

**BC Geological Survey
Coal Assessment Report
980**



ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Groundhog Property 2014 Geological Assessment Report

TOTAL COST:

AUTHOR(S): Hayden Mackenzie

SIGNATURE(S): 

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COMMODITIES SOUGHT: Anthracite Coal

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MINING DIVISION: Ominica

NTS / BCGS: 104 A 16

LATITUDE: 56° 52' _____ "

LONGITUDE: 128° 26' _____ " (at centre of work)

UTM Zone: 9N **EASTING:** 545000 **NORTHING:** 6305000

OWNER(S): Atrum Coal Groundhog Inc.

MAILING ADDRESS: 801-1199 West Pender Street, Vancouver, BC V6E 2R1

OPERATOR(S) [who paid for the work]: Atrum Coal Groundhog Inc.

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REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)

Anthracite; Groundhog

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956

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)		417079, 418443, 417080, 418444, 417081, 418445, 417082, 418446, 417085, 418587, 417088 , 418588, 417089, 418589, 417090, 418590, 417094, 394847, 417095, 394848, 417096, 394849, 417098, 417100, 417520, 417101, 417521, 417297, 417522, 417298, 417523 417528	
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres, number of holes, size, storage location)			
Core	10,700 m 42 holes Groundhog HQ, 10 Camp	418444 418588 418587 417080 417081	
Open hole water monitoring			
Non-core			
RELATED TECHNICAL			
Sampling / Assaying			
Petrographic			
Mineralographic			
Metallurgic			

PROSPECTING (scale/area)		
PREPATORY / PHYSICAL		
Line/grid (km)		
Topo/Photogrammetric (scale, area)		
Legal Surveys (scale, area)		
Road, local access (km)/trail		
Trench (number/metres)		
Underground development (metres)		
Other		
	TOTAL COST	20,097,643.74

2014

Groundhog Anthracite Project

GEOLOGICAL ASSESSMENT REPORT 2014
ATRUM COAL

ATRUM COAL | 801-1199 West Pender St, Vancouver BC V6E 2R1

A portion of the summary (Page 6), Section 6, Section 7, Appendix 8, and Appendix 9 remain confidential under the terms of the Coal Act Regulation, and have been removed from the public version.

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1. Summary

The Groundhog Anthracite Project (Groundhog) is situated within the Groundhog Coalfield, located in north-western British Columbia's Cassiar Land District. The project lies close to the northern extremity of the Skeena Mountains within the Bowser Basin approximately 180 km north of Hazelton and 150 km north-east of Stewart, British Columbia, Canada. Other nearby cities include Smithers, British Columbia 240 km to the South, and Prince George, British Columbia 490 km to the south-east. Current access to Atrum Coal's Groundhog Project is limited to the Kluatantan airstrip which is located to the south-east of the property.

Geologically, the Groundhog Coalfield is located in the northern portion of the Bowser Basin, bounded by the Skeena Arch to the north and the Stikine Arch to the south.

Using the nomenclature coined by Cookanoo and Bustin in 1991, the formations of the Bowser Lake Group from oldest to youngest are as follows: the Ashman Formation, Currier Formation, McEvoy Formation, and the Devil's Claw Formation. The coal measures are located within the Currier Formation, which at Groundhog is approximately 600 metres thick and comprised of siltstone, mudstone, sandstone and coal. There are at least 21 known coal seams within the Currier Formation on the Groundhog Property, these are broken into four horizons starting with the Davis Horizon at the top followed by the Discovery, Duke and Trail Horizons. Seams within these horizons are given a letter starting with 'A' at the top, and additional letters for each new seam down stratigraphy. Coal seams range in thickness from tens of centimetres to more than 7 m, and typically range from 0.5 to 3.0 m for the main seams. The sediments of the Bowser Basin have undergone two major deformation events, the first of which was of the highest intensity. Compression from the northeast and the southwest occurred during the uplift of the Coast Crystalline Belt. Locally the result of this F1 deformation can be observed in the northwest-southeast trending Beirnes Synclinorium.

In May 2012 Atrum Coal Groundhog Inc. (Atrum) acquired licences within the Groundhog coalfield and conducted their first field program in September and October of that year. In 2013 a more extensive program ran from May to October with a focus on the north-west section of the property, now referred to as 'Groundhog North'. Towards the end of 2013 and into 2014 Atrum acquired a number of additional licences which resulted in an expansion of licence area from 11,118 to 22,364 hectares. Atrum currently owns 32 licences and 20 applications. Application land area is 30,279 hectares and with licence land gives a total of 52,643 hectares.

The 2014 exploration program had two objectives. The first was to define an area for potential bulk sample extraction and identify marker horizons within Groundhog North. This was achieved by drilling 33 holes within a 500 m by 500 m square called the Bulk Sample Area (BSA). The second objective was to drill holes on a regional scale to identify any areas of interest in land recently converted from application to licence. Seven holes were drilled regionally, six on the eastern part of the property and one south of Currier Creek. Following the exploration program, 10 holes were drilled for water monitoring which was managed and supervised by Knight Piesold Consultants. A total of 10,700 m were drilled in 2014 on Atrum's Groundhog property. All exploration drilling was done with HQ3 diamond drill bits; core was logged in a shack at Groundhogs base camp at the Kluatantan Airstrip. Coal samples were sent to ALS Laboratories in Richmond, BC once they were logged. Selected samples were processed under advice from A&B Mylec (Australia) with a focus on defining product specifications for major coal seams.

In July 2014, Atrum excavated 200 tonnes of anthracite coal from a combination of two trenches at the Groundhog property. The main purpose of the trenches was to prove the supply chain of getting coal from Groundhog to Stewart Port, recover at least 100 tonnes of coal, validate drillhole data and collect structural information to aid with the structural interpretation of the BSA. A representative sample from the coal stockpile was taken to Stewart Port and to ALS Laboratory in Richmond, BC.

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[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

2. Introduction

2.1 Location and Physiographic Setting

The Groundhog Anthracite Project (Groundhog) is situated within the Groundhog Coalfield, located in north-western British Columbia's Cassiar Land District. The project lies close to the northern extremity of the Skeena Mountains within the Bowser Basin approximately 180 km north of Hazelton and 150 km northeast of Stewart, British Columbia, Canada. Other nearby cities include Smithers, British Columbia 240 km to the south, and Prince George, British Columbia 490 km to the southeast (Figure 2.1).

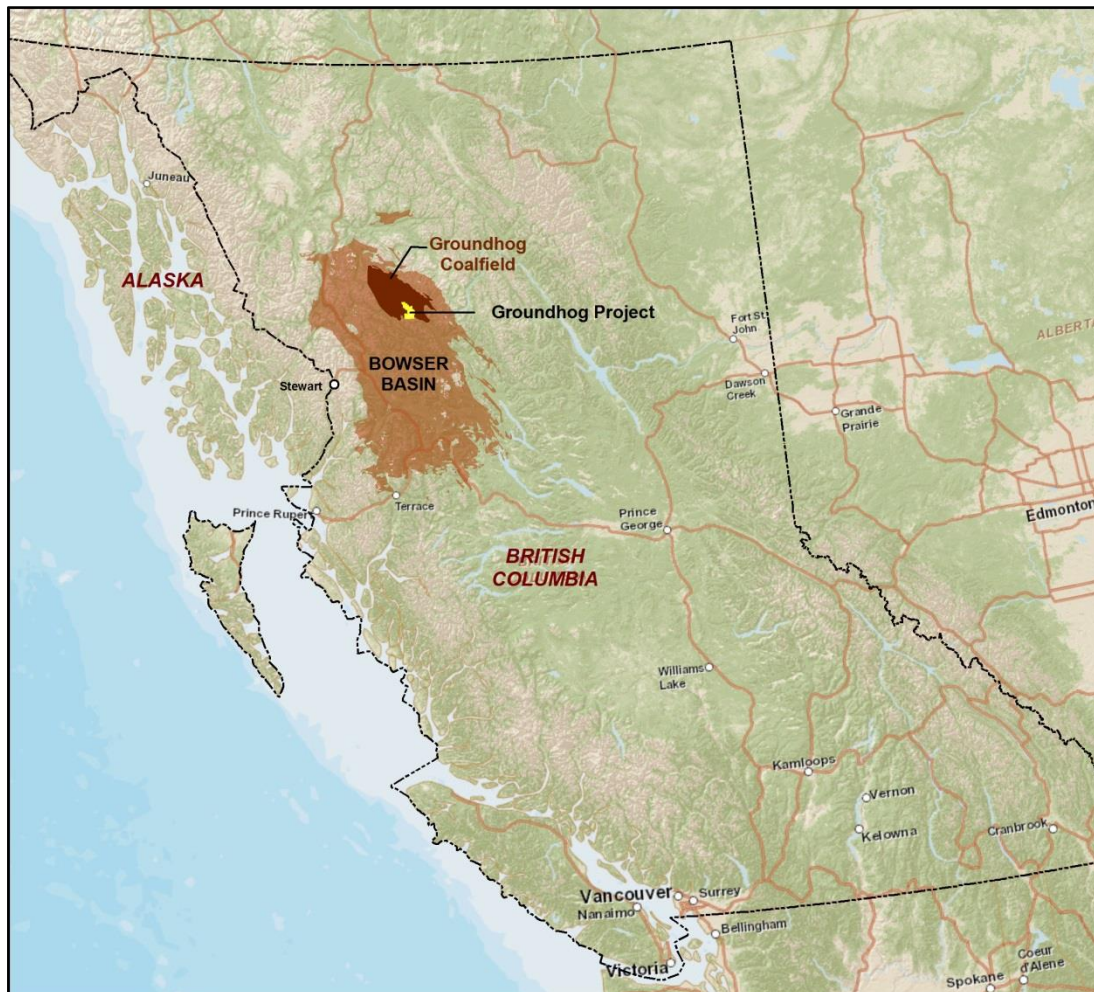


Figure 2.1 Location of Groundhog Anthracite Project and the Bowser Basin

2.2 Access

During Atrum's exploration, Smithers has been the point of access to the site and is where the majority of expediting has been based out of. Minor amounts of equipment have been mobilised to site out of Meziadin Airstrip. Current access to Atrum Coal's Project is limited to the Kluatantan airstrip located to the southeast of the property. The Kluatantan airstrip lies directly beside the project's base camp and is used regularly by fixed wing aircraft and helicopters providing transport and supplies to the camp.

A portion of the British Columbia Railway (BCR) extends from Prince George northwest to Bear Lake. Prior to 1977, steel for the rail was laid from Bear Lake to the Chipmunk airstrip located 30 km southeast of the property but the railway was not completed. North of the Chipmunk airstrip a construction road was graded and cleared parallel to the east bank of the Skeena River and continues to 5 km southeast of the property. From this point to just beyond the northern edge of the Groundhog property line, the rail grade has been graded and cleared but remains in poor condition.

Atrum Coal plans to rehabilitate the rail line and make it a functional transport route to allow access to the site. This will provide access to sea ports along the west coast as well as towns and other infrastructure to allow efficient transport of goods to site and to transport product to market. The distance by rail from Atrum's property to Fort St. James, Prince George, Prince Rupert and Vancouver is 381 km, 497 km, 1,234 km, and 1,294 km respectively.

2.3 Climate

Project-specific meteorological baseline data have been collected at the Groundhog meteorological station since July 19, 2013. The majority of atmospheric parameters monitored during 2013 at the station, and at a station approximately 200 km northwest (Dease Lake EC-MSD station) are similar, indicating that climates at these two locations are comparable. However, the monitoring period for data collected from the Groundhog station is short and definitive statements on local climate cannot be made at this time.

Based on the climate normal data, it can be expected that mean monthly Groundhog station temperatures can typically range between -15°C and 15°C, with December and January being the coldest months and July and August being the warmest. Because the temperature variation at the Groundhog station is similar to the temperature variation at the Dease Lake (AUT) station, it is expected that hourly temperatures at the Groundhog station can range between -40°C and 35°C, annually.

Based on the climate normal data, it is expected that monthly precipitation at the Groundhog station will typically be highest between August and November, and lowest between March and May. The ClimateWNA climate normal estimate for the Groundhog station location estimates the lowest monthly precipitation to be 40 mm in March and the highest to be 132 mm in November, with an annual total of 926 mm. Climate WNA is a high-resolution climate modelling program which utilises historical weather station data to project future seasonal and annual climate variables in Western North America.

Long term climate normal records show that there is typically no snow from June to September and snow starts to accumulate towards the end of October, with the deepest accumulation in late winter.

Winds during the monitoring period blew from the southwest direction, approximately 12 % of the time, with a secondary wind from the south-southeast which occurred approximately 9 % of the time. The most frequent wind speeds were calm which occurred approximately 50 % of the time. The monitored wind speeds were fairly low and monitored wind speeds exceeded 4 m/s for only 0.2 % of the time.

2.4 Historical Perspective

During the 1872 to 1878 gold rush, prospectors traveling to Cassiar from Fraser Lake made the first coal discoveries near the Groundhog Coalfield. It was not until 1900 though, that the first report mentioning the Groundhog Coalfield was given to the Canadian Department of Railways and Canals by V.H. Dupont. His report detailed the existence of several outcroppings of coal located at the convergence of Didene Creek and the Spatsizi River approximately 50 km northwest of Atrum Coal's current Groundhog Project.

In 1903 the first claims were staked in the Groundhog Coalfield by James McEvoy and W.W. Leach, who also had holdings on the Skeena River and the Discovery, Currier and Davis Creeks. Preliminary exploration of the area commenced in 1904 and inquiries were made into the building of a rail route near the coalfield.

During the period between 1910 and 1912 exploration was carried out by various companies and individuals. G.H. Malloch completed a geological evaluation of the southern Groundhog Property in 1911 and was the first to begin applying nomenclature to the local stratigraphic formations. The abundance of interest in the area around this time was partially due to the expectation that the Canadian Northeastern Railway would be built to extend near the Groundhog Coalfield's location. With the onset of World War 1 all exploration ceased along with the railway construction.

Activity at the Groundhog Coalfield did not resume until several years after the end of the Second World War. In 1948 A.F. Buckman and B.A. Latour of the Geological Survey of Canada (GSC) conducted geological reconnaissance and compiled a report of their findings along with the details of all previous exploration that had taken place. The GSC revisited the Groundhog Coalfield in 1957 with Operation Stikine. This resulted in the creation of a base map but no definitive correlation of coal seams, stratigraphy, or structural information.

In 1966 Coastal Coal acquired coal exploration licences on the Discovery Property in the Groundhog Coalfield. Two years later in 1968 Professor R.V. Best and a team spent nine weeks conducting helicopter assisted exploration of the licenced areas during which approximately 3,885 km² was mapped. From this exploration, Best was able to divide the local strata into four definable units: Lower Conglomerate, Lower Shale, Upper Shale and Upper Conglomerate. The 56 surface samples taken during this time were subjected to proximate analysis. The report written by J.M. Black detailed the results of this analysis but did not indicate which laboratory processed the samples. Black's report also provided the sample's locations on extensive hand drawn geological maps of the property.

From 1969 to 1970, W.D. Tompson led a joint venture in the Groundhog Coalfield between Quintana Minerals Corporation, National Coal Corporation Ltd, and Placer Development Ltd. Exploration consisted of surface mapping and six diamond drill holes, most of which plot just west of Atrum Coal's current Groundhog Property. Samples were taken from coal seams within the six drill holes and sent for proximate analysis and specific gravity testing at Commercial Testing and Engineering (CT&E) in Ladner, British Columbia.

Tompson's team determined that the property was directly underlain by rocks of what was termed the "Coal-Bearing Lithosome". This lithosome was part of the nomenclature Tompson had designed for the stratigraphic sequence he assembled for the property, which is listed in depositional order as follows: McEvoy Ridge Lithosome, Coal-Bearing Lithosome, Devil's Claw Conglomerate Lithosome and the Lonesome Mountain Lithosome. The local strata were further subdivided into three facies and correlated with the depositional and tectonic history of the Bowser Basin in 1974 by G.H.

Eisbacher. Eisbacher examined the eastern margin of the basin and applied the following titles to his subdivisions: Duti River-Slamgeesh Facies, Groundhog-Gunanoot Facies, and the Jenkins Creek Facies.

In 1977 BC Hydro considered using coal to operate a thermal power generating plant and appointed W.D. Tompson, from the previously mentioned joint venture, to review all work that had been done in the Groundhog Coalfield. All drilling, trenching, sampling and mapping was detailed in an extensive report. After examining all existing information, Tompson stated "The coalfield is in the very early stages of exploration, so therefore it is not possible to accurately calculate the coal reserves or the tonnage of recoverable clean coal. However, it is shown that the area between Evans Creek and Discovery Creek is underlain by relatively undisturbed coal seams." From this data Tompson determined four exploration targets for BC Hydro to explore.

In 1978 Groundhog Coal acquired seventy-seven coal exploration licences in the Groundhog Coalfield. The company started out with a large exploration program aimed at reviewing and confirming previous work done in the area, but after some initial analysis it was decided that the local geology was not as clearly defined as originally anticipated. The project was reorganized with a focus on the more promising targets, and coal exploration licences were reduced from seventy-seven to three which encompassed parts of Upper Discovery Creek and Davis Creek. Traverses along both Upper Discovery Creek and Davis Creek were carried out by B. Mountford in the field seasons of 1978 and 1979. Mountford dug out and measured partially exposed coal seams along Upper Discovery Creek but noted he was unable to locate several of the coal seams along Davis Creek which had been mentioned in previous reports.

In 1980 Mountford, accompanied by L.G. Scott, completed a helicopter assisted preliminary geological program on the three remaining Groundhog Coal exploration licences. Kerr reported after mapping a 25 km area with evenly spaced 25m grids that coal outcroppings were few and far between and generally only found adjacent to the main creeks. When encountered, the coal seams were sampled and mapped in detail. Measurements taken during these field excursions led Kerr to conclude that there was no evidence to support the existence of any major structural disturbances in the Groundhog Coalfield aside from gently dipping 10° to 20° beds with strikes varying from 130° to 185° . Surface samples taken were sent for proximal analysis at Commercial Testing and Engineering (CT&E) in Ladner, British Columbia.

Later in 1980, L.G. Scott obtained six more coal exploration licences in the Groundhog Coalfield, of which John Kerr and team completed a cumulative eleven day preliminary analysis. These new licences covered several known and projected coal outcroppings near Telfer Creek, Beirnes Creek, and Currier Creek.

In 1981 coal exploration licences were issued to Petro-Canada for the eastern boundary of the Groundhog Coalfield. After initial exploration of the area, Petro-Canada concluded that insufficient thickness and quality of the coal seams, in conjunction with tight folding, made the area unsuitable for conventional mining. Despite suggesting that the currently held licences be abandoned, Petro-Canada recommended the close monitoring of any GSC programs taking place in the Bowser Basin as well as any exploration being conducted by other licence holders in the area.

Other work completed in 1981 within the Groundhog Coalfield included six diamond drill holes completed by Imperial Metals near or on the current Groundhog Property. No official report was released but geophysical logs, strip logs, and descriptive logs were filed with the BC government.

In 1982 and 1983 Suncor acquired twenty-nine coal exploration licences amounting to a 6,439 hectare property located in the southern portion of the Groundhog Coalfield near Mount Jackson. In 1983 Suncor carried out a helicopter supported geological mapping, trenching, and sampling program spanning all the licences held. Sixteen trenches totaling 104.2 m were dug, and samples taken were sent to Calgary for analyses by Birtley Coal and Minerals Testing Ltd. Field teams traversed the exposed south facing slopes of Mount Jackson and Falconer Mountain. From these traverses, stratigraphic columns were created and it was interpreted that coal seams should be present underneath the lower north facing slopes of Mount Jackson and extend beneath the Jackson Flats, McEvoy Flats, and Trail Creek.

In 1984 Groundhog Coal Limited commenced an exploration program on six licences they obtained in 1982. The licences were located west of the Skeena River valley between Beirnes Creek and Currier Creek. The program consisted of geological mapping, trenching, and sampling but no drill program was conducted. A total of twelve trenches were dug, from which 23 representative coal samples were taken and subjected to analysis at Cyclone Engineering Sales Ltd. (Cyclone) in Edmonton, Alberta.

Indicated resource estimates calculated by Groundhog Coal Limited following their 1984 exploration program included information obtained from samples, trenches, and diamond drill holes completed by National Joint Venture's 1970 program and Imperial Metals' 1981 program. Estimates were based on the classifications adopted by Cordillera Region and Energy, Mines and Resources Canada in Report ER79-9, Coal Resources and Reserves of Canada. In their report Groundhog Coal Limited further defined their indicated resources as "those computed partly from specific measurements and partly from reasonable geologic projections. For the mountainous regions the maximum distance between points of observation should be 600 metres or less". According to those parameters, Groundhog Coal Limited calculated the historical in-situ indicated resources at 11.5 million tonnes within their coal exploration licence area.

Gulf Resources Canada Limited also conducted exploration programs in 1983 and 1984 on thirty-two coal exploration licences making up their Evans Creek Property just east of the licences held by Groundhog Coal Limited. The programs consisted of helicopter supported 1:10,000 scale geological mapping based along drainage channels, and nine hand trenches. Representative samples taken from trenched coal seams with a true thickness greater than 0.5 metres were sent to C T & E in 1983 and Loring Laboratories Ltd in Calgary, Alberta for analysis in 1984.

Between 1985 and 1988 Gulf added eighteen new licences to the south of their initial thirty-two licences. Work done in 1985 on the Evans Creek Property was used as the basis for a speculative coal resource estimate amounting to 504 Mt. After an exploration program consisting of geological mapping, trenching, and sampling was carried out in 1988, Gulf's speculative coal resources estimate for the expanded Evans Creek Property was brought up to 1,538 Mt.

In 2008, an 11 hole drill program was completed by WestHawk on the Groundhog Property primarily focusing on the historic area around Discovery Creek with all exploration falling between Davis and Currier Creeks. The work consisted of geologic mapping, trenching, diamond drilling, downhole geophysical logging, sampling and subsequent analytical work. Samples were subjected to both coal quality analyses and one sample was tested for vitrinite reflectance.

In 2012 Moose Mountain Technical Services built a geological model for Atrum Coal based on twenty-three historic diamond drillholes totaling 4,643.2 m and 30 hand trenches totaling 95.5 m. This was done prior to Atrum conducting any field work.

In May 2012 Atrum Coal Groundhog Inc. (Atrum) acquired the Groundhog Anthracite Property and conducted their first field program in September and October 2012. This program involved drilling 15 holes totalling 4,992 m.

Atrum conducted an extensive field program consisting of diamond core drilling, field mapping and hand trenching from May to October in 2013. This program involved approximately 8,000 m of drilling in 64 holes. 43 of the drill holes were HQ sized for exploration and 17 were PQ sized to gather large diameter samples for washability testing.

In 2014 Atrum Coal continued exploration, focusing primarily on the Bulk Sample Area (see Section 5.3) within the north-west to define an area to extract a bulk sample as well as regional drilling on tenures recently converted from application to licence to identify potential future targets. The 2014 drilling program involved 10,700 m of drilling with a total of 52 holes. The 2014 exploration program also involved a seismic reflectance survey in winter to assist with structural interpretation; unfortunately, this program had limited success due to the structural complexity of the area surveyed. A trenching program was also undertaken with an excavator and dozer. Approximately 200 tonnes of coal was removed from two trenches as a trial excavation with samples from this sent to ALS laboratories in Richmond, BC for coal quality and washability testing.

2.5 Acknowledgements

The work undertaken at Groundhog for the 2014 field season was conducted by various contractors, consultants and staff under the management and supervision of Atrum staff. This report was prepared by Mr. Hayden Mackenzie of Atrum Coal with the input from other Atrum geological staff and the following groups:

- ALS Laboratories for sample coal quality analyses
- GEEL Enterprises for Camp Services and Expediting
- Silverking Helicopters for helicopter field support
- Century Wireline for downhole geophysical logging
- Tsayta Aviation for fixed wing air support
- Nomad Air for delivering large loads in their Skyvan
- Tower Communications for radio and satellite communications
- Driftwood Diamond Drilling for core drilling services
- Geotech Drilling for hydrogeology drilling
- Knight Piesold for hydrogeology program management and base line hydrogeology work
- SRK for geochemical baseline and mine drainage work.
- McElhanney for road design and LiDAR surveys
- Kleanza for archaeological investigations
- Brad Van Den Bussche from Kaybri Resource Management Ltd. for geological consulting and management
- Ian Fraser for geological field management and interpretation work
- Dave Marchioni for interpretation assistance
- A& B Mylec for coal quality interpretation and advice
- Nick Gordon for geotechnical advice and resource evaluations

Mr. Hayden Mackenzie of Atrum Coal Groundhog received a Bachelor of Science in Geology and a Master of Science in Engineering Geology from the University of Canterbury. Hayden has been employed as a Geologist and Engineering Geologist with CRL Energy in New Zealand with published research on acid rock drainage remediation as well as extensive experience in exploration project management for coal and Coal Bed Methane programs in New Zealand, Indonesia and Vietnam. He worked as a Senior Geologist for Coal Marketing International, managing exploration programs in Indonesia and Australia and conducting research and analysis of international coal markets and trading. Hayden has been working directly and indirectly through DMT Geosciences with Atrum Coal since May 2013 and is now the Atrum Coal Geology Manager.

Ian Fraser, P.Geol.; co-author of this report, is a consultant to Atrum Coal from IF Consulting Ltd. Mr. Ian Fraser is a professional consulting geologist with more than 35 years of mineral exploration experience. A graduate of Laurentian University (B.Sc.) 1985; Ian has worked on coal, precious and base metal along with uranium projects throughout Canada and recently a gold project in Colombia. He maintains Professional Geoscientist designation (P.Geol.) with APEGA (Association of Professional Engineers and Geoscientists of Alberta); NO. 54846, and similar designation with APEGS (Association of Professional Engineers and Geoscientists of Saskatchewan); NO. 09910.

3. Tenure

The Groundhog Anthracite Property currently consists of 32 contiguous licences covering 22,364 Ha and 20 adjoining coal licence applications covering 30,279 Ha for a total of 52,643 Ha.

The property coal licences are held by Atrum Coal Groundhog Inc. Licences are summarised in Table 3.1 and shown in Figure 3.1 **Error! Reference source not found.** A larger map is appended (Appendix 11).

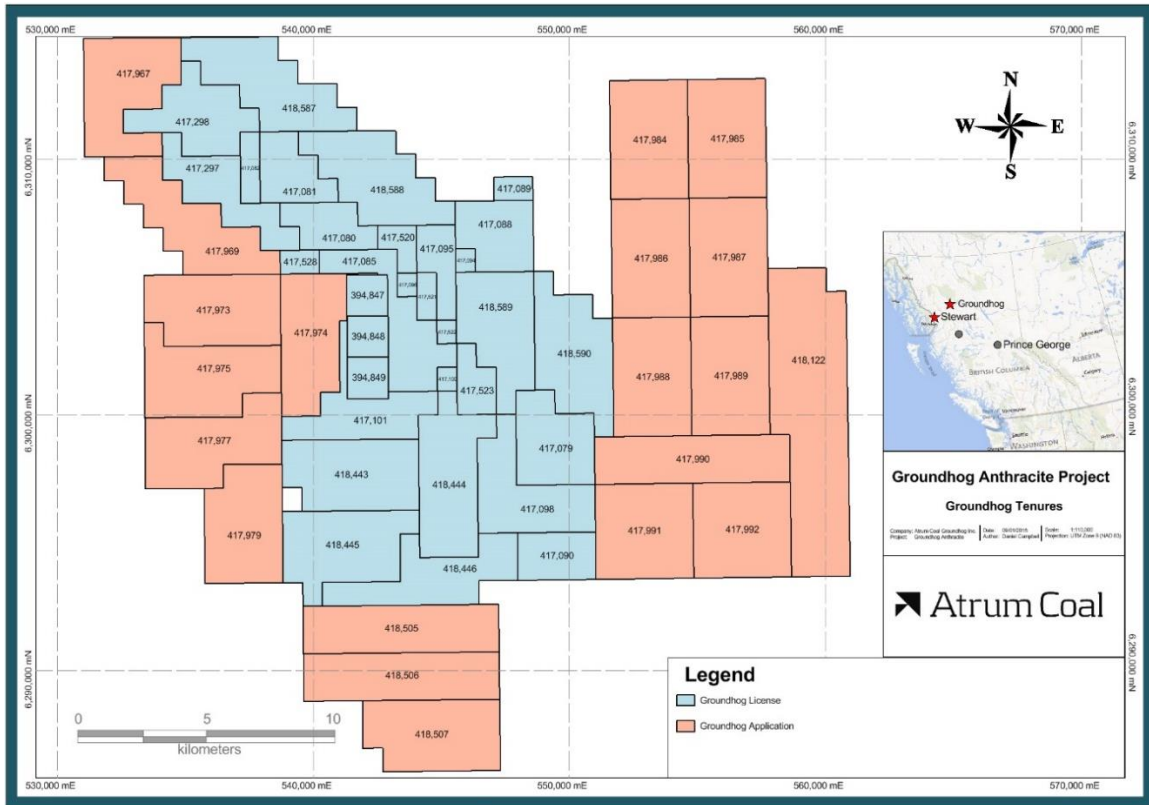


Figure 3.1 Groundhog Project Area and Tenures

Table 3.1 Groundhog Project Area Tenures (2014)

Tenure Number	Owner	Tenure Type	Tenure Sub Type	Status	Area (ha)
417079	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	991
417080	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	565
417081	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	636
417082	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	212
417085	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	1,031
417088	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	777
417089	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	142
417090	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	568
417094	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	71
417095	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	425
417096	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	71
417098	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 21 Oct 2014	1,204
417520	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 12 Sep 2014	212
417521	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 12 Sep 2014	142
417522	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 12 Sep 2014	71
417523	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 12 Sep 2014	354
418443	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 15 Jan 2015	1,416
418444	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 15 Jan 2015	1,416
418445	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 15 Jan 2015	1,417
418446	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 15 Jan 2015	1,205
418587	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 11 June 2015	1,411
418588	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 11 June 2015	1,412
418589	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 11 June 2015	1,273
418590	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 11 June 2015	1,415
394847	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 12 July 2015	259
394848	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 12 July 2015	259
394849	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 12 July 2015	259
417100	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 07 Nov 2014	71
417101	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 07 Nov 2014	960
417297	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 03 March 2015	918
417298	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 03 March 2015	1,059
417528	Atrum Coal Groundhog Inc	Coal	Licence	Good Standing 13 Sept 2014	142
Subtotal					22,364
417967	Atrum Coal Groundhog Inc	Coal	Application		1,411
417969	Atrum Coal Groundhog Inc	Coal	Application		1,413
417984	Atrum Coal Groundhog Inc	Coal	Application		1,412
417985	Atrum Coal Groundhog Inc	Coal	Application		1,412
417986	Atrum Coal Groundhog Inc	Coal	Application		1,413
417987	Atrum Coal Groundhog Inc	Coal	Application		1,413
417988	Atrum Coal Groundhog Inc	Coal	Application		1,415
417989	Atrum Coal Groundhog Inc	Coal	Application		1,415

Tenure Number	Owner	Tenure Type	Tenure Sub Type	Status	Area (ha)
417990	Atrum Coal Groundhog Inc	Coal	Application		1,416
417991	Atrum Coal Groundhog Inc	Coal	Application		1,417
417992	Atrum Coal Groundhog Inc	Coal	Application		1,417
418122	Atrum Coal Groundhog Inc	Coal	Application		3,375
418505	Atrum Coal Groundhog Inc	Coal	Application		1,500
418506	Atrum Coal Groundhog Inc	Coal	Application		1,500
418507	Atrum Coal Groundhog Inc	Coal	Application		1,500
417973	Atrum Coal Groundhog Inc	Coal	Application		1,414
417974	Atrum Coal Groundhog Inc	Coal	Application		1,259
417975	Atrum Coal Groundhog Inc	Coal	Application		1,415
417977	Atrum Coal Groundhog Inc	Coal	Application		1,416
417979	Atrum Coal Groundhog Inc	Coal	Application		1,346
Subtotal					30,279
					52,643

4. Geology

4.1 Regional Geology

4.1.1 Bowser Lake Group

The Bowser Lake Group comprises a 3,500 m thick sedimentary succession in the Groundhog project area and consists of the following formations from youngest to oldest.

- The Devil's Claw Formation;
- The McEvoy Formation;
- The Currier Formation; and,
- The Ashman Formation

		Discovery Property, Gulf Canada Resources, 1988	Panorama Property Gulf Canada Resources, 1981	Bowser Basin Cookenboo & Bustin, 1991
C R E T A C E O U S	B O W S E R L A K E	Devils Claw Unit	Rhonnda Sequence	Devil's Claw Formation
		Malloch Unit	Malloch Sequence	McEvoy Formation
J U R A S S I C	G R O U P	Groundhog Unit	Groundhog Sequence	Currier Formation
		Panorama Unit	Panorama Sequence	Ashman Formation

Figure 4.1 Stratigraphic Column - Bowser Lake Group (MMTS, 2012)

4.1.2 Devil's Claw Formation

The Devil's Claw Formation overlies the McEvoy Formation and consists primarily of thick successions of conglomerates with minor interbeds of sandstone, siltstone and shale. This 300 to 500 m thick formation is interpreted as being deposited in a high energy environment such as that on an alluvial fan. Both large-scale cross bedding of conglomerates with pebble to cobble sized clasts and homogenous conglomerates can be seen in the Devil's Claw Formation. Both are clast-supported and composed of well-sorted and well-rounded chert, volcanic quartz and occasional granodiorite clasts.

4.1.3 McEvoy Formation

The McEvoy Formation overlies the Currier Formation. Strata from the 600 to 1,000 m thick McEvoy Formation are interpreted as being deposited in paralic and brackish waters from a fluviially

dominated delta system. Coarsening-upward, silt mudstones are the dominant facies but sandstones and conglomerates are present, as well as thin sub-anthracite seams.

4.1.4 Currier Formation

The approximately 1,000 m thick Currier Formation overlies the Ashman Formation and is the primary coal bearing formation of the Groundhog Coalfield. It is deltaic in origin and records a change from the underlying Ashman Formation to alternating marine and non-marine deposition. The formation consists of alternating beds of shale and sandstone with lesser amounts of siltstone, conglomerate and coal.

Prior to 1991 the Currier Formation was referred to either as the Groundhog Sequence or Groundhog Unit.

4.1.5 Ashman Formation

The approximately 1,800 m thick, fully marine Ashman Formation is the oldest formation in the Bowser Lake Group. The Jurassic age formation is composed of mostly dark bluish grey to black shale that coarsens upwards repetitively to shallow-marine sandy mudstone and sandstone.

4.1.6 Bowser Basin

The Bowser Basin covers an area of approximately 50,000 km² and is the largest contiguous basin in the Canadian Cordillera. The Bowser Basin developed as a result of tectonic compression and uplift of the Coast Mountains during the Upper Jurassic. This created an inland basin from which the sea regressed leaving behind a sequence of coarsening upwards clastic sediments of the Bowser Lake Group ranging in age from the Upper Jurassic (175 million years) to Cretaceous (130 million years).

The Bowser Basin is defined by the outcrop extent of the Bowser Lake Group and is bounded by the Stikine Arch to the south.

There is good coal development in the Currier Formation across a broad area of the northern Bowser Basin with at least 25 individual coal seams documented.

Structurally the sediments of the Bowser Basin have undergone two major deformational events; this is described in detail in Section 4.5 Structural Geology.

A stratigraphic column for the Bowser Lake Group is shown in Figure 4.2

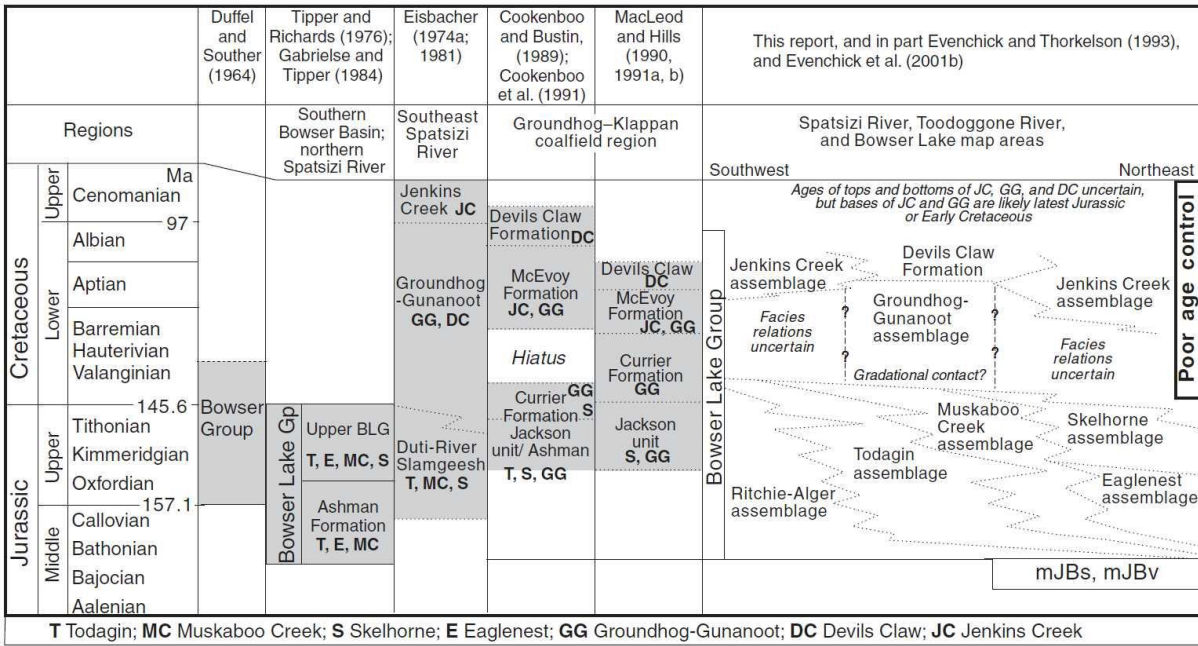


Figure 4.2 Stratigraphy of the Bowser Lake Group, Groundhog Coalfield

4.2 Local Geology

Following the 2014 field season, Atrum geologists along with consultants spent approximately two months working on coal seam correlation and interpreting all available data to build a better understanding of the local geology. This work began with identifying marker horizons (see Section 4.2.2), which enabled the identification of structure in the areas of interest with high accuracy. Geologists were then able to assign coal seam names working outwards from marker horizons. This was checked against core photographs, dipmeter data, geophysical logs, core logs and coal quality results to ensure a high level of confidence. Initially this work took place for the Bulk Sample Area (BSA) where a considerable amount of drilling took place in a small area (Figure 4.3). Once this area was correlated it was possible to move out of the BSA and apply the same methodology to drill holes on a project-wide scale and to historic drill holes.

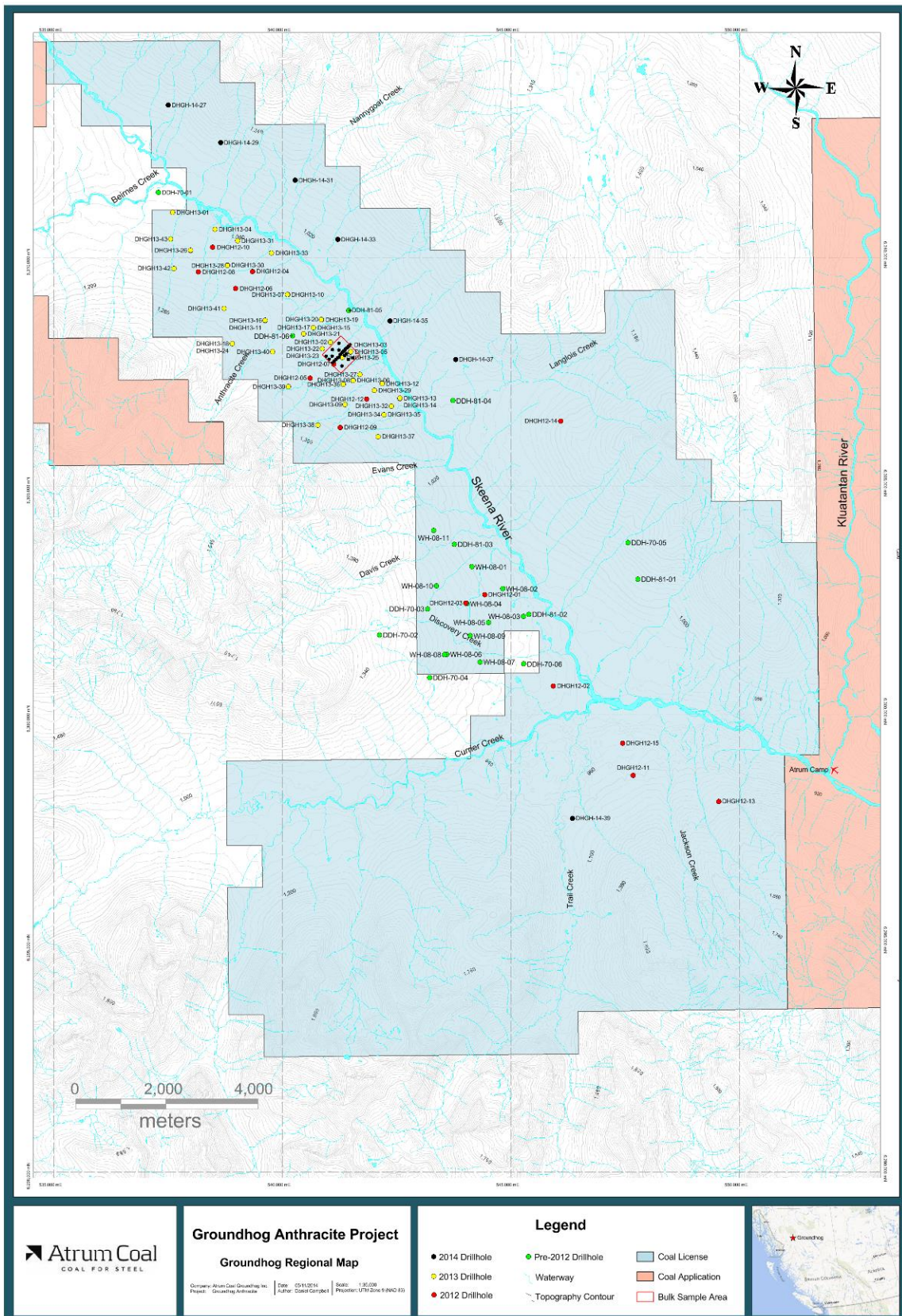
4.2.1 Coal Seam Geology

The coal-bearing Currier Formation consists of alternating beds of shale and sandstone, with lesser amounts of siltstone, conglomerate and coal. Strata are generally arranged in coarsening-upward units ranging from 30 to 60 m thick in the lower part of the formation. Within Groundhog tenure areas, the thickness of the coal-bearing unit, locally known as the Currier Formation, is approximately 600 m thick.

Coal occurrences indicate the base of the Currier Formation.

Atrum’s 2014 exploration drilling program had two objectives, the first was to define an area known as the Bulk Sample Area (BSA) within Groundhog North, this was to accurately determine the coal occurrence and coal quality in a potential bulk sample area. The focus on the BSA in 2014 was a consequence of positive coal intersections derived from drill holes drilled in 2012 and 2013. The secondary objective was to drill regional drill holes to identify new areas of interest within tenure areas recently converted from application to licence. Drill hole site locations are shown in Figure 4.3.

A summary of 2014 coal intersections is attached in Appendix 1.



4.2.2 Marker Horizons

A significant aim of all Atrum drilling programmes was to identify a distinct marker horizon within the Currier Formation to aid with coal seam correlation and improve drill program effectiveness by increasing the ability to accurately target specific coal seams. During the re-correlation exercise which took place in the second half of 2014, two distinct marker horizons were identified which have now been called 'Marker 1' (M1), and 'Marker 2' (M2). These are a distinct sequence of lithologies and characteristics within the coal measures and are described below.

4.2.2.1 Marker 1

Marker 1 is a massive, clean sandstone 3 to 8 m thick with accessory quartz veining. It is distinctly recognised in geophysical logs by its clean gamma signature (Figure 4.4). Marker 1 is bound by siltstone above and below, with a sharp upper contact and a gradational lower contact (Figure 4.4 and Figure 4.5). The younger siltstone is capped by fine grained sandstone with a distinctive darker mudstone bivalve horizon defining the fine grained sandstone / siltstone contact. The bivalve horizon rests approximately 5-10 m above Marker 1. Below the clean sandstone is a sequence consisting of siltstone with sandstone, and the subsequent Discovery B coal seam. The sandstone of Marker 1 has an average thickness of 5 m and a range in thickness from 3 to 8 m.

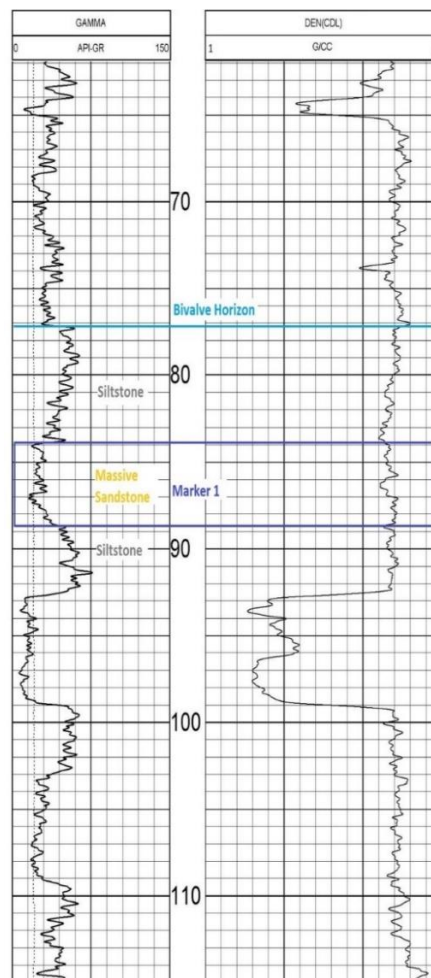


Figure 4.4 Geophysical log from drill hole DHGH14-12 displaying gamma (left) and density (right) of Marker 1. The low gamma signature of the clean, quartz-rich sandstone of Marker 1 is evident.



Figure 4.5 Marker 1 as it appears in drill core from drill hole DHGH-14-12, displaying a clean sandstone with accessory quartz veins. The bivalve horizon is visible above the marker.

4.2.2.2 Marker 2

Marker 2 occurs stratigraphically deeper than Marker 1; it is comprised of three units. A clean, massive sandstone 3 to 5 m thick with accessory to common quartz veining to poorly developed quartz stockwork marks the beginning of Marker 2. It sharply overlies 1 to 2 m of siltstone, which grades into a sandstone with siltstone bands, 2 to 5 m thick. The upper sandstone unit is easily distinguished in geophysical logs by its clean, low gamma signature (Figure 4.6). The deeper sandstone is finer grained, contains siltstone laminations to bands, and is generally thinner than the shallower sandstone; this is identified by a slight decrease in the gamma signature. This pattern of three lithologies is readily distinguishable in geophysical logs and drill core photos (Figure 4.6 and Figure 4.7). At times, the shallower sandstone is underlain by a single interlaminated sandstone and siltstone unit. The lower sandstone unit grades into a poorly developed siltstone, the base of which is constrained by a bivalve horizon that spans across the contact into poorly developed sandstone.

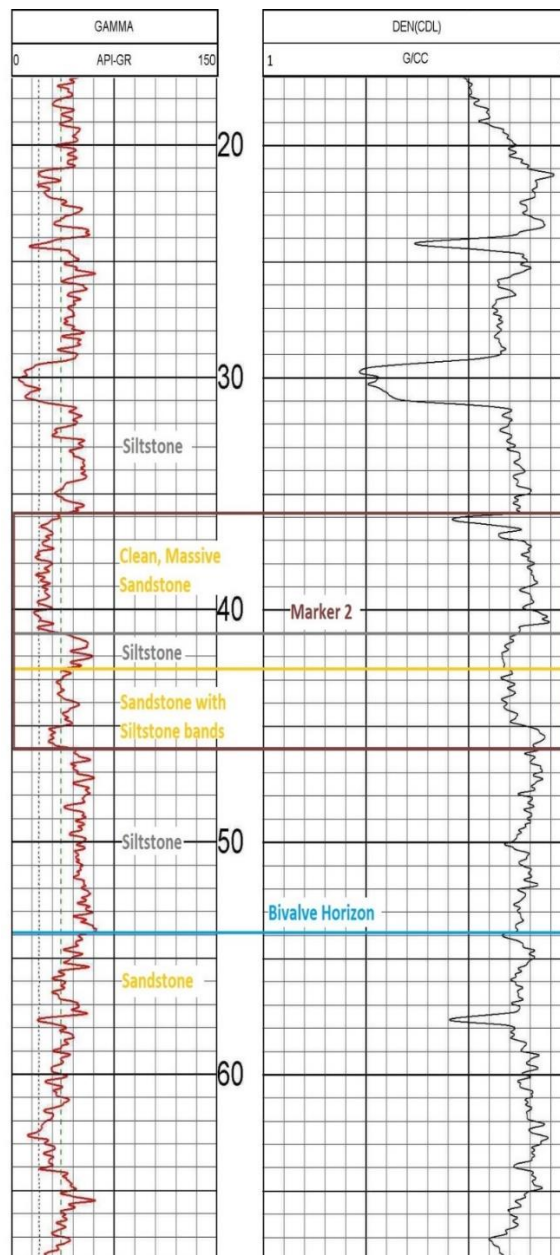


Figure 4.6 Geophysical log from drill hole DHGH-14-16 showing the gamma (left) and density (right) signatures of the units which make up Marker 2.

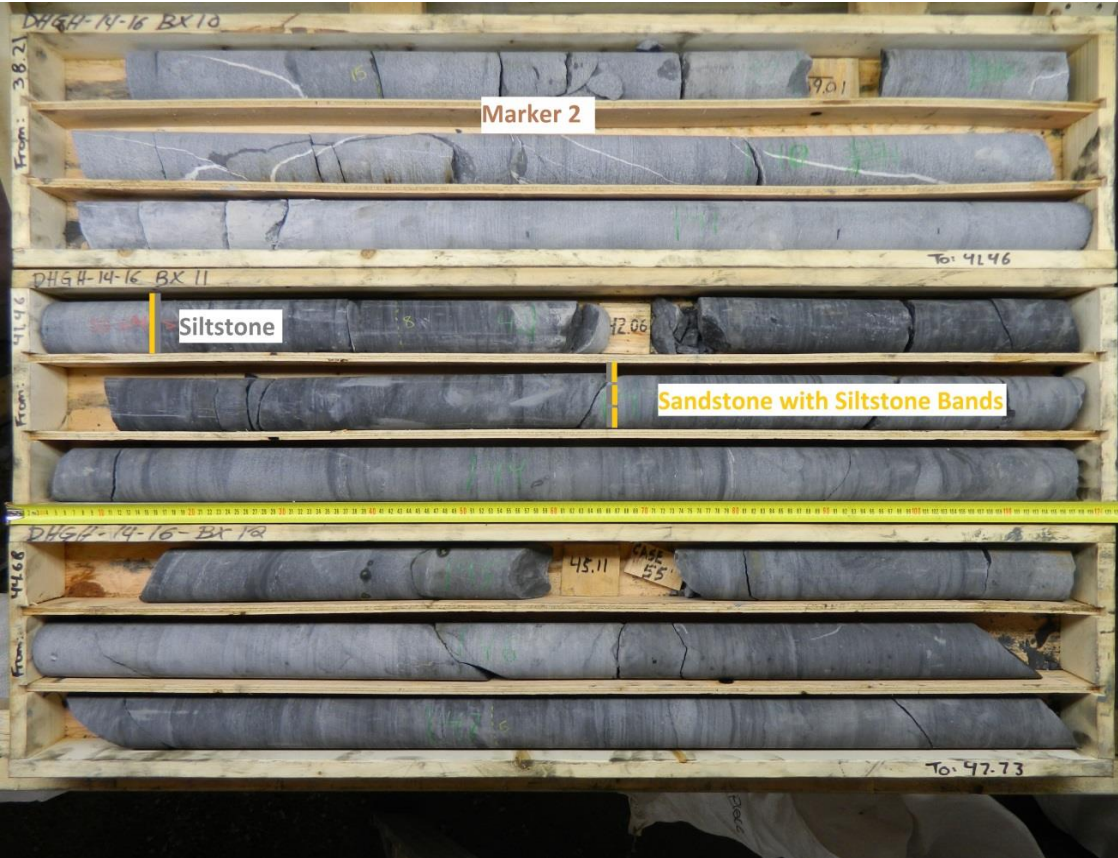




Figure 4.7 Dill core photos from drill hole DHGH-14-16 displaying the three units that comprise a typical Marker 2. The uppermost sandstone is most recognisable by its clean, massive appearance and sharp contact with the underlying siltstone. Following the marker, the bivalve horizon is visible, which further constrains the position of Marker 2.

4.3 Interburden, Veins and Sulphides

The interburden sediments that separate coal seams in the NW area are comprised mainly of interbedded siltstone, sandstone and carbonaceous mudstone beds with minor conglomerate. A schematic drillhole showing typical intersections of the coal seam and interburden stratigraphy is shown in Figure 4.8. The siltstones and sandstones display numerous thin carbonaceous laminations and shelly fragments sometimes forming into pebbly lag beds. Bioturbation and dewatering structures are common within the sediments. Bedding dips range from horizontal to near vertical.

Localised veining occurs within both the sediment and coal seams with veins primarily comprised of quartz, dolomite and minor siderite. Within the coal seams, thin quartz veins and pyrite (lenses or disseminated) are locally abundant, an example of quartz veins and disseminated pyrite is shown in Figure 4.9.

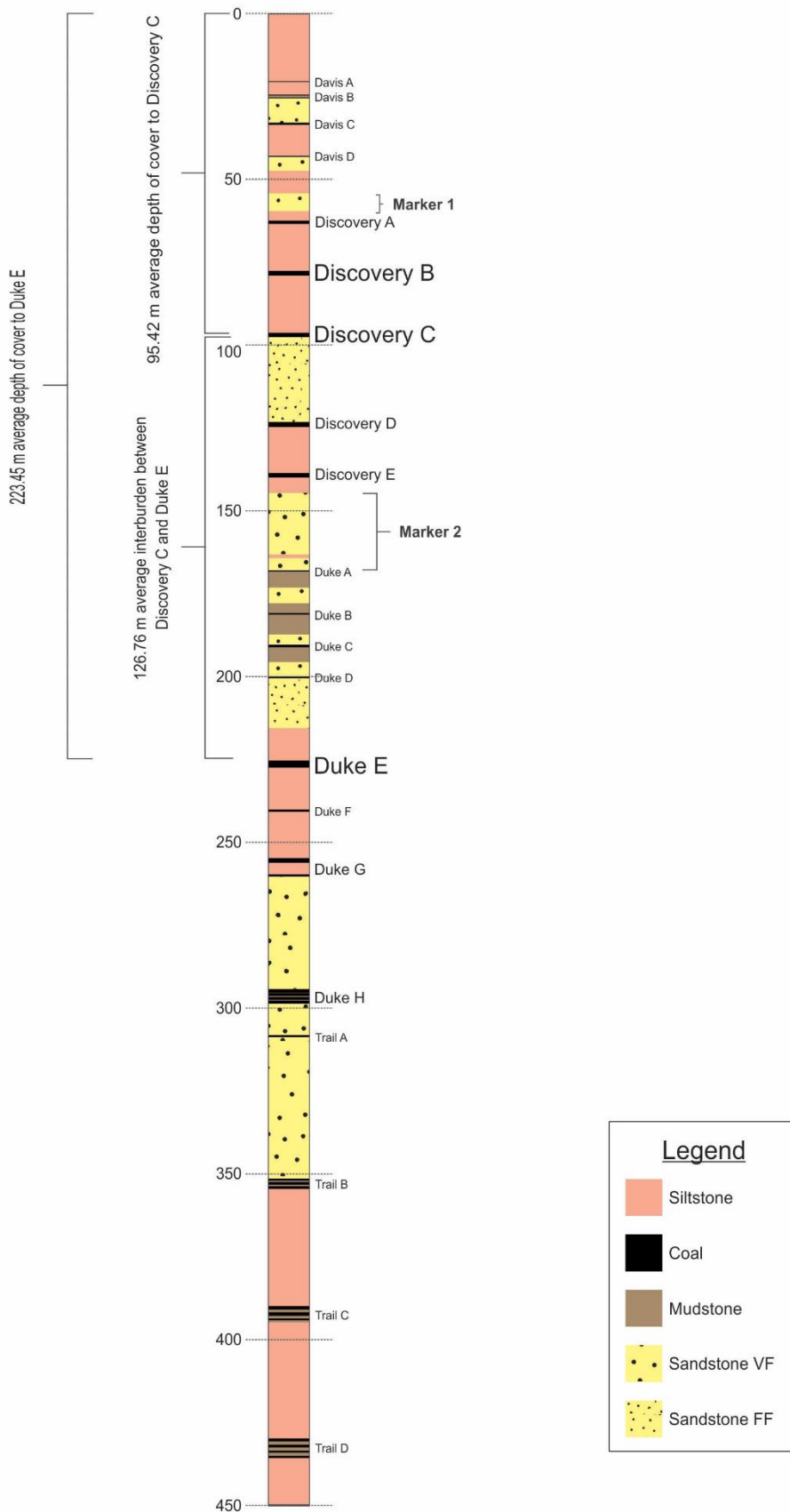


Figure 4.8 Schematic showing typical stratigraphy of Groundhog North



Figure 4.9 Example of disseminated pyrite and quartz veining within DHGH13-03

4.4 Target Coal Seams

Atrum's primary exploration focus in the 2014 field season was to define the occurrence of what was known as Seam 70 within the Bulk Sample Area (BSA), an area chosen following the 2013 field season as a prospective bulk sample site. Following the 2014 field season an extensive period of data review and correlation took place and as a result of this process a new coal seam naming convention was introduced.

At least 21 known coal seams occur within the Currier Formation on the Groundhog property. These are broken into four horizons starting with the Davis Horizon at the top followed by the Discovery, Duke and Trail Horizons. Seams within these horizons are given a letter starting with an 'A' at the top and additional letters for each new seam down stratigraphy (Table 4.1). Coal seams range in thickness from tens of centimetres to more than 7 m, and typically range from 0.5 to 3.0 m for the seams considered amenable to mining.

Atrum geologists introduced the new coal seam nomenclature following an extensive correlation exercise which evaluated each drill hole independently with drill core photos, drill logs and geophysical logs. As the correlation exercise developed it became apparent that there were more coal seams than previously thought in Groundhog North and that two coal seams (Discovery B and Discovery C) were both being called Seam 70 in previous correlations. The Discovery B and Discovery C coal seams vary in their quality and thickness but typically one or both of the coal seams are greater than one metre in thickness at any point. In previous correlations it was assumed that Seam 70 split and had a large parting in areas where both coal seams are strongly represented; however,

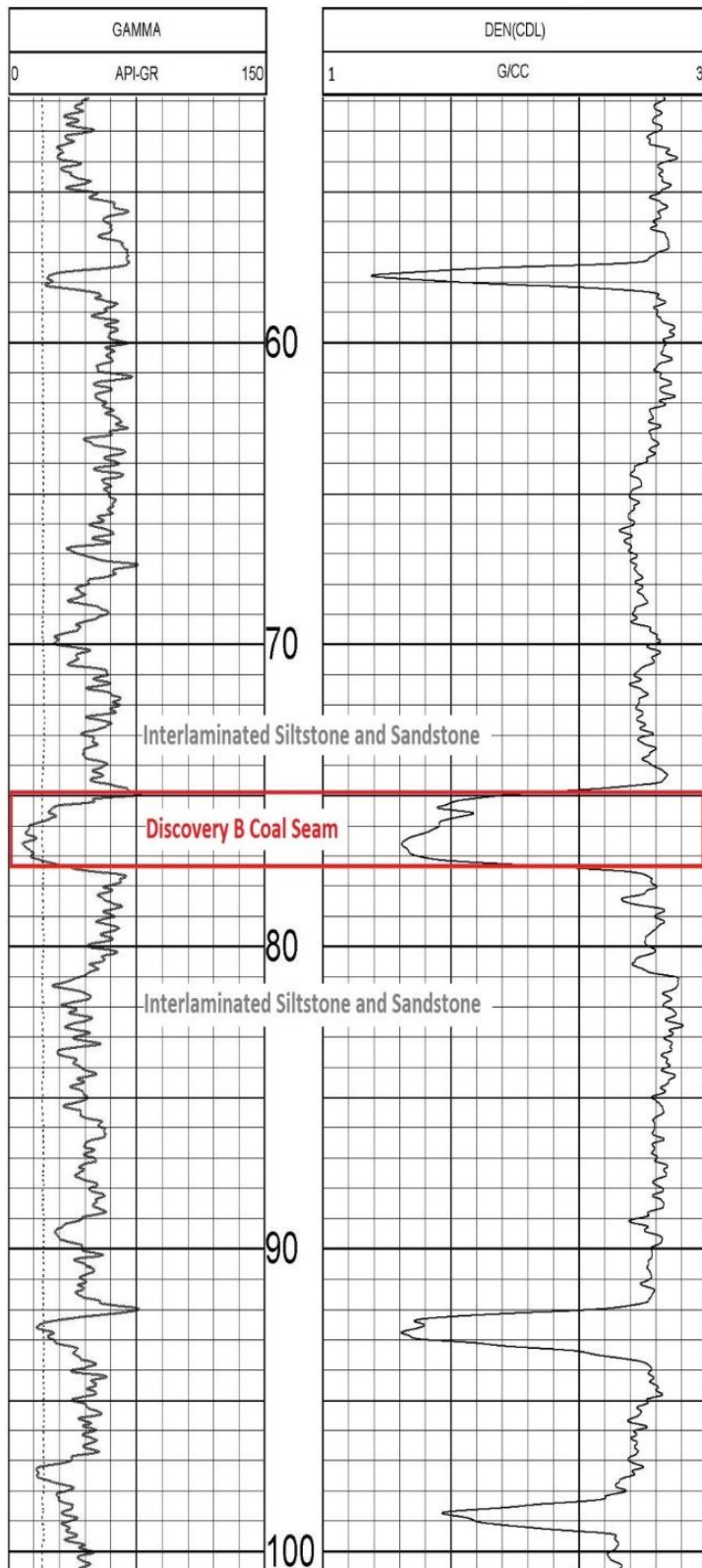
upon closer examination made possible by the close drill hole spacing in the BSA, it was proven not to be the case.

As marker horizons were identified, obvious lithological horizons became evident, typically bound by marker horizons or zones with large sandstone beds. This led to the development of the four lithological horizons mentioned above and shown in Table 4.1.

Table 4.1 Nomenclature for each of the identifiable seams in the Groundhog Property. Individual coal seams are given a horizon name and the associated seam; e.g. Duke E.

Horizon	Seam
Davis	A
	B
	C
	D
Marker 1	
Discovery	A
	B
	C
	D
	E
Marker 2	
Duke	A
	B
	C
	D
	E
	F
	G
	H
Trail	A
	B
	C
	D

Within the newly configured horizons, and based on coal seam thickness and lateral extent, Discovery B and C, and Duke E coal seams appear to be most amenable for resource development and these coal seams will be discussed in greater detail below. There are more intersections of the Discovery Horizon than other horizons within Groundhog North due to this horizon outcropping within the BSA. The Davis Horizon has already outcropped in a large portion of the Groundhog property and is usually encountered closer to high topography. The Duke and Trail Horizons are typically only encountered in deep drillholes or on the eastern side of the property where seam dips and topography result in less depth of cover to these horizons.



4.4.1 Discovery B Coal Seam

The unit underlying the Discovery A coal seam consists of bioturbated, interlaminated siltstone and sandstone with burrows and quartz veinlets throughout with a standard thickness of 30 m. Located halfway through this unit, is the Discovery B coal seam, 12 to 17 m below the Discovery A coal seam. The Discovery B coal seam is characterized by a clean, low gamma signature and planar, sharp contacts (Figure 4.10, Figure 4.11). The Discovery B coal seam is comprised of clean, high quality coal; ranges from 0.3 to 9.0 m in thickness with the largest measurements due to local structural thickening. Overall, the Discovery B coal seam has an average thickness of 2.1 m. Typically, 76 % of coal seam thickness is logged as coal; the remainder is comprised of minor quartz-carbonate veining and cleat infill. The Discovery B coal seam was intersected 57 times in drill holes and is stratigraphically the uppermost seam of importance in the Groundhog Property that we currently know about. The continuity, thickness, and shallow depth make the Discovery B coal seam a very viable prospect with respect to further resource development and potential mining.

Figure 4.10 Geophysical log from drill hole DHGH-14-10 illustrating gamma (left) and density (right) and the clean gamma signature of Discovery B coal seam.

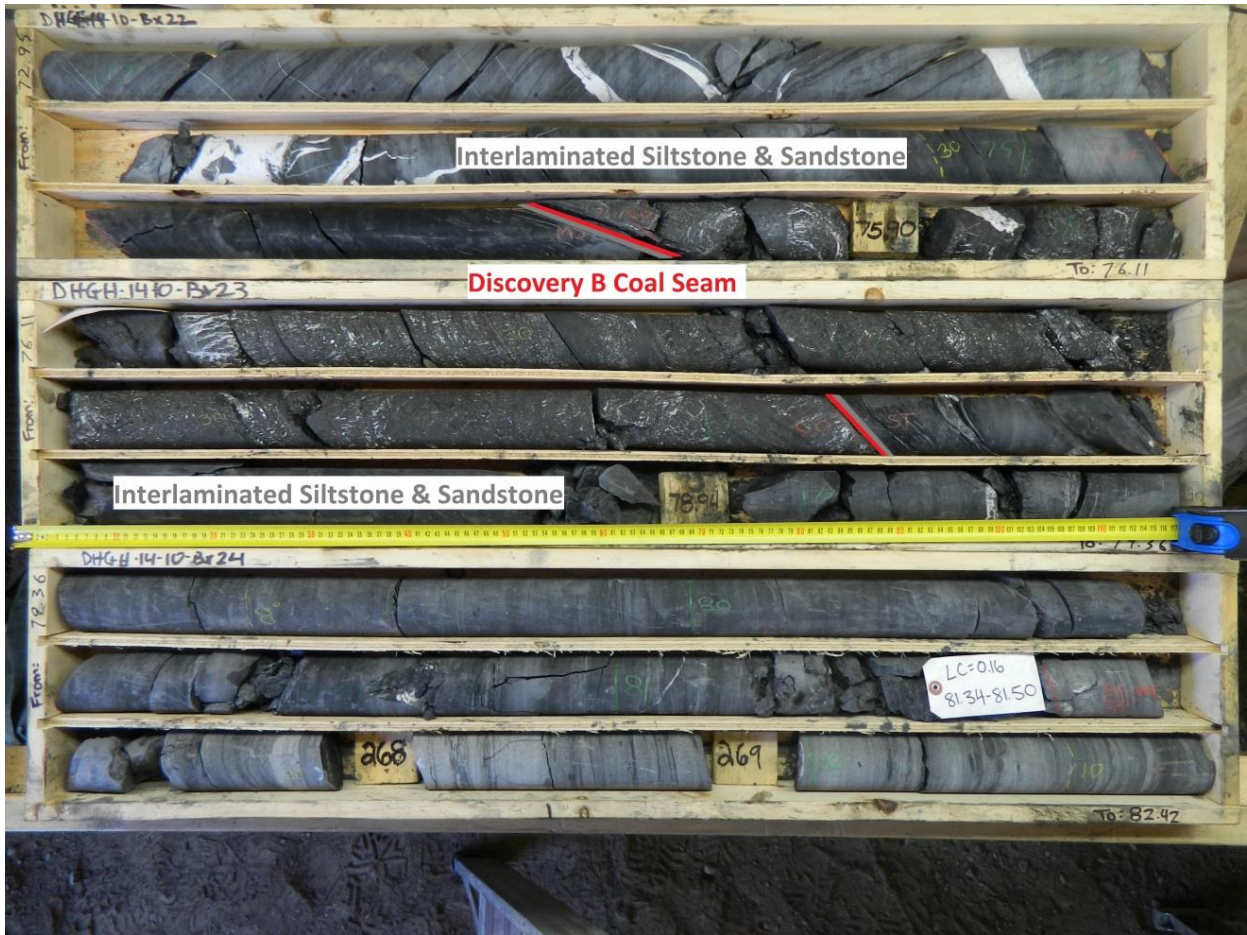


Figure 4.11 Drill core photo of the clean, low density Discovery B coal seam from drill hole DHGH-14-10

4.4.1.1 Coal Seam Thickness

As shown in Figure 4.12, the thickness of Discovery B coal seam ranges from 0.2 m to 5.35 m. An average thickness of 1.64 m was obtained for all Discovery C coal seam intersections once plotted in the 3D geologic model. Figure 4.12 indicates that Discovery B coal seam thins to the west and thickens to the east. There are areas of folding where Discovery B coal seam is structurally thickened, these can be identified as the thicker areas running north-west to south-east in Figure 4.12. This interpretation is supported by down hole geophysical logs and core photography.

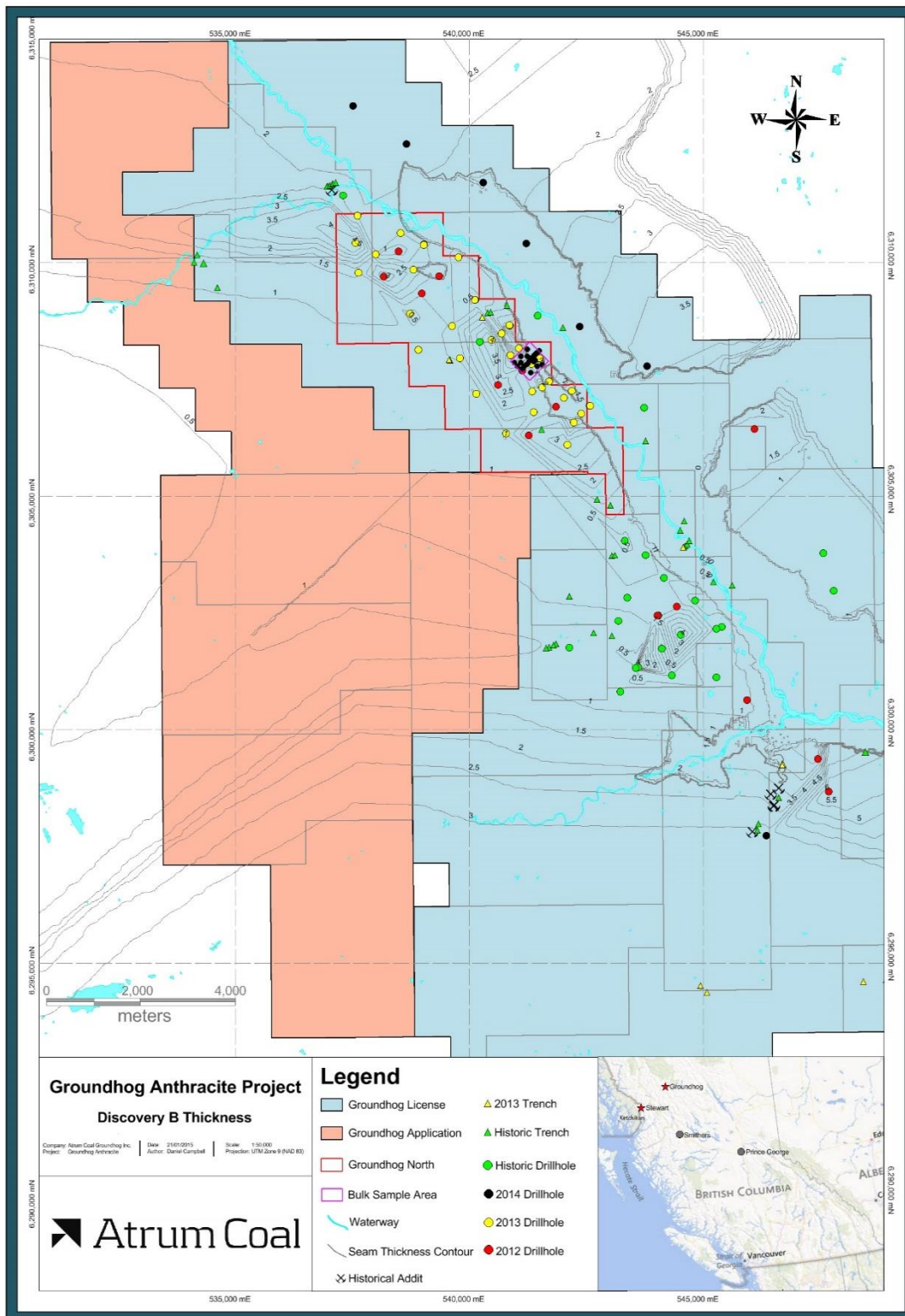


Figure 4.12 Discovery B Coal Seam Thickness Contours

4.4.1.2 Plies

The Discovery B coal seam in some instances includes thin, generally less than 10 cm, mudstone partings within the coal seam. Table 4.2 summarises the occurrence of seam parting material within the Discovery B coal seam.

Table 4.2 Discovery B coal seam and parting thickness summary

	Total Cumulative Coal Thickness (m)	Total Cumulative Parting Thickness (m)	Total Thickness (m)	Total % of Section Parting
Average	1.64	0.09	1.73	5.2
Maximum	5.35	0.95	5.95	16
Minimum	0.2	0	0.2	0

4.4.1.3 Seam Dip

Due to a series of synclines and anticlines trending northeast-southwest, the Discovery B coal seam dips vary considerably from almost horizontal to sub-vertical and in rare situations, overturned in Groundhog North.

4.4.1.4 Depth of Cover

The Discovery B coal seam is considered to be one of the shallower coal targets within Groundhog North; the depth ranges from 0 to 300 m. However, within the main exploration areas the Discovery B coal seam is typically intersected between 0 and 60 m below surface. The Discovery B coal seam dips to the west and topography rapidly increases in height resulting in compounding depth of cover. There are only rare intersections of the Discovery B coal seam on the east side of the Skeena River due to it outcropping and also with limited data points as shown in Figure 4.13.

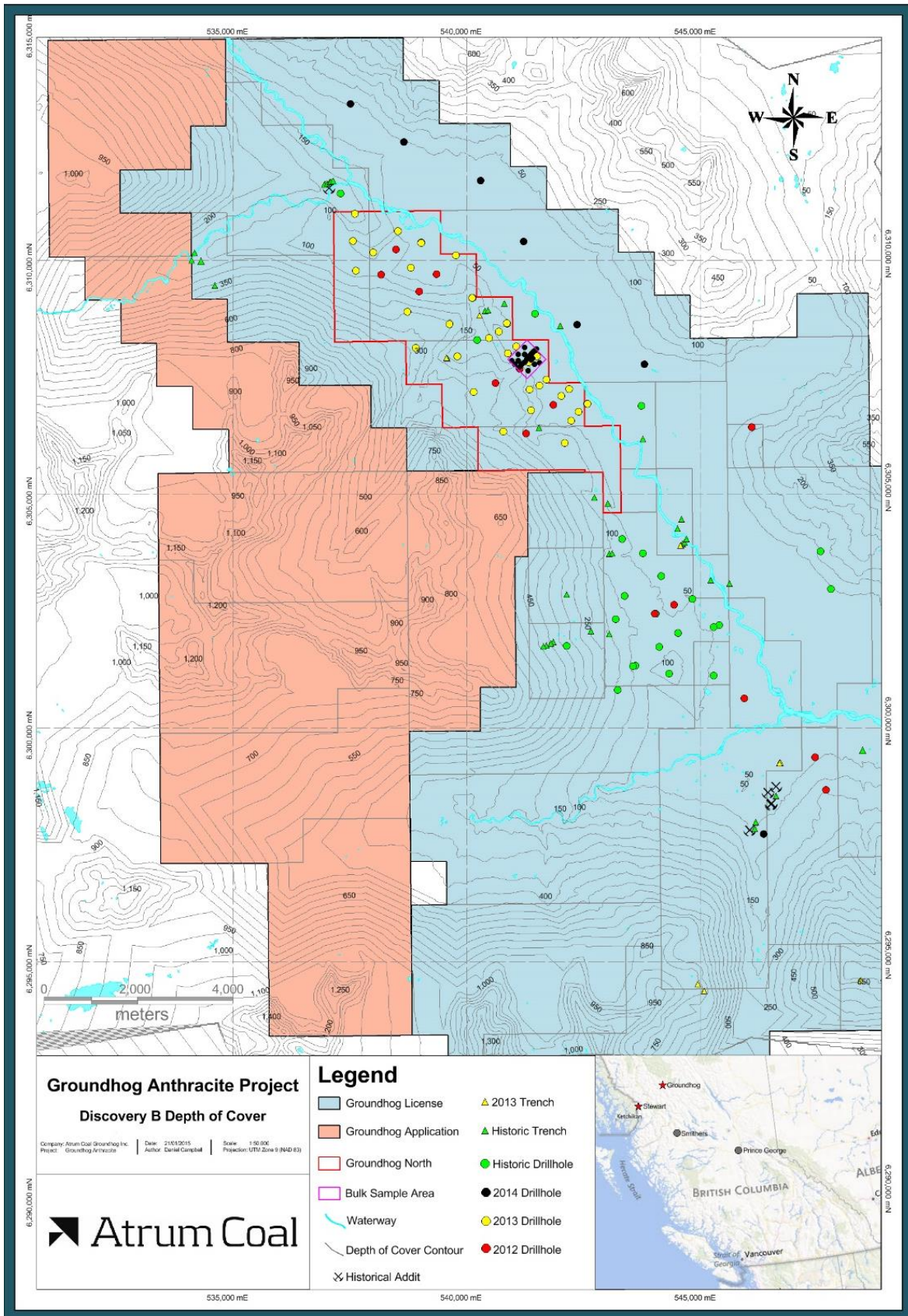


Figure 4.13 Discovery B Coal Seam Depth of Cover Contours

4.4.2 Discovery C Coal

Seam

Beneath the continuation of interlaminated siltstone and sandstone, rests the Discovery C coal seam, with a gradational upper contact. 15-20 m of interburden separates the Discovery B and Discovery C coal seams. The Discovery C coal seam can contain several small mudstone partings and minor quartz-carbonate cleat infill, as visible in its geophysical signature (Figure 4.14) and in drill core photos (Figure 4.15). Discovery C coal seam ranges in thickness from 0.2 m to 11.80 m due to structural thickening and has an average thickness of 2 m, with 76% logged as coal. It grades into 0.5 m each of carbonaceous mudstone and siltstone. Its lower contact is gradational into 10-15 m of siltstone with sandstone laminations, and eventually into sandstone of varying grain size with irregularly interbedded siltstone. The Discovery C coal seam was intersected 57 times in drillholes, and is significant in regards to its mining potential in the Groundhog Property.

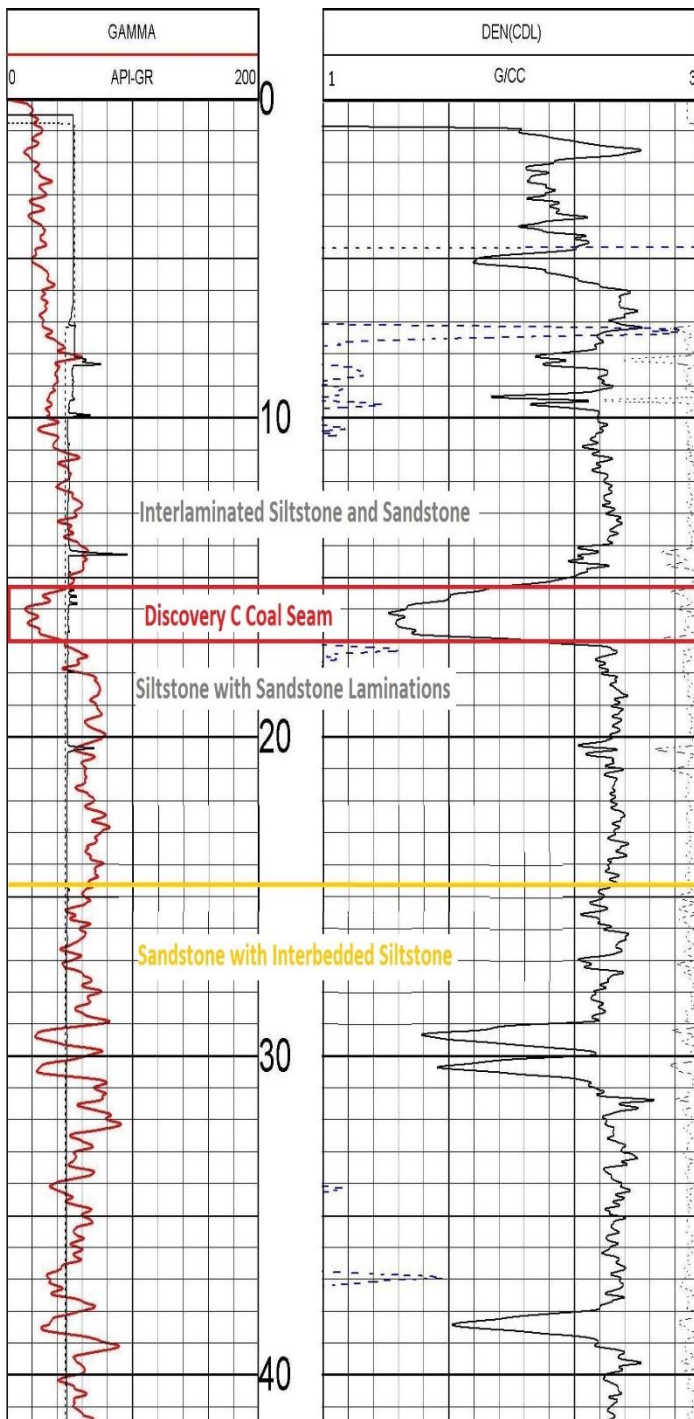


Figure 4.14 Geophysical log of gamma (left) and density (right) of a typical Discovery C coal seam from drill hole DHGH-14-02

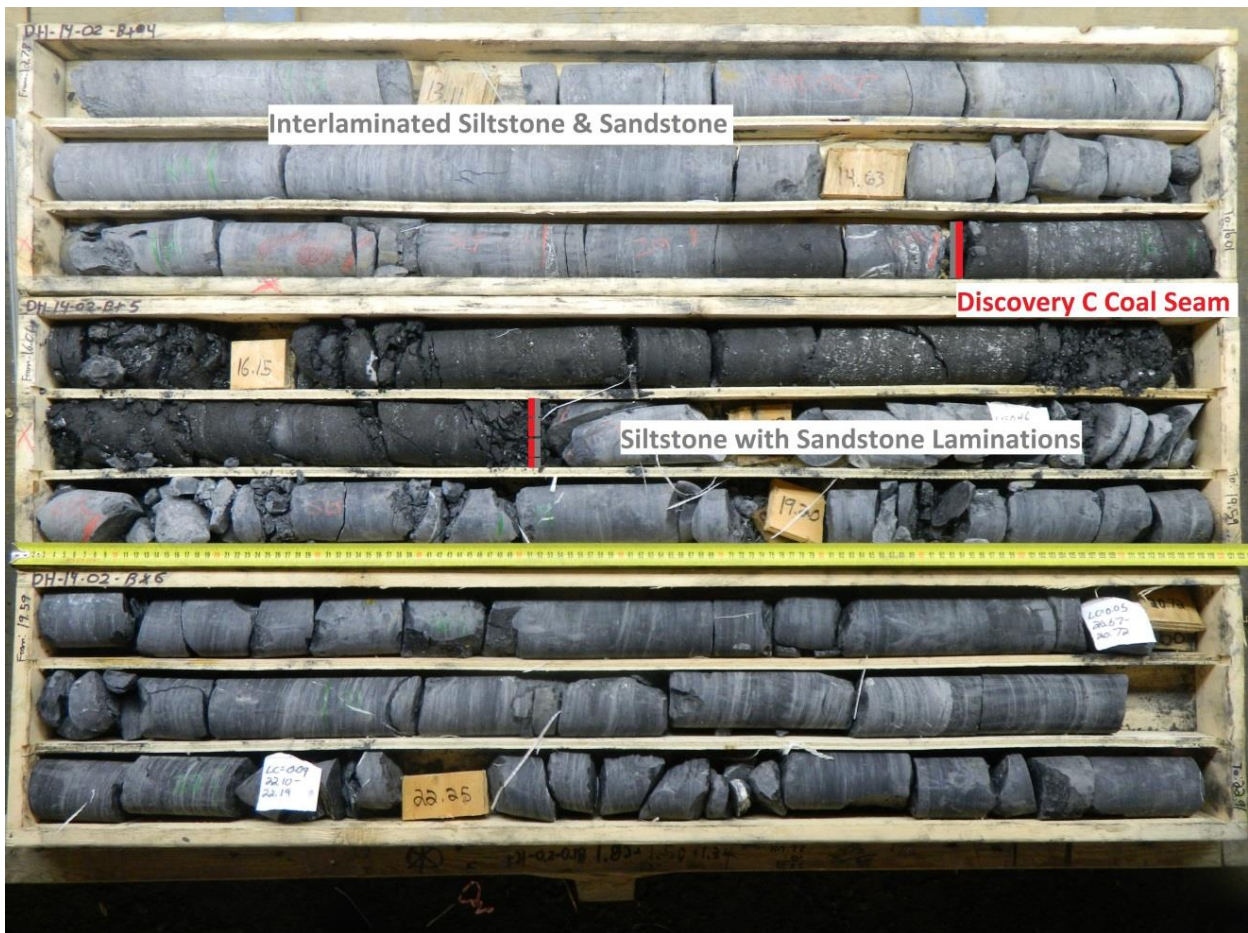


Figure 4.15 The Discovery C coal seam as it appears in drill core in drill hole DHGH-14-02 within a unit of interlaminated siltstone and sandstone. Minor mudstone is visible throughout the seam in addition to minor quartz-carbonate cleat infill.

4.4.2.1 Thickness

As shown in Figure 4.16, the thickness of the Discovery C coal seam ranges from 0.5 m to 2.5 m as defined by drill hole intersections. An average thickness of 1.3 m was obtained for all Discovery C coal seam intersections once plotted in the 3D geologic model. There are localised areas where thickness increases significantly due to structural thickening; this is usually around the hinge of folds. Discovery C coal seam is laterally extensive and is very similar to the Discovery B coal seam in its depth, thickness and characteristics. This interpretation is supported by the down hole geophysical logs and drill core photography.

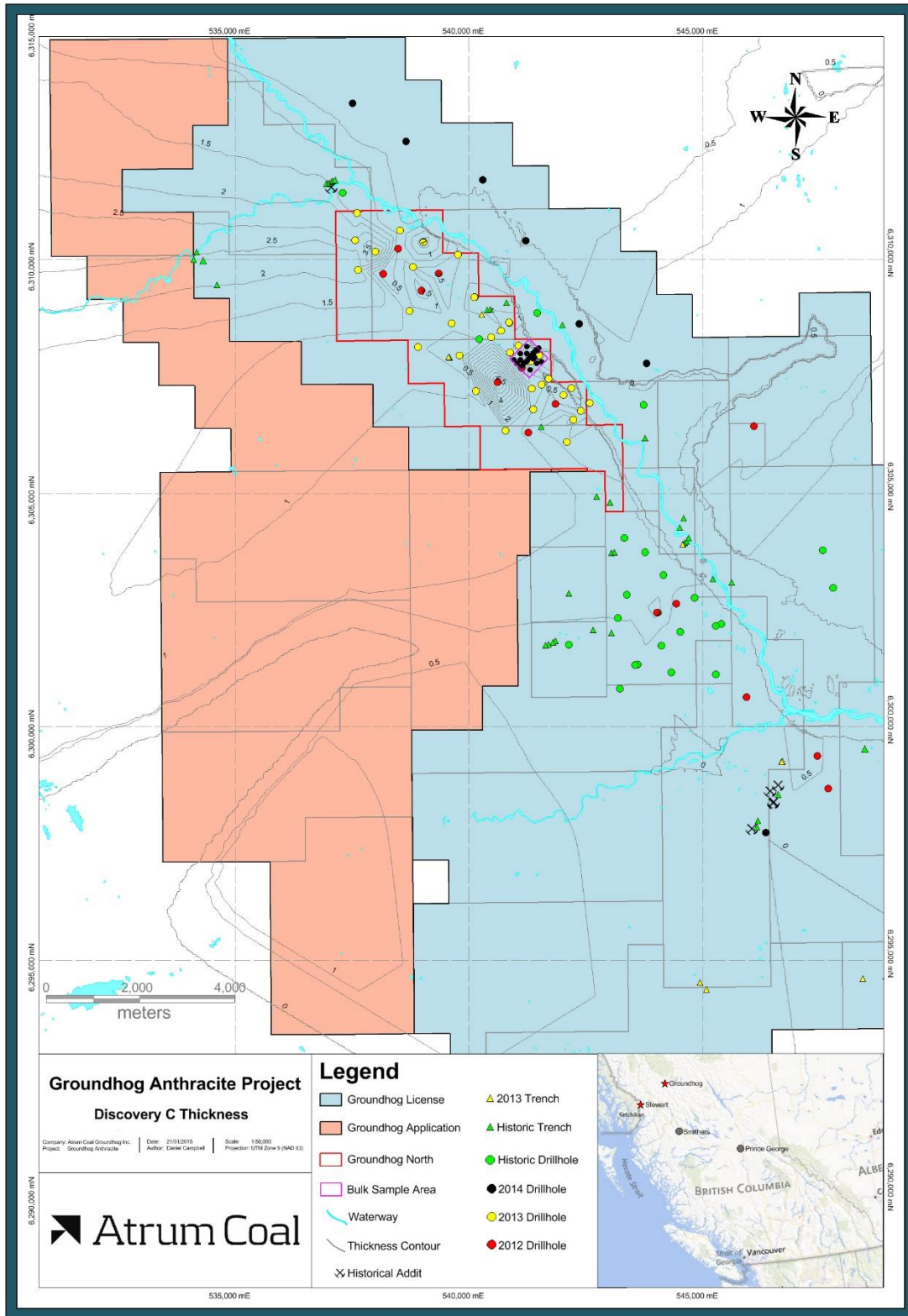


Figure 4.16 Discovery C Coal Seam Thickness Contours

4.4.2.2 *Plies*

Discovery C coal seam in some instances includes thin, generally less than 11 cm, mudstone partings within the coal seam. Table 4.3 summarises the occurrence of parting material in the Discovery C coal seam.

Table 4.3 Discovery C coal seam and parting thickness summary

	Total Cumulative Coal Thickness (m)	Total Cumulative Parting Thickness (m)	Total Thickness (m)	Total % of Section Parting
Average	1.32	0.11	1.43	7.7
Maximum	6.95	1.95	8.84	22
Minimum	0.2	0	0.2	0

4.4.2.3 *Seam Dip*

Due to a series of synclines and anticlines trending northeast-southwest, the Discovery C coal seam dips vary considerably from almost horizontal to sub-vertical and in rare situations, overturned in Groundhog North.

4.4.2.4 *Depth of Cover*

Discovery C coal seam, similar to Discovery B coal seam, is considered to be one of the shallower coal targets within Groundhog North, the depth within ranges from 0 to 300 m. However, within the main exploration areas the Discovery C coal seam is typically intersected between 0 and 80 m below surface. Discovery C coal seam dips to the west and topography rapidly increases in height resulting in compounding depth of cover. There are only rare intersections of Discovery C coal seam on the east side of the Skeena River due to it outcropping and also with limited data points as shown in Figure 4.17.

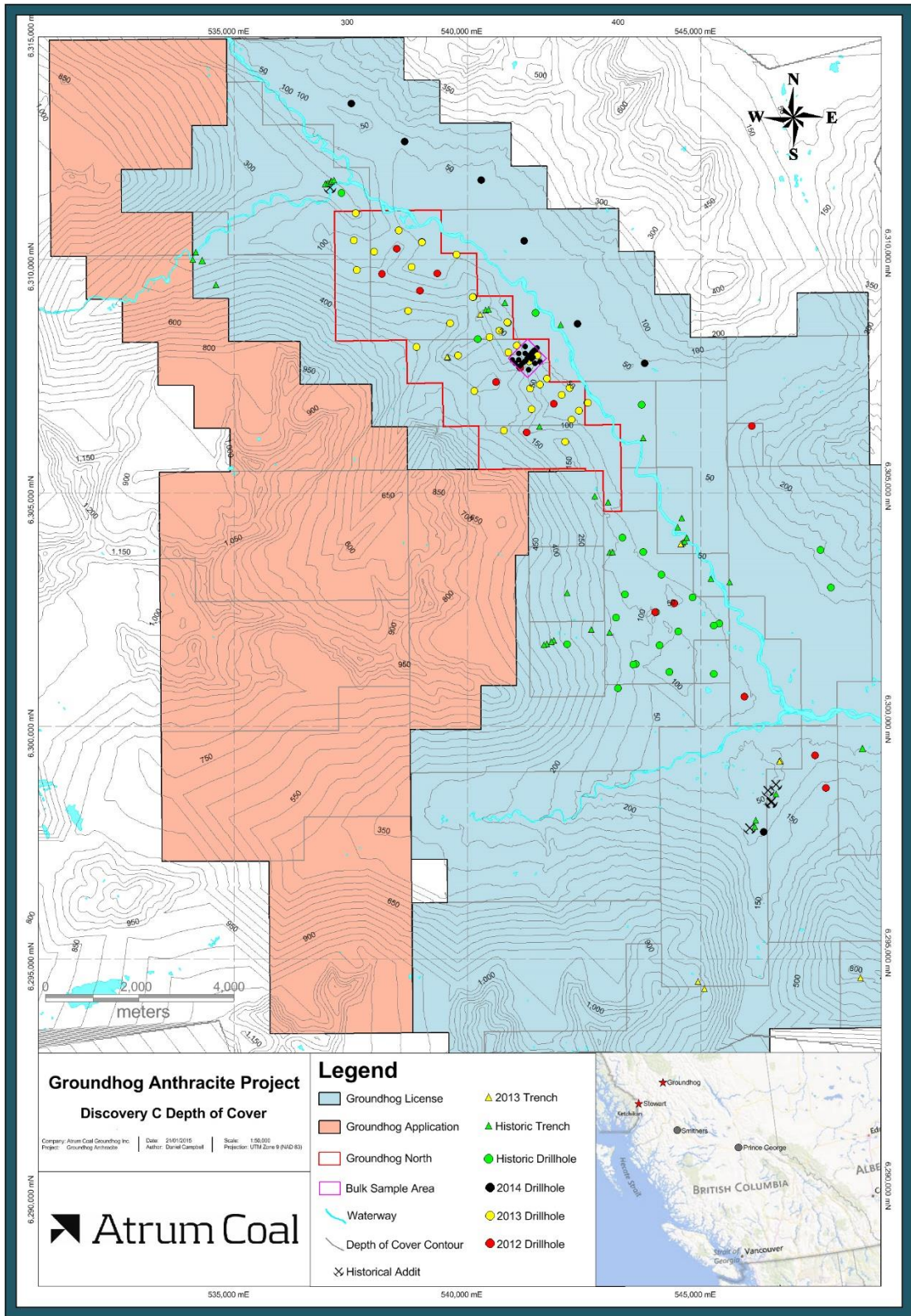


Figure 4.17 Discovery C Coal Seam Depth of Cover Contours

4.4.2.5 Interburden

The interburden sediments that separate coal seams in Groundhog North are comprised mainly of interbedded siltstone, sandstone and carbonaceous mudstone beds, with minor conglomerate. The siltstones and sandstones display numerous thin carbonaceous laminations and shelly fragments sometimes forming into pebbly lag beds. There is an abundance of bioturbation and dewatering structures within the sediments. Bedding dips range from horizontal to near vertical.

Localised veining occurs within both the sediments and coal seams with veins comprised mainly of quartz and minor apatite. The interburden thickness between the targeted Discovery B and Discovery C coal seams is typically 5 m to 15 m in the northern part of the Groundhog Property, but increases to the west. However, a lack of data far to the west restricts accuracy of interburden thicknesses in this area. Refer Figure 4.18.

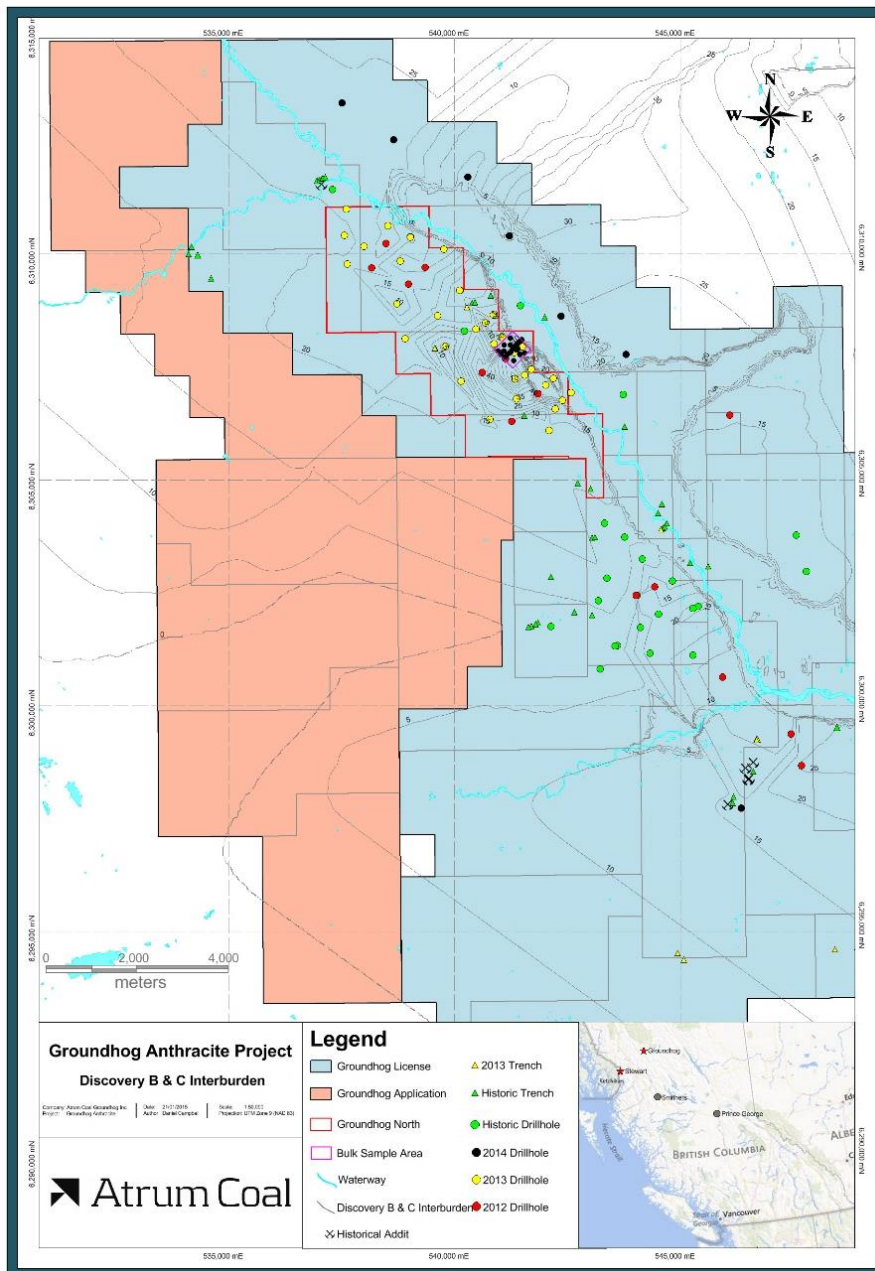


Figure 4.18 Interburden Thickness Contours between Discovery B and Discovery C Coal Seams

4.4.3 Duke E Coal Seam

Above the Duke E coal seam is 10-15 m of clean, fine grained sandstone followed by 9-10 m of interlaminated to irregularly interbedded siltstone and sandstone, often containing dewatering structures. Duke E coal seam is distinguished by its very sharp contacts and clean, high grade coal (Figure 4.19, Figure 4.20) The lower contact is underlain by 1 to 3 m of coaly mudstone that grades out into a coaly siltstone unit. The Duke E coal seam has an average thickness of 2 m. In intersection, Duke E coal seam can range in thickness from 0.60 m to up to 6.8 m due to structural thickening. Structural thickening is supported by drill core photos, dipmeter, and drill hole geophysical logs. The Duke E coal seam currently represents the stratigraphically lowermost coal seam of economic importance of the Groundhog Property. This is further substantiated due to the low number of drillholes that penetrate deeper than Duke E coal seam. The Duke G coal seam occurring stratigraphically lower has a very distinct geophysical signature; a 'Marker' perhaps which further constrains the position of the Duke E coal seam (Figure 4.19).

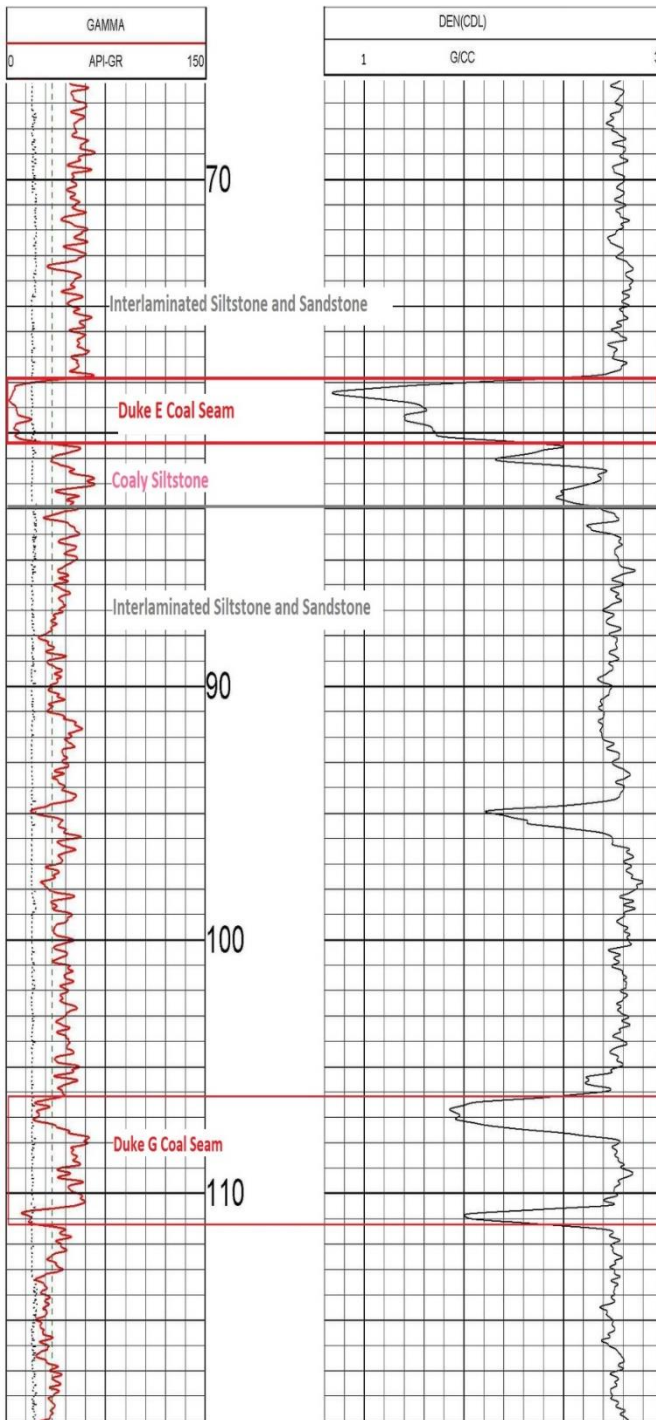


Figure 4.19 Geophysical log from drill hole DHGH-14-35 of gamma (left) and density (right) of the typical Duke E coal seam signature. The sharp contacts and clean coal characteristics are obvious.



Figure 4.20 The Duke E coal seam as it is seen in drill core from drill hole DHGH-14-35.

4.4.3.1 Thickness

As shown in Figure 4.21, the thickness of the Duke E coal seam ranges from 1 m to 4 m. An average thickness of 2.45 m was obtained for all Discovery C coal seam intersections once plotted in the 3D geologic model. Across Groundhog North Duke E coal seam exhibits relatively consistent thicknesses of 2 m but increases with structural thickening, as shown in Figure 4.21 along the structural trend which runs approximately north-west to south-east. This interpretation is supported by the down hole geophysical logs and drill core photography.

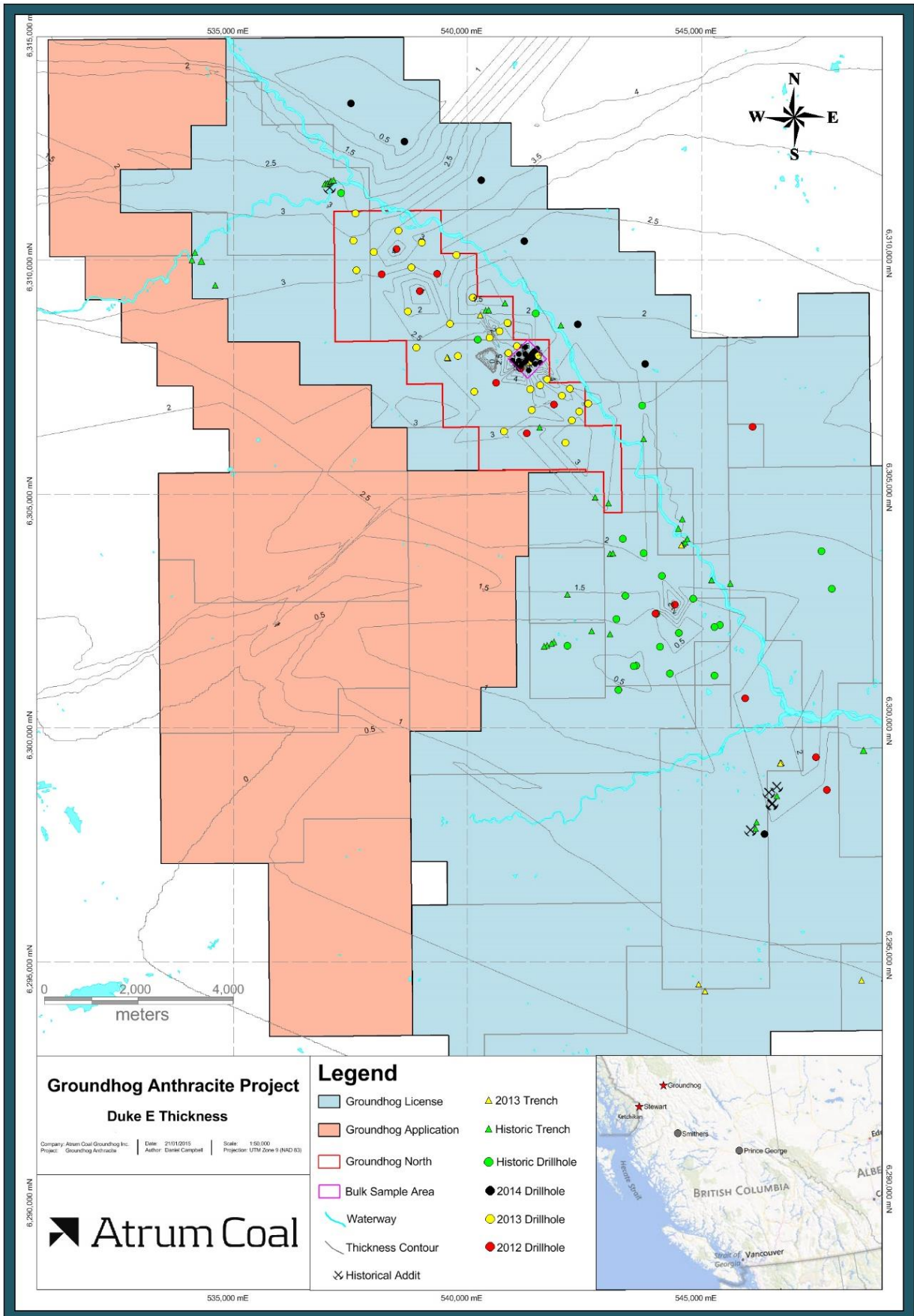


Figure 4.21 Duke E Coal Seam Thickness Contours

4.4.3.2 Plies

Duke E coal seam in some instances includes thin, generally less than 15 cm, mudstone partings within the coal seam. Table 4.4 summarises the occurrence of partings in the Duke E coal seam.

Table 4.4 Duke E coal and parting thickness summary

	Total Cumulative Coal Thickness (m)	Total Cumulative Parting Thickness (m)	Total Thickness (m)	Total % of Section Parting
Average	2.01	0.13	2.14	5.6
Maximum	6.84	0.88	7.19	13
Minimum	0.25	0	0.25	0

4.4.3.3 Seam Dip

The Duke Horizon bedding dip including the Duke E coal seam has been documented to exhibit far shallower dip angles than that seen higher up in the Currier Formation. There are localised areas where structure increases the dip of the coal seam; but typically the Duke E coal seam dips between 0 and 15 degrees. This is primarily due to the interpretation that the Duke Horizon is structurally less complex than the overlying horizons as a result of thicker, more competent rocks surrounding the seams in the Duke Horizon.

4.4.3.4 Depth of Cover

Duke E coal seam is considered to be one of the deeper coal targets within Groundhog North. The depth ranges from 150 to 250 m below surface within the areas Atrum has conducted most of their exploration, as shown in Figure 4.22. The Duke E coal seam rises closer to the surface east of the Skeena River where it has been intersected in drillholes as shallow as 78 m and has been modelled to come as shallow as 50 m. To the west of Groundhog North, Duke E coal seam dips downwards and topography increases in height rapidly resulting in increasing depths of cover.

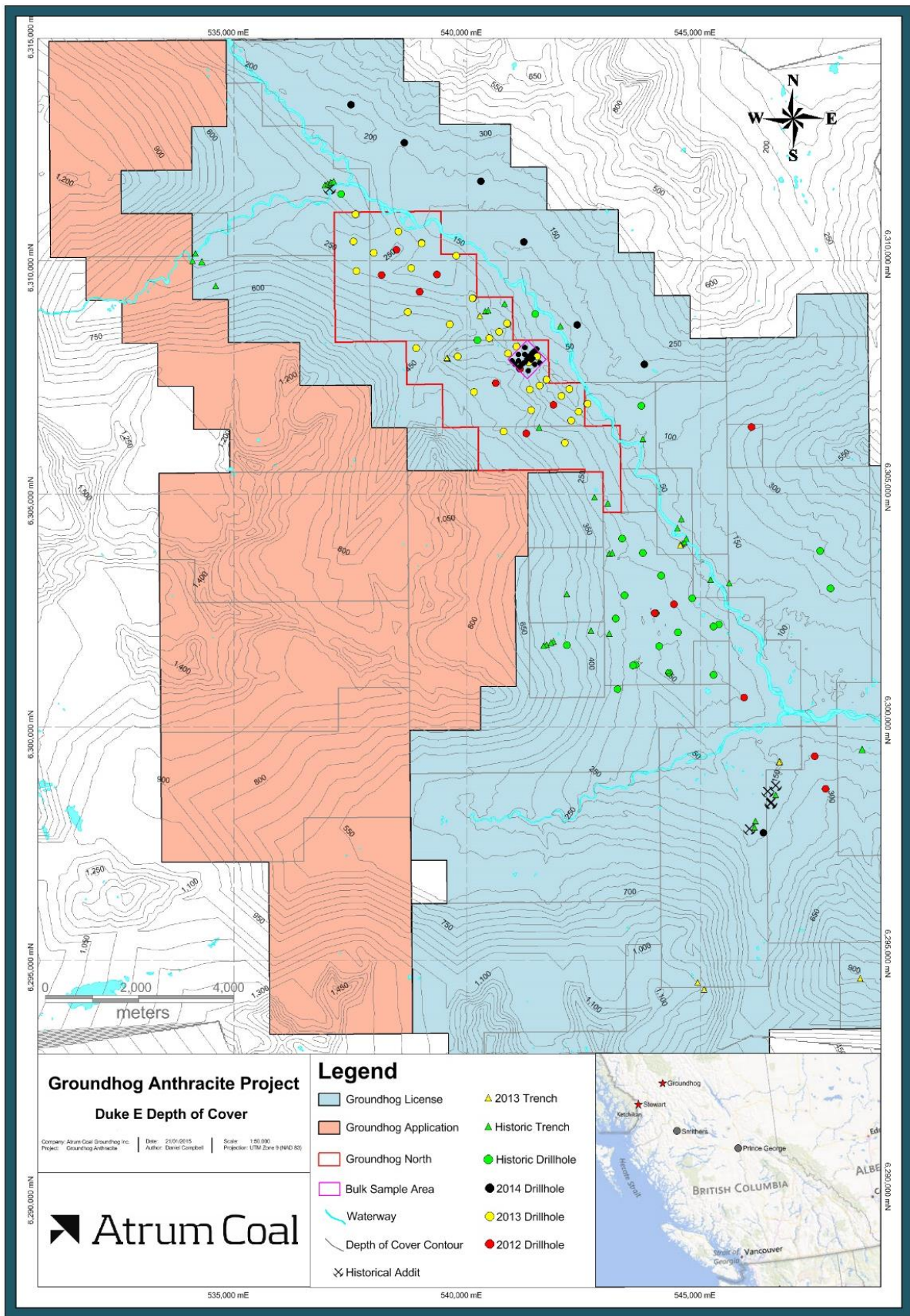


Figure 4.22 Depth of Cover Contours for Duke E Coal Seam

4.4.3.5 Interburden

The interburden thickness between the targeted Discovery C and Duke E coal seams is typically 100 to 120 m.

These interburden thicknesses indicate that minimal interaction effects can be expected between the two seams in an underground mining environment.

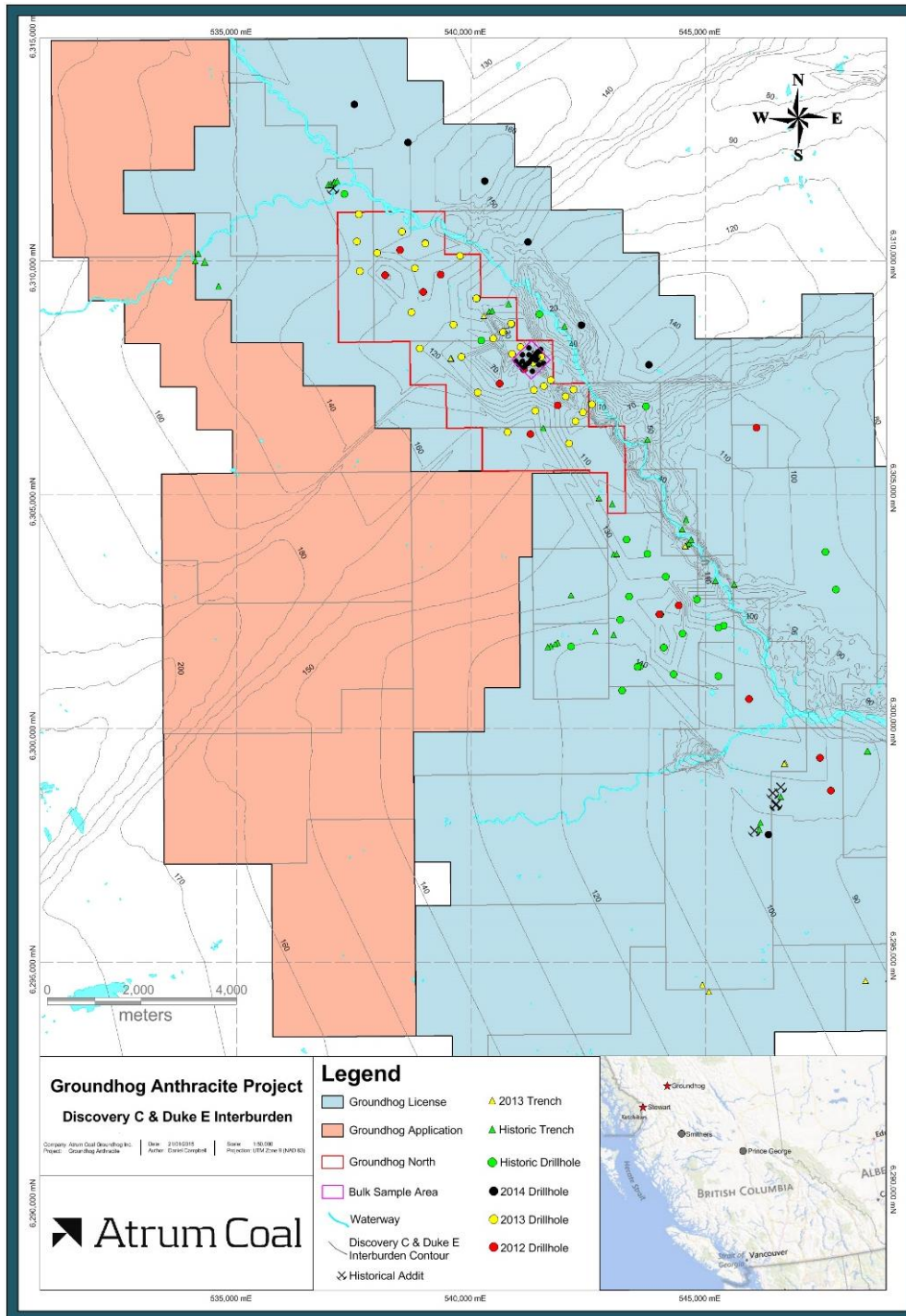


Figure 4.23 Interburden Thickness Contours between Discovery C and Duke E Coal Seams

4.4.4 Other Coal Seams of Significance

During the 2014 drilling program and correlation exercise, two other coal seams of significance were identified. These are the Duke H and Trail C coal seams. There is limited information about these coal seams due to the small number of drill hole intersections; however the intersections are positive and will become targets for future drilling.

4.5 Structural Geology

The sediments of the Bowser Basin have undergone two major deformational events, the first of which was of the highest intensity. Compression from the northeast and the southwest occurred during the uplift of the Coast Crystalline Belt. Locally the result of this F1 deformation can be observed in the northwest-southeast trending Beirnes Synclinorium (Figure 4.24) and thrust faulting that is more intense in the southern portion of the Groundhog Coalfield than in the north. The southwest limb of the synclinorium dips gently, bringing coal seams in the area closer to surface near the outer most extent of the limb. Evidence for shearing of the coal seams in this portion of the synclinorium is minimal. The northeast limb, however, is overturned and associated with extensive cleavage and shearing in the coal seams as the limb approaches the Skeena River. Cleavages related to F1 deformation are well developed in fine grained lithologies near the fold axes.

Northwest-southeast compressional F2 deformation is coaxial to that of F1, forming shallow, open northeast-southwest trending folds that affect the plunge of F1 folds by approximately 5°. F2 folds vary in wave length from 100 m to 700 m and vary in amplitude from 100 m to 200 m. Flat laying thrust faults resulting from the F2 deformation event are thought to be related to the hanging walls of drag folds and have displacement visible along bedding surfaces.

Bustin and Moffatt (1983) suggested that the style of deformation in the Bowser Basin is related to lithology. This hypothesis is supported in the way that the higher, more competent, massive beds of the Devil's Claw and Upper McEvoy units are characterized by broad, open, low-amplitude folds while the relatively thin-bedded, fine-grained lower McEvoy and Currier units are characterized by high amplitude, shorter wavelength folds that tend to be disharmonic with the overlying units.

The Groundhog Thrust Fault is the principle fault within the Groundhog Coalfield. Striking approximately 310°, with an unknown dip, the fault extends from Currier Creek northwest outside of Atrum's property. Along the fault, rocks of the McEvoy Formation are commonly thrust over those of the Currier Formation. The front of the fault is serrated with multiple lobes of McEvoy Formation rock protruding over Currier Formation rocks.

Approximately 6.5 km west of the Groundhog thrust fault lies the Upper Currier Creek normal fault. Striking approximately 315° to 340°, with a believed near vertical dip, the fault extends north from the headwaters of Currier Creek.

Historic reports and associated maps suggest multiple anticlines and synclines trending northwest-southeast within the Beirnes Synclinorium, but additional mapping to confirm previously reported measurements is needed.

Following the 2013 field exploration and drilling program it was apparent that the structure of the coal field can be very complicated in localised zones as a result of the two phases of deformation,

this made correlation of coal seams particularly difficult; however, a much greater understanding of the structural environment is now known.

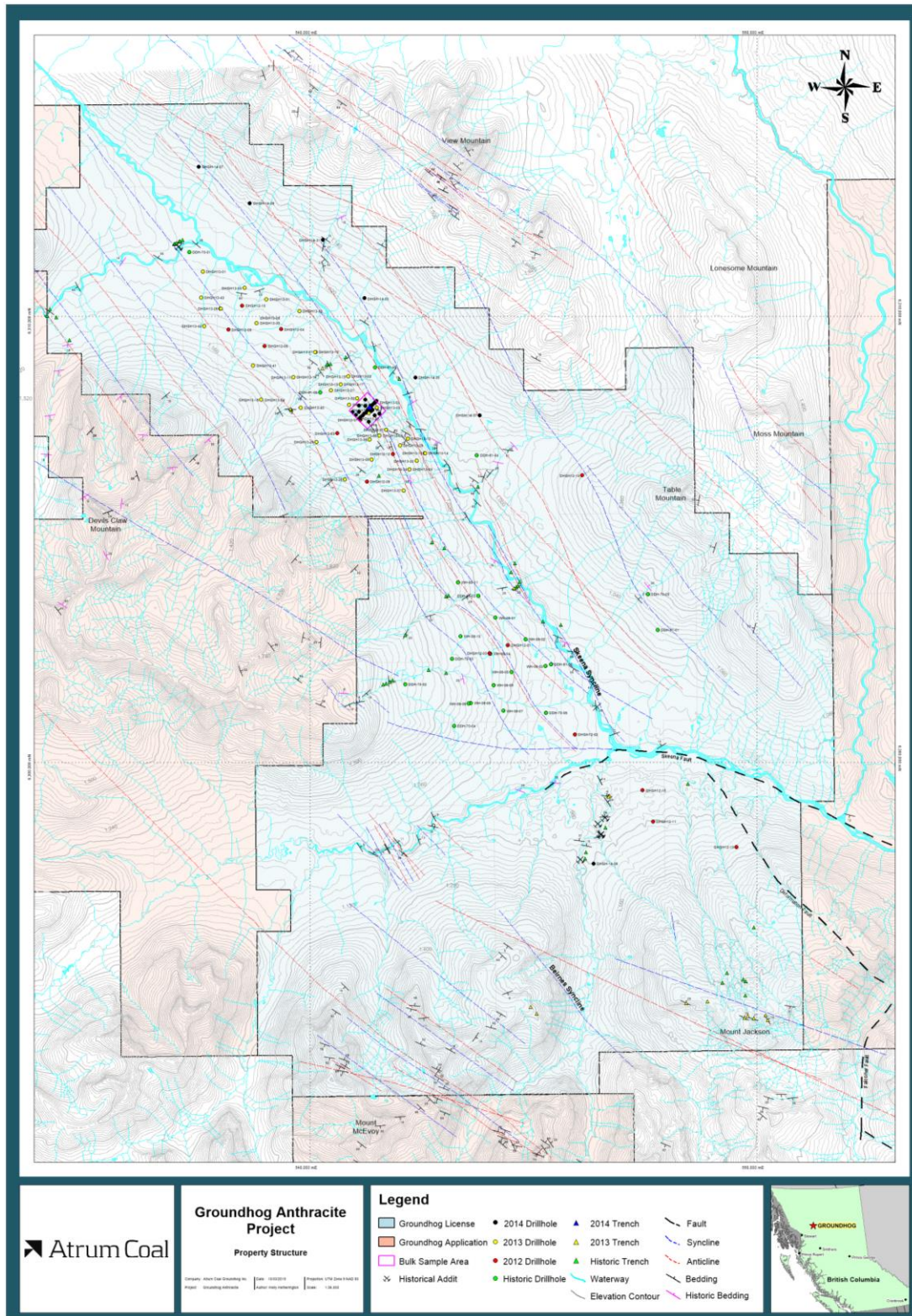


Figure 4.24 General Structure of the Groundhog Coal Field

A 2013 report by consulting structural geologist, Michael Cooley on the structure of the Groundhog Property is attached in Appendix 2.

4.6 Deposit Type

The definition of “Deposit Type” for coal properties is different from that applied to other types of geologic deposits. For coal deposits this is an important concept because the classification of a coal deposit as a particular type determines the range of values that may be applied during the estimation of reserves and resources.

As specified in Geological Survey of Canada (GSC) Paper 88-21, which is a reference for coal deposits as specified in NI 43-101, coal “Deposit Types” are either surface mineable, underground mineable, non-conventional or sterilized. All of the deposits of interest at Groundhog in this report refer to the surface mineable coals. In addition to “Deposit Types” the GSC Paper 88-21 also refers to “Geology Types”, which are a definition of the amount of geological complexity, usually imposed by the structural complexity of the area. The classification of a coal deposit by “Geology Type” determines the approach to be used for the resource estimation methodology and the limits to be applied to certain key estimation criteria.

The identification of a particular deposit type for a coal property defines the confidence that can be placed in the extrapolation of data values away from a particular point of reference. The classification scheme of the GSC is similar to many other international coal reserve classification systems but it has one significant difference. This system is designed to accommodate differences in the degree of tectonic deformation of different coal deposits in Canada. Four classes are provided for that range from the first, which is for deposits of the Plains type with low tectonic disturbance, to the fourth which is for Rocky Mountains type deposits such as that of Byron Creek, which is classed as "severe". The second class is referred to as "moderate"; the gently to moderately dipping but only moderately faulted strata of the Panorama properties are typical of this class. The Mount Klappan Anthracite deposit to the north is classified as “complex” due to the tight folds, steep and overturned limbs and common faults. However, portions of that property that are not so deformed are also considered “moderate”.

In 2012 Moose Mountain Technical Services (MMTS) evaluated the Groundhog Coal Field for Atrum Coal in 2012 prior to initial tenure acquisition, at the time MMTS classified Groundhog as structurally moderate, but recent exploration has shown that at least portions of the deposit are likely complex structurally.

A copy of geological maps and cross sections from this chapter can be found in Appendix 11

5. Atrum Exploration Programs

All exploration programs on the Groundhog property to date have been conducted with the use of aircraft. This has typically involved airplane to access the camp using an Otter, Islander, Beaver or SkyVan. Helicopters have been used extensively to access exploration areas and conduct drill rig and equipment moves, facilitate pad construction and move people around in the field. Winter access has been limited to Otter and Beaver fixed wing aircraft due to their optional snow ski attachments and helicopter use.

An SRS 300 helicopter portable hydraulic drill is the primary drill rig used to complete drilling programs on site provided by Driftwood Diamond Drilling of Smithers, BC. However, in 2014, Geotech Drilling of Prince George, BC provided an HP200 drill for drilling water monitoring wells. Most holes drilled have been cored with a diamond bit to recover HQ or HQ3 sized core.

5.1 2012 Exploration Program

In May 2012 Atrum acquired the Groundhog Property and conducted their first field program in September and October of that year. At that time the property consisted of 16 contiguous licences covering 7,472 ha and seven adjoining coal licence applications covering 11,118 ha for a total of 18,590 ha.

The exploration program was designed to test the extent of the coal measures within approximately 300 to 350 m of surface throughout the coal licences. Much of the area had not been previously tested by drilling, but surface mapping and trenching information from legacy data in previous assessment reports helped guide the general layout of the drill program.

The 2012 exploration programme consisted of 4,992 m of drilling in 15 diamond drill cored holes on the coal licences.

5.2 2013 Exploration Program

As a consequence of the positive coal intersections derived from the cored drillholes drilled during the 2012 season, Atrum's 2013 exploration drilling program focussed on the north-western portion (known as 'Groundhog North') of the Groundhog Anthracite Project where eight holes were drilled in 2012.

The 2013 exploration programme consisted of approximately 8,000 m of drilling in 64 diamond drill cored holes located on the coal licences. 43 of the drill holes were HQ holes and 17 were PQ size. A further 4 PQ holes were drilled to the south west of Groundhog North between Davis and Discovery Creeks (Borehole PQ12-01- 1 to PQ12-01-4). The exploration took place between June and September 2013.

The deepest drill hole was drilled to more than 470 m (DHGH13-07). Most drill holes were vertical but 10 of the HQ holes were inclined. Typical casing depth was less than 4 m.

5.3 2014 Exploration Program

5.3.1 Overview

Following the 2013 field program, three locations were identified with shallow coal intersections and good coal quality results. One of these areas was chosen as a potential Bulk Sample Area (BSA) based on coal quality results. The focus of the 2014 exploration program was to define the BSA to a level where bulk sample mining could take place. This program took place over two phases with the first being in winter when six holes were drilled between the 3rd and 18th of April. This work ceased over the spring break up as snow melted and continued again in summer once the ground was clear of snow when an additional 27 holes were drilled within the BSA.

5.3.2 Drilling

A total of 52 holes were drilled in 2014 including 10 holes for water monitoring with approximately 10,700 m drilled. The drill hole collar summary information is conveyed in Table 5.1 and a spreadsheet is included in Appendix 5. The summer program took place between the 3rd of June and the 13th of October.

Seven of the 52 holes were drilled regionally once tenures previously under application were converted to licenses. These holes were placed strategically along the eastern side of the field area to identify any areas worth exploring further. This program returned positive results with good coal intersections and typically shallow dipping beds.

All exploration holes in 2014 were drilled with HQ3 bits and utilised split core tubes to ensure good drill core recovery. Overall, recoveries and drill core quality were high. Drill core was all logged to a level of detail to be able to calculate Rock Mass Rating (RMR) which is used for mine design and hydrogeological modelling. All of the drill holes utilised a vertical inclination except for five. The five non-vertical holes were inclined to -65 degrees in order to better gather accurate structural information.

Table 5.1 HQ Drill Hole Summary and Collar Survey Table

Drill Hole ID	Date Started	Date Completed	Easting	Northing	Elevation	Total Depth (m)	Dip	Azimuth	Incline/ Vertical	Core Diameter	Casing Depth	Unconsolidated Material Depth
DHGH-14-01A	3-Apr-14	4-Apr-14	541374	6307993	1046.07	51.21	-90.0	0.0	V	HQ	6.10	3.40
DHGH-14-01B	4-Apr-14	6-Apr-14	541374	6307993	1046.07	101.49	-90.0	0.0	V	HQ	6.10	3.40
DHGH-14-02	7-Apr-14	9-Apr-14	541412	6308030	1041.95	110.64	-90.0	0.0	V	HQ	7.10	7.10
DHGH-14-03	9-Apr-14	10-Apr-14	541448	6308065	1032.86	104.54	-90.0	0.0	V	HQ	7.62	-
DHGH-14-04	11-Apr-14	13-Apr-14	541483	6308107	1021.07	109.73	-90.0	0.0	V	HQ	12.19	13.00
DHGH-14-05	13-Apr-14	16-Apr-14	541237	6308134	1059.73	120.40	-90.0	0.0	V	HQ	3.05	2.16
DHGH-14-06	16-Apr-14	18-Apr-14	541344	6307961	1052.15	115.82	-90.0	0.0	V	HQ	13.72	10.20
DHGH-14-07	3-Jun-14	7-Jun-14	541306	6307924	1068.71	289.25	-90.0	0.0	V	HQ	6.70	6.45
DHGH-14-08	3-Jun-14	5-Jun-14	541272	6307887	1075.10	108.81	-90.0	0.0	V	HQ	7.32	7.16
DHGH-14-09	5-Jun-14	8-Jun-14	541176	6307778	1092.04	289.25	-90.0	0.0	V	HQ	10.36	7.35
DHGH-14-10	7-Jun-14	10-Jun-14	541209	6307816	1087.66	286.21	-90.0	0.0	V	HQ	3.65	2.91
DHGH-14-11	9-Jun-14	12-Jun-14	541096	6307704	1106.07	270.96	-90.0	0.0	V	HQ	8.23	3.75
DHGH-14-12	11-Jun-14	13-Jun-14	541134	6307740	1098.90	164.29	-90.0	0.0	V	HQ	3.05	3.70
DHGH-14-13	13-Jun-14	18-Jun-14	541462	6308075	1029.49	374.60	-90.0	0.0	V	HQ	22.55	21.14
DHGH-14-14	13-Jun-14	15-Jun-14	541324	6307939	1063.03	152.09	-90.0	0.0	V	HQ	4.57	4.40
DHGH-14-15	16-Jun-14	17-Jun-14	541324	6307939	1063.03	51.21	-65.5	240.2	I	HQ	3.05	4.28
DHGH-14-16	17-Jun-14	20-Jun-14	541400	6307904	1055.77	224.94	-90.0	0.0	V	HQ	16.25	10.16
DHGH-14-17	18-Jun-14	19-Jun-14	541462	6308075	1029.49	51.21	-65.0	214.0	I	HQ	15.24	17.28
DHGH-14-18	21-Jun-14	22-Jun-14	541430	6308049	1037.52	103.63	-90.0	0.0	V	HQ	9.14	9.22
DHGH-14-19	22-Jun-14	26-Jun-14	541368	6307871	1062.23	295.05	-90.0	0.0	V	HQ	3.05	2.44
DHGH-14-20	22-Jun-14	24-Jun-14	541430	6308049	1037.52	51.21	-66.0	228.8	I	HQ	10.37	7.83
DHGH-14-21	24-Jun-14	25-Jun-14	541380	6308008	1045.09	109.42	-90.0	0.0	V	HQ	4.38	2.67
DHGH-14-22	25-Jun-14	25-Jun-14	541380	6308008	1045.09	60.66	-66.1	243.0	I	HQ	4.50	2.88
DHGH-14-23	26-Jun-14	27-Jun-14	541359	6307968	1048.69	126.19	-90.0	0.0	V	HQ	3.05	2.25
DHGH-14-24	27-Jun-14	28-Jun-14	541245	6307833	1083.30	124.66	-90.0	0.0	V	HQ	4.57	4.55
DHGH-14-25	28-Jun-14	29-Jun-14	541359	6307968	1048.69	81.88	-72.2	239.1	I	HQ	3.05	1.84
DHGH-14-26	14-Jul-14	19-Jul-14	541092	6307853	1095.27	304.48	-90.0	0.0	V	HQ	4.78	1.75
DHGH-14-27	14-Jul-14	20-Jul-14	537509	6313347	1123.79	392.87	-90.0	0.0	V	HQ	9.14	5.01
DHGH-14-28	19-Jul-14	23-Jul-14	541096	6307995	1079.33	326.82	-90.0	0.0	V	HQ	2.79	2.24
DHGH-14-29	21-Jul-14	25-Jul-14	538652	6312530	1124.31	377.63	-90.0	0.0	V	HQ	18.29	20.84
DHGH-14-30	23-Jul-14	27-Jul-14	541237	6307989	1068.73	289.24	-90.0	0.0	V	HQ	9.14	2.00
DHGH-14-31	25-Jul-14	30-Jul-14	540288	6311707	1134.91	347.46	-90.0	0.0	V	HQ	19.81	11.46
DHGH-14-32	27-Jul-14	1-Aug-14	540955	6307854	1102.78	359.34	-90.0	0.0	V	HQ	8.22	2.03
DHGH-14-33	30-Jul-14	4-Aug-14	541216	6310406	1065.29	358.31	-90.0	0.0	V	HQ	12.19	7.17
DHGH-14-34	1-Aug-14	5-Aug-14	541310	6307639	1091.09	283.15	-90.0	0.0	V	HQ	11.27	2.12
DHGH-14-35	4-Aug-14	9-Aug-14	542357	6308627	1033.33	319.41	-90.0	0.0	V	HQ	7.62	3.07

DHGH-14-36	5-Aug-14	10-Aug-14	541444	6307779	1063.80	221.88	-90.0	0.0	V	HQ	24.38	20.56
DHGH-14-37	9-Aug-14	15-Aug-14	543795	6307780	1078.99	350.21	-90.0	0.0	V	HQ	25.91	1.78
DHGH-14-38	10-Aug-14	15-Aug-14	541551	6307814	1041.21	286.51	-90.0	0.0	V	HQ	21.94	1.58
DHGH-14-39	16-Aug-14	22-Aug-14	546347	6297736	989.77	368.50	-90.0	0.0	V	HQ	34.13	27.50
DHGH-14-40	23-Aug-14	27-Aug-14	541023	6307784	1109.15	304.49	-90.0	0.0	V	HQ	8.23	4.50
DHGH-14-41	27-Aug-14	30-Aug-14	539350	6309697		310.29	-90.0	0.0	V	HQ	6.10	4.2
MW14-01D	29-Aug-14	3-Sep-14	541244	6308145	1078.00	137.80	-90.0	0.0	V	-	-	-
MW14-01S	6-Sep-14	6-Sep-14	541225	6308151	1056.00	58.50	-90.0	0.0	V	-	-	-
MW14-02D	8-Sep-14	10-Sep-14	541776	6308339	987.00	31.70	-90.0	0.0	V	-	-	-
MW14-03D	12-Sep-14	16-Sep-14	540590	6307381	1165.00	150.90	-90.0	0.0	V	-	-	-
MW14-03S	17-Sep-14	19-Sep-14	540598	6307390	1170.00	96.90	-90.0	0.0	V	-	-	-
MW14-04D	21-Sep-14	24-Sep-14	538724	6308875	1159.00	102.70	-90.0	0.0	V	-	-	-
MW14-04S	27-Sep-14	28-Sep-14	538740	6308890	1115.00	76.50	-90.0	0.0	V	-	-	-
MW14-05D	30-Sep-14	5-Oct-14	539012	6309314	1100.00	144.00	-90.0	0.0	V	-	-	-
MW14-05S	8-Oct-14	10-Oct-14	538993	6309326	1098.00	100.90	-90.0	0.0	V	-	-	-
MW14-06	12-Oct-14	13-Oct-14	539901	6310247	1060.00	54.00	-90.0	0.0	V	-	-	-
MZ14-40	23-Aug-14	26-Aug-14	541023	6307784	1109.15	307.60	-90.0	0.0	V	-	-	-
MZ14-41	27-Aug-14	29-Aug-14	539350	6309697		310.40	-90.0	0.0	V	-	-	-

5.3.3 Seismic Reflection Survey

A 2D seismic reflection survey was carried out between the 5th of March and the 8th of April 2014 at Groundhog to assist with determining structure within Groundhog North with a focus on the BSA. Figure 5.1 shows the location of seismic reflection lines.

The setup used for data acquisition included 72 channels operated as a split spread array with 5 m geophone spacing and 5 m shot spacing offset from the geophones by 2.5 m. The seismic program was conducted during winter and the source (150 g dynamite charge) was placed on the snow-ground interface with snow compacted above. The geophone frequency was 10 Hz.

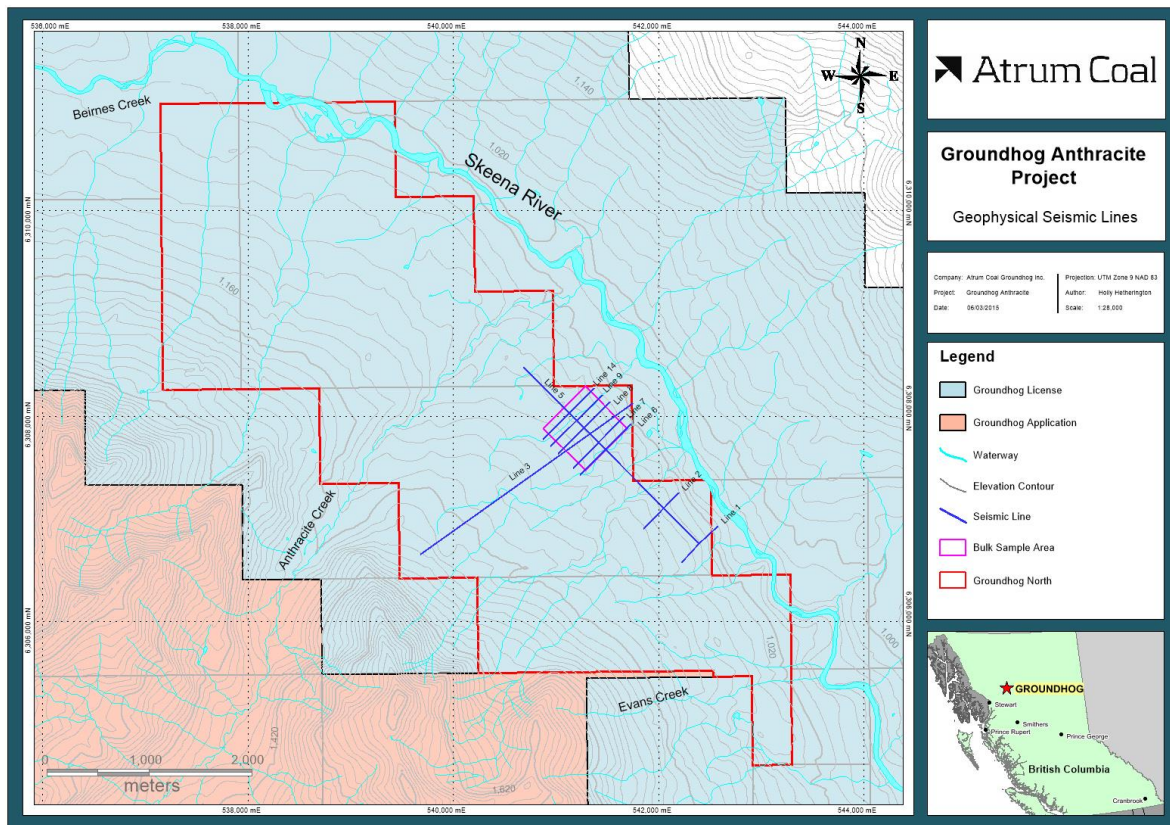


Figure 5.1 Groundhog Seismic Reflection Survey Lines

The aim of the seismic survey was to generate detailed images of the subsurface structure initially to identify a suitable location for a bulk sample mine with limited structure and secondly, to aid with correlation of coal seams and to help with mine design. Unfortunately due to the high complexity of the structure within the BSA, the seismic survey did not provide very good information and no distinctive markers were identified using this method.

5.3.4 Trenching

In July and August 2014, Atrum conducted a trenching program which included excavating four trenches within the BSA (Table 5.2). Two hundred tonnes of anthracite coal were excavated from a combination of two trenches at the Groundhog property. The main purpose of the trenches was to prove the supply chain of getting coal from Groundhog to Stewart Port, recover at least 100 tonnes of coal, validate drillhole data and collect structural information to aid with the structural interpretation of the BSA. A representative sample from the coal stockpile was taken to Stewart Port and to ALS Laboratory in Richmond, BC.

Table 5.2 2014 Trenching Program Summary

Trench ID	Easting UTM Zone 9 NAD 83	Northing	Length (m)	Width (m)	Depth (m)	Azimuth	Seam Thickness (m)
AC-GH-TR-01 / AC-GH-TR-02	541349	6307962	14.89	3.1	7.2	240	5.50
AC-GH-TR-03	541400	6307901	-	4.0	5.9	240	0.00
AC-GH-TR-04	541367	6307873	-	4.0	5.3	240	1.40

5.3.4.1 AC-GH-TR-01 and AC-GH-TR-02

AC-GH-TR-01 was excavated at the location of DHGH-14-06 following a near-surface coal intersection in drill core. The objective of this trench was to recover at least 100 tonnes of coal, validate data from DHGH-14-06, and collect structural information to aid with the structural interpretation of the BSA. The trench was also intended to provide proper trenching and sampling techniques for future trenches at Groundhog.

Prior to trenching, an organic layer was removed and piled north-east of the trench site. An additional clay/sand layer with common boulders (unconsolidated material) was removed to the south east side of the trench. The coal stockpile was located on the north-west side of the trench. The trench was excavated at approximately 240 degrees with a width of 3.1 m and a maximum depth of 6.7 m and produced an estimated 80 tonnes of coal.

AC-GH-TR-02 was excavated parallel to AC-GH-TR-01 to recover additional coal. No structural measurements were taken in AC-GH-TR-02. Ten coal samples were taken in one tonne bags and flown to Groundhog Camp then sent to either Stewart, BC for storage or to ALS Laboratories in Richmond, BC for analysis.

Once documentation and sampling was completed, both trenches were reverse filled with coal, followed by unconsolidated material then a layer of organic material.

5.3.4.2 AC-GH-TR-03

In August 2014, Atrum Coal trenched areas of interest in the Bulk Sample Area to collect structural information. Trench AC-GH-TR-03 was excavated at drill site DHGH-14-16 to intersect a fold hypothesized to occur at the trench site due to coal thickening observed in drill core from DHGH-14-16 and a fold documented in AC-GH-TR-01 trends near the trench site. Samples were also collected for analysis of each lithology intersected. The objective of this trench was only to document structural information and not to intersect coal. Four distinctive horizons were observed in the trench which were:

1. Organics
2. Clay/Sand (A)
3. Clay/Sand (B)
4. Siltstone

Once documentation and sampling was completed, the trench was reverse filled with siltstone, followed by unconsolidated material and finally organic material.

5.3.4.3 AC-GH-TR-04

Trench AC-GH-TR-04 was excavated at drill site DHGH-14-19 to intersect in situ rock and document bedding. A coal seam was also targeted to document the contact and possible micro-structures near the rock and coal contact. Samples were collected for analysis of each lithology intersected. Four distinctive horizons were observed in the trench which were:

1. Organics
2. Clay/Sand
3. Siltstone
4. Coal

Once documentation and sampling was completed, the trench was reverse filled with coal, then siltstone, followed by unconsolidated material and finally organic material.

Full trenching reports and sample compilation are appended (Appendix 3)

5.3.5 Correlation and Internal Model

Following its 2014 drill program, Atrum Coal completed a geological interpretation and correlation exercise in order to characterize the behaviour of the coal-bearing stratigraphic package within the Groundhog Property. From the collected data, a subsurface geological model was produced for the Bulk Sample Area and regional areas of the property.

Previous correlation models were disregarded in order to produce an unbiased model for internal use and planning. A new coal seam nomenclature was introduced to better reflect updated knowledge of the property (Table 4.1). The correlation exercise used all of the available data from the 2014 and previous exploration programs. The data available prior to 2014, however, were often lacking in both quality and quantity.

Within the stratigraphic package, three significant coal seams were identified: the Discovery B, Discovery C, and Duke E seams.

Drillhole correlations were conducted individually. Continuous marker horizons in the interburden strata between seams were identified and provided a useful tool in correlating lithologies across sections. A correlateable stratigraphic package was identified throughout the Bulk Sample Area with high confidence.

The improved correlation methodology, using marker horizons allowed the delineation of overturned and recumbent folds within and surrounding the Bulk Sample Area. This style of geological structure was also evident in surface outcrops around the area (Figure 5.2).



Figure 5.2 Photos of recumbent and overturned folds in outcrop

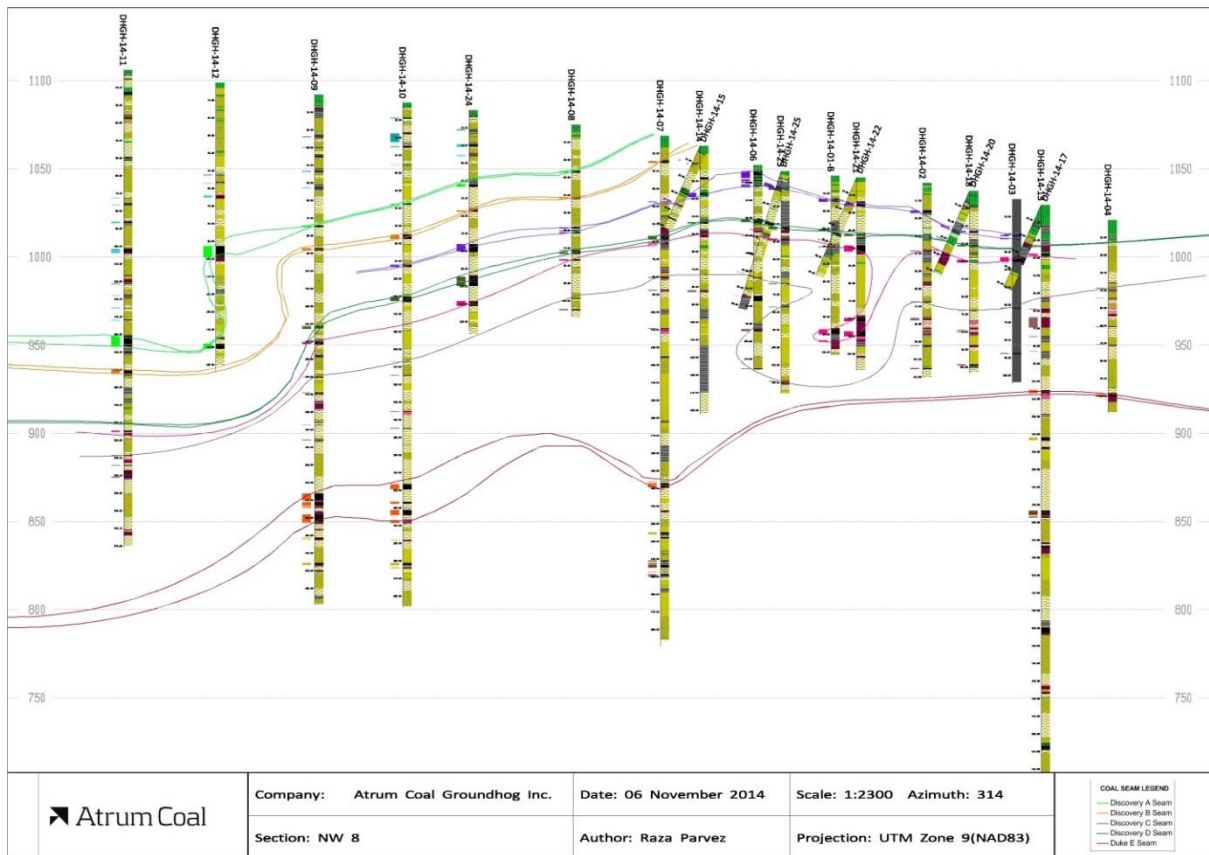


Figure 5.3 Recumbent fold as modelled in the Bulk Sample Area

The behaviour of coal seams is more understood throughout the Groundhog Property following the 2014 correlation exercise. Despite the complex structure seen in parts of the area, coal seams were found to be laterally continuous. Furthermore, potentially less disturbance is indicated in the Duke Horizon of seams East of the Skeena and to the southeast of the Bulk Sample Area. In particular, the Duke E seam is readily correlatable in these parts of the Groundhog property.

Various regions were correlated with a higher degree of confidence than others, largely due to drillhole spacing and the availability of quality data from the years prior. As such, there were restrictions associated with the complete representation of the subsurface model outside of the Bulk Sample Area. Several areas exist in which complex structural features were identified; however, there were not enough data to explain their degree of propagation or orientation. Structures with an unknown trend due to limited data were left out of the model; as such, the stratigraphy represented in the geologic model appears flatter and more simplified than it may be in reality.

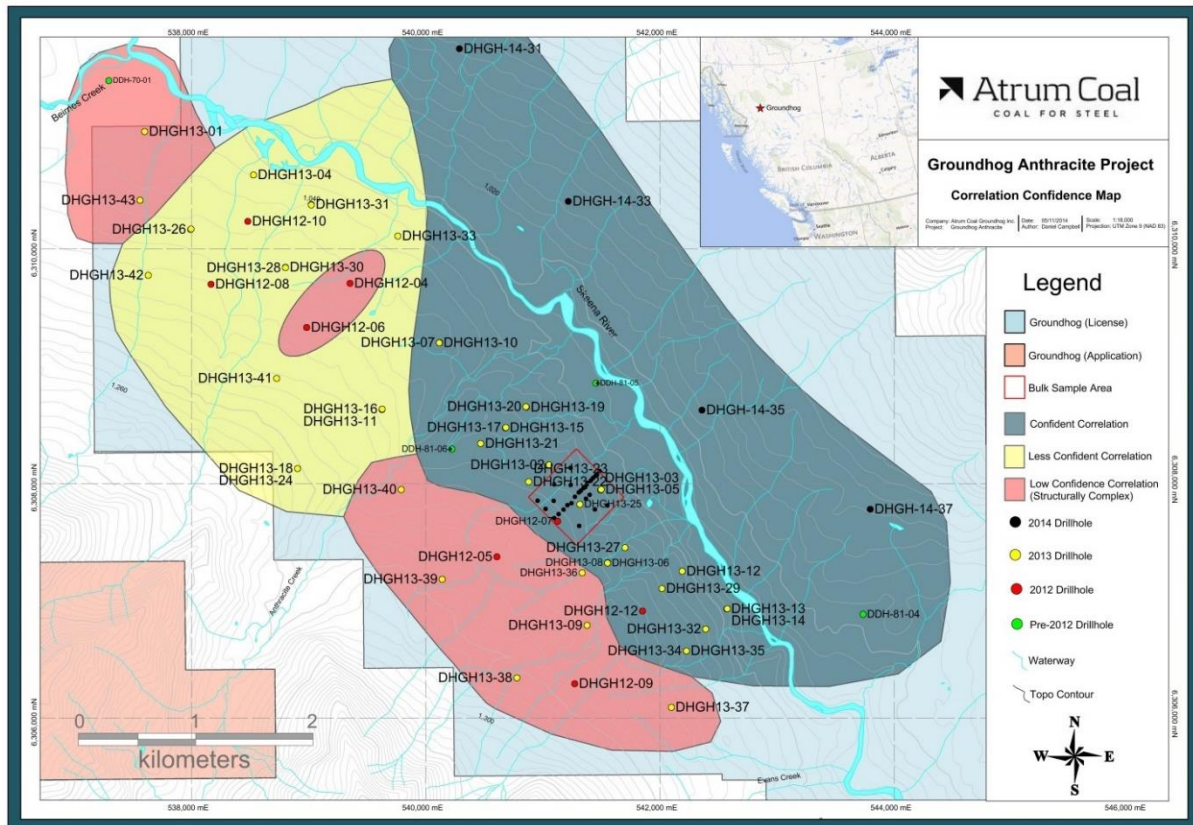


Figure 5.4 Correlation confidence of the Groundhog Property.

An internal correlation report is attached (Appendix 4), additional cross sections are attached in Appendix 11

5.4 Data Acquisition

Atrum Coal geologists have typically been employed on a seasonal basis; however, each year they undergo thorough training in data acquisition and drill core description. In 2014 Atrum Coal introduced Task Manager; software used to capture data, specifically drill core data. Atrum geologists received comprehensive training in this software prior to logging drill core in the field and are constantly required to cross check work against other geologists to ensure data is collected in an accurate and consistent manner. A senior geologist on site checks every drill core sample selection prior to sampling to ensure coal quality data is maintained to the highest standard possible. Once measured, described and photographed, coal intersections and selected rock samples are bagged and labelled for subsequent analysis. High quality core photography has proved very valuable when reviewing data during correlation following the field season.

Drill core is typically HQ3 size; it is recovered using wireline drill core retrieval and typically drill core recoveries are greater than 90%. Once drill core reaches the surface it is placed in core boxes and flown back to camp by helicopter where it is logged in a core shack then stored on site to the north of the Kluatantan Airstrip. Core logs are attached in Appendix 5.

Upon completion of a drill hole, water is circulated in the drill hole to clean the drill hole ahead of downhole geophysical logging. Initially, the drill hole is geophysically logged through the drill rods for gamma and density. Following the through-rod logging, drill rods are pulled and geophysical logging resumes 'open-hole' with gamma, calliper, density, dipmeter, neutron, sonic and occasionally Acoustic Televiewer (ATV). Strip logs which combine descriptive core logs and downhole geophysics are attached in Appendix 6.

5.4.1 Drilling

The 2012 drilling program consisted of 4,992 m of drilling in 15 diamond drill cored holes located on the coal licences.

The 2013 drilling program comprised of 43 HQ diamond drill holes (both inclined and vertical), and an additional 19 PQ holes.

The 2014 exploration programme consisted of 41 HW diamond drillholes, (five of which were inclined) and an additional 10 air drilled holes for water monitoring.

Combined with the historic drilling and trenches, a total of 104 drill holes and five trenches are located within Groundhog North, as shown in Figure 5.5.

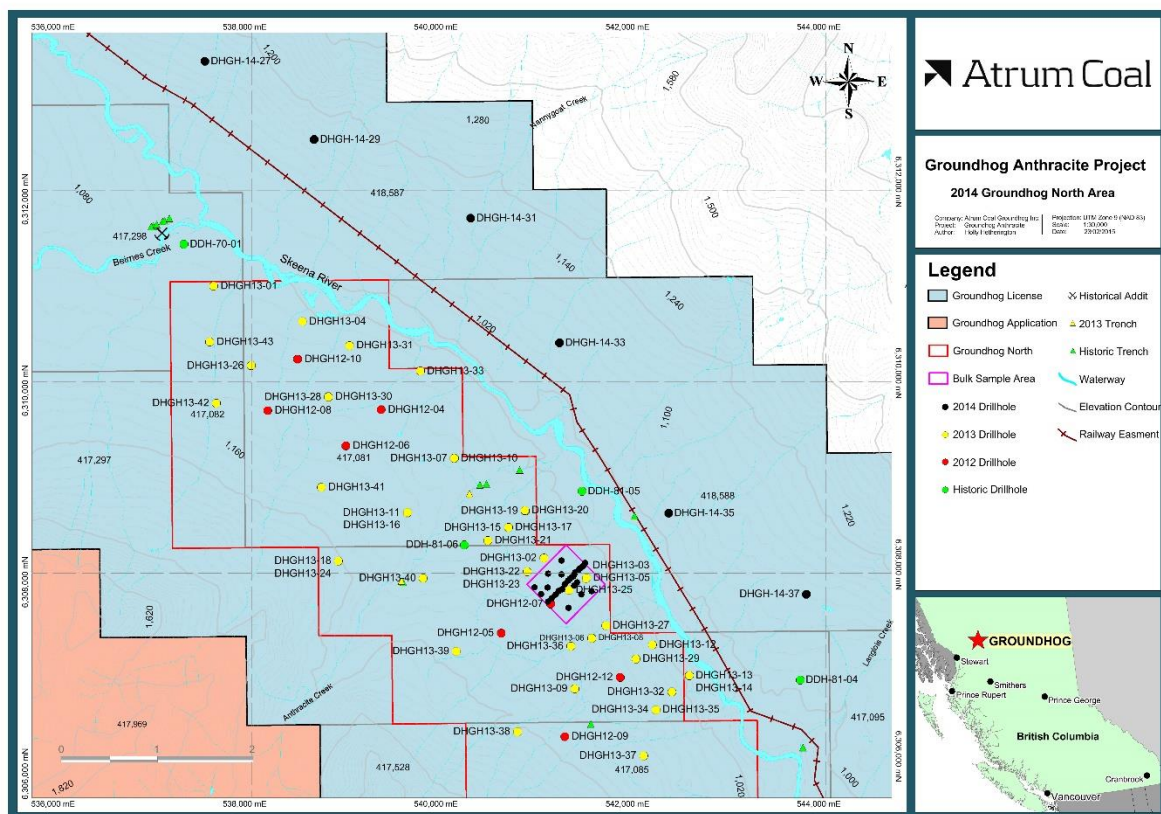


Figure 5.5 Exploration within Groundhog North

Drilling based on current geological interpretations has correlated a total of 21 seams. As shown in Table 4.1, the seam naming convention is based on four horizons with individually lettered seams within each horizon.

5.4.2 Drill Hole Geophysical Logging

All 15 holes drilled in the 2012 drilling program were logged with a slim-line gamma-density tool lowered through the drill rod stem (through rod survey) to obtain at least one complete geophysical log of the drill hole. Detailed logging (1:50 scale) was undertaken only over significant coal seam intervals. Whenever possible exploration drill-holes were also logged open hole (only DH-GH-12-01).

In general, all drill holes were logged through the drill stem to obtain a gamma density log at 1:100 and 1:200 scale, a neutron log at 1:100 scale, and an expanded scale gamma density log at 1:50 scale. Due to the late timing in the season of the drill program, and the restriction to air access only (helicopter) to drill sites, geophysical logging was restricted to through the drill stem only after drill hole DH-GH-12-01 to reduce risk and time.

All 64 drill holes drilled in the 2013 exploration program were geophysically logged. In general all drill holes were logged through the drill stem to obtain a gamma density log at 1:100 and 1:200 scale and a neutron log at 1:100 scale to provide at least one complete geophysical log of the drill hole. Detailed logging at a scale of 1:50 was undertaken over the significant coal seam intervals.

In the 2014 drilling program 39 of the 41 exploration drill holes were logged with geophysical tools. The typical suite of tools for the 2014 program included gamma, calliper and density with many drill holes also having neutron, deviation and dipmeter logging. 19 holes had sonic tools run on them to help determine geotechnical properties of the rock and five drill holes were scanned with an acoustic televiewer (ATV), three of which were processed and interpreted.

As part of the correlation exercise following the 2014 field program, it was noted that dipmeter data was very beneficial in aiding correlation and should be run on all future drillholes.

As the project has progressed more data has typically been collected for each drillhole. Table 5.3 summarises available data for each of the years of exploration on Atrum Groundhog licences. Data from the 2014 program are the most comprehensive allowing for more reliable correlations.

Table 5.3 Available data from Groundhog drilling programs

	1970 National Coal Corp. Ltd.	1981 Imperial Oil Ltd.	2008 West Hawk Resources Corp.	2012 Atrum Coal	2013 Atrum Coal	2014 Atrum Coal
Strip logs	✓	✓	poor quality	✓	✓	✓
Gamma		poor quality	✓	✓	✓	✓
Density		poor quality	✓	✓	✓	✓
Core Photos			3 drillholes, poor quality	poor quality	✓	✓
Dipmeter			1 drillhole		12 drillholes	✓
ATV					1 drillhole	5 drillholes
Sonic						✓

All geophysical logs are attached in Appendix 7.

6. Coal Quality

The evaluation of coal quality for the 2012 to 2014 exploration programs is based upon the analytical results of drill core (coal samples) obtained from drill holes, and from bulk samples of coal collected from the Groundhog Project Area including the trench excavated in 2014 within the BSA mentioned in 5.3.4. The primary purpose of the drill coring programs was to obtain sufficient samples of significant coal seams for reliable preliminary determinations of the raw and clean quality characteristics of the coal within the Groundhog Project Area.

Specific lab analyses on drill core samples were typically performed more recently by ALS Laboratories of Richmond, British Columbia with most samples from 2012 and some samples from 2013 being tested by Loring Laboratories Ltd. of Calgary, Alberta. The change to ALS was due to the additional testing capabilities of the ALS laboratory for mechanical testing such as the drop shatter test. Most samples collected were representative of selected coal units and their associated internal partings. Roof and Floor samples were also collected for most significant seams, although only a limited amount of roof and floor samples have been analysed.

In total 833 core samples were collected from the 2012 drilling program, of which 507 individual ply samples were analysed for raw coal quality. From the initial ply samples, 80 composite samples were made to represent potential product intervals; basic size and washability work was done on these composites. In addition, 10 coal samples were selected and petrographic analysis was performed by Pearson and Associates of Victoria, BC.

The 2013 laboratory program was progressively more extensive than in 2012; laboratory testing not only included coal quality but also environmental analysis, mineral properties and geotechnical parameters. In total, 1,216 core samples were collected from the 2013 drilling program of which 216 individual ply samples were analysed for raw coal quality. From the initial ply samples, 43 composite samples were made and analysed for washability as clean coal composites.

The 2014 laboratory program was similar to the 2013 program and included coal quality and environmental analysis. In total 2,002 samples were collected, 92 of which were rock samples specifically for geochemical analysis and acid base accounting. A focus was made on defining product specifications for each major coal seam in 2014 to determine what products would be available to markets. Of the samples collected, 265 underwent coal quality analysis (Appendix 8).

[REDACTED]

[REDACTED]

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8. Costs Incurred

Details of costs incurred for work conducted during the 2014 exploration program is provided within the Cost Summary Report (Appendix 10).

Exploration costs incurred to date is summarised in Table 8.1

Table 8.1 Groundhog Exploration Expenditure Summary

Exploration Year	Expenditure
2012	3,049,171.87
2013	8,661,287.98
2014	20,097,643.74
Total	31,808,103.59

9. Conclusions

Significant resources of high rank Anthracite coal have been identified within the Groundhog Property limits currently held by Atrum Coal Groundhog Ltd. The primary value of the Groundhog Property is that of a PCI (pulverized coal injection) product for the steel making industry and as a specific high carbon anthracite product. The 2014 exploration season contributed great value to Atrum’s knowledge of the geological environment and resource. Additional drilling, surface mapping and trenching are required to increase the confidence level of the current resources. With proposed ground access and bulk sample extraction becoming available in 2015, alongside a comprehensive field program, the 2015 field season will see Atrum take large steps towards development.

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- Xstract Mining Consultants, Groundhog Anthracite Project – Resource Estimate, April 2013.

Appendix 1 - Coal Seam Summary

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH12-01	24.45	25.80	1.35	Discovery B	1	1.35	0.00
DHGH12-01	41.35	42.10	0.75	Discovery C	0.44	0.33	0.42
DHGH12-01	57.20	58.30	1.10	Discovery D	1	1.10	0.00
DHGH12-01	63.68	64.06	0.38	Discovery E	0.97	0.37	0.01
DHGH12-01	84.76	85.08	0.32	Duke A	0.72	0.23	0.09
DHGH12-01	115.28	116.20	0.92	Duke D	0.46	0.42	0.50
DHGH12-01	150.44	152.40	1.96	Duke E	0.33	0.65	1.31
DHGH12-01	161.76	162.56	0.80	Duke F	0.49	0.39	0.41
DHGH12-01	185.99	186.43	0.44	Duke G	0.64	0.28	0.16
DHGH12-01	200.20	204.36	4.16	Duke H	0.29	1.21	2.95
DHGH12-01	214.80	215.60	0.80	Trail A	0.57	0.46	0.34
DHGH12-01	237.96	238.96	1.00	Trail B	0.77	0.77	0.23
DHGH12-01	257.00	257.69	0.69	Trail C	1	0.69	0.00
DHGH12-01	272.48	274.04	1.56	Trail D	0.56	0.87	0.69
DHGH12-02	69.60	71.35	1.75	Duke E	0.29	0.51	1.24
DHGH12-02	86.70	87.40	0.70	Duke G	0.93	0.65	0.05
DHGH12-02	138.60	144.30	5.70	Duke H	0.36	2.05	3.65
DHGH12-02	150.20	151.35	1.15	Trail A	0.87	1.00	0.15
DHGH12-02	194.40	196.35	1.95	Trail B	0.71	1.38	0.57
DHGH12-02	219.80	222.25	2.45	Trail C	0.92	2.25	0.20
DHGH12-02	250.20	251.20	1.00	Trail D	1	1.00	0.00
DHGH12-02	268.30	269.30	1.00	Trail E	0.92	0.92	0.08
DHGH12-02	280.00	280.60	0.60	Trail F	1	0.60	0.00
DHGH12-03	25.88	27.71	1.83	Davis C	0.37	0.68	1.15
DHGH12-03	43.86	44.25	0.39	Davis D	0.64	0.25	0.14
DHGH12-03	52.30	52.69	0.39	Discovery A	1	0.39	0.00
DHGH12-03	75.25	76.45	1.20	Discovery B	0.95	1.14	0.06
DHGH12-03	98.97	100.09	1.12	Discovery C	0	0.00	1.12
DHGH12-03	115.41	116.42	1.01	Discovery D	0.99	1.00	0.01
DHGH12-03	120.19	120.96	0.77	Discovery E	0.78	0.60	0.17
DHGH12-03	158.95	159.65	0.70	Duke C	0.79	0.55	0.15
DHGH12-03	177.11	177.59	0.48	Duke D	1	0.48	0.00
DHGH12-03	248.90	249.77	0.87	Duke E	0.95	0.83	0.04
DHGH12-03	269.50	270.22	0.72	Duke F	1	0.72	0.00
DHGH12-04	40.20	42.79	2.59	Discovery D	0.55	1.42	1.17
DHGH12-04	53.07	53.40	0.33	Discovery E	0	0.00	0.33
DHGH12-04	120.30	120.60	0.30	Duke D	0.8	0.24	0.06
DHGH12-04	147.10	151.38	4.28	Duke E	0.62	2.65	1.63
DHGH12-04	170.10	172.52	2.42	Duke G	0.8	1.94	0.48

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH12-04	194.96	196.00	1.04	Duke H	0.64	0.67	0.37
DHGH12-04	222.14	224.38	2.24	Trail A	0.64	1.43	0.81
DHGH12-04	253.93	255.52	1.59	Trail B	1	1.59	0.00
DHGH12-04	293.40	296.59	3.19	Trail C	0.62	1.98	1.21
DHGH12-05	117.30	118.81	1.51	Davis A	1	1.51	0.00
DHGH12-05	133.60	134.20	0.60	Davis B	1	0.60	0.00
DHGH12-05	201.60	208.62	7.02	Discovery A	0.5	3.51	3.51
DHGH12-05	223.70	228.78	5.08	Discovery B	0.63	3.20	1.88
DHGH12-05	270.05	277.00	6.95	Discovery C	1	6.95	0.00
DHGH12-05	309.40	309.65	0.25	Discovery D	0.24	0.06	0.19
DHGH12-05	313.16	313.70	0.54	Discovery E	1	0.54	0.00
DHGH12-06	40.92	42.60	1.68	Davis C	0.88	1.48	0.20
DHGH12-06	73.16	77.23	4.07	Discovery A	0.79	3.22	0.85
DHGH12-06	93.57	94.63	1.06	Discovery B	1	1.06	0.00
DHGH12-06	138.02	141.68	3.66	Discovery C	0.49	1.79	1.87
DHGH12-06	159.36	159.89	0.53	Discovery D	0.66	0.35	0.18
DHGH12-06	169.18	172.10	2.92	Discovery E	0.64	1.87	1.05
DHGH12-06	184.92	185.88	0.96	Duke A	0.7	0.67	0.29
DHGH12-06	228.96	229.87	0.91	Duke D	0.42	0.38	0.53
DHGH12-06	275.44	276.65	1.21	Duke E	0.73	0.88	0.33
DHGH12-06	282.10	282.89	0.79	Duke F	0	0.00	0.79
DHGH12-06	296.44	298.60	2.16	Duke G	0.5	1.08	1.08
DHGH12-06	309.20	310.20	1.00	Duke H	0.9	0.90	0.10
DHGH12-07	86.50	87.50	1.00	Davis A	0.7	0.70	0.30
DHGH12-07	93.06	94.04	0.98	Davis B	1	0.98	0.00
DHGH12-07	170.12	171.20	1.08	Discovery A	1	1.08	0.00
DHGH12-07	183.38	185.20	1.82	Discovery B	0.82	1.49	0.33
DHGH12-07	202.20	202.71	0.51	Discovery D	0.35	0.18	0.33
DHGH12-07	207.60	208.11	0.51	Discovery E	0.78	0.40	0.11
DHGH12-07	259.20	262.40	3.20	Duke D	0.97	3.10	0.10
DHGH12-08	48.42	52.95	4.53	Discovery A	0.77459	3.51	1.02
DHGH12-08	90.15	93.60	3.45	Discovery B	1	3.45	0.00
DHGH12-08	134.37	134.70	0.33	Discovery D	1	0.33	0.00
DHGH12-08	139.84	140.38	0.54	Discovery E	0.72	0.39	0.15
DHGH12-08	151.59	152.37	0.78	Duke A	1	0.78	0.00
DHGH12-08	163.62	166.04	2.42	Duke B	0.77	1.86	0.56
DHGH12-08	168.43	170.05	1.62	Duke C	0.8	1.30	0.32
DHGH12-08	180.07	182.95	2.88	Duke D	0.61	1.76	1.12
DHGH12-08	227.38	230.50	3.12	Duke E	0.57	1.78	1.34

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH12-08	244.04	251.00	6.96	Duke G	0.21	1.46	5.50
DHGH12-08	289.60	298.42	8.82	Duke H	0.27	2.38	6.44
DHGH12-09	217.53	218.30	0.77	Davis A	0.64	0.49	0.28
DHGH12-09	236.18	236.67	0.49	Davis B	0.73	0.36	0.13
DHGH12-09	246.99	247.52	0.53	Davis C	1	0.53	0.00
DHGH12-09	273.48	275.40	1.92	Davis D	0.64	1.23	0.69
DHGH12-09	288.79	290.84	2.05	Discovery A	0.98	2.01	0.04
DHGH12-09	310.00	314.18	4.18	Discovery B	0.53	2.22	1.96
DHGH12-09	347.82	354.80	6.98	Discovery C	0.92	6.42	0.56
DHGH12-09	377.62	380.70	3.08	Discovery D	0.51	1.57	1.51
DHGH12-09	388.47	388.92	0.45	Discovery E	0.69	0.31	0.14
DHGH12-10	25.98	27.07	1.09	Davis C	1	1.09	0.00
DHGH12-10	36.80	37.48	0.68	Davis D	0.59	0.40	0.28
DHGH12-10	66.08	66.43	0.35	Discovery A	1	0.35	0.00
DHGH12-10	87.13	87.80	0.67	Discovery B	1	0.67	0.00
DHGH12-10	122.00	122.47	0.47	Discovery C	1	0.47	0.00
DHGH12-10	142.00	145.99	3.99	Discovery D	0.8	3.19	0.80
DHGH12-10	149.82	153.40	3.58	Discovery E	0.71	2.54	1.04
DHGH12-10	179.01	179.21	0.20	Duke A	1	0.20	0.00
DHGH12-10	195.23	195.96	0.73	Duke C	0.86	0.63	0.10
DHGH12-10	215.30	216.28	0.98	Duke D	1	0.98	0.00
DHGH12-10	270.16	276.80	6.64	Duke E	0.65	4.32	2.32
DHGH12-10	286.18	286.43	0.25	Duke F	1	0.25	0.00
DHGH12-11	88.90	89.08	0.18	Davis A	1	0.18	0.00
DHGH12-11	100.28	101.12	0.84	Davis B	0.61	0.51	0.33
DHGH12-11	108.40	108.78	0.38	Davis C	0.68	0.26	0.12
DHGH12-11	130.70	131.58	0.88	Discovery A	0.73	0.64	0.24
DHGH12-11	140.87	149.90	9.03	Discovery B	0.48	4.33	4.70
DHGH12-11	189.18	189.40	0.22	Discovery D	1	0.22	0.00
DHGH12-11	194.62	197.42	2.80	Discovery E	0.6	1.68	1.12
DHGH12-11	218.20	218.76	0.56	Duke A	0.61	0.34	0.22
DHGH12-11	219.81	220.46	0.65	Duke B	0.8	0.52	0.13
DHGH12-11	223.10	225.20	2.10	Duke C	0.55	1.16	0.95
DHGH12-11	237.06	239.00	1.94	Duke D	0.18	0.35	1.59
DHGH12-11	285.89	287.60	1.71	Duke E	0.68	1.16	0.55
DHGH12-11	301.36	302.82	1.46	Duke F	0.64	0.93	0.53
DHGH12-11	322.40	329.54	7.14	Duke G	0.04	0.29	6.85
DHGH12-11	362.05	378.37	16.32	Duke H	0.67	10.93	5.39
DHGH12-11	384.88	386.63	1.75	Trail A	1	1.75	0.00

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH12-12	21.37	22.12	0.75	Discovery D	0.55	0.41	0.34
DHGH12-12	27.70	28.32	0.62	Discovery E	1	0.62	0.00
DHGH12-12	56.29	57.37	1.08	Duke B	1	1.08	0.00
DHGH12-12	65.58	67.84	2.26	Duke C	0.62	1.40	0.86
DHGH12-12	88.20	89.20	1.00	Duke D	0.72	0.72	0.28
DHGH12-12	124.40	127.55	3.15	Duke E	0.74	2.33	0.82
DHGH12-12	148.50	152.82	4.32	Duke G	0.42	1.81	2.51
DHGH12-12	186.78	191.00	4.22	Duke H	0.79	3.33	0.89
DHGH12-12	244.92	246.55	1.63	Trail A	1	1.63	0.00
DHGH12-12	260.19	265.72	5.53	Trail B	0.72	3.98	1.55
DHGH12-15	9.00	9.80	0.80	Discovery C	0.19	0.15	0.65
DHGH12-15	27.67	29.57	1.90	Discovery D	0	0.00	1.90
DHGH12-15	34.82	35.96	1.14	Discovery E	0.68	0.78	0.36
DHGH12-15	62.00	62.75	0.75	Duke A	0.87	0.65	0.10
DHGH12-15	67.31	67.70	0.39	Duke B	0.77	0.30	0.09
DHGH12-15	71.96	72.90	0.94	Duke C	0.96	0.90	0.04
DHGH12-15	75.90	76.55	0.65	Duke D	0.91	0.59	0.06
DHGH12-15	102.00	102.84	0.84	Duke E	1	0.84	0.00
DHGH12-15	127.10	127.63	0.53	Duke G	1	0.53	0.00
DHGH12-15	199.40	202.22	2.82	Duke H	0.71	2.00	0.82
DHGH12-15	219.60	224.07	4.47	Trail A	0.74	3.31	1.16
DHGH13-01	125.00	125.45	0.45	Davis A	0.44	0.20	0.25
DHGH13-01	130.60	130.90	0.30	Davis B	0.77	0.23	0.07
DHGH13-01	140.20	140.60	0.40	Davis C	0.38	0.15	0.25
DHGH13-01	148.01	149.25	1.24	Davis D	0	0.00	1.24
DHGH13-01	171.15	172.65	1.50	Discovery A	0.83	1.25	0.26
DHGH13-01	196.95	198.88	1.93	Discovery B	1	1.93	0.00
DHGH13-01	229.90	233.50	3.60	Discovery C	0.36	1.30	2.30
DHGH13-01	263.50	264.37	0.87	Discovery D	0.72	0.63	0.24
DHGH13-01	273.85	277.50	3.65	Discovery E	0.87	3.18	0.47
DHGH13-01	299.60	299.90	0.30	Duke A	0.57	0.17	0.13
DHGH13-01	303.35	303.80	0.45	Duke B	0.87	0.39	0.06
DHGH13-01	316.90	317.25	0.35	Duke C	0.2	0.07	0.28
DHGH13-01	333.20	334.20	1.00	Duke D	0.48	0.48	0.52
DHGH13-01	369.85	372.90	3.05	Duke E	0.65	1.98	1.07
DHGH13-02	37.30	42.45	5.15	Discovery B	0.64	3.30	1.85
DHGH13-02	78.25	79.45	1.20	Discovery C	0.85	1.02	0.18
DHGH13-02	108.20	109.90	1.70	Discovery D	0.88	1.50	0.20
DHGH13-02	126.50	127.95	1.45	Discovery E	0.64	0.93	0.52

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH13-02	152.33	152.40	0.07	Duke A	0	0.00	0.07
DHGH13-02	163.05	165.04	1.99	Duke B	1	1.99	0.00
DHGH13-02	176.73	178.09	1.36	Duke C	0	0.00	1.36
DHGH13-02	187.68	188.30	0.62	Duke D	0	0.00	0.62
DHGH13-03	13.40	14.10	0.70	Discovery A	0.37	0.26	0.44
DHGH13-03	22.60	23.45	0.85	Discovery B	1	0.85	0.00
DHGH13-03	30.40	42.20	11.80	Discovery C	0.57	6.73	5.07
DHGH13-03	49.59	49.85	0.26	Discovery D	1	0.26	0.00
DHGH13-03	53.82	54.85	1.03	Discovery E	0.78	0.80	0.23
DHGH13-03	80.30	80.57	0.27	Duke A	1	0.27	0.00
DHGH13-03	88.00	88.15	0.15	Duke B	1	0.15	0.00
DHGH13-03	97.10	97.50	0.40	Duke C	1	0.40	0.00
DHGH13-03	107.30	107.80	0.50	Duke D	1	0.50	0.00
DHGH13-03	130.60	132.50	1.90	Duke E	0.84	1.60	0.30
DHGH13-03	144.40	144.67	0.27	Duke F	1	0.27	0.00
DHGH13-03	157.40	162.65	5.25	Duke G	0.21	1.10	4.15
DHGH13-03	196.08	198.90	2.82	Duke H	0.57	1.61	1.21
DHGH13-04	4.16	4.68	0.52	Discovery A	0	0.00	0.52
DHGH13-04	34.50	36.00	1.50	Discovery B	0.65	0.98	0.53
DHGH13-04	66.30	66.86	0.56	Discovery C	1	0.56	0.00
DHGH13-04	94.73	95.21	0.48	Discovery D	1	0.48	0.00
DHGH13-04	106.85	107.05	0.20	Discovery E	1	0.20	0.00
DHGH13-04	140.18	141.20	1.02	Duke A	0.51	0.52	0.50
DHGH13-04	152.10	152.42	0.32	Duke C	1	0.32	0.00
DHGH13-04	168.88	169.11	0.23	Duke D	1	0.23	0.00
DHGH13-04	221.35	226.20	4.85	Duke E	0.69	3.35	1.50
DHGH13-04	252.80	258.90	6.10	Duke G	0.25	1.53	4.58
DHGH13-04	284.95	285.48	0.53	Duke H	1	0.53	0.00
DHGH13-05	10.65	11.55	0.90	Discovery A	0.4	0.36	0.54
DHGH13-05	16.15	19.10	2.95	Discovery B	0.64	1.89	1.06
DHGH13-05	44.05	44.80	0.75	Discovery C	1	0.75	0.00
DHGH13-05	53.50	53.80	0.30	Discovery D	1	0.30	0.00
DHGH13-05	56.72	57.55	0.83	Discovery E	1	0.83	0.00
DHGH13-06	5.14	7.08	1.94	Discovery B	0	0.00	1.94
DHGH13-06	36.30	37.10	0.80	Discovery C	1	0.80	0.00
DHGH13-06	55.60	57.30	1.70	Discovery E	1	1.70	0.00
DHGH13-06	72.20	75.45	3.25	Duke A	0.2	0.65	2.60
DHGH13-06	82.35	82.65	0.30	Duke B	1	0.30	0.00
DHGH13-06	91.75	92.50	0.75	Duke C	1	0.75	0.00

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH13-06	129.65	132.53	2.88	Duke E	0.76	2.19	0.69
DHGH13-06	159.65	165.72	6.07	Duke G	0.15	0.91	5.16
DHGH13-06	202.40	207.15	4.75	Duke H	0.92	4.37	0.38
DHGH13-06	241.00	245.20	4.20	Trail A	0.26	1.09	3.11
DHGH13-06	295.95	301.35	5.40	Trail B	0.75	4.05	1.35
DHGH13-06	318.94	322.15	3.21	Trail C	0.21	0.67	2.54
DHGH13-06	365.15	378.08	12.93	Trail D	0.6	7.76	5.17
DHGH13-07	134.05	134.40	0.35	Discovery B	1	0.35	0.00
DHGH13-07	171.50	172.80	1.30	Discovery C	0.8	1.04	0.26
DHGH13-07	182.10	182.30	0.20	Discovery D	1	0.20	0.00
DHGH13-07	188.90	189.05	0.15	Discovery E	0.73	0.11	0.04
DHGH13-07	224.97	225.12	0.15	Duke A	1	0.15	0.00
DHGH13-07	262.85	263.95	1.10	Duke E	1	1.10	0.00
DHGH13-07	305.10	309.40	4.30	Duke G	0.42	1.81	2.49
DHGH13-07	348.30	351.20	2.90	Duke H	0.98	2.84	0.06
DHGH13-07	379.65	380.85	1.20	Trail B	0.91	1.09	0.11
DHGH13-07	405.45	405.75	0.30	Trail C	1	0.30	0.00
DHGH13-07	447.50	449.19	1.69	Trail D	1	1.69	0.00
DHGH13-08	27.25	29.40	2.15	Discovery B	1	2.15	0.00
DHGH13-08	51.50	53.10	1.60	Discovery C	0.27	0.43	1.17
DHGH13-08	81.00	84.00	3.00	Discovery E	0.9	2.70	0.30
DHGH13-09	86.70	87.30	0.60	Davis D	0.47	0.28	0.32
DHGH13-09	100.25	101.75	1.50	Discovery A	0.65	0.98	0.53
DHGH13-09	130.62	133.27	2.65	Discovery B	0.65	1.72	0.93
DHGH13-09	171.00	172.00	1.00	Discovery C	1	1.00	0.00
DHGH13-09	185.56	186.67	1.11	Discovery D	1	1.11	0.00
DHGH13-09	196.70	197.70	1.00	Discovery E	1	1.00	0.00
DHGH13-09	237.50	238.15	0.65	Duke C	1	0.65	0.00
DHGH13-11	188.50	189.00	0.50	Davis B	1	0.50	0.00
DHGH13-11	193.70	196.92	3.22	Davis C	1	3.22	0.00
DHGH13-11	237.10	238.15	1.05	Discovery A	1	1.05	0.00
DHGH13-11	268.75	270.42	1.67	Discovery B	0.64	1.07	0.60
DHGH13-11	297.80	298.45	0.65	Discovery C	1	0.65	0.00
DHGH13-11	306.00	307.22	1.22	Discovery D	0	0.00	1.22
DHGH13-11	326.12	327.20	1.08	Discovery E	1	1.08	0.00
DHGH13-12	22.85	24.70	1.85	Discovery A	1	1.85	0.00
DHGH13-12	44.53	46.30	1.77	Discovery B	1	1.77	0.00
DHGH13-12	63.42	64.84	1.42	Discovery C	1	1.42	0.00
DHGH13-12	81.90	82.95	1.05	Discovery E	1	1.05	0.00

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH13-13	13.20	13.40	0.20	Duke C	0	0.00	0.20
DHGH13-13	40.25	43.25	3.00	Duke E	0.98	2.94	0.06
DHGH13-14	16.88	17.55	0.67	Duke C	1	0.67	0.00
DHGH13-14	39.94	42.50	2.56	Duke E	1	2.56	0.00
DHGH13-15	6.05	6.50	0.45	Discovery A	1	0.45	0.00
DHGH13-15	18.70	24.65	5.95	Discovery B	0.8	4.76	1.19
DHGH13-15	45.50	45.95	0.45	Discovery C	1	0.45	0.00
DHGH13-15	67.00	67.30	0.30	Discovery D	1	0.30	0.00
DHGH13-15	78.80	80.78	1.98	Discovery E	0.8	1.58	0.40
DHGH13-17	10.30	12.20	1.90	Discovery A	0.82	1.56	0.34
DHGH13-17	26.35	27.05	0.70	Discovery B	1	0.70	0.00
DHGH13-17	46.30	47.30	1.00	Discovery C	0.8	0.80	0.20
DHGH13-17	72.06	73.19	1.13	Discovery D	0	0.00	1.13
DHGH13-18	305.30	307.05	1.75	Discovery A	0.93	1.63	0.12
DHGH13-18	325.85	326.69	0.84	Discovery B	0	0.00	0.84
DHGH13-18	353.55	354.16	0.61	Discovery C	1	0.61	0.00
DHGH13-18	370.99	372.55	1.56	Discovery D	1	1.56	0.00
DHGH13-18	383.22	383.74	0.52	Discovery E	1	0.52	0.00
DHGH13-18	407.45	407.57	0.12	Duke A	1	0.12	0.00
DHGH13-18	412.90	413.90	1.00	Duke B	1	1.00	0.00
DHGH13-18	423.60	424.41	0.81	Duke C	1	0.81	0.00
DHGH13-19	58.95	61.72	2.77	Discovery B	0.9	2.49	0.28
DHGH13-20	23.70	24.62	0.92	Davis C	1	0.92	0.00
DHGH13-20	88.04	91.51	3.47	Discovery B	0.32	1.11	2.36
DHGH13-21	90.01	93.27	3.26	Discovery A	0.75	2.45	0.82
DHGH13-21	117.22	121.45	4.23	Discovery B	1	4.23	0.00
DHGH13-22	45.98	47.43	1.45	Discovery B	0.93	1.35	0.10
DHGH13-22	72.21	73.07	0.86	Discovery C	1	0.86	0.00
DHGH13-22	90.03	90.33	0.30	Discovery D	1	0.30	0.00
DHGH13-22	113.50	114.50	1.00	Discovery E	1	1.00	0.00
DHGH13-25	17.00	17.10	0.10	Davis D	1	0.10	0.00
DHGH13-25	39.60	41.35	1.75	Discovery A	0.78	1.37	0.39
DHGH13-25	59.08	60.65	1.57	Discovery B	0.73	1.15	0.42
DHGH13-26	9.99	12.35	2.36	Discovery A	1	2.36	0.00
DHGH13-26	31.70	34.86	3.16	Discovery B	0.49	1.55	1.61
DHGH13-26	56.66	61.50	4.84	Discovery C	0.67	3.24	1.60
DHGH13-26	88.29	88.72	0.43	Discovery D	1	0.43	0.00
DHGH13-27	23.13	24.56	1.43	Duke A	0	0.00	1.43
DHGH13-27	36.25	38.44	2.19	Duke B	0.69	1.51	0.68

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH13-27	47.20	49.82	2.62	Duke C	0.31	0.81	1.81
DHGH13-27	59.08	59.39	0.31	Duke D	1	0.31	0.00
DHGH13-27	76.26	82.93	6.67	Duke E	0.46	3.07	3.60
DHGH13-29	7.25	7.68	0.43	Duke C	0.44	0.19	0.24
DHGH13-29	61.75	64.80	3.05	Duke E	0.71	2.17	0.88
DHGH13-29	91.70	100.90	9.20	Duke G	0.1	0.92	8.28
DHGH13-29	109.65	111.82	2.17	Duke H	0.73	1.58	0.59
DHGH13-31	17.38	18.97	1.59	Discovery B	0.85	1.35	0.24
DHGH13-31	44.19	46.80	2.61	Discovery C	0.62	1.62	0.99
DHGH13-32	62.16	63.62	1.46	Duke A	0.63	0.92	0.54
DHGH13-32	66.00	66.48	0.48	Duke B	1	0.48	0.00
DHGH13-32	95.12	97.89	2.77	Duke E	0.92	2.55	0.22
DHGH13-33	25.70	26.50	0.80	Discovery B	1	0.80	0.00
DHGH13-33	40.15	40.55	0.40	Discovery C	1	0.40	0.00
DHGH13-34	16.04	16.94	0.90	Discovery B	1	0.90	0.00
DHGH13-34	37.80	38.75	0.95	Discovery C	1	0.95	0.00
DHGH13-34	55.95	57.31	1.36	Discovery E	0.73	0.99	0.37
DHGH13-34	87.89	88.79	0.90	Duke A	0.4	0.36	0.54
DHGH13-34	96.90	97.30	0.40	Duke B	0	0.00	0.40
DHGH13-34	104.37	104.71	0.34	Duke C	0	0.00	0.34
DHGH13-34	125.40	128.15	2.75	Duke E	0.93	2.56	0.19
DHGH13-35	18.49	19.10	0.61	Discovery B	0	0.00	0.61
DHGH13-35	46.30	48.04	1.74	Discovery C	0.93	1.62	0.12
DHGH13-36	15.20	16.04	0.84	Davis A	0	0.00	0.84
DHGH13-36	24.96	25.53	0.57	Davis B	0	0.00	0.57
DHGH13-36	35.40	37.70	2.30	Davis C	0.33	0.76	1.54
DHGH13-36	48.35	48.65	0.30	Davis D	0	0.00	0.30
DHGH13-36	60.55	62.80	2.25	Discovery A	0.77	1.73	0.52
DHGH13-36	71.33	72.73	1.40	Discovery B	0.79	1.11	0.29
DHGH13-37	77.25	78.10	0.85	Davis A	0.88	0.75	0.10
DHGH13-37	94.62	95.70	1.08	Davis B	0.7	0.76	0.32
DHGH13-37	109.55	110.20	0.65	Davis C	0.32	0.21	0.44
DHGH13-37	121.90	124.10	2.20	Davis D	0.35	0.77	1.43
DHGH13-37	136.55	139.30	2.75	Discovery A	0.74	2.04	0.72
DHGH13-37	146.30	149.72	3.42	Discovery B	0.83	2.84	0.58
DHGH13-37	164.45	165.50	1.05	Discovery C	1	1.05	0.00
DHGH13-38	137.30	137.40	0.10	Davis A	1	0.10	0.00
DHGH13-38	140.20	140.40	0.20	Davis B	1	0.20	0.00
DHGH13-38	149.40	149.97	0.57	Davis C	1	0.57	0.00

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH13-38	157.55	158.17	0.62	Davis D	0.5	0.31	0.31
DHGH13-38	183.97	190.31	6.34	Discovery A	0.38	2.41	3.93
DHGH13-38	201.72	202.69	0.97	Discovery B	1	0.97	0.00
DHGH13-39	140.00	140.40	0.40	Davis A	1	0.40	0.00
DHGH13-39	155.55	156.58	1.03	Davis B	0.63	0.65	0.38
DHGH13-39	158.13	158.45	0.32	Davis C	0.56	0.18	0.14
DHGH13-39	169.64	170.30	0.66	Davis D	0.58	0.38	0.28
DHGH13-39	196.20	197.45	1.25	Discovery A	0.92	1.15	0.10
DHGH13-39	229.57	230.00	0.43	Discovery B	1	0.43	0.00
DHGH13-39	251.58	254.86	3.28	Discovery C	0.12	0.39	2.89
DHGH13-39	280.60	281.20	0.60	Discovery D	0.55	0.33	0.27
DHGH13-39	292.04	292.55	0.51	Discovery E	0.65	0.33	0.18
DHGH13-39	306.60	307.93	1.33	Duke A	0.36	0.48	0.85
DHGH13-39	314.50	314.80	0.30	Duke B	0	0.00	0.30
DHGH13-41	150.18	155.63	5.45	Davis C	0.74	4.03	1.42
DHGH13-41	234.49	236.90	2.41	Discovery A	0.94	2.27	0.14
DHGH13-41	254.87	255.18	0.31	Discovery B	1	0.31	0.00
DHGH-14-01-B	13.09	14.77	1.68	Discovery C	0.93	1.56	0.12
DHGH-14-01-B	30.15	31.18	1.03	Discovery D	0.58	0.60	0.43
DHGH-14-01-B	40.16	40.42	0.26	Discovery E	1	0.26	0.00
DHGH-14-01-B	87.04	94.26	7.22	Discovery E	0.51	3.68	3.54
DHGH-14-02	15.53	17.14	1.61	Discovery C	1	1.61	0.00
DHGH-14-02	30.20	30.50	0.30	Discovery D	1	0.30	0.00
DHGH-14-02	38.23	38.63	0.40	Discovery E	1	0.40	0.00
DHGH-14-02	67.18	67.48	0.30	Duke A	1	0.30	0.00
DHGH-14-02	76.56	77.90	1.34	Duke B	0	0.00	1.34
DHGH-14-02	92.12	92.56	0.44	Duke C	1	0.44	0.00
DHGH-14-02	104.89	105.45	0.56	Duke D	1	0.56	0.00
DHGH-14-03	20.50	22.70	2.20	Discovery C	0.57	1.25	0.95
DHGH-14-03	28.00	28.30	0.30	Discovery D	0	0.00	0.30
DHGH-14-03	32.85	35.65	2.80	Discovery E	1	2.80	0.00
DHGH-14-04	38.51	38.84	0.33	Duke A	0	0.00	0.33
DHGH-14-04	44.28	44.40	0.12	Duke B	1	0.12	0.00
DHGH-14-04	60.53	60.90	0.37	Duke C	1	0.37	0.00
DHGH-14-04	70.61	70.89	0.28	Duke D	0	0.00	0.28
DHGH-14-04	98.87	100.47	1.60	Duke E	1	1.60	0.00
DHGH-14-05	6.14	6.78	0.64	Discovery B	0	0.00	0.64
DHGH-14-05	25.89	27.42	1.53	Discovery C	0.82	1.25	0.28
DHGH-14-05	49.38	51.15	1.77	Discovery D	0.87	1.54	0.23

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH-14-05	64.14	66.20	2.06	Discovery E	0.74	1.52	0.54
DHGH-14-05	95.29	95.77	0.48	Duke A	0	0.00	0.48
DHGH-14-05	107.73	107.85	0.12	Duke B	1	0.12	0.00
DHGH-14-06	3.34	12.18	8.84	Discovery C	0.53	4.69	4.15
DHGH-14-06	30.90	32.35	1.45	Discovery D	1	1.45	0.00
DHGH-14-06	40.15	40.32	0.17	Discovery E	1	0.17	0.00
DHGH-14-06	63.43	63.55	0.12	Duke A	1	0.12	0.00
DHGH-14-06	74.23	77.18	2.95	Duke B	1	2.95	0.00
DHGH-14-06	92.99	94.20	1.21	Duke A	0.58	0.70	0.51
DHGH-14-06	115.40	115.76	0.36	Duke A	1	0.36	0.00
DHGH-14-07	14.28	15.45	1.17	Discovery B	1	1.17	0.00
DHGH-14-07	37.28	37.56	0.28	Discovery C	0	0.00	0.28
DHGH-14-07	56.39	58.87	2.48	Discovery D	0.92	2.28	0.20
DHGH-14-07	60.58	62.61	2.03	Discovery E	0.52	1.06	0.97
DHGH-14-07	80.15	80.58	0.43	Duke A	0	0.00	0.43
DHGH-14-07	87.18	87.89	0.71	Duke B	1	0.71	0.00
DHGH-14-07	109.07	109.48	0.41	Duke C	1	0.41	0.00
DHGH-14-07	195.55	199.50	3.95	Duke E	0.67	2.65	1.30
DHGH-14-07	224.83	226.05	1.22	Duke G	1	1.22	0.00
DHGH-14-07	240.89	250.19	9.30	Duke H	0.46	4.28	5.02
DHGH-14-08	26.18	27.19	1.01	Discovery A	0.78	0.79	0.22
DHGH-14-08	41.02	42.22	1.20	Discovery B	0.73	0.88	0.32
DHGH-14-08	58.21	61.63	3.42	Discovery C	0.52	1.78	1.64
DHGH-14-08	71.34	73.42	2.08	Discovery D	0.65	1.35	0.73
DHGH-14-08	76.34	77.10	0.76	Discovery E	1	0.76	0.00
DHGH-14-08	98.25	98.38	0.13	Duke A	0	0.00	0.13
DHGH-14-08	104.66	105.38	0.72	Duke B	0.78	0.56	0.16
DHGH-14-09	23.65	24.05	0.40	Davis A	1	0.40	0.00
DHGH-14-09	29.75	30.06	0.31	Davis B	1	0.31	0.00
DHGH-14-09	43.21	43.78	0.57	Davis C	0.95	0.54	0.03
DHGH-14-09	52.66	53.15	0.49	Davis D	1	0.49	0.00
DHGH-14-09	74.24	75.09	0.85	Discovery A	1	0.85	0.00
DHGH-14-09	86.93	88.33	1.40	Discovery B	1	1.40	0.00
DHGH-14-09	130.97	132.78	1.81	Discovery D	0.51	0.92	0.89
DHGH-14-09	140.14	141.34	1.20	Discovery E	1	1.20	0.00
DHGH-14-09	160.08	160.20	0.12	Duke A	1	0.12	0.00
DHGH-14-09	168.79	169.23	0.44	Duke B	1	0.44	0.00
DHGH-14-09	187.11	187.27	0.16	Duke C	1	0.16	0.00
DHGH-14-09	195.49	195.93	0.44	Duke D	1	0.44	0.00

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH-14-09	226.22	242.70	16.48	Duke E	0.67	11.04	5.44
DHGH-14-09	251.10	252.21	1.11	Duke F	0.68	0.75	0.36
DHGH-14-09	265.52	266.67	1.15	Duke G	1	1.15	0.00
DHGH-14-10	8.62	8.97	0.35	Davis A	1	0.35	0.00
DHGH-14-10	17.65	22.45	4.80	Davis B	0.05	0.24	4.56
DHGH-14-10	24.70	25.30	0.60	Davis C	0.75	0.45	0.15
DHGH-14-10	35.37	35.54	0.17	Davis D	1	0.17	0.00
DHGH-14-10	57.47	58.10	0.63	Discovery A	1	0.63	0.00
DHGH-14-10	74.89	77.37	2.48	Discovery B	0.95	2.36	0.12
DHGH-14-10	92.08	93.31	1.23	Discovery C	0.94	1.16	0.07
DHGH-14-10	110.12	112.68	2.56	Discovery D	0.95	2.43	0.13
DHGH-14-10	146.86	147.11	0.25	Duke A	1	0.25	0.00
DHGH-14-10	154.55	155.01	0.46	Duke B	0.89	0.41	0.05
DHGH-14-10	175.26	175.63	0.37	Duke C	1	0.37	0.00
DHGH-14-10	184.47	184.96	0.49	Duke D	1	0.49	0.00
DHGH-14-10	216.29	238.46	22.17	Duke E	0.37	8.20	13.97
DHGH-14-10	248.11	248.46	0.35	Duke F	1	0.35	0.00
DHGH-14-10	261.11	264.31	3.20	Duke G	0.6	1.92	1.28
DHGH-14-11	72.32	72.61	0.29	Davis A	1	0.29	0.00
DHGH-14-11	76.54	76.74	0.20	Davis B	1	0.20	0.00
DHGH-14-11	85.97	103.82	17.85	Davis C	0.17	3.03	14.82
DHGH-14-11	121.12	128.01	6.89	Davis B	0.11	0.76	6.13
DHGH-14-11	134.67	135.13	0.46	Davis C	1	0.46	0.00
DHGH-14-11	141.83	142.23	0.40	Davis D	1	0.40	0.00
DHGH-14-11	150.85	156.95	6.10	Discovery A	0.92	5.61	0.49
DHGH-14-11	169.91	172.31	2.40	Discovery B	0.79	1.90	0.50
DHGH-14-11	191.77	191.87	0.10	Discovery D	1	0.10	0.00
DHGH-14-11	204.60	205.25	0.65	Discovery E	1	0.65	0.00
DHGH-14-11	218.32	218.86	0.54	Duke A	1	0.54	0.00
DHGH-14-11	223.92	224.37	0.45	Duke B	1	0.45	0.00
DHGH-14-11	230.69	231.16	0.47	Duke C	1	0.47	0.00
DHGH-14-12	52.18	52.53	0.35	Davis A	1	0.35	0.00
DHGH-14-12	57.12	57.29	0.17	Davis B	1	0.17	0.00
DHGH-14-12	64.13	65.05	0.92	Davis C	1	0.92	0.00
DHGH-14-12	92.67	99.07	6.40	Discovery A	1	6.40	0.00
DHGH-14-12	147.99	150.93	2.94	Discovery A	0.94	2.76	0.18
DHGH-14-13	22.71	22.96	0.25	Discovery D	1	0.25	0.00
DHGH-14-13	27.58	28.83	1.25	Discovery E	1	1.25	0.00
DHGH-14-13	58.81	59.11	0.30	Duke A	1	0.30	0.00

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH-14-13	63.67	69.43	5.76	Duke B	0	0.00	5.76
DHGH-14-13	74.35	74.75	0.40	Duke C	1	0.40	0.00
DHGH-14-13	82.83	83.15	0.32	Duke D	0	0.00	0.32
DHGH-14-13	105.01	106.69	1.68	Duke E	0.97	1.63	0.05
DHGH-14-13	118.63	118.87	0.24	Duke F	1	0.24	0.00
DHGH-14-13	131.78	133.33	1.55	Duke G	1	1.55	0.00
DHGH-14-13	173.31	177.19	3.88	Duke H	0.62	2.41	1.47
DHGH-14-14	26.73	28.98	2.25	Discovery C	0.62	1.40	0.86
DHGH-14-14	43.16	43.92	0.76	Discovery D	0.93	0.71	0.05
DHGH-14-14	50.44	50.70	0.26	Discovery E	1	0.26	0.00
DHGH-14-14	72.92	73.26	0.34	Duke A	1	0.34	0.00
DHGH-14-14	81.77	83.01	1.24	Duke B	0.58	0.72	0.52
DHGH-14-15	35.48	36.18	0.70	Discovery C	1	0.70	0.00
DHGH-14-16	9.83	14.12	4.29	Discovery C	0.86	3.69	0.60
DHGH-14-16	24.11	24.53	0.42	Discovery D	1	0.42	0.00
DHGH-14-16	29.47	31.09	1.62	Discovery E	1	1.62	0.00
DHGH-14-16	57.57	57.89	0.32	Duke A	1	0.32	0.00
DHGH-14-16	138.18	138.39	0.21	Duke A	1	0.21	0.00
DHGH-14-16	141.09	141.93	0.84	Duke E	1	0.84	0.00
DHGH-14-16	157.38	157.67	0.29	Duke F	1	0.29	0.00
DHGH-14-16	172.93	178.22	5.29	Duke G	0.34	1.80	3.49
DHGH-14-16	213.36	217.55	4.19	Duke H	0.66	2.77	1.42
DHGH-14-18	22.81	23.62	0.81	Discovery C	1	0.81	0.00
DHGH-14-18	30.76	31.52	0.76	Discovery D	1	0.76	0.00
DHGH-14-18	39.19	40.62	1.43	Discovery E	0	0.00	1.43
DHGH-14-18	67.73	67.94	0.21	Duke A	1	0.21	0.00
DHGH-14-18	78.59	80.19	1.60	Duke B	0	0.00	1.60
DHGH-14-18	87.20	87.48	0.28	Duke C	1	0.28	0.00
DHGH-14-18	98.43	99.03	0.60	Duke D	1	0.60	0.00
DHGH-14-19	5.69	7.79	2.10	Discovery B	1	2.10	0.00
DHGH-14-19	30.07	32.10	2.03	Discovery C	1	2.03	0.00
DHGH-14-19	50.12	51.26	1.14	Discovery D	1	1.14	0.00
DHGH-14-19	54.31	54.56	0.25	Discovery E	1	0.25	0.00
DHGH-14-19	81.08	81.33	0.25	Duke A	0.64	0.16	0.09
DHGH-14-19	88.18	88.97	0.79	Duke B	1	0.79	0.00
DHGH-14-19	131.42	131.95	0.53	Duke B	0.83	0.44	0.09
DHGH-14-19	142.94	155.63	12.69	Duke A	0.01	0.13	12.56
DHGH-14-19	171.37	171.97	0.60	Duke E	1	0.60	0.00
DHGH-14-19	198.47	199.00	0.53	Duke G	0.49	0.26	0.27

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH-14-19	223.50	227.09	3.59	Duke H	0.52	1.87	1.72
DHGH-14-19	241.41	244.13	2.72	Trail A	0.6	1.63	1.09
DHGH-14-19	287.14	289.66	2.52	Trail B	0.93	2.34	0.18
DHGH-14-20	23.60	25.03	1.43	Discovery C	0.9	1.29	0.14
DHGH-14-20	31.12	31.45	0.33	Discovery D	0	0.00	0.33
DHGH-14-20	37.73	38.14	0.41	Discovery E	1	0.41	0.00
DHGH-14-21	14.81	16.13	1.32	Discovery C	1	1.32	0.00
DHGH-14-21	32.01	33.19	1.18	Discovery D	0.5	0.59	0.59
DHGH-14-21	38.53	42.07	3.54	Discovery E	1	3.54	0.00
DHGH-14-21	79.59	90.16	10.57	Discovery E	0.46	4.86	5.71
DHGH-14-22	15.14	15.43	0.29	Discovery C	1	0.29	0.00
DHGH-14-22	34.03	35.00	0.97	Discovery D	1	0.97	0.00
DHGH-14-22	40.83	41.13	0.30	Discovery E	1	0.30	0.00
DHGH-14-23	9.34	10.46	1.12	Discovery C	0.27	0.30	0.82
DHGH-14-23	31.41	33.58	2.17	Discovery D	0.71	1.54	0.63
DHGH-14-23	38.31	39.40	1.09	Discovery E	0.81	0.88	0.21
DHGH-14-23	63.55	77.09	13.54	Duke A	0.05	0.68	12.86
DHGH-14-23	118.85	119.26	0.41	Duke A	1	0.41	0.00
DHGH-14-24	10.92	11.49	0.57	Davis B	0.53	0.30	0.27
DHGH-14-24	19.46	20.84	1.38	Davis C	0.69	0.95	0.43
DHGH-14-24	25.57	26.00	0.43	Davis D	0.65	0.28	0.15
DHGH-14-24	41.95	43.38	1.43	Discovery A	0.97	1.39	0.04
DHGH-14-24	56.88	57.73	0.85	Discovery B	1	0.85	0.00
DHGH-14-24	76.01	80.16	4.15	Discovery C	1	4.15	0.00
DHGH-14-24	94.46	99.79	5.33	Discovery D	0.96	5.12	0.21
DHGH-14-24	108.24	111.11	2.87	Discovery E	0.73	2.10	0.77
DHGH-14-25	8.76	10.65	1.89	Discovery C	0.9	1.70	0.19
DHGH-14-25	30.21	31.24	1.03	Discovery D	0.87	0.90	0.13
DHGH-14-25	36.60	36.93	0.33	Discovery E	1	0.33	0.00
DHGH-14-25	61.81	62.02	0.21	Duke A	1	0.21	0.00
DHGH-14-25	74.98	75.04	0.06	Duke B	0	0.00	0.06
DHGH-14-26	3.70	4.14	0.44	Davis A	1	0.44	0.00
DHGH-14-26	21.74	22.28	0.54	Davis B	1	0.54	0.00
DHGH-14-26	27.38	28.68	1.30	Davis C	0.54	0.70	0.60
DHGH-14-26	37.76	38.36	0.60	Davis D	1	0.60	0.00
DHGH-14-26	87.62	97.04	9.42	Davis D	0.3	2.83	6.59
DHGH-14-26	124.71	124.94	0.23	Discovery A	1	0.23	0.00
DHGH-14-26	137.39	138.11	0.72	Discovery B	0.89	0.64	0.08
DHGH-14-26	155.41	155.51	0.10	Discovery E	1	0.10	0.00

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DHGH-14-26	185.12	185.57	0.45	Duke A	1	0.45	0.00
DHGH-14-26	192.55	193.52	0.97	Duke B	0	0.00	0.97
DHGH-14-26	215.26	215.58	0.32	Duke C	0.81	0.26	0.06
DHGH-14-26	222.19	222.57	0.38	Duke D	1	0.38	0.00
DHGH-14-26	252.84	258.86	6.02	Duke E	0.12	0.72	5.30
DHGH-14-26	270.47	270.76	0.29	Duke G	1	0.29	0.00
DHGH-14-26	295.01	298.39	3.38	Duke H	0.56	1.89	1.49
DHGH-14-28	41.12	49.35	8.23	Discovery A	0.58	4.77	3.46
DHGH-14-28	62.75	65.47	2.72	Discovery B	1	2.72	0.00
DHGH-14-28	99.06	99.38	0.32	Discovery C	0.63	0.20	0.12
DHGH-14-28	117.23	118.17	0.94	Discovery D	1	0.94	0.00
DHGH-14-28	130.55	131.76	1.21	Discovery E	1	1.21	0.00
DHGH-14-28	161.21	161.68	0.47	Duke A	1	0.47	0.00
DHGH-14-28	171.32	172.06	0.74	Duke B	1	0.74	0.00
DHGH-14-28	189.56	189.94	0.38	Duke C	1	0.38	0.00
DHGH-14-28	199.45	200.05	0.60	Duke D	1	0.60	0.00
DHGH-14-28	244.12	245.12	1.00	Duke E	0.78	0.78	0.22
DHGH-14-28	258.48	262.83	4.35	Duke G	0.26	1.13	3.22
DHGH-14-28	290.07	295.07	5.00	Duke H	0.63	3.15	1.85
DHGH-14-30	7.48	8.55	1.07	Discovery B	0	0.00	1.07
DHGH-14-30	34.67	36.40	1.73	Discovery C	0.66	1.14	0.59
DHGH-14-30	52.24	52.80	0.56	Discovery D	1	0.56	0.00
DHGH-14-30	66.66	68.31	1.65	Discovery E	0.79	1.30	0.35
DHGH-14-30	96.39	96.92	0.53	Duke A	1	0.53	0.00
DHGH-14-30	107.59	108.63	1.04	Duke B	1	1.04	0.00
DHGH-14-30	128.11	128.53	0.42	Duke C	1	0.42	0.00
DHGH-14-30	139.49	139.89	0.40	Duke D	0.68	0.27	0.13
DHGH-14-30	189.95	197.14	7.19	Duke E	0.92	6.61	0.58
DHGH-14-30	216.57	218.91	2.34	Duke G	1	2.34	0.00
DHGH-14-30	240.25	245.07	4.82	Duke H	0.6	2.89	1.93
DHGH-14-31	15.27	16.48	1.21	Discovery C	0.5	0.61	0.61
DHGH-14-31	35.55	37.90	2.35	Discovery D	0.91	2.14	0.21
DHGH-14-31	56.47	57.11	0.64	Discovery E	1	0.64	0.00
DHGH-14-31	95.94	96.32	0.38	Duke A	1	0.38	0.00
DHGH-14-31	115.73	116.40	0.67	Duke C	1	0.67	0.00
DHGH-14-31	127.31	127.89	0.58	Duke D	0.91	0.53	0.05
DHGH-14-31	186.29	191.37	5.08	Duke E	0.73	3.71	1.37
DHGH-14-31	206.25	213.67	7.42	Duke G	0.52	3.86	3.56
DHGH-14-31	260.69	264.76	4.07	Duke H	0.65	2.65	1.42

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH-14-31	293.43	298.18	4.75	Trail B	0.86	4.09	0.67
DHGH-14-32	11.69	13.33	1.64	Davis C	0.76	1.25	0.39
DHGH-14-32	63.71	66.65	2.94	Discovery A	0.74	2.18	0.76
DHGH-14-32	82.95	83.91	0.96	Discovery B	0.92	0.88	0.08
DHGH-14-32	139.66	140.11	0.45	Discovery C	1	0.45	0.00
DHGH-14-32	152.04	152.94	0.90	Discovery D	1	0.90	0.00
DHGH-14-32	166.51	166.99	0.48	Discovery E	1	0.48	0.00
DHGH-14-32	179.67	181.23	1.56	Duke A	0.74	1.15	0.41
DHGH-14-32	193.07	193.49	0.42	Duke B	1	0.42	0.00
DHGH-14-32	199.25	203.06	3.81	Duke C	0.43	1.64	2.17
DHGH-14-32	210.88	211.98	1.10	Duke D	1	1.10	0.00
DHGH-14-32	222.34	223.35	1.01	Duke E	1	1.01	0.00
DHGH-14-32	267.77	268.91	1.14	Duke F	0	0.00	1.14
DHGH-14-32	282.32	288.78	6.46	Duke G	0.31	2.00	4.46
DHGH-14-32	328.98	330.32	1.34	Duke H	0.73	0.98	0.36
DHGH-14-33	33.24	36.69	3.45	Discovery E	0.55	1.90	1.55
DHGH-14-33	41.00	41.48	0.48	Duke A	0	0.00	0.48
DHGH-14-33	49.81	50.16	0.35	Duke B	0	0.00	0.35
DHGH-14-33	67.89	68.47	0.58	Duke C	1	0.58	0.00
DHGH-14-33	108.96	111.28	2.32	Duke E	1	2.32	0.00
DHGH-14-33	135.76	138.99	3.23	Duke G	0.8	2.58	0.65
DHGH-14-33	181.56	184.98	3.42	Duke H	0.69	2.36	1.06
DHGH-14-33	199.64	201.68	2.04	Trail B	1	2.04	0.00
DHGH-14-33	246.88	261.12	14.24	Trail C	0.61	8.69	5.55
DHGH-14-33	287.45	292.12	4.67	Trail D	0.49	2.29	2.38
DHGH-14-34	12.62	12.83	0.21	Davis A	0	0.00	0.21
DHGH-14-34	19.52	20.16	0.64	Davis B	0	0.00	0.64
DHGH-14-34	35.13	35.63	0.50	Davis C	1	0.50	0.00
DHGH-14-34	55.17	56.07	0.90	Discovery A	1	0.90	0.00
DHGH-14-34	70.80	71.71	0.91	Discovery B	1	0.91	0.00
DHGH-14-34	88.46	90.06	1.60	Discovery C	0.91	1.46	0.14
DHGH-14-34	115.56	115.77	0.21	Discovery E	0.67	0.14	0.07
DHGH-14-34	129.63	130.15	0.52	Duke A	1	0.52	0.00
DHGH-14-34	137.77	142.11	4.34	Duke B	0.2	0.87	3.47
DHGH-14-34	152.51	152.82	0.31	Duke C	0.81	0.25	0.06
DHGH-14-34	161.20	161.91	0.71	Duke D	1	0.71	0.00
DHGH-14-34	196.46	198.71	2.25	Duke E	1	2.25	0.00
DHGH-14-35	26.51	26.87	0.36	Duke A	1	0.36	0.00
DHGH-14-35	39.16	39.85	0.69	Duke B	1	0.69	0.00

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH-14-35	41.18	41.58	0.40	Duke C	1	0.40	0.00
DHGH-14-35	48.52	49.05	0.53	Duke D	0.81	0.43	0.10
DHGH-14-35	78.25	80.55	2.30	Duke E	1	2.30	0.00
DHGH-14-35	106.57	111.52	4.95	Duke G	0.34	1.68	3.27
DHGH-14-35	145.15	147.49	2.34	Duke H	0.61	1.43	0.91
DHGH-14-35	223.86	228.37	4.51	Trail B	0.85	3.83	0.68
DHGH-14-35	255.57	256.54	0.97	Trail C	1	0.97	0.00
DHGH-14-36	5.16	7.61	2.45	Discovery B	0	0.00	2.45
DHGH-14-36	29.26	31.52	2.26	Discovery C	0	0.00	2.26
DHGH-14-36	41.55	41.73	0.18	Discovery D	0	0.00	0.18
DHGH-14-36	53.92	54.12	0.20	Discovery E	0	0.00	0.20
DHGH-14-36	94.09	94.39	0.30	Duke B	1	0.30	0.00
DHGH-14-36	123.96	126.38	2.42	Duke B	0.83	2.01	0.41
DHGH-14-36	134.14	134.36	0.22	Duke A	1	0.22	0.00
DHGH-14-36	178.92	179.42	0.50	Duke A	1	0.50	0.00
DHGH-14-36	195.44	196.25	0.81	Duke B	0.28	0.23	0.58
DHGH-14-36	205.56	206.35	0.79	Duke C	1	0.79	0.00
DHGH-14-36	210.21	211.07	0.86	Duke D	1	0.86	0.00
DHGH-14-37	20.49	24.30	3.81	Discovery B	0.15	0.57	3.24
DHGH-14-37	46.57	48.00	1.43	Discovery C	0.51	0.73	0.70
DHGH-14-37	69.09	70.41	1.32	Discovery E	1	1.32	0.00
DHGH-14-37	97.37	97.78	0.41	Duke A	0.88	0.36	0.05
DHGH-14-37	103.81	104.14	0.33	Duke B	1	0.33	0.00
DHGH-14-37	115.11	115.77	0.66	Duke C	1	0.66	0.00
DHGH-14-37	120.79	121.29	0.50	Duke D	1	0.50	0.00
DHGH-14-37	196.45	198.21	1.76	Duke E	1	1.76	0.00
DHGH-14-37	237.33	238.53	1.20	Duke G	1	1.20	0.00
DHGH-14-37	257.29	257.99	0.70	Duke H	1	0.70	0.00
DHGH-14-37	292.66	293.07	0.41	Trail B	1	0.41	0.00
DHGH-14-37	343.71	344.78	1.07	Trail C	0.68	0.73	0.34
DHGH-14-38	13.33	14.79	1.46	Discovery A	0.51	0.74	0.72
DHGH-14-38	18.33	21.54	3.21	Discovery B	1	3.21	0.00
DHGH-14-38	68.90	69.62	0.72	Discovery C	1	0.72	0.00
DHGH-14-38	80.57	81.67	1.10	Discovery D	1	1.10	0.00
DHGH-14-38	91.10	91.80	0.70	Discovery E	1	0.70	0.00
DHGH-14-38	114.27	114.54	0.27	Duke A	1	0.27	0.00
DHGH-14-38	120.52	122.22	1.70	Duke B	1	1.70	0.00
DHGH-14-38	132.02	132.33	0.31	Duke C	1	0.31	0.00
DHGH-14-38	141.28	141.63	0.35	Duke D	1	0.35	0.00

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
DHGH-14-38	161.64	162.24	0.60	Duke E	1	0.60	0.00
DHGH-14-38	218.63	219.36	0.73	Duke G	0.45	0.33	0.40
DHGH-14-38	263.38	273.66	10.28	Duke H	0.77	7.92	2.36
DHGH-14-39	37.02	38.44	1.42	Discovery A	0.45	0.64	0.78
DHGH-14-39	61.07	64.27	3.20	Discovery B	0.61	1.95	1.25
DHGH-14-39	103.17	103.53	0.36	Discovery D	1	0.36	0.00
DHGH-14-39	112.20	114.12	1.92	Discovery E	0.31	0.60	1.32
DHGH-14-39	141.51	141.76	0.25	Duke A	1	0.25	0.00
DHGH-14-39	146.28	148.63	2.35	Duke B	0.42	0.99	1.36
DHGH-14-39	151.35	151.86	0.51	Duke C	1	0.51	0.00
DHGH-14-39	173.45	174.55	1.10	Duke D	1	1.10	0.00
DHGH-14-39	184.85	186.23	1.38	Duke E	1	1.38	0.00
DHGH-14-39	223.48	226.82	3.34	Duke G	0.33	1.10	2.24
DHGH-14-39	265.06	270.95	5.89	Duke H	0.57	3.36	2.53
DHGH-14-39	290.79	292.59	1.80	Trail A	1	1.80	0.00
DHGH-14-39	346.76	349.57	2.81	Trail B	1	2.81	0.00
DHGH-14-40	21.30	26.14	4.84	Davis B	0.36	1.74	3.10
DHGH-14-40	41.68	41.92	0.24	Davis C	0	0.00	0.24
DHGH-14-40	90.51	95.39	4.88	Davis D	0.18	0.88	4.00
DHGH-14-40	119.24	120.27	1.03	Discovery A	0.17	0.18	0.85
DHGH-14-40	132.22	133.52	1.30	Discovery B	0.88	1.14	0.16
DHGH-14-40	154.65	155.60	0.95	Discovery C	1	0.95	0.00
DHGH-14-40	161.95	162.34	0.39	Discovery D	1	0.39	0.00
DHGH-14-40	168.14	169.42	1.28	Discovery E	1	1.28	0.00
DHGH-14-40	189.10	190.40	1.30	Duke A	0	0.00	1.30
DHGH-14-40	202.65	209.68	7.03	Duke B	0.27	1.90	5.13
DHGH-14-40	233.97	234.70	0.73	Duke C	0.33	0.24	0.49
DHGH-14-40	243.69	244.54	0.85	Duke D	0	0.00	0.85
DHGH-14-40	285.07	289.64	4.57	Duke E	0.25	1.14	3.43
WH-08-02	10.60	10.80	0.20	Davis B	1	0.20	0.00
WH-08-02	21.15	21.30	0.15	Davis C	1	0.15	0.00
WH-08-02	34.53	34.70	0.17	Davis D	1	0.17	0.00
WH-08-02	42.40	43.50	1.10	Discovery A	1	1.10	0.00
WH-08-02	49.78	50.05	0.27	Discovery B	1	0.27	0.00
WH-08-02	67.10	67.30	0.20	Discovery C	1	0.20	0.00
WH-08-02	83.00	83.50	0.50	Discovery D	1	0.50	0.00
WH-08-02	115.50	115.90	0.40	Duke D	1	0.40	0.00
WH-08-02	137.10	138.10	1.00	Duke E	1	1.00	0.00
WH-08-02	144.00	144.59	0.59	Duke F	0.68	0.40	0.19

<i>Hole</i>	<i>From (m)</i>	<i>To (m)</i>	<i>Coal + Rock Thickness by Seam (m)</i>	<i>Seam Name</i>	<i>Coal / Coal + Rock Ratio</i>	<i>Net Coal</i>	<i>Net Rock Parting</i>
WH-08-02	162.00	164.68	2.68	Duke G	0.22	0.59	2.09
WH-08-02	188.08	194.00	5.92	Duke H	0.46	2.72	3.20
WH-08-02	224.70	225.00	0.30	Trail B	1	0.30	0.00
DDH-81-04	72.30	74.80	2.50	Duke E	0.8	2.00	0.50
DDH-81-04	102.20	105.00	2.80	Duke G	0.43	1.20	1.60
DDH-81-04	146.70	150.80	4.10	Duke H	0.54	2.21	1.89
DDH-81-05	49.40	51.30	1.90	Duke E	1	1.90	0.00
DDH-81-05	73.80	78.80	5.00	Duke G	0.24	1.20	3.80
DDH-81-05	114.21	117.97	3.76	Trail B	0.85	3.20	0.56
DDH-81-05	128.01	129.06	1.05	Trail C	1	1.05	0.00

Appendix 2 – Structural Geology Report

Type 1 Fold Interference Patterns of the Groundhog Coalfield at Anthracite Creek and its Significance to Coal Exploration.

For Atrum Coal

By

Michael Cooley

PhD, PGeol

September 29, 2013

Summary

The preliminary design of a 3D model for the Anthracite Creek area of the Groundhog Coalfield is presented here in the form of a map and structural cross sections that show the dome and basin style of type 1 fold interference pattern between two phases of folding. The complex structural style has greatly hampered attempts of interpreting continuity of coal seams across the study area, and it is highly unlikely that any one coal seam can be reliably correlated across the area. Despite this lack of interpretability the structural style modeled here is realistic and can be used as a guide for the regional to property scale interpretation of structures. A more detailed understanding of the structures (better than the current resolution of 200 metres which is the closest spacing of existing drill holes) can only be achieved with more data, either in the form of more densely drilled holes or some form of geophysics, or possibly chemostratigraphy. It is highly probable that the closely spaced stacked coal seams still represent a viable exploration target, especially considering the two phases of folding have compressed the coal and increased the relative coal volumes. An additional target might also be the hinge zones of folds where flow of coal into the hinges may have occurred during deformation.

INTRODUCTION

An interpretation of the geology of the Anthracite Creek area has been attempted here by assuming a polyphase folding pattern of mainly type 1 (and possibly locally type 2 where the younger F2 folds are overturned) and inspecting the map as a whole looking for patterns where bedding in outcrops or dipmeter data in drillholes resemble parts of the domes, basins and saddles that should be expected for this polyphase fold style (Figure 1). Two main phases of folding are evident in the Anthracite Creek area. The earliest phase of deformation was NNW directed compression with the formation of ENE trending F1 folds with moderately south-dipping axial planes. The F1 folds are overprinted and folded by younger NW trending F2 folds that have SW dipping axial planes which formed during D2 NE-SW compression.

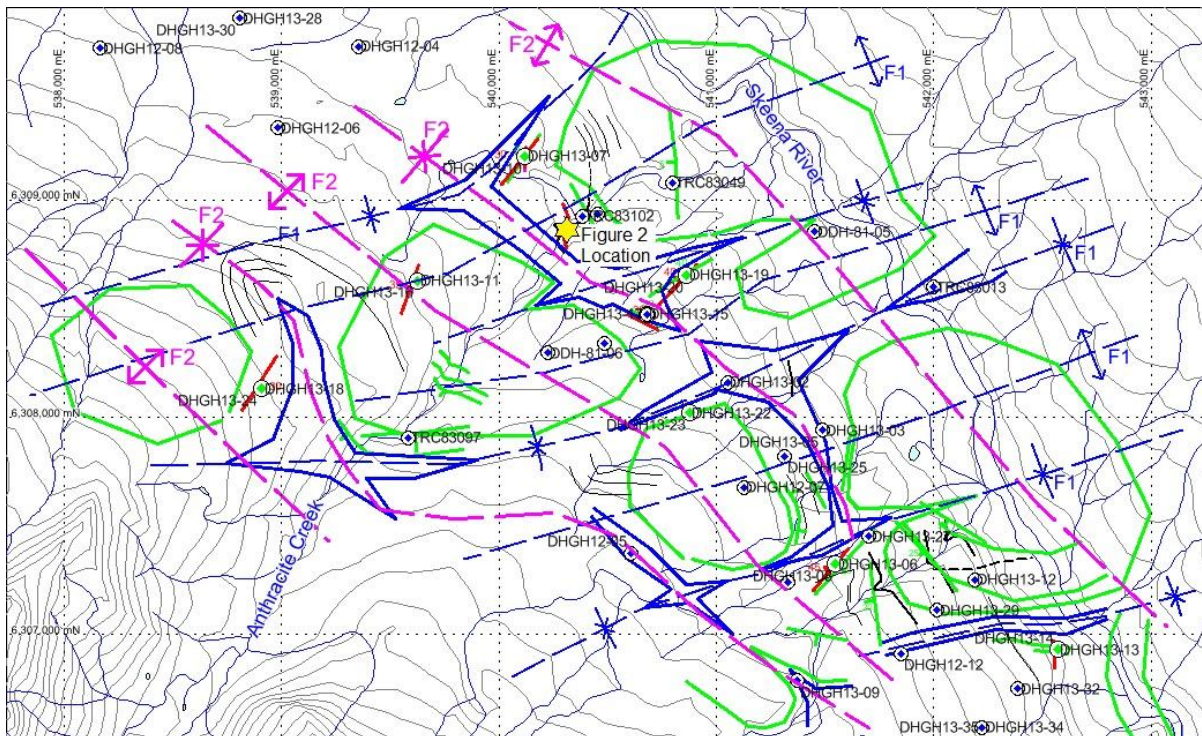


Figure 1. Dome (green lines and polygons) and basin or saddle- (solid blue lines and polygons) shaped dip domains which have resulted from interference between early ENE-trending F1 folds (blue dashed lines) and younger NW-trending F2 folds (magenta dashed lines).

D1 folds are likely open folds that trend east-west. South-dipping axial planes are indicated by south-dipping cleavages observed in a few outcrops which suggests these earlier folds have a north vergence; south to north compression and transport direction. D2 folds are tight to possibly locally overturned. Axial planar cleavage generally dips gently to the SW indicating a pronounced NE-vergence, with a high potential for overturned northeast limbs.

Outcrop exposures showing the earlier folded S1 cleavages are relatively rare. One good exposure occurs along the Anthracite Creek and is shown in Figure 2. At station MCGH02 in Figure 2, both bedding and S1 cleavage have been folded by a younger F2 syncline.

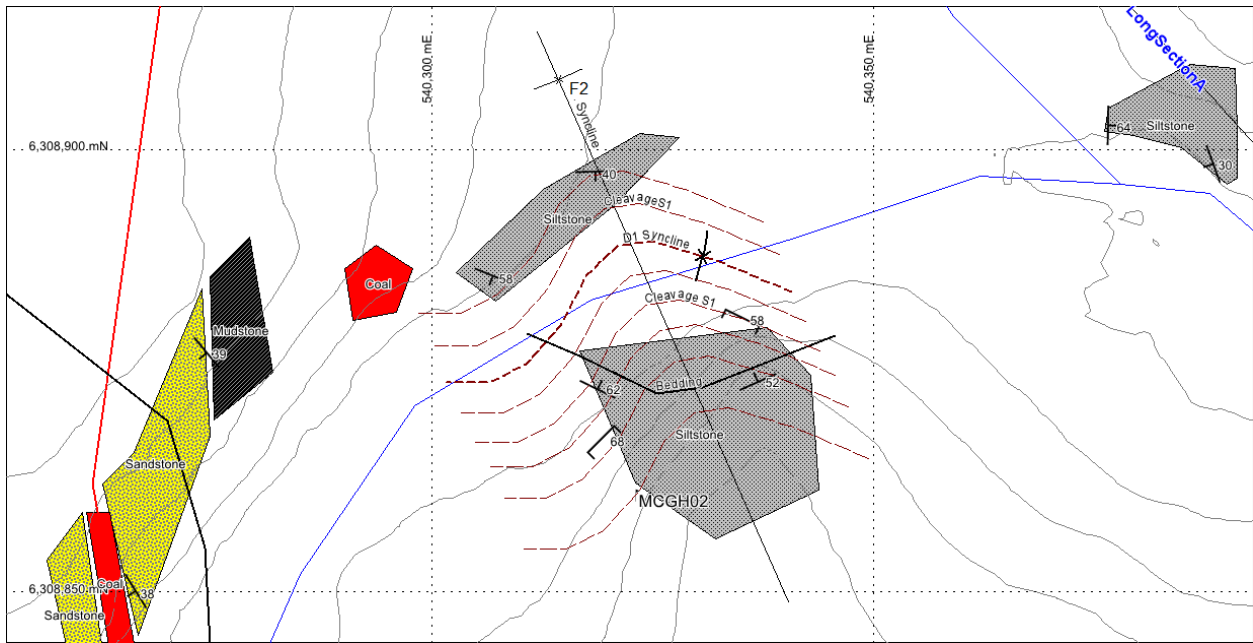


Figure 2. Geologic station MCGH02 along Anthracite Creek where older S1 cleavage has been folded by a younger F2 syncline. This outcrop location is shown on Figure 1. Outcrop photo of location is shown in Figure 3. The coloured polygons represent mapped outcrops.

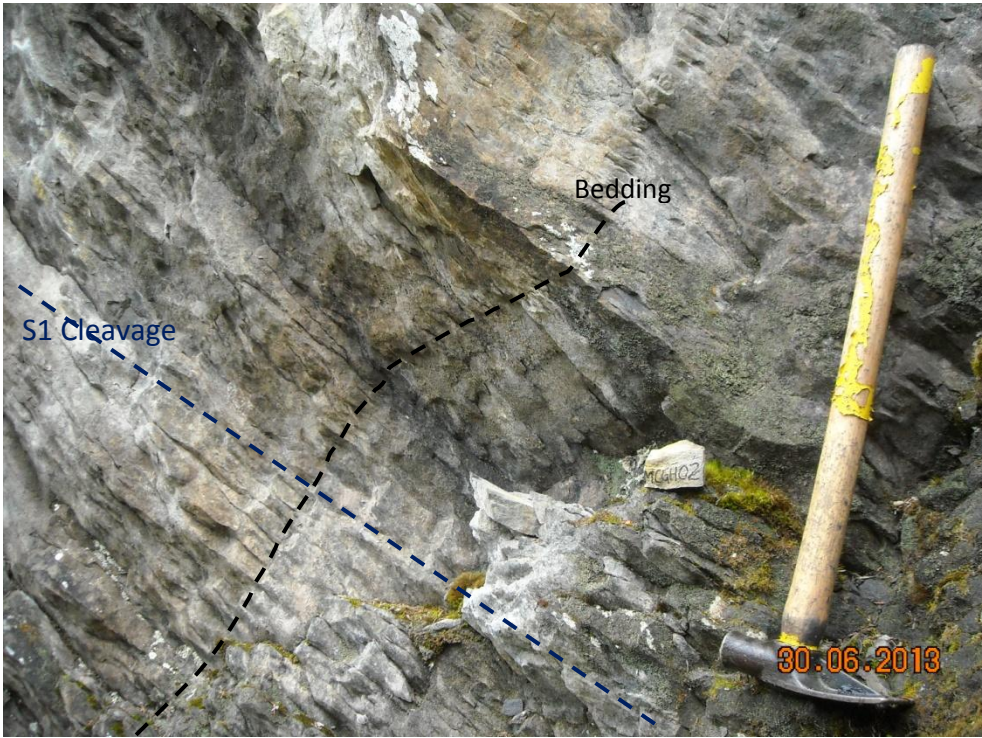


Figure 3. Outcrop along Anthracite Creek where moderately SE-dipping S1 cleavage cuts NE-dipping bedding. View is to the east at station MCGH02.

Stereographic projections of S1, S2 and bedding are presented below which display evidence of polyphase folding.

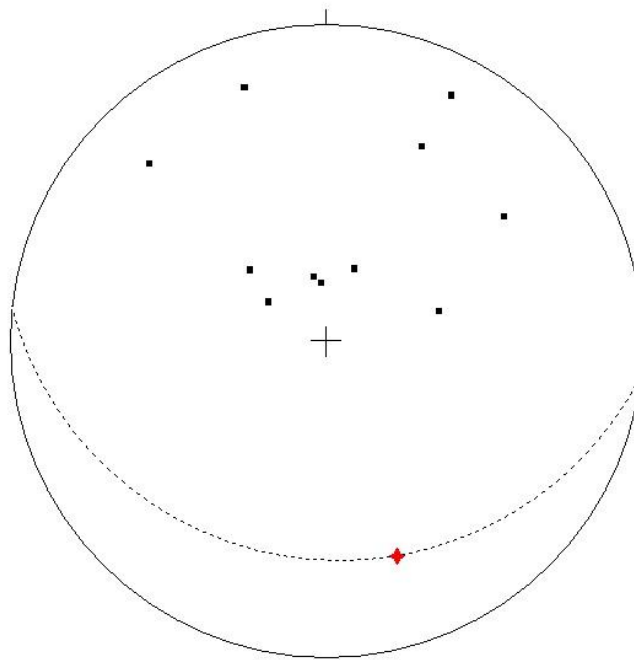


Figure 4. Stereographic projection of eleven S1 cleavage measurements from the Anthracite Creek area showing a generally south-dipping orientation for S1 cleavage. S1 is folded about a SSW-trending F2 fold axis of 29→162. More S1 cleavages need to be measured to get a statistically meaningful population.

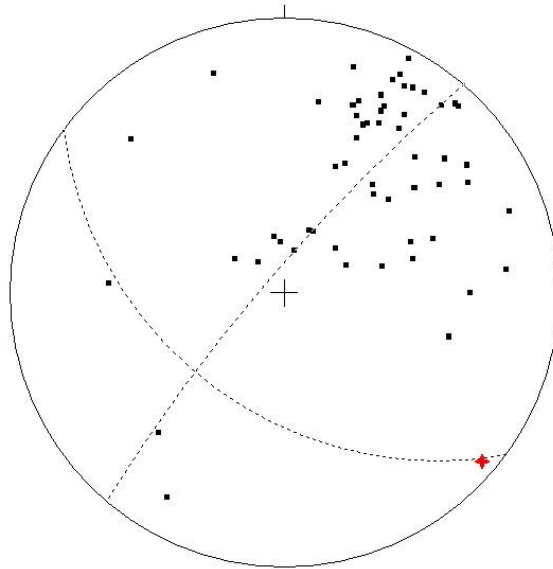


Figure 5. Stereographic projection of 57 cleavage measurements collected by Atrum Coal geologists from the Anthracite Creek area showing a generally southwest-dipping orientation. These cleavages are interpreted to be axial planar to the younger F2 folds and are themselves folded along a SE-trending fold axis 06→131, suggesting refolding of the younger F2 folds about a younger parallel axis.

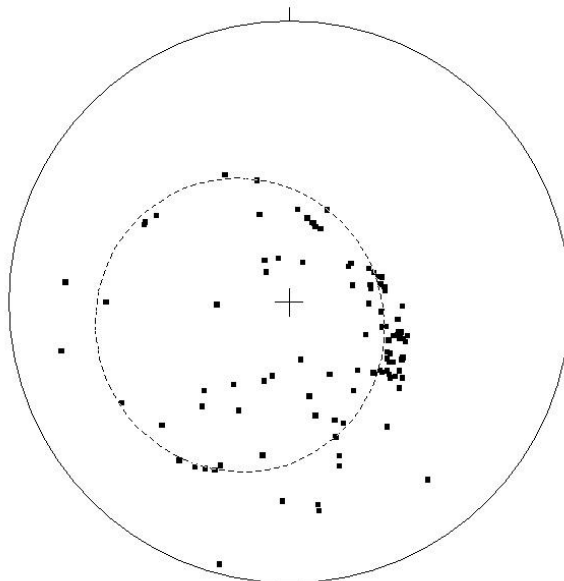


Figure 6. Stereographic projection of poles to bedding from dipmetre tool data from drill hole DHGH13-016 showing a small circle pattern that is indicative of poly-phase deformation. Most drill hole dipmetre data displays a similar small circle pattern.

After analyzing the stereonet data and observing the fold patterns evident in outcrop, a type 1 to type 2 fold interference pattern became a possibility and a few simple sketches of fold styles led to an initial model for the deformation style that was to be expected at the property and outcrop scales (Figures 7 and 8). This pattern was observed in the Anthracite Creek area and the image in Figure 7 was used as a style guide for the final interpretation shown in Figure 1.

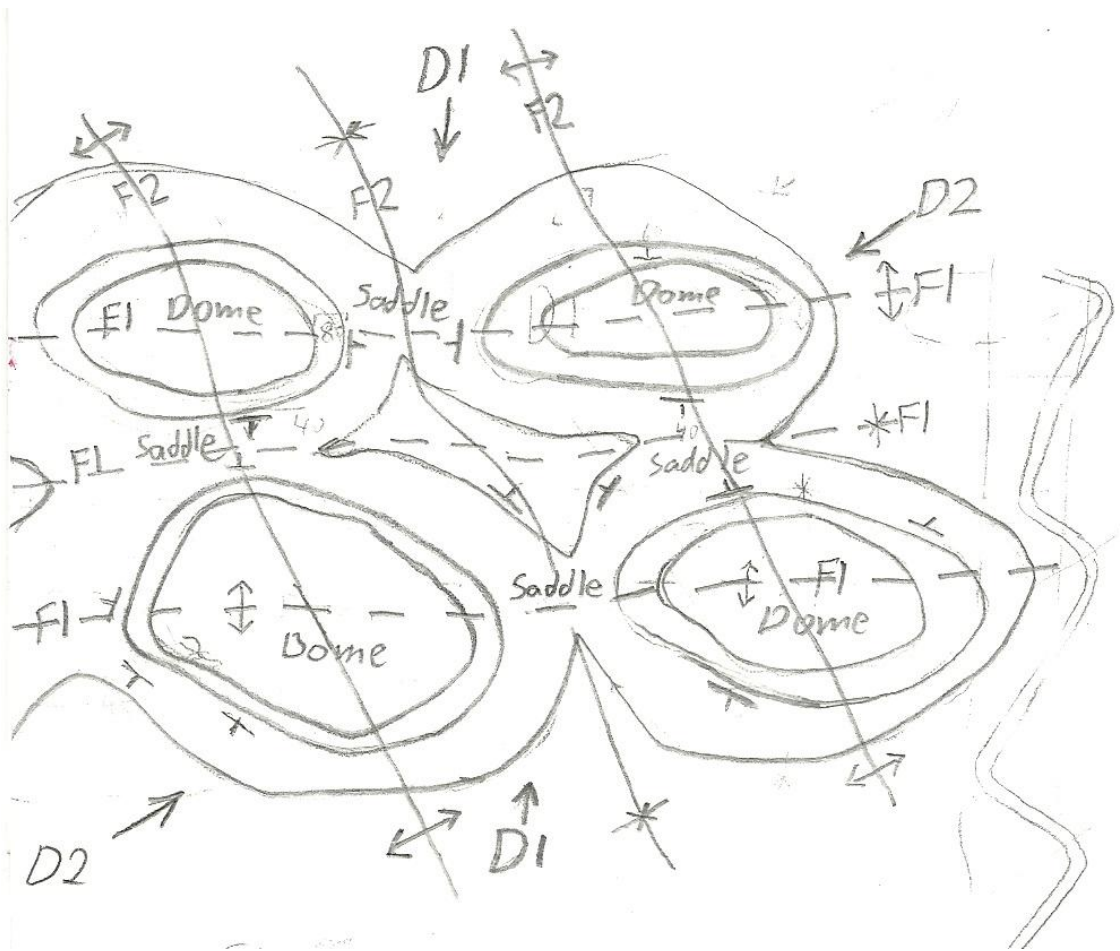


Figure 7. Preliminary sketch of the fold interference pattern that is proposed to occur at the property scale in the Anthracite Creek area. This is a type 1 fold interference pattern that occurs from nearly orthogonal overprinting fold events.

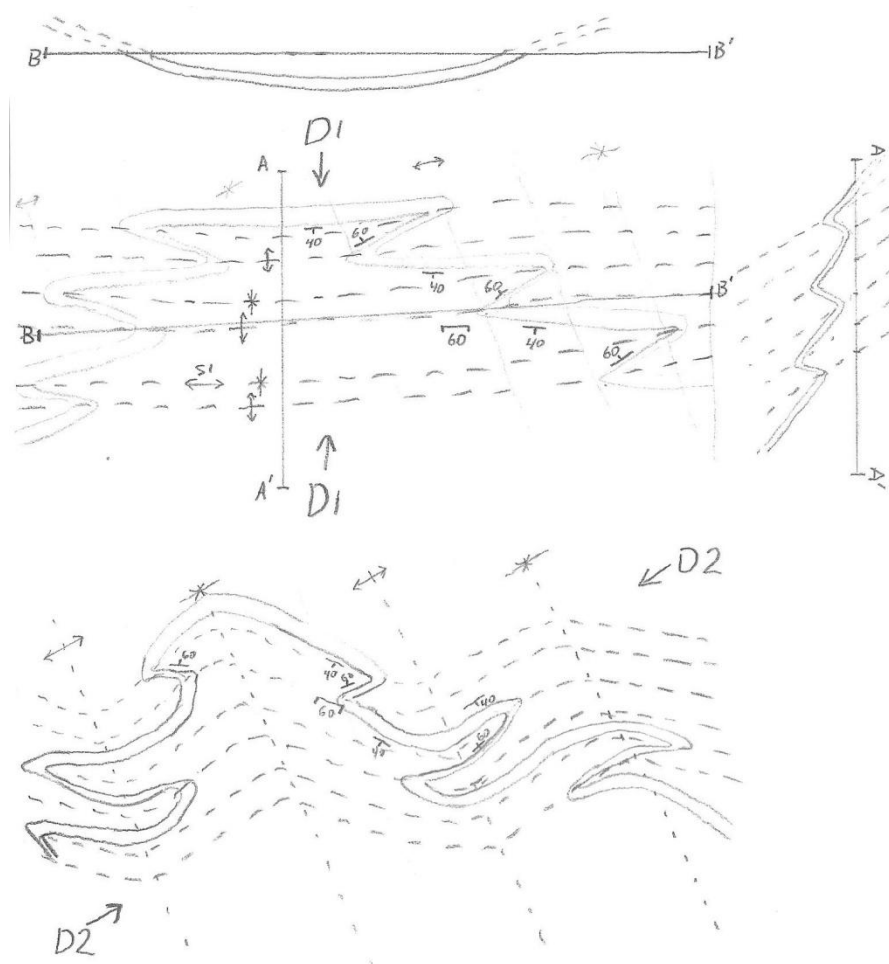


Figure 8. Hypothetical sequence of deformation showing the possible outcrop-scale patterns of fold interference that might be expected, but not directly observed within the Anthracite Creek area.

An exposure of complexly folded sediments occurs approximately 10 kilometres NW of the Anthracite Creek area, and a photograph from this locality is shown in Figure 9. This area would be a good place to conduct detailed mapping in order to confirm the polyphase fold style. This confirmation and documentation would greatly improve our understanding of the geology that lies beneath the less well exposed Anthracite Creek area.

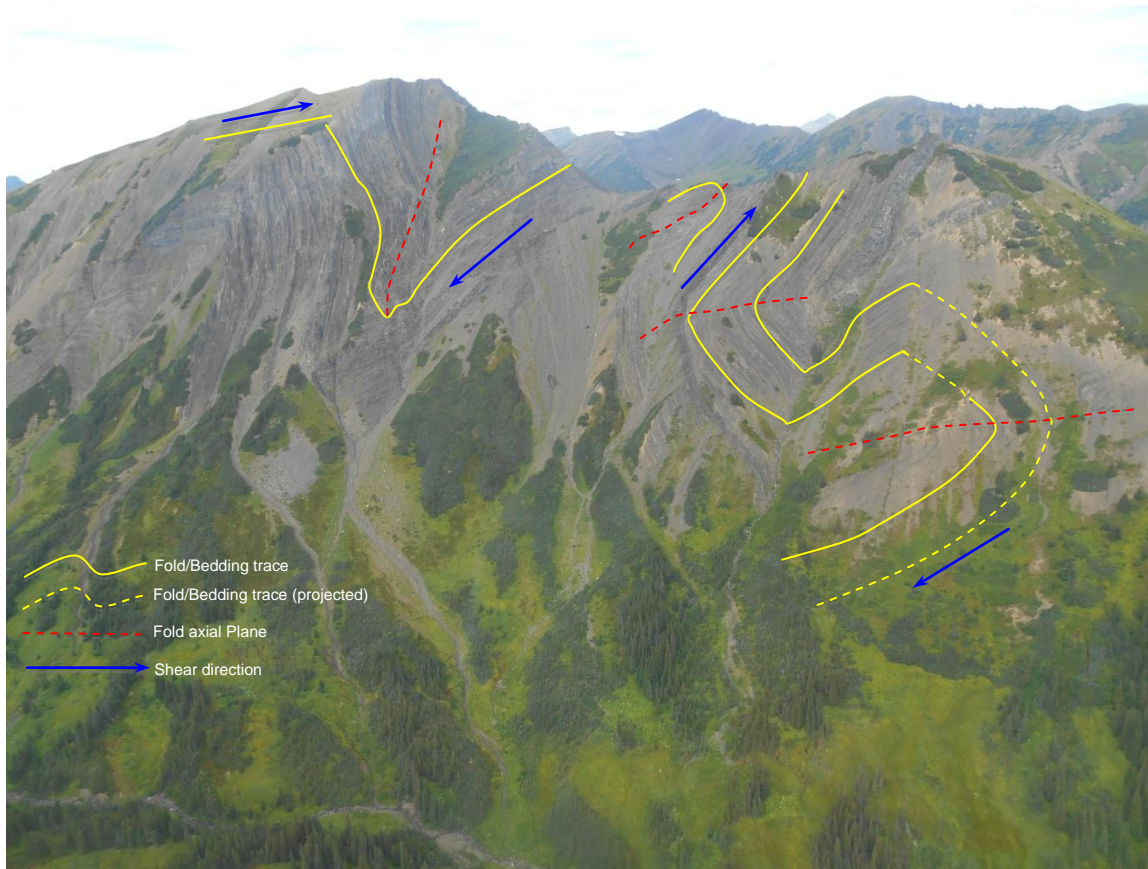


Figure 9. Annotated photograph of an exposure located 10 km along strike to the northwest from the Anthracite Creek area (photo and annotations from Edward Layzelle). View is to the NW at complexly refolded sediments that could be analogous to the types of structures that underlie the Anthracite Creek area. Photo location shown in Figure 10.



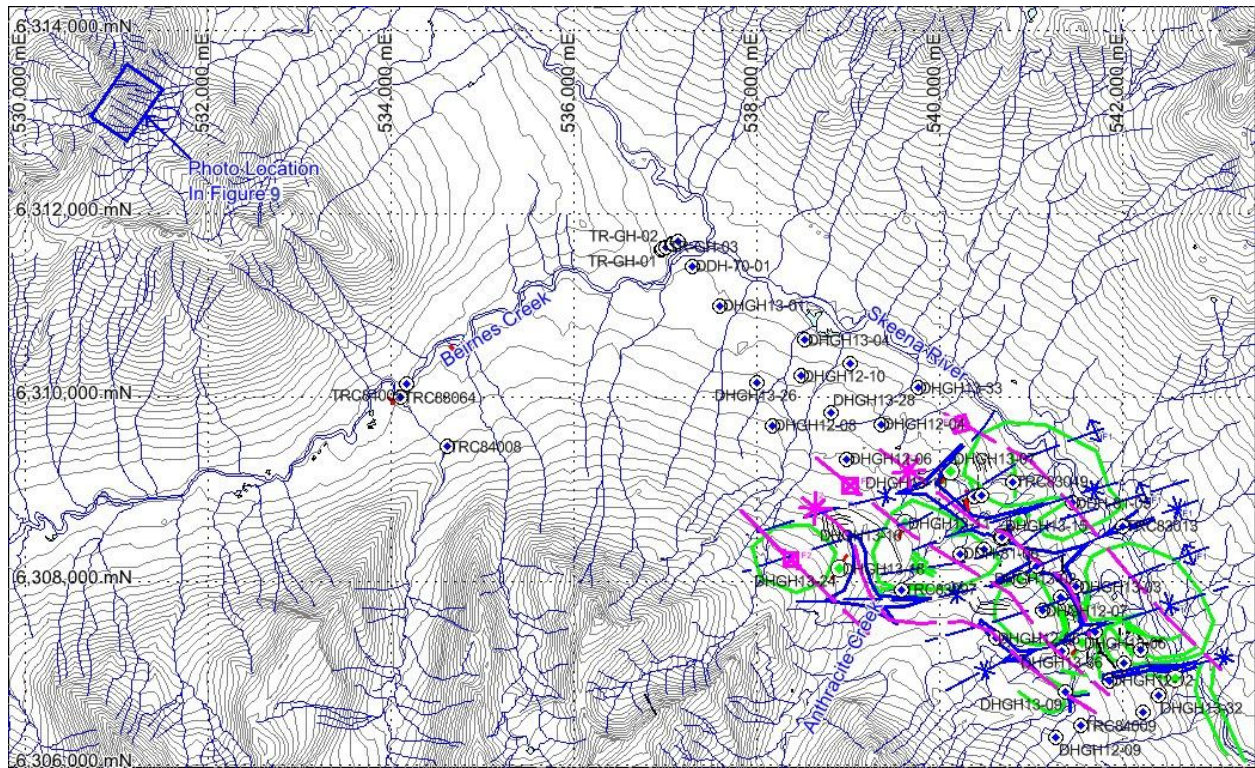


Figure 10. Map showing the location of photograph shown in Figure 9 which is 10 kilometres NW of Anthracite Creek.

The LIDAR topographic dataset has proved to be of some benefit in terms of more precisely locating drill collar elevations, however relatively few areas of bedrock exposure patterns were evident within the immediate Anthracite Creek area. The LIDAR data does show one area where an F2 syncline is exposed in the NW part of the area of modeling (Figure 11).

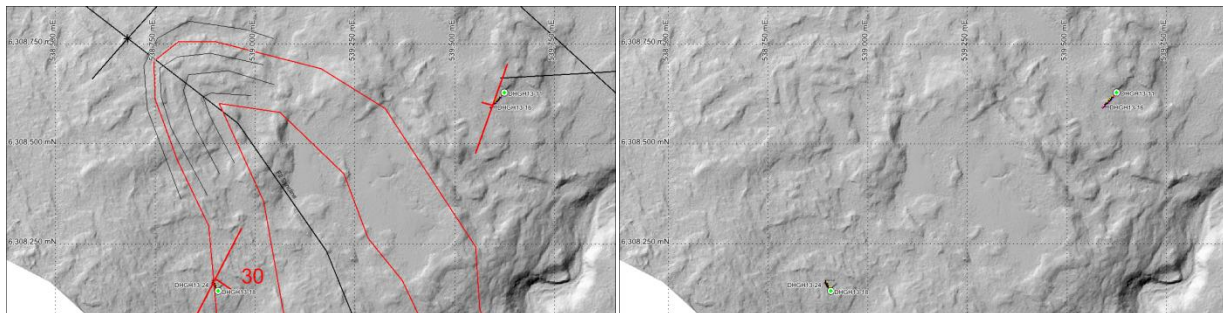


Figure 11. An F2 syncline is weakly displayed in this LIDAR image near the NW corner of the area of detailed 3D modeling. Although an important topographic dataset for the project, relatively minor geological features were observed on the LIDAR.

Once the basic dome and basin/saddle pattern which is shown in Figure 1 had been established for the Anthracite Creek area, a series of 9 cross sections and 3 strike sections were

constructed through the area to begin the 3D modeling of the structures. This arduous task has resulted in the cross section figures that can be found at the end of this report. A map showing the locations and orientations of the sections is shown in Figure 12.

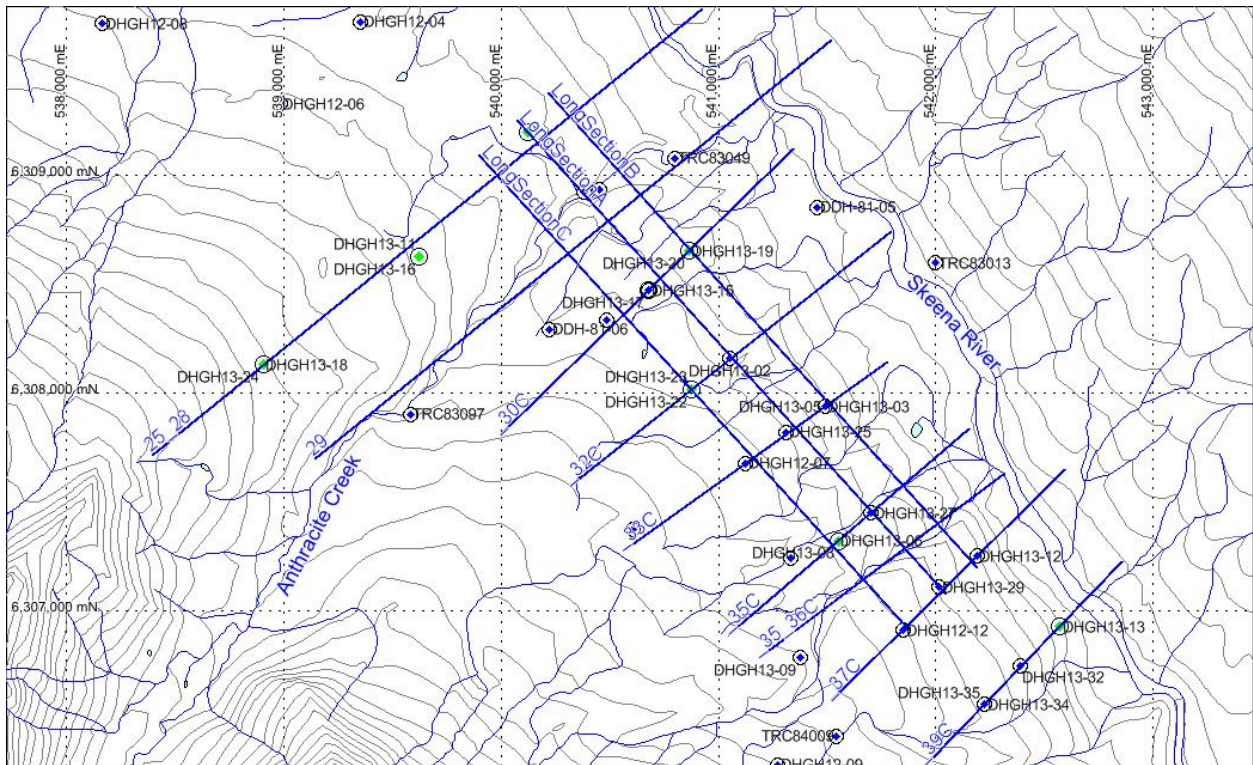


Figure 12. Location map of the 9 cross sections and 3 strike sections produced for this interpretation.

Disclaimer/ description of limitations in the dataset used to construct the sections

Cross sections are located at the end of this document.

Single bedding measurements in isolated outcrops, and inconsistent bedding dipmetre data throughout a drill hole cannot be used to confidently determine the local position relative to the larger D2/D1 overprinting structures, so these data have been used reluctantly or locally ignored in the interpretation.

Many of the holes with dipmetre data are short (< 50 metres) and do not contain sufficient data to determine what part of the property scale fold structure was drilled into. If the drill hole

happens to intersect an area of abundant minor folding then it is very difficult to determine on which part of the major structure these minor folds occur.

Bedding/core angles (BCAs) measured from the drill core have been generally ignored due to the inherent uncertainty of the strike direction. However, if bedding is close to perpendicular to the core axis (~90° to the core axis) over a large interval this interval of bedding orientation can be reliably constrained and has been used in the model.

This model /interpretation is definitely not an accurate or precise representation of the actual location of individual coal seams. This model is however very realistic. It honors all the available data and represents the structural style that should be expected with this polyphase fold type.

Due to the complexity of the interference patterns and the relatively sparse geological data (rare discontinuous outcrops along creeks, widely spaced drill holes, very few drill holes with reliable dipmetre data, general lack of marker beds within a monotonous stratigraphy), it is highly unlikely that individual coal seams can be reliably correlated across this area. In addition, due to lateral facies changes the coal seams are unlikely to be continuous throughout the 5 km by 3 km volume modeled here. This model presented here is more of a general guide for the structural style of the property-scale fold patterns within which the more detailed scale patterns will have to be determined by more detailed drilling or actual mining excavation.

In other words, reality will be more complicated than the simple model I have presented here in the map and cross sections.

Although the interpretation shown on the cross sections and strike sections might give the impression that that coal seams have been correlated across the entire 5km X 3 km area, there is actually a great deal of uncertainty in the correlation due. Extrapolating from areas of known coal locations in drill holes and creeks through areas of no data was accomplished by “best fit” extrapolation of contacts to follow the fold patterns established by the dome and basin/saddle model shown in Figure 1.

Attempts at using the geophysical logs have locally proven very useful where drill intercepts are close together. However, now that a realistic structural style has been established, additional comparison of geophysical log signatures may be done to possibly refine the model over longer distances.

Significance of the model to coal exploration and eventual mining

Certain facts related to the deformation style will have to be accepted and a change in focus for exploration may be required to realistically propose mining in this complexly deformed area. The following factors characterize the coal deposits and will affect the mineability of the coal;

-Multiple coal horizons are consistently intersected in every drill hole. In spite of the complex deformation, it should be possible to calculate an approximate volume of coal for a given area, but with definite uncertainties due to unpredictable nature of the deformation style and to the probability that individual coal seams are discontinuous and overlapping rather than continuous.

-Overlapping coal seams may be better as it means extra coal within any given cross section volume.

-Coal horizons will have to be drilled at a much closer spacing to reliably model the location, orientation and continuity of the coal prior to mining.

-Tight to locally overturned folds are definitely expected to occur with this deformation style, and **thickening of coal seams due to flow of the more ductile coal into hinge zones during compression and folding is an important exploration target for future exploration!**

It is highly probable that the multiple coal seams that Atrum coal has intersected at shallow depths and at multiple stacked horizons may actually contain much more coal than any laterally continuous and consistent seam. The degree of folding, from two directions means that there is more coal volume within this area of interest than may have been calculated from previous estimates. Also consider that the folding is more detailed than this relatively conservative model that I have presented here in the map and cross sections, which would make for even higher coal volumes.

We won't really know until you find some way of improving the structural model to get closer to reality, either by more closely spaced drilling with a dipmeter tool run on **ALL** holes, some kind of ground geophysics such as ground magnetics or a 3D seismic survey, or an actual excavation of an area for a test case.

Recommendations

-Drill more closely spaced holes and use the dipmetre tool on all holes. Incline all holes if the dipmetre tool works best in an inclined hole.

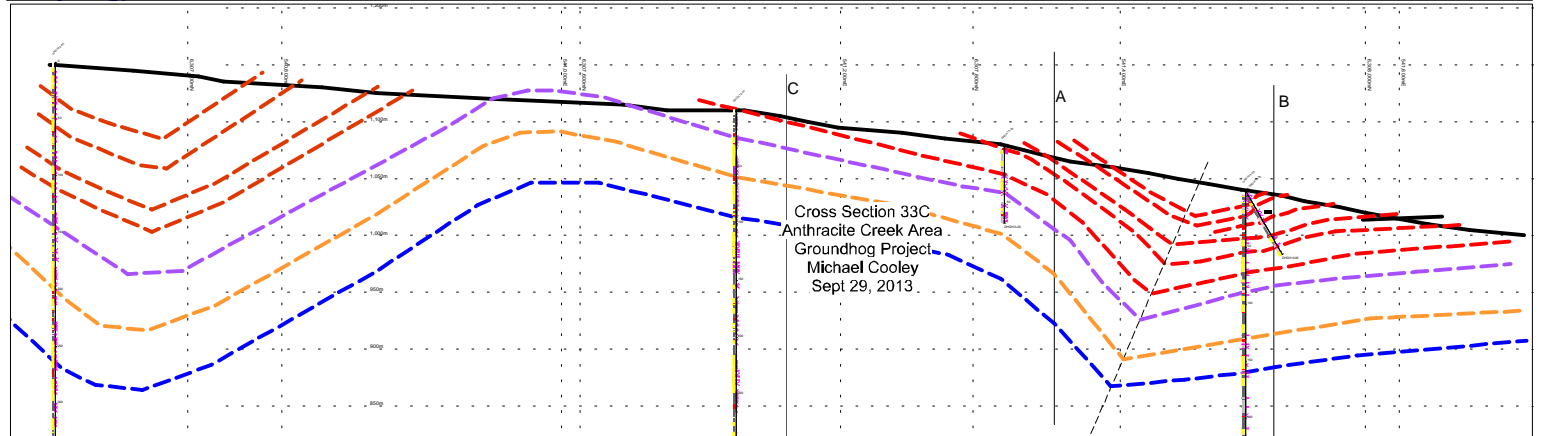
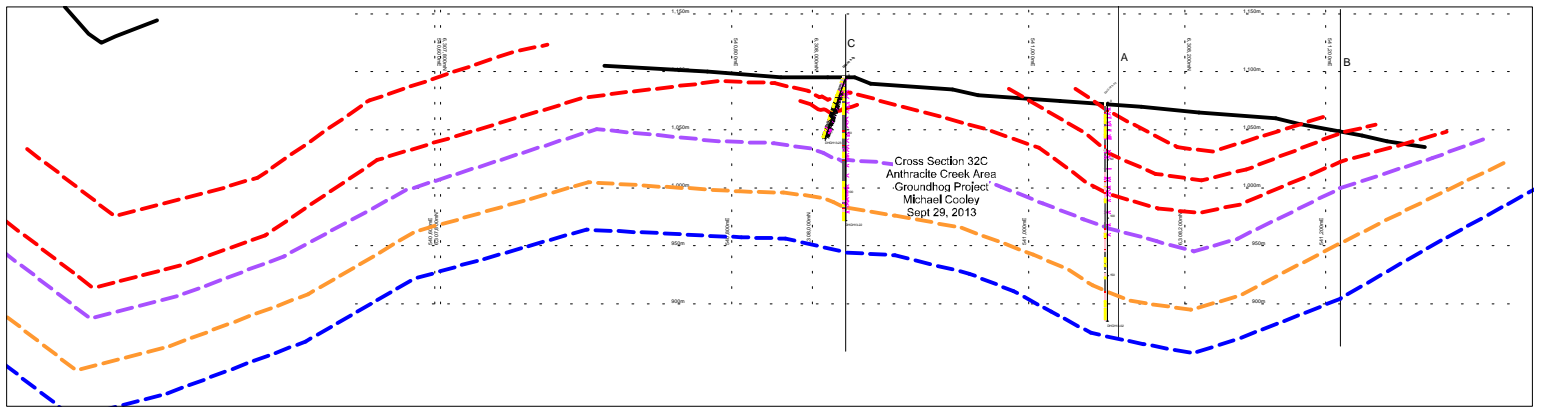
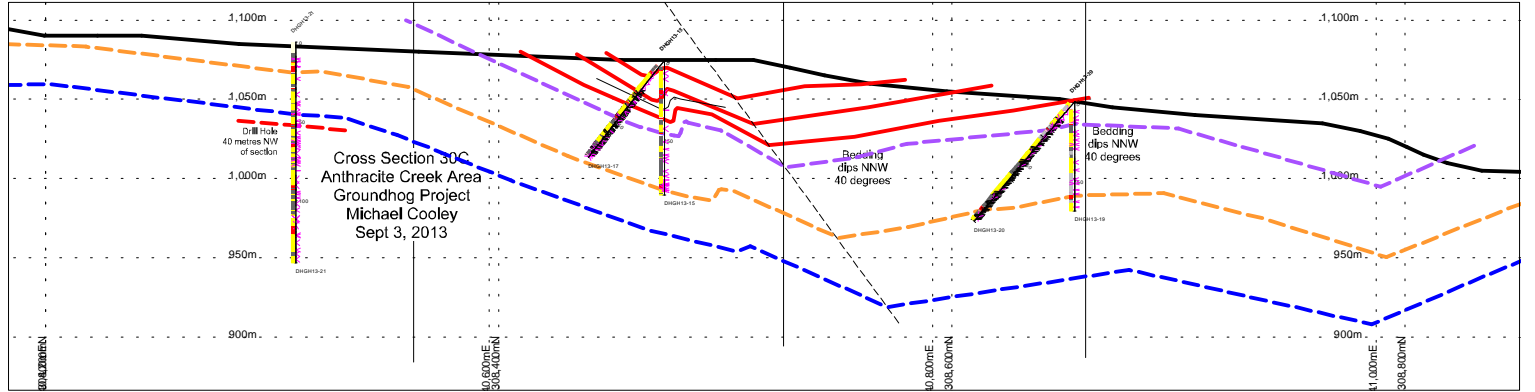
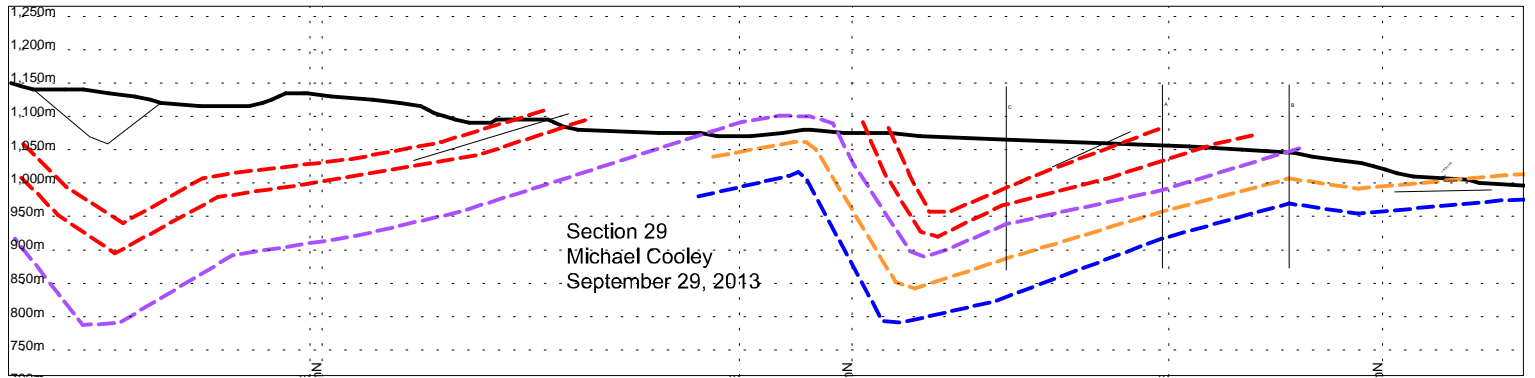
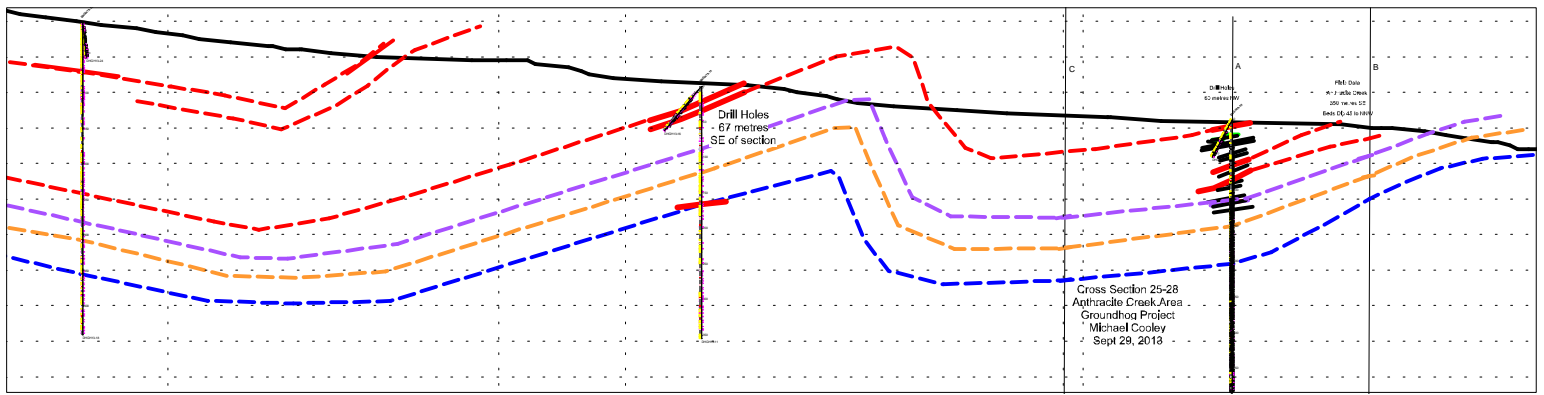
-Do some geophysics. See if ground magnetics will work by testing the core to see if there is sufficient magnetic susceptibility contrast. Or run a small test area of ground magnetic.

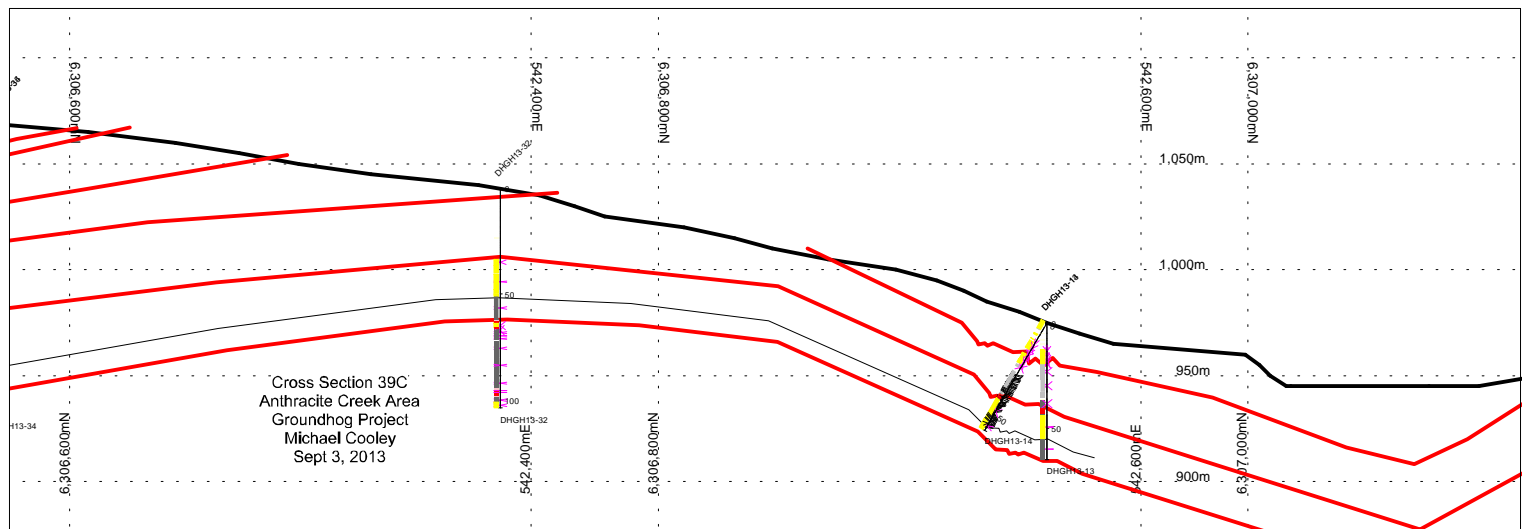
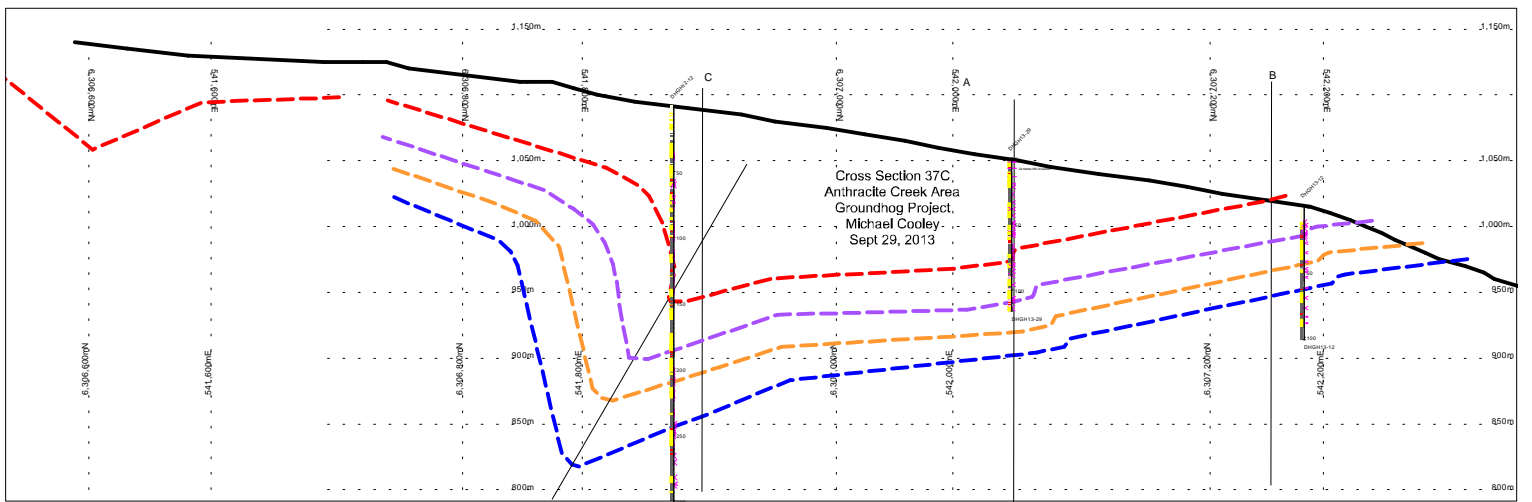
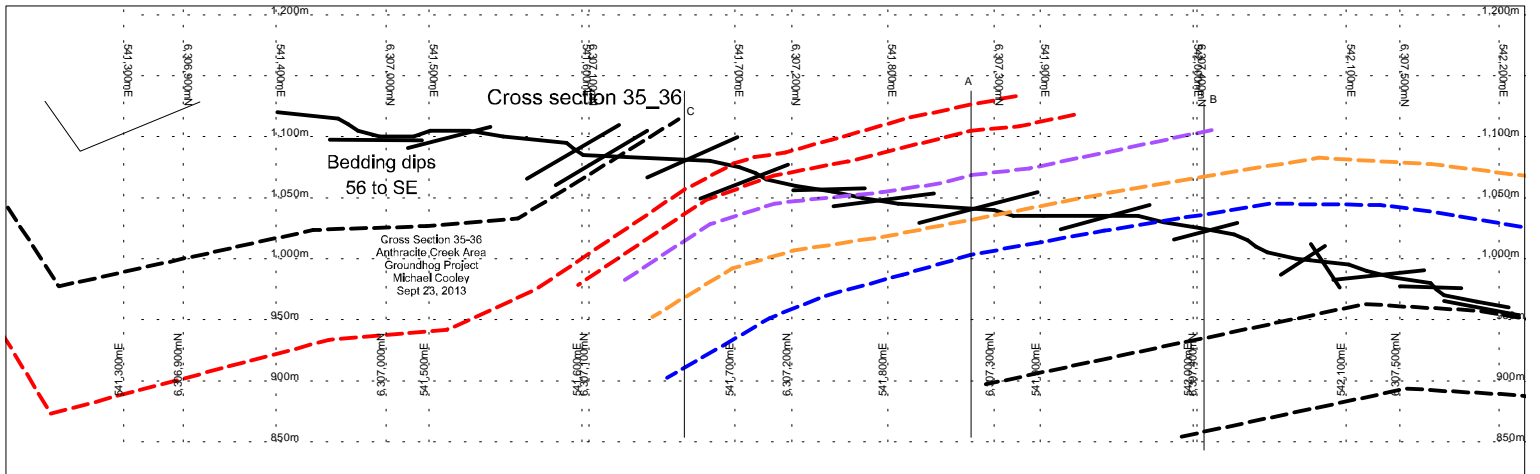
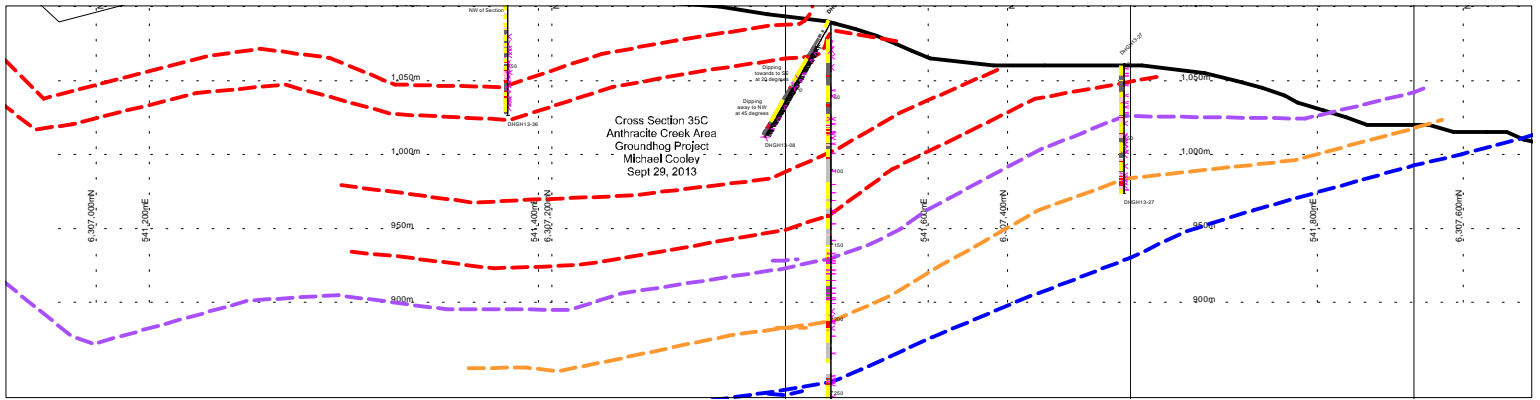
-Do a 3D seismic survey. However will this actually work in a terrain that is not conically or cylindrically folded? Dome and basin structures means there will be abundant reflections from off the survey lines that can potentially interfere with processing.

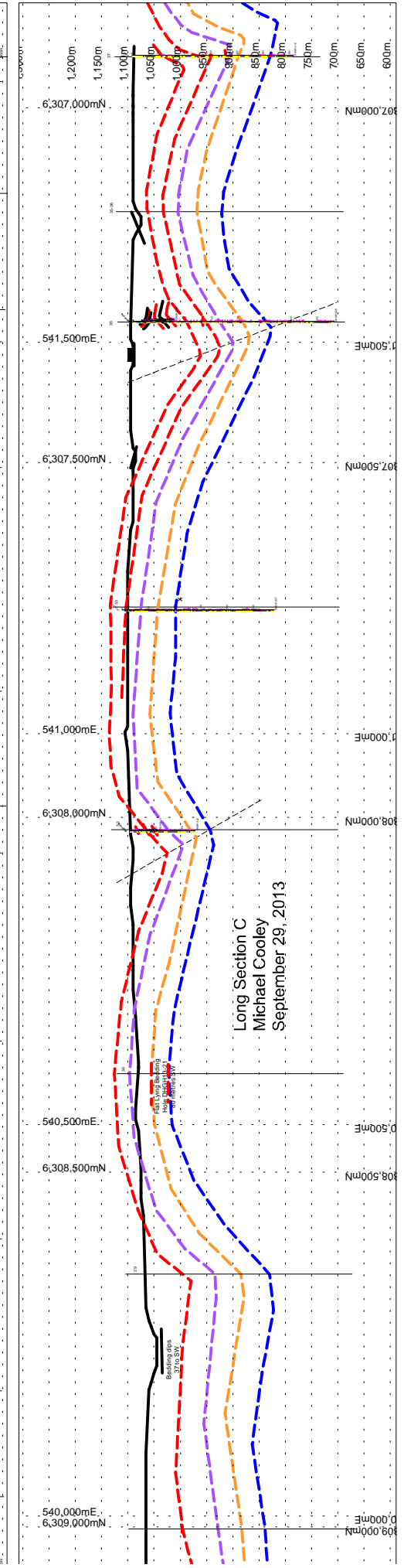
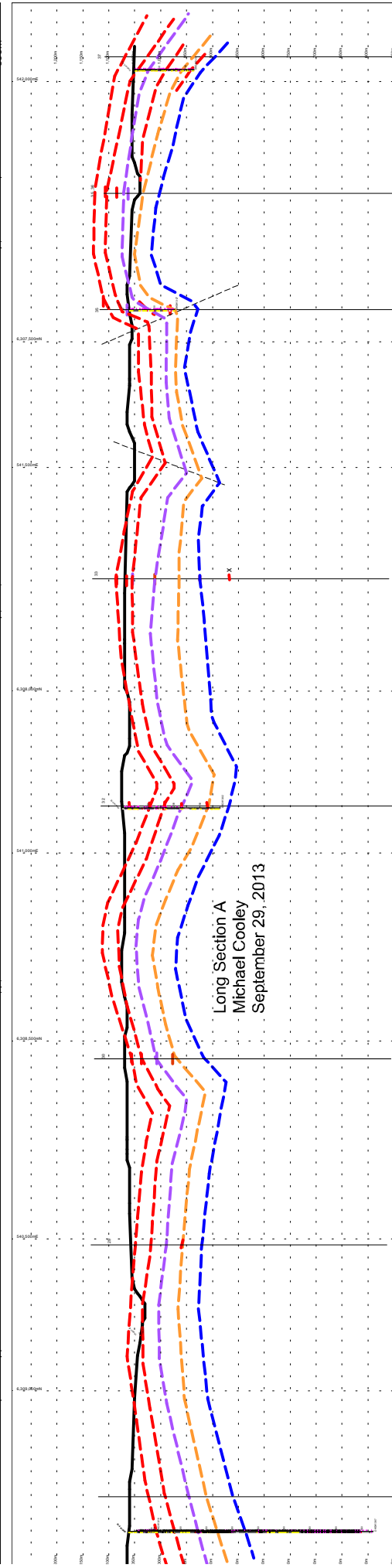
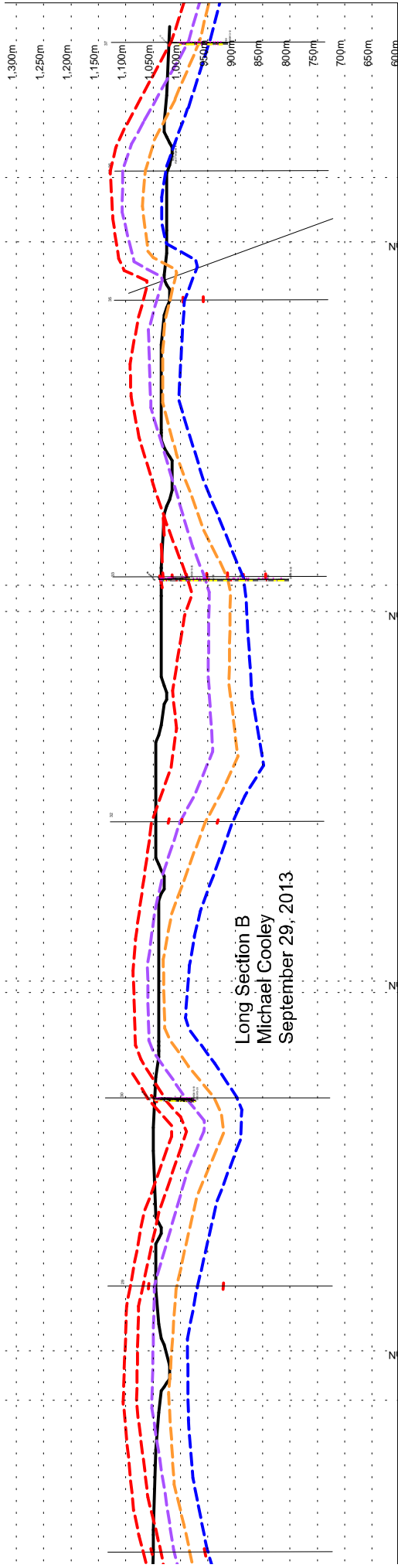
-The lack of marker horizons and a definite stratigraphy is problematic. Is there any potential to do chemostratigraphy? Is there a trace element pattern or rare earth element pattern or stable isotope pattern within the drilled stratigraphy that might be useful? This would mean sending core in for geochemical analysis.

-Map in detail the exposure of complex folding observed 10 km NW of the Anthracite Creek. Lessons learned there can be applied in the less well exposed areas at Anthracite Creek.

-Do not use the model presented here in cross and strike sections as an actual or accurate representation of coal horizons locations. It is a realistic model that generally honors all available structural data and displays the complexity of the structures. Actual continuity of the individual coal seams has to be confirmed by other methods mentioned above.







Appendix 3 – Trenching Reports

2014

ATRUM COAL 2014 TRENCHING PROGRAM

AC-GH-TR-01 & AC-GH-TR-02 TECHNICAL REPORT

GROUNDHOG ANTHRACITE PROJECT

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Groundhog Trenching Program

AC-GH-TR-01 & AC-GH-TR-02 Technical Report

Introduction

In July 2014, Atrum Coal excavated 200 tonnes of anthracite coal from a combination of two trenches at the Groundhog Property. The main purpose of the trenches is to prove the supply chain of getting coal from Groundhog to the Stewart Port, recover at least 100 tonnes of coal, validate data from borehole DHGH-14-06, and collect structural information to aid the structural interpretation within the bulk sample area. The trench was also intended to provide proper trenching and sampling techniques for future trenches at Groundhog. A representative amount of the stockpiled coal will be sent to ALS labs for analysis.

A total of two trenches were excavated at the trenching site, AC-GH-TR-01 and AC-GH-TR-02. The latter, AC-GH-TR-02, was excavated parallel to AC-GH-TR-01 approximately 2.5 meters SE to increase the size of the coal stockpile. All structural information was collected from the AC-GH-TR-01. This document summarises the technical data collected from AC-GH-TR-01 and the sampling and reclamation of both trenches.

Overview

Prior to trenching, an organic layer was removed and piled NE of the trench site. An additional clay/sand layer with common boulders (unconsolidated material) was removed towards the SE side of the trench. The coal stockpile was located on the NW side of the trench (*Figure 1*). The trench was dug at ~240 degrees with a width of 3.1 m and a maximum depth of 6.7 m to the base level (below the organic and clay/sand horizons) of the trench producing an estimated 80 tonnes of coal.

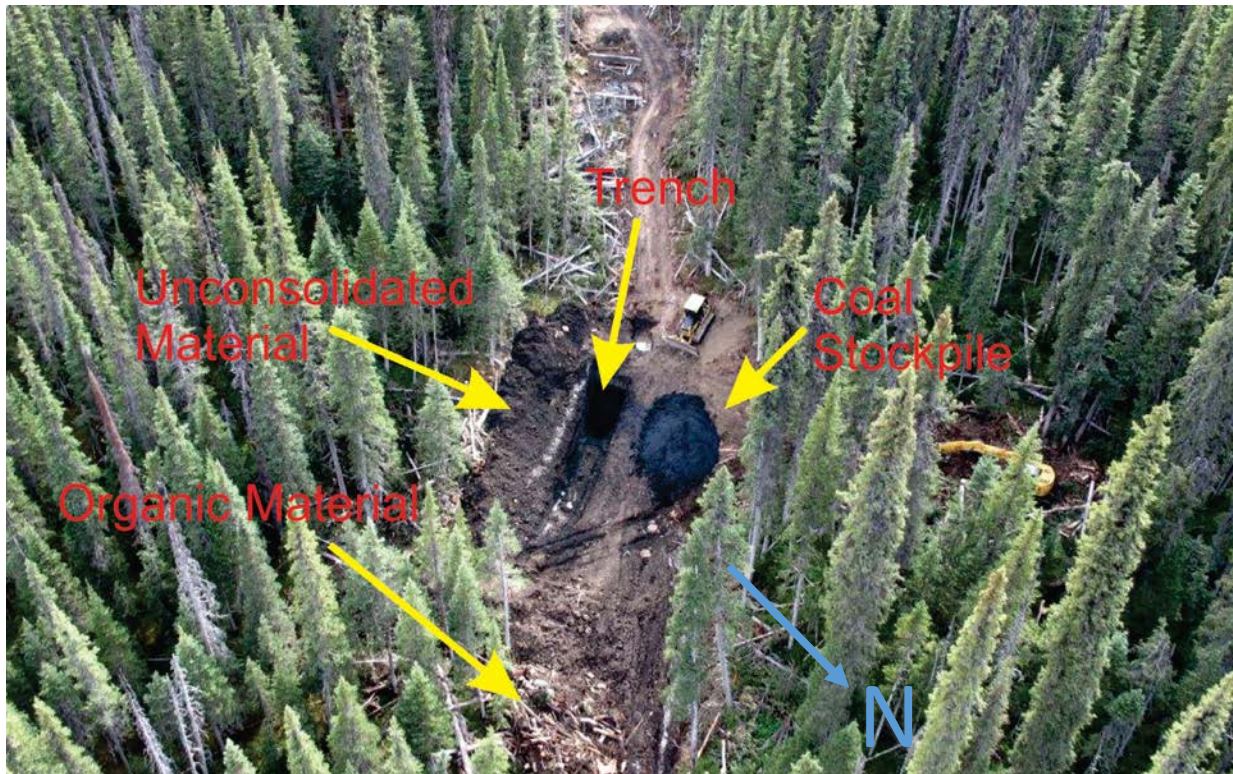


Figure 1: Aerial photograph showing general layout of trench and location of removed material.

Geology

Examination of the trench face revealed important information having implications on both structural interpretation and depositional environment. Lenticular bedding was documented at the trench proving the thickening and thinning of coal beds can be abrupt and possibly more irregular than previously thought. Lenticular bedding has been considered when examining geophysical logs for correlation as coal seam thickness has varied greatly between drillholes that are closely spaced but has never been observed in outcrop in the bulk sample area prior to AC-GH-TR-01. Less than 25 m away from the trench site is DHGH-14-23 which intersected the same coal seam intersected in the trench, but was 1 m thick in the drillhole compared to approximately 6 m in the trench. However, due to the restrictions of the excavator, the trench was unable to reach the bottom of the coal seam to document its maximum thickness.

Lithologies/Horizons

There are three lithologies that compose the 7.2 m vertical trench including organics, a clay/sand unit, and one coal seam that can be further divided into three distinguishable coal seam horizons (Figure 2).

Organics

The organic layer varies in thickness over the extent of the trench area from 30-50 cm. The organic layer was stockpiled in the SE corner of the trenching site before trenching began.

Clay/Sand

Underlying the organic layer is a light brown, unconsolidated, and weathered horizon approximately 1.0 to 1.5 m thick. This is primarily comprised of clay and sand but has common round boulders ranging in size from 0.10 to 1.5 m with most between 0.10 and 0.30 m in diameter.

Coal

Below the clay/sand horizon is a black, soft, coal seam that is slightly weathered near the upper contact. Coal descriptions were done from approximately 4 m away from the trench face and are less detailed than drillhole logging data. The three coal horizons starting from the roof of the coal seam are (A) 1.0 m; (B) 3.5 m; and (C) 1.0 m. A brief description of each seam is as follows.

- A.) Soft, weathered, moist; no visible cleating or infill; dark coal with no bright faces, looks very weathered; visible parting near the bottom approximately 10-20 cm; gradational contact with (B).
- B.) Hard, fresh, well-cleated coal; overall C2 brightness; face cleats can be up to 5 cm; rare and irregular quartz cleat fill.
- C.) Hard, fresh, well-cleated coal but too deep to properly document. Coal from this unit when brought to surface by excavator is up to C2 brightness but likely contaminated with coal horizons A and B.

Structure

Trenching produced valuable structural data and improved overall understanding of coal seam morphology, particularly the thinning and thickening of coal seams at Groundhog where coal beds in particular, have been hypothesized to be lenticular. See Figure 3 for the location of the structural measurements listed below and to see the lenticular bedding observed in the trench.

Eastern limb (A) → Gradational contact between coal and carbonaceous mudstone (XM); bedding 305/71.

Western Limb (B) → Coal; C2-C3 brightness, common mudstone bands, irregular trace pyrite, coal is generally well cleated when fresh face exposed by excavator, no quartz veining observed; bedding 276/33.

Fold plunge (C) → Coal; C3 brightness, common mudstone bands, shows evidence of weathering, coal moderately cleated when fresh face exposed by excavator, minor millimeter quartz veining observed; plunge 27/320.

Axial plane (D) → Apparent axial plane; 325/70.

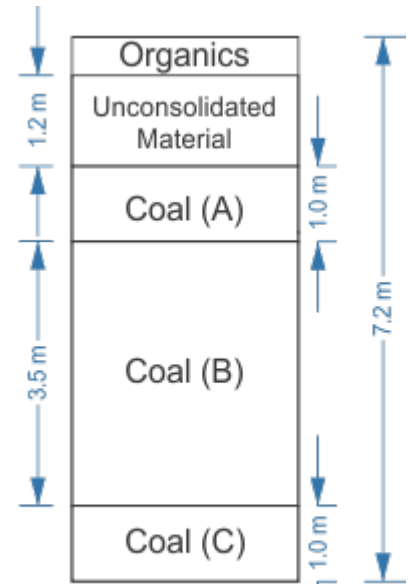


Figure 2: Cross section of trench.

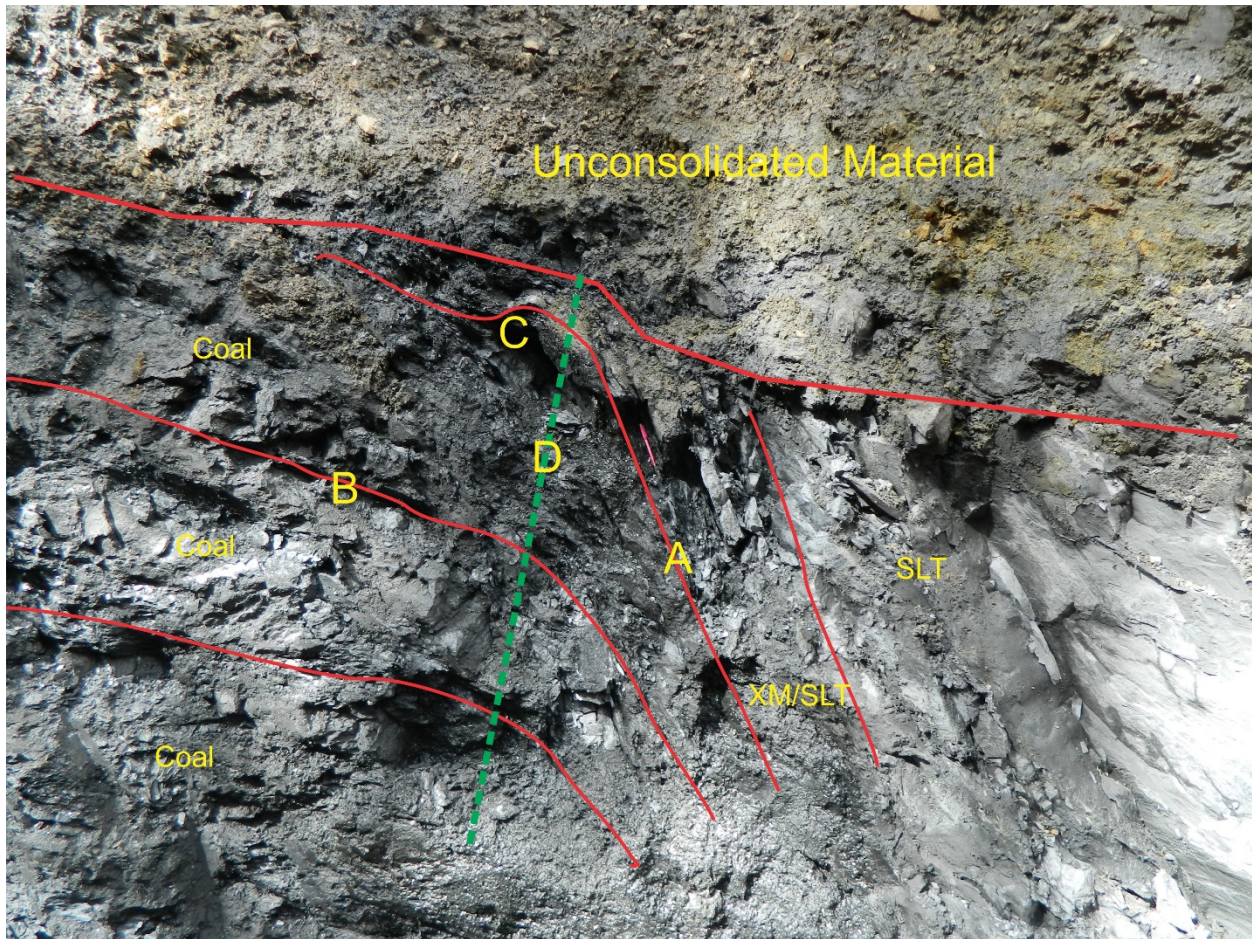


Figure 3: Cross section looking NW at face of trench showing documented lithologies and structural features: A) Coal-XM contact bedding measurement; B) Coal bedding measurement; C) Location where plunge was measure from; D) Axial plane. The three different coal lithologies labelled are labelled only to demonstrate the lenticular bedding and not to imply distinct lithological differences.

Stockpile

The coal stockpile is a chevron type stockpile but is irregularly shaped due to the rough terrain and the limitations of the excavator (Figure 4). The stockpile in Figure 5 after AC-GH-TR-02 was completed is estimated at 60 to 80 tonnes, measuring ~4 m high, 4-6 m wide, and 8-10 m long. After extracting the coal from the first trench, a second trench (AC-GH-TR-02) was dug parallel to AC-GH-TR-01 to increase the size of the stockpile. AC-GH-TR-02 did not have any structural data collected from it. After the second trench was dug, a strip sample (bag 5) was collected using the excavator. The stockpile was then sampled again with five more one tonne bags that were sampled from various parts of the stockpile as described below.

Sampling

A total of four one tonne bag samples were collected from AC-GH-TR-001 stockpile, one from AC-GH-TR-002, and an additional five from the combined larger stockpile. In total, 10 one tonne bags were collected ranging from ~300 kg to 750 kg. Four additional samples approximately 10 kg were collected from the combined larger stockpile. A total of 14 samples were collected from trenches AC-GH-TR-01 and AC-GH-TR-02. No samples were collected ply by ply from the trench and the sampled coal was not described as too small amount of observed coal would have represented the entire bag, excluding bag five which was a representative strip sample of AC-GH-TR-02. The coal in the stockpile is generally well clefted, commonly C1 when fresh, about 50% 0.04 to 0.40 m size lumps and 50% fines (Figure 6; Figure 7). The coal is quite brittle and readily breaks when handled. A short summary of the stockpile sampling techniques used and sample location relative to the stockpile are described below (Figure 8).



Figure 4: Overview of coal stockpile midway through trenching.



Figure 5 : Excavator about to start sampling coal stockpile.

Bag 1: Sample was collected from the top of the stockpile; likely represents the C horizon of the coal seam as described above. A trench was cut across the top of the coal stockpile by the excavator operator to expose the top layer. The operator then scraped the sides of the stockpile trench to take a representative sample. Contamination from the other coal horizons is possible and cannot be ruled out.

Bag 2: Sample was collected from the middle of the stockpile; likely represents the B horizon of the coal seam as described above. A trench was

cut across the middle of the coal stockpile by the excavator operator to expose the middle layer. The operator then scraped the sides of the trench from that layer to take a representative sample. Contamination from the other coal horizons is possible and cannot be ruled out.

Bag 3: Sample was collected from bottom of the stockpile; likely represents the A horizon of the coal seam as described above. A trench was cut across the bottom of the coal stockpile by

the excavator operator to expose the bottom layer. The operator then scraped the sides of the trench from that layer to take a representative sample. Contamination from the other coal horizons is possible and cannot be ruled out.

Bag 4: Sample was collected from the entire vertical cross-section of the stockpile; likely represents the A, B, and C horizons of the coal seam as described above. A trench was cut across the entire coal stockpile by the excavator operator to expose the top, middle, and bottom of the stockpile. The operator then scraped the sides of the trench to take a representative sample.

Bag 5: Sample was collected from the trench face with the excavator. Operator successfully scraped the trench face and took a consistent thickness of coal from the trench face to represent the entire intersected coal seam. It is possible that parts of the seam may have a higher proportional amount of coal scraped than other parts of the face. This bag is considered the representative sample from the trench site and was described after being dumped into the one tonne sample bag.

Coal is generally well cleated, C1 – C4 Brightness but C2 is most common, large 30 cm by 30 cm lumps, one lump had a sulphide bleb 2 cm by 4 cm, no visible quartz veining, centimeter scale mudstone bands are irregularly spaced, however, difficult to evaluate while in the one tonne ore bag.

Bag 6: Sample was collected by taking shovel scoops from the outside of the stockpile 1 m away from each other on the entire outer layer of the stockpile.

Bag 7: Sample was collected through the upper section of the stockpile. Operator trenched across the upper section of the stockpile then scraped the sides of the trench to collect coal evenly throughout the stockpile trench.



Figure 6: Close up of coal from stockpile showing C1 brightness and prominent cleating.



Figure 7: Photograph showing lumps of coal on stockpile.

Bag 8: Sample was collected through the middle to upper middle section of the stockpile. Operator trenched across the upper middle of the stockpile then scraped the sides of the trench to collect coal evenly throughout the newly exposed area of the trench across the stockpile.

Bag 9: Sample was collected through the middle to lower middle section of the stockpile. Operator trenched across the lower middle of the stockpile then scraped the sides of the trench to collect coal evenly throughout the newly exposed area of the trench across the stockpile.

Bag 10: Sample was collected through the bottom section of the stockpile. Operator trenched across the bottom of the stockpile then scraped the sides of the trench to collect coal evenly throughout the newly exposed area of the trench across the stockpile.

After the sample bags were filled at the trench site, they were flown via helicopter to the Kluatantan airstrip, stored, and sent to appropriate locations as needed.



Figure 8: Apparatus used to fill one tonne ore bags with coal.



Figure 9: Operator back-filling coal into trench to start the reclamation process.

Four small 7 kg samples were collected from the large stockpile just to have readily accessible coal to send for analysis that isn't in a one tonne bag. These bags were selected randomly from the stockpile. Table 1 below summarizes those sample numbers and weights.

Table 1: Summary of small coal samples.

Sample ID	Sample Location	Weight (KG)
AC-TR-GH-01-A	Coal Stockpile	7.0
AC-TR-GH-01-B	Coal Stockpile	7.3
AC-TR-GH-01-C	Coal Stockpile	6.2
AC-TR-GH-01-D	Coal Stockpile	6.9

Reclamation

Once documentation and sampling of AC-GH-TR-01 and AC-GH-TR-02 was completed, both trenches were reverse filled with coal followed by unconsolidated material (Figure 9; Figure 10). The coal was packed into the trenches by the bulldozer several times as more coal was added. The unconsolidated material was then spread over where it had been removed from to retain original contours of the trench site. Organic material was then spread over the entire trench site, including trees that were cut down in preparation of the trench site (Figure 11; Figure 12; Figure 13).



Figure 10: The trench site after the trench was filled and unconsolidated material partially spread over trench site.



Figure 11: Operator beginning to spread the organic material over the trench site.



Figure 12: Organic material spreading continued.



Figure 13: Photograph of trench site after organic material has been spread over the entire trench site.

Recommendations

Future trenches should plan to trench a depth of at least 7.0 m to intersect bedrock where structural measurements can be taken. This includes intersecting approximately 3.5 m of unconsolidated material. Depths may change based on data within a relevant distance of the trench site. Trench length should be no less than 10 m to optimize the amount of data made available compared to the time put in to the trench site.

Conclusion

It is easy to conclude that AC-GH-TR-01 was a success and achieved all objectives set forth prior to the beginning of the operation including:

- 1) Having coal available at the Groundhog camp ready to be flown to Stewart Port completing the supply chain of transporting anthracite from the Groundhog Property to a deep sea coal shipping port.
- 2) Approximately 200 tonnes of coal were extracted, stockpiled, and photographed by a professional photographer.
- 3) Trenching guidelines and procedures were established for future trenches on the Groundhog Property.
- 4) Structural information was documented and will be incorporated into the geologic model for correlation.
- 5) The trench site excavation and reclamation was completed in a safe work environment with no incidents.

2014

ATRUM COAL 2014 TRENCHING PROGRAM

AC-GH-TR-03 TECHNICAL REPORT

GROUNDHOG ANTHRACITE PROJECT

Groundhog Trenching Program

AC-GH-TR-03 Technical Report

Introduction

In August 2014, Atrum Coal trenched areas of interest in the bulk sample area to collect structural information. Trench AC-GH-TR-03 was excavated at drill site DHGH-14-16 to intersect a fold hypothesized to occur at the trench site due to coal thickening observed in drill core from DHGH-14-16 and a fold documented in AC-GH-TR-01 trends near the trench site. Samples were also collected for analysis of each lithology intersected. The objective of this trench was only to document structural information and not to intersect coal.

Overview

Prior to trenching, an organic layer was removed and piled on the SE side of the trench site. An additional clay/sand layer with common boulders (unconsolidated material) was removed and stockpiled along the NE side of the trench (Figure 1). The trench was dug at approximately 240 degrees with a width of 4.0 m and a maximum depth of 5.9 m. Figure 1 shows the trench flooded, this is due to heavy rains after the trench was dug and during logging. The water in the trench was pumped out prior to logging.

Geology

Examination of AC-GH-TR-03 provided one structural data point; a bedding measurement was collected and confirmed the hypothesized strike direction. AC-GH-TR-03 was not deep enough to document bedding characteristics or depositional environment.



Figure 1: Trench site AC-GH-TR-03 prior to water being pumped out.

Lithologies/Horizons

There are four lithologies/horizons that compose the 5.6 m vertical trench including organics, a clay/sand unit that can be further divided into two distinguishable units, and siltstone (SLT) (Figure 2).

Organics

The organic layer varies in thickness over the extent of the trench area from 30-50 cm. The organic layer was stockpiled on the SW side of the trench.

Clay/Sand (A)

Underlying the organic layer is a light brown, unconsolidated, and weathered horizon called clay/sand (A), approximately 3.4 m thick. This is primarily comprised of clay and sand but has common round boulders ranging in size from 0.10 to 1.0 m with most between 0.10 and 0.30 m in diameter.

Clay/Sand (B)

Below the clay/sand (A) horizon is a dark grey, unconsolidated, and weathered horizon called clay/sand (B), approximately 1.8 m thick. This is primarily comprised of clay and sand but has common round boulders ranging in size from 0.10 to 0.80 m with most between 0.10 and 0.30 m in diameter. It is similar to the horizon described above but is darker and a distinguishable horizon.

Siltstone (SLT)

Beneath the clay/sand (B) horizon is a hard, light to medium grey, slightly weathered SLT 0.40 m thick. Weathered surfaces are iron stained/gossanous. Excavator was unable to penetrate any farther through the SLT and restricted the depth of the trench.

Structure

One bedding measurement was collected from AC-GH-TR-03. It was hypothesized that this trench would have intersected a fold due to the thickness of coal near the surface and its proximity to the fold at AC-GH-TR-01. The primary reason for this trench was to intersect that fold and document the plunge and plunge direction to aid in the correlation of drillholes in the bulk sample area. The documented bedding is as follows:

Bedding →308/04 and 318/09

-Bedding measurements taken within 1 m of each other and have similar strike and dip.

Sampling

A total of four samples were collected from AC-GH-TR-03 with an average weight of approximately 5 kg. No coal was collected from AC-GH-TR-03. One sample was collected from

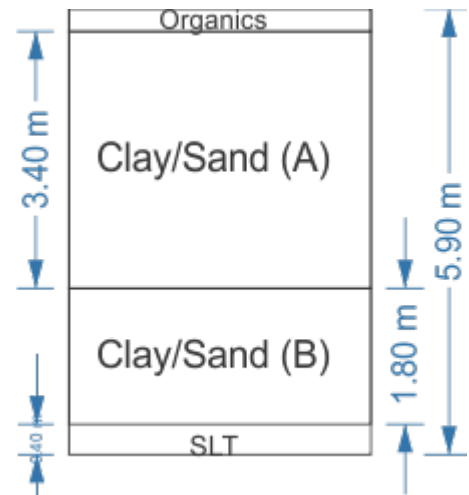


Figure 2: Cross-section of AC-GH-TR-03 showing lithology/horizon depths.

each unit in the trench except from horizon sand/clay (B), which, had two samples collected from it. Table 1 below summarizes the lithology/horizon and depth of the collected samples.

Table 1: Summary of sample lithology/horizon and depth.

Sample ID	Lithology/Horizon	Depth (m)	Weight (kg)
AC-GH-TR-03-A	Clay/Sand (A)	0.30 – 3.70	5.7
AC-GH-TR-03-B	Clay/Sand (B)	3.70 – 4.60	6.1
AC-GH-TR-03-C	Clay/Sand (B)	4.60 – 5.50	5.0
AC-GH-TR-03-D	SLT	5.50 – 5.90	4.6

Reclamation

Once documentation and sampling of AC-GH-TR-03 was completed, it were reverse filled with SLT followed by unconsolidated material and organic material. The unconsolidated material was packed into the trenches by the bulldozer several times as more material was added to retain original contours of the trench site. Organic material was then spread over the entire trench site, including trees that were cut down in preparation of the trench site.

Recommendations

Future trenches should plan to trench a depth of at least 7.0 m to intersect bedrock where structural measurements can be taken. This includes intersecting approximately 3.5 m of unconsolidated material. Depths may change based on data within a relevant distance of the trench site. Trench lengths should be no less than 10 m to optimize the amount of data made available compared to the time put into the trench site. An additional trench would be beneficial that continues the trend of this trench NE and likely intersect the targeted fold and could provide valuable structural data about the plunge of the fold as well as depth of the coal seam. The extended trench site would have to be designed to go deeper than AC-GH-TR-03 and should be at least 25 m long.

Conclusion

Bedding data was documented at AC-GH-TR-03 to confirm previously hypothesized bedding strike and dip. The primary target of AC-GH-TR-03, however, was to trench across the trend of a fold documented in AC-GH-TR-01 and confirm fold plunge and plunge direction; this was not achieved. The trench did not intersect the fold limbs as targeted, however, the trench was still successful as data was collected and proven against the geologic model.

2014

ATRUM COAL 2014 TRENCHING PROGRAM

AC-GH-TR-04 TECHNICAL REPORT

GROUNDHOG ANTHRACITE PROJECT

Groundhog Trenching Program

AC-GH-TR-04 Technical Report

Introduction

In August 2014, Atrum Coal trenched areas of interest in the bulk sample area to collect structural information. Trench AC-GH-TR-04 was excavated at drill site DHGH-14-19 to intersect in situ rock and document bedding. A coal seam was also targeted to document the contact and possible micro-structures near the rock and coal contact. Samples were also collected for analysis of each lithology intersected.

Overview

Prior to trenching, an organic layer was removed and piled on the SE side of the trench site. An additional clay/sand layer with common boulders (unconsolidated material) was removed and stockpiled along the NE side of the trench (Figure 1). The trench was dug at approximately 240 degrees with a width of 4.0 m and a maximum depth of 5.3 m. Figure 1 shows the trench flooded, this is due to heavy rains after the trench was dug and during logging. The water in the trench was pumped out prior to logging.



Figure 1: Overview of trench showing removed material locations.

Geology

Examination of AC-GH-TR-04 provided one structural data point; a bedding measurement was collected and confirmed the hypothesised strike direction. AC-GH-TR-04 also exposed a coal and siltstone sharp contact. No micro-structures (folds, faults, etc.) or lenticular bedding were visible.

Lithologies/Horizons

There are four lithologies/horizons that compose the 5.3 m vertical trench including organics, a clay/sand unit, siltstone (SLT), and the roof of a coal seam (Figure 2).

Organics

The organic layer varies in thickness over the extent of the trench area from 30-50 cm. The organic layer was stockpiled on the SE side of the trench.

Clay/Sand

Underlying the organic layer is a light brown, unconsolidated, and weathered horizon approximately 2.1 m thick. This is primarily comprised of clay and sand but has common round boulders ranging in size from 0.10 to 1.0 m with most between 0.10 and 0.30 m in diameter.

Siltstone (SLT)

Beneath the clay/sand horizon is a hard, light to medium grey, slightly weathered SLT 1.5 m thick. Weathered surfaces are iron stained/gossanous. SLT has a sharp contact with coal seam below. Trenching through this unit was time consuming and hard on the excavator. Only a small length of the trench was chosen to expose the coal to reduce wear on the machine.

Coal

Below the SLT is a soft, moderately weathered dark coal; no visible cleating or infill in coal sample or on trench face. Dark coal with no bright faces; visible parting near the bottom approximately 10-20 cm. Due to poor lighting and rainy conditions when logging, photos did not show features of coal on trench face. The geologist on site was also unable to enter the deep part of the trench that exposed coal because of slope stability and improper benching to allow a person to enter the trench. Coal was described at surface from a small stockpile the operator excavated.

Structure

One bedding measurement was collected from AC-GH-TR-04. The primary reason for this trench was to document bedding and micro-structures near the coal SLT contact. This data was not available at AC-GH-TR-04. The documented bedding is as follows:

Bedding → 321/10 and 304/15

-Bedding measurements taken within 1 m of each other and have similar strike and dip (Figure 3).

Sampling

A total of five samples were collected from AC-GH-TR-04 with an average weight of approximately 5 kg. One sample was collected from each unit in the trench except from the SLT

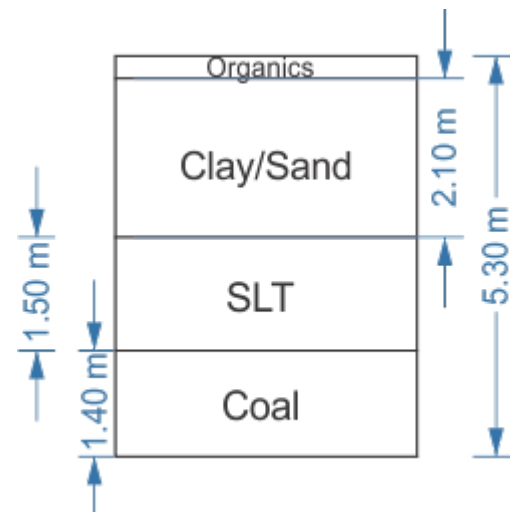


Figure 2: Cross-section of AC-GH-TR-04.



Figure 3: Photo showing where bedding measurements were taken from.

unit, which, had three samples collected from it. This was done to collect a sufficient amount of rock for geochemical analysis. Table 1 below summarizes the lithology/horizon and depth of the collected samples.

Table 1: Summary of sample lithology/horizon and depth.

Sample ID	Lithology/Horizon	Depth (m)	Weight (kg)
AC-GH-TR-04-A	Clay/Sand	0.30 – 2.40	5.6
AC-GH-TR-04-B	SLT	2.40 – 2.90	4.7
AC-GH-TR-04-C	SLT	2.90 – 3.40	4.4
AC-GH-TR-04-D	SLT	3.40 – 3.90	5.4
AC-GH-TR-04-E	Coal	3.90 – 5.30	6.4

Reclamation

Once documentation and sampling of AC-GH-TR-04 was completed, it were reverse filled with coal, then SLT, followed by unconsolidated material and organic material. The unconsolidated material was packed into the trenches by the bulldozer several times as more material was added to retain original contours of the trench site. Organic material was then spread over the entire trench site, including trees that were cut down in preparation of the trench site.

Recommendations

Future trenches should plan to trench a depth of at least 7.0 m to intersect bedrock where structural measurements can be taken at ease. Approximately 3.5 m of unconsolidated material should be expected before intersecting bedrock. Depths may change based on data within a relevant distance of the trench site. Trench lengths should be no less than 10 m to optimize the amount of data made available compared to the time put into the trench site. It may be beneficial to start trenching in locations where there is vertical bedding near surface that can be exposed to collect axial plane, plunge, and plunge direction of folds.

Conclusion

Bedding data was documented at AC-GH-TR-04 to confirm previously hypothesized bedding strike and dip. AC-GH-TR-04 did not expose folds, faults, or lenticular bedding, however, the trench did prove successful as data was still collected and proven against the geologic model.

2014 Trench Summary (UTM NAD 83 Zone 9)

Trench ID	Easting	Northing	Length (m)	Width (m)	Depth (m)	Azimuth	Seam Thickness (m)
AC-GH-TR-01 / AC-GH-TR-02	541349	6307962	14.89	3.1	7.2	240	5.50
AC-GH-TR-03	541400	6307901	-	4.0	5.9	240	0.00
AC-GH-TR-04	541367	6307873	-	4.0	5.3	240	1.40

Trench	Sample ID	Lab Sample ID	Seam	Horizon	Corresponding Depth in nearest drillhole
AC-GH-TR-01	Bag 1	Not Analyzed	Discovery C	Discovery	7.84-8.84m in DHGH-14-06
AC-GH-TR-01	Bag 2	Not Analyzed	Discovery C	Discovery	4.34-7.84m in DHGH-14-06
AC-GH-TR-01	Bag 3	Not Analyzed	Discovery C	Discovery	3.34-4.34m in DHGH-14-06
AC-GH-TR-01	Bag 4	Bulk Sample - Mixed'	Discovery C	Discovery	3.34-8.84m in DHGH-14-06
AC-GH-TR-02	Bag 5	'Bulk Sample - Strip' and 'Strip Bulk Reserve Sample'	Discovery C	Discovery	3.34-8.84m in DHGH-14-06
AC-GH-TR-01/AC-GH-TR-02	Bag 6	Not Analyzed	Discovery C	Discovery	3.34-8.84m in DHGH-14-06
AC-GH-TR-01/AC-GH-TR-02	Bag 7	Not Analyzed	Discovery C	Discovery	4.34-8.84m in DHGH-14-06
AC-GH-TR-01/AC-GH-TR-02	Bag 8	Not Analyzed	Discovery C	Discovery	4.34-8.84m in DHGH-14-06
AC-GH-TR-01/AC-GH-TR-02	Bag 9	Not Analyzed	Discovery C	Discovery	3.34-7.84m in DHGH-14-06
AC-GH-TR-01/AC-GH-TR-02	Bag 10	Not Analyzed	Discovery C	Discovery	3.34-7.84m in DHGH-14-06
AC-GH-TR-01/AC-GH-TR-02	AC-GH-TR-01-A	Not Analyzed	Discovery C	Discovery	3.34-7.84m in DHGH-14-06
AC-GH-TR-01/AC-GH-TR-02	AC-GH-TR-01-B	Not Analyzed	Discovery C	Discovery	3.34-8.84m in DHGH-14-06
AC-GH-TR-01/AC-GH-TR-02	AC-GH-TR-01-C	Not Analyzed	Discovery C	Discovery	3.34-8.84m in DHGH-14-06
AC-GH-TR-01/AC-GH-TR-02	AC-GH-TR-01-D	Not Analyzed	Discovery C	Discovery	3.34-8.84m in DHGH-14-06
AC-GH-TR-03	AC-GH-TR-03-A	Not Analyzed	Regolith above Discovery C	Discovery	0.53-3.93m in DHGH-14-16
AC-GH-TR-03	AC-GH-TR-03-B	Not Analyzed	Regolith above Discovery C	Discovery	3.93-4.83m in DHGH-14-16
AC-GH-TR-03	AC-GH-TR-03-C	Not Analyzed	Regolith above Discovery C	Discovery	4.83-5.73m in DHGH-14-16
AC-GH-TR-03	AC-GH-TR-03-D	Not Analyzed	Roof above Discovery C	Discovery	5.73-6.13m in DHGH-14-16
AC-GH-TR-04	AC-GH-TR-04-A	Not Analyzed	Regolith above Discovery B	Discovery	2.09-4.19m in DHGH-14-19
AC-GH-TR-04	AC-GH-TR-04-B	Not Analyzed	Roof above Discovery B	Discovery	4.19-4.69m in DHGH-14-19
AC-GH-TR-04	AC-GH-TR-04-C	Not Analyzed	Roof above Discovery B	Discovery	4.69-5.19m in DHGH-14-19
AC-GH-TR-04	AC-GH-TR-04-D	Not Analyzed	Roof above Discovery B	Discovery	5.19-5.69m in DHGH-14-19
AC-GH-TR-04	AC-GH-TR-04-E	Not Analyzed	Discovery B	Discovery	5.69-7.09m in DHGH-14-19

Appendix 4 – Correlation Report

Groundhog Correlation Report

Executive Summary

- Following its 2014 drill program, Atrum Coal completed a geological interpretation and correlation exercise in order to characterize the behavior of the coal-bearing stratigraphic package within the Groundhog Property. From the collected data, a subsurface geological model was produced for the Bulk Sample Area and regional areas of the property.
- Previous correlation models were disregarded in order to produce an unbiased model. A new coal seam nomenclature was introduced to better reflect updated knowledge of the property. The correlation exercise used all of the available data from the 2014 and previous exploration programs. The data available prior to 2014, however, were lacking in both quality and quantity.
- Within the stratigraphic package, three significant coal seams were identified: the Discovery B, Discovery C, and Duke E seams.
- Drillhole correlations were conducted individually. Continuous marker horizons in the interburden strata between seams were identified and provided a useful tool in correlating lithologies across sections. A correlateable stratigraphic package was identified throughout the Bulk Sample Area with high confidence.
- The improved correlation methodology, using these marker horizons, allowed the delineation of overturned and recumbent folds within and surrounding the Bulk Sample Area. This style of geological structure was also evident in surface outcrops around the area.
- The behaviour of coal seams is more understood throughout the Groundhog Property following the 2014 correlation exercise. Despite the complex structure seen in parts of the area, coal seams were found to be laterally continuous. Furthermore, potentially less disturbance is indicated in the Duke horizon of seams East of the Skeena and to the southeast of the Bulk Sample Area. In particular, the Duke E seam is readily correlatable in these parts of the Groundhog property, with a typical consistent thickness of 2.3-3.1 m.
- Various regions were correlated with a higher degree of confidence than others, largely due to drillhole spacing and the availability of quality data from the years prior. As such, there were restrictions associated with the complete representation of the subsurface model outside of the Bulk Sample Area. Several areas exist in which complex structural features were identified; however, there were not enough data to explain their degree of propagation or orientation. Structures with an unknown trend due to limited data were left out of the model; as such, the stratigraphy represented in the geologic model appears flatter and more simplified than it may be in reality.
- The importance of collecting thorough and high quality data, especially dipmeter, for each drillhole cannot be stressed enough. This data collection is necessary in order to make geological interpretations and modeling as accurate as possible.
- Future drilling programs should focus on the Southeast and Skeena East Regional Areas, with drillholes aimed at increasing the confidence of current correlations surrounding the Discovery B, Discovery C, and Duke E coal seams.

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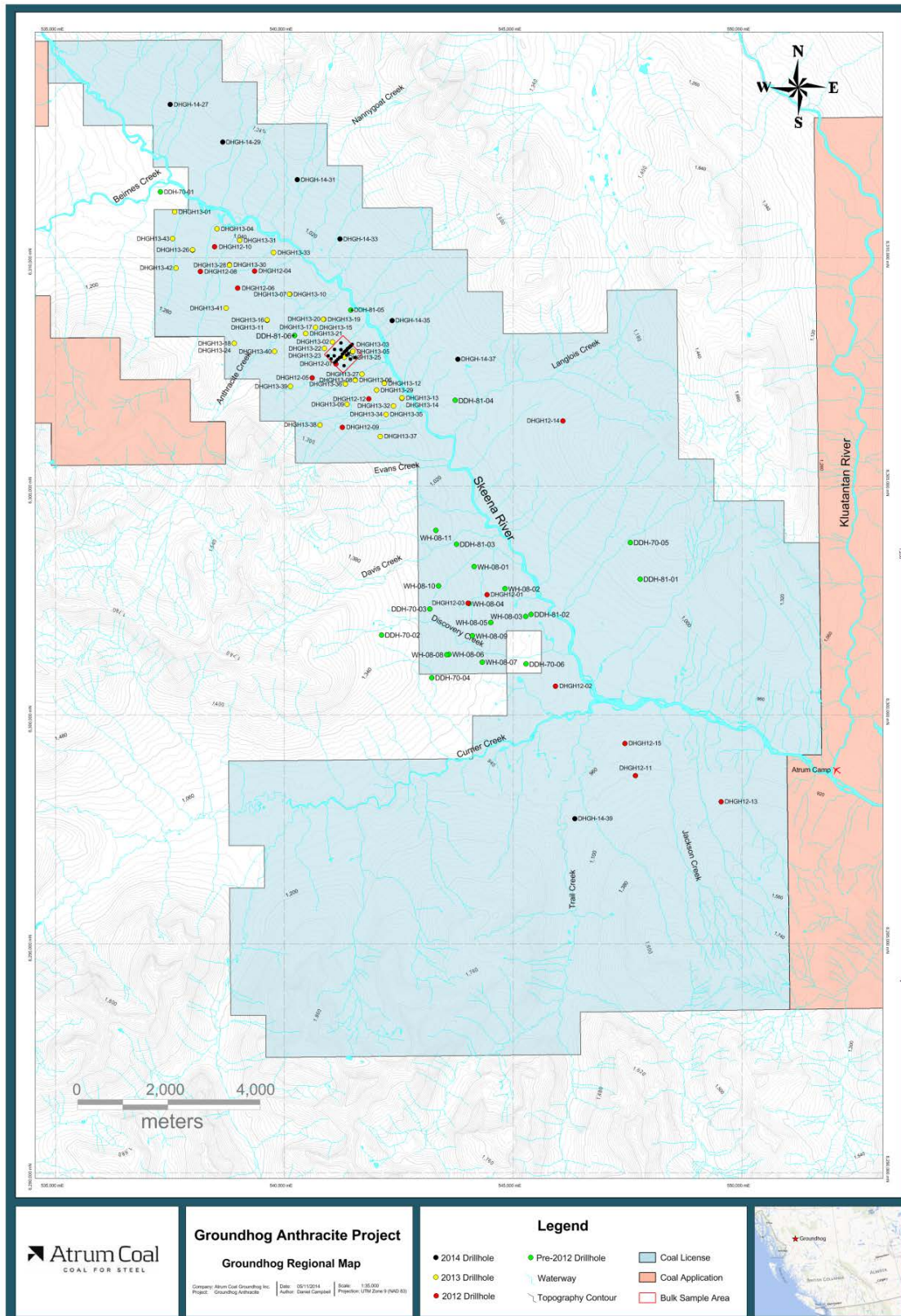
Participants

- Dan Campbell
- Ian Fraser
- Nick Gordon
- Holly Hetherington
- Hayden Mackenzie
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- Raza Parvez
- Erich Schmitt

Introduction

Atrum Coal has 81,616 hectares of joined coal tenures within the Bowser Basin/Groundhog Coalfield, of which 18,426 hectares compose the Groundhog coal licenses. Atrum began exploration in 2012 on the Groundhog coal licenses and built on knowledge gained from drilling programs in 1970, 1981, and 2008. In 2012, Atrum drilled 15 holes and identified the Northwest of the property as the primary target. In 2013, drilling focused entirely on the Northwest with the objective of further defining a site for a bulk sample mine. In early 2014, bulk sample drilling began in the area referred to as the Bulk Sample Area, and a program of 6 holes was completed in the winter.

In early September of 2014, Atrum Coal completed its 2014 drill program, which aimed to further define the Bulk Sample Area as well as identify additional areas of interest on previously unexplored areas of the Groundhog Property (Figure 1). A total of 41 drillholes were completed in 2014: 33 in the Bulk Sample Area and 7 regionally spaced in unexplored areas of the property. The 2014 drill program added to previous drilling of 64 drillholes in 2013; confined to the Northwest area of the Groundhog Property, and 15 in 2012. A total of 37 drillholes occur in the Bulk Sample Area from the three years of exploration: 33 from 2014, 3 from 2013, and 1 from 2012 (Figure 2). Following the 2014 field program, Atrum geologists along with Ian Fraser and Dave Marchioni met in Victoria to work on interpreting the collected data.



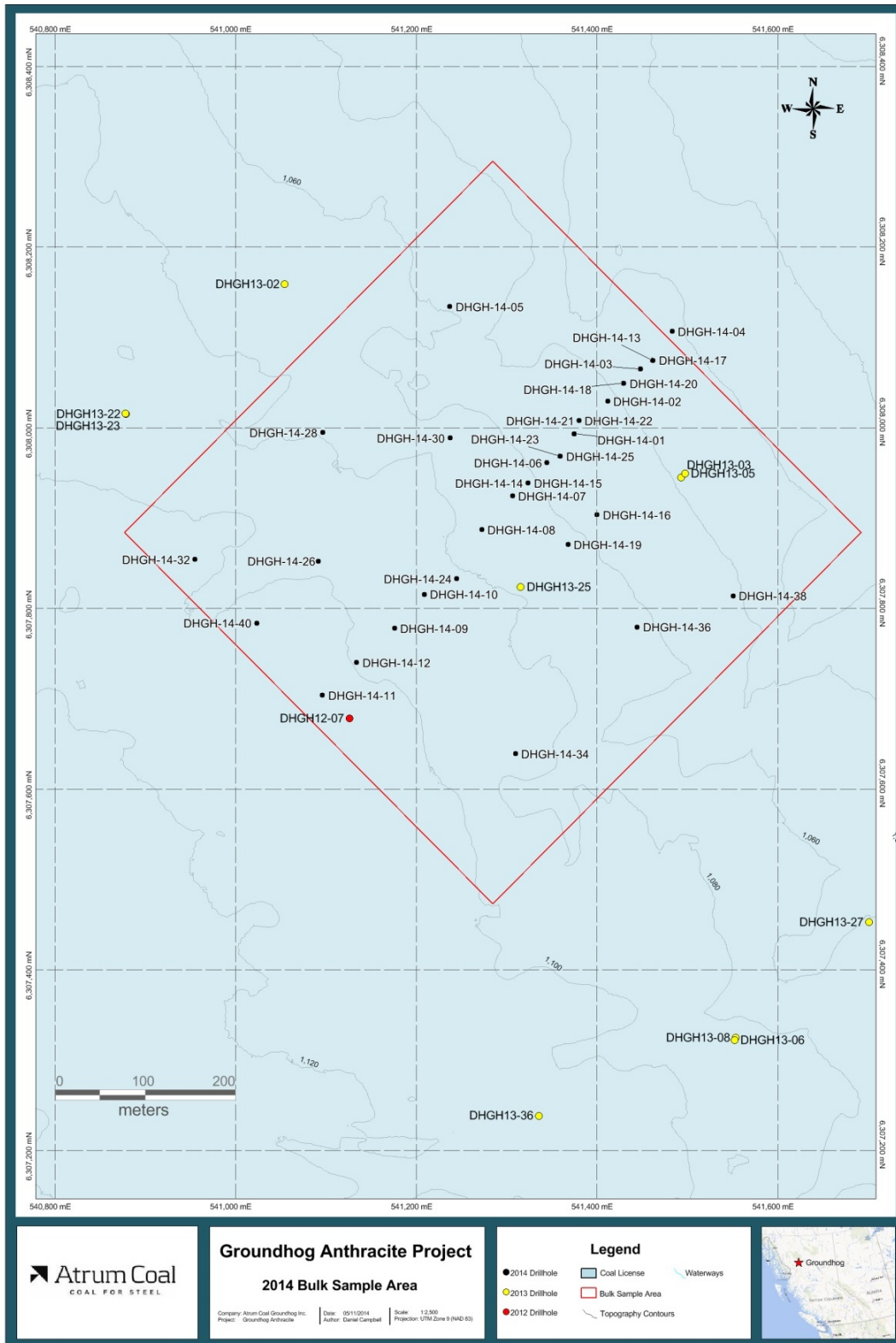


Figure 2. Plan map of the Bulk Sample Area within the Groundhog Property as given by the red square. Drillholes and corresponding collar IDs are given for the 2014 and previous drilling programs.

The objective of this interpretation exercise was to identify a stratigraphic package, which summarized the Bulk Sample Area and Groundhog property stratigraphy, and, furthermore, to map out where in the Currier Formation each drillhole occurs. The ability to map the Currier Formation and the coal bearing rocks within the Formation will prove to be invaluable information when correlating drillholes on the Groundhog Property in the future and possibly the surrounding tenures adjacent to Groundhog. This correlation exercise was completed by identifying marker horizons that were spatially continuous. Recognizing adjacent interburden relationships between coal seams and marker horizons proved to be helpful for defining coal horizons. A variety of tools and methods were used to complete coal seam correlation including stratigraphical analysis of geophysical logs focusing on gamma and density signatures, dipmeter implications on structurally complex stratigraphy, and core photos to verify repetitive patterns in drillcore.

Prior to this correlation exercise, all drillhole data was appended to the original geologic model that was created following the 2012 drill program. There is significantly more data at Groundhog currently than when the original 2012 model was made, particularly in the Bulk Sample Area. However, to properly examine the drillhole data all previous correlations were disregarded and re-examined to ensure independent analysis of the data rather than conforming to a previous correlation. The concepts and conclusions in regards to coal seam correlation from the Bulk Sample Area were applied to the rest of the stratigraphy at Groundhog where applicable.

The findings of this correlation work are presented in this report. Correlations and data are given separately for the Bulk Sample Area and regional areas of the Groundhog Property. Regions are divided into the Northwest, Southeast, Skeena East, and Currier Creek Regional Areas (Figure 3). Included for each region is the methodology of how the current data was utilized to identify coal seams and to create the subsurface geological model. The relevant seam characterizations, drillhole descriptions, and correlation findings are provided in detail. This information is accompanied by summaries of the identifiable coal bearing sedimentary packages and an overview of the main structures effecting the subsurface of the Bulk Sample and regional areas.

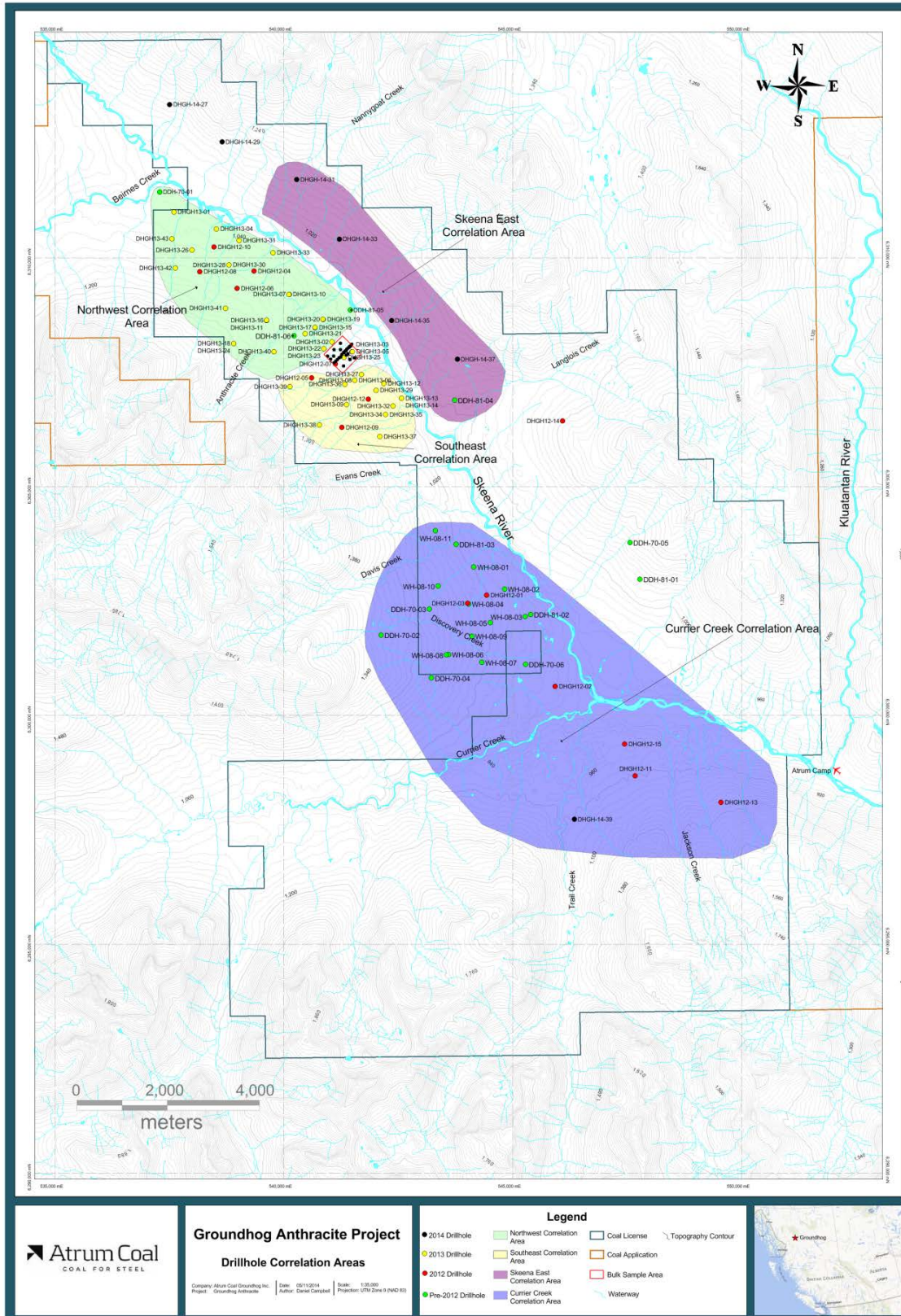


Figure 3. Plan map of the Groundhog Property displaying the regional areas identified in the correlation exercise: Northwest, Skeena East, Southeast, and Currier Creek.

Previous Works and Correlations

Seam identification at Groundhog has been difficult due to the structural complexity and the uncertainty surrounding coal seam continuity. Two prominent coal seams, labelled as Seam 70 and Seam 40, were identified in 2012 and further targeted in 2013 and 2014, primarily Seam 70 as it was shallower and likely to be the first mineable seam. A lack of dipmeter data in 2012 and 2013 increased the difficulty of correlating coal seams. Dipmeter data from 2014 has since been used to document overturned and recumbent folds in the Bulk Sample Area, often describing drastic variations in interburden between known continuous coal seams and explaining overturned bedding. These recently documented folding styles, amplitudes, and frequencies have never been applied to the property on a regional scale, primarily because of the insufficient data previously available to identify structural features.

Modeling Restrictions of Complex Structure

After the completion of the Bulk Sample Area interpretation, coal horizons were defined within the Currier Formation. The findings relating to the stratigraphic package were applied to the rest of the Groundhog property, however, modeling issues arise when applying concepts from the well understood Bulk Sample Area to other regions that have minimal data.

Modeling of the Bulk Sample Area was handled as a separate exercise from the modeling of the rest of the Groundhog Property, due to the variance in quality of data available for each area. The Bulk Sample Area is approximately 500 m by 500 m in area and comprises 37 closely spaced drillholes accompanied with detailed lithological logs, core photos, and geophysical logs, including dipmeter data. The amount of detailed data within the Bulk Sample Area allows for the identification and modelling of complex, subsurface structures, such as overturned and recumbent folds with high confidence. The drillhole spacing in the Bulk Sample Area ranges from less than 25 m to 200 m; whereas, regional drillholes can have over 1 km spacing. The wide spacing of regional drillholes on the Groundhog property does not permit confident modelling of complex structures, which likely trend large distances across the property, as is noted in outcrop examples. The variability of the data quality and the drillhole spacing required the Bulk Sample Area to be modeled separately from the regional areas. The Currier Creek Regional Area was not incorporated into the model at this time due to data quality and time constraints.

The lack of dipmeter data accompanying regional drillholes, adds to the difficulty of incorporating complex structure into the subsurface model. Prior to the 2014 drill program, dipmeter data was rarely acquired as part of the regular suite of geophysical logs. Without dipmeter, it is nearly impossible to infer overturned limbs, recumbent folds, and identifying fold trends. Even on the tightly spaced drillhole plan in the Bulk Sample Area, the complex structures would not have been identified without dipmeter data. Without the ability to accurately identify trends of steep and overturned folds, which are common on the Groundhog property, the geophysical logs show the same section of the stratigraphic package repeat itself, drastically increasing the interburden between markers and coal seams, often showing coal seams and markers several times throughout the drillhole. This repetition of stratigraphy without the ability to determine repeating coal seams is the main cause of correlation issues.

Folding is often visible in core photos, however, determining a trend to these folds is not possible without dipmeter data and/or close drill spacing. It is irrational to incorporate folds into the model based on sparse regional drillhole data because although their presence is known, their propagation, frequency of repetition, and amplitude would have a high chance of being incorrect. Infill drilling with dipmeter will have to be completed in the areas that are structurally complex in order to model structures confidently. This area primarily includes that to the northwest and west of the Bulk Sample Area.

The model represents the best interpretation of coal seams that can be produced at this time without modeling low confidence folds. It should be noted that where the model conveys areas of flat-lying strata in the regions surrounding the Bulk Sample Area, they have the potential to contain complex folds between regional drillholes. Further drilling will be required prior to mine planning and development of infrastructure. No drillholes were added to the west of the Skeena River in 2014 out of the Bulk Sample Area; thus, no new data is available for interpretation or to update the structural knowledge of the area.

Table 1. Markers and coal seams as they appear in sequential order in the stratigraphic package. The package is divided into horizons.

Horizon	Seam
Davis	A
	B
	C
	D
Marker 1	
Discovery	A
	B
	C
	D
	E
Marker 2	
Duke	A
	B
	C
	D
	E
	F
	G
	H
Trail	A
	B
	C
	D

The confidence of the coal seam correlation of the Bulk Sample Area has increased significantly. However, there is insufficient data to infer complex geologic structures between drillholes outside of the Bulk Sample Area.

Each drillhole was correlated independently and referenced back to the sedimentary package defined by the Davis, Discovery, Duke, and Trail Horizons as well as two identified stratigraphic markers (Table 1). Folding of the horizons, particularly the Discovery Horizon, makes correlation using strictly gamma and density geophysical logs difficult and often results in varying interburden relationships between coal seams and markers. Not being able to confidently incorporate folds of structurally complex regional drillholes into the model resulted in the model appearing geologically simpler than the subsurface may actually be. This should be taken into consideration when moving forward in the planning of future drilling programs and mine plans.

Because the data sets available from previous years differ, not all regions are correlated with the same confidence level. To deal with variability in available data as well as drill spacing, the Atrium geology team has produced a map illustrating the confidence of coal seam correlation between drillholes throughout the Groundhog Property (Figure 4). The degree of confidence is related to the amount and quality of the data available and the certainty associated with each interpretation. Closer spaced drillholes from the 2014

exploration program have the highest confidence level. Less confident correlations, often caused by structural complexity, are designated as areas with the lowest confidence. These areas require further drilling to produce more accurate interpretations.

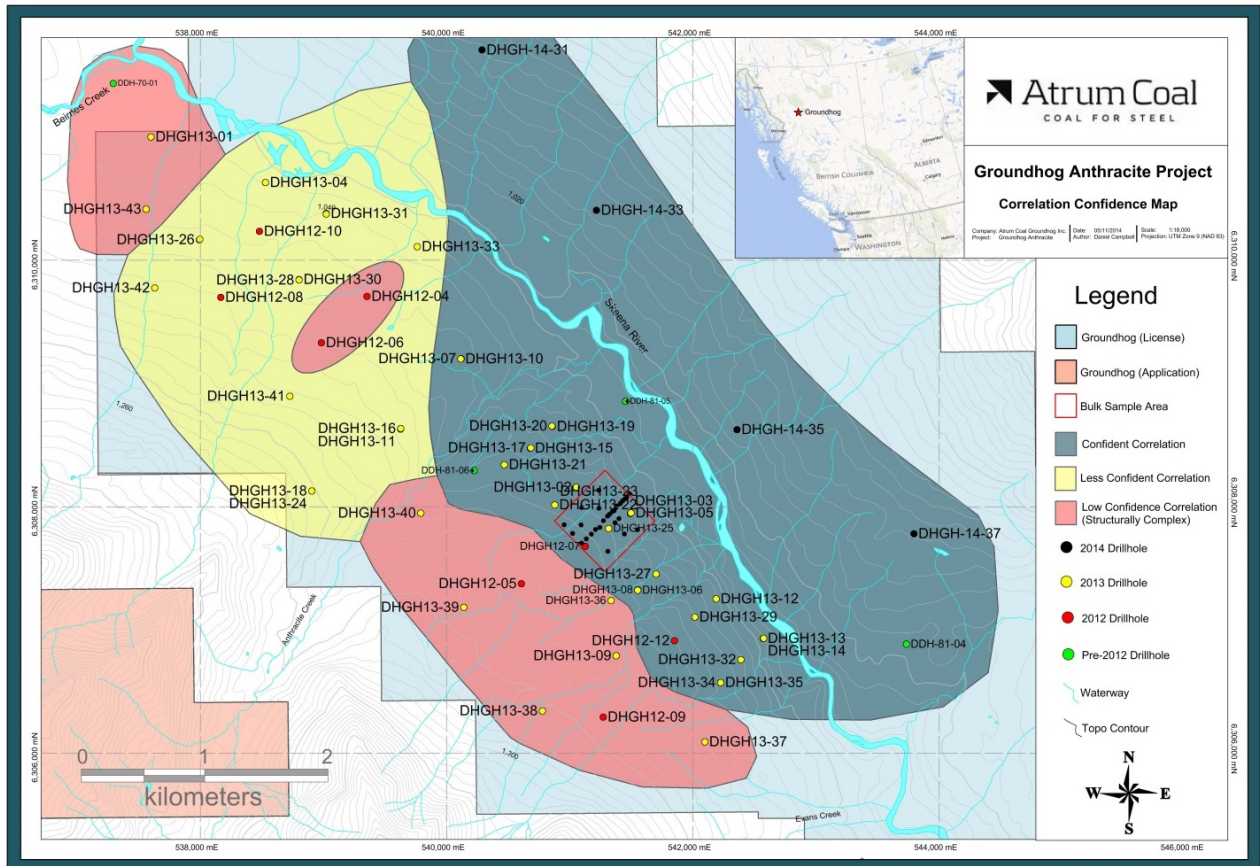


Figure 4. Correlation confidence map of the Groundhog Property. The colours represent the degree of confidence associated with each drillhole and the surrounding area. The dark blue conveys regions of high confidence level.

Figure 5 is a schematic example of the geologic model output from MineSight. The figure illustrates the subsurface relationships between the Discovery C and the Duke E seam over the Groundhog property. The blue square delineates the Bulk Sample Area.

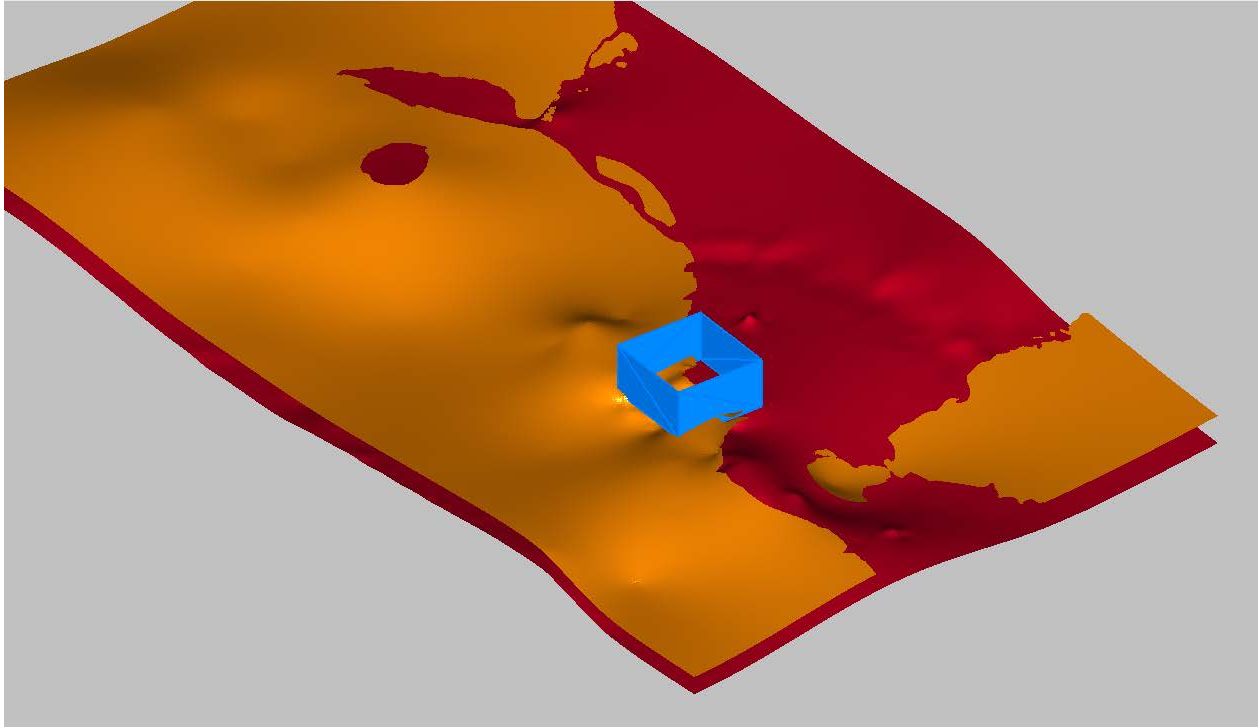


Figure 5. Schematic of the subsurface geology of the Discovery C and Duke E coal seams through the Groundhog property as produced from the Minesight model. Discovery B is represented by the orange surface and Duke E is represented by the red surface. The blue square delineates the Bulk Sample Area

Drillhole Planning and Coal Seam Target Depths

Drillhole target depths at Groundhog to date have been arbitrary as Seam 70 and Seam 40 were poorly understood in regards to their exact location in the stratigraphic sequence. Seam 70 was identified as a clean coal seam approximately 50-150 m deep, while Seam 40 was a clean coal seam around 250 m depth. With the information now available regarding the stratigraphy, this methodology is not completely incorrect in regards to interburden between these seams. However, it is an inaccurate way to correlate coal seams due to the structural complexity that has been observed in the Bulk Sample Area. Several drillholes from 2013 were shallow and only intersected a few coal seams. Correlation of these seams proved to be difficult as the shallower drillholes provided less data to aid with defining relationships between drillholes. The reasoning for these shallow holes was to focus primarily on Seam 70, and the drillholes were terminated following its intersection to help reduce exploration costs. Following the interpretation in 2014, it has become apparent that some of these drillholes did not intersect any seams of significance.

Previous Data Sets

Data from historic drilling programs were utilized as best as possible for correlations; however, various shortcomings in the historic data as well as those from the 2012 and 2013 Atrum Coal drilling programs became quite apparent throughout correlations. The historic drilling program data sets included the

1970 National Coal Corporation Ltd., 1981 Imperial Oil Ltd., and 2008 West Hawk Resources Corporation drilling programs.

Table 2 summarizes all of the currently available data from the drilling programs on the Groundhog Property.

Table 2. Available data in the form of geophysical logs, dipmeter, and core photos from each of the historical

	1970 National Coal Corp. Ltd.	1981 Imperial Oil Ltd.	2008 West Hawk Resources Corp.	2012 Atrum Coal	2013 Atrum Coal	2014 Atrum Coal
Strip logs	✓	✓	poor quality	✓	✓	✓
Gamma		poor quality	✓	✓	✓	✓
Density		poor quality	✓	✓	✓	✓
Core Photos			3 drillholes, poor quality	poor quality	✓	✓
Dipmeter			1 drillhole		12 drillholes	✓
ATV					1 drillhole	5 drillholes
Sonic						✓

drilling programs of 1970, 1981, and 2008 and recent drilling programs of 2012, 2013, and 2014 on the Groundhog Property. Data collected from the 2014 drilling program are the most comprehensive allowing for more reliable correlations.

Dipmeter was one of the most important data sets used for correlating the Bulk Sample Area. Little to no dipmeter data were captured in the pre-2014 drilling programs, inhibiting the ability to predict trends accurately on subsurface structures and bedding behaviour throughout the drillholes. Core photos previous to those from the 2013 drilling program are either poor or non-existent, further inhibiting the identification of structures and lithologies. The 2014 Atrum Coal drilling program provided the most comprehensive data allowing correlations between and within the 2014 drillholes to be the most confident. The 2014 data is compiled in Task Manager (TM) allowing for easy comparison of lithological logs to geophysical data. Historical geophysical data of downhole gamma and density readings aided some regional correlations but was largely hindered by the lack of associated core photos to solidify these correlations.

Methodology

- Geophysical logs displaying gamma and density were compared to identify recognizable features within drillholes. A signature in the gamma log that identified a clean sandstone was recognized to be useful as a marker horizon. Photos were used to further back up patterns that were seen in geophysical logs. Distinct bivalve horizons that were repeatable across drillholes were noted. Marker 1 and Marker 2 were identified based on this data, as discussed later in this section.

- Drillhole layout maps were printed and the copies were named “Marker 1” and “Marker 2,” respectively. Written next to the individual drillholes on the map, were the depths of each marker as identified by gamma logs.
- A dummy drillhole database was started, with the same coordinates for drillholes within the Bulk Sample Area where “DHGH-14” was replaced with “D” i.e. DHGH-14-01 = D01. A lithology file, which was comprised of only Markers 1 and 2 listed as the seams, was created. The depths at which Marker 1 and Marker 2 occur were entered in to MineSight to build the subsurface model.
- Geophysical logs were compared in order to identify a consistent sedimentary sequence, primarily utilizing gamma and density data. Drillhole DHGH-14-24 was chosen to portray the archetype stratigraphic package identifiable within and in between drillholes because of its flat-lying strata and representable interburden between the Discovery Horizon coal seams.
- Subsurface lithological sections of Bulk Sample Area and regional area drillholes were printed out to visually correlate lithological packages and coal seams. Drawn in were the stratigraphic sequences and structural relationships between and within drillholes. The correlations used all of the available data from core photos, lithological logs, and geophysical logs including gamma, density, and dipmeter.
- Dewatering and flame structures were documented and used to determine upright versus inverted strata.
- The depth ranges of correlateable coal seams in each drillhole were compiled and entered into MineSight with the spacing above and below the seams labelled as interburden. The subsurface geological model of the Bulk Sample Area and regional areas was designed from this information.
- In some rare instances, there was not enough data available to confidently assign a coal seam or marker horizon. In cases such as this the drillhole was left out of the model. As the model was constructed, the drillhole was then correlated concurrently based on seams and markers which best fit the model output.
- Two distinct lithological packages were recognized throughout the Bulk Sample Area. They were identifiable by geophysical logs and core photos.

Stratigraphic Package

Marker 1

Marker 1 is a massive, clean sandstone ranging 3-8 m in thickness with accessory quartz veining. It is distinctly recognized in geophysical logs by its clean gamma signature (Figure 6). It is bound by siltstone on either side, with a sharp upper contact and a gradational lower contact (Figure 7). The shallower siltstone is capped by fine grain sandstone with a bivalve horizon crossing the contact to a fine grain sandstone above. The bivalve horizon rests approximately 5-10 m above Marker 1. Below the clean sandstone, is a sequence consisting of siltstone, containing the Discovery A coal seam, followed by interlaminated to irregularly interbedded siltstone with sandstone, and the subsequent Discovery B coal seam. The sandstone of Marker 1 has an average thickness of 5 m and a range in thickness from 3-8 m.

Marker 2

Marker 2 occurs stratigraphically deeper than Marker 1; it is comprised of three units. A clean, massive sandstone 3-5 m thick with accessory to common quartz veining marks the beginning of Marker 2. It sharply overlies 1-2 m of siltstone, which grades into a sandstone with siltstone bands, 2-5 m thick. The upper sandstone unit is easily distinguished in geophysical logs by its clean, low gamma signature (Figure 8). The deeper sandstone is finer grained, contains siltstone laminations to bands, and is generally thinner than the shallower sandstone. This pattern of three lithologies is readily distinguishable in geophysical logs and core photos (Figure 9). At times, the shallower sandstone is underlain by a single interlaminated sandstone and siltstone unit. The lower sandstone unit grades into a poorly developed siltstone, the base of which is constrained by a bivalve horizon that spans across the contact into a poorly developed sandstone. There is potential to increase the size of the marker by identifying signatures for greater distances up and down the drillhole.

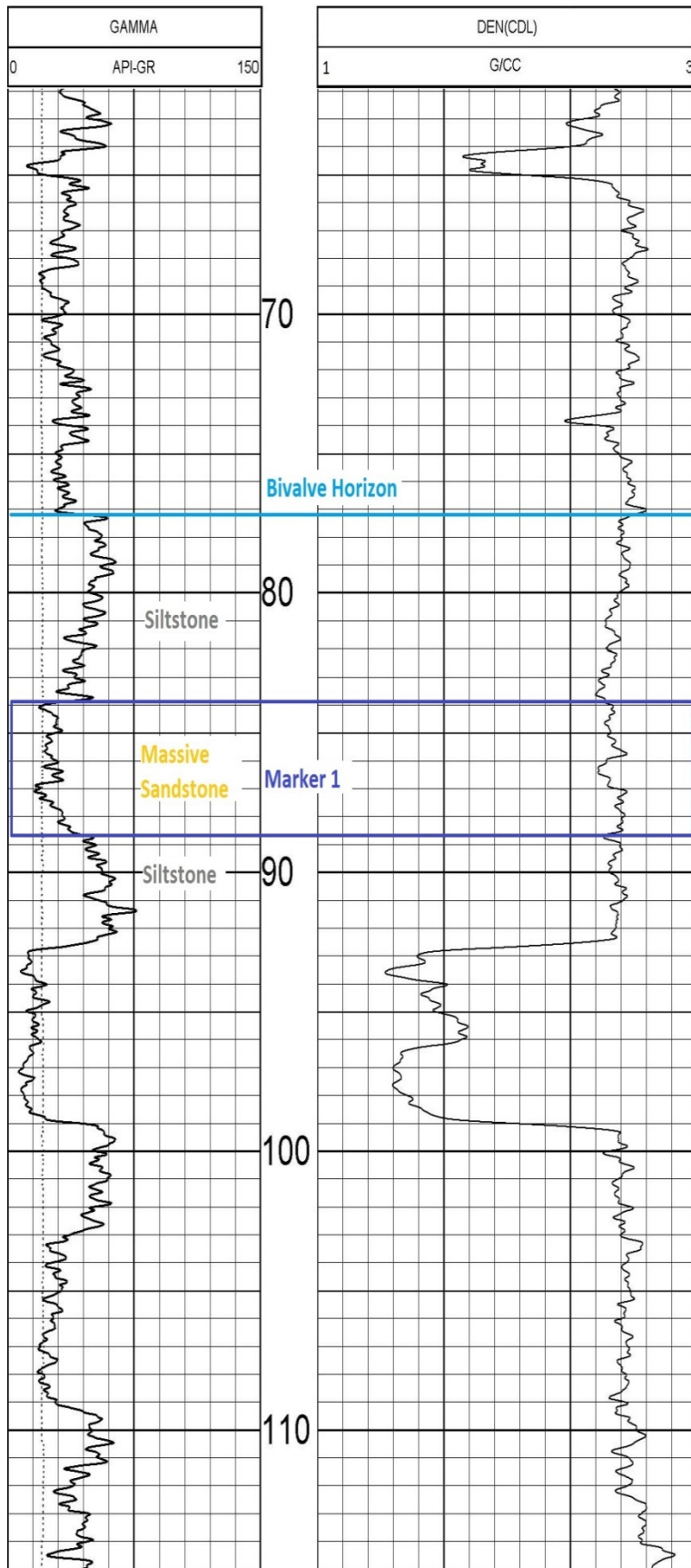


Figure 6. Geophysical log from DHGH-14-12 displaying gamma (left) and density (right) of Marker 1. The low gamma signature of the clean, quartz-rich sandstone of Marker 1 is evident.



Figure 7. Marker 1 as it appears in core from DHGH-14-12, displaying a clean sandstone with accessory quartz veins. The bivalve horizon is visible above the marker.

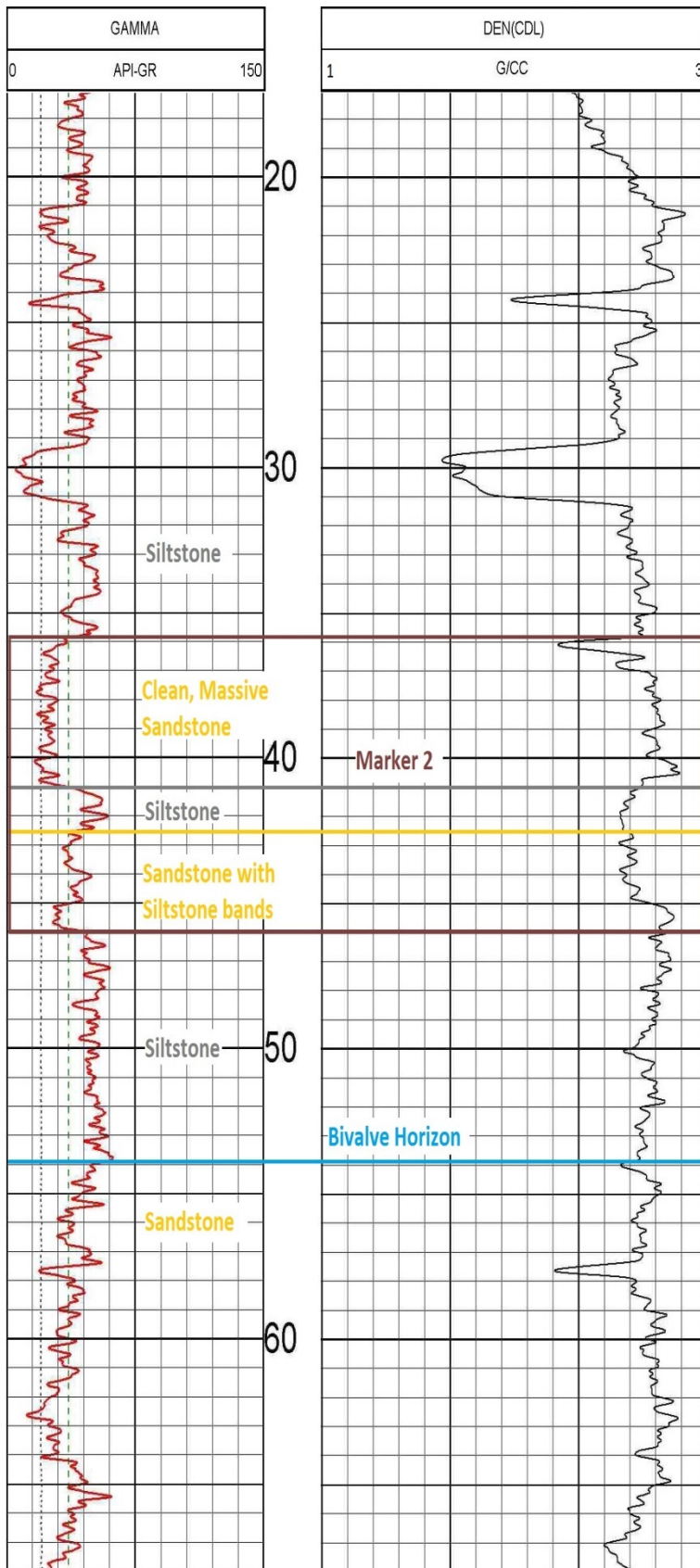


Figure 8. Geophysical log from DHGH-14-16 showing the gamma (left) and density (right) signatures of the units which make up Marker 2. The top of Marker 2 is a clean, massive sandstone readily identified in the gamma log by a low, clean output. Its sharp contact with the siltstone below is evident in both the gamma and density, and the lower 'dirty' sandstone unit is identified by a slight decrease in the gamma.

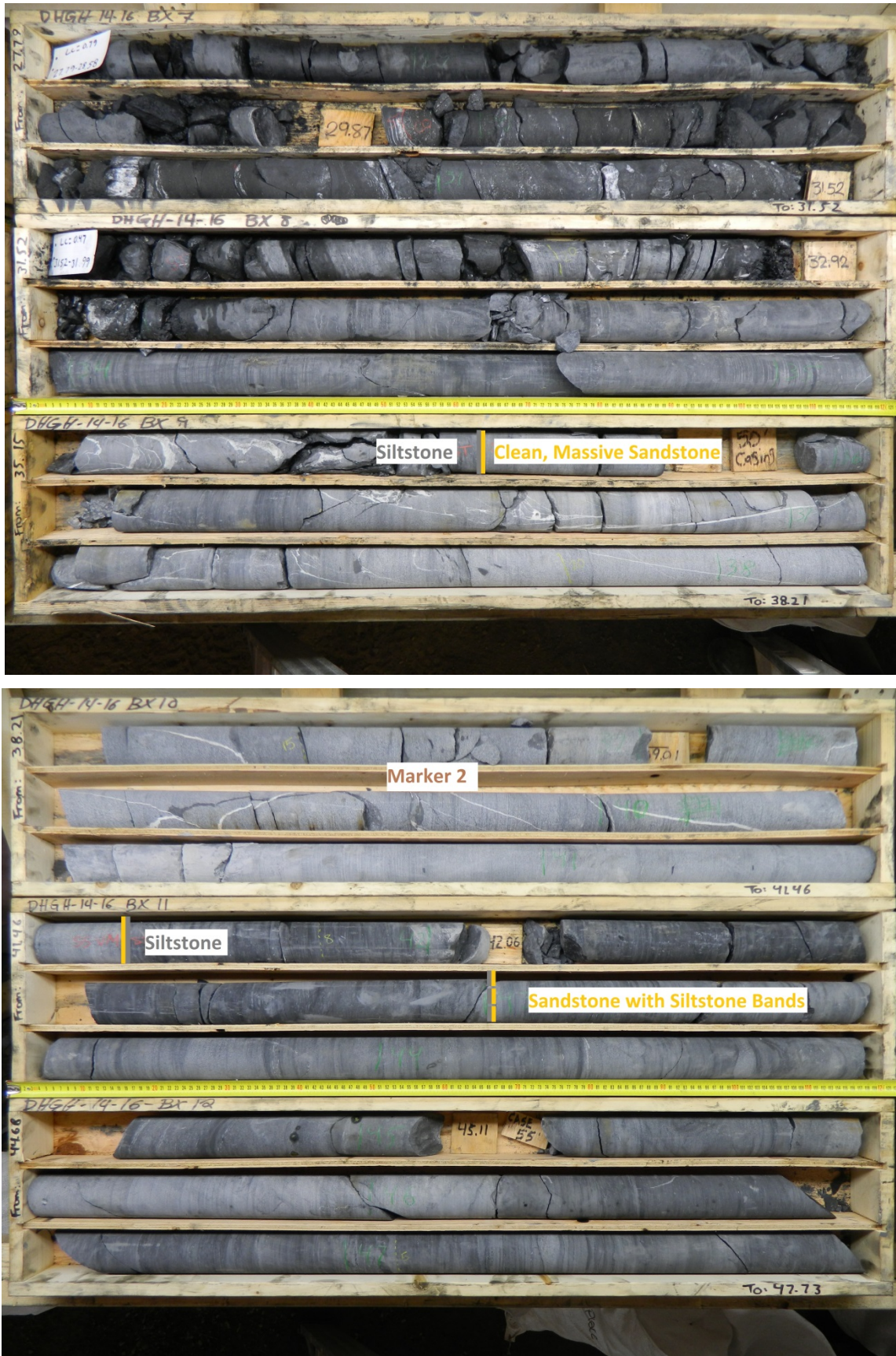




Figure 9. Core photos from DHGH-14-16 displaying the three units that comprise a typical Marker 2. The uppermost sandstone is most recognizable by its clean, massive appearance and sharp contact with the underlying siltstone. Following the marker, the bivalve horizon is visible, which further constrains the position of Marker 2.

Upper Stratigraphic Package

The lithological package seen in the Groundhog Property is described in order stratigraphically, moving down sequence. Refer to Table 1 for the list of **Error! Reference source not found.** horizons within the stratigraphic package and the adopted coal seam nomenclature. Drillhole DHGH-14-24 represents the archetype for a repeatable sedimentary sequence noted across sections. This drillhole was chosen because it represents almost all of the coal seams of the strata, maintains relatively flat laying beds, and lacks complex structure. The strata were determined to be stratigraphically upright, confidently based on flame structures and, with less confidence, on vertical burrows. Within the Bulk Sample Area, the Discovery B, Discovery c, and Duke E coal seams were noted as high prospects based on their continuity, thickness, and coal quality. Examples of geophysical signatures and core photos are provided for these seams of high importance.

*Davis Horizon:**Davis A*

Davis A marks the top of the stratigraphic package. It is a 30 cm coal band with sharp contacts. It is hosted in siltstone in the southwestern region, which becomes coarser towards the northeast. Accessory quartz-carbonate veining and cleat infill is common in Davis A, most notably at its contacts. Below Davis A is an irregularly interbedded siltstone and sandstone unit for 3-5 m.

Davis B

Davis B is the first seam of the stratigraphic type-section to be seen in DHGH-14-24. It is composed of two coal seams or bands separated by a mudstone parting. Its total maximum thickness is around **1 m** but is variable. Davis B lays above a massive, clean sandstone with minor quartz veins for 5-10 m. It is noted that this sandstone becomes progressively siltier to the west.

Davis C

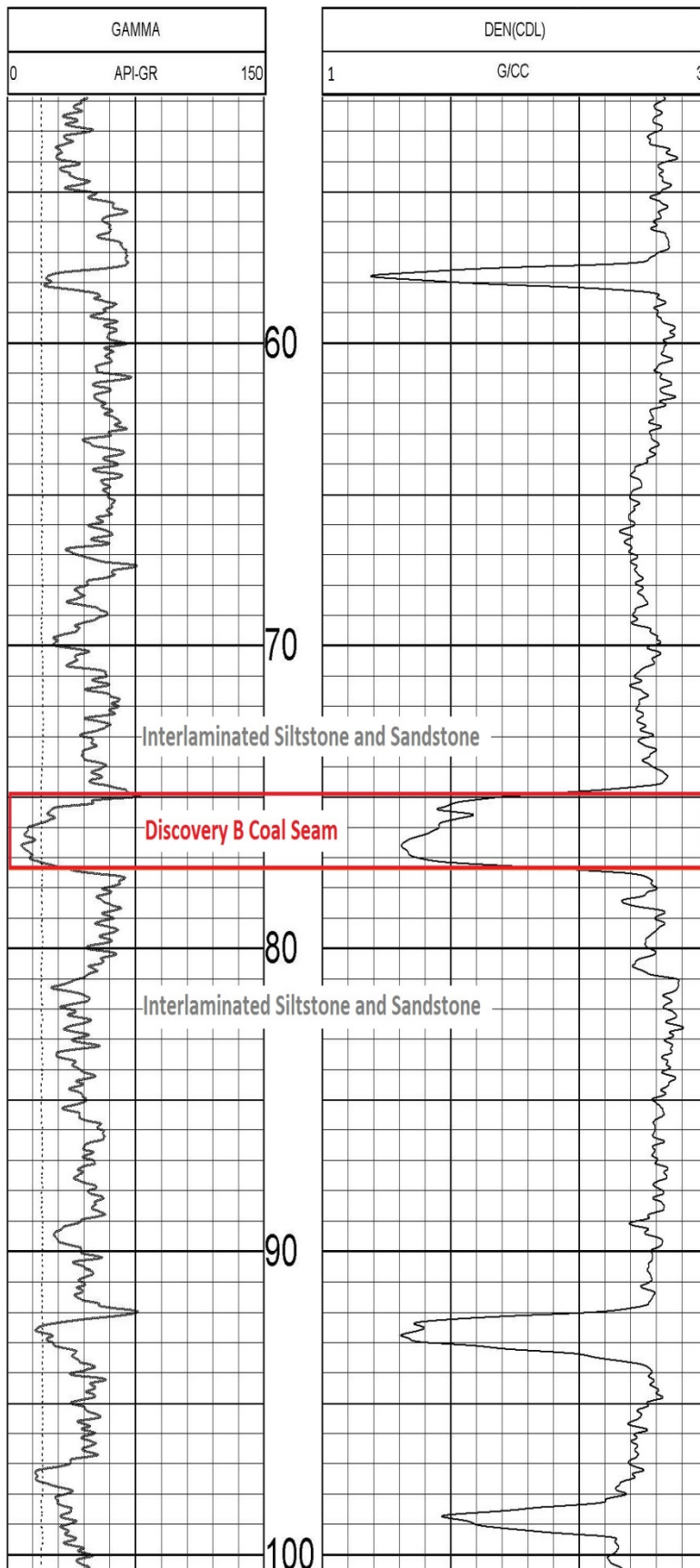
The Davis C seam is a 0.5-1 m coal seam with variable quartz-carbonate veining and cleat infill. Its basal contact ranges from sharp and irregular to gradational with an underlying poorly developed siltstone with irregularly interbedded sandstone that continues for 6-10 m.

Davis D

The narrow Davis D seam sharply underlies this siltstone. It is a coal band 0.2-0.5 m in thickness. It is often seen with common quartz-carbonate veining and cleat infill. The lower contact is gradational into a fine grain, poorly developed sandstone for up to 5 m, marked by a bivalve horizon at the base of the unit. The Davis D seam is thus the first seam above the bivalve horizon associated with Marker 1. These bivalves are consistent for half a meter across the contact into a 2 m thick massive siltstone. The bivalves are visible in both the sandstone and the siltstone on either side of the sharp boundary. For the 5 m following, poorly developed siltstone and sandstone are interbedded, the lower contact of which is gradational into the characteristic Marker 1 of clean, massive sandstone with quartz veining.

*Discovery Horizon:**Discovery A*

Marker 1 sandstone grades into a poorly developed siltstone, with a thickness of 3-5 m. The Discovery A seam is identified as the first coal seam below Marker 1. The Discovery A seam has sharp contacts, a range in thickness from 0.23-8.23 m, and an average thickness of 2.27 m. It is often seen with common quartz-carbonate cleat infill and veining and a small mudstone parting at the centre of the seam evident in the gamma log; 78% of the total seam thickness was logged as coal. Discovery A was intersected 40 times in drillcore.



Discovery B

The underlying unit below the Discovery A seam consists of bioturbated, interlaminated siltstone and sandstone with burrows and quartz veinlets throughout with a standard thickness of 30 m. Located halfway through this unit, is the Discovery B seam, 12-17 m below the Discovery A seam. The Discovery B seam is characterized by a clean, low gamma signature and planar, sharp contacts (Figure 10, Figure 11). It is comprised of clean, high quality coal. It ranges from 0.27-9.03 m in thickness with the largest measurements due to local structural thickening, and an average thickness of 2.07 m. Of these seam thicknesses, 76% is logged as coal. It can be seen with minor quartz-carbonate veining and cleat infill. The Discovery B seam was intersected 57 times in drillhole. It is the stratigraphically uppermost seam of importance in the Groundhog Property. Its continuity, thickness, and shallow depth make it a viable prospect seam.

Figure 10. Geophysical log from DHGH-14-10 of gamma (left) and density (right) displaying the Discovery B seam's clean gamma signature. Sharp contacts are evident by the gamma and density. The Discovery B seam is contained within a unit of bioturbated, interlaminated siltstone and sandstone.

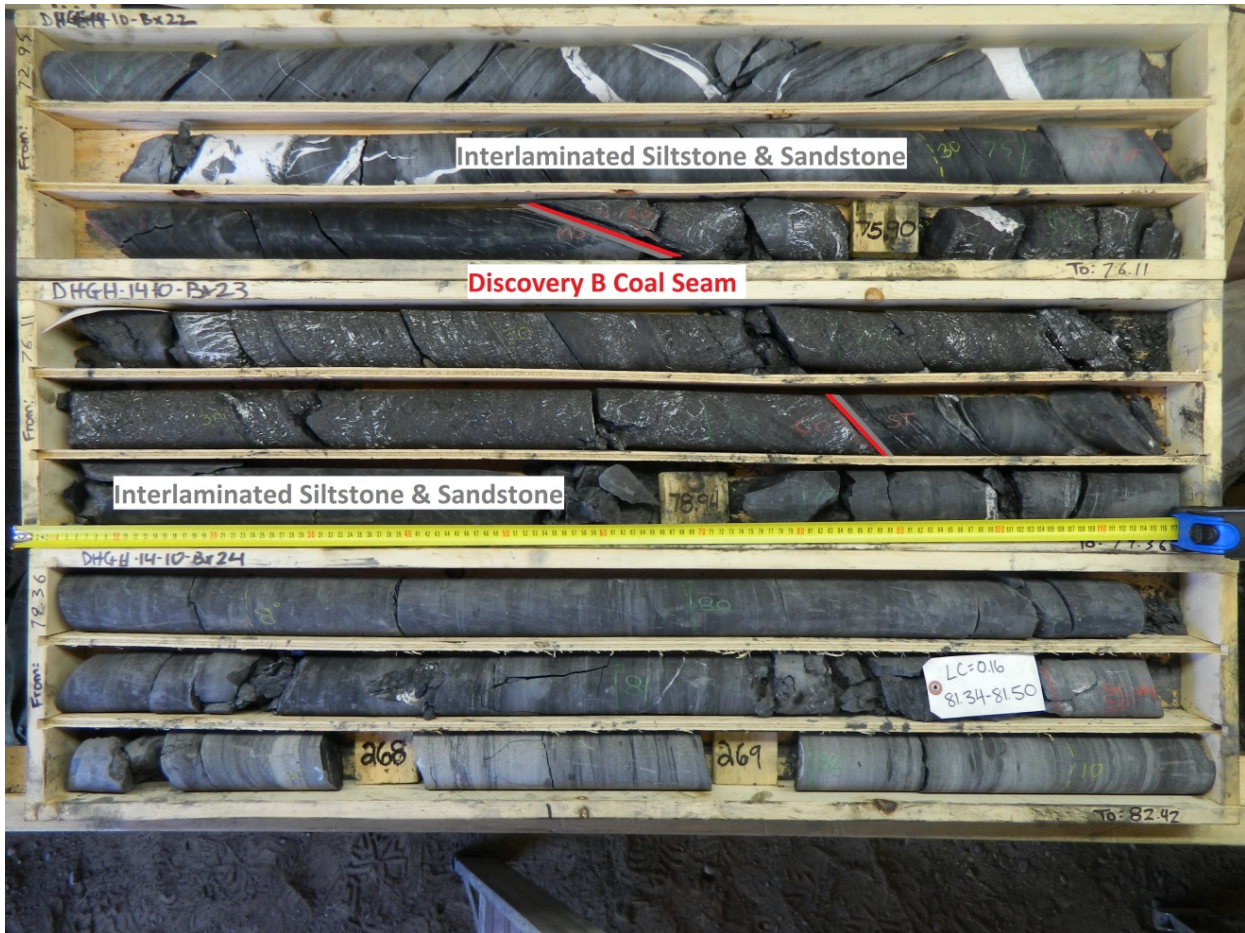
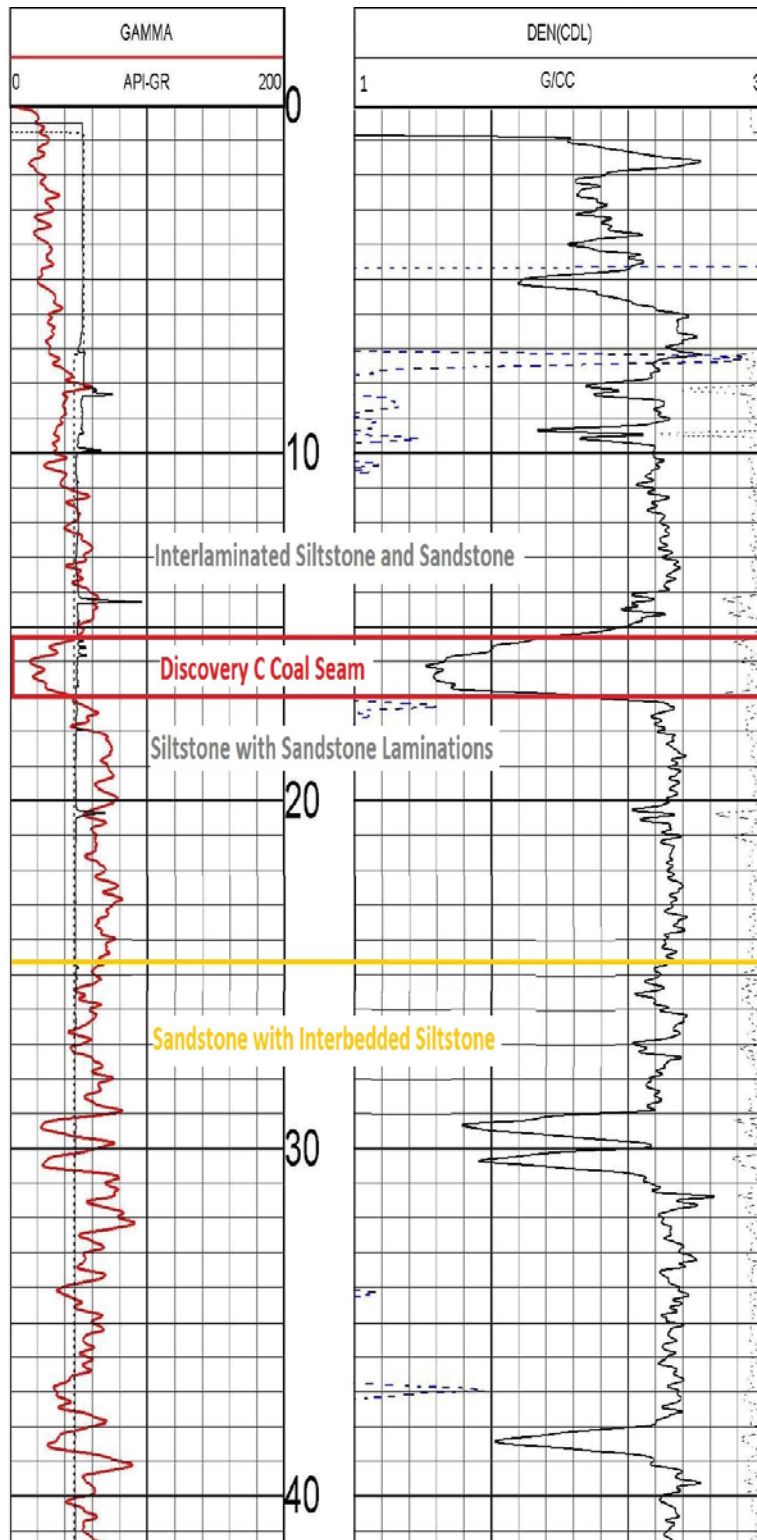


Figure 11. Core photo of the clean, low density Discovery B coal seam from DHGH-14-10. Sharp, planar contacts, also easily noted in geophysical logs (Figure 10) can be seen at the top and bottom. Well developed, interlaminated siltstone and sandstone is shown above and below the Discovery B seam.



Discovery C

Beneath the continuation of interlaminated siltstone and sandstone, rests the Discovery C seam, with a gradational upper contact. 15-20 m of interburden separates the Discovery B and Discovery C seams. The Discovery C seam can contain several small mudstone partings and minor quartz-carbonate cleat infill, as visible in its geophysical signature (Figure 12) and in core photos (Figure 13). It is seen as small as 0.2 m and can reach a maximum thickness of 11.80 m due to structural thickening, with an average thickness of 1.98 m, with 76% logged as coal. It grades into half a meter each of carbonaceous mudstone and siltstone. Its lower contact is gradational into 10-15 m of siltstone with sandstone laminations, and eventually into sandstone of varying grain size with irregularly interbedded siltstone. The Discovery C seam was intersected 57 times in drillholes, and it is significant in regards to its mining potential in the Groundhog Property.

Figure 12. Geophysical log of gamma (left) and density (right) of a typical Discovery C seam from DHGH-14-02. The 'dirty' gamma signature corresponds to the presence of minor mudstone throughout the seam.

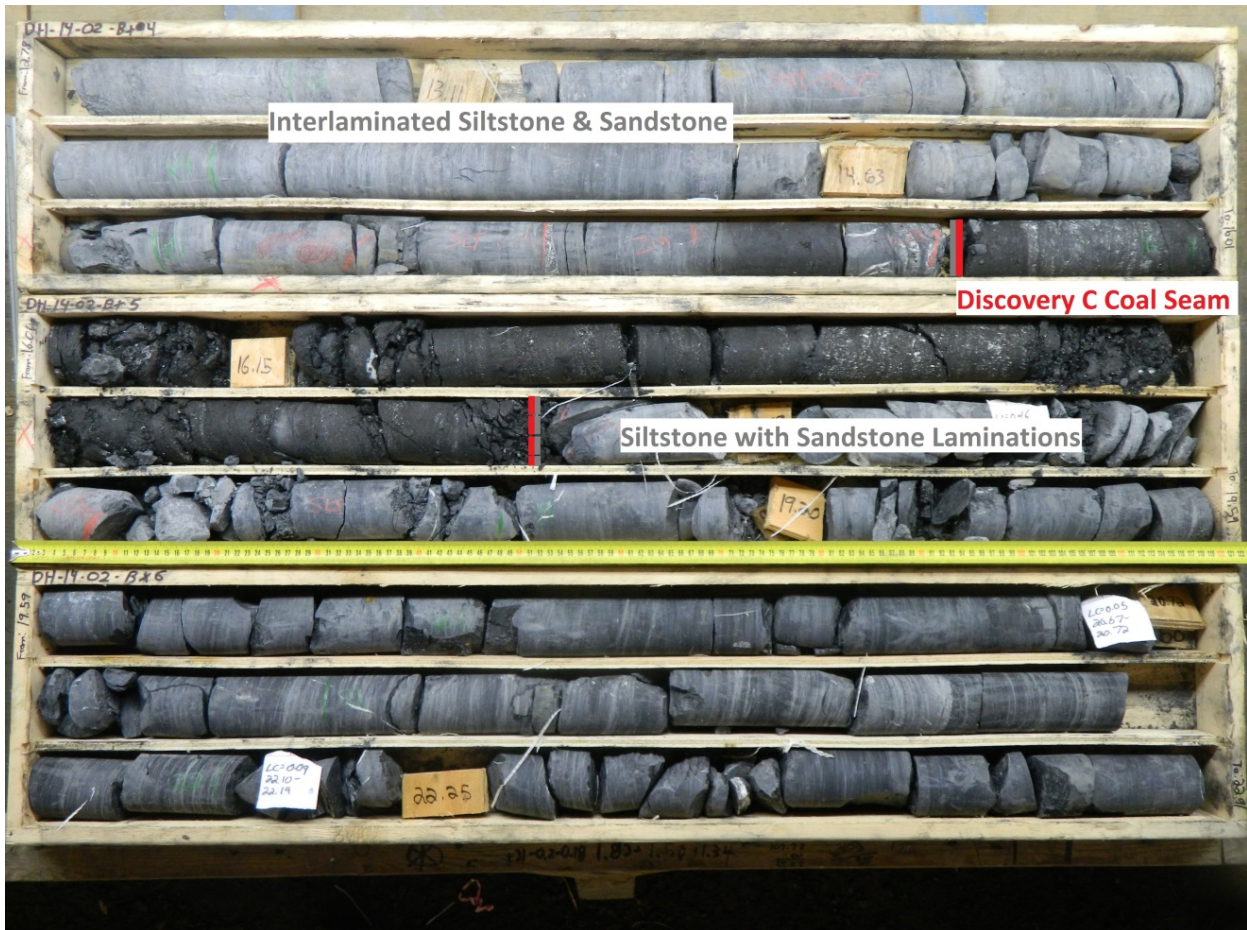


Figure 13. The Discovery C coal seam as it appears in core in DHGH-14-02 within a unit of interlaminated siltstone and sandstone. Minor mudstone is visible throughout the seam in addition to minor quartz-carbonate cleat infill.

Discovery D

Next in the downhole sequence is the Discovery D seam. It rests 20-30 m below the Discovery C seam, although the interburden between the Discovery C and Discovery D seams varies moving away from DHGH-14-24. It has sharp contacts and a thickness of 0.10-5.33 m; its average thickness is 1.14 m. It is seen to contain a small quartz-veined mudstone to siltstone parting that pinches out westward, as visible in core photos and geophysical logs; 77% of the total seam thickness was logged as coal. The Discovery D seam is less continuous and appears to pinch out in some drillholes in the Bulk Sample Area. It was intersected 54 times in drillholes.

Discovery E

Between the Discovery D and Discovery E seams is 12-20 m of laminated siltstone with irregular sandstone beds. The Discovery E seam has a sharp upper contact with 1-2 m of coal. It can contain minor quartz-carbonate cleat infill, and the gamma displays a 'dirty' signature. The Discovery E seam grades into a massive siltstone with minor quartz wisps and coal laminations, which overlies the 20 m sandstone-siltstone-sandstone system of Marker 2. The base of Marker 2 sharply comes into contact with a massive siltstone that contains quartz veinlets and a basal bivalve horizon. The foot of the upper sedimentary package is defined by this bivalve horizon stratigraphically below Marker 2.

Lower Stratigraphic Package

The lower stratigraphy is defined as the strata residing below the bivalve horizon associated with Marker 2. In regional drillholes, these seams can be seen topographically closer to the surface and there is more understanding around their characteristics in geophysical logs and photos. In the Bulk Sample Area this region at depth is complex and correlations are more difficult as most drillholes and relevant dipmeter data do not penetrate to this depth. The lower stratigraphic package appears to be less affected by structure.

Duke Horizon:

Duke A to Duke D

Below the upper package, rests a relatively undisturbed section for 40 m of repeating irregularly to thickly interbedded sandstone and siltstone. This unit continually grades down to siltstone through to coal, coaly mudstone, and mudstone and back into coarser units. These various coal seams are labeled Duke A, Duke B, Duke C, and Duke D seams, respectively. The seams are generally low quality and range from 0.1 to 0.5 m thickness.

The narrow Duke A seam is a coal band sharply resting between a silty sandstone and a mudstone. It occurs directly below Marker 2. It often has quartz-carbonate veining at its lower contact. Approximately 10 m below Duke A is the Duke B seam, which is characterized as a coaly mudstone to coal package with various mudstone partings and a total thickness of 4-8 m. 5-10 m below, the Duke C seam sharply resides at the contact between a sandstone and a mudstone. The Duke C seam is a 0.5-1.5 m coal band. Lastly, the Duke D seam again is present between sandstone and mudstone. It is situated

5-10 m below the Duke C seam. This coal band is low quality, often appearing as coaly to carbonaceous mudstone, averaging 0.5 m in thickness.

Duke E

The strata grade back into 10-15 m of clean, fine grain sandstone followed by 9-10 m of interlaminated to irregularly interbedded siltstone and sandstone, often containing dewatering structures. Within this siltstone and sandstone unit resides the Duke E seam. Duke E is distinguished by its very sharp contacts and clean, high grade coal (Figure 14, Figure 15). The lower contact is followed by 1-3 m of coaly mudstone that grades out into the siltstone and sandstone unit. The Duke E seam has an average thickness of 3.44 m. In intersection, Duke E can range in thickness from 0.60 m to up to 22 m due to structural thickening, which is explained on a per case basis and supported by photos, dipmeter, and geophysical logs. 70% of the total seam thickness was logged as coal, due to parting sometimes being present within the seam. Duke E currently represents the stratigraphically lowermost seam of economic importance of the Groundhog Property. The Duke E coal seam was intersected 43 times in drillcore.

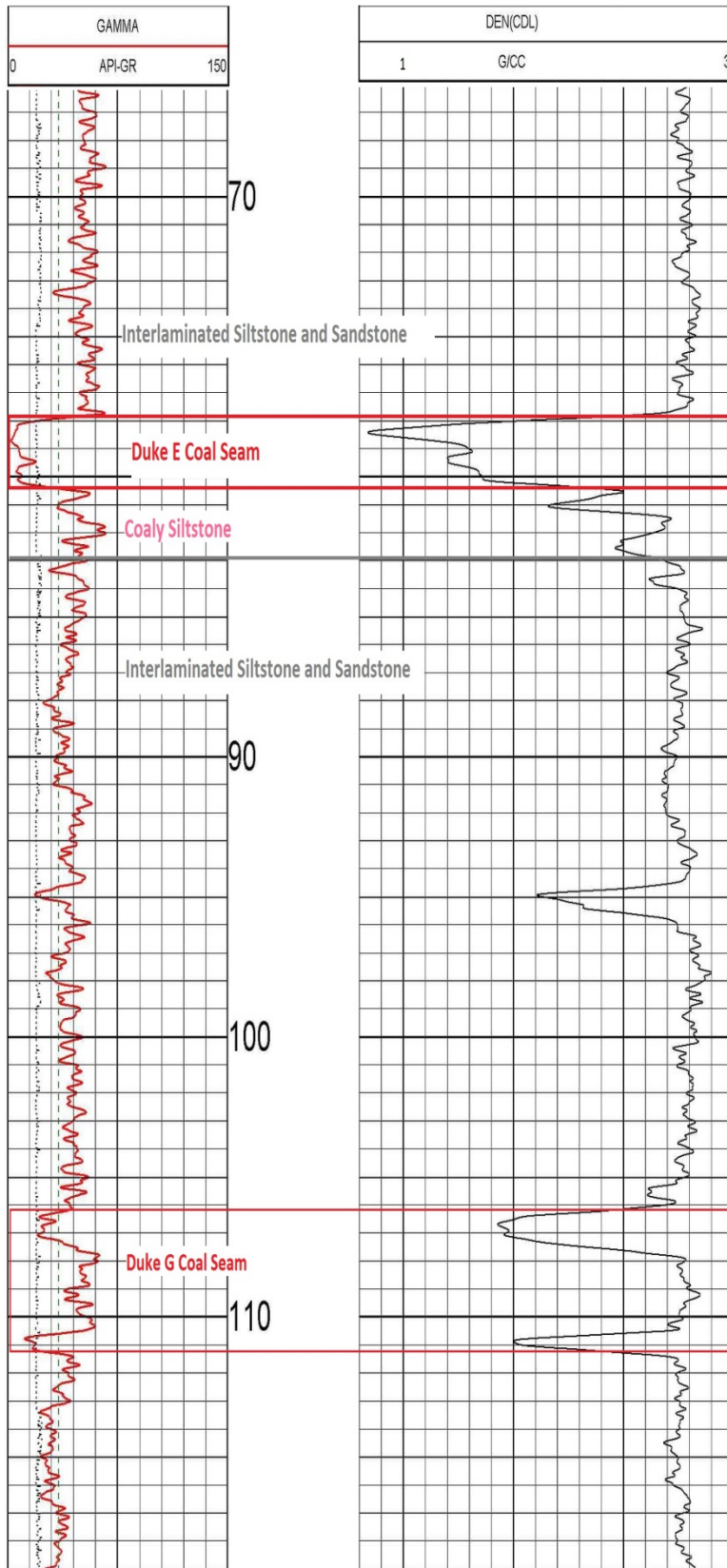


Figure 14. Geophysical log from DHGH-14-35 of gamma (left) and density (right) of the typical Duke E coal seam signature. The sharp contacts and clean coal characteristics are obvious. The distinct signature of the Duke G seam is visible below, which further constrains the position of the Duke E seam.

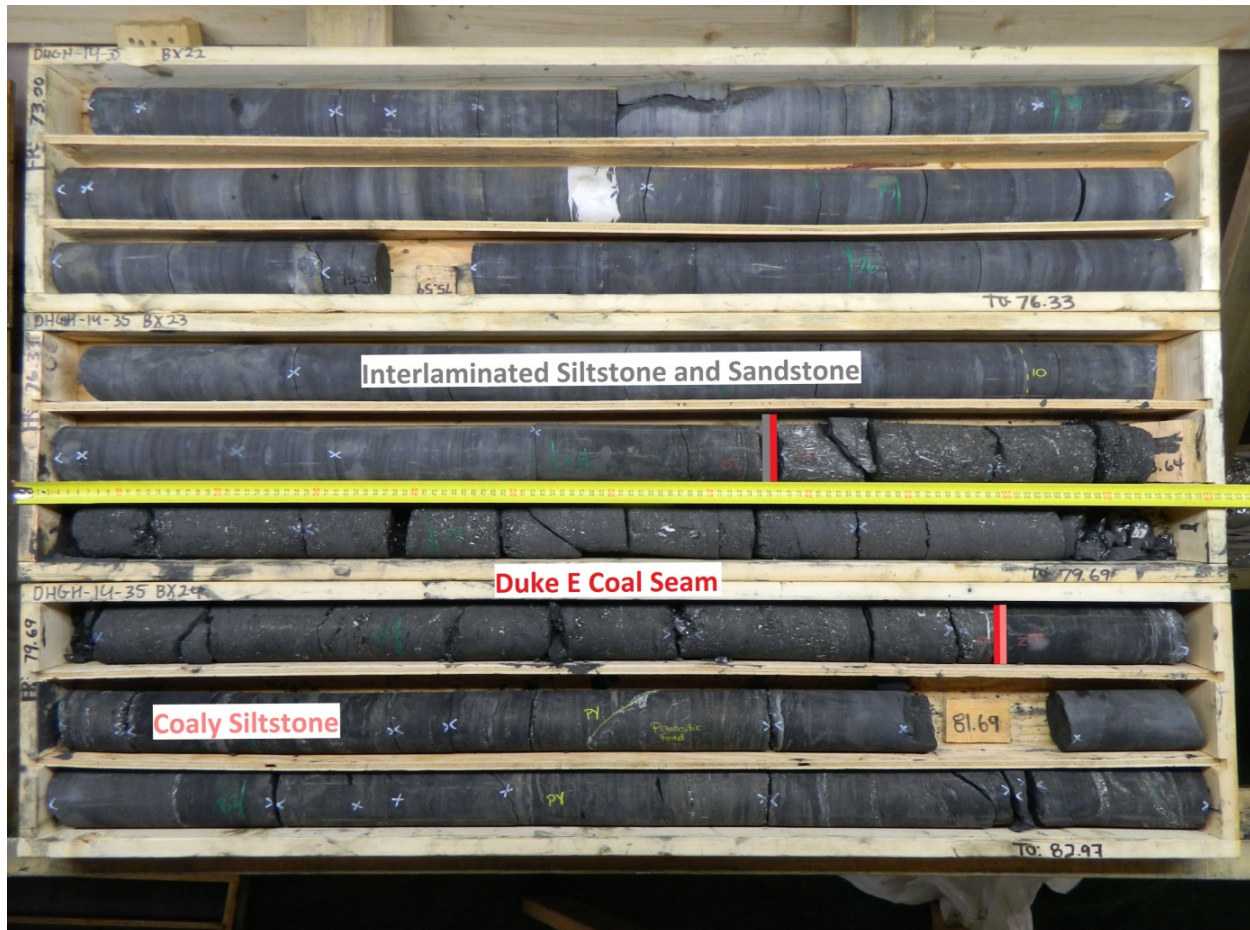


Figure 15. The Duke E coal seam as it is seen in core from DHGH-14-35. It is easily recognized in core by its sharp contacts and clean, high grade coal.

Duke F and G

Duke E is further characterized by its relationship with the Duke G and the Duke H seams below, respectively. The Duke F seam is an inconsistent seam that can sometimes be found to reside 10-15 m below Duke E. It is a small seam, characterized by the presence of pyrite and is often parted by a small amount of siltstone to sandstone. 25-30 m below the Duke E seam, the Duke G seam appears. Duke G is a package made up of two coal seams 0.5-1.5 m thick separated by a 2-4 m siltstone parting. It has a sharp upper contact, commonly present with a pyrite.

Duke H

The Duke G and Duke H seams are separated by 25-40 m of interlaminated to irregularly interbedded sandstone and siltstone. The Duke H seam represents a coal package with total thickness of 3-6 m. It is distinctly recognizable by three partings of mudstone to carbonaceous mudstone between 1 m coal seams. It rests above a massive sandstone often with siltstone clasts throughout. Variations in interburden between the seams are described as it arises through structural analyses or by changes in depositional environment.

Trail Horizon:

Trail A to Trail D

The Trail A seam is the first seam to appear, around 7-12 m, below the Duke H seam. Below the Trail A seam, the seams Trail B, C, and D are also found to be continuous and correlateable. However, due to their depth, less is known about these seams and the interburden between each. The Trail B seam is found 60-75 m below the Duke H seam. The Trail B seam, with a thickness of 2-4 m, is the first clean seam below the Duke H. The Trail C seam is found 20-25 m below the Trail B seam, with thickness of 7-10 m. The Trail C seam is composed of a package of four coal bands to seam, often with the latter two appearing as coaly mudstone or coal stringers. In geophysics, it is identifiable by four low density spikes.

Any lack of data arises from fewer holes being drilled to great depths and the drillhole dipmeter not always extending deep enough to reach the complete lower sedimentary sequence. Lithological units and coal seams at the bottom of the deeper holes require more work to define their interrelationships and defining characteristics.

Bulk Sample Area

Bulk Sample Area Sections

Various sections were produced from the Minesight geological model in order to best convey the subsurface behavior of the Bulk Sample Area strata. Figure 16 shows all of the Bulk Sample Area sections in plan view included in this report. The sections show the trace of the coal seams and the manner of their propagation. The sections presented were chosen as they encompass each of the relevant drillholes and best display the subsurface structures and coal seam behavior. Figure 17 to Figure 21 show sections moving towards the southeast of the Bulk Sample Area.

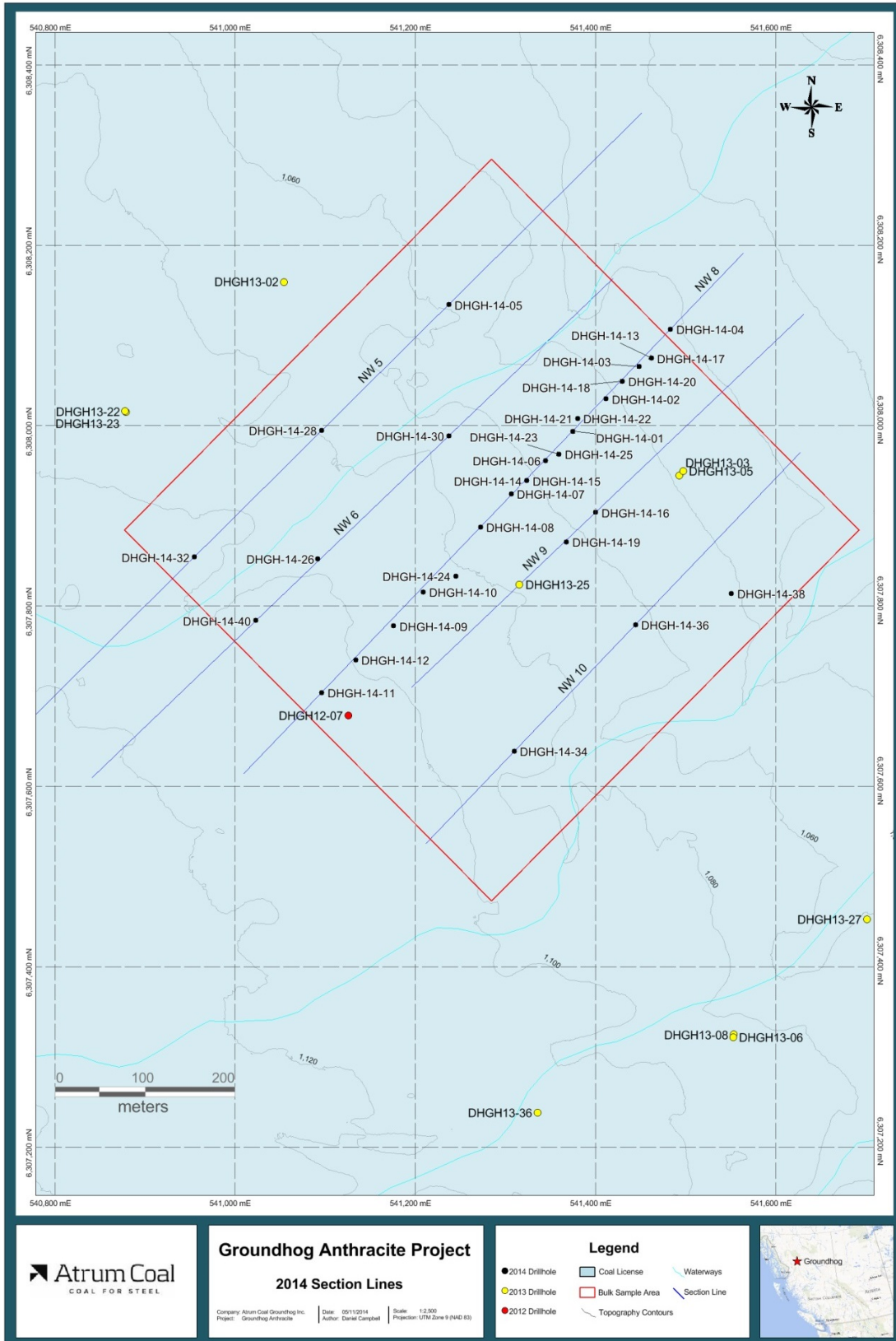


Figure 16. Plan view map of the Bulk Sample area showing the sections produced from the model output.

NW10 Cross-Section

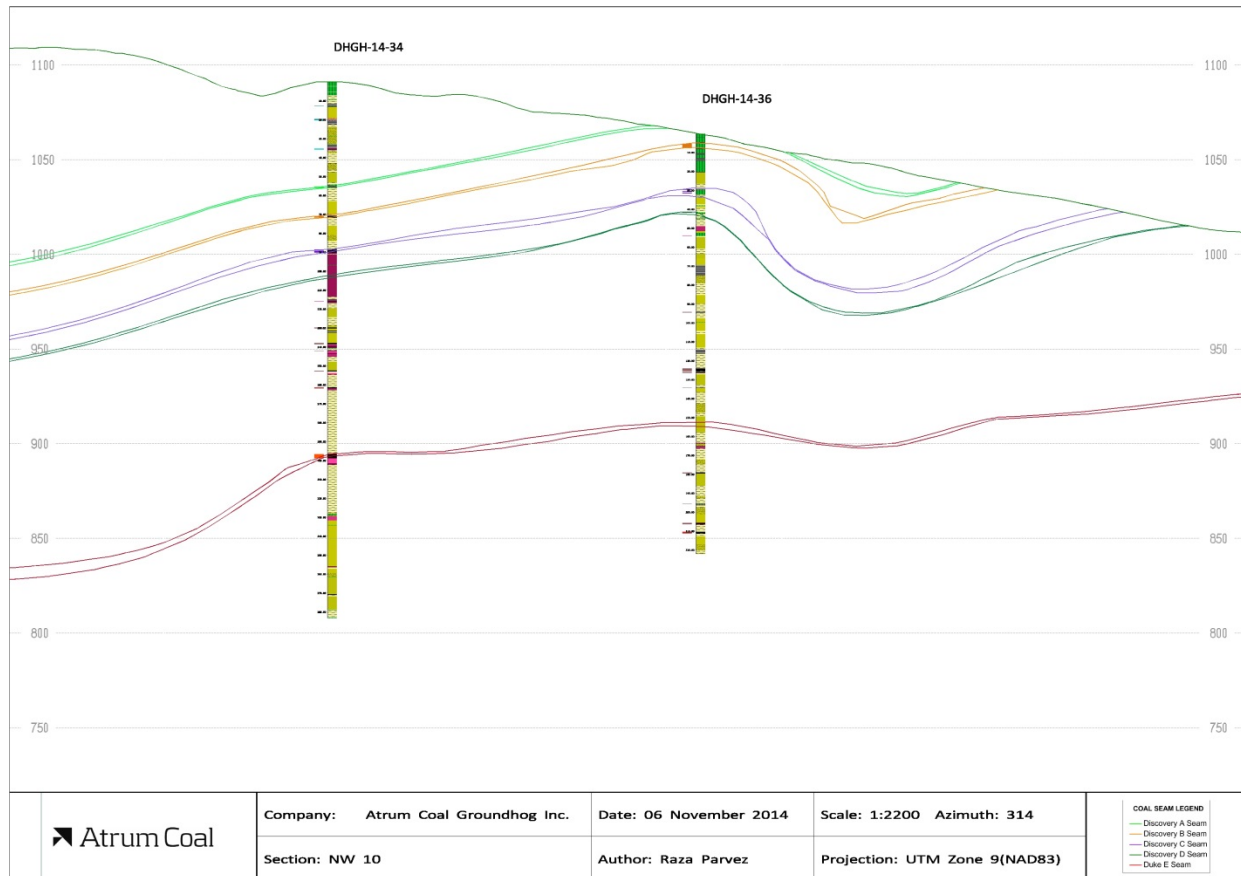


Figure 17. NW10 Section facing northwest through the Bulk Sample Area illustrating seam depths and structure.

DHGH-14-34

The typical stratigraphic package from Marker 1 to Marker 2 is contained within DHGH-14-34, with the exception of the Discovery D seam. However, the Discovery D seam could be the Discovery C seam as they have very similar geophysical logs and are equidistant from the Discovery B and Discovery E seams. Below Marker 2, Seams Duke B to Duke E are present; Duke A was not intersected and presumably pinched out from the east. The structure is complex at the top of DHGH-14-34 making it difficult to infer an S-fold. Davis A and Davis B may be the same seam overturned. A small S-fold is present below the Discovery C seam, at 90-100 m depth, which increases the interburden thickness between the Discovery C and Discovery E seams.

DHGH-14-36

A large S-fold is present with a shape similar to that of the NW8 section and the DHGH-14-16 and DHGH-14-19 drillholes. Evidence for the overturned limb is based on Marker 2, which is observed in drillcore twice, once overturned from 138-158 m. The Discovery B seam to the Duke B seam is intersected. Below the first occurrence of Marker 2, there is an overturn and the markers and seams occur more than once. This is a very complex region with minimal data; there are several faults and strong foliation present. More drillholes are required to make high confidence correlations. The interpretation provided is the most probable.

DHGH-14-38

The typical package is present from the Discovery A seam to the Duke H seam, with little change in the interburden thicknesses between the seams. The exception is that of the increased interburden between the Discovery B and the Discovery C seams, which can be explained by the steep bedding. Upright flame structures of high confidence are visible at 150 m and again at 170 m depth indicating upright strata.

NW9 Cross-Section

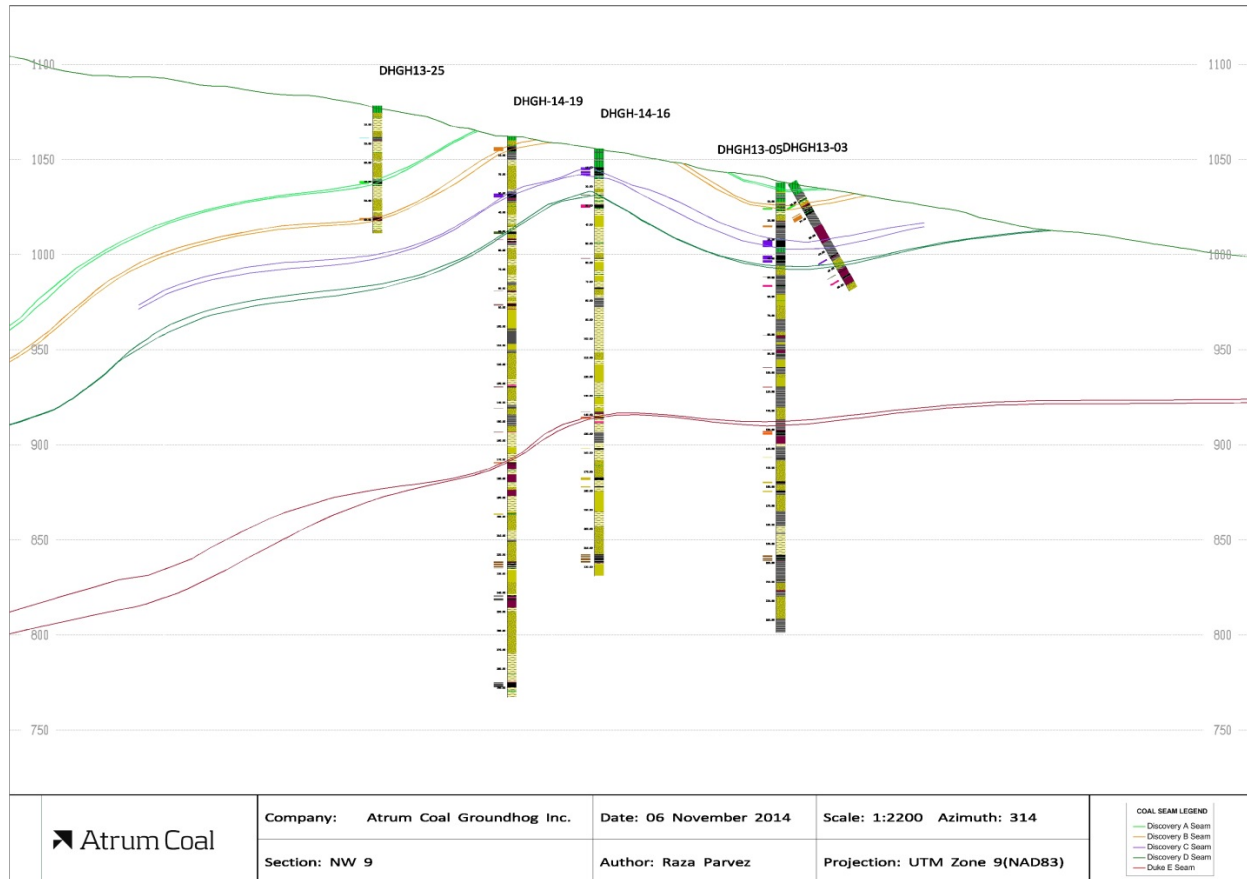


Figure 18. NW9 Section facing northwest through the Bulk Sample Area illustrating seam depths and structure.

DHGH-13-25

The typical stratigraphic package starting from the Davis D seam through to the Discovery B seam is present. Additional bivalves are visible above the Davis D seam; this scenario occurs in other drillholes but it is uncommon.

DHGH-14-19

The stratigraphic sequence is intact from the Discovery B seam to the Duke B seam. Below the Duke B seam, the strata are overturned such that Duke B, Duke A, and Marker 2 repeat in that order. The Duke C seam is presumably folded just west of DHGH-14-19 and is not intersected by the drillhole. The upper fold hinge of the recumbent fold as described in drillholes DHGH-14-01 and DHGH-14-21 is inferred at

100 m, based on dipmeter and core photo evidence. The upper fold hinge occurs in a deformed sandstone that is uncommon and intensely foliated. Structural thickening occurs in the overturned limb due to the increased bedding angle as seen in dipmeter and core. The latter fold hinge of the recumbent fold resides at 150 m, which is readily seen in core photos, and further proven where the bivalve horizon associated with the base of Marker 2 repeats itself two more times very tightly.

Below the second and third occurrence of Marker 2 at the second fold hinge, the strata become complex and difficult to explain. Directly below the Duke B seam, there are several faults observed in drillcore and a significant portion of the sedimentary package is unaccounted for. The Duke E seam is approximately 30 m closer to Duke A than expected. Below this Duke E intersection, the lower package is intact including what is inferred to be the Duke G seam, the Duke H seam, and two additional seams that are intersected appear that are unnamed as they are deep in the package.

DHGH-14-16

The top of DHGH-14-16 conforms well to DHGH-14-19, with the Discovery C seam to the Duke A seam being retained. The Discovery C seam is exceptionally thicker than it often appears. The recumbent fold further propagates eastward as evident by the repetition of Marker 2 and its associated bivalve horizon. The Discovery E seam is intersected two times confidently and possibly a third. The second occurrence of the Discovery E seam may represent the hinge of the recumbent fold, in which case the Discovery E is not repeated again. The upper fold hinge is visible in photos in the interburden below Duke A. Marker 2 and Duke A repeat themselves three times in the core adding to the evidence in favour of the recumbent fold. Marker 2 is substantially thicker in the overturned limb because the steep bedding angle of 60-75° increases the apparent thickness of the horizon. The upright segment of Marker 2 is structurally compressed into the lower limb of the recumbent fold. The apparent thinning is accommodated by multiple shears and faults. It has also been noted that this zone may represent a thrust fault.

The Duke E seam is intersected at 142 m; there is significantly less sedimentary package between it and Marker 2, similar to the adjacent DHGH-14-19. Various coal seams appear in the shear zone, which may represent fragments of Seams 10 to 13. The Duke F, Duke G, and Duke H seams are preserved and conformable to the neighbouring drillholes of DHGH-13-03 to the east and DHGH-14-19 to the west.

DHGH-13-03 (Vertical) and DHGH-13-05 (Inclined)

The top of the drillholes is complex and it is difficult to correlate between holes with confidence. Drastic changes in coal thickness exist at the top of drillhole. This has been identified as a complex region that would require another drillhole. The stratigraphic package is contained from the Discovery A seam to the Duke H seam in the DHGH-13-03 with typical interburden. DHGH-13-05 is again conformable from the Discovery A to the Discovery E seams at the end of the drillhole. The Discovery C seam has a drastic increase in thickness due to increased dip of bedding, but there is no dipmeter data to pull from. Drillholes DHGH-14-16 and DHGH-14-19 do not match well with respect to the interburden from Marker 2 to the Duke E seam. DHGH-13-03 has typical interburden thicknesses while DHGH-14-16 and DHGH-14-19 have significantly less.

NW8 Cross-Section

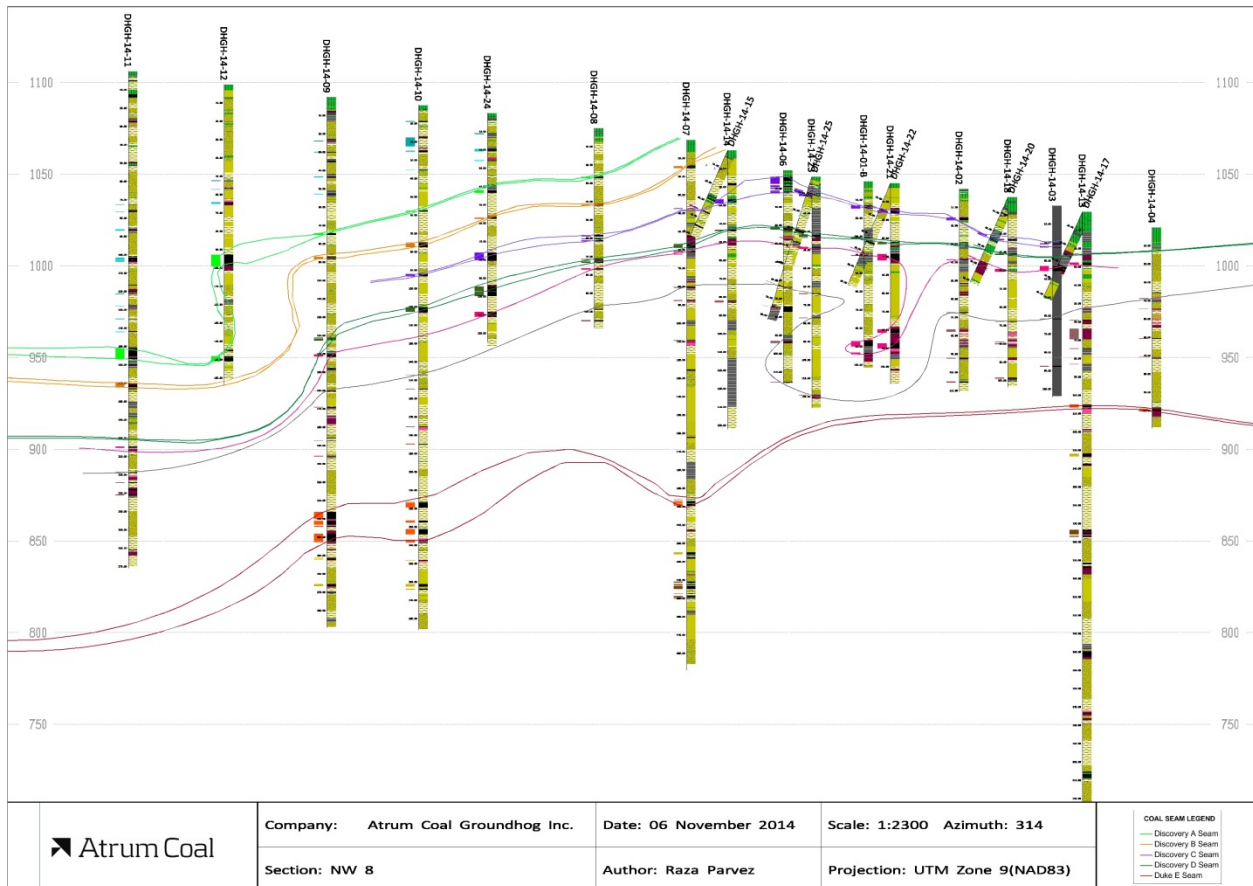


Figure 19. NW8 Section facing northwest through the Bulk Sample Area illustrating seam depths and structure.

DHGH-12-07

DHGH-12-07 is slightly off section from the NW8 traverse. It is a structurally complex drillhole with multiple overturned folds throughout and faulting from 164-171 m. The package from the Discovery A seam to Duke D appears to be preserved with large changes in interburden occurring due to faulting and steepening of bedding. The Duke D correlation is uncertain. Beds are found to be very steep to vertical, for tens of meters. Due to the lack of defining relationships with its nearest adjacent drillhole, DHGH-14-11, DHGH-12-07 was originally left out of the model. Supporting evidence for correlations is based on photos, geophysical signatures, and the model output.

DHGH-14-11

The bedding at the top of DHGH-14-11 dips towards the southwest, causing the intersection of the typical stratigraphic package to occur further downhole relative to that of the northeast. The Davis B and Davis C seams occur three times in the drillhole, following the trace of an S-fold. The thickening of interburden between the latter two intersections of the Davis C seam, from 100-135 m depth, is a result of the steeply dipping central limb of the S-fold. The dipmeter data show that the topmost limb of the S-fold has a moderate dip to the southwest, the central limb is overturned and dips steeply eastward, and the deepest limb returns to a shallow southwestward dip.

Below Marker 2 at 210 m, the Duke A and Duke B seams appear to pinch out. The Duke C, Duke D, and Duke E seams recur with no change in interburden thickness. The thickness of Duke E drops radically in DHGH-14-11 possibly as a result of it beginning to pinching out. The drillhole does not extend deep enough to intersect the Duke F, Duke G, or Duke H seams. The upright flame structures visible 244 m depth indicate that the strata are upright.

DHGH-14-12

The usual stratigraphic package is found further downhole because of a drastic steepening of the bedding at the top of DHGH-14-12, with some sedimentary layers resting near vertical. A possible crinkle fold propagates through the upper portion of the drillhole, but there is no dipmeter to confirm hypotheses.

Marker 1 is intersected three times downhole due to S-folding, where its second consecutive appearance is overturned. Thickening of the Discovery A seam at 95 m is a result of this S-folding. The intersection of the Discovery A seam occurs simultaneously with the upper fold hinge, and the seam is overturned on itself around 97 m depth. The drillhole does not extend deep enough to come into contact with the strata below the Discovery A seam. The drillhole was presumed to be just shy of reaching the Discovery B seam.

DHGH-14-09

There is an increase of overburden compared to the northeastern drillholes at the top of the drillhole as units continue to dip towards the southwest. An increase in the interburden thickness between the Discovery B seam and the Discovery D seam arises, causing the Discovery D seam to be intersected deeper downhole than usual. This is a result of an S-fold overturning the strata in between the two seams from 90-130 m depth. The Discovery C seam pinches out between DHGH-14-10 and DHGH-14-09. The deeper lithologies, below Marker 2, are consistent with DHGH-14-10 and there is little change in the amount interburden between the seams at depth. Upright flame structures, indicating right-way-up strata, of high level confidence are found at 272 m and, less confidently, at 209 m depth.

DHGH-14-10

The entirety of the upper sedimentary package is intersected. The Discovery E seam, however, is not present, apparently temporarily pinching out or being displaced by faulting. Davis A is intersected at the top of the drillhole 10 m above Davis B. An apparent thickening between the Discovery A and Discovery B coal seams arises due to the steepening of the bedding angle between the two seams. The Discovery C seam is present above the Discovery D seam.

Below the upper package, the typical lower stratigraphy is present from the Duke A seam to the Duke H seam. The strata are very shallowly dipping to the southwest. The strata are evidently upright, based on flame structures visible in core at 184 m depth.

DHGH-14-24

DHGH-14-24 represents the type-section for most of the upper stratigraphic package from the Davis C seam to Marker 2. The Discovery E seam reappears in the package, situated above Marker 2. Davis B is

present 10 m above the Davis C seam with the same bedding angle as the rest of the drillhole. The lower bivalve horizon is not intersected due to its local disappearance below Marker 2 or the drillhole was not drilled deep enough to intersect it.

DHGH-14-08

DHGH-14-08 contains the typical stratigraphic package from the Davis D seam to Marker 2. There is no dipmeter data for the top of drillhole to explain the vertical thickening between the Davis D seam and Marker 1. Further downhole, the stratigraphy is dipping at a shallow angle to the south and southwest. The bivalve horizon below Marker 2 is not visible in this drillhole.

DHGH-14-07

The typical stratigraphic package is present from the Discovery B to the Duke H seam. The Discovery C seam thins out compared to the more eastern drillholes DHGH-14-15, DHGH-14-14, and DHGH-14-06. Below the Duke C seam, there is a 30 m vertical limb, from approximately 130-160 m seen in photos, which is part of a recumbent fold that persists in the northeastern portion of the section. This is the farthest west the recumbent fold is documented, primarily due to a lack of downhole data at this depth. The vertical bedding is responsible for the increase in interburden between the Duke C, Duke D, and Duke E seams. Seams 40 through to the Duke H seam occur as expected with minor variations in the interburden. The insufficient data at these depths, that is, greater than 150 m, hinders proper detailed structural analysis. Flame structures indicating upright strata are intersected at 280 m depth.

DHGH-14-14 (Vertical) and DHGH-14-15 (Inclined)

The Discovery C seam in both holes is diverging compared to DHGH-14-06 to the east, which thickened at a small localized anticline. DHGH-14-15 does not reach past the Discovery C seam. The Discovery D, Discovery E, Duke A, and Duke B seams occur in DHGH-14-14, as expected.

Below the Duke B seam, there is an overturn through a fairly massive siltstone, which drastically increases the interburden between Duke B and Duke C. This massive siltstone forms the westward extent of the recumbent fold witnessed in both adjacent drillholes, DHGH-14-07 and DHGH-14-06, on NW8. Duke A and Duke B do not repeat again in this drillhole as the recumbent fold has already turned back and trends eastward before intersecting DHGH-14-14 again.

DHGH-14-06

The Discovery C, Discovery D, and Discovery E seams, as well as Marker 2, the Duke A seam, and the Duke B seam, all occur in this drillhole as expected. The Discovery C seam is substantially thicker than its average thickness. This is caused by structural thickening during folding; the anticline of which is documented only locally.

Marker 2 is intersected three times. However, the lower two occurrences consist primarily of the bivalve layers associated with the Marker 2 sequence. This correlation is very confident as it honours the bedding data from both the dipmeter and core photos. The core photos also show the overturned packages below the first Marker 2 occurrence. Likewise, The Duke A seam is present three times, maintaining its interburden relationship throughout the subsequent overturned and upright units. The

Duke B seam occurs once, but it is positioned directly at the upper fold nose of the recumbent fold. The fold nose is difficult to see in core and the coal is sheared; the dipmeter provides the evidence for an overturn.

DHGH-14-23 (Vertical) and DHGH-14-25 (Inclined)

DHGH-14-25, the inclined drillhole that is westward from the drillpad, contains the package from the Discovery C seam to the Duke B seam with no overturns observed in the drill core. In DHGH-14-23, the Discovery C seam down to The Duke A seam occurs as expected in regards to the package. Below Duke A, there is an overturn characterized by the following sequence: Marker 2, Duke A, Duke A, Marker 2, Marker 2, Duke A. The occurrence of Marker 2 and the Duke A three times in the borehole based evidence from core photos, geophysical signatures, and dipmeter data. This section was the area that first implied that complex structure was affecting this region. This evidence was subsequently added to and tested against, in favour of this unit being overturned.

DHGH-14-01

The Discovery C seam through to the Discovery E seam occurs as expected in regards to the package. However, the Discovery E seam occurs two more times below the package as it has been folded twice. The upper fold nose preceding the recumbent fold occurs in Marker 2, which explains why no bivalves are present and more siltstone is associated. The bivalves are folded back westward before intersecting DHGH-14-01. The Duke A seam is similarly folded back westward before being intersected in the drillhole. Directly below the first appearance of the Discovery E seam, the tight recumbent fold starts effecting bedding angles and the changes happens over a short distance, from flat to 55° in 5 m. This takes effect in the upper portion of Marker 2. Marker 2 occurs twice; the first upright and the second overturned. It is hypothesized with high confidence that if drilling continued in DHGH-14-01, Marker 2 would have been intersected again from approximately 101-120 m. The Discovery E seam is intersected three times; the latter two occurrences shape the tight nature of the recumbent fold. A fold nose can be seen in drillcore between the second and third intersections of the Discovery E seams. This adds to the certainty of the overall picture regarding the interpreted recumbent fold. Borehole DHGH-14-21, to the east of DHGH-14-01, also confirms the above interpretation and folding style.

DHGH-14-21 (Vertical) and DHGH-14-22 (Inclined)

DHGH-14-22 intersects the package from the Discovery C seam down to the bottom of Marker 2 just above the bivalve layer. DHGH-14-21 contains the Discovery C through Discovery E seams as expected above Marker 2. However, Marker 2 occurs simultaneously with the location of the upper fold associated with the recumbent fold. It is primarily a massive sandstone with high bedding angles. The overturn in Marker 2 increases the amount of sandstone and explains the lack of bivalves as they have already been overturned to trend westward before being intersected by borehole DHGH-14-22. Below the overturned Marker 2, there are two Discovery E seam occurrences; the first overturned and the second upright. This increases to the correlation certainty that is documented with the Discovery E seams in DHGH-14-01. Eastward of DHGH-14-22, the tight recumbent fold becomes closer to the subsurface from which point it continues as typical unfolded strata. This transition is sharp and steep but agrees with the structures observed at surface on the Groundhog Property and honours drillhole

data. Below the deepest occurrence of the Discovery E seam, is the top of Marker 2. The drillhole, however, does not extend deep enough to intersect the entire Marker 2 package including the bivalves.

DHGH-14-02

Moving up from Marker 2, the Discovery E, Discovery D, and Discovery C seams are intersected by DHGH-14-02. DHGH-14-02 correlates well with DHGH-14-20, with the seams Duke A to Duke C present below Marker 2.

DHGH-14-18 (Vertical) and DHGH-14-20 (Inclined)

The Discovery C, Discovery D, and Discovery E seams are each intersected above Marker 2. The distance separating the Discovery C and the Discovery D seams decreases moving eastward. The Duke A, Duke B, and Duke C seams all occur consistently below Marker 2 with typical separation.

DHGH-14-03

There is no core or dipmeter for DHGH-14-03; as such, the correlations are less assured. The Marker 2 correlation, however, is confident in geophysical logs. Above Marker 2, the Discovery E, Discovery D, and possibly the Discovery C seams occur. The presence of the Discovery C seam here is less confident as it is very thin. Moving eastward along NW8 section, the Discovery C seam converges towards the Discovery D seam.

DHGH-14-13 (Vertical) and DHGH-14-17 (Inclined)

Above Marker 2, only the Discovery E and the Discovery D seams remain. Below Marker 2, the Duke A to Duke H seams are present. It has been noticed that the interburden between the Duke E, Duke G, and Duke H seams increases between each towards the northeast. The Duke F seam does not appear in this unit.

DHGH-14-04

DHGH-14-04 sits on the east side of the NW8 section. There is minimal coal and it does not contain the entire package above Marker 2. It would be wise to stay west of this drillhole. DHGH-14-04 correlates well with DHGH-14-13. The Discovery D and Discovery E seams, however, appear to pinch out between DHGH-14-13 and DHGH-14-04. The seams Duke A to Duke are present with consistent interburden thicknesses.

NW6 Cross-Section

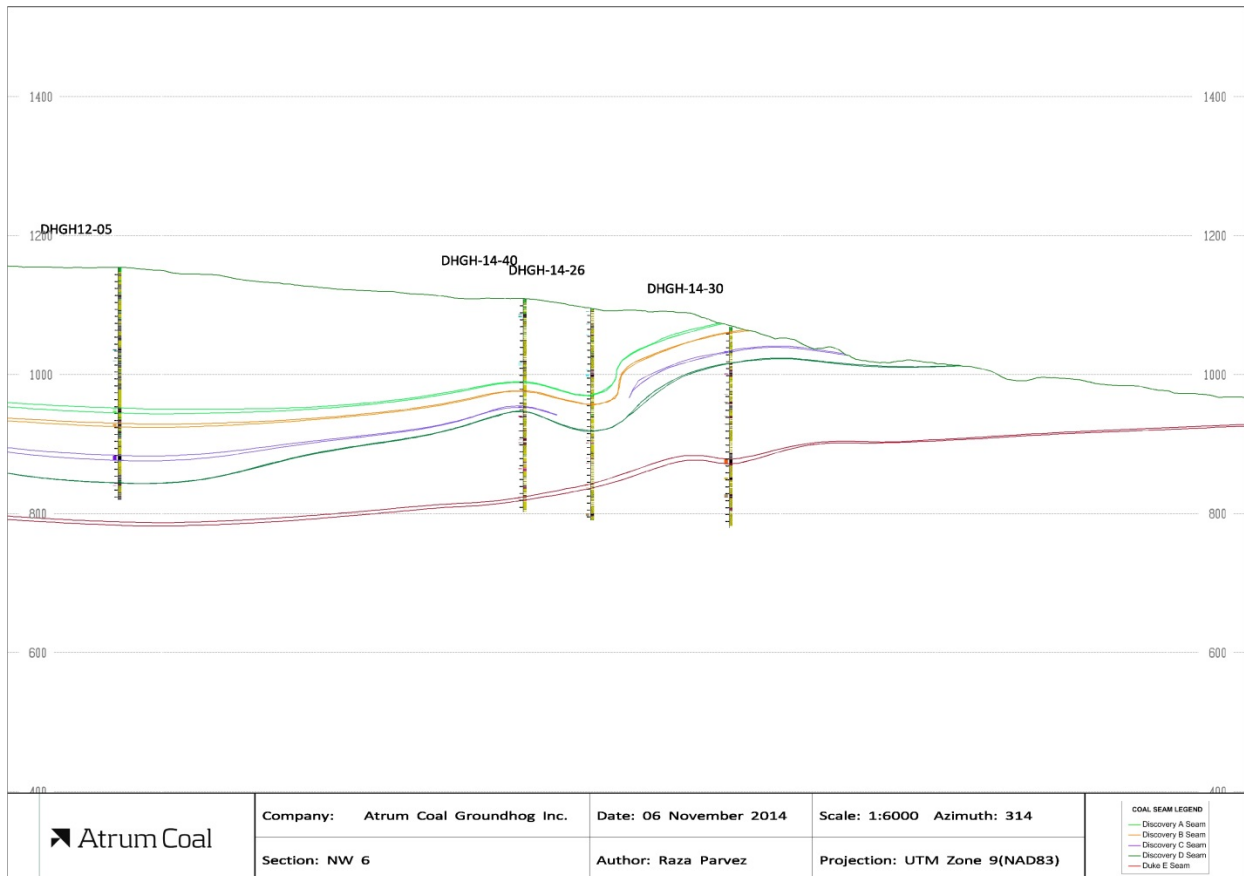


Figure 20. NW6 Section face northwest through the Bulk Sample Area illustrating seam depths and structure.

DHGH-14-40

DHGH-14-40 has a complicated structure near the top of the drillhole. Correlations on the Davis B to the Davis D package are less confident. Davis A was not intersected. There is increased interburden between the Davis C seam and the Davis D seam due to high angle bedding and a thick channel sand. There are no dipmeter data, adding to these uncertainties. The typical sedimentary sequence from Marker 1 to Marker 2 is contained within the drillhole. The Discovery E seam repeats itself three times as a result of the overturned S-fold from 170-213 m. Marker 2 also repeats in the S-fold. The S-fold explains the increased thickness between Marker 1 and Marker 2. A possible significant fault zone is present at 210 m. Lower in the stratigraphy, the typical sequence from the Duke A to the Duke E seam is present. The Duke F, Duke G, and Duke H seams do not occur as the drillhole does not reach deep enough.

DHGH-14-26

Steep beds are present near the top of the drillhole from 5-32 m, which may represent an overturned fold. Yet there is insufficient data to justify including a fold at this point in the model. DHGH-14-26 contains Davis A to Davis D, but less interburden exists between Davis B and Davis C. The seams may be depositionally converging towards each other.

Multiple overturns occur from 60-100 m depth. Evidence for this S-fold comes from triple intersection of Davis D in the core as it is overturned and subsequently turned upright again. Sufficient evidence, including dipmeter, core photos, interburden variance, prove the continued propagation of the S-fold and explain the missing coal seams of the lithological package between Marker 1 and Marker 2.

There are three coal seams between Marker 1 and Marker 2, with approximately 30 m less rock than expected in the stratigraphic package. The coal seams were characterized by spatial relevance to both markers, in addition to geophysical log signatures. The Discovery B seam retained its consistently low gamma and density signatures. The Discovery A seam conclusively must be above the Discovery B seam. The Discovery E seam rests just above Marker 2. The Discovery C and Discovery D seams make no occurrence and are assumed to pinch out in DHGH-14-26, and appear again the southwest and northeast. Below Marker 2 the stratigraphy is consistent; however, the Duke E seam is very thin compared to its standard thickness. The seam likely split into two and thinned out. The drillholes proximal to DHGH-14-26 have better Duke E intersections. The Duke G and Duke H seams occur as expected.

DHGH-14-30

The entire stratigraphic package from the Discovery B to the Duke H seam is preserved. There is a dramatic increase in the interburden between the Duke D and Duke E seams. The dipmeter data at the top of the drillhole appear complex but the photos prove otherwise. No dipmeter data are available below Duke E, making deeper correlations difficult. The Discovery C and Discovery D seams pinch out somewhere in between DHGH-14-30 and DHGH-14-26. Upright flame structures confidently reside at 159 m, indicating upright strata.

NW5 Cross-Section

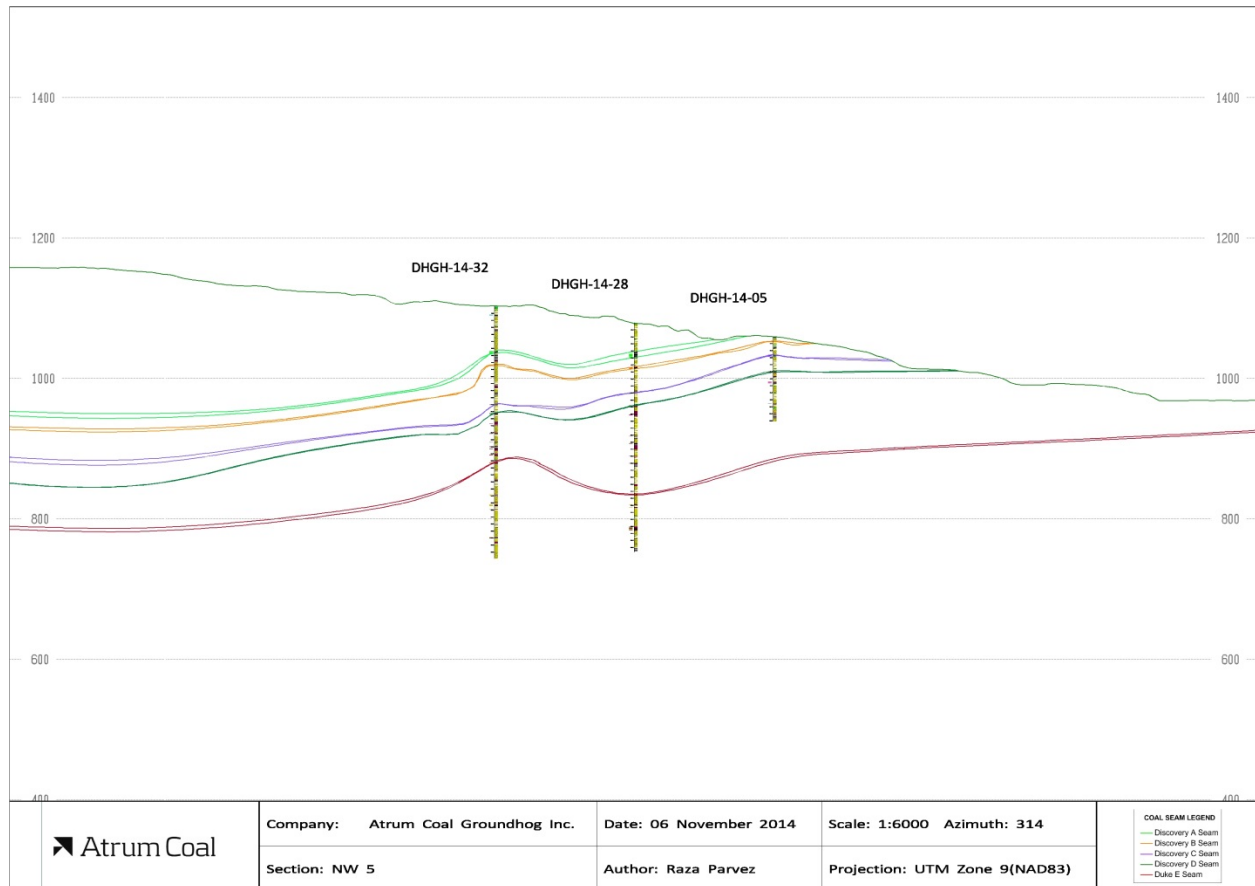


Figure 21. NW5 Section facing northwest of the regional Northwest Area illustrating coal seam interburden and depths.

DHGH-14-32

The downhole geology in DHGH-14-32 is extremely complex, and the usual marker horizons are difficult to interpret. The top of the drillhole does not correlate well with DHGH-14-28 as there is a relatively large separation between the two drillholes. Parts of DHGH-14-32 correlate with DHGH-14-40 but uncertainties remain. Above the presumed Marker 1, bedding is very steep and faulted. The typical strata above Marker 1 are not preserved, and the only confident seam intersection is the Davis C seam

Below Marker 1, the Discovery A seam resides in its usual place, following which the interburden increases dramatically above the Discovery B seam. At this depth of 85-110 m, there are five fold hinges visible in photos and the pattern is recognized in the dipmeter. These structures represent the repetition of multiple overturned folds on a small scale. The last fold hinge of the series appears to be faulted (sinistral) causing the Discovery A seam to repeat itself twice more, once overturned and once upright, very tightly in the sequence. The Discovery B seam, identified by its clean gamma signature, the Discovery E seam is present. The lower bivalve horizon is not intersected in its usual lithology and the boundaries of Marker 2 are less confident.

The lower stratigraphic package is structurally complex and more data are required to present a full interpretation of the structural controls at depth. Below Marker 2, the seams between and including Duke A and Duke H are present, with variations in the interburden arising due to steepening of bedding angles and faulting. The Duke E seam does not hold its usual characteristics, but was chosen based on its location in the package. There is significant faulting visible at 270 m depth. Alternatively, the Duke A to Duke C seams may be repeated due to folding, and the Duke E and subsequent seams may occur further downhole.

DHGH-14-28

DHGH-14-28 correlates well with DHGH-14-05 and DHGH-14-30. The structure at the top of DHGH-14-28 is complex, with several faults recorded above Marker 1. No coal seams are present above this marker. A possible S-fold causes the Discovery B seam to repeat and fold over on itself in the core. This accounts for the Discovery B seam's increase in thickness at 65 m, where the nose of the lower fold coincides with the seam. Below Marker 1, the Discovery A to Discovery E seams are intersected. The typical strata are found from the Discovery C seam downhole through to the Duke H seam, which are photo verified to correlate well. The Duke E seam here is very thin. Strata are upright based on high confidence upright flame structures found at 213 m.

DHGH-14-05

DHGH-14-05 retains a consistent stratigraphic package from the Discovery B seam to the Duke B seam. The interburden between the Discovery B and Discovery C coal seams has lessened, but is not explained as there is no dipmeter for DHGH-14-05.

Overtured Folds

NW8 Cross-Section Southwest Segment

Figure 19 of the NW8-section from DHGH-14-08 southwest to DHGH-14-11 best conveys overtured folding (Figure 19). The upper stratigraphic package is seen to continue across the drillholes of the main Bulk Sample Area traverse NW8. Eastward from DHGH-14-24, drillhole DHGH-14-08 displays the package with little change in interburden between coal seams from the Davis D seam through to the base of Marker 2. To the southwest along section, the package is relatively complete. From DHGH-14-08 towards the southwest, the package continues through to DHGH-14-10 with a slight increase in westward dip. The Discovery E seam, however, has no trace in the core. The loss of Discovery E may be due to its pinching out or from shearing above Marker 2. There is an apparent increase in thickness of units between the Discovery A and Discovery B seams; this is attributed to an increase in the bedding angle as evident in the dipmeter. Continuing southwest along the section, the package is subjected to structural controls resulting in multiple folds producing an S-fold. The topmost limb of the S-fold has a moderate dip towards the southwest, the overtured middle limb dips steeply eastward, and the deepest limb has a shallow dip again in the southwest direction. The S-fold becomes clearly definable in DHGH-14-09 between the Discovery B and Discovery D seams. The upper fold hinge is visible in core photos and dipmeter. The fold hinge is visible in DHGH-14-09 with a shallow dipping upper limb overlying a steeply dipping overtured limb (Figure 22). The sedimentary units between the two coal

seams are overturned and subsequently turned upright again. Confirmation for the upper bend of the S-fold is visible in core photos, and bedding can be seen to be overturned in the dipmeter. The dipmeter conveys a low-angle, southwest dipping limb subsequently over a steeply dipping east limb. The lower bend is less obvious in core, and its trace is inferred from the dipmeter where stratigraphy is folded back upright. At this point in DHGH-14-09, the Discovery C seam appears to pinch out, either depositionally or as a result of minor faulting coinciding with the lower fold axis. The folding is further explained by the drastic increase in interburden between the Discovery B and Discovery D seams, as the sedimentary units are repeating themselves and the noses of the fold result in vertical thickening. DHGH-14-10 and DHGH-14-09 convey areas of faulting above Marker 2 in core photos and lithological logs, which may account for the intermittent loss of the Discovery E seam in DHGH-14-10 and the loss of Discovery C seam westward.

In DHGH-14-12, a substantial section of the package is overturning on itself. As there is no dipmeter for DHGH-14-12, fold data were reliant on core photos and lithology signatures. The shallower fold nose can be traced in the Discovery A coal seam, causing its significant increase in thickness compared to the rest of the seam along section. Other indications for overturned bedding come from the reoccurrence of bivalve horizons and Marker 1, which repeat three times downhole as a result of the S-fold bending the strata. The steep bedding of the middle, eastward-dipping limb accounts for the thickening of Marker 1. The Davis D seam appears once in the package because it folds just west of the drillhole. In DHGH-14-12, the package does not contain the Discovery B seam as drilling was just shy of reaching this depth. The seam, however, is presumed to continue just below the drillhole and arises again in DHGH-14-11. The S-fold further propagates through DHGH-14-11, where the fold hinges are tighter. The upper fold hinge is evident in dipmeter and visible in photos (Figure 23). Above Marker 1, the bivalve horizon is no longer visible. The fold axes of have moved relatively upward in the package, affecting the Davis C coal seam as it is seen in core three times, bending back on itself. The shallower hinge is visible in photos in the sandstone and siltstone unit below the first presence of the Davis C seam. The deeper portion of the S-fold is not recognizable in photos due to faulting and broken core. The placement of the lower hinge is inferred from the dipmeter. Below these overturned folds, the complete upper stratigraphic package is present, with the exception of the Discovery C seam. The package conveys similar interburden thicknesses as seen in DHGH-14-24. Marker 2 is largely undisturbed from the above S-folding, but is found deeper westward.

The extent of overturned folding is further constrained in the orthogonal direction to the NW8 section. Northwest of drillhole DHGH-14-09, two overturned folds forming the S-fold are well developed, as in DHGH-14-26. The sequence of the Davis C seam to Marker 1 appears three times in core, once overturned. Marker 1 represents a fold nose where it is doubling in thickness due to this folding. In the overturned limb, the interburden between Marker 1 and the Davis C seam has increased due to the steep bedding dip, seen in core photos and dipmeter. The same S-fold limb pattern carries through this drillhole with a shallow, southwest dipping top limb, steep eastward dipping limb, and a bottom limb that has a shallow dip towards the southwest. The up-hole segment of the S-fold is broad, while the deeper segment is tighter. The Discovery B seam only repeats itself twice as it pinches out in the middle

limb. Below the S-fold, the complete stratigraphic package is encompassed by DHGH-14-26. However, as in DHGH-14-09, the Discovery C seam is not present and appears to pinch out.

DHGH-14-34 is positioned to the southeast of DHGH-14-09, where it is relatively unaffected by structure. For the most part its bedding is uniformly dipping to the west at a shallow angle. Between DHGH-14-09 and DHGH-14-34 the Discovery C seam is present and the Discovery D seam appears to pinch out. DHGH-14-34 contains the portion of the stratigraphic package beginning from Marker 1 through to Marker 2, less the Discovery D seam. Remnant crinkle folding, as identified through the dipmeter, arises between the Discovery C seam and the Discovery E seam, resulting in an increase in the interburden thickness between these two coal seams.

From the sections and supporting data, it has been determined that the shallower portion of the S-fold is a broad open-fold that opens eastward. Its fold axis is plunging towards the east. The lower bend of the S-fold opens towards the southwest, and it is more tightly closed with common faulting occurring along the fold axis with a roughly horizontal plunge. Above and below the S-fold, the strata are relatively uniform between drillholes, and the fold levels out towards the east.



Figure 22. Core photo of DHGH-14-09 with visible fold hinge. Shallow dipping bedding of the upper limb is overlaying the steeply dipping overturned limb.



Figure 23. Core photo of DHGH-14-11 with hinge visible in core effectively overturning strata over a short distance. The Davis C seam is situated above the fold hinge.

Recumbent Fold

NW8 Cross-Section Northeast Segment

The northeast segment of NW 8 from DHGH-14-07 to DHGH-14-02 best displays the recumbent fold affecting strata (Figure 19). Marker 2 and the bivalves associated with it are the main horizons used for the correlation of this complex structure. Photos, dipmeter, and lithological core logs were also used to verify overturned units and to correlate continuous coal seams throughout the folding. Although the complex structure increases the uncertainty of NW8 for expecting tight recumbent folds, the stratigraphic package holds up and coal seams are interpreted to be quite continuous across the Bulk Sample Area. The Discovery E seam, for example, is overturned at the axis of the recumbent fold and occurs in each borehole where expected, and it continues eastward away from the recumbent fold.

The vertical bedding in DHGH-14-07 marks the known southwesterly propagation of the recumbent fold. It is responsible for the large changes in interburden between coal seams at the bottom of drillholes DHGH-14-07 and DHGH-14-05. The nose of the recumbent fold is identified in DHGH-14-06 and DHGH-14-23 by the repetition of bivalve horizons and mirrored lithologies, with supporting evidence for overturned bedding from dipmeter. In DHGH-14-01 the fold hinge becomes very tight and

near isoclinal. The Discovery E seam is nearly folded back on itself with the fold hinge visible in photos in between. The recumbent fold appears to be short-lived affecting a small area, and bedding is conformable in the northeastern drillhole DHGH-14-02.

Remarks on Marker 2

Marker 2 is a consistent marker horizon across the Bulk Sample Area, with only minor variations in few locations. The northeastern segment of NW8 is the only part of the Bulk Sample Area that Marker 2 has been interpreted to be overturned. It is overturned in DHGH-14-23 with high certainty and confidence using core photos, dipmeter, knowledge about the property's complex structure, and an increasing understanding for the stratigraphic package in the Bulk Sample Area. The drillholes adjacent to DHGH-14-23 have anomalies that, until detailed structural analysis was completed, were unsolved, where any solutions that were made suggested seams that were very localized, that is, lenticular coal lenses. In the early stages of 2014 correlation, seams were hypothesized to be lenticular and primarily controlled by depositional environment rather than dominantly controlled by structure. This has since been proven to be incorrect. Only minor coal seams pinch out and large folds occurring in the subsurface are common and readily documented with dipmeter and core photos.

Surface Structures

The subsurface geology of the Bulk Sample Area is more complex than originally believed. The various overturned and recumbent folds occur over relatively short distances. The seams across the Bulk Sample Area are highly affected by structure resulting in folding of seams up to multiple times in places to produce S-folding. The structures in the Bulk Sample Area were noted to have a northwesterly trend. This style of folding, however, is not solely contained within the Bulk Sample Area. Complex folding styles are known to be present throughout the Groundhog Property in outcrop. Figure 24 shows the style of overturned folds seen at the surface. The photo shows multiple overturned folds, which can be compared to the documented S-fold that propagates within the Bulk Sample Area. The visible vertical bedding and tight fold hinges resemble what has been encountered in core and add to the understanding of the complexities of the area. As seen in drillcore, the degree of folding is prevalent in coal, mudstone, and siltstone. These lithologies are more prone to being folded as they have low strength competency. Conversely, the competent, massive sandstones are more resistant to forces and less likely to be folded. Figure 25 shows this idea of selective folding. The behaviour of regional structures at the surface must be remembered when interpreting subsurface structures. Recumbent folds are also found throughout the Groundhog property. Figure 26 displays two examples of recumbent folding exposed at the surface. Along with the data provided in core photos, dipmeter, and geophysical logs, which point to a recumbent fold occurring within the Bulk Sample Area. A similar structure is evident in outcrop of the regional Groundhog Property, shown in Figure 27.

Despite complex deformational structures, coal seams were found to be reasonably continuous, rather than lenticular, and correlate well to each other. The idea of seam continuity across large areas is also evident in outcrop over the regional area of the Groundhog Property.



Figure 28. Looking on to a portion of the Groundhog property in which bedding is relatively flat lying. The photo shows strata within a larger synform with a moderately steady bedding angle undisturbed by complex structure. shows an expanse unaffected by complex structures in which the bedding angle is shallow over a large area, within a larger synform. Areas of lateral continuity appear to be marked by local areas of complexity.



Figure 24. Photo of multiple overturned folds in outcrop of the Groundhog Property. Strata are seen to be effectively overturned multiple times in one locale. Tight hinges and vertical limbs, similar to those seen in core, are evident.



Figure 25. Photo from the Groundhog Property displaying two overturned folds, with flat-lying lithologies above and below. This selective folding style in outcrop resembles that identified in the subsurface of the Bulk Sample Area. Less competent lithologies are selectively folded whereas lithologies with a greater degree of competency, such as massive sandstones, are more resistant to folding.

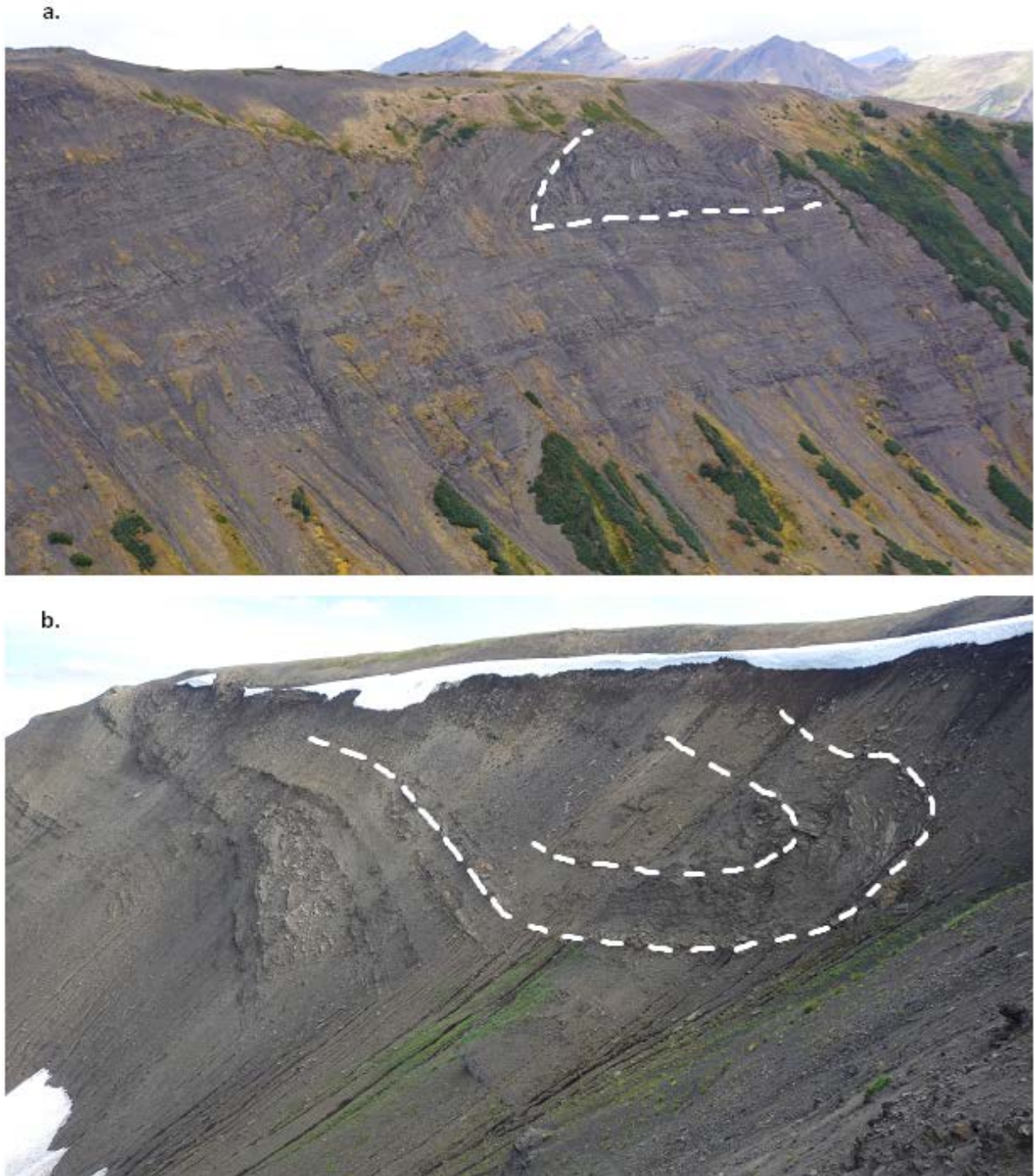


Figure 26. Two examples of recumbent folding at the surface in the regional Groundhog Property. (a) The upper photo displays a Chevron fold with a tight hinge. (b) The latter photo depicts a recumbent similar to that of the recumbent fold as described in the Bulk Sample Area.



Figure 27. Photo of an overturned fold outcropping in the Groundhog property. This fold resembles the recumbent fold that is identified and described in the subsurface of the Bulk Sample Area.



Figure 28. Looking on to a portion of the Groundhog property in which bedding is relatively flat lying. The photo shows strata within a larger synform with a moderately steady bedding angle undisturbed by complex structure.

Recommendations for the Bulk Sample Area Correlation

To fully develop a complete understanding of the subsurface geology and spatial distribution of coal seams in the Bulk Sample Area, more drillholes would be required. This is especially true for the northwest, specifically along sections NW5 and NW6, and the southeast sections of the Bulk Sample Area. Understanding the regional geology of the Groundhog property will also aid in the comprehension of the structural controls on the local scale. When consulting outcrop photos of the regional Groundhog property, it is easy to discern that there are several structural controls affecting the area, which must be taken in to account when considering subsurface reconstructions.

Regional Sections

Following the regional correlation, sections were produced from the MineSight subsurface geological model. The sections presented best encompass the present drillholes and convey the large propagation of the coal seams throughout the various regional areas of the Groundhog Property. Figure 1 shows the location of the regional sections provided in this report in plan view. Figure 30 to Figure 37 are sections taken from the model, facing northwest, which show the coal seams of the stratigraphic package throughout the Northwest and Southeast Regional Areas. Northeast facing sections NE1 and NE2 are given, which show a larger view of the subsurface for the Northwest and Southeast regional areas (Figure 38), and the Skeena East regional area (Figure 39), respectively. Sections are presented with discussions for each individual drillhole correlation.

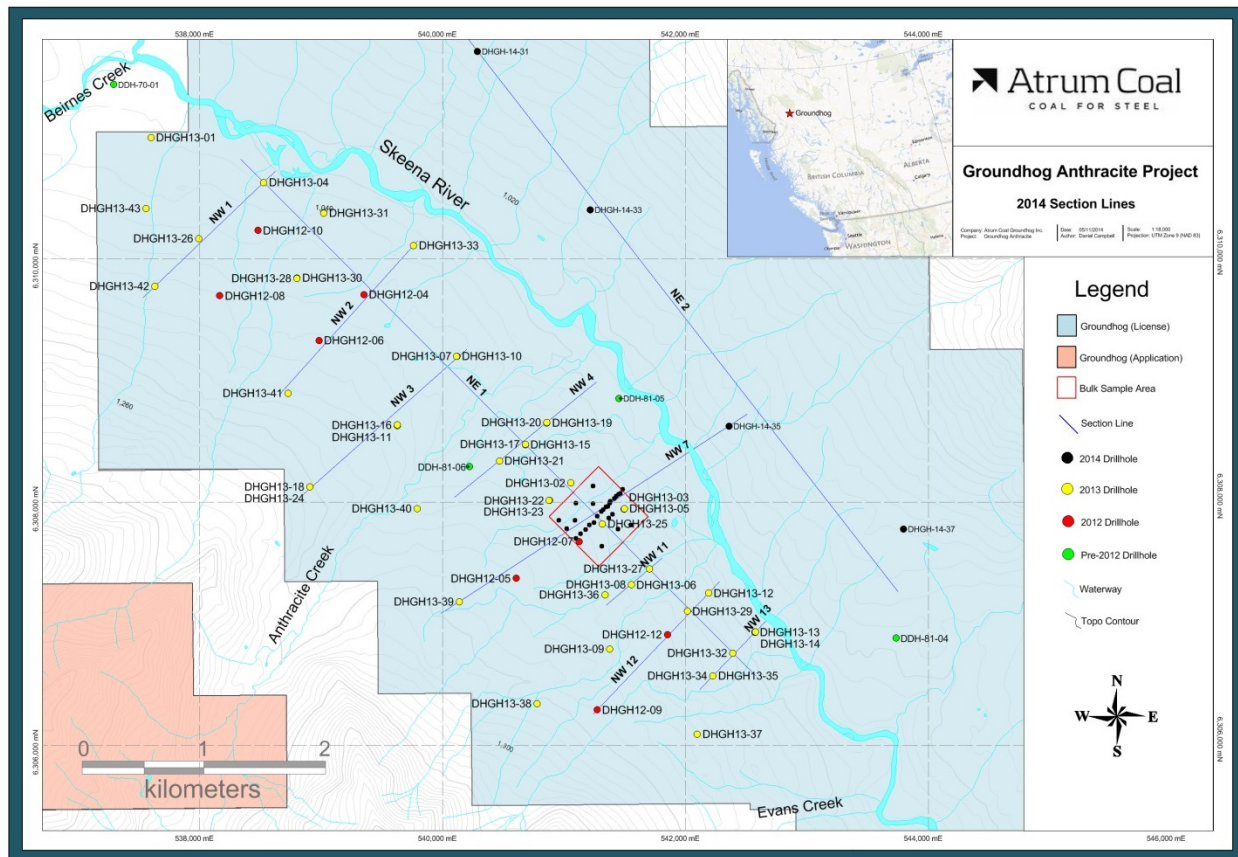


Figure 29. Plan view map of the Groundhog Property showing the corresponding regional sections

Northwest Regional Area

NW1 Section

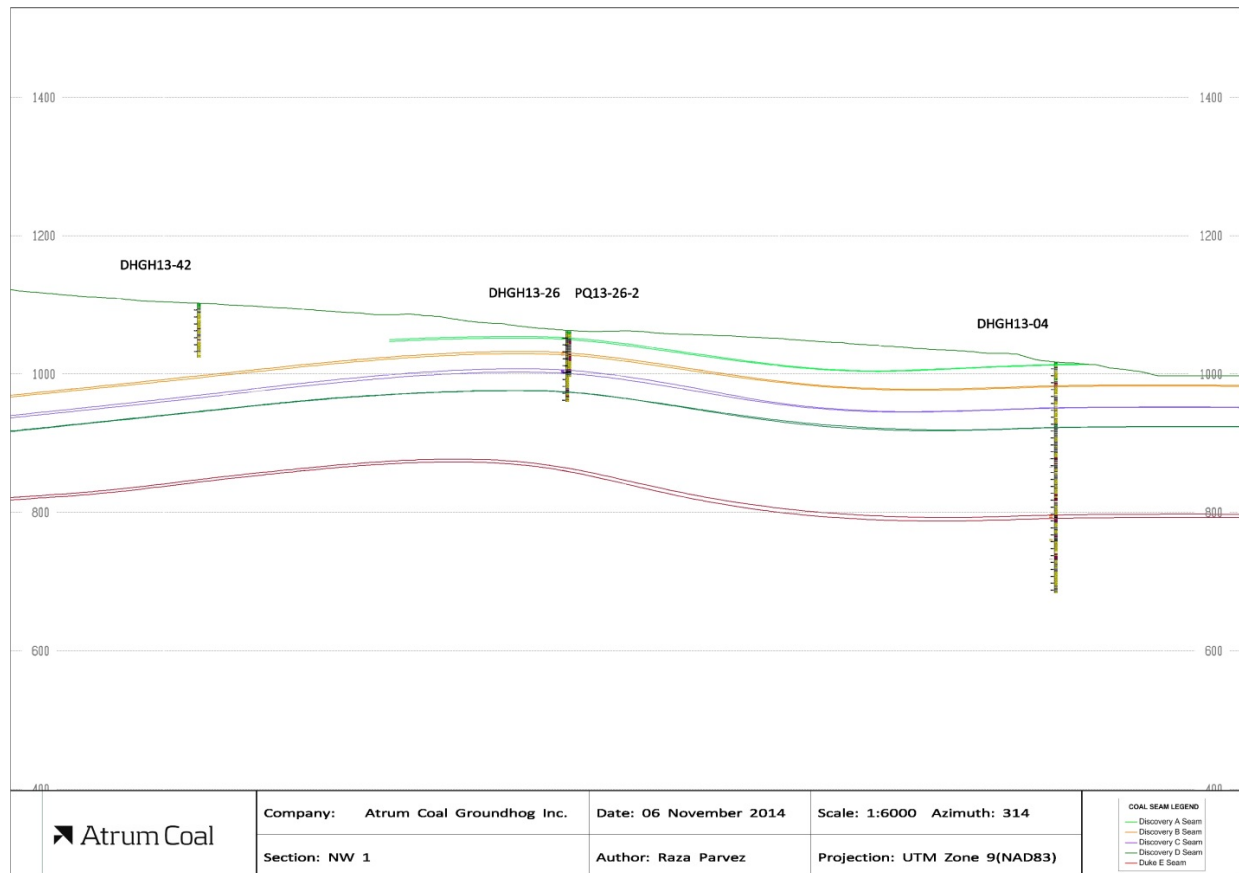


Figure 30. NW1 Section facing northwest of the regional Northwest Regional Area illustrating coal seam interburden and depths.

DHGH-13-42

DHGH-13-42 is shallow drillhole at 70m depth; as such, there are not a lot of data for correlation and correlations have low confidence. Marker 2 may be present at the top of the drillhole. Below the basal bivalve horizon of Marker 2, resides a sandstone with irregularly interbedded to interlaminated siltstone and basal siltstone clasts which is sharply contacted with mudstone to siltstone. The mudstone grades to another sandstone unit with irregular siltstone laminations, which increases in siltstone content to well developed, irregularly interbedded sandstone and siltstone. At its base, this unit contains a bivalve horizon above a sharp contact with mudstone below. Bivalves are only visible in the sandstone. This bivalve horizon and lithology succession associated below Marker 2 correlates with DHGH-13-41. The Duke A to Duke D package is intersected as a small carbonaceous mudstone package. This may be a sign of the Duke A to Duke D depositionally pinching out. DHGH-13-42 is presumed to be short of the Duke E and subsequent seams. Above Marker 2, the Discovery E seam is assumed to be eroded away.

DHGH-13-26

DHGH-13-26 is a shallow, 100 m drillhole. Without distinct marker horizons, confidence regarding where lithologies are in reference to the sequence is low. Discovery A to Discovery D is intersected, where seam picks were heavily based on the best fit from the model output.

DHGH-13-04

There are no folds are visible in the photos and the bedding is consistent throughout. Correlations associated with DHGH-13-04 are less confident and seam naming will be dependent on best fits produced from the model. Marker 1 is intersected 14-24 m below surface, with coal seams above presumably eroded away. Below Marker 2 the typical Discovery B to Discovery E sequence is present, less the Discovery A seam. The interburden between Marker 1 and Discovery B is thinner than expected; this may be due to the faulting present below Marker 1. The Discovery A seam may have pinched out or may also be absent due to the faulting. Marker 2 is intersected at 110-122 m depth. The basal siltstone of the marker has apparent vertical thickening due to a steepening of the bedding. The Duke A seam is not present, but the stratigraphic package from the Duke B seam to the Duke H seam is present with typical interburden thicknesses.

NW2 Section

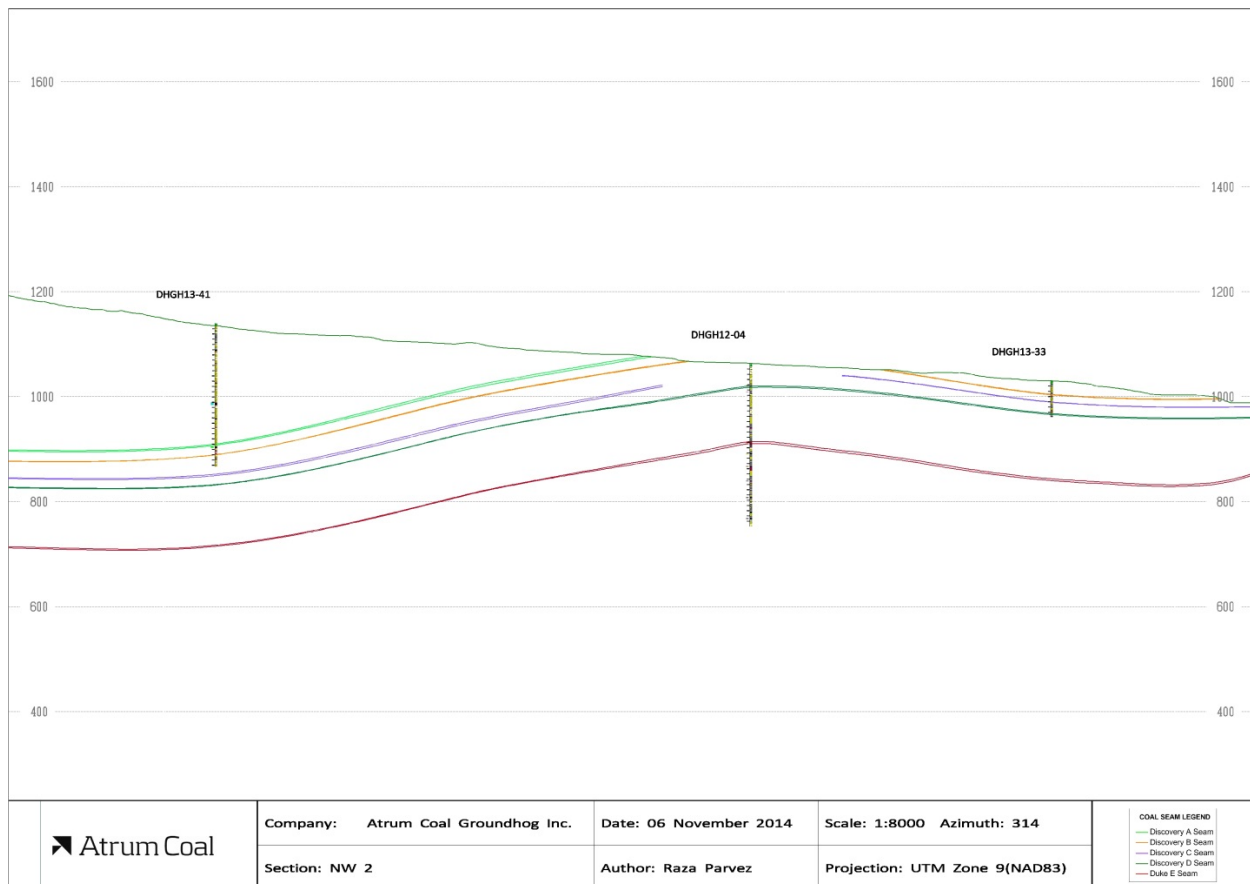


Figure 31. NW2 Section facing northwest of the regional Northwest Area illustrating seam depths, interburden, and the behavior of coal seams pinching out depositionally.

DHGH-13-41

The Discovery Horizon is interpreted to occur substantially deeper than the original drillhole correlation. Marker 1 is intersected at 230 m with the Discovery A and Discovery B seams below. The previous correlation involved no Marker 1 or Marker 2 and several unexpected bivalve horizons appeared between Discovery E and Duke E. The current interpretation correlates well with DHGH-13-11 and DHGH-13-38. Due to the strata occurring deeper down hole, there are several unnamed and uncorrelated seams above Marker 1.

DHGH-12-06

DHGH-12-06 is difficult to correlate due to the drillhole spacing in the northwest region. It occurs just off section from NW2. From 135-105 m the drillhole is structurally complex at depth, with various faults and folds. An overturned fold is identified at 157 m depth. The fold hinge is visible in photos and the lithologies above and below the fold correlate well; however, there is no orientation of the fold due to the lack of dipmeter. Two S-folds are present between 225 and 235 m depth, with all hinges visible in photos. Bedding varies greatly over short distances, with 10 m of vertical bedding in places (190-200 m depth). Possibly upright flame structures are present 253 m. A possible overturned or crinkle fold is visible at 280 m. With no dipmeter data the structural analyses and correlation of seams in DHGH-12-06 is very difficult. There is low confidence about the Discovery Horizon in this drillhole. The current interpretation does fit the model; however, there are other possibilities that could fit the drillhole. The Duke A to Duke D package contains more coal than what is typically expected. The Duke E seam is intersected yet thinner than usual.

DHGH-12-04

DHGH-12-04 is structurally complex throughout. A vertical undulating fault is intersected at 78 m depth. The lack of dip meter data makes correlating seams and identifying folds difficult. Following a short interval of steep bedding, an overturned fold hinge is visible in photos. The lithology does not mirror well on either side of the hinge; another fold may be present making an S-fold, between 110-105 m. Possible upright flame structures exist at 185m above a possible overturn or S-fold. An S-/Z-fold is visible at 245-246 m in photo, but its orientation cannot be determined. Flame structures with low confidence may also be visible at 267m and 300m.

The Discovery Horizon is slightly thicker than expected, but this is likely a result of the folding that thickens the sequence throughout the drillhole. Marker 2 may be intersected but occurs as a thicker sandstone than expected. The typical bivalves associated with Marker 2 do occur. This is a low confidence correlation because there are no strong marker horizons to base interpretations off of.

DHGH-13-33

Due to its shallow depth and subsequent lack of data, DHGH-13-33 was correlated after the model output was produced. The coal seams Discovery B and Discovery C were identified based on the best fit scenario produced by the model, which was then affirmed by geophysical logs and core photos.

NW3 Section

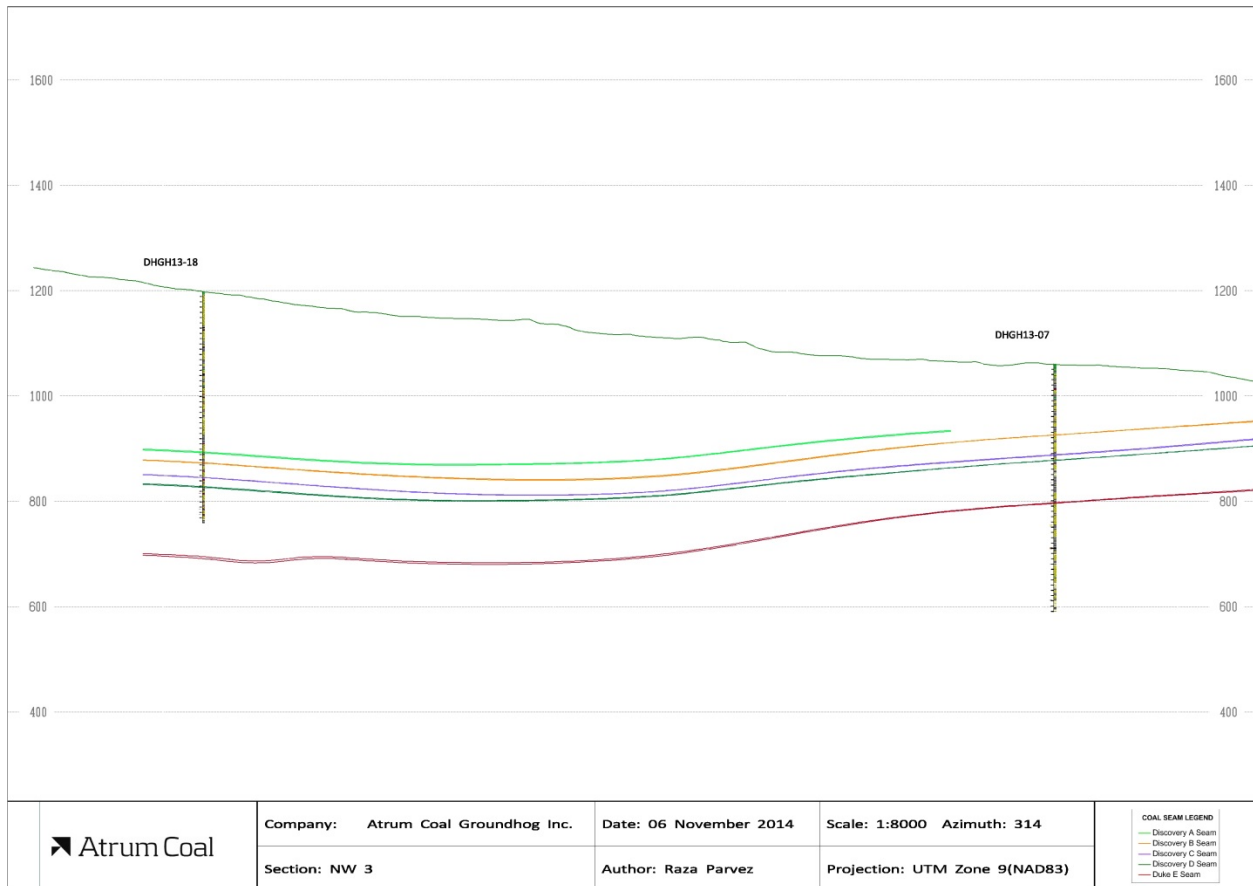


Figure 32. NW3 Section facing northwest of the regional Northwest Regional Area illustrating seam depths and interburden relationships.

DHGH-13-18 (Vertical) and DHGH-13-24 (Inclined)

Complex structure is evident throughout DHGH-13-18. The lack of dipmeter makes structural interpretation difficult. Vertical bedding is seen at 19 m and 26-43 m indicating a possible open or kink fold hinge. From 45-105 m bedding is conformable ranging from 10-30°. Vertical bedding is again present at 111 m and is interpreted to be a part of a kink fold due to the lack of mirroring lithologies above and below. Bedding is conformable at a low angle from 184-225 m. A possible S-fold is present at 235-270 m interpreted with a low level of confidence based on fold hinges and lithologies in core photos.

There remains no strong correlation above 290 m depth. 290-400 m however, is confidently correlated as part of the Discovery Horizon. Marker 1 and Marker 2 occur as expected. The package is deep but this is expected as the drillhole collar is high in elevation.

DHGH-13-11 (Vertical) and DHGH-13-16 (Inclined)

DHGH-13-11 occurs just off section of NW3. The correlation of DHGH-13-11 with DHGH-13-18 is confident, with minor dissimilarities. The Discovery Horizon down to the Discovery E seam is present. A

substantial amount of coal exists well above the Discovery Horizon. Possible additional markers occur above the discovery zone. Further research is required for upper package correlations.

DHGH-13-07 (Vertical) and DHGH-13-10 (Inclined)

The lower portion of DHGH-13-07 has a confident correlation, from the Duke A seam to the Trail D seam. Interburden and geophysical signatures occur as expected. Marker 2 is different than its usual form, but it continues to occur in the proper location and remains with its associated bivalves. Above Marker 2, there is low confidence as to the Marker 1 to Marker 2 package. Marker 1 is not documented in the drillhole. The Discovery E and Discovery D seams appear to occur as expected. The Discovery C seam thins out and could possibly be the Discovery B seam, above which lithologies are not correlateable with other coal seams on the property. Only minor coal is present. The flame structures visible at 435 m indicate upright strata at this depth. The structure at the top of the drillhole is complex and possible may occur at 49 m with overturned flames structures visible above at 29 m. There are no intersected coal seams in DHGH-13-10 that can be correlated.

NW4 Section

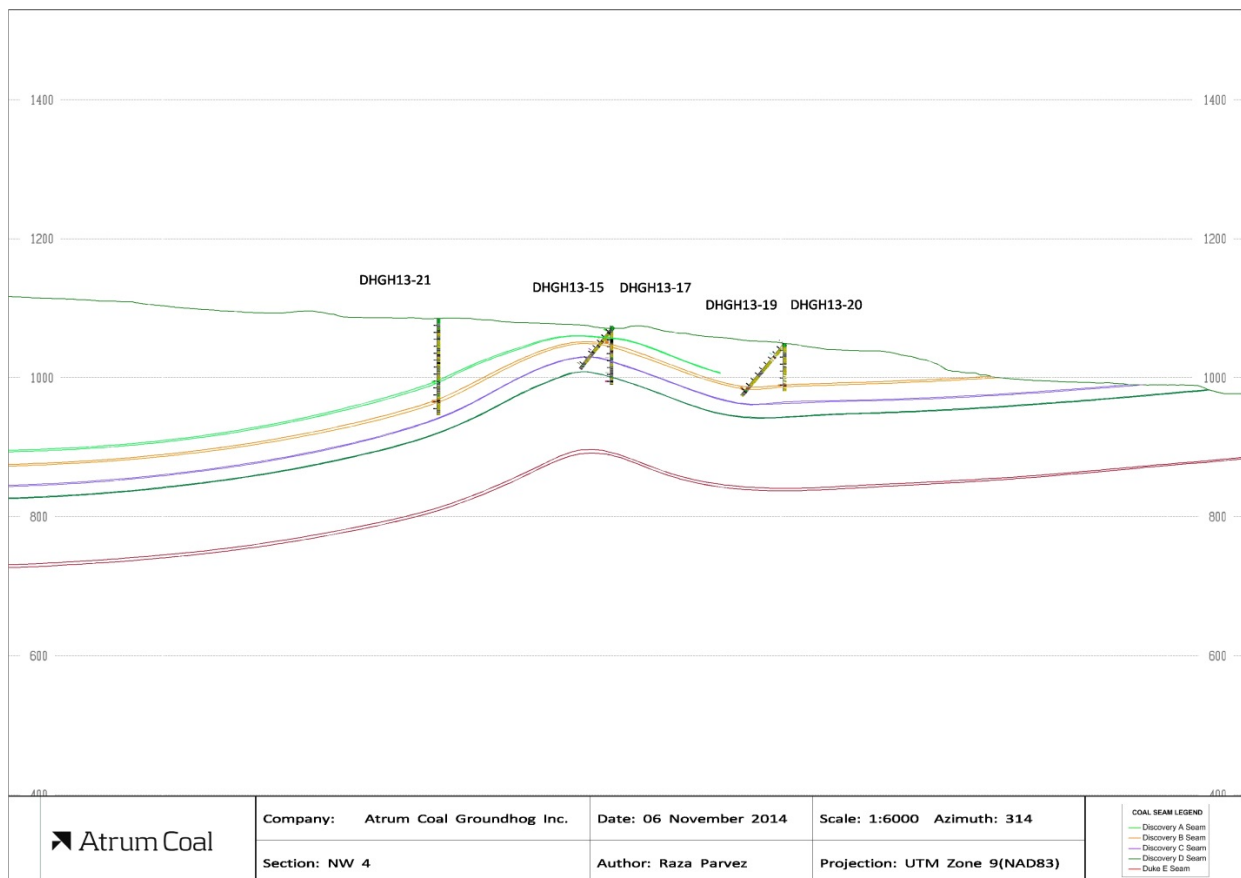


Figure 33. NW4 Section facing northwest of the regional Northwest Regional Area illustrating the propagation of seams and the interburden relationships.

DHGH-13-21

DHGH-13-21 displays complex structure, proving it to be difficult to interpret with the limitations of the current data. From the top of drillhole to 29 m, stratigraphy appears relatively flat to low angled and conformable. A possible fold hinge is intersected, as seen in photos at 34 m, in massive sandstone. This is interpreted with low confidence based on core photos and lithologies that mirror over a short distance (6 m) on either side of the potential hinge. An increase in brittle deformation is seen from 65-121 m, with common broken, faulted, and sheared core. A minor crinkle folding is seen at 105 m. There are no stratigraphic markers or identifiable coal seams that have yet been correlated with confidence between this drillhole and others.

DHGH-13-15 (Vertical)

No established marker horizons were available for correlation in DHGH-13-15. Correlation was based on the package between Discovery A and Discovery E seam and corresponding geophysical signatures. As such, the correlation confidence is low. With the Discovery E and Discovery D seams occurring, the Discovery C seam could be either coal seam above at 35 m or 45 m. The 45 m seam is currently interpreted as the Discovery C seam as it has a clean gamma signature and preserves the interburden between the Discovery C and Discovery D seams. The Discovery B seam is substantially thicker than usual, possibly due to structure, but likely its increased thickness is depositionally controlled locally. The coal band between the Discovery B and Discovery C seams, at 35 m depth, is left unnamed and is possibly a local depositional feature. The Discovery A seam is possibly present at the top of the drillhole but there are not enough recovery or quality geophysical logs to confirm. The bottom of the drillhole is faulted and complex structures are evident.

DHGH-13-17 (Inclined)

DHGH-13-17 is the twinned hole of DHGH-13-15. The Discovery A through to the Discovery D seams occur as expected. There is no sign of Marker 1 above the Discovery A seam; however, there are a few meters of siltstone above Discovery A before the top of the drillhole at which point there is no recovery. Often there are a few metres of siltstone between the Marker 1 and the Discovery A seam, which does occur in this drillhole. The Discovery B seam is smaller in DHGH-13-17 than expected and compared to its vertical drillhole equivalent DHGH-13-15. Bedding becomes vertical directly above the seam and the seam may represent a fold nose but there are not enough data to support this hypothesis.

DHGH-13-19 (Vertical) and DHGH-13-20 (Inclined)

The Discovery B coal seam was found in both DHGH-13-19 and its twinned drillhole DHGH-13-20. Because these drillholes were shallow, the seams were chosen based on the appended correlation with the model after an output was produced, which was then verified by geophysical logs and core photos.

Individual Drillholes***DHGH-13-01***

A fold hinge of an overturned fold is visible at 232 m depth. The lithologies, e.g. coal and conglomerate, are mirrored above and below the hinge for 70 m on either side. Above which, several folds may be present, and steep bedding is evident. The orientation of the fold is unknown due to the

lack of dipmeter data. Confident upright flame structures reside at 134 m and possible overturned flame structures are present at 307 m. It is difficult to correlate seams with other drillholes due to the lack of markers within the drillhole, as well as the proximity of other drillholes. The top and bottom of the drillhole become structurally complex with faulting and steep bedding. The coal seams present do resemble those of the Davis, Discovery, and Duke Horizons. The sequence from Davis A to Duke F has been retained and is included in the model. The presence of conglomerate is rare; it is possible that DHGH-13-01 intersects the stratigraphic sequence higher up, or the presence of conglomerate is due to facies changes. There is not enough data to comment any further.

DHGH-13-43

With a depth 50 m, DHGH-13-43 has too narrow of a scope of the package to be correlated with other drillholes. There are no dipmeter data associated with the drillhole. Significant faulting occurs down to 25 m depth including vertical undulatory discrete faulting. There is a single, uncorrelated coal seam with several carbonaceous mudstone partings 42-45 m.

DHGH-12-10

DHGH-12-10 correlates well with DHGH-13-04 directly to the north. The correlation for DHGH-12-10 is less confident; however, the package does occur as expected. Seam naming will be dependent on the model output. DHGH-12-10 contains the typical stratigraphic package from the Davis C seam to the Duke E seam; however, the Discovery D seam has pinched out. The Discovery A seam is again present directly below Marker 1. The Discovery E seam consists of several coal bands with partings. The Duke A seam, which is usually a small band below Marker 2 is absent and presumably has positionally pinched out. Thickening between the Duke D seam and the Duke E seam is likely due to the complex structure separating the two, with possible folding increasing vertical thickness. Below Duke E, bedding becomes vertical and highly faulted. The drillhole was short of reaching the Duke G seam.

DHGH-12-08

There is a relative lack of structure throughout DHGH-12-08 and a consistent bedding angle of 20°. Significant fault zones occur at 70-75 m and 150-155 m, with the latter including 2 subvertical, undulatory faults. Because no concrete markers were identified in DHGH-12-08, the model was largely used to correlate coal seams. The stratigraphic package from Discovery A to Duke H is preserved. However, Discovery C has pinched out. This drillhole correlates well to DHGH-13-41 based on photos and geophysical signatures.

DHGH-13-28 (Vertical) and DHGH-13-30 (Inclined)

DHGH-13-28 and DHGH-13-30 are very short drillholes at 66 m and 14 m depth, respectively. As such there are not enough data to correlate lithologies and coal seams.

DHGH-13-31

DHGH-13-31 is a shallow drillhole, at 57 m total depth, with two intersected coal seams. Due to the shallow view of this drillhole, the seams which best fit the model output were chosen. Discovery B and Discovery C were identified, and verified with geophysical logs and core photos.

DHGH-13-40

There appears to be an S-fold in the dipmeter between 50-70 m and another from 130-150 m, but they are difficult to interpret in the core due to massive siltstones and poor photos. The coal seams present in DHGH-13-40 are not at present time correlateable due to the large distance between this drillhole and surrounding drillholes and the lack of marker horizons.

DHGH-81-05

DHGH-18-05 has an old geophysical log, which has less detail than the recent geophysical logs. At 49-52 m the Duke E seam likely resides based on the geophysical signature and with interburden between it and the Duke A and Duke B seams above, and the Duke G seam below.

DHGH-13-22 (Vertical) and DHGH-14-23 (Inclined)

Minimal proximal data exist around both drillholes to correlate to and confirm correlations with; including DHGH-13-02. Marker 1 does not have a bivalve layer above it and there is low confidence about this marker. The Discovery A seam appears to pinch out between the drillholes. The stratigraphic package from the Discovery B seam to the Discovery E seam occurs in DHGH-14-22 but with increased interburden thicknesses. This is especially true between the Discovery D and Discovery E seams, where the bedding is vertical. Marker 2 occurs at the bottom, but the borehole in DHGH-14-22 did not extend deep enough to see the remainder of the package.

DHGH-13-02

The stratigraphic package consisting of the Discovery B seam to the Duke D seam is preserved in DHGH-13-02. The Discovery B seam vertically thickened due to structure and vertical bedding. The increase in interburden between the Discovery C and Discovery D seams is due to a steepening of bedding, as seen in core photos. Duke A appears to be pinching out depositionally as it remains only as a mudstone with quartz veinlets below Marker 2.

Southeast Regional Area

NW7 Section

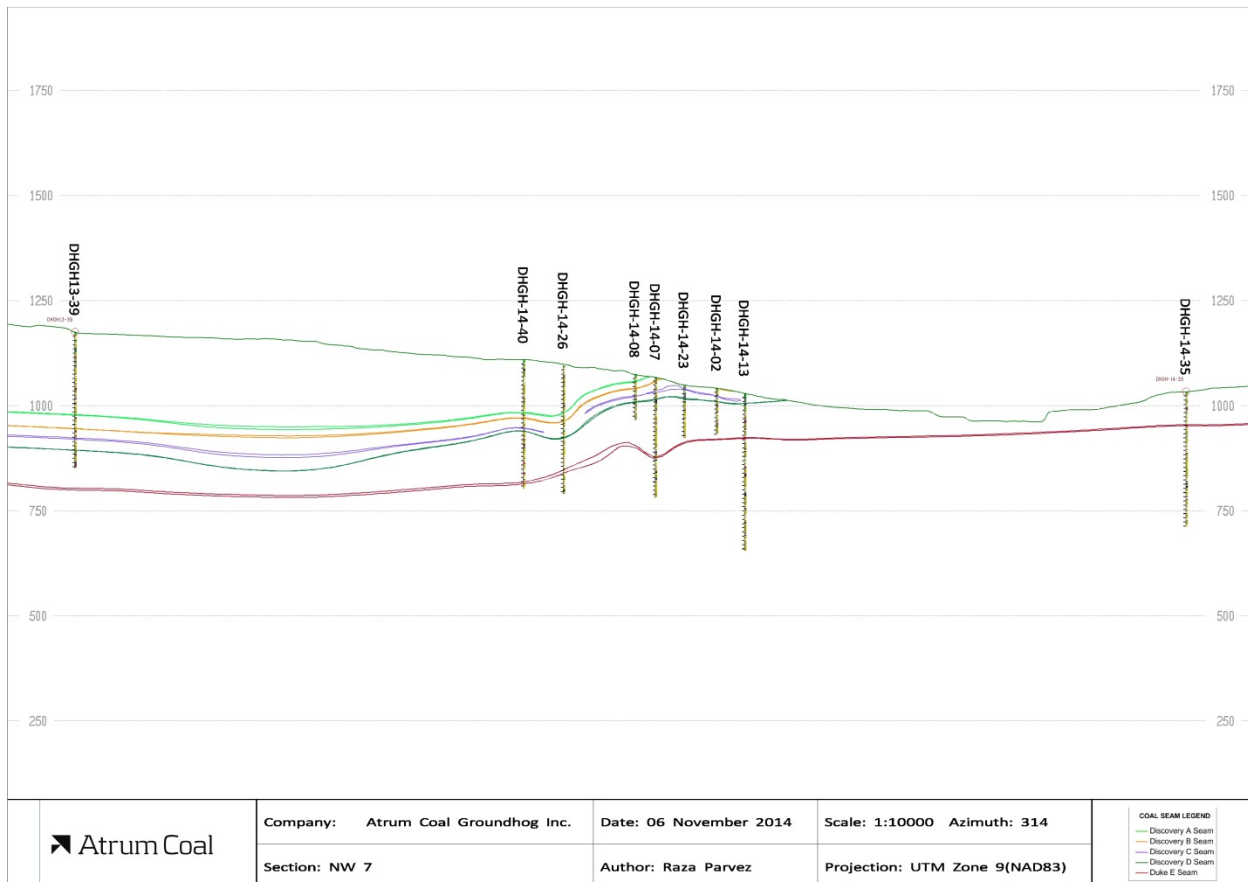


Figure 34. NW7 Section facing northwest of the regional Northwest Regional Area illustrating seam depths, structure, and interburden relationships.

DHGH-13-39

DHGH-13-39 and DHGH-12-05 are a continuation of the NW8 Cross-Section of the Bulk Sample Area. The southwest segment of this line was known to become very complex structurally. Few identifiable coal seams and the lack of dipmeter make structural interpretations problematic. Difficulties also arise due to the extensive distances between DHGH-13-39 and adjacent drillholes. A correlateable Marker 2 is intersected at 295-305 m. Correlations are largely based off of the presence of this marker, with the coal seams above somewhat resembling the Discovery Horizon. The interburden between the Discovery A and Discovery B seams is greater than expected.

DHGH-12-05

Similar to DHGH-13-39, DHGH-12-05 is structurally complex, with possible multiple overturns, but there are no dipmeter data to pull from for structural analyses. The correlation of DHGH-12-05 has been largely guided by the model output. The Discovery Horizon is substantially thicker and has more interburden than expected. There are coal seams present higher up in the package that are uncorrelated, yet this is the most likely interpretation.

NW11 Section

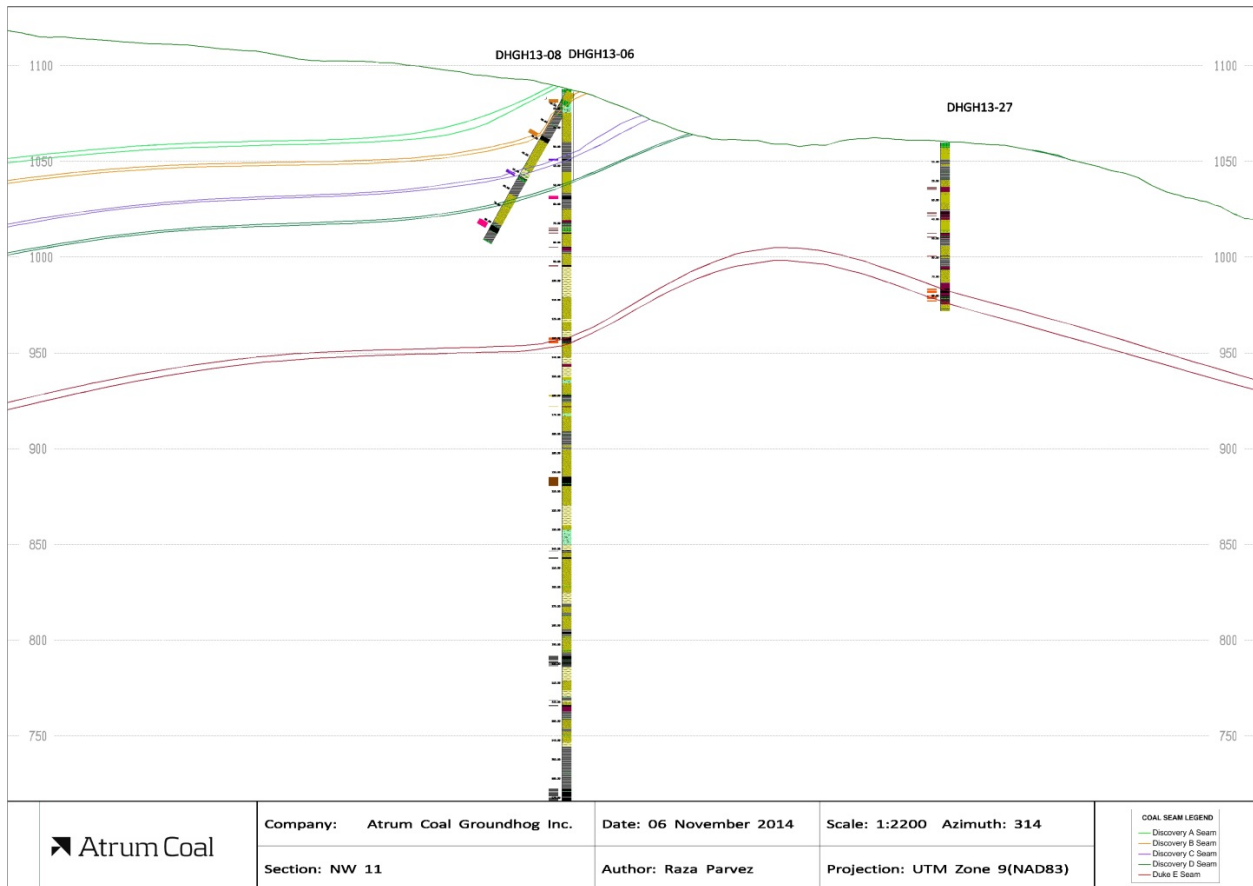


Figure 35. NW11 Section facing northwest of the Southeast Regional Area illustrating seam depths and behavior.

DHGH-13-36

DHGH-13-36 is structurally complex and shallow drillhole. It occurs just off section of NW11. Because of this, and its being a distal drillhole, correlations were very difficult to make. Several faults exist and there are amounts of lost core. Markers are not readily identifiable in the drillhole. Based on interburden thickness and the geophysical signatures, Discovery A and Discovery B appear to be intersected with Davis A to Davis D identified above.

DHGH-13-06 (Vertical) and DHGH-13-08 (Inclined)

The correlation of the coal seams is mostly based on interburden between visible seams. Marker 2 does not occur as expected, yet a relatively massive sandstone occurs where the upper sandstone would reside in Marker 2. The Discovery B seam does not occur in DHGH-13-06 but is predicted to be at the top of the drillhole in the weathered regolith zone. With the exception of Marker 2 and how it is normally conveyed, almost the entire package is preserved in DHGH-13-06 from the hypothetical Discovery B seam to the Duke H seam. However, the Discovery D seam and the Duke D seam do not appear. Trail A to Trail D reside below Duke H. The Trail C and Trail B seams are major coal seams with thicknesses of 3-5 m. This lower package is likely change as correlation continues. DHGH-13-08 correlates well with the exception of the Discovery B seam in DHGH-13-06 which has likely outcropped.

DHGH-13-27

DHGH-13-27 correlates well with the package, with Marker 2 visible at the top of the drillhole. The Duke E seam is siltier than expected and could possibly be below the end of hole depth or it is locally separated as shown in core photos. The package includes Marker 2 to the Duke E seam.

NW12 Section

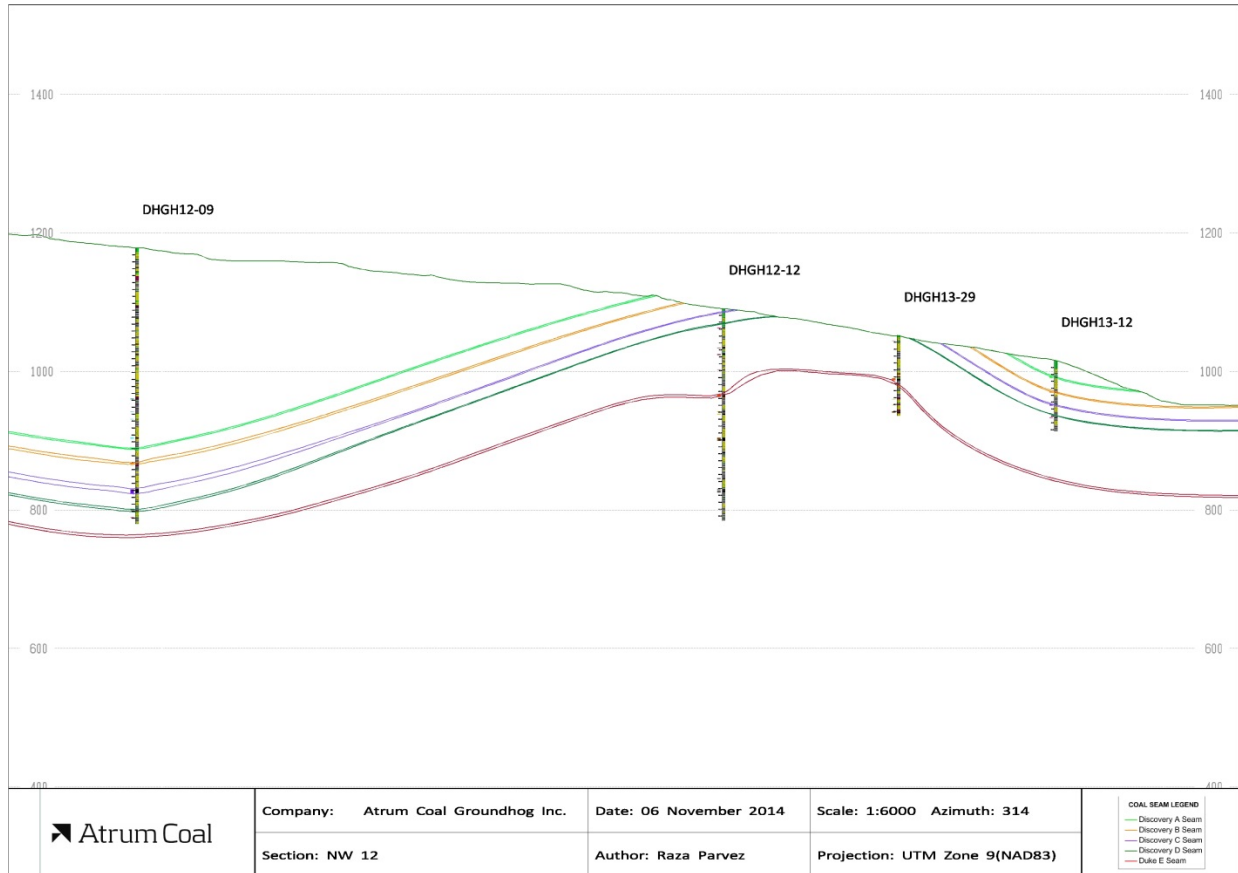


Figure 36. NW12 Section facing northwest of the Southeast Regional Area illustrating seam depths.

DHGH-12-09

There are no dipmeter data for DHGH-12-09 to aid in structural interpretations. Because of the lack of concrete marker horizons to hang strata on, correlations are based on the best-fit scenario from produced from the model. The correlation compares well with DHGH-12-05. Both of these drillholes were difficult to correlate but the current interpretation is the most probable. The thickness of the Discovery Horizon, including the coal seams for DHGH-12-09 and DHGH-12-05 is greater than expected. It is possible that this could represent the Duke Horizon instead, but it is difficult to say for certain.

DHGH-12-12

The presence of the Duke A seam to the Duke H seam is a confident correlation. Both the interburden thicknesses and the coal seam signatures in geophysical logs are reliable and consistent. Below the Duke H seam is a package with limited data. The coal seams have been assigned seams Trail A to Trail D.

Two possible Marker 2 horizons were proposed; the Marker 2 that was chosen for the current correlation was chosen based on the interburden the Discovery E and the Duke E coal seams.

DHGH-13-29

There are very few coal seams present in DHGH-13-29 to correlate with. The Duke E seam was chosen because of its geophysical signature and relationship to the Duke G seam below. DHGH-13-29 may have an overturn fold; however, there are no dipmeter data to confirm. The Duke G seam has an additional seam associated with the package that has not previously been seen in other drillholes; it is not yet correlated. The distance between Duke G and Duke H has drastically decreased; the drillhole is too short to confirm if this seam is Duke H confidently. Another drillhole would be required nearby, that extends deeper than DHGH-13-29.

DHGH-13-12

The package from Marker 1 to Marker 2 occurs in the drillhole. The top of Marker 1 does not have bivalves associated with it as they have already surfaced. The Discovery D seam is not intersected as it is less continuous comparatively to the other coal seams in the upper stratigraphic package. The drillhole stops at the top of the bivalves paired with Marker 2. The flat bedding throughout the entire drillhole allows for confident correlation.

NW13 Section

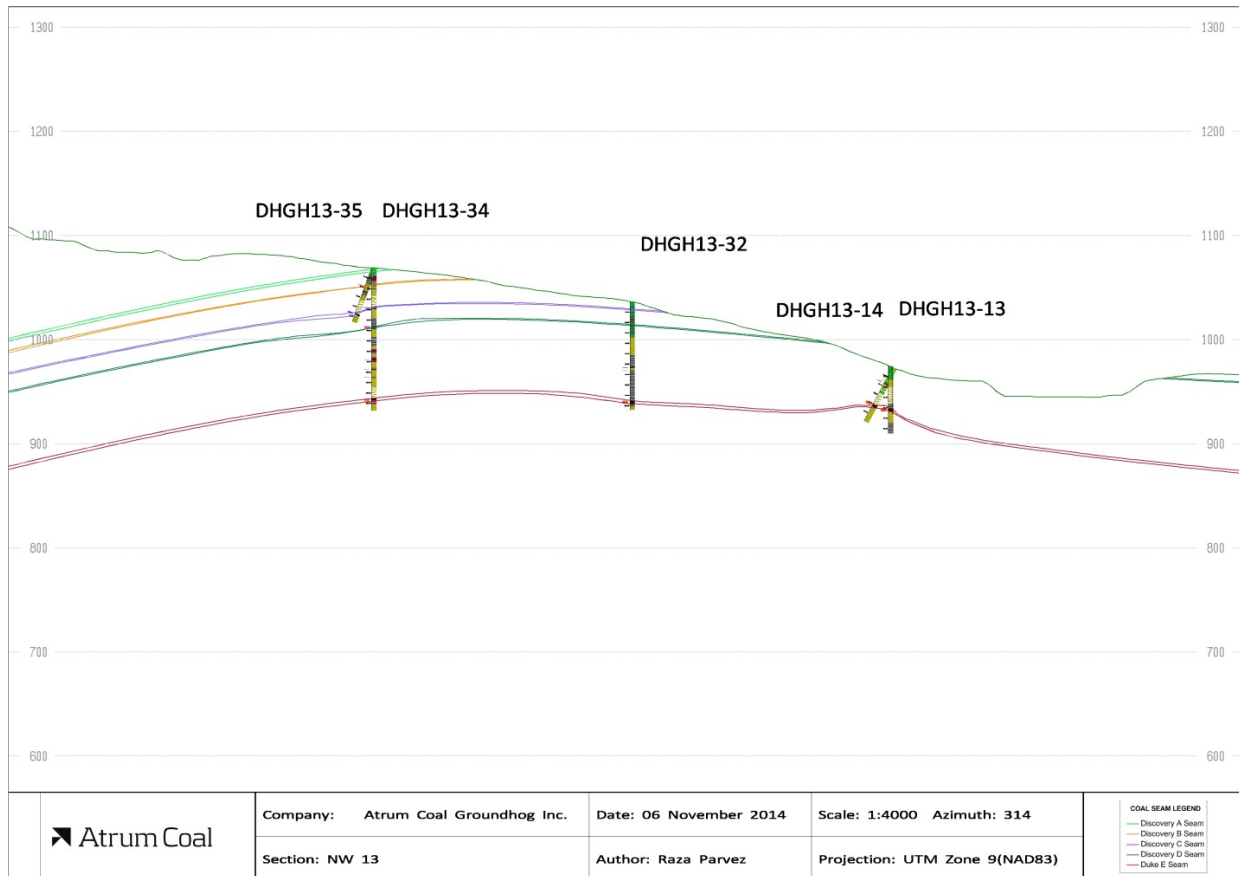


Figure 37. NW13 Section facing northwest of the Southeast Regional Area illustrating seam depths and interburden relationships.

DHGH-13-34 (Vertical) and DHGH-13-35 (Inclined)

The Discovery B to the Duke E seam occurs in DHGH-13-34, except for the Discovery D seam. This correlation is confident, and it preserves the stratigraphic package. Marker 2 is now deemed to have one sandstone unit instead of two.

DHGH-13-32

There is minimal amount of section to interpret DHGH-13-32. The occurrence of the Duke E seam is confident based on photo evidence and its geophysical signatures. Any one of Duke A, Duke B, and Duke C could be missing but it is interpreted that the Duke C seam has pinched out.

DHGH-13-13 (Vertical) and DHGH-13-14 (Inclined)

Only one major coal seam is intersected in either of these drillholes, determined to be the Duke E seam. The correlation is based on the geophysical signature. Otherwise, the seam would not honour any other part of the package. The correlation of this seam is low but plausible. The Duke C seam occurs around 13 m depth.

Individual Drillholes

DHGH-13-38

With no strongly identifiable coal seams, marker beds, or closely adjacent drillholes, DHGH-13-38 is very difficult to correlate. A possible Marker 1 is present at 170 m. The predicted location for the Discovery B seam matched that which was produced by the model. There is not much available to correlate this drillhole against, but the Davis A to Davis D package matches that in DHGH-13-39.

DHGH-13-09

The correlation for DHGH-13-09 has low confidence because no Marker 1 was intersected in the drillhole. There is, however, an area that appears to resemble a Marker 2, which does uphold the package within the Discovery Horizon. The Discovery B seam has an extra seam associated with it below that does not normally occur.

DHGH-13-37

Upright flame structures are visible in core at 50 m. At 105 m depth and below the core becomes highly faulted and structures are undeterminable. DHGH-13-37 was originally left out of the model due to a lack of confident marker horizons and dipmeter. Using the model to best match seams to what was present in the drillhole, Davis A to Discovery C was correlated.

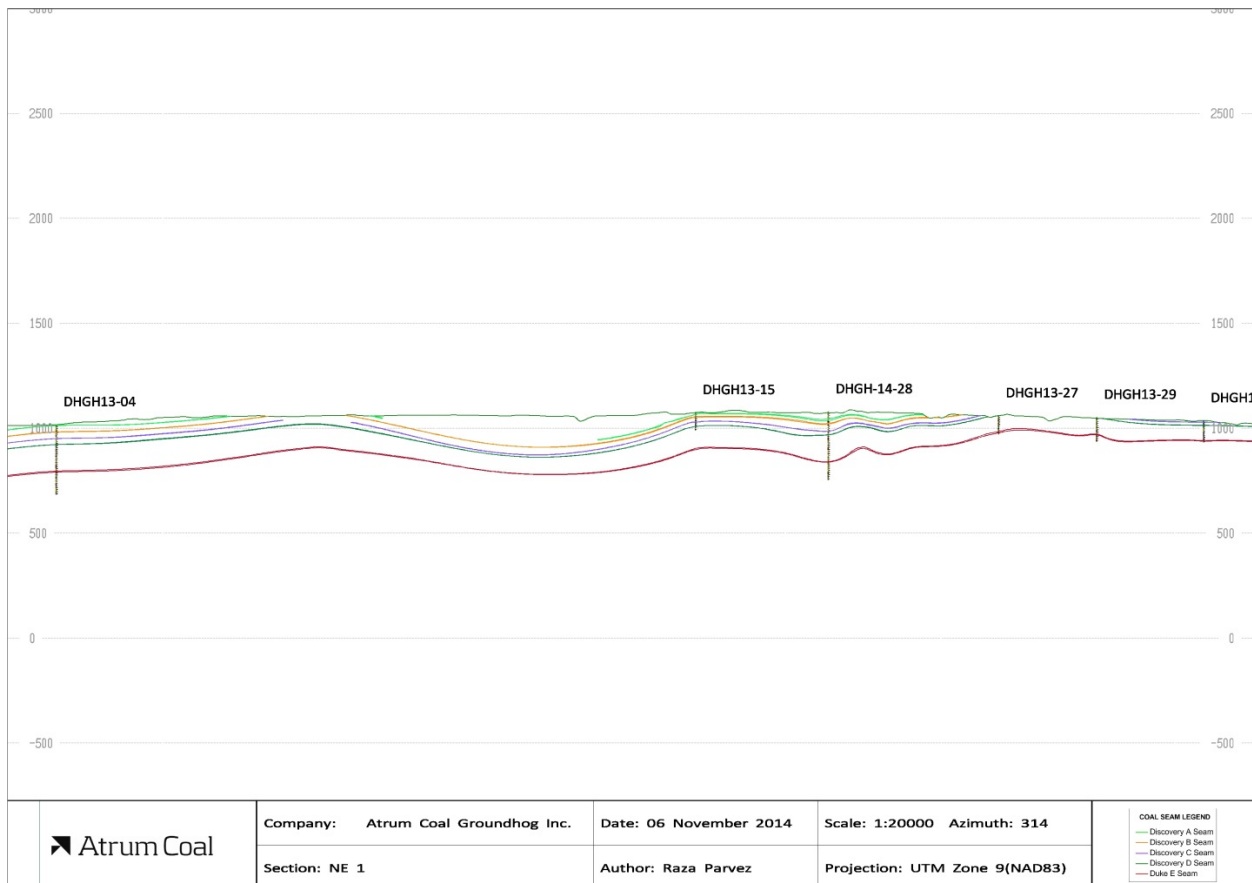


Figure 38. NE1 Section facing northeast through the Northwest and Southeast Regional Areas illustrating large scale seam depths and seam behavior.

Skeena East Regional Area

NE2 Section

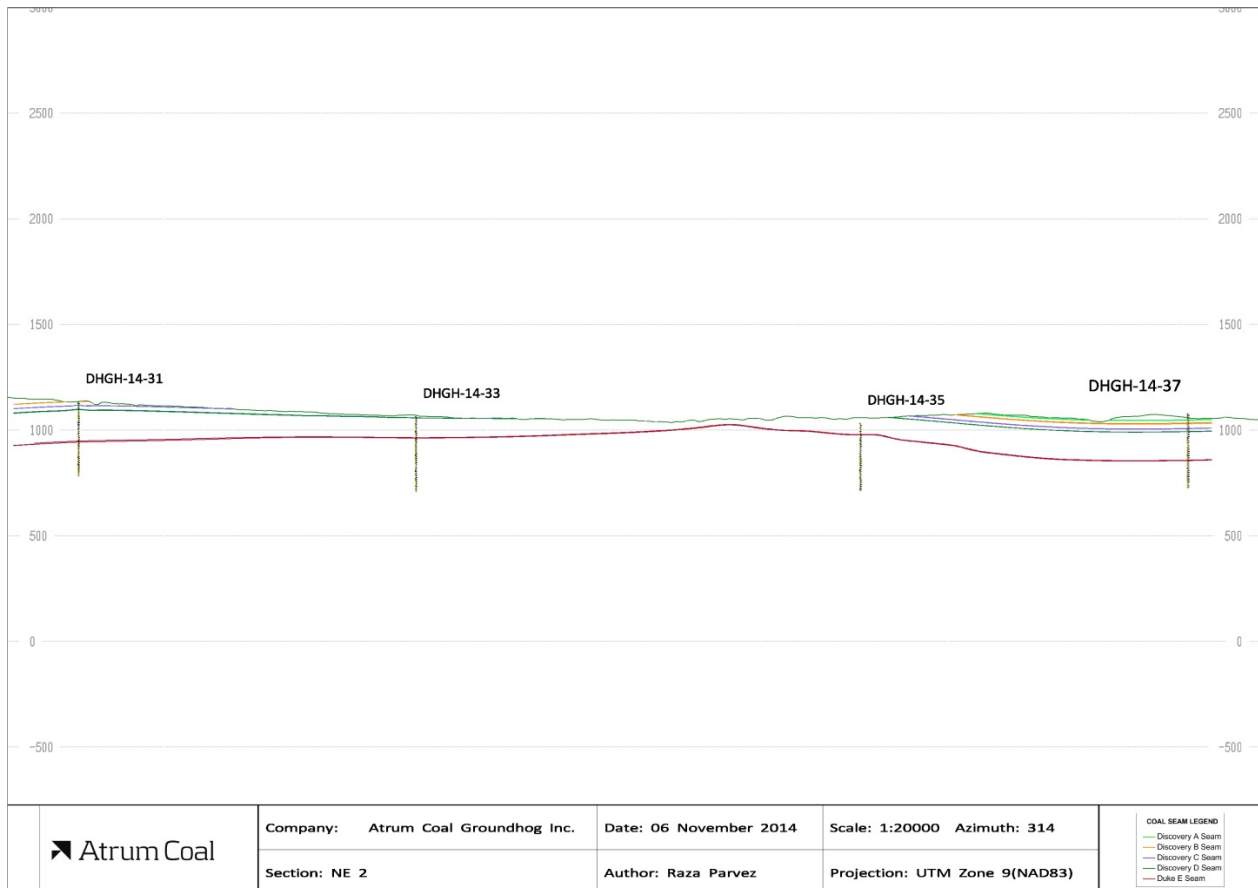


Figure 39. NE2 Section facing northeast through the Skeena East Regional area illustrating seam depths and continuity on a large scale.

DHGH-14-31

The Duke E seam to the Trail B seam is present. Above the Duke E seam, the correlation becomes unclear and the nearest data point to compare to is 1.6 km away. Marker 2 is interpreted to be from 65-89 m. There is not 100% certainty that this unit is Marker 2, but a clean light grey sandstone exists followed by a sandstone with siltstone and a massive dark gray siltstone with bivalves at the bottom of the unit. The Duke A to Duke D package is more spread out but the interburden between each has been noted to be noticeably variable. Below the Duke D seam, there is more interburden than expected above the Duke E seam. The Duke E seam down to the Trail B seam occurs in its typical form. Above Marker 2, the Discovery E and Discovery D relationship has become unclear.

DHGH-14-33

Above Marker 2, coal correlation is complicated. The Discovery E seam occurs directly above Marker 2, consisting of two coal seams separated by a parting. In the past, the upper coal seam may have been called the Discovery D seam but there is too small of a parting for it to be considered part of another coal package. Above the Discovery E seam there is no coal. This is unusual; however, due to little data

near drillhole it is difficult to give explanations apart from changes in the depositional environment have occurred. Below Marker 2, the Duke A to Duke C package is more spread out than usual. The Duke E, Duke G, Duke H, Trail B, Trail C, and Trail D seams are intersected as expected.

DHGH-14-35

Marker 2 is present but takes on a different appearance for the upper sandstone units. The bottom siltstone and bivalves still occur as expected. Below Marker 2, the seams Duke A to Duke H occur as expected. The Trail B seam is missing but the Trail C and Trail D seams occur. The bedding angles in DHGH-14-35 are low. This, and the fact that Duke E resides at 78 m below the surface make this area a target for further drilling.

DHGH-14-37

The Discovery B to the Discovery E seam package occurs as expected, less the Discovery D seam. There is a thin coal band to carbonaceous mudstone above the Discovery E seam that could be the Discovery D. Marker 2 is different than expected, as the lower sandstone no longer remains yet the upper sandstone and bivalves occur. The typical Duke A to Duke D occurs below Marker 2. Below the Duke D seam is the Duke E Seam, which has its distinct geophysical signature. Below the Duke E seam, resides the Duke G seam. The Duke G seam is usually comprised of two seams but in DHGH-14-37 it is found with one seam. Beneath the Duke G seam is the Duke H seam. Again, the Duke H seam does not follow its usual appearance in both photos and geophysical logs. The interburden is less than expected between the Duke G and Duke H seams. Conclusively, the Duke H seam is a low confidence correlation, yet the Discovery B to Duke G correlation is fairly confident. Below the Duke H seam, the Trail B and Trail C seams are found. Less is known about these seams regarding continuity; they warrant being named as they occur regularly.

Individual Drillholes

DHGH-81-04

The Duke E to Trail B seams is correlated with expected interburden based on geophysical logs. There are minimal data to rely on but the interpretation fits the present model.

DHGH-12-14

Although good coal seams are intersected, there are no identifiable marker horizons to place the seams in their appropriate location in the overall stratigraphic package. Most importantly, there are no adjacent drillholes to DHGH-12-14 to draw data from.

Currier Creek Area

Central Area Interpretation

Much effort has been aimed at determining a correlation for the drillholes of the Currier Creek regional area of the Groundhog property. The utilized data is a combination of 1981, 2008, and 2012 drillhole data. Everything apart from the 2012 data proved to be problematic to correlate; however, the 2012 data do not perfectly fit the known Davis, Discovery, and Duke Horizons. Furthermore, there was a large variance in drillhole collar elevation and, in general, the farther west and uphill the drillholes, the harder it is to correlate Horizons. Serious doubt surrounds the Beirnes Synclinorium's having gentle limbs; it is likely that several faults have gone unmapped that are causing significant displacement.

DHGH-12-01 and DHGH-12-03

Both of the DHGH-12-01 and DHGH-12-03 drillholes are similar and have similar low confidence associated with the package. These two drillholes are distal from the northwest area, and depositional changes are expected; however, the entire package does hold up. Marker 2 and the entire Discovery Horizon do occur, yet there are differences in both the interburden and the physical characteristics of the coal seams. The Discovery B seam continues to be the best seam. There is more interburden between the Discovery E and Duke E seams in both drillholes. The Duke A to Duke D package is also spread out more than expected.

DHGH-14-39

The drillhole strata correlate well with the stratigraphic package. Marker 1 through the Trail B seam occurs as expected. The interburden between Discovery A and Discovery B is greater than expected. Given the drillhole spacing near to this hole, this is a confident correlation. To be certain of this correlation's accuracy, more drillholes would be required.

DHGH-12-15

The Discovery C to the Duke G seam occur as expected in DHGH-12-15. An additional seam is intersected below the Duke D seam; this seam has been given the name Duke D-1. The Duke E seam is not as thick as expected, but DHGH-12-15 is far away from the Bulk Sample Area, where there is more available, representative data. The Duke H seam is interpreted to be intersected at 200m depth, with an increase in the interburden thickness between the Duke G seam and the Duke H seam. Additional drillholes are needed to confirm this correlation. The Trail A seam is thus concluded to occur below the Duke H Seam.

DHGH-12-11

Davis A to the Duke E seam occurs as expected with a few minor exceptions as follows. The Discovery B seam is much thicker than usual due to it being intersected at an apparent angle of 40°. The Discovery C seam was not intersected. Additional seams are present below the Duke D seam and above the Duke E seam, and thin coal bands occur commonly between the Duke E and Duke H seams, in addition to the Duke G seam. The Duke H seam is very thick, with a coal thickness of 10 m. This is possible due to structural thickening, where steep beds are documented throughout the coal seam. This segment is possibly overturned yet more data are needed to comment further on the interpretation.

DHGH-12-02

There is no obvious Marker 1 or Marker 2 in DHGH-12-02. The seams are correlated to the known package as best as possible. The Duke E and Duke H signatures and interburden occur as expected.

Conclusions

The correlation work conducted by Atrum Coal following its 2014 drill program has allowed a greater knowledge of the overall geology of the Groundhog Property to be gained. Various structures were identified that were not previously considered in the Bulk Sample and regional areas of the property. Structures included overturned and recumbent folds, which are visible in both core and outcropping at the surface. These structures were found to have northwesterly trends.

There is a greater understanding of the behavior of coal seams within the Groundhog Property post correlation work. Coal seams are known to be more continuous than previously thought. Throughout the Bulk Sample and regional area, coal seams were found to be reasonably correlateable between drillholes, despite complex structure. Regions of flat-lying strata appear to be distinctly marked by local areas of complex structures of folding and faulting.

Based on thickness, quality, and continuity, the coal seams of significance of the Groundhog property are the Discovery B, Discovery C, and Duke E coal seams, in stratigraphic order. In particular, the Duke E seam appears to be less structurally disturbed in the Skeena East and Southeast Regional Areas. In these areas, the Duke E seam is readily correlateable with a consistent typical thickness of 2.3-3.1 m amenable to both open cut and underground mining.

Recommendations for Future Exploration

Additional drilling is required to expand on the regional knowledge of coal seams and structures and to identify mineable prospects. An area to look to first for economic potential includes that east of the Skeena River. The thick, high quality Duke E seam is found shallower in this area. Although the drillholes east of the Skeena have distances between them of around 1.5 km, they correlate well, suggesting that structure is less complex in the region. Energy could be focused on collecting drillhole data for the area between Anthracite Creek and Evans Creek to better develop confident correlations in this prospective zone.

To increase the confidence level of coal seam correlations, drillholes that fill in gaps of data are required. This is especially true for the areas surrounding drillholes that are correlated with low confidence. Adjacent drillholes would be required to correlate seams with confidence and to accurately understand local structural controls. The Bulk Sample Area and the northwest region have been identified as structurally complex. Smaller spacing between drillholes would be needed to understand the propagation of folds and faults. Dipmeter must be accompanied with future drillholes to aid in identifying folds and determining their orientation.

Filling in the gap in data between the northwest and central regions would further develop the general understanding of the Groundhog Property's geology. Facies changes and large scale faulting will likely need to be taken into account when considering correlations on a regional scale. Knowledge of the subsurface lithologies and structural controls in this area could lead to additional mineable prospects.

The best scenario for future drill programs would involve geologists at the drill-rig working with the driller. Core should be logged on-site directly in the split-tubes that are received from the driller. The drillpad would be equipped with a location for the geologist to conduct his or her work without interfering with the work or safety of the driller or the driller's helper. Doing so would improve the time and ease of acquiring RQD and geotechnical defects data, as the core has not yet been broken. Additionally, when core is properly aligned, structures and bedding relationships are visible. Following the recording of this data at the drill rig, core would be placed in boxes and sent to camp for detailed lithology logging and coal sampling by geologists in camp. Acquiring data directly from rock core in the split-tubes should significantly decrease the time it takes to obtain information necessary for correlations and mine planning. The on-site geologist and driller can work together in a way that maximizes efficiency for drilling and minimizes costs by drilling to targets identifiable to a site geologist. Drillhole correlations should coincide with logging such that target depths can be updated while drilling is ongoing. With this style of core-logging in effect, planned drillholes can be re-designated to locales that would deliver the most information for interpreting the subsurface. Drillhole planning can be kept up to date, eliminating unnecessary drillholes and thus improving efficiency and costs of the working field season.

The importance of dipmeter data in addition to good quality photos of drillcore cannot be emphasized enough for future drill programs, in order to make accurate correlations between coal seams. Every drillhole needs to be accompanied by dipmeter data. Good data is especially vital when correlating regions with extensive faulting and folding and when good marker horizons are absent. Proper photographs of core would best be taken when the core is taken to camp. Lighting must be kept as consistent as possible for photographs. It is important that the core is dry when being photographed in order for any lithologies, structures, and features to be visible when referring to the photo at a later time. Structures and features should be aligned in such a way that they are visible in the photo. Pictures cannot be blurry or out of focus; a new DSLR camera may provide higher quality photos and reduce camera shake. The core photos from the 2014 drilling program set a good standard for what all future photos should resemble. Abbreviations need to be written on the core in areas where structures or sedimentary features may be hard to distinguish in photos. Flame structures need to be identified with the way-up direction noted on the core.

The timing of logging is important for several reasons. Drillholes need to be logged and photographed in camp immediately following the receiving of geophysical logs. When core is exposed to the elements, it is now known that the rock becomes discoloured. This is especially true for sandstone, where the 2012 core photos show that the originally light gray sandstone weathered to a tan colour while it was left unprotected. This occurred during a period of less than two weeks before the geologist was able to receive the core for logging. Secondly, the coal quality can quickly deteriorate once exposed; timely

sampling of coal seams is extremely important. Sample shipments will be sent out directly to the ALS lab in Richmond, BC twice a week to best ensure true results. The handling of coal also needs to be done so carefully. Limiting the amount of breakage of coal ensures accurate results about its properties. When sampling, coal should be kept intact. Rice bags containing coal samples will be half-filled and transported gently to limit the amount of damage to the coal. For geotech samples, the spreadsheet needs to contain where the sample occurs within the stratigraphic sequence and its relationship to surrounding coal seams, and the estimated strength (R value) needs to be recorded with the lithology type.

Task Manager (TM) needs to be utilized in a way such that stratigraphic logs accompanied with gamma and density logs can be compared between various drillholes simultaneously. This would prove most efficient with the geophysical data from 2012 and 2013 available in TM as well. In order for this to work, it must be possible to change the offset of an individual drillhole to allow for correlations of coal seams of varying depths. This would allow correlations to be performed in the field and is an efficient way of comparing drillhole logs to each other. Based on the structural complexity seen throughout the area, it is recommended that a program of block modeling be incorporated rather than gridded seam modeling to best work with and display the geologic subsurface.

Appendix 5 – Descriptive Core Logs

Category	Code	Item
Litho_Type	MS	Mudstone
Litho_Type	ST	Siltstone
Litho_Type	SS	Sandstone
Litho_Type	CO	Coal
Litho_Type	KL	Core Loss
Litho_Type	SH	Shale
Litho_Type	XM	Carbonaceous Mudstone
Litho_Type	XS	Carbonaceous Sandstone
Litho_Type	XH	Carbonaceous Shale
Litho_Type	XT	Carbonaceous Siltstone
Litho_Type	ZM	Coaly Mudstone
Litho_Type	ZS	Coaly Sandstone
Litho_Type	ZH	Coaly Shale
Litho_Type	ZT	Coaly Siltstone
Litho_Type	SA	Sand
Litho_Type	SO	Soil
Litho_Type	SI	Silt
Litho_Type	MD	Mud
Litho_Type	CL	Clay
Litho_Type	GV	Gravel
Litho_Type	BO	Boulders
Litho_Type	PY	Pyrite
Litho_Type	QZ	Quartz
Litho_Type	SD	Siderite
Litho_Type	CB	Carbonate
Litho_Type	NL	Not Logged
Litho_Type	DM	Dolomite
Litho_Type	AL	Alluvium
Litho_Type	CV	Colluvium
Litho_Type	FI	Fill/Spoil
Litho_Type	LO	Loam
Litho_Type	M1	Conglomerate (>65% matrix)
Litho_Type	M2	Conglomerate (35-65% matrix)
Litho_Type	M3	Conglomerate (<35% matrix)
Litho_Type	CG	Conglomerate
Litho_Type	CS	Claystone
Litho_Type	BR	Breccia
Litho_Type	FB	Fault Breccia
Litho_Type	TI	Tillite
Litho_Type	CC	Calcrete
Litho_Type	FW	Fossil Wood
Litho_Type	CA	Calcite
Litho_Type	NC	Non Coal
Litho_Type	NR	No Recovery

Litho_Type	VD	Void
Litho_Qual	CL	clayey
Litho_Qual	SI	silty
Litho_Qual	SA	sandy
Litho_Qual	GV	gravelly
Litho_Qual	VV	very fine grained
Litho_Qual	VF	very fine to fine grained
Litho_Qual	VM	very fine to medium grained
Litho_Qual	VC	very fine to coarse grained
Litho_Qual	VX	very fine to very coarse grained
Litho_Qual	FF	fine grained
Litho_Qual	FM	fine to medium grained
Litho_Qual	FC	fine to coarse grained
Litho_Qual	FX	fine to very coarse grained
Litho_Qual	MM	medium grained
Litho_Qual	MC	medium to coarse grained
Litho_Qual	MX	medium to very coarse grained
Litho_Qual	CC	coarse grained
Litho_Qual	CX	coarse to very coarse grained
Litho_Qual	XX	very coarse grained
Litho_Qual	C1	bright (>90%)
Litho_Qual	C2	bright with dull bands (60-90%)
Litho_Qual	C3	interbanded dull and bright bands(40-60%)
Litho_Qual	C4	mainly dull with frequent bright bands (10-40%)
Litho_Qual	C5	dull with minor bright bands (1-10%)
Litho_Qual	C6	dull (<1%)
Litho_Qual	M1	mid-lustrous to bright
Litho_Qual	M2	mid-lustrous
Litho_Qual	M3	mid-lustrous to dull
Litho_Qual	AN	anthracite
Litho_Qual	CS	clay sized
Litho_Qual	TS	silt sized
Litho_Qual	SS	sand sized
Litho_Qual	MS	mud sized
Litho_Qual	CT	cannel (torbanite, bog)
Litho_Qual	DC	dull conchoidal
Litho_Qual	EW	extremely weathered
Litho_Qual	SY	stony
Litho_Qual	CU	undifferentiated
Litho_Qual	WE	weathered
Litho_Qual	GG	granular
Litho_Qual	GP	granular to pebbly
Litho_Qual	GO	granular to cobbly
Litho_Qual	GU	granular to bouldery
Litho_Qual	PP	pebbly
Litho_Qual	PO	pebbly to cobbly
Litho_Qual	PU	pebbly to bouldery

Litho_Qual	OO	cobbly
Litho_Qual	OU	cobbly to bouldery
Litho_Qual	UU	bouldery
Litho_Qual	S1	very fine grained (VV)
Litho_Qual	S2	fine grained (FF)
Litho_Qual	S3	fine to medium grained (FM)
Litho_Qual	S4	medium grained (MM)
Litho_Qual	S5	coarse to very coarse grained (CX)
Litho_Qual	S6	Interbedded, fine and coarse
Litho_Qual	S7	medium to coarse grained (MC)
Litho_Qual	S8	coarse grained (CC)
Litho_Qual	S9	very coarse grained (XX)
Shade	L	light
Shade	A	light to medium
Shade	C	light to dark
Shade	E	medium
Shade	B	medium to dark
Shade	D	dark
Shade	N	banded
Shade	M	mottled
Shade	S	speckled
Shade	V	variegated
Hue	G	greyish
Hue	B	brownish
Hue	K	blackish
Hue	W	whitish
Hue	O	orangey
Hue	R	reddish
Hue	L	bluish
Hue	F	buff
Hue	C	creamy
Hue	E	greenish
Hue	P	pinkish
Hue	U	purplish
Hue	X	off-whitish
Hue	Y	yellowish
Colour	G	grey
Colour	K	black
Colour	B	brown
Colour	W	white
Colour	L	blue
Colour	F	buff
Colour	C	cream
Colour	E	green
Colour	M	multi-coloured
Colour	O	orange
Colour	P	pink

Colour	U	purple
Colour	R	red
Colour	X	off-white
Colour	Y	yellow
Adjective	AB	abundant (30-60%)
Adjective	CM	common (15-30%)
Adjective	DA	decreasing in abundance
Adjective	DE	detrital
Adjective	DO	dominant (>60%)
Adjective	HI	highly
Adjective	IP	in part
Adjective	IA	increasing in abundance
Adjective	IR	irregular
Adjective	LR	large
Adjective	MN	minor (1-15%)
Adjective	MO	moderately
Adjective	RA	rare (<1%)
Adjective	TY	slightly
Adjective	TG	strongly
Adjective	TK	thick
Adjective	TH	thin
Adjective	VE	very
Adjective	AL	altered
Adjective	BR	bright
Adjective	LC	clear
Adjective	XC	coarser
Adjective	CC	conchoidal
Adjective	DD	dull
Adjective	FT	fault gouge
Adjective	FF	finer (<10% of unit)
Adjective	HR	hard
Adjective	HA	heat affected
Adjective	IB	interbanded
Adjective	LU	lustrous
Adjective	RS	resinous
Adjective	SO	soft
Adjective	AR	arenitic
Adjective	AK	arkosic
Adjective	BE	bentonitic
Adjective	CA	calcareous
Adjective	XX	carbonaceous
Adjective	CB	carbonate
Adjective	CL	clayey
Adjective	CO	coaly
Adjective	CG	conglomeritic
Adjective	CS	claystone
Adjective	DM	dolomitic

Adjective	FO	fossiliferous
Adjective	GP	graphitic
Adjective	ID	iron stained
Adjective	KA	kaolinitic
Adjective	LT	lithic
Adjective	LO	loamy
Adjective	MD	muddy
Adjective	MS	mudstone
Adjective	OX	oxidised
Adjective	PE	peaty
Adjective	PY	pyritic
Adjective	QZ	quartzose
Adjective	SA	sandy
Adjective	SH	shaly
Adjective	HY	shelly
Adjective	SD	sideritic
Adjective	SI	silty
Adjective	SM	smectitic
Adjective	SS	sandstone
Adjective	ST	siltstone
Adjective	SY	stony
Adjective	AM	sub arenitic
Adjective	TI	tillitic
Adjective	TF	tuffaceous
Adjective	VI	vitrainous
Adjective	BN	bands
Adjective	BL	blebs
Adjective	CT	clasts
Adjective	OO	cobbles
Adjective	CI	concretions
Adjective	DS	disseminated
Adjective	FR	fragments
Adjective	GN	grains
Adjective	GG	granules
Adjective	LM	laminae
Adjective	LY	layers
Adjective	LN	lenses
Adjective	MX	matrix
Adjective	ND	nodules
Adjective	PA	partings
Adjective	PB	pebbles
Adjective	PT	pellets
Adjective	PH	phases
Adjective	PO	pods
Adjective	SG	stringers
Adjective	TR	traces
Adjective	WP	wisps

Adjective	ET	and
Adjective	AS	as
Adjective	OF	of
Adjective	ON	on
Adjective	WI	with
Adjective	AT	alternating
Adjective	BU	near base of unit
Adjective	MU	near middle of unit
Adjective	XU	near top and base of unit
Adjective	TU	near top of unit
Adjective	TT	tends to
Adjective	TO	throughout
Litho_Interrel	CU	coarsening up to
Litho_Interrel	DS	disseminated with
Litho_Interrel	FU	fining up to
Litho_Interrel	IB	interbedded with
Litho_Interrel	IC	intercalated with
Litho_Interrel	IL	interlaminated with
Litho_Interrel	IM	intermixed with
Litho_Interrel	IR	irregularly interbedded with
Litho_Interrel	BN	with bands of
Litho_Interrel	BO	with boulders of
Litho_Interrel	CM	with cement of
Litho_Interrel	CT	with clasts of
Litho_Interrel	OO	with cobbles of
Litho_Interrel	FR	with fragments of
Litho_Interrel	GG	with granules of
Litho_Interrel	LN	with lenses of
Litho_Interrel	MX	with matrix of
Litho_Interrel	ND	with nodules of
Litho_Interrel	PB	with pebbles of
Litho_Interrel	PO	with pods of
Litho_Interrel	WP	with wisps of
Defect_Spacing	VN	very narrow (<6 mm)
Defect_Spacing	NA	narrow (6-20 mm)
Defect_Spacing	MN	moderately narrow (20-60 mm)
Defect_Spacing	MW	moderately wide (60-200 mm)
Defect_Spacing	WI	wide (200-600 mm)
Defect_Spacing	VW	very wide (600-2000 mm)
Defect_Spacing	EW	extremely wide (>2 m)
Core_State	O	Overdrilled core
Core_State	S	Solid core
Core_State	B	Broken core
Core_State	V	Very broken core
Core_State	F	Fragmented core
Core_State	C	Crushed core
Core_State	K	cuttings

Mech_State	NS	Non slaking
Mech_State	LS	Low slaking
Mech_State	MS	Medium slaking
Mech_State	HS	High slaking
Mech_State	NP	Non plastic
Mech_State	LP	Low plasticity
Mech_State	IP	Intermediate plasticity
Mech_State	HP	High plasticity
Mech_State	BR	brecciated
Mech_State	BK	blocky
Mech_State	BL	brittle
Mech_State	CE	cleated
Mech_State	DW	disintegrates on wetting
Mech_State	EX	expanding clay
Mech_State	FS	fissile
Mech_State	FI	fissured
Mech_State	FG	flaggy
Mech_State	FL	flaky
Mech_State	FR	fractured
Mech_State	FB	friable
Mech_State	IN	indurated
Mech_State	MF	micro faulted
Mech_State	NC	non-cleated
Mech_State	PO	powdery
Mech_State	PU	puggy
Mech_State	SH	sheared
Mech_State	SK	slickensided
Mech_State	SL	slabby
Mech_State	ST	sticky
Mech_State	SF	subfissile
Texture	AM	amorphous
Texture	AP	aphanitic
Texture	CI	concretionary
Texture	CS	clast supported
Texture	EQ	equigranular
Texture	FB	fibrous
Texture	GG	granular
Texture	GT	gritty
Texture	MS	matrix supported
Texture	ND	nodular
Texture	PL	platey
Basal_Contact	B	basal contact open or readily parts
Basal_Contact	D	basal contact deformed
Basal_Contact	E	erosional basal contact
Basal_Contact	F	faulted at basal contact
Basal_Contact	G	gradational basal contact
Basal_Contact	I	sharp and irregular basal contact

Basal_Contact	J	jointed at basal contact
Basal_Contact	O	sharp and oblique basal contact
Basal_Contact	P	sharp and planar basal contact
Basal_Contact	R	fractured at basal contact
Basal_Contact	S	sheared at basal contact
Basal_Contact	U	sharp and undulose basal contact
Sed_Feature	CT	contorted bedding
Sed_Feature	CV	convoluted bedding
Sed_Feature	CB	current bedding
Sed_Feature	DF	diffuse bedding
Sed_Feature	DB	disturbed bedding
Sed_Feature	FL	flasar bedding
Sed_Feature	GB	graded bedding
Sed_Feature	LB	lenticular bedding
Sed_Feature	PB	penny bands
Sed_Feature	PL	planar bedding
Sed_Feature	PD	poorly developed bedding
Sed_Feature	RI	ripple bedding
Sed_Feature	WB	wavy bedding
Sed_Feature	WD	well developed bedding
Sed_Feature	HX	high angle cross bedding (>30?)
Sed_Feature	MX	medium angle cross bedding (10?-30?)
Sed_Feature	LX	low angle cross bedding (<10?)
Sed_Feature	XB	cross bedding
Sed_Feature	FX	fine cross bedding
Sed_Feature	TX	tabular cross bedding
Sed_Feature	RX	trough cross bedding
Sed_Feature	LL	large scale cross laminations (>2 m)
Sed_Feature	ML	medium scale cross laminations (200 - 2m)
Sed_Feature	SL	small scale cross laminations (<200 mm)
Sed_Feature	WL	wavy laminations
Sed_Feature	AG	angular grains
Sed_Feature	GG	subangular grains
Sed_Feature	VG	very angular grains
Sed_Feature	BG	subrounded grains
Sed_Feature	RG	rounded grains
Sed_Feature	WG	well rounded grains
Sed_Feature	DG	bladed grains
Sed_Feature	LG	prolate grains
Sed_Feature	TG	tabular grains
Sed_Feature	AF	angular fragments
Sed_Feature	GF	subangular fragments
Sed_Feature	VF	very angular fragments
Sed_Feature	BF	subrounded fragments
Sed_Feature	RF	rounded fragments
Sed_Feature	WF	well rounded fragments
Sed_Feature	AP	angular pebbles

Sed_Feature	GP	subangular pebbles
Sed_Feature	BP	subrounded pebbles
Sed_Feature	RP	rounded pebbles
Sed_Feature	VP	very angular pebbles
Sed_Feature	WP	well rounded pebbles
Sed_Feature	WS	well sorted
Sed_Feature	MS	moderately sorted
Sed_Feature	PS	poorly sorted
Sed_Feature	BS	bimodal sorting
Sed_Feature	YS	polymodal sorting
Sed_Feature	CU	coarsening upwards
Sed_Feature	FU	fining upwards
Sed_Feature	IR	impermeable (<0.1 mD)
Sed_Feature	LP	low permeability (0.1-10 mD)
Sed_Feature	MP	medium permeability (10-10000 mD)
Sed_Feature	HP	high permeability (>10000 mD)
Sed_Feature	PE	permeable
Sed_Feature	PO	porous
Sed_Feature	DC	dessication cracks
Sed_Feature	IC	intraformational cracks
Sed_Feature	MC	mud casts/cracks
Sed_Feature	SC	shrinkage cracks
Sed_Feature	YC	syneresis cracks
Sed_Feature	BT	bioturbated
Sed_Feature	BD	boudinage
Sed_Feature	PC	bounce marks/prod casts
Sed_Feature	BW	burrowing
Sed_Feature	CR	climbing ripples
Sed_Feature	CI	colloidal iron deposit
Sed_Feature	CF	compaction feature
Sed_Feature	FS	flame structures
Sed_Feature	IM	imbricate clasts
Sed_Feature	LC	load cast
Sed_Feature	PG	pebble lag
Sed_Feature	RW	reworked
Sed_Feature	RM	ripple marks
Sed_Feature	RU	rip-up clasts
Sed_Feature	RB	rootlet beds
Sed_Feature	SF	scour and fill
Sed_Feature	DY	sedimentary dyke
Sed_Feature	SP	slumping
Sed_Feature	DE	soft sediment deformation
Sed_Feature	ST	stylolites
Sed_Feature	VV	varving
Sed_Feature	WE	water escape structures
Sed_Feature	IP	in part
Sed_Feature	BU	near base of unit

Sed_Feature	MU	near middle of unit
Sed_Feature	XU	near top and base of unit
Sed_Feature	TU	near top of unit
Sed_Feature	TO	throughout
Min_Fos_Abund	A	abundant
Min_Fos_Abund	C	common (15-30%)
Min_Fos_Abund	D	secondary
Min_Fos_Abund	E	accessory
Min_Fos_Abund	M	minor
Min_Fos_Abund	N	dominant (>60%)
Min_Fos_Abund	R	rare
Min_Fos_Type	AN	ankerite
Min_Fos_Type	CA	calcite
Min_Fos_Type	CB	carbonate
Min_Fos_Type	CL	clay
Min_Fos_Type	DM	dolomite
Min_Fos_Type	GP	graphite
Min_Fos_Type	IL	illite
Min_Fos_Type	KA	kaolinite
Min_Fos_Type	PY	pyrite
Min_Fos_Type	QZ	quartz
Min_Fos_Type	SD	siderite
Min_Fos_Type	SU	sulphides
Min_Fos_Type	UN	unidentified mineral
Min_Fos_Type	BI	bivalves
Min_Fos_Type	BR	brachiopods
Min_Fos_Type	XR	carbonaceous remains
Min_Fos_Type	RC	carbonaceous root traces
Min_Fos_Type	FB	charcoal
Min_Fos_Type	FW	fossil wood
Min_Fos_Type	FO	fossils
Min_Fos_Type	GT	gastropods
Min_Fos_Type	MF	marine fossils
Min_Fos_Type	PF	plant fragments
Min_Fos_Type	PI	plant impressions
Min_Fos_Type	RT	root traces
Min_Fos_Type	RO	rootlets
Min_Fos_Type	SR	sediment filled root traces
Min_Fos_Type	HY	shells
Min_Fos_Type	WF	woody fragments
Min_Fos_Assoc	AM	amorphous
Min_Fos_Assoc	BN	bands
Min_Fos_Assoc	CM	cement
Min_Fos_Assoc	CT	clasts
Min_Fos_Assoc	CC	coarse grains
Min_Fos_Assoc	CB	concentrated at base
Min_Fos_Assoc	CN	concentrated at top

Min_Fos_Assoc	CI	concretions
Min_Fos_Assoc	KK	cone in cone structure
Min_Fos_Assoc	XL	crystals
Min_Fos_Assoc	DE	detrital
Min_Fos_Assoc	DS	disseminated
Min_Fos_Assoc	FB	fibrous
Min_Fos_Assoc	FF	fine grains
Min_Fos_Assoc	FR	fragments
Min_Fos_Assoc	GN	grains
Min_Fos_Assoc	BL	in blebs
Min_Fos_Assoc	CV	in cavities
Min_Fos_Assoc	CE	in cleat
Min_Fos_Assoc	PO	in pods
Min_Fos_Assoc	VN	in veins
Min_Fos_Assoc	VU	in vughs
Min_Fos_Assoc	FD	infilling fault discontinuities
Min_Fos_Assoc	IB	infilling of burrows
Min_Fos_Assoc	IC	intercalations
Min_Fos_Assoc	LM	laminae
Min_Fos_Assoc	LN	lenses
Min_Fos_Assoc	MX	matrix
Min_Fos_Assoc	ND	nodules
Min_Fos_Assoc	BP	on bedding planes
Min_Fos_Assoc	FP	on fracture planes
Min_Fos_Assoc	JN	on joints
Min_Fos_Assoc	OO	oolites
Min_Fos_Assoc	PB	pebbles
Min_Fos_Assoc	PT	pellets
Min_Fos_Assoc	FL	radial filaments
Min_Fos_Assoc	RE	replacement
Min_Fos_Assoc	RF	replacing fossils
Min_Fos_Assoc	RS	resinous
Min_Fos_Assoc	SN	staining
Min_Fos_Assoc	MS	Mudstone
Min_Fos_Assoc		
Est_Strength	S2	Loose
Est_Strength	S3	Medium dense
Est_Strength	S4	Dense
Est_Strength	S5	Very dense
Est_Strength	C1	Very soft
Est_Strength	C2	Soft
Est_Strength	C3	Firm
Est_Strength	C4	Stiff
Est_Strength	C5	Very stiff
Est_Strength	C6	Hard
Bed_Spacing	LL	thinly laminated (< 6 mm)
Bed_Spacing	LM	thickly laminated (6-20 mm)

Bed_Spacing	UB	very thinly bedded (20-60 mm)
Bed_Spacing	TB	thinly bedded (60-200 mm)
Bed_Spacing	MB	medium bedded (200-600 mm)
Bed_Spacing	CB	thickly bedded (600-2000 mm)
Bed_Spacing	VB	very thickly bedded (> 2 m)
Bed_Spacing	MA	massive/absent bedding
Bed_Spacing	IR	irregular spaced bedding
Defect_Type	BP	Bedding plane
Defect_Type	BZ	Broken zone
Defect_Type	FR	fracture (undifferentiated)
Defect_Type	JN	Joint
Defect_Type	SH	Shear zone
Defect_Type	CE	Coal cleat
Defect_Type	FT	Fault
Defect_Type	DB	Drilling induced break
Defect_Type	DZ	Drilling induced broken zone
Defect_Type	CL	Clay band
Defect_Type	CF	Contraction fracture
Defect_Type	XB	Cross bedding
Defect_Type	DY	Dyke
Defect_Type	FO	Foliation
Defect_Type	SI	Sill
Defect_Type	SO	Softened zone (non-tectonic)
Defect_Type	VN	Vein
Defect_Type	DS	Discing
Defect_Intact	I	Intact
Defect_Continuity	C	continuous across core width
Defect_Continuity	D	discontinuous across core width
Defect_Continuity	V	divaricates
Defect_Continuity	T	truncated within core width
Shape	C	concave/convex
Shape	I	irregular
Shape	P	planar
Shape	S	stepped
Shape	U	undulose
Roughness	P	polished
Roughness	R	rough
Roughness	K	slickensided
Roughness	S	smooth
Infill_Type	CA	calcite
Infill_Type	XR	carbonaceous remains
Infill_Type	CB	carbonate
Infill_Type	CL	clay
Infill_Type	CO	coal
Infill_Type	CU	crushed rock
Infill_Type	FO	fossils
Infill_Type	IO	iron oxide

Infill_Type	PF	plant fragments
Infill_Type	PY	pyrite
Infill_Type	QZ	quartz
Infill_Type	SA	sand
Infill_Type	SD	siderite
Infill_Type	SI	silt
Infill_Mode	A	absent
Infill_Mode	L	blebs
Infill_Mode	B	breccia
Infill_Mode	G	gouge
Infill_Mode	H	healed (cemented)
Infill_Mode	O	open
Infill_Mode	R	rubble
Infill_Mode	C	surface completely coated
Infill_Mode	P	surface partly coated
Infill_Mode	S	surface staining
Infill_Mode	T	trace
Weathering	F	Fresh
Weathering	W	Weathered
Weathering	S	Slightly weathered
Weathering	M	Moderately weathered
Weathering	D	Distinctly weathered
Weathering	H	Highly weathered
Weathering	E	Extremely weathered
Weathering	R	Residual soil
PL_Test_Type	A	axial
PL_Test_Type	D	diametral
PL_Test_Type	I	irregular
Sample_State	D	dry
Sample_State	W	wet
Dip_Orientation_Method	A	measured from ATV or Raax imagery
Dip_Orientation_Method	D	directly measured from reference line
Dip_Orientation_Method	E	estimated
Dip_Orientation_Method	I	indirectly measured
Structure_Sets		0.5 Massive, no or few joints/defects.
Structure_Sets		1 One defect/joint set, foliation included.
Structure_Sets		1.5 One defect set plus random.
Structure_Sets		2 Two defect sets.
Structure_Sets		2.5 Two defect sets plus random.
Structure_Sets		3 Three defect sets.
Structure_Sets		3.5 Three defect sets plus random.
Structure_Sets		4 Four or more defect sets, random, heavily defected "sugar cube" etc
Structure_Sets		5 Crushed rock, earthlike.
Friability	CO	Compact
Friability	FR	Friable
Friability	VF	Very Friable
Bedding_Development	MA	Massive

Bedding_Development	PD	Poorly Developed
Bedding_Development	WD	Well Developed
Bedding_Development	VWD	Very Well Developed
Joint_Alteration	A	Tightly healed, hard, non-softening, impermeable filling, e.g. quartz,
Joint_Alteration	B	Unaltered/Fresh joint walls, or surface staining only
Joint_Alteration	C	Slightly altered joint walls (one grade higher than intact rock).
Joint_Alteration	D	Frictional materials: sand, silt, calcite, clayey-silt or clayey-sand coati
Joint_Alteration	E	Altered joint walls (two grades higher than intact rock). Cohesive ma
Joint_Alteration	F	Frictional materials. Sandy particles, clay free, disintegrated rock (no
Joint_Alteration	G	Hard cohesive materials. Strongly over-consolidated, non-softening c
Joint_Alteration	H	Soft cohesive materials. Medium to low overconsolidated, softening
Joint_Alteration	J	Swelling clays, e.g. montmorillonite

carbonate, epidote.

ngs (small clay fraction), non-softening.

terials: softening or low friction clay mineral coatings, i.e. kaolinite, mica, chlorite, talc, gypsum, graphite
n-softening)

lay

clay

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-01	0	3.4	3.40			KL												Organics; no recovery; casing reamed to 6.10 m
DHGH-14-01	3.4	4.69	1.29			SS	FF	E	G					5				regolith up to 6.00 m
DHGH-14-01	4.69	5.54	0.85			KL												
DHGH-14-01	5.54	8.13	2.59			SS	FF	E	G					7				
DHGH-14-01	8.13	9.22	1.09			KL												
DHGH-14-01	9.22	9.84	0.62			SS	FF	E	G									
DHGH-14-01	9.84	11.33	1.49			ST								5				
DHGH-14-01	11.33	12.62	1.29	GT-14-001		SS	VV	D	G					10				GT-14-001 IS 11.69-12.07; ROOF OF COAL SEAM
DHGH-14-01	12.62	12.89	0.27			KL												
DHGH-14-01	12.89	13.09	0.20	140000		ST		D	G									
DHGH-14-01	13.09	13.4	0.31	140001		CO	C3		K						M	CB	BL	No infill; FEW CLEATS WITH NO INFILL First 0.08 m of core is crushed; 1 3 CM THICK MDST BAND; NO INFILL; 40 % BRIGHT COAL
DHGH-14-01	13.4	13.52	0.12	140002		ST		D	G									
DHGH-14-01	13.52	13.95	0.43	140003		CO	C3		K									FEW LESS THAN 1 CM MDST BANDS; 40 TO 50 % BRIGHT COAL; TRACE CARB INFILL; MODERATELY DEVELOPED CLEATS IN THE LAST 10 CM OF SAMPLE
DHGH-14-01	13.95	14.57	0.62	140004		CO	C4		K					5	M	PY	BN	PY BANDS AND PY BLEBS UP TO 3%; QRTZ CARB BANDS UP TO 1 % IN CLEAT FILL; CLEATS ARE IN BANDS AND OCCUR IRREGULARLY THROUGHOUT THE SAMPLE
DHGH-14-01	14.57	14.77	0.20	140005		CO	C5		K						M	CB	BN	PRIMARILY DULL COAL WITH MDST BANDS; MINIMAL CRB INFILL
DHGH-14-01	14.77	14.97	0.20	140006		SS	FF	E	G									
DHGH-14-01	14.97	17.89	2.92	GT-14-002		SS	FF	L	G	ST				2				GT-14-002 IS 17.29-17.71; 2.5 M BELOW COAL SEAM
DHGH-14-01	17.89	21.71	3.82			ST		E	G									
DHGH-14-01	21.71	21.76	0.05			KL												
DHGH-14-01	21.76	25.39	3.63			ST		D	G					3				
DHGH-14-01	25.39	30.15	4.76	GT-14-003		MS		D	G									GT-14-003 IS 27.02-27.39; 2.6 M ABOVE COAL SEAM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-01	44.02	49.14	5.12			SS	FF	L	G						M	QZ	VN	
DHGH-14-01	49.14	49.36	0.22			KL												
DHGH-14-01	49.36	50.6	1.24			SS	FF	L	G									Alignment of 0.5 cm black elongated grains at 45 BCA
DHGH-14-01	50.6	51.82	1.22			ST		D	G									
DHGH-14-01	51.82	53.42	1.60			SS	FF	L	G					35	M	CB	VN	
DHGH-14-01	53.42	53.68	0.26			KL												
DHGH-14-01	53.68	55.99	2.31			SS	FF	L	G					35				
DHGH-14-01	55.99	56.93	0.94			ST		E	G									
DHGH-14-01	56.93	57.26	0.33			ST		L	G	XX								
DHGH-14-01	57.26	66.79	9.53			ST		D	G					50				
DHGH-14-01	66.79	66.89	0.10			KL												
DHGH-14-01	66.89	71.31	4.42			SS	VV	E	G					35	M	CB	VN	Irregular CB infilling from 68.85-69.64 m
DHGH-14-01	71.31	73.77	2.46			ST		D	G					40				
DHGH-14-01	73.77	75.7	1.93			SS	FF	L	G						M	CB	VN	
DHGH-14-01	75.7	75.83	0.13			KL												
DHGH-14-01	75.83	82.74	6.91			SS	FF	L	G						M	QZ	VN	
DHGH-14-01	82.74	82.79	0.05			KL												
DHGH-14-01	82.79	83.3	0.51			SS	FF	L	G					18				
DHGH-14-01	83.3	86.35	3.05	GT-14-004		ST		D	G									GT-14-004 IS 85.71-86.18; 1 M ABOVE COAL SEAM
DHGH-14-01	86.35	86.84	0.49			XM		D	G						M	CB	BN	
DHGH-14-01	86.84	87.04	0.20	140009		XM		D	G						M	CB	BN	
DHGH-14-01	87.04	87.24	0.20	140010		CO	C6		K						M	CB	BN	CARB CLEAT INFILL PRIMARILY IN BUTT CLEATS; UP TO 2 CM MDST BANDS IN SAMPLE; UP TO 10 % BRIGHT COAL
DHGH-14-01	87.24	88.1	0.86	140011		CO	C2		K						M	CB	BN	MINOR CARB CLEAT FILL; NO SULPHIDES; 2 BANDS OF DULL COAL 3 CM THICK

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-02	21.79	21.88	0.09			KL												
DHGH-14-02	21.88	24.77	2.89			ST		D	G									
DHGH-14-02	24.77	24.99	0.22			KL												
DHGH-14-02	24.99	25.24	0.25			ST		D	G									
DHGH-14-02	25.24	25.69	0.45			KL												
DHGH-14-02	25.69	27.12	1.43			ST		E	G	SS								
DHGH-14-02	27.12	27.16	0.04			KL												
DHGH-14-02	27.16	28.94	1.78			ST		D	G	SS				5				
DHGH-14-02	28.94	29.2	0.26			KL			K									
DHGH-14-02	29.2	29.27	0.07			CO			K									
DHGH-14-02	29.27	29.61	0.34			KL				CO								
DHGH-14-02	29.61	29.68	0.07			KL												
DHGH-14-02	29.68	30	0.32			ST		D	G									
DHGH-14-02	30	30.2	0.20	140025		ST		D	G									
DHGH-14-02	30.2	30.5	0.30	140026		CO			K									80% BRIGHT COAL; WELL DEVELOPED CLEATS; 1% CB CLEAT INFILL IN THE LAST 10 CM OF SAMPLE; NO SULPHIDES; THERE IS A 1 CM BAND OF MUDSTONE IN NEAR THE CLEAT FILL TOWARDS THE END OF THE SAMPLE; IN THE FIRST 8 CM BELOW THE SAMPLE, THERE IS OVER 30% CB VEINING INFILL
DHGH-14-02	30.5	30.7	0.20	140027		MS			K									FLOOR SAMPLE; UPPER 8 CM HAS 30% CB VEINING; GRADATIONAL CONTACT WITH COAL
DHGH-14-02	30.7	32.62	1.92			MS		D	G					5				
DHGH-14-02	32.62	32.91	0.29			SS	VV	E	G	ST								
DHGH-14-02	32.91	33.25	0.34	GT-14-006		SS	VV	E	G	ST								GT-14-006 32.91-33.25; 10 ABOVE COAL SEAM; UNIT ABOVE THIS ONE IS A FISSILE MUDSTONE
DHGH-14-02	33.25	35.29	2.04			SS	VV	E	G	ST								
DHGH-14-02	35.29	35.66	0.37	GT-14-007		SS	VV	E	G	ST								GT-14-007 35.39-35.66; 3 M ABOVE COAL SEAM
DHGH-14-02	35.66	37.18	1.52			SS	VV	E	G	ST								
DHGH-14-02	37.18	37.48	0.30	GT-14-008		SS	VV	E	G	ST								GT-14-008 IS 37.18-37.48; 1 M ABOVE COAL SEAM
DHGH-14-02	37.48	37.8	0.32			ST		D	G					8				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-04	53.25	54.57	1.32			XM			K									
DHGH-14-04	54.57	54.66	0.09			KL												
DHGH-14-04	54.66	56.4	1.74			ST		L	G									
DHGH-14-04	56.4	60.33	3.93			SS	FF	L	G					5				
DHGH-14-04	60.33	60.53	0.20	140042		SS	FF	L	G									CRB BANDS ARE WITHIN 6 CM OF THE COAL CONTACT
DHGH-14-04	60.53	60.9	0.37	140043		CO	C6		K						CB	M	BN	CRB CLEAT FILL UP TO 1%; PY BANDS ABD STRINGERS UP TO 2 %; LESS THAN 10% BRIGHT COAL; SEVERAL CM SCALE BANDS OF MUDSTONE; CORE IS VERY SOLID BUT TOO SMALL FOR GEOTECH AND LIKELY NOT THE TARGET SEAM
DHGH-14-04	60.9	61.1	0.20	140044		ST		D	G	SS								CLEAN SLT
DHGH-14-04	61.1	65.27	4.17			ST		D	G	SS								
DHGH-14-04	65.27	65.32	0.05			KL												
DHGH-14-04	65.32	66.31	0.99			ST		D	G	SS								
DHGH-14-04	66.31	70.61	4.30			SS	FF	L	G									
DHGH-14-04	70.61	70.89	0.28			ZM			K									
DHGH-14-04	70.89	71.07	0.18			XM			K									
DHGH-14-04	71.07	71.69	0.62			MS		D	G									
DHGH-14-04	71.69	72.32	0.63			ST		D	G									
DHGH-14-04	72.32	72.37	0.05			KL												
DHGH-14-04	72.37	78.88	6.51			ST		D	G									
DHGH-14-04	78.88	86.95	8.07			SS	VV	E	G	ST								
DHGH-14-04	86.95	89.46	2.51			SS	VV	L	G					10				
DHGH-14-04	89.46	95.22	5.76			SS	VV	E	G	ST								
DHGH-14-04	95.22	95.41	0.19			KL												
DHGH-14-04	95.41	95.56	0.15			MD			K									
DHGH-14-04	95.56	98.16	2.60			ST		D	G									
DHGH-14-04	98.16	98.26	0.10			KL												
DHGH-14-04	98.26	98.87	0.61	GT-14-015		XM		D	G									NO ROOF SAMPLE; USED FOR GEOTECH; SAMPLE GT-14-015 IS 98.55-98.85

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-05	9.59	10.25	0.66			ST		D	G									
DHGH-14-05	10.25	10.48	0.23			SS	VV	E	G	ST								
DHGH-14-05	10.48	10.52	0.04			KL												
DHGH-14-05	10.52	11.12	0.60			SS	VV	L	G									
DHGH-14-05	11.12	11.24	0.12			ZM			K	MD								
DHGH-14-05	11.24	11.95	0.71			ST		D	G									
DHGH-14-05	11.95	12.42	0.47			KL												
DHGH-14-05	12.42	12.78	0.36			ST		D	G									
DHGH-14-05	12.78	13.12	0.34			KL												
DHGH-14-05	13.12	14.8	1.68			ST		D	G					2				
DHGH-14-05	14.8	15.26	0.46			KL												
DHGH-14-05	15.26	15.34	0.08			CO												
DHGH-14-05	15.34	16.43	1.09			XM			K					3				
DHGH-14-05	16.43	16.58	0.15			ST		D	G									
DHGH-14-05	16.58	16.76	0.18			KL												
DHGH-14-05	16.76	18.02	1.26			ST		D	G									
DHGH-14-05	18.02	18.12	0.10			KL												
DHGH-14-05	18.12	19.36	1.24			ST		D	G									
DHGH-14-05	19.36	19.63	0.27			KL												
DHGH-14-05	19.63	20.88	1.25			SS	VV	E	G	ST								
DHGH-14-05	20.88	21.04	0.16			KL												
DHGH-14-05	21.04	21.87	0.83			SS	VV	E	G	ST								
DHGH-14-05	21.87	22	0.13			KL												
DHGH-14-05	22	24.32	2.32			SS	VV	E	G	ST				2				
DHGH-14-05	24.32	24.41	0.09			KL												
DHGH-14-05	24.41	25.33	0.92			SS	VV	E	G	ST								
DHGH-14-05	25.33	25.45	0.12			MD			K	SI								
DHGH-14-05	25.45	25.61	0.16			KL												
DHGH-14-05	25.61	25.69	0.08			XM			K									
DHGH-14-05	25.69	25.89	0.20	140050		ST	C6		K						QZ	M		MINOR CARBONACEOUS BANDS; QTZ BAND SUUP TO 3%

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-05	25.89	26.09	0.20	140051		CO	C3		K									90% DULL COAL; CM SCALE MDST BANDS; NO INFILL;
DHGH-14-05	26.09	26.36	0.27			KL				CO								
DHGH-14-05	26.36	27.22	0.86	140052		CO	C6		K						CB	M		THERE ARE TWO 3-5 CM PARTINGS THAT HAVE COAL STRINGERS IN THEM; CM SCALE MDST BANDS ARE FREQUENT; 2 %CB INFILL IN CLEATS AND BANDS; NO SULPHIDES
DHGH-14-05	27.22	27.42	0.20	140053		CO	C5		K						CB	M	CE	CB CLEAT FILL OCCURS IN BUTT CLEATS; MULTIPLE CM SCALE BANDS OF MDST; 10% BRIGHT ;
DHGH-14-05	27.42	27.62	0.20	140054		XS	VV		K	ST								XS GRADATIONAL CONTACT; CRB INFILL NEAR THE CONTACT UP TO 3%;
DHGH-14-05	27.62	28.18	0.56			ST												
DHGH-14-05	28.18	28.47	0.29			KL												
DHGH-14-05	28.47	28.67	0.20			ST		D	G	MS								
DHGH-14-05	28.67	31.42	2.75			SS	VV	L	G	ST				20				
DHGH-14-05	31.42	31.76	0.34			KL												
DHGH-14-05	31.76	33.51	1.75			SS	VV	E	G	ST								
DHGH-14-05	33.51	33.7	0.19			KL								19				
DHGH-14-05	33.7	34.11	0.41			ST		D	G									
DHGH-14-05	34.11	34.19	0.08			KL												
DHGH-14-05	34.19	39.13	4.94			ST		D	G	SS				50				
DHGH-14-05	39.13	39.19	0.06			KL												
DHGH-14-05	39.19	41.6	2.41			ST		D	G	SS				9				MICRO THRUST FOLDAT 39.80 M
DHGH-14-05	41.6	41.73	0.13			KL												
DHGH-14-05	41.73	46.07	4.34			ST		D	G	SS				40				
DHGH-14-05	46.07	46.17	0.10			KL												
DHGH-14-05	46.17	49.17	3.00			ST		D	G	SS				24				
DHGH-14-05	49.17	49.18	0.01			XM			K									1 cm of xm remains from the original 21 cm unit; the bottom 20 cm was used in the roof sample
DHGH-14-05	49.18	49.38	0.20	140055		XM		D	G						QZ	M	VN	COALY MUDSTONE WITH QTZ CARB INFILL AS VEINS AND STRINGERS UP TO 4%; PYRITE BLEBS AND BANDS UP TO 4%

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-05	49.38	49.58	0.20	140056		CO	C6		K						QZ	M	VN	BORDER LINE COALY MUDSTONE; MDST BANDS ARE COMMON AND OVER 90% OF THE COAL IS DULL; QZ AND CRB VEINING IS PARRALLEL TO BEDDING WITH RACE AMOUNTS OCCURRING AS CLEAT FILL; NO SULPHIDES
DHGH-14-05	49.58	50.12	0.54	140057		CO	C5		K						QZ	M	CE	ALL JOINTS ARE PLANAR POLISHED; 10% BRIGHT COAL; MDST BANDS ARE COMMON AND UP TO 1 CM THICK; NO SULHIDES; QTZ CRB CLEAT FILL;
DHGH-14-05	50.12	50.35	0.23			KL				CO								
DHGH-14-05	50.35	50.95	0.60	140058		CO	C5		K									SIMILAR POLISHED SURFACES AS LITHOLOGY ABOVE; 85-95% DULL COAL; ONE 6 CM BAND OF BRIGHT COAL WITH NO CLEAT FILL;TR CRB VEINING/STRINGERS
DHGH-14-05	50.95	51.15	0.20	140059		CO	C4		K									40% BRIGHT COAL; SOLID CORE; WELL DEVELOPED CLEATS; 1% CRB FILL IN FACE CLEATS; NO SULPHIDES; ONE 2 CM BAND OF MDST
DHGH-14-05	51.15	51.89	0.74	GT-14-016		XM			K					4				NO FLOOR SAMPLE; FLOOR SAMPLE WAS USED FOR GT-14-016 IS 51.18-51.38
DHGH-14-05	51.89	54.28	2.39			SS	VV	E	G	ST								
DHGH-14-05	54.28	54.45	0.17			KL												
DHGH-14-05	54.45	55.85	1.40			SS	VV	L	G	ST				20				
DHGH-14-05	55.85	55.95	0.10			XM			K									
DHGH-14-05	55.95	56.1	0.15			KL												
DHGH-14-05	56.1	57.21	1.11			XM			K									
DHGH-14-05	57.21	57.46	0.25			CO			K					5				
DHGH-14-05	57.46	57.62	0.16			XM			K									
DHGH-14-05	57.62	59.42	1.80			ST		D	G									
DHGH-14-05	59.42	59.64	0.22			KL												
DHGH-14-05	59.64	61.62	1.98			ST		D	G									
DHGH-14-05	61.62	61.88	0.26			KL												
DHGH-14-05	61.88	63.94	2.06			ST		D	G									
DHGH-14-05	63.94	64.14	0.20	140060		ZM			K						CB	M	VN	COALY MUDSTONE WITH UP TO 8% QTZ CRB INFILL PARALLEL TO BEDDING

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-05	64.14	64.62	0.48	140061		CO	C2		K						CB	M	BL	65% BRIGHT COAL; WELL DEVELOPED BRIGHT CLEATS; TWO SMALL 5 CM PARTINGS THAT ARE IRREGULAR ANGULAR AND CAUSE THE FIRST TWO "KICKS" IN THE GEOPHYSICAL LOG TO CREATE THE CHRISTMAS TREE LOOK; NO SULPHIDES; TRACE MDST BANDS
DHGH-14-05	64.62	64.77	0.15	140062		XM			K									XM WITH ANTHRACITE STRINGERS
DHGH-14-05	64.77	65.07	0.30	140063		CO	C3		K						PY	M	BN	3 CM PY BAND RIGHT AT THE TOP OF THE SAMPLE; TR PY BLBS; 1% CRB STRINGERS PARRALEL TO BEDDING; 60 % BRIGHT COAL; COAL GRADE GRADUALLY BECOMES WORSE TOWARDS THE BOTTOM OF THE SAMPLE; THERE IS ONE 1 CM BAND OF MDST
DHGH-14-05	65.07	65.45	0.38	140064		ZM			K				6					ZM WITH ANTHRACITE STRINGERS
DHGH-14-05	65.45	66.2	0.75	140065		CO	C3		K						CB	M	VN	55% BRIGHT COAL; GRADE OF COAL GRADATIONALLY BECOMES WORSE TOWARDS THE BOTTOM OF THE SAMPLE; CRB UP TO 1% AT THE BOTTOOME OF THE SAMPLE; MDST BANDS LESS THAN 1 CM PCCUR IRREGUKARLY THROUGHT THE SAMPLE
DHGH-14-05	66.2	66.4	0.20	140066		MS			K						QZ	M	VN	XM WITH IRREGULAR WTZ VEINING
DHGH-14-05	66.4	67.02	0.62			MS			K									
DHGH-14-05	67.02	68.2	1.18			ST		D	G									
DHGH-14-05	68.2	68.35	0.15			KL												
DHGH-14-05	68.35	69.45	1.10			ST		D	G									
DHGH-14-05	69.45	69.9	0.45			SS	FF	L	G									
DHGH-14-05	69.9	70.12	0.22			KL												
DHGH-14-05	70.12	71.83	1.71			SS	FF	L	G									
DHGH-14-05	71.83	72	0.17			KL												
DHGH-14-05	72	75.04	3.04			SS	FF	L	G									
DHGH-14-05	75.04	75.06	0.02			MD			K									
DHGH-14-05	75.06	77.74	2.68			SS	VV	D	G	ST				14				
DHGH-14-05	77.74	80.15	2.41			SS	FF	L	G					10				
DHGH-14-05	80.15	80.37	0.22			KL												
DHGH-14-05	80.37	81.64	1.27			ST		D	G	SS				10				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-05	111.75	112	0.25			MS			K									
DHGH-14-05	112	112.57	0.57			XM			K									
DHGH-14-05	112.57	113.35	0.78			ST		D	G									
DHGH-14-05	113.35	114.04	0.69			XM			K									
DHGH-14-05	114.04	114.2	0.16			ZM			K					10				
DHGH-14-05	114.2	114.34	0.14			CO			K									
DHGH-14-05	114.34	114.5	0.16			MS			K									
DHGH-14-05	114.5	114.53	0.03			ZM			K									
DHGH-14-05	114.53	115.33	0.80			MS			K					9				
DHGH-14-05	115.33	115.73	0.40			SS	FF	E	G									
DHGH-14-05	115.73	116.47	0.74			ST		E	G									
DHGH-14-05	116.47	120.6	4.13			SS	FF	L	G					8				
DHGH-14-06	0	1.5	1.50			KL												casing up to 13.72; regolith up to 10.2 m
DHGH-14-06	1.5	2	0.50			SS	NA	L	B									
DHGH-14-06	2	3.34	1.34			KL												
DHGH-14-06	3.34	3.54	0.20	140067		CO	C6		K	MS								WEATHERED; HAS A MUDDY TEXTURE; NO INFILL
DHGH-14-06	3.54	3.74	0.20	140068		SS	NA	L	B	PB								LIKELY DRILL CAVE
DHGH-14-06	3.74	3.94	0.20	140069		CO	C6		K									UNIFORM COAL; WEATHER WITH MUDDY TEXTURE; COAL IS MOIST; NO INFILL; DULL COAL
DHGH-14-06	3.94	4.89	0.95	140070		CO	C6		K									UNIFORM COAL; WEATHER WITH MUDDY TEXTURE; COAL IS MOIST; NO INFILL; DULL COAL
DHGH-14-06	4.89	5.89	1.00	140071		CO	C6		K									UNIFORM COAL; WEATHER WITH MUDDY TEXTURE; COAL IS MOIST; NO INFILL; DULL COAL
DHGH-14-06	5.89	6.39	0.50			KL												
DHGH-14-06	6.39	6.5	0.11	140072		ST		D	G									MINOR CARBONACEOUS BANDS
DHGH-14-06	6.5	6.88	0.38			KL				CO								
DHGH-14-06	6.88	7.3	0.42	140073		CO	C6		K						CB	M		5% BRIGHT COAL BANDS; ;1 % CRB INFILL; MDST BANDS ARE COMMON; FIRST INTACT PIECE OF COAL IN THIS HOLE; STILL HAS A MUDDY/GRAINY TEXTURE;
DHGH-14-06	7.3	7.71	0.41			KL			K									
DHGH-14-06	7.71	8.12	0.41	140074		ST		D	G									NO CARBONACEOUS BANDS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-06	8.12	8.42	0.30			KL				CO								
DHGH-14-06	8.42	8.82	0.40	140075		CO	C5		K									CRUSHED CORE; STILL HAS A MUDDY GRAINY TEXTURE; NO DETECTABLE INFILL; 10% BRIGHT COAL
DHGH-14-06	8.82	9.12	0.30	140076		CO	C6		K	MS								CORE HAD A MUD TEXTURE; WHEN FINGER PUSHED IN THE IMPRINT WILL STAY AS A PERFECT MOLD; WEATHERED; LESS THAN 5% BRIGHT COAL BITS; NO DETECTABLE INFILL
DHGH-14-06	9.12	9.6	0.48	140077		SS	NA	L	B	PB								LIKELY DRILL CAVE
DHGH-14-06	9.6	9.85	0.25			KL				CO								
DHGH-14-06	9.85	10.15	0.30	140078		CO	C6		K									COALY MUDSTONE TO COAL; PIECES DO NOT FIT TOGETHER; ALSO PROBABLY DRILL CAVE; HARD TO CORRELATE TO GEOPHYSICAL LOG; NO SULPHIDES; EXPECT BAD COAL QUALITY
DHGH-14-06	10.15	10.8	0.65			KL												
DHGH-14-06	10.8	11.05	0.25	140079		CO	C5		K									UP TO 10% BRIGHT COAL BITS; CORE IS BRITTLE AND FRACTURED/CRUSHED; NO DETECTABLE SULPHIDES; WEATHERED
DHGH-14-06	11.05	11.28	0.23			KL				CO								
DHGH-14-06	11.28	11.5	0.22	140080		ST			K									TRACE ANTHRACITE STRINGERS
DHGH-14-06	11.5	11.98	0.48	140081		CO	C5		K									UP TO 10% BRIGHT COAL BITS; MDST BANDS ARE COMMON; CORE IS STILL IN TACT; NO SULPHIDES
DHGH-14-06	11.98	12.18	0.20	140082		CO	C6		K						CB	M	BN	LESS THAN 5% BRIGHT COAL BITS; WELL DEVELOPED CLEATS ON TWO BRIGHT COAL BANDS; ONE BAND OF PYRITE 2 CM THICK THAT OCCURS IN CLEATS AS WELL; CRB INFILL
DHGH-14-06	12.18	12.38	0.20	140083		ST												CLEAN SLT
DHGH-14-06	12.38	13.22	0.84			ST		E	G					8				
DHGH-14-06	13.22	13.37	0.15			KL												
DHGH-14-06	13.37	14.18	0.81			ST		E	G									
DHGH-14-06	14.18	14.25	0.07			KL												
DHGH-14-06	14.25	14.54	0.29			ST		E	G									
DHGH-14-06	14.54	17.89	3.35			SS	FF	L	G					18				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-06	38.64	40.15	1.51			ST		D	G									
DHGH-14-06	40.15	40.32	0.17			CO			K									
DHGH-14-06	40.32	43.84	3.52			ST		D	G					5				
DHGH-14-06	43.84	44.26	0.42			KL												
DHGH-14-06	44.26	45.36	1.10			SS	FF	L	G									
DHGH-14-06	45.36	45.52	0.16			KL												
DHGH-14-06	45.52	51.91	6.39			ST		D	G									
DHGH-14-06	51.91	54.27	2.36			SS	FF	E	G	ST								
DHGH-14-06	54.27	56.07	1.80			ST		D	G	SS				20				
DHGH-14-06	56.07	58.09	2.02			ST		D	G									
DHGH-14-06	58.09	58.37	0.28			KL												
DHGH-14-06	58.37	60.24	1.87			ST		D	G									
DHGH-14-06	60.24	60.91	0.67			SS	VV	E	G	ST								UP TO 10% FOSSILS
DHGH-14-06	60.91	63.43	2.52			SS	VV	E	G					42				
DHGH-14-06	63.43	63.55	0.12			CO			K									
DHGH-14-06	63.55	63.79	0.24			XM			K									
DHGH-14-06	63.79	64.24	0.45			MS		D	G					32				
DHGH-14-06	64.24	64.99	0.75			ST		D	G									
DHGH-14-06	64.99	66.53	1.54			SS	VV	D	G	ST								
DHGH-14-06	66.53	73.28	6.75			SS	FF	L	G					18				
DHGH-14-06	73.28	74.03	0.75			ST		E	G									
DHGH-14-06	74.03	74.23	0.20	140089		ST		D	G						CB	M	VN	SLT WITH 1 % CRB VN
DHGH-14-06	74.23	74.43	0.20	140090		CO	C5		K						CB	M	VN	BRIGHT COAL UPTO 10%; CRB AND QZ VEIING IS COMMON WITH A COMBINED AMOUNT OF 10%; ALL COAL IN THIS SEAM IS VERY SIMILAR; ANTHRACITE BANDS ARE IRREGULARLY SPACED; PY BANDS OCCUR IN ALL COAL SAMPLES; MDST BANDS ARE COMMON UP TO 3 CM; CORE LOOKS LIKE IT WAS MISHANDLED ON THE DRILL RIG AS SOME CORE DOES NOT LINE UP PROPERLY; COULD BE BECAUSE OF ITS BRITTLE NATURE WHEN BEING TAKEN OUT OF THE SPLITS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-06	74.43	75.26	0.83	140091		CO	C5		K						CB	M	VN	BRIGHT COAL UPTO 10%; CRB AND QZ VEIING IS COMMON WITH A COMBINED AMOUNT OF 10%; ALL COAL IN THIS SEAM IS VERY SIMILAR; ANTHRACITE BANDS ARE IRREGULARLY SPACED; PY BANDS OCCUR IN ALL COAL SAMPLES; MDST BANDS ARE COMMON UP TO 3 CM; CORE LOOKS LIKE IT WAS MISHANDLED ON THE DRILL RIG AS SOME CORE DOES NOT LINE UP PROPERLY; COULD BE BECAUSE OF ITS BRITTLE NATURE WHEN BEING TAKEN OUT OF THE SPLITS
DHGH-14-06	75.26	76.09	0.83	140092		CO	C5		K						CB	M	VN	BRIGHT COAL UPTO 10%; CRB AND QZ VEIING IS COMMON WITH A COMBINED AMOUNT OF 10%; ALL COAL IN THIS SEAM IS VERY SIMILAR; ANTHRACITE BANDS ARE IRREGULARLY SPACED; PY BANDS OCCUR IN ALL COAL SAMPLES; MDST BANDS ARE COMMON UP TO 3 CM; CORE LOOKS LIKE IT WAS MISHANDLED ON THE DRILL RIG AS SOME CORE DOES NOT LINE UP PROPERLY; COULD BE BECAUSE OF ITS BRITTLE NATURE WHEN BEING TAKEN OUT OF THE SPLITS
DHGH-14-06	76.09	76.98	0.89	140093		CO	C5		K						CB	M	VN	BRIGHT COAL UPTO 10%; CRB AND QZ VEIING IS COMMON WITH A COMBINED AMOUNT OF 10%; ALL COAL IN THIS SEAM IS VERY SIMILAR; ANTHRACITE BANDS ARE IRREGULARLY SPACED; PY BANDS OCCUR IN ALL COAL SAMPLES; MDST BANDS ARE COMMON UP TO 3 CM; CORE LOOKS LIKE IT WAS MISHANDLED ON THE DRILL RIG AS SOME CORE DOES NOT LINE UP PROPERLY; COULD BE BECAUSE OF ITS BRITTLE NATURE WHEN BEING TAKEN OUT OF THE SPLITS
DHGH-14-06	76.98	77.18	0.20	140094		CO	C5		K						CB	M	VN	BRIGHT COAL UP TO 10%; 10% CRB VEINING AND ONE 3 CM QZ VEIN; COAL IS SOIL; HOMOGENEOUS THROUGH SAMPLE; CRB OCCURS PRIMARILY IN BUTT CLEATS
DHGH-14-06	77.18	77.38	0.20	140095		SS	VV	E	G	ST					CB	M	CE	SST WITH PY BAND NEAR THE CONTACT
DHGH-14-06	77.38	80.02	2.64	GT-14-017		SS	VV	E	G	ST				48				GT-14-017 IS 77.85-78.12; 30cm below Coal seam
DHGH-14-06	80.02	86.86	6.84			SS	FF	L	G									
DHGH-14-06	86.86	89.54	2.68			SS	VV	E	G	ST				35				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-06	89.54	89.76	0.22			KL												
DHGH-14-06	89.76	90.28	0.52			MS			K									
DHGH-14-06	90.28	90.4	0.12			KL												
DHGH-14-06	90.4	92.99	2.59			MS			K									
DHGH-14-06	92.99	93.21	0.22			CO			K									
DHGH-14-06	93.21	93.52	0.31			XM			K									
DHGH-14-06	93.52	93.72	0.20	140096		XM			K									CLEAN XM
DHGH-14-06	93.72	94.2	0.48	140097		CO	C4		K						CB	M	VN	40% BRIGHT COAL; WELL DEFINED CLEATS; CRB VN UP TO 4% AND 1% CRB CLEAT INFILL; NO SULPHIDES
DHGH-14-06	94.2	94.4	0.20	140098		SS	FF	D	G	ST								SLT WITH 1% PY; OCCURS AS A BLEB
DHGH-14-06	94.4	100.46	6.06			SS	FF	D	G	ST			54					UP TO 2% FOSSILS NEAR LOWER CONTACT
DHGH-14-06	100.46	100.75	0.29			KL												
DHGH-14-06	100.75	108.56	7.81			ST		D	G									
DHGH-14-06	108.56	108.67	0.11			KL												
DHGH-14-06	108.67	115.2	6.53			SS	FF	E	G	ST			32					
DHGH-14-06	115.2	115.4	0.20	140099		SS	FF	E	G	ST								CLEAN SST
DHGH-14-06	115.4	115.76	0.36	140100		CO	C5		K						CB	M	VN	UP TO 10% CRB IN THE FIRST 10 CM OF SAMPLE; IRREGULAR crb vn for the rest of the sample UP TO 2%; 10% BRIGHT COAL; 5 MDST BANDS UP TO 5 MM THICK
DHGH-14-06	115.76	115.96	0.20	140101		ST		D	G									CLEAN SLT
DHGH-14-06	115.96	116.18	0.22			ST		D	G									
DHGH-14-07	0	2.14	2.14			KL												
DHGH-14-07	2.14	2.23	0.09			GV												
DHGH-14-07	2.23	5.21	2.98			KL												
DHGH-14-07	5.21	5.28	0.07			SS	VF	A	G									
DHGH-14-07	5.28	6.45	1.17			KL												
DHGH-14-07	6.45	10.19	3.74		70	SS	VF	A	G			PL	37					
DHGH-14-07	10.19	10.34	0.15			KL												
DHGH-14-07	10.34	12.81	2.47		70	SS	VF	A	G			PL	32					
DHGH-14-07	12.81	13.01	0.20			KL												
DHGH-14-07	13.01	13.42	0.41		70	SS	VF	A	G			PL	32					

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-07	13.42	13.87	0.45			MS		B	G									
DHGH-14-07	13.87	13.97	0.10			KL												No Seam Roof
DHGH-14-07	13.97	14.28	0.31			KL				CO								No Seam Roof
DHGH-14-07	14.28	15.25	0.97	145001		CO	C3		K						E	CB	CE	Seam; well defined anthracite bands that have prominent cleating; no sulphide infill;
DHGH-14-07	15.25	15.45	0.20	145002		CO	C5		K			P			C	CB	CE	Seam Floor; increase in ms bands compared to sample above; ms bands up to 8 mm thick and occur irregularly
DHGH-14-07	15.45	15.69	0.24	145003		ST		B	G				PD	35				Floor
DHGH-14-07	15.69	21.34	5.65			ST		B	G				PD	35				
DHGH-14-07	21.34	21.42	0.08			KL												
DHGH-14-07	21.42	22.82	1.40			ST		B	G			I	PD	33				
DHGH-14-07	22.82	26.6	3.78		70	SS	VF	A	G			G	PL	30				
DHGH-14-07	26.6	26.63	0.03			KL												
DHGH-14-07	26.63	32.73	6.10			SS	VF	A	G				PD	30				
DHGH-14-07	32.73	37.28	4.55			ST		B	G					25				
DHGH-14-07	37.28	37.56	0.28			ZM		D	K			P			M	CB	VN	
DHGH-14-07	37.56	38.22	0.66		80	SS	VF	A	G				PD	40	C	QZ	VN	
DHGH-14-07	38.22	38.42	0.20			KL												
DHGH-14-07	38.42	42.22	3.80		60	SS	VF	A	G				WD	40	C	QZ	VN	
DHGH-14-07	42.22	42.72	0.50			KL												
DHGH-14-07	42.72	44.91	2.19		60	SS	FM	A	G				PD	33	C	QZ	VN	Bedding not uniform due to slight folding/fracturing
DHGH-14-07	44.91	46.54	1.63			MS		E	G				PD	32	E	QZ	VN	
DHGH-14-07	46.54	46.64	0.10			ZM		D	K	CM								
DHGH-14-07	46.64	46.98	0.34			KL												
DHGH-14-07	46.98	47.09	0.11			ZM		D	K	CM								
DHGH-14-07	47.09	51.89	4.80		60	SS	VF	A	G				BW	30	C	QZ	VN	
DHGH-14-07	51.89	52.09	0.20	145004	60	SS	VF	A	G			G	BW	30	C	QZ	VN	Roof A
DHGH-14-07	52.09	52.61	0.52	145005		CO	C6	D	K	AB		G			C	QZ	CE	Seam A; low quality dull coal; no cleats; conchoidal fractures; polished surfaces
DHGH-14-07	52.61	52.81	0.20	145006		XM		D	K					15	E	QZ	VN	Floor
DHGH-14-07	52.81	53.93	1.12			XM		D	K					15	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-07	53.93	53.98	0.05			KL												
DHGH-14-07	53.98	56.19	2.21			XM		D	K			G		15	E	QZ	VN	
DHGH-14-07	56.19	56.39	0.20	145007		XM		D	K			G		15	E	QZ	VN	Roof
DHGH-14-07	56.39	56.74	0.35	145008		CO	C5	D	K	DD								Seam Roof; well cleated; few mm scale ms bands
DHGH-14-07	56.74	56.94	0.20			KL												
DHGH-14-07	56.94	57.92	0.98	145009		CO	C4	D	K	DD					E	QZ	VN	Seam A
DHGH-14-07	57.92	58.67	0.75	145010		CO	C2	D	K	DD					M	QZ	CE	Seam; well defined prominent cleats; vary in size; no sulphides;
DHGH-14-07	58.67	58.87	0.20	145011		CO	C4	D	K	DD		G			M	CB	CE	Seam Floor; well defined cleats
DHGH-14-07	58.87	59.07	0.20	145012		MS		B	G						R	QZ	VN	Floor
DHGH-14-07	59.07	60.37	1.30			MS		B	G						R	QZ	VN	
DHGH-14-07	60.37	60.58	0.21	145013		MS		B	G						R	QZ	VN	Roof
DHGH-14-07	60.58	61.08	0.50	145014		CO	C6	D	K	DD		G			E	QZ	VN	Seam; well cleated
DHGH-14-07	61.08	61.28	0.20	145015		MS		B	G						C	QZ	VN	Floor
DHGH-14-07	61.28	61.63	0.35			MS		B	G						C	QZ	VN	
DHGH-14-07	61.63	62	0.37	145016		CO	C4	D	K						R	CB	CE	Seam; common ms bands up to 1 cm; minor cleats with abundant dull coal
DHGH-14-07	62	62.18	0.18	145017		ZM		D	K	DD					M	PY	BL	Parting
DHGH-14-07	62.18	62.42	0.24			KL												No Roof
DHGH-14-07	62.42	62.61	0.19	145018		CO	C2	D	K	BR		G			R	PY	BL	Seam Floorwell cleated; mm scale ms bands
DHGH-14-07	62.61	62.83	0.22	145019		MS		B	G									Floor
DHGH-14-07	62.83	64.7	1.87			MS		B	G									
DHGH-14-07	64.7	70.29	5.59		80	SS	FC	A	G			E	FU	25	R	QZ	VN	
DHGH-14-07	70.29	71.54	1.25		60	ST		B	G			G	WD	20				
DHGH-14-07	71.54	74.39	2.85		70	SS	FM	A	G			G	PD	10	M	QZ	VN	
DHGH-14-07	74.39	74.54	0.15			MS		B	G									
DHGH-14-07	74.54	74.69	0.15			KL												
DHGH-14-07	74.69	76.89	2.20			MS		B	G			G			R	QZ	VN	
DHGH-14-07	76.89	77.66	0.77			XM		B	G						A	BI	DS	one lens of ooids
DHGH-14-07	77.66	79.83	2.17		80	SS	FM	A	G			I	PD	20	M	BI	DS	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-07	160.49	161.77	1.28		60	SS	VF	A	G	CO			WD	60	M	QZ	VN	
DHGH-14-07	161.77	161.98	0.21	145032	60	SS	VF	A	G	CO		P	WD	60	M	QZ	VN	Roof A
DHGH-14-07	161.98	162.28	0.30	145033		CO	SY	D	K				PD		C	QZ	CE	Seam sample 1. Qtz carbonate veining along face cleats which range from 10 to 80 degrees, and minor infill along butt cleats. Pyrite occurs as blebs and bands concentrated near top of unit. Minor siltstone lenses near top of unit.
DHGH-14-07	162.28	162.57	0.29	145034		CO	C4	D	K			I	PD		C	QZ	CE	Seam sample 2. QTZ/CARB VEINING UP TO 2CM THICKNESS IN FACE CLEATS, MINOR IN BUTTE CLEATS, FACE CLEATS HIGHLY IRREGULAR 20-90 DEGREES, SLT BANDS/LENSES COMMON NARROW 0.5 CM
DHGH-14-07	162.57	162.73	0.16	145035	70	SS	VM	A	G	CO			WD	52	M	QZ	VN	Floor A
DHGH-14-07	162.73	164.98	2.25		70	SS	VM	A	G	CO		G	WD	52	M	QZ	VN	
DHGH-14-07	164.98	165.03	0.05			KL												
DHGH-14-07	165.03	168.95	3.92		60	SS	VF	A	G			G	WD	45	M	QZ	VN	
DHGH-14-07	168.95	175.67	6.72		90	ST		B	G			G	WD	35	M	QZ	VN	
DHGH-14-07	175.67	183.8	8.13		60	MS		D	G	CO			PD	25	M	QZ	VN	
DHGH-14-07	183.8	184.86	1.06		60	MS		B	G			G	WD	20	M	CB	VN	
DHGH-14-07	184.86	188.11	3.25		70	SS	VF	B	G				WD	20				
DHGH-14-07	188.11	188.16	0.05			KL												
DHGH-14-07	188.16	189.27	1.11		70	SS	VF	B	G				WD	20				
DHGH-14-07	189.27	189.35	0.08			KL												
DHGH-14-07	189.35	191.55	2.20		70	SS	VF	B	G			G	WD	20				
DHGH-14-07	191.55	191.98	0.43		90	SS	VF	A	G				WD	30	M	CB	VN	
DHGH-14-07	191.98	192.07	0.09			KL												
DHGH-14-07	192.07	193.4	1.33		90	SS	VF	A	G			P	WD	30	M	CB	VN	
DHGH-14-07	193.4	195.41	2.01		90	ST		B	G	MD		G	WD	10	R	CB	VN	
DHGH-14-07	195.41	195.55	0.14	145036	90	ST		B	G	MD		G	WD	10	R	CB	VN	Roof A. Minor coaly lenses increasing down hole.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-07	195.55	195.67	0.12	145037		CO	C3		K			G			M	CB	VN	Seam. Common carbonate in butt cleats. Face cleats about 10 degrees. Sample size is small because lost core had to go below this interval and the roof rock would have masked this small coal intervals coal quality
DHGH-14-07	195.67	195.76	0.09			KL												
DHGH-14-07	195.76	195.92	0.16	145038		CO	C2		K			G			M	CB	VN	Seam. Minor carbonate in butt cleats. Minor muddy bands near base. Cleats occur in bands
DHGH-14-07	195.92	196.22	0.30	145039	70	ST		B	G	SA			IR	25	M	CB	VN	Floor A
DHGH-14-07	196.22	196.26	0.04			KL												
DHGH-14-07	196.26	196.51	0.25		70	ST		B	G	SA			IR	25	M	CB	VN	8cm CO C4 seam in middle of unit
DHGH-14-07	196.51	196.71	0.20	145040	70	ST		B	G	SA		O	IR	25	M	CB	VN	Roof A
DHGH-14-07	196.71	197.06	0.35	145041		CO	C3		K									Seam roof. Minor muddy bands up to 2mm. Face cleats vary from 5 to 20deg
DHGH-14-07	197.06	197.22	0.16			KL												
DHGH-14-07	197.22	197.38	0.16			KL												
DHGH-14-07	197.38	198.11	0.73	145042		CO	C2		K			I						Seam. Face cleats vary from 15 to 40deg.
DHGH-14-07	198.11	198.23	0.12	145043		ST		E	G			I			M	CB	VN	Parting; Core is 50% ST 50% CO
DHGH-14-07	198.23	198.73	0.50	145044		CO	C2		K						R	CB	CE	Seam. CB mostly in butt cleats. Trace amount of ST
DHGH-14-07	198.73	199.3	0.57	145045		CO	C1		K						R	CB	CE	Seam. CB in poorly developed cleats & concentrated near top
DHGH-14-07	199.3	199.5	0.20	145046		CO	C3		K			P			M	CB	CE	Seam floor. CB concentrated in butt cleats. Face cleats 5 to 15 deg. Muddy bands up to 2mm
DHGH-14-07	199.5	199.7	0.20	145047		ST		D	G	MD	EQ	G	PD		E	CB	CE	Floor
DHGH-14-07	199.7	203.51	3.81			ST		D	G	MD	EQ	G	PD		E	CB	CE	
DHGH-14-07	203.51	205.32	1.81		60	ST		B	G			I	IR	15				
DHGH-14-07	205.32	208.12	2.80		80	SS	VM	A	G	CT		P	WD	15	M	CB	VN	
DHGH-14-07	208.12	212.4	4.28		60	ST		E	G				WD	17				
DHGH-14-07	212.4	212.6	0.20	145048	60	ST		E	G			P	WD	17				Roof A

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-07	212.6	212.83	0.23	145049		CO	C4		K				PD		E	CB	CE	Seam top A. Alternating anthracite and muddy bands, muddy bands concentrated at top. Carbonate veins perpendicular to core axis at top, in butt cleats near bottom. Pyrite occurs as irregular blebs Face cleats vary from 1 to 10 degrees.
DHGH-14-07	212.83	213.05	0.22	145050		CO	C2		K			G	PD		E	CB	CE	Seam bottom A. Carbonate and pyrite in butt cleats. Face cleats vary from 1 to 20 degrees.
DHGH-14-07	213.05	213.25	0.20	145051		ZT		D	G				PD	18	E	CB	CE	Floor. Minor anthracite bands.
DHGH-14-07	213.25	213.63	0.38			ZT		D	G			G	PD	18	E	CB	CE	
DHGH-14-07	213.63	214.66	1.03			ST		D	G		EQ	G	PD	15	M	CB	WP	
DHGH-14-07	214.66	217.56	2.90		60	ST		E	G			G	WD	12	M	CB	VN	
DHGH-14-07	217.56	221.69	4.13		90	SS	VF	A	G			G	WD	10	M	CB	VN	
DHGH-14-07	221.69	221.73	0.04			KL												
DHGH-14-07	221.73	223.07	1.34		95	SS	VM	A	G			G	PD	8	M	CB	VN	
DHGH-14-07	223.07	224.63	1.56			SS	VM	A	G		AM		PD		E	CB	VN	
DHGH-14-07	224.63	224.83	0.20	145052		SS	VM	A	G		AM	P	PD		E	CB	VN	Roof
DHGH-14-07	224.83	225.03	0.20	145053		CO	C3		K				PD		E	CB	CE	Seam roof A. Minor muddy bands up to 5mm at top. Bedding parallel QZ-CB VN up to 5mm at top. PY bleb at top. Cleats not apparent
DHGH-14-07	225.03	225.85	0.82	145054		CO	C3		K				PD		E	CB	CE	Seam A. CB mostly in butt cleats. Face cleats 10 to 80 deg. Patches of MT in CO interpreted as irregular contact.
DHGH-14-07	225.85	226.05	0.20	145055		CO	C3		K			I	PD		E	CB	CE	Seam floor A. CB in VN along irreglar contact. Half of core is CO, half MT, split along vertical.
DHGH-14-07	226.05	226.25	0.20	145056		MS		B	G				PD	32	E	CB	WP	Floor
DHGH-14-07	226.25	226.82	0.57			MS		B	G			G	PD	32	E	CB	WP	
DHGH-14-07	226.82	227.18	0.36		60	ST		B	G				WD	30	E	CB	VN	
DHGH-14-07	227.18	227.38	0.20	145057	60	ST		B	G			I	WD	30	E	CB	VN	Roof A
DHGH-14-07	227.38	227.47	0.09			KL												
DHGH-14-07	227.47	227.89	0.42	145058		CO	C3		K			P			R	CB	VN	Seam Top A. No apparent cleating.
DHGH-14-07	227.89	228.2	0.31	145059		CO	C4		K			P			M	CB	VN	Seam bottom A. Top 8cm MS parting. No apparent cleating.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-07	228.2	228.33	0.13	145060		MS		B	G		AM	F			M	CB	WP	Floor
DHGH-14-07	228.33	234.98	6.65		80	SS	VM	A	G			O	WD	10	M	CB	VN	
DHGH-14-07	234.98	235.06	0.08			MS		D	G		AM				M	CB	VN	
DHGH-14-07	235.06	235.47	0.41			KL												
DHGH-14-07	235.47	235.66	0.19			MS		B	G		AM	I			M	CB	VN	
DHGH-14-07	235.66	236.84	1.18		80	SS	VF	E	G			I	WD	25	M	CB	VN	
DHGH-14-07	236.84	237.32	0.48			XM		D	G		AM				M	CB	VN	
DHGH-14-07	237.32	238.62	1.30		60	SS	VF	E	G	TY		G	WD	18	M	CB	VN	
DHGH-14-07	238.62	240.69	2.07		60	SS	VF	E	G	TY		G	BT	62	M	CB	VN	
DHGH-14-07	240.69	240.89	0.20	145061	60	SS	VF	E	G	TY		G	BT	62	M	CB	VN	Roof A
DHGH-14-07	240.89	241.09	0.20	145062		CO	C4		K	ST					M	CB	CE	Seam Roof. Conchoidal fracture faces. Common silty bands up to 2mm. Poorly developed face cleats; 40 to 60deg. Minor carbonate in butt cleats.
DHGH-14-07	241.09	241.45	0.36	145063		CO	C4		K	ST		G			M	CB	CE	Seam. Conchoidal fracture faces. Common silty bands up to 2mm. Poorly developed face cleats; 40 to 60deg. Very minor carbonate in butt cleats.
DHGH-14-07	241.45	241.56	0.11			KL												
DHGH-14-07	241.56	241.9	0.34	145064		ST		D	G	CO					M	CB	VN	Parting.
DHGH-14-07	241.9	242.14	0.24	145065		CO	C3		K			I	PD		R	CB	CE	Seam. Conchoidal fractures. Poorly developed cleating.
DHGH-14-07	242.14	242.42	0.28	145066	60	ST		B	G		AM	I			C	CB	VN	Parting. High angle contact.
DHGH-14-07	242.42	242.66	0.24	145067		CO	C3		K			I	PD		M	CB	BN	Seam. Conchoidal fractures. Fine grained. No cleating.
DHGH-14-07	242.66	242.88	0.22	145068		ST		B	G		AM				M	CB	VN	Parting.
DHGH-14-07	242.88	242.98	0.10			KL												
DHGH-14-07	242.98	243.02	0.04			KL												
DHGH-14-07	243.02	243.21	0.19	145069		CO	C3	B	K			I	PD	45	M	CB	FP	Seam. Gamma & density do not coincide. Lithologies were based on continuity of core & subsequent intervals. Conchoidal fractures. Fine grained.
DHGH-14-07	243.21	243.41	0.20	145070		ST		B	G			I	PD	45	M	CB	VN	Parting.
DHGH-14-07	243.41	243.72	0.31	145071		CO	SY	D	K	ST		G			M	CB	CE	Seam. Cleats up to 2mm. Highly folded. Conchoidal fractures.
DHGH-14-07	243.72	244.66	0.94	145072		CO	C3		K			G			M	CB	CE	Seam A. Highly folded. Variably developed cleats up to 2mm. CB mainly in butt cleats.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-07	244.66	244.86	0.20	145073		CO	SY	D	K	ST					E	CB	VN	Seam floor. Conchoidal fracture faces. ST bands up to 2cm.
DHGH-14-07	244.86	245.06	0.20	145074		ST		E	G				PD	30	C	CB	VN	Floor
DHGH-14-07	245.06	245.6	0.54			ST		E	G				PD	30	C	CB	VN	
DHGH-14-07	245.6	246.83	1.23			SS	VF	A	G			I	BT	5	E	CB	VN	
DHGH-14-07	246.83	247.16	0.33			ST						G	WD	5				
DHGH-14-07	247.16	247.33	0.17			CO	C2		K	ST		G						Not sampled: less than 30cm & frequent ST bands. Seam chosen based on density & competent core down to next coal seam.
DHGH-14-07	247.33	248.14	0.81		70	ST		B	G			G	WD	40				
DHGH-14-07	248.14	248.3	0.16			MS		D	G				IR	35				
DHGH-14-07	248.3	248.5	0.20	145075		MS		D	G			G	IR	35				Roof
DHGH-14-07	248.5	249.07	0.57	145076		CO	C2		K				PD	40	R	CB	CE	Seam. Minor silty lenses up to 5mm. Well developed cleating up to 2x4mm. Face cleats 35deg. Conchoidal fracturing near bottom.
DHGH-14-07	249.07	249.11	0.04			KL												
DHGH-14-07	249.11	249.78	0.67	145077		CO	C2		K			G	PD	5				Seam. Minor silty lenses up to 1cm. Cleats up to 5mm, variably developed. Face cleats 5 to 40deg. CB mostly in butt cleats.
DHGH-14-07	249.78	249.97	0.19	145078		ST		D	G			P	FU	5				Parting. Lithology based on gamma log. Based on last coal seam.
DHGH-14-07	249.97	250.19	0.22	145079		CO	C1		K	ST		I	PD	10	R	CB	CE	Seam floor. Seam based on gamma log. Minor silty bands up to 5mm. Well developed cleats up to 1cm. Face cleat 10deg.
DHGH-14-07	250.19	250.39	0.20	145080		ST		B	G			P	BT	8	M	CB	WP	Floor.
DHGH-14-07	250.39	251.98	1.59			ST		B	G			P	BT	8	M	CB	WP	
DHGH-14-07	251.98	255.09	3.11			SS	VM	A	G	ST			PD	12				
DHGH-14-07	255.09	255.17	0.08			KL												
DHGH-14-07	255.17	256.47	1.30			SS	VM	A	G	ST		P	PD	16				
DHGH-14-07	256.47	258.77	2.30			MS		B	G	CO		G	FU	12	M	PY	BN	
DHGH-14-07	258.77	263.24	4.47			SS	VM	A	G			P	FU	20				
DHGH-14-07	263.24	271.34	8.10		80	SS	VM	A	G			G	WD	17	R	CB	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-07	271.34	271.47	0.13			KL												
DHGH-14-07	271.47	272.35	0.88		80	SS	VM	A	G			G	WD	17	R	CB	VN	
DHGH-14-07	272.35	275.79	3.44		60	SS	VF	A	G				BT	15				
DHGH-14-07	275.79	275.87	0.08			KL												
DHGH-14-07	275.87	279.04	3.17		60	SS	VF	A	G				BT	15				
DHGH-14-07	279.04	279.11	0.07			KL												
DHGH-14-07	279.11	284.54	5.43		60	SS	VF	A	G				BT	15				
DHGH-14-07	284.54	284.65	0.11			KL												
DHGH-14-07	284.65	285.74	1.09		60	SS	VF	A	G				BT	15				
DHGH-14-08	0	1.42	1.42		100	KL												
DHGH-14-08	1.42	2.4	0.98			MD		E	G									
DHGH-14-08	2.4	4.45	2.05			KL												
DHGH-14-08	4.45	4.76	0.31		60	MD		E	G									
DHGH-14-08	4.76	5.45	0.69		60	SS	FF	E	G					37				
DHGH-14-08	5.45	6.86	1.41			KL												
DHGH-14-08	6.86	7.16	0.30			MD		E	G									Drilling slough
DHGH-14-08	7.16	8.5	1.34			SS	VF	E	G	MN				30				
DHGH-14-08	8.5	8.58	0.08			KL												
DHGH-14-08	8.58	13.93	5.35			ST		B	G	FO		G	PL	27	E	BI		
DHGH-14-08	13.93	17.46	3.53			SS	VF	A	G			P		25				
DHGH-14-08	17.46	18.96	1.50			ST		B	G			P	PL	15				
DHGH-14-08	18.96	23.44	4.48			SS	VF	A	G				PD	31				
DHGH-14-08	23.44	25.98	2.54		65	ST		B	G				PL	29				
DHGH-14-08	25.98	26.18	0.20	140109		SS	VV	A	G			P	PL					Roof
DHGH-14-08	26.18	26.31	0.13	140110		CO	C3		K						E	CB	VN	Seam Roof
DHGH-14-08	26.31	26.47	0.16			KL												
DHGH-14-08	26.47	26.73	0.26	140111		CO	C3		K						E	CB	VN	Seam
DHGH-14-08	26.73	26.79	0.06			KL												
DHGH-14-08	26.79	27.19	0.40	140112		CO	C4		K			G			C	PY	BN	Seam floor
DHGH-14-08	27.19	27.39	0.20	140113		ZM			K			I						Floor

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-08	27.39	29.35	1.96		70	ST		A	G				PL	35				
DHGH-14-08	29.35	31.33	1.98		70	ST		A	G				PL	19				
DHGH-14-08	31.33	40.82	9.49		65	SS	VV	A	G			I	PL	20				
DHGH-14-08	40.82	41.02	0.20	140114		ZT		B	G	CO					E	CB	VN	roof
DHGH-14-08	41.02	41.22	0.20	140115		CO	C3	D	K						E	CB	VN	seam roof
DHGH-14-08	41.22	41.57	0.35	140116		CO	C3	D	K						E	CB	VN	coal seam
DHGH-14-08	41.57	41.89	0.32			KL												
DHGH-14-08	41.89	42.02	0.13	140117		CO	C3	D	K						E	CB	VN	coal seam
DHGH-14-08	42.02	42.22	0.20	140118		CO	C3	D	K			P			E	CB	VN	seam floor
DHGH-14-08	42.22	42.42	0.20	140119	65	ST		B	G									floor a
DHGH-14-08	42.42	47.1	4.68			ST		B	G				PL	18				
DHGH-14-08	47.1	54.04	6.94		65	SS	VF	A	G				PL	27				
DHGH-14-08	54.04	54.24	0.20			KL												
DHGH-14-08	54.24	57.17	2.93		65	SS	VF	A	G				PL	25				
DHGH-14-08	57.17	58.01	0.84			ST		D	G	LM			WD	10	E	CB	VN	
DHGH-14-08	58.01	58.21	0.20	140120		ST		D	G	LM			WD	10				roof
DHGH-14-08	58.21	58.62	0.41	140121		CO	C4	D	K	CO			PD					seam roof; top 10cm C4 coal followed by mud (75%) w interbedded coal beds (25%)
DHGH-14-08	58.62	59.06	0.44	140122		CO	C4		K				PD		E	CB	VN	seam; crushed; CB VN roughly centre of seam
DHGH-14-08	59.06	59.25	0.19	140123		ZM			K						M	CB	VN	parting
DHGH-14-08	59.25	59.55	0.30			ST		B	G			I	PD		M	CB	VN	
DHGH-14-08	59.55	60.1	0.55			KL												
DHGH-14-08	60.1	60.52	0.42	140124		CO	C3		K									seam; c3; mm ms bands;
DHGH-14-08	60.52	60.65	0.13	140125		ST		B	G						M	CB	VN	parting
DHGH-14-08	60.65	61.12	0.47			ST		B	G						M	CB	VN	
DHGH-14-08	61.12	61.43	0.31	140126		CO	C4		K									seam; crushed
DHGH-14-08	61.43	61.63	0.20	140127		CO	C4		K									seam floor; crushed
DHGH-14-08	61.63	61.83	0.20	140128		ST		E	G			P	PD		M	CB	VN	floor
DHGH-14-08	61.83	63.48	1.65			ST		E	G			P	PD		M	CB	VN	
DHGH-14-08	63.48	66.15	2.67		60	SS	VF	L	G	TU	EQ		PL	45	M	CB	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-08	93.7	94.96	1.26			ST		B	G						M	PY	BL	
DHGH-14-08	94.96	98.25	3.29			SS	VF	B	G	TU	EQ	I	PD		M	CB	VN	
DHGH-14-08	98.25	98.38	0.13			ZM			K			G			M	CB	VN	
DHGH-14-08	98.38	99.1	0.72			MS		D	G		EQ	G	PD	20	M	CB	VN	
DHGH-14-08	99.1	99.71	0.61			ST		D	G		EQ	G	PD		R	CB	VN	
DHGH-14-08	99.71	102.87	3.16		60	SS	VF	E	G		EQ	G	PL		M	CB	VN	
DHGH-14-08	102.87	103.68	0.81			SS	VF	A	G	FO	EQ	G	PL	20				
DHGH-14-08	103.68	104.66	0.98		70	ST		B	G		EQ	I	PL	20	M	CB	VN	
DHGH-14-08	104.66	104.8	0.14	140140		CO	C4		K				PL	15	C	CB	VN	seam roof; 2mm anthracite beds irregularly dispersed; strong CA veining next to contacts; bleby PY throughout coal unit
DHGH-14-08	104.8	105.06	0.26	140141		CO	C4		K				PL	15	C	CB	VN	seam: 2mm anthracite beds irregularly dispersed; strong CA veining next to contacts; bleby PY throughout coal unit; end of unit has increased MS bands
DHGH-14-08	105.06	105.22	0.16	140142		XM			K				PL	15	C	CB	VN	seam floor: continuous MS bands with abundant cb cleat fill; mm scale anthracite bands
DHGH-14-08	105.22	105.38	0.16	140142		CO	C6		K				PL	15	C	CB	VN	
DHGH-14-08	105.38	107.75	2.37			ST		B	G	RA	EQ	G	PD					
DHGH-14-08	107.75	108.56	0.81		60	ST		A	G		EQ		PL	20				
DHGH-14-08	108.56	108.9	0.34			KL												END OF HOLE
DHGH-14-09	0	1.99	1.99			KL												
DHGH-14-09	1.99	2.29	0.30		50	MD		E	B									
DHGH-14-09	2.29	4.95	2.66			KL												
DHGH-14-09	4.95	5.34	0.39			SS	VF	E	G		AM							
DHGH-14-09	5.34	6.83	1.49			KL												
DHGH-14-09	6.83	7.1	0.27			SS	VF	E	G		EQ							
DHGH-14-09	7.1	7.35	0.25			MS		B	G									
DHGH-14-09	7.35	7.57	0.22			XM		D	G	MN		G						
DHGH-14-09	7.57	8	0.43	140143		XM		D	G	MN		G			M	QZ	CE	Roof: Cleated anthracite bands, 2-10mm wide, dominantly at top of interval and associated w/mnr qtz-ca infill; large 3cm Py bleb at end of interval

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-09	24.7	24.92	0.22			ZM		B	G			G						Minor anthracite bands, 1-5mm width, decreasing with depth (grading out); anth bands are associated with sub mm scale Qtz-ca veinlets and cleat infill
DHGH-14-09	24.92	25.46	0.54			MS		B	G			G			M	QZ	VN	
DHGH-14-09	25.46	26.7	1.24		80	ST		B	G			G	WD	30	M	QZ	VN	
DHGH-14-09	26.7	28.7	2.00		70	SS	FF	A	G			G	WD	5				
DHGH-14-09	28.7	29.75	1.05			SS	FF	A	G		EQ	P						
DHGH-14-09	29.75	30.06	0.31			CO	C5	D	K			P			C	QZ	VN	2cm Qtz-Ca vein in middle of interval+minor Qtz-Ca veinlets
DHGH-14-09	30.06	30.86	0.80			SS	FF	A	G		EQ	G			M	QZ	VN	
DHGH-14-09	30.86	32.31	1.45		70	SS	VF	A	G			G	WD	10				
DHGH-14-09	32.31	33.73	1.42		80	ST		B	G			G			M	QZ	VN	
DHGH-14-09	33.73	34.34	0.61			MS		B	G			G			M	QZ	VN	Mn Qtz-Ca vn towards bottom CT.
DHGH-14-09	34.34	34.73	0.39			CO	SY	D	K			P			A	QZ	CE	Gradational top CT defined by increasing ANT bands; sharp bot CT; Qtz-Ca mostly seen as butt cleat infill throughout; Qtz-Ca1-2cm veins at bot CT; distinct mm scale ANT bands near top of interval;
DHGH-14-09	34.73	35.22	0.49			MS		D	G	BU		P			M	QZ	VN	
DHGH-14-09	35.22	35.29	0.07			KL												
DHGH-14-09	35.29	35.56	0.27		80	CO	C5	D	K			I			C	QZ	VN	Qtz-Ca as 1cm vein at top CT, minor amounts of butt cleat infill, particularly near top of interval, and rare sub cm scale vein/veinlets; antracite bands interlaminated w/mudstone throughout
DHGH-14-09	35.56	39.21	3.65		90	SS	FF	A	G	MS		G	WD	10	M	QZ	VN	
DHGH-14-09	39.21	41.73	2.52			SS	FF	A	G				PD	5				
DHGH-14-09	41.73	43.04	1.31			MS		B	G						M	QZ	VN	Minor mm scale ANT bands near bottom of interval
DHGH-14-09	43.04	43.21	0.17	140146		MS		B	G			P			M	QZ	VN	Roof: CLEAN MS
DHGH-14-09	43.21	43.24	0.03	140146		XM		B	G	XX		G			C	QZ	VN	Roof: A few thin stony coal bands <3mm scale as grades into coal seam
DHGH-14-09	43.24	43.78	0.54	140147	80	CO	C5	D	K			G			M	QZ	CE	Seam: Qtz-Ca common as butt cleat infill near top and bottom CT's; mod to weak MS intermixed throughout; sub cm scale Py near top & Bot intervals

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-09	43.78	43.98	0.20	140148		XM		B	G	MN		G			C	QZ	VN	Floor: top half of interval has common Qz-Ca as vn and cleat infill; minor thin coal bands top of interval; 5-10mm Py vein in middle of interval; bottom grades to MS over short interval
DHGH-14-09	43.98	44.08	0.10			MS		B	G	XX		G						
DHGH-14-09	44.08	45.85	1.77			SS	FF	A	G				PD	15	M	QZ	VN	
DHGH-14-09	45.85	47.3	1.45			ST		B	G						R	QZ	VN	
DHGH-14-09	47.3	50.64	3.34		80	SS	FF	A	G				WD	25	R	QZ	VN	
DHGH-14-09	50.64	52.66	2.02			MD		B	G	TR		G	PD	15	M	QZ	VN	
DHGH-14-09	52.66	53.15	0.49		60	CO	C4	D	K			P			A	QZ	VN	Slightly gradational upper CT; abundant Qtz-Ca veins and cleat butt infill throughout; Co intermixed with MS, with centre of seam slightly more pure CO
DHGH-14-09	53.15	54.16	1.01			MS		B	G						M	PY	VN	
DHGH-14-09	54.16	57.42	3.26		85	SS	FF	A	G				PD	10	M	BI		
DHGH-14-09	57.42	62.19	4.77			ST		B	G	FO		G			M	BI		
DHGH-14-09	62.19	63.25	1.06		70	ST		B	G				WD	5				
DHGH-14-09	63.25	63.49	0.24		90	SS	FF	A	G			G	PD	3	M	QZ	VN	
DHGH-14-09	63.49	67.07	3.58			ST		B	G			P	PD	10	M	QZ	VN	
DHGH-14-09	67.07	69.3	2.23			SS	FF	A	G		AM				M	QZ	VN	
DHGH-14-09	69.3	69.4	0.10			KL												
DHGH-14-09	69.4	72.5	3.10			SS	FF	A	G		AM	G			M	QZ	VN	
DHGH-14-09	72.5	74.04	1.54			ST		B	G	CO			PD	5	R	PY	BL	
DHGH-14-09	74.04	74.24	0.20	140149		ST		B	G	CO		P	PD	5	R	PY	BL	Roof: trace py blebs, and v rare mm scale anth laminations
DHGH-14-09	74.24	74.44	0.20	140150		CO	C4	D	K	MS					C	QZ	CE	Seam roof: bright cleated Anth with strong Qtz-Ca cleat infill near top CT; minor y bleb; 2cm MS band near top of interval
DHGH-14-09	74.44	74.89	0.45	140151		CO	C4	D	K	CM					M	QZ	VN	Seam: minor sub cm scale MS laminations; mnr Qz-Ca throughout as veins and butt cleat infill
DHGH-14-09	74.89	75.09	0.20	140152		CO	C5	D	K			G			C	QZ	CE	Seam floor: lower CT gradational over short interval; common Qtz-Ca butt cleat infill and trace Py blebs towards bottom on interval

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-09	75.09	75.29	0.20	140153		ST		B	G	MN					M	QZ	CE	Floor: top of interval has mnr Anth w/strong Qtz-Ca cleat infill and 1cm wide Py band as grades into ST
DHGH-14-09	75.29	80.49	5.20		80	ST		B	G				WD	15	R	QZ	VN	
DHGH-14-09	80.49	80.56	0.07			KL												
DHGH-14-09	80.56	85.55	4.99		80	SS	FF	A	G			G	WD	5	M	QZ	VN	
DHGH-14-09	85.55	85.62	0.07			KL												
DHGH-14-09	85.62	86.57	0.95			ST		B	G				PD					
DHGH-14-09	86.57	86.73	0.16			MS		B	G									minor anth lenses w/ qtz/carb cleat infill
DHGH-14-09	86.73	86.93	0.20	140154		MS		B	G	CO		G						Roof: minor coal laminations near bottom CT <5mm wide; bot CT gradational over short interval
DHGH-14-09	86.93	87.13	0.20	140155		CO	C4	D	K						C	QZ	CE	Seam roof: minor regularly spaced 1-5mm MS laminations throughout; common Qtz-Ca butt cleat infill and irregular infill mostly near top CT & lessening w/depth
DHGH-14-09	87.13	87.52	0.39	140156		CO	C3	D	K	MS					M	QZ	VN	Seam: up to 20% MS as regularly spaced laminations (<1cm); mnor Qtz-Ca venilets & butt cleat infill throughout
DHGH-14-09	87.52	88.07	0.55	140157		CO	C2	D	K	MS		P			M	PY	VN	Seam: 10-15% MS in thin laminations throughout; 7mm Py VN and rare Py blebs near bot of interval; minor Qtz-Ca veins near bottom of interval
DHGH-14-09	88.07	88.33	0.26	140158		CO	C4	D	K	MS		P			C	QZ	CE	Seam floor: 20-25% MS laminations throughout; common Qtz-Ca butt cleat infill increasing towards bot CT; minor Py veins 1-3mm wide; sharp planar bot CT
DHGH-14-09	88.33	88.53	0.20	140159		ST		B	G						R	QZ	VN	Floor: rare Qtz-Ca veins at top CT
DHGH-14-09	88.53	91	2.47		70	ST		B	G			P	WD	20				
DHGH-14-09	91	95.61	4.61		75	SS	FF	B	G	ST		G	WD	10	M	QZ	VN	
DHGH-14-09	95.61	101.27	5.66		60	ST		B	G			G	WD	10	R	CA	VN	
DHGH-14-09	101.27	105.1	3.83		80	SS	FF	A	G			G	WD	20	R	QZ	VN	
DHGH-14-09	105.1	105.55	0.45		20	ST		B	G									
DHGH-14-09	105.55	105.7	0.15			KL												
DHGH-14-09	105.7	106.45	0.75		60	SS	FF	A	G			I	PD	20	R	QZ	VN	
DHGH-14-09	106.45	107.4	0.95		80	SS	FF	A	G				WD	30	M	QZ	VN	fold limb

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-09	107.4	107.88	0.48		80	SS	NA	A	G				WD	89				fold hinge in interval
DHGH-14-09	107.88	112.62	4.74		80	SS	FF	A	G				WD	60				fold limb
DHGH-14-09	112.62	118.02	5.40			ST		B	G				WD	30	R	QZ	VN	
DHGH-14-09	118.02	118.24	0.22			KL												
DHGH-14-09	118.24	119.62	1.38			SS	FF	A	G									
DHGH-14-09	119.62	123.95	4.33		85	SS	FF	A	G				WD	25	R	QZ	VN	
DHGH-14-09	123.95	125.6	1.65		90	ST		B	G		P	PD	10	R	QZ	VN		
DHGH-14-09	125.6	125.78	0.18			XM		B	K		P							
DHGH-14-09	125.78	129.16	3.38		90	ST		B	G		P	PD	40					
DHGH-14-09	129.16	130.77	1.61		75	SS	FF	A	G		P	WD		C	QZ	VN		20CM QTZ/CARB AT UPPER CONTACT
DHGH-14-09	130.77	130.97	0.20	140160		ST		B	G		P			M	QZ			ROOF: CLEAN ST
DHGH-14-09	130.97	131.39	0.42	140161		CO	C4	B	K		I			R	QZ	VN		RARE QTZ VN NEAR BOTTOM OF INTERVAL, VERY RARE CLEAT FILL
DHGH-14-09	131.39	131.47	0.08	140162		ST		B	G	MN				M	QZ	VN		PARTING A, 3CM COAL BAND AT END OF INTERVAL
DHGH-14-09	131.47	131.59	0.12			KL												CORE LOSS LOCATIONS APPROXIMATED FROM GEOPHYSICAL LOGS
DHGH-14-09	131.59	131.94	0.35	140163		CO	C4	B	K	MN				M	PY	VN		SEAM, 5CM MS BAND IN MIDDLE OF INTERVAL
DHGH-14-09	131.94	132.09	0.15	140164		CO	C4	B	K					M	PY	BL		SEAM: MINOR INTERMIXED MS; MN PY BLEBS
DHGH-14-09	132.09	132.78	0.69			KL				CO								CORE LOSS LOCATIONS ARE APPROXIMATED FROM GEOPHYSICAL LOGS
DHGH-14-09	132.78	133.89	1.11		50	ST		B	G		P	WD	20	R	QZ	VN		
DHGH-14-09	133.89	136.6	2.71			SS	FF	A	G		G	WD		R	QZ	VN		
DHGH-14-09	136.6	138.51	1.91		90	ST		B	G		G		35	R	QZ	VN		
DHGH-14-09	138.51	138.93	0.42			MS		B	G	XX				C	QZ	VN		
DHGH-14-09	138.93	139.11	0.18			KL												
DHGH-14-09	139.11	139.94	0.83			MS		B	G	XX	P							
DHGH-14-09	139.94	140.14	0.20	140165		MS		B	G	XX	P			M	PY	VN		ROOF: CARBONACEOUS IN PART, MN PY VEINS
DHGH-14-09	140.14	140.34	0.20	140166		CO	C5	B	K					M	QZ	VN		SEAM ROOF, MINOR BUTT CLEAT INFILL IN LAST 6CM OF INTERVAL
DHGH-14-09	140.34	141.03	0.69	140167		CO	C3	B	K					R	QZ	VN		SEAM A, MINOR PREDOMINANTLY BUTT CLEAT INFILL IN LAST 10CM OF INTERVAL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-09	141.03	141.34	0.31	140168		CO	SY	B	K			P			C	QZ	CE	SEAM FLOOR, TOP OF INTERVAL HAS 8CM OF XM, BOTTOM OF INTERVAL HAS 3CM BAND OF XM
DHGH-14-09	141.34	141.53	0.19	140169		XM		B	G			G			M	QZ	VN	FLOOR: COALY MS
DHGH-14-09	141.53	141.73	0.20			XM		B	G			G			M	QZ	VN	
DHGH-14-09	141.73	144.01	2.28			ST		B	G			G			M	QZ	VN	
DHGH-14-09	144.01	147.08	3.07		95	SS	FF					P			M	QZ	VN	
DHGH-14-09	147.08	147.44	0.36			ST		B	G			P	WD		M	QZ	VN	
DHGH-14-09	147.44	147.64	0.20	140170		ST		B	G	XX		P	WD		C	PY	BL	ROOF, 3CM PYRITE BLEB ON LOWER CONTACT OF INTERVAL
DHGH-14-09	147.64	147.94	0.30	140171		CO	C3	B	K						M	PY	BL	SEAM A, VARIABLY 3-7CM QTZ/CARB VEIN WITH LARGE PYRITE BLEB IN MIDDLE OF INTERVAL; seam picked off of gama due to a large amount of PY that likely made the density log inaccurate
DHGH-14-09	147.94	148.11	0.17	140172		ST		B	G			I			R	QZ	VN	PARTING: BASIC ST
DHGH-14-09	148.11	148.41	0.30	140173		CO	C5	B	K			G			R	QZ	GN	SEAM, COAL IS HEAVY AND MOIST, GRADES INTO COALY MS INTO LOWER CONTACT
DHGH-14-09	148.41	148.61	0.20	140174		MS		B	G	MN		P			R	PY	BL	FLOOR: WEAKLY CARBONACEOUS MS
DHGH-14-09	148.61	149.34	0.73			MS		B	G	MN		P			R	PY	VN	
DHGH-14-09	149.34	151.03	1.69			SS	FF	A	G			G	WD	10	M	QZ	VN	
DHGH-14-09	151.03	151.13	0.10			KL												
DHGH-14-09	151.13	156.18	5.05		70	SS	NA	A	G			G	PD	15	R	QZ	VN	
DHGH-14-09	156.18	157.74	1.56			ST		B	G	HY		G	WD		C	BI		
DHGH-14-09	157.74	157.82	0.08			KL												
DHGH-14-09	157.82	159.89	2.07			SS	VF	E	G	HY		P	PD	15				
DHGH-14-09	159.89	160.08	0.19			XM		B	G				WD		C	PY	VN	
DHGH-14-09	160.08	160.2	0.12			CO	SY	D	K						C	QZ	VN	COMMON QTZ/CARB VEINS THROUGHOUT INTERVAL, MINOR PD CLEATING
DHGH-14-09	160.2	160.48	0.28			MS		B	G	XX		G	WD					
DHGH-14-09	160.48	161.48	1.00			ST		B	G	TR		G	PD		R	QZ	VN	
DHGH-14-09	161.48	164.08	2.60		70	SS	FF	A	G			G	WD	5	R	QZ	VN	
DHGH-14-09	164.08	168.28	4.20		85	SS	FM	A	G			G	WD	10	R	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments	
DHGH-14-09	168.28	168.33	0.05			KL													
DHGH-14-09	168.33	168.59	0.26			ST		B	G			I	WD						
DHGH-14-09	168.59	168.79	0.20	140175		ST		B	G			I	WD		M	PY	BL	ROOF: ST W/MN PY BLEBS	
DHGH-14-09	168.79	168.99	0.20	140176		CO	C4	D	K	CM					M	PY	BL	SEAM A: 30-40% MS LM, QTZ/CARB CLEATING AND VEINING, EQUAL AMOUNTS OF BUTT AND FACE CLEATS, ABUNDANT CLEATS	
DHGH-14-09	168.99	169.23	0.24	140177		CO	C4	D	K	CM		G			M	QZ	VN	SEAM A, COMMON CONCOIDAL FRACTURING OCCURING IN TOP 10 CM, LOWER INTERVAL COMMONLY WELL CLEATING, 5MM FACE CLEAT, 2MM BUTT CLEAT	
DHGH-14-09	169.23	169.48	0.25	140178		XM		D	G	MN								FLOOR : CARBONACEOUS MS W/MINOR COAL LM'S	
DHGH-14-09	169.48	169.68	0.20			XM		D	G	MN									
DHGH-14-09	169.68	170.26	0.58			MS		B	G			G	WD		M	PY	BL		
DHGH-14-09	170.26	172.17	1.91		65	ST		B	G			G	PD						
DHGH-14-09	172.17	173.3	1.13			ST		B	G	RA		G	WD						
DHGH-14-09	173.3	174.55	1.25			MS		B	G			P	WD		R	QZ	WP		
DHGH-14-09	174.55	175.15	0.60			ZM		D	G	CM					M	QZ	VN		
DHGH-14-09	175.15	178.3	3.15			XM		D	G	MN					M	QZ	VN		
DHGH-14-09	178.3	178.7	0.40			MS		D	G	TR		G			M	PY	BL		
DHGH-14-09	178.7	184.25	5.55		95	ST		B	G				PD	10	M	QZ	VN		
DHGH-14-09	184.25	185.82	1.57		90	SS	FF	A	G	RA	AM	I			R	QZ	VN		
DHGH-14-09	185.82	186.15	0.33			CO	C5	D	K	CM		P			C	QZ	VN	common mm-cm scale ms bands; four vitrinite bands 1-3 cm thick; cleats occur in vitrinite bands; butt cleat up to 8 mm and face up to 5 mm; face cleat is 10 degrees/ parralel to bedding	
DHGH-14-09	186.15	186.91	0.76			ST		B	G	RA	AM	G							
DHGH-14-09	186.91	187.11	0.20	140179		ST		B	G	RA	AM	G						ROOF: ST W/RARE CO WISPS	
DHGH-14-09	187.11	187.27	0.16	140180		CO	SY	D	K						C	QZ	VN	seam;sampled because it is a possible marker seam; sample requested by Dan	
DHGH-14-09	187.27	187.47	0.20	140181		ST		B	G	CM	AM	G			M	QZ	WP	FLOOR: ST W/COMMON COAL LAMINATIONS	
DHGH-14-09	187.47	188.55	1.08			ST		B	G	CM	AM	G			M	QZ	WP		
DHGH-14-09	188.55	194.5	5.95			ST		B	G		AM	G		20	M	QZ	VN		

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments	
DHGH-14-09	194.5	195.49	0.99		85	SS	FF	A	G			P							
DHGH-14-09	195.49	195.93	0.44			CO	SY	D	K	CM		G			C	QZ	VN	stoney col with common ms bands up to 3 cm; cb occur along bedding plane up to 5%; cleats are common near basal contact in a 7 cm vitrinite band; cleats are also common in the top 5 cm of coal seam but not as well defined; no sample taken because coal grade is too low	
DHGH-14-09	195.93	196.04	0.11			ZM		D	G	MN	AM	G							
DHGH-14-09	196.04	196.69	0.65			MS		D	G	MN	AM	G							anthracite bans near upper contact
DHGH-14-09	196.69	203.31	6.62			ST		B	G		AM	G			R	QZ	VN		
DHGH-14-09	203.31	208.31	5.00		65	SS	FF	A	G			G		1	R	QZ	WP		
DHGH-14-09	208.31	212.61	4.30		95	SS	FF	A	G			G			R	QZ	VN		
DHGH-14-09	212.61	212.69	0.08			KL													
DHGH-14-09	212.69	216.66	3.97		90	SS	FF	A	G			G			R	QZ	VN		
DHGH-14-09	216.66	222.55	5.89		60	ST		B	G			G		15	R	QZ	VN		
DHGH-14-09	222.55	226.02	3.47			ST		B	G	TR	AM				R	QZ	VN		
DHGH-14-09	226.02	226.22	0.20	140182		ST		B	G	MN	AM	P			R	QZ	VN	ROOF: Anth bn's at basal CT	
DHGH-14-09	226.22	226.42	0.20	140183		CO	C3	D	K						M	QZ	VN	SEAM ROOF: Minor Qtz-Ca veinlets near top CT; MS inter laminations common near top CT and grading out to minor; prominent cleats w/5mm face 3mm butt	
DHGH-14-09	226.42	227.42	1.00	140184		CO	C2	D	K	MN								SEAM: mn MS as mm scale laminations and rarely intermixed; prominent cleating; no visible infill impurities	
DHGH-14-09	227.42	228.04	0.62	140185		CO	C2	D	K	MN								SEAM: mn MS laminations and occasionally intermixed; prominent cleating; relatively free of visible infill impurities	
DHGH-14-09	228.04	228.46	0.42	140186		CO	C3	D	K	MN								SEAM: 5cm ST band TU & 5cm MS bnd BU; mn MS LM throughout; common cleating; relatively free of visible infill impurities	
DHGH-14-09	228.46	229.22	0.76	140187		CO	C2	D	K	TR					R	QZ	CE	SEAM: mn to rare MS LM's; rare Qtz-Ca butt cleat infill; prominent cleating w/variable 5mm face 2mm butts	
DHGH-14-09	229.22	229.3	0.08	140188		CO	SY	D	K	CM					A	QZ	VN	SEAM: abundant Qtz-Ca Vn w/abundant MS; low quality CO	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-09	229.3	229.69	0.39	140189		CO	C2	D	K	MN								SEAM: mn MS LMs; occasional large cleats up to 10mm face by 5mm butt
DHGH-14-09	229.69	229.95	0.26	140190		CO	C2	D	K	CM		G			R	QZ	CE	SEAM FLOOR: CM MS LM's increasing towards BU; large prominent cleats up to 30mm face 20mm butt; gradational lower CT
DHGH-14-09	229.95	230.09	0.14	140191		XT		B	G	CO					R	QZ	WP	PARTING FLOOR: MN CO BN's at TU
DHGH-14-09	230.09	230.85	0.76	140192		XT		B	G	SA					R	QZ	WP	PARTING: mn ANTH LM's in middle of interval
DHGH-14-09	230.85	231.05	0.20	140193		XT		B	G	SA		P			M	QZ	VN	PARTING ROOF: mn IM SA; basal CT planar sharp @ 45deg
DHGH-14-09	231.05	231.25	0.20	140194		CO	C2	D	K	MN					R	QZ	CE	SEAM ROOF: mn MS LM's; rare qtz cleat fill TU; common small cleating
DHGH-14-09	231.25	232.22	0.97	140195		CO	C2	D	K	MN					R	QZ	VN	SEAM: mn MS LM's; rare ST clasts and BN's up to 2cm assoc. w/rare qtz vn
DHGH-14-09	232.22	233.18	0.96	140196		CO	C2	D	K	MN		G			R	QZ	CE	SEAM: mn MS LMs; some structurally displaced MS BN's up to 2cm @ BU assoc. w/ CM Qz cleat infill near bot CT; cleating is locally common
DHGH-14-09	233.18	233.38	0.20	140197		ZM		D	G						C	QZ	VN	PARTING1: 60%-40% MS-CO ratio; CO decreasing from top CT down to distinct 60deg JN separating less coaly MS below
DHGH-14-09	233.38	233.8	0.42	140198		ZM		D	G			P			C	QZ	VN	PARTING2: increasing Co content towards Bot of interval
DHGH-14-09	233.8	234.31	0.51	140199		CO	C2	D	K	MN		P			M	QZ	WP	SEAM FLOOR: mn MS LM's; mn Qz wisps BU; common small cleats 1mmx1mm;
DHGH-14-09	234.31	234.51	0.20	140200		ST		B	G	TR					R	QZ	WP	FLOOR: 3cm Anth BN @ TU w/Qtz infill; trace anth+qtz wisps
DHGH-14-09	234.51	236.3	1.79		95	ST		B	G			G			R	QZ	VN	
DHGH-14-09	236.3	237.76	1.46			XM		D	G	CM					C	QZ	VN	
DHGH-14-09	237.76	237.96	0.20	140201		XM		D	G	CM		P			C	QZ	CE	ROOF: nice sharp planar basal CT
DHGH-14-09	237.96	238.16	0.20	140202		CO	C3	D	K	RA								SEAM ROOF: massive clean coal, rare MS intermixed
DHGH-14-09	238.16	239.16	1.00	140203		CO	C2	D	K	RA								SEAM: clean coal, rare MS; prominent cleating up to 5mm face x 3mm butt
DHGH-14-09	239.16	240.16	1.00	140204		CO	C2	D	K	RA								SEAM: clean coal, rare MS, prominent cleating up to 5mm face x 3mm butt

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-09	240.16	241.16	1.00	140205		CO	C2	D	K	MN								SEAM: mn MS LM's'; moderately cleated
DHGH-14-09	241.16	242.16	1.00	140206		CO	C2	D	K	MN								SEAM: mn MS LM's; mod to well cleated; common cocoidal fracturing near base of interval
DHGH-14-09	242.16	242.5	0.34	140207		CO	C2	D	K	MN								SEAM: mn MS LM's throughout; locally concoidally fractured; mod to well cleated up to 7mm face x 5mm butt
DHGH-14-09	242.5	242.7	0.20	140208		CO	C2	D	K	MN								SEAM FLOOR: mn MS LM's; sharp lower CT ends in core loss at end of run/block; final 4cm is ZM band
DHGH-14-09	242.7	242.9	0.20			KL												
DHGH-14-09	242.9	243.73	0.83			XT		B	G	CM		G			C	QZ	CE	
DHGH-14-09	243.73	246.13	2.40			ST		B	G			G	PD	20	R	QZ	VN	
DHGH-14-09	246.13	246.99	0.86			XM		D	K	CM		G			C	QZ	WP	
DHGH-14-09	246.99	251.1	4.11		80	ST		B	G			P	WD	30	M	QZ	VN	
DHGH-14-09	251.1	251.6	0.50			CO	SY	D	K	CM		P			C	QZ	VN	not sampled due to low coal grade determined from geophysical logs
DHGH-14-09	251.6	251.95	0.35			XM		D	K	MN		G			M	QZ	CE	
DHGH-14-09	251.95	252.21	0.26			CO	SY	D	K	CM		G			C	PY	VN	not sampled due to low grade coal, stony coal, determined from geophysical logs
DHGH-14-09	252.21	252.65	0.44			XM		D	G	CM		G			C	QZ	WP	
DHGH-14-09	252.65	254.09	1.44			ST		B	G			G						
DHGH-14-09	254.09	256.77	2.68		50	ST		B	G			G	WD	20				
DHGH-14-09	256.77	256.97	0.20		50	SS	FF	A	G									
DHGH-14-09	256.97	264.13	7.16			SS	FF	A	G	TR			PD	35				
DHGH-14-09	264.13	264.18	0.05			KL												
DHGH-14-09	264.18	265.28	1.10			SS	FF	A	G	TR			PD	35				
DHGH-14-09	265.28	265.52	0.24	140209		SS	FF	A	G	MN		P	PD		M	PY	VN	ROOF A: 4cm Py vn t bottom CT; 3cm anth band w/qtz-ca infill near BU
DHGH-14-09	265.52	265.72	0.20	140210		CO	C3	D	K	CM					M	QZ	VN	SEAM ROOF A: abundant MS LM's at TU grading out to minor LM's; 2cm wide qtz-ca vn in center of interval; minor Py veinlets; moderately cleated in part

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-09	265.72	266.47	0.75	140211		CO	C3	D	K	CM					C	QZ	VN	SEAM A: locally common intermixed/interlaminated MS; 3cm wide qtz-ca vein in center of interval; 5mm py vein near bottom of interval; moderate cleating in local bands
DHGH-14-09	266.47	266.67	0.20	140212		CO	C3	D	K	CM		G			M	QZ	VN	SEAM FLOOR: slightly gradational lower CT; mn MS BN's and LM's; minor qtz-ca vn and cleat butt infill; common concoidal fracturing at top of interval; dominantly cleated up to 10mm face x 5mm butt
DHGH-14-09	266.67	266.87	0.20	140213		ZM		D	K	MN		G			M	QZ	CE	FLOOR A: gradational top & bot CT's; minor coal bands w/qtz cleat butt infill; mn irregular py veins
DHGH-14-09	266.87	267.41	0.54			XM		D	G	CM		G			C	QZ	WP	
DHGH-14-09	267.41	267.46	0.05			KL												
DHGH-14-09	267.46	269.62	2.16		60	ST		B	G			P	WD	10	R	CB	VN	
DHGH-14-09	269.62	269.99	0.37			CO	C4	D	K	CM					M	QZ	VN	Coal not sampled-low quality on geophys logs; top half of interval is C3 cleated Co but grades into dominantly MS; mn PY @ TU
DHGH-14-09	269.99	270.05	0.06			CO												
DHGH-14-09	270.05	270.62	0.57			MS		B	G	TR		G			R	QZ	WP	
DHGH-14-09	270.62	271.22	0.60			ST		B	G									
DHGH-14-09	271.22	275.81	4.59			SS	FF	A	G			G		30	M	QZ	VN	
DHGH-14-09	275.81	280.06	4.25		90	SS	FF	A	G			G	PD	25				
DHGH-14-09	280.06	283.91	3.85			ST		B	G	TR		G	PD	10	R	QZ	VN	
DHGH-14-09	283.91	286.08	2.17			MS		D	G			G			M	QZ	VN	
DHGH-14-09	286.08	288.86	2.78			SS	VF	D	G						M	QZ	VN	E.O.H.
DHGH-14-10	0	0.02	0.02			SO			E									
DHGH-14-10	0.02	1.97	1.95			KL												
DHGH-14-10	1.97	2.25	0.28			GV		V	G									
DHGH-14-10	2.25	2.42	0.17			KL												
DHGH-14-10	2.42	2.56	0.14			ST		B	G		AM							
DHGH-14-10	2.56	2.86	0.30			KL												
DHGH-14-10	2.86	3.91	1.05			ST		B	G	FO		G	PD	22	C	BI	BN	
DHGH-14-10	3.91	8.03	4.12			SS	VF	A	G	FO		G	PD	20	E	BI	BN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-10	24.85	25.09	0.24	145082		CO	C4		K			G	PD	30	M	CB	CE	Seam top. Very soft. Few pieces that are competent have conchoidal fractures.
DHGH-14-10	25.09	25.3	0.21	145083		CO	C3		K			G	PD	30	M	CB	CE	Seam bottom A. Minor muddy lenses up to 2mm. Face cleats 2 to 10mm at 25deg. Butt cleats 1 to 10mm. CB mostly in butt cleats.
DHGH-14-10	25.3	25.5	0.20	145084		MS		B	G			G	PD	30	M	CB	WP	Floor
DHGH-14-10	25.5	25.99	0.49			MS		B	G			G	PD	30	M	CB	WP	
DHGH-14-10	25.99	26.47	0.48			ST		B	G				PD	25	M	CB	WP	
DHGH-14-10	26.47	26.52	0.05			KL												
DHGH-14-10	26.52	26.59	0.07			ST		B	G			G	PD	25	M	CB	WP	
DHGH-14-10	26.59	33.24	6.65			SS	VF	A	G			G	WD	30	M	CB	WP	
DHGH-14-10	33.24	34.6	1.36			ST		B	G			G	CU	23	M	CB	VN	
DHGH-14-10	34.6	35.12	0.52			MS		B	G			I	PD	20	M	CB	VN	
DHGH-14-10	35.12	35.37	0.25			KL												
DHGH-14-10	35.37	35.45	0.08			CO	C4		K						C	CB	CE	Common carbonate infill along face and butt cleats. Face cleats at 20 degrees.
DHGH-14-10	35.45	35.54	0.09			CO	C4		K			P			C	CB	CE	Siltstone lenses up to 7 mm. Common carbonate infill along face and butt cleats. Face cleats at 20 degrees.
DHGH-14-10	35.54	35.56	0.02			SS	VF	A	G					15	M	PY	DS	
DHGH-14-10	35.56	35.71	0.15			KL												
DHGH-14-10	35.71	38.46	2.75			SS	VF	A	G	FO			FU	25	M	BI	BN	
DHGH-14-10	38.46	38.63	0.17			KL												
DHGH-14-10	38.63	42.67	4.04			ST		B	G	FO		G	WD	20				
DHGH-14-10	42.67	42.95	0.28			KL												
DHGH-14-10	42.95	44.86	1.91		70	SS	VM	A	G				WD	35	M	CB	WP	
DHGH-14-10	44.86	45.24	0.38			KL												
DHGH-14-10	45.24	46.31	1.07		70	SS	VM	A	G						M	CB	VN	
DHGH-14-10	46.31	47	0.69			ST		B	G			P						
DHGH-14-10	47	55.09	8.09			SS	VM	A	G			G	PD	6	A	CB	VN	
DHGH-14-10	55.09	56.98	1.89			ST		B	G			G			M	CB	WP	
DHGH-14-10	56.98	57.27	0.29			MS		B	G	MN		P			M	CB	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-10	57.27	57.47	0.20	145085		MS		B	G	MN		P			M	CB	VN	Roof
DHGH-14-10	57.47	57.67	0.20	145086		CO	C3		K						E	CB	CE	Seam Roof. Minor carbonate in butt cleats near top contact. Cleats poorly developed and face cleats up to 20 degrees. Some concoidal fracture. Muddy bands up to 3 mm.
DHGH-14-10	57.67	57.9	0.23	145087		CO	C3		K						E	CB	CE	Seam. Minor conchoidal fracture. Poorly developed cleating with carbonate in butt cleats near top. Muddy bands up to 3 mm.
DHGH-14-10	57.9	58.1	0.20	145088		CO	C3		K			P			E	CB	CE	Seam Floor. Moderately developed cleats up to 2 x 2 mm. Face cleats up to 30 degrees. Muddy bands up to 1 mm. Accessory carbonate in butt cleats. Minor conchoidal fracture. Pyrite in bands.
DHGH-14-10	58.1	58.3	0.20	145089		ST		B	G				WD	30				Floor.
DHGH-14-10	58.3	69.01	10.71		80	ST		B	G			G	WD	40	M	CB	VN	
DHGH-14-10	69.01	69.1	0.09			SS	VF	A	G			P	PD	60	E	CB	VN	
DHGH-14-10	69.1	69.3	0.20			SS	VF											
DHGH-14-10	69.3	70.82	1.52			SS	VF	A	G			P	PD	60	E	CB	VN	
DHGH-14-10	70.82	74.37	3.55		60	ST		A	G			P	WD	50	E	CB	VN	
DHGH-14-10	74.37	74.69	0.32			MS			K			P	PD	65				
DHGH-14-10	74.69	74.89	0.20	145090		MS			K			P	PD	65				Roof
DHGH-14-10	74.89	75.09	0.20	145091		CO	C2		K				PD	45	M	CB	CE	Seam roof. Muddy bands up to 10 mm. Moderately well developed cleating up to 2 x 2 mm. Carbonate mostly in butt cleats. Face cleats at 45 to 75 degrees.
DHGH-14-10	75.09	75.33	0.24	145092		CO	C2		K				PD	30	M	CB	CE	Seam. Well developed cleating up to 4 x 4 mm. Carbonate predominantly in butt cleats. Pyrite in a single lens. Face cleats at 45 degrees.
DHGH-14-10	75.33	75.46	0.13			KL												
DHGH-14-10	75.46	76.17	0.71	145093		CO	C2		K				PD	30	M	CB	CE	Seam. Muddy bands up to 2 mm. Variably well developed cleating up to 3 x 4 mm. Face cleats at 30 degrees. Pyrite in a single lens. Carbonate predominantly in butt cleats.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-10	76.17	77.17	1.00	145094		CO	C2		K				PD	30	M	CB	CE	Seam. Well developed cleating up to 3 x 4 mm. Face cleats at 30 degrees and much better developed than butt cleats.
DHGH-14-10	77.17	77.37	0.20	145095		CO	C2		K			P	PD	30	M	CB	CE	Seam Floor. Minor muddy bands up to 2 mm. Carbonate predominantly in butt cleats. Face cleats up to 45 degrees. Cleating moderately developed, 2 x 3 cm. Trace sulfide in blebs.
DHGH-14-10	77.37	77.57	0.20	145096		ST		B	G				PD	8	R	CB	VN	Floor
DHGH-14-10	77.57	80.56	2.99			ST		B	G				PD	8	R	CB	VN	
DHGH-14-10	80.56	80.72	0.16			KL												
DHGH-14-10	80.72	85.4	4.68		70	SS	VM	M	G			G	WD	15				
DHGH-14-10	85.4	89.24	3.84		50	ST		B	G				WD	8	E	CB	VN	
DHGH-14-10	89.24	91.88	2.64		60	SS	VF	A	G			G	CU	40	E	CB	VN	
DHGH-14-10	91.88	92.08	0.20	145097	60	SS	VF	A	G	CO		G	CU	40	E	CB	VN	Roof.
DHGH-14-10	92.08	92.28	0.20	145098		CO	C2		K				PD	35	M	CB	CE	Seam Roof. Minor muddy bands up to 5 mm. Moderately well developed cleating up to 1 x 1 mm. Face cleats at 35 degrees. Carbonate loosely controlled by cleating.
DHGH-14-10	92.28	92.92	0.64	145099		CO	C2		K				PD	35	E	CB	CE	Seam. Muddy bands up to 4 mm. Conchoidal fracture, with poorly developed cleating. Face cleats at 30 degrees. Carbonate loosely controlled by butt cleats.
DHGH-14-10	92.92	92.99	0.07			KL				CO								
DHGH-14-10	92.99	93.31	0.32	145100		CO	C2		K			G	PD	35	C	CB	CE	Seam Floor.
DHGH-14-10	93.31	93.49	0.18	145101		ST			G	CO		P	WD	35	R	CB	VN	Floor. Muddy bands up to 20 mm. Carbonate along face and butt cleats. Cleating well developed up to 2 x 2 mm. Face cleats at 30 degrees. Pyrite in blebs near base. Minor conchoidal fracture.
DHGH-14-10	93.49	96.87	3.38			ST			G			P	WD	35	R	CB	VN	
DHGH-14-10	96.87	98.92	2.05			SS	VM	A	G				PD	45	M	CB	VN	
DHGH-14-10	98.92	99.02	0.10			KL												
DHGH-14-10	99.02	102.85	3.83			SS	VM			ST		P	PD	50	M	CB	VN	
DHGH-14-10	102.85	108.68	5.83			ST		B	G				WD	70	E	CB	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-10	108.68	109	0.32			KL												
DHGH-14-10	109	109.14	0.14			ST		B	G			P			E	CB	VN	
DHGH-14-10	109.14	109.92	0.78			SS	VM	A	G			P	WD	60	E	CB	VN	
DHGH-14-10	109.92	110.12	0.20	145102		SS	VM	A	G			P	WD	60	E	CB	VN	Roof
DHGH-14-10	110.12	110.32	0.20	145103		CO	C1		K						M	CB	BL	Seam Roof. Conchoidal fracture. Very fine grained. Carbonate in blebs up to 2 cm.
DHGH-14-10	110.32	111.32	1.00	145104		CO	C2								M	CB	CE	Seam. Minor conchoidal fracture. Moderately well developed cleating with cleats up to 2 x 3 mm. Carbonate in face and butt cleats. Pyrite in blebs. Several muddy bands up to 1 cm. Face cleats at 15 degrees.
DHGH-14-10	111.32	112.32	1.00	145105		CO	C2								M	CB	CE	Seam. Minor conchoidal fracture. Variably developed cleating with cleats up to 2 x 3 mm. Minor muddy bands up to 3 mm. Carbonate in face and butt cleats, Pyrite in blebs. Face cleats at 10 to 15 degrees.
DHGH-14-10	112.32	112.56	0.24	145106		CO	C2		K						M	CB	VN	Seam (True seam floor hidden by core loss). Conchoidal fracturing and moderately developed cleating with cleats up to 2 x 2 mm. Carbonate in veins (not controlled by cleats). Pyrite associated with carbonate. Face cleats at 10 to 15 degrees.
DHGH-14-10	112.56	112.68	0.12			KL				CO								
DHGH-14-10	112.68	112.88	0.20	145107		XM			K	CO		G	PD	22	M	CB	WP	Floor. Coal content increases up hole with carbonate veining and in butt cleats.
DHGH-14-10	112.88	113.28	0.40			XM			K	CO		G	PD	22	M	CB	WP	
DHGH-14-10	113.28	115.18	1.90		70	ST		B	G									
DHGH-14-10	115.18	118.12	2.94			SS	VM	A	G	ST		P	WD	28	M	CB	VN	
DHGH-14-10	118.12	120.56	2.44			ST		D	G				BT	20	M	CB	VN	
DHGH-14-10	120.56	123.59	3.03		60	ST		B	G			G	WD	30	E	CB	VN	
DHGH-14-10	123.59	125.63	2.04			ST		B	G				WD	42	M	CB	VN	
DHGH-14-10	125.63	125.78	0.15			KL												
DHGH-14-10	125.78	125.81	0.03			KL												
DHGH-14-10	125.81	128.79	2.98			ST		B	G				PD	30	M	CB	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-10	128.79	128.93	0.14			KL												
DHGH-14-10	128.93	129.18	0.25			ST		B	G		AM	G		30	R	CB	WP	
DHGH-14-10	129.18	134.28	5.10			SS	VM	A	G	ST		P	PD	25	M	CB	VN	
DHGH-14-10	134.28	139.77	5.49		50	SS	VM	A	G			G	BT	15	R	CB	VN	
DHGH-14-10	139.77	142.34	2.57			ST		B	G				PD	20	R	PY	BL	
DHGH-14-10	142.34	142.39	0.05			KL												
DHGH-14-10	142.39	144.39	2.00			ST		B	G	FO	AM	G			M	BI	BN	
DHGH-14-10	144.39	146.09	1.70			SS	VF	A	G	FO		G	CU		M	BI	BN	
DHGH-14-10	146.09	146.86	0.77			ST		B	G			P	CU					
DHGH-14-10	146.86	147.11	0.25			CO	C4		K	SI		G	PD	20	M	CB	CE	Not sampled due to 6 cm band siltstone in the middle.
DHGH-14-10	147.11	148.82	1.71			ST		B	G	CO		G	FU	20	R	CB	WP	
DHGH-14-10	148.82	151.49	2.67		60	SS	VF	A	G				WD	20				
DHGH-14-10	151.49	151.54	0.05			KL												
DHGH-14-10	151.54	154.38	2.84		60	SS	VF	A	G			I	WD	20	R	PY	BL	
DHGH-14-10	154.38	154.55	0.17	145108	60	SS	VF	A	G			I	WD	20	R	PY	BL	Roof. Minor anthracite bands at bottom of unit.
DHGH-14-10	154.55	154.6	0.05			KL				CO								
DHGH-14-10	154.6	155.01	0.41	145109		CO	C3		K				PD	20				Coal. ST bands <10mm. Variably developed cleating; face cleats 30deg. Cleats <2x3mm. CB in face & butt cleats.
DHGH-14-10	155.01	158.92	3.91	145110		ST		B	G	CO		P	FU	23	R	CB	CE	Floor. Common anthracite bands.
DHGH-14-10	158.92	163.34	4.42			SS	VM	A	G	ST		P	PD	40				
DHGH-14-10	163.34	169.3	5.96			ST		B	G	CO		G	FU	15	R	CB	WP	
DHGH-14-10	169.3	170.69	1.39			SS	VF	A	G			G	WD	10				
DHGH-14-10	170.69	173.98	3.29		80	ST		B	G			I	WD	16				
DHGH-14-10	173.98	175.06	1.08			SS	FC	A	G	XC		I	WD	10				
DHGH-14-10	175.06	175.26	0.20	145111		SS	FC	A	G	XC		I	WD	10				Roof. Clean
DHGH-14-10	175.26	175.63	0.37	145112		CO	C4		K	ST		G	PD	20				Seam. Common ST bands <5mm. Anthracite bands <30mm. Mod to well developed cleating, 3x4mm. Face cleats 5 to 40deg. CB in face & butt cleats. PY in bands.
DHGH-14-10	175.63	175.83	0.20	145113		ZM		D	G			G	WD	20	E	CB	VN	Floor. Common anthracite bands top of ZM <2mm.
DHGH-14-10	175.83	177.1	1.27			ZM		D	G			G	WD	20	E	CB	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-10	177.1	181.83	4.73			ST		B	G		AM	G						
DHGH-14-10	181.83	184.22	2.39		60	ST		B	G			G	WD	20				
DHGH-14-10	184.22	184.47	0.25	145114	60	ST		B	G			G	WD	20				Roof A. Minor anthracite bands near base
DHGH-14-10	184.47	184.67	0.20	145115		CO	C3		K				PD	10	E	CB	CE	Seam Roof A. Minor ST bands <5mm. Cleating variably developed < 40x80mm. Face cleats 10 to 15deg. Conchoidal fractures. CB in face cleats. Single PY BN 2mm.
DHGH-14-10	184.67	184.96	0.29	145116		CO	C3		K				PD	12	M	CB	CE	Seam A. Common ST bands <10mm. Cleating variably developed < 40x80mm. Face cleats 10 to 15deg. CB in face & butt cleats. Single PY BL 10mm.
DHGH-14-10	184.96	185.06	0.10			KL												Seams end w/in core loss. ~11cm missing CO. No seam floor or floor sample taken.
DHGH-14-10	185.06	192.84	7.78			ST		B	G			G	PD	30				
DHGH-14-10	192.84	194.16	1.32		70	ST		B	G				WD	20				
DHGH-14-10	194.16	194.21	0.05			KL												
DHGH-14-10	194.21	198.24	4.03		70	ST		B	G			G	WD	20				
DHGH-14-10	198.24	202.44	4.20			SS	VF	A	G	ST		G	WD	12				
DHGH-14-10	202.44	212.15	9.71		80	ST		B	G			G	FS	10				
DHGH-14-10	212.15	215.44	3.29			ST		B	G			P	CU	8				
DHGH-14-10	215.44	215.47	0.03			KL												
DHGH-14-10	215.47	216.09	0.62			ST		B	G				CU	8				
DHGH-14-10	216.09	216.29	0.20	145117		ST		B	G			P	CU	8				Roof. Trace coaly lenses 1 to 2 mm.
DHGH-14-10	216.29	216.59	0.30	145118		CO	C1		K	ST			PD	15	R	CB	VN	Seam Roof. Extended to include an 8 cm siltstone parting. Well developed cleating with cleats up to 4 x 6 mm. Face cleats at 10 to 15 degrees. Trace carbonate in veins.
DHGH-14-10	216.59	216.67	0.08			KL												
DHGH-14-10	216.67	217.49	0.82	145119		CO	C1		K			G	PD	20				Seam. Very well developed cleating, with cleats up to 4 x 5 mm. Face cleats at 10 to 15 degrees. Minor silty lenses up to 4 mm.
DHGH-14-10	217.49	217.64	0.15	145120		CO	SY	D	G	ST		G	PD	20	M	CB	VN	SY CO parting. Irregular anthracite pods. Highly folded likely causing gamma & density to be dissimilar.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-10	217.64	218.52	0.88	145121		CO	C2		K				PD	20				Seam. Silty, FF top 12cm, coinchoidal fractures. Variably developed cleating < 20x50mm. Face cleats 10 to 25deg. Slightly muddier for ~40cm bottom of unit.
DHGH-14-10	218.52	219.32	0.80	145122		CO	C2		K				PD	35				Seam. Well developed cleating, < 40x50mm. Face cleats 35 to 40deg. Slightly muddier top ~30cm top of unit, FF and conchoidal fractures.
DHGH-14-10	219.32	219.49	0.17	145123		CO	C2		K			G	PD	40	M	CB	CE	Seam floor. Minor ST band <3mm. Well developed cleating, <20x40mm. Face cleats 40 to 50deg.
DHGH-14-10	219.49	219.69	0.20	145124		ST		B	G				PD	50	C	CB	VN	Floor. Coaly near upper contact (~7 cm).
DHGH-14-10	219.69	221.71	2.02			ST		B	G				PD	50				
DHGH-14-10	221.71	221.78	0.07			KL												
DHGH-14-10	221.78	223.29	1.51			ST		B	G				PD	60				
DHGH-14-10	223.29	224.1	0.81			ST		B	G				PD	89				hinge of fold
DHGH-14-10	224.1	226.18	2.08			ST		B	G				PD	60				
DHGH-14-10	226.18	226.4	0.22	145125		ST		B	G			P	PD	60				Roof. Clean.
DHGH-14-10	226.4	226.6	0.20	145126		CO	C2		K				PD	40	R	CB	CE	Seam Roof. Moderately well developed cleating with cleats <2 x 2. Rare carbonate in butt cleats near upper contact. Face cleats at 40 degrees.
DHGH-14-10	226.6	227.44	0.84	145127		CO	C2		K			G	P	30	R	CB	CE	Seam. Silty lenses up to 3mm. Trace carbonate in butt cleats. Moderately well developed cleating up to 2 x 2 mm. Angle of face cleats varies. Abundance of silty bands increases down sample but not significantly.
DHGH-14-10	227.44	227.64	0.20	145128		CO	SY		K			G	P		M	CB	CE	Seam Floor, Stony. Minor carbonate in poorly developed cleats
DHGH-14-10	227.64	227.82	0.18	145129	55	ST		B	G				PD		E	CB	BN	Floor. Sub mm wisps of carbonate and coal.
DHGH-14-10	227.82	230.22	2.40		55	ST		B	G	CO			PD		E	CB	BN	irregular folding
DHGH-14-10	230.22	230.32	0.10			KL												
DHGH-14-10	230.32	230.82	0.50		55	ST		B	G	BN			PD		E	CB	BN	
DHGH-14-10	230.82	231.04	0.22	145130	55	ST		B	G	BN		G	PD		E	CB	BN	Roof. Anthracite bands <10mm concentrated near bottom.
DHGH-14-10	231.04	231.24	0.20	145131		CO	C3		K				PD	45	E	CB	VN	Seam roof. FF. Conchoidal fractures. Silty bands < 2mm. CB concentrated at top contact.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-10	231.24	232.24	1.00	145132		CO	C1		K	TR			PD	45	R	CB	VN	Seam. Trace silty bands <2mm. Well developed cleats <3x5mm. Face cleats 60deg.
DHGH-14-10	232.24	233.24	1.00	145133		CO	C1		K	TR			PD	70	R	CB	CE	Seam. Trace silty bands <2mm. Well developed cleating <2x4mm. Face cleats 70 to 80deg.
DHGH-14-10	233.24	233.84	0.60	145134		CO	C2		K	MN			PD	70	M	CB	CE	Seam. Silty bands <3mm. Well developed cleating <2x4mm. MN CB concentrated in butt cleats. Face cleats 70 to 75deg.
DHGH-14-10	233.84	234.04	0.20	145135		CO	C3		K	CM		U	PD		E	CB	CE	Seam floor. Well developed cleating <2x3mm. ST bands <10mm. Face cleat angles highly variable. CB concentrated in face cleats.
DHGH-14-10	234.04	234.24	0.20	145136		ST		B	G	MN		G	WD	50	M	CB	VN	Floor. Anthracite bands <10mm.
DHGH-14-10	234.24	236.1	1.86			ST		B	G	MN		P	WD	50	M	CB	VN	
DHGH-14-10	236.1	236.97	0.87			ZM		D	G									
DHGH-14-10	236.97	237	0.03			KL												Core loss in coal. No roof sample taken.
DHGH-14-10	237	237.56	0.56	145137		CO	C2		K	MN		P	PD	40	R	CB	CE	Seam. Minor ST lenses <10mm. Moderately well developed cleating <2x2mm. Face cleats 40deg. CB mostly in butt cleats.
DHGH-14-10	237.56	238.16	0.60	145138		ZT		D	G				PD	38	E	CB	VN	Parting. 10cm C3 coaly band in centre of parting. Minor coaly lenses <20mm.
DHGH-14-10	238.16	238.2	0.04			KL												Core loss in parting
DHGH-14-10	238.2	238.46	0.26	145139		CO	C2		K			G			R	CB	CE	Seam floor. Poorly developed cleating. Some conchoidal fracturing.
DHGH-14-10	238.46	238.66	0.20	145140		MS		D	G	MN			PD	25	R	CB	WP	Floor. Minor coaly bands <10mm.
DHGH-14-10	238.66	238.94	0.28			MS		D	G	MN	AM	G			R	CB	WP	
DHGH-14-10	238.94	241.4	2.46		60	ST		A	G			G	WD	36	M	CB	VN	
DHGH-14-10	241.4	243.01	1.61			SS	VF	A	G			P	PD	20	M	CB	VN	
DHGH-14-10	243.01	247.91	4.90		70	ST		B	G				WD	18				
DHGH-14-10	247.91	248.11	0.20	145141	70	ST		B	G			G	WD	18	M	CB	VN	Roof. Minor anthracite bands <2mm. Single CB vein 20mm.
DHGH-14-10	248.11	248.46	0.35	145142		CO	C3		K	MN		I	IR	30	M	CB	CE	Seam. Minor silty bands <5mm. Well developed cleating <3x4mm. Face cleats 30deg. CB & PY in both face & butt cleats.
DHGH-14-10	248.46	248.66	0.20	145143		ZM			K				PD	15	M	PY	DS	Floor. Minor CO bands <2mm.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-10	248.66	249.21	0.55			ZM			K			G	PD	15	M	PY	DS	
DHGH-14-10	249.21	253.32	4.11		65	ST		B	G			G	WD	12	R	CB	VN	
DHGH-14-10	253.32	260.91	7.59			SS	VM	A	G				WD	15				
DHGH-14-10	260.91	261.11	0.20	145144		SS	VM	A	G			G	WD	15				Roof. Trace coaly bands 1mm.
DHGH-14-10	261.11	261.31	0.20	145145		CO	C4		K	MN			PD	40	M	CB	CE	Seam roof. Minor silty bands <10mm. Poorly developed cleating. Variable face cleat angle. Conchoidal fracturing. Minor CB in face & butt cleats. Minor PY blebs <15x40mm
DHGH-14-10	261.31	262.21	0.90	145146		CO	C2		K	MN			PD	40	M	CB	CE	Seam. Minor silty bands <5mm. Poorly developed cleating. Conchoidal fractures. Minor CB in face & butt cleats. Face cleats 40deg. Minor PY blebs 10x40mm.
DHGH-14-10	262.21	262.41	0.20	145147		CO	C3		K	MN		G	PD	10	M	CB	CE	Seam floor. Minor silty bands <10mm. Poorly developed cleating. Conchoidal fractures. CB predominately in butt cleats. Face cleats 10deg. Trace PY blebs <5x10mm.
DHGH-14-10	262.41	262.6	0.19	145148	60	SS	VF	A	G				WD	15	E	CB	VN	Floor. Accessory CB. Common coaly bands <20mm.
DHGH-14-10	262.6	263.49	0.89		60	SS	VF	A	G				WD	15	M	CB	VN	
DHGH-14-10	263.49	263.69	0.20	145149	60	SS	VF	A	G			G	WD	15	M	CB	VN	Roof. Coaly bands <5mm. CB concentrated at bottom of unit. Single PY band <50mm.
DHGH-14-10	263.69	264.04	0.35	145150		CO	C2		K	MN		G			M	CB	CE	Seam. Minor silty bands <5mm. Well developed cleating <4x5mm. Face cleats 20deg. CB predominately in butt cleats. PY concentrated near top of unit.
DHGH-14-10	264.04	264.31	0.27	145151		CO	C4		K	CM		G	PD	20	E	CB	CE	Seam. Common silty bands <10mm. Variably developed cleating <4x5mm. Accessory CB in face & butt cleats. Face cleats 20deg. Single PY band at base 10mm.
DHGH-14-10	264.31	264.51	0.20	145152		ST		B	G				FU	30	R	CB	WP	Floor. Minor anthracite bands <2mm.
DHGH-14-10	264.51	266.26	1.75			ST		B	G			G	FU	30	R	CB	WP	
DHGH-14-10	266.26	267.43	1.17			SS	VM	A	G				PD	35				
DHGH-14-10	267.43	267.5	0.07			KL												
DHGH-14-10	267.5	269.78	2.28			SS	VM	A	G	SI		G	PD	30	E	CB	VN	
DHGH-14-10	269.78	271.34	1.56		70	SS	VF	A	G			G	WD	35	M	CB	VN	
DHGH-14-10	271.34	277.21	5.87			ST		B	G			G	PD	20	R	CB	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-10	277.21	285.65	8.44		70	SS	VF	A	G				WD	20	M	CB	VN	
DHGH-14-11	0	1.42	1.42			KL												
DHGH-14-11	1.42	2.02	0.60			MD		M	B									
DHGH-14-11	2.02	2.69	0.67			KL												
DHGH-14-11	2.69	3.03	0.34			MD		E	G									
DHGH-14-11	3.03	4.83	1.80			ST		A	G			P						
DHGH-14-11	4.83	5.18	0.35			CO	C6	D	K	AB								NO SAMPLE DUE TO LOW QUALITY ASSESSED FROM GEOPHYS; ABUNDANT INTERMIXED MS BORDERING ON ZM; NO CLEATING
DHGH-14-11	5.18	5.4	0.22			KL												
DHGH-14-11	5.4	5.69	0.29			SS	FF	A	G		AM				C	QZ	VN	
DHGH-14-11	5.69	8.23	2.54			ST		B	G				PD	20	R	QZ	VN	
DHGH-14-11	8.23	9.83	1.60			ST		B	G				PD	60	R	QZ	VN	SAME LITH AS ABOVE BUT BEDDING ANGLE GRADUALLY CHANGES FROM 20 TO 60 DEG W/DEPTH
DHGH-14-11	9.83	10.97	1.14			KL												
DHGH-14-11	10.97	12.47	1.50			KL				CO								
DHGH-14-11	12.47	12.83	0.36	140214		CO	SY	D	K	CM		G			C	QZ	VN	SEAM: TOP 10CM SOFT MUDDY COAL (POSSIBLY MIXED W/ DRILLING MUD), BOTTOM OF INTERVAL STONY COAL
DHGH-14-11	12.83	13.23	0.40	140215		CO	C5	D	K	CM					M	QZ	CE	SEAM: LOW QUALITY MUDDY COAL, CLEANER WELL CLEATED ANTHRACITE BAND UP TO 5CM IN MIDDLE OF INTERVAL W/MINOR QTZ CLEAT INFILL
DHGH-14-11	13.23	14.02	0.79	140216		CO	C4	D	K	CM		G			M	QZ	VN	SEAM: IRREGULARLY INTERLAMINATED ANTH-MS; MNR QTZ-CA VN'S & CLEAT FILL; GRADES INTO 15CM OF SILTIER COAL @ BOT OF INTERVAL
DHGH-14-11	14.02	14.1	0.08			KL												
DHGH-14-11	14.1	14.26	0.16			MS		B	G	RA		P			R	QZ	CE	STARTS ON CORE LOSS
DHGH-14-11	14.26	17.56	3.30		90	SS	FF	A	G			P	WD	65	C	QZ	VN	
DHGH-14-11	17.56	19.8	2.24			ST		B	G			G	PD	10				
DHGH-14-11	19.8	21.13	1.33			SS	FF	A	G		AM		PD					
DHGH-14-11	21.13	21.18	0.05			KL												
DHGH-14-11	21.18	22.58	1.40			SS	FF	A	G		AM				M	QZ	VN	
DHGH-14-11	22.58	23.36	0.78			ST		B	G				PD	10				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	23.36	23.47	0.11			KL												
DHGH-14-11	23.47	24.07	0.60			ST		B	G		AM	P						
DHGH-14-11	24.07	25.45	1.38		75	SS	FF	A	G			G	PD	15				
DHGH-14-11	25.45	26.58	1.13			MS		B	G			G	PD	10				
DHGH-14-11	26.58	27.5	0.92			XM		D	G	MN		G			M	QZ	CE	
DHGH-14-11	27.5	27.6	0.10			CO	SY	D	K	CM		G			M	QZ	CE	STONY COAL WITH COMMON MS BANDS; MN QTZ-CA CLEAT INFILL; MN PY VN'S NEAR UPPER CT; GRADATIONAL UPPER & LOWER CT'S
DHGH-14-11	27.6	27.75	0.15			CO	C4	D	K	RA		G						COAL WITH RARE MS BANDS; WELL DEVELOPPED CLEATING W/4MM FACE X 2MM BUTTS; ENDS ON 2CM ZM BAND
DHGH-14-11	27.75	28.53	0.78			SS	VF	A	G		AM				C	QZ	VN	
DHGH-14-11	28.53	28.63	0.10			KL												
DHGH-14-11	28.63	29.58	0.95			SS	VF	A	G		AM	I		15	M	QZ	VN	
DHGH-14-11	29.58	29.63	0.05			ZM		D	K									CRUMBLED ZM AT END OF RUN
DHGH-14-11	29.63	29.7	0.07			KL												
DHGH-14-11	29.7	29.82	0.12			XM		D	G		AM	P						
DHGH-14-11	29.82	30.18	0.36			ZM		D	G	CM		G			M	QZ	CE	COALY MUDSTONE W/COMMON ANTHRACITE BANDS, CONCOIDALLY FRACTURED, GRADATIONAL BOT CT
DHGH-14-11	30.18	35.16	4.98		80	ST		B	G			P	PD	30	M	QZ	VN	
DHGH-14-11	35.16	38.55	3.39			SS	FF	A	G		AM				C	QZ	VN	
DHGH-14-11	38.55	38.6	0.05			KL												
DHGH-14-11	38.6	38.9	0.30			SS	FF	A	G		AM	G			C	QZ	VN	
DHGH-14-11	38.9	40.26	1.36			ST		B	G				WD	25				
DHGH-14-11	40.26	41.06	0.80			KL												
DHGH-14-11	41.06	49.16	8.10			ST		B	G			G	PD	40	M	QZ	VN	
DHGH-14-11	49.16	49.59	0.43			XT		D	G	MN		G			M	QZ	VN	
DHGH-14-11	49.59	49.79	0.20	140217		CO	SY	D	K	CM		G			C	QZ	CE	ROOF: STONEY COAL: COMMON QTZ-CA CLEAT INFILL; COMMON SMALL CLEATING IN COAL (1MM FACE X 0.5MM BUTT); INTERBEDDED W/ST BUT GRADING TO CLEANER COAL AT BOT OF INTERVAL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	49.79	49.95	0.16	140218		CO	C4	D	K	CM								SEAM: CRUSHED COAL: INTERMIXED WITH COMMON MS; CONCOIDAL FRACTURING; NO OTHER FEATURES; UNCERTAIN OF PLACEMENT IN SEAM DUE TO LARGE CORE LOSSES
DHGH-14-11	49.95	51	1.05			KL												
DHGH-14-11	51	51.15	0.15			KL												
DHGH-14-11	51.15	51.49	0.34			XM		D	G	MN		G			C	QZ	VN	
DHGH-14-11	51.49	54.47	2.98			ST		B	G		AM		PD	35	M	QZ	VN	
DHGH-14-11	54.47	59.67	5.20		60	SS	FF	A	G				PD	20	R	QZ	VN	
DHGH-14-11	59.67	59.76	0.09			KL												
DHGH-14-11	59.76	65.86	6.10		80	SS	FF	A	G				WD	20	M	QZ	VN	
DHGH-14-11	65.86	66.03	0.17			KL												
DHGH-14-11	66.03	68.98	2.95		80	SS	FF	A	G				WD	20	R	QZ	VN	
DHGH-14-11	68.98	69.08	0.10			KL												
DHGH-14-11	69.08	72.23	3.15			ST		B	G				PD	30				
DHGH-14-11	72.23	72.28	0.05			KL												
DHGH-14-11	72.28	72.32	0.04			ST		B	G			P			C	QZ	VN	
DHGH-14-11	72.32	72.61	0.29			CO	SY	D	K			G		20	C	QZ	CE	STONY COAL WITH GRADATIONAL UPPER AND LOWER CONTACTS, COMMON QTZ CLEAT INFILL AT UPPER AND LOWER CONTACTS, NOT SAMPLED DUE TO LOW COAL GRADE
DHGH-14-11	72.61	75.28	2.67		60	SS	VF	A	G				WD	25				
DHGH-14-11	75.28	75.32	0.04		40	ST		B	G									
DHGH-14-11	75.32	75.79	0.47			MS		B	G			G			M	QZ	CE	
DHGH-14-11	75.79	76.12	0.33			CO	SY	D	K			G			C	QZ	VN	STONY COAL INTERLAMINATED WITH MS, QTZ VEINS AND CLEAT INFILL, PREDOMINANTLY ALONG BUTT CLEATS, NOT SAMPLED DUE TO LOWGRADE OF COAL DETERMINED FROM GEOPHYS LOGS
DHGH-14-11	76.12	76.54	0.42			MS		D	G			G						

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	76.54	76.74	0.20			CO	SY	D	K			G	PD		C	QZ	CE	STONY COAL INTERMIXED WITH MS, MINOR PYRITE BLEBS ASSOCIATED W/ GRADATIONAL CONTACTS ON UPPER AND LOWER INTERVAL, COMMON QTZ CLEAT INFILL ALONG BOTH CLEAT PLANES, COAL NOT SAMPLED DUE TO LOW GRADE DETERMINED BY GEOPHYS
DHGH-14-11	76.74	79.08	2.34		80	SS	FF	A	G			G	PD	20				
DHGH-14-11	79.08	83.92	4.84			SS	FF	A	G		AM	G			R	QZ	VN	
DHGH-14-11	83.92	85.45	1.53			ST		B	G	TR		G	PD	20	R	QZ	VN	
DHGH-14-11	85.45	85.77	0.32			MS		D	G	RA		G			R	QZ	CE	
DHGH-14-11	85.77	85.97	0.20	140219		MS		D	G	CM		G			C	QZ	CE	ROOF A: MS W/COMMON COAL LM'S INCREASING TOWARDS GRADATIONAL BOT CT; MNR 1CM PY VN MIDDLE OF INTERVAL
DHGH-14-11	85.97	86.17	0.20	140220		CO	C4	D	K	CM					C	QZ	CE	SEAM ROOF: COMMON MS LM'S; CM QTZ-CA CLEAT INFILL LESSENING W/DEPTH
DHGH-14-11	86.17	86.72	0.55	140221		CO	C4	D	K	CM					M	QZ	CE	SEAM: CM MS LM'S THROUGHOUT; MNR QTZ-CA IRREGULAR INFILL; SOME COAL BNDS MOD CLEATED W/SMALL SIZED CLEATS
DHGH-14-11	86.72	86.92	0.20	140222		CO	C5	D	K	CM		G			R	QZ	CE	SEAM FLOOR: CM MS LM'S; RARE QTZ-CA CLEAT BUTT INFILL; ANTH LM'S ARE MODERATELY CLEATED
DHGH-14-11	86.92	87.12	0.20	140223		ZM		D	K	CM		G			C	PY	VN	FLOOR A: GRADES OUT OF STONEY COAL WITH CM QZ CLEAT BUTT INFILL, INTO MS; 2CM PY VN ON GRADATIONAL CT
DHGH-14-11	87.12	87.96	0.84			MS		D	G	TR		G						
DHGH-14-11	87.96	91.58	3.62		85	SS	FF	A	G				WD	30	M	QZ	VN	
DHGH-14-11	91.58	92.28	0.70		95	SS	FF	A	G				WD	85				FOLD NOSE AT 92.65M
DHGH-14-11	92.28	99.86	7.58		80	SS	FF	A	G			I	WD	55	M	QZ	VN	
DHGH-14-11	99.86	100.88	1.02			ST		D	G			G	PD	60	R	QZ	VN	
DHGH-14-11	100.88	101.43	0.55			MS		D	G	TR	AM	P						
DHGH-14-11	101.43	101.71	0.28	140224		CO	SY	D	K	CO		P			C	QZ	CE	ROOF A: STONY COAL WITH COMMON QTZ CLEAT INFILL (INFILLING PREDOMINANTLY BUTT CLEATS), COMMON PY THROUGHOUT NTERVAL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	101.71	101.91	0.20	140225		CO	C5	D	K	CM	AM				M	QZ	CE	SEAM ROOF: LOW-MOD QUALITY COAL COMMONLY INTERMIXED W/MUD; COAL IS FINE GRAINED W/NO SIGNIFICANT CLEATING; MINOR QTZ-CA IRREGULAR INFILL
DHGH-14-11	101.91	102.58	0.67	140226		CO	C4	D	K	CM		P			M	QZ	CE	SEAM: COMMON MS LM'S W/MNR QTZ-CA CLEAT BUTT INFILL; ANTH LAMINATIONS ARE COMMONLY CLEATED W/SMALL 3MM FACE X 2MM BUTTS; SHARP BOT CT IS BROKEN IN CORE APPEARS IRREGULAR SHARP
DHGH-14-11	102.58	102.88	0.30	140227		ST		B	G	RA		P			C	PY	VN	PARTING: ST W/SHARP PLANAR UPPER CT; BROKEN LOWER CT (APPEARS TO BE SHARP PLANAR); SOME MNR COAL LM'S AND 2CM PY VN NEAR TOP CT
DHGH-14-11	102.88	103.62	0.74	140228		CO	SY	D	K	CM					C	QZ	CE	SEAM A: TOP 10 CM ARE CLEAN C3 COAL W/COMMON CONCOIDAL FRACTURING; REST OF INTERVAL HAS BANDS OF STONEY COAL 10-20CM THICK W/STRONG QTZ-CA CLEAT INFILL AND MOD MS INTERMIXED THROUGHOUT INTERBANDED W/LOCALLY COALY MS AND MS LM'S; RARE IRREGULAR PY VN AT TOP OF INTERVAL
DHGH-14-11	103.62	103.82	0.20	140229		CO	SY	D	K	CM		G			C	QZ	CE	SEAM FLOOR: CMN MS LM'S; CMN QTZ-CA CLEAT INFILL AT BOT OF INTERVAL; GRADATIONAL LOWER CT; MOD CLEATING IN THE ANTH BANDS UP TO 5MM FACE X 3MM BUTTS
DHGH-14-11	103.82	104.02	0.20	140230		ZM		D	G	CM		G			C	QZ	CE	FLOOR: TRANSITIONS FROM STONEY COAL TO COALY MS; STRONG QTZ-CA CLEAT INFILL IN THE COAL BANDS; GRADATIONAL BOT CT ALSO
DHGH-14-11	104.02	104.58	0.56			ZM		D	G	MN		G	WD	60	M	QZ	CE	
DHGH-14-11	104.58	107.08	2.50			ST		B	G	TR		I			M	QZ	CE	
DHGH-14-11	107.08	108.7	1.62			SS	FF	A	G				PD	60				
DHGH-14-11	108.7	108.85	0.15			KL												
DHGH-14-11	108.85	110.68	1.83			SS	FF	A	G			G	PD	60				
DHGH-14-11	110.68	116.29	5.61		80	SS	FF	A	G			P	WD	55	R	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	116.29	116.63	0.34			CO	SY	D	K	CM		P			C	QZ	CE	MODERATLEY CLEATED STONY COAL, 1CM PY VN IN MIDDLE OF UNIT, COMMON QTZ CLEAT INFILL, NOT SAMPLED DUE TO LOW GRADE DETERMINED BY GEOPHYS
DHGH-14-11	116.63	118.54	1.91			SS	FF	A	G			P	WD	60	M	QZ	VN	
DHGH-14-11	118.54	118.67	0.13			CO	SY	D	K	CM		P			C	QZ	CE	STONY COAL, COMMONLY CLEATED WITH QTZ INFILL, PREDOMINANTLY ALONG BUTT CLEATS, NOT SAMPLED DUE TO LOW GRADE DETERMINED BY GEOPHYS
DHGH-14-11	118.67	120.18	1.51			XM		D	G			G			R	QZ	WP	
DHGH-14-11	120.18	120.55	0.37			CO	SY	D	K	CM		P			C	QZ	CE	STONY COAL, COMMONLY QTZ CLEAT INFILL PREDOMINANTLY ALONG BUTT CLEATS, MIDDLE OF INTERVAL ABUNDANT QTZ/CARB INFILL, NOT SAMPLED DUE TO LOW GRADE DETERMINED BY GEOPHYS
DHGH-14-11	120.55	120.92	0.37		90	SS	VF	A	G				WD	50	C	QZ	VN	
DHGH-14-11	120.92	121.12	0.20	140274	90	SS	VF	A	G				WD	50	C	QZ	VN	ROOF A: 13CM OF SS TRANSITIONING TO 7CM ZM, ABUNDANT QZ VNING AND A 1CM PY BLEB
DHGH-14-11	121.12	121.47	0.35	140275		CO	C4	D	K	CM		G			R	QZ	CE	SEAM: CM MS BANDS, CONCOIDALLY FRACTURED, RARE CARB/QTZ CLEAT INFILL, POORLY DEVELOPED CLEATING
DHGH-14-11	121.47	121.67	0.20	140276		ZM		D	K			G			A	QZ	CE	FLOOR: ABUNDANT QTZ/CARB CLEAT INFILL PRESENT, UPPER AND LOWER CONTACTS ARE GRADATIONAL
DHGH-14-11	121.67	121.73	0.06			MS		D	G	RA		G			C	QZ	WP	
DHGH-14-11	121.73	123.81	2.08			ST		B	G			G	PD	45	C	QZ	VN	
DHGH-14-11	123.81	127.25	3.44			SS	FF	A	G			G	PD		A	QZ	VN	
DHGH-14-11	127.25	127.5	0.25			MS		B	G			I			C	QZ	VN	
DHGH-14-11	127.5	127.62	0.12			CO	SY	D	K	CM		G			A	QZ	CE	
DHGH-14-11	127.62	127.74	0.12			MS		D	G	MN		I			M	PY	BL	
DHGH-14-11	127.74	128.01	0.27			CO	C4	D	K	MN		P			M	QZ	CE	
DHGH-14-11	128.01	128.9	0.89			MS		D	G	MN		G						
DHGH-14-11	128.9	129.33	0.43			ZM		D	G						C	QZ	VN	
DHGH-14-11	129.33	129.73	0.40			MS		B	G			P			A	QZ	VN	
DHGH-14-11	129.73	133.39	3.66			SS	FF	A	G		AM		PD	20	R	QZ	VN	
DHGH-14-11	133.39	134.47	1.08		80	ST		B	G			P			M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	134.47	134.67	0.20	140231	80	ST		B	G			P			R	QZ	VN	ROOF: RARE QTZ VNS NEAR BOTTOM OF INTERVAL
DHGH-14-11	134.67	135.13	0.46	140232		CO	C4	D	K			G			R	QZ	VN	SEAM: RARE CLEATING, SMALL CLEATS (2MM FACE CLEATS, 1MM BUTT CLEATS) , RARE QTZ/CARB VEINS AT BOTTOM OF INTERVAL; RARE PY BLEBS NEAR BOT CT
DHGH-14-11	135.13	135.33	0.20	140233	80	ST		B	G			G	PD		R	QZ	WP	FLOOR:RARE QTZ/CARB WISPS THROUGHOUT INTERVAL
DHGH-14-11	135.33	137.19	1.86		80	ST		B	G			G	PD		M	QZ	VN	
DHGH-14-11	137.19	141.63	4.44		65	SS	FF					G			M	QZ	VN	
DHGH-14-11	141.63	141.83	0.20	140234		XM		D	G	CM		P			R	QZ	WP	ROOF: ST GRADING INTO DOMINANTLY MS; RARE ANTH LAMINATIONS NEAR BOT CT'; PLANAR SHARP LOWER CT
DHGH-14-11	141.83	142.23	0.40	140235		CO	C3	D	K	MN		P			M	QZ	CE	SEAM: MNR INTERMIXED MS; WEAK TO MOD DEVELOPPED CLEATING UP TO 3MM FACE X 5MM BUTTS; COMMON QTZ-CA CLEAT INFILL NEAR TOP AND BOT CT'S, RARE QTZ-CA IN MIDDLEOF INTERVAL; SHARP PLANAR UPPER AND LOWER CT'S
DHGH-14-11	142.23	142.43	0.20	140236		ST		B	G			P	PD	35	C	QZ	VN	FLOOR: ST Q/STRONGER QTZ-CA VN NEAR UPPER CT
DHGH-14-11	142.43	142.89	0.46			ST		B	G			P	PD	35	C	QZ	VN	
DHGH-14-11	142.89	144.9	2.01		70	SS	FF	A	G			G	WD	50	C	QZ	VN	
DHGH-14-11	144.9	148.42	3.52			SS	FF	A	G		AM	P			M	QZ	VN	
DHGH-14-11	148.42	150.16	1.74		70	SS	FF	A	G			G	WD	35				
DHGH-14-11	150.16	150.65	0.49			MS		D	G	MN		G	PD	30	M	QZ	CE	
DHGH-14-11	150.65	150.85	0.20	140237		XM		D	G	CM		G	PD	30	C	QZ	CE	ROOF: MS GRADING INTO COAL TOWARDS BOTTOM OF INTERVAL COMMON QTZ/CARB CLEAT INFILL AT BOTTOM OF INTERVAL
DHGH-14-11	150.85	151.05	0.20	140238		CO	C4	D	K	CM		G	PD		M	QZ	CE	SEAM ROOF: COMMON MS LAMINATIONS THROUGHOUT INTERVAL, MINOR QTZ CLEAT INFILL, PREDOMINANTLEY BUTT CLEAT INFILL
DHGH-14-11	151.05	151.33	0.28	140239		CO	C4	D	K	CM					M	QZ	CE	SEAM: COMMON MS LAMINATIONS THROUGHOUT INTERVAL, ANTHRACITE BANDS MODERATLEY CLEATED, 3MM FACE CLEATS AND BUTT CLEATS
DHGH-14-11	151.33	151.38	0.05			KL												CORE LOSS
DHGH-14-11	151.38	152.4	1.02	140240		CO	C3	D	K	CM		G	PD	25	M	QZ	CE	SEAM: COMMON MS LAMINATIONS THROUGHOUT INTERVAL, MINOR QTZ CLEAT INFILL, PREDOMINANTLEYET BUTT CLEAT INFILL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	152.4	153.42	1.02	140241		CO	C4	D	K	CM		G	PD	25	C	QZ	CE	SEAM A: COMMON MS LAMINATIONS THROUGHOUT INTERVAL, PREDOMINANTLY BUTT CLEAT QTZ/CARB INFILL, OCCASIONAL PY VNS AND BLEBS THROUGHOUT INTERVAL, ANTHRACITE BANDS ARE COMMONLY CLEATED, 4MM FACE AND 2MM BUTT CLEATS
DHGH-14-11	153.42	154.44	1.02	140242		CO	C3	D	K	CM		G	PD	25	M	QZ	CE	SEAM A: COMMON MS LAMINATIONS THROUGHOUT INTERVAL, MINOR QTZ/CARB CLEAT INFILL, MINOR PY BLEBS UP TO 2CM WIDE THROUGHOUT INTERVAL
DHGH-14-11	154.44	155.45	1.01	140243		CO	C4	D	K	CM		I	PD	25	M	QZ	VN	SEAM A: COMMON MS LAMINATIONS THROUGHOUT INTERVAL, MINOR QTZ/CARB CLEAT INFILL, PREDOMINANTLY BUTT CLEAT INFILL, ANTHRACITE BANDS WELL DEVELOPED CLEATING, 4MM FACE AND 3MM BUTT CLEATS, COMMON PY BLEBS AND VNS INCLUDING 3CM PY VN AT TOP OF INTERVAL
DHGH-14-11	155.45	155.89	0.44	140244		XT		D	G		AM	G			A	QZ	VN	PARTING: ABUNDANT QTZ/CARB FRACTURE INFILL
DHGH-14-11	155.89	156.75	0.86	140245		CO	C3	D	K	M		G			M	QZ	VN	SEAM A: MINOR MS LAMINATIONS GRADING TOWARDS COMMON MS LAMINATIONS TOWARDS BOTTOM OF INTERVAL, TOP OF INTERVAL COMMONLY CLEATED, BOTTOM OF INTERVAL PREDOMINANTLY CONCOIDALLY FRACTURED
DHGH-14-11	156.75	156.95	0.20	140246		CO	C3	D	K	M		I			M	QZ	VN	SEAM FLOOR A: COMMON MS INTERMIXED THROUGHOUT INTERVAL, COMMON CONCOIDAL FRACTURES
DHGH-14-11	156.95	157.15	0.20	140247		SS	FF	A	G		AM				M	QZ	VN	FLOOR: MASSIVE SANDSTONE W/ MINOR QTZ/CARB VNS
DHGH-14-11	157.15	157.48	0.33			SS	FF	A	G		AM				M	QZ	VN	
DHGH-14-11	157.48	157.66	0.18		80	MS		D	G						M	QZ	VN	
DHGH-14-11	157.66	157.73	0.07			KL												
DHGH-14-11	157.73	159.41	1.68		80	MS		D	G						M	QZ	VN	
DHGH-14-11	159.41	159.61	0.20	140248		MS		D	G	RA		P			R	QZ	WP	ROOF: RARE CO LAMINATIONS APPROACHING SHARP PLANAR BOT CT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	159.61	160.01	0.40	140249		CO	C3	D	K	MN			PD	10	M	QZ	VN	SEAM: MINOR MS LAMINATIONS THROUGHOUT; MNR QTZ-CA VNS; COMMON SMALL SIZE CLEATING (2MM FACE X 1MM BUTT) W/OCCASIONAL CONCOIDAL FRACTURES
DHGH-14-11	160.01	160.41	0.40	140250		CO	C3	D	K	CM		I	PD	10	M	QZ	VN	SEAM: MINOR TO COMMON MS LAMINATION'S; MNR QTZ-CA CLEAT INFILL NEAR BOT OF INTERVAL;MODERATELY DEVELOPPED RECTANGULAR CLEATING UP TO 5MM FACE X 2MM BUTTS; SHARP IRREGULAR BOT CT
DHGH-14-11	160.41	160.61	0.20	140251		MS		D	G	RA			PD		R	QZ	VN	FLOOR: GENERALLY CLEAN MS W/RARE COAL LAMINATIONS >2MM WIDE; RARE QTZ-CA WISPS
DHGH-14-11	160.61	161.67	1.06			MS		D	G				PD		R	QZ	VN	
DHGH-14-11	161.67	166.69	5.02		70	SS	FF	A	G			G	WD	10	M	QZ	VN	
DHGH-14-11	166.69	169.71	3.02		90	ST		B	G				BT					
DHGH-14-11	169.71	169.91	0.20	140252		ST		B	G			G						ROOF: SILTSTONE INTERLAMINATED W/ SAND
DHGH-14-11	169.91	170.31	0.40	140253		CO	C4	D	K	CM					M	QZ	VN	SEAM A: COMMON MS LAMINATIONS THROUGHOUT INTERVAL, ANTHRACITE BANDS MODERATELY CLEATED, QZ/CARB VEINS AND PY BLEBS ARE MINOR
DHGH-14-11	170.31	170.81	0.50	140254		XM		D	K	CM		G			M	QZ	CE	PARTING: CARBONACEOUS MUDSTONE WITH MINOR QZ/CARB VNS AND COMMON ANTHRACITE WISPS
DHGH-14-11	170.81	171.56	0.75	140255		CO	C4	D	K	CM					M	QZ	VN	SEAM: COMMON MS LAMINATIONS THROUGHOUT INTERVAL, QTZ/CARB VNS ARE MINOR, MINOR CLEATING, 0.5MM FACE ABD BUTT CLEATS
DHGH-14-11	171.56	172.31	0.75	140256		CO	C4	D	K	CM					M	QZ	VN	SEAM: COMMONMS LAMINATIONS THROUGHOUT INTERVAL, QTZ/CARB VNS ARE MINOR AND CONCENTRATED TOWARDS BOTTOM OF INTERVAL, MINOR CLEATING, 0.5MM FACE AND BUTT CLEATS
DHGH-14-11	172.31	172.51	0.20	140257		MS		D	G	MN			PD	30	M	QZ	VN	FLOOR: MS WITH 1CM PY BLEB AT TOP OF UNIT, MINOR QTZ/CARB VNS AT OP OF INTERVAL
DHGH-14-11	172.51	173.36	0.85			MS		D	G	MN			PD	30	M	QZ	VN	
DHGH-14-11	173.36	173.49	0.13			KL												
DHGH-14-11	173.49	174.69	1.20			SS	FF	A	G		AM	G			M	QZ	VN	
DHGH-14-11	174.69	179.9	5.21		85	ST		B	G				WD	20	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	179.9	179.98	0.08			KL												
DHGH-14-11	179.98	180.11	0.13		85	SS	FF	A	G			G	WD	5	R	QZ	VN	
DHGH-14-11	180.11	183.83	3.72			MS		D	G		AM				M	QZ	VN	
DHGH-14-11	183.83	185.9	2.07			SS	FF	A	G			G	PD		M	QZ	VN	
DHGH-14-11	185.9	188.54	2.64			MS		D	G			I	PD	10	M	QZ	VN	
DHGH-14-11	188.54	188.9	0.36			SS	FF	A	G		AM		PD					
DHGH-14-11	188.9	189.02	0.12			KL												
DHGH-14-11	189.02	189.25	0.23			KL												
DHGH-14-11	189.25	191.43	2.18		60	SS	FF	A	G			G	PD		M	QZ	VN	
DHGH-14-11	191.43	191.77	0.34			MS		D	G			P			M	QZ	VN	
DHGH-14-11	191.77	191.87	0.10	140258		CO	C4	D	K						R	QZ	VN	SEAM: MINOR CONCOIDAL FRACTURING, MOST OF COAL SEAM LOST DUE TO POOR RECOVERY, ROUGHLY 25% PRESENT, SAMPLE TAKEN FOR POSSIBLE FUTURE ANALYSIS, LOCATION IN SEAM UNKNOWN
DHGH-14-11	191.87	192.22	0.35			KL				CO								
DHGH-14-11	192.22	192.66	0.44			SS	FF	A	G	RA	AM	P			M	QZ	VN	
DHGH-14-11	192.66	195.57	2.91		70	SS	FF	A	G				PD		M	QZ	VN	
DHGH-14-11	195.57	198.38	2.81			ST		D	G			G			M	QZ	VN	
DHGH-14-11	198.38	201.28	2.90			SS	FF	A	G		AM	G			M	QZ	VN	
DHGH-14-11	201.28	204.4	3.12		70	ST		B	G			I	WD	20	M	QZ	VN	
DHGH-14-11	204.4	204.6	0.20	140259		ST		A	G			G			C	QZ	VN	ROOF A: ST W/MNR QTZ-CA VEINS GRADING INTO COALY MS NEAR BOT CT; BOTTOM CT IS STRONGLY QTZ-CA VEINED W/MNR CO BANDS
DHGH-14-11	204.6	204.93	0.33	140260		CO	C3	D	K	MN					M	QZ	VN	SEAM A: MNR MS LAMINATIONS; COMMON CONCOIDAL FRACTURING; MNR QTZ-CA VEINS AND RARE PY BLEBS
DHGH-14-11	204.93	205.25	0.32	140261		CO	C3	D	K	MN		P			M	QZ	VN	SEAM A: MNR MS LM'S/INTERMIXED; COMMON CONCOIDAL FRACTURING; MNR QTZ-CA VEINS; RARE PY BLEBS; SHARP BOT CT
DHGH-14-11	205.25	205.45	0.20	140262		ST		B	G		AM				R	QZ	WP	FLOOR: CLEAN MASSIVE ST; TRACE QTZ-CA WISPS
DHGH-14-11	205.45	205.74	0.29			ST		B	G		AM	G			R	QZ	VN	
DHGH-14-11	205.74	207.28	1.54			XM		D	G	MN		G	PD	10	R	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	207.28	208.99	1.71			ST		B	G	RA	AM	G			R	QZ	WP	
DHGH-14-11	208.99	209.19	0.20			SS	FF	A	G		AM		WD					
DHGH-14-11	209.19	209.29	0.10			KL												
DHGH-14-11	209.29	216.79	7.50			SS	FF	A	G	MN	AM	P	WD		R	QZ	VN	
DHGH-14-11	216.79	218.32	1.53		80	ST		B	G			G	WD	45	M	QZ	CB	
DHGH-14-11	218.32	218.86	0.54			CO	C4	D	K									
DHGH-14-11	218.86	220.28	1.42			ST		B	G		AM				M	QZ	VN	
DHGH-14-11	220.28	221.22	0.94			ZM		D	K	AB		G			M	QZ	VN	
DHGH-14-11	221.22	222.73	1.51			XM		D	G	CM		G			M	QZ	CE	
DHGH-14-11	222.73	223.72	0.99			ST		D	G	MN		G			R	PY	BL	
DHGH-14-11	223.72	223.92	0.20	140263		ST		D	G	MN		G			R	QZ	CE	ROOF: ST W/ COMMON ANTHRACITE WISPS W/QTZ CLEAT INFILL
DHGH-14-11	223.92	224.15	0.23	140264		CO	C4	D	K	CM		G			M	QZ	CE	SEAM A: COAL W/ COMMON MS BANDS INTERLAMINATING AND RARE ST BANDS THROUGHOUT INTERVAL, MINOR QTZ VNING AND PY BLEBS, RARE CLEATING
DHGH-14-11	224.15	224.37	0.22	140265		CO	C3	D	K	CM		P			M	QZ	CE	SEAM: COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, MINOR QTZ CLEAT INFILL, RARE CLEATING
DHGH-14-11	224.37	224.57	0.20	140266		ST		B	G			G	PD	45	M	QZ	VN	FLOOR: ST W/ MINOR QTZ VNING
DHGH-14-11	224.57	226.95	2.38			ST		B	G			G	PD	45	M	QZ	VN	
DHGH-14-11	226.95	227.5	0.55			XM		D	G	MN	AM	G						
DHGH-14-11	227.5	227.7	0.20	140267		XM		D	G	MN	AM	G			R	QZ	CE	ROOF: XM W/ MINOR ANTHRACITE BANDS AT BTOM OF INTERVAL, RARE QTZ CLEAT INFILL IN THE ANTHRACITE BANDS
DHGH-14-11	227.7	228.05	0.35	140268		CO	SY	D	K	CM		G			A	QZ	VN	SEAM: STONY COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, ABUNDANT QTZ/CARB VNING AND CLEAT INFILL, PROMINANT CLEATING PRESENT, 4MM FACE 2MM BUTT CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-11	228.05	228.4	0.35	140269		CO	SY	D	K	CM		G			A	QZ	VN	SEAM A: STONY COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, ABUNDANT QTZ/CARB VNING AND CLEAT INFILL, MINOR PY BLEBS THROUGHOUT INTERVAL, RARE CLEATING, 0.5 MM FACE AND BUTT CLEATS
DHGH-14-11	228.4	228.6	0.20	140270		XM		D	K	CM					M	QZ	CE	FLOOR: CARBONACEOUS MS WITH COMMON ANTHRACITE WISPS MAINLY 1CM WIDE, ONE LARGE BLEB AT BASE OF UNIT 7CM, MINOR QTZ/CARB CLEAT INFILL IN ANTHRACITE WISPS
DHGH-14-11	228.6	230.49	1.89			XM		D	K	AB					A	QZ	CE	
DHGH-14-11	230.49	230.69	0.20	140271		XM		D	K	RA	AM	I			R	QZ	CE	ROOF: CARBONACEOUS MS W/RARE COAL WISPS W/QTZ-CA INFILL; SHARP LOWER CT
DHGH-14-11	230.69	231.16	0.47	140272		CO	C4	D	K	MN		G			M	QZ	VN	SEAM A: MNR MS LAMINATIONS/INTERMIXED; MNR QTZ-CA VEINS AND CLEAT INFILL; 1CM WIDE PY VEIN IN MIDDLE OF INTERVAL; GRADATIONAL LOWER CT; COMMON CONCIODAL FRACTURING AT TOP OF INTERVAL, MODERATE CLEATING IN ANTH BANDS SEEN IN MIDDLE OF INTERVAL
DHGH-14-11	231.16	231.36	0.20	140273		MS		D	G		AM				M	QZ	WP	MS WITH MINOR CA WISPS
DHGH-14-11	231.36	232.1	0.74			MS		D	G		AM	G						
DHGH-14-11	232.1	239.81	7.71			ST		B	G				PD	20	M	QZ	VN	
DHGH-14-11	239.81	245.09	5.28		70	SS	FF	A	G			G	FS	20	M	QZ	VN	
DHGH-14-11	245.09	247.63	2.54		70	SS	FF	A	G			G	WD	50	A	QZ	VN	INTERVAL IS PARTLY BRITTLE FAULTED ZONE WITH ABUNDANT DILATIONS UP TO 6CM WIDE FILLED BY QTZ-CA
DHGH-14-11	247.63	253.46	5.83		70	SS	VF	A	G			G	FS	10	M	QZ	VN	
DHGH-14-11	253.46	256.85	3.39		85	ST		B	G			G			R	QZ	VN	
DHGH-14-11	256.85	257.43	0.58			ST		B	G	LM	EQ		PD	5				
DHGH-14-11	257.43	257.62	0.19			ST		B	G		EQ		PD	45	M	QZ	VN	SUDDEN DISCONTINUOUS CHANGE OF BEDDING ANGLE
DHGH-14-11	257.62	260.59	2.97			ST		B	G	LM		G		15	M	QZ	VN	
DHGH-14-11	260.59	260.88	0.29			XM		D	K	RA	EQ	G			M	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-12	16.05	20.19	4.14		60	SS	VF	A	G				FS	60	E	CB	VN	
DHGH-14-12	20.19	20.47	0.28			KL												
DHGH-14-12	20.47	21.3	0.83		60	SS	VF	A	G				FS	65	E	CB	VN	
DHGH-14-12	21.3	21.8	0.50			KL												
DHGH-14-12	21.8	22.5	0.70		55	SS	VF	A	G				FS	65	M	CB	VN	
DHGH-14-12	22.5	22.71	0.21			KL												
DHGH-14-12	22.71	25.58	2.87		60	SS	VF	A	G				PD	20	E	CB	VN	
DHGH-14-12	25.58	25.72	0.14			KL												
DHGH-14-12	25.72	31.24	5.52		60	SS	VF	A	G				FS	65	E	CB	VN	
DHGH-14-12	31.24	31.41	0.17			KL												
DHGH-14-12	31.41	38.76	7.35		60	SS	VF	A	G			G	FS	80	M	CB	VN	
DHGH-14-12	38.76	39.81	1.05			KL												
DHGH-14-12	39.81	42.07	2.26		70	SS	VF	A	G			G	WD	30	E	CB	VN	
DHGH-14-12	42.07	47.42	5.35			SS	VM	A	G				WD	15	E	CB	VN	
DHGH-14-12	47.42	47.52	0.10			KL												
DHGH-14-12	47.52	47.91	0.39			SS	VM	A	G			G	WD	15				
DHGH-14-12	47.91	51.09	3.18		70	ST		B	G				WD	10	M	CB	VN	
DHGH-14-12	51.09	51.29	0.20			KL												
DHGH-14-12	51.29	51.97	0.68		70	ST		B	G				WD	15	M	CB	VN	
DHGH-14-12	51.97	52.18	0.21	145155	70	ST		B	G			G	WD	15	M	CB	VN	Roof. Minor anthracite lenses throughout <1mm
DHGH-14-12	52.18	52.53	0.35	145156		CO	C4		K	M		G	WD	20	E	CB	CE	Seam. Minor silty lenses <4mm. Well developed cleating, <2x3mm. Face cleats 20deg. CB in face & butt cleats.
DHGH-14-12	52.53	52.73	0.20	145157	50	SS	VF	A	G				CU	20	E	CB	VN	Floor. Minor anthracite veins <5mm at top.
DHGH-14-12	52.73	55.85	3.12		50	SS	VF	A	G			G	CU	20	M	CB	WP	
DHGH-14-12	55.85	56.19	0.34			ZM		D	G			G	PS	10	M	CB	VN	
DHGH-14-12	56.19	56.44	0.25			CO	SY		K			I	PD	10	E	CB	CE	Stony coal, not sampled
DHGH-14-12	56.44	56.63	0.19			ST		B	G				PD	15	M	CB	VN	
DHGH-14-12	56.63	56.85	0.22			KL												
DHGH-14-12	56.85	56.98	0.13			ST		B	G				PD	15				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-12	56.98	57.12	0.14			KL												
DHGH-14-12	57.12	57.29	0.17			CO	C5		K			G	PD	15	E	CB	CE	
DHGH-14-12	57.29	62.28	4.99		70	SS	VM	A	G			G	WD	20	M	CB	VN	
DHGH-14-12	62.28	63.03	0.75			ST		B	G			G	PD	18	R	CB	WP	
DHGH-14-12	63.03	63.93	0.90			ZM		D	G				WD	20	M	CB	CE	
DHGH-14-12	63.93	64.13	0.20	145158		ZM		D	G			G	WD	20	M	CB	CE	Roof. Minor coaly bands to 2 mm concentrated near base.
DHGH-14-12	64.13	64.33	0.20	145159		CO	C3		K				PD	10	E	CB	CE	Seam Roof. Muddy bed ~5 mm as shown in density log and minor silty lenses up to 2mm. Accessory carbonate in face and butt cleats. Mod developed cleating with cleats up to 3 x 5 mm. Face cleats up to 10 degrees.
DHGH-14-12	64.33	64.84	0.51	145160		CO	C3		K				PD	10	M	CB	CE	Seam. Siltstone bed in middle of unit 5 cm thick as shown in log. Muddy bands up to 3mm. Minor carbonate in butt cleats. Cleats moderately well developed up to 4 x 5 mm. Face cleats at 20 degrees.
DHGH-14-12	64.84	65.05	0.21	145161		CO	C3		K			G	PD	12	M	CB	CE	Siltstone bands up to 15 mm. Mod dev cleats up to 2 x 2 mm. Face cleats at 12 degrees. Carbonate mostly in butt cleats near bottom contact. Trace py in blebs.
DHGH-14-12	65.05	65.24	0.19	145162		XM			K						M	PY	DS	Coaly ban 8 mm plus sub mm wisps near top. Minor dissem py near upper contact.
DHGH-14-12	65.24	65.84	0.60			XM			K			G	PD	15				
DHGH-14-12	65.84	71.91	6.07		60	SS	VM	A	G			G	WD	22	R	CB	VN	
DHGH-14-12	71.91	74.87	2.96			ST		B	G	CO		G	PD	18	M	CB	CE	
DHGH-14-12	74.87	77.22	2.35			SS	VM	N	G	FO		G	WD	28	M	BI	BN	
DHGH-14-12	77.22	81.49	4.27			ST		B	G	FO		G	PD	18	M	BI	BN	
DHGH-14-12	81.49	83.62	2.13			SS	VM	N	G			F	WD	10	M	CB	VN	
DHGH-14-12	83.62	83.8	0.18			ST		B	G			F	WD	10	M	CB	VN	
DHGH-14-12	83.8	88.89	5.09			SS	VM	A	G	ST		G	PD	20	E	CB	VN	
DHGH-14-12	88.89	92.47	3.58			ST		B	G	TR		G	CU	28	R	CB	WP	
DHGH-14-12	92.47	92.67	0.20	145163		ST		B	G	TR		G	CU	28	R	CB	WP	Roof. Trace coal lenses up to 2mm. Minor CB in wisps & bands. Minor PY in bands

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-12	92.67	92.87	0.20	145164		CO	C3		K	MN		G	PD	28	E	CB	CE	Seam roof. MN silty bands <10mm. Moderatley developed cleating <2x2mm. Face cleats 28deg. CB mostly in face cleats. Single PY band 3mm at top.
DHGH-14-12	92.87	94.01	1.14	145165		CO	C2		K	TR		G	PD	15	R	CB	CE	Seam. Trace silty bands <2mm. Variably developed cleating <2x2mm. Face cleats 10 to 20deg. Some conchoidal fracturing. CB in butt cleats. PY in blebs <10x20mm
DHGH-14-12	94.01	94.7	0.69	145166		CO	C4		K	CM		G	PD	10	E	CB	VN	Seam. FF. Common silty bands <10mm. Conchoidal fracturing. Poorly developed cleating <2x2mm. Irregular face cleat anfgle. CB in veins & cleats. Trace PY blebs <2mm.
DHGH-14-12	94.7	95.7	1.00	145167		CO	C3		K	TR		G			M	CB	CE	Seam. Trace silty bands <1mm. Poorly developed cleating <1x2mm. Face cleat angles highly variable. Common conchoidal fracturing. CB in face & butt cleats. PY in blebs <2mm.
DHGH-14-12	95.7	96.7	1.00	145168		CO	C2		K	TR		G			M	CB	VN	Seam. Trace silty bands <2mm. Mostly FF w conchoidal fracutring. Poorly developed cleating <2x2mm. Face cleats angle highly variable. CB in irregular veinlets. PY in bands <10mm.
DHGH-14-12	96.7	97.7	1.00	145169		CO	C1		K	TR					R	CB	VN	Seam. FF. Conchoidally fractured. Poorly developed cleating. Trace silty bands <2mm. CB veins <2mm. PY blebs <1mm.
DHGH-14-12	97.7	98.17	0.47	145170		CO	C1		K	TR		G	PD	55	R	CB	CE	Seam. FF. Trace silty bands <1mm. Variably developed cleating <4x5mm. Face cleats 55deg. Some conchoidal fractures. CB in face & butt cleats. PY in blebs <1x3mm.
DHGH-14-12	98.17	98.87	0.70	145171		CO	C3		K	MN			PD	55	E	CB	CE	Seam. Minor silty bands <5mm. Moderatley developed cleating <2x4mm. Face cleats 55deg. CB in face & butt cleats. PY blebs <1x2mm.
DHGH-14-12	98.87	99.07	0.20	145172		CO	C2		K	MN		P	PD	55	M	CB	CE	Seam floor. Minor silty bands <5mm. Well developed cleats <3x4mm. Face cleats 55deg. CB in face & butt cleats. PY blebs 5x20mm.
DHGH-14-12	99.07	99.27	0.20	145173		XM			K	TR			PD	60	M	CB	VN	Floor. Rare coal bands <2mm.
DHGH-14-12	99.27	101.34	2.07			XM			K	TR		G	PD	60	R	CB	WP	
DHGH-14-12	101.34	102.86	1.52		70	ST		B	G			P	WD	55	R	CB	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-12	102.86	108.64	5.78			SS	VM	A	G	ST			PD	45	M	CB	VN	
DHGH-14-12	108.64	108.68	0.04			KL												
DHGH-14-12	108.68	109.31	0.63			SS	VM	A	G	ST		P	PD	45				
DHGH-14-12	109.31	114.69	5.38		70	SS	VF	A	G			G	WD	45	M	CB	VN	
DHGH-14-12	114.69	117.22	2.53			ST		B	G			G	WD	50	M	CB	VN	
DHGH-14-12	117.22	119.91	2.69			MS			K			G	PD	55	R	CB	VN	
DHGH-14-12	119.91	120.62	0.71			ST		B	G	CM		G	PD	50	C	BI	BN	
DHGH-14-12	120.62	125.59	4.97			SS	VF	A	G	MN		G	PD	45	M	BI	BN	
DHGH-14-12	125.59	126.64	1.05			ST		B	G		AM	G			M	PY	BL	
DHGH-14-12	126.64	129.44	2.80			SS	VF	A	G	FO			PD	10	M	CB	VN	
DHGH-14-12	129.44	133.8	4.36			ST		B	G	FO		G	WD	10	M	BI	BN	
DHGH-14-12	133.8	137.17	3.37		70	SS	VF	A	G			G	WD	10				
DHGH-14-12	137.17	141.51	4.34			SS	VM	A	G	ST		G	PD	5				
DHGH-14-12	141.51	143.72	2.21			ST		B	G	RA		G	WD	20	E	CB	VN	
DHGH-14-12	143.72	144.49	0.77			SS	VF	A	G			I	WD	30	E	CB	VN	
DHGH-14-12	144.49	144.53	0.04			XM		D	G			G	PD	20	M	CB	WP	
DHGH-14-12	144.53	144.73	0.20	145174		XM		D	G	RA		G	PD	20	M	CB	WP	Roof. Minor anthracite bands <10mm near bottom contact
DHGH-14-12	144.73	144.93	0.20	145175		CO	C2		K	TR		G	PD	25	R	CB	CE	Seam roof. Trace silty bands <1mm. Moderately developed cleating, <2x2mm. Face cleats 25deg. Minor conchoidal fracturing. Rare CB in butt cleats.
DHGH-14-12	144.93	145.31	0.38	145176		CO	C2		K	TR			PD	25	R	CB	CE	Seam. Trace silty bands <1mm. Conchoidal fracturing. Poorly developed cleating, <2x2mm. Face cleats 25 deg. CB in butt cleats.
DHGH-14-12	145.31	145.36	0.05			KL												Core loss interval falls entirely in the coal seam above. No seam floor or floor samples taken.
DHGH-14-12	145.36	145.44	0.08			XM		D	G			G			M	CB	VN	
DHGH-14-12	145.44	147.79	2.35		60	ST		B	G			G	WD	30	E	CB	VN	
DHGH-14-12	147.79	147.99	0.20	145177	60	ST		B	G	TR		G	WD	30	M	CB	VN	Roof. Trace coaly wisps <1mm.
DHGH-14-12	147.99	148.19	0.20	145178		CO	C2		K			G	PD					Seam roof. Mostly conchoidal fracturing. FF disintegrated coal.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	36.27	38.72	2.45			SS	FM	A	G		AM							
DHGH-14-13	38.72	38.92	0.20			KL												
DHGH-14-13	38.92	39.2	0.28			SS	FM	A	G		AM							
DHGH-14-13	39.2	40.9	1.70		80	SS	VF	A	G			G		10				
DHGH-14-13	40.9	41.1	0.20			KL												
DHGH-14-13	41.1	43.7	2.60			SS	VF	A				G						
DHGH-14-13	43.7	47.86	4.16			ST		B	G		AM				R	QZ	WP	
DHGH-14-13	47.86	47.99	0.13			KL												
DHGH-14-13	47.99	52.25	4.26			ST		B	G		AM				C	BI		
DHGH-14-13	52.25	52.86	0.61			ZT		A	G			G			C	QZ	VN	
DHGH-14-13	52.86	55.1	2.24			MS					AM				R	QZ	CE	
DHGH-14-13	55.1	58.81	3.71		85	SS	FF	A	G			G		15	R	QZ	VN	
DHGH-14-13	58.81	59.11	0.30			CO	SY	B	G			P			A	QZ	CE	
DHGH-14-13	59.11	61.25	2.14			XM		D	G			G		20	M	QZ	CE	
DHGH-14-13	61.25	63.67	2.42		65	ST		B	G			I		20	R	QZ	WP	
DHGH-14-13	63.67	69.43	5.76		95	XM		D	K			G		20	M	QZ	VN	
DHGH-14-13	69.43	74.15	4.72		90	SS	FF	A	G					10				
DHGH-14-13	74.15	74.35	0.20	140282		SS	FF	A	G	RA		P		10				ROOF: 4CM COAL BAND AND RARE LAMINATIONS WITH QTZ-CA CLEAT BUTT INFILL ASSOCIATED WITH SHARP BOT CT
DHGH-14-13	74.35	74.75	0.40	140283		CO	C5	D	K	CM		P		25	C	QZ	CE	SEAM A: POOR GEOPHYS DENSITY SIGNATURE IS LIKELY DUE TO ABUNDANT QTZ-CA AS VEINING AND MNR CLEAT INFILL AND MNR PY VEIN AND BLEBS 1CM WIDE IN CENTRE OF INTERVAL; SHARP UPPER AND LOWER CT'S; MNR MS LAMINATIONS THROUGHOUT; ANTH BANDS HAVE MOD DEVELOPPED CLEATING LOCALLY UP TO 5MM FACE X 3MM BUTTS
DHGH-14-13	74.75	74.95	0.20	140284		MS		B	G	TR	AM							FLOOR: CLEAN MS
DHGH-14-13	74.95	75.35	0.40			MS		B	G	TR	AM							
DHGH-14-13	75.35	75.39	0.04			KL												
DHGH-14-13	75.39	78.1	2.71			MS		B	G		AM							

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	78.1	82.83	4.73			SS	FC	A	G	TR	AM	G			R	QZ	VN	
DHGH-14-13	82.83	83.15	0.32			XM		D	G	TR		P	SL		M	QZ	VN	
DHGH-14-13	83.15	86.75	3.60			MS		B	G	TR	AM	G			R	QZ	VN	
DHGH-14-13	86.75	87.42	0.67			SS	VF	A	G	TR	AM	P						
DHGH-14-13	87.42	91	3.58			ST		B	G			G	SL		R	QZ	VN	
DHGH-14-13	91	96.58	5.58			SS	FF	A	G		AM				R	QZ	VN	
DHGH-14-13	96.58	96.63	0.05			KL												
DHGH-14-13	96.63	97.35	0.72			SS	FF	A	G		AM	G			R	QZ	VN	
DHGH-14-13	97.35	103.35	6.00		65	ST		A	G			G	FS	10	R	QZ	VN	
DHGH-14-13	103.35	104.81	1.46			ST		B	G	TR	AM				R	QZ	WP	
DHGH-14-13	104.81	105.01	0.20	140285		ST		B	G	MN	AM	G			M	QZ	WP	ROOF: ST W/MNR COAL WISPS W/WISPY QTZ-CA CLEAT INFILL. LOWER CONTACT IS GRADATIONAL OVER SHORT INTERVAL W/2CM WIDE QTZ-CA VEIN ASSOC W/CONTACT
DHGH-14-13	105.01	105.21	0.20	140286		CO	C3	D	K	CM					R	QZ	VN	SEAM ROOF: COMMON MS LAMINATIONS; RARE QTZ-CA VEINLETS; WELL CLEATED WITH LARGE CLEATS UP TO 22MM FACE X 8MM BUTT
DHGH-14-13	105.21	105.83	0.62	140287		CO	C2	D	K	MN					M	QZ	CE	SEAM: MINOR MS LAMINATIONS THROUGHOUT; MINOR QTZ-CA CLEAT INFILL; WELL DEVELOPPED CLEATING THROUGHOUT UP TO MAX SIZE OF 10MM FACE X 10MM BUTT
DHGH-14-13	105.83	105.88	0.05			KL												
DHGH-14-13	105.88	106.49	0.61	140288		CO	C3	D	K	MN					R	QZ	CE	SEAM A: MNR MS LAMINATIONS INCREASING SLIGHTLY W/DEPTH; RARE QTZ-CA CLEAT INFILL; AND 5CM DIAM ST CLAST NEAR BOT OF INTERVAL; WELL DEVELOPPED CLEATING THROUGHOUT RANGING IN SIZE UP TO RARELY 12MM FACE X 8MM BUTTS
DHGH-14-13	106.49	106.69	0.20	140289		CO	C4	D	K	CM		P			R	QZ	CE	SEAM FLOOR: COMMON MS LAMINATIONS AND 4CM BAND NEAR BOT CT; SHARP BOT CT; WELL DEVELOPPED CLEATING; TRACE QTZ-CA CLEAT INFILL
DHGH-14-13	106.69	106.89	0.20	140290		ST		B	G	TR			WD	35	C	QZ	VN	FLOOR A: 10CM OF SS W/PLANAR SHARP CT WITH 10CM OF ST; ST HAS COMMON QTZ-CA VEINING UP TO 1CM WIDE

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	106.89	107.37	0.48		60	ST		B	G	TR		G	WD	35	C	QZ	VN	
DHGH-14-13	107.37	109.6	2.23			ZM		D	K	CM		G	PD	30	C	PY	VN	
DHGH-14-13	109.6	110.03	0.43			MS		B	G		AM	G			M	QZ	WP	
DHGH-14-13	110.03	118.43	8.40			ST		B	G			G	WD	20	M	QZ	VN	
DHGH-14-13	118.43	118.63	0.20	140291		XM		D	G	CM		G			M	QZ	VN	ROOF A: TOP OF INTERVAL IS 8CM OF SS WITH SHARP PLANAR LOWER CT W/ XM; XM HAS GRADATIONAL LOWER CT TO COAL; COMMON PY VN AND BLEBS ASSOC WITH SS-->XM CONTACT IN CENTER OF INTERVAL; XM HAS COMMON QTZ-CA VEINS AND COMMON COAL LAMINATIONS W/QTZ-CA CLEAT BUTT INFILL
DHGH-14-13	118.63	118.87	0.24	140292		CO	C4	D	K	CM		G			M	QZ	VN	SEAM A: MINOR TO COMMON MS LAMINATIONS THROUGHOUT; ANTH BANDS ARE WELL CLEATED WITH LARGE CLEATS UP TO 30MM FACE X 10MM BUTTS; COMMON QTZ-CA VEINING ASSOC WITH TOP CT DECREASING TO MINOR QTZ-CA VEINLETS; 1CM WIDE PY VEIN NEAR TOP CONTACT AND RARE TO MINOR PY BLEBS THEREAFTER
DHGH-14-13	118.87	118.92	0.05			KL												
DHGH-14-13	118.92	119.12	0.20	140293		ZM		D	K	CM		G			M	QZ	CE	FLOOR: COALY MS W/COMMON TO LOCALLY ABUNDANT CO LAMINATIONS; MINOR QTZ-CA CLEAT BUTT INFILL ASSOC DOMINANTLY W/TOP OF INTERVAL
DHGH-14-13	119.12	119.49	0.37			ZM		D	K			G						
DHGH-14-13	119.49	120.07	0.58			MS		B	G	TR		G	PD	10	M	QZ	WP	
DHGH-14-13	120.07	120.57	0.50			ST		B	G		AM	G			M	QZ	WP	
DHGH-14-13	120.57	131.55	10.98			SS	FF	A	G				PD	5	M	QZ	VN	
DHGH-14-13	131.55	131.78	0.23	140294		XM		D	K	CM		G			C	PY	BL	ROOF A: CARBONACEOUS MUDSTONE W/COMMON ANTHRACITE BANDS AND COMMON PY BLEBS; SHARP UPPER AND LOWER CT'S
DHGH-14-13	131.78	132.03	0.25	140295		CO	SY	D	K	CM		G			A	QZ	VN	SEAM ROOF A: STONEY COAL; COMMON MS LAMINATIONS; ABUNDANT QTZ-CA VEINING THROUGHOUT; ANTH BANDS DISPLAY MNR CLEATING; RARE PY BLEBS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	132.03	133.03	1.00	140296		CO	C3	D	K	CM					M	QZ	CE	SEAM A: COMMON MS LAMNIATIONS THROUGHOUT; MNR QTZ-CA CLEAT BUTT INFILL; CLEATING IS DOMINANTLY WEAKLY DEVELOPPED WITH LOCAL BANDS OF WELL DEVELOPPED CLEATING UP TO 20MM FACE X 5MM BUTT; RARE PY BLEBS
DHGH-14-13	133.03	133.33	0.30	140297		CO	C4	D	K	CM		G			M	QZ	VN	SEAM FLOOR: CMN MS LAMINATIONS; LOCALLY WELL DEVELOPPED CLEATING IN ANTH BANDS UP TO 10MM FACE X 4MM BUTT; LOWER CT GRADATIONAL OVER SHORT (10CM) INTERVAL
DHGH-14-13	133.33	133.53	0.20	140298		XM		D	G	RA					M	QZ	WP	FLOOR: CARBONACEOUS MUDSTONE W/ COMMON QTZ-CA WISPS; TOP CONTACT IS SLIGHTLY GRADATIONAL W/STRONGER QTZ-CA VEINING AND RARE CO LAMINATIONS OVER THE FIRST 5CM OF INTERVAL
DHGH-14-13	133.53	133.75	0.22			XM		D	G	RA		G			M	QZ	WP	
DHGH-14-13	133.75	137.15	3.40		65	ST		B	G						R	QZ	WP	
DHGH-14-13	137.15	137.35	0.20	140299	60	ST		B	G	RA		P			R	QZ	WP	ROOF A: INTERLAMINATED ST & SS; 3CM PY VEIN ON LOWER CT; RARE COAL LAMINATIONS ASSOC W/BOTTOM CONTACT WITH MNR QTZ-CA CLEAT BUTT INFILL
DHGH-14-13	137.35	137.66	0.31	140300		CO	C4	D	K	CM					C	QZ	CE	SEAM A: COMMON INTERMIXED MS; ANTH DISPLAYS WELL DEVELOPPED CLEATING UP TO 4MM FACE X 2MM BUTT W/COMMON QTZ-CA CLEAT INFILL; RARE PY BLEBS
DHGH-14-13	137.66	137.98	0.32	140301		CO	C4	D	K	CM		P			M	QZ	CE	SEAM: COMMON MS LAMINATIONS; LOCALLY MODERATELY CLEATED W/SMALL CLEATS 2MM FACE X 1MM BUTT WITH MNR QTZ-CA CLEAT BUTT INFILL AND MNR QTZ-CA VEINS
DHGH-14-13	137.98	138.18	0.20	140302		XM		D	G	MN	AM				M	QZ	WP	FLOOR: CARBONACEOUS MS W/MNR COAL LAMINATIONS AND LENSES WITH QTZ-CA CLEAT INFILL AND WISPS; 1CM WIDE PY VEIN NEAR TOP CT
DHGH-14-13	138.18	138.58	0.40			XM		D	G	MN	AM	G			M	QZ	WP	
DHGH-14-13	138.58	139.13	0.55			ST		B	G		AM	G			R	QZ	VN	
DHGH-14-13	139.13	144.62	5.49		90	SS	FM	A	G		AM	G	WD	30	M	QZ	VN	
DHGH-14-13	144.62	149.56	4.94		80	SS	FF	A	G	TR	AM	G	PD	5	R	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	149.56	152.22	2.66			ST		B	G		AM	G			R	QZ	VN	
DHGH-14-13	152.22	152.3	0.08			KL												
DHGH-14-13	152.3	156.8	4.50			ST		B	G		AM	G			M	QZ	VN	
DHGH-14-13	156.8	159.55	2.75		80	ST		B	G			G	PD	1	M	QZ	WP	
DHGH-14-13	159.55	173.11	13.56			ST		B	G	RA	AM				R	QZ	WP	
DHGH-14-13	173.11	173.31	0.20	140303		ST		B	G	RA	AM	I			R	QZ	WP	ROOF: MASSIVE ST, RARE CO LAMINATIONS NEAR LOWER CONTACT
DHGH-14-13	173.31	173.51	0.20	140304		CO	C3	D	K	MN					M	QZ	CE	SEAM ROOF A: MINOR COAL LAMINATIONS; WELL CLEATED THROUGHOUT UP TO 4MM FACE X 4MM BUTTS; MINOR QTZ-CA CLEAT INFILL AND RARE PY BLEBS
DHGH-14-13	173.51	173.89	0.38	140305		CO	C4	D	K	CM		P			M	QZ	CE	SEAM A: COMMON MS LAMINATIONS; CLEATING IS WELL DEVELOPPED IN LOCAL SECTIONS W/SIZES RANGING UP TO 20MM FACE X 10MM BUTT; MINOR QTZ-CA CLEAT INFILL AND RARE PY BLEBS; LOWER CT IS PLANAR SHARP
DHGH-14-13	173.89	174.21	0.32	140306		XM		D	K	MN		G	PD	5	M	QZ	CE	PARTING: CARBONACEOUS MS W/MNR COAL LAMINATIONS WITH MNR QTZ-CA INFILL; GRADATIONAL LOWER CT
DHGH-14-13	174.21	174.65	0.44	140307		CO	C3	D	K	MN		P			M	QZ	CE	SEAM A: MNR MS LAMINATIONS; WELL DEVELOPPED MED TO LARGE CLEATING UP TO 20MM FACE X 10MM BUTTS WITH MNR QTZ-CA CLEAT INFILL, PARTICULARLY AT TOP OF INTERVAL; MINOR PY BLEBS SEEN THROUGHOUT; LOWER CT GRADATIONAL OVER SHORT INTERVAL (10CM)
DHGH-14-13	174.65	175.16	0.51	140308	60	XM		D	K	MN		P			M	QZ	CE	PARTING A: CARBONACEOUS MS WITH 20CM OF SS IN CENTRE OF INTERVAL; MNR COAL LAMINATIONS W/MNR QTZ-CA CLEAT INFILL SEEN NEAR GRADATIONAL TOP AND BOTTOM CTS
DHGH-14-13	175.16	175.95	0.79	140309		CO	C3	D	K	MN		G			M	QZ	CE	SEAM A: MNR MS LAMINATIONS; WELL DEVELOPPED LARGE RECTANGULAR CLEATING THROUGHOUT UP TO 30MM FACE X 10MM BUTTS; MNR QTZ-CA AS CLEAT INFILL AND VEINS; MNR PY CLEAT BUTT INFILL; GRADATIONAL LOWER CONTACT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	175.95	176.15	0.20	140310		ZM		D	K	CM		G			R	QZ	CE	FLOOR: COALY MS W/COMMON ANTH BANDS AT TOP CONTACT DECREASING W/DEPTH; COAL IN WELL CLEATED Q/RARE QTZ-CA CLEAT INFILL; GRADES INTO MUDSTONE NEAR BOTTOM OF INTERVAL
DHGH-14-13	176.15	176.41	0.26			MS		D	K									
DHGH-14-13	176.41	176.61	0.20	140311		ZM		D	K	CM		G			R	QZ	CE	ROOF: COALY MS W/COMMON ANTH LAMINTIONS NEAR GRADATIONAL BOT CT
DHGH-14-13	176.61	176.99	0.38	140312		CO	C3	D	K	CM					R	QZ	CE	SEAM: COMMON MS LAMINATIONS THROUGHOUT; RARE QTZ-CA CLEAT BUTT INFILL; ANTH IS WEAKLY CLEATED W/RARE CONCOIDAL FRACTURING LOCALLY
DHGH-14-13	176.99	177.19	0.20	140313		CO	C5	D	K	CM		G			M	QZ	VN	SEAM FLOOR A: COMMON MS LAMINATIONS AND BANDS; MNR QTZ-CA VEINS AND RARELY AS CLEAT INFILL; MNR PYRITE VEINS AND BLEBS AT TOP AND CENTRE OF INTERVAL; GRADTIONAL LOWER CONTACT W/ST
DHGH-14-13	177.19	177.39	0.20	140314		XM		B	G	RA	AM	G			M	QZ	WP	FLOOR: CARBONACEOUS MUDSTONE GRADING INTO SILTSTONE; RARE COAL LENSES AND QTZ-CA WISPS AT TOP OF INTERVAL DECREASING W/DEPTH
DHGH-14-13	177.39	178.19	0.80			ST		B	G		AM	G						
DHGH-14-13	178.19	185.4	7.21			SS	FF	A	G	MN	AM	G	PD	1				
DHGH-14-13	185.4	190.77	5.37			SS	VF	A	G			G	PD	10				
DHGH-14-13	190.77	190.99	0.22			ST		B	G		AM							
DHGH-14-13	190.99	191.19	0.20	140315		ST		B	G	TR	AM	P			R	QZ	VN	ROOF: ST W/ SMALL COAL BAND AND QTZ-CA VEIN BOTH 5MM WIDE RIGHT NEXT TO SHARP BOT CT
DHGH-14-13	191.19	191.8	0.61	140316		CO	C4	D	K	CM		P			M	QZ	CE	SEAM: CLEATING IS LOCALLY WELL DEVELOPPED UP TO 5MM FACE X 3MM BUTTS; COMMON MS LAMINATIONS AND MINOR MS BANDS UP TO 4CM WIDE; MINOR QTZ-CA CLEAT INFILL
DHGH-14-13	191.8	192	0.20	140317		XM		B	G	RA					M	QZ	CE	FLOOR: CARBONACEOUS MS W/RARE COAL LENSES; MNR QTZ-CA CLEAT INFILL IN THOSE LENSES AND AS WISPS
DHGH-14-13	192	192.24	0.24			XM		B	G	RA		G			M	QZ	CE	
DHGH-14-13	192.24	192.93	0.69			ST		B	G		AM							

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	192.93	193.13	0.20	140318		ST		B	G	MN	AM	P			R	QZ	CE	ROOF: SILTSTONE W/MNR COAL WISPS NEAR SHARP BOTTOM CONTACT
DHGH-14-13	193.13	193.68	0.55	140319		CO	C4	D	K	CM					M	QZ	CE	SEAM: MINOR, POORLY DEVELOPPED CLEATING W/CMN MS BANDS AND SOME INTERMIXED MS; MNR QTZ-CA CLEAT INFILL
DHGH-14-13	193.68	194.23	0.55	140320		CO	C4	D	K	CM		P			M	QZ	CE	SEAM: COMMON MS BANDS; LOCALLY WELL DEVELOPPED CLEATING UP TO 10MM FACE X 5MM BUTTS W/MNR QTZ-CA CLEAT INFILL
DHGH-14-13	194.23	194.52	0.29	140321		XM		D	G	MN		P	PD	5	M	QZ	CE	PARTING: CARBONACEOUS MS W/MNR COAL LAMINATIONS WITH MNR QTZ-CA INFILL
DHGH-14-13	194.52	194.76	0.24	140322		CO	C5	D	K	CM		G			M	QZ	CE	SEAM: POOR QUALITY COAL (C5) W/COMMON MS BANDS UP TO 1CM WIDE; MNR QTZ-CA CLEAT INFILL THROUGHOUT
DHGH-14-13	194.76	194.96	0.20	140323		XM		D	K	MN					M	QZ	CE	FLOOR: CARBONACEOUS MS W/MINOR COAL LENSES HAVING MNR QTZ-CA CLEAT INFILL
DHGH-14-13	194.96	197.72	2.76			XM		D	K	MN					M	QZ	CE	
DHGH-14-13	197.72	200.16	2.44		65	SS	FF	A	G			G	PD	5				
DHGH-14-13	200.16	212.4	12.24			SS	FM	A	G	MN	AM	G			R	QZ	VN	
DHGH-14-13	212.4	214.32	1.92		70	SS	FF	A	G				WD	3				
DHGH-14-13	214.32	215.1	0.78			SS	FF	A	G		AM	G						
DHGH-14-13	215.1	221.6	6.50		80	SS	FF	A	G				WD		M	QZ	VN	
DHGH-14-13	221.6	221.65	0.05			KL												
DHGH-14-13	221.65	225.9	4.25		80	ST		B	G		AM	G	PD	3				
DHGH-14-13	225.9	230.64	4.74			ST		B	G		AM		PD	3	R	PY	BL	
DHGH-14-13	230.64	230.74	0.10			KL												
DHGH-14-13	230.74	235.4	4.66			ST		B	G		AM	G			M	PY	BL	
DHGH-14-13	235.4	238.98	3.58			MS		D	G		AM	G			M	PY	BL	
DHGH-14-13	238.98	239.31	0.33			SS	FF	A	G		AM	G						
DHGH-14-13	239.31	239.51	0.20	140324		ZM		B	G	CO	AM	G			C	PY	DS	ROOF: COALY MUDSTONE TRANSITIONING INTO COAL OVER GRADATIONAL CONTACT; ABUNDANT VEINED AND DISSEMINATED PY OVER LAST 15CM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	239.51	239.71	0.20	140325		CO	C5	D	K	CM					M	PY	BL	SEAM ROOF A: COAL BANDS ARE LOCALLY MODERATELY CLEATED UP TO 7MM FACE X 5MM BUTTS; COMMON MS BANDS UP TO 1.5CM WIDE; 1CM WIDE QTZ-CA VEIN IN MIDDLE OF INTERVAL; MNR PY BLEBS AND DISSEMINATIONS
DHGH-14-13	239.71	240.4	0.69	140326		CO	C4	D	K	CM					M	QZ	CE	SEAM A: COMMON MS LAMINATIONS AND OCCASIONAL BANDS UP TO 1CM WIDE; COAL HAS MODERATE CLEATING SIZES RANGING FROM 1MM FACE X 1MM BUTT UP TO 10MM FACE X 5MM BUTTS; MINOR QTZ-CA CLEAT BUTT INFILL THROUGHOUT AND 4CM WIDE SILTSTONE CLAST IN CENTRE OF INTERVAL
DHGH-14-13	240.4	241.05	0.65	140327		CO	C4	D	K	CM					M	QZ	CE	SEAM: COMMON MS LAMINATIONS AND OCCASIONAL BANDS UP TO 3CM WIDE; COAL HAS MODERATE CLEATING (LOCAL BANDS WELL DEVELOPPED) UP TO 12MM FACE X 4MM BUTTS W/MNR QTZ-CA CLEAT BUTT INFILL
DHGH-14-13	241.05	241.68	0.63	140328		CO	C4	D	K	CM					M	QZ	CE	SEAM: COMMON MS LAMINATIONS AND MNR BANDS UP TO 3CM WIDE; MNR QTZ-CA CLEAT BUTT INFILL; POORLY DEVELOPPED CLEATING
DHGH-14-13	241.68	242.56	0.88	140329		CO	C5	D	K	CM					M	QZ	CE	SEAM: SLIGHTLY INCREASED MS BANDING FROM INTERVAL ABOVE; COMMON CONCOIDAL FRACTURING WITH RARE LOCALLY WELL DEVELOPPED LARGE CLEATING
DHGH-14-13	242.56	242.75	0.19	140330		CO	SY	D	K	CM		P			C	QZ	VN	SEAM FLOOR: STONEY COAL W/COMMON MS INTERMIXED, MNR QTZ-CA CLEAT INFILL AND LARGE QTZ-CA VEIN ASSOCIATED W/LOWER CONTACT
DHGH-14-13	242.75	242.95	0.20	140331		XM		B	G	MN	AM				C	QZ	WP	CARBONACEOUS MUDSTONE W/COMMON QTZ-CA WISPS
DHGH-14-13	242.95	243.95	1.00			XM		B	G	CM	AM	P			C	QZ	CE	
DHGH-14-13	243.95	265.9	21.95		70	SS	FF	A	G	MN		G	BT	20	R	QZ	VN	
DHGH-14-13	265.9	272.2	6.30			ST		B	G		AM	I	BI		R	QZ	VN	
DHGH-14-13	272.2	272.61	0.41			ZM		D	K	CM		G	PD	10	M	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	272.61	272.81	0.20	140332		ZM		D	K	CM	AM	G			M	QZ	CE	ROOF: COALY MS, COMMON COAL LAMINATIONS THROUGHOUT INTERVAL WITH MINOR QTZ/CARB CLEAT INFILL
DHGH-14-13	272.81	273.28	0.47	140333		CO	C4	D	K	CM					M	QZ	CE	SEAM: COMMON MS INTERMIXED W/ COAL, MINOR QTZ/CARB CLEAT INFILL, 1 CM QTZ VN MIDDLE OF UNIT, CLEATING WELL DEVELOPED, 2MM FACE AND BUTT CLEATS, BOTTOM 8 CM OF UNIT LITTLE TO NO LEATING PRESENT
DHGH-14-13	273.28	273.36	0.08			KL												CORE LOSS
DHGH-14-13	273.36	273.56	0.20	140334		CO	C4	D	K	CM		P			R	QZ	CE	SEAM: COMMON MS LAMINATIONS, RARE CLEAT INFILL ALONG BUTT AND FACE CLEATS, 1MM QTZ VN AT BU, LOCALLY MODERATELY DEVELOPED CLEATING, 3MM FACE AND 1MM BUTT CLEATS
DHGH-14-13	273.56	273.76	0.20	140335		XM		D	G	MN		P			R	QZ	CE	FLOOR: CARB MS W/ MINOR COAL WPS, RARE QTZ/CARB CLEAT INFILL IN COAL WPS
DHGH-14-13	273.76	274.64	0.88			XM		D	G	MN		P			M	QZ	CE	
DHGH-14-13	274.64	275.91	1.27			SS	FF	A	G		AM	I			M	QZ	VN	
DHGH-14-13	275.91	276.74	0.83			XM		D	G	MN	AM	G			C	PY	VN	5CM WIDE COAL BAND TU
DHGH-14-13	276.74	277.14	0.40			CO	SY	D	K	CM		G	PD	20	M	QZ	CE	
DHGH-14-13	277.14	279.15	2.01			ST		B	G	RA		G	PD		R	QZ	WP	
DHGH-14-13	279.15	279.35	0.20			CO	SY	D	K						C	QZ	CE	
DHGH-14-13	279.35	279.43	0.08			XM		D	K	MN		I			M	QZ	WP	
DHGH-14-13	279.43	285.31	5.88		90	SS	FF	A	G			G		10	M	QZ	VN	
DHGH-14-13	285.31	285.39	0.08			KL												
DHGH-14-13	285.39	287.9	2.51		90	SS	FF	A	G			G		10	M	QZ	VN	
DHGH-14-13	287.9	301.63	13.73		85	ST		B	G			G	PD	25	M	QZ	VN	
DHGH-14-13	301.63	305.11	3.48			SS	FF	A	G	RA	AM	G			C	QZ	VN	
DHGH-14-13	305.11	305.31	0.20	140336		SS	FF	A	G	RA		I			R	QZ	VN	ROOF: SS W/ RARE ST LAMINATIONS AND RARE QTZ VNING AT TU

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	305.31	305.51	0.20	140337		CO	C5	D	K	CM					M	QZ	CE	SEAM: COMMON MS BANDS THROUGHOUT INTERVAL W/ MINOR QTZ/CARB CLEAT INFILL, LOCAL MODERATELY DEVELOPED CLEATING, 2MM FACE 1MM BUTT, CONCOIDAL FRACTURING NEAR TOP AND BOTTOM OF UNIT
DHGH-14-13	305.51	305.91	0.40	140338		CO	C5	D	K	CM					M	QZ	CE	SEAM: COMMON MS BANDS THROUGHOUT INTERVAL W/ MINOR QTZ/CARB CLEAT INFILL, LOCAL MODERATELY DEVELOPED CLEATING, 2MM FACE 1MM BUTT, CONCOIDAL FRACTURING NEAR TOP AND BOTTOM OF UNIT
DHGH-14-13	305.91	306.53	0.62			KL												CORE LOSS
DHGH-14-13	306.53	306.83	0.30	140339		CO	C4	D	K	CM		G			M	QZ	CE	SEAM A: COMMON MS BANDS THROUGHOUT INTERVAL, MINOR QTZ/CARB CLEAT INFILL, POORLY DEVELOPED CLEATING, RARE PY BL AT BU
DHGH-14-13	306.83	307.28	0.45	140340		CO	C5	D	K	CM		G			R	QZ	CE	SEAM A: COMMON MS BANDS, RARE QTZ/CARB CLEAT INFILL, CLEATING POORLY DEVELOPED, 1CM BAND OF PY NEAR TU
DHGH-14-13	307.28	308.28	1.00	140341		CO	C5	D	K	AB		G			R	QZ	CE	SEAM: ABUNDANT MS BANDS, RARE QTZ/CARB CLEAT INFILL, COMMON CONCOIDAL FRACTURING THROUGHOUT UNIT, POORLY DEVELOPED CLEATING
DHGH-14-13	308.28	308.57	0.29			KL												CORE LOSS
DHGH-14-13	308.57	308.96	0.39	140342		CO	C5	D	K	AB		G			M	QZ	CE	SEAM: ABUNDANT MS BANDS, MINOR QTZ/CARB CLEAT INFILL, PREDOMINANTLY BUTT INFILL, POORLY DEVELOPED CLEATING
DHGH-14-13	308.96	309.16	0.20	140343		CO	SY	D	K	AB		G			M	QZ	CE	SEAM FLOOR: STONY COAL, 50% ST 5-% COAL, MINOR QTZ/CARB CLEAT INFILL, PREDOMINATELY BUTT CLEAT INFILL, CLEATING IS MODERATELY DEVELOPED
DHGH-14-13	309.16	309.36	0.20	140344		ST		B	G	MN	AM				M	QZ	WP	FLOOR: ST W/ MINOR COAL LAMINATIONS AT TU, MINOR QTZ/CARB WISPS THROUGHOUT INTERVAL
DHGH-14-13	309.36	310.78	1.42			ST		B	G	RA	AM	G			R	QZ	WP	
DHGH-14-13	310.78	312.18	1.40		85	SS	FF	A	G	RA		G		15				
DHGH-14-13	312.18	317	4.82			SS	FF	A	G	RA	AM	G						
DHGH-14-13	317	321.4	4.40		65	SS	VF	A	G					10	M	PY	DS	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	321.4	330.76	9.36			SS	FF	A	G	RA	AM	G			R	QZ	VN	
DHGH-14-13	330.76	331.03	0.27			CO	SY	D	K	CM		G			M	QZ	CE	
DHGH-14-13	331.03	331.13	0.10			XM		D	G	CM		G			C	QZ	WP	
DHGH-14-13	331.13	332.19	1.06			ST		B	G	RA		G			R	QZ	WP	
DHGH-14-13	332.19	332.34	0.15			ZT		B	G	CM		G			M	QZ	CE	
DHGH-14-13	332.34	333.17	0.83			ST		B	G		AM	G			M	PY	BL	
DHGH-14-13	333.17	333.5	0.33			XM		D	G	MN		G			M	QZ	CE	
DHGH-14-13	333.5	334.47	0.97			ZM		D	K	CM		G			M	QZ	CE	
DHGH-14-13	334.47	335.19	0.72			ST		B	G	RA		G			R	QZ	WP	
DHGH-14-13	335.19	335.51	0.32			XM		B	G	CM		G			C	QZ	CE	
DHGH-14-13	335.51	336.26	0.75			ST												
DHGH-14-13	336.26	336.51	0.25			ZM		D	G	CM					M	QZ	CE	
DHGH-14-13	336.51	336.71	0.20	140345		ZM		D	G	CM		G	WD	2	M	QZ	CE	ROOF: COALY MUDSTONE: COMMON ANTH BANDS UP TO 1CM WIDE HAVE WELL DEVELOPPED CLEATING (5MM X 5MM) AND MINOR QTZ-CA CLEAT BUTT INFILL. HIGHLY GRADATIONAL LOWER CT W/COAL;
DHGH-14-13	336.71	337.06	0.35	140346		CO	C4	D	K	CM		G			C	QZ	CE	SEAM: COMMON MS LAMINATIONS NEAR TOP CONTACT AS WELL AS COMMON QTZ-CA CLEAT BUTT INFILL NEAR GRADATIONAL TOP CT; COMMON TO MINOR INTERMIXED MS IN LOWER HALF; ANTH BANDS DISPLAY POOR TO WELL DEVELOPPED CLEATING FROM SMALL (1MM X 1MM) UP TO 5MM X 5MM; SAMPLE INTERVAL CHOSEN BASED ON WHAT WAS IN BOX AND GAMMA AS THOSE CLOSELY MATCHED BETTER THAN COMPENSATED DENSITY
DHGH-14-13	337.06	337.26	0.20	140347		XM		D	G	MN		G	WD	3	M	QZ	CE	PARTING A: CARBONACEOUS MUDSTONE, COALY IN PART W/MNR COAL LAMINATIONS THROUGHOUT; COAL BANDS HAVE MNR QTZ-CA CLEAT BUTT INFILL; RARE PY BLEBS; SAMPLE INTERVAL BASED ON WHAT WAS SEE IN BOX AND GAMMA AS THOSE MATCED CLOSELY AND MATCHED BETTER THAN COMPENSATED DENSITY

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	340.52	345.51	4.99		90	SS	FF	A	G			G	BI	15	R	QZ	VN	
DHGH-14-13	345.51	350.51	5.00		60	ST		B	G			G	PD					
DHGH-14-13	350.51	357.03	6.52			SS	FF	A	G	RA	AM	G			M	QZ	VN	
DHGH-14-13	357.03	357.48	0.45			ZS	FF	A	G	CM	AM	I			C	QZ	CE	
DHGH-14-13	357.48	357.56	0.08			ZM		D	G	CM					C	PY	DS	
DHGH-14-13	357.56	357.76	0.20	140352		ZM		D	G	CM		G			C	QZ	CE	ROOF A: COALY MS: COMMON COAL LAMINATIONS AND BANDS UP TO 2CM WIDE W/LOCALLY COMMON QTZ-CA CLEAT INFILL; COMMON PY IN BOTTOM OF INTERVAL AS 2CM WIDE VEIN, DISSEMINATIONS, AND CLEAT BUTT INFILL; LOWER CT IS GRADATIONAL
DHGH-14-13	357.76	357.96	0.20	140353		CO	SY	D	K	CM		G			C	QZ	VN	SEAM ROOF A: STONEY COAL GRADING INTO COAL: CMN QTZ-CA VEINLETS AND INFILL; MNR PY CLEAT BUTT INFILL AND BLEBS ASSOC. W/QTZ-CA VEINING; MODERATELY TO LOCALLY WELL DEVELOPPED CLEATING TYPICALLY 3MM X 3MM, RANGING UP TO 10MM FACE X 5MM BUTTS
DHGH-14-13	357.96	358.58	0.62	140354		CO	C3	D	K	MN		G	PD		R	QZ	CE	SEAM: C3 COAL WITH MINOR INTERMIXED AND INTERLAMINATED MS; TOP OF INTERVAL IS COMMONLY CONCOIDALLY FRACTURED, MIDDLE TO LOWER HALF OF INTERVAL HAS WELL DEVELOPPED CLEATING RANGING FROM SMALL UP TO 20MM FACE X 7MM BUTTS; QTZ-CA CLEAT INFILL IS RARE; BOTTOM CT GRADATIONAL OVER INTERVAL
DHGH-14-13	358.58	358.78	0.20	140355	60	ST		B	G	MN	AM			10	M	QZ	WP	FLOOR/PARTING A: CARBONACEOUS MS GRADING INTO ST: TOP HALF IS XM GRADING INTO ST; 1CM WIDE PY VN ON UPPER CT; MNR COAL LAMINATIONS IN BOTH XM AND ST; MINOR QTZ-CA VEINLETS AND INFILL/WISPS THROUGHOUT
DHGH-14-13	358.78	359.48	0.70			ST		B	G	RA			PD	10	M	QZ	WP	
DHGH-14-13	359.48	359.68	0.20	140356		ST		B	G	RA		P	PD		M	QZ	WP	ROOF/PARTING A: 15CM ST 5CM XM; PLANAR SHARP CONTACT BTW ST AND XM; CM OF COMMON DS PY ASSOC W/ST TO XM CONTACT; XM THEN GRADES SHARPLY INTO COAL AT BOTTOM OF INTERVAL W/MNR COAL LAMINATIONS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-13	359.68	360.28	0.60	140357		CO	C4	D	K	CM					M	QZ	VN	SEAM A: C4 COAL W/COMMON MS LAMINATIONS AND RARE BANDS UP TO 3CM WIDE; MNR QTZ-CA VEINIG AND RARE CLEAT INFILL; RARE PY BLEBS CONCENTRATED IN CENTRE OF INTERVAL; RECTANGULAR CLEATING IS MODERATELY DEVELOPPED LOCALLY UP TO 10M FACE X 4MM BUTTS
DHGH-14-13	360.28	360.33	0.05			KL												
DHGH-14-13	360.33	360.53	0.20	140358	75	XM		D	G	MN		G			M	QZ	VN	FLOOR A: 5CM OF STONEY COAL W/CMN QTZ-CA CLEAT INFILL FOLLOWED BY 15CM CARBONACEOUS MS GRADING INTO ST; CT BTW CO AND XM IS PLANAR SHARP AND DEFINED BY A 2CM WIDE QTZ-CA VEIN AND 3CM WIDE BAND OF COMMON DS PY; STONEY COAL HAS MODERATELY DEVELOPPED CLEATING
DHGH-14-13	360.53	360.61	0.08			MS		D	G	MN					M	QZ	WP	
DHGH-14-13	360.61	361.4	0.79		80	ST		B	G			G	WD					
DHGH-14-13	361.4	364.86	3.46			SS	FF	A	G	MN			WD					
DHGH-14-13	364.86	364.9	0.04			KL												
DHGH-14-13	364.9	366.44	1.54			SS	FF	A	G	MN	AM	G						
DHGH-14-13	366.44	374	7.56		75	SS	FF	A	G	RA			PD	10				EOH
DHGH-14-14	0	2.55	2.55			KL												
DHGH-14-14	2.55	2.74	0.19			SO		E	B	MN	AM							
DHGH-14-14	2.74	3.35	0.61			KL												
DHGH-14-14	3.35	4.4	1.05			MD		B	G	MN	AM							
DHGH-14-14	4.4	13.96	9.56		70	SS	VM	A	G			G	WD	25	R	QZ	VN	
DHGH-14-14	13.96	14.55	0.59		80	ST		B	G				WD	30				
DHGH-14-14	14.55	14.68	0.13			KL												
DHGH-14-14	14.68	17.65	2.97		80	ST		B	G			G	WD	30				
DHGH-14-14	17.65	17.85	0.20	145183	80	ST		B	G	TR			WD	30	R	QZ	CE	Roof. Trace CO bands <2mm.
DHGH-14-14	17.85	18.05	0.20	145184		CO	C4		K	MN		G			R	QZ	BL	Seam roof. FF. Minor silty bands near upper contact. Conchoidal fracturing. Poorly developed cleating, <2x2mm.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-14	34.76	39.58	4.82			ST		B	G			G	WD	25	R	QZ	WP	
DHGH-14-14	39.58	40.46	0.88		70	SS	VM	A	G				WD	25	M	QZ	VN	
DHGH-14-14	40.46	40.77	0.31			KL												
DHGH-14-14	40.77	41.02	0.25		70	SS	VM	A	G			G	WD	25	M	QZ	VN	
DHGH-14-14	41.02	42.96	1.94			MS		B	G			G	PD	20	R	QZ	WP	
DHGH-14-14	42.96	43.16	0.20	145188		MS		B	G	TR		G	PD	20	R	QZ	WP	Roof. Minor coaly bands near bottom contact, <5mm.
DHGH-14-14	43.16	43.38	0.22	145189		CO	C2		K				PD		M	QZ	CE	Seam roof. Discontinuous cleats, <1x2mm. Minor conchoidal fracturing. QZ filling spaces between cleats.
DHGH-14-14	43.38	43.43	0.05			KL												
DHGH-14-14	43.43	43.72	0.29	145190		CO	C2		K	TR		G	PD	10	M	QZ	CE	Seam. Traces silty bands <3mm. Poorly developed cleating, 1x2mm. Face cleats 10mm. QZ mostly in face cleats. Minor conchoidal fracturing.
DHGH-14-14	43.72	43.92	0.20	145191		CO	C2		K	TR		G	PD	20	R	QZ	CE	Seam floor. Trace silty bands <2mm. Poorly developed cleating, <2x2mm. Face cleats 20deg. QZ in face cleats. Minor conchoidal fracturing.
DHGH-14-14	43.92	44.12	0.20	145192	55	ST		B	G	TR		G	WD	26	E	QZ	CE	Floor. Minor coaly bands near top contact, <4mm. Accessory QZ in face & butt cleats.
DHGH-14-14	44.12	44.47	0.35		55	ST		B	G				WD	26	M	QZ	VN	
DHGH-14-14	44.47	44.54	0.07			KL												
DHGH-14-14	44.54	47.13	2.59		55	ST		B	G				WD	10	M	QZ	VN	
DHGH-14-14	47.13	48.07	0.94			KL												
DHGH-14-14	48.07	49.87	1.80			XM		D	G			G	PD	10	R	QZ	WP	
DHGH-14-14	49.87	50.24	0.37			KL												0.26m of core loss is coal. no roof and floor samples taken
DHGH-14-14	50.24	50.44	0.20	145193		XM		D	G				PD	10	R	QZ	WP	Roof. Clean.
DHGH-14-14	50.44	50.7	0.26	145194		CO	C5		K	CM					E	QZ	CE	Seam. Common silty bands <30mm. Cleats <2x4mm.
DHGH-14-14	50.7	52	1.30			XM		D	G	TR			PD	10	M	PY	BL	
DHGH-14-14	52	53.85	1.85			ST		B	G		AM	G						
DHGH-14-14	53.85	53.93	0.08			SS	VM	A	G				WD	5	M	PY	BL	
DHGH-14-14	53.93	54.02	0.09			KL												
DHGH-14-14	54.02	56.31	2.29			SS	VM	A	G				WD	5	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-14	56.31	57.86	1.55			KL				CO								
DHGH-14-14	57.86	58.3	0.44			KL												
DHGH-14-14	58.3	59.66	1.36			SS	VM	A	G		AM	P			M	QZ	VN	
DHGH-14-14	59.66	61.31	1.65			ST		B	G			G	PD	8				
DHGH-14-14	61.31	63.25	1.94			SS	VM	A	G			G	PD	8	M	QZ	VN	
DHGH-14-14	63.25	69.9	6.65			ST		B	G	FO		I	PD	10	E	BI	BN	
DHGH-14-14	69.9	72.92	3.02			SS	VF	M	G	FO		I	PD	8	M	BI	BN	
DHGH-14-14	72.92	73.26	0.34			CO	SY		G			G			C	QZ	VN	
DHGH-14-14	73.26	75.34	2.08			ST		B	G	MN					M	QZ	WP	
DHGH-14-14	75.34	75.59	0.25			KL												
DHGH-14-14	75.59	76.78	1.19			ST		B	G			G	WD	10				
DHGH-14-14	76.78	78.32	1.54			SS	VM	A	G			G	WD	8				
DHGH-14-14	78.32	81.6	3.28		65	SS	VF	A	G				WD	10	R	QZ	WP	
DHGH-14-14	81.6	81.66	0.06			KL												
DHGH-14-14	81.66	81.77	0.11	145195	65	SS	VF	A	G			I	WD	10	E	PY	DS	Roof. Clean
DHGH-14-14	81.77	82.13	0.36	145196		CO	C3		K	TR		I	PD	10	M	QZ	CE	Seam. Minor silty bands <10mm. Moderately well developed cleating, <4x3mm. Face cleats 10deg. QZ mostly in butt cleats. Minor PY blebs <5mm.
DHGH-14-14	82.13	82.65	0.52	145197		ZM			K			G			M	QZ	VN	Parting. Coaly bands <3mm. Conchoidal fractures.
DHGH-14-14	82.65	83.01	0.36	145198		CO	C5		K	CM		G	PD	10	M	QZ	CE	Seam floor. Grades to C4 at basal contact. Common silty bands <20mm. Variably developed cleating, <3x4mm. Face cleats 10deg. Qz in face & butt cleats. Minor PY bleb <40mmx10mm.
DHGH-14-14	83.01	83.21	0.20	145199		ST		B	G	TR		G	WD	15				Floor. Rare coaly bands <2mm.
DHGH-14-14	83.21	86.22	3.01			ST		B	G	TR		G	WD	15				
DHGH-14-14	86.22	92.62	6.40		60	SS	VF	A	G				WD	15				
DHGH-14-14	92.62	96.8	4.18			MS		D	G				PD	18	M	QZ	VN	
DHGH-14-14	96.8	96.84	0.04			KL												
DHGH-14-14	96.84	97.37	0.53			MS		D	G				PD	18	M	QZ	VN	
DHGH-14-14	97.37	97.5	0.13			KL												
DHGH-14-14	97.5	98.15	0.65			MS		D	G			P	PD	18				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-14	98.15	100.52	2.37			SS	VV	A	G			G	PD	5				
DHGH-14-14	100.52	102.82	2.30			SS	VM	A	G				PD	50	R	QZ	VN	
DHGH-14-14	102.82	102.94	0.12			KL												
DHGH-14-14	102.94	106.7	3.76			SS	VM	A	G	ST		P	WD	25	M	QZ	VN	
DHGH-14-14	106.7	107.08	0.38			ST		B	G			I	PD	30				
DHGH-14-14	107.08	113.1	6.02			SS	VF	A	G			G	PD	60	R	QZ	VN	
DHGH-14-14	113.1	121.16	8.06			MS		D	G		AM	G	WD	75	M	QZ	VN	
DHGH-14-14	121.16	139.8	18.64			MS		D	G		AM	G			R	QZ	VN	
DHGH-14-14	139.8	151.71	11.91		70	ST		B	G	MN			CV		M	QZ	CE	
DHGH-14-15	0	2.05	2.05			KL												
DHGH-14-15	2.05	2.1	0.05			GV		V	G									
DHGH-14-15	2.1	3.27	1.17			KL												
DHGH-14-15	3.27	3.94	0.67			GV	CL		G									
DHGH-14-15	3.94	11.19	7.25		90	SS	VF	A	G				WD	50				
DHGH-14-15	11.19	11.24	0.05			KL												
DHGH-14-15	11.24	15.91	4.67		80	SS	VF	A	G			G	WD	50				
DHGH-14-15	15.91	25.32	9.41		60	ST		B	G				WD	50				
DHGH-14-15	25.32	26.06	0.74			KL												
DHGH-14-15	26.06	26.37	0.31			MS		D	G			P	PD	50				
DHGH-14-15	26.37	26.57	0.20	145200		MS		D	G	TR		P	PD	50				Roof. Trace CO lenses <1mm.
DHGH-14-15	26.57	26.77	0.20	145201		CO	C4			K	MN		PD	50				Seam roof. Minor siltstone bands up to 8 mm. Very fine grained. Moderately developed cleating up to 2 x 2 near top.
DHGH-14-15	26.77	27.05	0.28	145202		CO	C4			K					M	QZ	VN	Seam. Minor silty lenses. Mostly fine grained and desintegrated. Minor concoidal fracture. Minor quartz carb veining evident as fragments.
DHGH-14-15	27.05	27.99	0.94			KL				CO								Enirety of core loss in coal seam.
DHGH-14-15	27.99	28.71	0.72	145203		CO	C4					G	PD	20	R	QZ	CE	Seam. Moderately developed cleating with face cleats at 20 degrees. Cleats up to 2 x 2 mm. Minor concoidal fracture. Upper portion desintegrated. Note seam floor accidentally bagged with seam.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-15	28.71	28.87	0.16	145204	50	SS	VF	A	G			G						Floor. Trace coal at very top.
DHGH-14-15	28.87	28.91	0.04	145204		SS	VM	M	G			G	PD	30				
DHGH-14-15	28.91	29.35	0.44			SS	VM	M	G				PD	30				
DHGH-14-15	29.35	30.59	1.24			KL												
DHGH-14-15	30.59	32.58	1.99			SS	VM	M	G				PD	45	M	QZ	VN	
DHGH-14-15	32.58	32.68	0.10			KL												
DHGH-14-15	32.68	34.51	1.83			SS	VM	M	G			G	PD	48	M	QZ	VN	
DHGH-14-15	34.51	35.26	0.75			ST		B	G				WD	45				
DHGH-14-15	35.26	35.48	0.22	145205		ST		B	G				WD	45				Roof. Carbonaceous.
DHGH-14-15	35.48	35.67	0.19	145206		CO	C3		K	TR		G			M	QZ	CE	Seam roof. FF. Conchoidal fracturing. Very poorly developed cleating, <1x1mm. Trace silty bands <1mm.
DHGH-14-15	35.67	35.98	0.31	145207		CO	C2		K			G						Seam. FF. Conchoidally fractured.
DHGH-14-15	35.98	36.18	0.20	145208		CO	C3		K	TR		G			R	QZ	WP	Seam floor. High conchoidal fracturing. Minor silty bands <1mm. QZ wisps <0.5mm.
DHGH-14-15	36.18	36.38	0.20	145209		SS	FF	A	G	TR		G	PD	35	M	QZ	WP	Floor. Trace CO at upper contact. Minor QZ wisps. Carbonaceous.
DHGH-14-15	36.38	36.45	0.07			SS	FF	A	G			P	PD	35	M	QZ	VN	
DHGH-14-15	36.45	36.66	0.21			ST		B	G		AM	G						
DHGH-14-15	36.66	37.32	0.66		90	SS	FF	A	G			I	PD	40	M	QZ	VN	
DHGH-14-15	37.32	41.05	3.73		90	ST		B	G				WD	25	R	QZ	VN	
DHGH-14-15	41.05	41.22	0.17			KL												
DHGH-14-15	41.22	41.5	0.28		90	ST		B	G			G	WD	15	R	QZ	VN	
DHGH-14-15	41.5	41.72	0.22		80	SS	FC	A	G				WD	20	M	QZ	VN	
DHGH-14-15	41.72	41.84	0.12			KL												
DHGH-14-15	41.84	42.75	0.91		80	SS	FC	A	G			I	WD	20	M	QZ	VN	
DHGH-14-15	42.75	43.91	1.16			ST		B	G		AM							
DHGH-14-15	43.91	44.11	0.20	145210		ST		B	G		AM	I						Roof. Weakly carbonaceous near base.
DHGH-14-15	44.11	44.31	0.20	145211		CO	C2		K	MN			WD	25	M	QZ	VN	Seam Roof. Common conchoidal fracture. Poorly developed cleating up to 1 x 1 mm. A fragment of siltstone in the middle of the unit with associated pyrite blebs. Quartz carbonate in veins

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-15	44.31	44.71	0.40	145212		CO	C2		K				WD	20				Seam. Minor silty bands up to 2 mm. Moderately well developed cleating up to 1 x 2 mm. Face cleats at 20 degrees. Concoidal fracture common
DHGH-14-15	44.71	44.91	0.20	145213		CO	C2		K			G	WD	25	M	QZ	CE	Seam Floor. Minor silty lenses up to 4 mm. Moderately developed cleating up to 2 x 2 mm. Face cleats at 15 degrees. Minor concoidal fracture. Minor quartz carb mostly in butt cleats.
DHGH-14-15	44.91	45.11	0.20	145214	70	ST		B	G				WD	20	M	QZ	VN	Floor. Minor coaly lenses near upper contact up to 2 mm. Minor quartz carb veining.
DHGH-14-15	45.11	50.87	5.76		70	ST		B	G				WD	20	E	QZ	VN	
DHGH-14-16	0	0.03	0.03			SO			B									
DHGH-14-16	0.03	1.68	1.65			KL												
DHGH-14-16	1.68	2.21	0.53			GV	CL	M	B									
DHGH-14-16	2.21	5.16	2.95			KL												
DHGH-14-16	5.16	5.73	0.57			GV	CL	M	G									
DHGH-14-16	5.73	6.2	0.47			KL												
DHGH-14-16	6.2	6.27	0.07	145215		ST		B	G	TR		I			C	PY	BL	Roof. Common PY blebs. Trace CO at lower contact.
DHGH-14-16	6.27	6.49	0.22	145216		CO	C5		K	CM								Seam roof. Disaggregated. Common silty bands, <2mm.
DHGH-14-16	6.49	9.83	3.34			KL												
DHGH-14-16	9.83	10.54	0.71	145217		CO	C3		K	MN								Seam. Disaggregated. Minor SI. Visible cleats in disaggregated CO. Cleats <3x4mm.
DHGH-14-16	10.54	11.25	0.71	145218		CO	C3		K	MN								Seam. Minor SI. Visible cleats in disaggregated CO. Cleats <3x4mm.
DHGH-14-16	11.25	11.81	0.56			KL												
DHGH-14-16	11.81	12.45	0.64	145219		CO	C2		K									Seam. Well developed cleating, <5x5mm. Face cleats 10 to 25deg. Several disaggregated zones.
DHGH-14-16	12.45	13.08	0.63	145220		CO	C2		K									Seam. Well developed cleating, <3x2mm. Face cleats 10 to 25deg. Several disaggregated zones.
DHGH-14-16	13.08	13.13	0.05			KL												
DHGH-14-16	13.13	13.92	0.79	145221		CO	C3		K	MN								Seam. Disaggregated. Minor SI. Moderately developed cleating, <2x2mm.
DHGH-14-16	13.92	14.12	0.20	145222		CO	C5		K	CM								Seam floor. Highly disaggregated. Common SI near base.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-16	14.12	14.3	0.18	145223		ST		B	G	TR								Floor. Trace CO near upper contact.
DHGH-14-16	14.3	14.7	0.40			KL												
DHGH-14-16	14.7	14.91	0.21			ST		B	G				PD	15				
DHGH-14-16	14.91	15.82	0.91			KL												
DHGH-14-16	15.82	21.1	5.28			ST		B	G			G	WD	20	M	QZ	VN	
DHGH-14-16	21.1	22.94	1.84		90	SS	VF	A	G			G	WD	12				
DHGH-14-16	22.94	23.92	0.98			ST		B	G			G	WD	25				
DHGH-14-16	23.92	24.11	0.19	145224		ST		B	G			G	WD	25				Roof. Clean
DHGH-14-16	24.11	24.53	0.42	145225		CO	C3		K	CM			WD	20	E	QZ	CE	Seam. Common stilty bands, <3mm. Well developed cleating, <3x3mm. Face cleats 20deg. QZ in face & butts cleats. PY in blebs, <2mm.
DHGH-14-16	24.53	24.73	0.20	145226		ST		B	G	MN			PD	15	M	QZ	CE	Floor. Minor CO bands, <5mm. Minor QZ in cleats.
DHGH-14-16	24.73	25.75	1.02			ST		B	G	CO			PD	15	R	QZ	WP	
DHGH-14-16	25.75	26.05	0.30			KL												
DHGH-14-16	26.05	27.5	1.45			ST		B	G	CO			PD	15	R	QZ	WP	
DHGH-14-16	27.5	28.15	0.65			KL												
DHGH-14-16	28.15	29.27	1.12			ST		B	G			G	PD	15				
DHGH-14-16	29.27	29.47	0.20	145227		ST		B	G	TR		I	PD	15	M	QZ	VN	Roof. Trace CO lenses at lower contact. Minor QZ veins.
DHGH-14-16	29.47	29.67	0.20	145228		CO	C4		K	TR		G	PD	20	E	QZ	CE	Seam roof. Minor silty bands, <8mm. Variably developed cleating, <2x2mm. Face cleats 25 to 30deg. Accessory QZ in cleats. Rare PY blebs, <1mm.
DHGH-14-16	29.67	30.38	0.71	145229		CO	C3		K	TR		G	PD	20	E	QZ	VN	Seam. FF. Conchoidal fracturing. Rare silty bands, <1mm. Rare cleats, <1x1mm. Rare PY bleb up to 20mm.
DHGH-14-16	30.38	31.09	0.71	145230		CO	C4		K	CM			PD	25	M	QZ	CE	Seam. Common ST fragments & lenses, <10mm. Poorly developed cleating, <1x1mm. Face cleats 25deg. Minor QZ in butt cleats. Minor PY blebs, <5mm.
DHGH-14-16	31.09	31.23	0.14			KL				CO								0.15m of coal seam above in core loss. No seam floor or floor samples taken.
DHGH-14-16	31.23	31.56	0.33			KL												0.15m of coal seam above in core loss. No seam floor or floor samples taken.
DHGH-14-16	31.56	35.28	3.72			ST		B	G			G	PD	20	M	QZ	VN	
DHGH-14-16	35.28	41.15	5.87			SS	VM	A	G	ST		P	PD	15	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments	
DHGH-14-16	41.15	47.73	6.58		60	ST		B	G			G	WD	8					
DHGH-14-16	47.73	49.56	1.83			ST		B	G										
DHGH-14-16	49.56	49.92	0.36			KL													
DHGH-14-16	49.92	54.89	4.97			ST		B	G	FO	AM				E	BI	BN		
DHGH-14-16	54.89	57.57	2.68			SS	VF	A	G			I	PD	20	M	QZ	VN		
DHGH-14-16	57.57	57.89	0.32			CO	SY		K			G							Stony CO. Not sampled
DHGH-14-16	57.89	59.66	1.77			ST		B	G			G	PD	15	M	QZ	WP		
DHGH-14-16	59.66	61.33	1.67		65	SS	VM	A	G			G	WD	23	M	QZ	VN		
DHGH-14-16	61.33	64.12	2.79			SS	FC	A	G			I	PD	12	M	QZ	VN		
DHGH-14-16	64.12	65.35	1.23		40	ST		B	G				WD	10	M	QZ	VN		
DHGH-14-16	65.35	66.02	0.67			ST		B	G						E	QZ	VN		
DHGH-14-16	66.02	66.12	0.10			KL													
DHGH-14-16	66.12	66.8	0.68			ST		B	G			I	PD	20	M	QZ	VN		
DHGH-14-16	66.8	69.69	2.89			SS	VM	A	G			G	WD	62	M	QZ	VN		
DHGH-14-16	69.69	71.31	1.62		60	ST		B	G			G	WD	30	M	QZ	VN		
DHGH-14-16	71.31	73.05	1.74			ST		B	G			G	WD	30	M	QZ	WP		
DHGH-14-16	73.05	73.68	0.63			CO	SY		K						M	QZ	VN		
DHGH-14-16	73.68	76.93	3.25			SS	VF	A	G	FO		G	FU	45	R	QZ	VN		
DHGH-14-16	76.93	78.3	1.37			ST		B	G	FO		G			M	QZ	VN		
DHGH-14-16	78.3	83.5	5.20			MS		D	G		AM	G			R	PY	BL		
DHGH-14-16	83.5	105.64	22.14			ST		B	G				PD	70					
DHGH-14-16	105.64	105.74	0.10			KL													
DHGH-14-16	105.74	107.13	1.39			ST		B	G			G	PD	40	M	QZ	VN		
DHGH-14-16	107.13	111.11	3.98			SS	VF	A	G			P	WD	40	M	QZ	WP		
DHGH-14-16	111.11	113.39	2.28			ST		B	G			I	WD	40	M	QZ	VN		
DHGH-14-16	113.39	120.88	7.49			SS	FC	A	G	ST			PD	35	M	QZ	VN		
DHGH-14-16	120.88	120.96	0.08			KL													
DHGH-14-16	120.96	122.71	1.75			SS	FC	A	G	ST		I	PD	35	M	QZ	VN		
DHGH-14-16	122.71	129.29	6.58			ST		B	G				PD	20	R	QZ	VN		
DHGH-14-16	129.29	129.48	0.19	145231		ST		B	G	TR		G	PD	20	R	QZ	VN		Seam roof. Trace CO at basal contact.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-16	129.48	129.66	0.18	145232		CO	C3		K	TR			PD	25				Seam. FF. Moderately developed cleating, <1x2mm. Conchoidal fracturing. Dissaggregated lower half of seam w silty fragments.
DHGH-14-16	129.66	129.86	0.20			KL				CO								Enirety of core loss in coal seam above. No seam floor or floor samples taken.
DHGH-14-16	129.86	130.55	0.69			ST		B	G			G	PD	20	M	QZ	VN	
DHGH-14-16	130.55	134.47	3.92			SS	VM	A	G			I	PD		M	QZ	VN	
DHGH-14-16	134.47	136.36	1.89			ST		B	G	CO		I	PD	15	M	QZ	VN	
DHGH-14-16	136.36	138	1.64			SS	VM	N	G			G	PD	15	M	QZ	VN	
DHGH-14-16	138	138.18	0.18	145233		SS	VM	N	G	TR		O	PD	15	M	QZ	VN	Seam roof. Traces of CO at basal contact. Minor QZ veining <5mm.
DHGH-14-16	138.18	138.39	0.21	145234		CO	C4		K				PD	45	C	QZ	VN	Seam. Based on CO present in box. No cleating present. FF. Conchoidal fracturing. Common QZ veining, <7mm.
DHGH-14-16	138.39	138.54	0.15			KL				CO								0.15m of core loss in seam above.
DHGH-14-16	138.54	138.59	0.05			KL												
DHGH-14-16	138.59	139.29	0.70			XS		B	G			I	PD	20	M	QZ	VN	
DHGH-14-16	139.29	139.47	0.18			CO	C4		K			I	PD	25	M	QZ	VN	Seam too narrow to be sampled. Seam thickness based on gamma and parting measured in box.
DHGH-14-16	139.47	140.64	1.17			ST		B	G			I	WD	10	M	QZ	VN	
DHGH-14-16	140.64	140.91	0.27			SS	VF	N	G				PD	20	M	QZ	VN	
DHGH-14-16	140.91	141.09	0.18	145235		SS	VF	N	G	XX			PD	20	M	QZ	VN	Roof. Carbonaceous.
DHGH-14-16	141.09	141.29	0.20	145236		CO	C2		K	TR		G	WD	8				Seam roof. Very well developed cleating, <7x15mm. Face cleats 8deg. Minor muddy bands, <2mm.
DHGH-14-16	141.29	141.73	0.44	145237		CO	C1			TR		G	WD	10	R	QZ	CE	Seam. Very well developed cleating, <5x15mm. Face cleats 10deg.Trace silty lenses <1mm. Rare QZ wisps <0.5mm in butt cleats.
DHGH-14-16	141.73	141.93	0.20	145238		CO	C1			TR		P	WD	10	R	QZ	CE	Seam floor. Very well developed cleating, <5x10mm. Face cleats 10deg. Minor silty bands <2mm. Rare QZ wisps <0.5mm in butt cleats.
DHGH-14-16	141.93	142.17	0.24	145239		ST		B	G	MN		G	WD	20	R	QZ	WP	Floor. Minor AN bands at upper contact, <10mm.
DHGH-14-16	142.17	143.27	1.10			ST		B	G			G	WD	20	R	QZ	WP	
DHGH-14-16	143.27	144.47	1.20			ZM		D	G	MN		G	WD	8	M	QZ	VN	AN bands <20mm

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-16	144.47	148.26	3.79			ST		B	G				WD	8				
DHGH-14-16	148.26	148.31	0.05			KL												
DHGH-14-16	148.31	148.36	0.05			KL												
DHGH-14-16	148.36	149.02	0.66			ST		B	G			G	WD	8				
DHGH-14-16	149.02	154.76	5.74			MS		D	G			G	WD	10				
DHGH-14-16	154.76	157.18	2.42		70	ST		B	G			G	WD	10				
DHGH-14-16	157.18	157.38	0.20	145240	70	ST		B	G	MN		P	WD	10				Roof. Minor CO at basal contact, <8mm.
DHGH-14-16	157.38	157.67	0.29	145241		CO	C2		K			G	PD	20	E	QZ	VN	Seam. Well developed cleating, <8x8mm. Face cleats 20deg. Accessory QZ in veins & butt cleats. Minor PY in blebs <5mm, & bands <1mm.
DHGH-14-16	157.67	157.87	0.20	145242		MS		D	K	MN	AM	G						Floor. Minor CO bands near upper contact. <5mm
DHGH-14-16	157.87	158.14	0.27			MS		D	K		AM	G						
DHGH-14-16	158.14	158.42	0.28			CO	SY		K			G	WD	20	E	QZ	BN	Stony coal. Seam too narrow to be sampled.
DHGH-14-16	158.42	159.59	1.17			ST		B	G	MN		G	PD	10	M	QZ	WP	
DHGH-14-16	159.59	163.75	4.16		60	ST		B	G			G	WD	25				
DHGH-14-16	163.75	166.6	2.85			SS	VF	A	G				WD	20				
DHGH-14-16	166.6	166.68	0.08			KL												
DHGH-14-16	166.68	172.69	6.01			SS	VF	A	G	TR		G	PD	10				
DHGH-14-16	172.69	172.93	0.24	145243		SS	VF	A	G	TR		G	PD	10	E	QZ	VN	Roof. CO bands <10mm near basal contact. Minor QZ veins <10mm.
DHGH-14-16	172.93	173.13	0.20	145244		CO	C3		K	TR		G	PD	15	M	QZ	CE	Seam roof. Silty lenses <5mm. Moderately developed cleating, <2x4mm. Face cleats 15deg. Minor QZ in butt cleats. Minor PY bands, <4mm.
DHGH-14-16	173.13	173.93	0.80	145245		CO	C3		K	M		G	PD	20	M	QZ	VN	Seam. Silty lenses <5mm. Moderately developed cleating, <2x3mm. Face cleats 20deg. Minor QZ in butt cleats. Rare PY bands <0.5mm.
DHGH-14-16	173.93	174.13	0.20	145246		CO	C3		K	M		G	PD	15	M	QZ	BN	Seam floor. ST lense <10mm. Minor muddy bands <2mm. Moderately developed cleating, <2x2mm. Face cleats 15deg. Minor QZ in bands <3mm. Minor PY bands <2mm.
DHGH-14-16	174.13	174.33	0.20	145247		ST		B	G			G	PD	10	M	QZ	WP	Floor. Trace coaly bands near upper contact. Minor QZ veining.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-16	174.33	174.77	0.44			ST		B	G			G	PD	10	R	QZ	WP	
DHGH-14-16	174.77	177.41	2.64		70	ST		B	G			G	WD	10				
DHGH-14-16	177.41	177.61	0.20	145248	70	ST		B	G	MN		G	WD	10	M	QZ	VN	Roof. Minor CO at basal contact. Minor QZ veining at basal contact
DHGH-14-16	177.61	177.81	0.20	145249		CO	C2		K	TR		G	WD	10	M	QZ	CE	Seam roof. Trace muddy lenses <1mm. Well developed cleating, <5x5mm. Face cleats 10deg. Minor QZ mostly in butt cleats. Minor PY in cleats <0.5mm, & blebs <4mm.
DHGH-14-16	177.81	178.02	0.21	145250		CO	C2		K	MN		G	WD	10	M	QZ	VN	Seam. Minor silty lenses, <20mm. Well developed cleating, <4x4mm. Face cleats 10deg. Minor QZ veining. Minor PY blebs <4mm.
DHGH-14-16	178.02	178.22	0.20	145251		CO	C2		K			G	WD	10	M	QZ	CE	Seam floor. Well developed cleating, <3x6mm. Face cleats 10deg. Minor QZ in cleats & veins. PY bands <2mm.
DHGH-14-16	178.22	178.41	0.19	145252		ST		B	G	TR		G	PD	12	M	PY	BN	Floor. AN bands, <8mm, near upper contact. Trace PY in bands <1mm.
DHGH-14-16	178.41	180.15	1.74			ST		B	G			G	PD	12				
DHGH-14-16	180.15	186.6	6.45			SS	VM	A	G	RA		G	WD	10	R	QZ	WP	
DHGH-14-16	186.6	187.07	0.47	GT-14-19		SS	VM	A	G			G	PD	10	R	QZ	WP	GEOTECH SAMPLE GT-14-19
DHGH-14-16	187.07	191.07	4.00			SS	VM	A	G	RA		G	PD	10	R	QZ	WP	
DHGH-14-16	191.07	195.15	4.08			ST		B	G		AM	G						
DHGH-14-16	195.15	195.64	0.49	GT-14-20		ST		B	G		AM	G						GEOTECH SAMPLE GT-14-20
DHGH-14-16	195.64	198.67	3.03			ST		B	G		AM	G						
DHGH-14-16	198.67	212.43	13.76			SS	VF	A	G	TR	AM		PD	10	R	QZ	WP	
DHGH-14-16	212.43	212.75	0.32	GT-14-21		SS	VF	A	G		AM							GEOTECH SAMPLE GT-14-21
DHGH-14-16	212.75	213.16	0.41			SS	VF	A	G		AM		PD	10	R	QZ	WP	
DHGH-14-16	213.16	213.36	0.20	145253		SS	VF	A	G	TR	AM	P	PD	10	R	QZ	WP	ROOF A: SANDSTONE (VF), PLANAR SHARP LOWER CT; 4CM WIDE SEMI-MASSIVE SULPHIDE VEIN (PY) ON LOWER CT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-16	213.36	214	0.64	145254		CO	C3	D	K	CM		G	PD		M	QZ	CE	SEAM A: COMMON MS LAMINATIONS THROUGHOUT; MNR QTZ-CA CLEAT INFILL TOP OF INTERVAL; MNR PY CLEAT BUTT INFILL AND BLEB (1CM X 4CM) IN TOP HALF OF INTERVAL; MODERATELY DEVELOPPED CLEATING 5MM FACE X 3MM BUTTS AND SMALLER; LOWER HALF GRADES SLIGHTLY TOWARDS LOWER CT W/MS
DHGH-14-16	214	214.37	0.37	145255		MS		D	G	RA	AM	G			R	QZ	WP	PARTING: MASSIVE MS W/RARE COAL LENSES W/RARE QTZ-CA WISPS; LOWER CT GRADES TO CO OVER SHORT INTERVAL
DHGH-14-16	214.37	214.92	0.55	145256		CO	C4	D	K	CM		G	PD		M	QZ	CE	SEAM A: C4 COAL W/COMMON MS LAMINATIONS INCREASING TOWARDS BOTTOM OF INTERVAL; GENERALLY WELL CLEATED UP TO 10MM FACE X 5MM BUTT; MNR QTZ-CA CLEAT INFILL IN PATCHES; LOWER HALF GRADES INTO MS PARTING; RARE PY BLEBS
DHGH-14-16	214.92	215.38	0.46	145257		MS		B	G	RA	AM	G			R	QZ	VN	PARTING: MASSIVE MS, SLIGHTLY WEATHERED IN SMALL LOCAL ZONES W/SLIGHTLY GRADATIONAL TOP & BOT CT'S (RARE CO BANDS)
DHGH-14-16	215.38	216.26	0.88	145258		CO	C3	D	K	MN		G	PD		M	QZ	CE	SEAM: MNR MS LAMINATIONS THROUGHOUT; MODERATE TO WELL DEVELOPPED CLEATING THROUGHOUT (UP TO LARGE 20MM FACE X 8MM BUTT); MNR QTZ-CA COMMONLY AS CLEAT BUTT INFILL NEAR TOP AND BOTTOM OF INTERVAL; RARE BY BLEBS; SLIGHTLY GRADATIONAL LOWER CT
DHGH-14-16	216.26	216.46	0.20	145259		MS		B	G	TR	AM				R	QZ	CE	PARTING (FLOOR): MASSIVE MS
DHGH-14-16	216.46	216.66	0.20			MS		B	G		AM							
DHGH-14-16	216.66	216.86	0.20	145260		MS		B	G	RA	AM	G			R	QZ	CE	PARTING (ROOF) A: MS, CARBONACEOUS IN PART, GRADING INTO COAL W/RARE CO LAMINATIONS AT BOT OF UNIT/BOT CT
DHGH-14-16	216.86	217.35	0.49	145261		CO	C4	D	K	CM			PD		R	QZ	CE	SEAM A: COMMON MS LAMINATIONS THROUGHOUT; LOCALLY WELL DEVELOPPED CLEATING IN ANTH (RANGING UP TO 20MM FACE X 10MM BUTTS); RA QTZ-CA CLEAT INFILL NEAR TOP OF INTERVAL AND RARE PY CLEAT INFILL IN MIDDLE OF INTERVAL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-16	217.35	217.55	0.20	145262		CO	C4	D	K	CM		G	WD	10	M	QZ	CE	SEAM FLOOR A: COMMON MS LAMINATIONS AND BANDS UP TO 4CM WIDE: GRADATIONAL LOWER CT INTO MS W/MNR QTZ-CA CLEAT BUTT INFILL; RARE PY BLEBS; LOCALLY WELL DEVELOPPED CLEATING SEEN IN ANTH BANDS UP TO 15MM FACE X 10MM BUTTS
DHGH-14-16	217.55	217.75	0.20	145263		ZM		D	K	MN	AM	G			M	QZ	CE	FLOOR A: COALY MS W/MNR COAL BANDS AT TOP OF UNIT W/MNR QZ-CA CLEAT INFILL AND GRADING INTO PLAIN MASSIVE MS; 1CM X 5CM PY BLEB ASSOC W/TOP CT
DHGH-14-16	217.75	218.08	0.33			MS		B	G	TR	AM	G						
DHGH-14-16	218.08	218.38	0.30			ST		E	G		AM	G						
DHGH-14-16	218.38	218.53	0.15			SS	FM	A	G	RA	AM							
DHGH-14-16	218.53	218.91	0.38	GT-14-22		SS	FC	A	G		AM							GEOTECH SAMPLE GT-14-22
DHGH-14-16	218.91	224.51	5.60			SS	FX	A	G	RA	AM		RU	20				EOH
DHGH-14-17	0	2.44	2.44			KL												
DHGH-14-17	2.44	2.59	0.15			GV	CL	M	G									
DHGH-14-17	2.59	5.49	2.90			KL												
DHGH-14-17	5.49	5.74	0.25			GV	CL	M	G									
DHGH-14-17	5.74	8.53	2.79			KL												
DHGH-14-17	8.53	9.03	0.50			GV	CL	M	G									
DHGH-14-17	9.03	11.58	2.55			KL												
DHGH-14-17	11.58	13.12	1.54			GV	CL	M	G									
DHGH-14-17	13.12	14.63	1.51			KL												
DHGH-14-17	14.63	14.86	0.23			GV	CL	M	G									
DHGH-14-17	14.86	15.24	0.38			KL												
DHGH-14-17	15.24	17.28	2.04			KL												
DHGH-14-17	17.28	18.68	1.40		60	SS	VF	A	G									
DHGH-14-17	18.68	19.41	0.73			KL												
DHGH-14-17	19.41	20	0.59			SS	VF	A	G			WD	20	R	QZ	WP		
DHGH-14-17	20	20.15	0.15			KL												
DHGH-14-17	20.15	22.84	2.69			SS	VF	A	G	MN		P	WD	25	R	QZ	WP	BIVALVE INTERVAL: 22.35-22.85

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-17	22.84	25.02	2.18			XM		B	G	MN	AM	I			M	QZ	WP	
DHGH-14-17	25.02	25.56	0.54			CO	SY	D	G	AB		G			C	QZ	VN	
DHGH-14-17	25.56	29.79	4.23			MS		B	G	MN	AM				M	QZ	WP	
DHGH-14-17	29.79	29.87	0.08			KL												
DHGH-14-17	29.87	31.22	1.35			MS		B	G	MN	AM	P			M	QZ	WP	
DHGH-14-17	31.22	31.35	0.13			CO	SY	D	K	CM		P			C	QZ	CE	
DHGH-14-17	31.35	31.41	0.06			XM		D	G	MN	AM	G			M	QZ	VN	
DHGH-14-17	31.41	31.61	0.20	140359		XM		D	G	RA	AM	G			M	QZ	VN	ROOF: XM W/ RARE COAL INTERMIXED AT BU, MINOR QTZ/CARB VNING
DHGH-14-17	31.61	32.09	0.48	140360		CO	C4	D	K	CM			PD		M	QZ	CE	SEAM ROOF: COMMON MS LAMINATIONS, MINOR QTZ/CARB CLEAT INFILL AND SOME VNING PRESENT, LOCAL MINOR CLEATING, 1MM FACE AND BUTT CLEATS
DHGH-14-17	32.09	32.74	0.65	140361		CO	C4	D	K	CM			PD		M	QZ	VN	SEAM: COMMON MS LAMINATIONS, MINOR QTZ/CARB VNING UP TO 1CM NEAR TU, MODERATELY DEVELOPED CLEATING, 3MM FACE AND 1MM BUTT CLEATS
DHGH-14-17	32.74	32.92	0.18			KL												
DHGH-14-17	32.92	33.02	0.10			KL												
DHGH-14-17	33.02	33.88	0.86	140362		CO	C4	D	K	CM		G	PD		M	QZ	CE	SEAM: COMMON TO MINOR MS LAMINATIONS, 3 MS LAMINATIONS UP TO 2CM WIDE SPACED EVENLY THROUGHOUT INTERVAL, MINOR QTZ/CARB CLEAT INFILL, WELL DEVELOPED CLEATING, 2MM FACE AND 2MM BUTT CLEATS
DHGH-14-17	33.88	34.13	0.25	140363		CO	C4	D	K	CM		G	PD		C	QZ	VN	SEAM FLOOR: COMMON MS LAMINATIONS THROUGHOUT INTERVAL, COMMON QTZ/CARB VNING, POORLY DEVELOPED CLEATING
DHGH-14-17	34.13	34.33	0.20	140364		XM				RA	AM	G			C	QZ	WP	FLOOR: CARBONACEOUS MS W/ RARE COAL BANDS, COMMON QTZ/CARB WPS AT BU
DHGH-14-17	34.33	35.66	1.33			XM				RA	AM	G			C	QZ	WP	
DHGH-14-17	35.66	38	2.34			ST		B	G		AM				R	QZ	WP	
DHGH-14-17	38	38.51	0.51			KL												
DHGH-14-17	38.51	39.37	0.86			ST		B	G		AM	G			R	PY	BL	
DHGH-14-17	39.37	41.13	1.76			SS	FM	A	G		AM							

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments	
DHGH-14-17	41.13	41.35	0.22			KL													
DHGH-14-17	41.35	42.4	1.05			SS	FM	A	G		AM								
DHGH-14-17	42.4	42.82	0.42			KL													
DHGH-14-17	42.82	50.25	7.43			SS	FM	A	G	RA	AM	P			R	QZ	WP		
DHGH-14-17	50.25	50.85	0.60			KL													
DHGH-14-17	50.85	51.21	0.36			MS		B	G		AM				R	QZ	VN	E.O.H.	
DHGH-14-18	0	2.38	2.38			KL													
DHGH-14-18	2.38	3	0.62			GV	CL	M	G										
DHGH-14-18	3	5.43	2.43			KL													
DHGH-14-18	5.43	7.9	2.47			KL													
DHGH-14-18	7.9	9.18	1.28			GV	CL	M	G			G							
DHGH-14-18	9.18	9.38	0.20			CO	SY	D	K			G							
DHGH-14-18	9.38	9.88	0.50			SS	FF	A	G				PD						
DHGH-14-18	9.88	9.99	0.11			KL													
DHGH-14-18	9.99	11.53	1.54			SS	FF	A	G				PD						
DHGH-14-18	11.53	22.48	10.95		65	ST		B	G			G	WD	10	R	QZ	VN		
DHGH-14-18	22.48	22.61	0.13		35	SS	VF	A	G						R	PY	BL		
DHGH-14-18	22.61	22.81	0.20	140365	65	ST		B	G			P	WD	10	R	QZ	VN	ROOF A: ST INTERLAMINATED W/ SS, RARE QTZ/CARB VNING	
DHGH-14-18	22.81	23.22	0.41	140366		CO	C5	D	K	CM		G			M	QZ	VN	SEAM A: COMMON MS INTERMIXED THROUGHOUT INTERVAL, MINOR QTZ/CARB VNING, RARE PY BLEBS THROUGHOUT INTERVAL, VERY POORLY DEVELOPED CLEATING	
DHGH-14-18	23.22	23.62	0.40	140367		CO	C4	D	K	CM		P			R	QZ	VN	SEAM: COMMON MS INTERMIXED, RARE QTZ/CARB VNNING, VERY POORL DEVELOPED CLEATING PRESENT	
DHGH-14-18	23.62	23.73	0.11	140368		XM		D	G	RA					R	QZ	WP	FLOOR: CARBONACEOUS MS W. RARE COAL AND QTZ/CARB WISPS CONCENTRATED TOWARDS TU	
DHGH-14-18	23.73	23.85	0.12			KL													
DHGH-14-18	23.85	24.02	0.17			XM		D	G	RA			PD	10	C	QZ	WP		
DHGH-14-18	24.02	27.5	3.48		70	ST		A	G				PD	10	M	QZ	VN		
DHGH-14-18	27.5	27.75	0.25			ZM		D	G	CM		P	PD		C	QZ	CE		

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-18	27.75	30.56	2.81			MS		D	G	RA			PD	10	M	QZ	WP	
DHGH-14-18	30.56	30.76	0.20	140369		MS		D	G	RA		G	PD	10	M	QZ	VN	ROOF A: MS W/ COAL LAMINATIONS AT BU, MINOR QTZ/CARB VNING AND DISSEMINATED PY AT BU
DHGH-14-18	30.76	31.02	0.26	140370		CO	C3	D	K	CM		G						SEAM ROOF: COMMON MS INTERMIXED THROUGHOUT INTERVAL, CLEATING IS POORLY DEVELOPED
DHGH-14-18	31.02	31.28	0.26	140371		CO	C4	D	K	CM		G			R	QZ	CE	SEAM: COMMON MS INTERMIXED THROUGHOUT INTERVAL, CLEATING IS POORLY DEVELOPED, RARE QTZ/CARB CLEAT INFILL IN MIDDLE OF UNIT,
DHGH-14-18	31.28	31.52	0.24	140372		CO	C4	D	K	CM		I			M	QZ	CE	SEAM FLOOR: COMMON MS INTERMIXED THROUGHOUT INTERVAL, MINOR QTZ/CARB CLEAT INFILL TOWARDS TU, PREDOMINANTLY BUTT CLEAT INFILL, CLEATING IS POORLY DEVELOPED VERY SMALL CLEATS 0.5MM FACE AND BUTT
DHGH-14-18	31.52	31.72	0.20	140373		MS		B	G		AM	G			M	QZ	WP	FLOOR: MS W/ MINOR QTZ/CARB WPS THROUGHOUT INTERVAL
DHGH-14-18	31.72	32.37	0.65			MS		B	G		AM	G			M	QZ	VN	
DHGH-14-18	32.37	32.87	0.50		60	SS	FF	A	G				PD		M	QZ	VN	
DHGH-14-18	32.87	32.91	0.04			KL												
DHGH-14-18	32.91	34.61	1.70		60	SS	VF	B	G				WD	30	C	QZ	VN	
DHGH-14-18	34.61	34.92	0.31			KL												
DHGH-14-18	34.92	35.02	0.10			CO	SY	D	K			G			A	QZ	CE	
DHGH-14-18	35.02	36.3	1.28			MS		D	G			G			M	QZ	VN	
DHGH-14-18	36.3	36.71	0.41		80	SS	FF	A	G				PD		M	QZ	VN	
DHGH-14-18	36.71	36.83	0.12			KL												
DHGH-14-18	36.83	37.88	1.05			SS	FF	A	G			G	PD		M	QZ	VN	
DHGH-14-18	37.88	38.11	0.23			ST		B	G									
DHGH-14-18	38.11	38.86	0.75			ST		B	G		AM				M	QZ	VN	
DHGH-14-18	38.86	39.19	0.33			KL												
DHGH-14-18	39.19	40.62	1.43			KL				CO								
DHGH-14-18	40.62	44.94	4.32			ST		B	G		AM	G			M	QZ	VN	
DHGH-14-18	44.94	54.84	9.90			SS	FM	A	G		AM	P			C	QZ	VN	
DHGH-14-18	54.84	55.84	1.00			ST		B	G		AM	G			R	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-18	55.84	60.84	5.00			SS	FM	A	G			G	PD	20	R	QZ	VN	
DHGH-14-18	60.84	65.97	5.13			ST		D	G	FO	AM				R	PY	BL	
DHGH-14-18	65.97	67.73	1.76			SS	FM	A	G	FO	AM	P			C	BI		
DHGH-14-18	67.73	67.94	0.21			CO	SY	D	K	CM		P			C	QZ	CE	
DHGH-14-18	67.94	68.09	0.15			MS		B	G	RA	AM	G			R	QZ	WP	
DHGH-14-18	68.09	70.44	2.35			ST		B	G		AM	G			R	QZ	VN	
DHGH-14-18	70.44	73.54	3.10		65	ST		B	G			P		15	M	QZ	WP	
DHGH-14-18	73.54	73.76	0.22			CO	SY	D	K	MN		G			C	QZ	CE	
DHGH-14-18	73.76	75.18	1.42			ZM		D	G	CM		G			M	QZ	CE	
DHGH-14-18	75.18	75.64	0.46			MS		B	G	RA	AM	G			R	QZ	CE	
DHGH-14-18	75.64	76.99	1.35			ST		B	G			G	WD	10	R	QZ	WP	
DHGH-14-18	76.99	77.64	0.65			ZM		D	G			G			M	QZ	CE	
DHGH-14-18	77.64	78.24	0.60			XM		D	G	MN	AM							
DHGH-14-18	78.24	78.59	0.35			KL												
DHGH-14-18	78.59	79.04	0.45			ZM		D	G			G			M	QZ	WP	
DHGH-14-18	79.04	79.69	0.65			ST		B	G			G	PD	10	R	QZ	VN	
DHGH-14-18	79.69	80.19	0.50			ZM		D	G									
DHGH-14-18	80.19	81.49	1.30			XM		D	G	CM	AM	I			M	QZ	CE	
DHGH-14-18	81.49	81.74	0.25			MS		B	G	AB	AM	I						
DHGH-14-18	81.74	82.24	0.50			SS	FM	B	G		AM							
DHGH-14-18	82.24	82.34	0.10			KL												
DHGH-14-18	82.34	87.2	4.86			SS	FM	A	G		AM	P						
DHGH-14-18	87.2	87.48	0.28			CO	C6	D	K	AB	AM	P			R	QZ	VN	
DHGH-14-18	87.48	88.88	1.40			XM		B	G	MN		P			M	QZ	CE	
DHGH-14-18	88.88	91	2.12			ST		B	G	RA	AM	I						
DHGH-14-18	91	98.23	7.23			SS	FM	A	G		AM	P			M	QZ	VN	
DHGH-14-18	98.23	98.43	0.20	140374		SS	FM	A	G		AM	P			R	QZ	VN	ROOF: MASSIVE SS W/ RARE QTZ/CARB VNING AT BU

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-18	98.43	98.73	0.30	140375		CO	C4	D	K	CM		G	PD		M	QZ	VN	SEAM: COMMON MS LAMINATIONS THROUGHOUT INTERVAL W/ MINOR QTZ/CARB VNING THROUGHOUT UNIT, LOCAL WELL DEVELOPED CLEATING, CLEATS ARE 5MM FACE AND 4MM BUTT CLEATS
DHGH-14-18	98.73	99.03	0.30	140376		CO	C4	D	K	CM		G	PD		M	QZ	VN	SEAM: COMMON MS LAMINATIONS THROUGHOUT INTERVAL W/ MINOR QTZ/CARB VNING AT TU, VERY POORLY DEVELOPED CLEATING
DHGH-14-18	99.03	99.25	0.22	140377		XM		D	G	MN	AM	G			M	QZ	WP	FLOOR: CARBONACEOUS MUDSTONE W/MINOR COAL AND QTZ/CARB WISPS
DHGH-14-18	99.25	99.95	0.70			MS		B	G		AM				M	QZ	WP	
DHGH-14-18	99.95	100.06	0.11			KL												
DHGH-14-18	100.06	100.27	0.21			MS		B	G		AM	G						
DHGH-14-18	100.27	103.27	3.00			ST		B	G		AM				M	QZ	VN	E.O.H.
DHGH-14-19	0	2.13	2.13			KL												
DHGH-14-19	2.13	4.46	2.33		80	SS	VF	A	G				PD	20	M	QZ	VN	
DHGH-14-19	4.46	5.18	0.72			KL												
DHGH-14-19	5.18	5.49	0.31			MS		B	G	MN	AM				R	QZ	WP	
DHGH-14-19	5.49	5.69	0.20	140378		MS		B	G	MN	AM				R	QZ	CE	ROOF: MS W/ MINOR CO BANDS AT BU, COAL IN BANDS HAVE MINOR CLEAT INFILL
DHGH-14-19	5.69	5.89	0.20	140379		CO	C2	D	K	MN					M	QZ	CE	SEAM ROOF: COAL WITH APPROX 15% MS LAMINATIONS THROUGHOUT INTERVAL, MINOR QTZ/CARB CLEAT INFILL AT BU, WELL DEVELOPED CLEATING, 5MM FACE AND 2MM BUTT CLEAT
DHGH-14-19	5.89	6.89	1.00	140380		CO	C2	D	K	MN					R	QZ	CE	SEAM: COAL W/ APPROX 15% MS LAMINATIONS THROUGHOUT INTERVAL, RARE QTZ/CARB CLEAT INFILL BU, WELL DEVELOPED CLEATS, 5MM FACE 2MM BUTT
DHGH-14-19	6.89	7.57	0.68	140381		CO	C3	D	K	CM					C	QZ	CE	SEAM: COAL W/ COMMON MS BANDS THROUGHOUT INTERVAL, COMMON QTZ/CARB CLEAT INFILL PREDOMINANTELY AT TU BUT ALSO EVIDENT AT BU, CLEATING WELL DEVELOPED, 6MM FACE AND 3MM BUTT CLEAT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-19	51.61	53.86	2.25		80	SS	FF	A	G			G			C	QZ	VN	
DHGH-14-19	53.86	54.31	0.45			XM		D	K	MN		G			M	QZ	VN	
DHGH-14-19	54.31	54.56	0.25			CO	C3	D	K	CM		P			M	QZ	CE	
DHGH-14-19	54.56	55.15	0.59		85	ST		B	G			P			M	QZ	VN	
DHGH-14-19	55.15	55.4	0.25			CO	C3	D	K	CM		P			C	QZ	CE	
DHGH-14-19	55.4	55.75	0.35			XM		D	G	MN		G			R	QZ	CE	
DHGH-14-19	55.75	55.9	0.15			ZM		D	K	CM		G			M	QZ	VN	
DHGH-14-19	55.9	57.27	1.37			MS		B	G	MN	AM	G			M	QZ	WP	
DHGH-14-19	57.27	59.18	1.91			ST		B	G		AM	G						
DHGH-14-19	59.18	64.76	5.58			SS	FF	A	G	ST	AM	P		20	M	QZ	VN	
DHGH-14-19	64.76	67.81	3.05		70	ST		B	G			P	BT	20	R	QZ	VN	
DHGH-14-19	67.81	71.41	3.60			SS	FF	A	G			P	PD	15	R	QZ	VN	
DHGH-14-19	71.41	72.84	1.43		60	SS	FF	A	G					15	R	QZ	WP	
DHGH-14-19	72.84	76.66	3.82			ST		B	G	TU	AM	G			R	QZ	WP	
DHGH-14-19	76.66	78.2	1.54			MS		B	G	BU	AM				C	BI		BIVALVE INTERVAL FROM 78.23-79.21
DHGH-14-19	78.2	80.89	2.69			SS	FF	A	G	TU		G	PD	15	M	BI		BIVALVE INTERVAL FROM 78.23-79.21
DHGH-14-19	80.89	81.08	0.19			XM		D	G		AM	I			M	QZ	WP	
DHGH-14-19	81.08	81.2	0.12			CO	SY	D	K		AM				A	QZ	CE	
DHGH-14-19	81.2	81.29	0.09			KL												
DHGH-14-19	81.29	81.33	0.04			CO	SY	D	K		AM				M	QZ	VN	
DHGH-14-19	81.33	81.96	0.63			XM		D	G	RA					M	QZ	WP	
DHGH-14-19	81.96	84.6	2.64		70	ST		B	G			G	PD	5	M	QZ	WP	
DHGH-14-19	84.6	86.77	2.17			SS	FF	A	G	MN		P			M	QZ	VN	
DHGH-14-19	86.77	87.31	0.54			ST		B	G				PD		M	QZ	WP	
DHGH-14-19	87.31	87.38	0.07			KL												
DHGH-14-19	87.38	87.79	0.41		65	SS	FF	A	G			G	PD	10	M	QZ	WP	
DHGH-14-19	87.79	87.98	0.19			XM		D	G		AM	G			M	QZ	VN	
DHGH-14-19	87.98	88.18	0.20	104393		XM		D	G	MN	AM	P			M	QZ	VN	ROOF A: XM W/ MINOR COAL LENSES NEAR BU, MINOR QZ/CARB VNING AND DISSEMINATED PYRITE

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-19	88.18	88.38	0.20	140394		CO	SY	D	K	CM		P			M	QZ	CE	SEAM ROOF A: STONY COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, MINOR QZ/CARB CLEAT INFILL AND MINOR PY BLEBS NEAR BU
DHGH-14-19	88.38	88.77	0.39	140395		CO	C5	D	K	CM		P			C	QZ	CE	SEAM: COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, COMMON QZ/CARB CLEAT INFILL AS WELL AS VNING NEAR BU, LOCAL WELL DEVELOPED CLEATING, 2MM FACE AND 1MM BUTT CLEATS
DHGH-14-19	88.77	88.97	0.20	140396		CO	SY	D	K	CM		P			C	QZ	CE	SEAM FLOOR: HEAVY COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, COMMON QZ/CARB CLEAT INFILL, PREDOMINATELY IN BUTT CLEATS, LOCAL WELL DEVELOPED CLEATING NEAR BU, 4MM FACE AND 3MM BUTT CLEATS
DHGH-14-19	88.97	89.17	0.20	140397		XM		D	G	MN		G	PD		M	QZ	WP	FLOOR: CARBONACEOUS MS W/ MINOR CO LENSES NEAR TU WITH MINOR QZ/CARB CLEAT INFILL AND WISPS
DHGH-14-19	89.17	89.43	0.26			XM		D	G	MN		G	PD		M	QZ	WP	
DHGH-14-19	89.43	90.67	1.24		80	SS	FF	A	G			G	WD	3	M	QZ	WP	
DHGH-14-19	90.67	91.1	0.43			XT		B	G	CM		G	PD		M	QZ	CE	
DHGH-14-19	91.1	92.12	1.02		90	SS	FM	A	G				WD					
DHGH-14-19	92.12	92.19	0.07			KL												
DHGH-14-19	92.19	101.19	9.00		90	SS	FM	A	G	MN		P	PD	10	M	QZ	VN	
DHGH-14-19	101.19	101.87	0.68			MS		B	G		AM	I			M	QZ	VN	
DHGH-14-19	101.87	102.17	0.30			SS	FF	B	G			P			C	QZ	VN	
DHGH-14-19	102.17	109.04	6.87			M2		A	G	SS		P			C	QZ	VN	
DHGH-14-19	109.04	112.51	3.47			SS	FC	A	G	MN		P	PD	30	M	QZ	VN	
DHGH-14-19	112.51	113.76	1.25			MS		D	G			P	WD	25	C	QZ	VN	
DHGH-14-19	113.76	114.44	0.68			SS	FF	A	G				PD	40	M	QZ	VN	
DHGH-14-19	114.44	114.58	0.14			KL												
DHGH-14-19	114.58	123.41	8.83		95	SS	FF	A	G				WD	50				
DHGH-14-19	123.41	127.74	4.33		65	SS	FF	A	G			G	WD	40				
DHGH-14-19	127.74	130.55	2.81			ST		B	G			G	PD	50	R	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-19	130.55	131.22	0.67			ZM				CM	AM				A	QZ	CE	
DHGH-14-19	131.22	131.42	0.20	140398		ZM		D	K	CM	AM	G			A	QZ	CE	ROOF: COALY MS W/ COMMON CO BANDS THROUGHOUT INTERVAL, ABUNDANT QZ/CARB CLEAT INFILL IN BOTH FACE AND BUTT CLEATS, 1CM QZ/CARB VN AT TU
DHGH-14-19	131.42	131.78	0.36	140399		CO	C4	D	K	MN				45	C	QZ	CE	SEAM: COAL W/ MINOR MS LMAINATIONS THROUGHOUT INTERVAL, COMMON QZ/CARB CLEAT INFILL PREDOMINANTLY IN BUTT CLEATS, MODERATELY WELL DEVELOPED CLEATING, 4MM FACE AND 1MM BUTT CLEATS
DHGH-14-19	131.78	131.87	0.09			KL												
DHGH-14-19	131.87	131.95	0.08	140400		CO	SY	D	K	AB					A	QZ	CE	FLOOR A: STONY COAL W/ ABUNDANT MS INTERMIXED THROUGHOUT INTERVAL, ABUNDANT QZ/CARB CLEAT INFILL THROUGHOUT INTERVAL, PREDOMINANTLY IN BUTT CLEATS, MINOR PY BLEBS NEAR TU
DHGH-14-19	131.95	132.07	0.12	140400		SS	FF	A	G			G			C	QZ	VN	FLOOR C: SS IRREGULARLY INTERBEDDED W/ ST, COMMON QZ/CARB VNING AT TU, MINOR DISSEMINATED PY NEAR TU AS WELL
DHGH-14-19	132.07	133.84	1.77		60	SS	FF	A	G			P		45	M	QZ	WP	
DHGH-14-19	133.84	138.76	4.92			SS	FF	A	G			G	PD	45				
DHGH-14-19	138.76	141.11	2.35		80	ST		B	G	RA		G	WD		R	QZ	WP	
DHGH-14-19	141.11	142.94	1.83			MS		D	G		AM	P	PD		M	QZ	VN	
DHGH-14-19	142.94	143.04	0.10			CO	SY	D	K			P		45	A	QZ	CE	
DHGH-14-19	143.04	146.45	3.41			SS	FF	A	G				WD	65	M	QZ	VN	
DHGH-14-19	146.45	152.18	5.73			MS		B	G	FO	AM	P			A	BI		BIVALVE INTERVALS 146.67-148.00, 151.62-152.27
DHGH-14-19	152.18	155.4	3.22			SS	FF	A	G			G	WD	65	R	QZ	VN	
DHGH-14-19	155.4	155.63	0.23			XT		B	G	CM		G			A	QZ	VN	
DHGH-14-19	155.63	163.63	8.00			ST		B	G		AM	G			M	QZ	WP	
DHGH-14-19	163.63	166.67	3.04			SS	FM	A	G	CM		G		25	C	QZ	VN	
DHGH-14-19	166.67	171.17	4.50			ST		B	G			I	WD	40				
DHGH-14-19	171.17	171.37	0.20	140401		ST		B	G			I	PD	40	C	QZ	VN	ROOF A: ST W/ COMMON QZ/CARB VNING, 2CM VN AT BU, MINOR DISSEMINATED PY THROUGHOUT INTERVAL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-19	171.37	171.57	0.20	140402		CO	C4	D	K	CM		G			A	QZ	CE	SEAM ROOF: COAL W/ COMMON QZ/CARB CLEAT INFILL, PREDOMINANTLY IN BUTT CLEATS, BUT ALSO OCCURRING IN FACE CLEATS, WELL DEVELOPED CLEATING, 5MM FACE 3MM BUTT CLEATS
DHGH-14-19	171.57	171.77	0.20	140403		CO	C4	D	K	CM		G			C	QZ	CE	SEAM: COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, COMMON QZ/CARB CLEAT INFILL, PREDOMINANTLY IN BUTT CLEATS AND UP TO 0.5CM THICK, CLEATING IS POORLY DEVELOPED, INTERVAL IS A BROKEN ZONE W/ MINOR CONCOIDAL FRACTURING
DHGH-14-19	171.77	171.97	0.20	140404		CO	C5	D	K	CM		G			M	QZ	CE	SEAM FLOOR: COAL W/ COMMON MS LAMINATIONS, MINOR QZ/CLEAT INFILL OCCURRING IN BOTH FACE AND BUTT CLEATS, CLEATING POORLY DEVELOPED, SOME LOCAL CLEATING WITH 4MM FACE AND 1MM BUTT CLEATS, INTERVAL IS A BROKEN ZONE W/ MINOR CONCOIDAL FRACTURING
DHGH-14-19	171.97	172.17	0.20	140405		XM		D	K	MN		G			M	QZ	CE	FLOOR: CARBONACEOUS MS W/ MINOR COAL WISPS THROUGHOUT INTERVAL, MINOR QZ/CARB CLEAT INFILL
DHGH-14-19	172.17	172.59	0.42			XM		D	K									
DHGH-14-19	172.59	172.64	0.05			KL												
DHGH-14-19	172.64	172.79	0.15			CO	C4	D	K	MN		I			M	QZ	CE	
DHGH-14-19	172.79	174.88	2.09			XM				CM								
DHGH-14-19	174.88	175.59	0.71			ST		B	G				PD					
DHGH-14-19	175.59	175.92	0.33			KL												
DHGH-14-19	175.92	177.72	1.80			ST		B	G			G	PD	30	M	QZ	VN	
DHGH-14-19	177.72	181.84	4.12			XM				CM		G	PD	30	C	QZ	CE	
DHGH-14-19	181.84	182.03	0.19		85	ST		B	G					30				
DHGH-14-19	182.03	182.11	0.08			KL												
DHGH-14-19	182.11	184.41	2.30		85	ST									M	QZ	VN	
DHGH-14-19	184.41	185.9	1.49			SS	FF	A	G		AM	P			M	QZ	VN	
DHGH-14-19	185.9	189.09	3.19			XM		D	G	CM		G	PD		M	QZ	CE	
DHGH-14-19	189.09	197.19	8.10		90	ST		B	G			P	WD	30	R	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-19	197.19	198.47	1.28			SS	VF	A	G			I			M	QZ	VN	
DHGH-14-19	198.47	198.65	0.18			CO	C4	D	K									
DHGH-14-19	198.65	198.92	0.27			KL				CO								
DHGH-14-19	198.92	199	0.08			CO	C4	D	K									
DHGH-14-19	199	207.15	8.15		65	SS	VF	A	G			G		15	M	QZ	VN	
DHGH-14-19	207.15	212.01	4.86			ST		B	G		AM	G			M	QZ	VN	
DHGH-14-19	212.01	213.08	1.07			MS		B	G		AM	G			M	QZ	VN	
DHGH-14-19	213.08	223.5	10.42		60	SS	FF	B	G			P			C	QZ	VN	CLASTS OF HOST SEDIMENT IN QZ/CARB VNING DUE TO ADJACENT FAULTS
DHGH-14-19	223.5	223.65	0.15			CO	C4	D	K	CM		G		30	M	QZ	CE	
DHGH-14-19	223.65	224.05	0.40			XM		D	K	CM		P			M	QZ	CE	
DHGH-14-19	224.05	224.15	0.10			CO	C3	D	K	MN		G			R	QZ	CE	
DHGH-14-19	224.15	224.23	0.08			CO	SY	D	K	AB		G			R	QZ	CE	
DHGH-14-19	224.23	224.48	0.25			ST		D	G	MN		G			M	QZ	CE	
DHGH-14-19	224.48	224.68	0.20	140406		ST		D	G	MN		G			M	QZ	CE	ROOF: ST W/ MINOR COAL WISPS W/ MINOR QZ/CARB CLEAT INFILL NEAR BU
DHGH-14-19	224.68	224.94	0.26	140407		CO	C3	D	K	MN		G			R	QZ	CE	SEAM ROOF: COAL W/ MINOR MS LAMINATIONS THROUGHOUT INTERVAL, RARE QZ/CARB CLEAT INFILL IN BOTH FACE AND BUTT CLEATS, VERY WELL EVELOPED CLEATING THROUGHOUT INTERVAL, 1CM FACE AND 0.5CM BUTT CLEATS,
DHGH-14-19	224.94	225.2	0.26	140408		CO	C4	D	K	CM		G			R	QZ	CE	SEAM: COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, RARE QZ/CARB CLEAT INFILL IN BOTH FACE AND BUTT CLEATS AS WELL AS RARE PY BLEBS THROUGHOUT INTERVAL, LOCAL LARGE WELL DEVELOPED CLEATS, 1CM FACE AND 0.5 CM BUTT CLEATS
DHGH-14-19	225.2	225.45	0.25	140409		CO	C3	D	K	MN		G			R	QZ	VN	SEAM FLOOR: COAL W/ MINOR MS LAMINATIONS MAINLY CONCENTRATED AT TU AND BU AS WELL AS RARE MS LENSES AT BU, RARE QZ/CARB VNING, VERY SMALL VNS 0.5-1MM THICK, LOCAL WELL DEVELOPED CLEATING, 3MM FACE AND 2MM BUTT CLEATS,
DHGH-14-19	225.45	225.94	0.49	140410		ST		B	G			P			R	QZ	WP	PARTING: ST W/ RARE QZ/CARB WISPS CONCENTRATED AT TU AND BU

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-19	225.94	226.22	0.28	140411		CO	C3	D	K	MN		G			M	QZ	CE	SEAM: COAL W/ MINOR MS BANDS THROUGHOUT INTERVAL W/ MINOR QZ/CARB CLEAT INFILL ALONG BOTH FACE AND BUTT CLEATS, WELL DEVELOPED CLEATING, 3MM FACE AND 4MM BUTT CLEATS
DHGH-14-19	226.22	226.5	0.28	140412		CO	C2	D	K	RA		G			R	QZ	VN	SEAM: COAL W/ RARE MS LENSES NEAR BOTTOM OF UNIT W/ RARE QZ/CARB VNING OCCURING IN THE MS LENSES, WELL DEVELOPED CLEATING THROUGHOUT INTERVAL, 3MM FACE AND 3MM BUTT CLEATS
DHGH-14-19	226.5	226.88	0.38	140413		ST		B	G						M	QZ	VN	PARTING: SLIGHTLY WEATHERED/SOFTENED ST W/ MINOR QZ/CARB VNING OCCURING THROUGHOUT INTERVAL
DHGH-14-19	226.88	227.09	0.21	140414		CO	C3	D	K	MN					M	QZ	VN	SEAM: COAL W/ MINOR QZ/CARB CLEAT INFILL OCCURING IN BOTH FACE AND BUTT CLEATS, CLEATING IS VERY WELL DEVELOPED, 2MM FACE AND 2MM BUTT CLEATS, ABUNDANT CONCOIDAL FRACTURING OCCURING IN INTERVAL
DHGH-14-19	227.09	227.2	0.11			KL				CO								LOST CORE ATTRIBUTED TO COAL
DHGH-14-19	227.2	228.02	0.82			ST		D	G	MN		P			M	QZ	VN	
DHGH-14-19	228.02	234.34	6.32		90	SS	FM	A	G	MN								
DHGH-14-19	234.34	240.65	6.31		75	SS	VF	A	G			P	BT	15	R	QZ	WP	BIVALVE INTERVAL FROM 241-241.30
DHGH-14-19	240.65	241.21	0.56			ST		B	G	RA		P	PD	15	M	QZ	VN	
DHGH-14-19	241.21	241.41	0.20	140415		ST		B	G	RA		P	PD	15	M	QZ	VN	ROOF: ST W/ MINOR QZ/CARB VNING NEAR BU ALONG WITH RARE COAL WISPS
DHGH-14-19	241.41	241.73	0.32	140416		CO	C3	D	K	MN		G	PD		M	QZ	CE	SEAM: COAL W/ MINOR CO BANDS THROUGHOUT INTERVAL, ONE MS BAND 2CM, AVERAGE 1CM WIDE, MINOR QZ/CARB BUTT CLEAT INFILL, LOCAL WELL DEVELOPED CLEATING, 1CM FACE AND 0.5 CM BUTT CLEATS
DHGH-14-19	241.73	242.05	0.32	140417		CO	C3	D	K	CM		G	PD		M	QZ	CE	SEAM: COAL W/ COMMON MS LAMINATION MOSTLY IN BOTTOM HALF OF INTERVAL, MINOR QZ/CARB CLEAT INFILL IN FACE AND BUTT CLEATS, LOCAL WELL DEVELOPED CLEATING, 4MM FACE AND 2MM BUTT CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-19	282.75	286.02	3.27			ST		B	G		AM				R	QZ	VN	
DHGH-14-19	286.02	286.36	0.34	GT-14-25		ST		B	G				PD	5				
DHGH-14-19	286.36	286.68	0.32			ST		B	G	MN		P	PD		R	QZ	CE	
DHGH-14-19	286.68	286.87	0.19			ZM		D	K	CM	AM	P						NOT SAMPLED DUE TO POOR GEOPHYSICS AND SMALL THICKNESS
DHGH-14-19	286.87	287.14	0.27	140426		ZM		B	G		AM				M	PY	BL	ROOF: COALY MS W/ MINOR PY BL AT TU, 2CM WIDE 4CM LONG, COAL BANDS ARE CONCENTRATED TOWARD BOTTOM OF UNIT
DHGH-14-19	287.14	287.44	0.30	140427		CO	C3	D	K	CM		G	PD		R	QZ	CE	SEAM: COAL WITH COMMON MS LAMINATIONS THROUGHOUT INTERVAL CONCENTRATED TOWARD MIDDLE OD UNIT, RARE QZ/CARB CLEAT INFILL ALONG FACE CLEATS, ONE 2MM QZ/CARB VN IN MIDDLE OF UNIT, LOCAL WELL DEVELOPED CLEATING, 0.5CM FACE 0.6CM BUTT CLEATS
DHGH-14-19	287.44	287.74	0.30	140428		CO	C4	D	K	CM		P			M	QZ	CE	SEAM: COAL W/ COMMON MS BANDS CONCENTRATED TOWARDS TOP OF UNIT, MINOR QZ/CARB CLEAT INFILL, PREDOMINANTLY ALONG BUTT CLEATS, LOCAL VERY WELL DEVELOPED CLEATING, 1CM FACE 0.5CM BUTT CLEATS, HIGH VITRINITE CONTENT
DHGH-14-19	287.74	287.81	0.07	140429		MS		B	G		AM	P						PARTING: MASSIVE MS
DHGH-14-19	287.81	288.16	0.35	140430		CO	C3	D	K	MN	AM				R	QZ	CE	SEAM: MASSIVE COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, RARE QZ/CARB CLEAT INFILL ONLY ALONG BUTT CLEATS AND IS 0.5MM THICK WELL DEVELOPED CLEATING, 5MM FACE AND 4MM BUTT CLEATS,
DHGH-14-19	288.16	288.26	0.10			KL				CO								CORE LOSS ATTRIBUTED TO LOST COAL
DHGH-14-19	288.26	288.6	0.34	140431		CO	C4	D	K	MN		G	PD	20	M	QZ	CE	SEAM: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, MINOR QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS BU, CLEATING IS POORLY DEVELOPED AT TU BUT BECOMES WELL DEVELOPED AT BU, BEDDING ANGLE CHANGES FROM 20 TO ROUGHLY 89 DEGREES AT BU, FOLD IS EVIDENT OVER NEXT THREE COAL INTERVALS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-20	7.25	7.95	0.70			ST		B	G				PD	15				
DHGH-14-20	7.95	8.2	0.25			KL												
DHGH-14-20	8.2	8.73	0.53			ST		B	G			I	PD	15	R	PY	BL	
DHGH-14-20	8.73	8.93	0.20	145264		XM			K	RA		G						ROOF: CARBONACEOUS MS W/SILTY BAND NEAR BOT CT; RARE ANTH BANDS; CRUSHED BOT CT IS DIFFICULT TO DISCERN
DHGH-14-20	8.93	9.1	0.17	145265		CO	C3	D	K	MN								SEAM: MNR INTERMIXED MS; LOCALLY WELL DEVELOPPED CLEATS UP TO 4MM FACE X 3MM BUTTS BUT FOR THE MOST PART IS DISAGGREGATED; COAL IS MOIST AND V SOFT/CRUMBLY
DHGH-14-20	9.1	9.2	0.10			KL												
DHGH-14-20	9.2	9.61	0.41	145266		CO	C3	D	K	MN		I						SEAM: MNR INTERMIXED MS, INCREASING TOWARDS SHARP IRREGULAR BOT CT; LOCALLY WELL DEVELOPPED CLEATING UP TO 4MM FACE X 3MM BUTT BUT DOMINANTLY CRUSHED/DISAGGREGATED; COAL IS MOIST AND V SOFT/CRUMBLY
DHGH-14-20	9.61	9.78	0.17	145267		ST		B	G				PD	30	R	QZ	WP	FLOOR: ST W/RARE QTZ- WISPS
DHGH-14-20	9.78	9.94	0.16			KL												
DHGH-14-20	9.94	10.42	0.48			ST		B	G			G	PD	35				
DHGH-14-20	10.42	13.1	2.68		80	SS	FM	A	G				WD	45				
DHGH-14-20	13.1	13.72	0.62			KL												
DHGH-14-20	13.72	16.47	2.75		70	SS	FM	A	G			G	WD	35	R	QZ	VN	
DHGH-14-20	16.47	16.96	0.49			KL												
DHGH-14-20	16.96	18.74	1.78		80	ST		B	G			G	WD	40	R	QZ	VN	
DHGH-14-20	18.74	18.96	0.22			MS		D	G				PD	20	M	QZ	VN	
DHGH-14-20	18.96	19.09	0.13			KL												
DHGH-14-20	19.09	19.25	0.16			MS		D	G				PD	20	M	QZ	VN	
DHGH-14-20	19.25	19.5	0.25			KL												
DHGH-14-20	19.5	21.33	1.83			MS		D	G				PD	20	R	QZ	VN	
DHGH-14-20	21.33	21.59	0.26			KL												
DHGH-14-20	21.59	23.11	1.52			MS		D	G				PD	20	R	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-21	14.81	15.37	0.56	145274		CO	C2	D	K	MN					R	QZ	CE	Seam. Minor MS bands up to 4 mm. Locally well developed cleating up to 7 x 3 mm. Mostly fine grained and disaggregated. Coal is moist and soft.
DHGH-14-21	15.37	15.93	0.56	145275		CO	C2	D	K	RA					R	QZ	CE	Seam. Rare MS bands up 10 mm near bottom of unit. Cleating well developed up to 5 x 4 mm. Top half disaggregated. Rare qz in butt cleats.
DHGH-14-21	15.93	16.13	0.20	145276		CO	C4	D	K	MN		G			M	QZ	VN	Seam Floor. Minor MS bands. 2 cm qz/carb vein at top of interval. Well developed cleating up to 10 x 4 mm.
DHGH-14-21	16.13	16.33	0.20	145277		XM		D	K	RA	AM				R	QZ	WP	Floor. Rare coal bands near top.
DHGH-14-21	16.33	16.4	0.07			XM		D	K	RA	AM	G			R	QZ	WP	
DHGH-14-21	16.4	18.24	1.84		80	ST		B	G			G	WD	5				
DHGH-14-21	18.24	20.6	2.36		70	SS	VM	A	G			G	PD					
DHGH-14-21	20.6	21.62	1.02		70	ST		B	G				BT	5				
DHGH-14-21	21.62	21.7	0.08			KL												
DHGH-14-21	21.7	28.62	6.92		70	ST		B	G				BT	5				
DHGH-14-21	28.62	28.67	0.05			KL												
DHGH-14-21	28.67	28.78	0.11		70	ST		B	G			G	WD	5				
DHGH-14-21	28.78	31.35	2.57			ST		B	G		AM				R	QZ	VN	
DHGH-14-21	31.35	31.56	0.21			KL												
DHGH-14-21	31.56	31.81	0.25			ST		B	G		AM	G			R	QZ	VN	
DHGH-14-21	31.81	32.01	0.20	145278		ST		B	G	MN	AM	G			R	QZ	VN	Roof. Minor coal bands up to 1 cm near base.
DHGH-14-21	32.01	32.4	0.39	145279		CO	C4		K	MN					E	QZ	CE	Seam. Minor ST bands up to 4 mm near top. Moderately developed cleating with cleats up to 1 x 2 mm. Mostly fine grained with conchoidal fracture. Qz/ carb present in face and butt cleats as well as blebs in fg sections.
DHGH-14-21	32.4	32.99	0.59			KL				CO								
DHGH-14-21	32.99	33.19	0.20	145280		CO	C2		K	RA					R	QZ	CE	Seam. Rare MS bands up to 1 mm. Poorly developed cleating up to 1 x 1 mm.
DHGH-14-21	33.19	33.26	0.07	145281		XM		D	G	MN		P			M	QZ	WP	Floor. Rare coal bands in XM section. Qz/carb veins dominated bottom half.
DHGH-14-21	33.26	33.39	0.13	145281	60	ST		B	G				WD	20	N	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-21	33.39	33.6	0.21		60	ST		B	G			P	WD	20	R	QZ	VN	
DHGH-14-21	33.6	33.69	0.09			CO	SY	D	K	MN		G			M	QZ	CE	Not sampled.
DHGH-14-21	33.69	34.78	1.09			XM		D	G				PD	15	M	QZ	VN	
DHGH-14-21	34.78	35.93	1.15			KL												
DHGH-14-21	35.93	36.05	0.12			XM		D	G		AM	G						
DHGH-14-21	36.05	38.33	2.28			MS		B	G				PD	20	M	QZ	WP	
DHGH-14-21	38.33	38.53	0.20	145282		MS		B	G	MN		G	PD	20	E	QZ	VN	Roof. Minor coal bands up to 1 cm near bottom contact. Semi massive py band ~ 4 cm thick just above coal. Minor qz/carb veins throughout.
DHGH-14-21	38.53	38.74	0.21	145283		CO	C4		K	CM					M	PY	BN	Seam Roof. Common MS bands up to 2 cm. Dominantly fine grained with concoidal fracture. Py blebs up to 5 x 1 cm near bottom. Irregular patches of qz/carb.
DHGH-14-21	38.74	39.74	1.00	145284		CO	C3		K	MN					E	QZ	CE	Seam. Minor MS bands up to 1 cm. Locally well developed cleating up to 2 x 2 mm with qz/carb infill along face and butt cleats. Dominantly fine grained with concoidal fracture. Py blebs up to .5 x 3 cm. Qz/carb also as veins up to 1 c,
DHGH-14-21	39.74	40.74	1.00	145285		CO	C3		K	MN					E	QZ	CE	Seam. Minor MS bands up to 1 cm. Locally well developed cleating up to 2 x 2 mm with qz/carb infill along butt and face cleats. Top is fine grained with concoidal fracture. Py blebs up to 1 x 4 cm and qz/carb veins up to 1 cm.
DHGH-14-21	40.74	41.67	0.93	145286		CO	C3		K	MN					E	QZ	CE	Seam. Minor MS bands up to 1 cm. Well developed cleating up to 4 x 3 mm with qz/carb infill mostly along face cleats. Py blebs up to 1 x 1 cm and qz/carb veins up to 5 mm.
DHGH-14-21	41.67	41.87	0.20	145287		CO	C3		K	MN					E	QZ	CE	Seam Floor. Minor MS bands up to 2 cm. Well developed cleating up to 2 x 3 mm with qz/carb infill mostly along face cleats. Py blebs up to 2 x 4 mm.
DHGH-14-21	41.87	42.07	0.20	145288		CO	SY		K						E	QZ	CE	Floor. 2 cm XM at top and 7 cm XM at bottom. Well developed cleats up to 2 x 2 mm with qz/carb infill along face and butt cleats. Minor pyrite blebs.
DHGH-14-21	42.07	43.64	1.57			XM		D	G	RA	AM				E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments	
DHGH-14-21	81.87	87.21	5.34			XM		D	G				PD	30	M	QZ	WP		
DHGH-14-21	87.21	87.28	0.07			CO	SY	D	K										
DHGH-14-21	87.28	87.48	0.20	145295		CO	SY	D	K	CM		G			C	QZ	CE	Roof. Common MS laminations up to 2 mm. Poorly developed cleats up to 1 x 2 mm with qz/carb infill along face and butt cleats. 1 cm py band at lower contact. Gamma appears to be more accurate than the density log for what is in the box.	
DHGH-14-21	87.48	87.68	0.20	145296		CO	C4	D	K						M	QZ	CE	Seam Roof. A single MS fragment 2 x 2 cm. Poorly developed cleats up to 1 x 1 mm with irregular qz/carb infill. Minor py blebs up to 2 x 3 mm.	
DHGH-14-21	87.68	88.36	0.68	145297		CO	C4	D	K	CM					C	QZ	VN	Seam. Common MS laminations up to 5 mm. Poorly developed cleats up to 1 x 1 mm. Qz/carb veins up to 5 mm and py blebs up to 2 x 3 mm.	
DHGH-14-21	88.36	89.32	0.96	145298		CO	C3	D	K	MN					E	QZ	VN	Seam. Minor MS laminations up to 3 mm concentrated near base. Moderately developed cleats up to 2 x 4 mm. Local concoidal fracture. Qz/carb veins up to 4 mm concentrated near base outlining an asymmetrical fold.	
DHGH-14-21	89.32	89.52	0.20	145299		CO	C4	D	K	MN		G			E	QZ	VN	Seam Floor. Minor MS bands up to 1 cm. Moderately developed cleats up to 3 x 2 mm. Qz/carb veins up to 3 cm and py veins up to 1 cm.	
DHGH-14-21	89.52	89.72	0.20	145300		CO	SY	D	K	AB					C	QZ	VN	Floor. Abundant MS throughout. Qz veins up to 5 cm and rare py blebs up to 1 x 1 cm.	
DHGH-14-21	89.72	90.16	0.44			CO	SY	D	K			G							
DHGH-14-21	90.16	91.27	1.11			ZM		D	G	MN					E	QZ	WP	STRONGLY SHEARED AND FOLDED ZONE.	
DHGH-14-21	91.27	91.73	0.46	GT-14-24		ZM		D	G	MN		P			E	QZ	WP	STRONGLY SHEARED AND FOLDED ZONE.	
DHGH-14-21	91.73	93.22	1.49			XM		B	G		EQ	G	PD	30	M	QZ	WP		
DHGH-14-21	93.22	96.01	2.79			MS		B	G			G	WD	22	R	QZ	VN		
DHGH-14-21	96.01	99.86	3.85			SS	VC	A	G	RA	AM	I			E	QZ	VN		
DHGH-14-21	99.86	101.05	1.19		70	ST		B	G				WD	32	E	QZ	VN		
DHGH-14-21	101.05	101.25	0.20	145301	70	ST		B	G			I	WD	32	M	QZ	VN	Roof. Rare coal bands near base up to 3 mm and minor qz/carb veining near base.	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-21	101.25	101.62	0.37	145302		CO	C3	D	K	MN		G			E	QZ	VN	Seam. Minor MS bands up to 3 mm. Well developed cleating up to 8 x 5 mm. Qz/carb as butt cleat infill and veins. Concoidal fracture at lower contact.
DHGH-14-21	101.62	101.8	0.18	145303		CO	SY	B	K	AB					E	QZ	VN	Floor. Abundant MS with anthracite bands which have well developed cleating up to 10 x 8 mm. Qz/carb as cleat infill and veins up to 5 mm. Isoclinal fold.
DHGH-14-21	101.8	102.63	0.83			ZM		D	G	MN		G			E	QZ	WP	
DHGH-14-21	102.63	108.87	6.24			ST		B	G				WD	15	R	QZ	VN	
DHGH-14-21	108.87	108.93	0.06			KL												
DHGH-14-21	108.93	109.29	0.36			ST							PD	18	R	QZ	WP	EOH
DHGH-14-22	0	2.24	2.24			KL												
DHGH-14-22	2.24	2.47	0.23			GV		M	B									
DHGH-14-22	2.47	2.61	0.14			KL												
DHGH-14-22	2.61	7.5	4.89			SS	FC	A	G				PD	35	R	QZ	VN	
DHGH-14-22	7.5	7.85	0.35			KL												
DHGH-14-22	7.85	10.36	2.51			SS	FC	A	G	TR			PD	35	R	QZ	WP	
DHGH-14-22	10.36	10.45	0.09			KL												
DHGH-14-22	10.45	12.73	2.28			SS	FC	A	G			G	PD	35	R	QZ	VN	
DHGH-14-22	12.73	14.23	1.50		60	SS	VM	A	G			G	WD	35				
DHGH-14-22	14.23	14.83	0.60			ST		B	G	RA		G	PD	30	R	QZ	WP	
DHGH-14-22	14.83	15.07	0.24			XM		D	G	RA		I	PD		R	QZ	WP	
DHGH-14-22	15.07	15.14	0.07			KL												In coal
DHGH-14-22	15.14	15.43	0.29	145304		CO	C2	D	K			G			R	QZ	CE	SEAM: COAL HAS DISAGGREGATED CLEATS UP TO 2MM X 2MM, BUT IS MOSTLY DISAGGREGATED AND MOIST; LOWER CT GRADATIONAL OVER SHORT INTERVAL
DHGH-14-22	15.43	15.63	0.20	145305		MS		B	G	MN	AM				M	QZ	WP	FLOOR: MNR COAL WISPS CONCENTRATED AT TOP OF INTERVAL
DHGH-14-22	15.63	15.88	0.25			MS		B	G	TR	AM	G			R	QZ	WP	
DHGH-14-22	15.88	20.28	4.40		70	SS	VF	A	G			G	WD	25	R	QZ	VN	
DHGH-14-22	20.28	29.18	8.90		80	ST		B	G			G	BT	20	R	PY	BL	
DHGH-14-22	29.18	33.83	4.65			ST		B	G			G	PD	24				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-22	46.44	48.54	2.10			MS		D	G	TR	AM				R	QZ	WP	
DHGH-14-22	48.54	48.8	0.26			KL												
DHGH-14-22	48.8	51.24	2.44			SS	MC	A	G	TR	AM				R	QZ	VN	
DHGH-14-22	51.24	51.55	0.31			KL												
DHGH-14-22	51.55	54.63	3.08			SS	MC	A	G	TR	AM	P			E	QZ	VN	
DHGH-14-22	54.63	55.28	0.65			ST		B	G		AM	G			R	QZ	VN	
DHGH-14-22	55.28	56.17	0.89			SS	FM	A	G		AM				R	QZ	VN	
DHGH-14-22	56.17	56.26	0.09			KL												
DHGH-14-22	56.26	58.14	1.88			SS	FM	A	G		AM	G			R	QZ	WP	
DHGH-14-22	58.14	60.39	2.25		85	ST		B	G				PD	10	R	QZ	VN	EOH
DHGH-14-23	0	0.21	0.21			GV	CL	M	B									
DHGH-14-23	0.21	1.98	1.77			KL												
DHGH-14-23	1.98	2.47	0.49	GT-14-27		SS	FM	A	G		EQ	I						
DHGH-14-23	2.47	3.48	1.01			SS	FM	A	G		EQ	I						
DHGH-14-23	3.48	5.21	1.73			MS		D	G		AM				E	QZ	VN	
DHGH-14-23	5.21	6.41	1.20			KL												
DHGH-14-23	6.41	9.05	2.64		90	MS		D	G				PD	30	E	QZ	VN	
DHGH-14-23	9.05	9.19	0.14			XM		D	G									
DHGH-14-23	9.19	9.34	0.15			KL												MISSING COAL
DHGH-14-23	9.34	10.16	0.82			KL				CO								MISSING COAL
DHGH-14-23	10.16	10.46	0.30	145311		CO	C3	D	K	MN					R	PY	BL	SEAM: CORE LOSS ABOVE AND BELOW; SLIGHTLY WEATHERED; MOIST AND CRUMBLLED; FINE GRAINED, DISAGGREGATED W/INTERMIXED MS; TRACE PY BLEBS
DHGH-14-23	10.46	10.61	0.15			KL												MISSING COAL
DHGH-14-23	10.61	11.9	1.29			SS	FF	A	G				PD		R	QZ	VN	
DHGH-14-23	11.9	12.06	0.16			KL												
DHGH-14-23	12.06	14.12	2.06		90	SS	FF	A	G			P	WD	27	M	QZ	VN	
DHGH-14-23	14.12	16.86	2.74		75	ST		B	G				WD	25	M	QZ	VN	
DHGH-14-23	16.86	17.07	0.21			KL												
DHGH-14-23	17.07	17.25	0.18		75	ST		B	G			G	WD	25	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-23	17.25	17.72	0.47			MS		D	G				PD	20	R	QZ	VN	
DHGH-14-23	17.72	17.73	0.01			KL												
DHGH-14-23	17.73	18.4	0.67			MS		D	G			G	PD	20	R	PY	BL	
DHGH-14-23	18.4	18.66	0.26			MS		D	G			G	PD	20	R	PY	BL	
DHGH-14-23	18.66	20.25	1.59			MS		D	G			G	PD	20	R	PY	BL	
DHGH-14-23	20.25	24.9	4.65		70	MS		D	G	TR		G	WD	20				
DHGH-14-23	24.9	25.01	0.11			KL												
DHGH-14-23	25.01	27.49	2.48			MS		D	G				PD	30	R	QZ	VN	
DHGH-14-23	27.49	27.59	0.10			KL												
DHGH-14-23	27.59	30.4	2.81			MS		D	G				PD	30	R	QZ	VN	
DHGH-14-23	30.4	31.05	0.65	GT-14-29		MS		D	G				PD	30	R	QZ	VN	
DHGH-14-23	31.05	31.21	0.16			MS		D	G				PD	30	R	QZ	VN	
DHGH-14-23	31.21	31.41	0.20	145312		MS		D	G	TR		G	PD	30	R	QZ	VN	ROOF: PLAIN MS W/TRACE CO LENSES ON BOT CT; LOWER CT GRADATIONAL OVER SHORT INVTERVAL (5CM)
DHGH-14-23	31.41	31.66	0.25	145313		CO	C5	D	K	MN		G			E	QZ	CE	SEAM ROOF A: MNR MS BANDS UP TO 4MM; MNR QTZ-CA CLEAT INFILL AND MNR PY BLEBS; VARIABLY DEVELOPPED CLEATING UP TO 2MM X 2MM; LOWER CT GRADATIONAL OVER SHORT INTERVAL (3CM)
DHGH-14-23	31.66	31.86	0.20	145314		ZM		D	G	MN		G			E	QZ	VN	PARTING: COALY MUDSTONE; COMMON QTZ-CA VEINING; MNR DEFORMED COAL BANDS; BOT CT GRADATIONAL OVER SHORT INTERVAL
DHGH-14-23	31.86	32.81	0.95	145315		CO	C3	D	K	MN		I	PD	20	E	QZ	CE	SEAM: MNR MS LAMINATIONS UP TO 2MM; WELL DEVELOPPED CLEATING UP TO 4MM FACE X 3MM BUTT; MNR QTZ-CA DOMINANTLY AS BUTT CLEAT INFILL; FINE GRAINED AT UPPER AND LOWER CTS
DHGH-14-23	32.81	32.87	0.06	145316		XM		D	G			I			C	QZ	VN	PARTING: CARBONACEOUS MS WITH SHARP IRREGULAR UPPER/LOWER CT'S AND COMMON QTZ-CA VEINING
DHGH-14-23	32.87	33.02	0.15	145317		CO	C3	D	K	MN		P			M	QZ	VN	SEAM: MNR MS LAMINATIONS UP TO 2MM; MNR QTZ-CA VEINS UP TO 3MM; POORLY DEVELOPPED CLEATING UP TO 1MM X 1MM; PLANAR SHARP LOWER CT\
DHGH-14-23	33.02	33.25	0.23	145318		ST		B	G						E	QZ	VN	PARTING: ST WITH ACCESORY/MNR QTZ-CA VEINS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-23	33.25	33.38	0.13			KL												
DHGH-14-23	33.38	33.58	0.20	145319		CO	C2	D	K	RA		G			M	QZ	VN	SEAM FLOOR: RARE MS LAMINATIONS AND MNR QTZ-CA VEINS; WELL DEVELOPPED CLEATING UP TO 4MM FACE X 2MM BUTTS; LOWER CT GRADATIONAL OVER SHORT INTERVAL
DHGH-14-23	33.58	33.78	0.20	145320		XM		D	G	MN		G	PD		M	QZ	WP	FLOOR: MNR COAL BANDS CONCENTRATED AT TOP OF INTERVAL UP TO 3MM; MNR QTZ WISPS
DHGH-14-23	33.78	35.13	1.35			XM		D	G	MN		G	PD		M	QZ	WP	
DHGH-14-23	35.13	36.93	1.80			ST		B	G			P	PD	25	M	QZ	VN	
DHGH-14-23	36.93	37.01	0.08			KL												
DHGH-14-23	37.01	38.11	1.10			MS		D	G		AM							
DHGH-14-23	38.11	38.31	0.20	145321		MS		D	G	TR	AM	G			R	QZ	VN	ROOF: MASSIVE MS; BOTTOM 5CM ON GRADATIONAL LOWER CT HAS ACCESORY QTZ-CA AND RARE CO BANDS
DHGH-14-23	38.31	38.51	0.20	145322		CO	C3	D	K	MN			PD	20	E	QZ	CE	SEAM ROOF: MNR MS BANDS UP TO 3MM; MNR QTZ-CA CLEAT BUTT AND FACE INFILL AND AS VEINS NEAR UPPER CT; CLEATING WELL DEVELOPPED UP TO 3MM FACE X 2MM BUTTS;
DHGH-14-23	38.51	38.84	0.33	145323		CO	C3	D	K	MN					R	QZ	CE	SEAM: MNR MS LAMINATIONS; CLEATING IS VARIABLY DEVELOPPED UP TO 2MM X 2MM; BUT MAINLY DISAGGREGATED OVER INTERVAL; COAL IS CRUSHED AND MOIST IN PART; TRACE QTZ-CA
DHGH-14-23	38.84	39.05	0.21			KL				CO								MISSING COAL
DHGH-14-23	39.05	39.4	0.35	145324		CO	C3	D	K	MN		P	PD	15	M	QZ	CE	SEAM FLOOR: MNR MS BANDS UP TO 2MM WIDE; MNR QTZ-CA CLEAT INFILL; DOMINANTLY WELL DEVELOPPED CLEATING UP TO 3MM FACE X 2MM BUTTS; ALSO FINE GRAINED IN PART W/CONCOIDAL FRACTURES; PLANAR SHARP BOT CT
DHGH-14-23	39.4	39.6	0.20	145325		XM		D	G	RA		G	PD		E	QZ	VN	FLOOR A: CARBONACEOUS MS; 2CM QTZ-CA VEIN ON UPPER CT; LOWER CT IS 1CM QTZ-PY VEIN W/2CM WIDE COAL BAND AT LOWER CT
DHGH-14-23	39.6	40.79	1.19			MS		D	G	TR	AM	G			R	QZ	WP	
DHGH-14-23	40.79	41.23	0.44	GT-14-30		MS		D	G	TR	AM	G			R	QZ	WP	
DHGH-14-23	41.23	42.18	0.95			MS		D	G	TR	AM	G			R	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-23	42.18	45.57	3.39			SS	FM	A	G	RA	AM				E	QZ	VN	
DHGH-14-23	45.57	45.81	0.24	GT-14-31		SS	FM	A	G	RA	AM				E	QZ	VN	
DHGH-14-23	45.81	47.99	2.18			SS	FM	A	G	RA	AM				E	QZ	VN	
DHGH-14-23	47.99	48.65	0.66			KL												
DHGH-14-23	48.65	49.33	0.68			SS	FM	A	G	RA	AM	P			E	QZ	VN	
DHGH-14-23	49.33	50.23	0.90			ST		B	G			G	PD		R	QZ	VN	
DHGH-14-23	50.23	53.9	3.67			SS	FF	A	G	MN		G	PD	10	R	QZ	VN	
DHGH-14-23	53.9	57.21	3.31			ST		B	G	RA	AM				R	QZ	VN	
DHGH-14-23	57.21	57.34	0.13			KL												
DHGH-14-23	57.34	60.53	3.19			MS		D	G	MN	AM	G			R	QZ	VN	bivalve interval from base of this unit to top of next
DHGH-14-23	60.53	63.55	3.02			SS	FF	A	G	MN		I	WD	45	M	QZ	VN	
DHGH-14-23	63.55	64.03	0.48			CO	SY	D	K	MS					C	QZ	VN	STONEY COAL; DEFORMED W/COMMON INTERMIXED MS AND COMMON QTZ-CA VEINS; LOST CORE AT BOT CT;
DHGH-14-23	64.03	64.08	0.05			KL												
DHGH-14-23	64.08	64.86	0.78			ST		B	G			P	PD	20	R	QZ	VN	
DHGH-14-23	64.86	74.11	9.25			SS	FM	A	G	MN		G	WD	20	M	QZ	VN	
DHGH-14-23	74.11	75.77	1.66			ST		B	G	RA		G	PD	20	R	QZ	VN	
DHGH-14-23	75.77	76.84	1.07			MS		D	G			G	PD	20	E	QZ	WP	
DHGH-14-23	76.84	77.09	0.25			CO	C4	D	K	MN		G	PD	25	E	QZ	CE	COAL: GRADATIONAL UPPER AND LOWER CT'S; MN MS BANDS; THIN PY BANDS AND ACCESORY QTZ-CA CLEAT INFILL; PY BANDS ALONG CT'S OUTSIDE OF INTERVAL (IN OVERLYING AND UNDERLYING MS)
DHGH-14-23	77.09	77.24	0.15			MS		D	G			G			M	QZ	VN	
DHGH-14-23	77.24	80.83	3.59			SS	VF	A	G	FO		G	PD	30	M	BI	BN	BIVALVES AT BOT OF INTERVAL
DHGH-14-23	80.83	81.06	0.23			ST		B	G	FO			PD	30	M	BI	BN	BIVALVES AT TOP OF INTERVAL
DHGH-14-23	81.06	85.09	4.03	GT-14-35		ST		B	G				PD	30				
DHGH-14-23	85.09	86.73	1.64			ST		B	G			G	PD	30	M	PY	BL	
DHGH-14-23	86.73	87.78	1.05		60	SS	VM	A	G				WD	28	R	QZ	VN	
DHGH-14-23	87.78	87.82	0.04			KL												
DHGH-14-23	87.82	91.73	3.91		70	SS	VM	A	G			G	WD	40	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-24	5.19	6.72	1.53			ST		B	G	FO	AM	G			M	BI		BIVALVE INTERVAL FROM 6.68-7.78
DHGH-14-24	6.72	10.92	4.20			SS	FF	A	G	FO					M	BI		BIVAVE INTERVAL FROM 6.68-7.78
DHGH-14-24	10.92	11	0.08			CO	C4	D	K						A	QZ	CE	COAL NOT SAMPLED DUE TO POOR GEOPHYS AND SMALL THICKNESS
DHGH-14-24	11	11.22	0.22			KL				CO								LOST CORE ATTRIBUTED TO LOST COAL
DHGH-14-24	11.22	11.44	0.22			CO	C5	D	K	CM	AM							COAL NOT SAMPLED DUE TO SMALL THICKNESS
DHGH-14-24	11.44	11.49	0.05			KL				CO								LOST CORE ATTRIBUTED TO LOST COAL
DHGH-14-24	11.49	13.37	1.88			MS		B	G	MN	AM				M	QZ	VN	
DHGH-14-24	13.37	14.72	1.35			SS	FF	A	G				PD	20				
DHGH-14-24	14.72	15.09	0.37			KL												
DHGH-14-24	15.09	18.31	3.22			SS	FF	A	G			G	PD	20	R	QZ	VN	
DHGH-14-24	18.31	19.26	0.95			MS				RA					R	QZ	WP	
DHGH-14-24	19.26	19.46	0.20	140436		MS		B	G	RA		G			R	QZ	WP	ROOF: MUDSTONE W/ RARE COAL WISPS AND RARE QZ/CARB WISPS
DHGH-14-24	19.46	19.78	0.32	140437		CO	SY	D	G						A	QZ	CE	SEAM A: STONY COAL W/ ABUNDANT QZ/CARB CLEAT INFILL AND RARE PY BLEBS AT TU,
DHGH-14-24	19.78	19.96	0.18	140438		XM		D	G	MN		G			C	QZ	CE	PARTING: CARBONACEOUS MS W/ MINOR COAL BANDS AT BU, COMMON QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS BU
DHGH-14-24	19.96	20.22	0.26	140439		CO	C4	D	K	CM		G			C	QZ	CE	SEAM :COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, INCREASING MS CONTENT TOWARDS BOTTOM CONTACT, COMMON QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS TOP HALF OF INTERVAL, IN BOTH BUTT AND FACE CLEATS, LOCAL MODERATELY WELL DEVELOPED CLEATING, 2MM FACE AND 2MM BUTT CLEATS
DHGH-14-24	20.22	20.34	0.12	140440		XM		D	G	MN		I			M	QZ	VN	PARTING A: CARBONACEOUS MS W/ MINOR COAL BANDS NEAR BU AND ALSO INTERMIXED THROUGHOUT INTERVAL, MINOR QZ VNING ONE VN NEAR MIDDLE OF UNIT 2MM THICK, MINOR DISSEMINATED PY AT TOP OF UNIT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-24	20.34	20.71	0.37	140441		CO	C3	D	K	MN								SEAM: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, CLEATING IS WELL DEVELOPED, 2MM FACE CLEATS AND 1MM BUTT CLEATS, COMMON CONCOIDAL FRACTURING OCCURRING THROUGHOUT INTERVAL
DHGH-14-24	20.71	20.84	0.13			KL				CO								LOST CORE ATTRIBUTED TO COAL
DHGH-14-24	20.84	20.96	0.12			KL												LOST CORE ATTRIBUTED TO COAL
DHGH-14-24	20.96	21.31	0.35			ST		B	G				PD	20	M	QZ	VN	
DHGH-14-24	21.31	21.43	0.12			KL												
DHGH-14-24	21.43	24.2	2.77		65	SS	FF	A	G			G	PD	20				
DHGH-14-24	24.2	25.57	1.37			XT		B	G	MN		G	PD	20	M	QZ	WP	
DHGH-14-24	25.57	25.7	0.13			CO	C4	D	K	MN			PD		A	QZ	CE	COAL NOT SAMPLED DUE TO LOW QUALITY DETERMINED BY GEOPHYS. AND SMALL THICKNESS
DHGH-14-24	25.7	25.85	0.15			KL				CO								LOST CORE ATTRIBUTED TO COAL
DHGH-14-24	25.85	26	0.15			CO	C4	D	K	MN		P	PD		A	QZ	CE	COAL NOT SAMPLED DUE TO LOW QUALITY DETERMINED BY GEOPHYS.
DHGH-14-24	26	28.74	2.74			SS	FF	A	G	TU		G	PD	20	R	PY	BL	
DHGH-14-24	28.74	30.53	1.79			ST		B	G	FO					M	BI		BIVALVE INTERVAL FROM 29.00-29.49
DHGH-14-24	30.53	30.79	0.26			KL												
DHGH-14-24	30.79	33.95	3.16			SS	FF	A	G				PD	20	M	QZ	WP	
DHGH-14-24	33.95	34.06	0.11			KL												
DHGH-14-24	34.06	35.31	1.25			ST		B	G		AM	G						
DHGH-14-24	35.31	38.72	3.41			SS	FF	A	G		AM				A	QZ	VN	
DHGH-14-24	38.72	39.98	1.26			MS		B	G		AM				R	QZ	VN	
DHGH-14-24	39.98	40.09	0.11			KL												
DHGH-14-24	40.09	40.91	0.82			MS		B	G	MN	AM	G			R	QZ	CE	
DHGH-14-24	40.91	41.25	0.34	GT-14-32		MS		B	G		AM							GEOTECH SAMPLE: MASSIVE MS
DHGH-14-24	41.25	41.95	0.70	140442		MS		B	G	MN	AM	P			R	QZ	CE	ROOF A: MS W/ MINOR COAL LENSES NEAR BU, RARE QZ/CARB CLEAT INFILL IN COAL WISPS, BOTTOM 5CM OF INTERVAL IS C2 COAL W/ RARE MS LAMINATIONS AND W/ WELL DEVELOPED CLEATING AND 1MM FACE AND 1MM BUTT CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-24	41.95	42	0.05	140442		CO	C2	D	K	RA								ROOF B: MS W/ MINOR CO LENSES NEAR BU, RARE QZ/CARB CLEAT INFIL IN COAL WISPS, BOTTOM 5CM OF INTERVAL IS C2 COAL W/ RARE MS LAMINATIONS AND W/ WELL DEVELOPED CLEATING AND 1MM FACE AND BUTT CLEATS
DHGH-14-24	42	42.05	0.05			KL				CO								LOSS CORE ATTRIBUTED TO COAL LOSS
DHGH-14-24	42.05	42.69	0.64	140443		CO	C3	D	K	MN	G				R	QZ	CE	SEAM: COAL W/ MINOR MS BANDS THROUGHOUT INTERVAL, RARE QZ/CARB CLEAT INFILL NEAR TU AND NEAR BU PREDOMINANTLY IN BUTT CLEATS, LOCAL MODERATELY DEVELOPED CLEATING, 1MM FACE AND 0.5 MM BUTT CLEATS
DHGH-14-24	42.69	42.99	0.30	140444		CO	SY	D	G	AB	G				C	QZ	CE	SEAM: STONY COAL W/ ABUNDANT MS LAMINATIONS, COMMON QZ/CARB CLEAT INFILL NEAR MIDDLE OF UNIT, POORLY DEVELOPED CLEATING
DHGH-14-24	42.99	43.38	0.39	140445		CO	SY	D	G	AB	G				A	QZ	CE	SEAM A: STONY COAL W/ ABUNDANT MS LAMINATIONS THROUGHOUT INTERVAL, ABUNDANT QZ/CARB CLEAT INFILL THROUGHOUT INTERVAL, CLEAT INFILL PREDOMINANTLY IN BUTT CLEATS UP TO 1CM THICK, MINOR 1CM THICK BAND CONTAINING DISSEMINATED PY NEAR MIDDLE OF UNIT
DHGH-14-24	43.38	43.58	0.20	140446		ZM		D	G	CM	P				C	QZ	CE	FLOOR: COALY MS W/ COMMON CO BANDS THROUGHOUT INTERVAL CONCENTRATED TOWARDS TU, COMMON QZ/CARB CLEAT INFILL CONCENTRATED AT BU PREDOMINANTLY IN BUTT CLEATS, THICKNESSES UP TO 0.5CM
DHGH-14-24	43.58	55.12	11.54		70	ST		B	G		G	BT	10	M	QZ	VN		
DHGH-14-24	55.12	55.47	0.35	GT-14-33	80	SS	FF	A	G		G							GEOTECH SAMPLE: SS IRREGULARLY INTERLAMINATED W/ ST
DHGH-14-24	55.47	56.68	1.21			MS		B	G		G							
DHGH-14-24	56.68	56.88	0.20	140447		XM		B	G	MN					M	QZ	CE	ROOF: CARBONACEOUS MS WITH MINOR COAL BANDS AT BU AND MINOR QZ/CARB CLEAT INFILL IN THE COAL BANDS, PREDOMINANTLY IN BUTT CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-24	56.88	57.16	0.28	140448		CO	C4	D	K	MN	AM	G			R	QZ	BL	SEAM ROOF: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, RARE QZ/CARB BLEBS ONLY NEAR MIDDLE OF UNIT, CLEATING IS POORLY DEVELOPED NEAR TU BUT BECOMES VERY WELL DEVELOPED TOWARDS BU, 1CM FACE AND 0.5CM BUTT CLEATS, COMMON CONCOIDAL FRACTURING OCCURRING AT TU AND BU
DHGH-14-24	57.16	57.44	0.28	140449		CO	C2	D	K	MN	AM	G			M	QZ	BL	SEAM: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, MINOR QZ/CARB BLEBS NEAR BU, CLEATING IS MODERATELY DEVELOPED, 1MM FACE AND 1MM BUTT CLEATS, CONCOIDAL FRACTURING COMMON AND INTACT COAL N BOX FRACTURES EASILY WHEN HANDLED
DHGH-14-24	57.44	57.73	0.29	140450		CO	C3	D	K	MN	AM	G						SEAM FLOOR: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, INCREASING MS CONTENT TOWARDS BU, CLEATING IS MODERATELY DEVELOPED, 3MM FACE AND 2MM BUTT CLEATS, CONCOIDAL FRACTURING OCCURS EASILY WHEN COAL IS HANDLED
DHGH-14-24	57.73	57.93	0.20	140451		ST		D	G	RA					R	QZ	WP	FLOOR: ST W/ RARE COAL AND QZ/CARB WISPS THROUGHOUT INTERVAL, BUT CONCENTRATED TOWARDS TU
DHGH-14-24	57.93	60.56	2.63			ST		D	G		AM				R	QZ	WP	
DHGH-14-24	60.56	60.84	0.28	GT-14-34		ST		D	G		AM				R	QZ	WP	GEOTECH SAMPLE: MASSIVE ST WITH RARE QZ WISPS THROUGHOUT INTERVAL
DHGH-14-24	60.84	61.53	0.69			ST		D	G		AM	G						
DHGH-14-24	61.53	67.01	5.48		65	SS	FF	A	G			G		10	R	QZ	VN	
DHGH-14-24	67.01	75.32	8.31		60	ST		B	G			G	BT	15				
DHGH-14-24	75.32	75.62	0.30	GT-14-37	90	ST		B	G			G		15				GEOTECH A: ST IRREGULARLY INTERLAMINATED W/ SS VF, BEDDING ANGLE IS ROUGHLY 15 DEGREES
DHGH-14-24	75.62	76.01	0.39	140452	90	ST		B	G			G			M	QZ	WP	ROOF A: ST IRREGULARLY INTERLAMINATED WITH SS FF, MINOR QZ/CARB WISPS NEAR BU
DHGH-14-24	76.01	76.21	0.20	140453		CO	C5	D	K	CM		G			C	QZ	VN	SEAM ROOF: BORDERLINE STONY COAL W/ COMMON MS BANDS PREDOMINANTLY AT TU WITH COMMON QZ/CARB VNING, BOTTOM HALF OF UNIT GRADES IN TO C3 COAL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-24	76.21	77.21	1.00	140454		CO	C3	D	K	CM		G	PD	25	M	QZ	CE	SEAM: COAL W/ COMMON MS BANDS THROUGHOUT INTERVAL, MINOR QZ/CARB CLEAT INFILL ONLY NEAR MIDDLE OF UNIT, PREDOMINANTLY IN BUTT CLEATS, MINOR PY BLEBS IN TOP HALF OF UNIT, CLEATING IS POORLY DEVELOPED THROUGHOUT INTERVAL, VERY SMALL CLEATS LESS THAN 1MM FACE AND BUTT CLEATS
DHGH-14-24	77.21	78.21	1.00	140455		CO	C3	D	K	CM	AM	G			M	QZ	VN	SEAM: COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, 4CM CLAST OF ST NEAR MIDDLE OF UNIT WITH RARE BLEBS OF PY, LOCAL WELL DEVELOPED CLEATING W/ 2MM FACE AND 1MM BUTT CLEATS, BUT INTERVAL HAS PREDOMINANTLY POOR CLEATING DEVELOPMENT
DHGH-14-24	78.21	79.21	1.00	140456		CO	C3	D	K	MN		G	PD	25	R	QZ	CE	SEAM: COAL W/ MINOR MS LAMINATIONS THROUGHOUT UNIT, RARE QZ/CARB CLEAT INFILL PREDOMINANTLY IN BUTT CLEATS ONLY NEAR BOTTOM OF UNIT, CLEATING IS VERY WELL DEVELOPED THROUGHOUT INTERVAL, 2MM FACE AND 2MM BUTT CLEATS, 2 RARE PY BLEBS NEAR MIDDLE AND BOTTOM OF INTERVAL
DHGH-14-24	79.21	79.96	0.75	140457		CO	C2	D	K	MN		G	WD	25	M	QZ	CE	SEAM: COAL W/ MINOR MS BANDS NEAR TOP OF UNIT VARYING FROM 1-3CM, MINOR QZ/CARB CLEAT INFILL THROUGHOUT UNIT, BUT MOSTLY CONCENTRATED NEAR TOP AND BOTTOM OF UNIT, CLEATING IS VERY WELL DEVELOPED THROUGHOUT INTERVAL, 4MM FACE AND 1MM BUTT CLEATS
DHGH-14-24	79.96	80.16	0.20	140458		CO	C5	D	K	MN		P	WD	25	M	QZ	CE	SEAM FLOOR:COAL W/ MINOR MS LAMINATIONS THROUGHOUT UNIT, MINOR QZ/CARB CLEAT INFILL PREDOMINANTLY IN FACE CLEATS, BUT AT BOTTOM CONTACT CLEAT INFILL IS IN BOTH BUTT AND FACE CLEATS, CLEATING IS WELL DEVELOPED THROUGHOUT UNIT, 1MM FACE AND 1MM BUTT CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-24	80.16	80.36	0.20	140459		XM		D	G	MN		G	PD	25	C	QZ	CE	FLOOR: CARBONACOUS MS W/ COMMON COAL BANDS THROUGHOUT UNIT, COMMON QZ/CARB CLEAT INFILL CONCENTRATED IN TOP OF UNIT, BUT ALSO PRESENT THROUGHOUT, CLEAT INFILL PREDOMINANTLY IN FACE CLEATS, MINOR PY BAND 1CM THICK NEAR TOP OF UNIT
DHGH-14-24	80.36	80.64	0.28			XM												
DHGH-14-24	80.64	81.01	0.37			ST		B	G		AM	G			R	QZ	WP	
DHGH-14-24	81.01	82.37	1.36		80	SS	FF	A	G			G	WD	15	M	QZ	VN	
DHGH-14-24	82.37	82.7	0.33	GT-14-38	95	SS	FF	A	G			G	WD	15				GEOTECH A: SS FF INTERBEDDED W/ ST, BEDDING ANGLE AT 15 DEGREES
DHGH-14-24	82.7	93.61	10.91			ST		B	G			G	PD	15	R	QZ	BN	
DHGH-14-24	93.61	94.26	0.65			XM		D	G	CM		G	PD		M	QZ	CE	
DHGH-14-24	94.26	94.46	0.20	140460		XM		D	G	MN		G			R	PY	BL	ROOF A: CARBONACEOUS MS W/ MINOR COAL WISPS NEAR BOTTOM OF UNIT, MINOR QZ/CARB VNING THROUGHOUTUNIT, RARE PY BLEBS NEAR BOTTOM OF UNIT; gamma is more accurate with what is represented in the core box
DHGH-14-24	94.46	94.66	0.20	140461		CO	C3	D	K	MN	AM	G			R	QZ	CE	SEAM ROOF: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, RARE QZ/CARB CLEAT INFILL T TOP OF INTERVAL ALONG CONTACT, CLEATING IS POORLY DEVELOPED
DHGH-14-24	94.66	95.66	1.00	140462		CO	C4	D	K	MN		G	PD	40	R	QZ	CE	SEAM A: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, THREE 0.5-1.5CM RARE ST BANDS SPACED EVENLY THROUGHOUT INTERVAL, RARE PY BLEBS PRESENT THROUGHOUT INTERVAL RARE QZ/CARB CLEAT INFILL AS WELL AS 1MM VNING IN ST BANDS
DHGH-14-24	95.66	96.41	0.75	140463		CO	C4	D	K	MN	AM	G			M	QZ	CE	SEAM: COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, TWO 1-1.5CM ST BANDS SPACED 14 CM APART IN TOP HALF OF INTERVAL, MINOR QZ/CARB CLEAT INFILL PREDOMINANTLY IN FACE CLEATS AND VNING IN THE ST BANDS, CLEATING IS MODERATE TO POORLY DEVELOPED THROUGHOUT, 2MM FACE AND 1MM BUTT CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-24	96.41	97.16	0.75	140464		CO	C3	D	K	MN	AM	P			R	QZ	CE	SEAM: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, RARE QZ/CARB BLEBS OCCURING SPORADICALLY THROUGHOUT INTERVAL, CLEATING IS POORLY DEVELOPED, LESS THAN 1MM FACE AND BUTT CLEATS
DHGH-14-24	97.16	97.35	0.19	140465		MS		D	G		AM	P			A	QZ	VN	PARTING: MASSIVE MS W/ ABUNDANT QZ/CARB VNING THROUGHOUT INTERVAL
DHGH-14-24	97.35	98.43	1.08	140466		CO	C3	D	K	MN		G	PD	40	M	QZ	BL	SEAM A: COAL W/ MINOR MS LAMINATIONS THROUGHOUT INTERVAL, ONE 4CM BAND OF MS NEAR MIDDLE OF UNIT, MINOR QZ/CARB BLEBS OCCURING THROUGHOUT UNIT AND 1MM VNS IN THE MS BAND ALONG WITH RARE PY BLEBS, CLEATING IS POORLY DEVELOPED THROUGHOUT UNIT, CLEATS ARE SMALLER THAN 1MM FOR FACE AND BUTT CLEATS, 10 CM AREA OF CONCOIDAL FRACTURING NEAR TOP OF UNIT
DHGH-14-24	98.43	99.5	1.07	140467		CO	C3	D	K	MN	AM	G						SEAM: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, CLEATING IS MODERATELY WELL DEVELOPED NEAR TOP OF UNIT, BUT DECREASES TO POORLY DEVELOPED NEAR BOTTOM OF UNIT, TOP OF UNIT CLEATS ARE 2MM FACE AND 1MM BUTT CLEATS, TWO 15CM AREAS OF CONCOIDAL FRACTURING IN THE BOTTOM HALF OF UNIT
DHGH-14-24	99.5	99.79	0.29	140468		CO	C4	D	K	CM	AM	P						FLOOR SEAM: COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, COAL CAN BE MOULDED EASILY, CLEATING IS VERY POORLY DEVELOPED
DHGH-14-24	99.79	99.99	0.20	140469		ST		B	G				PD	30	M	QZ	BL	FLOOR: POORLY DEVELOPED ST W/ MINOR QZ/CARB BLEBS AT TOP OF INTERVAL
DHGH-14-24	99.99	102.55	2.56			ST		B	G				PD	30	C	QZ	VN	
DHGH-14-24	102.55	102.64	0.09			KL												
DHGH-14-24	102.64	105.61	2.97		85	ST		B	G				PD	25	M	QZ	VN	
DHGH-14-24	105.61	106.39	0.78			ST		B	G			G			M	QZ	WP	
DHGH-14-24	106.39	106.65	0.26	GT-14-40		ST		B	G		AM	G						GEOTECH: MASSIVE ST
DHGH-14-24	106.65	108.04	1.39			ST		B	G	CM	AM	P			M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-24	114.88	118.46	3.58			SS	FM	A	G		AM	G			M	QZ	VN	
DHGH-14-24	118.46	118.87	0.41	GT-14-39		SS	FM	A	G		AM	G			R	QZ	VN	GEOTECH: MASSIVE SS W/ RARE QZ VNING NEAR TOP OF UNIT, VNS ARE APPROXIMATELY 1MM THICK
DHGH-14-24	118.87	119.07	0.20			SS	FM	A	G		AM	P			R	QZ	VN	
DHGH-14-24	119.07	120.3	1.23			ST		D	G		AM	G		75	M	QZ	VN	
DHGH-14-24	120.3	122.8	2.50		75	SS	FF	A	G			G		15	M	QZ	VN	
DHGH-14-24	122.8	127.02	4.22			ST		B	G		AM				R	PY	BL	E.O.H.
DHGH-14-25	0	1.58	1.58			KL												
DHGH-14-25	1.58	3.42	1.84			SS	FM	A	G				PD	65				
DHGH-14-25	3.42	3.72	0.30			KL												
DHGH-14-25	3.72	4.32	0.60			MS		B	G	MN	AM	G			R	QZ	CE	
DHGH-14-25	4.32	5.14	0.82			ST		B	G		AM	G			M	QZ	VN	
DHGH-14-25	5.14	7.72	2.58			MS		D	G	RA			PD	20	E	QZ	VN	
DHGH-14-25	7.72	7.94	0.22			KL												
DHGH-14-25	7.94	8.31	0.37			MS		D	G	RA			PD	20	E	QZ	VN	
DHGH-14-25	8.31	8.56	0.25			ZM			K						M	QZ	VN	
DHGH-14-25	8.56	8.76	0.20	145330		ZM			K			G			M	QZ	VN	ROOF A: COALY MS W/SOME MNR WELL DEVELOPPED CLEATING NEAR TOP OF INTERVAL
DHGH-14-25	8.76	9.24	0.48	145331		CO	C3	D	K	MN		P			R	QZ	CE	SEAM ROOF: MNR SILTSTONE BANDS UP TO 1CM; RARE QTZ-CA CLEAT INFILL; PARTIALLY WELL DEVELOPPED CLEATS UP TO 6MM FACE X 4MM BUTTS; LOCALLY FINE GRAINED AND DISAGGREGATED; MOIST AND SOFT IN PART
DHGH-14-25	9.24	9.34	0.10	145332		ST		D	G						E	PY	BL	PARTING A: ST BAND W/MNR COAL WISPS; PY BLEBS UP TO 2CM X 3CM; RARE QTZ-CA VEINS
DHGH-14-25	9.34	9.43	0.09			KL												MISSING COAL
DHGH-14-25	9.43	10.45	1.02	145333		CO	C2	D	K	RA					M	QZ	VN	SEAM: RARE SILTSTONE BANDS AT THE BOTTOM OF INTERVAL UP TO 3MM WIDE; FINE GRAINED W/CONCOIDAL FRACTURING; MNR QTZ-CA VEINS UP TO 5MM; MOIST

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-25	10.45	10.65	0.20	145334		CO	C3	D	K	MN					M	QZ	VN	SEAM FLOOR A: MNR SILTY BANDS UP TO 8MM WIDE; MNR QTZ-CA VEINS UP TO 5MM AND MNR PY BLEBS U TO 5MM X 5MM; MAINLY FINE GRAINED W/CONCOIDAL FRACTURING; GRADATIONAL LOWER CT
DHGH-14-25	10.65	10.85	0.20	145335		XM		D	K	CM		G			E	QZ	CE	FLOOR: CARBONACEOUS MUDSTONE W/COMMON COAL BANDS AT THE TOP OF UNIT; ACCESORY QTZ CLEAT INFILL AND BANDS UP TO 5MM; GRADATIONAL LOWER CT
DHGH-14-25	10.85	11.54	0.69		60	MS		D	G			G	WD	20	R	QZ	WP	
DHGH-14-25	11.54	13.06	1.52		80	SS	FM	A	G				WD	20	M	QZ	VN	
DHGH-14-25	13.06	13.14	0.08			KL												
DHGH-14-25	13.14	15.84	2.70		85	SS	FM	A	G			I	WD	20	M	QZ	VN	
DHGH-14-25	15.84	16.14	0.30			ST		B	G				WD	20	R	QZ	VN	
DHGH-14-25	16.14	16.39	0.25			KL												
DHGH-14-25	16.39	17.58	1.19			ST		B	G				WD	10	R	QZ	VN	
DHGH-14-25	17.58	17.75	0.17			KL												
DHGH-14-25	17.75	19.44	1.69			ST		B	G				WD	10	R	QZ	VN	
DHGH-14-25	19.44	21.8	2.36		60	ST		B	G				WD	20	R	PY	BL	
DHGH-14-25	21.8	22.17	0.37			KL												
DHGH-14-25	22.17	23.8	1.63		60	ST		B	G	TR		P	WD	20				
DHGH-14-25	23.8	29.28	5.48			ST		B	G			I	PD	25				
DHGH-14-25	29.28	29.52	0.24			MS		D	G						R	QZ	VN	
DHGH-14-25	29.52	29.57	0.05			KL												
DHGH-14-25	29.57	30.01	0.44			XM		D	G	MN			PD		R	QZ	VN	
DHGH-14-25	30.01	30.21	0.20	145336		XM		D	G	RA		I	PD		R	QZ	VN	ROOF A: CARBONACEOUS MS W/RARE COAL BANDS UP TO 5MM WIDE; RARE QTZ VEINLETS UP TO 2MM WIDE AND TRACE PY BLEBS; IRREGULAR SHARP BOT CT
DHGH-14-25	30.21	30.41	0.20	145337		CO	C3	D	K	MN			PD		R	PY	BL	SEAM ROOF A: MNR MS LAMINATIONS UP TO 5MM; RARE PY BLEBS AND RARE QTZ-CA CLEAT INFILL NEAR TOP CONTACT; LOCALLY MODERATELY DEVELOPPED CLEATING UP TO 2MM FACE X 1MM BUTTS; MOIST, SOFT AND DISAGGREGATED IN PART

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-25	30.41	30.76	0.35	145338		CO	C3	D	K	MN			PD	25	M	QZ	CE	SEAM: MNR MS BANDS UP TO 2MM; MNR STILSTONE FRAGMENTS UP TO 5CM (5CM ST FRAGMENT AT BOT OF INTERVAL); LOCALLY WELL DEVELOPPED CLEATING UP TO 3MM FACE X 2MM BUTTS; FINE GRAINED IN PART; MNR QTZ-CA IN FACE AND BUTT CLEATS; TOP END OF INTERVAL IS FINE GRAINED, MOIST AND SOFT/DISAGGREGATED
DHGH-14-25	30.76	31.11	0.35	145339		CO	C2	D	K	RA			PD	15	R	QZ	CE	SEAM: RARE MS LAMINATIONS UP TO 2MM WIDE; WELL DEVELOPPED CLEATING UP TO 4MM FACE X 3MM BUTTS; RARE QTZ-CA INFILL IN BUTT CLEATS; BOTTOM OF INTERVAL IS FINE GRAINED, MOIST AND DISAGGREGATED
DHGH-14-25	31.11	31.24	0.13			KL				CO								
DHGH-14-25	31.24	31.49	0.25			KL												
DHGH-14-25	31.49	34.32	2.83		65	ST		B	G			P	WD	37	E	QZ	VN	
DHGH-14-25	34.32	35.12	0.80		80	SS	VM	A	G				WD	30	M	QZ	VN	
DHGH-14-25	35.12	35.17	0.05			KL												
DHGH-14-25	35.17	35.8	0.63		90	SS	VM	A	G				WD		M	QZ	VN	
DHGH-14-25	35.8	36.22	0.42		60	SS	FF	A	G			G	WD	30	M	QZ	VN	
DHGH-14-25	36.22	36.6	0.38			MS		D	G	RA		G	PD	25	M	QZ	VN	
DHGH-14-25	36.6	36.93	0.33			CO	C3											
DHGH-14-25	36.93	39.32	2.39			MS		D	G	MN		P	PD	20	M	QZ	WP	
DHGH-14-25	39.32	39.37	0.05			CO	C4	D	K			P			M	QZ	CE	
DHGH-14-25	39.37	39.91	0.54		60	SS	FF	A	G			P	WD	20	M	QZ	WP	
DHGH-14-25	39.91	42.34	2.43			ST		B	G	RA		G	PD	20	R	QZ	WP	
DHGH-14-25	42.34	47.9	5.56			SS	FM	A	G	MN			PD	20	M	QZ	VN	
DHGH-14-25	47.9	48.03	0.13			KL												
DHGH-14-25	48.03	49.58	1.55			SS	FM	A	G		AM	P			R	QZ	VN	
DHGH-14-25	49.58	54.74	5.16		55	ST		B	G			G	PD	10	M	QZ	VN	
DHGH-14-25	54.74	59.29	4.55			ST		B	G	FO		G	PD	10	M	BI	BN	Bivalve interval 59 to 59.7
DHGH-14-25	59.29	61.59	2.30			SS	FM	A	G			G	PD	20	R	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-25	61.59	61.81	0.22			ST		B	G			I			E	QZ	VN	
DHGH-14-25	61.81	62.02	0.21			CO	C3	D	K	MN		P			E	QZ	VN	
DHGH-14-25	62.02	62.69	0.67			XM		D	G	MN		G	PD	10	R	PY	BL	
DHGH-14-25	62.69	64.7	2.01		80	ST		B	G			G	PD	20	R	QZ	VN	
DHGH-14-25	64.7	71.08	6.38		90	SS	FM	S	G			G	WD	30	M	QZ	VN	
DHGH-14-25	71.08	72.9	1.82		70	ST		B	G			G	WD	25	M	QZ	WP	
DHGH-14-25	72.9	73.45	0.55		65	MS		B	G	RA		I	PD	40	R	QZ	WP	
DHGH-14-25	73.45	73.65	0.20	145340		SS	VV	A	G	MN		G	PD	40	M	QZ	VN	ROOF A: VFG SANDSTONE; BOTTOM CONTACT IS GRADATIONAL WITH MNR COAL BANDS, COMMON QTZ-CA VEINING UP TO 1CM WIDE AND MNR PY VEINS UP 1 - 2CM WIDE
DHGH-14-25	73.65	74.05	0.40	145341		CO	C3	D	K	MN			PD		C	QZ	VN	SEAM A: MNR MUDSTONE LAMINATIONS AND INTERMIXED THROUGHOUT; COMMON QTZ-CA VEINS UP TO 1CM WIDE AND AS CLEAT FACE & BUTT INFILL; RARE PY BLEBS NEAR TOP OF INTERVAL; CLEATING IS MODERATELY DEVELOPPED (UP TO 5MM X 5MM) AND FINE GRAINED IN PART; COAL DISPLAYS STRONG FOLDING/DEFORMATION
DHGH-14-25	74.05	74.43	0.38	145342		CO	C4	D	K	MN		G	WD	20	E	QZ	VN	SEAM A: MNR MS LAMINATIONS; MNR QTZ-CA VEINS UP TO 4MM WIDE; RARE PY BLEBS ASSOC W/QTZ VEINING; VARIABLY DEVELOPPED CLEATING FROM LOCALLY WELL DEVELOPPED BANDS (W/CLEATS UP TO 7MM FACE X 5MM BUTTS) TO FINE GRAINED; CENTRE OF INTERVAL IS MOIST WITH COMMON CONCOIDAL FRACTURING; GRADATIONAL LOWER CT INTO COALY MUDSTONE; DISCREET INTACT FLT W/2CM OF OFFSET
DHGH-14-25	74.43	74.63	0.20	145343		ZM		D	K	MN		G	WD	20	E	QZ	VN	FLOOR A: COALY MUDSTONE; QTZ VEINS UP TO 1CM WIDE ON UPPER AND LOWER CONTACTS; COMMON THIN COAL LAMINATIONS <5MM
DHGH-14-25	74.63	74.87	0.24			XM		D	G	MN		G	PD	20	M	QZ	CE	
DHGH-14-25	74.87	74.98	0.11			KL												
DHGH-14-25	74.98	75.04	0.06			XM		D	G	MN		I	PD		M	QZ	CE	
DHGH-14-25	75.04	81.43	6.39		60	MS		D	G	RA			PD	30	R	QZ	VN	EOH

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	0	1.59	1.59			KL												
DHGH-14-26	1.59	1.74	0.15			GV	SA	M	B		GT	I						
DHGH-14-26	1.74	3.5	1.76		80	SS	FF	A	G		EQ	P	WD	20	M	QZ	VN	
DHGH-14-26	3.5	3.7	0.20	140475	80	SS	FF	A	G		EQ	P	WD	20	C	QZ	VN	ROOF A: SS INTERLAMINATED W/ ST, COMMON QZ/CARB VNING AT BU 5CM WIDE, MINOR QZ/CARB WISPS THROUGHOUT UNIT
DHGH-14-26	3.7	4.14	0.44	140476		CO	C5	D	K	AB	AM				E	QZ	VN	SEAM: COAL W/ ABUNDANT MS INTERMIXED THROUGHOUT INTERVAL, MS CONTENT INCREASES IN THE MIDDLE OF THE INTERVAL, TOP AND BOTTOM 5CM OF UNIT HAS COMPARABLY LESS MS CONTENT (COMMON MS CONTENT VS ABUNDANT IN THE MIDDLE OF INTERVAL), ACCESSORY 0.5CM QZ/CARB VNING OCCURING AT TU AND BU, CLEATING IS VERY POORLY DEVELOPED
DHGH-14-26	4.14	4.24	0.10			KL												
DHGH-14-26	4.24	4.79	0.55			ST		B	G	BU	AM	G			M	QZ	VN	
DHGH-14-26	4.79	8.69	3.90		85	ST		B	G				WD	40	C	QZ	VN	
DHGH-14-26	8.69	8.91	0.22			KL												
DHGH-14-26	8.91	10.32	1.41		75	ST		B	G			G	WD	55	C	QZ	VN	BRITTLE DEFORMATION OCCURING AT TU
DHGH-14-26	10.32	12.19	1.87			ST		B	G		AM				C	QZ	VN	
DHGH-14-26	12.19	12.24	0.05			KL												
DHGH-14-26	12.24	17.89	5.65			ST		B	G	MN	AM	G			C	QZ	VN	
DHGH-14-26	17.89	21.24	3.35		60	ST		B	G	RA		G	PD	30	M	QZ	VN	
DHGH-14-26	21.24	21.55	0.31			XT		D	G	CM	AM				M	QZ	VN	
DHGH-14-26	21.55	21.6	0.05			KL												
DHGH-14-26	21.6	21.74	0.14	140477		XT		D	G	CM	AM	G			C	QZ	VN	ROOF: CARBONACEOUS ST W/ COMMON COAL LAMINATIONS THROUGHOUT INTERVAL, COMMON QZ/CARB VEINING THROUGHOUT INTERVAL, BUT CONCENTRATED TOWARDS TU

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	21.74	22.08	0.34	140478		CO	C5	D	K	AB		G			C	QZ	VN	SEAM: COAL W/ ABUNDANT MS LAMINATIONS THROUGHOUT INTERVAL, 1CM MS BAND IN MIDDLE OF INTERVAL, COMMON QZ/CARB VNING AND BLEBS OCCURRING THROUGHOUT INTERVAL, LOCAL MODERATELY WELL DEVELOPED CLEATING, 1MM FACE AND BUTT CLEATS, BEDDING IS IRREGULAR WITH COMMON SMALL SCALE FOLDING
DHGH-14-26	22.08	22.28	0.20	140479		CO	C4	D	K	CM		P		30	C	QZ	CE	SEAM A: COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, COMMON QZ/CARB CLEAT INFILL ALONG BOTH FACE AND BUTT CLEATS, MINOR PY BLEBS FORMING A 0.5-1CM BAND NEAR TOP OF UNIT, CLEATING IS WELL DEVELOPED, 2MM FACE AND 1MM BUTT CLEATS, BEDDING BECOMES PLANAR AND WELL DEVELOPED AT 30 DEGREES
DHGH-14-26	22.28	22.48	0.20	140480		SS	FF	A	G	RA		G	PD	10	C	QZ	VN	FLOOR: SS W/ RARE COAL LENSES NEAR TOP OF UNIT, COMMON QZ/CARB VNING OCCURRING AT TOP OF UNIT 2CM WIDE, COMMON QZ/CARB WISPS THROUGHOUT UNIT
DHGH-14-26	22.48	24.11	1.63			SS	FF	A	G	RA		G	PD	10	C	QZ	VN	
DHGH-14-26	24.11	27.38	3.27			MS		B	G	CM	AM	G			M	QZ	WP	
DHGH-14-26	27.38	27.61	0.23			CO	SY	D	K	CM			WD	20	C	QZ	CE	STONY COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, COMMON QZ/CARB CLEAT INFILL IN BOTH FACE AND BUTT CLEATS, 3CM BY 5CM BLEB OF PYRITE NEAR BOTTOM OF UNIT, LOCAL WELL DEVELOPED CLEATING, 1CM FACE AND 5MM BUTT CLEATS, COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY THE GEOPHYSICAL LOGS
DHGH-14-26	27.61	27.66	0.05			KL				CO								
DHGH-14-26	27.66	27.77	0.11			CO	SY	D	K	AB		G	PD		C	QZ	CE	STONY COAL W/ ABUNDANT MS LAMINATIONS THROUGHOUT INTERVAL, COMMON QZ/CARB CLEAT INFILL ALONG BOTH FACE AND BUTT CLEATS, LOCAL WELL DEVELOPED CLEATING, 3MM FACE AND 3MM BUTT CLEATS, COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY THE GEOPHYSICAL LOGS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	27.77	28.32	0.55			MS		B	G		AM	P						
DHGH-14-26	28.32	28.68	0.36			CO	SY	D	K	AB		P	WD	20	A	QZ	CE	STONY COAL W/ ABUNDANT MS LAMINATIONS THROUGHOUT INTERVAL, ABUNDANT QZ/CARB CLEAT INFILL PREDOMINANTLY ALONG BUTT CLEATS BUT ALSO OCCURRING ALONG FACE CLEATS, MINOR PY BLEBS THROUGHOUT INTERVAL, LOCAL WELL DEVELOPED CLEATING, 1MM FACE AND 1MM BUTT CLEATS, COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY THE GEOPHYSICAL LOGS
DHGH-14-26	28.68	36.24	7.56			SS	FF	A	G	CM	EQ	G	PD	20	M	QZ	VN	
DHGH-14-26	36.24	37.05	0.81			ST		B	G	RA	AM	G			M	QZ	VN	
DHGH-14-26	37.05	37.56	0.51			ZT		D	G	AB		G	PD	20	A	QZ	CE	
DHGH-14-26	37.56	37.76	0.20	140481		XT		D	G	MN		G			M	QZ	CE	ROOF: CARBONACEOUS ST W/ MINOR COAL LAMINATIONS AT BU, MINOR QZ/CARB CLEAT INFILL PREDOMINANTLY IN BUTT CLEATS
DHGH-14-26	37.76	37.96	0.20	140482		CO	C3	D	K	MN		G			E	QZ	CE	SEAM ROOF: COAL W/ MINOR MS LAMINATIONS THROUGHOUT INTERVAL, ACCESSORY QZ/CARB CLEAT INFILL PREDOMINANTLY IN BUTT CLEATS AND NEAR TU, PORRLY DEVELOPED CLEATING THROUGHOUT INTERVAL
DHGH-14-26	37.96	38.16	0.20	140483		CO	C3	D	K	MN		G			E	QZ	VN	SEAM A: COAL W/ MINOR MS LAMINATIONS THROUGHOUT INTERVAL, ACCESSORY QZ/CARB VNING OCCURING NEAR TOP OF UNIT, TWO 0.5CM-1CM VEINS NEAR TOP OF UNIT, MINOR BLEBS OF PYRITE THROUGHOUT INTERVAL, LOCAL MODERATELY DEVELOPED CLEATING, 1MM BUTT AND 2MM FACE CLEATS
DHGH-14-26	38.16	38.36	0.20	140484		CO	C3	D	K	MN		P			E	QZ	CE	SEAM FLOOR: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, ACCESSORY QZ/CARB CLEAT INFILL ALONG BUTT CLEATS UP TO 0.5CM CONCENTRATED NEAR BU, CLEATING BECOMES INCREASINGLY MORE WELL DEVELOPED TOEARDS BOTTOM OF UNIT, 1MM BUTT AND 2MM FACE CLEATS
DHGH-14-26	38.36	38.56	0.20	140485		MS		B	G	MN	AM	G			M	QZ	WP	FLOOR: MASSIVE MS W/ MINOR COAL WISPS TOWARDS TU, MINOR QZ/CARB WISPS TOWARDS TU

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	38.56	39.2	0.64			MS		B	G		AM	G			M	QZ	WP	
DHGH-14-26	39.2	45.2	6.00		70	SS	FF	A	G		EQ		PD	20	M	QZ	WP	
DHGH-14-26	45.2	45.77	0.57			KL				CO								
DHGH-14-26	45.77	46.14	0.37		70	SS	FF	A	G		EQ	G	PD	20	M	QZ	WP	
DHGH-14-26	46.14	46.94	0.80			MS		B	G	MN	AM				M	QZ	CE	
DHGH-14-26	46.94	47.12	0.18			KL												
DHGH-14-26	47.12	47.74	0.62			MS		B	G		AM	P		70	M	QZ	VN	BASAL CONTACT OCCURS AT 70 DEGREES
DHGH-14-26	47.74	49.52	1.78			SS	FF	A	G	FO	EQ		PD	25	M	QZ	VN	
DHGH-14-26	49.52	52.57	3.05			ST		B	G	FO	AM				M	QZ	VN	
DHGH-14-26	52.57	55.14	2.57		85	SS	FF	A	G		EQ	G	PD	20	M	QZ	VN	
DHGH-14-26	55.14	56.1	0.96		90	ST		B	G			P	WD	25	M	QZ	VN	
DHGH-14-26	56.1	61.58	5.48			SS	FF	A	G	MN	EQ		PD		C	QZ	VN	
DHGH-14-26	61.58	61.87	0.29			KL												
DHGH-14-26	61.87	62.04	0.17			KL												
DHGH-14-26	62.04	63.01	0.97			SS	VF	A	G		EQ				E	QZ	VN	
DHGH-14-26	63.01	63.09	0.08			KL												
DHGH-14-26	63.09	63.99	0.90			MS		B	G	MN	AM				E	QZ	VN	
DHGH-14-26	63.99	64.24	0.25			KL												
DHGH-14-26	64.24	64.97	0.73			MS		B	G	MS	AM	G			E	QZ	VN	
DHGH-14-26	64.97	67.54	2.57		85	SS	FF	A	G	FO		G	PD	35	E	QZ	VN	
DHGH-14-26	67.54	68.44	0.90			ST		B	G	MN	AM				M	QZ	VN	
DHGH-14-26	68.44	68.77	0.33			MS		B	G		AM				C	QZ	VN	
DHGH-14-26	68.77	69.19	0.42			KL												
DHGH-14-26	69.19	70.13	0.94			MS		B	G	MN	AM				M	QZ	CE	
DHGH-14-26	70.13	70.93	0.80			ST		B	G				PD	45				
DHGH-14-26	70.93	83.21	12.28		70	SS	FF	A	G			G	WD	45				
DHGH-14-26	83.21	86.26	3.05			SS	FF	A	G	MN		G	PD	40	E	QZ	VN	
DHGH-14-26	86.26	87.37	1.11			ST		B	G	MN	AM	G			M	QZ	VN	
DHGH-14-26	87.37	87.62	0.25			XM		D	G	MN	AM	P			M	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	87.62	87.94	0.32			CO	SY	D	K	MN		G	WD	50	A	QZ	CE	STONY COAL W/ MINOR MS LAMINATIONS THROUGHOUT INTERVAL, ABUNDANT QZ/CARB CLEAT INFILL THROUGHOUT UNIT, 1CM VEIN NEAR TU, ACCESSORY 1.5 CM PY BAND NEAR TU AS WELL AS BLEBS, COAL NOT SAMPLED DUE TO LOW GRADE DETERMINED BY GEOPHYSICAL LOGS
DHGH-14-26	87.94	88.2	0.26			ZM		D	K	CM					E	QZ	CE	COALY MUDSTRONE W/ COMMON COAL INTERMIXED THROUGHOUT INTERVAL, ACCESSORY QZ/CARB VNING NEAR BU, INTERVAL IS A BROKEN ZONE WITH INCREASING FRAGMENTATION AT THE BOTTOM OF THE UNIT
DHGH-14-26	88.2	88.35	0.15			MS		D	G	MN	AM				C	QZ	CE	
DHGH-14-26	88.35	88.5	0.15			CO	SY	D	K	CM								STONY COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, COAL IS HIGHLY BROKEN, POORLY DEVELOPED CLEATING THROUGHOUT UNIT
DHGH-14-26	88.5	88.7	0.20			KL				CO								
DHGH-14-26	88.7	88.9	0.20			KL												
DHGH-14-26	88.9	89.15	0.25			KL												
DHGH-14-26	89.15	89.22	0.07			KL												
DHGH-14-26	89.22	90.21	0.99			ZM		D	G	CM		G	PD	45	E	QZ	CE	
DHGH-14-26	90.21	90.95	0.74			MS		B	G	MN	AM	G			C	QZ	VN	
DHGH-14-26	90.95	90.96	0.01			SS	VF	A	G				PD	75	M	QZ	VN	UPPER LIMB OF FOLD
DHGH-14-26	90.96	91.28	0.32			SS	VF	A	G				PD	89	C	QZ	VN	HINGE OF FOLD
DHGH-14-26	91.28	91.58	0.30			SS	VF	A	G				PD	70				LOWER LIMB OF FOLD
DHGH-14-26	91.58	93.48	1.90			MS		D	G	MN		P	PD	45	E	QZ	VN	
DHGH-14-26	93.48	93.98	0.50			ZM		D	G	CM		G	WD		M	QZ	CE	
DHGH-14-26	93.98	94.25	0.27			KL												
DHGH-14-26	94.25	94.51	0.26			ZM		D	G	CM		G						
DHGH-14-26	94.51	94.71	0.20	140486		ZM		D	G	CM		G			M	QZ	CE	ROOF A: COALY MS W/ COMMON 2MM COAL LAMINATIONS THROUGHOUT UNIT, MINOR QZ/CARB CLEAT INFILL, MINOR PY BLEB AT BU

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	94.71	95.06	0.35	140487		CO	C4	D	K	CM		G			A	QZ	CE	SEAM ROOF: COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, ABUNDANT QZ/CARB CLEAT INFILL IN BOTH FACE AND BUTT CLEATS, POORLY DEVELOPED CLEATING THROUGHOUT INTERVAL, 0.5MM FACE AND 0.5MM BUTT CLEATS
DHGH-14-26	95.06	96.06	1.00	140488		CO	C4	D	K	CM		G			C	QZ	CE	SEAM A: COAL W/ COMMON 4CM-7CM MS BANDS NEAR TOP, MIDDLE AND BOTTOM OF UNIT, COMMON QZ/CARB CLEAT INFILL MAINLY CONCENTRATED TO MIDDLE OF UNIT AND PREDOMINANTLY IN BUTT CLEATS, 2CM BY 6CM MINOR DISSEMINATED PY IN THE MIDDLE OF UNIT, MODERATELY WELL DEVELOPED CLEATING, 3MM FACE AND 1MM BUTT CLEATS,
DHGH-14-26	96.06	96.85	0.79	140489		CO	C4	D	K	CM		G			C	QZ	CE	SEAM A: COAL W/ COMMON MS LAMINATIONS THROUGHOUT INTERVAL, COMMON QZ/CARB CLEAT INFILL PREDOMINANTLY IN BUTT CLEATS, MINOR PY BLEBS NEAR MIDDLE OF UNIT, WELL DEVELOPED CLEATING, 3MM BUTT CLEATS AND 2MM FACE CLEATS
DHGH-14-26	96.85	97.04	0.19	140490		CO	C3	D	K	MN		G			C	QZ	CE	SEAM FLOOR: COAL W/ MINOR MS LAMINATIONS THROUGHOUT INTERVAL, COMMON QZ/CARB CLEAT INFILL PREDOMINANTLY IN BUTT CLEATS, POORLY DEVELOPED CLEATING, RARE 1MM FACE AND 1MM BUTT CLEATS
DHGH-14-26	97.04	97.26	0.22	140491		XM		D	G	MN	AM	G			E	QZ	CE	FLOOR A: MASSIVE CARBONACEOUS MS W/ MINOR COAL WISPS THROUGHOUT INTERVAL AND 2MM LAMINATIONS AT TU, ACCESSORY QZ/CARB CLEAT INFILL IN BOTH FACE AND BUTT CLEATS, ACCESSORY PY BLEBS NEAR TU AND A SMALL 1MM BY 1MM BLEB NEAR BU
DHGH-14-26	97.26	98.08	0.82			XM		D	G	MN	AM	G			M	QZ	WP	
DHGH-14-26	98.08	98.57	0.49			MS		D	K		AM	P			M	QZ	WP	
DHGH-14-26	98.57	99.48	0.91		70	SS	FF	A	G			G	WD	5	M	QZ	WP	
DHGH-14-26	99.48	99.81	0.33			KL												
DHGH-14-26	99.81	105.57	5.76		70	SS	FF	A	G			G	WD	5	M	QZ	WP	
DHGH-14-26	105.57	106.89	1.32			ST		B	G	MN	AM				E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	106.89	106.95	0.06			KL												
DHGH-14-26	106.95	109.06	2.11			ST		B	G		AM	G			M	PY	DS	
DHGH-14-26	109.06	112.19	3.13			SS	FF	A	G	FO	AM	G			M	QZ	VN	
DHGH-14-26	112.19	117.23	5.04			ST		B	G	FO	AM				M	QZ	VN	
DHGH-14-26	117.23	117.84	0.61			SS	FF	A	G		AM				C	QZ	VN	
DHGH-14-26	117.84	117.96	0.12			KL												
DHGH-14-26	117.96	119.36	1.40			SS	FF	A	G		AM	G			C	QZ	VN	
DHGH-14-26	119.36	120.02	0.66			ST		B	G			P	PD	10	M	QZ	VN	
DHGH-14-26	120.02	122.43	2.41			SS	FF	A	G		EQ	P			A	QZ	VN	TOP AND BOTTOM OF INTERVAL ARE BOUNDED BY A 10-12CM QZ/CARB VEIN
DHGH-14-26	122.43	122.53	0.10			ST		B	G				PD		M	QZ	VN	
DHGH-14-26	122.53	122.99	0.46			SS	FF	A	G		AM	P			A	QZ	VN	
DHGH-14-26	122.99	123.46	0.47			ST		B	G			P	PD	35	C	QZ	VN	
DHGH-14-26	123.46	123.51	0.05			CO	C4	D	K	MN	AM				A	QZ	VN	MASSIVE COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, ABUNDANT QZ/CARB VNING, POORLY DEVELOPED CLEATING, RARE 0.5MM FACE AND 0.5MM BUTT CLEATS, COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM THE GEOPHYSICAL LOGS
DHGH-14-26	123.51	123.71	0.20			KL				CO								
DHGH-14-26	123.71	123.85	0.14			CO	SY	D	K	CM	AM	G			A	QZ	VN	MASSIVE STONY COAL W/ COMMON MS INTERMIXED THROUGHOUT INTERVAL, ABUNDANT QZ/CARB VNING, VERY POORLY DEVELOPED CLEATING, COAL NOT SAMPLED DUE TO LOW GRADE DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-26	123.85	124.71	0.86		90	ST		B	G			P	WD	50	C	QZ	VN	
DHGH-14-26	124.71	124.94	0.23			CO	C4	B	G	CM	AM	I						MASSIVE COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, VERY POORLY DEVELOPED CLEATING, UNIT IS HIGHLY FRACTURED, COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM THE GEOPHYSICAL LOGS AS WELL AS THE SMALL THICKNESS
DHGH-14-26	124.94	125.41	0.47			SS	VF	A	G	MN	AM	P			M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	125.41	125.85	0.44		90	XM		B	G	MN	AM				A	QZ	VN	
DHGH-14-26	125.85	125.99	0.14			KL												
DHGH-14-26	125.99	126.54	0.55			MS		B	G			P	PD	15	M	QZ	WP	
DHGH-14-26	126.54	128.1	1.56		60	SS	FF	A	G				WD	15	M	QZ	WP	
DHGH-14-26	128.1	128.16	0.06			KL												
DHGH-14-26	128.16	130.32	2.16		60	SS	FF	B	G			G	WD	15	M	QZ	WP	
DHGH-14-26	130.32	134.26	3.94		60	ST		B	G			P	WD	10	E	QZ	VN	
DHGH-14-26	134.26	136.59	2.33		70	SS	FF	A	G			G	WD	10	M	QZ	VN	
DHGH-14-26	136.59	137.05	0.46			MS		B	G		AM	G			M	QZ	WP	
DHGH-14-26	137.05	137.19	0.14			XM		B	G		AM	P			M	QZ	WP	
DHGH-14-26	137.19	137.39	0.20	140492		XM		B	G	MN	AM	P			M	QZ	WP	ROOF: MASSIVE CARBONACEOUS MS W/ MINOR COAL LAMINATIONS AT BU, MINOR QZ CLEAT INFILL AND WISPS
DHGH-14-26	137.39	137.59	0.20	140493		CO	C3	D	K	MN		G			E	QZ	CE	SEAM ROOF A: COAL W/ MINOR MS LAMINATIONS THROUGHOUT THE INTERVAL, QZ/CARB CLEAT INFILL PREDOMINANTLY IN BUTT CLEATS, MINOR PY BLEBS THROUGHOUT UNIT, INTERVAL IS HIGHLY FRACTURED, LOCAL WELL MODERATELY WELL DEVELOPED CLEATING, 1MM FACE AND 1MM BUTT CLEATS
DHGH-14-26	137.59	138.03	0.44	140494		CO	C4	D	K	MN	AM				M	QZ	BL	SEAM: COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, MINOR QZ/CARB BLEBS NEAR BU, UNIT IS HIGHLY FRACTURED, CLEATING IS POORLY DEVELOPED, RARE 1MM FACE AND 1MM BUTT CLEATS
DHGH-14-26	138.03	138.11	0.08			KL				CO								
DHGH-14-26	138.11	138.19	0.08			KL												
DHGH-14-26	138.19	138.42	0.23			XM		D	G	CM	AM	G			C	QZ	CE	
DHGH-14-26	138.42	139.06	0.64			ST		B	G		AM	G			M	QZ	WP	
DHGH-14-26	139.06	140.99	1.93		70	SS	VF	A	G			P	WD	10	M	QZ	WP	
DHGH-14-26	140.99	141.53	0.54			SS	FF	A	G		AM	P			M	QZ	VN	
DHGH-14-26	141.53	142	0.47		85	SS	FF	A	G				WD		M	QZ	VN	
DHGH-14-26	142	142.06	0.06			KL												
DHGH-14-26	142.06	143.8	1.74			SS	FF	A	G	MN	AM	P			M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	143.8	146.58	2.78		80	ST		B	G				WD	20	M	QZ	VN	
DHGH-14-26	146.58	147.22	0.64			KL												
DHGH-14-26	147.22	149	1.78		80	ST		B	G					30	M	QZ	VN	
DHGH-14-26	149	149.22	0.22			KL												
DHGH-14-26	149.22	150.39	1.17		60	ST		B	G				WD	30	M	QZ	VN	
DHGH-14-26	150.39	152.07	1.68			ST		B	G				PD	30				
DHGH-14-26	152.07	152.97	0.90			KL												
DHGH-14-26	152.97	153.59	0.62			ST		B	G			P	PD	30	M	QZ	VN	
DHGH-14-26	153.59	153.67	0.08			CO	SY	D	K									
DHGH-14-26	153.67	154.08	0.41			SS	FF	A	G		AM				A	QZ	VN	
DHGH-14-26	154.08	154.32	0.24			KL				CO								
DHGH-14-26	154.32	154.45	0.13			KL				CO								
DHGH-14-26	154.45	154.79	0.34			SS	FF	A	G		AM				M	QZ	VN	
DHGH-14-26	154.79	155.25	0.46			KL				CO								
DHGH-14-26	155.25	155.41	0.16			SS	FF	A	G		AM	P			M	QZ	VN	
DHGH-14-26	155.41	155.51	0.10			CO	C4	D	K		AM	P			C	QZ	VN	
DHGH-14-26	155.51	156.67	1.16			XM		B	G	MN	AM	G			M	QZ	CE	
DHGH-14-26	156.67	157.41	0.74			ST		B	G		AM				M	QZ	WP	
DHGH-14-26	157.41	157.61	0.20			KL												
DHGH-14-26	157.61	158.75	1.14			ST		B	G		AM	G						
DHGH-14-26	158.75	165.35	6.60			SS	FM	A	G		AM	P			E	QZ	VN	
DHGH-14-26	165.35	168.09	2.74			ST		B	G		AM	G			M	QZ	VN	
DHGH-14-26	168.09	171.89	3.80			SS	FF	B	G			G	PD	20	M	QZ	VN	
DHGH-14-26	171.89	179.27	7.38			ST		B	G	FO	AM	G			M	QZ	VN	
DHGH-14-26	179.27	180.46	1.19			SS	FF	A	G	FO			PD	25	E	QZ	VN	
DHGH-14-26	180.46	180.52	0.06			KL												
DHGH-14-26	180.52	185.12	4.60			SS	FF	A	G		AM	P	BT		M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	185.12	185.57	0.45			CO	SY	D	K	CM		P	WD	20	C	QZ	CE	STONY COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, WAVY BEDDING AT 20 DEGREES, COMMON QZ/CARB CLEAT INFILL PREDOMINANTLY IN FACE CLEATS, LOCAL WELL DEVELOPED CLEATING, 3MM FACE CLEATS AND 1MM BUTT CLEATS, NOT SAMPLED DUE TO LOW GRADE DETERMINED FROM THE COAL IN BOX AS WELL AS GEOPHYSICAL LOGS
DHGH-14-26	185.57	186.64	1.07			MS		B	G			G	PD	30	E	QZ	WP	
DHGH-14-26	186.64	188.62	1.98		85	ST		B	G			G	WD	30	M	QZ	WP	
DHGH-14-26	188.62	191.01	2.39		85	SS	FF	A	G			P	PD	30	M	QZ	WP	
DHGH-14-26	191.01	192.55	1.54		90	ST		B	G			P	WD	20	M	QZ	WP	
DHGH-14-26	192.55	193.25	0.70			ZM		D	K			G	WD		C	QZ	VN	
DHGH-14-26	193.25	193.52	0.27			XM		B	G	MN	AM	G			E	QZ	CE	
DHGH-14-26	193.52	195.9	2.38		60	ST		B	G			G	PD		M	QZ	VN	
DHGH-14-26	195.9	204.81	8.91			SS	FM	A	G	CM			PD	20	M	QZ	VN	
DHGH-14-26	204.81	207.57	2.76		70	SS	FF	A	G			P	WD					
DHGH-14-26	207.57	208.57	1.00			MS		B	G			P	WD	20	C	QZ	VN	
DHGH-14-26	208.57	212.33	3.76			SS	FF	A	G	MN			PD	20	M	QZ	VN	
DHGH-14-26	212.33	212.45	0.12			KL												
DHGH-14-26	212.45	213.76	1.31			ST		B	G		AM	P						
DHGH-14-26	213.76	215.26	1.50			SS	FM	A	G	MN	AM				M	QZ	VN	
DHGH-14-26	215.26	215.32	0.06			KL				CO								
DHGH-14-26	215.32	215.58	0.26	140495		CO	C4	D	K	CM		G		20	M	QZ	CE	SEAM A: COAL W/ COMMON MS INTERMIXED THROUGHOUT INTERVAL, MINOR QZ/CARB CLEAT INFILL PREDOMINANTLY IN FACE CLEATS NEAR TOP OF UNIT, 1CM BAND OF DISSEMINATED PY NEAR TU, PY BLEBS IN BUTT CLEATS NEAR MIDDLE OF UNIT AS WELL , LOCAL WELL DEVELOPED CLEATING, 3MM BUTT AND 2MM FACE CLEATS, INCREASING MS CONTENT TOWARDS BOTTOM OF INTERVAL AND COAL BECOMES MORE MASSIVE, BOTTOM 10CM OF UNIT IS MODERATLEY FRACTURED

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	253.19	257.78	4.59			ST		B	G				WD	40	E	QZ	VN	
DHGH-14-26	257.78	257.9	0.12	140502		ST		B	G	MN			WD	40	M	QZ	VN	ROOF A: SILTSTONE WITH SANDSTONE INTERBEDDED WITH COAL BANDS TOWARDS THE BOTTOM OF THE UNIT
DHGH-14-26	257.9	257.98	0.08	140502		CO	SY	D	K	CM		B		35	E	QZ	CE	ROOF C: STONY COAL, COMMON XT INTERBEDDED IN STONY COAL, ACCESSORY QZ IN CLEATS, MINOR BANDS OF PYRITE, BASAL CONTACT PARTS EASILY
DHGH-14-26	257.98	258.18	0.20	140503		CO	C2	D	K	MN				35	E	QZ	CE	SEAM: COAL, MINOR INTERLAMINATED XT, WELL DEVELOPED CLEATS, 4MM FACE CLEATS, 2MM BUTT CLEATS, ACCESSORY QZ IN BUTT CLEATS, MINOR BANDS OF PYRITE,
DHGH-14-26	258.18	258.4	0.22			KL												
DHGH-14-26	258.4	258.69	0.29			ST		B	G	MN		P	PD	25	M	QZ	WP	
DHGH-14-26	258.69	258.86	0.17			CO	SY	D	K	CM								STONY COAL W/ COMMON ST LAMINATIONS THROUGHOUT INTERVAL UP TO 1CM, COAL NOT SAMPLED DUE TO LOW GRADE DETERMINED BY GEOPHYSICAL LOGS
DHGH-14-26	258.86	258.98	0.12			XT		B	G	MN		G			C	QZ	VN	
DHGH-14-26	258.98	260.59	1.61			ST		B	G	MN		G	PD	30	E	QZ	WP	
DHGH-14-26	260.59	263.98	3.39		90	SS	FF	A	G			P	PD	35	M	QZ	WP	
DHGH-14-26	263.98	264.15	0.17			SS	FF	A	G		AM							
DHGH-14-26	264.15	264.26	0.11			KL												
DHGH-14-26	264.26	267.67	3.41			SS	FF	A	G	MN			PD	30				
DHGH-14-26	267.67	267.77	0.10			KL												
DHGH-14-26	267.77	270.27	2.50		90	SS	FF	A	G	MN		P	PD		E	QZ	VN	
DHGH-14-26	270.27	270.47	0.20	140504	90	SS	FF	A	G	MN		P	PD		E	QZ	VN	ROOF A: FINEGRAINED SANDSTONE WITH IRREGULAR INTERBEDS OF SILTSTONE, POORLY DEVELOPED BEDDING, MINOR COAL LAMINATIONS THROUGHOUT, ACCESSORY QUARTZ VEINING
DHGH-14-26	270.47	270.76	0.29	140505		CO	C4	D	K	MN		I			E	PY	DS	SEAM A: C4 COAL, MINOR CARBONACEOUS MUDSTONE INTERMIXED THROUGHOUT, ACCESSORY DISSEMINATED PYRITE THROUGHOUT INTERVAL, QZ/CARB IN CLEATS, POORLY DEVELOPED CLEATS, ABUNDANT CONCHOIDAL FRACTURING THROUGHOUT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-26	270.76	270.96	0.20	140506	80	ST		B	G			P	WD	30	E	QZ	VN	ROOF A: SILTSTONE WITH WELL DEVELOPED INTERLAMINATIONS OF FINEGRAINED SANDSTONE, ACCESSORY QZ VEINING
DHGH-14-26	270.96	271.56	0.60		80	ST		B	G			P	WD	30	E	QZ	VN	
DHGH-14-26	271.56	271.75	0.19			CO	C4	D	K	CM		P	WD	40	E	QZ	VN	SEAM A: COAL WITH COMMON WELL DEVELOPED INTERLAMINATIONS OF CARBONACEOUS MUDSTONE THROUGHOUT, ACCESSORY QUARTZ VEINING, ACCESSORY PYRITE BANDING, NOT SAMPLED DUE TO POOR QUALITY DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-26	271.75	273.27	1.52			ST		B	G		AM	G			C	QZ	VN	
DHGH-14-26	273.27	275.55	2.28			SS	FF	A	G			P	PD	55	C	QZ	VN	
DHGH-14-26	275.55	280.82	5.27			ST		B	G		AM	G			M	QZ	VN	
DHGH-14-26	280.82	284.16	3.34		85	ST		B	G			G	PD	20	M	QZ	WP	
DHGH-14-26	284.16	291.63	7.47			SS	FF	A	G		AM				E	QZ	VN	
DHGH-14-26	291.63	291.69	0.06			KL												
DHGH-14-26	291.69	294.81	3.12			SS	FF	A	G		AM	P			C	QZ	VN	
DHGH-14-26	294.81	295.01	0.20	140507		SS	FF	A	G	MN	AM	P			M	QZ	VN	ROOF A: FINEGRAINED AMORPHOUS SANDSTONE, MINOR COAL LAMINATIONS AT THE BOTTOM OF THE UNIT, MINOR QZ/CARB VEINING, 1 CM PY BAND AT BOTTOM OF UNIT
DHGH-14-26	295.01	295.21	0.20	140508		CO	C3	D	K	XX		G			M	QZ	CE	SEAM ROOF: C3 COAL, LAMINATIONS OF CARBONACEOUS MUDSTONE THROUGHOUT, MINOR QZ CLEAT INFILL PREDOMINANTLY IN BUTT CLEATS, MODERATELY WELL DEVELOPED CLEATS, 2MM BUTT CLEATS, 2MM FACE CLEATS,
DHGH-14-26	295.21	296.09	0.88	140509		CO	C3	D	K	XX		G			M	QZ	CE	SEAM A: C3 COAL, LAMINATIONS OF CARBONACEOUS MUDSTONE THROUGHOUT, MINOR QZ CLEAT INFILL PREDOMINANTLY IN FACE CLEATS, MINOR PYRITE BLEBS NEAR TOP OF UNIT, QUARTZ PREDOMINANTLY NEAR BOTTOM OF SEAM, INCREASING MUDCONTENT TOWARDS BOTTOM OF SEAM, WELL DEVELOPED CLEATS, 2MM BUTT CLEATS, 2MM FACE CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	2.2	4.47	2.27			KL												
DHGH-14-27	4.47	5.25	0.78			SS	VF	E	G				PD	60	M	QZ	VN	
DHGH-14-27	5.25	5.9	0.65			ST		E	G				PD	60	M	QZ	VN	
DHGH-14-27	5.9	6.84	0.94			KL												
DHGH-14-27	6.84	9.16	2.32			ST		B	G			G	WD	40				
DHGH-14-27	9.16	12.06	2.90			SS	FF	E	G				WD	40	M	QZ	VN	
DHGH-14-27	12.06	12.21	0.15			KL												
DHGH-14-27	12.21	12.87	0.66			SS	FF	E	G			G	PD	40	M	QZ	VN	
DHGH-14-27	12.87	13.68	0.81			ST		B	G				PD					
DHGH-14-27	13.68	13.75	0.07			KL												
DHGH-14-27	13.75	14.18	0.43			KL				CO								LOST COAL
DHGH-14-27	14.18	14.28	0.10	145344		CO	C4	D	K	RA		G			R	QZ	VN	SEAM FLOOR A: COMMON CONCOIDAL FRACTURING, DISAGGREGATED IN PART; RARE ST LAMINATIONS; GRADATIONAL BOT CT; RARE PY BLEBS
DHGH-14-27	14.28	14.48	0.20	145345		ST		B	G				PD		M	QZ	VN	FLOOR: CARBONACEOUS SILTSTONE; MNR QTZ-CA VEINS
DHGH-14-27	14.48	14.55	0.07			ST		B	G			G	PD		M	QZ	VN	
DHGH-14-27	14.55	15.01	0.46			KL				CO								LOST COAL
DHGH-14-27	15.01	15.16	0.15			KL												LOST COAL
DHGH-14-27	15.16	15.28	0.12			KL												LOST COAL
DHGH-14-27	15.28	16.18	0.90			KL												
DHGH-14-27	16.18	16.3	0.12			XT		D	G						M	CB	BL	
DHGH-14-27	16.3	17.71	1.41			ST		B	G				PD	70	M	QZ	VN	
DHGH-14-27	17.71	17.96	0.25			KL												
DHGH-14-27	17.96	19.72	1.76			ST		B	G			G	WD	70				
DHGH-14-27	19.72	23.33	3.61		80	ST		B	G				WD	40	M	QZ	VN	
DHGH-14-27	23.33	23.54	0.21			KL												
DHGH-14-27	23.54	25.71	2.17		80	ST		B	G			G	WD	45	M	QZ	VN	
DHGH-14-27	25.71	34.98	9.27		55	ST		B	G	RA		G	WD	45	M	QZ	VN	
DHGH-14-27	34.98	35.33	0.35			ZM		B	G	MN		G	WD	40	M	QZ	CE	
DHGH-14-27	35.33	36.3	0.97			ST		B	G	MN		G	WD	40				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	47.51	49.37	1.86		55	ST		B	G				WD	60	M	QZ	VN	
DHGH-14-27	49.37	50.54	1.17			KL												
DHGH-14-27	50.54	50.97	0.43		55	ST		B	G				WD	30	M	QZ	VN	
DHGH-14-27	50.97	51.08	0.11			KL												
DHGH-14-27	51.08	55.33	4.25		55	ST		B	G			I	WD	30	M	QZ	VN	
DHGH-14-27	55.33	55.53	0.20			CO	SY		K			P						Not sampled. Stony coal.
DHGH-14-27	55.53	56.56	1.03		55	ST		B	G				WD	30	M	QZ	VN	
DHGH-14-27	56.56	56.91	0.35			KL												
DHGH-14-27	56.91	58.4	1.49		55	ST		B	G			G	WD	70	M	QZ	VN	
DHGH-14-27	58.4	58.66	0.26			XT		B	G				PD		R	QZ	VN	
DHGH-14-27	58.66	59	0.34			KL												
DHGH-14-27	59	59.53	0.53			KL				CO								LOST COAL
DHGH-14-27	59.53	60.84	1.31		80	SS	VM	C	G				PD	65				
DHGH-14-27	60.84	60.93	0.09			KL												
DHGH-14-27	60.93	61.25	0.32		80	SS	VM	C	G				PD	65	M	QZ	VN	
DHGH-14-27	61.25	61.42	0.17			KL												
DHGH-14-27	61.42	63.89	2.47		80	SS	VM	C	G				WD	65				
DHGH-14-27	63.89	65.69	1.80		55	ST		B	G	MN			PD	40	M	QZ	VN	
DHGH-14-27	65.69	67.19	1.50		55	ST		B	G			G	WD	15	M	QZ	VN	
DHGH-14-27	67.19	68.34	1.15			SS	VF	A	G			I	PD		M	QZ	VN	
DHGH-14-27	68.34	68.66	0.32			ST		B	G			P	WD	10	C	QZ	VN	
DHGH-14-27	68.66	68.77	0.11			XM		D	G			G	PD					
DHGH-14-27	68.77	69.11	0.34			CO	SY	D	K			I	WD		E	QZ	VN	STONY COAL, NOT SAMPLED; MINOR PARASITIC (RECUMBENT) FOLDING
DHGH-14-27	69.11	69.68	0.57			XM		D	G		AM	I			R	QZ	VN	
DHGH-14-27	69.68	70.46	0.78			CO	SY	D	K	CM		G	PD	10	E	QZ	VN	Stony Coal: not sampled. COMMON INTERBEDDED STILSTONE UP TO 30CM THICK; Folding in coal. Conchoidal fracturing. Accessory QZ in VN.
DHGH-14-27	70.46	71.06	0.60			ST		B	G	MN			WD	10	E	QZ	VN	
DHGH-14-27	71.06	71.14	0.08			KL												
DHGH-14-27	71.14	72.31	1.17			SS	VF	E	G	XX			PD	30	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	72.31	72.41	0.10			KL												
DHGH-14-27	72.41	78.43	6.02			SS	VF	E	G			I	WD	20	E	QZ	VN	
DHGH-14-27	78.43	78.83	0.40			ZM		D	G	TH		G	PD	20	M	QZ	VN	
DHGH-14-27	78.83	80.75	1.92		60	SS	VM	E	G	MN			WD	20	M	CB	FD	
DHGH-14-27	80.75	82.17	1.42			ST		B	G	CO		G	WD		M	PY	BL	6cm CO bed middle of unit.
DHGH-14-27	82.17	84.56	2.39			ST		B	G			G	WD	25	M	PY	BL	
DHGH-14-27	84.56	85.8	1.24			MS		D	G	TH		G	PD	20	R	QZ	WP	
DHGH-14-27	85.8	86.06	0.26			ZM			K	TH		G	WD	20	R	QZ	WP	
DHGH-14-27	86.06	86.16	0.10			CO	SY		K	TH					M	QZ	VN	Coal not sampled; <30cm. Stony coal. ST parting MU. Several ST bands <4mm.
DHGH-14-27	86.16	86.36	0.20			KL				CO								COAL LOSS
DHGH-14-27	86.36	86.49	0.13			KL												
DHGH-14-27	86.49	92.87	6.38		55	SS	VF	E	G			G	WD	5	R	QZ	WP	Minor folding at basal contact
DHGH-14-27	92.87	95.06	2.19			ST		B	G	TH		G	PD	10	C	QZ	VN	
DHGH-14-27	95.06	95.25	0.19			CO	SY		K			G	WD	25	E	QZ	VN	Minor visible folding in coal. Coal not sampled; <30cm. Stony coal. Poorly developed cleating. Minor QZ in face & butt cleats.
DHGH-14-27	95.25	97.89	2.64			ST		B	G			G	PD	15	R	QZ	WP	
DHGH-14-27	97.89	98.55	0.66			MS		D	G	CO		G	PD	20	M	QZ	WP	
DHGH-14-27	98.55	104.2	5.65			ST		B	G			G	WD	20	M	QZ	VN	
DHGH-14-27	104.2	109.86	5.66		60	ST		B	G			G	WD	6	M	QZ	WP	
DHGH-14-27	109.86	111.87	2.01			MS		D	G	TR		G	WD	12	M	QZ	VN	
DHGH-14-27	111.87	114.26	2.39		80	ST		B	G			G	WD	12				
DHGH-14-27	114.26	115.67	1.41			MS		D	G	TR		G	PD	15	M	QZ	CE	
DHGH-14-27	115.67	121.71	6.04			SS	VM	A	G			I	PD	20				
DHGH-14-27	121.71	122.5	0.79			MS		D	G			G	WD	8	E	QZ	VN	
DHGH-14-27	122.5	124.32	1.82		55	ST		B	G			G	WD	12				
DHGH-14-27	124.32	124.67	0.35			MS		B	G		AM	G						
DHGH-14-27	124.67	127.06	2.39			ST		B	G									
DHGH-14-27	127.06	127.89	0.83			ST		B	G			G	PD	10	R	QZ	WP	
DHGH-14-27	127.89	128.01	0.12			MS		D	G	RA		G	PD	10	R	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	128.01	128.16	0.15			CO	C4	D	K			G	PD	10	E	QZ	CE	Coal not sampled; <30cm thick.
DHGH-14-27	128.16	128.24	0.08			ZM		D	G	ST		G	WD	10	E	QZ	VN	
DHGH-14-27	128.24	128.44	0.20	145350		ZM		D	G	MN		G	WD	10	R	QZ	CE	Seam roof. Minor CO lenses. Trac QZ in cleating.
DHGH-14-27	128.44	128.81	0.37	145351		CO	C2		K	MN		G	PD	10	M	QZ	CE	Seam. Minor MS bands. Well developed cleating; <10mm butt x 15mm face cleats. Face cleats 10deg. Minor (8%) QZ in face & butt cleats. Minor (0.5%) PY in veinlets.
DHGH-14-27	128.81	129.01	0.20	145352		XM		D	G	RA		G	PD	10	M	QZ	CE	Seam floor. Rare CO bands at upper contact. Minor (<1%) QZ in cleating.
DHGH-14-27	129.01	129.49	0.48			XM		D	G	RA		G	PD	10	E	PY	BL	
DHGH-14-27	129.49	129.69	0.20	145353		XM		D	G	RA		G	PD	10	M	PY	VN	Seam roof. Minor PY (<1%) in veins. Trace QZ in cleating.
DHGH-14-27	129.69	130.02	0.33	145354		CO	C2		K	MN		P	PD	10	E	QZ	CE	Seam. Minor MS laminations. Moderate to well-developed cleating; <6mm butt x 8mm face cleats. Face cleats 5 deg. Accessory (2%) QZ mostly in butt cleats. 4mm PY vein near upper contact.
DHGH-14-27	130.02	130.13	0.11	145355		MS		D	G	RA		P	PD	10	R	QZ	CE	Seam floor. Top half clean MS. Bottom half ZM w accessory PY in cleats. Minor QZ in cleats.
DHGH-14-27	130.13	130.43	0.30	145355		ZM		B	G			G	WD	10	M	PY	CE	
DHGH-14-27	130.43	132.61	2.18			MS		B	G	RA		G	WD	10	R	QZ	CE	
DHGH-14-27	132.61	132.81	0.20	145356		MS		B	G	RA		G	WD	10	R	QZ	CE	Roof. Minor CO bands, <10mm. Rare QZ in cleats. 30mm PY band at bottom contact.
DHGH-14-27	132.81	133.37	0.56	145357		CO	C3		K	MN		G	PD	10	M	QZ	CE	Seam. Minor MS bands <4mm. Locally well-developed cleating at top grading into intact disaggregated CO with listric fractures. <4x10mm cleats. Face cleats 65deg. Minor QZ (~1%) in cleats.
DHGH-14-27	133.37	133.93	0.56	145358		CO	C1		K	RA		G	PD	10	M	QZ	VN	Seam. Minor MS bands <2mm. Very well-developed cleating; <10x20mm. Face cleats 60deg spaced 20mm. Rare conchoidal fracturing. Minor QZ in face cleats.
DHGH-14-27	133.93	134.23	0.30	145359		CO	SY		K	MN		G	PD	5	M	QZ	VN	Parting. Stony CO. Minor ST lenses <8mm. Minor QZ in veins.
DHGH-14-27	134.23	134.38	0.15	145360		CO	SY		K	AB		G	WD	5	M	QZ	VN	Seam. Stony CO. Pick based on density log. Minor QZ in veins.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	134.38	134.57	0.19	145361		CO	C2		K	MN		G	WD	5	M	QZ	CE	Seam floor. Minor MS laminations <2mm. Well-developed cleating, 8x10mm. Face cleats 70deg. Minor, <2mm thick QZ. Minor, <3mm PY in veins.
DHGH-14-27	134.57	134.73	0.16	145362		ZM		B	G	TR		G	WD	5	M	QZ	VN	Floor. Minor, <3mm CO lenses. Minor, <4mm QZ veins.
DHGH-14-27	134.73	134.83	0.10			ZM		B	G			G	WD	5	M	QZ	VN	
DHGH-14-27	134.83	137.17	2.34		60	SS	VF	M	G			G	WD	10				
DHGH-14-27	137.17	142.26	5.09		55	ST		B	G	MN		G	WD	10	M	QZ	CE	
DHGH-14-27	142.26	144.69	2.43		50	ST		B	G	MN		G	WD	15	M	QZ	CE	
DHGH-14-27	144.69	146.08	1.39			ST		B	G			G	PD	15				
DHGH-14-27	146.08	146.59	0.51			ZT		B	G	TH		G	PD	20	M	QZ	VN	
DHGH-14-27	146.59	154.54	7.95		55	SS	VM	M	G			I	WD	10				
DHGH-14-27	154.54	155.06	0.52			ST		B	G			G	PD	15	M	QZ	WP	
DHGH-14-27	155.06	155.36	0.30			CO	SY		K			G	WD	7	R	QZ	CE	Not sampled. Stony coal.
DHGH-14-27	155.36	155.56	0.20	145363		CO	SY		K			G	WD	7	R	QZ	CE	Roof. Stony coal. Minor CO bands <5mm. Trace QZ in cleats.
DHGH-14-27	155.56	155.75	0.19	145364		CO	C3		K	MN		G	WD	5	M	QZ	CE	Seam roof. Single ST bed <35mm. Moderately well-developed cleating, <7x10mm. Face cleats 60deg spaced 10mm. Butt cleats spaced 5mm. Minor QZ <3mm thick in cleats.
DHGH-14-27	155.75	156.28	0.53	145365		CO	C1		K	MN		G	WD	10	M	QZ	CE	Seam. MNR SILTSTONE LENSES UP TO 5MM; MOD TO WELL DEVELOPPED CLEATING UP TO 5MM X 5MM; FACE CLEATS AT 70DEG SPACED AT 5MM; MNR QTZ-CA INFILLING CLEATS UP TO 3MM WIDE
DHGH-14-27	156.28	156.44	0.16	145366		CO	C3		K	MN		G	WD	10	E	QZ	VN	SEAM: MNR MS BANDS UP TO 2MM; POORLY DEVELOPPED CLEATING 3MM X 2MM; FACE CLEATS AT 80DEG ; MNR QTZ-CA VEINS NEAR BOT OF INTERVAL; GRADATIONAL BOT CT
DHGH-14-27	156.44	156.81	0.37	145367		CO	C2		K	MN		I	WD	10	M	QZ	CE	SEAM: MNR MS BANDS UP TO 2MM WIDE; WELL DEVELOPPED CLEATING UP TO 10MM FACE X 6MM BUTTS, W/70DEG FACE CLEATS UP TO 10MM APART; MINOR QTZ-CA CLEAT INFILL UP TO 2MM THICK; GRADATIONAL LOWER CT
DHGH-14-27	156.81	156.93	0.12	145368		ST		B	G			I	PD	15	M	QZ	VN	Parting: CLEAN SILTSTONE

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	156.93	157.09	0.16	145369		CO	C2		K	MN		G	PD	10	M	QZ	CE	Seam floor: MINOR MS BANDS UP TO 1MM; MODERATELY DEVELOPPED CLEATING UP TO 4MM FACE X 4MM BUTTS, FACE CLEATS ARE AT 60DEG SPACED AT 4MM; MNR QTZ CLEAT INFILL UP TO 3MM WIDE
DHGH-14-27	157.09	157.29	0.20	145370		MS		D	K	TR		G	PD	10	R	QZ	CE	Floor: TRACE COAL LENSES AND BANDS UP TO 1MM THICK NEAR TOP CONTACT
DHGH-14-27	157.29	157.37	0.08			MS		D	K	TR		G	PD	10				
DHGH-14-27	157.37	160.92	3.55		55	ST		B	G	RA		G	WD	10	R	QZ	CE	
DHGH-14-27	160.92	161.05	0.13			CO	C3	D	K	MN		G			E	QZ	VN	Coal not sampled; <30cm thick
DHGH-14-27	161.05	163.01	1.96			MS		B	G	MN		G	WD	40	M	QZ	VN	
DHGH-14-27	163.01	163.86	0.85			ST		B	G			G	WD	30	M	QZ	WP	MINOR PARASITIC FOLDING TOP OF UNIT
DHGH-14-27	163.86	164.32	0.46			ZM		D	G	TH		G	WD	10	M	QZ	VN	
DHGH-14-27	164.32	167.02	2.70		60	ST		E	G			G	WD	10				
DHGH-14-27	167.02	168.31	1.29			ST		B	G			G	WD	5				
DHGH-14-27	168.31	177.65	9.34			SS	FM	A	G			I	WD	15				
DHGH-14-27	177.65	178.07	0.42			MS		B	G	TH		G	WD	10	M	QZ	VN	
DHGH-14-27	178.07	178.37	0.30			CO	SY	D	K	MN		G	WD	10	M	QZ	CE	NOT SAMPLED: STONEY COAL
DHGH-14-27	178.37	181.5	3.13		60	ST		B	G			G	WD	10				
DHGH-14-27	181.5	182.07	0.57			MS		D	K	MN		G	PD	10				
DHGH-14-27	182.07	183.85	1.78		60	ST		B	G	MN			WD	5				
DHGH-14-27	183.85	183.97	0.12			ZM			K		AM	I						
DHGH-14-27	183.97	184.08	0.11			CO	SY		K			G	WD	5	M	QZ	CE	NOT SAMPLED: STONY COAL <30CM
DHGH-14-27	184.08	185.65	1.57			ST		B	G	TR		G	PD	10	R	PF		
DHGH-14-27	185.65	187.98	2.33			SS	FM	E	G	MN		P	WD	5				
DHGH-14-27	187.98	188.71	0.73			ST		B	G	MN		G	PD	10	R	QZ	CE	
DHGH-14-27	188.71	189.94	1.23		75	SS	VF	E	G			G	PD	10				
DHGH-14-27	189.94	190.6	0.66			ST		E	G				PD	10	R	PY	BL	
DHGH-14-27	190.6	190.7	0.10			KL												
DHGH-14-27	190.7	190.75	0.05			ST		E	G			G	PD	10	C	QZ	VN	
DHGH-14-27	190.75	190.83	0.08			CO	SY		K			G	WD	5	M	QZ	VN	Not sampled; stony coal; <30cm.
DHGH-14-27	190.83	193.92	3.09		70	ST		E	G	RA		G	WD	15	R	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	193.92	199.02	5.10		60	MS		D	G	TR		G	PD	10	M	PF	BP	
DHGH-14-27	199.02	203.55	4.53		55	ST		E	G			G	WD	2				
DHGH-14-27	203.55	207.8	4.25			ST		N	G	CO			WD	10	M	QZ	VN	5cm stony coal band middle of unit
DHGH-14-27	207.8	208	0.20	145371		ST		N	G	CO		G	WD	10	M	QZ	VN	ROOF: COAL BANDS NEAR LOWER CONTACT UP TO 1CM WIDE
DHGH-14-27	208	208.21	0.21	145372		CO	C2		K	MN			WD	7	E	QZ	CE	SEAM ROOF A: MNR MS BANDS UP TO 2MM & MNR SILTSTONE LENSES UP TO 5MM; MODERATELY DEVELOPPED CLEATING UP TO 5MM X 5MM; FACE CLEATS 70DEG; APPROX 3% QTZ CLEAT INFILL UP TO 4MM THICK
DHGH-14-27	208.21	208.51	0.30	145373		CO	C2		K	MN		G	WD	7	E	QZ	CE	SEAM: MNR MS BANDS <1MM; WELL DEVELOPPED CLEATS UP TO 5MM FACE X 5MM BUTTS; FACE CLEATS AT 80DEG; QTZ CLEAT INFILL UP TO 2MM
DHGH-14-27	208.51	208.71	0.20	145374		ZM		D	G	MN			PD	10	M	QZ	CE	FLOOR: MINOR COAL BANDS <9MM WIDE
DHGH-14-27	208.71	208.91	0.20			ZM		D	G	MN			PD	10	M	QZ	CE	
DHGH-14-27	208.91	209.07	0.16	145375		ZM		D	G	MN		G	PD	10	M	QZ	CE	ROOF: MINOR COAL BANDS UP TO 20MM WIDE NEAR BASAL CONTACT
DHGH-14-27	209.07	209.42	0.35	145376		CO	C3		K	MN		G	WD	5	E	QZ	CE	SEAM A: MINOR SILTSTONE LENSES <6MM; MODERATELY DEVELOPPED CLEATING UP TO 3MM BUTT X 6MM FACE; FACE CLEATS 70 DEG SPACED AT 6MM; ACCESORY QTZ-CA CLEAT INFILL UP TO 5MM; 1% PY IN BLEBS; GRADATIONAL BOT CT
DHGH-14-27	209.42	209.62	0.20	145377		ST		B	G	MN		G	WD	10	M	QZ	CE	FLOOR: 60MM COAL BAND IN MIDDLE OF INTERVAL; COAL BANDS NEAR TOP CT UP TO 10MM
DHGH-14-27	209.62	210.38	0.76		60	ST		B	G			G	WD	10	M	QZ	CE	
DHGH-14-27	210.38	210.53	0.15			CO	SY		K	CM		P	WD	5	E	QZ	CE	Not sampled; stony coal; <30cm
DHGH-14-27	210.53	210.81	0.28			ZM			K	MN		P	PD	10				
DHGH-14-27	210.81	211.11	0.30			CO	SY		K	CM		G	WD	15	E	QZ	CE	Not sampled; stony coal
DHGH-14-27	211.11	212.04	0.93		65	ST		E	G			G	PD	10	R	PY	BL	
DHGH-14-27	212.04	213.02	0.98			ZM		D	G	MN			PD	5	M	QZ	VN	
DHGH-14-27	213.02	213.24	0.22	145378		ZM		D	G	MN		G	PD	10	M	QZ	CE	ROOF A: MINOR COAL BANDS UP TO 10MM; MINOR PY BANDS UP TO 3MM WIDE

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	213.24	213.44	0.20	145379		CO	C2		K	MN		G	WD	10	M	QZ	CE	SEAM ROOF A: MINOR SILTSTON LENSES UP TO 3MM WIDE; MODERATELY DEVELOPPED CLEATING UP TO 8MM FACE X 4MM BUTT; FACE CLEATS 80 DEG; MINOR QTZ-CA CLEAT INFILL UP TO 1MM THICK, AND MINOR PY IN CLEATS
DHGH-14-27	213.44	213.77	0.33	145380		CO	C2		K	MN			WD	10	M	QZ	CE	SEAM: MNR MS BANDS <8MM; WELL DEVELOPPED CLEATING 4MM BUTT X 7MM FACE; FACE CLEATS 70 DEG; MINOR QTZ IN CLEATS <0.5MM WIDE
DHGH-14-27	213.77	213.97	0.20	145381		CO	C3		K	MN		G	WD	10	M	QZ	CE	SEAM FLOOR A: MINOR SILTSTONE BANDS <10MM; POORLY DEVELOPPED CLEATING 4MM BUTTS X 6MM FACE; FACE CLEATS 80DEG; MINOR QTZ-CA CLEAT INFILL UP TO 3MM WIDE; MINOR PY BANDS; GRADATIONAL LOWER CT
DHGH-14-27	213.97	214.17	0.20	145382		SS	FC	L	G		AM							FLOOR: CLEAN SANDSTONE
DHGH-14-27	214.17	220.39	6.22			SS	FC	L	G	CL		I	WD	10	M	PY	BL	
DHGH-14-27	220.39	220.52	0.13			CO	C2		K	RA		P	WD	10	E	QZ	CE	Not sampled; <30cm. Rare MS laminations. Well developed cleating, <20x10mm. 15% QZ in face & butt clats. Minor PY blebs.
DHGH-14-27	220.52	224.79	4.27		70	SS	VM	A	G	RA		G	WD	10				
DHGH-14-27	224.79	224.94	0.15			ZM		D	G	MN		G	WD	10	M	QZ	CE	
DHGH-14-27	224.94	225.04	0.10			CO	C3			MN		G	PD	10	E	QZ	CE	Not sampled; <30cm. Well developed cleating, <25x10mm. Minor MS laminations. 15% QZ in face & butt cleats. Minor PY in cleats.
DHGH-14-27	225.04	227.83	2.79			ST		E	G	MN		P	PD	30	M	QZ	CE	CO bands <5cm thick, spacing 30cm.
DHGH-14-27	227.83	227.97	0.14			SS	FF	L	G	RA	AM	P						
DHGH-14-27	227.97	229.99	2.02			ST		B	G			G	WD	20	R	QZ	WP	
DHGH-14-27	229.99	231.36	1.37			SS	FM	A	G			G	PD	20				
DHGH-14-27	231.36	232.15	0.79		60	SS	FF	A	G			G	WD	10				
DHGH-14-27	232.15	234.88	2.73			SS	FM	A	G	MN	EQ	P	WD	10	M	QZ	VN	
DHGH-14-27	234.88	235.77	0.89		70	SS	FM	A	G			G	WD	10	M	PY	BN	
DHGH-14-27	235.77	235.93	0.16			CO	C4		K	CO		G	WD	10	E	QZ	CE	Not sampled; <30cm. Common MS laminations. Moderately-developed cleating, <10x7mm. 15% QZ in cleating. 5% PY in veins.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	235.93	236.64	0.71			ZM		B	G	CM		G	WD	5	M	QZ	CE	
DHGH-14-27	236.64	238.3	1.66			ST		B	G	RA		G	PD	10	R	QZ	CE	
DHGH-14-27	238.3	238.6	0.30	145383		ZM			K	CM		G	WD	5	E	QZ	CE	ROOF: COMMON COAL BANDS <2CM WIDE; GRADATIONAL BOT CT
DHGH-14-27	238.6	238.74	0.14	145384		CO	C4		K	CM			WD	5	M	QZ	CE	SEAM ROOF A: COMMON MS BANDS UP TO 8MM; BEDDING PLACES SHOW LISTRIC SHEARED FACES; POORLY DEVELOPPED CLEATING 5MM FACE X 2MM BUTT; CLEAT FACES 70DEG; MINOR QTZ CLEAT INFILL UP TO 3MM; MNR PY CLEAT INFILL UP TO 1MM NEAR TOP CT
DHGH-14-27	238.74	239.09	0.35	145385		CO	C3		K	CM			PD	5	M	PY	BL	SEAM A: COMMON MS BANDS <2MM; LARGE 6CM MS BAND IN MIDDLE OF INTERVAL; WELL DEVELOPPED CLEATING 6MM FACES X 5MM BUTTS; FACE CLEATS AT 70DEG; RARE QTZ VEINLETS <1MM IN BEDDIG PLANES; MINOR PY BLEBS UP TO 4MM
DHGH-14-27	239.09	239.25	0.16	145386		CO	C3		K	MN		P	PD	15	M	QZ	CE	SEAM FLOOR A: MINOR MS BANDS UP TO 3MM WIDE; MODERATELY DEVELOPPED CLEATING 5MM FACE X 4MM BUTT; FACE CLEATS AT 80DEG; MINOR QTZ INFILLING CLEATS UP TO 3MM; 20MM WIDE PY BLEB AT TOP OF INTERVAL
DHGH-14-27	239.25	239.45	0.20	145387		MS		D	G	MN			PD	20	R	QZ	CE	FLOOR: MINOR COAL LENSES UP TO 3MM
DHGH-14-27	239.45	241.36	1.91			MS		D	G	RA		P	PD	20	R	QZ	CE	
DHGH-14-27	241.36	247.34	5.98			SS	FC	L	G	RA			PD	20	R	QZ	VN	
DHGH-14-27	247.34	247.54	0.20	145388		SS	FC	L	G			I	PD	20				ROOF: CLEAN SANDSTONE
DHGH-14-27	247.54	247.74	0.20	145389		CO	C4	D	K	CM		G	WD	10	M	PY	BL	SEAM ROOF A: COMMON ST BANDS <8MM; POORLY DEVELOPPED CLEATING 4MM X 2MM; FACE CLEATS 80 DEG; TRACE QTZ IN CLEATS UP TO 1MM WIDE; MINOR PY BLEBS
DHGH-14-27	247.74	248	0.26	145390		CO	C4	D	K	CM		G	WD	15	E	QZ	CE	SEAM: COMMON SILTSTONE BANDS UP TO 6MM WIDE; POORLY DEVELOPPED CLEATING UP TO 4MM FACES X 2MM BUTTS; CLEAT FACES AT 75 DEG SPACED AT 4MM; MINOR QTZ CLEAT INFILL UP TO 3MM; MINOR PY IN VEINS UP TO 3M WIDE; COAL GRADE DECREASES W/DEPTH TO A GRADATIONAL LOWER CT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	248	248.39	0.39	145391		ZM		D	K	MN		G	PD	15	M	QZ	CE	PARTING: COALY MUDSTONE; MINOR COAL LENSES <5MM; ONE COAL BAND 50MM WIDE;
DHGH-14-27	248.39	248.71	0.32	145392		CO	C3	D	K	MN			WD	10	E	QZ	CE	SEAM A: MINOR SILTSTONE BANDS 10-30MM THICK; POORLY DEVELOPPED CLEATING UP TO 6MM FACE X 3MM BUTT; FACE CLEATS 75DEG; ACESSORY QTZ (5%) UP TO 3MM INFILLING CLEATS; MINOR PY BLEBS UP TO 3MM
DHGH-14-27	248.71	248.91	0.20	145393		CO	C3	D	K	MN		P	WD	10	M	QZ	CE	SEAM FLOOR A: MINOR SILTSTONE BANDS <17MM; POORLY DEVELOPPED CLEATING ABOUT 7MM FACE X 2MM BUTT; FACE CLEATS AT 65 DEG; MINOR QTZ CLEAT INFILL UP TO 5MM; MINOR PY BANDS UP TO 4MM
DHGH-14-27	248.91	249.08	0.17	145394		XM		B	G	TR			WD	5				FLOOR: CARBONACEOUS MUDSTONE; SINGLE COAL BAND (4MM WIDE) AT BOT OF INTERVAL
DHGH-14-27	249.08	249.75	0.67			XM		B	G	MN		G	WD	5	M	PY	VN	
DHGH-14-27	249.75	261.07	11.32		55	SS	VV	A	G			G	WD	10	M	QZ	VN	
DHGH-14-27	261.07	261.32	0.25			XM		D	G	RA			PD	20	R	QZ	CE	
DHGH-14-27	261.32	261.52	0.20	145395		XM		D	G	RA		I	PD	20	R	QZ	CE	ROOF A: MINOR COAL LENSES UP TO 3MM WIDE; TRACE FERN & LEAF FRAGMENTS
DHGH-14-27	261.52	261.69	0.17	145396		CO	C2		K	MN			PD	8	M	QZ	CE	SEAM ROOF: MINOR MUDSTONE LAMINATIONS < 1MM; POOR TO MODERATELY DEVELOPED CLEATING UP TO 5MM X 5MM; FACE CLEATS AT 55DEG; MINOR QTZ CLEAT INFILL UP TO 3MM
DHGH-14-27	261.69	262.24	0.55	145397		CO	C3		K	MN			WD	5	M	QZ	CE	SEAM: MINOR MUDSTONE BANDS UP TO 8MM WIDE; LOCALLY POOR TO MODERATELY DEVELOPED CLEATING UP TO 5MM FACES X 3MM BUTTS; FACE CLEATS 65 DEG SPACED 5MM; MINOR QTZ INFILLING CLEATS UP TO 3MM WIDE
DHGH-14-27	262.24	262.44	0.20	145398		CO	C4		K	CM		G	WD	5	M	QZ	CE	SEAM FLOOR: COMMONG MUDSTONE BANDS UP TO 20MM WIDE; POORLY DEVELOPED CLEATING UP TO A MAXIMUM OF 5M X 2MM; FACE CLEATS 70DEG; LISTRIC SURFACES; MINOR QTZ CLEAT INFILL UP TO 3MM WIDE
DHGH-14-27	262.44	262.63	0.19	145399		ZT		B	G	MN		G	PD	10	M	QZ	CE	FLOOR: MNOR COAL BANDS UP TO 80MM; COAL DECREASES W/DEPTH
DHGH-14-27	262.63	263.48	0.85		50	ST				TR		G	WD	15	R	QZ	WP	
DHGH-14-27	263.48	264.48	1.00			ZM			K			G	WD	5	M	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	282.3	282.84	0.54	145407		CO	C3		K	MN			PD	30	M	QZ	CE	SEAM: MINOR SILTSTONE LENSES UP TO 10MM; MINOR MS BANDS <1MM; NO CLEATING; COAL FABRIC PARTLY DESTROYED/CRUSHED; RARE LISTRIC SURFACES SEEN; RARE QZ CLEAT INFILL;
DHGH-14-27	282.84	282.98	0.14	145408		XT		D	G	MN		G			M	QZ	VN	PARTING: CARBONACEOUS SILTSTONE; QZ LENSES UP TO 3MM; LISTRIC/SHEARED SURFACES; COAL NEAR LOWER CT
DHGH-14-27	282.98	283.81	0.83	145409		CO	C3		K	MN			PD	60	M	QZ	VN	SEAM: MINOR SILTSTONE LENSES UP TO 10MM; MINOR MS LAMINATIONS; COMMON LISTRIC/SHEARED SURFACES; COAL FABRIC MOSTLY DESTROYED BY SHEARING; NO CLEATS; RARE QZ VEINLETS
DHGH-14-27	283.81	284.64	0.83	145410		CO	C3		K	MN			PD	70	M	QZ	VN	SEAM: MINOR SILTSTONE LENSES UP TO 8MM; MILLED SILTSTONE CLASTS UP TO 50MM (SUB ROUNDED); NO CLEATING; COAL TEXTURES DESTROYED/CRUSHED; VARIABLY FOLDED UP TO ISOCLINAL FOLDING; DISCRETE FAULT; LISTRIC SURFACES, OCCASIONALLY SLICKED;
DHGH-14-27	284.64	285.47	0.83	145411		CO	C3		K	MN			PD	80	M	QZ		SEAM: MIONR SILTSTONE LENSES AND BROKEN BANDS UP TO 25MM WIDE; QZ VEINS ASSOC W/SILTSTONE BANDS; NO CLEATING; COAL FABRIC DESTORYED/PULVERISED BY FOLDING AND SHEARING; OCCASIONAL LISTRIC SURFACES; DISCRETE FAULTS AT 50 DEG; HIGHLY FOLDED; LOCAL VERTICLE BEDDING AT BOTTOM OF INTERVAL
DHGH-14-27	285.47	286.31	0.84	145412		CO	C2		K	MN		G	PD	50	M	QZ	VN	SEAM: MINOR SILTSTONE BANDS AND CLASTS UP TO 40MM WIDE; MINOR QZ VEINS ASSOC W/SILTSTONE CLASTS; NO CLEATING; MINOR CONCOIDAL FRACTURING; PRIMARY COAL TEXTURES DESTROYED BY SHEARING; FOLDED IN PART W/LOCAL VERTICLE BEDDING AT TOP OF INTERVAL; LISTRIC SURFACES NEAR BOT CONTACT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	286.31	287.18	0.87	145413	40	SS	VM	A	G			G	PD		C	QZ	VN	PARTING A: UPPER CONTACT IS DISCRETE FAULT; LARGE OPEN FOLD HINGE; SHEARED AND SLICKED ALONG BEDDING PLANES; SS, ST AND CO BANDS ARE INTERBEDDED AND PARTLY INTERMIXED, LOCALLY PRESERVING POOR BEDDING;
DHGH-14-27	287.18	288.07	0.89	145414		CO	C2		K	MN			PD	65	M	QZ	VN	SEAM: MINOR SILTSTONE BANDS UP TO 40MM THICK; COAL GRADE VARIES LOCALLY FROM C3-C2; CLEATING MOD TO WELL DEVELOPPED LOCALLY UP TO 5MM X 5MM; FACE CLEAST AT 50DEG; OCCASIONAL LISTRIC SURFACES ALONG BEDDING PLANES WITH SLICKS; BEDDING VARIES 60-70 DEG;
DHGH-14-27	288.07	288.96	0.89	145415		CO	C2		K	MN		G	PD	55	M	QZ	CE	SEAM: MINOR SILTSTONE LENSES AND BANDS UP TO 20MM THICK; MINOR QTZ CLEAT INFILL; MOD TO WELL DEVELOPED CLEATING 5MM X 8MM ; CLEAT FACES AT 45DEG; MINOR FOLDING BEGINNING AT BOT OF INTERVAL; RARE SLICKED BEDDING PLANES BOT OF INTERVAL; MINOR CONCOIDAL FRACTURING
DHGH-14-27	288.96	289.11	0.15	145416		ST		B	G	RA			PD					BASED ON GAMMA; FOLDED SILTSTONE BAND; RARE COAL AT CONTACTS
DHGH-14-27	289.11	289.84	0.73	145417		CO	C3		K	MN			PD	10	M	QZ	CE	SEAM: MINOR ST BANDS UP TO 10MM THICK; POORLY DEVELOPED CLEATING 3MM X 2MM; FACE CLEATS AT 60DEG; MINOR LISTRIC SURFACES; RARE QTZ CLEAT INFILL UP TO 0.5MM
DHGH-14-27	289.84	290.53	0.69	145418		CO	C2		K	MN			PD	10	M	QZ	VN	SEAM: 10% SILTSTONE BANDS 1MM - 20MM; MINOR QTZ VEINS ASSOC W/ST BANDS; MOD TO WELL DEVELOPED CLEATING 3MM FACE X 5MM BUTT; BUTT CLEATS 60DEG; MINOR CONCOIDAL FRACTURING; UP TO 2MM THICK QTZ CLEAT INFILL; MINOR VARIABLE FOLDING
DHGH-14-27	290.53	291.25	0.72	145419		CO	C3		K	MN			PD	10	M	QZ	VN	SEAM: MINOR SILTSTONE BANDS UP TO 15MM; MINOR QTZ VNS ASSOC W/ST BANDS; PRIMARY COAL TEXTURES PARTIALLY DESTROYED BY SHEARING; LOCAL POORLY DEVELOPED CLEATING 4MM FACE X 3MM BUTT; FACE CLEATS AT 85DEG; COMMON LISTRIC SURFACES ON BEDDING PLANES; TRACE QTZ CLEAET INFILL 1MM THICK

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	294.84	295.02	0.18	145428		ST		B	G	MN			PD	30				PARTING: SILTSTONE W/MINOR COAL BANDS UP TO 30MM; LISTRIC SURFACES
DHGH-14-27	295.02	295.22	0.20	145429		CO	C2		K	MN			PD	20	R	QZ	CE	SEAM: MINOR ST BANDS 1-10MM; MOD TO WELL DEVELOPED CLEATING UP TO 10MM FACE X 10MM BUTTS;TRACE QTZ CLEAT INFILL (0.5MM); MINOR LISTRIC SURFACES
DHGH-14-27	295.22	295.42	0.20	145430		CO	C2		K	MN		G	PD	20	R	QZ	CE	SEAM FLOOR: MINOR ST BANDS 1-10MM; MOD TO WELL DEVELOPED CLEATING UP TO 10MM FACE X 10MM BUTTS;TRACE QTZ CLEAT INFILL (0.5MM); MINOR LISTRIC SURFACES
DHGH-14-27	295.42	295.65	0.23	145431		ST		E	G	MN		G	PD	30	M	QZ	CE	FLOOR: MINOR COAL LENSES UP TO 10MM NEAR TOP CT
DHGH-14-27	295.65	296.37	0.72			ZM		D	G	CM		I	WD	30	E	QZ	CE	PARASITIC FOLDING
DHGH-14-27	296.37	297	0.63			ST		E	G	RA		G	PD	30	M	QZ	WP	
DHGH-14-27	297	306.69	9.69			SS	VM	A	G	RA		G	PD	35	E	QZ	VN	
DHGH-14-27	306.69	310.18	3.49			SS	VM			TR								
DHGH-14-27	310.18	314.86	4.68		75	ST		B	G			G	WD	50	M	QZ	VN	
DHGH-14-27	314.86	323.25	8.39		60	SS	VF	E	G			G	WD	60	M	QZ	VN	
DHGH-14-27	323.25	340.75	17.50			SS	VM	A	G	CM		G	PD	65	M	QZ	VN	Single large fold reversing bedding dip
DHGH-14-27	340.75	347.5	6.75		60	SS	VF	E	G			G	WD	60	M	QZ	VN	
DHGH-14-27	347.5	350.82	3.32		70	ST		B	G			G	WD	55	M	QZ	VN	
DHGH-14-27	350.82	360.78	9.96			SS	VF	A	G	MN		G	WD	50	M	QZ	VN	
DHGH-14-27	360.78	361.29	0.51			ST		B	G			G	WD	30	R	QZ	WP	
DHGH-14-27	361.29	361.7	0.41			ZT		B	G	MN		G	WD	35	E	QZ	CE	
DHGH-14-27	361.7	361.98	0.28			MS		B	G	MN			PD	35	M	QZ	CE	
DHGH-14-27	361.98	362.15	0.17	145432		MS		B	G	MN		I	PD	35	M	QZ	CE	ROOF: MINOR COAL BANDS UP TO 5MM
DHGH-14-27	362.15	362.35	0.20	145433		CO	C2	D	K	MN			PD	40	M	QZ	CE	SEAM ROOF: MINOR MS LAMINATIONS <3MM; POORLY DEVELOPPED CLEATING 4MM X 2MM; FACE CLEATS 70DEG; MINOR QTZ CLEAT INFILL UP TO 2MM; FOLDED NEAR BOTTOM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-27	362.35	363.15	0.80	145434		CO	C3	D	K	MN			PD	30	M	QZ	VN	SEAM: MINOR MUDSTONE LAMINATIONS <3MM;MINOR ST LENSES UP TO 8MM WIDE; PRIMARY TEXTURES PARTIALLY DESTROYED BY FAULDING/SHEARING AT TOP OF INTERVAL; LOCALLY POORLY DEVELOPED CLEATING UP TO 2MM X 4MM; FACE CLEATS 65 DEG; FOLDED AND WEAKLY FAULTED (DISCREET FAULT) NEAR TOP OF INTERVAL; LISTRIC SURFACES; RARE QTZ ASSOCIATED W/ST CLASTS
DHGH-14-27	363.15	363.95	0.80	145435		CO	C3	D	K	MN			PD		M	QZ	VN	SEAM: MINOR ST & MS BANDS 2-25MM; PRIMARY COAL TEXTURES DESTROYED/CRUSHED; PARTIALLY FOLDED W/COMMON LISTRIC SURFACES AND SLICKENSLIDED BEDDING PLANES; MINOR QTZ VEINS UP TO 3MM
DHGH-14-27	363.95	364.74	0.79	145436		CO	C3	D	K	MN			PD		M	QZ	VN	SEAM: MINOR ST BANDS AND MS LENSES 1-10MM WIDE; LOCALLY POORLY DEVELOPED CLEATING; SILTSTONE + QTZ VEIN RUNNING PARALLEL TO CORE AXIS (VERTICLE) IN LOWER HALF OF INTERVAL; PRIMARY TEXTURES MAINLY DESTROYED BY SHEARING & FAULTING; COMMON LISTRIC SURFACES WITH SLICKENSLIDES; FOLDED
DHGH-14-27	364.74	364.94	0.20	145437		CO	C4	D	K	CM		G	PD		M	QZ	VN	SEAM FLOOR: COMMON SILTSTONE BANDS UP TO 50MM WIDE AS COAL GRADES INTO UNDERLYING SS/ST; MINOR QTZ VEINS; FOLDED W/COMMON LISTRIC SURFACES; SHEARING AND FOLDING DESTROYING PRIMARY COAL TEXTURES;
DHGH-14-27	364.94	365.14	0.20	145438		SS	FF	E	G	MN			WD		E	QZ	VN	FLOOR: HIGHLY FOLDED W/MINOR COAL BANDS
DHGH-14-27	365.14	392.35	27.21			SS	VF	E	G	MN			WD	50	E	QZ	VN	EOH
DHGH-14-27	392.35	392.89	0.54			ST		B	G									EOH
DHGH-14-28	0	1.79	1.79			KL												
DHGH-14-28	1.79	1.99	0.20			SS	FF	A	G		EQ				E	QZ	VN	
DHGH-14-28	1.99	2.11	0.12			KL												
DHGH-14-28	2.11	5.04	2.93			SS	FF	A	G	FO			PD	25	C	BI		bivalve interval from 5.09-6.0m
DHGH-14-28	5.04	5.14	0.10			KL												
DHGH-14-28	5.14	9.85	4.71			ST		B	G	FO		G	PD	25	C	BI		bivalve interval from 5.09-6.0m

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	41.73	42	0.27	140520		CO	C6	D	K	MN	AM	G			E	QZ	VN	SEAM: SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, TWO 6MM ACCESSORY QZ/CARB VEINS NEAR MIDDLE OF UNIT LOCAL WELL DEVELOPED CLEATS IN MIDDLE OF INTERVAL, ELSEWHERE POORLY DEVELOPED CLEATING, 5MM FACE CLEATS, 3MM BUTT CLEATS
DHGH-14-28	42	42.2	0.20	140521		ZM		B	G	MN	AM	P			M	QZ	VN	FLOOR: MASSIVE SHEARED COALY MUDSTONE W/ MINOR COAL BANDS THROUGHOUT 7MM-2CM, MINOR QZ/CARB VEINING, QZ/CARB ALSO PRESENT IN CLEATS UP TO 1MM
DHGH-14-28	42.2	43.01	0.81			MS		B	G	MN	AM	P			M	QZ	VN	
DHGH-14-28	43.01	43.56	0.55			ZM		D	K	MN					M	QZ	VN	
DHGH-14-28	43.56	43.99	0.43			KL												
DHGH-14-28	43.99	44.24	0.25	140522		CO	SY	D	K	CM		G			E	QZ	VN	ROOF: STONY COAL W/ COMMON MS LAMINATIONS THROUGHOUT UNIT, ACCESSORY QZ/CARB VEINING UP TO 8MM AND CLEAT INFILL RANGING FROM 2MM-10MM, LISTRIC SURFACES ALONG BEDDING PLANES
DHGH-14-28	44.24	44.44	0.20	140523		CO	C5	D	K	MN	AM	G			M	QZ	VN	SEAM ROOF: MASSIVE SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, MINOR 2MM THICK QZ/CARB VEINING THROUGHOUT UNIT, CLEATING IS VERY POORLY DEVELOPED, LISTRIC SURFACES PRESENT ALONG JOINTS
DHGH-14-28	44.44	45.14	0.70	140524		CO	C4	D	K	MN	AM	G			E	QZ	VN	SEAM: MASSIVE SHEARED COAL, W/ MINOR MS INTERMIXED THROUGHOUT UNIT, ACCESSORY QZ/CARB VEINING CONCENTRATED AT BOTTOM OF UNIT, ALSO PRESENT IN VERY SMALL POORLY DEVELOPED CLEATS
DHGH-14-28	45.14	45.34	0.20	140525		ZM		D	K	CM	AM	G			M	QZ	VN	PARTING: MASSIVE COALY MUDSTONE, COMMON COAL INTERMIXED THROUGHOUT UNIT, MINOR QZ/CARB VEINING THROUGHOUT UNIT, LISTRIC SURFACES ALONG JOINTS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	45.34	45.79	0.45	140526		CO	C3	D	K	MN		G		35	M	QZ	VN	SEAM: COAL W/ MINOR 4MM MS BANDS THROUGHOUT UNIT, MINOR QZ/CARB VNING CONCENTRATED TOWARDS BOTTOM OF UNIT, CLEATING IS WELL DEVELOPED, 7MM FACE AND 2MM BUTT CLEATS, LISTRIC SURFACES PRESENT ALONG JOINTS AND BEDDING PLANES
DHGH-14-28	45.79	46.41	0.62	140527		CO	C4	D	K	MN					C	QZ	VN	SEAM: COAL W/ MINOR MS LAMINATIONS THROUGHOUT UNIT AND INCREASING MS CONTENT TOWARDS BOTTOM OF UNIT, COMMON QZ/CARB VNING UP TO 18MM THICK, ALSO PRESENT IN CLEATS 1-2MM, CLEATING IS MODERATLEY DEVELOPED, 3MM FACE CLEATS
DHGH-14-28	46.41	46.58	0.17			KL	CO											
DHGH-14-28	46.58	46.7	0.12			KL	CO											
DHGH-14-28	46.7	47	0.30	140528		CO	SY	D	K	CM		I		70	C	QZ	CE	STONY COAL W/ COMMON MS BANDS THROUGHOUT UNIT, WELL DEVELOPED BEDDING AT 70 DEGREES, COMMON QZ/CARB CLEAT INFILL UP TO 2MM
DHGH-14-28	47	47.62	0.62			XM		B	G	MN		P		50	E	QZ	CE	
DHGH-14-28	47.62	47.82	0.20	140529		XM		B	G	MN		P		50	E	QZ	VN	ROOF: CARBONACEOUS MS W/ MINOR COAL LENSES THROUGHOUT UNIT, ACCESSORY 2-3MM QZ/CARB VNING CONCENTRATED TOWARDS BOTTOM OF UNIT,
DHGH-14-28	47.82	48.02	0.20	140530		CO	C4	D	K	MN		G			E	QZ	VN	SEAM ROOF: COAL W/ MINOR MS BANDS THROUGHOUT UNIT, ACCESSORY 3MM QZ/CARB VNING THROUGHOUT UNIT, CLEATING IS POORLY DEVELOPED, 2MM FACE CLEATS
DHGH-14-28	48.02	48.34	0.32	140531		CO	C3	D	K	MN		G		50	E	QZ	VN	SEAM: SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, ACCESSORY 2MM QZ/CARB VNING THROUGHOUT UNIT, CLEATING IS VERY POORLY DEVELOPED

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	48.34	48.93	0.59	140532		CO	C3	D	K	MN		G		30	M	QZ	VN	SEAM: COAL W/ MINOR MS LAMINATIONS UP TO 3MM THICK, INCREASING MS CONTENT TOWARDS BOTTOM OF UNIT, MINOR QZ/CARB VNING PARELLEL TO BEDDING, CLEATING IS WELL DEVELOPED, 5MM FACE AND BUTT CLEATS, LISTRIC SURFACES ALONG BEDDING PLANES
DHGH-14-28	48.93	49.16	0.23	140533		CO	SY	D	K	CM				30	C	QZ	VN	FLOOR A: STONY COAL W/ COMMON 3MM MS BANDS THROUGHOUT UNIT, COMMON QZ/CARB 3MM VNING AND 1MM CLEAT INFILL INCREASING TOWARDS BOTTOM OF UNIT, ACCESSORY 6MM PY BANDS AT BOTTOM OF UNIT, WELL DEVELOPED CLEATING, 3MM FACE CLEATS
DHGH-14-28	49.16	49.27	0.11			KL												
DHGH-14-28	49.27	49.35	0.08			CO	SY	D	K	MN		G			C	QZ	VN	STONY COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, COMMON 2MM QZ/CARB VNING THROUGHOUT UNIT, ACCESSORY DISSEMINATED PY THROUGHOUT UNIT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY THE GEOPHYSICAL LOGS
DHGH-14-28	49.35	49.95	0.60			XM		D	G	CM		G	PD	35	E	QZ	CE	
DHGH-14-28	49.95	50.25	0.30			CO	SY			CM		P	WD	20	E	QZ	CE	STONY COAL W/ COMMON MS LAMINATIONS THROUGHOUT UNIT, ACCESSORY 3MM QZ/CARB CLEAT INFILL PREDOMINANTLY IN FACE CLEATS, PY BANDS CONCENTRATED TOWARDS BOTTOM OF UNIT, CLEATING IS POORLY DEVELOPED, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY THE GEOPHYSICAL LOGS
DHGH-14-28	50.25	53.22	2.97		80	ST		V	G			G	WD	30	M	QZ	VN	
DHGH-14-28	53.22	55.14	1.92		70	SS	FF	A	G				WD	25				
DHGH-14-28	55.14	55.22	0.08			KL												
DHGH-14-28	55.22	57.68	2.46		80	SS	FF	A	G			G	WD	25	M	QZ	VN	
DHGH-14-28	57.68	61.45	3.77		80	ST		B	G			G	WD	20	E	QZ	VN	
DHGH-14-28	61.45	61.79	0.34			XM		D	G	MN		I	PD		M	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	61.79	61.84	0.05			CO	C4	D	K	MN		P			M	QZ	VN	SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, MINOR QZ/CARB VNING THROUGHOUT UNIT, LISTRIC SURFACES PRESENT ALONG JOINTS, CLEATING IS VERY POORLY DEVELOPED, NOT SAMPLED DUE TO SMALL THICKNESS AND LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-28	61.84	61.91	0.07		95	ST		B	G			G	PD	30				upper limb of fold
DHGH-14-28	61.91	61.98	0.07		95	ST		B	G			G	PD	89				FOLD HINGE
DHGH-14-28	61.98	62.39	0.41		95	ST		B	G			G	PD	45				LOWER LIMB OF FOLD
DHGH-14-28	62.39	62.55	0.16			XM		D	G	MN		P			E	QZ	WP	
DHGH-14-28	62.55	62.75	0.20	140534		XM		D	G	MN		P			M	QZ	WP	ROOF: CARBONACEOUS MS W/ MINOR COAL WISPS NEAR BOTTOM OF UNIT, MINOR QZ/CARB WISPS THROUGHOUT UNIT
DHGH-14-28	62.75	62.95	0.20	140535		CO	C4	D	K	MN		G			C	QZ	CE	SEAM ROOF: COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, COMMON QZ/CARB CLEAT INFILL UP TO 2MM, WELL DEVELOPED CLEATING, 4MM FACE CLEATS
DHGH-14-28	62.95	63.45	0.50	140536		CO	C4	D	K	MN		G	PD	30	M	QZ	BP	SEAM: COAL W/ MINOR 4MM MS LAMINATIONS IN TOP HALF OF UNIT, SHEARING OCCURS NEAR BOTTOM OF UNIT, MINOR QZ/CARB COATING ON BEDDING PLANE SURFACE, LOCAL WELL DEVELOPED CLEATING, 3MM FACE CLEATS
DHGH-14-28	63.45	63.95	0.50	140537		CO	C2	D	K		AM	G						SEAM: MASSIVE COAL, CLEATING IS WELL DEVELOPED THROUGHOUT UNIT, 3MM FACE AND 2MM BUTT CLEATS
DHGH-14-28	63.95	64.84	0.89	140538		CO	C3	D	K	MN	AM	G			M	QZ	WP	SEAM: MASSIVE COAL W/ MINOR MS INTERMIXED THROUGHOUT INTERVAL, MINOR QZ/CARB WISPS THROUGHOUT INTERVAL, VERY POORLY DEVELOPED CLEATING THROUGHOUT, LISTRIC SURFACES PRESENT ALONG BEDDING PLANES

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	64.84	65.27	0.43	140539		CO	C3	D	K	MN		G	PD	30	E	QZ	CE	SEAM A: COAL W/ MINOR MS LAMINATIONS THROUGHOUT UNIT, ACCESSORY QZ/CARB 2MM CLEAT INFILL AND 6MM VNING CONCENTRATED TOWARDS BOTTOM OF UNIT, MINOR PY BANDS NEAR TOP OF UNIT, MODERATLEY DEVELOPED CLEATING THROUGHOUT, 3MM SIZED CLEATS
DHGH-14-28	65.27	65.47	0.20	140540		CO	C5	D	K	MN			PD	35	A	QZ	CE	SEAM FLOOR A: SHEARED COAL W/ MINOR MS LAMINATIONS THROUGHOUT UNIT, ACCESSORY 3MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, MINOR 2MM BY 4MM PY BLEBS THROUGHOUT UNIT, MODERATELY DEVELOPED CLEATING, CLEATS UP TO 4MM
DHGH-14-28	65.47	65.56	0.09			KL												
DHGH-14-28	65.56	67.4	1.84		85	ST		B	G			P			M	QZ	VN	
DHGH-14-28	67.4	69.81	2.41		85	SS	FC	A	G	CM		P	WD	55				
DHGH-14-28	69.81	73.9	4.09		55	ST		B	G	CM			WD	50				
DHGH-14-28	73.9	73.95	0.05			KL												
DHGH-14-28	73.95	75.96	2.01		60	SS	FF	A	G	MN			WD	50	N	QZ	WP	
DHGH-14-28	75.96	76.13	0.17			KL												
DHGH-14-28	76.13	79.09	2.96		90	SS	FF	A	G	CM		G	PD	50	M	QZ	WP	
DHGH-14-28	79.09	85.99	6.90		80	ST		B	G	MN		G	DE	45	M	QZ	WP	
DHGH-14-28	85.99	88.49	2.50		95	ST		B	G				PD	50	M	QZ	VN	
DHGH-14-28	88.49	88.54	0.05			KL												
DHGH-14-28	88.54	88.95	0.41		95	ST		B	G				DE		E	QZ	VN	
DHGH-14-28	88.95	92.85	3.90			SS	FF	A	G	MN	AM	G			E	QZ	VN	8CM QZ/CARB VEIN NEAR TOP OF UNIT
DHGH-14-28	92.85	93.34	0.49		85	ST		B	G				PD	40	M	QZ	VN	
DHGH-14-28	93.34	93.43	0.09			KL												
DHGH-14-28	93.43	96.48	3.05		75	SS	FF	A	G			P	WD	40	M	QZ	VN	
DHGH-14-28	96.48	97.15	0.67			MS		B	G	MN		P	PD	35	M	QZ	VN	
DHGH-14-28	97.15	97.58	0.43			XM		D	K	MN		I			M	QZ	VN	
DHGH-14-28	97.58	98.86	1.28			SS	FM	A	G	MN		P			C	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	98.86	99.06	0.20	140541		SS	FM	A	G	MN		P			C	QZ	VN	ROOF: SS W/ MINOR ST LAMINATIONS THROUGHOUT UNIT INCREASING TOWARDS BOTTOM OF UNIT, COMMON QZ/CARB VNING THROUGHOUT UNIT
DHGH-14-28	99.06	99.26	0.20	140542		CO	C4	D	K	CM	AM				M	QZ	BL	SEAM: MASSIVE SHEARED COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT AND INCREASING IN MS CONTENT TOWARDS BOTTOM OF UNIT, MINOR Q BLEBS AT TOP OF UNIT, LISTRIC SURFACES ON FRACTURES, VERY POORLY DEVELOPED CLEATING
DHGH-14-28	99.26	99.38	0.12			KL	CO											
DHGH-14-28	99.38	99.94	0.56		85	MS		B	G			G	PD		M	QZ	WP	
DHGH-14-28	99.94	105.36	5.42		85	ST		A	G			G	WD	25	M	QZ	VN	
DHGH-14-28	105.36	113.04	7.68		72	SS	FF	A	G	MN		G	WD	25	M	QZ	VN	
DHGH-14-28	113.04	116.37	3.33		85	ST		B	G			P	PD	30	M	QZ	WP	
DHGH-14-28	116.37	117.03	0.66			MS		B	G		AM	G			E	QZ	VN	
DHGH-14-28	117.03	117.23	0.20	140543		MS		B	G	MN	AM	G			E	QZ	VN	ROOF A: MASSIVE MUDSTONE, MINOR COAL BANDS TOWARDS THE BOTTOM OF UNIT, 5MM COAL BANDS, ACCESSORY QZ CLEAT FILL TOWARDS BOTTOM OF UNIT, CLEAT INFILL UP TO 3MM, MINOR PYRITE BAND AT BOTTOM OF UNIT, PYRITE BAND 2-6MM THICK
DHGH-14-28	117.23	117.57	0.34	140544		CO	C2	D	K	MN		G			M	QZ	CE	SEAM ROOF: C1 COAL, MINOR MS LAMINATIONS THROUGHOUT, MINOR QZ/CARB CLEAT INFILL, INFILL 2MM AT TOP OF UNIT, 0.5MM CLEAT INFILL LOWER IN UNIT, VERY WELL DEVELOPED CLEATS, 3MM FACE AND BUTT CLEATS,
DHGH-14-28	117.57	117.95	0.38	140545		CO	C3	D	K	MN		G			M	QZ	VN	SEAM: C3 COAL, MINOR MUDSTONE LAMINATIONS THROUGHOUT, MINOR QZ CARB VEINING CONCENTRATED AT BOTTOM HALF OF THE UNIT, MODERATELY WELL DEVELOPED CLEATING, 2 MM FACE AND BUTT CLEATS, LISTRIC SURFACES ON JOINTS, QZ VEINS ARE 1-3 MM, MS LAMINATIONS ARE 1-2MM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	117.95	118.17	0.22	140546		CO	C3	D	K	MN		G		30	E	QZ	CE	SEAM FLOOR: C3 COAL, MINOR 5-10MM MUDSTONE LAMINATIONS THROUGHOUT, ACCESSORY 1-3MM QZ/CARB CLEAT INFILL CONCENTRATED AT BOTTOM OF UNIT, WELL DEVELOPED CLEATS, 4MM FACE CLEATS, 2MM BUTT CLEATS, LISTRIC SURFACES ON BUTT CLEATS
DHGH-14-28	118.17	118.37	0.20	140547		XM		B	G	MN	AM	G			M	QZ	WP	FLOOR: MASSIVE CARBONACEOUS MUDSTONE, MINOR 2-6 MM COAL LAMINATIONS, AT THE TOP OF UNIT, MINOR QUARTZ WISPS
DHGH-14-28	118.37	119.74	1.37			XM		B	G	MN	AM	G			M	QZ	WP	
DHGH-14-28	119.74	119.79	0.05			KL												
DHGH-14-28	119.79	122.4	2.61			SS	FF	A	G				PD	20	M	QZ	WP	
DHGH-14-28	122.4	122.45	0.05			KL												
DHGH-14-28	122.45	125.65	3.20			SS	FF	A	G	MN			PD		M	QZ	WP	
DHGH-14-28	125.65	125.99	0.34			XM		D	G	MN		G			M	QZ	VN	
DHGH-14-28	125.99	126.09	0.10			CO	SY	D	K	CM		G			M	QZ	CE	STONY COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY GEOPHYSICAL LOGS, COMMON 2-10MM MS LAMINATIONS THROUGHOUT, ACCESSORY 1-10MM QZ/CARB CLEAT INFILL CONCENTRATED IN THE MIDDLE OF UNIT, WITH MINOR PY BLEBS CONCENTRATED AT BOTTOM OF UNIT
DHGH-14-28	126.09	126.21	0.12			CO	C4	D	K	MN		G			E	QZ	CE	C4 COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY GEOPHYSICAL LOGS, MINOR 10MM MS BANDS THROUGHOUT, ACCESSORY QZ/CARB CLEAT INFILL THROUGHOUT, MINOR 2MM THICK PYRITE LENSES THROUGHOUT
DHGH-14-28	126.21	126.34	0.13			XM		D	K	CM		P			E	QZ	CE	
DHGH-14-28	126.34	126.42	0.08			ZM		D	K	CM		G			E	QZ	CE	
DHGH-14-28	126.42	127.39	0.97			XM		D	K	MN	AM				M	QZ	WP	
DHGH-14-28	127.39	127.48	0.09			KL												
DHGH-14-28	127.48	130.33	2.85			XM		D	K		AM	P			M	QZ	WP	
DHGH-14-28	130.33	130.55	0.22	140548		XM		D	K		AM	P			M	QZ	WP	ROOF: CARBONACEOUS MUDSTONE, MASSIVE, MINOR QZ WISPS AT BOTTOM OF THE UNIT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	130.55	130.81	0.26	140549		CO	C4	D	K	MN		G			E	QZ	CE	SEAM ROOF: C4 COAL, MINOR 2-4MM MUDSTONE LAMINATIONS THROUGHOUT, 3MM QZ/CARB CLEAT INFILL, VERY POORLY DEVELOPED CLEATS, LISTRIC SURFACES ON JOINTS
DHGH-14-28	130.81	131.17	0.36	140550		CO	C4	D	K	MN		G			E	QZ	CE	SEAM: C4 COAL, MINOR 2-4MM MUSTONE LAMINATIONS THROUGHOUT, 2MM ACCESSORY QZ/CARB CLEAT INFILL THROUGHOUT, POORLY DEVELOPED CLEATS, CLEAT DEVELOPMENT INCREASES TOWARDS BOTTOM OF THE SEAM, CLEATS AT BOTTOM OF UNIT 2MM FACE AND BUTT CLEATS, LISTRIC SURFACES ON JOINTS,
DHGH-14-28	131.17	131.56	0.39	140551		CO	C2	D	K	MN		G			E	QZ	CE	SEAM: C2 COAL, MINOR MUDSTONE LAMINATIONS CONCENTRATED AT THE MIDDLE OF THE UNIT, ACCESSORY 2-4MM QZ/CARB CLEAT INFILL THROUGHOUT, VERY WELL DEVELOPED CLEATS, 4MM FACE AND BUTT CLEATS
DHGH-14-28	131.56	131.76	0.20	140552		CO	C4	D	K	CM		P			M	QZ	VN	SEAM FLOOR: C4 COAL, COMMON 10-20MM MUDSTONE LAMINATIONS CONCENTRATED TOWARDS TOP HALF OF THE UNIT, MINOR QZ/CARB VEINING CONCENTRATED TOWARDS BASE OF UNIT, MINOR QZ/CARB CLEAT INFILL THROUGHOUT, LOCAL MODERATELY WELL DEVELOPED CLEATS AT BASE OF UNIT, WHEN CLEATS ARE PRESENT THERE ARE 2MM FACE AND BUTT CLEATS
DHGH-14-28	131.76	131.96	0.20	140553		ZM				CM	AM	G			E	QZ	VN	FLOOR: SHEARED COALY MUDSTONE, MASSIVE, 2CM QZ/CARB VEIN AT THE TOP OF THE UNIT
DHGH-14-28	131.96	132.05	0.09			ZM		D	K	CM					M	QZ	CE	
DHGH-14-28	132.05	133.26	1.21			XM		D	K		AM				M	QZ	WP	
DHGH-14-28	133.26	135.72	2.46			ST		B	G		AM	G						
DHGH-14-28	135.72	136.77	1.05		90	ST		B	G			P	PD					
DHGH-14-28	136.77	141.39	4.62			SS	FM	A	G	MN	AM	P			E	QZ	VN	
DHGH-14-28	141.39	142.2	0.81		70	SS	VF	A	G				PD	25	M	QZ	VN	
DHGH-14-28	142.2	142.28	0.08			KL												
DHGH-14-28	142.28	143.85	1.57		70	SS	VF	A	G			G	PD	25	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	143.85	144.8	0.95		80	ST		B	G			G			M	QZ	VN	
DHGH-14-28	144.8	149.24	4.44		70	SS	FM	A	G			G		15	M	QZ	WP	
DHGH-14-28	149.24	157.22	7.98			ST		B	G	MN					E	QZ	VN	
DHGH-14-28	157.22	161.21	3.99		80	SS	FF	A	G	FO		G	PD	10	M	QZ	VN	
DHGH-14-28	161.21	161.68	0.47			CO	SY	D	K	CM		G			E	QZ	VN	STONY COAL, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY THE GEOPHYSICAL LOGS, COMMON 5-15MM MS LAMINATIONS THROUGHOUT CONCENTRATED IN THE MIDDLE OF THE UNIT, ACCESSORY QZ VEINING THROUGHOUT, WELL DEVELOPED CLEATING AT TOP OF UNIT, CLEAT DEVELOPMENT DECREASES TOWARDS BOTTOM OF UNIT, AT TOP OF UNIT CLEATS ARE 4MMX4MM
DHGH-14-28	161.68	161.94	0.26			XM		D	G	MN		G	PD	15	M	QZ	WP	
DHGH-14-28	161.94	164.19	2.25		95	ST		B	G				PD					
DHGH-14-28	164.19	164.94	0.75		75	MS		B	G	MN		G	PD	15	M	QZ	CE	6CM THICK COAL BAND NEAR TOP OF UNIT, WITH 6MM FACE CLEATS
DHGH-14-28	164.94	171.12	6.18		70	SS	FF	A	G			I	WD	20	M	QZ	VN	FLAME STRUCTURES COINCIDE WITH CORRECT WAY UP
DHGH-14-28	171.12	171.32	0.20	140554	70	SS	FF	A	G	MN		P	WD		E	QZ	CE	ROOF A: FINEGRAINED SS INTERLAMINATED WITH SILT, MINOR 25MM COAL BANDS AT BOTTOM OF THE UNIT, ACCESSORY 1MM QZ/CARB CLEAT INFILL, ACCESSORY 30MM PYRITE BANDS
DHGH-14-28	171.32	171.69	0.37	140555		CO	SY	D	K	CM		G			E	QZ	VN	SEAM A: STONEY COAL, COMMON 10MM MS LAMINATIONS THROUGHOUT, ACCESSORY QZ/CARB VEINING CONCENTRATED AT TOP OF UNIT - TWO 5MM VEINS NEAR TOP OF UNIT, ACCESSORY 1-3MM PYRITE BANDS THROUGHOUT THE UNIT
DHGH-14-28	171.69	172.06	0.37	140556		CO	SY	D	K	CM		G			E	QZ	CE	SEAM A: STONEY COAL W/ COMMON 10MM MS BANDS THROUGHOUT THE UNIT, ACCESSORY 5MM QZ/CARB CLEAT INFILL, TWO 3MM PYRITE BANDS IN MIDDLE OF THE UNIT, LOCAL WELL DEVELOPED CLEATING NEAR BOTTOM OF THE UNIT, NEAR UNIT BOTTOM 3MM FACE CLEATS AND 2MM BUTT CLEATS, LISTRIC SURFACES ON BEDDING PLANES

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	172.06	172.26	0.20	140557		XM		D	G	CM		G			E	QZ	VN	FLOOR: CARBONACEOUS MUDSTONE, COMMON COAL BANDS ARE 5MM THROUGHOUT THE UNIT, ACCESSORY 5-10MM QZ VEINING CONCENTRATED TOWARDS THE TOP OF THE UNIT
DHGH-14-28	172.26	173.03	0.77			XM		D	G	CM		G			M	QZ	VN	
DHGH-14-28	173.03	174.52	1.49		90	MS		B	G	MN		G			M	QZ	WP	
DHGH-14-28	174.52	180.3	5.78		95	XM		D	G			G	WD	10	M	QZ	VN	
DHGH-14-28	180.3	182.7	2.40		65	SS	FF	A	G			G	PD	5				
DHGH-14-28	182.7	185.52	2.82			ST		B	G	MN		G	WD	10				
DHGH-14-28	185.52	189.31	3.79			SS	FM	A	G	MN		P		20	M	QZ	CE	
DHGH-14-28	189.31	189.56	0.25	140558		SS	FM	A	G		AM	I						ROOF: FINE-MEDIUM GRAINED MASSIVE SANDSTONE
DHGH-14-28	189.56	189.94	0.38	140559		CO	SY	D	K	CM		G			C	QZ	CE	SEAM A: STONEY COAL, COMMON 15MM MS BANDS CONCENTRATED TOWARDS BOTTOM OF THE UNIT, COMMON 5MM QZ/CARB CLEAT INFILL, MINOR DISSEMINATED PYRITE THROUGHOUT UNIT, LOCALLY WELL DEVELOPED CLEATS, 3MM FACE AND BUTT CLEATS
DHGH-14-28	189.94	190.14	0.20	140560		ZM		D	K	MN	AM	G			E	QZ	CE	FLOOR: COALY MUDSTONE, MINOR 3-10MM COAL BANDS THOROUGHOUT, MINOR 1MM QZ/CARB CLEAT INFILL
DHGH-14-28	190.14	191.16	1.02			ZM		D	K	MN	AM	G			E	QZ	CE	
DHGH-14-28	191.16	194.92	3.76			ST		B	G		AM	G			M	QZ	WP	
DHGH-14-28	194.92	199.25	4.33		75	SS	FM	A	G			P	WD		M	QZ	WP	FLAME STRUCTURES COINCIDE WITH CORRECT WAY UP
DHGH-14-28	199.25	199.45	0.20	140561	75	ST		B	G	MN		P	WD		M	QZ	CE	ROOF A: SILTSTONE WITH SANDSTONE INTERBEDDED WITHIN IT, MINOR COAL BANDS AT THE BOTTOM OF THE UNIT, MINOR 3MM QZ/CARB CLEAT INFILL
DHGH-14-28	199.45	199.65	0.20	140562		CO	C4	D	K	MN		G			E	QZ	CE	SEAM ROOF: C4 COAL, MINOR 2-4 MUDSTONE LAMINATIONS THROUGHOUT, ACCESSORY 2MM QZ/CARB CLEAT INFILL CONCENTRATED IN TOP HALF OF UNIT, LOCAL MODERATELY DEVELOPED CLEATS, 1MM FACE AND BUTT CLEATS,

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	199.65	199.85	0.20	140563		CO	C3	D	K	MN		G			E	PY	BN	SEAM A: C3 COAL, MINOR 3MM MS LAMINATIONS THROUGHOUT, MINOR 3MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS BOTTOM HALF, 8MM PYRITE BAND NEAR TOP OF UNIT, POORLY DEVELOPED CLEATING THROUGHOUT
DHGH-14-28	199.85	200.05	0.20	140564		CO	C2	D	K	MN		G			E	QZ	CE	SEAM FLOOR: C2 COAL, MINOR 4MM MS LAMINATIONS THROUGHOUT, ACCESSORY 3MM QZ/CARB CLEAT INFILL, VERY WELL DEVELOPED CLEATING, 3MM FACE AND BUTT CLEATS,
DHGH-14-28	200.05	200.25	0.20	140565		XM		D	G	MN	AM	G			M	QZ	WP	FLOOR: CARBONACEOUS MUDSTONE, MINOR 2MM COAL BANDS THROUGHOUT, MINOR 1MM QZ/CARB WISPS CONCENTRATED TOWARDS THE TOP OF UNIT
DHGH-14-28	200.25	201.03	0.78			XM		D	G	MN	AM	G			M	QZ	WP	
DHGH-14-28	201.03	205.19	4.16			MS		B	G			G	PD	10				
DHGH-14-28	205.19	208.34	3.15			ST		D	G		AM	G						
DHGH-14-28	208.34	210.28	1.94		70	ST		B	G				PD					
DHGH-14-28	210.28	219.84	9.56		75	SS	FF	A	G			G	WD	1	M	QZ	VN	FLAME STRUCTURES COINCIDE WITH CORRECT WAY UP, YOUNGING UPWARDS
DHGH-14-28	219.84	228.01	8.17		85	ST		B	G			G	WD	10	M	QZ	VN	
DHGH-14-28	228.01	229.55	1.54			ST		B	G			G	PD	5	M	QZ	VN	
DHGH-14-28	229.55	230.77	1.22			XM		D	G	MN								
DHGH-14-28	230.77	230.87	0.10			CO	C2	D	K	MN		P						COAL W/ MINOR MS LAMINATIONS AT BOTTOM OF UNIT, CLEATING IS MODERATELY WELL DEVELOPED THROUGHOUT, 2MM BY 2MM CLEATS, COAL NOT SAMPLED DUE TO SMALL THICKNESS AND POOR QUALITY AS DETERMINED FROM THE GEOPHYSICAL LOGS
DHGH-14-28	230.87	232.35	1.48			XM		D	G	MN		G	PD		E	QZ	VN	
DHGH-14-28	232.35	237.13	4.78		75	SS	FF	A	G			G	PD	15	E	QZ	VN	
DHGH-14-28	237.13	242.71	5.58		85	ST		A	G	RA		G	WD	15	M	QZ	WP	
DHGH-14-28	242.71	243.92	1.21			SS	FF	A	G		AM	P			M	QZ	VN	
DHGH-14-28	243.92	244.12	0.20	140566		SS	FF	A	G		AM	P			E	PY	DS	ROOF A: MASSIVE FINEGRAINED SANDSTONE, MINOR 5MM QZ VEINING AT BOTTOM OF UNIT, ACCESSORY DISSEMINATED PYRITE

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	244.12	244.42	0.30	140567		CO	C4	D	K	CM					E	QZ	CE	SEAM A: C4 COAL, COMMON MUDSTONE LAMINATIONS THROUGHOUT, ACCESSORY 2-3MM QZ/CARB CLEAT INFILL, MINOR 2MM PYRITE BLEBS, POORLY DEVELOPED CLEATING THROUGHOUT
DHGH-14-28	244.42	244.64	0.22	140568		XM		D	K	MN					M	QZ	VN	PARTING: CARBONACEOUS MUDSTONE, MINOR COAL LAMINATIONS THROUGHOUT, MINOR 2MM QZ/CARB VNS
DHGH-14-28	244.64	245.12	0.48	140569		CO	SY	D	K	CM					C	QZ	VN	SEAM A: COMMON MUDSTONE LAMINATIONS THROUGHOUT, COMMON 2-7MM QZ/CARB VEINS, MINOR 2MM PYRITE BLEBS CONCENTRATED TOWARDS MIDDLE OF UNIT, LOCAL WELL DEVELOPED CLEATING, 2MM FACE AND BUTT CLEATS
DHGH-14-28	245.12	245.32	0.20	140570		XM		B	G	MN	AM	G			M	QZ	VN	FLOOR: MASSIVE CARBONACEOUS MUDSTONE, MINOR 3MM COAL BANDS THROUGHOUT, MINOR 3MM QZ/CARB VEINS
DHGH-14-28	245.32	245.86	0.54			XM		B	G	MN	AM	G			M	QZ	VN	
DHGH-14-28	245.86	250.8	4.94		70	SS	FF	A	G			G	BT	5	M	QZ	WP	
DHGH-14-28	250.8	258.28	7.48			SS	FF	A	G	MN		G			M	QZ	VN	
DHGH-14-28	258.28	258.48	0.20	140571		XS		A	G	MN		P			A	QZ	VN	ROOF: CARBONACEOUS SANDSTONE, MINOR COAL LENSES THROUGHOUT, MINOR 2MM QZ/CARB VEINING AT BOTTOM OF UNIT, MINOR 2MM COAL BANDS THROUGHOUT
DHGH-14-28	258.48	259.01	0.53	140572		CO	C4	D	K	MN		P			M	QZ	CE	SEAM A: C4 COAL, MINOR 2-4MM QZ/CARB CLEAT INFILL, DECREASING MS CONTENT TOWARDS BOTTOM OF UNIT, BETTER CLEAT DEVELOPMENT AT BOTTOM OF THE UNIT, MINOR PYRITE BLEBS, 1MM FACE AND BUTT CLEATS
DHGH-14-28	259.01	259.21	0.20	140573		XM		D	K	MN					E	PY	BN	FLOOR: CARBONACEOUS MUDSTONE, 10MM PYRITE BAND AT TOP OF UNIT, MINOR COAL LENSES THROUGHOUT, MINOR QZ WISPS,
DHGH-14-28	259.21	259.71	0.50			XM		D	G	MN	AM	G			M	QZ	WP	
DHGH-14-28	259.71	262.01	2.30		70	ST		B	G			G	MX	15	M	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	281.5	285.45	3.95			SS	FF	A	G	MN	AM		PD		M	QZ	VN	
DHGH-14-28	285.45	285.53	0.08			KL												
DHGH-14-28	285.53	289.87	4.34		95	SS	VF	A	G		AM	G	PD	5				
DHGH-14-28	289.87	290.07	0.20	140579	80	XM		B	G	MN		P	PD		M	QZ	CE	ROOF A: CARBONACEOUS MS INTERLAMINATED W/ SS, MINOR 1MM COAL LENSES THROUGHOUT UNIT, MINOR 1MM QZ/CARB CLEAT INFILL
DHGH-14-28	290.07	290.38	0.31	140580		CO	C2	D	K	MN		G			M	QZ	CE	SEAM: C2 COAL W/ MINOR 4MM MS LAMINATIONS THROUGHOUT, MINOR 1MM QZ/CARB CLEAT INFILL, CLEATING IS WELL DEVELOPED, 5MM BY 3MM CLEATS
DHGH-14-28	290.38	290.52	0.14	140581		ZM		D	K	CM	AM	G			M	QZ	VN	PARTING: SHEARED COALY MS W/ COMMON COAL INTERMIXED THROUGHOUT UNIT, MINOR < 1MM QZ/CARB VEINING OCCURRING AT TOP OF UNIT
DHGH-14-28	290.52	290.84	0.32	140582		CO	C3	D	K	MN	AM	G			M	QZ	CE	SEAM: C3 COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, MINOR <1 QZ/CARB CLEAT INFILL THROUGHOUT UNIT, CLEATING IS WELL DEVELOPED THROUGHOUT, 4MM BY 4MM CLEATS
DHGH-14-28	290.84	291.04	0.20	140583		XM		D	G	MN		G			E	QZ	CE	FLOOR: CARBONACEOUS MS W/ MINOR 5MM COAL LAMINATIONS THOROUGHOUT UNIT, ACCESSORY 1-2MM QZ/CARB CLEAT INFILL
DHGH-14-28	291.04	291.29	0.25			XM		D	G	MN	AM	G			M	QZ	CE	
DHGH-14-28	291.29	291.49	0.20	140584		XM		D	G	MN		G			M	QZ	CE	ROOF: CARBONACEOUS MS W/ MINOR 2-6MM COAL LAMINATIONS NEAR BOTTOM OF UNIT, MINOR 2MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS BOTTOM OF UNIT
DHGH-14-28	291.49	291.69	0.20	140585		CO	C3	D	K	CM		G			E	QZ	CE	SEAM ROOF: C3 COAL W/ COMMON 5MM MS BANDS THROUGHOUT UNIT, ACCESSORY 1-7MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS BOTTOM OF UNIT, CLEATING IS VERY WELL DEVELOPED, 8MM BY 3MM CLEATS
DHGH-14-28	291.69	291.98	0.29	140586		CO	C4	D	K	CM		G			M	QZ	CE	SEAM: C4 COAL W/ COMMON 3-6MM MS LAMINATIONS THROUGHOUT UNIT, MINOR 1-3MM QZ/CARB CLEAT INFILL, CLEATING IS WELL DEVELOPED, 3MM BY 3MM CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	291.98	292.18	0.20	140587		CO	SY	D	K	AB		G			M	QZ	VN	SEAM: STONY COAL W/ ABUNDANT 11MM MS LAMINATIONS INCREASING IN FREQUENCY TOWARDS BOTTOM OF UNIT, MINOR 1-3MM QZ/CARB VNING THROUGHOUT UNIT, CLEATING IS VERY POORLY DEVELOPED, CLEAT DEVELOPMENT IS RARE
DHGH-14-28	292.18	292.61	0.43	140588	60	XM		D	G	MN	AM	G			M	QZ	CE	PARTING A: MASSIVE CARBONACEOUS MS GRADING INTO VF SS AND THEN BACK INTO XM, MINOR 1-8MM COAL LENSES CONCENTRATED AT TOP AND BOTTOM OF UNIT, MINOR 1MM QZ/CARB CLEAT INFILL IN COAL LENSES
DHGH-14-28	292.61	292.86	0.25	140589		CO	SY	D	K	AB		G			E	QZ	VN	SEAM: STONY COAL W/ ABUNDANT 5-20MM MS BANDS THROUGHOUT UNIT, ACCESSORY 1-3MM QZ/CARB VEINS CONCENTRATED NEAR BOTTOM OF UNIT, LOCAL WELL DEVELOPED CLEATING, 4MM BY 3MM CLEATS
DHGH-14-28	292.86	293.54	0.68	140590		CO	C4	D	K	MN		G			M	QZ	CE	SEAM: C4 COAL W/ MINOR 4MM LAMINATIONS THROUGHOUT UNIT, MINOR 1MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS MIDDLE OF UNIT, LOCAL VERY WELL DEVELOPED CLEATING, 5MM BY 3MM CLEATS
DHGH-14-28	293.54	293.77	0.23	140591		CO	SY	D	K	AB		G			M	QZ	VN	SEAM FLOOR: STONY COAL W/ ABUNDANT 3-10MM MS LAMINATIONS THROUGHOUT, MINOR 1-3MM QZ/CARB VEINING THROUGHOUT, CLEATING IS POORLY DEVELOPED
DHGH-14-28	293.77	293.97	0.20	140592		XM		D	G	MN		G			M	QZ	WP	FLOOR: CARBONACEOUS MS W/ MINOR 1-2MM COAL LENSES CONCENTRATED AT TOP OF UNIT, MINOR QZ/CARB WISPS CONCENTRATED AT TOP OF UNIT
DHGH-14-28	293.97	294.09	0.12			SS	FF	A	G									
DHGH-14-28	294.09	294.27	0.18	140593		SS	FF	A	G			G						ROOF A: SS GRADING INTO CARBONACEOUS MS, MS CONTAINS MINOR 4MM COAL BANDS THROUGHOUT UNIT
DHGH-14-28	294.27	294.39	0.12	140593		XM		D	G	MN		P						ROOF B: SS GRADING INTO CARBONACEOUS MS, MS CONTAINS MINOR 4MM COAL BANDS THROUGHOUT UNIT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-28	294.39	294.6	0.21	140594		CO	SY	D	K	CM		G			E	QZ	CE	SEAM ROOF: STONY COAL W/ COMMON 30MM MS BANDS, ACCESSORY 1-2MM QZ/CARB CLEAT INFILL, LOCAL MODERATELY WELL DEVELOPED CLEATING, 5MM BY 4MM CLEATS
DHGH-14-28	294.6	294.8	0.20	140595		CO	SY	D	K	CM		G			M	QZ	CE	SEAM: STONY COAL W/ COMMON 13 MM MS BANDS THROUGHOUT, MINOR 1MM QZ/CARB CLEAT INFILL, CLEATING IS POORLY DEVELOPED THROUGHOUT, 2MM BY 2MM CLEATS
DHGH-14-28	294.8	295.07	0.27	140596		CO	SY	D	K	CM		P			E	QZ	VN	SEAM FLOOR: STONY COAL W/ COMMON 2-5MM MS BANDS THROUGHOUT UNIT, 1-3MM ACCESSORY QZ/CARB CLEAT INFILL CONCENTRATED AT TOP 10CM AND BOTTOM 10CM OF UNIT LOCAL WELL DEVELOPED CLEATING, POORLY DEVELOPED ELSEWHERE, 2MM BY 2MM CLEATS
DHGH-14-28	295.07	295.27	0.20	140597		XM		D	G	MN		G			M	QZ	WP	FLOOR: CARBONACEOUS MS W/ MINOR 1MM COAL WISPS AT TOP OF UNIT, MINOR QZ/CARB WISPS THROUGHOUT UNIT
DHGH-14-28	295.27	295.72	0.45			XM		D	G	MN		G			M	QZ	WP	
DHGH-14-28	295.72	297.32	1.60		80	SS	VF	A	G	MN		G	WD	10	M	QZ	VN	
DHGH-14-28	297.32	301.75	4.43		90	SS	FF	A	G	MN		G	WD		E	QZ	VN	
DHGH-14-28	301.75	302.31	0.56			CG		A	G	ST	MS	G			M	QZ	VN	
DHGH-14-28	302.31	302.84	0.53			SS	FC	A	G	MN	AM	P						
DHGH-14-28	302.84	306.66	3.82		70	ST		B	G			P	MX	20				
DHGH-14-28	306.66	306.86	0.20	140598	80	ST		B	G	MN		P	WD		E	QZ	VN	ROOF A: ST INTERLAMINATED W/ SS, MINOR 3MM COAL LAMINATION AT BOTTOM OF UNIT, ACCESSORY 5-8MM QZ/CARB VEIN NEAR BOTTOM OF UNIT
DHGH-14-28	306.86	307.11	0.25	140599		CO	SY	D	K	CM		P			M	QZ	CE	SEAM: STONY COAL W/ COMMON 5MM MS BANDS THROUGHOUT UNIT, MINOR 1MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, LOCALLY WELL DEVELOPED CLEATING, 2MM BY 2MM CLEATS, LISTRIC SURFACES ALONG JOINTS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	11.61	14.36	2.75			KL												
DHGH-14-29	14.36	15	0.64		60	SI	CL	B	G									
DHGH-14-29	15	17.45	2.45		60	GV		E	G	SS								
DHGH-14-29	17.45	19.81	2.36			KL												No coal based on gamma
DHGH-14-29	19.81	20.49	0.68		80	GV		E	G	SS								
DHGH-14-29	20.49	20.84	0.35			KL												
DHGH-14-29	20.84	22.42	1.58			ST		E	G			G	PD	25				
DHGH-14-29	22.42	24.6	2.18			SS	FF	N	G			G	PD	15				
DHGH-14-29	24.6	27.8	3.20		85	SS	VF	N	G			G	WD	10				
DHGH-14-29	27.8	28.53	0.73			SS	VF	A	G			G	PD	10	M	QZ	VN	
DHGH-14-29	28.53	33	4.47		85	SS	VF	N	G			G	WD	18	M	QZ	VN	
DHGH-14-29	33	33.61	0.61			ST		E	G			G	PD	15				
DHGH-14-29	33.61	33.81	0.20	145439		ST		E	G			I	PD	15				Roof. Clean
DHGH-14-29	33.81	34.01	0.20	145440		CO	C2		K	TR		G	PD	15	M	QZ	CE	Seam roof. Rare MS lenses <2mm. Moderately well-developed cleating; <3mm face x5mm butt. Face cleats 70deg. Minor QZ <1mm in cleating. Minor PY veinlets <2mm.
DHGH-14-29	34.01	34.46	0.45	145441		CO	C3		K	MN		G	PD	15	M	QZ	CE	Seam. Minor ST lenses <4mm. Poorly developed cleating; 3mm face x 4mm butt. Lower contact features are destroyed, crushed coal, and listric and slickensided surfaces. Minor QZ <1mm in cleating.
DHGH-14-29	34.46	34.83	0.37	145442		ST		B	G	MN		G	PD	20	M	QZ	WP	Parting. Minor CO bands <15mm. Minor QZ in wisps. Rare PY blebs.
DHGH-14-29	34.83	34.91	0.08			KL				CO								
DHGH-14-29	34.91	35.28	0.37	145443		CO	C3		K	MN		G	PD	10	M	QZ	CE	Seam. Minor ST laminations <4mm. Poorly developed cleating; <3mm face x 2mm butt. Some listric faces. Primary textures locally destroyed by shearing. Minor QZ <1mm in cleating.
DHGH-14-29	35.28	35.65	0.37	145444		ST		E	G	RA		G	PD	10	R	QZ	WP	Parting. Rare CO lenses <7mm. Rare QZ in wisps.
DHGH-14-29	35.65	35.86	0.21	145445		CO	C3		K	MN			PD	10	M	QZ	CE	Seam. Minor ST laminations <5mm. Poorly developed cleating; <2mm face x 4mm butt. Minor listric surfaces. Minor QZ <0.5mm in cleats & veinlets.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	35.86	35.98	0.12			KL				CO								No floor sample taken due to core loss.
DHGH-14-29	35.98	39.14	3.16			MS		B	G						M	PF	BP	
DHGH-14-29	39.14	39.34	0.20	145446		MS		B	G			G			M	PF	BP	ROOF: CLEAN MS
DHGH-14-29	39.34	39.52	0.18	145447		CO	C4		K	MN								SEAM ROOF: LISTRIC FACES; PRIMARY COAL TEXTURES DESTROYED BY SHEARING; MINOR INTERMIXED MS
DHGH-14-29	39.52	39.72	0.20	145448		CO	C4		K	MN								SEAM: LISTRIC FACES; PRIMARY COAL TEXTURES DESTROYED BY SHEARING; MINOR INTERMIXED MS
DHGH-14-29	39.72	39.92	0.20	145449		ZM		B	G	TR			PD	35	M	QZ	VN	FLOOR: TRACE COAL BANDS UP TO 2MM WIDE
DHGH-14-29	39.92	40.94	1.02			ZM		B	G	MN			PD	35	M	QZ	VN	
DHGH-14-29	40.94	41.9	0.96			KL												
DHGH-14-29	41.9	42.08	0.18			KL												LOST COAL
DHGH-14-29	42.08	42.13	0.05			KL												LOST COAL
DHGH-14-29	42.13	42.3	0.17	145450		XM		B	G			G						ROOF: CARBONACEOUS MUDSTONE; CLEAN; SHEARED
DHGH-14-29	42.3	43.11	0.81	145451		CO	C4		K	CM								SEAM: MINOR TO COMMON INTERMIXED SILTSTONE BANDS UP TO 30MM; HIGHLY SHEARED W/COMMON LISTRIC FACES
DHGH-14-29	43.11	43.92	0.81	145452		CO	C3		K	MN								SEAM: MINOR INTERMIXED SILTSTONE/MUDSTONE AND RARE MS BANDS UP TO 20MM; SHEARED W/COMMON LISTRIC FACES; PRIMARY TEXTURES DESTROYED BY SHEARING
DHGH-14-29	43.92	44.74	0.82	145453		CO	C3		K	MN		G	PD	30	M	QZ	CE	SEAM: MINOR SILTSTONE BANDS UP TO 30MM; MINOR INTERMIXED MS; PARTLY SHEARED W/COMMON LISTRIC FACES; VERY POORLY DEVELOPPED CLEATING REMAINING 1MM X 1MM; GRADATIONAL LOWER CT
DHGH-14-29	44.74	44.99	0.25	145454		ZT		B	G	MN			PD		M	QZ	CE	PARTING: MINOR COAL BANDS UP TO 2MM
DHGH-14-29	44.99	45.08	0.09			KL												
DHGH-14-29	45.08	45.13	0.05			KL				CO								No seam floor, floor, or roof samples taken due to core loss.
DHGH-14-29	45.13	45.65	0.52	145455		CO	C3		K	MN		G						SEAM: MINOR ST BANDS UP TO 20MM; PRIMARY COAL TEXTURES DESTROYED AND CRUSHED BY SHEARING; RECOMPACTED W/COMMON LISTRIC SURFACES
DHGH-14-29	45.65	45.85	0.20	145456		XT		B	G						C	QZ	VN	FLOOR: CLEAN

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments	
DHGH-14-29	45.85	46.34	0.49			XT		B	G										
DHGH-14-29	46.34	46.52	0.18	145457		XT		B	G	MN									ROOF: MINOR COAL BANDS AT BOTTOM OF UNIT UP TO 4MM
DHGH-14-29	46.52	46.83	0.31	145458		CO	C3		K	MN		G	PD	25	E	QZ	CE	SEAM ROOF: MNR MS BANDS UPTO 3MM; LOCALLY VERY POORLY DEVELOPED CLEATING 1MM X 1MM; MINOR LISTRIC SURFACES AND PARTLY SHEARED; ACCESORY QTZ CLEAT INFILL	
DHGH-14-29	46.83	47.27	0.44	145459	80	ZT		B	G	CM		G			M	QZ	VN	PARTING A: FOLD RUNNING DOWN LENGTH OF CORE AXIS; CONTACT OF ZT AND CO; MINOR LISTRIC SURFACES; MNR QTZ VEINS AND MINOR PY BLEBS	
DHGH-14-29	47.27	47.51	0.24	145460		CO	C2		K	MN			PD	30	M	QZ	CE	SEAM A: MINOR MS BANDS UP TO 5MM; POORLY DEVELOPED CLEATING 2MM X 3MM; MINOR QTZ CLEAT INFILL UP TO 1MM AND MNR PY BLEBS UP TO 8MM; LISTRIC SURFACES	
DHGH-14-29	47.51	47.7	0.19	145461		CO	C3		K	CM		G			E	QZ	CE	SEAM FLOOR: COMMON SILTSTONE LENSES UP TO 80MM; FOLDED AND HIGHLY SHEARED W/COMMON LISTRIC SURFACES; PRIMARY TEXTURES MAINLY DESTROYED; LOCAL POORLY DEVELOPED CLEATING 1MM X 1MM; COMMON QTZ CLEAT INFILL IS BROKEN/SHEARED	
DHGH-14-29	47.7	47.9	0.20	145484		ST		E	G	TR			PD	40	M	QZ	CE	FLOOR: TRACE COAL LENSES	
DHGH-14-29	47.9	48.18	0.28			KL													
DHGH-14-29	48.18	48.22	0.04			KL													
DHGH-14-29	48.22	51.8	3.58			ST		E	G	MN		G	PD	40	M	QZ	CE		
DHGH-14-29	51.8	52	0.20	145462		ST		E	G	TR		G	PD	35	R	QZ	WP	Roof. Trace CO lenses <1mm.	
DHGH-14-29	52	52.22	0.22	145463		CO	C3		K	MN		G	PD	20	E	QZ	CE	Seam roof. Minor ST beds <30mm. Well developed cleating; 10mm face x 5mm butt. Face cleats at 65deg. Minor QZ <2mm in cleats. Minor PY in blebs.	
DHGH-14-29	52.22	52.47	0.25	145464		CO	C3		K	MN		G	PD	30	E	QZ	CE	Seam. Minor ST beds <8mm. Well developed cleating; 7mm face x 5mm butt. Face cleats 65deg. Rare listric surfaces along BP. Accessory (5%) QZ <2mm in face & butt cleats.	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	52.47	52.65	0.18	145465		CO	C3		K	MN		G	PD	30	E	QZ	CE	Seam floor. Minor ST beds <8mm. Moderate to well developed cleating; 5mm face x 5mm butt. Occasional listric surfaces. Weakly sheared. Accessory QZ (5%) <2mm in face & butt cleats.
DHGH-14-29	52.65	52.85	0.20	145466		ST		E	G	MN		G	PD	35	M	QZ	CE	Floor. Minor CO bands, <30mm. Minor QZ in cleats. Minor PY blebs. Some shearing surfaces.
DHGH-14-29	52.85	53.73	0.88			ST		E	G				PD	35	M	PY	BL	
DHGH-14-29	53.73	53.98	0.25			KL												
DHGH-14-29	53.98	54.06	0.08			KL				CO								No roof or seam roof samples taken due to core loss.
DHGH-14-29	54.06	55.01	0.95	145467		CO	C2		K	MN		G	PD	25	M	QZ	CE	Seam. Minor ST bands <10mm. Moderately developed cleating; 4mm x 3mm. Minor conchoidal fracturing. Occasional listric surfaces. Locally sheared. Minor QZ <1mm in cleats.
DHGH-14-29	55.01	55.21	0.20	145468		CO	C2		K	MN		P	PD	25	M	QZ	CE	Seam floor. Minor ST bands <5mm. Poorly developed cleating; <2x3mm. Some listric surfaces. Minor QZ <1mm in cleating. Minor PY <2mm veinlets & blebs near basal contact.
DHGH-14-29	55.21	55.42	0.21	145469	75	SS	VF	N	G				PD	30	M	QZ	VN	Floor. Some coal from seam above mixed into sample. Overall clean.
DHGH-14-29	55.42	60.05	4.63		75	SS	VF	N	G				WD	35	M	QZ	VN	
DHGH-14-29	60.05	60.12	0.07			KL												
DHGH-14-29	60.12	61.09	0.97		75	SS	VF	N	G				WD	35				
DHGH-14-29	61.09	68.25	7.16			SS	VF	N	G				WD	35	R	QZ	VN	
DHGH-14-29	68.25	68.38	0.13			KL												
DHGH-14-29	68.38	72.31	3.93			SS	VF	N	G				WD	25	M	QZ	VN	
DHGH-14-29	72.31	72.36	0.05			KL												
DHGH-14-29	72.36	72.54	0.18			SS	VF	N	G									
DHGH-14-29	72.54	78.15	5.61		85	SS	VF	N	G	XX		S	WD	30	M	QZ	VN	
DHGH-14-29	78.15	78.3	0.15			ZM		B	G	MN		S	WD	10	R	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	78.3	78.43	0.13			CO	C4		K	MN		F			M	QZ	CE	COAL NOT SAMPLED <30 CM; MINOR INTERMIXED MS; HIGHLY SHEARED DESTROYING AND PULVERIZING PRIMARY COAL TEXTURES; W/FAULTED CONTACTS; ABUNDANT SHEARED/LISTRIC SURFACES; MINOR SHEARED QTZ (FORMERLY CLEAT INFILL) AND RARE PY MILLED CLASTS
DHGH-14-29	78.43	80.31	1.88		50	SS	VF	A	G			G	WD	40	E	QZ	VN	SHEARED INTERAL WITH SIGNIFICANT VERTICAL FAULT
DHGH-14-29	80.31	80.89	0.58			ST		B	G	XX		G	WD	55	M	QZ	VN	BEDDING ANGLE VARIABLE; MINOR FOLDING AND SHEARING
DHGH-14-29	80.89	81.23	0.34			ZM		D	G	MN		P	PD	55	M	QZ	VN	3CM COAL BAND NEAR BOT CONTACT
DHGH-14-29	81.23	94.35	13.12		80	SS	FC	N	G	RA		G	WD	45	E	QZ	VN	
DHGH-14-29	94.35	94.95	0.60			ST		B	G		EQ	G	WD	45				
DHGH-14-29	94.95	98.63	3.68		60	SS	VF	N	G			G	WD	40	R	QZ	VN	
DHGH-14-29	98.63	98.82	0.19			XM		D	G			G	PD	40				MINOR COAL LENSES INCREASING IN ABUNDANCE TOWARDS BOT OF UNIT
DHGH-14-29	98.82	99.02	0.20	145470		XM		D	G	MN		G	PD	40	M	QZ	CE	Roof. Minor CO lenses; <5mm. Rare QZ in cleating.
DHGH-14-29	99.02	99.14	0.12	145471		CO	C5		K	MN			PD	40	E	QZ	CE	Seam. Minor ST bands; <15mm. Poorly developed cleating; <1x1mm. Minor listric surfaces. Accessory (5%) QZ; <4mm in cleats. Minor PY blebs; <4mm.
DHGH-14-29	99.14	99.18	0.04			KL				CO								
DHGH-14-29	99.18	99.42	0.24	145472		CO	C2		K	MN		P	PD	35	E	QZ	CE	Seam. Minor ST laminations; <3mm. Poor to moderately developed cleating; <3x3mm. Rare listric surfaces. Accessory (5%) QZ; <3mm in cleating. Minor PY; <2mm blebs.
DHGH-14-29	99.42	99.62	0.20	145473	65	MS		D	G			G	PD	35	R	QZ	WP	Floor. Clean. Rare QZ wisps. Rare PY blebs.
DHGH-14-29	99.62	100.32	0.70		65	MS		D	G	TR		G	WD	45	R	QZ	WP	
DHGH-14-29	100.32	106.08	5.76		60	SS	VM	N	G			G	WD	45	R	QZ	WP	
DHGH-14-29	106.08	106.33	0.25			XM		B	G	TR		G	PD	30	M	QZ	WP	
DHGH-14-29	106.33	106.5	0.17	145474		XM		B	G	TR		G	PD	30	M	QZ	WP	Roof. Rare CO wisps. Rare QZ wisps.
DHGH-14-29	106.5	106.8	0.30	145475		CO	C4		K	MN		P	PD	40	E	QZ	CE	Seam. Common MS laminations w single bands <40mm. Poorly developed cleating; <3x4mm. Rare listric surfaces. Accessory (3%) QZ; <3mm in cleating.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	106.8	107	0.20	145476	55	SS	VM	A	G			G	WD	40	R	QZ	WP	Floor. Clean
DHGH-14-29	107	109.53	2.53		55	SS	VM	A	G			G	WD	45	R	QZ	WP	
DHGH-14-29	109.53	111.78	2.25		70	ZM		D	G	MN		G	PD	40	M	QZ	WP	
DHGH-14-29	111.78	111.93	0.15		55	SS	VF	A	G				WD	30				
DHGH-14-29	111.93	111.97	0.04			KL												
DHGH-14-29	111.97	114.11	2.14		55	SS	VF	A	G			G	WD	30				
DHGH-14-29	114.11	114.31	0.20	145477		MS		B	G	TR		G	PD	45	M	QZ	CE	Roof. Trace CO lenses <3mm. Minor QZ in cleating.
DHGH-14-29	114.31	114.51	0.20	145478		CO	C2		K	MN		G	PD	45	M	QZ	CE	Seam roof. Minor MS laminations; <3mm. Moderately developed cleating; <4mm face x 3mm butt. Common conchoidal fracturing. No shearing. Minor QZ; <2mm in cleating.
DHGH-14-29	114.51	115.08	0.57	145479		CO	C2		K	MN		G	PD	50	M	QZ	CE	Seam. Minor MS laminations; <2mm. Locally well developed cleating; <3mm face x 4mm butt. Conchoidal fracturing. Minor listric faces. Minor QZ; <2mm in cleating.
DHGH-14-29	115.08	115.43	0.35	145480		CO	C3		K	MN		G	PD	45	M	QZ	CE	Seam. Minor MS laminations; <2mm. Primary textures destroyed by shearing. Common slickenside/ listric faces. Minor QZ, <1mm in cleating.
DHGH-14-29	115.43	116.35	0.92	145481		CO	C2		K	TR		G	PD	40	M	QZ	CE	Seam. Minor MS laminations; <5mm. Locally well developed cleating; <5mm face x 4mm butt. Common conchoidal fracturing. Minor QZ; <1mm in cleating & veinlets.
DHGH-14-29	116.35	116.53	0.18	145482		CO	C2		K	MN		G	PD	45	M	QZ	CE	Seam floor. Minor ST laminations toward basal contact; <2mm. Modertely developed cleating; <3mm face x 4mm butt. Minor QZ, <1mm in cleating.
DHGH-14-29	116.53	116.73	0.20	145483		ST		B	G	TR		G	PD	50	M	QZ	WP	Floor. Rare CO lenses; <3mm.
DHGH-14-29	116.73	117.65	0.92			ST		B	G	TR		G	PD	50	M	QZ	VN	
DHGH-14-29	117.65	125.31	7.66		55	SS	VM	A	G	TR		G	WD	50				
DHGH-14-29	125.31	130.45	5.14		75	CG	GG	C	G	TR		G	WD	55	E	QZ	VN	
DHGH-14-29	130.45	139.84	9.39			SS	FC	A	G			G	PD	50	M	QZ	VN	
DHGH-14-29	139.84	140.94	1.10		55	SS	VF	E	G			G	PD	45				
DHGH-14-29	140.94	141.26	0.32		55	SS	VF	E	G			G	PD	80				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments	
DHGH-14-29	141.26	143.02	1.76		55	SS	VF	E	G			G	PD	50					
DHGH-14-29	143.02	143.38	0.36			ST		E	G			G	PD	50					
DHGH-14-29	143.38	143.7	0.32			CO	SY		K	CM		G	WD	40	E	QZ	CE		
DHGH-14-29	143.7	143.97	0.27			CO	C3		K	MN		P	WD	40	E	QZ	CE	NOT SAMPLED <30CM; MINOR ST BANDS UP TO 4MM; MODERATELY DEVELOPED CLEATING UP TO A MAX OF 4MM X 4MM; FACE CLEATS 60 DEG; MINOR CONCOIDAL FRACTURING; QTZ CLEAT INFILL UP TO 2MM WIDE;	
DHGH-14-29	143.97	144.54	0.57			MS		B	G			G	WD	50					
DHGH-14-29	144.54	146.82	2.28		55	SS	VF	E	G			G	WD	55					
DHGH-14-29	146.82	146.9	0.08			MS		B	G				PD	55					
DHGH-14-29	146.9	147.1	0.20	145485		MS		B	G	RA		G	PD	55	R	QZ	VN	ROOF: MUDSTONE W/RARE COAL BANDS AT BOTTOM OF INTERVAL	
DHGH-14-29	147.1	147.3	0.20	145486		CO	C3		K				PD	50	M	QZ	CE	SEAM ROOF: MODERATELY CLEATED UP TO 3MM X 6MM; FACE CLEATS AT 50DEG; MNR QTZ CLEAT INFILL UP TO 2MM	
DHGH-14-29	147.3	148.12	0.82	145487		CO	C3		K				PD	50	M	QZ	VN	SEAM A: LOCALLY POORLY DEVELOPED CLEATING UP TO 1MM X 1MM; PRIMARY TEXTURES DESTROYED/CRUSHED BY SHEARING; COMMON LISTRIC FACES; BROKEN QTZ CLEAT INFILL UP TO 2MM; MINOR PY BLEBS	
DHGH-14-29	148.12	148.32	0.20	145488		CO	C3		K				G	PD	50	M	QZ	CE	SEAM FLOOR B: TOP HALF OF INTERVAL HIGHLY SHEARED WITH COMMON LISTRIC FACES AND NO PRIMARY TEXTURES REMAINING; BOTTOM HALF ON INTERVAL HAS MOD DEVELOPED CLEATING UP TO A MAX OF 4MM X 4MM; BUTT CLEATS AT 50DEG; MINOR CONCOIDAL FRACTURING ON CLEAT FACES; MINOR QTZ CLEAT INFILL UP TO 3MM; MNR RARE BELBS
DHGH-14-29	148.32	148.52	0.20	145489		ST		B	G	TR		G	PD	50	R	QZ	WP	FLOOR: CLEAN ST W/TRACE CO BANDS AT TOP CT	
DHGH-14-29	148.52	151.02	2.50			ST		B	G			G	PD	50					
DHGH-14-29	151.02	155.67	4.65		60	ST		E	G			G	PD	45					
DHGH-14-29	155.67	156.74	1.07			MS		B	G	RA			PD	45	R	QZ	CE		
DHGH-14-29	156.74	156.94	0.20	145490		MS		B	G	RA		G	PD	45	M	QZ	CE	ROOF: RARE COAL BANDS; QTZ BANDS UP TO 15MM; MNR QTZ CLEAT INFILL UP TO 1MM	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	156.94	157.14	0.20	145491		CO	C3		K	MN		I	WD	50	M	QZ	VN	SEAM ROOF: MINOR ST LENSES UP TO 4MM; MODERATE TO WELL DEVELOPED CLEATING UP TO 3MM X 5MM; BUTT CLEATS 45 DEG; MINOR QTZ VEINS UP TO 4MM WIDE AND MNR QTZ CLEAT INFILL UP TO 3MM
DHGH-14-29	157.14	157.41	0.27	145492		CO	C3		K	MN		I	PD	50	M	QZ	CE	SEAM A: MINOR MS BANDS UP TO 10MM WIDE; MOD TO WELL DEVELOPED CLEATING UP TO A MAX OF 3MM X 2MM; MINOR PY VEINLETS 1MM; MNR QTZ VEINS UP TO 2MM AND CLEAT INFILL UP TO 1MM
DHGH-14-29	157.41	157.65	0.24	145493		CO	C2		K	MN		I	PD	50	M	QZ	CE	SEAM FLOOR: 40MM ST CLAST AT TOP OF INTERVAL; MODERATELY DEVELOPED CLEATING W/CONCOIDAL FRACTURING; CLEATS 2MM X 1MM; MNR QTZ CLEAT INFILL UP TO 2MM; QTZ VEINS UP TO 4MM
DHGH-14-29	157.65	157.85	0.20	145494		ST		B	G			G	PD	50	R	QZ	WP	FLOOR: CLEAN ST
DHGH-14-29	157.85	158.59	0.74		65	ST		B	G				PD	50	R	QZ	WP	
DHGH-14-29	158.59	158.78	0.19	145495	65	ST		B	G	MN		G	PD	50	M	QZ	CE	ROOF A: MINOR COAL BAND 16MM AT BOT OF UNIT; RARE PY BLEBS 3MM;
DHGH-14-29	158.78	158.98	0.20	145496		CO	C3		K				WD	55	M	QZ	CE	SEAM ROOF A: MODERATELY DEVELOPED CLEATING UP TO 2MM X 2MM; MINOR QTZ CLEAT INFILL UP TO 3MM; MNR PY BLEBS UP TO 4MM DIAM
DHGH-14-29	158.98	159.98	1.00	145497		CO	C3		K	MN			PD	50	M	QZ	CE	SEAM A: MNR MS LENSES UP TO 4MM WIDE; MOD DEVELOPED CLEATING UP TO 3MM X 3MM; MNR QTZ CLEAT INFILL UP TO 3MM; PY BLEBS UP TO 2MM DIAM; PARTLY SHEARED COMMON LISTRIC SURFACES
DHGH-14-29	159.98	160.37	0.39	145498		CO	C3		K	CM			PD	45	M	QZ	CE	SEAM: COMMON MS BANDS UP TO 20MM; LOCALLY MOD DEVELOPED CLEATING 1MM X 3MM; QTZ CLEAT INFILL UP TO 1MM; MNR PY VEINLETS AND BLEBS UP TO 2MM DIAM
DHGH-14-29	160.37	160.47	0.10	145499		XM		B	G	MN					M	QZ	VN	PARTING: MINOR COAL LENSES UP TO 2MM; MNR QTZ VEINS; INTERMIXED XM AND ST
DHGH-14-29	160.47	160.7	0.23			KL												
DHGH-14-29	160.7	160.74	0.04			KL												
DHGH-14-29	160.74	160.99	0.25	145500		XM		B	G	XX								PARTING: COATED W/DRILLING MUD;

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	160.99	161.79	0.80	145501		CO	C3		K	MN			PD	50	M	QZ	CE	SEAM A: ST BANDS UP TO 10MM; MOD DEVELOPED CLEATING UP TO 4MM X 2MM; BUTT CLEATS AT 50DEG; QTZ CLEAT INFILL UP TO 3MM WIDE; MNR PY VEINS UP TO 2MM
DHGH-14-29	161.79	161.99	0.20	145502		CO	C4		K	MN		P	PD	55	M	QZ	VN	SEAM FLOOR: MNR ST LENSES UP TO 50MM; COMMON LISTRIC SURFACES W/LOCALLY MOD DEVELOPED CLEATING 2MM X 2MM; MINOR CONCOIDAL FRACTURING; MNR QTZ IN VEINS UP TO 4MM WIDE AND IN CLEATS UP TO 0.5MM;
DHGH-14-29	161.99	162.19	0.20	145503		ST		C	G	RA			PD	60	M	QZ	VN	FLOOR A: CLEAN ST W/MNR CO AT TOP OF INTERVAL; MNR QTZ VEIN ON TOP CT
DHGH-14-29	162.19	176.65	14.46			ST		C	G			G	PD	60	R	QZ	WP	
DHGH-14-29	176.65	176.94	0.29			MS		B	G	TR		G	PD	50	M	QZ	WP	
DHGH-14-29	176.94	178.06	1.12		60	ST		B	G	MN		G	PD	35	M	QZ	WP	
DHGH-14-29	178.06	178.94	0.88			ZM		D	G	MN			PD	35	E	QZ	VN	
DHGH-14-29	178.94	178.99	0.05			KL												
DHGH-14-29	178.99	179.52	0.53			ZM		D	G	MN		G	PD	35	E	QZ	VN	
DHGH-14-29	179.52	180.62	1.10			CO	SY	D	K	CM		G	PD	40	E	QZ	VN	NOT SAMPLED: STONY COAL; ALTERNATING COAL-MS BANDS UP TO 60MM; ACCESORY QTZ IN VEINS AND CLEATING INFILL; MINOR PY BLEBS UP TO 8MM; DEFORMED/FOLDED AT BOTTOM
DHGH-14-29	180.62	180.92	0.30			ZM		D	G	MN		G			M	QZ	WP	
DHGH-14-29	180.92	191.08	10.16			ST		B	G	TR			WD	35	M	QZ	WP	
DHGH-14-29	191.08	191.25	0.17			KL				CO								LOST COAL; NO ROOF SAMPLES DUE TO CORE LOSS
DHGH-14-29	191.25	191.63	0.38	145504		CO	C3		K	MN			WD	30	E	QZ	CE	SEAM A: MNR MS BANDS UP TO 2MM; MOD TO WELL DEVELOPED CLEATING 3MM X 4MM W/MNR CONCOIDAL FRACTURING; FACE CLEATS 60DEG; 3% ACCESORY QTZ CLEAT INFILL UP TO 2MM; TRACE DS PY
DHGH-14-29	191.63	191.99	0.36	145505		CO	SY		K	CM			WD	30	E	QZ	CE	PARTING: STONY COAL W/COMMON MS BANDS; COMMON LISTRIC FACES W/LOCALLY MOD DEVELOPED CLEATING 2MM X 3MM; UP TO 5% ACCESORY QTZ CLEAT INFILL UP TO 4MM WIDE

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	191.99	192.35	0.36	145506		CO	C3		K	MN			WD	30	M	QZ	CE	SEAM A: MINOR ST BANDS UP TO 40MM; MOD TO WELL DEVELOPED CLEATING UP TO 4MM X 2MM W/MINOR CONCOIDAL FRACTURING; OCCASIONAL LISTRIC SURFACES; MINOR QTZ CLEAT INFILL UP TO 2MM WIDE; MNR PY BLEBS UP TO 6MM
DHGH-14-29	192.35	192.55	0.20	145507		CO	C3		K			G	WD	30	M	QZ	CE	SEAM FLOOR: MOD TO WELL DEVELOPED CLEATING 3MM X 4MM W/MINOR CONCOIDAL FRACTURING SEEN; MINOR LISTRIC SURFACES; MINOR QTZ CLEAT INFILL UP TO 4MM
DHGH-14-29	192.55	192.76	0.21	145508		ST		B	G	MN		P	PD	30	M	QZ	WP	FLOOR A: MNR COAL NEAR TOP CONTACT; RARE COAL WISPS THROUGHOUT; MNR QTZ VNS; RARE PY BLEBS UP TO 6MM
DHGH-14-29	192.76	193.2	0.44			ST		B	G				PD	30	M	QZ	WP	
DHGH-14-29	193.2	193.4	0.20	145509		ST		B	G			P	PD	30	M	QZ	WP	ROOF: CLEAN ST
DHGH-14-29	193.4	193.51	0.11	145510		CO	C4		K	CM			PD	20	E	QZ	VN	SEAM: COMMON (UP TO 25%) SILTSTONE BANDS; LISTRIC SURFACES; ACCESORY QTZ CLEAT INFILL AND VEINS UP TO 5MM WIDE
DHGH-14-29	193.51	193.77	0.26	145511		CO	C3		K	MN		G	PD	20	M	QZ	CE	SEAM: MINOR MS BANDS UP TO 15MM WIDE; MINOR LISTRIC SURFACES; MOD DEVELOPED CLEATING 2MM X 3MM; FACE CLEATS 70DEG; MNR QTZ CLEAT INFILL UP TO 5MM WIDE
DHGH-14-29	193.77	193.97	0.20	145512		ST		M	G	MN			PD	30	R	QZ	WP	FLOOR: ST W/MINOR COAL LAMINATIONS
DHGH-14-29	193.97	195.29	1.32			ST		M	G	TR	AM	G			M	QZ	WP	
DHGH-14-29	195.29	199.47	4.18		65	ST							FS	20	M	QZ	WP	
DHGH-14-29	199.47	199.6	0.13			KL				CO								Based on density. No roof samples taken.
DHGH-14-29	199.6	199.68	0.08			MS					AM							
DHGH-14-29	199.68	199.82	0.14	145513		MS		B	G		AM	G						ROOF A: CLEAN AMORPHOUS MUDSTONE FOLLOWED BY 6CM OF ST W/RARE COAL BANDS NEAR THE GRADATIONAL BOTTOM CONTACT
DHGH-14-29	199.82	199.88	0.06	145513		ST		B	G	RA	AM	G			M	QZ	VN	ROOF B
DHGH-14-29	199.88	200.09	0.21	145514		CO	C3		K						M	QZ	CE	SEAM: COAL IS CRUSHED AND SHEARED; NO PRIMARY TEXTURES REMAINING; MOIST

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	200.09	200.3	0.21	145515		CO	C3		K			F			R	PY	DS	SEAM: COAL IS MAINLY CRUSHED AND CRUBLED/SHEARED W/FAULTED BOTTOM CONTACT; LOCALLY POORLY DEVELOPED CLEATING 1MM X 1MM; RARE DS PY
DHGH-14-29	200.3	200.36	0.06	145516		ST		B	G			F						FLOOR A: CLEAN ST; FAULTED ON BOTH CONTACTS
DHGH-14-29	200.36	200.5	0.14	145516	85	SS	VF	A	G				WD	20				FLOOR B: CLEAN SS VF INTERBEDDED W/ST
DHGH-14-29	200.5	203.73	3.23		85	SS	VF	A	G			G	WD	20	R	QZ	VN	
DHGH-14-29	203.73	211.23	7.50		60	ST		E	G			G	FS	20	M	QZ	VN	
DHGH-14-29	211.23	218.68	7.45		80	SS	VF	A	G				FS	20	M	QZ	VN	
DHGH-14-29	218.68	218.72	0.04			KL												
DHGH-14-29	218.72	220.09	1.37		90	SS	VF	A	G				WD	20	R	QZ	VN	
DHGH-14-29	220.09	221.25	1.16			KL				CO								No remnant coal in box. Possible density low due to cave/faulting
DHGH-14-29	221.25	224.71	3.46		80	SS	VF	A	G	TR			WD	20	R	QZ	VN	
DHGH-14-29	224.71	224.81	0.10			KL				CO								LOST COAL
DHGH-14-29	224.81	224.96	0.15			CO	C3		K	MN		G	PD	20	M	QZ	CE	Coal not sampled; <30cm. Minor ST bands <30mm near basal contact. Moderately developed cleating; 3mm face x 4mm butt. Minor QZ; <1mm in cleating.
DHGH-14-29	224.96	227.64	2.68		65	SS	VF	A	G				WD	35	M	QZ	VN	
DHGH-14-29	227.64	227.76	0.12			ZT		D	G				PD	5	M	QZ	CE	
DHGH-14-29	227.76	227.81	0.05			KL												
DHGH-14-29	227.81	227.87	0.06			ZT		D	G			G	PD	5	M	QZ	CE	
DHGH-14-29	227.87	229.74	1.87			ST		D	G	TR		G	WD	15	R	QZ	CE	
DHGH-14-29	229.74	236.81	7.07		85	SS	VM	A	G				WD	15	M	QZ	VN	
DHGH-14-29	236.81	237.01	0.20	145517	85	SS	VM	A	G	XX			WD	15	M	QZ	VN	ROOF A: CLEAN
DHGH-14-29	237.01	237.16	0.15	145518		CO	C3		K			G						SEAM ROOF: NO CLEATING; SHEARING DESTROYING PRIMARY TEXTURES; COMMON LISTRIC SURFACES
DHGH-14-29	237.16	237.36	0.20	145519		ST		B	G	TR		G	PD	35				PARTING: ST W/TRACE COAL BANDS AT THE GRADATIONAL TOP CONTACT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	237.36	237.65	0.29	145520		CO	C2		K	MN		G	PD		M	QZ	CE	SEAM: MINOR ST LENSES AT GRADATIONAL TOP CT UP TO 2MM; LOCALLY VERY POOR CLEATING W/MOST OF PRIMARY TEXTURES DESTROYED BY SHEARING; COMMON LISTRIC SURFACES; MNR QTZ CLEAT INFILL/BROKEN QTZ
DHGH-14-29	237.65	237.89	0.24	145521		ST		B	G	RA		G	PD		M	QZ	VN	PARTING: RARE COAL AT GRADATIONAL TOP AND BOTTOM CONTACTS; MINOR QZ VEINS
DHGH-14-29	237.89	238.37	0.48	145522		CO	C2		K									SEAM: LOCALLY MOD TO WELL DEVELOPED CLEATING 4MM X 2MM; PRIMARY TEXTURES PARTLY DESTROYED BY SHEARING W/ COMMON LISTRIC FACES
DHGH-14-29	238.37	238.57	0.20	145523		CO	C2		K			G						SEAM FLOOR: SHEARED; CRUSHED WITH NO PRIMARY TEXTURES REMAINING
DHGH-14-29	238.57	238.77	0.20	145524	80	ST		B	G			G	WD	35	R	QZ	VN	FLOOR A: CLEAN ST AND SS VV
DHGH-14-29	238.77	249.77	11.00		80	ST		B	G				WD	35	M	QZ	VN	
DHGH-14-29	249.77	249.97	0.20	145525	80	ST		B	G	MN		G	WD	35	M	PY	BL	ROOF A: MNR COAL BANDS UP TO 2MM WIDE NEAR GRADATIONAL BOT CT
DHGH-14-29	249.97	250.18	0.21	145526		CO	C4		K	MN			PD	30	E	QZ	CE	SEAM ROOF: MNR ST BANDS <3MM; POORLY DEVELOPED CLEATING 2MM X 2MM; QTZ CLEAT INFILL UP TO 2MM
DHGH-14-29	250.18	250.82	0.64	145527		CO	C4		K	CM			PD	30	M	QZ	CE	SEAM: COMMON ST BANDS UP TO 120MM; LOCALLY MOD- WELL DEVELOPED CLEATING 2MM X 2MM W/MNR CONCOIDAL FRACTURING; LISTRIC SURFACES; MNR QTZ CLEAT INFILL UP TO 2MM
DHGH-14-29	250.82	251.72	0.90	145528		CO	C2		K				PD	20				SEAM: LOCALLY MOD DEVELOPED CLEATING UP TO 2MM X 4MM; OCCASIONAL LISTRIC SURFACES WHERE FABRIC IS DESTROYED BY SHEARING;
DHGH-14-29	251.72	251.89	0.17	145529		CO	C3		K	CM			PD	20	M	QZ	VN	PARTING: COMMON SILTSTONE BEDS UP TO 30MM; MINOR LISTRIC SURFACES; NO CLEATING; MINOR QTZ VEINS UP TO
DHGH-14-29	251.89	252.43	0.54	145530		CO	C3		K	RA			PD	20	R	QZ	VN	SEAM: RARE SILTSTONE LENSES <25MM; POORLY DEVELOPED CLEATING 1MM X 1MM; LISTRIC/SHEARED SURFACES; PRIMARY COAL TEXTURES LOCALLY DESTROYED BY SHEARING

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	252.43	252.63	0.20	145531		CO	C2		K	MN		G	PD	20	M	QZ	CE	SEAM FLOOR: MINOR MS LENSES <2MM; MOD DEVELOPED CLEATING UP TO 4MM X 3MM W/MINOR CONCOIDAL FRACTURING; MNR QTZ CLEAT INFILL UP TO 1MM; SOME LISTRIC SURFACES
DHGH-14-29	252.63	252.82	0.19	145532	60	SS	VM	A	G	MN			PD	20	M	QZ	VN	FLOOR A: MNR CO BANDS NEAR TOP CONTACT
DHGH-14-29	252.82	253.81	0.99		60	SS	VM	A	G			G	WD	20	M	QZ	VN	
DHGH-14-29	253.81	255.62	1.81			SS	VM	A	G	MN		F	WD	20	M	QZ	VN	
DHGH-14-29	255.62	257.51	1.89		75	SS	VF	A	G			G	PD	30	M	QZ	VN	
DHGH-14-29	257.51	263.41	5.90			ST		B	G			G	PD	10	M	PY	BL	
DHGH-14-29	263.41	265.34	1.93			SS	VM	A	G		AM	P						
DHGH-14-29	265.34	265.49	0.15			CO	C3		K	MN		G	PD	25	M	QZ	CE	No sample <30cm width. Poorly developed cleating 2mm x 2mm; minor siltstone bands; listric surfaces and partly sheared; rare Py veinlets
DHGH-14-29	265.49	265.84	0.35			CO	SY		K	CM		G	PD	25	M	QZ	CE	
DHGH-14-29	265.84	266.41	0.57			XM		D	G	MN		G	PD	10	R	QZ	WP	
DHGH-14-29	266.41	266.88	0.47		65	SS	VM	A	G			F	PD	45	M	QZ	VN	
DHGH-14-29	266.88	275.41	8.53			SS	VM	A	G	MN		G	PD	15	M	QZ	VN	
DHGH-14-29	275.41	277.03	1.62		70	ST		E	G			P	WD	35	M	QZ	VN	
DHGH-14-29	277.03	277.23	0.20	145533	70	ST		E	G			O	WD	35	M	QZ	VN	ROOF A: CLEAN
DHGH-14-29	277.23	277.47	0.24	145534		CO	C2		K	MN		I	PD	20				SEAM ROOF: MNR MS LENSES UP TO 2MM; MODERATELY DEVELOPED CLEATING UP TO A MAX OF 4MM BUTT X 5MM FACE; FACE CLEATS AT 40DEG; COMMON LISTRIC SURFACES
DHGH-14-29	277.47	277.71	0.24	145535		CO	C3		K	MN								SEAM: VERY HIGHLY SHEARED ZONE; INTERMIXED SILTSTONE; PRIMARY TEXTURES DESTROYED BY SHEARING; ABUNDANT LISTRIC FACES; MNR INTERMIXED ST
DHGH-14-29	277.71	278.28	0.57	145536		CO	C3		K	MN			PD	20	M	QZ	CE	SEAM: MNR MS/ST BANDS UP TO 21MM; POORLY DEVELOPPED CLEATING UP TO 2MM X 4MM; LISTRIC FACES AND TEXTURES LOCALLY DESTROYED BY SHEARING; MNR QTZ CLEAT INFILL UP TO 1MM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	278.28	278.48	0.20	145537		CO	C3		K	MN		G	PD	20	M	QZ	CE	SEAM FLOOR: MINOR SILTSTONE LENSES UP TO 4MM; POORLY DEVELOPED CLEATING 1MM X 5MM; MNR QTZ UP TO 1MM IN CLEATS;
DHGH-14-29	278.48	278.7	0.22	145538	60	ST		B	G	MN	AM				R	QZ	WP	FLOOR A: MNR CO BANDS TOP OF UNIT UP TO 15MM; RARE QTZ CLEAT INFILL
DHGH-14-29	278.7	280.01	1.31		75	ST		E	G			G	WD	20	R	QZ	VN	
DHGH-14-29	280.01	298.58	18.57		65	SS	VM	A	G	MN		G	WD	10	E	QZ	VN	
DHGH-14-29	298.58	298.84	0.26	145539		ZT			K	MN		P	PD	20	M	QZ	CE	Roof: minor coal bands up to 5mm wide; mnr qtz cleat infill
DHGH-14-29	298.84	299.09	0.25	145540		CO	C3		K	MN		G			M	PY	BL	SEAM ROOF A: MNR ST LENSES <20MM; LOCALLY POORLY DEVELOPED CLEATING UP TO 2MM X 4MM; LOCALLY SHEARED W/LISTRIC SURFACES; MNR PY BLEBS <3MM WIDE; RARE QTZ CLEAT INFILL UP TO 1MM WIDE
DHGH-14-29	299.09	299.7	0.61	145541		CO	C4		K	MN		G			R	QZ	VN	SEAM: MINOR MS LENSES <5MM; SINGLE 40MM WIDE ST BAND IN MIDDLE OF INTERVAL; HIGHY SHEARED, PRIMARY TEXTURES DESTROYED AND PULVERIZED BY SHEARING; COMMON LISTRIC SURFACES
DHGH-14-29	299.7	300.22	0.52	145542		CO	C4		K	MN		G						SEAM: MINOR ST CLASTS <8MM AND MS LENSES UP TO 30MM WIDE; SHEARED W/COMMON LISTRIC FACES; PRIMARY BEDDING AND CLEATING DESTROYED BY SHEARING
DHGH-14-29	300.22	300.59	0.37	145543		CO	C4		K	MN								SEAM: MINOR SILTSTONE BANDS UP TO 30MM WIDE; COMMON LISTRIC FACES (SHEARED);
DHGH-14-29	300.59	300.79	0.20			KL				CO								LOST COAL
DHGH-14-29	300.79	301.04	0.25	145544		CO	C3		K	MN		G						SEAM: MINOR MUDSTONE LENSES UP TO 2MM WIDE; POORLY DEVELOPED CLEATING 2MM BUTT X 5MM FACES; W/MINOR LISTRIC SURFACES;
DHGH-14-29	301.04	301.15	0.11	145545		ST		B	G	MN		I						Parting: pick based on gamma and core in box; MINOR COAL LAMINATIONS AT TOP CT UP TO 1MM WIDE;
DHGH-14-29	301.15	301.39	0.24	145546		CO	C2		K			P			M	QZ	CE	Seam floor: MODERATELY DEVELOPED CLEATING 2MM X 5MM W/CONCOIDAL FRACTURING; MINOR QTZ CLEAT INFILL UP TO 1MM WIDE;

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-29	301.39	301.59	0.20	145547		MS			K	MN		G	PD	15	M	PY	BL	FLOOR A: MINOR COAL BANDS NEAR TOP CT UP TO 5MM WIDE; MNR PY BLEBS 12MM DIAM; RARE QTZ CLEAT INFILL IN COAL BANDS
DHGH-14-29	301.59	301.83	0.24			MS			K			G	PD	15	M	PY	BL	
DHGH-14-29	301.83	307.51	5.68		85	SS	VM			MN		G	PD	25	M	QZ	VN	
DHGH-14-29	307.51	313	5.49			SS	FM	N	G	MN		G	WD	15	M	QZ	VN	
DHGH-14-29	313	319.63	6.63		70	SS	VM	E	G			G	WD	15				
DHGH-14-29	319.63	320.96	1.33			SS	FC	E	G	MN		G	PD	15	R	QZ	VN	
DHGH-14-29	320.96	346.52	25.56		50	SS	VM	A	G			G	WD	20	M	QZ	VN	
DHGH-14-29	346.52	351.76	5.24			SS	FM	N	G	MN		G	WD	15	M	QZ	VN	
DHGH-14-29	351.76	357.84	6.08		60	SS	FM	E	G			G	BW	15	M	QZ	VN	
DHGH-14-29	357.84	358.53	0.69			SS	FM	S	G			I	PD	10				
DHGH-14-29	358.53	361.32	2.79		65	ST		B	G			G	WD	30	R	QZ	VN	
DHGH-14-29	361.32	361.64	0.32	GT-14-41	65	ST		B	G			G	WD	30	R	QZ	VN	GEOTECH SAMPLE GT-14-41, ABOVE COAL SEAM
DHGH-14-29	361.64	362.44	0.80		65	ST		B	G			G	WD	30	R	QZ	VN	
DHGH-14-29	362.44	363.03	0.59			ST		B	G			G	PD	35	M	PY	BN	
DHGH-14-29	363.03	363.26	0.23	145548		ST		B	G	MN		G	PD	35	E	PY	BN	ROOF: minor coal laminations <1mm at basal CT; accessory pyrite DS and banded up to 1cm wide
DHGH-14-29	363.26	363.57	0.31	145549		CO	C4		K	CM		G	PD		E	PY	BN	Seam Roof A: Based on gamma & CO in box; vertically folded siltstone band 30mm wide in middle of interval; common siltstone in bands <15mm; minor qtz veins; locally poorly developed cleating 2mm x 2mm w/minor concoidal fracturing; accessory pyrite bands<4mm are bedding parallel and folded w/siltstone;
DHGH-14-29	363.57	363.68	0.11	145550		ST		B	G	TR		G			M	PY	BL	Parting: High density due to accessory presence of PY bands.
DHGH-14-29	363.68	364.08	0.40	145551		CO	C3		K	MN		G	PD	25	M	PY	LN	SEAM A: MINOR SILTSTONE BANDS UP TO 15MM; LOCALLY MOD DEVELOPED CLEATING 5MM X 3MM W/MNR CONCOIDAL FRACTURING; PARTLY SHEARED; MINOR LISTRIC FACES; MINOR PY LENSES AND BANDS <2MM; RARE QTZ CLEAT INFILL UP TO 1MM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	8.88	8.95	0.07			XM		D	K		AM							
DHGH-14-30	8.95	10.86	1.91			ST		D	G	MN	AM				M	QZ	CE	
DHGH-14-30	10.86	10.91	0.05			ST												
DHGH-14-30	10.91	10.97	0.06			SS	FF											
DHGH-14-30	10.97	12.13	1.16			ST		D	G		AM				M	QZ	VN	
DHGH-14-30	12.13	12.2	0.07			KL												
DHGH-14-30	12.2	12.55	0.35			ST		B	G		AM	P						
DHGH-14-30	12.55	13.21	0.66		85	SS	FF	A	G				PD	15				
DHGH-14-30	13.21	13.35	0.14			KL												
DHGH-14-30	13.35	17.69	4.34		85	SS	FF	A	G	MN			PD	15	E	QZ	VN	
DHGH-14-30	17.69	17.74	0.05			KL												
DHGH-14-30	17.74	20.15	2.41		70	ST		A	G	MN			WD	20	M	QZ	VN	
DHGH-14-30	20.15	20.44	0.29			KL												
DHGH-14-30	20.44	21.81	1.37		80	ST		A	G				LB					
DHGH-14-30	21.81	22.07	0.26			KL												CAVE IN
DHGH-14-30	22.07	22.66	0.59			SS	FF	A	G			G			M	QZ	VN	
DHGH-14-30	22.66	22.89	0.23		60	SS	FF	A	G			G	WD	20	M	QZ	WP	
DHGH-14-30	22.89	23.95	1.06			SS	FF	A	G	MN		P			M	QZ	VN	
DHGH-14-30	23.95	24.07	0.12			XM		D	K		AM	P						
DHGH-14-30	24.07	24.14	0.07			SS	FM	B	G		AM							
DHGH-14-30	24.14	24.51	0.37			KL												CAVE IN
DHGH-14-30	24.51	28.05	3.54			SS	FF	A	G	MN			PD	10	E	QZ	VN	QZ VEINING ONLY IN TOP 62 CMS
DHGH-14-30	28.05	28.35	0.30			KL												CAVE IN
DHGH-14-30	28.35	32.69	4.34			SS	FM	A	G	TR		G	PD	12	M	QZ	VN	
DHGH-14-30	32.69	33.58	0.89		85	ST		B	G			G	PD	15				
DHGH-14-30	33.58	34.67	1.09			XM		D	K	MN		P	PD	20	E	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	34.67	34.9	0.23			CO	SY	D	K	MN		P			E	QZ	CE	STONY COAL W/ MINOR 2-5MM MS LAMINATIONS THROUGHOUT, ACCESSORY 1-7MM QZ/CARB CLEAT INFILL, LOCAL WELL DEVELOPED CLEATING, 43MM BY 3MM CLEATS, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-30	34.9	35.07	0.17			ST		B	G			P			M	QZ	VN	
DHGH-14-30	35.07	35.27	0.20	140602		ST		B	G		AM	P			M	QZ	VN	ROOF: MASSIVE ST W/ MINOR 1MM QZ/CARB VEINING THROUGHOUT UNIT
DHGH-14-30	35.27	35.49	0.22	140603		CO	C3	D	K	MN		G						SEAM ROOF: C3 COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, WELL DEVELOPED CLEATING, 3MM BY 3MM CLEATS, LISTRIC SURFACES ALONG JOINTS
DHGH-14-30	35.49	35.74	0.25	140604		CO	C4	D	K	MN								SEAM: SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, CLEATING IS POORLY DEVELOPED, RARE LOCAL DEVELOPED CLEATING W/ 2MM BY 2MM CLEATS, LISTRIC SURFACES ALONG JOINTS
DHGH-14-30	35.74	35.96	0.22			KL				CO								LOST CORE ATTRIBUTED TO COAL
DHGH-14-30	35.96	36.4	0.44	140605		CO	C2	D	K	CM								SEAM: SHEARED COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT W/ INCREASING MS CONTENT TOWARDS BOTTOM OF UNIT, CLEATING IS POORLY DEVELOPED THROUGHOUT, TOP OF UNIT HAS LISTRIC SURFACES PRESENT ALONG JOINTS
DHGH-14-30	36.4	37.25	0.85			KL												CAVE IN, POTENTIALLY ATTRIBUTED TO LOST COAL
DHGH-14-30	37.25	39.08	1.83		90	SS	FF	A	G				WD	25	E	QZ	VN	
DHGH-14-30	39.08	39.15	0.07			KL												
DHGH-14-30	39.15	39.91	0.76		90	SS	VF	A	G		AM	P			M	QZ	VN	
DHGH-14-30	39.91	45.83	5.92		80	ST							WD	10				
DHGH-14-30	45.83	45.91	0.08			KL												
DHGH-14-30	45.91	47.65	1.74		70	ST		A	G	TR		G	WD	15	M	QZ	VN	
DHGH-14-30	47.65	50.67	3.02			ST		B	G				PD	20				
DHGH-14-30	50.67	50.89	0.22			KL												
DHGH-14-30	50.89	52.04	1.15			ST		B	G			P	PD	20	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	52.04	52.24	0.20	140606		ST		B	G	MN		P	PD	20	E	QZ	VN	ROOF: ST W/ 3-10MM MINOR COAL LENSES NEAR BOTTOM OF UNIT, ACCESSORY 1-2MM QZ/CARB VEINING
DHGH-14-30	52.24	52.8	0.56	140607		CO	C4	D	K	CM		P			E	QZ	CE	SEAM: C4 COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, QZ/CARB ACCESSORY 1-3MM CLEAT INFILL CONCENTRATED AT TOP 10CM AND BOTTOM 8CM, CLEATING IS POORLY DEVELOPED, MINOR LOCAL WELL DEVELOPED CLEATING 1MM BY 1MM CLEATS
DHGH-14-30	52.8	53	0.20	140608		XM		D	K	MN	AM	G			M	QZ	CE	FLOOR: MASSIVE CARBONACEOUS MS W/ MINOR 2MM COAL LENSES AT TOP OF UNIT, MINOR 1MM QZ/CARB CLEAT INFILL
DHGH-14-30	53	53.81	0.81			XM		D	G	MN		G			M	QZ	CE	
DHGH-14-30	53.81	56.98	3.17		70	ST		A	G				WD	25	E	QZ	VN	
DHGH-14-30	56.98	57.08	0.10			KL												
DHGH-14-30	57.08	58.05	0.97		85	SS	FF	A	G			P	WD	40	E	QZ	VN	
DHGH-14-30	58.05	58.17	0.12			MS		B	G	TR	AM	I			M	QZ	VN	
DHGH-14-30	58.17	58.32	0.15			CO	SY	D	K	CM		P			E	QZ	CE	STONY COAL W/ COMMON 2-5MM MS BANDS THROUGHOUT UNIT, ACCESSORY 1-4MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, CLEATING IS POORLY DEVELOPED THROUGHOUT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY GEOPHYSICAL LOGS
DHGH-14-30	58.32	59.17	0.85		80	ST		B	G			P	WD	40	E	QZ	VN	FOLIATION AT 20 DEGREES WITH QZ INFILL ALONG SOME FOLIATIONS
DHGH-14-30	59.17	60.84	1.67			SS	FF	A	G			G	PD	40	C	QZ	VN	
DHGH-14-30	60.84	61.34	0.50			ST		B	G			P	PD	25	M	QZ	VN	
DHGH-14-30	61.34	61.56	0.22			CO	SY	D	K	CM			PD		E	QZ	VN	STONY COAL W/ COMMON 4-7 MS LAMINATIONS THROUGHOUT, ACCESSORY 1-2MM QZ/CARB VEINING THROUGHOUT UNIT ALONG WITH MINOR CLEAT INFILL, MINOR 1MM PY BLEBS THROUGHOUT UNIT, POORLY DEVELOPED CLEATING, 2MM BY 2MM CLEATS, COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	61.56	61.67	0.11			KL				CO								
DHGH-14-30	61.67	61.72	0.05			KL												
DHGH-14-30	61.72	63.67	1.95		70	XM		D	K	MN		G	PD	10	E	QZ	CE	
DHGH-14-30	63.67	65	1.33			MS		B	G		AM				M	QZ	VN	
DHGH-14-30	65	65.21	0.21			KL												
DHGH-14-30	65.21	66.46	1.25			MS		B	G		AM	G			M	QZ	VN	
DHGH-14-30	66.46	66.66	0.20	140609		MS		B	G		AM	G			M	QZ	VN	ROOF: MASSIVE MS W/ MINOR <1MM QZ/CARB VEINING AT BOTTOM OF UNIT
DHGH-14-30	66.66	67.01	0.35	140610		CO	SY	D	K	CM		G			E	QZ	VN	SEAM:STONY COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, ACCESSORY 1-4MM QZ/CARB VEINING AND CLEAT INFILL THROUGHOUT UNIT, POORLY DEVELOPED CLEATING THROUGHOUT UNIT
DHGH-14-30	67.01	67.28	0.27	140611		CO	C4	D	K	CM		G			E	QZ	CE	SEAM A: C4 COAL W/ COMMON 4-10MM MS LAMINATIONS THROUGHOUT, ACCESSORY 1-4MM QZ/CARB CLEAT INFILL, ACCESSORY 3-5MM PY BLREBS THROUGHOUT LOCAL WELL DEVELOPED CLEATING, 4MM BY 4MM CLEATS
DHGH-14-30	67.28	67.63	0.35	140612		ZM		D	K	MN		G	PD	10	E	QZ	VN	PARTING: COALY MS W/ MINOR 1-3MM COAL BANDS THROUGHOUT UNIT, ACCESSORY QZ/CARB VEINING CONCENTRATED TOWARDS BOTTOM OF UNIT AND EXPLOITING BEDDING PLANE WEAKNESS
DHGH-14-30	67.63	68.11	0.48	140613		CO	C2	D	K	MN		G			M	QZ	CE	SEAM: C2 COAL W/ MINOR 1-5MM MS LAMINATIONS THROUGHOUT UNIT, MINOR 2MM QZ/CARB CLEAT INFILL CONCENTRATED AT TOP OF UNIT, CLEATING IS VERY WELL DEVELOPED, 2MM BY 2MM CLEATS
DHGH-14-30	68.11	68.31	0.20	140614		CO	C6	D	K	MN		G			E	QZ	CE	SEAM:SHEARED COAL W/ MINOR MS LAMINATIONS AT BOTTOM OF UNNIT, MS CONTENT INCREASING TOWARDS BOTTOM OF UNIT, SHEARING OCCURRING IN COAL TOP 10CM OF UNIT REST OF UNIT IS COMPETANT DUE TO INCREASED MS CONTENT AND CONCENTRATED CLEAT INFILL, CLEATIN GIS POORLY DEVELOPED, MINOR LOCAL CLEATING, 2MM BY 2MM CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	68.31	68.57	0.26	140615		XM		D	K	CM		G	PD	15	E	QZ	CE	FLOOR: CARBONACEOUS MS W/ COMMON MS BANDS CONCENTRATED AT TOP AND BOTTOM OF UNIT, TOP OF UNIT COAL BANDS ARE 2-10MM, BOTTOM COAL BAND IS 140MM W/ COMMON 2-4MM QZ/CARB CLEAT INFILL
DHGH-14-30	68.57	69.28	0.71			XM		D	K	MN	AM				M	QZ	WP	
DHGH-14-30	69.28	69.38	0.10			KL												
DHGH-14-30	69.38	69.43	0.05			KL												
DHGH-14-30	69.43	71.3	1.87			XM		D	K	MN		G			E	PY	BL	
DHGH-14-30	71.3	72.18	0.88		90	SS	FF	A	G	MN		G	DE		M	QZ	VN	
DHGH-14-30	72.18	75.36	3.18			SS	FM	A	G		AM				M	QZ	VN	
DHGH-14-30	75.36	75.66	0.30			KL												
DHGH-14-30	75.66	75.74	0.08			KL												
DHGH-14-30	75.74	78.8	3.06			SS	FM	A	G	MN	AM	I			M	QZ	VN	
DHGH-14-30	78.8	81.29	2.49		85	ST		B	G			G	PD	20				
DHGH-14-30	81.29	82.84	1.55			SS	FF	A	G			G	PD	15	M	QZ	WP	
DHGH-14-30	82.84	86.14	3.30		70	SS	FF	A	G			G	WD	20	M	QZ	WP	
DHGH-14-30	86.14	87.17	1.03			ST		B	G		AM				M	PY	BL	
DHGH-14-30	87.17	87.22	0.05			KL												
DHGH-14-30	87.22	91.39	4.17			ST		B	G	MN	AM	G		18	M	PY	BL	
DHGH-14-30	91.39	92.83	1.44			MS		D	G	FO	AM	G			M	PY	BL	BIVALVE INTERVAL FROM 92.20 - 93.50
DHGH-14-30	92.83	96.39	3.56			SS	FF	A	G	FO			PD	25	M	PY	BN	BIVALVE INTERVAL FROM 92.20 - 93.50
DHGH-14-30	96.39	96.92	0.53			CO	SY	D	K	AB					A	QZ	VN	STONY COAL. ABUNDANT 4-7MM MUSTONE LAMINATIONS THROUGHOUT, ABUNDANT 4-10MM QZ VEINING AT TOP AND BOTTOM OF UNIT, POORLY DEVELOPED CLEATING, LAST 5CM UNIT HAS WELL DEVELOPED 5MM X 5MM CLEATS, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-30	96.92	97.01	0.09			KL				CO								
DHGH-14-30	97.01	97.27	0.26			XM		D	K	MN		G			M	QZ	CE	
DHGH-14-30	97.27	99.59	2.32			ST		B	G	MN	AM	G			M	QZ	CE	
DHGH-14-30	99.59	103.99	4.40		80	SS	FF	A	G	MN		P	WD	27	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	103.99	105.55	1.56		80	ST		B	G			G	WD		M	QZ	WP	
DHGH-14-30	105.55	107.59	2.04		80	SS	FF	A	G			P	WD		M	QZ	VN	
DHGH-14-30	107.59	108.63	1.04			CO	SY	D	K	AB		P			A	QZ	VN	STONY COAL, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY GEOPHYSICAL LOGS, W/ ABUNDANT 4-7MM MS LAMINATIONS THROUGHOUT UNIT, ABUNDANT QZ/CARB VEINING CONCENTRATED AT TOP 50 CM, CLEATING IS POORLY DEVELOPED UNTIL THE BOTTOM 30CM OF THE UNIT CLEATING IS WELL DEVELOPED, 4MM BY 3MM CLEATS
DHGH-14-30	108.63	109.55	0.92			XM		B	G	CM	AM	G			E	QZ	CE	
DHGH-14-30	109.55	109.94	0.39		60	SS	FF	A	G			G			M	QZ	VN	
DHGH-14-30	109.94	110.66	0.72			XM		D	K	MN	AM	G			M	QZ	WP	
DHGH-14-30	110.66	111.14	0.48		70	ST						G	WD	22				
DHGH-14-30	111.14	112.29	1.15			ST		D	G		AM	G						
DHGH-14-30	112.29	115.76	3.47			MS		D	G				PD	20	M	QZ	VN	
DHGH-14-30	115.76	115.81	0.05			KL												
DHGH-14-30	115.81	118.66	2.85			MS		B	G		AM	G			M	QZ	VN	
DHGH-14-30	118.66	123.99	5.33			SS	VF	A	G	TR		G	PD	20	M	QZ	CE	
DHGH-14-30	123.99	127.91	3.92			SS	FM	A	G	MN		G		15	M	QZ	CE	
DHGH-14-30	127.91	128.11	0.20	140616		SS	FM	A	G	MN		P		15	M	QZ	CE	ROOF: FINE TO MEDIUM GRAINED SANDSTONE, MINOR COAL LENSES AT BOTTOM OF UNIT, MINOR QZ/CARB CLEAT FILL
DHGH-14-30	128.11	128.53	0.42	140617		CO	C4	D	K	CM		G		20	E	QZ	CE	SEAM A: C4 COAL, COMMON 5-10MM MUSTONE LAMINATIONS THROUGHOUT, ACCESSORY 1-3MM QZ/CARB CLEAT INFILL, POORLY DEVELOPED CLEATS, ACCESSORY 6MM PYRITE BAND AT TOP OF UNIT, 5MMX6MM BLEBS
DHGH-14-30	128.53	128.73	0.20	140618		XM		D	K	MN		G			M	QZ	VN	FLOOR: CARBONACEOUS MUDSTONE, MINOR 2-4MM COAL BANDS THROUGHOUT, MINOR QZ/CARB VEINING,
DHGH-14-30	128.73	130.96	2.23			XM		D	K	MN		G			M	QZ	VN	
DHGH-14-30	130.96	134.51	3.55		85	ST		B	G	MN		G	PD		M	QZ	WP	
DHGH-14-30	134.51	137.5	2.99		65	SS	FF	A	G			G	PD	25				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	137.5	139.49	1.99			SS	FF	A	G			P	PD	25				
DHGH-14-30	139.49	139.66	0.17			CO	SY	D	K	AB				20	E	QZ	CE	STONEY COAL, LOCALLY WELL DEVELOPED CLEATS 3X3MM, 50 MM ST BAND AT BOTTOM OF UNIT, ACCESSORY 2-3MM QZ/CARB CLEAT FILL, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY GEOPHYSICAL LOGS
DHGH-14-30	139.66	139.79	0.13			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-30	139.79	139.89	0.10			CO	C5	D	K	CM		P		20	E	QZ	CE	STONEY COAL, POORLY DEVELOPED CLEATS, 2-5MM ST BANDS THROUGHOUT, ACCESSORY 2-3MM QZ/CARB CLEAT FILL, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY GEOPHYSICAL LOGS
DHGH-14-30	139.89	140.3	0.41			XM		D	K	MN		G			M	QZ	VN	
DHGH-14-30	140.3	144.26	3.96			ST		B	G				PD	30	M	QZ	VN	
DHGH-14-30	144.26	144.42	0.16			KL												
DHGH-14-30	144.42	145.66	1.24			MS		D	G		AM	G						
DHGH-14-30	145.66	146.99	1.33			ST		B	G		AM	G						
DHGH-14-30	146.99	148.01	1.02		85	ST		B	G			G	PD	30	M	QZ	WP	
DHGH-14-30	148.01	153.22	5.21		80	SS	FF	A	G			G	PD	25				FLAMES STRUCTURES COINCIDE WITH PROPER WAY UP, YOUNGING UPWARDS
DHGH-14-30	153.22	155.84	2.62			SS	FF	A	G		AM	G			M	QZ	VN	
DHGH-14-30	155.84	163.96	8.12		85	SS	FF	A	G			G	WD	30				FLAMES STRUCTURES COINCIDE WITH PROPER WAY UP, YOUNGING UPWARDS
DHGH-14-30	163.96	174.63	10.67		80	ST		A	G			G	WD	20				
DHGH-14-30	174.63	175.6	0.97			ST		B	G		AM				M	QZ	VN	
DHGH-14-30	175.6	175.65	0.05			KL												
DHGH-14-30	175.65	181	5.35			ST		B	G		AM	G			M	QZ	VN	
DHGH-14-30	181	181.47	0.47			XM		D	G	MN		G		23	M	QZ	WP	
DHGH-14-30	181.47	181.67	0.20	140619		XM		D	K	MN		G			E	QZ	VN	ROOF: CARBONACEOUS MUDSTONE, MINOR 3-5MM COAL BANDS, ACCESSORY 2-3MM QZ/CARB VEINS,
DHGH-14-30	181.67	181.87	0.20	140620		CO	C3	D	K	MN		G		30	E	QZ	CE	SEAM ROOF: C3 COAL, MINOR 2-4MM MUDSTONE LAMINATIONS, ACCESSORY 3-5 QZ/CARB CLEAT INFILL, MODERATELY WELL DEVELOPED CLEATS 2X2MM CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	181.87	182.37	0.50	140621		CO	C1	D	K	RA		P						SEAM: C1 COAL, RARE 2-3MM MS LAMINATIONS THROUGHOUT, WELL DEVELOPED 2X2MM CLEATS THROUGHOUT
DHGH-14-30	182.37	182.57	0.20	140622		MS		B	G		AM	G			M	QZ	VN	FLOOR: MASSIVE MUDSTONE, MINOR 1-6MM QZ/CARB VEINING THROUGHOUT
DHGH-14-30	182.57	183.99	1.42			MS		B	G	MN		G			E	QZ	VN	
DHGH-14-30	183.99	189.61	5.62			MS		B	G	MN	AM				E	QZ	VN	
DHGH-14-30	189.61	189.75	0.14			XM												
DHGH-14-30	189.75	189.95	0.20	140623		XM		D	K	MN		G			C	QZ	CE	ROOF: CARBONACEOUS MUDSTONE, MINOR 1-6MM COAL LAMINATIONS THROUGHOUT, 1-3MM QZ/CARB CLEAT INFILL, ONE 6MM QZ/CARB VN,
DHGH-14-30	189.95	190.15	0.20	140624		CO	SY	D	K	CM		G			E	QZ	CE	SEAM ROOF: STONEY COAL, COMMON 2-3MM MS LAMINATIONS, 2-5MM QZ/CARB CLEAT INFILL, 9MM QZ/CARB VEIN IN THE MIDDLE OF UNIT, MS CONTENT DECREASING TOWARDS BOTTOM OF UNIT, CLEATING POORLY DEVELOPED THROUGHOUT
DHGH-14-30	190.15	191.01	0.86	140625		CO	C1	D	K	TR		G			R	QZ	CE	SEAM: C1 COAL, TRACE 2MM MS LAMINATIONS AT THE TOP OF UNIT, MINOR 1-2MM QZ/CARB CLEAT INFILL THROUGHOUT BUT CONCENTRATED AT TOP OF UNIT, VERY WELL DEVELOPED 5MM FACE CLEATS THROUGHOUT, 3MM WELL DEVELOPED CLEATS
DHGH-14-30	191.01	191.55	0.54	140626		CO	C2	D	K	MN		G			M	QZ	CE	SEAM: C2 COAL, MINOR 4-5MM MS LAMINATIONS CONCENTRATED AT THE BOTTOM OF UNIT, MINOR 1-3MM QZ/CARB CLEAT INFILL THROUGHOUT, WELL DEVELOPED CLEATS, CLEAT DEVELOPMENT DECREASES TOWARDS BOTTOM OF UNIT, 3X3MM CLEATS AT TOP OF UNIT, AT BOTTOM OF UNIT RARE 1X1MM CLEATS
DHGH-14-30	191.55	192.51	0.96	140627		CO	C2	D	K	MN		G			M	QZ	CE	SEAM: C2 COAL, MINOR 4-6MM MS LAMINATIONS THROUGHOUT, MINOR 1-5MM QZ/CARB CLEAT INFILL, WELL DEVELOPED CLEATING THROUGHOUT, 4X2MM CLEATS
DHGH-14-30	192.51	192.86	0.35	140628		ZM		D	K	CM								PARTING: SHEARED COALY MUDSTONE WITH LISTRIC SURFACES, MINOR MUDSTONE LAMINATIONS THROUGHOUT,

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	192.86	193.68	0.82	140629		CO	C1	D	K	MN		G			M	QZ	VN	SEAM A: C1 COAL, THREE SILT BANDS 30 & 50 MM NEAR TOP OF UNIT & 10MM NEAR BOTTOM OF UNIT, 1MM MS LAMINATIONS THROUGHOUT, WELL DEVELOPED CLEATING, 1X2MM CLEATS, 1-3MM THICK QZ/CARB VEINING RESTRICTED TO BOTTOM OF UNIT, TOP TWO SILT BANDS HAVE COAL LENSES, LISTRIC SURFACES ON JOINTS
DHGH-14-30	193.68	194.19	0.51	140630		CO	C3	D	K	MN		G			R	QZ	CE	SEAM: C3 COAL, MINOR 1-4MM MUDSTONE LAMINATIONS THROUGHOUT, INCREASING MS TOWARDS BOTTOM OF UNIT, 1MM TRACE QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS TOP OF UNIT, WELL DEVELOPED CLEATING, 2X2MM CLEATS, DEVELOPED CLEATING WITH INCREASED MS CONTENT
DHGH-14-30	194.19	194.29	0.10			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-30	194.29	194.75	0.46	140631		CO	C2	D	K	CM								SEAM: SHEARED COAL, COMMON MUDSTONE INTERMIXED, LISTRIC SURFACES COMMON, CLEAT DEVELOPMENT DESTROYED BY SHEARING
DHGH-14-30	194.75	195.37	0.62	140632		CO	C2	D	K	MN		G						SEAM: C2 COAL, MINOR 1-3MM MS LAMINATIONS CONCENTRATED AT THE TOP OF UNIT, WELL DEVELOPED CLEATING, 1X3MM CLEATS
DHGH-14-30	195.37	195.96	0.59	140633		CO	C3	D	K	CM		G			M	QZ	CE	SEAM: C3 COAL, COMMON MS LAMINATIONS AT THE BOTTOM OF THE UNIT, 2-5MM MS LAMINATIONS, 2MM QZ/CARB CLEAT INFILL THROUGHOUT, MODERATELY WELL DEVELOPED CLEATING AT TOP OF UNIT DECREASING TO POORLY DEVELOPED TOWARDS BOTTOM OF THE UNIT, 2X2MM CLEATS AT THE TOP OF THE UNIT
DHGH-14-30	195.96	196.41	0.45	140634		CO	C3	D	K	MN								SEAM: SHEARED COAL, MINOR MUDSTONE INTERMIXED THROUGHOUT, COMMON LISTRIC SURFACES PRESENT, CLEAT DEVELOPMENT DESTROYED BY SHEARING,
DHGH-14-30	196.41	196.51	0.10			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-30	196.51	196.94	0.43	140635		CO	C4	D	K	CO		G						SEAM: C4 COAL, COMMON 2-3MM MS LAMINATIONS, 2X2MM MODERATELY WELL DEVELOPED CLEATS, LISTRIC SURFACES PRESENT ALONG JOINTS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	196.94	197.14	0.20	140636		CO	C4	D	K	CO		G						SEAM FLOOR: C4 COAL, COMMON 2-3MM MUDSTONE LAMINATIONS AT TOP OF UNIT, MUDSTONE BECOMES INTERMIXED TOWARDS BOTTOM OF UNIT,
DHGH-14-30	197.14	197.36	0.22	140637		ZM		D	K	CM	AM	P			M	QZ	VN	FLOOR A: COALY MUDSTONE, COMMON COAL INTERMIXED THROUGHOUT, 12MM ST CLASTS WITH MINOR 1-3MM QZ VEINS IN THEM, UNIT IS SHEARED WITH COMMON LISTRIC SURFACES
DHGH-14-30	197.36	199.33	1.97			XM		D	K	MN		G			E	QZ	CE	
DHGH-14-30	199.33	199.4	0.07			KL												
DHGH-14-30	199.4	200.89	1.49		80	SS	FF	A	G	MN		G	WD	10				
DHGH-14-30	200.89	201.43	0.54	GT-14-43	70	SS	FF	A	G			G	WD	5				GEOTECH SAMPLE: SS INTERLAMINATED W/ ST
DHGH-14-30	201.43	206.42	4.99		80	SS	FF	A	G			G	PD	10				
DHGH-14-30	206.42	206.66	0.24	140638		SS	FF	A	G	MN		G		10	M	QZ	CE	ROOF: FINEGRAINED SANDSTONE, MINOR 2-3MM COAL LAMINATIONS AT THE BOTTOM OF UNIT, MINOR 1MM QZ/CARB CLEAT INFILL AT BOTTOM OF UNIT,
DHGH-14-30	206.66	207.02	0.36	140639		CO	C4	A	G	MN					M	QZ	VN	SEAM A: C4 COAL, MINOR 2-4MM MUDSTONE LAMINATIONS THROUGHOUT, MINOR 1MM QZ/CARB VEINS, 3MM PYRITE BANDS AT MIDDLE OF UNIT, PYRITE 3MM CLEAT INFILL AT BOTTOM OF THE UNIT, MODERATELY DEVELOPED 2X2MM CLEATS
DHGH-14-30	207.02	207.13	0.11	140640		ZM		D	K	MN	AM	G			E	QZ	VN	FLOOR A: COALY MUDSTONE, MINOR 3MM COAL LENSES, 6MM QZ/CARB VEIN AT TOP OF UNIT
DHGH-14-30	207.13	207.22	0.09	140640		CO	C5	D	K	CM		G			M	QZ	CE	FLOOR B: C5 COAL, COMMON 1-3MM MUDSTONE LAMINATIONS THROUGHOUT, 1-2MM QZ CLEAT INFILL, WELL DEVELOPED 3X2MM CLEATS, LISTRIC SURFACES COMMON, HIGHLY FRACTURED UNIT
DHGH-14-30	207.22	207.33	0.11			CO	C5	D	K	CM		G			M	QZ	CE	
DHGH-14-30	207.33	210.14	2.81		85	SS	FF	A	G			G	WD	12	E	QZ	VN	
DHGH-14-30	210.14	211.27	1.13			SS	FF	A	G	MN	AM	G	BT		M	QZ	CN	multiple fining upwards sequences
DHGH-14-30	211.27	216.37	5.10			SS	FF	A	G	MN		P			E	QZ	VN	
DHGH-14-30	216.37	216.57	0.20	140641		SS	FF	A	G	MN	AM	P			E	QZ	VN	ROOF: MASSIVE SS W/ MINOR 5MM COAL LENSES NEAR BOTTOM OF UNIT, 2-4MM ACCESSORY QZ/CARB VEINING

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	216.57	216.77	0.20	140642		CO	SY	D	K	MN		G			M	QZ	VN	SEAM ROOF A: STONY COAL W/ MINOR 4-12MM MS LAMINATIONS THROUGHOUT, MINOR 1-4MM QZ/CARB VEINS THROUGHOUT, 1MM QZ/CARB CLEAT INFILL THROUGHOUT AS WELL, ONE 20X55MM ACCESSORY PY BLEBS NEAR BOTTOM OF UNIT AND MINOR PY BLEBS NEAR TOP OF UNIT, CLEATING IS VERY POORLY DEVELOPED
DHGH-14-30	216.77	217.72	0.95	140643		CO	C4	D	K	CM		G			M	QZ	CE	SEAM: C4 COAL W/ COMMON 5-15MM MS LAMINATIONS THROUGHOUT, MINOR 1-2MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, CLEATING IS MODERATELY WELL DEVELOPED, 2X1MM CLEATS, LOCAL SMALL SCALE FOLDING IS OBSERVED NEAR TOP OF SEAM
DHGH-14-30	217.72	218.71	0.99	140644		CO	C4	D	K	CM		G			M	QZ	CE	SEAM: C4 COAL W/ COMMON 2-7MM MS LAMINATIONS THROGUHOUT UNIT, MINOR 1-2MM QZ/CARB CLEAT INFILL, LISTRIC SURFACES PRESENT, COAL IS LOCALLY SHEARED NEAR TOP 25CM AND BOTTOM 10CM OF UNIT, CLEATING IS POORLY DEVELOPED, LOCAL 1X1MM CLEATS
DHGH-14-30	218.71	218.91	0.20	140645		CO	SY	D	K	CM		G			M	QZ	VN	SEAM FLOOR A:STONY COAL W/ COMMON MS LAMINATIONS THROUGHOUT, MINOR 1-2MM QZ/CARB CLEAT INFILL, TOP OF UNIT IS HIGHLY FRACTURED WITH POORLY DEVELOPED CLEATS, BOTTOM OF UNIT IS INTACT WITH MODERATELY DEVELOPED 2X2MM CLEATS, MINOR 1-3MM PYRITE BANDS AT THE BOTTOM OF THE UNIT, LISTRIC SURFACES COMMON
DHGH-14-30	218.91	219.11	0.20	140646		XM		D	K	MN		G			E	QZ	VN	FLOOR: MINOR 1-3MM COAL LAMINATIONS THROUGHOUT, MINOR QZ/CARB VEINING USUALLY 1MM WITH ONE 5MM QZ/CARB VN
DHGH-14-30	219.11	220.01	0.90			XM		D	K	MN		G			E	QZ	VN	
DHGH-14-30	220.01	223.04	3.03		60	SS	FF	A	G			G	WD	30	E	QZ	VN	
DHGH-14-30	223.04	224.26	1.22			ST		D	G	MN		G			M	QZ	VN	
DHGH-14-30	224.26	229.44	5.18		70	SS	FF	A	G	MN		G	WD		E	QZ	VN	
DHGH-14-30	229.44	232.13	2.69			ST		B	G		AM	G			E	QZ	VN	
DHGH-14-30	232.13	234.96	2.83			SS	FF	A	G		AM				C	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	234.96	235.01	0.05			KL												
DHGH-14-30	235.01	239.7	4.69			SS	VF	A	G		AM	P	PD	10	E	QZ	VN	
DHGH-14-30	239.7	239.98	0.28	GT-14-65		SS	VF	A	G	MN	AM				M	QZ	CE	GEOTECH SAMPLE: SS VF W/ MINOR 2MM THICK COAL WISPS THROUGHOUT , MINOR QZ/CARB CLEAT INFILL IN COAL WISPS
DHGH-14-30	239.98	240.25	0.27	140647		SS	VF	A	G	MN	AM	P		10	M	QZ	WP	ROOF A: VERY FINE GRAINED SANDSTONE, MINOR COAL LENSES AT THE BOTTOM OF THE UNIT, ONE PYRITE BLEB AT THE BOTTOM OF THE UNIT 25X60MM, MINOR <1MM QZ WISPS
DHGH-14-30	240.25	240.58	0.33	140648		CO	C1	D	K	RA		G			M	QZ	CE	SEAM: C1 COAL W/ RARE 1MM MS LAMINATIONS THROUGHOUT, MINOR 1-3MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS TOP OF UNIT, CLEATING IS VERY WELL DEVELOPED, 5X5MM CLEATS
DHGH-14-30	240.58	240.85	0.27	140649		CO	C4	D	K	MN		G			M	QZ	CE	SEAM: C4 COAL W/ MINOR 1-3MM MS LAMINATIONS INCREASING IN FREQUENCY TOWARDS BOTTOM OF UNIT, MINOR 1-3MM QZ/CARB WITH MINOR VEINS PARRELLER TO BEDDING INCREASING IN FREQUENCY TOWARDS BOTTOM OF UNIT, CLEATING IS MODERATELY WELL DEVELOPED NEAR TOP OF UNIT WITH 2X2MM DECREASES TO POORLY DEVELOPED CLEATING AT BOTTOM OF UNIT, LISTRIC SURFACES ALONG JOINTS
DHGH-14-30	240.85	241.19	0.34	140650		XT		D	K	MN		P			M	QZ	CE	PARTING: CARBONACEOUS ST W/ MINOR 2-5MM COAL LAMINATIONS, MINOR 1MM CLEAT INFILL IN COAL LAMINATIONS, 4MM QZ/CARB VEIN AT TOP OF UNIT
DHGH-14-30	241.19	241.44	0.25	140651		CO	C3	D	K	MN					M	QZ	CE	SEAM: C3 COAL W/ MINOR 2-4MM MS LAMIINATIONS MS CONTENT DECREASES TOWARDS BOTTOM OF UNIT, MINOR 1MM QZ/CARB CLEAT INFILL, 4MM QZ/CARB VEIN RUNNING PARELLEL TO BEDDING NEAR MIDDLE OF UNIT, CLEAT DEVELOPMENT INCREASES TOWARDS BOTTOM OF UNIT, 4X4MM CLEATS AT BOTTOM OF UNIT
DHGH-14-30	241.44	241.5	0.06			KL				CO								CORE LOSS ATTRIBUTED TO LOST COAL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	241.5	241.75	0.25	140652		CO	C2	D	K	CM		G			M	QZ	CE	SEAM: C2 COAL W/ COMMON 4-20MM MS LAMINATIONS THROUGHOUT UNIT INCREASING TOWARDS BOTTOM OF UNIT, MINOR 1MM QZ/CARB CLEAT INFILL, MINOR 1-3MM PY BANDS NEAR TOP OF UNIT AND DISSEMINATED PY ALSO AT TOP OF UNIT , CLEATING IS WELL DEVELOPED, 4X3 CLEATS
DHGH-14-30	241.75	241.95	0.20	140653		XM		B	G	MN		P		5	M	QZ	VN	FLOOR: CARBONACEOUS MS W/ MINOR 1-3MM COAL LENSES THROUGHOUT UNIT, MINOR 1-2MM QZ/CARB VEINING THROUGHOUT UNIT
DHGH-14-30	241.95	242.13	0.18		70	SS	VF	A	G			G	PD		M	QZ	VN	
DHGH-14-30	242.13	242.33	0.20	140654	70	XM		B	G	MN		G	WD		M	QZ	CE	ROOF A: CARBONACEOUS MS INTERLAMINATED W/ SS VF, MINOR 3MM COAL LENSES BOTTOM OF UNIT, MINOR 1MM QZ/CARB CLEAT INFILL
DHGH-14-30	242.33	242.57	0.24	140655		CO	C4	D	K	MN		G			M	QZ	CE	SEAM: C4 COAL W/ MINOR 2-4MM MS LAMINATIONS THROUGHOUT, MINOR 1MM QZ/CARB CLEAT INFILL THROUGHOUT, CLEATING IS POORLY DEVELOPED
DHGH-14-30	242.57	243.23	0.66	140656		CO	C2	D	K	MN		G			M	QZ	CE	SEAM: C2 COAL W/ MINOR 3-10MM MS LAMINATIONS THROUGHOUT UNIT, MS CONTENT INCREASING TOWARDS BOTTOM OF UNIT, MINOR 1MM QZ/CARB CLEAT INFILL, CLEATING IS WELL DEVELOPED, 4X4MM CLEATS
DHGH-14-30	243.23	243.46	0.23	140657		XM		D	G	CM		G			M	QZ	CE	FLOOR: CARBONACEOUS MS W/ 2-25MM COAL LAMINATIONS THROUGHOUT, MINOR 1MM QZ/CARB CLEAT INFILL
DHGH-14-30	243.46	243.96	0.50			ST		B	G	MN		G						
DHGH-14-30	243.96	244.16	0.20	140658		ST		B	G	MN		G			E	QZ	VN	ROOF: ST W/ MINOR 7-20MM COAL BANDS NEAR BOTTOM OF UNIT, ACCESSORY 2-4MM QZ VEINING NEAR BOTTOM OF UNIT
DHGH-14-30	244.16	244.36	0.20	140659		CO	SY	D	K	CM		G			E	QZ	VN	SEAM ROOF A: STONY COAL W/ COMMON 10-20MM MS BANDS, ACCESSORY 3MM QZ/CARB VEINS NEAR TOP OF UNIT, MINOR 7MM PY BANDS NEAR TOP OF UNIT, LOCAL WELL DEVELOPED 2X2MM CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-30	244.36	244.87	0.51	140660		CO	C4	D	K	CM		G			M	QZ	CE	SEAM: C4 COAL W/ COMMON 4-12MM MS LAMINATIONS THROUGHOUT UNIT, MINOR 2MM QZ/CARB CLEAT INFILL NEAR MIDDLE OF UNIT, CLEATING IS WELL DEVELOPED THROUGHOUT, 1X1MM CLEATS
DHGH-14-30	244.87	245.07	0.20	140661		CO	SY	D	K	CM		G			C	QZ	CE	SEAM FLOOR: STONY COAL W/ COMMON 4-12MM MS LAMINATIONS THROUGHOUT UNIT, COMMON 1-5MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, MODERATELY WELL DEVELOPED LOCAL CLEATS, 2X3MM CLEATS
DHGH-14-30	245.07	245.27	0.20	140662		XM		D	K	MN		G			M	QZ	WP	FLOOR: CARBONACEOUS MS W/ MINOR 5-15MM COAL LENSES NEAR TOP OF UNIT, MINOR COAL WISPS THROUGHOUT UNIT AS WELL AS MINOR QZ/CARB CLEAT INFILL IN COAL LENSES
DHGH-14-30	245.27	246.13	0.86			XM		D	K	MN		G			M	QZ	WP	
DHGH-14-30	246.13	248	1.87		70	SS	FF	A	G				PD	16	E	QZ	VN	
DHGH-14-30	248	249.34	1.34			SS	FF	A	G	MN	AM							
DHGH-14-30	249.34	249.39	0.05			KL												
DHGH-14-30	249.39	253.09	3.70			SS	FF	A	G	MN	AM	G						
DHGH-14-30	253.09	259.39	6.30			SS	FF	A	G			G	WD	10				
DHGH-14-30	259.39	260.07	0.68			ST		B	G			I	WD	15	E	QZ	VN	
DHGH-14-30	260.07	260.33	0.26			CO	C5	D	K	CM		G			M	QZ	CE	C5 COAL W/ COMMON 3-4 MS LAMINATIONS THROUGHOUT UNIT, MINOR 3MM QZ.CARB CLEAT INFILL CONCENTRATED TOWARDS MIDDLE OF UNIT, CLEATING IS LOCALLY WELL DEVELOPED W/ 3X4MM CLEATS, COAL NOT SAMPLED DUE TO LOW GRADE DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-30	260.33	260.4	0.07			XM		D	G	MN	AM	G			M	QZ	CE	
DHGH-14-30	260.4	260.53	0.13			CO	C4	D	K	MN		G			M	QZ	CE	C4 COAL W/ COMMON 10-15MM MS BANDS THROUGHOUT UNIT, MINOR 2MM QZ.CARB CLEAT INFILL CONCENTRATED TOWARDS TOP OF UNIT, CLEATING IS LOCALLY WELL DEVELOPED W/ 3X4MM CLEATS, COAL NOT SAMPLED DUE TO LOW GRADE DETERMINED FROM GEOPHYSICAL LOGS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	8.85	11.01	2.16			KL												
DHGH-14-31	11.01	11.46	0.45			GV		A	G	CM								
DHGH-14-31	11.46	11.93	0.47			SS	VM	A	G			G						
DHGH-14-31	11.93	13.25	1.32			ST		E	G			G						
DHGH-14-31	13.25	13.4	0.15			MS		B	G			G						
DHGH-14-31	13.4	14.61	1.21			KL												
DHGH-14-31	14.61	15.07	0.46			MS		B	G			G	PD	10	M	QZ	WP	
DHGH-14-31	15.07	15.27	0.20	145557		MS		B	G	MN		G	PD	10	M	QZ	WP	ROOF: MNR COAL LENSES AS GRADES INTO BOT CT
DHGH-14-31	15.27	15.59	0.32	145558		CO	C4		K	CM		G	PD	10				SEAM ROOF: COMMON MS BANDS UP TO 70MM THICK; SHEARED AND CRUSHED; MOIST AND SOFT;
DHGH-14-31	15.59	15.71	0.12	145559		CO	C2		K	MN			PD	10	R	PY	VN	SEAM: MNR ST BANDS UP TO 15MM AND MS LENSES UP TO 30MM; LOCALLY WELL DEVELOPED CLEATING UP TO 5MM X 5MM W/MINOR CONCOIDAL FRACTURING; MINOR LISTRIC SURFACES; RARE PY IN VEINLETS UP TO 0.5MM
DHGH-14-31	15.71	16.32	0.61			KL				CO								LOST COAL
DHGH-14-31	16.32	16.48	0.16	145560		CO	C4		K	CM		P						SEAM: HIGHLY SHEARED W/NO PRIMARY TEXTURES REMAINING; MOIST AND PULVERISED; COMMON INTERMIXED MS;
DHGH-14-31	16.48	16.68	0.20	145561		SS	VM	A	G				PD	45				FLOOR: CLEAN SS
DHGH-14-31	16.68	20.37	3.69			SS	VM	A	G	MN		G	PD	45				
DHGH-14-31	20.37	23.93	3.56		60	SS	VM	A	G				WD	30				
DHGH-14-31	23.93	23.98	0.05			KL												
DHGH-14-31	23.98	24.95	0.97		60	SS	VM	A	G			G	WD	40				
DHGH-14-31	24.95	27.34	2.39		70	ST		B	G			G	WD	30	R	QZ	VN	
DHGH-14-31	27.34	27.39	0.05			KL												
DHGH-14-31	27.39	30.35	2.96		80	ST		B	G				WD	30				
DHGH-14-31	30.35	30.39	0.04			KL												
DHGH-14-31	30.39	33.84	3.45		70	ST		B	G				WD	35				
DHGH-14-31	33.84	34.23	0.39	GT-14-42	70	ST		B	G				WD	35				GT-14-42; ABOVE COAL SEAM
DHGH-14-31	34.23	35.35	1.12		70	ST		B	G				WD	35				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments	
DHGH-14-31	35.35	35.55	0.20	145562	70	ST		B	G	RA		G	PD	45	M	QZ	VN	ROOF A: RARE COAL BANDS UP TO 20MM AT BOT OF INTERVAL W/MNR QTZ UP TO 2MM WIDE	
DHGH-14-31	35.55	35.74	0.19	145563		CO	C3		K	MN			PD	45	M	QZ	CE	SEAM ROOF A: MINOR SILTSTONE BANDS UP TO 20MM; MOD TO WELL DEVELOPED CLEATING UP TO A MAX SIZE OF 4MM X 5MM; MINOR QTZ CLEAT INFILL UP TO 2MM WIDE; MNR PY BLEBS <3MM	
DHGH-14-31	35.74	36.32	0.58	145564		CO	C1		K	MN				40	M	QZ	CE	SEAM A. MINOR ST LENSES <12MM. WELL DEVELOPED CLEATING <2MM BUTT X 6MM W/MNR CONCOIDAL FRACTURING; MINOR QTZ CLEAT INFILL UP TO 1MM; MINOR PYRITE LAMINAE <1MM	
DHGH-14-31	36.32	36.9	0.58	145565		CO	C1		K	MN		G	WD	30	R	QZ	CE	SEAM: MINOR MS LENSES <15MM; WELL DEVELOPED CLEATING 3MM X 5MM W/COMMON CONCOIDAL FRACTURING; RARE QTZ CLEAT INFILL <1MM;	
DHGH-14-31	36.9	37.12	0.22	145566		ST		B	G	MN	AM	G				R	QZ	VN	PARTING: MNR COAL LAMINATIONS AT TOP AND BOTTOM OF INTERVAL
DHGH-14-31	37.12	37.42	0.30	145567		CO	C4		K	CM		G	PD	45	R	QZ	CE	SEAM: COMMON MS BANDS <30MM; RARE QTZ CLEAT INFILL <0.5MM	
DHGH-14-31	37.42	37.69	0.27	145568		CO	C3		K	MN		G	WD	40	R	QZ	CE	SEAM: MINOR ST BANDS <30MM; LOCALLY MOD DEVELOPED CLEATING UP TO A MAX OF 3MM X 8MM; RARE QTZ CLEAT INFILL <0.5MM	
DHGH-14-31	37.69	37.9	0.21	145569		CO	C4		K	MN		G	PD	40	R	QZ	CE	SEAM FLOOR: MINOR MS BANDS AND CLASTS <12MM; LOCALLY MOD DEVELOPED CLEATING UP TO A MAX OF 3MM X 6MM; RARE QTZ CLEAT INFILL <0.5MM	
DHGH-14-31	37.9	38.09	0.19	145570		ZM		D	G	MN		G	PD	40	M	QZ	VN	FLOOR: MINOR COAL LAMINATIONS <2MM	
DHGH-14-31	38.09	38.95	0.86			ST		B	G	MN		G	PD	45	R	QZ	WP		
DHGH-14-31	38.95	39.27	0.32			SS	FM	N	G			G	WD	20					
DHGH-14-31	39.27	41.17	1.90			ST		B	G	RA		G	PD	30	R	QZ	WP		
DHGH-14-31	41.17	44.33	3.16		60	ST		B	G			G	PD	45					
DHGH-14-31	44.33	46.02	1.69			ST		B	G	MN		G	PD	35	R	QZ	WP		
DHGH-14-31	46.02	46.07	0.05			KL				CO								LOAST COAL	
DHGH-14-31	46.07	46.3	0.23			CO	C4		K	MN		G			R	PY	DS	COAL PICK BASED ON GAMMA AND COAL IN BOX; NO SAMPLE <30CM; MINOR MS LENSES <20MM; CRUSHED PRIMARY TEXTURES DESTROYED	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	46.3	49.19	2.89			ST		B	G									
DHGH-14-31	49.19	49.41	0.22	145571		ST		B	G	MN		G	PD		E	PY	BN	ROOF A: MINOR COAL BANDS <5MM; 5% PY BANDS 1-4MM; MINOR DUCTILE DEFORMATION; MNR QTZ VEINING
DHGH-14-31	49.41	49.61	0.20	145572		CO	C2		K	MN			WD	30	M	QZ	CE	SEAM ROOF A: MNR MS CLASTS <5MM DIAM AND BANDS <10MM; WELL DEVELOPED CLEATING UP TO 4MM X 4MM; MINOR PY BLEBS <5MM DIAM AND VEINLETS <1MM; QTZ MINOR CLEAT INFILLING
DHGH-14-31	49.61	49.7	0.09			KL				CO								LOST COAL
DHGH-14-31	49.7	49.9	0.20	145573		CO	C3		K	MN		G	PD	30	E	QZ	VN	SEAM A: MINOR ST UP TO 30MM; LOCALLY POORLY DEVELOPED CLEATING UP TO 3MM X 6MM; 10% QTZ VEINS UP TO 10MM WIDE; MINOR PY VEINS<2MM
DHGH-14-31	49.9	50.59	0.69	145574		CO	C2		K	MN			PD	30	M	QZ	VN	SEAM A: MINOR MS BANDS UP TO 20MM; LOCALLY WELL DEVELOPED CLEATING UP TO 6MM X 6MM W/CONCOIDAL FRACTURES; MINOR QTZ VEINS AND CLEAT INFILL UP TO 2MM WIDE; MINOR PY LENSES/BLEBS <1MM
DHGH-14-31	50.59	50.79	0.20	145575		CO	C2		K			G	PD	30	E	QZ	CE	SEAM FLOOR: WELL DEVELOPED CLEATING UP TO 6MM X 6MM W/MINOR CONCOIDAL FRACTURING; QTZ CLEAT INFILL UP TO 2MM
DHGH-14-31	50.79	50.99	0.20	145576		SS	VF	A	G	MN		G	WD	30	M	QZ	CE	FLOOR: MINOR COAL BANDS AT TOP OF INTERVAL UP TO 12MM WIDE
DHGH-14-31	50.99	54.29	3.30		70	SS	VF	A	G			G	WD	30				
DHGH-14-31	54.29	54.76	0.47			ST		B	G			G	PD	40	R	QZ	WP	
DHGH-14-31	54.76	55.22	0.46			ZT		B	G	MN		G			R	QZ	CE	
DHGH-14-31	55.22	56.27	1.05			ST		B	G				PD	35	R	QZ	WP	
DHGH-14-31	56.27	56.47	0.20	145577		ST		B	G	RA		G	PD	40	R	QZ	WP	ROOF: MINOR COAL BANDS <8MM; RARE QTZ WISPS
DHGH-14-31	56.47	56.64	0.17	145578		CO	C2		K	MN			WD	30	M	QZ	VN	SEAM ROOF A: MNR MS LAMINATIONS <2MM; MODERATELY DEVELOPED CLEATING AT 3MM X 4MM; MINOR QTZ VEINS AND RARE QTZ CLEAT INFILL <0.5MM; MINOR PY BLEBS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	56.64	56.91	0.27	145579		CO	C1		K				WD	30	R	QZ	CE	SEAM: WELL DEVELOPED CLEATING UP TO 2MM FACE X 6MM BUTTS W/MINOR CONCOIDAL FRACTURING; RARE QTZ CLEAT INFILL <0.5MM
DHGH-14-31	56.91	57.11	0.20	145580		CO	C1		K	MN		G	PD	30	M	QZ	CE	SEAM FLOOR: BOTTOM CT PICK BASED ON GAMMA AND CORE IN BOX; MINOR ST AND MS LENSES UP TO 10MM WIDE; WELL DEVELOPED CLEATING 2MM FACE X 6MM BUTT; MINOR QTZ CLEAT INFILL <1MM
DHGH-14-31	57.11	57.31	0.20	145581		ST		B	G	XX		G	PD	35	M	QZ	VN	FLOOR: MINOR QTZ VEINS NEAR TOP CT UP TO 20MM; SLIGHTLY CARBONACEOUS
DHGH-14-31	57.31	58.04	0.73			ST		B	G			G	PD	35				
DHGH-14-31	58.04	63.43	5.39		60	SS	VM	E	G				WD	40	M	QZ	VN	
DHGH-14-31	63.43	63.56	0.13			KL												
DHGH-14-31	63.56	65.06	1.50		60	SS	VM	E	G			P	WD	40	M	QZ	VN	
DHGH-14-31	65.06	68.87	3.81			SS	VM	E	G	RA			PD	35	M	QZ	VN	
DHGH-14-31	68.87	82.48	13.61		60	SS	VM	E	G			G	WD	40				
DHGH-14-31	82.48	90.3	7.82			ST		B	G	MN		G	PD	35	M	BI		
DHGH-14-31	90.3	92.66	2.36			SS	VF	E	G	CM		G	PD	40	E	BI		
DHGH-14-31	92.66	94.38	1.72			ST		B	G	RA		G			E	PY	DS	
DHGH-14-31	94.38	95.42	1.04		60	SS	VV	A	G	CM		G	PD		C	BI		
DHGH-14-31	95.42	95.94	0.52			ZM			K	CM		G	PD	45	M	PY	BN	
DHGH-14-31	95.94	96.14	0.20			CO	C3		K	RA		G	PD	45	M	QZ	CE	NO SAMPLE UNDER 30 CM. RARE MUDSTONE LENSES, UP TO 1MM; POORLY DEVELOPED CLEATING, 2MM X 2MM; MINOR QUARTZ INFILL AND RARE PY CLEAT INFILL
DHGH-14-31	96.14	96.32	0.18			CO	SY		K	MN			PD	40	E	QZ	CE	MINOR MUDSTONE BANDS UP TO 10 MM, COAL BANDS HAVE POORLY DEVELOPED CLEATING UP TO 2MM X 3MM, ACCESSORY PY CLEAT INFILL AND BLEBS UP TO 10MM DIAM. 7% QZ, CLEAT INFILL AND VEINS UP TO 8 MM WIDE.
DHGH-14-31	96.32	96.53	0.21			ZM			K	MN		G	PD		M	QZ	CE	
DHGH-14-31	96.53	97.23	0.70			MS		B	G	RA		G	PD	35	R	QZ	CE	
DHGH-14-31	97.23	99	1.77			ST		B	G			G	PD	30	R	QZ	WP	
DHGH-14-31	99	101.02	2.02		80	XM			K	MN		G	PD	35	M	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	101.02	101.12	0.10			CO	C3		K	MN		G	PD	35	M	QZ	CE	NOT SAMPLED <30CM; MINOR MS AND ST LENSES AND BANDS; POORLY DEVELOPED CLEATING; GRADATIONAL CT'S
DHGH-14-31	101.12	101.37	0.25			XM			K	MN		G	PD	40	R	QZ	WP	
DHGH-14-31	101.37	103.35	1.98			ST		B	G	RA		G	PD	40	R	QZ	VN	
DHGH-14-31	103.35	104.8	1.45		70	ZM		B	G	CM		G	WD	40	M	QZ	CE	
DHGH-14-31	104.8	114.3	9.50		50	MS		B	G			G	PD	40	R	QZ	WP	
DHGH-14-31	114.3	115.53	1.23			MS		D	G	RA			PD	35	R	QZ	CE	
DHGH-14-31	115.53	115.73	0.20	145582		MS		D	G	RA		G	PD	35	R	QZ	CE	ROOF: MS WITH RARE COAL LENSES
DHGH-14-31	115.73	116	0.27	145583		CO	SY		K	CM		G	PD	35	E	QZ	VN	SEAM ROOF A: COMMON INTERBEDDED MS, 5-8% ACCESSORY QUARTZ VEINS AND CLEAT INFILL; 5% PY BANDS UP TO 10 MM
DHGH-14-31	116	116.2	0.20	145584		CO	C2		K	MN		G	PD	35	R	QZ	CE	SEAM A: MINOR MS LENSES, POOR TO MODERATELY DEVELOPED CLEATING, 2MM X 2MM, RARE LISTERIC SURFACES, SHEARED IN PART, RARE QTZ CLEAT INFILL, 0.5 MM, RARE PY BLEBS
DHGH-14-31	116.2	116.4	0.20	145585		CO	C5		K	CM		P	PD	30	R	PY	BL	SEAM FLOOR: CM INTERMIXED MS, RARE LOCAL POORLY DEVELOPED CLEATING, 2 X 2 MM, SHEARED WITH CM LISTERIC SURFACES, TRACE PY BLEBS
DHGH-14-31	116.4	116.6	0.20	145586		MS		B	G	TR			PD	50	R	QZ	WP	FLOOR: RARE COAL WISPS, 5 MM QTZ VEIN NEAR TOP CONTACT
DHGH-14-31	116.6	118.91	2.31			ST		B	G			G	PD	50	R	QZ	VN	
DHGH-14-31	118.91	120.82	1.91		90	SS	VM	A	G				WD	45				
DHGH-14-31	120.82	121.7	0.88			SS	FC	A	G		AM	F			E	QZ	VN	22CM MASSIVE QTZ VEIN (DILATIONAL) ON BOT CT
DHGH-14-31	121.7	124.52	2.82		65	ST		B	G	RA		G	PD	35	M	QZ	VN	
DHGH-14-31	124.52	124.74	0.22			XM			K	RA		I	PD	40				
DHGH-14-31	124.74	125.88	1.14			SS	VM	M	G	RA		G			E	QZ	VN	
DHGH-14-31	125.88	127.07	1.19		50	SS	VM	A	G				WD	40	M	QZ	VN	
DHGH-14-31	127.07	127.31	0.24	145587	50	SS	VM	A	G			I	WD	40	M	QZ	VN	ROOF A: CLEAN SS INTERLAMINATED WITH ST

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	142.22	142.5	0.28			ZM			K	MN		G	PD		R	QZ	CE	
DHGH-14-31	142.5	143.55	1.05		65	SS	VF	A	G									
DHGH-14-31	143.55	145.55	2.00		85	ZM			K	CM		G	PD	20	M	QZ	CE	COAL BANDS ARE WELL CLEATED
DHGH-14-31	145.55	149.55	4.00		60	ST		B	G			G	WD	25	R	QZ	VN	
DHGH-14-31	149.55	152.58	3.03			ST		B	G			G	PD	20				
DHGH-14-31	152.58	153.73	1.15			MS		B	G		EQ	I	PD	10				
DHGH-14-31	153.73	154.39	0.66			CO	C4		K	CM		G	WD	15	E	QZ	VN	COAL NOT SAMPLED DUE TO LOW QUALITY ON LAS. COMMON MUDSTONE BANDS; COAL BANDS HAVE LOCALLY WELL DEVELOPED CLEATING, WITH CONCOIDAL FRACTURES, 5% QTZ VEIN AND INFILL, UP TO 3MM; MINOR PY BANDS UP TO 10MM; MINOR LISTERIC SURFACES
DHGH-14-31	154.39	155.89	1.50			ZM		M	G	MN		G	PD	10	M	QZ	VN	
DHGH-14-31	155.89	177.55	21.66		80	ST		B	G			G	PD	15				
DHGH-14-31	177.55	185.05	7.50			ST		B	G		AM				R	QZ	VN	
DHGH-14-31	185.05	185.3	0.25	GT-14-44		ST		B	G		AM				R	QZ	VN	GEOTECH SAMPLE
DHGH-14-31	185.3	186.09	0.79			ST		B	G		AM				R	QZ	VN	
DHGH-14-31	186.09	186.29	0.20	145591		ST		B	G	TR	AM	P			R	QZ	VN	ROOF: ST W/RARE COAL LENSES
DHGH-14-31	186.29	186.49	0.20	145592		CO	C2		K	RA			PD		R	QZ	CE	SEAM ROOF: RARE MS LAMINATIONS NEAR TOP CONTACT; WELL DEVELOPED CLEATING UP TO A MAX OF 5MM FACE X 12MM BUTT; RARE QTZ CLEAT INFILL UP TO 1MM
DHGH-14-31	186.49	187.21	0.72	145593		CO	C2		K	RA			PD		R	QZ	CE	SEAM: RARE MS BANDS UP TO 8MM WIDE; LOCALLY WELL CLEATED UP TO 5MM FACE X 10MM BUTT; LOCALLY WELL SHEARED DESTROYING PRIMARY TEXTURES; OCCASIONAL LISTRIC SURFACES; TRACE QTZ CLEAT INFILL >0.5MM
DHGH-14-31	187.21	187.93	0.72	145594		CO	C2		K	RA			PD	10	R	QZ	CE	SEAM: RARE MS LAMINATIONS >4MM; MINOR LOCALLY WELL DEVELOPED CLEATING 3MM FACE X 10MM BUTT; NON CLEATED ZONES ARE SHEARED DESTROYING AND CRUSHING PRIMARY TEXTURES; COMMON LISTRIC SURFACES; TRACE QTZ CLEAT INFILL >1MM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	187.93	188.66	0.73	145595		CO	C2		K	RA		P	PD	10	R	QZ	CE	SEAM: RARE MS AND ST LAMINATIONS AND RARE LENSES <5MM; RARE WELL DEVELOPED CLEATING W/COMMON CONCOIDAL FRACTURE 5MM FACE X 3MM BUTT; NON CLEATED AREAS ARE SHEARED W/LISTRIC SURFACES SEEN; SHEARING DESTROYING MOST PRIMARY TEXTURES; RARE QTZ CLEAT INFILL <1MM
DHGH-14-31	188.66	189.04	0.38	145596	70	XM			K	MN		G	PD		R	QZ	WP	PARTING A: 25CM OF CARBONACEOUS MS GRADING INTO COALY MS; LOCALLY MINOR TO COMMON MS LENSES AND BANDS UP TO 20MM WIDE; COAL BANDS ARE WELL CLEATED W/MNR QTZ CLEAT INFILL <1MM; WEAKLY FOLDED IN PART
DHGH-14-31	189.04	189.34	0.30	145597		CO	C3		K	MN		G	PD	10	M	QZ	CE	SEAM: MINOR MS LAMINATIONS <3MM; LOCALLY MOD TO WELL DEVELOPE CLEATING UP TO 5MM FACE X 4MM BUTT; MINOR QTZ CLEAT INFILL <1MM AND RARE VEINS <3MM
DHGH-14-31	189.34	189.54	0.20	145598		ZM			K	MN			PD	10	M	PY	BN	FLOOR A: LARGE COALY MS PARTING; MINOR COAL WISPS AND LENSES <1MM THROUGHOUT; MINOR PY BANDS <3MM
DHGH-14-31	189.54	189.87	0.33			ZM			K									
DHGH-14-31	189.87	190.07	0.20	145599		XM			K	TR		P						ROOF: CARBONACEOUS MS W/TRACE COAL WISPS
DHGH-14-31	190.07	190.35	0.28	145600		CO	C4		K	MN		P			E	PY	VN	SEAM A: MINOR MS LAMINATIONS <2MM; ACESORY (5%) PYRITE VEINS UP TO 12MM AND BLEBS; ACESORY (2%) QTZ CLEAT INFILL UP TO 2MM THICK; PRIMARY TEXTURES ENTIRELY DESTROYED BY SHEARING W/COMMON LISTRIC SURFACES; MINOR FOLDING AT TOP CT
DHGH-14-31	190.35	190.61	0.26	145601		XM			K	RA		P	PD	20				PARTING: RARE COAL LAMINATIONS AND WISPS THROUGHOUT; LISTRIC SURFACES
DHGH-14-31	190.61	191.13	0.52	145602		CO	C4		K	MN		G	PD	20	E	QZ	CE	SEAM A: MINOR MS LAMINATIONS <8MM; VARIABLY POOR TO MOD CLEATED FROM 1MM X 1MM UP TO 5MM FACE X 4MM BUTT; ACESORY (~4%) QTZ CLEAT INFILL AND VEINS <3MM; MINO RPY VEINS <2MM; INCREASING MS W/DEPTH NEAR GRADATIONAL BOT CT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	191.13	191.37	0.24	145603		CO	SY		K	CM		G	PD	25	M	QZ	CE	SEAM FLOOR A: COMMON MS LAMINATINOS AND BANDS UP TO 10MM; COAL BANDS AND LENSES ARE VARIABLY CLEATED (POOR TO WELL) FROM 1MM X 1MM UP TO A MAX OF 4MM FACE X 2MM BUTT; MINOR QTZ CLEAT INFILL <1MM AND MINOR PY CLEAT INFILL AND VEINLETS <1MM
DHGH-14-31	191.37	191.57	0.20	145604		ZM		D	K	MN			PD	50	M	QZ	CE	FLOOR: COALY MUDSTONE W/MINOR COAL BANDS (UP TO 5MM WIDE) NEAR GRADATIONAL TOP CT, DECREASING IN ABUNDANCE W/DEPTH; COAL BANDS HAVE MINOR QTZ CLEAT INFILL
DHGH-14-31	191.57	191.75	0.18			ZM		D	K	MN		G	PD	50	M	QZ	CE	
DHGH-14-31	191.75	193.55	1.80			ST		B	G	RA		G	PD	25	M	PY	BL	LARGE PY BLEB 4CM DIAM IN MIDDLE OF INTERVAL
DHGH-14-31	193.55	204.77	11.22		60	SS	VF	A	G			G	WD	20				
DHGH-14-31	204.77	206.05	1.28			ST		B	G	TR		I	PD	20	R	QZ	VN	
DHGH-14-31	206.05	206.25	0.20	145605		ST		B	G	TR		I	PD	20	R	QZ	CE	ROOF: TRACE COAL LENSES AND WISPS W/TRACE QTZ CLEAT INFILL; LOWER CT IS GRADATIONAL OVER SHORT (~5CM) INTERVAL
DHGH-14-31	206.25	206.45	0.20	145606		CO	C3		K	MN			PD	20	M	QZ	VN	SEAM ROOF A: MINOR ST LAMINATIONS <4MM, MORE ABUNDANT NEAR TOP CT; POOR TO MOD CLEATED RANGING FROM 2MM X 2MM UP TO 3MM FACE X 5MM BUTT; MINOR IRREGULAR QTZ VEINS UP TO 5MM AND MINOR QTZ CLEAT INFILL UP TO 1MM; RARE PY BLEBS <2MM
DHGH-14-31	206.45	206.9	0.45	145607		CO	C3		K	MN		G	PD	20	M	QZ	CE	SEAM A: MINOR MS LAMINATIONS THROUGHOUT 2MM - 8MM WIDE; COAL IS LOCALLY WELL CLEATED UP TO 3MM FACES X 2MM BUTTS; CONCOIDAL FRACTURING ON CLEAT FACES; MINOR QTZ CLEAT INFILL <1MM; RARE PY BLEBS AND VEINS 1-2MM WIDE

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	206.9	207.65	0.75	145608		CO	C4		K	CM			PD	20	M	QZ	VN	SEAM A: COMMON SILTSTONE BANDS AND LAMINATIONS 2MM TO 40MM WIDE; COAL BANDS ARE WELL CLEATED AVG 3MM FACE X 4MM BUTT; CONCOIDAL FRACTURE ON CLEAT FACES; RARE LISTRIC SURFACES; MINOR QTZ (1-2%) CLEAT INFILL <1MM AND VEINS <4MM; MINOR PY VEINS <8MM AND BLEBS UP TO 2MM
DHGH-14-31	207.65	208.4	0.75	145609		CO	C4		K	CM			PD	15	M	QZ	CE	SEAM A: COMMON SILTSTONE BANDS RANGING FROM 5MM - 50MM WIDE; COAL BANDS HAVE LOCAL WELL DEVELOPED CLEATING 3MM X 3MM W/CONCOIDAL FRACTURE; MINOR QTZ CLEAT INFILL <1MM THROUGHOUT; MNR PY CLEAT INFILL <1MM
DHGH-14-31	208.4	209.15	0.75	145610		CO	C4		K	CM			PD	10	R	QZ	CE	SEAM: THINLY LAMINATED MS VARYING FRO 1MM UP TO 8MM LAMINATIONS; RARE ST LENSES AND BANDS UP TO 10MM; COAL BANDS ARE MOD TO WELL CLEATED UP TO 3MM X 6MM; CLEAT FACES DISPLAY CONCOIDAL FRACTURE; MINOR QTZ CLEAT INFILL IN COAL BANDS, MNR QTZ VEILETS <1MM; MS ABUNDANCE INCREASEING SLIGHTLY TOWARDS LOWER CT
DHGH-14-31	209.15	209.35	0.20	145611		CO	C5		K	CM		G	PD	10	M	QZ	CE	SEAM FLOOR: COMMON SILTSTONE BANDS UP TO 20MM WIDE; COAL BANDS ARE HIGH GRADE (C2) AND WELL CLEATED UP TO 6MM FACE X 4MM BUTT, DISPLAYING COMMON CONCOIDAL FRACTURING; MINOR QTZ CLEAT INFILL <1MM; GRADATIONAL LOWER CT
DHGH-14-31	209.35	209.53	0.18	145612		ZT		D	G	MN			PD	10	M	QZ	VN	FLOOR: COAL SILTSTONE; MINOR COAL BANDS 5-12MM WIDE NEAR GRADATIONAL TOP CT
DHGH-14-31	209.53	209.75	0.22			ZT		D	G	MN		G	PD	10	M	QZ	VN	
DHGH-14-31	209.75	210.14	0.39			ST		B	G	RA			PD	15				
DHGH-14-31	210.14	210.49	0.35	GT-14-45		ST		B	G	RA			PD	15				GEOTECH SAMPLE
DHGH-14-31	210.49	212.7	2.21			ST		B	G	RA			PD	15				
DHGH-14-31	212.7	212.82	0.12	145613		ST		B	G			I	PD	15				ROOF A: CLEANT SILTSTONE
DHGH-14-31	212.82	212.93	0.11	145613		ZT		B	G	MN		G	PD	15	M	QZ	CE	ROOF B: COALY ST; MINOR COAL BANDS 2-4MM WIDE; MNR QTZ VEINS AND CLEAT INFILL <2MM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	212.93	213.14	0.21	145614		CO	C3		K	MN			PD	15	M	QZ	CE	SEAM ROOF A: PICK BASED ON GAMMA AND COAL IN BOX; MINOR ST LAMINATIONS 1-4MM; VARIABLY MOD TO WELL DEVELOPED CLEATING AVG 3MM FACES X 7MM BUTTS W/COMMON CONCOIDAL FRACTURE ON CLEAT FACES; MINOR QTZ CLEAT INFILL <0.5MM; RARE DS AND BADED PY
DHGH-14-31	213.14	213.46	0.32	145615		CO	C3		K	MN		G	PD	20	M	QZ	CE	SEAM A: PICK BASED ON GAMMA AND COAL IN BOX; MINOR ST LAMINATIONS 2-10MM; COAL BANDS ARE VARIABLY MOD TO WELL CLEATED FROM 2MM X 2M UP TO 3MM FACE X 8MM BUTTS; MNR QTZ CLEAT INFILL <1MM; MINOR PY BLEBS <3MM AND BANDS UP TO 4MM WIDE; ST BAND ABUNDANCE INCREASING SLIGHTLY W/DEPTH
DHGH-14-31	213.46	213.67	0.21	145616		CO	C4		K	CM		G	PD	20	M	QZ	CE	SEAM FLOOR: PICK BASED ON GAMMA AND COAL IN BOX; COMMON ST BANDS UP TO 15MM WIDE; COAL IS WELL CLEATED LOCALLY UPAVG 4MM X 4MM W/COMMON CONCOIDALLY FRACTURED CLEAT FACES; MINOR QTZ CLEAT INFILL <2MM; LOWER CT IS GRADATIONAL OVER SHORT INTERVAL (~5CM)
DHGH-14-31	213.67	213.85	0.18	145617		ST		B	G	MN	AM	G			R	QZ	CE	FLOOR: MINOR COAL WISPS <2MM WIDE EAR TOP CT GRADING OUT OVER 10CM INTERVAL
DHGH-14-31	213.85	215.18	1.33			ST		B	G		AM	G						
DHGH-14-31	215.18	221.75	6.57			SS	VM	A	G	TR		G	PD	10				
DHGH-14-31	221.75	224.69	2.94		60	SS	VF	A	G			G	PD	20				
DHGH-14-31	224.69	232.68	7.99			ST		B	G			G	PD	15				
DHGH-14-31	232.68	234.16	1.48			SS	VV	A	G		AM	G						
DHGH-14-31	234.16	234.82	0.66			ST		B	G		AM	G						
DHGH-14-31	234.82	260	25.18			SS	FM	A	G	TR	AM							
DHGH-14-31	260	260.29	0.29	GT-14-46		SS	FM	A	G	TR	AM							GEOTECH SAMPLE
DHGH-14-31	260.29	260.51	0.22			SS	FM	A	G	TR	AM							

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	260.51	260.69	0.18	145618		SS	FM	A	G	RA		G	PD	20	R	QZ	VN	ROOF: CLEAN SANDSTONE; BOTTOM CT IS GRADATIONAL OVER SHORT (~5CM) INTERVAL W/RARE COAL AND QTZ VEININS AND CLEAT INFILL AT BOT CONTACT
DHGH-14-31	260.69	260.89	0.20	145619		CO	C2		K	RA			PD	20	M	QZ	CE	SEAM ROOF: RARE ST LAMINATIONS (DECREASING SLIGHTLY W/DEPTH) <2MM; WELL DEVELOPED CLEATING UP TO 5MM FACE X 10MM BUTT W/COMMON CONCOIDAL FRACTURING ON CLEAT FACES; MINOR QTZ CLEAT INFILL <2MM
DHGH-14-31	260.89	261.29	0.40	145620		CO	C2		K	RA			PD	20	M	QZ	CE	SEAM A: RARE ST LAMINATIONS AND LENSES <4MM WIDE; CLEATING LOCALLY MOD TO WELL DEVELOPED FROM 3MM X 2MM UP TO 10MM X 10MM; COMMON CONCOIDAL FRACTURE ON CLEAT FACES; MINOR QTZ CLEAT INFILL 1-3MM; RARE PY BLEBS 2-5MM DIAM
DHGH-14-31	261.29	261.52	0.23			KL				CO								LOST COAL
DHGH-14-31	261.52	261.62	0.10			KL				CO								LOST COAL
DHGH-14-31	261.62	261.83	0.21	145621		CO	C3		K	MN		G	PD	20	R	QZ	CE	SEAM: MINOR ST AND MS LAMINATIONS 1-4MM, INCREASING SLIGHTLY IN ABUNDANCE W/DEPTH TOWARDS GRADATIONAL CONTACT; MODERATELY DEVELOPED CLEATING 2MM FACE X 4MM BUTTS, LOCALLY UP TO WELL DEVELOPED 4MM X 10MM; CONCOIDAL FRACTURING ON CLEAT FACES; RARE QTZ CLEAT INFILL <0.5MM
DHGH-14-31	261.83	262.36	0.53	145622		ST		D	G	MN		G	PD	20	R	QZ	CE	PARTING: MINOR COAL BANDS 1-10MM, PARTICULARLY NEAR TOP GRADATIONAL CT; COAL BANDS ARE VARIABLY CLEATED FROM 1MM X 1MM UP TO 3MM X 4MM; MINOR QTZ VEINLETS, WISPS AND CLEAT INFILL ASSOCIATED W/COAL BANDS; GRADES INTO CLEANER ST NEAR BOT CT (FINING UPWARDS)
DHGH-14-31	262.36	262.93	0.57	145623		CO	C3		K	MN		G	PD	20	M	QZ	CE	SEAM: MINOR ST AND MS BANDS 2MM - 15MM WIDE; WELL DEVELOPED CLEATING AVG 3MM X 3MM W/COMMON CONCOIDAL FRACTURING; MINOR QTZ CLEAT INFILL 1-2MM; BOT CT GRADATIONAL OVER SHORT INTERVAL;

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	262.93	263.49	0.56	145624		ST		D	G	MN		G	PD	15	R	QZ	VN	PARTING: MINOR COAL LAMINATIONS NEAR GRADATIONAL TOP AND BOT CT'S; PARTING IS FINING UPWARDS
DHGH-14-31	263.49	264.03	0.54	145625		CO	C2		K	MN		G	PD	10	M	QZ	CE	SEAM: MINOR ST LAMINATIONS 2-10MM AND LENSES 5-30MM WIDE; WELL DEVELOPED CLEATING VARYING FROM 2MM FACE X 3MM BUTT UP TO 4MM FACE X 12MM BUTTS W/CONCOIDAL FRACTURING ON CLEAT FACES; MINOR QTZ CLEAT INFILL UP TO 1MM
DHGH-14-31	264.03	264.56	0.53	145626		CO	C3		K	MN		G	PD	20	E	QZ	CE	SEAM: RARE TO MINOR ST LAMINATIONS AND LENSES 2-4MM; WELL DEVELOPED CLEATING UP TO 3MM FACE X 10MM BUTT; CONCOIDAL FRACTURING; ~4% QTZ CLEAT INFILL IN MIDDLE OF INTERVAL UP TO 3MM WIDE
DHGH-14-31	264.56	264.76	0.20	145627		CO	C3		K	MN		G	PD	20	M	QZ	CE	SEAM FLOOR A: MINOR ST LAMINATIONS <3MM; MODERATELY DEVELOPED CLEATING UP TO 4MM FACE X 8MM BUTTS; MINOR QTZ CLEAT INFILL <1MM; 2MM WIDE PY VEINLET NEAR TOP OF INTERVAL; GRADATIONAL BOT CT
DHGH-14-31	264.76	264.96	0.20	145628		ZT			K	MN		G	PD	20	R	QZ	CE	FLOOR: MINOR COAL BANDS AT TOP OF INTERVAL EAR GRADATIONAL TOP CT, GRADING OUT W/DEPTH; RARE QTZ CLEAT INFILL ASSOCIATE W/COAL BANDS
DHGH-14-31	264.96	266.34	1.38			ST		D	G	TR	AM	I						
DHGH-14-31	266.34	266.96	0.62			CO	C4		K									CRUSHED COAL: ENTIRELY CRUSHED/POWDERED; NO PRIMARY TEXTURES; INDIVIDUAL CLEATS UP TO 1MM X 1MM SEEN; MOIST; POSSIBLE INTERMIXED MS; INTERMIXED DRILLING MUD; COAL IS MIX OF SLOUGH AND CAVE IN + DRILLING MUD
DHGH-14-31	266.96	267.38	0.42			ZT		D	K	CM		G	PD		M	QZ	CE	WEAKLY FOLDED
DHGH-14-31	267.38	271.25	3.87		60	SS	VF	A	G	TR		G	PD		R	QZ	CE	
DHGH-14-31	271.25	274.71	3.46		50	ZM		D	G	MN		G	PD	30	R	QZ	WP	
DHGH-14-31	274.71	276.77	2.06			ST		E	G	TR		G	PD	20	R	QZ	WP	
DHGH-14-31	276.77	292.41	15.64			SS	FC	A	G	TR	AM							
DHGH-14-31	292.41	292.78	0.37	GT-14-47		SS	FC	A	G	TR	AM	I						GEOTECH SAMPLE; SS-->ZM CONTACT AT 293.20m
DHGH-14-31	292.78	293.23	0.45			ZM		B	G	MN			PD	20	M	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	293.23	293.43	0.20	145629		ZM		B	G	MN		G	PD	20	M	QZ	VN	ROOF: MINOR COAL BANDS 2MM - 20MM TOWARDS BOTTOM CT; BOT CT GRADATIONAL OVER SHORT INTERVAL
DHGH-14-31	293.43	293.63	0.20	145630		CO	C3		K	MN			PD	20	M	QZ	CE	SEAM ROOF: MINOR ST LAMINATIONS 1-2MM WIDE; MODERATELY CLEATED AVG 2MM X 3MM; MINOR QTZ CLEAT INFILL UP TO 2MM
DHGH-14-31	293.63	293.92	0.29	145631		CO	C4		K	MN			PD	25	R	QZ	CE	SEAM: MINOR ST LAMINATIONS 2-10MM WIDE; VARIABLY MOD TO WELL CLEATED UP TO 3MM X 4MM; RARE LISTRIC SURFACES; RARE QTZ CLEAT INFILL <0.5MM
DHGH-14-31	293.92	294.12	0.20	145632		CO	C4		K	MN		G	PD	25	M	QZ	CE	SEAM FLOOR: MINOR ST LAMINATIONS 2-7MM WIDE AND RARE ST LESES 3-15MM WIDE; MODERATELY CLEATED LOCALLY UP TO 2MM FACE X 3M BUTTS; MINOR QTZ CLEAT INFILL <1MM
DHGH-14-31	294.12	294.32	0.20	145633		ZT		B	G	MN		G	PD	25	R	QZ	CE	FLOOR: MN COAL BANDS NEAR TOP CT 10-20MM WIDE; COAL BANDS ARE MODERATELY CLEATED 1MM X 2M; RARE QTZ CLEAT INFILL IN COAL BANDS
DHGH-14-31	294.32	294.57	0.25			ZT		B	G	CM		G	PD	25	M	QZ	CE	
DHGH-14-31	294.57	294.77	0.20	145634		ZT		B	G	CM		G	PD	25	E	QZ	VN	ROOF: COMMON COAL BANDS AND LAMINATIONS 2-15MM; 2% QTZ VEINS UP TO 4MM WIDE AND MINOR QTZ CLEAT INFILL <1MM; PARTLY SHEARED W/MINOR LISTRIC SURFACES
DHGH-14-31	294.77	295.05	0.28	145635		CO	C3		K	MN			PD	20	R	QZ	CE	SEAM ROOF: MINOR ST LAMINATIONS AND RARE LENSES 1-3MM; POOR TO LOCALLY MOD DEVELOPED CLEATING AVG 2MM FACE X 4M BUTTS; RARE QTZ CLEAT INFILL <1MM; WEAK SHEARING AND RARE LISTRIC SURFACES NEAR TOP OF INTERVAL
DHGH-14-31	295.05	295.46	0.41	145636		CO	C3		K	MN			PD	20	R	QZ	CE	SEAM: MNR ST LAMINATIONS 1-3MM AND LENSES UP TO 10MM WIDE; POOR TO MOD DEVELOPED CLEATING RANGING FROM 1MM X 1MM TO UP TO 4MM FACE X 5MM BUTT; LOCALLY WEAKLY SHEARED W/RARE LISTRIC SURFACES; RARE QTZ CLEAT INFILL <0.5MM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	295.46	296.14	0.68	145637		CO	C3		K	MN					R	QZ	CT	SEAM: MINOR ST LAMINATIONS <3MM AND CLASTS (BROKEN BANDS FROM SHEARING) UP TO 10MM WIDE; LOCALLY POORLY CLEATED NEAR TOP OF INTERVAL UP TO A MAX OF 2MM X 2MM; PRIMARY TEXTURES ALMOST ENTIRELY DESTROYED (SHEARED TO POWDER) BY SHEARING W/COMMON LISTRIC SURFACES; RARE QZ CLASTS ASSOC W/ST CLASTS
DHGH-14-31	296.14	296.99	0.85	145638		CO	C2		K	MN			PD	20	R	QZ	CE	SEAM: MINOR ST LAMINATION 2-4MM WIDE; MOD TO WELL DEVELOPED CLEATING UP TO 5MM FACE X 10MM BUTTS; CONCOIDAL FRACTURE ON CLEAT FACES; RARE QZ CLEAT INFILL <1MM; WEAKLY SHEARED LOCALLY W/RARE LISTRIC SURFACES; LOCALLY CRUSHED
DHGH-14-31	296.99	297.83	0.84	145639		CO	C2		K	MN			PD	15				SEAM: MNOR ST LAMINATIONS 2-10MM WIDE; MOD TO WELL DEVELOPED CLEATING UP TO 4MM X 4MM W/COMMON CONCOIDAL FRACTURE; RARE QZ CLEAT INFILL <1MM AND RARE VEINS 1-5MM; WEAKLY SHEARED W/MINOR LISTRIC SURFACES
DHGH-14-31	297.83	298.03	0.20	145640		CO	C3		K	MN					M	QZ	CE	SEAM FLOOR: MNR ST INTERMIXED; VARIABLY POOR TO MOD DEVELOPED CLEATING 2MM X 3MM; MINOR QZ CLEAT INFILL UP TO 4MM WIDE; WEAKLY SHEARED W/SOME PRIMARY TEXTURES CRUSHED/DESTROYED
DHGH-14-31	298.03	298.18	0.15	145641		CO	SY		K	MN		G			E	QZ	CE	FLOOR A: MINOR INTERMIXED ST; FOLDED IN PART; 5-7% QZ CLEAT INFILL AND IRREGULAR VEINING; 2% PY FOLDED VEINS AND BLEBS 5-10MM WIDE; LOCAL PATCHES OF COAL ARE HIGH GRADE (C2-C1) W/CONCOIDAL FRACTURE AND MOD-WELL CLEATED 2MM X 3MM
DHGH-14-31	298.18	298.23	0.05	145641		ZT		B	G	MN					M	QZ	VN	FLOOR C: MINOR COAL BANDS <5MM; MINOR QZ VEINS 3-5MM WIDE ASSOCIATED W/COAL BANDS; WEAKLY FOLDED
DHGH-14-31	298.23	299.35	1.12			ZT		B	G	MN	AM	G			M	QZ	CE	
DHGH-14-31	299.35	300.61	1.26			ST		B	G	TR	AM	G			R	QZ	WP	
DHGH-14-31	300.61	302.35	1.74		65	ST		A	G			G	PD	20				
DHGH-14-31	302.35	313.2	10.85			SS	FC	A	G	RA	AM	G			R	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-31	313.2	318.68	5.48		70	SS	FM	A	G	TR		G	WD	25	R	QZ	WP	
DHGH-14-31	318.68	319.75	1.07			SS	FM	A	G		AM	G						
DHGH-14-31	319.75	330.05	10.30			SS	VF	A	G			G	WD	30	R	PY	BL	
DHGH-14-31	330.05	343.58	13.53			ST		B	G	TR	AM	G			M	PY	BL	
DHGH-14-31	343.58	353.12	9.54			SS	FM	A	G	TR			PD	35	R	PY	DS	SOFT SED DEFORMATION INCLUDES BURROWS; DS PY NEAR TOP OF UNIT; BIVALVES 344.50m-345.14m; EOH
DHGH-14-32	0	2.03	2.03			KL												
DHGH-14-32	2.03	2.09	0.06			SS	FF	M	B		AM							
DHGH-14-32	2.09	3.59	1.50			KL												
DHGH-14-32	3.59	5.35	1.76		80	SS	FF	A	G			G	WD	10				
DHGH-14-32	5.35	5.77	0.42		80	ST		B	G				WD	10				
DHGH-14-32	5.77	5.99	0.22			KL												
DHGH-14-32	5.99	9.18	3.19		90	ST		B	G				WD	14	E	QZ	VN	
DHGH-14-32	9.18	9.26	0.08			KL												
DHGH-14-32	9.26	11.49	2.23		90	ST		B	G			G	WD	15	E	QZ	VN	
DHGH-14-32	11.49	11.69	0.20	140667	90	ST		B	G			P	WD	15				ROOF A: ST INTERLAMINATED WITH SS VF
DHGH-14-32	11.69	12.02	0.33	140668		CO		D	K	CM	AM	G						SEAM: SHEARED COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, CLEATING IS VERY POORLY DEVELOPED THROUGHOUT, TWO LOCAL COAL BANDS WITH 2MMX1MM CLEATS NEAR MIDDLE OF UNIT, LISTRIC SURFACES PRESENT ALONG JOINTS
DHGH-14-32	12.02	12.24	0.22	140669		CO	C4	D	K	MN		G			E	QZ	CE	SEAM: C4 COAL W/ MINOR 1MM MS LAMINATIONS THOROUGHOUT UNIT, ACCESSORY 2-5MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, CLEATING IS MODERATELY DEVELOPED, 1MMX1MM CLEATS
DHGH-14-32	12.24	12.64	0.40	140670		XM		B	G	MN	AM	G			M	QZ	CE	PARTING: MASSIVE CARBONACEOUS MS W/ MINOR 2-4MM COAL LAMINATIONS CONCENTRATED AT TOP AND BOTTOM OF UNIT, MINOR 1MM QZ/CARB CLEAT INFILL IN COAL LAMINATIONS AND PRESENT AS WISPS THROUGHOUT UNIT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	12.64	12.98	0.34	140671		CO		D	K	CM	AM	G						SEAM: SHEARED COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, CLEATING IS VERY POORLY DEVELOPED THROUGHOUT, LISTRIC SURFACES PRESENT ALONG JOINTS
DHGH-14-32	12.98	13.33	0.35	140672		CO	C4	D	K	MN					M	QZ	CE	SEAM: C4 COAL W/ MINOR 1MM MS LAMINATIONS THOROUGHOUT UNIT, ACCESSORY 2-5MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, CLEATING IS POORLY DEVELOPED, RARE 1MMX1MM CLEATS
DHGH-14-32	13.33	13.86	0.53			KL												
DHGH-14-32	13.86	15.04	1.18			ST		B	G		AM	G			M	QZ	WP	
DHGH-14-32	15.04	18.67	3.63			SS	FF	A	G		AM				C	QZ	VN	
DHGH-14-32	18.67	18.88	0.21			KL												
DHGH-14-32	18.88	19.77	0.89			SS	FF	A	G		AM	P			E	QZ	VN	
DHGH-14-32	19.77	20.73	0.96		90	ST		B	G			P	WD	20	M	QZ	VN	
DHGH-14-32	20.73	23.35	2.62		85	SS	VF	A	G				WD	10				
DHGH-14-32	23.35	26	2.65			ST		B	G		AM				E	QZ	VN	
DHGH-14-32	26	26.05	0.05			KL												
DHGH-14-32	26.05	27.02	0.97			ST		B	G		AM				M	QZ	VN	
DHGH-14-32	27.02	27.18	0.16			KL												
DHGH-14-32	27.18	27.44	0.26			ST		B	G		AM	G			E	QZ	VN	
DHGH-14-32	27.44	29.07	1.63			SS	FF	A	G		AM	P			E	QZ	VN	
DHGH-14-32	29.07	29.28	0.21			CO	SY	D	K	CM		G			C	QZ	CE	STONY COAL W/ COMMON 3-5MM MS LAMINATIONS THROUGHOUT INTERVAL, COMMON 1-6MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, BUT COMCENTRATED TOWARDS THE TOP OF UNIT, MINOR 1-2MM PY BLEBS NEAR MIDDLE OF UNIT, COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-32	29.28	29.98	0.70			XM		B	G	MN		G			E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	50.86	62.86	12.00			SS	FF	A	G	MN		G	PD	65	C	QZ	VN	
DHGH-14-32	62.86	63.51	0.65			ZM		B	G	CM		G			C	QZ	CE	
DHGH-14-32	63.51	63.71	0.20	1403676		ZM		B	G	CM		G			C	QZ	CE	ROOF: COALY MS W/ COMMON 2-10MM BANDS THROUGHOUT UNIT, COMMON 2MM QZ/CARB CLEAT INFILL
DHGH-14-32	63.71	63.91	0.20	1403677		CO	C3	D	K	MN		G			M	QZ	CE	SEAM ROOF A: C3 COAL W/ MINOR 2-4MM MS LAMINATIONS THORUGHOUT UNIT, MINOR 1-4MM QZ/CARB CLEAT INFILL SPORADICALLY THROUGHOUT UNIT, ACCESSORY 3MM PY BAND NEAR BOTTOM OF UNIT, CLEATING IS MODERATELY DEVELOPED W/ 2X2MM CLEATS
DHGH-14-32	63.91	64.36	0.45	1403678		CO	C3	D	K	MN		G			E	QZ	CE	SEAM:C3 COAL W/ MINOR 3-5MM MS LAMINATIONS THROUGHOUT UNIT, QCESSORY 2-4MM QZ/CARB SPORADICALLY THROUGHOUT UNIT, CLEATING IS WELL DEVELOPED THROUGHOUT UNIT, 2X2MM CLEATS
DHGH-14-32	64.36	64.56	0.20	1403679		CO	C3	D	K	MN		G			M	QZ	CE	SEAM FLOOR: C3 COAL W/ MINOR 1MM MS LAMINATIONS THROUGHOUT UNIT AND INCREASING IN FREQUENCY TOWARDS BOTTOM OF UNIT, MINOR 1-3MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, CLEATING IS POORLY DEVELOPED, RARE 1X1MM CLEATS
DHGH-14-32	64.56	64.76	0.20	1403680		XM		D	K	MN		G			M	QZ	CE	FLOOR; CARBONACEOUS MS W/ MINOR COAL INTERMIXED IN BOTTOM 6CM OF UNIT, MINOR 2MM QZ/CARB CLEAT INFILL CONCENTRATED AT BOTTOM OF UNIT
DHGH-14-32	64.76	64.91	0.15			ZM		D	K									
DHGH-14-32	64.91	65.11	0.20	1403681		ZM		D	K	CM		G			E	QZ	CE	ROOF:COALY MS W/ COMMON 3-5MM COAL LAMINATIONS THROUGHOUT UNIT, ACCESSORY 1-6MM CLEAT INFILL CONCENTRATED TOWARDS TOP 5CM OF UNIT
DHGH-14-32	65.11	65.31	0.20	1403682		CO	C3	D	K	CM		G						SEAM ROOF: C3 COAL W/ COMMON 20-25MM MS BANDS THROUGHOUT UNIT, CLEATING IS VERY WELL DEVELOPED, 3X4MM CLEATS, CONCOIDAL FRACTURING PRESENT ON CLEAT SURFACES

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	65.31	66.01	0.70	1403683		CO	C1	D	K	RA		G						SEAM: C1 COAL W/ RARE 3MM MS LAMINATIONS CONCENTRATED TOWARDS TOP OF UNIT, CLEATING IS VERY WELL DEVELOPED, 2X3MM CLEATS, SEAM IS HIGHLY FRACTURED ALONG CLEAT SURFACES
DHGH-14-32	66.01	66.06	0.05			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-32	66.06	66.21	0.15			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-32	66.21	66.45	0.24	1403684		CO	C2	D	K	RA								SEAM: C2 COAL W/ RARE 2MM MS LAMINATIONS CONCENTRATED TOWARDS BOTTOM OF UNIT, CLEATING IS VERY WELL DEVELOPED, 2X3MM CLEATS, SEAM IS COMMONLY FRACTURED ALONG CLEAT SURFACES IN TOP 10CM OF INTERVAL
DHGH-14-32	66.45	66.65	0.20	1403685		CO		D	K	MN		G			M	QZ	CE	SEAM FLOOR: SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT AND INCREASING IN MS CONTENT TOWARDS BOTTOM OF UNIT, MINOR 1-3MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS BOTTOM OF UNIT, LISTRIC SURFACES PRESENT ALONG JOINTS ALONG WITH RARE SLICKSIDES, CLEATING IS POORLY DEVELOPED, RARE 1X1MM CLEATS
DHGH-14-32	66.65	66.85	0.20	1403686		ST		B	G			G	WD	30	E	QZ	VN	FLOOR A: ST INTERLEMINATED W/ SS FF, ACCESSORY 1-4MM QZ/CARB VEINING THROUGHOUT UNIT
DHGH-14-32	66.85	68.66	1.81			ST		B	G			G	WD	30	E	QZ	VN	
DHGH-14-32	68.66	69.5	0.84			XM		D	G	MN		G		30	E	QZ	VN	
DHGH-14-32	69.5	69.7	0.20	1403687		XM		D	K	MN	AM	G			M	QZ	CE	ROOF: MASSIVE CARBONACEOUS MS W/ MINOR 1-3MM COAL LAMINATIONS CONCENTRATED TOWARDS TOP OF UNIT, BUT ALSO THROUGHOUT, MINOR 1-2MM QZ/CARB CLEAT INFILL
DHGH-14-32	69.7	70.03	0.33	1403688		CO		D	K	CM	AM	G			E	QZ	CE	SEAM: SHEARED COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, TOP 5CM OF UNIT HAS POORLY DEVELOPED CLEATS, THE REST OF THE UNITS STRUCTURE HAS BEEN DESTROYED BY SHEARING HOWEVER, ACCESSORY 3-5MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS TOP OF UNIT WITH MINOR CLEAT INFILL AT BOTTOM OF UNIT, LISTRIC SURFACES PRESENT ALONG JOINTS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	83.66	83.91	0.25	1403693		CO		D	K	MN	AM	G			M	QZ	CE	SEAM: SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, MINOR 3MM QZ/CARB CLEAT INFILL NEAR MIDDLE AND BOTTOM OF UNIT, LISTRIC SURFACES W/ MINOR SLICKENSIDES ALONG JOINTS, CLEATING HAS BEEN DESTROYED BY SHEARING
DHGH-14-32	83.91	84.11	0.20	1403694		XM		B	G	CM	AM	G			A	QZ	CE	FLOOR A: CARBONACEOUS MS W/ COMMON 4-15MM COAL BANDS CONCENTRATED AT TOP OF UNIT, ABUNDANT 3-10MM QZ/CARB CLEAT INFILL, ONE 15MM PY BAND CONSISTING OF 2X5MM BLEBS AT MIDDLE OF UNIT
DHGH-14-32	84.11	84.43	0.32			XM		B	G	MN	AM	G			C	QZ	CE	
DHGH-14-32	84.43	87.72	3.29		70	SS	FF	A	G	MN		G	PD	25	E	QZ	VN	
DHGH-14-32	87.72	88	0.28		60	SS	FF	A	G	TR		P	WD	40	E	QZ	VN	
DHGH-14-32	88	89.99	1.99			SS	FF	A	G	MN		G	PD	89	M	QZ	VN	
DHGH-14-32	89.99	93.67	3.68		85	SS	FF	A	G	TR		G	WD	65	E	QZ	VN	
DHGH-14-32	93.67	94.07	0.40		90	SS	FF	A	G			G	WD	50	E	QZ	VN	UPPER LIMB OF FOLD
DHGH-14-32	94.07	94.35	0.28		90	SS	FF	A	G			G	WD	89	M	QZ	WP	HINGE OF FOLD
DHGH-14-32	94.35	96.47	2.12		90	SS	FF	A	G				WD	65	A	QZ	VN	LOWER LIMB OF FOLD
DHGH-14-32	96.47	96.58	0.11			KL												
DHGH-14-32	96.58	97.95	1.37			SS	FF	A	G		AM	P			A	QZ	VN	
DHGH-14-32	97.95	98.84	0.89		60	SS	FF	A	G			G	WD	75	M	QZ	VN	UPPER LIMB OF FOLD
DHGH-14-32	98.84	98.92	0.08		60	SS	FF	A	G				WD	89				HINGE OF FOLD
DHGH-14-32	98.92	99.5	0.58		70	SS	FF	A	G			G	WD	50	M	QZ	VN	LOWER LIMB OF FOLD
DHGH-14-32	99.5	101.61	2.11			SS	FF	A	G	MN		G	PD	60	E	QZ	VN	
DHGH-14-32	101.61	102.68	1.07			SS	FF	A	G				PD	80	M	QZ	VN	
DHGH-14-32	102.68	102.77	0.09			KL												
DHGH-14-32	102.77	106.12	3.35			SS	FF	A	G	CM		G	PD	70	E	QZ	VN	
DHGH-14-32	106.12	106.98	0.86			SS	FF	A	G	CM			PD	30	E	QZ	VN	
DHGH-14-32	106.98	107.18	0.20			KL												
DHGH-14-32	107.18	107.47	0.29			SS	FF	A	G	MN		G	PD	30	M	QZ	VN	
DHGH-14-32	107.47	108.77	1.30			ST		B	G	TR			PD	20	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	108.77	108.89	0.12			KL												
DHGH-14-32	108.89	110.48	1.59			ST		B	G			G	PD	5	E	QZ	VN	
DHGH-14-32	110.48	111.96	1.48			ST		B	G				PD	40	E	QZ	VN	
DHGH-14-32	111.96	112.01	0.05			KL												
DHGH-14-32	112.01	112.25	0.24			ZM		D	G	CM		G			M	QZ	CE	
DHGH-14-32	112.25	113.31	1.06			XM		D	G	MN		P	PD	55	M	QZ	CE	
DHGH-14-32	113.31	113.51	0.20			ZM		D	G	CM			WD	55	A	QZ	VN	
DHGH-14-32	113.51	113.61	0.10			KL												
DHGH-14-32	113.61	114.14	0.53			XM		D	G	MN		P	PD	55	M	QZ	CE	
DHGH-14-32	114.14	114.34	0.20	1403695		XM		D	G	MN		P	PD	55	M	QZ	CE	ROOF: CARBONACEOUS MS W/ MINOR 2-3MM COAL LAMINATIONS THROUGHOUT UNIT, MINOR 1-3MM QZ/CARB CLEAT INFILL AND MINOR VEINING AT BOTTOM OF UNIT
DHGH-14-32	114.34	114.82	0.48	1403696		CO		D	K	CM	AM	G			M	QZ	CE	SEAM: SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, MINOR 5MM QZ/CARB CLEAT INFILL AT BOTTOM OF UNIT, LISTRIC SURFACES PRESENT ALONG JOINTS, CLEATING HAS BEEN DESTROYED BY SHEARING
DHGH-14-32	114.82	115.02	0.20	1403697		MS		D	G			P			M	QZ	WP	FLOOR: MASSIVE MS W/ MINOR 1MM QZ/CARB WISPS NEAR MIDDLE OF UNIT
DHGH-14-32	115.02	116.18	1.16			XM		D	G	MN		P	WD		C	QZ	CE	THREE SMALL SCALE FOLDS WITHIN INTERVAL, EACH FOLD SPANS APPROXIMATELY 12-15CM
DHGH-14-32	116.18	116.37	0.19			CO	C4	D	K	CM		P			C	QZ	CE	C4 COAL W/ COMMON 4-15MM MS LAMINATIONS THROUGHOUT UNIT, COMMON 1-7MM QZ/ CARB CLEAT INFILL CONCENTRATED TOWARDS TOP 10CM AND BOTTOM 2CM OF UNIT, CLEATING IS MODERATELY DEVELOPED W/ LOCAL 1X1MM CLEATS, NOT SAMPLED DUE TO LOW GRADE DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-32	116.37	117.8	1.43		85	ST		B	G			G	WD	5	M	QZ	VN	
DHGH-14-32	117.8	122.94	5.14		80	SS	VF	A	G			G	WD	15	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	122.94	123.14	0.20	1403698	80	ST		B	G	MN		G	WD	15	E	QZ	VN	ROOF A: ST INTERLAMINATED W/ SS VF, MINOR 5MM COAL LAMINATIONS AT BOTTOM OF UNIT, ACCESSORY 4-7MM QZ/CARB VEIN NEAR BOTTOM OF UNIT AS WELL AS 3MM QZ/CARB CLEAT INFILL IN COAL L AMINATION AT BOTTOM OF UNIT
DHGH-14-32	123.14	123.34	0.20	1403699		CO		D	K	CM	AM	G			E	QZ	CE	SEAM ROOF A: SHEARED COAL W/ COMMON MS INTERMIXED THROUGHOUT UNIT, ACCESSORY 2-5MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS TOP OF UNIT, NEAR MIDDLE OF UNIT 10MM QZ/CARB VEIN W/ ACCESSORY 3X8MM PY BLEBS EMBEDDED IN THE VEIN, LISTRIC SURFACES PRESENT ALONG JOINTS, CLEATING HAS BEEN DESTROYED BY SHEARING
DHGH-14-32	123.34	123.79	0.45	1403700		CO	C4	D	K	MN			WD	15				SEAM: C4 COAL W/ MINOR 1-3MM MS LAMINATIONS THOROUGHOUT UNIT, CLEATING IS POORLY DEVELOPED THROUGHOUT UNIT, 1X1MM CLEATS
DHGH-14-32	123.79	124.02	0.23	1403701		CO	C4	D	K	CM		G	WD	15	M	QZ	CE	SEAM FLOOR: C4 COAL W/ MINOR 1-3MM MS LAMINATIONS INCREASING IN FREQUENCY TOWARDS BOTTOM OF UNIT, MINOR 1-4MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS TOP AND BOTTOM OF UNIT, CLEATING IS POORLY DEVELOPED THROUGHOUT UNIT, 1X1MM CLEATS
DHGH-14-32	124.02	124.22	0.20	1403702		MS		B	G	MN		G	PD	10	M	QZ	VN	FLOOR: MS W/ MINOR 2-4MM COAL LAMINATIONS AT TOP OF UNIT, MINOR 1-5MM QZ/CARB VEINING CONCENTRATED TOWARDS TOP OF UNIT AND 1MM VEIN NEAR MIDDLE OF UNIT
DHGH-14-32	124.22	126.3	2.08			MS		B	G				PD	10	M	QZ	VN	
DHGH-14-32	126.3	128.49	2.19		80	SS	FF	A	G	MN		G	WD	10	E	QZ	VN	
DHGH-14-32	128.49	133.47	4.98		80	ST		B	G			P	WD	10	E	QZ	VN	
DHGH-14-32	133.47	138.08	4.61			SS	FF	A	G	MN	AM	G			E	QZ	VN	
DHGH-14-32	138.08	139.46	1.38			XT		B	G	MN		G	PD	20	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	139.46	139.66	0.20	1403703		XT		B	G	MN		G	PD	20	C	QZ	VN	ROOF: CARBONACEOUS MS W/ MINOR 3-6MM COAL LAMINATIONS CONCENTRATED TOWARDS BOTTOM OF UNIT, TWO 25-30MM QZ/CARB VEINS ONE LOACTED NEAR MIDDLE OF UNIT THE SECOND AT THE BOTTOM OF UNIT, QZ/CARB ALSO PRESENT AS CLEAT INFILL IN BETWEEN TWO VEINS
DHGH-14-32	139.66	140.11	0.45	1403704		CO	C4	D	K	MN		G			E	QZ	CE	SEAM A: C4 COAL W/ MINOR 3-6MM ST LAMINATIONS THOROUGHOUT UINIT, ACCESSORY 1-2MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, MINOR PY CLEAT INFILL MIDDLE OF UNIT, LOCAL POORLY DEVELOPED CLEATING, RARE 1X2MM CLEATS
DHGH-14-32	140.11	140.27	0.16	1403705		XM				MN		P	PD	20	M	QZ	CE	FLOOR A: CARBANACEOUS MUDSTONE WITH MINOR, POORLY DEVELOPED 1 MM COAL LENSES THROUGHOUT. MINOR 0.5MM QUARTZ- CARB CLEAT INFILL. LAST 4 SENTIMETERS OF FLOOR ARE SS TO COMPLETE 20 CM FLOOR.
DHGH-14-32	140.27	140.31	0.04	1403705		SS	VF	A	G	MN		G	PD		E	QZ	VN	FLOOR B: FINE GRAINED SANDSTONE WITH MINOR 3-4 MM SILT LAMINATIONS. ACCESSORY 1-2MM QUARTZ VEINING. TOP 16 CM OF UNIT IS XM.
DHGH-14-32	140.31	140.85	0.54		70	SS	VF	A	G			G	WD	20	E	QZ	VN	
DHGH-14-32	140.85	142.14	1.29		90	SS	FF	A	G			G	PD	20	E	QZ	VN	
DHGH-14-32	142.14	146.52	4.38		85	ST		B	G			G	WD	15	M	QZ	VN	
DHGH-14-32	146.52	148.04	1.52		80	SS	FF	A	G	TR		P	WD	15	E	QZ	VN	
DHGH-14-32	148.04	151.84	3.80			ST		B	G	TR	AM	G						
DHGH-14-32	151.84	152.04	0.20	1403706		XM		D	G	MN	AM	P			E	QZ	CE	ROOF: MASSIVE CARBONACEOUS MS W/ MINOR 3-5MM COAL LAMINATIONS THROUGHOUT UNIT, ACCESSORY 1-2MM QZ/CARB CLEAT INFILL
DHGH-14-32	152.04	152.24	0.20	1403707		CO	C2	D	K	MN		G			E	QZ	CE	SEAM ROOF A: C2 COAL W/ MINOR 2-5MM MS LAMINATIONS THROUGHOUT UNIT, ACCESSORY 1-5MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, ACCESSORY 3X20MM PY BLEBS AT TOP OF UNIT , CLEATING IS WELL DEVELOPED THROUGHOUT, 2X2MM CLEATS, ABUNDANT CONCOIDAL FRACTURING IS PRESENT ALONG CLEAT FACES

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	152.24	152.74	0.50	1403708		CO	C3	D	K	MN		G			E	QZ	CE	SEAM: C3 COAL WITH MINOR 1-3 MM MS LAMINATIONS THROUGHOUT UNIT, ACCESSORY 1-2 MM QZ-CARB CLEAT INFILL THROUGHOUT. CLEATING IS VERY WELL DEVELOPED, CLEATS ARE ON AVERAGE 3X3MM IN SIZE. BOTTOM OF UNIT HAS COMMON FRACTURING ALONG CLEAT FACES.
DHGH-14-32	152.74	152.94	0.20	1403709		CO	C4	D	K	MN		G			E	QZ	CE	SEAM FLOOR: C4 COAL WITH MINOR MS LAMINATIONS THROUGHOUT. ACCESSORY 1-2 MM QZ-CARB CLEAT INFILL THROUGHOUT WITH ONE 5-20 MM WIDE QTZ VEIN, SLICKENLINES COMMON. CLEATING IS POOPLY DEVELOPED AND CLEATS ARE ON AVERAGE 1X2 IN SIZE.
DHGH-14-32	152.94	153.14	0.20	1403710		XM		D	G	MN	AM	G			M	QZ	CE	FLOOR: CARBONACEOUS MUDSTONE WITH MINOR COAL LAMINATIONS AND LENSES FOCUSED IN TOP THIRD OF UNIT. COAL LENSES CONTAIN MINOR QUARTZ CARB CLEAT INFILL.
DHGH-14-32	153.14	153.85	0.71			XM		D	G	MN	AM	G			M	QZ	CE	
DHGH-14-32	153.85	154.4	0.55			ST		B	G			G	PD	10	M	QZ	WP	
DHGH-14-32	154.4	155.15	0.75			SS	FF	A	G			P			E	QZ	VN	
DHGH-14-32	155.15	157.53	2.38		80	ST		B	G									
DHGH-14-32	157.53	158.79	1.26		90	SS	FM	A	G			P	WD	20	M	QZ	VN	
DHGH-14-32	158.79	160.53	1.74		70	SS	FF	A	G				WD	25	M	QZ	VN	
DHGH-14-32	160.53	160.59	0.06			KL												
DHGH-14-32	160.59	163.59	3.00		70	SS	FF	A	G				WD	25				
DHGH-14-32	163.59	163.64	0.05			KL												
DHGH-14-32	163.64	164.01	0.37		60	SS	FF	A	G			G	WD	25				
DHGH-14-32	164.01	164.38	0.37			XT		B	G	MN					E	QZ	VN	
DHGH-14-32	164.38	164.81	0.43			CO	SY	D	K	CM		G			C	QZ	CE	stony coal with common 1-5mm mudstone laminations throughout. common 1-4mm Qz/ Carb cleat infill as well as one 10mm quartz carb vein in the middle of unit. Accessory 10-20 mm pyrite lense near top of unit. Local poorly developed cleating throughout, 2mm by 2mm cleats. Coal not sampled due to low grade as determined by geophysical logs.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	164.81	166.31	1.50			XM		D	G	CM	AM	P			C	QZ	CE	
DHGH-14-32	166.31	166.51	0.20	1403711		XM		D	G	CM	AM	P			C	QZ	CE	ROOF: CARBANACEOUS MUDSTONE WITH COMMON 3-5 MM COAL LAMINATIONS THROUGHOUT WITH COMMON QUARTZ CLEATING. BEDDING IS DEFORMED AND FOLDED. ONE MINOR QUARTZ VEIN PARALLEL TO CORE AXIS
DHGH-14-32	166.51	166.99	0.48	1403712		CO		D	K	MN	AM	P			C	QZ	CE	SEAM: SHEARED COAL SEAM WITH MINOR MUDSTONE THROUGHOUT. SHEARING CAUSES LAMINATIONS TO BE DISCONTINUOUS AND CLEATING APPEARS TO BE POORLY DEVELOPED DUE TO SHEARING. CLEATS ARE SMALL, 1X1MM IF PRESENT.
DHGH-14-32	166.99	167.19	0.20	1403713		XT		D	G	MN	AM	P			C	QZ	CE	FLOOR: MASSIVE CARBONACEOUS SILTSTONE WITH MINOR 1-3MM COAL LAMINATIONS THROUGHOUT. ONE 5 MM QUARTZ VEIN PARALLED TO CORE AXIS. QUARTZ INFILL IN CLEATS. LAMINATIONS STILL DEFORMED FROM SHEARING.
DHGH-14-32	167.19	169.23	2.04			XT		D	G	MN	AM	G			M	QZ	WP	
DHGH-14-32	169.23	169.79	0.56			ST		B	G		AM	G						
DHGH-14-32	169.79	171.91	2.12		85	SS	FF	A	G			G	WD	45	M	QZ	VN	
DHGH-14-32	171.91	172.73	0.82			SS	FF	A	G		AM				A	QZ	VN	
DHGH-14-32	172.73	172.78	0.05			KL												
DHGH-14-32	172.78	175.15	2.37			SS	FF	A	G	MN	AM				E	QZ	VN	
DHGH-14-32	175.15	175.22	0.07			KL												
DHGH-14-32	175.22	179.31	4.09			SS	FF	A	G		AM	P			A	QZ	VN	
DHGH-14-32	179.31	179.67	0.36			XT		B	G			G			C	QZ	VN	
DHGH-14-32	179.67	179.87	0.20			CO		D	K	MN		P			E	QZ	VN	sheared coal with minor mudstone intermixed throughout, accessory 2-6 mm quartz veins in the middle of the unit, not sampled due to low grade. sheared coal with quartz infill
DHGH-14-32	179.87	180.08	0.21			XT		B	G	MN		G			C	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	180.08	180.28	0.20	1403714		ZM		B	G	CM		G			C	QZ	VN	ROOF: COALY MS W/ COMMON COIAL INTERMIXED THROUGHOUT UNIT, COMMON 15MM ST LENSE NEAR MIDDLE OF UNIT W/ COMMON 1-6MM QZ/CARB VEINING THROUGHOUT THE LENSE
DHGH-14-32	180.28	180.49	0.21	1403715		CO		D	K	MN		G			E	QZ	CE	SEAM ROOF: SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, ONE 20X70MM ST COBBLE AT TOP OF UNIT, ACCESSORY 1-3MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS TOP OF UNIT, CLEATING STRUCTURE HAS BEEN DESTROYED BY SHEARING
DHGH-14-32	180.49	181.03	0.54	1403716		CO		D	K	MN		G			M	QZ	CE	SEAM: SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, MINOR 1-2MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS BOTTOM OF UNIT, CLEATING STRUCTURE HAS BEEN DESTROYED BY SHEARING
DHGH-14-32	181.03	181.23	0.20	1403717		CO		D	K	MN		G			E	QZ	VN	SEAM FLOOR: SHEARED COAL W/ MINOR MS INTERMIXED THROUGHOUT UNIT, ONE 7MM ST QZ/CARB VEIN AT TOP OF UNIT, QZ/CARB ALSO PRESENT IN MINOR 1-3MM CLEAT INFILL CONCENTRATED TOWARDS TOP OF UNIT, CLEATING STRUCTURE HAS BEEN DESTROYED BY SHEARING
DHGH-14-32	181.23	181.45	0.22	1403718		XM		D	G	MN		P			E	QZ	VN	FLOOR A: CARBONACEOUS MS W/ MINOR 2-5MM COAL LAMINATIONS CONCENTRATED TOWARDS TOP OF UNIT AND DECREASING IN FREQUENCY TOWARDS BOTTOM OF UNIT, QZ/CARB ACCESSORY 3-5MM VEINS TOWARDS BOTTOM OF UNIT, QZ/CARB ALSO PRESENT AS 1-3MM ACCESSORY CLEAT INFILL, MINOR 1-3MM PY BLEBS CONCENTRATED TOWARDS TOP OF UNIT
DHGH-14-32	181.45	184.68	3.23			ST		B	G		AM				E	QZ	VN	
DHGH-14-32	184.68	192.39	7.71			SS	FF	A	G		AM				C	QZ	VN	
DHGH-14-32	192.39	193.07	0.68			ZT		B	G	CM	AM	P			E	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	193.07	193.49	0.42			CO	SY	D	K	CM		G			E	QZ	CE	STONY COAL, HHEAVY AND DULL, MINOR FRACTURING OF COAL POSSIBLY DUE TO FAULTING, MINOR 10MM MS FRAGMENTS NEAR MIDDLE OF UNIT, COMMON MS CLEATING IS POORLY DEVELOPED, ACCESSORY 1-3 MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, COAL NOT SAMPLED DUE TO LOW GRADE DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-32	193.49	193.69	0.20			XM		D	G		AM				M	QZ	FP	
DHGH-14-32	193.69	194.06	0.37			KL												
DHGH-14-32	194.06	196.68	2.62			SS	FF	A	G	CM		P	PD		A	QZ	FP	QZ CONCENTRATED TO TOP OF UNIT
DHGH-14-32	196.68	198.66	1.98			ST		B	G			G	WD	45	M	QZ	FP	
DHGH-14-32	198.66	199.25	0.59			XM		D	G	MN		P	PD					
DHGH-14-32	199.25	200.02	0.77			CO	C5	D	K	CM		P			C	QZ	FP	C5 COAL W/ MINOR 20MM MS FRAGMENTS NEAR BOTTOM OF UNIT AS WELL AS ONE 5CM MS BAND IN MIDDLE OF UNIT, QZ/CARB 1-10MM FRAGMENT INFILL CONFINED TO MS FRAGMENTS AND BANDS, QZ/CARB ALSO PRESENT IN 2-3MM CLEAT INFILL NEAR TOP OF UNIT, CLEATING IS VERY POORLY DEVELOPED THROUGHOUT UNIT, ACCESSORY PY THAT IS DISSEMINATED AT TOP OF UNIT, IN 5MM BLEBS NEAR MIDDLE OF UNIT, COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-32	200.02	200.12	0.10			KL				CO								
DHGH-14-32	200.12	201.32	1.20		60	ST		B	G			G	PD		M	QZ	FR	
DHGH-14-32	201.32	202.01	0.69			XM		B	G	MN					M	QZ	FR	
DHGH-14-32	202.01	202.21	0.20	140719		XM		B	F	MN		P	PD	15	E	QZ	CE	ROOF A: CALCAREOUS MUDSTONE WITH MINOR 1-5 MM COAL LAMINATIONS THROUGHOUT. BEDDING IS POORLY DEVELOPED AT 15 DEGREES. THERE ARE ACCESSORY QUARTZ CLEAT INFILL AND CONTACT IS PLANAR. VERY MINOR PYRITE BLEBS ARE OCCURING IN CLEATS AS WELL. BEDDING IS WAVY IN PARTS AS WELL.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	202.21	202.64	0.43	140720		CO	C4	D	K	MN		P	PD	10	E	QZ	CE	SEAM: C4 COAL WITH MINOR 1-2MM MUDSTONE LAMINATIONS THROUGHOUT. BEDDING IS POORLY DEVELOPED. 2-3MM CLEATING IS MODERATEDLY DEVELOPED. COAL RANGES FROM DULL TO BRIGHT, INCONSISTENT LUSTER.
DHGH-14-32	202.64	203.06	0.42	140721		CO	C4	D	K	CO		P	PD	15	E	QZ	CE	SEAM: C4 COAL WITH COMMON 1-5MM MUDSTONE LAMINATIONS THROUGHOUT. MUDSTONE AND 1-5MM ACCESSORY QUARTZ CLEATING IS MORE COMMON THAN THE INTERVAL ABOVE AND COAL CONTAINS MORE 'ASH'. BEDDING IS POORLY DEVELOPED
DHGH-14-32	203.06	203.17	0.11			XM		B	G		AM				C	PY	BN	
DHGH-14-32	203.17	203.25	0.08			KL												
DHGH-14-32	203.25	205.48	2.23			XM		D	G	MN		G			E	QZ	VN	
DHGH-14-32	205.48	205.69	0.21			ZM		D	G	CM		G			A	QZ	CE	
DHGH-14-32	205.69	209.33	3.64		60	SS	FF	A	G			G	WD	25	E	QZ	VN	
DHGH-14-32	209.33	210.56	1.23			XT		B	G	MN			WD	25	M	QZ	VN	
DHGH-14-32	210.56	210.61	0.05			KL												
DHGH-14-32	210.61	210.88	0.27	140722		ZT		D	G	CM		G	WD	25	E	QZ	VN	ROOF: COALY SILTSTONE WITH COMMON 2-3MM COAL LAMINATIONS THROUGHOUT AND BECOMING MORE CONCENTRATED CLOSER TO COAL SEAM. BEDDING IS WELL DEVELOPED WITH ACCESSORY QUARTZ VEINING. CONTACT IS GRADATIONAL
DHGH-14-32	210.88	211.08	0.20	140723		CO		D	K	MN	AM	G			M	QZ	VN	SEAM ROOF A: SHEARED COAL WITH RARE LOCAL WELL DEVELOPED 1 X 1 MM CLEATS. LUSTER VARIES DUE TO SHEARING. MINOR MUDSTONE INTERMIXED THROUGHOUT AND LOCAL 15 X 40 MM AREA WITH ACCESSORY DISSEMINATED PYRITE CONCENTRATED TOWARDS THE BOTTOM OF UNIT. LITRIC SURFACES PRESENT ALONG JOINTS AND FRACURES. MINOR 1-3 MM QUARTZ VEINLETS IN BOTTOM OF THE UNIT.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	211.08	211.75	0.67	140724		CO		D	K	MN	AM	G			M	QZ	CE	SEAM: SHEARED COAL WITH MINOR MUDSTONE INTERMIXED THROUGHOUT. RARE 1 X 1 MM CLEATS, CLEATING IS VERY POORLY DEVELOPED THROUGHOUT, DESTROYED BY SHEARING. MINOR 2-3 MM QUARTZ WISPS OCCURRING IN CLEATS AND IS CONCENTRATED IN THE TOP AND THE MIDDLE OF THE UNIT. GRADATIONAL BASAL CONTACT.
DHGH-14-32	211.75	211.98	0.23	140725		CO		D	K	MN	AM	G			E	QZ	CE	SEAM FLOOR: SHEARED COAL WITH MINOR MUDSTONE INTERMIXED THROUGHOUT. SHEARING CAUSES LOCAL DESTRUCTION OF CLEATS AND CREATES LISTRIC SURFACES. MINOR LOCAL 1 X 1 MM CLEATS. QUARTZ IS ACCESSORY AND OCCURS IN CLEATS.
DHGH-14-32	211.98	212.18	0.20	140726		XM		B	G	CO		G	PD		A	QZ	VN	FLOOR: CARBONACEOUS MUDSTONE WITH COMMON COAL LAMINATIONS FOCUSED AT THE TOP OF THE UNIT. BEDDING IS WAVY DUE TO SHEARING AND SOME BEDS PINCH OUT. QUARTZ IS MOSTLY IN 1-3MM VEINLETS AND PODS OCCURRING IN 1 X 1 MM LOCAL CLEATING WITH ONE 1 CM VEIN OCCURRING AFTER THE COMMON COAL LAMINATIONS.
DHGH-14-32	212.18	213.18	1.00			XM		B	G	MN		G	PD	15	M	QZ	WP	
DHGH-14-32	213.18	217.91	4.73		55	SS	FF	A	G			I	PD	15	M	QZ	FP	
DHGH-14-32	217.91	218.2	0.29			CO	SY	D	K	CM					C	QZ	CE	STONY COAL W/ COMMON 2-4MM MS LAMINATIONS THROUGHOUT UNIT, ONE 15 MM THICK MS BAND AT TOP OF UNIT, COMMON QZ/CARB 1-15MM CLEAT INFILL CONCENTRATED TOWARDS BOTTOM OF UNIT, MINOR 5MM PY BLEBS NEAR MIDDLE OF UNIT, CLEATING IS VERY POORLY DEVELOPED, COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM THE GEOPHYSICAL LOGS
DHGH-14-32	218.2	218.41	0.21			KL				CO								
DHGH-14-32	218.41	221.92	3.51			MS		D	G	MN			PD	25	M	QZ	LN	
DHGH-14-32	221.92	222.14	0.22			ZM		D	G	CM		G			C	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	222.14	222.34	0.20	140727		ZM		D	G	CM		G			E	QZ	VN	ROOF: COALY MUDSTONE WITH COMMON 1-3 MM COAL BANDS THROUGHOUT. MUDSTONE BEDS ARE WAVY DUE TO SHEARING. QUARTZ IS COMMON AND OCCURS IN 1X1 MM POORLY DEVELOPED CLEATS AND IN 1MM VEINLETS.
DHGH-14-32	222.34	222.54	0.20	140728		CO		D	K	MN		G			E	QZ	CE	SEAM ROOF A: SHEARED COAL WITH MINOR 1 MM MUDSTONE LAMINATIONS THROUGHOUT. ACCESSORY QUARTZ OCCURS AS 1 MM VEINLETS AND IN 1 X1MM POORLY DEVELOPED CLEATED. SHEARING CAUSES LISTRIC SURFACES AND LOCAL DESTRUCTION OF LAMINATIONS AND CLEATS. PYRITE IS IN VEINLETS AND INFILLING FRACTURES.
DHGH-14-32	222.54	222.84	0.30	140729		CO		D	K	MN		G	PD		E	QZ	VN	SEAM: SHEARED COAL WITH MINOR 1-2MM MUDSTONE LAMINATIONS THROUGHOUT. APPROXIMATELY 50% OF CLEATING AND BEDDING IS DESTROYED BY SHEARING. COAL BEDS ARE 1-2MM THICK WHEN SEEN. QUARTZ OCCURS IN VEINLETS AND AS FRACTURE INFILL. DOES NOT APPEAR TO BE ASSOCIATED WITH CLEATS.
DHGH-14-32	222.84	223.14	0.30	140730		CO		D	K	MN	AM	G			E	QZ	VN	SEAM: SHEARED COAL WITH MINOR MUDSTONE LAMINATIONS THROUGHOUT UNIT. MUDSTONE IS INTERMIXED WITH COAL AND IS MOTTLED DUE TO SHEARING. LABELED AS MASSIVE AS STRUCTURE HAS BEEN 95% DESTROYED. QUARTZ OCCURS AS 1-3 MM VEINLETS AND FRACTURE INFILL. CONTACT IS GRADATIONAL.
DHGH-14-32	223.14	223.35	0.21	140731		CO		D	K	MN	AM	G			E	QZ	VN	SEAM FLOOR: SHEARED COAL WITH MINOR MUDSTONE LAMINATIONS THROUGHOUT UNIT. MUDSTONE IS INTERMIXED WITH COAL AND IS MOTTLED DUE TO SHEARING. LABELED AS MASSIVE AS STRUCTURE HAS BEEN 95% DESTROYED. QUARTZ OCCURS AS 1-3 MM VEINLETS AND FRACTURE INFILL. CONTACT IS GRADATIONAL.LISTRIC SURFACES DUE TO SHEARING

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	223.35	223.6	0.25	140732		ZM		D	G	CM		G			M	QZ	FP	FLOOR: COALY MUDSTONE WITH COMMON COAL THROUGHOUT. APPROXIMATELY 40% COAL AND 60% MUDSTONE. COAL OCCURS IN LAMINATIONS HOWEVER ARE SHEARED AND INTERMIXED WITH MUDSTONE. LISTRIC SURFACES ARE VERY COMMON. BEDS ARE IRREGULARLY SIZED AND ARE MOTTLED DUE TO SHEARING. MINOR ACCESSORY QUARTZ AS 1MM IRREGULAR FRACTURE INFILL
DHGH-14-32	223.6	224.47	0.87			MS		B	G		AM				E	QZ	FP	BASAL CONTACT HAS BEEN BROKEN UP DUE TO DRILLING, UNABLE TO DETERMINE BASAL CONTACT TYPE
DHGH-14-32	224.47	224.78	0.31			ZM		D	K	CM	AM	G						LOW DENSITY KICK DUE TO FAULTING, CORE IS SHEARED WITH COMMON FRACTURING THROUGHOUT THIS UNIT
DHGH-14-32	224.78	232.72	7.94		60	SS	FF	A	G	CM		I	PD		E	QZ	FP	COMMON FAULTING OCCURING OVER INTERVAL, GIVING LOW DENSITY KICKS ON GEOPHYSICAL LOGS WITH NO CORRESPONDING GAMMA KICKS
DHGH-14-32	232.72	233.22	0.50			CO		B	K	CM		G			E	QZ	VN	SEAM: SHEARED COAL WITH 50% OF 2-3 MM LAMINATIONS BEING DISTORTED BY SHEARING. COMMON MUDSTONE LAMINATION THROUGHOUT WITH IRREGULAR BEDDING DUE TO SHEARING. QUARTZ OCCURS IN 1MM CLEAT INFILL, 1-3MM FRACTURE INFILL AND IN 1-3MM VEINLETS. SHEARING IS MORE INTENSE IN TOP OF UNIT. LISTRIC SURFACES COMMON.
DHGH-14-32	233.22	233.62	0.40			XM		B	G	CM		G			C	QZ	CE	
DHGH-14-32	233.62	237.61	3.99			ST		B	G	TR		G		15	E	QZ	VN	
DHGH-14-32	237.61	241.52	3.91		75	SS	FM	A	G	CM		F		10	E	QZ	VN	
DHGH-14-32	241.52	241.95	0.43			SS	MC	A	G		AM	R	BG					
DHGH-14-32	241.95	242.38	0.43			SS	FC	A	G	MN		E			M	QZ	CE	
DHGH-14-32	242.38	242.47	0.09			SS	FC	A	G	MN		E			M	QZ	VN	
DHGH-14-32	242.47	242.85	0.38			MS		B	G		AM	P						
DHGH-14-32	242.85	243.25	0.40			SS	FM	A	G	MN		P			E	QZ	VN	
DHGH-14-32	243.25	243.8	0.55			SS	FF	A	G	MN					M	QZ	VN	
DHGH-14-32	243.8	244.38	0.58		80	SS	FM	A	G			P	BP	15	E	QZ	VN	
DHGH-14-32	244.38	246.31	1.93		55	SS	FF	A	G			P	WL	15	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	246.31	246.63	0.32			CO	C5	D	K	MN		P	WL	20	C	QZ	VN	SEAM A: C5 COAL WITH MINOR 1-3 MM MUDSTONE LAMINATIONS THROUGHOUT. LAMINATIONS ARE WAVY. 1-5 MM QUARTZ OCCURS IN FRACTURE INFILL, VEINLETS AND IN CLEATS AND 1MM PYRITE VEINLETS ARE COMMON. NOT SAMPLED DUE TO HIGH DENSITY AND PYRITE CONTENT. ONE 2 CM PYRITE VEIN CAPS THE UNIT
DHGH-14-32	246.63	246.9	0.27			XM		D	G	MN	AM	P			M	QZ	VN	
DHGH-14-32	246.9	247	0.10			ZM		B	G	CO		P	WL		C	QZ	VN	QUARTZ OCCURS ALONG WAVY LAMINATIONS, CLEATING IS VERY POORLY DEVELOPED.
DHGH-14-32	247	247.19	0.19			XM		D	G	MN	AM							
DHGH-14-32	247.19	247.25	0.06			ZM		B	G	CO		P		15	C	QZ	CE	
DHGH-14-32	247.25	247.63	0.38			XM		D	G	MN	AM	P			E	QZ	WP	BEDDING MOTTLED DUE TO SHEARING. PYRITE BLEBS ARE 1-30MM IN SIZE AND ARE FOCUSED IN THE CENTER OF THE UNIT.
DHGH-14-32	247.63	248.02	0.39			CO	C5	D	K	CO		P	WL	25	E	QZ	CE	SEAM: C5 COAL WITH 1-5MM MUDSTONE LAMINATIONS THROUGHOUT. LAMINATIONS ARE IRREGULARLY SPACED. QUARTZ OCCURS AS CLEAT INFILL AND IN FRACTURE INFILL. CLEATS ARE POORLY DEVELOPED AND 1-2 MM IN SIZE. NOT SAMPLED DUE TO HIGH DENSITY CAUSED FROM HIGH MUD CONTENT.
DHGH-14-32	248.02	249.43	1.41			MS		D	G	MN	AM	G			M	QZ	WP	
DHGH-14-32	249.43	252.72	3.29		70	ST		B	G			G	WL	35				LAMINATIONS GRADE INTO BEDDING THEN BACK TO LAMINATIONS. LAMINATIONS ARE WAVY IN MIDDLE OF THE UNIT, COULD BE DUE TO SOFT SED DEFORMATION.
DHGH-14-32	252.72	254.12	1.40			MS		B	G		AM	G						
DHGH-14-32	254.12	255.69	1.57		70	ST		B	G	MN		G	WL	20	M	QZ	WP	
DHGH-14-32	255.69	256.6	0.91			SS	FF	A	G				WL	20				
DHGH-14-32	256.6	256.72	0.12			KL												
DHGH-14-32	256.72	267.77	11.05			SS	FF	A	G	MN		P	WL	35	E	QZ	FP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	267.77	268.1	0.33		60	ZM		D	G	MN		P	WB		E	QZ	VN	WAVY BEDDING COULD BE DUE TO SHEARING, CONTACT BETWEEN CARBONACEOUS MUDSTONE AND COALY MUDSTONE ARE IRREGULAR. QUARTZ OCCURS IN VEINLETS.
DHGH-14-32	268.1	268.91	0.81		80	XM		B	G	CM		P		30	E	QZ	LM	SANDSTONE BED IS TOWARD TE END OF THE UNIT. INTERRELATIONSHIP IS DIFFICULT TO SEE DUE TO BROKEN ZONE. COAL IS FOCUSED IN SHEARED AREAS AS LISTRIC SURFACES AND IN DISSEMINATED 1 X 1MM CLEATS. COAL LEMINATIONS ARE MORE PROMINENT IN THE BOTTOM OF THE UNIT.
DHGH-14-32	268.91	270.25	1.34			MS		B	G	MN	AM	G			A	QZ	WP	
DHGH-14-32	270.25	274.48	4.23		65	SS	FF	A	G			G	WL	10	E	QZ	FP	
DHGH-14-32	274.48	274.87	0.39		55	SS	FF	A	G				WB	5	A	QZ	WP	
DHGH-14-32	274.87	278.23	3.36			SS	MM	A	G	MN	AM	G			E	QZ	FP	MUDSTONE OCCURS AS CLASTS AND LAMINATIONS AND COAL OCCURS AS LENSES AND LAMINATIONS AS WELL.
DHGH-14-32	278.23	279.22	0.99			XS		E	G	MN	AM	G			E	QZ	WP	THIS UNIT IS DIFFERENTIATED FROM THE SANDSTONE ABOVE DUE TO A DARKER SHADE OF GREY AND MORE COAL LESNSEs, LAMINATIONS AND WISPS. COAL IS AROUND 10% OF THE ROCK AS OPPOSED TO 3% ABOVE.
DHGH-14-32	279.22	282.12	2.90			SS	FF	A	G	MN	AM	P			E	QZ	WP	MUDSTONE AND COAL OCCUR AS LENSES AND LAMINATIONS WITH ACCESSORY QUARTZ. APPROX 2% OF UNIT.
DHGH-14-32	282.12	282.32	0.20	140733		SS	FF	A	G	MN	AM				M	QZ	WP	ROOF: FINE GRAINED SANDSTONE WITH MINOR 1MM COAL LENSES AND 1 MM QUARTZ WISPS THROUGHOUT.
DHGH-14-32	282.32	282.62	0.30	140734		ZM		D	G	CM		P	WB	5	E	QZ	VN	SEAM ROOF A: COALY MUDSTONE WITH COMMON COAL LAMINATIONS AT THE BOTTOM OF THE UNIT. 1MM COAL LAMINATIONS ARE INTERBEDDED WITH 1MM MUDSTONE LAMINATIONS. LAMINATIONS ARE WAVY DUE TO DEFORMATION. BOTTOM OF THE UNIT CONTAINS A 1.5 CM PYRITE VEIN FOLLOWED BY A 1 CM QUARTZ VEIN. 1 X 1-3MM CLEATS ARE POORLY DEVLOPED AND FOCUSED AT THE MIDDLE AND BOTTOM OF THE UNIT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	282.62	282.93	0.31	140735		CO	C4	B	K	MN		P	WB	10	E	QZ	LM	SEAM: C4 COAL WITH MINOR MUDSTONE LAMINATIONS THROUGHOUT. 1-2MM MUDSTONE LAMINATIONS ARE INTERLAMINATED WITH 1-3MM COAL LAMINATIONS. 1X 1-3 MM CLEATS ARE MODERATELY-WELL DEVELOPED. QUARTZ IS ACCESSORY AND OCCURS IN LAMINATIONS AND IN WISPS.
DHGH-14-32	282.93	283.46	0.53	140736		CO	C4	B	K	MN		G	WB	10	E	QZ	LM	SEAM: SHEARED C4 COAL WITH MINOR MUDSTONE LAMINATION/D/ DISSEMINATED THROUGHOUT. THIS INTERVAL IS SIMILAR IN QUALITY TO THE ABOVE SEAM, HOWEVER IT IS SHEARED AND BEDDING HAS BEEN DEFORMED AND 50% OF CLEATS HAVE BEEN DESTROYED. QUARTZ OCCURS IN 1MM LAMINATIONS AND AS 1MM WISPS.
DHGH-14-32	283.46	283.9	0.44	140737		CO	SY	D	K	CO		P			E	QZ	WP	SEAM FLOOR: SHEARED STONY COAL WITH MUDSTONE DISSEMINATED THROUGHOUT. 1 X 1 MM MAKE UP 15% OF UNIT AND ARE BRIGHT. LAMINATIONS HAVE BEEN DESTROYED DUE TO SHEARING. QUARTZ IS ACCESSORY AND OCCURS AS 1MM WISPS AND IN ONE 5 MM VEIN.
DHGH-14-32	283.9	284.58	0.68	140738		XM		D	G	CM		P	WB		E	QZ	WP	FLOOR: CARBONACEOUS MUDSTONE WITH COMMON 1-2MM COAL LAMINATIONS TOWARD THE TOP OF THE UNIT. BEDDING IS WAVY DUE TO DEFORMATION FROM SHEARING. QUARTZ OCCURS AS 1MM WISPS AND 1MM STRINGERS ALONG LAMINATIONS. 85% MUD, 15% COAL.
DHGH-14-32	284.58	287.74	3.16		60	ST		B	G			P	WB		M	QZ	WP	
DHGH-14-32	287.74	287.94	0.20	140739	60	ST		B	G			P	WB		M	QZ	WP	FLOOR A: SILTSTONE AND SANDSTONE INTERLAMINATED. UNIT CONTAINS POORLY DEFINED WAVY BEDS WITH 2% 1MM QUARTZ WISPS. WISPS INCREASE IN FREQUENCY TOWARDS THE BOTTOM OF THE UNIT TO 15%.
DHGH-14-32	287.94	288.22	0.28	140740		CO	C4	D	K	MN		P		10	E	QZ	CE	SEAM ROOF A: C4 COAL WITH MINOR 1MM MUDSTONE LAMINATIONS THROUGHOUT. LAMINATIONS AND CLEATING IS WELL DEVELOPED. CLEATS ARE 1 X 1-4 MM AND APPROXIMATELY 20% ARE BRIGHT. QUARTZ AND PYRITE OCCUR IN 1MM CLEAT INFILL.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	288.22	288.55	0.33	140741		CO	C4	D	K	MN		P			E	QZ	CE	SEAM A: PARTIALLY SHEARED C4 COAL WITH MINOR (15%) 1 MM MUDSTONE LAMINATIONS. TOP OF UNIT CONTAINS 35% SHEARED MUDSTONE CLASTS WITH A MOSTLY COAL MATRIX. END OF UNIT IS SLIGHTLY MORE SHEARED AND CLEATING HAS BEEN 60% DESTROYED. QUARTZ MAKES UP 4% OF ROCK AND OCCURS AS WISPS AND IN CLEATS
DHGH-14-32	288.55	288.68	0.13			KL				CO								LOST CORE-COAL
DHGH-14-32	288.68	288.78	0.10	140742		CO	C4	D	K	MN		P			E	QZ	CE	SEAM FLOOR: SLIGHTLY SHEARED C4 COAL WITH MINOR 1MM MUDSTONE LAMINATIONS. CLEATS ARE 60% DESTROYED BY SHEARING. QUARTZ OCCURS IN 1MM CLEATS. SLIGHTLY MORE DULL THAN THE REST OF THE SEAM
DHGH-14-32	288.78	289.18	0.40	140743		ZM		D	G	CM		P			E	QZ	WP	FLOOR: COALY MUDSTONE WITH 30% COAL 1-2 MM LAMINATIONS FOCUSED TOWARD THE TOP OF THE UNIT. QUARTZ OCCURS IN LAMINATIONS AROUND COAL LENSES/LAMINAE, IN WISPS AND AS ONE 1 CM VEIN BOUNDING THE UNIT FROM THE UPPER COAL UNIT. SHEARING HAS CAUSED SOME MUDSTONE AND COAL LAMINATIONS TO PINCH OUT INTO LENSES.
DHGH-14-32	289.18	290.46	1.28			ST		B	G			G	WB		E	QZ	WP	MAYBE A LEAF FOSSIL ALONG MECHANICAL BREAK AT 291.07M
DHGH-14-32	290.46	297.45	6.99			SS	MM	A	G	MN	AM	G			E	QZ	VN	
DHGH-14-32	297.45	299.29	1.84			SS	FM	A	G	CM		G	DE		M	QZ	FP	MUDSTONE CLASTS OCCUR IN 10-30 CM POORLY DEFORMED BEDS. THESE OCCUR NEAR THE BOTTOM-MIDDLE OF THE UNIT AND AT THE TOP MIDDLE.
DHGH-14-32	299.29	301.52	2.23			SS	FM	A	G		AM	G						
DHGH-14-32	301.52	305.88	4.36		55	SS	VF	A	G			G	WL		E	QZ	WP	
DHGH-14-32	305.88	310.76	4.88			ST		B	G	MN	AM	G			M	QZ	WP	HAVE A 1-1.5 CM BAND OF SILSTONE CLASTS WITH QUARTZ INFILL.
DHGH-14-32	310.76	311.3	0.54			MS		D	G	MN	AM	G			M	QZ	WP	ONE 5 CM THICK BAND OF VERY FINE SANDSTONE AT THE TOP OF UNIT
DHGH-14-32	311.3	314.43	3.13		65	ST		B	G			G			M	QZ	WP	
DHGH-14-32	314.43	315.97	1.54			SS	FF	A	G	CM		G	DE		M	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	315.97	316.04	0.07			KL												
DHGH-14-32	316.04	320.95	4.91			SS	FF	A	G	CM								
DHGH-14-32	320.95	328.91	7.96		70	SS	VF	A	G			P	DE		E	QZ	LM	LAMINATIONS ARE MOTTLED DUE TO SOFT SEDIMENT DEFORMATION
DHGH-14-32	328.91	328.98	0.07	140744	70	SS	VF	A	G			P	DE		E	QZ	LM	ROOF A: INTERLAMINATED SANDSTONE AND SILTSTONE. LAMINATIONS ARE MOTTLED DUE TO SOFT SEDIMENT DEFORMATION. QUARTZ MAKES UP 3% OF THE ROCK AND IS FOCUSED IN BETWEEN SAND AND SILT LAMINATIONS.
DHGH-14-32	328.98	329.11	0.13	140744		XT		M	M	CM		P	DE		C	QZ	DS	ROOF B: CARBONACEOUS SILTSTONE WITH SANDSTONE LAMINATIONS MIXED WITH 30% 1MM GRAINS OF PYRITE AND 20% DISSEMINATED 1MM QUARTZ GRAINS, AND 10% 1-2MM COAL LAMINATIONS. ALL COMPONENTS OF THE ROCK ARE MOTTLED BY SOFT SEDIMENT DEFORMATION AND SHEARING.
DHGH-14-32	329.11	329.29	0.18	140745		CO	C4	B	K	CM		P			E	QZ	CE	SEAM ROOF: C4 COAL WITH APPROXIMATELY 15-20% MUDSTONE INTERMIXED. SHEARING MAKES JUDGING THE COAL GRADE AND THE AMOUNT OF MUDSTONE DIFFICULT AND WAS GIVEN A C4 VALUE PARTIALLY BASED ON GEOPHYSICAL DATA-GAMMA, HAD LAS OFFSET AT 81 CM. CLEATING IS POORLY DEVELOPED AND WAS LIKELY DESTROYED BY SHEARING. 1MM QUARTZ GRAINS ARE IN POORLY DEVELOPED CLEATS.
DHGH-14-32	329.29	329.43	0.14	140746		CO	SY	B	K	CM		P			E	QZ	CE	SEAM BREAK: STONY COAL WITH APPROXIMATELY 50% MUD LAMINATIONS. SHEARING ONCE AGAIN MAKES IT DIFFICULT TO TELL THE GRADE OF THE COAL AND MUCH OF THE UNIT APPEARS TO BE MUD. THE GAMMA MATCHES WHAT IS SEEN IN THE ROCKS AS WELL WITH A SLIGHT GAMMA HIGH IN THIS UNIT. COULD HAVE ALSO BEEN CALLED COALY MUDSTONE. QUARTZ OCCURS IN 1MM BY 1MM POORLY DEVELOPED CLEATS.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	329.43	329.64	0.21	140747		CO	C5	B	K	CM		P			E	QZ	CE	SEAM: C5 COAL WITH DISSEMINATED MUD INTERMIXED. SHEARING CAUSES IT TO BE DIFFICULT TO GIVE COAL A PROPER GRADE, AND IT APPEARS TO HAVE APPROXIMATELY 40% MUD. CLEATING IS 85% DESTROYED BY SHEARING AND COAL GRAINS ARE A 1MM OR LESS. QUARTZ OCCURS IN POORLY DEVELOPED CLEATS.
DHGH-14-32	329.64	329.87	0.23	140748		XM		B	G	MN		P			E	CL	FP	SEAM BREAK: SHEARED CARBONACEOUS SILTSTONE WITH COAL OCCURRING AS LISTRIC SURFACES ON SHEAR PLANES. CLAYS ARE ALSO PARTIALLY COATING SHEAR FACES IN THE UNIT. APPEARS TO BE CUTTING THROUGH THE COAL BED AS BOTH UNITS ON EITHER SIDE OF THE UNIT ARE SIMILAR AND A FAULT PLANE CAN BE MEASURED.
DHGH-14-32	329.87	330.13	0.26	140749		CO	C5	B	K	CO		P			E	QZ	CE	SEAM: C5 COAL WITH DISSEMINATED MUD INTERMIXED. SHEARING CAUSES IT TO BE DIFFICULT TO GIVE COAL A PROPER GRADE, AND IT APPEARS TO HAVE APPROXIMATELY 40% MUD. CLEATING IS 85% DESTROYED BY SHEARING AND COAL GRAINS ARE A 1MM OR LESS. QUARTZ OCCURS IN POORLY DEVELOPED CLEATS.
DHGH-14-32	330.13	330.32	0.19	140750		CO	C4	B	K	CO		P			E	QZ	CE	SEAM FLOOR A: C4 COAL WITH ONLY SLIGHTLY SHEARED AND LAMINATIONS ARE 1-3MM IN SIZE. MUDSTONE LAMINATIONS ARE ABOUT 10% OF THE UNIT. QUARTZ IS 5% OF THE UNIT AND OCCURS IN CLEAT INFILL. PYRITE MAKES UP 5% OF THE UNIT AND ALSO OCCURS IN CLEAT INFILL.
DHGH-14-32	330.32	330.52	0.20	140751		ST		B	G		AM	G			E	QZ	WP	FLOOR: MASSIVE SILTSTONE WITH 3% QUARTZ WISPS.
DHGH-14-32	330.52	331.29	0.77			ST		B	G		AM	G			E	QZ	WP	
DHGH-14-32	331.29	334.78	3.49			SS	FM	A	G	MN		G	DE		M	QZ	WP	TEXTURE PARTIALLY DESTROYED BY FAULT ZONE. SILTSTONE CLASTS ALSO OCCUR IN THE BOTTOM-MIDDLE OF THE UNIT IN HEALED FAULT GAUGE.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-32	334.78	336.77	1.99			XM		D	G	CM	AM	P			E	QZ	WP	LOW DENSITY AND LOW GAMMA DUE TO FAULT GAUGE AT TOP OF UNIT. COAL IS ALSO DISSEMINATED IN FAULT GAUGE AT TOP OF UNIT
DHGH-14-32	336.77	336.82	0.05			CO	SY	D	K	CM		P			E	QZ	CE	SEAM: 5 CM OF STONY COAL WITH MODERATELY DEVELOPED CLEATING. MUDSTONE LAMINATIONS ARE 15% OF UNIT. QUARTZ MAKE UP 15% OF UNIT AS 1 MM CLEAT INFILL.
DHGH-14-32	336.82	337.55	0.73			XM		D	G	CM		P			E	QZ	WP	
DHGH-14-32	337.55	338.66	1.11			ST		B	G		AM	G			E	QZ	WP	
DHGH-14-32	338.66	340.29	1.63			SS	FF	A	G	MN	AM	G			M	QZ	WP	
DHGH-14-32	340.29	342.44	2.15			SS	MM			MN								
DHGH-14-32	342.44	349.32	6.88			SS	FM	A	G	MN	AM	G			E	QZ	FP	
DHGH-14-32	349.32	358.71	9.39			SS	FF	A	G	MN			DE		M	QZ	WP	EOH
DHGH-14-32	358.71	359.63	0.92			ST		B	G									
DHGH-14-33	0	1.82	1.82			KL												
DHGH-14-33	1.82	1.97	0.15			GV	CL	M	B									
DHGH-14-33	1.97	4.47	2.50			KL												
DHGH-14-33	4.47	5.02	0.55			GV	CL	M	G									
DHGH-14-33	5.02	6.6	1.58			KL												
DHGH-14-33	6.6	7.17	0.57			GV	CL	M	G									
DHGH-14-33	7.17	9.85	2.68		70	ST		B	G	RA			PD	20	R	BI		
DHGH-14-33	9.85	10.11	0.26			KL												
DHGH-14-33	10.11	12.15	2.04		70	ST		B	G	TR		G	PD	20	R	PY	BN	
DHGH-14-33	12.15	12.37	0.22		80	SS	VM	A	G	TR								
DHGH-14-33	12.37	12.53	0.16			KL												
DHGH-14-33	12.53	15.17	2.64		80	SS	VM	A	G	TR		G	WD	20				
DHGH-14-33	15.17	15.91	0.74			ST		B	G	TR			PD	20				
DHGH-14-33	15.91	16.55	0.64			ST												
DHGH-14-33	16.55	21.8	5.25			ST		B	G	RA		G	PD	20				
DHGH-14-33	21.8	29.49	7.69		80	ST		B	G			G	PD	20	R	QZ	VN	
DHGH-14-33	29.49	31.06	1.57			ST		B	G	TR			PD	20				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments	
DHGH-14-33	31.06	31.14	0.08			KL													
DHGH-14-33	31.14	33.04	1.90			ST		B	G	TR			PD	20	R	QZ	VN		
DHGH-14-33	33.04	33.24	0.20	145642		ST		B	G	TR		I	PD	20	R	QZ	VN	ROOF: CLEAN ST W/TRACE COAL LENSES	
DHGH-14-33	33.24	33.44	0.20	145643		CO	C4		K	MN			PD	20	M	QZ	CE	SEAM ROOF: HIGHLY SHEARED AND BROKEN, DESTROYING PRIMARY COAL TEXTURES; MINOR LISTRIC SURFACES; MINOR INTERMIXED CRUSHED MS; MINOR QTZ CLEAT INFILL, GENERALLY BROKEN <1MM	
DHGH-14-33	33.44	34.04	0.60	145644		CO	C3		K	MN			PD	20	M	QZ	CE	SEAM: MINOR MS LAMINATIONS 1-3MM WIDE AND INTERMIXED MS IN SHEARED ZONES; VARIABLY WEAK TO STRONGLY SHEARED W/MINOR LISTRIC SURFACES SEEN; NO CLEATING REMAINING; SOME INTERMIXED DRILLING MUD IN LOWER INTERVAL WHERE COAL IS HIGHLY SHEARED AND CRUSHED; MINOR QTZ CLEAT INFILL <2MM AND BROKEN VEINS 5-15MM WIDE	
DHGH-14-33	34.04	34.24	0.20	145645		CO	C3		K	MN		I			R	QZ	CE	SEAM FLOOR: HIGHLY SHEARED W/MINOR INTERMIXED MS; PRIMARY TEXTURES DESTROYED BY SHEARING; COATED WITH MINOR DRILLING MUD; RARE BROKEN QTZ CLEAT INFILL SEEN; MOIST AND SOFT IN PART	
DHGH-14-33	34.24	34.31	0.07			ST		B	G						M	PY	VN	NO FLOOR SAMPLE; TOO SMALL OF AN INTERVAL; 5MM WIDE PY VN NEAR UPPER CT	
DHGH-14-33	34.31	35.76	1.45			KL													
DHGH-14-33	35.76	35.8	0.04			KL													
DHGH-14-33	35.8	36.49	0.69	145646		CO	C3		K	MN					R	QZ	CE	SEAM: CORE SLIPPED OUT OF CATCHER AND WAS PARTIALLY GROUND DURING DRILLING, REDUCING CORE DIAMETER; MINOR INTERMIXED MS; COAL IS SHEARED/CRUSHED DESTROYING PRIMARY TEXTURES; LOCALLY RARE POOR CLEATING 1MM X 1MM; RARE BROKEN QTZ CLEAT INFILL <1MM	
DHGH-14-33	36.49	36.69	0.20	145647		CO	C3		K	MN		I						SEAM FLOOR: MINOR INTERMIXED MS; SHEARED AND CRUSHED, DESTROYING PRIMARY TEXTURES; MINOR LISTRIC SURFACES	
DHGH-14-33	36.69	36.89	0.20	145648		MS		D	G	TR	AM							FLOOR: TRACE COAL NEAR TOP CONTACT; SOME INTERMIXED DRILLING MUD; OTHERWISE CLEAN MS	
DHGH-14-33	36.89	36.99	0.10			MS		D	G		AM	I							

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	36.99	39.63	2.64		85	SS	VF	A	G			G	PD	20	R	QZ	VN	
DHGH-14-33	39.63	41	1.37			MS		B	G	TR		G	PD	20	R	QZ	CE	
DHGH-14-33	41	41.48	0.48			KL				CO								PARTIALLY LOST COAL
DHGH-14-33	41.48	41.61	0.13			ZM		B	G	MN					M	PY	BL	
DHGH-14-33	41.61	41.81	0.20			KL												
DHGH-14-33	41.81	42.2	0.39			KL												
DHGH-14-33	42.2	42.75	0.55			MS		B	G	TR	AM	G						
DHGH-14-33	42.75	42.9	0.15			ZM		M	G	MN		G			E	QZ	VN	
DHGH-14-33	42.9	43.62	0.72			MS		B	G		AM	G			R	PY	BN	
DHGH-14-33	43.62	49.71	6.09		80	SS	FM	A	G	TR		G	WD	20	R	BI		
DHGH-14-33	49.71	49.81	0.10			ZS		D	K	MN					M	QZ	CE	
DHGH-14-33	49.81	50.16	0.35			KL				CO								LOST COAL: NOT SAMPLED
DHGH-14-33	50.16	50.34	0.18			ZM			K	MN	AM	G						
DHGH-14-33	50.34	55.09	4.75		65	SS	VM	A	G	TR		G	WD	15				
DHGH-14-33	55.09	56.16	1.07			ST		B	G				PD	20	R	QZ	VN	
DHGH-14-33	56.16	56.54	0.38			KL												
DHGH-14-33	56.54	56.94	0.40			ST		B	G			G	PD	20				
DHGH-14-33	56.94	57.23	0.29			MS		D	G	RA			PD	20	M	QZ	CE	
DHGH-14-33	57.23	57.27	0.04			KL												
DHGH-14-33	57.27	57.41	0.14			MS		D	G	RA		G			A	QZ	VN	13 CM WIDE VUGGY MASSIVE QTZ VEIN
DHGH-14-33	57.41	57.66	0.25			ST		B	G	RA		G						
DHGH-14-33	57.66	58.8	1.14		85	SS	FM	A	G		AM	G						
DHGH-14-33	58.8	61.46	2.66			ST		M	G			G	PD	15	R	PY	BL	
DHGH-14-33	61.46	66.26	4.80		80	SS	VM	A	G			G	PD	15				
DHGH-14-33	66.26	66.5	0.24			ST		B	G			P	PD	15				
DHGH-14-33	66.5	66.98	0.48			ZM			K	CM		G	WD	20	M	QZ	VN	
DHGH-14-33	66.98	67.33	0.35			ST		B	G	RA		G	PD	20	R	QZ	CE	
DHGH-14-33	67.33	67.57	0.24			CO	SY		K	CM		G	WD	20	R	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	79.27	82.48	3.21		70	MS		D	G	TR	AM	G						
DHGH-14-33	82.48	86.22	3.74			ST		B	G		AM	G			R	QZ	WP	
DHGH-14-33	86.22	88.57	2.35		75	ST		A	G			G	PD	20				
DHGH-14-33	88.57	90.42	1.85			ST		B	G		AM	G						
DHGH-14-33	90.42	103.95	13.53		60	ST		B	G			G	PD	20	R	QZ	VN	
DHGH-14-33	103.95	107.95	4.00			ST		B	G				PD	15				
DHGH-14-33	107.95	108.17	0.22	GT-14-48		ST		B	G				PD	15				GEOTECH SAMPLE
DHGH-14-33	108.17	108.26	0.09			ST		B	G			G	PD	15				
DHGH-14-33	108.26	108.6	0.34			XT		B	G	RA		G	PD	15	R	QZ	CE	
DHGH-14-33	108.6	108.76	0.16			ZM		D	G	MN			PD	10	M	QZ	CE	
DHGH-14-33	108.76	108.96	0.20	145654		ZM		D	G	MN		G	PD	10	M	QZ	CE	ROOF: MINOR COAL BANDS AND LENSES 1-20MM WIDE W/MINOR QTZ CLEAT INFILL
DHGH-14-33	108.96	109.16	0.20	145655		CO	C2			K	RA		PD	15	R	QZ	CE	SEAM ROOF: RARE INTERMIXED MS NEAR TOP CT; WELL CLEATED THROUGHOUT 2MM X 3MM UP TO 4MM X 4MM; CLEAT FACES 80DEG; COMMON CONCOIDAL FRACTURING SEEN ON CLEAT FACES; RARE QTZ CLEAT INFILL <0.5MM
DHGH-14-33	109.16	109.71	0.55	145656		CO	C1			K	RA		PD	10	R	QZ	CE	SEAM: RARE MS LAMINATIONS 1-3MM WIDE THROUGHOUT; WELL CLEATED FROM 2MM X 3MM UP TO 8MM X 7MM; BRIGHT CLEAT FACES W/COMMON CONCOIDAL FRACTURE; RARE QTZ CLEAT INFILL <0.5MM
DHGH-14-33	109.71	110.38	0.67	145657		CO	C3			K	MN				M	QZ	CE	SEAM: MINOR ST BANDS 2-4MM; STRONGLY SHEARED DESTROYING ALL PRIMARY TEXTURES; COMMON POLISHED LISTRIC SURFACES THROUGHOUT; RARE QTZ VEINS UP TO 5MM WIDE ASSOC W/ST BANDS AND MINOR BROKEN/SHEARED QTZ CLEAT INFILL
DHGH-14-33	110.38	111.08	0.70	145658		CO	C3			K					R	QZ	GN	SEAM: STRONGLY SHEARED DESTROYING PRIMARY COAL TEXTURES; COAL DULLED FROM BEING CRUSHED/POWDERED; COMMON POLISHED LISTRIC SURFACES THROUGHOUT; TRACE QTZ GRANULES
DHGH-14-33	111.08	111.28	0.20	145659		CO	C4			K	MN	G						SEAM FLOOR: MINOR INTERMIXED MS NEAR GRADATIONAL BOT CT; STRONGLY SHEARED DESTROYING PRIMARY TEXTURES

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	111.28	111.45	0.17	145660		XM		B	G	RA		G						FLOOR: RARE COAL AT TOP OF UNIT NEAR GRADATIONAL TOP CT; CLEAN XM; SHEARED W/COMMON LISTRIC SURFACES; MOIST AND SOFT IN PART
DHGH-14-33	111.45	111.92	0.47			ST		B	G	RA	AM	G			R	QZ	CE	
DHGH-14-33	111.92	113.36	1.44		80	SS	VV	A	G	TR		G	PD	25	R	QZ	VN	
DHGH-14-33	113.36	113.83	0.47			ST		B	G	TR			PD	25				
DHGH-14-33	113.83	114.03	0.20	145661		ST		B	G	TR		P	PD	25				ROOF: CLEAN ST W/TRACE COAL WISPS
DHGH-14-33	114.03	114.33	0.30	145662		CO	C3		K	MN		G	PD	20	M	QZ	CE	SEAM: MINOR MS LAMINATIONS 3-5MM WIDE; INCREASING IN ABUNDANCE TOWARDS TOP AND BOT CT'S; COAL BANDS ARE LOCALLY MOD TO DOMINANTLY WELL CLEATED VARYING FORM 2MM FACE X 4MM BUTT UP TO 10MM FACE X 12MM BUTTS; COMMON CONCOIDAL FRACTURE ON CLEAT FACES; MINOR QTZ CLEAT INFILL THROUGHOUT <1MM
DHGH-14-33	114.33	114.55	0.22	145663		MS		B	G	RA		G	PD		R	QZ	CE	FLOOR: XM WITH MINOR COAL WISPS AND ASSOCIATED QTZ CLEAT INFILL
DHGH-14-33	114.55	116.93	2.38			ST		E	G			G	PD	25				
DHGH-14-33	116.93	117.23	0.30			CO	SY		K	CM		G	PD	25	E	QZ	CE	NOT SAMPLED: STONY COAL; COMMON SILTSTONE BANDS 2-12MM WIDE; 5% ACCESSORY QTZ VEINS AND CLEAT INFILL; COAL BANDS 5-10MM ARE WELL CLEATED UP TO A MAX OF 3MM X 5MM; LOWER CONTACT GRADATIONAL OVER 20-30CM
DHGH-14-33	117.23	117.9	0.67			ST		E	G	RA		G	PD	30	R	QZ	CE	
DHGH-14-33	117.9	125.5	7.60		75	SS	VM	A	G				PD	20	R	QZ	VN	
DHGH-14-33	125.5	135.44	9.94		80	SS	VM	A	G			G	WD	20	R	QZ	VN	
DHGH-14-33	135.44	135.56	0.12			ST		B	G				PD	25	R	QZ	WP	
DHGH-14-33	135.56	135.76	0.20	145664		ST		B	G	TR		G	PD	25	R	QZ	WP	ROOF: CLEAN ST W/TRACE COAL WISPS NEAR BOT CT; BOT CT GRADATIONAL OVER SHORT (~5CM) INTERVAL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	137.11	137.31	0.20	145670		ZM			K	MN		G	WD	20	E	PY	VN	ROOF A: ZM PARTING; RARE COAL WISPS IN TOP HALF OF INTERVAL; COMMON COAL BANDS 2-20MM WIDE IN BOTTOM HALF OF INTERVAL NEAR GRADATIONAL LOWER CT; COAL BANDS ARE WELL CLEATED 3MM X 3MM; TWO 5-8MM WIDE PY VEINS ON BOT CT; MINOR QTZ CLEAT INFILL ASSOC W/COAL BANDS
DHGH-14-33	137.31	137.51	0.20	145671		CO	C2		K	MN		G	WD	40	M	QZ	CE	SEAM ROOF: MINOR MS LAMINATIONS/BANDS IN BOT OF INTERVAL 3MM-50MM; WELL CLEATED 2MM X 4MM UP TO 5MM X 8MM; COMMON CONCOIDAL FRACTURE ON BRIGHT CLEAT FACES; MINOR QTZ CLEAT INFILL <1MM; MINOR LISTRIC (POLISHED AND SLICKED) SURFACES
DHGH-14-33	137.51	138.11	0.60	145672		CO	C4		K	CM					M	QZ	CE	SEAM: COMMON MS AND ST BANDS AND LAMINATIONS THROUGHOUT (5MM -80MM); LOCAL COAL BANDS ARE VARIABLY POOR TO WELL CLEATED VARYING FROM 1MM X 1MM UP TO LOCALLY 4MM X 5MM; MINOR QTZ CLEAT INFILL <1MM; MODERATELY SHEARED W/COMMON SLICKED/POLISHED LISTRIC SURFACES
DHGH-14-33	138.11	138.7	0.59	145673		CO	C4		K	CM		G	PD		M	QZ	CE	SEAM: COMMON MS AND ST ANDS THROUGHOUT (2-30MM); POORLY CLEATED 1MM X 1MM; MOST PRIMARY COAL TEXTURES DESTROYED BY SHEARING; VARIABLY WEAK TO STRONGLY SHEARED; LISTRIC SURFACES; MINOR QTZ BROKEN CLEAT INFILL AND VEINLETS <1MM; GRADES INTO STONY COAL
DHGH-14-33	138.7	138.99	0.29	145674		CO	SY		K	CM		G	PD	20	M	QZ	CE	SEAM FLOOR A: COMMON MS BANDS UP TO 20MM WIDE; COAL BANDS ARE VARIABLY POOR TO MOD CLEATED UP TO 1MM X 2MM CLEATS; MINOR QTZ CLEAT INFILL AND VEINS 1-4MM WIDE; RARE PY BLEBS; WEAKLY SHEARED W/POLISHED LISTRIC SURFACES
DHGH-14-33	138.99	139.2	0.21	145675		ZM		B	G	MN		G	PD	20	R	QZ	CE	FLOOR: MINOR COAL BANDS AND LENSES GRADING OUT W/DEPTH 1-10MM WIDE; RARE QTZ CLEAT INFILL ASSOC W/COAL LENSES
DHGH-14-33	139.2	141.15	1.95			ST		B	G	TR		G	PD	20	R	QZ	WP	
DHGH-14-33	141.15	141.7	0.55			MS		B	G	RA	AM	P						

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	141.7	141.9	0.20	145676		MS		B	G	TR	AM	P						ROOF: TRACE COAL LENSES/CLASTS
DHGH-14-33	141.9	142.1	0.20	145677		CO	C2		K	MN			PD	20	M	QZ	CE	SEAM ROOF A: MINOR MS BANDS UP TO 30MM WIDE; MOD TO LOCALLY WELL CLEATED AVG 1MM X 3MM, RARELY UP TO 4MM X 3MM; COMMON CONCOIDAL FRACTURE ON CLEAT FACES; MINOR QTZ CLEAT INFILL 1-3MM AND RARE PY CLEAT INFILL <1MM
DHGH-14-33	142.1	142.37	0.27	145678		CO	C2		K	MN			PD	20	M	QZ	CE	SEAM: MINOR MS LAMINATIONS AND 15MM WIDE ST BAND IN MIDDLE OF INTERVAL; MOD TO LOCALLY WELL CLEATED COAL UP TO 3MM X 3MM; MINOR QTZ CLEAT INFILL <1MM; IRREGULAR 1-5MM WIDE QTZ VEIN ASSOC W/ST BAND IN CENTRE OF INTERVAL; LOCALLY WELL SHEARED AT BOTTOM OF INTERVAL W/COMMON LISTRIC SURFACES
DHGH-14-33	142.37	142.57	0.20	145679		CO	C2		K	MN		G	PD	15	M	QZ	CE	SEAM FLOOR A: MINOR MS BANDS 2-4M WIDE THROUGHOUT; WELL CLEATED AVG 2MM X 3MM CLEATS W/COMMON CONCOIDAL FRACTURE; MINOR QTZ CLEAT INFILL 1-2M WIDE AND RARE PY CLEAT INFILL <1MM
DHGH-14-33	142.57	142.75	0.18	145680		MS		B	G	RA		G	PD	15	R	QZ	WP	FLOOR: RARE COAL WISPS AND ASSOCIATED QTZ WISPS
DHGH-14-33	142.75	144.03	1.28		60	SS	VF	A	G			I	PD	15				
DHGH-14-33	144.03	150.31	6.28			SS	FC	A	G	RA		G	PD	20	R	QZ	VN	
DHGH-14-33	150.31	154.94	4.63		70	SS	VM	A	G	RA		G	PD	20	R	QZ	WP	
DHGH-14-33	154.94	156.57	1.63			ST		B	G		AM							BROKEN AND FAULTED AT BASE OF INTERVAL, AFFECTING COMPENSATED DENSITY; NO SIGNS OF COAL IN CORE
DHGH-14-33	156.57	156.86	0.29			KL												
DHGH-14-33	156.86	160.76	3.90			ST		B	G	RA	AM	G						
DHGH-14-33	160.76	161.37	0.61			MS		B	G		AM	G						
DHGH-14-33	161.37	164.78	3.41		60	ST		B	G			G	PD	25	R	QZ	WP	
DHGH-14-33	164.78	165.17	0.39			SS	FM	A	G		AM	I						
DHGH-14-33	165.17	181.36	16.19			SS	VF	A	G	TR			PD	25	R	QZ	WP	
DHGH-14-33	181.36	181.56	0.20	145681		SS	VF	A	G	TR	AM	P		25	R	QZ	WP	ROOF A: CLEAN SS; TRACE COAL AT BOT CT AND 30MM WIDE PY VEIN RIGHT ON BOT COT W/COAL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	181.56	181.76	0.20	145682		CO	C3		K	MN			PD	20	M	QZ	CE	SEAM ROOF: OVERALL C3, LOCALLY C2; MINOR MS LENSES 1-4MM WIDE; MOD TO WELL CLEATED FROM 2MM X 2MM UP TO 5MM FACE X 8MM BUTT; CONCOIDAL FRACTURE ON COMMONLY BRIGHT CLEAT FACES; MNOR QTZ CLEAT INFILL 0.5-1MM WIDE
DHGH-14-33	181.76	182.19	0.43	145683		CO	C3		K	MN		G	PD	20	M	QZ	CE	SEAM A: OVERALL C3, LOCALLY C2 AND UP TO C1; MINOR MS LENSES AND LAMINATIONS 1-5MM WIDE; MOD TO WELL CLEATED RANGING FROM 1MM X 2MM UP TO 5MM X 10MM W/COMMON CONCOIDAL FRACTURE; WEAKLY SHEARED BREAKING UP CLEATS AND QTZ INFILL; MINOR QTZ CLEAT INFILL <1MM; RARE PY VEINLETS
DHGH-14-33	182.19	182.65	0.46	145684		ZT		B	G	MN		G	PD		M	QZ	CE	PARTING: MINOR COAL BANDS 3-5MM WIDE, CONCENTRATED AT TOP AND BOTTOM OF INTERVAL NEAR GRADATIONAL CT'S W/ASSOCIATED MINOR QTZ CLEAT INFILL <1MM;
DHGH-14-33	182.65	183.11	0.46	145685		CO	C4		K	MN			PD	25	M	QZ	CE	SEAM A: MINOR MS AND RARE ST LENSES 2-8MM WIDE; WEAKLY SHEARED INTERMIXING MS AND BREAKING CLEATS; GENERALLY MOD CLEATED 2MM X 3MM; RARELY LOCALLY WELL CLEATED 3MM X 5MM W/CONCOIDAL FRACURING ON CLEAT FACES; MINOR QTZ CLEAT INFILL 0.5-2MM WIDE, BROKEN FROM WEAK DEFORMATION; RARE PY BLEBS <3MM AND CLEAT INFILL <1MM
DHGH-14-33	183.11	183.31	0.20	145686		CO	C4		K	RA		P	PD	25	M	QZ	CE	SEAM FLOOR A: RARE MS LENSES 1-4MM WIDE; POORLY CLEATED 1MM X 3MM; RARE CONCOIDAL FRACTURE IN LOCAL BRIGHT BANDS; MINOR QTZ CLEAT INFILL <0.5MM; RARE PY WISPS ON BOT CONTACT
DHGH-14-33	183.31	183.51	0.20	145687		ST		B	G	MN			PD	25	R	QZ	WP	FLOOR: MINOR COAL LENSES AND LAMINATIONS <2MM WIDE; RARE QTZ CLEAT INFILL AND WISPS <1MM ASSOC W/COAL LENSES
DHGH-14-33	183.51	183.7	0.19			ST		B	G	TR								
DHGH-14-33	183.7	183.9	0.20	145688		ST		B	G	TR		G	PD	30				ROOF: CLEAN ST W/TRACE COAL LENSES AT BOT OF INTERVAL <1MM; LOWER CT GRADATIONAL OVER SHORT (~2CM) INTERVAL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	183.9	184.1	0.20	145689		CO	C4		K	MN			WD	30	M	QZ	CE	SEAM ROOF: MINOR ST BANDS AND LENSES 3MM UP TO 12MM WIDE; MODERATELY CLEATED 3MM FACE X 4MM BUTTS; RARE CONCOIDAL FRACTURE; CLEATS PARTLY BROKEN UP BY WEAK BRITTLE DEFORMATION; MINOR QTZ CLEAT INFILL <1MM AND VEINLETS 1MM WIDE ASSOC W/ST BANDS; DISCREET SHEAR AT BOT OF INTERVAL
DHGH-14-33	184.1	184.78	0.68	145690		CO	C3		K	MN			PD	30	M	QZ	CE	SEAM A: MINOR ST BANDS FROM 4-10MM WIDE; RARE ST LAMINATIONS<2MM; MODERATELY CLEATED 2MM X 4MM; OCCASIONAL CONCOIDAL FRACTURE; LOCALLY POORLY CLEATED (1MM X 1MM) WHERE COAL IS WEAKLY BROKEN/DEFORMED FROM SHEARING; DISCREET SHEAR AT THE TOP OF THE INTERVAL AND RARE POLISHED LISTRIC SURFACES; MINOR QTZ CLEAT INFILL <1MM; RARE PY BLEBS UP TO 20MM DIAM
DHGH-14-33	184.78	184.98	0.20	145691		CO	C3		K	MN		G	PD	30	M	QZ	CE	SEAM FLOOR: MINOR ST BANDS AND LENSES THROUGHOUT FROM 4MM TO 20MM WIDE; ST PARTLY INTERMIXED; DOMINANTLY POOR TO LOCALLY MODERATE CLEATING RANGING FROM 1MM X 1MM POORLY CLEATED TO 2MM FACE X 4MM BUTT MOD CLEATED; V WEAKLY SHEARED W/MINOR LISTRIC SLICKED AND POLISHED SURFACES; CLEATS ARE PARTIALLY BROKEN UP FROM BRITTLE DEFORMATION; MINOR QTZ CLEAT INFILL <0.5MM
DHGH-14-33	184.98	185.16	0.18	145692		ZT		B	G	AB		G			E	QZ	CE	FLOOR: ST INTERBANDED W/ABUNDANT (~55%) COAL BANDS 40 - 60MM WIDE; COAL BANDS ARE PARTLY BROKEN/IRREGULAR, WELL CLEATED AND BRIGHT AVERAGING 3MM X 3MM UP TO A MAX OF 10MM X 10MM; COMMON CONCOIDAL FRACTURE ON CLEAT FACES; ACCESSORY (4%) QTZ CLEAT INFILL 1-3MM WIDE AND MINOR VEINLETS <0.5MM WIDE
DHGH-14-33	185.16	186.11	0.95			ST		B	G	RA		G	PD	20	R	PY	BL	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	186.11	186.53	0.42			CO	SY		K	CM		G	PD	25	M	QZ	CE	NOT SAMPLED: STONY, LOW QUALITY COAL; COMMON MS AND ST BANDS UP TO 12MM WIDE, SOME BROKEN, AND INTERMIXED ST; COAL IS VARIABLY CLEATED UP TO LOCALLY WELL CLEATED IN BANDS FROM 1MM X 1MM UP TO 3MM X 4MM; MINOR QTZ CLEAT INFILL UP TO 2MM, OFTEN BROKEN; RARE PY CLEAT INFILL <1MM; RARE SLICKED/POLISHED LISTRIC SURFACES SEEN
DHGH-14-33	186.53	187.06	0.53			ZM		B	G	MN		G	WD	30	M	QZ	CE	
DHGH-14-33	187.06	187.94	0.88		80	ST		B	G			G			R	QZ	VN	
DHGH-14-33	187.94	191.07	3.13			SS	MC	E	G	MN		G	WD	35	M	QZ	VN	
DHGH-14-33	191.07	198.49	7.42		70	SS	VM	A	G			G	BW	15	M	QZ	VN	
DHGH-14-33	198.49	199.44	0.95			MS		B	G			G	WD	5	R	QZ	VN	
DHGH-14-33	199.44	199.64	0.20	145693		MS		B	G			G	WD	5	R	QZ	VN	Roof. Minor CO bands at basal contact <3mm.
DHGH-14-33	199.64	199.84	0.20	145694		CO	C2		K	MN		G	WD	5	M	PY	BL	Seam roof. Single ST band <8mm. Moderately well developed cleating. Cleats <3mm face x <15mm butt. Face cleats 80deg. Minor conchoidal fracturing. Minor PY in blebs <20mm & cleats <1mm. Rare QZ wisps in cleats <.5mm.
DHGH-14-33	199.84	200.47	0.63	145695		CO	C2		K	MN		I	WD	30	M	QZ	CE	Seam. Minor MS bands 5-20mm. Moderate to well developed cleating. Cleats <3x4mm. Minor conchoidal fracturing. Common listric surfaces. Minor QZ in cleats <1mm.
DHGH-14-33	200.47	200.87	0.40	145696		CO	C1		K	MN		G	WD	15	R	QZ	CE	Seam. Single ST band 2mm. Well developed cleating. Cleats <5x6mm. Minor conchoidal fracturing. Rare QZ wisps in cleats <0.5mm.
DHGH-14-33	200.87	201.48	0.61	145697		CO	C2		K	MN		G	PD	50				Seam. Minor ST & MS clasts & lenses <2mm. Poorly developed cleating. Cleats <1x1mm. Section sheared and original textures lost. Several listric faces.
DHGH-14-33	201.48	201.68	0.20	145698		CO	C4		K			G	PD	30	M	QZ	VN	Seam floor. No cleating development. Highly sheared; common listric faces. Minor QZ veins <4mm.
DHGH-14-33	201.68	202.03	0.35	145699		ZT		B	G	MN		G	PD	5	M	QZ	VN	Floor. Common CO bands & lenses <70mm. Mnor PY in bands & cleats <2mm.
DHGH-14-33	202.03	202.44	0.41			ZT		B	G	MN		G	PD	5	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	202.44	203.43	0.99			ST		E	G			G	PD	10	R	QZ	WP	
DHGH-14-33	203.43	204.65	1.22		50	SS	VV	A	G			G	WD	10				
DHGH-14-33	204.65	208.98	4.33			SS	FM	A	G	MN		G	PD	25				
DHGH-14-33	208.98	217.24	8.26		70	SS	VM	E	G	ST		G	BW	20				
DHGH-14-33	217.24	219.15	1.91			SS	VF	E	G			G	PD	10				
DHGH-14-33	219.15	225.7	6.55		60	SS	VF	E	G			G	DE	10	M	QZ	VN	
DHGH-14-33	225.7	246.29	20.59			ST		B	G		AM				M	PY	BL	
DHGH-14-33	246.29	246.67	0.38			SS	VV	E	G				PD	50				
DHGH-14-33	246.67	246.88	0.21	145700		SS	VV	E	G				PD	50	M	PY	CB	Roof. Clean. Minor disseminated PY at basal contact.
DHGH-14-33	246.88	247.09	0.21	145701		CO	C1					G	PD	45	M	QZ	VN	Seam roof. Well developed cleating; <10x10mm. Butt cleats 65deg. Rare conchoidal fracturing. Minor QZ in veins <20mm and cleats <2mm.
DHGH-14-33	247.09	247.51	0.42	145702		CO	SY		K	MN			PD	10	M	QZ	VN	Stony coal. Minor ST laminations <20mm. Locally well developed cleating; <5x5mm. Minor QZ in veins <4mm. Minor PY blebs <2mm & cleats <0.5mm.
DHGH-14-33	247.51	247.64	0.13			KL				CO								
DHGH-14-33	247.64	247.92	0.28	145703		CO	SY		K	MN		P	PD	15	M	QZ	VN	Seam. Minor ST bands <40mm. Locally moderately developed cleating. Cleats <1mm face x <4mm butt. Original textures destroyed from shearing.
DHGH-14-33	247.92	248.7	0.78	145704		CO	C2		K	MN			PD	15	M	QZ	CE	Seam. Minor ST bands <2-60mm. Well developed cleating. Cleats <4mm face x <8mm butt. Rare conchoidal fracturing. Some listric surfaces. Minor QZ in cleats <1mm.
DHGH-14-33	248.7	248.77	0.07			KL				CO								
DHGH-14-33	248.77	248.87	0.10	145705		CO	C2		K	MN		G			M	QZ	VN	Seam. Minor MS lamintations <3mm. Locally well developed cleating. Cleats <4mm face x <6mm butt. Common conchoidal fracutring. Minor QZ in veins <5mm.
DHGH-14-33	248.87	249.07	0.20	145706		ZT		B	G	MN			PD	70	M	QZ	CE	Floor (parting). Minor CO at contact & in laminations <2mm. Minor QZ <1mm in cleats.
DHGH-14-33	249.07	249.74	0.67			ZT		B	G	MN			PD	70	M	QZ	WP	
DHGH-14-33	249.74	249.91	0.17	145707		ZT		B	G	CM		O	PD	70	M	PY	BN	Roof (parting). Common CO laminations <5mm. Minor QZ <4mm in veins. Minor PY <3mm blebs.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	249.91	250.64	0.73	145708		CO	C1		K	MN		P	PD	60				Seam. Minor MS laminations <3mm. Well developed cleating. Cleats <6mm face x <7mm butt. Minor conchoidal fracturing.
DHGH-14-33	250.64	250.85	0.21	145709		ST		B	G	MN		G	PD	35	M	QZ	VN	Parting. Minor CO band at upper contact <20mm.
DHGH-14-33	250.85	251.24	0.39			ST						G						Parting
DHGH-14-33	251.24	251.7	0.46	145710		CO	C1		K	MN		G	PD	10	M	QZ	VN	Seam. Minor ST bands <20mm. Well developed cleating. Cleats <2mm face x <5mm butt. Common conchoidal fracturing. Some listric faces. Minor QZ veins <1mm.
DHGH-14-33	251.7	251.89	0.19	145711		CO	C4		K	MN		G	PD	20	M	QZ	VN	Seam floor. Minor ST clasts <10mm at basal contact. No cleating development. Common sheared faces. Minor QZ veins <3mm. Minor PY blebs <1mm.
DHGH-14-33	251.89	252.1	0.21	145712		SS	VM	B	G	MN		G	WD	45	C	QZ	VN	Floor. Minor CO laminations <3mm. Common QZ veins <5mm.
DHGH-14-33	252.1	255.4	3.30		55	SS	VM	A	G				WD	45	C	QZ	VN	
DHGH-14-33	255.4	255.63	0.23	145713	55	SS	VM	A	G	RA		G	WD	45	C	QZ	VN	Roof. Minor CO clasts in highly sheared & QZ veined SS & ST.
DHGH-14-33	255.63	255.83	0.20	145714		CO	C4		K	CM		G	PD	55	C	QZ	VN	Seam roof. Shear zone. Common ST clasts 5-20mm. Common QZ veining.
DHGH-14-33	255.83	256.36	0.53	145715		CO	C4		K	MN		G	PD	55	C	QZ	VN	Seam. Minor ST clasts & lenses <20cm. No cleating. Shear zone. Several listric surfaces. Common QZ veining <
DHGH-14-33	256.36	256.73	0.37	145716		CO	C3		K	MN		G	PD	50	E	QZ	VN	Seam. Minor ST lenses 3-10mm. Some remnant cleats 1x1mm. Shear zone. Several listric faces. Accessory QZ veining <4mm.
DHGH-14-33	256.73	257.37	0.64	145717		CO	C3		K	MN		G	PD	70	E	QZ	VN	Seam. Minor ST clasts <5mm. Original textures destroyed by shearing. Dominated by listric surfaces. Accessory QZ veining <4mm. Minor PY blebs <20mm.
DHGH-14-33	257.37	258.07	0.70	145718		CO	C4		K	MN		O	PD	55	E	QZ	VN	Seam. Minor ST lenses <7mm & clasts <40mm w disseminated PY xtals <4mm. Original textures destroyed by shearing. Accessory QZ veins <2mm.
DHGH-14-33	258.07	258.79	0.72	145719		CO	C2		K	MN		G	PD	55	M	QZ	CE	Seam. Minor MS laminations <2mm. Moderately developed cleating. Cleats <2mm face x <3mm butt. Common listric faces. Minor QZ <1mm in cleats.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	258.79	259.38	0.59	145720		CO	C2			CM		G	PD	30	M	QZ	VN	Seam. Minor (10%) ST & MS bands <30mm, concentrated at top. Locally well developed cleating. Cleats <3mm face x <5mm butt. Some listric surfaces. Minor QZ in veins <20mm & cleats <0.5mm.
DHGH-14-33	259.38	259.59	0.21	145721	50	CO	C2		K			G						Parting. Interbanded ST (<30mm) & CO (<45mm). Well developed cleating in CO, <2mm face x <4mm butt. Common conchoidal fracturing. Minor QZ in cleating <1mm.
DHGH-14-33	259.59	260.59	1.00	145722		CO	C2		K	MN		G	PD	25	M	QZ	VN	Seam. Minor ST lenses <25mm. Poorly developed cleating, <2x2mm. Common listric faces. Minor QZ in veins <3mm assoc. w ST lenses.
DHGH-14-33	260.59	260.9	0.31	145723		CO	C2		K	MN		G	PD	40	M	QZ	VN	Seam. Minor ST bands <20mm at top & MS bands <35mm at base. Moderately developed cleating, <4x4mm. Some listric surfaces. Minor QZ veins <2mm assoc. w ST bands.
DHGH-14-33	260.9	261.12	0.22	145724		CO	C3		K	MN		G	PD	25	R	QZ	CE	Seam floor. Minor ST bands <35mm. Locally moderately well developed cleating. Cleats <2mm face x <4mm butt. Some listric faces. Rare QZ in cleats <0.5mm.
DHGH-14-33	261.12	261.32	0.20	145725		ZT			K	MN		G	PD	20	M	QZ	CE	Floor. Minor CO bands throughout.
DHGH-14-33	261.32	261.64	0.32			ZT			K	MN		G	PD	20	M	QZ	CE	
DHGH-14-33	261.64	264.47	2.83			ST		B	G			P	PD	15	M	PY	BN	
DHGH-14-33	264.47	269.69	5.22			SS	VF	A	G	MN		G	WD	20	M	QZ	VN	
DHGH-14-33	269.69	282.61	12.92		70	SS	VF	E	G	MN		G	BW	10	R	QZ	VN	
DHGH-14-33	282.61	287.22	4.61		85	ST		B	G				WD	10				
DHGH-14-33	287.22	287.45	0.23	145726	85	ST		B	G			I	WD	10				Roof. Some CO in sample; didn't break on contact. Clean ST/SS
DHGH-14-33	287.45	287.65	0.20	145727		CO	C3		K	MN		G	PD	10	M	QZ	CE	Seam roof. Minor (10%) ST lenses <4mm & MS laminations <11mm. Locally well developed cleating. Cleats <5mm face x <10mm butt. Face cleats 80deg. Some conchoidal fracturing. Minor QZ in cleats <2mm. Minor PY in cleats <1mm.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-33	287.65	288.02	0.37	145728		CO	C2		K	MN		G	PD	10	M	QZ	CE	Seam. Minor (10%) ST lenses <4mm & MS laminations <20mm. Moderately well developed cleating. Cleats <4mm face x <6mm butt. Face cleats 85deg. Minor conchoidal fracturing. Minor QZ in cleats <1mm.
DHGH-14-33	288.02	288.13	0.11	145729		ST		B	G	MN		G	PD	5				Parting. Minor CO laminations <1mm.
DHGH-14-33	288.13	288.28	0.15	145730		CO	C3		K	MN		G	PD	8	M	QZ	CE	Seam floor. Minor ST & MS laminations <10mm. Locally well developed cleating. Cleats <3mm face x <5mm butt. Face cleats 80deg. Locally commo conchoidal fracturing. Minor QZ in cleats <3mm.
DHGH-14-33	288.28	288.5	0.22	145731		ZT			K	MN		G	PD	10	M	PY	BN	Floor. Minor CO laminations throughout <1mm. Minor PY dissminated <0.5mm & bands <1mm.
DHGH-14-33	288.5	290.54	2.04			ST												
DHGH-14-33	290.54	291.19	0.65			CO	SY		K	CO			PD	13	M	QZ	VN	Stony coal. Not sampled.
DHGH-14-33	291.19	291.39	0.20	145732		CO	SY		K	CO		G	PD	13	M	QZ	VN	Roof. Stony coal. CO laminations <5mm. 20mm QZ vein.
DHGH-14-33	291.39	291.56	0.17	145733		CO	C3		K	MN		G	PD	13	M	QZ	VN	Seam roof. Minor ST bands <10mm. Moderately well developed cleating. Cleats <3mm face x <4mm butt. Minor QZ veining <7mm.
DHGH-14-33	291.56	291.92	0.36	145734		CO	C1		K	MN		G	PD	20	M	QZ	CE	Seam. Minor MS lenses <2mm. Well developed cleating. Cleats <3mm face x <10mm butt. Common conchoidal fracturing. QZ veins <2mm & in cleats <1mm.
DHGH-14-33	291.92	292.12	0.20	145735		CO	SY		K	MN		G	PD	20	M	QZ	CE	Floor. Stony Coal. Minor ST laminations <20mm. Minor QZ in cleating <1mm.
DHGH-14-33	292.12	295.49	3.37			ZT				MN		G	PD	15	M	QZ	VN	
DHGH-14-33	295.49	296.25	0.76			ST		B	G			G	PD	15				
DHGH-14-33	296.25	303.12	6.87			SS	VF	E	G			G	WD	15				
DHGH-14-33	303.12	308.51	5.39		60	SS	FF	E	G			G	WD	20	M	QZ	VN	
DHGH-14-33	308.51	327.4	18.89		70	ST		B	G	RA		G	DE	15	M	QZ	VN	
DHGH-14-33	327.4	336.86	9.46			SS	VM	E	G	MN		G	DE	20	M	QZ	VN	
DHGH-14-33	336.86	345.25	8.39		80	ST		B	G				FS	20				
DHGH-14-33	345.25	348.1	2.85			SS	VM	E	G		AM	G			M	QZ	VN	
DHGH-14-33	348.1	351.51	3.41			ST		B	G			I			M	BI	BN	Bivalve interval 348.74 - 354.54m. Occurs as concentrated bivalve beds & disseminations throughout unit.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	20.55	22.31	1.76			MS		D	G	MN		G			E	QZ	WP	LOW DENSITY KICK DUE TO FAULTING JUST BEFORE CONTACT
DHGH-14-34	22.31	23.69	1.38			ST		B	G		AM							
DHGH-14-34	23.69	24.99	1.30		60	SS	VF	A	G	MN					E	QZ	WP	
DHGH-14-34	24.99	25.1	0.11			KL												
DHGH-14-34	25.1	25.57	0.47			SS	MM	A	G	MN	AM	P			M	QZ	WP	MASSIVE EXCEPT FOR 1 CM OF PEBBLE CONGLOMERATE AT THE BASE OF THE UNIT, CLASTS ARE ALMOST ALL MUDSTONE AND 1MM-5 CM IN SIZE.
DHGH-14-34	25.57	28.41	2.84		70	SS	VF	A	G					35				
DHGH-14-34	28.41	28.49	0.08			KL												
DHGH-14-34	28.49	32.77	4.28		70	SS	VF	A	G	MN				40	M	QZ	WP	
DHGH-14-34	32.77	32.83	0.06			KL												
DHGH-14-34	32.83	33.11	0.28			ST		A	G	MN				40				
DHGH-14-34	33.11	34.79	1.68			MS		D	G									
DHGH-14-34	34.79	35.13	0.34	140752		ZM		D	G	CM		P		35	C	QZ	CE	ROOF: COALY MUDSTONE WITH COAL AND MUDSTONE IRREGULARLY INTERMIXED THROUGHOUT DUE TO SHEARING. 1-7 MM QUARTZ OCCURS AS CLEAT INFILL AND VEINLETS THROUGHOUT. QUARTZ IS 20%, COAL IS 15% AND MUD IS 65%.
DHGH-14-34	35.13	35.38	0.25	140753		CO	C4	D	K	CM		G		35	E	QZ	CE	SEAM ROOF: HIGHLY SHEARED COAL WITH MUDSTONE BEDS UP TO 1.5 CM THICK (10% OF ROCK). COAL IS MEDIUM GRAINED AND 1MM BY 1 MM CLEATS HAVE BEEN DESTROYED BY SHEARING, LISTRIC SURFACES ARE ABUNDANT. 15 % BRIGHT COAL
DHGH-14-34	35.38	35.63	0.25	140754		CO	C4	D	K	CM		G			E	QZ	CE	SEAM FLOOR: HIGHLY SHEARED COAL WITH MUDSTONE INTERMIXED (10% OF ROCK). COAL IS MEDIUM GRAINED AND 1MM BY 1 MM CLEATS HAVE BEEN DESTROYED BY SHEARING, LISTRIC SURFACES ARE ABUNDANT. 15% BRIGHT COAL.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	35.63	35.95	0.32	140755		ZT		D	G	CM		G			M	QZ	DS	FLOOR: COALY SILTSTONE WITH A MAJORITY OF THE COAL FOCUSED AT THE TOP OF THE UNIT. COAL IS STILL SHEARED AND CLEATING IS POORLY DEVELOPED WITH LISTRIC SURFACES COMMON. QUARTS IS 0.5% OF THE ROCK AND IS DISSEMINATED THROUGHOUT. CONTACT WAS CHOSEN BASED ON DENSITY GEOPHYSICAL DATA, COULD HAVE HAD ABOUT 10 CM MORE IN THE COAL SEAM, HOWEVER DUE TO SHEARING AND GRADATIONAL INCREASE IN MUD CONTENT IT WAS CHOSEN AT ITS LOCATION.
DHGH-14-34	35.95	36.03	0.08			KL												
DHGH-14-34	36.03	36.6	0.57			ST		B	G		AM	G			E	QZ	VN	
DHGH-14-34	36.6	37.5	0.90			SS	FF	A	G	MN	AM	P			E	QZ	VN	LAMINAE ARE IRREGULAR. QUARTZ VEINS ARE 0.5-3 CM WITH SOME 1 MM STRINGER VEINS ASSOCIATED WITH LARGER VEINS.
DHGH-14-34	37.5	42.93	5.43			ST		B	G		AM				C	BI	CN	38.39-39.09M BIVALVE INTERVAL, BIVALVES UP TO 4.5 CM LONG.
DHGH-14-34	42.93	46.4	3.47		75	SS	FF	A	G	MN		G	DE	20	E	QZ	VN	
DHGH-14-34	46.4	47.67	1.27			ST		B	G	MN		P			E	QZ	VN	
DHGH-14-34	47.67	53.01	5.34			SS	MM	A	G		AM				E	CA	VN	48.14-48.46, VUGGY BLADED CALCITE VEIN.
DHGH-14-34	53.01	54	0.99			ST		B	G		AM							
DHGH-14-34	54	54.13	0.13			KL												
DHGH-14-34	54.13	54.25	0.12			ST		B	G		AM							
DHGH-14-34	54.25	54.97	0.72			XM		D	G	MN		P			E	QZ	WP	
DHGH-14-34	54.97	55.17	0.20	140756		XM		D	G	MN		P			E	QZ	WP	ROOF: CARBONACEOUS MUDSTONE WITH 5% COAL LENSES THROUGHOUT. BECOME MORE CONCENTRATED AT THE BASE OF THE UNIT.
DHGH-14-34	55.17	55.47	0.30	140757		CO	C4	D	K	CM		G			E	QZ	VN	SEAM ROOF: HIGHLY SHEARED C4 COAL. SOME FACES ARE VERY BRIGHT WITH UP TO 70% BRIGHT FACES, OTHERS ARE APPROXIMATELY 25% BRIGHT FACES. LISTRIC FACES ARE COMMON AND CLEATING IS MOSTLY DESTROYED. SOME 1X 1-3 MM CLEATS ARE STILL INTACT.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	55.47	55.66	0.19	140758		CO	C5	D	K	CM		P		15	E	QZ	CE	SEAM: SLIGHTLY SHEARED C5 COAL. THE ASH CONTENT CHANGES DRASTICALLY THROUGHOUT THE UNIT (BETWEEN AMOUNT OF QUARTZ AND MUD, CAUSING A LOCAL DENISTY HIGH. QUARTZ OCCURS IN CLEAT INFILL AND AS A LARGER 1 CM VEIN CONTAINING 15% COAL AT THE BASE OF THE UNIT. TOP OF THE UNIT CONTAINS THE MOST MUD AND FOR THE FIRST 3 CM CONTAINS APPROXIMATLEY 70% MUD. MUDSTONE OCCURS AS 1-10 MM LAMINATIONS. WHERE COAL IS PRESENT IT IS BRIGHT, BRIGHT BANDS CAN BE UP TO 90% OF THE ROCK.
DHGH-14-34	55.66	55.91	0.25	140759		CO	C4	D	K	CM		P			M	QZ	WP	SEAM: HIGHLY SHEARED C4 COAL. DIFFICULT TO DETERMINE C GRADE, PARTIALLY CHOSEN BASED ON DENSITY KICK, WHICH MAY HAVE ALSO BEEN LOW DUE TO SHEARING. LISTRIC SURFACES COMMON, CLEATING IS COMPLETELY DESTROYED. COAL OCCURS IN SUB MM TO 1 MM GRAINS. QUARTZ IS IRREGULARLY INTERMIXED.
DHGH-14-34	55.91	56.07	0.16	140760		CO	SY	D	K	CM		P			C	QZ	VN	SEAM FLOOR: MODERATELY SHEARED STONY COAL WITH COMMON MUDSTONE LAMINATIONS THROUGHOUT. ASH CONTENT IS APPROXIMATELY 45% WITH HALF BEING QUARTS AND THE OTHER HALF AS MUD. QUARTZ OCCURS AS VEINLETS AND IN CLEAT INFILL. CLEATS ARE APPROXIMATELY 1-3 MM AND ARE VERY POORLY DEVELOPED.
DHGH-14-34	56.07	56.27	0.20	140761	85	ST		B	G			G	PD		E	QZ	LN	FLOOR A: SILTSTONE WITH SANDSTONE LAMINAE IRREGULARLY INTERBEDDED. SILTSTONE IS 80% OF TH UNIT WITH SANDSTONE ABOUT 20%. 1% QUARTZ LENSES.
DHGH-14-34	56.27	57.87	1.60		80	ST		B	G			G	PD		E	QZ	VN	
DHGH-14-34	57.87	62.92	5.05		60	ST		B	G			G	PD		E	QZ	VN	
DHGH-14-34	62.92	69.85	6.93		70	SS	FM	A	G			G	PD					INTERLAMINATED SANDSTONE AND SILTSTONE GRADES BECOMES MORE SILTY TOWARDS BOTTOM OF UNIT.
DHGH-14-34	69.85	70.42	0.57			ST		B	G	MN		G						
DHGH-14-34	70.42	70.6	0.18			MS		D	G	MN	AM	P			M	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	70.6	70.8	0.20	140762		MS		D	G	MN	AM	P			M	QZ	CE	ROOF: MASSIVE MUDSTONE WITH MINOR COAL LENSES THROUGHOUT. COAL LENSES ARE SUBMILIMETER TO 1 MM IN SIZE AND CONTAIN QUARTZ IN THE FORM OF CLEAT INFILL.
DHGH-14-34	70.8	70.91	0.11	140763		CO	SY	D	K	MN		P			C	QZ	VN	SEAM ROOF: C2 COAL WITH 12% MUDSTONE LAMINATIONS AND 15% QUARTZ. MUDSTONE LAMINATIONS ARE 1 MM TO 5 CM IN WIDTH. QUARTZ OCCURS MOSTLY AS FRACTURE INFILL AND SECONDLY AS CLEAT INFILL. CLEATING IS VERY WELL DEVELOPED AND 1X 1-3 MM IN SIZE AND COAL IS APPROXIMATELY 90% BRIGHT.
DHGH-14-34	70.91	71.33	0.42	140764		CO	C2	D	K	MN		P			E	QZ	FR	SEAM A: MODERATELY SHEARED C2 COAL, SHEARING HAS DESTROYED ABOUT 40% OF CLEATS. WHERE CLEATS ARE SEEN THEY ARE 1-2 X 2-3 MM IN SIZE AND COAL IS 80% BRIGHT. THERE ARE MINOR MUDSTONE LAMINATIONS THROUGHOUT RANGING IN SIZE FROM 1-3 MM AND CAN ALSO BE DISSEMINATED IN MORE SHEARED ZONES. THERE IS ON PYRITE BLEB 5 MM BY 40 MM IN SIZE AT THE TOP OF THE UNIT. QUARTZ OCCURS AS 1-4MM VEINLETS IN FRACTURE INFILL.
DHGH-14-34	71.33	71.71	0.38	140765		CO	C2	D	K	CM		P	WD	10	E	QZ	CE	SEAM FLOOR A: C2 COAL, WITH WELL DEVELOPED 1-6MM MUDSTONE LAMINATIONS THROUGHOUT. CLEATING IS WELL MODERATELY DEVELOPED AND ARE 1-2 MM IN SIZE. COAL IS 60-90% BRIGHT DEPENDING ON THE SECTION OF THE UNIT.
DHGH-14-34	71.71	71.91	0.20	140766		ST		B	G	MN			PD	10				FLOOR: SILTSTONE WITH MINOR SANDY LAMINATIONS AT THE TOP OF THE UNIT. SANDY LAMINATIONS CAN SOMETIMES PINCH OUT INTO LENSES AND ARE IRREGULARLY SPACED. 2% QUARTZ IN THE FORM OF A 2 MM VEIN AT THE BASE OF THE UNIT.
DHGH-14-34	71.91	75.87	3.96			ST		B	G	MN			PD	10				
DHGH-14-34	75.87	80.74	4.87		80	SS	FM	A	G	CM		P	PD	10	E	QZ	VN	SILTSTONE LAMINATIONS PINCH OUT INTO ELONGATED LENSES, BEDDING IS IRREGULAR. 3-4 BANDS OF MS-ST CLASTS AT THE TOP OF THE UNIT.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	80.74	84.01	3.27		55	SS	FF	A	G	MN		P	PD	10	M	QZ	VN	LAMINATIONS ARE HIGHLY IRREGULAR. BEDDING IS MOTTLED SUE TO SOFT SEDIMENT DEFORMATION
DHGH-14-34	84.01	88.19	4.18		60	ST		B	G			G	WD		M	QZ	VN	SILTSTONE AND SANDSTONE INTERRELATIONSHIP IS WELL DEFINED BUT CHANGES IN WIDTH FROM LAMINATIONS TO BEDS.
DHGH-14-34	88.19	88.46	0.27	140767		ZM		D	G	CM		P	WD	10	C	QZ	VN	ROOF: CARBONACEOUS MUDSTONE WITH APPROXIMATELY 20% COAL LAMINATIONS FOCUSED AT THE TOP 7 CM AND BOTTOM 5 CM OF THE UNIT. THE MIDDLE SECTIONS IS ALMOST BARREN OF COAL. COAL OCCURS IN 1-2 MM LAMINATIONS. QUARTZ OCCURS MOSLY AS 1-10MM VEINS BOTH PARALLEDL AND PERPENDICUALR TO THE LAMINATIONS AND AS 1-2 MM CLEAT INFILL.
DHGH-14-34	88.46	88.66	0.20	140768		CO	C4	D	K	CM		G	WL	10	C	QZ	CE	SEAM ROOF: C4 COAL WITH 20% 1-4MM MUDSTONE LAMINATIONS THROUGHOUT. IN SOME SECTIONS OF THE UNIT MUDSTONE LAMINATION ARE WAVY DUE TO SOFT SEDIMENT DEFORMATION. CLEATING IS WELL DEVELOPED AND 1-3 MM IN SIZE WITH COAL BEING 15% BRIGHT. MANY FACES ARE MOSTLY DULL AND OTHERS CAN BE UP TO 60% BRIGHT. QUARTZ OCCURS AS FRACTURE INFILL VEINLETS AND AS CLEAT INFILL, AND AS LAMINAE, ALL 1 MM IN SIZE
DHGH-14-34	88.66	88.96	0.30	140769		CO	C2	D	K	MN		P	WD	10	E	QZ	VN	SEAM: C2 COAL WITH 7% MUDSTONE LAMINATIONS THROUGHOUT. CLEATING IS MOSTLY POORLY DEVELOPED AND DIFFICULT TO PICK OUT WELL DEFINED CLEATS. HOWEVER, FACES ARE BRIGHT AND VARY FROM 60-90% BRIGHT. QUARTZ OCCURS MOSTLY AS VEINS PARALLEL TO THE CORE AXIS BUT ALSO AS CLEAT INFILL
DHGH-14-34	88.96	89.1	0.14	140770		XM		D	G	MN		P			M	QZ	CE	PARTING: SHEARED CARBONACEOUS MUDSTONE WITH 5% 1-5MM COAL LAMINATTIONS BEING TRUNCATED IN TO LENSES DUE TO SHEARING.. LISTRIC SURFACES COMMON. QUARTZ OCCURS AS 1MM CLEAT INFILL IN COAL LENSES.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	89.1	89.69	0.59	140771		CO	C3	D	K	CM		G	PD	10	M	QZ	CE	SEAM: PARTLY SHEARED C3 COAL WITH 20% MUDSTONE LAMINATIONS THROUGHOUT. LAMINATIONS ARE MOSTLY WELL DEVELOPED WITH SOME SHEARING BREAKING UP CLEATS AND CREATING LISTRIC FACES. COAL IS IRREGULAR IN BRIGHTNESS WITH THE TOP OF THE UNIT AT C1 GRADE AND THE MIDDLE OF THE UNIT AVERAGING 30-50% BRIGHTNESS. SUB MILLIMETER QUARTZ IS ONLY 0.5% OF THE UNIT AND IS IN CLEAT INFILL.
DHGH-14-34	89.69	90.06	0.37	140772		CO	C2	D	K	CM		G		10	E	QZ	CE	SEAM FLOOR: C2 COAL WITH THE TOP OF THE UNIT ONLY SLIGHTLY SHEARED AND INCREASING INTO A HIGHLY SHEARED ZONE AT THE BASE. MUDSTONE OCCURS AS 1-4MM STRINGERS CROSS CUTTING THE COAL SEAMS, SOME OCCURS IN LAMINAE AS WELL. COAL RANGES IN BRIGHTNESS FROM C1 GRADES DOWN TO 50% BRIGHT IN THE SHEAR ZONES. MAY LOOK LESS BRIGHT DUE TO SHEARING. QUARTZ (10%) IS MORE PREVALENT IN THE SHEAR ZONES AND OCCURS MOSTLY AS 1MM CLEAT INFILL AND 1-3MM VEINLETS
DHGH-14-34	90.06	90.26	0.20	140773		XM		D	G	MN		G			M	QZ	CE	FLOOR: SHEARED CARBONACEOUS MUDSTONE WITH 5% 1-5MM COAL LAMINATIONS BEING TRUNCATED IN TO LENSES DUE TO SHEARING.. LISTRIC SURFACES COMMON. QUARTZ OCCURS AS 1MM CLEAT INFILL IN COAL LENSES.
DHGH-14-34	90.26	90.59	0.33			XM		D	G	MN		G			M	QZ	CE	
DHGH-14-34	90.59	90.84	0.25			ST		B	G		AM	G			M	QZ	WP	
DHGH-14-34	90.84	96.65	5.81		90	XS	FM	A	G	MN			WD	50	E	QZ	VN	91.47-91.57 BULL QUARTZ VEIN. BEDDING SHALLOWS OUT AROUND 96 AT A POTENTIAL FOLD AXIS. COAL IS AT APPROXIMATELY 10-15% AS LENSES AND CLASTS WITHIN THE SANDSTONE.
DHGH-14-34	96.65	96.84	0.19			KL												
DHGH-14-34	96.84	113.31	16.47		90	XS	FM	A	G	MN		P	WD	50	E	QZ	VN	SILTSTONE LAMINATIONS WITHIN A SANDSTONE. COAL IS AT APPROXIMATELY 10-15% AS LENSES AND CLASTS WITHIN SANDSTONE.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	113.31	113.71	0.40			ST		B	G	MN			PD	25	M	QZ	WP	
DHGH-14-34	113.71	113.8	0.09			KL												
DHGH-14-34	113.8	114.62	0.82			ST		B	G		AM	P			M	QZ	WP	
DHGH-14-34	114.62	115.24	0.62			MS		D	G		AM	G			M	QZ	WP	
DHGH-14-34	115.24	115.56	0.32			XM		D	G	MN	AM	P			E	QZ	WP	
DHGH-14-34	115.56	115.63	0.07			KL				CO								
DHGH-14-34	115.63	115.77	0.14			CO	C4	D	K	MN	AM	P			E	QZ	CE	SEAM: HIGHLY SHEARED C4? COAL, DIFFICULT TO TELL GRADE DUE TO SHEARING. ALMMOST ALL CLEATING HAS BEEN DESTROYED.
DHGH-14-34	115.77	116.64	0.87			XM		D	G	MN		P			C	QZ	CE	CARBONACEOUS MUSTONE HAS QUARTZ/ COAL LENSES THROUGHOUT THAT ARE ALSO SHEARED AND HAVE DEFORMED LAMINATIONS.
DHGH-14-34	116.64	118.26	1.62			ST		B	G		AM	G			M	QZ	FP	
DHGH-14-34	118.26	119.48	1.22		70	ST		B	G			P	PD		E	QZ	VN	QUARTZ BEARING VEIN AT THE BOTTOM OF THE UNIT. VEIN ALSO CONTAINS SILTSTONE IN A REHEALED FAULT ZONE. LAST 7 CM OF THE UNIT.
DHGH-14-34	119.48	124.12	4.64			SS	MM	A	G		AM	G			E	QZ	VN	124.10-124.19 BULL QUARTZ VEIN
DHGH-14-34	124.12	127.16	3.04		80	ST		B	G				PD	10				
DHGH-14-34	127.16	127.24	0.08			KL												
DHGH-14-34	127.24	128.68	1.44		80	ST		B	G			P	PD	10	E	BI	CB	BIVALVE INTERVAL: 128.72-129.02, BIVALVES ARE 1MM TO 1 CM IN SIZE AND MAKE UP 10% OF THE ROCK IN THE INTERVAL THEY OCCUR IN.
DHGH-14-34	128.68	129.43	0.75			SS	FM	A	G		AM	P			E	BI	CB	BIVALVE INTERVAL: 129.02-129.97, INCREASE IN ABUNDANCE TOWARDS BASE. GOES FROM 5% TO 10% AT BASE.
DHGH-14-34	129.43	129.63	0.20	140774		SS	FM	A	G		AM	P			C	BI	CB	ROOF: MASSIVE FINE TO MEDIUM GRAINED SANDSTONE WITH A BIVALVE INTERVAL: 129.02-129.97, INCREASE IN ABUNDANCE TOWARDS BASE. GOES FROM 15% TO 20% AT BASE. 1-5 CM IN SIZE.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	129.63	129.79	0.16	140775		CO	SY	D	K	CM		G		20	E	QZ	CE	SEAM ROOF A: STONY COAL WITH COMMON SANDSTONE BANDS, COULD HAVE ALSO PASSED FOR COALY SANDSTONE, HOWEVER COAL WAS ESTIMATED TO BE APPROXIMATELY 40 PERCENT OF THE ROCK. COAL IS INTERBEDDED WITH SANDSTONE WITH BOTH AVERAGING AROUND 4 CM THICK. QUARTZ IS 10% OF THE UNIT AND OCCURS AS 1MM CLEAT INFILL AND 1-5 CM VEINS. CLEATING IS POORLY DEVELOPED AND VISIBLE CLEATS ARE 1X1-2MM IN SIZE
DHGH-14-34	129.79	130.15	0.36	140776		CO	C2	D	K	MN		P			E	QZ	DS	SEAM: HIGHLY SHEARED C2 COAL WITH ONE 3 X 11 CM SILSTONE CLAST IN THE MIDDLE OF THE UNIT. LISTRIC FACES ARE VERY COMMON. 1MM MUSTONE LAMINATIONS AND 1 MM QUARTZ CLEAT INFILL MAKE UP 10% OF THE UNIT. CLEATING IS ALMOST FULLY DESTROYED AND FACES ARE 80-90% BRIGHT.
DHGH-14-34	130.15	130.35	0.20	140777		SS	FM	A	G	MN		P			A	QZ	VN	FLOOR: FINE TO MEDIUM GRAINED SANDSTONE WITH MINOR COAL LAMINATIONS THROUGHOUT. UNIT IS HIGHLY SHEARED AND BULL QUARTZ VEINING MAKES UP 40% OF THE UNIT. QUARTZ ALSO OCCURS AS 1MM FRACTURE INFILL.
DHGH-14-34	130.35	131.36	1.01			SS	FM	A	G	MN		P			C	QZ	VN	
DHGH-14-34	131.36	131.57	0.21			CO	C4	D	K	CM		P			E	PY	BL	SEAM: HIGHLY SHEARED C4 COAL, NOT SAMPLED DUE TO SMALL SIZE. COMMON MUDSTONE LAMINATIONS THROUGHOUT. LISTRIC FACES ARE COMMON AND ALL EVIDENCE OF CLEATING HAS BEEN DESTROYED. PYRITE IS 2% OF THE UNIT AND OCCURS IN 3X 6 MM BLEBS
DHGH-14-34	131.57	132.05	0.48			ST		B	G			P	PD	15	E	QZ	FP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	132.05	132.31	0.26			CO	C4	D	K	MN		P			E	QZ	VN	SEAM: HIGHLY SHEARED C4 COAL, NOT SAMPLED DUE TO SMALL SIZE. VERY DIFFICULT TO GIVE COAL A C VALUE DUE TO SHEARING, WHEN HIT WITH A HAMMER THE WHOLE UNIT BROKE INTO SMALL PIECES ALONG LISTRIC FACES AND THEREFORE APPEARS QUITE BRIGHT. MUDSTONE IS INTERMIXED WITHIN THE UNIT AND IT THE UNIT IS CONSISTENT IN ITS SHEARED AMOUNT AND GRADE. QZ IS 2% OF THE UNIT AND OCCURS AS 2-4 MM FRACTURE INFILL/PINCHED OUT VEINS.
DHGH-14-34	132.31	137.57	5.26			SS	FM	A	G	RA		P	WD	30	C	QZ	VN	COAL IS HIGHLY DISSEMINATED IN ONE 5 CM BAND IN THE MIDDLE OF THE UNIT. QUARTZ IS MOSTLY FOCUSED IN THE SANDSTONE BEDS OF THE UNIT
DHGH-14-34	137.57	137.77	0.20	140778		SS	FM	A	G			P	WD	30	C	QZ	VN	ROOF A: FINE TO MEDIUM GRAINED SANDSTONE INTERBEDDED WITH SILTSTONE. BEDDING IS WELL DEVELOPED AND 1-3 MM QUARTZ VEINLETS (5%) ARE MOSTLY WITHIN THE SANDSTONE BEDS OF THE UNIT.
DHGH-14-34	137.77	137.94	0.17	140779		CO	SY	D	K	CM		G			E	QZ	VN	SEAM ROOF: HIGHLY SHEARED STONY COAL WITH APPROXIMATELY 40% INTERMIXED 1MM SIZE MUDSTONE AND QUARTZ GRAINS. LISTRIC SURFACES ARE COMMON AND MAKES COAL APPEAR TO BE BRIGHTER THAN IT IS. ALL CLEATS HAVE BEEN DESTROYED
DHGH-14-34	137.94	138.4	0.46	140780		CO	C3	D	K	MN		G			E	QZ	VN	SEAM: HIGHLY SHEARED C3? COAL, C VALUE WAS PURELY BASED ON DENISTY GEOPHYSICAL DATA. ONLY LISTRIC SURFACES ARE VISIBLE UPON BREAKING THE UNIT OPEN. QUARTZ IS 2% OF THE UNIT AND IS IN VEIN AND DISSEMINATED. MUD IS ALSO LIKELY DISSEMINATED IN THE UNIT, BUT IT IS TOO DIFFICULT TO GIVE A PROPER APPROXIMATION DUE TO SHEARING. ALL CLEATS HAVE BEEN DESTROYED.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	138.4	138.52	0.12	140781		CO	C4	D	K	MN		G			E	QZ	VN	SEAM FLOOR: C4 COAL WITH MODERATELY DEVELOPED 2X 3MM CLEATS. ALTERNATING BRIGHT (25%) AND DULL (47%) COAL BANDS. WITH 15% MUDSTONE LAMINATIONS. QUARTZ (10%) OCCURS AS 1MM CLEAT INFILL. PYRITE (3%) OCCURS IN 3MM BLEBS.
DHGH-14-34	138.52	138.72	0.20	140782		ZM		D	G	CM		P			C	QZ	CE	FLOOR: COALY MUDSTONE WITH 2-4 MM COAL LAMINATIONS THROUGHOUT THE UNIT. COAL (20%) IS MORE ABUNDANT TOWARDS THE TOP OF THE UNIT. QUARTZ (25%) OCCURS AS 1MM CLEAT INFILL AROUND COAL LAMINAE AND AS 1-3 MM VEINS. MUDSTONE IS 55% OF THE UNIT.
DHGH-14-34	138.72	139.06	0.34			ZM		D	G	CM		P			C	QZ	CE	
DHGH-14-34	139.06	140.38	1.32		65	XM		D	G				PD		E	QZ	WP	
DHGH-14-34	140.38	140.79	0.41			KL												
DHGH-14-34	140.79	141.7	0.91			ST		B	G	MN	AM	P			E	QZ	CE	
DHGH-14-34	141.7	141.98	0.28			ZT		D	G	AB		P		15	E	QZ	VN	TWO COAL BANDS, ONE IS 4 CM AT THE TOP OF THE UNIT AND THE OTHER IS 7CM IN THE MIDDLE OF THE UNIT. COAL BANDS ARE WAVY DUE TO SHEARING AND DEFORMATION.
DHGH-14-34	141.98	142.11	0.13			CO	C3	D	K	CM		P		15	E	QZ	VN	SEAM: C3 COAL, FIRST HALF OF COAL SEAM HAS NO DEFECT AND THE SECOND HALF IS A BROKEN ZONE. IN THE FIRST HALF THE QUALITY OF THE COAL IS MORE OF A C4 GRADE WITH ONLY 20% BRIGHT COAL, HOWEVER THE SECOND HALF IS A C2 GRADE WITH 80% BRIGHT COAL. CLEATING IS MODERATELY DEVELOPED AND CLEATES CAN RANGE IN SIZE FROM 1 X 1 MM TO 5X5 MM. QUARTZ IS 5% OF THE UNIT AND IS FOUND IN VEINLETS ALONG LAMINAE PLANES AND IN CLEATS
DHGH-14-34	142.11	142.99	0.88			ZM		D	G	CM		G	WL		E	QZ	VN	BEDS ARE WAVY AND DEFORMED, LIKELY DUE TO SHEARING. COAL LAMINATIONS ARE 2-4 CM WIDE WITH TWO 4 CM BANDS AT THE TOP OF THE UNIT AND THE MIDDLE OF THE UNIT. QUARTZ VEINING IS ASSOCIATED WITH COAL LAMINATIONS/BEDS. COAL COMPOSED APPROX 25% OF ROCK

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	142.99	143.59	0.60			XM		D	G	MN		G			C	PY	BN	
DHGH-14-34	143.59	145.12	1.53			XT		B	G	MN		G			E	QZ	CE	DENSITY SPIKE IS DUE TO FAULT ZONE.
DHGH-14-34	145.12	147.65	2.53			ST		B	G	MN	AM	P		30	M	QZ	WP	ALMOST ENTIRE UNIT IS MASSIVE OTHER THAN ONE COAL LAMINATION IN THE MIDDLE OF THE UNIT.
DHGH-14-34	147.65	152.12	4.47			SS	MM	A	G	MN	AM	P			M	QZ	WP	
DHGH-14-34	152.12	152.32	0.20	140783		SS	MM	A	G	MN	AM	P			M	QZ	VN	ROOF: MASSIVE MEDIUM GRAINED SANDSTONE WITH MINOR COAL LENSES THROUGHOUT THE UNIT AND WITH ONE 7 MM QUARTZ VEIN AT THE BASE OF THE UNIT.
DHGH-14-34	152.32	152.51	0.19	140784		CO	C4	D	K	CM	AM	G			E	QZ	CE	SEAM ROOF A: MODERATELY SHEARED C4 COAL WITH 1-3MM MUDSTONE (7%) LAMINATIONS THROUGHOUT. COAL IS 20% BRIGHT COAL AND CLEATING IS MODERATELY DEVELOPED. CLEATS RANGE IN SIZE FROM 1X1-4MM (CAN BE THIN AND ELONGATED) TO 4X4MM. 1-3 MM QUARTZ VEINS (10%) AND 2-4 MM PYRITE VEINLETS (3%).
DHGH-14-34	152.51	152.57	0.06			KL				CO								LOST CORE
DHGH-14-34	152.57	152.82	0.25	140785		CO	C4	D	K	CM		P			E	QZ	CE	SEAM FLOOR A: MODERATELY SHEARED C4 COAL WITH 1-3MM MUDSTONE (7%) LAMINATIONS THROUGHOUT. COAL IS 20% BRIGHT COAL AND CLEATING IS MODERATELY DEVELOPED. CLEATS RANGE IN SIZE FROM 1X1-4MM (CAN BE THIN AND ELONGATED) TO 4X4MM. 1-3 MM QUARTZ VEINS (10%) AND 2-4 MM PYRITE VEINLETS (3%).
DHGH-14-34	152.82	153.55	0.73	140786		ST		B	G	MN	AM	P			M	QZ	CE	FLOOR A: MASSIVE SILTSTONE WITH MINOR SANDY LAMINATIONS (5%) AT THE BASE OF THE UNIT AND MINOR COAL LAMINATIONS (5%) AT THE TOP OF THE UNIT
DHGH-14-34	153.55	154.48	0.93		70	ZM		D	G	CM		P	WL		E	QZ	VN	QZ ALSO OCCURS AS CLEAT INFILL
DHGH-14-34	154.48	157.34	2.86			ST		B	G		AM	G			E	QZ	WP	
DHGH-14-34	157.34	161	3.66			ST		B	G			G	FS	20				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	161	161.2	0.20	140787		ST		B	G	MN		P	FS	20	E	QZ	CE	ROOF A: SILTSTONE WITH SANDSTONE LAMINATIONS WITH FLAME STRUCTURES THROUGHOUT THE UNIT. MINOR COAL LAMINATIONS AT THE BASE OF THE UNIT GRADING INTO THE COAL SEAM. QUARTZ (7%) IS FOCUSED AT THE BASE OF THE UNIT WITH THE COAL AND OCCURS AS 1MM CLEAT INFILL. PYRITE OCCURS AS 1-3 MM BLEBS.
DHGH-14-34	161.2	161.44	0.24	140788		CO	C3	D	K	CM		G	PD		E	QZ	CE	SEAM ROOF: MODERATELY SHEARED C3 COAL WITH 1-10MM MUDSTONE (20%) LAMINATIONS THROUGHOUT. COAL IS APPROXIMATELY 60% BRIGHT, AND COULD BE MORE BUT IS MOTTLED BY SHEARING. CLEATING IS POORLY DEVELOPED AND 50% DESTROYED DUE TO SHEARING, CLEATS THAT ARE STILL VISIBLE ARE 1-2MM IN SIZE. QUARTZ (15%) OCCURS AS 1MM VEINLETS AND AS CLEAT INFILL. WHOLE SEAM APPEARS TO BE QUITE UNIFORM IN COAL QUALITY, HOWEVER ASH CONTENT VARIES THROUGHOUT THE UNIT (IN THE FORM OF QUARTZ AND MUDSTONE LAMINAE) AND THIS CAUSES DIPS IN THE DENSITY LOG.
DHGH-14-34	161.44	161.68	0.24	140789		CO	C3	D	K	CM		G	PD		E	QZ	CE	SEAM: MODERATELY SHEARED C3 COAL WITH 1-10MM MUDSTONE (30%) LAMINATIONS THROUGHOUT. MUDSTONE IS ALSO IN THE FORM OF 2-3 CM SHEARED CLASTS. COAL IS APPROXIMATELY 60% BRIGHT, AND COULD BE MORE BUT IS MOTTLED BY SHEARING. CLEATING IS POORLY DEVELOPED AND 50% DESTROYED DUE TO SHEARING, CLEATS THAT ARE STILL VISIBLE ARE 1-2MM IN SIZE. QUARTZ (1%) OCCURS AS 1MM VEINLETS AND AS CLEAT INFILL. WHOLE SEAM APPEARS TO BE QUITE UNIFORM IN COAL QUALITY, HOWEVER ASH CONTENT VARIES THROUGHOUT THE UNIT (IN THE FORM OF QUARTZ AND MUDSTONE LAMINAE) AND THIS CAUSES DIPS IN THE DENSITY LOG.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	161.68	161.91	0.23	140790		CO	C3	D	K	CM		G	PD		E	QZ	CE	SEAM FLOOR: MODERATELY SHEARED C3 COAL WITH 1-10MM MUDSTONE (30%) LAMINATIONS THROUGHOUT. COAL IS APPROXIMATELY 60% BRIGHT, AND COULD BE MORE BUT IS MOTTLED BY SHEARING. CLEATING IS POORLY DEVELOPED AND 50% DESTROYED DUE TO SHEARING, CLEATS THAT ARE STILL VISIBLE ARE 1-2MM IN SIZE. QUARTZ (7%) OCCURS AS 1MM VEINLETS AND AS CLEAT INFILL. WHOLE SEAM APPEARS TO BE QUITE UNIFORM IN COAL QUALITY, HOWEVER ASH CONTENT VARIES THROUGHOUT THE UNIT (IN THE FORM OF QUARTZ AND MUDSTONE LAMINAE) AND THIS CAUSES DIPS IN THE DENSITY LOG.
DHGH-14-34	161.91	162.11	0.20	140791		XT		D	G	MN		G			E	QZ	WP	FLOOR: CARBONACEOUS MUDSTONE WITH A 2CM COAL BAND WITH 1 CM QUARTZ VEINS ON EITHER SIDE AT THE TOP OF THE UNIT. THE REST OF THE UNIT CONTAINS QUARTZ WISPS WITH MINOR COAL LENSES ASSOCIATED WITH QUARTZ.
DHGH-14-34	162.11	162.68	0.57			XT		D	G			G			E	QZ	WP	
DHGH-14-34	162.68	165.16	2.48			ST		B	G		AM				M	QZ	WP	
DHGH-14-34	165.16	165.21	0.05			KL												
DHGH-14-34	165.21	171.26	6.05			ST		B	G		AM	G		35				ONE 30 CM SILTSTONE BED THAT IS LIGHT GREY IN COLOR IN THE MIDDLE OF THE UNIT. BEDDING CONTACT AT 35 DEGREES
DHGH-14-34	171.26	194.4	23.14		55	ST		B	G	MN		G	FS	15				SILTSTONE PERCENTAGE INCREASES TOWARDS THE BASE OF THE UNIT.
DHGH-14-34	194.4	196.05	1.65			ST		B	G	MN		P		10	M	QZ	WP	
DHGH-14-34	196.05	196.26	0.21			XM		D	G		AM	G		10	E	QZ	WP	
DHGH-14-34	196.26	196.46	0.20	140792		XM		D	G	CM		G		10	E	QZ	CE	ROOF: CARBONACEOUS SILTSTONE WITH COAL (10%) BANDS AT THE BASE OF THE UNIT APPROACHING THE COAL SEAM. QUARTZ (10%) OCCURS AS CLEAT INFILL AND IS ASSOCIATED WITH THE COAL BANDS.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	196.46	196.6	0.14	140793		CO	C4	D	K	MN		F		10	E	QZ	CE	SEAM ROOF: C4 COAL WITH 1-2 MM MUDSTONE (3%) LAMINATIONS. CLEATING IS MODERATELY DEVELOPED AND ARE 2-4 MM IN SIZE (SQUARE). COAL (90% OF ROCK) IS 10% BRIGHT COAL, THE REST BEING DULL. QUARTZ (5%) OCCURS AS 1MM CLEAT INFILL AND IN 1 MM VEINLETS ALONG LAMINATION PLANES.
DHGH-14-34	196.6	197.18	0.58	140794		CO	C3	D	K	MN	AM	F			M	QZ	CE	SEAM: HIGHLY SHEARED C3 COAL WITH MUDSTONE (5%) INTERMIXED. IT IS DIFFICULT TO GAGE THE AMOUNT OF MUDSTONE DUE TO INTENSE SHEARING. COAL (95%) IS 40-50% BRIGHT COAL AND THE REST DULL. THIS IS CONSISTENT THROUGHOUT THE UNIT. LISTRIC SURFACES ARE COMMON. CLEATS ARE ALMOST ALL DESTROYED BY SHEARING AND ARE 1MM IN SIZE, LACKING THE CLEAT SHAPE. QUARTZ (>1%) HAS BEEN SHEARED INTO 1MM DISCONTINUOUS VEINLETS.
DHGH-14-34	197.18	197.95	0.77	140795		CO	C3	D	K	CO		F			E	QZ	CE	SEAM: UNFRACTURED MASSIVE C3 COAL WITH 1-5MM MUDSTONE (20%) LAMINATIONS. MUDSTONE IS ALSO DISSEMINATED IN THE COAL. COAL IS SIMILAR GRADE TO THE SAMPLE ABOVE IN THAT IT IS 40-50% BRIGHT COAL AND THE REST IS DULL. QUARTZ (3%) OCCURS AS 1MM CLEAT INFILL. CLEATS ARE MODERATELY DEVELOPED AND ELONGATED, MOST BEING 1X 2-4 MM IN SIZE. DIP IN DENSITY LOG IS DUE TO INCREASE IN ASH CONTENT.
DHGH-14-34	197.95	198.51	0.56	140796		CO	C4	D	K	CO		F			C	QZ	CE	SEAM: HIGHLY SHEARED QZ RICH C4 COAL WITH APPROXIMATELY 40% MUDSTONE INTERMIXED AND IN 1-4 MM LAMINATIONS. COAL IS 15%-20% BRIGHT AND LISTRIC FACES ARE COMMON, CLEATING IS COMPLETELY DESTROYED. QUARTZ BECOMES MORE ABUNDANT TOWARDS THE BASE OF THE UNIT. AT THE BASE THERE IS A 7 CM THICK VEIN WITH VUGS CONTAINING PRISMATIC QUARTZ, BEFORE THE VEIN QUARTZ IS DOMINANTLY IN CLEAT INFILL. QUARTZ RANGES FROM 15% OF THE UNIT TO 65% AT THE BASE.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	198.51	198.71	0.20	140797		CO	C3	D	K	MN		G		45	E	QZ	CE	SEAM FLOOR: HIGHLY SHEARED C3 COAL WITH MUDSTONE (25%) OCCURRING AS 1-4 MM LAMINATIONS AND DISSEMINATED THROUGHOUT. APPROXIMATELY 40% BRIGHT COAL. QZ (3%) OCCURS AS SHEARED CLEAT INFILL, LISTRIC SURFACES ARE COMMON.
DHGH-14-34	198.71	198.91	0.20	140798		ZM		D	G	CM		G			E	QZ	CE	FLOOR: SHEARED COALY MUDSTONE WITH 2-20 MM BANDS OF COAL (30%) THROUGHOUT. COAL BANDS ARE TRUNCATED BY BRITTLE FAULTING. QUARTZ (7%) OCCURS AS 1-2 MM CLEAT INFILL.
DHGH-14-34	198.91	201.38	2.47			ZM		D	G	CM		G			C	QZ	VN	
DHGH-14-34	201.38	202.04	0.66			XM		D	G	MN		G			E	QZ	CE	
DHGH-14-34	202.04	203.2	1.16			ST		B	G	MN	AM	P			E	QZ	WP	
DHGH-14-34	203.2	224.38	21.18		52	ST		B	G			P	BW	45	E	QZ	VN	THE ENTIRE UNIT IS EFFECTED BY SOFT SEDIMENT DEFORMATIONS WITH 2% OF THE UNIT CONTAINING BURROWS. SOME EVIDENCE OF FLAMES STRUCTURES AS WELL. MAY HAVE RIPPLE MARKS AT 218.51-218.75
DHGH-14-34	224.38	227.58	3.20		70	ST		B	G			F	WD	40	E	QZ	FP	BRECCIATION AT CONTACT
DHGH-14-34	227.58	228.09	0.51		60	SS	FF	A	G						A	QZ	VN	
DHGH-14-34	228.09	228.97	0.88			KL												
DHGH-14-34	228.97	229.28	0.31		60	SS	FF	A	G			F			A	QZ	VN	UNIT IS HIGHLY SHEARED (DUCTILE)
DHGH-14-34	229.28	231.59	2.31			ZT				CM		P			C	QZ	CE	COAL BANDS ARE MOST ABUNDANT IN THE MIDDLE OF THE UNIT BUT ARE ALSO FOUND THROUGHOUT THE UNIT
DHGH-14-34	231.59	231.66	0.07			SS	FM	A	G		AM				M	QZ	WP	
DHGH-14-34	231.66	231.81	0.15			KL												
DHGH-14-34	231.81	234	2.19			SS	FM	A	G	MN					E	QZ	WP	
DHGH-14-34	234	234.06	0.06			KL												
DHGH-14-34	234.06	236.99	2.93		80	SS	FM	A	G			G			C	QZ	FP	QZ ALSO OCCURS IN VEINS
DHGH-14-34	236.99	255.79	18.80			SS	FM	A	G	CM		F			E	QZ	VN	CLASTS UP TO 3 CM
DHGH-14-34	255.79	256.35	0.56			XM		D	G	MN		G			E	QZ	CE	
DHGH-14-34	256.35	256.99	0.64			ST		B	G		AM	G			E	QZ	VN	
DHGH-14-34	256.99	259.21	2.22			SS	FM	A	G	MN		P	DE	30	E	QZ	VN	
DHGH-14-34	259.21	261.19	1.98		65	SS	VF	A	G	MN		G		15	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-34	278.83	282.7	3.87		80	ST		B	G						E	QZ	FD	
DHGH-14-34	282.7	283.16	0.46			KL												EOH
DHGH-14-35	0	1.82	1.82			KL												
DHGH-14-35	1.82	2.44	0.62			GV	SI	B	G	SS								
DHGH-14-35	2.44	3.31	0.87			KL												
DHGH-14-35	3.31	5.79	2.48			SS	FM	A	G		AM	I						
DHGH-14-35	5.79	7.75	1.96			ST		B	G				PD					
DHGH-14-35	7.75	8.53	0.78			KL												
DHGH-14-35	8.53	19.56	11.03			ST		B	G			G	PD	30	M	BI	BN	BIVALVE INTERVAL AT 19.15-20.91
DHGH-14-35	19.56	20.91	1.35			SS	FF	E	G			I	PD	30	C	BI	BN	
DHGH-14-35	20.91	21.66	0.75			ST		B	G				PD	15				
DHGH-14-35	21.66	23.2	1.54			KL												
DHGH-14-35	23.2	23.77	0.57		60	SS	VF	A	G				PD	10				
DHGH-14-35	23.77	23.97	0.20			KL												
DHGH-14-35	23.97	26.31	2.34		60	SS	VF	A	G				PD	10	M	QZ	VN	
DHGH-14-35	26.31	26.51	0.20	145762	60	SS	VF	A	G			G	PD	10	M	QZ	VN	Roof. Minor CO at basal contact <15mm
DHGH-14-35	26.51	26.72	0.21	145763		CO	C2		K	MN		G	PD	10	M	QZ	VN	Seam. Minor ST bands <10mm. Moderate to well developed cleating. Cleatss <2mm face x <4mm butt. Face cleats 85deg. Minor conchoidal fracturing. Minor QZ veins <3mm. Rare PY blebs <0.5mm.
DHGH-14-35	26.72	26.87	0.15	145764		CO	C1		K			I	PD	10	M	QZ	CE	Seam. Well developed cleating. Cleats <5mm face x 11mm butt. Face cleats 80deg. Minor conchoidal fracturing. Rare QZ cleat infill <0.5mm.
DHGH-14-35	26.87	27.07	0.20	145765		ZT			K			G	PD	10	R	QZ	CE	Seam floor. Coaly ST. Minor CO laminae <1mm. Rare QZ in cleating.
DHGH-14-35	27.07	27.2	0.13			ZT			K			G	PD	10	R	QZ	CE	
DHGH-14-35	27.2	28.84	1.64		55	ST		B	G			G	WD	10				
DHGH-14-35	28.84	36.86	8.02			ST		B	G			G	PD	10	M	QZ	VN	
DHGH-14-35	36.86	38.33	1.47			MS		B	G			G	PD	10	R	QZ	WP	
DHGH-14-35	38.33	39.16	0.83		60	SS	VF	E	G				WD	10				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-35	39.16	39.85	0.69		55	CO	C2		K			G	PD	10	M	QZ	VN	Interbedded CO & ST. CO seams up to 15cm. Not sampled.
DHGH-14-35	39.85	40.98	1.13			ZT			K				PD	10	M	PY	BL	
DHGH-14-35	40.98	41.18	0.20	145766		ZT			K				PD	10	M	QZ	VN	Roof. Coaly ST. CO bands <6mm. Minor QZ veinlets <1mm. Minor PY bands <5mm.
DHGH-14-35	41.18	41.58	0.40	145767		CO	C1		K	MN		G	PD	10	R	QZ	CE	Seam. Minor ST bands <25mm & MS laminations <1mm. Well developed cleating. Cleats <5mm face x <10mm butt. Common conchoidal fracturing. Rare QZ <0.5mm in cleats. Rare disseminated PY.
DHGH-14-35	41.58	41.79	0.21	145768		ZT			K			G	PD	10	R	QZ	CE	Floor. Coaly ST. Co bands <4mm. Rare QZ in cleating.
DHGH-14-35	41.79	42.6	0.81			ZT			K			G	PD	10	M	QZ	VN	
DHGH-14-35	42.6	48.08	5.48			ST		B	G		AM							
DHGH-14-35	48.08	48.16	0.08			KL												
DHGH-14-35	48.16	48.2	0.04			KL												
DHGH-14-35	48.2	48.31	0.11			ST		B	G		AM							
DHGH-14-35	48.31	48.52	0.21	145769		ST		B	G		AM	G			M	QZ	VN	Roof. Minor CO at basal contact <10mm bands.
DHGH-14-35	48.52	48.77	0.25	145770		CO	C2		K	MN		G	PD	10	M	QZ	CE	Seam. Minor MS bands <10mm. Locally well developed cleating. Cleats <4mm face x 9mm butt. Face cleats 85 deg. Minor conchoidal fracturing. Minor QZ in cleating <1mm.
DHGH-14-35	48.77	48.87	0.10	145771		ZT		D	G			G	PD	5	E	QZ	VN	Parting. Coaly ST. Co laminae <4mm. QZ veins <12mm.
DHGH-14-35	48.87	49.05	0.18	145772		CO	C3		K	MN		G	PD	5	M	QZ	VN	Seam. Minor MS bands <8mm. Moderate to well developed cleating. Cleats <3mm face x <8mm butt. Face cleats 85deg. Minor conchoidal fracturing. Minor QZ veins <4mm.
DHGH-14-35	49.05	49.26	0.21	145773		ST		B	G	MN			PD	20	R	QZ	VN	Floor. Minor CO laminae at upper contact, <1mm.
DHGH-14-35	49.26	62.17	12.91			ST		B	G				PD	20	R	QZ	VN	
DHGH-14-35	62.17	66.93	4.76			ST		B	G				WD	8				
DHGH-14-35	66.93	67.22	0.29	GT-14-58		ST		B	G				WD	5				Well developed laminated ST.
DHGH-14-35	67.22	78.02	10.80			ST		B	G				WD	10	M	QZ	VN	
DHGH-14-35	78.02	78.25	0.23	145774		ST		B	G	TR		G	WD	10	M	QZ	VN	Roof. Minor CO laminations <1mm bottom of unit.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-35	99.97	100.02	0.05			KL												
DHGH-14-35	100.02	100.98	0.96		70	SS	VF	E	G	RA		P	PD	10				
DHGH-14-35	100.98	106.37	5.39		80	ST		B	G				PD	10				
DHGH-14-35	106.37	106.57	0.20	145781	80	ST		B	G			P	PD	10				Roof. Clean
DHGH-14-35	106.57	106.77	0.20	145782		CO	C2		K	MN			PD	10	M	PY	DS	Seam roof. Minor MS laminations <10mm. Locally well developed cleating. Cleats <6mm face x <10mm butt. Face cleats 80deg. Rare conchoidal fracturing. Minor disseminated PY & in lenses <1mm. Rare QZ cleat infill, <1mm.
DHGH-14-35	106.77	107.47	0.70	145783		CO	C2		K	MN			PD	10	M	QZ	CE	Seam. Minor MS laminations <8mm. Well developed cleating. Cleats <7mm face x <10mm butt. Face cleats 80deg. Minor conchoidal fracturing. Minor QZ cleat infill <1mm. Minor PY in cleats <1mm.
DHGH-14-35	107.47	107.54	0.07			KL				CO								
DHGH-14-35	107.54	107.71	0.17	145784		CO	C2		K	MN		G	PD	10	M	QZ	CE	Seam floor. Minor MS band 50mm. Locally well developed cleating. Cleats <5mm face x <8mm butt. Face cleats 80deg. Minor QZ cleat infill <4mm. Minor PY in cleats & blebs <1mm.
DHGH-14-35	107.71	107.91	0.20	145785		ZT			K			G	PD	10	M	QZ	VN	Floor. Coaly ST. CO lamintions <4mm. QZ veins <3mm.
DHGH-14-35	107.91	108.01	0.10			ZT			K			G	PD	10	M	QZ	VN	
DHGH-14-35	108.01	110.71	2.70			ST		B	G				PD	10	M	QZ	VN	
DHGH-14-35	110.71	110.91	0.20	145786		ST		B	G	MN		G	PD	10	E	QZ	VN	Roof. Minor CO at basal contact. Accessory PY band 20mm & QZ vein 20mm at basal contact.
DHGH-14-35	110.91	111.11	0.20	145787		CO	C2		K				PD	8	M	QZ	CE	Seam roof. Well developed cleating. Cleats <9mm face x <10mm butt. Face cleats 70deg. Minor QZ cleat infill <1mm. Minor PY in cleats & bands <1mm.
DHGH-14-35	111.11	111.32	0.21	145788		CO	C2		K	MN			PD	10	E	QZ	VN	Seam. ST band 5mm & minor MS lenses <3mm. No to well developed cleating. Cleats <4mm face x <5mm butt. Face cleats 60 deg. Accessory QZ (5%) veins <3mm & cleat infill. Minor PY (<1%) blebs <1mm.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-35	111.32	111.52	0.20	145789		CO	C2		K	MN		G	PD	8	E	QZ	VN	Seam floor. Minor ST bands <10mm. No to well developed cleating. Cleats <4mm face x <6mm butt. Face cleats 85deg. Accessory (5%) QZ veins <4mm & cleat infill <1mm.
DHGH-14-35	111.52	111.72	0.20	145790		ST		B	G	MN		G	PD	5	R	QZ	CE	Floor. Minor CO laminations <4mm. Rare QZ in cleats.
DHGH-14-35	111.72	112.8	1.08			ST		B	G			G	PD	5				
DHGH-14-35	112.8	118.88	6.08		60	SS	FM	A	G	MN			WD	10				
DHGH-14-35	118.88	121.08	2.20		85	ST		B	G			G	MX	10	M	QZ	WP	
DHGH-14-35	121.08	128.22	7.14			ST		B	G			G	PD	5	M	QZ	VN	
DHGH-14-35	128.22	131.31	3.09		60	ST		B	G			G	WD	10	R	QZ	WP	
DHGH-14-35	131.31	133.79	2.48			ST		B	G			I	PD	1	R	QZ	WP	
DHGH-14-35	133.79	134.56	0.77			SS	VF	B	G			I	PD	5				
DHGH-14-35	134.56	142.46	7.90			ST		B	G			G	PD	5				
DHGH-14-35	142.46	144.9	2.44		65	ST		B	G				PD	5	M	PY	DS	
DHGH-14-35	144.9	145.15	0.25	145791	65	ST		B	G	MN		I	PD	5	M	PY	DS	Roof. <4mm CO at basal contact
DHGH-14-35	145.15	145.35	0.20	145792		CO	C2		K	MN		G	PD	10	M	QZ	CE	Seam roof. Minor ST bands 6mm. Well developed cleating. <4mm face x <7mm butt. Face cleats 87 deg. Conchoidal fracturing. Minor QZ in cleats <4mm.
DHGH-14-35	145.35	145.55	0.20	145793		CO	C3		K	MN		G	WD	10	M	QZ	VN	Seam. ST band 15mm. Minor MS laminae <2mm. No to moderately developed cleating; <2x2mm. QZ vein 5mm.
DHGH-14-35	145.55	145.88	0.33	145794		ST		B	G	MN	AM							Parting. Minor CO laminations at upper & basal contact.
DHGH-14-35	145.88	146.22	0.34	145795		CO	C2		K	MN		G	PD	10	E	QZ	CE	Seam. Minor MS laminae <1mm near basal contact. Well developed cleating. Minor PY bands <2mm.
DHGH-14-35	146.22	146.48	0.26	145796		ZT		D	G			P			M	QZ	CE	Parting (floor). Coaly ST. Minor QZ cleat infill <0.5mm.
DHGH-14-35	146.48	146.81	0.33	145797		ST		B	G	MN	AM							Parting (roof). Minor CO laminae <5mm at upper & basal contact.
DHGH-14-35	146.81	147.29	0.48	145798		CO	C2		K	MN		G	PD	10	M	QZ	VN	Seam. Minor ST lenses <4mm & MS laminae <4mm. Well developed cleating; <4mm face x <8mm butt. Conchoidal fracturing. Minor QZ cleat infill <1mm. Minor PY cleat infill <0.5mm.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-35	147.29	147.49	0.20	145799		CO	C3		K	MN		G	PD	10	M	QZ	CE	Seam floor. Minor ST & MS bands <5mm. Moderate to well developed cleating; <3mm face x 5mm butt. Some listric faces. Minor QZ in cleats <2mm.
DHGH-14-35	147.49	147.7	0.21	145800		ST		D	G	MN			PD	10				Floor. Minor CO laminae <3mm at upper contact.
DHGH-14-35	147.7	148.2	0.50			ST												
DHGH-14-35	148.2	148.54	0.34			ZT												
DHGH-14-35	148.54	148.74	0.20			KL				CO								
DHGH-14-35	148.74	148.81	0.07			CO	C3		K	CM		G						Not sampled. Seam <30cm. Common ST bands.
DHGH-14-35	148.81	149.01	0.20			ZT												
DHGH-14-35	149.01	149.35	0.34			ST		B	G	MN	AM	P			R	QZ	CE	
DHGH-14-35	149.35	154.77	5.42			SS	VM	C	G	MN		P	PD	10				
DHGH-14-35	154.77	156.27	1.50			ST						G						
DHGH-14-35	156.27	156.76	0.49			CO	SY		K	CM		G	PD	10	M	QZ	VN	Not sampled. Stony coal & 60% ST/MS
DHGH-14-35	156.76	157.65	0.89			ZT		D	G			G	PD	15	R	QZ	CE	
DHGH-14-35	157.65	159.19	1.54			ST		B	G			G	PD	15	M	PF	BP	
DHGH-14-35	159.19	162.88	3.69		70	SS	VF	C	G	MN		G	PD	15	R	QZ	CE	
DHGH-14-35	162.88	168.45	5.57		60	SS	FC	A	G			G	PD	10	M	QZ	VN	
DHGH-14-35	168.45	169.15	0.70			CG	GP	S	G			G	PD	5				
DHGH-14-35	169.15	177.08	7.93			SS	FC	N	G	MN		G	PD	15	E	QZ	VN	
DHGH-14-35	177.08	178.72	1.64			CG	GP	S	G	MN		P	PD	15				
DHGH-14-35	178.72	188.85	10.13		80	SS	VF	A	G	MN		G	PD	10				
DHGH-14-35	188.85	192.99	4.14			SS	VF	A	G	MN	AM	G						
DHGH-14-35	192.99	198.21	5.22		75	SS	VF	A	G			G	PD	5	M	QZ	VN	
DHGH-14-35	198.21	201.74	3.53			SS	VF	A	G	MN		G	PD	5				
DHGH-14-35	201.74	207.55	5.81		70	ST		B	G			G	PD	5				
DHGH-14-35	207.55	212.31	4.76			ST		B	G			G	PD	5	M	PY	BL	
DHGH-14-35	212.31	214.15	1.84			MS		D	G			P	PD	10				
DHGH-14-35	214.15	214.45	0.30			ST		E	G			P	PD	10				
DHGH-14-35	214.45	217.17	2.72			MS		D	G			G	PD	10	M	PY	BL	
DHGH-14-35	217.17	217.76	0.59			ST		B	G		AM	G			M	PY	BL	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-35	217.76	222.76	5.00			MS		D	G		AM	G			M	PY	BL	
DHGH-14-35	222.76	223.66	0.90			ST		B	G			G	PD	10	M	PY	BL	
DHGH-14-35	223.66	223.86	0.20	145801		ST		B	G			G	PD	10	C	PY	BL	Roof. Minor CO at basal contact <30mm. Common disseminated PY & as bivalve replacement.
DHGH-14-35	223.86	224.06	0.20	145802		CO	C2		K	MN		G	PD	15	M	QZ	CE	Seam roof. Minor MS bands <10mm. Moderately developed cleating; <3mm face x <5mm butt. Minor QZ in cleating <4mm. Minor PY blebs in MS
DHGH-14-35	224.06	224.94	0.88	145803		CO	C2		K	MN		G	PD	20	M	QZ	CE	Seam. ST band 45mm. Moderately developed cleating; <3mm face x <4mm butt. Face cleats 80 deg. Minor listric faces. Minor conchoidal fracturing. Minor QZ cleat infill <1mm.
DHGH-14-35	224.94	225.76	0.82	145804		CO	C3		K	MN		G	PD	40	M	QZ	CE	Seam. ST band 40mm & 60mm. Poorly developed cleating; <2mm face. Most original texture destroyed by shearing. Common listric faces. Minor QZ in cleating <2mm.
DHGH-14-35	225.76	226.33	0.57	145805		CO	C2		K	MN		G	PD	15	M	QZ	CE	Seam. Minor ST bands 20-30mm. Moderately developed cleating; <5mm face x <7mm butt. Face cleats 75 deg. Minor QZ <1mm in cleats.
DHGH-14-35	226.33	226.95	0.62	145806		CO	C3		K			G	PD	15	M	QZ	CE	Seam. No to moderately developed cleating; <2mm face x 15mm butt. Common listric faces. Minor QZ <2mm in cleating.
DHGH-14-35	226.95	227.3	0.35	145807		CO	C4		K									Seam. Crushed zone. Some listric faces. Disaggregated CO.
DHGH-14-35	227.3	227.96	0.66			KL				CO								
DHGH-14-35	227.96	228.19	0.23	145808		CO	C3		K	MN		G	PD	20				Seam. Minor MS laminations <2mm. No cleating. Common listric faces.
DHGH-14-35	228.19	228.37	0.18	145809		CO	C4		K	MN		P	PD	20				Seam floor. ST band 15mm. No cleating. Common listric faces.
DHGH-14-35	228.37	228.55	0.18	145810		ST		B	G				WD	20	M	QZ	VN	Floor. Clean
DHGH-14-35	228.55	228.74	0.19			ST		B	G			O	WD	20	M	QZ	VN	
DHGH-14-35	228.74	233.84	5.10			SS	FF	A	G	MN		G	PD	25	M	QZ	VN	
DHGH-14-35	233.84	235.35	1.51		60	SS	VV	A	G			F	PD	20	M	QZ	VN	
DHGH-14-35	235.35	235.75	0.40		60	SS	VV	A	G			F	PD	50	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-35	235.75	236.21	0.46		60	SS	VV	A	G			F	PD	20	M	QZ	VN	
DHGH-14-35	236.21	238.55	2.34			ST		B	G			P	WD	35	M	QZ	VN	
DHGH-14-35	238.55	244.28	5.73		55	SS	VF	A	G			F	WD	20	M	QZ	VN	
DHGH-14-35	244.28	250.42	6.14			ST		B	G	MN		P	PD	15	E	QZ	WP	
DHGH-14-35	250.42	251.33	0.91			CO	SY	D	K			P			E	QZ	CE	
DHGH-14-35	251.33	254.93	3.60			ST		B	G	MN		P	PD	15	E	BI	DS	BIVALVE INTERVAL: 251.33- 255.93
DHGH-14-35	254.93	255.34	0.41			ZT		D	K	MN		R			E	PY	BL	
DHGH-14-35	255.34	255.57	0.23	145811		ZT		D	K	MN		R			E	PY	BL	ROOF A: COALY ST COAL BAND ARE UP TO 20 MM THICK, UP TO 1% QZ VEINS AND AS CLEAT INFILL.
DHGH-14-35	255.57	255.77	0.20	145812		CO	C3	D	K	MN		G	PD	10	E	QZ	VN	SEAM ROOF: C3 COAL WITH 10% 12MM SILTSTONE BANDS WITH 5% QUARTZ VEINS UP TO 5MM THICK. NO TO MODERATELY DEVELOPED CLEATING, 4X 4 MM CLEATS. MINOR LISTRIC FACES AND MINOR CONCHOIDAL FRACTURING. GRADATIONAL CONTACT.
DHGH-14-35	255.77	255.98	0.21	145813		CO	C3	D	K	MN		G	PD	10	M	QZ	CE	SEAM: C3 COAL, FOLDED BEDDING ON ITSELF, MINOR MUDSTONE LAMINATIONS UP TO 1 MM. MINOR CLEATING, 3X3 MM IN SIZE. LISTRIC FACES. MN QZ IN CLEATS. GRADATIONAL CONTACT.
DHGH-14-35	255.98	256.34	0.36	145814		CO	C2	D	K	MN		G	PD	10	M	QZ	CE	SEAM: C2 COAL WITH 4% SILTSTONE BANDS UP TO 4MM. NO TO MODERATE DEVELOPED CLEATING, 2 X4 MM IN SIZE. MINOR CONCHOIDAL FRACTURING. LESS THAN 1% QZ OCCURRING AS 1MM CLEAT INFILL.
DHGH-14-35	256.34	256.54	0.20	145815		CO	C2	D	K			P	PD	10	M	QZ	CE	SEAM FLOOR: C2 COAL WITH MODERATELY DEVELOPED CLEATING, 3 MM FACE X 4 MM BUTT CLEATS. COMMON CONCHOIDAL FRACTURING. MINOR QZ IN CLEATING UP TO 1 MM IN SIZE.
DHGH-14-35	256.54	256.91	0.37	145816		ZT		D	G	MN		G	WD	10	E	PY	BN	FLOOR: COALY ST, COAL BANDS ARE UP TO 10 MM WITH MINOR QZ IN CLEATING. PYRITE BAND UP TO 15 MM.
DHGH-14-35	256.91	257.93	1.02			ST		B	G	MN		G	PD	25	M	QZ	VN	
DHGH-14-35	257.93	259	1.07			ZT		B	G			G	PD	25	E	PY	BN	
DHGH-14-35	259	260.44	1.44			ST		B	G	MN		I	PD	20	E	PY	BN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-35	260.44	260.62	0.18			CO	C2	D	K			P	PD		E	QZ	CE	SEAM: C2 COAL NOT SAMPLED BECAUSE IT IS LESS THAN 30 CM. WELL DEVELOPED CLEATING 3MM FACE CLEATS AND 5MM BUTT CLEATS. MINOR CHONCOIDAL FRACTURING. ACCESSORY 5% QUARTZ IN CLEATING.
DHGH-14-35	260.62	261.43	0.81			ST		B	G	MN		G	PD	15	M	QZ	CE	
DHGH-14-35	261.43	264.21	2.78		85	SS	FF	A	G			G	PD	15	E	QZ	VN	
DHGH-14-35	264.21	267.76	3.55			SS	FF	A	G			G	PD	5	E	QZ	VN	
DHGH-14-35	267.76	277.11	9.35		60	ST		B	G			G	PD	15	M	QZ	VN	
DHGH-14-35	277.11	285.75	8.64		90	ST		B	G	RA			PD	10	M	QZ	VN	
DHGH-14-35	285.75	285.82	0.07			KL												
DHGH-14-35	285.82	290.47	4.65		90	ST		B	G			G	PD	8	M	QZ	RF	BIVALVE INTERVALS: 287.81-287.92
DHGH-14-35	290.47	291.95	1.48			SS	FF	A	G			I	PD	20	E	BI	BN	BIVALVE INTERVAL: 291.28-291.95
DHGH-14-35	291.95	292.99	1.04		80	ST		B	G			O	WD	10				
DHGH-14-35	292.99	295.53	2.54			SS	FF	A	G	MN		G	PD	10	E	QZ	VN	
DHGH-14-35	295.53	296	0.47		55	SS	VF	A	G			G	PD	8				
DHGH-14-35	296	299.33	3.33			SS	FF	A	G	MN		P	PD	20				
DHGH-14-35	299.33	303.55	4.22		75	ST		B	G			G	WD	20				
DHGH-14-35	303.55	306.74	3.19			ST		B	G			I	PD	10				
DHGH-14-35	306.74	307.57	0.83			SS	VF	C	G			I	PD	5	M	QZ	VN	
DHGH-14-35	307.57	307.92	0.35			ST		B	G			I	PD	15	E	PY	LN	
DHGH-14-35	307.92	315.12	7.20			SS	FF	A	G				PD					
DHGH-14-35	315.12	315.67	0.55			MS		D	G			G	PD	15	M	PY	DS	
DHGH-14-35	315.67	315.86	0.19			ST		D	G			G	PD	15	M	QZ	VN	
DHGH-14-35	315.86	316.14	0.28	145817		ST		D	G	MN		G	PD	15	M	QZ	VN	ROOF: COAL LAMINATIONS ARE UP TO 11 MM AND ARE AT THE BASE OF THE UNIT. 6 CM ZT BAND ABOVE CONTACT WHICH WASN'T BROKEN OUT DUE TO SMALL SIZE. 1 QZ VEIN 5 MM WIDE ABOVE ZT BAND.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-35	316.14	316.42	0.28	145818		CO	C2	D	K	MN		G	PD	20	M	QZ	CE	SEAM: C2 COAL WITH CLEATS ABOUT 5 X 2MM IN SIZE. UP TO 5MM FACE WITH BUTTS UP TO 10 MM IN SIZE. MODERATELY TO WELL DEVELOPED CLEATING. COMMON CHONCOIDAL FRACTURE, FOCUSED ON GOOD FACES. ACCESSORY QZ IN CLEATS UP TO A MILLIMETER. 5% SILTSTONE LENSES INTERMIXED AT THE BASE OF THE UNIT (UP TO 8 MM).
DHGH-14-35	316.42	316.59	0.17	145819		CO	SY		K	MN		G	PD	15	C	QZ	VN	SEAM: STONY COAL WITH MINOR SI LAMINATIONS UP TO 2 MM IN SIZE. UNIT IS HIGHLY SHEARED (DUCTILE).
DHGH-14-35	316.59	316.79	0.20	145820		ST		B	G	MN		G	PD	25	M	QZ	CE	FLOOR: COAL LAMINATIONS UP TO 1CM IN SIZE. COAL LAMINATIONS HAVE BEEN SHEARED AND FOLDED. DEFORMATION IS FOCUSED IN THESE BANDS.
DHGH-14-35	316.79	322.57	5.78			ST		B	G				PD	25				END OF HOLE
DHGH-14-36	0	1.88	1.88			KL												
DHGH-14-36	1.88	2.11	0.23			GV	SI	B	G	SS								
DHGH-14-36	2.11	4.45	2.34			KL												
DHGH-14-36	4.45	5.16	0.71			GV	SI	B	G	SS								
DHGH-14-36	5.16	7.61	2.45			KL												
DHGH-14-36	7.61	8.2	0.59			GV	SI	B	G	SS								
DHGH-14-36	8.2	10.25	2.05			KL												
DHGH-14-36	10.25	11.25	1.00			GV	SA	B	G	SS								
DHGH-14-36	11.25	12.94	1.69			KL												
DHGH-14-36	12.94	14.3	1.36			GV		B	G	SS								
DHGH-14-36	14.3	17.23	2.93			KL												
DHGH-14-36	17.23	17.35	0.12			GV		B	G	SS								
DHGH-14-36	17.35	20.18	2.83			KL												
DHGH-14-36	20.18	20.56	0.38			GV	SI	B	G	SS								
DHGH-14-36	20.56	24.67	4.11		70	SS	MC	A	G			G	WD	40	M	QZ	VN	
DHGH-14-36	24.67	26.36	1.69			SS	MC	A	G	ST		G	PD	30	M	QZ	VN	
DHGH-14-36	26.36	29.1	2.74		75	ST		B	G			G	WD	40				
DHGH-14-36	29.1	29.26	0.16			ZT			K				PD	20				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-36	29.26	29.68	0.42			KL				CO								
DHGH-14-36	29.68	29.8	0.12			ZT			K									
DHGH-14-36	29.8	30.38	0.58			KL												
DHGH-14-36	30.38	30.82	0.44			KL				CO								
DHGH-14-36	30.82	31.16	0.34			KL												
DHGH-14-36	31.16	31.52	0.36			KL				CO								
DHGH-14-36	31.52	31.95	0.43			KL												
DHGH-14-36	31.95	32.73	0.78			ST		B	G				PD	15				
DHGH-14-36	32.73	33.01	0.28			KL												
DHGH-14-36	33.01	33.46	0.45			ST		B	G			G	PD	15				
DHGH-14-36	33.46	37.28	3.82			SS	FM	A	G		AM	G			M	QZ	VN	
DHGH-14-36	37.28	37.9	0.62			ST		B	G				PD	25				
DHGH-14-36	37.9	38.18	0.28			KL												
DHGH-14-36	38.18	38.33	0.15			ST		B	G			I	PD	25				
DHGH-14-36	38.33	39.04	0.71			SS	FM	A	G			G	PD	10				
DHGH-14-36	39.04	41.55	2.51		60	ST		B	G				PD	10	M	QZ	VN	
DHGH-14-36	41.55	41.73	0.18			KL												
DHGH-14-36	41.73	42.37	0.64			KL												
DHGH-14-36	42.37	44.78	2.41			ST		B	G				PD	15	M	QZ	VN	
DHGH-14-36	44.78	45.11	0.33			KL												
DHGH-14-36	45.11	48.8	3.69			ST		B	G			F	PD	15	M	QZ	VN	
DHGH-14-36	48.8	51.35	2.55			XT		D	G			O	PD	60	M	BI	BN	
DHGH-14-36	51.35	52.39	1.04			SS	MC	A	G				PD	15	M	QZ	VN	
DHGH-14-36	52.39	53.92	1.53			KL												
DHGH-14-36	53.92	54.12	0.20			KL												
DHGH-14-36	54.12	54.68	0.56			ST		B	G			G	PD	20	M	QZ	VN	
DHGH-14-36	54.68	60.82	6.14			SS	MC	A	G		AM				M	QZ	VN	
DHGH-14-36	60.82	63.26	2.44		70	ST		B	G			G	WD	25				
DHGH-14-36	63.26	65.83	2.57			SS	MC	A	G			G	PD	30	M	QZ	VN	
DHGH-14-36	65.83	69.39	3.56		60	SS	VM	B	G			G	PD	20				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-36	69.39	74.82	5.43			MS		D	G			G	PD	20	R	PY	BL	
DHGH-14-36	74.82	79.04	4.22			SS	VF	E	G			G	PD	30	M	BI	BN	
DHGH-14-36	79.04	79.23	0.19			ST		B	G				PD	35	R	PY	DS	
DHGH-14-36	79.23	79.52	0.29	GT-14-49		ST		B	G				PD	35	M	QZ	VN	
DHGH-14-36	79.52	85.23	5.71			ST		B	G	RA			PD	35	M	QZ	VN	
DHGH-14-36	85.23	89.84	4.61		85	SS	FM	A	G	RA		G	WD	25	R	QZ	VN	
DHGH-14-36	89.84	93.9	4.06		85	ST		B	G				WD	20	M	QZ	VN	
DHGH-14-36	93.9	94.09	0.19	145736	85	ST		B	G			G	WD	20	M	QZ	VN	Seam roof. Minor CO laminations at basal contact <3mm. Minor QZ veins <8mm. Minor PY bands at basal contact.
DHGH-14-36	94.09	94.39	0.30	145737		CO	C2		K	MN		F	PD	20	E	QZ	VN	Seam. Minor MS bands <12mm. Well developed cleating. Cleats <2mm face x <4mm butt. Face cleats 60deg. Accessory QZ (5%) in cleats <4mm. Minor PY blebs <1mm. High density on LAS due to presence of QZ.
DHGH-14-36	94.39	94.59	0.20	145738		ST		B	G				PD	15	M	QZ	VN	Seam floor. Clean
DHGH-14-36	94.59	95.21	0.62			ST		B	G	MN			PD	15	M	QZ	VN	
DHGH-14-36	95.21	97.41	2.20		70	ST		B	G			I	FL		M	QZ	VN	
DHGH-14-36	97.41	99.51	2.10			SS	VM	A	G		AM				R	QZ	VN	
DHGH-14-36	99.51	99.64	0.13			KL												
DHGH-14-36	99.64	102.72	3.08			SS	VM	A	G			O	WD	40	M	QZ	VN	
DHGH-14-36	102.72	103.12	0.40	GT-14-50		SS	VM	A	G		AM				M	QZ	VN	
DHGH-14-36	103.12	104.19	1.07			SS	VM	A	G		AM	I	DE		M	QZ	VN	
DHGH-14-36	104.19	105.83	1.64		60	ST		B	G			G	PD	10	M	QZ	VN	
DHGH-14-36	105.83	112.86	7.03		70	SS	FM	A	G			G	WD	10	R	QZ	VN	
DHGH-14-36	112.86	114.06	1.20			ST		B	G	MN		P	PD	15	R	QZ	WP	
DHGH-14-36	114.06	116.28	2.22			MS		D	G			G	WD	15	M	QZ	VN	
DHGH-14-36	116.28	120.28	4.00		60	ST		B	G	RA		G	PD	20	R	QZ	VN	
DHGH-14-36	120.28	123.96	3.68			ST		B	G				PD	35	R	QZ	VN	
DHGH-14-36	123.96	124.55	0.59			CO	SY		K				PD	35	M	QZ	VN	Stony coal. Not sampled

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-36	124.55	124.8	0.25	145739		CO	SY		K	MN		G		40	M	QZ	VN	Roof. Stony coal. Shear zone. Breaks on listric faces. Minor QZ veins <4mm. Minor PY blebs <15mm. Minor ST bands <40mm.
DHGH-14-36	124.8	125	0.20	145740		CO	C3		K			G	PD	30	M	QZ	VN	Seam roof. Original textures destroyed by shearing. Common listric surfaces. Minor folding. Minor QZ veins <3mm.
DHGH-14-36	125	125.44	0.44	145741		CO	C3		K	MN		G	PD	55	M	QZ	CE	Seam. Minor MS laminations <6mm. Locally remnant moderately developed cleating, <2x2mm. Common listric surfaces. Minor QZ in cleats <1mm. Minor PY bands <4mm.
DHGH-14-36	125.44	125.84	0.40	145742	65	ST		E	G	MN		G			E	QZ	VN	Parting. ST clasts <50mm in CO. Textures & bedding destroyed from faulting. Common listric surfaces. Minor MS bands <30mm. Accessory QZ veining in ST. Minor PY blebs <10mm.
DHGH-14-36	125.84	126.18	0.34	145743		CO	C4		K	MN		G	PD	45	M	QZ	VN	Seam. Minor MS laminations <20mm. Original textures destroyed by shearing. Common listric faces. Minor QZ veins <4mm. Minor PY disseminations in QZ veins.
DHGH-14-36	126.18	126.38	0.20	145744		CO	C4		K	MN		G	PD	20	M	QZ	VN	Seam floor. Minor MS laminations <15mm & ST clasts <4mm. Original textures destroyed by shearing and folding. Breaks at listric faces. Minor QZ veins <5mm.
DHGH-14-36	126.38	126.6	0.22	145745		ZT		D	G			G			M	QZ	VN	Floor. Coaly ST. Minor QZ veins <4mm. Minor pyrite blebs & bands.
DHGH-14-36	126.6	127	0.40			ST		B	G	MN		G	PD	20	M	QZ	VN	
DHGH-14-36	127	131.82	4.82		75	SS	MM	A	G			G	PD	25	M	QZ	VN	
DHGH-14-36	131.82	132.21	0.39	GT-14-51	75	SS	MM	A	G				PD	25	R	QZ	VN	
DHGH-14-36	132.21	132.69	0.48		75	SS	MM	A	G			G	PD	25	M	QZ	VN	
DHGH-14-36	132.69	134.14	1.45			ST		B	G	RA		G	PD	20	M	QZ	VN	
DHGH-14-36	134.14	134.36	0.22			CO	C3		K	MN		P	PD	30	M	QZ	VN	Not sampled. ST laminations <20mm. Locally well developed cleating <3x4mm. Minor QZ veins <5mm.
DHGH-14-36	134.36	136.61	2.25			SS	FM	N	G			G	PD	30	M	PY	CN	Bivalve horizon 136.55 - 137.48
DHGH-14-36	136.61	139.16	2.55			ST		B	G				PD	20	M	BI	BN	
DHGH-14-36	139.16	139.27	0.11			KL												
DHGH-14-36	139.27	142.47	3.20			ST		B	G			G	PD	30				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-36	195.44	195.58	0.14			CO	C3		K	MN		G			M	PY	BL	Not sampled; seam <30cm. Minor ST laminations <2mm. Common listric faces.
DHGH-14-36	195.58	195.94	0.36			ZT			K						M	QZ	VN	
DHGH-14-36	195.94	196.16	0.22			KL												
DHGH-14-36	196.16	196.25	0.09			CO	C4		K			G			M	QZ	VN	Not sampled; seam <30cm
DHGH-14-36	196.25	196.5	0.25			ZM						G						
DHGH-14-36	196.5	197.31	0.81			ST		B	G	MN		G	PD	25	M	QZ	VN	
DHGH-14-36	197.31	199.35	2.04		55	SS	VF	E	G			F	WD	40	M	QZ	VN	
DHGH-14-36	199.35	200.42	1.07		55	SS	VF	E	G			F	WD	60	M	QZ	VN	
DHGH-14-36	200.42	200.89	0.47		55	SS	VF	E	G			G	WD	40	M	QZ	VN	
DHGH-14-36	200.89	205.36	4.47			SS	VM	A	G			F	PD	10	E	QZ	VN	
DHGH-14-36	205.36	205.41	0.05	145751		SS	VM	A	G			F	PD	10	E	QZ	VN	Roof. SS VM - ZT faulted contact. SS clean. ZT minor PY blebs <8mm. 60% ZT, 40% SS VM
DHGH-14-36	205.41	205.56	0.15	145751		ZT			K			G	PD		M	PY	BL	
DHGH-14-36	205.56	205.77	0.21	145752		CO	C3		K	MN		G	PD	20	M	QZ	LN	Seam roof. Minor ST lenses <3mm. Poorly developed cleating <2x3mm. Common listric surfaces. Minor QZ veins <2mm assoc w ST lenses.
DHGH-14-36	205.77	206.15	0.38	145753		CO	C3		K	MN		G	PD	40				Seam. Minor MS laminations <3mm. Common listric surfaces; no remnant textures.
DHGH-14-36	206.15	206.35	0.20	145754		CO	C2		K	MN		G	PD	45	M	QZ	VN	Seam floor. Minor ST laminations <6mm. Common listric surfaces. Poorly developed cleating <4x6mm. Minor QZ veinlets <0.5mm in ST bands. Minor PY blebs <2mm
DHGH-14-36	206.35	206.51	0.16	145755		ZT			K			G			M	QZ	VN	Floor. Coaly ST. Minor QZ veins <2mm.
DHGH-14-36	206.51	210.01	3.50			ST		B	G				PD	40	M	QZ	VN	
DHGH-14-36	210.01	210.21	0.20	145756		ST		B	G			I	PD	40	M	QZ	VN	Roof. Clean
DHGH-14-36	210.21	210.35	0.14	145757		CO	C2		K	MN		G	PD	50	M	QZ	VN	Seam roof. Well developed cleating. Cleats <10x10mm. Minor conchoidal fracturing. Minor ST bands <10mm at upper contact. Minor QZ veins <3mm. Minor PY bands <4mm.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	23.07	23.54	0.47	140861		CO	C3		K	MN					E	QZ	VN	SEAM A: C3 COAL; HIGHLY SHEARED; MINOR MS INTERMIXED THROUGHOUT; MINOR SILTSTONE LENSES RANGING FROM 10-30MM WIDE; ST LENSES ARE BROKEN FROM SHEARING (ORIGINAL RELATIONSHIP/ORIENTATIONS UNKNOWN); 3% ACCESSORY QTZ-CA VEINING AND VEINLETS, INCLUDING ONE 10MM WIDE VEIN; STRONG SHEARING CRUSHING COAL AND DESTROYING 95% OF ORIGINAL CLEATING; PLACEMENT OF COAL IN COAL SEAM UNCERTAIN DUE TO CORE LOSS ABOVE AND BELOW
DHGH-14-37	23.54	24.2	0.66			KL				CO								LOST COAL
DHGH-14-37	24.2	24.3	0.10	140862		CO	C4		K	CO	D				E	QZ	VN	SEAM FLOOR: C4 COAL; COMMON (~30%) MS LAMINATIONS THROUGHOUT (1-2MM WIDE); 5% ACCESSORY QTZ-CA VEINING UP TO 5MM WIDE; POORLY DEVELOPED CLEATING UP TO 1MM X 2MM (~15% BRIGHT COAL); TOP OF INTERVAL IS MOIST AND EASILY BROKEN/SOFT
DHGH-14-37	24.3	24.5	0.20	140863	85	ST		B	G	MN		PD			E	QZ	VN	FLOOR: INTERMIXED ST AND SS FM W/MINOR COAL LENSES (~3%) UP TO 3MM WIDE X 15MM LONG; ACCESSORY QTZ VEINS FROM 1-8MM THICK
DHGH-14-37	24.5	25.22	0.72		85	ST		B	G	MN		G	PD	10	E	QZ	VN	
DHGH-14-37	25.22	28.92	3.70		70	SS	FM	A	G			P	WD	10				
DHGH-14-37	28.92	31.57	2.65		80	SS	FM	A	G	MN		P	WD	10				
DHGH-14-37	31.57	33.68	2.11		60	ST		B	G			G	DE	15				bedding is mottled.
DHGH-14-37	33.68	36.81	3.13		70	ST		B	G			G	WD	10				
DHGH-14-37	36.81	41.96	5.15			ST		B	G	MN		PD	15					
DHGH-14-37	41.96	42.01	0.05			KL												
DHGH-14-37	42.01	44.9	2.89			ST		B	G		AM							
DHGH-14-37	44.9	45	0.10			KL												
DHGH-14-37	45	46.57	1.57			ST		B	G		AM							

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	46.57	46.74	0.17			CO	C3	D	K	MN		P	WD	35	E	QZ	CE	C3 (40% BRIGHT))COAL W/ MINOR (10%) 1-2MM MS LAMINATIONS THROUGHOUT, ACCESSORY (15%) 1-6MM QZ/CARB CLEAT INFILL THROUGHOUT, ACCESSORY (5%) ONE 20X50MM PY BLEB AT TOP OF UNIT, CLEATING IS WELL DEVELOPED, 2X2MM CLEATS THROUGHOUT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED BY GEOPHYSICAL LOGS
DHGH-14-37	46.74	46.99	0.25	140864		XT		B	G	MN	AM	G			E	QZ	CE	ROOF A: CARBONACEOUS SILT W/ MINOR (3%) 2MM COAL LAMINATIONS AT TOP AND BOTTOM OF UNIT AS WELL AS 2MM COAL LENSES THROUGHOUT, ACCESSORY (3%) 1MM QZ/CARB VEINING THROUGHOUT UNIT, MINOR (<1%) 1MM PY VEINLETS ALONG TOP AND BOTTOM CONTACTS OF UNIT
DHGH-14-37	46.99	47.49	0.50	140865		CO	C2	D	K	MN					E	QZ	VN	SEAM: C2 (75% BRIGHT) COAL W/ MINOR (5%) 1MM MS LAMINATIONS THROUGHOUT, ACCESSORY (2%) 5MM QZ/CARB VEIN NEAR TOP OF UNIT, CLEATING IS WELL DEVELOPED THROUGHOUT, 3X4MM CLEATS, COMMON CONCOIDAL FRACTURING ALONG CLEAT FACES, COAL IS HEAVILY BROKEN AT TOP AND BOTTOM 5-10CM OF UNIT
DHGH-14-37	47.49	47.94	0.45			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-37	47.94	48	0.06	140866		CO	C4	D	K	CM		P			M	QZ	CE	FLOOR A: C4 (25% BRIGHT) COAL W/ COMMON (20%) 13MM MS BAND NEAR MIDDLE OF UNIT, MINOR (1%) 1MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS MIDDLE OF UNIT, ACCESSORY (8%) DISSEMINATED PY THROUGHOUT UNIT, CLEATING IS LOCAL AND WELL DEVELOPED, 2-3MM CLEATS PRESENT
DHGH-14-37	48	48.14	0.14	140866		XM		D	G	MN	AM	G			E	QZ	CE	FLOOR C: CARBONACEOUS MS W/ MINOR (4%) 1MM COAL LENSES CONCENTRATED TOWARDS TOP OF UNIT, ACCESSORY (4%) 1MM QZ/CARB CLEAT INFILL, MINOR (<1%) 1MMX2MM PY BLEB NEAR TOP OF UNIT
DHGH-14-37	48.14	51.18	3.04			XM		D	G	MN	AM	G			E	QZ	CE	
DHGH-14-37	51.18	53.89	2.71		55	ST		B	G				WD	20				
DHGH-14-37	53.89	58.84	4.95		70	SS	FM	A	G			P	WD	15				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	58.84	63.24	4.40		80	ST		B	G				WD	15				
DHGH-14-37	63.24	63.29	0.05			KL												
DHGH-14-37	63.29	66.34	3.05		80	ST		B	G			G	WD	10				
DHGH-14-37	66.34	68.89	2.55			XM		D	G	MN		G		20	E	QZ	CE	
DHGH-14-37	68.89	69.09	0.20	140867		XM		D	G	MN	AM	G			E	QZ	VN	ROOF A: CARBONACEOUS MS W/ MINOR (15%) 4-12MM COAL BANDS THORUGHOUT UNIT, ACCESSORY (3%) 1-3MM QZ/VCARB VEINING AS WELL AS 1MM CLEAT INFILL THORUGHOUT, ACCESSORY (4%) 3-4MM PY BANDS AND 1-2MM VEINLETS NEAR MIDDLE OF UNIT
DHGH-14-37	69.09	69.43	0.34	140868		CO	C3	D	K	MN		G			M	QZ	CE	SEAM ROOF A: C3 (40% BRIGHT) MODERATELY SHEARED COAL, 65% OF CLEATING HAS BEEN DESTROYED, 1-2MM CLEATS PRESENT, MINOR (12%) MS INTERMIXED THROUGHOUT UNIT, MINOR (1%) 1MM QZ.CARB CLEAT INFILL CONCENTRATED TOWARDS TOP OF UNIT, ACCESSORY (3%) 5X15MM PY BLEB AT TOP AND BOTTOM OF UNIT, LISTRIC SURFACES PRESENT ALONG JOINTS
DHGH-14-37	69.43	70.13	0.70	140869		CO	C2	D	K	MN		G			E	QZ	CE	SEAM: C2 (85% BRIGHT) COAL W/ MINOR (8%) 1-3MM MS LAMINATIONS THORUGHOUT UNIT, ACCESSORY (6%) 1-3MM QZ/CARB CLEAT INFILL THORUGHOUT UNIT, CLEATING IS WELL DEVELOPED THORUGHOUT, 1-2MM CLEATS PRESENT
DHGH-14-37	70.13	70.41	0.28	140870		CO	C2	D	K	MN		G			E	QZ	CE	SEAM FLOOR A: C2 (85% BRIGHT) COAL W/ MINOR (8%) 1-3MM MS LAMINATIONS THORUGHOUT UNIT, ACCESSORY (6%) 1-3MM QZ/CARB CLEAT INFILL THORUGHOUT UNIT, ACCESSORY (2%) 3X45MM PY BLEB AT TOP OF UNIT, CLEATING IS WELL DEVELOPED THORUGHOUT, 1-2MM CLEATS PRESENT
DHGH-14-37	70.41	70.61	0.20	140871		XM		D	G	MN	AM	G			E	QZ	CE	FLOOR: CARBONACEOUS MS W/ MINOR (10%) 2-5MM MS LAMINATIONS CONCENTRATED TOWARDS TOP HALF OF UNIT, ACCESSORY (3%) 1-2MM QZ/CARB CLEAT INFILL
DHGH-14-37	70.61	71.05	0.44			XM		D	G	MN	AM	G			E	QZ	CE	
DHGH-14-37	71.05	74.91	3.86			MS		D	G	RA	AM	G			E	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	74.91	80.21	5.30			SS	FF	A	G	MN	AM		FU		E	QZ	VN	
DHGH-14-37	80.21	80.26	0.05			KL												
DHGH-14-37	80.26	84.22	3.96			SS	FF	A	G	MN	AM	G			M	QZ	VN	
DHGH-14-37	84.22	87.68	3.46		70	ST		B	G			G	WD	10				
DHGH-14-37	87.68	95.78	8.10			ST		B	G		AM	G			E	BI		BIVALVE INTERVAL FROM 95.64-97.70M
DHGH-14-37	95.78	96.03	0.25			SS	FF	A	G	MN	AM							
DHGH-14-37	96.03	97.37	1.34			XM		D	G		AM	P			E	PY	DS	
DHGH-14-37	97.37	97.45	0.08			CO	SY	D	K	CM					E	QZ	CE	STONY COAL W/ COMMON (40%) 3-8MM MS LAMINATIONS THORUGHOUT UNIT, ACCESSORY (15%) 1-3MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-37	97.45	97.5	0.05			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-37	97.5	97.78	0.28			CO	SY	D	K	CM		G			E	QZ	VN	STONY COAL W/ COMMON (40%) 3-8MM MS LAMINATIONS THORUGHOUT UNIT, ACCESSORY (15%) 2-11MM QZ/CARB VEINING CONCENTRATED TOWARDS TOP OF UNIT AS WELL AS 1-2MM CLEAT INFILL THROUGHOUT UNIT, ACCESSORY (5%) 4-10MM PY BLEBS CONCENTRATED IN BOTTOM HALF OF UNIT; NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-37	97.78	98.31	0.53			XM		D	G	MN	AM	G			E	QZ	CE	
DHGH-14-37	98.31	101.9	3.59		90	ST		B	G				WD	10				
DHGH-14-37	101.9	101.94	0.04			KL												
DHGH-14-37	101.94	103.61	1.67		90	ST		B	G				WD	10				
DHGH-14-37	103.61	103.81	0.20	140872	90	ST		B	G	MN		P	WD	10	M	QZ	WP	ROOF A: MINOR COAL LAMINATIONS NEAR BOTTOM CONTACT; MINOR QTZ WISPS
DHGH-14-37	103.81	104.14	0.33	140873		CO	C4		K	CM		G	PD	5	E	QZ	CE	SEAM A: C4 COAL, ~30% BRIGHT; COMMON (20%) 1-4MM MS LAMINATIONS THROUGHOUT; ACCESSORY (~8%) 1-3MM WIDE QTZ-CA CLEAT INFILL; ~2% 3MM WIDE PY BLEBS CONCENTRATED TOWARD BOT HALF OF UNIT; MOD TO WELL DEVELOPPED CLEATING 2MM X 3MM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	104.14	104.34	0.20	140874		ZM			K	CM	AM				E	QZ	CE	FLOOR A: COMMON COAL BANDS 3 - 10MM CONCENTRATED AT TOP OF INTERVAL; ACCESSORY (~2%) QTZ CLEAT INFILL <1MM, AND 2% PY BLEBS 2-3MM DIAM CONCENTRATED TOWARDS TOP OF INTERVAL
DHGH-14-37	104.34	104.59	0.25			ZM			K	MN	AM	P			E	QZ	CE	
DHGH-14-37	104.59	105.97	1.38		80	ST		B	G	MN			WD	10	E	QZ	VN	
DHGH-14-37	105.97	106.02	0.05			KL												
DHGH-14-37	106.02	110.42	4.40			ST		B	G			G	WD	10	M	QZ	CE	
DHGH-14-37	110.42	112.3	1.88			XM		D	G	CM	AM	G			E	QZ	CE	
DHGH-14-37	112.3	112.55	0.25			CO	SY		K	CM		G	WD	10	E	QZ	CE	NOT SAMPLED DUE TO LOW QUALITY AND NARROW WIDTH; STONY COAL W/ COMMON (20%) 1-7MM MS LAMINATIONS CONCENTRATED TOWARDS TOP OF UNIT BUT ALSO THROUGHOUT, MINOR (2%) 4-7MM ST LENSES NEAR MIDDLE OF UNIT, MINOR(1% ACCESSORY (4%) 1-4MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, ACCESSORY (3%) 6-10MM PY BAND NEAR MIDDLE OF UNIT, LOCAL WELL DEVELOPED 1-2MM CLEATS
DHGH-14-37	112.55	114.73	2.18			XT		D	G	CM	AM	P			E	QZ	VN	
DHGH-14-37	114.73	114.91	0.18			SS	FF	A	G	MN					E	QZ	VN	
DHGH-14-37	114.91	115.11	0.20	140875		SS	FF	A	G	MN		R			E	QZ	VN	ROOF A: MINOR COAL LAMINATIONS CONCENTRATED AT TOP OF INTERVAL; SS IS WEATHERED AND SOFT
DHGH-14-37	115.11	115.36	0.25	140876		CO	SY		K	CM		G			E	QZ	CE	SEAM ROOF A: STONY COAL W/COMMON (30-40%) MS LAMINATIONS 2-4MM THROUGHOUT AND MINOR ST LENSES;

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	115.36	115.77	0.41	140877		CO	C3		K	MN		P			E	QZ	VN	SEAM A: C3 COAL; ~45% BRIGHT; MODERATELY SHEARED BECOMING LESS SHEARED TOWARDS BOT OF UNIT; PRIMARY TEXTURES AND CLEATING DOMINANTLY DESTROYED BY SHEARING; MN MS INTERMIXED THROUGHOUT (MIXED DUE TO SHEARING, ESPECIALLY TOWARDS TOP OF UNIT) W/SOME MS LAMINATIONS SEEN TOWARD BOTTOM OF UNIT 1-4MM WIDE; MN ST CLASTS TOWARDS BOT OF UNIT 7-20MM DIAM; ~3% QTZ VEINING 1-4MM AND MINOR CLEAT INFILL <2MM THROUGHOUT; 1% PY BLEBS UP TO 4MM WIDE X 20MM LONG IN MIDDLE OF UNIT
DHGH-14-37	115.77	115.97	0.20	140878		XM		D	G	MN					E	QZ	CE	FLOOR: MINOR COAL LENSES UP TO 4MM WIDE AND 2% QTZ CLEAT INFILL 1-3MM WIDE
DHGH-14-37	115.97	116.13	0.16			XM		D	G	MN		G			E	QZ	CE	
DHGH-14-37	116.13	118	1.87			ST		B	G		AM							
DHGH-14-37	118	118.16	0.16			KL												
DHGH-14-37	118.16	120.35	2.19			ST		B	G		AM	G						
DHGH-14-37	120.35	120.79	0.44			SS	FM	A	G			I	WD		E	PY	BL	
DHGH-14-37	120.79	121.01	0.22			CO	C2		K	MN		G			E	QZ	CE	COAL NOT SAMPLED, TOO NARROW: C2 COAL, 70% BRIGHT; MINOR MS LAMINATIONS THROUGHOUT 1-3MM; WELL DEVELOPED CLEATING 2MM X 3MM; CLEAT FACES HAVE CONCOIDAL FRACTURE; ACCESSORY ~2% QTZ CLEAT INFILL 1-2MM
DHGH-14-37	121.01	121.29	0.28			CO	SY		K	CM		G	WD		E	QZ	VN	COAL NOT SAMPLED: STONY COAL; STONY COAL W/COMMON MS LAMINATIONS AND BANDS 1-40MM WIDE; LOCAL COAL BANDS ARE BRIGHT C2 W/MOD TO WELL DEVELOPED CLEATING FROM 1MM X 1MM UP TO 4MM X 5MM; MINOR QTZ CLEAT INFILL 1-3MM AND ACCESSORY (~2%) QTZ VEINS 4-20MM WIDE; COAL GRADES OUT INTO COALY MUDSTONE
DHGH-14-37	121.29	121.89	0.60			ZM		D	G	CM	AM	G	WD		E	QZ	VN	
DHGH-14-37	121.89	123.17	1.28		85	XT		D	G	MN		G	WD	20	E	QZ	VN	
DHGH-14-37	123.17	127.3	4.13		80	SS	FF	A	G	TR			WD	20	M	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments	
DHGH-14-37	127.3	127.35	0.05			KL													
DHGH-14-37	127.35	129.23	1.88		90	SS	FF	A	G			G	WD	25					
DHGH-14-37	129.23	142.48	13.25			SS	FF	A	G	MN			PD	20	M	QZ	VN		
DHGH-14-37	142.48	142.54	0.06			KL													
DHGH-14-37	142.54	144.72	2.18			SS	FM	A	G			G	PD	20	M	QZ	VN		
DHGH-14-37	144.72	148.15	3.43		85	ST		B	G			G	PD	20	M	QZ	VN		
DHGH-14-37	148.15	149.89	1.74			ST		B	G	TR	AM				E	QZ	VN		
DHGH-14-37	149.89	150.27	0.38			XM		D	G	MN	AM	I			E	QZ	WP		
DHGH-14-37	150.27	150.36	0.09		90	SS	FM	A	G		AM				E	QZ	VN		
DHGH-14-37	150.36	150.57	0.21			KL													
DHGH-14-37	150.57	153.54	2.97		70	SS	FM	A	G			G	WD	30	E	QZ	VN		
DHGH-14-37	153.54	156.4	2.86		85	ST		B	G			G	WD		E	QZ	VN		
DHGH-14-37	156.4	156.59	0.19			ZM		D	G	CM	AM	I			E	QZ	CE		
DHGH-14-37	156.59	156.74	0.15			CO	C3	D	K	MN		G			M	QZ	WP	HIGHLY SHEARED C4 COAL, 25% BRIGHT COAL, COMMON 25% MS INTERMIXED THROUGHOUT UNIT, MINOR (1%) <1MM QZ/CARB WISPS AT TOP OF UNIT, NOT SAMPLED DUE TO SMALL THICKNESS	
DHGH-14-37	156.74	157.07	0.33			ZM		D	G	CM		G	PD	20	E	QZ	CE		
DHGH-14-37	157.07	157.55	0.48			ST		B	G	TR	AM				M	QZ	WP		
DHGH-14-37	157.55	157.78	0.23			KL													
DHGH-14-37	157.78	159.25	1.47		90	ST		B	G				WD	20	M	QZ	CE		
DHGH-14-37	159.25	159.45	0.20	140879	90	ST		B	G	MN		P	WD	20	R	QZ	CE	ROOF A: MINOR COAL LAMINATIONS 2-4MM THICK AT BOTTOM OF UNIT W/ASSOC RARE QTZ CLEAT INFILL <1MM	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	159.45	159.8	0.35	140880		CO	C2	D	K	MN		P	PD	15	E	QZ	CE	SEAM A: C2 COAL (85% BRIGHT COAL) W/ MINOR (15%) 1-3MM MS LAMINATIONS THROUGHOUT; LOCALLY VARIABLY WEAK TO MOD SHEARED; ONE 40MM MS BAND NEAR BOTTOM OF UNIT, ACCESSORY (5%) 1-4MM QZ/CARB CLEAT INFILL, ACCESSORY (2%) 1-2 MM PY VEINLETS DISPERSED THROUGHOUT BOTTOM HALF OF UNIT AS WELL AS 3X4MM PY BLEB IN TOP HALF OF UNIT, CLEATING IS MODERATELY WELL DEVELOPED, 1-2MM CLEATS PRESENT THROUGHOUT; MANY CLEATS ARE BROKEN FROM MOD SHEARING, SOME LISTRIC SURFACES SEEN
DHGH-14-37	159.8	160	0.20	140881		XM		D	G	MN	AM				M	QZ	VN	FLOOR: MINOR COAL LAMINATIONS 1-5MM WIDE CONCENTRATED AT TOP OF UNIT W/ASSOC RARE QTZ CLEAT INFILL <1MM; MINOR QTZ VEINS CONCENTRATED ALONG TOP CT UP TO 5MM WIDE
DHGH-14-37	160	160.29	0.29			XM		D	G	TR	AM	G						
DHGH-14-37	160.29	165.22	4.93			SS	FC	N	G	MN	AM	G			C	QZ	VN	
DHGH-14-37	165.22	173.02	7.80		85	SS	VM	A	G				PD	35	E	QZ	VN	
DHGH-14-37	173.02	173.07	0.05			KL												
DHGH-14-37	173.07	174.59	1.52		85	SS	VM	A	G			G	PD	35	E	QZ	VN	
DHGH-14-37	174.59	178.96	4.37			SS	FM	A	G		AM				E	QZ	VN	
DHGH-14-37	178.96	179.03	0.07			KL												
DHGH-14-37	179.03	180.19	1.16			SS	FM	A	G		AM				E	QZ	VN	
DHGH-14-37	180.19	180.39	0.20	140882		SS	FM	A	G		AM	F			E	QZ	VN	ROOF: HIGHLY FAULTED FAULT BRECCIA/GOUGE; 2% QTZ VEINLETS (BROKEN) 1-2MM; 1% PY BLEBS AND BROKEN VEINS
DHGH-14-37	180.39	180.59	0.20	140883		CO	C3	D	K	MN					M	QZ	CE	SEAM ROOF: C3 COAL 55-60% BRIGHT; HIGHLY SHEARED/FAULTED DESTROYING PRIMARY TEXTURES; <1% QTZ-CA CLEAT INFILL <1MM WIDE; LISTRIC SURFACES ALONG JOINTS/SHEARS; MINOR MS IS INTERMIXED FROM SHEARING

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	180.59	181.4	0.81	140884		CO	C3	D	K	MN		G			M	QZ	VN	SEAM: C3 COAL, ~55% BRIGHT (BRIGHTNESS DIFFICULT TO ESTIMATE ACCURATELY DUE TO SSTRONG SHEARING); HIGHLY SHEARED TO LOCALLY MODERATELY SHEARED DESTROYING MOST PRIMARY TEXTURES; MINOR INTERMIXED AND LAMINATED MS 1-2MM THICK; COMMON LISTRIC SURFACES/POLISHED SHEARS; MINOR (BROKEN) QTZ VEINLETS 1-2MM WIDE
DHGH-14-37	181.4	181.77	0.37	140885		CO	C3	D	K	MN		G			E	QZ	VN	SEAM: C3 COAL, ~55% BRIGHT (BRIGHTNESS DIFFICULT TO ESTIMATE DUE TO SHEARING); MINOR INTERMIXED MS THROUGHOUT; 18MM PY BAND AT TOP OF UNIT; ACCESORY (3%) QTZ VEINING 1-3MM THICK, 12MM WIDE QTZ VEIN IN MIDDLE OF UNIT; RARE QTZ CLEAT INFILL; HIGHLY SHEARED DESTROYING PRIMARY TEXTURES, W/COMMON LISTRIC/SHEARED SURFACES
DHGH-14-37	181.77	181.97	0.20	140886		CO	C3	D	K	MN		G			E	QZ	VN	SEAM FLOOR: C3 COAL, ~60% BRIGHT (BRIGHTNESS DIFFICULT TO ESTIMATE ACCURATELY DUE TO SHEARED NATURE OF COAL); HIGHLY SHEARED W/COMMON LISTRIC SURFACES, DESTROYING PRIMARY TEXTURES; MINOR INTERMIXED MS THROUGHOUT; ACCESORY 3% QTZ VEINING 1-3MM WIDE
DHGH-14-37	181.97	182.03	0.06			ZM		D	G	MN	AM				M	QZ	WP	
DHGH-14-37	182.03	182.08	0.05			KL												
DHGH-14-37	182.08	182.38	0.30			XT		B	G		AM	G			E	QZ	VN	
DHGH-14-37	182.38	185.21	2.83			SS	FM	A	G	MN	AM							
DHGH-14-37	185.21	185.35	0.14			KL												
DHGH-14-37	185.35	187.82	2.47			SS	FM	A	G	MN	AM	G			E	QZ	VN	
DHGH-14-37	187.82	195.5	7.68		90	SS	FM	A	G				WD	35	E	QZ	VN	
DHGH-14-37	195.5	196.21	0.71		80	SS	FF	A	G			G	PD	60	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	196.21	196.45	0.24	140887		XM		D	G	MN	AM	G			E	QZ	CE	ROOF A: CARBONACEOUS MS W/ MINOR (8%) 2-4MM MS LAMINATIONS AT TOP OF UNIT, BOTTOM HALF OF UNIT HAS COAL INTERMIXED W/ MS, MINOR (5%) 25MM ST BAND AT BOTTOM OF UNIT, ACCESSORY (2%) 1-2MM QZ/CARB CLEAT INFILL THROUGHOUT, ACCESSORY (3%) 1-4MM PY VEINLETS CONCENTRATED TOWARDS TOP OF UNIT
DHGH-14-37	196.45	196.65	0.20	140888		CO	C4	D	K	MN		G			E	QZ	VN	SEAM ROOF: C4 COAL (20% BRIGHT COAL) W/ MINOR (15%) 2-3MM MS LAMINATIONS THORUGHOUT UNIT, ACCESSORY (5%) 2-9MM QZ/CARB VEINING CONCENTRATED TOWARDS BOTTOM OF UNIT, CLEATING IS MODERATELY DEVELOPED, 1X1MM CLEATS PRESENT
DHGH-14-37	196.65	197.3	0.65	140889		CO	C2	D	K	MN		G			M	QZ	CE	SEAM: C2 COAL (90% BRIGHT COAL) W/ MINOR (5%) 2-4MM MS LAMINATIONS THORUGHOUT UNIT, MINOR (1%) 1MM QZ/CARB CLEAT INFILLDISPERSED THROUGHOUT, CLEATING IS WELL DEVELOPED, 2X3MM CLEATS PRESENT, MIDDLE BOTTOM OF UNIT HAS MODERATE SHEARING FOR 100MM
DHGH-14-37	197.3	198.01	0.71	140890		CO	C3	D	K	MN		G			E	QZ	CE	SEAM: C3 MODERATELY SHEARED COAL, (45% BRIGHT COAL) W/ MINOR (15%) MS INTERMIXED THORUGHOUT UNIT, ACCESSORY (3%) 1-2MM QZ/CARB CLEAT INFILL CONCENTRATED TOWARDS TOP OF UNIT, 70MM BAND OF XM IN TOP HALF OF UNIT, LISTRIC SURFACES PRESENT ALONG JOINTS, 80% OF CLEATING HAS BEEN DESTROYED, MINOR 1X2MM CLEATING PRESENT AT TOP AND BOTTOM 100MM OF UNIT, MIDDL EOF UNIT HAS BEEN CRUSHED
DHGH-14-37	198.01	198.21	0.20	140891		CO	C3	D	K	MN		G			E	QZ	CE	SEAM FLOOR: C3 COAL (55% BRIGHT COAL) W/ MINOR (15%) 1-4MM MS LAMINATIONS THORUGHOUT, ACCESSORY (2%) 1-3MM QZ/CARB CLEAT INFILL CONCENTRATED IN BOTTOM HALF OF UNIT, CLEATING IS POORLY DEVELOPED, 1X1MM CLEATS PRESENT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	198.21	198.41	0.20	140892		XM		D	G	MN	AM	P			E	QZ	CE	FLOOR: CARBONACEOUS MS W/ MINOR (%8) COAL INTERMIXED THOROUGHOUT AS WELL AS 3MM LAMINATIONS, UNIT HAS BEEN SHEARED W/ COMMON LISTRIC SURFACES PRESENT ALONG FRACTURES,
DHGH-14-37	198.41	199.75	1.34			XM		D	G	MN	AM	P			E	QZ	CE	
DHGH-14-37	199.75	199.95	0.20			CO	SY	D	K	CM		I		35	E	QZ	CE	STONY COAL, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS, AS WELL AS NOT SAMPLED DUE TO SMALL THICKNESS, COMMON (25%) 3-4MM MS LAMINATIONS THOROUGHOUT, ACCESSORY (5%) 1-5MM CLEAT INFILL THROUGHOUT, MINOR (1%) 3X2MM PY BLEB AT BASAL CONTACT, CLEATING IS POORLY DEVELOPED, MINOR 1X1MM CLEATS
DHGH-14-37	199.95	200.48	0.53			XM		D	G	MN	AM	P			E	QZ	VN	
DHGH-14-37	200.48	200.59	0.11			CO	SY	D	K	CM		P		25	E	QZ	CE	STONY COAL, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS, AS WELL AS NOT SAMPLED DUE TO SMALL THICKNESS, COMMON (25%) 3-4MM MS LAMINATIONS THOROUGHOUT, ACCESSORY (8%) 1-5MM CLEAT INFILL THROUGHOUT, CLEATING IS WELL DEVELOPED, 1X2MM CLEATS PRESENT
DHGH-14-37	200.59	200.77	0.18			XM		D	G	MN	AM	G			E	QZ	VN	
DHGH-14-37	200.77	202.62	1.85		90	SS	FF	A	G			P	WD	40	E	QZ	VN	
DHGH-14-37	202.62	212.48	9.86			SS	FM	A	G						E	QZ	VN	
DHGH-14-37	212.48	212.65	0.17			KL												
DHGH-14-37	212.65	212.78	0.13			SS	FM	A	G			F						
DHGH-14-37	212.78	224.4	11.62		60	SS	FF	A	G			G	WD	15	E	QZ	VN	
DHGH-14-37	224.4	229.19	4.79			SS	FF	N	G	MN	AM				E	QZ	VN	
DHGH-14-37	229.19	229.62	0.43			KL												
DHGH-14-37	229.62	233.41	3.79		70	SS	FF	A	G				WD	30	E	QZ	VN	
DHGH-14-37	233.41	233.55	0.14			KL												
DHGH-14-37	233.55	236.78	3.23			ST		B	G		AM	P			E	QZ	VN	
DHGH-14-37	236.78	237.13	0.35			XM		D	G		AM	G			E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	237.13	237.33	0.20	140893		XM		D	G		AM	G			M	QZ	VN	ROOF: SHEARED CARBONACEOUS MS W/ MINOR (7%) COAL INTERMIXED AND CONCENTRATED TOWARDS BOTTOM OF UNIT, COMMON LISTRIC SURFACES ALONG FRACTURES, UNIT IS HIGHLY FRACTURED, MINOR (1%) 1MM QZ/CARB VEINING, DIFFICULT TO DISTINGUISH LOCATION OF VEINING DUE TO HIGH FRACTURING
DHGH-14-37	237.33	237.89	0.56	140894		CO	C3	D	K			G			M	QZ	CE	SEAM: C3 HIGHLY SHEARED COAL (60% BRIGHT COAL) W/ MINOR (12%) MS INTERMIXED THROUGHOUT, COMMON LISTRIC SURFACES ALONG FRACTURES, MINOR (1%) 1MM QZ/CARB CLEAT INFILL CONCENTRATED TO MIDDLE OF UNIT, CLEATING HAS BEEN DESTROYED BY SHEARING
DHGH-14-37	237.89	238.53	0.64	140895		CO	C3	D	K			F			E	QZ	CE	SEAM A: C3 HIGHLY SHEARED COAL (60% BRIGHT COAL) W/ MINOR (12%) MS INTERMIXED THROUGHOUT, COMMON LISTRIC SURFACES ALONG FRACTURES, MINOR (10%) ONE 120MM ST COBBLE AT TOP OF UNIT, MINOR (1%) 1MM QZ/CARB CLEAT INFILL CONCENTRATED TO MIDDLE OF UNIT, CLEATING HAS BEEN DESTROYED BY SHEARING
DHGH-14-37	238.53	238.73	0.20	140896		SS	FM	N	G	MN	AM				E	QZ	VN	FLOOR:MASSIVE SS W/ MINOR (5%) 5X8MM ST PEBBLES THROUGHOUT, ACCESSORY (15%) 1-3MM QZ/CARB VEINING THOROUGHOUT
DHGH-14-37	238.73	241	2.27			SS	FM	N	G	MN	AM				C	QZ	VN	
DHGH-14-37	241	241.11	0.11			KL												
DHGH-14-37	241.11	241.99	0.88			SS	FM	N	G		AM	G			C	QZ	VN	
DHGH-14-37	241.99	243.49	1.50		65	SS	FF	A	G				WD	50	E	QZ	WP	
DHGH-14-37	243.49	243.62	0.13			KL												
DHGH-14-37	243.62	244.84	1.22		60	SS	VF	A	G			G	PD		E	QZ	VN	
DHGH-14-37	244.84	246.34	1.50			ST		B	G	MN	AM	G			E	QZ	VN	
DHGH-14-37	246.34	247.75	1.41			ST		M	G	CM		G	VP		A	QZ	FD	UNIT IS CHARACTERIZED BY FAULT BRECCIA

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	247.75	248.15	0.40			CO	SY	D	K	CM		P			E	QZ	VN	STONY COAL, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS AND GRADE OF COAL IN BOX, COMMON (25%) MS INTERMIXED THOROUGHOUT UNIT, COAL IS HIGHLY SHEARED WITH COMMON LISTRIC SURFACES PRESENT ALONG FRACTURES, ACCESSORY (8%) 1-3MM QZ/CARB CLEAT INFILL THOROUGHOUT UNIT, CLEATING HAS BEEN DESTROYED DUE TO SHEARING
DHGH-14-37	248.15	249.06	0.91			MS		B	G		AM	G						
DHGH-14-37	249.06	256.69	7.63			ST		B	G		AM				M	PY	BL	
DHGH-14-37	256.69	256.89	0.20	140897		ST		B	G	RA	AM	F			E	QZ	VN	ROOF: WEAKLY SHEARED W/COMMON (~15% QTZ VEINS); RARE COAL LAMINATIONS NEAR FAULTED BOTOTM CONTACT
DHGH-14-37	256.89	257.09	0.20	140898		CO	C4	D	K	MN			PD		E	QZ	VN	SEAM ROOF: MINOR MS LAMINATIONS 1-3MM; COAL BANDS ARE POORLY CLEATED 1MM X 1MM; WEAKLY SHEARED W/LISTRIC SURFACES; 3% QTZ AS 1-3MM WIDE VEINLETS AND CLEAT INFILL <1MM
DHGH-14-37	257.09	257.29	0.20			KL				CO								LOST COAL
DHGH-14-37	257.29	257.59	0.30	140899		CO	C4	D	K	MN		G			M	QZ	CE	SEAM: C4 COAL; 30-40% BRIGHT; MINOR SILTSTONE CLASTS UP TO 9CM DIAM; SHEARED DESTROYING AND CRUSHING PRIMARY TEXTURES; COMMON LISTRIC SURFACES, POLISHED AND SLICKED; MINOR QTZ CLEAT INFILL AND VEINLETS ASSOCIATED W/ST CLASTS BROKEN BY SHEARING;
DHGH-14-37	257.59	257.99	0.40	140900		CO	C3	D	K	MN		G	WD	50	M	QZ	VN	SEAM FLOOR: C3 COAL, 60% BRIGHT; WELL DEVELOPED CLEATING 1MM X 2MM UP TO 2MM X 4MM; MNOR QTZ VEINLETS 1-3MM; WEAKLY SHEARED LOCALLY W/MINOR POLISHED LISTRIC SURFACES
DHGH-14-37	257.99	258.16	0.17	140901		ZT		D	G	MN		G			M	QZ	CE	FLOOR: MINOR COAL LAMINATIONS 1-2MM WIDE CONCENTRATED AT TOP OF UNIT; MINOR QTZ CLEAT INFILL AND VEINLETS <1MM
DHGH-14-37	258.16	259.76	1.60			XT		B	G		AM				M	QZ	VN	
DHGH-14-37	259.76	259.84	0.08			KL												
DHGH-14-37	259.84	261.41	1.57			XT		B	G		AM	I			M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-37	261.41	268.48	7.07		70	ST		B	G			G	WD	60	E	QZ	VN	
DHGH-14-37	268.48	279.72	11.24		80	SS	FF	A	G				WD	65	E	QZ	VN	
DHGH-14-37	279.72	279.86	0.14			KL												
DHGH-14-37	279.86	284.3	4.44		80	SS	FF	A	G			G	WD	50	E	QZ	VN	
DHGH-14-37	284.3	288.74	4.44			SS	FF	A	G	RA			PD	50	C	QZ	VN	
DHGH-14-37	288.74	288.83	0.09			KL												
DHGH-14-37	288.83	289.79	0.96			SS	FF	A	G	RA			PD	50	C	QZ	VN	
DHGH-14-37	289.79	289.89	0.10			KL												
DHGH-14-37	289.89	291.43	1.54			SS	FF	A	G	RA		G	PD	65	E	QZ	VN	
DHGH-14-37	291.43	292.66	1.23		85	SS	VF	A	G			I	WD	50	E	QZ	VN	
DHGH-14-37	292.66	293.07	0.41			CO	SY	D	K	AB		F			E	QZ	VN	STONY COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS, ABUNDANT (50%) 1-5MM MS LAMINATIONS THROUGHOUT, ACCESSORY (5%) 1-5MM QZ/CARB CLEAT INFILL THROUGHOUT, MODERATELY SHEARED W/ COMMON LISTRIC SURFACES PRESENT ALONG JOINTS, COAL BANDS ARE LOCALLY POORLY CLEATED, 1X2MM CLEATS PRESENT
DHGH-14-37	293.07	295.89	2.82		85	SS	VF	A	G			F	WD	30	E	QZ	VN	
DHGH-14-37	295.89	296.39	0.50			ZM		D	G	MN		G			E	QZ	VN	
DHGH-14-37	296.39	296.69	0.30			XM		D	G	MN	AM	G			M	QZ	VN	
DHGH-14-37	296.69	296.9	0.21			ZM		D	G	MN					M	QZ	VN	
DHGH-14-37	296.9	297.09	0.19			KL												
DHGH-14-37	297.09	300.21	3.12			MS		B	G		AM	G			E	QZ	VN	
DHGH-14-37	300.21	300.83	0.62			ST		B	G			G	PD	40	M	PY	DS	
DHGH-14-37	300.83	305.4	4.57		80	ST		B	G			G	WD	40	E	QZ	VN	
DHGH-14-37	305.4	320.36	14.96		70	SS	VF	A	G				WD	40	M	QZ	VN	
DHGH-14-37	320.36	321.93	1.57			SS	FM	A	G		AM				E	QZ	VN	
DHGH-14-37	321.93	322.07	0.14			KL												
DHGH-14-37	322.07	330.69	8.62			SS	FM	A	G	TR	AM	P			E	QZ	VN	
DHGH-14-37	330.69	330.79	0.10		65	SS	FF	A	G	RA		G			E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	8.37	12	3.63		60	SS	FM	A	G			R	BW	5	E	QZ	VN	FLASAR BEDDING AS WELL. POTENTIAL FOLIATION FORMING AT 60 DEGREES
DHGH-14-38	12	12.13	0.13			ST		B	G	MN		P		10	M	QZ	WP	
DHGH-14-38	12.13	12.4	0.27	GT-14-54		ST		B	G	MN		P		10	M	QZ	WP	
DHGH-14-38	12.4	13.13	0.73			ST		B	G	MN		P		10	M	QZ	WP	
DHGH-14-38	13.13	13.33	0.20	140803		ST		B	G	MN	AM	P		10	M	QZ	WP	ROOF: SILTSTONE WITH MINOR SUBMILIMETER TO 1 MM COAL LENSES IN WISPS. THERE IS ONE 2 MM COAL LENSE IN THE MIDDLE OF THE UNIT. QUARTZ IS LESS THAN 1% OF THE ROCK AND ASSOCIATED WITH COAL LENSES AND IS IN CLEAT INFILL.
DHGH-14-38	13.33	13.69	0.36	140804		CO	C2	D	K	MN	AM			10	E	QZ	CE	SEAM ROOF: C2 COAL WITH POORLY- MODERATELY DEVELOPED CLEATING. CLEATS ARE 1MM TO 5MM IN SIZE. 1MM QUARTZ IS AROUND 1% OF THE UNIT AND OCCURS AS CLEAT INFILL. NON-SHEARED. COAL IS 70-90% BRIGHT. 10% MUDSTONE LAMINATIONS ARE PLANAR AND ARE UP TO 1-10 MM IN SIZE.
DHGH-14-38	13.69	13.98	0.29			KL				CO								LOST CORE
DHGH-14-38	13.98	14.37	0.39	140805		CO	C3	D	K	CM	AM				E	QZ	CE	SEAM FLOOR A: HIGHLY SHEARED C3 COAL WITH 20% MUDSTONE INTERMIXED THROUGHOUT AND IN LAMINATIONS. COAL IS APPROXIMATELY 50% BRIGHT. ALL CLEATING HAS BEEN DESTROYED BY SHEARING AND THERE ARE NO CLEATS ABOVE 1MM IN SIZE. QUARTZ IS 4% OF THE UNIT AND OCCURS AS CLEAT INFILL.
DHGH-14-38	14.37	14.58	0.21			KL				CO								LOST CORE
DHGH-14-38	14.58	14.79	0.21			KL				CO								LOST CORE
DHGH-14-38	14.79	14.99	0.20	140806		ZM		D	G	AB		G			E	QZ	CE	FLOOR: COALY MUDSTONE WITH
DHGH-14-38	14.99	16.18	1.19			XT		D	G	MN		R			E	QZ	FR	
DHGH-14-38	16.18	18.13	1.95			XT		D	G	MN		R			E	QZ	FR	Note: moved due to potentially drilling error to match LAS (ok'd by Hayden).

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	18.13	18.33	0.20	140807		ZT		D	G			R		35	C	QZ	CE	ROOF: Note: moved due to potentially drilling error to match LAS (ok'd by Hayden). SLIGHTLY SHEARED COALY SILTSTONE, COULD ALSO BE STONY COAL BUT GIVEN COALY SILTSTONE DUE TO LAS. COAL IS 80% BRIGHT, HOWEVER UNIT IS HEAVY. PYRITE (10%) AND QUARTZ (15%) OCCUR AS 1MM CLEAT INFILL AND IN VEINLETS. CLEATING IS MODERATELY DEVELOPED AND ARE 1-2 MM IN SIZE.
DHGH-14-38	18.33	18.88	0.55	140808		CO	C3	D	K	CM		R		50	E	QZ	CE	SEAM ROOF: Note: moved due to potentially drilling error to match LAS (ok'd by Hayden). C2 COAL THAT HAS MODERATELY DEVELOPED CLEATS THAT ARE 1-3 MM IN SIZE. COAL IS AROUND 80% BRIGHT AND THE ROCK IS LIGHT. HOWEVER, THERE IS APPROXIMATELY 15% QUARTZ OCCURRING AS 1-2 MM CLEAT INFILL AND VEINLETS. 1 MM MUDSTONE LAMINATIONS (15%) ARE MOSTLY PARALLEL WITH BEDDING AROUND 45 DEGREES, HOWEVER SOMETIMES CROSSCUT BEDDING.
DHGH-14-38	18.88	19.59	0.71	140809		CO	C3	D	K	CM		G		40	E	QZ	CE	SEAM: MODERATELY- HIGHLY SHEARED C3 COAL WITH 20% MUDSTONE LAMINATIONS. MUDSTONE LAMINATIONS ARE THICKER IN THIS UNIT AND RANGE FROM 1MM- 15MM. QUARTZ CLEATING IS COMPLETELY DESTROYED DUE TO SHEARING AND COAL IS IN 1MM POORLY DEFINED CLEATS. COAL IS 60-70% BRIGHT. QUARTZ (3%) OCCURS AS 1MM CLEAT INFILL AND IN DISSEMINATED PODS UP TO 1 CM IN SIZE.
DHGH-14-38	19.59	20.3	0.71	140810		CO	C3	D	K	CM		G		40	E	QZ	CE	SEAM: MODERATELY- HIGHLY SHEARED C3 COAL WITH 20% MUDSTONE LAMINATIONS. MUDSTONE LAMINATIONS ARE THICKER IN THIS UNIT AND RANGE FROM 1MM- 15MM. QUARTZ CLEATING IS COMPLETELY DESTROYED DUE TO SHEARING AND COAL IS IN 1MM POORLY DEFINED CLEATS. COAL IS 60-70% BRIGHT. QUARTZ (3%) OCCURS AS 1MM CLEAT INFILL AND IN DISSEMINATED PODS UP TO 1 CM IN SIZE. SAME AS SEAM ABOVE, NEEDED TO BREAK DUE TO SIZE.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	20.3	20.92	0.62	140811		CO	C3	D	K	MN	AM	P			E	QZ	CE	SEAM: HIGHLY SHEARED C3 COAL WITH MUDSTONE INTERMIXED THROUGHOUT. ALL CLEATING HAS BEEN DESTROYED AND COAL OCCURS AS 1MM POORLY DEFINED CLEATS. COAL IS VERY LIGHT AND IS 60-70% BRIGHT. QZ (2%) OCCURS AS CLEAT INFILL. BEDDING IS NOT VISIBLE.
DHGH-14-38	20.92	21.54	0.62	140812		CO	C3	D	K	MN	AM	P			E	QZ	CE	SEAM FLOOR: HIGHLY SHEARED C3 COAL WITH MUDSTONE INTERMIXED THROUGHOUT. ALL CLEATING HAS BEEN DESTROYED AND COAL OCCURS AS 1MM POORLY DEFINED CLEATS. COAL IS VERY LIGHT AND IS 60-70% BRIGHT. QZ (2%) OCCURS AS CLEAT INFILL. BEDDING IS NOT VISIBLE. SAME AS UNIT ABOVE, NEEDED TO BREAK APART DUE TO SIZE OF SEAM.
DHGH-14-38	21.54	21.74	0.20	140813		XT		D	G	MN	AM	G			E	CL	FP	FLOOR: CARBONACEOUS SILTSTONE WITH 3-10MM COAL (5%) LENSES FROM SHEARING TOWARDS THE TOP OF THE UNIT
DHGH-14-38	21.74	23.47	1.73			XT		D	G	RA	AM				M	QZ	WP	
DHGH-14-38	23.47	23.54	0.07			KL												
DHGH-14-38	23.54	25.13	1.59			MS		D	G	MN	AM	P			E	QZ	WP	
DHGH-14-38	25.13	25.33	0.20			MS		D	G	MN	AM	P			E	QZ	WP	
DHGH-14-38	25.33	25.67	0.34			CO	SY	D	K	CO		P		40	E	QZ	CE	SEAM: COAL IS 60-80% BRIGHT WHERE SEEN, HOWEVER COAL IS ONLY 45% OF THE ROCK. NOT SAMPLED DUE TO LOW PERCENTAGE OF COAL, SMALL SEAM SIZE, AND LOW DENSITY SPIKE.
DHGH-14-38	25.67	28.62	2.95		65	SS	FM	A	G	MN			BW	35	E	QZ	VN	
DHGH-14-38	28.62	28.69	0.07			KL												
DHGH-14-38	28.69	32.9	4.21		65	SS	FM	A	G	MN			BW	40	E	QZ	VN	
DHGH-14-38	32.9	33.32	0.42			KL												
DHGH-14-38	33.32	35.1	1.78		65	SS	FM	A	G	MN			BW	45	E	QZ	VN	
DHGH-14-38	35.1	35.66	0.56			MS		D	G		AM	G			E	QZ	VN	
DHGH-14-38	35.66	35.86	0.20	140814		MS		D	G		AM	P			E	QZ	WP	ROOF: MASSIVE MEDIUM-GRAY MUDSTONE WITH 1% QUARTZ WISPS..

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	41.5	44.03	2.53			MS		B	G		AM				E	PY	DS	FOLIATION DEVELOPED AT 55 DEGREES. LIKELY TO BREAK ALONG THIS WEAK PLANE. ROCK SHIMMERS IN THE LIGHT.
DHGH-14-38	44.03	44.12	0.09			KL												
DHGH-14-38	44.12	48.48	4.36			MS		B	G		AM				E	QZ	VN	QUARTZ VEINS ARE SHEARED AND ARE FOCUSED AT THE BASE OF THE UNIT.
DHGH-14-38	48.48	48.82	0.34			KL												
DHGH-14-38	48.82	50.46	1.64			SS	FF	B	G		AM	E			E	QZ	VN	QUARTZ IS FOCUSED AT THE TOP OF THE UNIT
DHGH-14-38	50.46	55.09	4.63			MS		B	G		AM	G			E	PY	BL	
DHGH-14-38	55.09	55.17	0.08		60	SS	FM	A	G					25	E	QZ	VN	
DHGH-14-38	55.17	55.27	0.10			KL												
DHGH-14-38	55.27	57	1.73		75	SS	FM	A	G					25	E	QZ	VN	BECOMES SANDIER AT BASE WITH ONLY 5% SILTSTONE LAMINATIONS.
DHGH-14-38	57	57.17	0.17			KL												
DHGH-14-38	57.17	58.23	1.06		70	SS	FM	A	G					25	E	QZ	VN	
DHGH-14-38	58.23	58.39	0.16			SS	MM	A	G	MN	AM	P		15	E	QZ	VN	
DHGH-14-38	58.39	58.66	0.27	GT-14-56		SS	MM	A	G	MN	AM	P		15	E	QZ	VN	GEOTECH SAMPLE
DHGH-14-38	58.66	59.08	0.42			SS	MM	A	G	MN	AM	P		15	E	QZ	VN	
DHGH-14-38	59.08	60.86	1.78		60	ST		B	G			G	WD	20	E	QZ	WP	
DHGH-14-38	60.86	63.28	2.42			SS	MM	A	G	MN					E	QZ	VN	FOLIATIONS AT 35 DEGREES
DHGH-14-38	63.28	64.88	1.60			SS	FM	A	G									
DHGH-14-38	64.88	65.99	1.11			ST		B	G		AM	G			M	QZ	WP	
DHGH-14-38	65.99	66.96	0.97			MS		D	G	MN		G		25	E	QZ	CE	
DHGH-14-38	66.96	68.7	1.74		55	SS	FF	A	G			P			E	QZ	VN	
DHGH-14-38	68.7	68.9	0.20	140818	55	SS	FF	A	G			P			E	QZ	VN	ROOF A: FINE GRAINED SANDSTONE INTERLAMINATED WITH SILTSTONE. QUARTZ OCCURS IN DISCONTINUOUS VEINLETS AND WISPS.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	68.9	69.26	0.36	140819		CO	C3	D	K	MN	AM	R			M	QZ	CE	SEAM: HIGHLY SHEARED C3? COAL WITH MUDSTONE (15%?) INTERMIXED THROUGHOUT. INTENSE SHEARING MAKES IT HARD TO GIVE A PROPER GRADE TO THE COAL. WAS GIVEN GRADE BASED ON BRIGHT FACES SEEN AND GEOPHYSICAL SIGNATURE. LISTRIC SURFACES COMMON. QUARTZ IS LESS THAN ONE PERCENT AND IS IN SHEARED CLEATS.
DHGH-14-38	69.26	69.62	0.36	140820		CO	C3	D	K	MN	AM	R			M	QZ	CE	SEAM: HIGHLY SHEARED C3? COAL WITH MUDSTONE (15%?) INTERMIXED THROUGHOUT. INTENSE SHEARING MAKES IT HARD TO GIVE A PROPER GRADE TO THE COAL. WAS GIVEN GRADE BASED ON BRIGHT FACES SEEN AND GEOPHYSICAL SIGNATURE. LISTRIC SURFACES COMMON. QUARTZ IS LESS THAN ONE PERCENT AND IS IN SHEARED CLEATS.
DHGH-14-38	69.62	69.82	0.20	140821		ZM		D	K	CM					A	QZ	VN	FLOOR: HIGHLY SHEARED COALY MUDSTONE. COAL IS APPROXIMATELY 20% OF THE ROCK, 20% QUARTZ, 60% MUDSTONE. THEY HAVE BEEN DUCTILY DEFORMED AND COAL IS FOCUSED IN THE HINGE OF THE FOLD. QUARTZ MUDSTONE AND COAL ARE INTERLAMINATED WITH LAMINATIONS RANGING FROM 3-5 MM.
DHGH-14-38	69.82	70.74	0.92			XM		D	G	MN		P			E	QZ	WP	
DHGH-14-38	70.74	70.91	0.17			KL												
DHGH-14-38	70.91	73.1	2.19			XM		D	G	MN		P		45	E	QZ	WP	
DHGH-14-38	73.1	73.3	0.20	140822		XM		D	G	MN		P		45	E	QZ	WP	ROOF: CARBONACEOUS SILTSTONE WITH 5% 1MM COAL LAMINATIONS THROUGHOUT.. QUARTZ (1%) OCCURS AS WISPS THAT ARE ASSOCIATED WITH COAL LAMINATIONS.
DHGH-14-38	73.3	73.65	0.35	140823		CO	C3	D	K	MN		P			E	QZ	CE	SEAM: FIRST 15 CM IS WELL CLEATED C2 COAL WITH 2% 1-3 MM MUDSTONE LAMINATIONS AND 10% QUARTZ OCCURRING AS CLEAT INFILL. CLEATS ARE 1-3MM IN SIZE. BOTTOM 15 CM IS SHEARED C3 COAL THAT CONTAINS 25% MUD AND 5% QUARTZ.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	73.65	73.85	0.20	140824		XM		D	G	MN		P		35	E	QZ	WP	FLOOR: CARBONACEOUS MUDSTONE WITH 2% COAL LAMINATIONS THROUGHOUT. LAMINATIONS ARE SHEARED THROUGHOUT. QZ (15%) OCCURS AS 1-6MM VEINS AND WISPS.
DHGH-14-38	73.85	74.51	0.66			XM		D	G	MN		P		35	E	QZ	WP	
DHGH-14-38	74.51	74.99	0.48		55	ST		B	G									
DHGH-14-38	74.99	75.25	0.26			KL												
DHGH-14-38	75.25	79.01	3.76		55	ST		B	G	RA		G	WD	30	E	QZ	VN	
DHGH-14-38	79.01	80.37	1.36			XM		D	G	MN		P		30	E	QZ	WP	
DHGH-14-38	80.37	80.57	0.20	140825		XM		D	G	MN		P		30	E	QZ	WP	ROOF A: CARBONACEOUS MS W/ 10% QZ/CARB 3-4MM VEINS AND 1MM WISPS THROUGHOUT UNIT, 2-3MM COAL LAMINATIONS THROUGHOUT UNIT, INCREASING IN ABUNDANCE TOWARDS BOTTOM OF UNIT, ACCESSORY PY BLEBS 4MMX3MM NEAR BASE OF UNIT
DHGH-14-38	80.57	81.06	0.49	140826		CO	C3	D	K	MN		P			E	QZ	VN	SEAM: C3 COAL W/ MINOR 1-2MM MS LAMINATIONS THORUGHOUT UNIT, ACCESSORY QZ/CARB 3-5MM VEINING AND 1MM CLEAT INFILL THROUGHOUT UNIT, MODERATELY DEVELOPED CLEATING, 1-3MM CLEAT SIZED, SLIGHTLY SHEARED
DHGH-14-38	81.06	81.67	0.61	140827		CO	C2	D	K	MN		P			E	QZ	VN	SEAM: MODERATELY SHEARED C3 COAL W/ MINOR MS DISSEMINATED AND INTERMIXED THROUGHOUT DUE TO SHEARING, 5% ACCESSORY QZ/CARB 1-2CM VEINS AT BASE OF UNIT, QZ/CARB ALSO PRESENT IN 1MM SHEARED CLEAT INFILL, 60% OF CLEATING HAS BEEN DESTROYED DUE TO SHEARING MINOR 1MM CLEATS, 70-80% BRIGHT COAL PRESENT
DHGH-14-38	81.67	81.87	0.20	140828		ZM		D	G	AB		P			E	QZ	VN	FLOOR: COALY MS W/ AUNDANT 7CM THICK COAL BANDS CONCENTRATED TOWARDS TOP OF UNIT, 15% OF UNIT HAS 5MM QZ/CARB VEINS CONCENTRATED TOWARDS TOP OF UNIT, MODERATELY SHEARED
DHGH-14-38	81.87	84.27	2.40			XM		D	G	MN		P			E	QZ	WP	
DHGH-14-38	84.27	88.89	4.62		55	ST		B	G			P	DE	5	E	BI	CB	89.58-89.85 BIVALVE INTERVAL
DHGH-14-38	88.89	89.71	0.82			XM		D	G	MN		P		5	E	QZ	CE	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	89.71	90.13	0.42			CO	SY	D	K	CM		P		5	C	QZ	VN	STONY COAL W/ COMMON 2CM QZ/CARB VEINING CONCENTRATED TOWARDS TOP OF UNIT AND 1-3MM CLEAT INFILL THROUGHOUT UNIT, COMMON 4-10MM MS LAMINATIONS THOROUGHOUT UNIT, ACCESSORY 2-3MM THICK PY BLEBS THROUGHOUT UNIT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-38	90.13	90.9	0.77			XM		D	G	MN		P		3	E	QZ	CE	
DHGH-14-38	90.9	91.1	0.20	140829		XM		D	G	MN		P		3	E	QZ	CE	ROOF A: CARBONACEOUS MS W/ 10% COAL LAMINATIONS THICKNESSES OF 3-10MM THOROUGHOUT UNIT, 10MM PY BAND AT BASE OF UNIT, 1MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT AND VEINLETS AT BASE OF UNIT
DHGH-14-38	91.1	91.8	0.70	140830		CO	C4	D	K	MN		P			E	QZ	VN	SEAM: APROX 10% BRIGHT COAL, 7% OF UNIT IS 1MM MS LAMINATIONS THROUGHOUT UNIT, QZ/CARB 1MM CLEAT INFILL AND VEINING, 2% MARIPOSITE ON CLEAT FACES, LOCAL MODERATE SHEARING NEAR TOP HALF OF UNIT, MODERATELY DEVELOPED CLEATING, 1-5MM CLEATS
DHGH-14-38	91.8	92	0.20	140831		XM		D	G	MN		G			E	QZ	CE	FLOOR: CARBONACEOUS MS W/ ONE 2CM THICK COAL BAND AT TOP OF UNIT, MINOR 1-5MM COAL LENSES THROUGHOUT UNIT, ACCESSORY 1-3MM 3% QZ/CARB CLEAT INFILL AND WISPS THROUGHOUT UNIT
DHGH-14-38	92	92.24	0.24			XM		D	G	MN		G			E	QZ	CE	
DHGH-14-38	92.24	95.45	3.21			ST		B	G		AM	G			M	QZ	WP	
DHGH-14-38	95.45	100.94	5.49			SS	MM	A	G		AM	R						
DHGH-14-38	100.94	103.39	2.45			ST		B	G			P		20	M	QZ	VN	
DHGH-14-38	103.39	108.16	4.77			SS	FM	A	G		AM	P		10	E	QZ	VN	
DHGH-14-38	108.16	111.54	3.38			ST		B	G	MN	AM	P		15	M	QZ	WP	
DHGH-14-38	111.54	111.59	0.05			KL												
DHGH-14-38	111.59	112.48	0.89			ST		B	G		AM	P		15	C	BI	CB	BIVALVE INTERVAL: 112.83-113.39
DHGH-14-38	112.48	114.27	1.79			SS	FF	N	G			P						

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	114.27	114.54	0.27			CO	SY	D	K	AB		P			C	QZ	CE	STONY COAL W/ ABUNDANT 3-5MM MS LAMINATIONS THORUGHOUT UNIT, COMMON QZ/CARB 1-5MM CLEAT INFILL THORUGHOUT UNIT, ACCESSORY 60X15MM PY BLEBS CONCENTRATED TOWARDS MIDDLE OF UNIT, CLEATING IS MODERATELY WELL DEVELOPED THROUGHOUT UNIT, 3MM CLEATS, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-38	114.54	114.58	0.04			KL												
DHGH-14-38	114.58	114.82	0.24			ZM		D	G	CM		G			E	QZ	CE	
DHGH-14-38	114.82	115.78	0.96			ST		B	G	MN		G		5	M	QZ	WP	
DHGH-14-38	115.78	116.19	0.41		60	SS	FM	A	G	RA		G	DE	15	M	QZ	CE	
DHGH-14-38	116.19	116.48	0.29		80	SS	FM	A	G			G	DE					
DHGH-14-38	116.48	120.52	4.04		60	SS	FM	A	G			P	DE					
DHGH-14-38	120.52	122.22	1.70			CO	SY	D	K	AB				20	E	QZ	CE	STONY COAL W/ ABUNDANT 3-200MM MS (60%) BANDS THROUGHOUT UNIT, ACCESSORY 13% QZ/CARB 1-5MM CLEAT INFILL THROUGHOUT UNIT, SHEARING IS PRESENT NEAR BOTTOM OF UNIT, LOCALIZED POORLY DEVELOPED CLEATING, 15% 1-2MM CLEATS PRESENT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-38	122.22	123.89	1.67			XM		D	G	MN					E	QZ	CE	
DHGH-14-38	123.89	123.94	0.05			KL												
DHGH-14-38	123.94	125.24	1.30		95	XM		D	G	MN			PD		E	QZ	CE	
DHGH-14-38	125.24	125.33	0.09			KL												
DHGH-14-38	125.33	128.15	2.82		90	XM		D	G	MN			WD		E	QZ	CE	
DHGH-14-38	128.15	128.2	0.05			KL												
DHGH-14-38	128.2	128.59	0.39		85	ST		B	G			G	PD					
DHGH-14-38	128.59	132.02	3.43		85	SS	FM	A	G	MN		P	PD	5				foliation at 20 degrees, moderately developed.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	132.02	132.33	0.31			CO	SY	D	K	AB		P			C	QZ	CE	STONY COAL WITH 2-10 MM MUDSTONE LAMINATIONS (40%), QUARTZ OCCURS AT 1-3MM CLEAT INFILL (12%), PYRITE (3%) OCCURS AS 4X22MM BLEBS THROUGHOUT. LOCAL CLEATS ARE MODERATELY DEVELOPED AND RANGE IN SIZE FROM 2-5MM, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM THE GEOPHYSICAL LOGS AND SMALL THICKNESS
DHGH-14-38	132.33	132.96	0.63			XM		D	G	MN	AM	G			E	QZ	VN	
DHGH-14-38	132.96	134.88	1.92		90	ST		B	G			G			M	QZ	VN	
DHGH-14-38	134.88	137.3	2.42		70	SS	FF	A	G									
DHGH-14-38	137.3	141.28	3.98		85	SS	FM	A	G	CM		P			E	QZ	VN	FOLIATION AT 20 DEGREES, MODERATELY DEVELOPED.
DHGH-14-38	141.28	141.63	0.35			CO	SY	D	K	AB		G			C	QZ	CE	STONY COAL WITH 50% 2-3 MM MUDSTONE LAMINATIONS THROUGHOUT. QUARTZ OCCURS AS 5MM VEINS OR AS 2-3 MM CLEAT INFILL. CLEATS ARE MODERATELY DEVELOPED AND CLEATS ARE 2-5 MM IN SIZE, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-38	141.63	147.16	5.53		60	MS		D	G	MN				15	E	QZ	WP	
DHGH-14-38	147.16	159.79	12.63		80	SS	FF	A	G			G	FS	20	E	QZ	VN	
DHGH-14-38	159.79	161.44	1.65		95	MS		D	G	MN		G	WD	10	M	QZ	CE	
DHGH-14-38	161.44	161.64	0.20	140832	95	MS		B	G	MN		G	WD		E	QZ	CE	ROOF A: MS INTERLAMINATED W/ SS VF, MINOR (5%) 3-10MM COAL LENSES AND BANDS THROUGHOUT UNIT, ACCESSORY QZ/CARB 1-3MM CLEAT INFILL AS WELL AS 6-10MM VEIN NEAR TOP OF UNIT
DHGH-14-38	161.64	161.84	0.20	140833		CO	C2	D	K	MN		G			E	QZ	CE	SEAM ROOF: C1 COAL W/ 8% 2-3MM MS LAMINATIONS THROUGHOUT UNIT, ACCESSORY 3% QZ/CARB 1-2MM CLEAT INFILL THOROUGHOUT UNIT, CLEATING IS MODERATELY DEVELOPED THOROUGHOUT UNIT, CLEATS ARE 1-2MM

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	161.84	162.04	0.20	140834		CO	C2	D	K	MN		G						SEAM: C2 HIGHLY SHEARED COAL DECREASING TOWARDS BOTTOM OF UNIT, 70% OF CLEATING HAS BEEN DESTROYED, MINOR (15%?) MS INTERMIXED THOROUGHOUT, LISTRIC SURFACES PRESENT ALONG JOINTING
DHGH-14-38	162.04	162.24	0.20	140835		CO	C2	D	K	MN		P						SEAM FLOOR: C2 COAL W/ MINOR (8%) MS 2-4MM LAMINATIONS THOROUGHOUT UNIT, MINOR SHEARING PRESENT AT BASE OF UNIT, CLEATING IS MODERATELY DEVELOPED, MINOR (15%) 1-3MM CLEATS PRESENT THROUGHOUT UNIT
DHGH-14-38	162.24	162.44	0.20	140836		SS	FF	A	G		AM	G			M	QZ	VN	FLOOR: MASSIVE SS FF, MINOR 1% QZ/CARB VEINING CONCENTRATED TOWARDS TOP AND BOTTOM OF UNIT
DHGH-14-38	162.44	163.54	1.10			SS	FF	A	G	MN		G	PD	15	C	QZ	VN	
DHGH-14-38	163.54	166.07	2.53			XM		D	G	MN		G	PD	25	E	QZ	VN	
DHGH-14-38	166.07	167.09	1.02			ST		B	G	MN	AM	G			M	QZ	CE	
DHGH-14-38	167.09	171.77	4.68		85	ST		B	G			P	PD	20	E	QZ	VN	
DHGH-14-38	171.77	172.31	0.54		85	SS	FF	A	G	MN		P	WD		E	QZ	VN	
DHGH-14-38	172.31	173.09	0.78		90	ST		B	G			G	PD	35	E	QZ	VN	
DHGH-14-38	173.09	173.47	0.38			SS	FF	A	G			P			C	QZ	VN	DUCTILE DEFORMATION AT THE TOPP OF THE UNIT
DHGH-14-38	173.47	173.79	0.32			XM		D	G	MN	AM							
DHGH-14-38	173.79	174.91	1.12		90	ST		B	G			G	PD	30	M	QZ	WP	
DHGH-14-38	174.91	178.08	3.17		80	SS	FF	A	G			G	WD	30				
DHGH-14-38	178.08	178.28	0.20	140837		ST		B	G	MN	AM	G			E	QZ	VN	ROOF A: MASSIVE ST W/ MINOR (5%) 3-5MM COAL LAMINATIONS AT BASE OF UNIT THAT HAVE UNDERGONE DUCTILE DEFORMATION, ACCESSORY (3%) 2-4MM QZ/CARB VEINS CONCEWNRATED TOWARDS BOTTOM OF UNIT, ACCESSORY (2%) 2-3MM PY BLEBS FORMING A BAND NEAR BOTTOM OF UNIT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	178.28	178.51	0.23	140838		CO	C4	D	K	MN		G			E	QZ	VN	SEAM A: C4 COAL W/ MINOR (15%) 3-5MM MS LAMINATIONS THROUGHOUT UNIT, ACCESSORY (10%) 1-4MM CLEAT INFILL THOROUGHOUT UNIT, ACCESSORY (10%) 8-15MM PY BLEBS CONCENTRATED TOWARDS MIDDLE OF UNIT, CLEATING IS WELL DEVELOPED THOROUGHOUT UNIT W/ 4-5MM CLEATS
DHGH-14-38	178.51	178.63	0.12			KL				CO								LOST CORE ATTRIBUTED TO COAL
DHGH-14-38	178.63	178.97	0.34	140839		CO	C4	D	K	MN		G			E	QZ	CE	SEAM: C4 MODERATLEY SHEARED COAL W/ MINOR (15%) MS INTERMIXED THOROUGHOUT UNIT, ACCESSORY (5%) 1-3MM QZ/CARB CLEAT INFILL THOROUGHOUT UNIT, SHEARING HAS DESTROYED 80%? OF CLEATING, LOCAL 1MM CLEATS IN 5MM BANDS THROUGHOUT UNIT (20%)
DHGH-14-38	178.97	179.17	0.20	140840		XM		D	G	MN	AM	G			M	QZ	CE	FLOOR: MASSIVE CARBONACEOUS MS W/ MINOR (5%) 2-6MM COAL LENSES CONCENTRATED TOWARDS TOP OF UNIT, MINOR (1%) 1MM QZ/CARB CLEAT INFILL
DHGH-14-38	179.17	179.28	0.11			XM		D	G	MN	AM	G			M	QZ	CE	
DHGH-14-38	179.28	181.47	2.19		70	ST		B	G			G	PD	30	M	QZ	WP	
DHGH-14-38	181.47	184.32	2.85			SS	MM	A	G	MN		G						FOLIATION OCCURING AT 40 DEGREES
DHGH-14-38	184.32	184.97	0.65		80	SS	FM	A	G	MN			PD		E	QZ	CE	
DHGH-14-38	184.97	185.02	0.05			KL												
DHGH-14-38	185.02	188.14	3.12		80	SS	FM	A	G	MN		G	PD	20	E	QZ	WP	
DHGH-14-38	188.14	189.23	1.09			SS	FF	N	G		AM				M	QZ	WP	
DHGH-14-38	189.23	212.45	23.22			KL												7 BOXES OF CORE LOST IN TRANSIT
DHGH-14-38	212.45	213.06	0.61			SS	MM	A	G		AM	G						FOLIATION OCCURING AT 35 DEGREES
DHGH-14-38	213.06	218.37	5.31			SS	MC	V	G	MN			PD	30	E	QZ	VN	
DHGH-14-38	218.37	218.42	0.05			KL												
DHGH-14-38	218.42	218.53	0.11			ZM		D	K	CM		P			M	QZ	CE	
DHGH-14-38	218.53	218.63	0.10			XM		D	G		AM	P			E	QZ	FR	
DHGH-14-38	218.63	218.83	0.20	140841		XM		D	G		AM	P			E	QZ	FP	ROOF: MASSIVE CARBONACEOUS MS W/ 1MM ACCESSORY (3%) QZ/CARB FRACTURE INFILL ON FRACTURE PLANES THRPOUGHOUT UNIT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	218.83	219.16	0.33	140842		CO	C3	D	K	MN		G			E	QZ	CE	SEAM: C3 HIGHLY SHEARED COAL W/ 30% MS INTERMIXED AND IN 2-3MM LAMINATIONS THROUGHOUT, CLEATING IS 80% DESTROYED, 1-2MM CLEATS, 1% QZ/CARB SHEARED 1MM CLEAT INFILL, LISTRIC FACES ON JOINTS
DHGH-14-38	219.16	219.36	0.20	140843		XM		B	G	MN	AM	G			E	QZ	CE	FLOOR: MASSIVE CARBONACEOUS MS W/ MINOR (8%) 1-2MM COAL LENSES THOROUGHOUT UNIT, ACCESSORY (5%) 1MM CLEAT INFILL THROUGHOUT UNIT
DHGH-14-38	219.36	221.35	1.99		65	XM		B	G	MN	AM	G			E	QZ	CE	
DHGH-14-38	221.35	222.86	1.51			ST		B	G	MN	AM	G	PD					
DHGH-14-38	222.86	230.47	7.61		95	SS	MM	A	G	MN		G	PD	20	E	QZ	VN	
DHGH-14-38	230.47	234.71	4.24			SS	MM	A	G	MN			PD	15	E	QZ	WP	
DHGH-14-38	234.71	249.41	14.70		55	SS	FM	A	G			G	BW	5	E	QZ	VN	
DHGH-14-38	249.41	255.14	5.73		90	ST		B	G			G			E	PY	BL	
DHGH-14-38	255.14	257.65	2.51			MS		B	G	MN	AM				E	PY	BL	
DHGH-14-38	257.65	258.05	0.40	GT-14-59		MS		B	G	MN	AM				E	PY	BL	
DHGH-14-38	258.05	263.38	5.33			MS		B	G	MN	AM				E	PY	BL	
DHGH-14-38	263.38	263.95	0.57			CO	SY	D	K					25				
DHGH-14-38	263.95	264.15	0.20	140844		CO	SY	D	K	CM		G	WD	40	E	QZ	CE	ROOF: STONY COAL W/ COMMON (40%) MS 4-10MM LAMINATIONS THROUGHOUT UNIT, ACCESSORY 1-2MM QZ/CARB CLEAT INFILL THOROUGHOUT, POORLY DEVELOPED CLEATING, LOCAL 1MM CLEATS PRESENT
DHGH-14-38	264.15	264.27	0.12	140845		CO	C3	D	K	MN			WD	30	E	QZ	CE	SEAM ROOF: C3 COAL W/ MINOR (15%) 2-4MM MS LAMINATIONS THROUGHOUT UNIT, ACCESSORY (3%) QZ/CARB CLEAT INFILL THROUGHOUT UNIT, CLEATING IS MODERATLEY DEVELOPED W/ 1-2MM CLEATS
DHGH-14-38	264.27	264.55	0.28			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-38	264.55	264.9	0.35	140846		CO	C3	D	K	MN		G			E	QZ	LN	SEAM: C3 COAL WITH 15% 2-3 MM MUDSTONE LAMINATIONS THROUGHOUT. 10% QTZ CARB LENSES RANGING FROM 4-10 MM IN SIZE. QTZ ALSO OCCURS AS 1-2 MM CLEAT INFILL. CLEATING IS POORLY DEVELOPED, BUT WHEN SEEN ARE 1-2MM IN SIZE. COAL IS 45% BRIGHT COAL.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	264.9	265.7	0.80	140847		CO	C2	D	K	MN		G			E	QZ	CE	SEAM: HIGHLY SHEARED C2 COAL WITH 10% MUD INTERMIXED THROUGHOUT. 1-2MM QZ-CARB (3%) CLEAT INFILL. 85% OF CLEATING HAS BEEN DESTROYED, WHEN PRESENT 1MM IN SIZE. 70% BRIGHT COAL.
DHGH-14-38	265.7	266.6	0.90	140848		CO	C2	D	K	MN		G			E	QZ	CE	SEAM A: HIGHLY SHEARED C2 COAL WITH 10% MUD INTERMIXED THROUGHOUT. 5% 10-20MM SILTSTONE CLASTS IN THE BOTTOM OF THE UNIT. 1-2MM QZ-CARB (3%) CLEAT INFILL. 85% OF CLEATING HAS BEEN DESTROYED, WHEN PRESENT 1MM IN SIZE. 70% BRIGHT COAL.
DHGH-14-38	266.6	267.31	0.71	140849		CO	C3	D	K	MN		G			E	QZ	CE	SEAM A: HIGHLY SHEARED C2 COAL WITH 20% MUD INTERMIXED THROUGHOUT. 5% 10-20MM SILTSTONE CLASTS THROUGHOUT THE UNIT. 1-2MM QZ-CARB (3%) CLEAT INFILL. 85% OF CLEATING HAS BEEN DESTROYED, WHEN PRESENT 1MM IN SIZE. 60% BRIGHT COAL.
DHGH-14-38	267.31	267.37	0.06			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-38	267.37	268.09	0.72	140850		CO	C3	D	K	MN		G			E	QZ	CE	SEAM: MODERATELY SHEARED C3 COAL WITH 10% 3-15MM MUDSTONE LAMINATIONS THROUGHOUT. 3% 2MM QZ CARB CLEAT INFILL. SHEARING IS CONCENTRATED TOWARDS THE TOP OF THE UNIT, LISTRIC SURFACES COMMON AT TOP. CLEATING BECOMES MORE WELL DEVELOPED AT THE BASE OF THE UNIT. CLEATS ARE 2MM IN SIZE. COAL IS 50% BRIGHT.
DHGH-14-38	268.09	268.97	0.88	140851		CO	C3	D	K	MN		P			E	QZ	CE	SEAM FLOOR A: HIGHLY SHEARED C3 COAL WITH 12% MUDSTONE INTERMIXED. 5% 4-12 MM SILTSTONE LENSES. 5% 2-3MM QZ CLEAT INFILL THROUGHOUT THE UNIT. 3% 2-5MM PYRITE BLEBS THROUGHOUT. 90% OF CLEATING HAS BEEN DESTROYED AND COAL IS 50% BRIGHT. CLEATS ARE 1MM IN SIZE WHEN SEEN.
DHGH-14-38	268.97	269.17	0.20	140852		XT		D	G	MN	AM	D			E	QZ	CE	FLOOR: CARBONACEOUS SILTSTONE WITH 5% 3-12MM COAL LAMINATIONS THROUGHOUT. CLEAT INFILL IS MODERATELY DEVELOPED AND 2-3MM IN SIZE. QZ IS 1-3MM IN SIZE AND OCCURS AS WISPS AND CLEAT INFILL.
DHGH-14-38	269.17	269.56	0.39			XT		D	G	MN	AM	D			E	QZ	FP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	269.56	269.89	0.33			ZT		D	G	CM	AM	G			E	QZ	CE	
DHGH-14-38	269.89	270.04	0.15			XT		D	G	MN	AM	D			E	QZ	VN	
DHGH-14-38	270.04	270.24	0.20	140853		XT		D	G	MN	AM	D			E	QZ	VN	ROOF A: CARBONACEOUS SILTSTONE W/ MINOR (3%) 2MM COAL LENSES CONCENTRATED TOWARDS BOTOTM OF UNIT, ACCESSORY (3%) 1-2MM QZ/CARB VEINING OCCURRING AT TOP AND BOTTOM OF INTERVAL, MINOR (<1%) 1MM PY BLEB NEAR TOP OF UNIT
DHGH-14-38	270.24	271.08	0.84	140854		CO	C3	D	K	MN		G			E	QZ	CE	SEAM A: ABUNDANTLY SHEARED C3 COAL WITH MINOR (12%) 3-4MM MS LAMINATIONS THOROUGHOUT, COMMON (20%) 15-20MM ST LENSES THROUGHOUT UNIT, ACCESSORY (10%) QZ/CARB 1-2MM CLEAT INFILL, 50% OF CLEATING HAS BEEN DESTROYED, 1MM CLEATS PRESENT, 55% BRIGHT COAL
DHGH-14-38	271.08	271.91	0.83	140855		CO	C3	D	K	MN		G			E	QZ	CE	SEAM A: ABUNDANTLY SHEARED INCREASING TOWARDS BOTTOM OF UNIT, C3 COAL, WITH MINOR (12%) 3-4MM MS LAMINATIONS THOROUGHOUT, COMMON (20%) 15-20MM ST LENSES CONCENTRATED TOWARDS TOP HALF OF UNIT, ACCESSORY (10%) QZ/CARB 1-2MM CLEAT INFILL, 50% OF CLEATING HAS BEEN DESTROYED, 1MM CLEATS PRESENT, 55% BRIGHT COAL
DHGH-14-38	271.91	272.11	0.20	140856		XT		D	G		AM	G			E	QZ	VN	FLOOR A: MASSIVE CARBONACEOUS SILTSTONE W/ ACCESSORY (4%) 3-5MM QZ/CARB VEINING CONCENTRATED TOWARDS TOP AND BOTTOM OF UNIT, ACCESSORY (2%) 4X35MM PY BLEB NEAR BOTTOM OF UNIT
DHGH-14-38	272.11	272.21	0.10			XT				MN	AM	F			E	QZ	VN	
DHGH-14-38	272.21	272.42	0.21			ZT		D	G	CM		G			C	PY	DS	
DHGH-14-38	272.42	272.62	0.20	140857		ZT		D	G	CM	AM	G			E	QZ	CE	ROOF: CARBONACEOUS SILTSTONE W/ COMMON (20%) 2-10MM COAL LAMINATIONS THOROUGHOUT UNIT, ACCESSORY 2-4MM CLEAT INFILL THROUGHOUT UNIT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-38	272.62	273.32	0.70	140858		CO	C3	D	K	MN		G			E	QZ	CE	SEAM A: C3 COAL W/ MINOR (10%) 2-4MM MS LAMINATIONS THORUGHOUT UNIT, MINOR (8%) 3-10MM ST LENSES THROUGHOUT UNIT, ACCESSORY (5%) 1-3MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, MINOR(<1%) 2MMX 20MM PY BLEB NEAR BOTTOM OF UNIT, 50% BRIGHT COAL, CLEATING IS MODERATELY WELL DEVELOPED AT TOP OF UNIT AND GRADES INTO POORLY DEVELOPED NEAR BOTTOM OF UNIT DUE TO HIGH SHEARING, 90% OF CLEATING HAS BEEN DESTROYED IN BOTTOM 20CM OF UNIT, 2MM CLEATS AT TOP OF UNIT
DHGH-14-38	273.32	273.66	0.34	140859		CO	C2	D	K	MN		G			E	QZ	CE	SEAM: C2 COAL W/ MINOR (5%) 2MM MS LAMINATIONS THORUGHOUT UNIT, ACCESSORY (3%) 2-3MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, CLEATING IS WELL DEVELOPED THROUGHOUT, 2MM CLEATS, 75-80% BRIGHT COAL
DHGH-14-38	273.66	273.86	0.20	140860		XM		D	G	MN		G			E	QZ	CE	FLOOR: CARBONACEOUS MS W/ MINOR (5%) 5-10MM COAL BANDS CONCENTRATED TOWARDS MIDDLE OF UNIT, ACCESSORY (3%) 1-3MM QZ/CARB CLEAT INFILL AS WELL AS IN 1MM WISPS THROUGHOUT UNIT
DHGH-14-38	273.86	274.09	0.23			XM		D	G	MN	AM	P			E	QZ	CE	
DHGH-14-38	274.09	277.56	3.47			SS	FF	A	G	MN			PD	1	M	QZ	CE	
DHGH-14-38	277.56	277.76	0.20			CO	SY	D	K	CM		P			C	QZ	CE	STONY COAL W/ COMMON (25%) 1-10MM MS LAMINATIONS THROUGHOUT UNIT, COMMON (30%) QZ/CARB 10MM VEINING AND 1MM CLEAT INFILL, ACCESSORY (15%) 2-10MM PY LENSES NEAR MIDDLE OF UNIT, MODERATELY DEVELOPED CLEATING, 3MM CLEATS PRESENT, NOT SAMPLED DUE TO LOW GRADE AS DETRMINED FROM GEOPHYSICAL LOGS
DHGH-14-38	277.76	278.14	0.38			XM		D	G	MN		P			E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	24.04	26.53	2.49			KL												
DHGH-14-39	26.53	27	0.47		60	SI	SA	E	G									
DHGH-14-39	27	27.5	0.50			KL				CO								
DHGH-14-39	27.5	27.91	0.41			CO	C5	D	K	AB		D						COAL=SOFTENED ZONE, NO CLEATING, NO TEXTURES. INTERMIXED MUD.
DHGH-14-39	27.91	29.38	1.47			XT		D	G	AB		P						
DHGH-14-39	29.38	32.69	3.31		80	SS	FM	A	G					30	C	QZ	VN	
DHGH-14-39	32.69	32.92	0.23			KL												
DHGH-14-39	32.92	36.82	3.90		60	SS	FM	A	G			G		40	C	QZ	VN	ACCESSORY EPIDOTE IN VEINS AND ASSOCIATED WITH QUARTZ
DHGH-14-39	36.82	37.02	0.20	145821	60	SS	FM	A	G	MN		G		40	C	QZ	VN	ROOF A: MINOR COAL AT BASAL CONTACT, GRADES INTO COAL SEAM. COAL IS VERY MUDDY.
DHGH-14-39	37.02	37.39	0.37	145822		CO	C5	D	K	AB	AM				M	QZ	CT	SEAM A: C5 COAL WITH ABUNDANT MUD. ONE 6MM SILTSTONE CLAST IN THE MIDDLE OF THE UNIT, WITH 1 MM QUARTZ FOCUSED IN THE CLAST. NO STRUCUTRE, HIGHLY SHEARED, NO CLEATING, COMPLETE DISAGGREGATION.
DHGH-14-39	37.39	37.81	0.42			KL				CO								
DHGH-14-39	37.81	38.17	0.36			KL												
DHGH-14-39	38.17	38.44	0.27	145823		CO	C5	D	K	AB	AM	F						SEAM A: C5 COAL HAS NO TEXTURES, NO CLEATING, HIGHLY SHEARED, COMMON LISTRIC FACES. MINOR SILTSTONE CLASTS.
DHGH-14-39	38.44	38.7	0.26	145824	80	ST		B	G	XX		G		35				FLOOR: FLOOR IS SIMILAR TO THE ROOF, CARBONACEOUS SILTSTONE. NO COAL.
DHGH-14-39	38.7	39.05	0.35		80	ST		B	G					35				
DHGH-14-39	39.05	39.22	0.17			KL												
DHGH-14-39	39.22	41.51	2.29		80	ST		B	G			O		40	E	QZ	VN	
DHGH-14-39	41.51	41.66	0.15			ZT		D	G			G		5	E	QZ	CE	
DHGH-14-39	41.66	43.38	1.72			SS	VF	E	G									
DHGH-14-39	43.38	43.57	0.19			ZT		B	G			G		10	E	QZ	CE	
DHGH-14-39	43.57	44.22	0.65		50	ST		B	G			G		5	E	PY	BN	
DHGH-14-39	44.22	45.55	1.33		85	SS	FM	A	G			P		15	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	45.55	45.68	0.13			ST		B	G					10				
DHGH-14-39	45.68	45.73	0.05			KL												
DHGH-14-39	45.73	45.87	0.14			ST		B	G			G		10	E	QZ	VN	
DHGH-14-39	45.87	48.12	2.25			SS	FM	E	G	MN		G		10	E	QZ	VN	
DHGH-14-39	48.12	48.55	0.43		60	SS	VF	E	G					5				
DHGH-14-39	48.55	48.7	0.15			KL												
DHGH-14-39	48.7	56.68	7.98		60	SS	VF	E	G			G		10	E	QZ	VN	
DHGH-14-39	56.68	58.09	1.41		70	ST		B	G					10				
DHGH-14-39	58.09	58.16	0.07			KL												
DHGH-14-39	58.16	60.34	2.18		85	ST		B	G			G		2	E	QZ	VN	
DHGH-14-39	60.34	60.87	0.53			ST		B	G			G		20	M	BI	BN	BIVALVE INTERVAL: 60.98-61.26 QZ ALSO AS REPLACEMENT
DHGH-14-39	60.87	61.07	0.20	145825		ST		B	G	MN		G		20	M	BI	BN	ROOF A: COAL BANDS AT THE BASE OF THE CONTACT UP TO 5MM IN SIZE. ACCESSORY PYRITE IN THE BIVALVES AND IN BANDS. ACCESSORY QZ AS REPLACEMENT OF BIVALVES, IN VEINS AND AS CLEAT INFILL.
DHGH-14-39	61.07	61.27	0.20	145826		CO	C3	D	K	MN		G		10	M	QZ	CE	SEAM ROOF: 5MM MUDSTONE LAMINATIONS, CLEATING IS NO TO MODERATELY DEVELOPED UP TO 4 X 6 MM. MINOR LISTRIC FACES.
DHGH-14-39	61.27	61.85	0.58	145827		CO	C2	D	K	MN		G		25	E	QZ	CE	SEAM A: C2 COAL WITH 5MM MS LM TO, MN PY IN CLEATS, MINOR QZ IN CLEATS. CLEATS ARE WELL DEVELOPED AT 4X 10MM IN SIZE. SOME LISTRIC SURFACES. QZ AND PY IN CLEATS IS UP 1 MM.
DHGH-14-39	61.85	62.05	0.20	145828		CO	C3	D	K	MN		G		20	M	QZ	CE	SEAM A: C3 COAL WITH MS BANDS UP TO 3 MM, ABUNDANT LISTRIC FACES, BREAKS VERY EASILY ALONG THESE FACES. HIGHLY SHEARED.
DHGH-14-39	62.05	62.4	0.35	145829		CO	C3	D	K	MN		G		15	E	QZ	CE	SEAM A: 3MM MS LM TO, ONE 40 MM SILTSTONE BAND AT THE BASE. PY IS DISSEMINATED AND VERY MINOR. QUARTZ IS 1MM AND AS CLEAT INFILL.
DHGH-14-39	62.4	62.61	0.21	145830		CO	C2	D	K			G		15	M	QZ	CE	SEAM: CLEATING IS WELL DEVELOPED UP TO 7MM FACE CLEATS AND 7 MM BUTT CLEATS. FACE CLEATS ARE AT AN ANGLE OF 85 DEGREES. MINOR LISTRIC SURFACES.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	62.61	63.18	0.57	145831		ZT		D	G	CM		G		10	E	QZ	CE	PARTING A: 40MM COAL BANDS (MAX), LISTRIC SURFACES ARE COMMON. QZ VEINS UP TO 2MM AND WZ IS UP TO 1MM IN CLEATS. ONE PYRITE BLEB (2MM).
DHGH-14-39	63.18	63.58	0.40	145832		CO	C2	D	K	MN		G		10	E	QZ	CE	SEAM: MINOR UP TO 4MM MS LN, CLEATING IS WELL DEVELOPED = 5 MM BY 8MM IN SIZE. MINOR CHONCOIDAL FRACTURING. FACE CLEATS AT 85 DEGREES. BUTT CLEATS AT 75 DEGREES. QZ IS UP TO 0.5- 4 MM IN CLEATS. PY BLEBS 1MM ACROSS.
DHGH-14-39	63.58	64.27	0.69	145833		ZT		D	K	CM		G			E	QZ	CE	FLOOR A: COAL BANDS ARE UP TO 40MM THICK, QZ IS 1MM IN CLEATS, PY IS 6MM IN SIZE AND IS 1MM IN CLEATING.
DHGH-14-39	64.27	64.32	0.05			KL												
DHGH-14-39	64.32	64.47	0.15			ZT												
DHGH-14-39	64.47	65.51	1.04			MS		D	G	MN		G		20	E	PY	BN	
DHGH-14-39	65.51	66.72	1.21			ST		B	G			G	MX	5				
DHGH-14-39	66.72	68.32	1.60		60	SS	FF	E	G				DE	30				
DHGH-14-39	68.32	68.42	0.10			KL												
DHGH-14-39	68.42	75.63	7.21		60	SS	FF	E	G				DE	30				was a lost core from 75.90-75.99, but was taken out because it was found 2 runs later (ignore photo)
DHGH-14-39	75.63	92.24	16.61		55	SS	VF	E	G				BW	20	M	QZ	VN	FOLIATION AT 65 DEGREES.
DHGH-14-39	92.24	94.99	2.75			ST		B	G	MN		G		10	M	BI	DS	
DHGH-14-39	94.99	98.03	3.04			MS		D	G		AM	G			M	PY	RF	BIVALVE INTERVAL: 98.35-99.02
DHGH-14-39	98.03	98.83	0.80			SS	VF	B	G			G		1	C	BI	BN	
DHGH-14-39	98.83	100.52	1.69			ZM		D	G			G		20	E	QZ	VN	
DHGH-14-39	100.52	102.96	2.44			ST		B	G	MN		G		1	M	PY	BL	
DHGH-14-39	102.96	103.17	0.21	145834		ST		B	G	RA		G		1	M	QZ	WP	ROOF: TRACE COAL LAMINATIONS AT THE BASE, UP TO 2MM, QZ OCCURS AS 1MM WISPS
DHGH-14-39	103.17	103.53	0.36	145835		CO	C2	D	K	MN		G			E	QZ	VN	SEAM: MS LM UP TO 3MM, MOSTLY AT THE TOP. CLEATING IS WELL DEVELOPED- 3MM FACE BY 8MM BUTT CLEATS. FACE CLEATS HAVE AN ANGLE OF 80 DEGREES. MINOR CHONCOIDAL FRACTURING. SOME LISTRIC FACES. 2MM QZ VEINS, IN FACE CLEATS UP TO 1MM.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	103.53	103.74	0.21	145836	75	SS	VF	E	G	MN		P	DE	10	E	QZ	CE	FLOOR: CO LM UP TO 1 CM THICK, FOCUSED AT TOP OF THE UNIT, BUT THROUHGOUT. 10% QZ CLEATING UP TO 2MM.
DHGH-14-39	103.74	110.91	7.17		75	SS	VF	E	G			P	DE	10				
DHGH-14-39	110.91	111.83	0.92		80	SS	FF	E	G			G		10				
DHGH-14-39	111.83	112.2	0.37			ST		B	G	TR		G		10	M	QZ	WP	
DHGH-14-39	112.2	113.32	1.12			ZT		D	G			G		10	E	QZ	VN	COAL BANDS UP TO 70 MM
DHGH-14-39	113.32	113.52	0.20	145837		ZT		D	G			P		10	M	QZ	WP	ROOF: CLEAN
DHGH-14-39	113.52	113.72	0.20	145838		CO	C2	D	K	MN		G			E	QZ	CE	SEAM ROOF A: MS LN 3MM, ONE 8MM SI BAND. MODERATELY TO WELL DEVLOPED CLEATING, CLEATS ARE 4 (FACE) X 6MM (BUTT) N SIZE. FACE CLEATS ARE 80 DEGREES. QZ IS UP TO 2MM, UP TO 1MM IN VEINS. PY UP TO 1MM IN CLEATS.
DHGH-14-39	113.72	113.83	0.11	145839		CO	C2	D	K	CM	AM	G						SEAM: HIGHLY SHEARED C2 COAL. BREAKS EASILY ALONG LISTRIC SURFACES. NO CLEATING.
DHGH-14-39	113.83	114.12	0.29	145840		CO	C2	D	K	MN		P		10	M	QZ	CE	SEAM FLOOR A: CLEATING IS MODERATE TO WELL DEVELOPED= 4 (FACE) X 6MM (BUTT). FACE AND BUTT CLEATS HAVE AN ANGLE OF 85 DEGREES. MN MS LM UP TO 4MM THROUGHOUT. SOME LISTRIC FACES, MINOR SHEARING. QZ IS UP TO 2MM IN CLEATS AND PY IS UP TO 1 MM IN CLEATS. QZ IS IN BEDDING PARALLEL CLEATS.
DHGH-14-39	114.12	114.32	0.20	145841		ST		B	G	TR		G		20	M	QZ	WP	FLOOR: COAL LAMINATIONS ARE LESS THAN 1MM.
DHGH-14-39	114.32	114.63	0.31			ST		B	G			G		10	M	QZ	WP	
DHGH-14-39	114.63	115.35	0.72		65	SS	FF	E	G				MX	10				
DHGH-14-39	115.35	115.4	0.05			KL												
DHGH-14-39	115.4	125.74	10.34		60	SS	FF	E	G	ST		G	BW	10	M	QZ	VN	
DHGH-14-39	125.74	127.71	1.97			SS	FM	E	G	ST		G		10	M	QZ	WP	
DHGH-14-39	127.71	133.54	5.83		60	SS	FM	E	G			G	BW	10				
DHGH-14-39	133.54	137.33	3.79		80	ST		B	G			G	MX	5				
DHGH-14-39	137.33	139.43	2.10			ST		B	G					5				
DHGH-14-39	139.43	139.54	0.11			KL												
DHGH-14-39	139.54	140.86	1.32			ST		B	G			I		15				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	140.86	141.09	0.23			SS	VF	A	G			R		25	E	PY	BN	
DHGH-14-39	141.09	141.51	0.42			ST		B	G			R						
DHGH-14-39	141.51	141.76	0.25			CO	C3	D	K	MN		R			M	QZ	VN	Not sampled; <30cm seam. Crushed zone. Common listric faces. Rare cleating. Minor QZ in cleats <1mm.
DHGH-14-39	141.76	142.04	0.28			ZT												
DHGH-14-39	142.04	145.6	3.56			ST		B	G			R		40				
DHGH-14-39	145.6	146.28	0.68			ST		B	G			G		15				
DHGH-14-39	146.28	146.64	0.36			ZM		D	G	CM		F		15	M	QZ	CE	
DHGH-14-39	146.64	146.85	0.21	145842		ZM		D	G	MN		F		15	M	QZ	WP	Roof: coal bands up to 2mm. faulted basal contact. qz also occurs as sub mm wisps.
DHGH-14-39	146.85	146.99	0.14	145843		CO	C2	D	K	MN		F		8	E	QZ	CE	Seam A: Minor ST laminations <8mm. Well developed cleating <6x8mm. Face cleats 60deg. Faulted above & below coal seam. Accessory QZ veins <2mm & cleat infill <1mm. 4mm PY bleb.
DHGH-14-39	146.99	147.12	0.13	145844		XT		D	G	MN		G						Parting A: softened zone, coal clasts up to 2mm, siltstone clasts up to 3mm
DHGH-14-39	147.12	147.25	0.13	145845		CO	C3	D	K	CM		R		10	C	QZ	VN	SEAM A: siltstone bands are up to 25mm, no-poor cleating development, 5 by 5mm cleats. qz veins up to 15 mm. pyrite bands are up to 10 mm. common listric faces, moderately sheared.
DHGH-14-39	147.25	147.56	0.31	145846		CO	C3	D	K	MN		G		15	M	QZ	CE	SEAM A: siltstone laminations are up to 4mm in size. 5% py, cleating is moderately developed, 2mm face x 5 mm butt. minor listric faces. qz is 1mm in cleating, py is up to 2mm in cleating.
DHGH-14-39	147.56	147.78	0.22	145847		ZT		D	G	MN				8	E	QZ	VN	Floor: coal bands up to 2mm.
DHGH-14-39	147.78	148.22	0.44			ZT												
DHGH-14-39	148.22	148.38	0.16			CO	C3	D	K	MN				8	E	QZ	VN	Not sampled; seam <30cm. st bands up to 10 mm. cleating is moderately developed 2 x 5 mm
DHGH-14-39	148.38	148.63	0.25			CO	SY	D	K	MN					C	QZ	VN	Not sampled; <40% CO. st bands up to 4 mm.
DHGH-14-39	148.63	151.15	2.52			ST		B	G			G		10				
DHGH-14-39	151.15	151.35	0.20	145848		ZT		D	G	CM		G			E	QZ	CE	Roof: coal bands up to 15mm. 2mm qz cleat infill. coal bands focused at top of unit.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	151.35	151.48	0.13	145849		CO	C2	D	K			G		10	M	QZ	CE	Seam Roof: moderately developed cleating, 3 (face) x5 (butt) mm, minor 1mm qz in cleat infill
DHGH-14-39	151.48	151.64	0.16	145850		CO	C3	D	K			F			M	QZ	BN	Seam: Highly sheared, recompactd. all cleating and bedding has been destroyed. listric faces common.
DHGH-14-39	151.64	151.86	0.22	145851		CO	C2	D	K	MN		G		15	E	QZ	CE	Seam Floor: Two 20 mm SI bands. cleating is moderately to well developed. at 2 x 4 mm . minor chochoidal fracturing. qtz is u to 1 mm in bedding parallel cleats.
DHGH-14-39	151.86	152.06	0.20	145852		ST		B	G	TR		G		15	E	QZ	VN	Floor: coal laminations up to 2mm.
DHGH-14-39	152.06	154.69	2.63			ST		B	G	TR		G		15	M	QZ	CE	
DHGH-14-39	154.69	154.78	0.09		80	SS	FM	A	G					15				
DHGH-14-39	154.78	154.86	0.08			KL												
DHGH-14-39	154.86	167.12	12.26		80	SS	FM	A	G	MN		G	LX	10	M	QZ	VN	
DHGH-14-39	167.12	172.8	5.68		90	SS	VM	E	G	MN				10				
DHGH-14-39	172.8	173.12	0.32	GT-14-60	90	SS	VM	E	G					10	M	BI	DS	Geotech sample
DHGH-14-39	173.12	173.18	0.06		90	SS	VM	E	G			I		10				
DHGH-14-39	173.18	173.45	0.27	145853	90	SS	VM	E	G	MN		I		10	M	BI	DS	Roof A: coal bands are up to 4mm at basal contact.
DHGH-14-39	173.45	173.65	0.20	145854		CO	C1	D	K	MN		G		10	M	QZ	CE	Seam Roof A: 2mm mudstone bands. cleating is well developed up to 6 (face)x 8mm (butt). face cleats are 80 degrees. qz is up to 1mm in cleats. py in 1mm bands. minor conchoidal fracturing.
DHGH-14-39	173.65	174.35	0.70	145855		CO	C1	D	K	MN		G		10	M	QZ	CE	Seam A: Cleating is well developed. up to 6 (face) x 8mm (butt). face cleats up to 85 degrees. minor listric surfaces. common conchoidal fracturing. qz up to 2mm. py is up to 5mm in lenses, up to 0.5 mm in cleat infill.
DHGH-14-39	174.35	174.55	0.20	145856		CO	C1	D	K	MN		G			M	QZ	CE	Seam Floor A: ms lm up to 5mm throughout. cleating is well developed, up to 6 x 10 mm. common conchoidal fracturing.
DHGH-14-39	174.55	174.75	0.20	145857	85	ST		D	G	MN		P		5	M	QZ	VN	Floor: 1mm coal lenses.
DHGH-14-39	174.75	176.98	2.23		85	ST		D	G	MN		P		5	M	QZ	VN	
DHGH-14-39	176.98	177.98	1.00			XM		D	G	TR		I		10	E	PY	CN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	191.36	192.4	1.04			SS	VM	E	G		AM				M	QZ	VN	
DHGH-14-39	192.4	194.37	1.97			KL												DROPPED CORE. LEFT BLOCK SAYING SO
DHGH-14-39	194.37	197.52	3.15		60	ST		B	G	RA			DE	3	M	QZ	FP	
DHGH-14-39	197.52	209.84	12.32			ST		B	G	MN		G		10	M	PY	DS	
DHGH-14-39	209.84	223.12	13.28		60	SS	FM	C	G	MN		P	LX	25	M	BI	BN	Bivalve horizon 218.08-218.46m
DHGH-14-39	223.12	223.28	0.16			ST		D	G			G		10	M	PY	CB	
DHGH-14-39	223.28	223.48	0.20	145865		ST		D	G	MN		G		10	E	PY	CB	Roof: coal bands are 2mm. py is concentrated at base. minor sub mm qz wisps. gradational contact.
DHGH-14-39	223.48	223.68	0.20	145866		CO	C2	D	K	MN		G		15	M	QZ	CE	Seam Roof A: mn ms laminations up to 3mm throughout. cleating is moderate to well developed, 3 (face) x4(butt) mm. Minor 2mm pyrite blebs. minor conchoidal fracturing. one siltstone lens up to 8 mm
DHGH-14-39	223.68	224.1	0.42	145867		CO	C2	D	K	MN		G		15	E	QZ	CE	Seam: MS LN up to 5 mm. Cleating is well developed, with 3 x4 mm cleats. 2mm qtz (2%) in cleats. pyrite is disseminated in one 3mm band and in one 2mm bleb.
DHGH-14-39	224.1	224.3	0.20	145868		CO	C2	D	K	MN		G		15	E	QZ	VN	Seam Floor: ms laminations up to 2mm. cleating is well developed, with cleats up to 2 x7 mm. qz veins up to 8mm, concentrated at the base. common conchoidal fracturing.
DHGH-14-39	224.3	224.5	0.20	145869		ZT		D	G	MN		G		15	E	QZ	VN	Floor: coal laminations up to 10mm. qz in veins up to 9mm and in 1mm wisps.
DHGH-14-39	224.5	226.55	2.05			ZT		D	G	MN		G		30	E	QZ	CE	
DHGH-14-39	226.55	226.82	0.27			CO	C2		K	MN		G		15	M	QZ	CE	Not sampled; CO seam <30cm. Minor ST lenses <4mm & 7mm MS band. Well developed cleating; <5mm face x <8mm butt. Face cleats 65 deg. Minor conchoidal fracturing. Minor QZ <1mm, mostly in bedding parallel cleats.
DHGH-14-39	226.82	232.16	5.34		70	ST		B	G	MN		G		20	E	QZ	VN	
DHGH-14-39	232.16	246.45	14.29		70	SS	VM	A	G	MN		G		25				
DHGH-14-39	246.45	251.54	5.09		60	ST		B	G			G		15	M	QZ	VN	
DHGH-14-39	251.54	253.43	1.89			ST		B	G		AM	G						
DHGH-14-39	253.43	264.81	11.38		65	SS	VM	E	G	TR		I	LX	15				

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	264.81	265.06	0.25	145870		ZM		D	G	AB		G		30	C	QZ	VN	Roof: contact chosen based on gamma and quartz content in roof and floor. coal bands up to 6mm, qtz veins up to 1 cm.
DHGH-14-39	265.06	265.26	0.20	145871		CO	C1	D	K	MN		G		15	E	QZ	CE	Seam Roof: cleating is well developed, 5 (FACE) x 8 mm in size. QTZ IS UP TO 2MM IN CE. MINOR CONCHOIDAL FRACTURE. SOME LISTRIC FACES. mudstone bands up to 3 mm.
DHGH-14-39	265.26	265.54	0.28	145872		CO	C1	D	K	MN				15	M	QZ	CE	Seam: mudstone laminations up to 1 mm. cleating is well developed, up to 3(face)x 5 mm. Minor listric surfaces.common(top of unit)- minor concoidal fracturing. qz in cleating is up to 1mm.
DHGH-14-39	265.54	265.58	0.04			KL				CO								
DHGH-14-39	265.58	265.68	0.10	145873		CO	C1	D	K	MN		G		10	M	QZ	CE	Seam: Minor siltstone lens up to 4mm. cleating is well developed. 4 x 6 mm in size, minor concoidal fracturing. single listric face. face cleats are at 85 degrees.
DHGH-14-39	265.68	265.88	0.20	145874		CO	C1	D	K	MN		G			M	QZ	CE	seam: crushed zone. minor mudstone intermixed. minor listric faces. cleats are up 5x5 in size, can't tell butt vs. face due to crushed zone.
DHGH-14-39	265.88	266.1	0.22	145875		CO	C1	D	K			G		10	M	QZ	CE	Seam Floor A: cleating is well developed, face cleats are 5 (face) x 9 mm. abundant conchoidal fracturing. qz up to 0.5 mm in face cleats. one pyrite lens 2mm across.
DHGH-14-39	266.1	266.31	0.21	145876		ST		B	G	RA		G		15	M	QZ	CE	Floor: coal laminations up to 5 mm.
DHGH-14-39	266.31	266.67	0.36			ST		B	G			G		15	M	QZ	CE	
DHGH-14-39	266.67	266.92	0.25			ZT		D	G			G		15	M	QZ	CE	
DHGH-14-39	266.92	268.17	1.25			ST		D	G	TR		G		20	R	QZ	CE	
DHGH-14-39	268.17	268.37	0.20	145877		ST		D	G	TR		G		20	R	QZ	CE	Roof A: pyrite is concentrated at the base as a 2 cm band. sub mm coal leses throughout the unit, with a 2 cm coal band at the base of the unit. pyrite in bedding parallel cleat faces.
DHGH-14-39	268.37	268.66	0.29	145878		CO	C2	D	K	MN		G		10	M	QZ	CE	Seam Roof A: mudstone laminations are up to 1mm. cleating is well developed. 5 (face) x 9 mm cleat size. face cleats are 60 degrees. pyrite is 1mm in cleats, qz is 1 mm as well, bith qz and py focused in face cleats. commonn conchoidal fracturing at top of unit

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	268.66	268.9	0.24	145879		CO	C2	D	K	MN		G		40	E	QZ	CE	Seam: mudstone laminations up to 2 mm. moderately sheared, minor listric faces, no to moderate cleating. cleats are 4 (face) x 4 mm in size. qz is up to 4 mm in size.
DHGH-14-39	268.9	269.04	0.14	145880		CO	C1	D	K	MN		G		20				Seam: mudstone laminations up to 1mm. well developed cleating= 4 (face) x 10 (butt)mm in size. face cleats have an angle of 80 degrees. abundant concoidal fracturing.
DHGH-14-39	269.04	269.08	0.04			KL				CO								
DHGH-14-39	269.08	269.27	0.19	145881		CO	C1	D	K			G		20	R	QZ	CE	Seam: broken zone. qz is up to 1mm in size. cleating is very well developed. 5mm (face) x 10mm (butt) cleats. dominant concoidal fracture. face cleats are 85 degrees. butt cleats are 40 degrees.
DHGH-14-39	269.27	269.66	0.39	145882		CO	C1	D	K	MN		G		15	M	CL	CE	Seam: mudstone laminations up to 5 mm. clay is sub millimeter cleat infill. cleats are well developed= 5 (face) x 8 mm in size. abundant concoidal fracture.
DHGH-14-39	269.66	270.11	0.45	145883		CO	C3	D	K	CM		G		5	C	QZ	CE	Seam: intact shear zone/ softened zone, common mud. abundant listric faces, breaks easily along them. remnant cleating up to 2 x 2mm. most textures and structures have been destroyed. qz is 1mm as cleat infill.
DHGH-14-39	270.11	270.35	0.24	145884		CO	C1	D	K	MN		G		10	E	QZ	VN	Seam: si bands up to 6 mm. well developed cleating. 5mm (face) x 7 mm (butt) cleats. common concoidal fracturing. qz in bedding parallel cleats up to 0.5 mm.
DHGH-14-39	270.35	270.55	0.20	145885		CO	C2	D	K	MN		G		10	E	QZ	CE	Seam: si bands up to 8 mm. minor qz in cleating. microfaulting at 70 degrees. minor listric faces. cleating is moderately developed= 2 (face) x 3 mm (butt). qz up to 1mm in face cleats. face cleats have an angle of 70 degrees.
DHGH-14-39	270.55	270.74	0.19	145886		CO	C3	D	K	CM		G		10	E	QZ	CE	Seam Floor: siltstone bands up to 10mm. moderate to well developed cleating= 7 (face) x 11 mm cleats. common concoidal fracturing. some listric faces.
DHGH-14-39	270.74	270.95	0.21	145887		ZM		D	G	MN		G		25	E	QZ	CE	Floor: one major coal band in the MU at 40 mm in size, other bands throughout are 3mm in size. qz in cleating up to 3mm.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	270.95	272.44	1.49			ZM		D	G			G		25	E	QZ	CE	
DHGH-14-39	272.44	273.36	0.92			ST		B	G	TR		G		10	M	QZ	CE	
DHGH-14-39	273.36	283.63	10.27			SS	FM	A	G	RA		G		15	M	QZ	VN	
DHGH-14-39	283.63	290.14	6.51			ST		B	G	TR		F	LX	15	M	QZ	VN	
DHGH-14-39	290.14	290.54	0.40			SS	VF	B	G			G						
DHGH-14-39	290.54	290.79	0.25	145888		SS	VF	B	G	MN		G		15	E	PY	CB	Roof A: coal bands are up to 6 mm in size. qz is up t 2mm in veins.
DHGH-14-39	290.79	290.99	0.20	145889		CO	C2	D	K	MN		G		15	M	QZ	VN	Seam Roof: Picks based on coal in box. cleating is well developed= 3 (face) x 3 (butt)mm. common conchoidal fracturing. pyrite is in face cleats up to 1mm, qz is submillimeter in face cleats. one qz vein up to 10 mm cross cutting bedding. mudstone laminations are 2mm. one 8mm py bleb. face cleats at an angle od 80 degrees.
DHGH-14-39	290.99	291.19	0.20	145890		CO	C1	D	K	MN		G		10	E	PY	CE	Seam A: Picks based on coal in box. Cleating is well developed = 4mm (face) x 7 mm in size. pyrite in face cleats. face cleats have an angle of 80 degrees. common conchoidal fracturing. udstone laminations up to 1mm.
DHGH-14-39	291.19	291.67	0.48	145891		CO	C2	D	K	MN		G		10	E	QZ	CE	Seam: Picks based on coal in box. 2% qtz as cleat infill, up to 1 mm in size. fault gauge= 35 mm in size at the top of the unit. locally sheared (highly). interbedded c1 and c3. minor listric faces. slickenslides locally developed. locally well devloped cleating= 6 mm (face) x 8 mm (butt). face cleats are 85 degrees. qtz mostly in face cleats
DHGH-14-39	291.67	291.92	0.25	145892		CO	C3	D	K	RA		G		10	M	QZ	CE	Seam: Picks based on coal in box. coal is moist. mudstone bands up to 2mm. moderately sheared, common listric faces. most textures destroyed by shearing, locally moderately devloped cleating= 3 (face) x 4 mm cleats.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	291.92	292.17	0.25	145893		CO	C3	D	K	CM		G		10				Seam: gauge infill up to 1 cm at base of unit. mudstone bands are 1cm. Picks based on coal in box. highly sheared, listric faces common, most original textures destroyed. some remnant cleating 3 x3 mm.
DHGH-14-39	292.17	292.39	0.22	145894		CO	C3	D	K	CM		G		5	E	QZ	CE	Seam: 10 and 40mm massive siltstone partings. cleating is very well developed = 2mm x 15 mm (butt). face cleats are at 85 degrees. but cleats are at 50 degrees. qz is mostly in face cleats up to 1 mm. veins up to 5 mm. Picks based on coal in box.
DHGH-14-39	292.39	292.59	0.20	145895		CO	C1	D	K	MN		G		10	M	QZ	CE	Seam Floor: SI lenses (6mm) and MS Bands (2 mm). Cleats are well developed= 5mm (face) x 9 mm (butt). face cleats are at 85 degrees. qz in face and butt cleats. face and butt cleats are 85 degrees. Picks based on coal in box.
DHGH-14-39	292.59	292.83	0.24	145896		SS	VF	N	G	MN		G		15	R	QZ	CE	Floor: coal band is 2-8 mm in size.
DHGH-14-39	292.83	292.91	0.08			SS	VF	N	G			G		15				
DHGH-14-39	292.91	293.36	0.45			ZT		D	G			G		15	M	QZ	CE	
DHGH-14-39	293.36	294.47	1.11			ST		D	G			G		15	M	PY	BL	
DHGH-14-39	294.47	299.32	4.85			SS	VM	A	G			G		10				
DHGH-14-39	299.32	303.73	4.41			ST		B	G			F		10	M	QZ	VN	
DHGH-14-39	303.73	311.27	7.54			ST		B	G	MN		G		25	M	QZ	VN	
DHGH-14-39	311.27	313.91	2.64			SS	VF	N	G			O	FU	30		BI		
DHGH-14-39	313.91	315.65	1.74			ST		B	G			G	BW	10				
DHGH-14-39	315.65	326.87	11.22			SS	VM	A	G	MN		G		15	M	QZ	VN	
DHGH-14-39	326.87	330.07	3.20		70	ST		B	G			I	BW	20	M	QZ	VN	
DHGH-14-39	330.07	330.41	0.34			ZT		D	G			G		15	M	QZ	CE	
DHGH-14-39	330.41	330.61	0.20			CO	C2	D	K	MN		F		20	E	QZ	CE	Seam: Siltstone lenses up to 10 mm. Minor listric surfaces. Cleating is moderately developed= 5 (face) x 7 (butt)mm. face cleats are 80 degrees. butt cleats are at 85 degrees. Not sampled; CO seam <30cm. Picks based on CO in box. Faulted at basal contact.
DHGH-14-39	330.61	335.86	5.25		70	SS	VF	E	G					10	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	335.86	336.14	0.28	GT-14-61	70	SS	VF	E	G					10				Geotech Sample. SS VF / ST above & below ~1.5m C1 coal seams.
DHGH-14-39	336.14	338.14	2.00		70	SS	VF	E	G			G	LX	10	M	QZ	VN	
DHGH-14-39	338.14	339.42	1.28		70	ST						G						
DHGH-14-39	339.42	339.46	0.04			XT		D	G	MN		P		10	M	QZ	CE	
DHGH-14-39	339.46	339.66	0.20	145897		XT		D	G	MN		P		10	M	QZ	CE	Roof: coal laminations are up to 4mm. quartz occurring in cleating
DHGH-14-39	339.66	340.03	0.37	145898		CO	C2	D	K	MN		G		20	E	QZ	CE	Seam Roof A: mudstone laminations up to 2mm throughout. Cleating is moderate-well developed= 7(face) x 8(butt)mm. face cleats are 85 degrees. minor concoidal fracturing. some listric faces. qz is up to 5 mm in bedding parallel cleats.
DHGH-14-39	340.03	340.41	0.38	145899		XT		D	G	MN		G		20	M	QZ	CE	Parting: Lenses are 2-12 mm. 3mm coal laminations at the base of the unit
DHGH-14-39	340.41	340.77	0.36	145900		CO	C2	D	K	MN		G		25	E	QZ	CE	Seam": 2% qz, MS LM up to 2mm, cleating is moderate-well developed= 7(face) x 10(butt)mm. face cleats are 85 degrees, but cleats are 80 degrees. some listric faces, 40 mm section of C3 in the middle of the unit. qz is up to 1 mm in face cleats. py lens, 1mm across in bedding parallel cleat.
DHGH-14-39	340.77	340.98	0.21	145901		CO	C3	D	K	MN		G		25	E	QZ	CE	Seam Floor: mudstone laminations are up to 6 mm throughout. no to moderate cleating, 3 (face) x 9mm (butt)mm. most original textures are sheared, common listric faces. qz is up to 2mm in cleats.
DHGH-14-39	340.98	341.06	0.08	145902		ZT		D	G	CM		F		5	M	QZ	CE	Floor: coal bands are sub mm to 8 mm in size.
DHGH-14-39	341.06	341.17	0.11	145902		ST		D	G					5				Floor: density spiked due to faulting. clean.
DHGH-14-39	341.17	341.7	0.53			ST												density spiked due to faulting.
DHGH-14-39	341.7	341.87	0.17	145903		ZT		D	G	CM		G		10	E	QZ	CE	Roof: coal is 2-14 mm in size. qz 2mm as cleat infill.
DHGH-14-39	341.87	342.21	0.34	145904		CO	C3	D	K	MN		G		15	E	QZ	CE	Seam: siltstone lenses are 10mm in size. poor to moderate cleating= 4(face) x 8 (butt) mm cleats. face cleats are 85 degrees. butt cleats are 80 degrees. qz is up to 4mm in cleat infill. some listric faces.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-39	342.21	342.49	0.28	145905		XT		D	G	TR		G		15	M	QZ	CE	Floor: coal laminations are sub mm to 2 mm, qz is sub mm in cleats. py band is 4mm thick.
DHGH-14-39	342.49	342.93	0.44			ST		B	G	RA		G		20	M	QZ	WP	
DHGH-14-39	342.93	344.39	1.46		65	ST		B	G			F		50	E	QZ	VN	folded with microfaults and vertical bedding.
DHGH-14-39	344.39	344.46	0.07		65	ST		B	G			G		20	E	QZ	VN	
DHGH-14-39	344.46	345.51	1.05		65	ST		B	G			F		55	E	QZ	VN	
DHGH-14-39	345.51	346.52	1.01		65	ST		B	G			G		30	E	QZ	VN	
DHGH-14-39	346.52	346.71	0.19	145906	65	ST		B	G	MN		G		30	E	QZ	VN	Roof: submm- 3mm coal laminations.
DHGH-14-39	346.71	346.76	0.05			KL				CO								
DHGH-14-39	346.76	346.96	0.20	145907		CO	C3	D	K	MN		G		20	M	QZ	CE	Seam Roof: si bands up to 8mm. some listric faces, minor clay in fracture planes. poor to moderately developed cleating= 4(face) x 6(butt) mm cleats. minor concoidal fracturing.
DHGH-14-39	346.96	347.4	0.44	145908		CO	C2	D	K	CM		G		30	E	QZ	CE	Seam: One 50 mm siltstone bands. cleating is well developed= 5 (face) x 12(butt) mm cleats. minor concoidal fracturing.
DHGH-14-39	347.4	348.03	0.63	145909		CO	C1	D	K	MN		G		30	M	QZ	CE	Seam: minor mudstone LM up to 2mm (mostly at top). cleating is very well developed= 8 (face) x 14 (butt) mm cleats. common concoidal fracturing. qz is 1mm in face cleats. minor listric faces along bedding planes. face cleats are at 45 degrees, butt cleats are 40 degrees.
DHGH-14-39	348.03	348.41	0.38	145910		CO	C3	D	K	CM		G		10	M	QZ	CE	Seam (almost a parting): Siltstone bands up to 35 mmm at the top of the unit. No to moderately developed cleating= 2(face) x 3 (butt)mm cleats. minor qz in cleats up to 2mm. minor concoidal fracturing. common listric faces.
DHGH-14-39	348.41	348.6	0.19	145911		CO	C1	D	K	MN		G		10	M	QZ	CE	Seam: ms lm up to 1mm. well developed cleating= 7 (face) x 10 (butt) mm cleats. common concoidal fracture. some listric faces. qz is 1mm, py is 1mm as well in face cleats.

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	2.11	4.33	2.22			KL												
DHGH-14-40	4.33	4.5	0.17			MD		M	B	MN								
DHGH-14-40	4.5	5.16	0.66			SS	FM	A	G		AM	R			E	QZ	VN	
DHGH-14-40	5.16	5.62	0.46		90	ST		B	G				PD	15	M	QZ	VN	
DHGH-14-40	5.62	6.67	1.05			KL												
DHGH-14-40	6.67	10.48	3.81		90	ST		B	G				WD	15	M	QZ	VN	
DHGH-14-40	10.48	11.19	0.71			KL												
DHGH-14-40	11.19	11.74	0.55			SS	MC	A	G		AM	P			C	QZ	VN	
DHGH-14-40	11.74	12.31	0.57			MS		B	G		AM	G			E	QZ	VN	
DHGH-14-40	12.31	13.59	1.28			KL												
DHGH-14-40	13.59	14.31	0.72		60	ST		B	G			R	WD	20	E	QZ	VN	
DHGH-14-40	14.31	14.64	0.33			MS		B	G		AM				E	QZ	VN	
DHGH-14-40	14.64	14.85	0.21			KL												
DHGH-14-40	14.85	15.1	0.25			MS		B	G		AM	P			C	QZ	VN	
DHGH-14-40	15.1	15.57	0.47			SS	MM	A	G	MN	AM	P			E	QZ	VN	
DHGH-14-40	15.57	15.83	0.26			ST		B	G		AM							
DHGH-14-40	15.83	16.2	0.37			KL												
DHGH-14-40	16.2	16.81	0.61			ST		B	G		AM	G						
DHGH-14-40	16.81	19.22	2.41		75	SS	FM	A	G				WD	20	E	QZ	VN	
DHGH-14-40	19.22	20.53	1.31			KL												
DHGH-14-40	20.53	20.6	0.07			KL												
DHGH-14-40	20.6	21.1	0.50		85	SS	FM	A	G	MN		P	PD		C	QZ	VN	
DHGH-14-40	21.1	21.3	0.20	140909	90	SS	FM	A	G			I	PD		C	QZ	VN	ROOF A: SS IRREGULARLY INTERBEDDED W/ ST, COMMON (20%) 1-40MM QZ/CARB VEINING THORUGHOUT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	21.3	21.65	0.35	140910		CO	C3	D	K	CM					E	QZ	VN	SEAM ROOF A: C3 COAL (40% BRIGHT COAL) COMMON (20%) 5-50 MM ST BANDS AT TOP AND BOTTOM OF UNIT, COMMON SHEARING W/ LISTRIC SURFACES PRESENT ASLONG JOINTING, ACCESSORY (2%) 1-2MM QZ/CARB VEINING IN ST BANDS, MINOR (0.5%) 2X30MM PY BLEBS IN ST BANDS, CLEATING HAS BEEN DESTROYED BY SHEARING, COAL IS MOIST AND COMMONLY FRACTURED
DHGH-14-40	21.65	22.47	0.82			KL												CORE LOSS ATTRIBUTED TO COAL
DHGH-14-40	22.47	23.14	0.67	140911		CO	C3	D	K	MN		P			E	QZ	VN	SEAM A: C3 COAL (60% BRIGHT COAL) MINOR (20%) 2-10M MS LAMINATIONS THROUGHOUT, ACCESSORY (4%) 1-7MM QZ/CARB VEINING CONCENTRATED TOWARDS BOTTOM OF UNIT, MINOR (<1%) 2X10MM PY BLEBS CONCENTRATED TOWARDS TOP OF UNIT, TOP OF INTERVAL IS MODERATELY SHEARED W/ COMMON LISTRIC SURFACES, BOTTOM HALF OF INTERVAL HAS WELL DEVELOPED CLEATING W/ 2X4MM CLEATS, COMMON CONCOIDAL FRACTURING ALONG CLEAT FACES
DHGH-14-40	23.14	23.34	0.20	140912		XM		D	G	MN		G		25	E	QZ	WP	FLOOR A: CARBONACEOUS MS W/ MINOR (5%) <1MM COAL WISPS THORUGHOUT UNIT, MINOR (<1%) QZ/CARB CLEAT INFILL AND WISPS THROUGHOUT AS WELL AS 20MM QZ/CARB VEIN AT TOP OF UNIT CONTACT, MINOR (<1%) DISSEMINATED PY THROUGHOUT
DHGH-14-40	23.34	24.64	1.30			XM		B	G	MN		P	PD	65	E	QZ	WP	
DHGH-14-40	24.64	24.84	0.20	140913		XM		B	G	MN		P		65	E	QZ	VN	FLOOR: CARBONACEOUS MS W/ MINOR (5%) <1MM COAL WISPS THORUGHOUT UNIT, ACCESSORY (10%) QZ/CARB WISPS THROUGHOUT AS WELL AS 25MM QZ/CARB VEIN AT BOTTOM OF UNIT CONTACT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	24.84	25.17	0.33	140914		CO	C3	D	K	MN					E	QZ	CE	SEAM ROOF: C3 COAL (60% BRIGHT COAL) W/ MINOR (20%) MS INTERMIXED THROUGHOUT AS WELL AS MS LAMINATIONS <2MM AT TOP OF UNIT, MINOR SHEARING W/ MINOR LISTRIC SURFACES PRESENT ALONG JOINTS, ACCESSORY (5%) 1-3MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, CLEATING HAS BEEN DESTROYED DUE TO SHEARING, RARE LOCAL WELL DEVELOPED 3X5MM CLEATS AT TOP OF UNIT
DHGH-14-40	25.17	25.74	0.57			KL				CO								LOST COAL
DHGH-14-40	25.74	26.14	0.40	140915		CO	C3	D	K	CM		G			E	QZ	VN	SEAM A: C3 COAL (55% BRIGHT COAL), TOP OF UNIT IS HIGHLY SHEARED W/ COMMON (35%) INTERMIXED MS AND COMMON LISTRIC SURFACES PRESENT ALONG JOINTING, BOTTOM HALF OF INTERVAL HAS COMMON (20%) 2-5MM MM ST BANDS, LOCAL MODERATE TO WELL DEVELOPED CLEATING, 2X4MM CLEATS PRESENT IN BOTTOM HALF OF UNIT, ACCESSORY (3%) 2-5MM QZ/CARB VEINS CONCENTRATED TOWARD SBOTTOM OF UNIT, TRACE PY CLEAT INFILL AT BOTTOM OF INTERVAL
DHGH-14-40	26.14	26.23	0.09			XM												
DHGH-14-40	26.23	26.62	0.39			KL												
DHGH-14-40	26.62	27.39	0.77			XM		D	K	MN		P	PD	45	M	QZ	CE	
DHGH-14-40	27.39	28.22	0.83			ST		B	G	MN		P	PD	70				
DHGH-14-40	28.22	29.37	1.15			SS	MC	A	G	MN	AM	P			R	QZ	VN	
DHGH-14-40	29.37	30.31	0.94		70	SS	VF	A	G			I	WD	50	E	QZ	VN	
DHGH-14-40	30.31	31.47	1.16		90	ST		E	G				WD	60	M	QZ	VN	
DHGH-14-40	31.47	31.8	0.33			KL												
DHGH-14-40	31.8	32.15	0.35			ST		B	G		AM							
DHGH-14-40	32.15	32.59	0.44			KL												
DHGH-14-40	32.59	32.82	0.23			KL												
DHGH-14-40	32.82	33.09	0.27			XM		D	G	MN					E	QZ	WP	
DHGH-14-40	33.09	33.35	0.26			KL												
DHGH-14-40	33.35	35.64	2.29		80	SS	VF	A	G			R	WD	25	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	35.64	36.49	0.85			MS		B	G		AM	I			E	QZ	VN	
DHGH-14-40	36.49	38.5	2.01			SS	FC	A	G	MN	AM				E	QZ	VN	
DHGH-14-40	38.5	38.69	0.19			KL												
DHGH-14-40	38.69	39.12	0.43			SS	FC	A	G		AM	G						
DHGH-14-40	39.12	39.24	0.12			XM			K	MN	AM	G						STRONGLY SHEARED W/LISTRIC SURFACES
DHGH-14-40	39.24	41.34	2.10		65	ST		B	G			P	PD		E	QZ	VN	
DHGH-14-40	41.34	41.44	0.10			ZM			K									
DHGH-14-40	41.44	41.68	0.24			KL												
DHGH-14-40	41.68	41.92	0.24			KL				CO								
DHGH-14-40	41.92	42.15	0.23			ZM			K									
DHGH-14-40	42.15	42.34	0.19			ST		B	G	MN		G	PD	40	M	QZ	CE	
DHGH-14-40	42.34	46.94	4.60			ST		B	G	MN		G	PD	50	M	QZ	VN	
DHGH-14-40	46.94	47.72	0.78		50	ST		B	G				WD	40	M	QZ	VN	
DHGH-14-40	47.72	47.83	0.11			KL												
DHGH-14-40	47.83	50.48	2.65		50	ST		B	G				WD	40	E	QZ	VN	
DHGH-14-40	50.48	50.88	0.40			KL												
DHGH-14-40	50.88	53.72	2.84		50	ST		B	G				WD	50	M	QZ	VN	
DHGH-14-40	53.72	53.93	0.21			KL												
DHGH-14-40	53.93	55.07	1.14		50	ST		B	G				WD	50	E	QZ	VN	
DHGH-14-40	55.07	55.16	0.09			KL												
DHGH-14-40	55.16	59.14	3.98		50	ST		B	G				WD	50	E	QZ	VN	
DHGH-14-40	59.14	59.32	0.18			KL												
DHGH-14-40	59.32	80.85	21.53		60	SS	VF	A	G				WD	60	E	QZ	VN	
DHGH-14-40	80.85	81	0.15			KL												
DHGH-14-40	81	82.03	1.03		70	SS	VF	A	G			P	WD	50	R	QZ	WP	
DHGH-14-40	82.03	87.51	5.48		90	ST		B	G			P	PD	30	E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	87.51	87.6	0.09			CO	C3	D	K	MN		F	PD	20	E	QZ	CE	C3 COAL (60% BRIGHT COAL) W/ MINOR (8%) 0.5-5MM MS LAMINATIONS THROUGHOUT, MODERATELY SHEARED DESTROYING 90%, MINOR LISTRIC SURRFACES PRESENT ALONG JOINTING, MINOR(10%) 1-2MM QZ/CARB CLEAT INFILL AS WELL AS A 10MM QZ/CARB VEIN AT TOP OF UNIT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS AS WELL AS THE SMALL THICKNESS
DHGH-14-40	87.6	88.92	1.32		70	ST		B	G			F	PD	50	A	QZ	VN	
DHGH-14-40	88.92	89.06	0.14			CO	SY	D	K	CM					E	QZ	VN	STONY COAL W/ COMMON (60%) ST INTERMIXED THOROUGHOUT, COAL IS HIGHLY SHEARED AND FRACTURED, ACCESSORY (10%) QZ.CARB VEINING THOROUGHOUT UNIT, CLEATING HAS BEEN DESTROYED BY SHEARING AND FRACTURING OF UNIT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS AS WELL AS SMALL THICKNESS
DHGH-14-40	89.06	89.16	0.10			KL												
DHGH-14-40	89.16	89.91	0.75			ST		B	G	TR		G	PD	40	E	QZ	VN	
DHGH-14-40	89.91	90.19	0.28			ZM		D	G	MN					M	QZ	CE	
DHGH-14-40	90.19	90.51	0.32			KL												
DHGH-14-40	90.51	90.62	0.11			CO	SY	D	K	MN		I			A	QZ	CE	STONY COAL W/ MINOR (15%) 1-3MM MS LAMINATIONS THROUGHOUT, ABUNDANT (35%) 1-3MM QZ/CARB CLEAT INFILL AS WELL AS 10-20MM QZ/CARB VEINS IN MIDDLE AND BOTTOM HALF OF UNIT, MINOR (<1%) 1MM PY CLEAT INFILL
DHGH-14-40	90.62	90.94	0.32			XM		D	G	TR		S	WD	40	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	90.94	91.31	0.37			CO	SY	D	K	MN		F			E	QZ	VN	STONY COAL W/ MINOR (20% MS AND 30% ST) MS AND ST INTERMIXED THOROUGHOUT UNIT, UNIT IS HIGHLY SHEARED DESTROYING CLEATING, COMMON LISTRIC SURFACES PRESENT, ACCESSORY (8%) 1-5MM QZ/CARB CLEAT INFILL AND BROKEN CLASTS, ONE 20MM VEIN AT BOTTOM OF UNIT, MINOR (1%) 3MM PY BLEBS NEAR MIDDLE OF UNIT , NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS AND SMALL THICKNESS
DHGH-14-40	91.31	92.42	1.11			SS	FM	A	G	RA	AM	S			C	QZ	VN	
DHGH-14-40	92.42	92.77	0.35			XT		D	G	MN	AM	G			M	QZ	CE	
DHGH-14-40	92.77	93.14	0.37			CO	C4	D	K	CM		P	PD	20	C	QZ	CE	C4 COAL (15% BRIGHT COAL) W/ COMMON (30%) 1-10MM MS LAMINATIONS THOROUGHOUT, COMMON (20%) 1-5MM QZ/CARB CLEAT INFILL AS WELL AS ONE 6MM QZ/CARB VEIN AT BOTTOM OF UNIT, ACCESSORY (5%) 10X30MM PY BLEBS THROUGHOUT UNIT, MODERATELY SHEARED DESTROYING CLEATING, MINOR LISTRIC SURFACES PRESENT ALONG JOINTING, LOCAL POORLY DEVELOPED CLEATS, 2X2MM CLEATS PRESENT AT BOTTOM OF UNIT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS
DHGH-14-40	93.14	94.71	1.57			SS	FM	A	G	MN	AM				C	QZ	VN	
DHGH-14-40	94.71	95.34	0.63			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-40	95.34	95.39	0.05			CO	SY	D	K	CM	AM	G			A	QZ	VN	STONY COAL W/ COMMON (20%) ST INTERMIXED THROUGHOUT UNIT, COMMON SHEARING DESTROYING CLEATING W/ MINOR LISTRIC SURFACES PRESENT ALONG JOINTING, ABUNDANT (25%) 1-8MM QZ/CARB VEINING THROUGHOUT UNIT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS AS WELL AS SMALL THICKNESS
DHGH-14-40	95.39	96.01	0.62		50	ST		B	G			P			M	QZ	VN	
DHGH-14-40	96.01	96.26	0.25		60	SS	VF	A	G			S	PD		E	QZ	VN	
DHGH-14-40	96.26	96.4	0.14			XM		B	G	RA		S			E	PY	BN	HIGHLY SHEARED UNIT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	96.4	98.37	1.97		75	SS	FM	A	G			G	WD	20	E	QZ	VN	
DHGH-14-40	98.37	100.13	1.76		55	MS		B	G	TR		G	PD		M	QZ	WP	
DHGH-14-40	100.13	100.71	0.58		70	MS		B	G			G	PD		M	PY	DS	
DHGH-14-40	100.71	103.12	2.41			SS	VF	A	G		AM	P			M	QZ	VN	
DHGH-14-40	103.12	104.02	0.90			MS		B	G		AM				E	BI		BIVALVE INTERVAL 103.80-104.20
DHGH-14-40	104.02	104.07	0.05			KL												
DHGH-14-40	104.07	104.15	0.08			MS		B	G		AM	G			R	QZ	VN	
DHGH-14-40	104.15	106.3	2.15			SS	VF	A	G			G	PD	20	M	QZ	VN	
DHGH-14-40	106.3	109.3	3.00			SS	VF								M	PY	DS	
DHGH-14-40	109.3	109.35	0.05			ST		B	G		AM	G			E	BI		BIVALVE INTERVAL FROM 106.93-107.40
DHGH-14-40	109.35	109.95	0.60		65	ST		B	G			P	WD	10	E	QZ	VN	
DHGH-14-40	109.95	113.27	3.32		60	SS	VF	A	G	TR		P	WD	15	M	QZ	WP	
DHGH-14-40	113.27	116.74	3.47			SS	VM	A	G	MN	AM		WD	30	C	QZ	VN	40CM QZ/CARB FROM 115.15-115.55
DHGH-14-40	116.74	117.65	0.91		65	ST		B	G			G	PD	20	M	QZ	VN	
DHGH-14-40	117.65	117.89	0.24			ST		B	G		AM							
DHGH-14-40	117.89	117.94	0.05			KL												
DHGH-14-40	117.94	118.99	1.05			ST		B	G	MN	AM				M	QZ	CE	
DHGH-14-40	118.99	119.24	0.25			KL												
DHGH-14-40	119.24	120.1	0.86			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-40	120.1	120.27	0.17	140916		CO	SY	D	K	CM		G	PD	20	E	QZ	CE	SEAM FLOOR: STONY COAL; ~8% BRIGHT; 50% ABUNDANT MS LAMINATIONS 3-4MM WIDE THROUGHOUT; LOCALLY WELL DEVELOPED CLEATING IN COAL BANDS AVG 2MM X 3MM; 5% QTZ CLEAT INFILL 1-3MM WIDE; 5% PY AS CLEAT INFILL <1MM (TOP OF INTERVAL) AND BLEBS 4MM X 20MM (BOTTOM OF UNIT); GRADES INTO COALY MUDSTONE
DHGH-14-40	120.27	120.35	0.08	140917		ZM		D	G	CM		G	PD	20	E	QZ	VN	FLOOR A: COMMON COAL BANDS THROUGHOUT 2-4MM THICK; 4% QTZ VEINS AND MINOR CLEAT INFILL; COAL GRADES OUT W/DEPTH GRADING INTO CARBOANCEOUS MUDSTONE
DHGH-14-40	120.35	120.47	0.12	140917		XM		D	G	MN		G	PD	20	M	QZ	CE	FLOOR B: MINOR COAL LENSES ~2MM WIDE THROUGHOUT W/ASSOCIATED MINOR QTZ CLEAT INFILL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	120.47	123.56	3.09		70	ST		B	G			G	WD	15	M	QZ	VN	
DHGH-14-40	123.56	131.01	7.45		60	SS	VM	A	G			G	WD	10	M	QZ	VN	
DHGH-14-40	131.01	131.25	0.24	GT-14-62	60	SS	VM	A	G				WD	15				GEOTECH A: SS IRREGULARLY INTERBEDDED W/ ST, SOFT SEDIMENT DEFORMATION PRESENT AS WAVY BEDDING THROUGHOUT
DHGH-14-40	131.25	131.94	0.69		60	ST		B	G	TR	AM	G	PD		R	QZ	WP	
DHGH-14-40	131.94	132.02	0.08			XM		D	G	TR			PD	10				
DHGH-14-40	132.02	132.22	0.20	140918		XM		D	G	MN		P	PD	10	M	QZ	CE	ROOF: MINOR COAL LAMINATIONS 1-2MM WIDE NEAR BOTTOM CONTACT W/ASSOC MINOR QTZ CLEAT INFILL
DHGH-14-40	132.22	132.54	0.32	140919		CO	C2	D	K	MN			PD		E	QZ	CE	SEAM ROOF: C2 COAL, ~70% BRIGHT; MODERATELY SHEARED IN MIDDLE AND BOTTOM OF INTERVAL; 10% MS INTERMIXED; SHEARING DESTROYING MOST PRIMARY TEXTURES; MOD CLEATING REMAINING IN RARE LOCAL BANDS 1MM X 1MM, CLEATING MOSTLY DESTROYED AND BROKEN; 2% QTZ CLEAT INFILL 1-5MM WIDE, CONCENTRATED TOWARDS TOP AND BOT OF INTERVAL, PARTLY BROKEN; COMMON LISTRIC POLISHED SURFACES/SHEARS
DHGH-14-40	132.54	133.17	0.63	140920		CO	C2	D	K	MN					M	QZ	CE	SEAM: C2 COAL, ~80-90% BRIGHT; MODERATELY SHEARED AT TOP AND BOT OF INTERVAL; MINOR 8% MS LAMINATIONS 2-3MM WIDE AND 1 MS BAND 30MM WIDE AT TOP OF INTERVAL (SMALL KICK IN DENSITY), MS ALSO INTERMIXED (FROM SHEARING); SHEARING DESTROYING MOST PRIMARY TEXTURES W/LOCALLY WELL DEVELOPED CLEATING REMAINING 1MM X 2MM W/COMMON CONCOIDAL FRACTURE; COMMON LISTRIC/SHEARED SURFACES; 1% QTZ CLEAT INFILL 1-3MM OFTEN BROKEN FROM SHEARING THROUGHOUT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	133.17	133.37	0.20	140921		CO	C2	D	K	MN		G	PD	15	C	QZ	CE	SEAM FLOOR: C2 COAL; ~80% BRIGHT; MINOR (10%) MS LAMINATIONS 1-5MM WIDE INCREASING SLIGHTLY NEAR BOT CONTACT; WEAKLY SHEARED AT TOP OF INTERVAL; VARIABLY MOD TO POORLY DEVELOPED CLEATING, SLIGHTLY BROKEN UP BY SHEARING, UP TO 1MM X 4MM W/MINOR CONCOIDAL FRACTURE; ~10% QTZ CLEAT INFILL 1-5MM THICK; 2% PY BLEBS 5MM X 20MM CONCENTRATED IN MIDDLE OF INTERVAL; LOWER CONTACT GRADATIONAL OVER SHORT (10CM) INTERVAL
DHGH-14-40	133.37	133.52	0.15	140922		XT		D	K	MN	AM	G			E	QZ	CE	FLOOR A: MINOR COAL LAMINATIONS 3-10MM WIDE NEAR TOP CONTACT GRADING OUT TO RARE COAL WISPS W/DEPTH, W/ASSOC MINOR (1%) QTZ CLEAT INFILL; GRADING INTO ST INTERLAMINATED W/SS
DHGH-14-40	133.52	133.57	0.05	140922	85	ST		B	G	TR			WD	15	R	QZ	WP	FLOOR B: ST INTERLAMINATED W/SS; TRACE COAL WISPS TOP OF UNIT
DHGH-14-40	133.57	134.52	0.95		85	ST		B	G			G	WD	15	R	QZ	WP	
DHGH-14-40	134.52	134.81	0.29	GT-14-63	85	ST		B	G			G	WD	15	R	QZ	WP	GEOTECH SAMPLE: ST INTERLEMINATED W/ SSVV W/ RARE (<1%) <1MM QZ/CARB WISPS THROUGHOUT UNIT
DHGH-14-40	134.81	135.87	1.06		85	ST		B	G			G	WD	15	R	QZ	WP	
DHGH-14-40	135.87	140.43	4.56		65	SS	VM	A	G			P	WD	20	E	QZ	VN	
DHGH-14-40	140.43	141.14	0.71			ST		B	G					20	R	QZ	WP	
DHGH-14-40	141.14	141.25	0.11			KL												
DHGH-14-40	141.25	142.18	0.93			ST		B	G			P		20	R	QZ	WP	
DHGH-14-40	142.18	144.17	1.99		55	ST		B	G				WD	25	E	QZ	VN	
DHGH-14-40	144.17	144.42	0.25			KL												
DHGH-14-40	144.42	145.37	0.95		50	ST		B	G				WD	25	E	QZ	VN	
DHGH-14-40	145.37	145.44	0.07			KL												
DHGH-14-40	145.44	149.07	3.63		65	ST		B	G			P	WD	30	E	QZ	VN	
DHGH-14-40	149.07	150.02	0.95			SS	FM	A	G			S	PD	35	E	QZ	VN	
DHGH-14-40	150.02	150.09	0.07		80	ST		B	G			G	PD	55	M	QZ	VN	UPPER HINGE OF FOLD
DHGH-14-40	150.09	150.24	0.15		80	ST		B	G			G	PD	89	M	QZ	VN	FOLD HINGE
DHGH-14-40	150.24	150.75	0.51		80	ST		B	G			S	PD	20	M	QZ	VN	LOWER HINGE OF FOLD

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	150.75	152.67	1.92			SS	FM	A	G	RA	AM	G			E	QZ	VN	
DHGH-14-40	152.67	154.45	1.78		60	SS	VM	A	G			G	WD	25	E	QZ	VN	
DHGH-14-40	154.45	154.65	0.20	140923		XT		B	G	RA		P			M	QZ	WP	ROOF: CARBONACEOUS MS W/ RARE 1MM COAL LENSES CONCENTRATED TOWARDS BOTTOM OF UNIT, MINOR (1%) <1MM QZ/CARB WISPS THOROUGHOUT UNIT
DHGH-14-40	154.65	154.85	0.20	140924		CO	C3	D	K	CM		G			E	QZ	CE	SEAM ROOF: C3 COAL (60% BRIGHT COAL) HIGH SHEARING OCCURRING THROUGHOUT UNIT DESTROYING CLEATING STRUCTURE, ABUNDANT LISTRIC SURFACES, COMMON (20%) MS INTERMIXED THROUGHOUT, ACCESSORY (4%) 1-4MM QZ/CARB CLEATING BROKEN INTO FRAGMENTS FROM SHEARING
DHGH-14-40	154.85	155.31	0.46	140925		CO	C2	D	K	MN		G			E	QZ	CE	SEAM A: C2 COAL (65% BRIGHT COAL), HIGHLY SHEARED DESTROYING ALL PRIMARY TEXTURES, COMMON LISTRIC SURFACES PRESENT, MINOR (15%) MS INTERMIXED THROUGHOUT, ACCESSORY (4%) 1-2MM QZ/CARB FRAGMENTED CLEAT INFILL AS WELL AS VEINLETS THROUGHOUT UNIT, MINOR (<1%) 1X30MM PY BLEBS THROUGHOUT
DHGH-14-40	155.31	155.51	0.20	140926		CO	C3	D	K	MN		G			E	QZ	CE	SEAM FLOOR: C3 COAL (55% BRIGHT COAL) MODERATELY SHEARED COAL DESTROYING MOST OF PRIMARY CLEAT TEXTURES, COMMON LISTRIC SURFACES THAT ARE POLISHED AND SLICKED, MINOR (15%) MS INTERMIXED AS WELL AS 1-3MM LAMINATIONS PRESENT CONCENTRATED TOWARDS TOP OF UNIT, ACCESSORY (5%) 1-2MM QZ/CARB FRAGMENTED CLEAT INFILL
DHGH-14-40	155.51	155.6	0.09	140927		CO	SY	D	K	CM		S		30	E	QZ	CE	FLOOR A: STONY COAL W/ COMMON (20%) 5-20MM MS AND 5-15MM ST BANDS THROUGHOUT UNIT, ACCESSORY (8%) 1-5MM QZ/CARB CLEAT INFILL THOROUGHOUT UNIT SLIGHTLY FRAGMENTED FROM MINOR SHEARING AT BASAL CONTACT, POORLY DEVELOPED CLEATING THROUGHOUT, 1MMX3MM MINOR CLEATS PRESENT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	155.6	155.7	0.10	140927		ZT		B	G	MN		G	PD	30	M	QZ	WP	FLOOR B: COALY ST W/ MINOR (4%) 1MM COAL WISPS THROUGHOUT, MINOR (2%) <1MM QZ/CARB WISPS THROUGHOUT
DHGH-14-40	155.7	156.02	0.32			XT		B	G	RA		S	PD	35	E	QZ	WP	
DHGH-14-40	156.02	158.78	2.76			SS	FM	A	G	MN	AM	P			M	QZ	VN	
DHGH-14-40	158.78	161.75	2.97		70	ST		B	G			G	WD	30	E	QZ	VN	
DHGH-14-40	161.75	161.95	0.20	140928	70	ST		A	G			S	WD	30	E	QZ	VN	ROOF A: ST INTERLAMINATED W/ SSVF, ACCESSORY (10%) 1-4MM QZ/CARB VEINING THROUGHOUT UNIT
DHGH-14-40	161.95	162.34	0.39	140929		CO	C3	D	K	MN		G			E	QZ	CE	SEAM: COAL (60% BRIGHT COAL) W/ MINOR (10%) 1-3MM MS LAMINATIONS THORUGHOUT UNIT, COAL IS SLIGHTLY SHEARED IN TOP 10CM OF UNIT, LISTRIC SURFACES ARE PRESENT ALONG JOINTS, BEDDING BECOMES DEVELOPED AT AFTER SHEARED PART OF COAL AT ANGLES OF 70 DEG, ACCESSORY (5%) 1-5MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, CLEATING IS POORLY DEVELOPED W/ RARE 1X1MM CLEATS
DHGH-14-40	162.34	162.54	0.20	140930		XM		D	G	MN		G		40	M	QZ	WP	FLOOR: CARBONACEOUS MS W/ MINOR (1%) 1MM COAL WISPS THROUGHOUT UNIT, MINOR (1%) <1MM QZ/CARB WISPS THORUGHOUT UNIT AS WELL AS ONE 1MM VEIN NEAR BOTTOM OF UNIT
DHGH-14-40	162.54	162.75	0.21			XM		D	G	MN	AM	G			M	QZ	WP	
DHGH-14-40	162.75	163.57	0.82			ST		B	G		AM	G			M	QZ	VN	
DHGH-14-40	163.57	163.88	0.31			XM		D	G	MN		S			E	QZ	VN	
DHGH-14-40	163.88	167.24	3.36		70	ST		B	G			I	WD	5	E	QZ	VN	
DHGH-14-40	167.24	167.59	0.35			CO	SY	D	K	CM		P		5	E	QZ	VN	STONY COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS, COMMON (20%) 1-3MM MS LAMINATIONS THROUGHOUT, ACCESSORY (5%) ONE 8MM QZ/CARB VEINING AT TOP CONTACT AS WELL AS THROUGHOUT UNIT AND 1-4MM CLEAT INFILL, ACCESSORY (3%) DISSEMINATED PY COVERING TOP 120MM OF UNIT, CLEATING IS POORLY DEVELOPED, BUT MINOR LOCAL MODERATELY DEVELOPED CLEATING IS PRESENT W/ 1X1MM CLEATS

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	167.59	167.94	0.35			ZM		D	G									
DHGH-14-40	167.94	168.14	0.20	140931		ZM		D	G	MN		R		5	E	QZ	CE	ROOF: COALY MS W/ MINOR (10%) 20-25MM COAL BANDS CONCENTRATED TOWARDS TOP OF UNIT, ACCESSORY (2%) 1-4MM QZ/CARB CLEAT INFILL AS WELL AS ONE 2-4MM VEIN NEAR MIDDLE OF UNIT
DHGH-14-40	168.14	168.34	0.20	140932		CO	C3	D	K	MN		G			M	QZ	CE	SEAM ROOF: C3 COAL (45% BRIGHT COAL) HIGHLY SHEARED DESTROYING PRIMARY CLEATING TEXTURES, MINOR (15%) MS INTERMIXED THOROUGHOUT, MINOR (.5%) <1MM QZ/CARB FRAGMENTED CLEAT INFILL THOROUGHOUT, LISTRIC POLISHED AND SLICKED SURFACES PRESENT
DHGH-14-40	168.34	168.94	0.60	140933		CO	C2	D	K	MN		G			E	QZ	CE	SEAM A: C2 COAL (85% BRIGHT COAL) HIGHLY SHEARED DESTROYING PRIMARY CLEATING TEXTURES, MINOR (10%) MS INTERMIXED THOROUGHOUT, ACCESSORY (2%) 1-2MM QZ/CARB FRAGMENTED CLEAT INFILL THOROUGHOUT, MINOR (<1%) ONE 20X40MM PY BLEB MIDDLE OF UNIT, ABUNDANT LISTRIC POLISHED AND SLICKED SURFACES PRESENT
DHGH-14-40	168.94	169.14	0.20	140934		CO	C2	D	K	MN		G			E	QZ	CE	SEAM FLOOR: C2 COAL (80% BRIGHT COAL) TOP OF UNIT IS MODERATELY SHEARED DESTROYING PRIMARY CLEATING TEXTURES, BOTTOM OF UNIT IS SLIGHTLY SHEARED, MINOR (15%) MS INTERMIXED THOROUGHOUT AS WELL AS 1-4MM MS LAMINATIONS IN BOTTOM HALF OF UNIT, ACCESSORY (3%) 1-3MM QZ/CARB FRAGMENTED CLEAT INFILL THOROUGHOUT, LISTRIC POLISHED SURFACES PRESENT IN TOP HALF OF UNIT, BOTTOM HALF OF UNIT HAS WELL DEVELOPED CLEATING W/ 1X1MM UP TO 2X4MM CLEATS PRESENT
DHGH-14-40	169.14	169.42	0.28	140935		CO	SY	D	K	CM		G			C	QZ	CE	FLOOR: STONY COAL W/ COMMON (25%) MS INTERMIXED THOROUGHOUT, COMMON (20%) 1-10MM QZ/CARB CLEAT INFILL CONCENTRATED IN MIDDLE AND BOTTOM OF UNIT, CLEATING IS POORLY DEVELOPED, MINOR 1X3MM CLEATS PRESENT W/ MINOR CONCOIDAL FRACTURING OCCURING ALONG CLEAT FACES

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	169.42	169.75	0.33			XM		D	G	MN	AM	G			M	QZ	WP	
DHGH-14-40	169.75	172.22	2.47		80	ST		B	G			P	PD	35	E	QZ	VN	
DHGH-14-40	172.22	172.43	0.21			SS	FM	A	G		AM	G			E	QZ	VN	
DHGH-14-40	172.43	174.27	1.84		85	SS	VF	A	G			S	WD	30	A	QZ	VN	
DHGH-14-40	174.27	175.85	1.58			SS	FM	A	G		AM				E	QZ	VN	
DHGH-14-40	175.85	175.9	0.05			KL												
DHGH-14-40	175.9	177.02	1.12			SS	FM	A	G		AM	S			N	QZ	VN	
DHGH-14-40	177.02	178.35	1.33		65	SS	FF	A	G			G	WD	20	M	QZ	VN	
DHGH-14-40	178.35	178.93	0.58			SS	FF	A	G	RA		G	PD	15	M	QZ	VN	
DHGH-14-40	178.93	180.6	1.67		60	SS	FF	A	G			G	WD	15	M	QZ	VN	
DHGH-14-40	180.6	182.77	2.17			SS	FF	A	G	MN		G	PD	15	E	QZ	VN	
DHGH-14-40	182.77	186.43	3.66			ST		B	G		AM	G			M	QZ	VN	
DHGH-14-40	186.43	187.66	1.23			SS	FF	A	G	MN		G	PD	20	E	QZ	VN	
DHGH-14-40	187.66	189.1	1.44		75	SS	FF	A	G	TR		G			M	QZ	WP	
DHGH-14-40	189.1	190.4	1.30		80	XM		D	G	RA	AM	G	PD		E	QZ	VN	
DHGH-14-40	190.4	190.67	0.27			ST		B	G		AM				M	QZ	VN	
DHGH-14-40	190.67	190.97	0.30			KL												
DHGH-14-40	190.97	199.68	8.71		65	SS	VF	A	G				WD	20	M	QZ	VN	
DHGH-14-40	199.68	200.28	0.60			MS		B	G		AM	I			M	QZ	WP	
DHGH-14-40	200.28	200.57	0.29			CO	SY	D	K	CM		G			C	QZ	CE	STONY COAL, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS AS WELL AS IN BOX OBSERVATION, COMMON (25%) MS INTERMIXED THROUGHOUT, MINOR (5%) 40X50MM ST COBBLE IN THE MIDDLE OF UNIT, MINOR (1%) 1X3MM PY BLEBS THROUGHOUT, COMMON (8%) 1-5MM QZ/CARB CLEAT INFILL THROUGHOUT UNIT, COMMON SHEARING THROUGHOUT UNIT DESTROYING CLEATING TEXTURE, LISTRIC SURFACES PRESENT ALON G JOINTING
DHGH-14-40	200.57	200.65	0.08			ZT		D	K	MN	AM	S						
DHGH-14-40	200.65	202.45	1.80			XM		B	G	MN		P			E	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	202.45	202.65	0.20	140936		XM		B	G	MN		S		40	E	QZ	CE	ROOF: CARBONACEOUS MS W/ MINOR (8%) 1-10MM COAL LENSES THROUGHOUT, ACCESSORY (3%) 1-2MM QZ/CARB CLEAT INFILL
DHGH-14-40	202.65	202.95	0.30	140937		CO	C3	D	K	MN		G			E	QZ	CE	SEAM A: C3 COAL (50% BRIGHT COAL) HIGHLY SHEARED DESTROYING PRIMARY TEXTURES, MINOR (12%) MS INTERMIXED THROUGHOUT, COMMON LISTRIC SURFACES, ACCESSORY (5%) 1-2MM QZ/CARB CLEAT INFILL AS WELL AS 10X30MM CLASTS THROUGHOUT, MINOR (1%) 10MM PY BLEBS CONCENTRATED TOWARDS TOP OF UNIT
DHGH-14-40	202.95	203.15	0.20	140938		CO	SY	D	K	CM		I			C	QZ	VN	SEAM A: STONY COAL (30%) W/ COMMON (20%) MS INTERMIXED THROUGHOUT, SHEARED THROUGHOUT W/ COMMON LISTRIC SURFACES, DESTROYING PRIMARY TEXTURES, COMMON (20%) 1-20MM QZ/CARB VEINING THROUGHOUT, MINOR (1%) 1-5MM PY BLEBS THORUGHOUT
DHGH-14-40	203.15	203.35	0.20	140939		XM		D	K	RA		G			E	QZ	VN	FLOOR: CARBONACEOUS MS W/ RARE <1MM COAL WISPSISPS THORUGHOUT, ACCESSORY (4%) 40MM WIDE QZ/CARB VEIN AT TOP CONTACT OF UNIT, UNIT SHEARED IN PART
DHGH-14-40	203.35	203.45	0.10			XM		D	K									
DHGH-14-40	203.45	203.53	0.08			KL												
DHGH-14-40	203.53	203.93	0.40			XM		D	K	MN		G	PD		E	QZ	VN	
DHGH-14-40	203.93	205.14	1.21		90	ST		B	G	TR		G	WD	65	E	QZ	VN	UPPER LIMB OF FOLD
DHGH-14-40	205.14	205.39	0.25		90	ST		B	G			G	PD	89	E	QZ	VN	HINGE ZONE
DHGH-14-40	205.39	206.05	0.66		90	ST		B	G			S	PD	40	E	QZ	VN	LOWER LIMB OF FOLD
DHGH-14-40	206.05	206.11	0.06	140940		ST		B	G	MN		P	PD	40	A	QZ	VN	ROOF A: ST W/ ABUNDANT (50%) 25MM QZ/CARB VEIN AT BOTTOM CONTACT, ACCESSORY (2%) 10X10MM PY BLEB, MINOR (5%) 1-5MM COAL LAMINATIONS BOTTOM OF UNIT
DHGH-14-40	206.11	206.25	0.14	140940		XM		D	K	MN		S			M	QZ	VN	ROOF C: CARBONACEOUS MS W/ MINOR (3%) 5MM COAL LENSES THROUGHOUT, MINOR (1%) 1-2MM QZ/CARB VEIN THORUGHOUT

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	206.25	206.71	0.46	140941		CO	SY	D	K	CM		G			C	QZ	VN	SEAM A: STONY COAL W/ COMMON (20%) MS INTERMIXED THROUGHOUT AS WELL AS MINOR (10%) ST INTERMIXED THROUGHOUT, ACCESSORY (15%) 1-3MM QZ/CARB CLEAT INFILL AS WELL AS 5-20M VEINING THROUGHOUT, MINOR (.5%) 5MM PY BAND IN THE MIDDLE OF UNIT AND ONE 1-3MM BLEB AT BOTTOM OF UNIT, RARE POORLY DEVELOPED CLEATING, 1X1MM CLEATS PRESENT, MODERATE SHEARING OCCURRING, LISTRIC SURFACES PRESENT ALONG JOINTS
DHGH-14-40	206.71	207.17	0.46	140942		ST		B	G	MN		G			E	QZ	VN	PARTING A: ST W/ MINOR (30%) CARBONACEOUS 1-30MM MS LAMINATIONS CONCENTRATED AT TOP AND BOTTOM CONTACTS, MINOR (5%) 1-10MM COAL LENSES AT TOP AND BOTTOM CONTACTS, ACCESSORY (3%) 1-2MM QZ/CARB CLEAT INFILL IN COAL LENSES
DHGH-14-40	207.17	207.57	0.40	140943		CO	C4	D	K	MN		G			C	QZ	VN	SEAM A: C4 COAL (20% BRIGHT COAL) W/ MINOR (15%) MS INTERMIXED THORUGHOUT UNIT, COMMON (15%) 2-20MM QZ/CARB VEINING AS WELL AS .5-2MM CLEAT INFILLTHROUGHOUT, MINOR (<1%) DISSEMINATED PY CONCENTRATED TO BOTTOM OF UNIT, MODERATE SHEARING THORUGHOUT UNIT W/ COMMON LISTRIC SURFACES DESTROYING PRIMARY TEXTURES
DHGH-14-40	207.57	207.69	0.12	140944		CO	SY	D	K	CM					C	QZ	CE	SEAM A: STONY COAL (15% BRIGHT COAL) W/ COMMON (20%) 1-3MM INTERLAMINATED AND INTERMIXED MS THORUGHOUT, COMMON (20%) 1-10MM QZ/CARB CLEAT INFILL, MINOR (1.5%) 1MM PY BLEBS THORUGHOUT UNIT, POORLY DEVELOPED CLEATING, MINOR 2X3MM CLEATS PRESENT, CLEATS ARE PARTLY FRACTURED DUE TO MINOR SHEARING
DHGH-14-40	207.69	208.08	0.39	140945		XM		D	G	MN	AM	G			M	QZ	CE	PARTING: CARBONACEOUS MS W/ MINOR (2%) <1MM COAL WISPS THORUGHOUT AS WELL AS TWO 10MM COAL BAND AT TOP AND MIDDLE OF UNIT, MINOR (1%) <1MM QZ/CARB CLEAT INFILL

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	208.08	208.28	0.20	140946		CO	C4	D	K	MN		S			E	QZ	VN	SEAM A: C4 COAL (40% BRIGHT COAL) W/ MINOR (13%) MS INTERMIXED THOROUGHOUT UNIT, ACCESSORY (15%) 3CM QZ/CARB VEIN AT BOTTOM CONTACT AS WELL AS FRAGMENTED QZ/CARB CLEAT INFILL AND CLASTS, MINOR (0.5%) 3X5MM PY BLEBS, HIGHLY SHEARED DESTROYING PRIMARY TEXTURES, ABUNDANT LISTRIC SURFACES
DHGH-14-40	208.28	208.48	0.20	140947		XM		D	G	MN	AM	G			M	QZ	WP	FLOOR: CARBONACEOUS MS W/ MINOR (2%) 1MM COAL WISPS THOROUGHOUT, MINOR (1%) <1MM QZ/CARB WISPS THOROUGHOUT
DHGH-14-40	208.48	209.13	0.65			XM		D	G	MN	AM	S			C	QZ	CT	HIGHLY SHEARED
DHGH-14-40	209.13	209.23	0.10	140948		XM		D	G		AM	G						ROOF A: MASSIVE CARBONACEOUS MS
DHGH-14-40	209.23	209.33	0.10	140948		ZM		D	K	CM		G						ROOF B: COAL MS W/ COMMON (20%) COAL INTERMIXED THOROUGHOUT, HIGHLY SHEARED, COMMON LISTRIC SURFACES PRESENT
DHGH-14-40	209.33	209.58	0.25	140949		CO	C3	D	K	MN		G			M	QZ	CT	SEAM: C3 COAL (20% BRIGHT COAL) HIGHLY SHEARED UNIT DESTROYING ALL PRIMARY TEXTURES, ABUNDANT LISTRIC SURFACES PRESENT, MINOR (12%) MS INTERMIXED THOROUGHOUT UNIT, MINOR (1%) 1X1MM QZ/CARB FRACTURED CLASTS
DHGH-14-40	209.58	209.68	0.10	140950		ZM		D	K	MN		S			M	QZ	CT	FLOOR A: COALY MS W/ MINOR (10-15%) COAL INTERMIXED THOROUGHOUT UNIT, MINOR (1%) 1X1MM QZ/CARB CLASTS THROUGHOUT, MINOR (1%) DISSEMINATED PY NEAR BOTTOM CONTACT OF UNIT, HIGHLY SHEARED UNIT
DHGH-14-40	209.68	209.78	0.10	140950		SS	VF	A	G	MN		G			E	QZ	VN	FLOOR C: SS VF W/ ST INTERMIXED THROUGHOUT UNIT, ACCESSORY (3%) 1-2MM QZ/CARB VEINING THOROUGHOUT UNIT
DHGH-14-40	209.78	214.87	5.09			SS	VF	A	G	MN		G		40	E	QZ	VN	
DHGH-14-40	214.87	217.09	2.22		60	SS	VF	A	G			S	WD	40	E	QZ	VN	
DHGH-14-40	217.09	219.23	2.14			SS	MC	A	G		AM	F			E	QZ	VN	
DHGH-14-40	219.23	220.57	1.34		70	SS	VV	A	G			G	PD	30	M	QZ	VN	
DHGH-14-40	220.57	223.99	3.42			SS	FM	A	G	TR	AM		FU		M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	223.99	224.62	0.63		80	ST		B	G				PD	15	M	QZ	VN	
DHGH-14-40	224.62	224.69	0.07			KL												
DHGH-14-40	224.69	226.59	1.90		80	ST		B	G			G	PD	15				
DHGH-14-40	226.59	228.93	2.34			ST		B	G		AM	G			M	PY	BL	
DHGH-14-40	228.93	233.53	4.60			SS	FM	A	G		AM				E	BI		BIVALVE INTERVAL 229.00-230.05M
DHGH-14-40	233.53	233.59	0.06			KL												
DHGH-14-40	233.59	233.97	0.38			SS	FM	A	G	TR	AM	P			M	PY	DS	
DHGH-14-40	233.97	234.06	0.09			CO	C3	D	K	MN		I			M	QZ	CE	C3 COAL W/ MINOR (10%) 5-15MM ST LENSES THOROUGHOUT UNIT, MINOR (15%) 1-3MM QZ/CARB CLEAT INFILL, MINOR (.5%) <1MM-2MM PY CLEAT INFILL, POORLY DEVELOPED CLEATING THOROUGHOUT, 1X2MM CLEATS PRESENT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS AS WELL AS SMALL THICKNESS
DHGH-14-40	234.06	234.36	0.30		75	ST		B	G			S	PD		E	QZ	VN	
DHGH-14-40	234.36	234.55	0.19			ZT		D	G	CM		G			E	QZ	VN	
DHGH-14-40	234.55	234.7	0.15			CO	C3	D	K	MN		I			C	QZ	CE	C3 COAL (50% BRIGHT COAL), MINOR (10%) MS INTERMIXED THOROUGHOUT, COMMON (25%) 1-20MM QZ/CARB CLEAT INFILL CONCENTRATED IN BOTTOM HALF OF UNIT, MINOR (0.5%) 1MM PY BLEBS CONCENTRATED TO MIDDLE OF UNIT, MODERATELY DEVELOPED CLEATING, 1X2MM CLEATS PRESENT, NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS AS WELL AS SMALL THICKNESS
DHGH-14-40	234.7	235.64	0.94			XT		B	G	MN	AM	G			E	QZ	CE	
DHGH-14-40	235.64	238.7	3.06		65	ST		B	G	RA		G	PD	25	M	QZ	WP	
DHGH-14-40	238.7	239.26	0.56			XT		B	G	MN	AM	G			M	QZ	WP	
DHGH-14-40	239.26	242.8	3.54			SS	FM	A	G	RA	AM	P			E	QZ	VN	
DHGH-14-40	242.8	243.06	0.26			ZT		B	G	MN		G	PD	15	M	QZ	CE	
DHGH-14-40	243.06	243.39	0.33		75	ST		B	G		AM	G						
DHGH-14-40	243.39	243.69	0.30			ST		B	G	RA	AM	G			M	QZ	WP	
DHGH-14-40	243.69	244.54	0.85			ZT		B	G	CM		G	PD	10	E	QZ	CE	

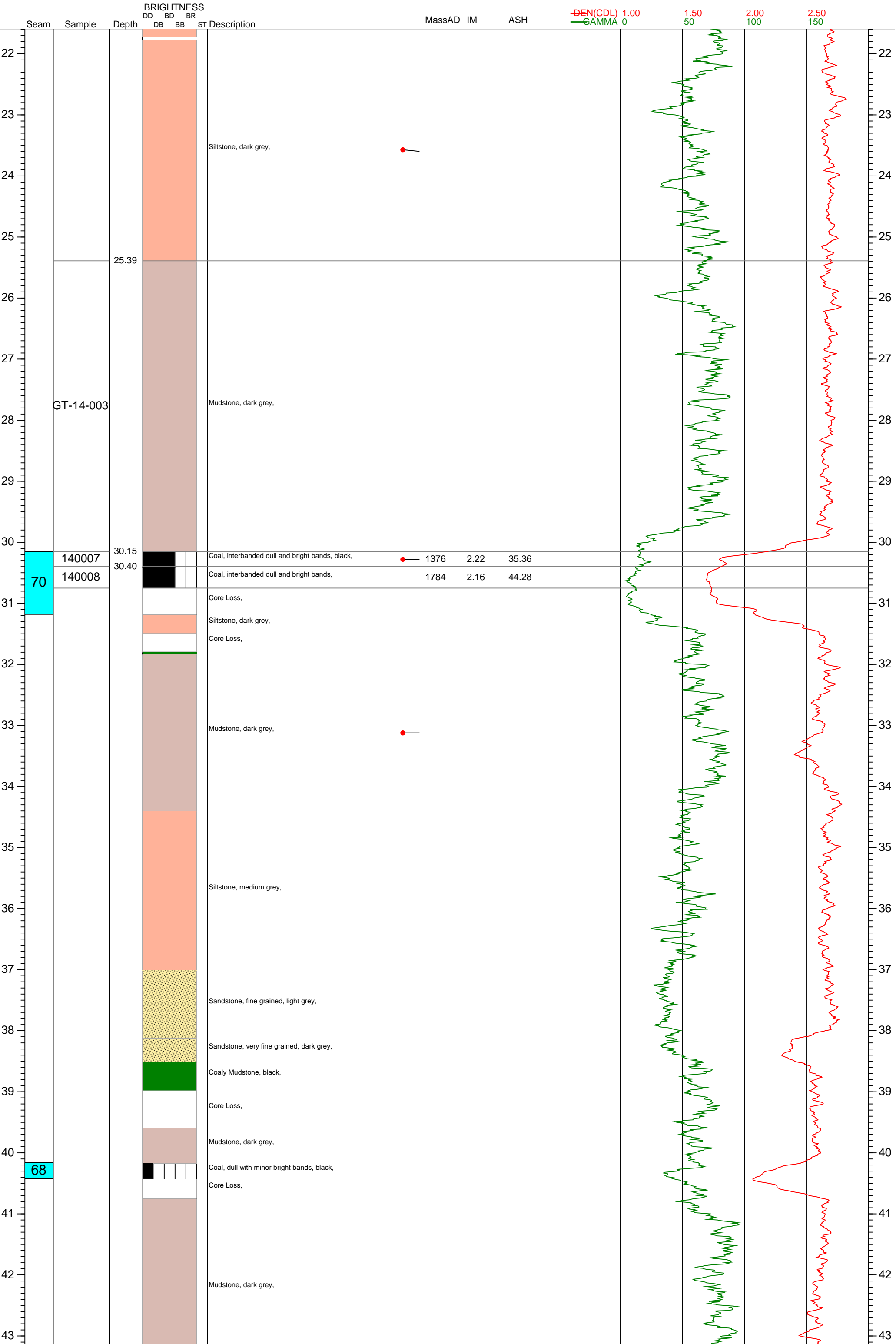
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DHGH-14-40	244.54	247.79	3.25			XT		B	G	MN	AM	G			M	QZ	WP	
DHGH-14-40	247.79	248.07	0.28			ST		B	G	TR	AM	S			M	QZ	WP	
DHGH-14-40	248.07	254.07	6.00			SS	FM	A	G	MN		G			M	QZ	VN	
DHGH-14-40	254.07	255.31	1.24		80	SS	VF	A	G	TR		P	PD	15	M	QZ	VN	
DHGH-14-40	255.31	255.9	0.59			CO	SY	D	K	CM					E	QZ	VN	STONY COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GROPHYSICAL LOGS, TWO ST PARTINGS AT TOP (70MM) AND MIDDLE (140MM) OF INTERVAL, ACCESSORY (15%) 6-10MM QZ/CARB VEINING AS WELL AS CLEAT INFILL 1-10MM, MINOR (<1%) 1-8MM PY BLEBS NEAR MIDDLE OF UNIT, MIDDLE OF UNIT IS SHEARED IN PART, CLEATING IS POORLY DEVELOPED, RARE LOCAL POORLY DEVELOPED CLEATING W/ 2X2MM CLEATS PRESENT, COMMON LISTRIC SURFACES PRESENT
DHGH-14-40	255.9	255.98	0.08			KL				CO								CORE LOSS ATTRIBUTED TO COAL
DHGH-14-40	255.98	268.48	12.50		50	ST		B	G			G	WD	25	M	QZ	VN	
DHGH-14-40	268.48	268.68	0.20	140951	50	ST		B	G			S	WD	25	E	QZ	VN	ROOF A: ST INTERLAMINATED W/ SS VF, ACCESSORY (3%) 1-4MM QZ/CARB VEINING THROUGHOUT
DHGH-14-40	268.68	268.99	0.31	140952		CO	C2	D	K	MN		P						SEAM: C2 COAL (70% BRIGHT COAL) W/ MINOR (5-10%) MS INTERMIXED THOROUGHOUT UNIT, VERY HIGHLY SHEARED UNIT DESTROYING ALL PRIMARY TEXTURES, ABUNDANT LISTRIC SURFACES
DHGH-14-40	268.99	269.19	0.20	140953	60	ZT		D	G	MN		G			E	QZ	CE	FLOOR A: COALY ST IRREGULARLLY INTERBEDDED W/ COALY MS, MINOR (7%) 1-4MM COAL BANDS THROUGHOUT, ACCESSORY (3%) <1MM QZ/CARB CLEAT INFILL AS WELL AS ONE 2MM VEIN IN MIDDLE OF UNIT
DHGH-14-40	269.19	269.38	0.19		60	ZT		B	G	CM			PD		E	QZ	CE	
DHGH-14-40	269.38	269.43	0.05			KL												
DHGH-14-40	269.43	270.14	0.71			ZM		B	G	CM		G			E	QZ	CE	UNIT CONTAINS SMALL SCALE S-FOLDS THROUGHOUT, SPANNING 5-15CM
DHGH-14-40	270.14	272.37	2.23			XT		B	G	MN		G			E	QZ	CE	
DHGH-14-40	272.37	272.71	0.34			ST		B	G	TR	AM	G			R	QZ	WP	
DHGH-14-40	272.71	277.22	4.51		85	SS	VM	A	G			P	PD	20	M	QZ	VN	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	277.22	279.25	2.03		65	ST		B	G				WD	20	R	QZ	WP	
DHGH-14-40	279.25	279.38	0.13			KL												
DHGH-14-40	279.38	283.02	3.64		65	ST		B	G	TR		P	WD	20	M	QZ	VN	
DHGH-14-40	283.02	283.32	0.30			CO	SY	D	K	MN		P			E	PY	LN	STONY COAL NOT SAMPLED DUE TO LOW GRADE AS DETERMINED FROM GEOPHYSICAL LOGS, COMMON (20%) MS INTERMIXED THROUGHOUT, MODERATELY SHEARED THROUGHOUT, CLEATING IS FRACTURED AND DESTROYED, ACCESSORY (5%) 1-10MM WIDE PY LENSES THROUGHOUT, MINOR (1%) <1MM FRACTURED QZ/CARB CLEAT INFILL
DHGH-14-40	283.32	283.47	0.15			XT		B	G	RA	AM	I			R	QZ	CE	
DHGH-14-40	283.47	284.87	1.40		75	SS	VF	A	G			S	WD	25	E	QZ	VN	
DHGH-14-40	284.87	284.97	0.10	140954		SS	VF	A	G	MN		P			E	QZ	VN	ROOF A: SS VF INTERMIXED W/ ST, ACCESSORY (10%) 3-20MM QZ/CARB VEINING THOROUGHOUT
DHGH-14-40	284.97	285.07	0.10	140954		ZM		D	G	CM	AM	G			M	QZ	CE	ROOF B: COAL MS W/ MINOR (10%) 1-10MM COAL LENSES THOROUGHOUT, MINOR (1%) <1MM QZ/CARB CLEAT INFILL THOROUGHOUT
DHGH-14-40	285.07	285.47	0.40	140955		CO	C4	D	K	MN		G			M	QZ	CE	SEAM A: C4 COAL (30% BRIGHT COAL) W/ MINOR (10%) MS INTERMIXED THOROUGHOUT, MINOR (1%) <1MM FRAGMENTED QZ/CARB CLEAT INFILL THOUGHOUT, MINOR (<1%) 10MM PY VEIN IN MIDDLE OF UNIT, POORLY DEVELOPED CLEATING THOROUGHOUT, 1X2MM CLEATS PRESENT, MODERATELY SHEARED THROUGHOUT DESTROYING MOST OF PRIMARY TEXTURE
DHGH-14-40	285.47	285.67	0.20	140956		ZT		D	G	CM	AM				E	QZ	CE	FLOOR A: COAL ST W/ COMMON (20%) 30MM COAL BANDS AT TOP OF UNIT GRADING INTO 2MM WISPS AT BOTTOM OF UNIT, ACCESSORY (4%) 1-3MM QZ/CARB CLEAT INFILL, RARE (0.5%) 1X2MM PY BLEBS NEAR TOP OF UNIT
DHGH-14-40	285.67	285.75	0.08			ZT		B	G	MN	AM	G			E	QZ	WP	
DHGH-14-40	285.75	286.05	0.30			XT		B	G	RA	AM	G			M	QZ	WP	
DHGH-14-40	286.05	286.33	0.28			ST		B	G		AM	G			R	QZ	WP	
DHGH-14-40	286.33	288.72	2.39		60	ST		B	G	MN		I	WD	5	M	QZ	WP	

HOLE ID	From /m	To /m	Drilled /m	Sample ID	Lith%	Lithology	Lith Qualifier	Shade	Colour	Adj 1	Texture	Basal Contact	Sed. Feature 1	Bed Dip	Min/Fos 1 Abund	Min/Fos 1	Min/Fos 1 Asoc	Comments
DHGH-14-40	288.72	288.92	0.20	140957	60	ST		B	G	MN		G	WD		E	QZ	VN	ROOF A:ST INTERLAMINATED W/ SS VF, MINOR (3%) 2-10MM COAL BANDS CONCENTRATED AT BOTTOM OF UNIT, ACCESSORY (2%) 2-5MM QZ/CARB VEINING THOROUGHOUT
DHGH-14-40	288.92	289.32	0.40	140958		CO	C2	D	K	MN		G			E	QZ	VN	SEAM A: C2 COAL (70% BRIGHT COAL) W/ MINOR (7%) 1-3MM MS LAMINATIONS THOROUGHOUT UNIT AS WELL AS LOCALLY INTERMIXED, 2% 3X5-20MM ST CLASTS BOTTOM OF UNIT, ACCESSORY (5%) 1-3MM QZ/CARB VEINING CONCENTRATED TO MIDDLE AND BOTTOM HALF OF UNIT, ALSO <1MM QZ/CARB CLEAT INFILL, MINOR (0.5%) 2X10MM PY BLEBS IN BOTTOM HALF OF UNIT, CLEATING IS LOCALLY WELL DEVELOPED IN MIDDLE OF UNIT, 3X5MM CLEATS PRESENT, CONCOIDAL FRACTURING OCCURRING ON CLEAT FACES, CLEATING HAS BEEN DESTROYED BY MINOR SHEARING AT TO PAND BOTTOM OF UNIT
DHGH-14-40	289.32	289.64	0.32	140959		CO	SY	D	K	CM		G			E	QZ	VN	SEAM A:STONY COAL WITH LOCAL C2 COAL BANDS 80% BRIGHT COAL W/ COMMON (40%) 1-4MM ST LAMINATIONS THOROUGHOUT, MINOR (5%) 3-7MM ST CLASTS NEAR MIDDLE OF UNIT, ACCESSORY (7%) 0.5-7MM QZ/CARB VEINING CONCENTRATED TO BOTTOM HALF OF UNIT, CLEATING IS WELL DEVELOPED IN COAL BANDS W/ 3X4MM CLEATS W/ CONCOIDAL FRACTURING ON CLEAT FACES PRESENT
DHGH-14-40	289.64	289.75	0.11	140960		ZT		D	G	CM	AM	G			M	QZ	CE	FLOOR A: COAL MS W/ COMMON (20%) 4-5MM COAL BANDS CONCENTRATED AT TOP OF UNIT, MINOR (1%) <1MM QZ/CARB CLEAT INFILL, ACCESSORY (2%) TWO 2-5MM PY VEINS NEAR MIDDLE OF UNIT
DHGH-14-40	289.75	289.84	0.09	140960		XT		D	G	MN	AM				M	QZ	WP	FLOOR C: CARBONACEOUS MS W/ MINOR (2%) <1MM COAL WISPS THOROUGHOUT, MINOR (1%) <1MM QZ/CARB WISPS THROUGHOUT
DHGH-14-40	289.84	290.47	0.63			XT		B	G	RA	AM	G			M	QZ	WP	
DHGH-14-40	290.47	291.63	1.16			ST		B	G	MN	AM	G	DE		R	QZ	WP	
DHGH-14-40	291.63	302.37	10.74			SS	FM	A	G	MN	AM	G			R	QZ	WP	

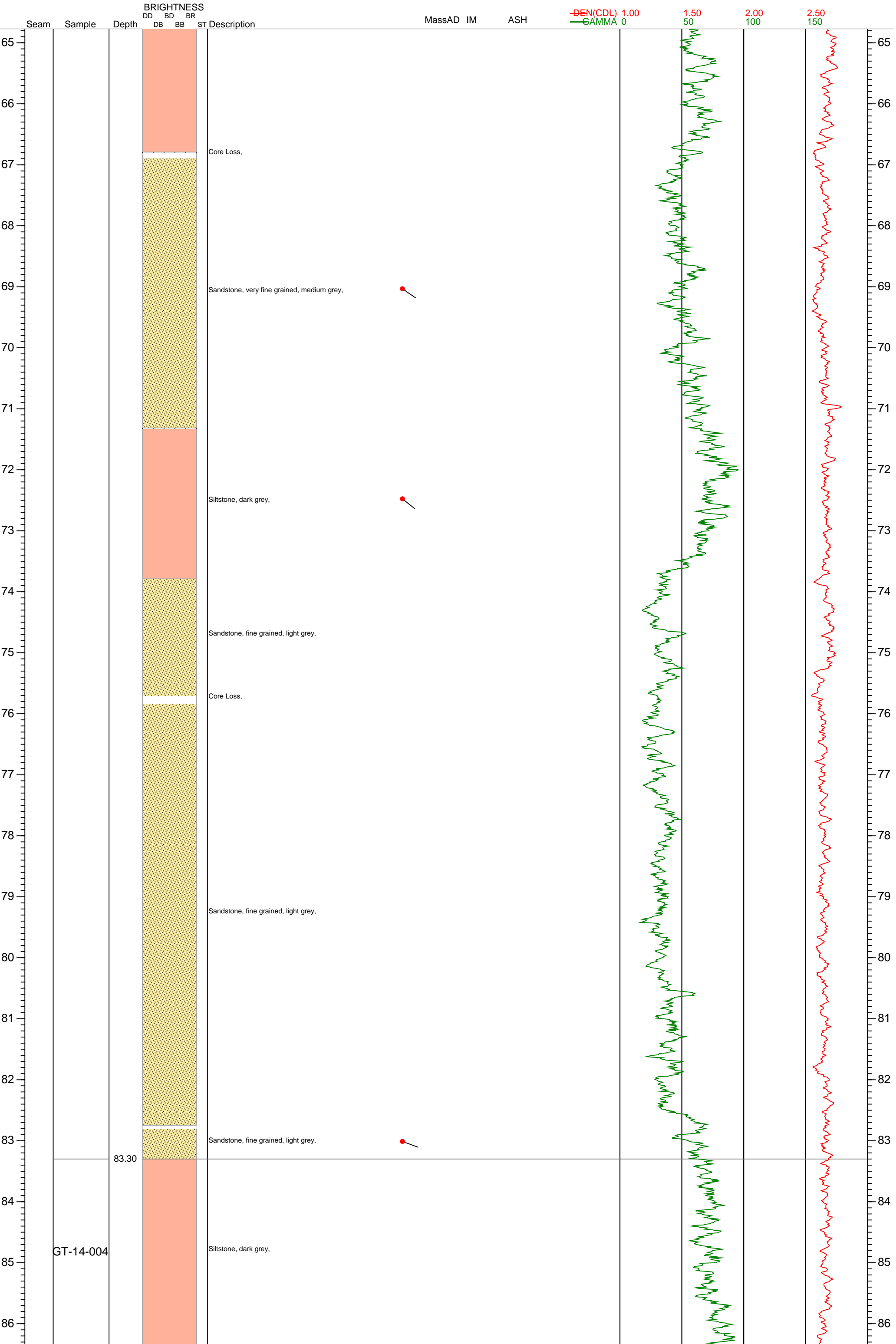
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DHGH-14-40	302.37	304.95	2.58		50	ST		B	G			G	PD	5	R	QZ	WP	
DHGH-14-40	304.95	306.91	1.96			ST		B	G		AM				R	QZ	WP	E.O.H.

Appendix 6 – Strip Logs



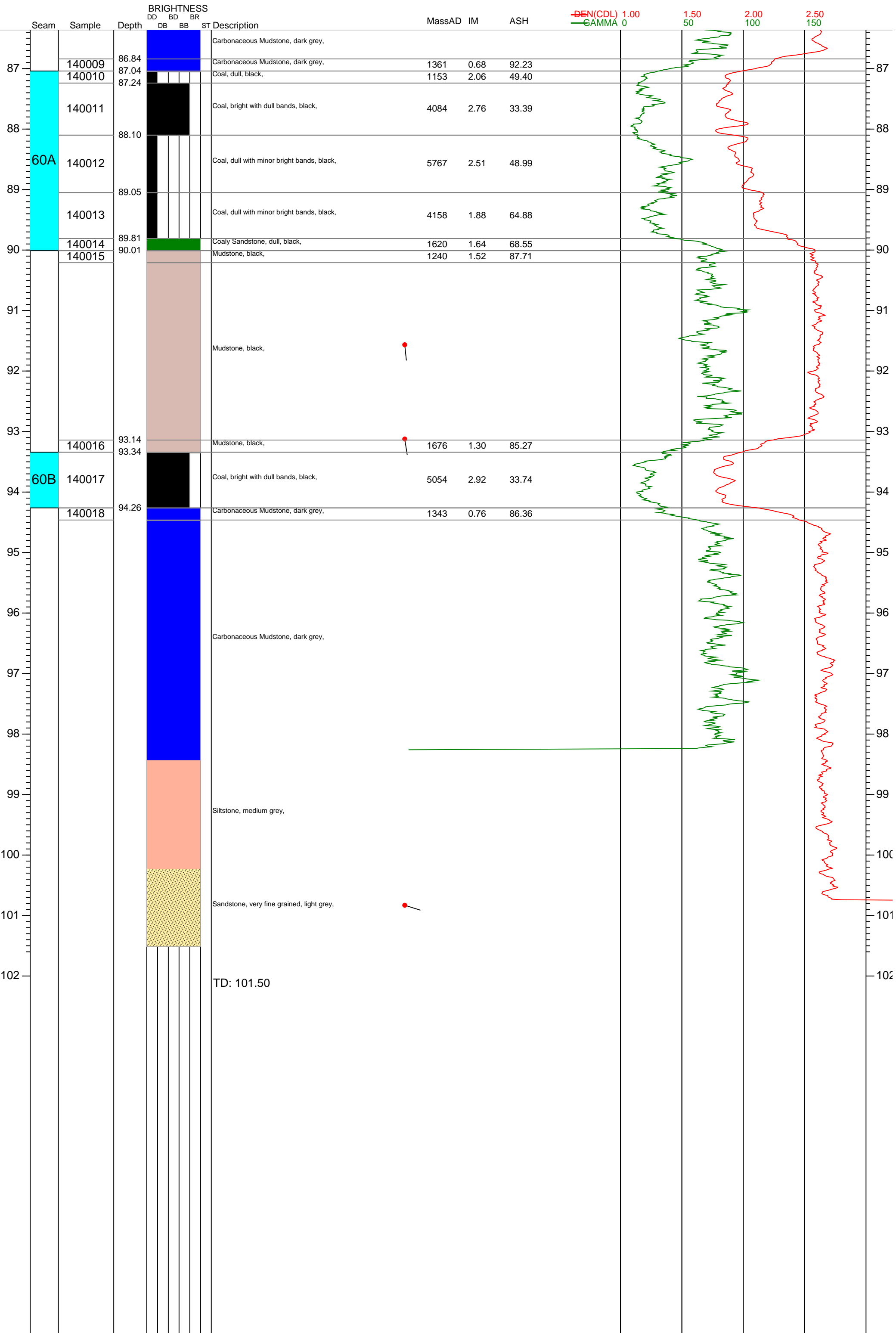
Groundhog
HOLE DHGH-14-01-B

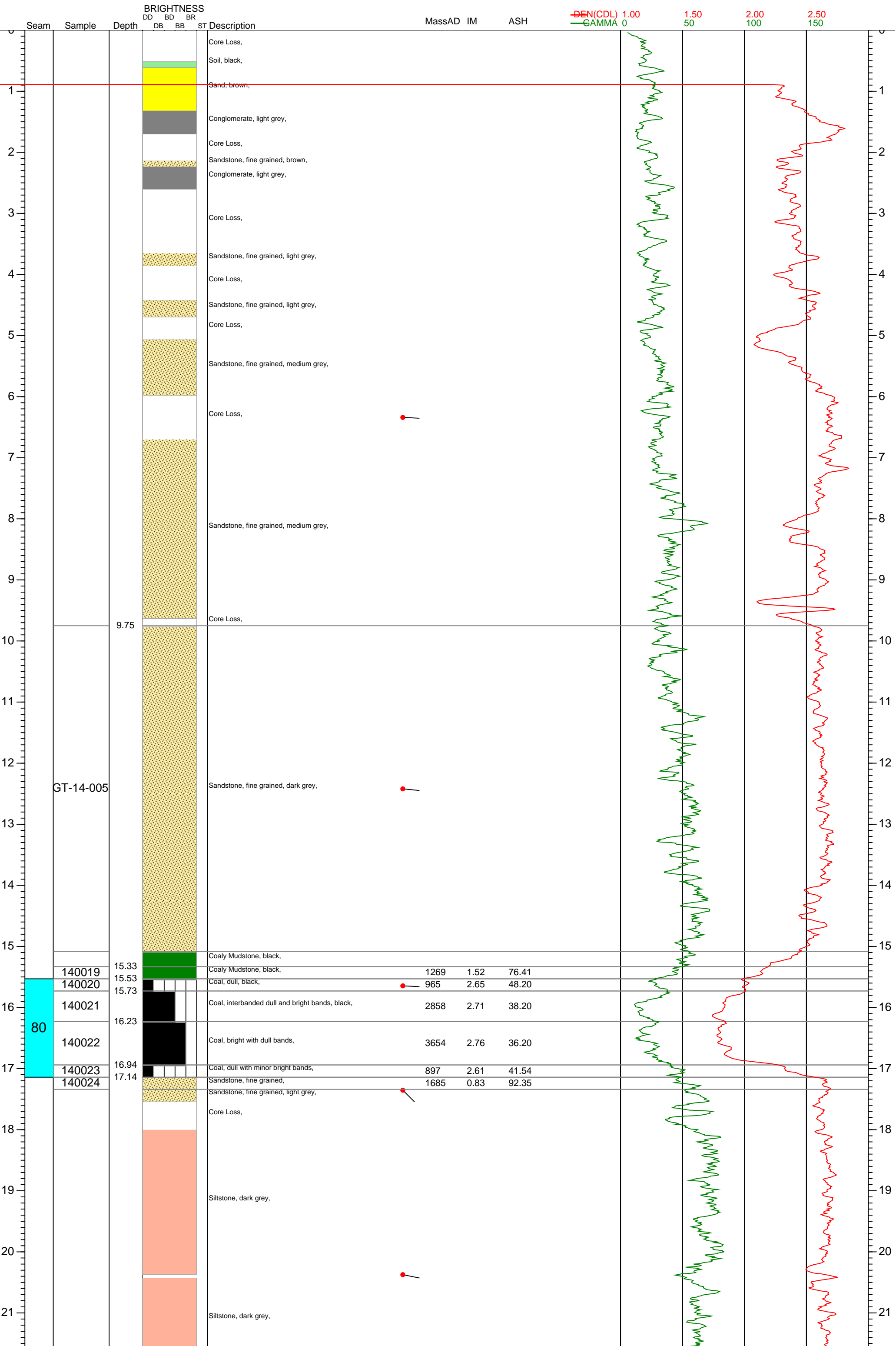
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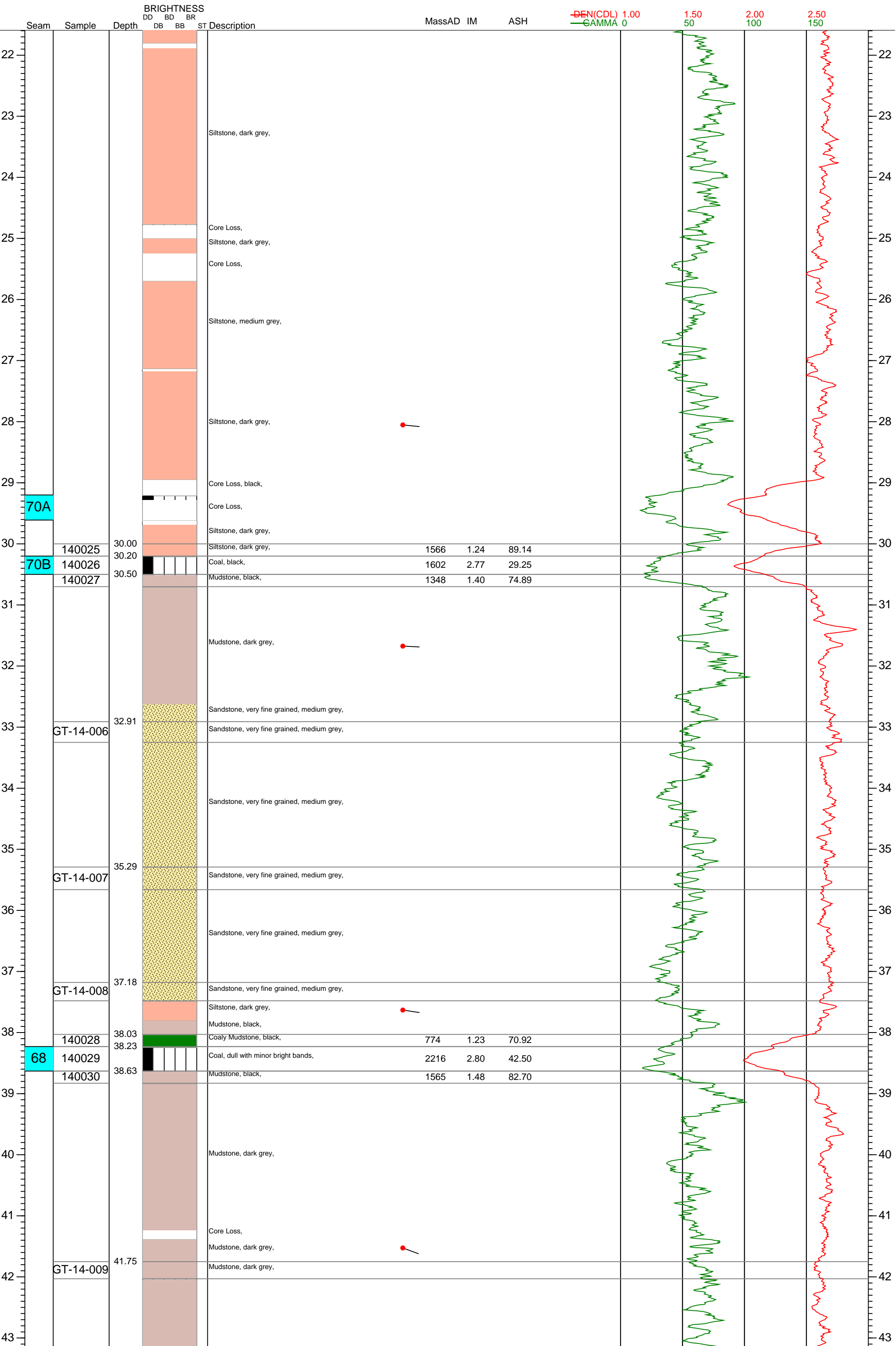


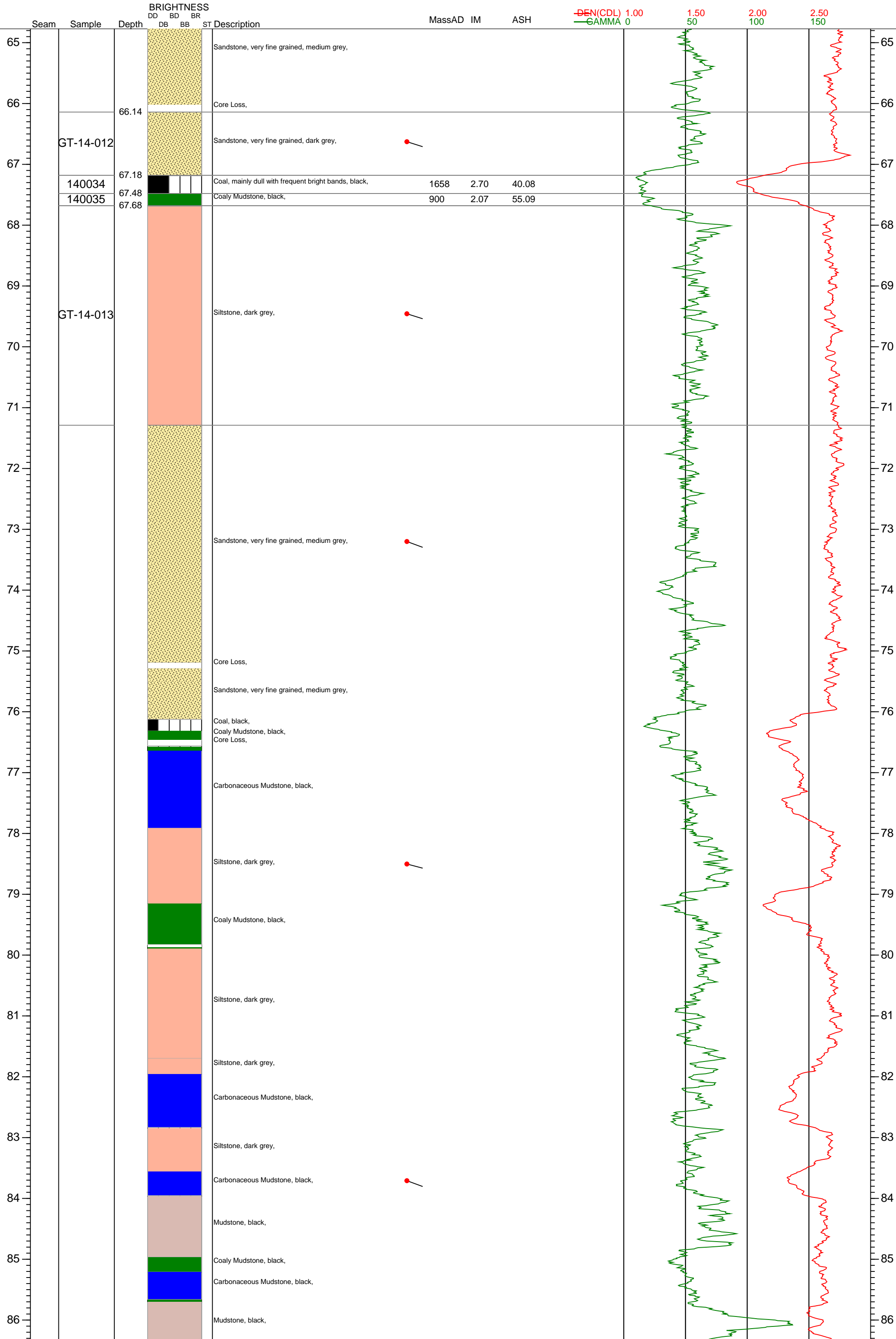
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HOLE DHGH-14-01-B

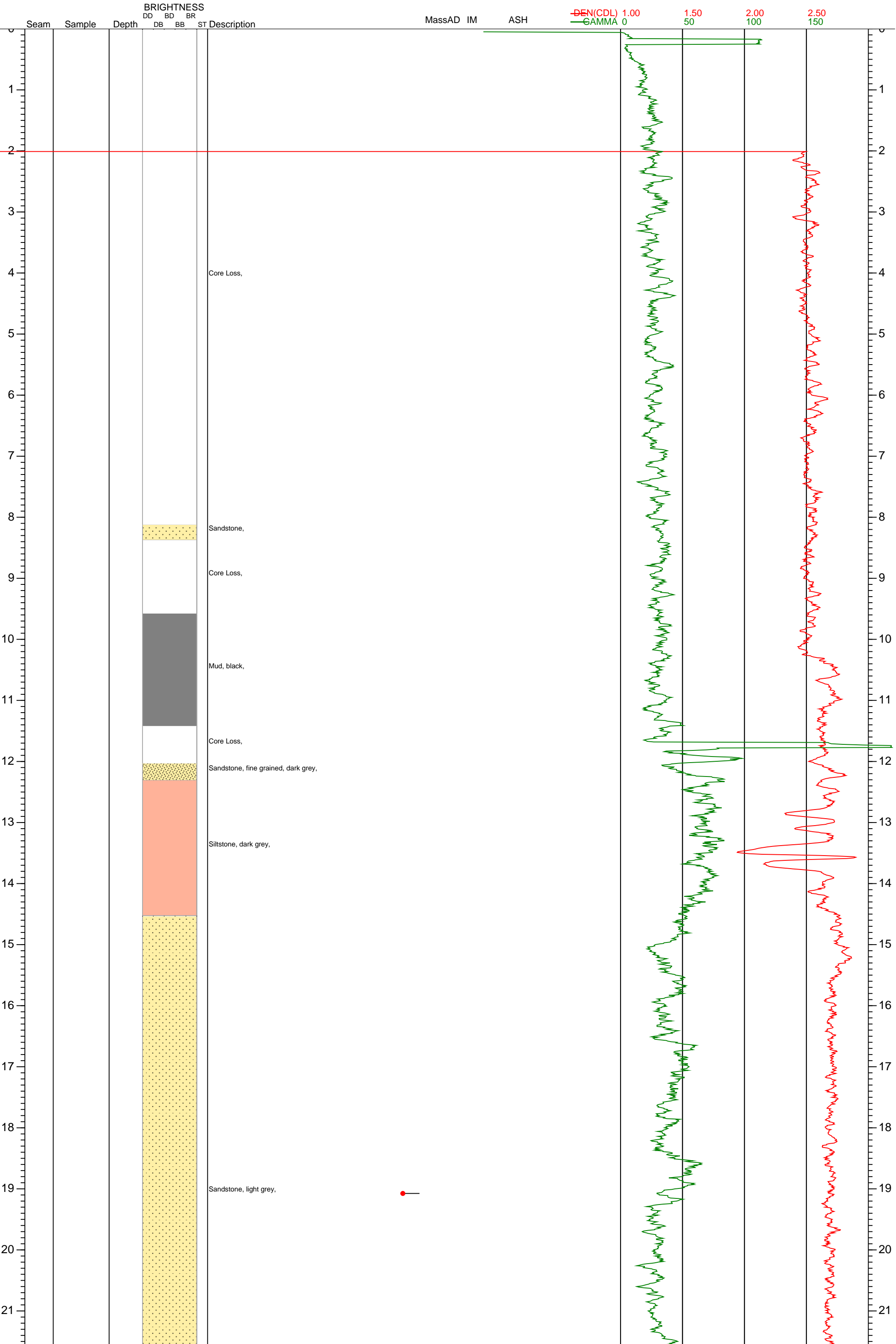
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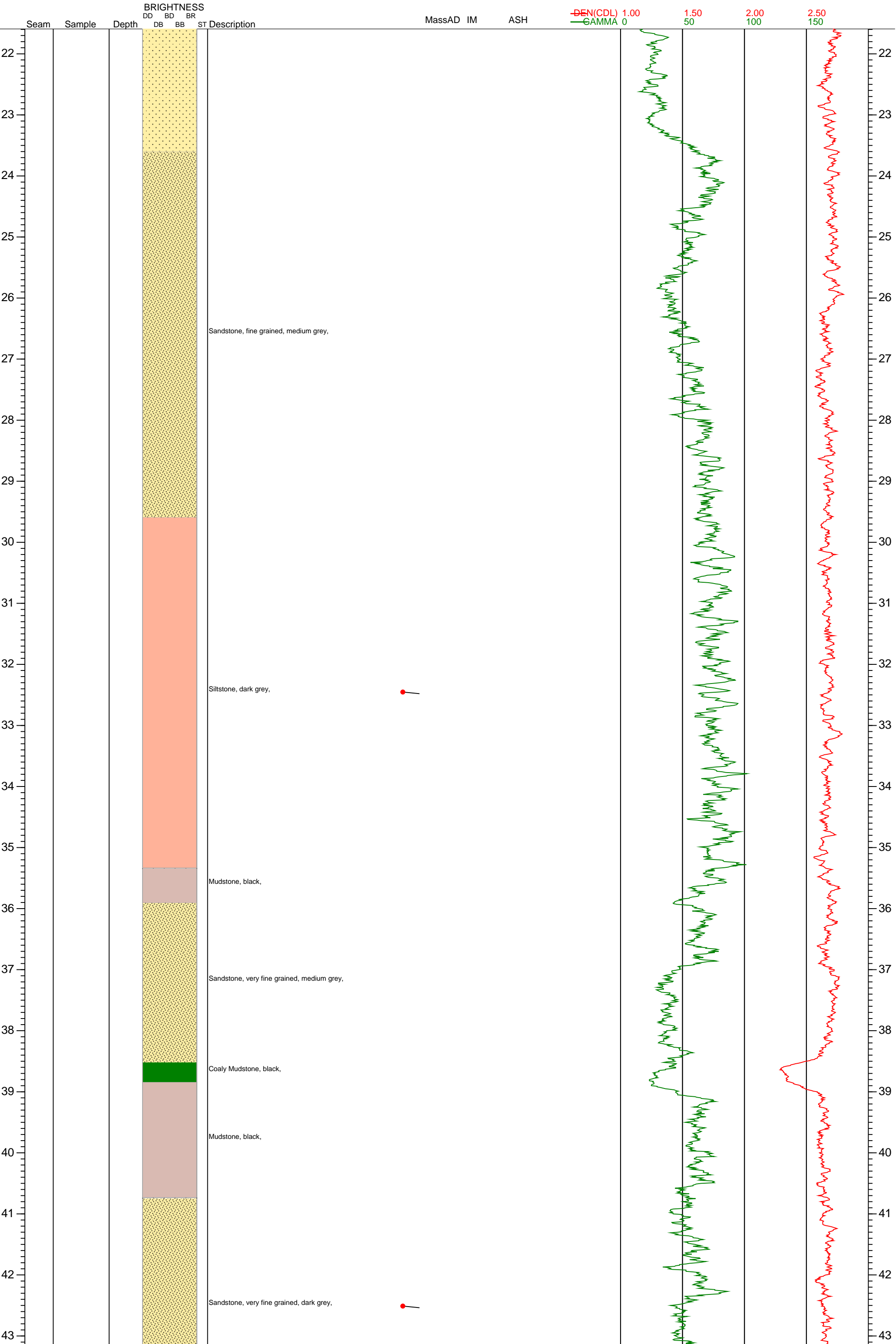


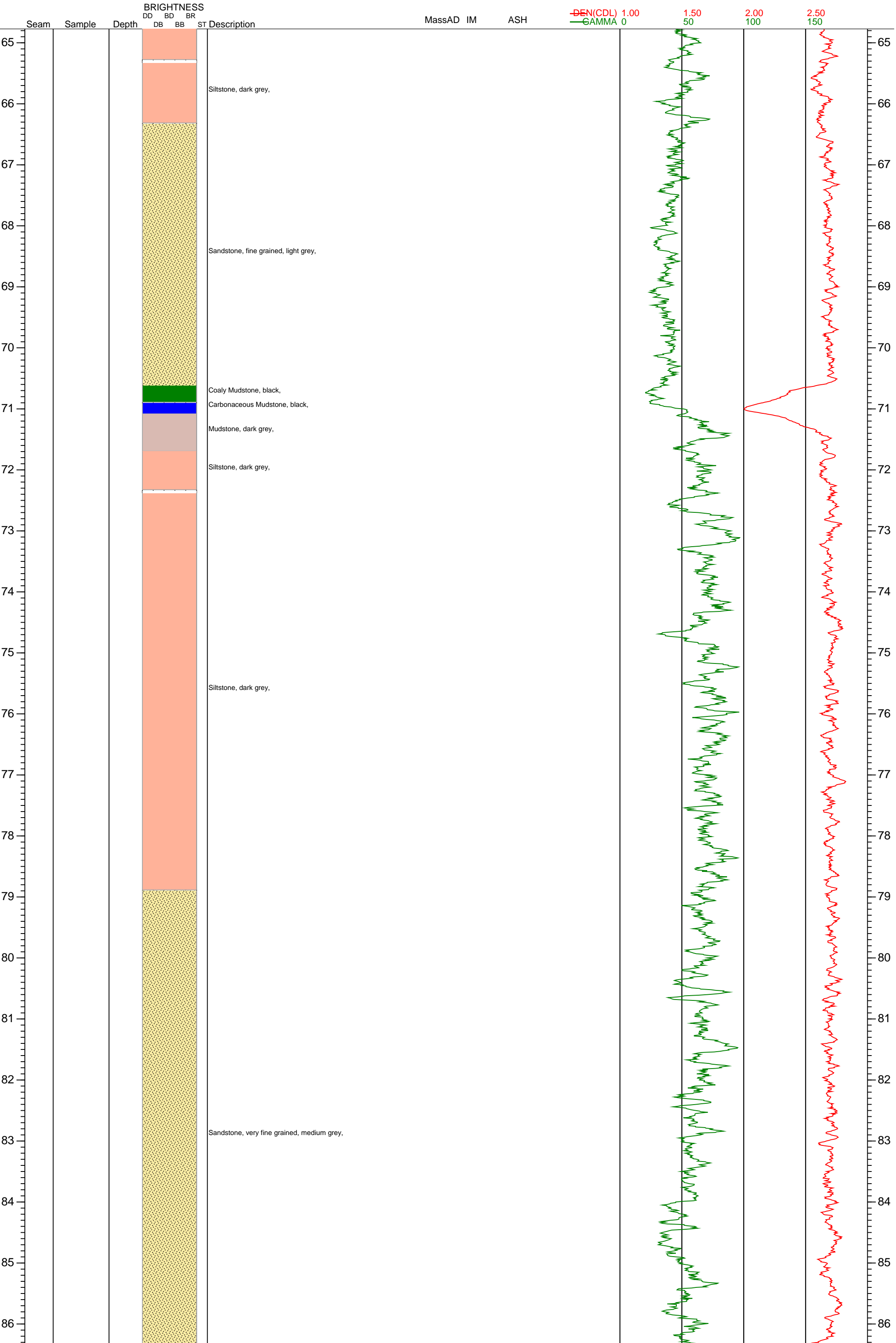


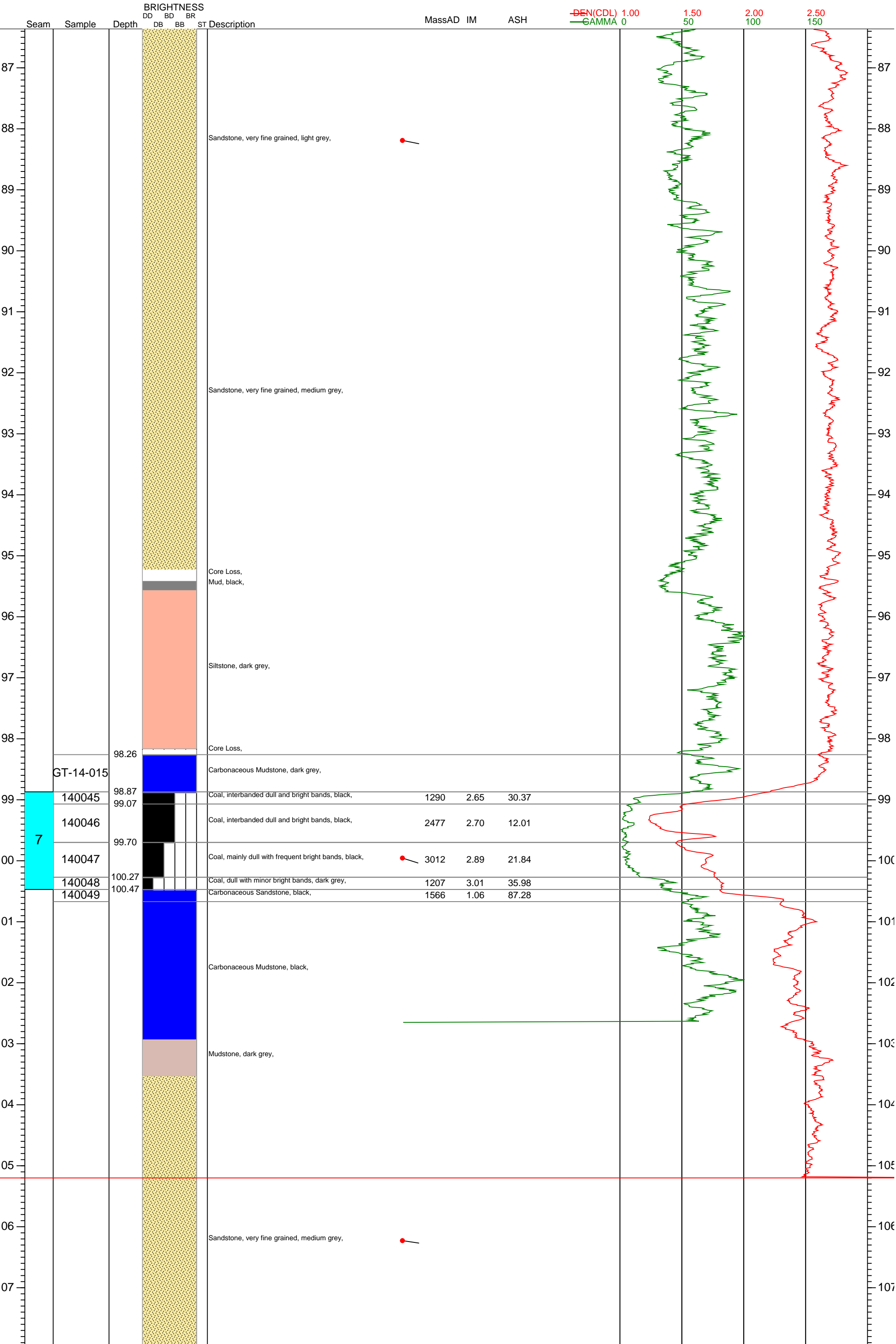


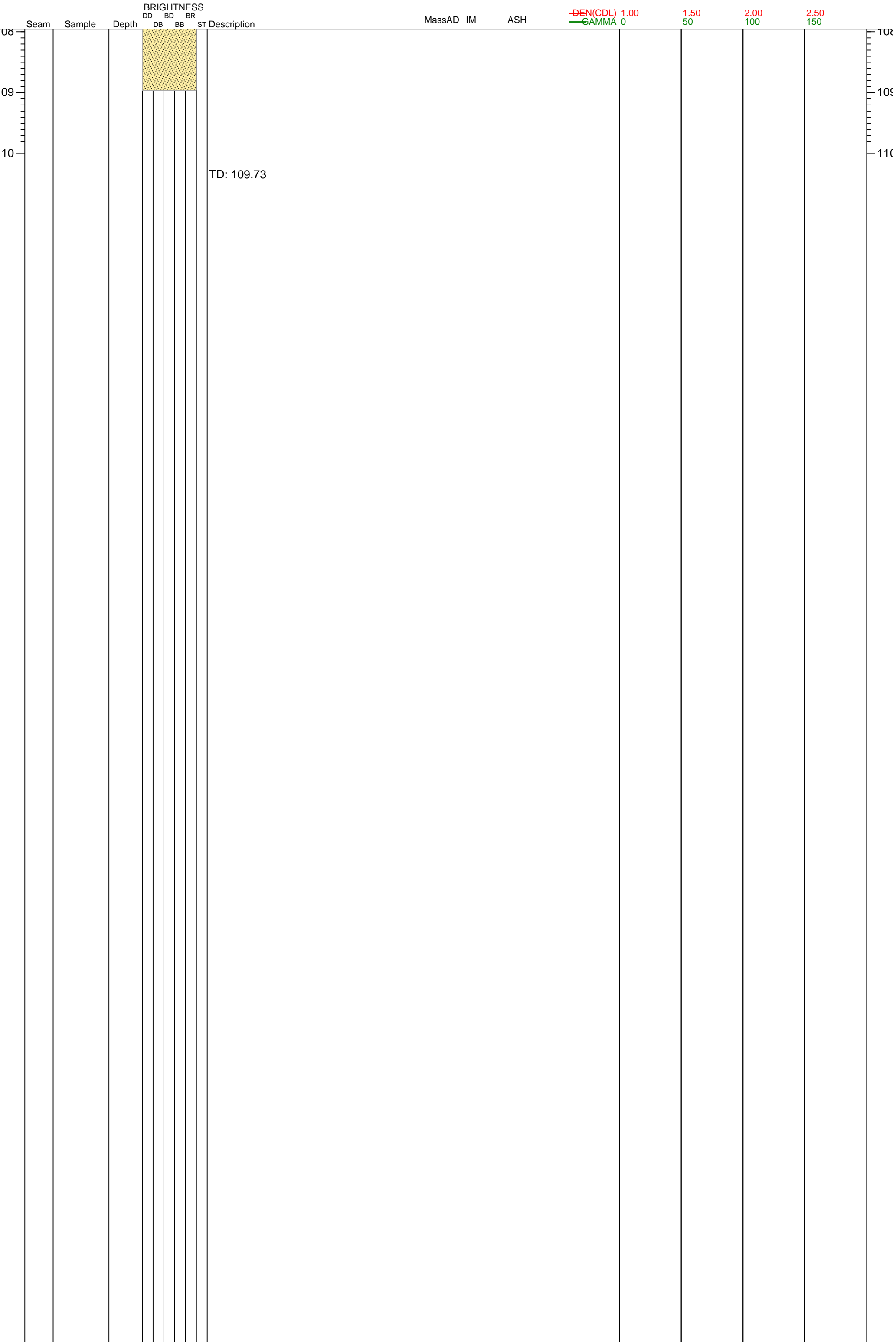


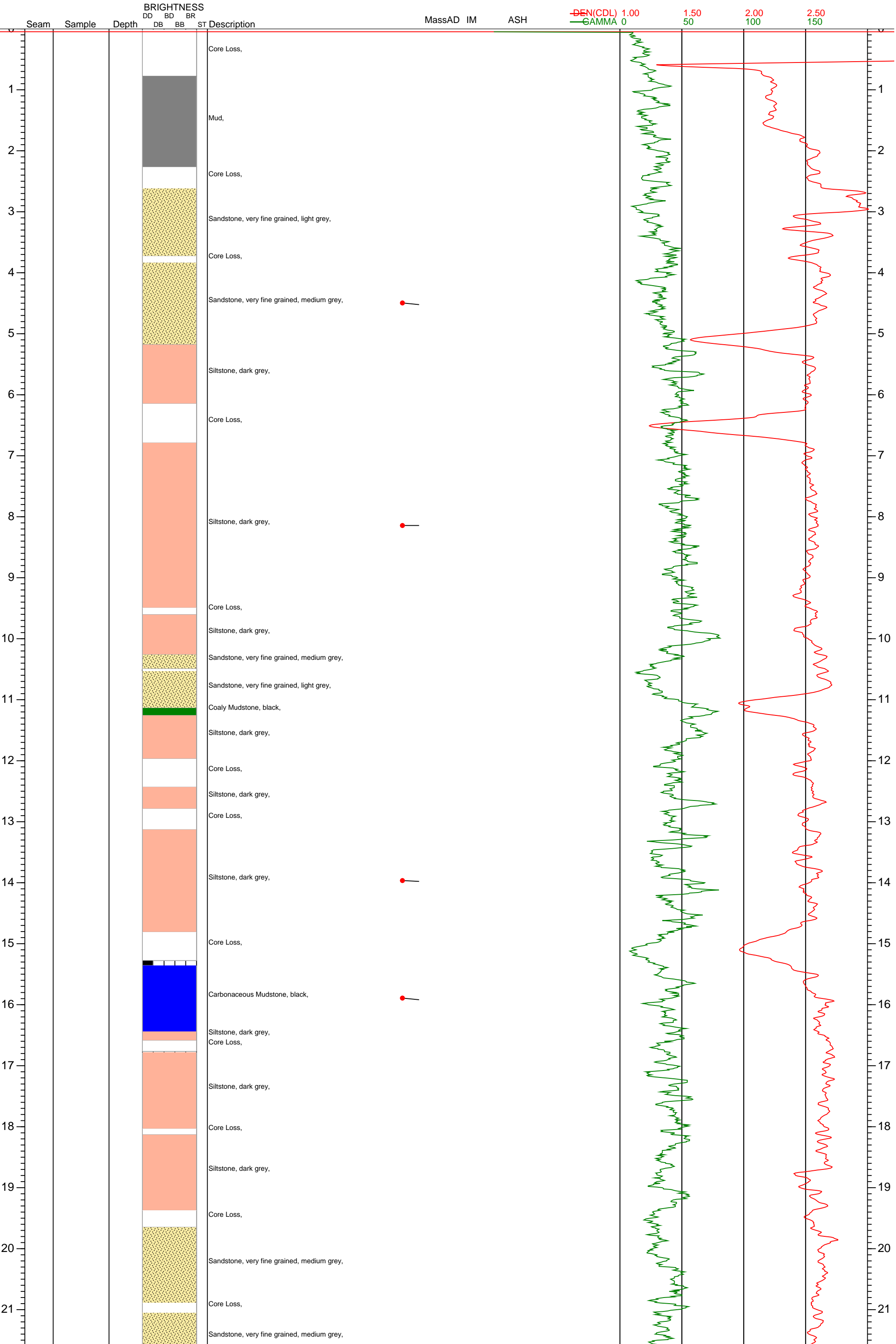


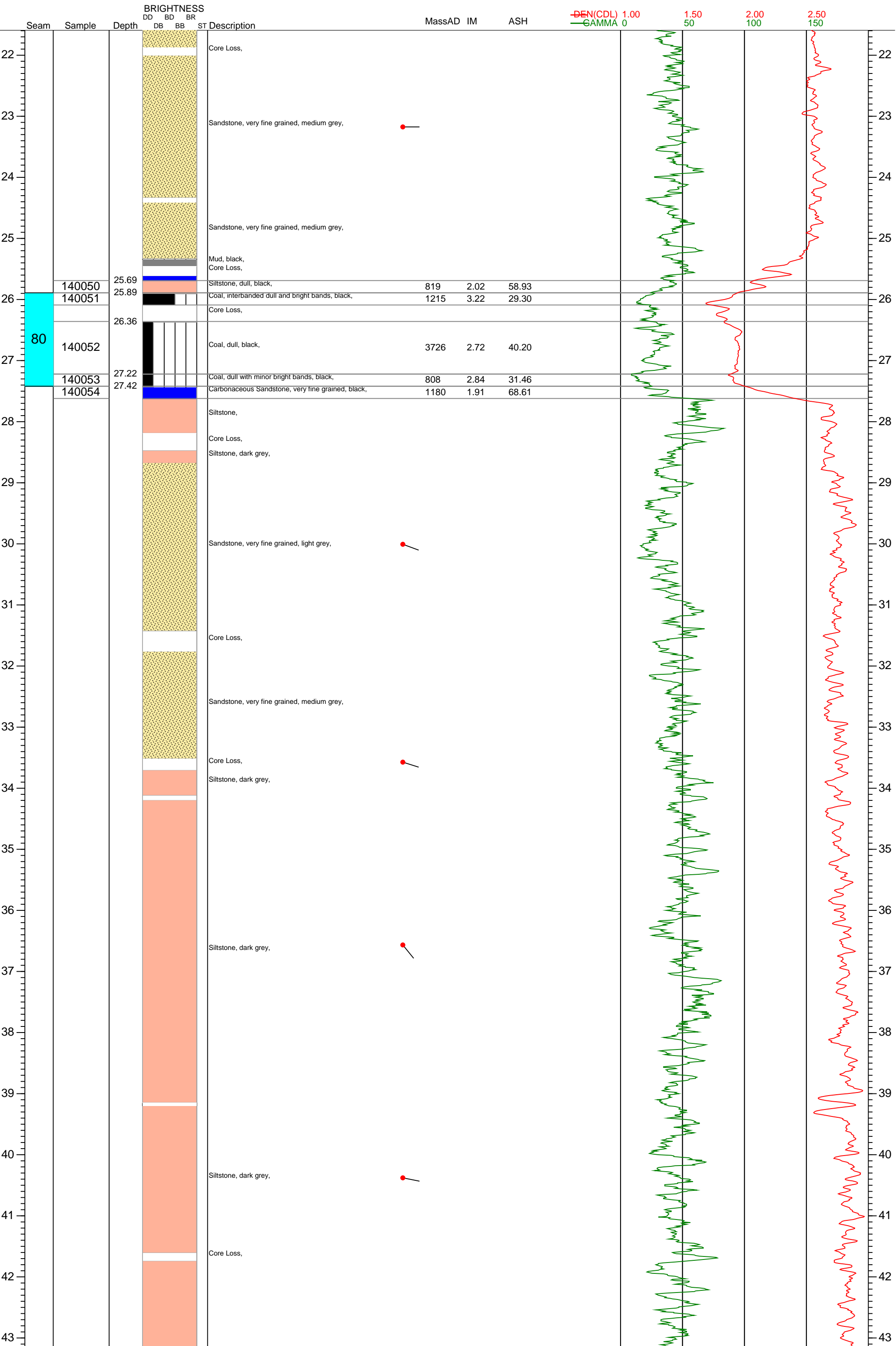


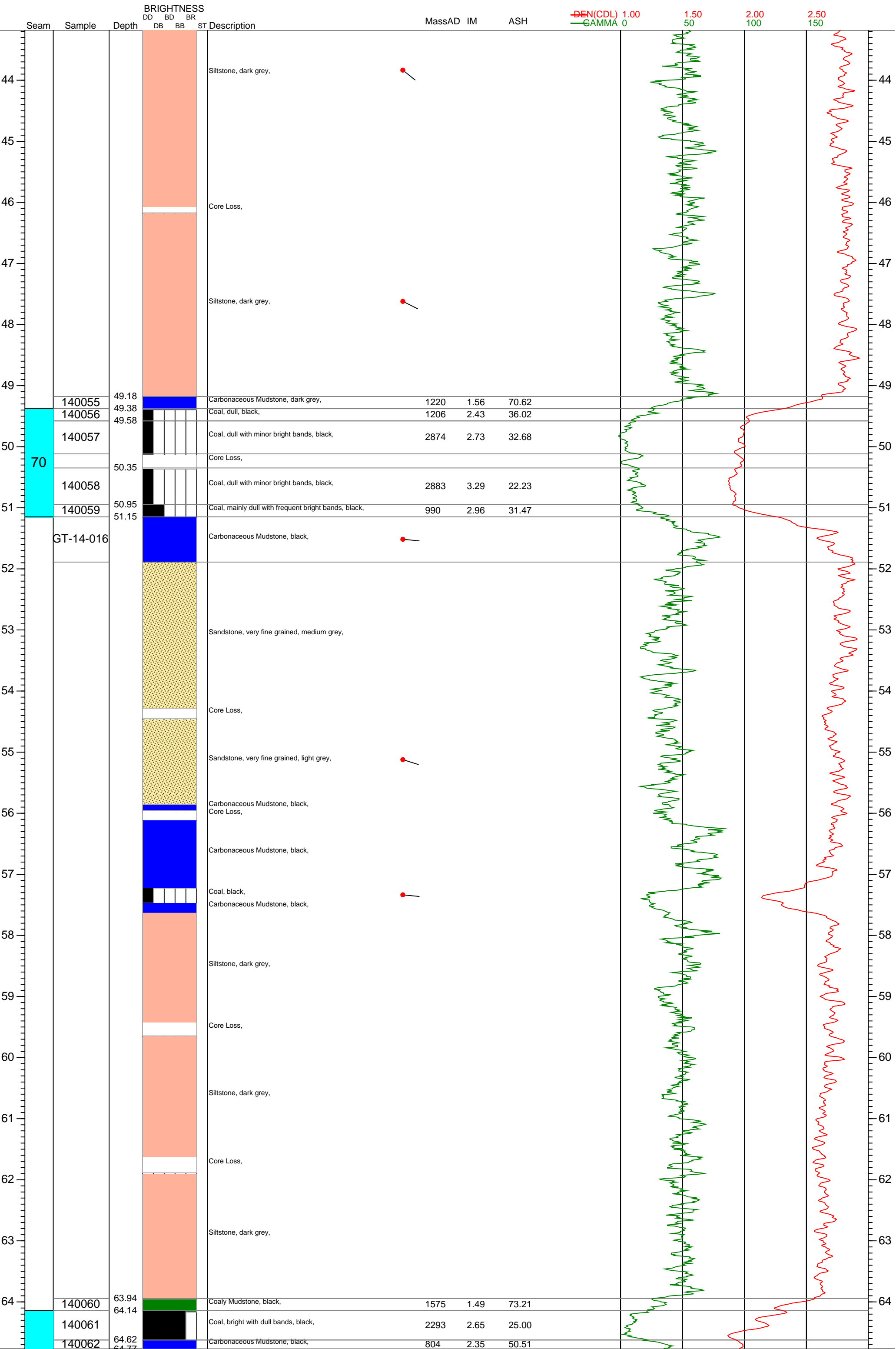


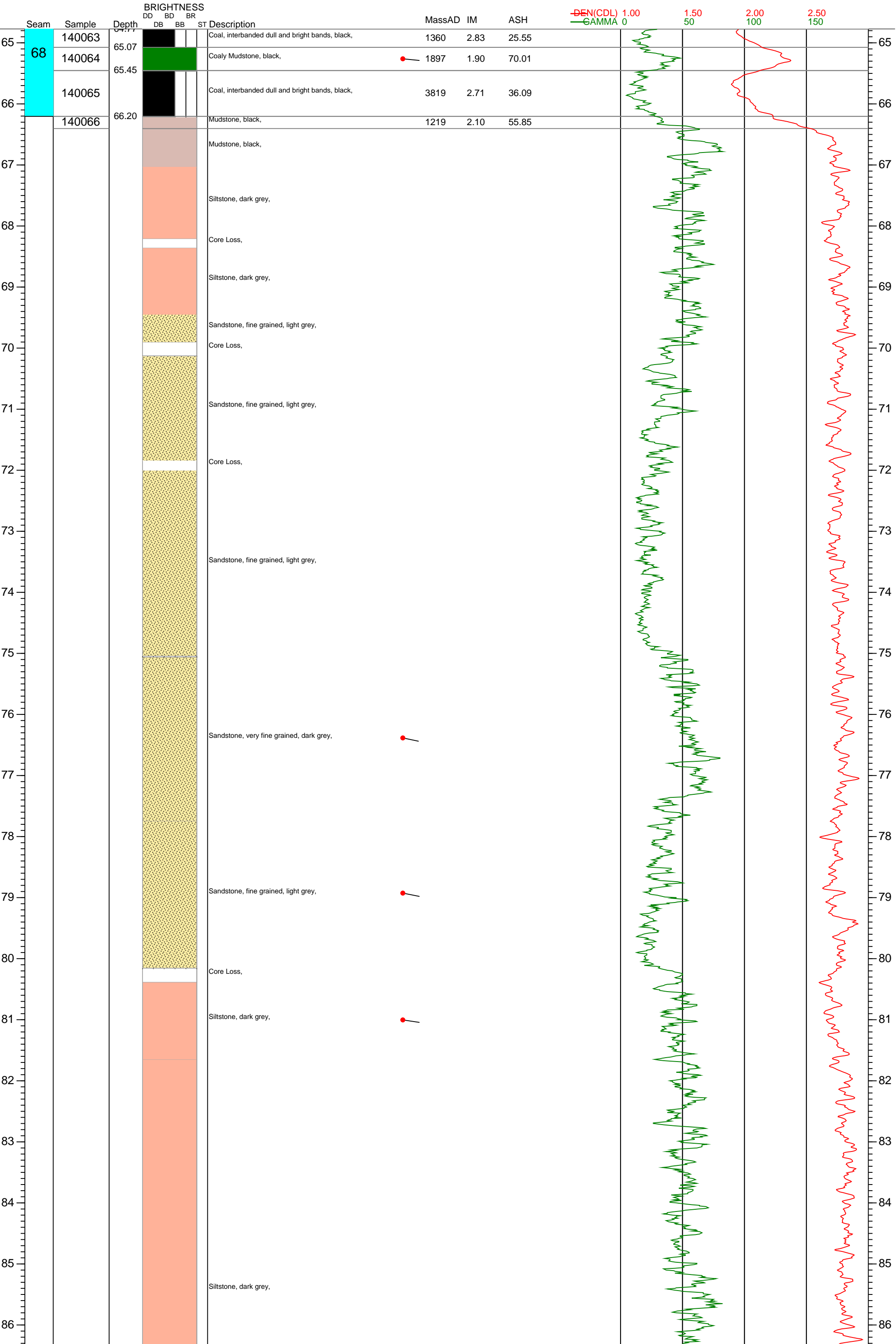


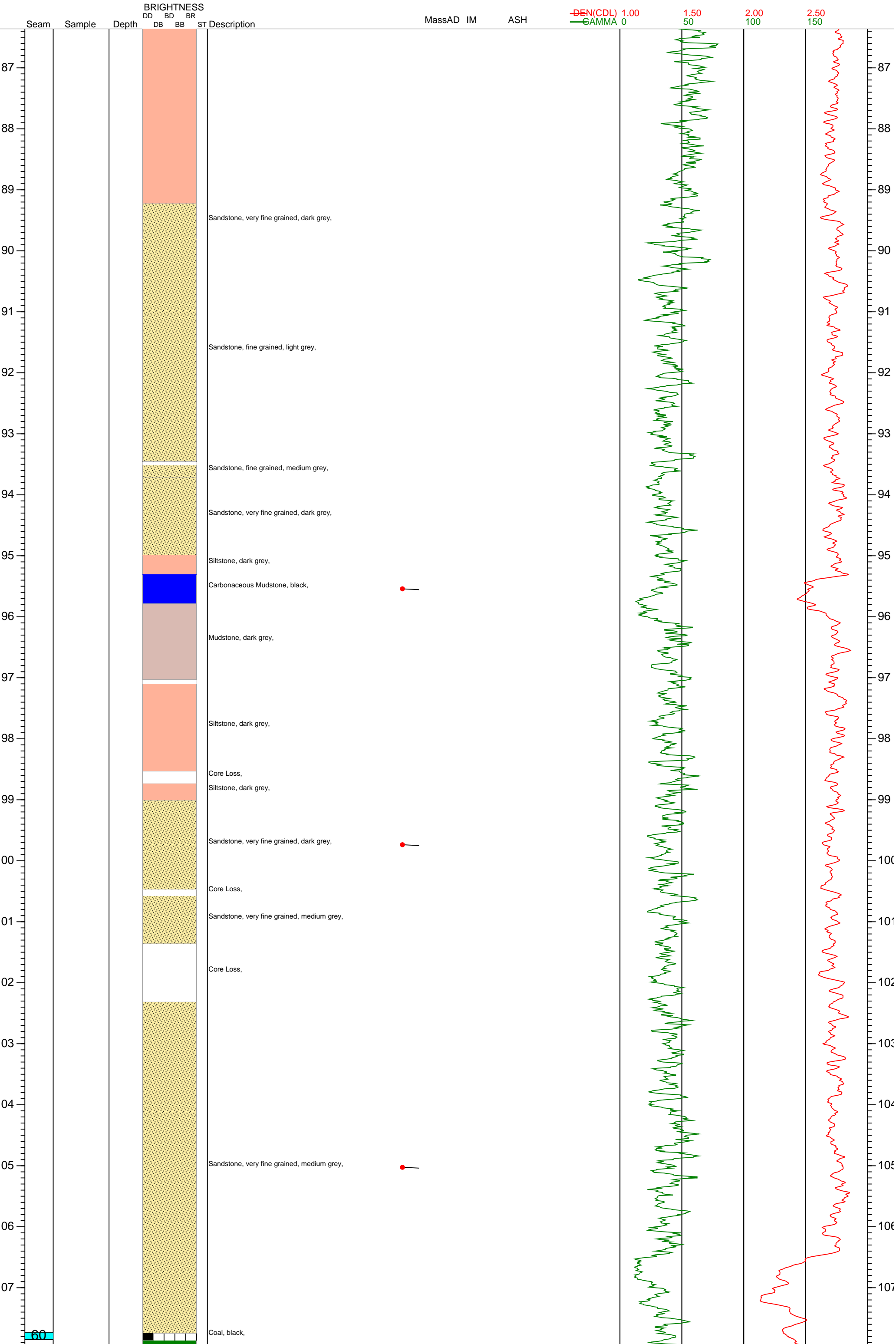


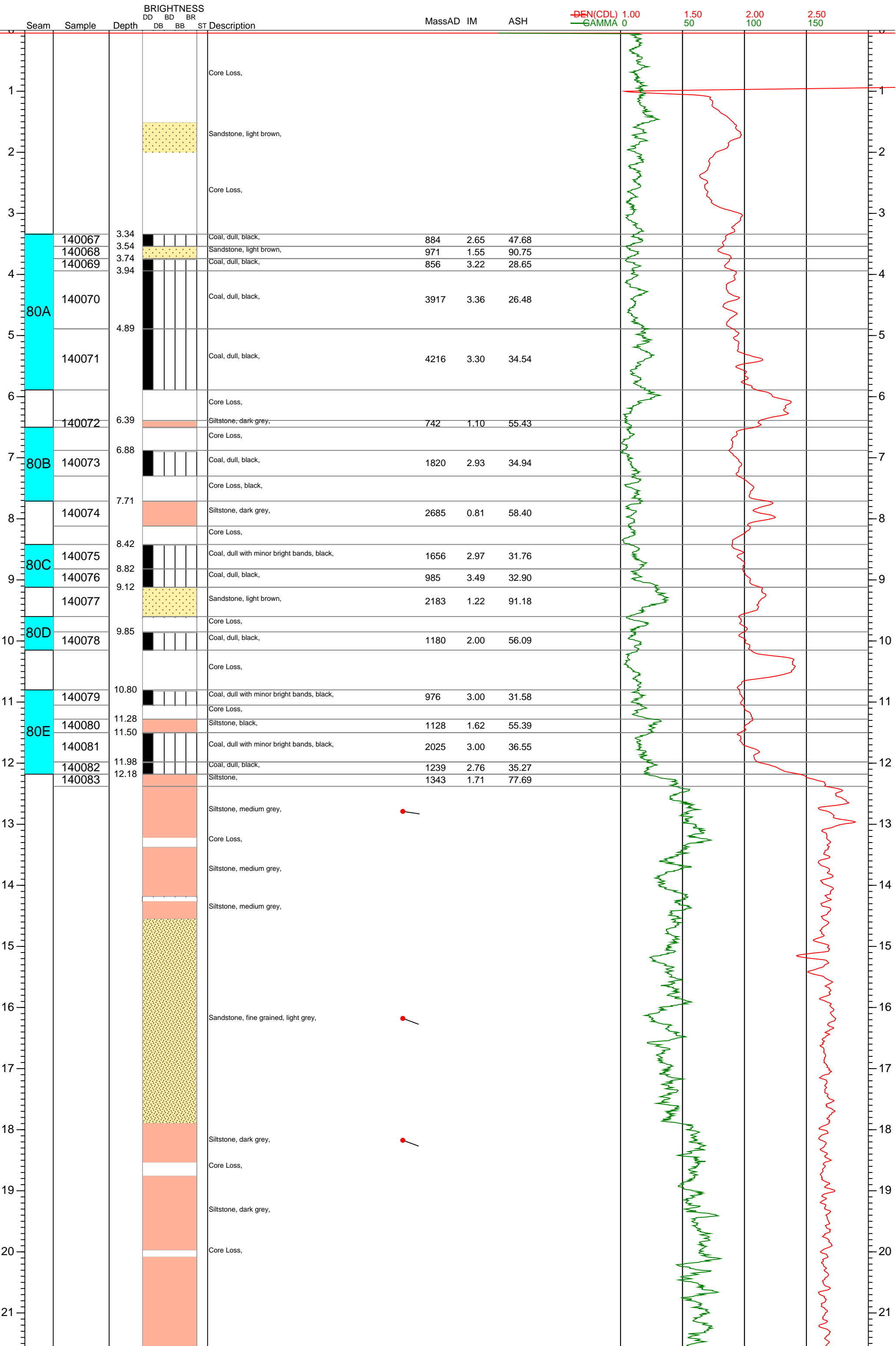


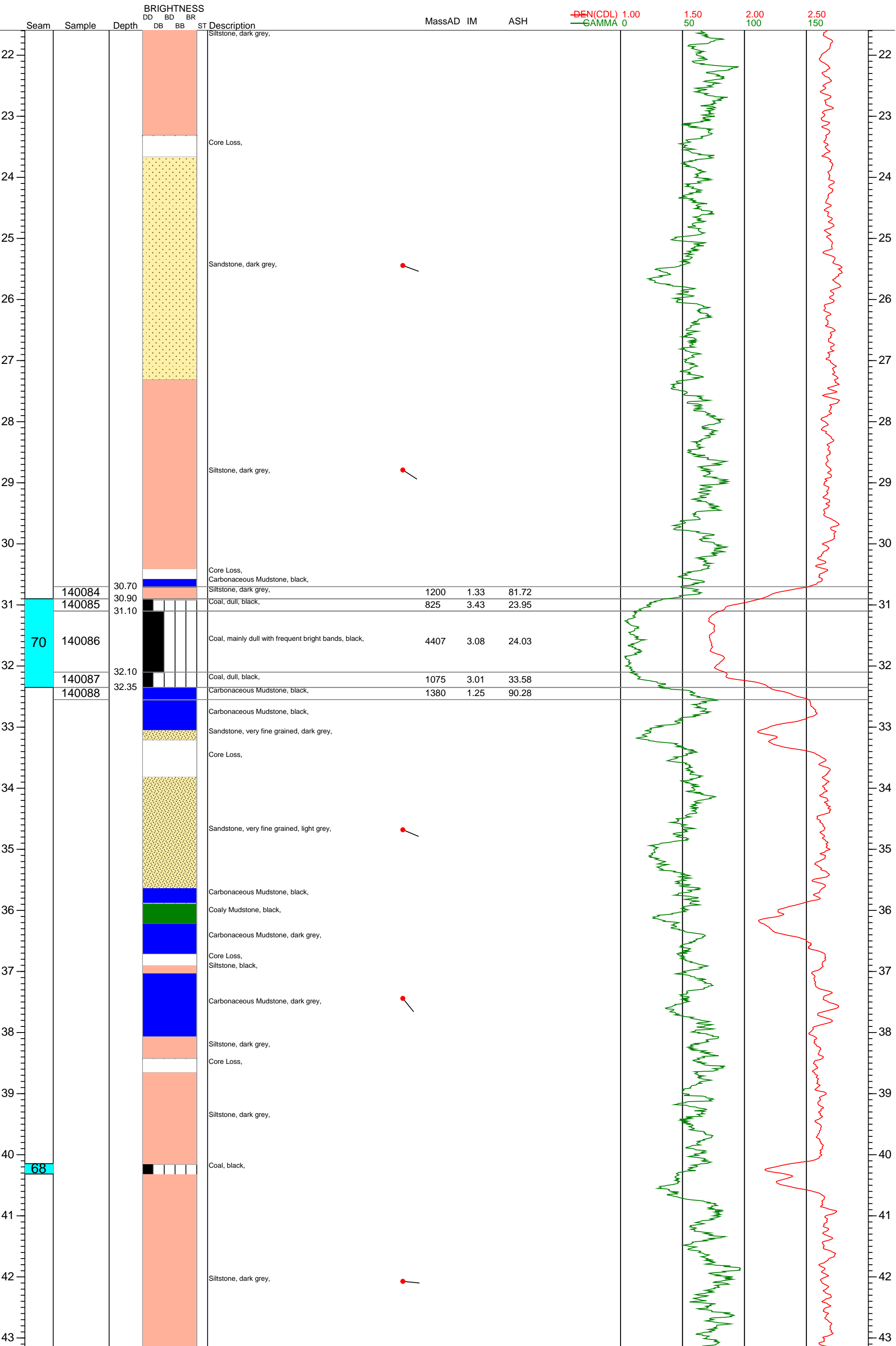


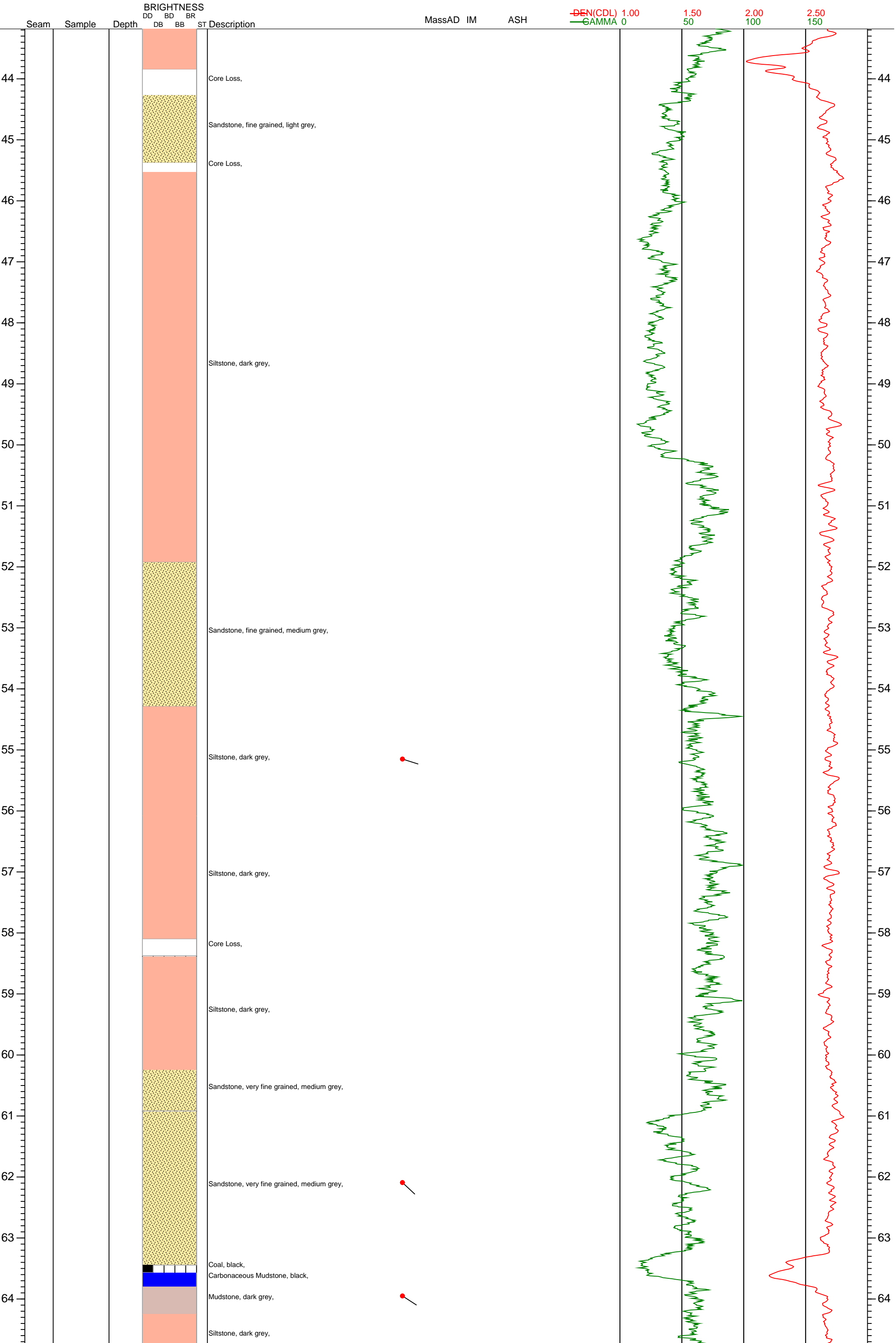


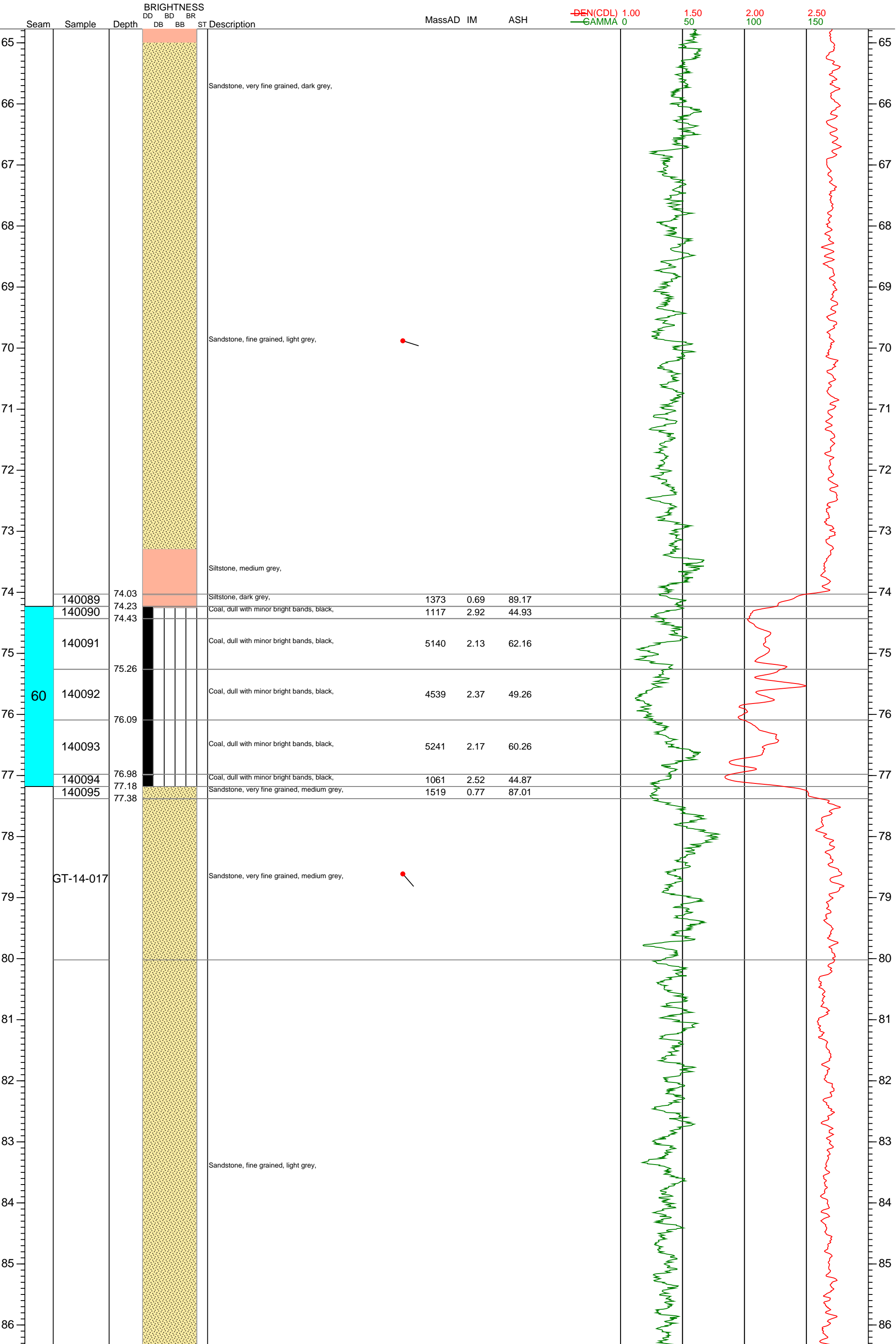


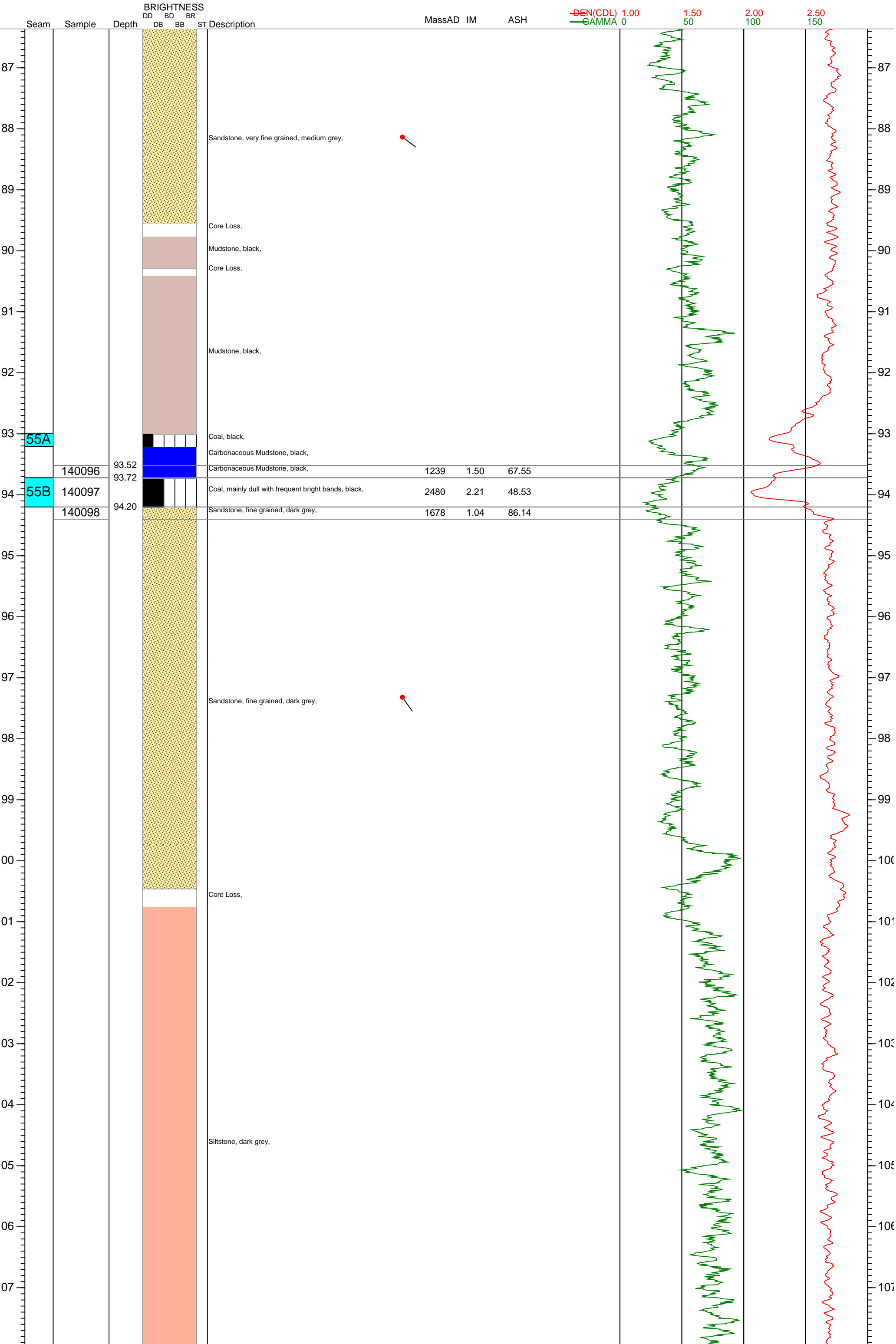


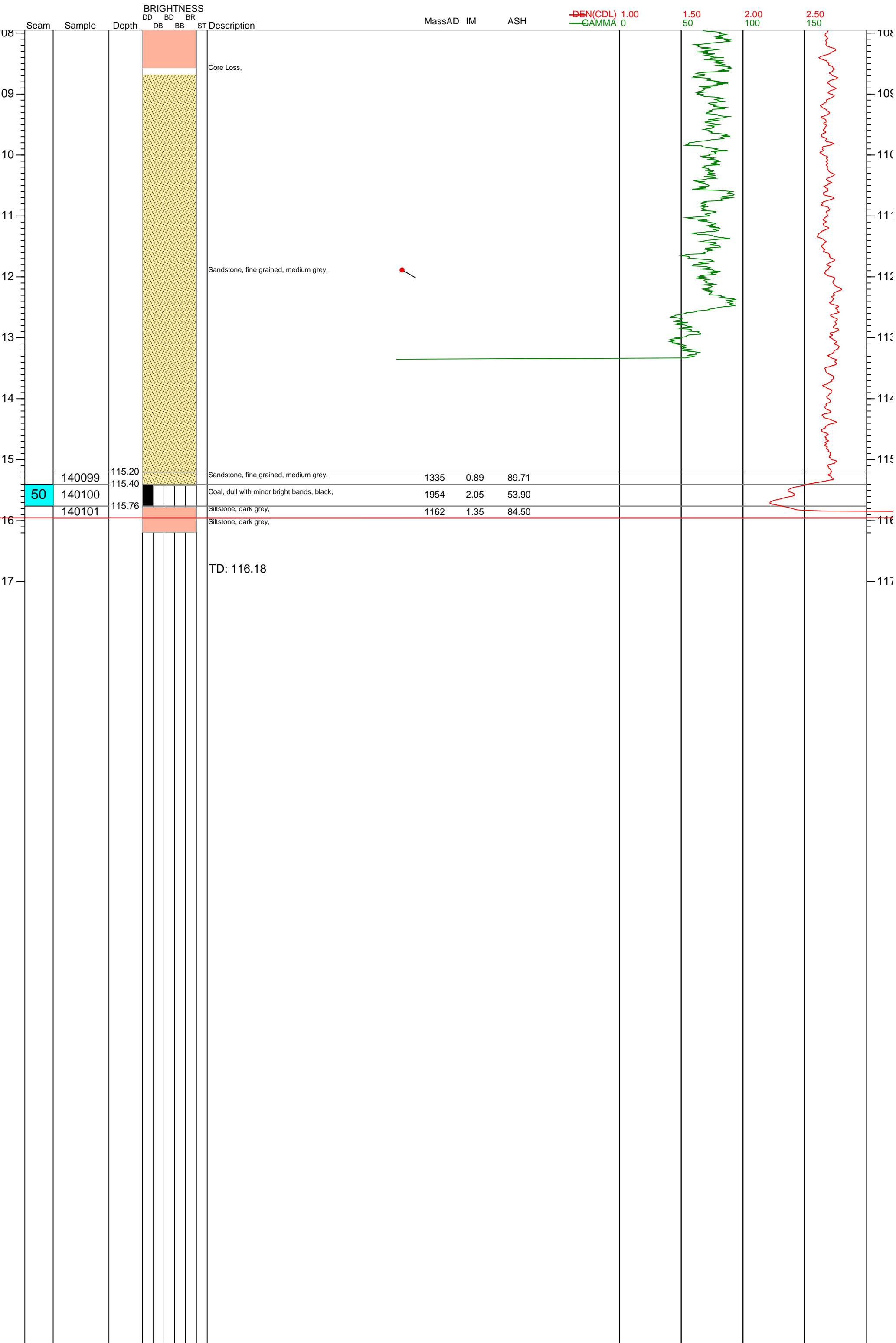




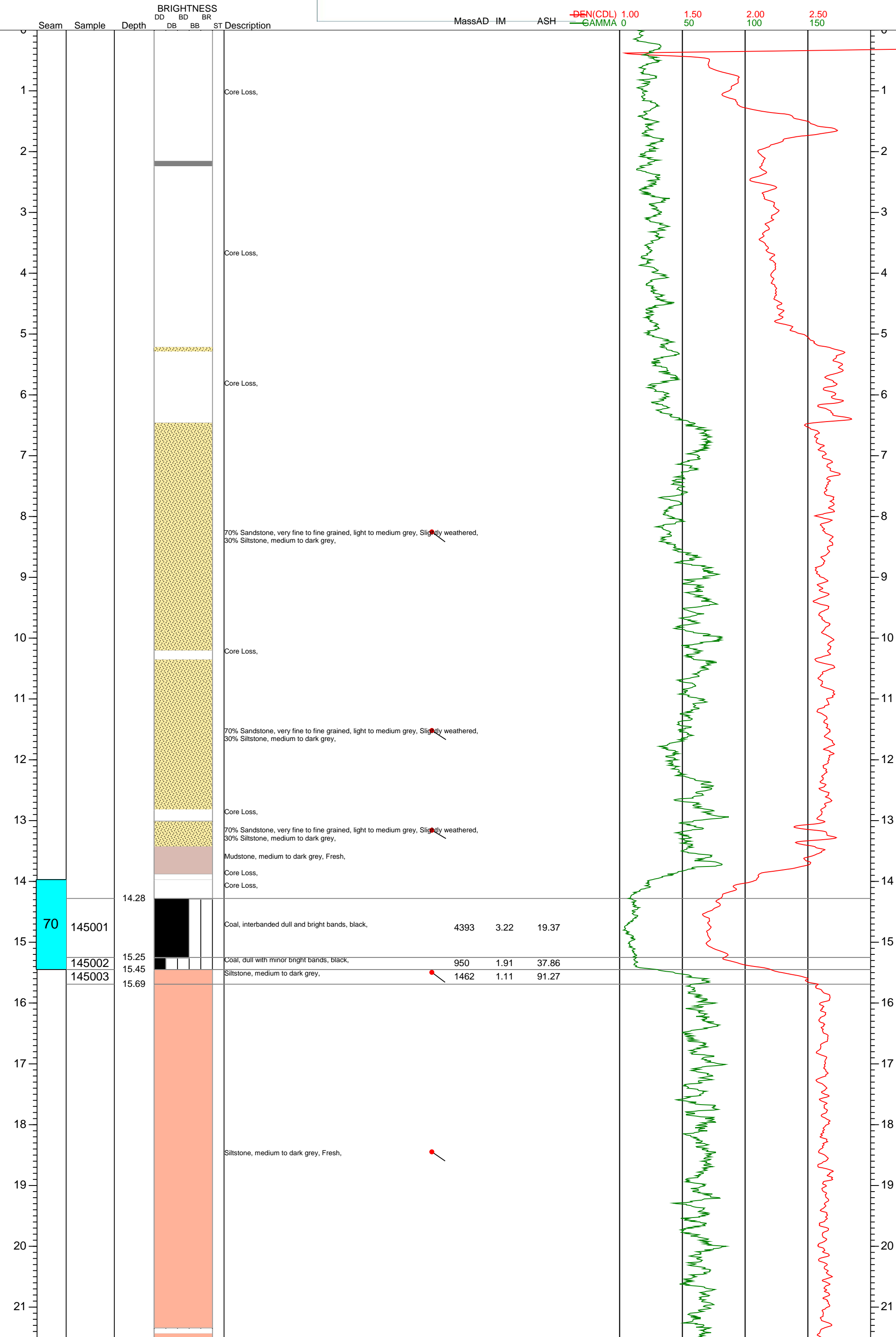


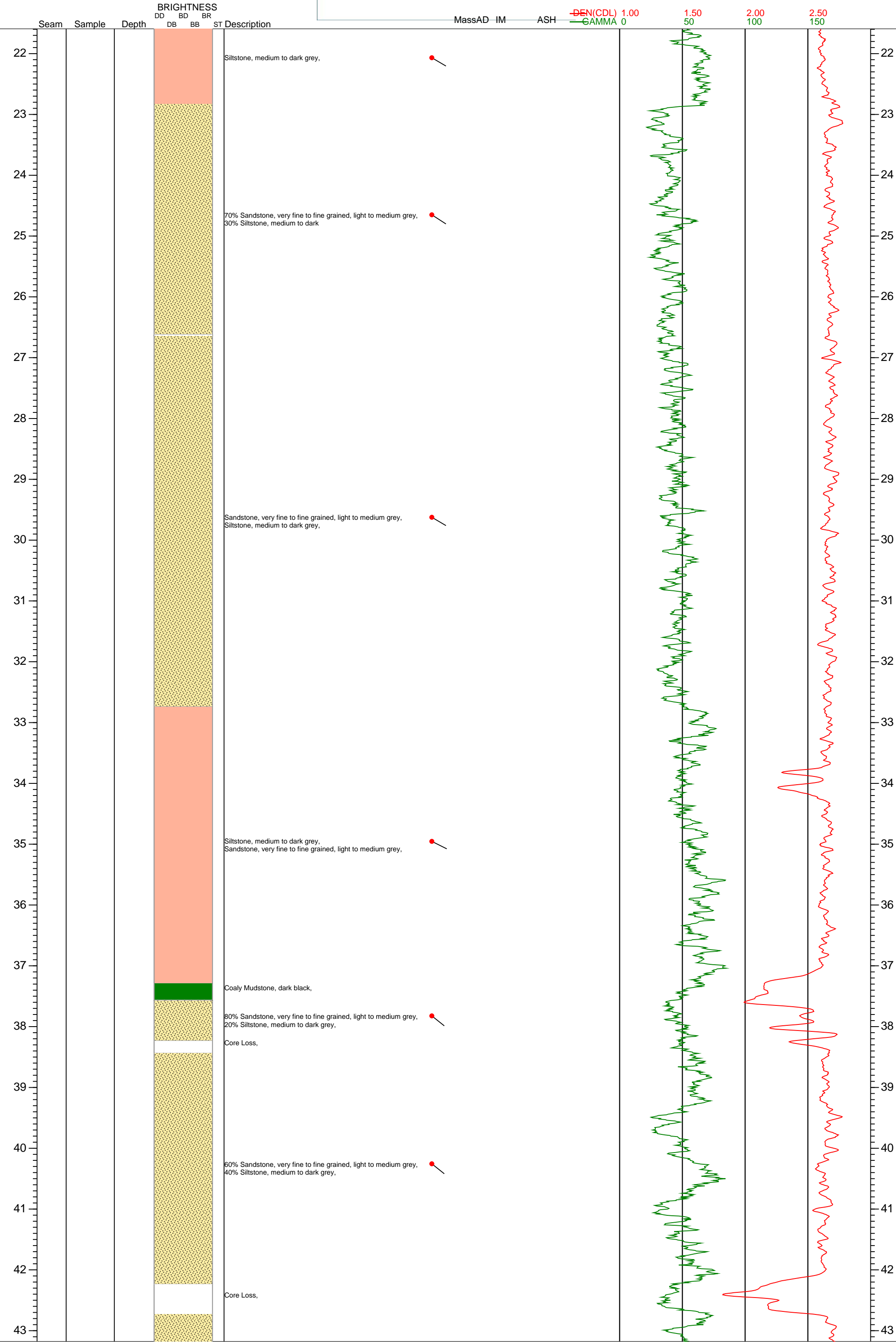


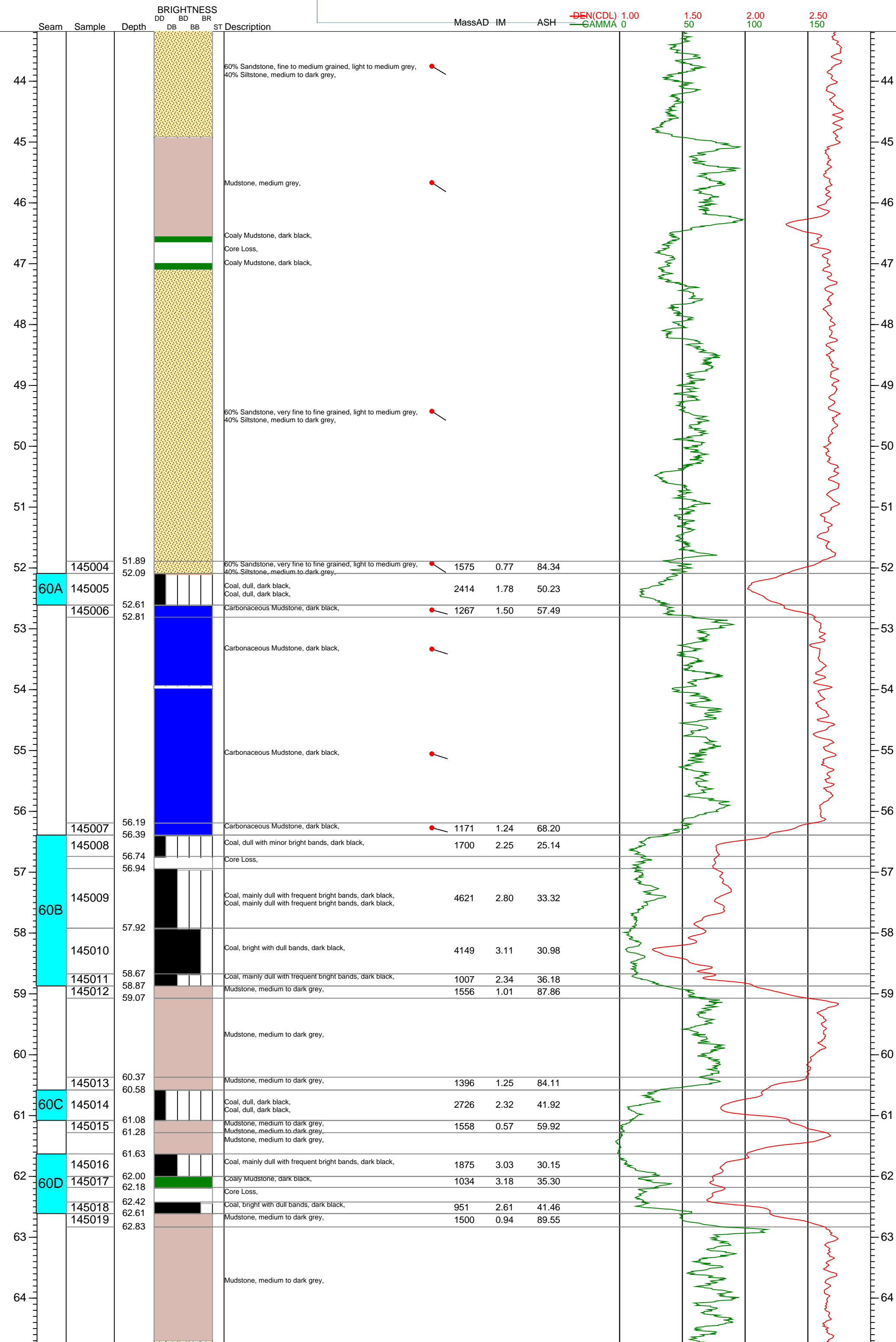


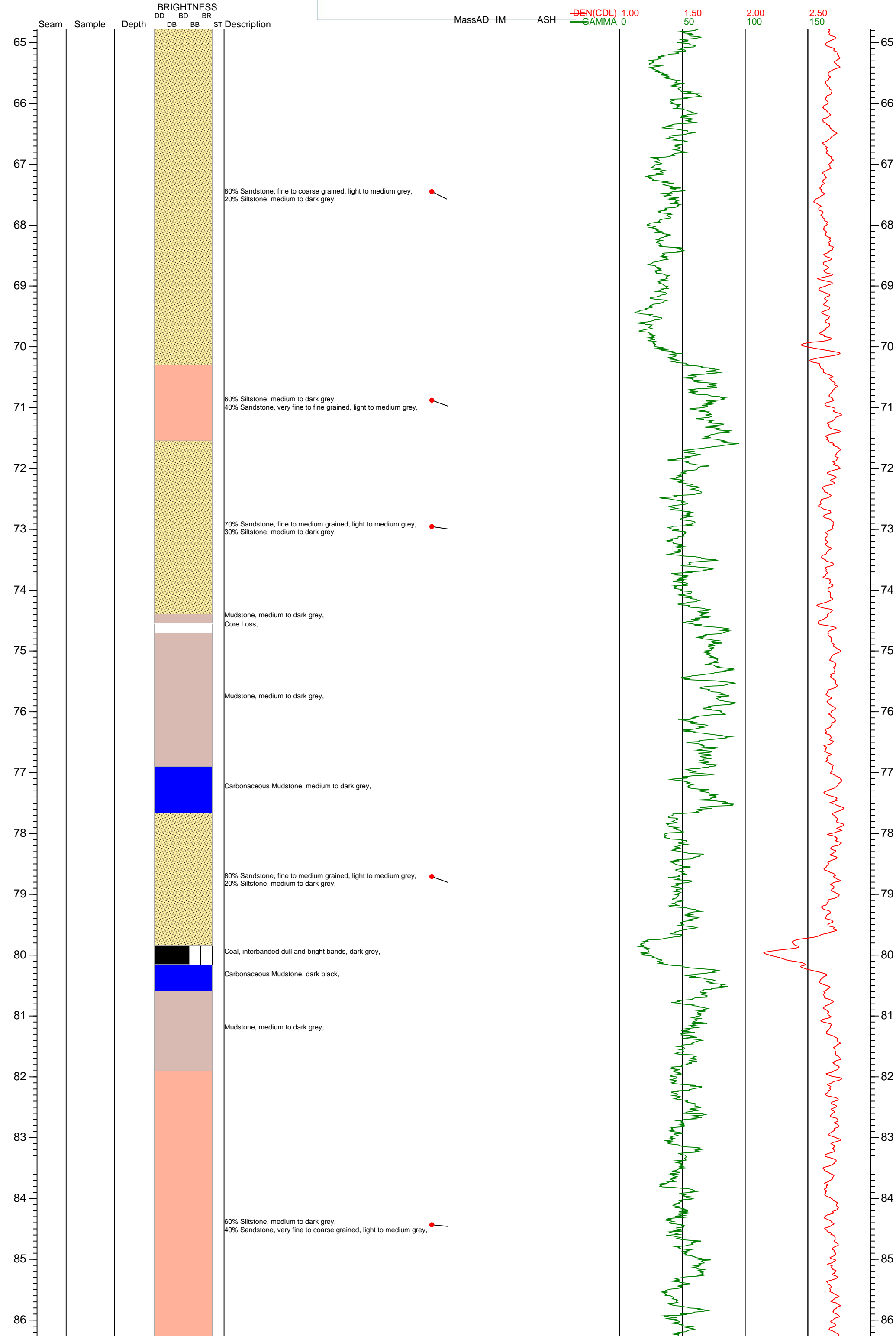


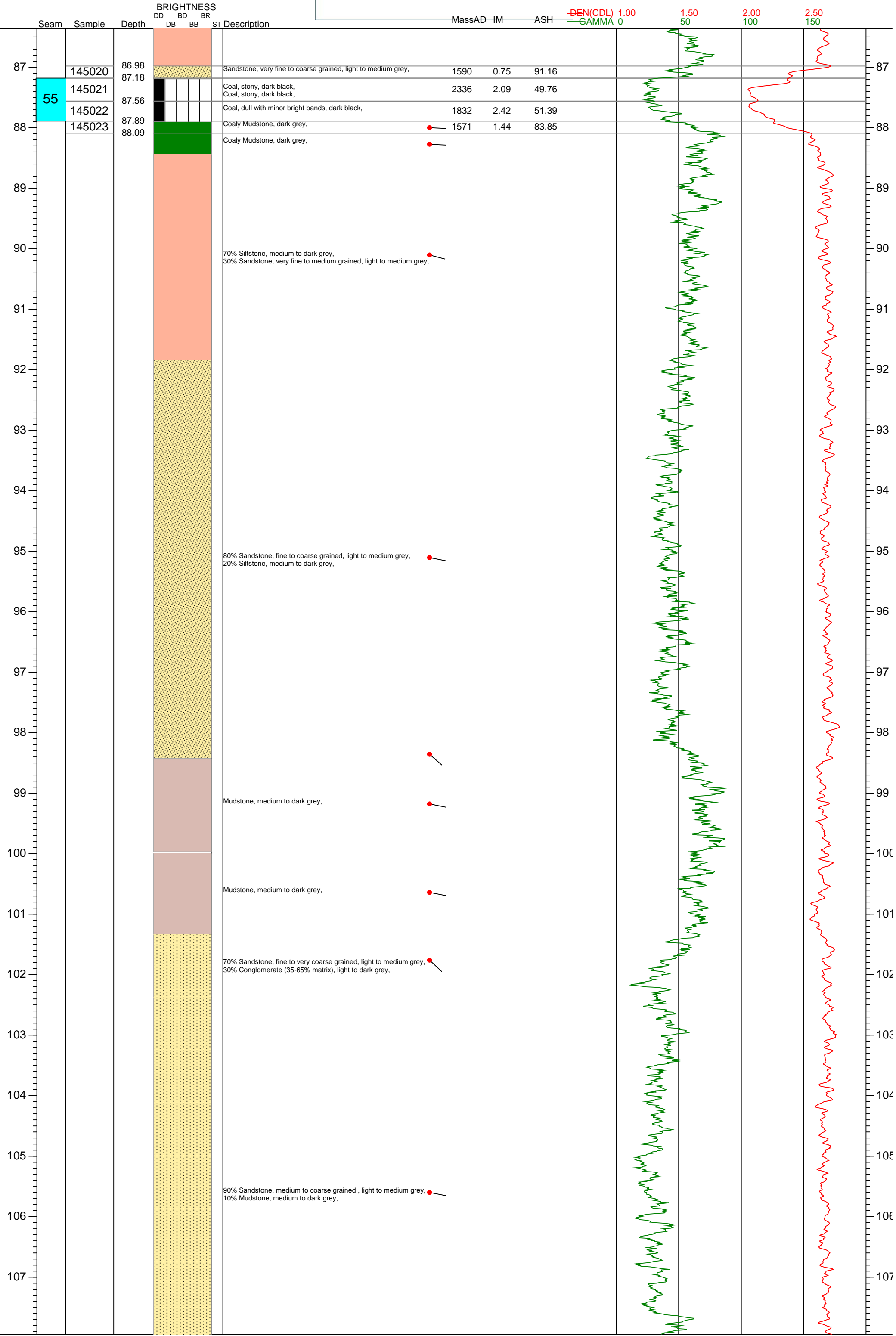
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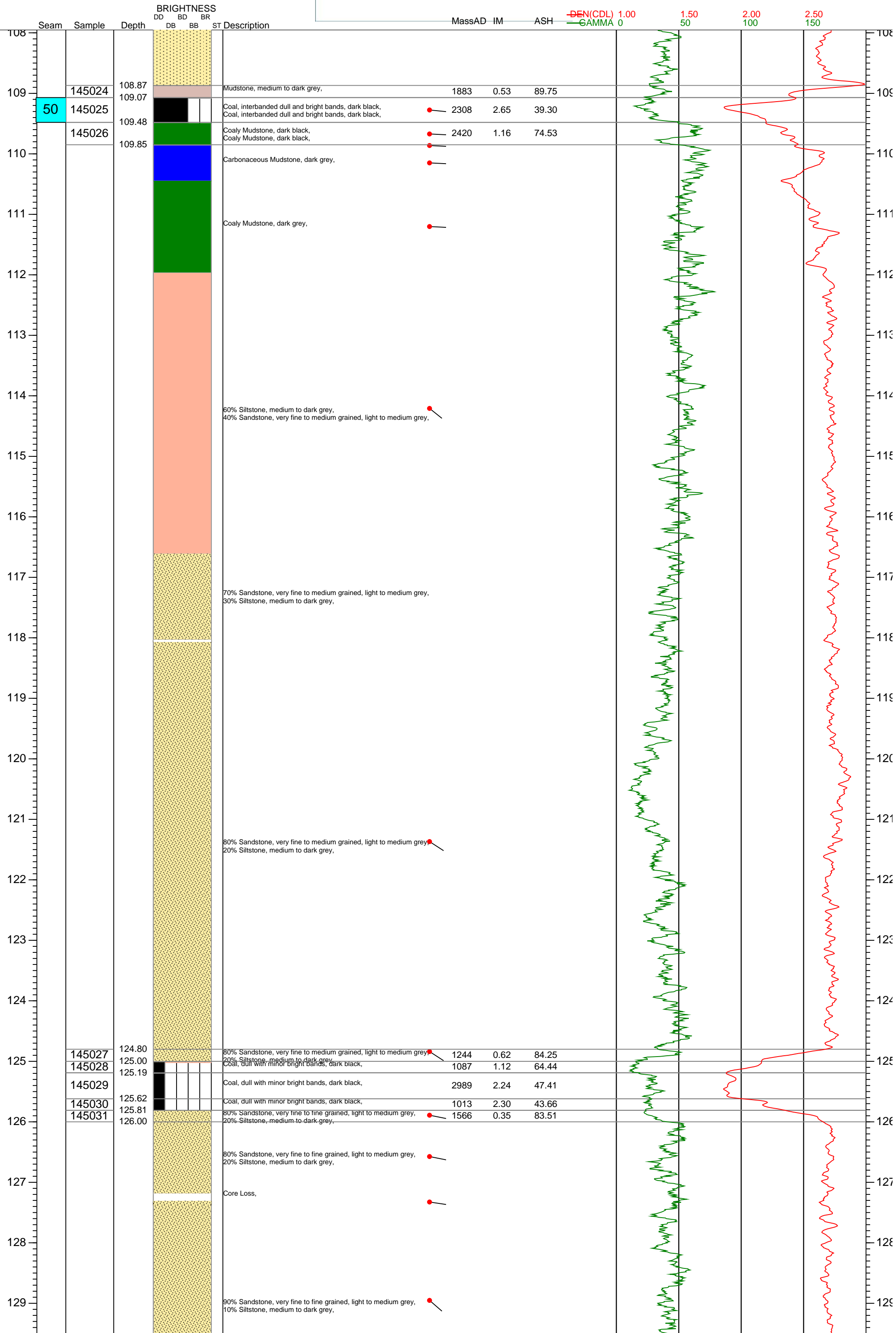




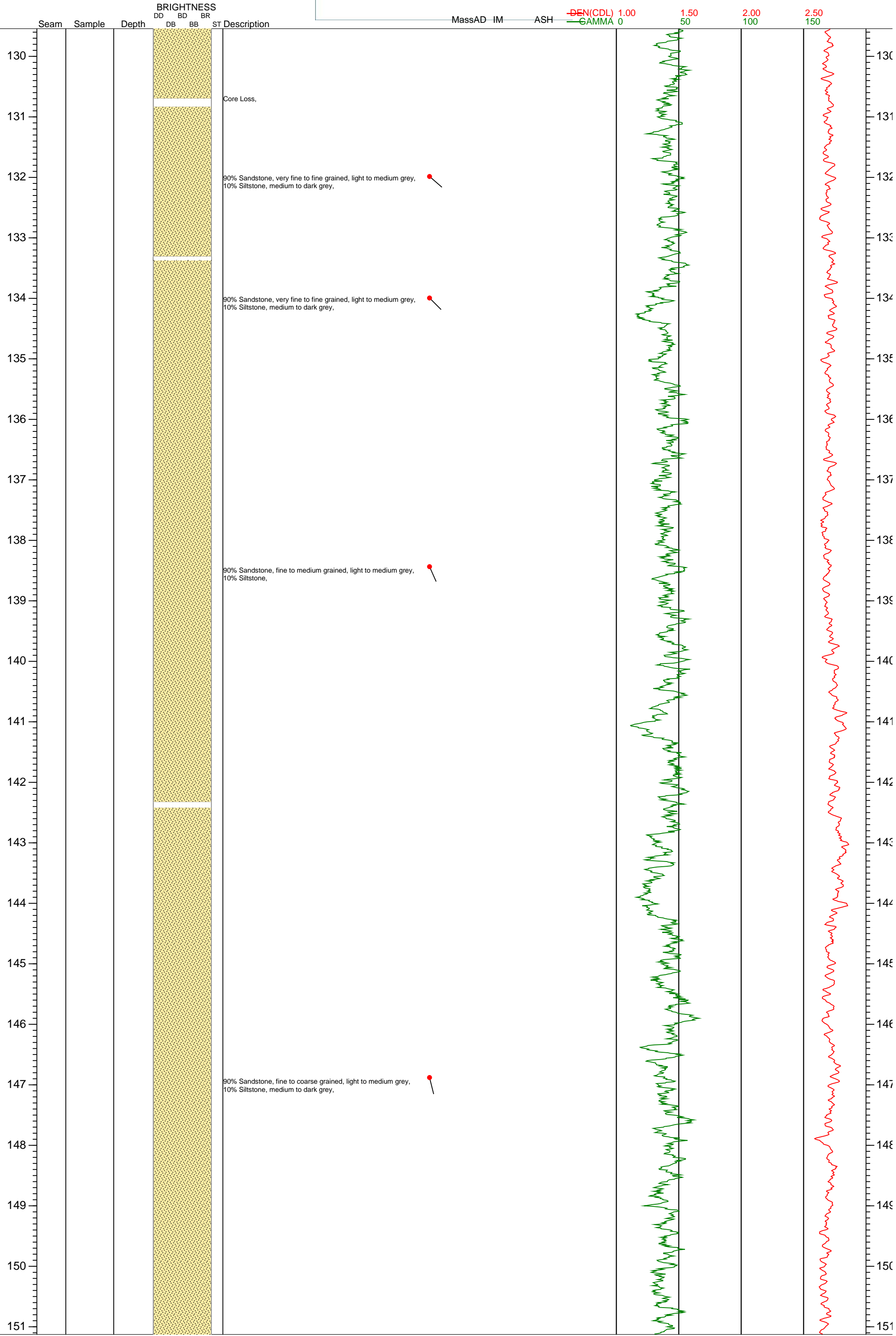




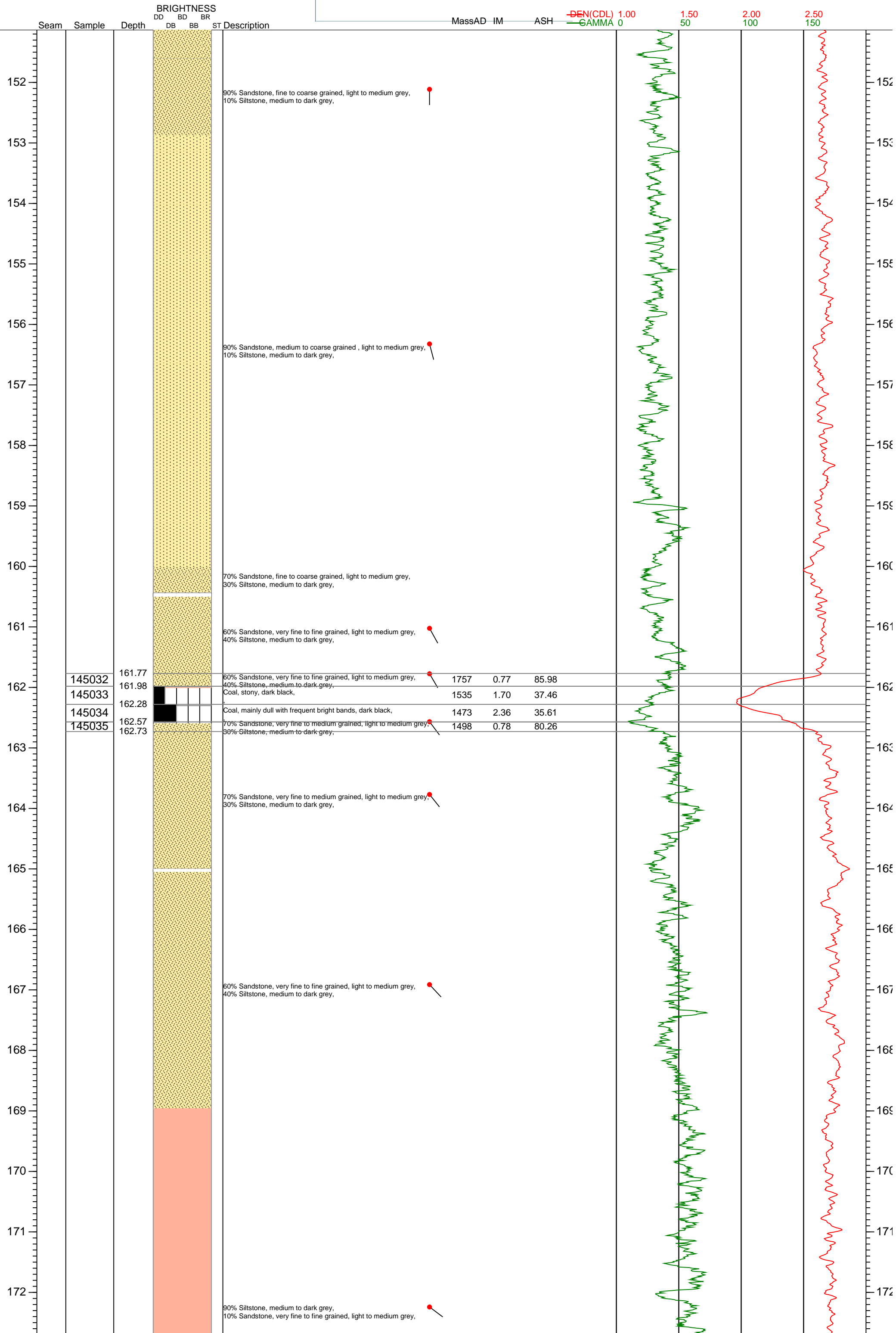




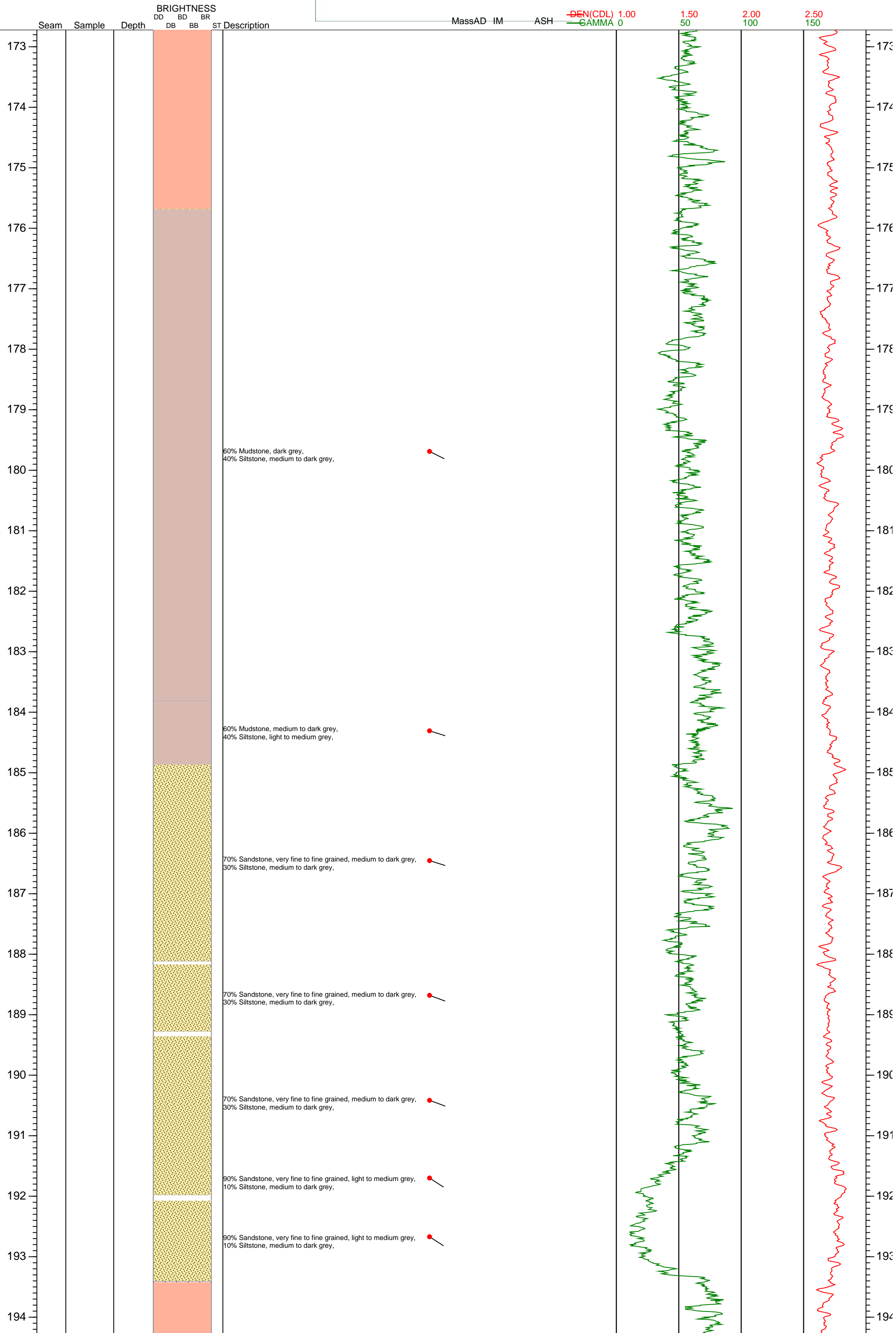
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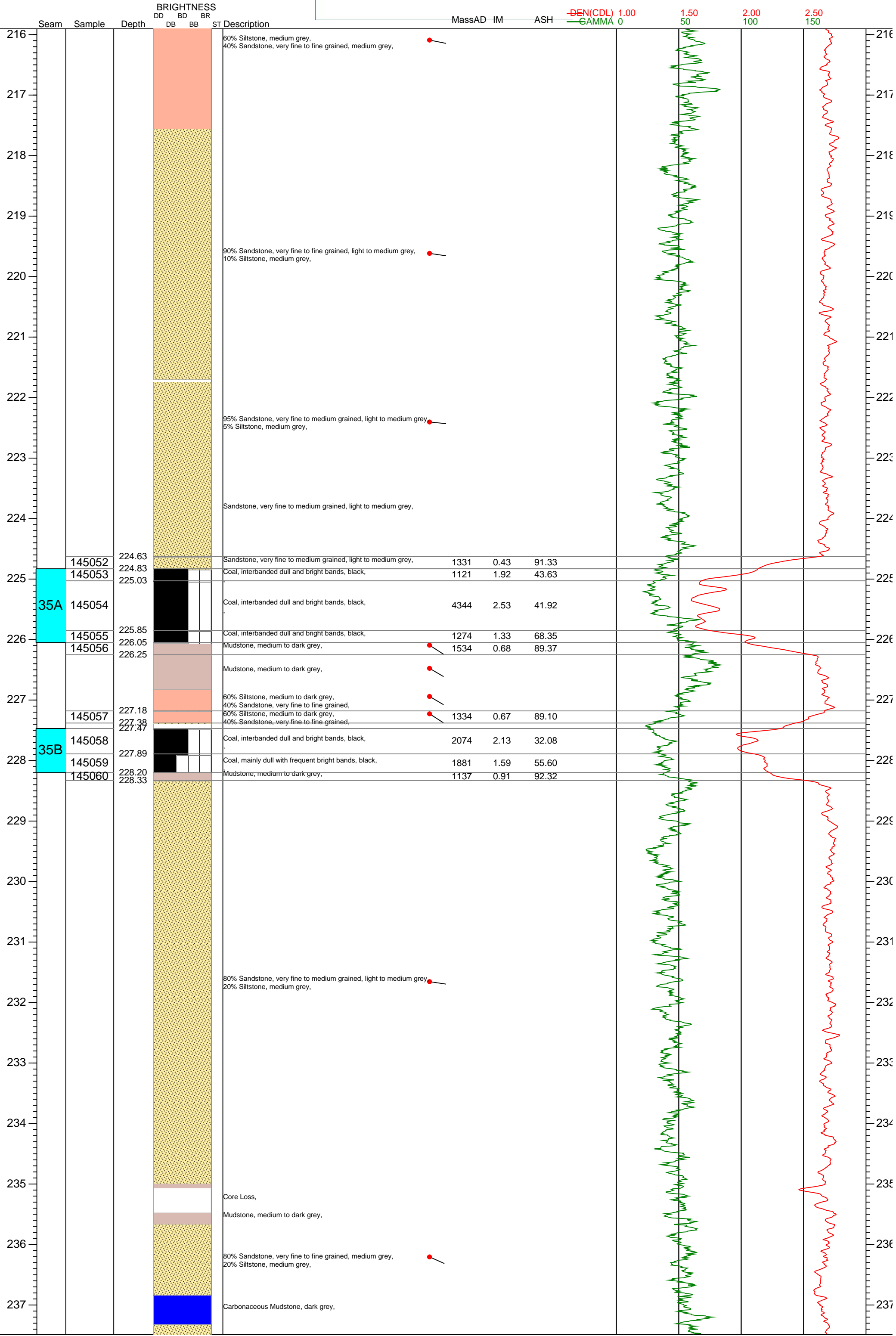


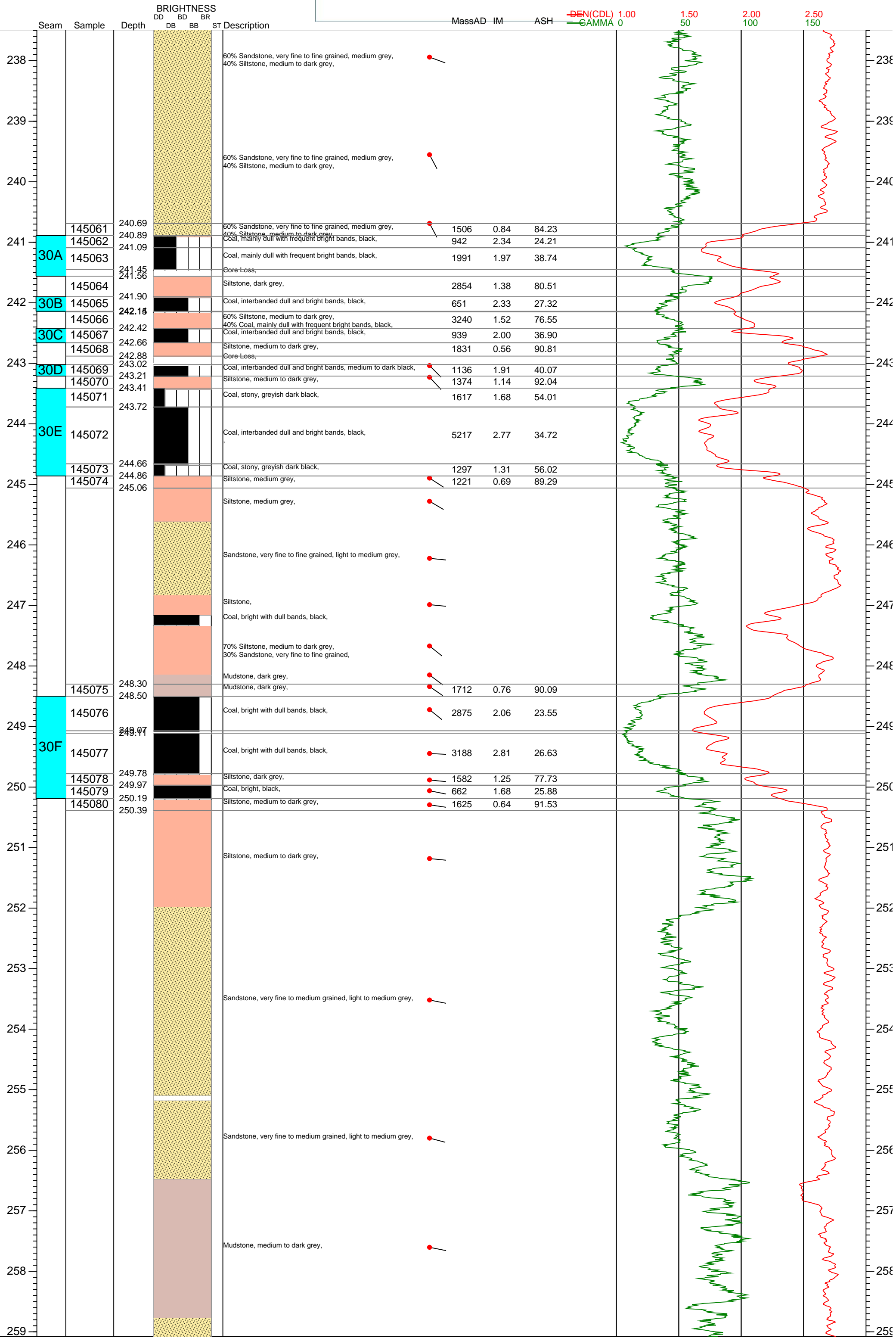
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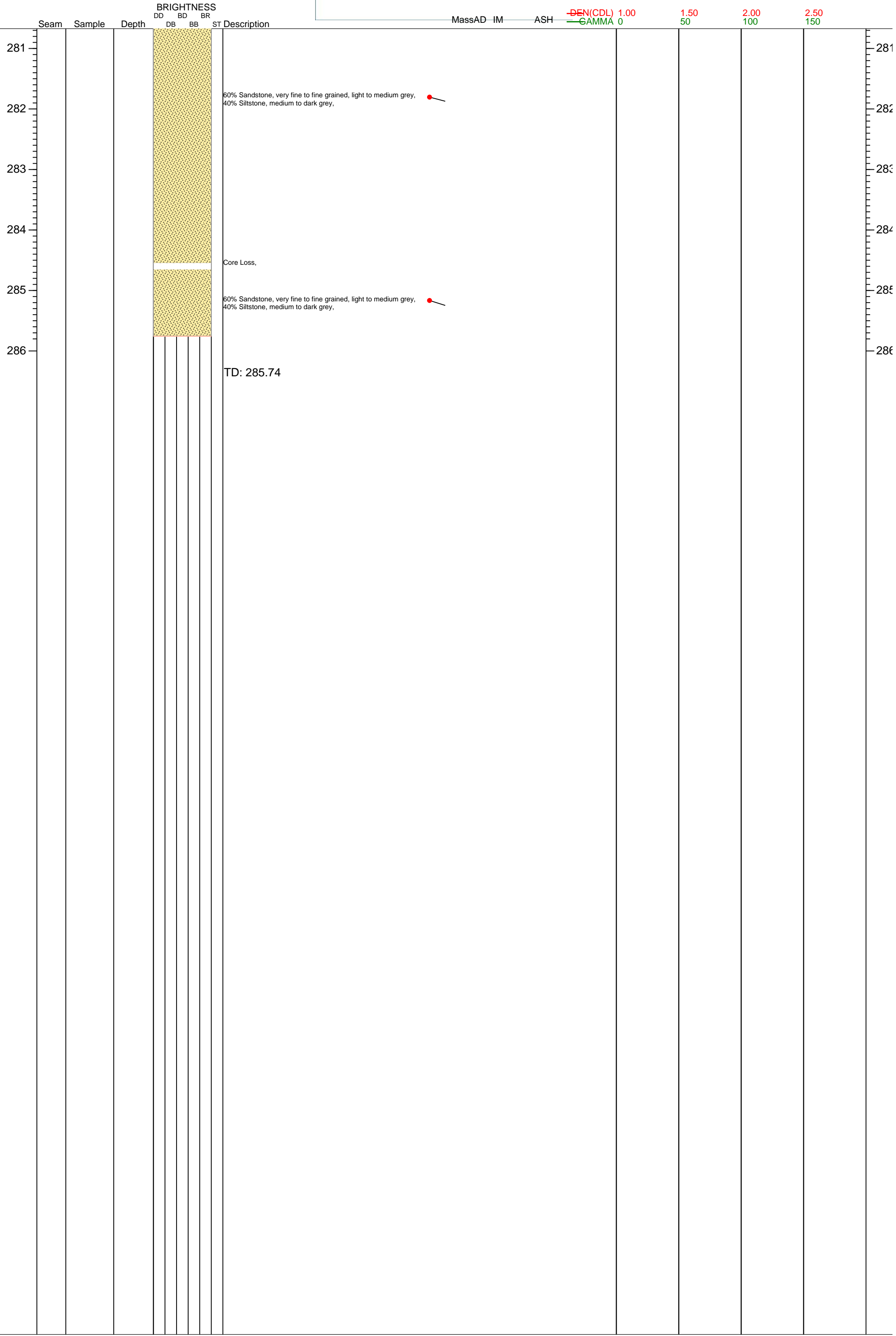


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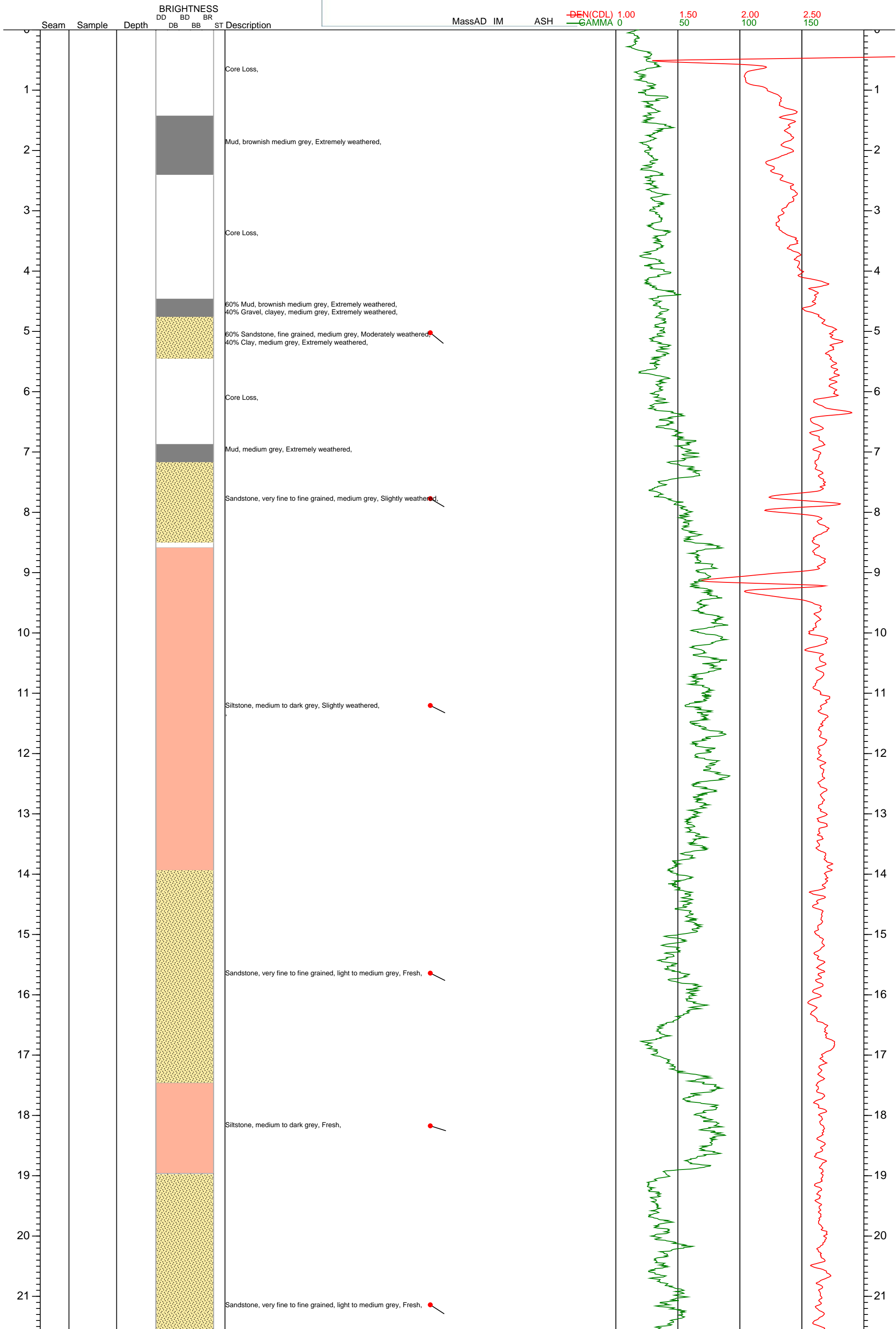




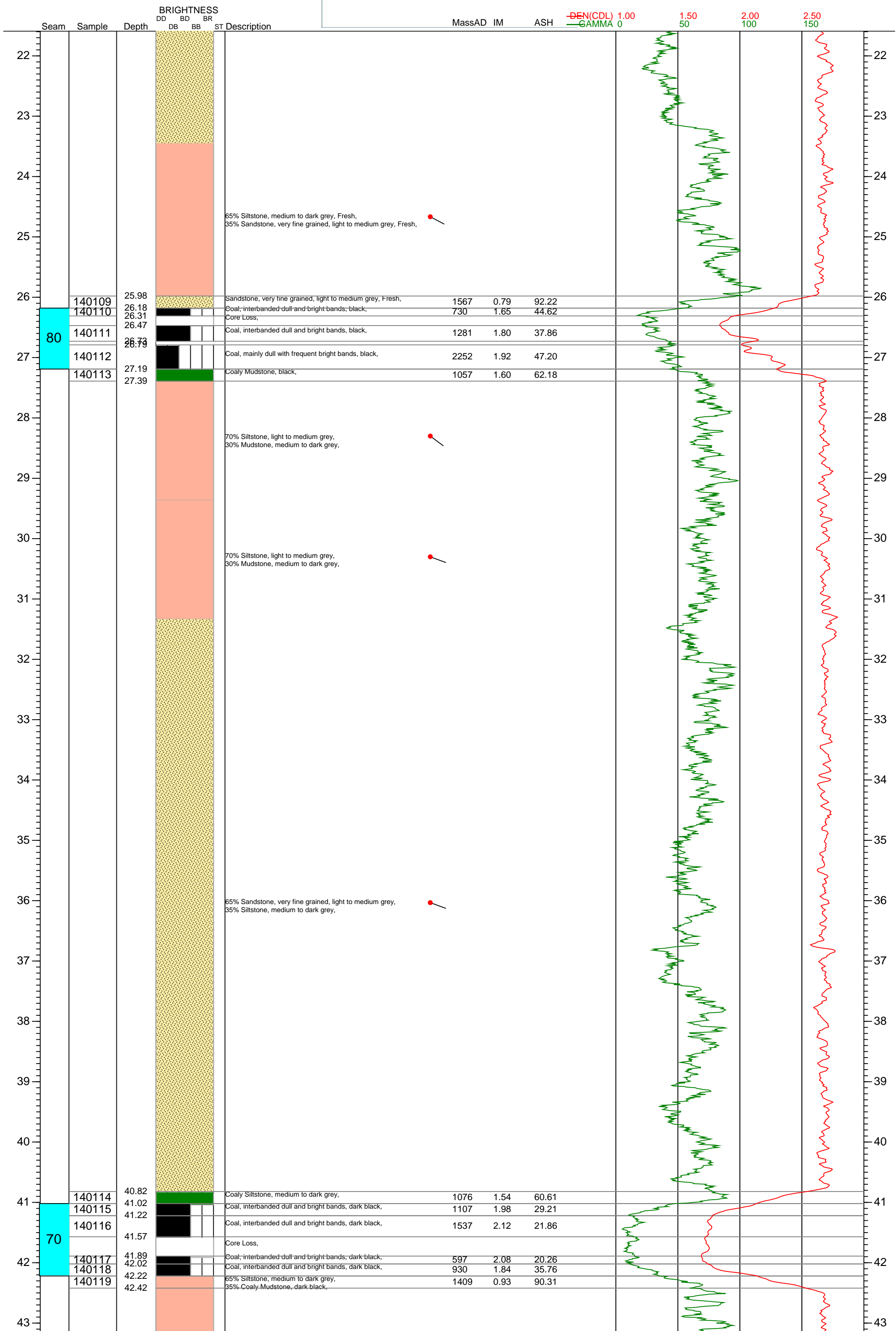




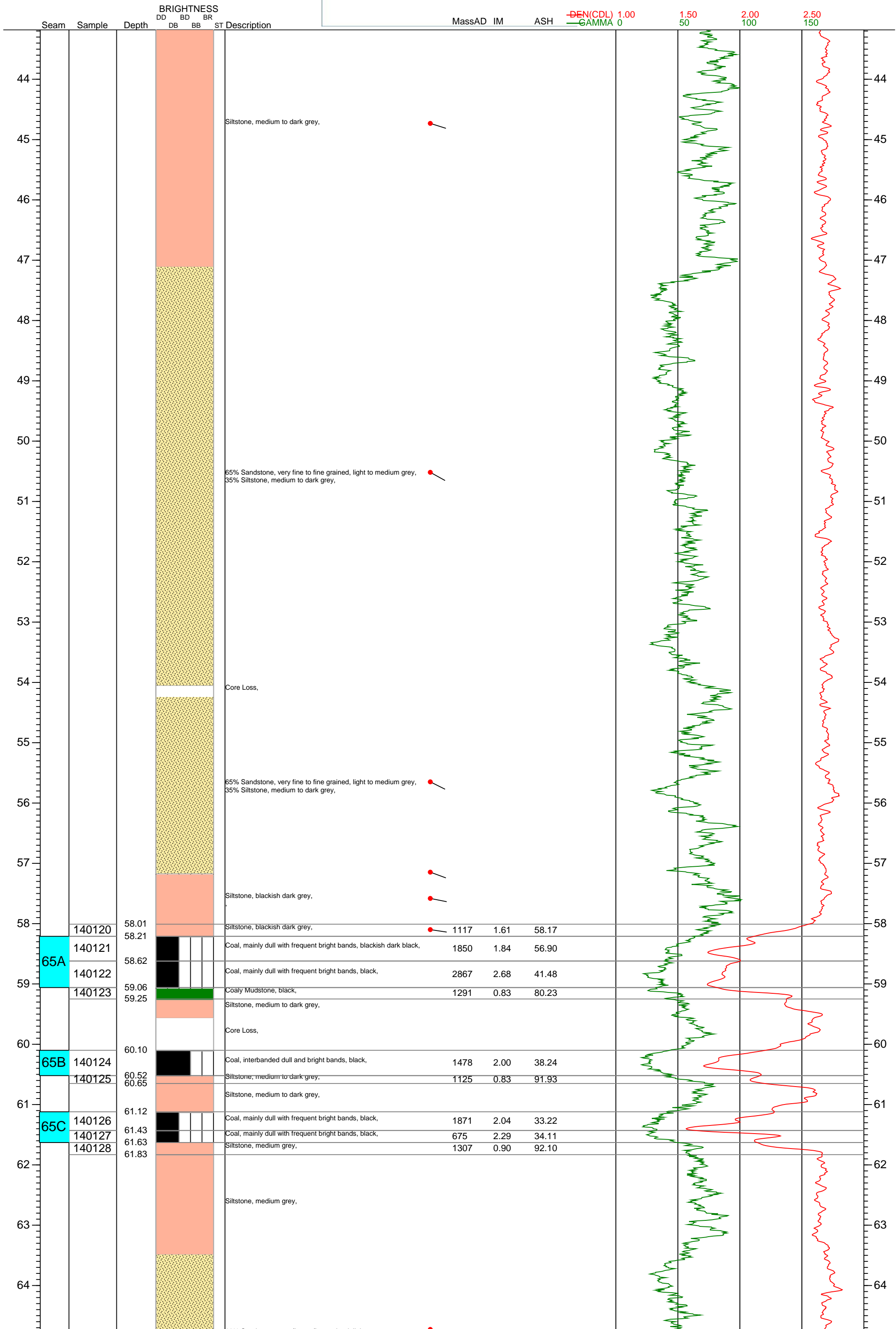
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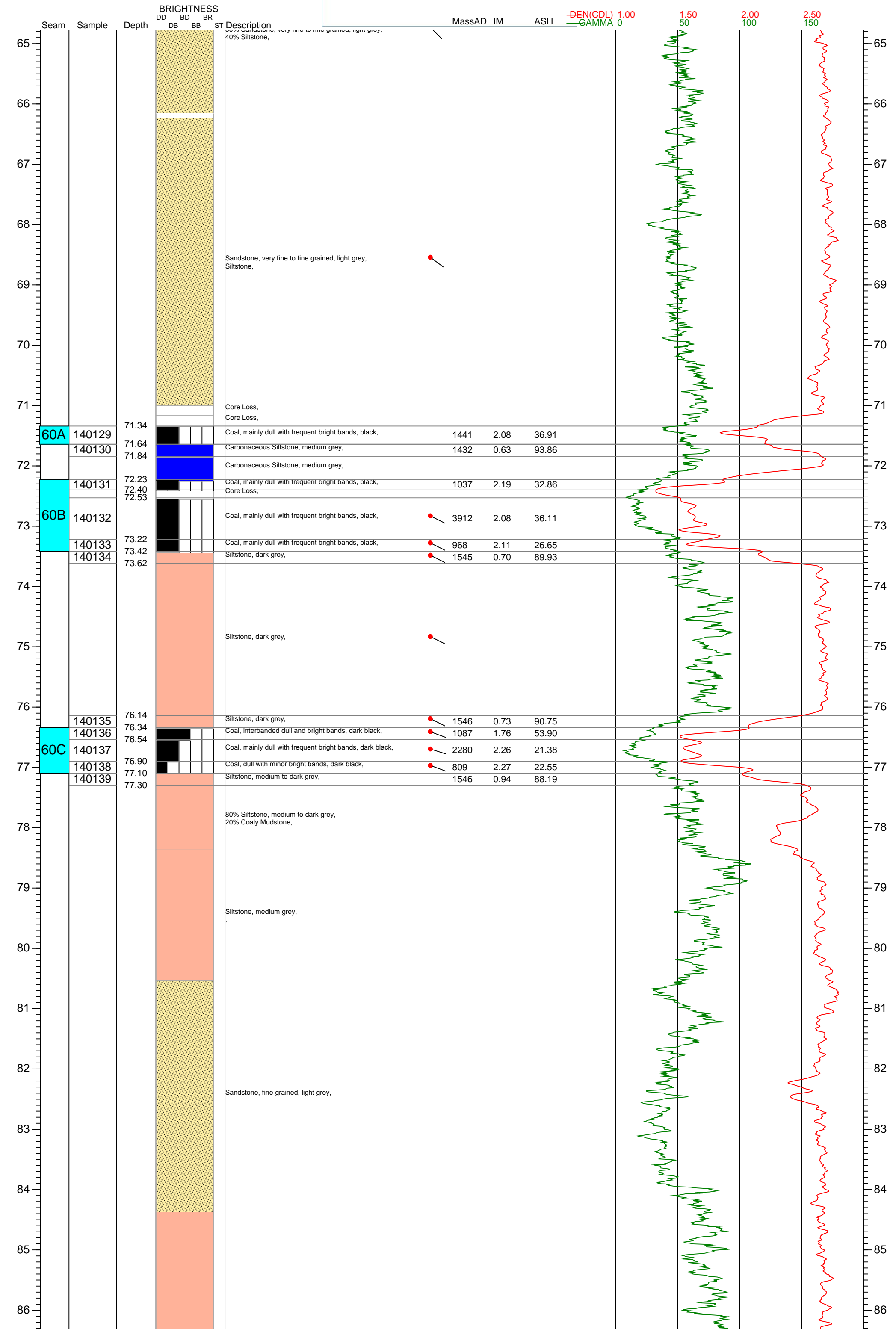
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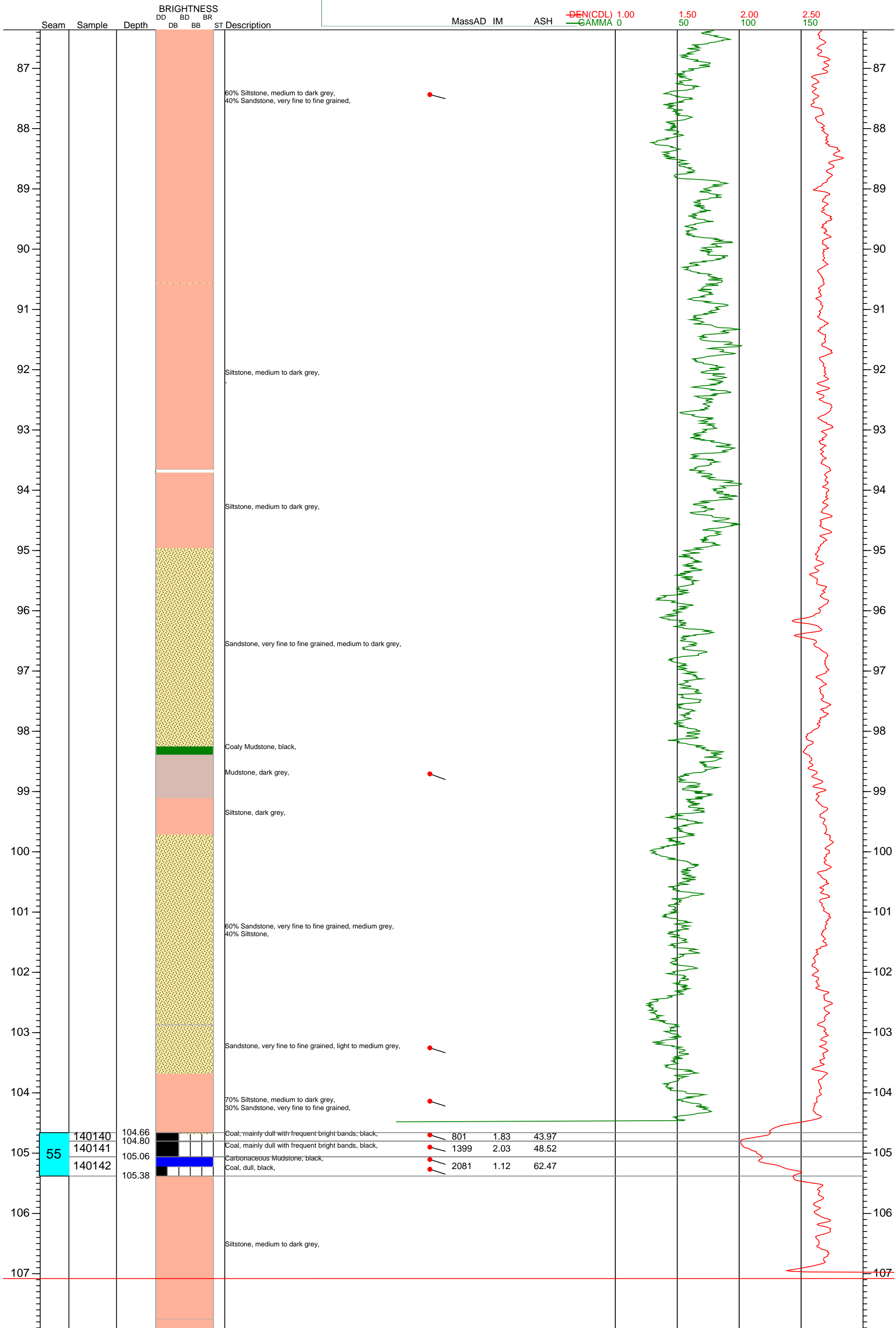
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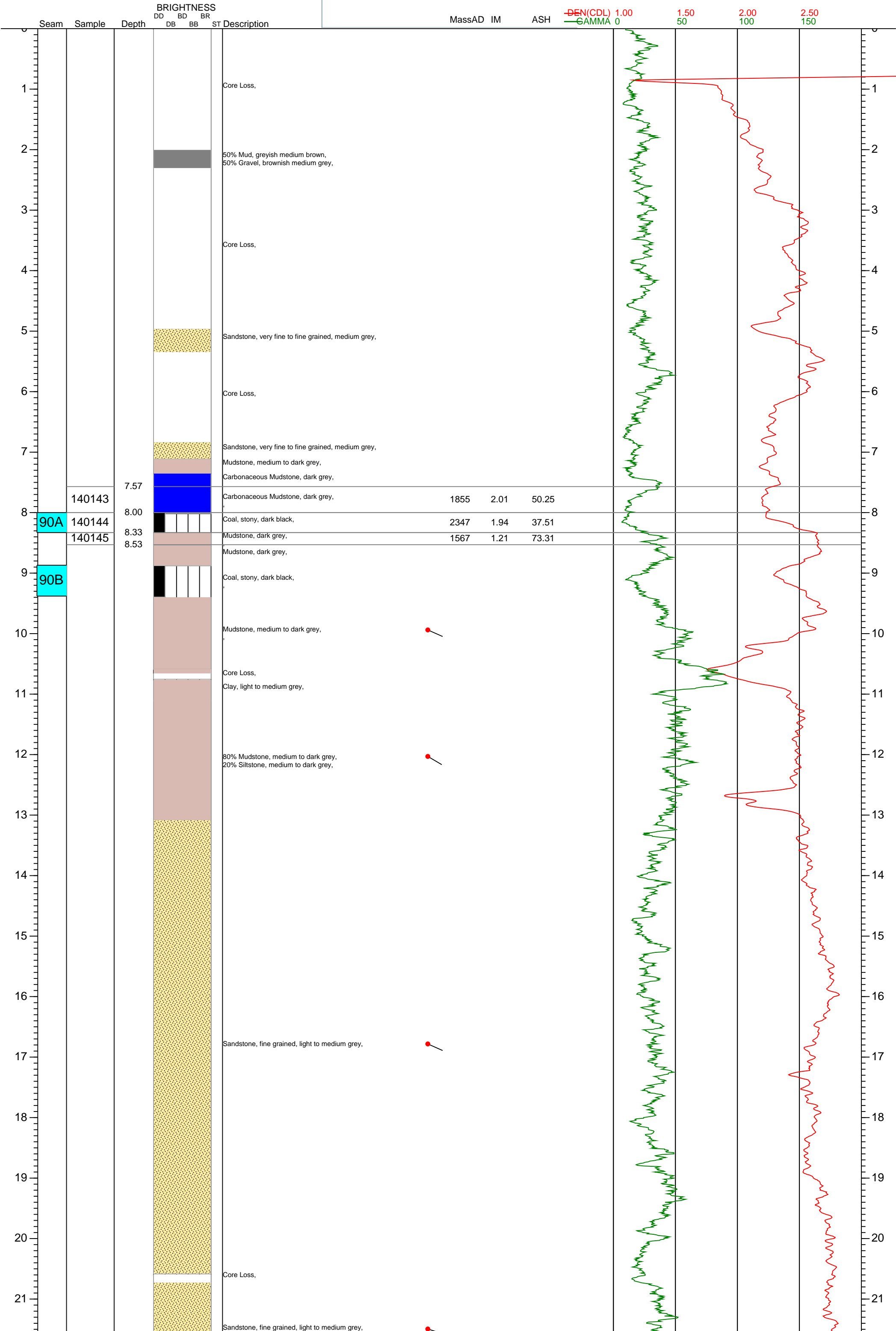
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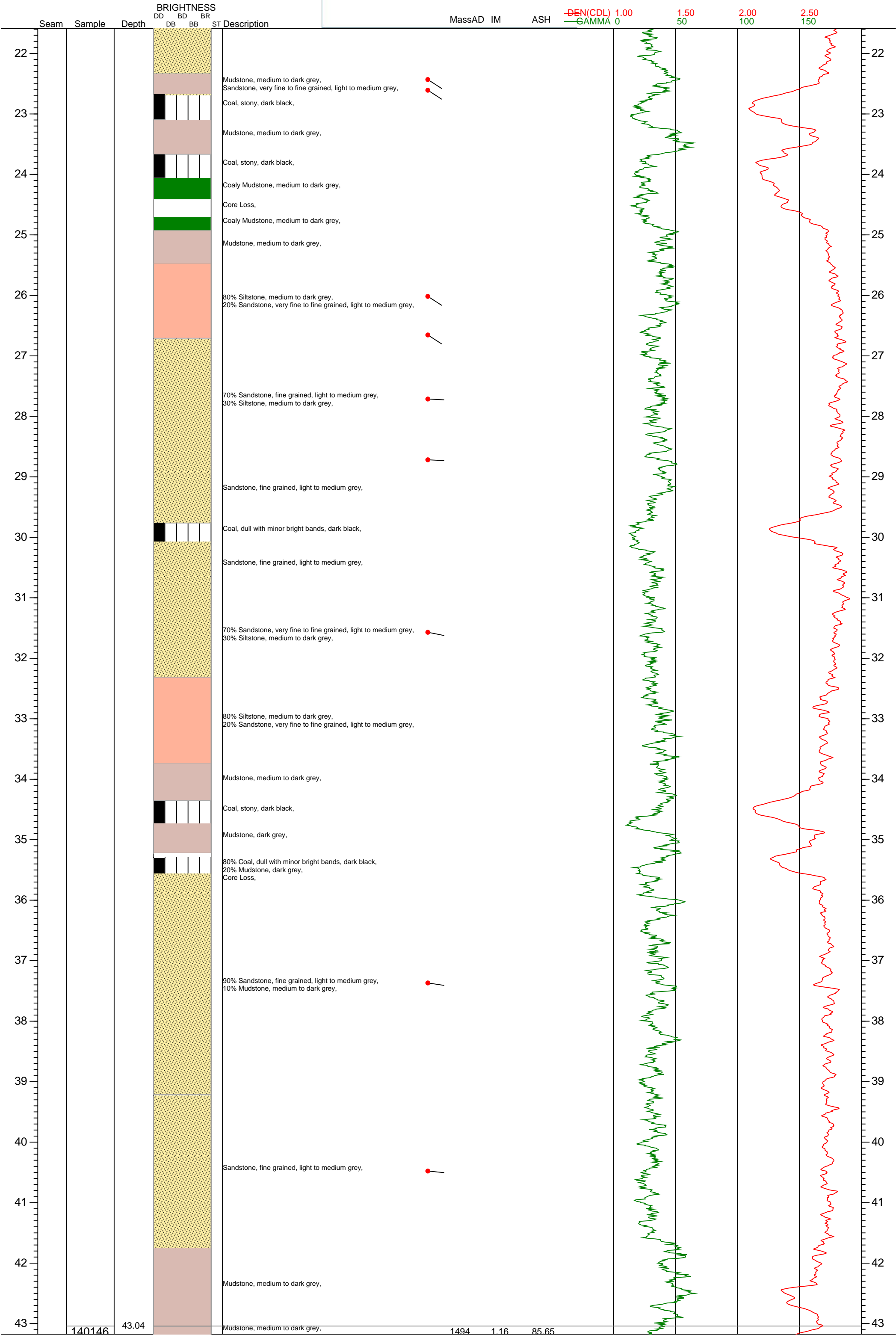
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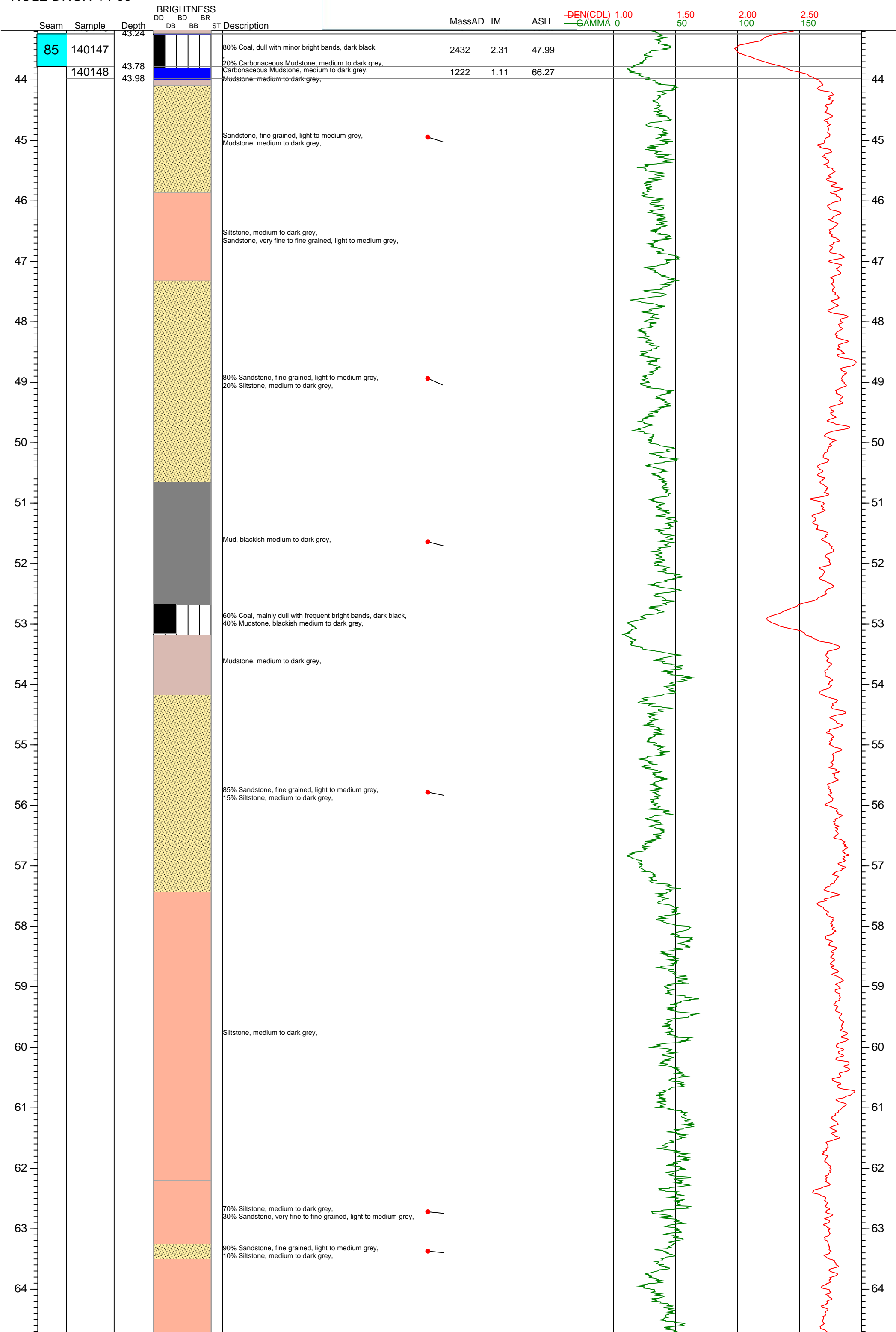
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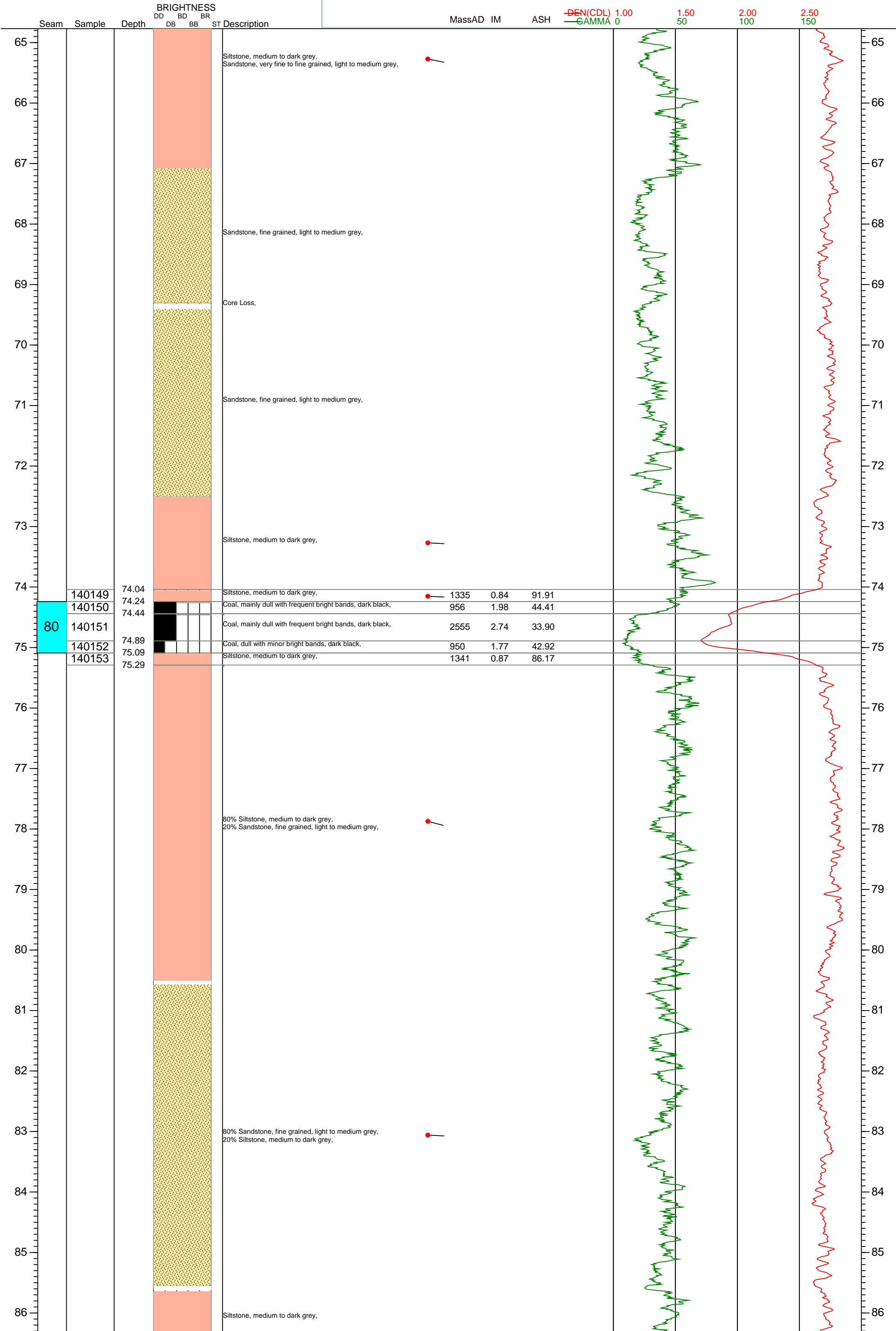
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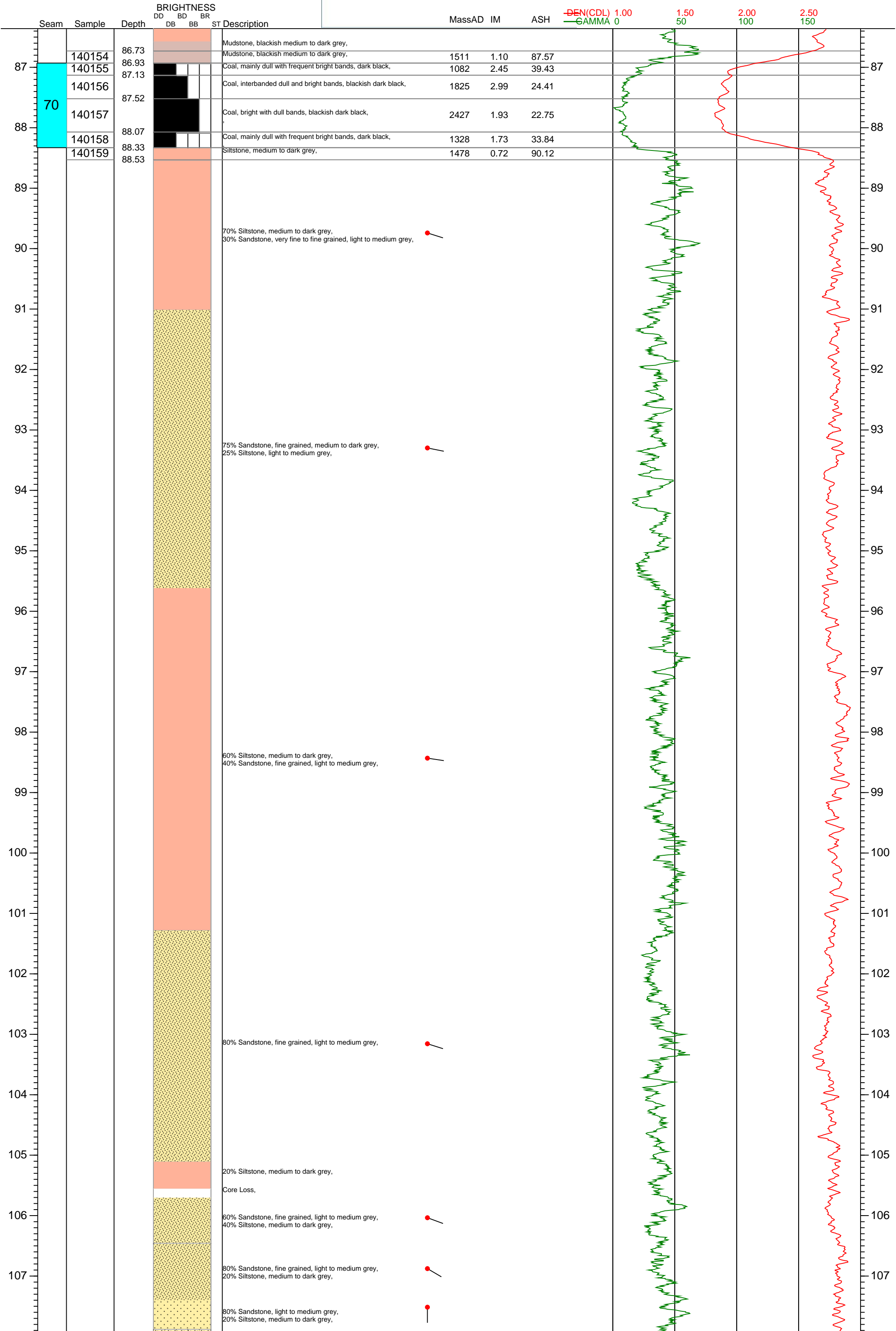


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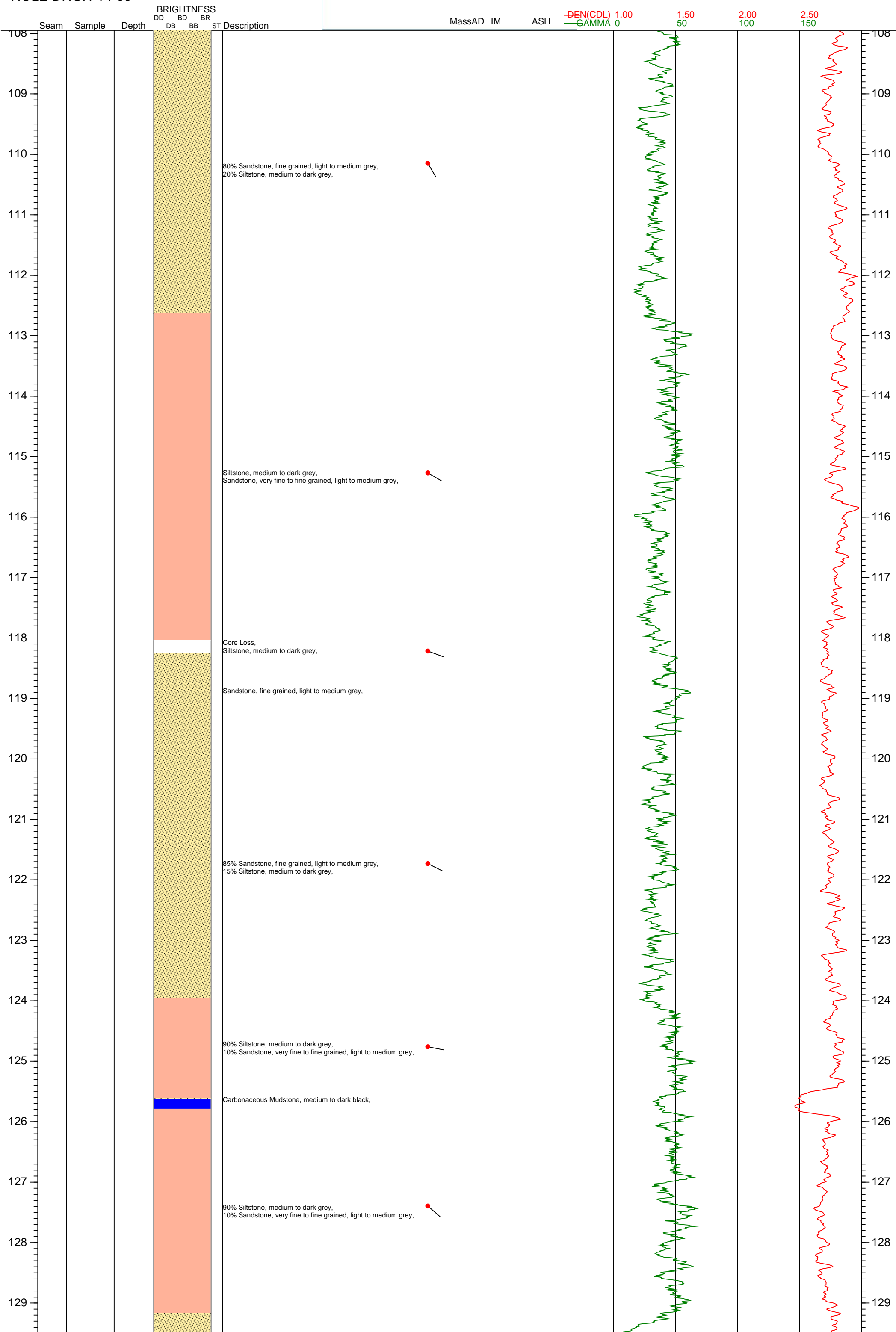


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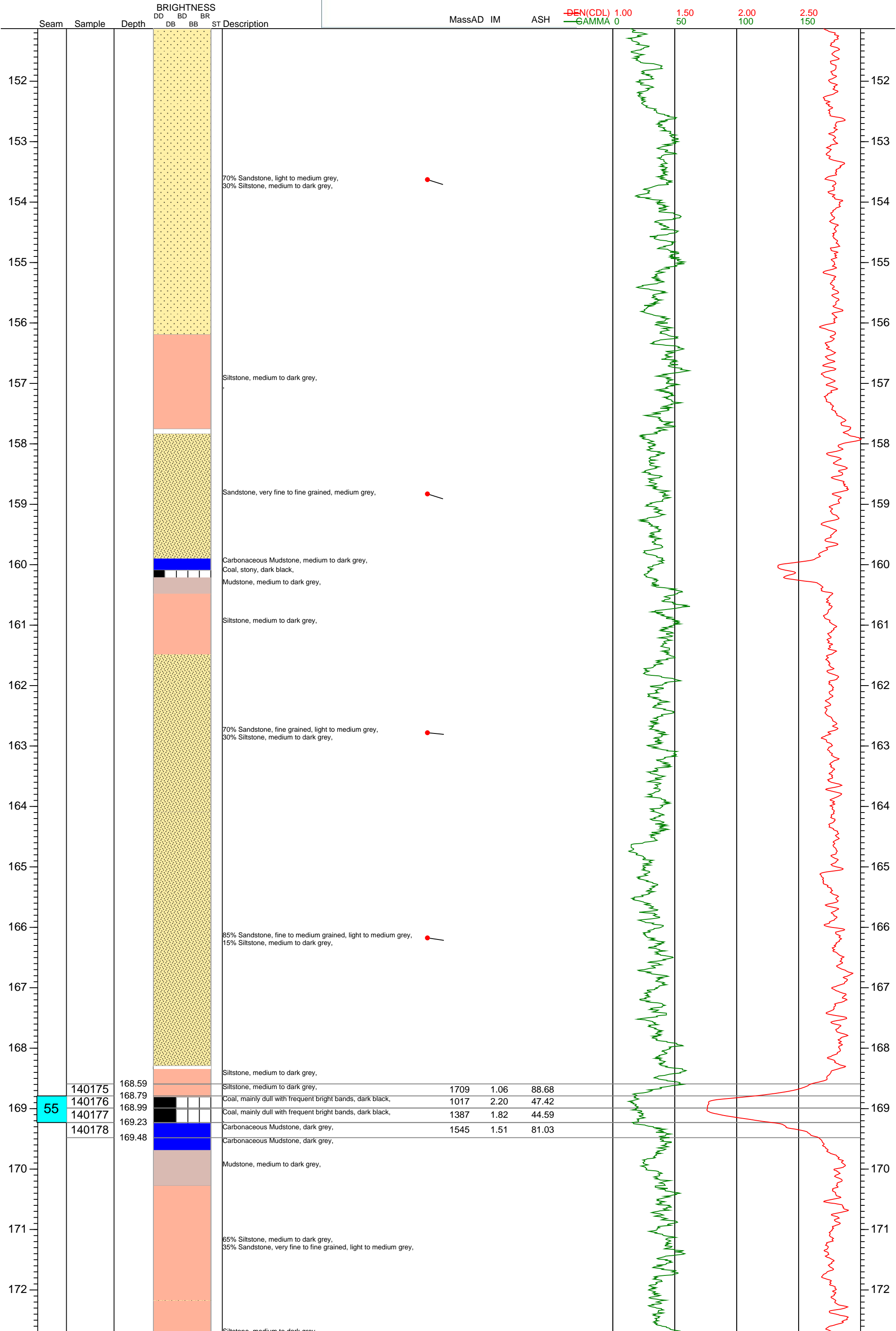




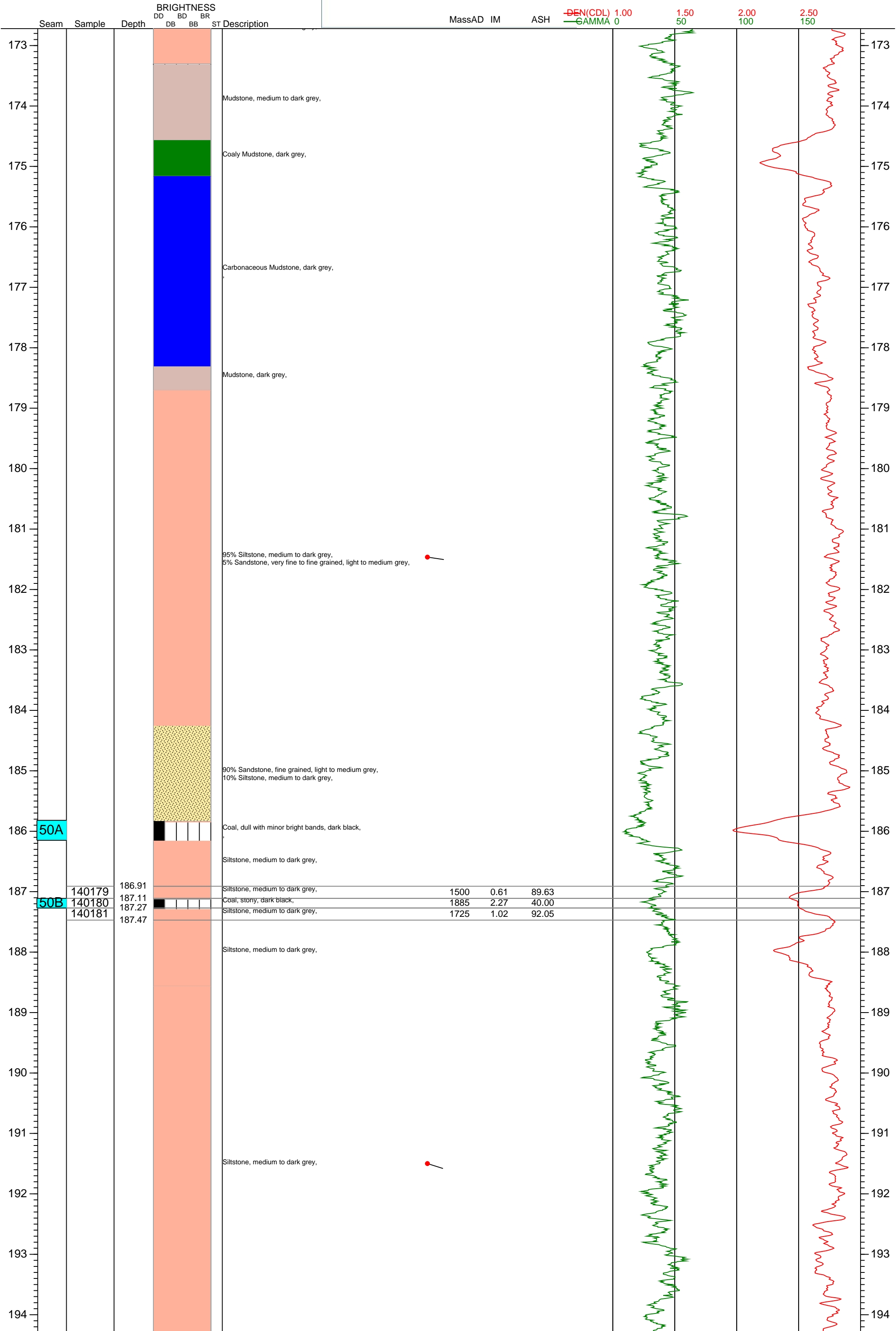
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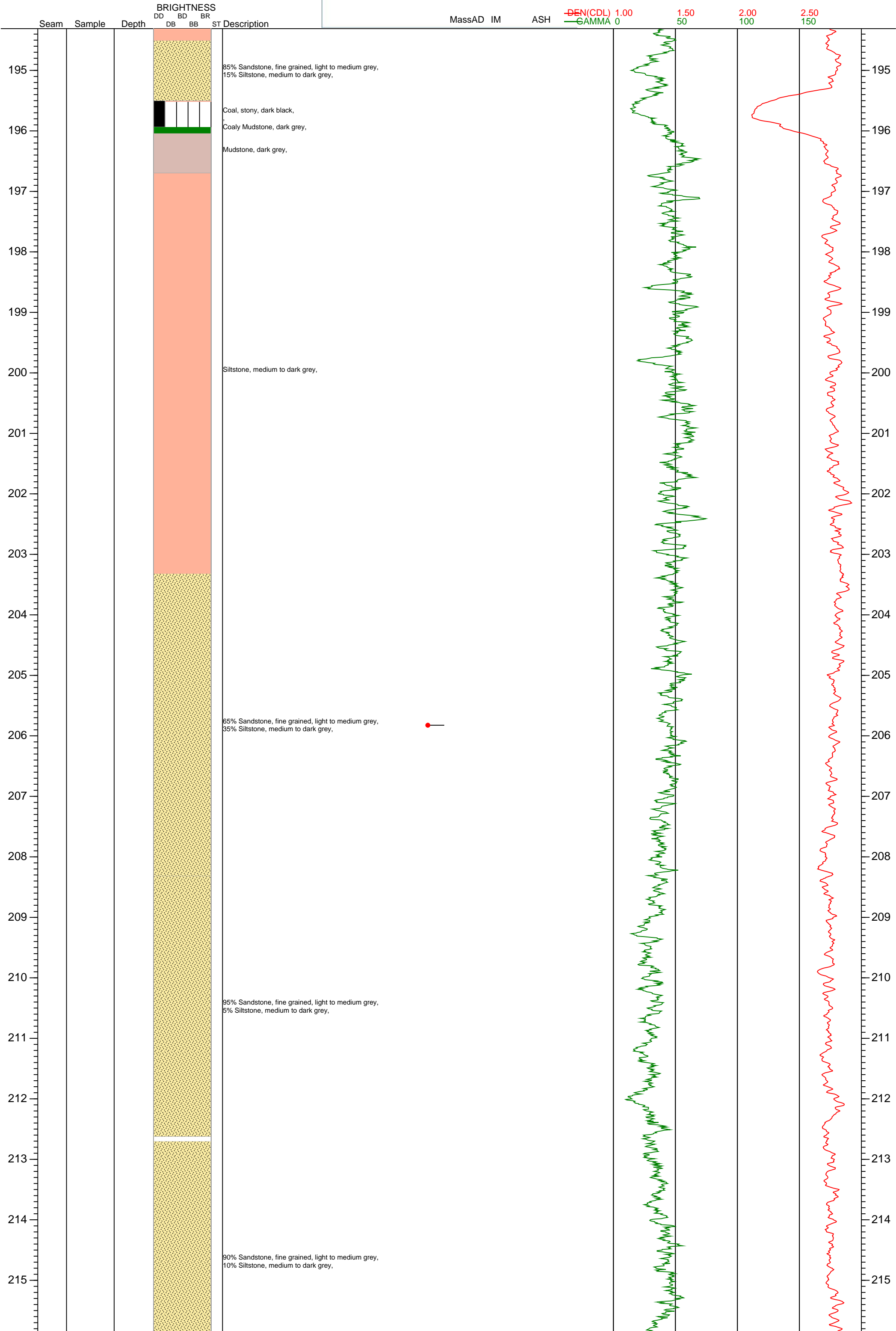
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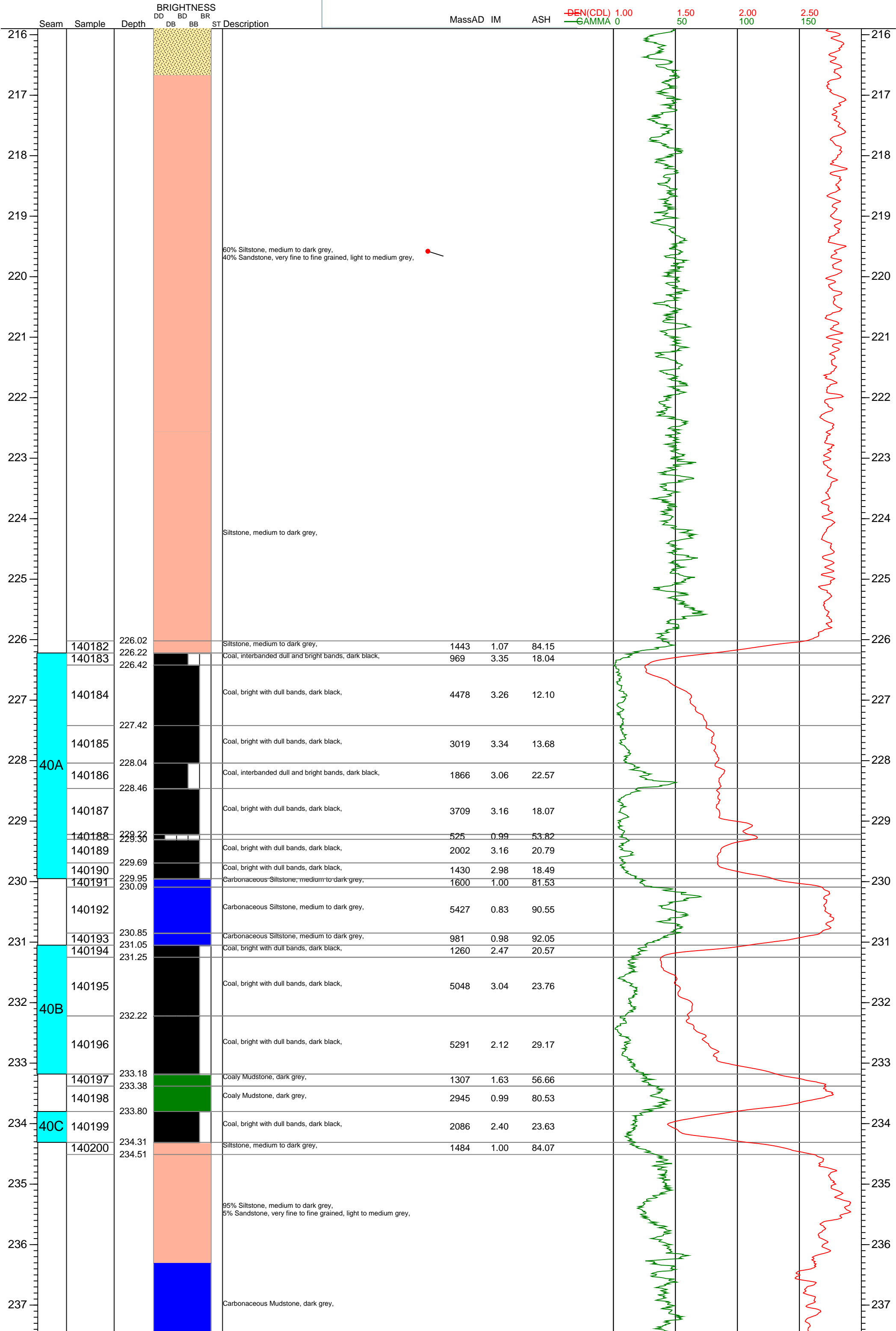
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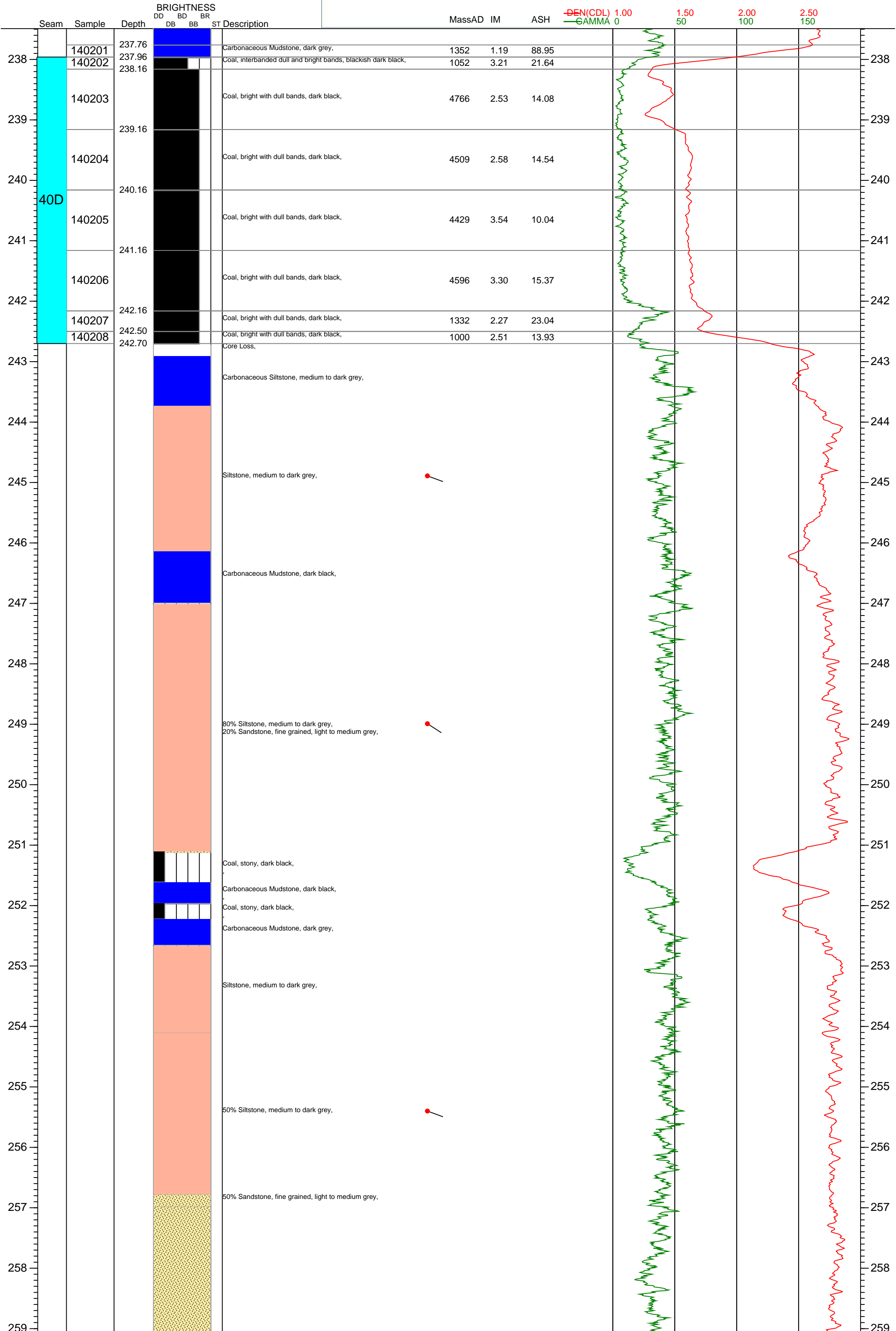


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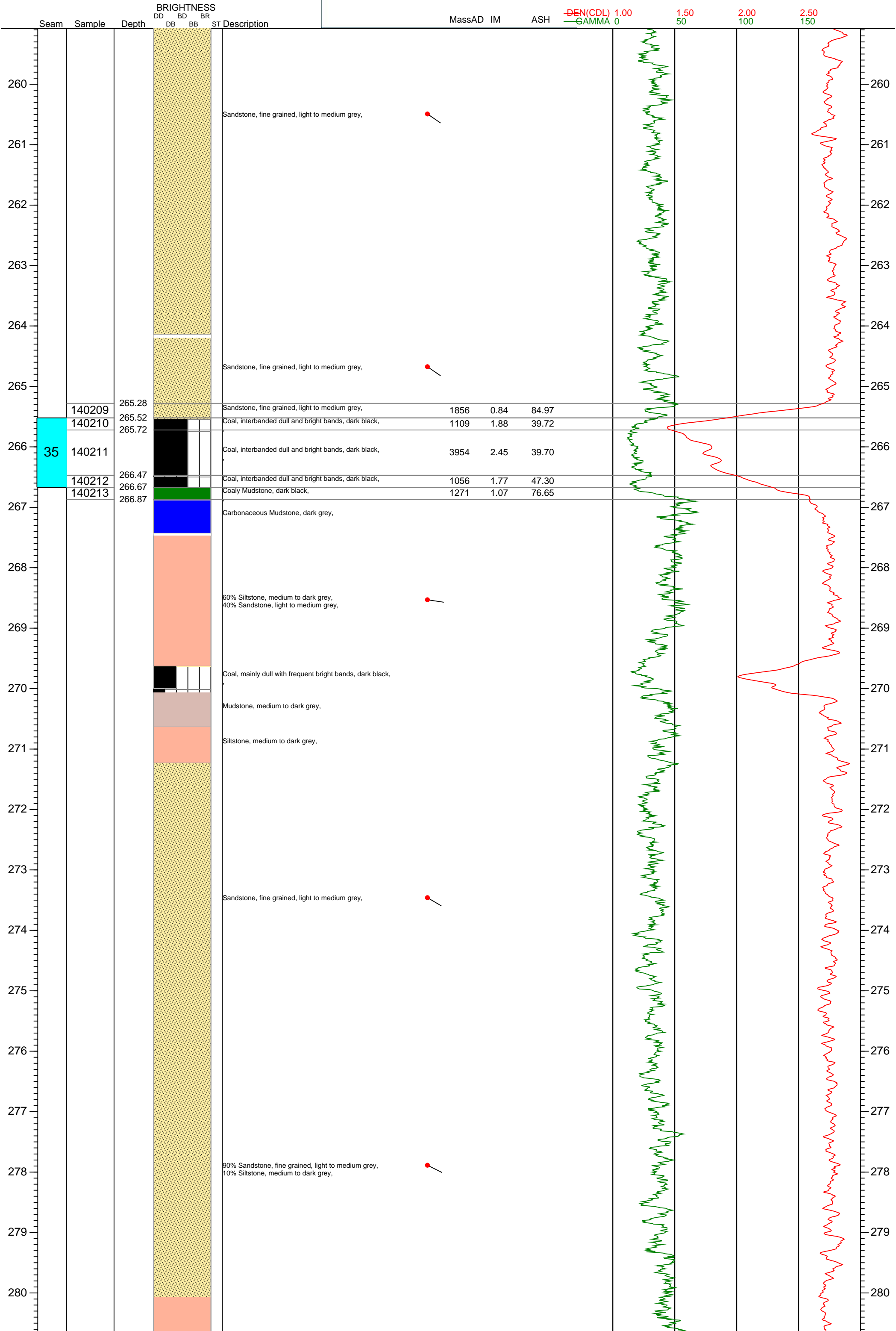


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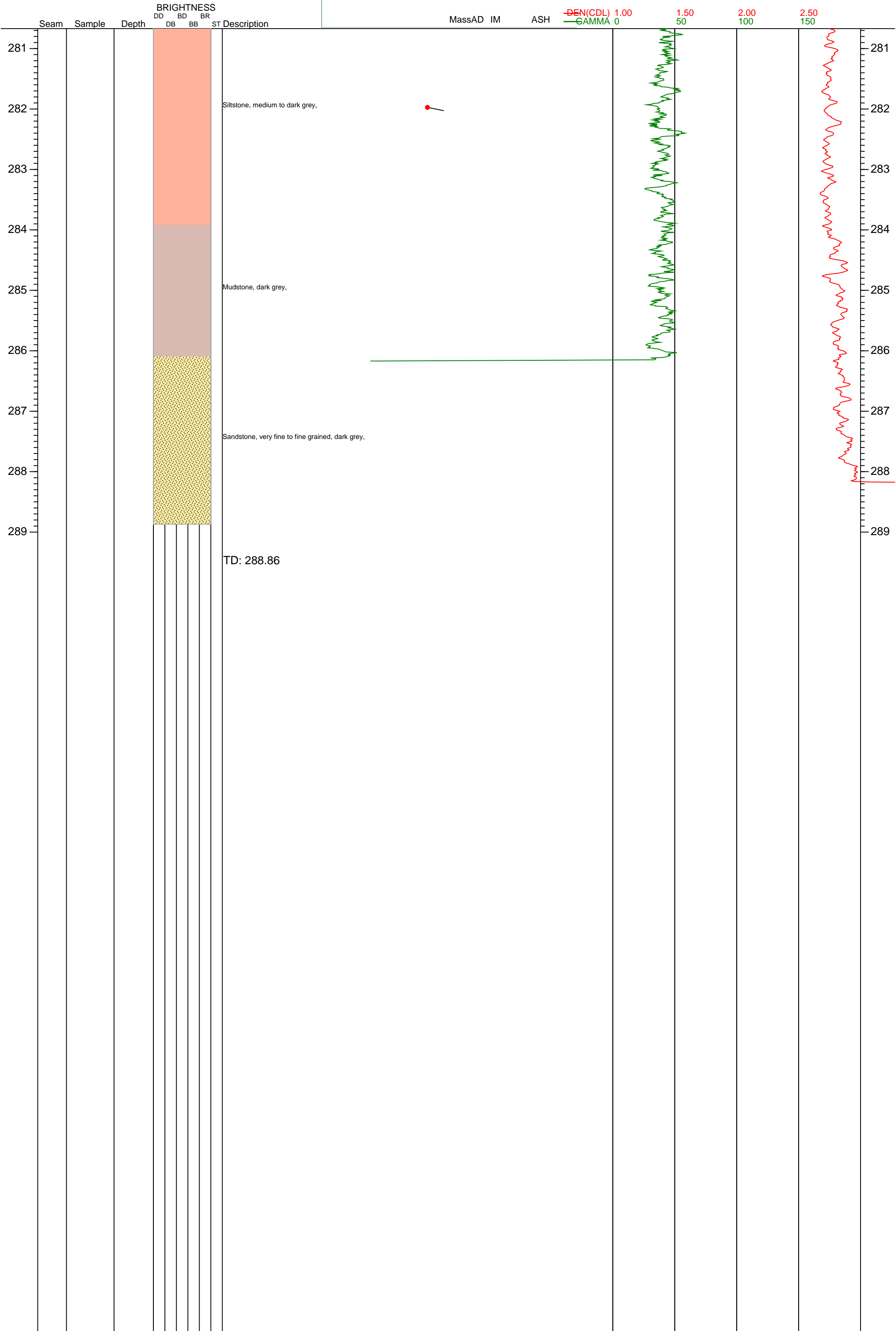




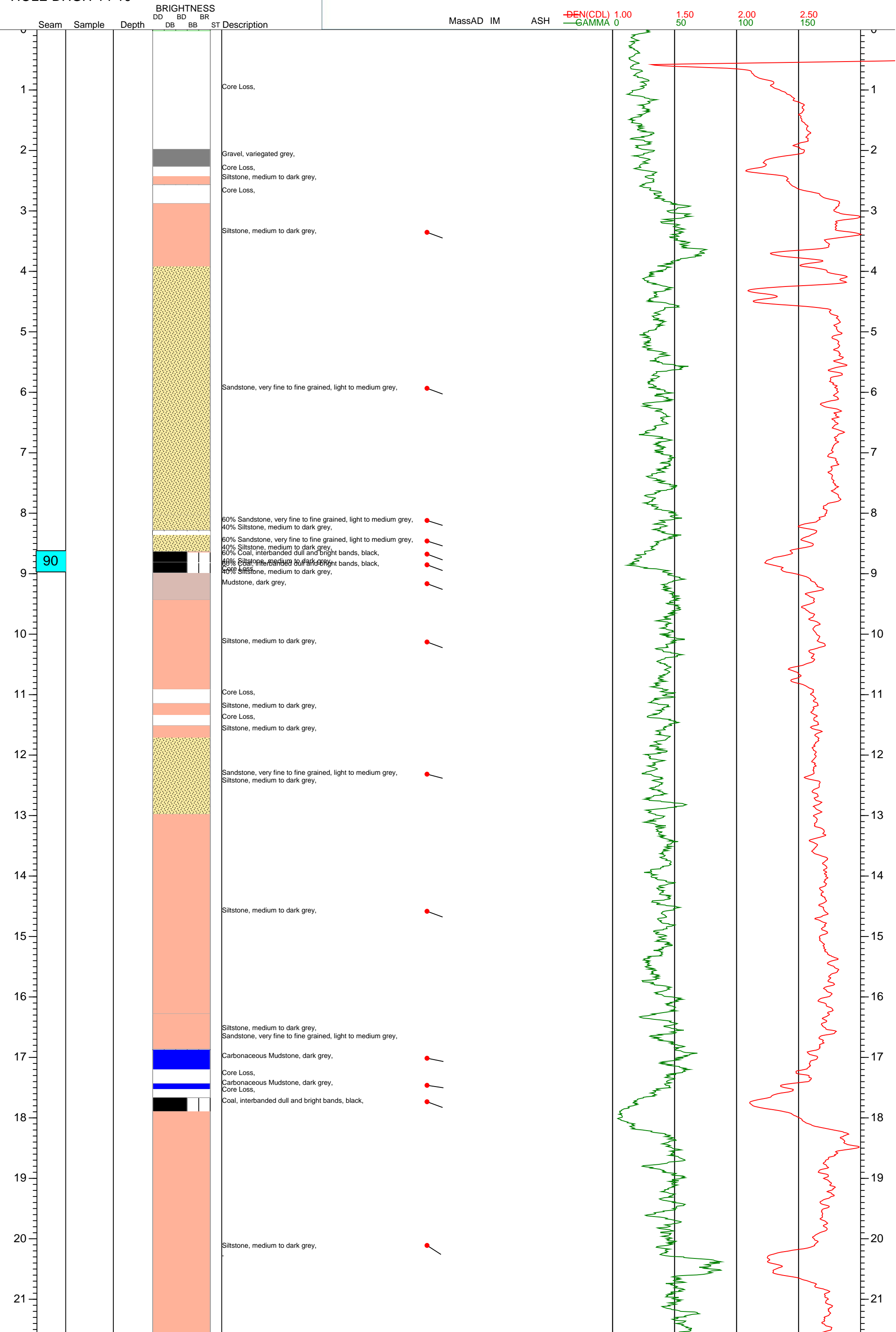
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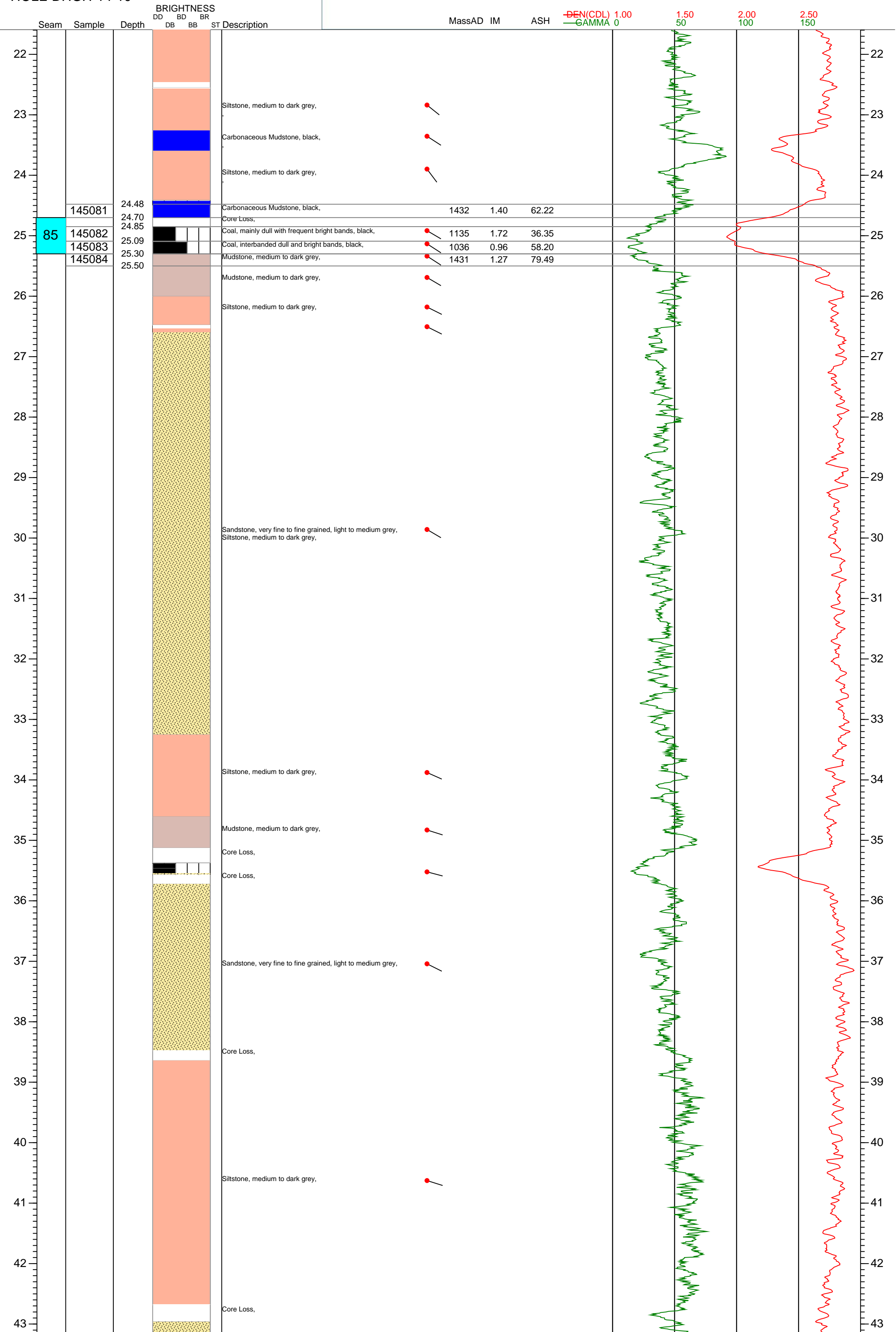
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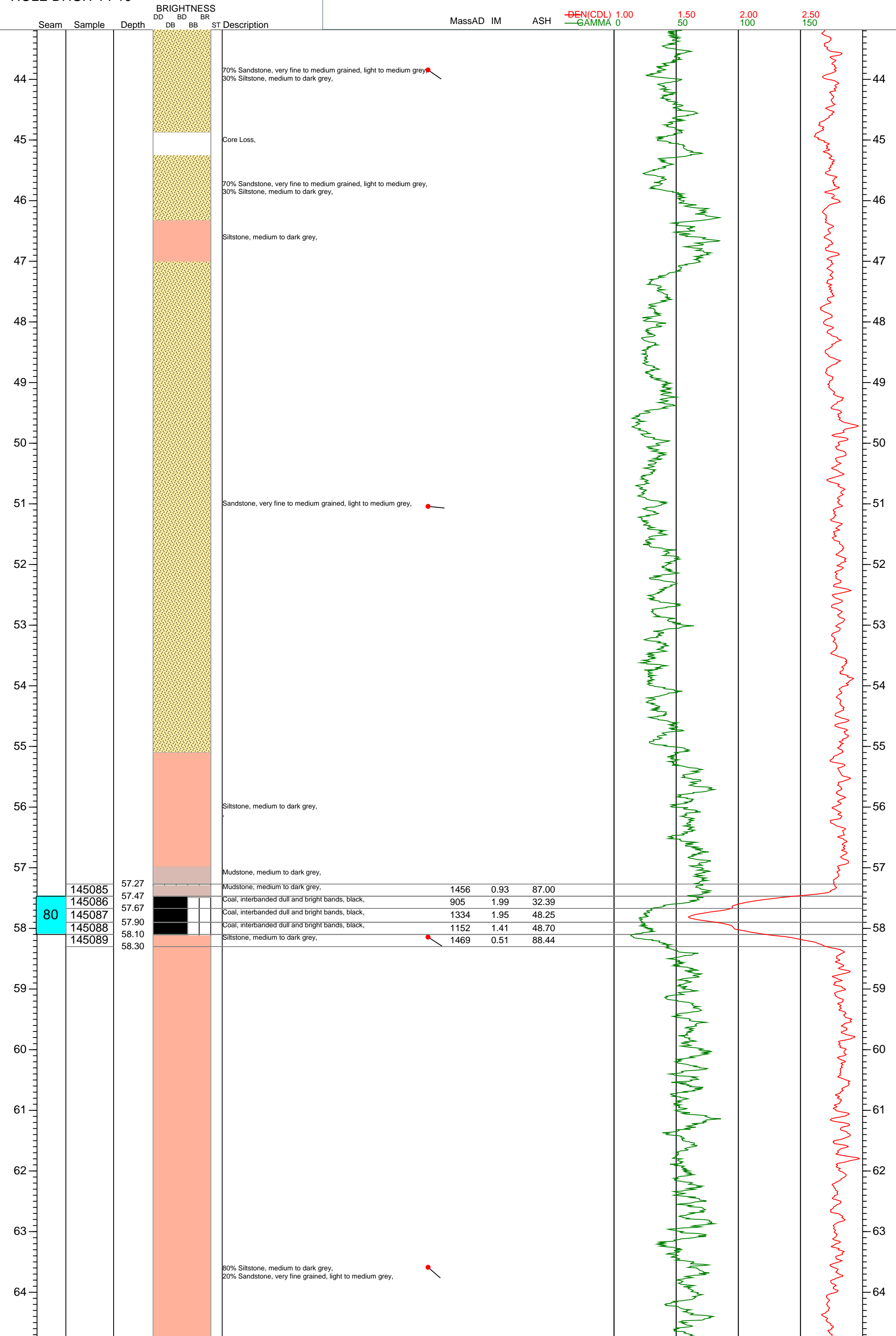
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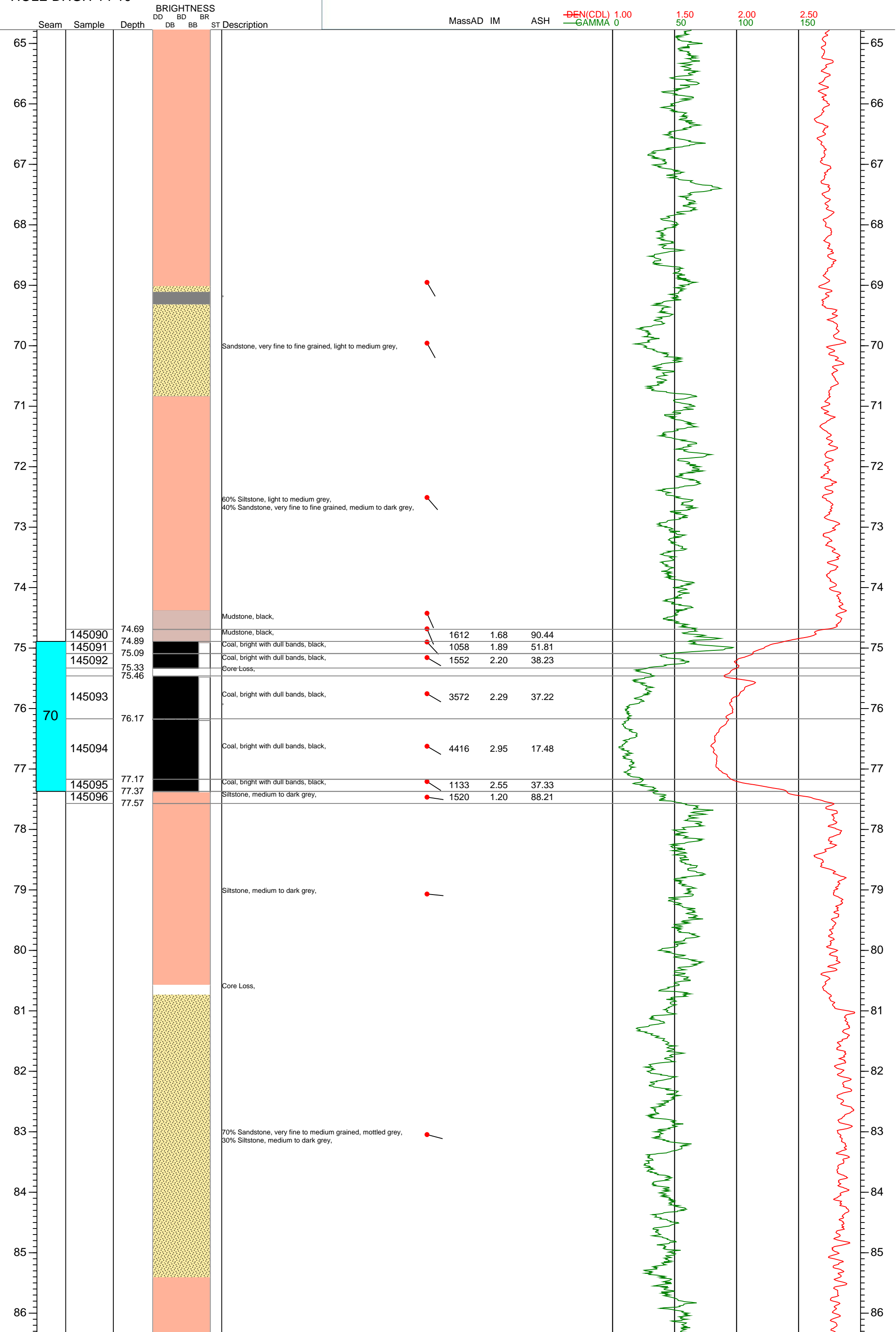
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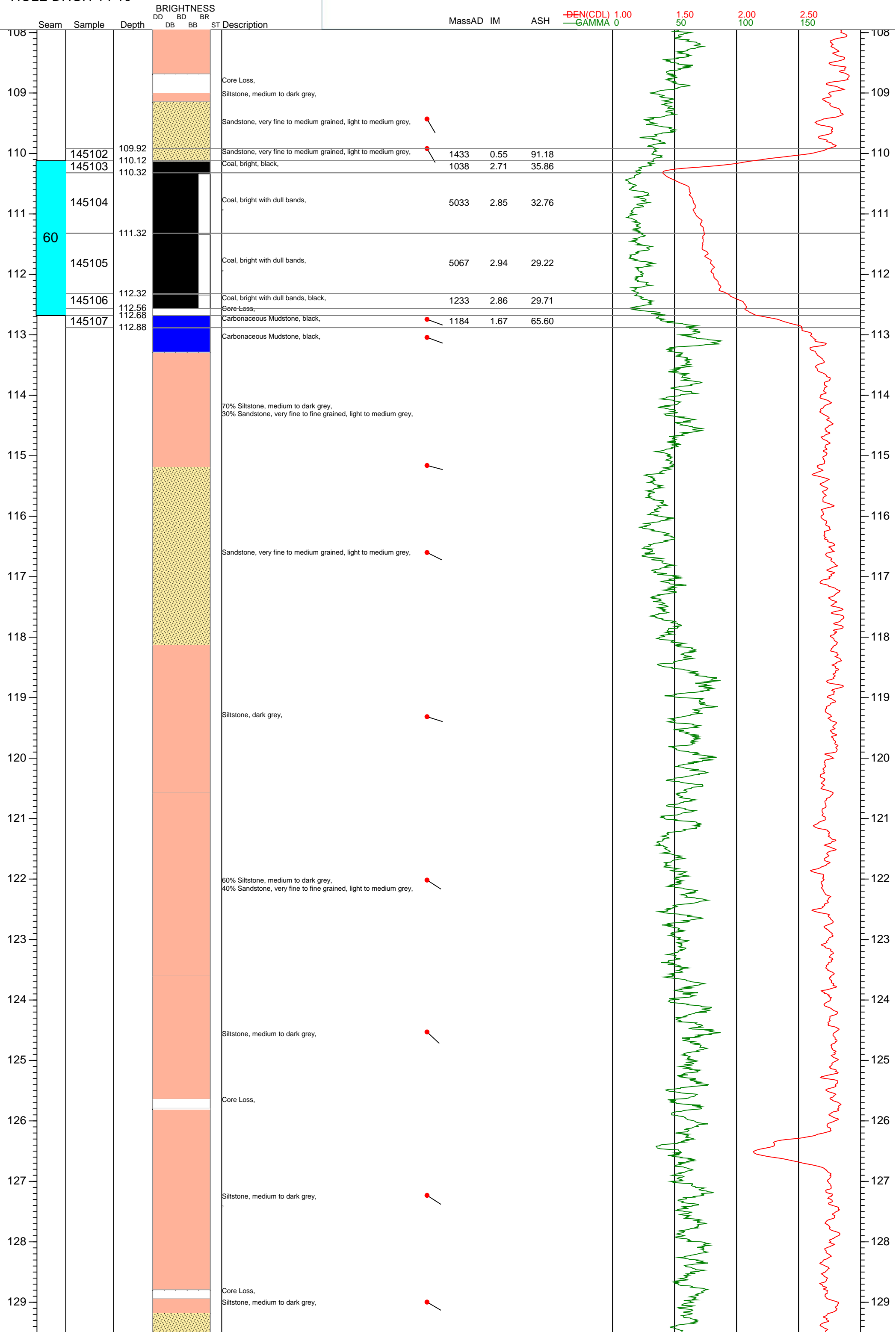
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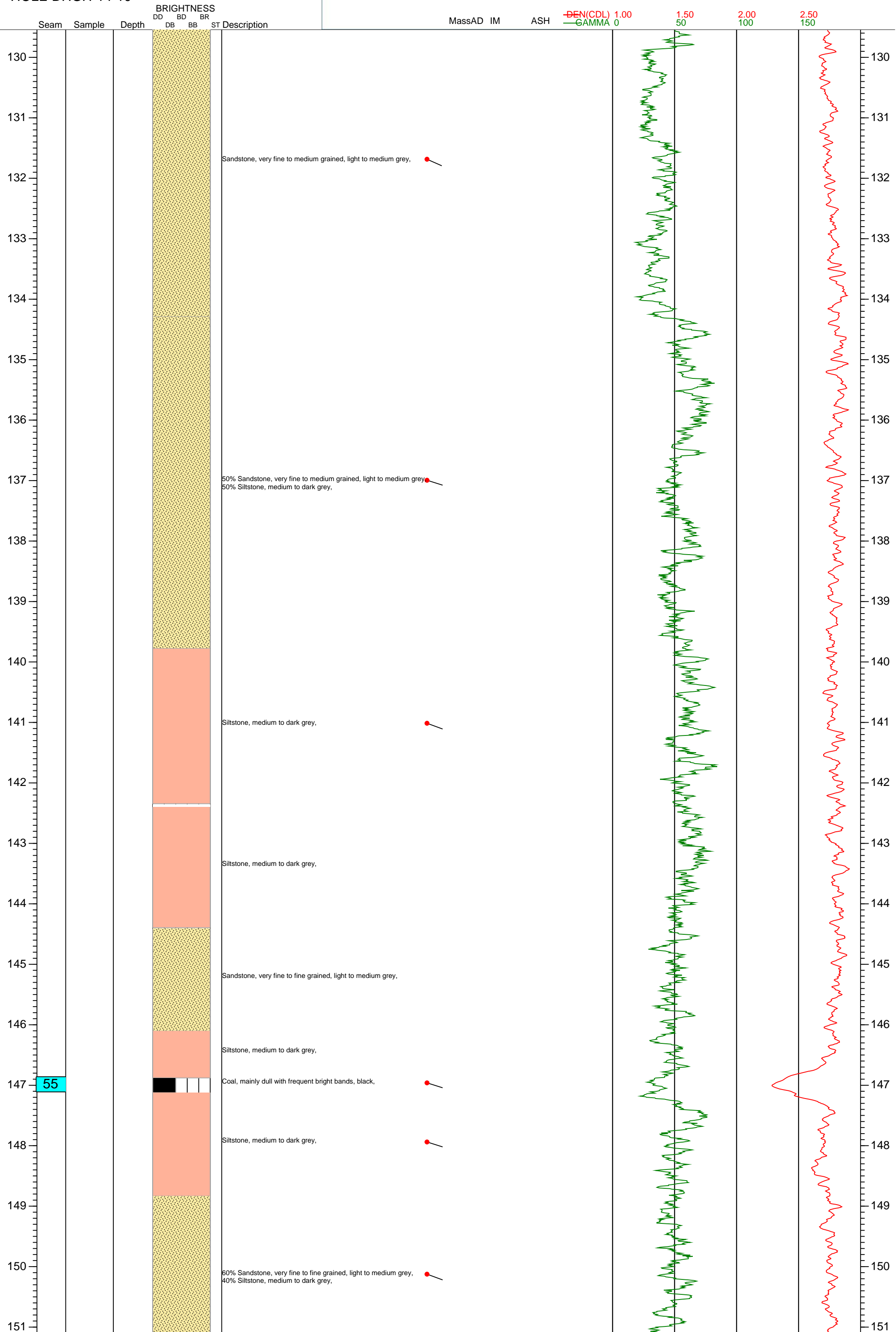
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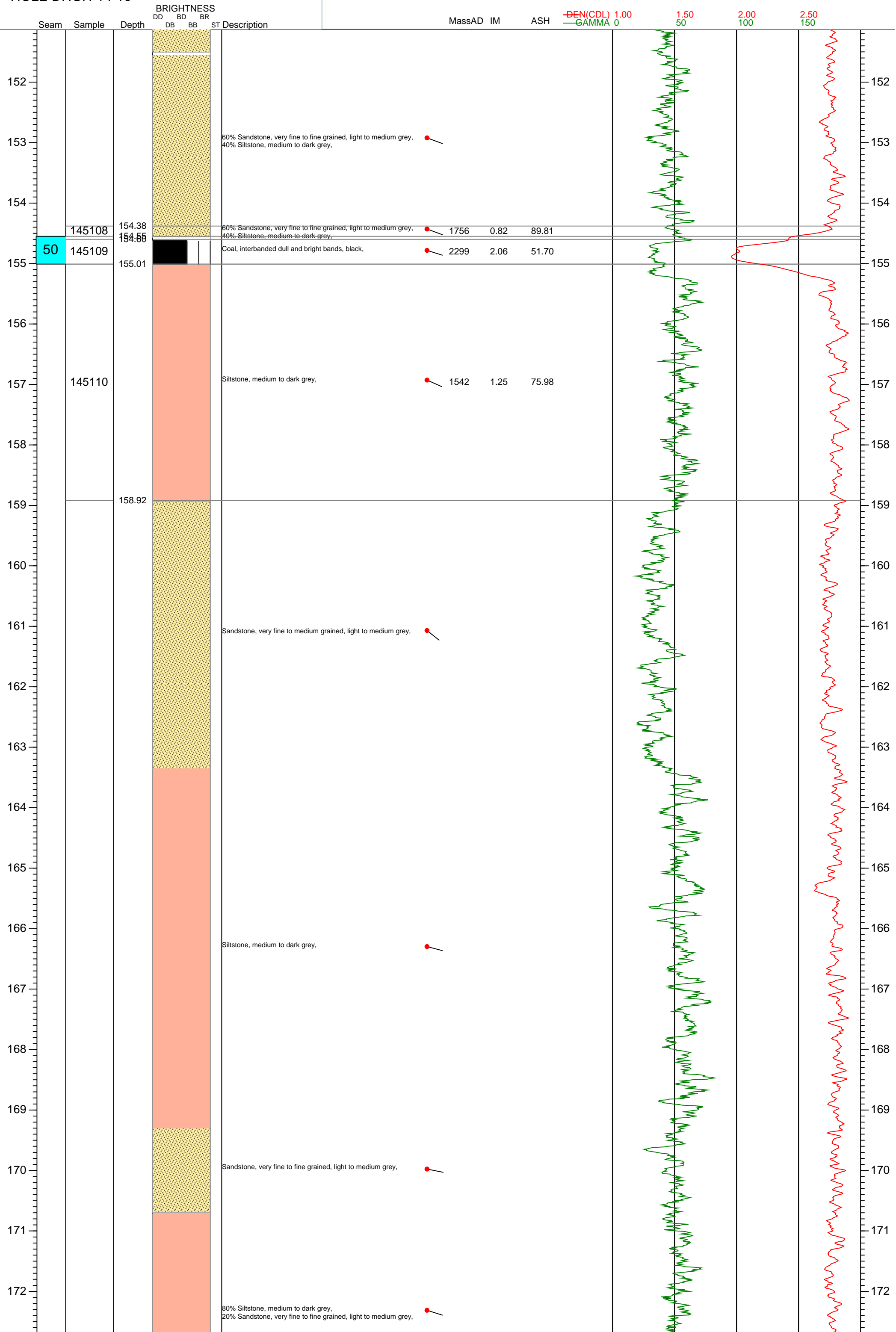
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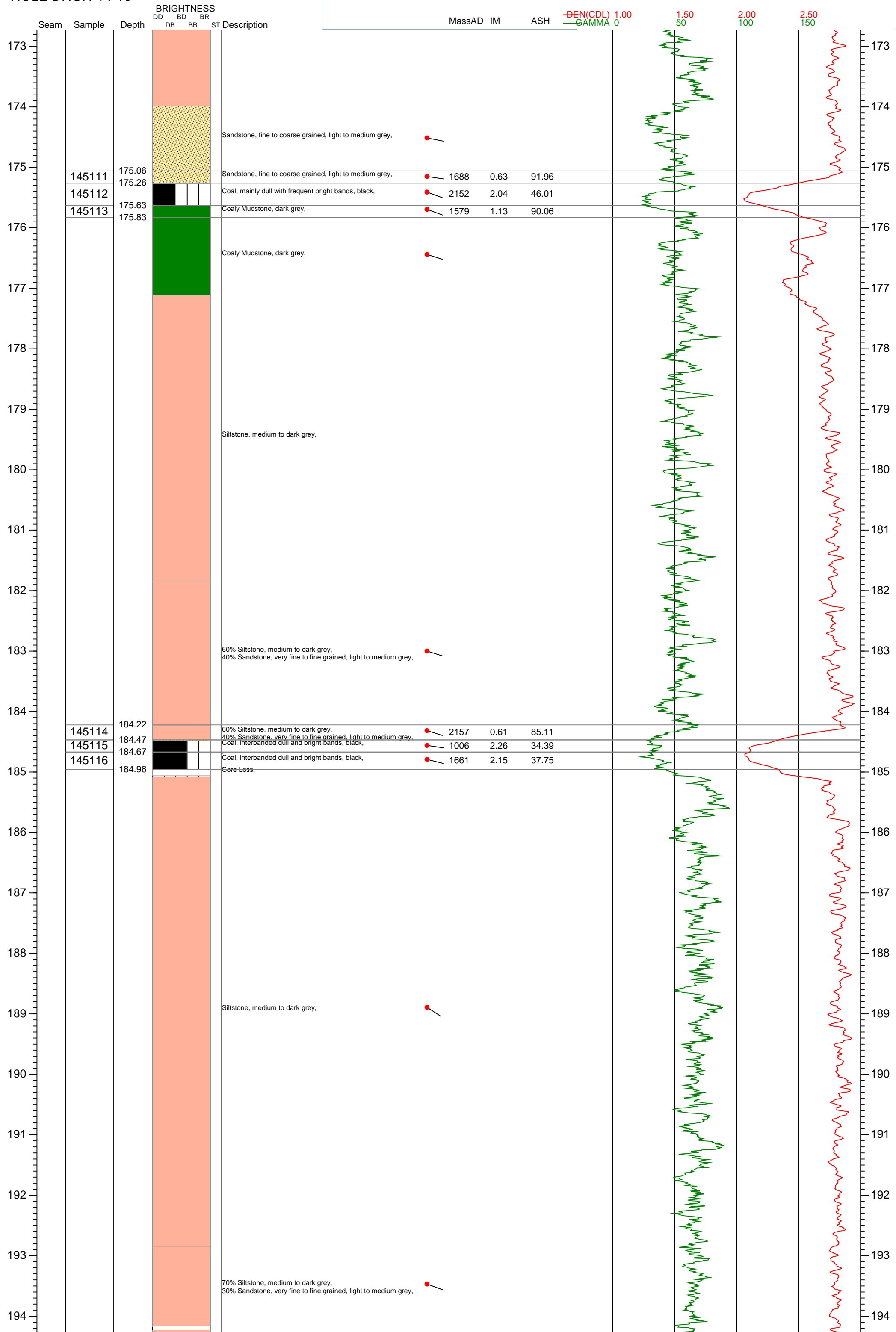
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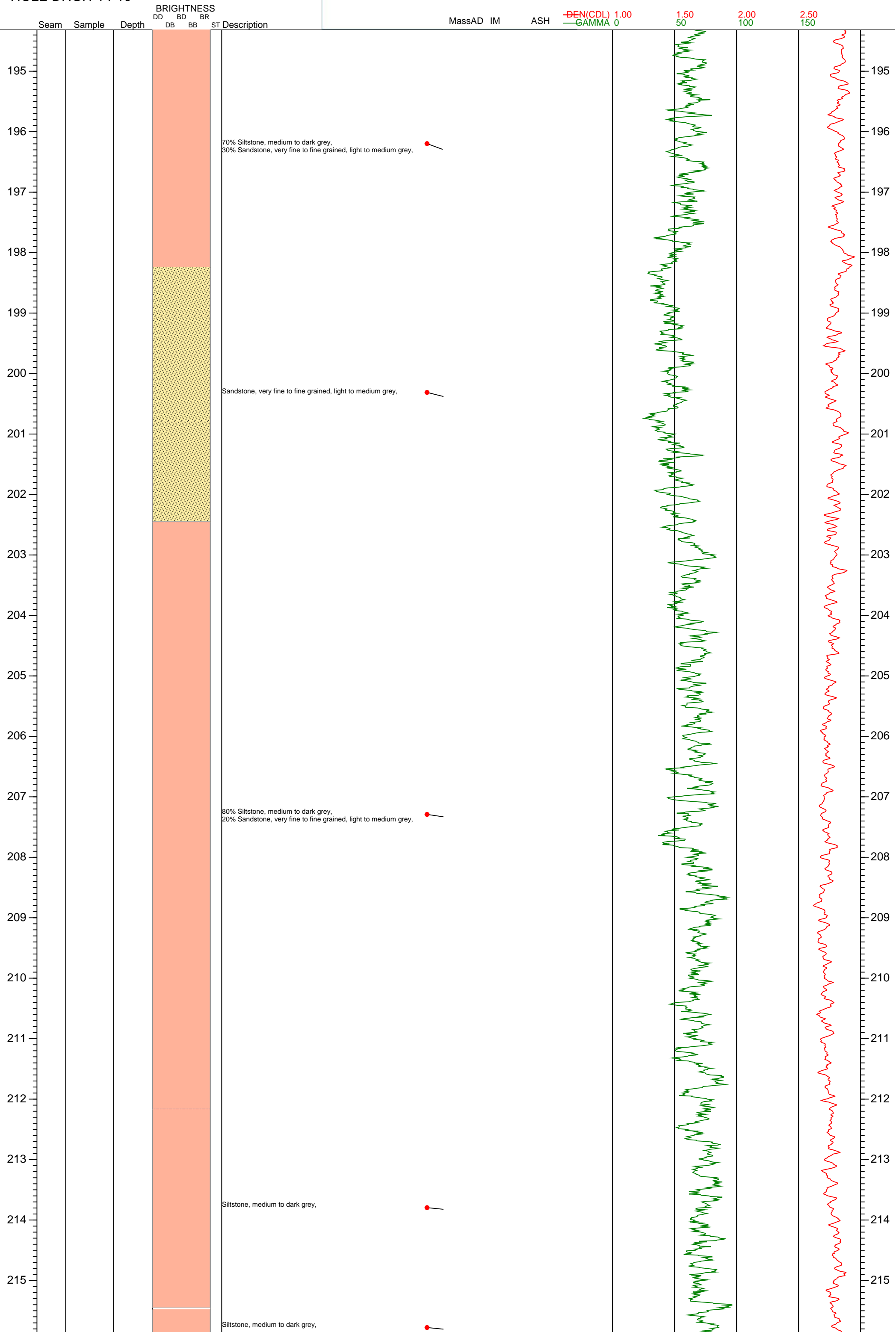
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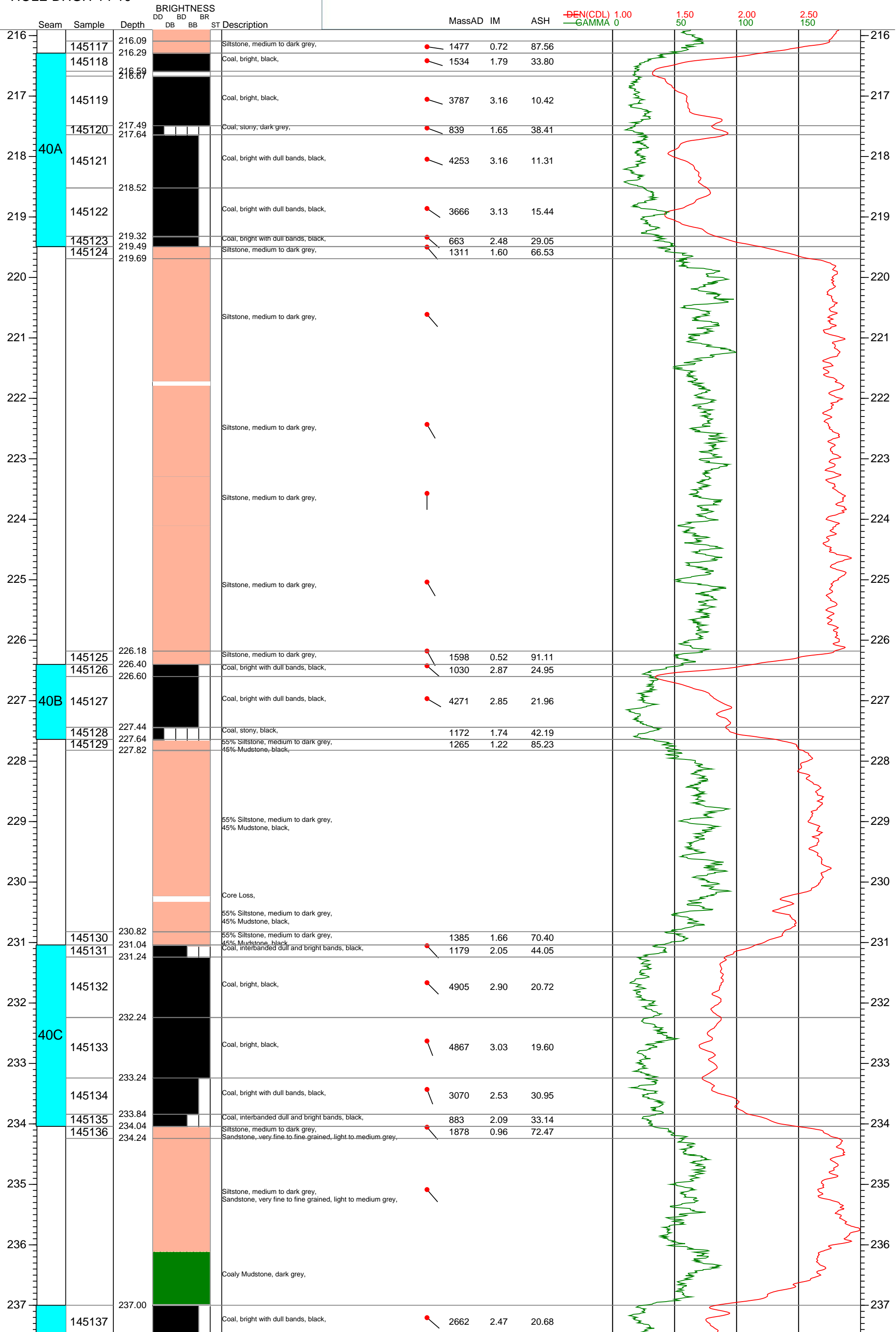
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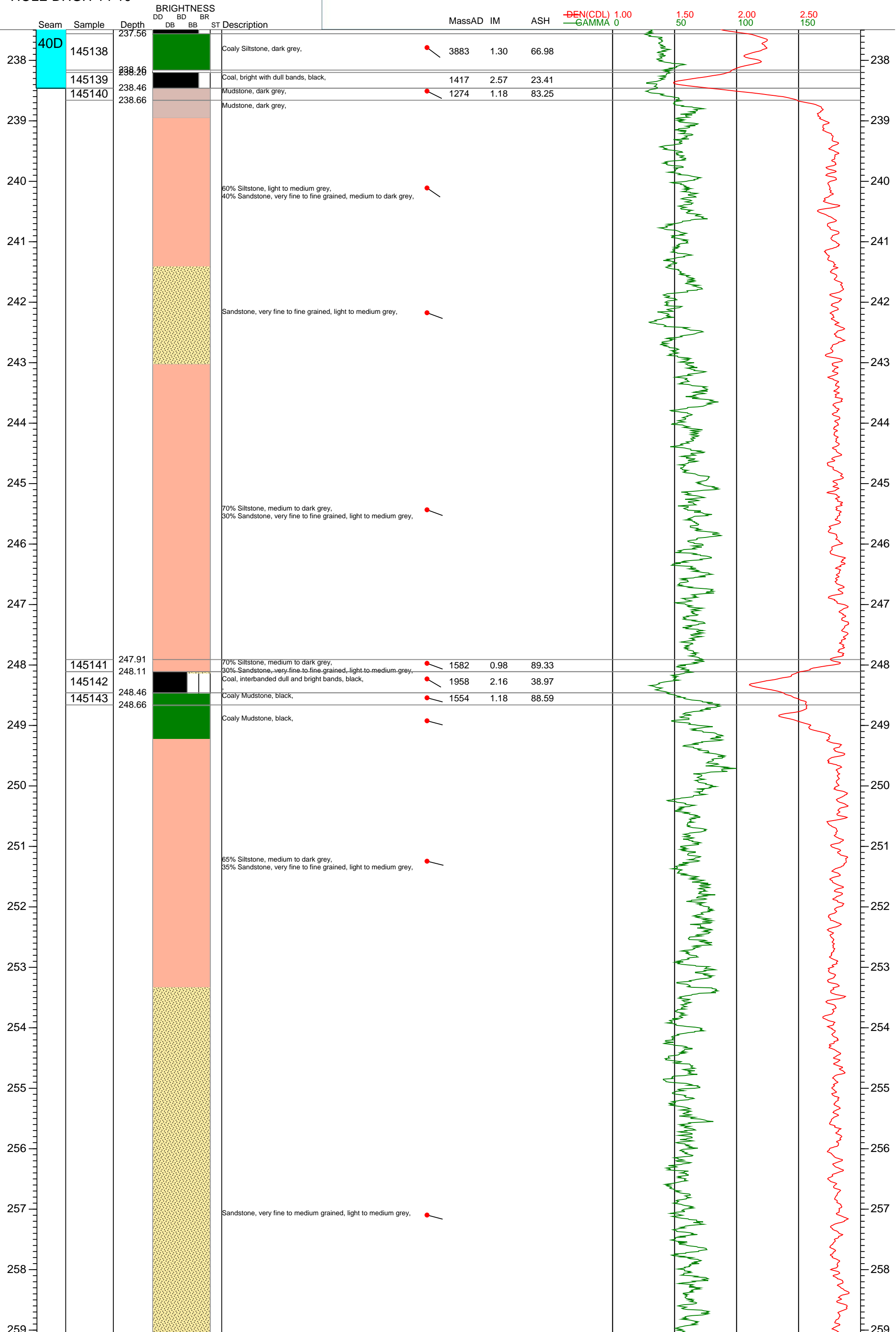
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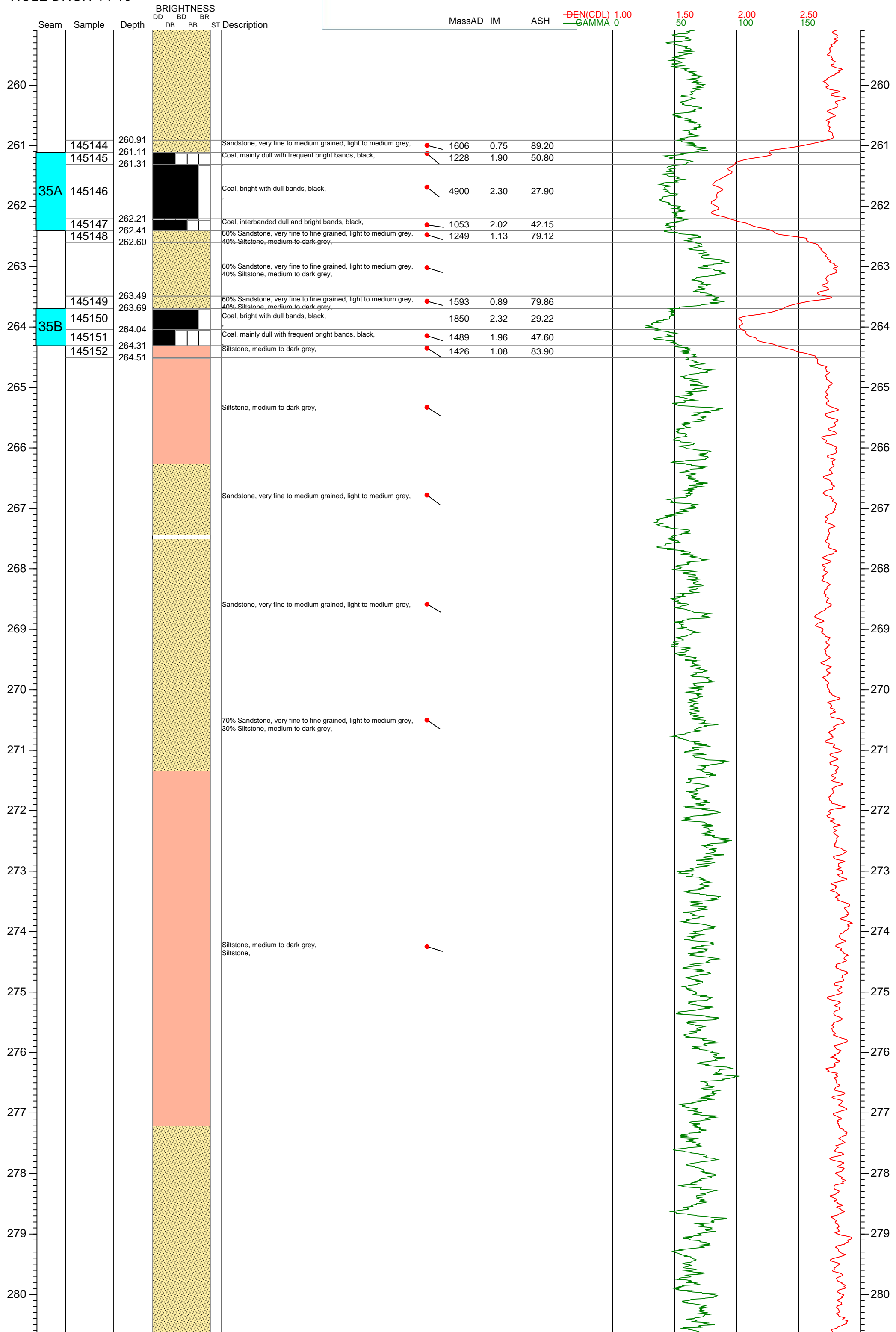
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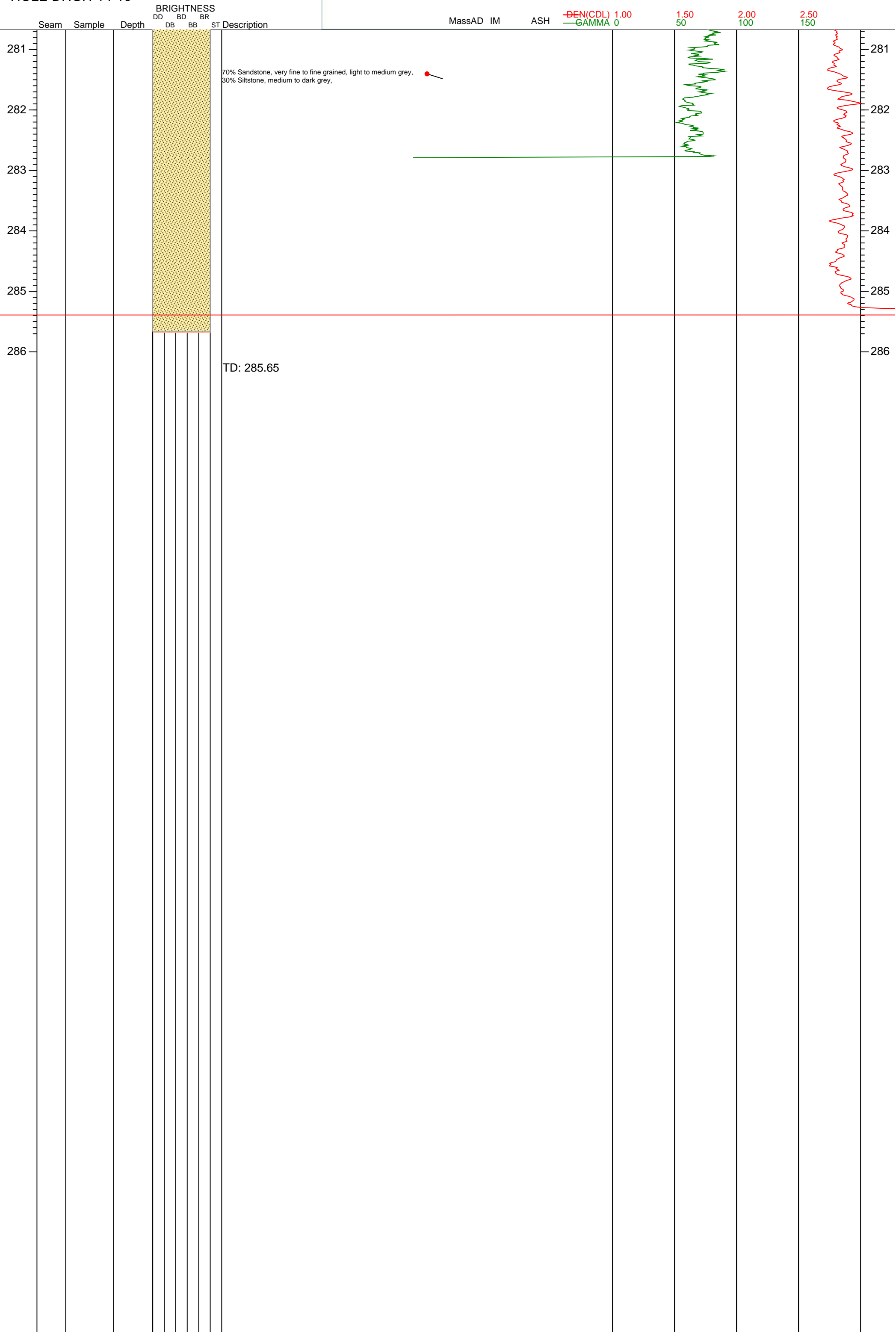
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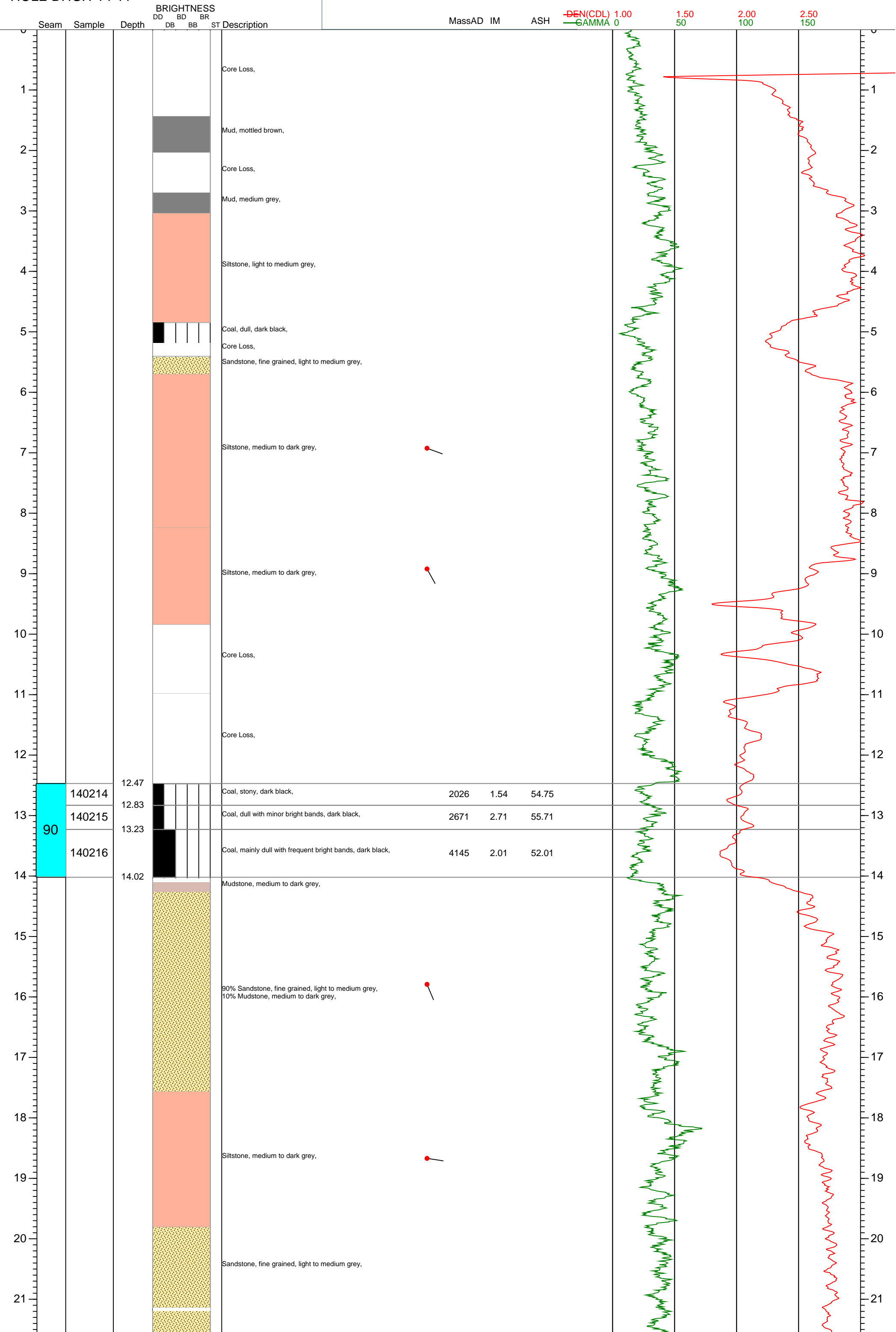
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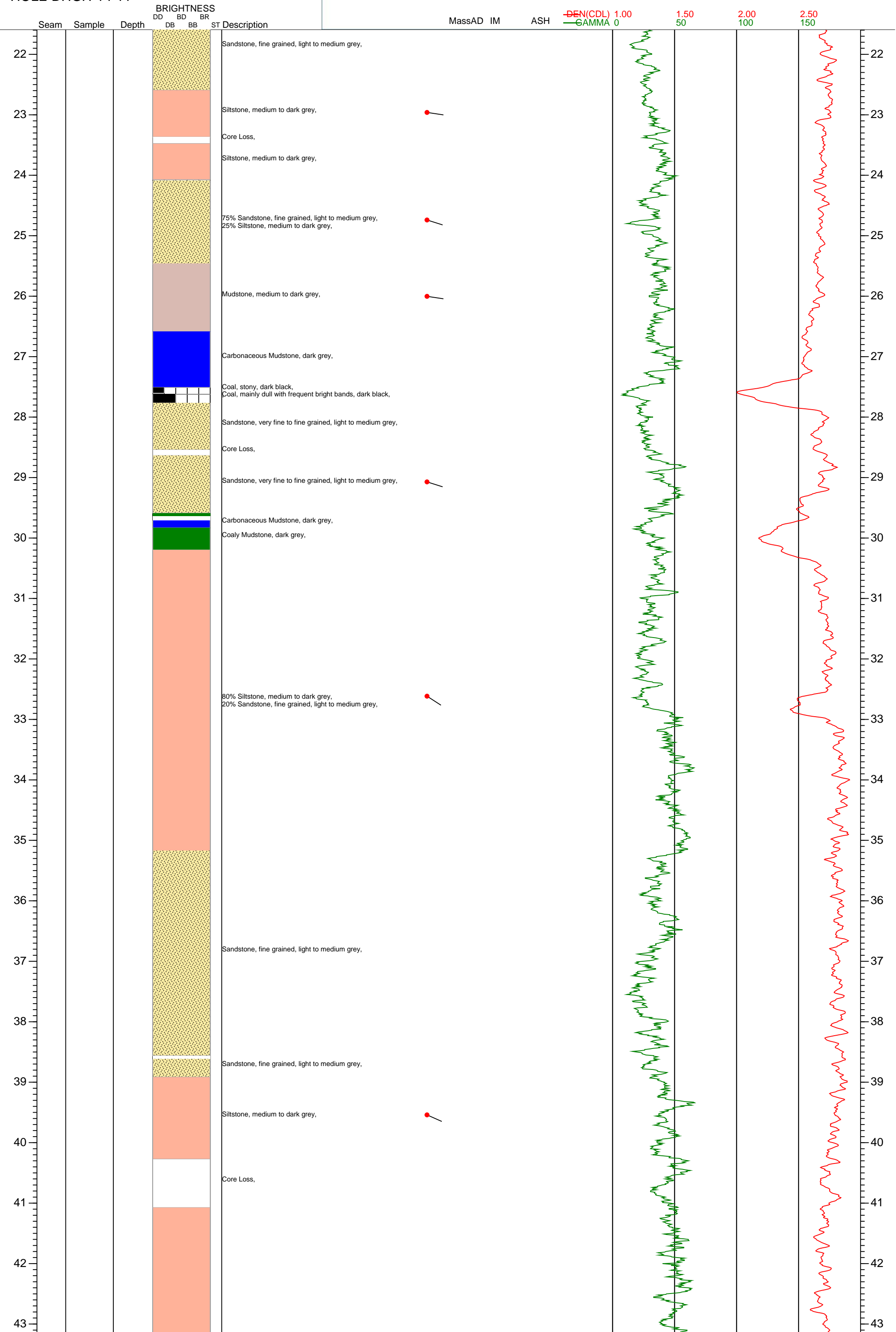
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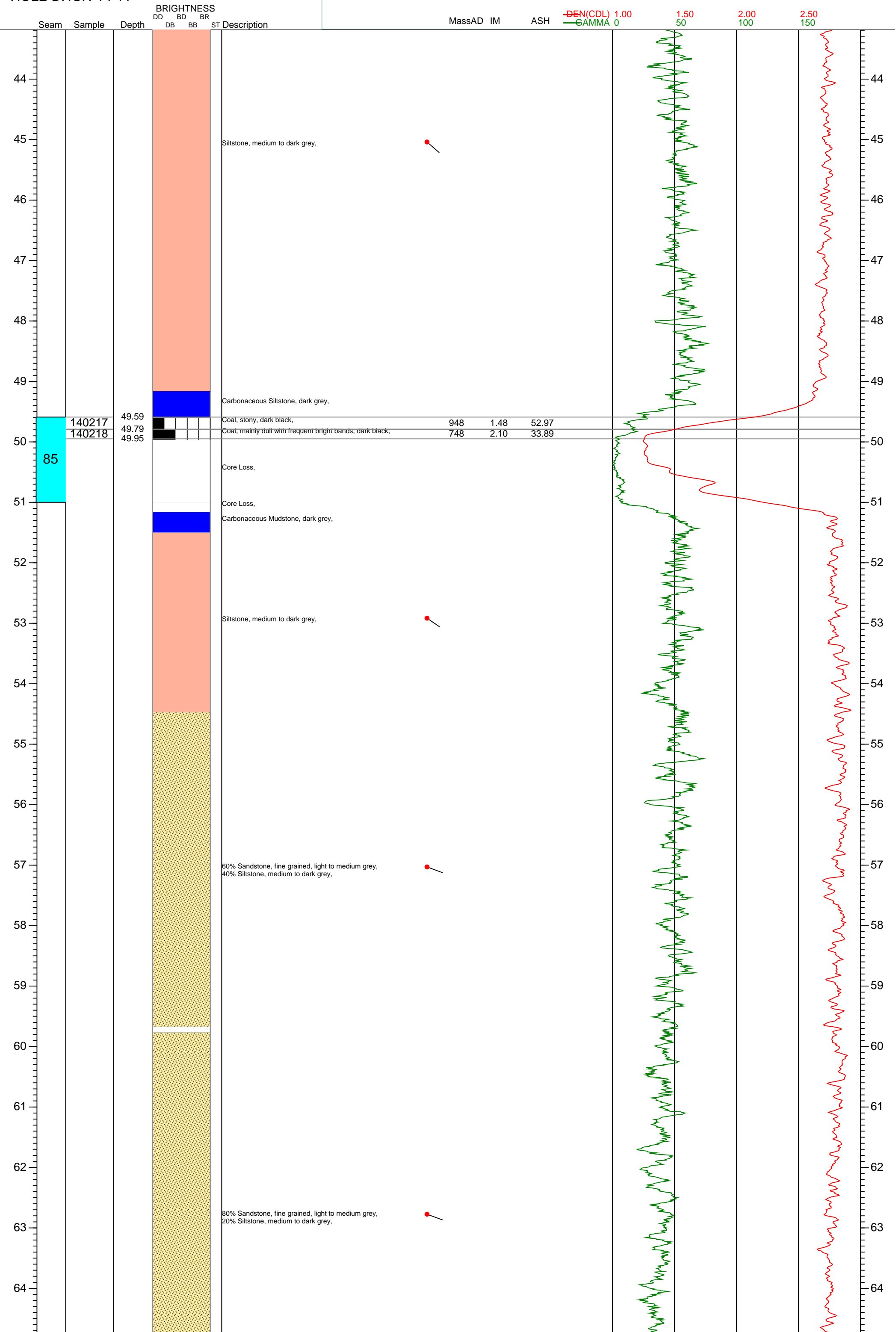
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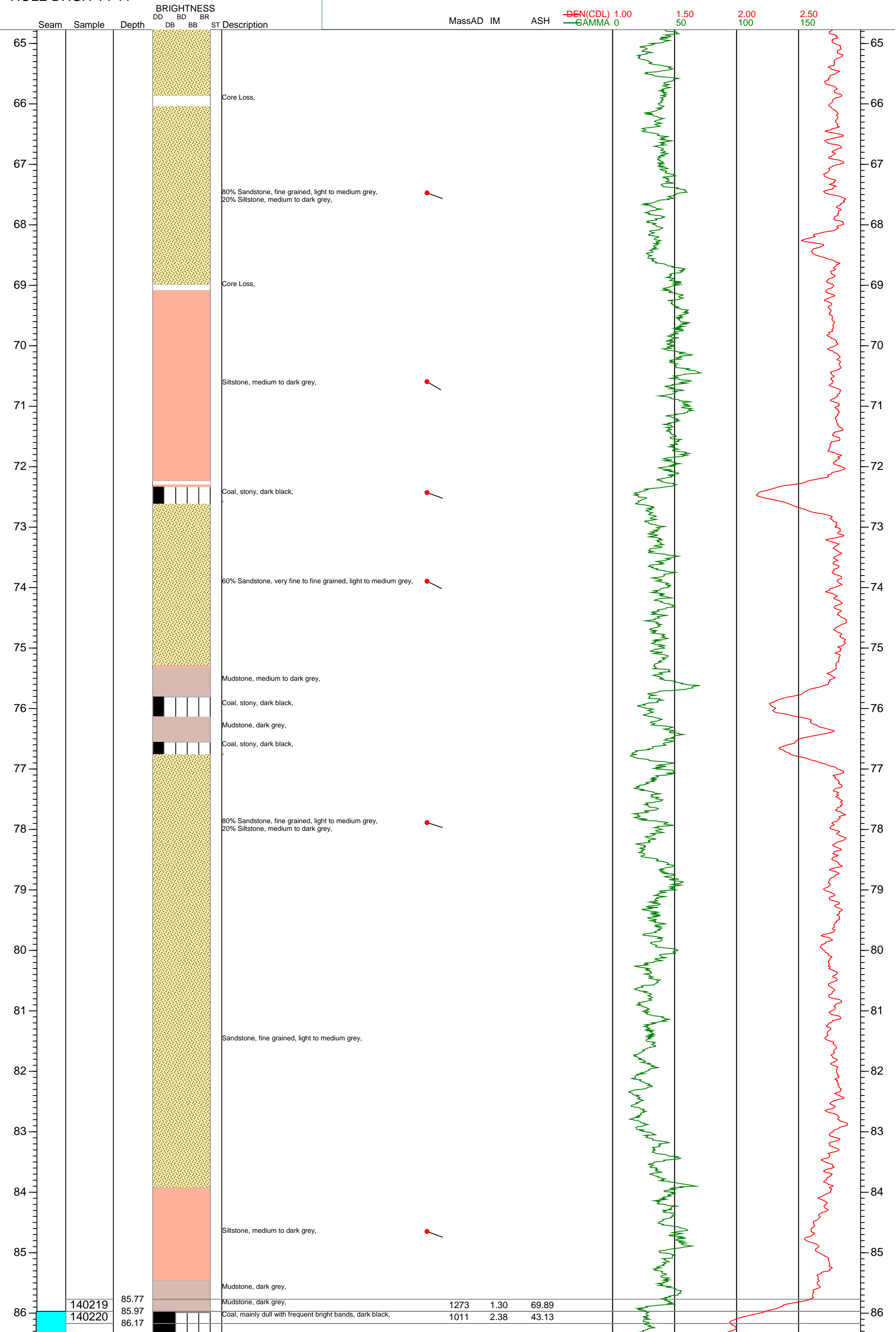
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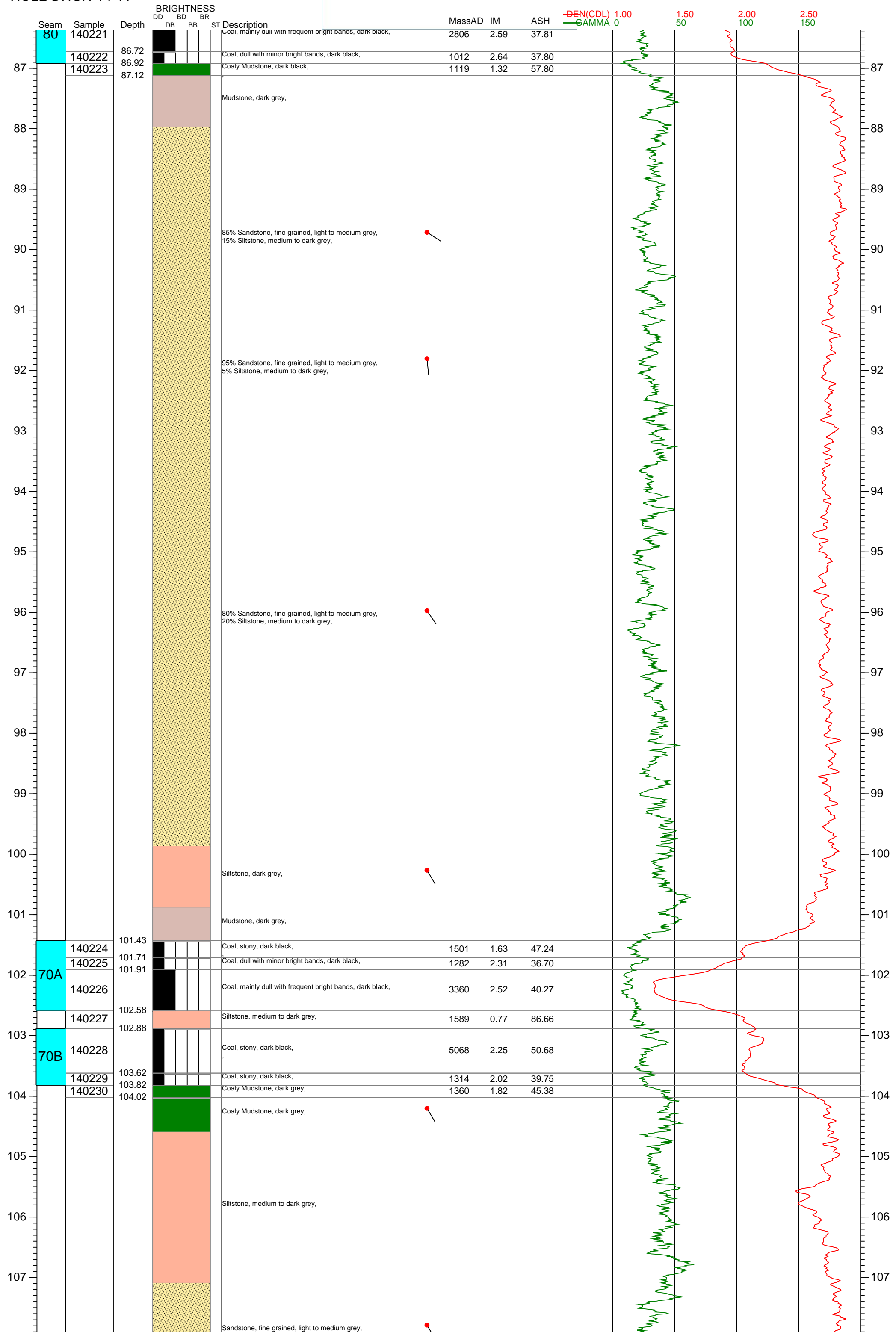
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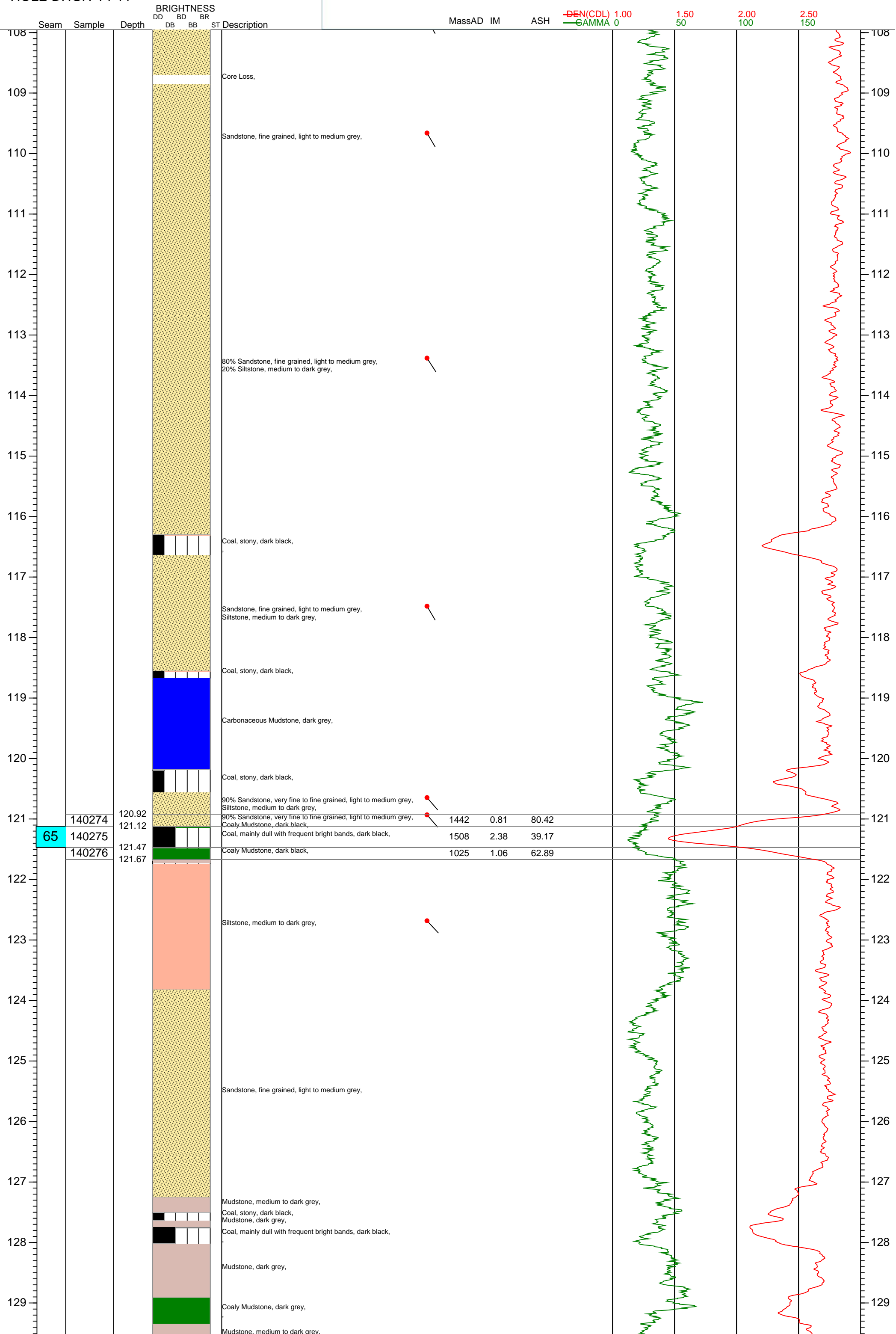
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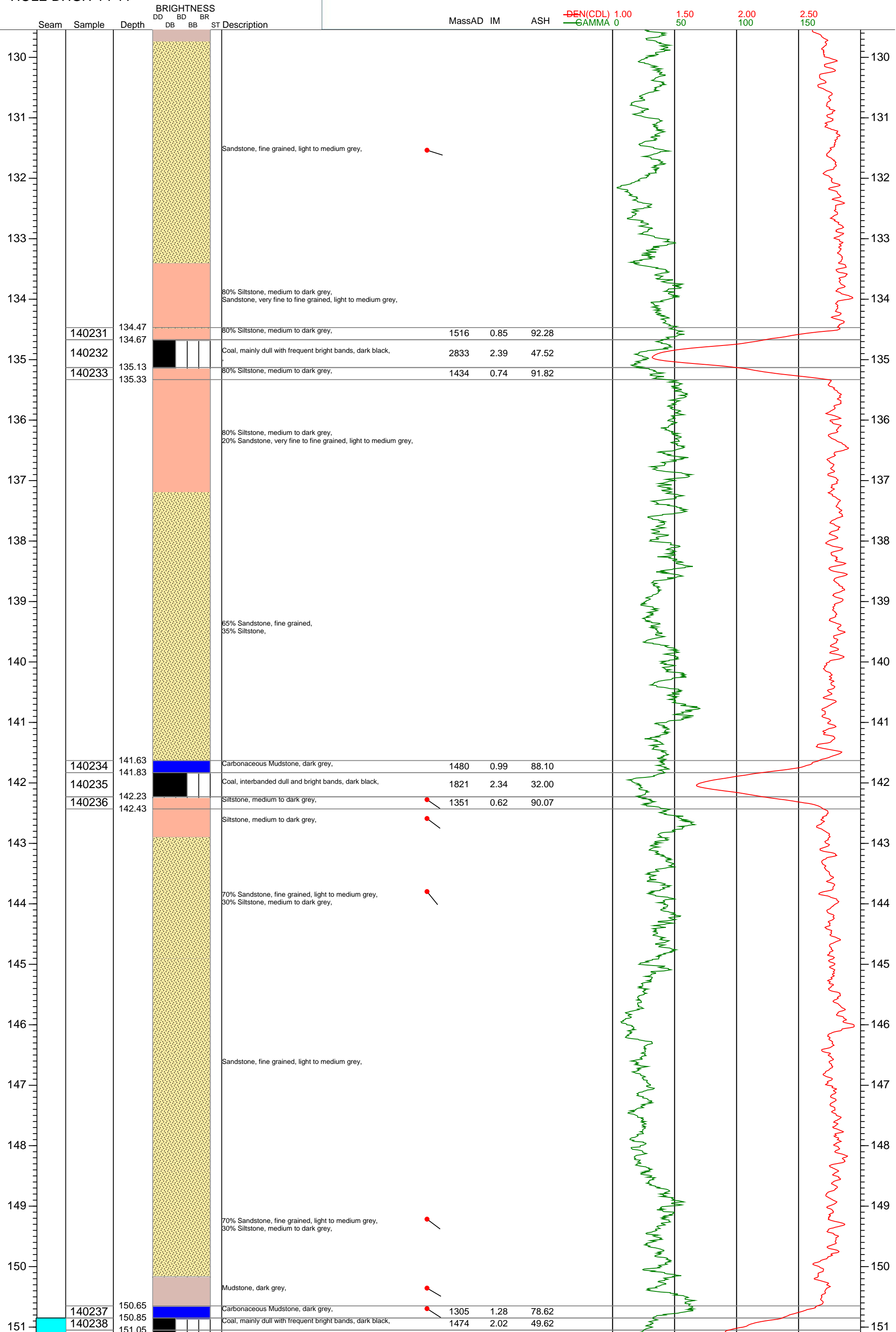


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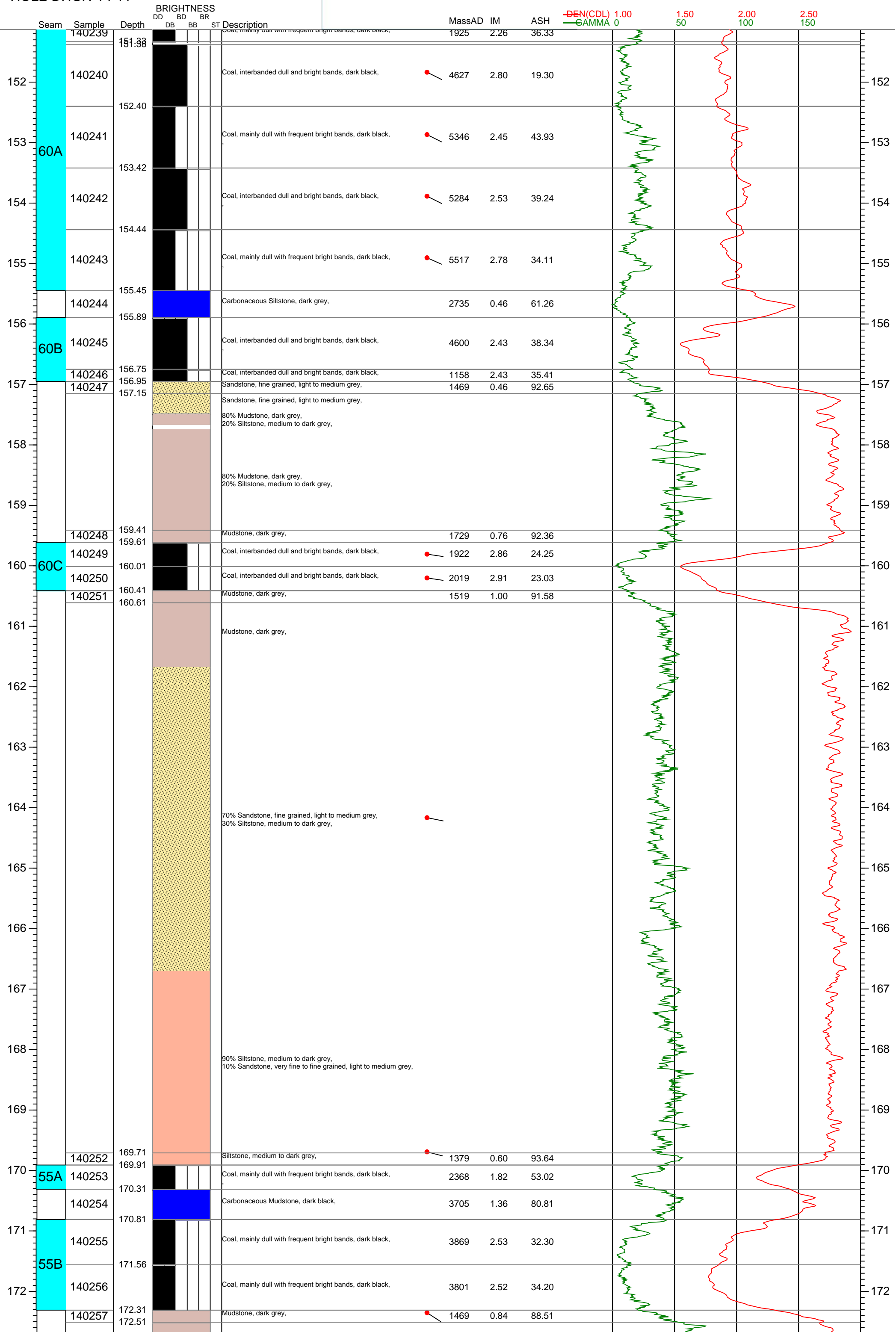


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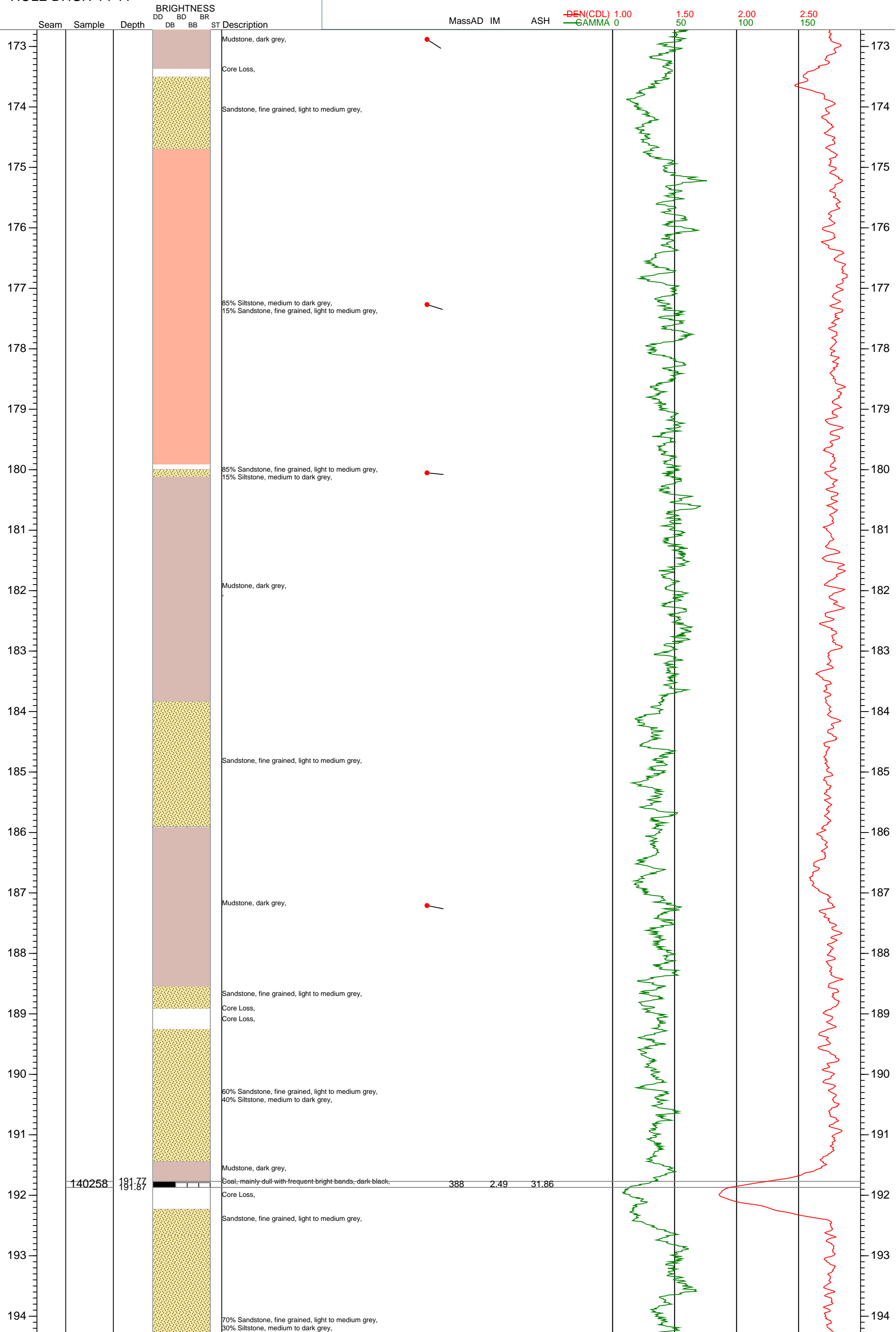




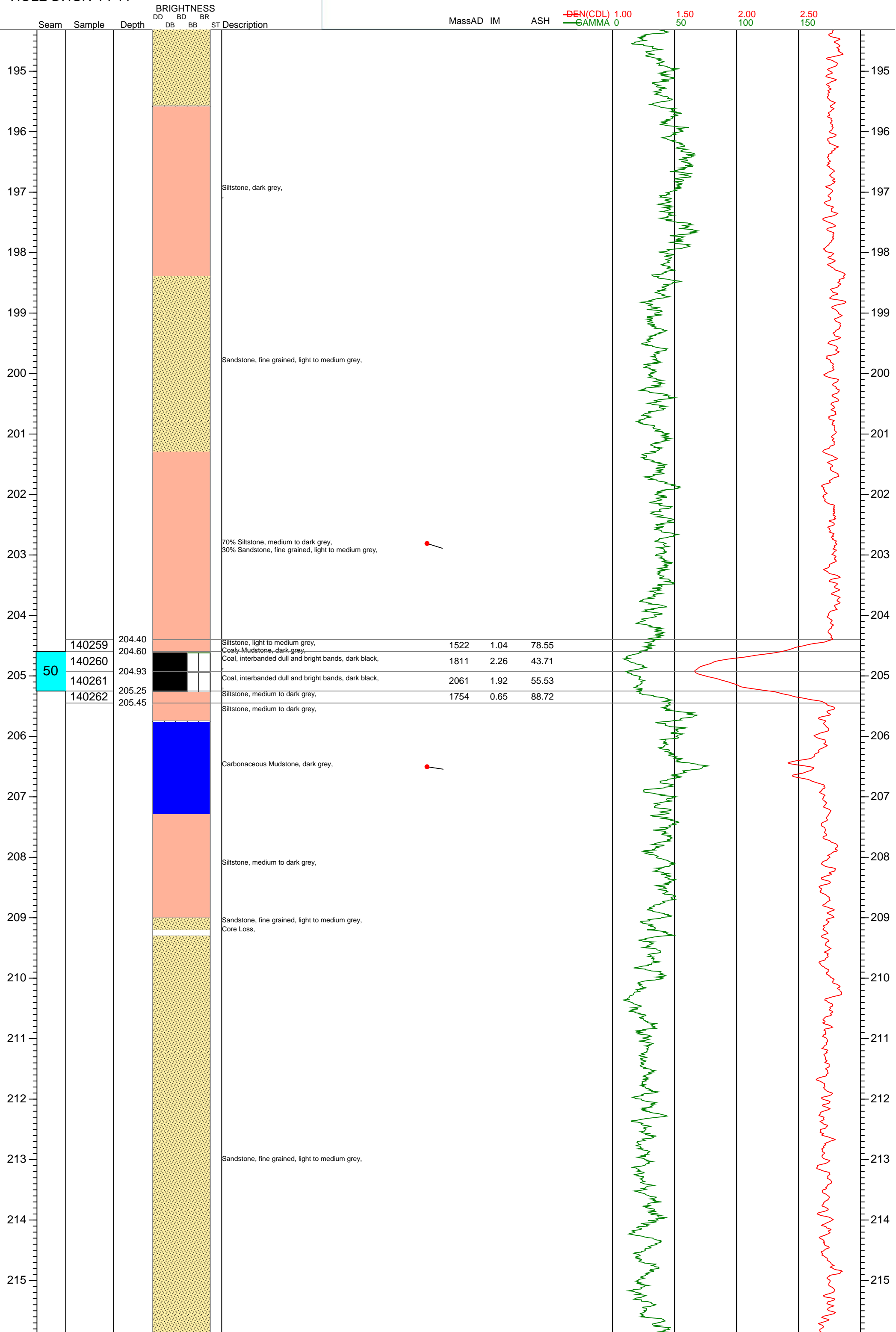
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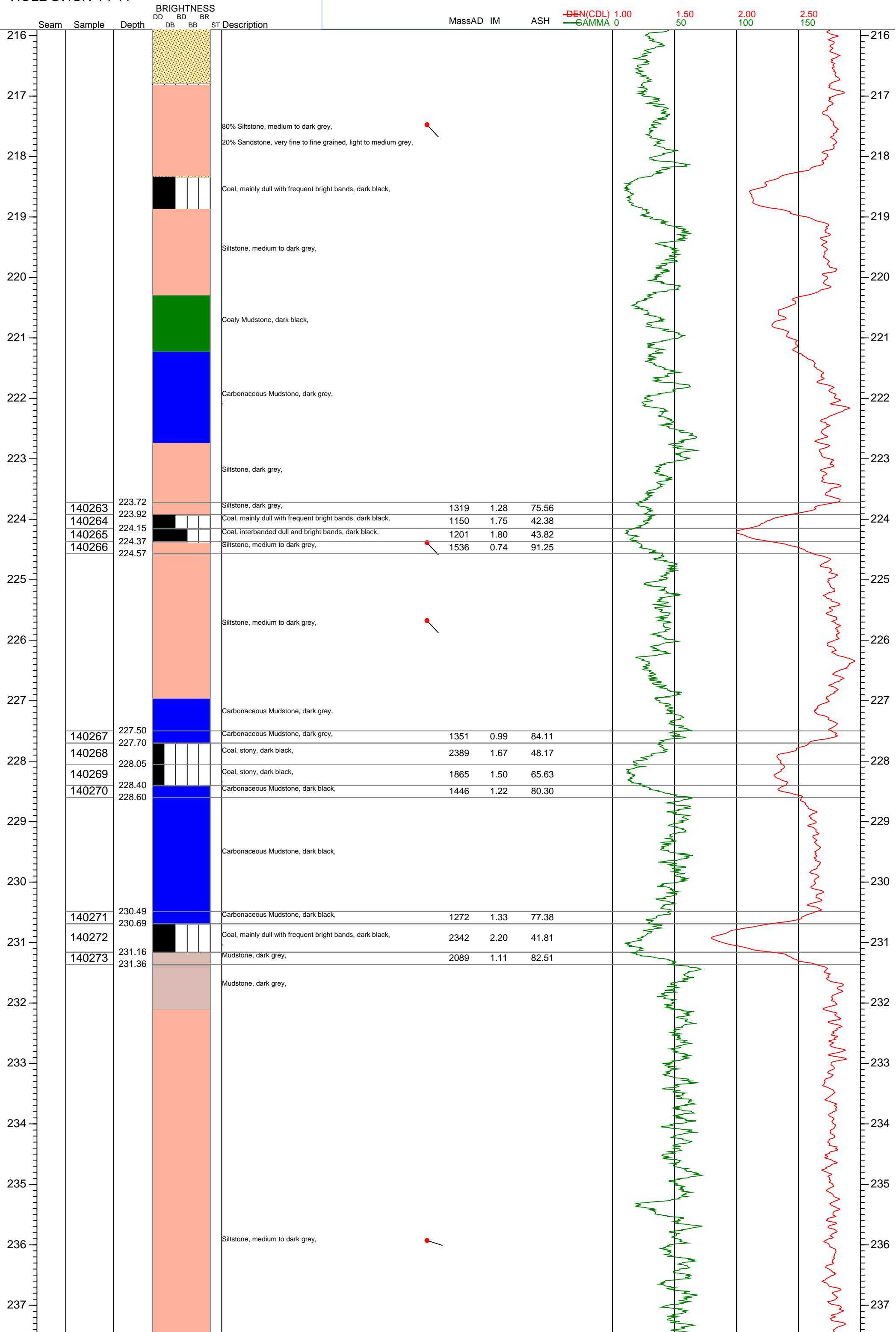
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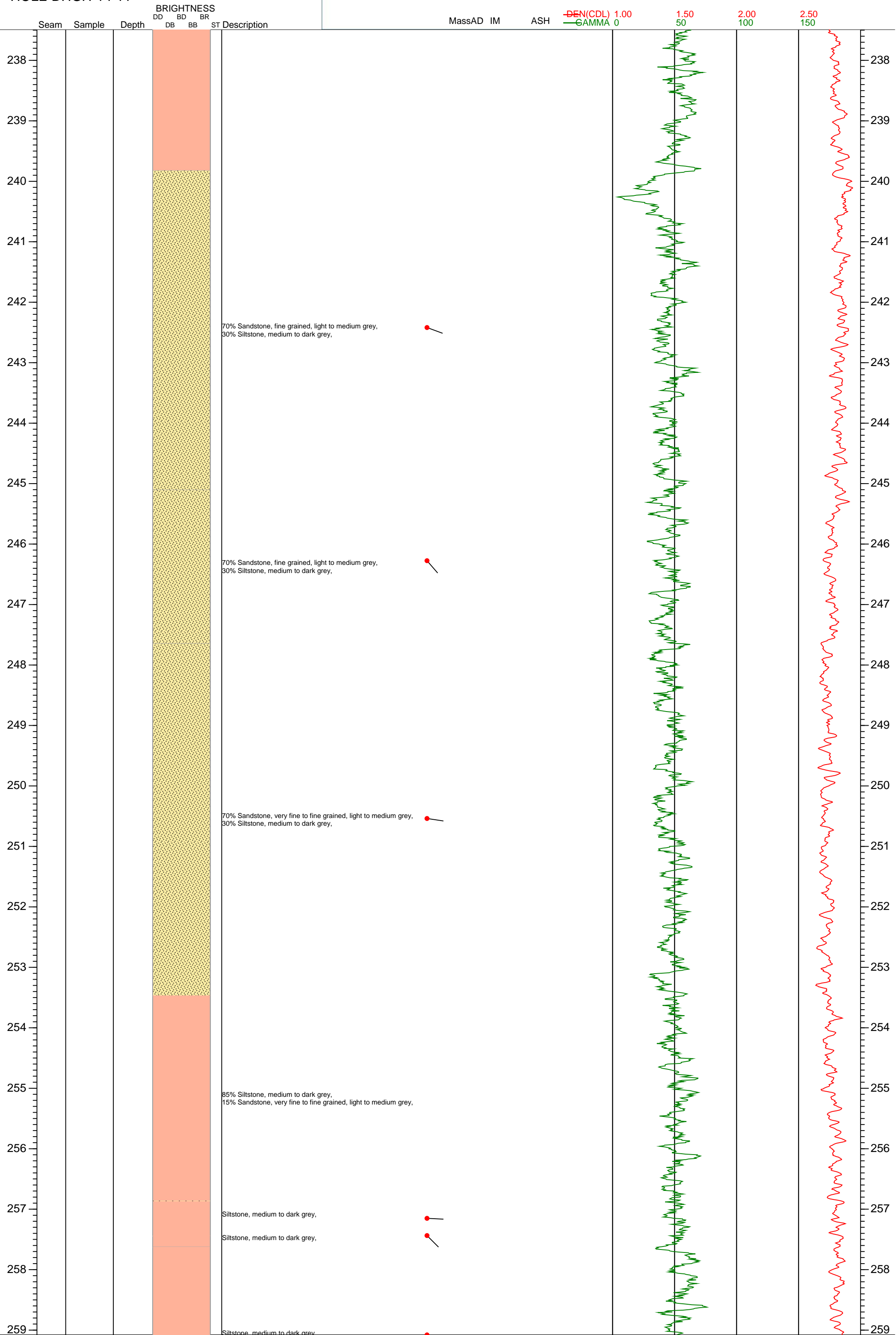
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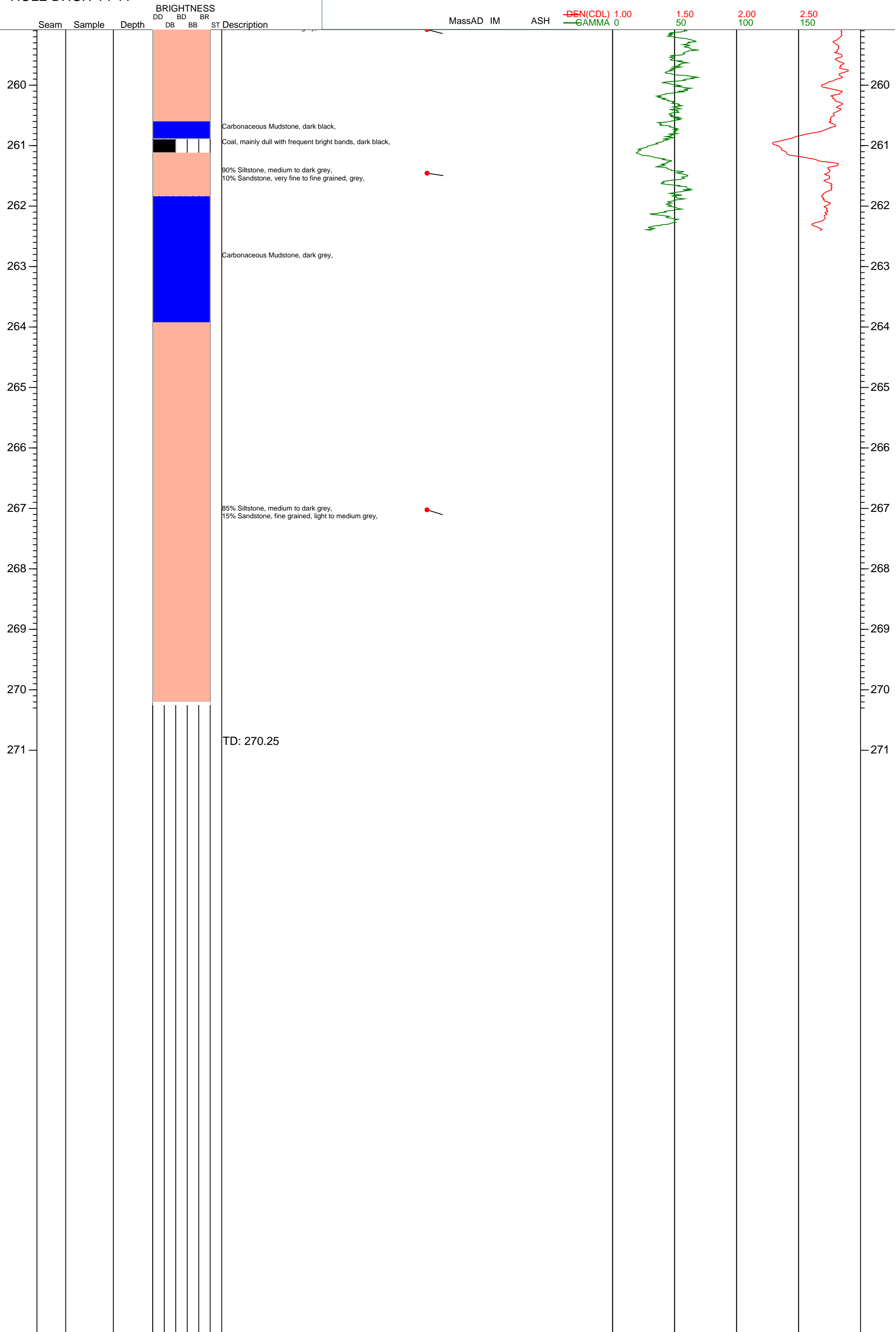
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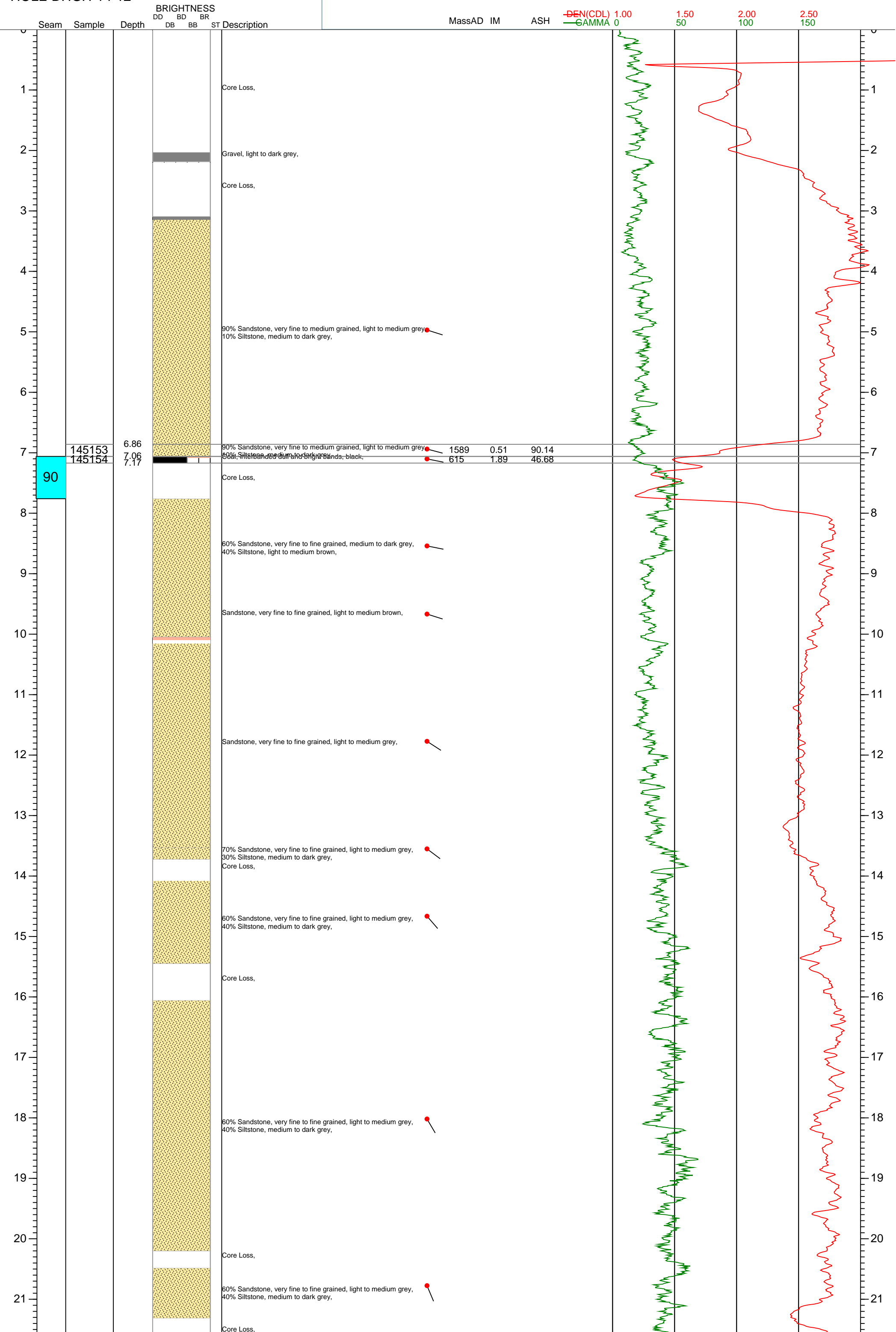
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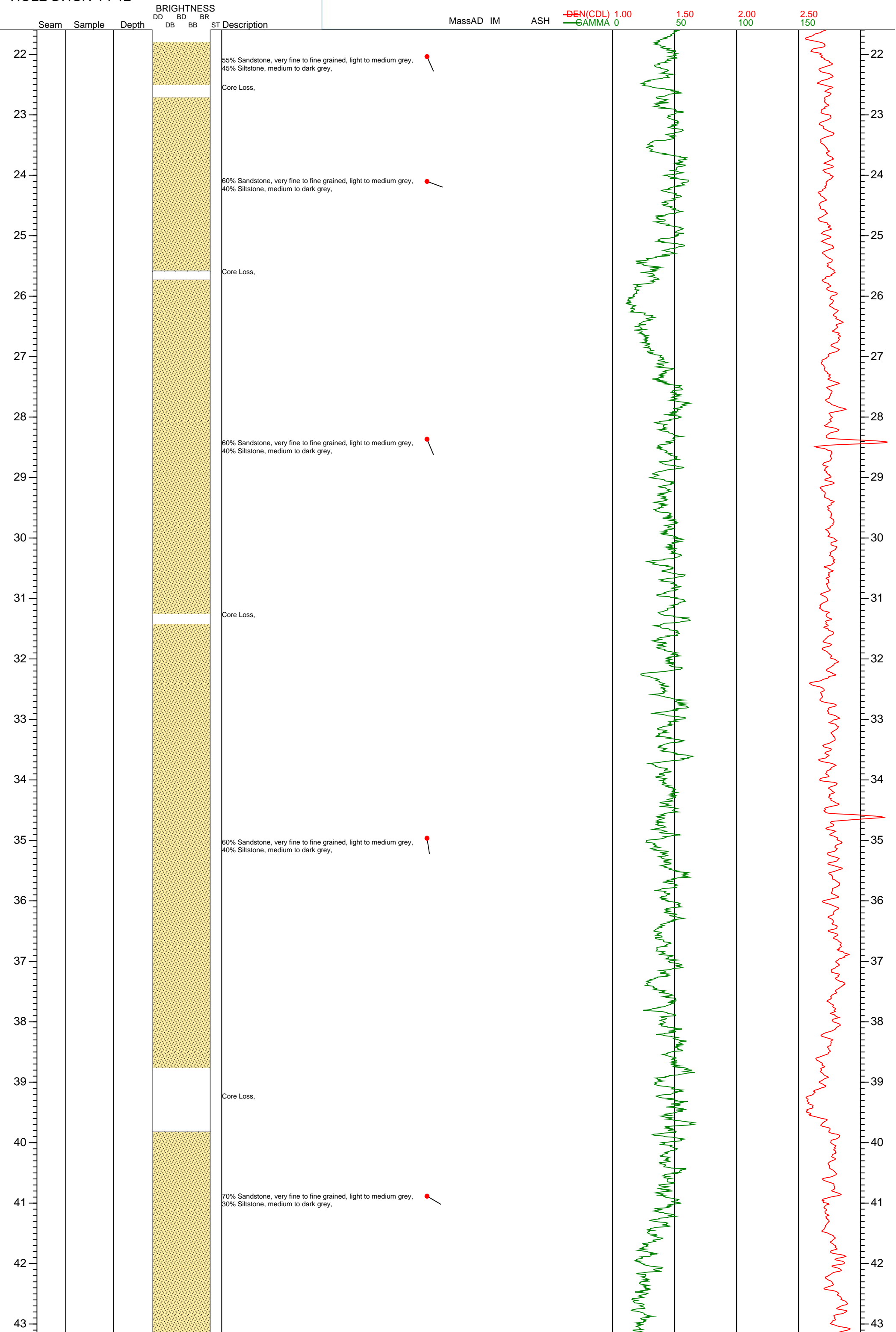
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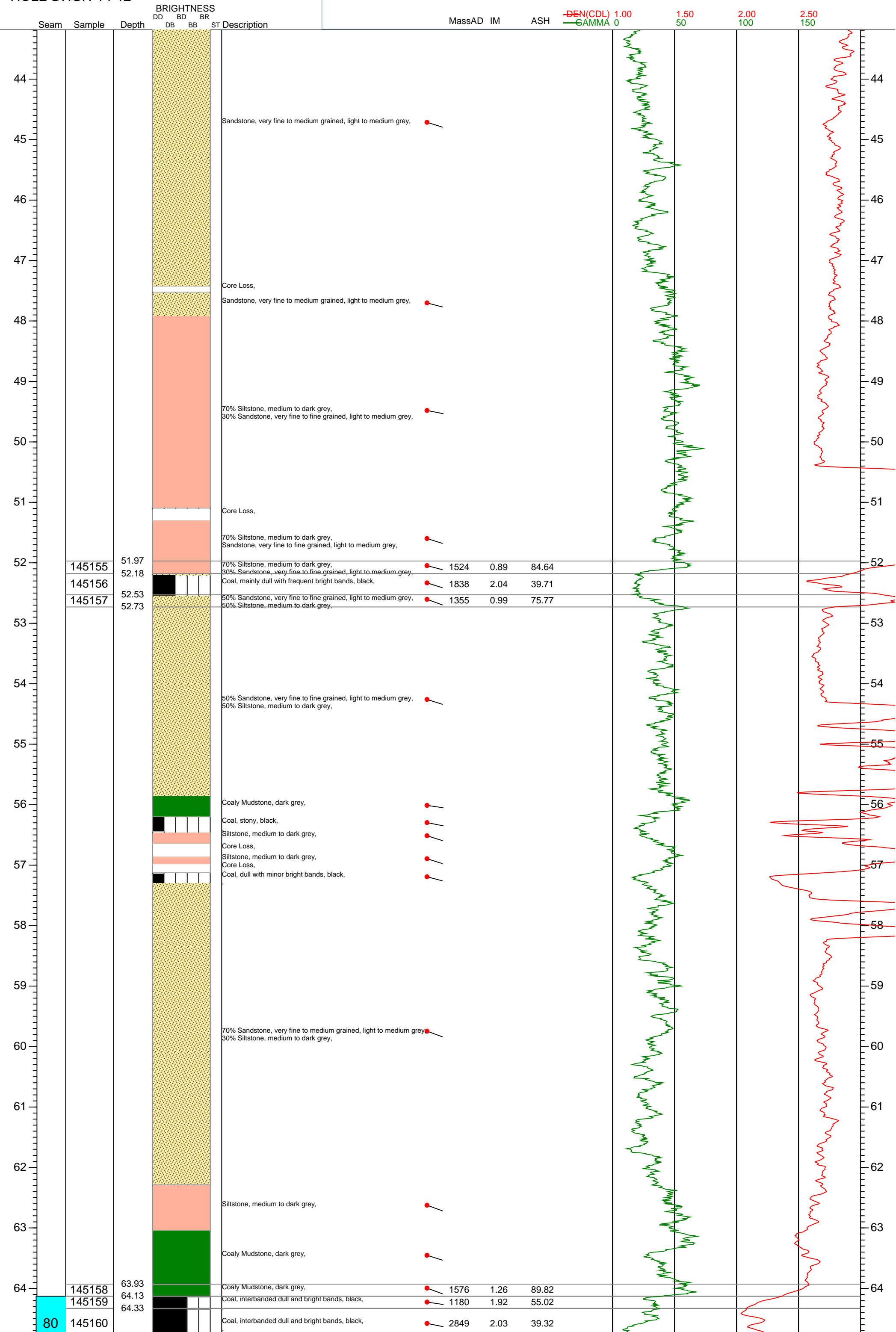
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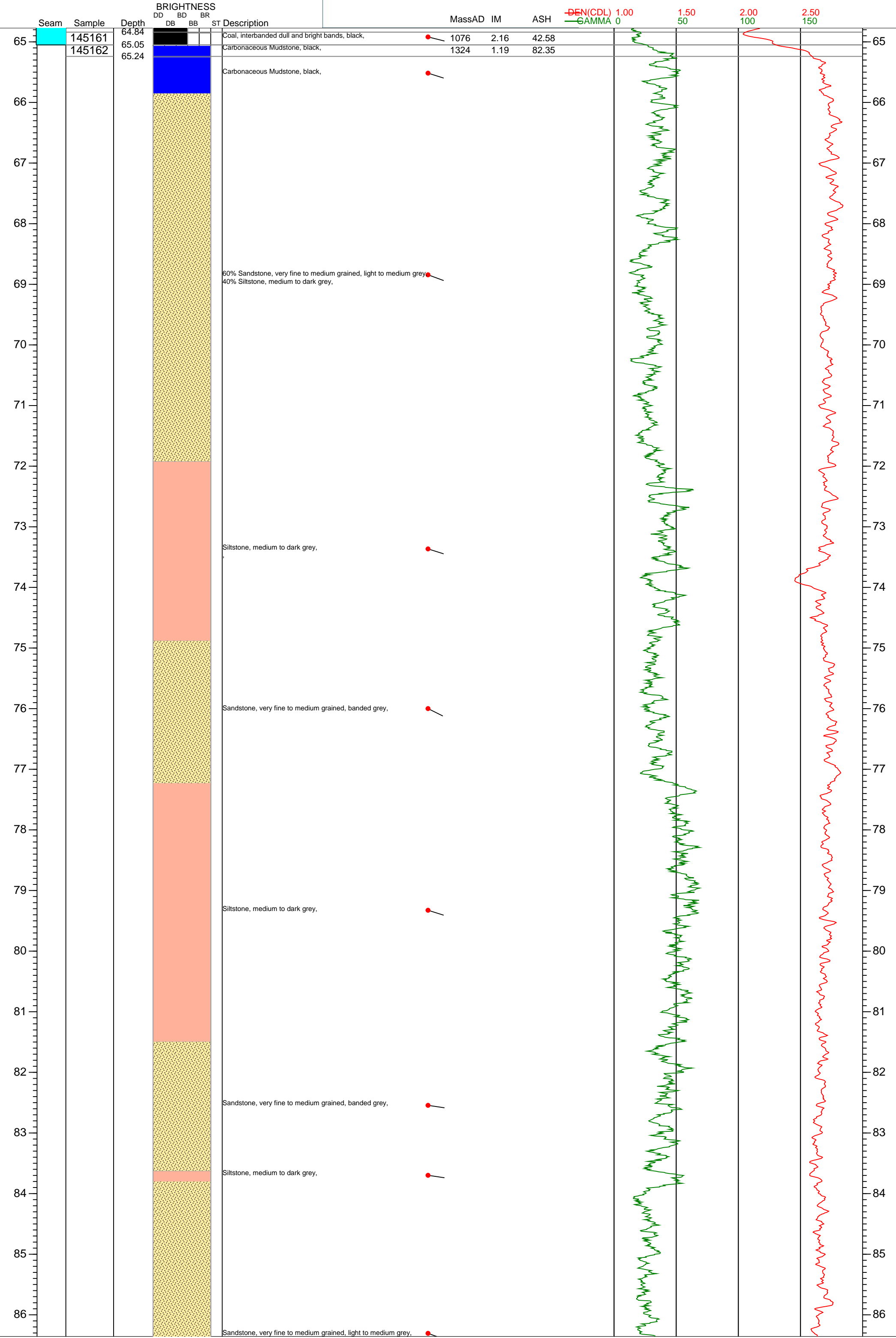
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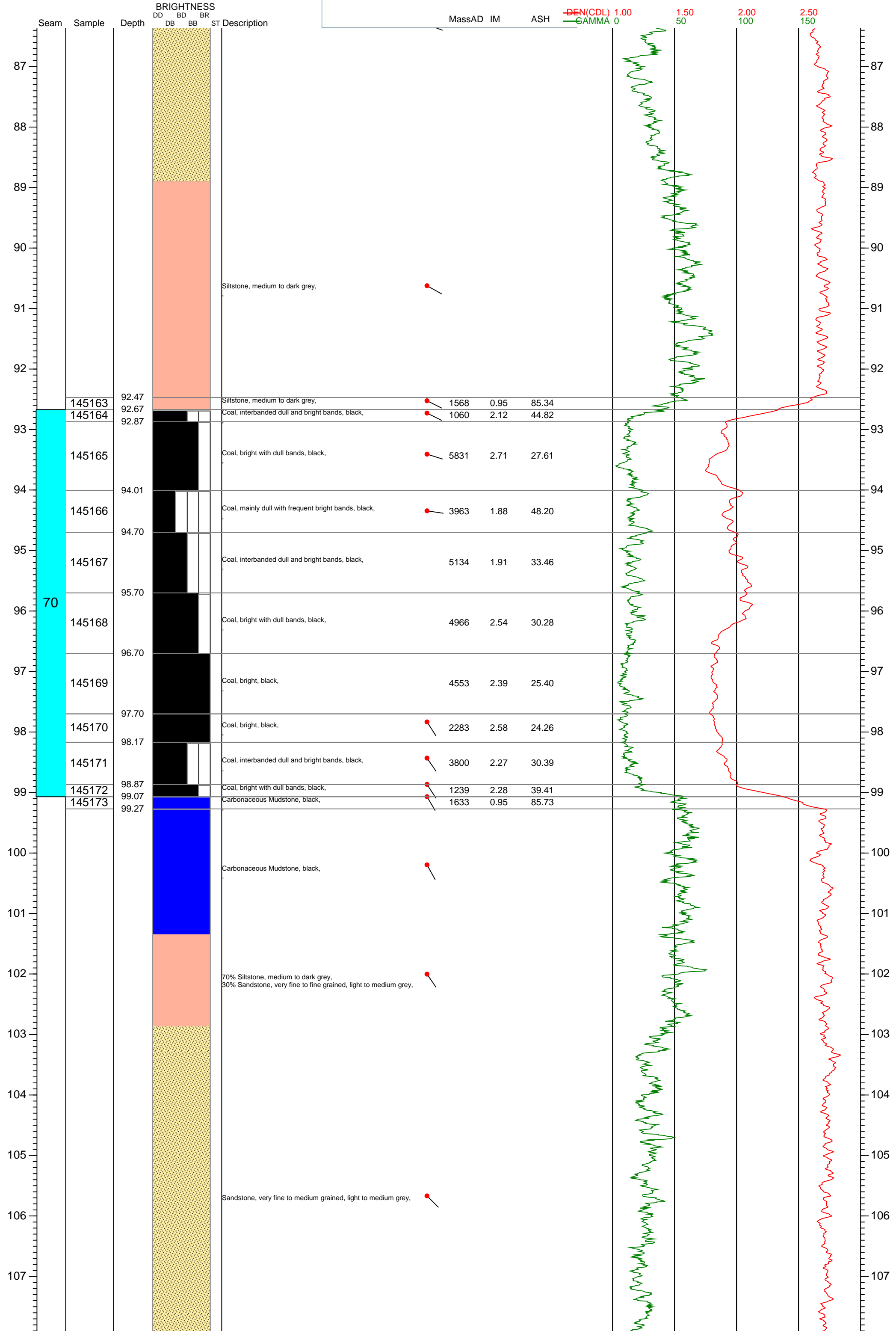
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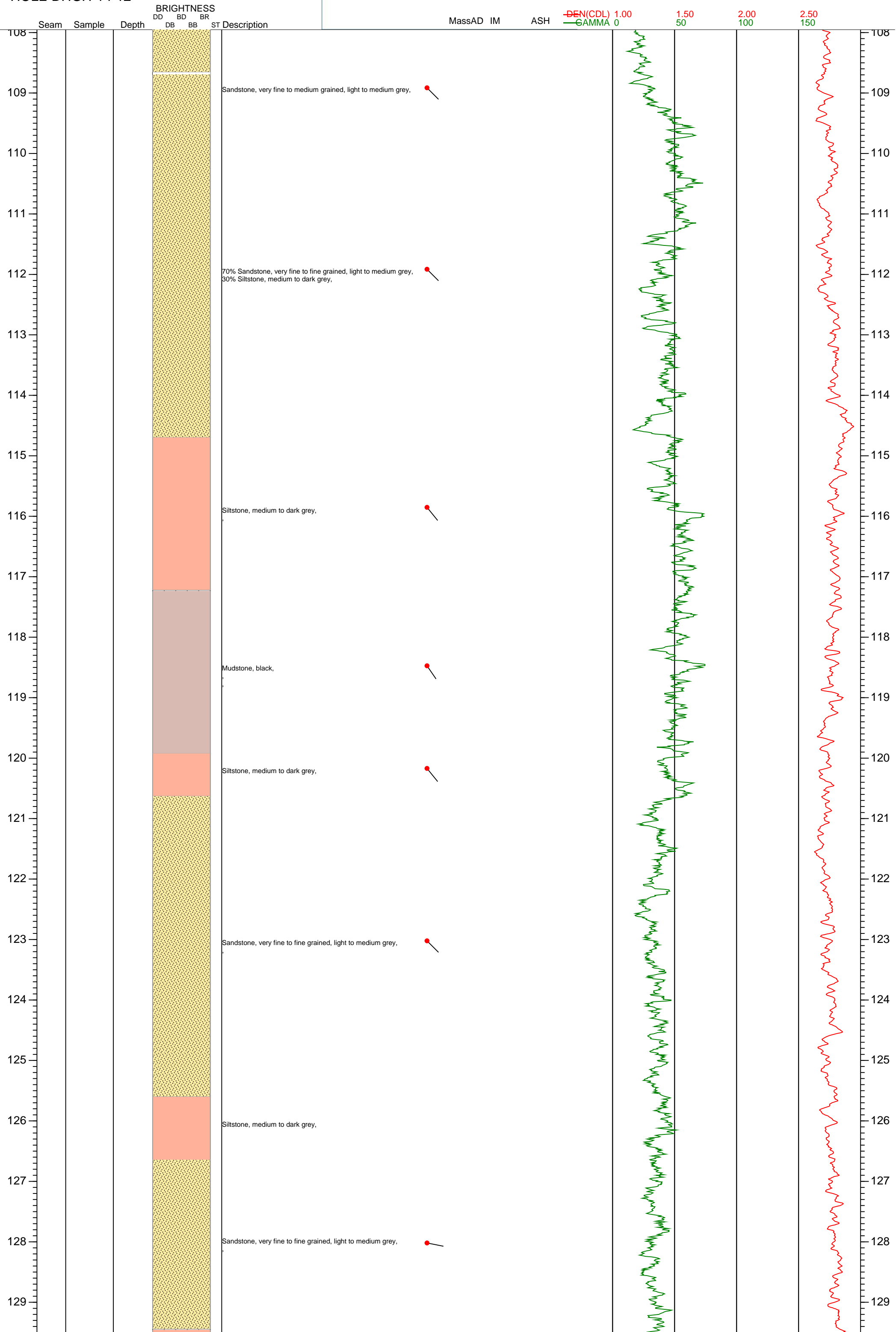
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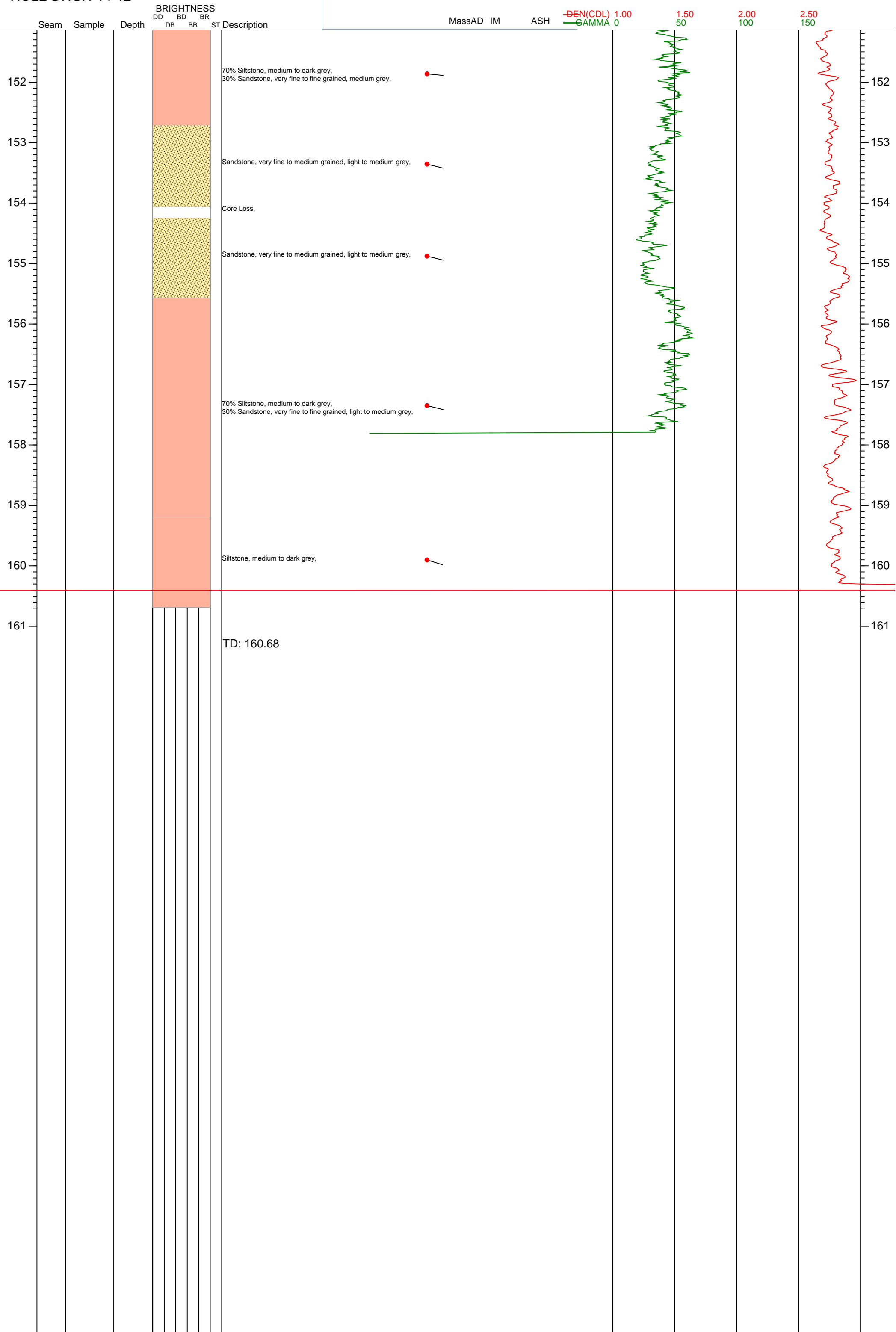
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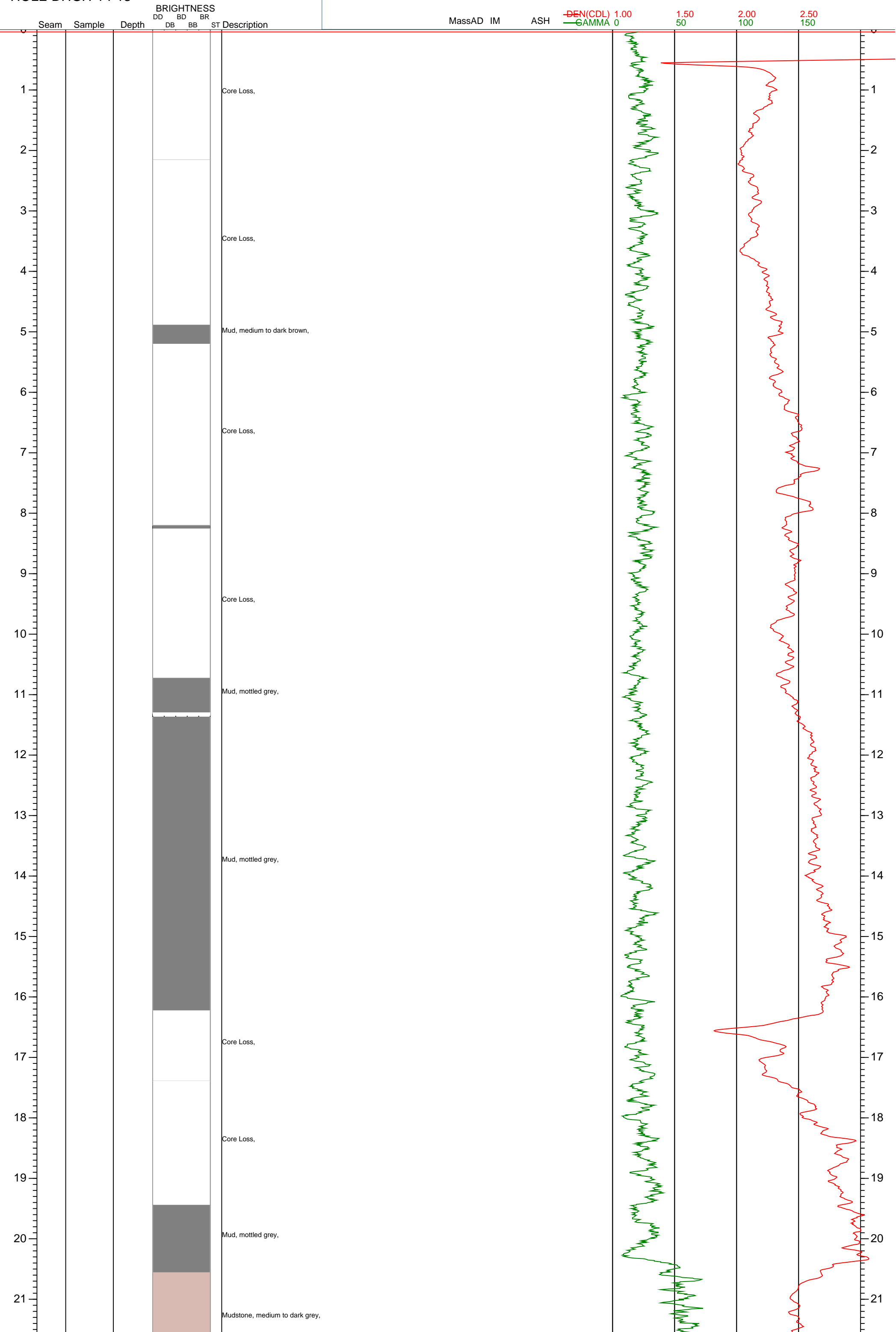
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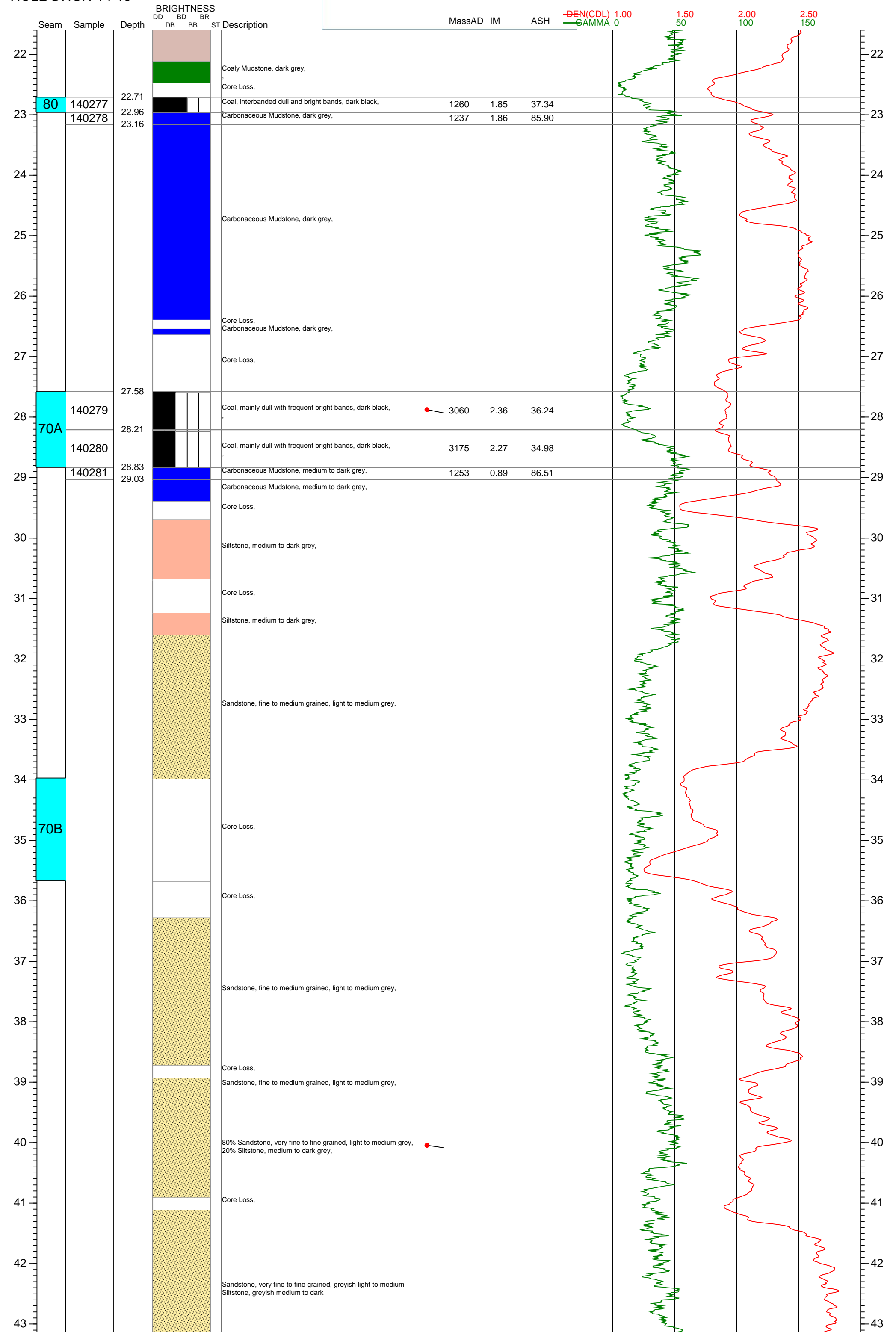
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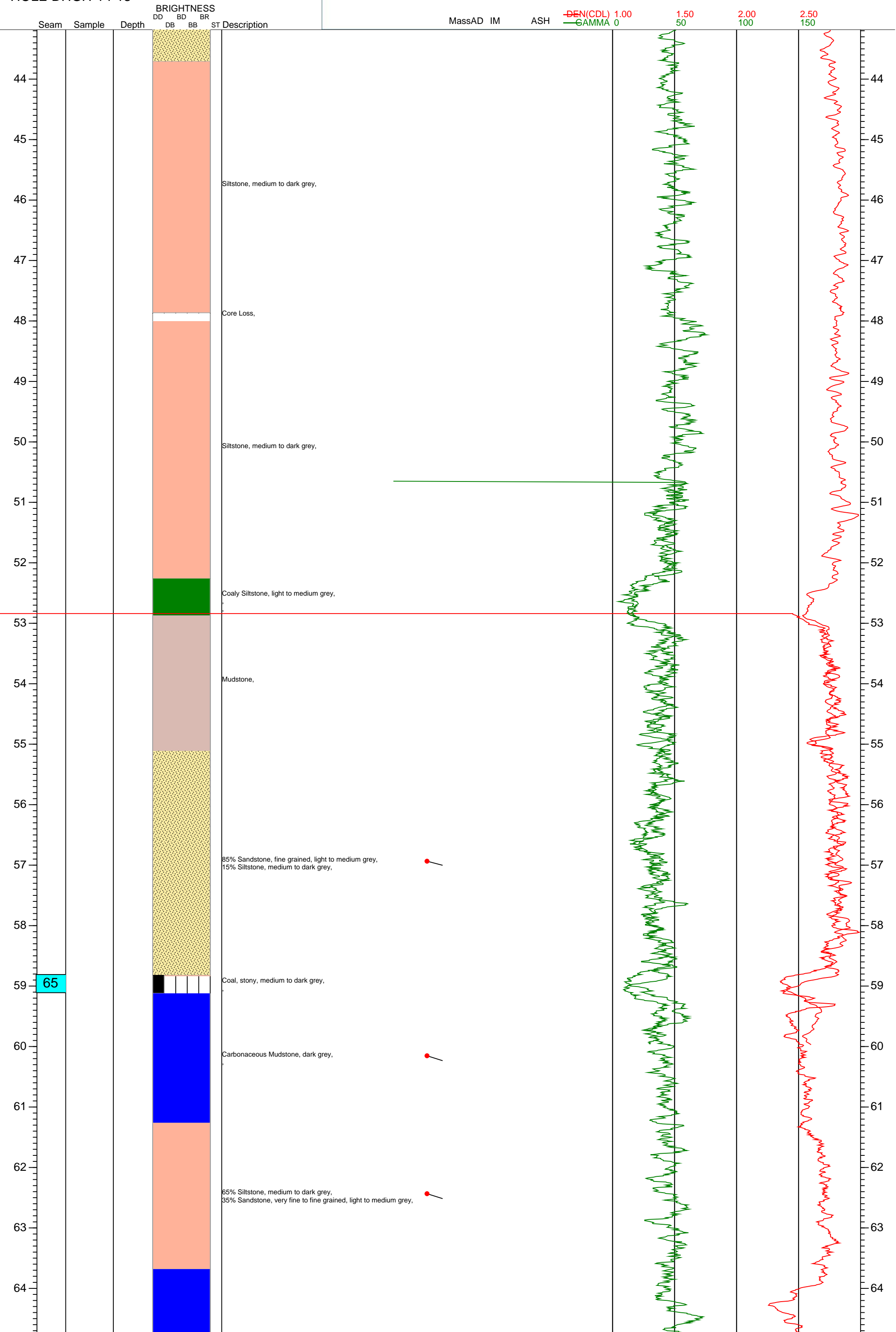
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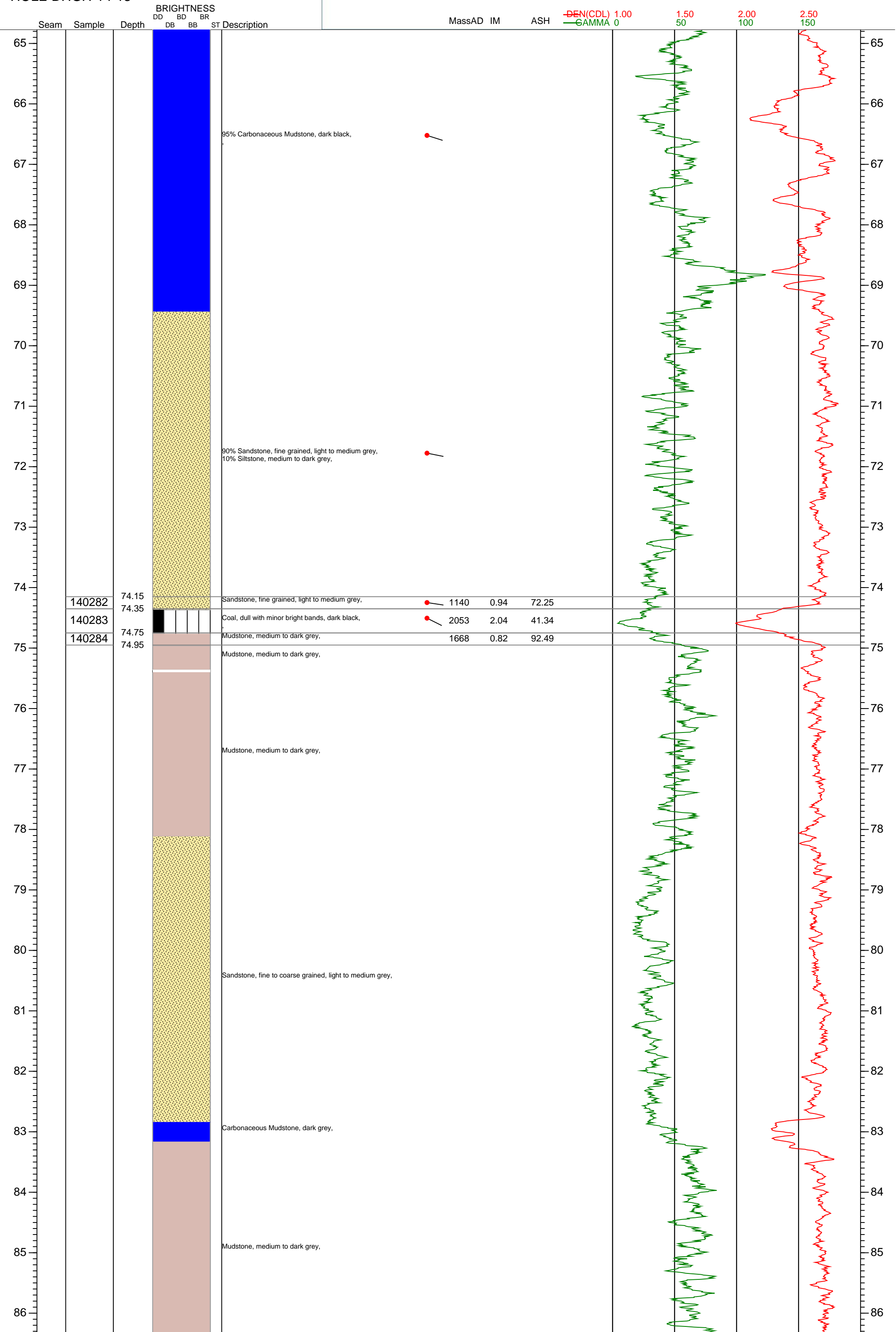
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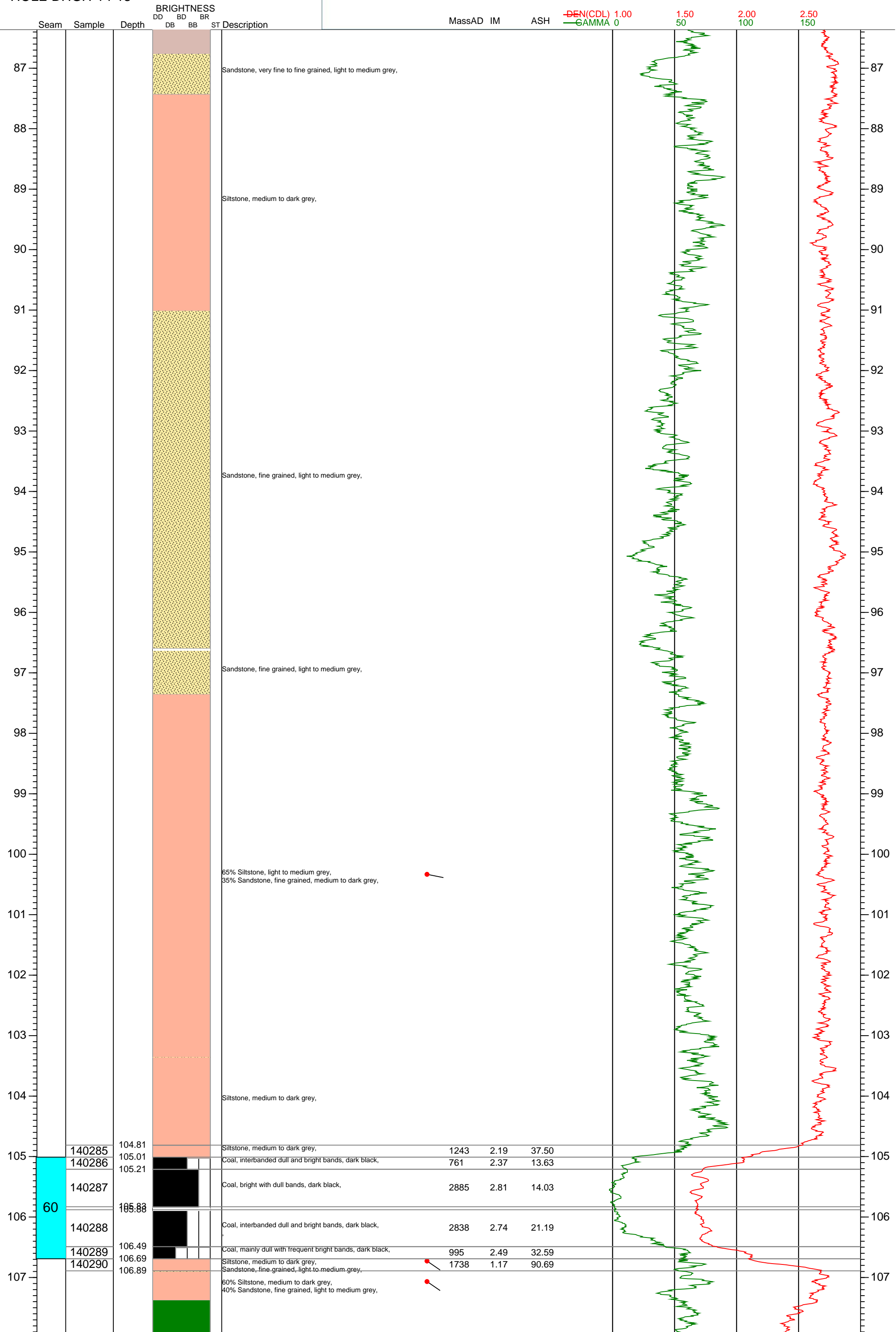
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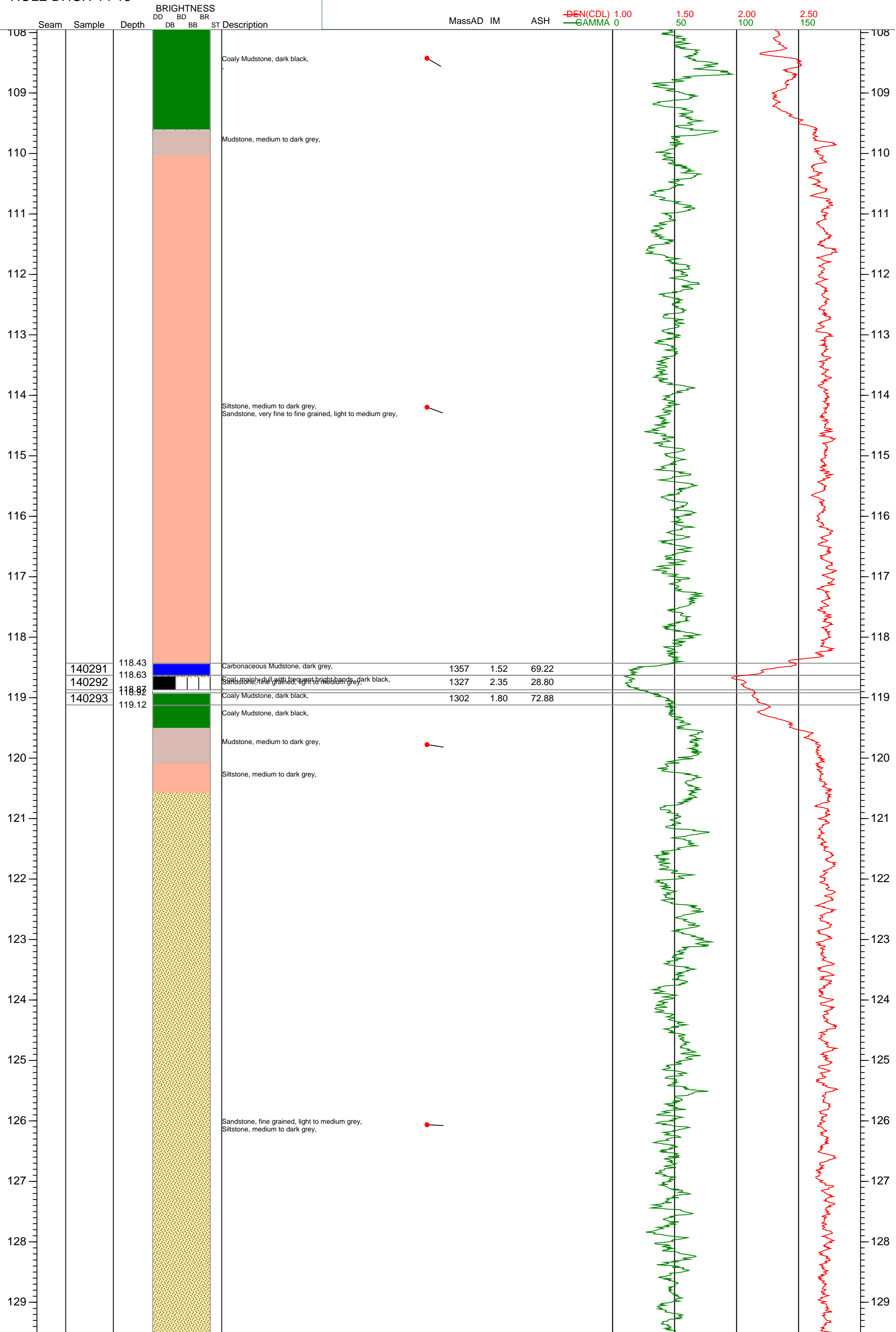
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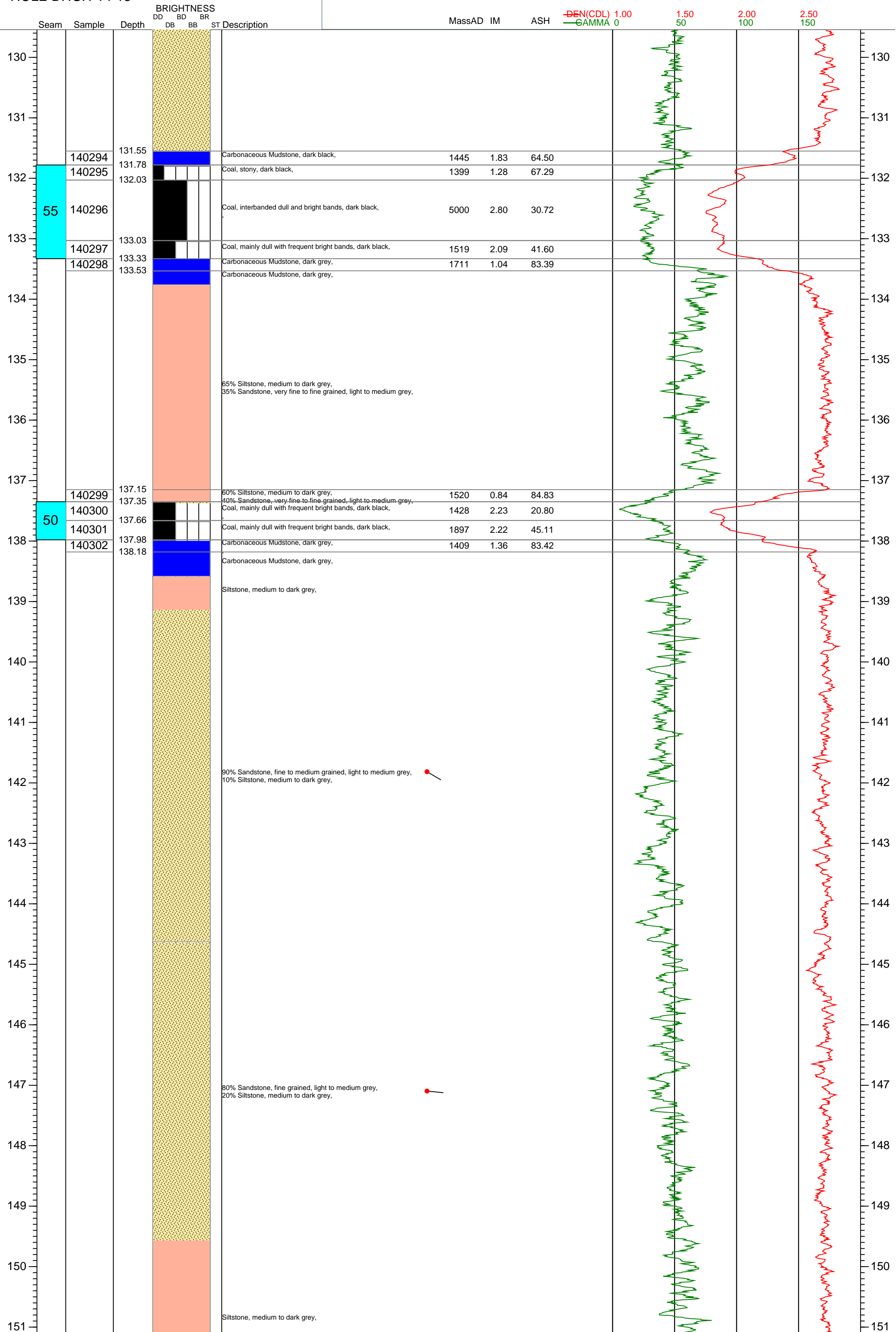
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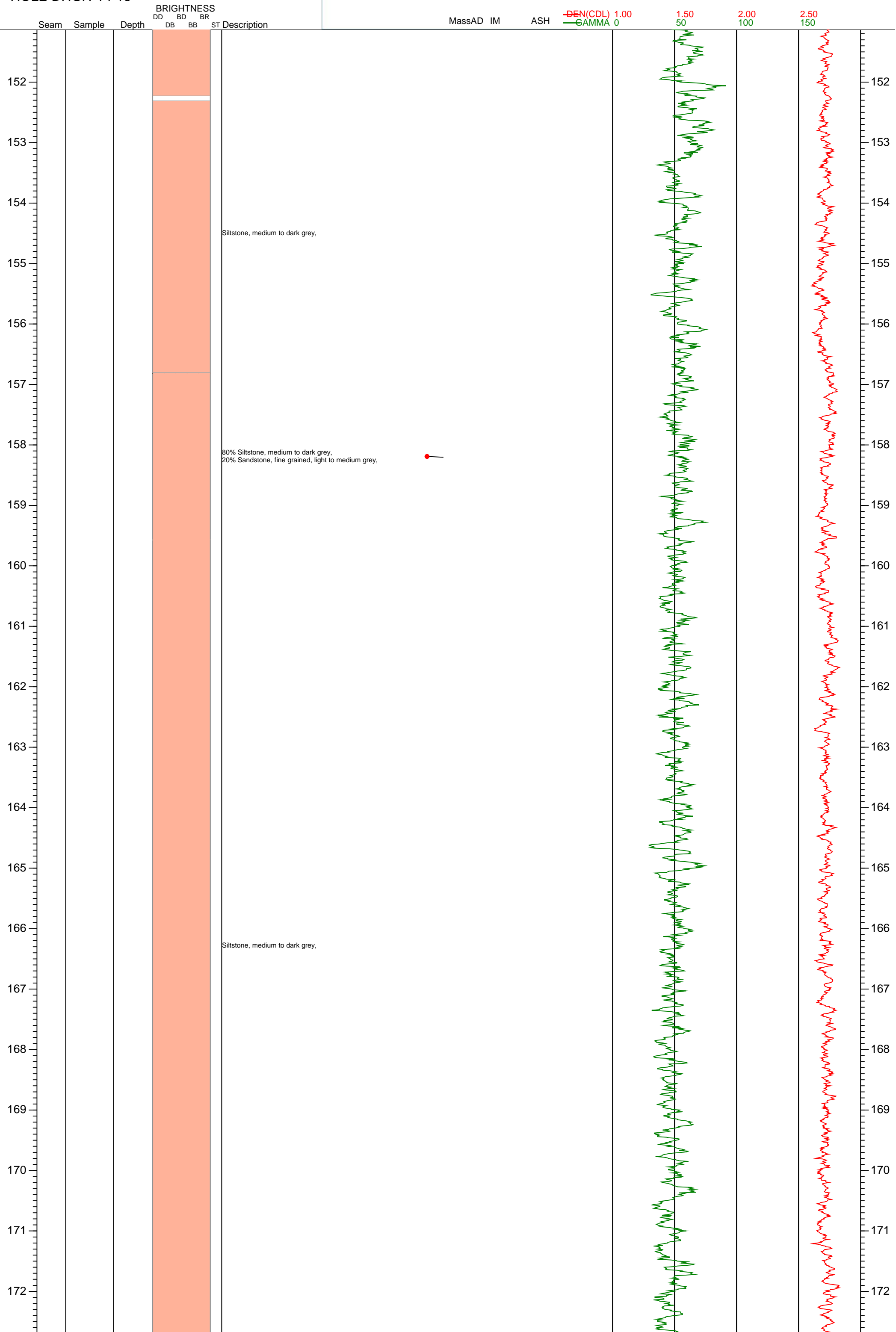
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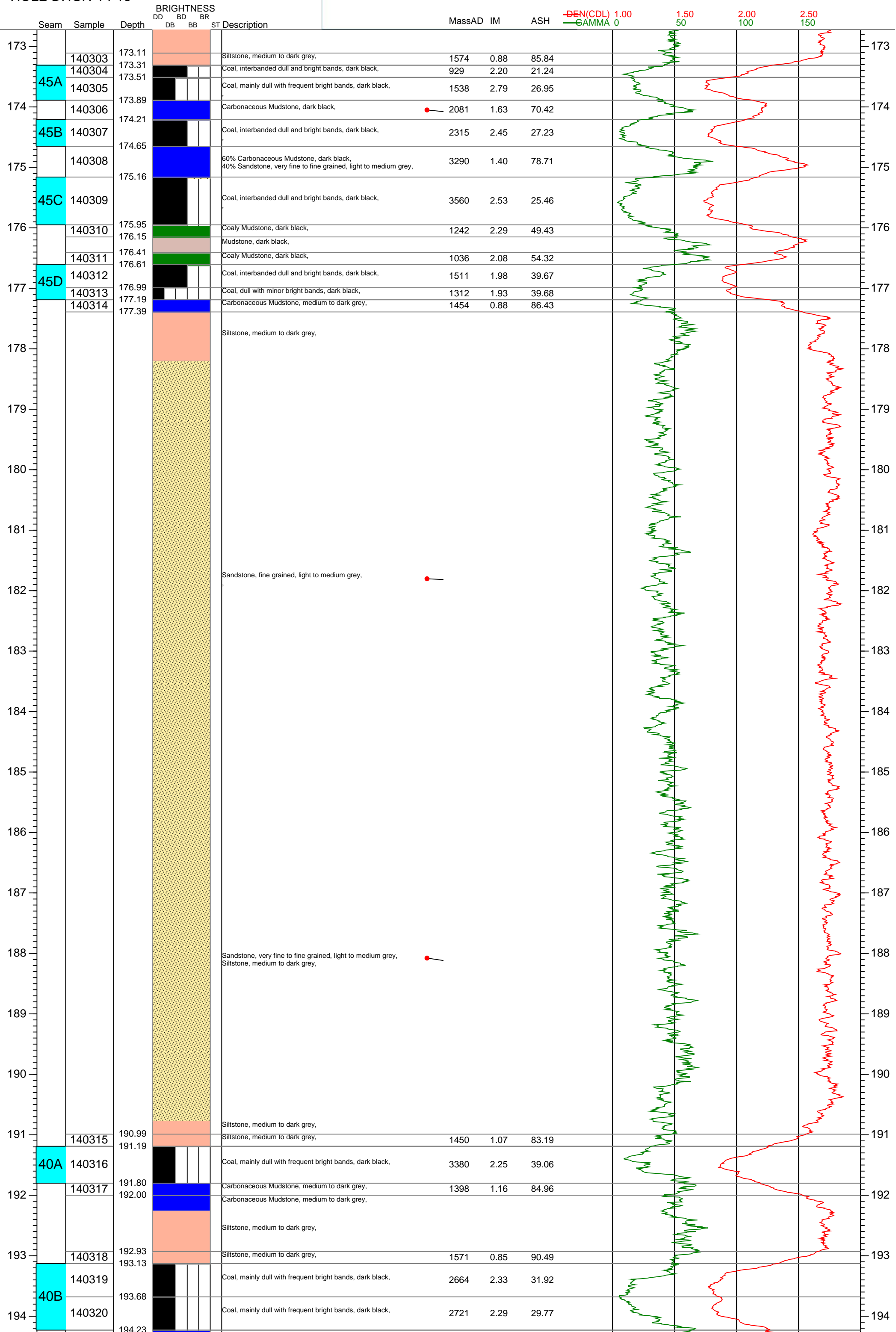
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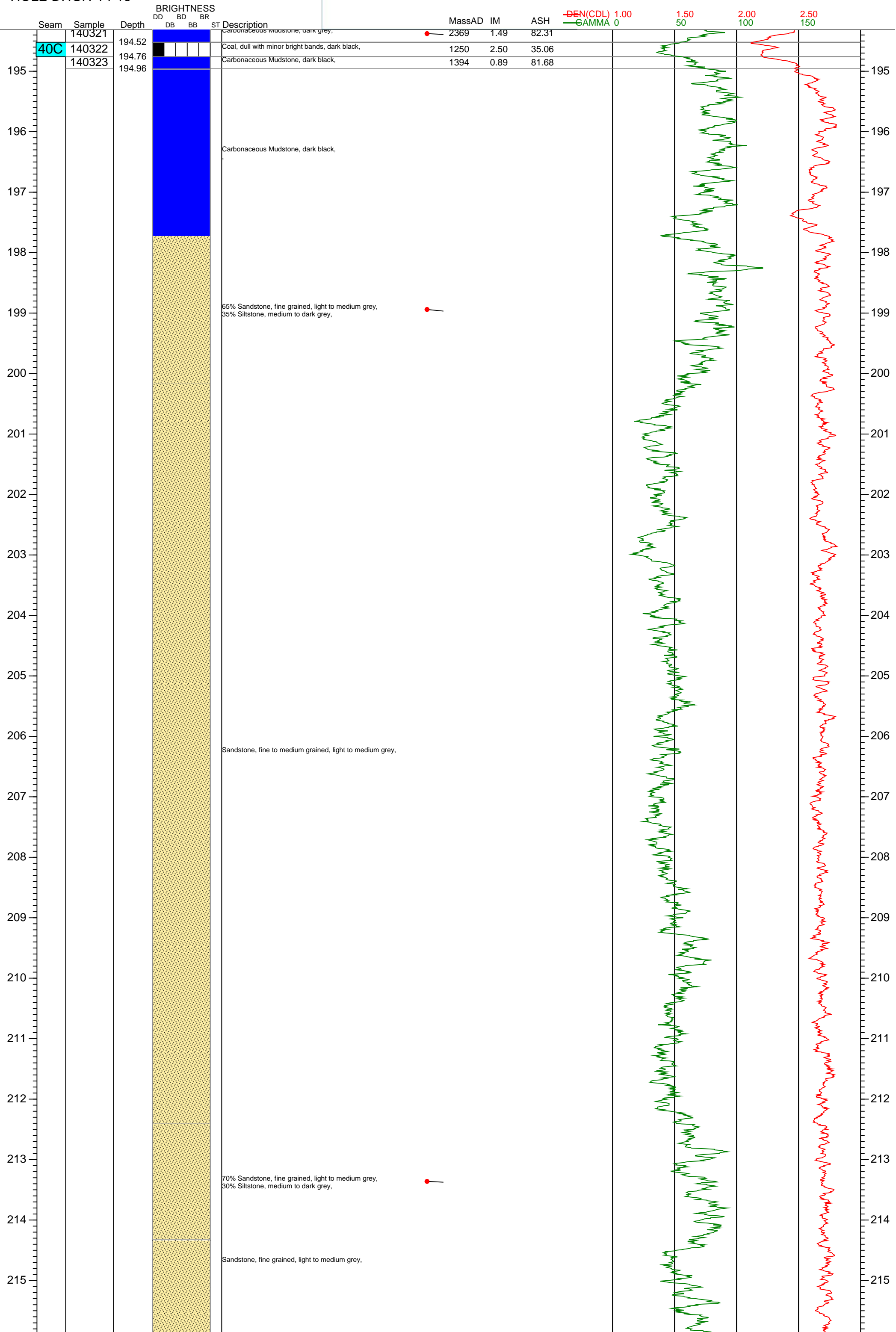
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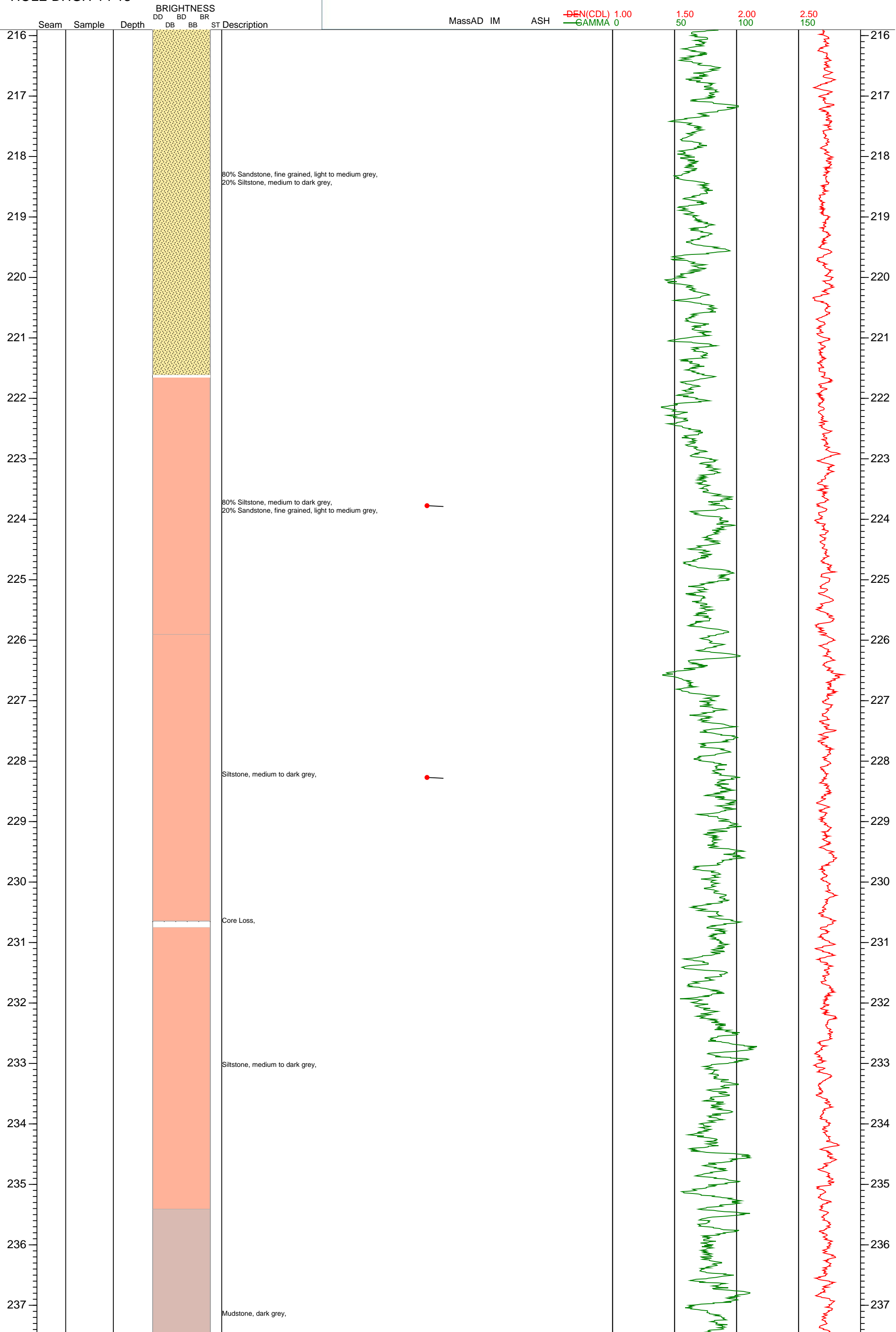
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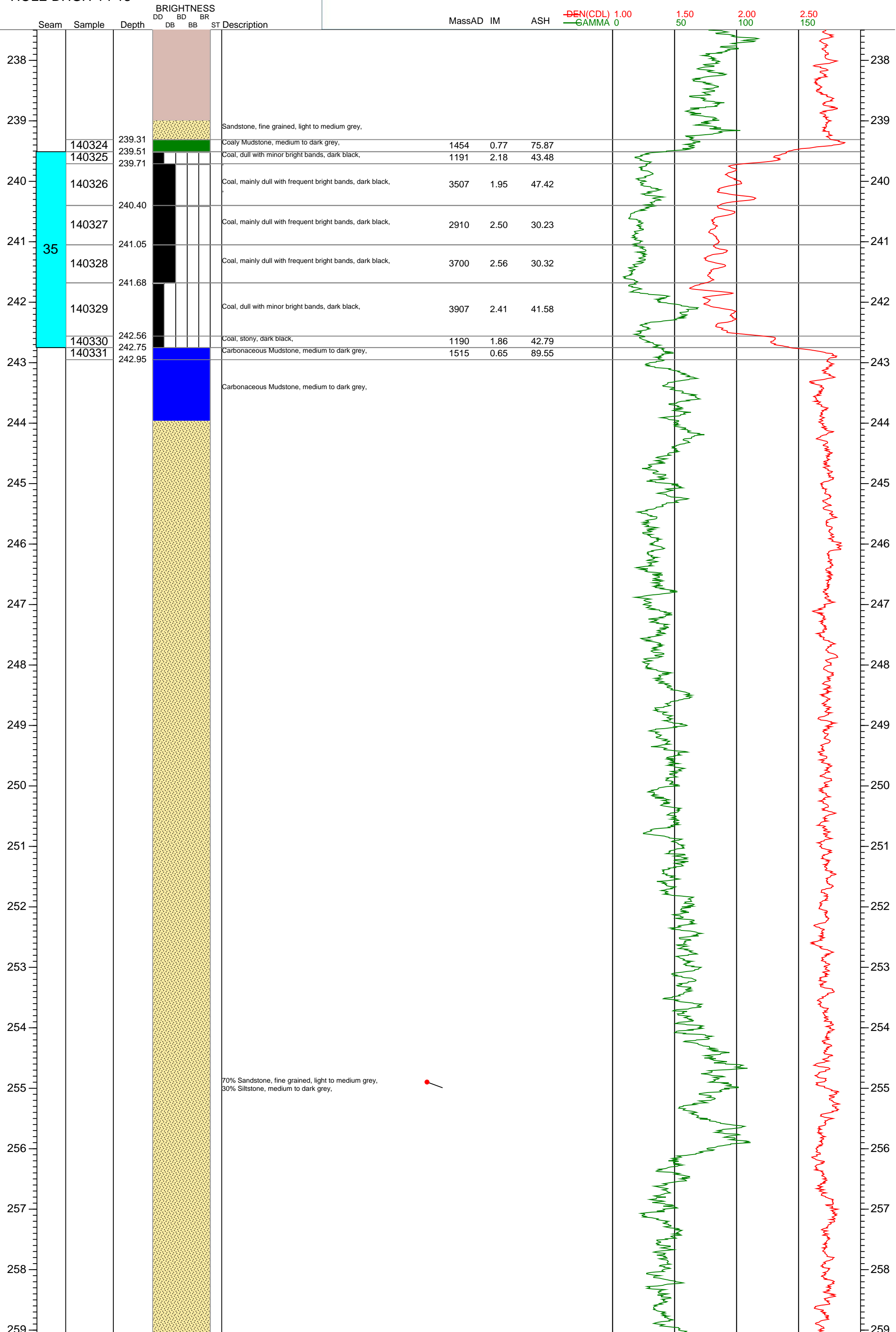
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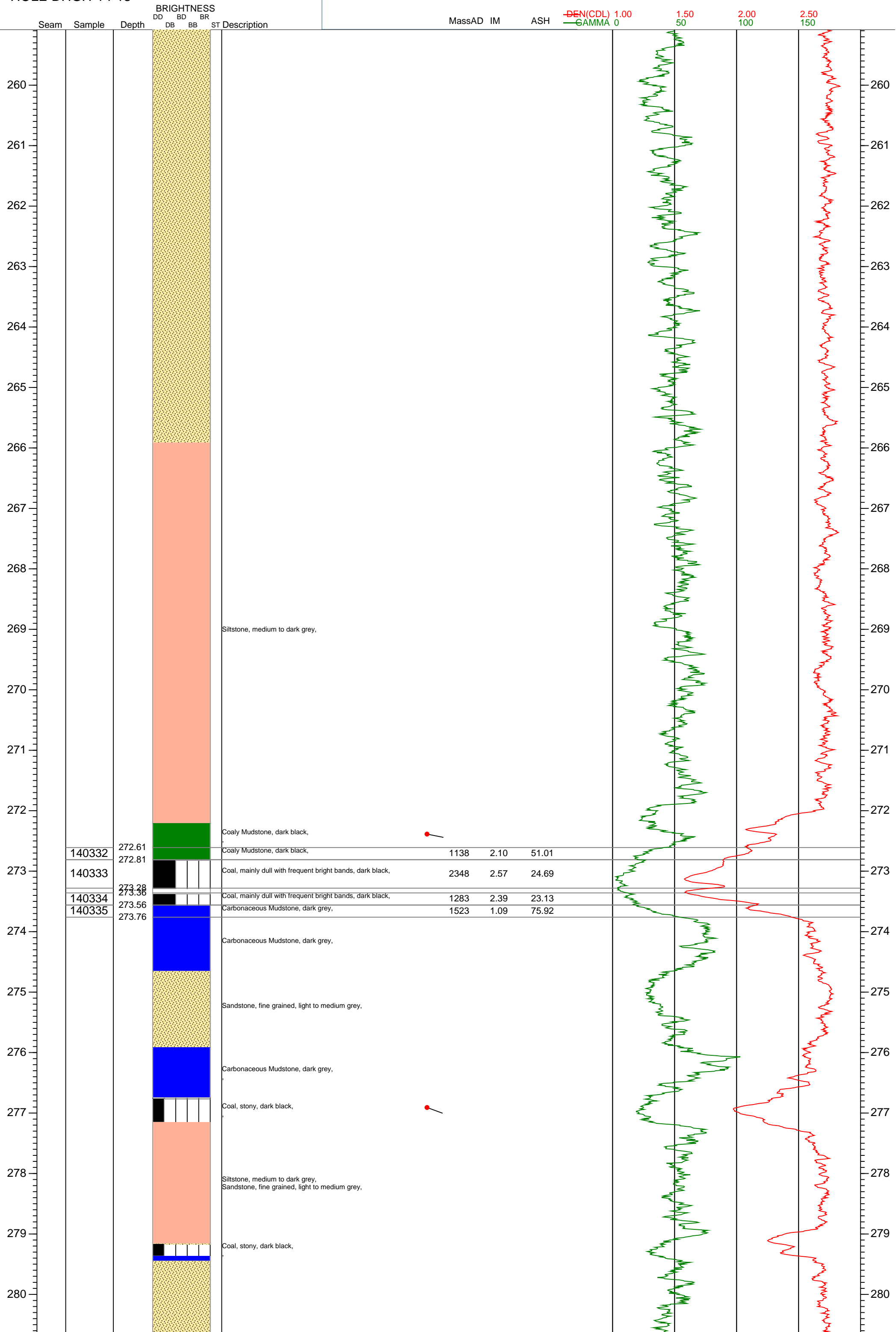
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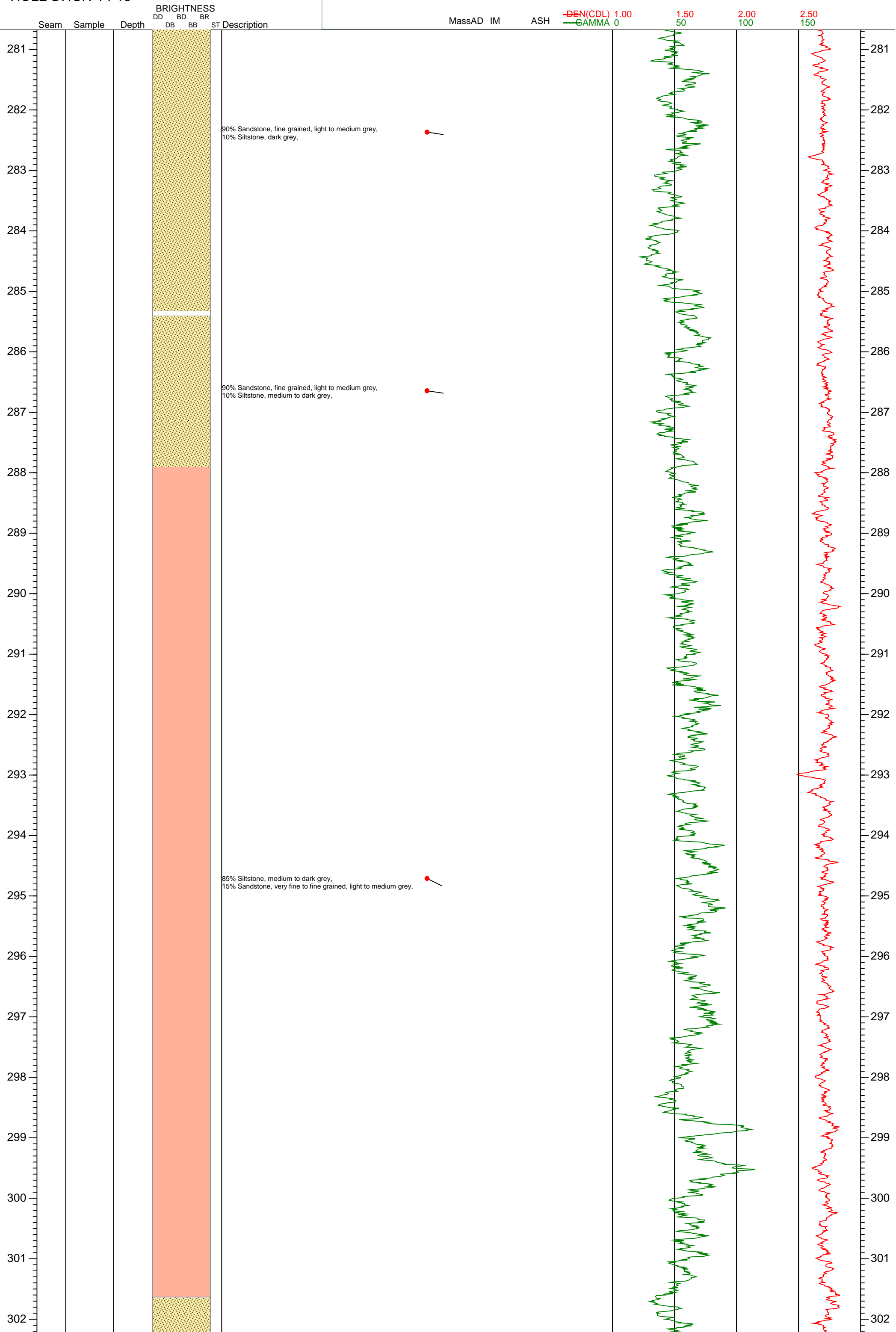
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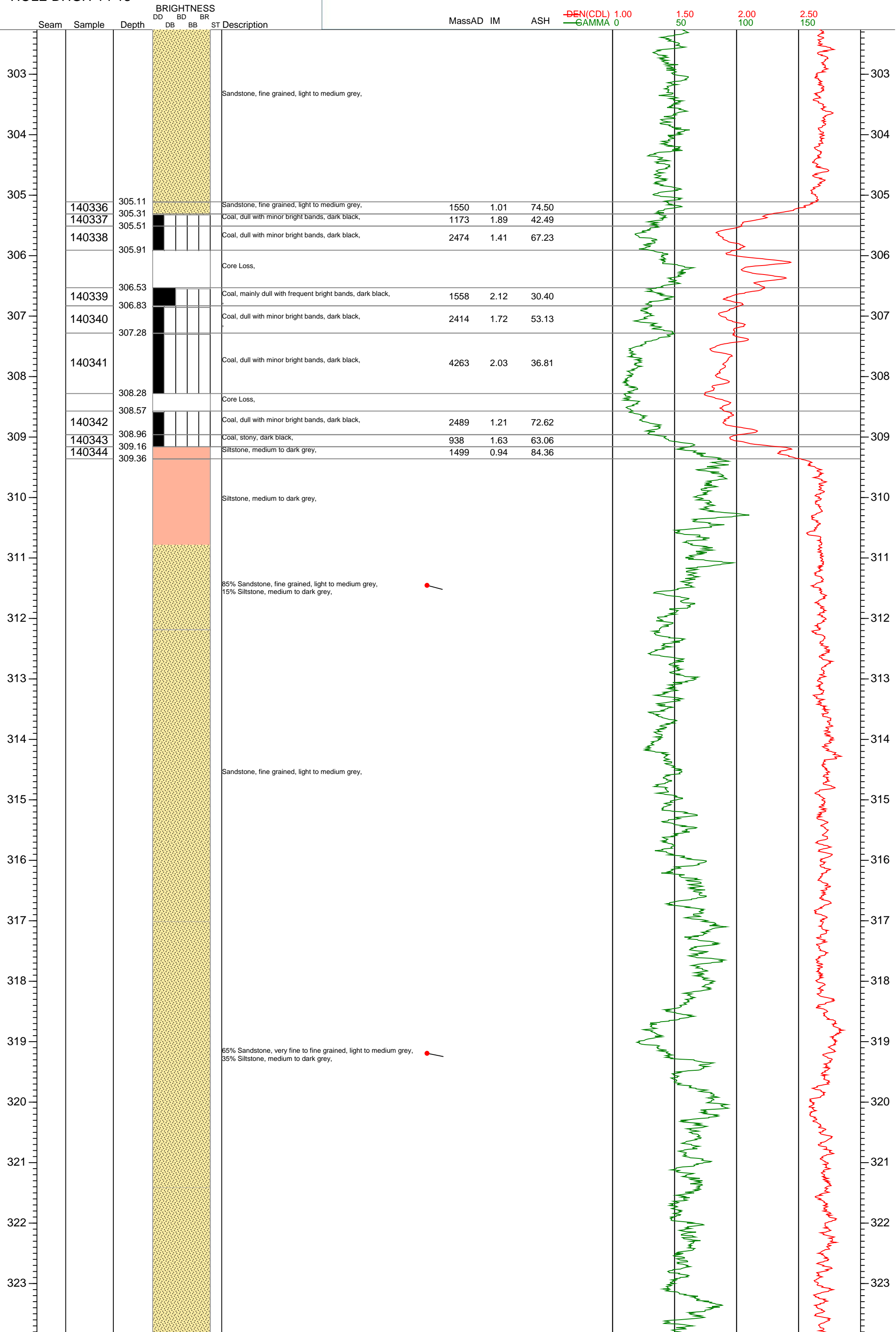
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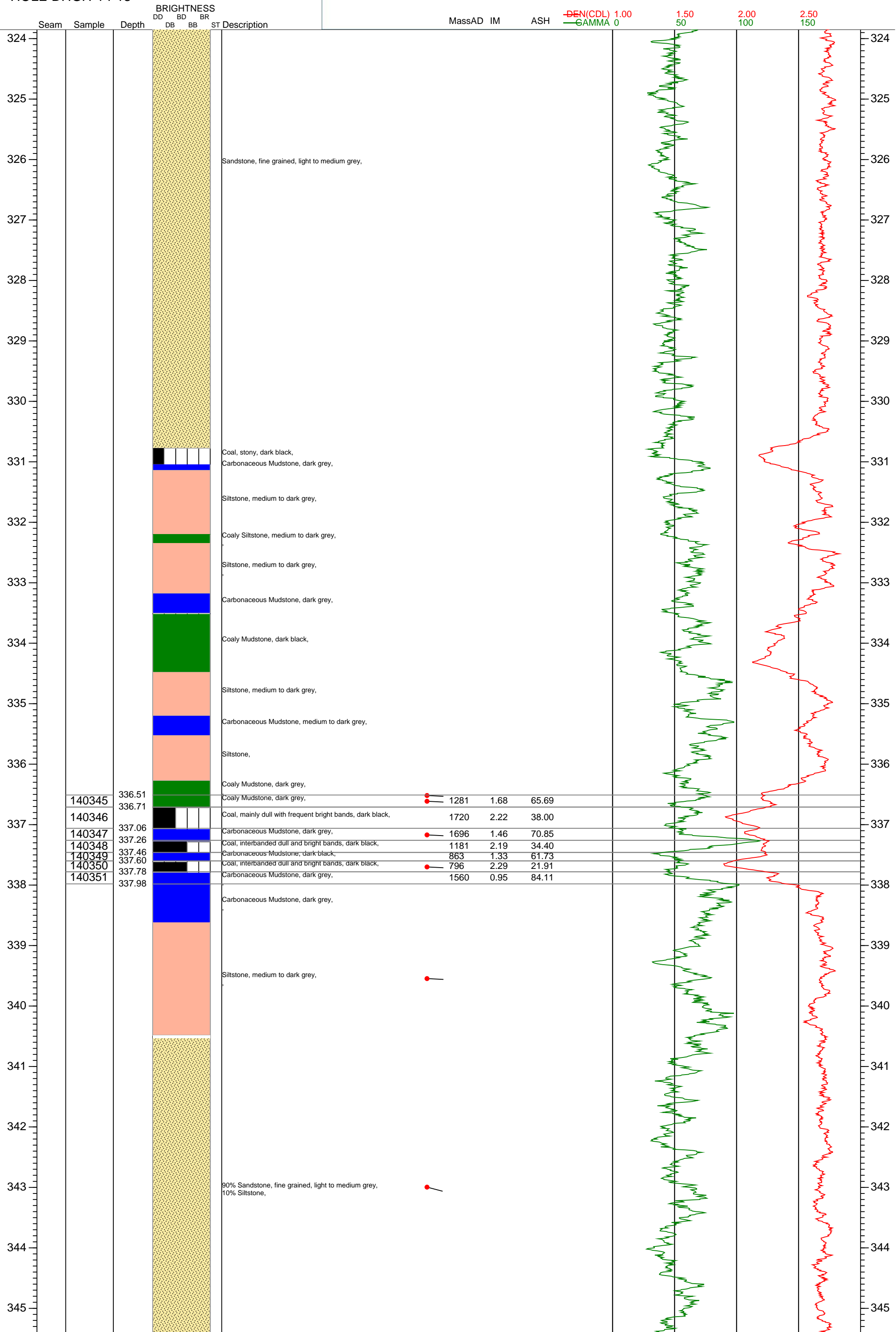
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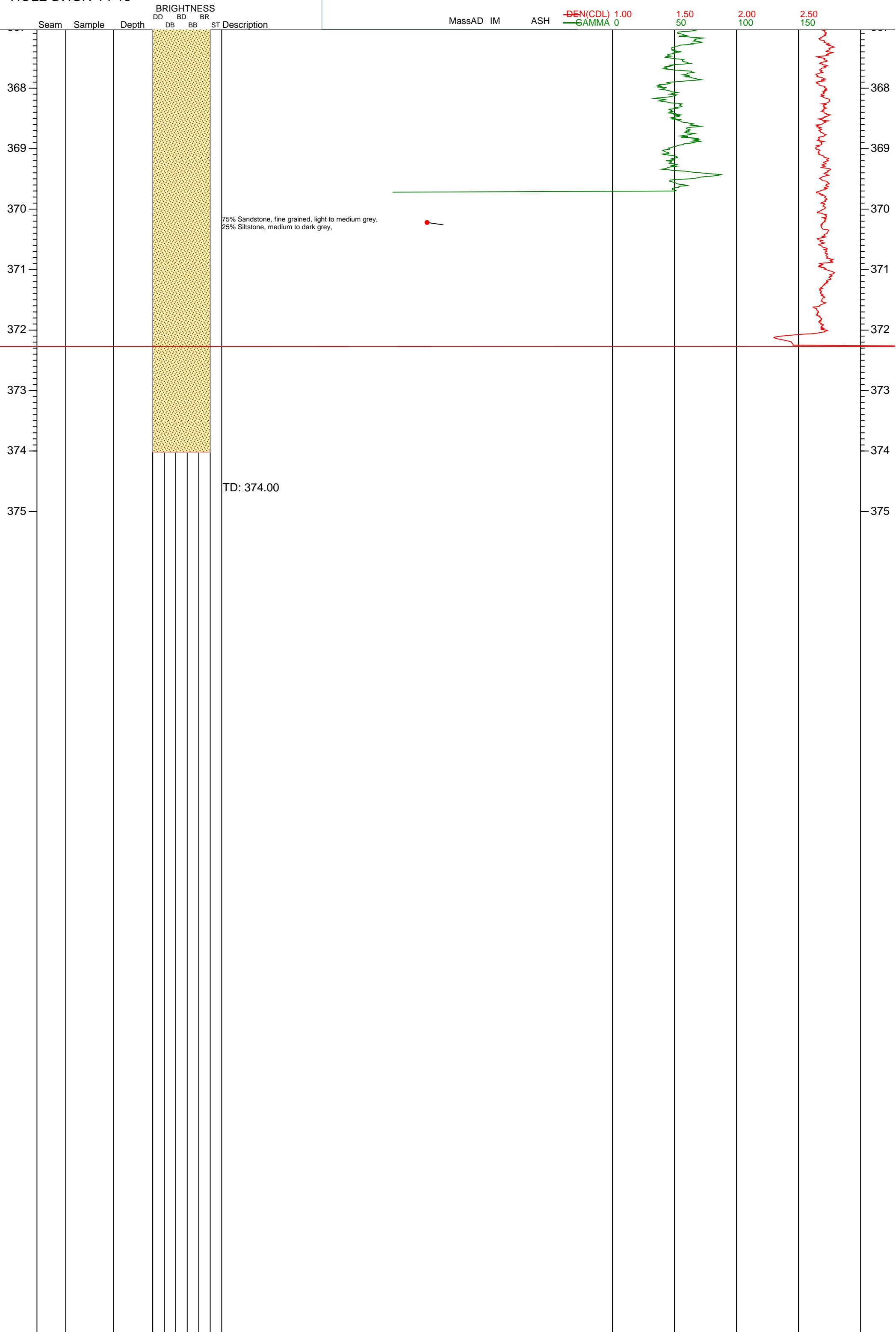
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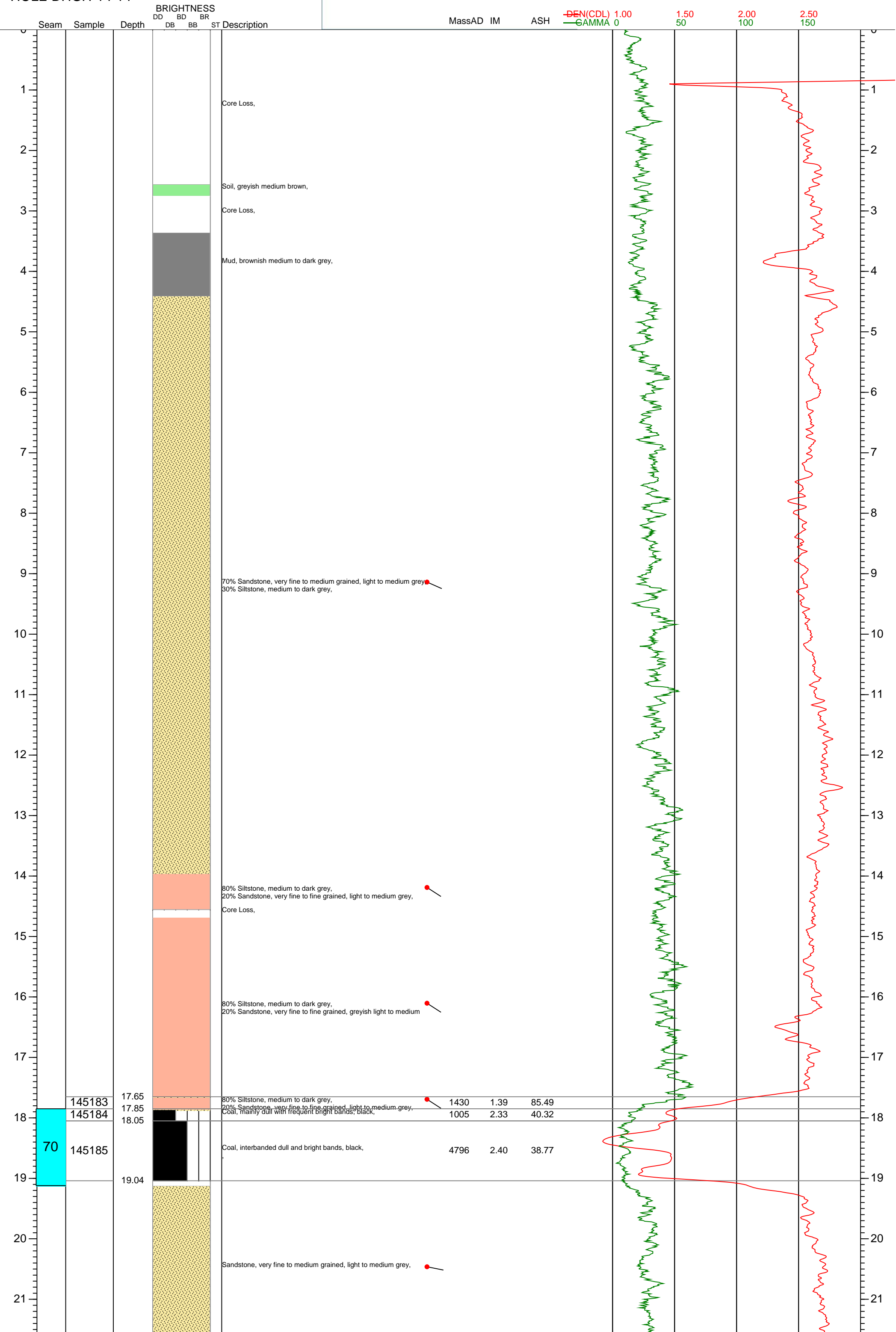
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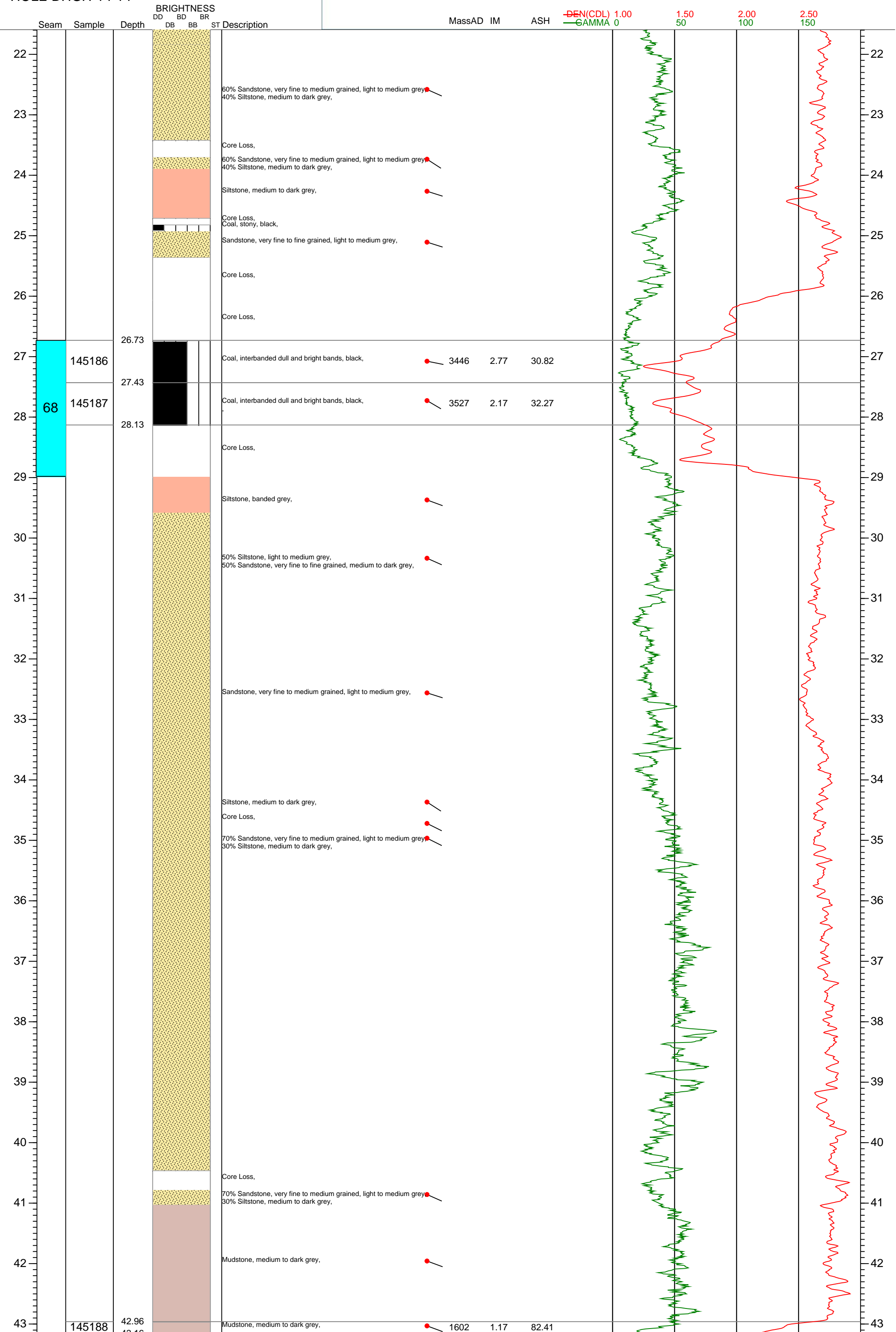
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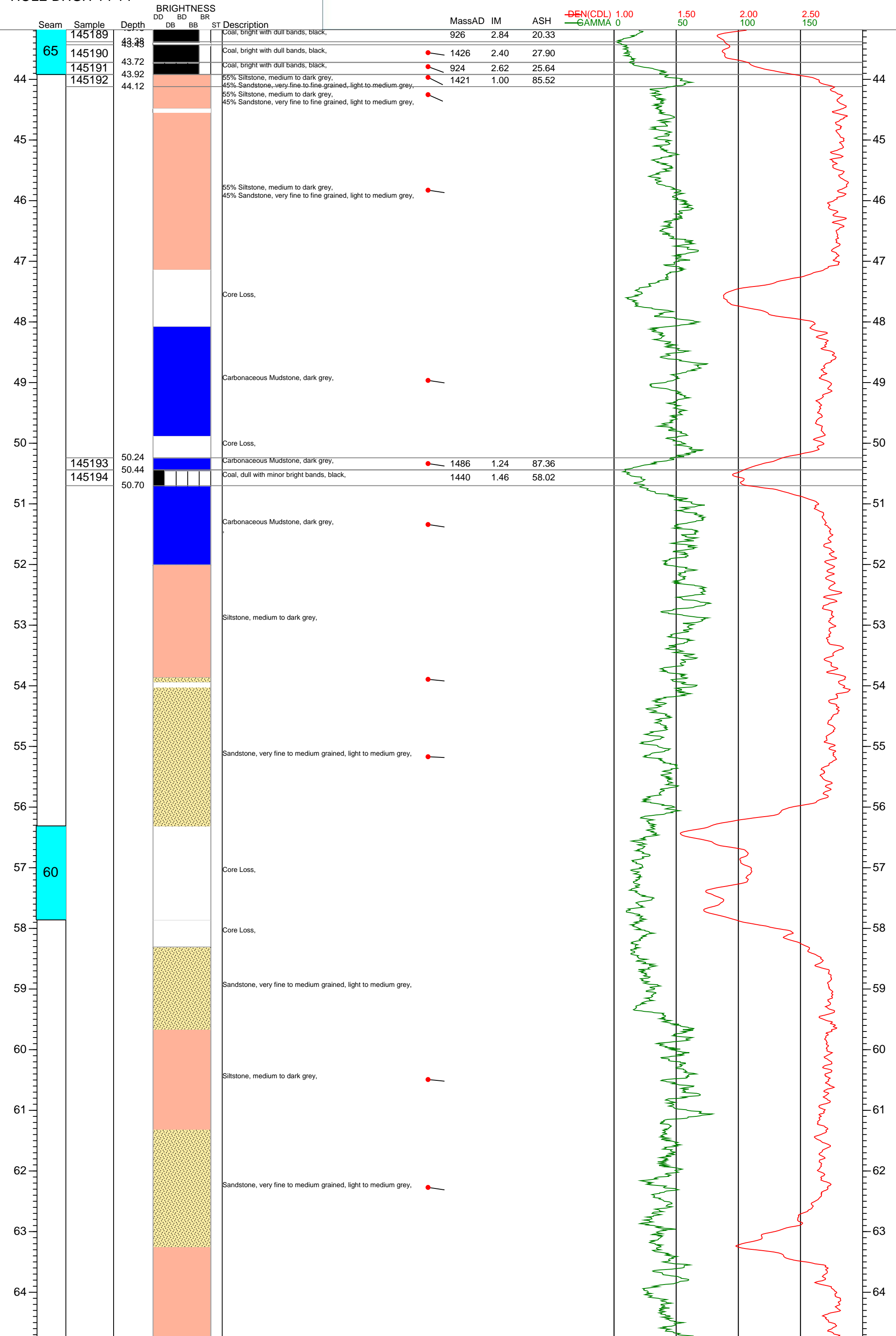
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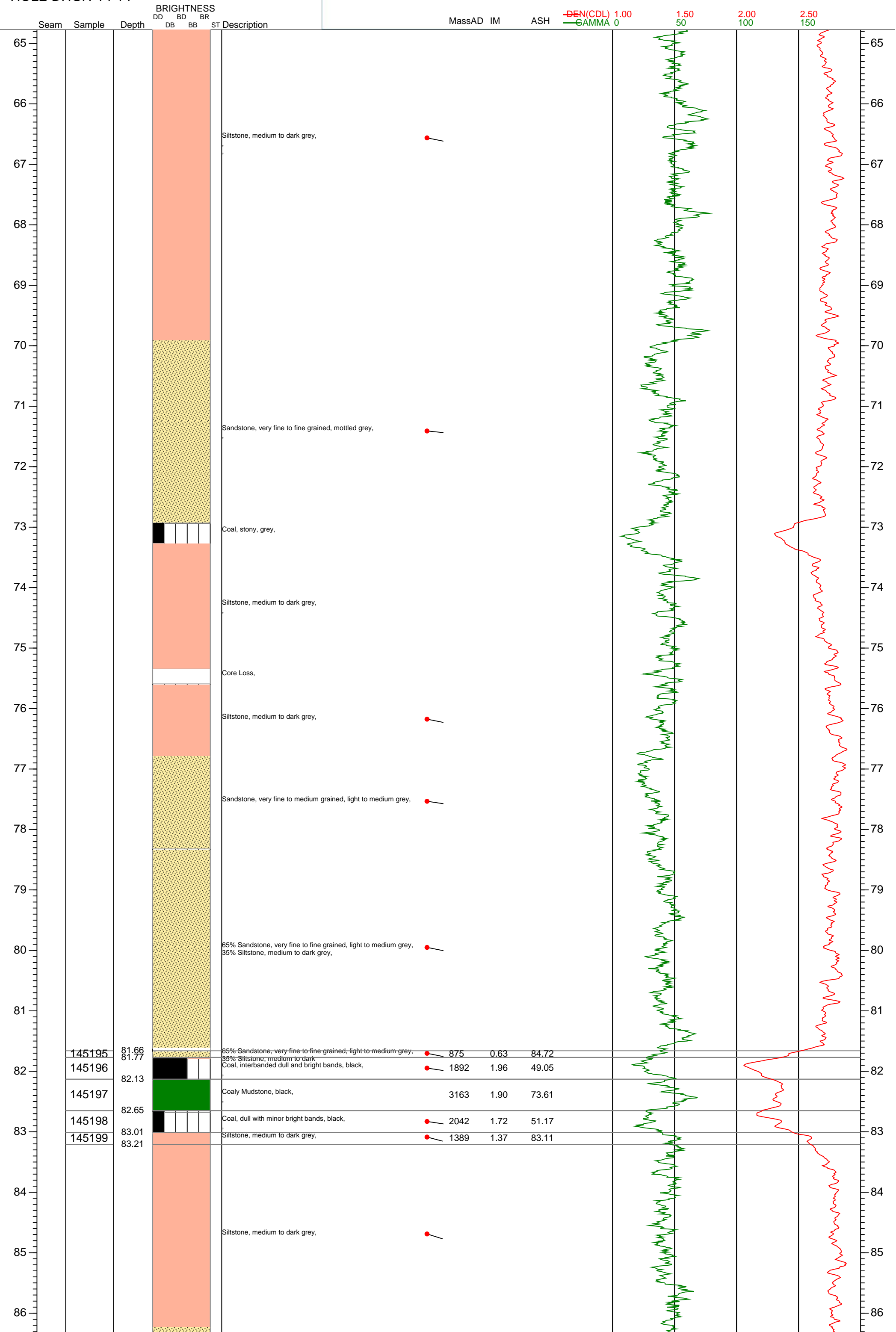
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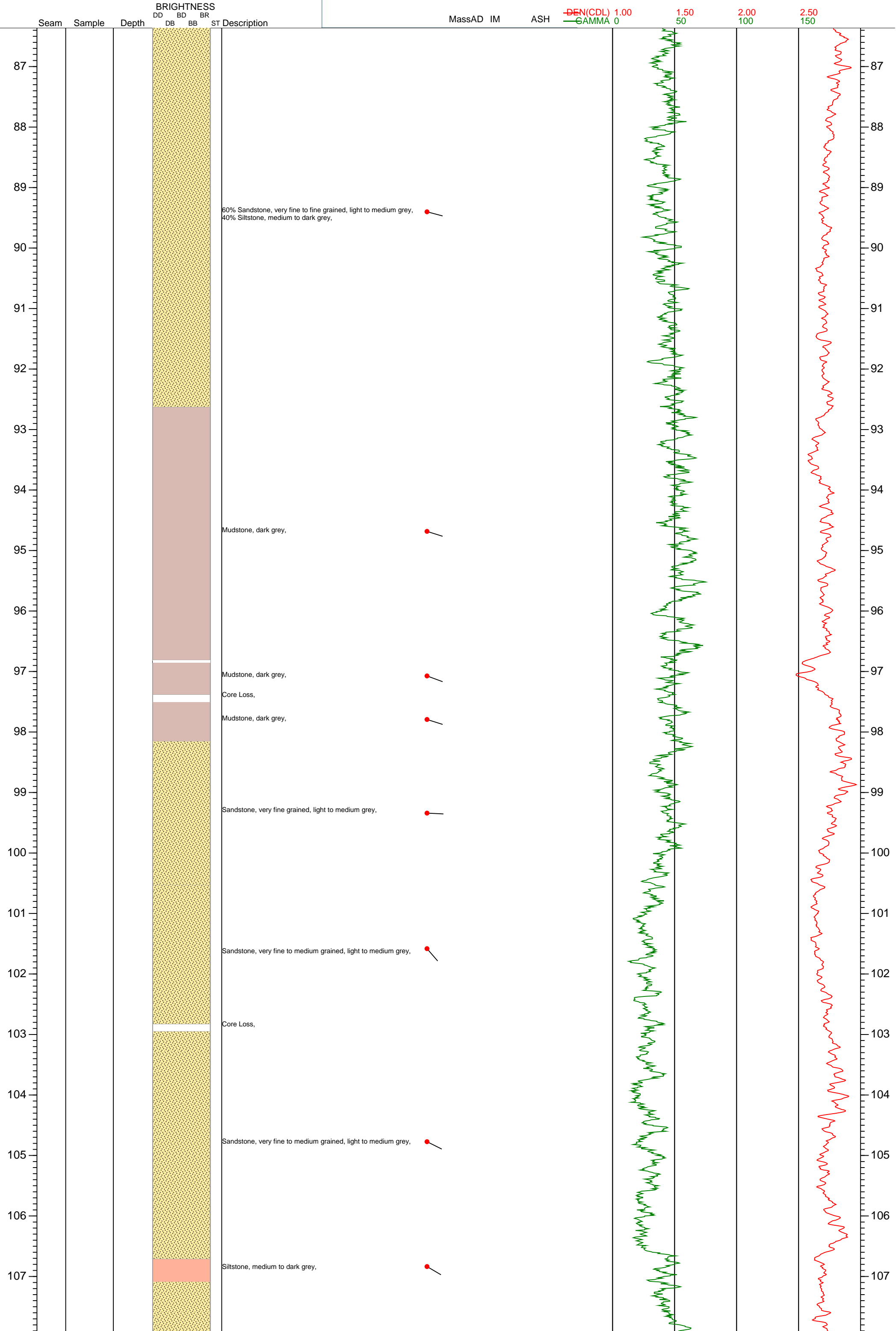
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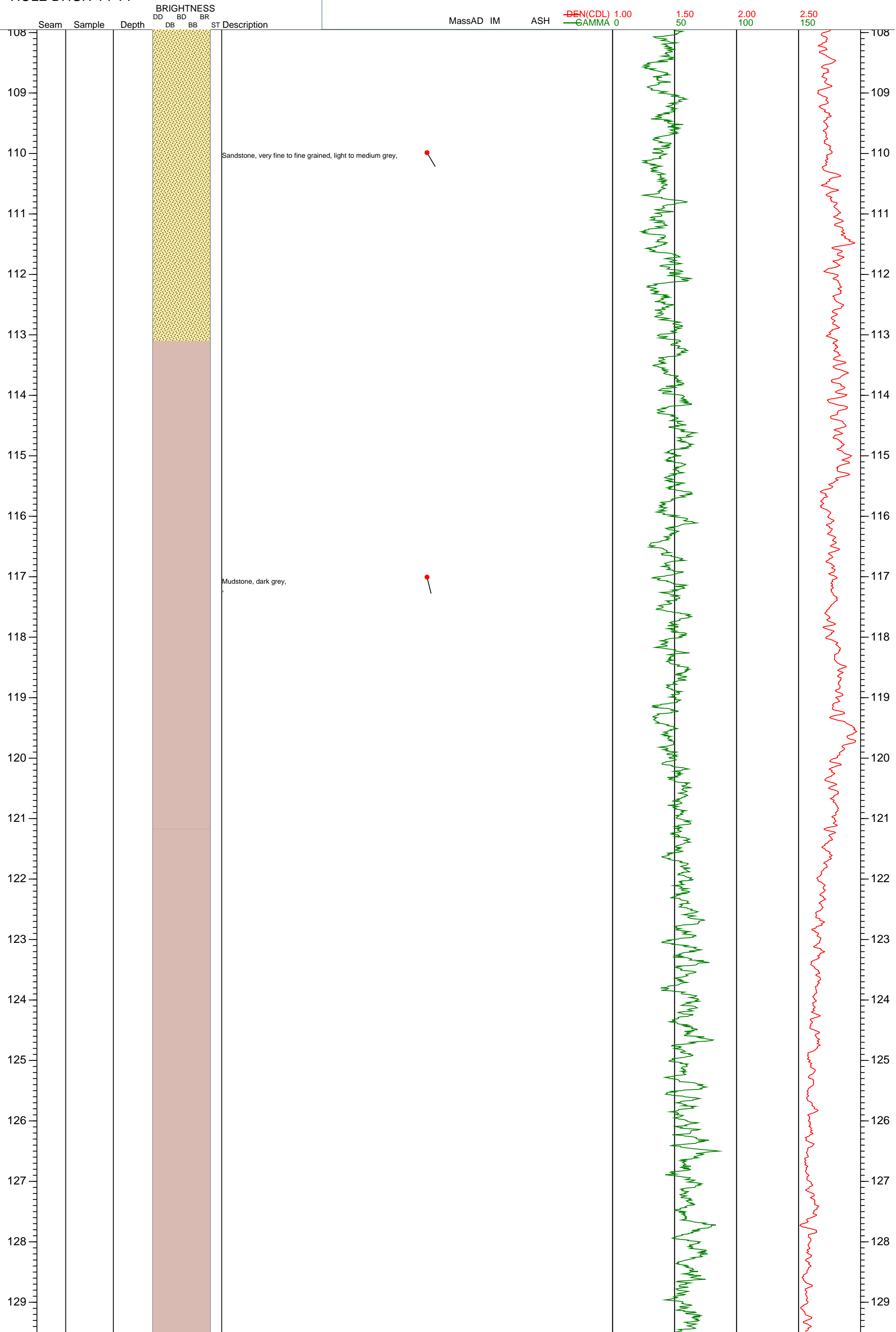
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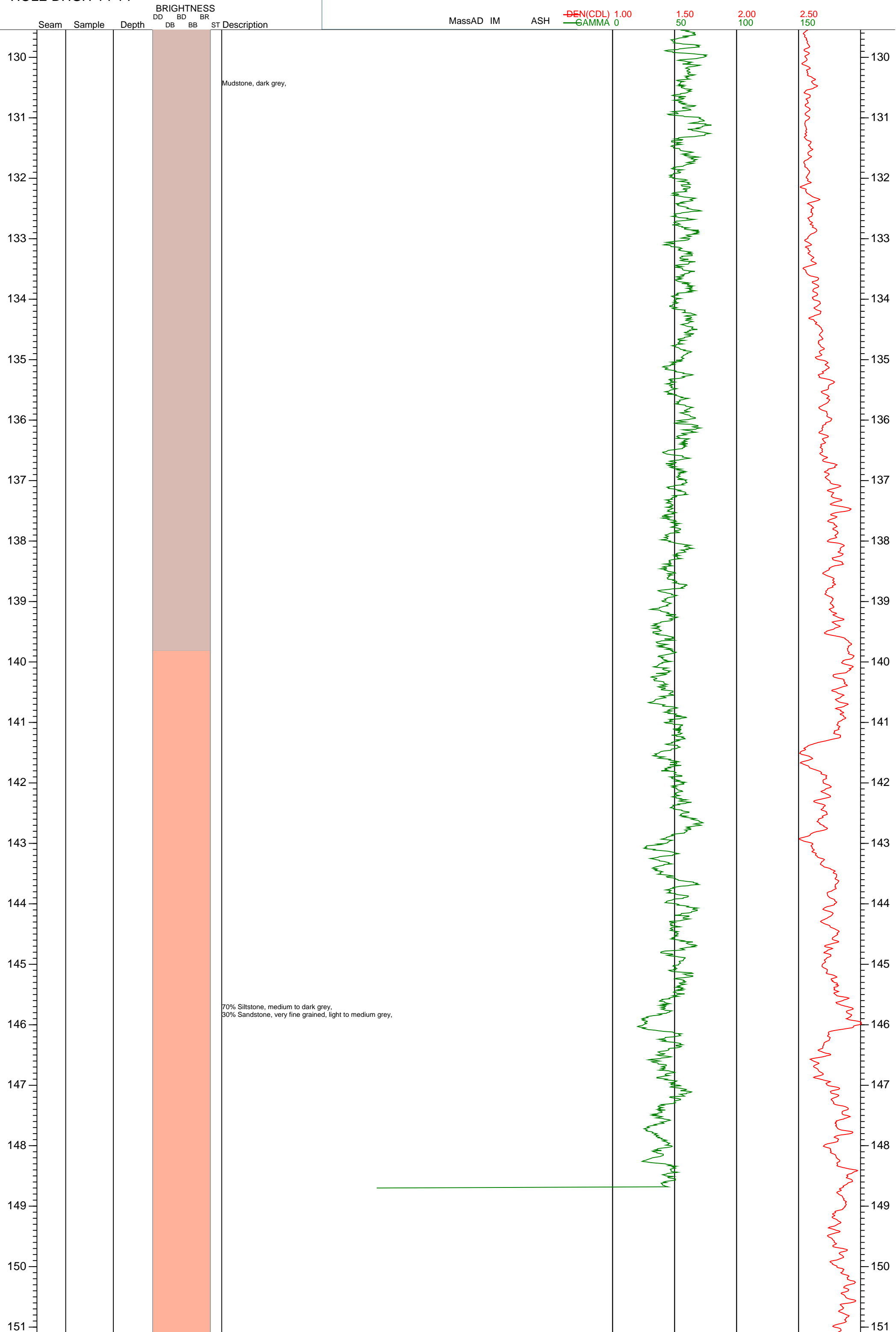


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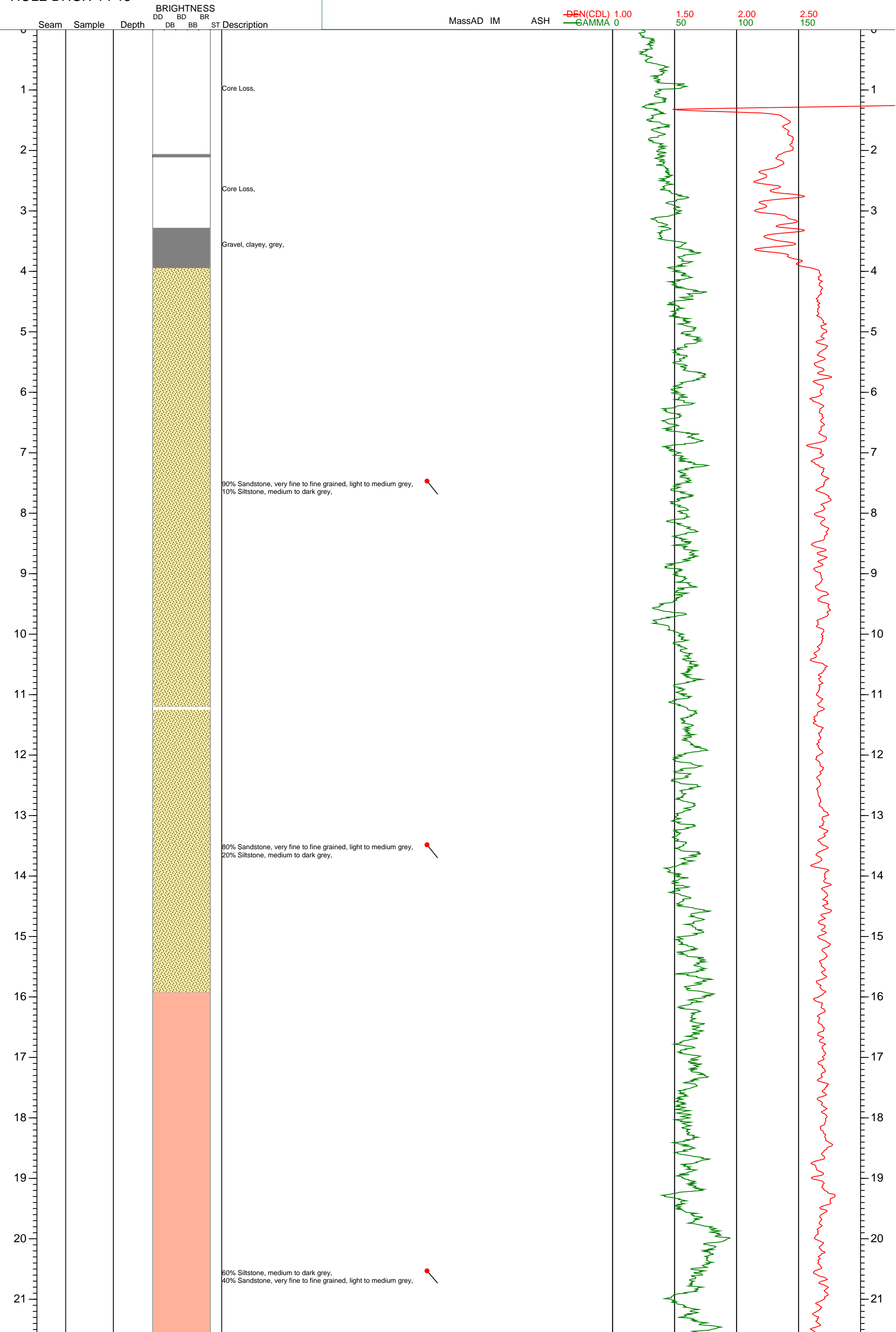


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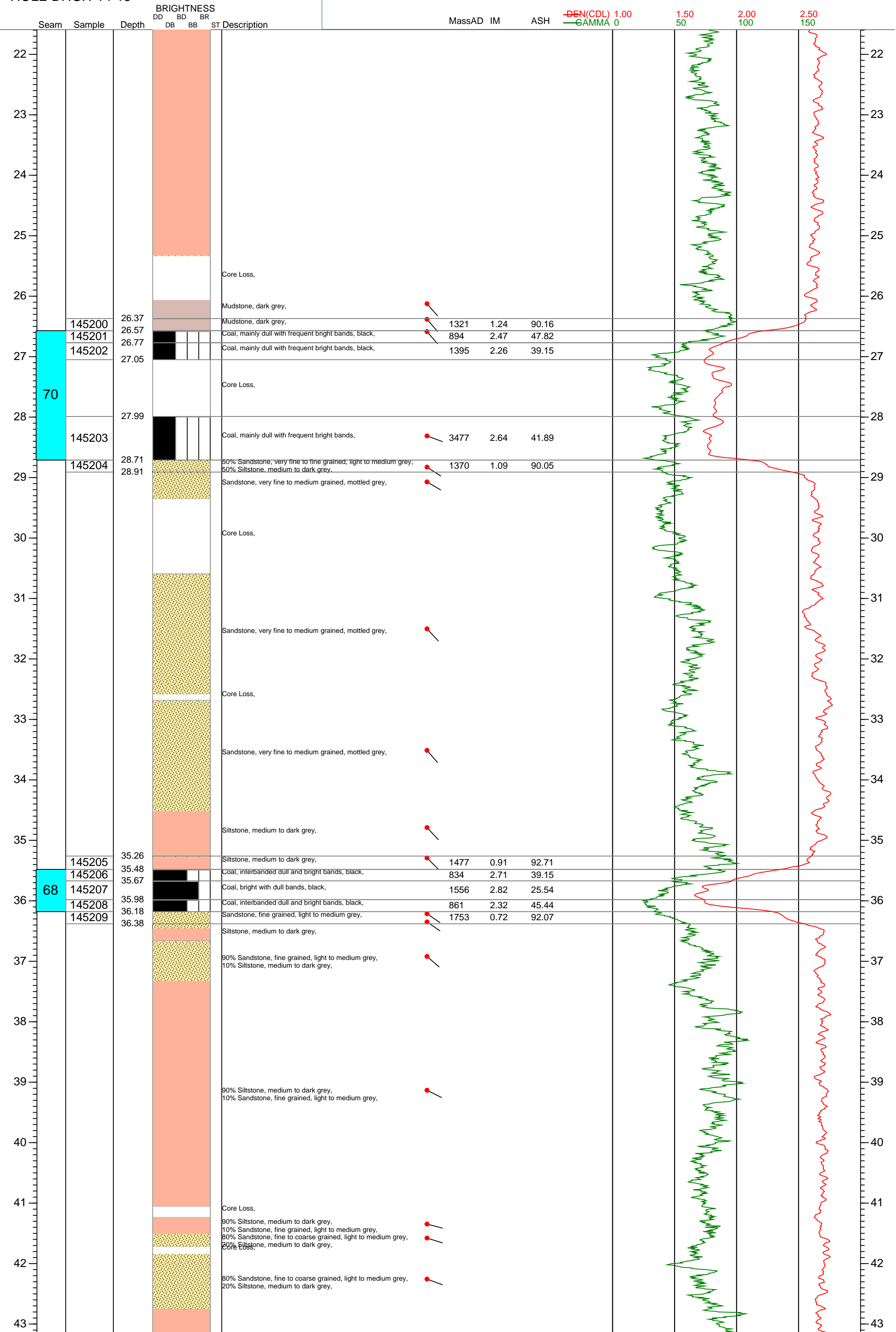


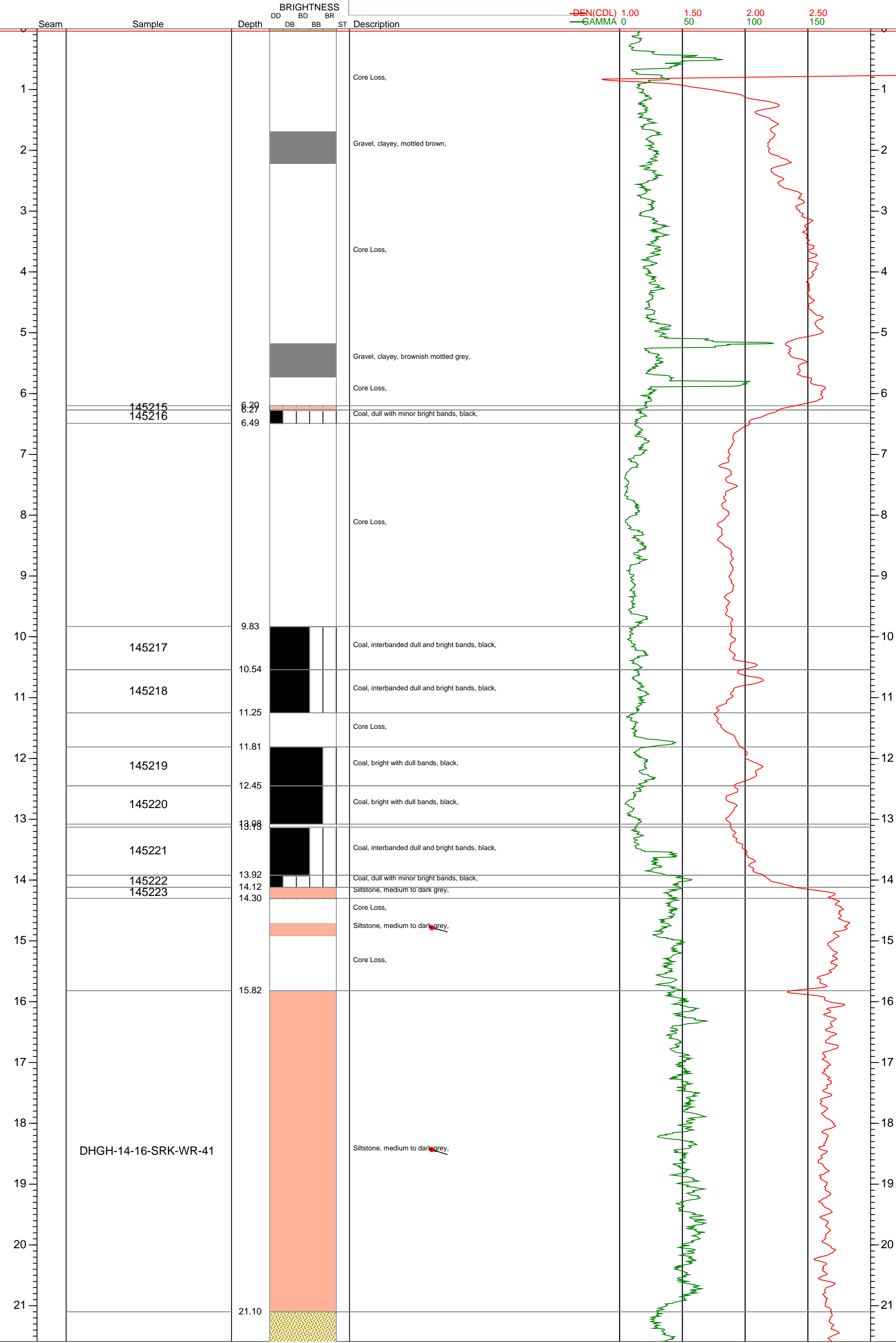


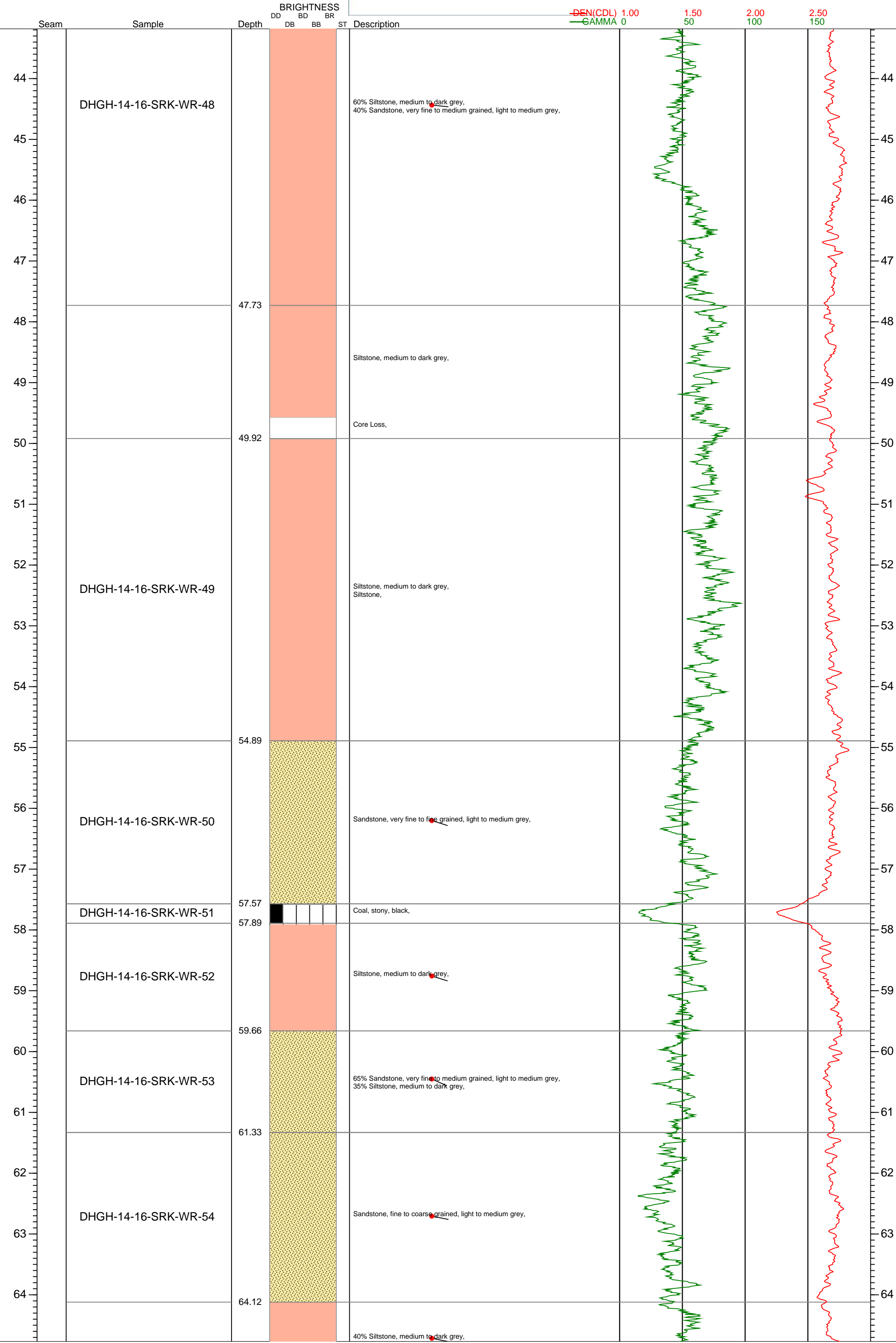
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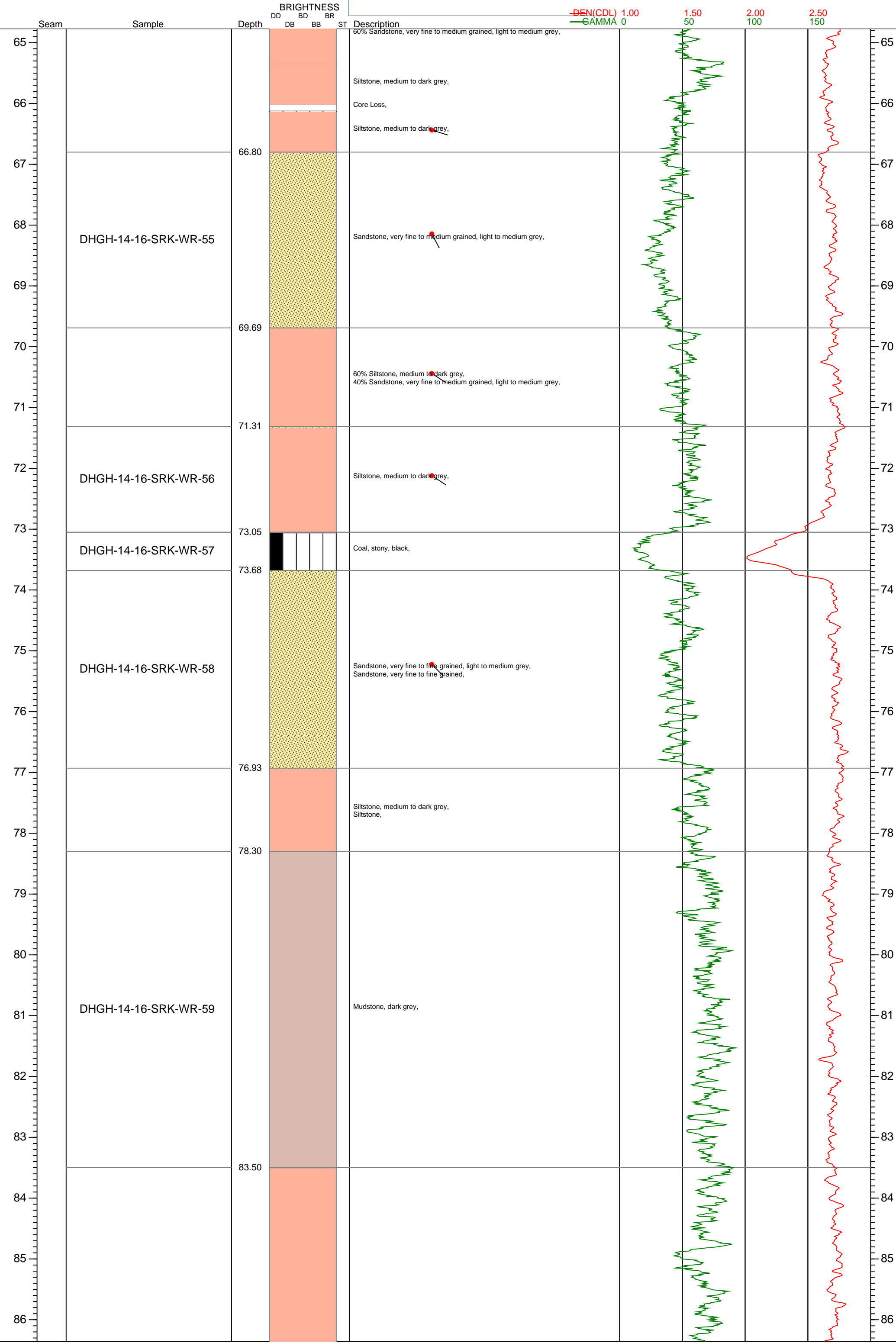
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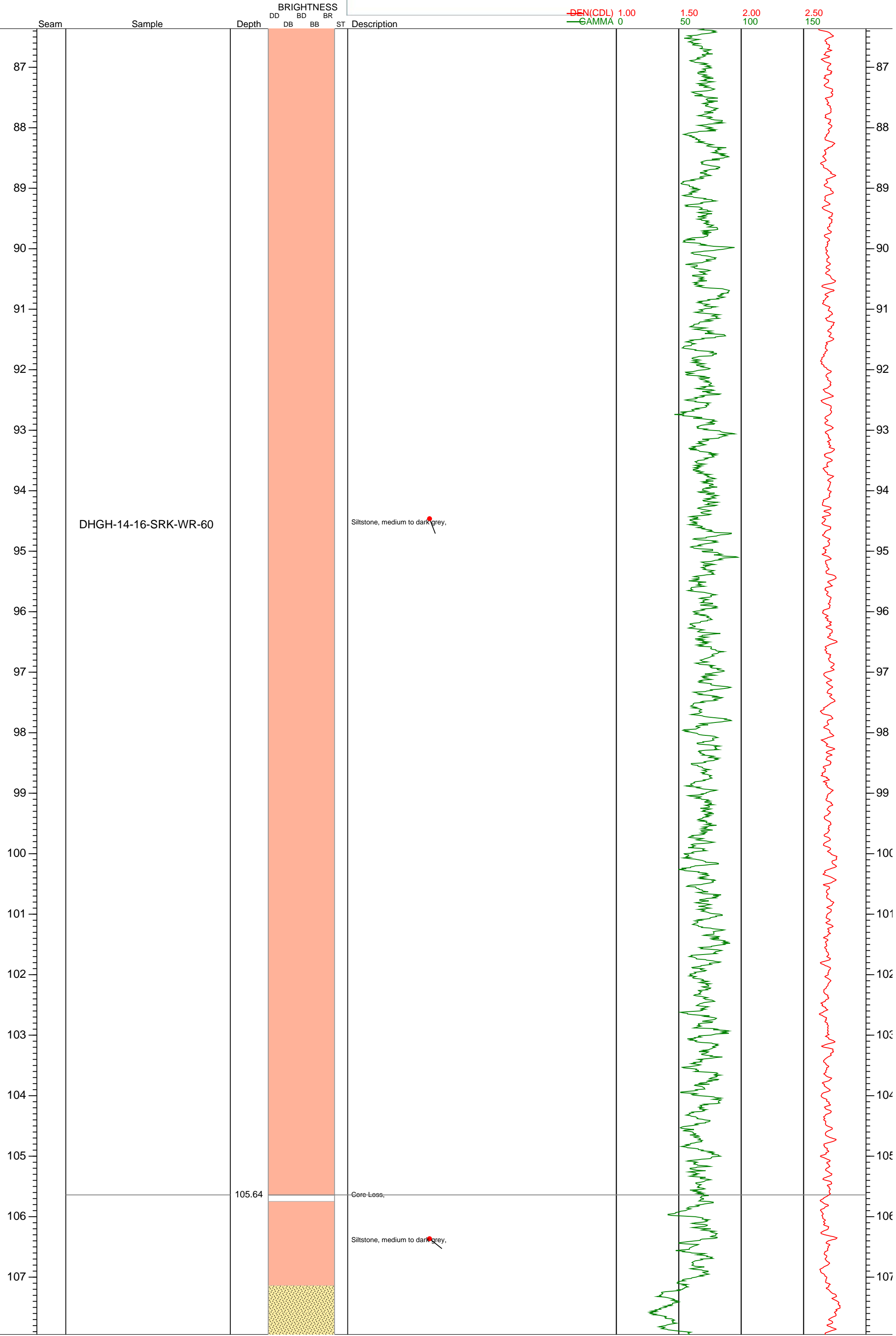




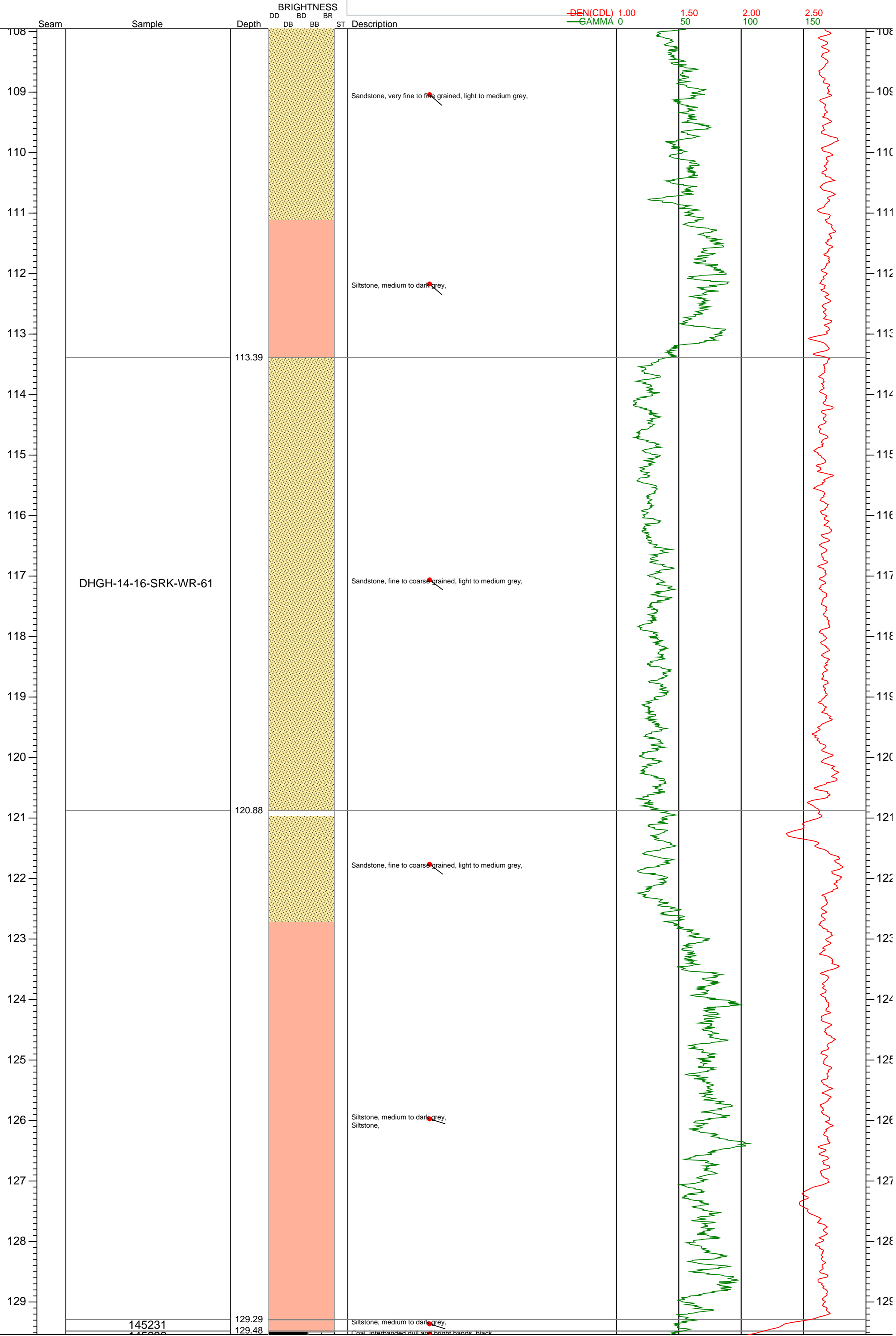
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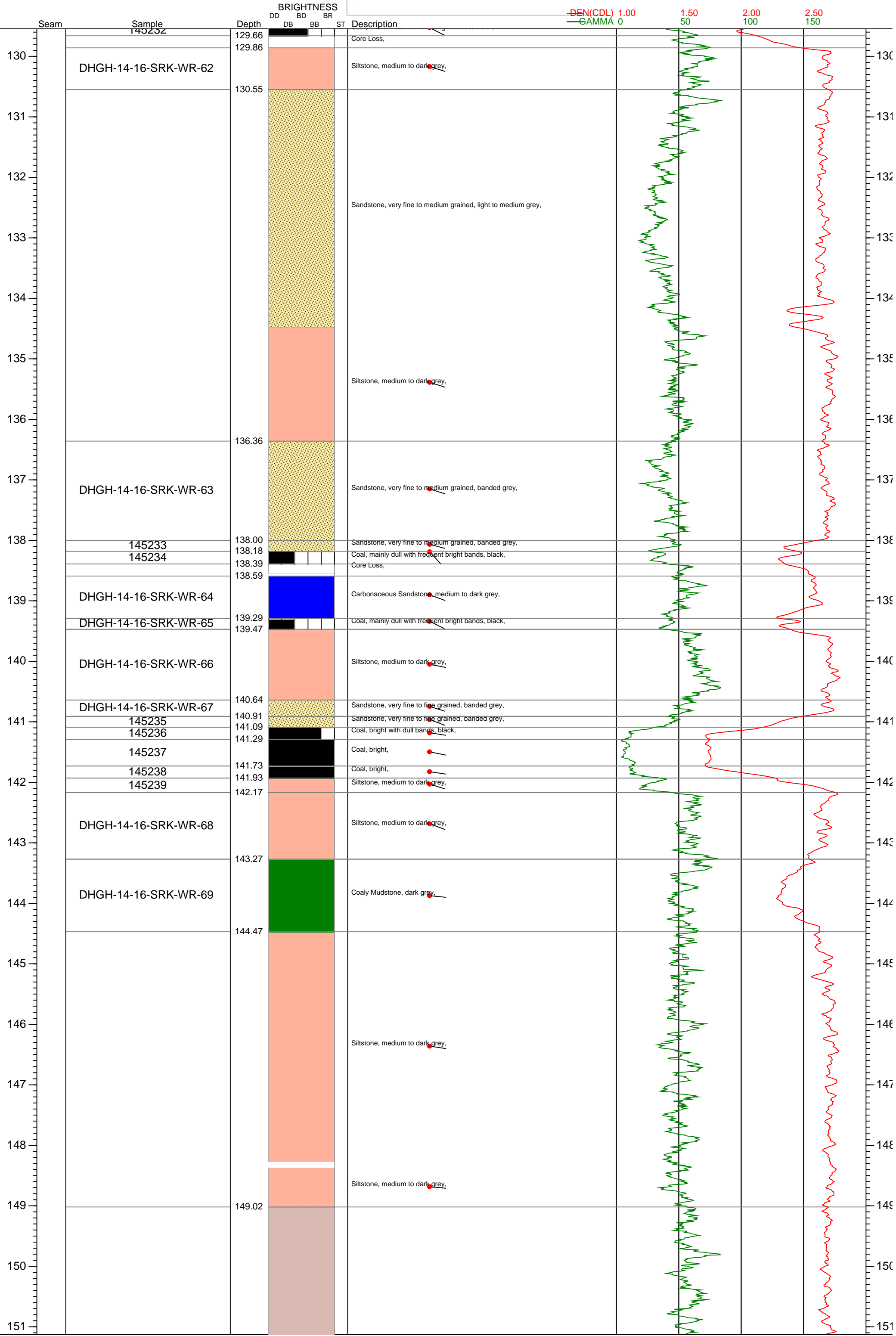


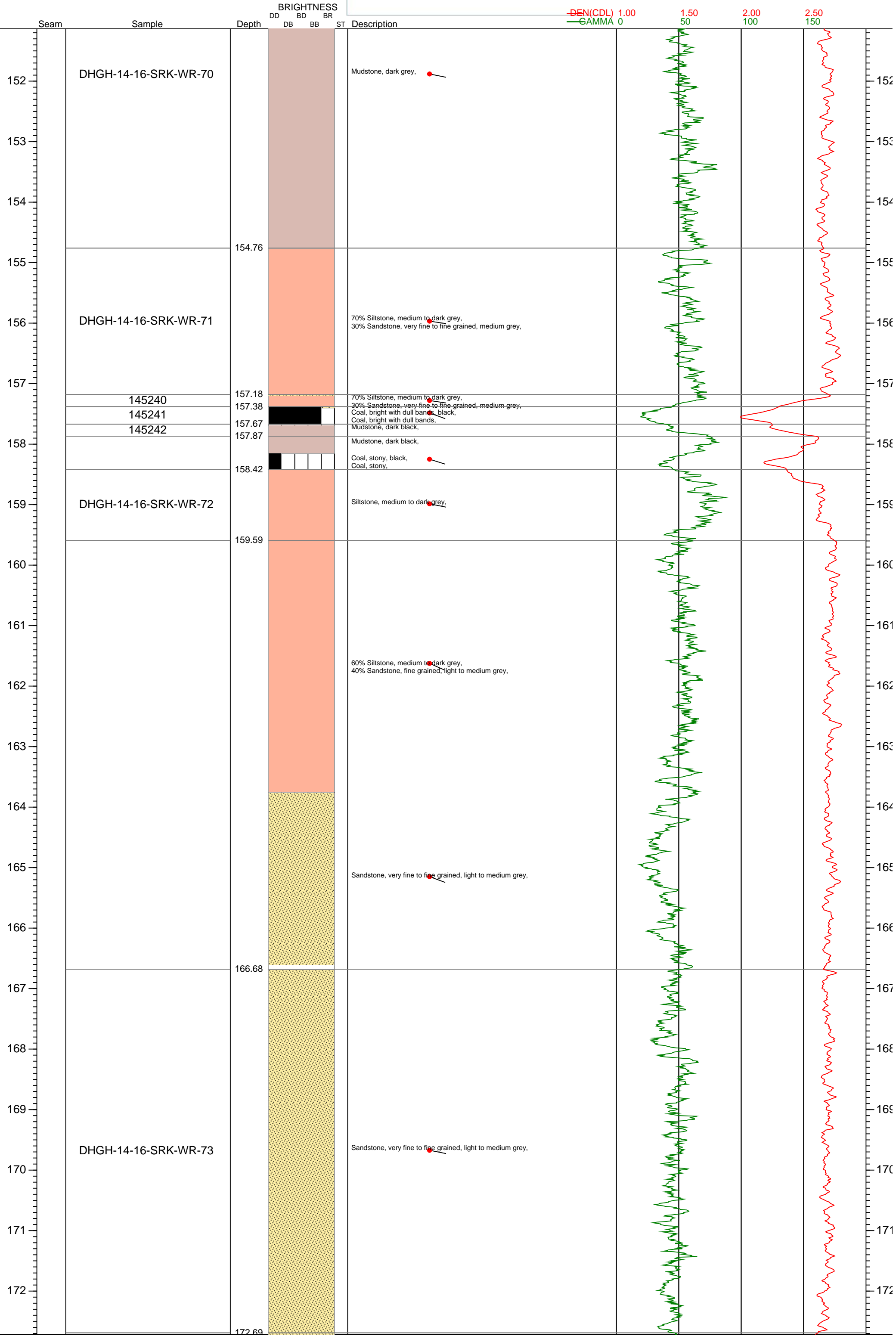
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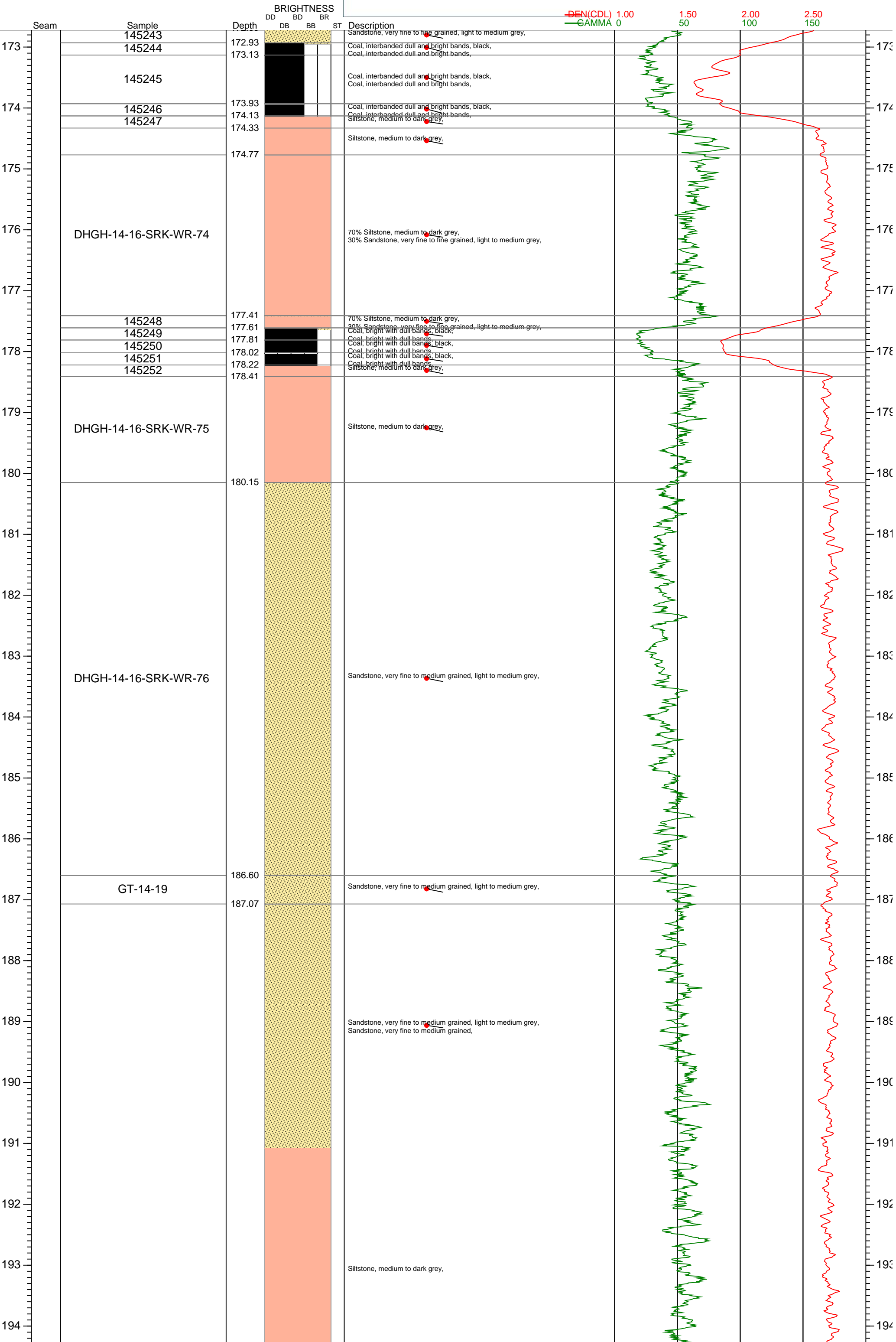
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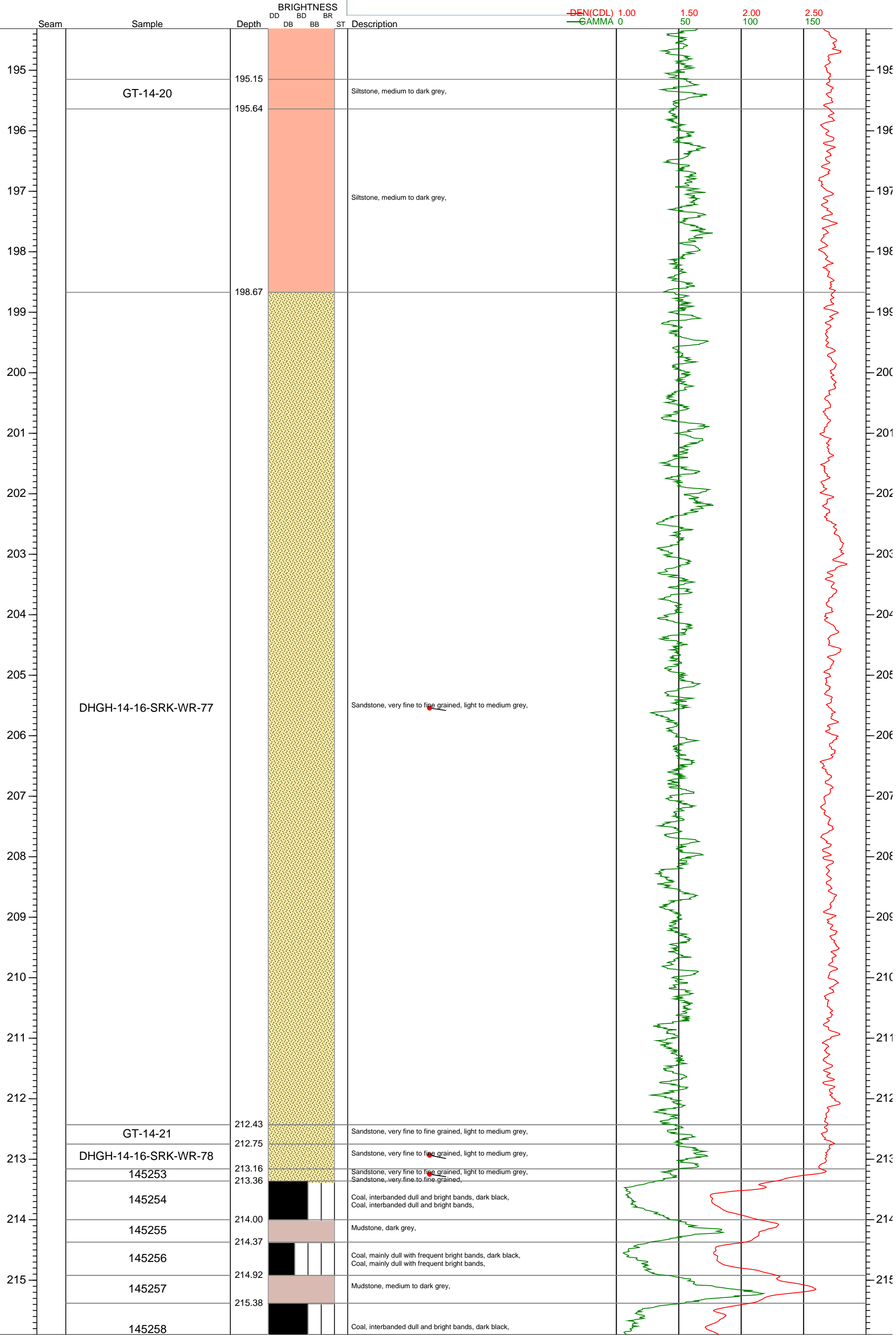


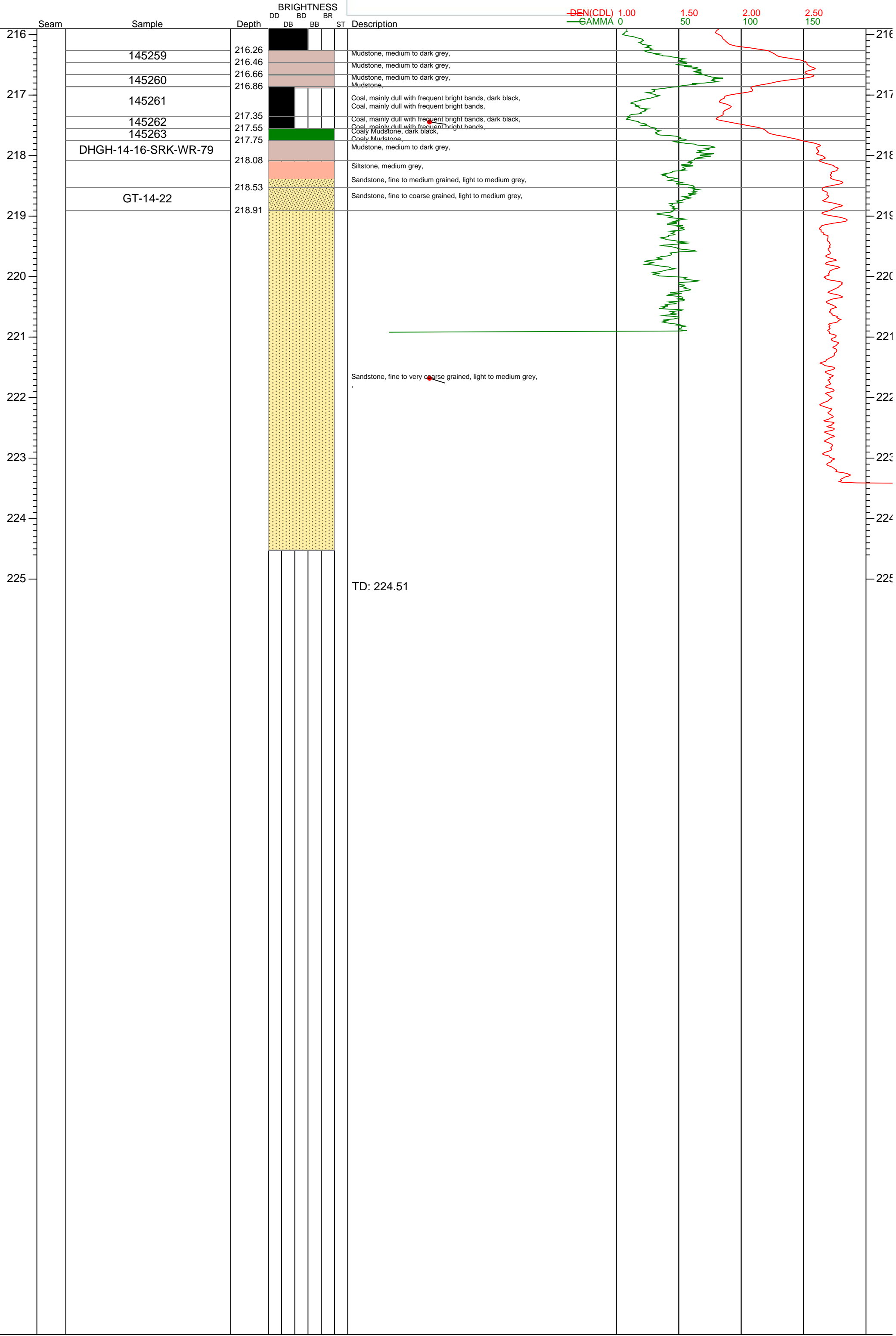




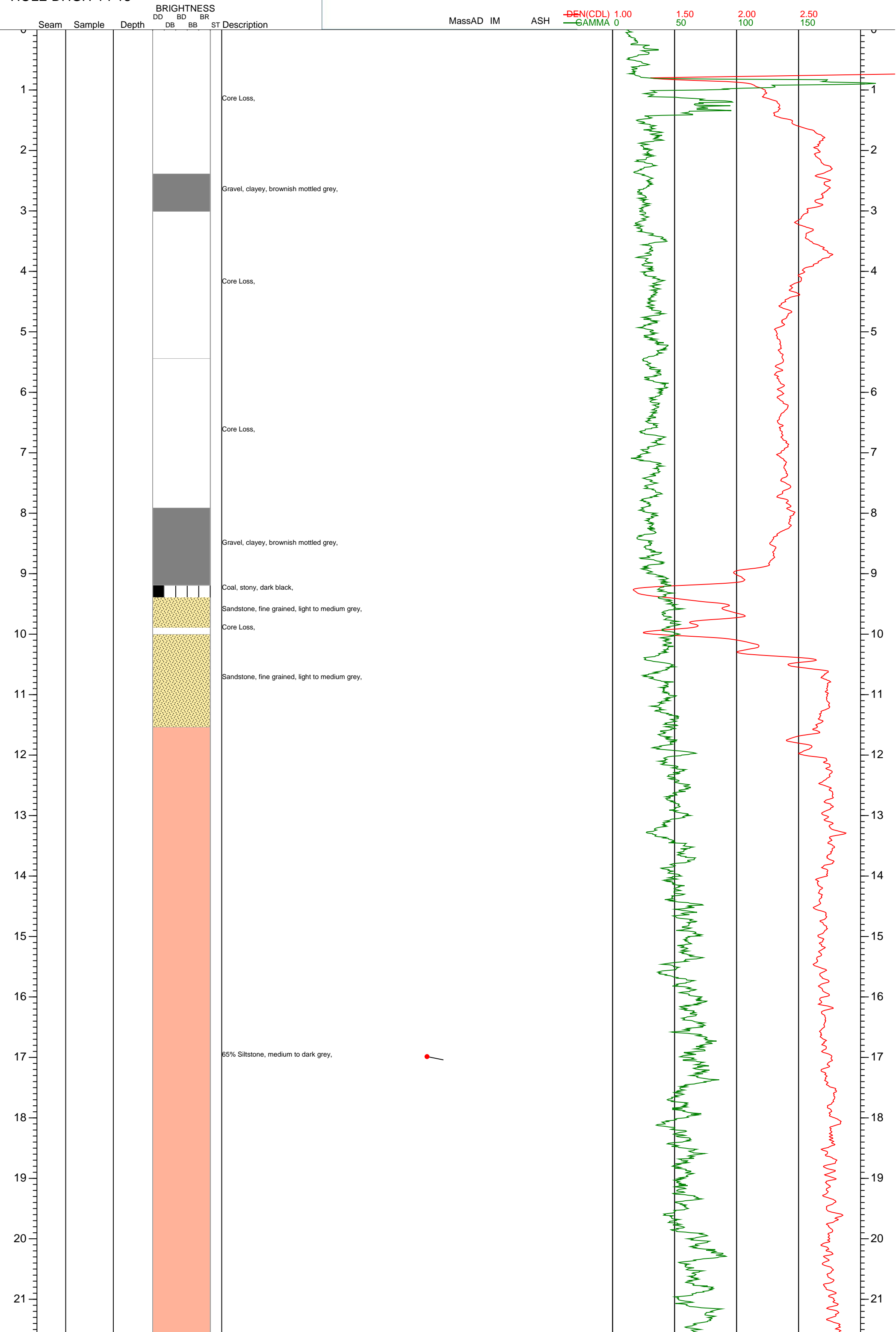
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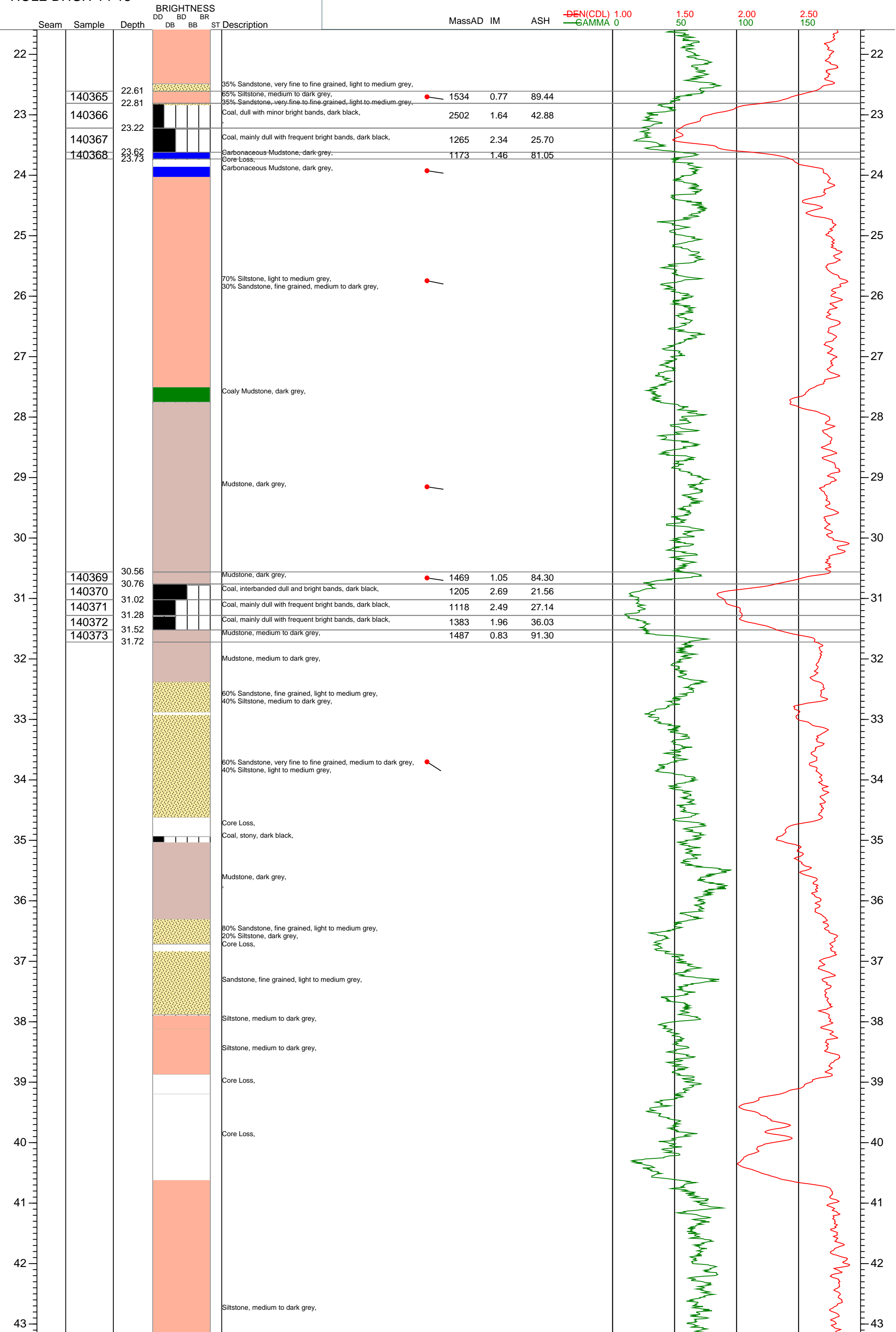




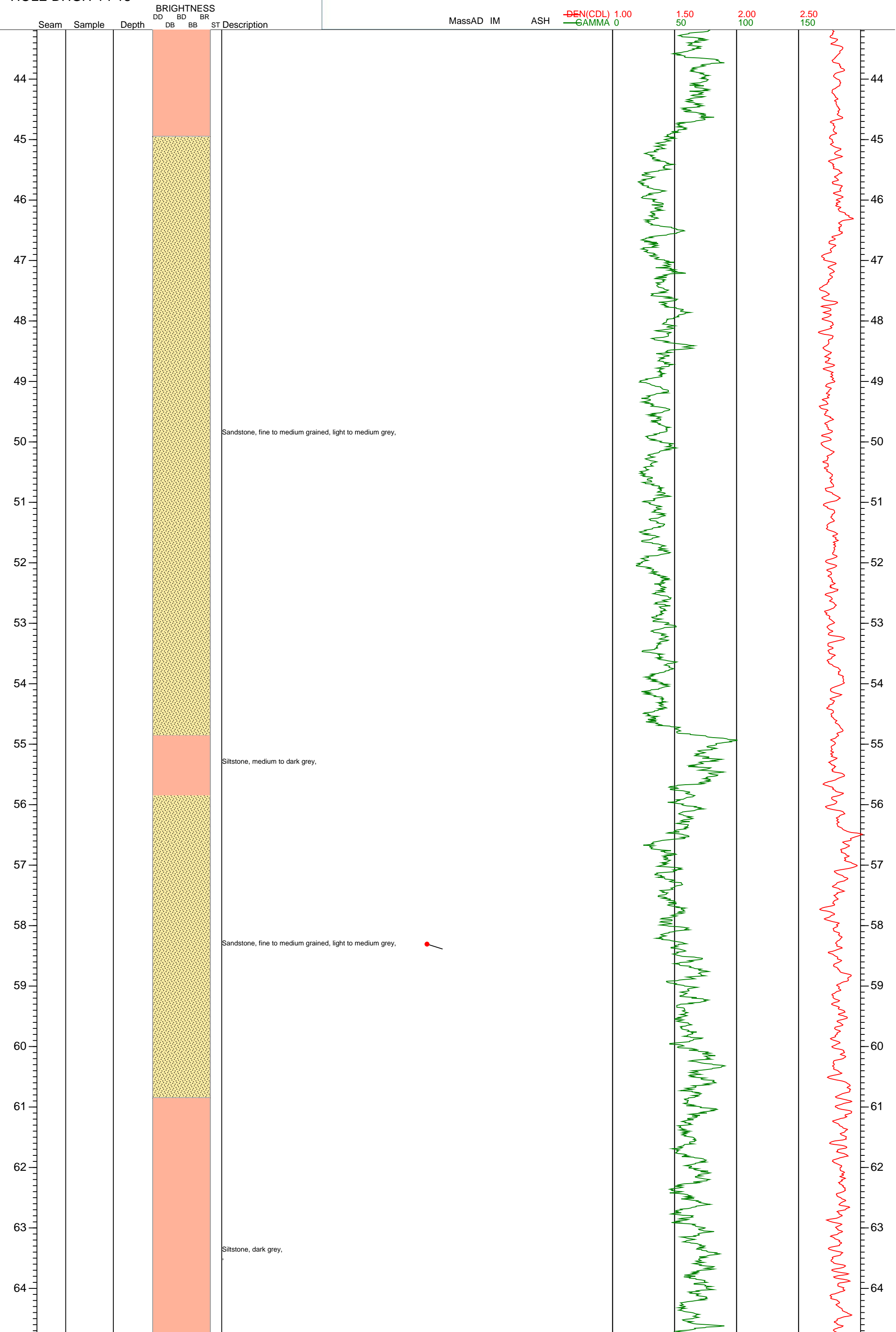


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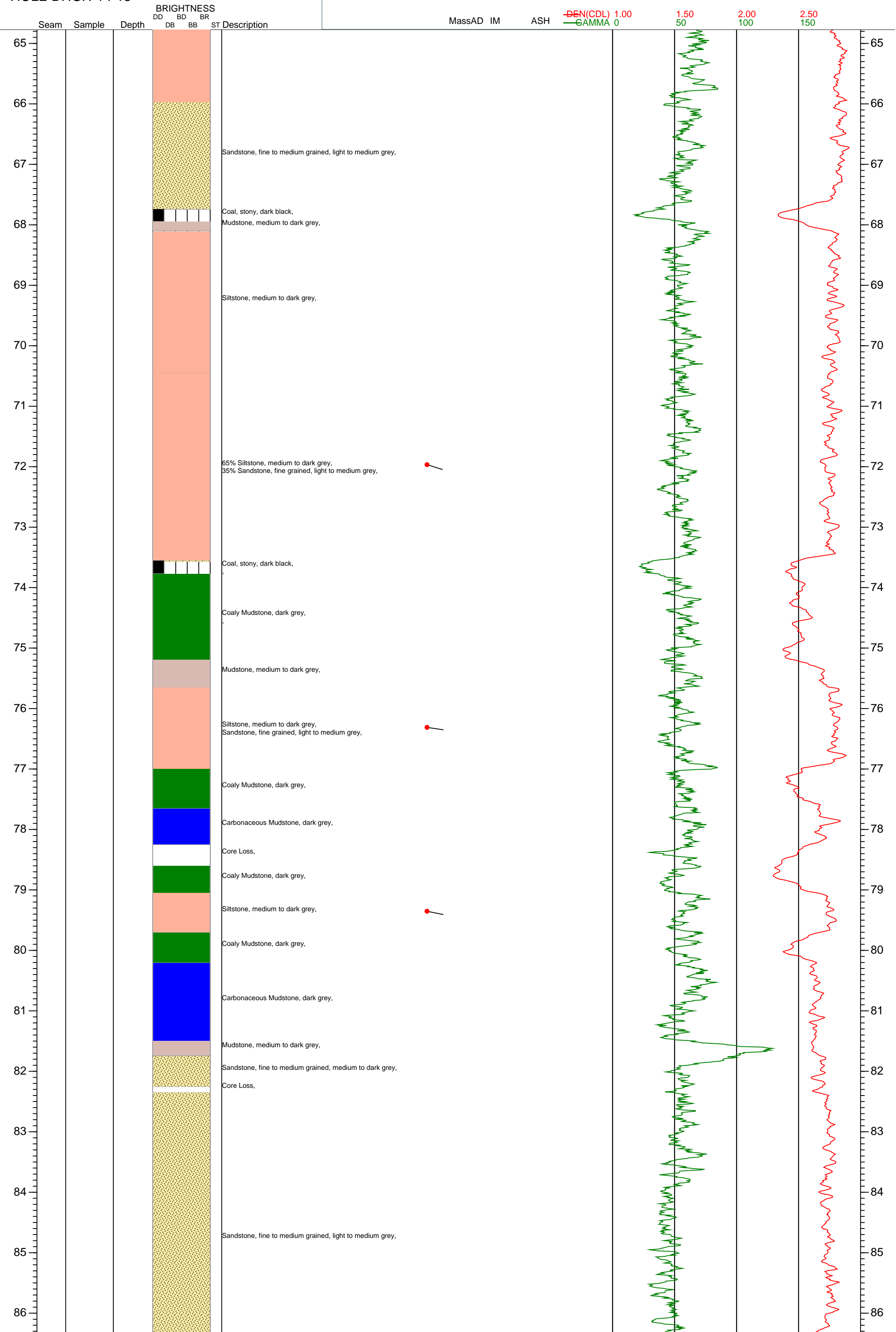




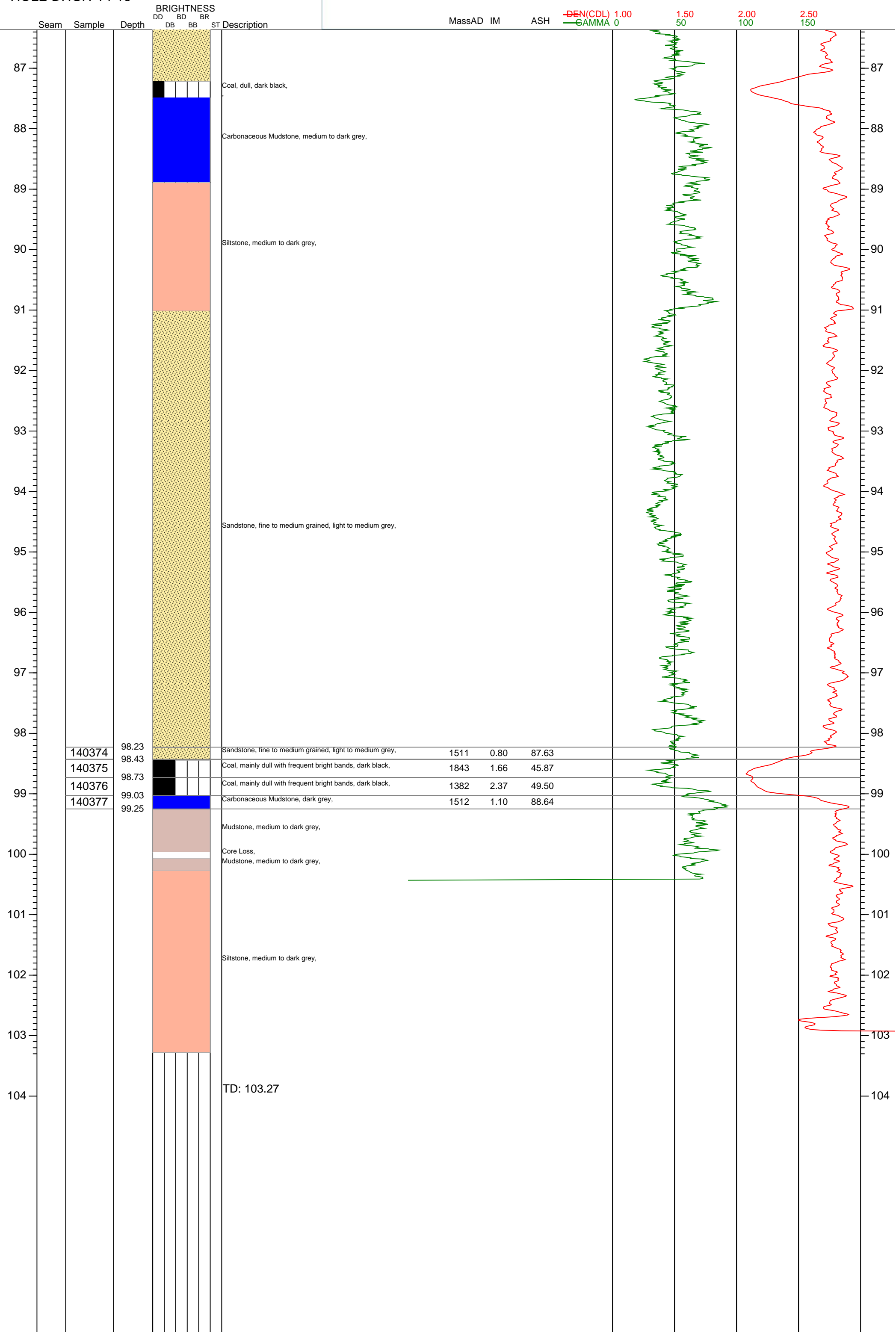
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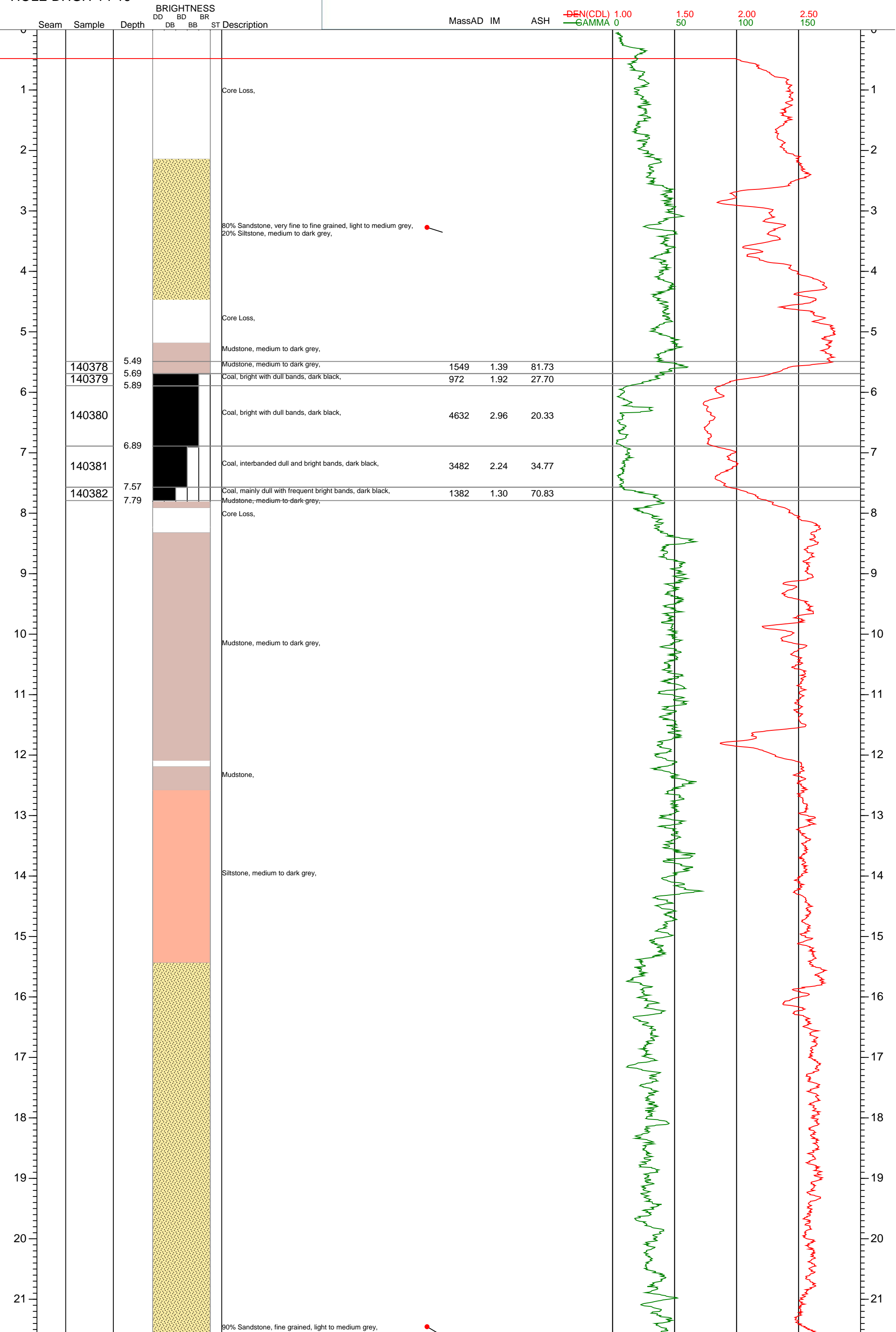
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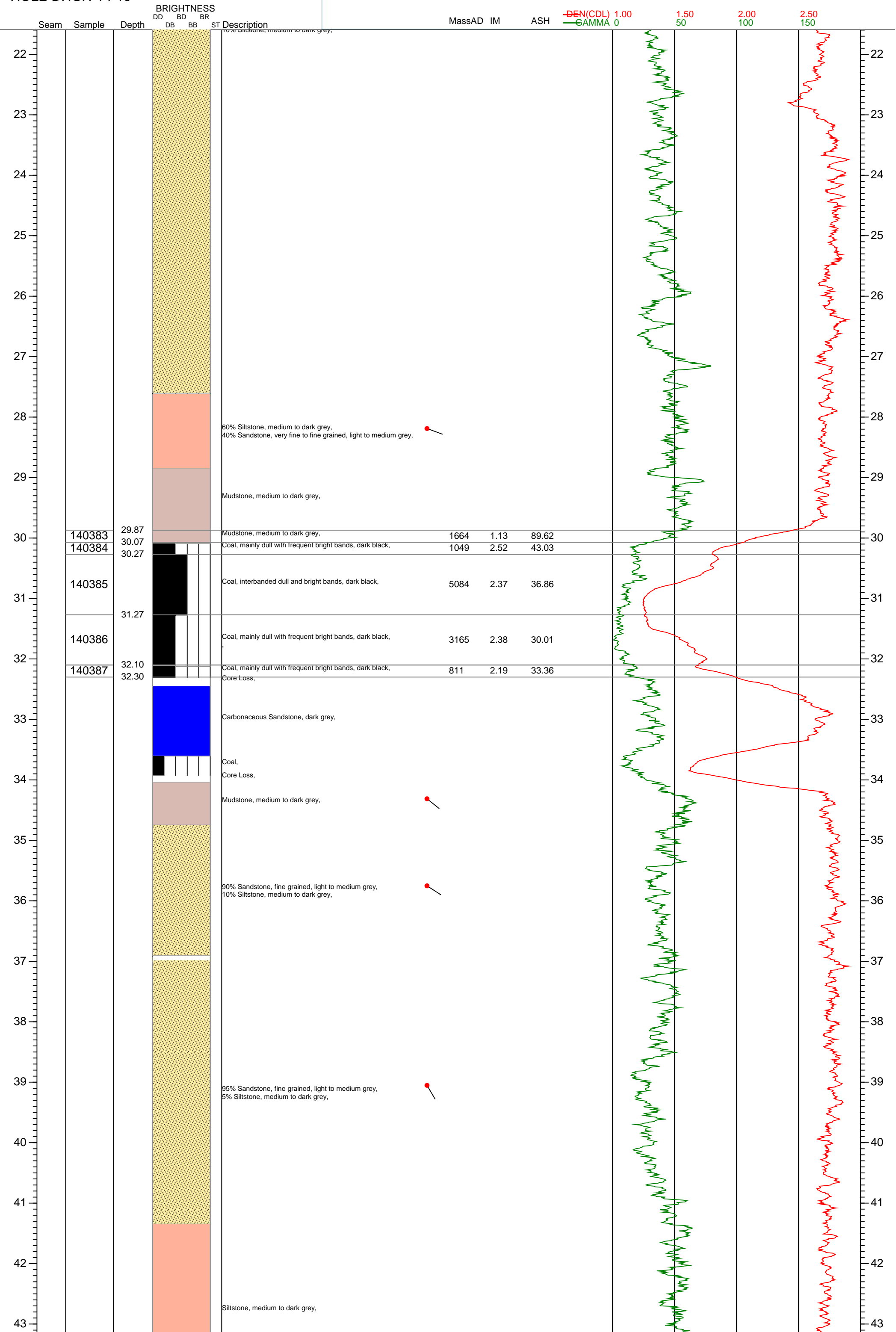
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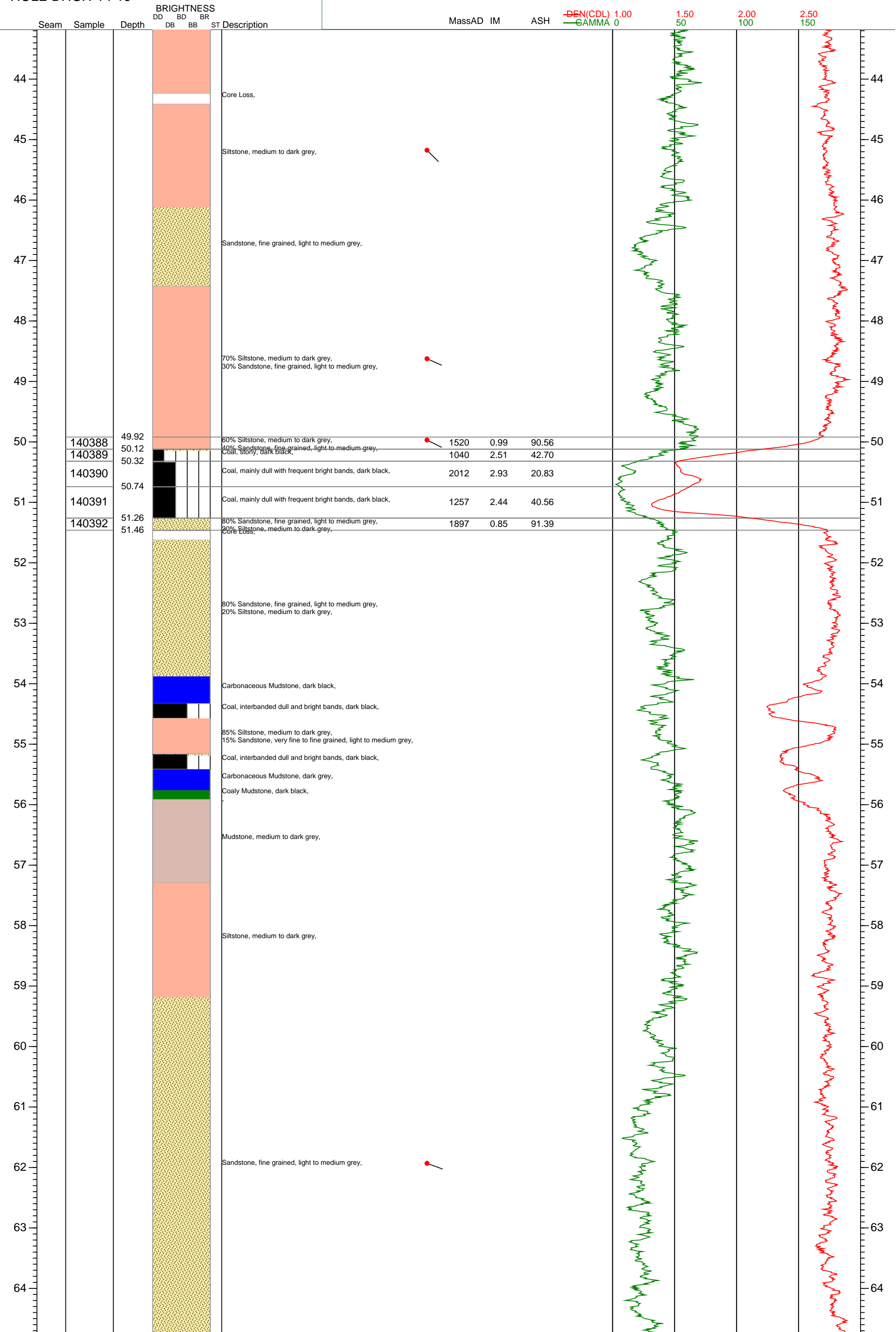
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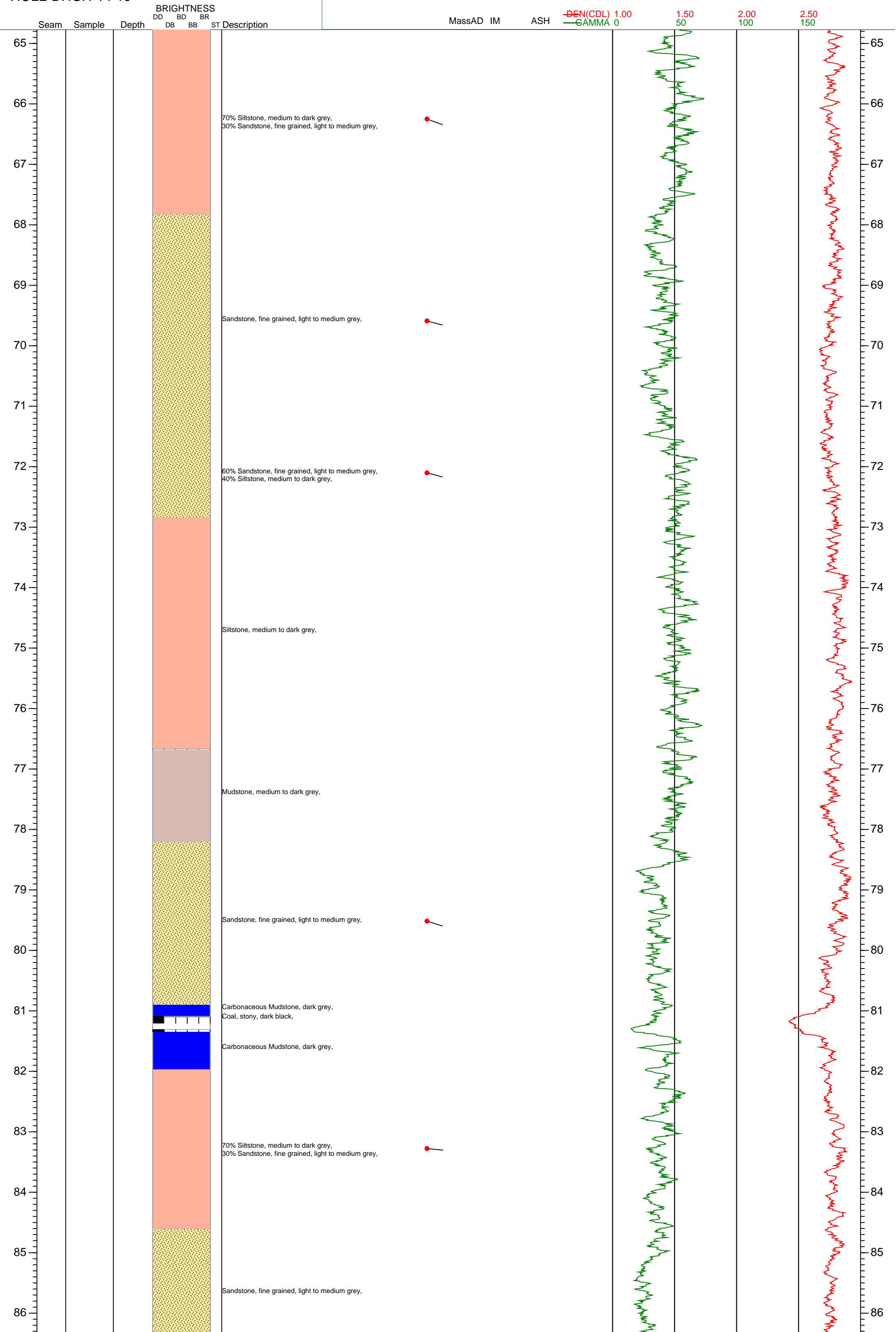
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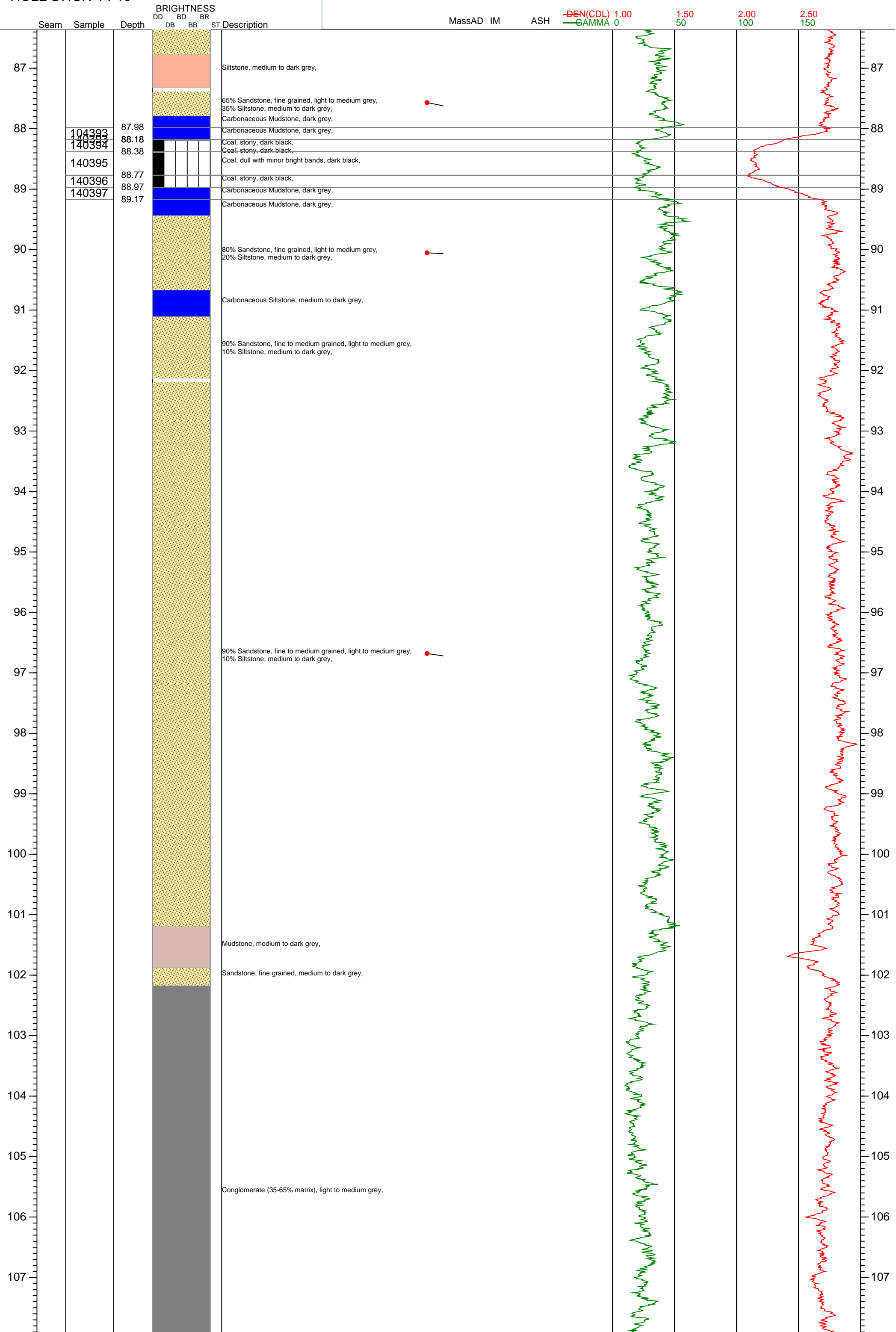
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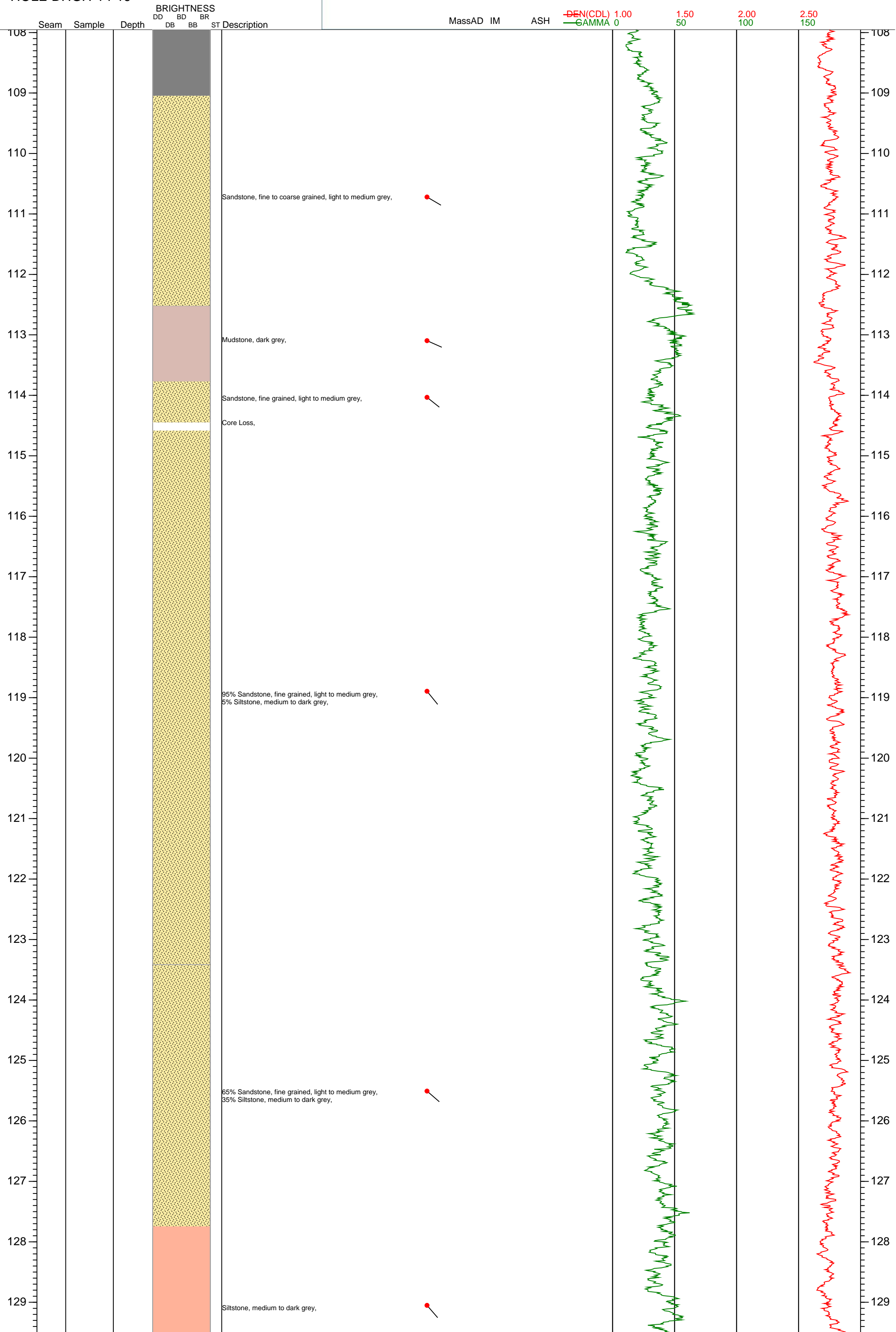
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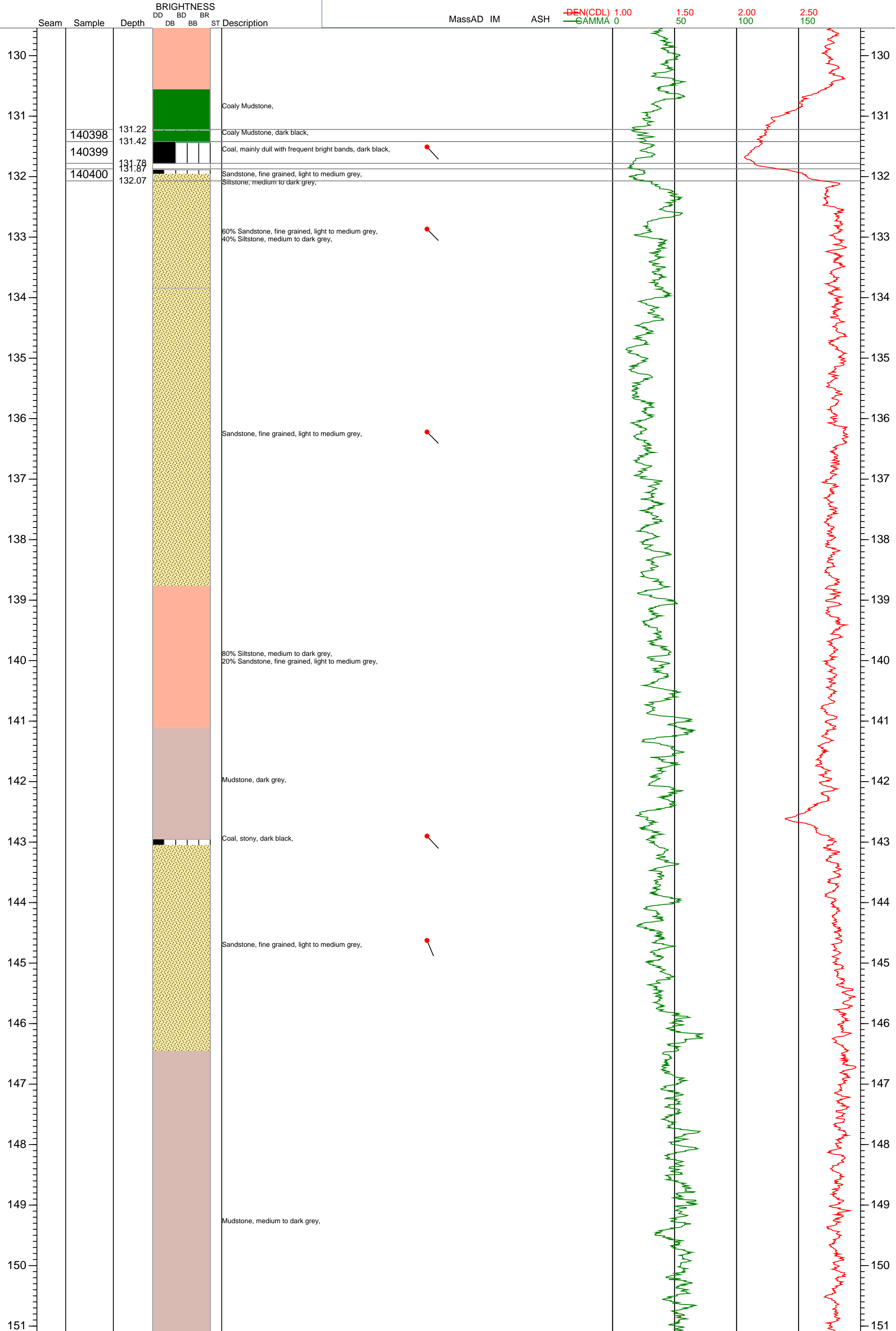
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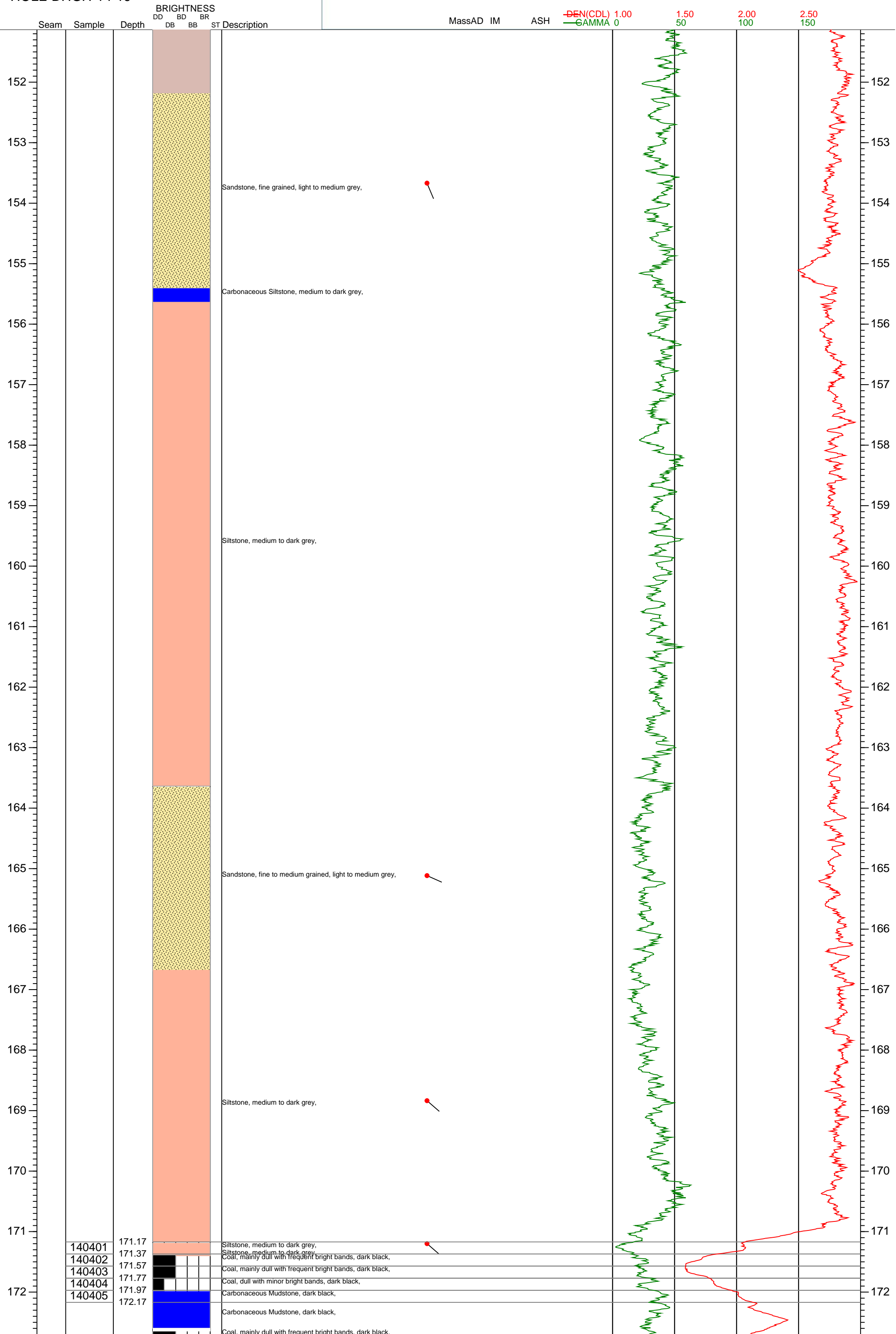
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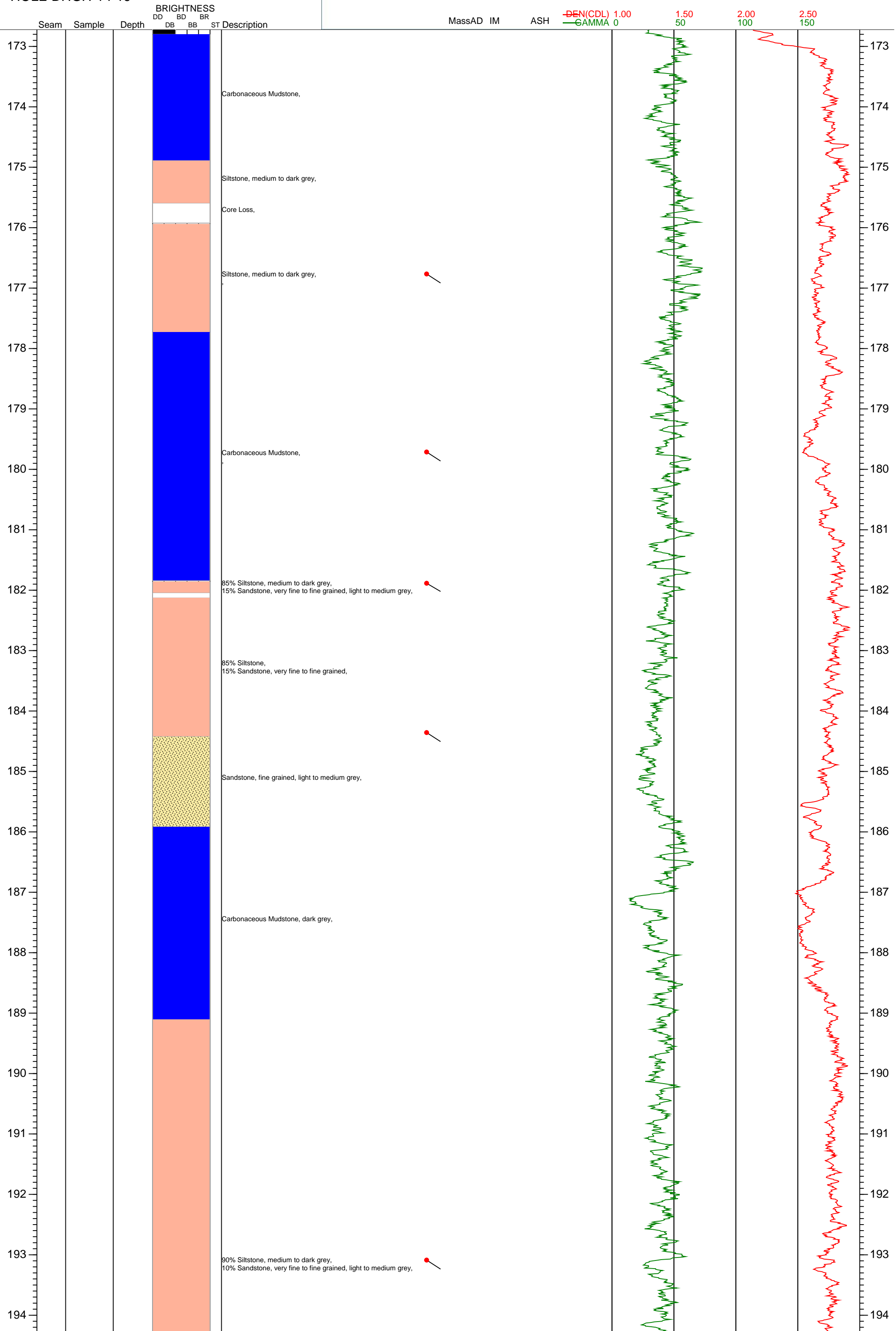
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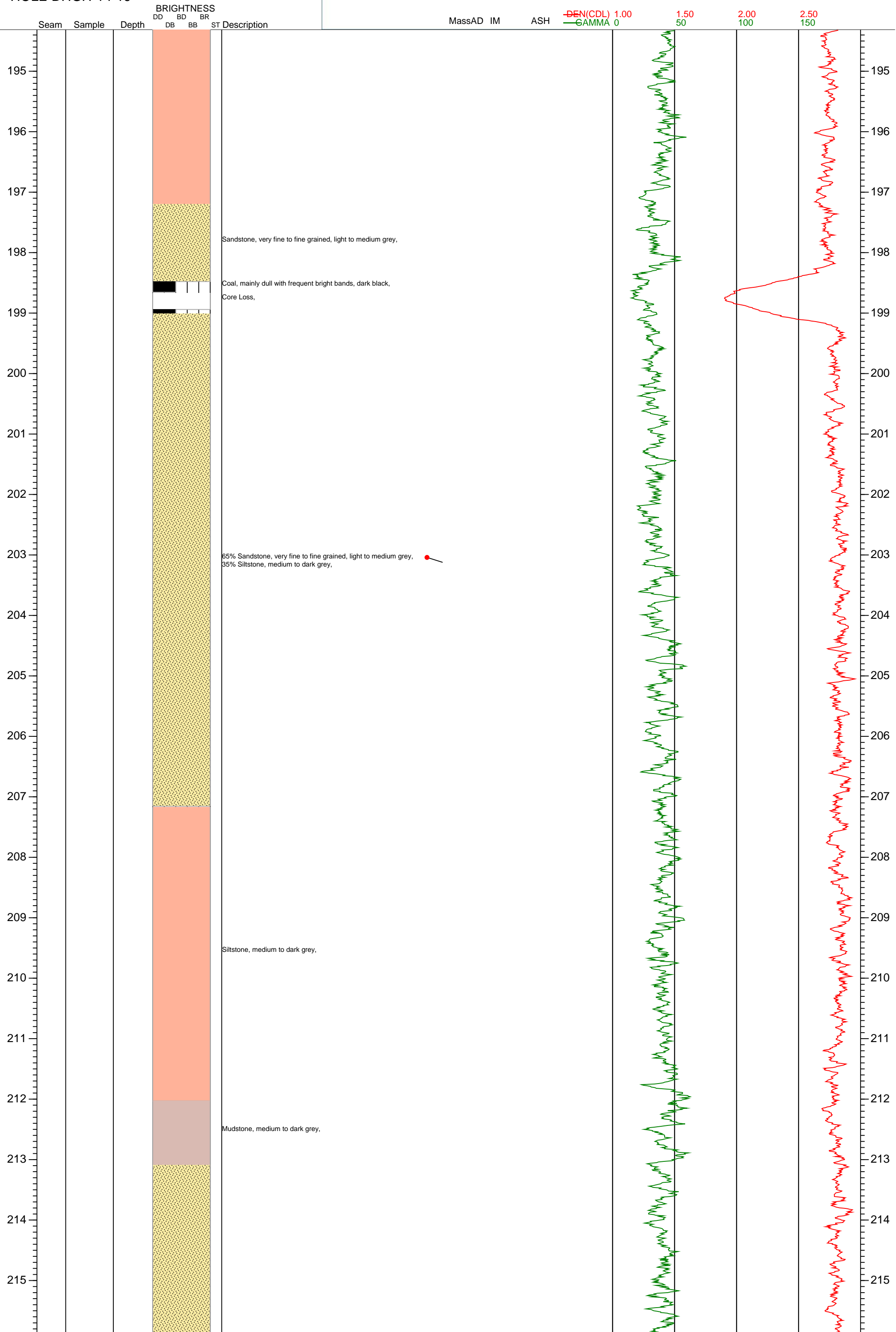
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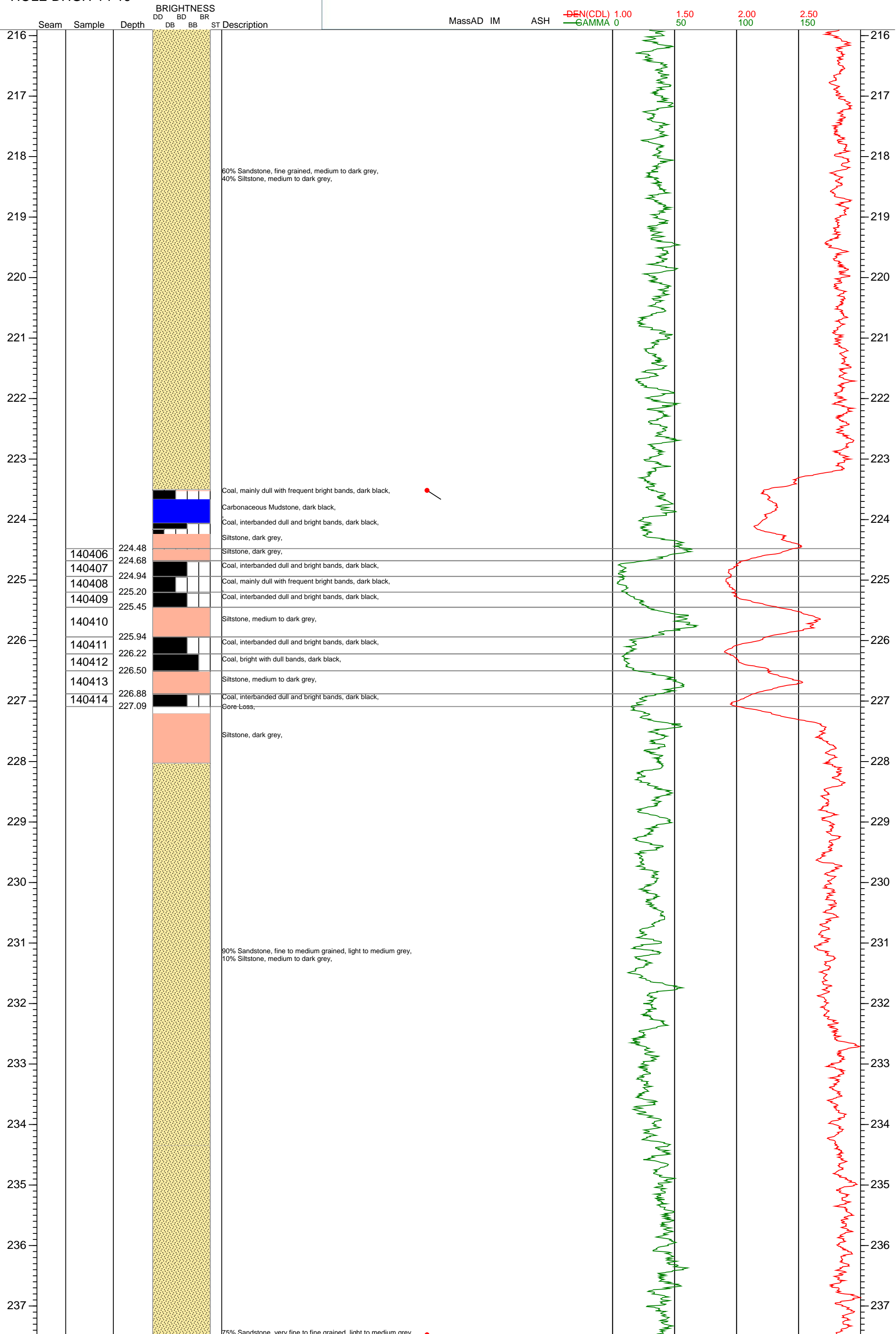
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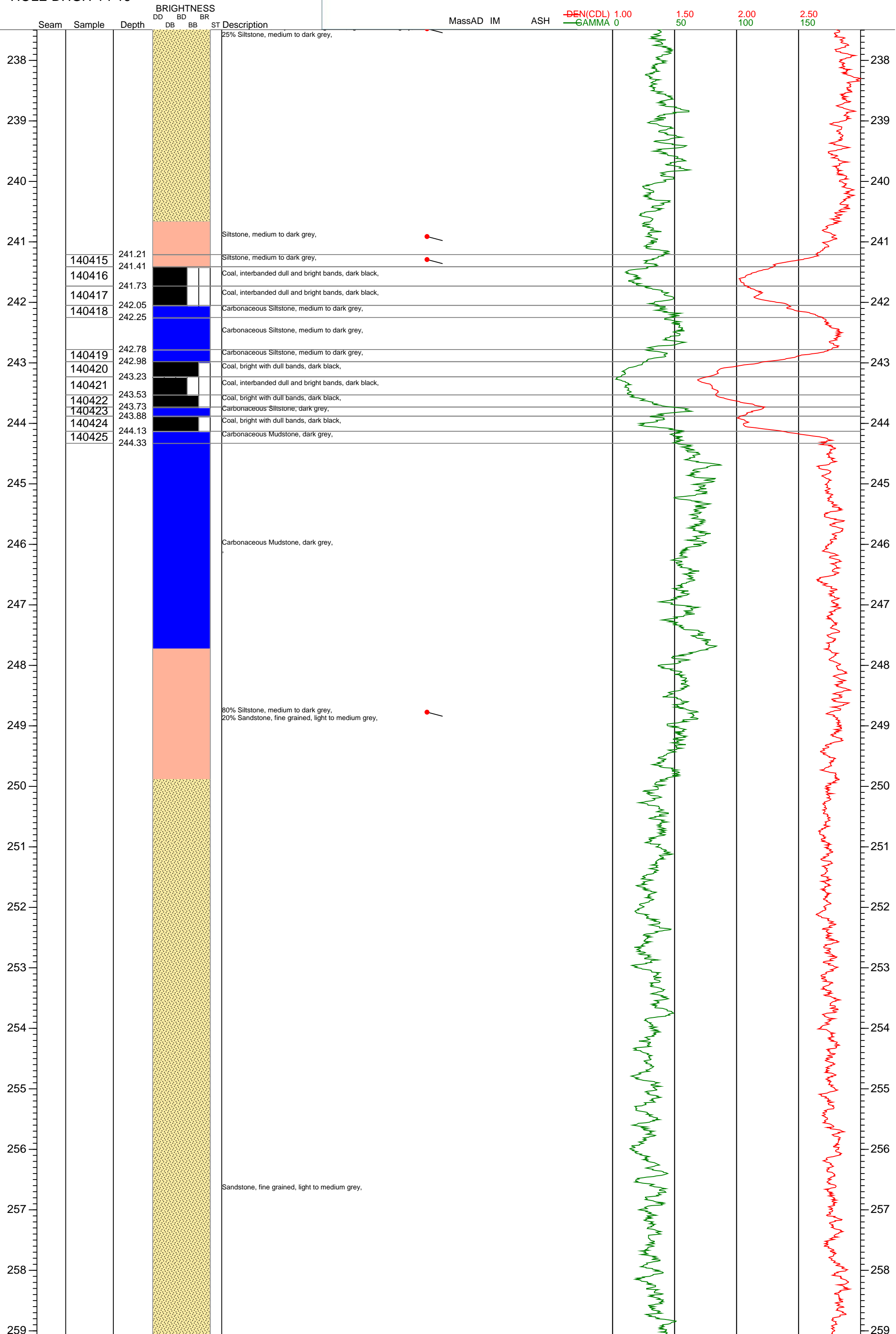
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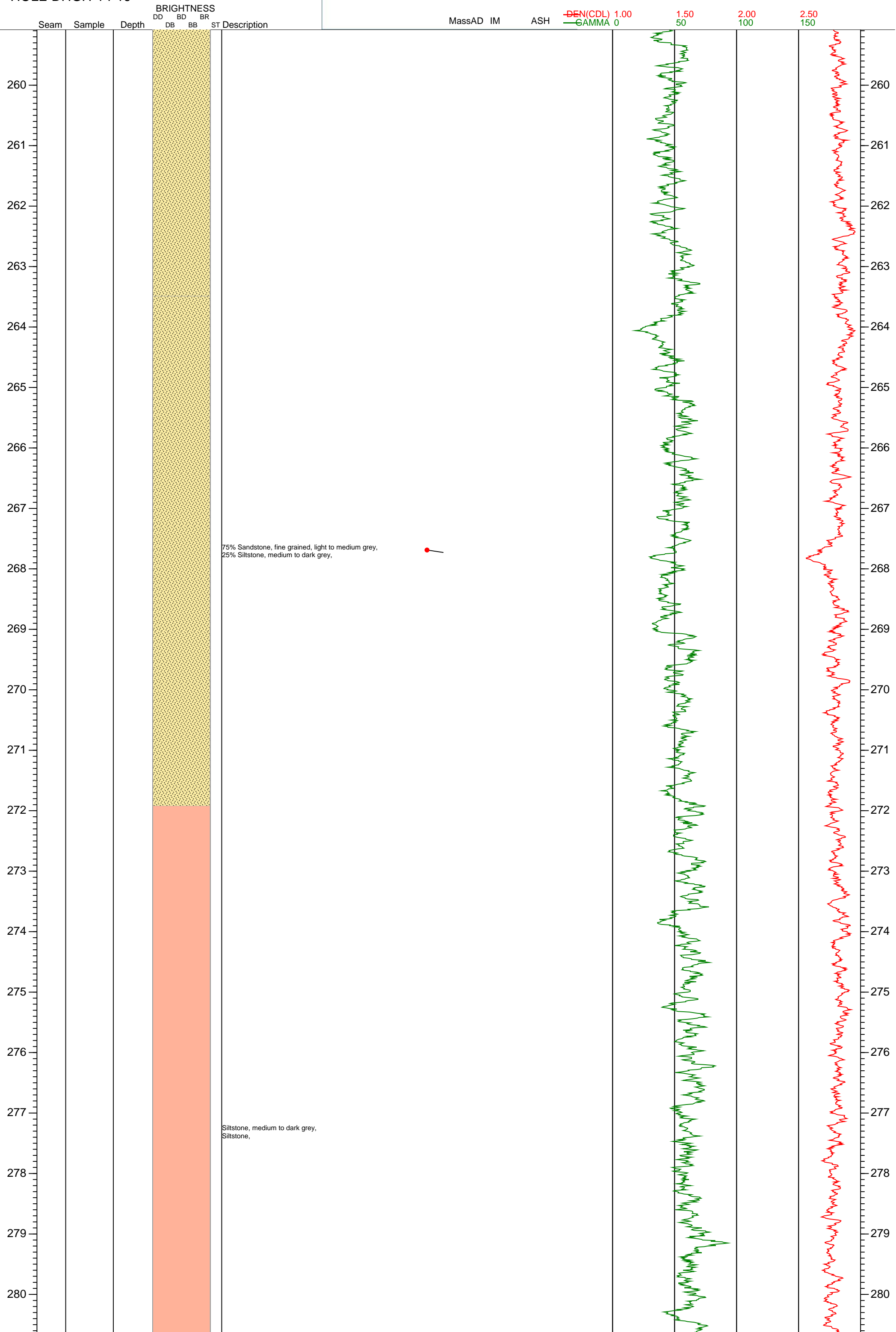
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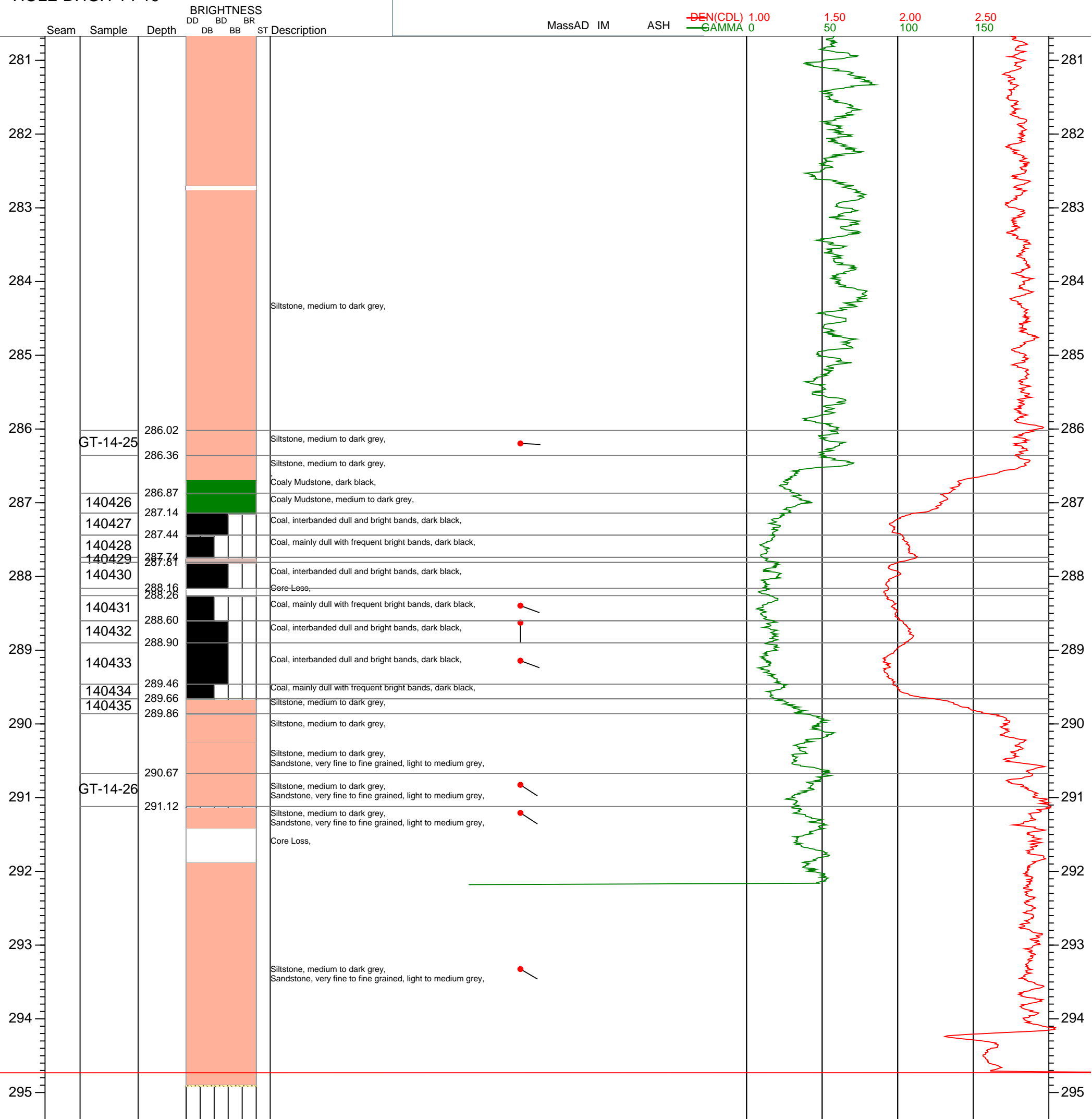
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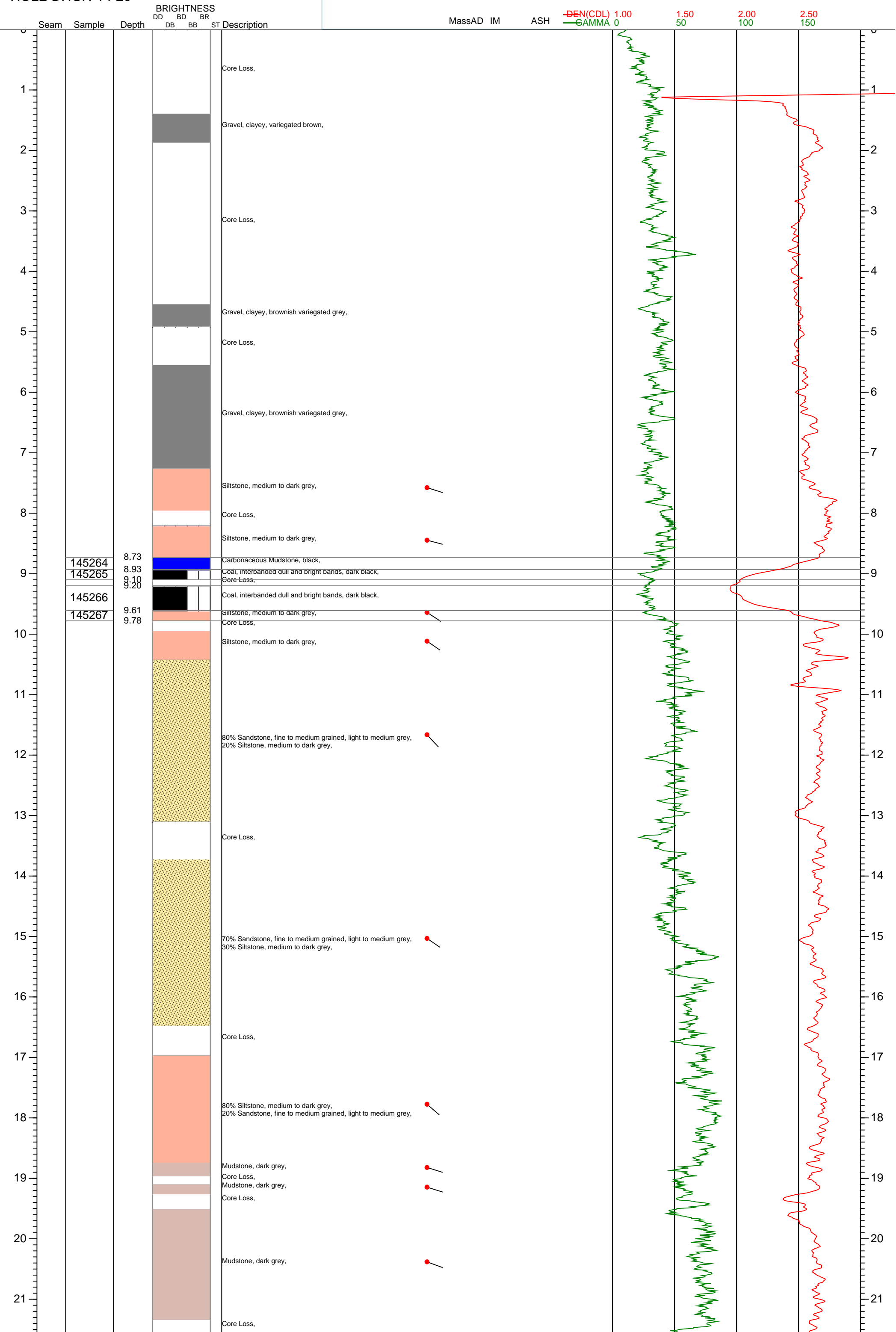
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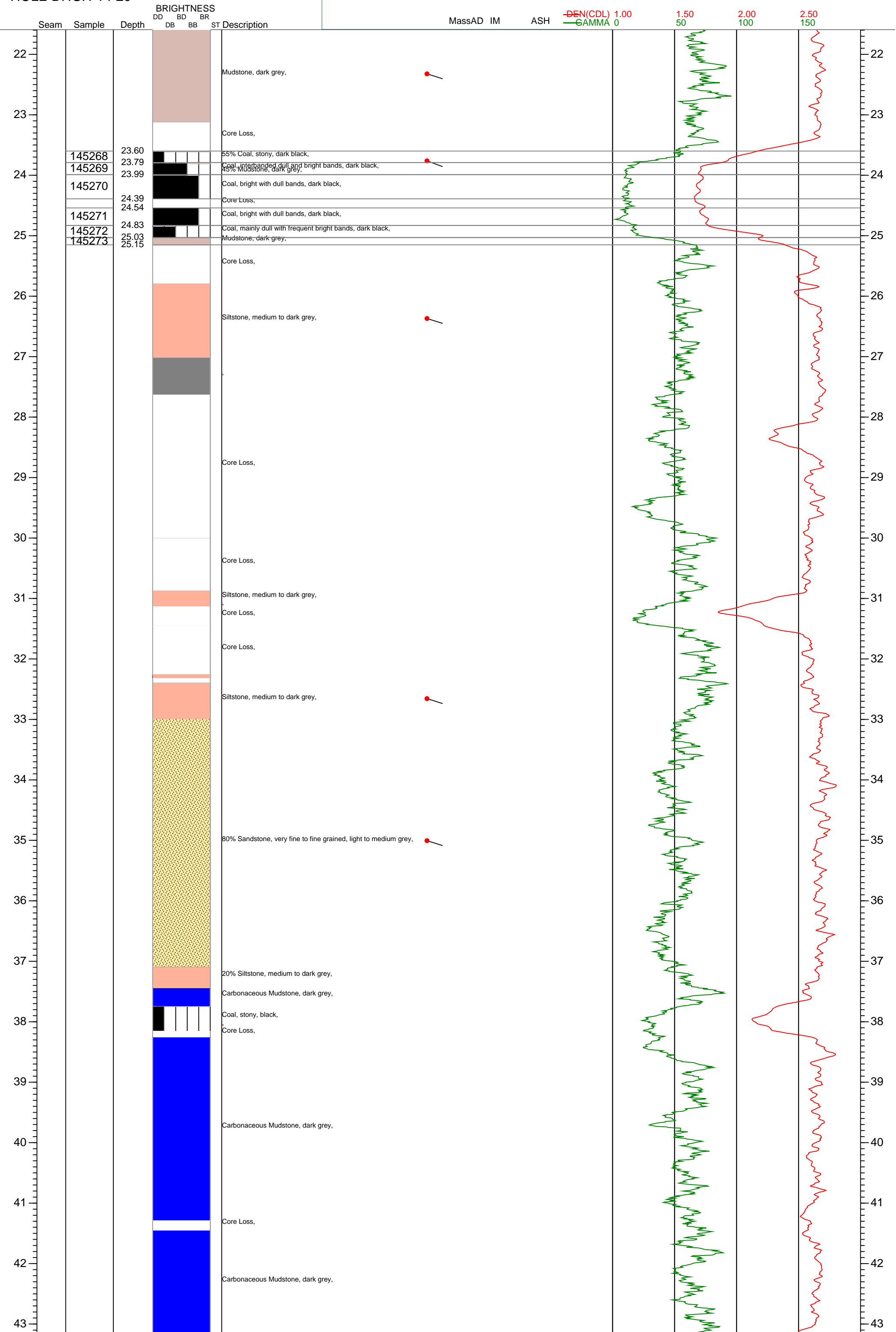
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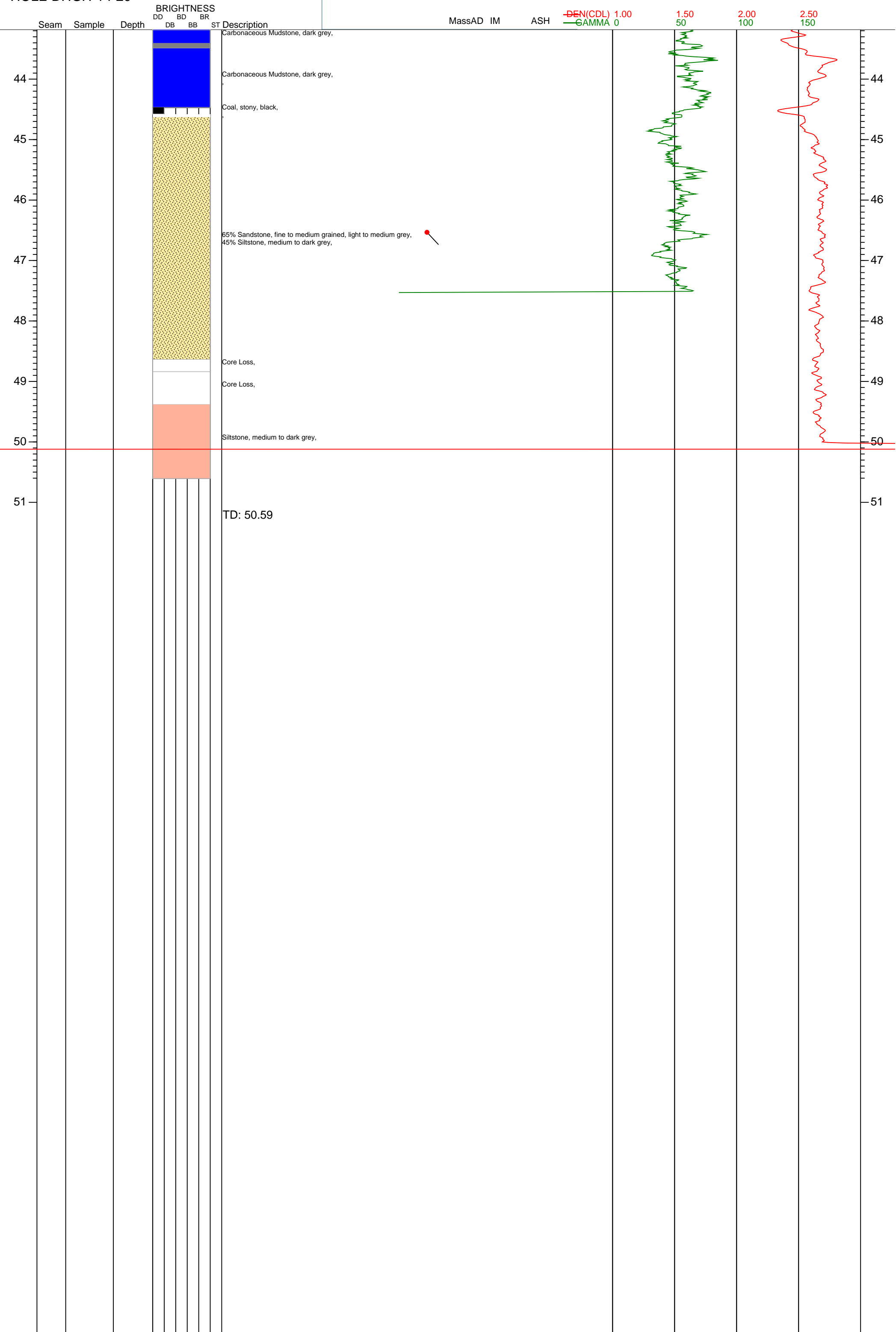
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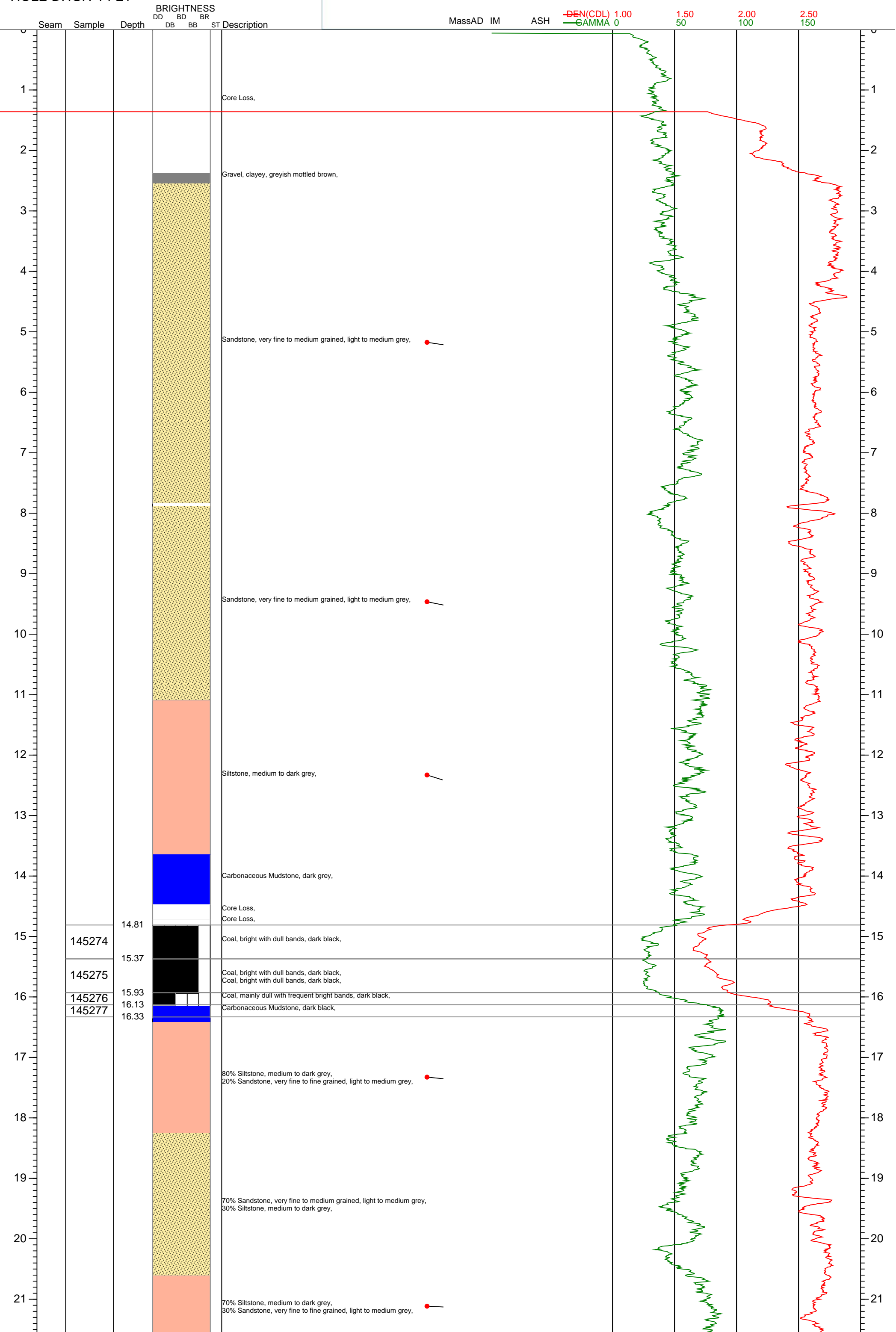
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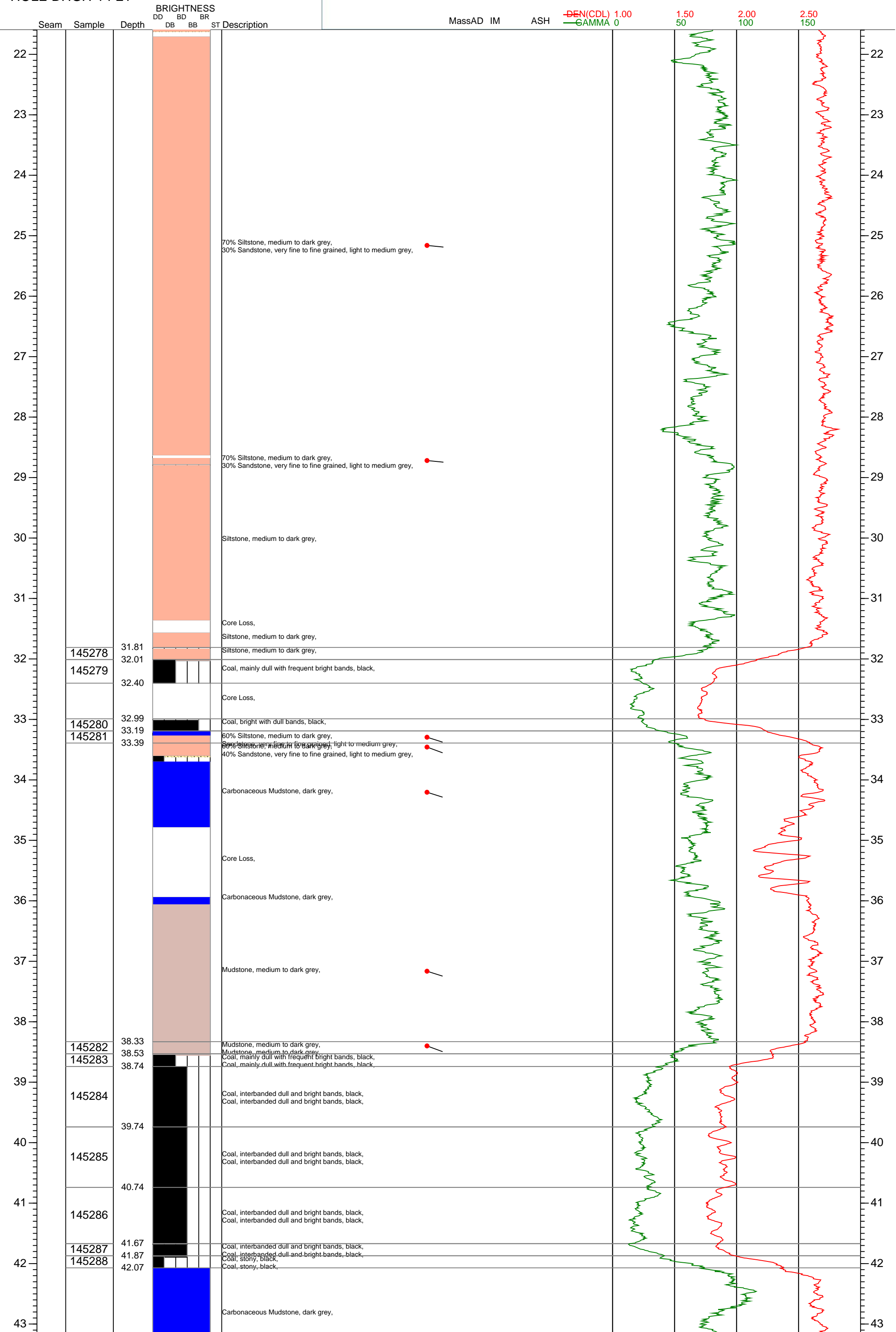
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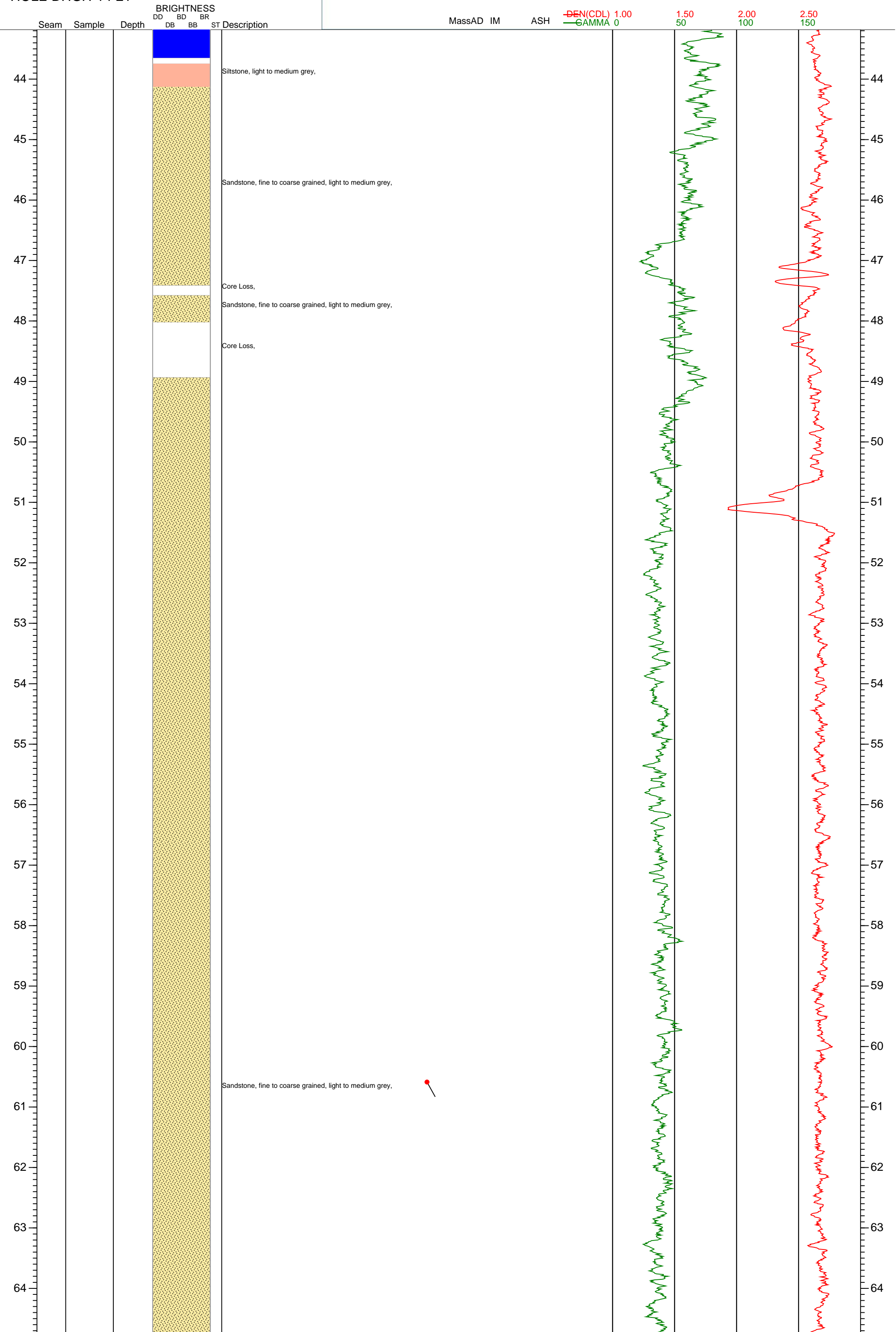
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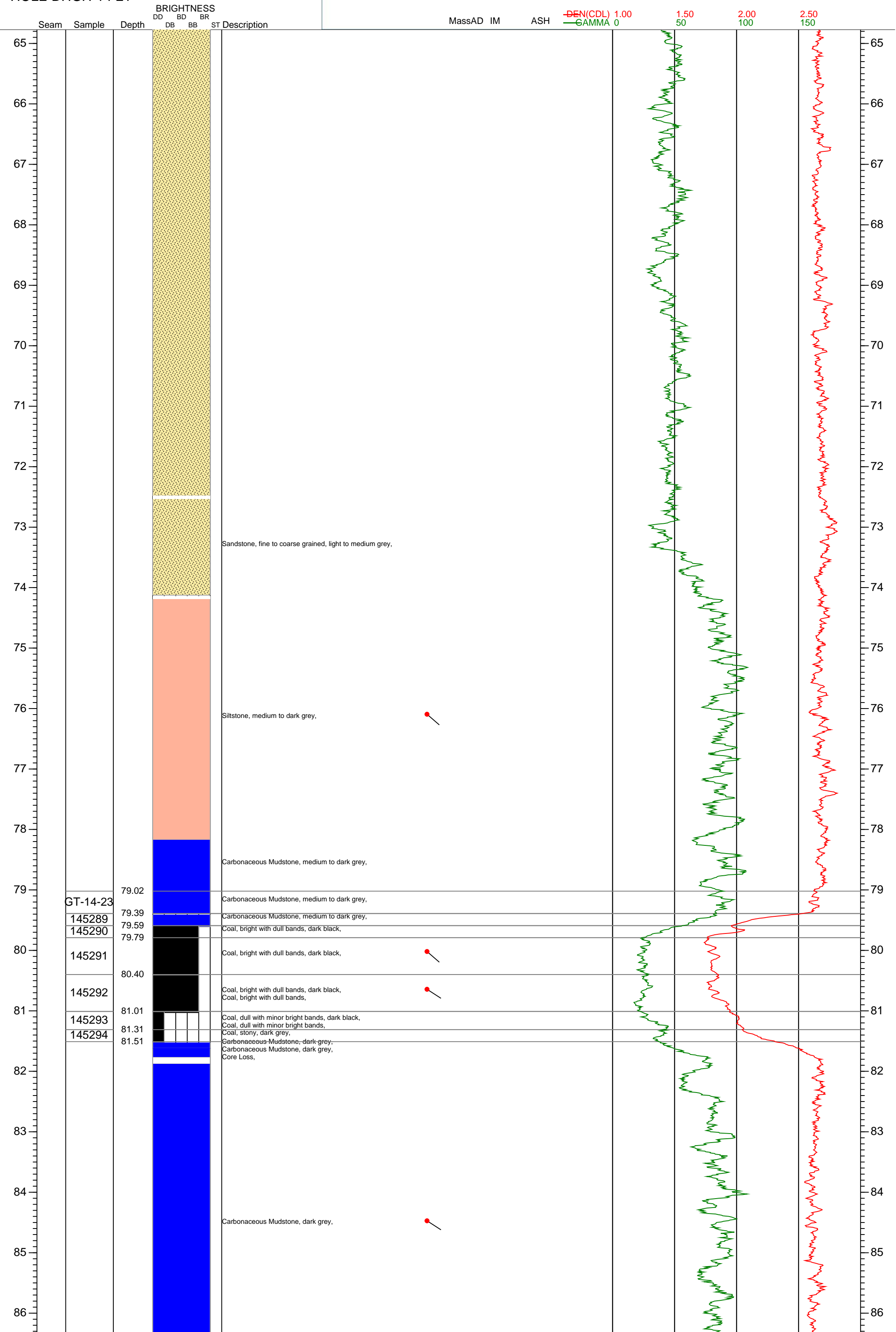
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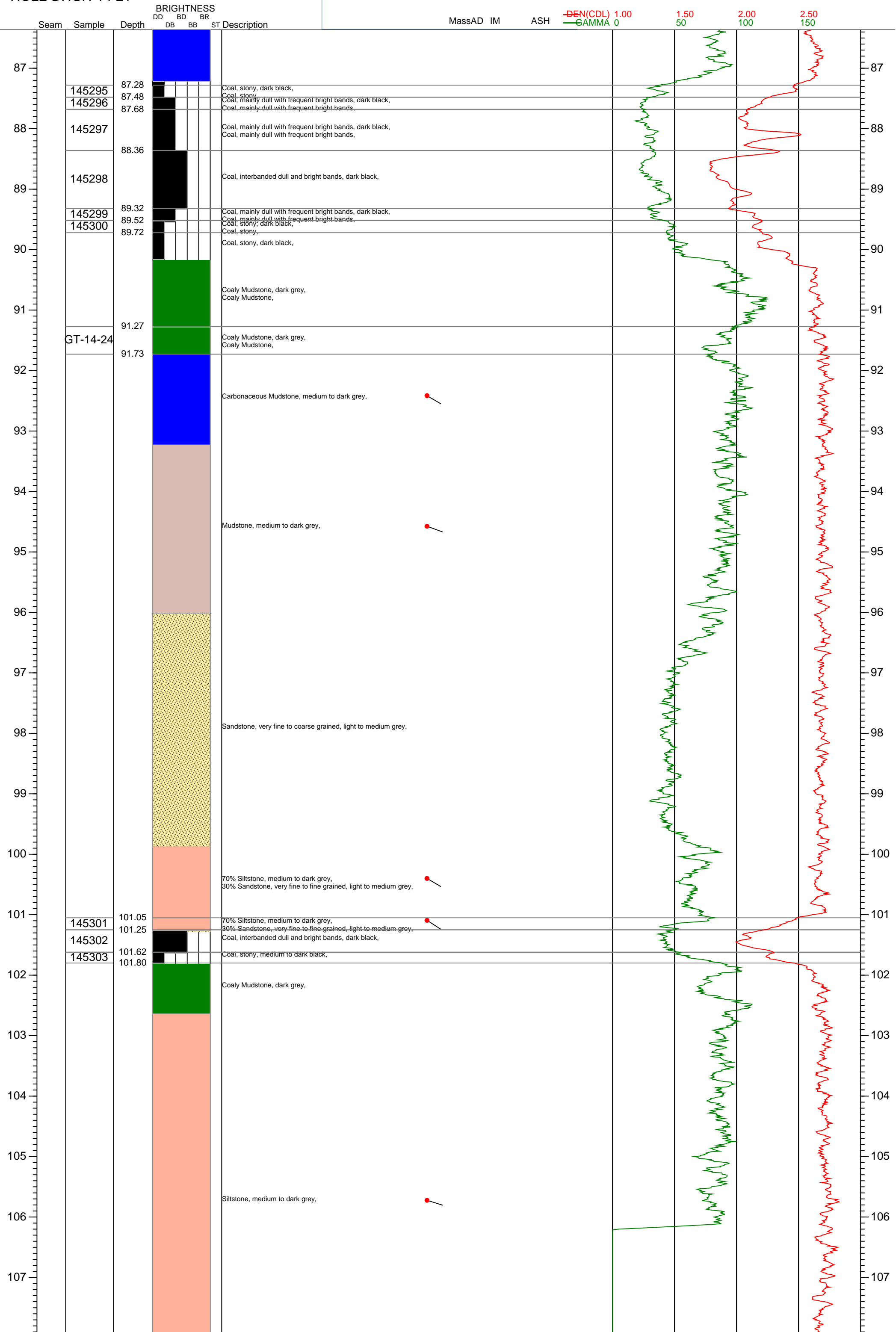
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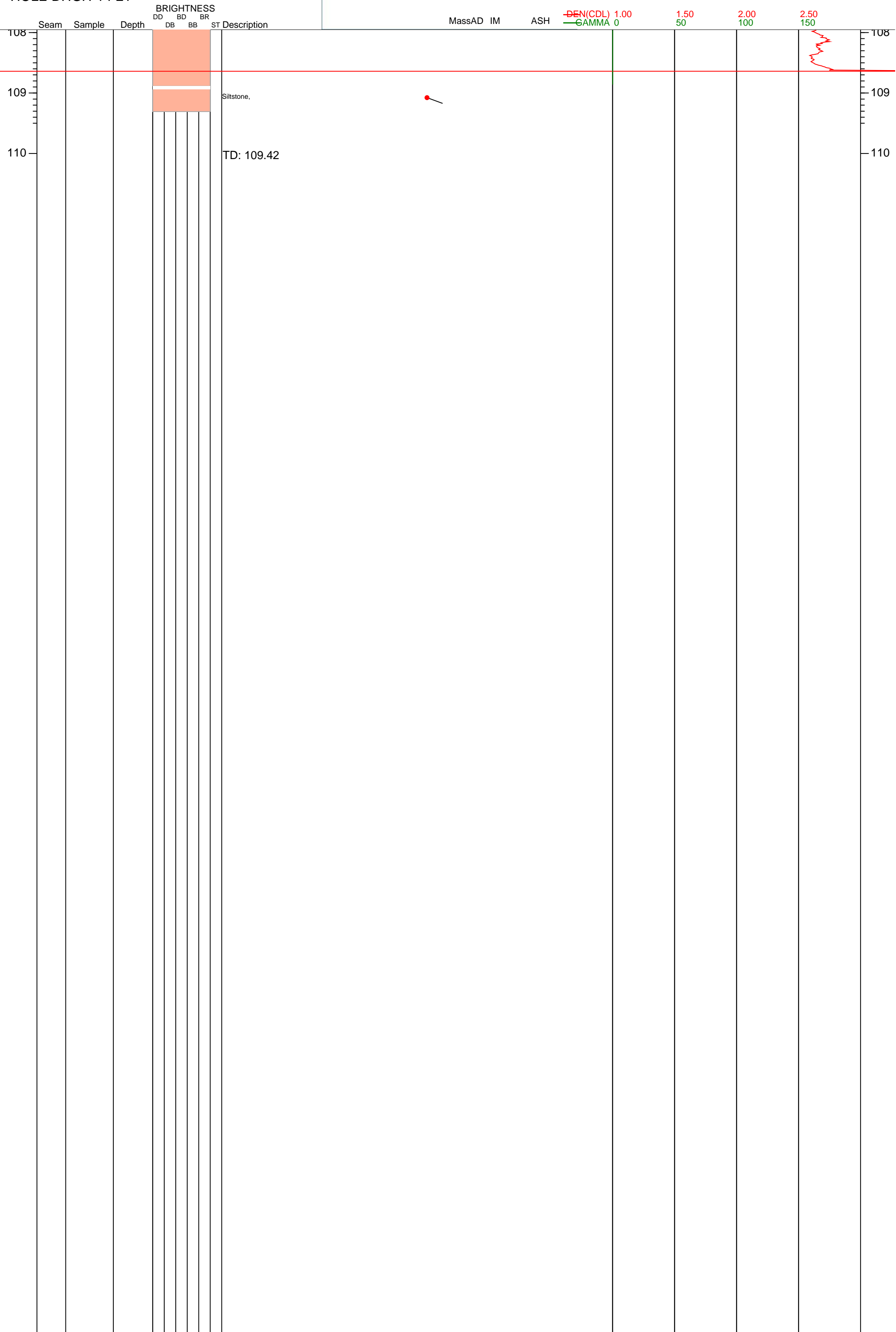
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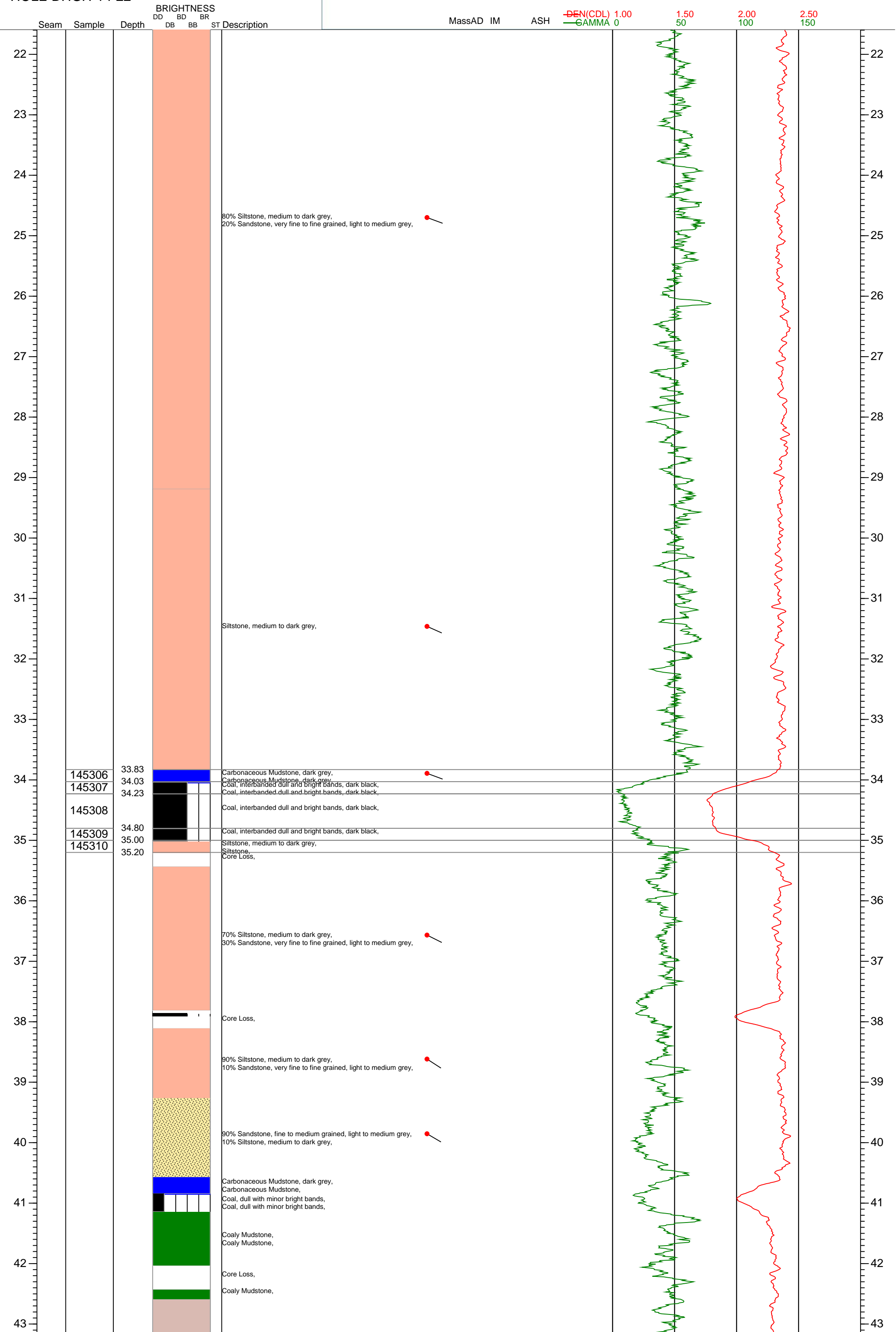
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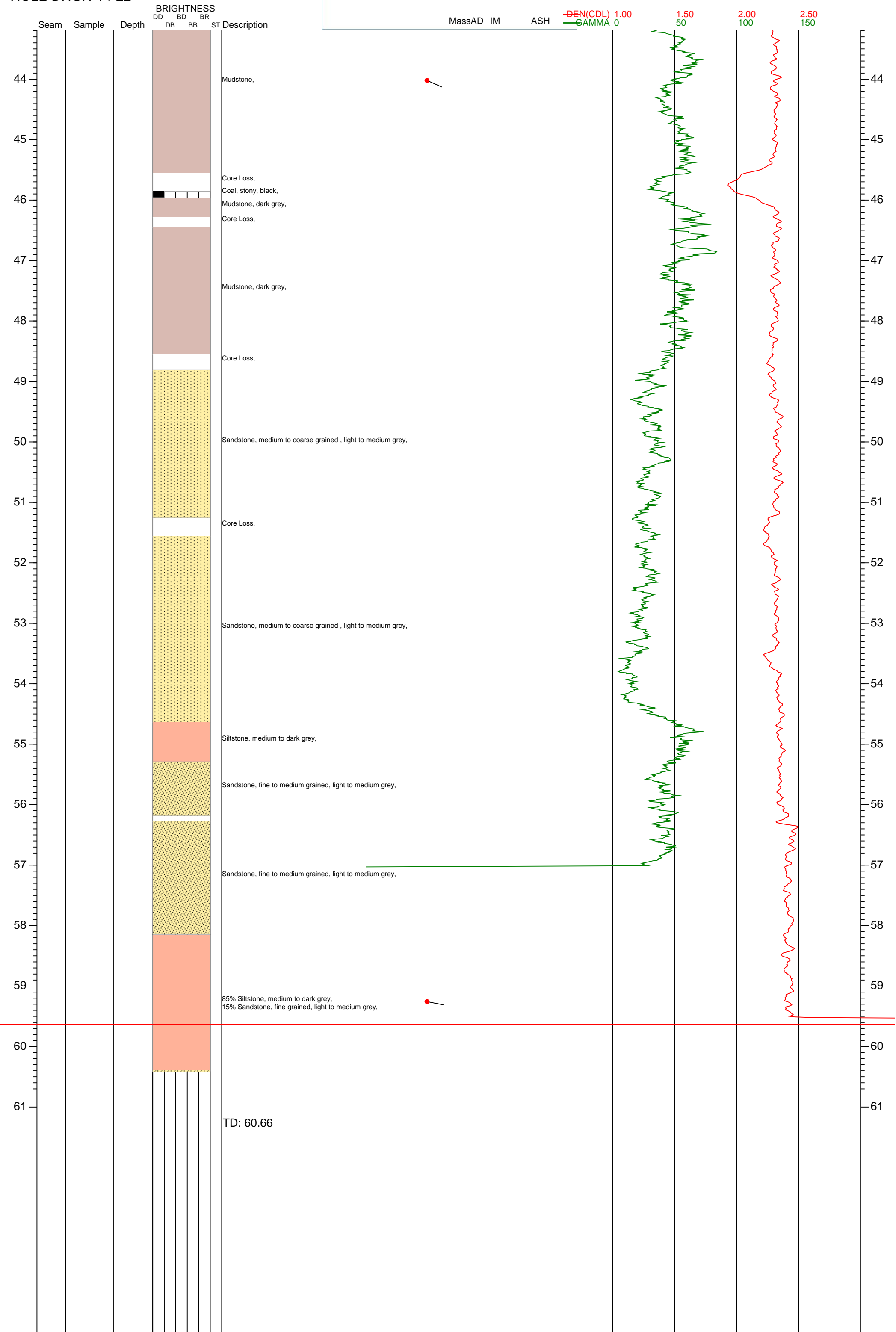
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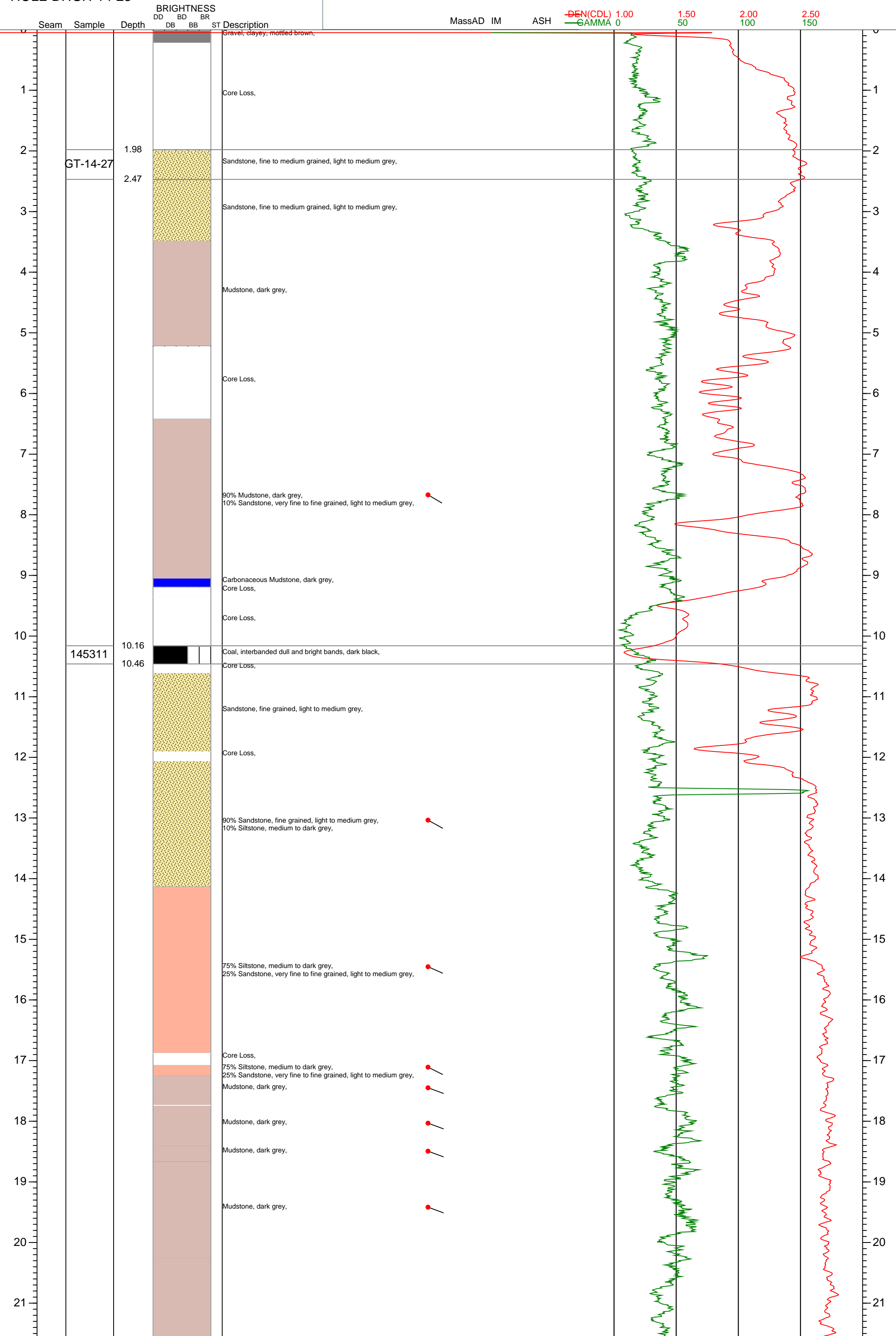
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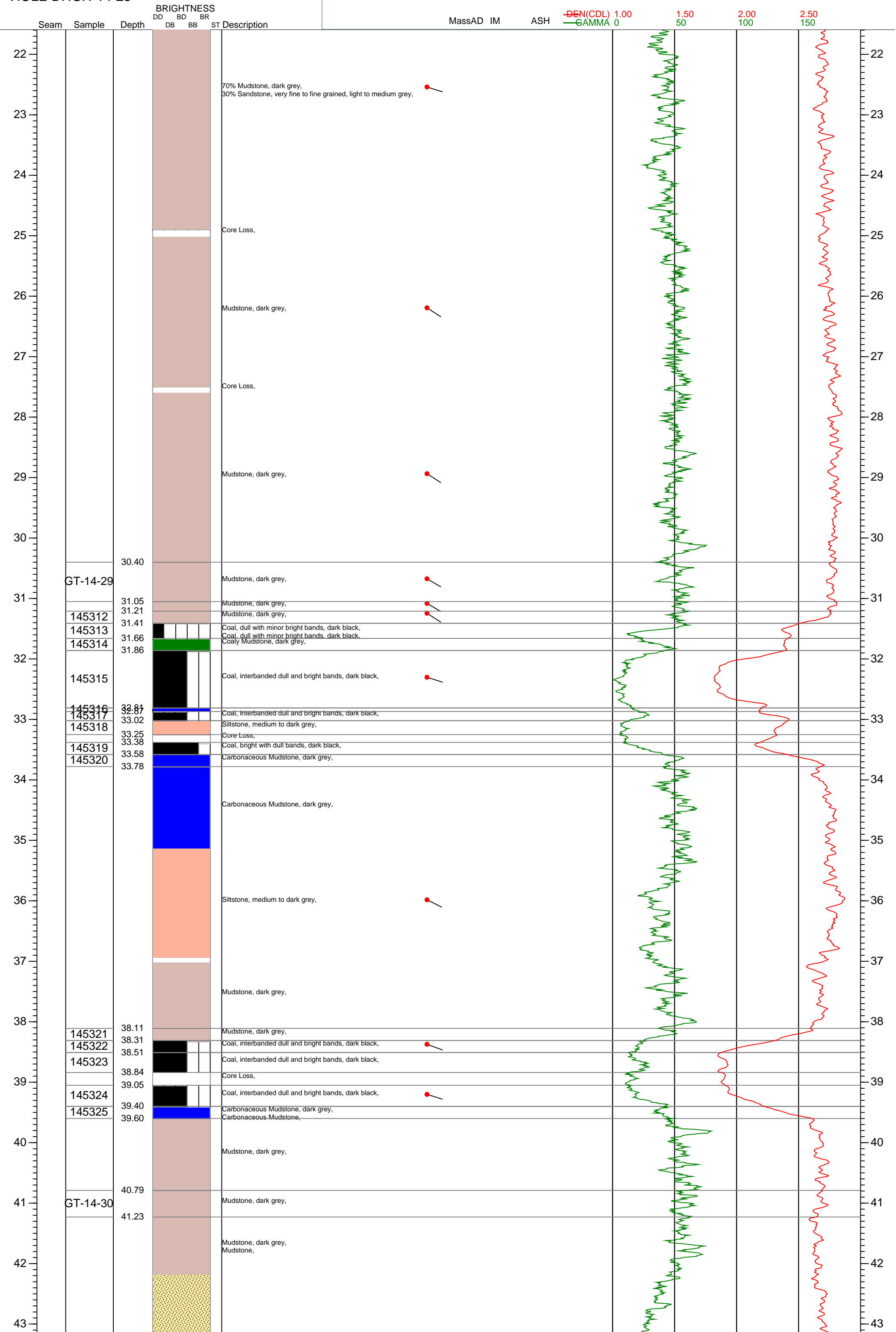
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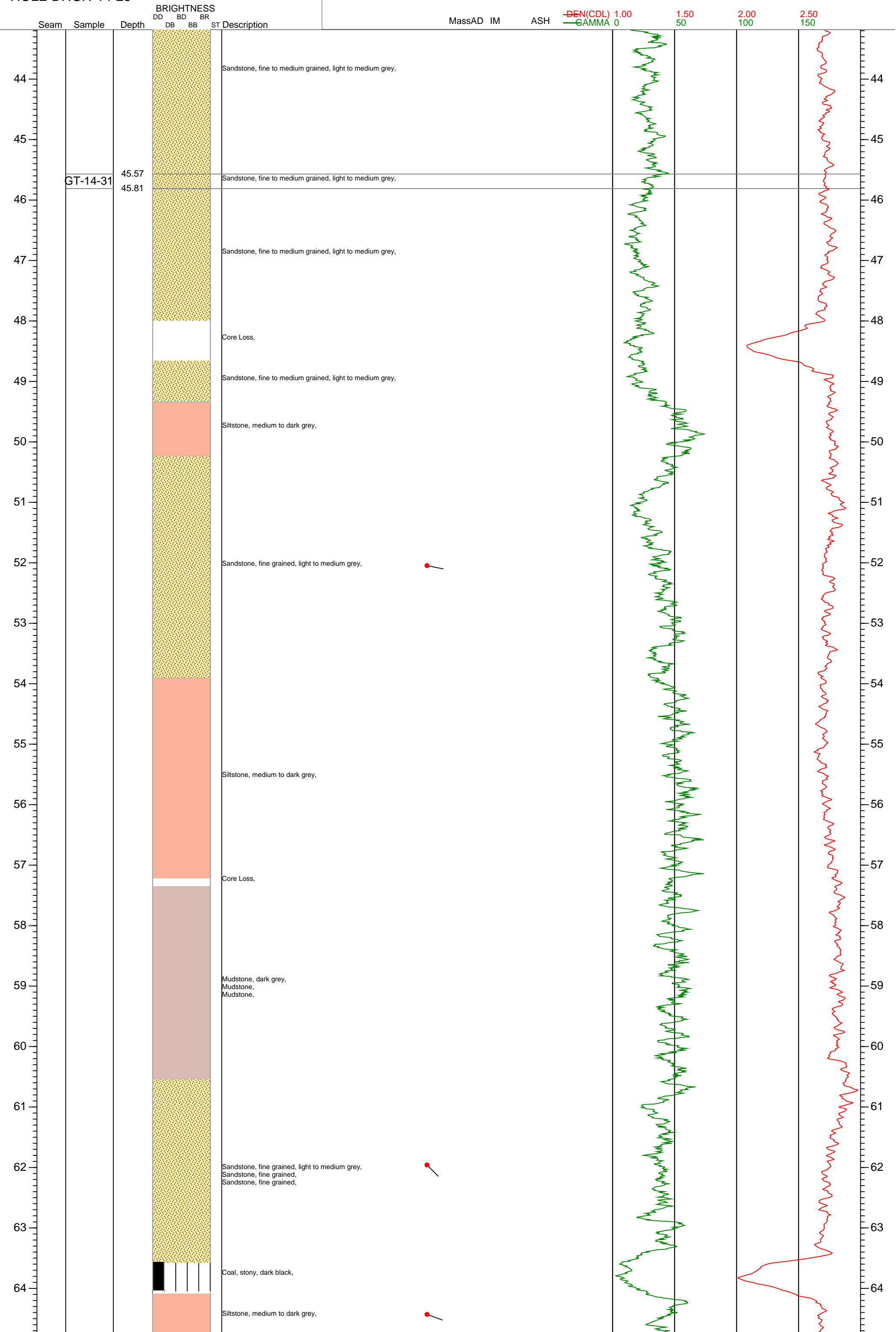
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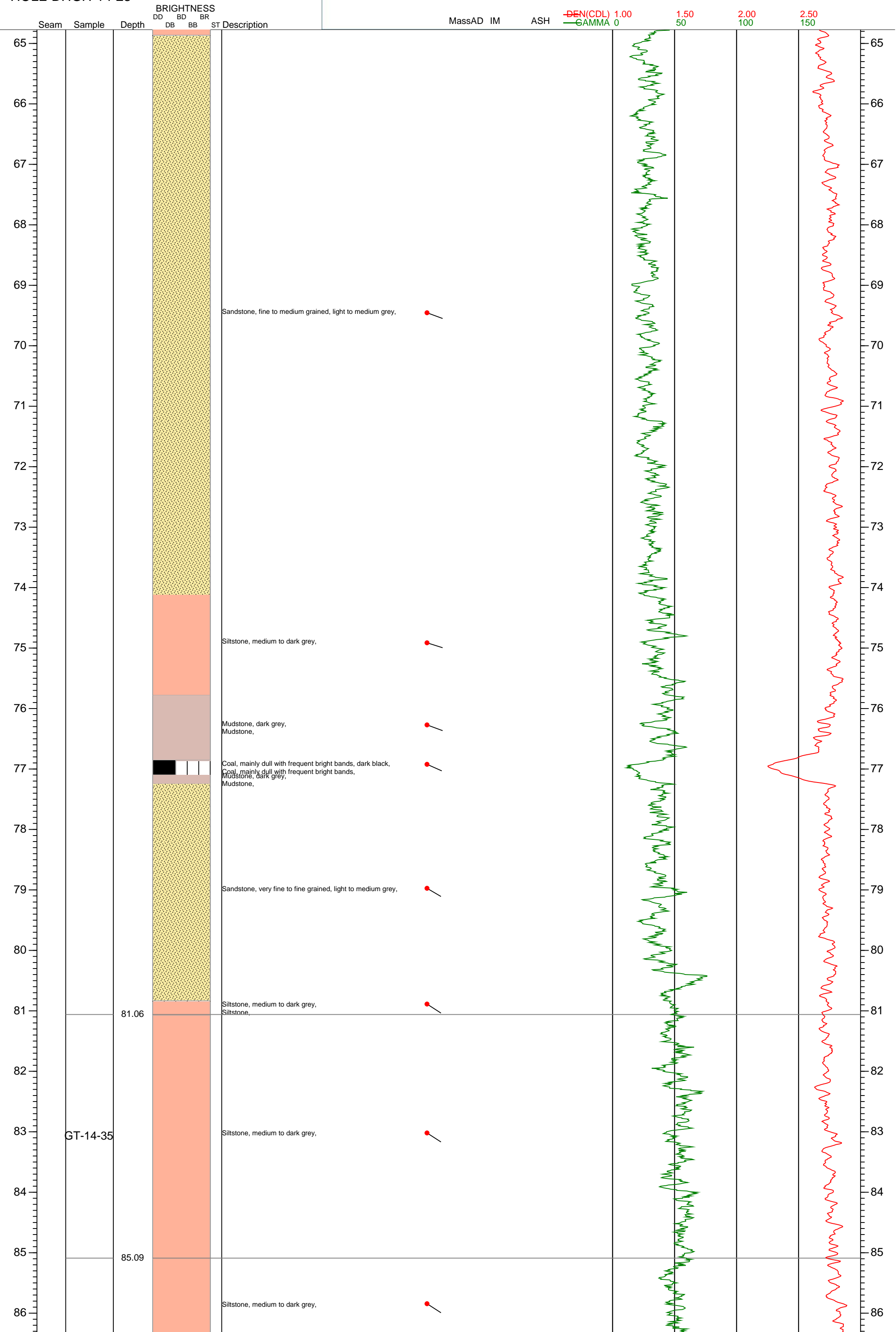
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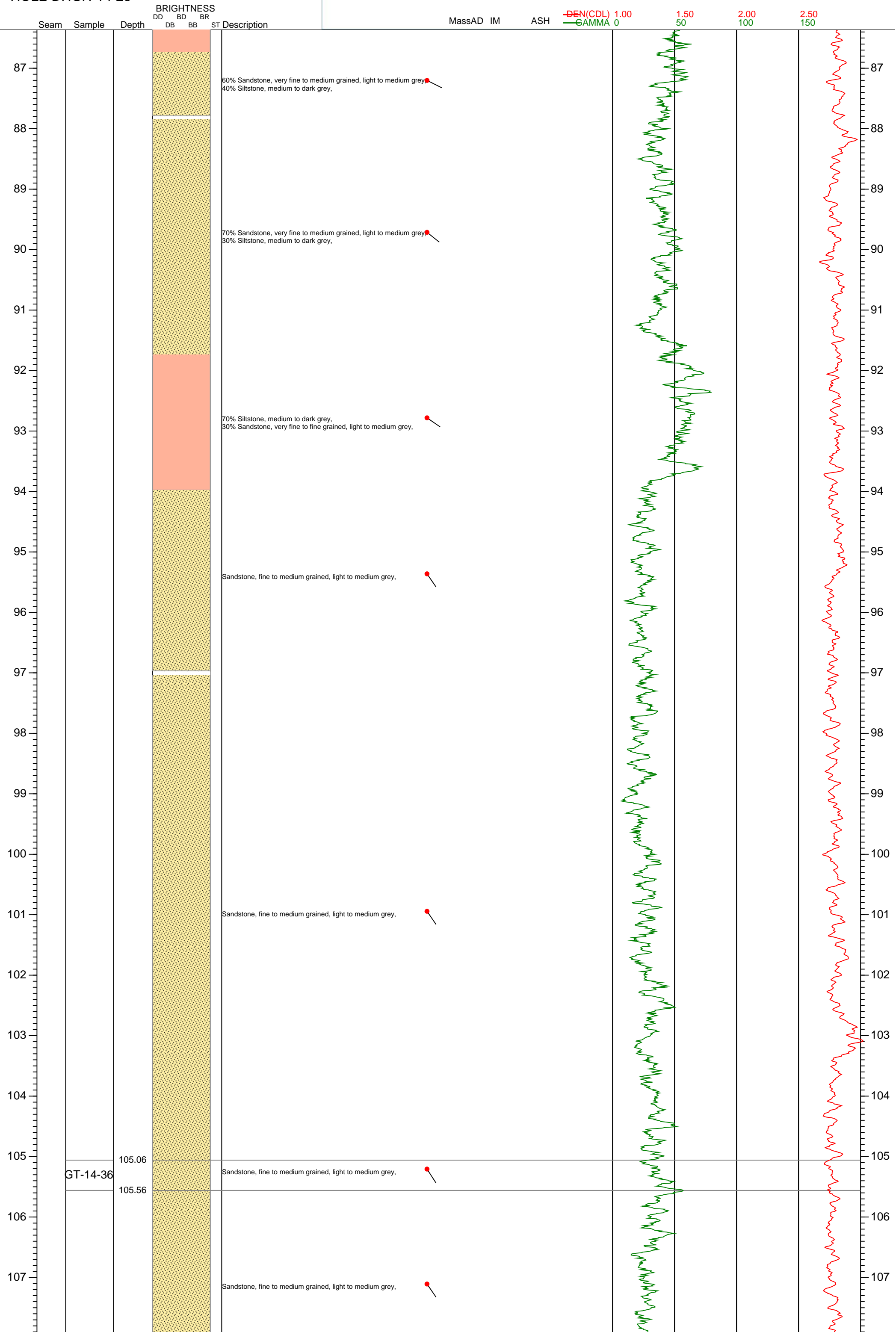
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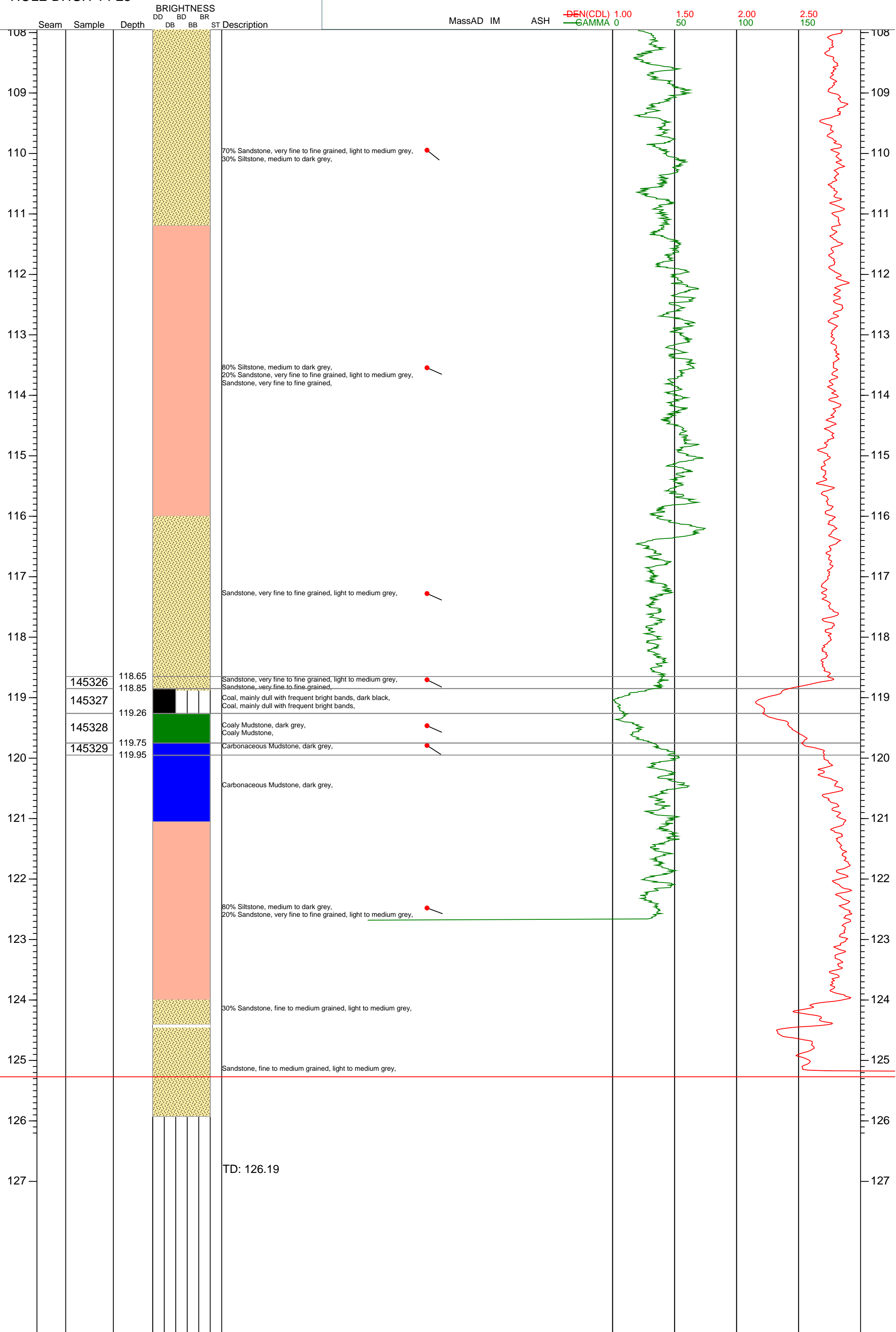
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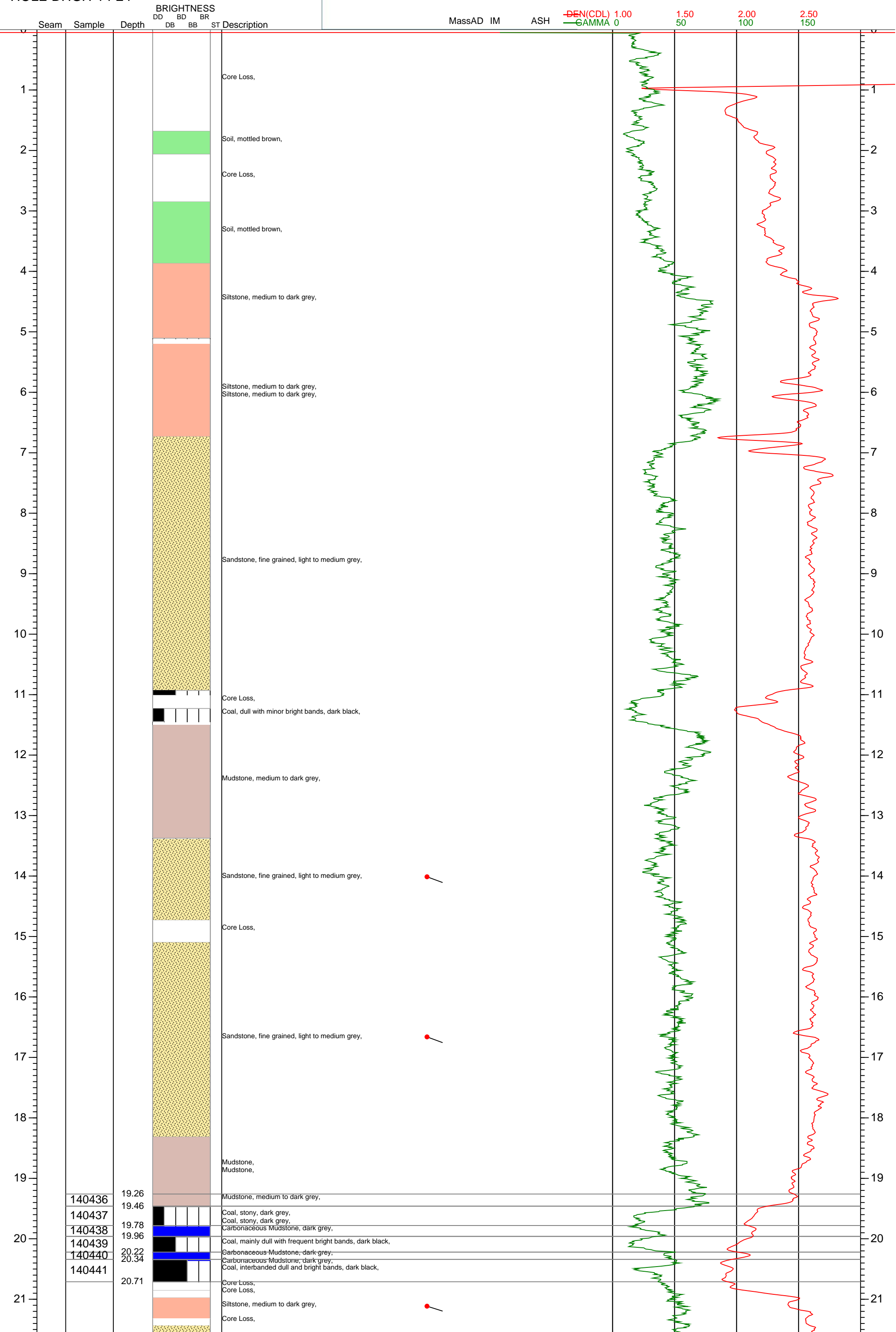
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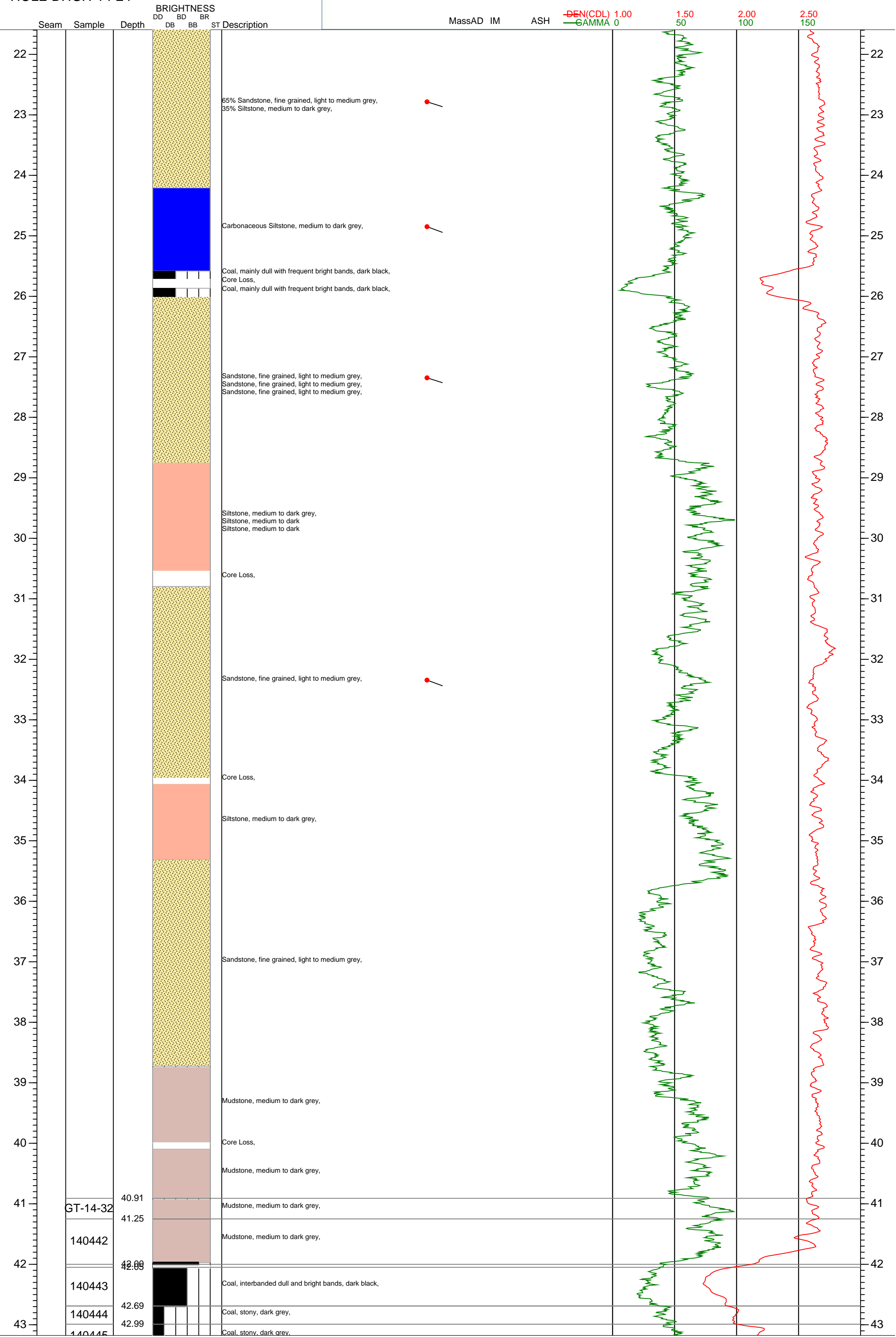
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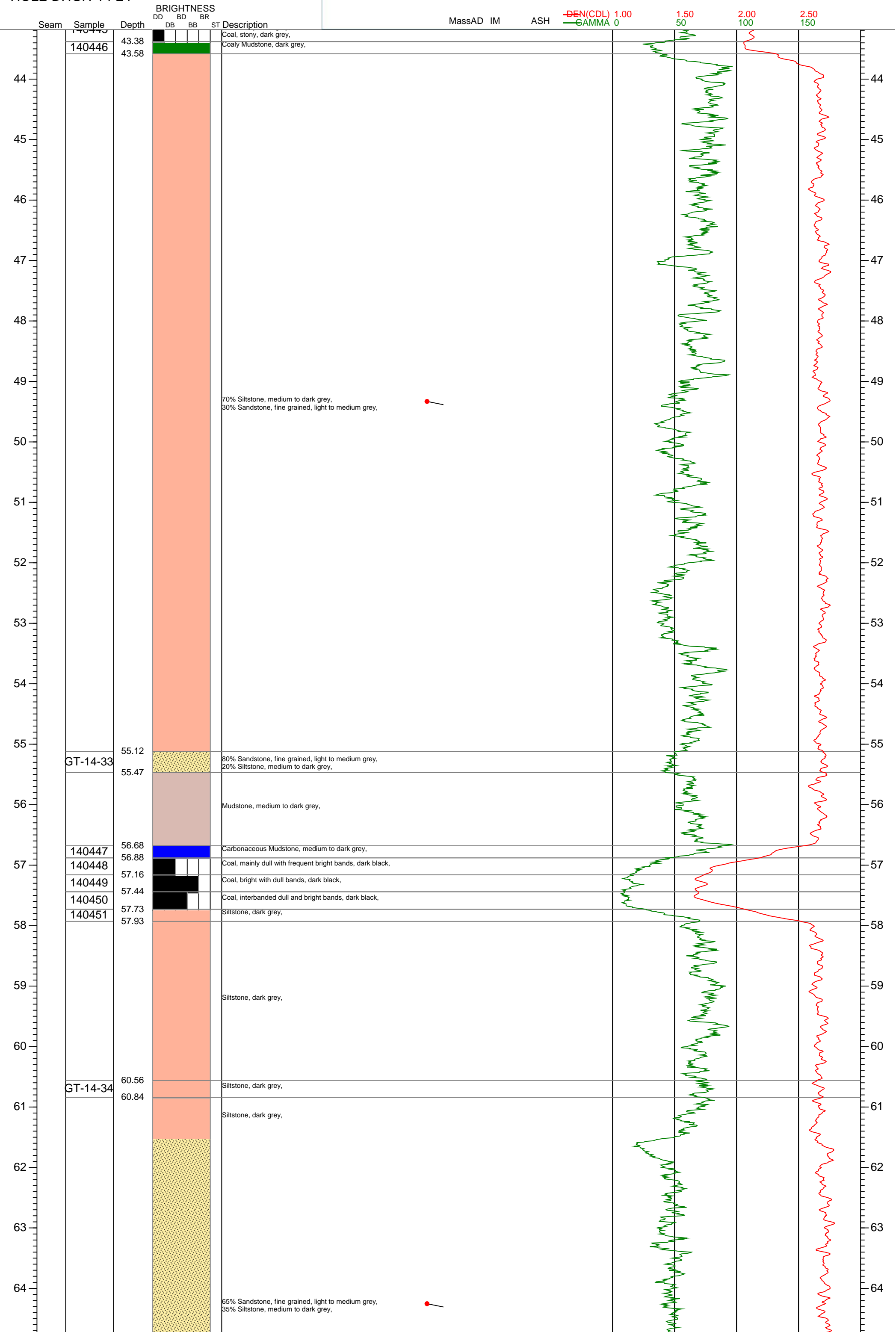
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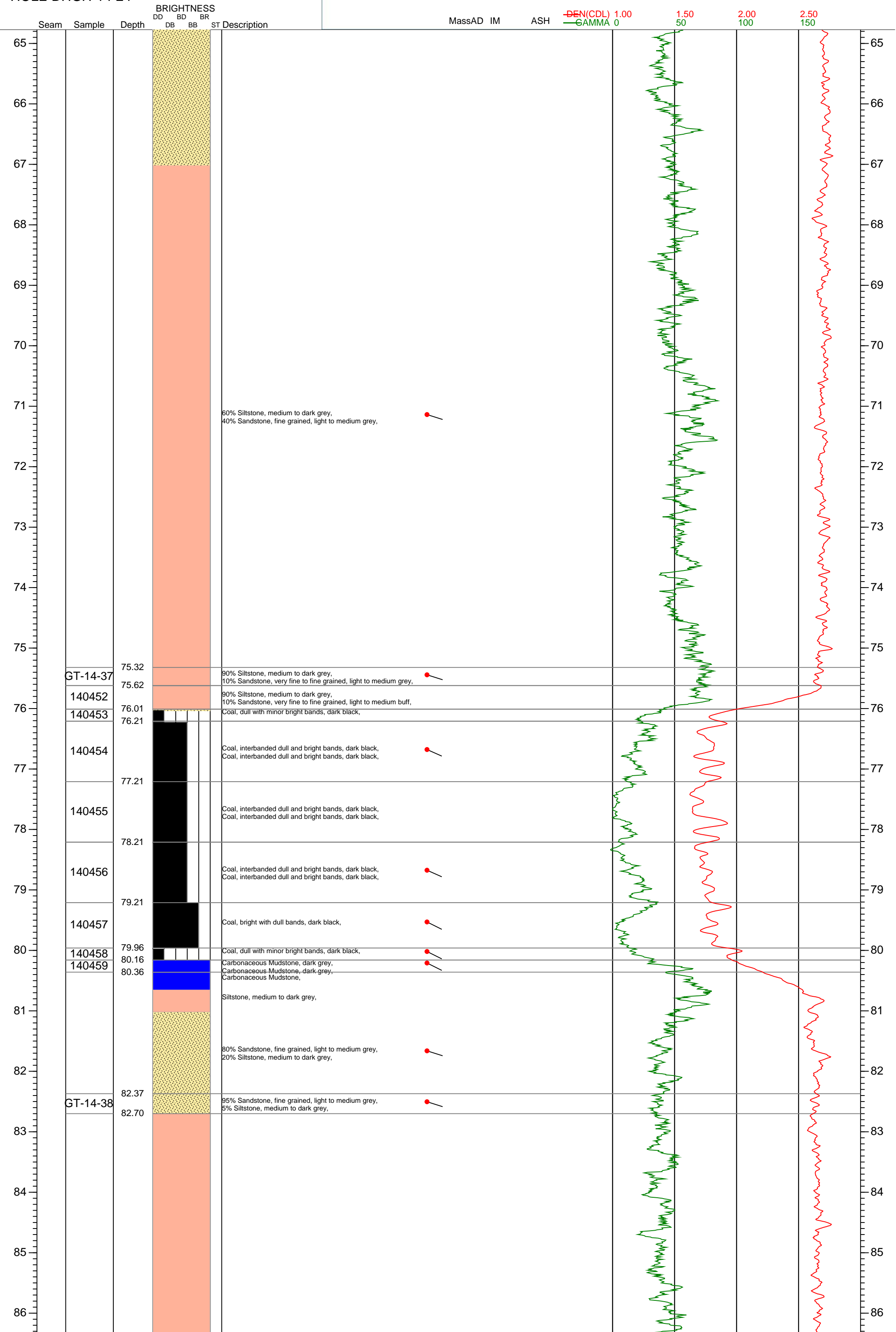
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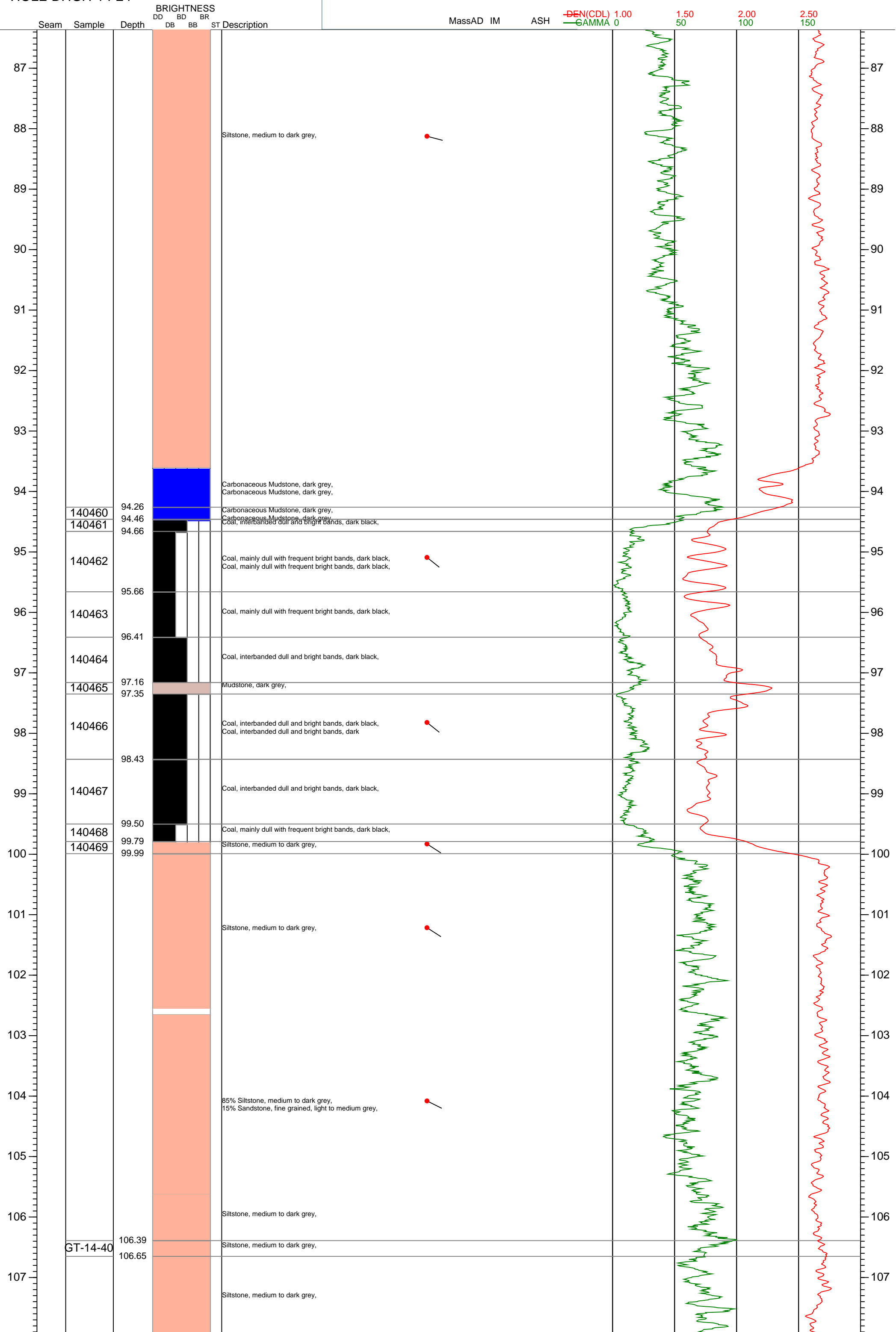
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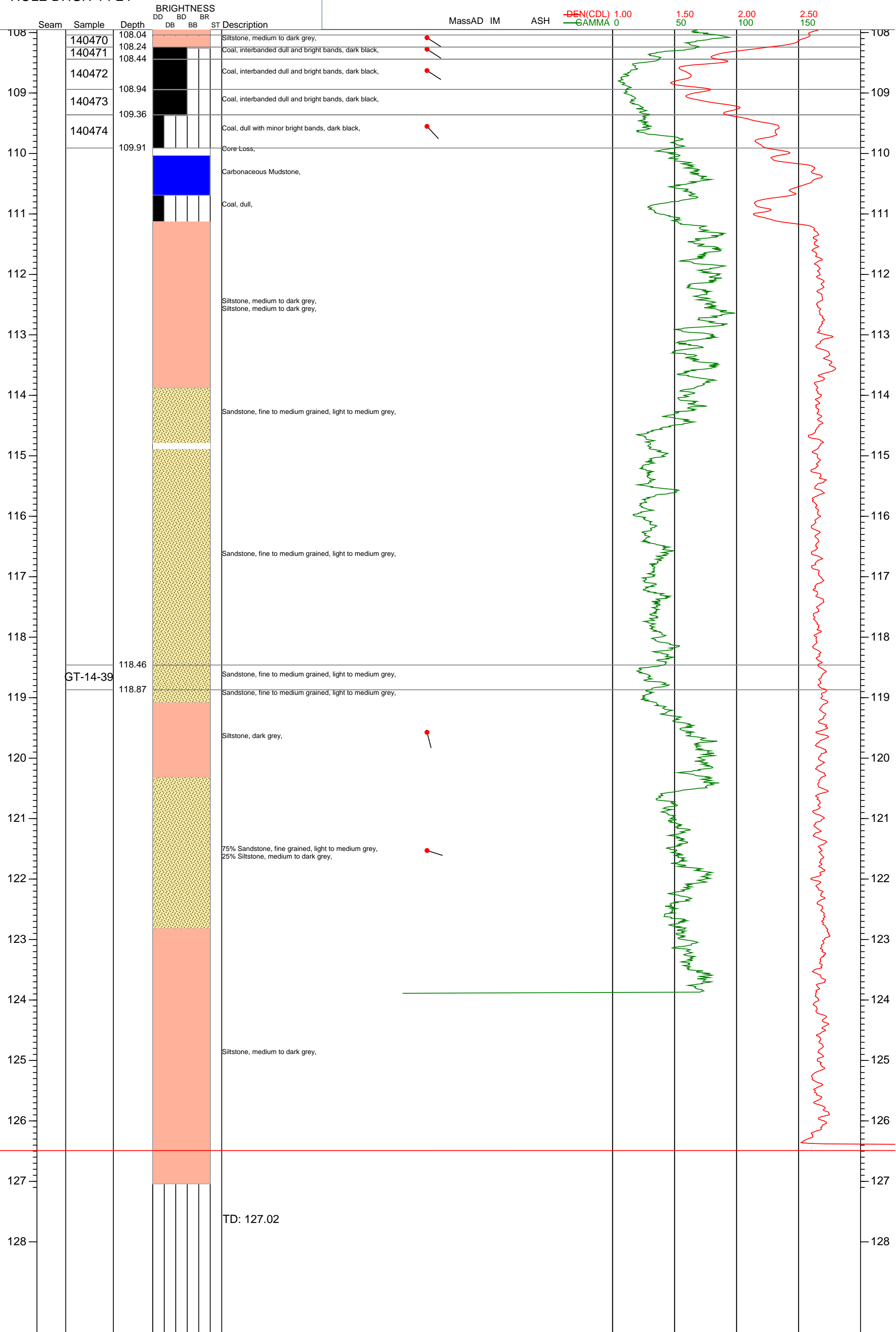
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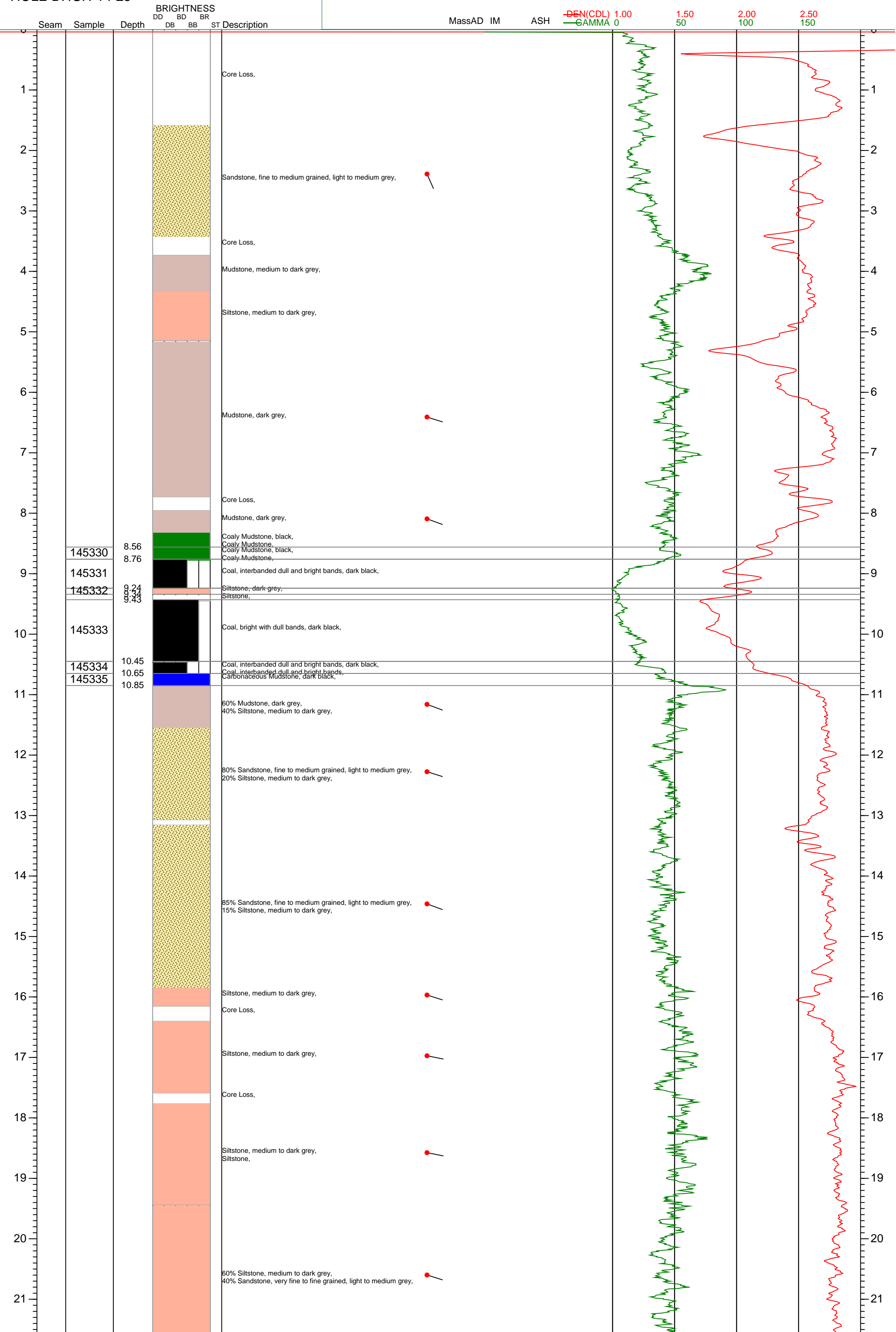
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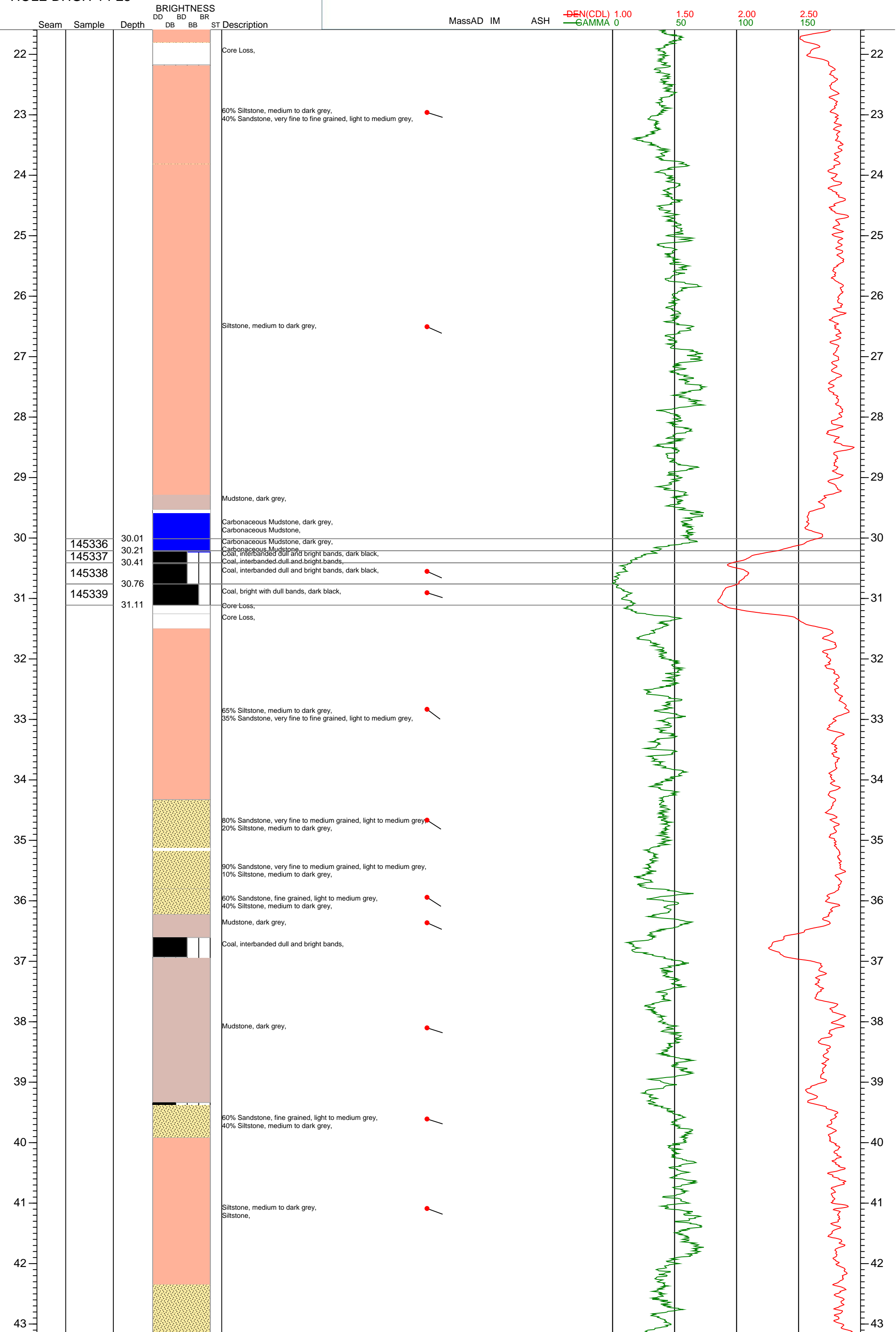
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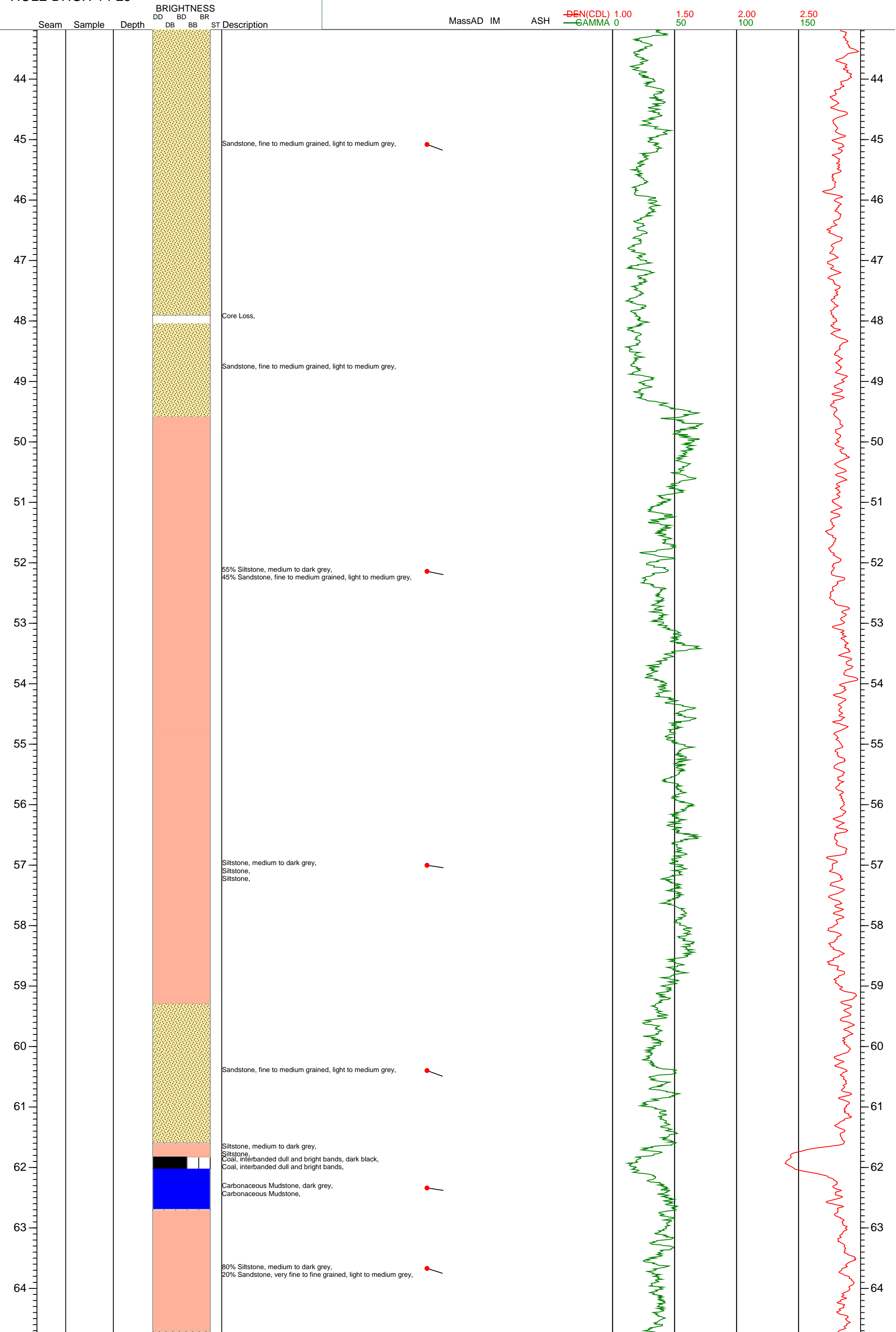
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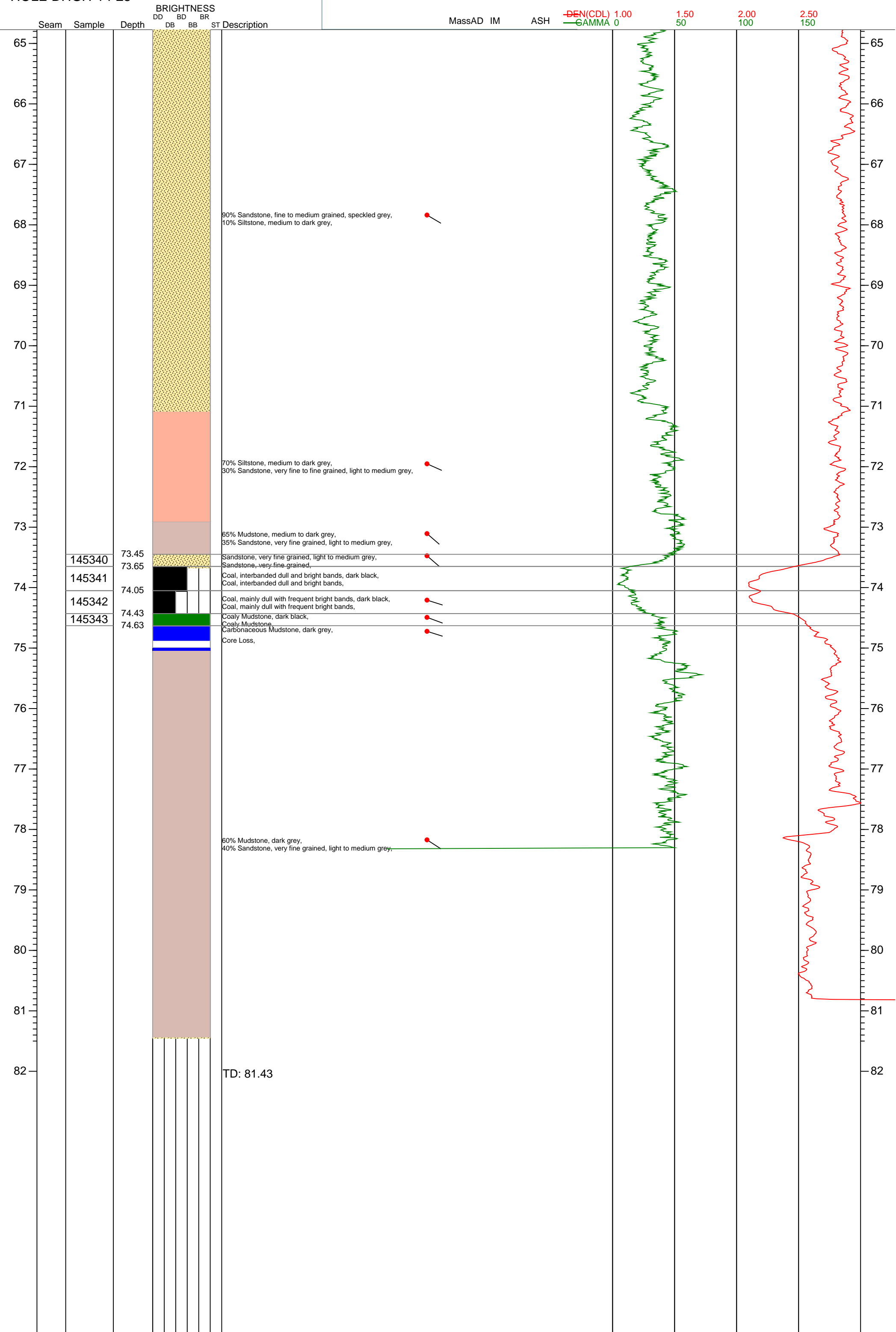
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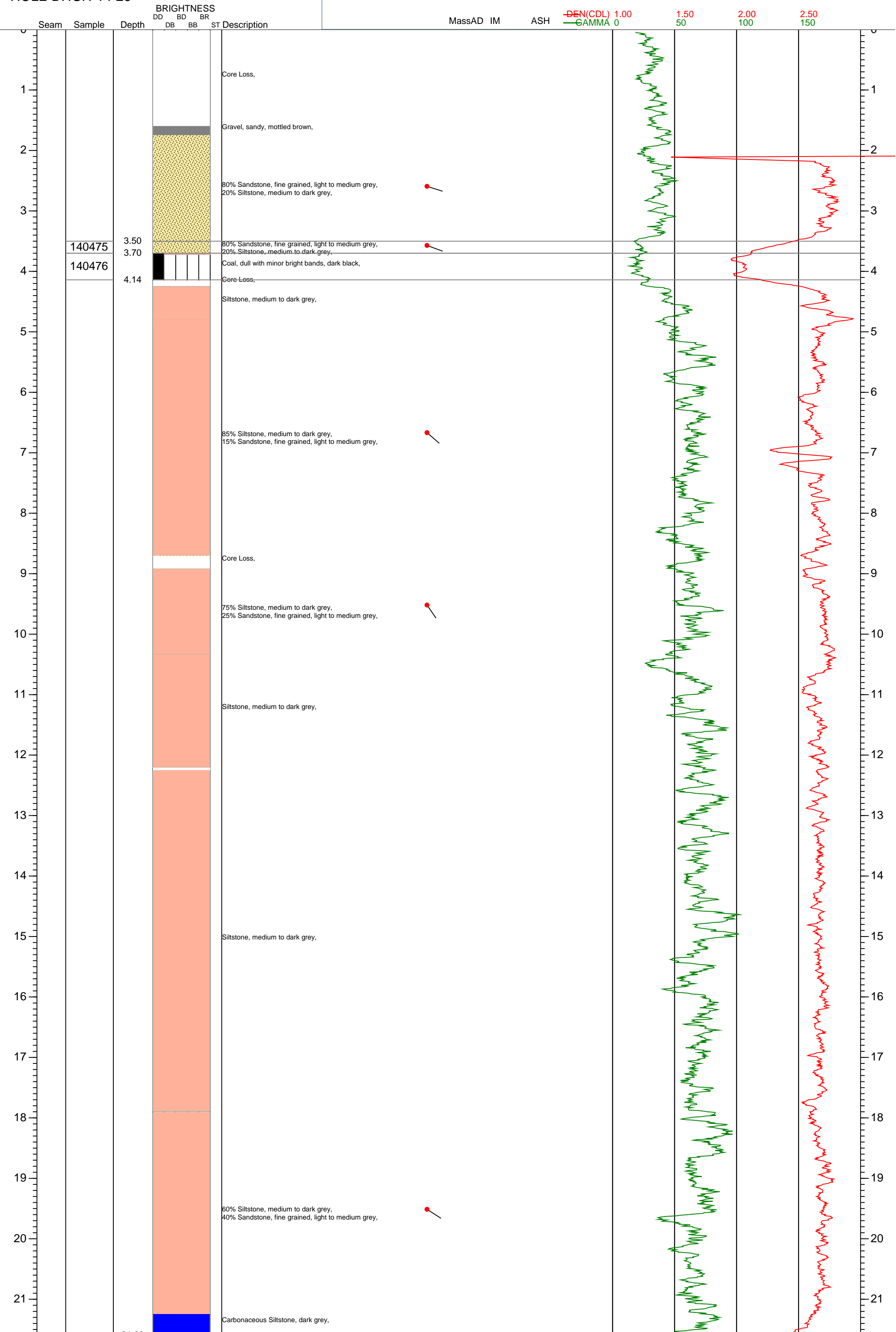
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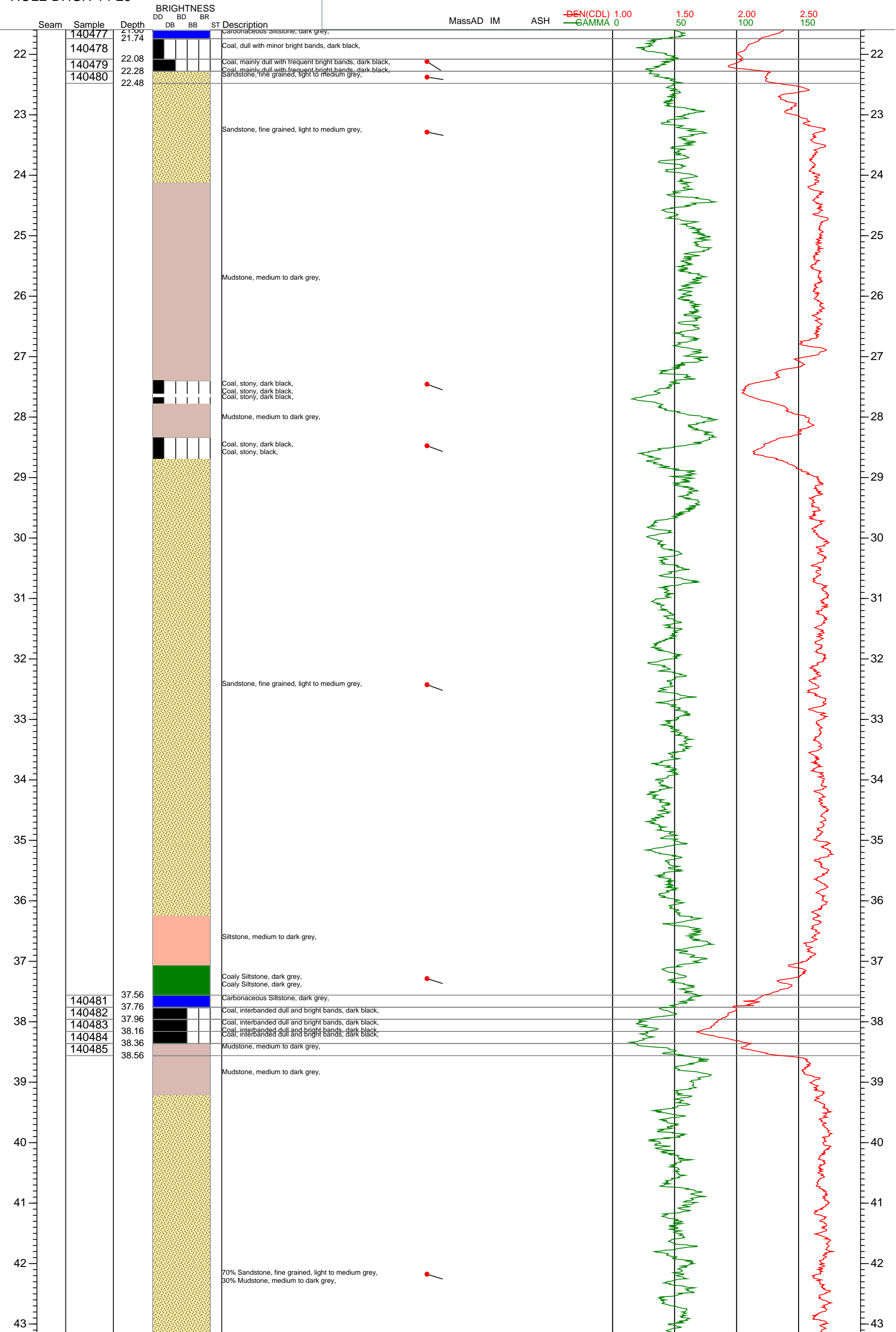
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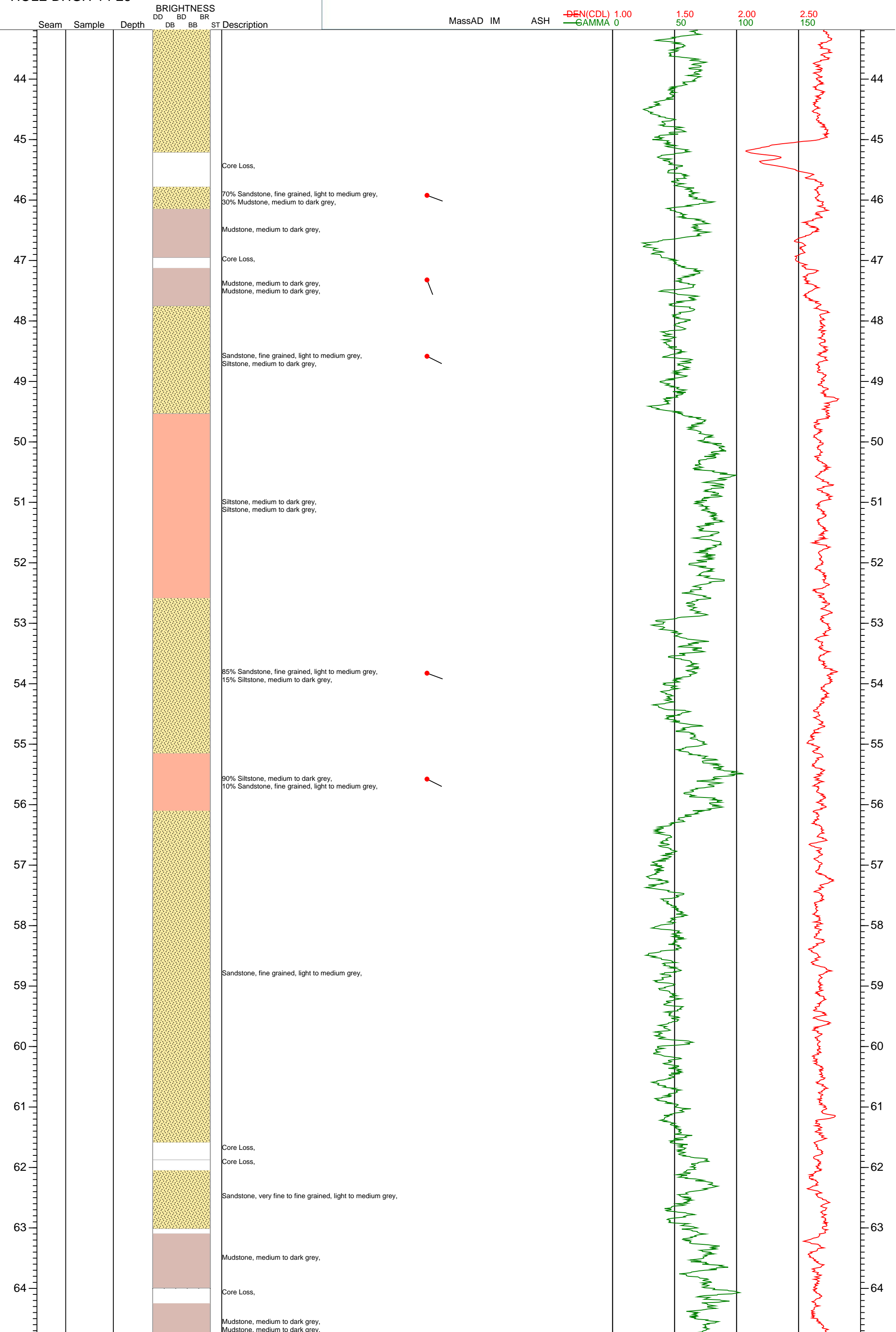
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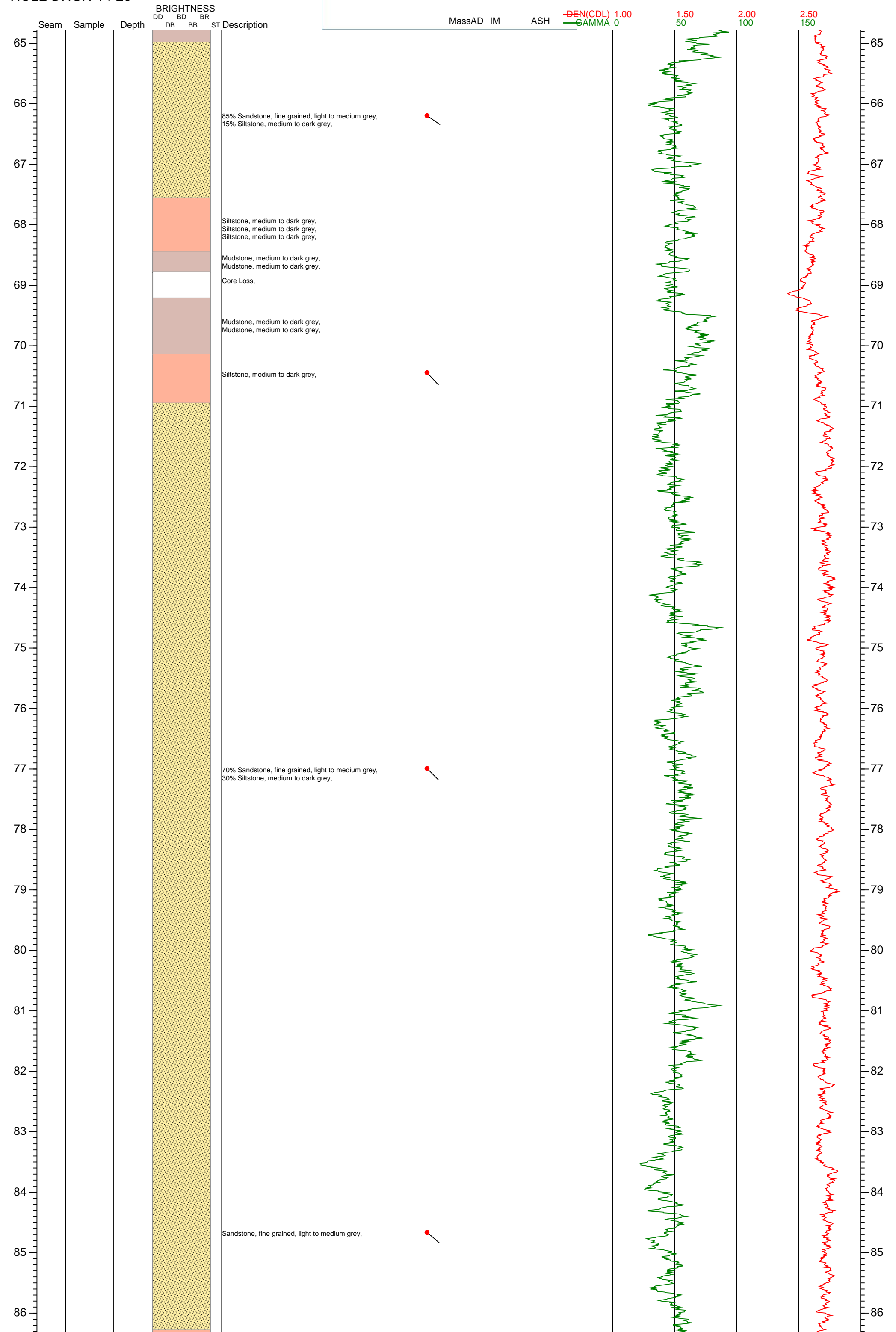
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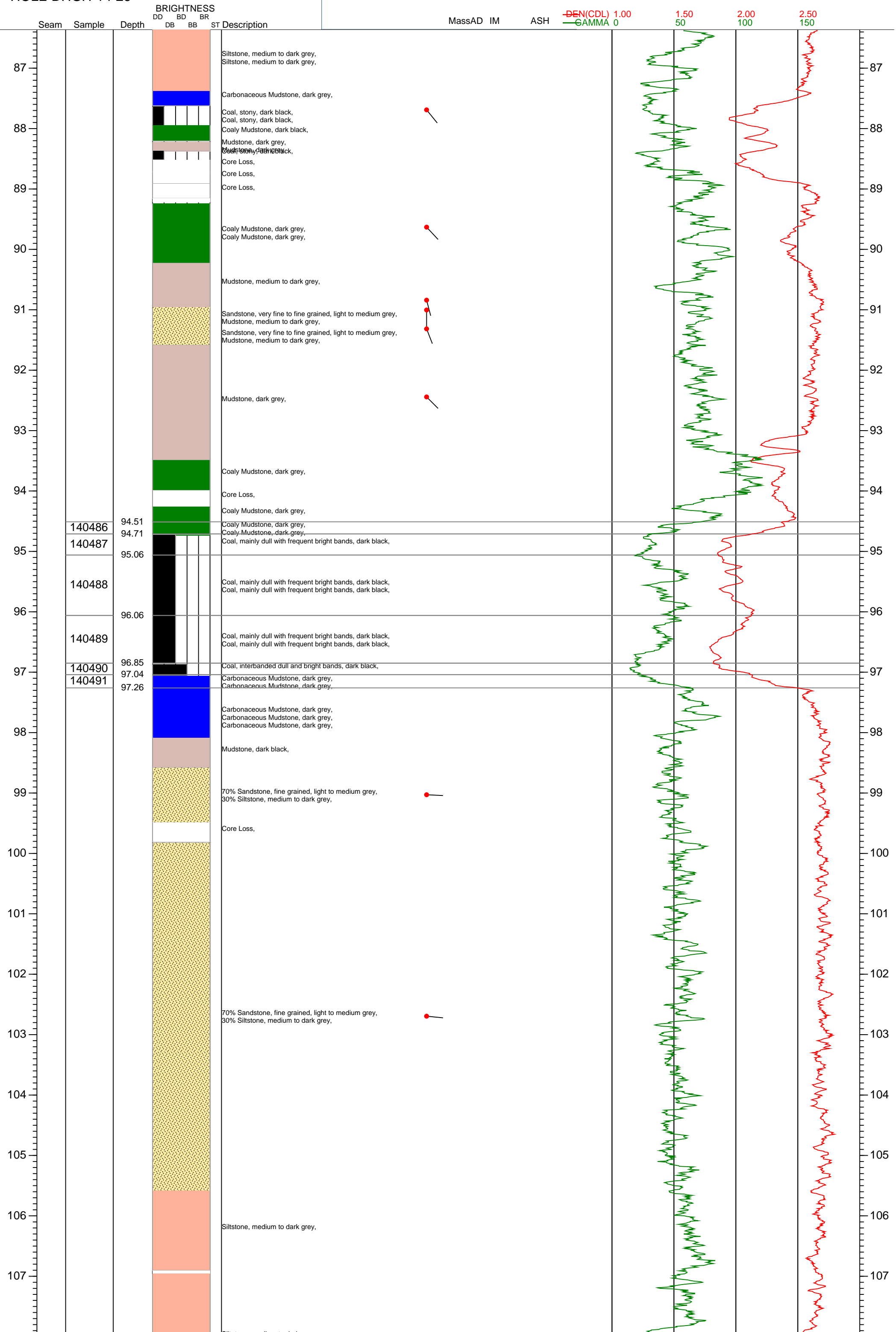
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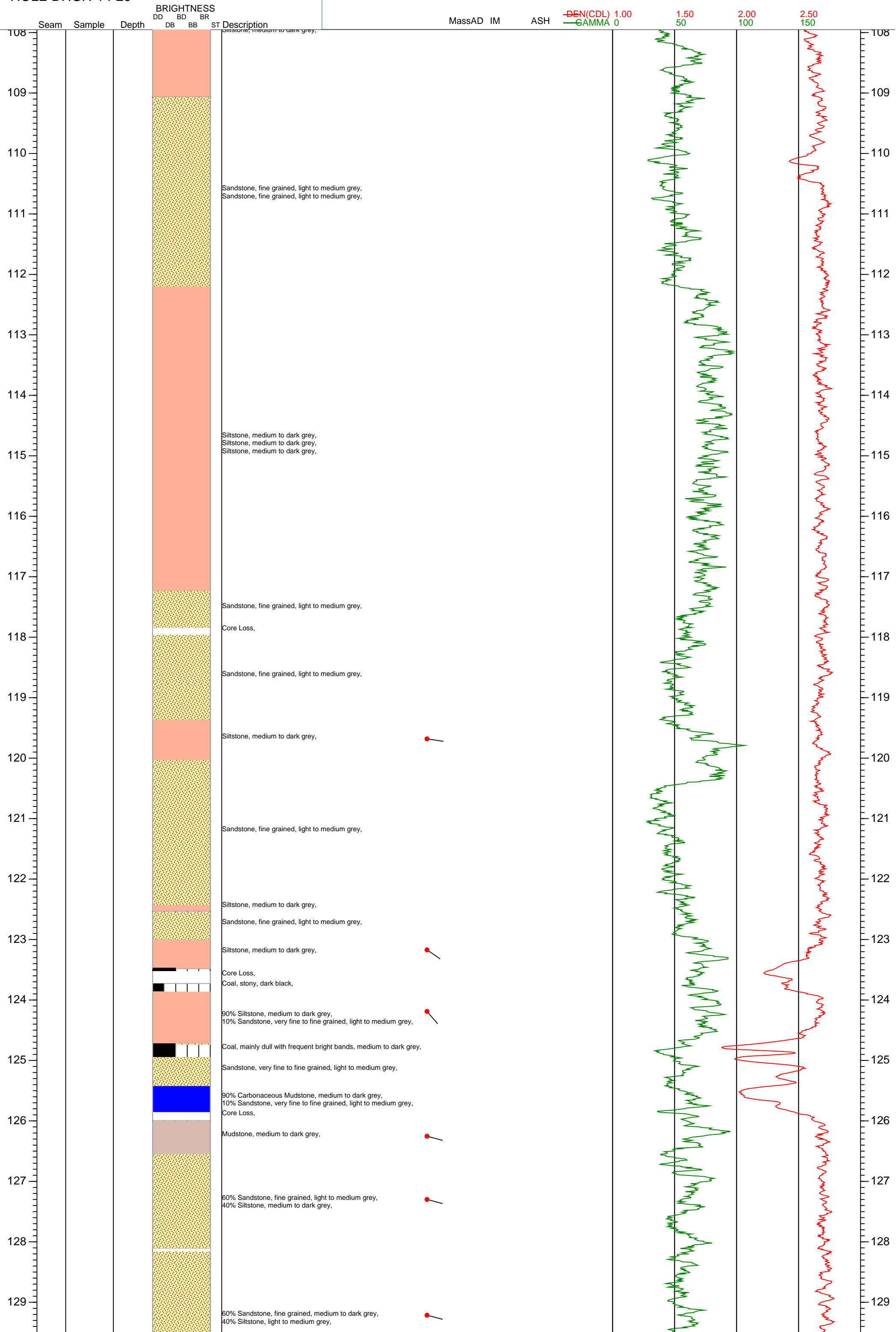
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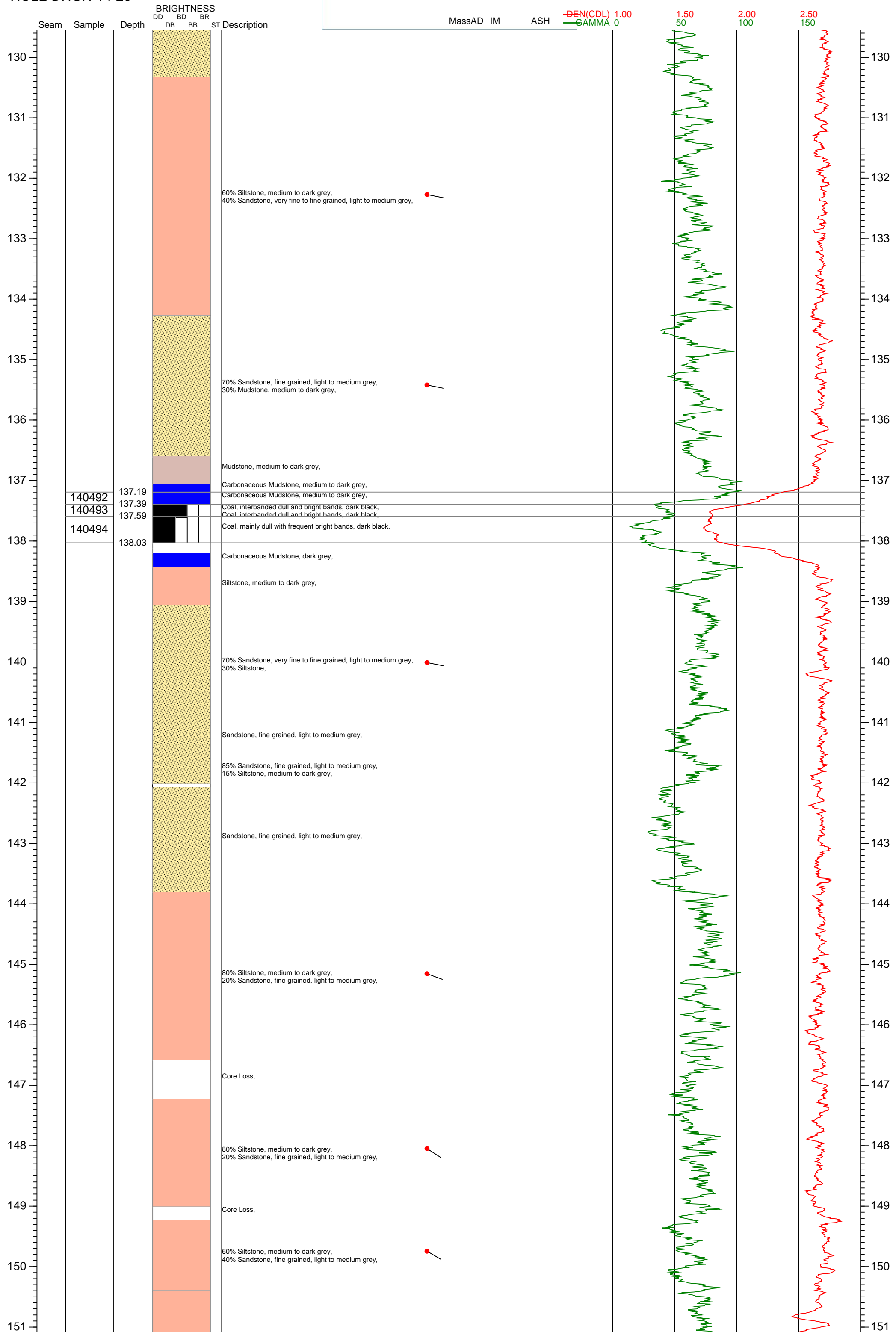
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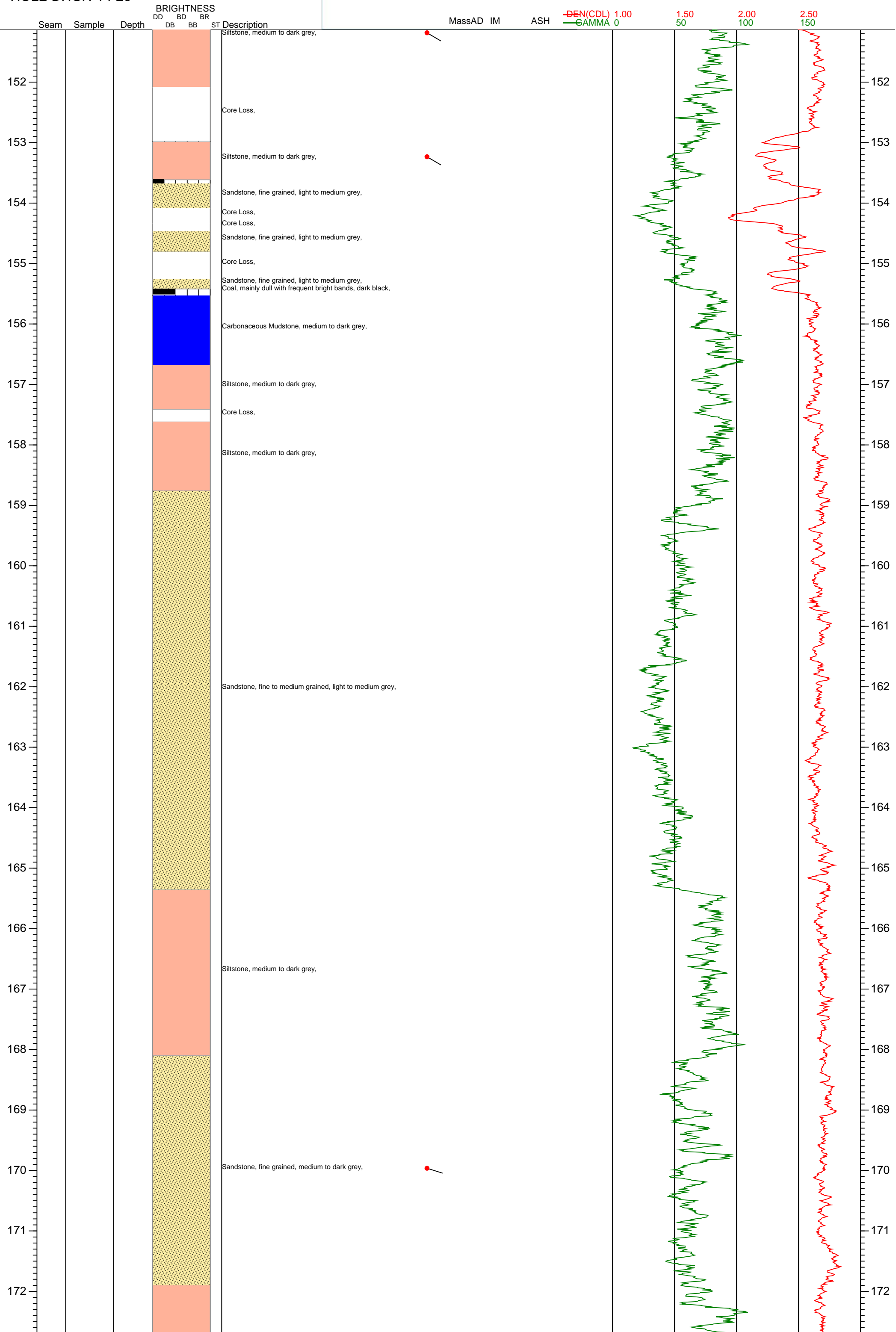
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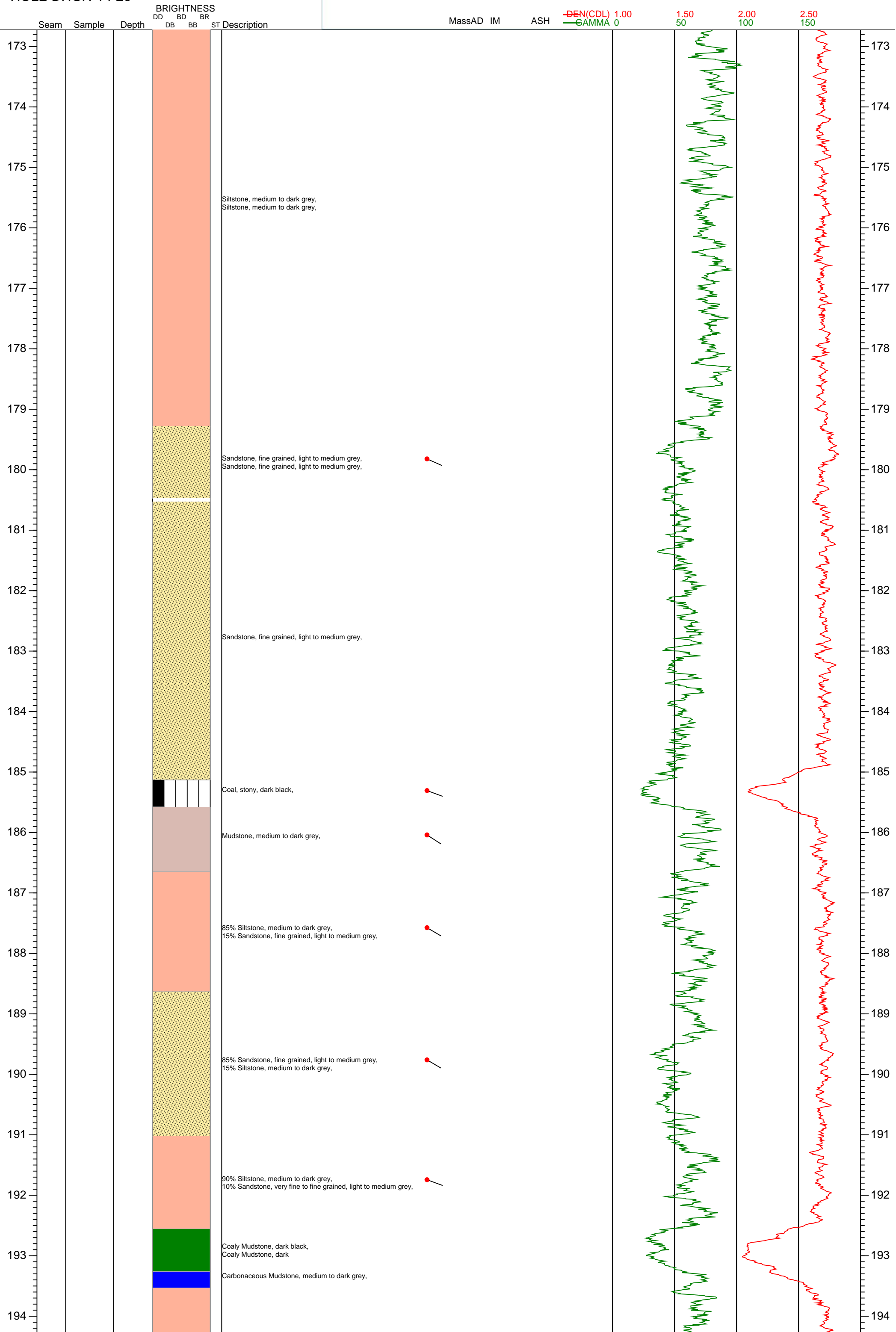
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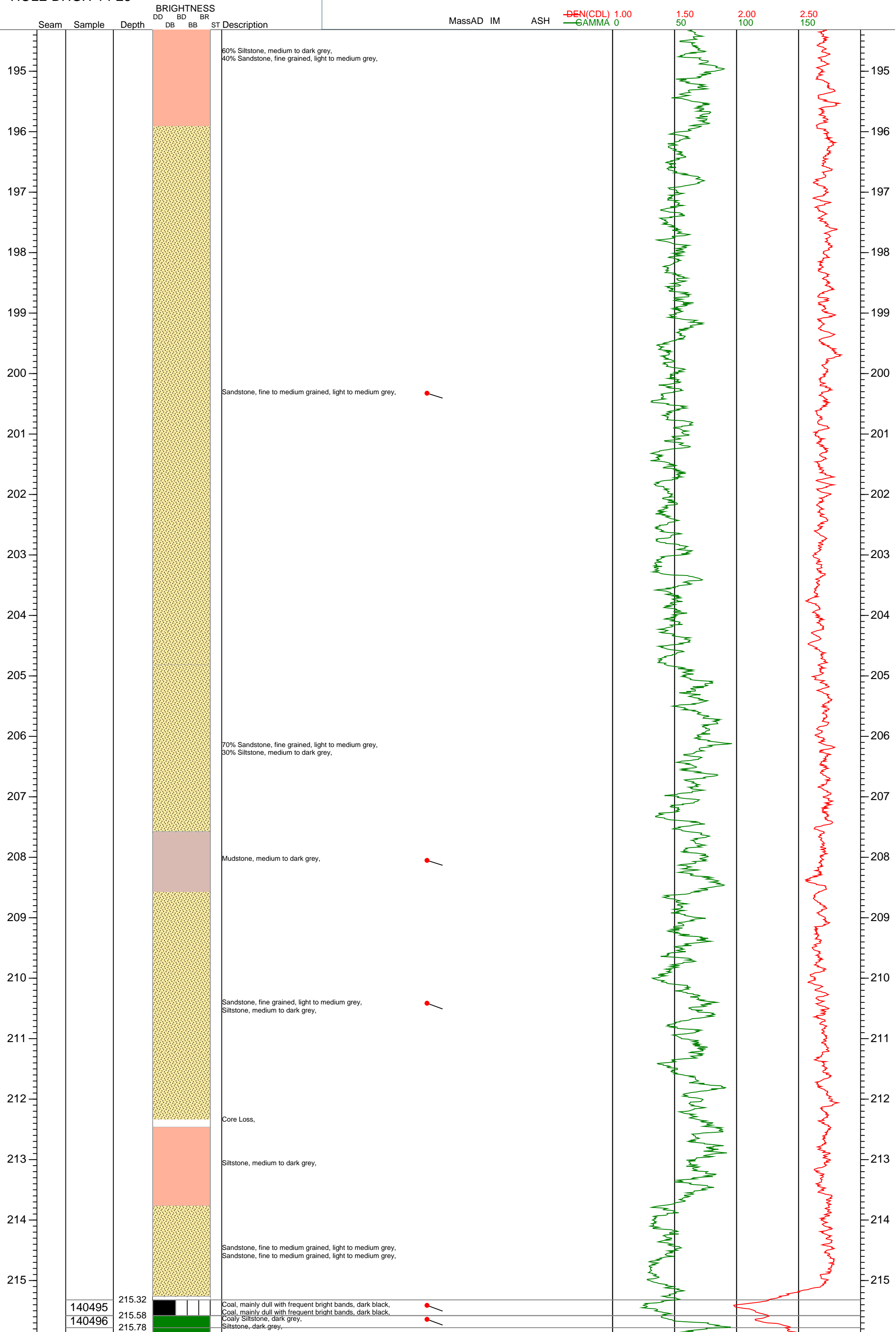
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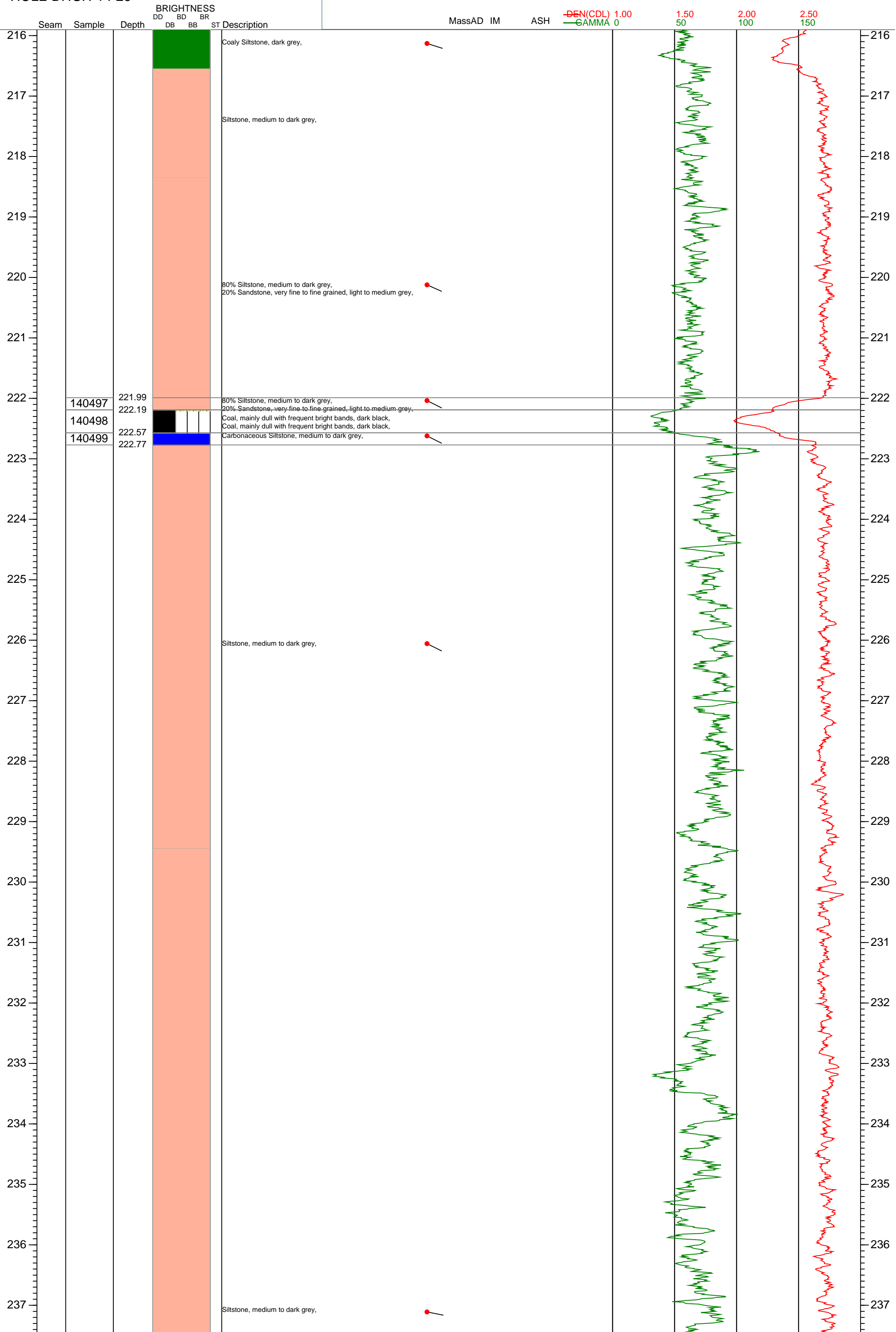
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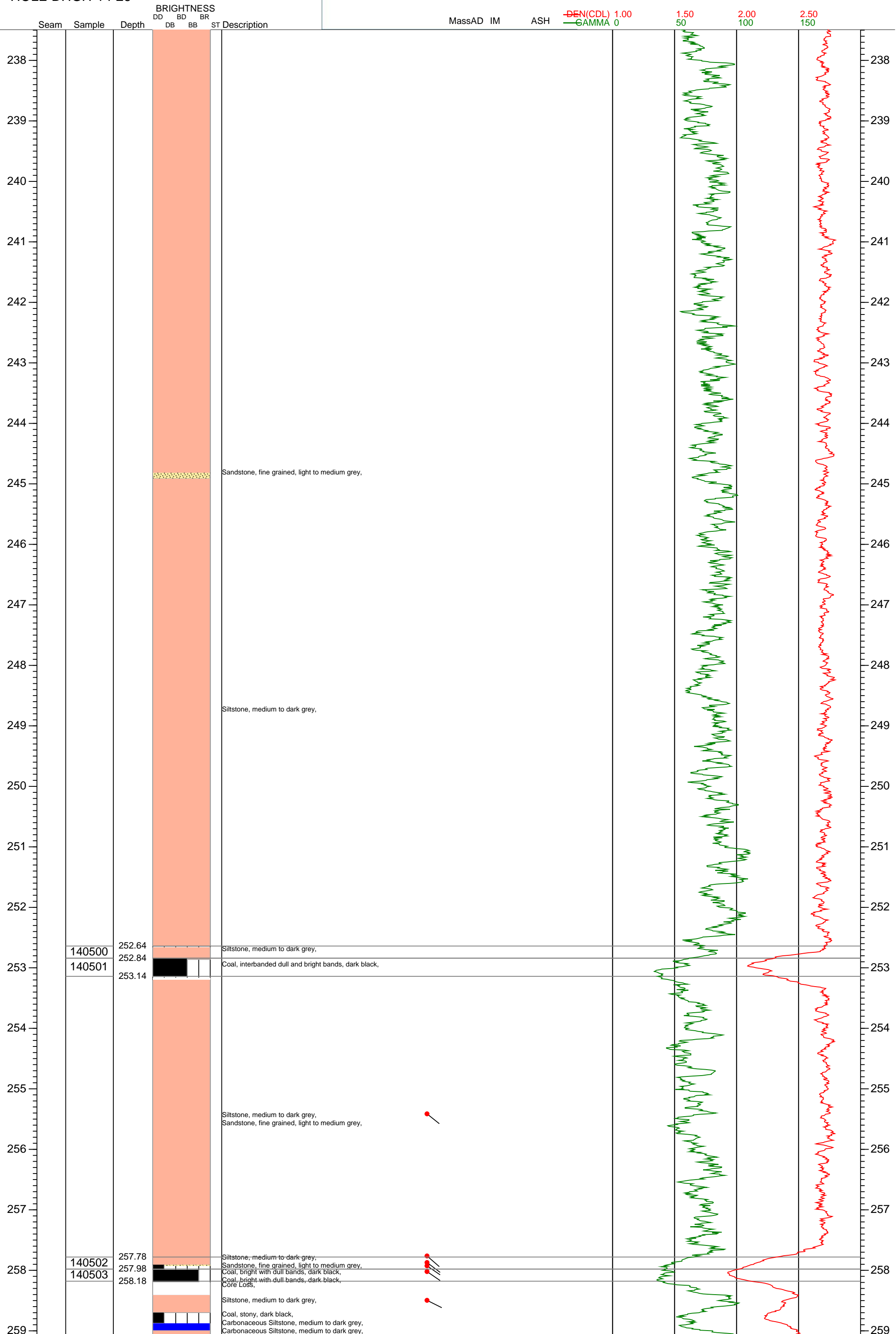
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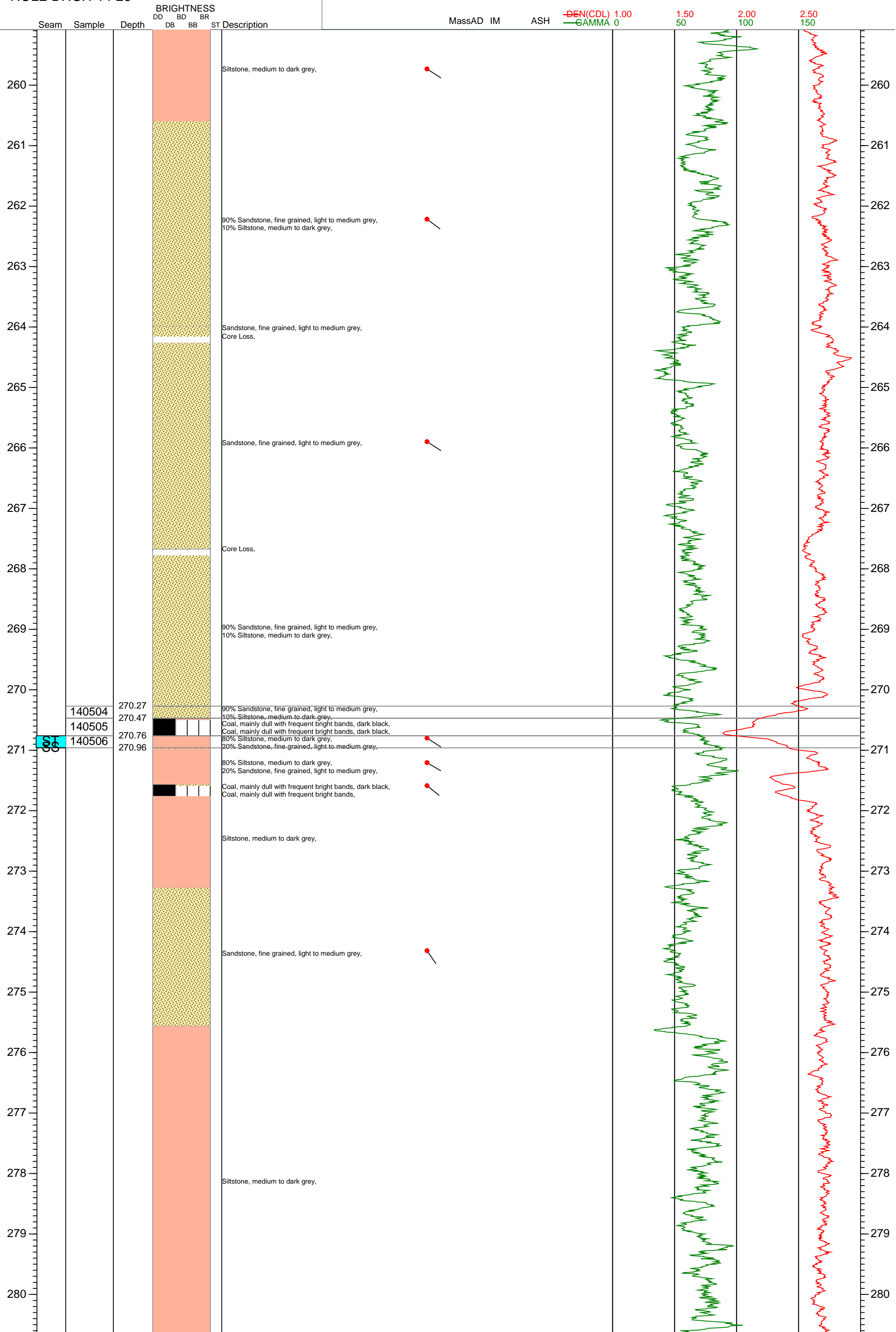
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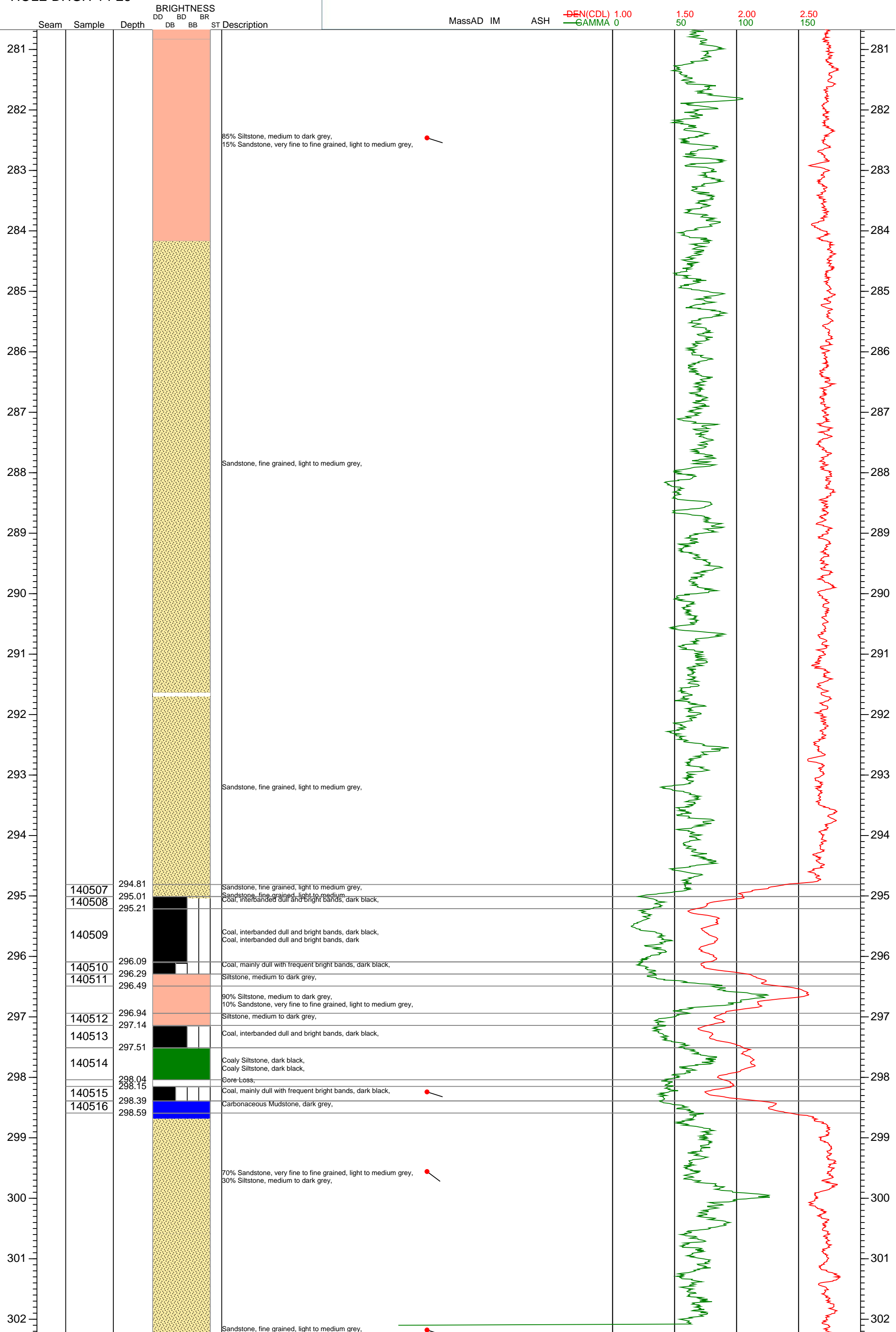
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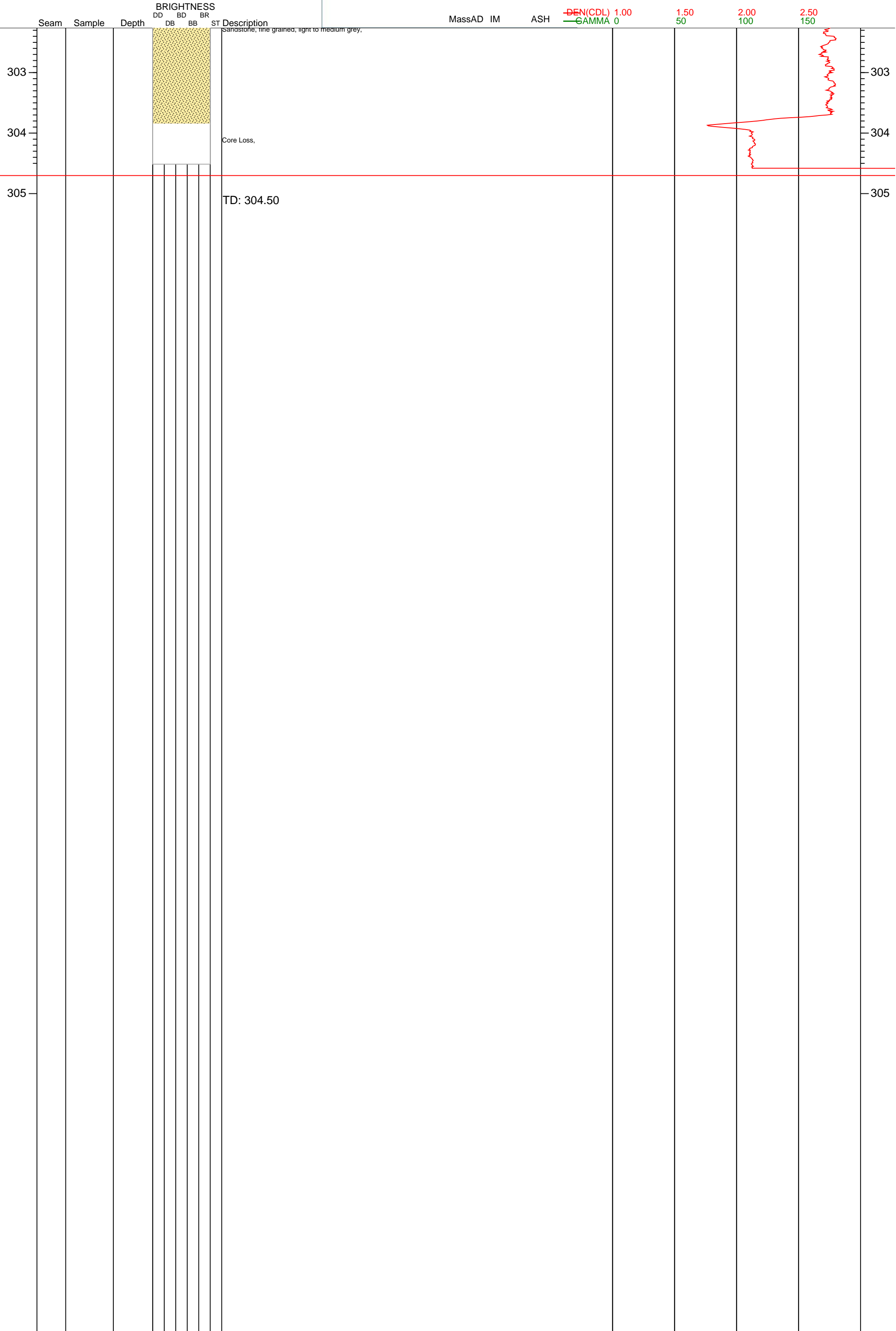
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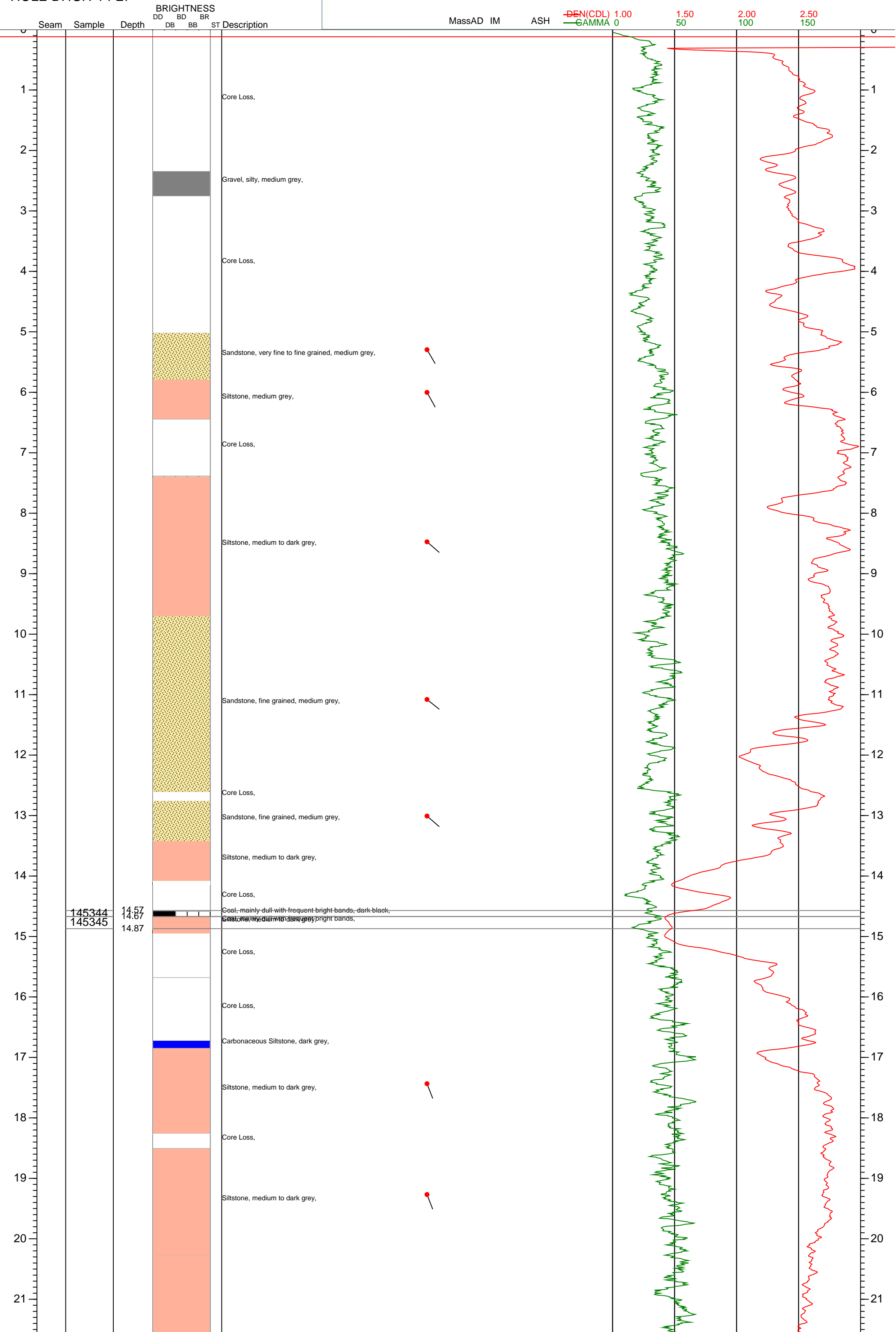
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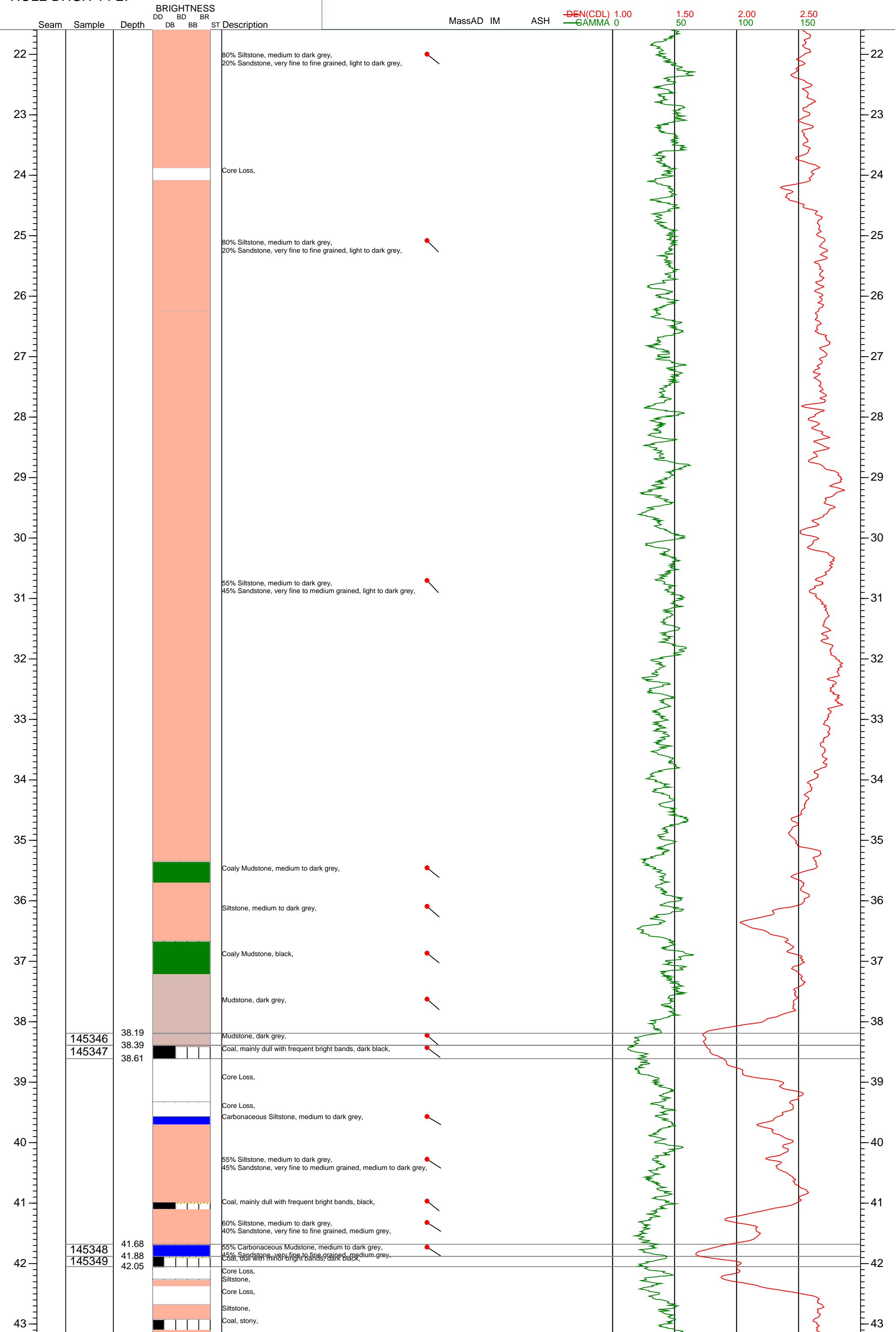
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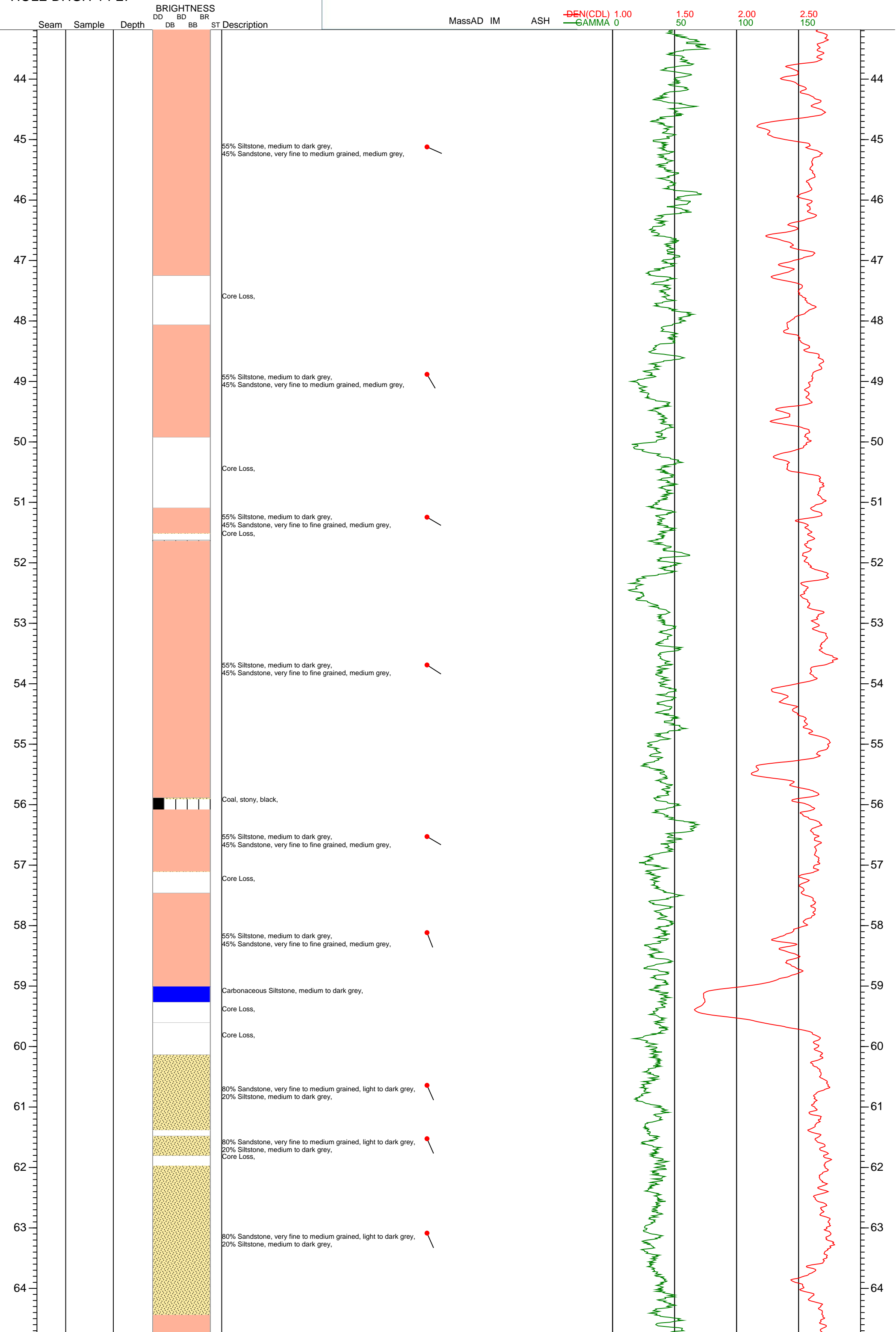
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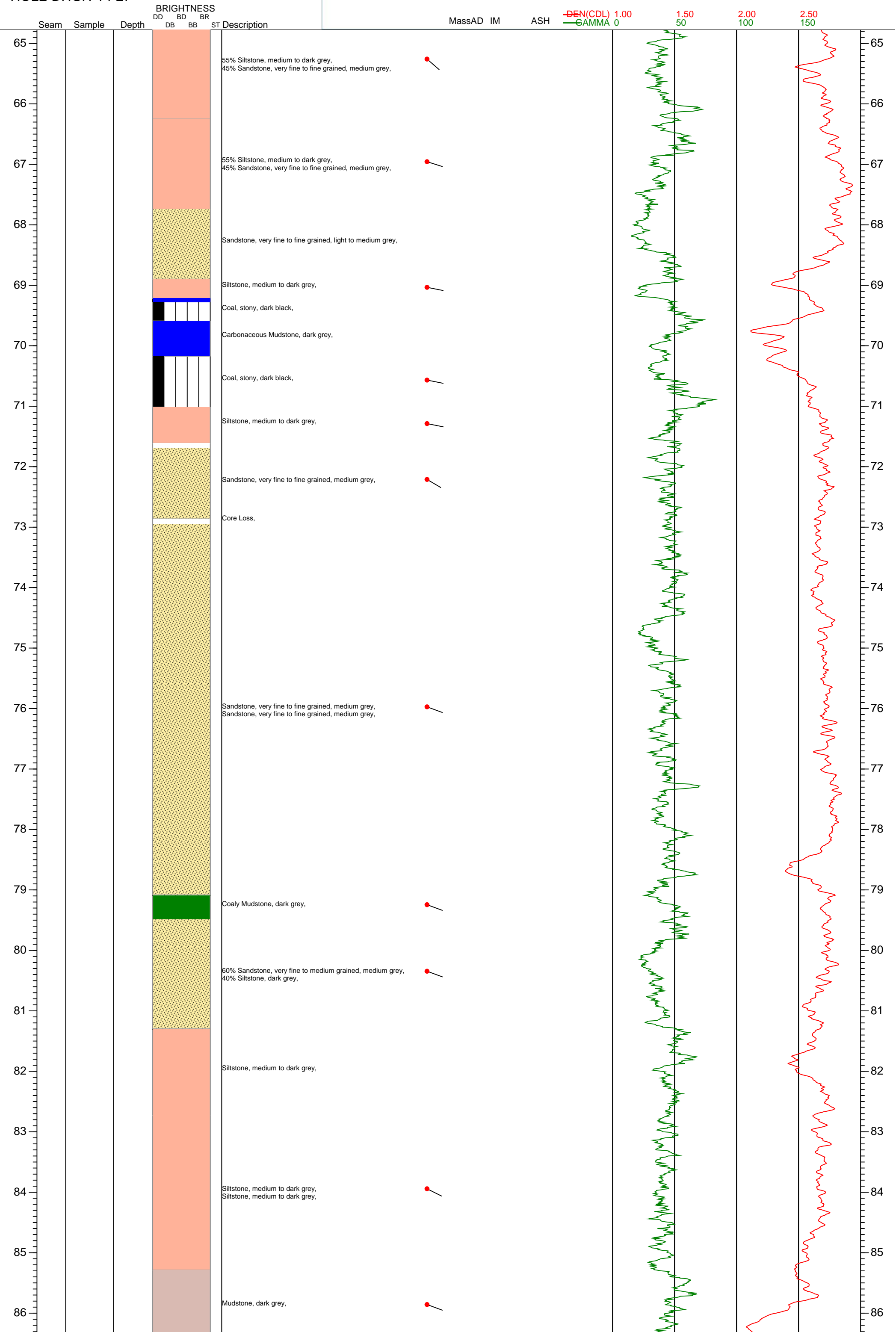
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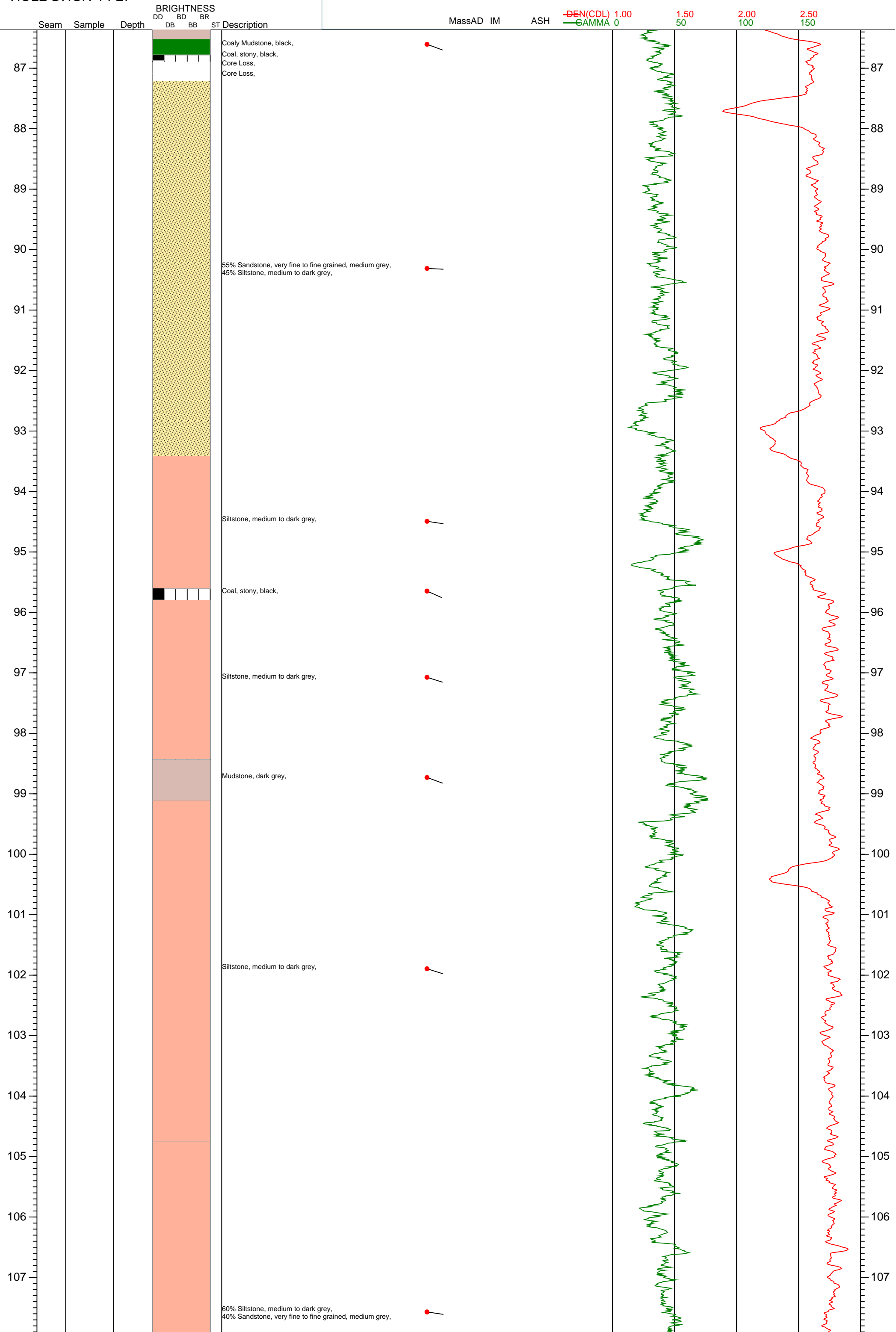
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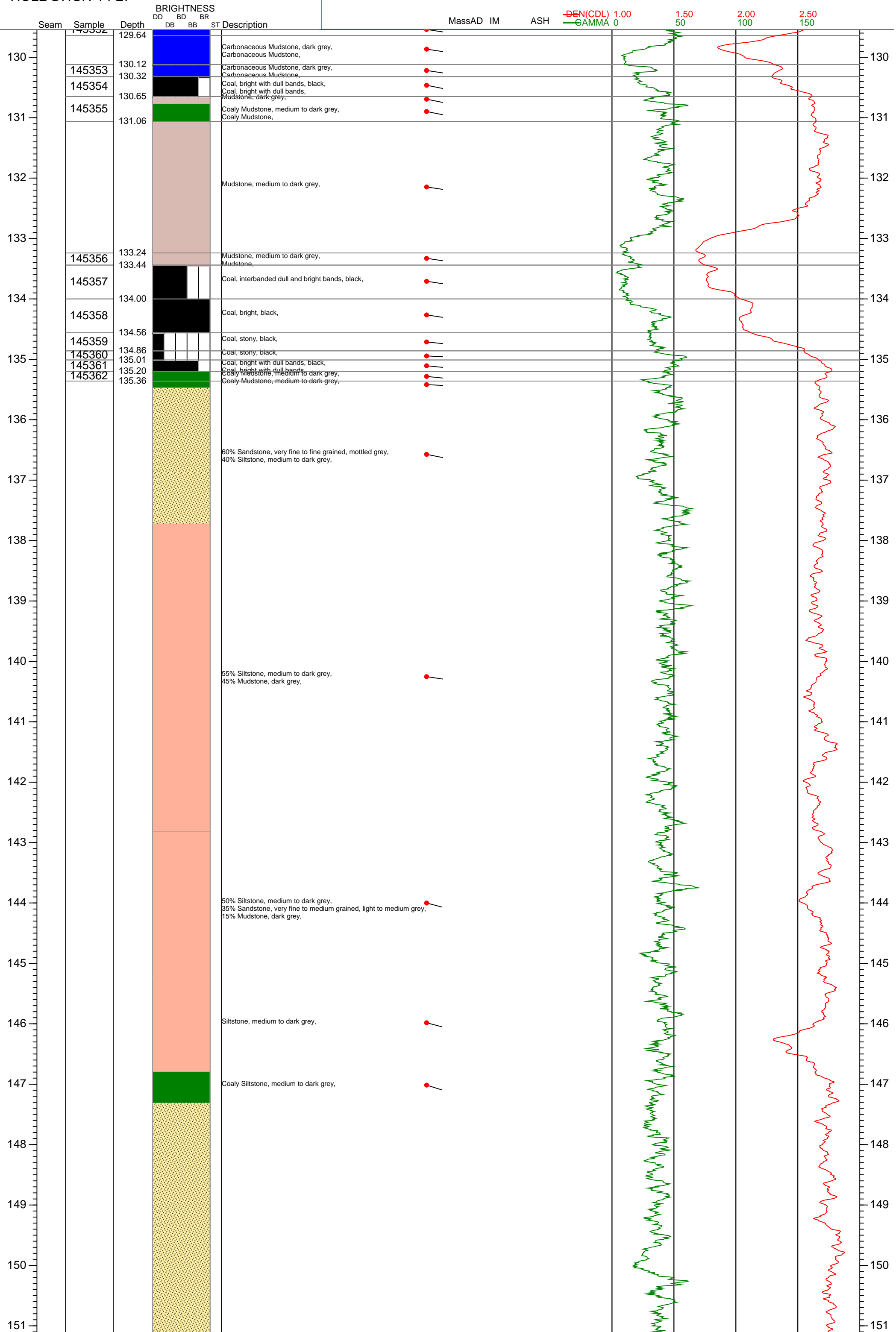
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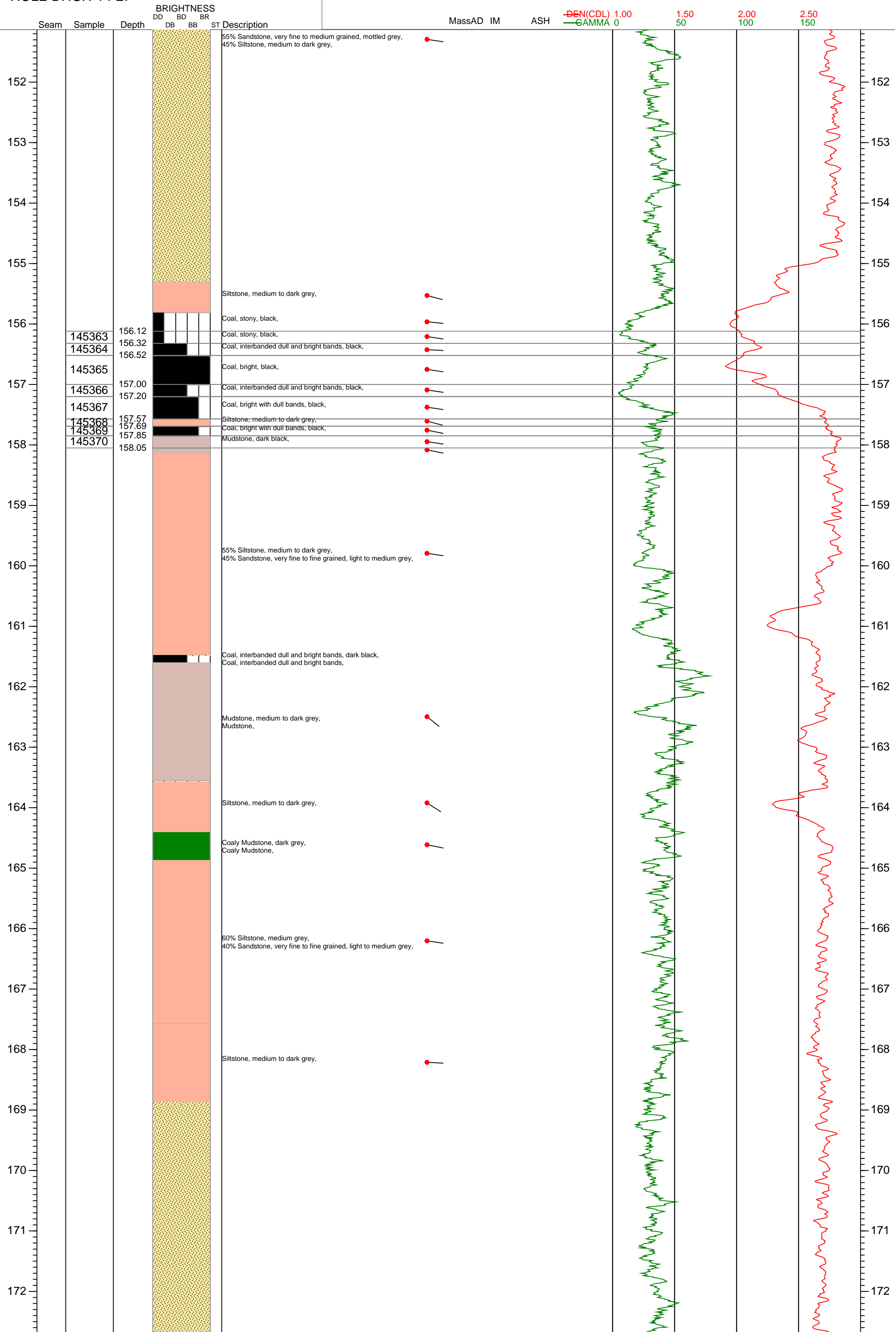
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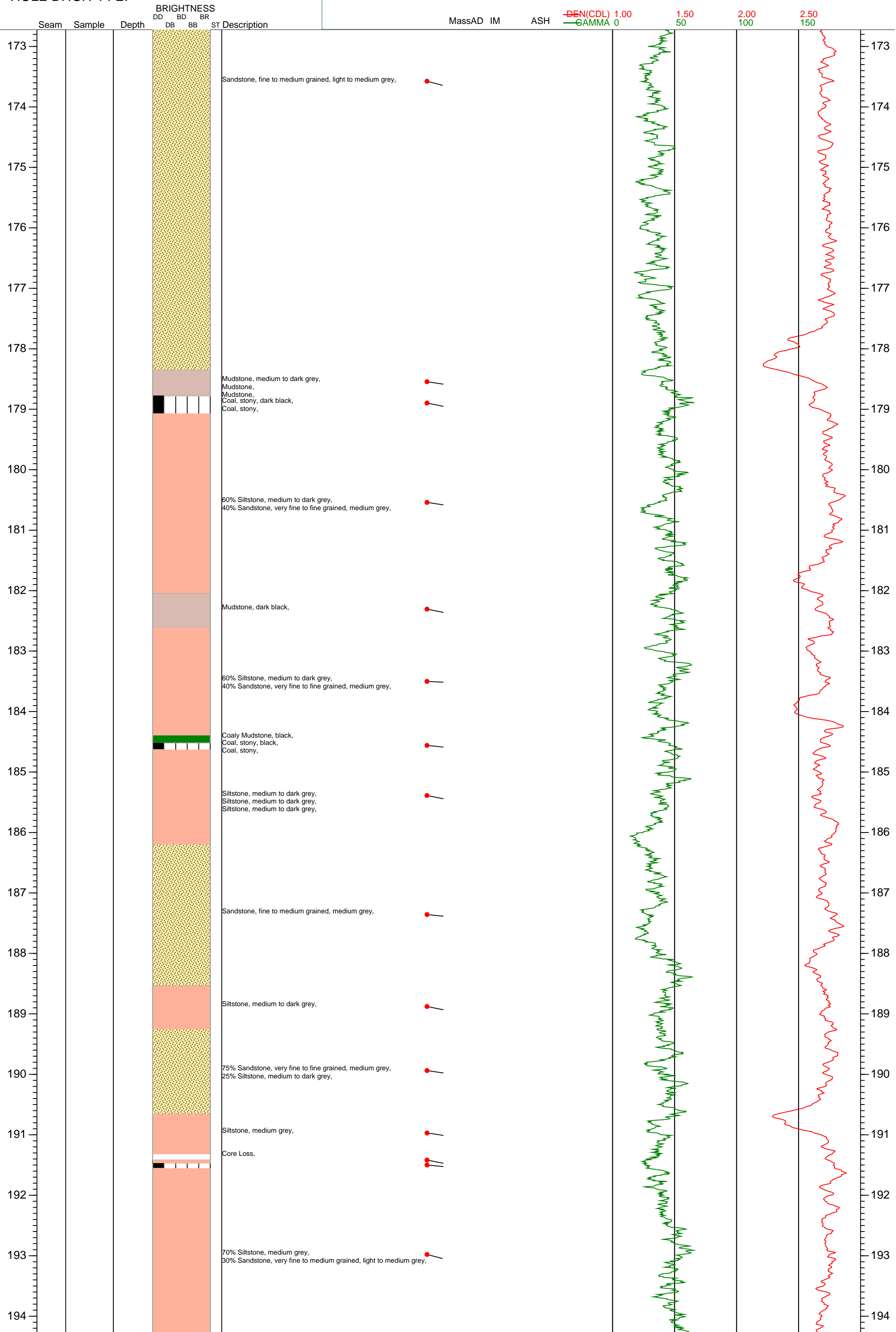
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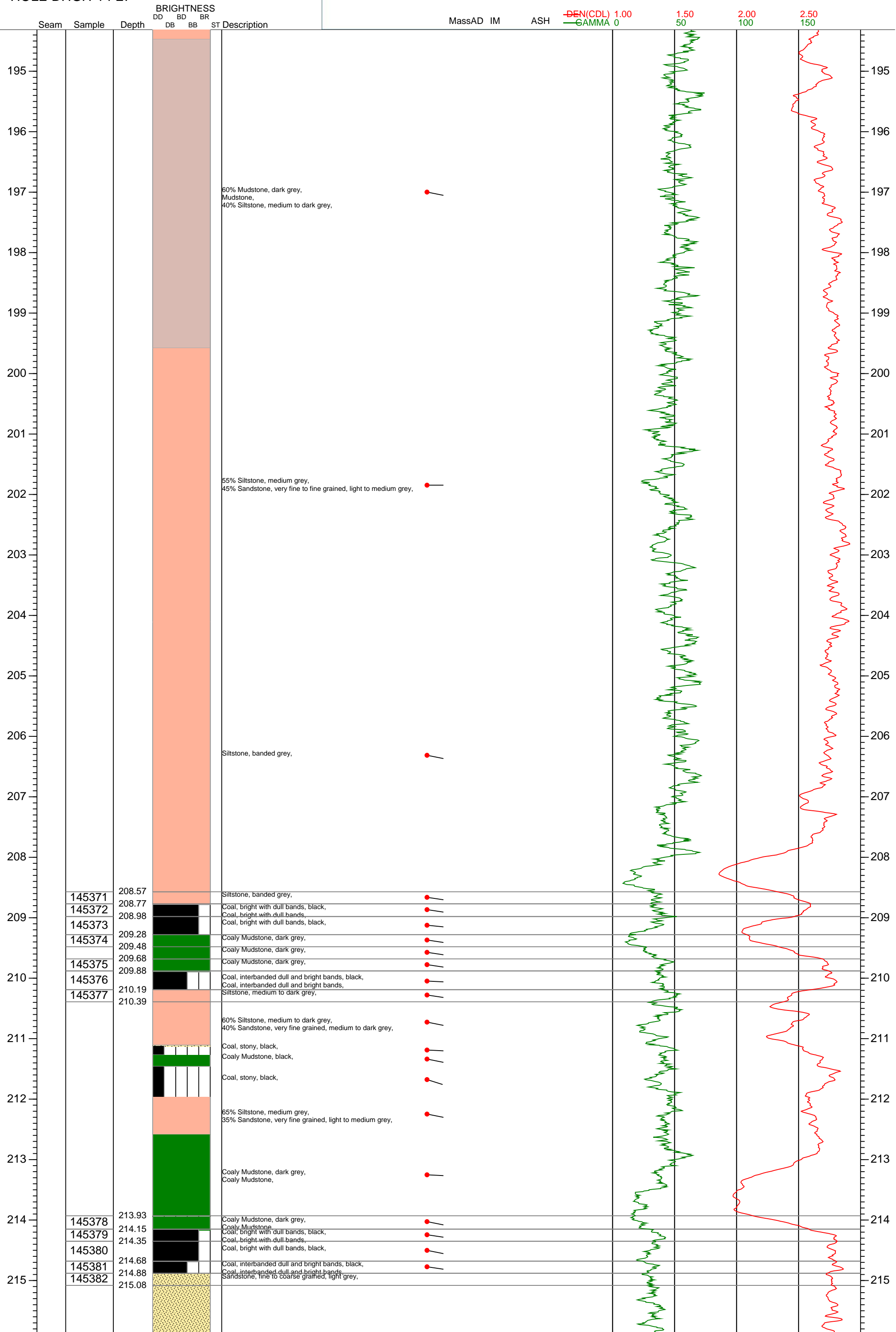
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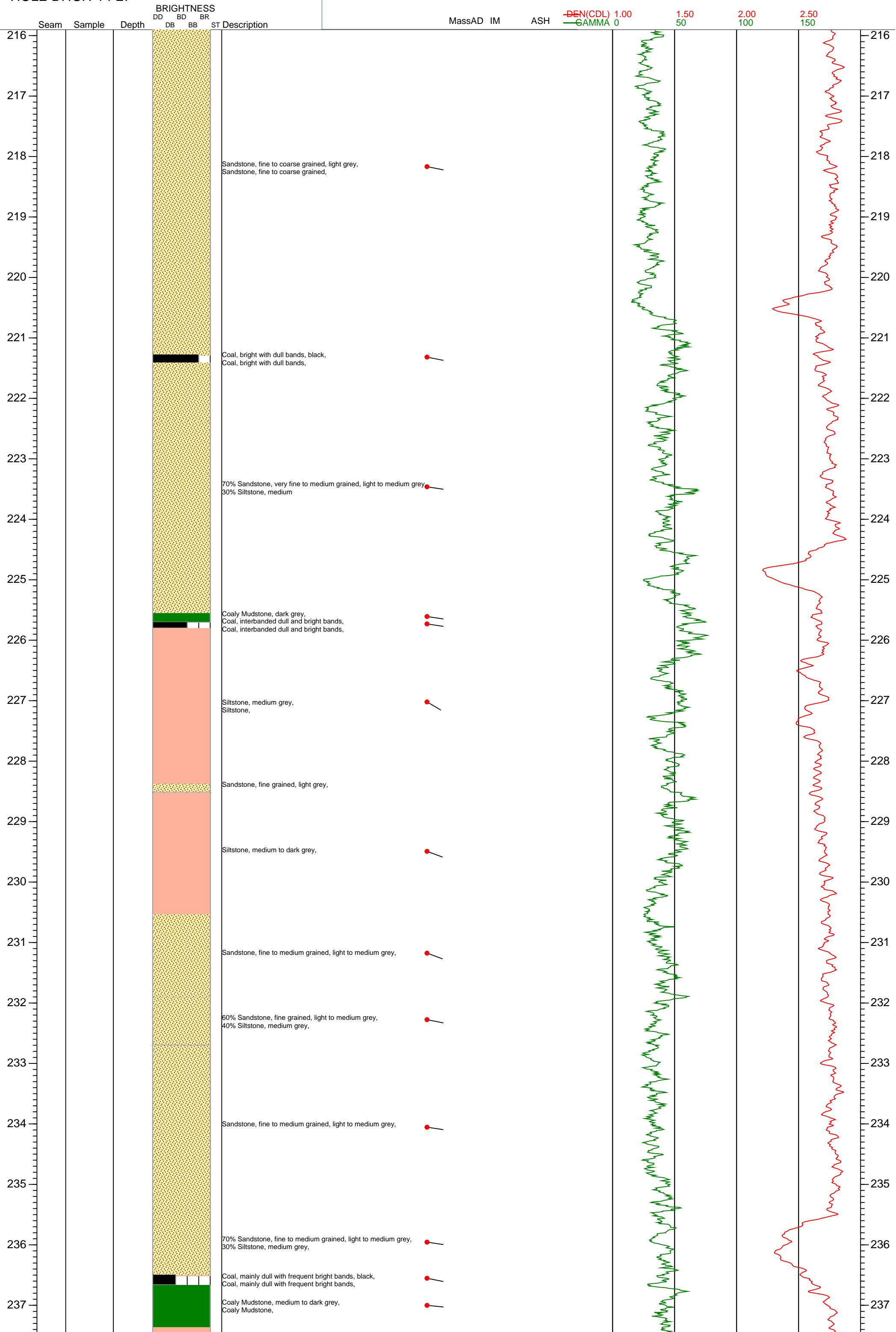
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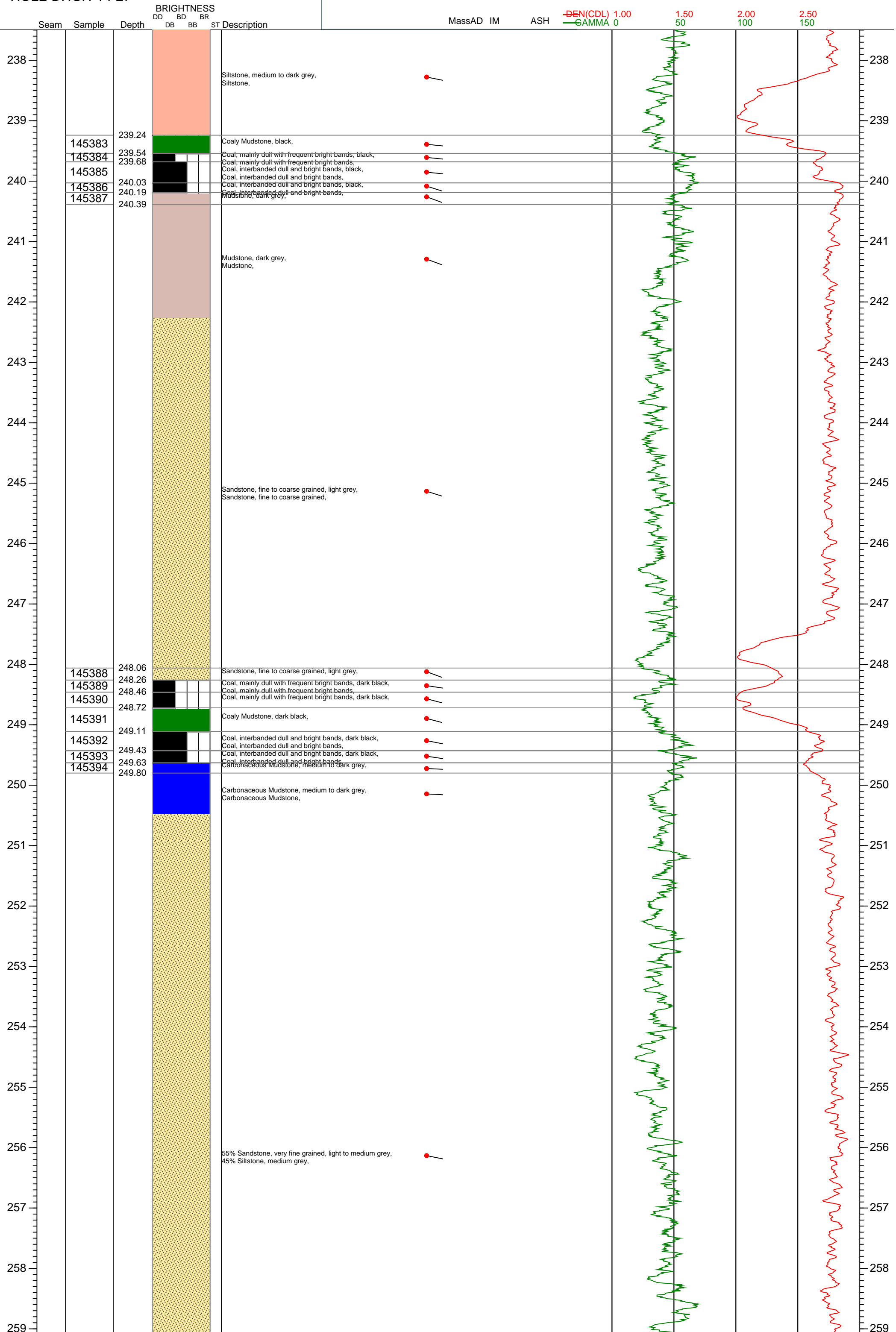
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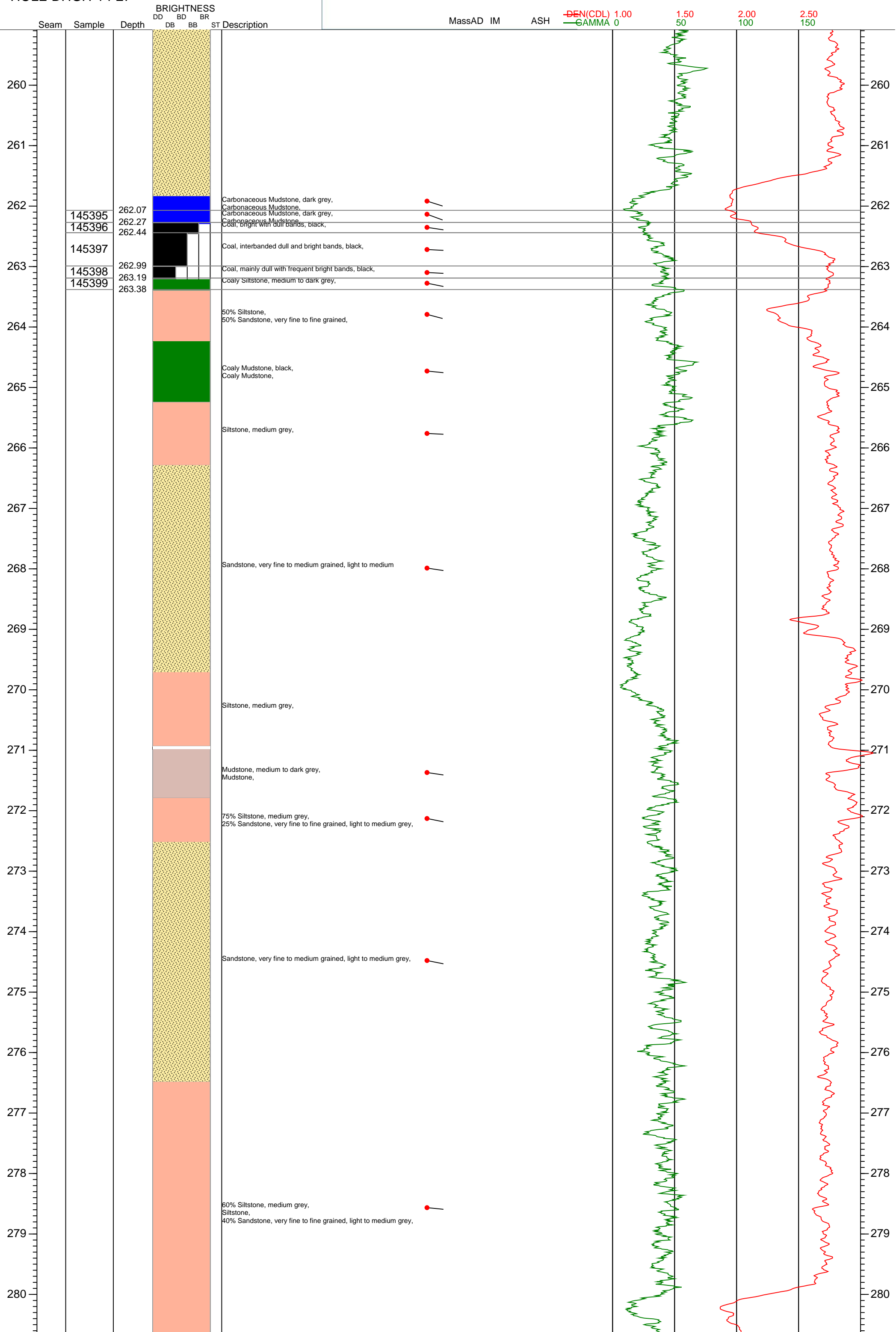
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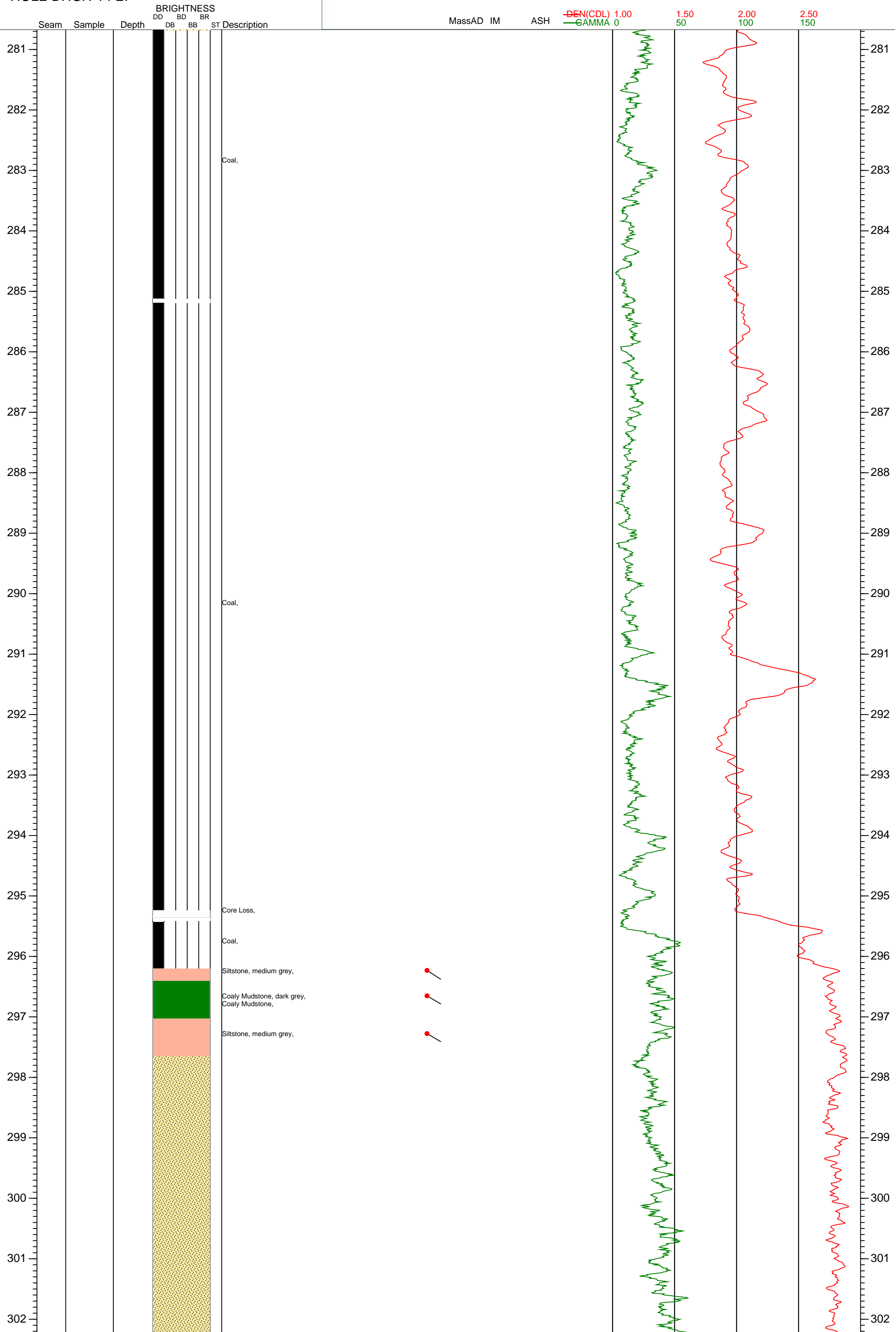
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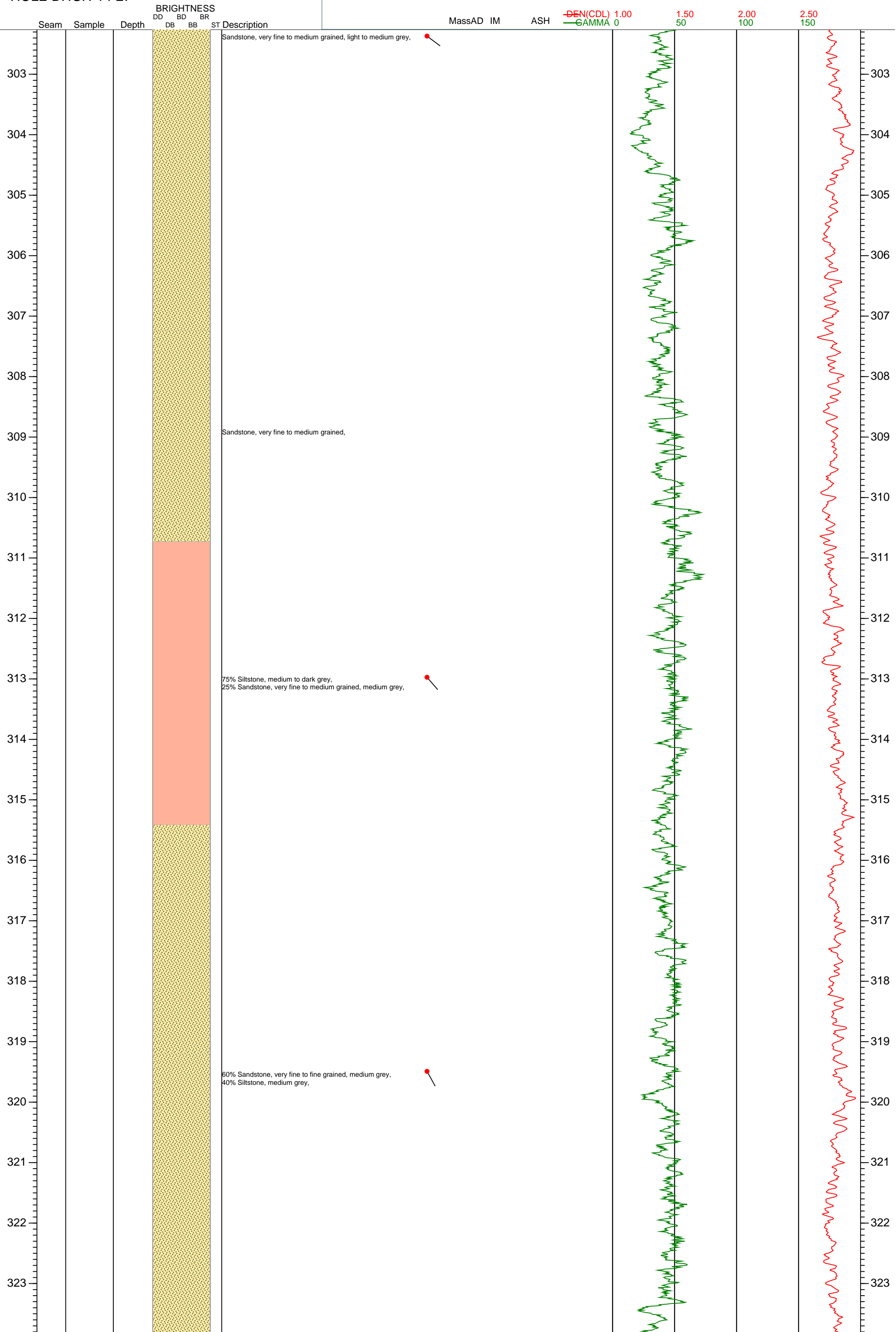
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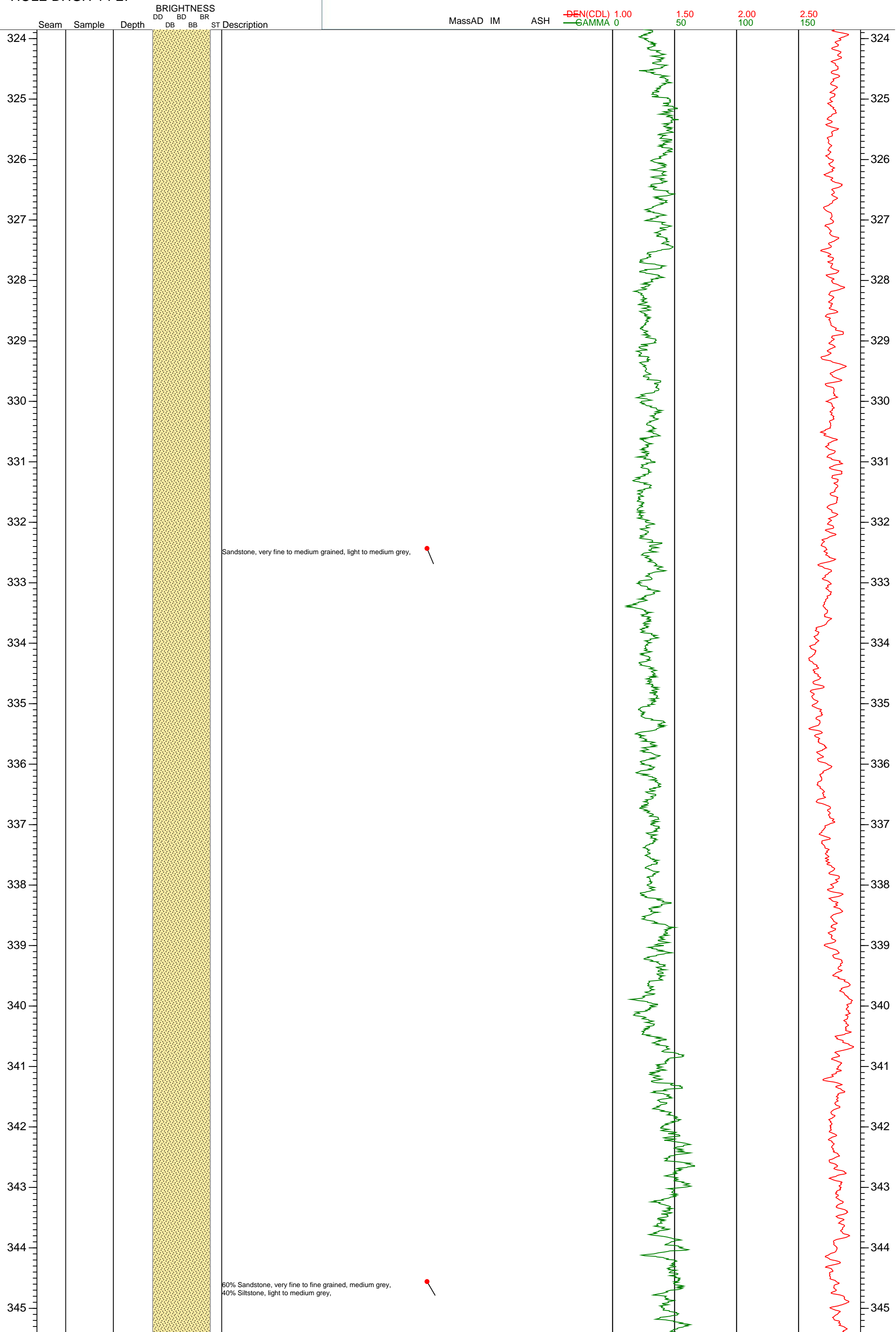
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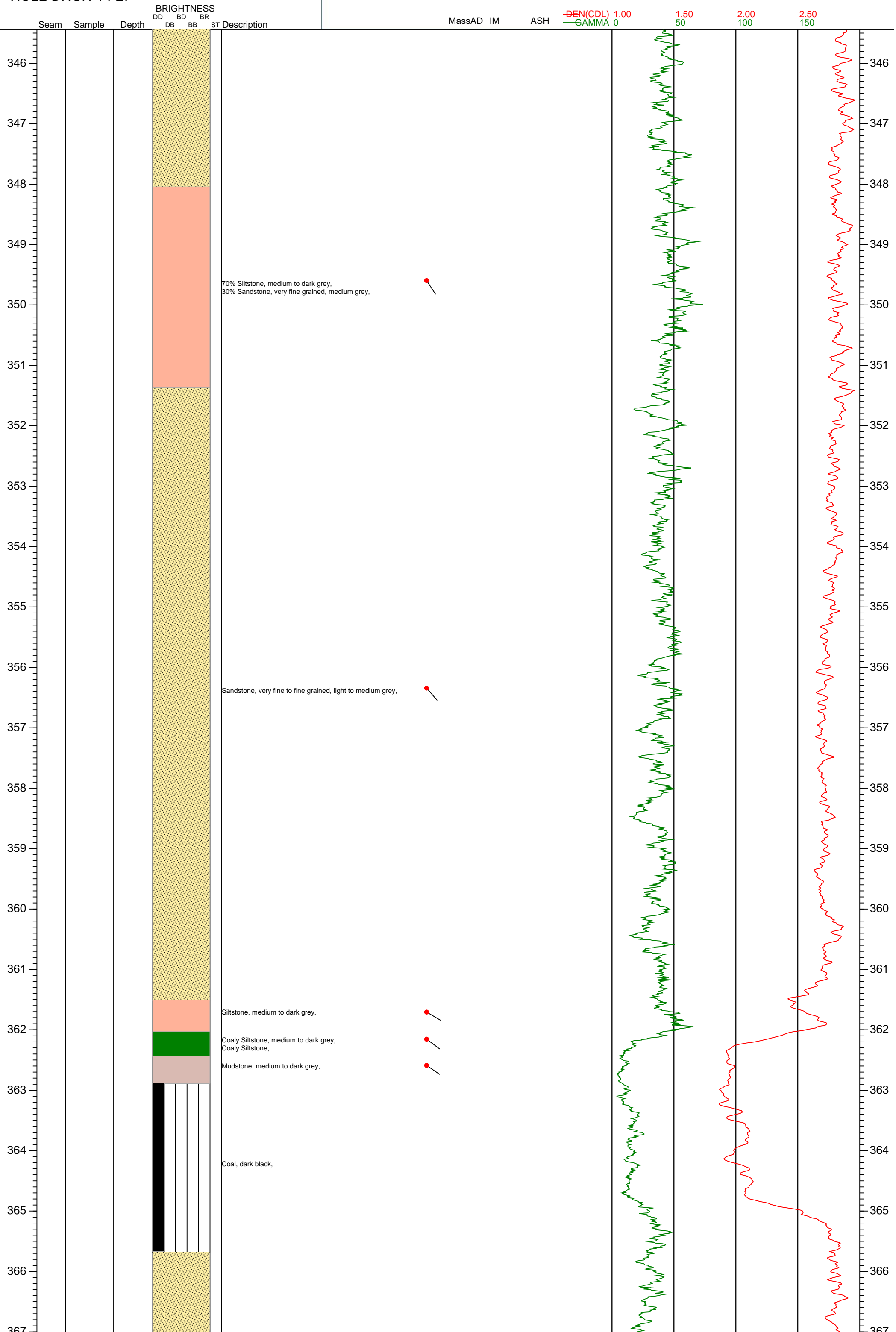
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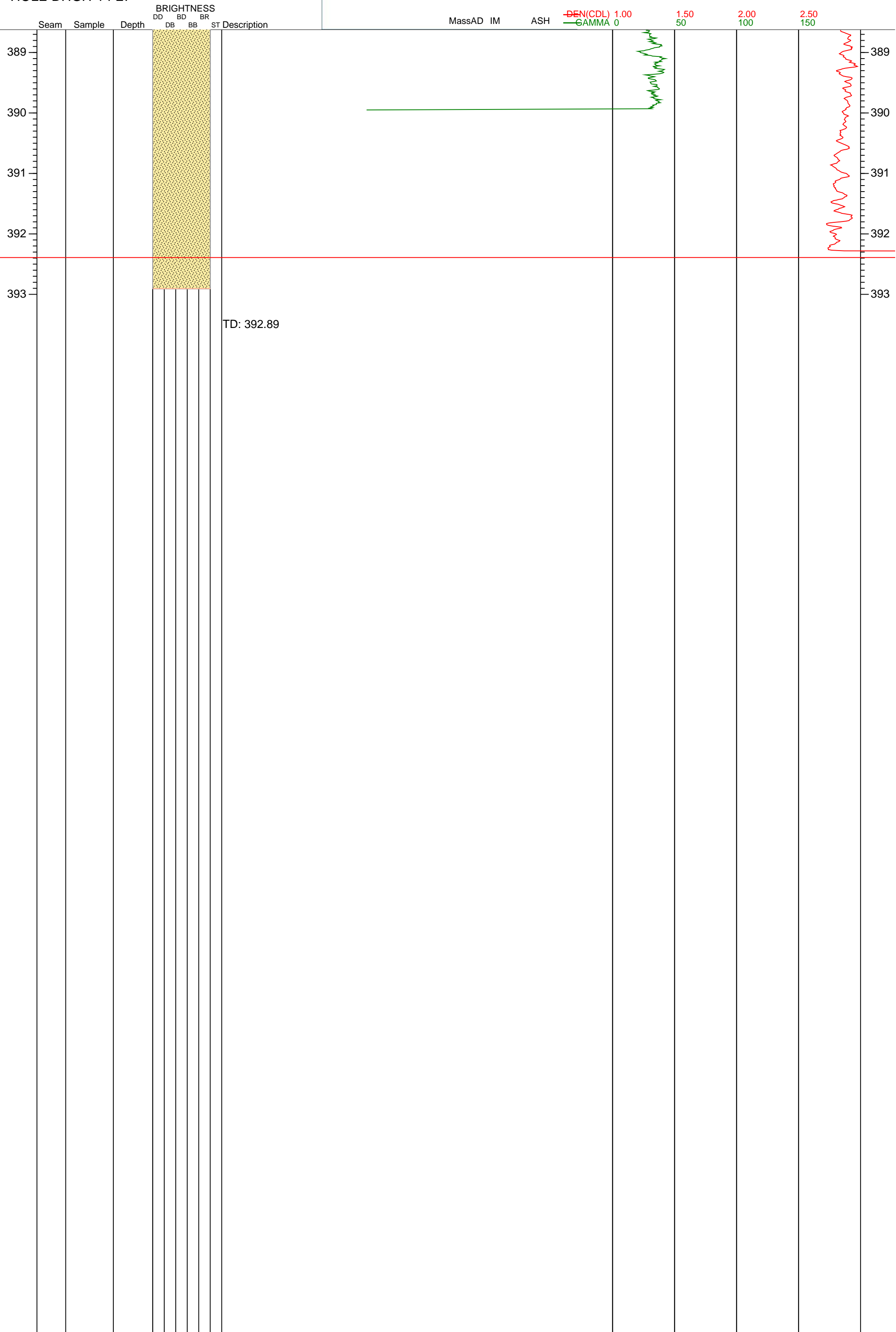
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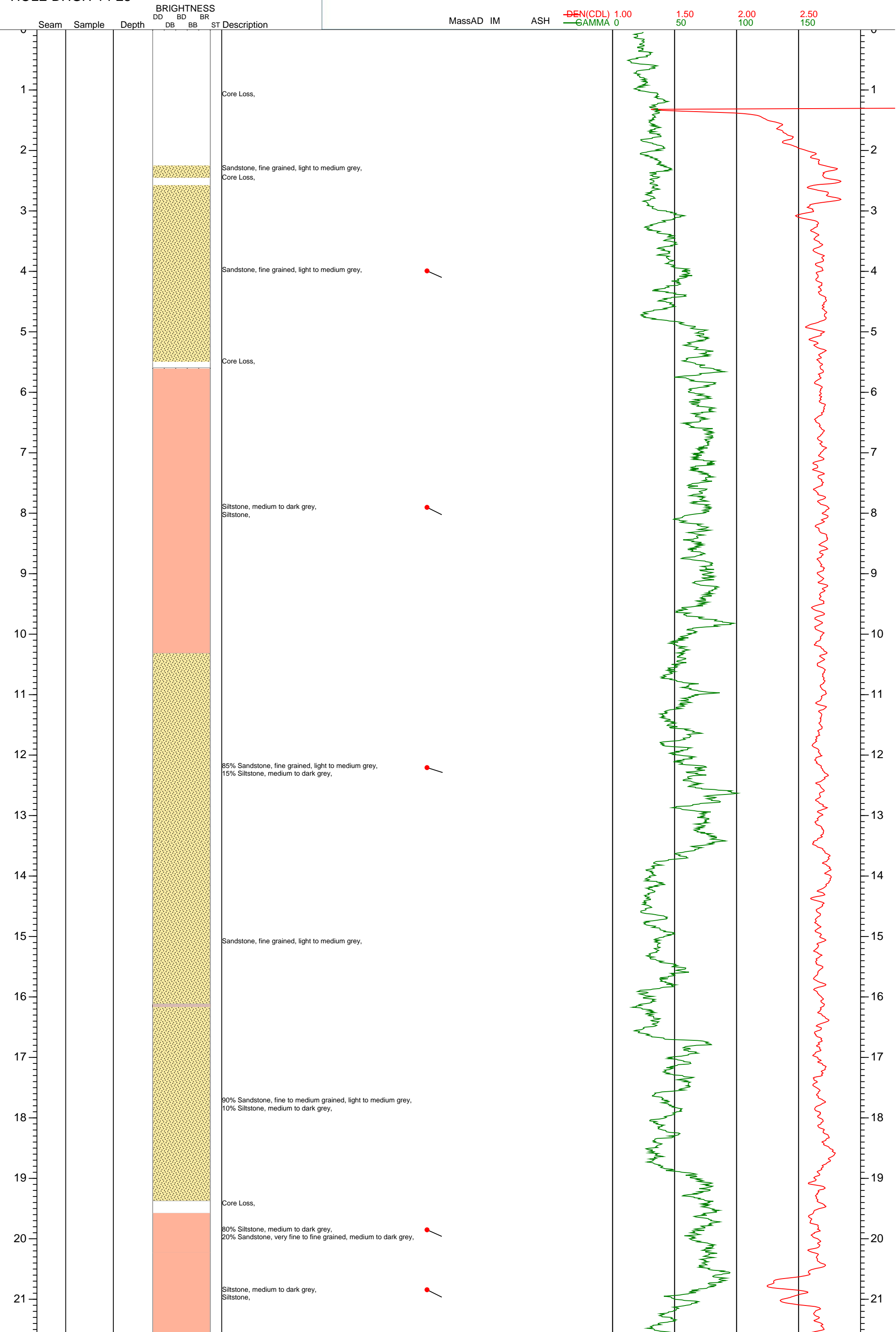
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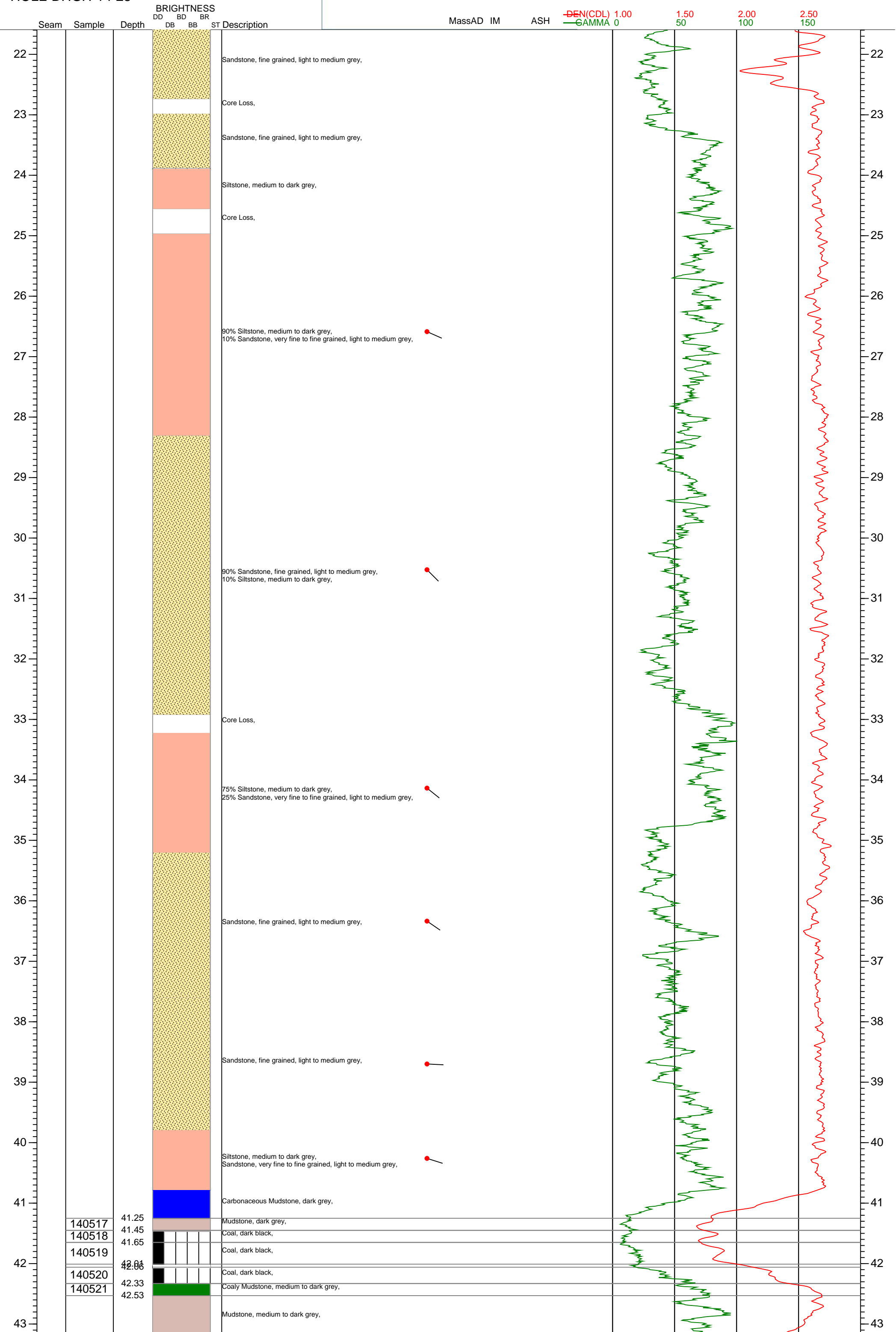
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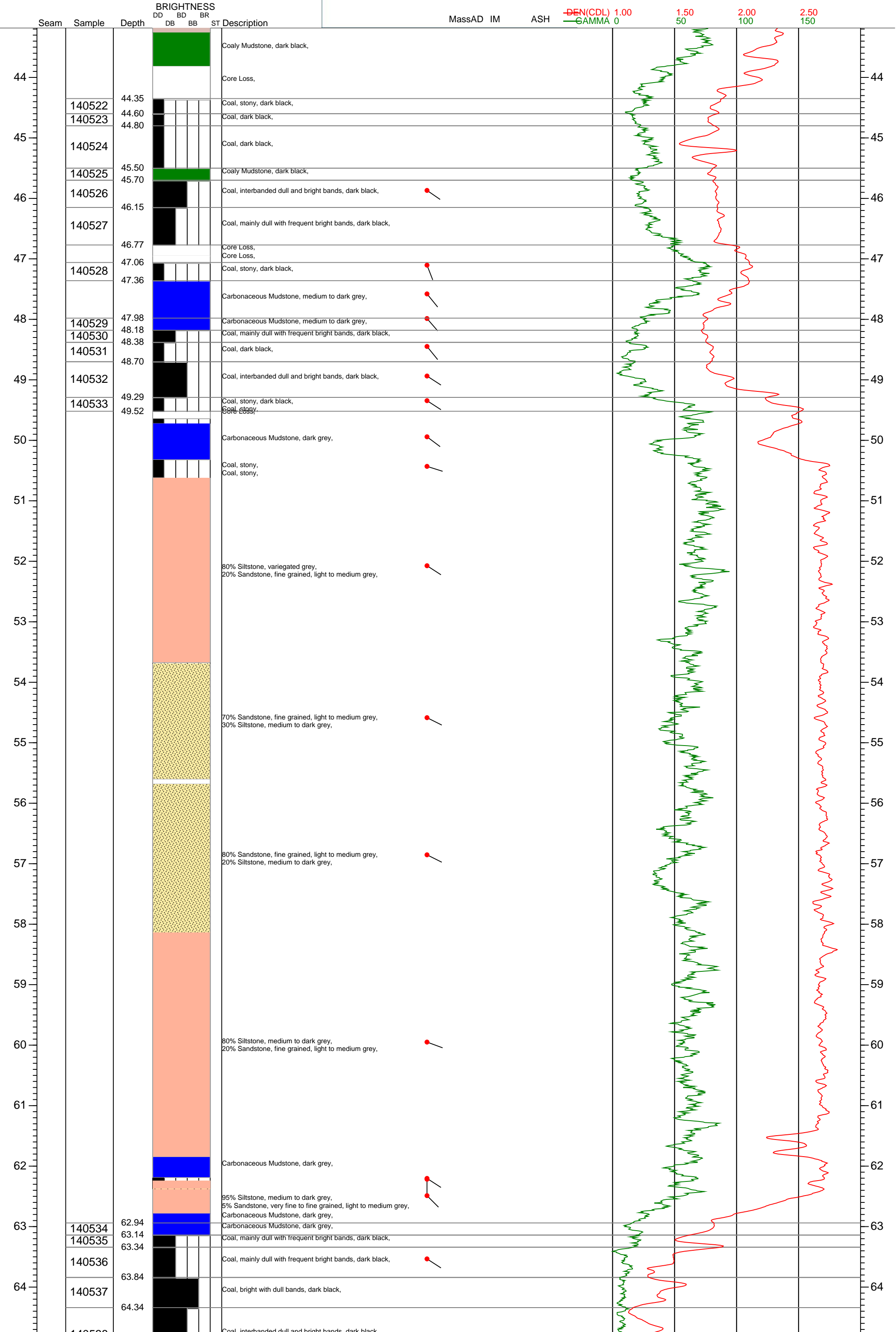


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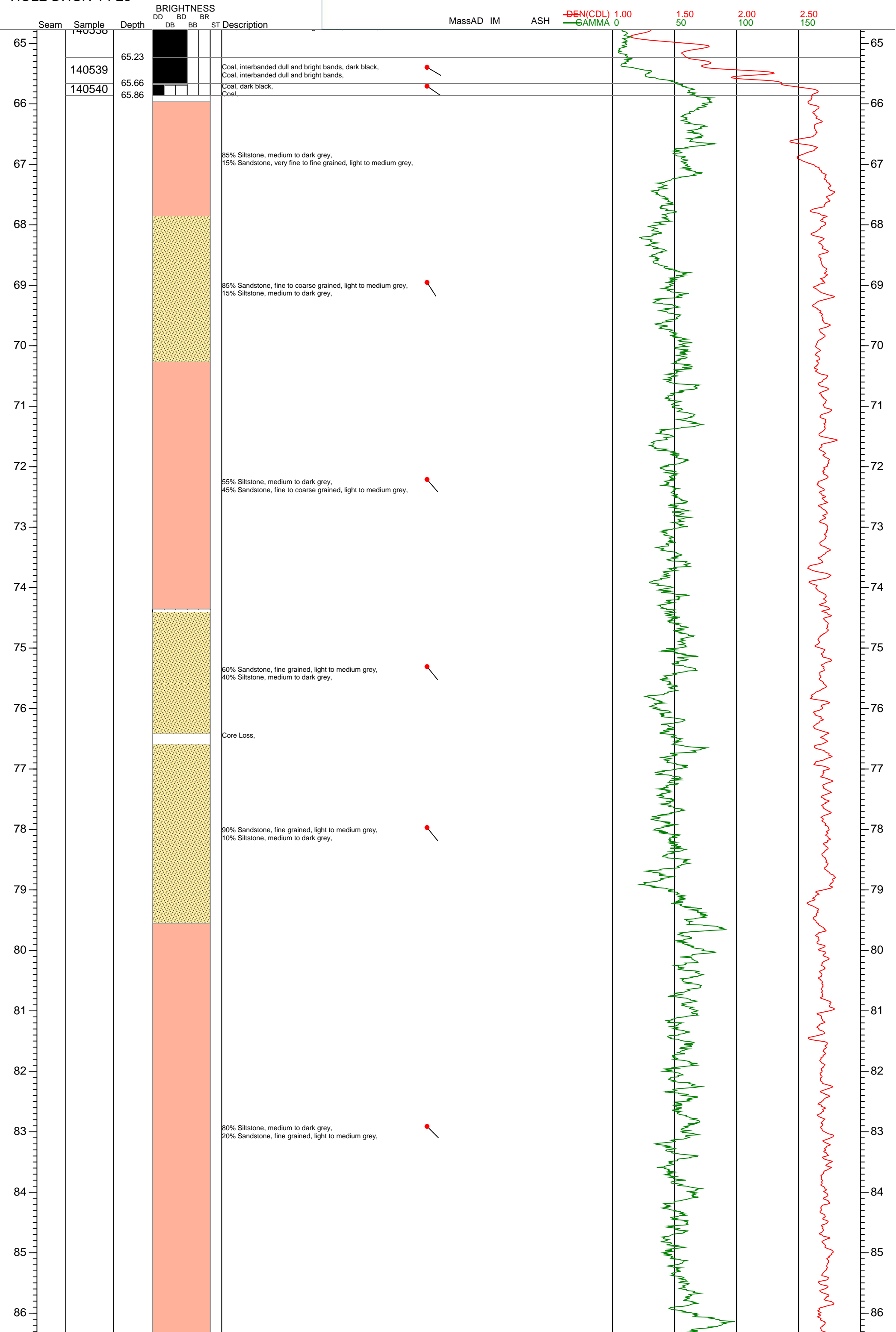


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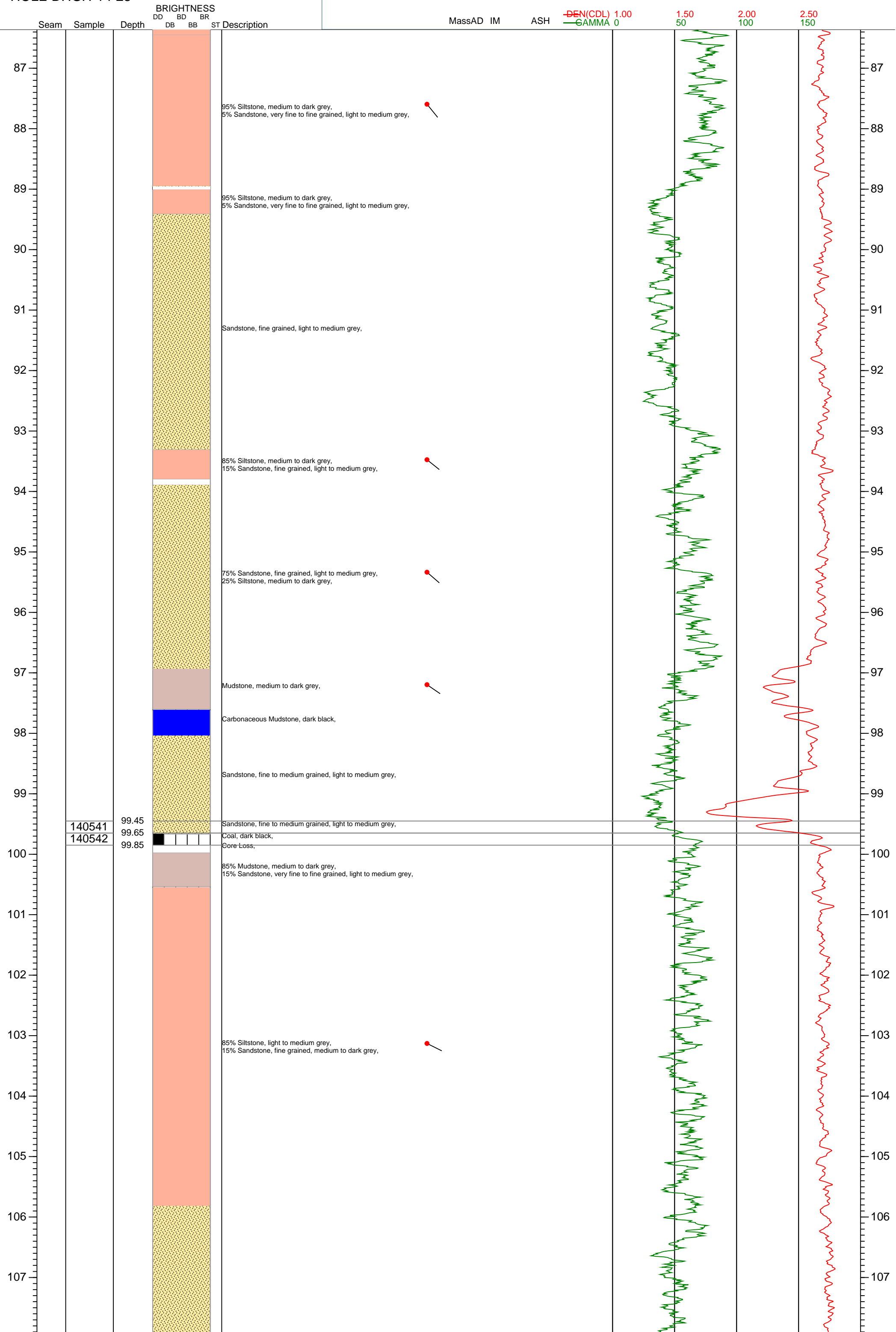




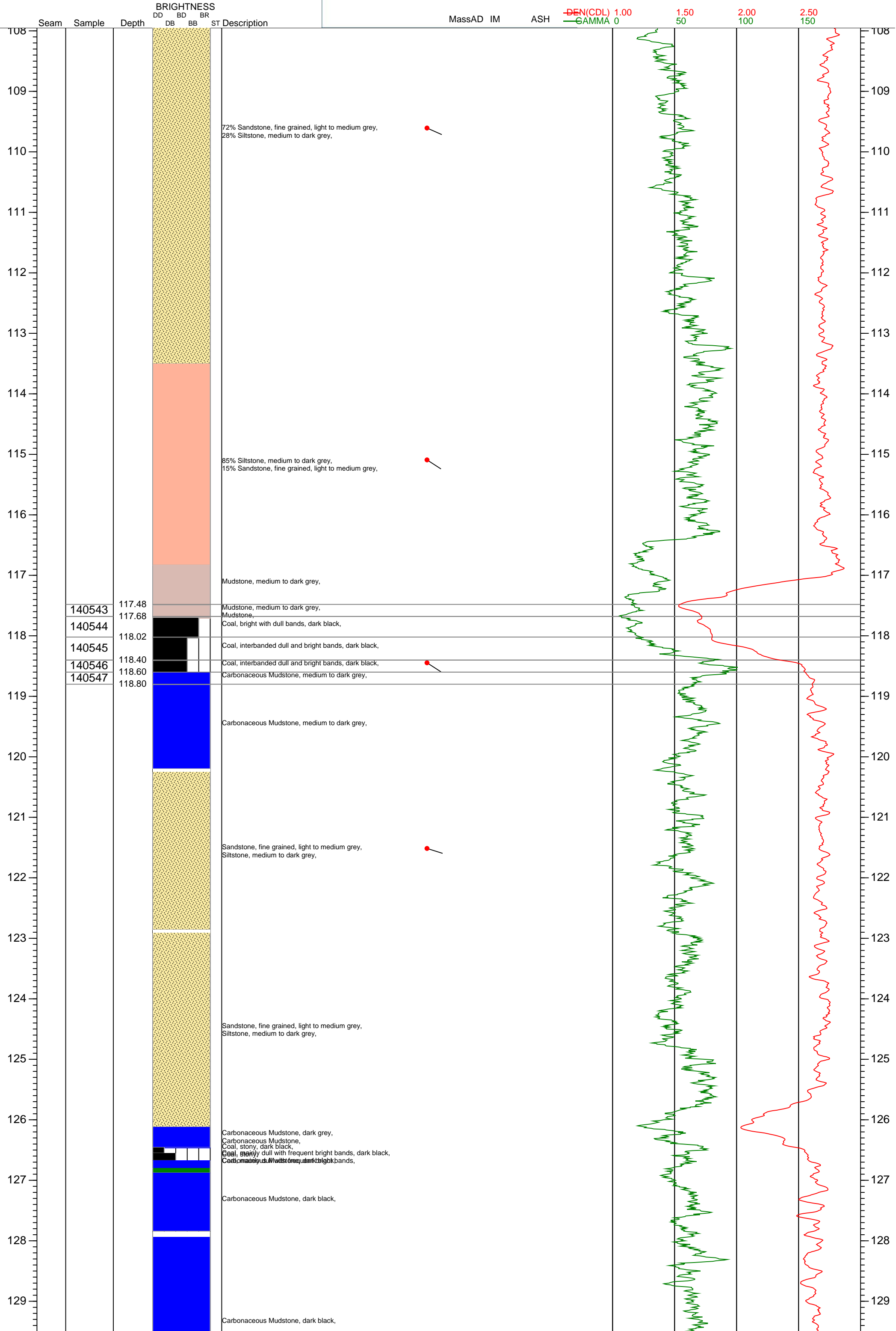
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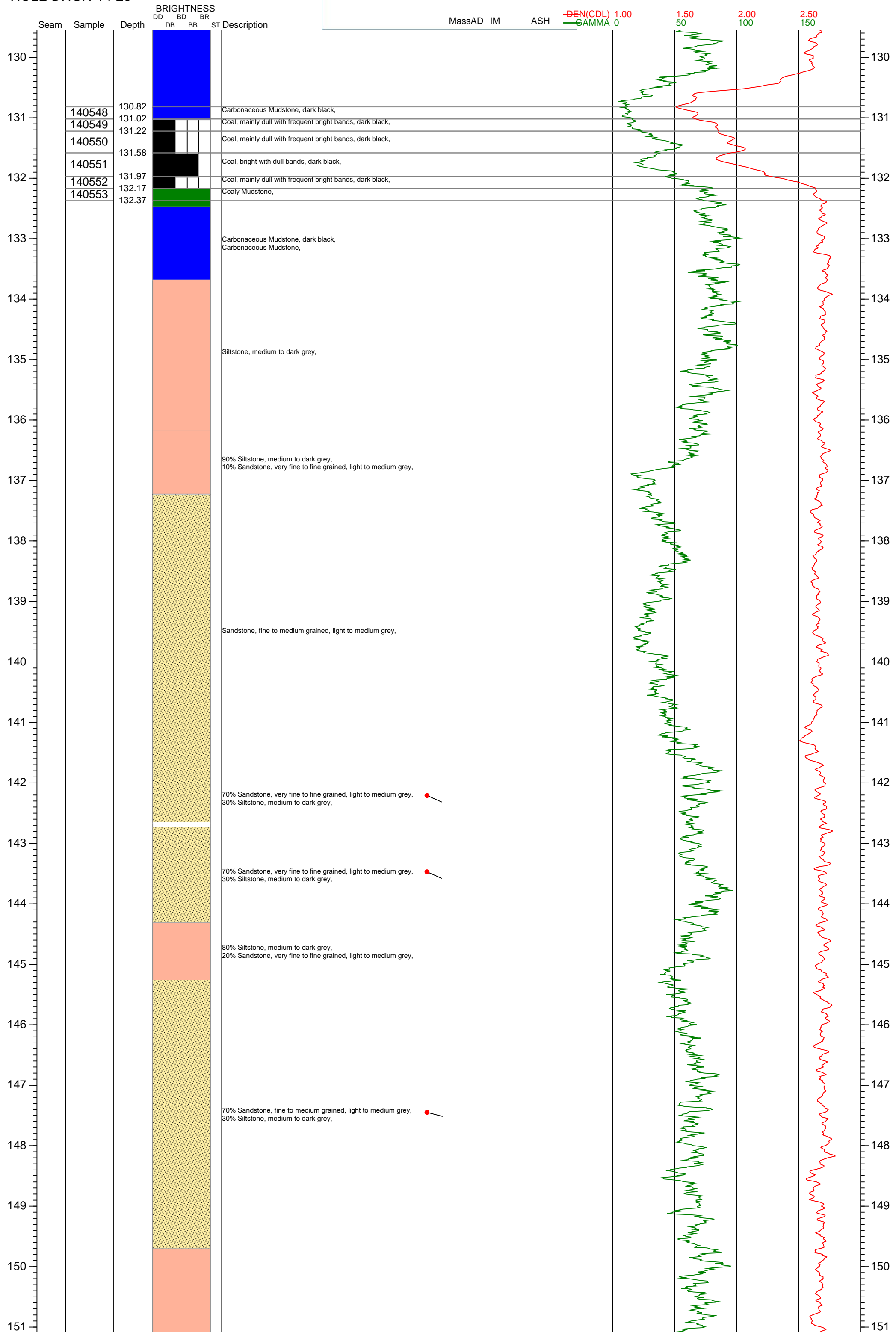
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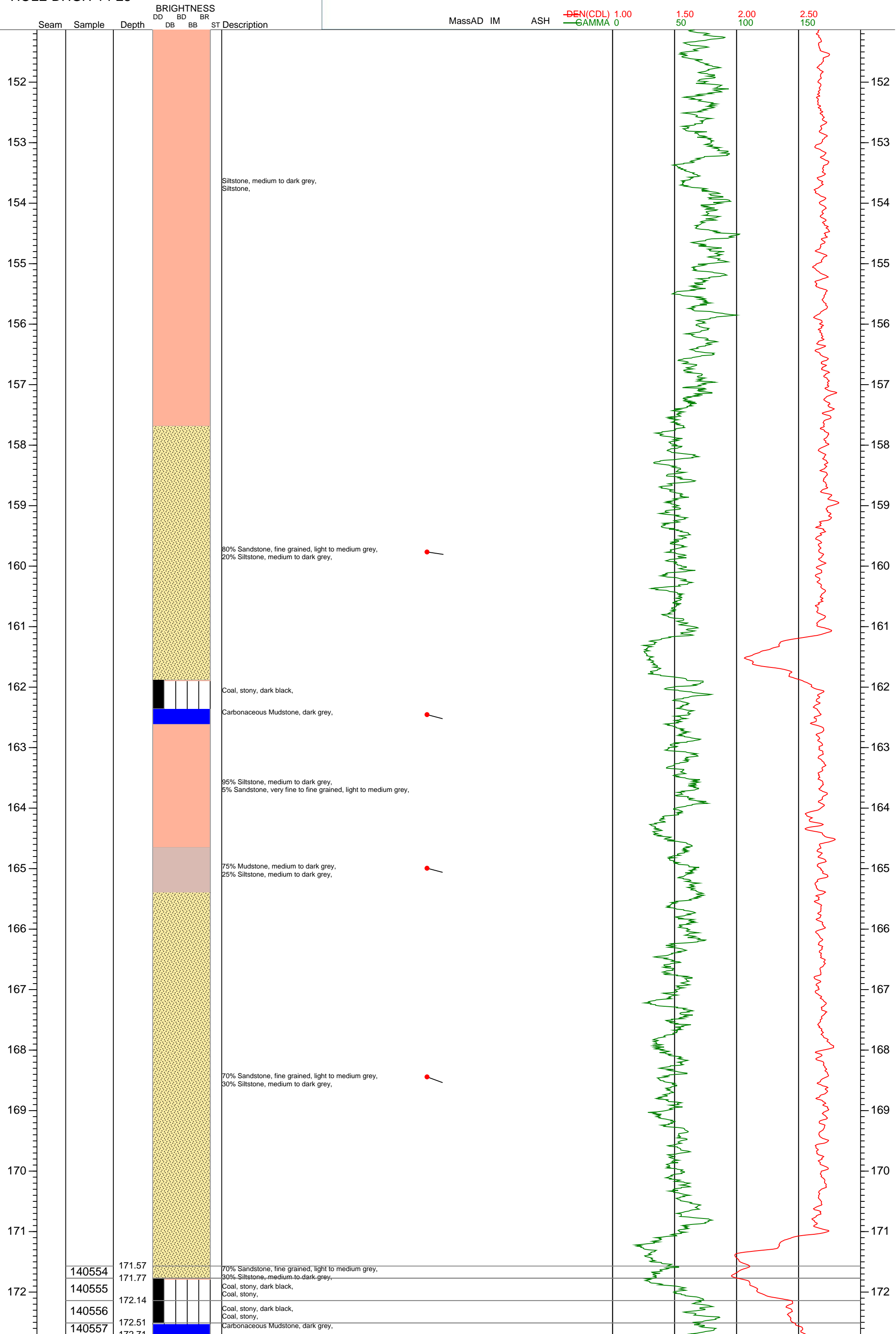
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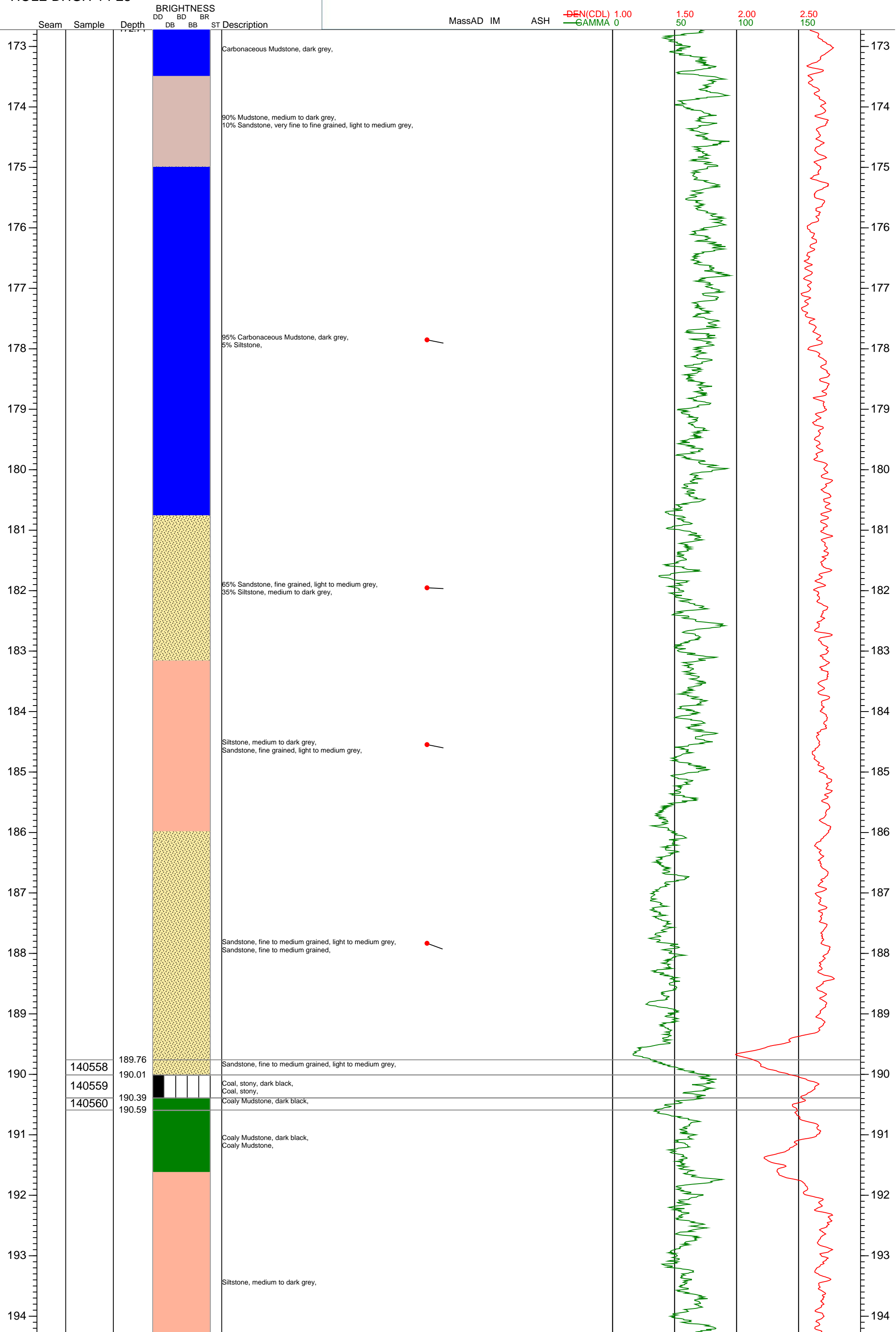
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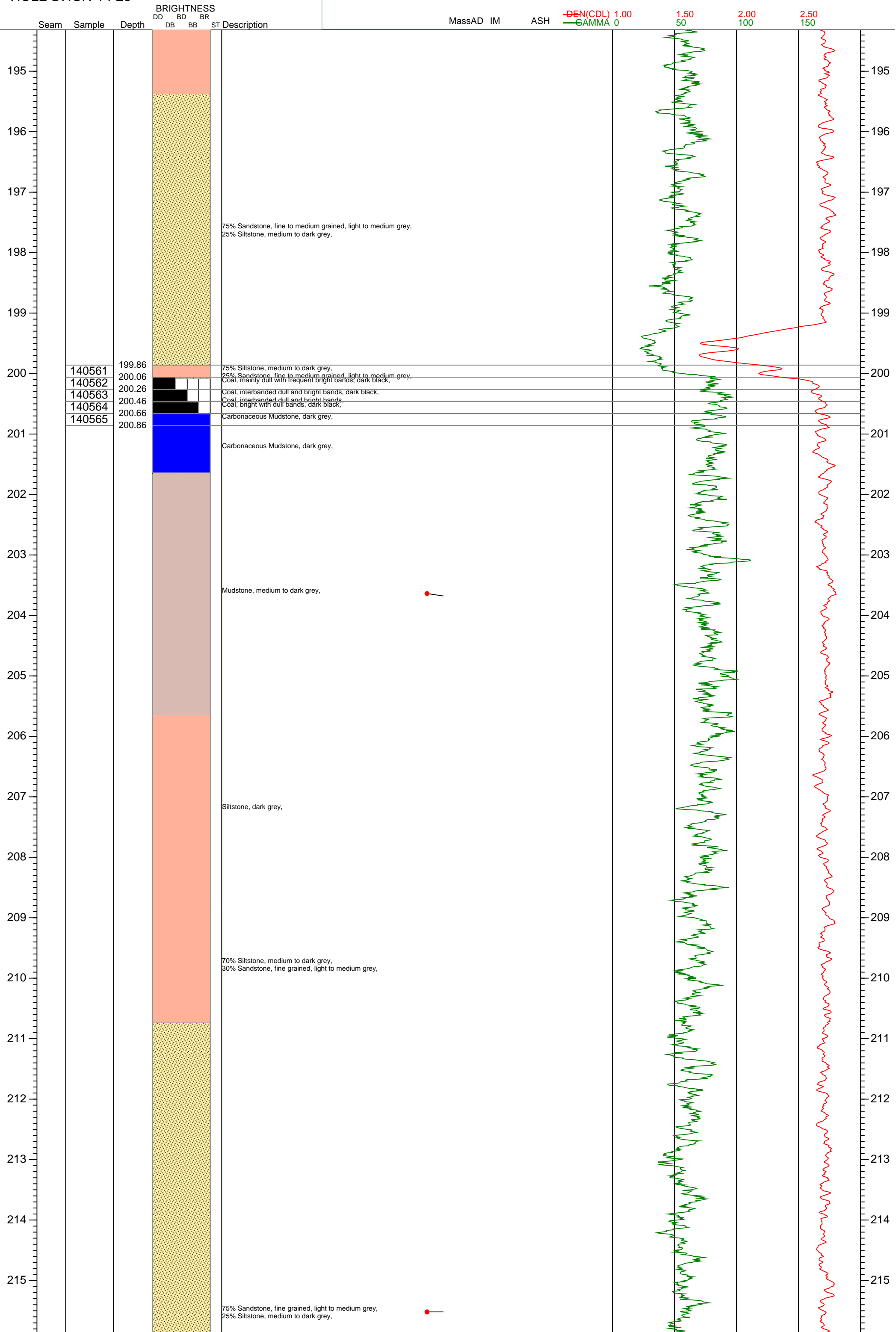
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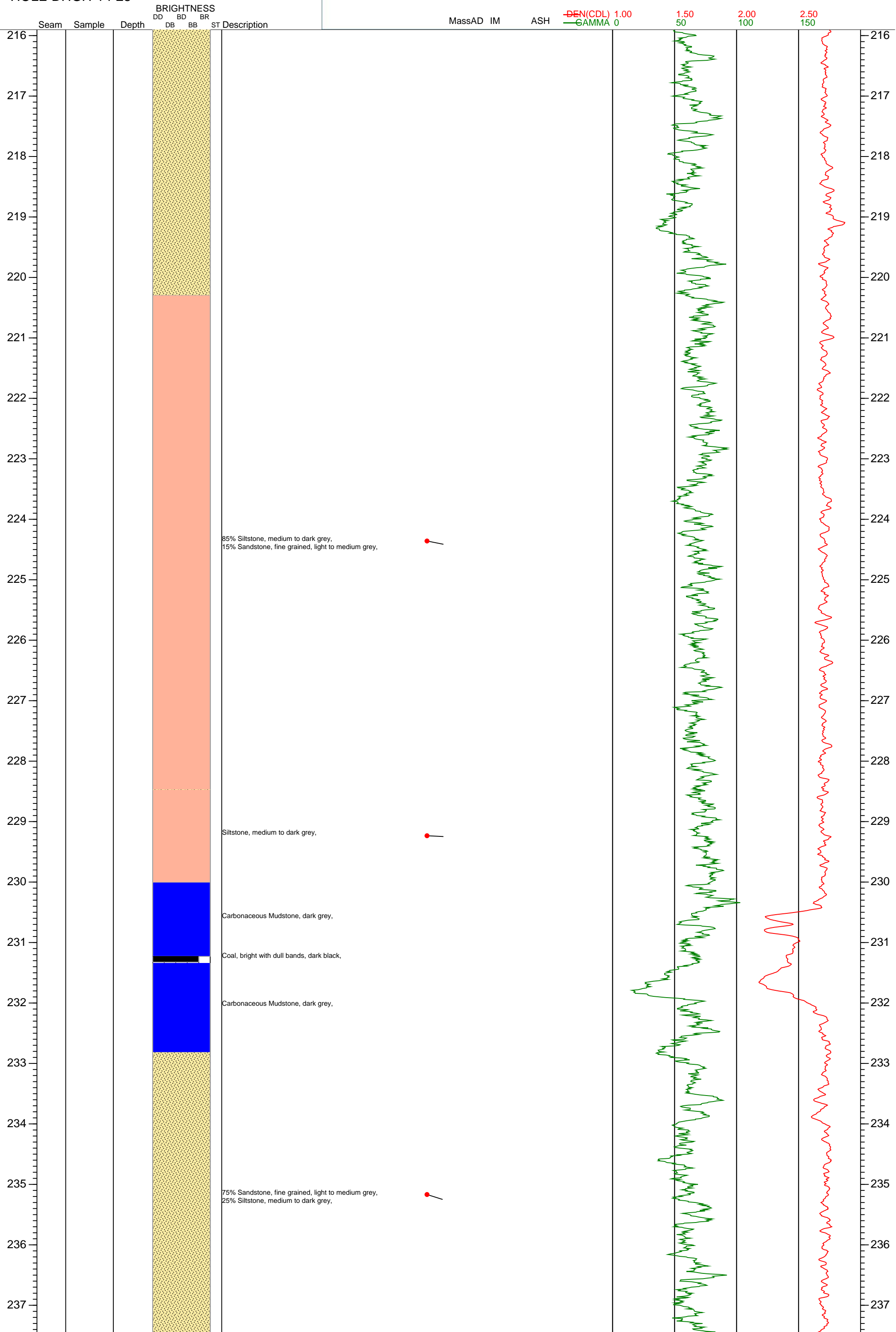
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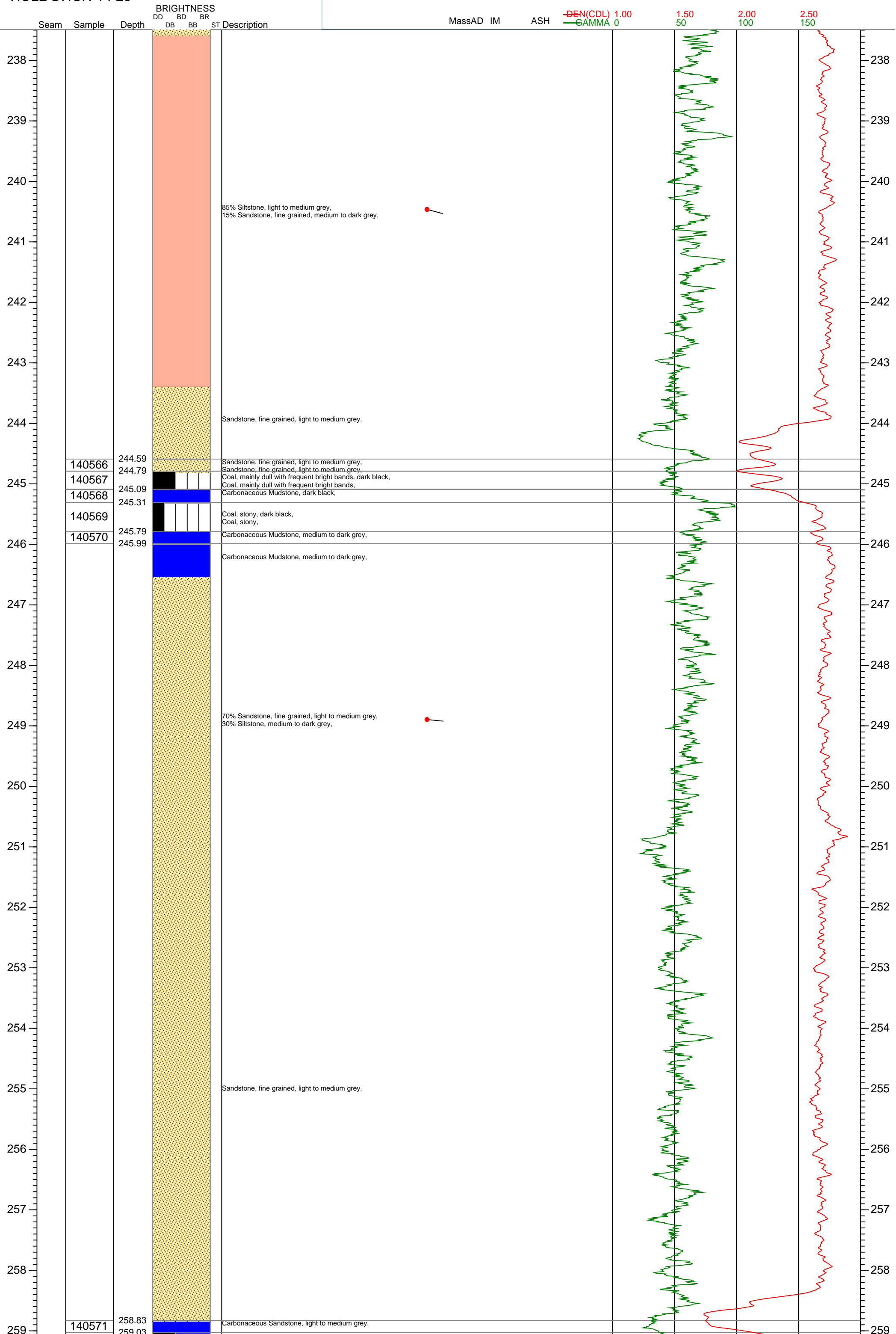
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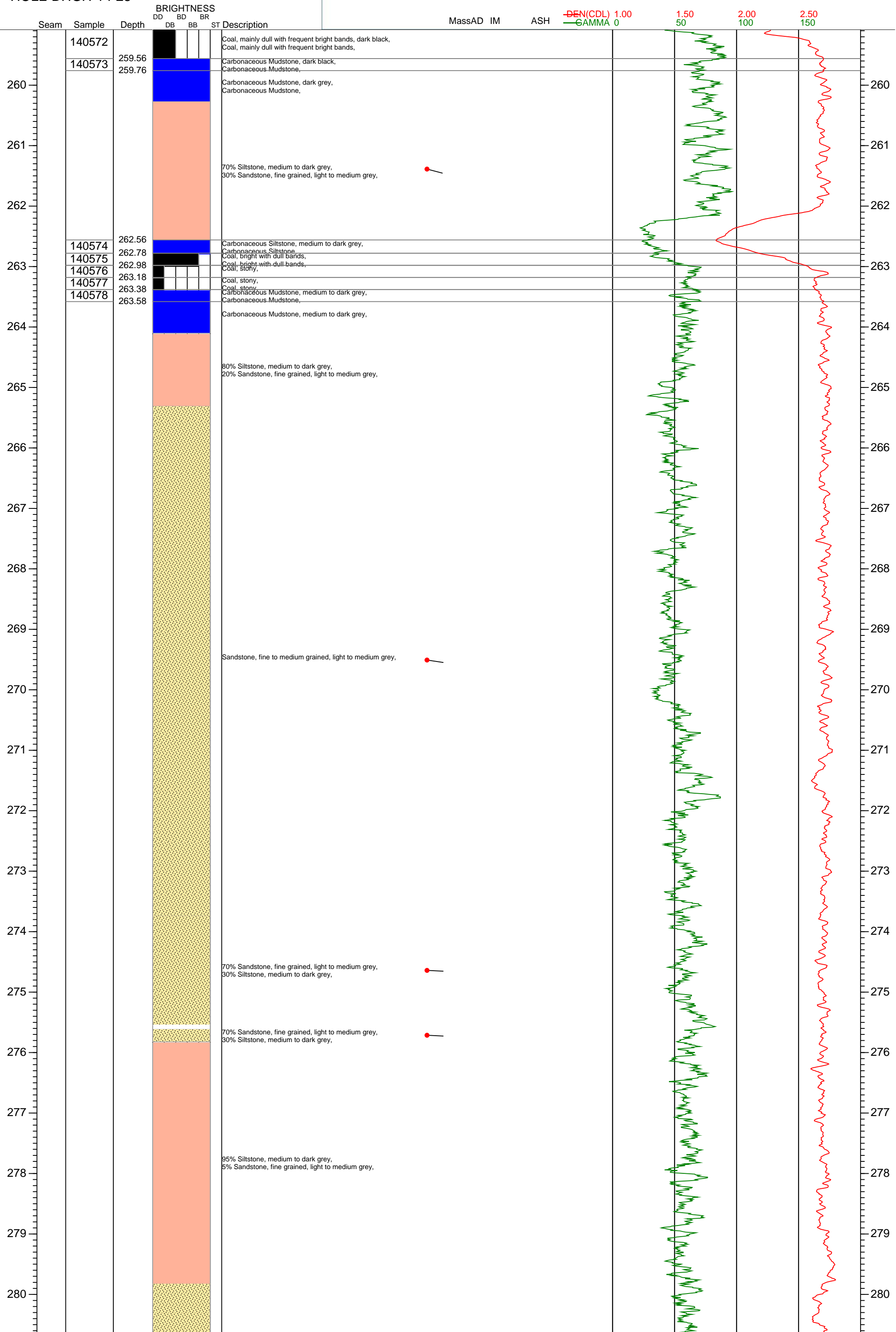
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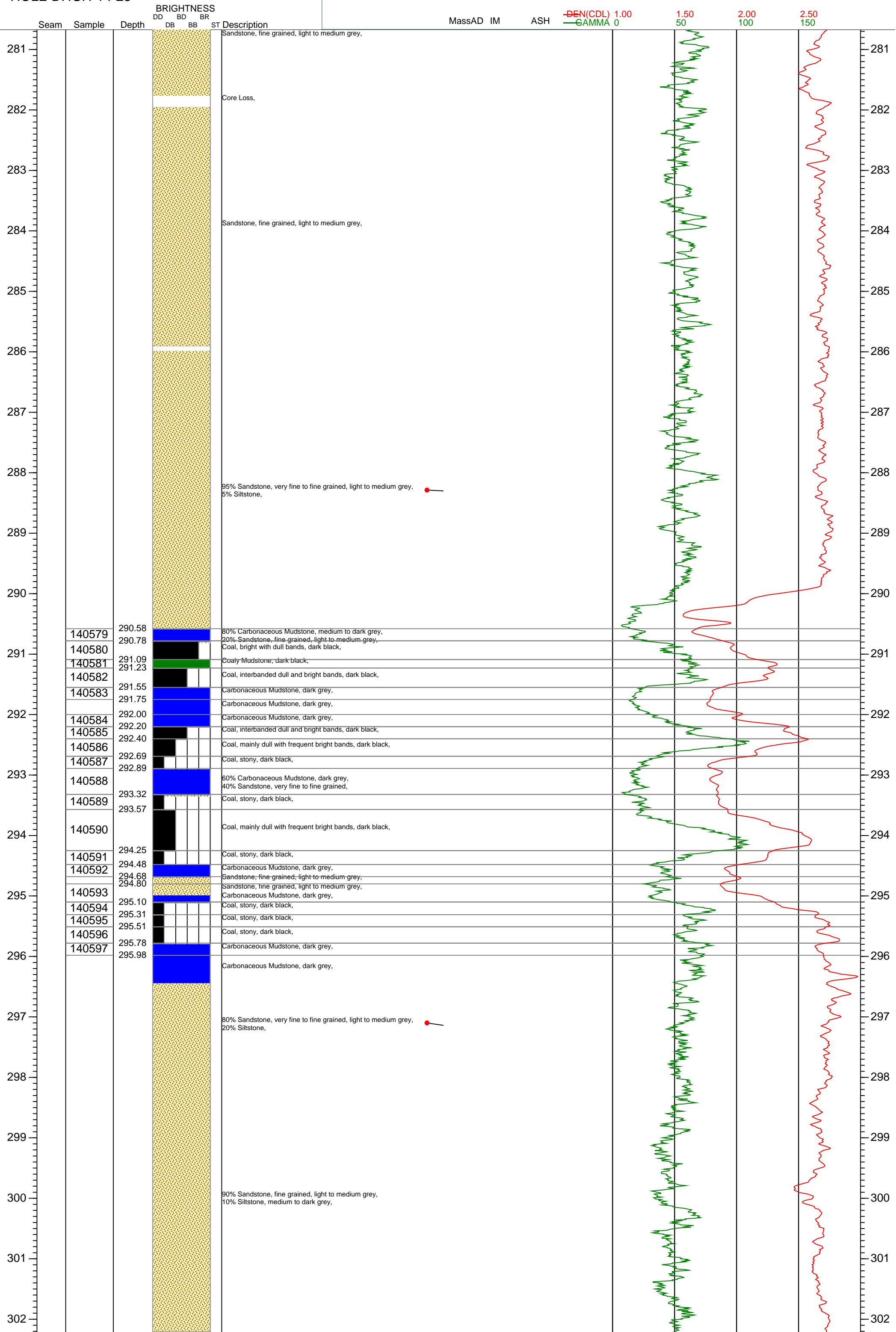
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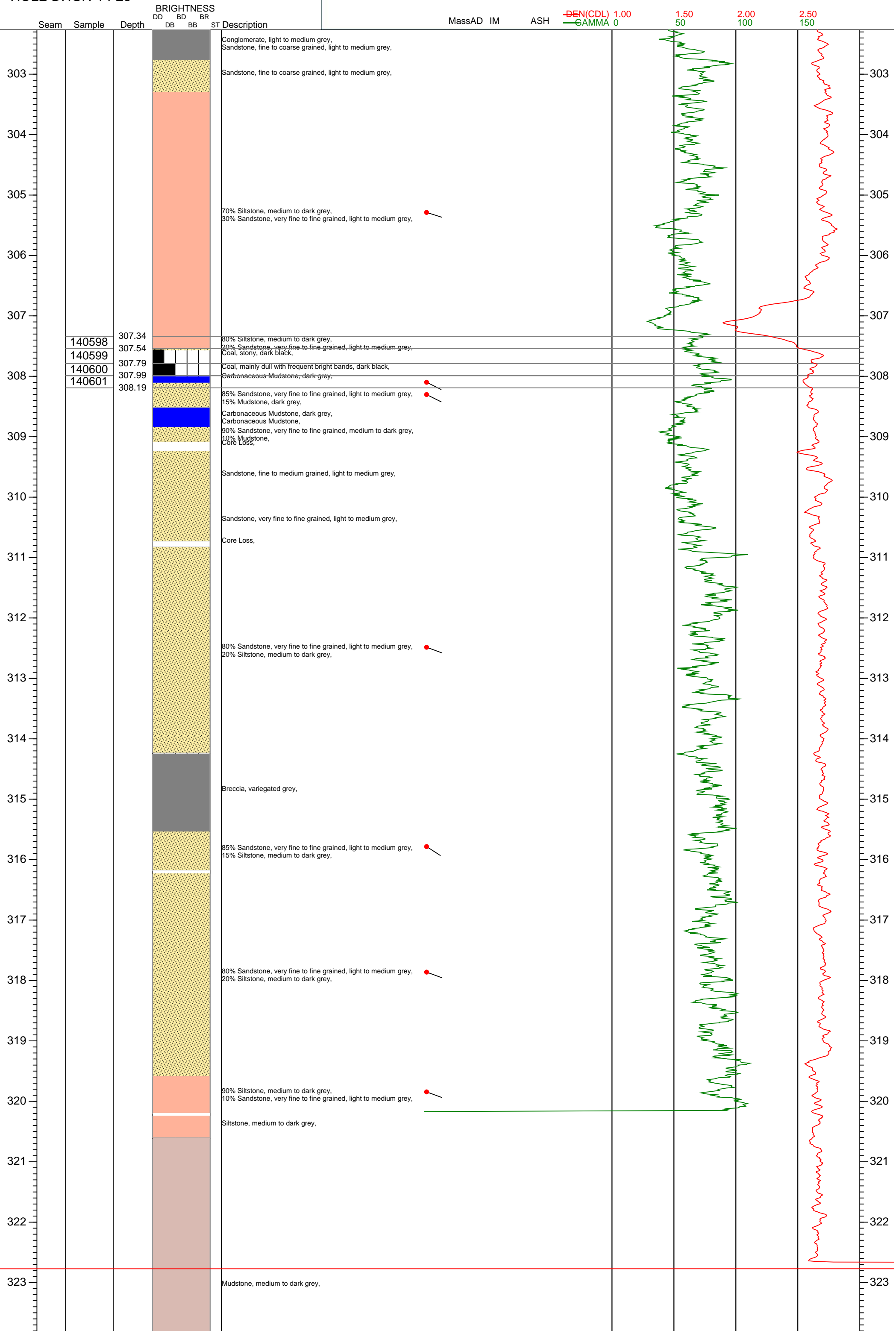


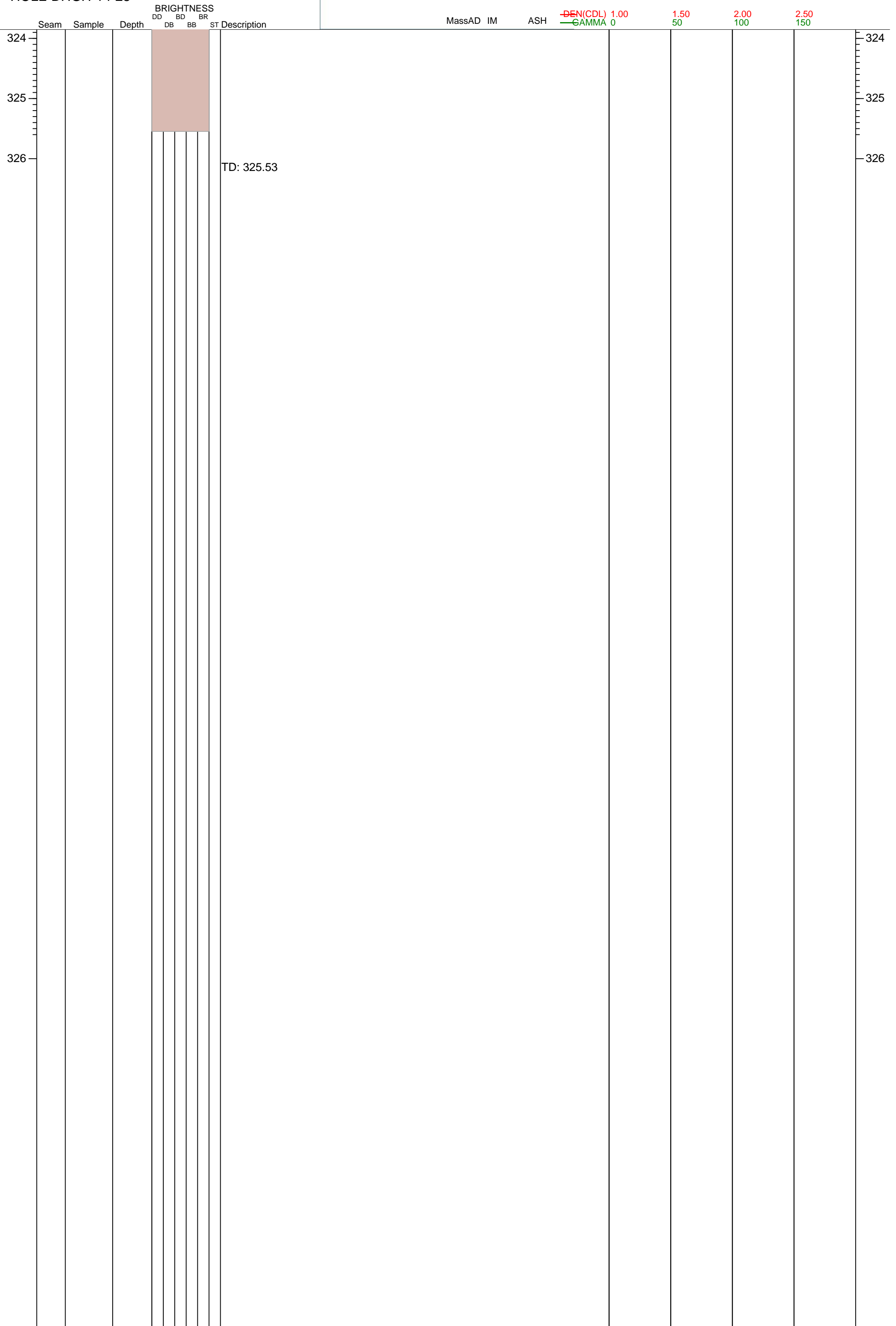
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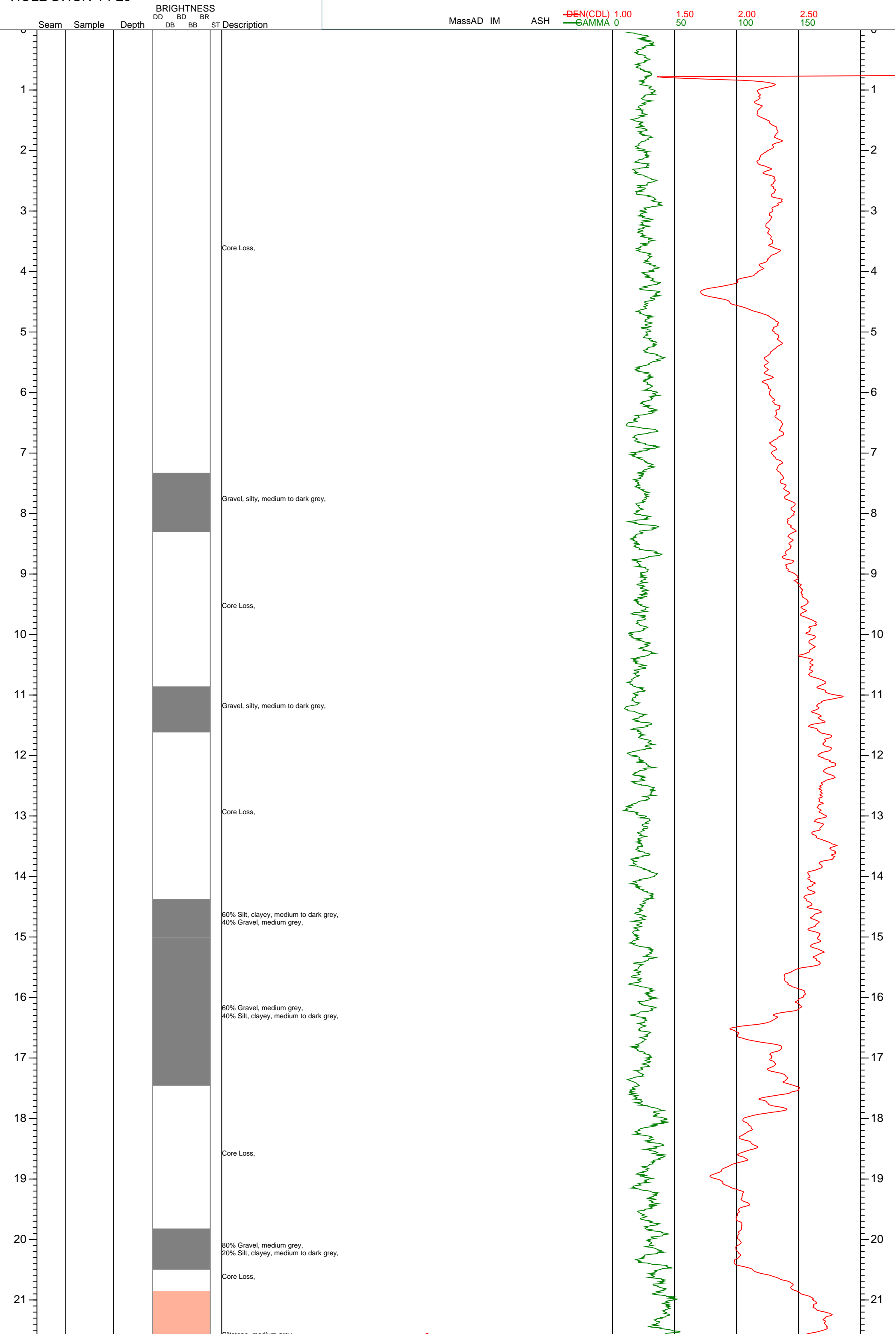
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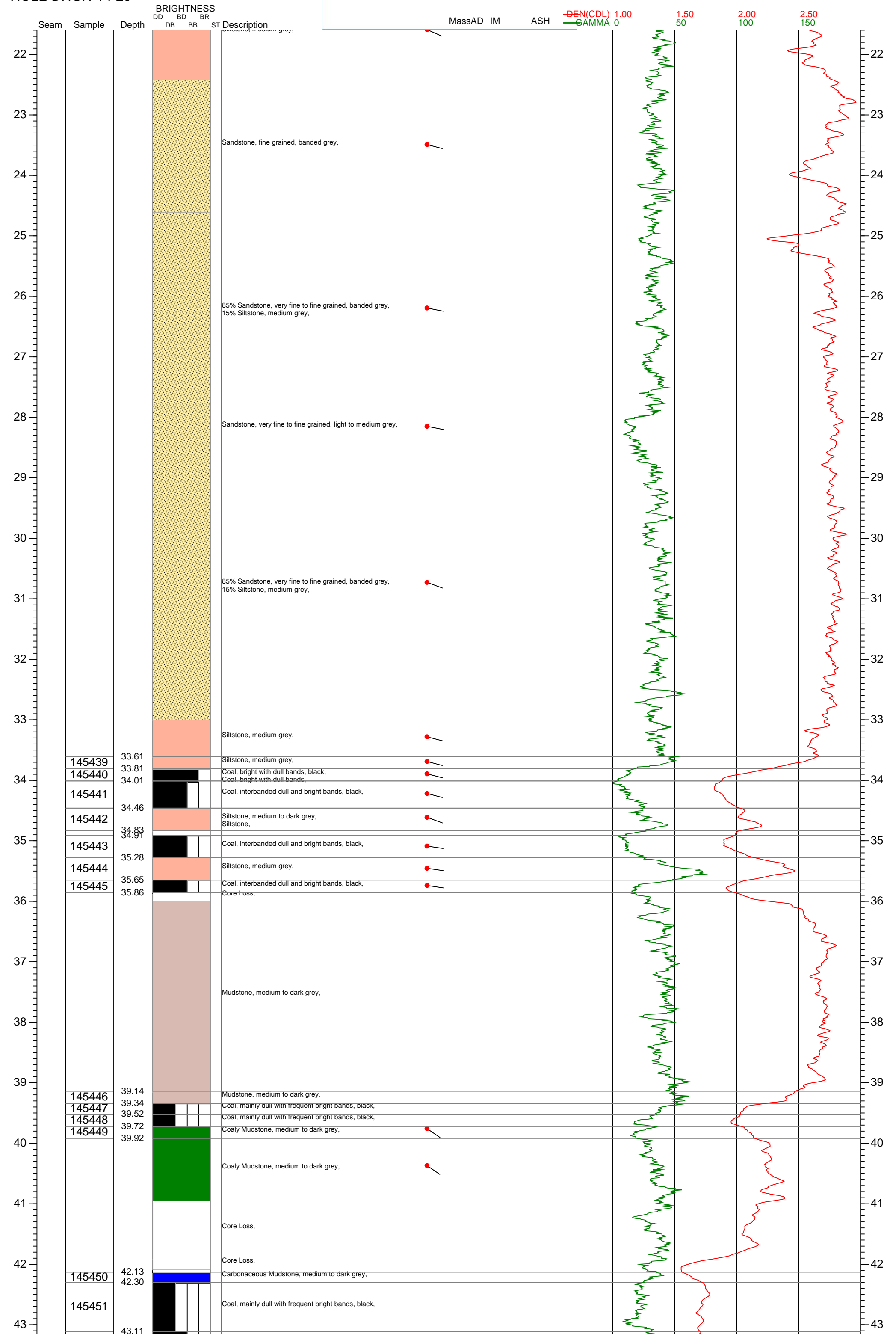




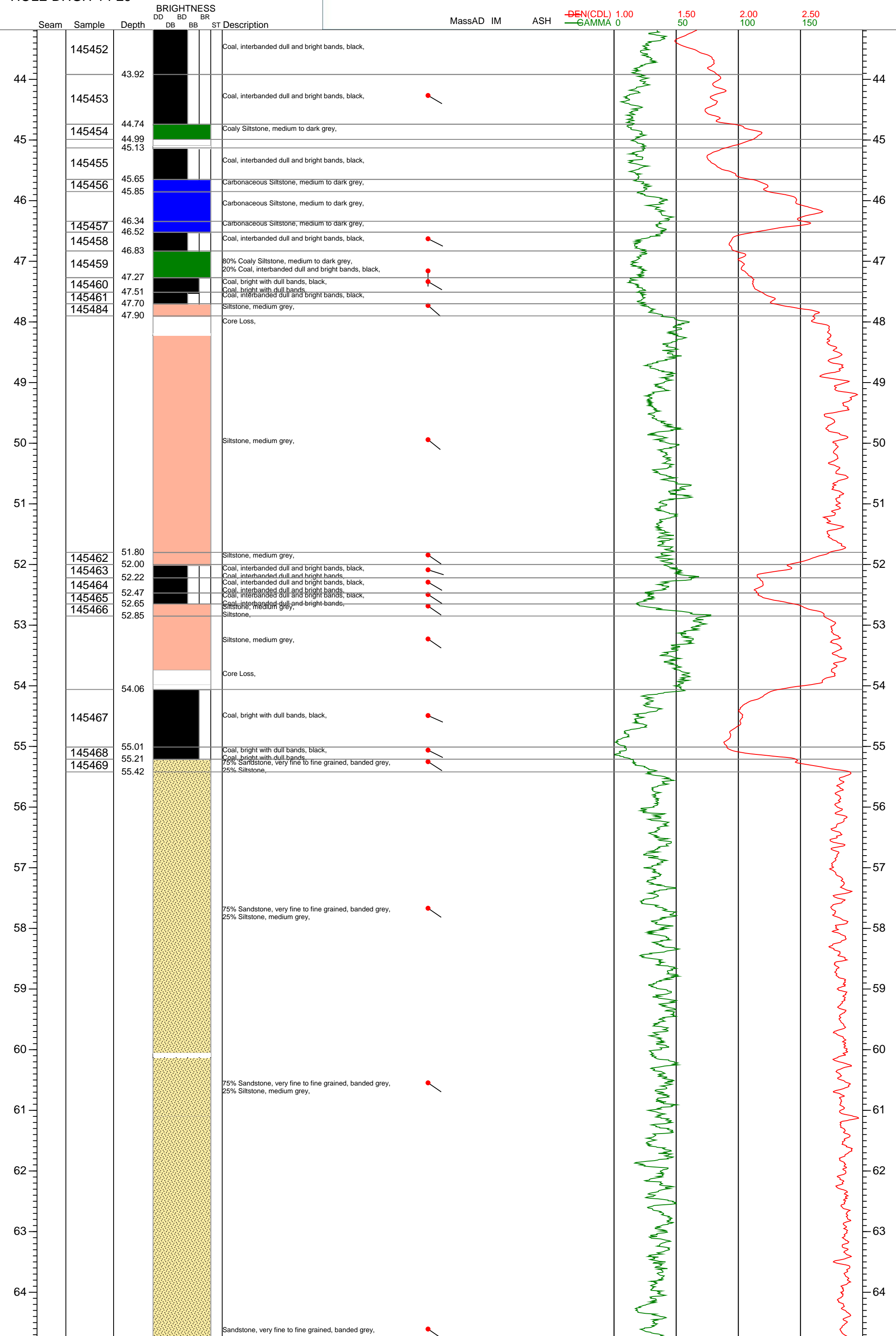
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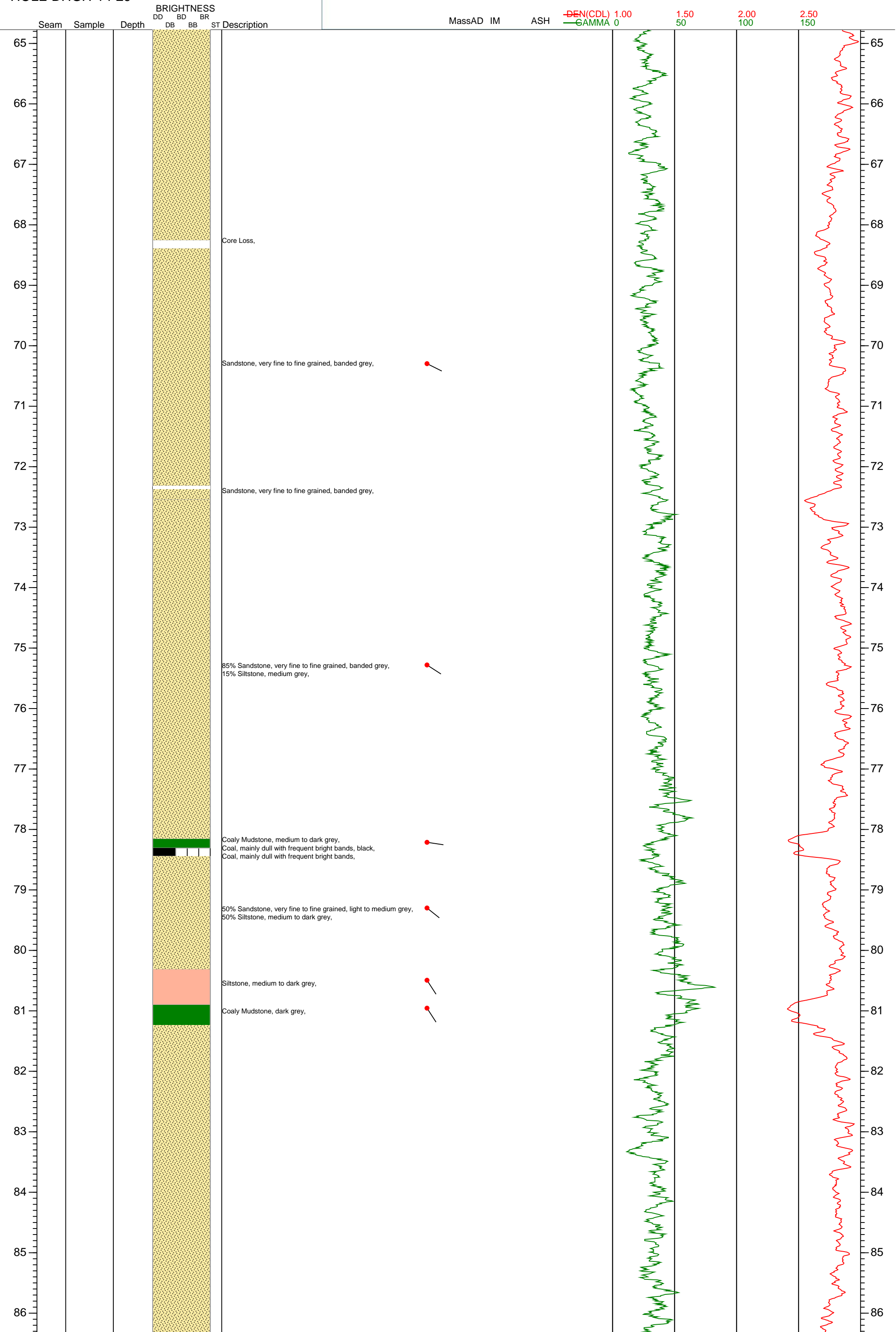
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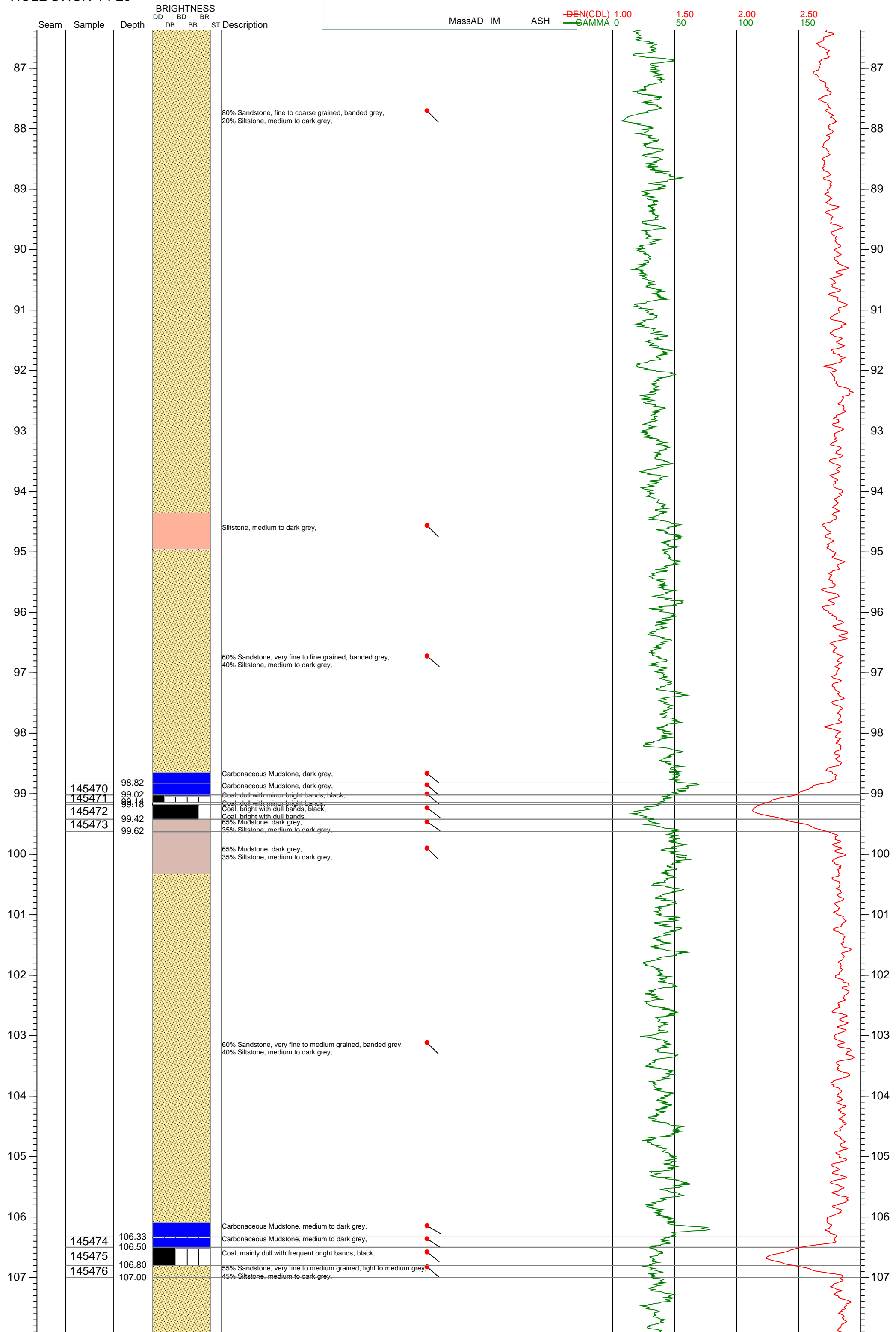


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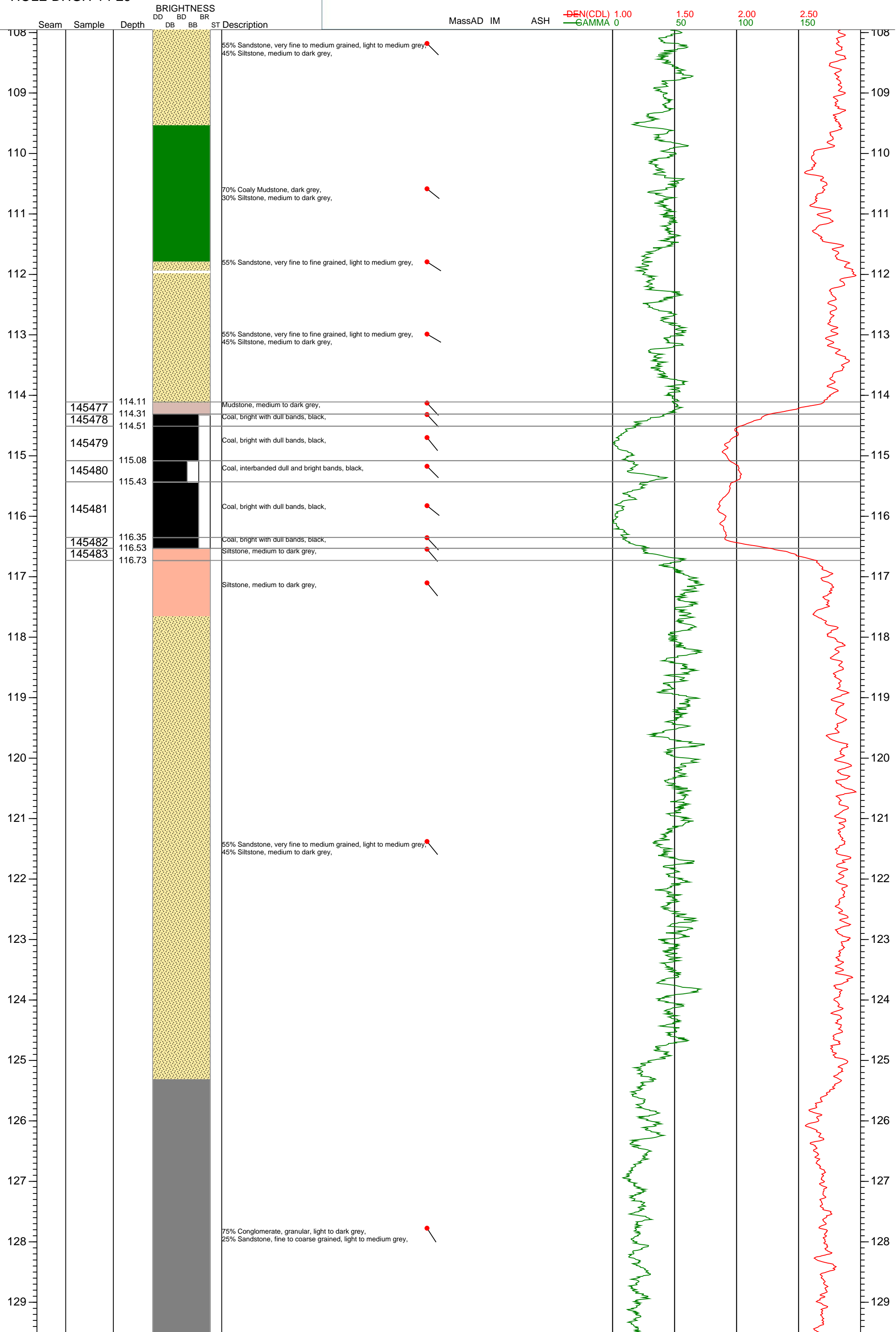


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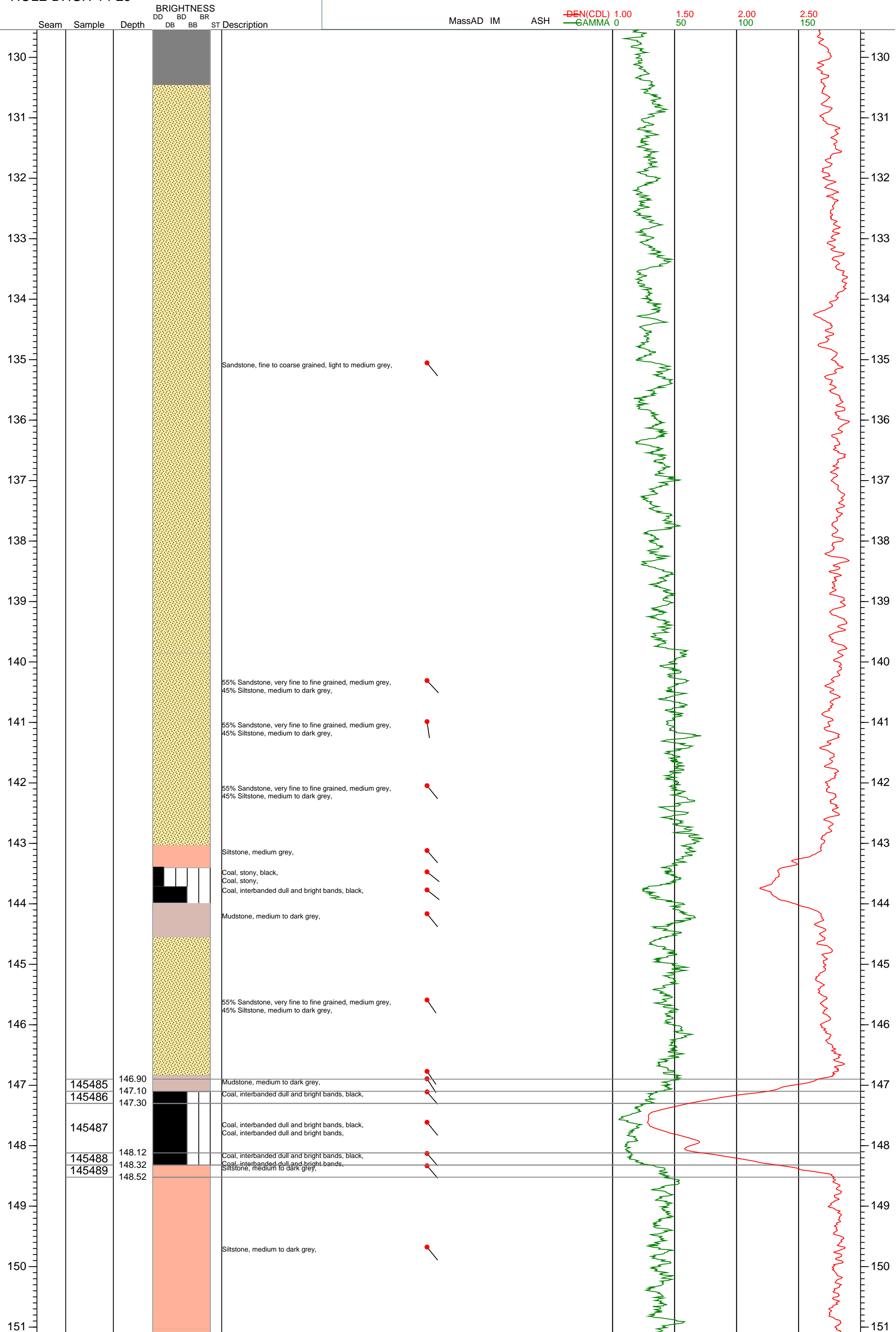


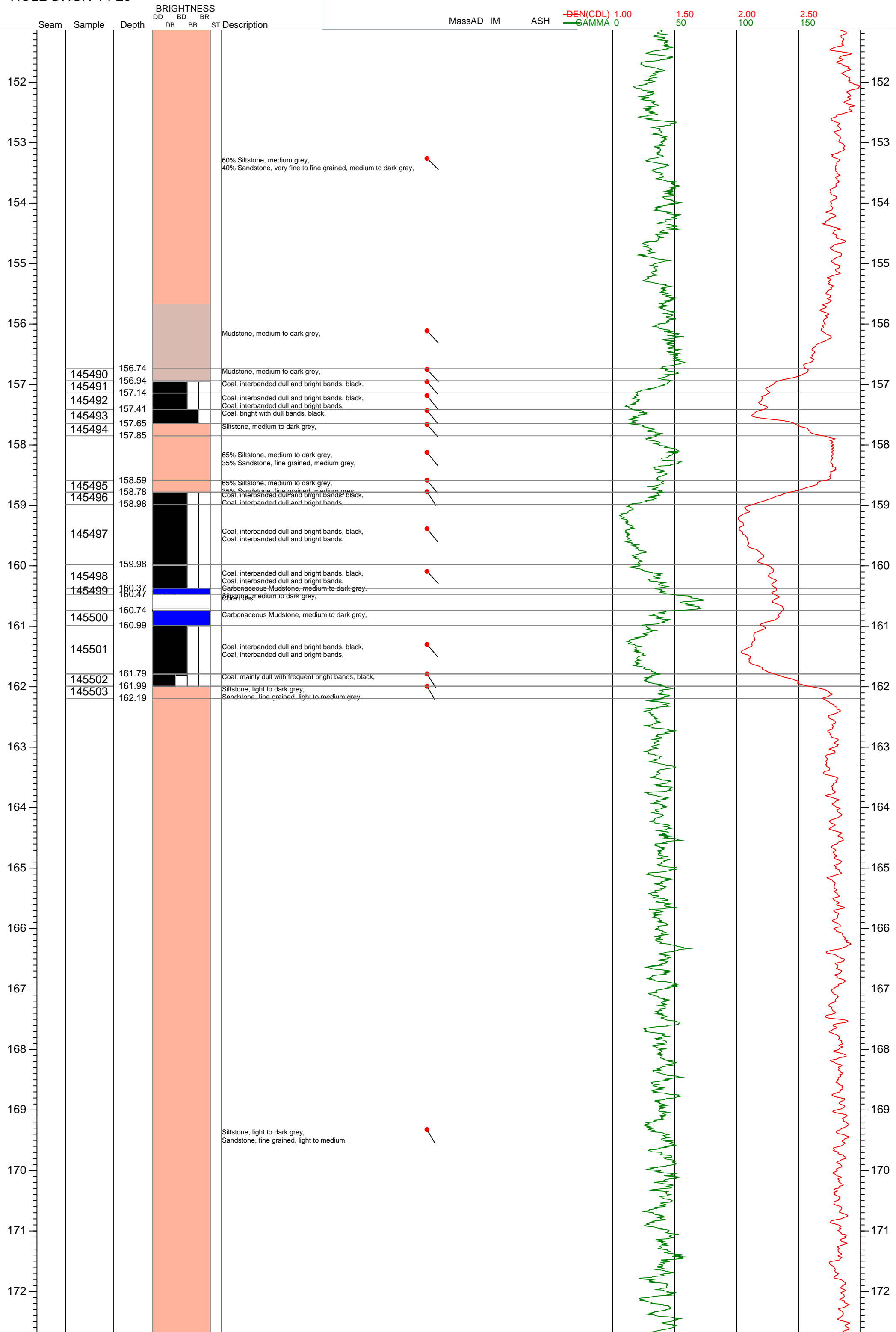


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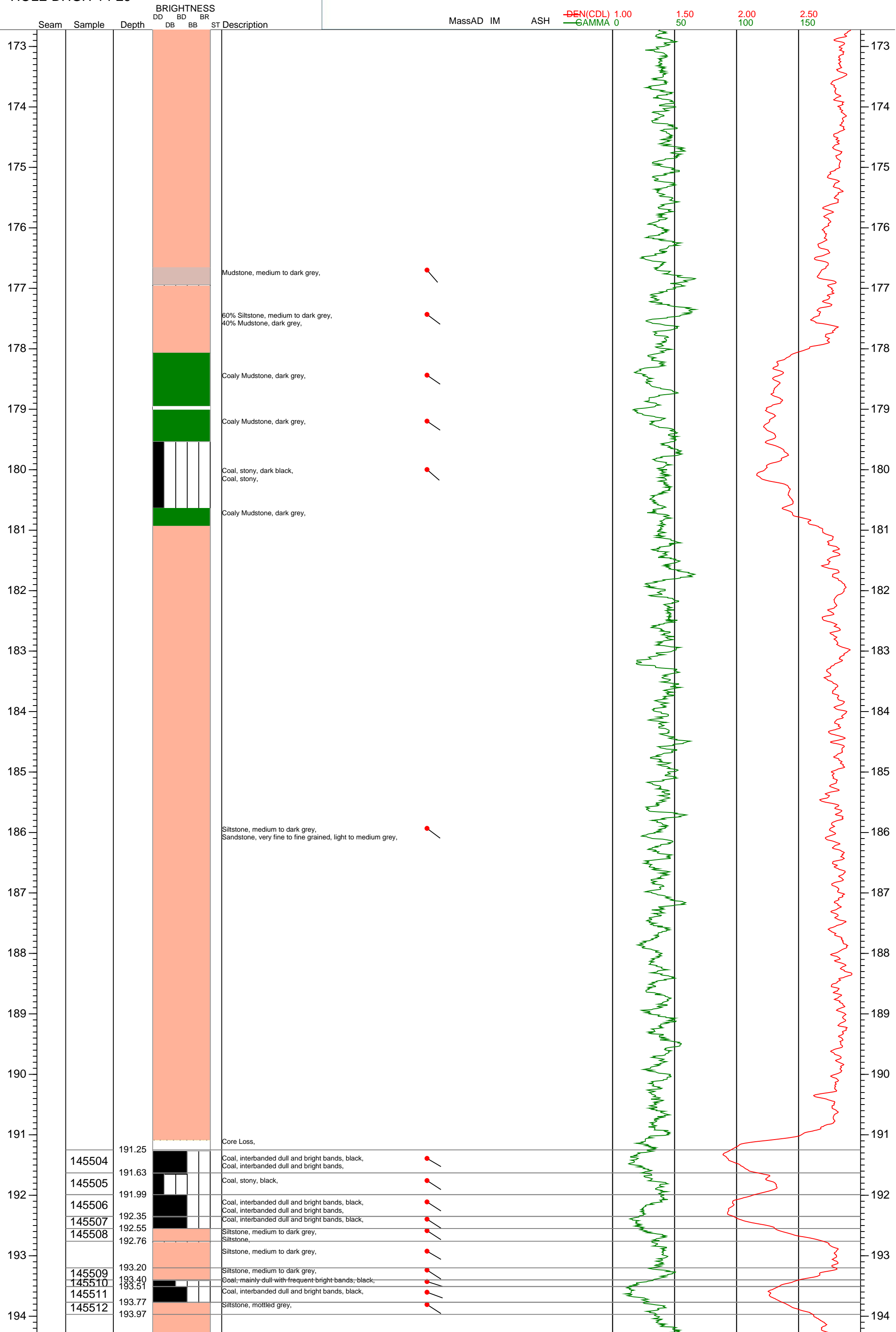


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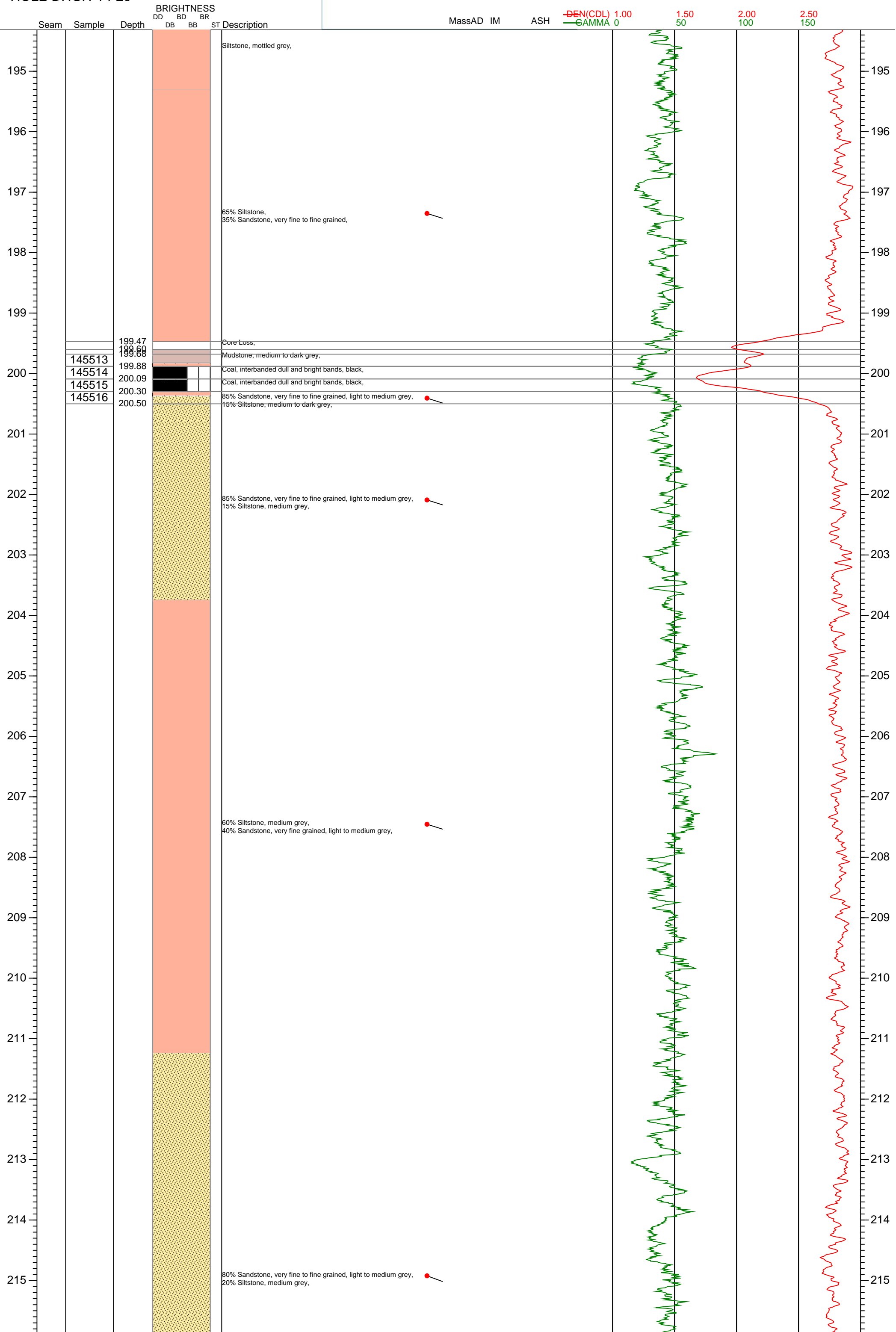




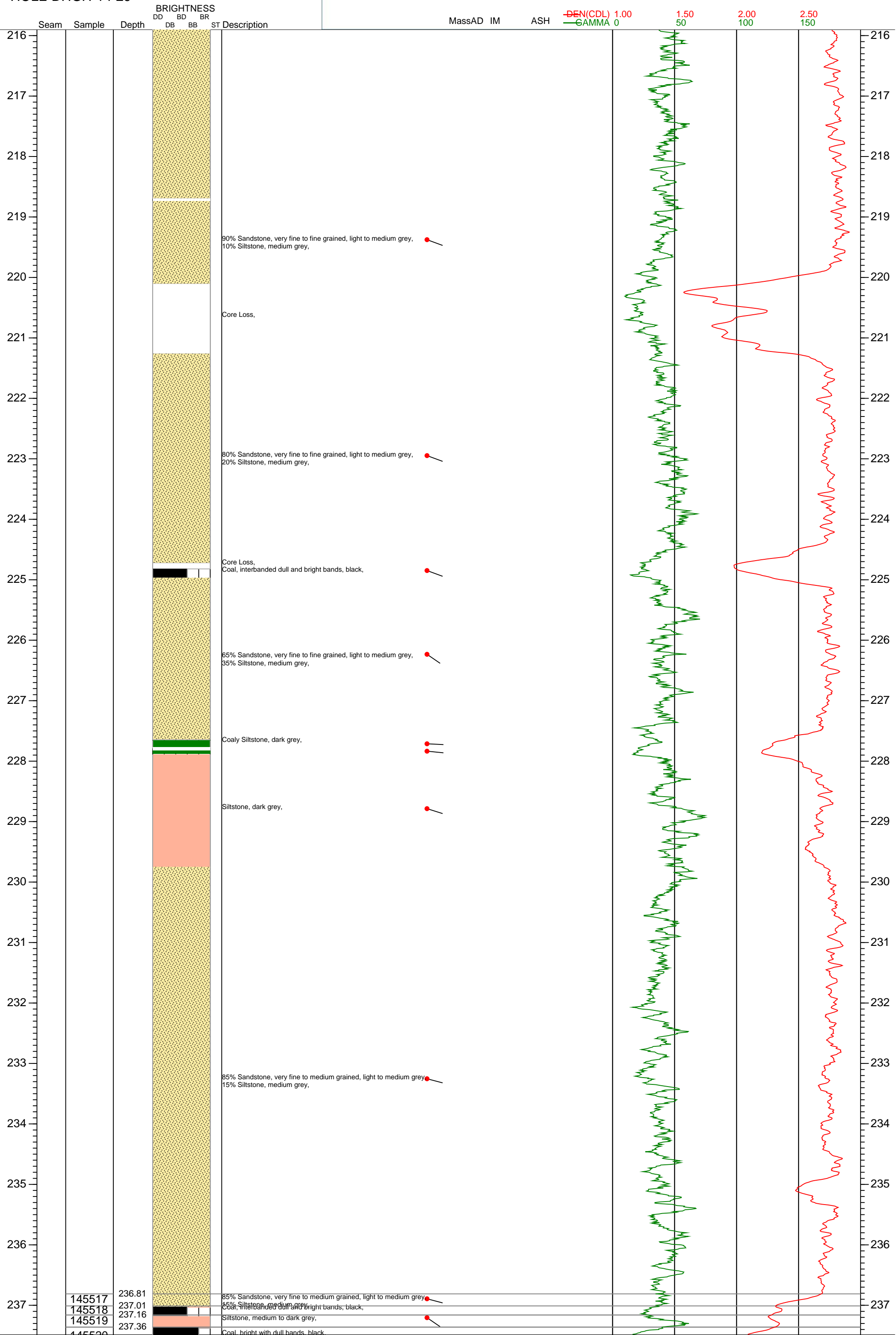
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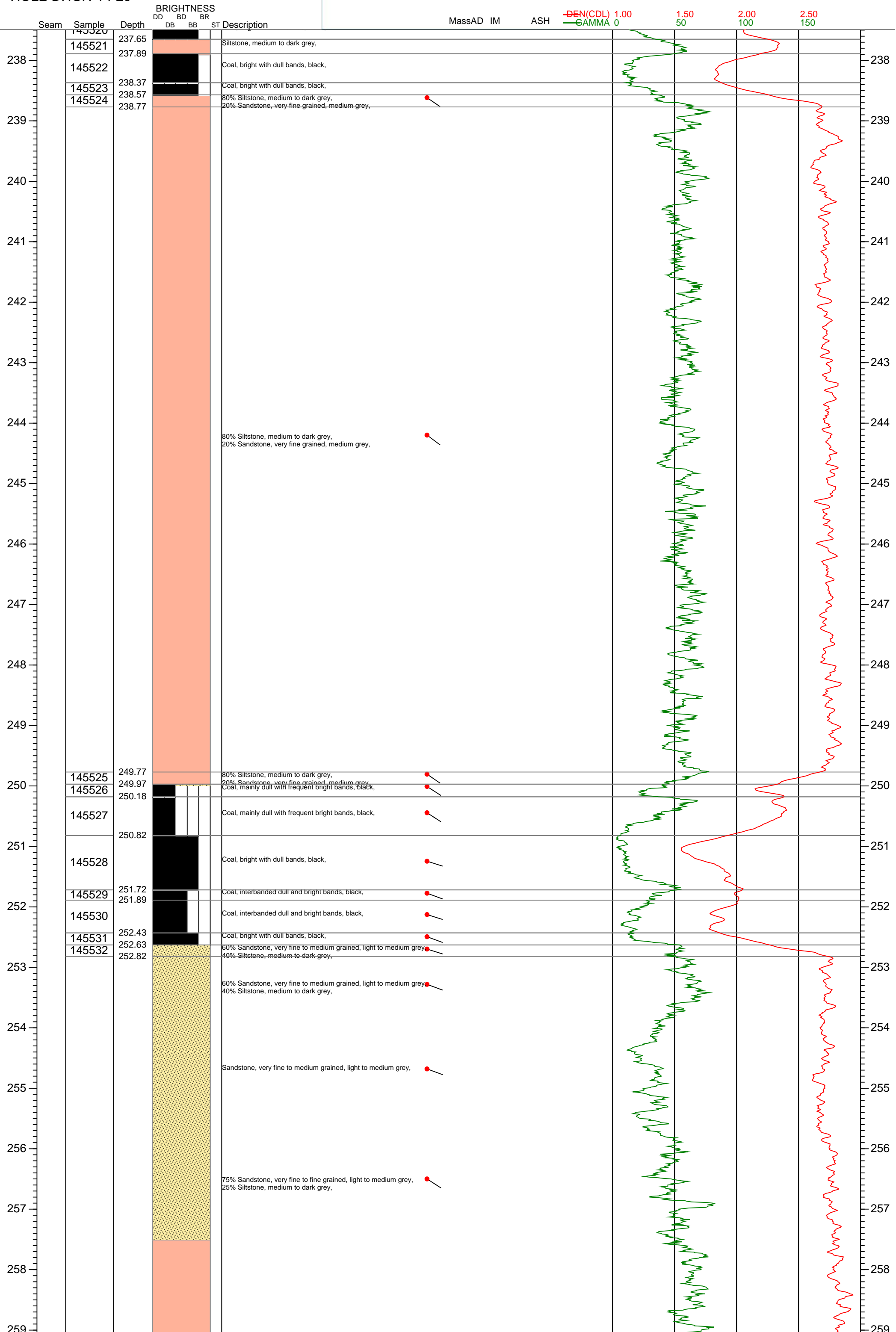
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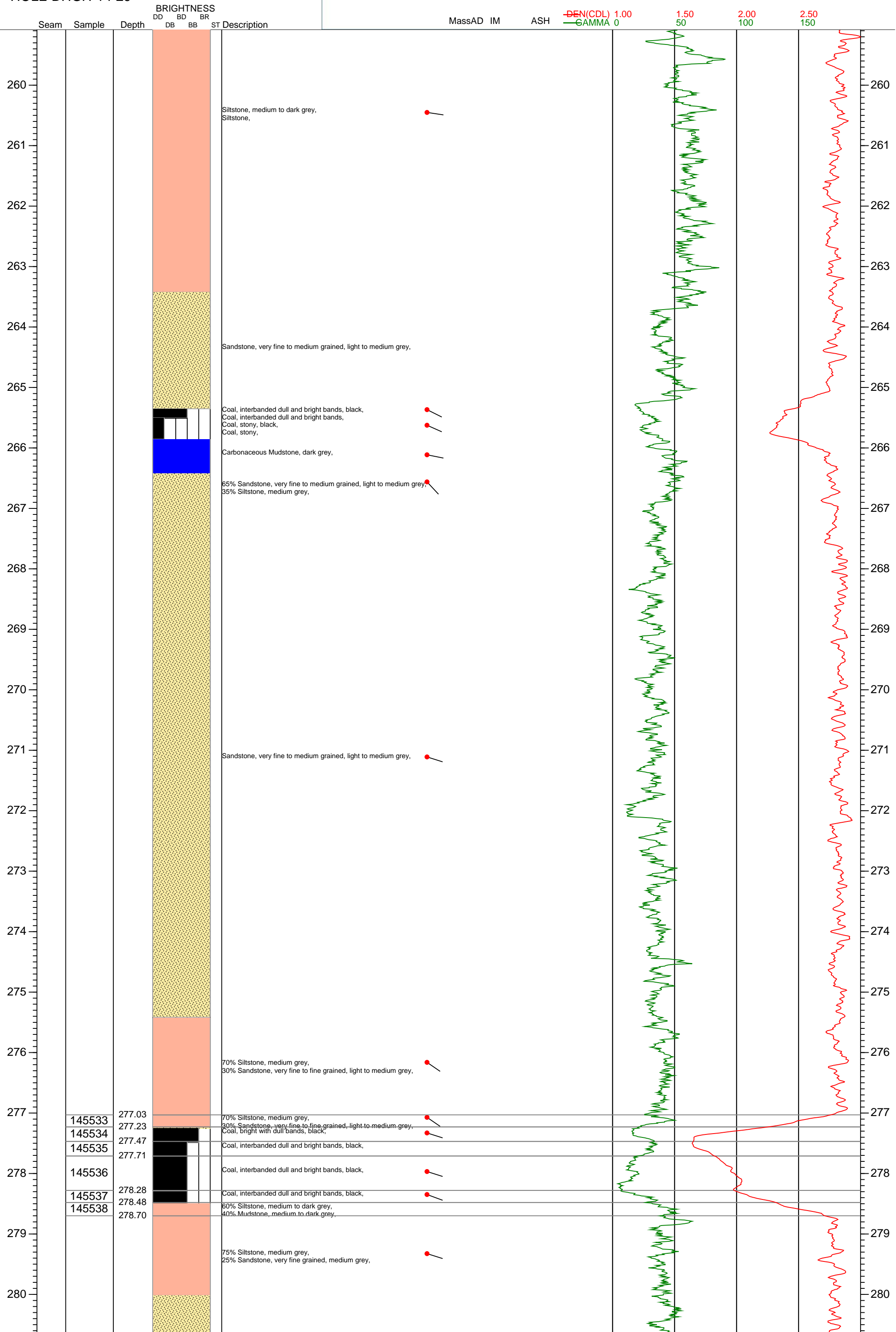
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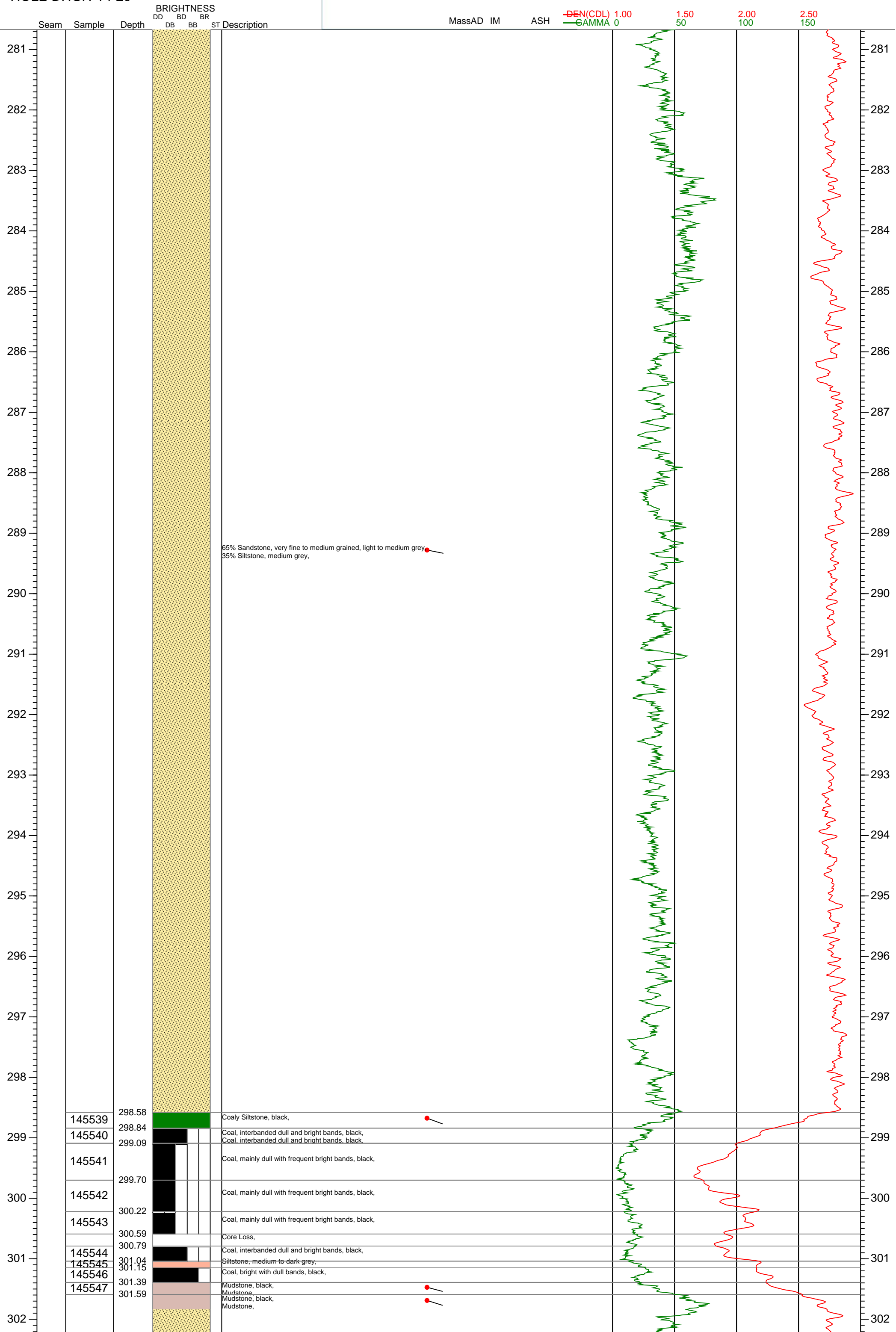
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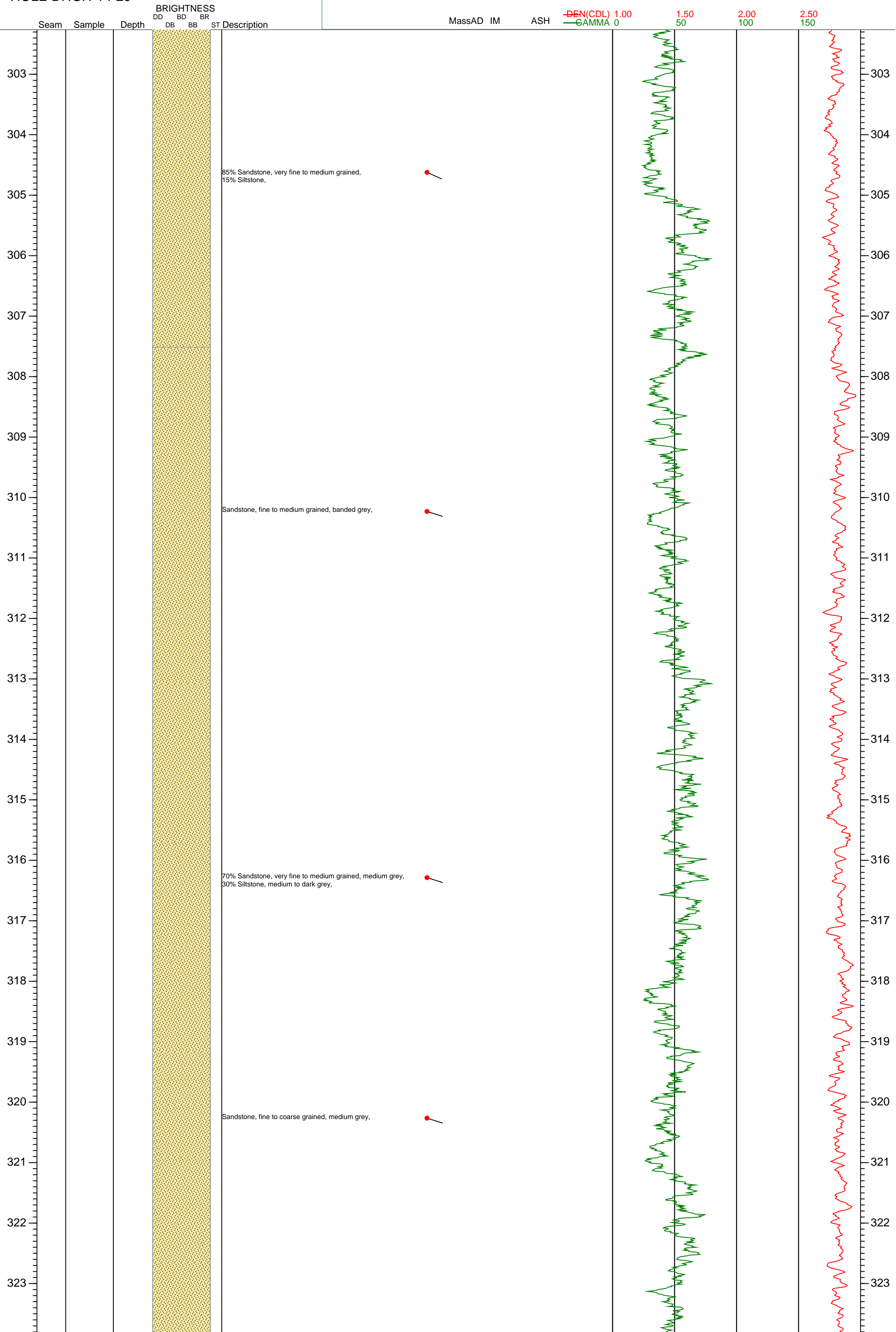
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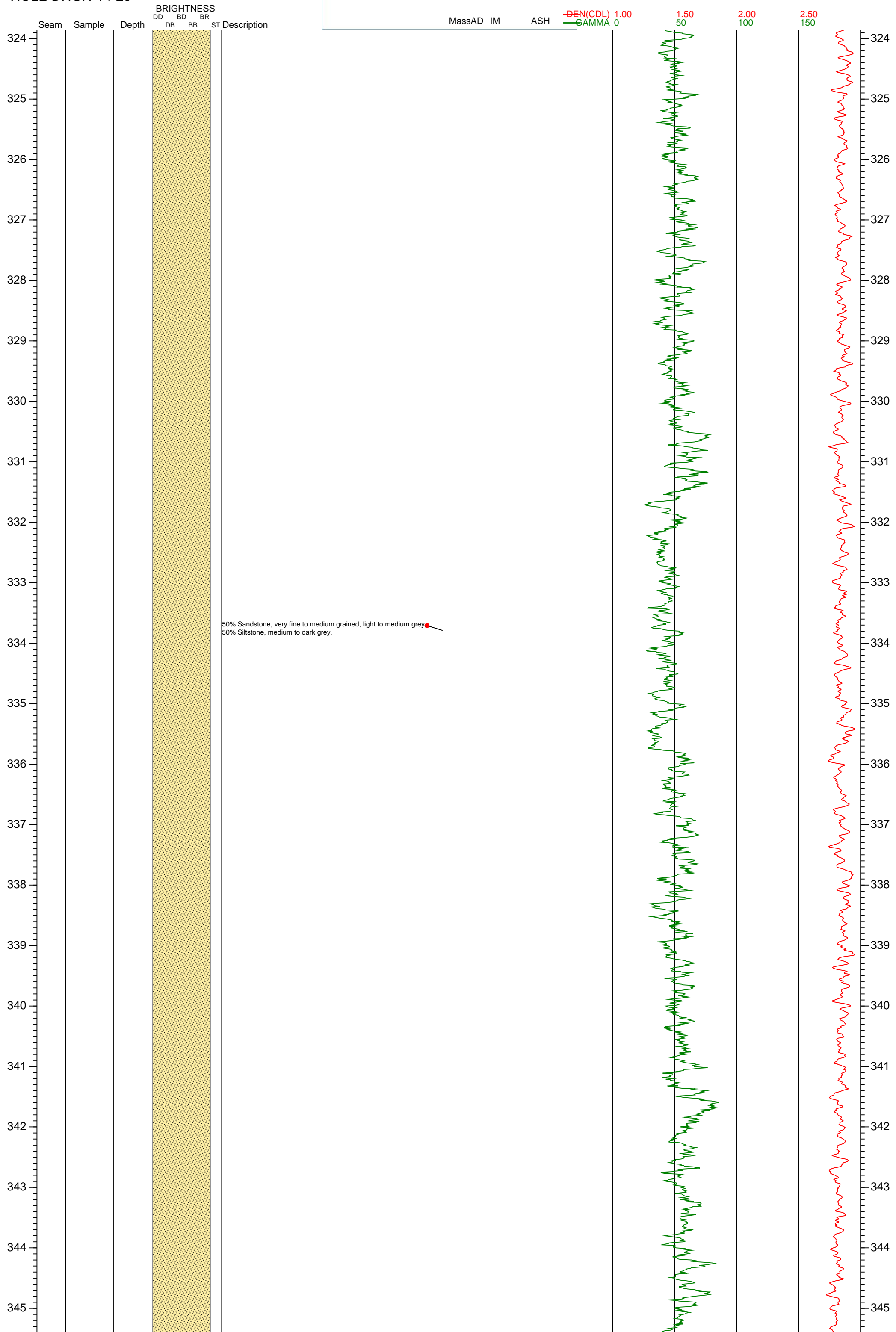
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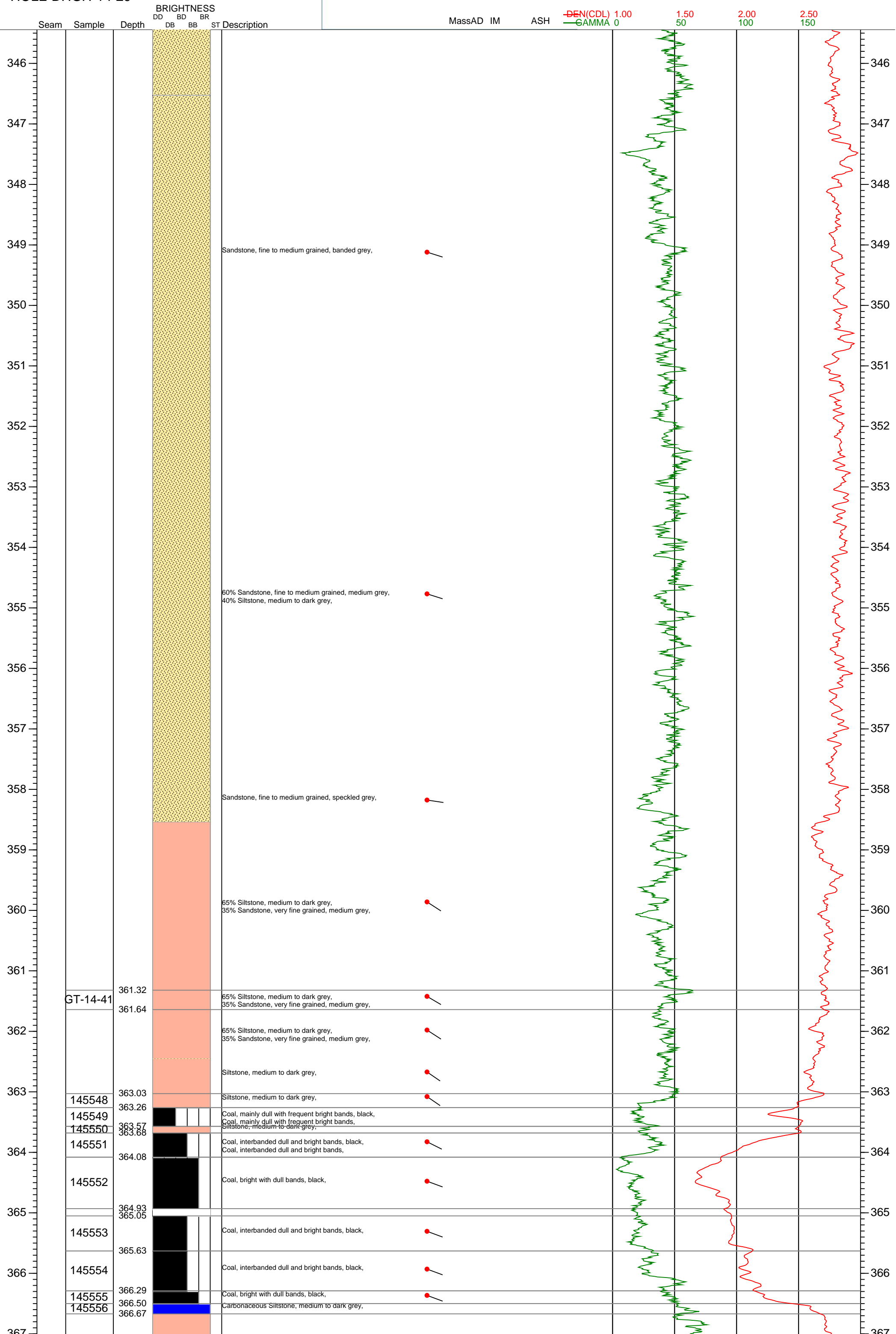
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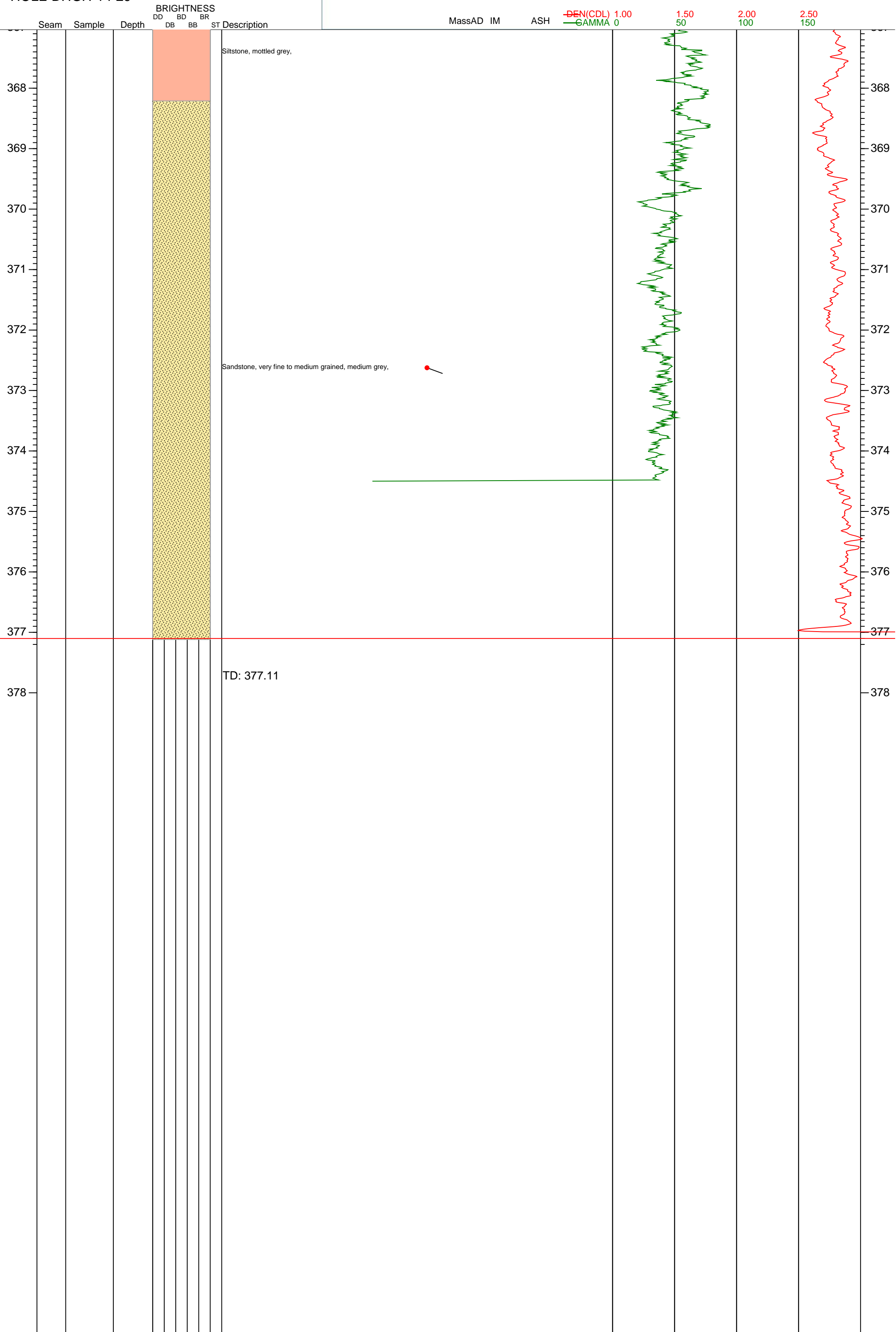
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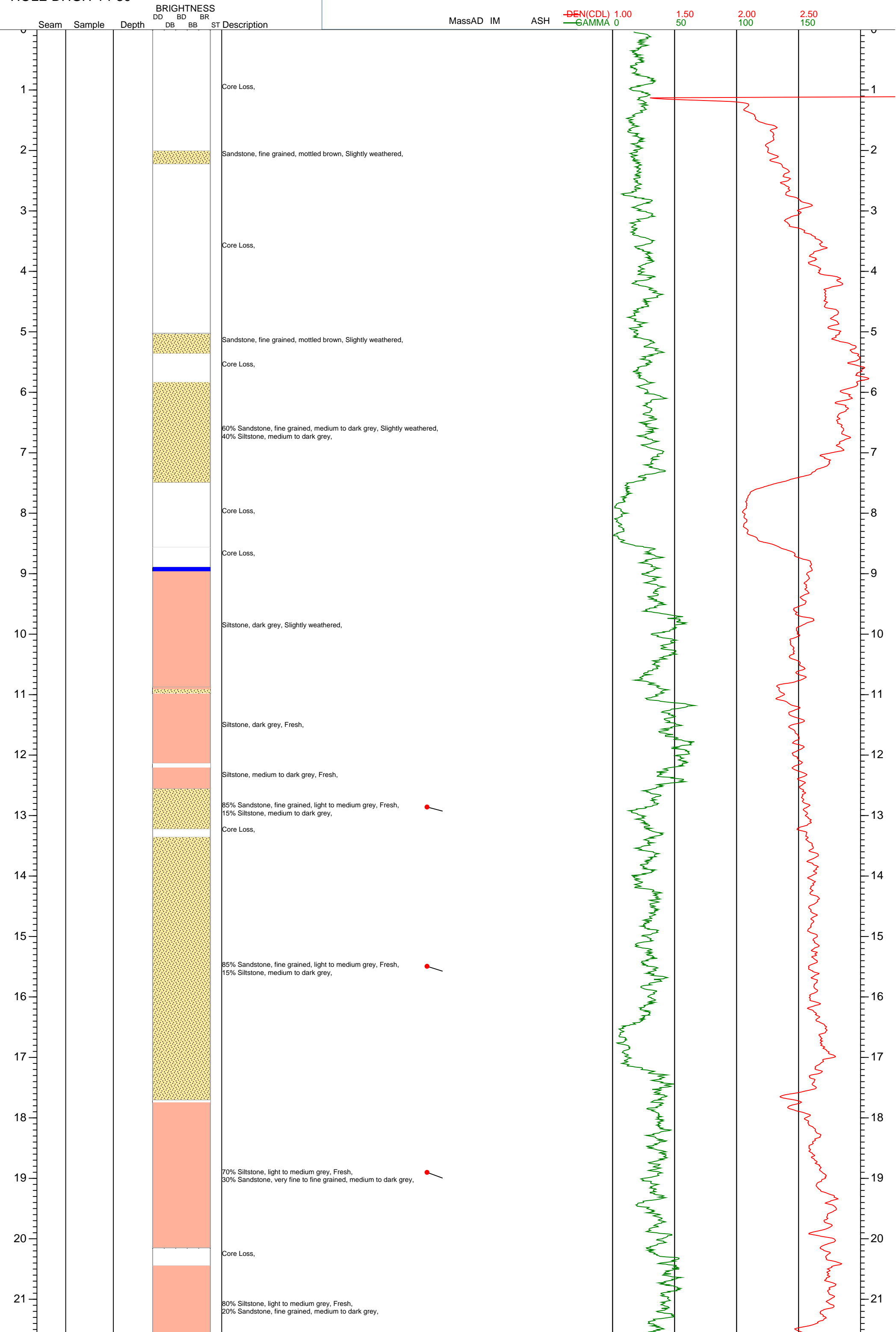
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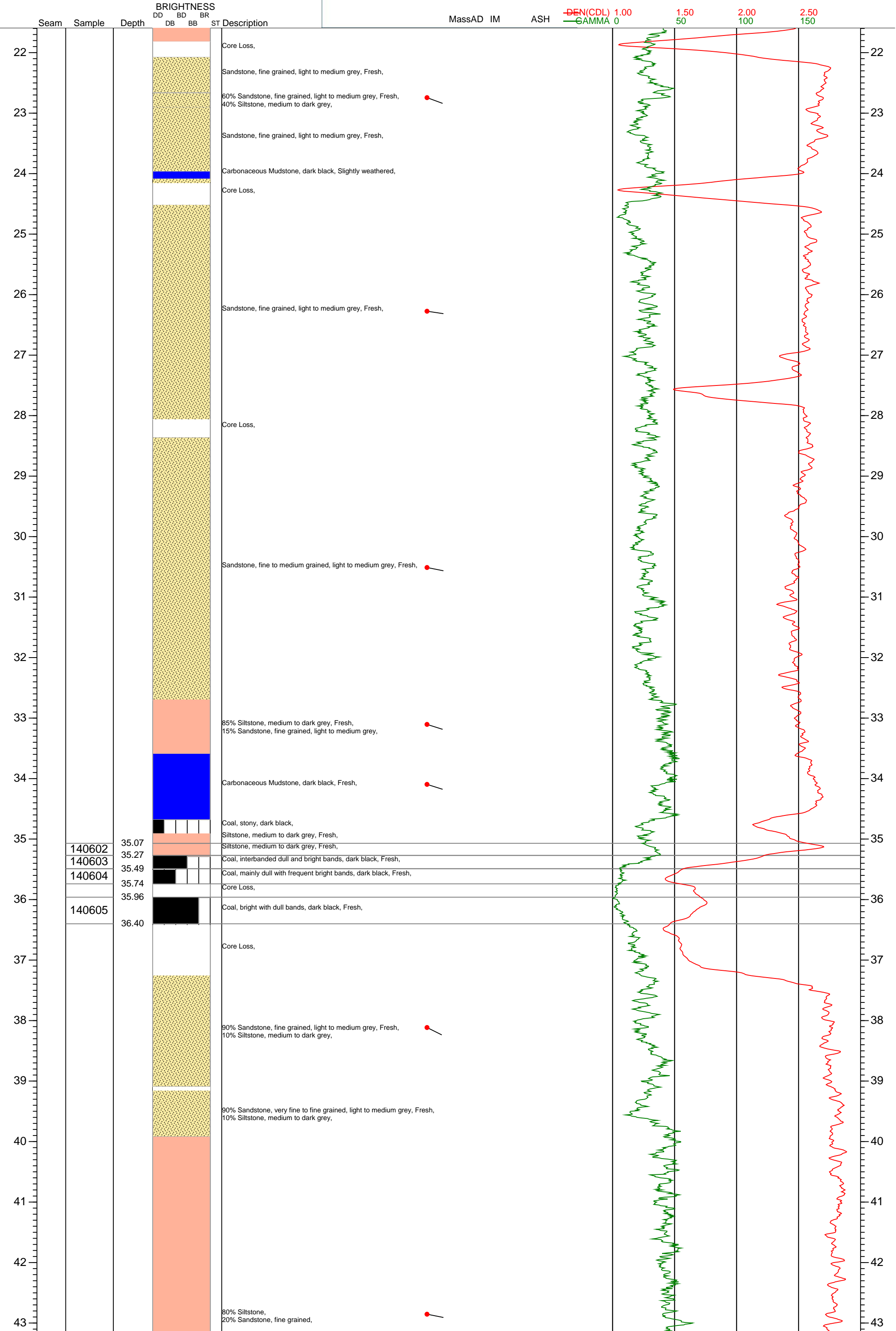
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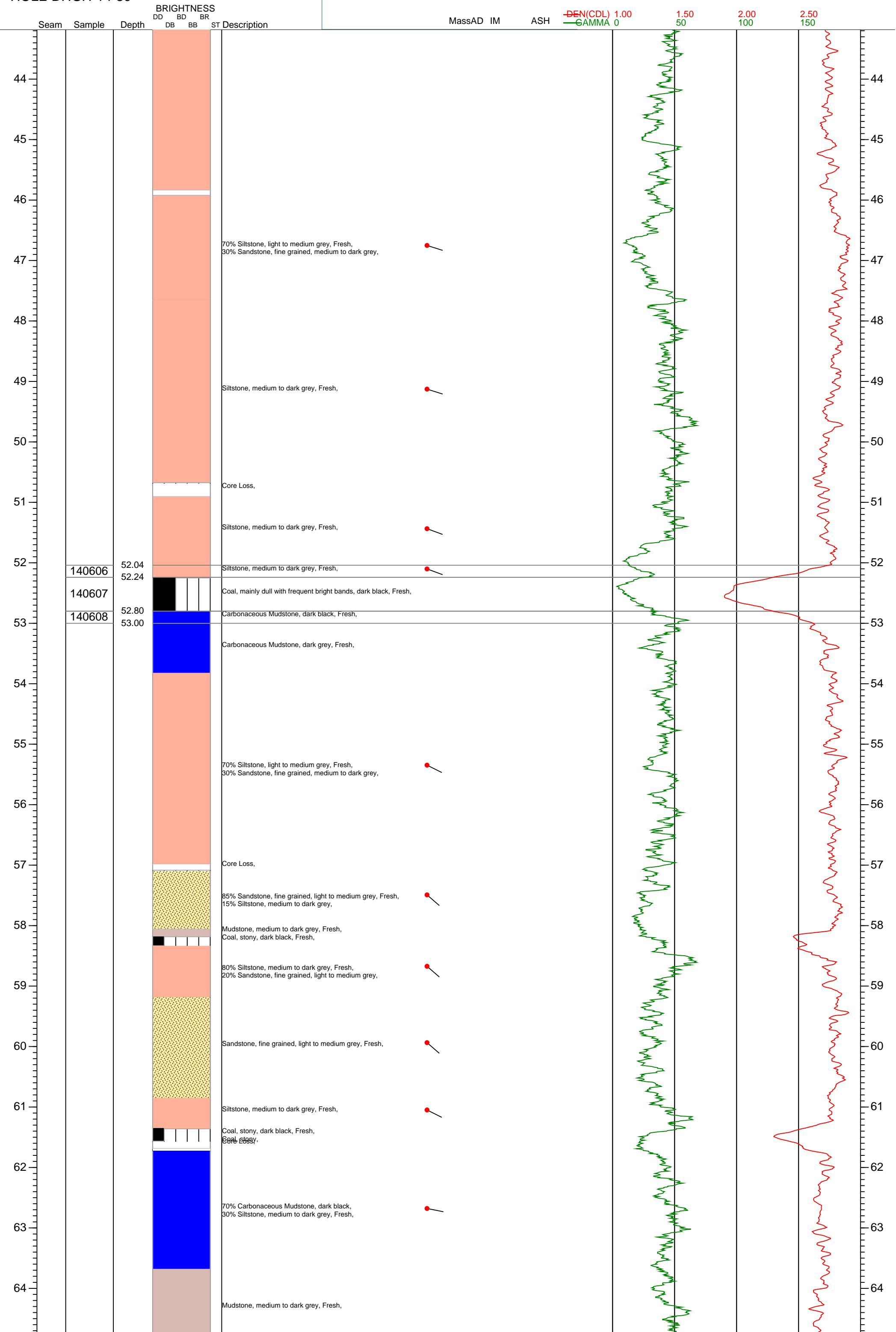
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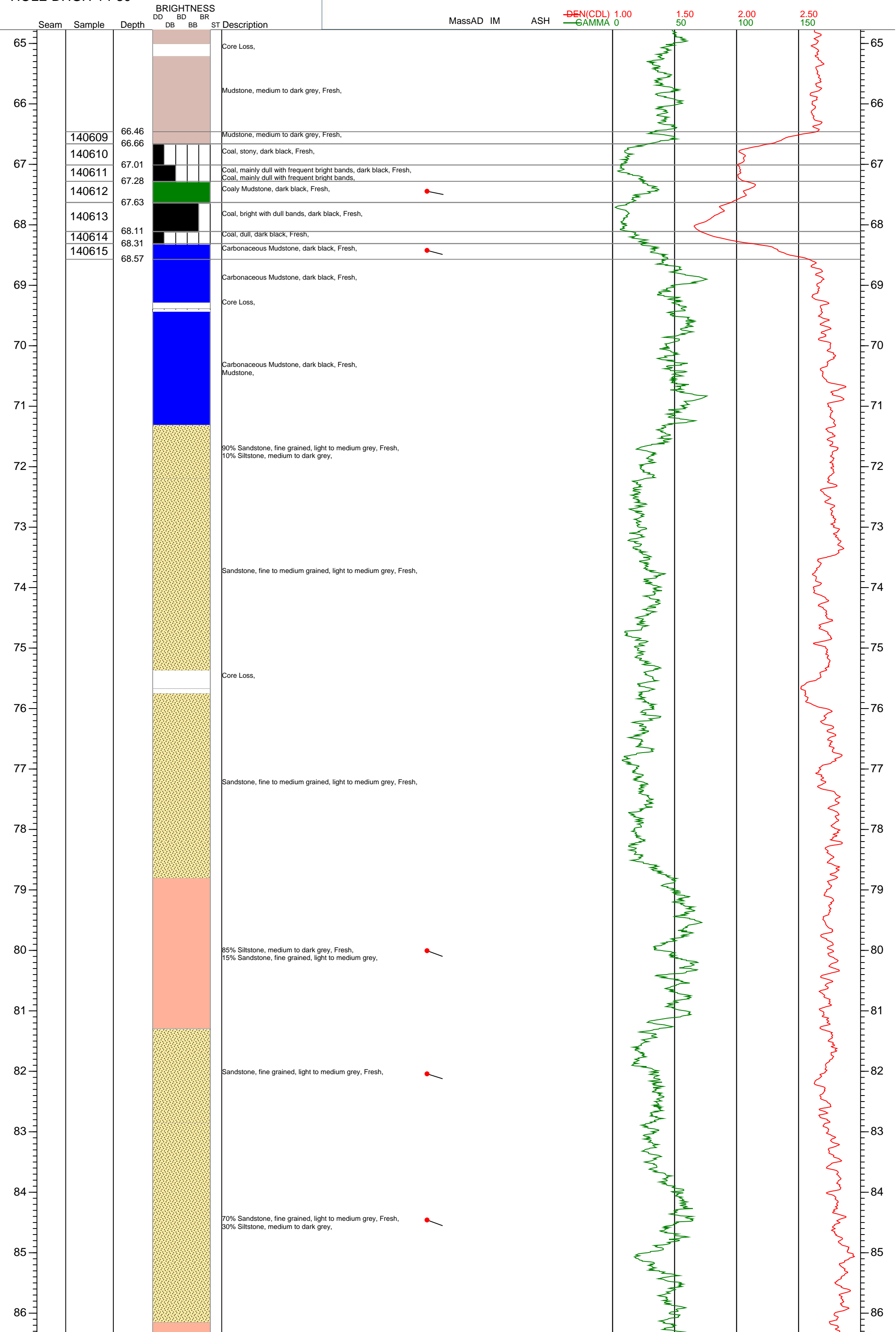
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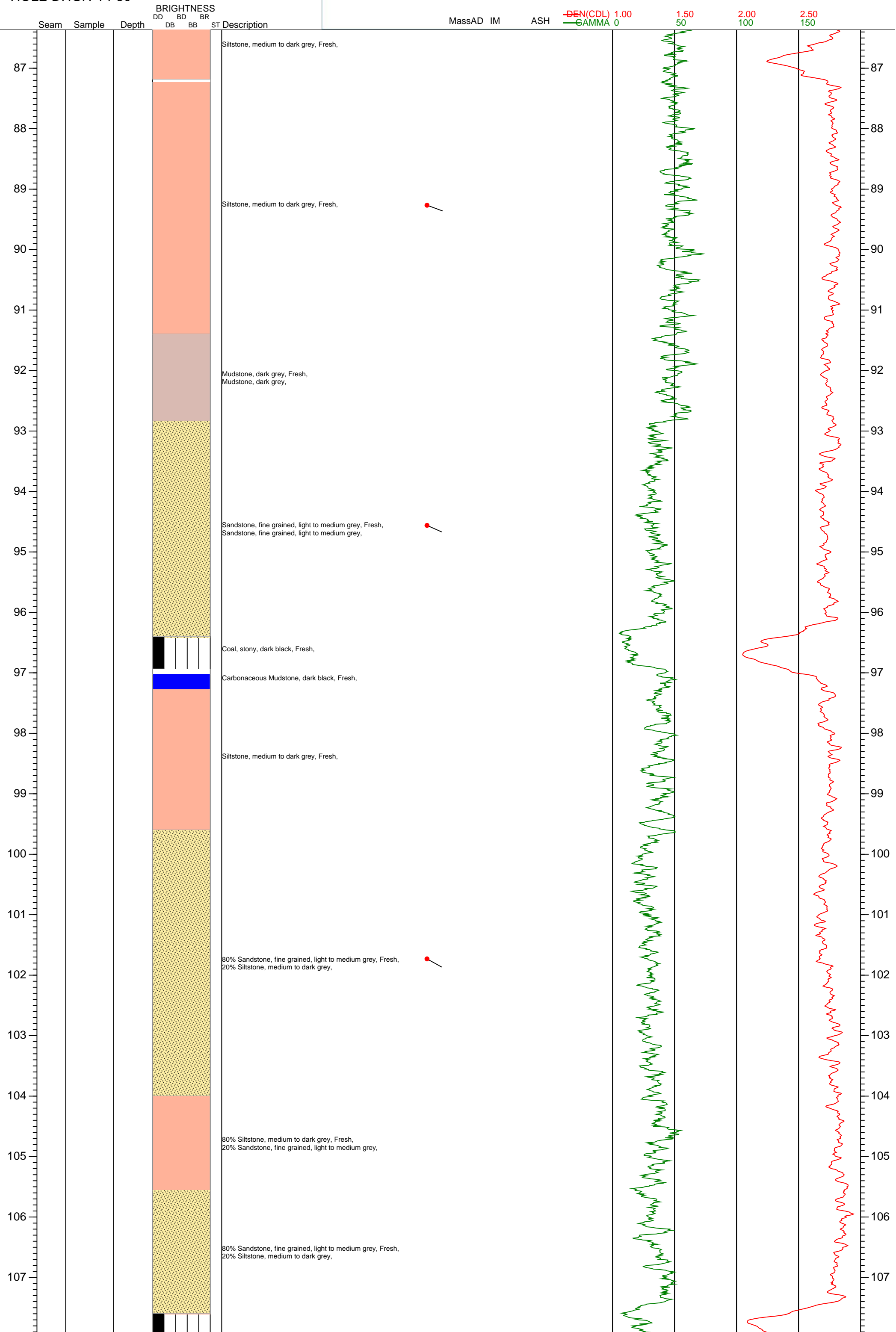
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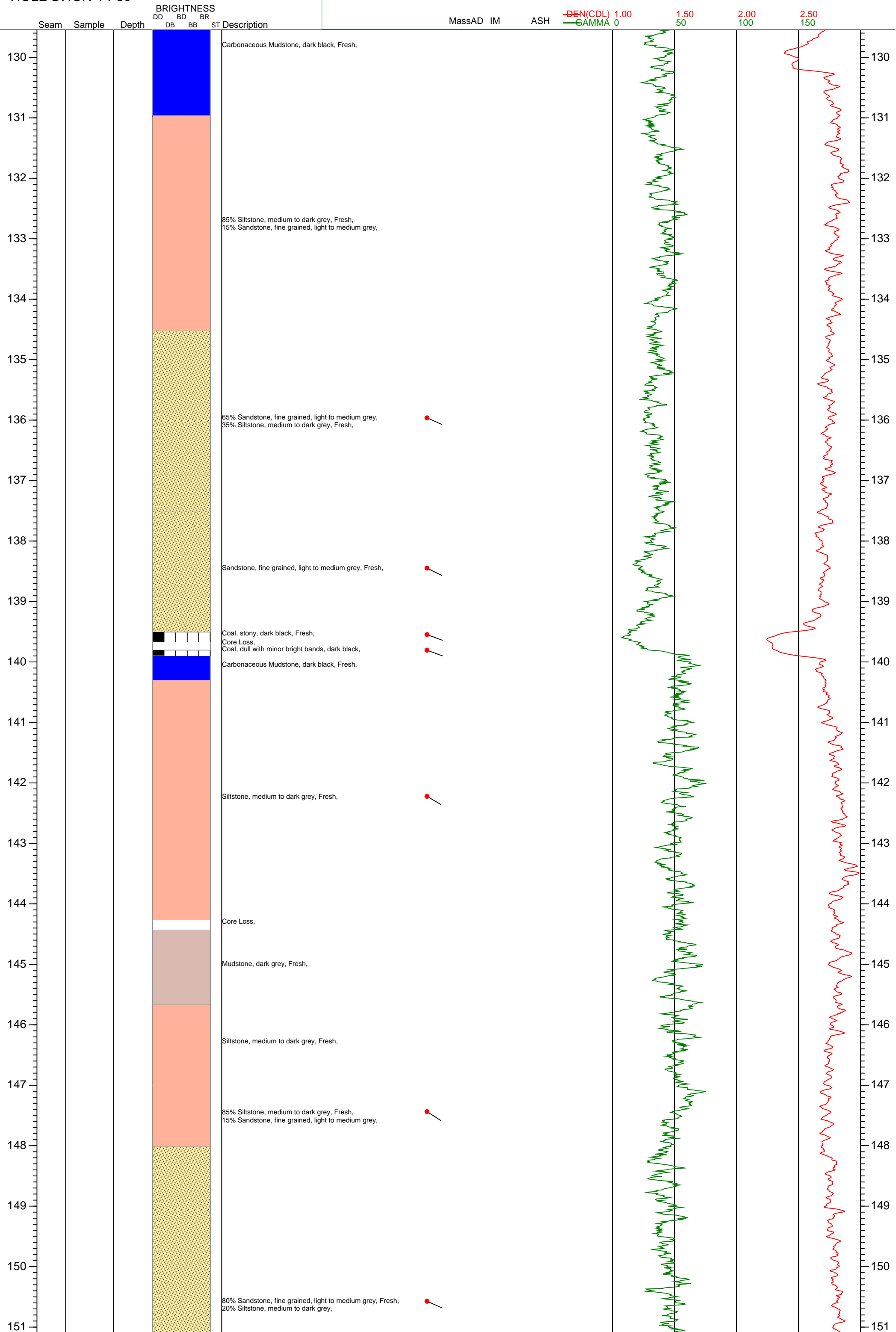
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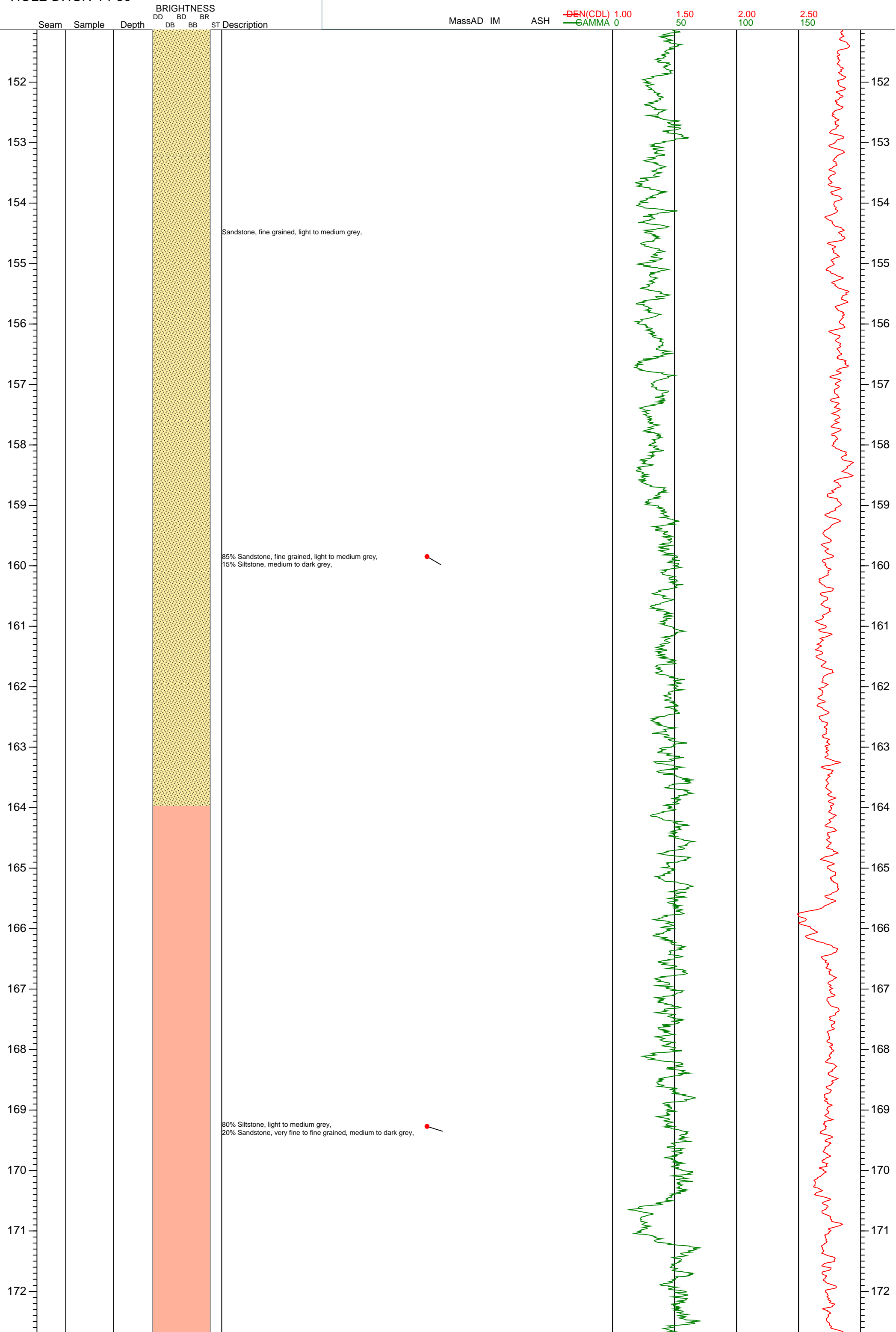
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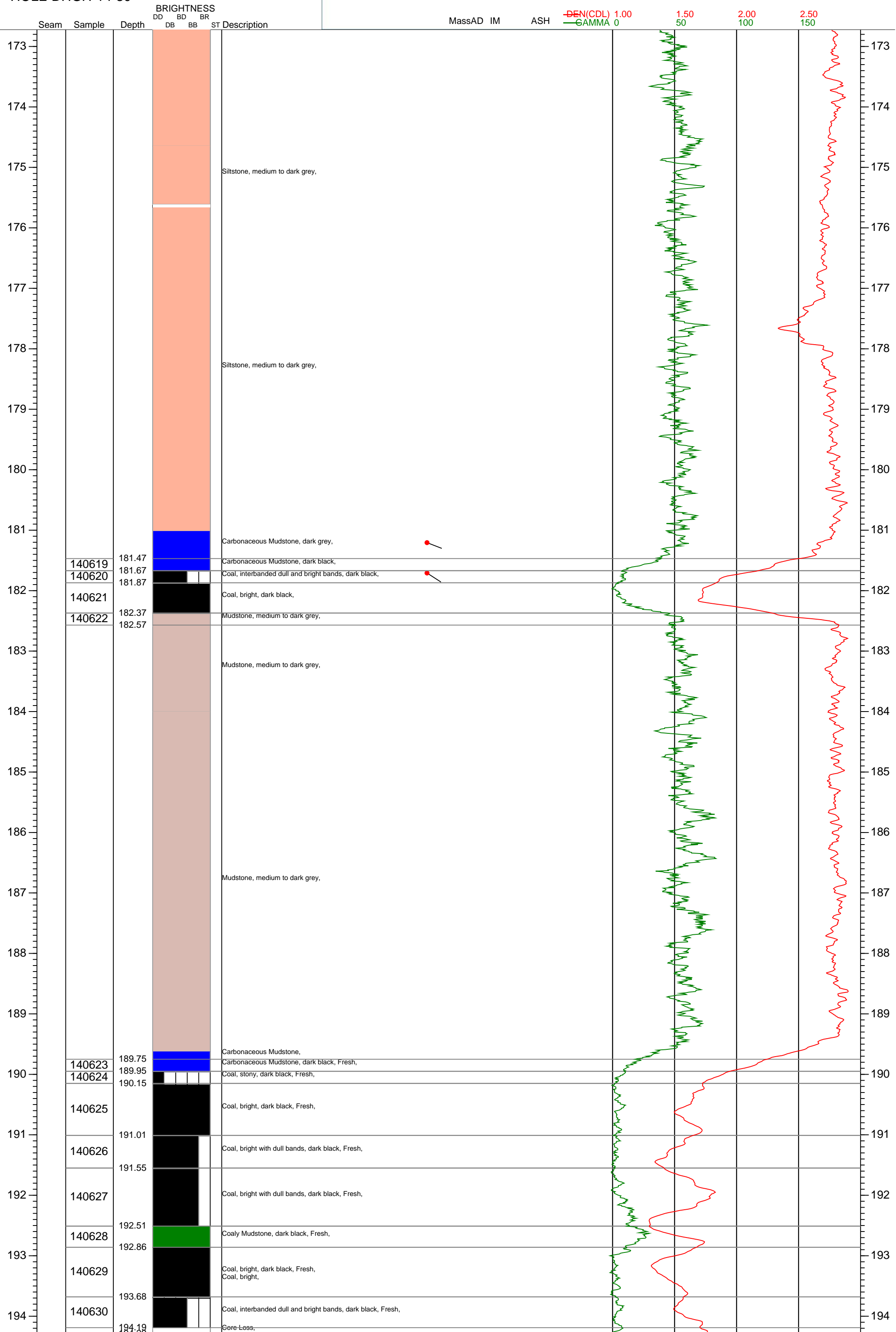
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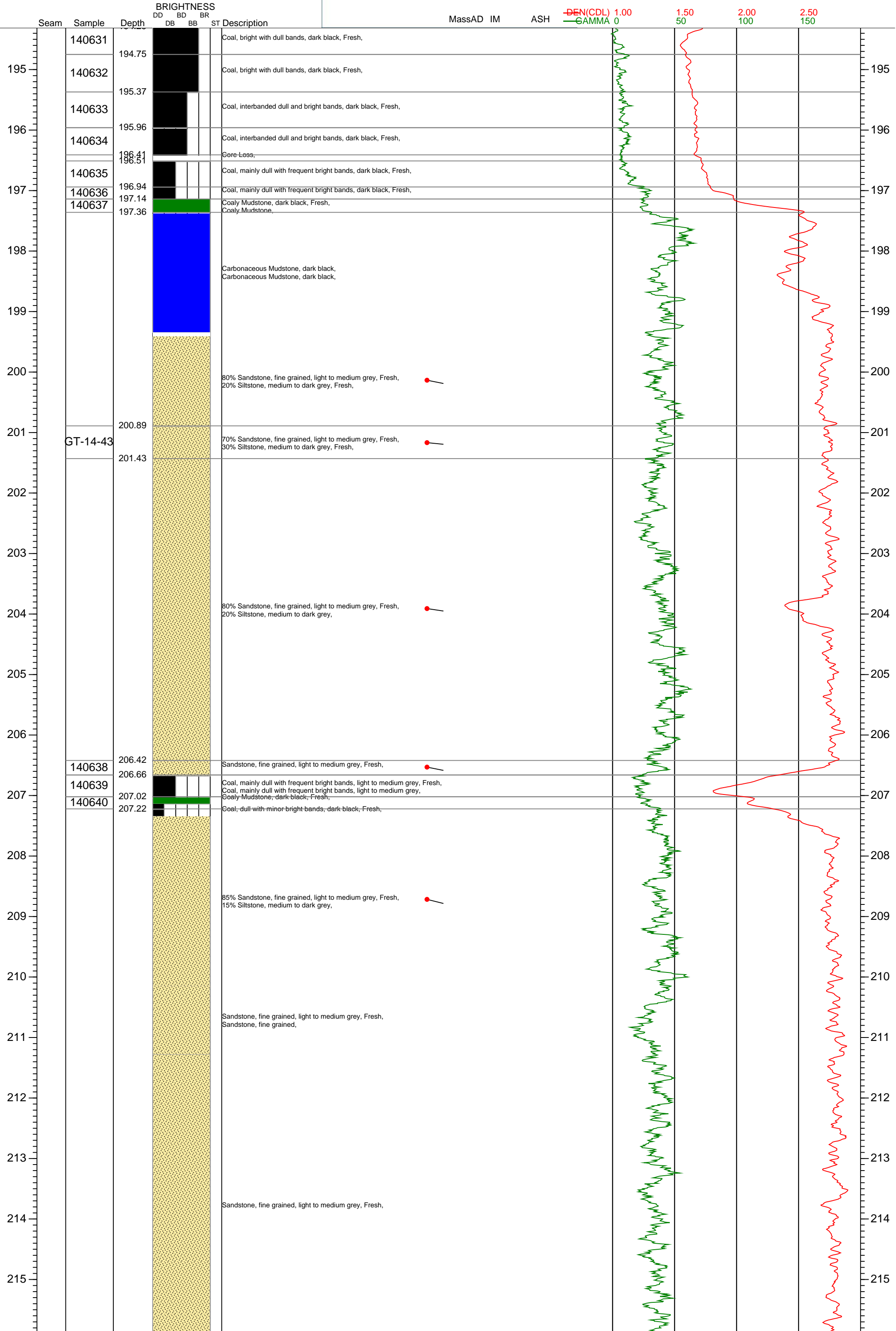
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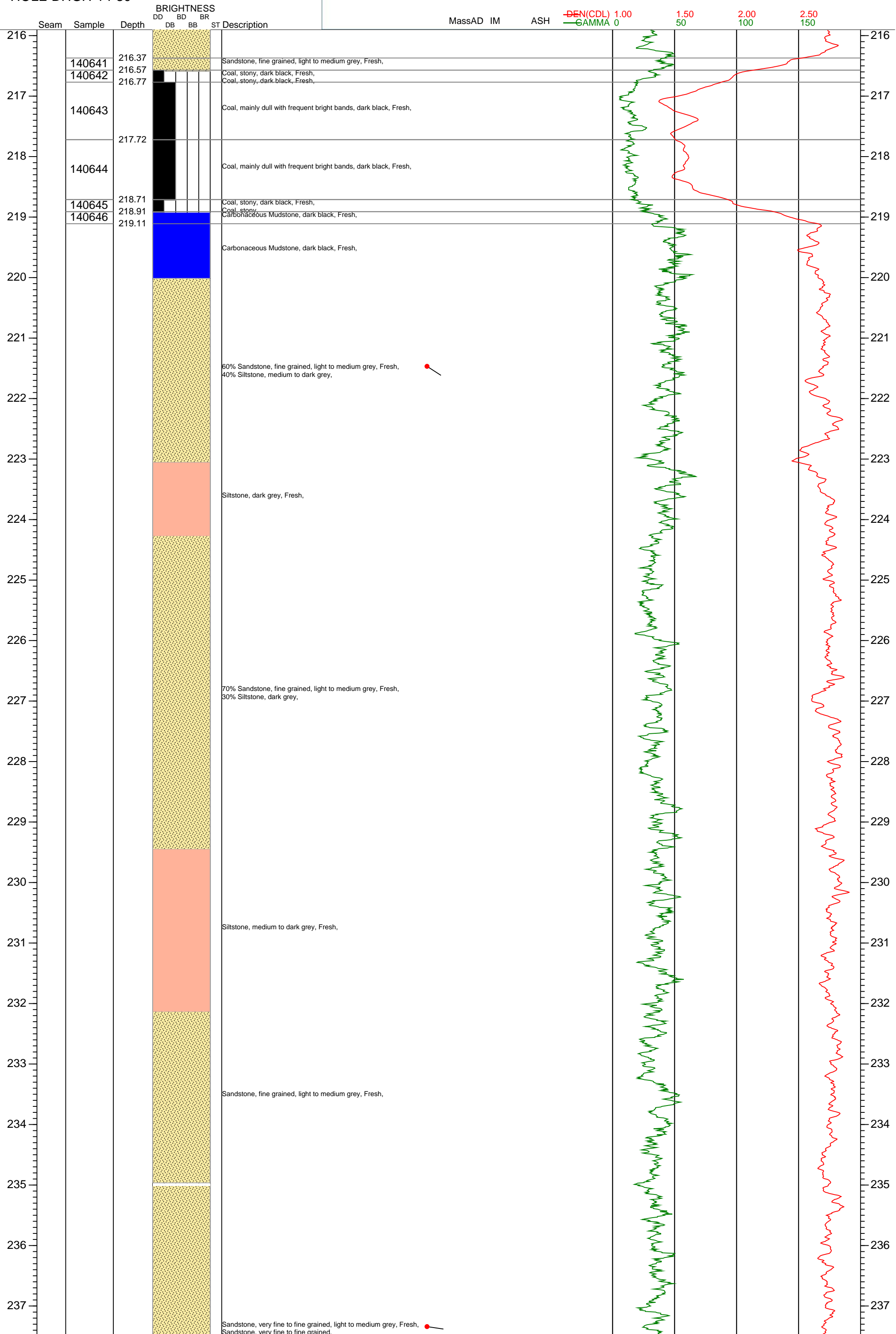
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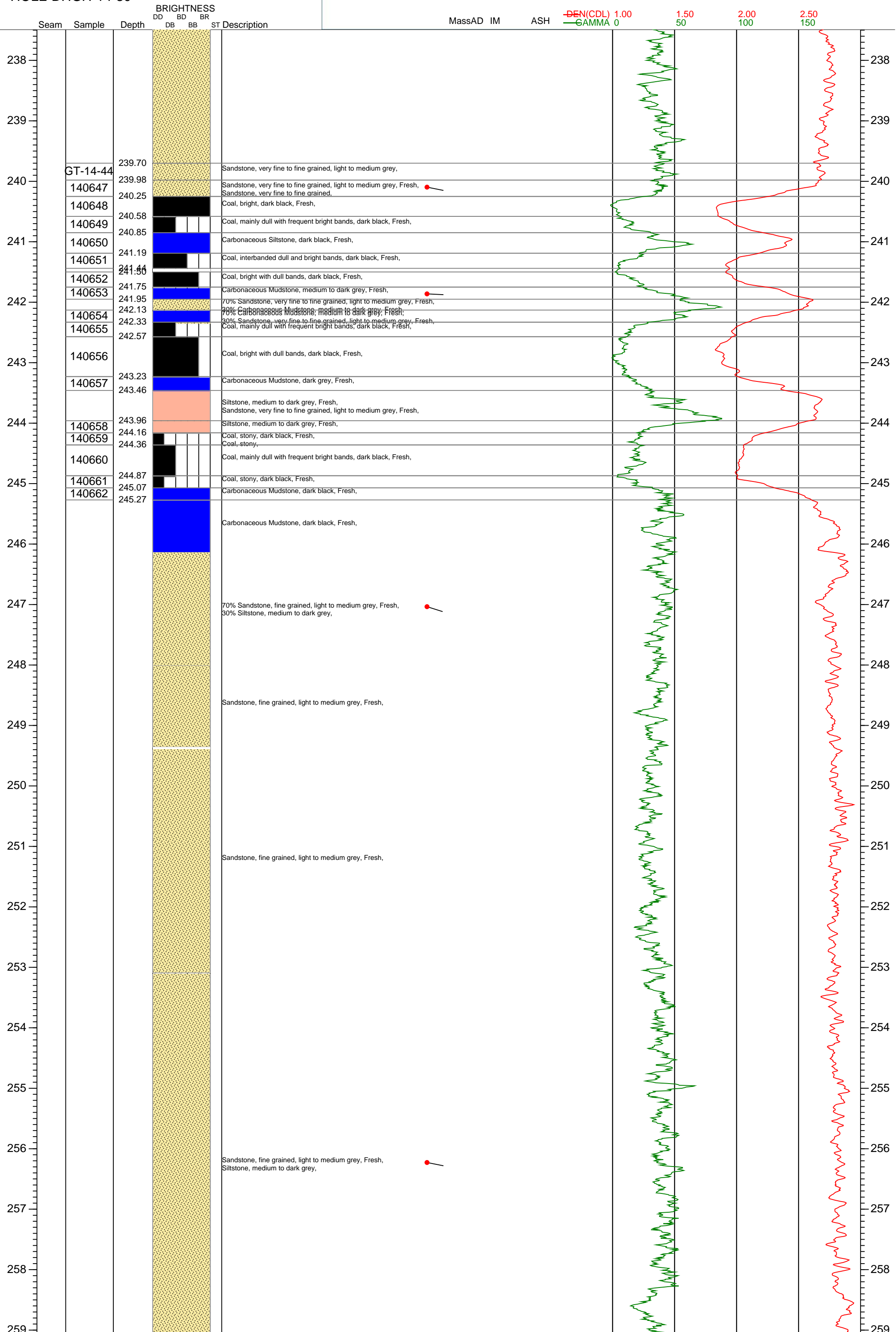
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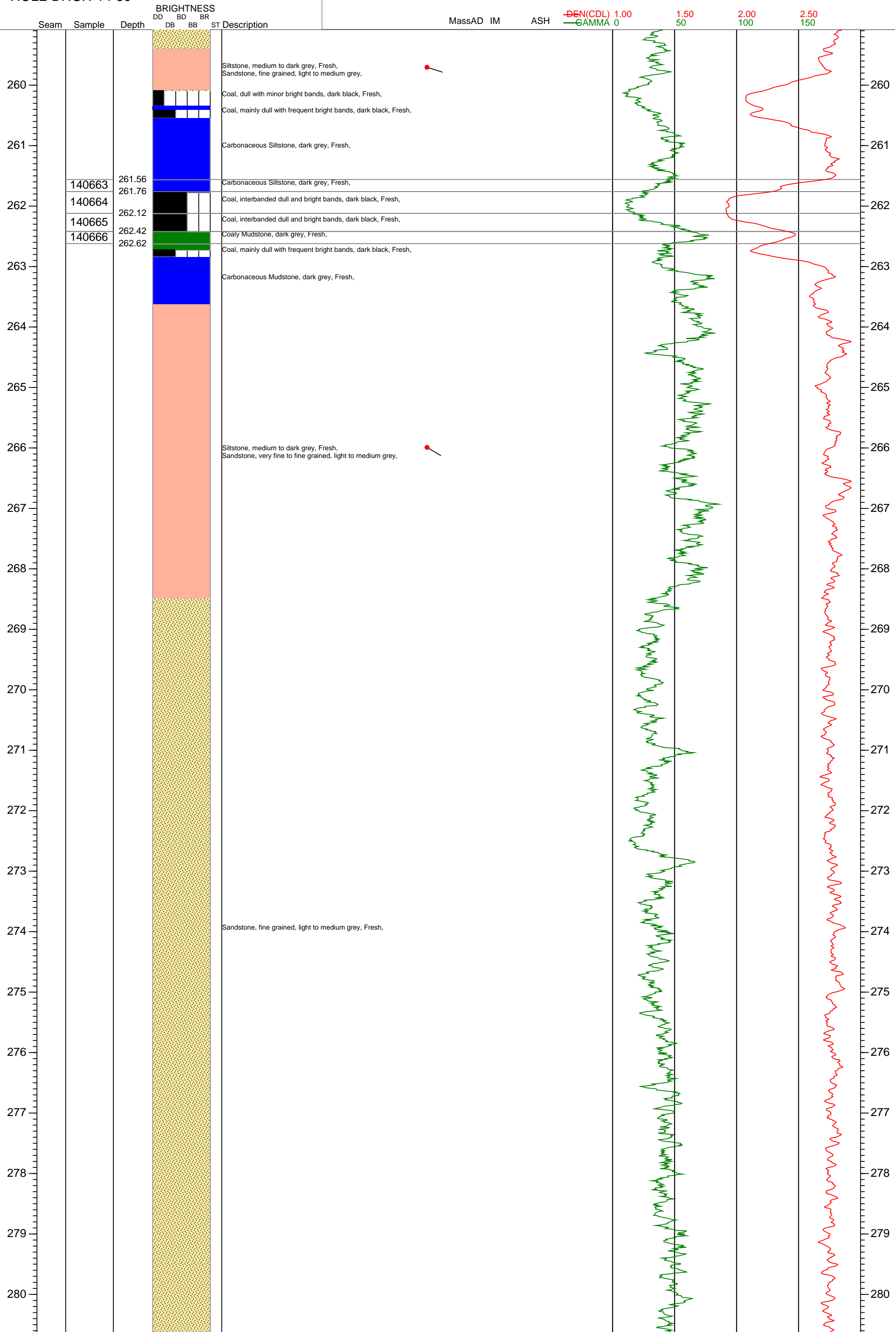
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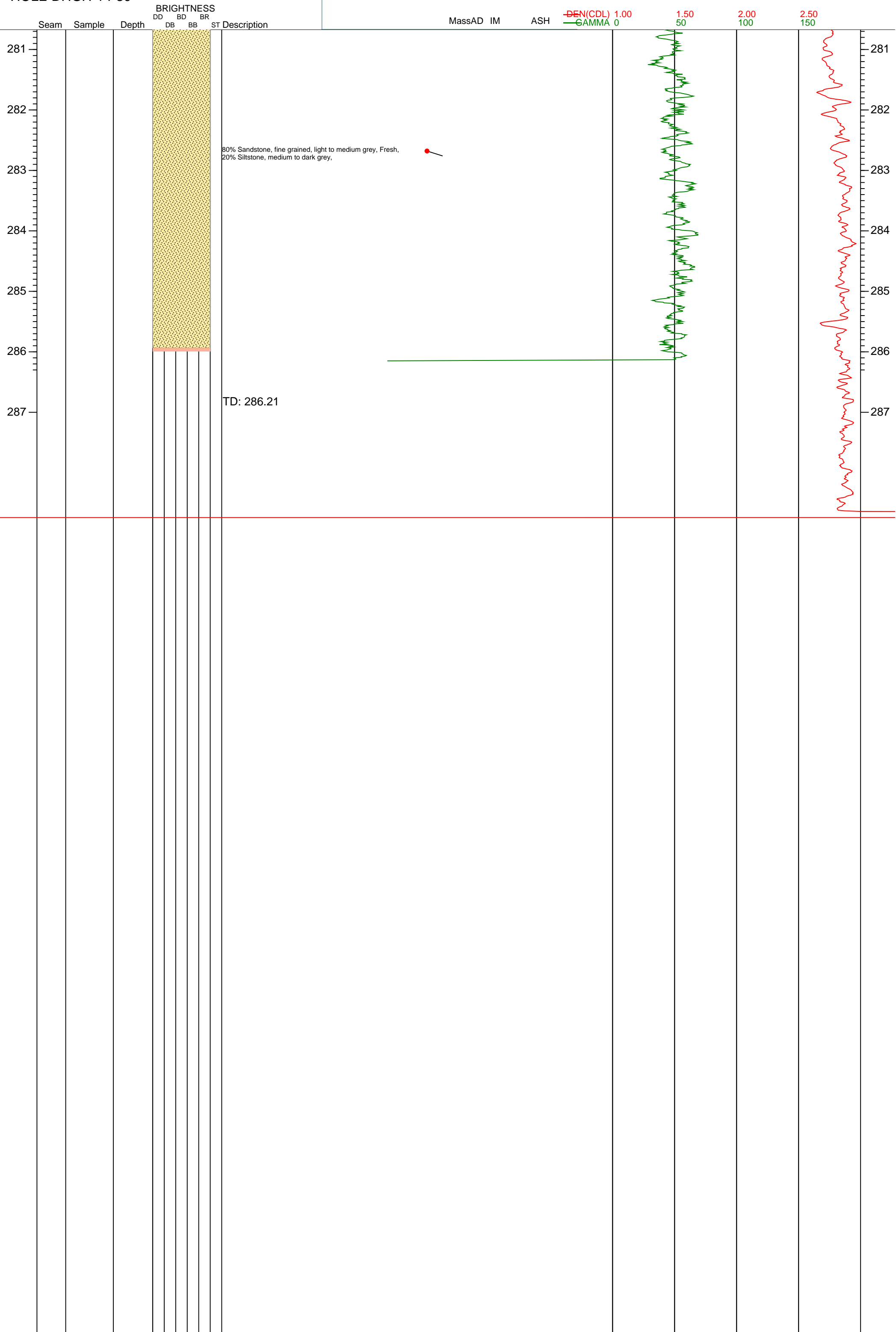
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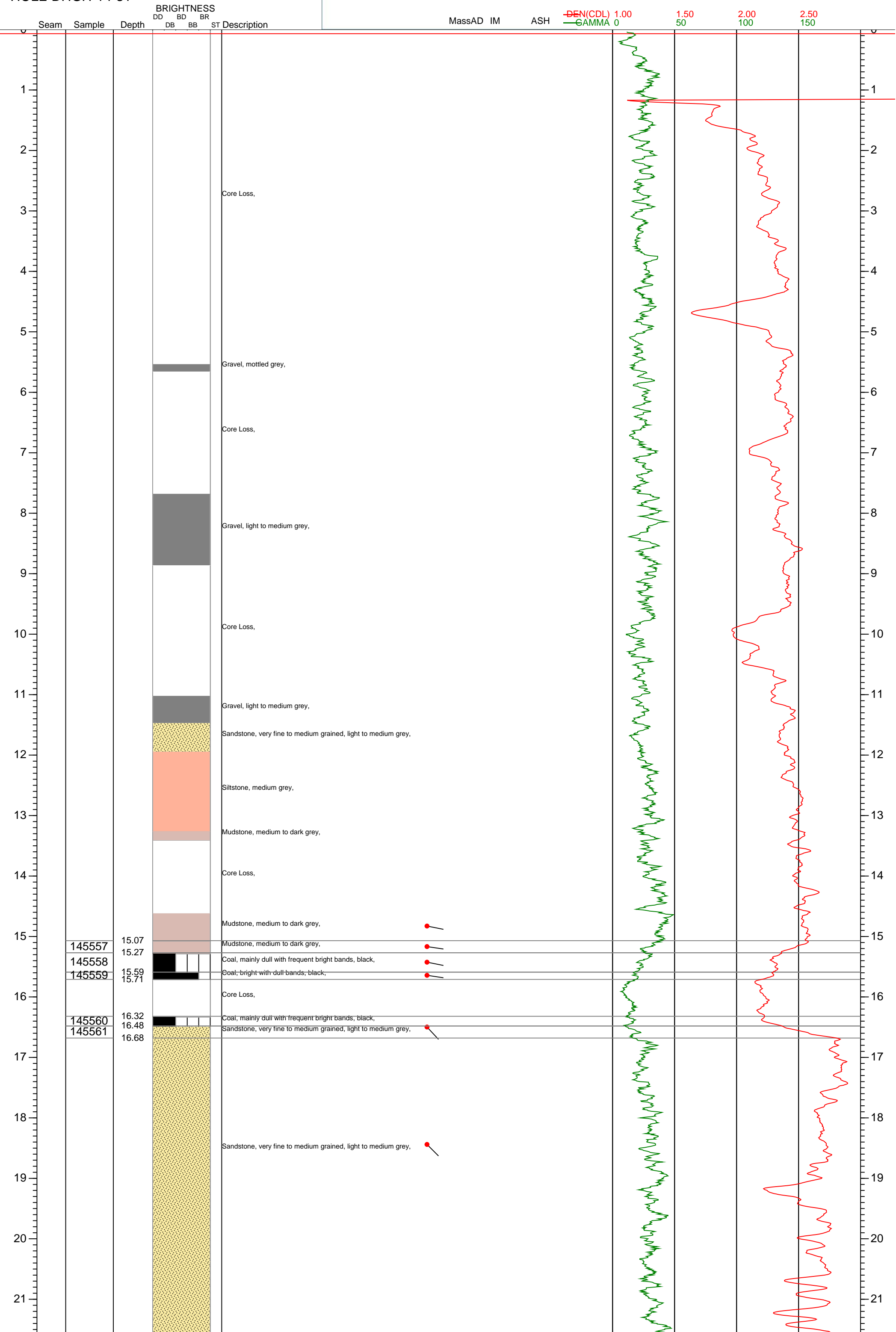
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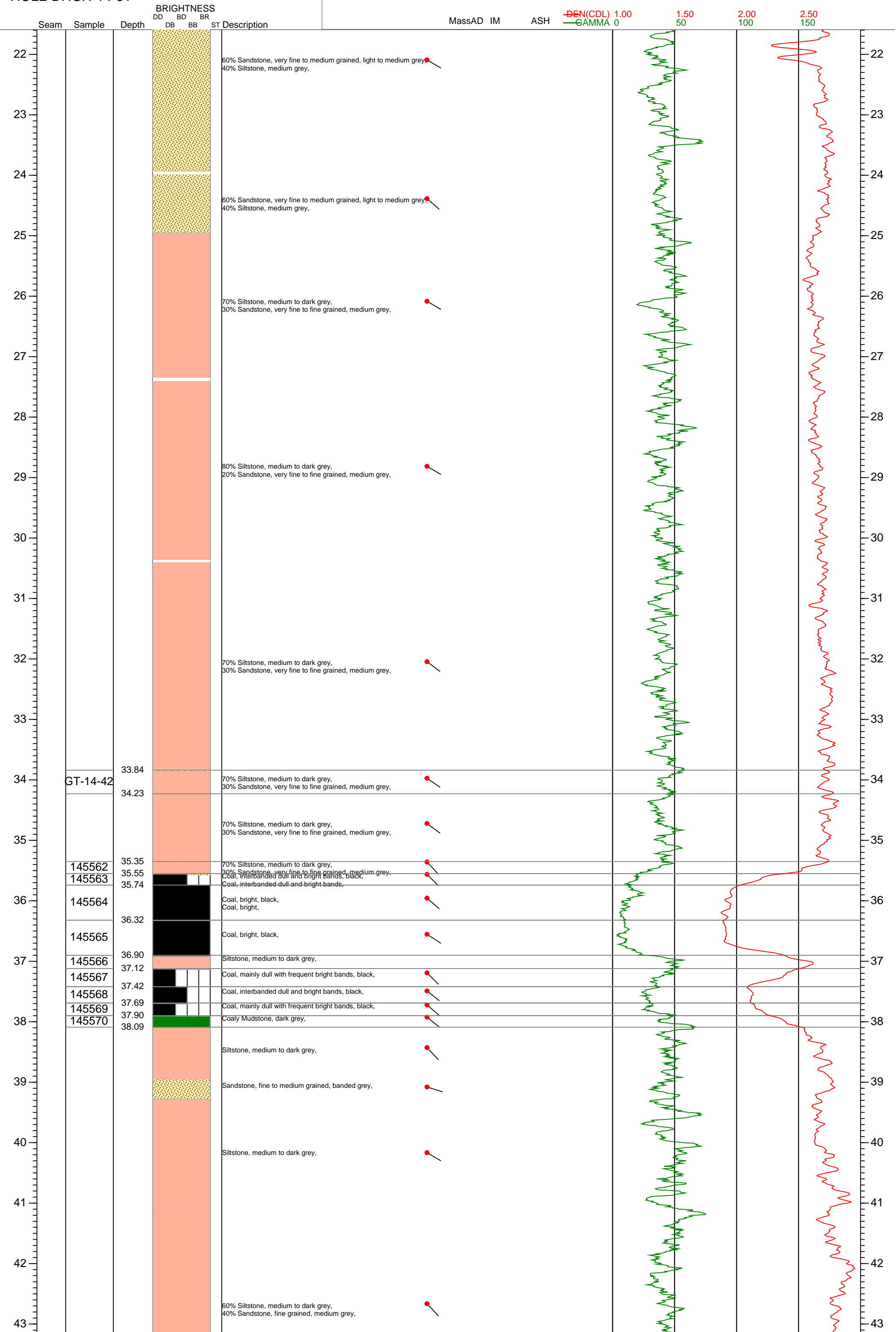
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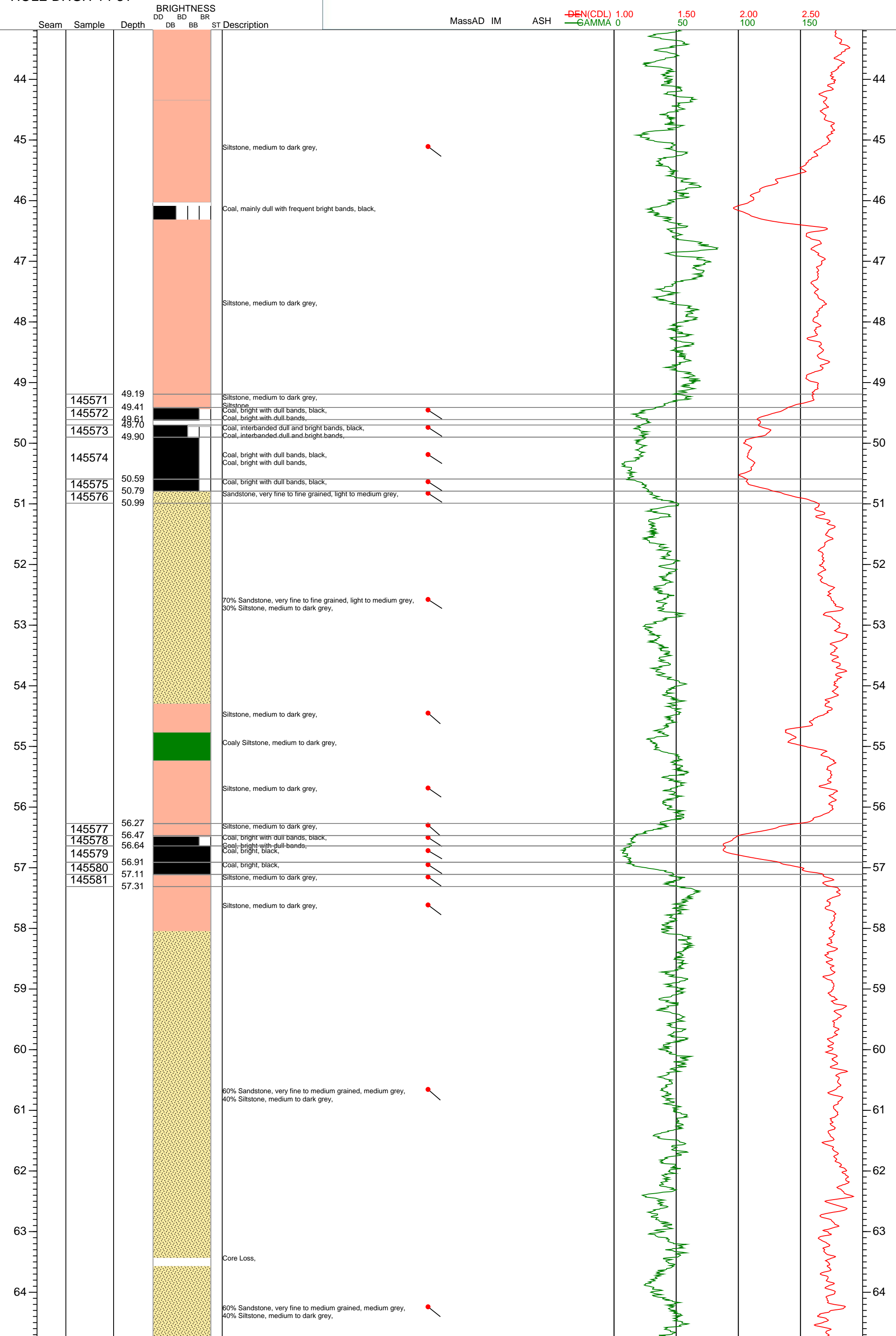
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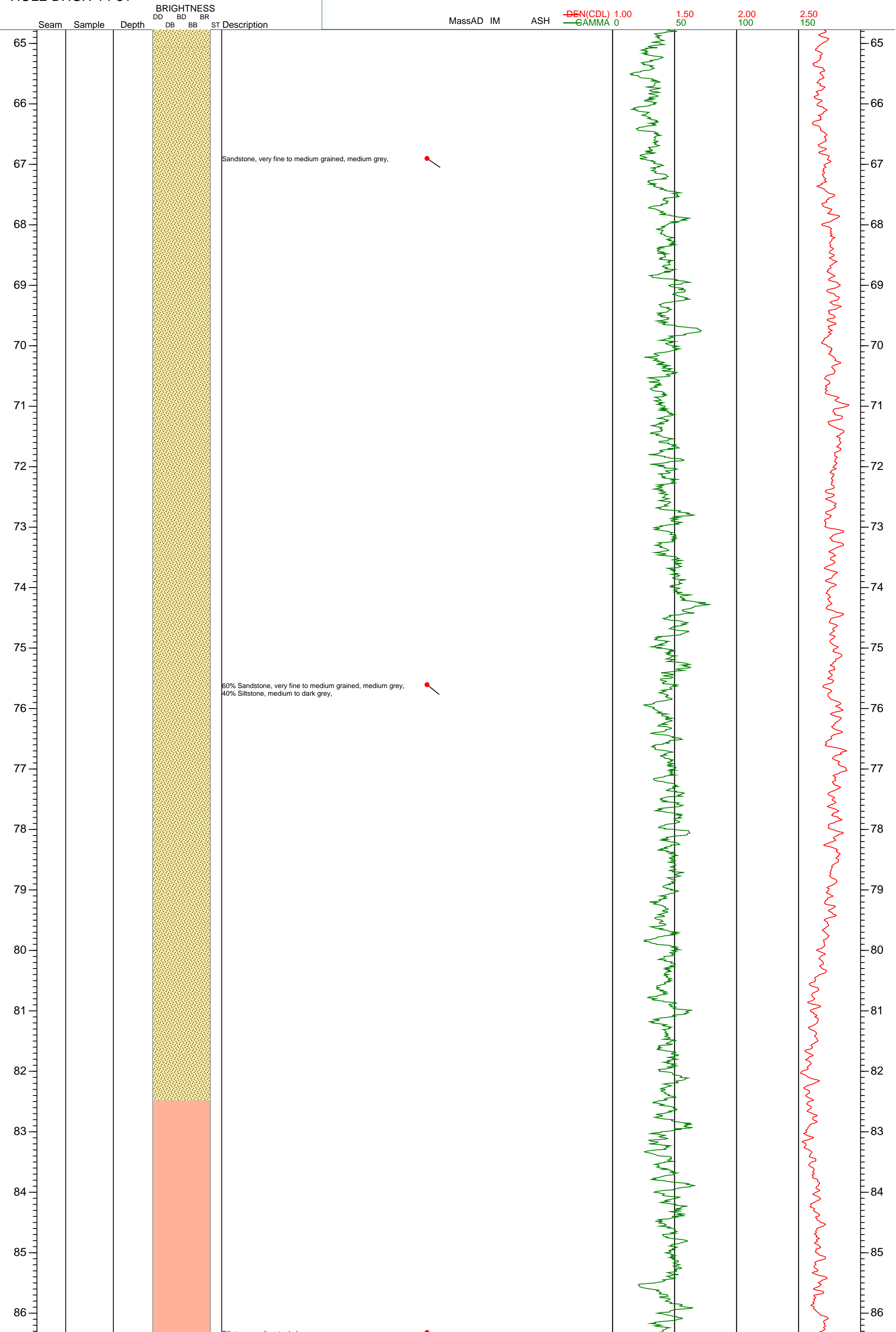
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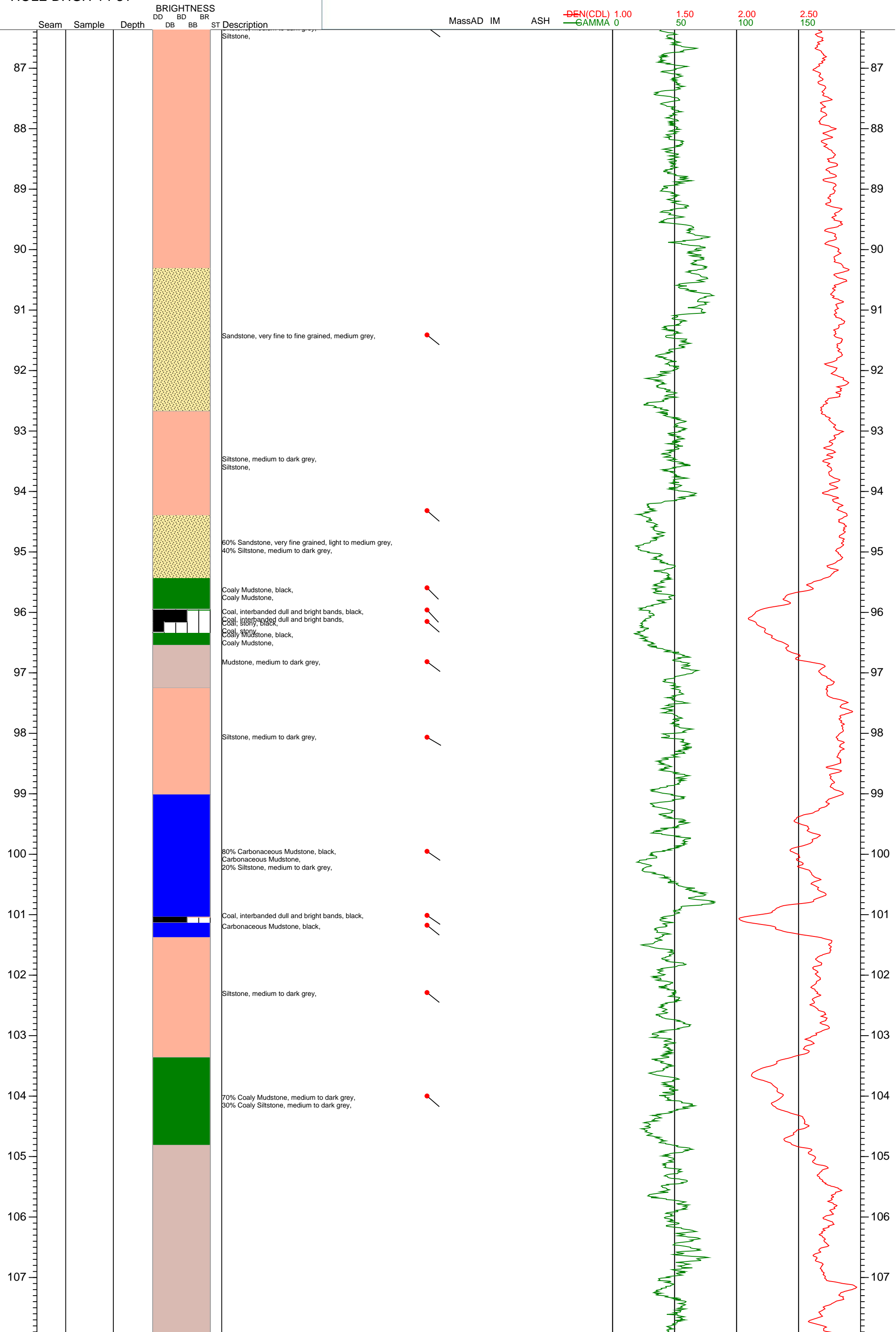
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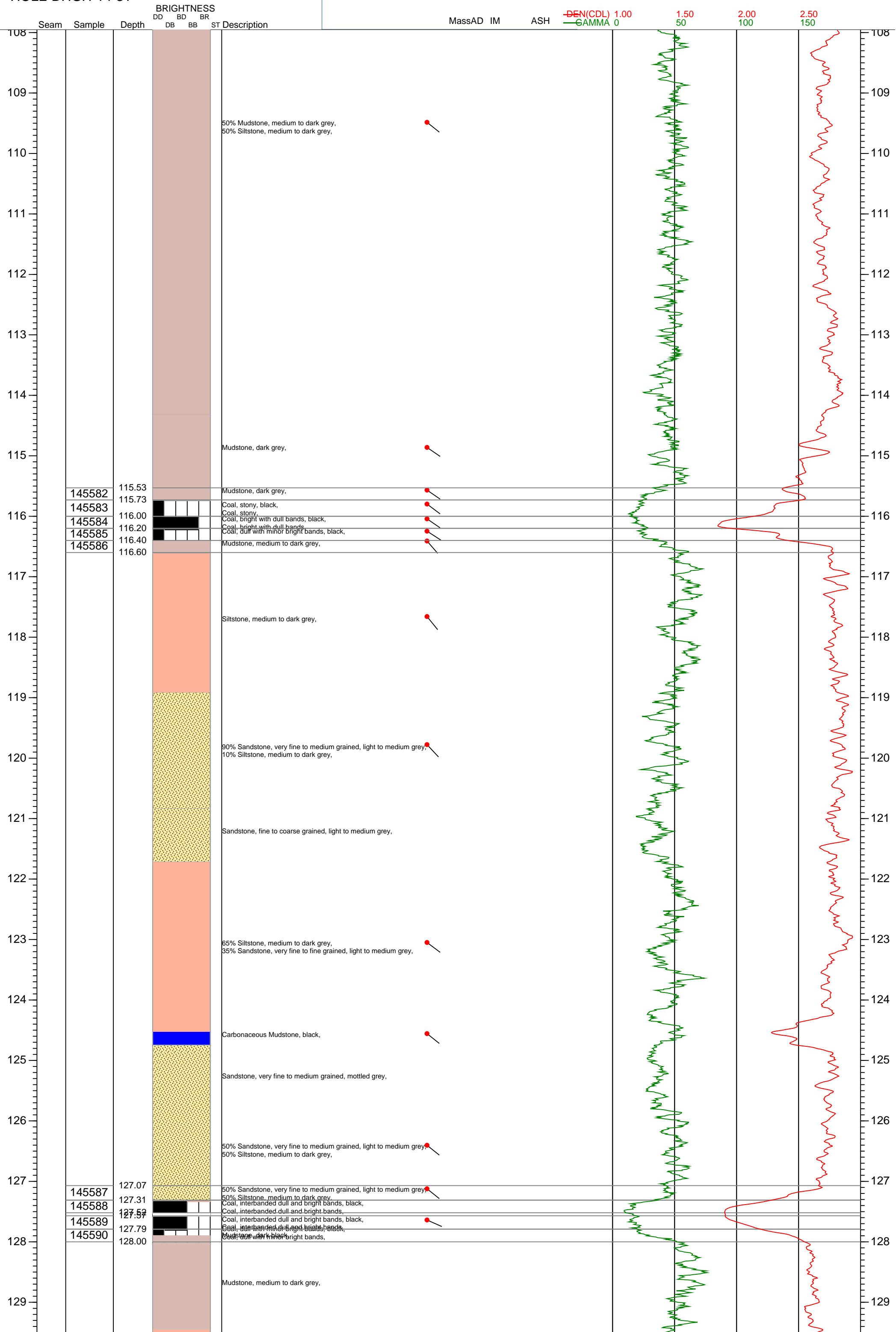
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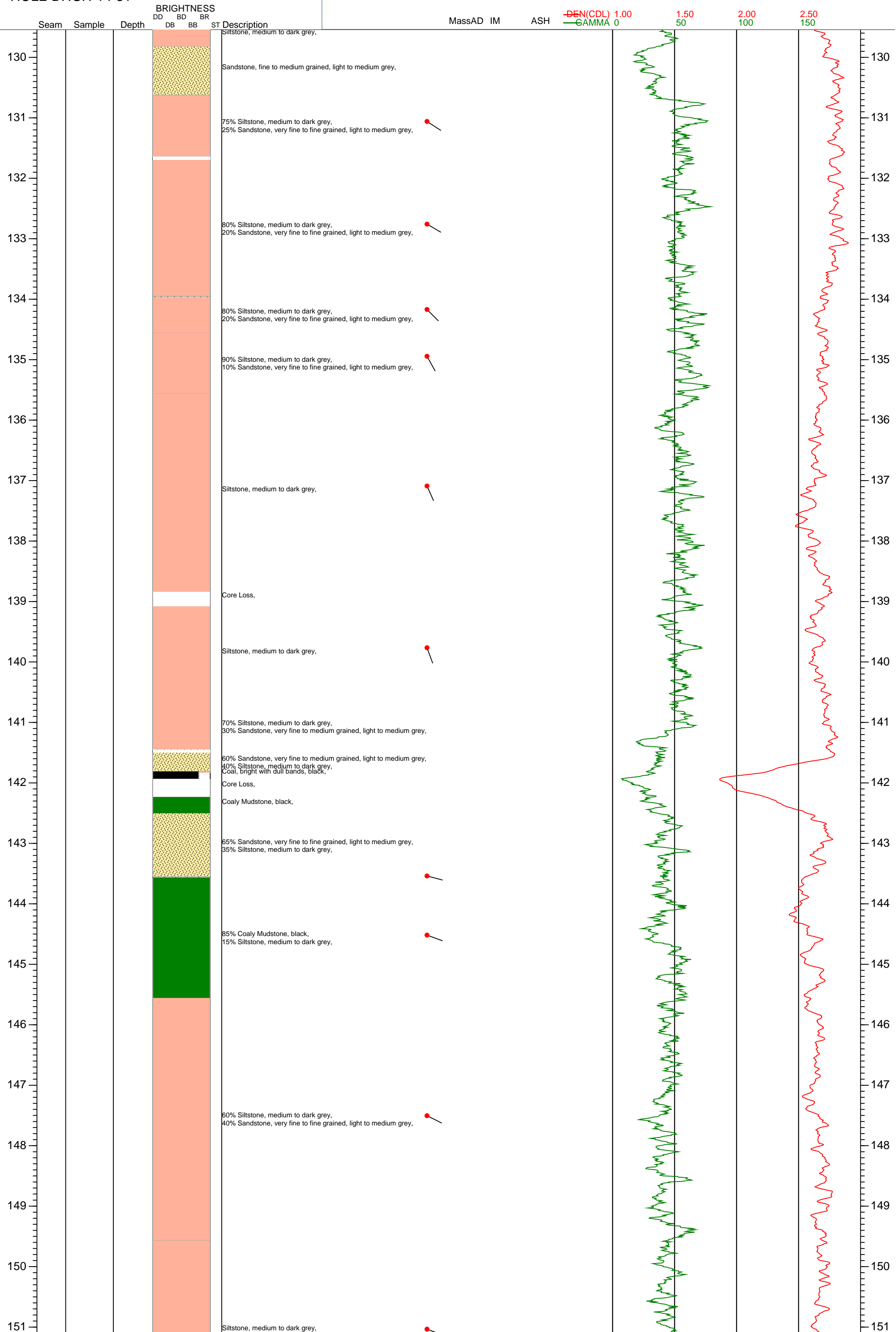
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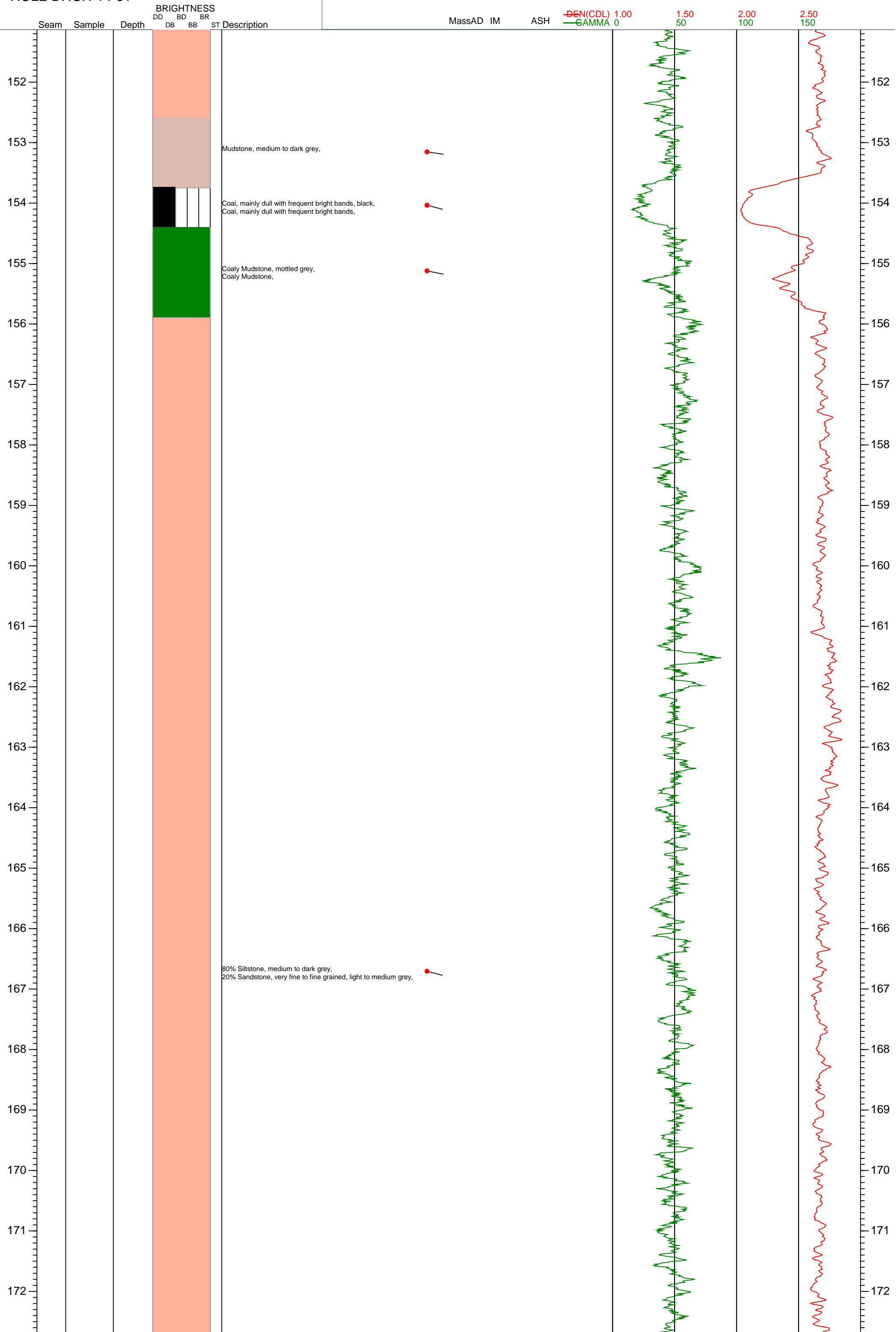
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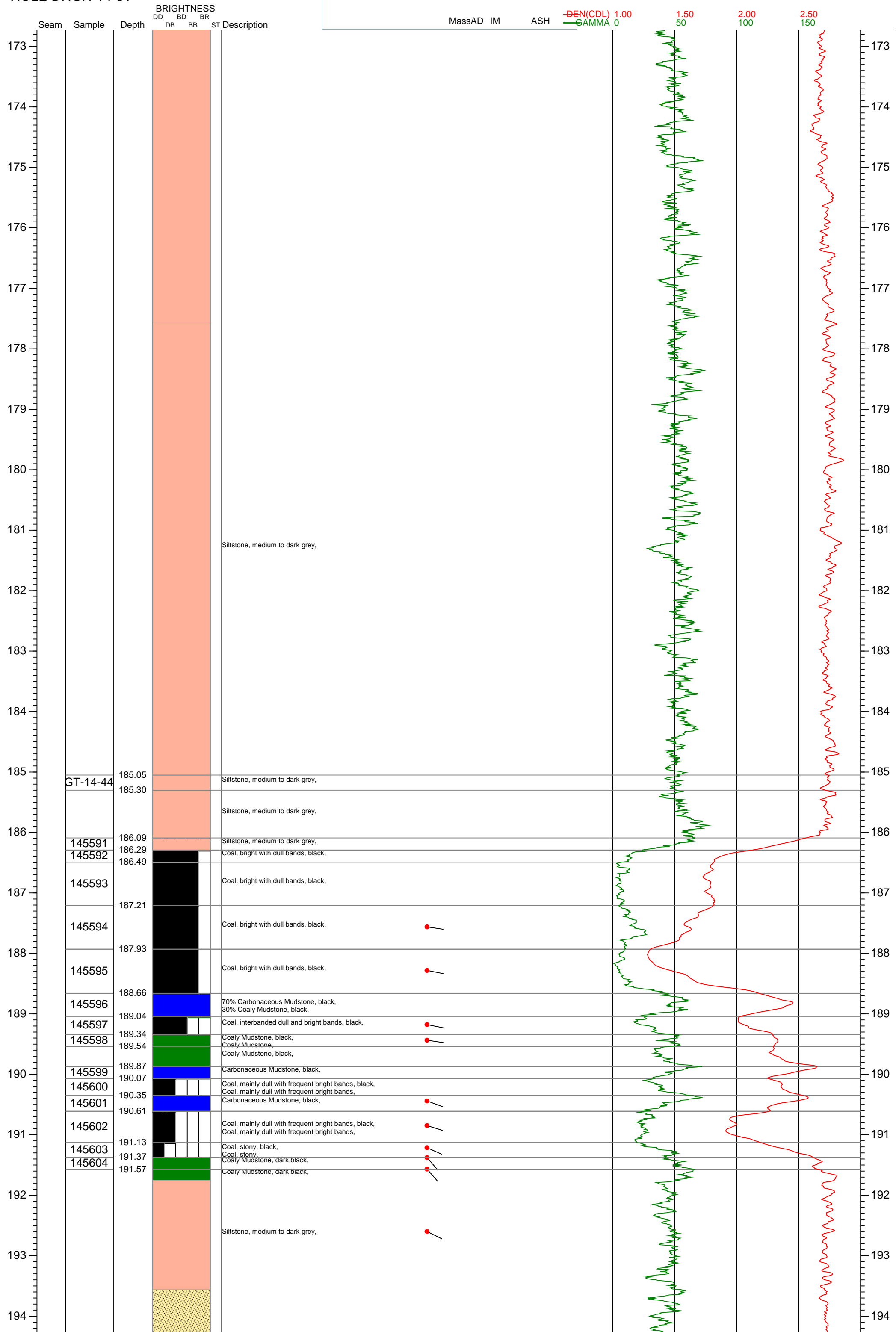
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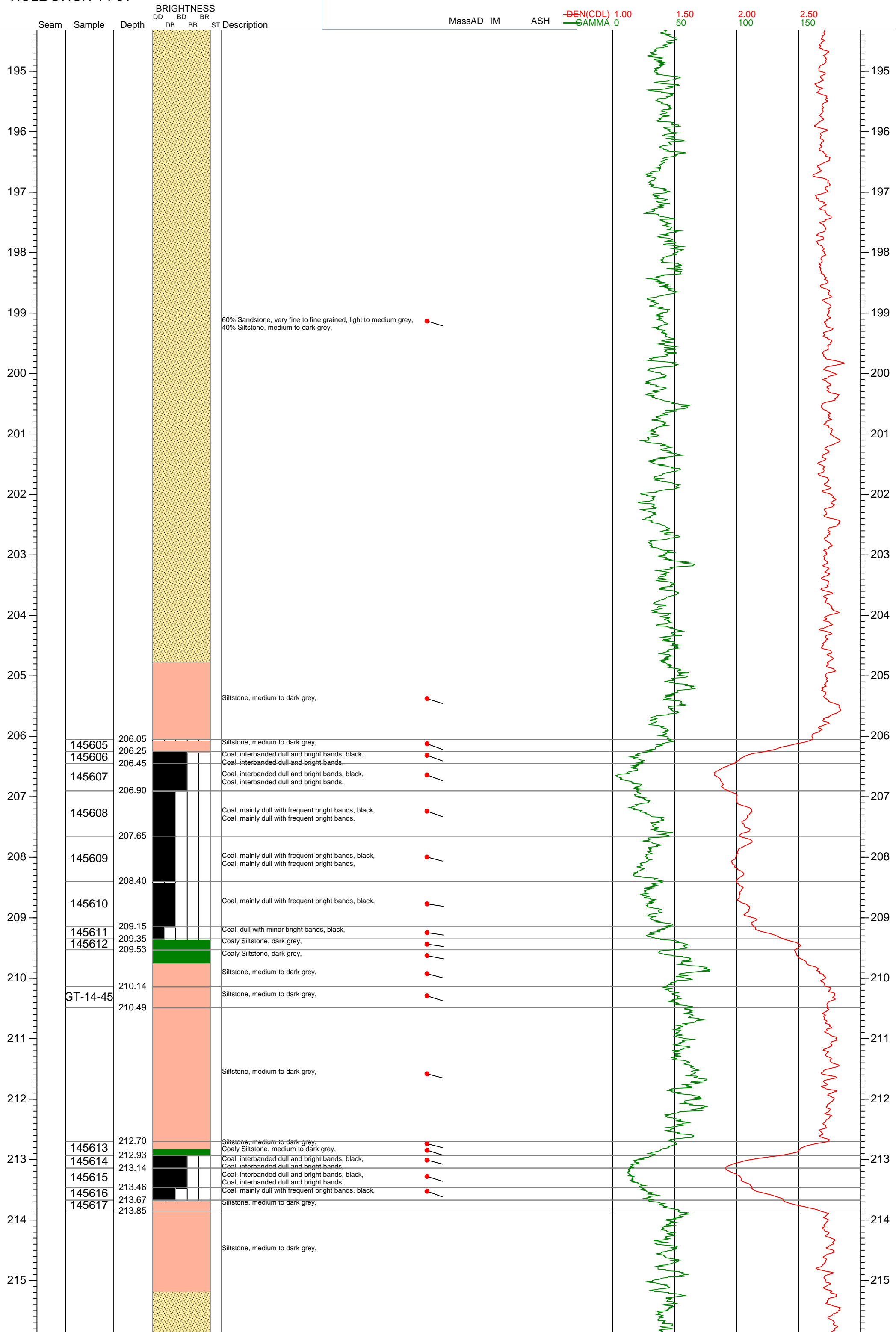
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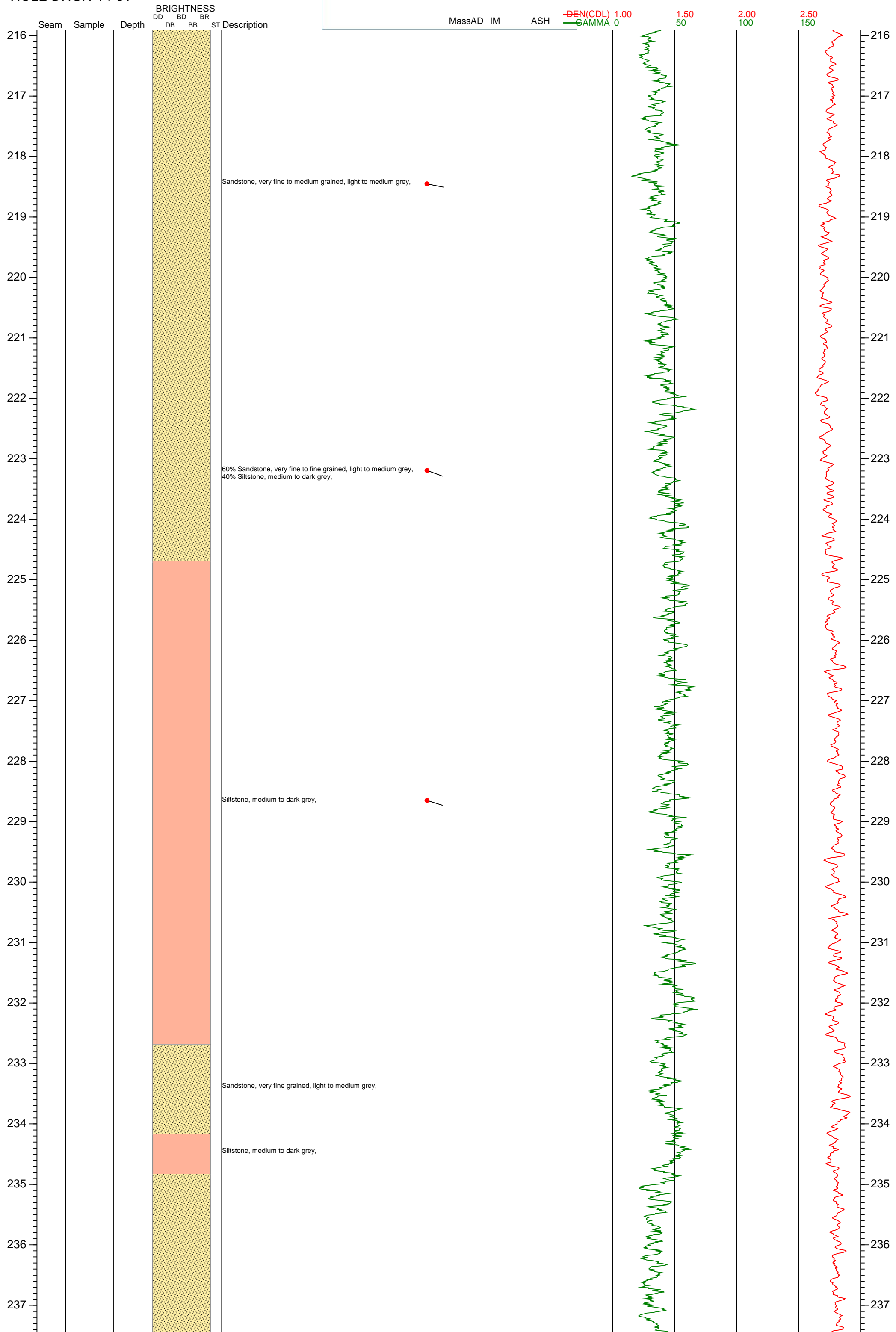
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HOLE DHGH-14-31



P1000
HOLE DHGH-14-31



P1000
HOLE DHGH-14-31



Sandstone, very fine to medium grained, light to medium grey.

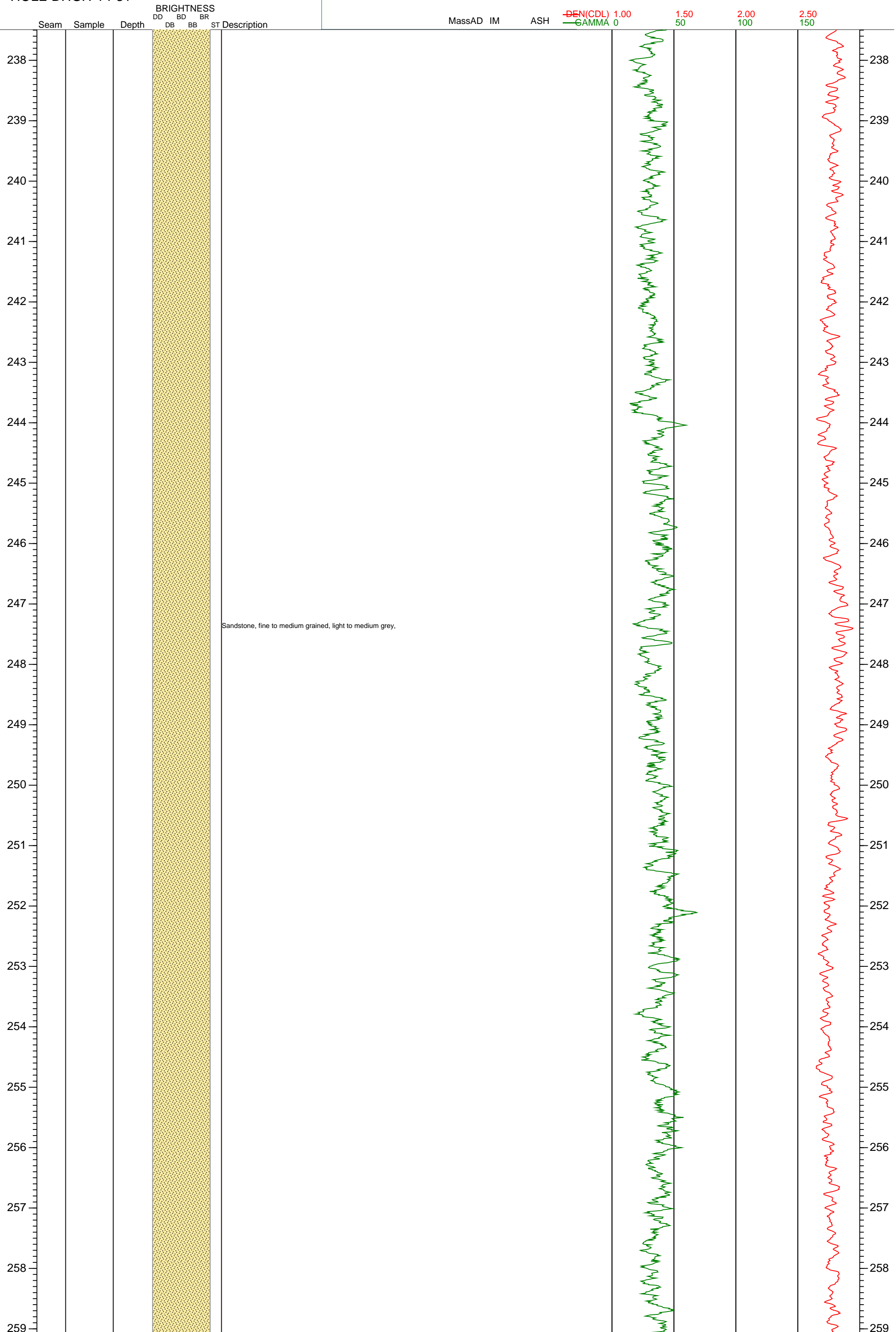
60% Sandstone, very fine to fine grained, light to medium grey,
40% Siltstone, medium to dark grey.

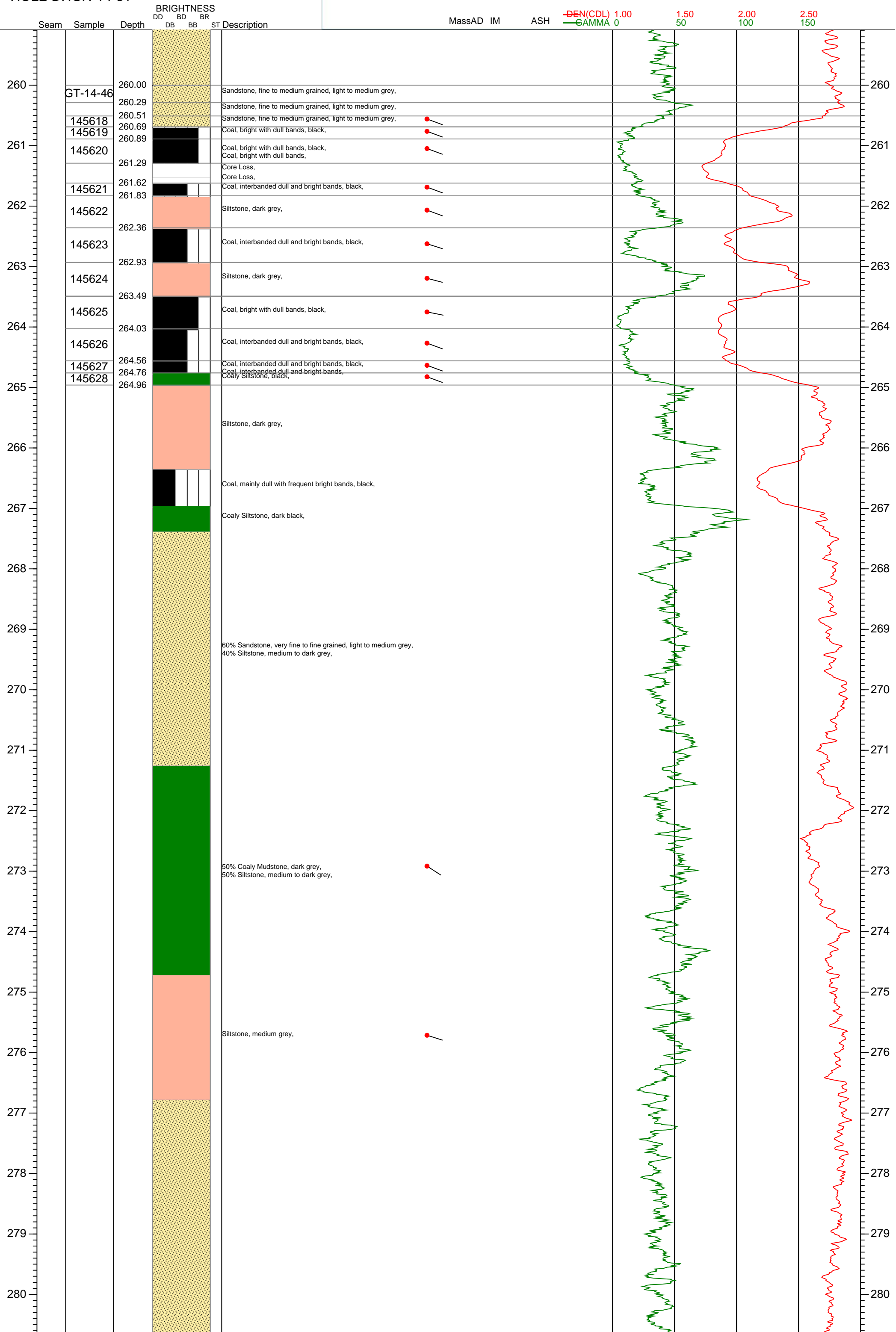
Siltstone, medium to dark grey.

Sandstone, very fine grained, light to medium grey.

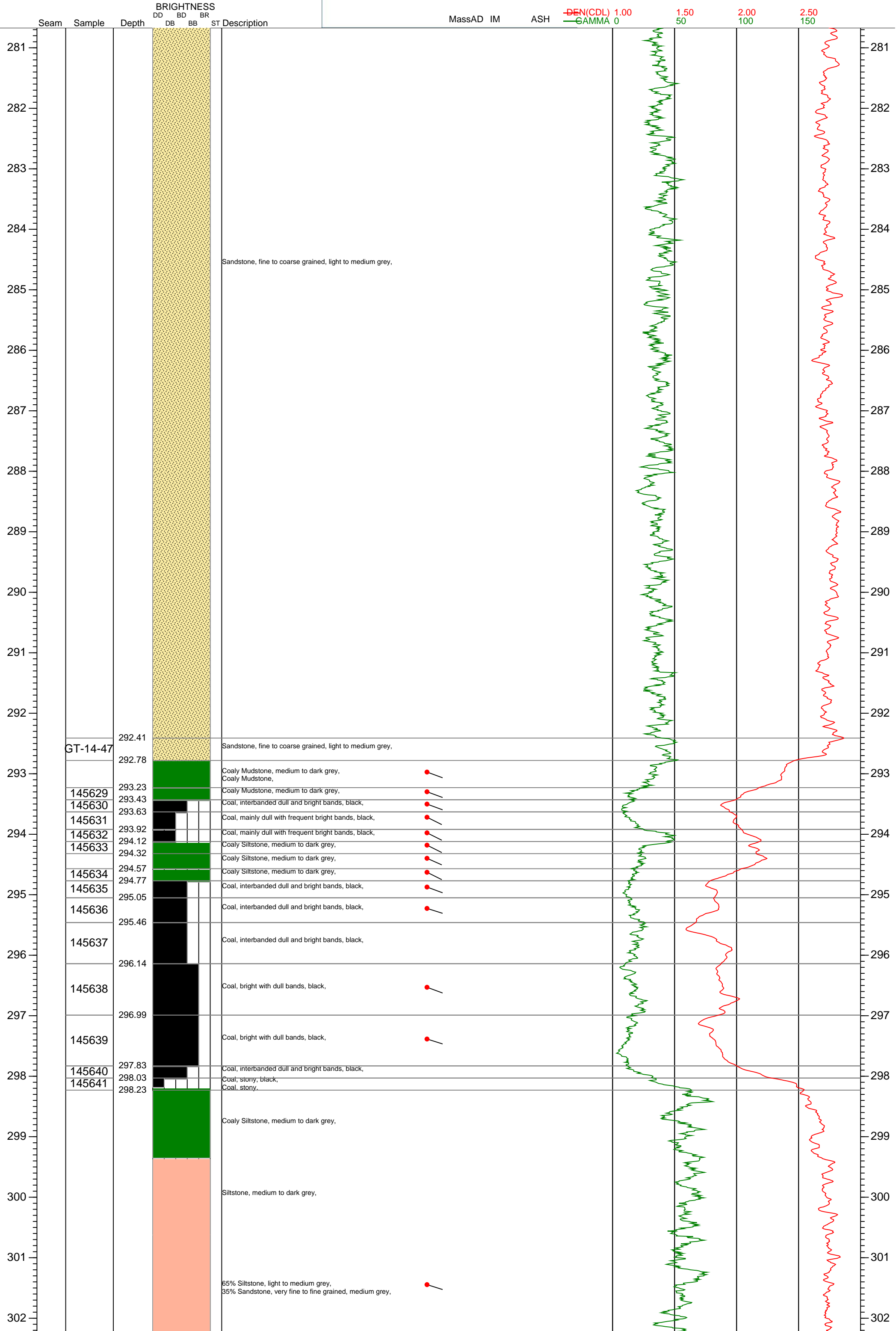
Siltstone, medium to dark grey.

P1000
HOLE DHGH-14-31

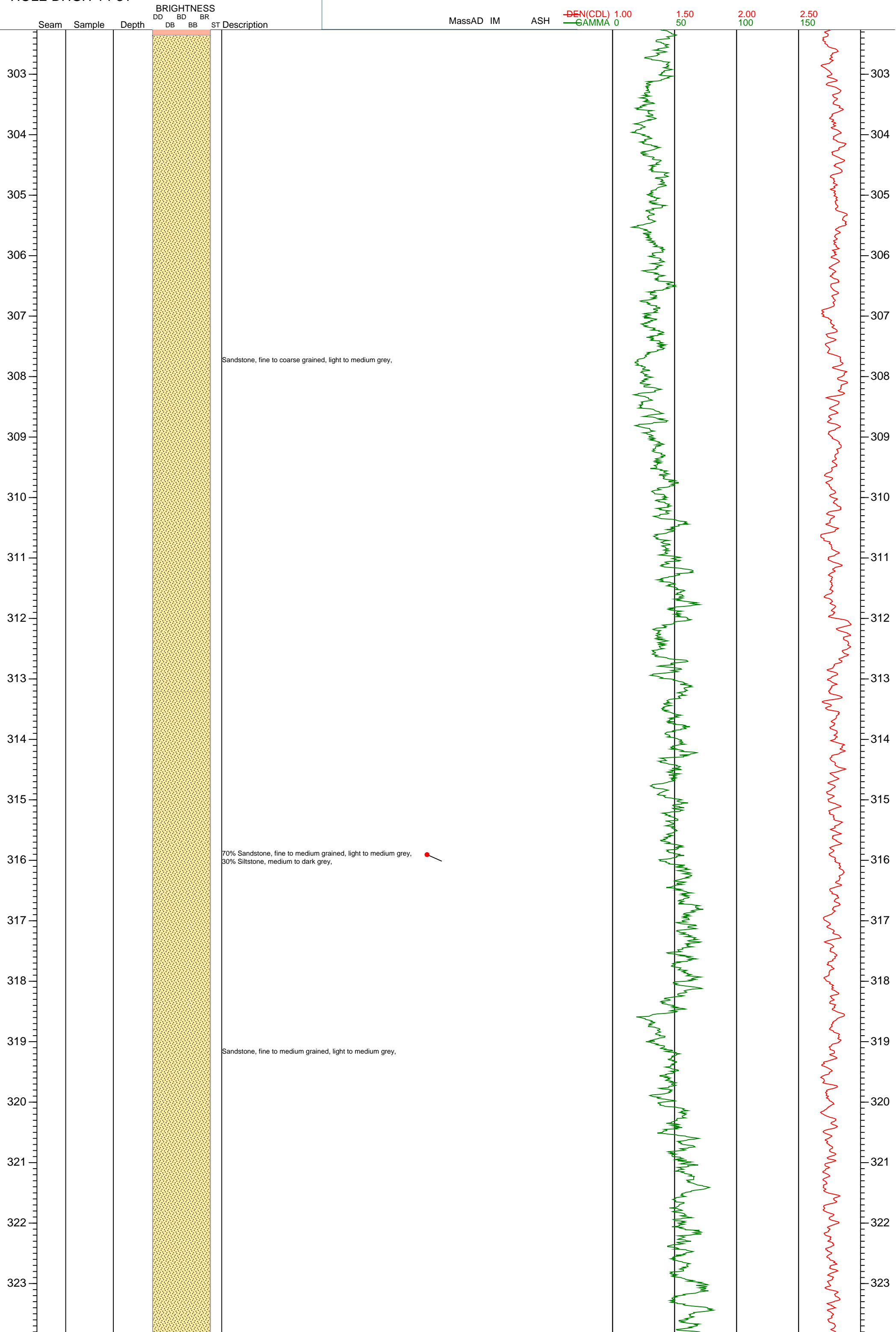




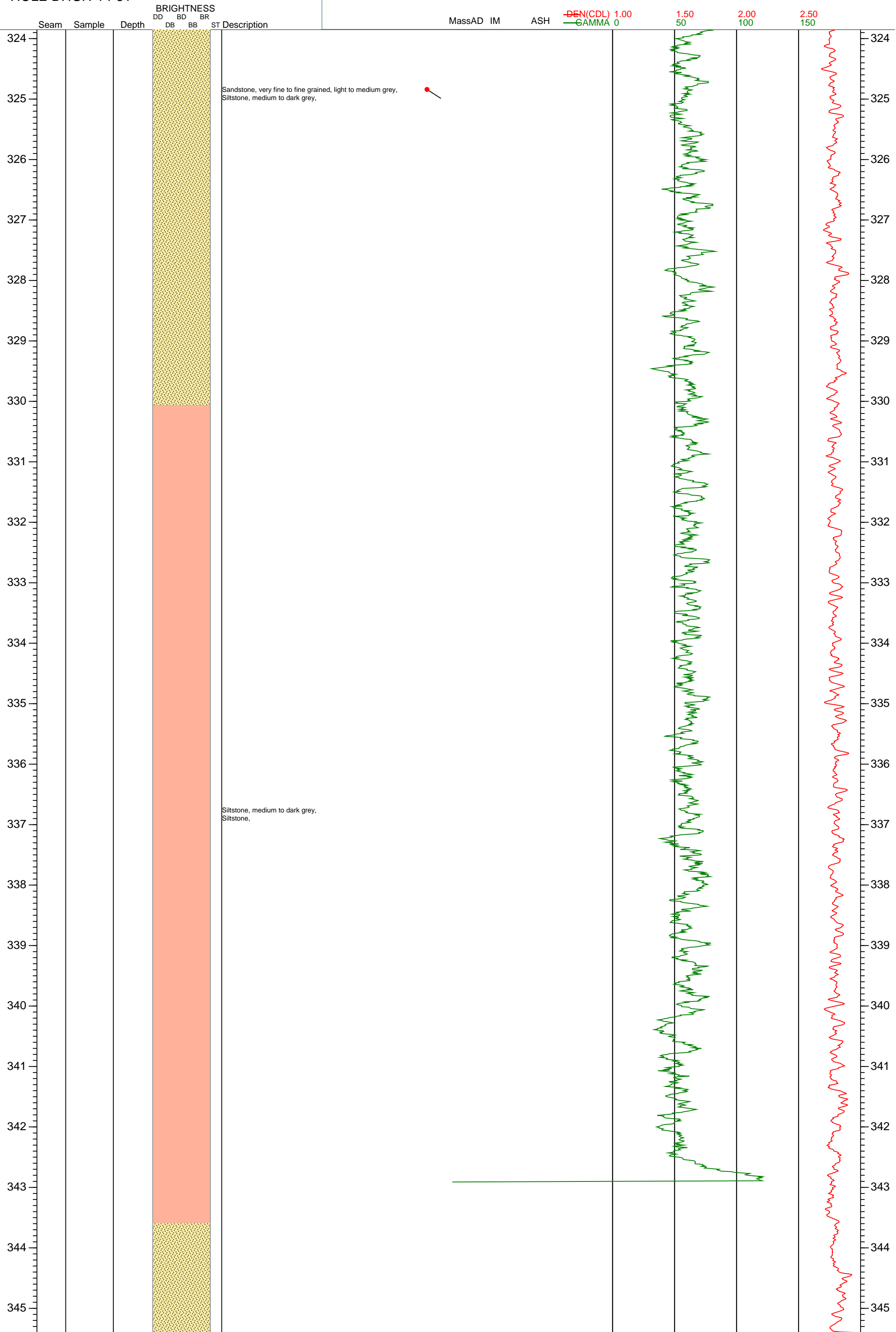
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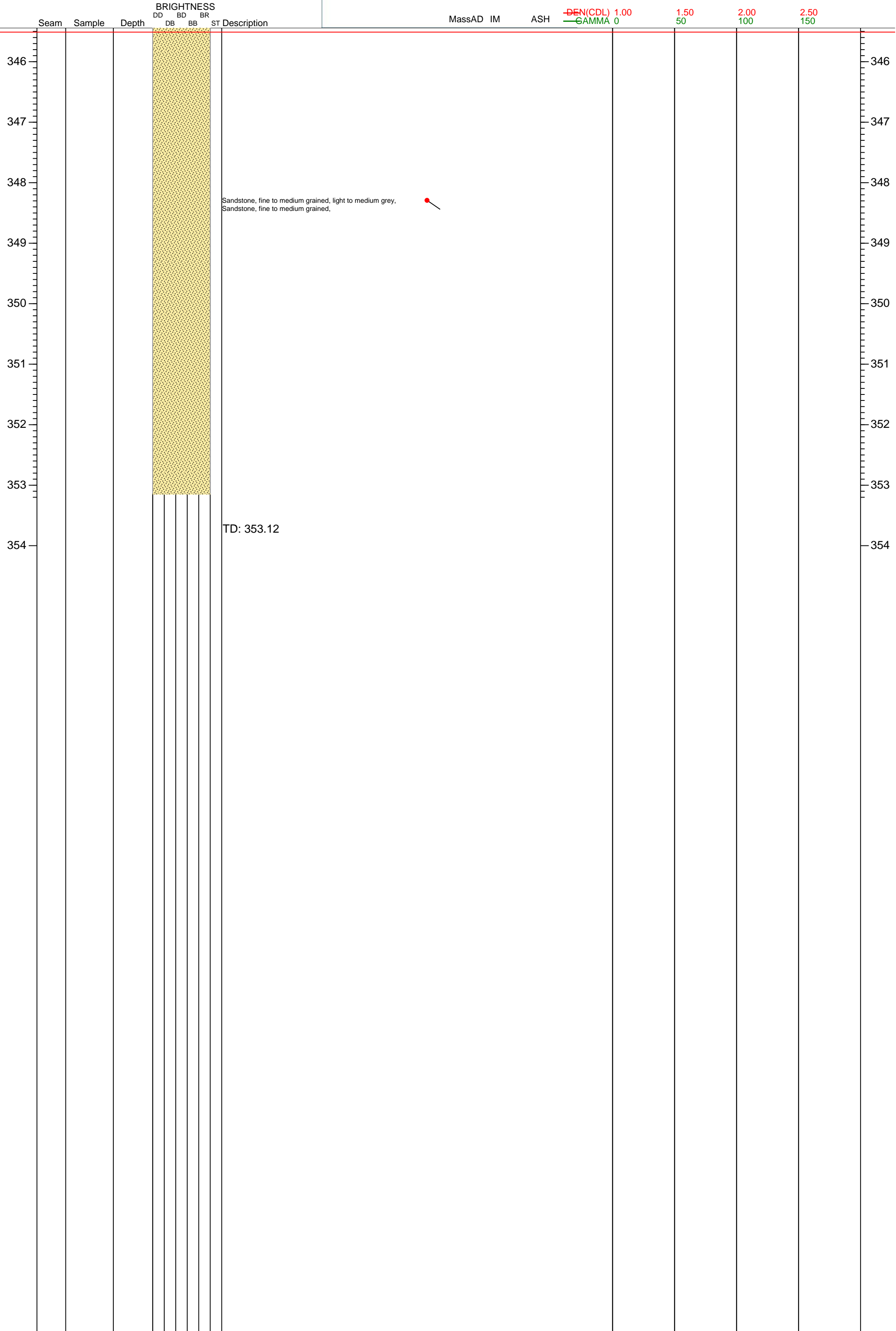
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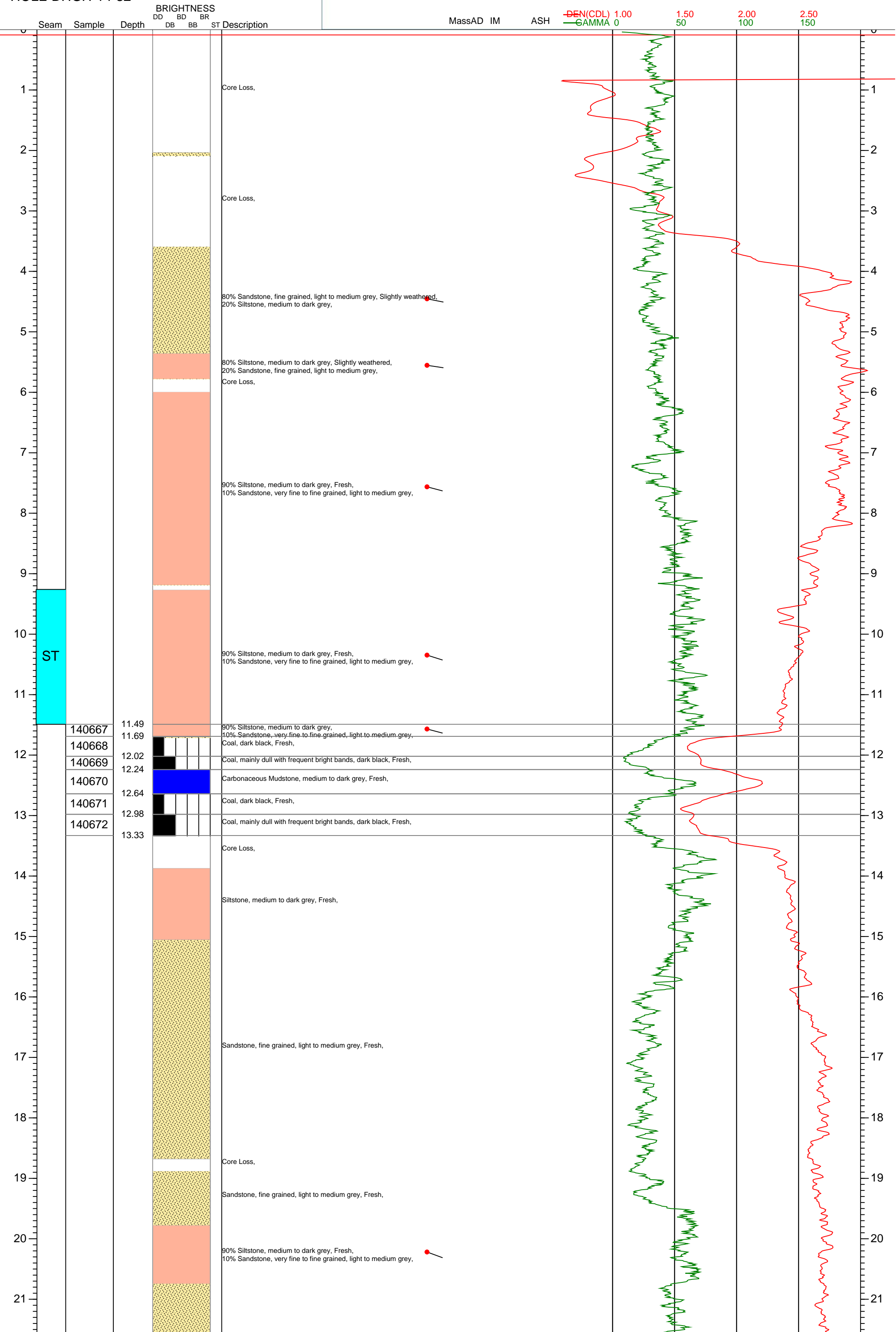
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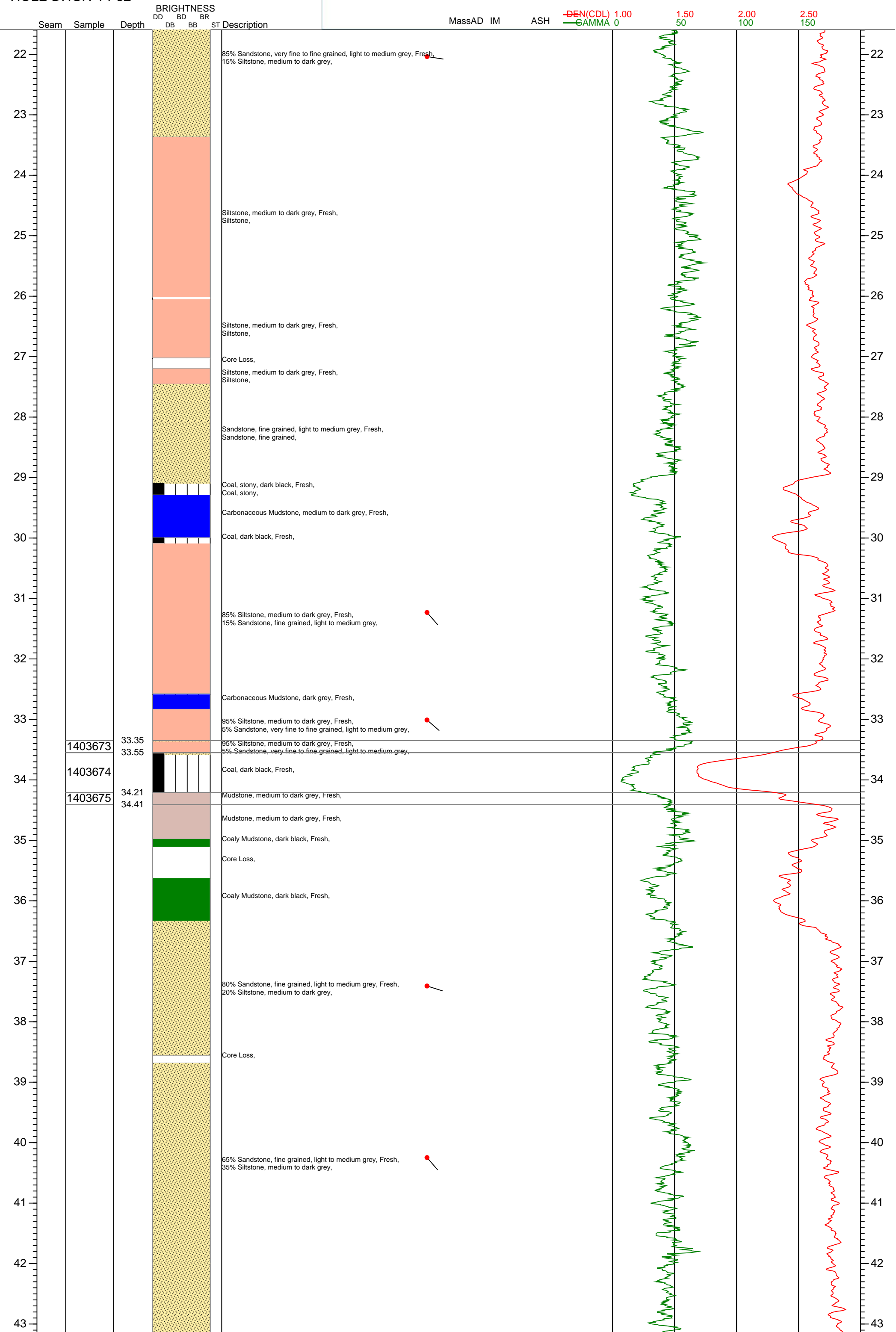
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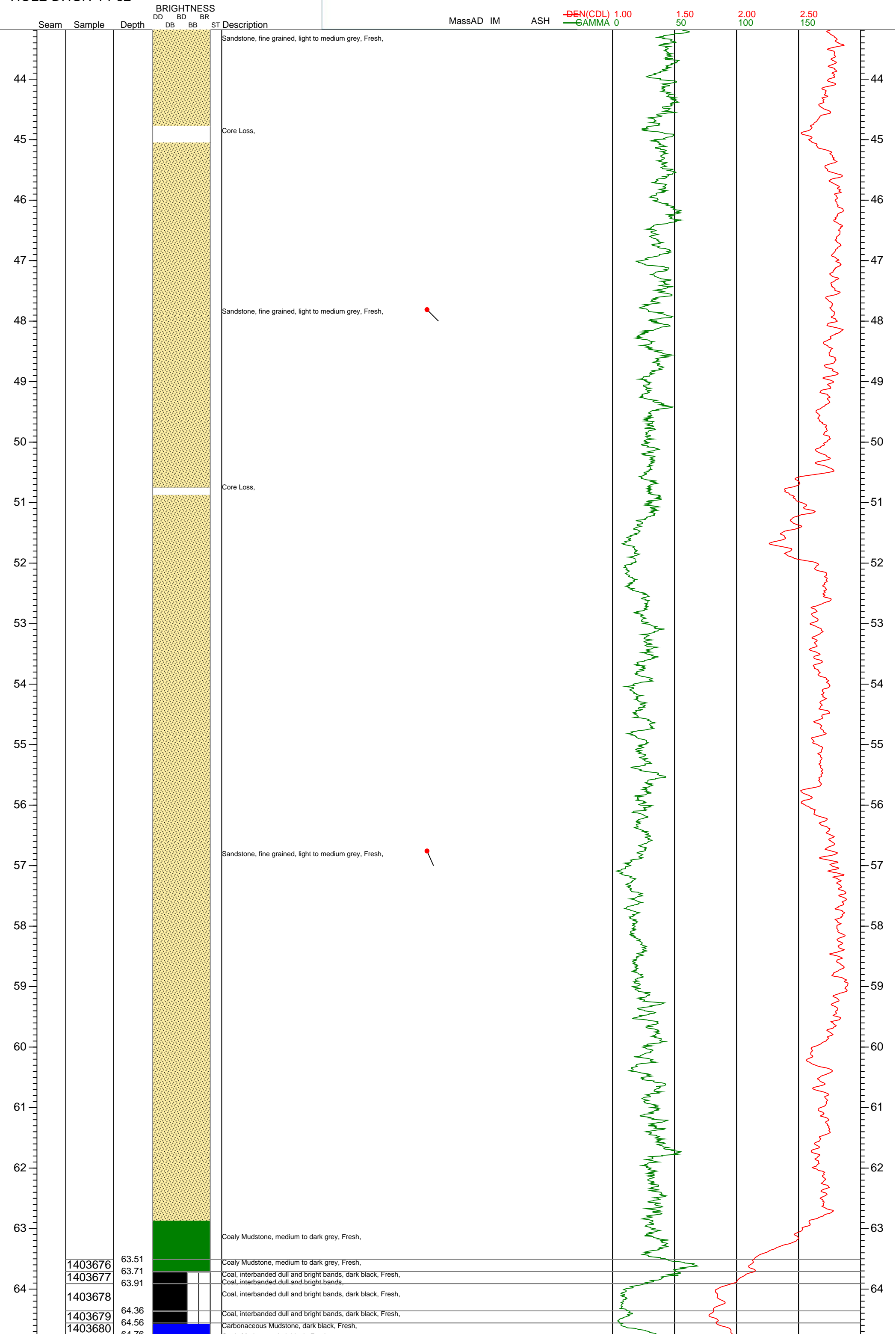
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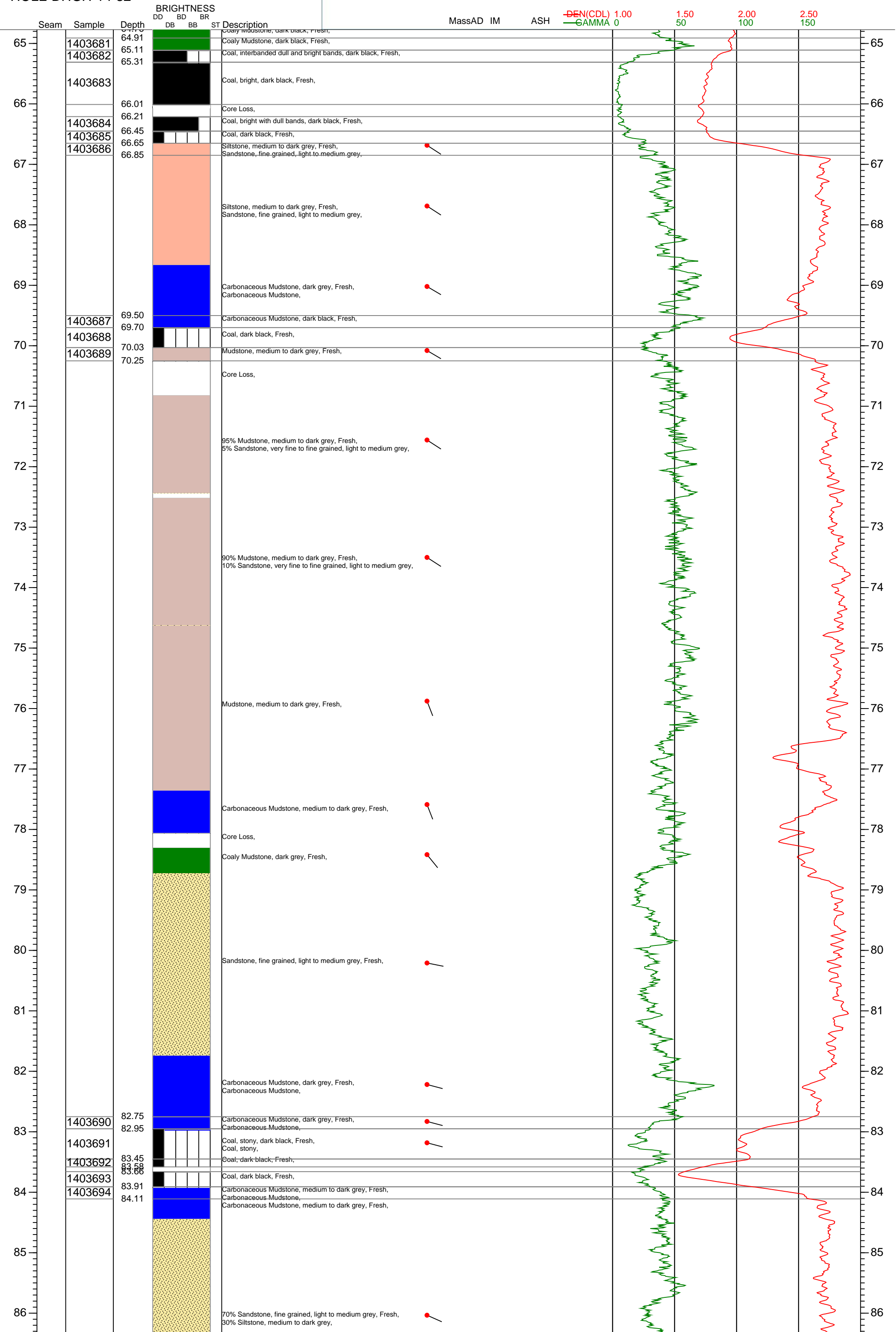
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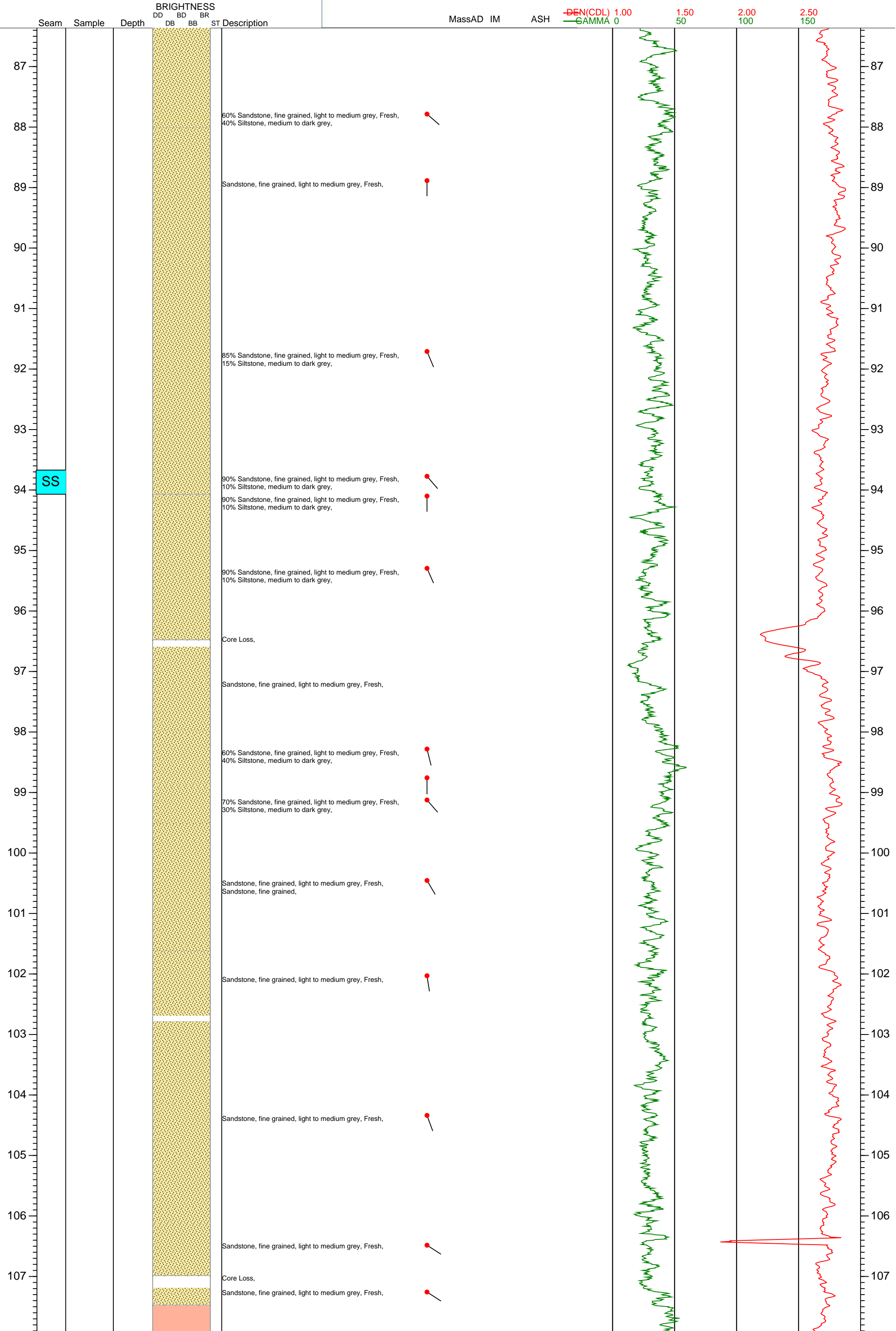
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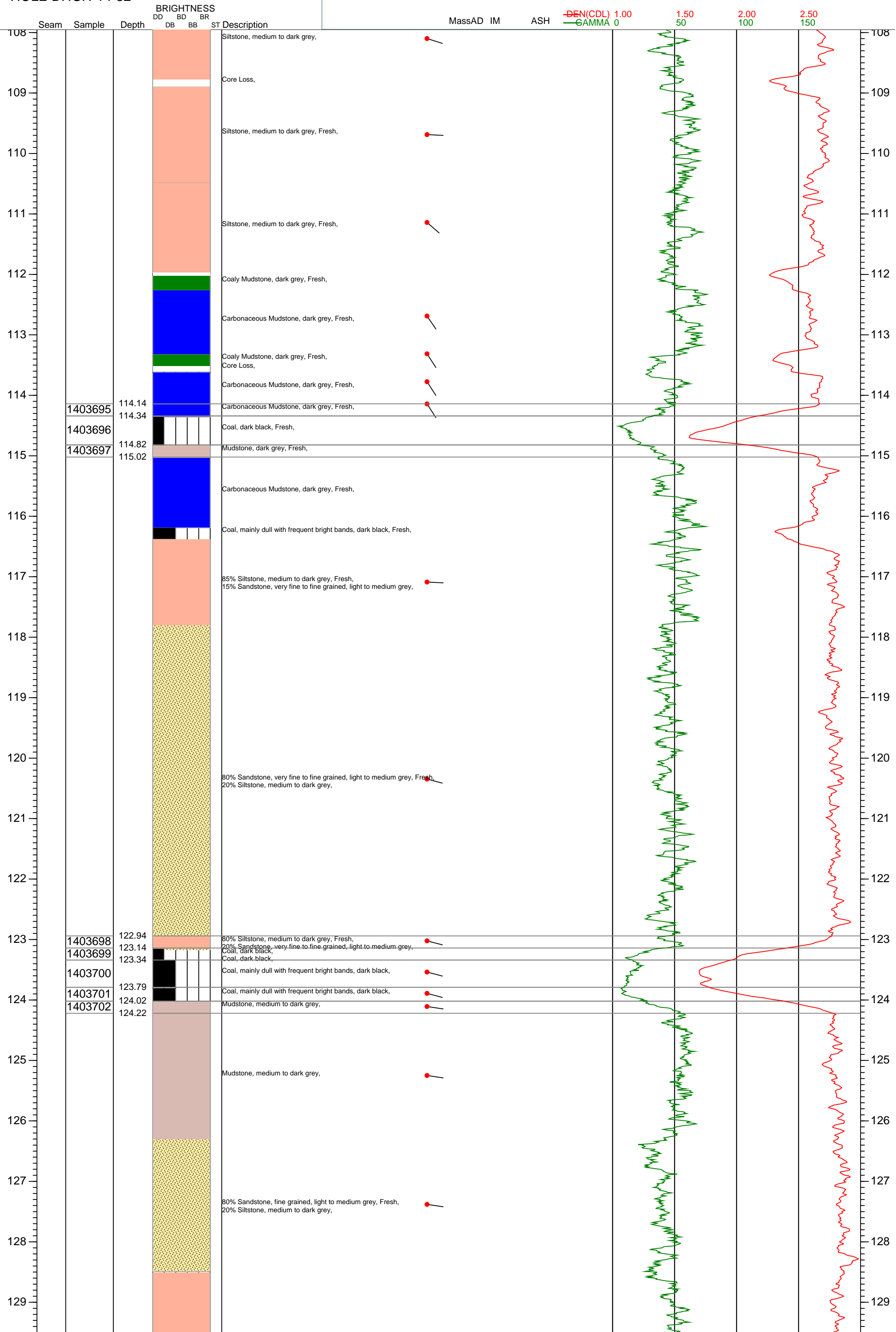
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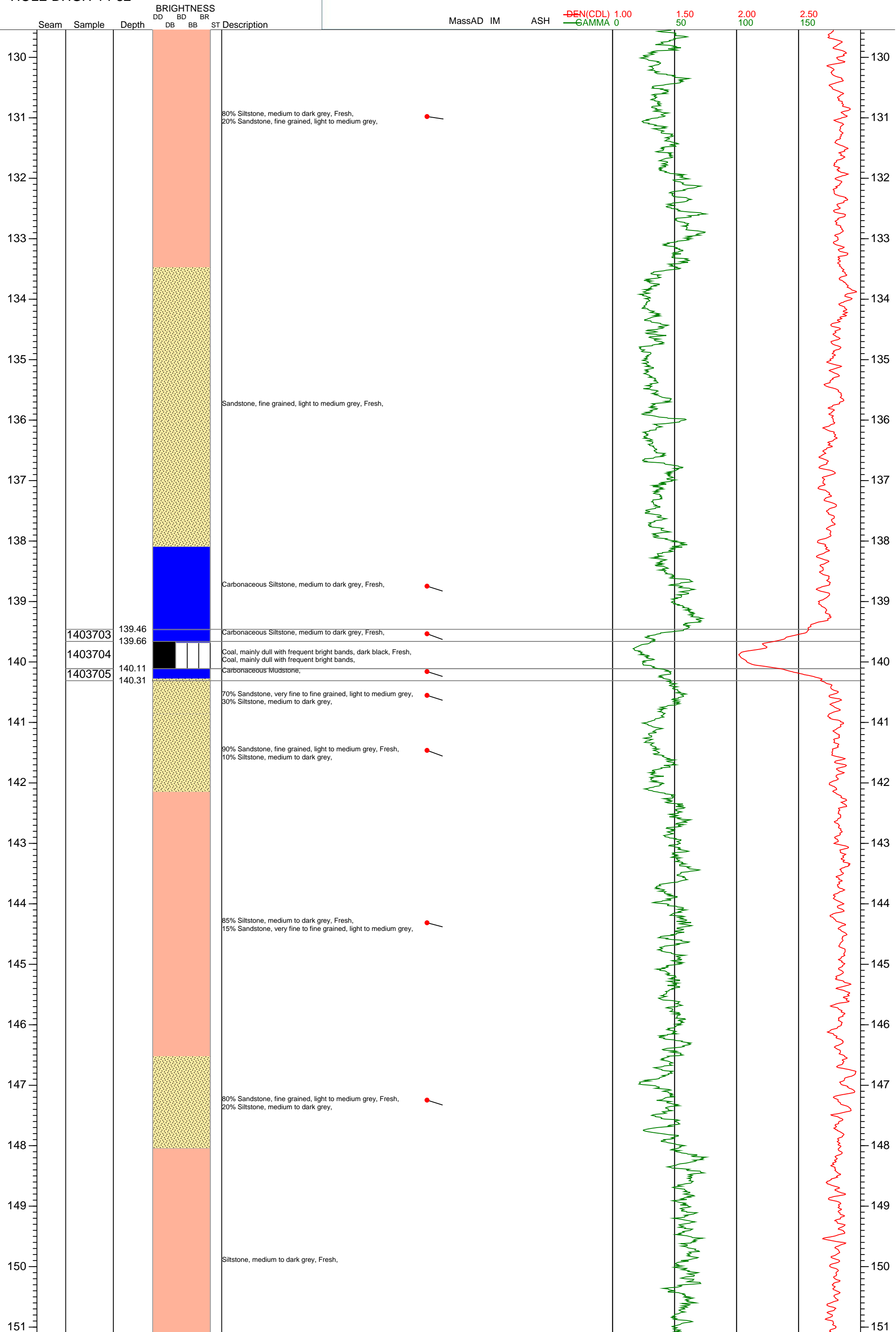
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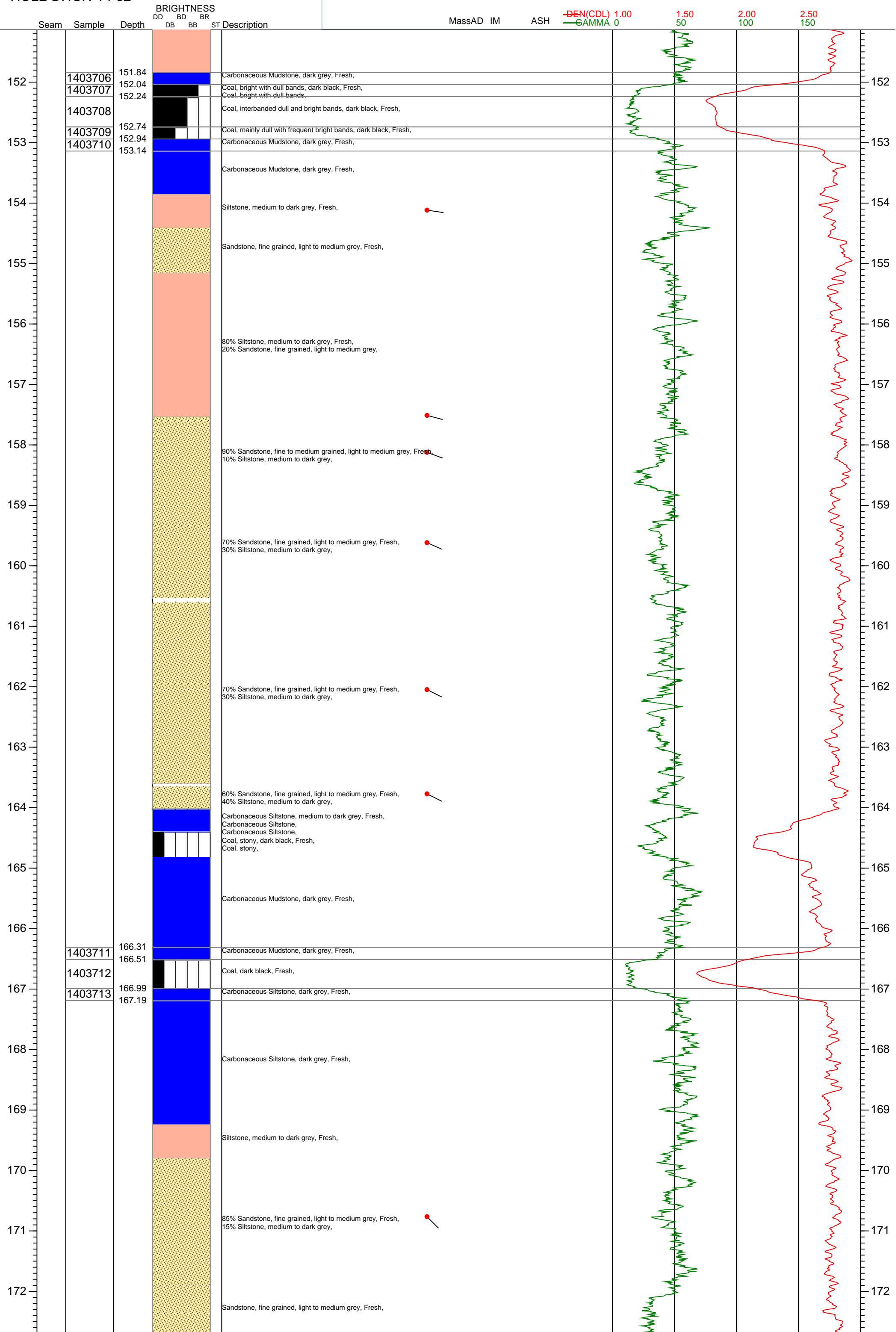
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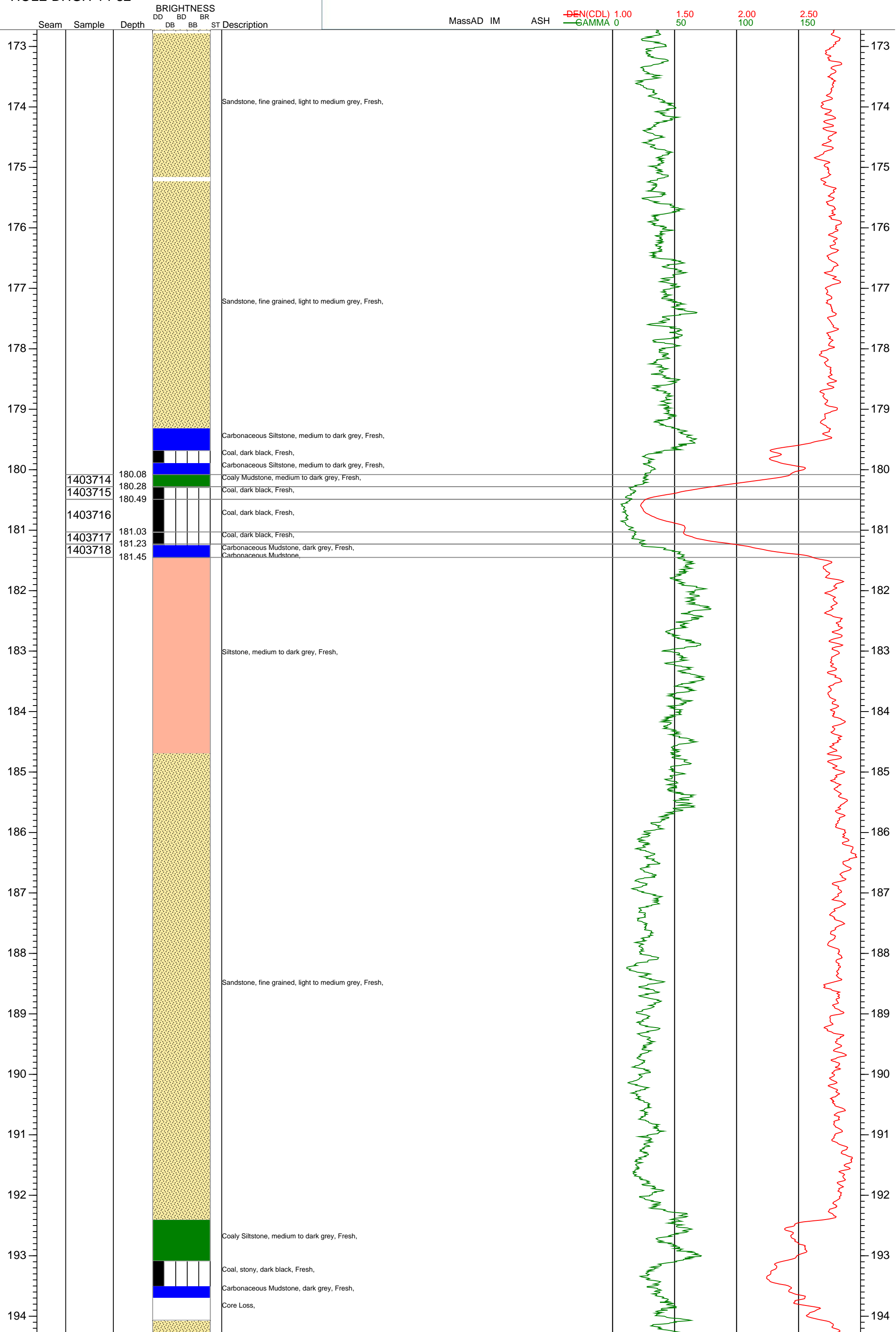
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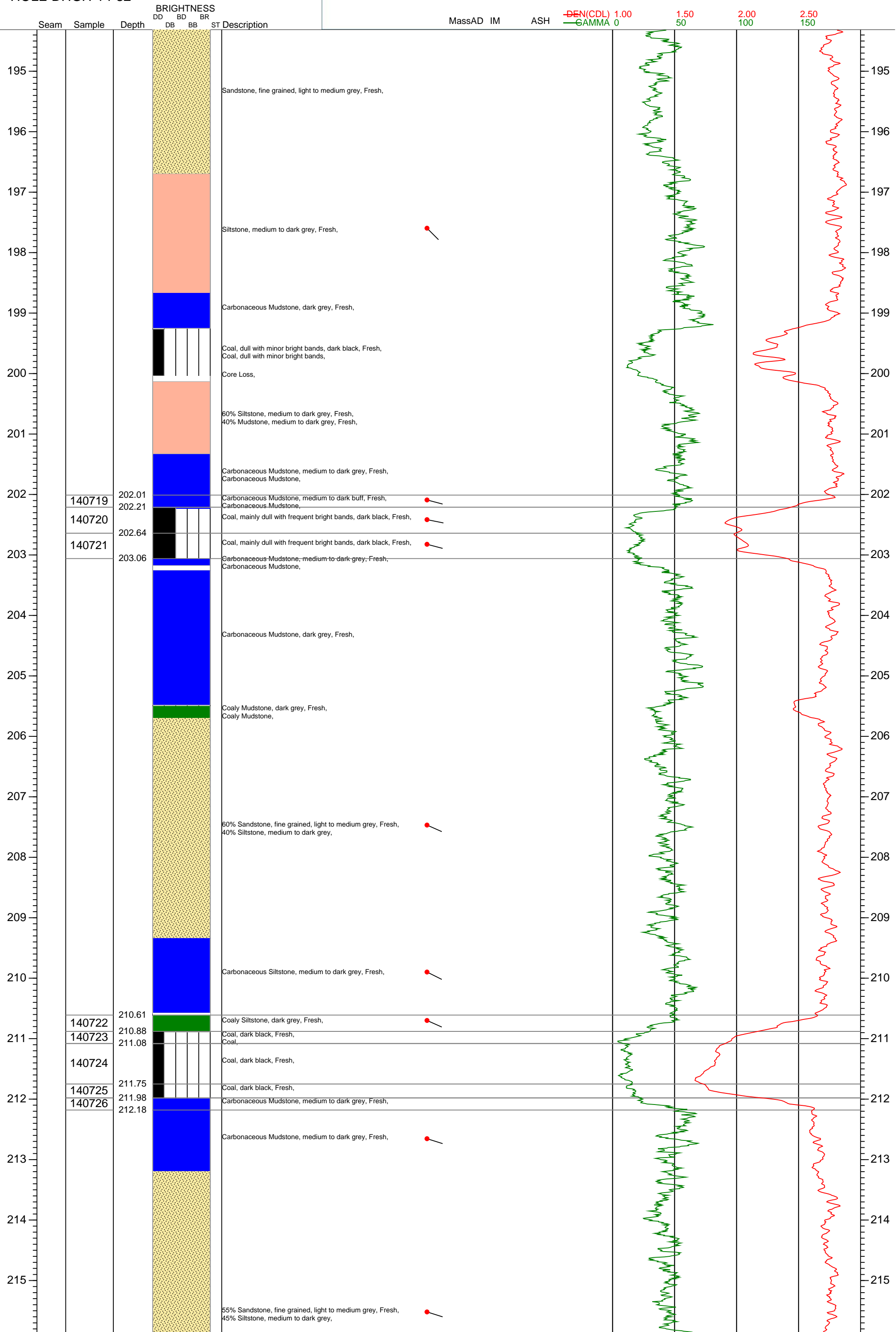
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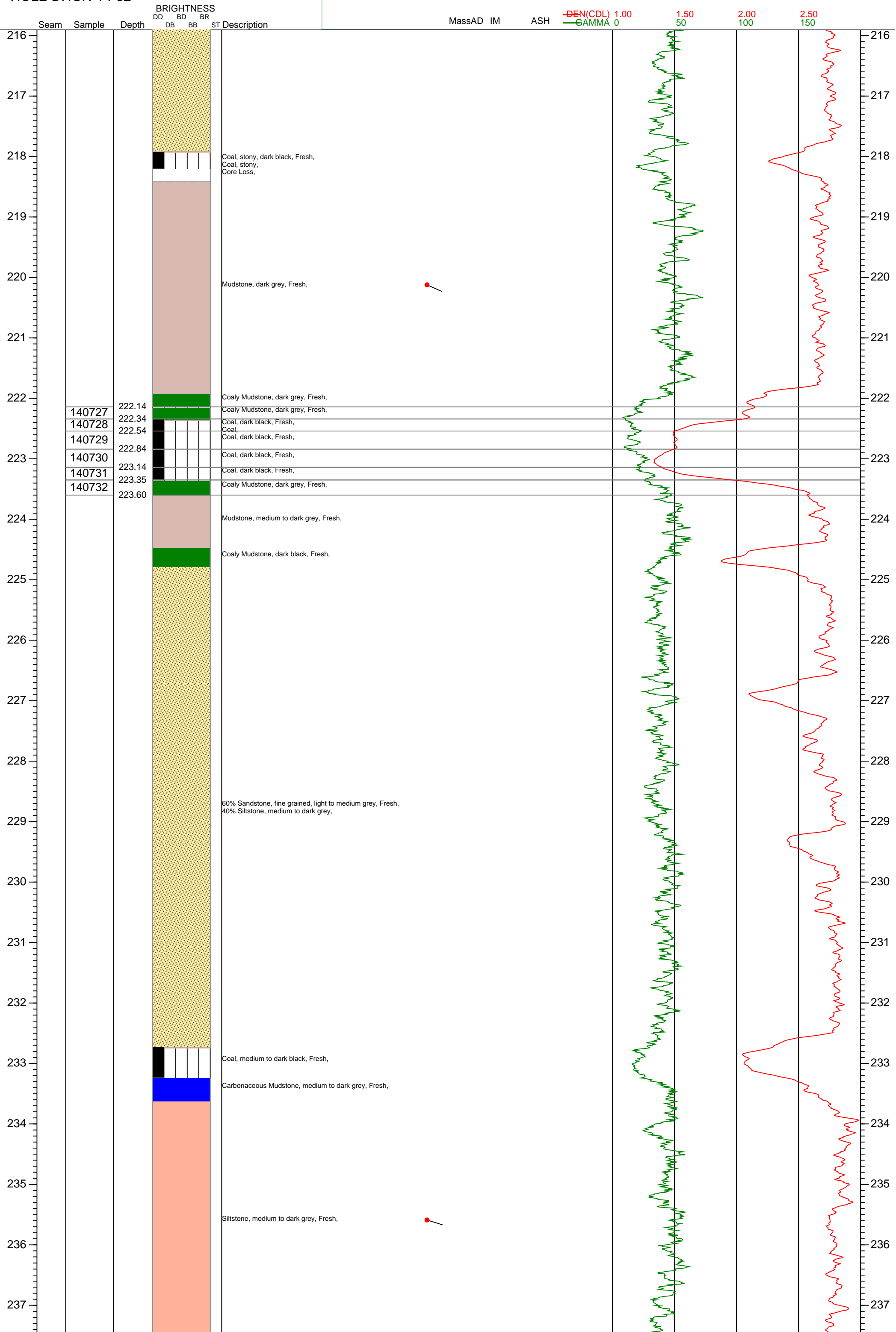
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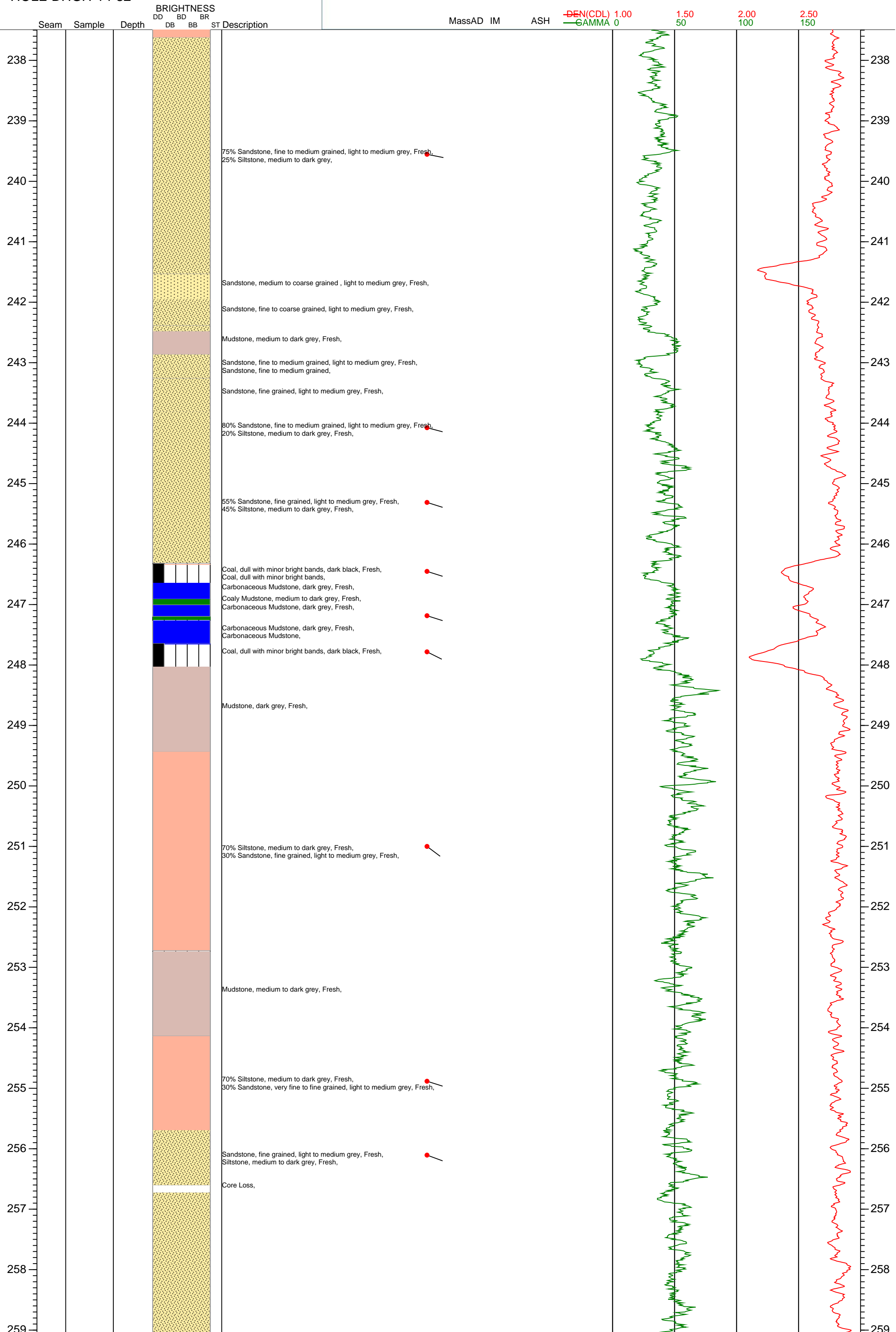
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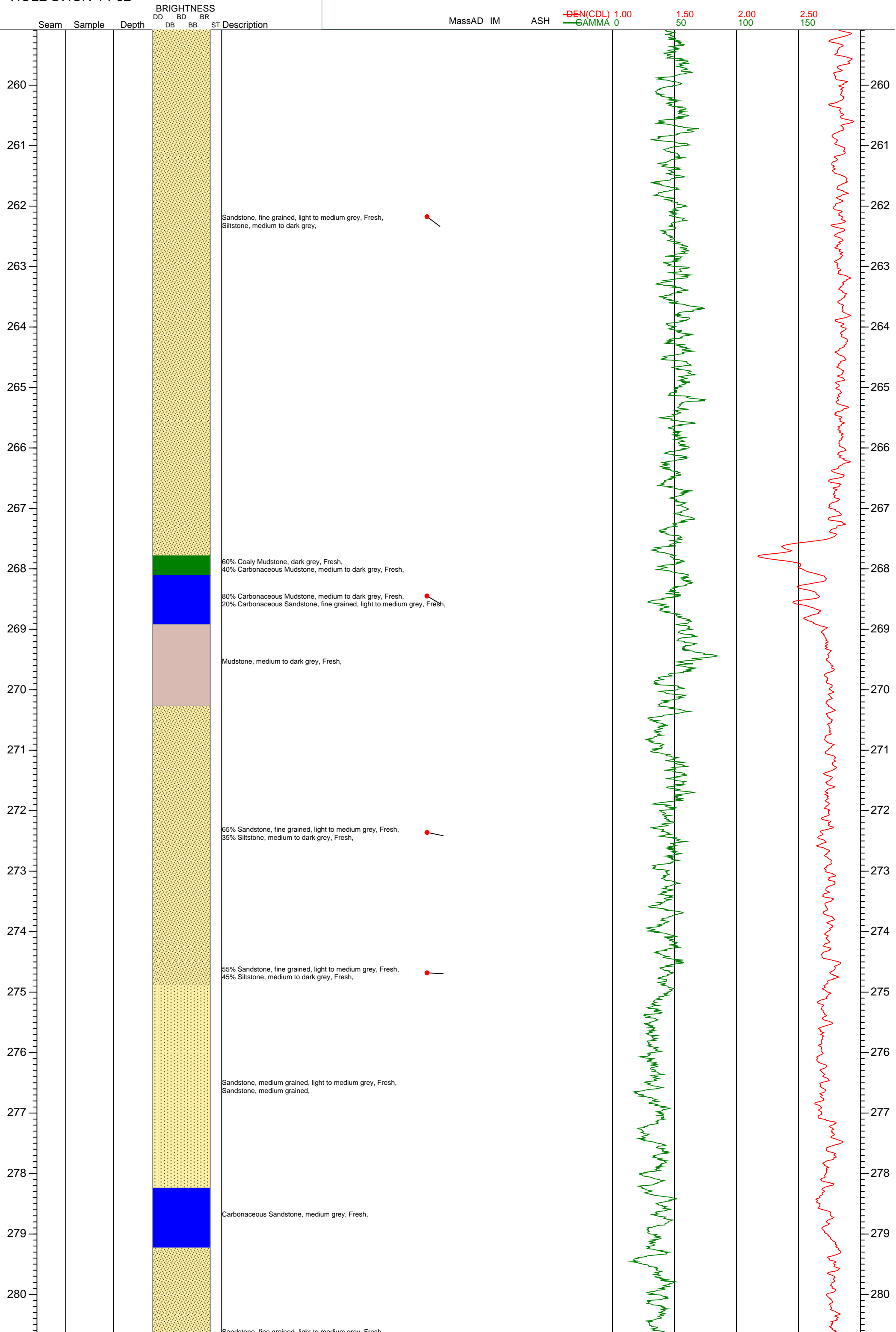
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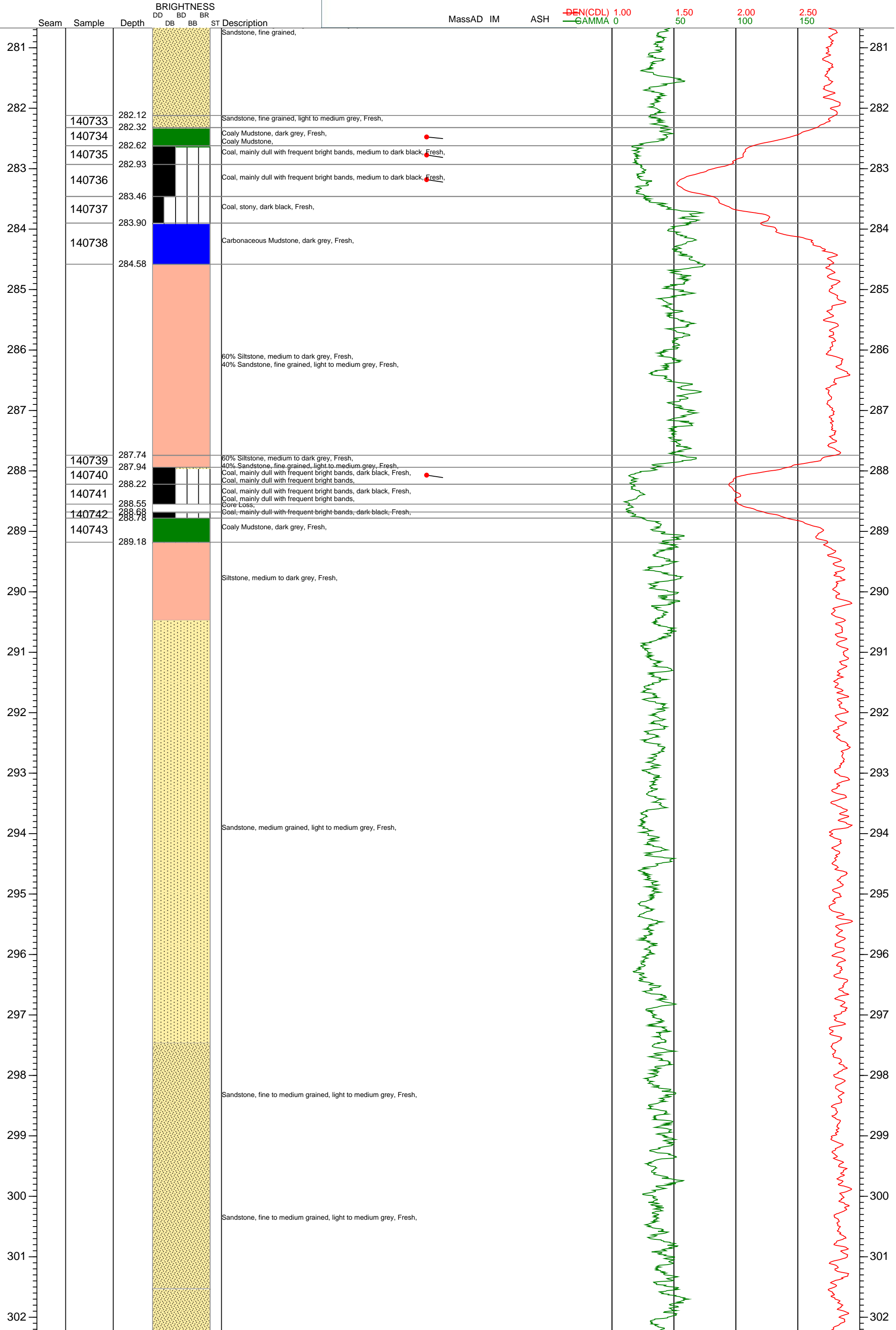


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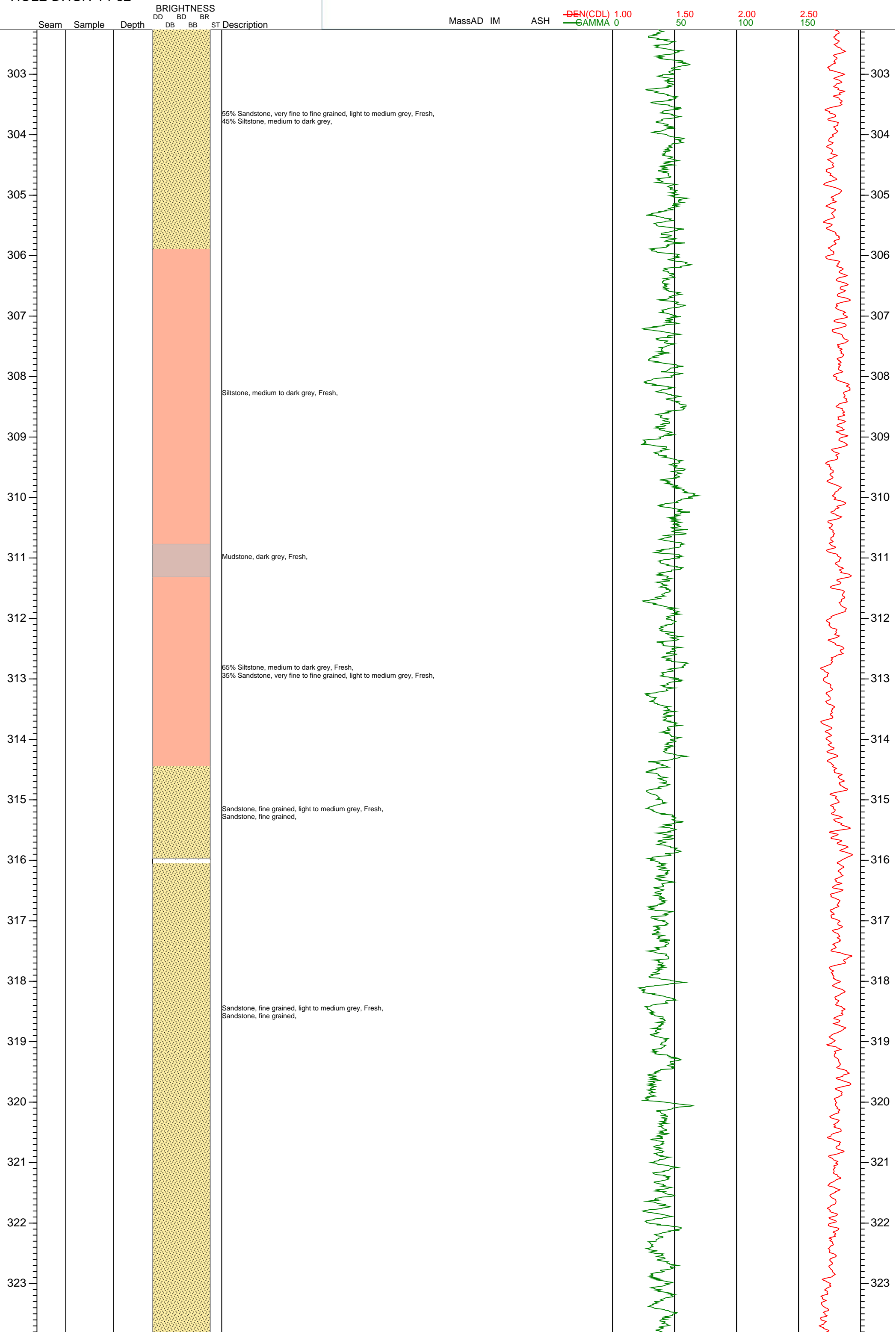


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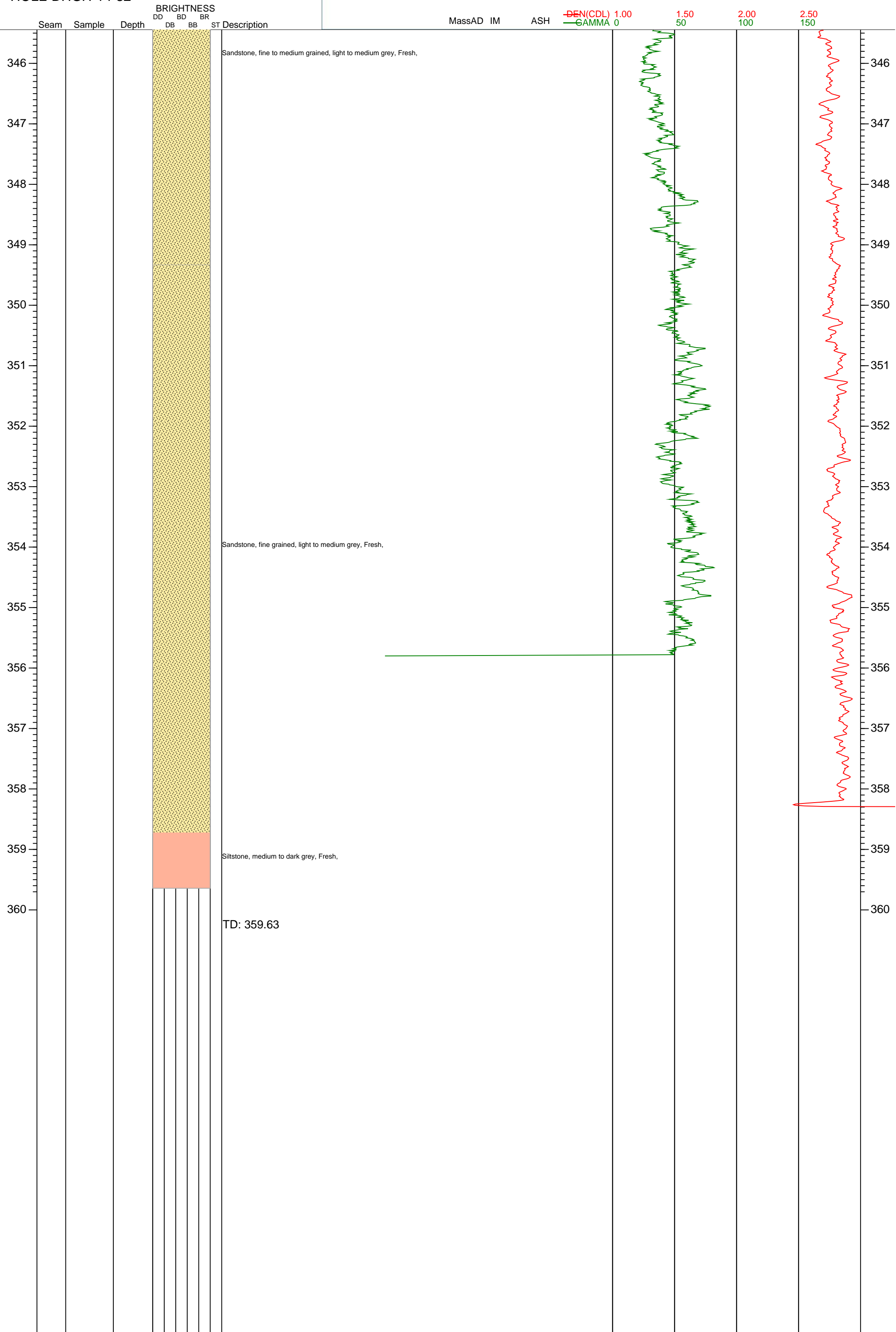




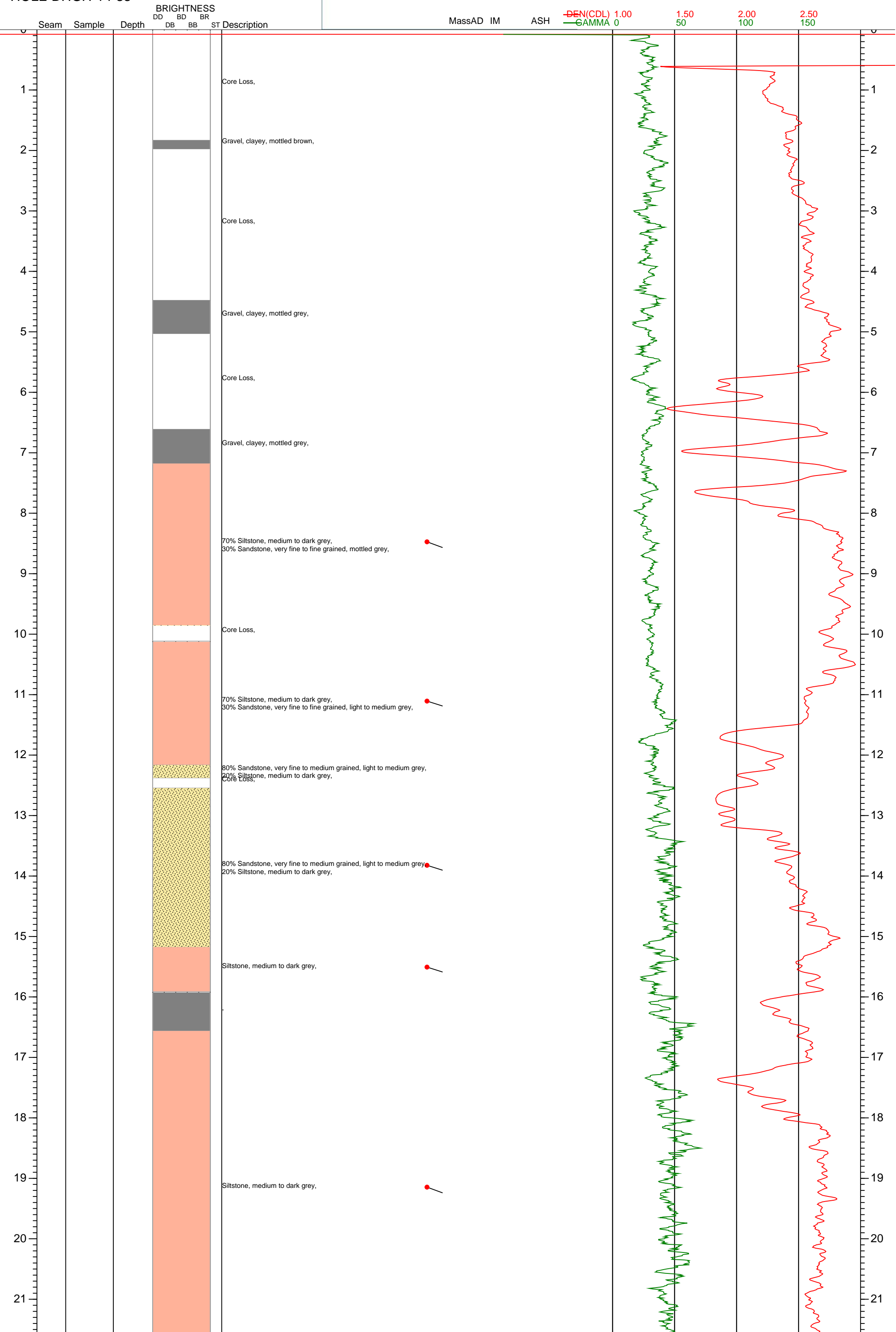
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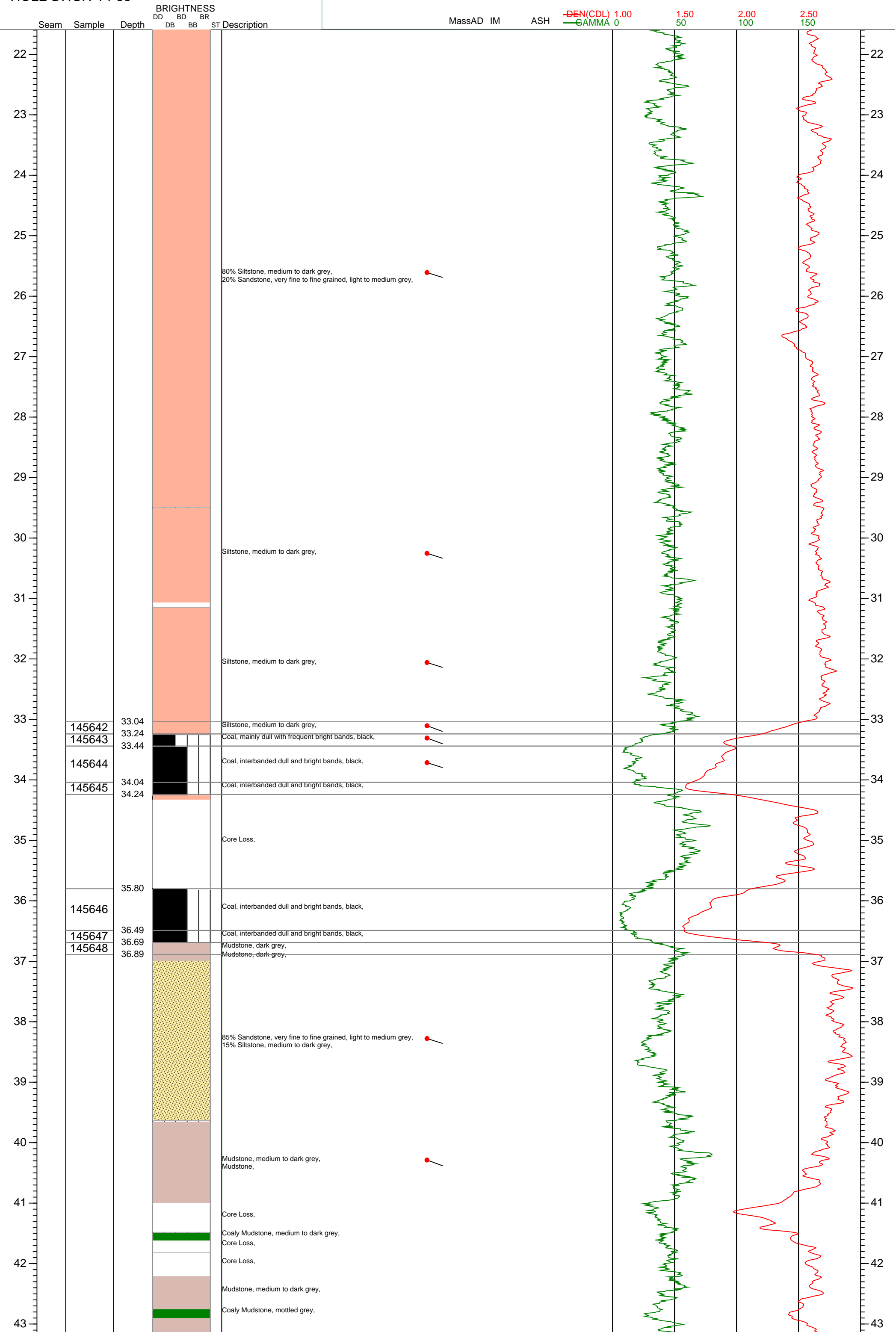
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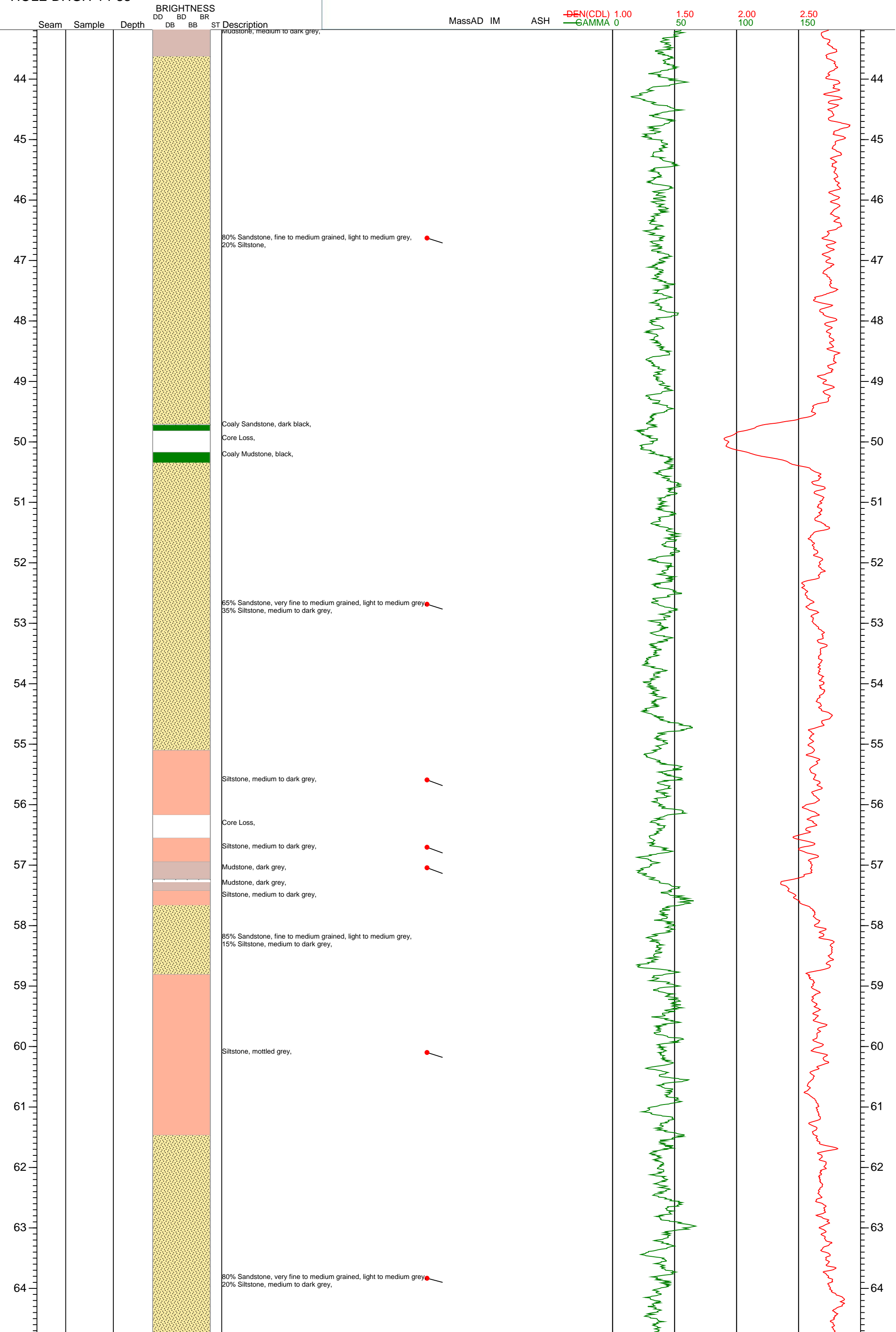
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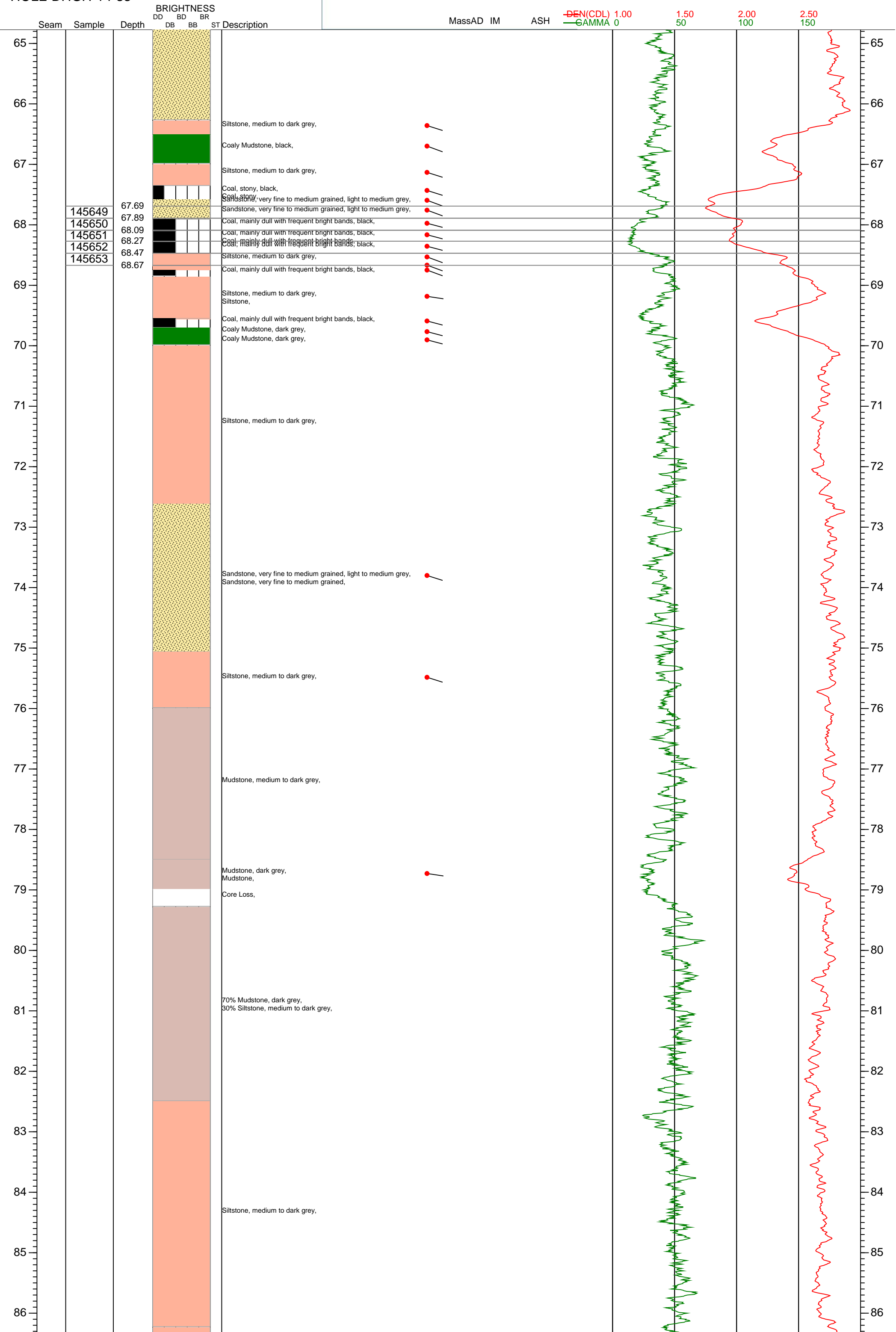
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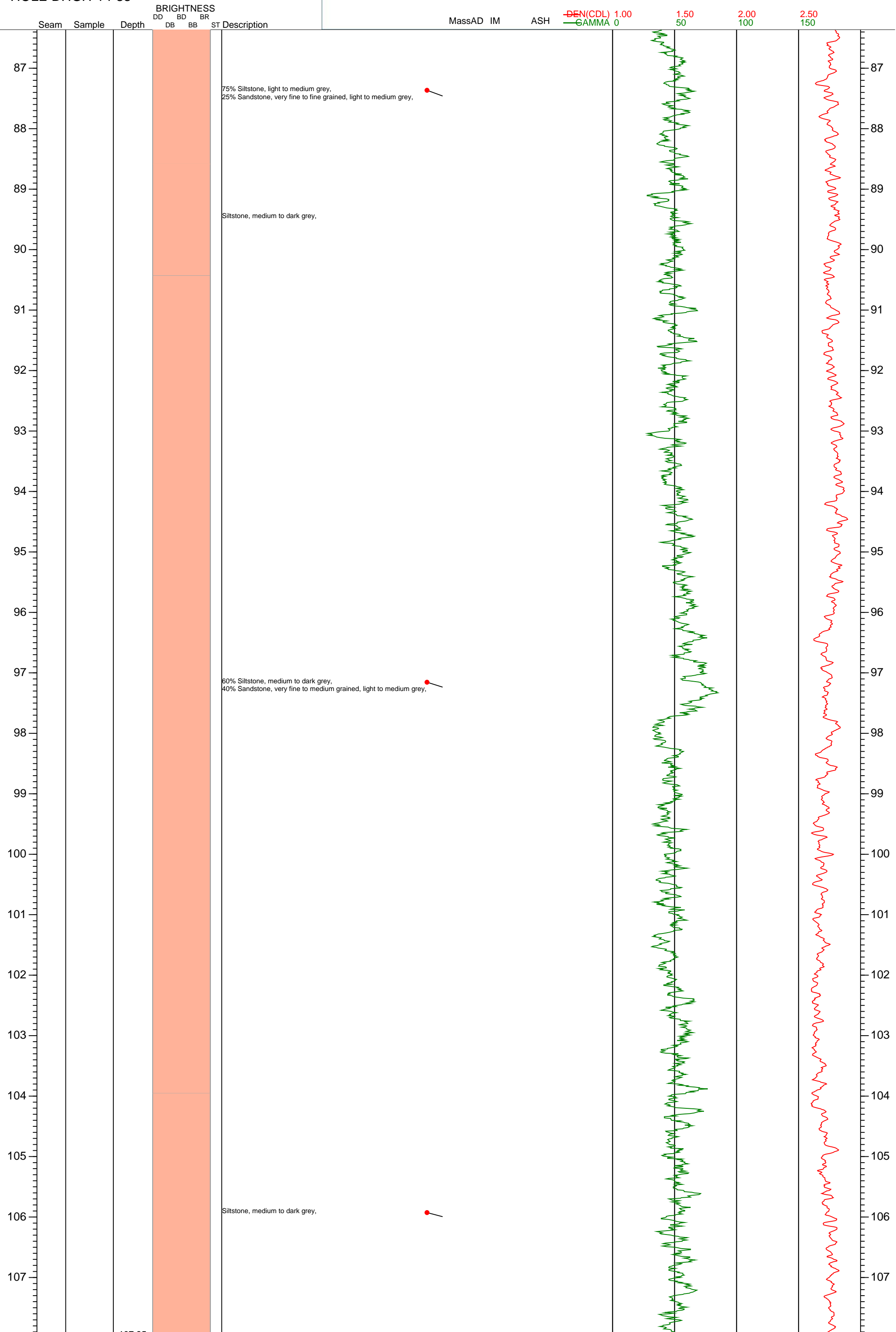
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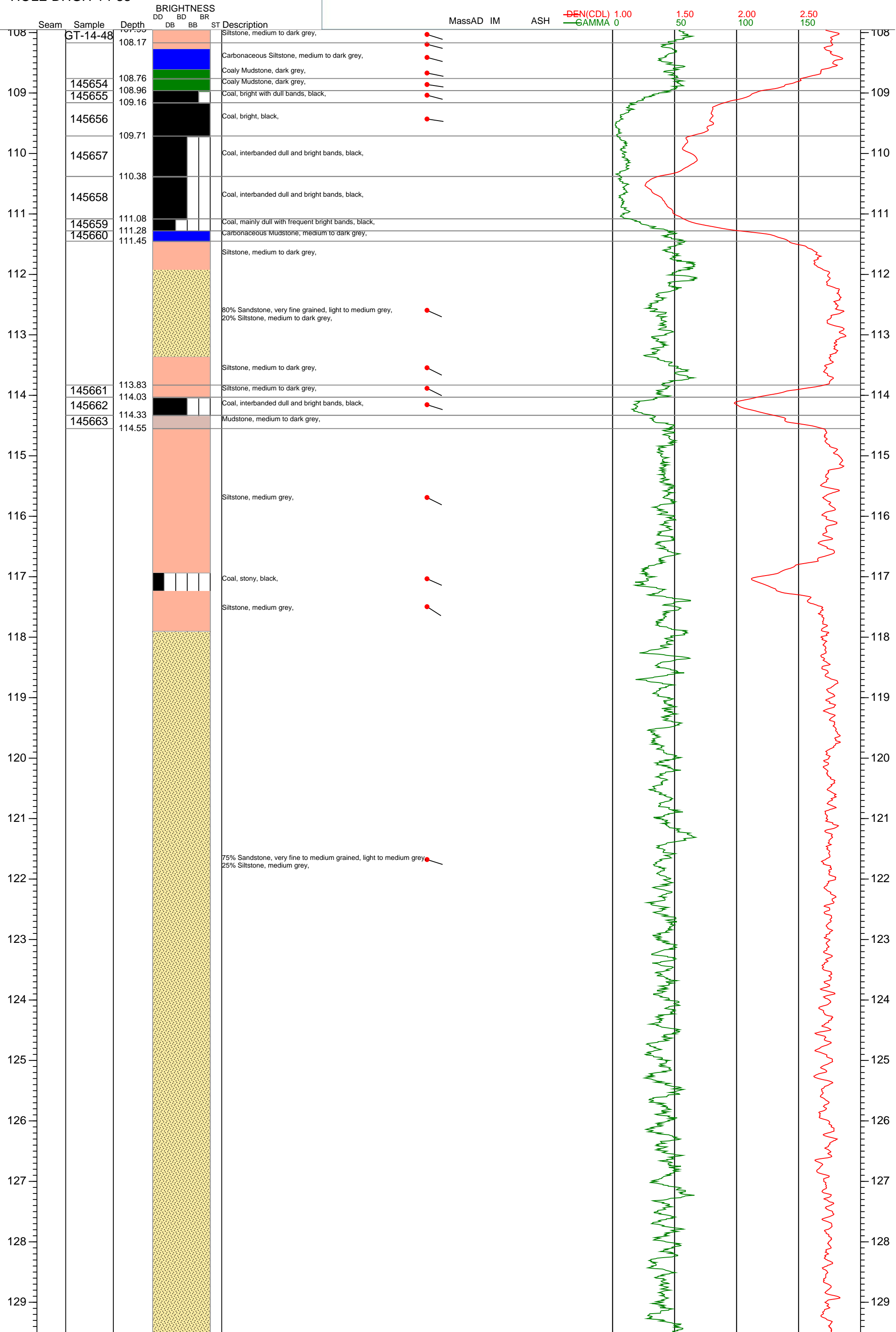
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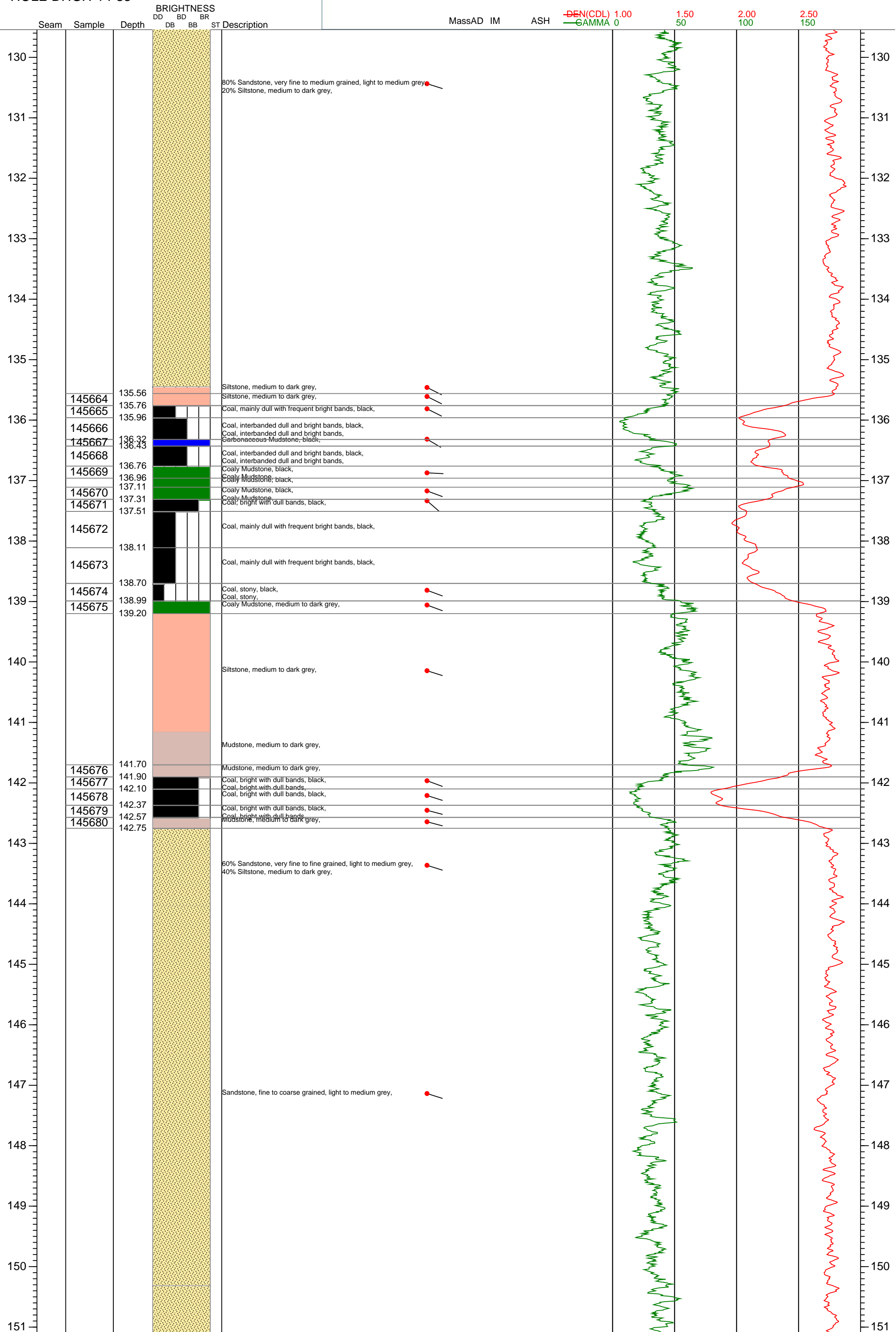
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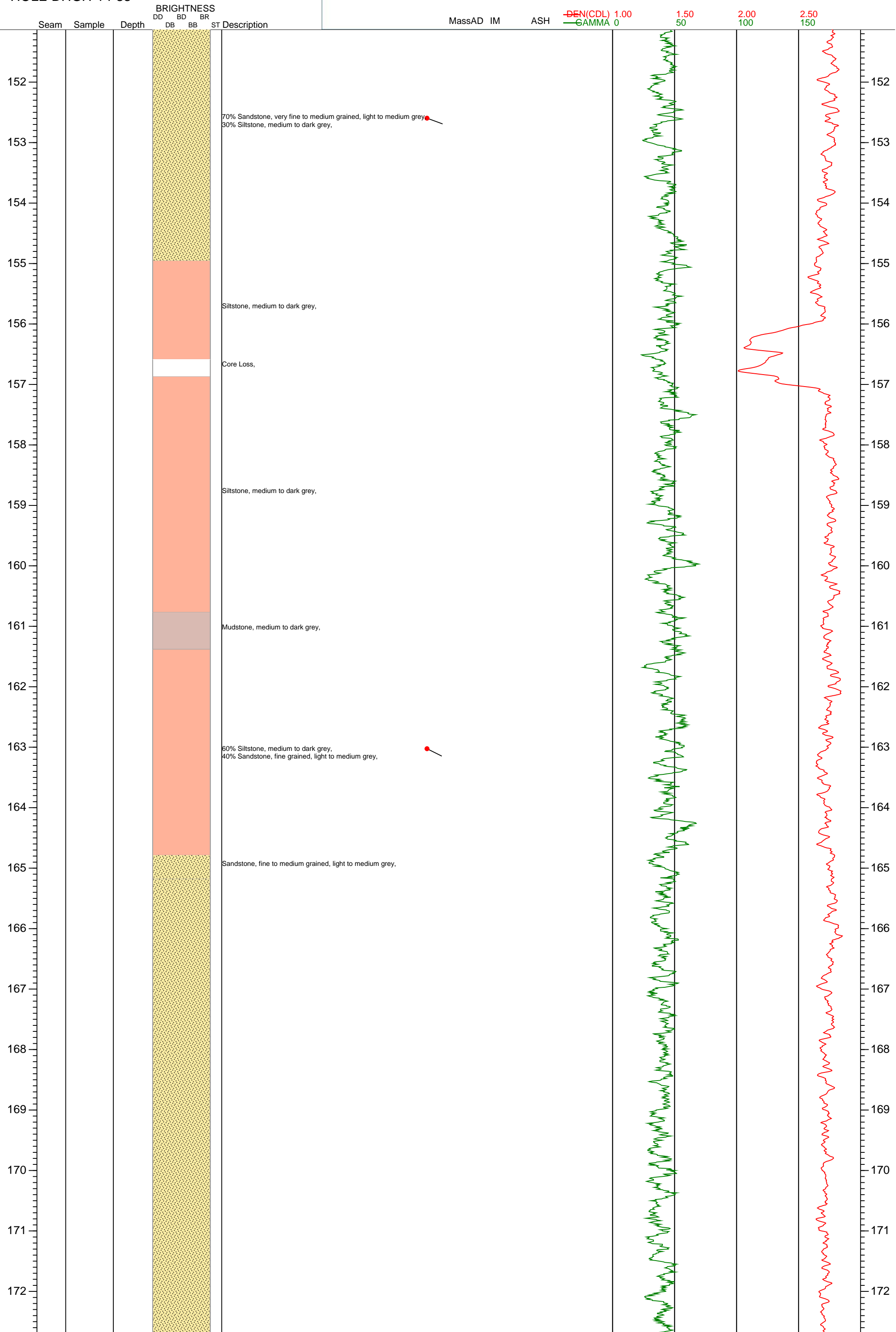
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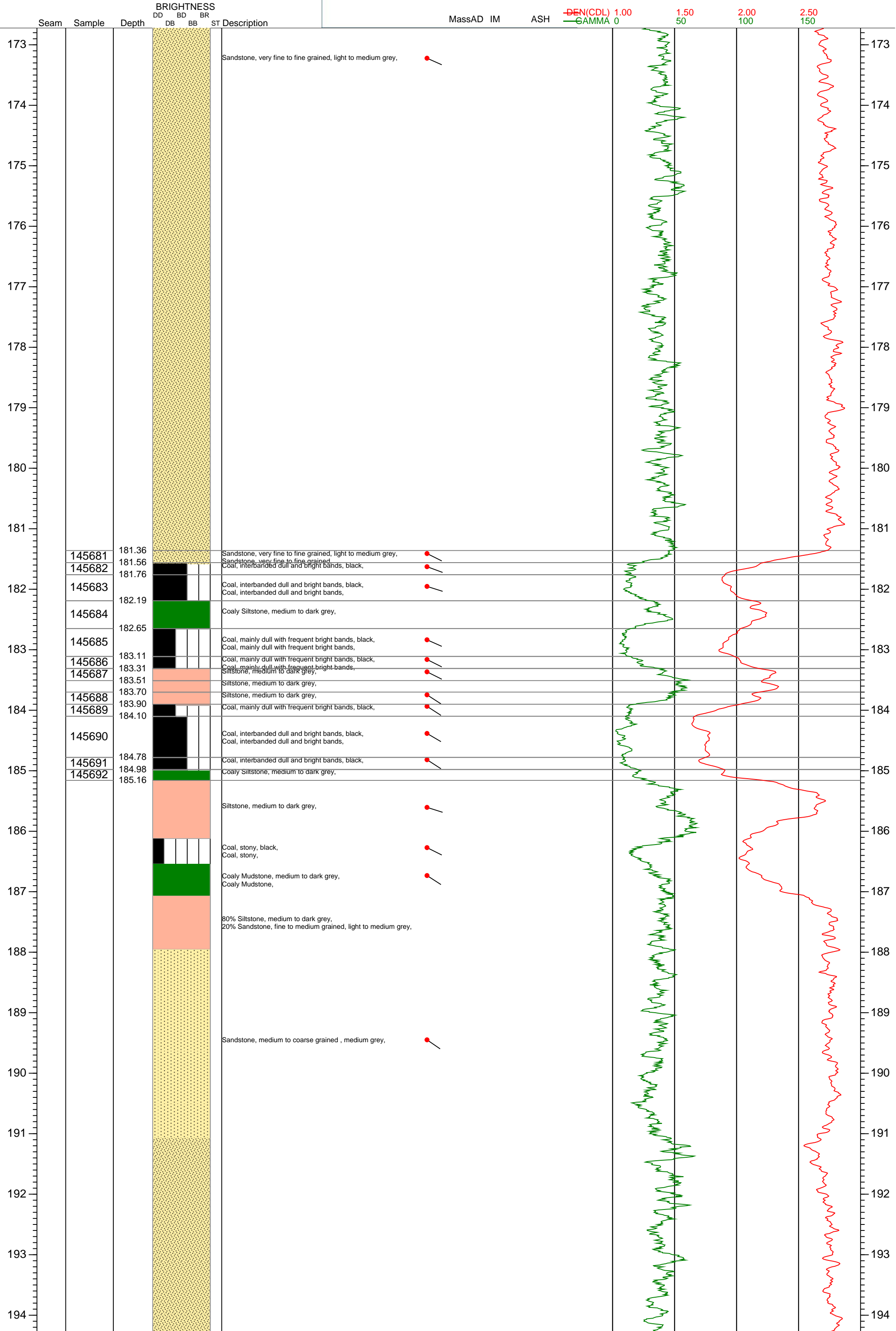


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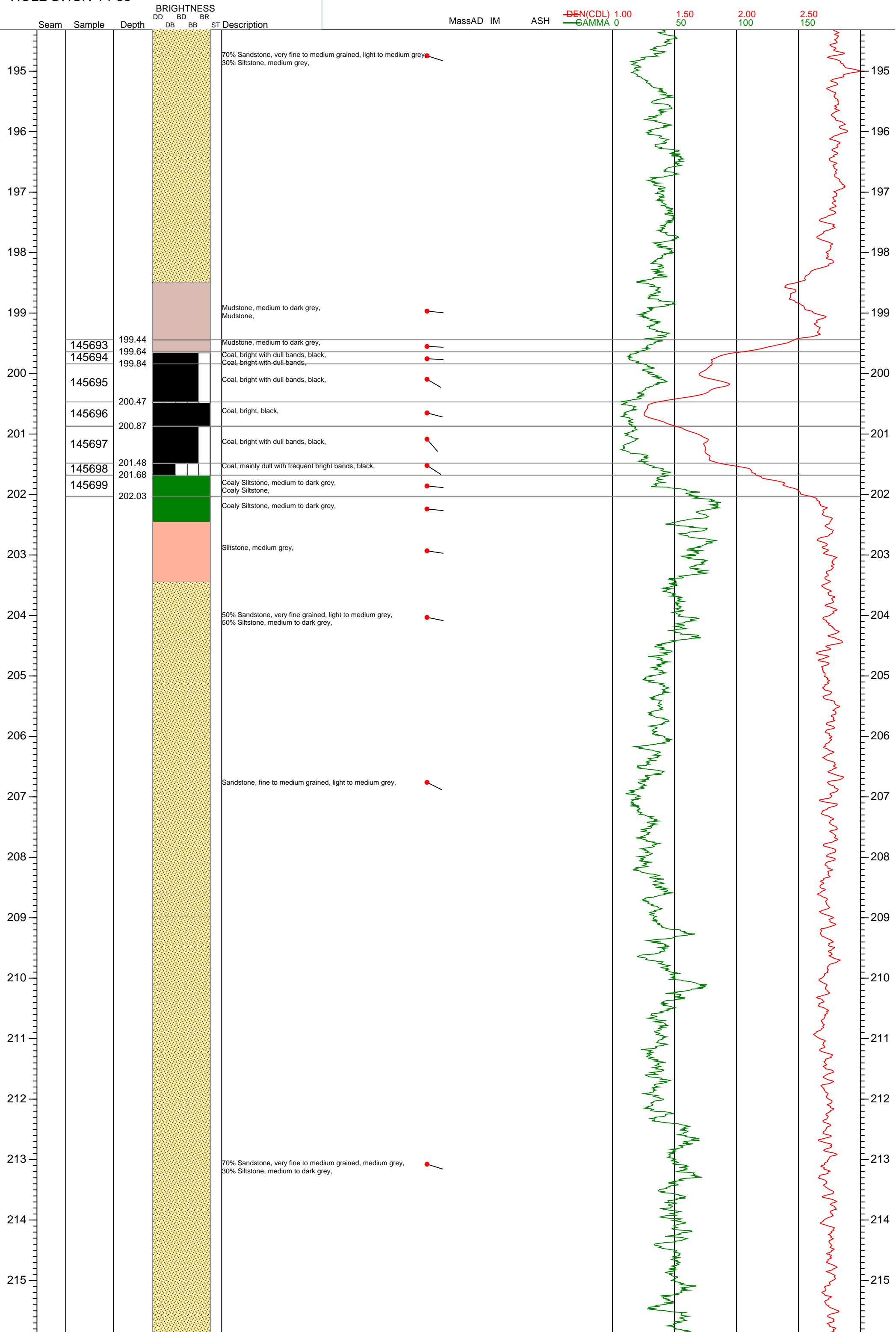


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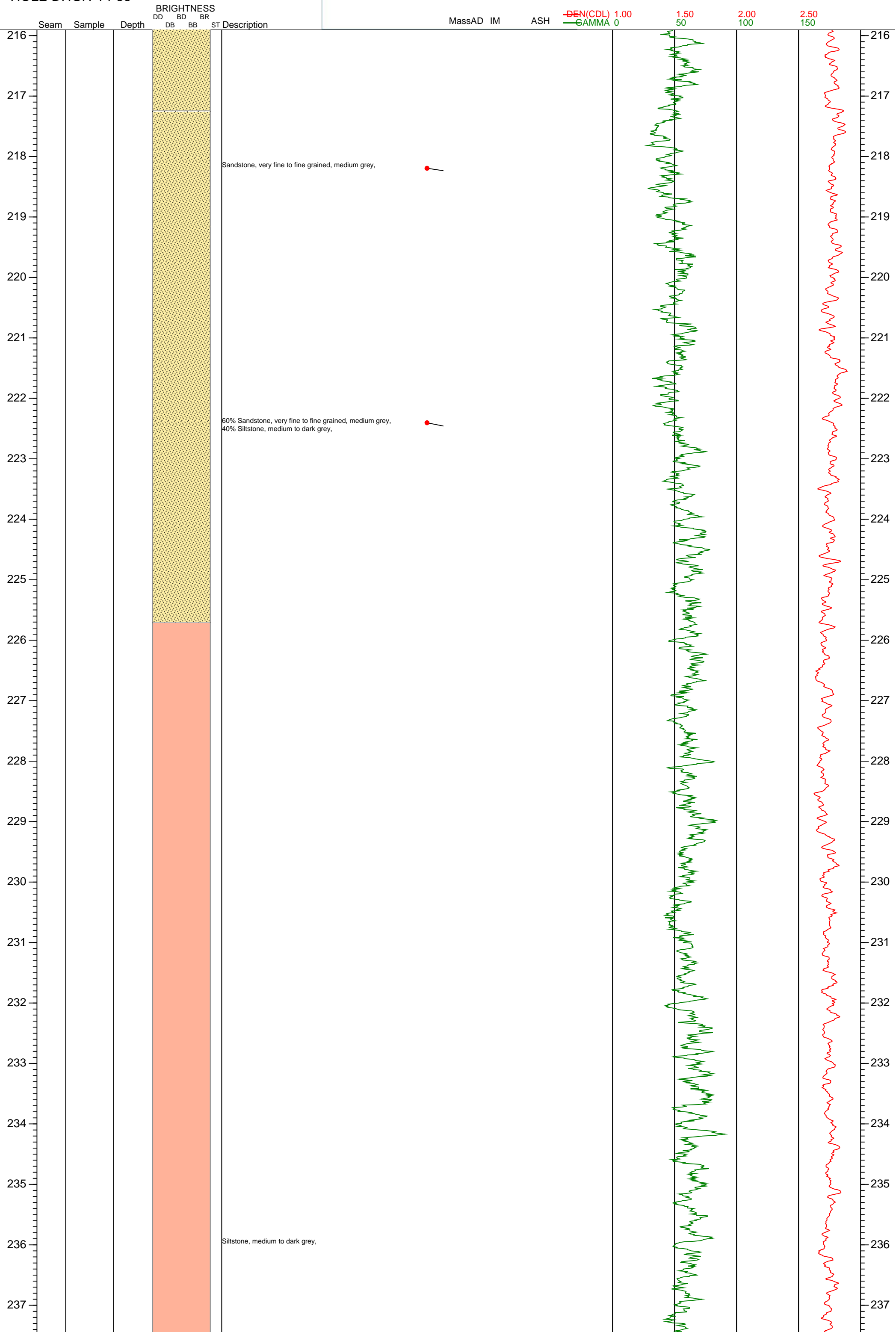




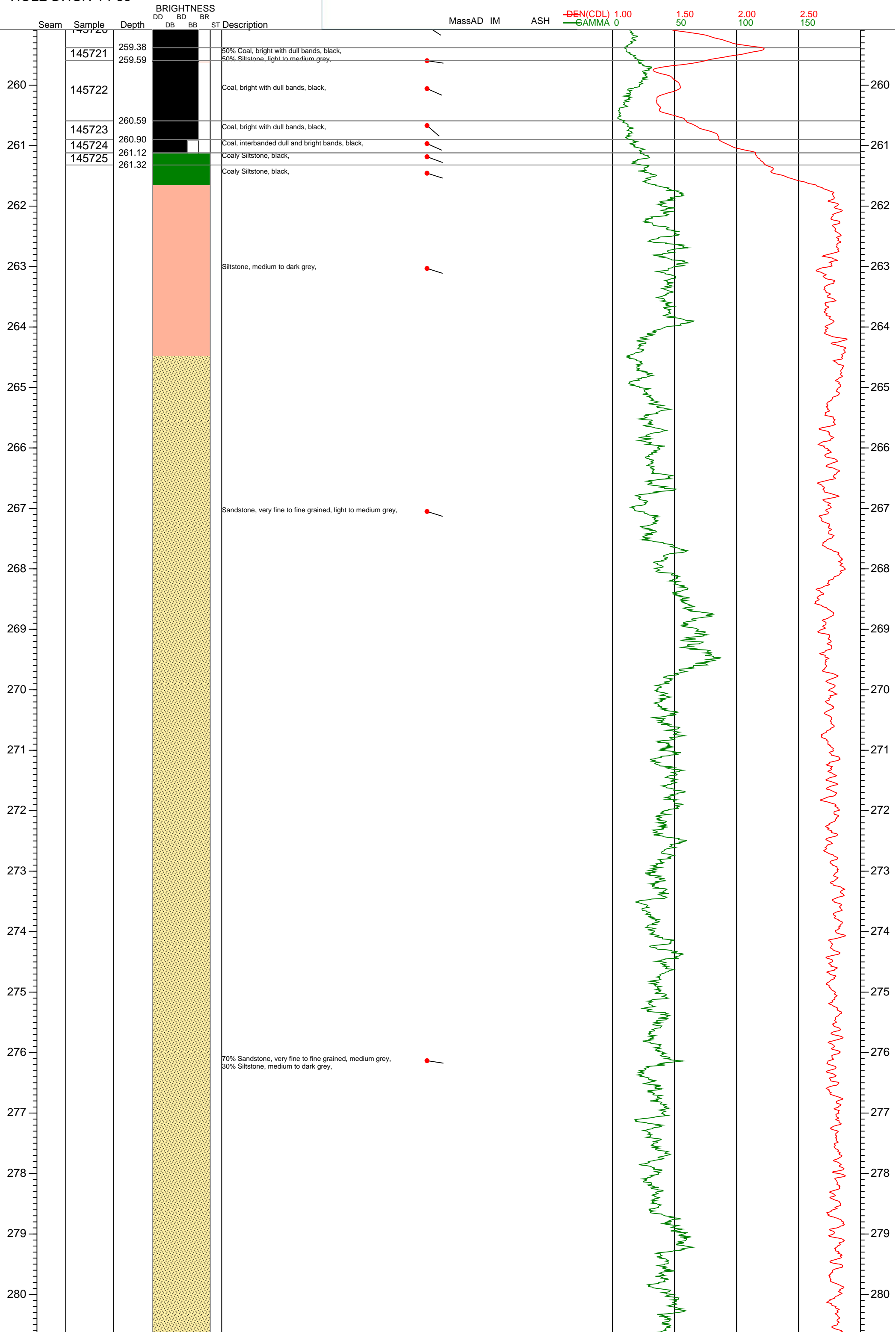
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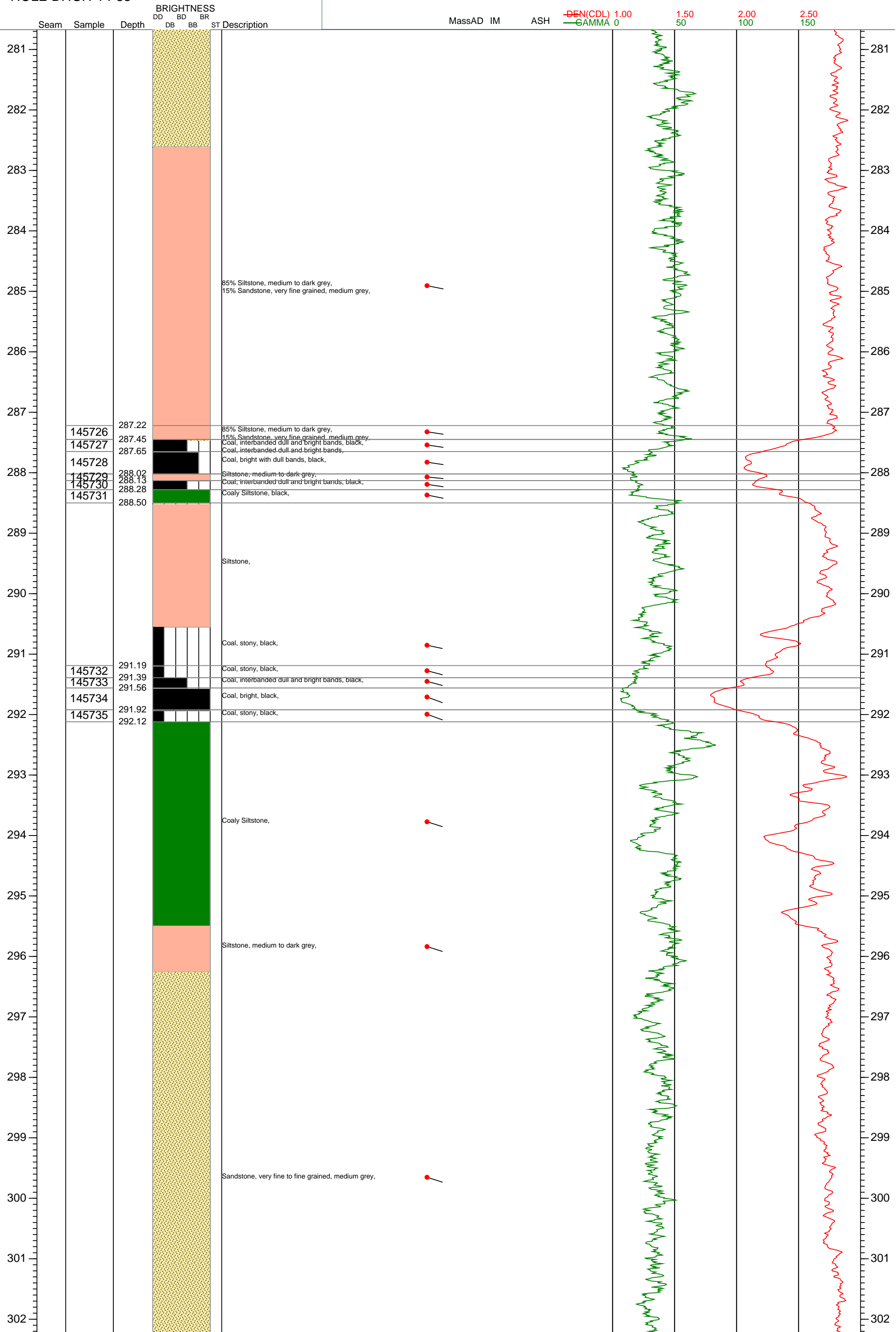
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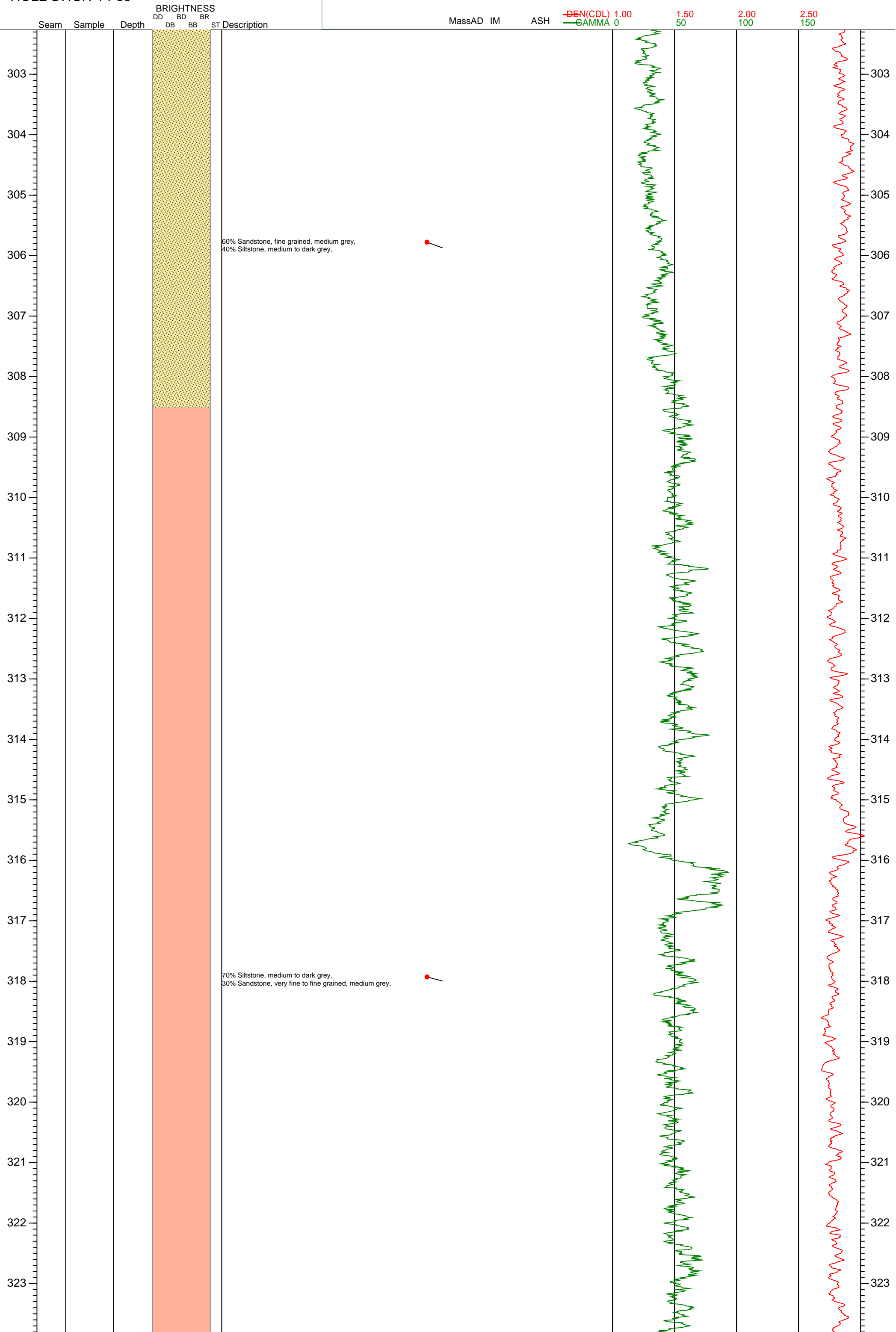
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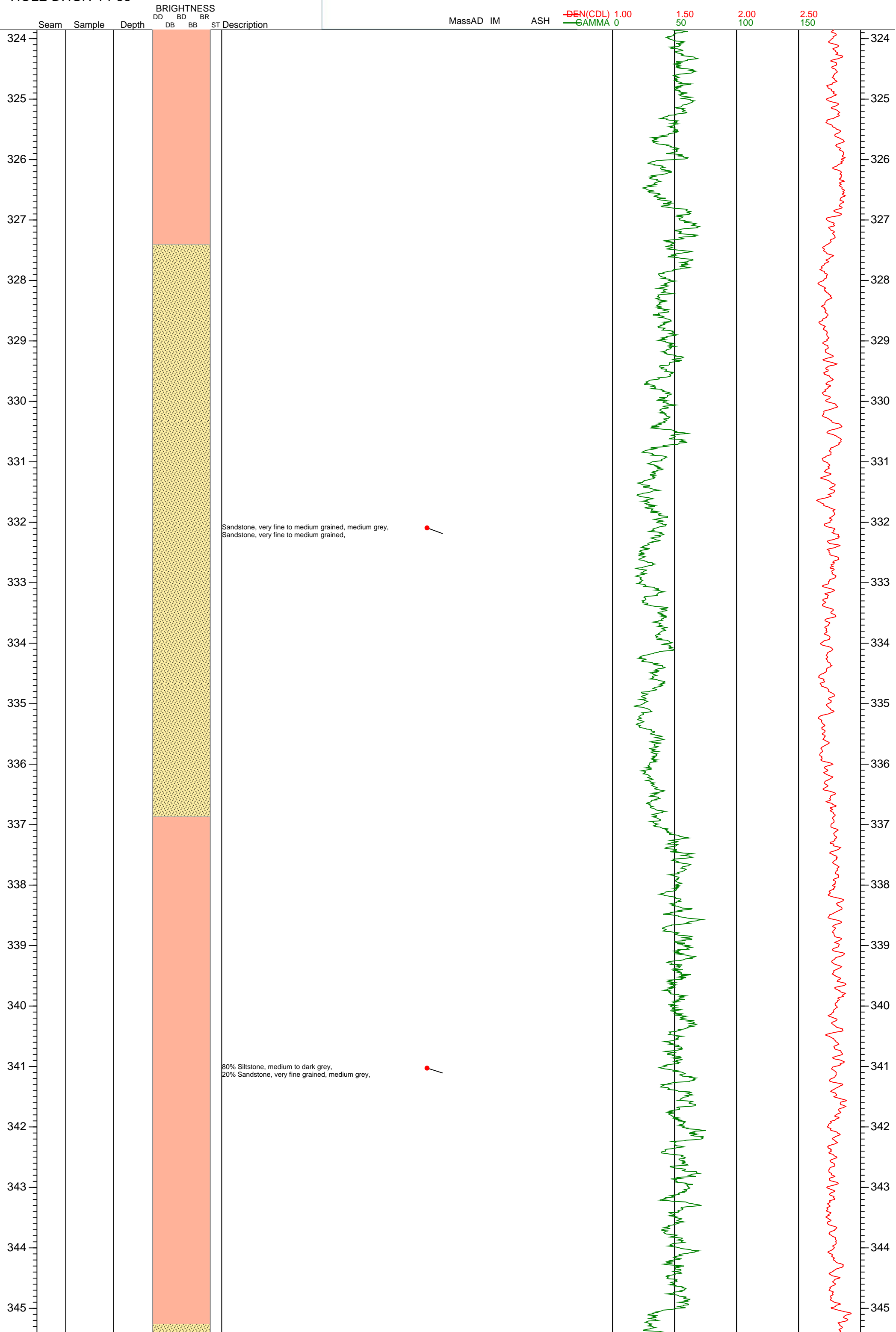
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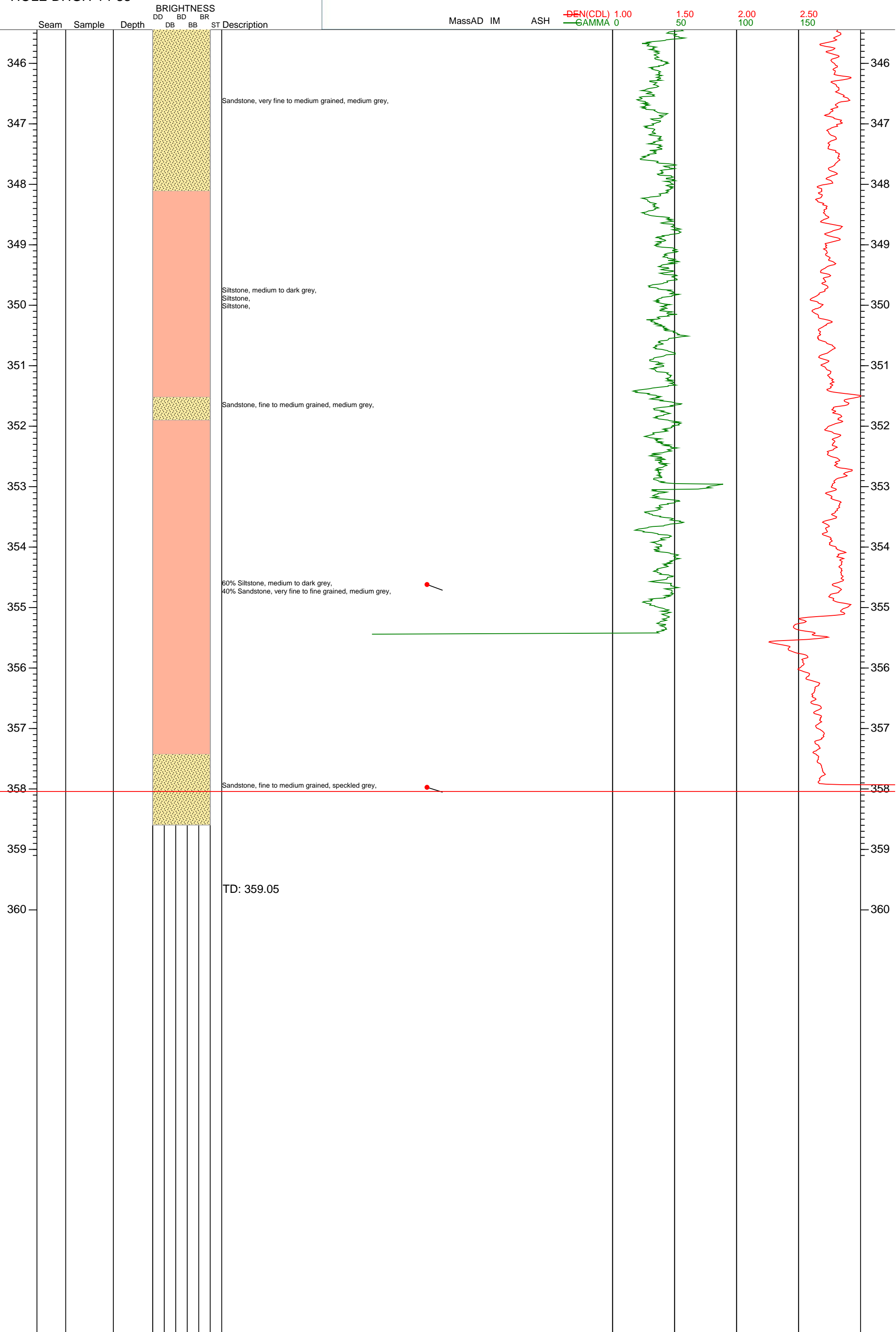
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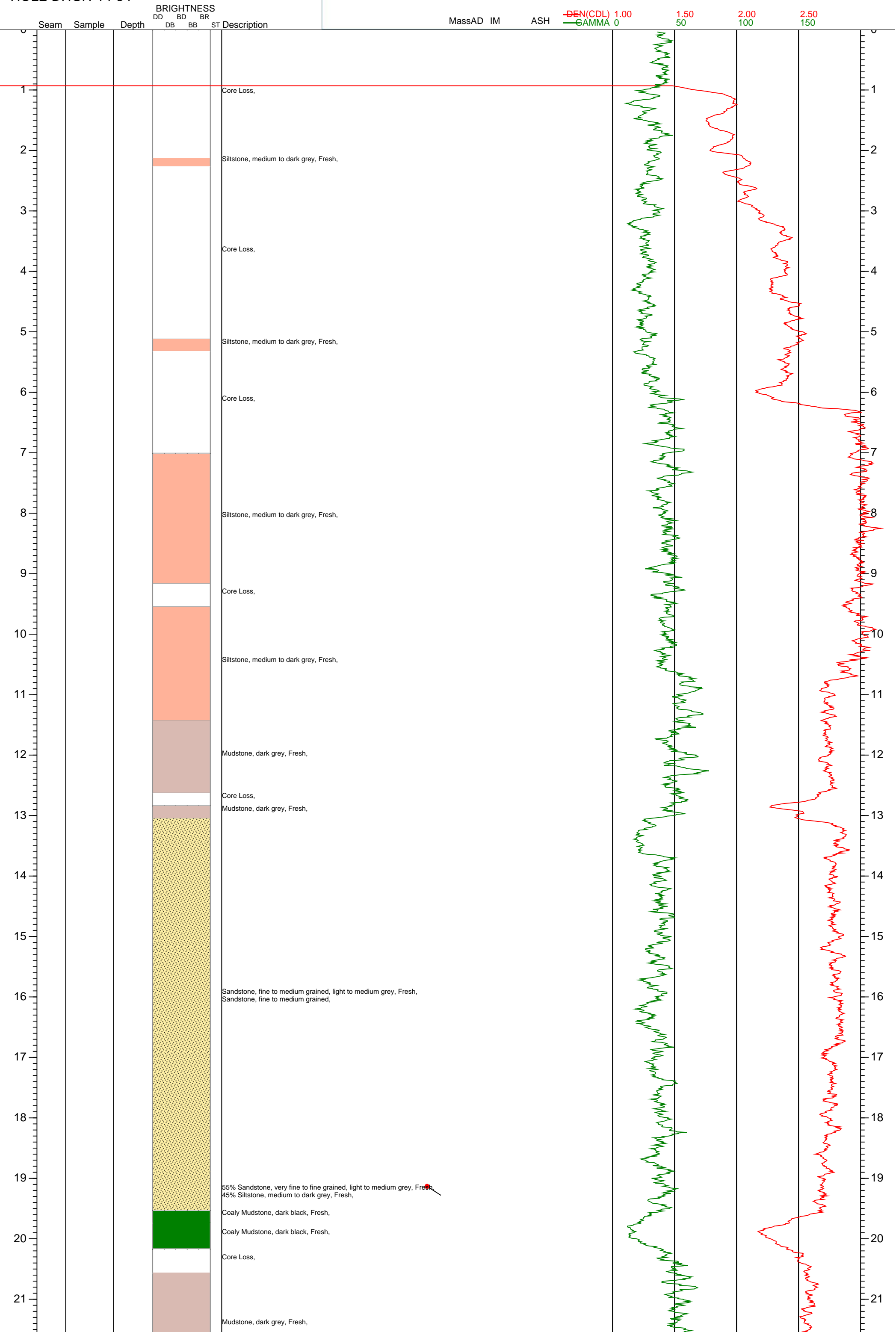


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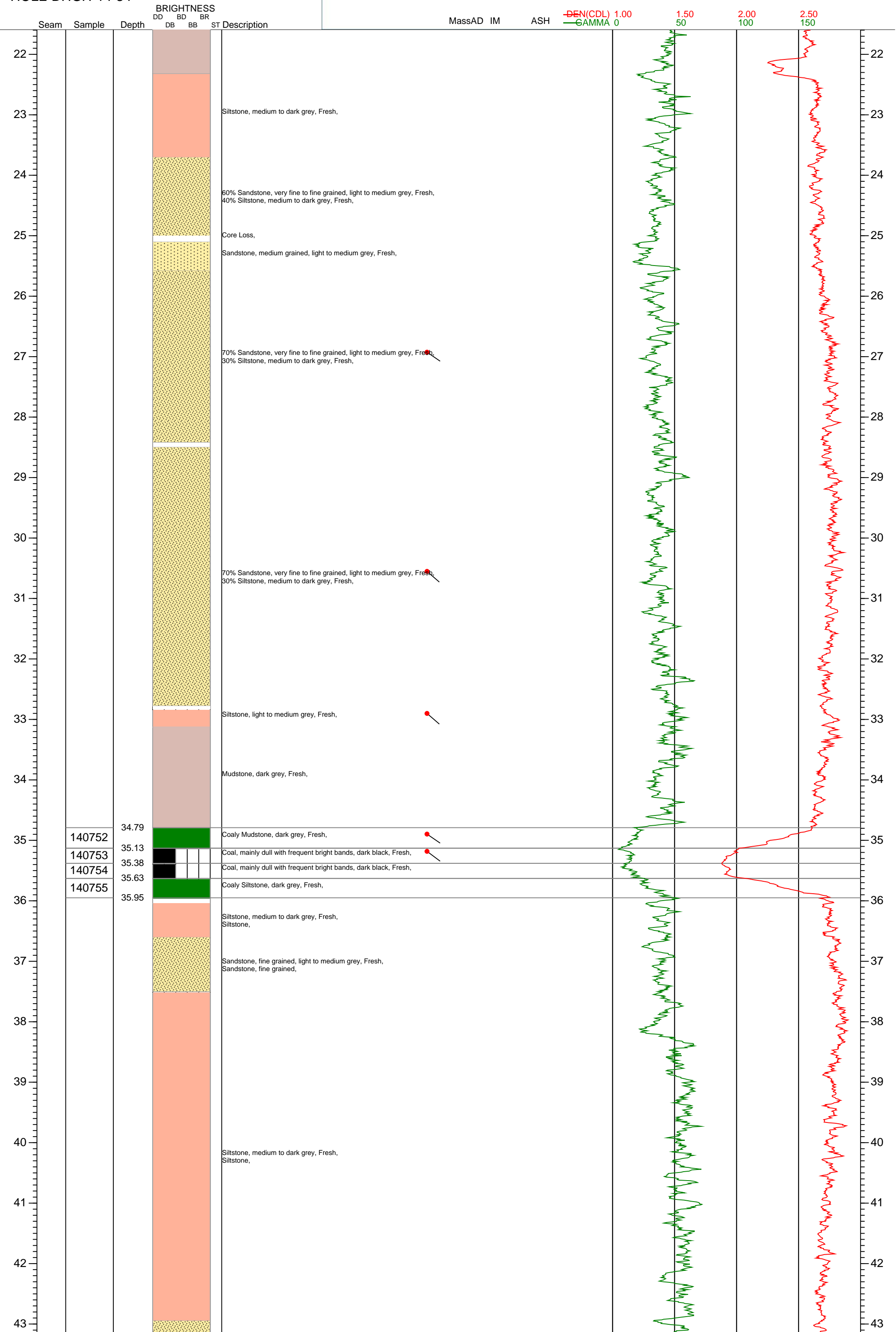


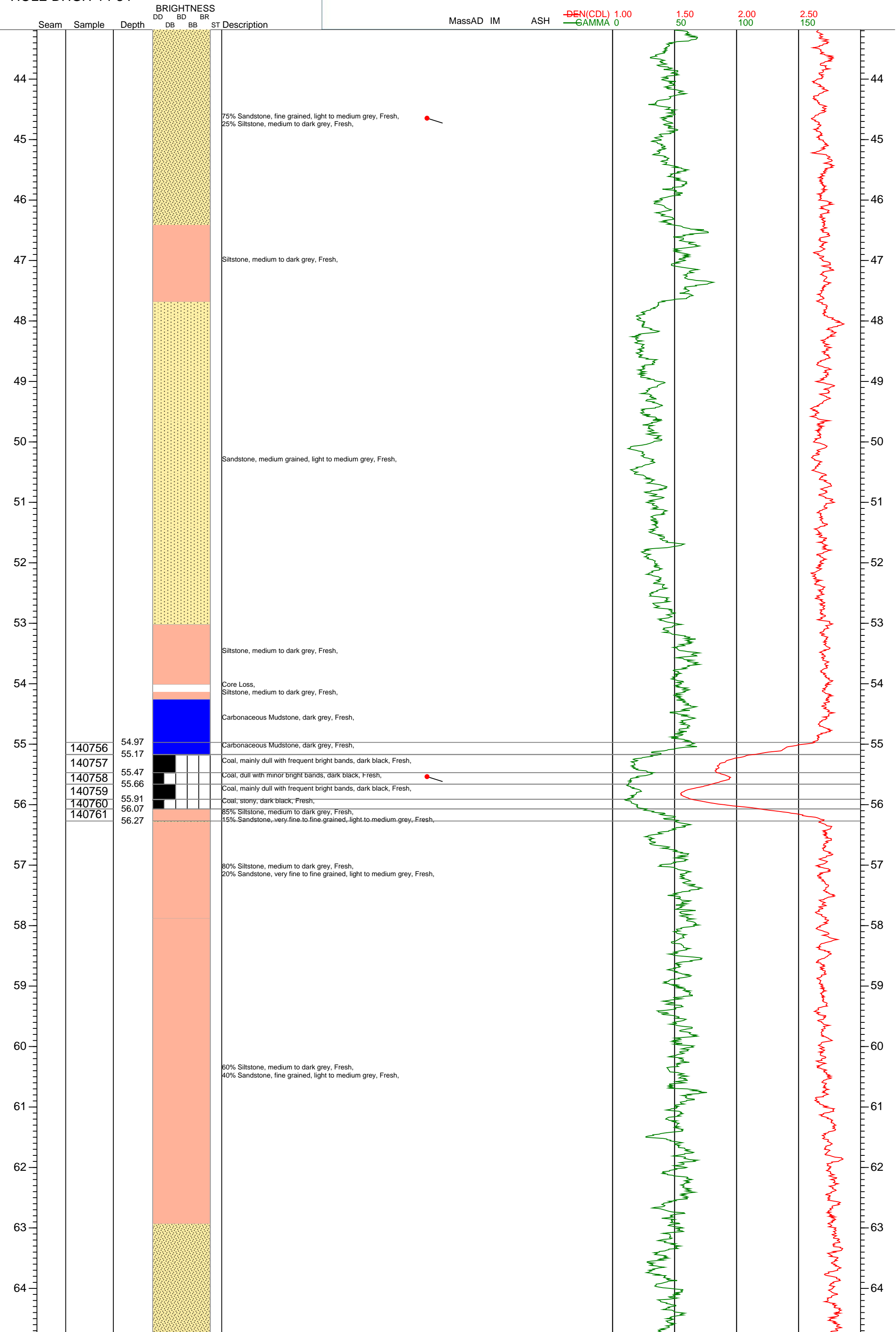
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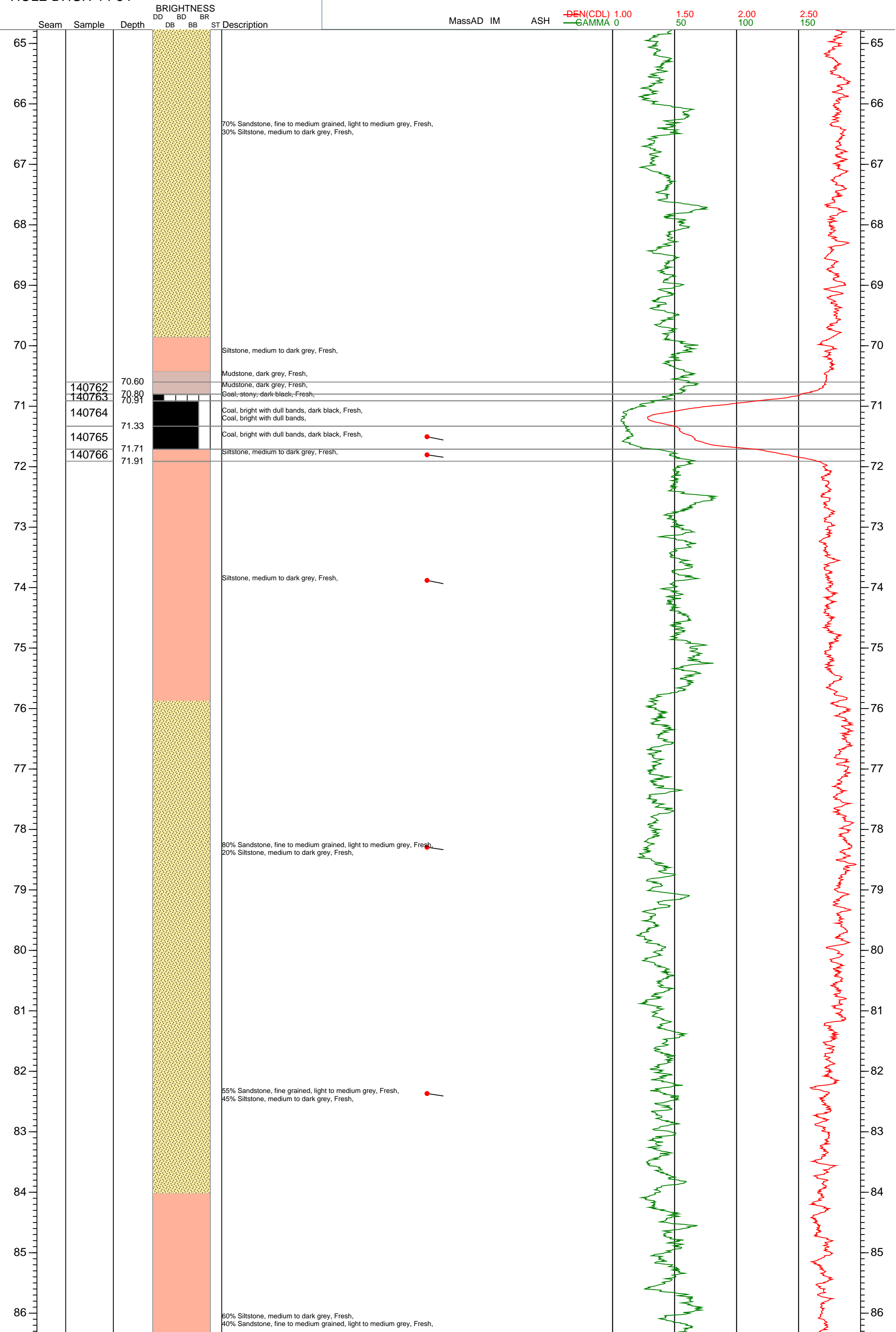


GROUNDHOG
HOLE DHGH-14-34

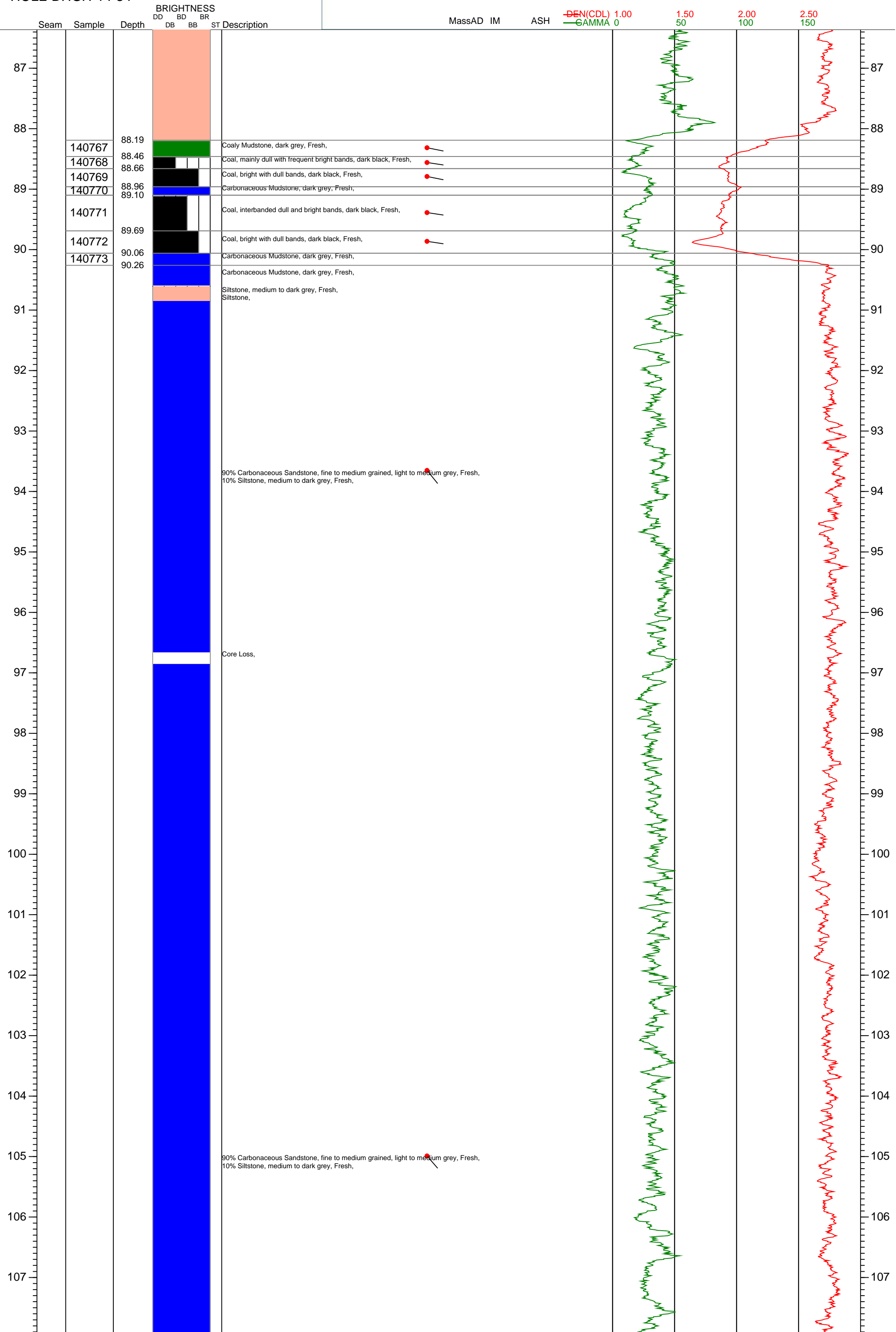




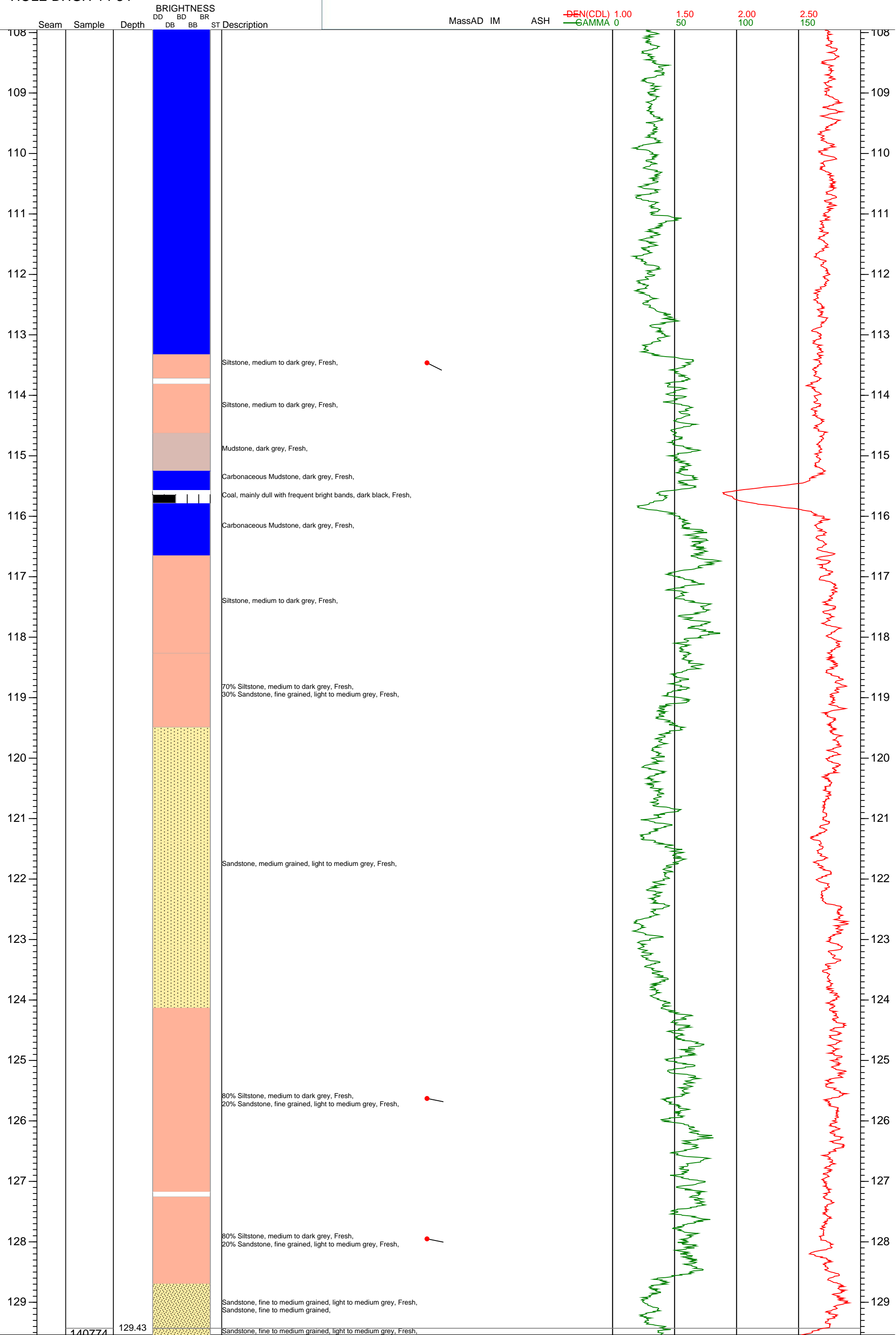
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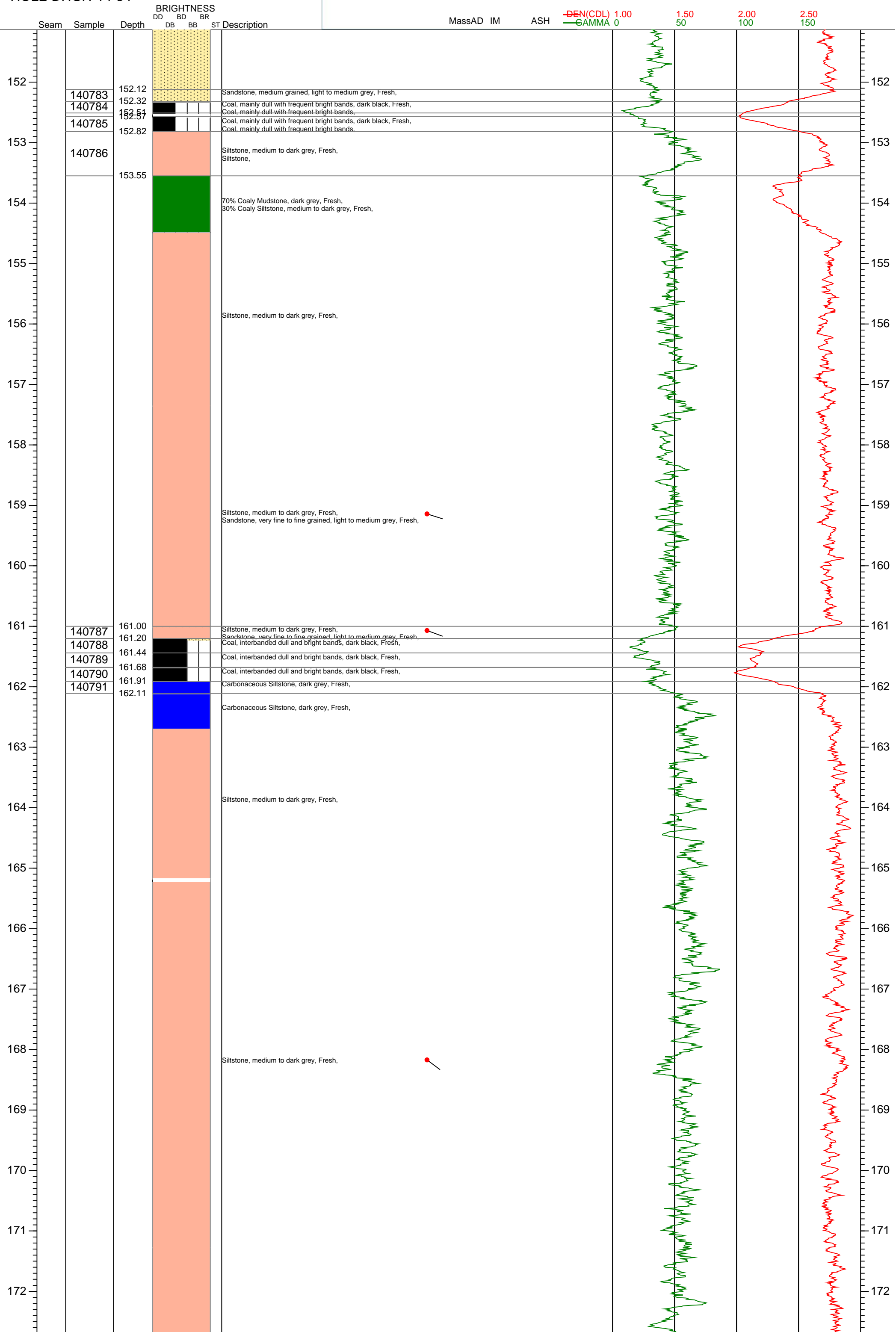
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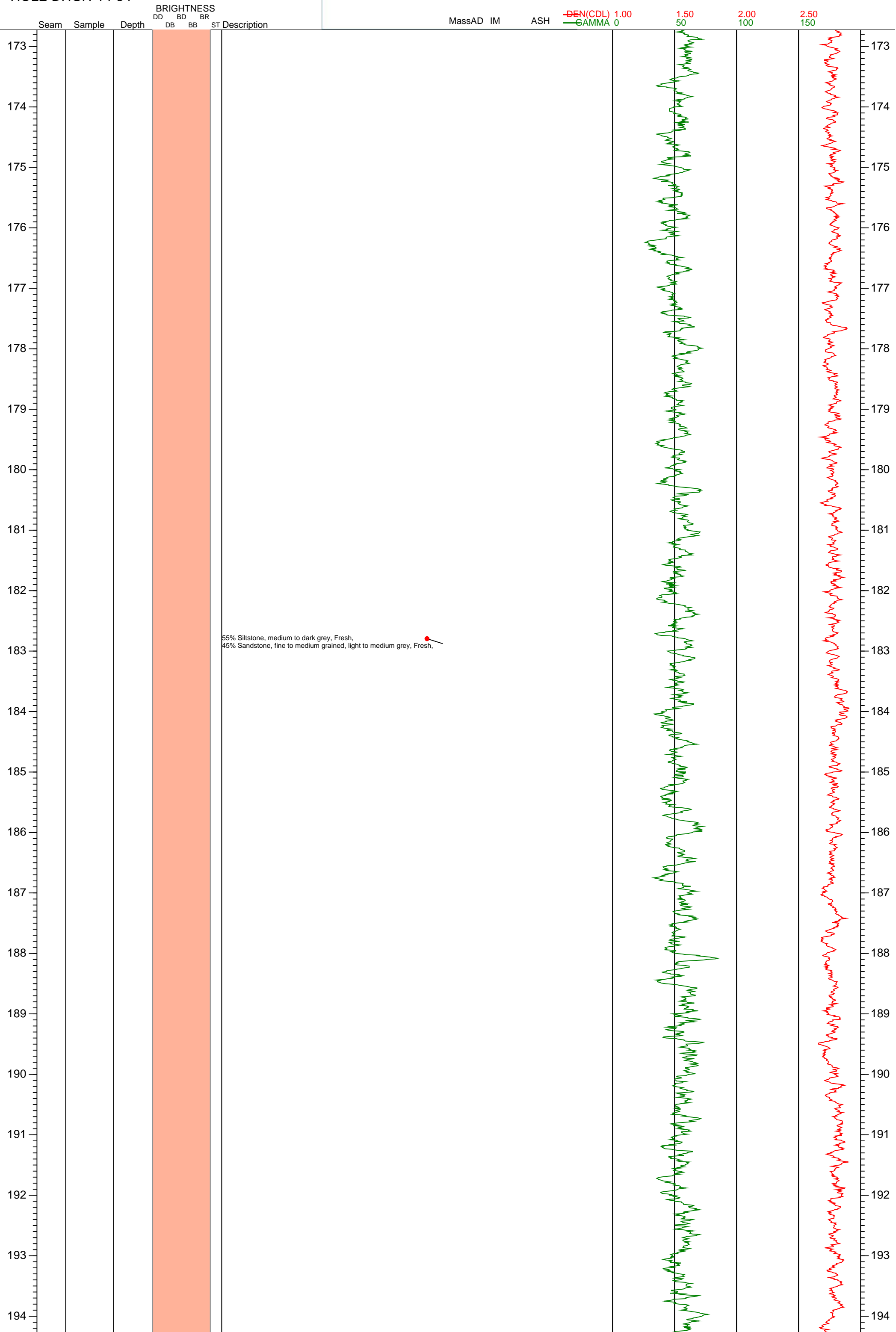


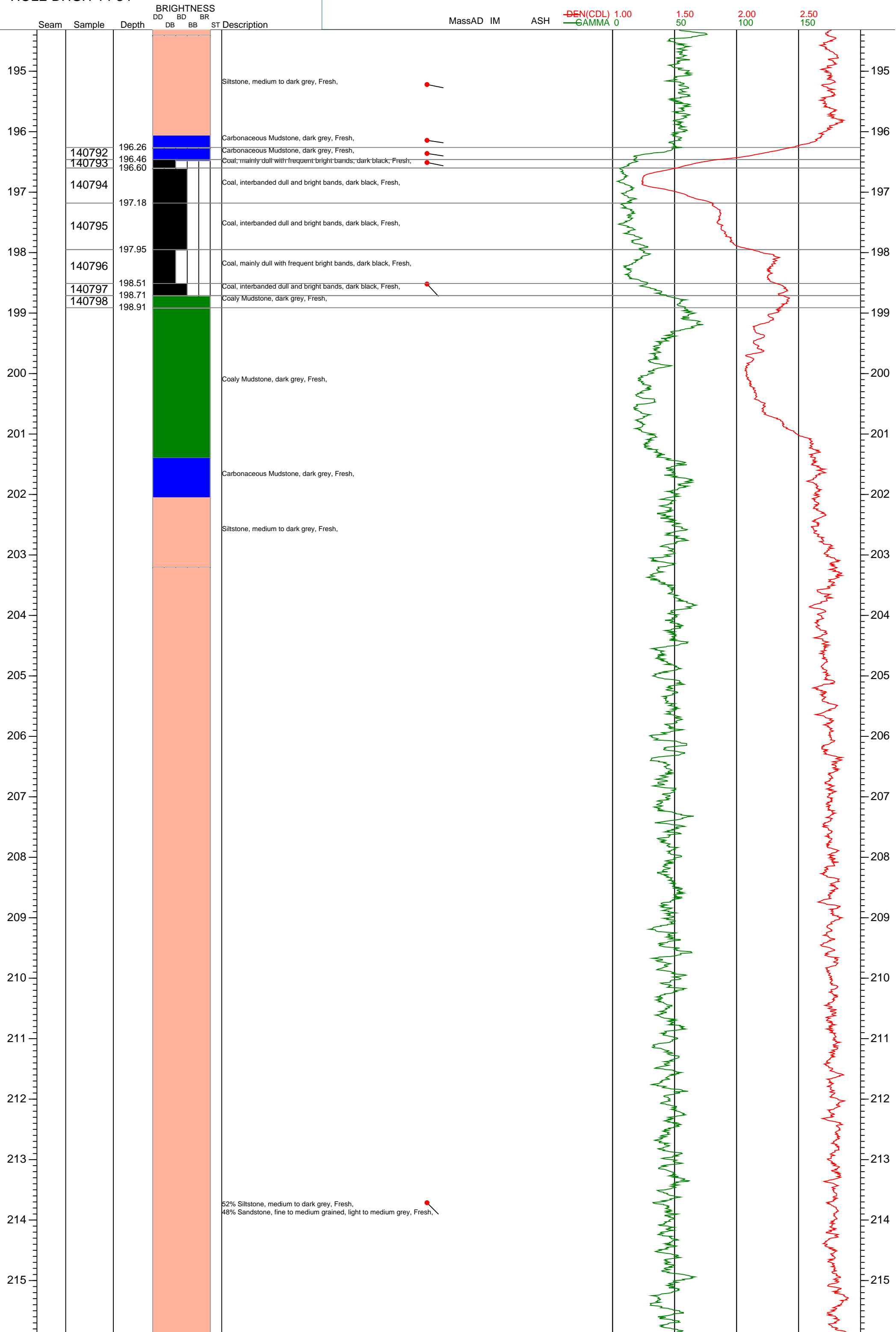
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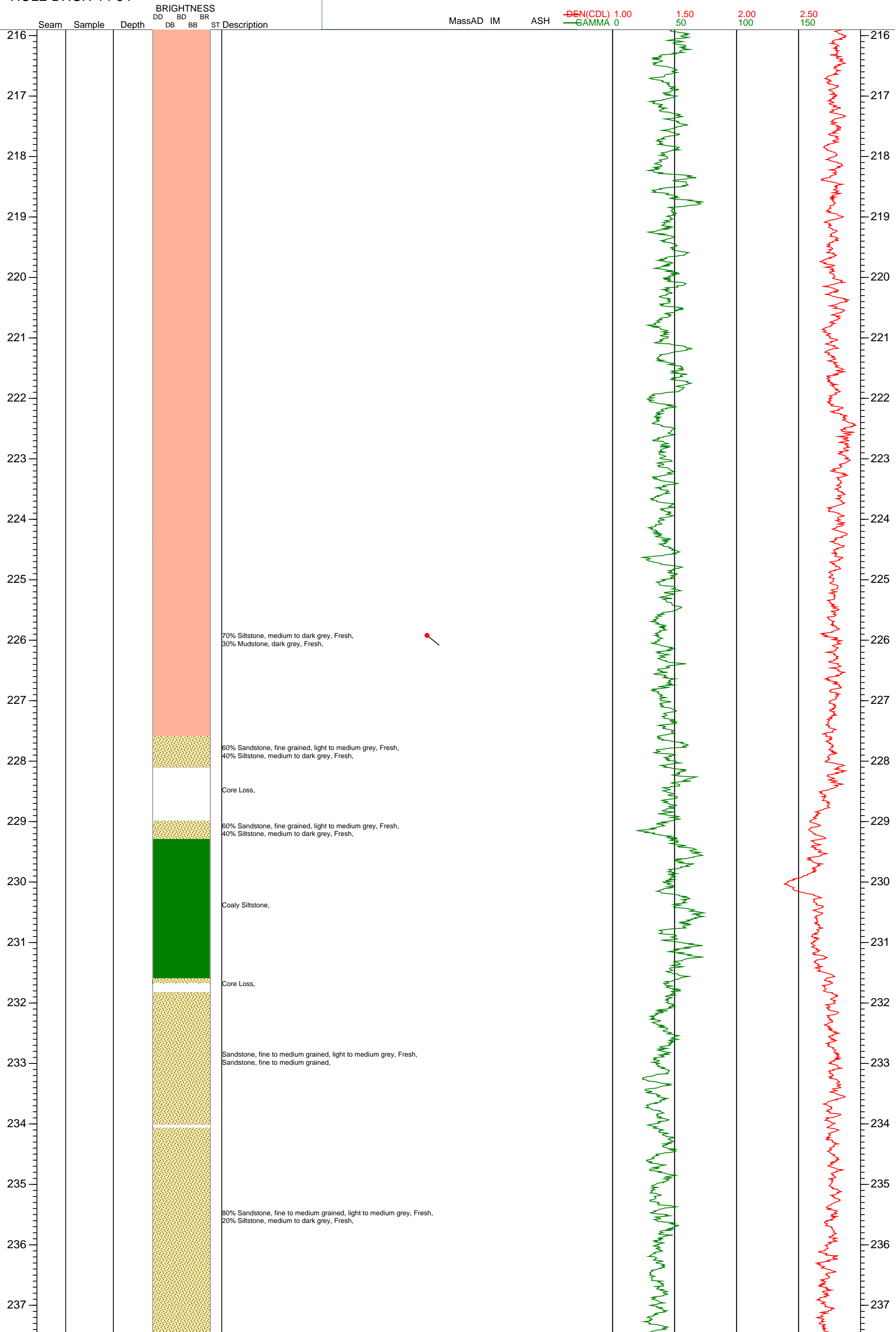
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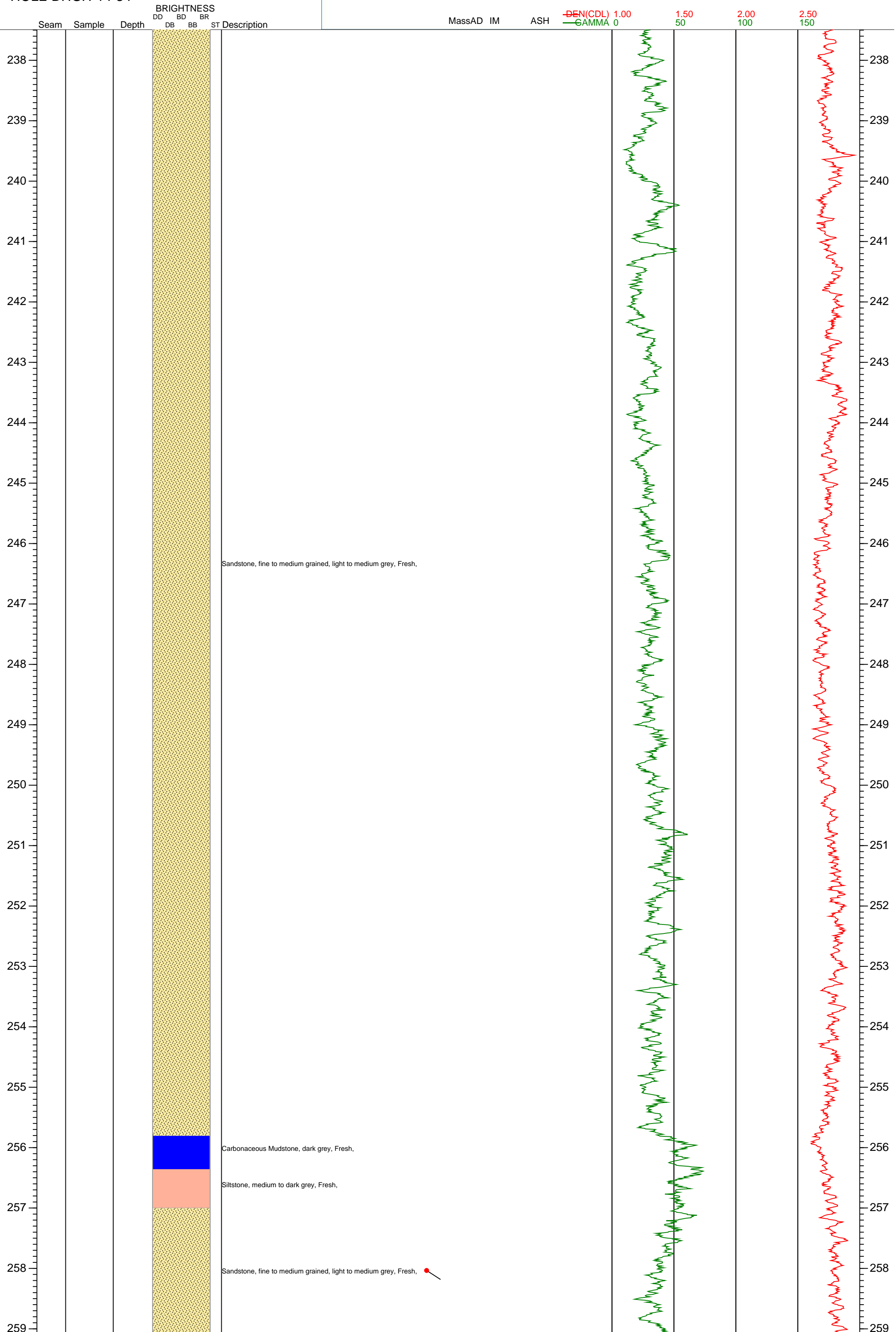






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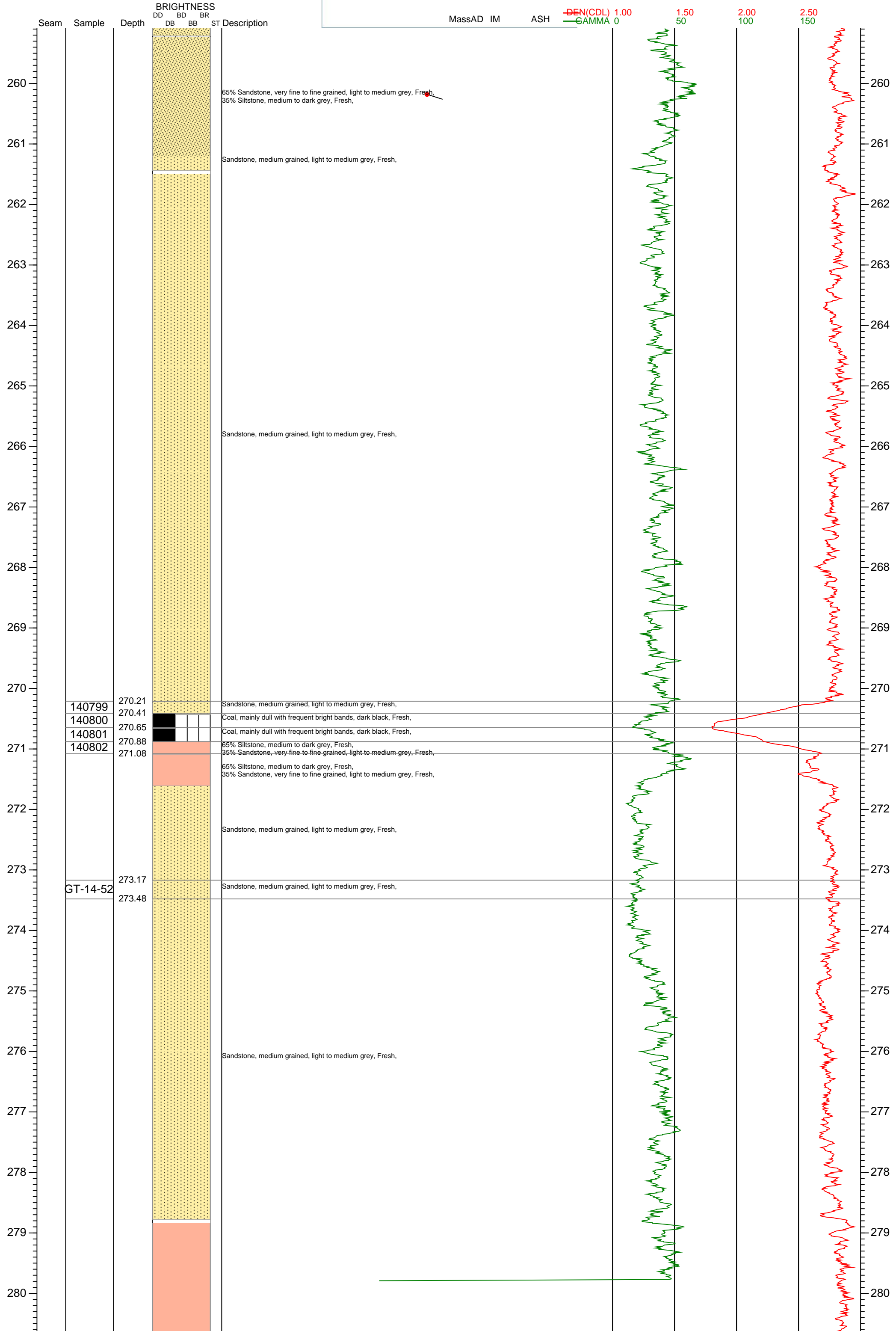
Sandstone, fine to medium grained, light to medium grey, Fresh,

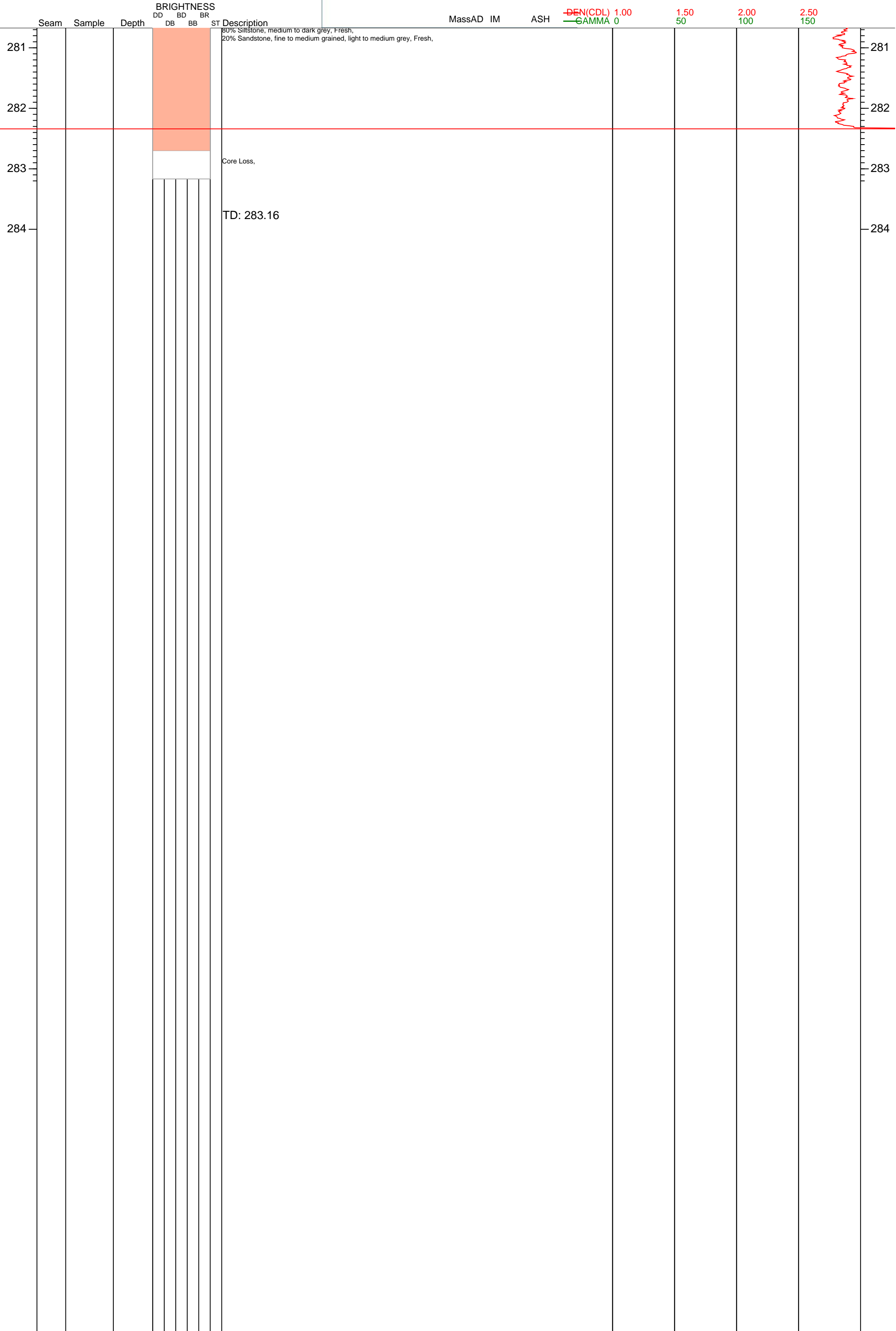
Carbonaceous Mudstone, dark grey, Fresh,

Siltstone, medium to dark grey, Fresh,

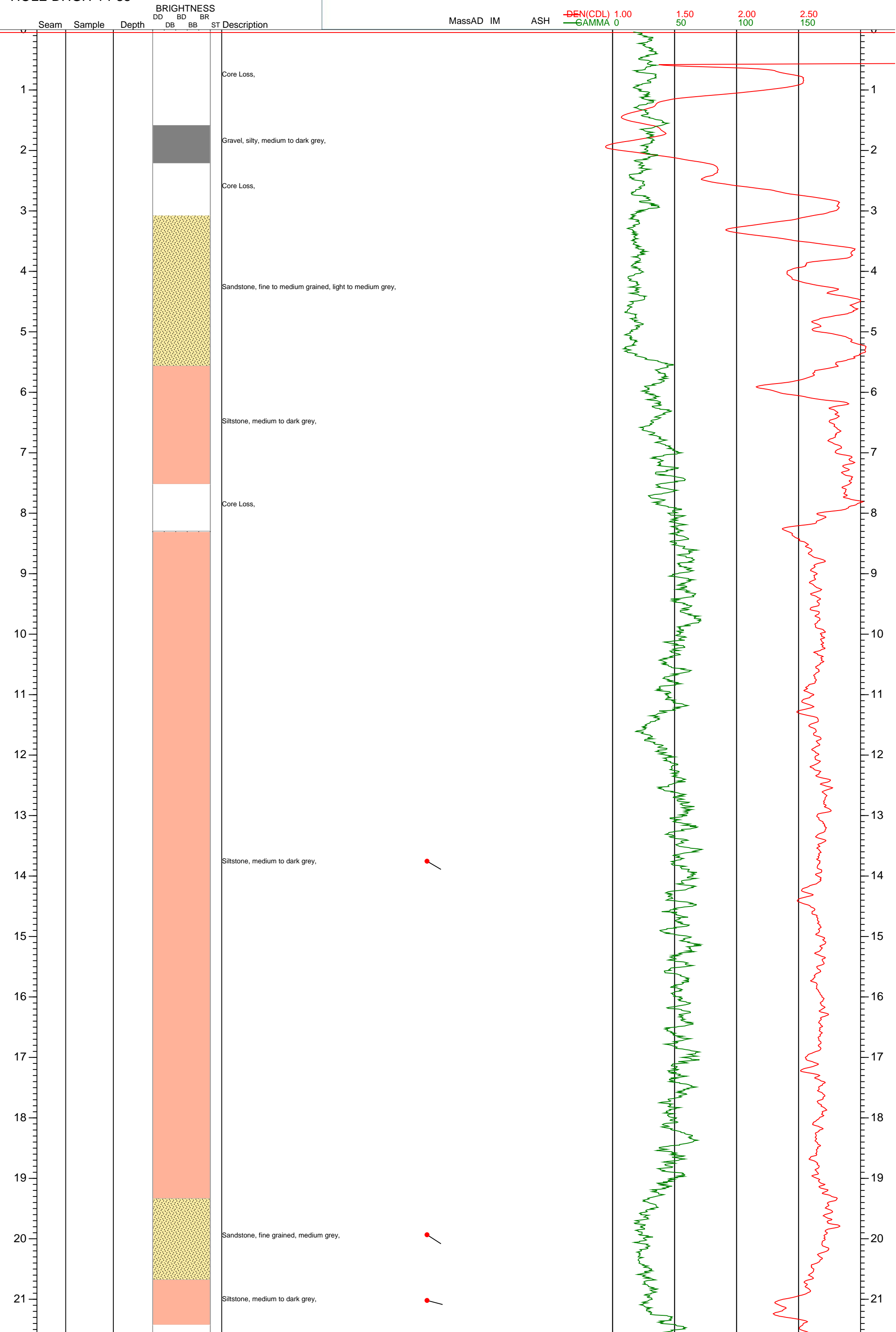
Sandstone, fine to medium grained, light to medium grey, Fresh,



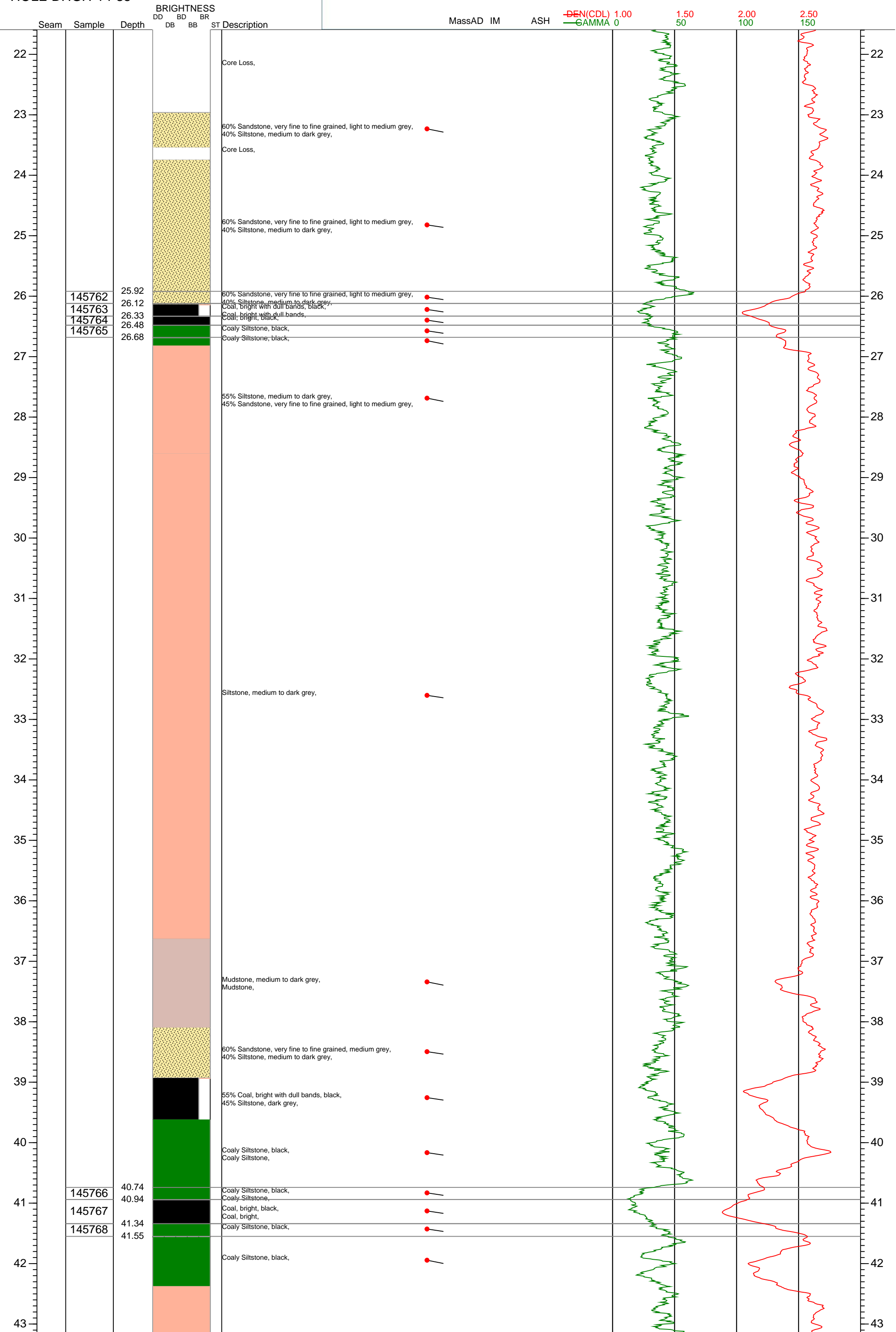




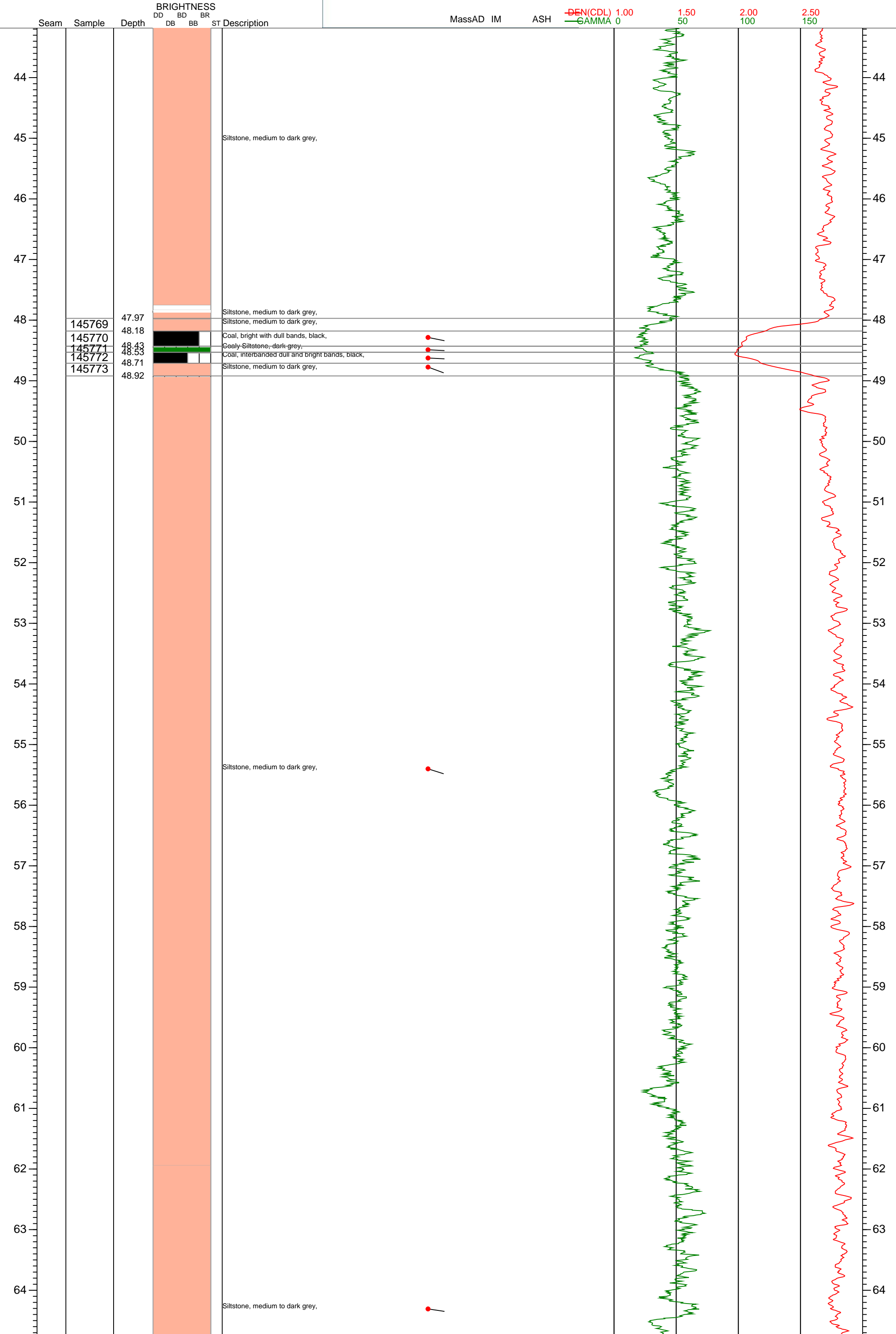
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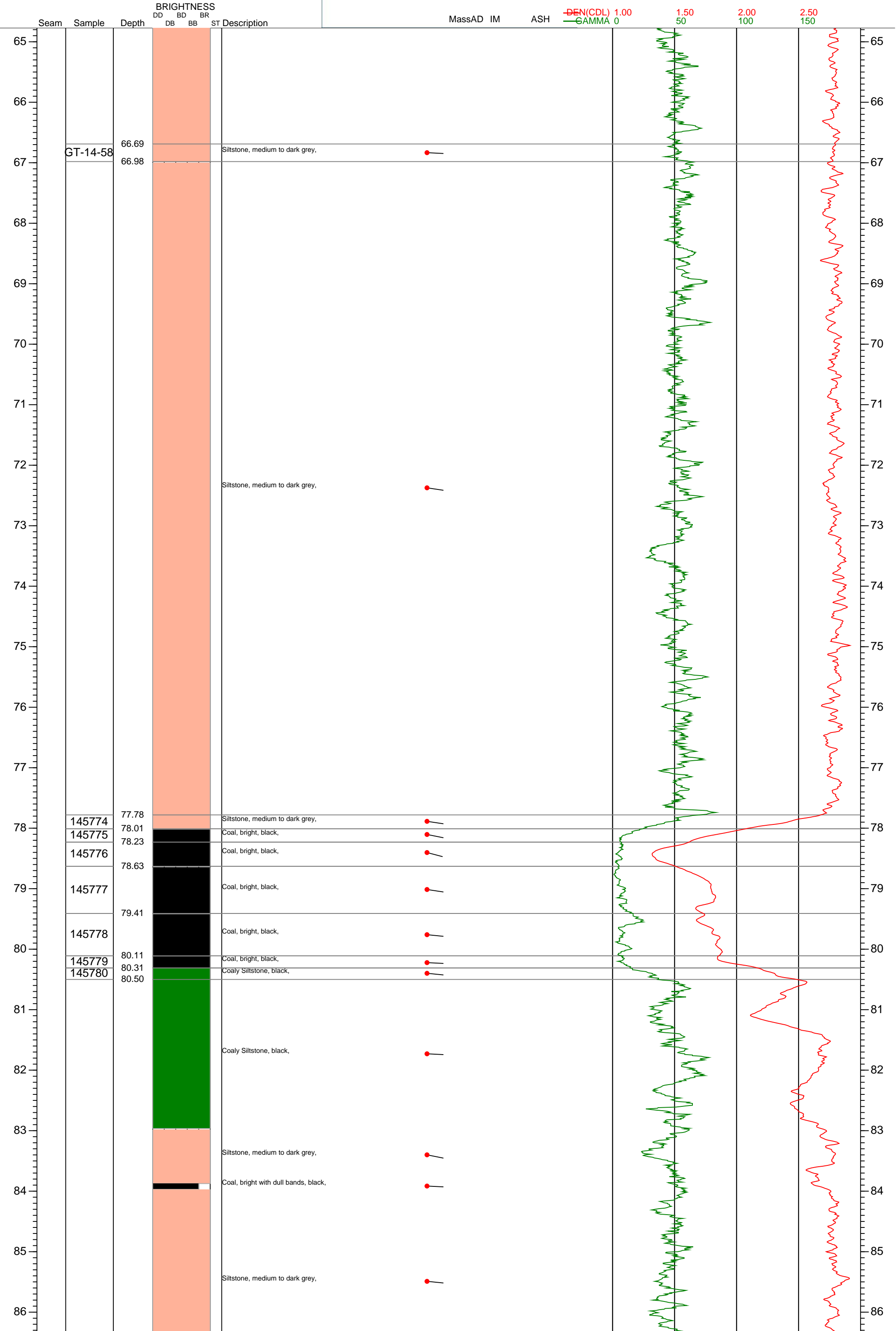
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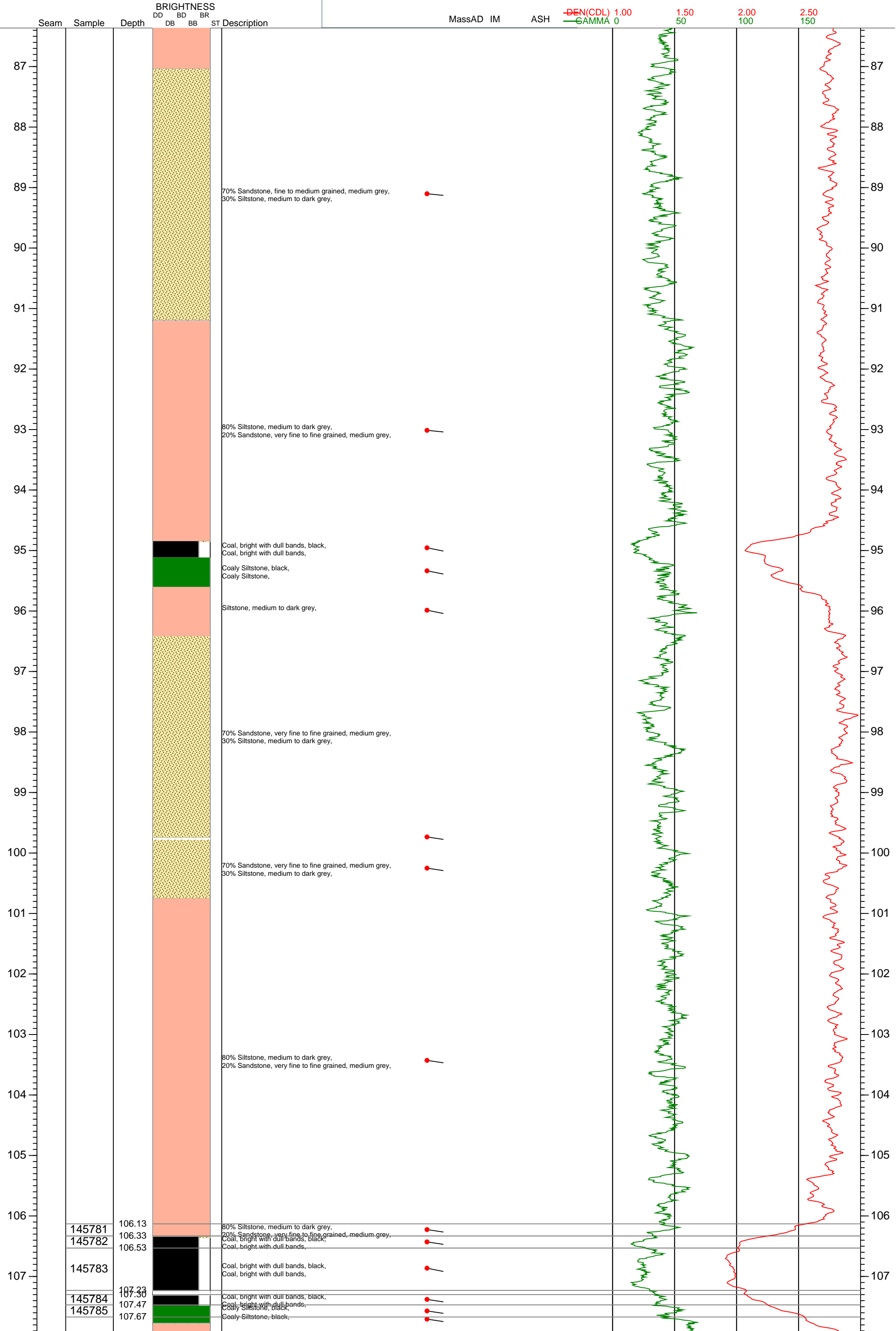
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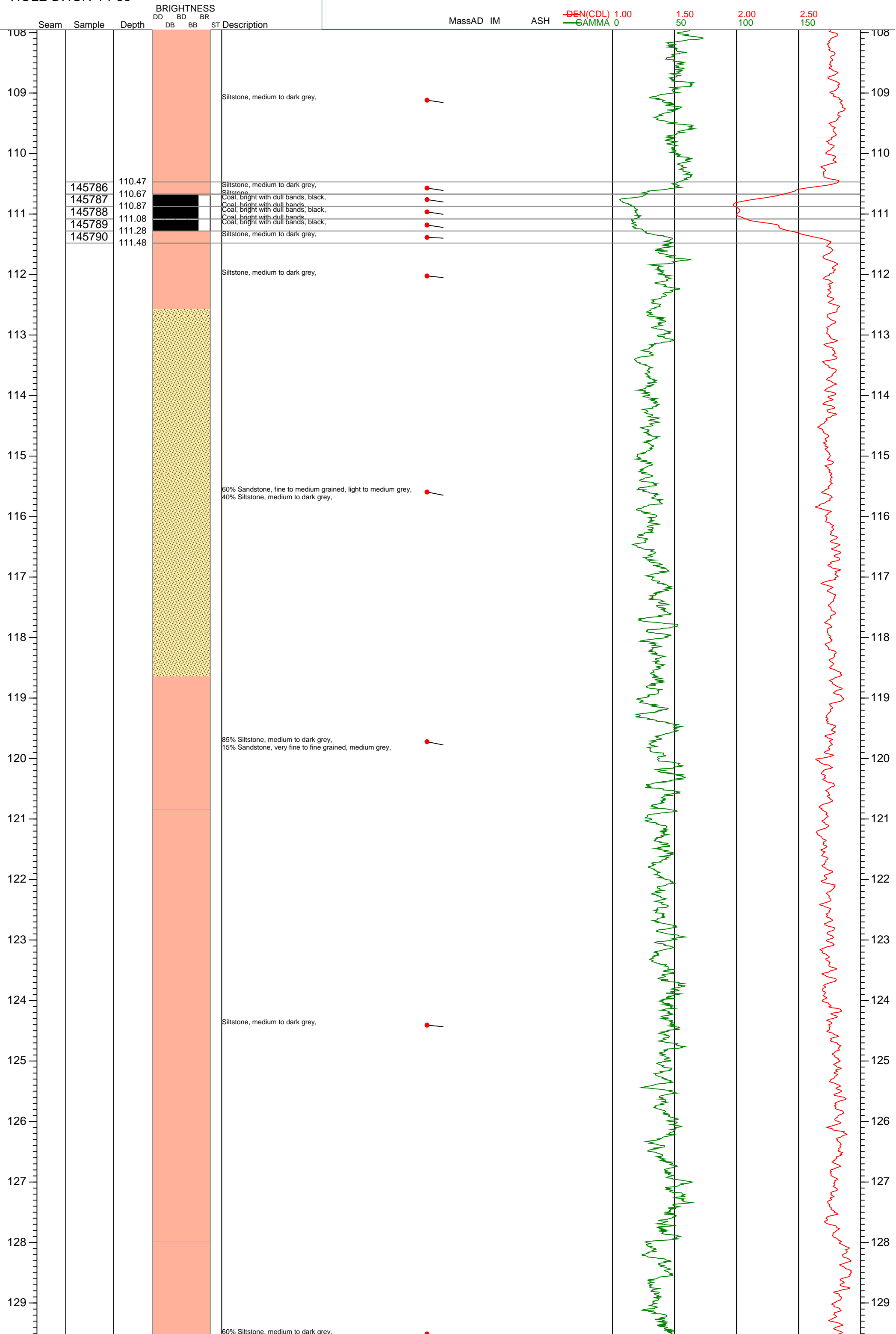
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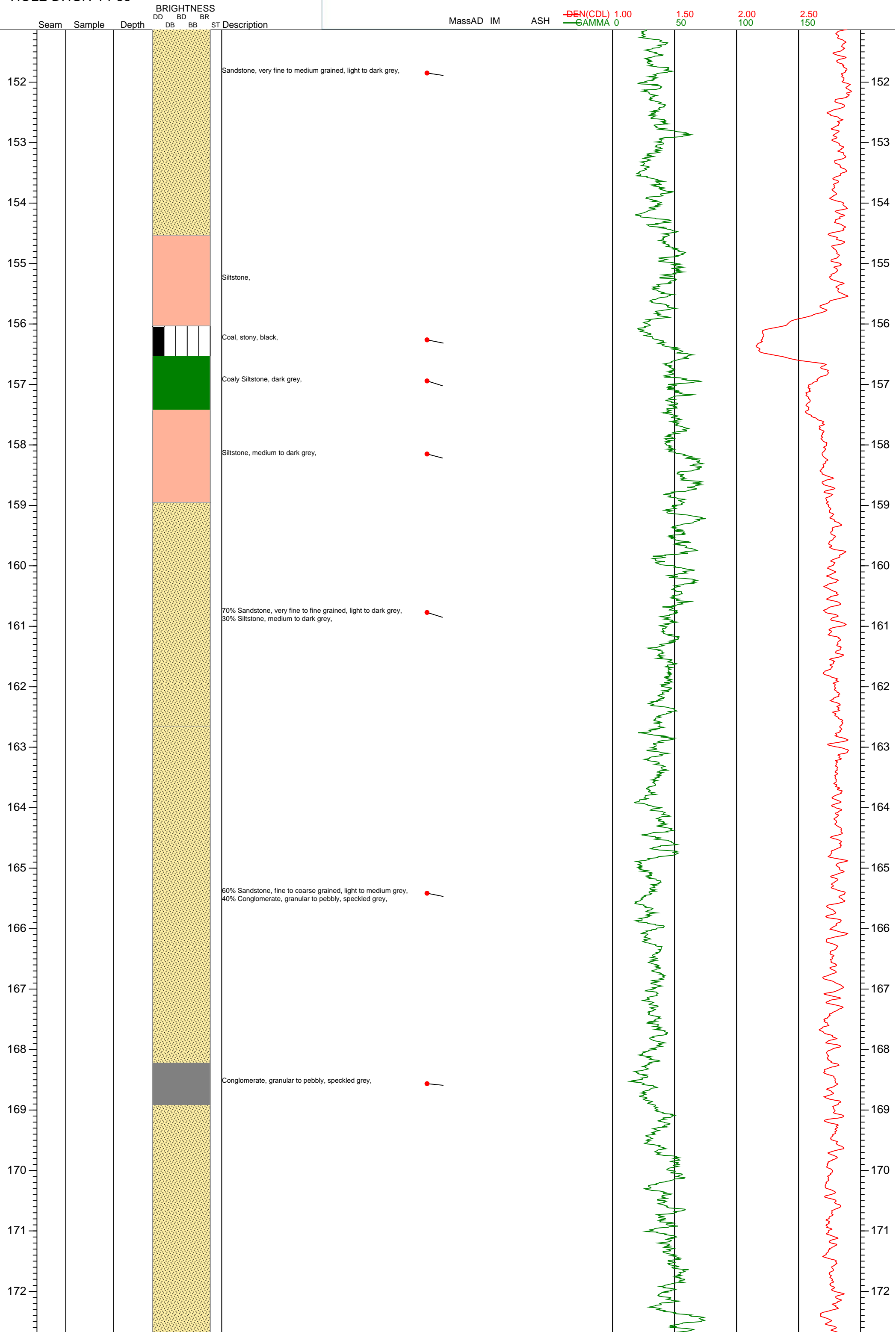
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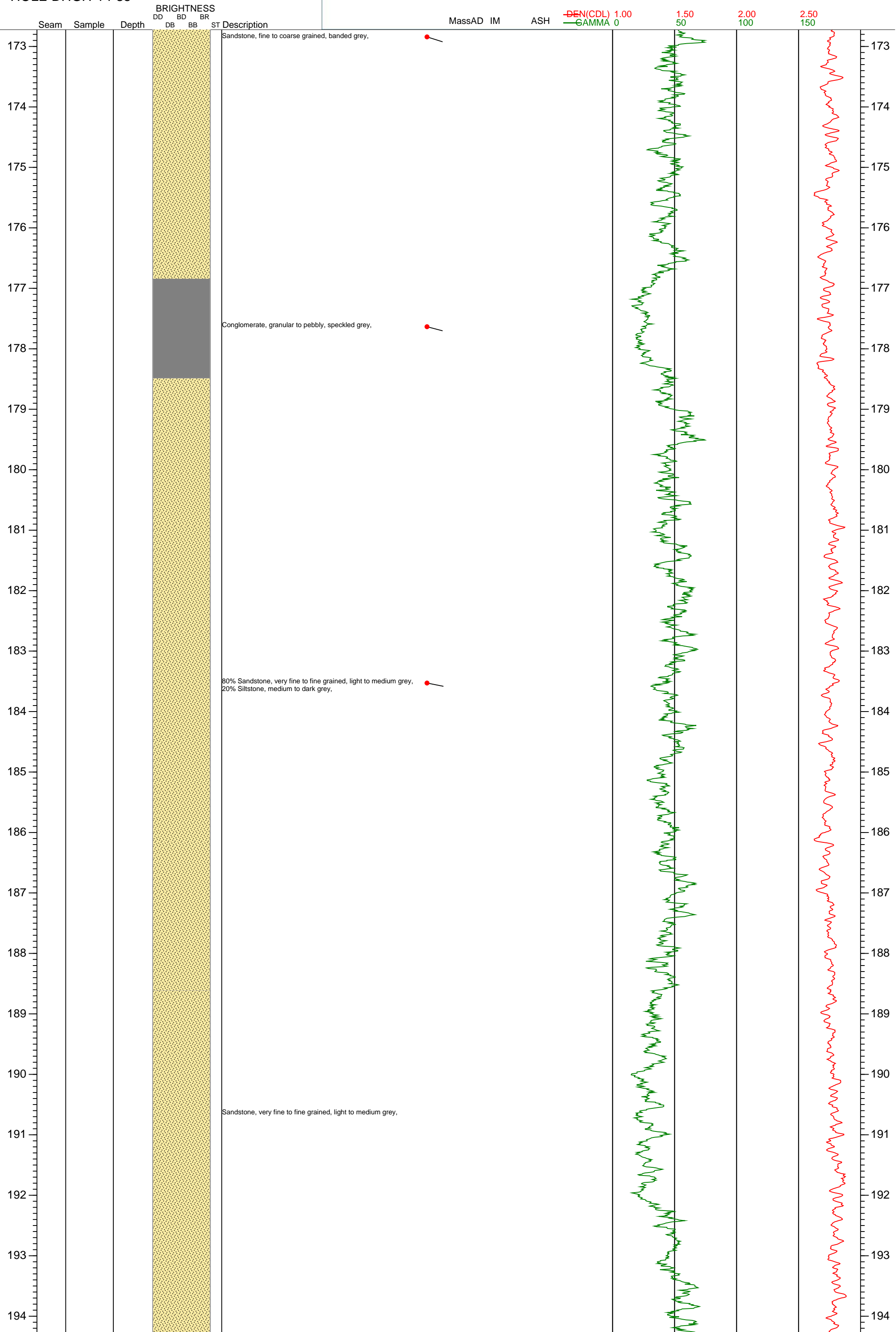
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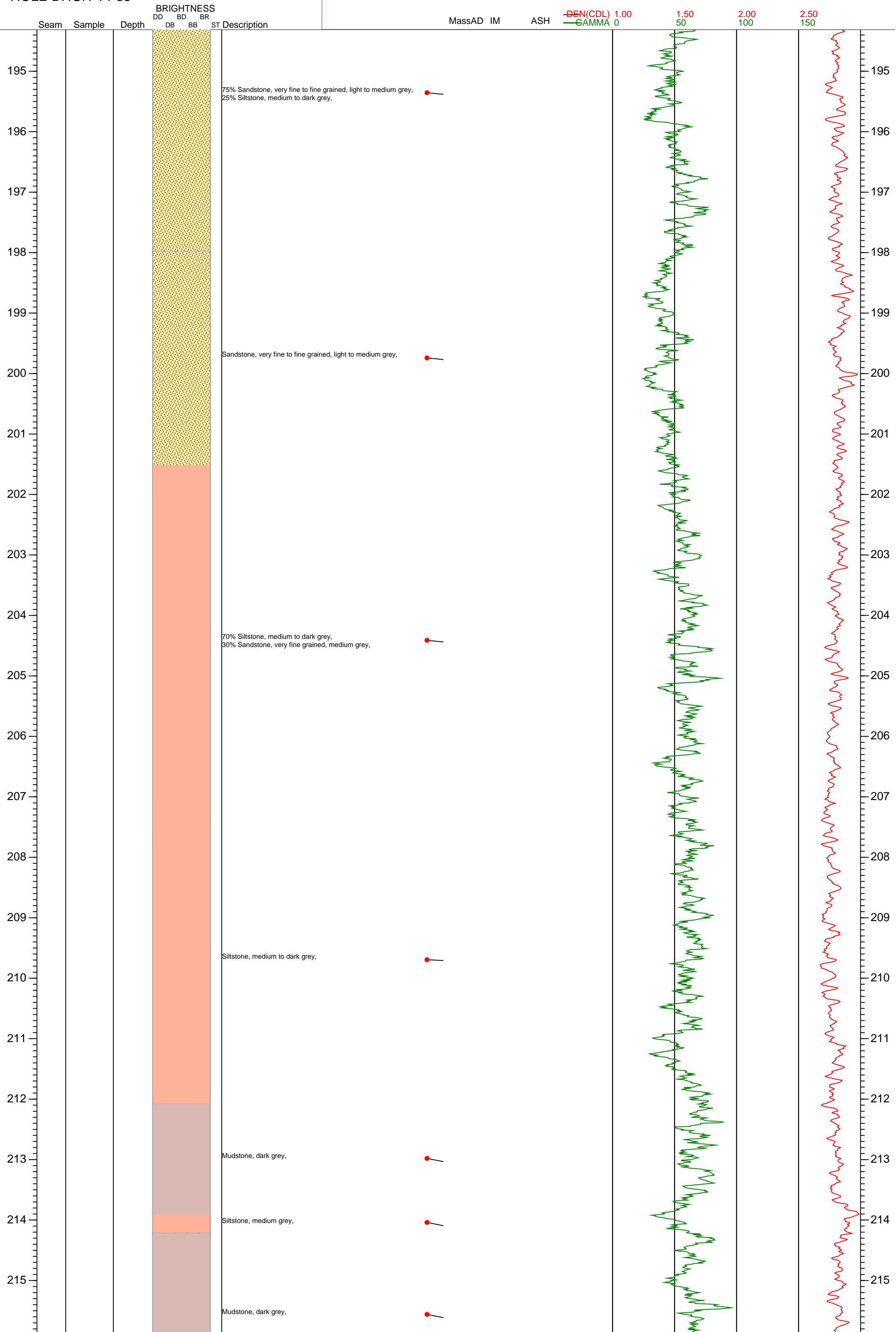
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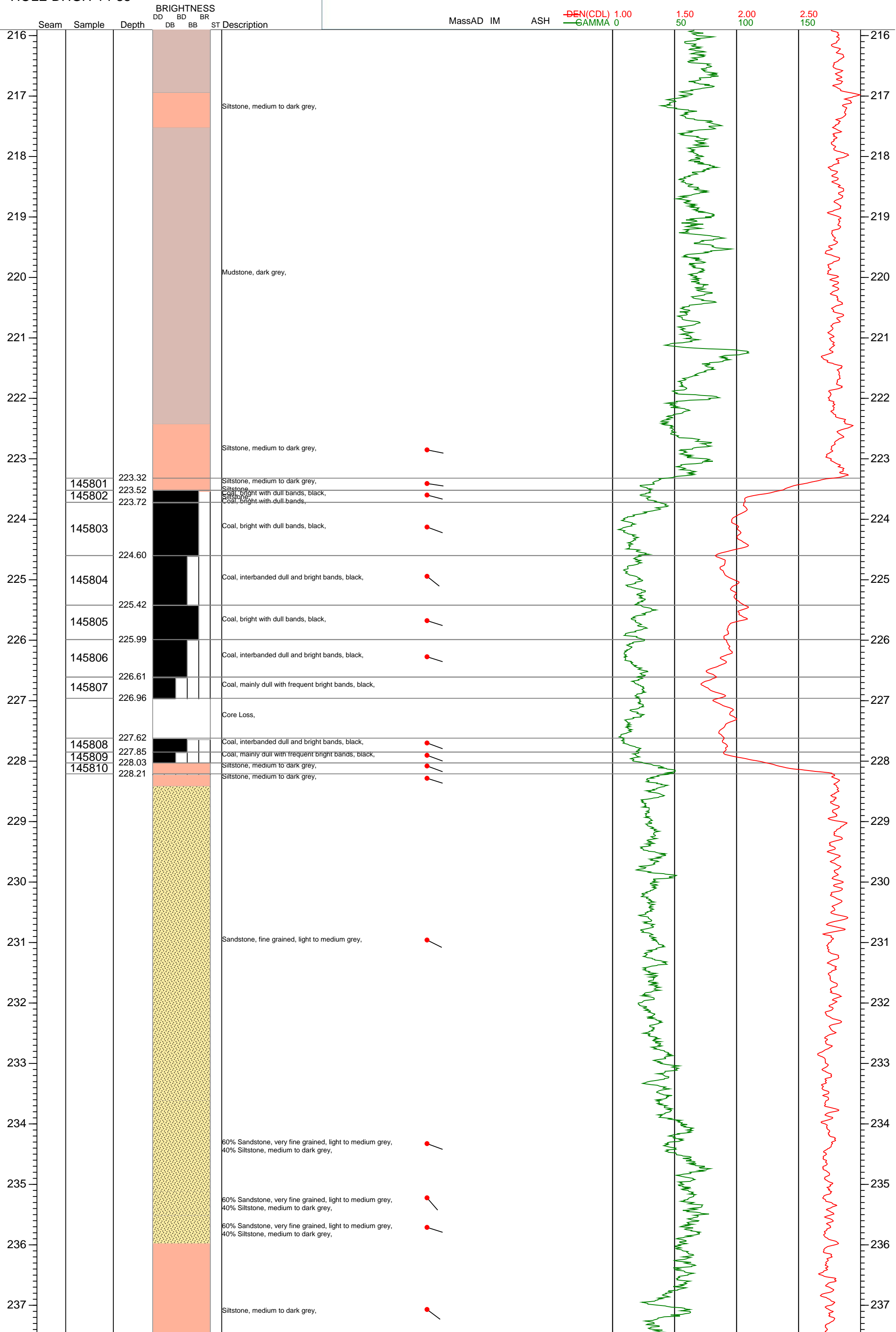
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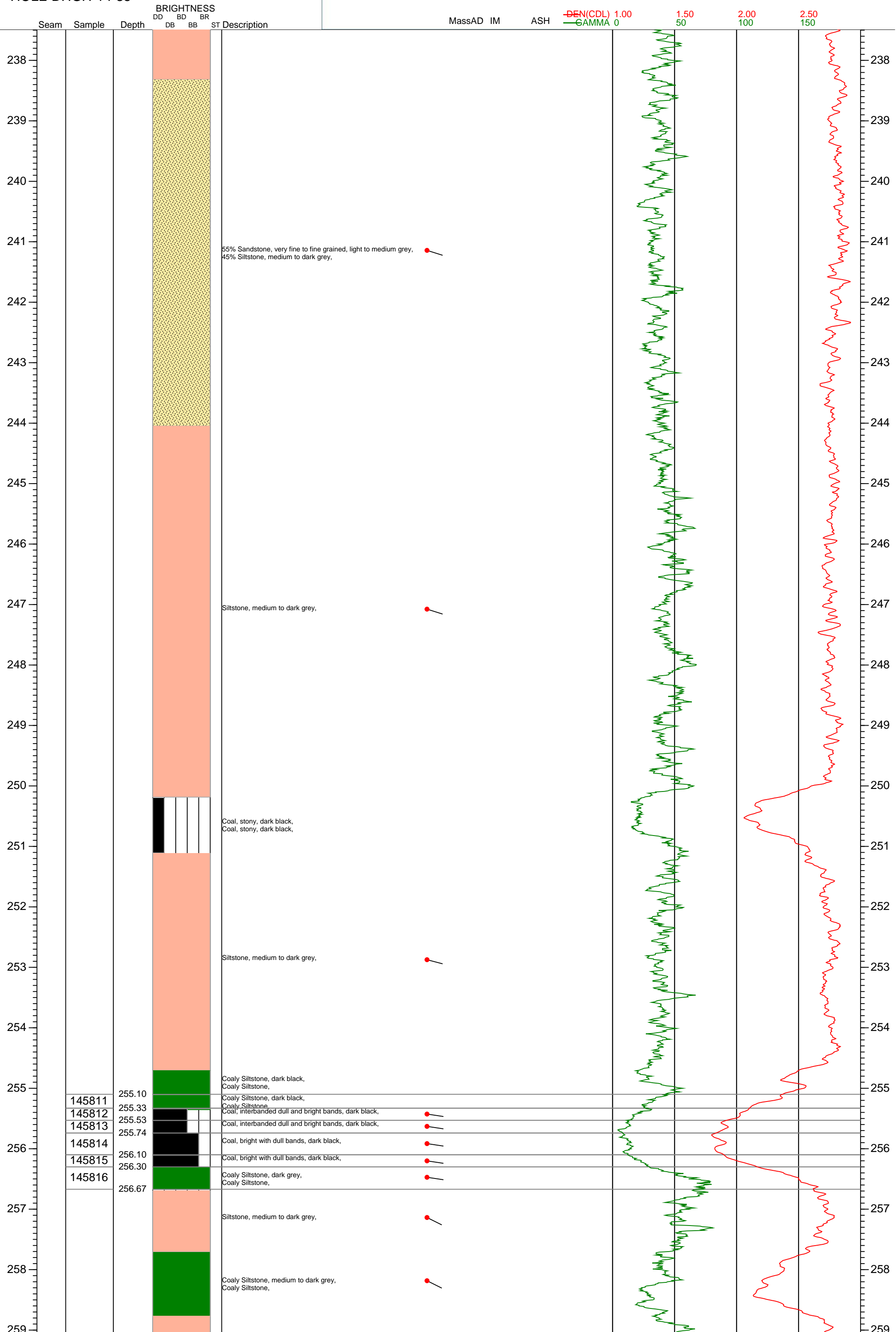
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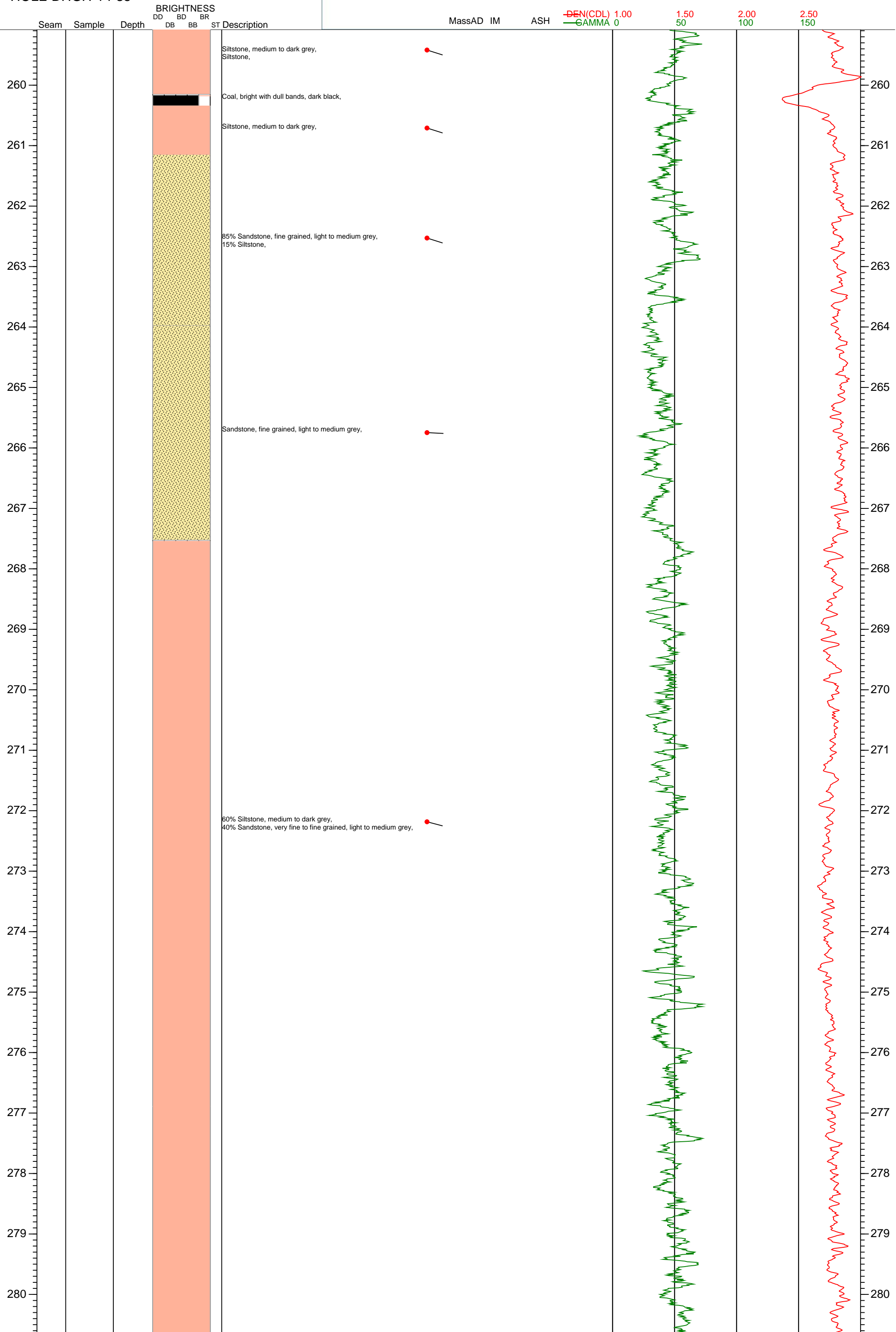
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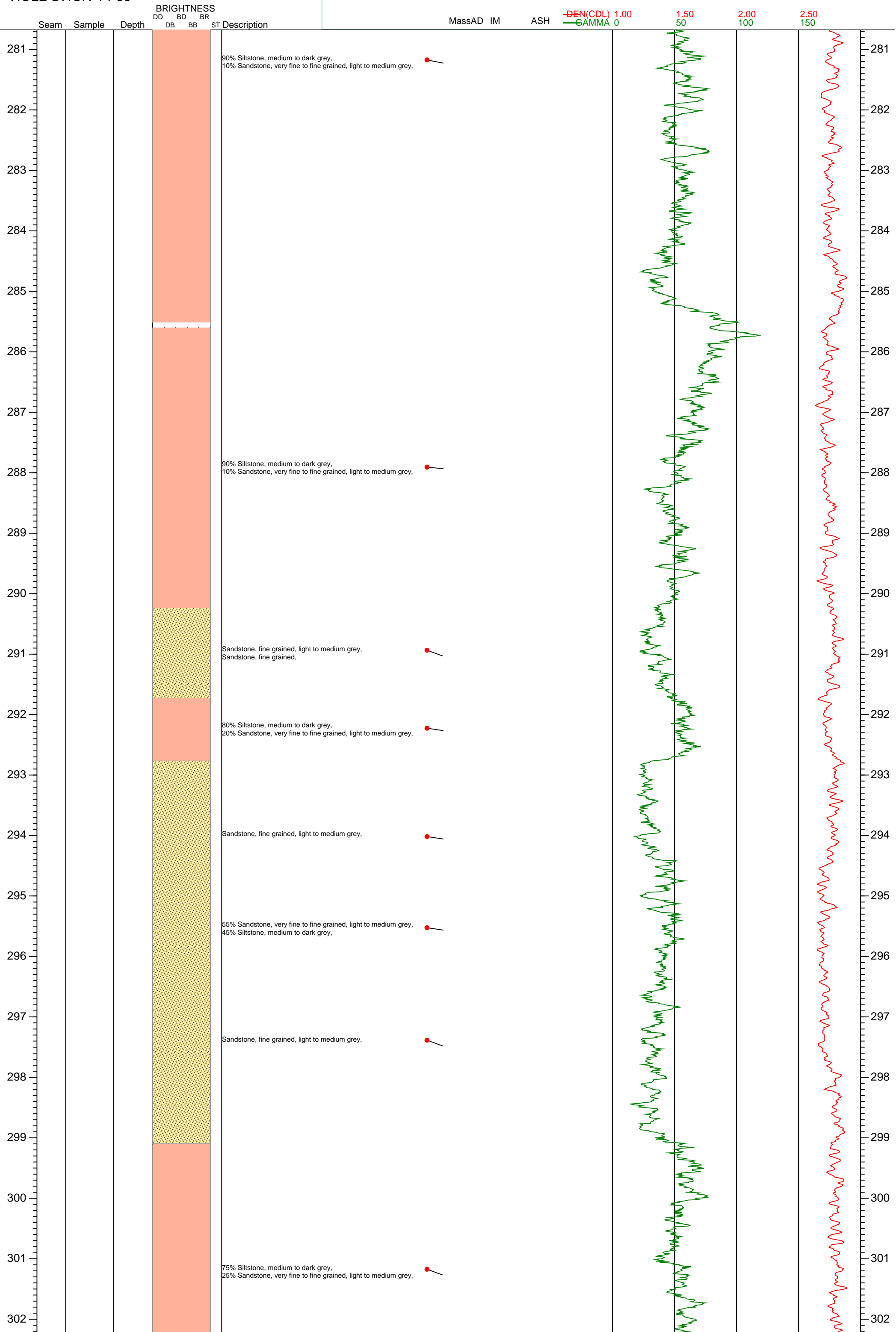
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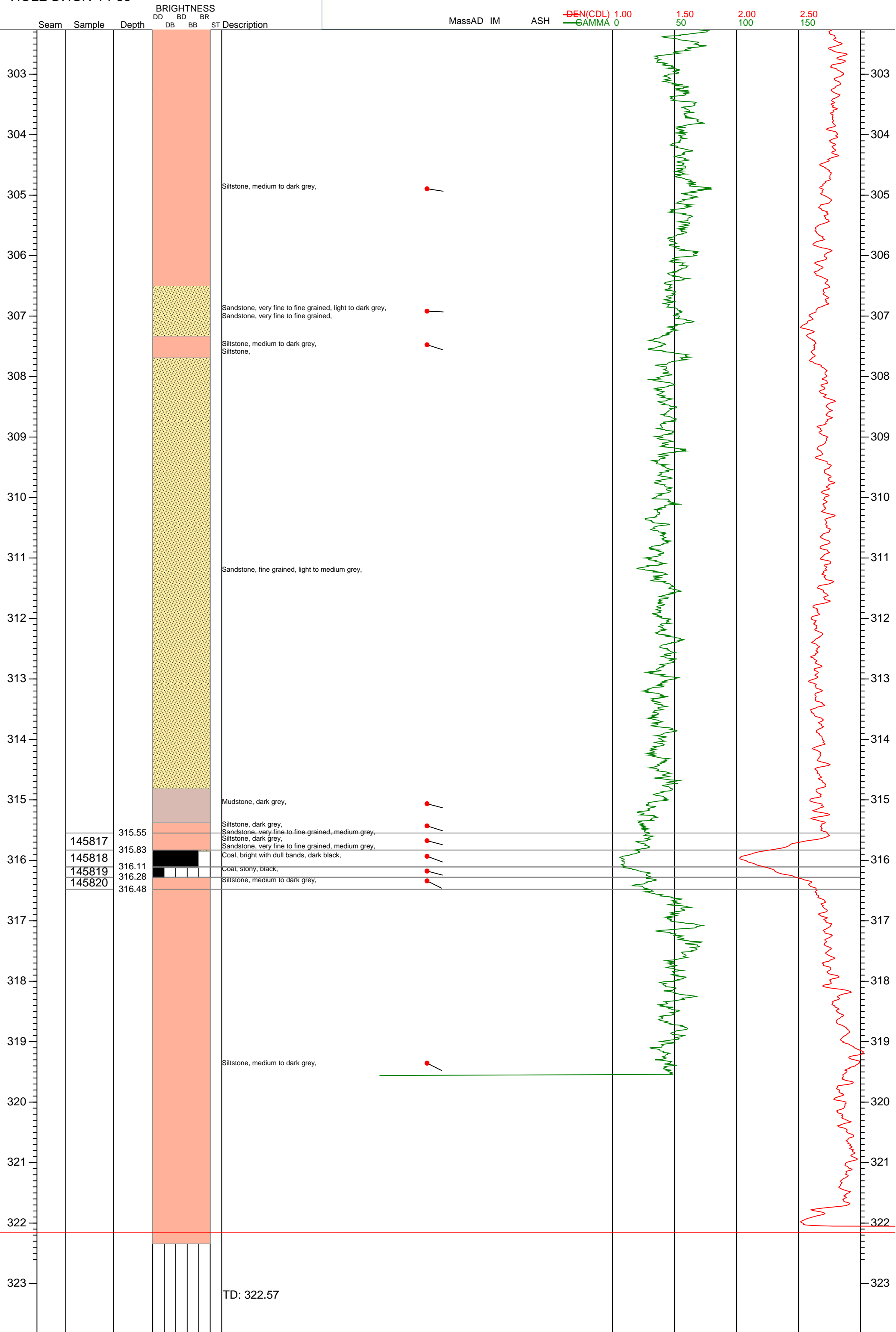
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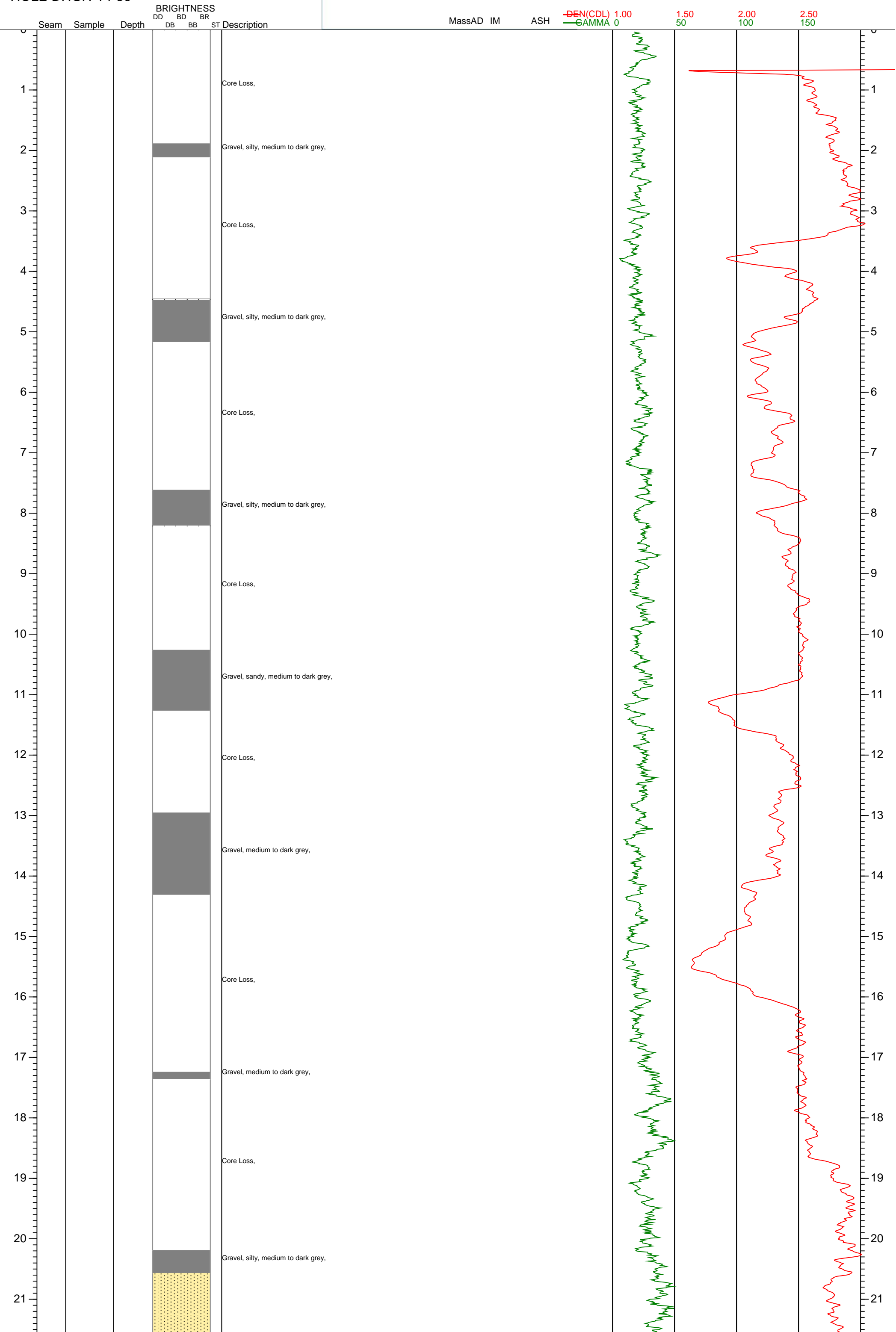


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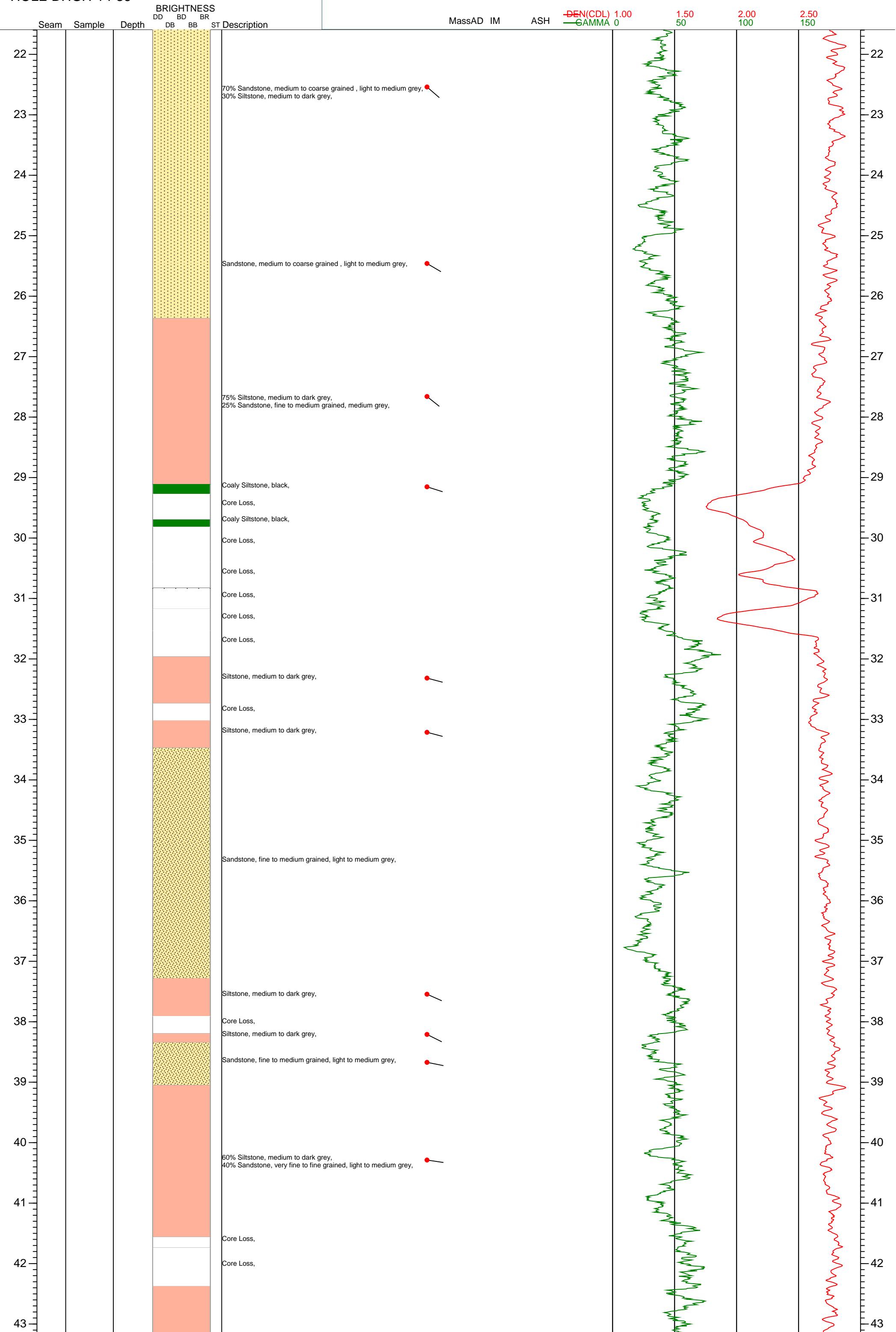


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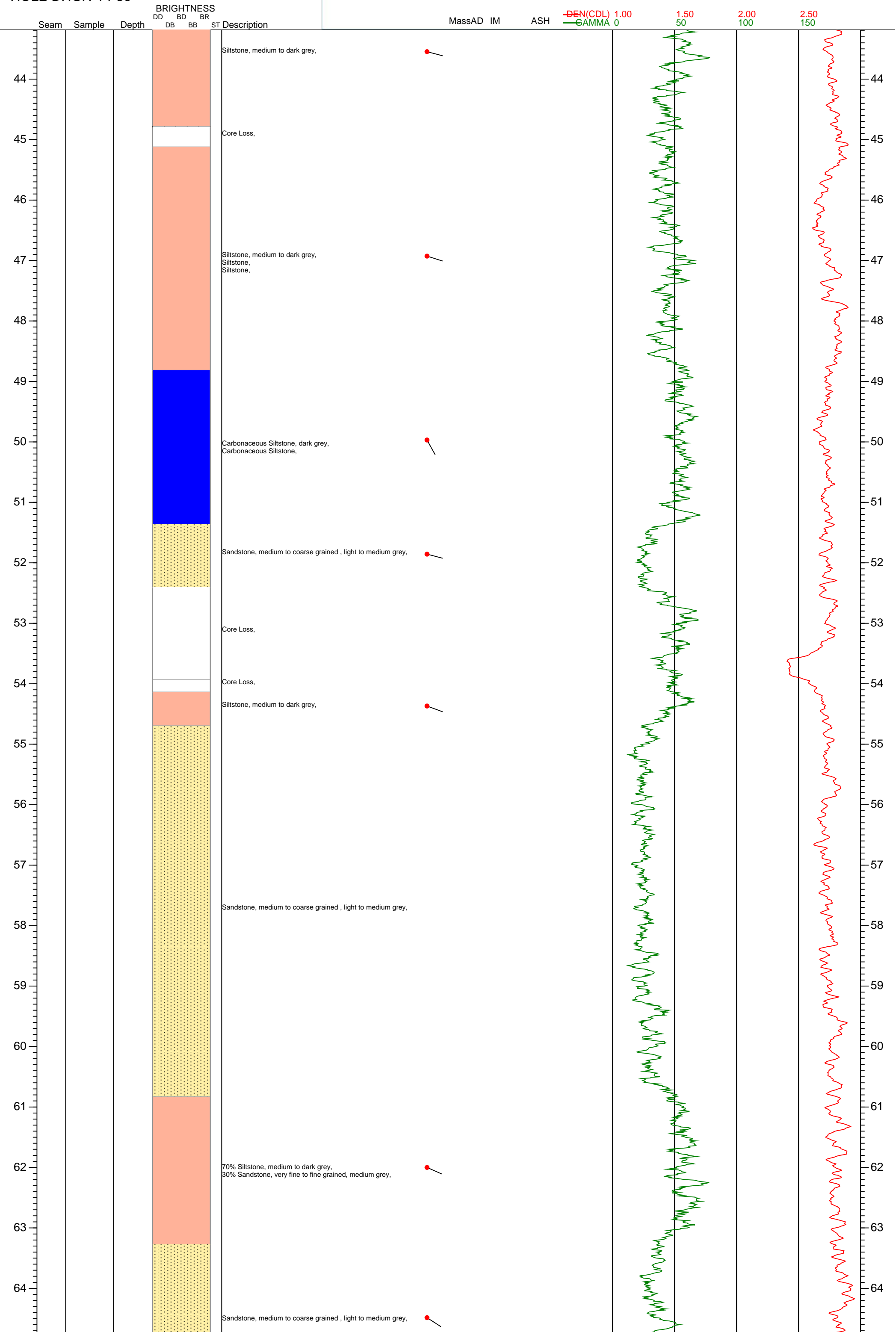




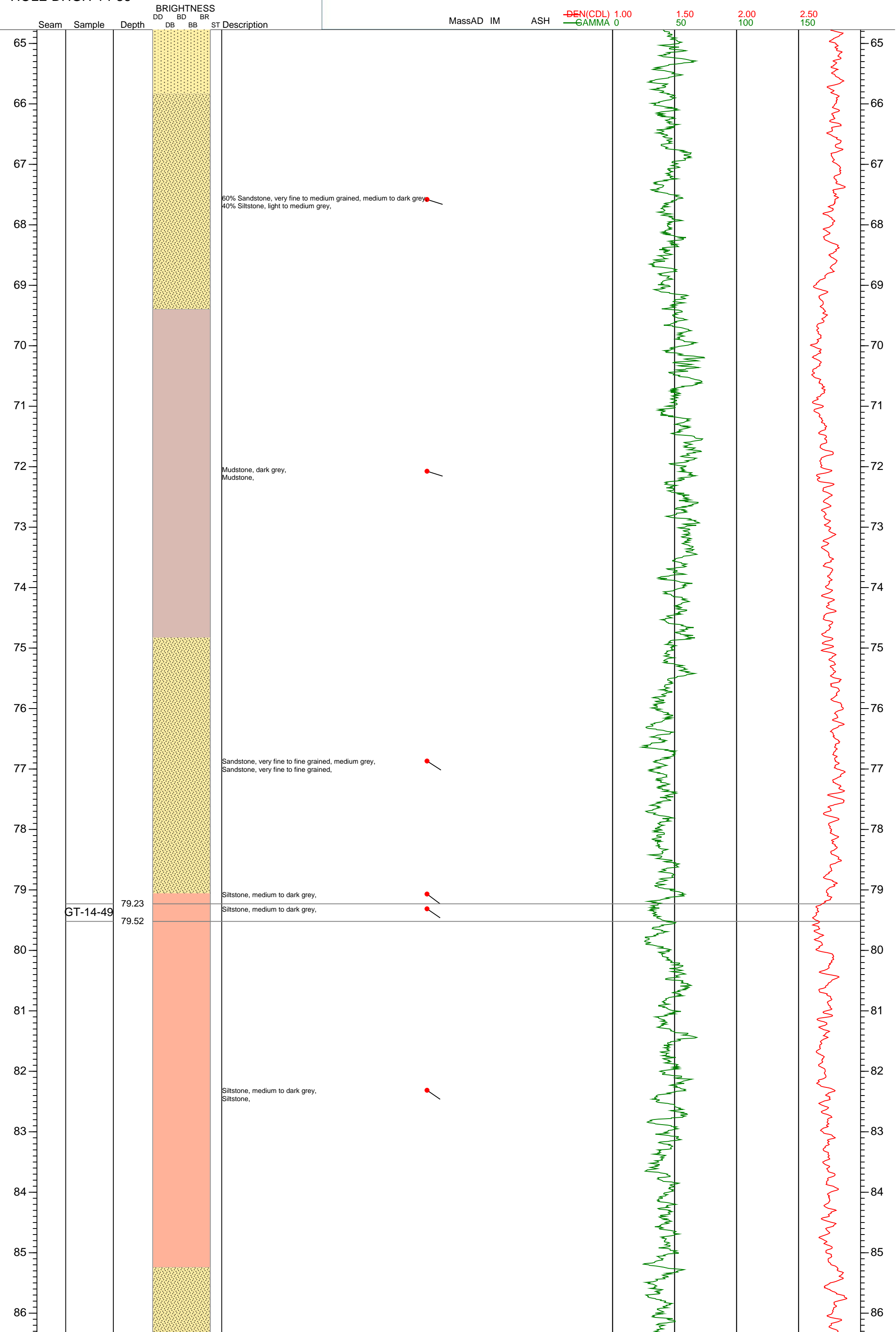
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HOLE DHGH-14-36



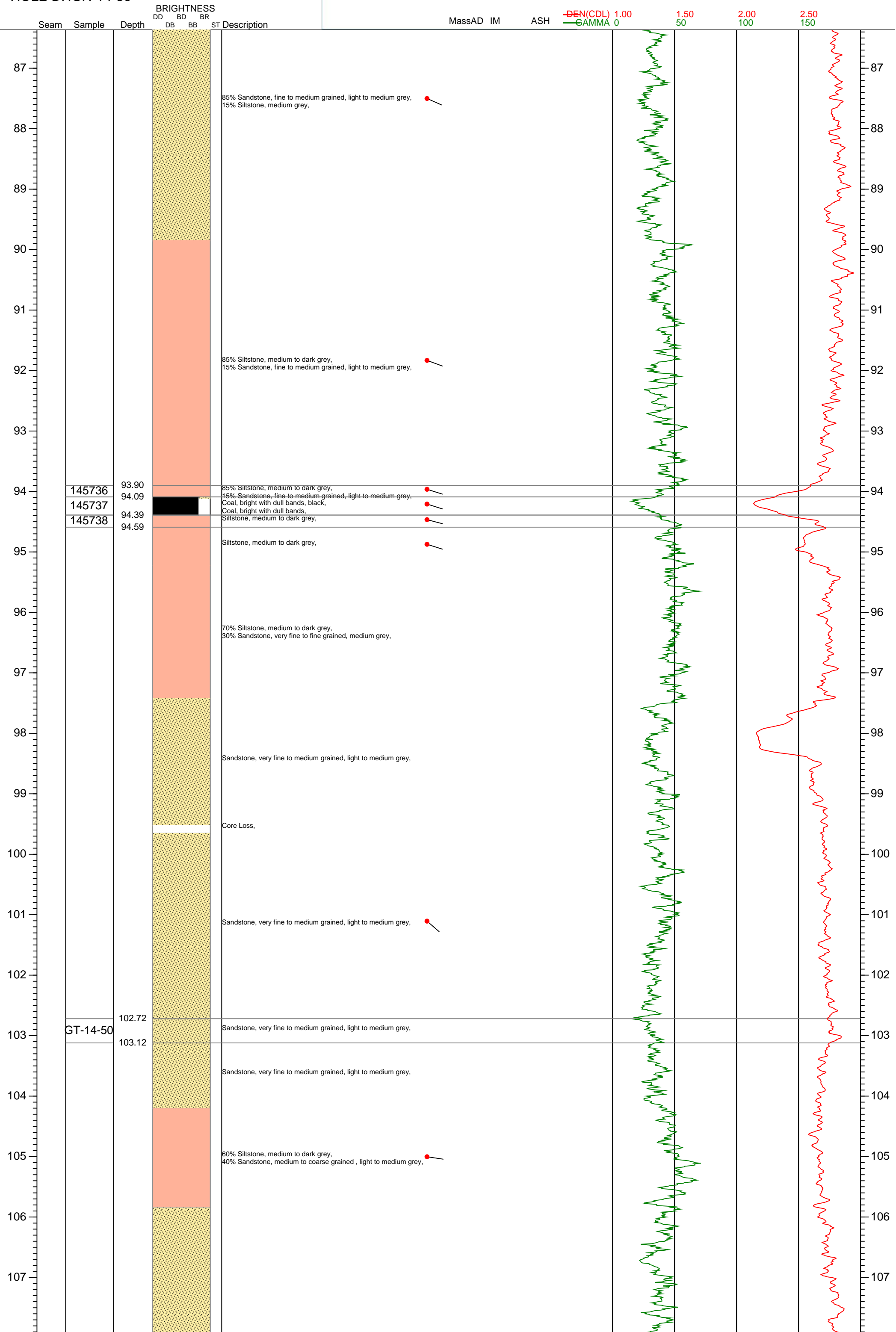
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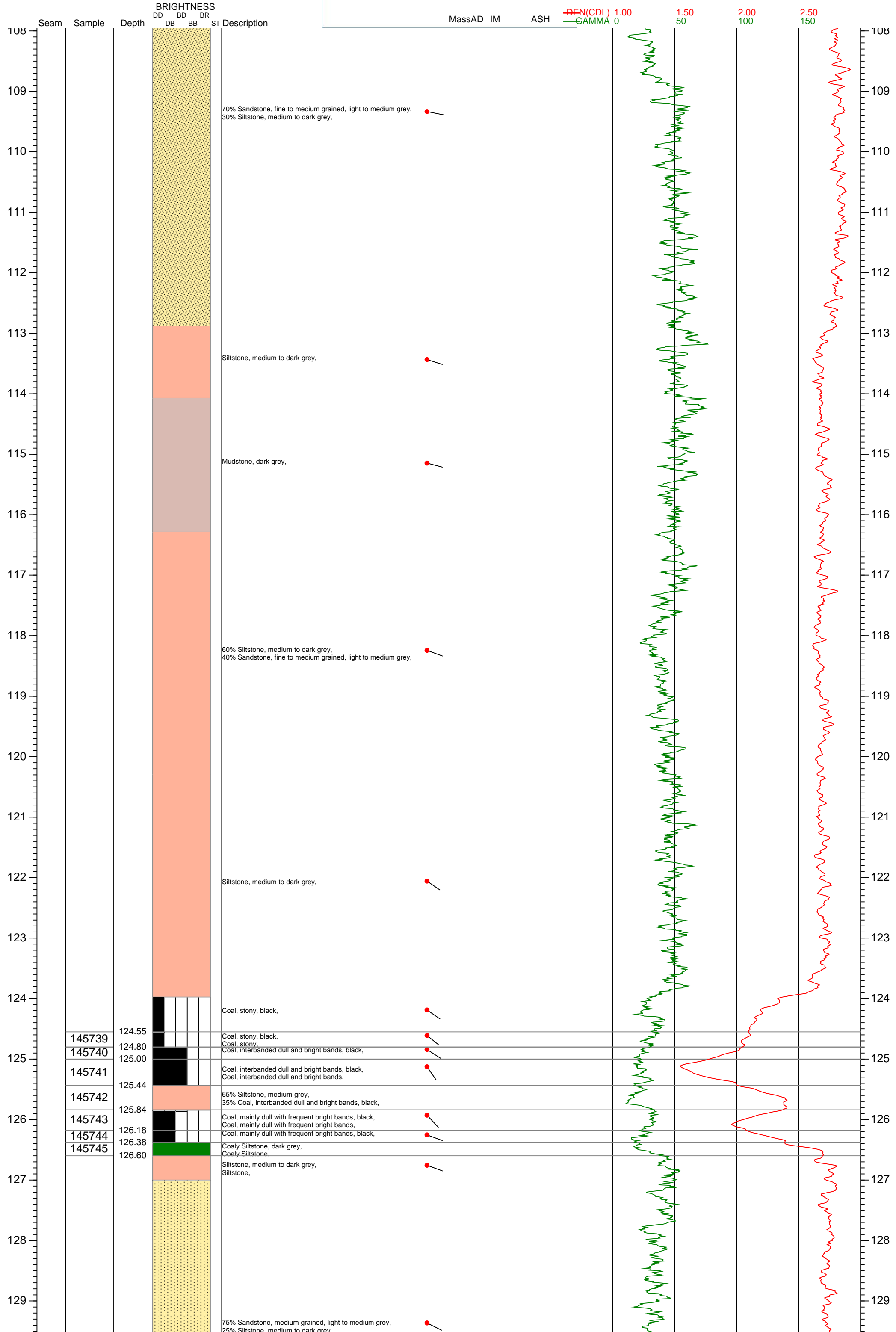
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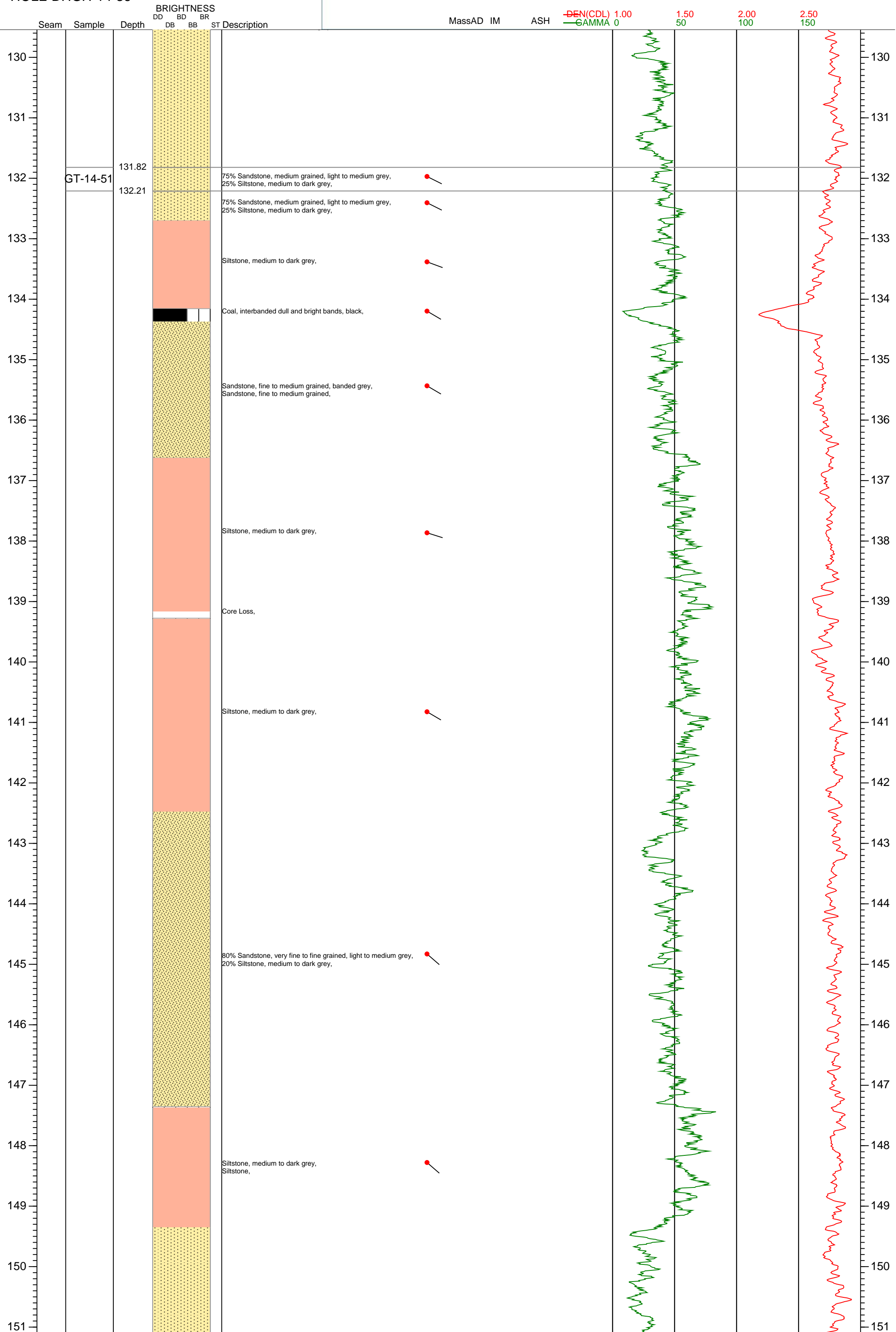
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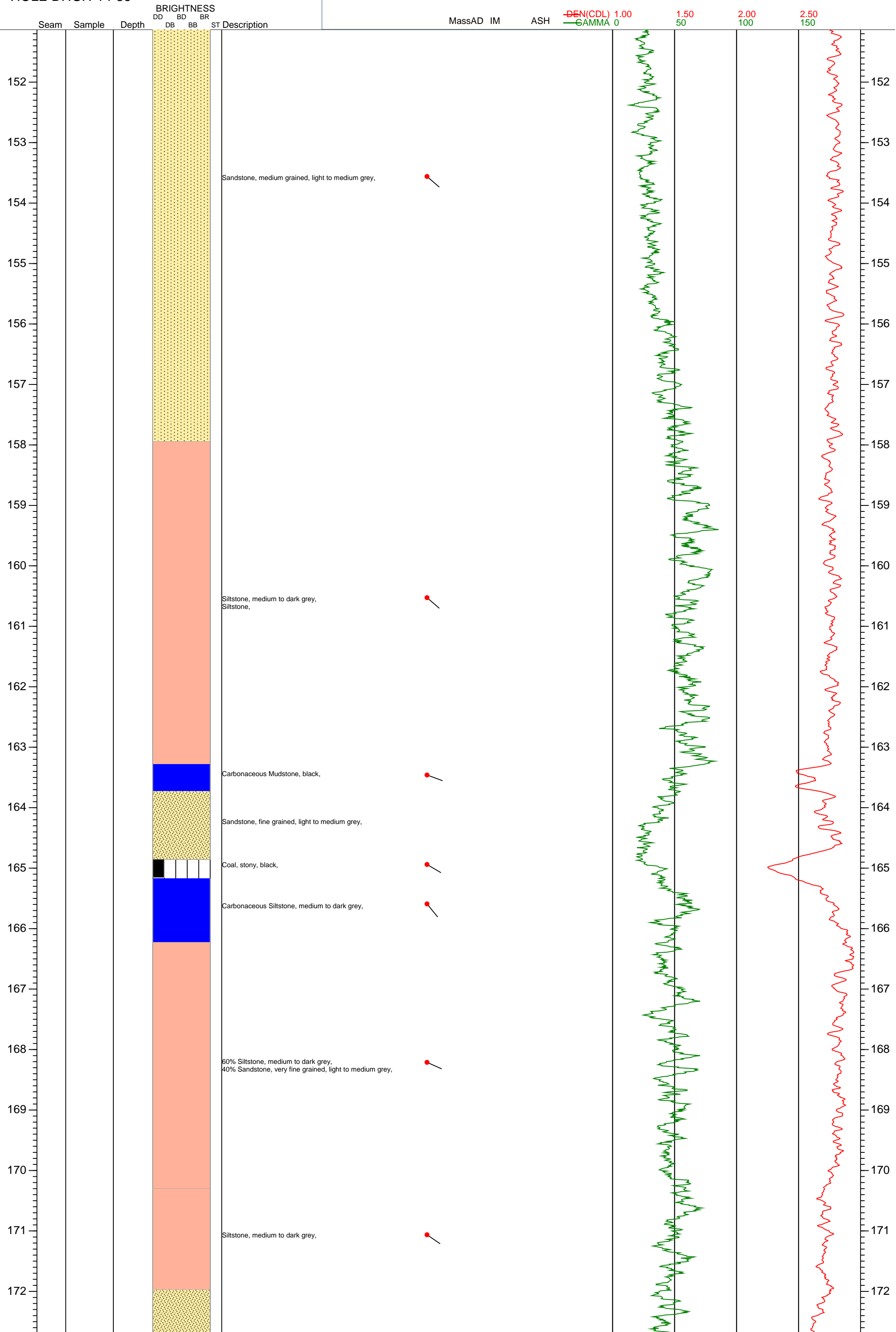
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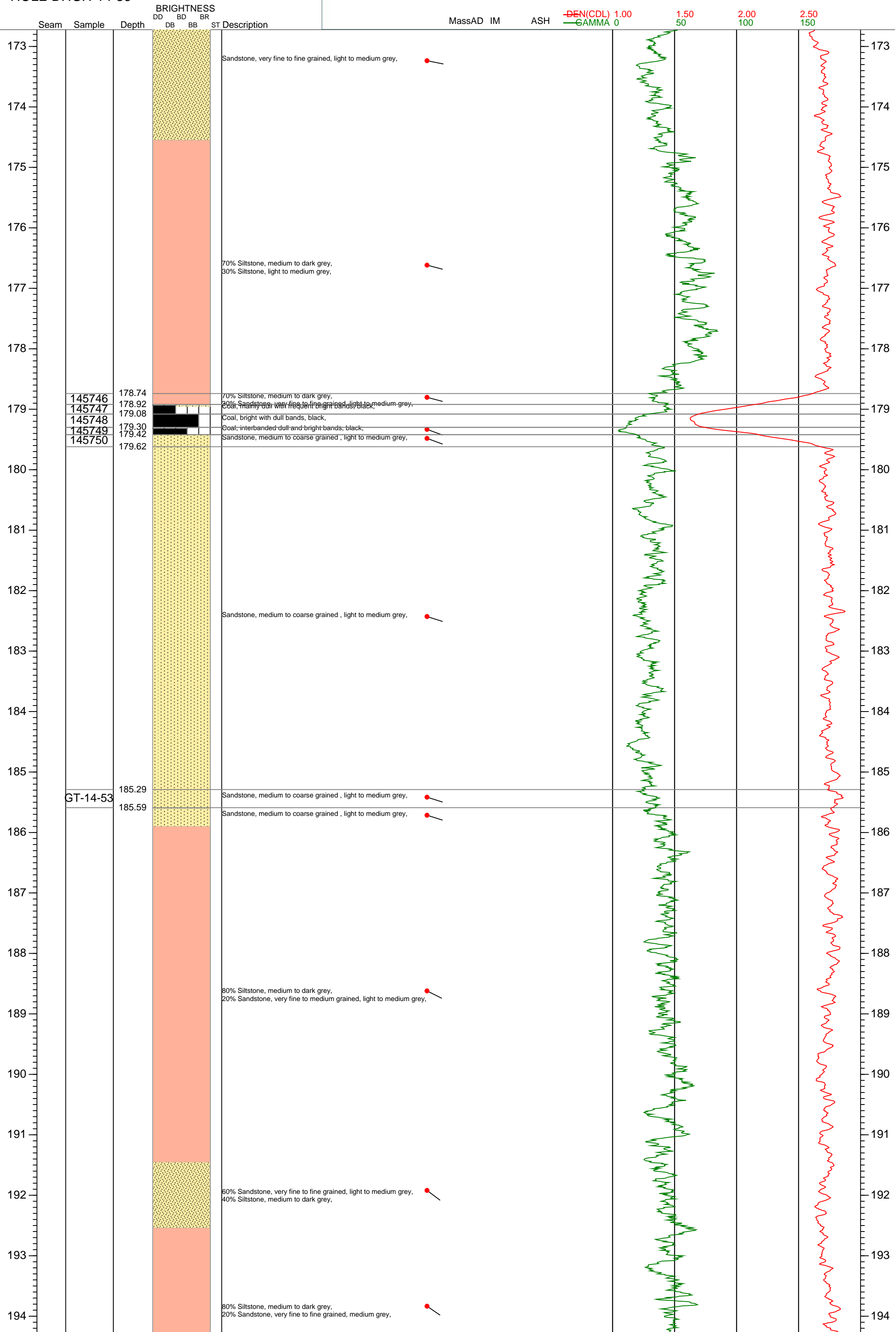
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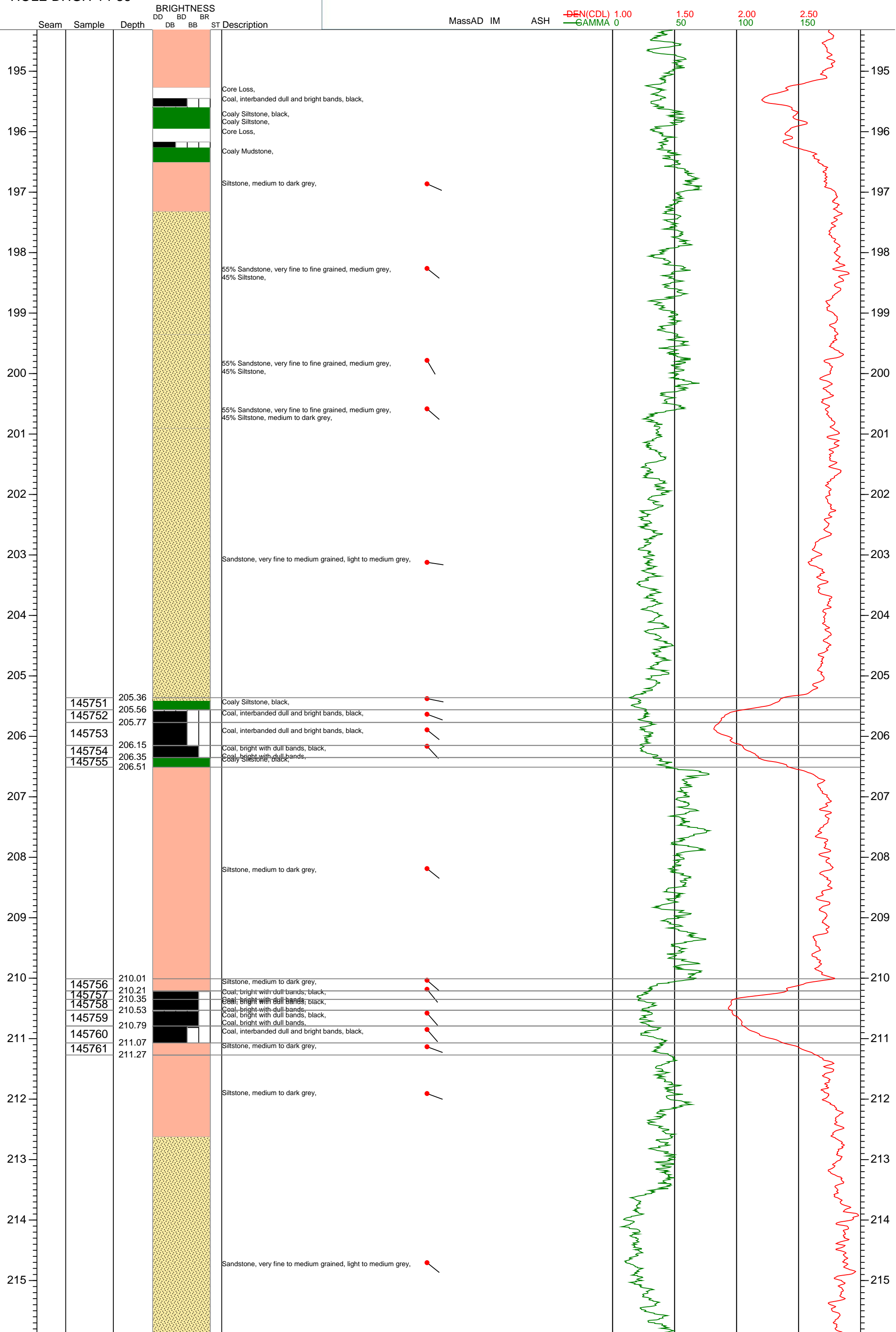
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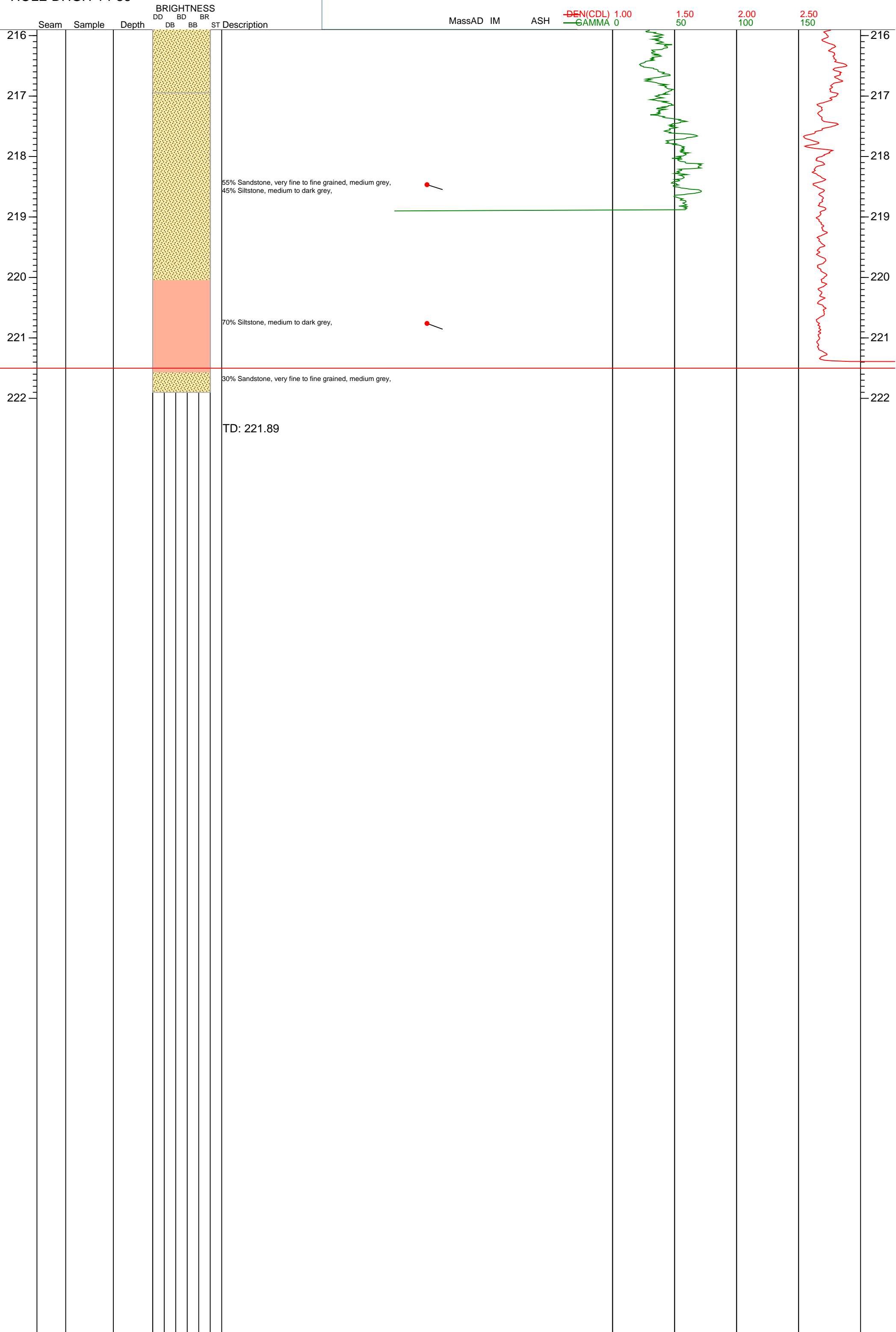
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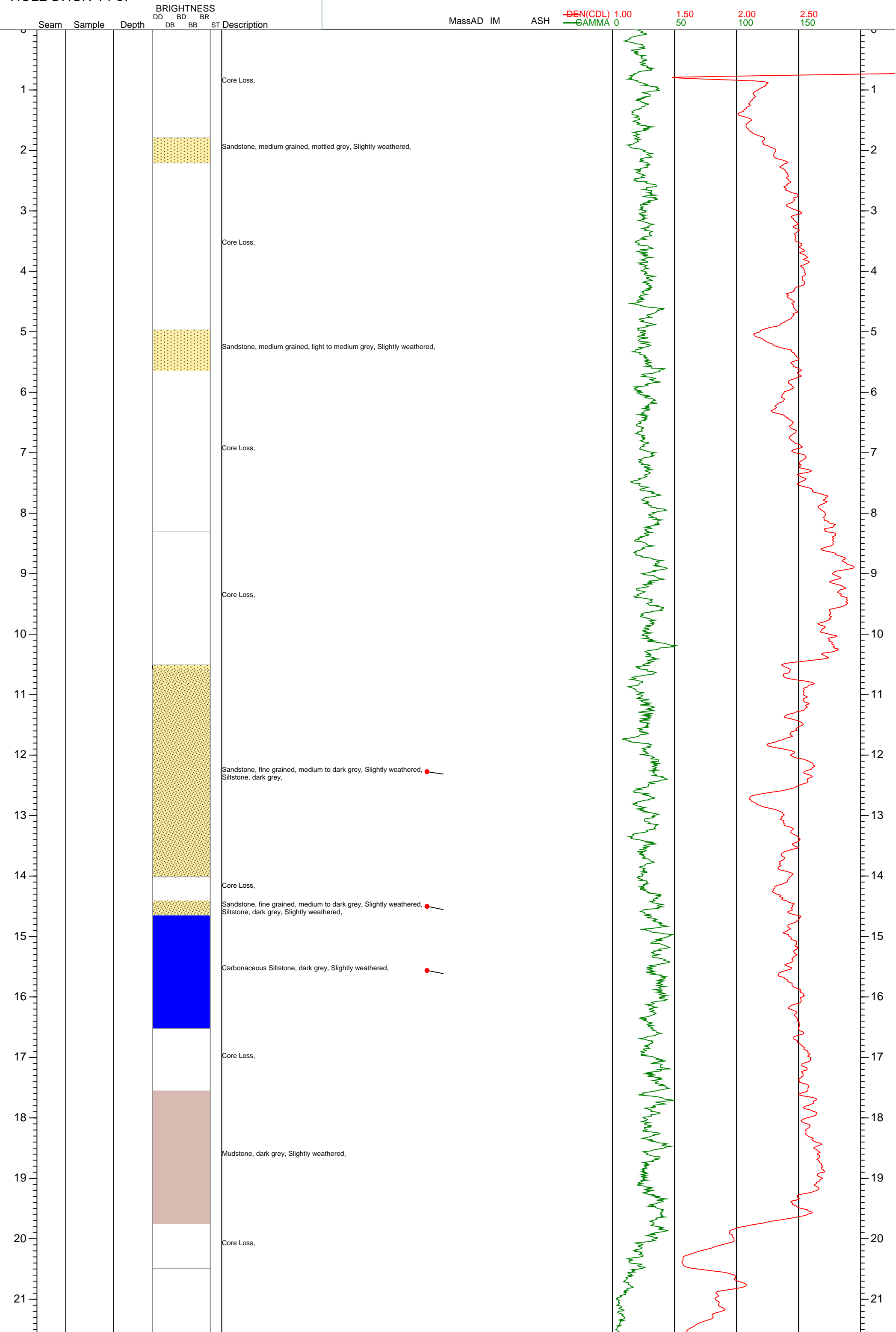


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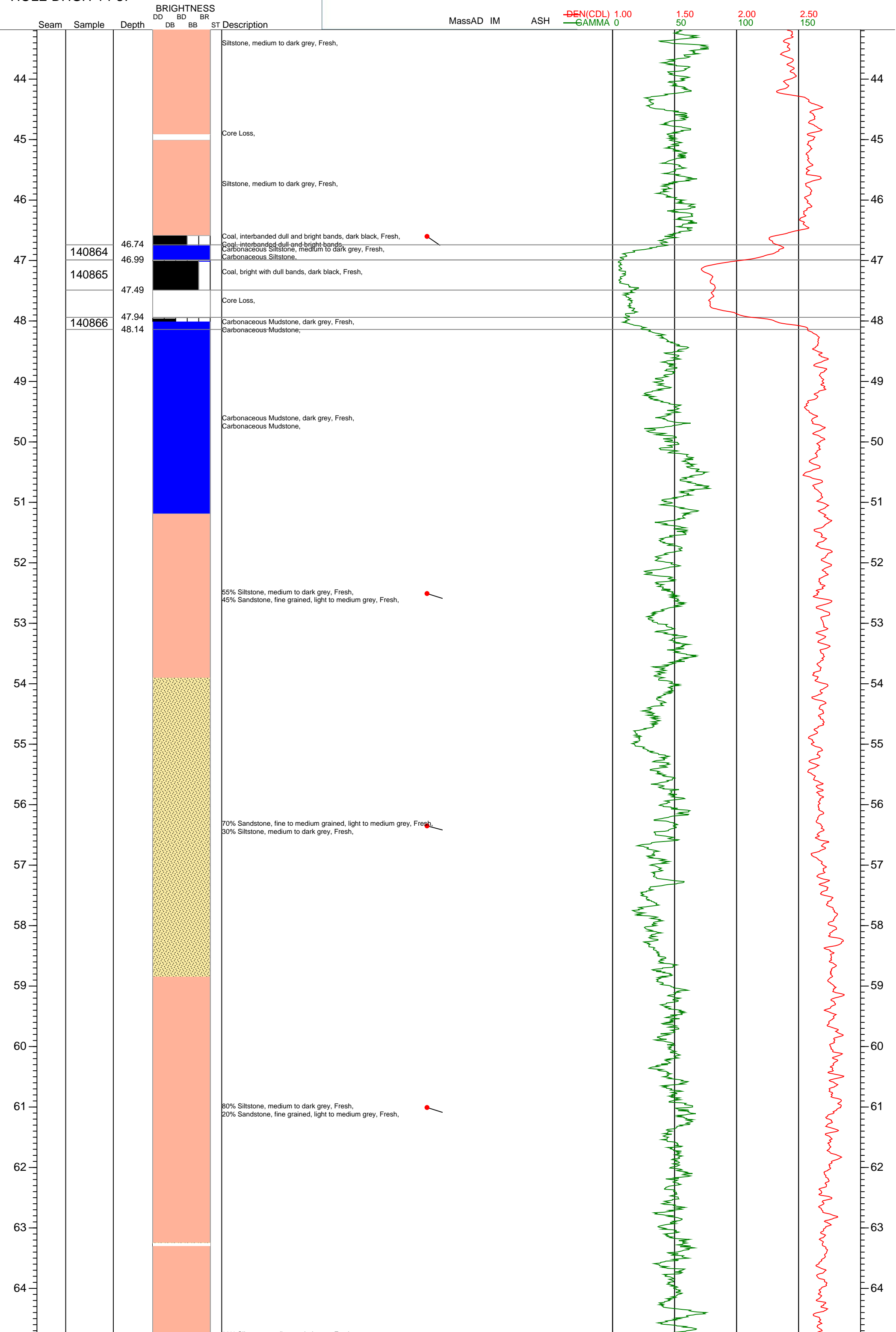
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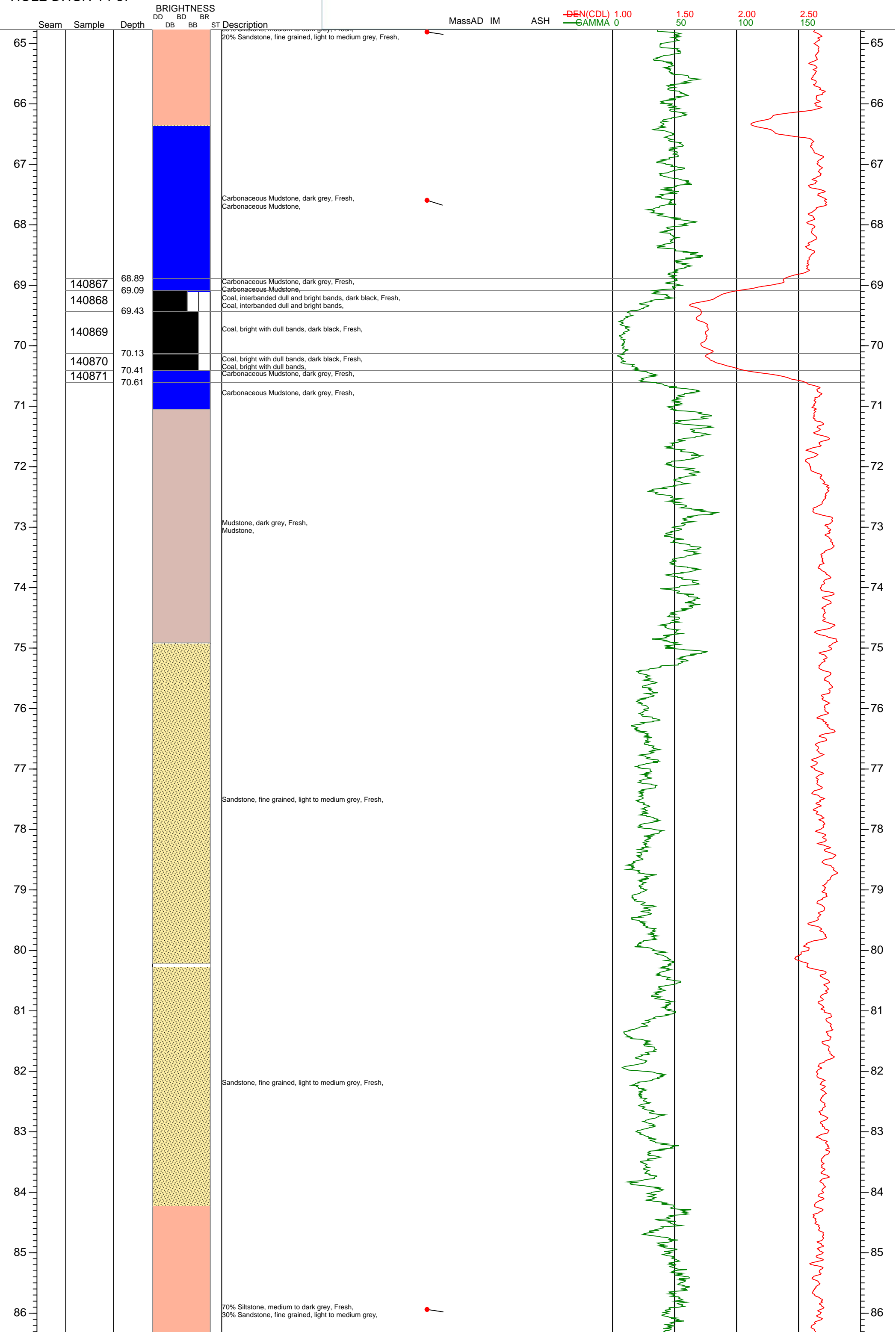


GROUNDHOG
HOLE DHGH-14-37

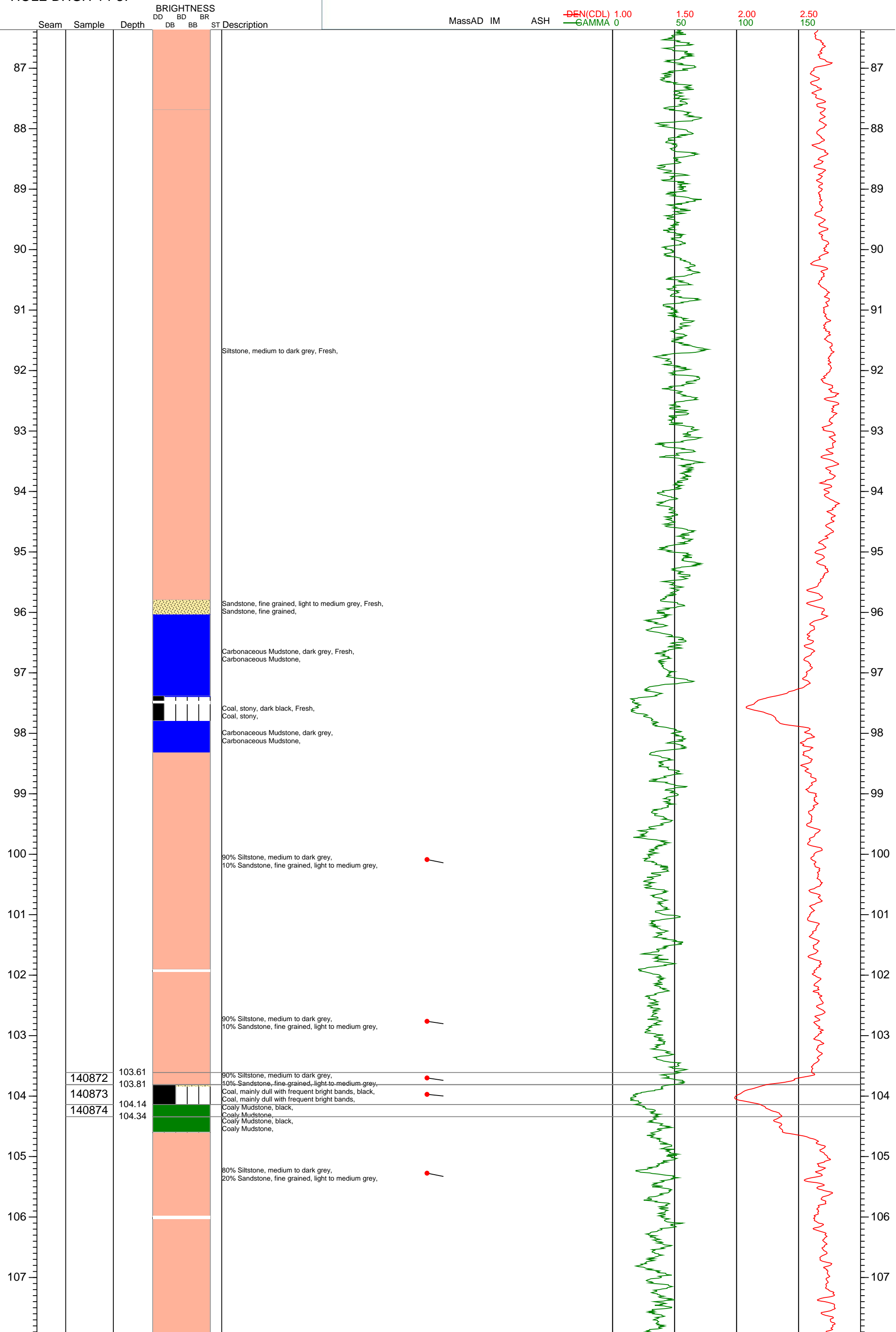




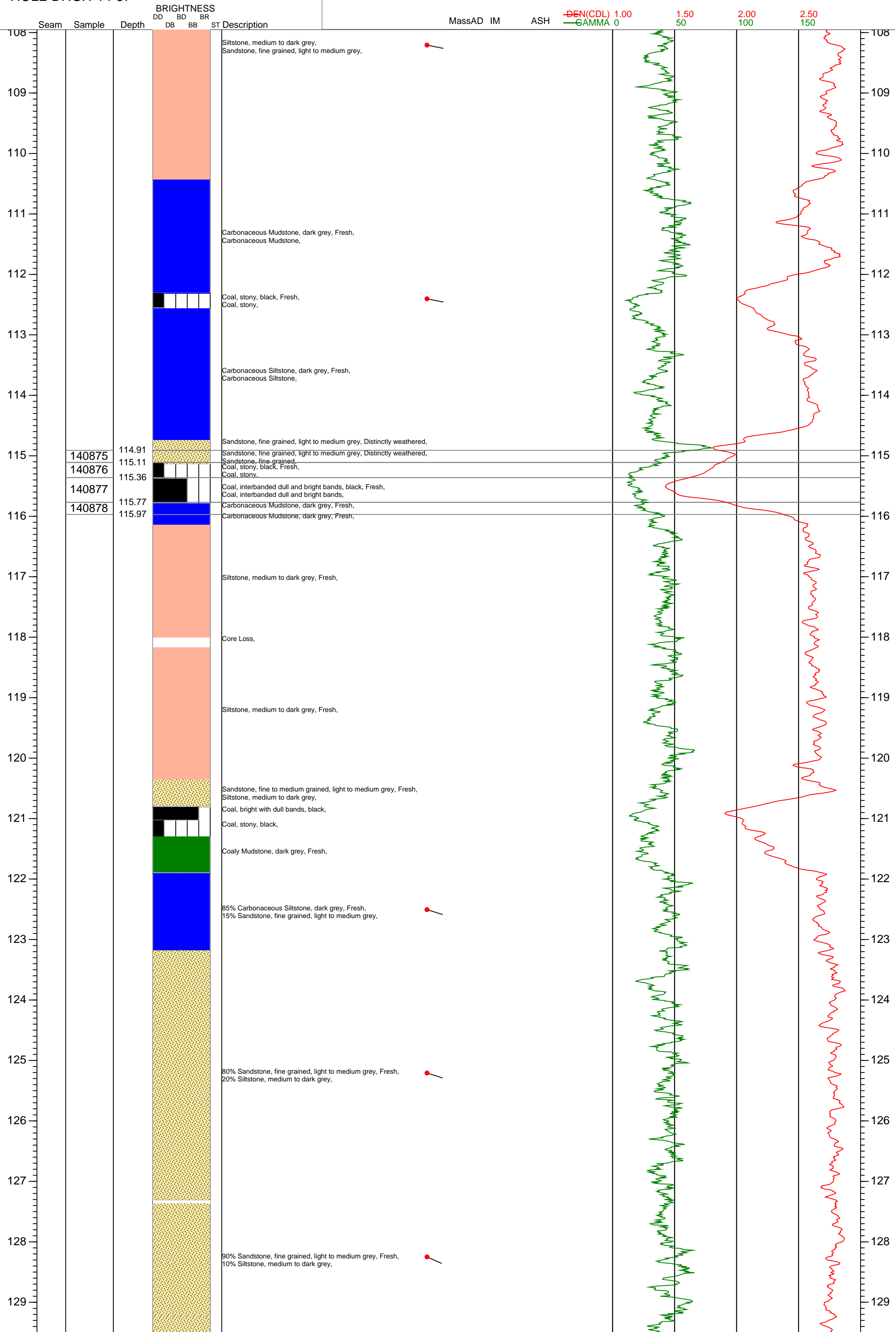
GROUNDHOG
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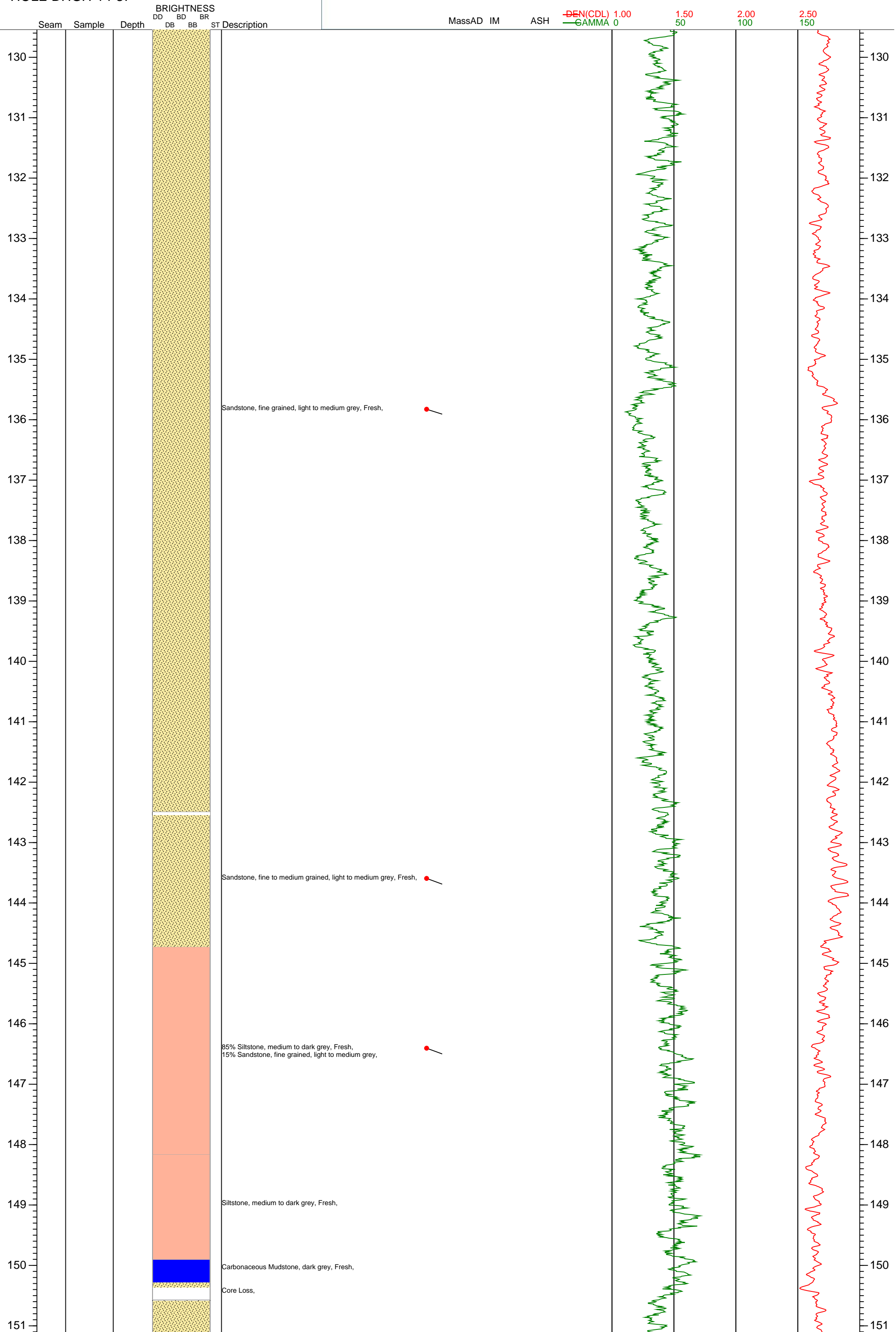


GROUNDHOG
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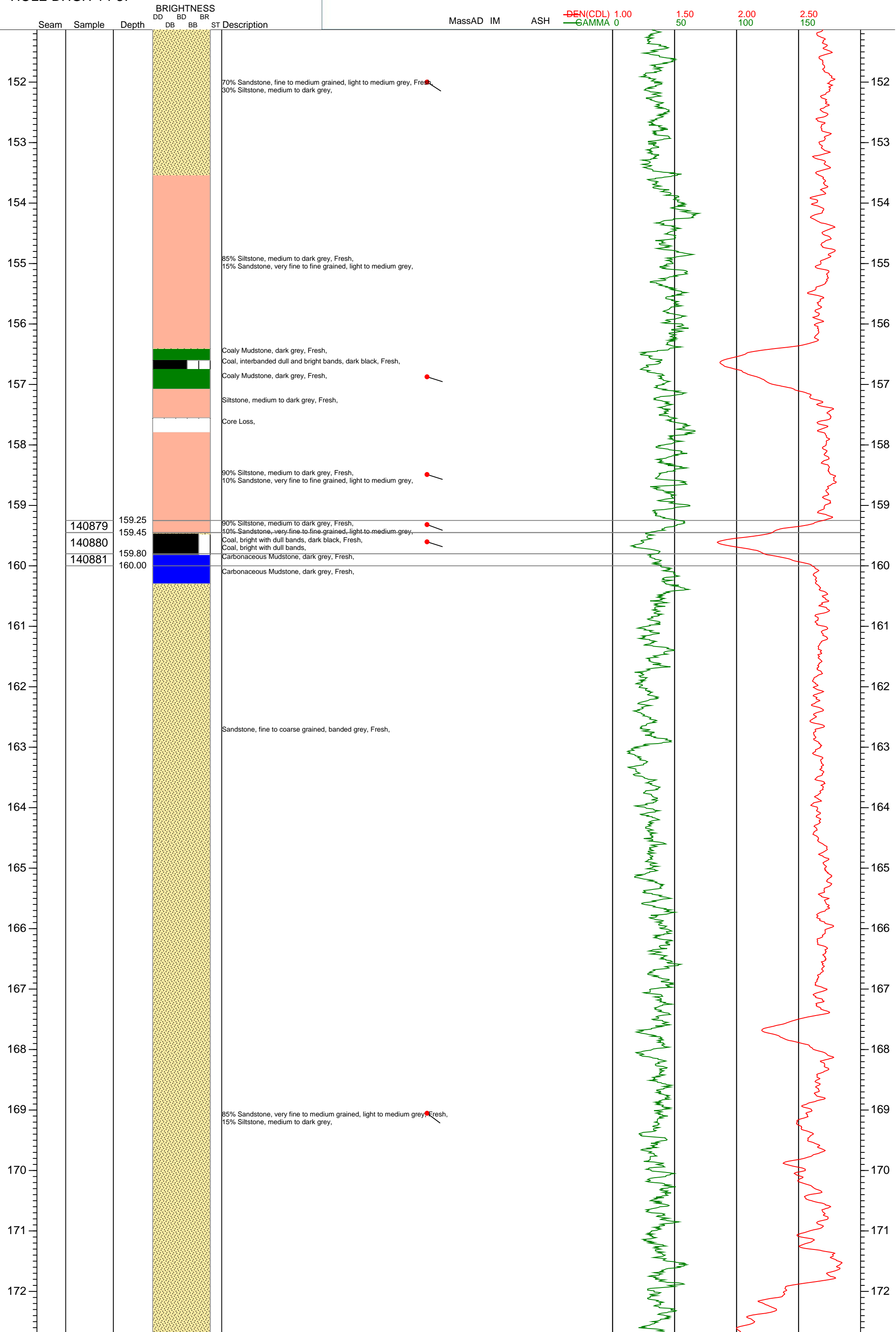


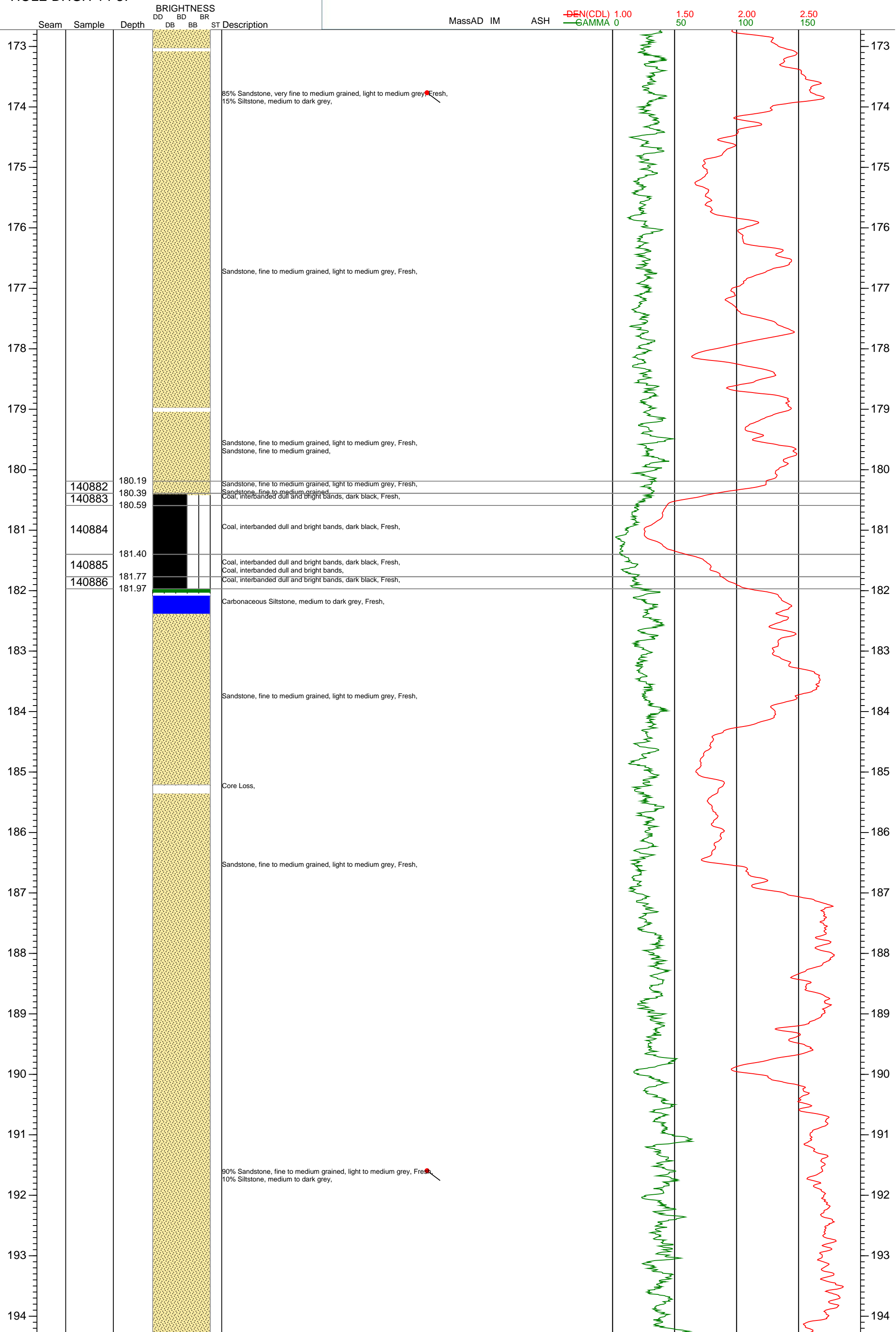
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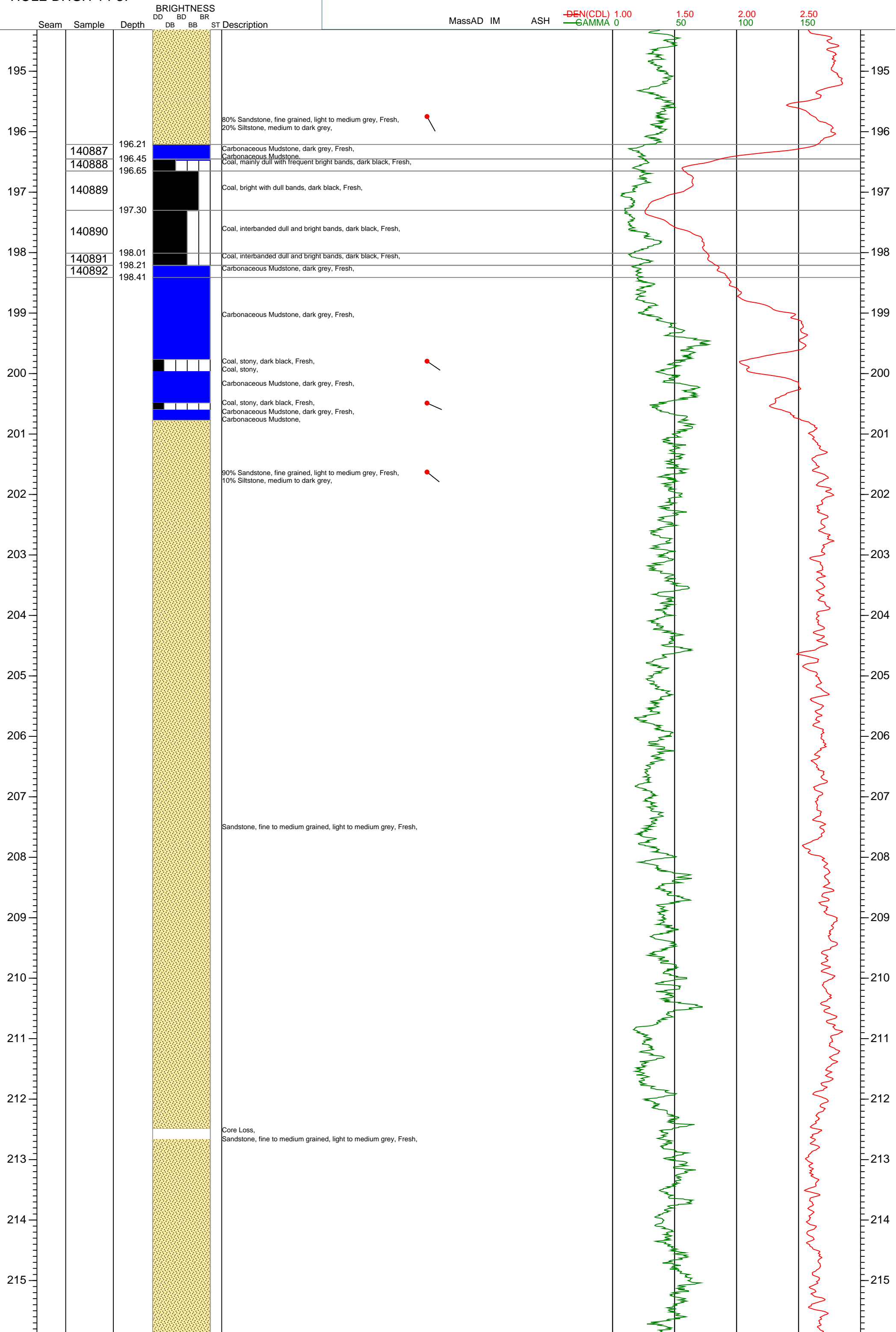


GROUNDHOG
HOLE DHGH-14-37

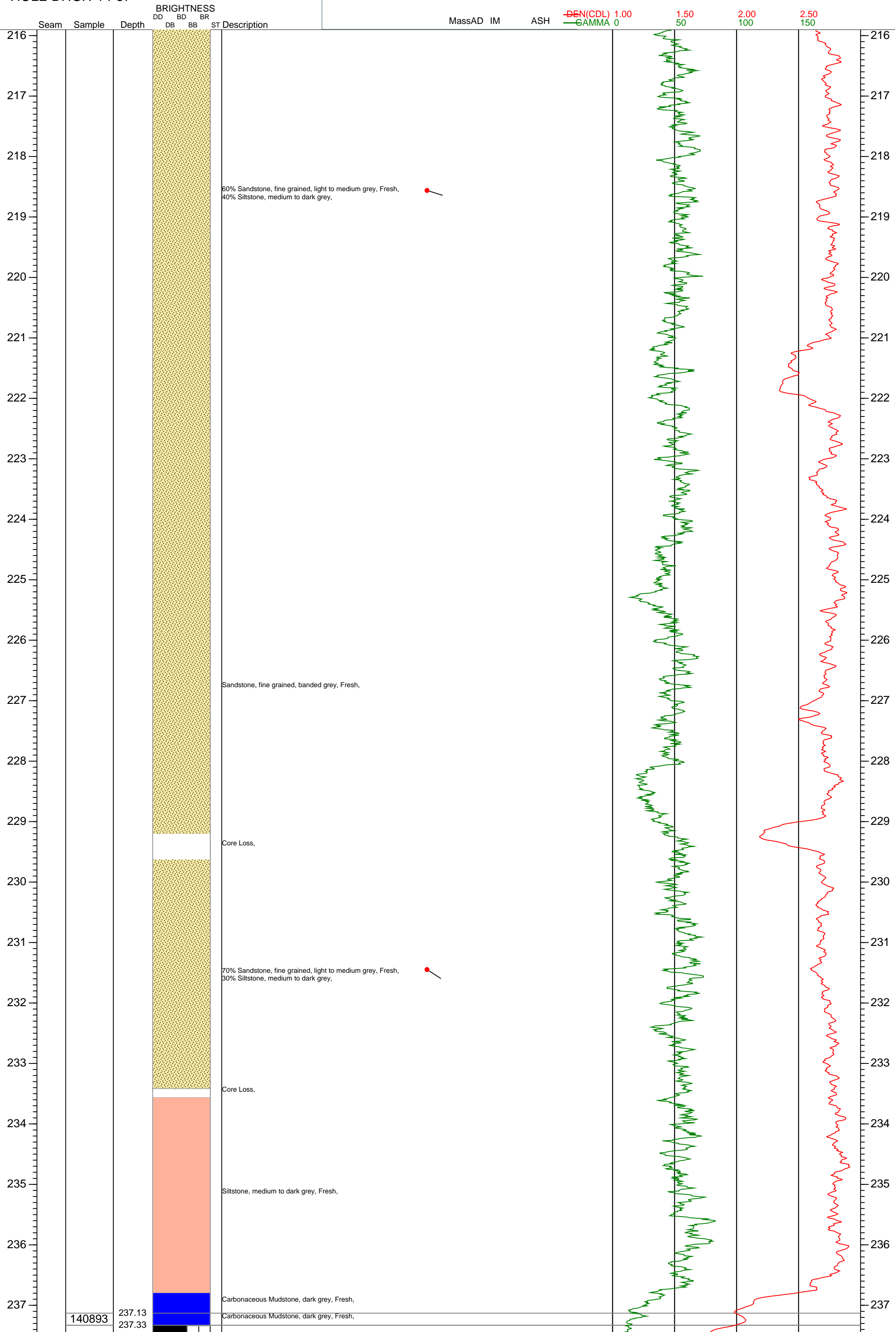


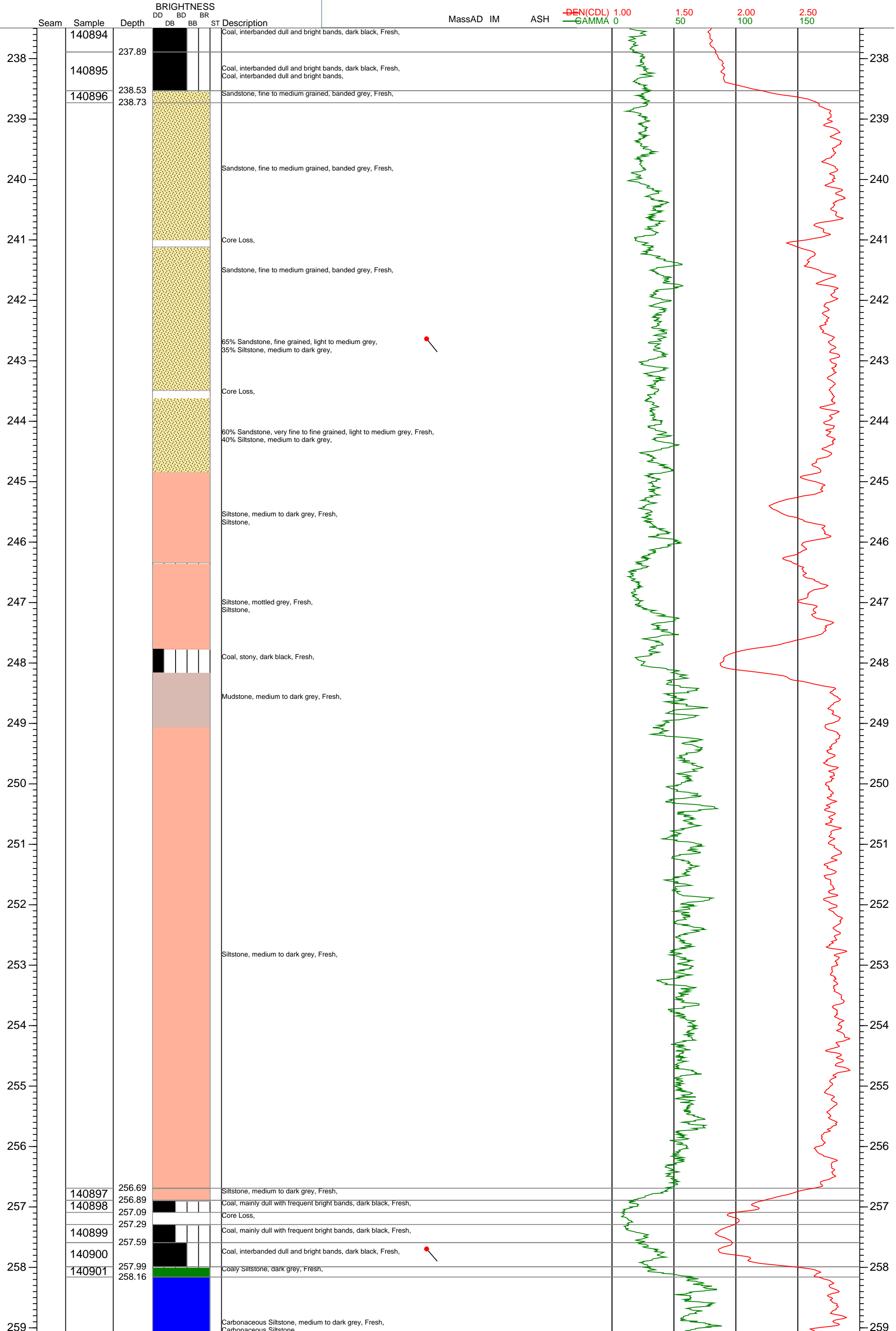


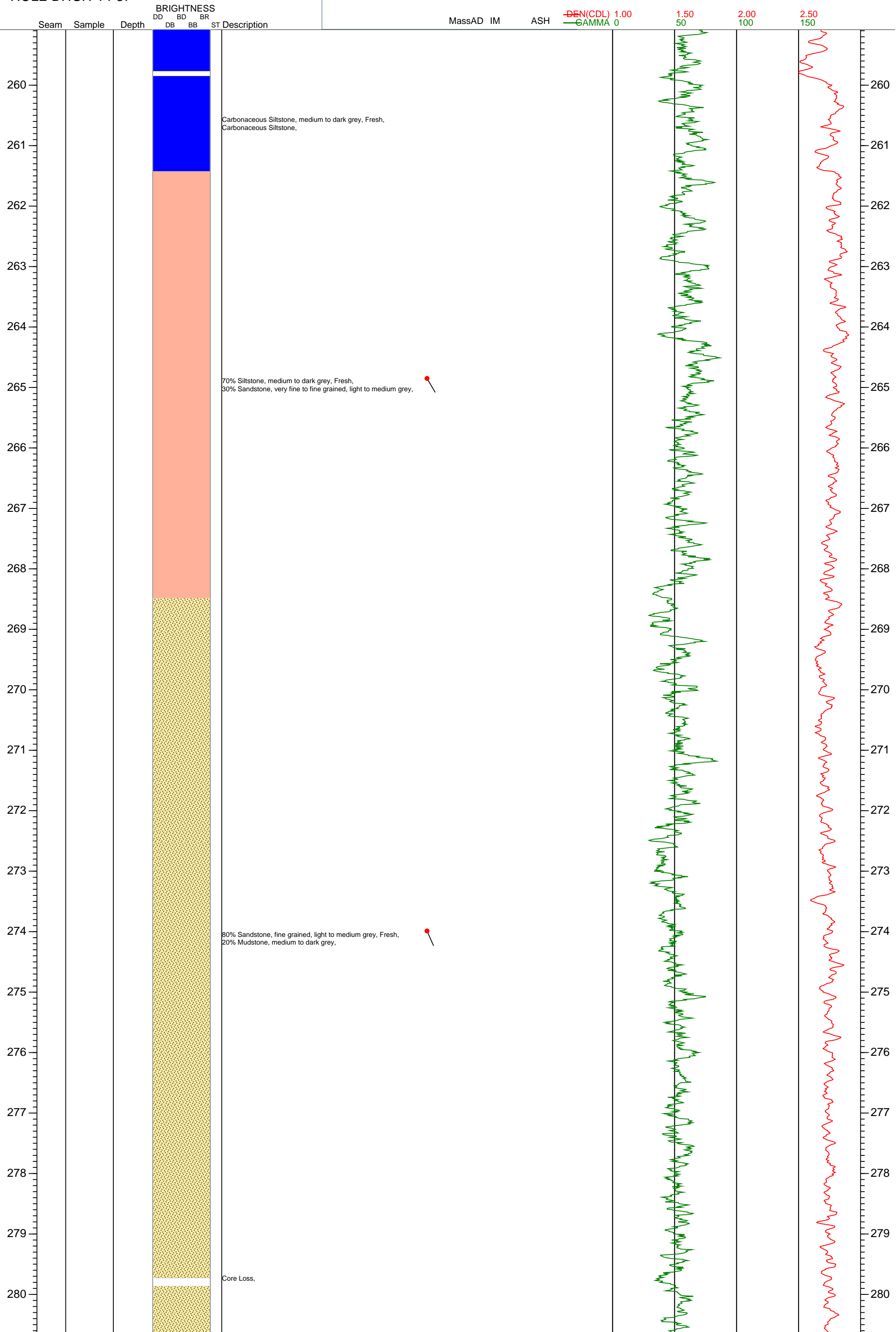
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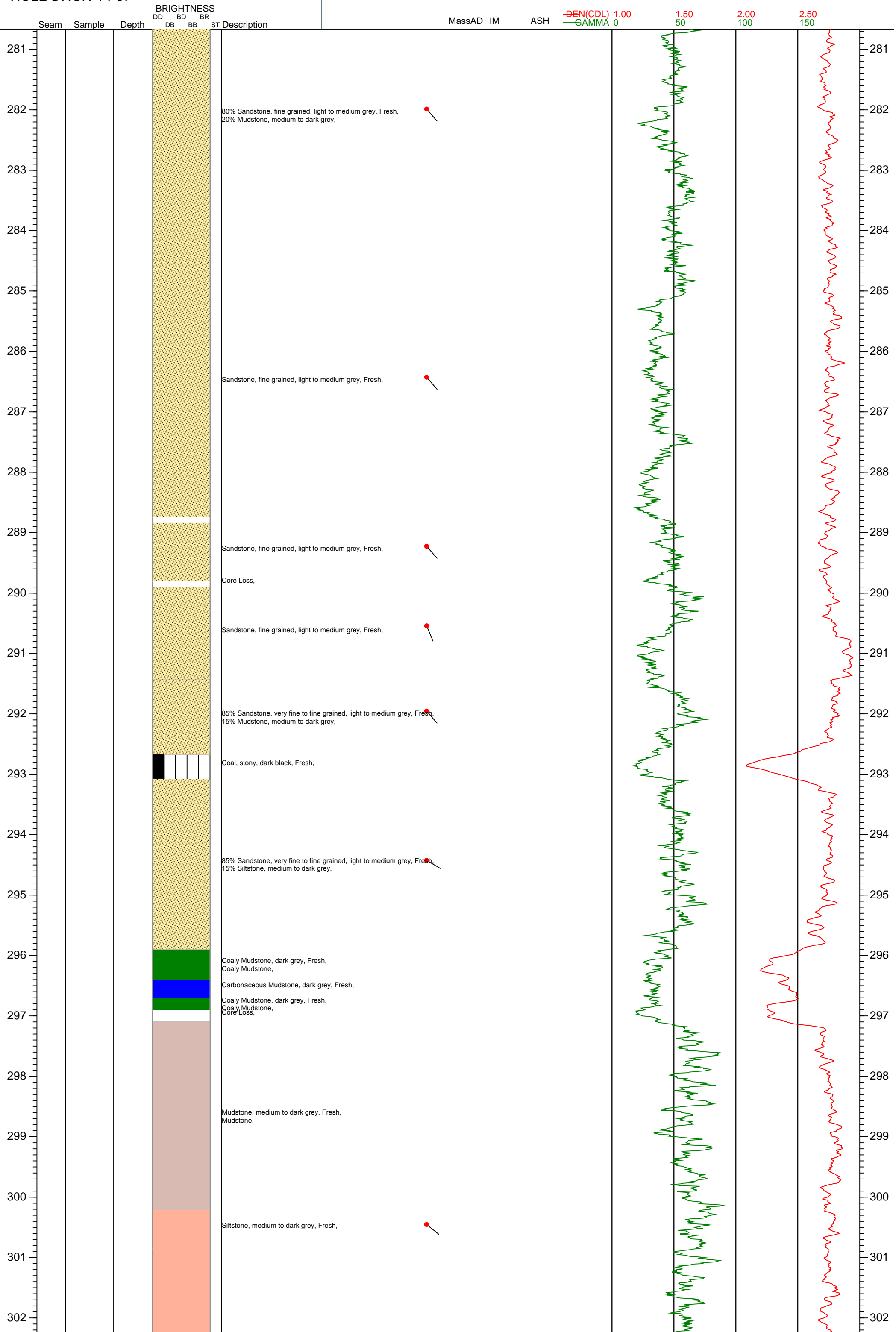


GROUNDHOG
HOLE DHGH-14-37

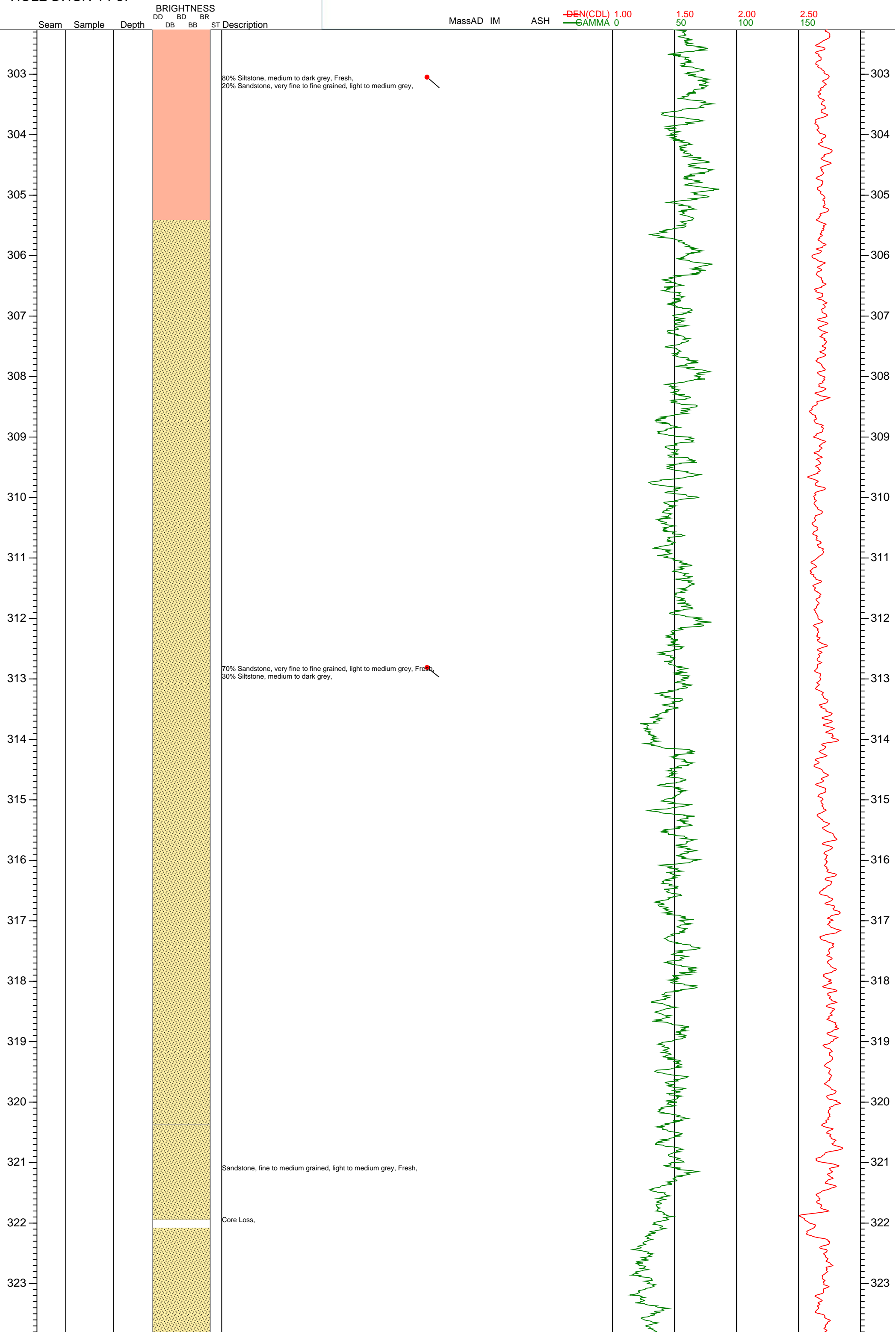


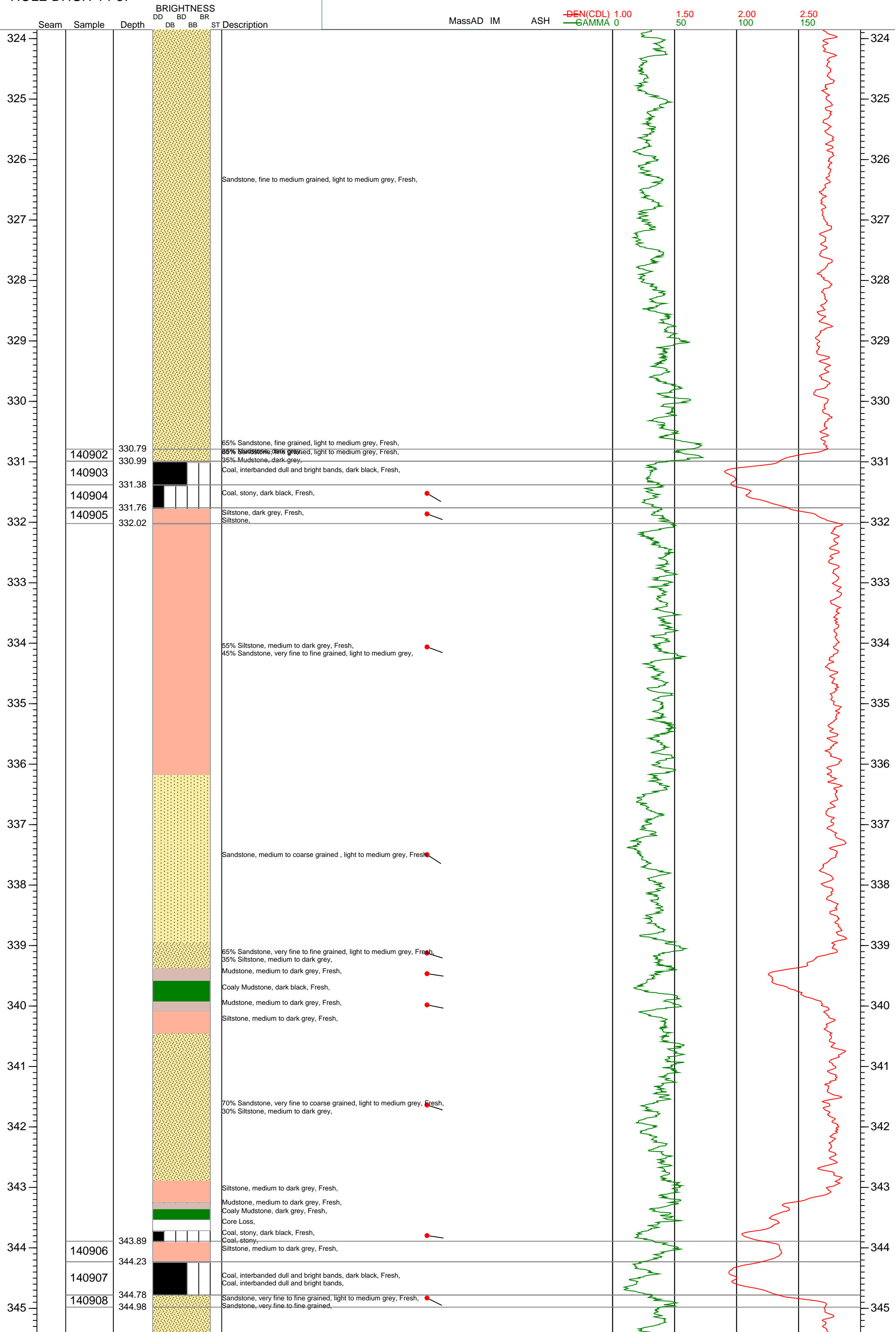


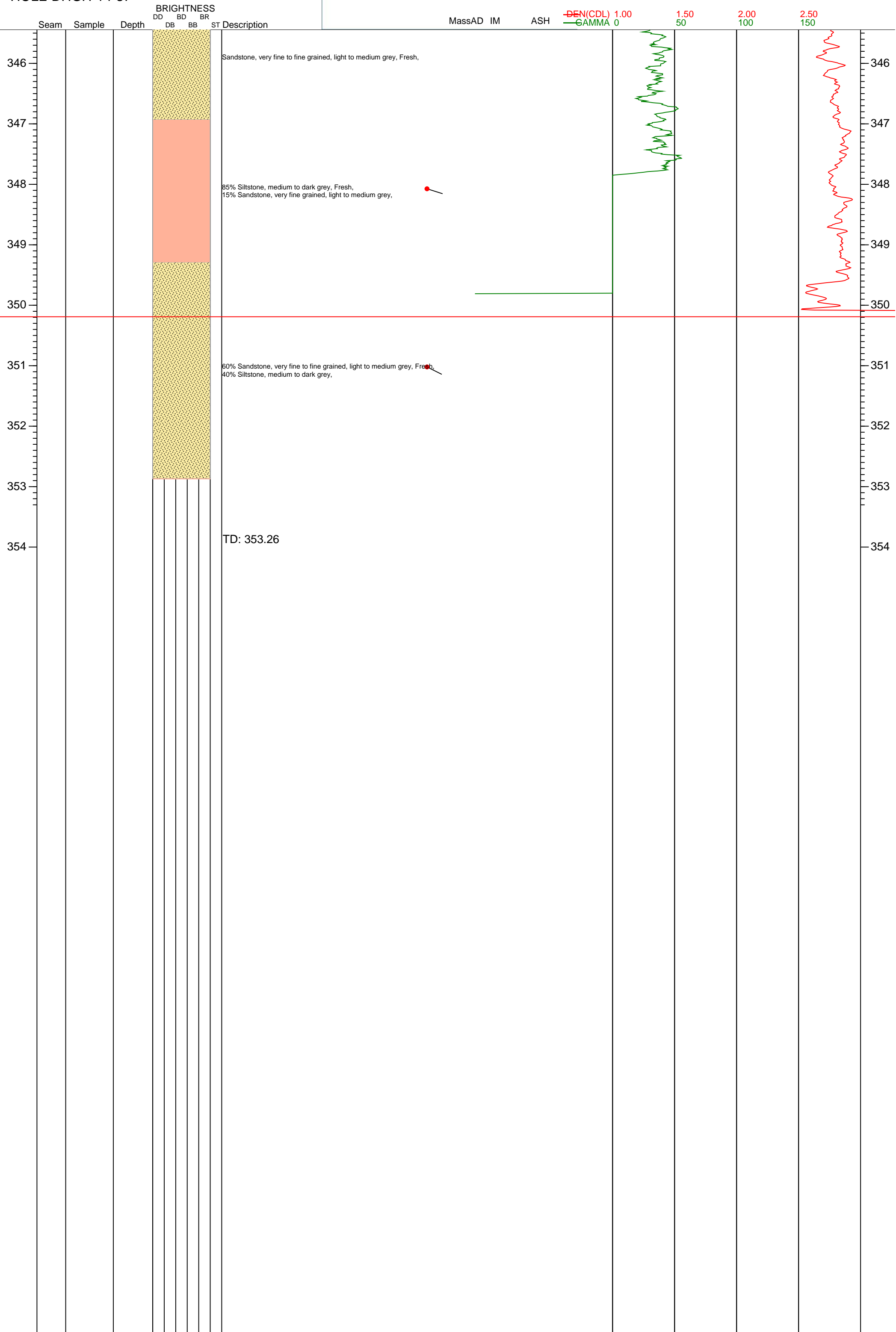




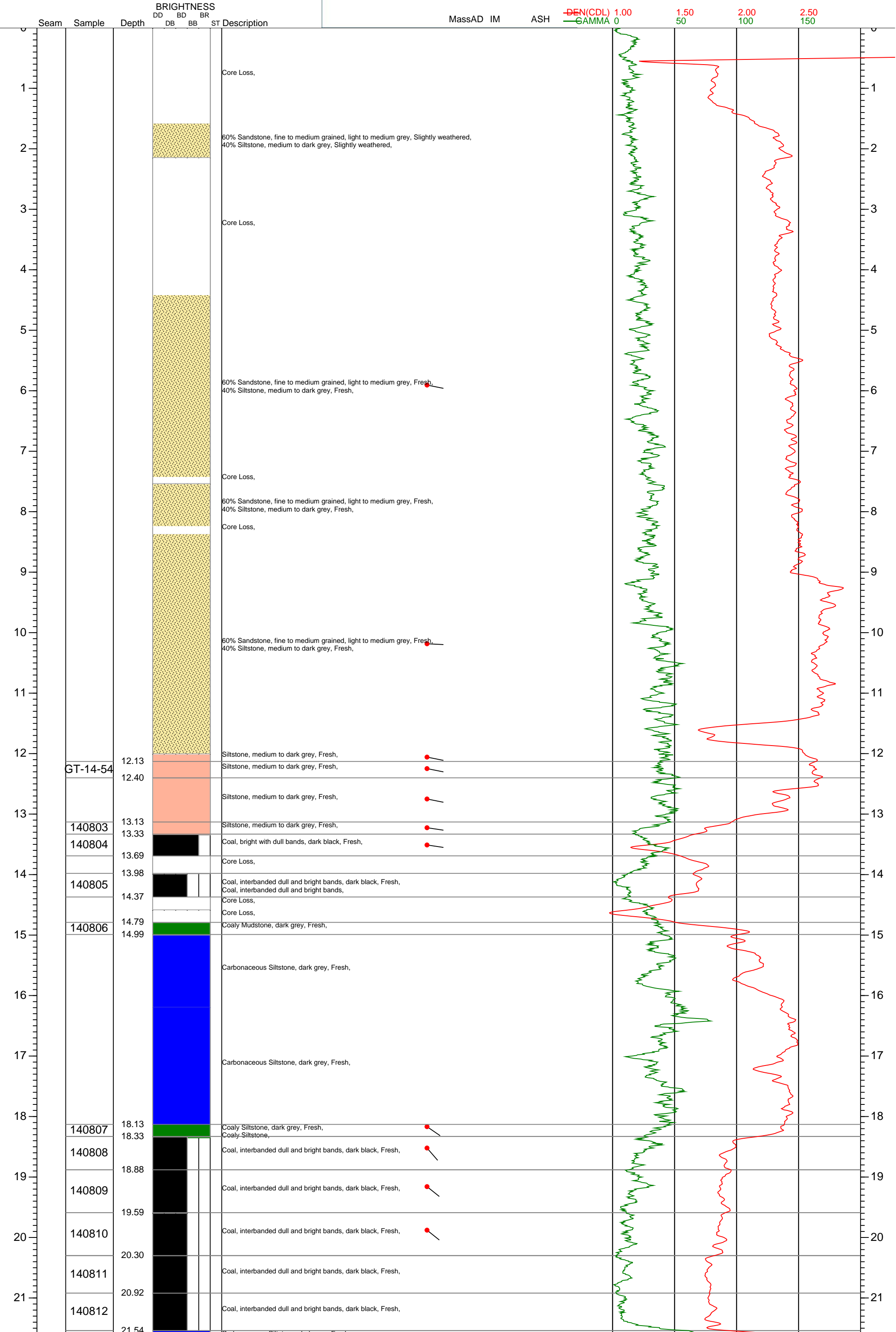
GROUNDHOG
HOLE DHGH-14-37



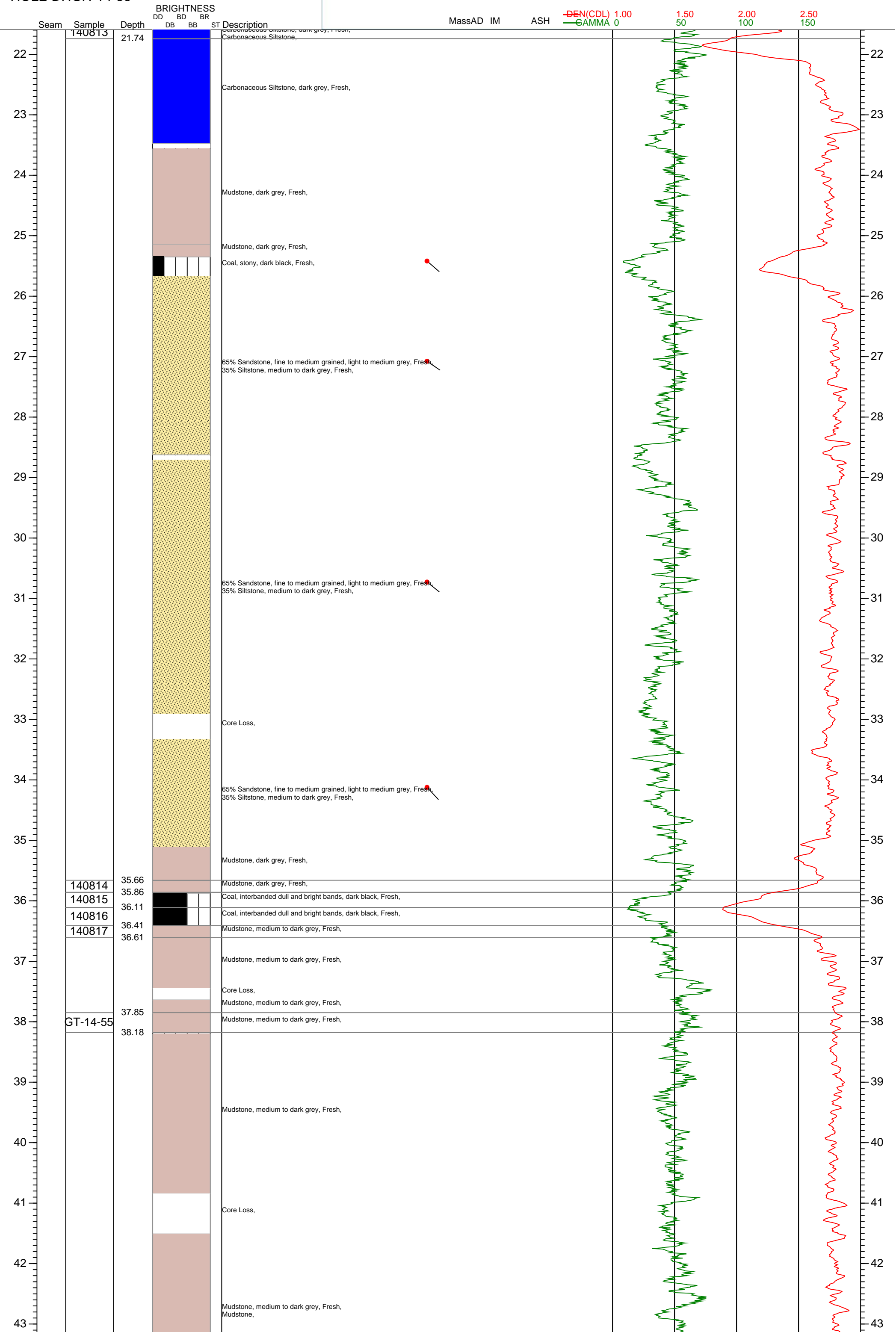


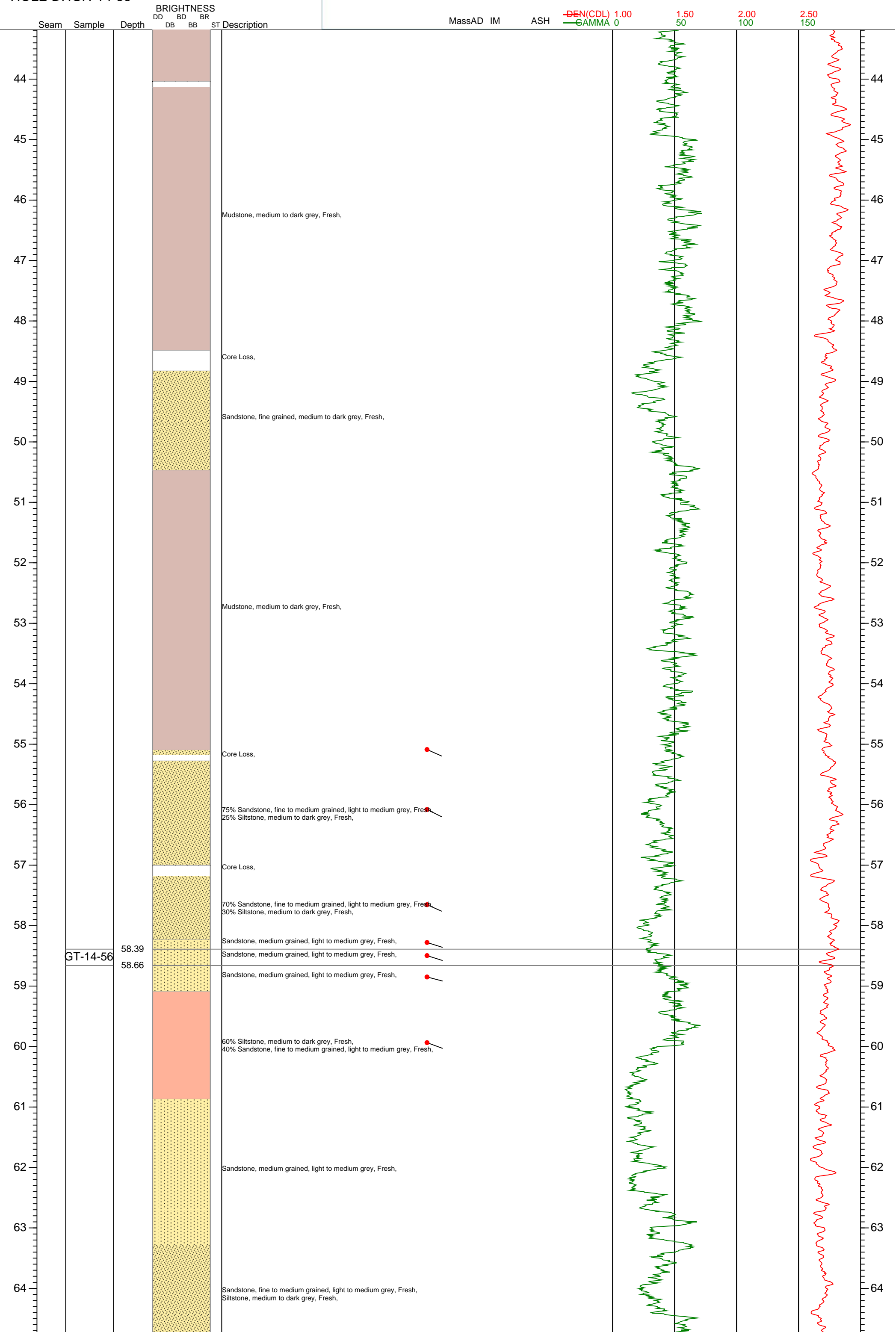


GROUNDHOG
HOLE DHGH-14-38

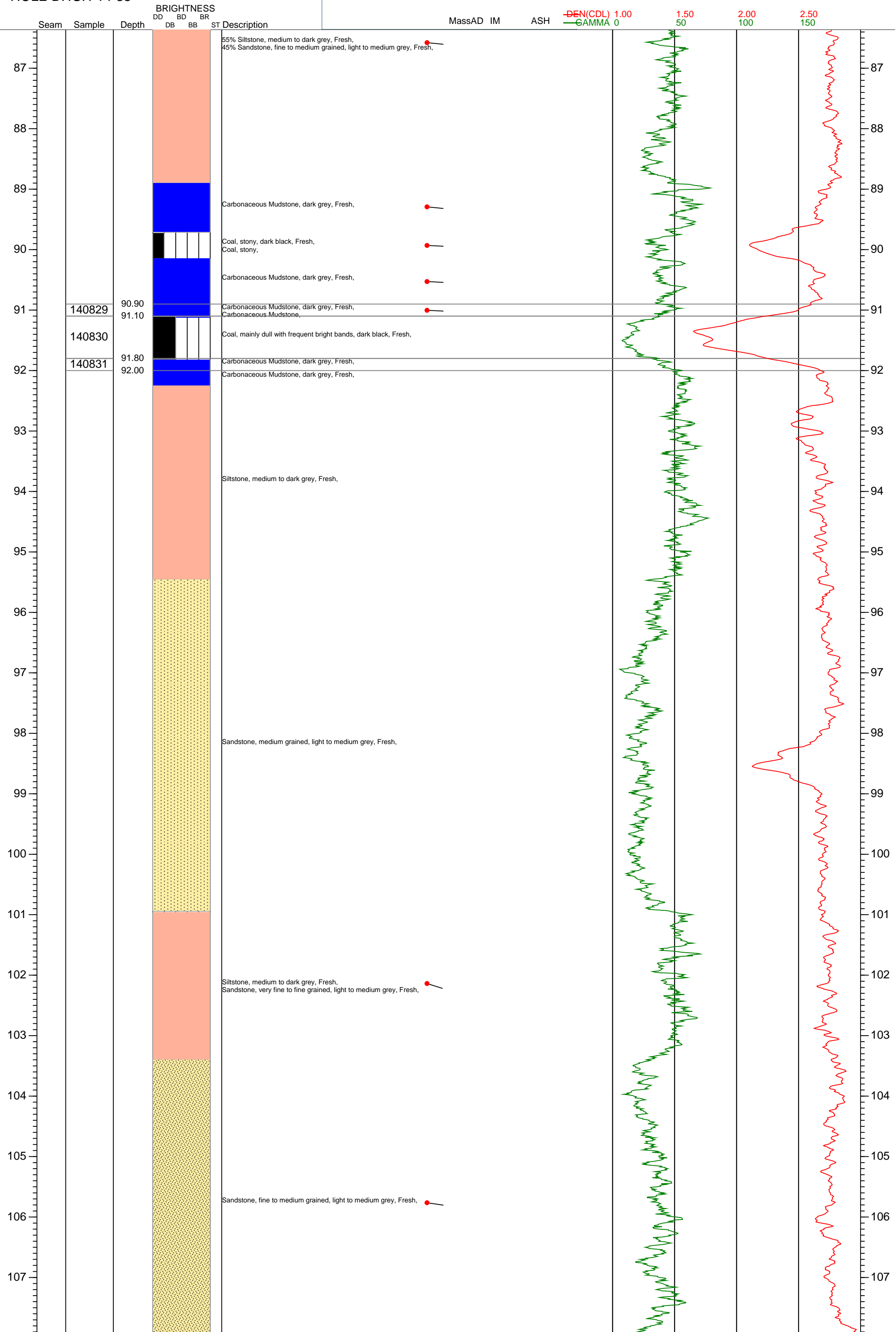


GROUNDHOG
HOLE DHGH-14-38

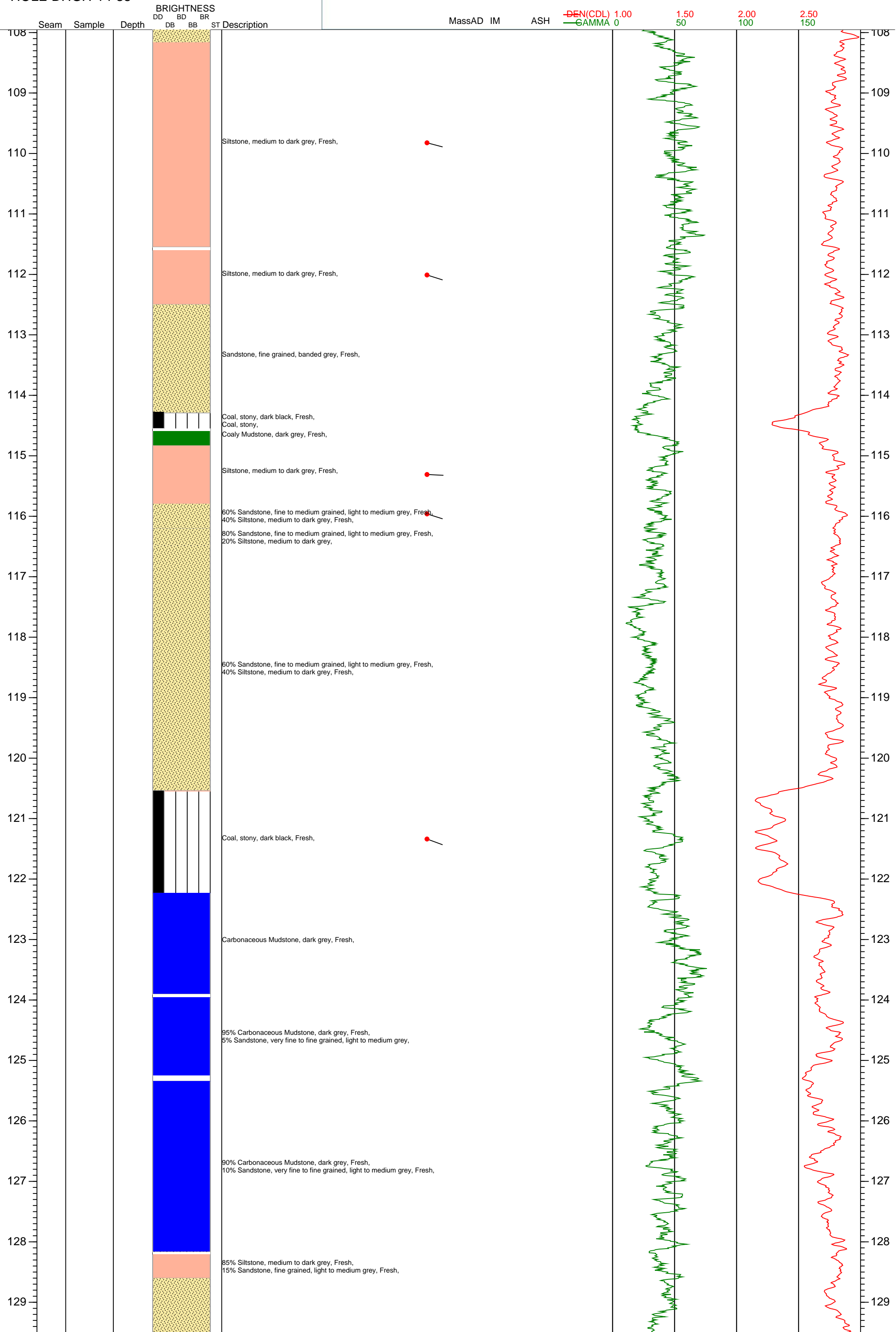


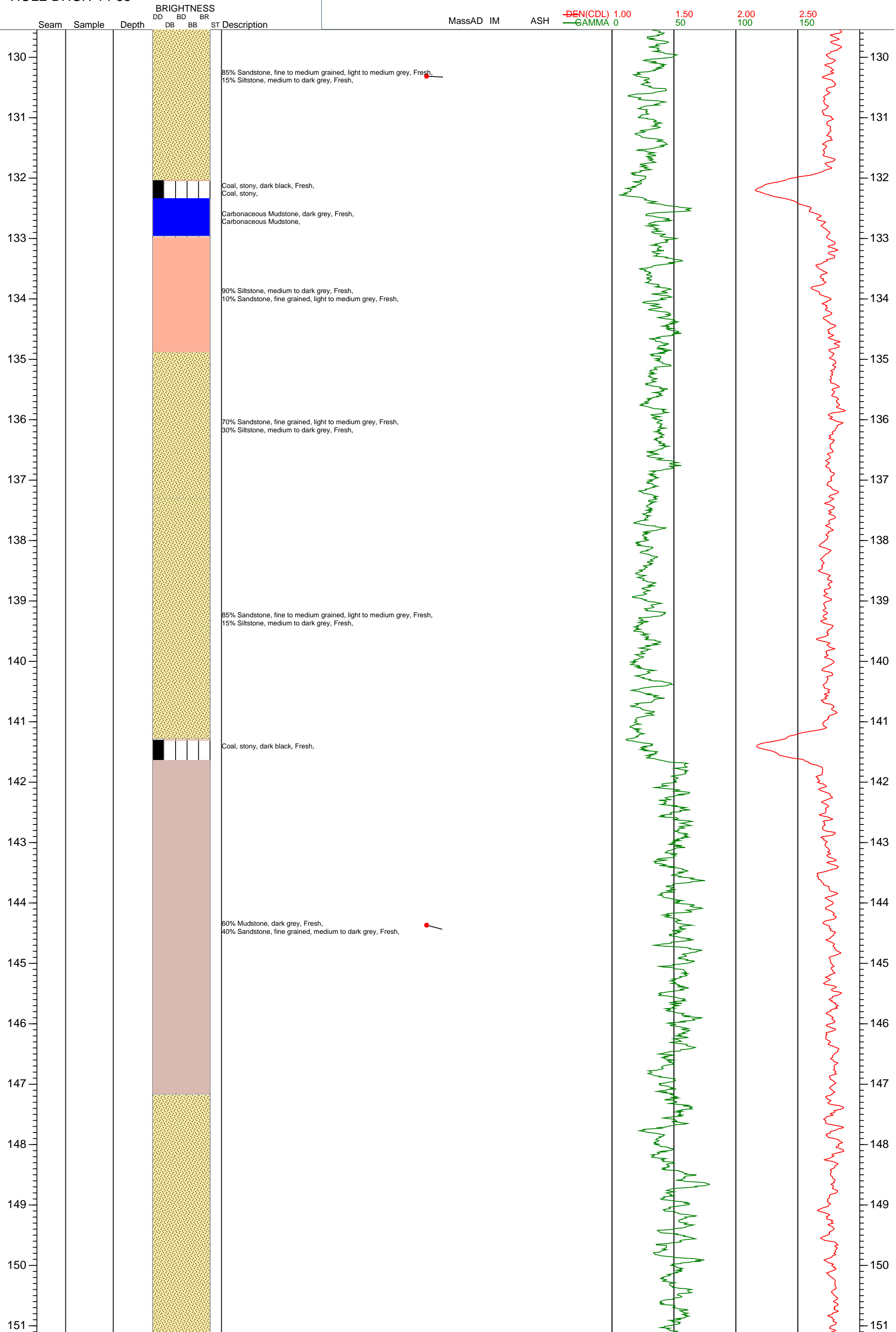


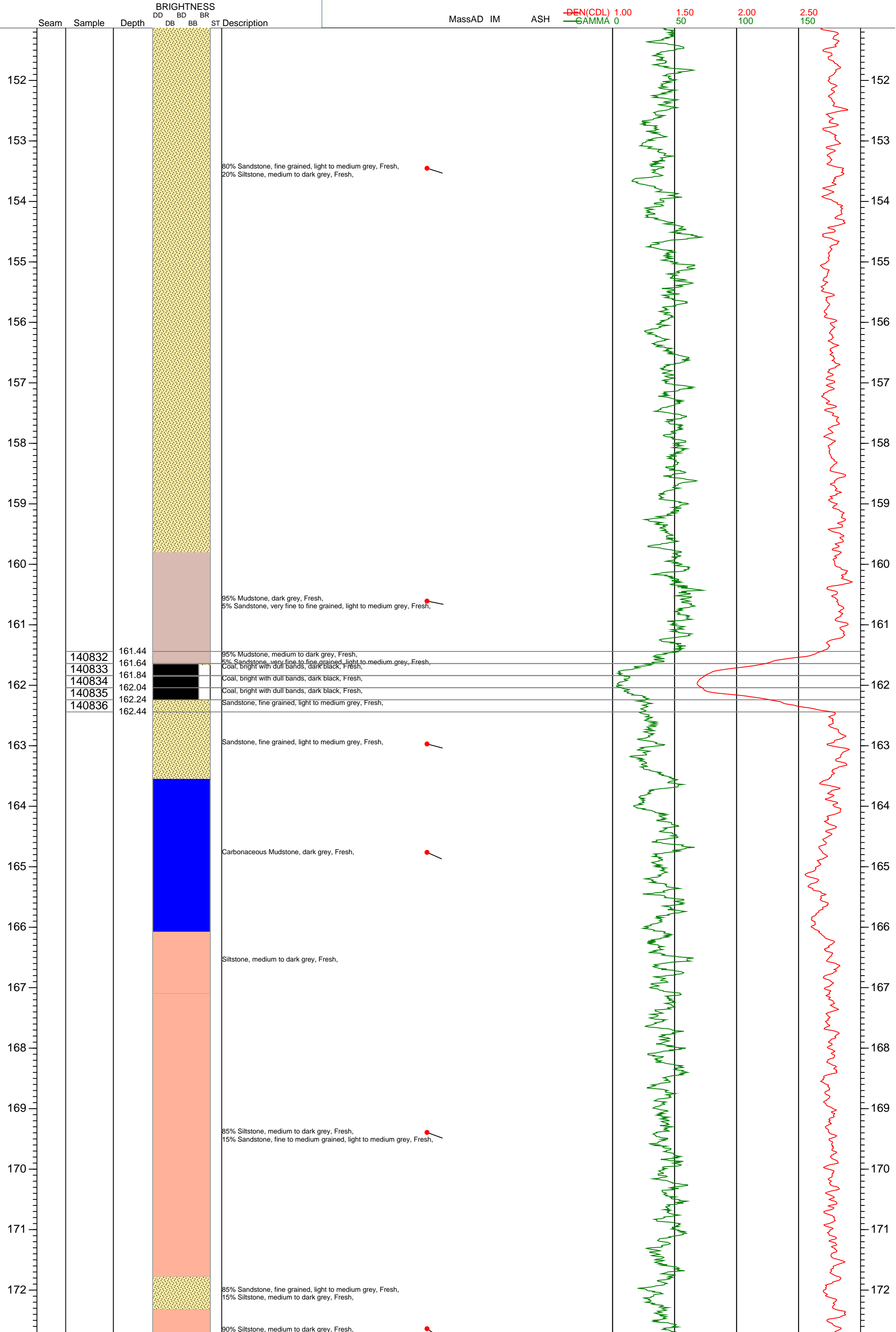
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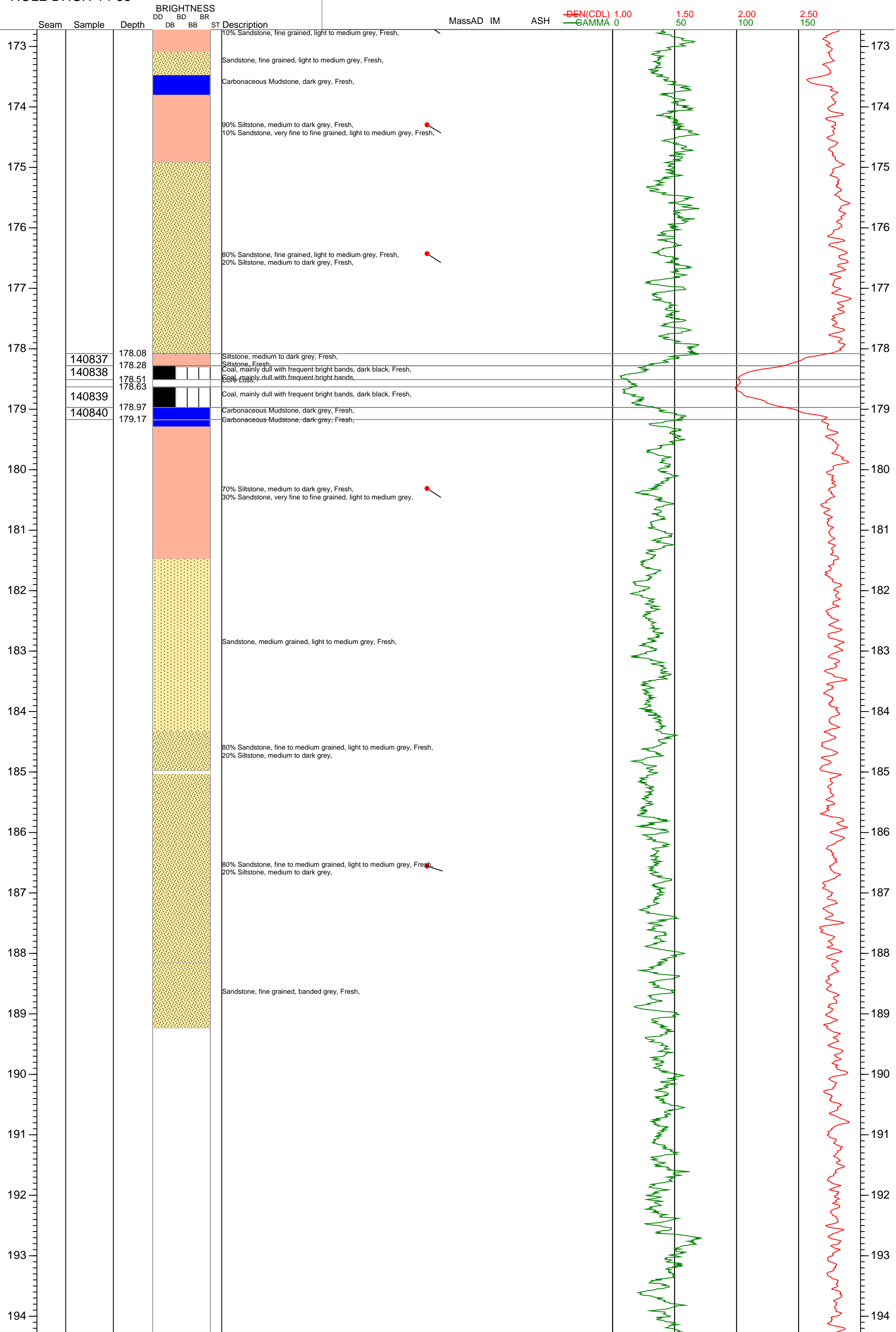
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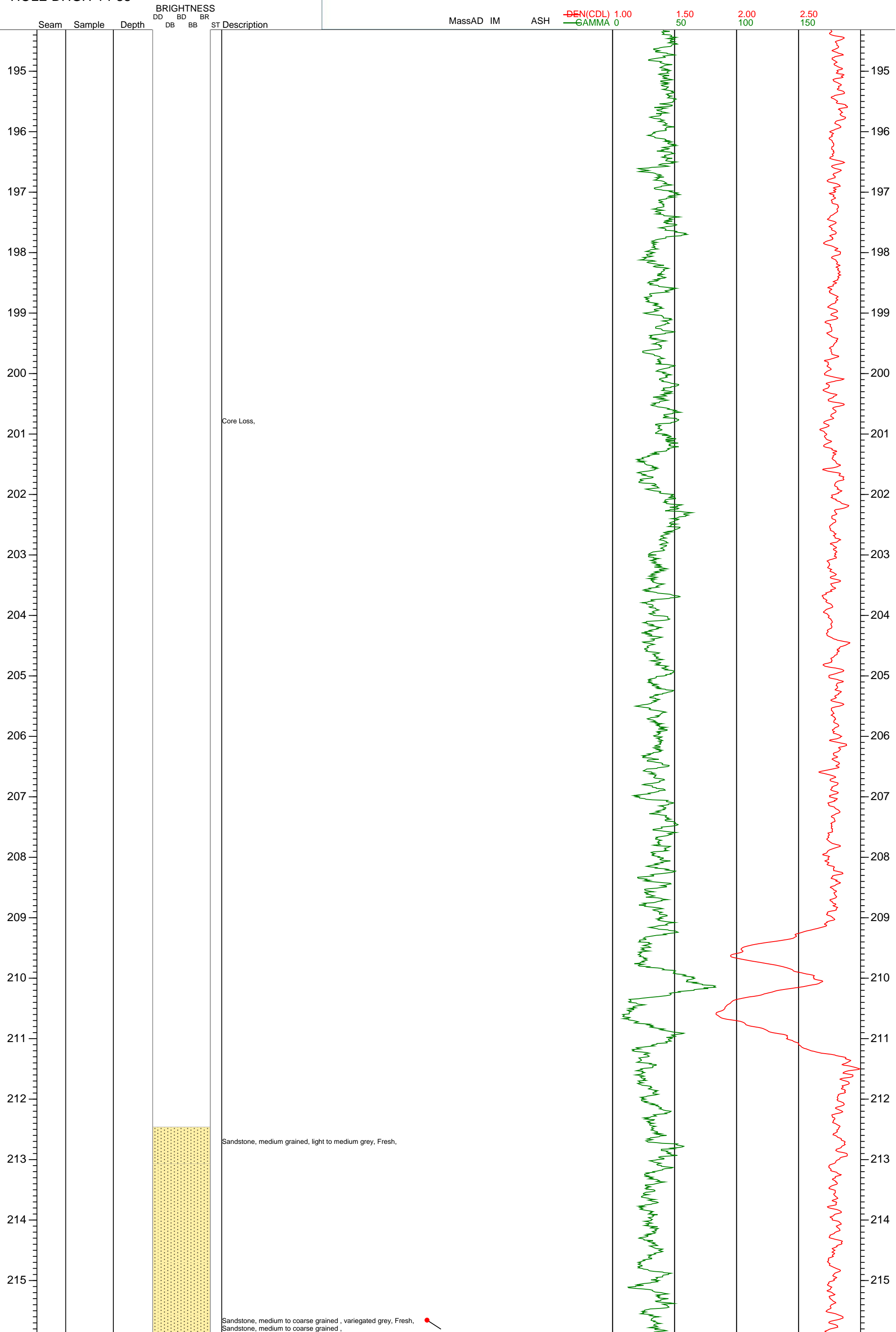




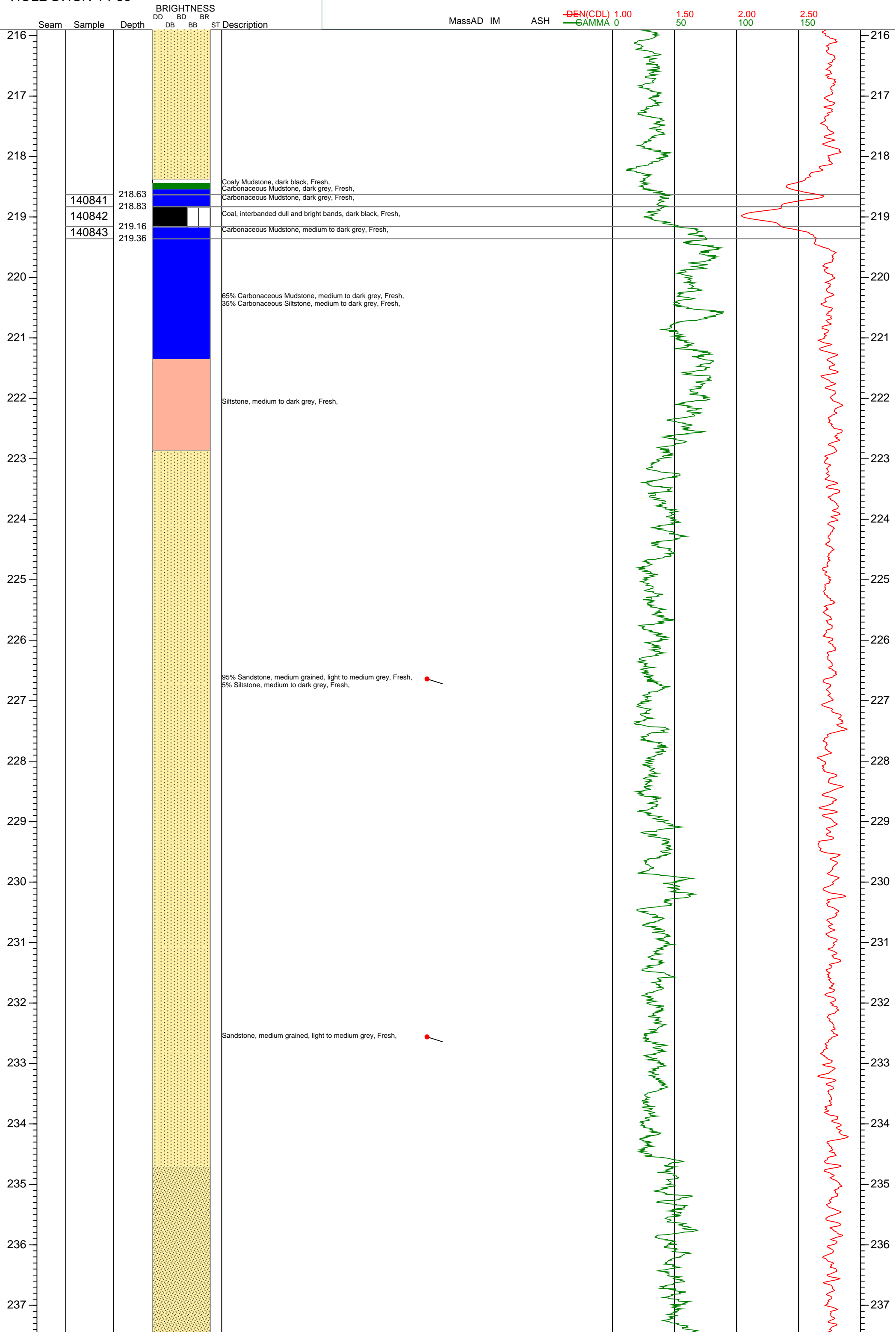


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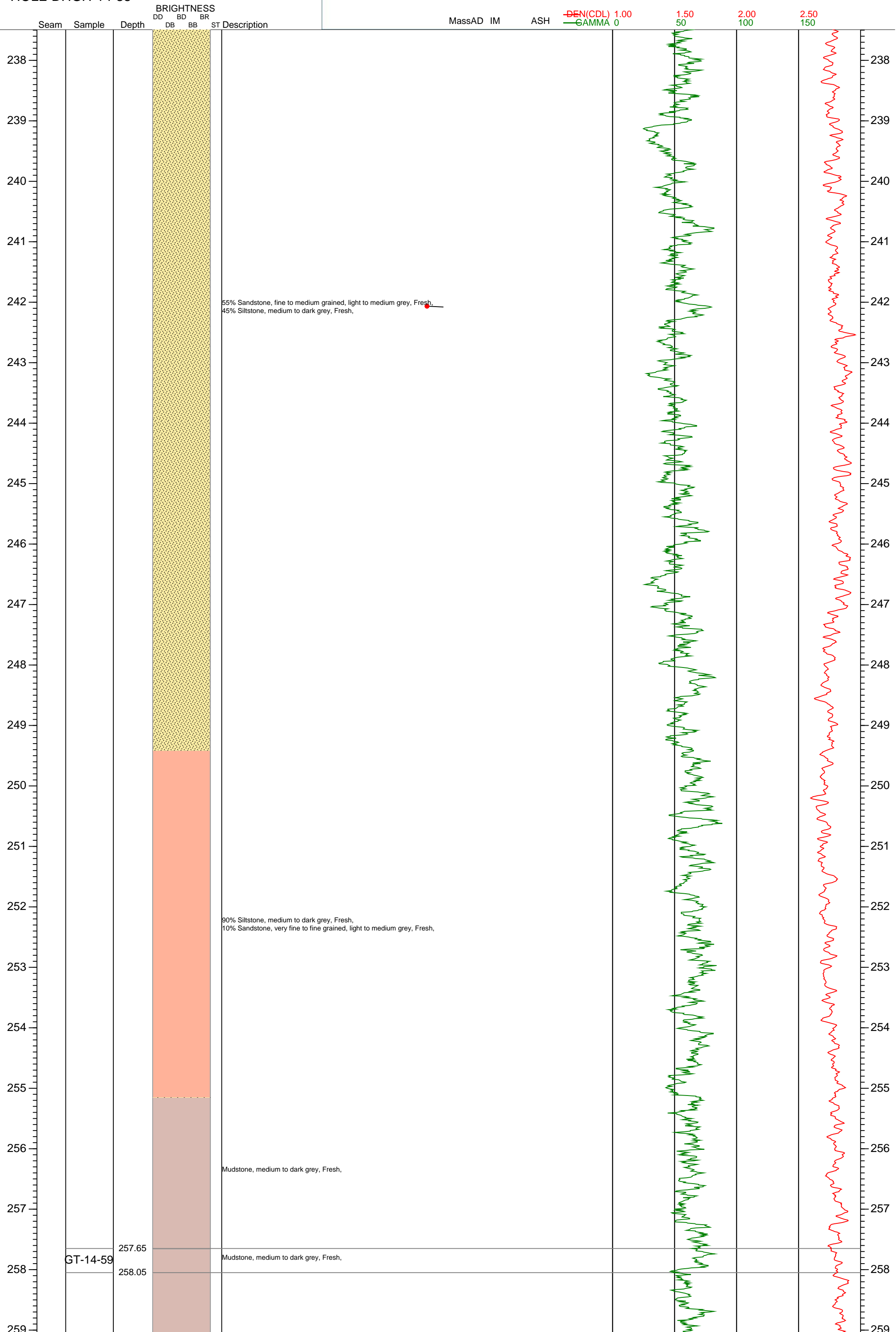




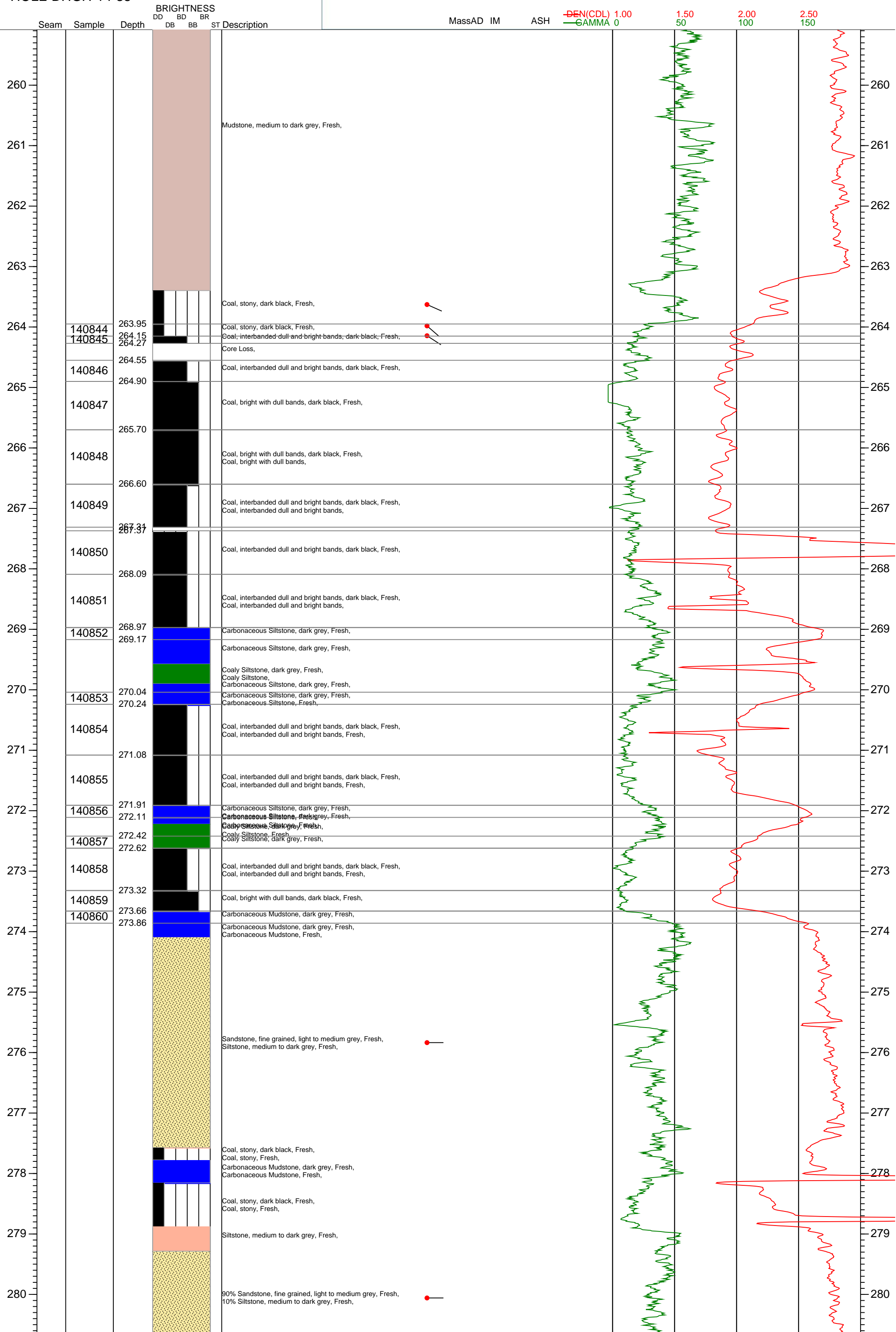
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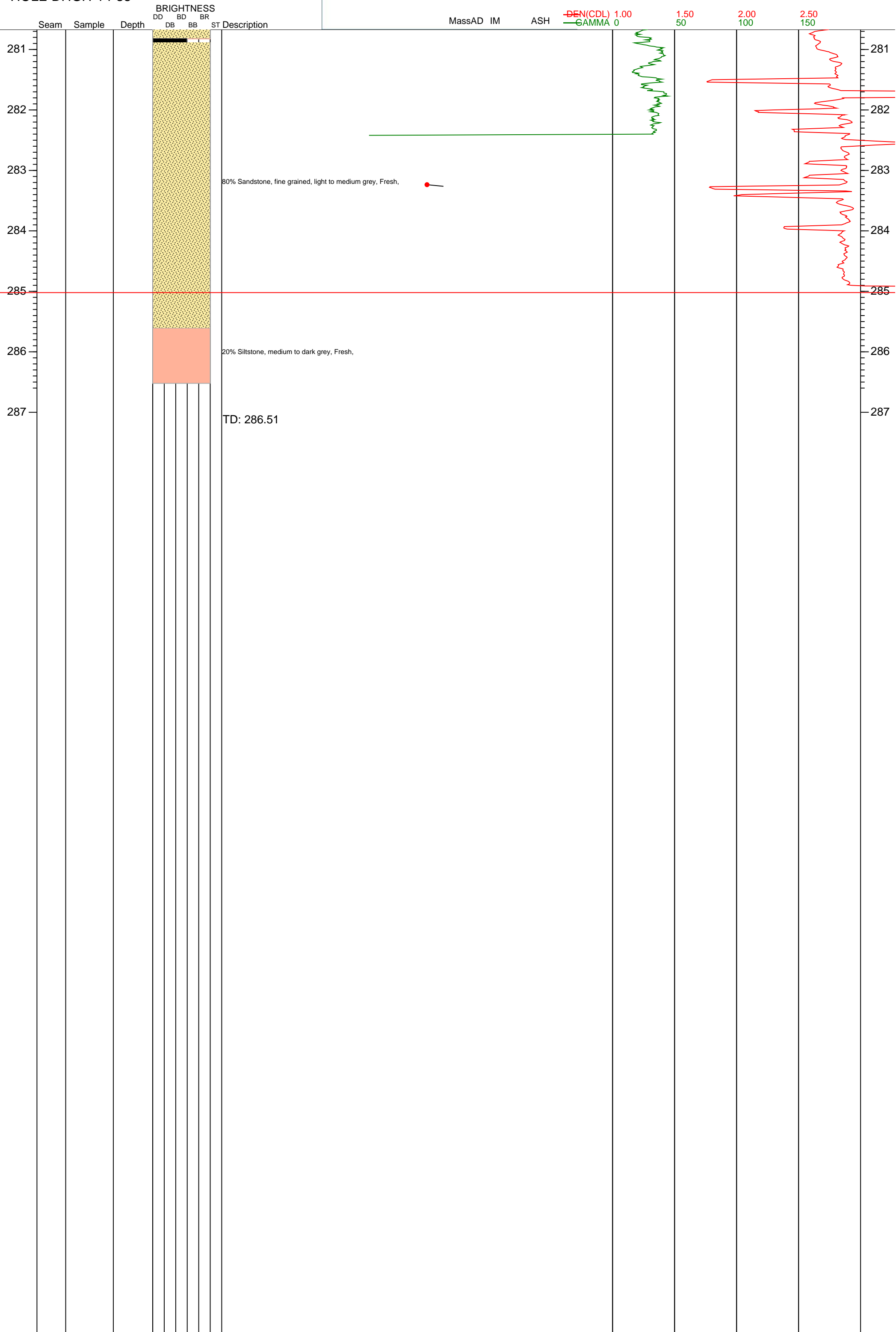


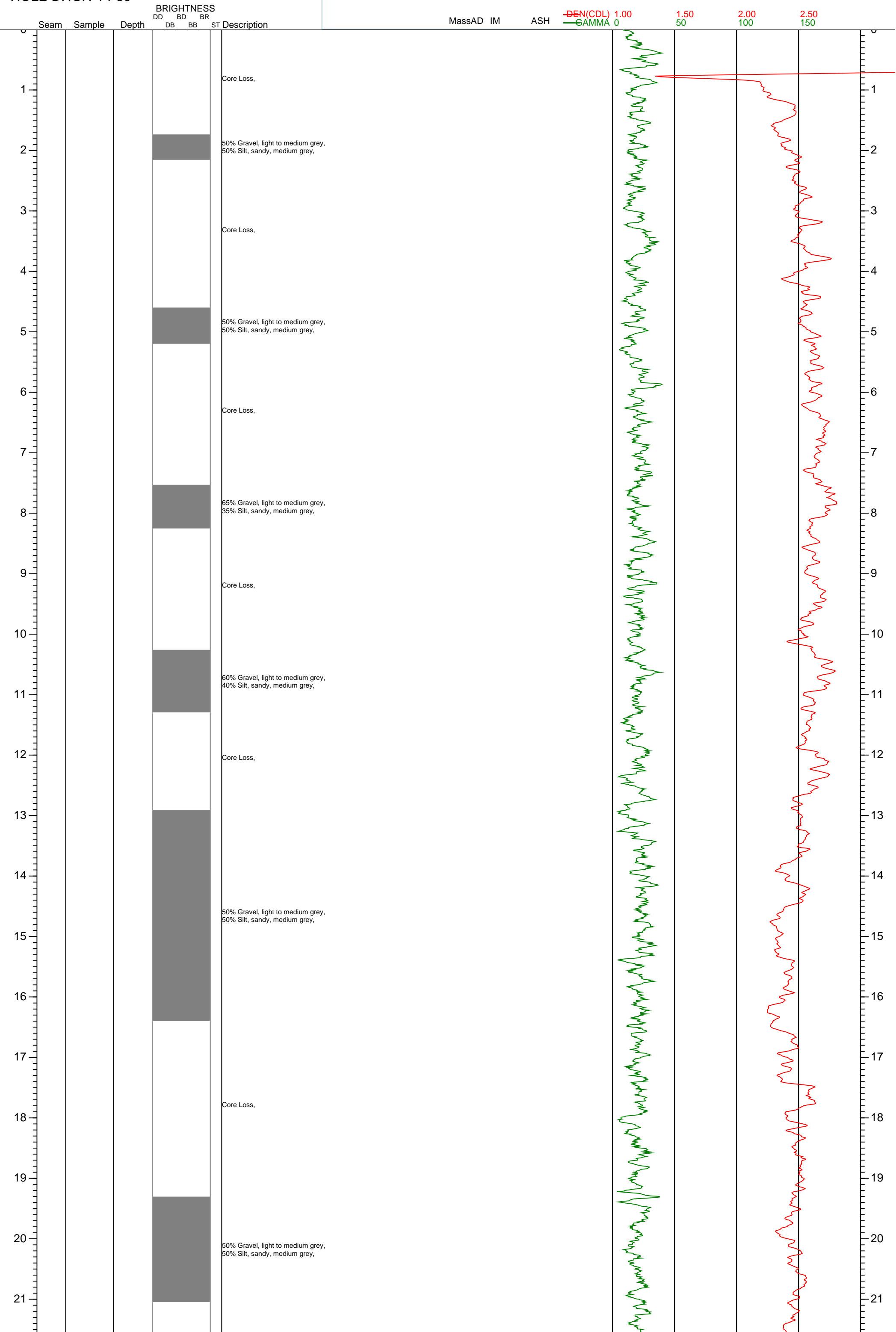
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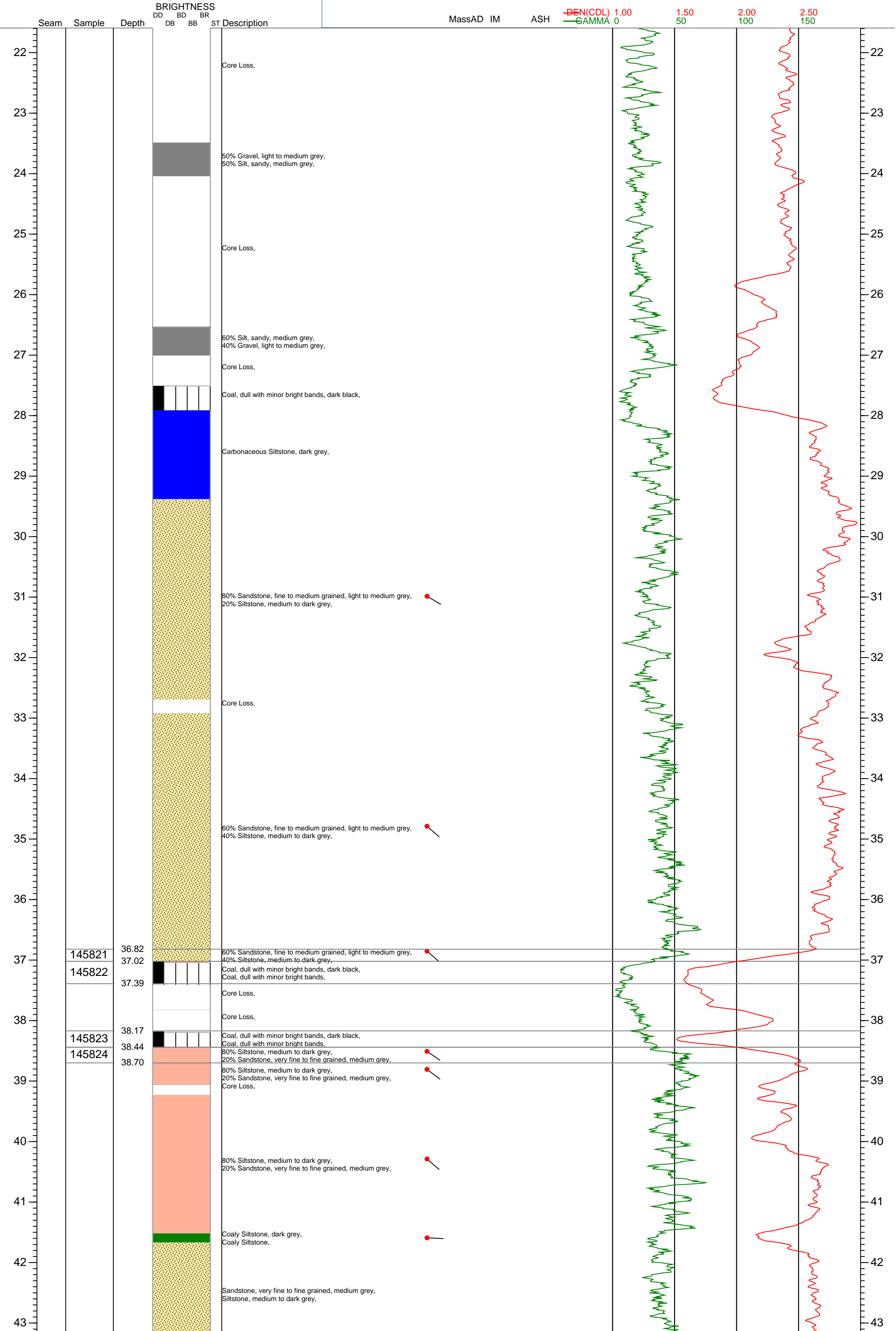
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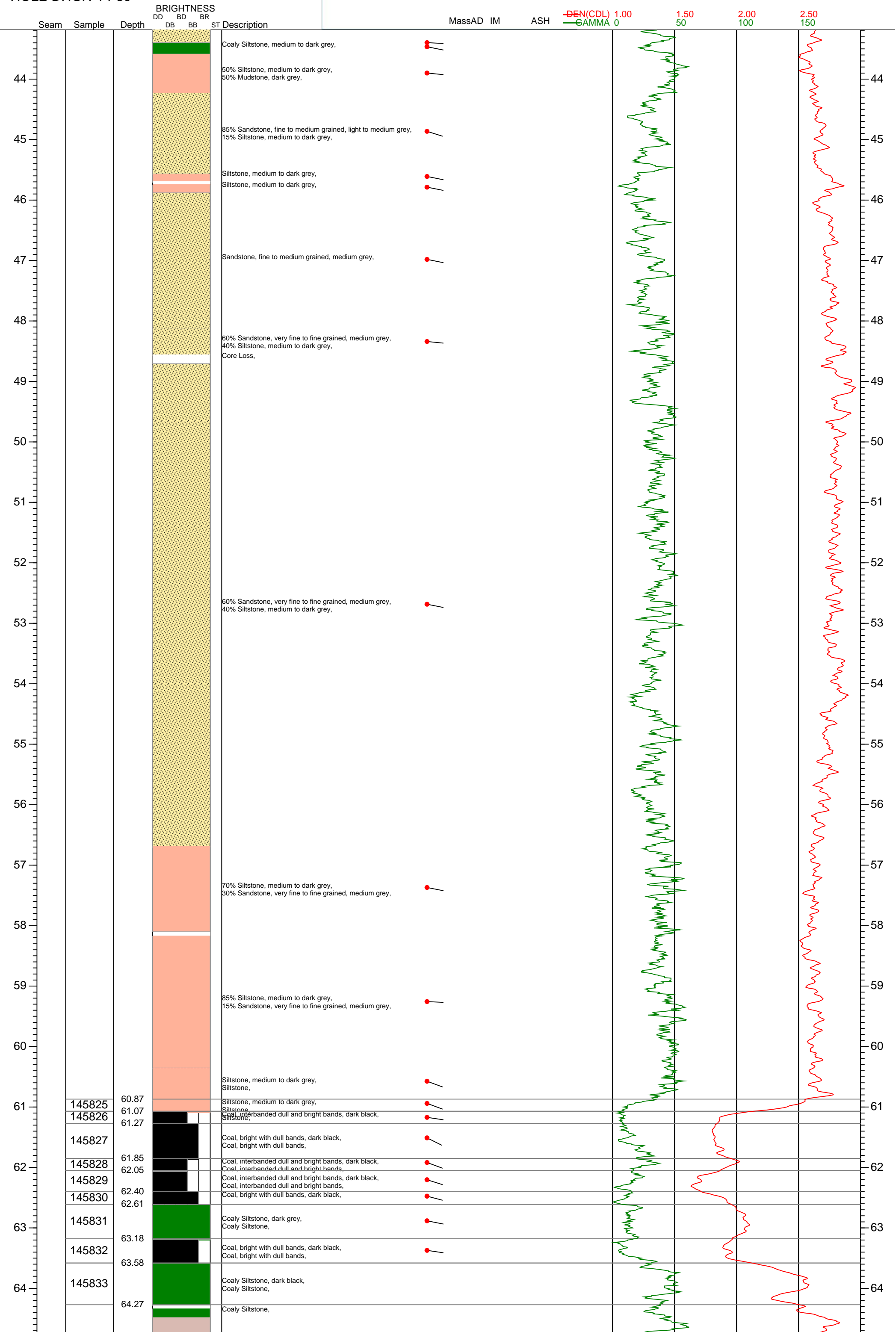




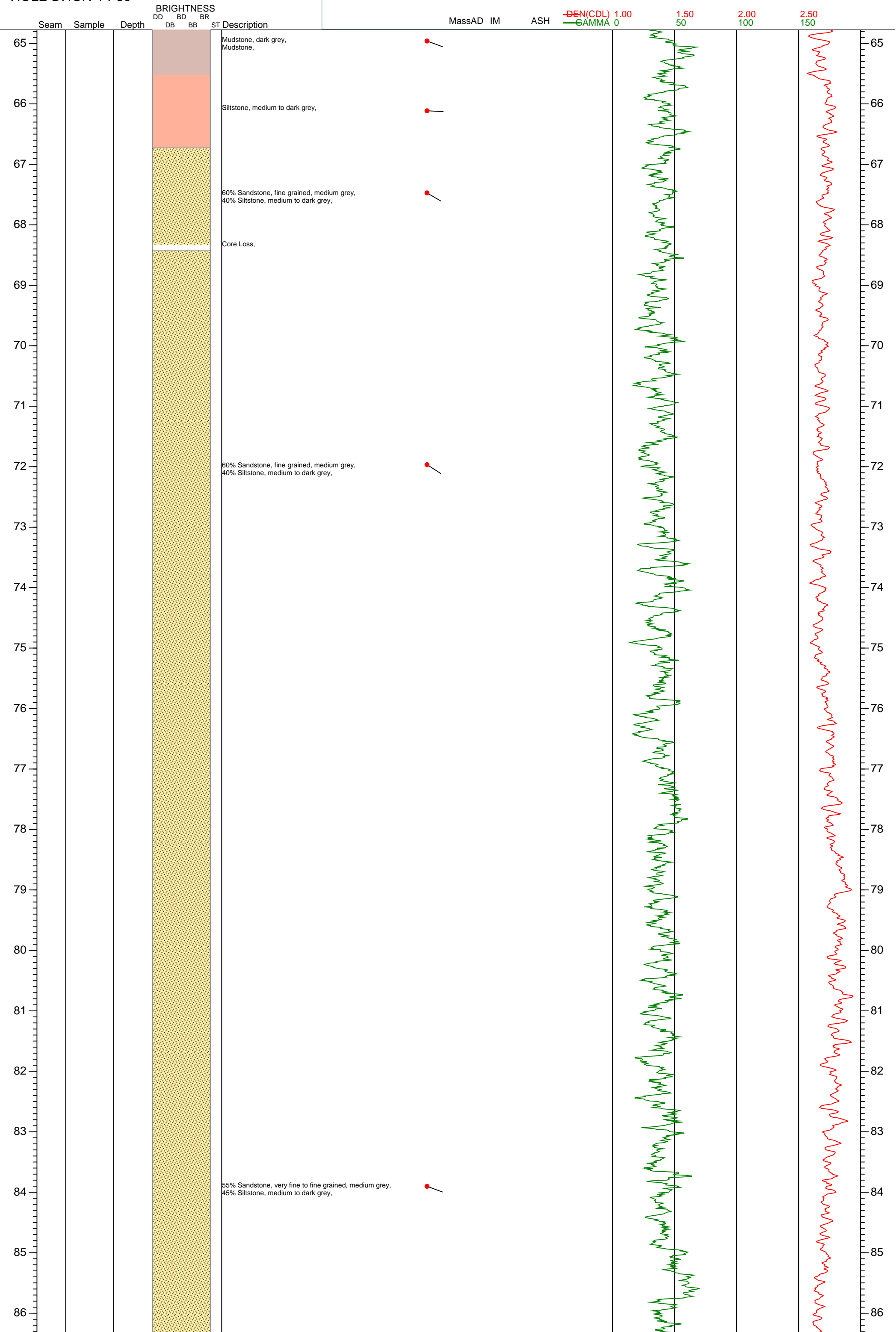
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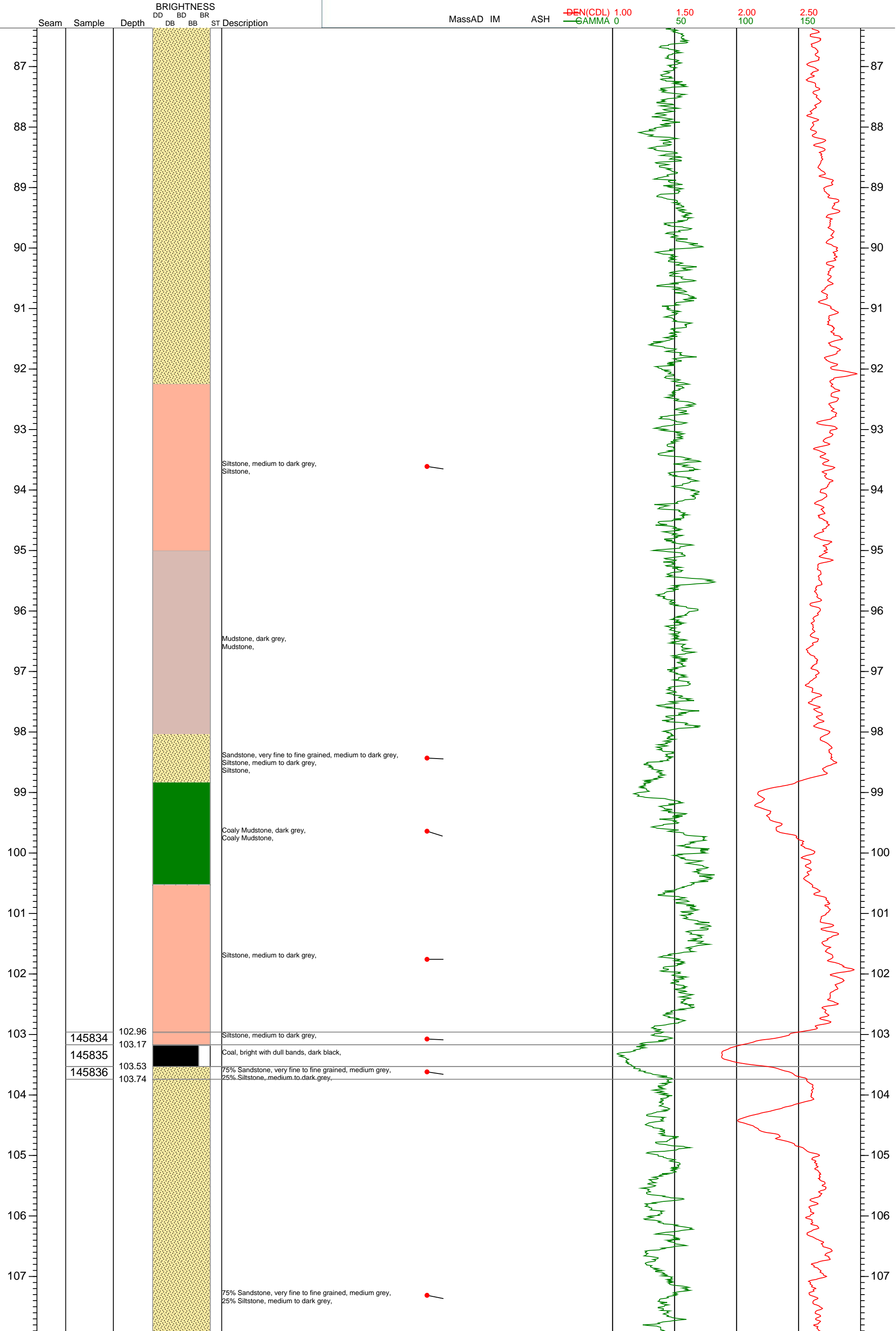
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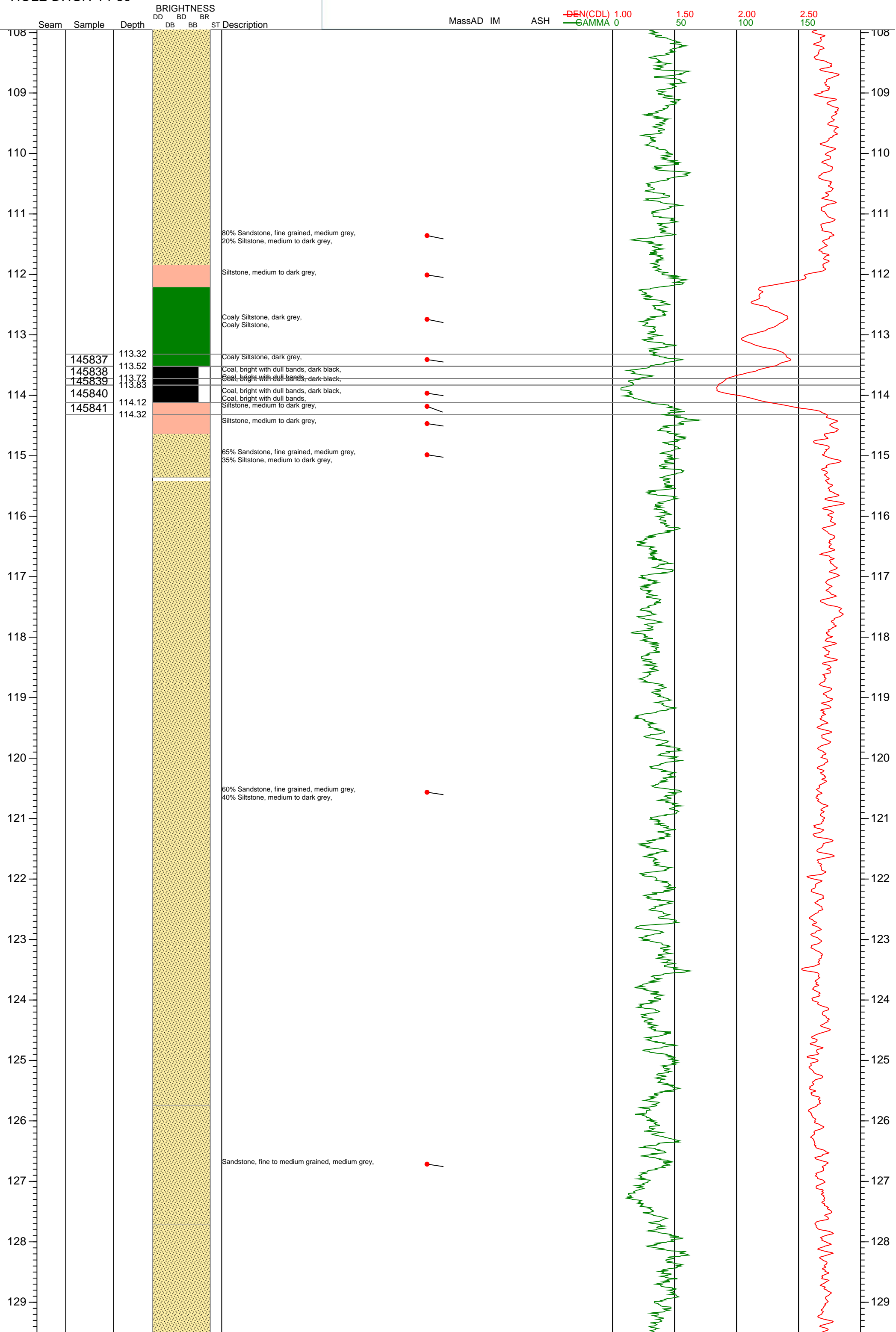
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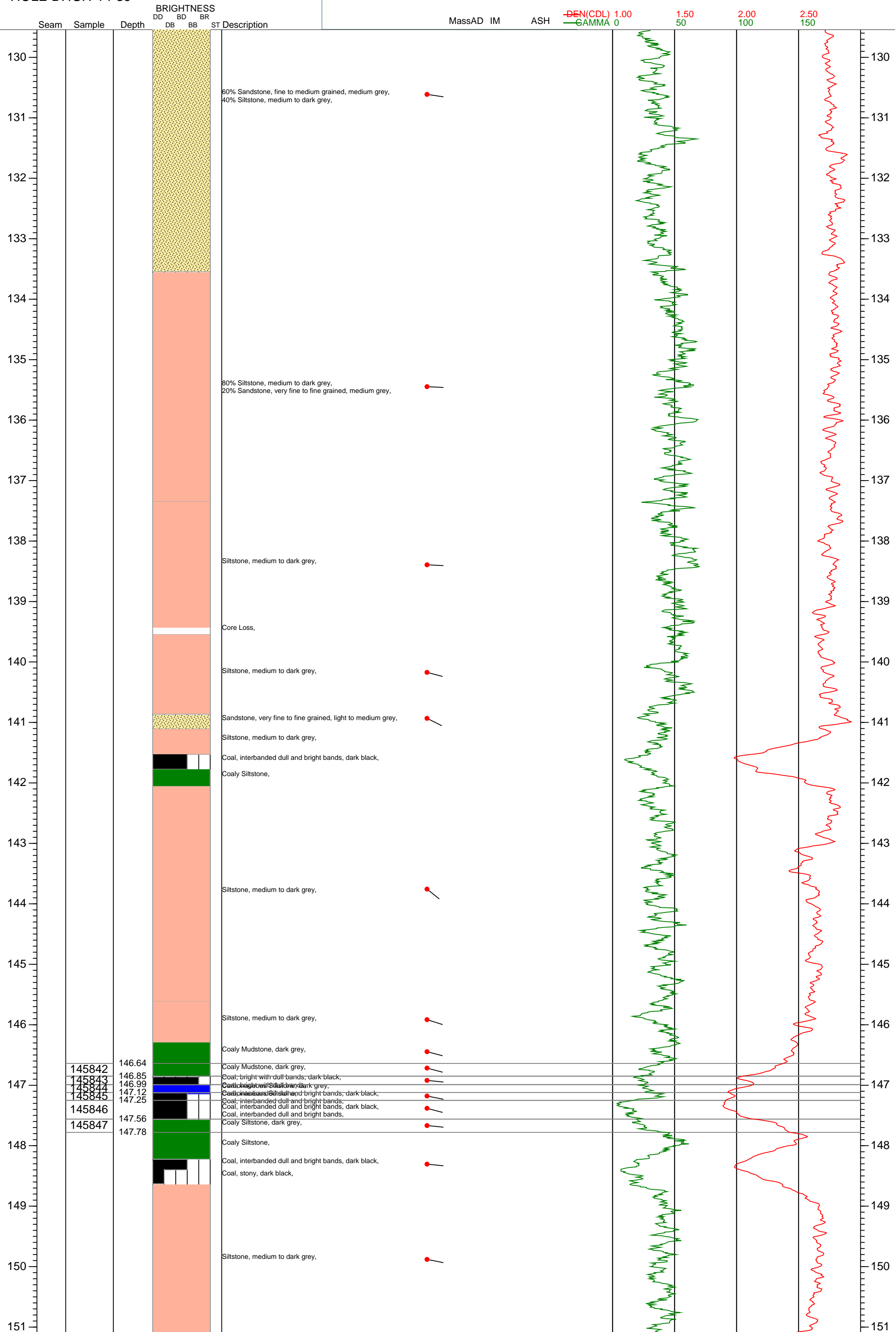
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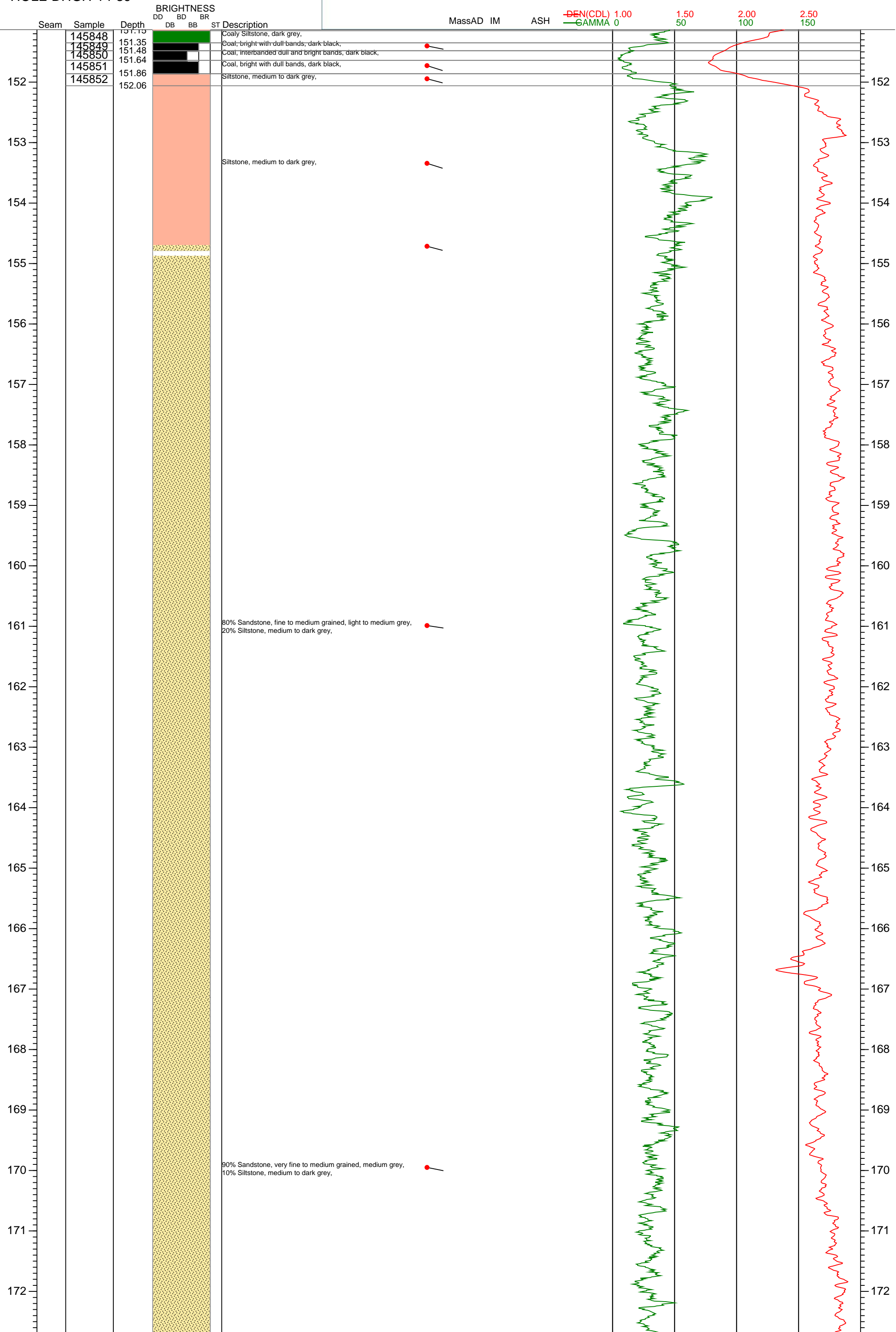
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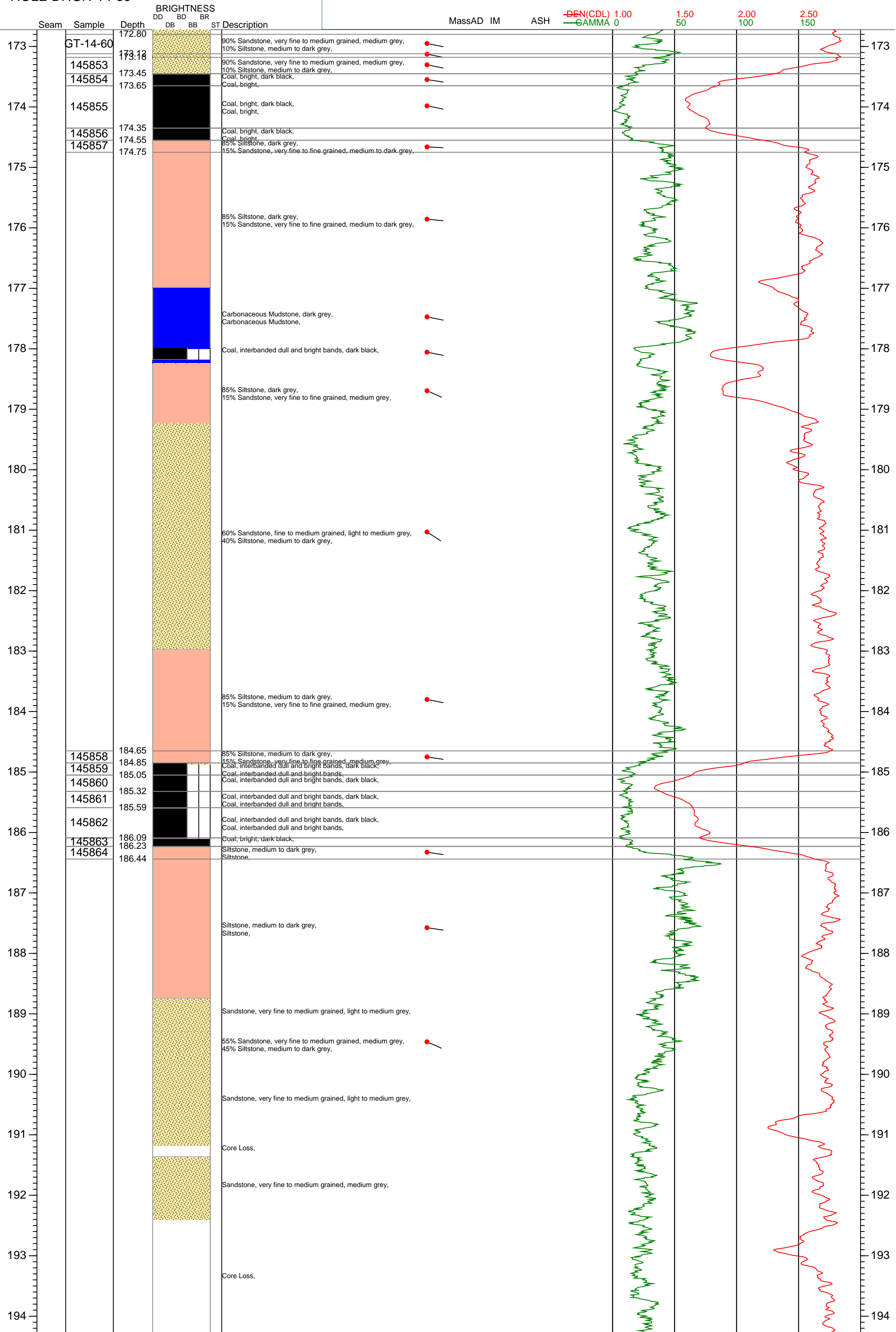
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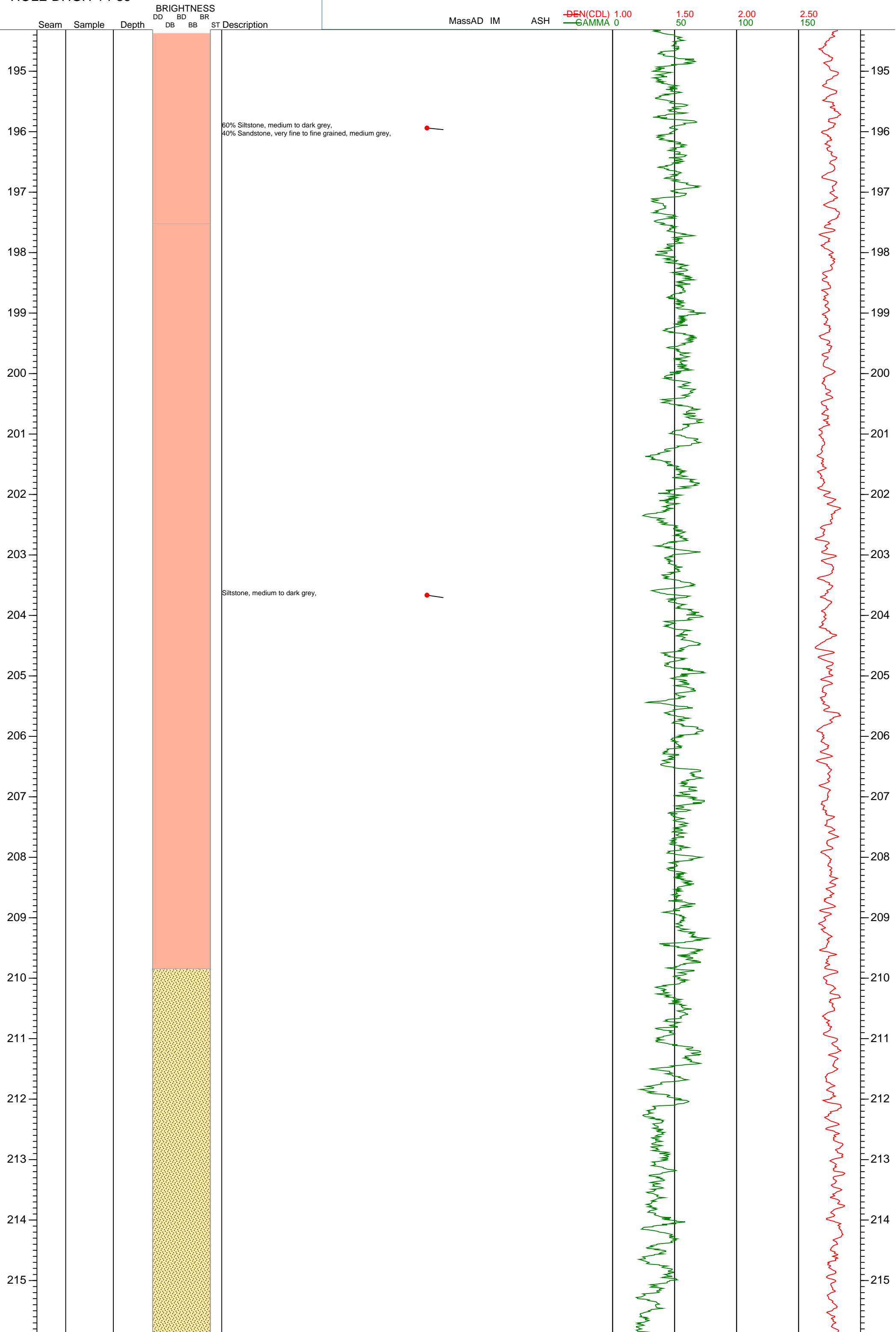
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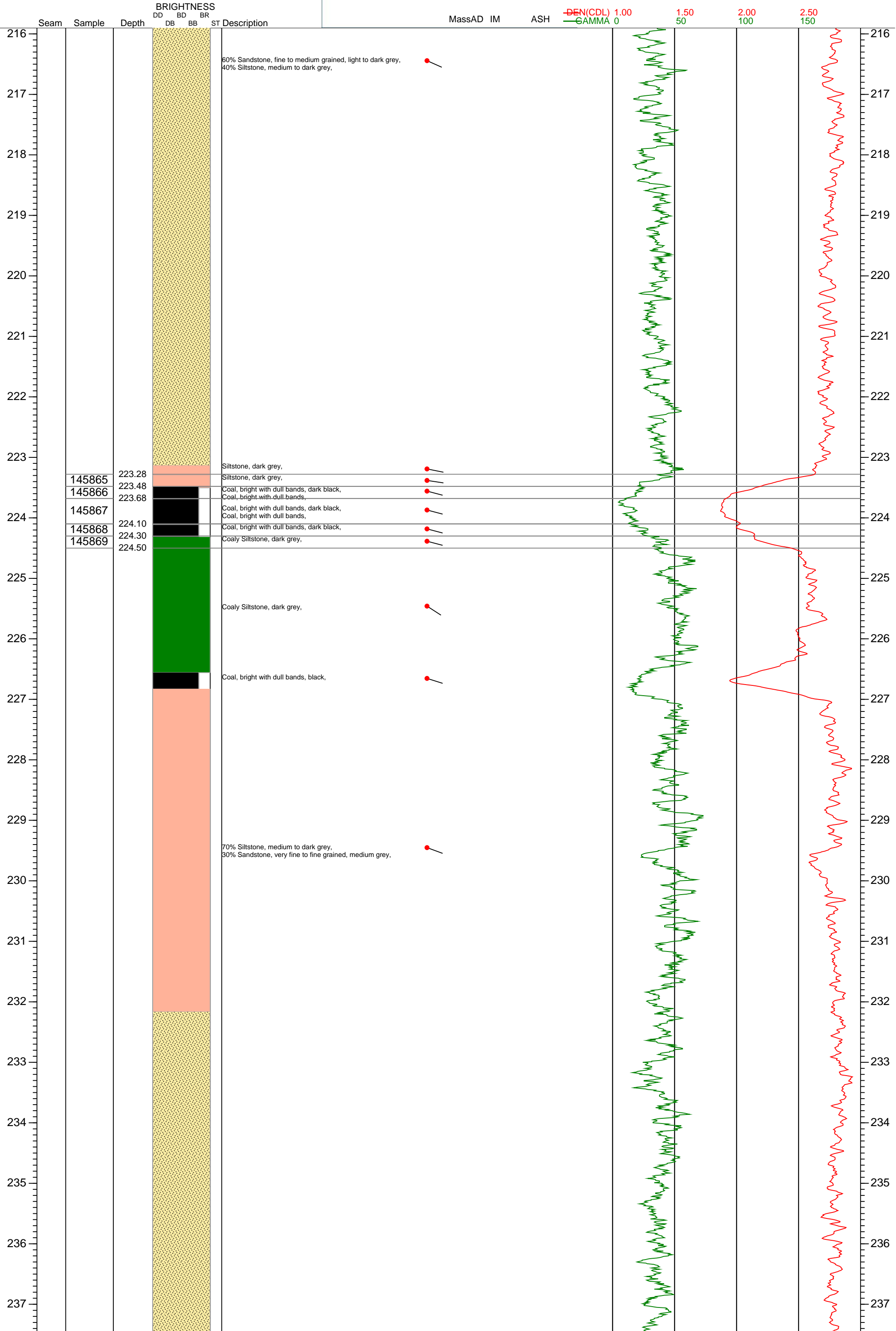
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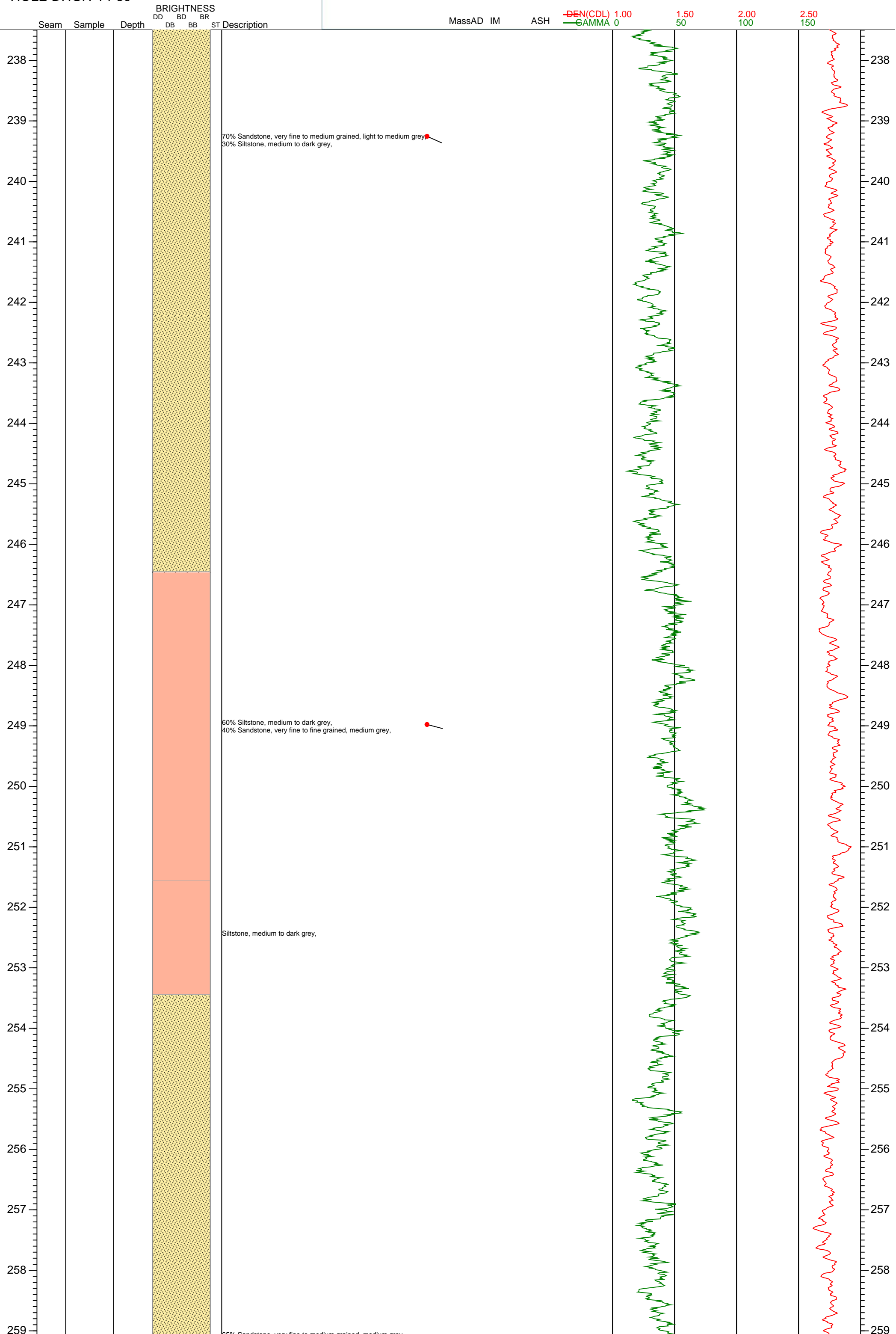
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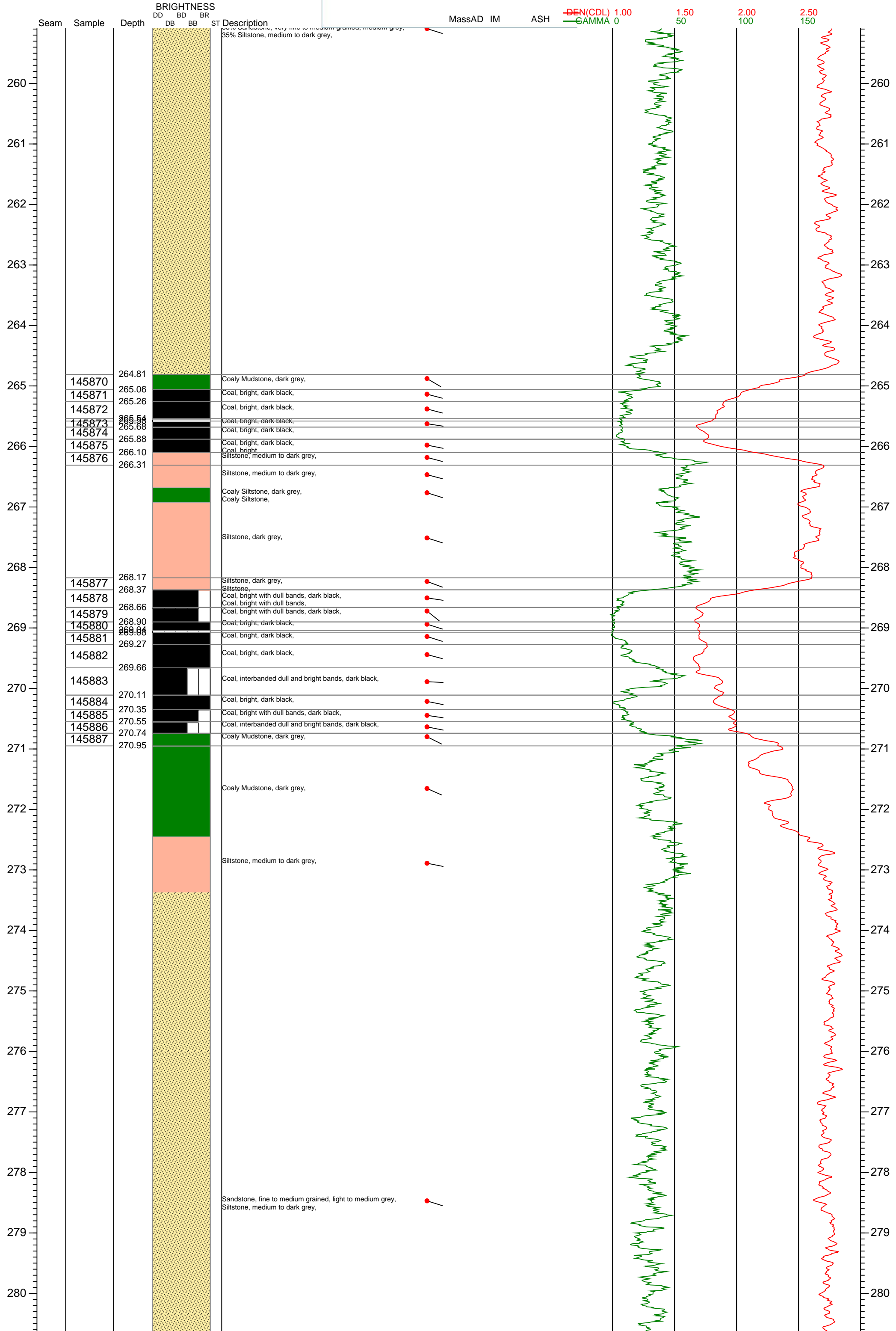
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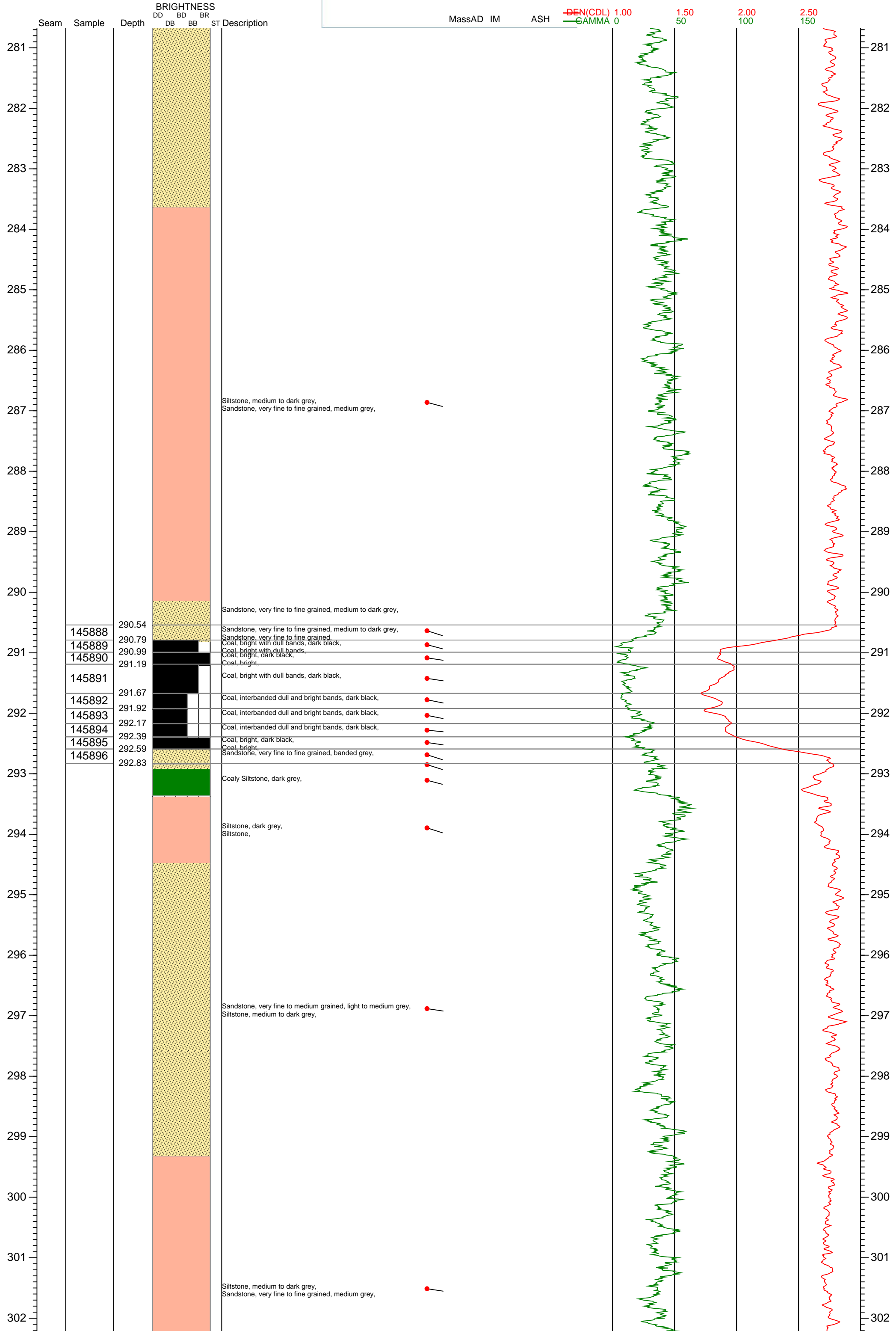
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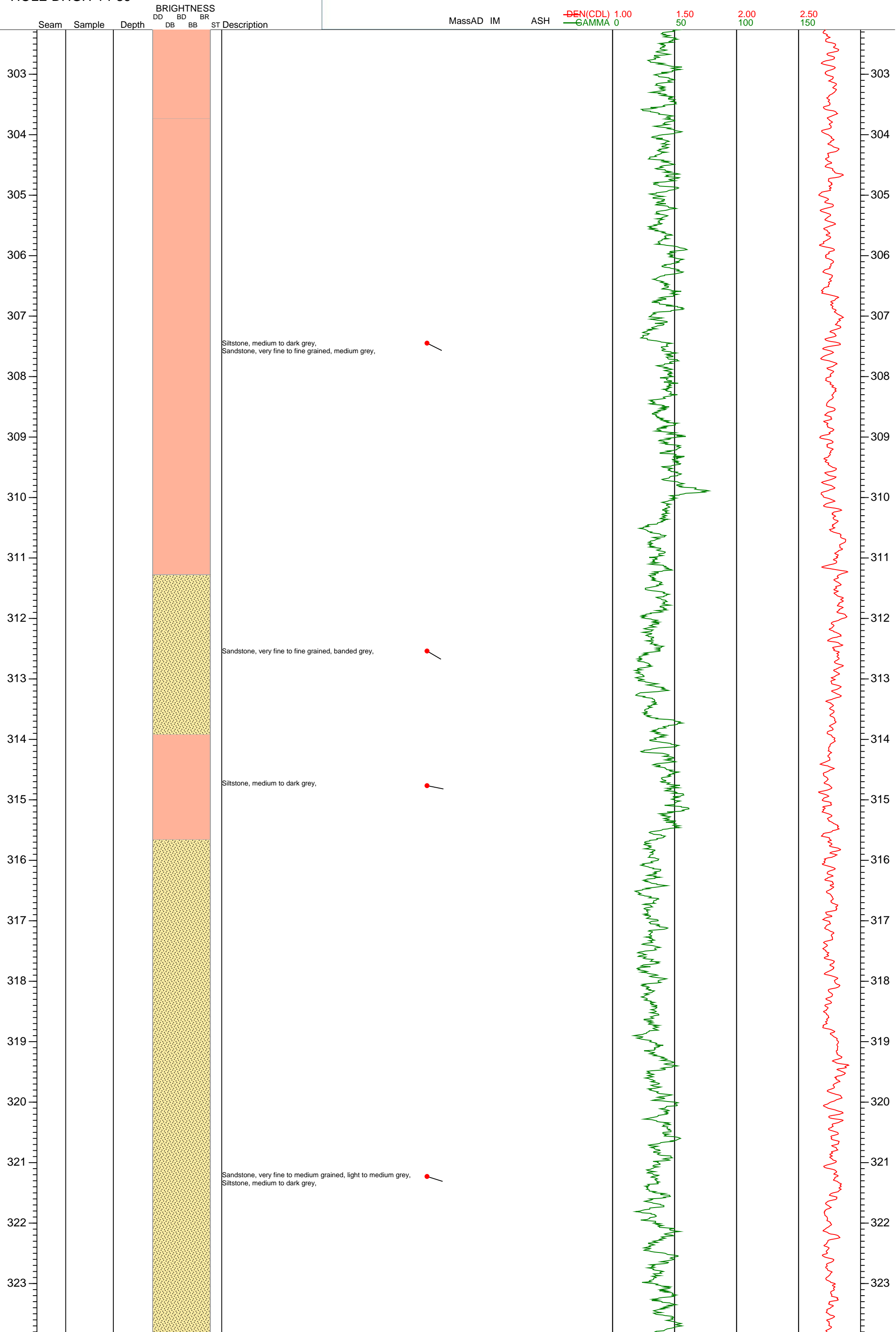
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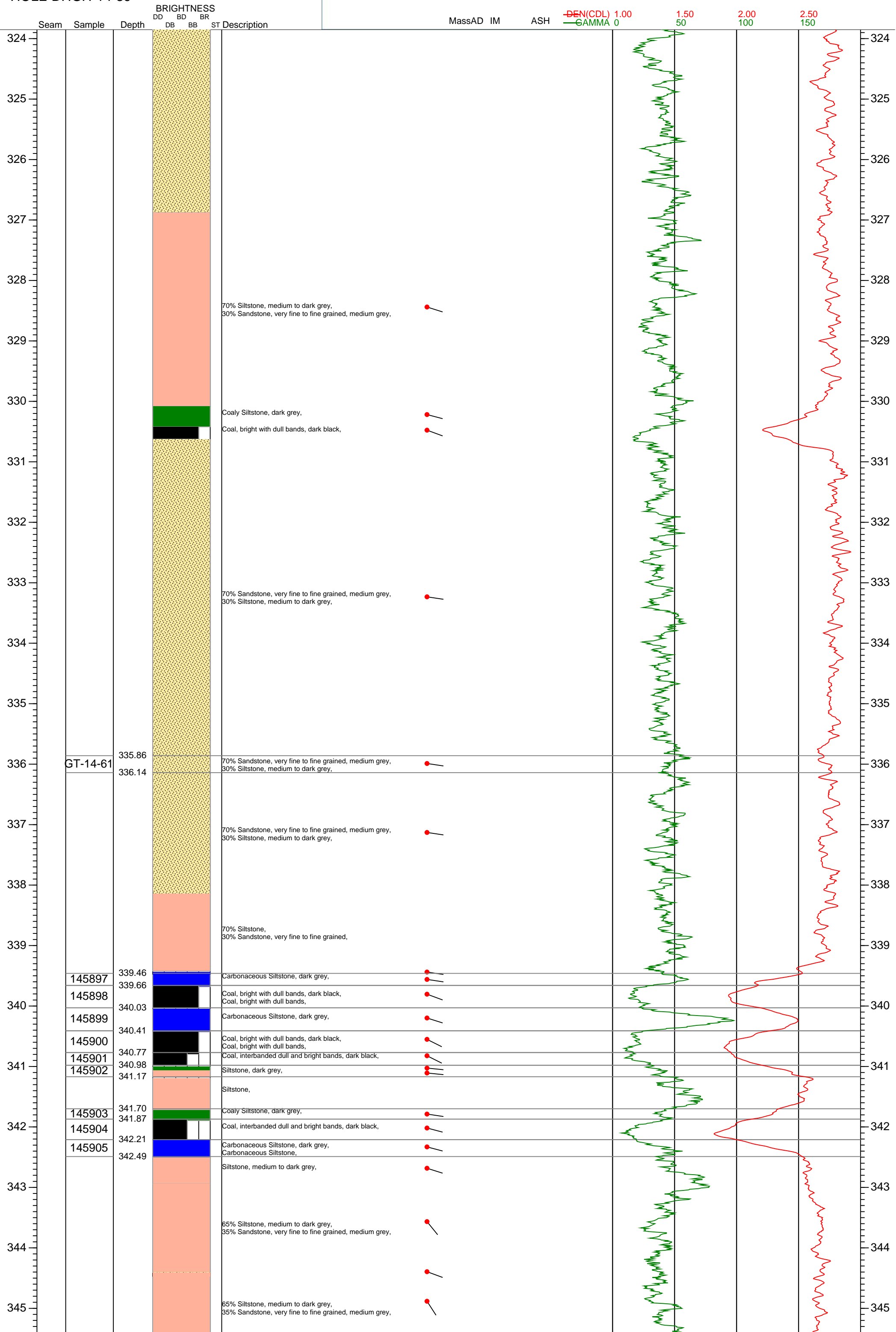
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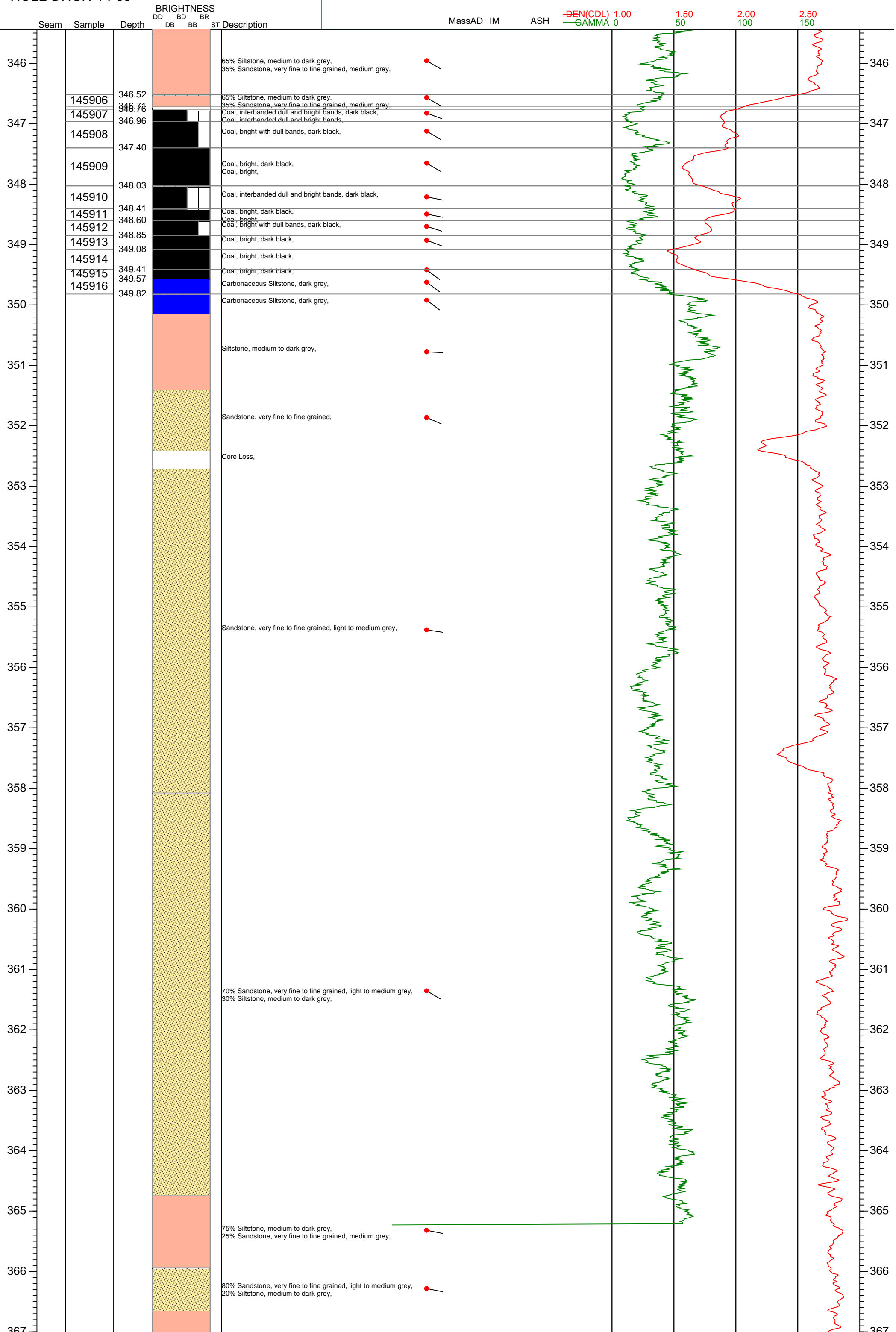
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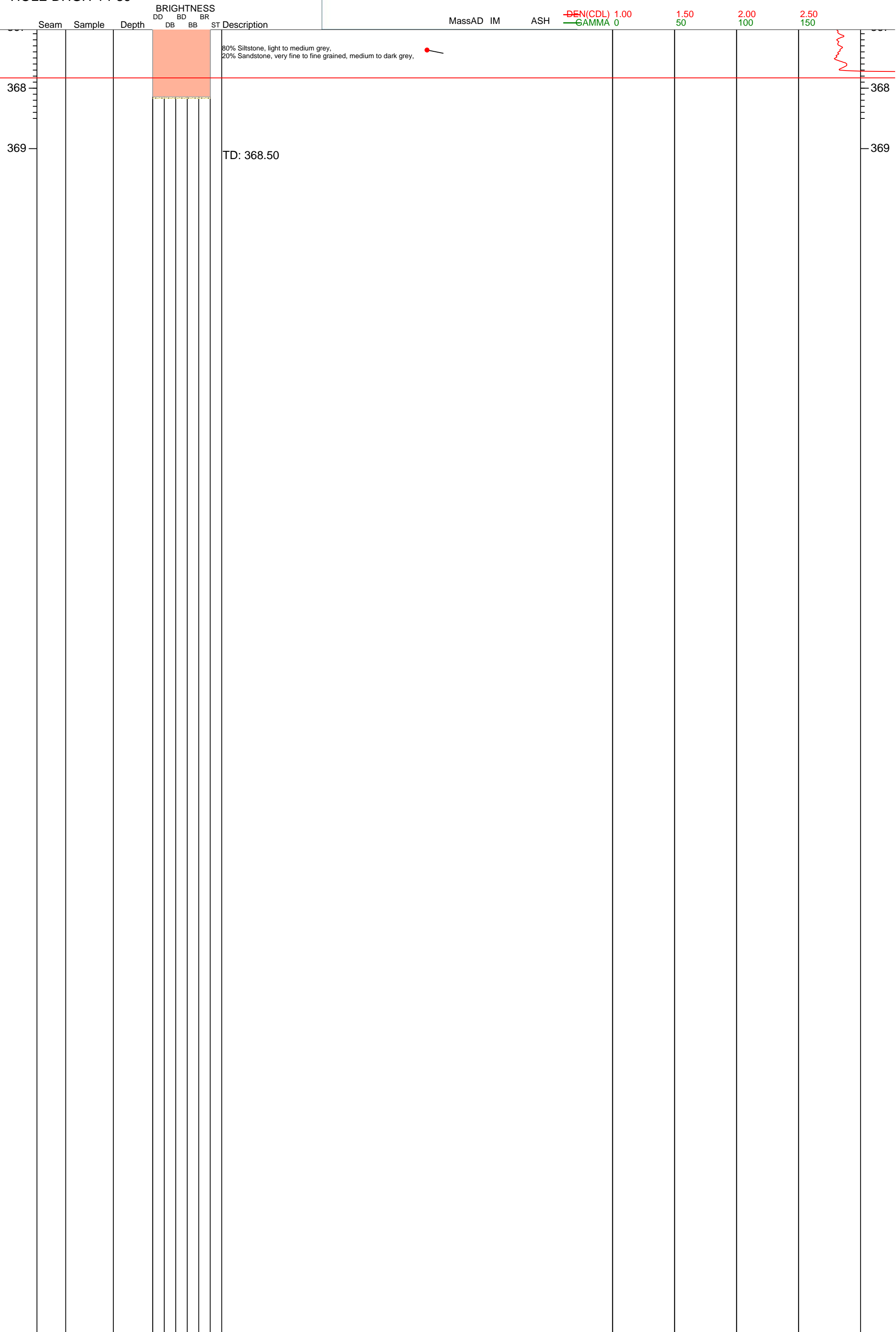
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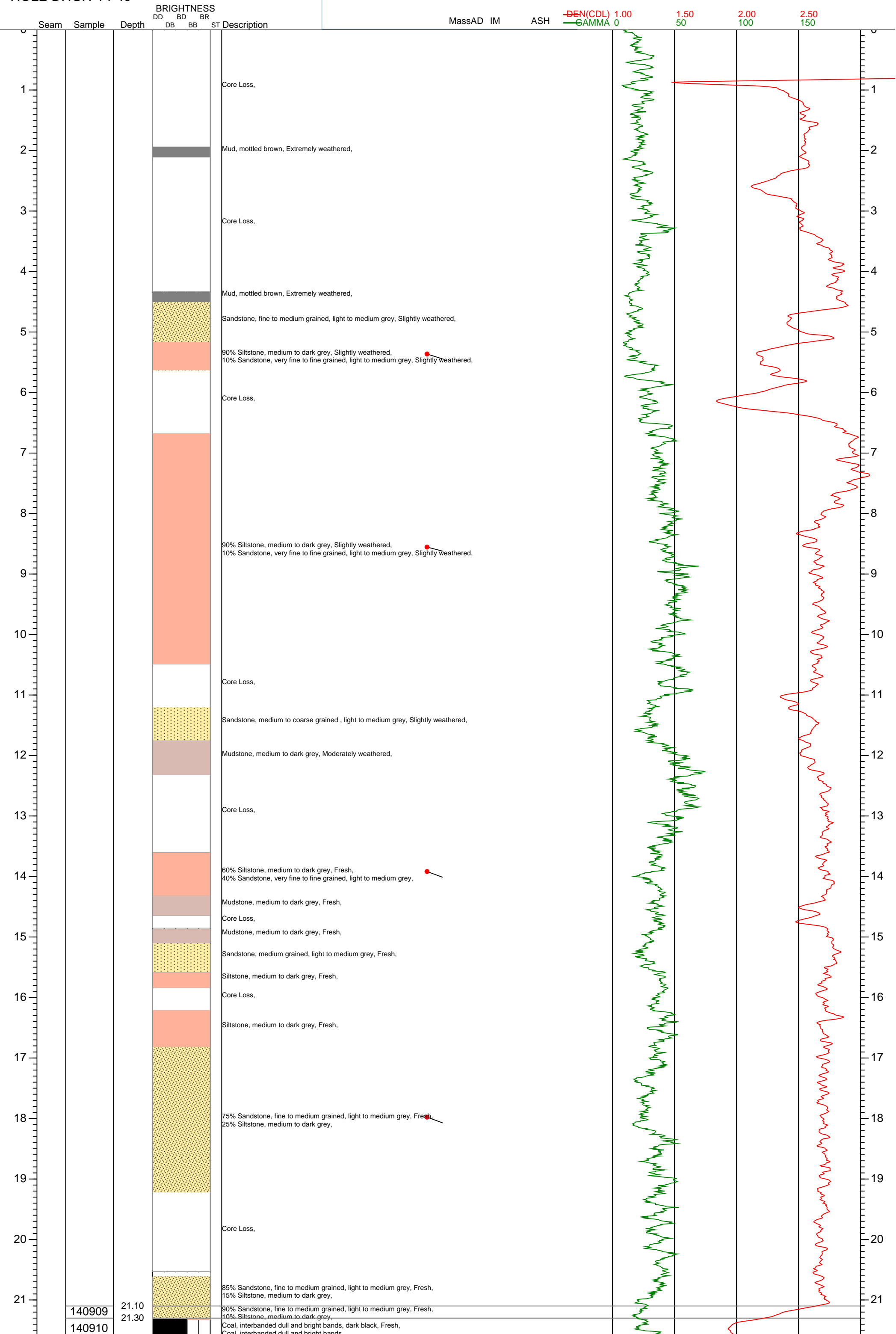
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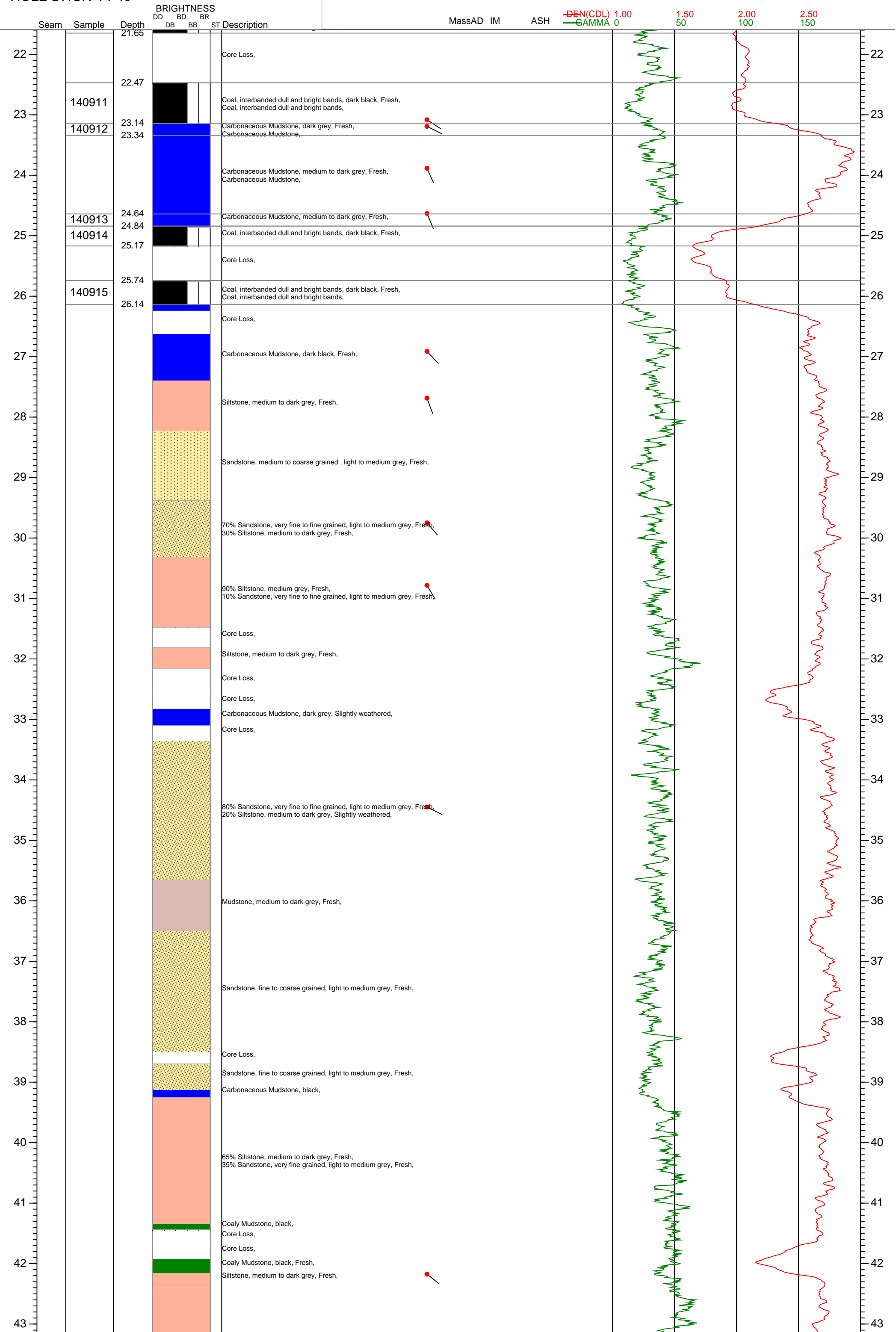
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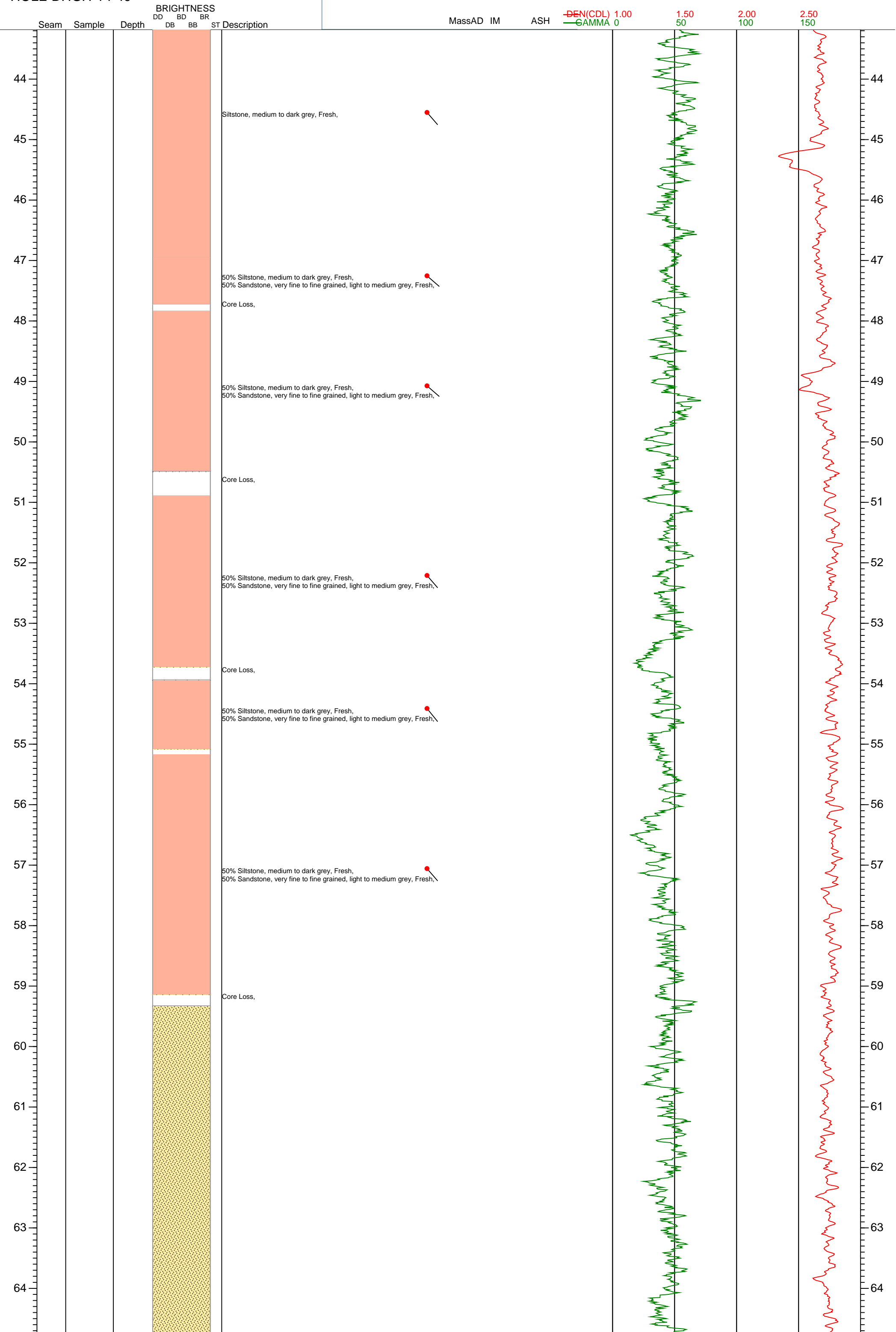
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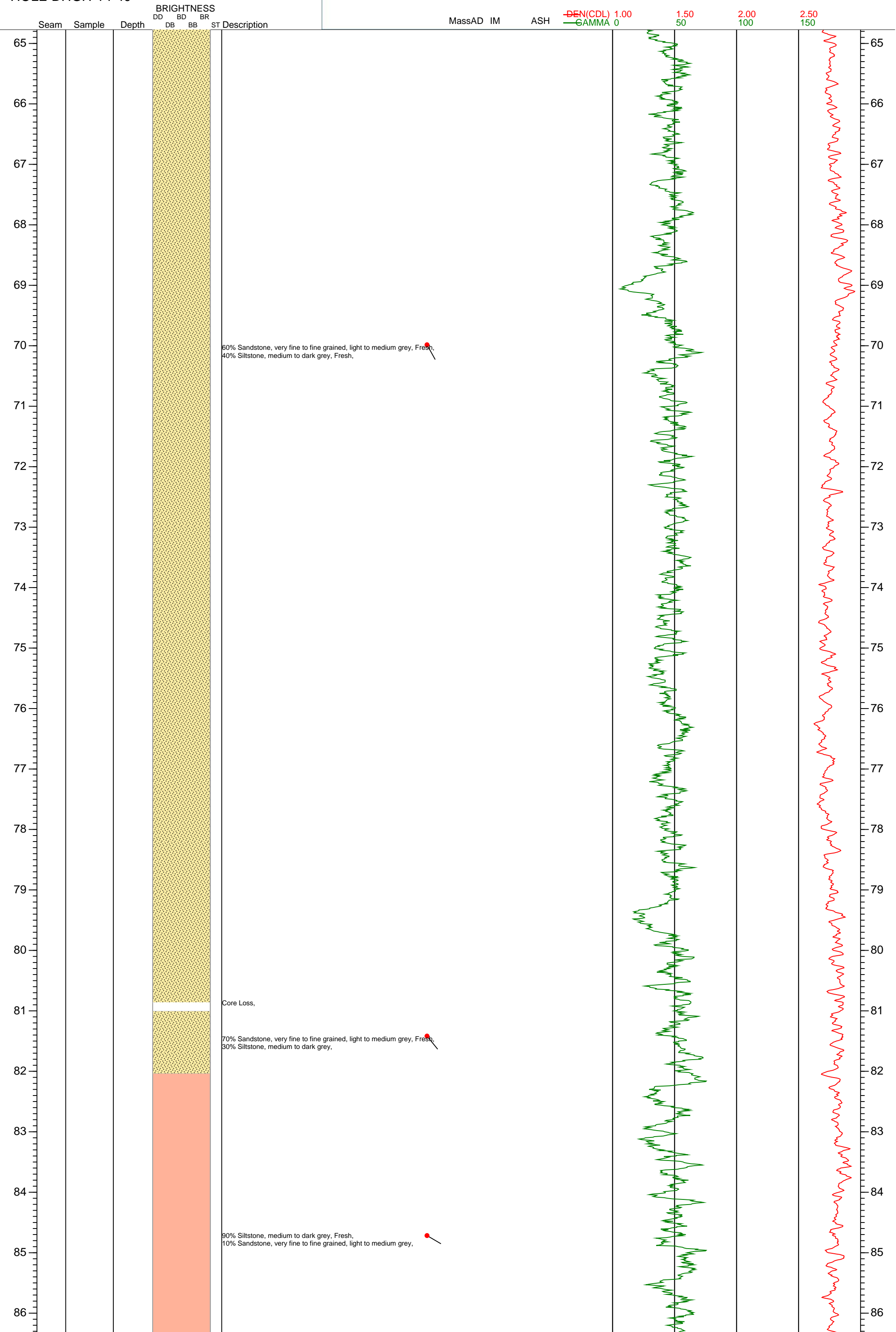
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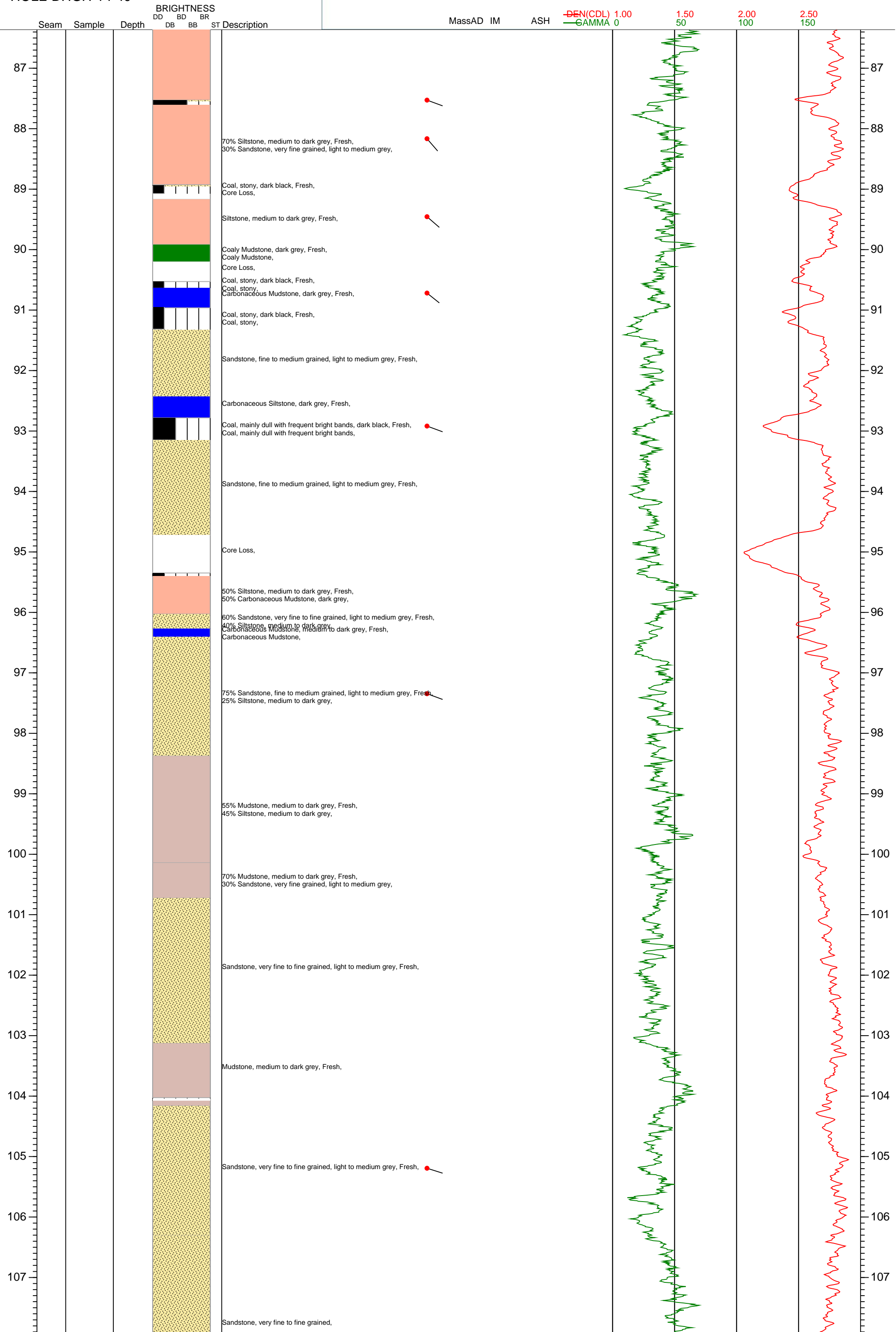
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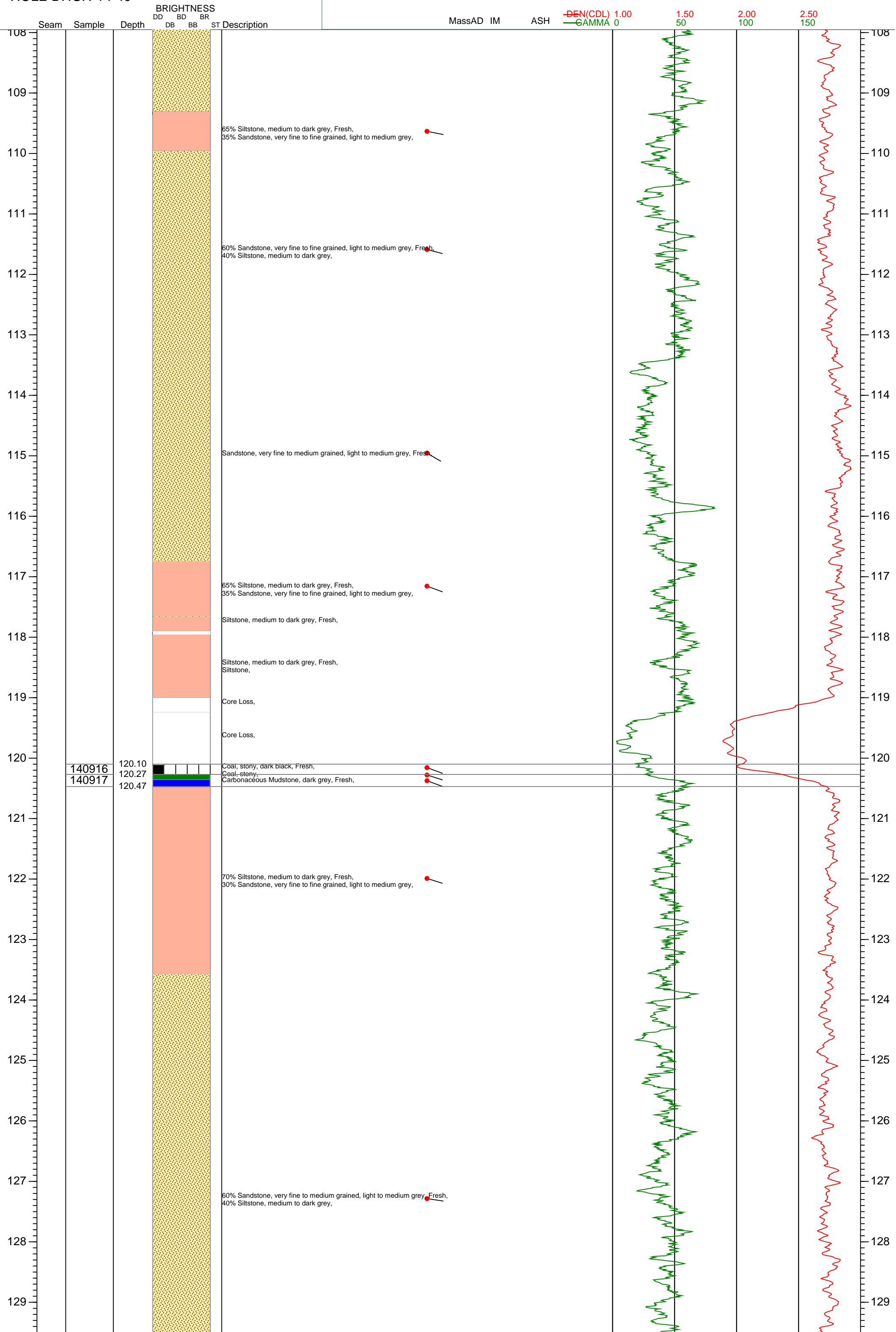
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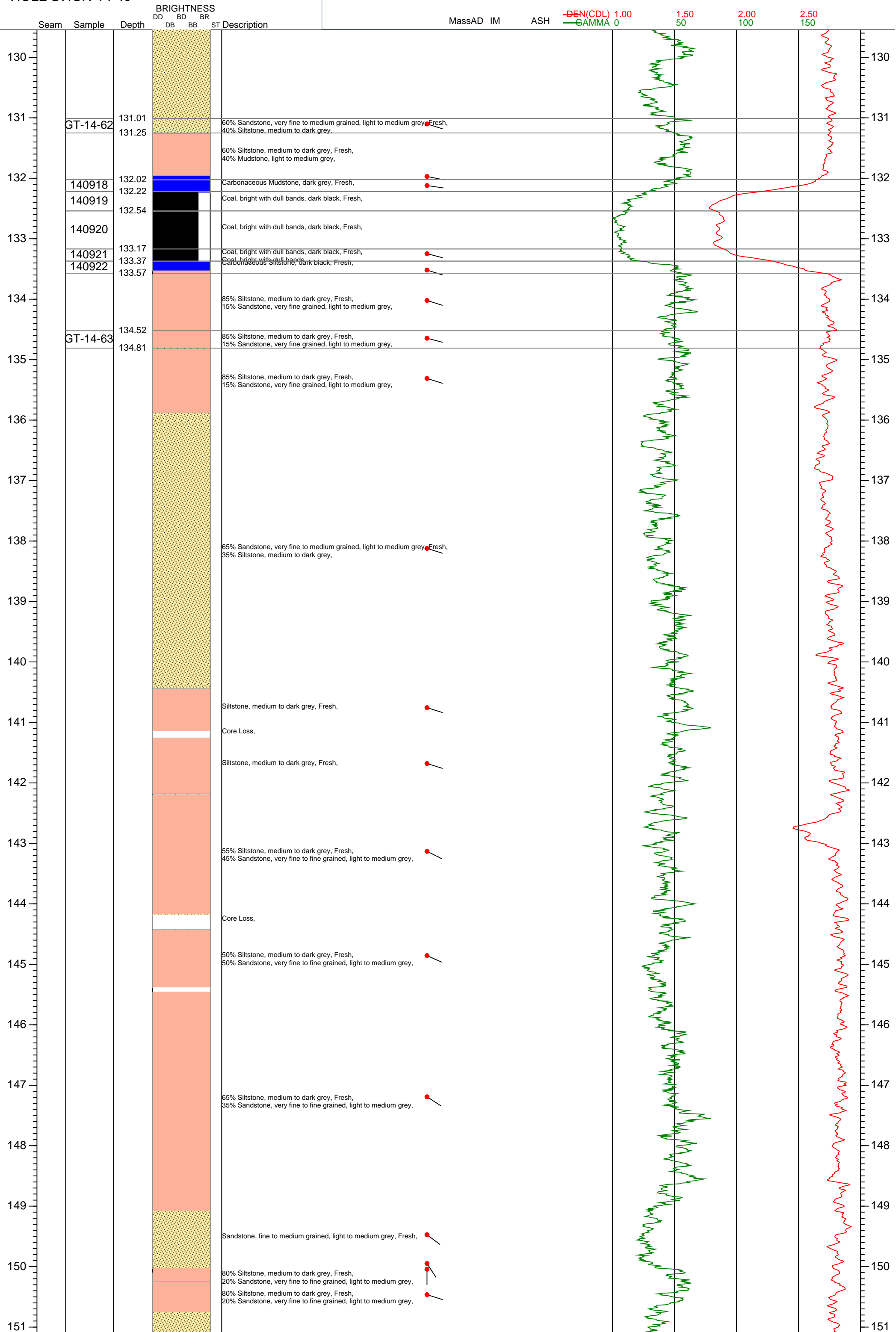
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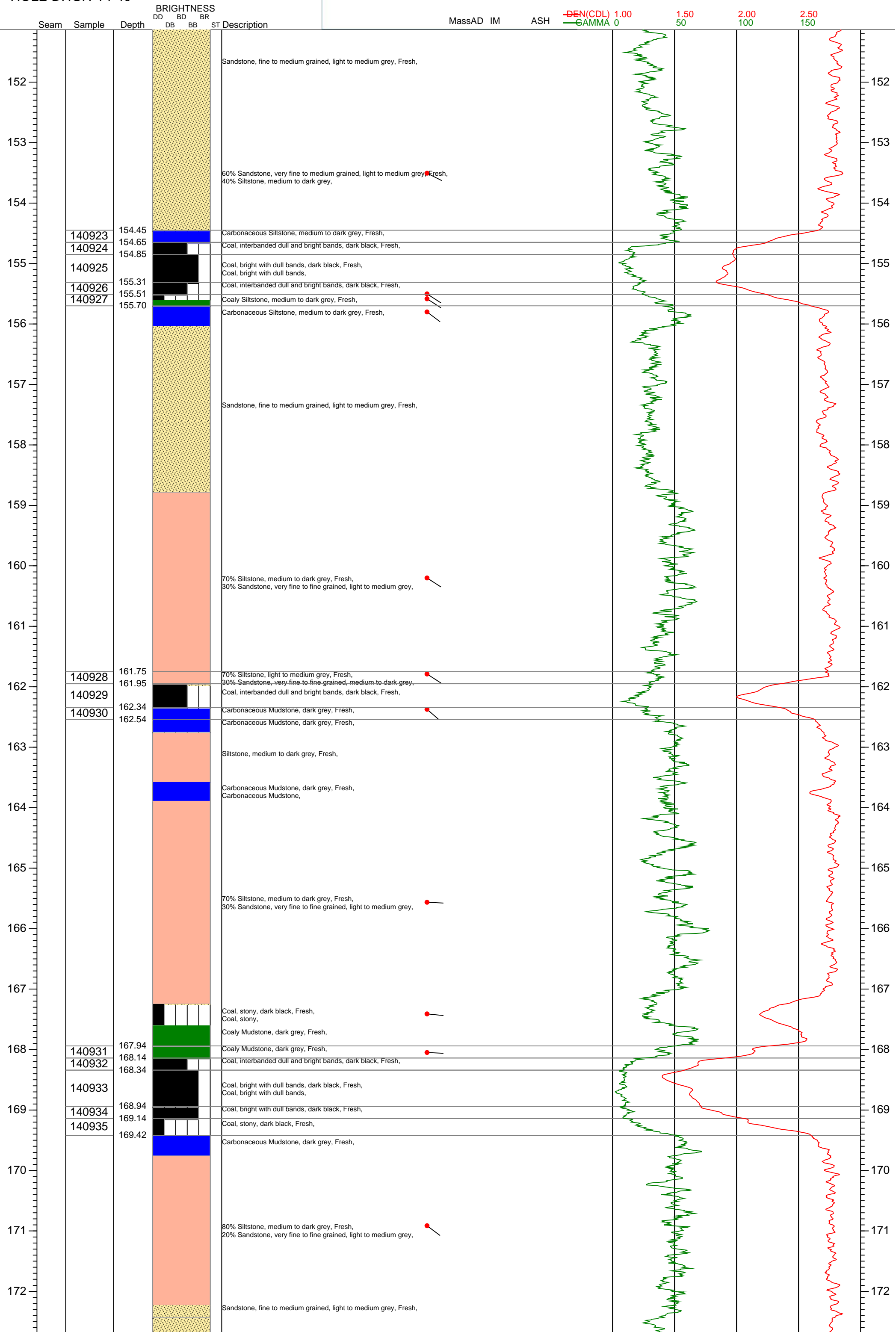
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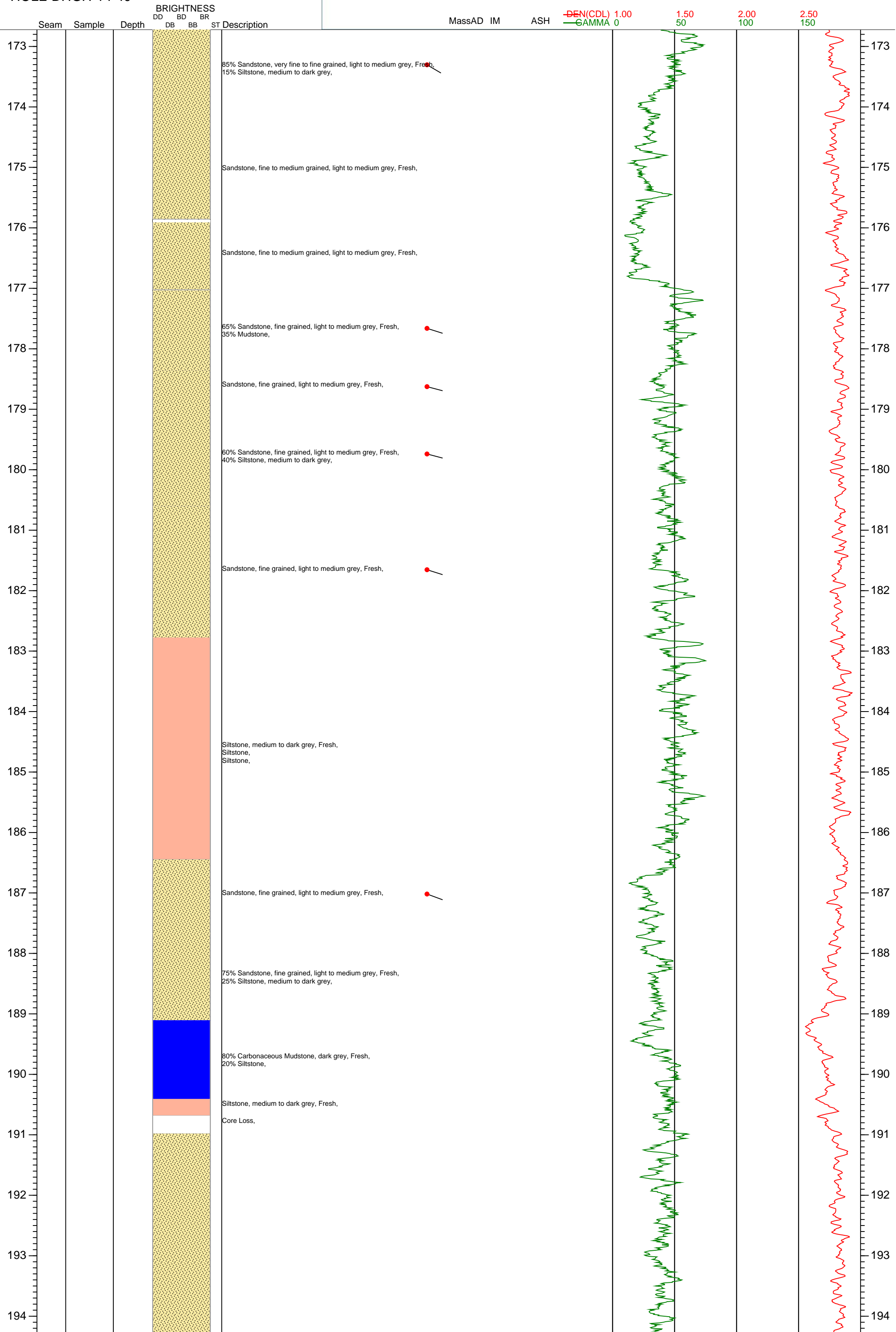
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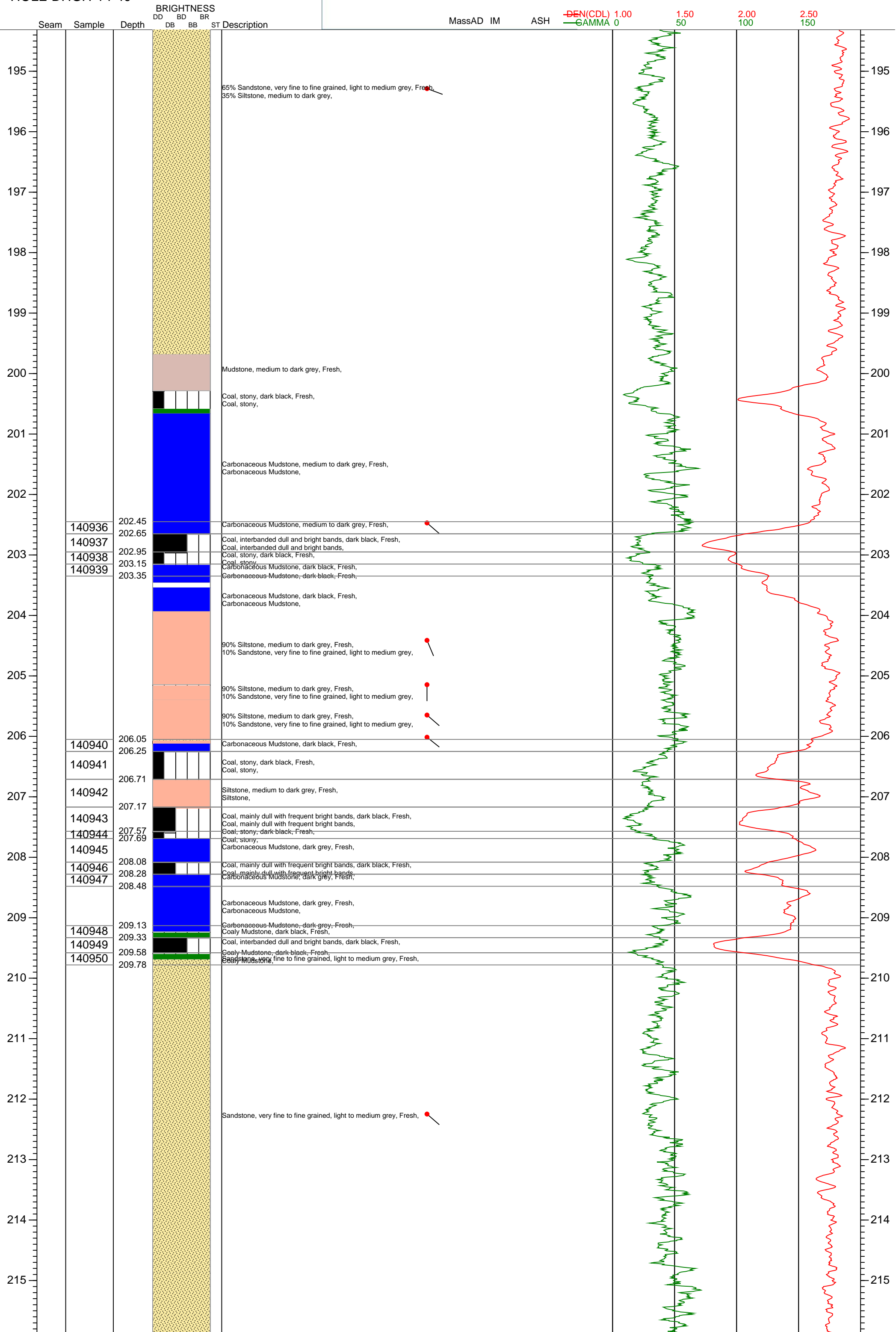
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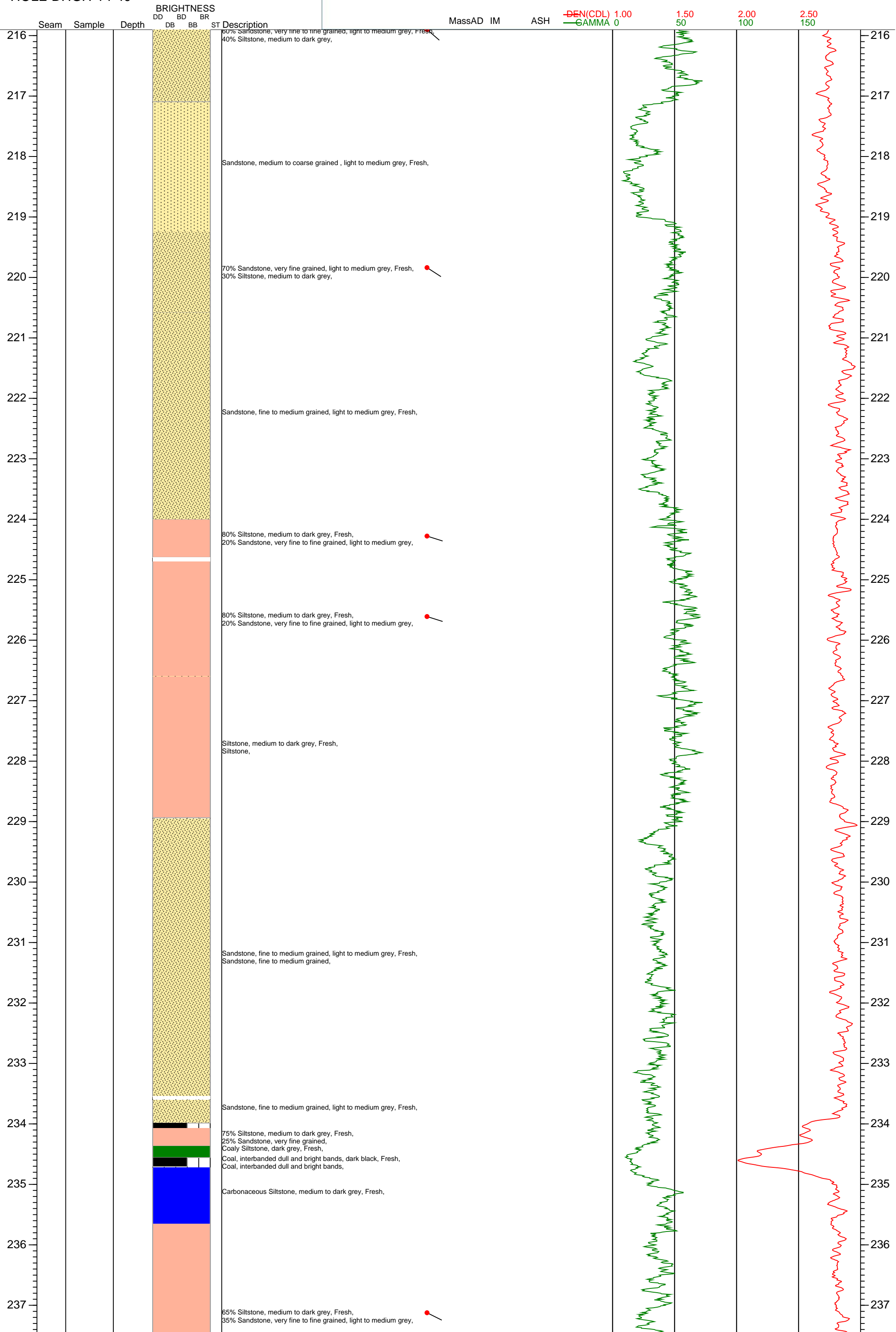
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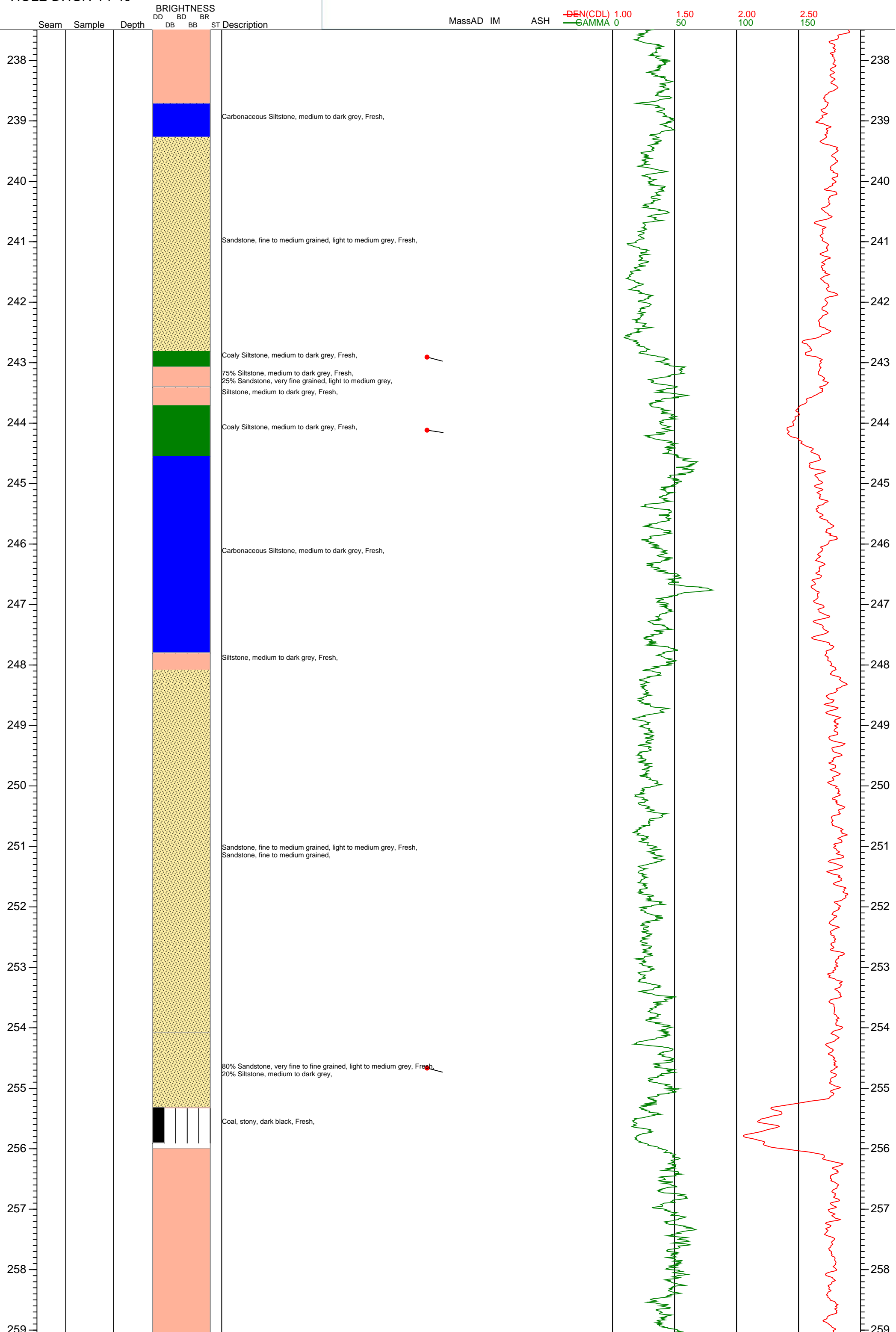
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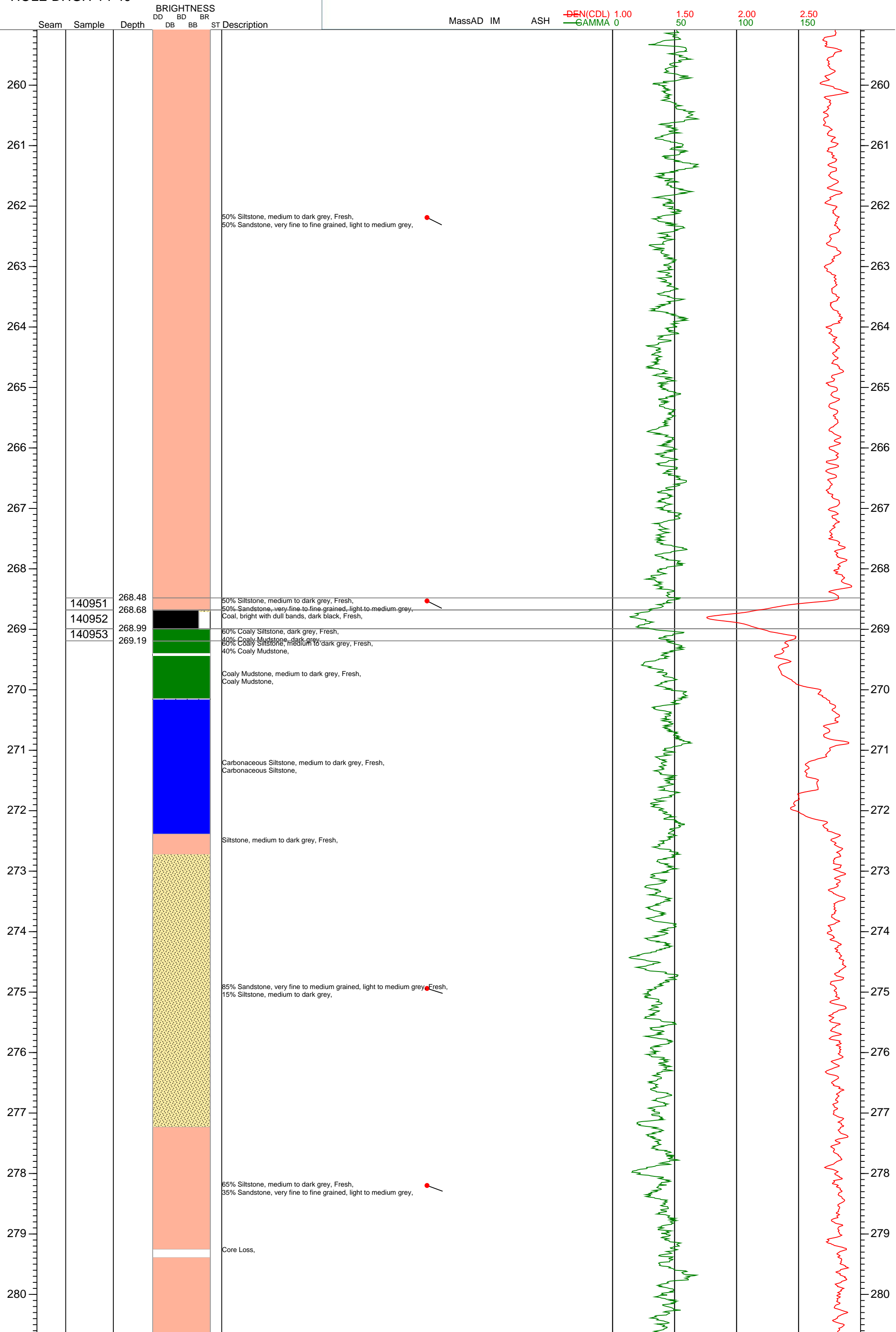
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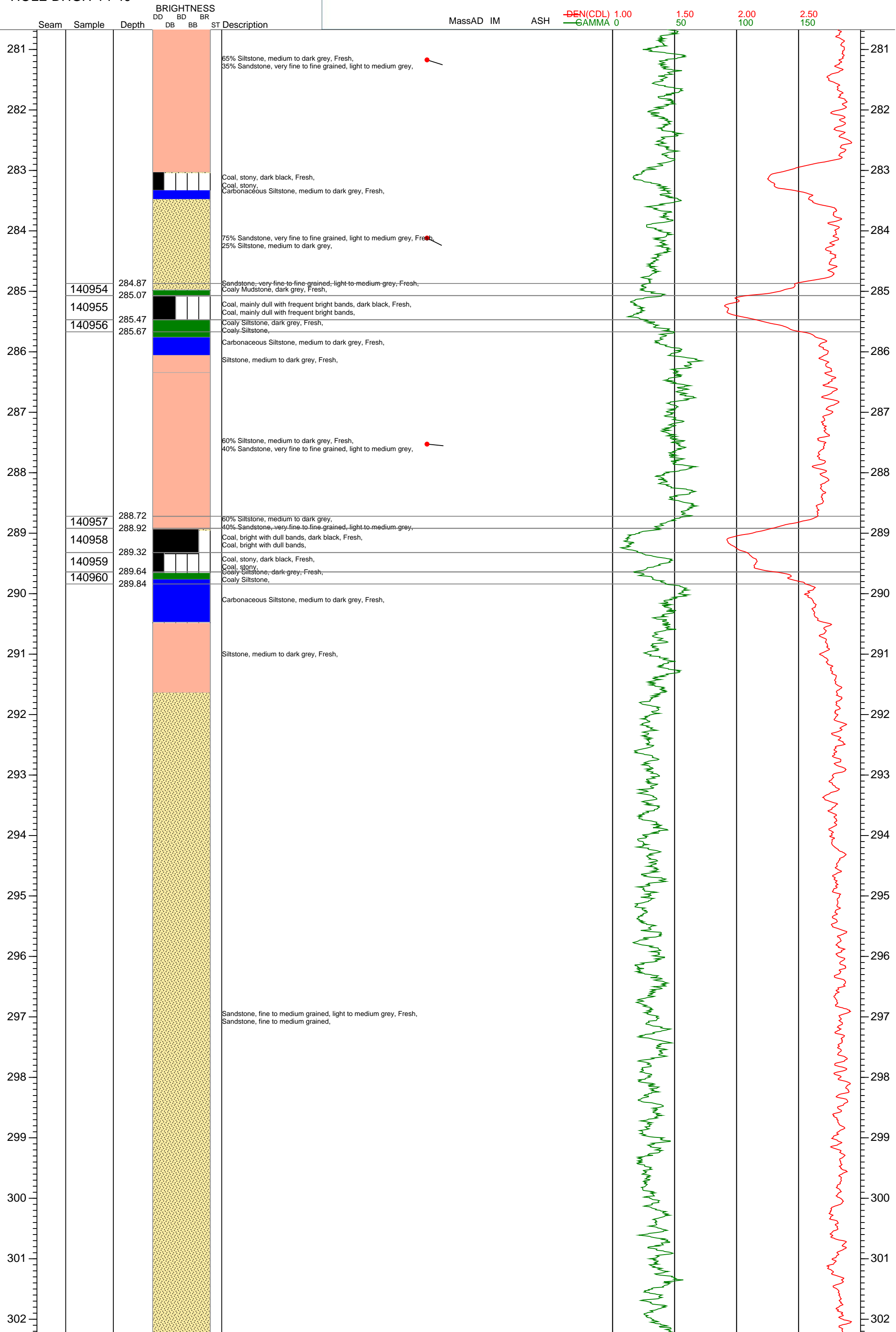
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HOLE DHGH-14-40



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HOLE DHGH-14-40



Appendix 7 – Geophysical Logs

Appendix 10 – Cost Summary Report

Exploration Work type	Comment	Days			Totals
Personnel (Name)* / Position	Field Days (list actual days)	Days	Rate	Subtotal*	
Geology Field Crew			\$0.00	\$1,121,888.94	
Engineering Services			\$0.00	\$191,632.10	
Expeditors and Management			\$0.00	\$170,653.56	
Geel Enterprises Incorporated			\$0.00	\$641,407.94	
				\$2,125,582.54	\$2,125,582.54
Office Studies	List Personnel (note - Office only, do not include field days)				
Literature search			\$0.00	\$0.00	
Database compilation			\$0.00	\$552.50	
Computer modelling			\$0.00	\$71,177.05	
LiDAR Services			\$0.00	\$9,350.00	
Reprocessing of data			\$0.00	\$0.00	
General research			\$0.00	\$5,200.00	
Report preparation			\$0.00	\$0.00	
Project Management			\$0.00	\$84,598.15	
Economic Analysis			\$0.00	\$2,089,901.11	
				\$2,260,778.81	\$2,260,778.81
Airborne Exploration Surveys	Line Kilometres / Enter total invoiced amount				
Aeromagnetics			\$0.00	\$0.00	
Radiometrics			\$0.00	\$0.00	
Electromagnetics			\$0.00	\$0.00	
Gravity			\$0.00	\$0.00	
Digital terrain modelling			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
				\$0.00	\$0.00
Remote Sensing	Area in Hectares / Enter total invoiced amount or list personnel				
Aerial photography			\$0.00	\$0.00	
LANDSAT			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
				\$0.00	\$0.00
Ground Exploration Surveys	Area in Hectares/List Personnel				
Geological mapping					
Regional					<i>note: expenditures here</i>
Reconnaissance					<i>should be captured in Personnel</i>
Prospect					<i>field expenditures above</i>
Underground	Define by length and width				
Trenches	Define by length and width			\$0.00	\$0.00
Ground geophysics	Line Kilometres / Enter total amount invoiced list personnel				
Radiometrics					
Magnetics					
Gravity					
Digital terrain modelling					
Electromagnetics	<i>note: expenditures for your crew in the field</i>				
SP/AP/EP	<i>should be captured above in Personnel</i>				
IP	<i>field expenditures above</i>				
AMT/CSAMT					
Resistivity					
Complex resistivity					
Seismic reflection				\$143,880.52	
Seismic refraction					
Well logging					
Geophysical interpretation / Logging				\$191,642.87	
Petrophysics					
Other (specify)					
				\$335,523.39	\$335,523.39
Geochemical Surveying	Number of Samples	No.	Rate	Subtotal	
Drill (cuttings, core, etc.)			\$0.00	\$459,252.09	
Stream sediment			\$0.00	\$0.00	
Soil	<i>note: This is for assays or</i>		\$0.00	\$72,517.70	
Rock	<i>laboratory costs</i>		\$0.00	\$44,920.87	
Water			\$0.00	\$35,416.10	
Biogeochemistry			\$0.00	\$0.00	
Whole rock			\$0.00	\$0.00	
Petrology			\$0.00	\$1,765.30	
Other (specify)			\$0.00	\$0.00	
				\$613,872.06	\$613,872.06
Drilling	No. of Holes, Size of Core and Metres	No.	Rate	Subtotal	
Diamond			\$0.00	\$1,314,859.84	
Reverse circulation (RC)			\$0.00	\$0.00	
Rotary air blast (RAB)			\$0.00	\$150,558.23	
Other (specify)			\$0.00	\$0.00	

					\$1,465,418.07	\$1,465,418.07
Other Operations	Clarify	No.	Rate	Subtotal		
Bulk sampling - consultants			\$0.00	\$191,462.92		
Bulk sampling - environmental studies			\$0.00	\$9,055.05		
Underground development studies			\$0.00	\$137,979.24		
Permitting / Licence Fees			\$0.00	\$174,971.60		
Logistics Study			\$0.00	\$287,174.08		
Public Relations / First Nations Training			\$0.00	\$286,247.89		
Archaeological Studies			\$0.00	\$99,878.00		
Environmental Studies			\$0.00	\$2,506,573.56		
Socio-economic Agreements			\$0.00	\$194,411.20		
					\$3,887,753.54	\$3,887,753.54
Reclamation	Clarify	No.	Rate	Subtotal		
After drilling			\$0.00	\$0.00		
Monitoring			\$0.00	\$0.00		
Other (specify)			\$0.00	\$0.00		
Transportation		No.	Rate	Subtotal		
Air Support to Site - Tsyata Aviation			\$0.00	\$1,760,704.70		
Taxi			\$0.00	\$4,091.06		
Helicopter (hours)			\$0.00	\$2,164,015.83		
Fuel (litres/hour)			\$0.00	\$272,179.30		
Other - Mobilisation / Demobilisation			\$0.00	\$49,731.49		
Other - Airport Security			\$0.00	\$60,196.65		
					\$4,310,919.03	\$4,310,919.03
Accommodation & Food	Rates per day					
Hotel			\$0.00	\$87,800.90		
Camp			\$0.00	\$2,367,415.34		
Meals	day rate or actual costs-specify		\$0.00	\$447,778.21		
					\$2,902,994.45	\$2,902,994.45
Miscellaneous						
Telephone			\$0.00	\$10,163.30		
Field Safety Training			\$0.00	\$4,000.00		
Fuel Storage and Containment			\$0.00	\$11,322.00		
Insurance			\$0.00	\$26,459.09		
Training - Geological			\$0.00	\$3,557.38		
IT Consulting and Consumables			\$0.00	\$57,286.28		
Health and Safety Supplies			\$0.00	\$13,970.87		
Generators (Rental)			\$0.00	\$13,450.00		
Marketing and Public Relations			\$0.00	\$33,669.13		
Bond Requirements			\$0.00	\$75,000.00		
Camp Winter Equipment Purchases (including mobilisation)			\$0.00	\$53,417.24		
Heavy Equipment Purchases (including mobilisation)			\$0.00	\$556,727.70		
Air Travel (international and interstate)			\$0.00	\$232,366.41		
New camp construction / upgrades (off-site)			\$0.00	\$868,217.09		
					\$1,959,606.49	\$1,959,606.49
Equipment Purchases						
Field Gear (Specify)			\$0.00	\$12,229.52		
Camp Equipment			\$0.00	\$118,011.36		
Camp Software (Camp Control)			\$0.00	\$5,875.00		
Camp Communications			\$0.00	\$94,287.15		
					\$230,403.03	\$230,403.03
Freight, rock samples						
Laboratory Freight Charges (Coal Samples)			\$0.00	\$4,792.33		
					\$4,792.33	\$4,792.33
TOTAL Expenditures						\$20,097,643.74

Appendix 11 – Maps and Cross Sections

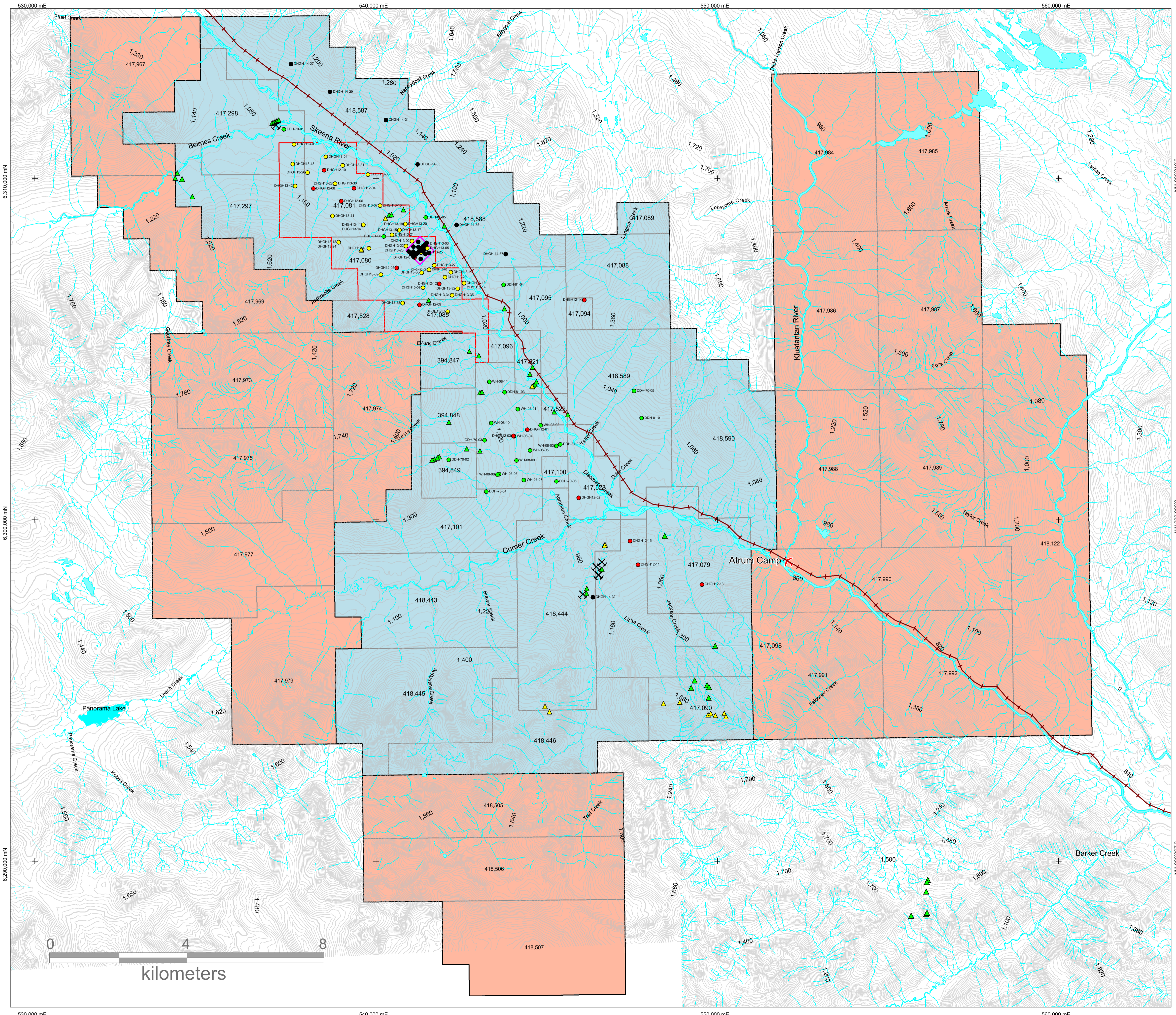
Groundhog Anthracite Project

2014 Groundhog Property

Company: Atrum Coal Groundhog Inc. | Projection: UTM Zone 9 (NAD 83)
 Project: Groundhog Anthracite | Scale: 1:55,000
 Author: Holly Hetherington | Date: 23/02/2015

Legend

- Groundhog License
- Groundhog Application
- Groundhog North
- Bulk Sample Area
- 2014 Drillhole
- 2013 Drillhole
- 2012 Drillhole
- Historic Drillhole
- Historical Addit
- 2013 Trench
- Historic Trench
- Waterway
- Elevation Contour
- Railway Easement
- Atrum Camp Location



530,000 mE 540,000 mE 550,000 mE 560,000 mE

6,310,000 mN

6,310,000 mN

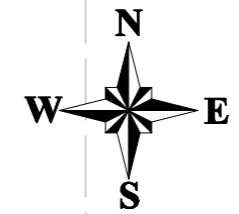
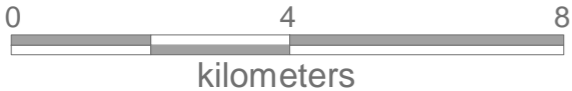
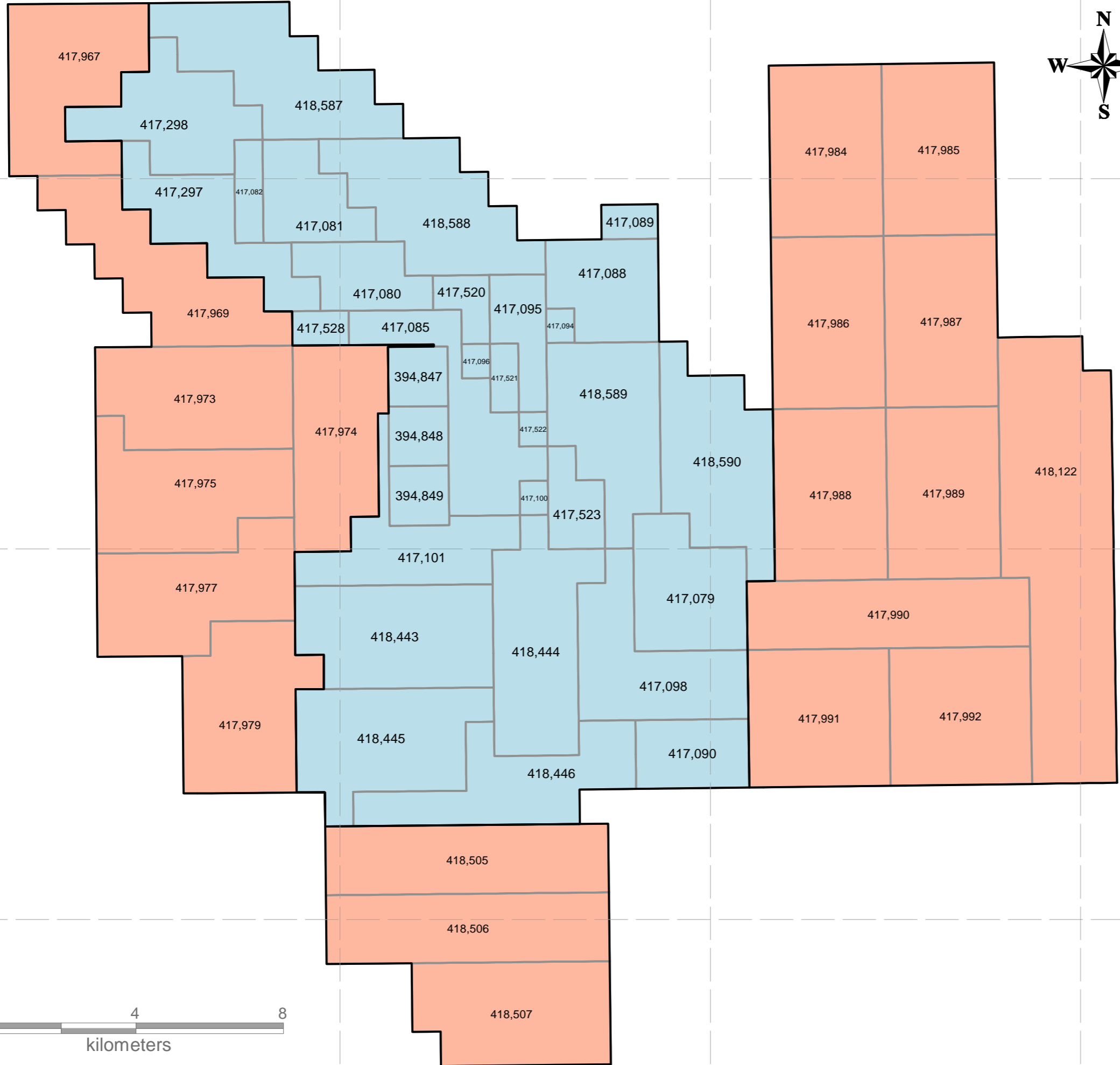
6,300,000 mN

6,300,000 mN

6,290,000 mN

6,290,000 mN

530,000 mE 540,000 mE 550,000 mE 560,000 mE





 **Atrum Coal**

Groundhog Anthracite Project

2014 Groundhog Tenures

Company: Atrum Coal Groundhog Inc.	Projection: UTM Zone 9 (NAD 83)
Project: Groundhog Anthracite	Scale: 1:110,000
Author: Holly Hetherington	Date: 23/02/2015

Legend

-  Groundhog License
-  Groundhog Application



Groundhog Anthracite Project

2014 Bulk Sample Area

Company: Atrum Coal Groundhog Inc. | Projection: UTM Zone 9 (NAD 83)
 Project: Groundhog Anthracite | Scale: 1:5,000
 Author: Holly Hetherington | Date: 23/02/2015

Legend

- Groundhog License
- Groundhog North
- Bulk Sample Area
- 2014 Drillhole
- 2013 Drillhole
- 2012 Drillhole
- Waterway
- Elevation Contour



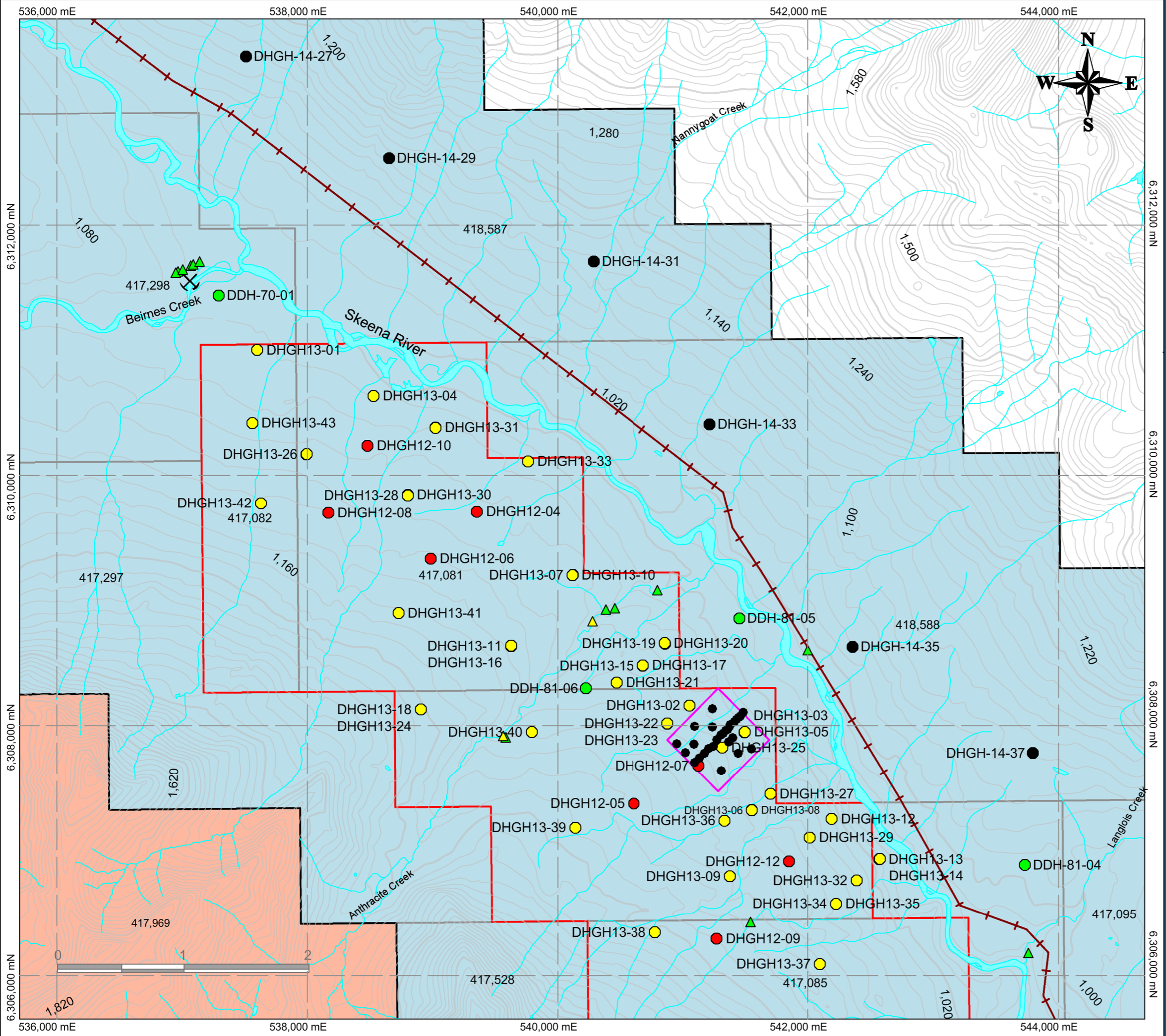
Groundhog Anthracite Project

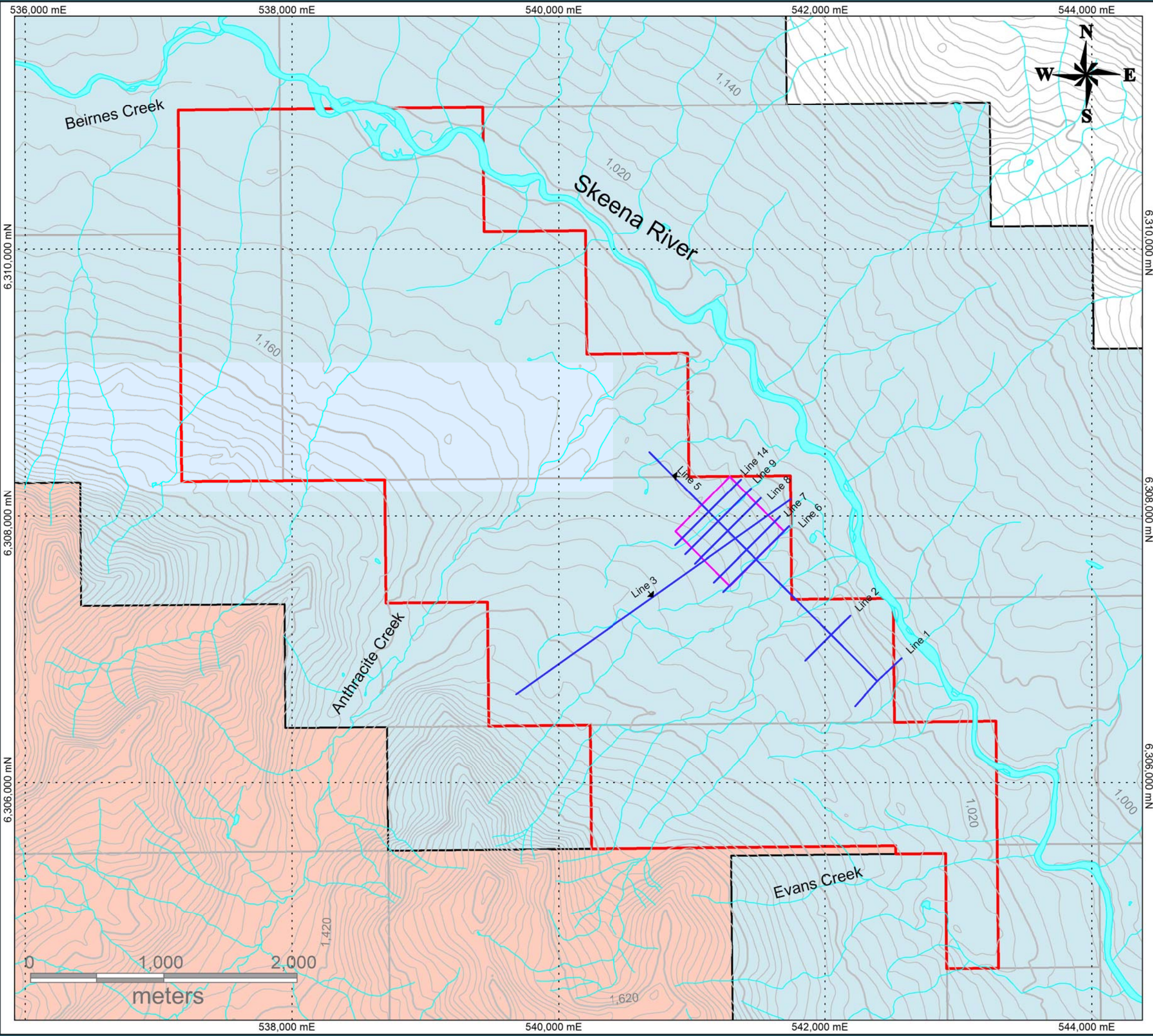
2014 Groundhog North Area

Company: Atrum Coal Groundhog Inc. | Projection: UTM Zone 9 (NAD 83)
 Project: Groundhog Anthracite | Scale: 1:30,000
 Author: Holly Hetherington | Date: 23/02/2015

Legend

- Groundhog License
- Groundhog Application
- Groundhog North
- Bulk Sample Area
- 2014 Drillhole
- 2013 Drillhole
- 2012 Drillhole
- Historic Drillhole
- Historical Addit
- 2013 Trench
- Historic Trench
- Waterway
- Elevation Contour
- Railway Easment





Groundhog Anthracite Project

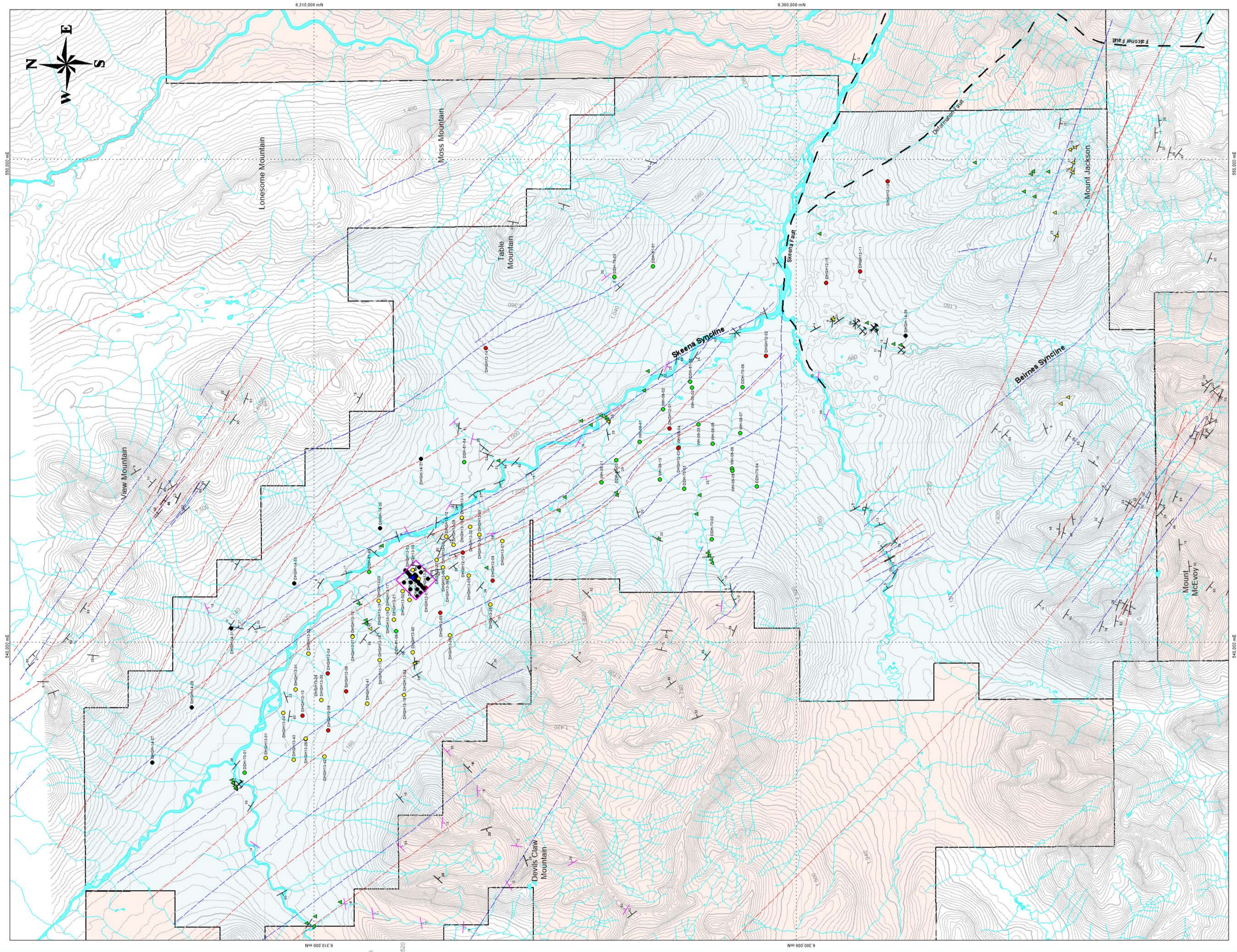
Geophysical Seismic Lines

Company: Atrium Coal Groundhog Inc. | Projection: UTM Zone 9 NAD 83
 Project: Groundhog Anthracite | Author: Holly Hetherington
 Date: 06/03/2015 | Scale: 1:28,000

Legend

- Groundhog License
- Groundhog Application
- Waterway
- Elevation Contour
- Seismic Line
- Bulk Sample Area
- Groundhog North





- Legend**
- Groundhog License
 - Groundhog Application
 - Bulk Sample Area
 - Historical Addit
 - 2014 Drillhole
 - 2013 Drillhole
 - 2012 Drillhole
 - Historic Drillhole
 - 2014 Trench
 - 2013 Trench
 - Historic Trench
 - Waterway
 - Elevation Contour
 - Fault
 - Syncline
 - Anticline
 - Bedding
 - Historic Bedding

Groundhog Anthracite Project
 Property structure

Company: Atrium Coal Groundhog Inc. | Date: 15/03/2019 | Project: UTM Zone 9 MAG 83
 Project: Groundhog Anthracite | Author: Holly Newington | Scale: 1:50,000



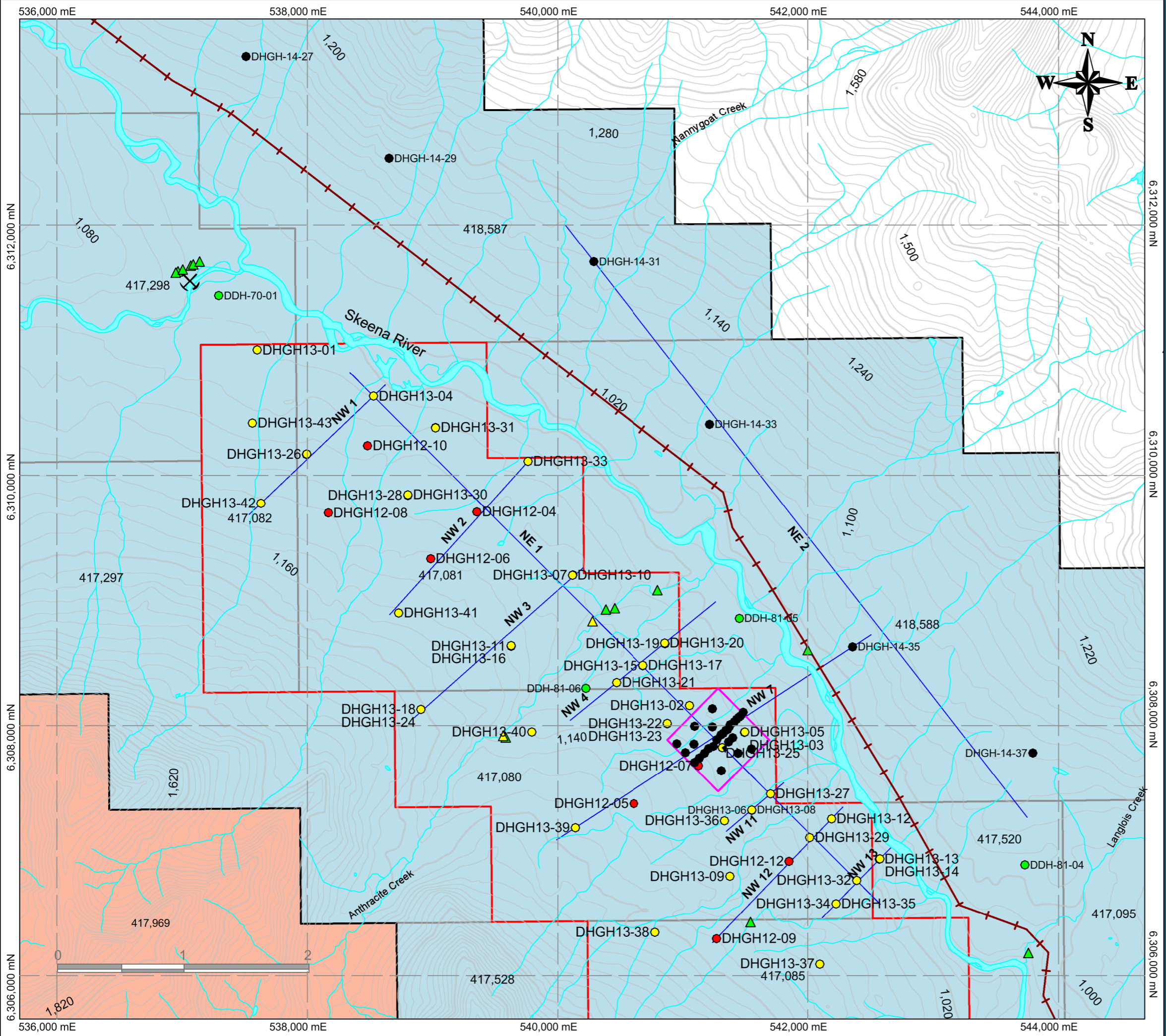
Groundhog Anthracite Project

2014 Regional Cross-Section Map

Company: Atrum Coal Groundhog Inc. | Projection: UTM Zone 9 (NAD 83)
 Project: Groundhog Anthracite | Scale: 1:30,000
 Author: Holly Hetherington | Date: 23/02/2015

Legend

- Groundhog License
- Groundhog Application
- Groundhog North
- Bulk Sample Area
- 2014 Drillhole
- 2013 Drillhole
- 2012 Drillhole
- Historic Drillhole
- Historical Addit
- 2013 Trench
- Historic Trench
- Waterway
- Elevation Contour
- Cross-Section Line
- Railway Easement
- Atrum Camp Location



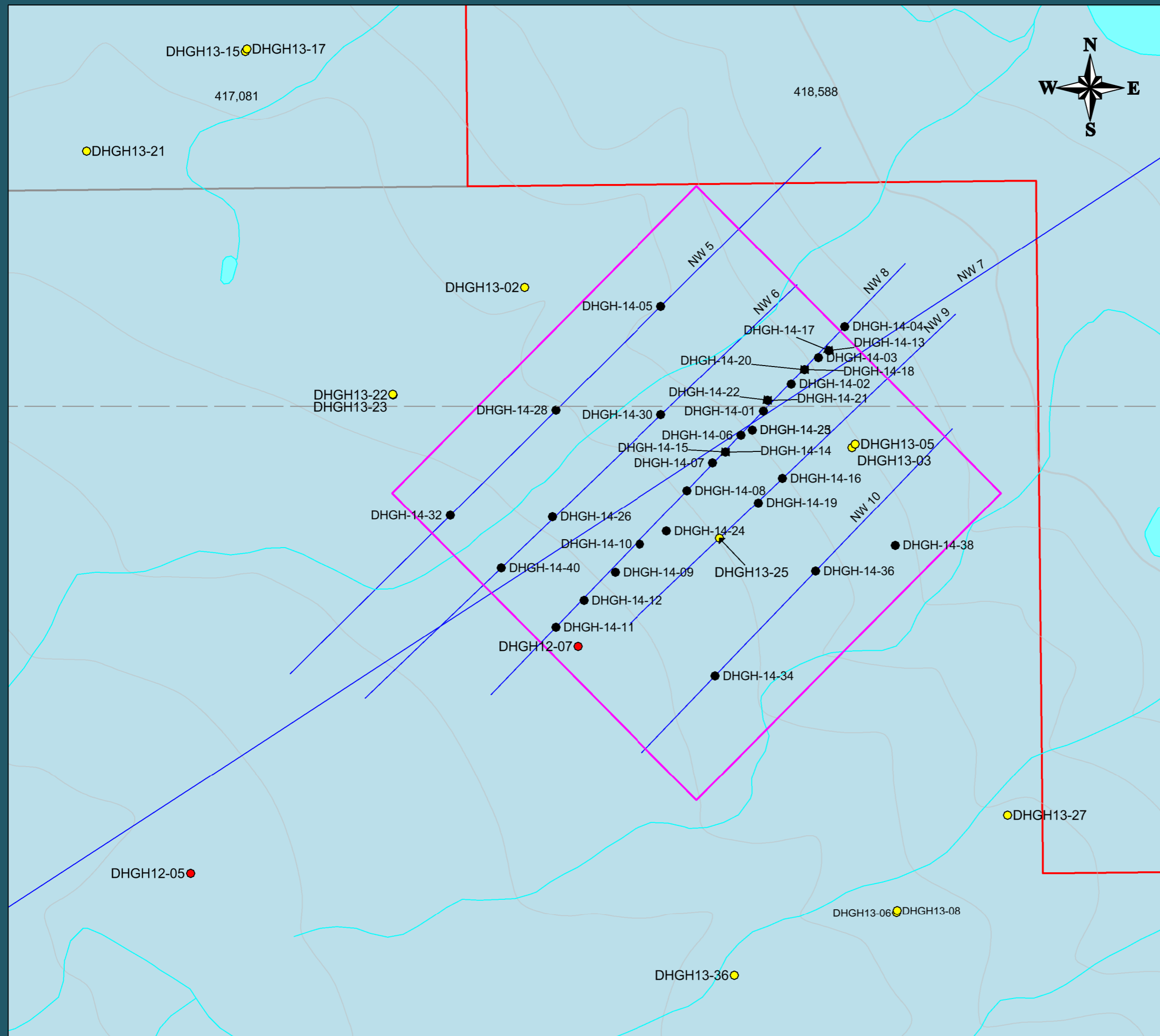
Groundhog Anthracite Project

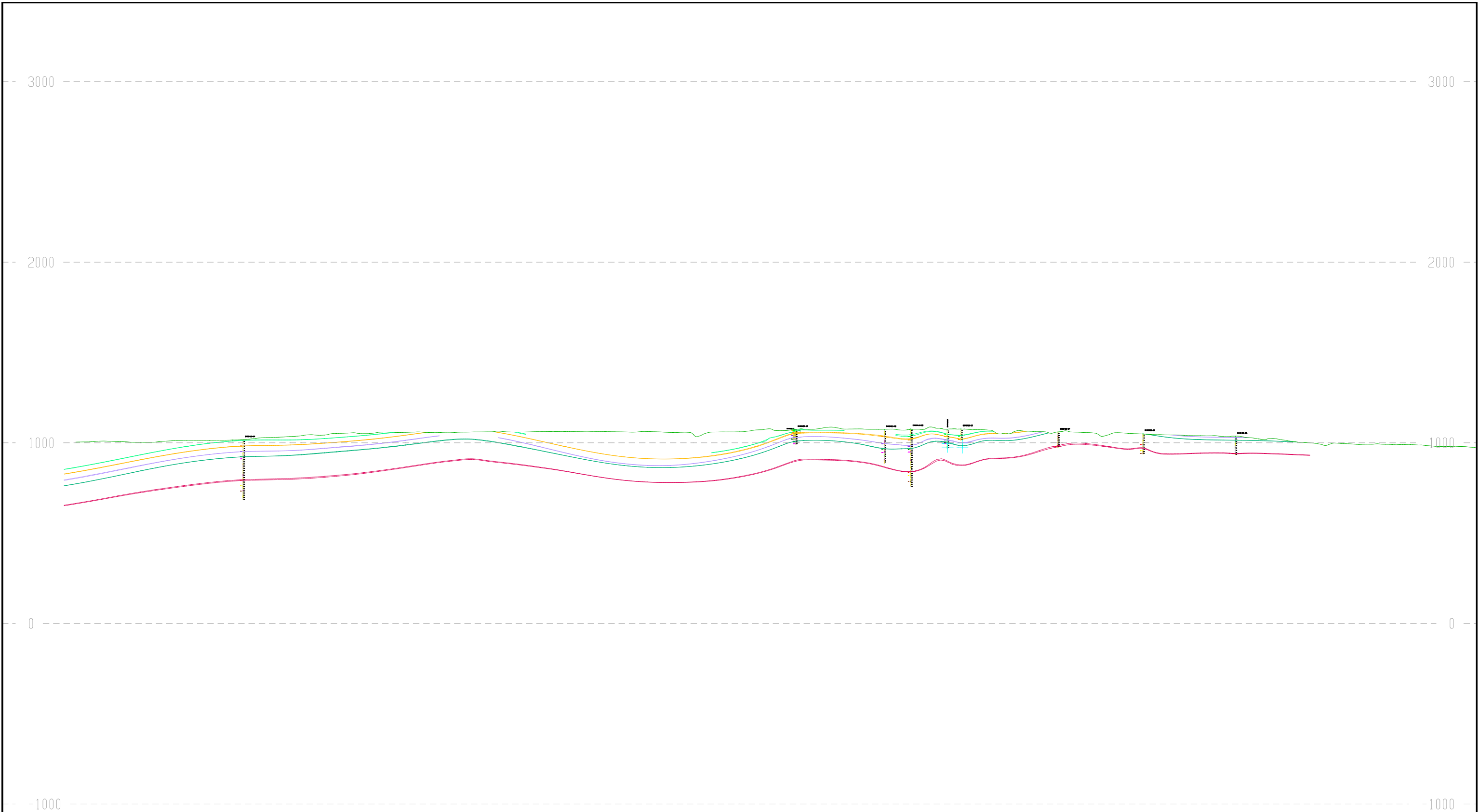
2014 Bulk Sample Cross-Section Map


Company: Atrum Coal Groundhog Inc. | Projection: UTM Zone 9 (NAD 83)
 Project: Groundhog Anthracite | Scale: 1:5,000
 Author: Holly Hetherington | Date: 23/02/2015

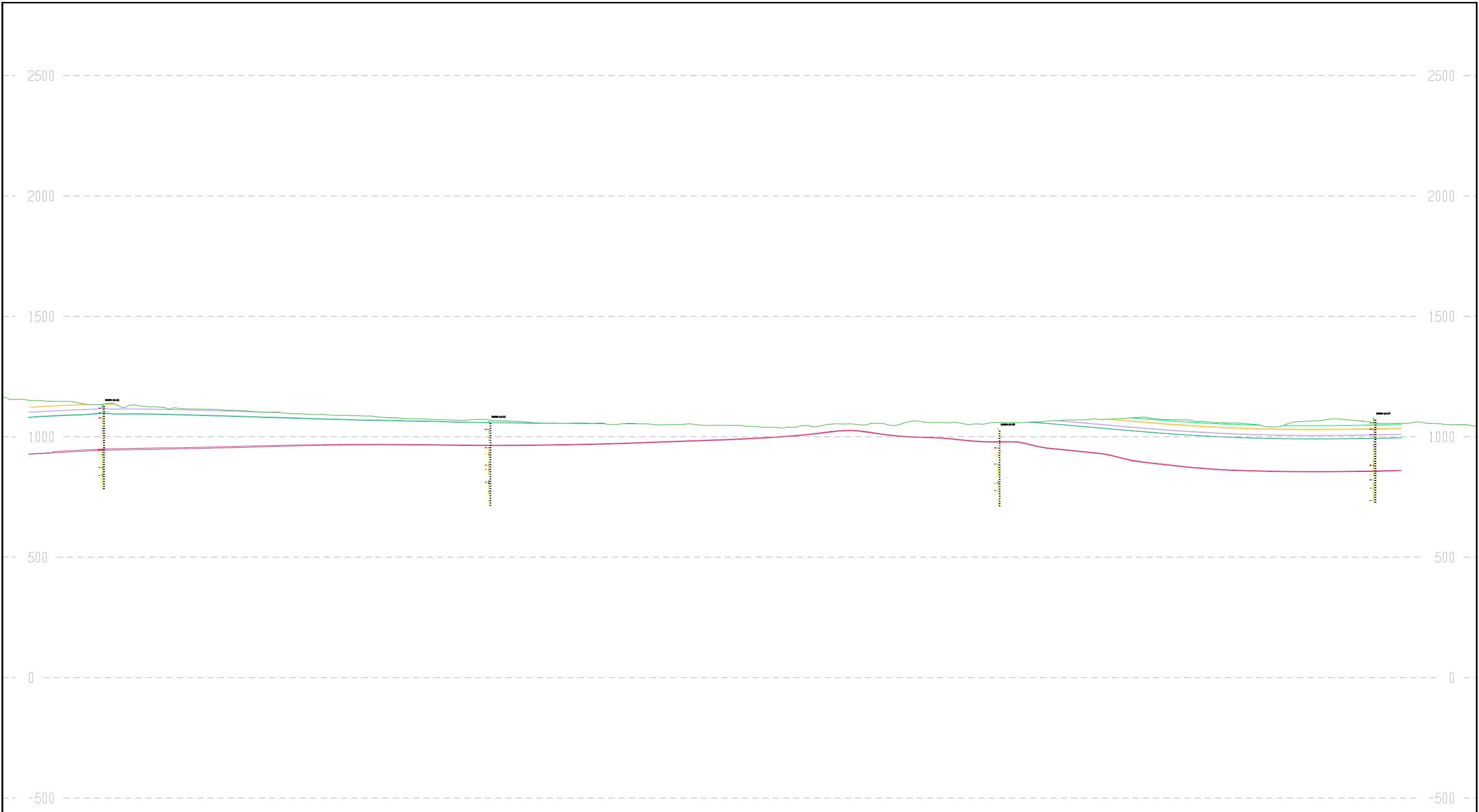
Legend

- Groundhog License
- Groundhog North
- Bulk Sample Area
- Waterway
- Elevation Contour
- Cross-Section Line
- 2014 Drillhole
- 2013 Drillhole
- 2012 Drillhole





	Company: Atrum Coal Groundhog Inc.	Date: 06 November 2014	Scale: 1:20000 Azimuth: 314	COAL SEAM LEGEND — Discovery A Seam — Discovery B Seam — Discovery C Seam — Discovery D Seam — Duke E Seam
	Section: NE 1	Author: Raza Parvez	Projection: UTM Zone 9(NAD83)	

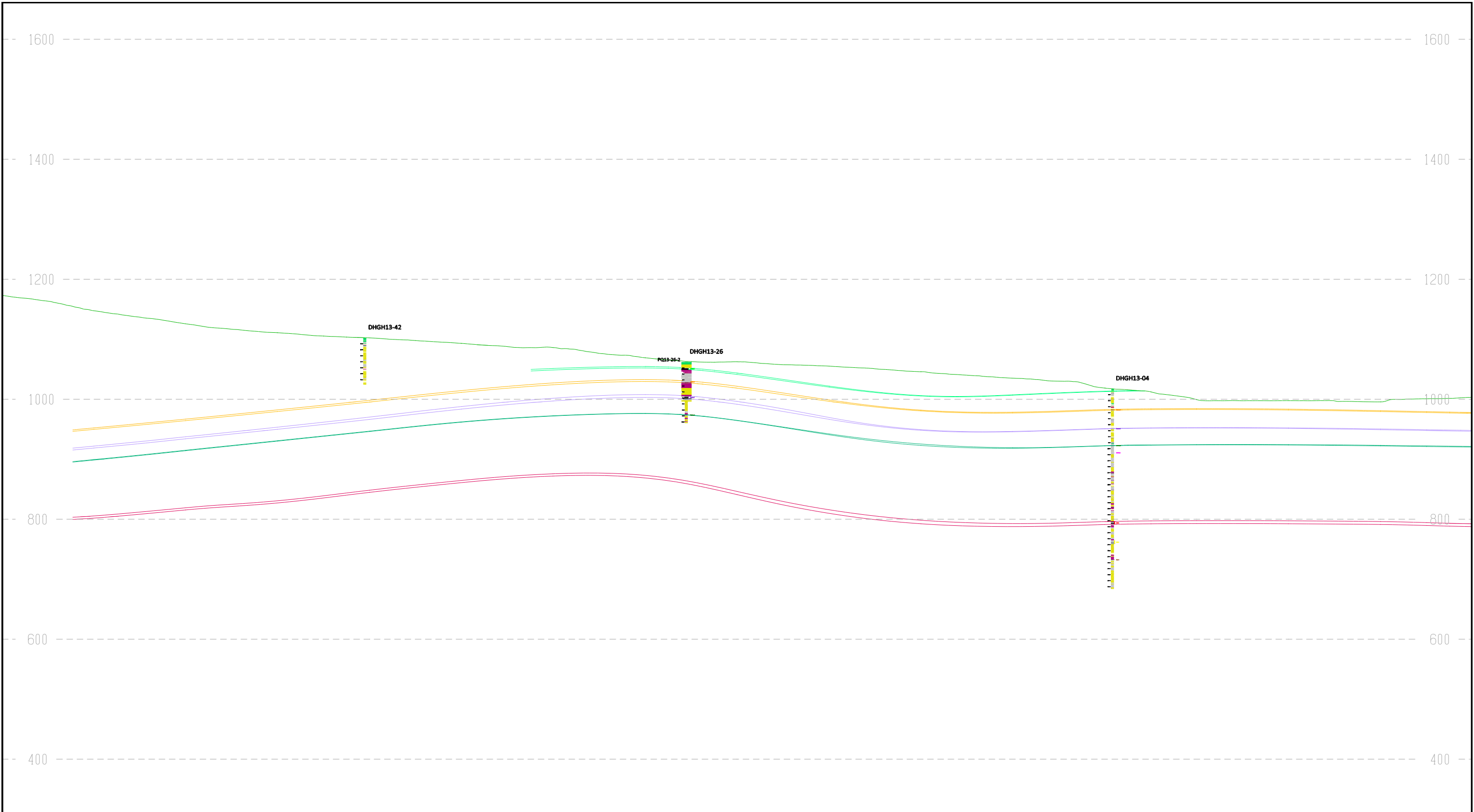


Company: Atrum Coal Groundhog Inc.
Section: NE 2

Date: 06 November 2014
Author: Raza Parvez

Scale: 1:15000 **Azimuth:** 314
Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND	
—	Discovery A Seam
—	Discovery B Seam
—	Discovery C Seam
—	Discovery D Seam
—	Duke E Seam

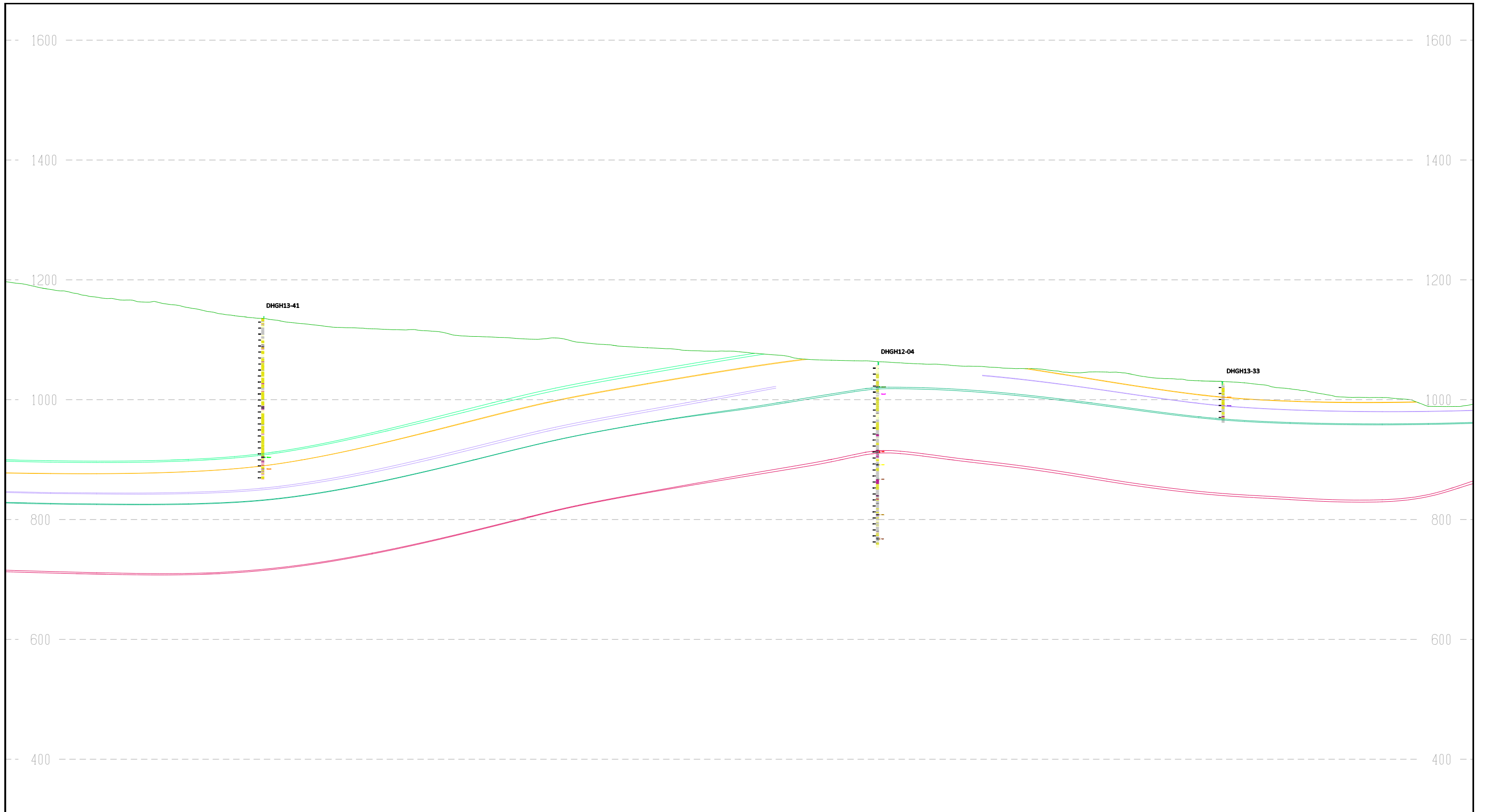


Company: Atrium Coal Groundhog Inc.
Section: NW 1

Date: 06 November 2014
Author: Raza Parvez

Scale: 1:6000 **Azimuth:** 314
Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND	
—	Discovery A Seam
—	Discovery B Seam
—	Discovery C Seam
—	Discovery D Seam
—	Duke E Seam



Company: Atrum Coal Groundhog Inc.

Date: 06 November 2014

Scale: 1:6000 **Azimuth:** 314

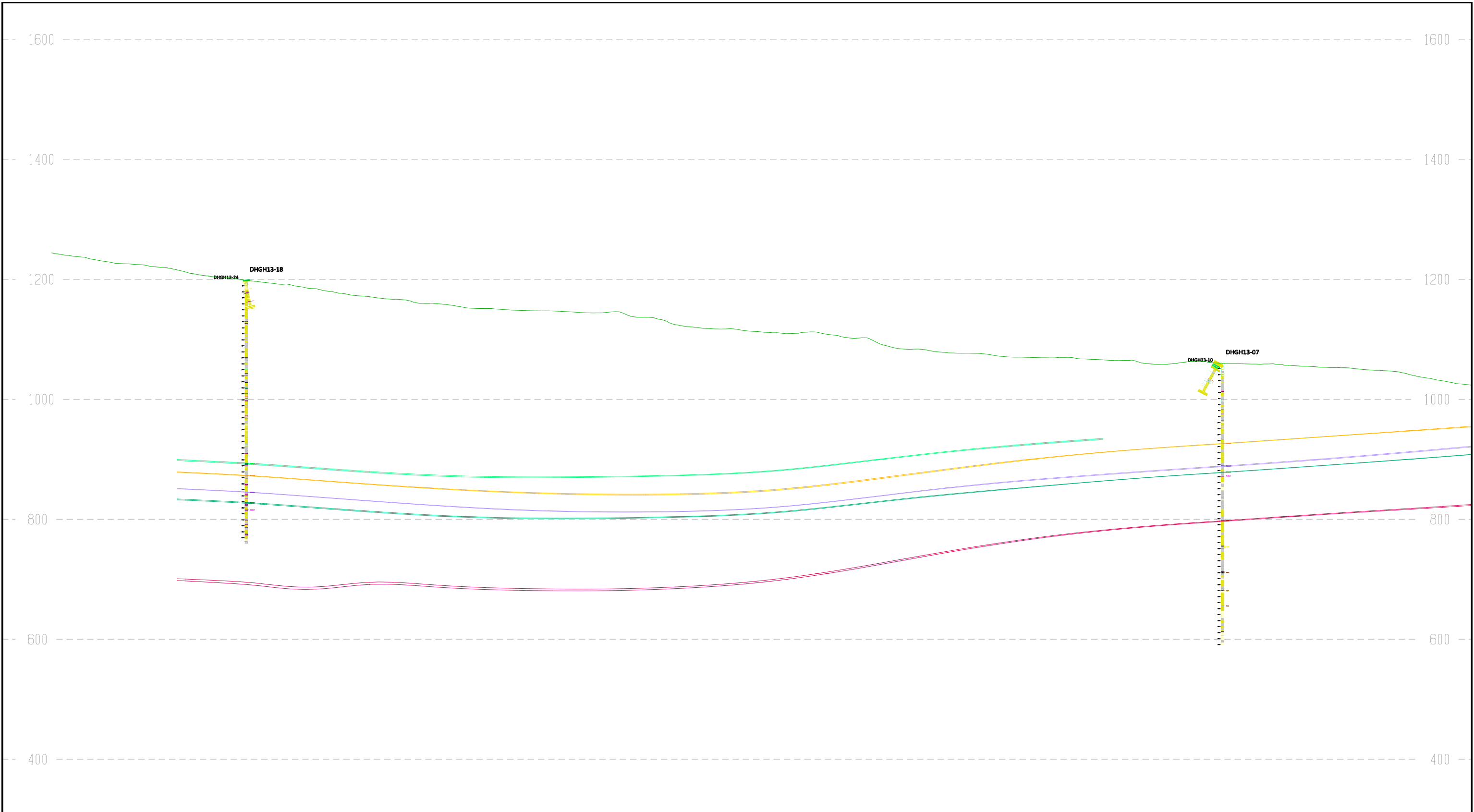
Section: NW 2

Author: Raza Parvez

Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND

- Discovery A Seam
- Discovery B Seam
- Discovery C Seam
- Discovery D Seam
- Duke E Seam

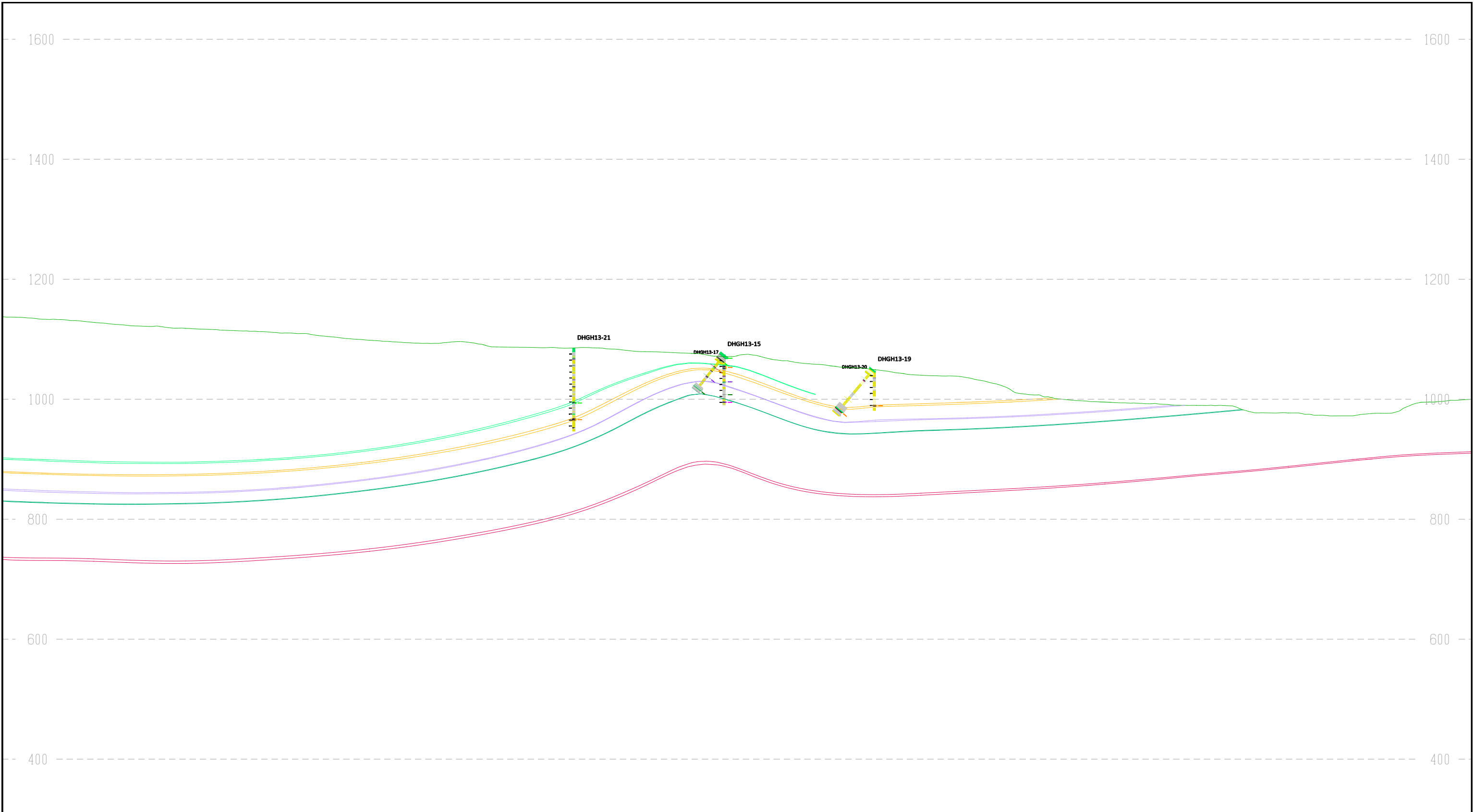


Company: Atrium Coal Groundhog Inc.
Section: NW 3

Date: 06 November 2014
Author: Raza Parvez

Scale: 1:6000 **Azimuth:** 314
Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND	
—	Discovery A Seam
—	Discovery B Seam
—	Discovery C Seam
—	Discovery D Seam
—	Duke E Seam

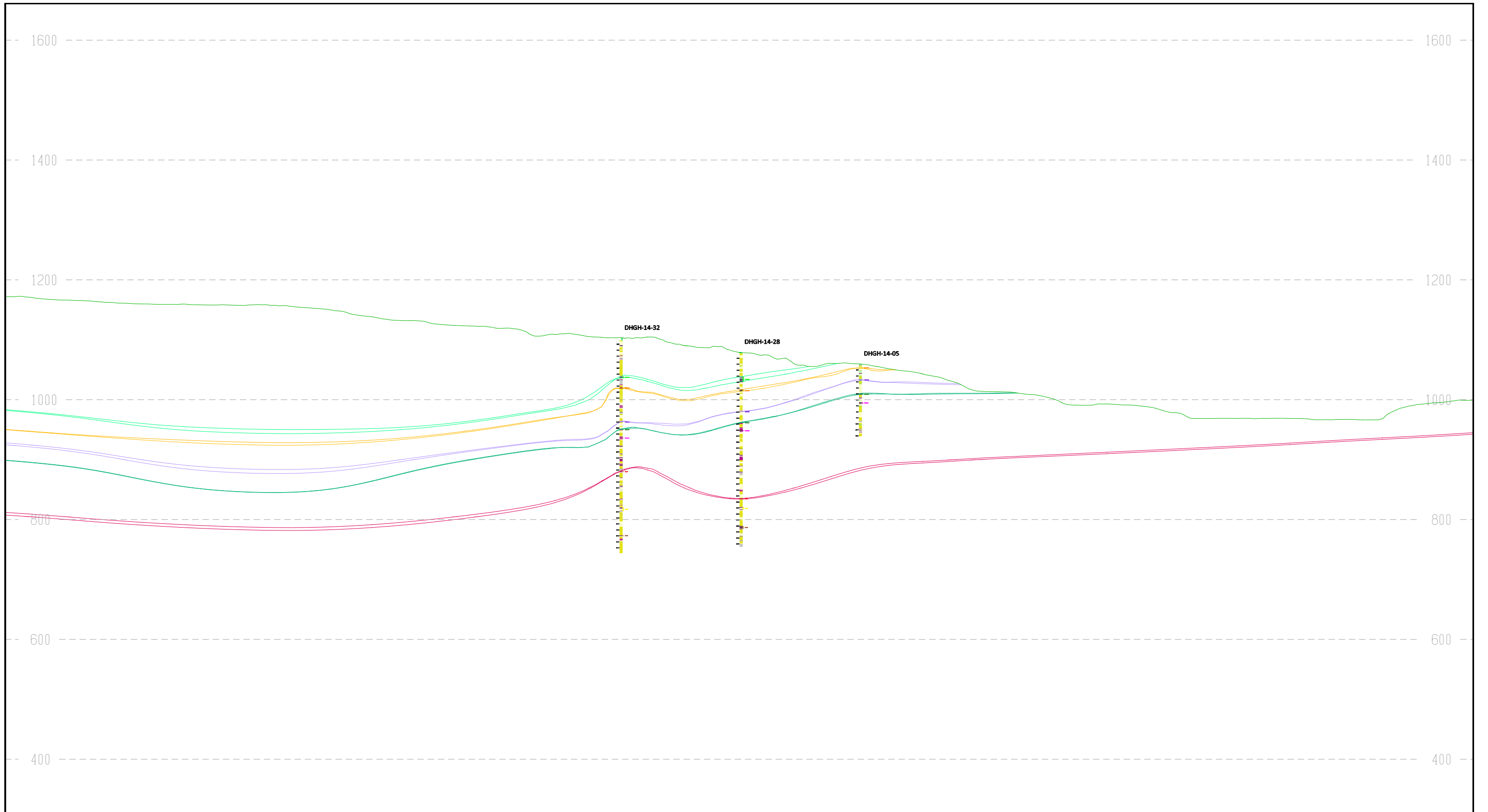


Company: Atrium Coal Groundhog Inc.
Section: NW 4

Date: 06 November 2014
Author: Raza Parvez

Scale: 1:6000 **Azimuth:** 314
Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND	
—	Discovery A Seam
—	Discovery B Seam
—	Discovery C Seam
—	Discovery D Seam
—	Duke E Seam



Company: Atrum Coal Groundhog Inc.

Date: 06 November 2014

Scale: 1:6000 **Azimuth:** 314

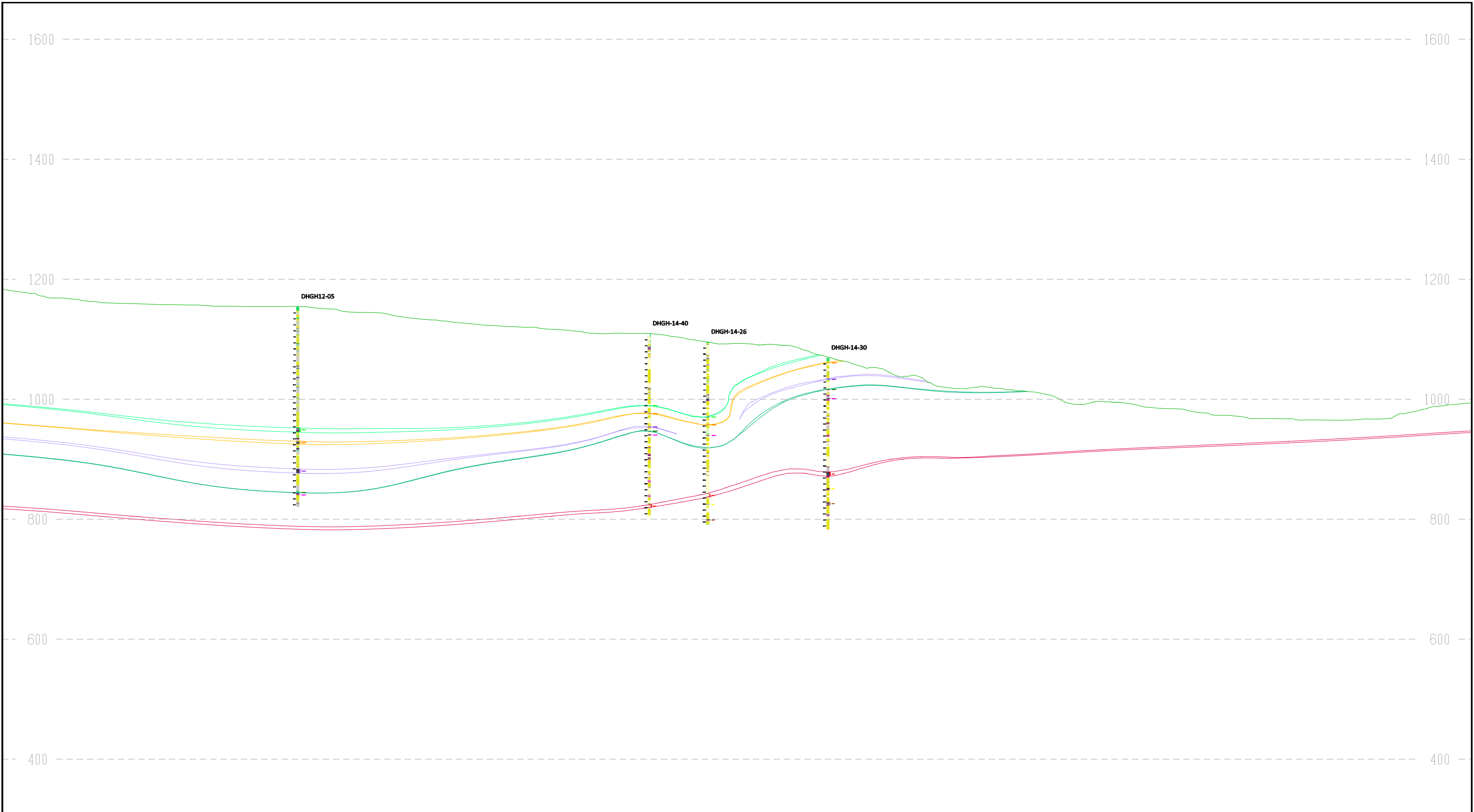
Section: NW 5

Author: Raza Parvez

Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND

- Discovery A Seam
- Discovery B Seam
- Discovery C Seam
- Discovery D Seam
- Duke E Seam

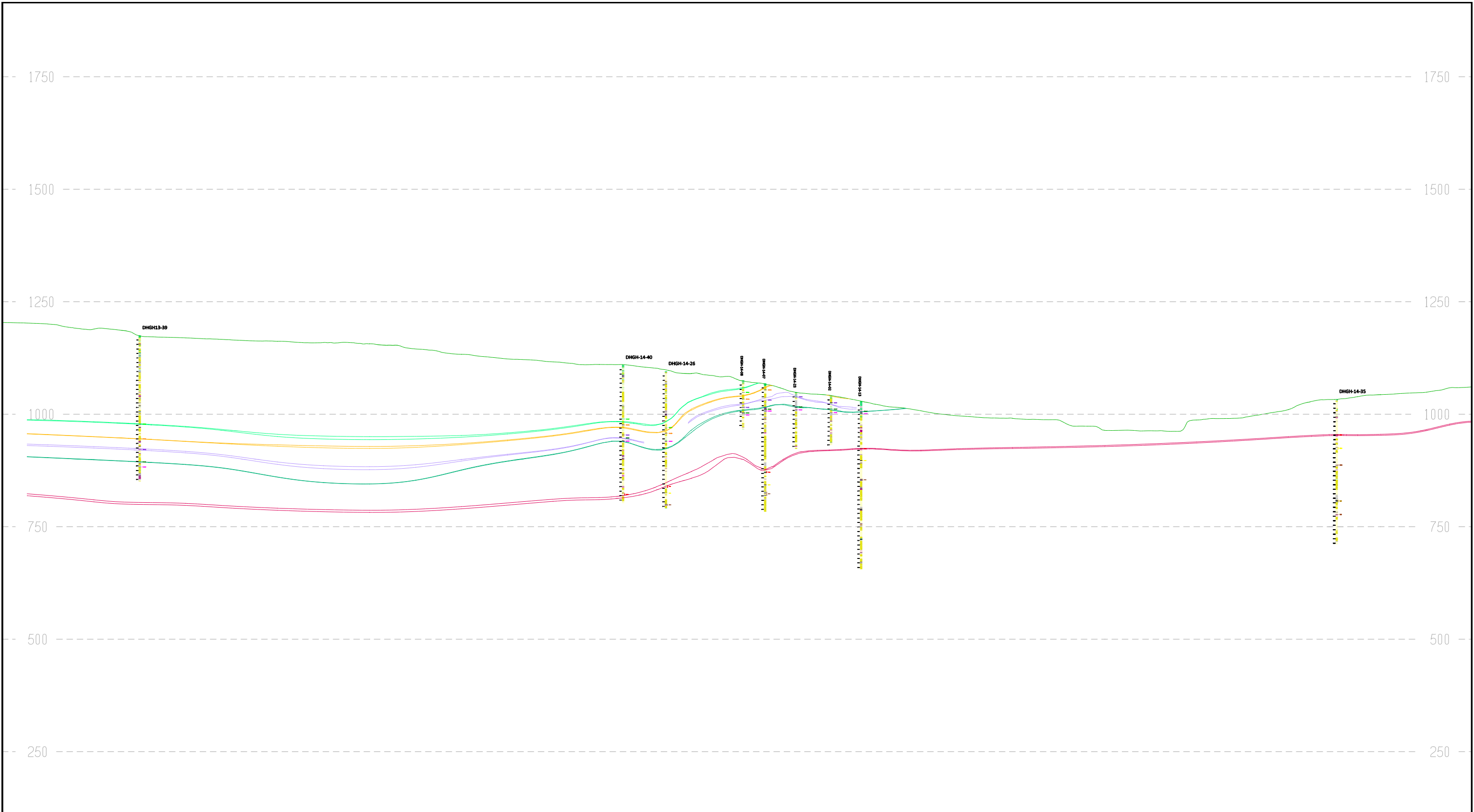


Company: Atrium Coal Groundhog Inc.
Section: NW 6

Date: 06 November 2014
Author: Raza Parvez

Scale: 1:6000 **Azimuth:** 314
Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND	
—	Discovery A Seam
—	Discovery B Seam
—	Discovery C Seam
—	Discovery D Seam
—	Duke E Seam

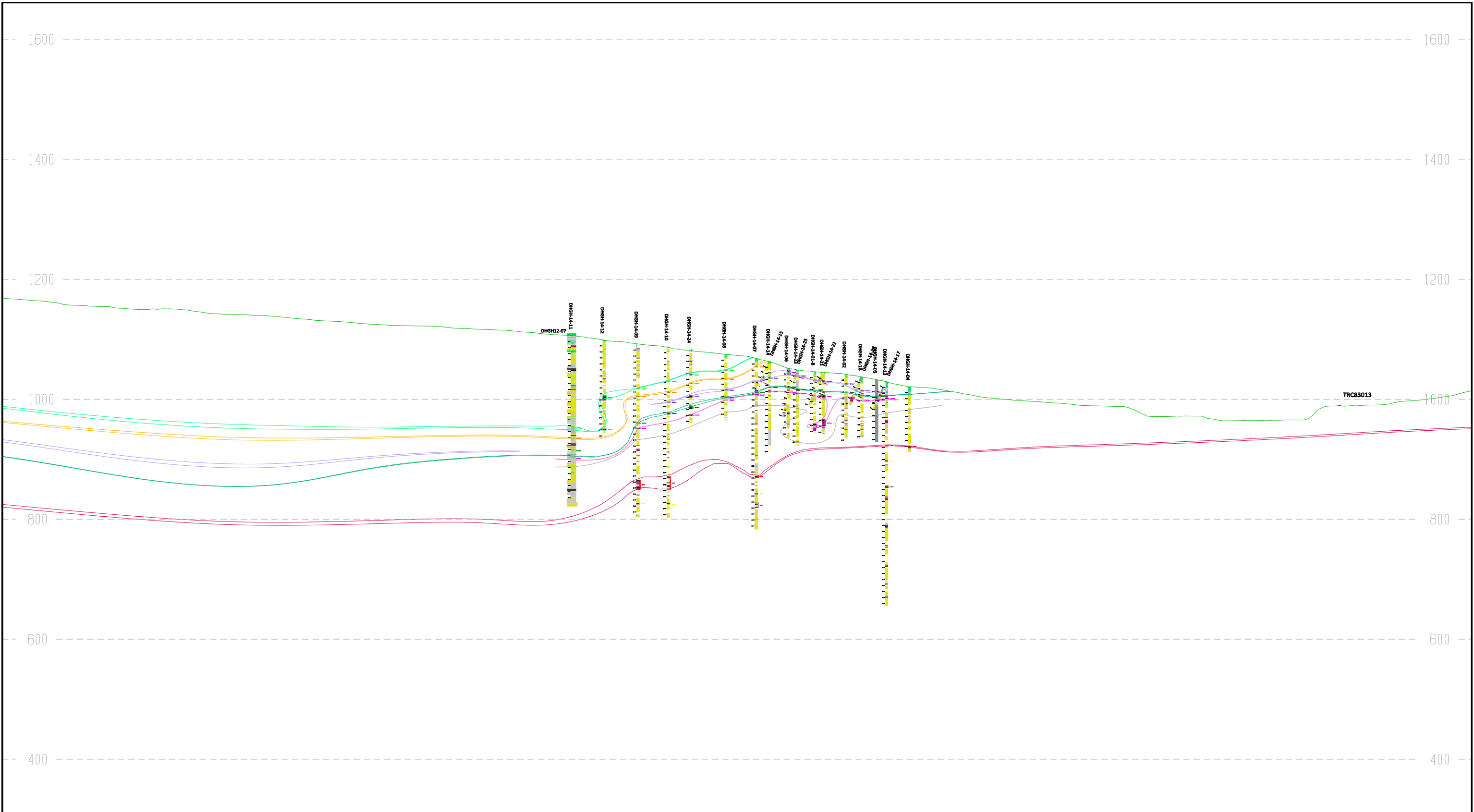


Company: Atrium Coal Groundhog Inc.
Section: NW 7

Date: 06 November 2014
Author: Raza Parvez

Scale: 1:8000 **Azimuth:** 314
Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND	
—	Discovery A Seam
—	Discovery B Seam
—	Discovery C Seam
—	Discovery D Seam
—	Duke E Seam

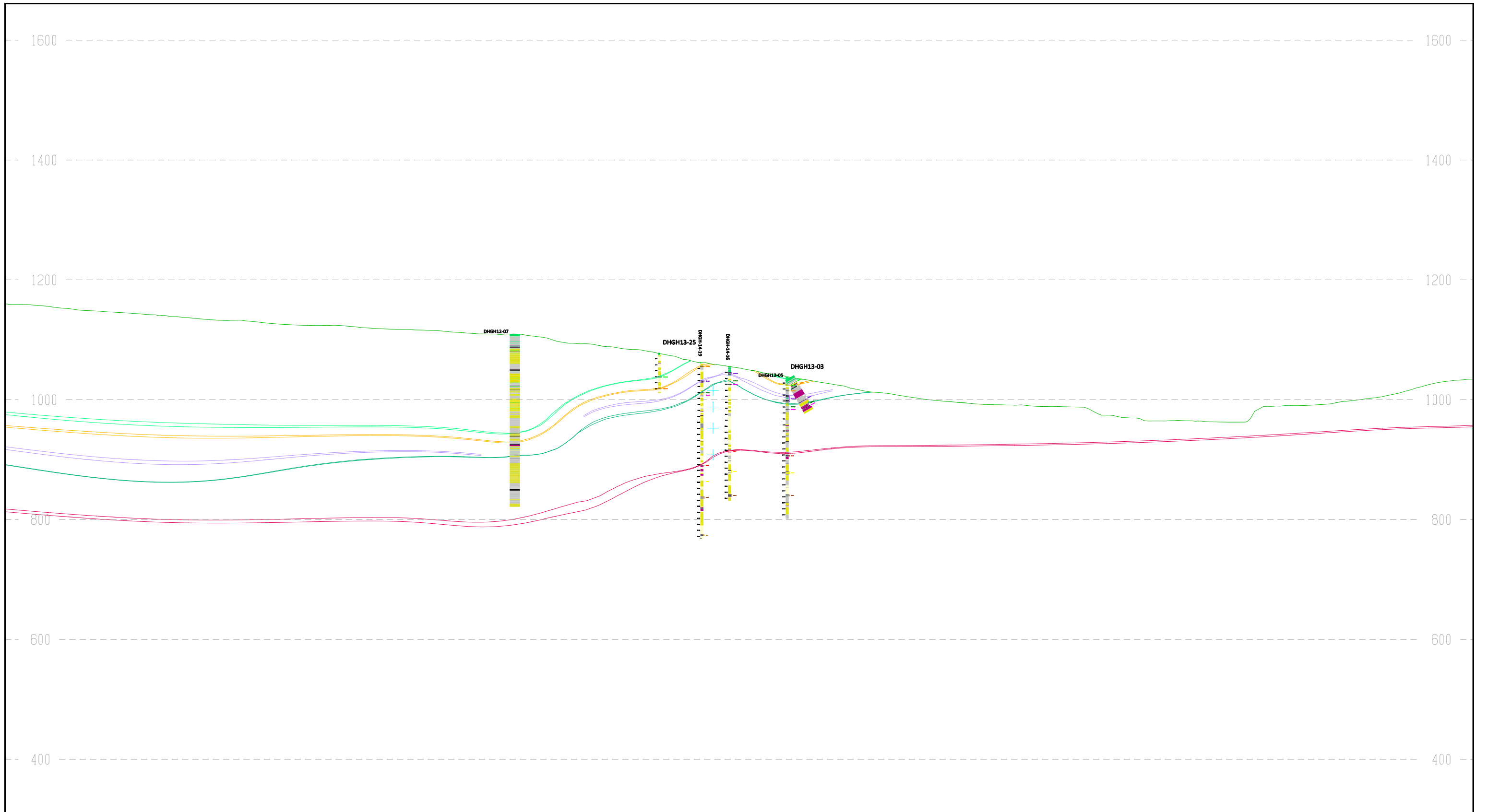


Company: Atrium Coal Groundhog Inc.
Section: NW 8

Date: 06 November 2014
Author: Raza Parvez

Scale: 1:6000 **Azimuth:** 314
Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND	
—	Discovery A Seam
—	Discovery B Seam
—	Discovery C Seam
—	Discovery D Seam
—	Duke E Seam



Company: Atrium Coal Groundhog Inc.

Section: NW 9

Date: 06 November 2014

Author: Raza Parvez

Scale: 1:6000 **Azimuth:** 314

Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND

- Discovery A Seam
- Discovery B Seam
- Discovery C Seam
- Discovery D Seam
- Duke E Seam



Company: Atrium Coal Groundhog Inc.
Section: NW 10

Date: 06 November 2014
Author: Raza Parvez

Scale: 1:6000 **Azimuth:** 314
Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND	
—	Discovery A Seam
—	Discovery B Seam
—	Discovery C Seam
—	Discovery D Seam
—	Duke E Seam



Company: Atrium Coal Groundhog Inc.

Section: NW 11

Date: 06 November 2014

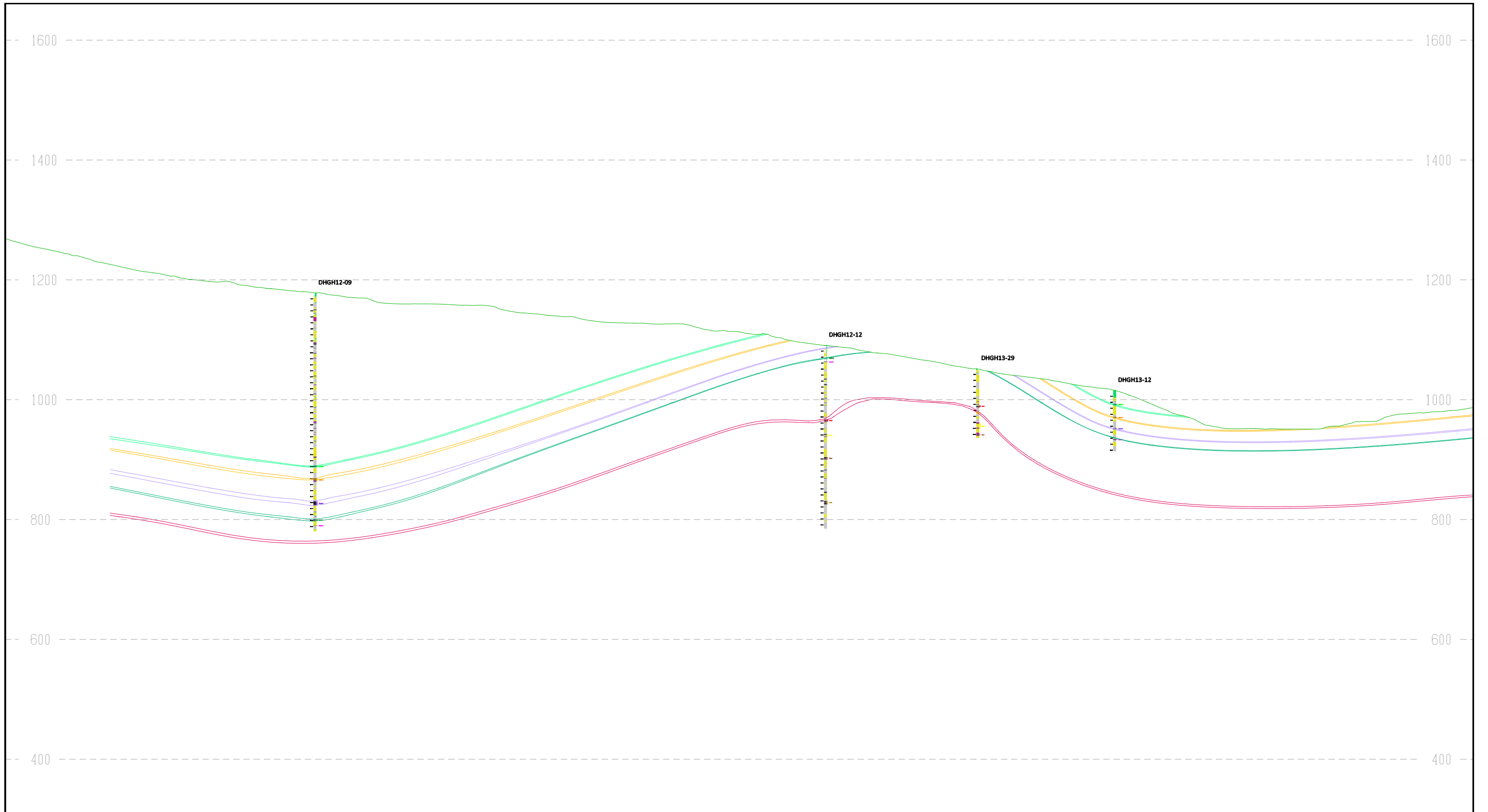
Author: Raza Parvez

Scale: 1:6000 **Azimuth:** 314

Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND

- Discovery A Seam
- Discovery B Seam
- Discovery C Seam
- Discovery D Seam
- Duke E Seam



Company: Atrum Coal Groundhog Inc.

Date: 06 November 2014

Scale: 1:6000 **Azimuth:** 314

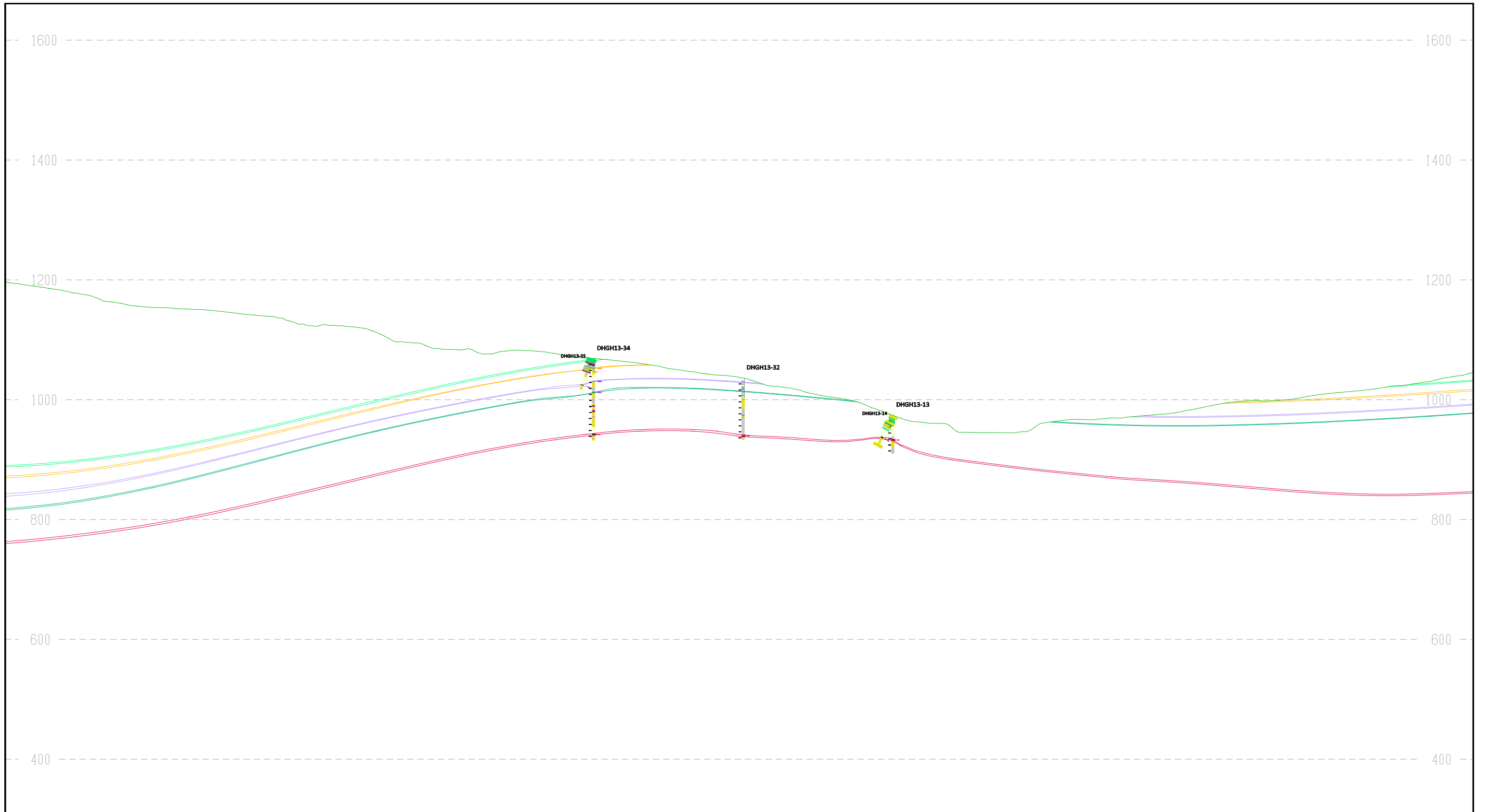
Section: NW 12

Author: Raza Parvez

Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND

- Discovery A Seam
- Discovery B Seam
- Discovery C Seam
- Discovery D Seam
- Duke E Seam



Company: Atrum Coal Groundhog Inc.

Section: NW 13

Date: 06 November 2014

Author: Raza Parvez

Scale: 1:6000 **Azimuth:** 314

Projection: UTM Zone 9(NAD83)

COAL SEAM LEGEND

- Discovery A Seam
- Discovery B Seam
- Discovery C Seam
- Discovery D Seam
- Duke E Seam