CanAus Coal Limited

ASSESSMENT REPORT

2015 Loop Ridge Exploration Program

Owner and Operator: CanAus Coal Ltd.

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March 2016

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Assessment Report: 2015 Loop Ridge Exploration Program

TOTAL COST: **$1,885,299.59.**

AUTHOR(S): **Dave Thompson, P.Geo.**

SIGNATURE(S): Dave Thompson

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

1. **Mines Act Permit CX-05-019, Approval #13-1630615-0711, issued July 11, 2013**
2. **Mines Act Permit CX-05-021, Approval #13-1630615-0722, issued July 22, 2014**

YEAR OF WORK: 2015
PROPERTY NAME: Michel Creek Coking Coal Project, Loop Ridge Property
CLAIM NAME(S) (on which work was done): Coal Licences #418319, 418624, 418632

COMMODITIES SOUGHT: Coal

MINING DIVISION: FORT STEELE
NTS / BCGS: 82G/10W
LATITUDE: 49° 38' 30" N
LONGITUDE: 114° 46' 30" W (at centre of work)
UTM Zone: 11 EASTING: 661,500m NORTHING: 5,501,000m

OWNER(S): CanAus Coal Limited

MAILING ADDRESS: #5000 Hwy 43, Sparwood, BC V0B 2G1

OPERATOR(S) [who paid for the work]: CanAus Coal Limited

REPORT KEYWORDS: Jurassic/Cretaceous, Mist Mountain Formation, Coal

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: Assessment Report – 2014 Loop Ridge Exploration Program

Parts of Section 1, all of Section 6, and all of Appendix D remain confidential under the terms of the Coal Act Regulation, and has been removed from the public version.

http://www.bclaws.ca/civix/document/id/complete/statreg/251_2004

Table of Contents

List of Tables

List of Figures

List of Appendices

1 Introduction and Summary

This report describes the exploration work conducted on the Loop Ridge property owned by CanAus Coal Ltd. (CanAus) in the Michel Creek area near Sparwood, BC (Figure 1.1).

In 1964, Crow's Nest Pass Coal Co. explored the property and completed a test pit in 1969, mining between 60,000t and 100,000t. Further test pit mining of 50,000t was completed by McGillivray Mining and Fording Coal in 1995 and 1996. Fording Coal completed two drill programs on the property in 1998 and 1999, totaling 36 holes.

In 2013, exploration conducted by CanAus on Loop Ridge included 37 reverse circulation geology drillholes, four reverse circulation pilot drillholes for coring, and eight large diameter core holes. Samples were taken during the reverse circulation geology drilling which were used to map coal seam rank variability. The large diameter core was analyzed for detailed washability and coking coal characteristics. A 3D resource model was prepared [redacted]

The 2014 Exploration Program on Loop Ridge fulfilled the requirements of a pre-feasibility study and included 66 reverse circulation drillholes, 19 reverse circulation pilot drillholes for coring and reverse flood sampling, 13 large diameter core holes, 8 HQ3 core holes and 2 large diameter reverse flood drillholes. Coal samples from the large diameter holes were analyzed for detailed sizing, washability and coking coal characteristics. Construction of a 3D block model was completed [redacted]

In 2015, a total of 20 reverse circulation drillholes were completed on Coal Licenses 418319 and 418632. Six of the holes were drilled for the installation of piezometers to monitor groundwater conditions. Six of the holes were drilled as pilot holes for the identification of coal seams in advance of the large diameter drilling. Eight large diameter reverse flood (44cm) holes were drilled to collect coal samples for carbonization testing. In addition, fourteen trenches were excavated at coal showings exposed predominantly in road cuts on Coal License 418632. Approximately 118m of coal was exposed in 166m of trenching. The trenches exposed several seams with true thicknesses ranging from 1-10m.

[redacted]

Figure 1.1 Location Plan

2 Property and Location

2.1 Ownership

Mineral rights are wholly owned by CanAus Coal Ltd. Surface rights are held by Jemi Fibre Corporation as part of their free-hold Tent Mountain Block 21. There are no oil and gas drilling activities on the property; however, the TransCanada Pipeline, which carries natural gas from wells in Alberta and transports it south across the Canada-United States border, cuts the property in half from east to west.

At this time there are no environmental liabilities identified on the property.

2.2 Property

The approximate centre point of the Loop Ridge property is 5,501,000N and 661,500E (UTM NAD 83). The Loop Ridge property, held by CanAus, represents seven coal licenses (Table 2.2.1). A location map shows information on the licenses (Figure 2.2.1).

Table 2.2.1 Loop Ridge Property Coal Licenses

Coal Licence	Property Name	Approx. Area (ha)
418319	Loop Ridge	409
418624	Loop Ridge Phase 2	689
418628	Loop Ridge Phase 2	24
418629	Loop Ridge Phase 2	1
418630	Loop Ridge Phase 2	4
418631	Loop Ridge Phase 2	151
418632	Loop Ridge Phase 2	1160
Total Area		**2438**

The property is situated in the northwest trending Front Ranges of the Rocky Mountains physiographic region, which is characterized by a series of steep mountains running to the northwest, incised by west flowing streams. Figure 2.2.1 shows the Loop Ridge property as the red and hashed area. Elevations range from ~1,400m along Michel Creek to a height of 1,680m at Loop Ridge.

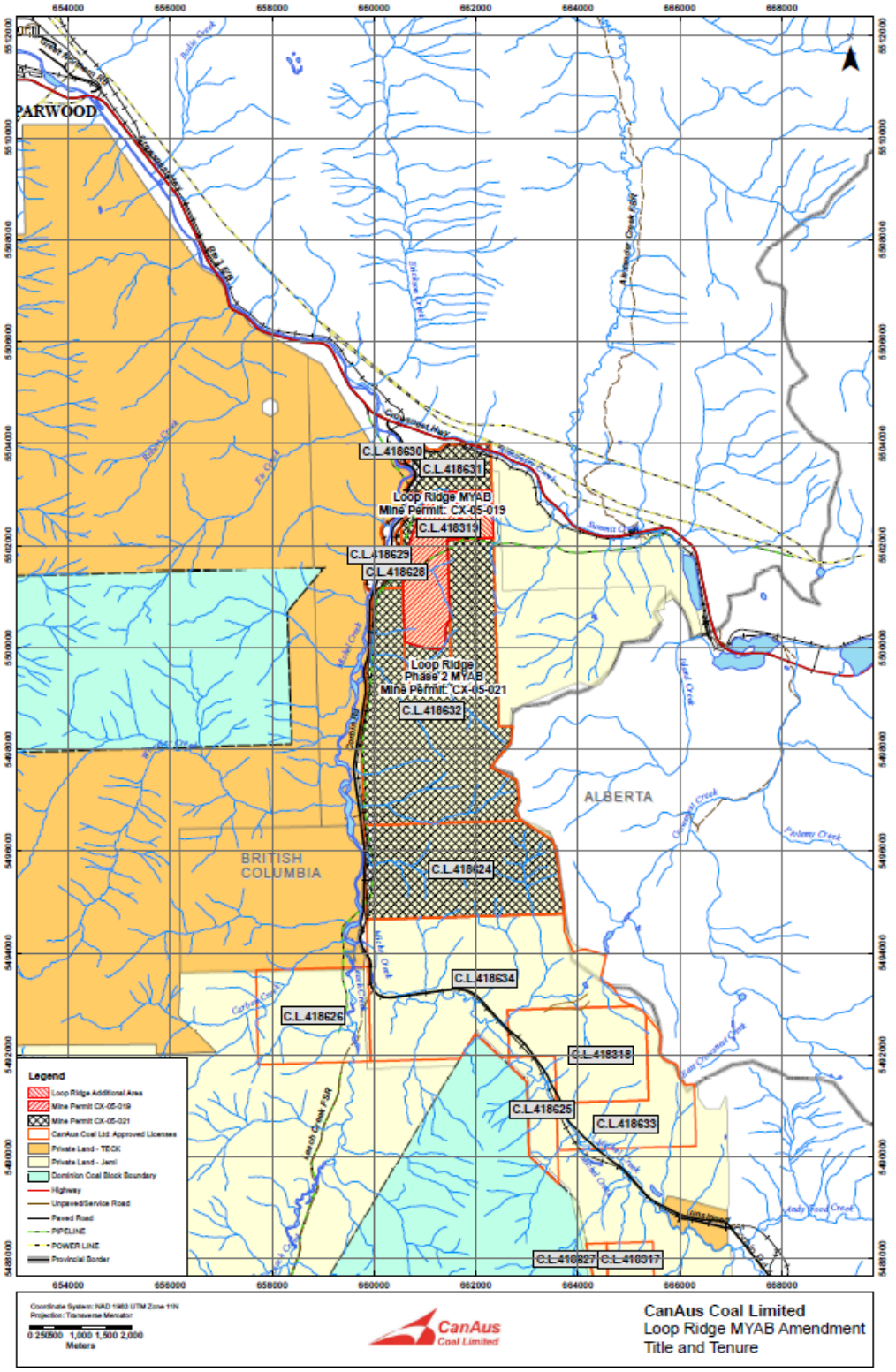
The Loop Ridge property is located between two open pit coal mines owned and operated by Teck Coal Ltd. The Teck Elkview Operations produce metallurgical coal ~10km north from the center of the Loop Ridge property and their Coal Mountain Operations produce both thermal and PCI coal ~19km south from the centre of the Loop Ridge property.

The climate is characterized by long, cold winters and short, cool to hot summers. In Sparwood, the temperature ranges from a record high of 39°C in the summer to a record low of -39.8°C in the winter, with a mean maximum in August of 23.6°C and a mean minimum in December of -11.6°C. Temperatures at the higher altitudes of the property would be slightly lower. The average amount of precipitation in Sparwood is 603mm with an equivalent of 248cm of that falling as snow. Loop Ridge generally has dense forest cover of pine and spruce; however, a significant portion of the property has been logged in the past year.

2.3 Location and Access

The Michel Creek Coking Coal Project is located southeast of the town of Sparwood in the Michel Creek valley, southeast British Columbia. Primary road access to the general area is via the Crowsnest Highway (Highway 3), which is an all-weather paved major highway connecting Sparwood with Fernie in the west and communities of the Crowsnest Pass in the east. The project area is accessed by driving east from Sparwood along Highway 3 for 11km and turning south onto Corbin Road. From Corbin Road, access to the Loop Ridge property is a further 4km. A network of logging and exploration trails on the property is utilized for drilling access.

Figure 2.2.1 – License Plan



3 Program Overview

3.1 Goals and Parameters

The 2015 exploration program was intended to gather sufficient coal samples from Seams 10, 11 18 and 20 to evaluate the individual seam qualities as well as determine potential seam blend products through carbonization testing. A prospecting program of coal seam trenching and mapping was also planned to evaluate the potential of extending the known resources at Loop Ridge to the south of the main deposit.

3.2 History

Exploration in the area dates back to the late nineteenth century. The Loop Ridge property was geologically mapped by Crow's Nest Pass Coal Company in 1964. Seven trenches, two adits, and at least 12 coal exploration drillholes were completed with this program. In 1969 the Crow's Nest Pass Coal Co. mined the McGillivray Pit at the north end of the Loop Ridge property. It is estimated that between 60,000t to 100,000t of coal was mined and trucked to the Michel preparation plant. In 1993 McGillivray Mining Ltd. completed an agreement with Tembec to mine at the old McGillivray site. Environmental studies were completed and a bulk sample permit obtained by the spring of 1995. The same year, approximately 20,000t of coal was mined and trucked to Teck's Elkview plant near Sparwood. In 1996, Fording Coal purchased McGillivray's property and rights from Tembec and mined a further 30,000t. The second bulk sample was trucked to the Coal Mountain mine, approximately 19km to the southeast. Fording Coal completed two drill programs on the entire Loop Ridge property, one in 1998 (18 holes) and another in 1999 (18 holes). A historic resource estimate by Crow's Nest Pass Coal Co. Ltd. indicated a total of 153.6Mt within 460m of surface with a further 13.3Mt between the depths of 460m and 760m.

In 2013, exploration conducted by CanAus on Loop Ridge included 37 reverse circulation geology drillholes, four reverse circulation pilot drillholes for coring, and eight large diameter core holes. Samples were taken during the reverse circulation geology drilling which were used to map coal seam rank variability. The large diameter core was analyzed for detailed washability and coking coal characteristics. A 3D resource model was prepared and a resource estimate was calculated.

Following the 2013 program, in 2014 CanAus completed 66 reverse circulation geology drillholes, 19 reverse circulation pilot drillholes for large diameter coring and reverse flood sampling, 13 large diameter (15cm) core holes, 8 HQ3 (6.1cm) core holes and 2 large diameter (44cm) reverse flood drillholes to confirm and expand on the 2013 and historic data (Figure 3.3.1 and Table 3.3.1). Samples were collected from reverse circulation, reverse flood and core drilling and the coal was analyzed for detailed washability and coking coal characteristics. A 3D block model was prepared and a resource estimate was calculated.

3.3 2015 Drilling

In 2015, a total of 20 reverse circulation drillholes were completed on Coal Licenses 418319 and 418632. Six of the holes were drilled for the installation of piezometers to monitor groundwater conditions. Six of the holes were drilled as pilot holes for the identification of coal seams in advance of the large diameter drilling. Eight large diameter reverse flood (44cm) holes were drilled to collect coal samples for carbonization testing. A total of 1,298m of drilling was completed, including 824m of reverse circulation holes and 474m of large diameter reverse flood holes (Figure 3.3.1 and Table 3.3.1).

All of the successful 2015 drill holes were geophysically logged with open-hole density and deviation tools.

All drill collars were surveyed with base-station corrected differential GPS equipment to centimetre-level accuracy.

3.4 2015 Trenching

Fourteen trenches were excavated and mapped at coal showings exposed predominantly in road cuts on Coal License 418632, approximately two kilometres south of the main Loop Ridge deposit. A cumulative total of 118m of coal (apparent thickness) was exposed in 166m of trenching. The trenches exposed several seams with true thicknesses estimated at between one and ten metres (Figure 3.3.1 and Table 3.4.1).

Figure 3.3.1 Loop Ridge Exploration Plan

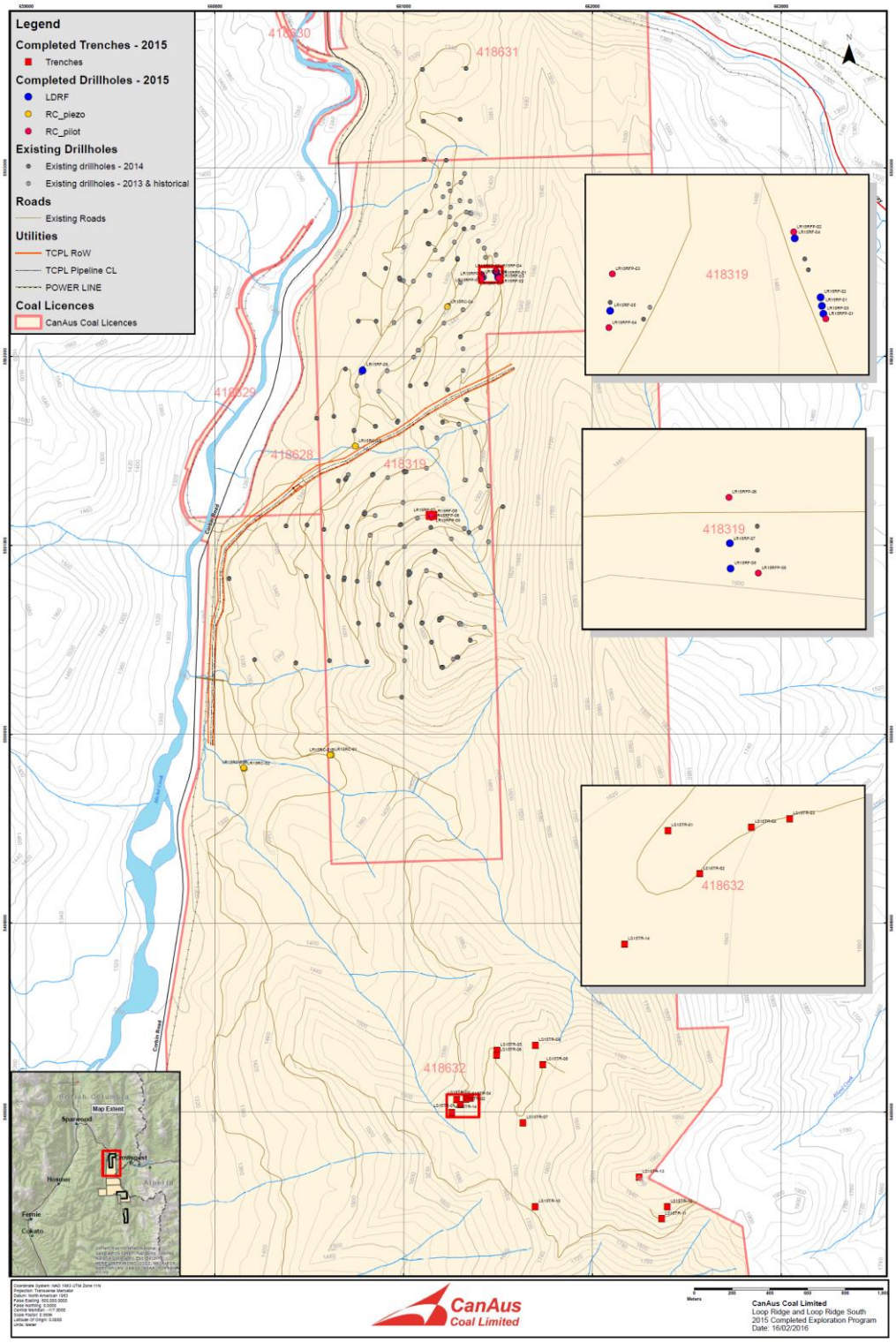


Table 3.3.1 Drillhole Locations

Hole ID	Type	Easting	Northing	Elevation	Depth	Azimuth	Dip
LR15RC-01	RC	660617.65	5499891.16	1343.59	100	0	-90
LR15RC-01B	RC	660609.87	5499889.94	1343.46	21	0	-90
LR15RC-02	RC	660155.43	5499818.45	1297.29	130	0	-90
LR15RC-02B	RC	660152.25	5499822.42	1297.26	31	0	-90
LR15RC-03	RC	660744.49	5501525.29	1348.60	100	0	-90
LR15RC-04	RC	661232.91	5502262.38	1400.09	100	0	-90
LR15RFP-01	RC	661503.55	5502415.53	1455.64	66	0	-90
LR15RFP-02	RC	661489.94	5502452.32	1453.86	88	0	-90
LR15RFP-03	RC	661413.13	5502434.54	1434.10	55	0	-90
LR15RFP-04	RC	661411.65	5502411.77	1433.62	50	0	-90
LR15RFP-05	RC	661152.84	5501151.31	1486.52	45	0	-90
LR15RFP-06	RC	661147.95	5501163.92	1486.16	38	0	-90
LR15RF-01	LDRF	661501.90	5502421.02	1455.66	62	0	-90
LR15RF-02	LDRF	661501.35	5502424.64	1455.46	61	0	-90
LR15RF-03	LDRF	661502.54	5502417.66	1455.62	61	0	-90
LR15RF-04	LDRF	661490.38	5502449.62	1454.17	72	0	-90
LR15RF-05	LDRF	661412.23	5502418.88	1433.51	42	0	-90
LR15RF-06	LDRF	660782.75	5501926.51	1355.48	115	0	-90
LR15RF-07	LDRF	661148.08	5501156.24	1486.29	31	0	-90
LR15RF-08	LDRF	661148.22	5501152.04	1486.52	30	0	-90
Total					**1298**		

Table 3.4.1 Trench Locations

Trench ID	Easting	Northing	Elevation	Azimuth	Dip	Length	Coal Apparent Thickness (m)	Coal Estimated True Thickness (m)
LS15TR-01	661281	5498066	1631	260	35	5.2	2.6	2
LS15TR-02	661300	5498040	1638	225	12	8	6.7	6
LS15TR-03	661354	5498073	1647	250	6	24.5	21.7	5
LS15TR-04	661331	5498068	1645	230	8	24.1	22.9	5
LS15TR-05	661494	5498327	1676	330	20	6.2	3.7	2
LS15TR-06	661493	5498301	1689	330	28	8.7	3.6	2
LS15TR-07	661632	5497942	1762	110	0	12.6	8.8	8
LS15TR-08	661738	5498251	1753	0	90	2.5	1	1
LS15TR-09	661698	5498352	1740	240	30	4.8	2.7	2
LS15TR-10	661697	5497499	1709	195	70	7.1	5	5

LS15TR-11	662367	5497434	1942	174	20	17.5	3.5	3
LS15TR-12	662397	5497499	1964	0	90	4.3	2.1	2
LS15TR-13	662248	5497655	1972	148	0	24.9	24.9	3
LS15TR-14	661255	5497998	1643	160	0	15.6	9.2	
Totals						**166**	**118.4**	**51**

4 2015 Exploration Work

4.1 Drilling

A total of 1,298m of drilling was completed over the month of July, including 824m of reverse circulation holes and 474m of large diameter reverse flood holes.

Two drilling contractors were used during the course of the program: Foraco International SA and Good Earth Drilling Services Ltd.

Foraco International SA mobilized to the site on July 13 and completed 6 reverse circulation (4.5”/11.3cm) pilot holes and 8 large diameter reverse flood (17.5”/44cm) sampling holes. Foraco completed their drilling and mobilized off-site by July 31.

Good Earth Drilling Services Ltd. mobilized to the site on July 22 and completed 6 reverse circulation (4.5”/11.3cm) piezometer holes by July 31. They remained on-site until August 8 to assist in the plugging of 12 historic drillholes that were flowing due to artesian action.

All 2015 drill holes were cased with welded-joint steel casing. The casing was generally left in the holes and the holes left open. In some locations the casing was removed and the holes back-filled according to Mines Act regulations and mineral exploration best practice. Artesian-flowing holes were also plugged and sealed according to Mines Act regulations and mineral exploration best practice.

4.2 Geophysical Logging

As per industry standard, all drill holes were geophysically logged. The geophysical contractor was Century Wireline Services, based in Red Deer, Alberta.

All open holes were logged with a gamma/neutron/deviation tool (#9058) and with a gamma/density/resistivity/caliper tool (#9239). Through-rod logs used a gamma-gamma tool (#9068A). Century has provided .las and .tif files of all geophysical logs.

All holes were logged immediately after drilling with the exception of some of the more stable large diameter holes which were logged within a few days of drilling.

In general, the quality of the data was found to be good.

All of the 2015 geophysical logs are included in Appendix B.

4.3 Surveying

CIMA Geomatics conducted a survey of drillhole locations for CanAus Coal Limited. Align Surveys was subcontracted to perform the field survey on site.

A static GPS survey was performed from the Priddis Canadian Active Control System monument PRDS CACS-GSD 756047 to several spikes that were placed on site. These placed spikes were used as local control benchmarks for the survey. Survey point 17 is one of these local control benchmarks and was used for the RTK survey of the drillhole locations. As an additional check for positional accuracy, a Precise Point Position (PPP) was processed for survey point 17 from the GPS data logged at that position.

The results of the PPP matched with the static survey results from PRDS CACS-GSD 756047 within 0.03m horizontally and 0.04m in elevation. The survey was performed in NAD 83 (CSRS) datum and the coordinates produced are UTM Zone 11 North. The Vertical Datum Is CGVD28 and elevations are orthometric heights. The geoid model used was GSD95.

The drillhole locations were surveyed in relation to survey point 17 (located along Corbin Road). Measurements were made to the approximate center of the drill holes at the surface entry points. Based on the terrain conditions and the survey methodology, the estimated positional accuracy of the drillhole surface locations is 0.20m in horizontal and 0.26m in vertical.

The locations of drillholes are shown in Table 3.3.1.

4.4 Sampling and Analysis

4.4.1 Large Diameter Reverse Flood Sampling

Eight large diameter (44cm) reverse flood (LDRF) drill holes were completed at four locations to collect samples of Seams 10, 11, 18 and 20 for pilot scale wash and carbonization testing. Approximately 14,000kg (wet) of coal was collected in total from eight holes. The samples were collected and sealed in bulk bags and shipped to Hazen Research Inc. in Golden, Colorado for pilot scale washing. Hazen Research completed the washing during August and September 2015, with sub-samples from each stage of the wash sent to Birtley Labs in Calgary, Alberta for coal quality analysis. Sub-samples from the Birtley samples were sent to Pearson Petrography in Victoria, British Columbia for petrographic analysis. The resultant wash products from Hazen Research

were flown to ALS Ipswich in Australia in October for carbonization testing. Final product assaying and carbonization testing is on-going. Analytical results from Birtley Labs and Pearson Petrography are shown in Appendix D.

4.5 Trenching

During August 2015, a 300 series backhoe was used to gain access to the area and excavate overburden in areas where coal or coaly material was exposed on surface. Many of these areas were identified during surface mapping and reconnaissance in previous years. Most of the area was clear cut logged recently, providing new access and outcrop exposures along access trails. Coal showings were identified primarily along logging access trails. Trenches were excavated to a depth of one to two metres, perpendicular to the apparent strike of the seams wherever possible, in an attempt to measure the true thickness of the seams. Overburden material was removed to expose fresh or in situ bedrock and coal. Trenches were mapped and logged to simulate drill holes in order to include in the geological modelling database. A collar location in the roof rock was staked and the location was measured with a hand-held GPS unit. The azimuth and dip of each trench were measured using a compass and clinometer. Intervals of rock and coal were measured from zero at the collar and along the azimuth and dip of the trench with a fiberglass tape measure. All trench details including location, intervals and lithological descriptions were recorded in a detailed trench log. Completed trenches were back-filled and re-contoured upon completion, with collar stakes carefully preserved for future surveying.

Twenty trenches were attempted in total, with fourteen trenches successfully exposing fresh or in situ bedrock and coal. Six of the attempts encountered overburden that was either too thick or too wet to expose an acceptable section of roof, seam and floor for logging and measurement. The fourteen successful trenches exposed what appeared to be an acceptable interval of in situ roof rock, coal and floor rock. Of particular note, trenches LS15TR-03 and 04 are two parts of one continuous 48.6m trench that exposed 44.6m of coal seam along a varying-azimuth road cut. The seam appears to dip to the east at a shallow angle of about 30 degrees, resulting in a calculated true thickness of about 10m.

Trenching along the southern access trail was more difficult at the lower elevations to the west, where the very narrow old trail was in thick forest and overgrown with small trees. Overburden was thick and few coal showings were exposed. At the higher elevations, near the Alberta border, coal seams exposed at surface appeared to be dipping at a shallow angle to the north, with local sandstone bedding orientation suggesting that this area is the nose of a northwest plunging syncline. There is evidence of previous trenching by Kaiser Resources in the 1960's in this area. Access to the higher elevations was re-established along a steep, narrow and rocky trail.

All other trenches intersected seams closer to perpendicular to strike and the coal intervals are considered close to true thickness. It is difficult to correlate any of these seams with seams on the Loop Ridge property due to distance and structural complexity in the area.

5 Geology

5.1 Regional Structure

The East Kootenay coalfields lie in the Front Ranges of the Rocky Mountains which are characterized by north to northwest trending concentric folds and west dipping thrust faults. Tertiary normal faults, some of which are listric and probably occupy earlier thrust surfaces, are also a major feature.

The Crowsnest coalfield is a complex synclinorium in the Lewis thrust sheet. The major compressional features of the basin are the synclines linked en echelon by low-amplitude anticlines. A series of west dipping thrust faults dominate the structure of the north half of the basin. The major extensional feature is the Erickson fault system, which juxtaposes Mississippian limestone and the Kootenay Group. The fault has a minimum, west side down, displacement of 1,200m.

5.2 Stratigraphy

The Jurassic-Cretaceous Kootenay Group occupies part of a northwest trending belt of predominantly non-marine rocks comprising part of the Rocky Mountain Foothills and Front Ranges of southwestern Alberta and southeastern British Columbia. The Kootenay Group extends from just north of the United States border in the south to the North Saskatchewan River in the north (Gibson, 1985).

The Kootenay Group of the Rocky Mountain Foothills and Front Ranges encompasses the stratigraphic interval between the Jurassic Fernie Group below and the Lower Cretaceous Blairmore Group above (Gibson, 1985).

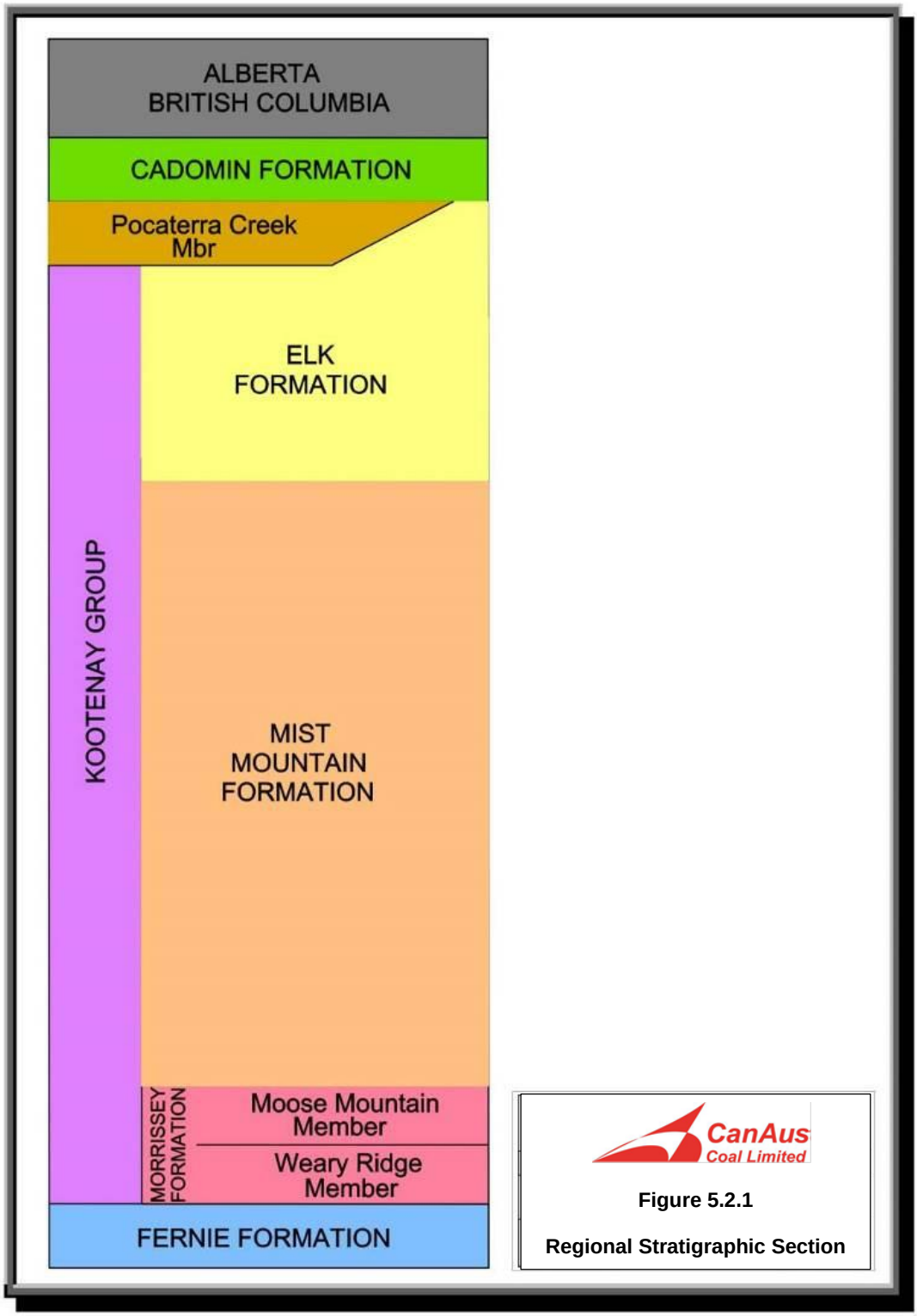
Three formations are recognized within the Kootenay Group, including the basal sandstone, Morrissey Formation, the coal-bearing Mist Mountain Formation, and the upper Elk Formation, (Figure 5.2.1).

Knowledge and definition of the stratigraphic column is required prior to any correlation and structural work. Figure 5.3.1 has been compiled from the drilling and interpretation of the geology to date at Loop Ridge. The section shows 20 coal seams within a section that is slightly more than 500m thick. The Moose Mountain Member of the basal Morrissey Formation has been identified in 68 of the holes drilled to date. On the east side of the Loop Ridge property, 22 drillholes have located limestone below the coal measures. The limestone represents the footwall side of the

major, regional, Erickson normal fault which juxtaposes Mississippian limestone and the Kootenay Group. The fault has a minimum, west side down, displacement of 1,200m.

Drilling on Loop Ridge has identified 20 coal seams with an average cumulative thickness of 70m in a 504m section, with the coal representing approximately 14% of the section, generally typical for the area. Table 5.3.1 lists the seams, the number of intercepts, as well as the minimum, maximum, and mean thickness of each. Artificial minimum seam thicknesses of 0.01-0.02m have been applied for modelling purposes only and were not used for the calculation of mean thicknesses.

Figure 5.2.1 Regional Stratigraphic Section



5.3 Geological Overview

Drilling on the Loop Ridge property has occurred principally within the Mist Mountain Formation. Older rocks of the underlying Morrissey Formation have been intersected in 68 of the drillholes.

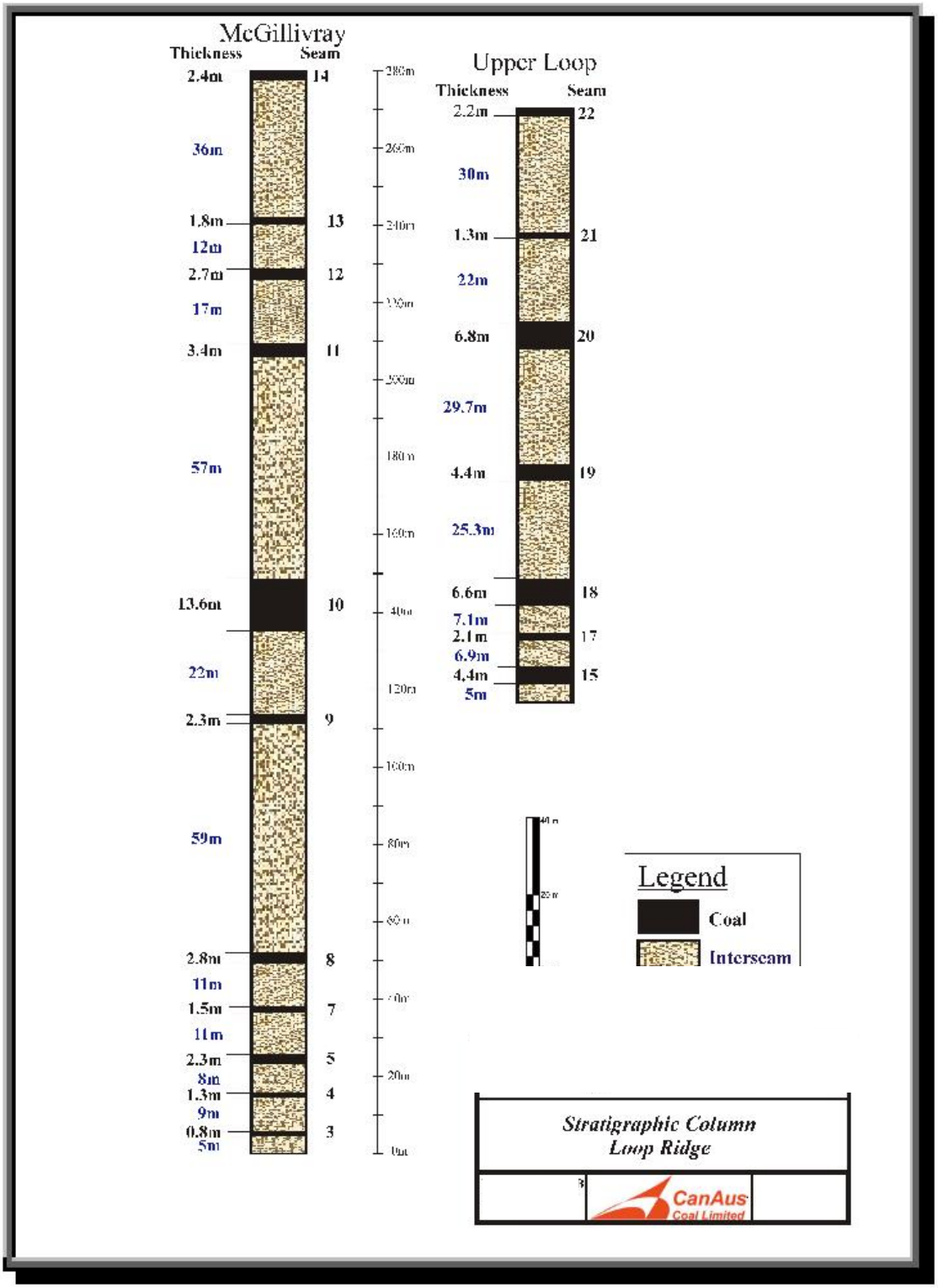
Drilling on the Loop Ridge property has tested the coal-bearing section the Mist Mountain Formation. Twenty major coal seams from Seams 3 to 22, are present and several subsidiary seams have been identified. Seam nomenclature is consistent with that of other mines in the area with Seam 20 being the uppermost major seam, and Seam 10, the lowest major seam present. Work in 2013 and 2014 allowed the average thicknesses of the coal seams to be calculated over the entire deposit (Table 5.3.1). Artificial minimum seam thicknesses of 0.01-0.02m were applied for modelling purposes only.

Overburden cover is variable, ranging from a few centimetres thick in the southern area of the known deposit (Upper Loop) to over 50 metres in the northern area (McGillivray). This area is covered in a thick layer of well-sorted river channel gravels.

Table 5.3.1 Loop Ridge Seam Data

Seam	Intercepts	Minimum (m)	Maximum (m)	Average (m)
22	1			2.17
21	21	0.02	3.65	0.73
20	49	0.02	22.52	6.23
19	72	0.02	18.74	4.11
19L	13	0.02	5.89	0.78
18	89	0.02	34.25	6.30
17	58	0.02	9.05	1.72
15	87	0.02	14.82	4.27
14	8	0.02	6.85	1.52
13	34	0.02	5.63	1.18
12	59	0.02	10.62	1.73
11	92	0.02	14.02	2.51
10	95	0.02	59.86	13.06
9	35	0.02	5.21	1.19
8	11	0.01	7.99	2.29
7	7	0.05	3.81	1.48
5	3	0.74	3.42	2.31
4	2	1.28	1.37	1.33
3	1	0.81	0.81	0.81

Figure 5.3.1 Typical Stratigraphic Section



7 Reclamation

CanAus policy is to keep exploration disturbance to the smallest practical area. Natural soil profiles are maintained whenever possible to enhance natural regeneration and to control erosion-causing runoff. Drill sites are recontoured and revegetated as soon as work is completed and deemed not required for future use. In addition, all exploration areas are left in a clean, safe and stable condition at the end of each field season.

Primary access in 2015 was via existing exploration and forestry trails, as described in Section 2.3. During pad construction, woody debris was buried or stacked to the greatest extent possible, and shoulder areas were contoured to a naturalistic form. Disturbed areas were seeded and fertilized with the appropriate mixtures. Drainage is controlled by ditches and culverts, with some supplemental cross-ditching.

New drill pads and trenches were constructed on the northern and southern areas of Loop Ridge, mostly in clear cut areas. Trenches were back-filled and recontoured and the drill pads were left as-is, as it is expected that they will be reused in 2016. Steeper trails were temporarily deactivated with cross-ditches.

8 Expenditures

Actual expenditure for this work during the period July through December, 2015 was $1,885,299.59. Major expense items are shown in Table 8.1.

Table 8.1 Loop Ridge Expenditures

Drilling	$513,882.75
Technical Services	$471,916.47
Analytical	$395,319.48
Heavy Equipment	$81,989.19
Safety and First Aid	$37,152.50
Licenses and Permits	$331,886.95
Personnel	$35,063.78
Miscellaneous	$18,088.47
Total	**$1,885,299.59**

Details are presented in Appendix G.

9 Conclusions

The 2015 Loop Ridge exploration program accomplished the goal of collecting enough coal samples of Seams 10, 11, 18 and 20 to conduct full coal quality analysis and carbonization testing on the individual seams and potential blends. The program also accomplished the goal of identifying an area to the south of the main Loop Ridge deposit with future potential for additional coal resources.

Approximately 14,000kg of coal was collected from eight large diameter reverse flood drillholes. The coal was processed in a pilot scale wash facility and the clean coal was analyzed for coking coal properties and carbonization qualities. The initial results for coking coal properties indicate the potential for a hard coking coal product similar to other coals of similar rank produced in the Elk Valley region. Further sampling of the primary seams using 15cm core in new locations is recommended to improve the coal quality understanding across the deposit.

Trenching on the southern area of the Loop Ridge property revealed several coal seams in different stratigraphic positions, indicating a potential to extend the known resources of the Loop Ridge deposit. A program of reverse circulation drilling is recommended to test the continuity and rank of these seams at depth.

10 References

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11 Statement of Qualifications

I, David A. Thompson, BSc, P.Geo., of 14-2656 Morningstar Crescent, Vancouver BC V5S 4P4, do hereby certify that:

1. I am Chief Geologist for CanAus Coal Ltd.
2. I graduated with a B.Sc. from the University of BC in 1986.
3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (Member ID #150701) and the Association of Professional Engineers and Geoscientists of Alberta (Member ID #184563).
4. I have worked as a geologist for a total of fifteen years since my graduation from university.
5. My past experience includes ten years working in coal exploration and mining in British Columbia and Alberta. I have managed large scale exploration programs for the definition and resource development of several complex metallurgical coal deposits up to and including the feasibility stage and mine development of those deposits. I was also the Chief Geologist in the production department at Peace River Coal's Trend Mine in Tumbler Ridge BC.
6. I am responsible for the entire Assessment Report titled "Assessment Report: 2015 Loop Ridge Exploration Program" dated 31 March, 2016.
7. I was on site for the entirety of the 2015 exploration program.
8. To the best of my knowledge, information and belief, the Assessment Report contains all scientific and technical information that is required to conform to the Mineral Tenure Act Regulations of British Columbia.
9. I consent to the filing of the Assessment Report with the British Columbia Ministry of Energy and Mines Geological Survey Branch.

Dated this 31st day of March, 2016.

Dave Thompson

Dave Thompson, P.Geo.
CanAus Coal Ltd.

Appendices

Appendix A Trench Logs – (on USB memory)

Appendix B Geophysical Logs – (on USB memory)

Appendix C Sampling Summary – (on USB memory)

Appendix D Sample Analytical Results and Certificates – (on USB memory)

Appendix E Analytical Process Guidelines – (on USB memory)

Appendix F Cross Sections – (on USB memory)

Appendix G Statement of Costs

Legend

Completed Trenches - 2015

- Trenches

Completed Drillholes - 2015

- LDRF
- RC_piezo
- RC_pilot

Existing Drillholes

- Existing drillholes - 2014
- Existing drillholes - 2013 & historical

Roads

- Existing Roads

Utilities

- TCPL RoW
- TCPL Pipeline CL
- POWER LINE

Coal Licences

- CanAus Coal Licences

659000 660000 661000 662000 663000

5503000 5502000 5501000 5500000 5499000

418630 418631 418629 418628 418319 418632

Corbin Road

Michel Creek

Island Creek

LR15RFP-02 LR15RF-04 LR15RFP-03 LR15RF-05 LR15RFP-04 LR15RF-02 LR15RF-01 LR15RF-03 LR15RFP-01

LR15RC-04 LR15RF-06 LR15RC-03 LR15RF-07 LR15RF-08 LR15RFP-06 LR15RFP-05

LR15RC-02B LR15RC-01B LR15RC-02 LR15RC-01

LS15TR-01 LS15TR-03 LS15TR-04 LS15TR-02 LS15TR-14 LS15TR-05 LS15TR-06 LS15TR-09 LS15TR-08 LS15TR-07 LS15TR-13 LS15TR-10 LS15TR-12 LS15TR-11

N

British Columbia

Alberta

Map Extent

Sparwood

Crowsnest

Hosmer

Fernie

Cokato

Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Coordinate System: NAD 1983 UTM Zone 11N
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: -117.0000
Scale Factor: 0.9996
Latitude Of Origin: 0.0000
Units: Meter

CanAus Coal Limited

0 200 400 600 800 1,000
Meters

CanAus Coal Limited
Loop Ridge and Loop Ridge South
2015 Completed Exploration Program
Date: 16/02/2016

Trench: LS15TR-01

CanAus Coal Ltd.
Trench Description

Collar
Northing: 5498066 Elevation: 1631 Trench Orientation: Azimuth 260 Property: Loop South

Easting: 661281 Dip: 35 Total Length: 5

UTM System: Nad 83 Seam: Logged by: DT, TS, AC, ML Date: Aug. 13, 2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	2.3	2.30	MS			Weathered Mudstone. Medium Soft, Light Brown
	2.30	2.6	0.30	Cm			Carb. Mud, very soft light-med. brown
	2.6	**5.2**	**2.60**	**Co**			Soft, Sheared, Dull
	5.2			MS			Brown Mudstone, med. soft

Trench: LS15TR-02

CanAus Coal Ltd.
Trench Description

Collar
Northing: 5498040.000 Elevation: 1638 Trench Orientation: Azimuth 225 Property: Loop South

Easting: 661300 Dip: 12 Total Length: 8

UTM System: Nad 83 Seam: Logged by: DT, TS, AC, ML Date: Aug. 13, 2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	0.5	0.50	MS			light brown, med. soft MS. Weathered at top
	0.50	0.8	0.30	Co			Dull, soft
	0.8	1.1	0.30	SLT			Parting, Light grey, med. hardness
	1.1	2.8	1.70	Co			Dull, soft
	2.80	**3.3**	**0.50**	**MS**			Parting, mudstone, med.-brown, med-soft hardness
	3.3	7.3	4.00	Co			Dull, soft
	7.3	**8**	**0.70**	**Co**			Dirty coal, carb. Mudstone. Very sheared. Grades into mudstone
	8			MS			Light brown, med.-soft. Hardness
							Stake moved 3 m south of measured collar

Trench: LS15TR-03

CanAus Coal Ltd.
Trench Description

Page: of

Collar
Northing: 5498073 Elevation: 1647 Trench Orientation: Azimuth 250 Property: Loop South

Easting: 661354 Dip: 6 Total Length: 24.5

UTM System: Nad 83 Seam: Logged by: DT, TS, AC, ML Date: Aug. 13, 2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0	1.9	1.90		SST		Fine-grained, light grey sandstone, slightly weathered
	1.9	9.1	7.20		Co		Soft, Dull
	9.1	**9.6**	**0.50**		**Cm**		Parting, Carb. Mud
	9.6	10.4	0.80		Co		Soft, Dull
	10.4	**10.6**	**0.20**		**Cm**		Parting, Carb. Mud
	10.6	13.3	2.70		Co		Dull, Soft
	13.3	**14.8**	**1.50**		**Co**		Dull, Dirty coal, carb. Mud bands, soft
	14.8	17.3	2.50		Co		Blocky, bright bands
	17.3	**17.5**	**0.20**		**Ms**		Parting, med. grey, med.-soft hardness
	17.5	24.5	7.00		Co		Some blocky coal with bright bands, soft
							Trench 4 is a continuation of this trench but on a different azimuth

Trench: LS15TR-04

CanAus Coal Ltd.
Trench Description

Collar
Northing: 5498068 Elevation: 1645 Trench Orientation: Azimuth 230 Property: Loop Sth

Easting: 661331 Dip: 8 Total Length: 24.1

UTM System: NAT83 Seam: Logged by: AC, ML, DT, TS Date: 08/13/15

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	21.80	21.80	CO			Occasionally blocky, some bright bands, soft, 5cm partings 1m from top, small parting (~3cm) middle of seam, occasional small mudstone partings throughout seam, coal less blocky towards bottom of seam
	21.80	22.00	0.20	MS			Light brown, med-soft, fractured
	22.00	23.10	1.10	CO			Dull, soft
	23.10	24.10	1.00	ST			Footwall, grey, blocky siltstone
	24.10			MS			Concretions, med brown, med-soft, some iron staining

Trench: _____LS15TR-05_____

CanAus Coal Ltd.
Trench Description

Page: of

Collar
Northing: 5498327 Elevation: 1676 Trench Orientation: Azimuth 330 Property: Loop South

Easting: 661494 Dip: 20 Total Length: 6.2

UTM System: NAD83 Seam: Logged by: Abby/Toby/Dave Date: 8/14/2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	1.50	1.50	ST			Fractured, weathered in part, siltstone
	1.50	5.20	3.70	CO			Some bright bands, soft, occasional minor partings throughout
	5.20	6.20	1.00	MS			Grey, blocky mudstone, irregular 5cm bands
							FW contact possibly 110/43
							Road cut face 170/50

Trench: _____LS15TR-06_____

CanAus Coal Ltd.
Trench Description

Page: of

Collar
Northing: 5498301 Elevation: 1689 Trench Orientation: Azimuth 330 Property: Loop South

Easting: 661493 Dip: 28 Total Length: 8.7

UTM System: NAD83 Seam: Logged by: Abby/ Dave/ Toby Date: 08/14/2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	3.10	3.10	ST			Light brown, soft-med, blocky, fractured
	3.10	6.70	3.60	CO			Dull, soft
	6.70	7.70	1.00	MS			Mudstone, light brownish grey
	7.70	8.70	1.00	ST			Occasional concretions, hard, light orangey-brown
							Possible FW contact 195/05

Trench: LS15TR-07

CanAus Coal Ltd.
Trench Description

Page: of

Collar
Northing: 5497942 Elevation: 1762 Trench Orientation: Azimuth 110 Property: Loop South

Easting: 661632 Dip: 0 Total Length: 12.6

UTM System: NAD83 Seam: Logged by: Abby/Dave/Toby/Malcolm Date: 08/14/15

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	1.50	1.50	ST			Sharp contact with coal
	1.50	8.40	6.90	CO			Dull, occasionally blocky, soft
	8.40	8.50	0.10	MS			Parting, mudstone
	8.50	10.40	1.90	CO			Soft, dull
	10.40	11.90	1.50	MS			Carbonaceous, grades into interburden, some coal
	11.90	12.60	0.70	IB			Interburden, couldn't find footwall, ended in interburden
							Parting bedding 290/40
							15m of coal perpendicular to trench

Trench: _____LS15TR-08_____

CanAus Coal Ltd.
Trench Description

Page: of

Collar
Northing: 5498251 Elevation: 1753 Trench Orientation: Azimuth - Property: Loop South

Easting: 661738 Dip: 90 Total Length: 2.5

UTM System: NAD83 Seam: Logged by: Abby/Malcolm Date: 08/14/2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	1.30	1.30	MS			Overburden, mudstone, med brown, soft-med, blocky
	1.30	1.50	0.20	CM			Carb mud, grades into coal
	1.50	2.50	1.00	CO			Muddy parting at 1.7m, dull, soft
	2.50			ST			Blocky, fractured, med-grey siltstone
							Stake moved 1.5m to N of GPS point
							Strike of seam 350

Trench: LS15TR-09 **Page:** of

CanAus Coal Ltd.
Trench Description

Collar
Northing: 5498352 **Elevation:** 1740 **Trench Orientation:** **Azimuth** 240 **Property:** Loop South

Easting: 661698 **Dip:** 30 **Total Length:** 4.8

UTM System: NAD83 **Seam:** **Logged by:** Abby/Toby/Malcolm/Dave **Date:** 08/14/2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	2.10	2.10	ST			**Blocky, fractured, siltstone, overburden**
	2.10	4.80	2.70	CO			**Blocky, some bright bands, firm**
	4.80			MS			**Iron stained, med-grey, abundant coaly plant frags**
							Seam strike 335, with contact above

Trench: LS15TR-10 **Page:** of

CanAus Coal Ltd.
Trench Description

Collar
Northing: 5497499 **Elevation:** 1709 **Trench Orientation:** **Azimuth** 195 **Property:** Loop South

Easting: 661697 **Dip:** 70 **Total Length:** 7.1

UTM System: NAD83 **Seam:** **Logged by:** Abby/Malcolm/Dave **Date:** 08/26/2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	1.50	1.50	OB			**Overburden**
	1.50	4.90	3.40	CO			**Coal, soft, sheared, bright banding**
	4.90	5.10	0.20	CO/CM			**Zone of hard iron stained coal (weathered pyrite), small mud bands**
	5.10	6.50	1.40	CO			**Coal, soft, sheared, softer than the rest of the seam.**
	6.50	6.60	0.10	FG			**Fault gouge, grey, clay-like with some laminations**
	6.60	7.10	0.50	SLT			**Highly weathered siltstone, reddish, contact with coal is sharp but wavy, Soft sed. Deformation in highly faulted zone.**

Trench: LS15TR-11 **Page:** of

CanAus Coal Ltd.
Trench Description

Collar
Northing: 5497434 **Elevation:** 1942m **Trench Orientation:** **Azimuth** 174 **Property:** Loop South

Easting: 662367 **Dip:** 20 **Total Length:** 17.5

UTM System: NAD83 **Seam:** **Logged by:** Abby/Malcolm/Dave **Date:** 08/27/2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	3.20	3.20	OB			Overburden. Trench started in overburden, hanging wall, contact with seam unclear but clearly near this point.
	3.20	5.50	2.30	CO			Coal, soft, dull.
	5.50	9.20	0.20	CO			Hard block coal with 50% bright banding,Seam = 25-30 degree dip to the North at 260 degree strike.
	9.20	14.50	5.30	MS			Mudstone, friable, highly weathered.
	14.50	15.50	1.00	CO			Coal, bright banding, hard, blocky, a few soft bands.
	15.50	16.50	1.00	MS			Mudstone, friable, weathered grey.
	16.50	17.50	1.00	SST			Snadstone, weathered brown/orange, forms distinct outcrops.
							Couldn't enter trench due to safety concerns.

Trench: LS15TR-12

CanAus Coal Ltd.
Trench Description

Page: of

Collar
Northing: 5497499 **Elevation:** 1964m **Trench Orientation:** **Azimuth:** **Property:** Loop South

Easting: 662397 **Dip:** 90 **Total Length:** 4.3

UTM System: NAD83 **Seam:** **Logged by:** Abby/Malcolm/Dave **Date:** 08/27/2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	1.90	1.90	CO			Coal, in-situ, eroded at surface, at depth is blocky with some bright banding, soft, sheared.
	1.90	3.20	1.30	SLT			Weathered siltstone, yellowish, oxidised, greyish on a fresh surface, fine-grained, jointed, tough to see any bedding, friable, fractured.
	3.20	4.30	0.20	CO			Coal. Blocky with some bright banding, soft, sheared, some iron-staining, variable orientation.
	4.30			SLT			Floor, as above.
							Area of high soft sediment deformation, partings are jointed and very fractured, pinch and swell out.

Trench: _____LS15TR-13_____

CanAus Coal Ltd.
Trench Description

Page: of

Collar
Northing: 5497655 Elevation: 1972m

Easting: 662248

UTM System: NAD83 Seam:

Trench Orientation: Azimuth 148 Property: Loop South

Dip: 0 Total Length: 24.9

Logged by: Abby/Malcolm/Dave Date: 08/27/2015

Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	24.90	24.90	CO			Coal, approximately 5cm parting near the bottom of the seam, blocky and bright near bottom, oxidised and soft
							towards the top of the seam.
							Bedding strike near top of trench North-South, 40 degrees West.
							Unable to access trench directly due to safety concerns, logged from surface.

Trench: LS15TR-14

CanAus Coal Ltd.
Trench Description

Page: of

Collar
Northing: 5497998 Elevation: 1643m

Easting: 661255

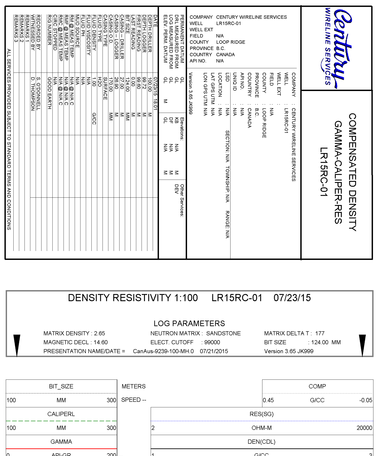
UTM System: NAD83 Seam:

Trench Orientation: Azimuth 160 Property: Loop South

Dip: 0 Total Length: 15.6

Logged by: Abby/Malcolm Date: 08/28/2015

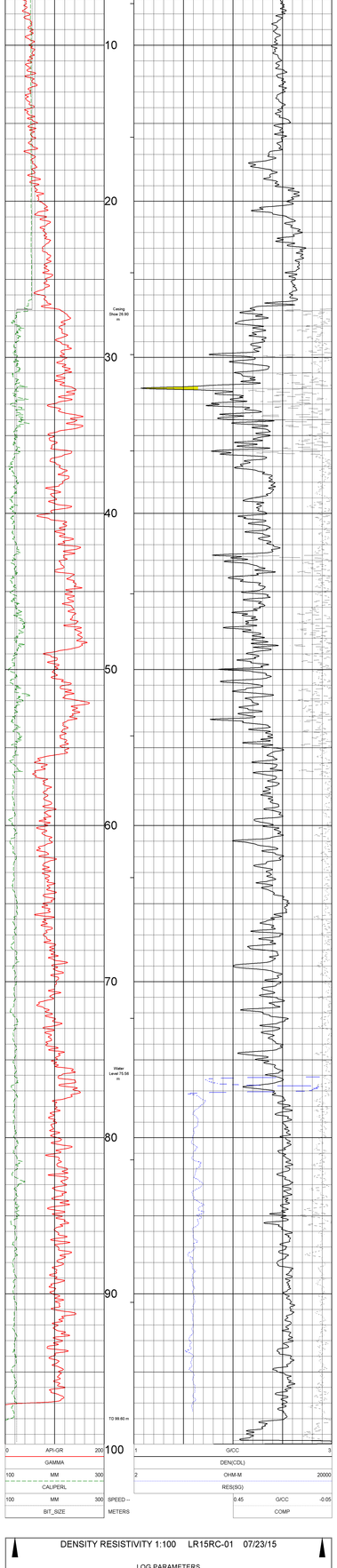
Interval	From	To	Length (m)	Lith Code	Seam	HCl	Description
	0.00	2.00	2.00	OB			Overburden, fill for landing. Weathered clay, yellowish, very soft, mixed with abundant loose clasts.
	2.00	2.80	0.80	CO			Coal, weathered, soft, dull.
	2.80	3.80	1.00	FG			Fault gouge, Weathered light grey clay matrix, abundant clasts which appear to be very slickenslided,
	3.80	11.20	7.40	CO			Coal, soft, sheared, mostly dull, occasional blocky areas with bright bands, relatively clean, no partings seen.
	11.20	15.60	4.40	MS			Mudstone, silty, wavy-sharp contact with coal.
							Tranch on edge of landing below LS15TR-04. A small tranch was dug E-W in the orientation of LS15TR-04. Coal encountered
							with no visible hanging wall/foot wall. Larger trench was then dug close to N-S and a footwall was encountered, assuming a
							dip to the North. The West wall of the trench was logged as iit provided the best exposure. Trench was logged on the surface as
							it was too unstable to enter.
							Trench showed extreme soft sediment deformation and thick fault gouge was seen in places, slikenslide were very pronounced.
							Determined to be a structurally complex area.
							Stake moved 4m to the West (260 degrees), stake put in at overburden side/bank.



DENSITY RESISTIVITY 1:100 LR15RC-01 07/23/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL. : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 124.00 MM
PRESENTATION NAME/DATE = CanAus-9239-100-MH-0 07/21/2015 Version 3.65 JK999



DENSITY RESISTIVITY 1:100 LR15RC-01 07/23/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL. : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 124.00 MM
PRESENTATION NAME/DATE = CanAus-9239-100-MH-0 07/21/2015 Version 3.65 JK999

TOOL CALIBRATION LR15RC-01 07/23/15 18:01
TOOL TM VERSION 2025
SERIAL NUMBER

	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Dec31,69	17:00.00		[CPS]	Default		Default	

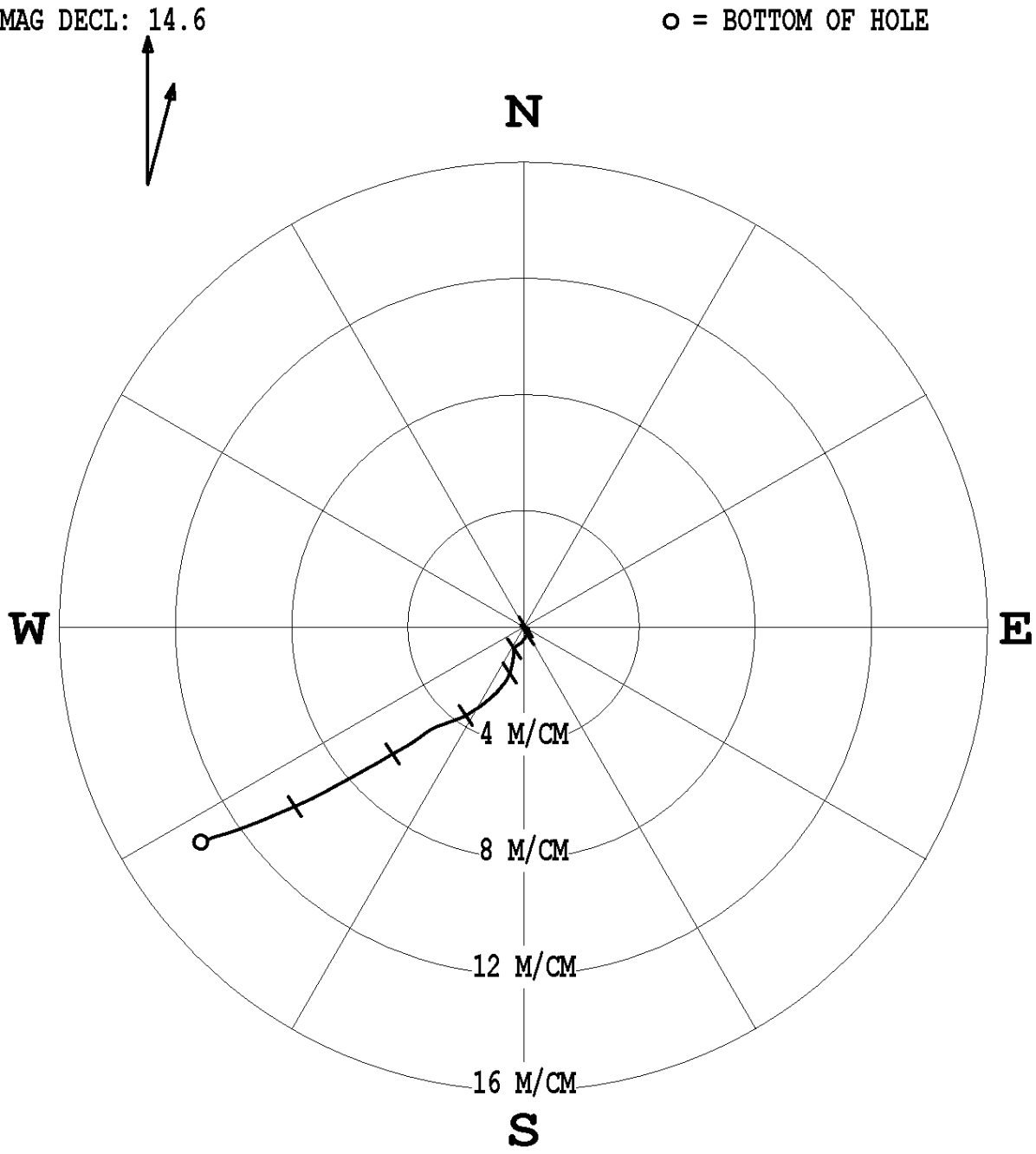
TOOL CALIBRATION LR15RC-01 07/23/15 18:01
TOOL 9239C1 TM VERSION 2025
SERIAL NUMBER 449

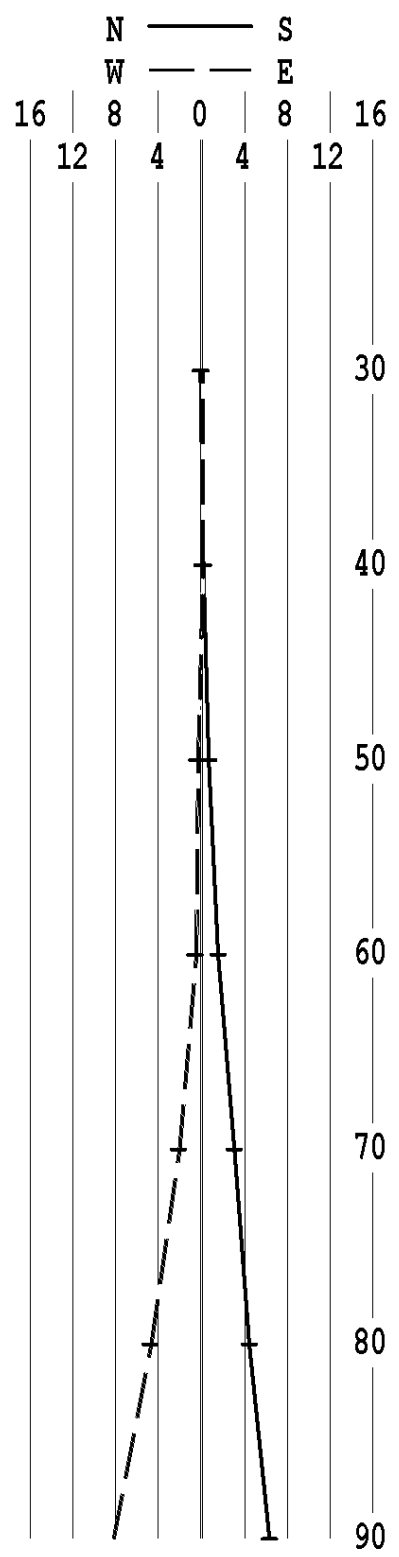
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26.50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18.29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06.57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37.07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37.34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul23,15	20:13.29	CALIPERL	[MM]	100.000	200.000	104652	205940
7	Jul02,15	11:19.02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24.14	F	[CPS]	Default		Default	
9	Nov17,08	13:21.11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RC-01
DATE OF LOG: 07/23/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 2 M/CM
TRUE DEPTH: 97.33 M
AZIMUTH: 236.3
DISTANCE: 13.4 M
+ = 10 M INCR
o = BOTTOM OF HOLE



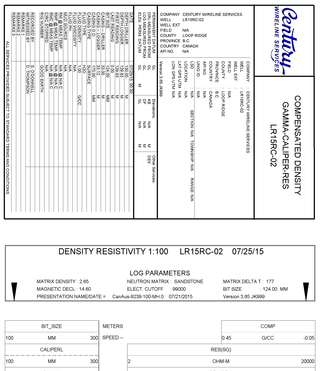


* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: CENTURY WIRELINE SE	HOLE ID.	: LR15RC-01
FIELD OFFICE	: CENTURY	DATE OF LOG	: 07/23/15
DATA FROM	: N/A	PROBE	: 9058A , 2615
MAG. DECL.	: 14.600	DEPTH UNITS	: METERS

LOG: LR15RC-01_07-23-15_17-36_9058A_.02_28.00_99.72_DEVI.log

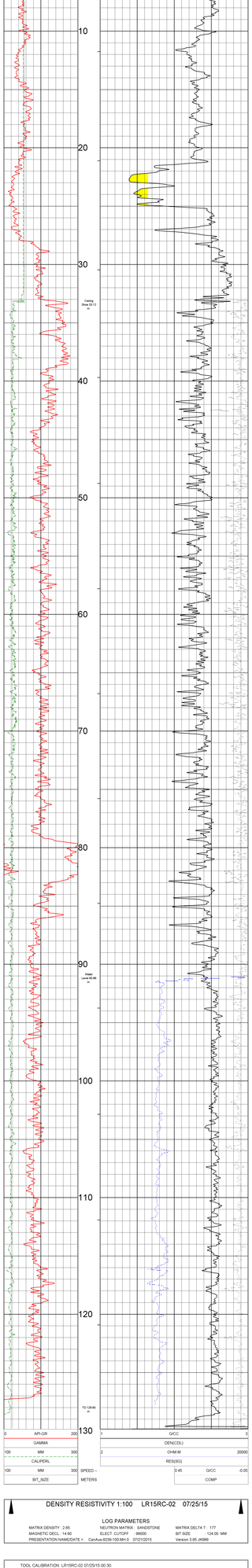
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
28.00	28.00	-0.00	0.00	0.0	98.8	1.9	98.8
29.00	29.00	0.00	0.03	0.0	89.3	1.8	95.1
30.00	30.00	-0.00	0.06	0.1	92.4	1.8	80.1
31.00	31.00	-0.02	0.08	0.1	102.5	1.5	202.7
32.00	32.00	-0.03	0.10	0.1	105.4	1.6	96.0
33.00	33.00	-0.04	0.13	0.1	106.1	1.7	127.7
34.00	34.00	-0.06	0.15	0.2	111.8	1.7	180.4
35.00	35.00	-0.08	0.15	0.2	119.4	1.7	135.1
36.00	36.00	-0.11	0.17	0.2	123.4	1.8	156.0
37.00	37.00	-0.14	0.18	0.2	128.6	2.3	172.8
38.00	37.99	-0.18	0.18	0.3	136.3	2.9	186.3
39.00	38.99	-0.23	0.16	0.3	145.1	3.1	229.5
40.00	39.99	-0.28	0.12	0.3	156.9	3.6	221.8
41.00	40.99	-0.33	0.08	0.3	166.9	3.9	216.8
42.00	41.99	-0.39	0.03	0.4	175.0	4.4	214.2
43.00	42.98	-0.45	-0.01	0.4	181.4	4.4	218.1
44.00	43.98	-0.51	-0.06	0.5	187.0	4.2	228.9
45.00	44.98	-0.56	-0.12	0.6	192.2	5.0	226.7
46.00	45.97	-0.61	-0.18	0.6	196.7	3.6	240.7
47.00	46.97	-0.64	-0.23	0.7	200.0	3.5	239.3
48.00	47.97	-0.67	-0.27	0.7	201.9	2.8	221.8
49.00	48.97	-0.71	-0.31	0.8	203.3	3.0	224.6
50.00	49.97	-0.75	-0.34	0.8	204.1	2.9	206.1
51.00	50.97	-0.80	-0.35	0.9	203.8	3.2	186.7
52.00	51.97	-0.86	-0.36	0.9	202.6	3.4	186.7
53.00	52.96	-0.92	-0.36	1.0	201.4	3.5	176.1
54.00	53.96	-0.99	-0.36	1.1	200.0	4.2	179.1
55.00	54.96	-1.07	-0.36	1.1	198.9	4.8	186.8
56.00	55.95	-1.15	-0.38	1.2	198.1	5.4	189.0
57.00	56.95	-1.24	-0.39	1.3	197.5	5.2	191.2
58.00	57.95	-1.34	-0.41	1.4	197.1	5.9	193.7
59.00	58.94	-1.45	-0.44	1.5	196.9	7.1	198.7
60.00	59.93	-1.58	-0.49	1.7	197.1	8.4	202.5
61.00	60.92	-1.72	-0.54	1.8	197.4	9.0	201.5
62.00	61.90	-1.86	-0.62	2.0	198.5	10.3	214.3
63.00	62.89	-2.01	-0.73	2.1	200.0	11.1	216.3
64.00	63.87	-2.17	-0.86	2.3	201.7	11.6	217.2
65.00	64.84	-2.32	-1.01	2.5	203.5	13.0	226.9
66.00	65.82	-2.47	-1.18	2.7	205.5	12.9	230.9
67.00	66.79	-2.61	-1.35	2.9	207.3	12.8	231.0
68.00	67.77	-2.75	-1.52	3.1	209.0	13.7	231.9
69.00	68.74	-2.88	-1.73	3.4	210.9	14.0	235.3
70.00	69.70	-3.01	-1.94	3.6	212.7	14.6	237.1
71.00	70.67	-3.13	-2.16	3.8	214.7	15.0	245.4
72.00	71.64	-3.22	-2.41	4.0	216.8	15.6	247.8
73.00	72.60	-3.31	-2.66	4.2	218.7	15.3	245.7
74.00	73.57	-3.40	-2.90	4.5	220.5	15.0	250.6
75.00	74.53	-3.50	-3.13	4.7	221.8	14.0	236.4
76.00	75.50	-3.63	-3.35	4.9	222.7	14.9	234.2
77.00	76.47	-3.78	-3.56	5.2	223.3	15.5	230.4
78.00	77.43	-3.94	-3.78	5.5	223.8	16.3	234.6
79.00	78.38	-4.10	-4.03	5.7	224.5	18.7	235.4
80.00	79.33	-4.26	-4.32	6.1	225.4	20.0	244.1
81.00	80.27	-4.43	-4.61	6.4	226.2	19.6	238.1
82.00	81.21	-4.60	-4.90	6.7	226.8	19.6	239.6
83.00	82.15	-4.77	-5.19	7.0	227.5	20.2	240.9
84.00	83.09	-4.93	-5.49	7.4	228.1	20.1	241.2
85.00	84.03	-5.10	-5.79	7.7	228.6	19.9	240.9
86.00	84.97	-5.27	-6.09	8.1	229.2	20.5	240.0
87.00	85.90	-5.44	-6.41	8.4	229.7	20.9	240.8
88.00	86.84	-5.61	-6.72	8.8	230.1	20.3	249.8
89.00	87.77	-5.78	-7.05	9.1	230.6	21.8	242.1
90.00	88.69	-5.96	-7.38	9.5	231.1	22.3	238.3
91.00	89.61	-6.11	-7.74	9.9	231.7	23.2	247.3
92.00	90.53	-6.27	-8.10	10.2	232.2	23.4	246.4
93.00	91.45	-6.43	-8.47	10.6	232.8	23.6	245.6
94.00	92.36	-6.59	-8.84	11.0	233.3	24.5	247.2
95.00	93.27	-6.75	-9.23	11.4	233.8	24.9	246.3
96.00	94.17	-6.90	-9.63	11.8	234.4	25.6	248.7
97.00	95.07	-7.05	-10.04	12.3	235.0	26.7	253.8
98.00	95.96	-7.18	-10.47	12.7	235.6	26.2	241.8
99.00	96.85	-7.33	-10.90	13.1	236.1	26.4	243.1
99.70	97.49	-7.42	-11.12	13.4	236.3	0.0	0.0



DENSITY RESISTIVITY 1:100 LR15RC-02 07/25/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE 124.00 MM
PRESENTATION NAMEDATE = CanAus-9239-100-MH-0 07/21/2015 Version 3.65 JK999



DENSITY RESISTIVITY 1:100 LR15RC-02 07/25/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE 124.00 MM
PRESENTATION NAMEDATE = CanAus-9239-100-MH-0 07/21/2015 Version 3.65 JK999

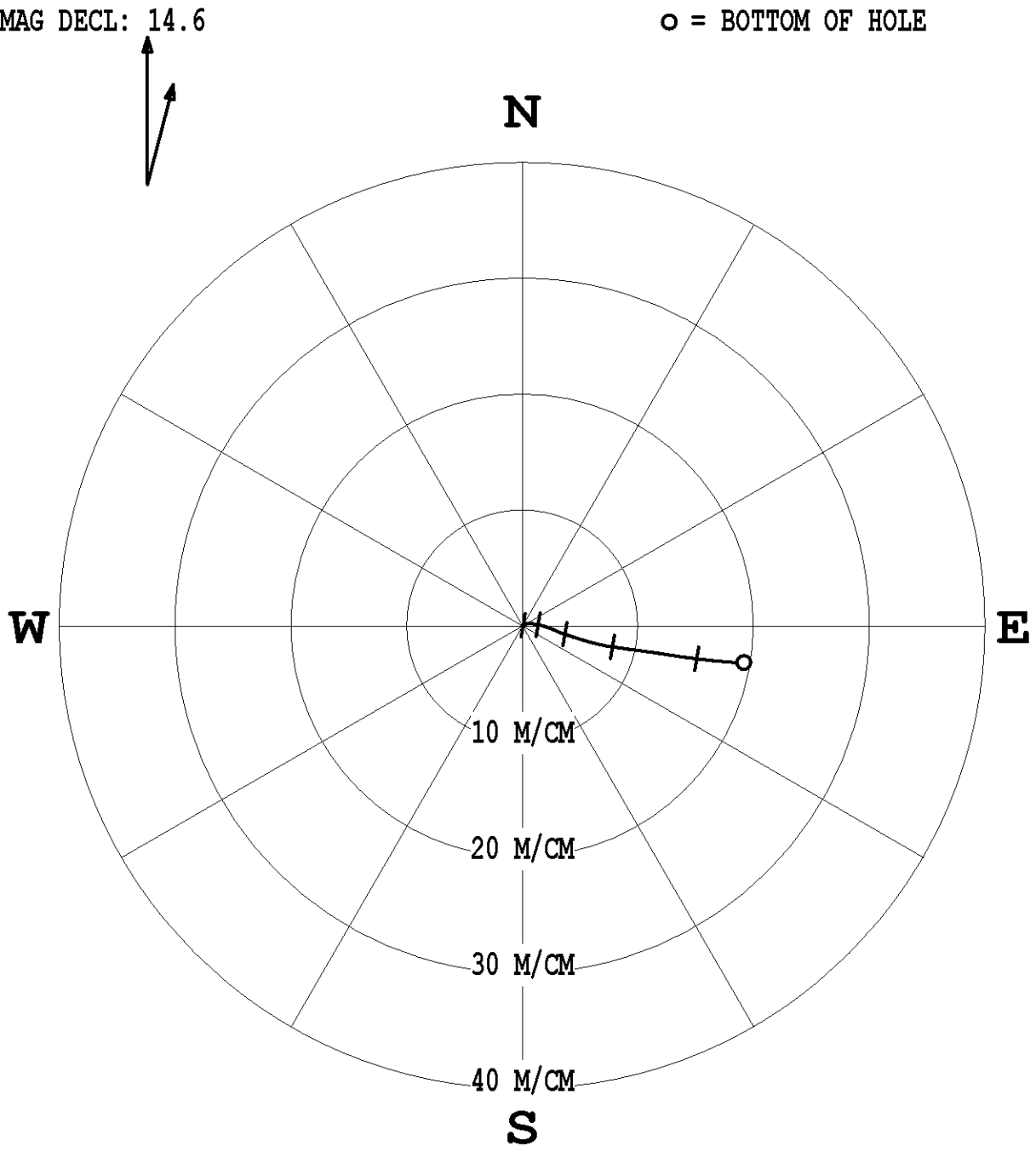
TOOL CALIBRATION : LR15RC-02 07/25/15 00:30
TOOL 9239C1 TM VERSION 2025
SERIAL NUMBER 446

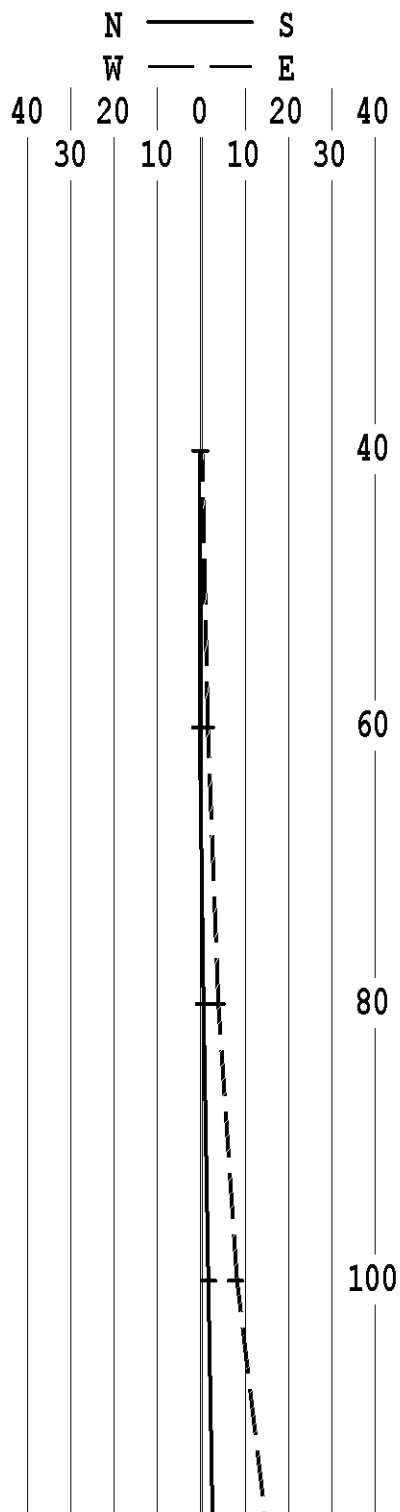
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02.15	10:28.50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02.15	11:16.29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02.15	11:08.57	CALIPER	[MM]	100.000	200.000	102969	209172
4	Jul02.15	11:37.07	DEN(LS)	[G/CC]	1.620	2.612	14403	1830
5	Jul02.15	11:37.34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul05.15	01:27.25	CALIPER_	[MM]	100.000	200.000	106652	207940
7	Jul02.15	11:19.02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17.08	13:24.14	F	[CPS]	Default	Default	Default	
9	Nov17.08	13:11.11	K	[CPS]	Default	Default	Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RC-02
DATE OF LOG: 07/24/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 5 M/CM
TRUE DEPTH: 127.47 M
AZIMUTH: 99.5
DISTANCE: 19.4 M
+ = 20 M INCR
o = BOTTOM OF HOLE

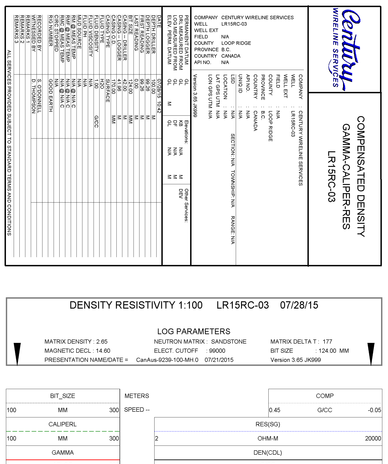




* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * *

CLIENT : CENTURY WIRELINE SE
FIELD OFFICE : CENTURY
DATA FROM : N/A
MAG. DECL. : 14.600
HOLE ID. : LR15RC-02
DATE OF LOG : 07/24/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS
LOG: LR15RC-02_07-24-15_23-45_9058A_.02_35.00_130.72_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
35.00	35.00	0.00	0.00	0.0	18.2	0.6	18.2
36.00	36.00	0.01	0.01	0.0	35.4	0.9	28.1
37.00	37.00	0.03	0.02	0.0	35.9	1.2	47.2
38.00	38.00	0.04	0.03	0.1	36.4	0.9	46.0
39.00	39.00	0.05	0.04	0.1	37.1	1.1	27.1
40.00	40.00	0.07	0.06	0.1	38.6	1.4	42.3
41.00	41.00	0.09	0.08	0.1	41.3	1.5	50.8
42.00	42.00	0.11	0.10	0.1	44.3	2.0	60.6
43.00	43.00	0.12	0.13	0.2	47.8	2.2	67.9
44.00	44.00	0.14	0.17	0.2	51.2	2.9	69.2
45.00	45.00	0.15	0.22	0.3	55.0	3.0	68.5
46.00	45.99	0.17	0.27	0.3	58.4	3.2	74.7
47.00	46.99	0.18	0.32	0.4	61.2	3.6	77.5
48.00	47.99	0.19	0.39	0.4	64.4	3.8	85.8
49.00	48.99	0.19	0.46	0.5	67.5	4.0	89.5
50.00	49.99	0.19	0.53	0.6	70.0	4.3	86.9
51.00	50.98	0.20	0.61	0.6	72.1	4.3	90.5
52.00	51.98	0.19	0.68	0.7	74.1	4.4	93.2
53.00	52.98	0.19	0.76	0.8	76.0	4.5	92.8
54.00	53.97	0.19	0.84	0.9	77.5	4.6	91.3
55.00	54.97	0.18	0.92	0.9	78.8	5.1	95.6
56.00	55.97	0.17	1.00	1.0	80.4	4.9	96.8
57.00	56.96	0.16	1.08	1.1	81.7	4.8	95.7
58.00	57.96	0.14	1.17	1.2	83.1	5.4	97.9
59.00	58.96	0.12	1.26	1.3	84.4	5.3	99.0
60.00	59.95	0.11	1.34	1.3	85.5	4.8	100.8
61.00	60.95	0.08	1.43	1.4	86.7	5.5	102.5
62.00	61.94	0.06	1.53	1.5	87.6	5.5	99.3
63.00	62.94	0.04	1.62	1.6	88.6	5.5	105.6
64.00	63.93	0.01	1.72	1.7	89.7	6.1	105.8
65.00	64.93	-0.02	1.82	1.8	90.5	5.8	104.7
66.00	65.92	-0.05	1.92	1.9	91.5	6.2	108.0
67.00	66.92	-0.08	2.02	2.0	92.3	6.6	108.1
68.00	67.91	-0.12	2.13	2.1	93.1	7.0	112.2
69.00	68.90	-0.16	2.24	2.2	94.0	7.0	111.1
70.00	69.89	-0.20	2.35	2.4	94.8	6.8	106.3
71.00	70.89	-0.24	2.47	2.5	95.5	6.5	111.6
72.00	71.88	-0.28	2.58	2.6	96.3	7.3	110.8
73.00	72.87	-0.34	2.70	2.7	97.1	7.3	122.6
74.00	73.86	-0.39	2.82	2.8	97.9	7.8	110.1
75.00	74.85	-0.45	2.94	3.0	98.6	7.1	120.4
76.00	75.84	-0.50	3.06	3.1	99.3	8.1	116.9
77.00	76.83	-0.56	3.20	3.2	99.9	8.4	113.7
78.00	77.82	-0.61	3.34	3.4	100.4	8.6	107.4
79.00	78.81	-0.66	3.48	3.5	100.8	8.8	109.4
80.00	79.80	-0.71	3.63	3.7	101.1	9.0	110.5
81.00	80.79	-0.76	3.78	3.9	101.4	9.3	108.0
82.00	81.77	-0.81	3.94	4.0	101.7	9.5	108.2
83.00	82.76	-0.87	4.10	4.2	101.9	9.8	107.7
84.00	83.74	-0.92	4.26	4.4	102.2	10.3	107.5
85.00	84.73	-0.97	4.43	4.5	102.4	10.7	107.6
86.00	85.71	-1.03	4.61	4.7	102.6	10.9	107.5
87.00	86.69	-1.09	4.79	4.9	102.8	10.8	109.2
88.00	87.67	-1.14	4.97	5.1	102.9	11.6	103.7
89.00	88.65	-1.20	5.17	5.3	103.1	12.1	106.7
90.00	89.63	-1.27	5.36	5.5	103.3	11.7	107.9
91.00	90.61	-1.32	5.56	5.7	103.4	12.0	106.3
92.00	91.59	-1.38	5.76	5.9	103.5	12.5	104.5
93.00	92.56	-1.44	5.97	6.1	103.5	12.7	105.9
94.00	93.54	-1.49	6.19	6.4	103.6	12.8	104.7
95.00	94.51	-1.55	6.40	6.6	103.6	13.3	102.1
96.00	95.48	-1.60	6.63	6.8	103.6	13.6	104.0
97.00	96.46	-1.65	6.86	7.1	103.6	13.6	99.1
98.00	97.43	-1.70	7.09	7.3	103.5	13.9	101.2
99.00	98.40	-1.75	7.34	7.5	103.4	14.3	101.2
100.00	99.36	-1.78	7.59	7.8	103.2	15.2	94.9
101.00	100.33	-1.82	7.85	8.1	103.0	15.4	97.7
102.00	101.29	-1.86	8.12	8.3	102.9	15.7	99.6
103.00	102.25	-1.90	8.39	8.6	102.8	16.0	98.6
104.00	103.21	-1.94	8.67	8.9	102.6	17.2	94.3
105.00	104.17	-1.98	8.96	9.2	102.5	17.1	98.3
106.00	105.12	-2.02	9.25	9.5	102.3	17.2	98.4
107.00	106.08	-2.06	9.55	9.8	102.2	17.2	97.5
108.00	107.03	-2.10	9.84	10.1	102.1	17.8	100.1
109.00	107.98	-2.14	10.15	10.4	101.9	19.0	98.4
110.00	108.93	-2.19	10.47	10.7	101.8	19.5	97.7
111.00	109.87	-2.23	10.81	11.0	101.7	19.6	96.8
112.00	110.81	-2.28	11.15	11.4	101.5	20.5	97.2
113.00	111.74	-2.33	11.50	11.7	101.4	19.6	103.2
114.00	112.67	-2.38	11.86	12.1	101.3	21.6	91.6
115.00	113.60	-2.44	12.23	12.5	101.3	22.3	102.5
116.00	114.53	-2.50	12.60	12.8	101.2	22.8	98.4
117.00	115.45	-2.56	12.99	13.2	101.1	23.2	99.9
118.00	116.36	-2.62	13.38	13.6	101.1	23.3	98.4
119.00	117.28	-2.67	13.78	14.0	101.0	23.9	97.8
120.00	118.19	-2.73	14.18	14.4	100.9	25.1	97.5
121.00	119.10	-2.78	14.61	14.9	100.8	25.9	97.6
122.00	119.99	-2.84	15.04	15.3	100.7	26.3	97.1
123.00	120.89	-2.89	15.49	15.8	100.6	26.6	97.3
124.00	121.78	-2.95	15.94	16.2	100.5	27.1	98.5
125.00	122.66	-3.00	16.40	16.7	100.4	28.0	96.2
126.00	123.55	-3.04	16.87	17.1	100.2	28.9	96.2
127.00	124.42	-3.08	17.36	17.6	100.1	29.7	94.4
128.00	125.28	-3.12	17.86	18.1	99.9	30.5	93.9
129.00	126.15	-3.16	18.36	18.6	99.8	30.5	93.9
130.00	127.01	-3.19	18.87	19.1	99.6	30.8	93.0
130.70	127.63	-3.20	19.15	19.4	99.5	0.0	0.0



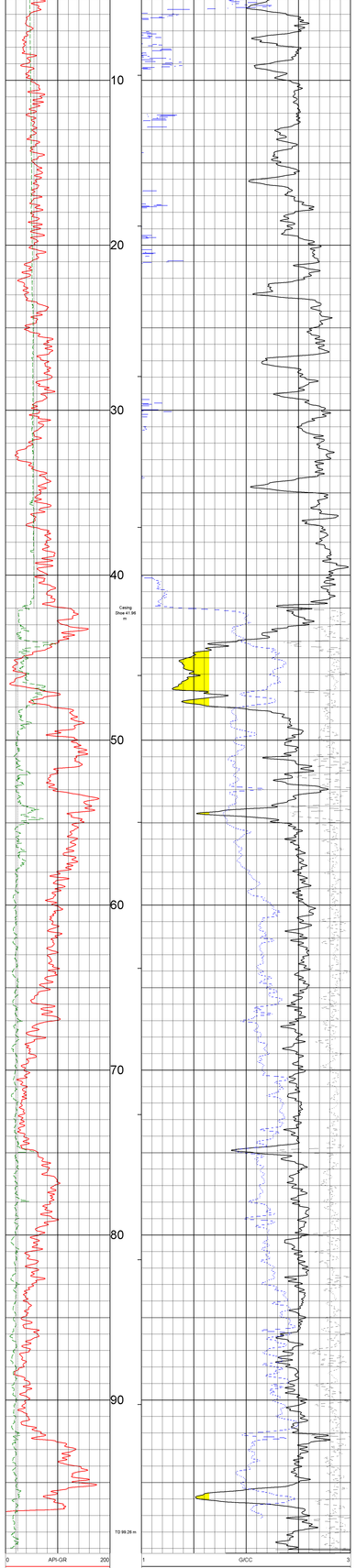
DENSITY RESISTIVITY 1:100 LR15RC-03 07/28/15

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 14.60
PRESENTATION NAME/DATE = CanAus.9239-100-MH-0 07/21/2015

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99000

MATRIX DELTA T : 177
BIT SIZE : 124.00 MM
Version 3.65 JK999



DENSITY RESISTIVITY 1:100 LR15RC-03 07/28/15

LOG PARAMETERS

MATRIX DENSITY : 2.65
MAGNETIC DECL. : 14.60
PRESENTATION NAME/DATE = CanAus.9239-100-MH-0 07/21/2015

NEUTRON MATRIX : SANDSTONE
ELECT. CUTOFF : 99000

MATRIX DELTA T : 177
BIT SIZE : 124.00 MM
Version 3.65 JK999

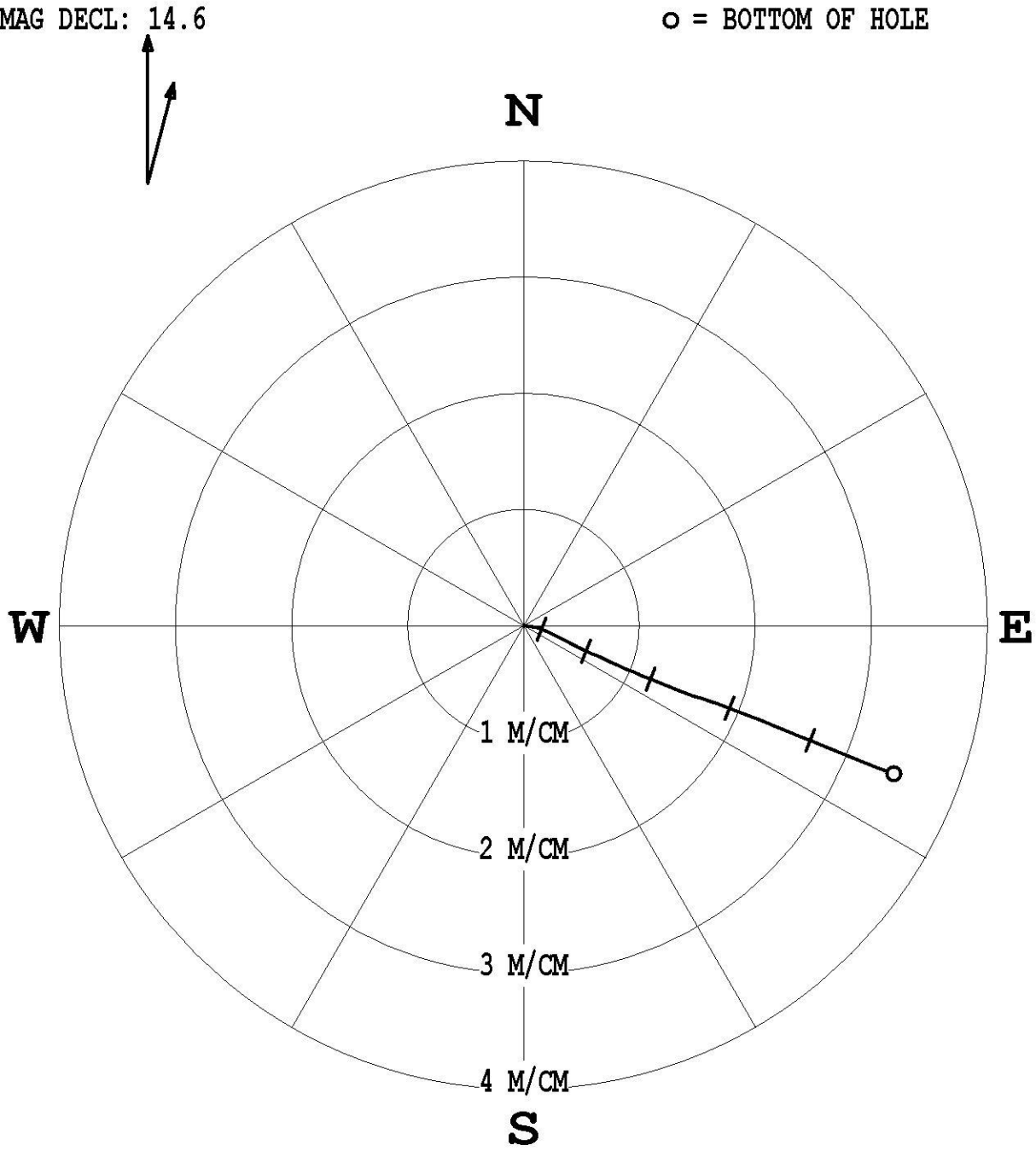
TOOL CALIBRATION: LR15RC-03 07/28/15 10:42
TOOL 9239CI TM VERSION 2025
SERIAL NUMBER 449

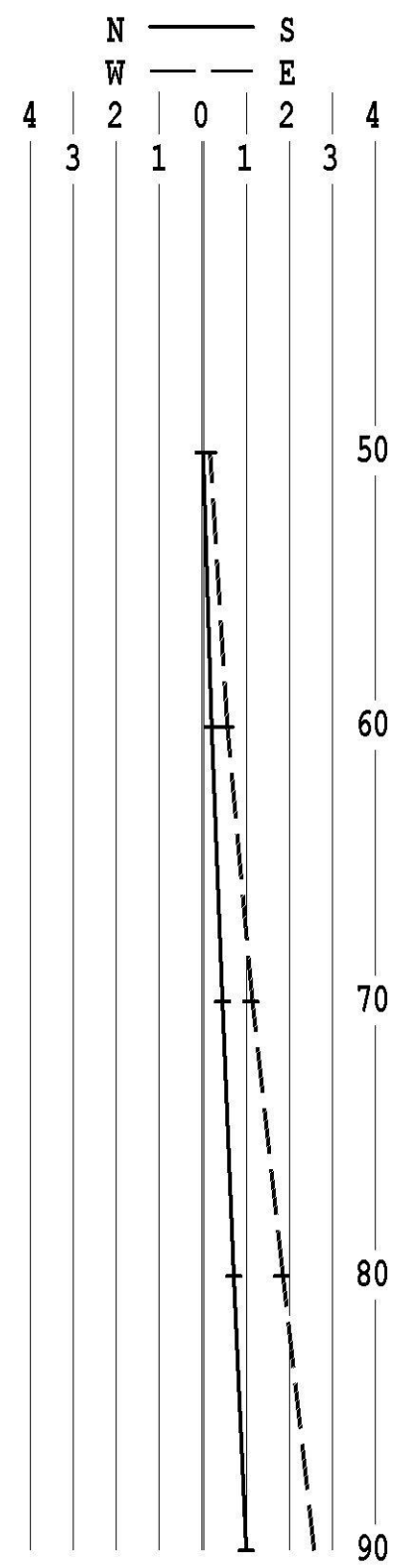
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:16:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul02,15	12:06:19	CALIPERL	[MM]	100.000	200.000	102650	224940
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RC-03
DATE OF LOG: 07/28/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 99.40 M
AZIMUTH: 111.9
DISTANCE: 3.4 M
+ = 10 M INCR
o = BOTTOM OF HOLE





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CENTURY WIRELINE SE HOLE ID. : LR15RC-03
FIELD OFFICE : CENTURY DATE OF LOG : 07/28/15
DATA FROM : N/A PROBE : 9058A , 2615
MAG. DECL. : 14.600 DEPTH UNITS : METERS
LOG: LR15RC-03_07-28-15_10-05_9058A_.02_43.00_99.70_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
43.00	43.00	-0.00	0.00	0.0	156.4	1.0	156.4
44.00	44.00	-0.00	0.02	0.0	98.7	1.1	95.3
45.00	45.00	-0.01	0.03	0.0	98.8	1.0	104.4
46.00	46.00	-0.01	0.05	0.1	98.3	1.1	98.6
47.00	47.00	-0.01	0.08	0.1	97.6	1.0	99.3
48.00	48.00	-0.01	0.10	0.1	98.0	1.5	108.0
49.00	49.00	-0.02	0.12	0.1	99.4	1.9	101.2
50.00	50.00	-0.03	0.15	0.2	101.2	2.0	116.3
51.00	51.00	-0.04	0.18	0.2	103.4	2.0	119.6
52.00	52.00	-0.06	0.22	0.2	105.2	2.1	113.9
53.00	53.00	-0.07	0.25	0.3	106.8	1.9	117.6
54.00	54.00	-0.09	0.28	0.3	108.0	2.2	116.4
55.00	54.99	-0.11	0.32	0.3	109.1	2.5	118.8
56.00	55.99	-0.13	0.36	0.4	110.0	2.7	123.2
57.00	56.99	-0.16	0.41	0.4	110.9	2.8	118.1
58.00	57.99	-0.18	0.45	0.5	111.5	2.8	117.2
59.00	58.99	-0.20	0.49	0.5	111.9	2.6	117.2
60.00	59.99	-0.22	0.54	0.6	112.3	2.8	117.6
61.00	60.99	-0.24	0.58	0.6	112.5	3.1	110.9
62.00	61.99	-0.26	0.63	0.7	112.3	3.2	115.6
63.00	62.98	-0.28	0.68	0.7	112.5	3.4	118.6
64.00	63.98	-0.31	0.74	0.8	112.8	3.4	122.1
65.00	64.98	-0.34	0.80	0.9	112.9	3.8	114.6
66.00	65.98	-0.36	0.86	0.9	113.0	3.7	113.5
67.00	66.98	-0.39	0.91	1.0	113.0	3.3	110.2
68.00	67.97	-0.41	0.97	1.1	112.9	3.6	113.0
69.00	68.97	-0.44	1.03	1.1	113.0	4.0	108.2
70.00	69.97	-0.46	1.09	1.2	112.8	3.8	109.8
71.00	70.97	-0.48	1.15	1.2	112.8	3.9	111.4
72.00	71.97	-0.51	1.22	1.3	112.8	4.5	109.4
73.00	72.96	-0.54	1.29	1.4	112.8	3.9	113.1
74.00	73.96	-0.57	1.35	1.5	112.7	4.0	114.7
75.00	74.96	-0.59	1.42	1.5	112.6	4.1	111.3
76.00	75.95	-0.61	1.49	1.6	112.4	3.5	115.0
77.00	76.95	-0.64	1.56	1.7	112.2	4.2	108.6
78.00	77.95	-0.66	1.63	1.8	112.1	4.3	110.3
79.00	78.95	-0.68	1.70	1.8	111.9	4.2	111.7
80.00	79.94	-0.71	1.77	1.9	111.9	4.2	109.2
81.00	80.94	-0.74	1.83	2.0	111.9	4.0	112.2
82.00	81.94	-0.76	1.90	2.0	111.8	4.0	107.1
83.00	82.94	-0.79	1.96	2.1	111.8	3.9	108.5
84.00	83.93	-0.81	2.03	2.2	111.8	4.4	111.1
85.00	84.93	-0.84	2.10	2.3	111.8	4.2	115.3
86.00	85.93	-0.87	2.17	2.3	111.8	4.1	112.9
87.00	86.93	-0.90	2.24	2.4	111.8	4.6	112.7
88.00	87.92	-0.93	2.31	2.5	111.8	4.4	113.9
89.00	88.92	-0.96	2.39	2.6	111.9	4.7	110.1
90.00	89.92	-0.99	2.46	2.7	111.8	4.4	111.3
91.00	90.91	-1.02	2.53	2.7	111.9	4.4	110.4
92.00	91.91	-1.05	2.61	2.8	111.9	5.2	109.9
93.00	92.91	-1.08	2.69	2.9	111.9	5.0	110.8
94.00	93.90	-1.11	2.77	3.0	111.9	4.7	112.9
95.00	94.90	-1.14	2.84	3.1	111.9	4.7	111.5
96.00	95.90	-1.17	2.92	3.1	111.9	4.6	112.6
97.00	96.89	-1.20	2.99	3.2	111.9	4.8	112.2
98.00	97.89	-1.23	3.07	3.3	111.9	4.6	110.3
99.00	98.89	-1.26	3.15	3.4	111.8	4.7	112.1
99.68	99.56	-1.28	3.19	3.4	111.9	0.0	0.0

COMPENSATED DENSITY
GAMMA-CALIPER-RES
LR15RC-04

COMPANY	CENTURY WIRELINE SERVICES
WELL	LR15RC-04
WELL EXT	N/A
FIELD	LOOP RIDGE
COUNTY	B.C.
PROVINCE	CANADA
COUNTRY	N/A
API NO.	

COMPANY	: CENTURY WIRELINE SERVICES
WELL	: LR15RC-04
WELL EXT	:
FIELD	: N/A
COUNTY	: LOOP RIDGE
PROVINCE	: B.C.
COUNTRY	: CANADA
API NO.	: N/A
UNIQ ID	: N/A
LSD	: N/A SECTION: N/A TOWNSHIP: N/A RANGE: N/A
LOCATION	: N/A
LAT GPS UTM	N/A
LON GPS UTM	N/A

Version 3.65 JK999

PERMANENT DATUM	GL		Elevations:			Other Services:
DRL MEASURED FROM	GL		KB	N/A	M	DEV
LOG MEASURED FROM	GL		DF	N/A	M	
ELEV. PERM. DATUM	GL	M	GL	N/A	M	

DATE	07/29/15 13:41			
DEPTH DRILLER	100.00	M		
DEPTH LOGGER	99.56	M		
FIRST READING	99.56	M		
LAST READING	0.00	M		
BIT SIZE	124.00	MM		
CASING -- DRILLER	12.00	M		
CASING -- LOGGER	11.90	M		
CASING O.D.	170.00	MM		
CASING TYPE	SURFACE			
FLUID TYPE	H2O			
FLUID DENSITY	1.00	G/CC		
FLUID VISCOSITY	N/A			
FLUID PH	N/A			
MUD SOURCE	N/A			
RM @ MEAS TEMP	N/A @ N/A C			
RMF @ MEAS TEMP	N/A @ N/A C			
RMC @ MEAS TEMP	N/A @ N/A C			
CIRC STOPPED	N/A			
RIG NUMBER	GOOD EARTH			
RECORDED BY	S. O'DONNELL			
WITNESSED BY	D. THOMPSON			
REMARKS 1				
REMARKS 2				
REMARKS 3				

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY RESISTIVITY 1:100 LR15RC-04 07/29/15

LOG PARAMETERS

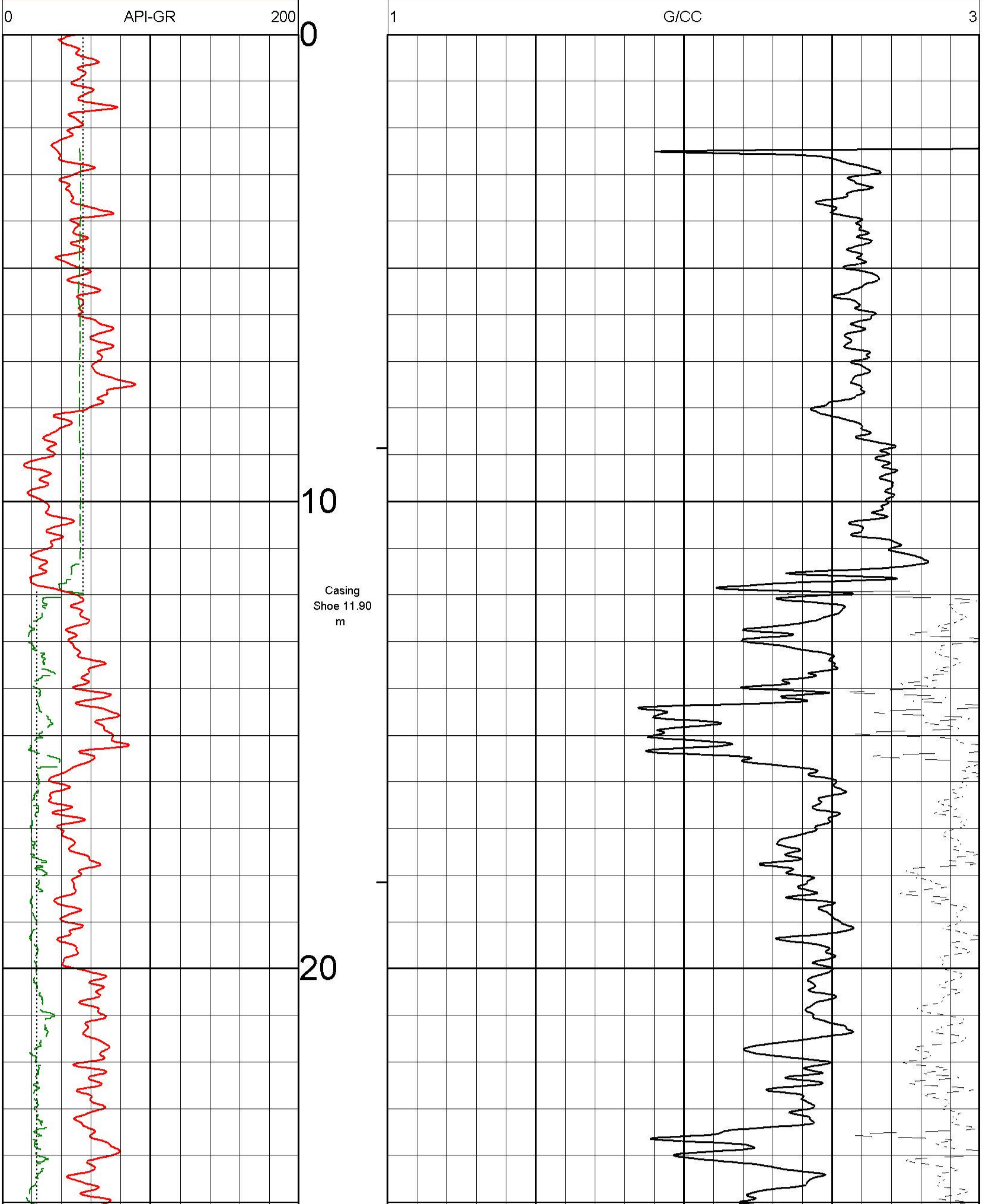
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 124.00 MM	
PRESENTATION NAME/DATE = CanAus-9239-100-MH.0 07/21/2015		Version 3.65 JK999	

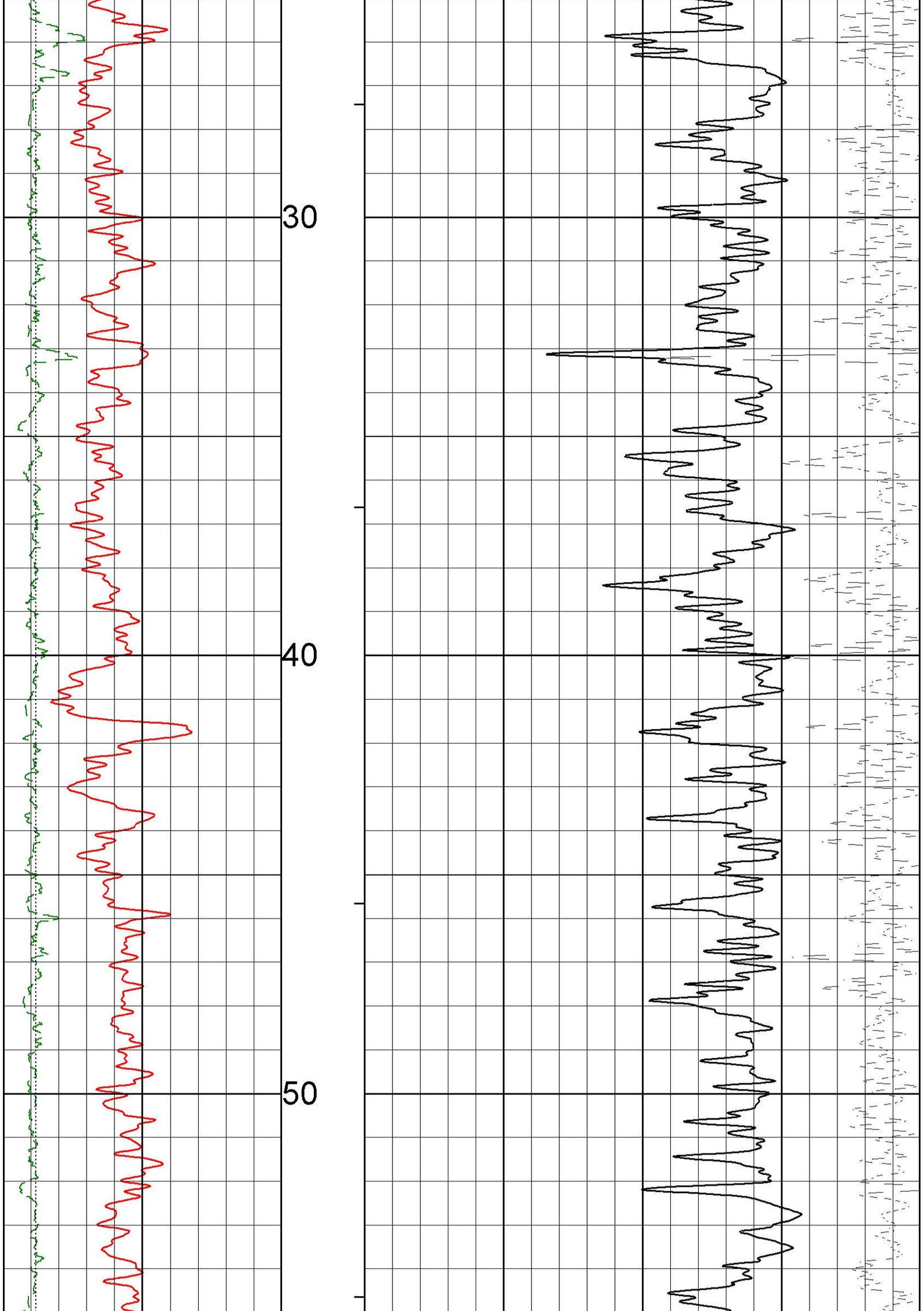
		COMP	
		G/CC	-0.05
		0.45	
		RES(SG)	
		OHM-M	20000
		2	
		DEN(CDL)	

METERS

SPEED --

BIT_SIZE			
MM		300	
100			
CALIPERL			
MM		300	
100			
GAMMA			


0
API-GR
200
1
G/CC
3
0
10
20
Casing
Shoe 11.90
m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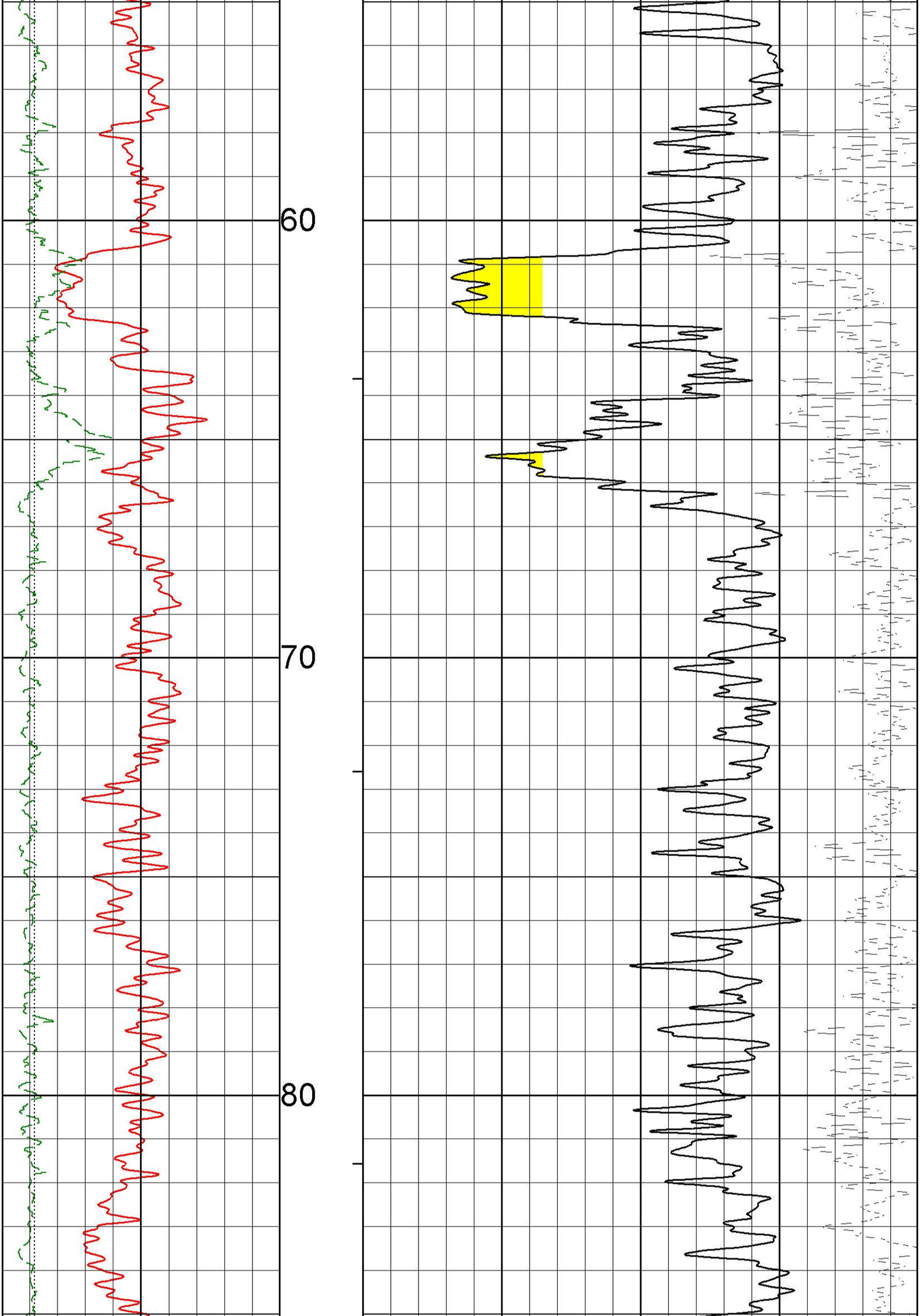
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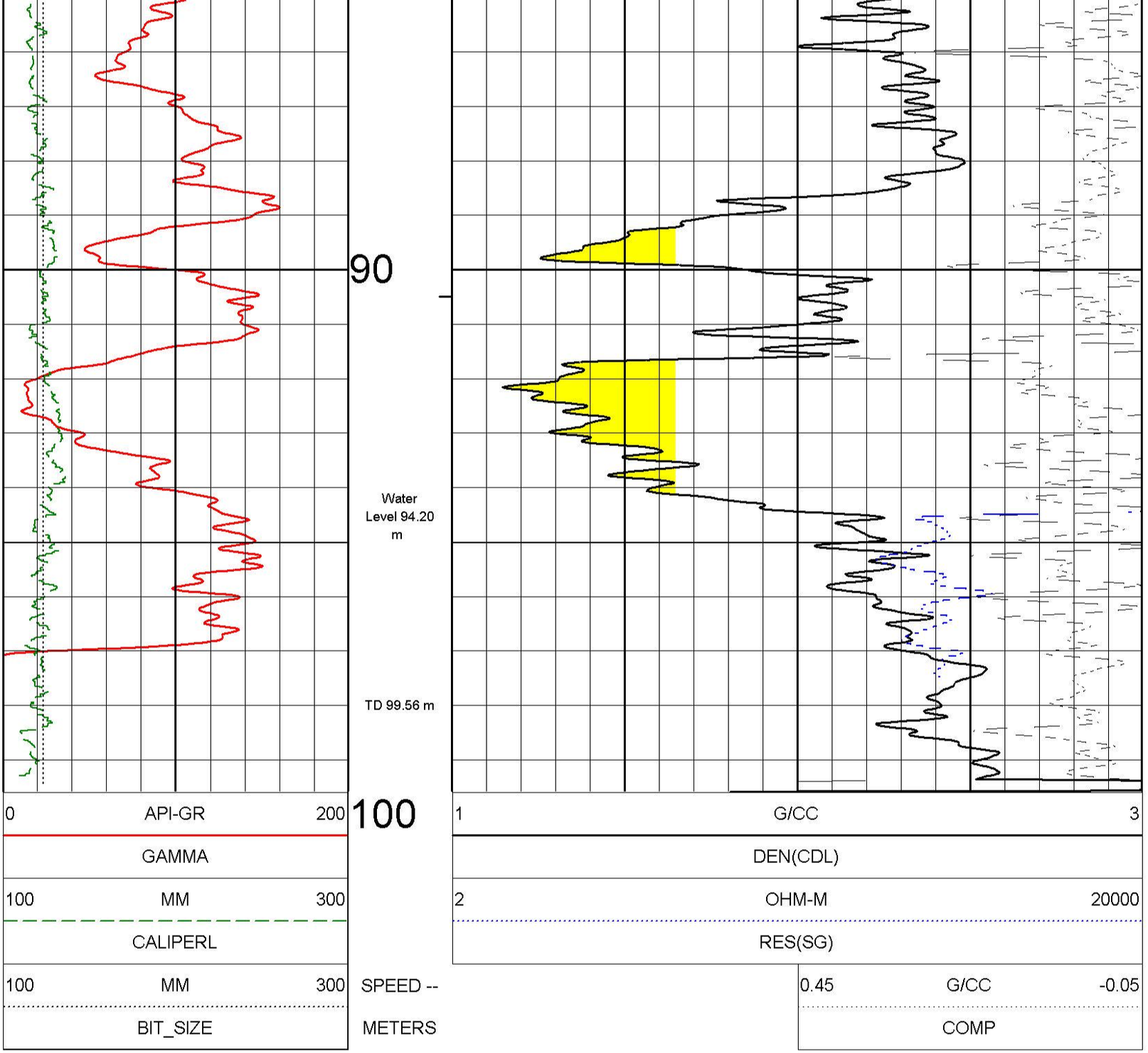


DENSITY RESISTIVITY 1:100 LR15RC-04 07/29/15

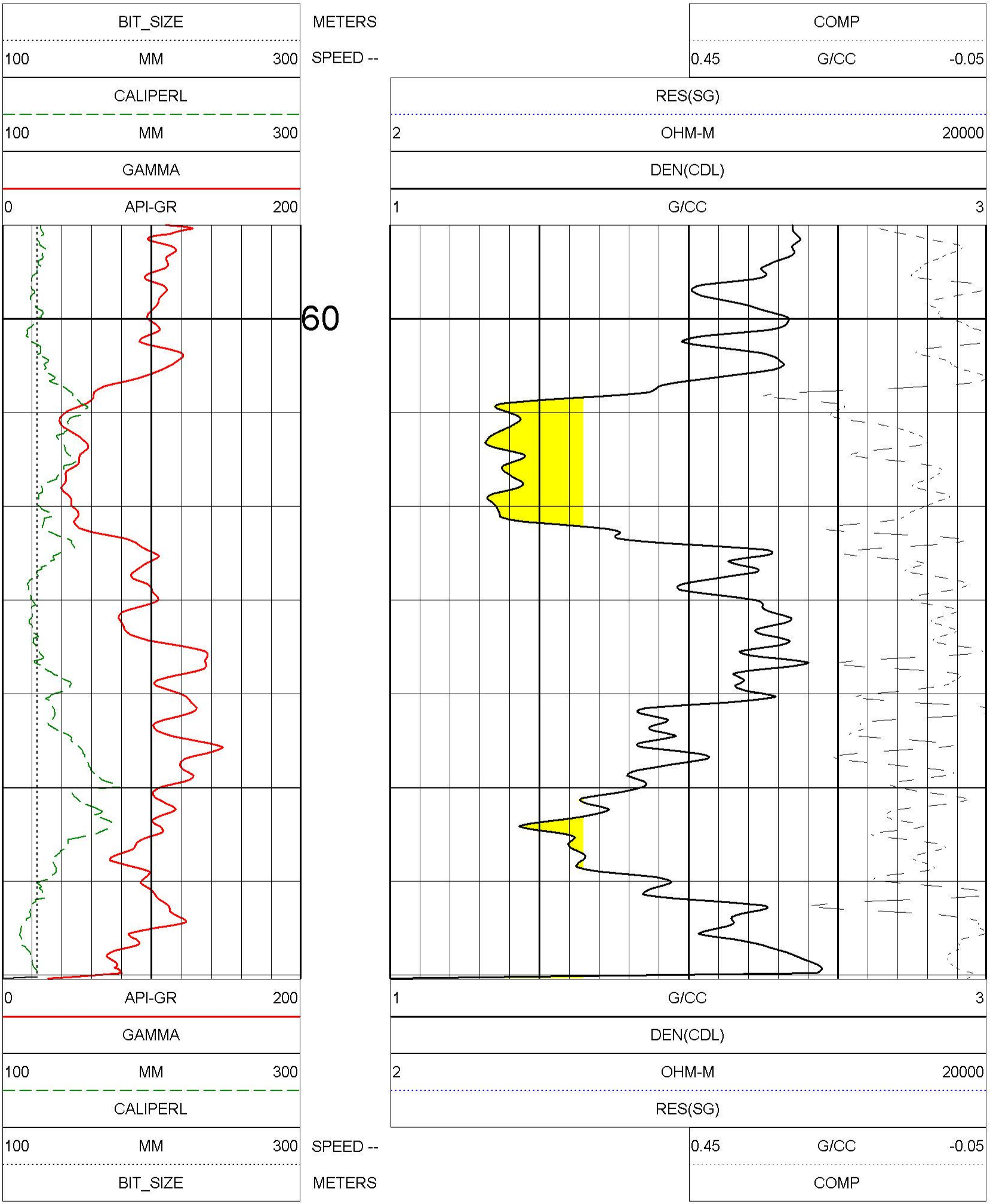
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 124.00 MM
PRESENTATION NAME/DATE = CanAus-9239-100-MH.0 07/21/2015		Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RC-04 07/29/15

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 124.00 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/21/2015		Version 3.65 JK999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METERS
COMP
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CALIPERL
RES(SG)
100 MM 300
2 OHM-M 20000
GAMMA
DEN(CDL)
0 API-GR 200
1 G/CC 3
60
0 API-GR 200
1 G/CC 3
GAMMA
DEN(CDL)
100 MM 300
2 OHM-M 20000
CALIPERL
RES(SG)
100 MM 300
SPEED --
0.45 G/CC -0.05
BIT_SIZE
METERS
COMP

DENSITY RESISTIVITY 1:50 LR15RC-04 07/29/15

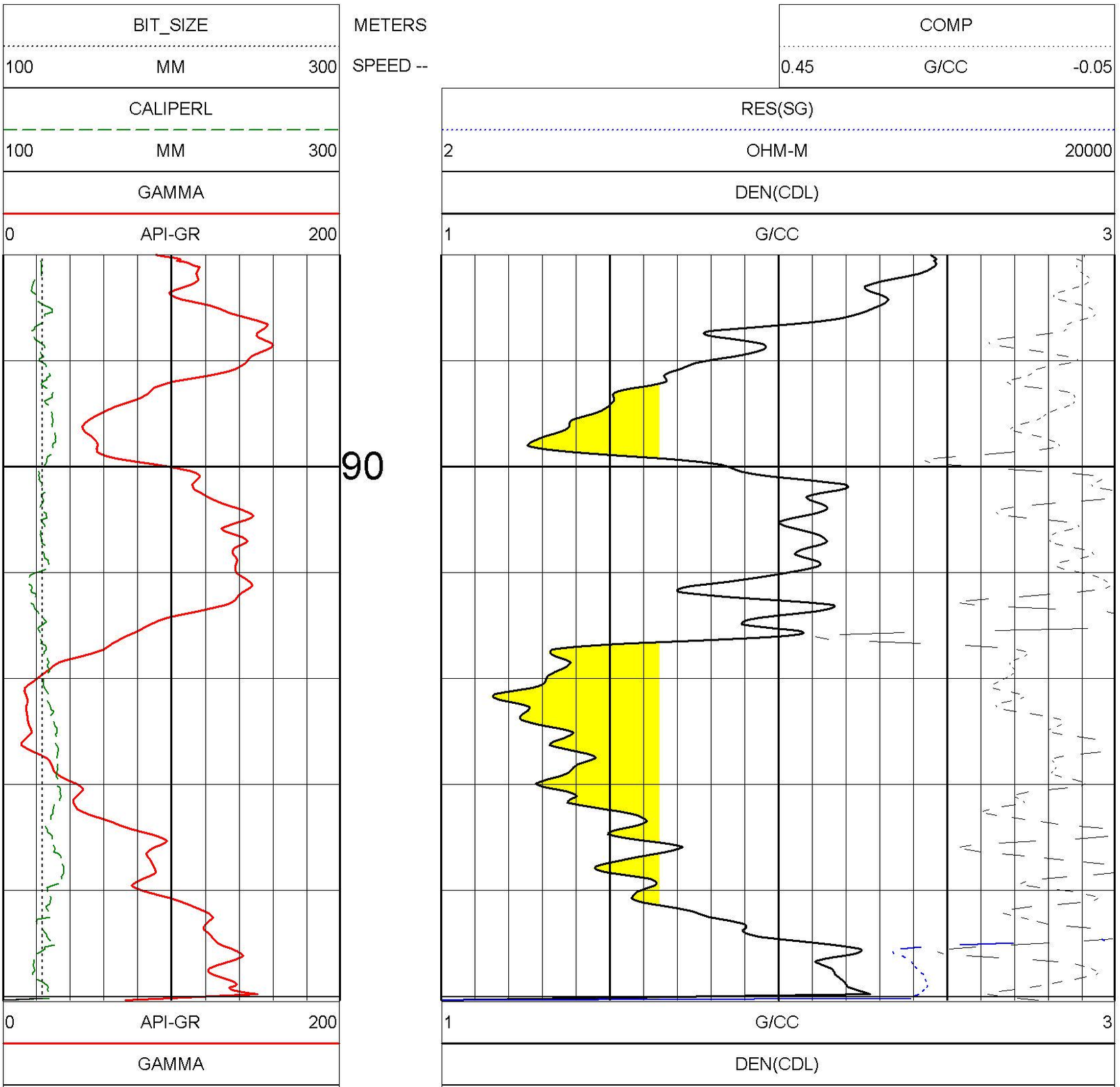
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 124.00 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/21/2015		Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RC-04 07/29/15

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 124.00 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/21/2015		Version 3.65 JK999



100	MM	300		2	OHM-M		20000
CALIPERL				RES(SG)			
100	MM	300	SPEED --			0.45 G/CC -0.05	
BIT_SIZE			METERS			COMP	

DENSITY RESISTIVITY 1:50 LR15RC-04 07/29/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 124.00 MM

PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/21/2015 Version 3.65 JK999

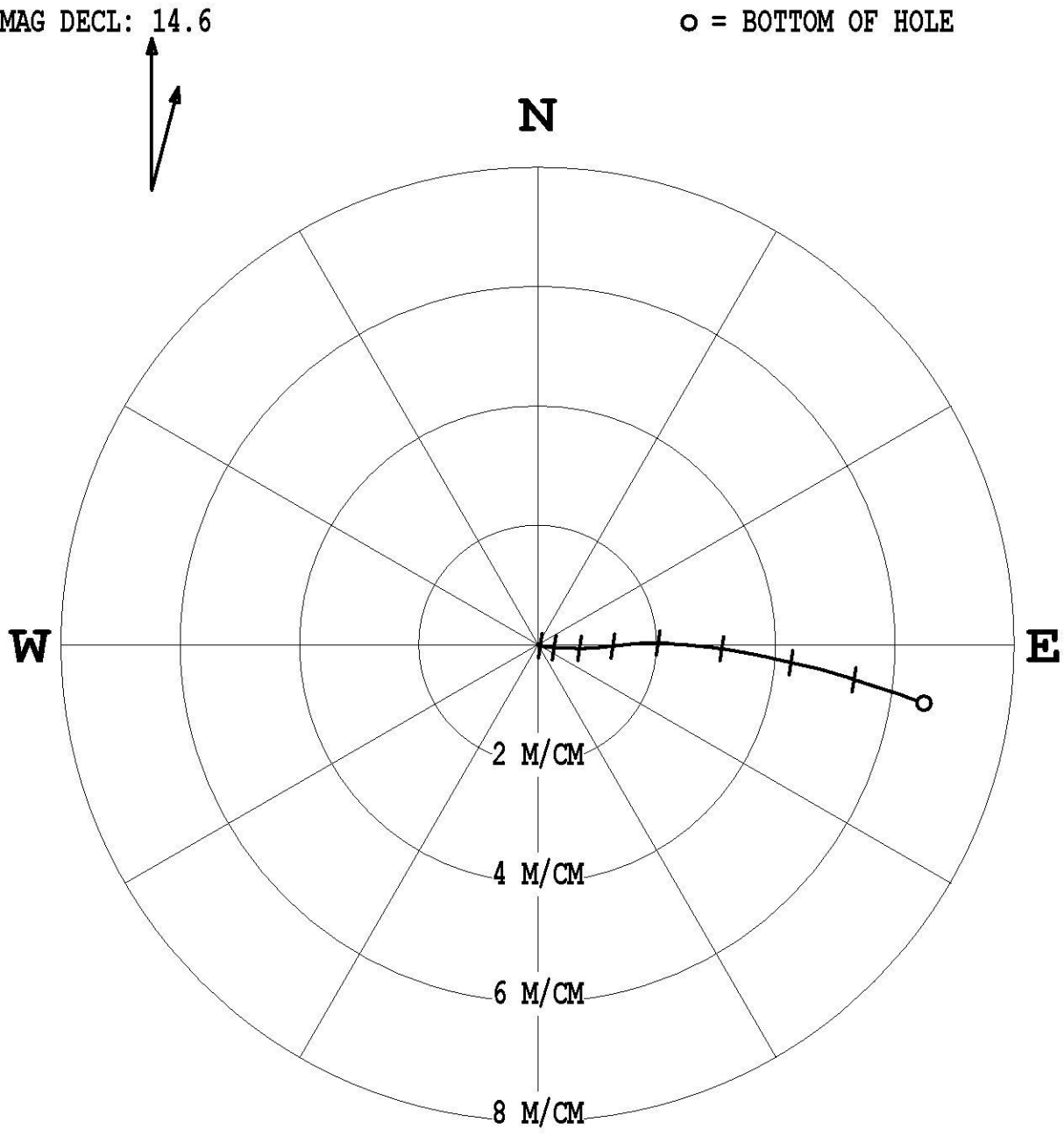
TOOL CALIBRATION LR15RC-04 07/29/15 13:41
TOOL 9239C1 TM VERSION 2025
SERIAL NUMBER 449

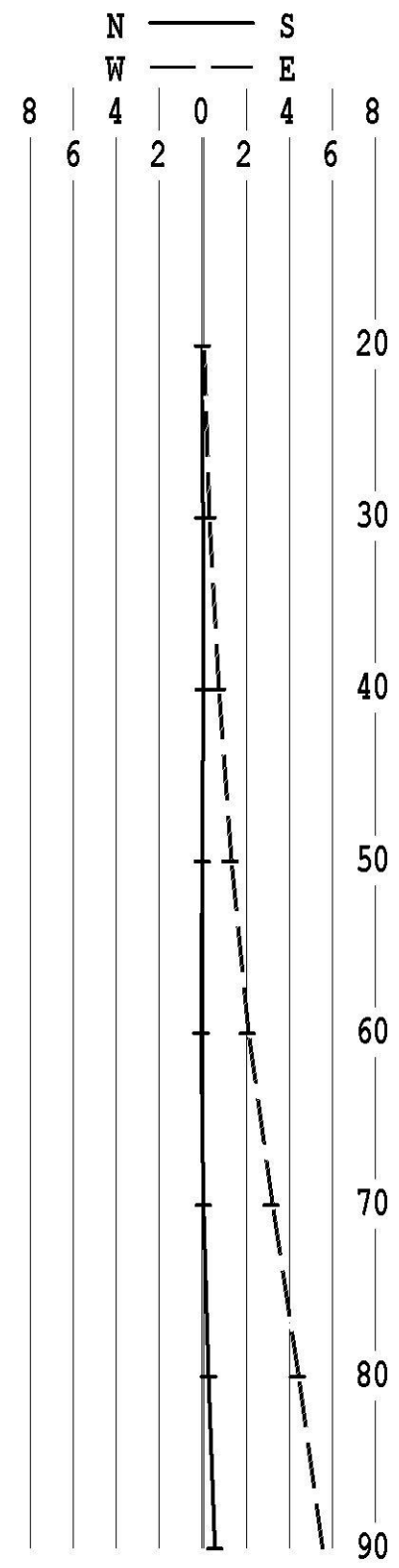
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul29,15	14:37:16	CALIPERL	[MM]	100.000	200.000	102650	213940
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RC-04
DATE OF LOG: 07/29/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 99.19 M
AZIMUTH: 98.7
DISTANCE: 6.6 M
+ = 10 M INCR
o = BOTTOM OF HOLE





* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * *

CLIENT : CENTURY WIRELINE SE
FIELD OFFICE : CENTURY
DATA FROM : N/A
MAG. DECL. : 14.600
LOG: LR15RC-04_07-29-15_13-18_9058A_.02_13.00_99.70_DEVI.log

HOLE ID. : LR15RC-04
DATE OF LOG : 07/29/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
13.00	13.00	-0.00	-0.00	0.0	187.3	0.1	187.3
14.00	14.00	-0.00	0.00	0.0	149.6	0.2	142.1
15.00	15.00	-0.00	0.01	0.0	130.6	0.3	117.1
16.00	16.00	-0.01	0.01	0.0	123.3	0.4	111.0
17.00	17.00	-0.01	0.02	0.0	122.4	0.3	121.1
18.00	18.00	-0.01	0.02	0.0	119.7	0.5	114.6
19.00	19.00	-0.02	0.03	0.0	117.4	0.5	106.8
20.00	20.00	-0.02	0.04	0.0	115.5	0.4	104.7
21.00	21.00	-0.02	0.05	0.1	112.7	0.7	90.5
22.00	22.00	-0.02	0.06	0.1	110.7	0.8	90.7
23.00	23.00	-0.03	0.08	0.1	109.0	1.1	105.1
24.00	24.00	-0.03	0.10	0.1	107.7	1.0	102.0
25.00	25.00	-0.04	0.12	0.1	106.4	1.5	105.0
26.00	26.00	-0.04	0.15	0.2	105.2	1.3	84.3
27.00	27.00	-0.04	0.18	0.2	104.0	1.7	104.6
28.00	28.00	-0.05	0.21	0.2	102.9	1.7	101.0
29.00	29.00	-0.05	0.24	0.2	102.0	1.8	94.0
30.00	30.00	-0.05	0.27	0.3	101.1	2.2	94.9
31.00	31.00	-0.05	0.31	0.3	100.1	2.1	96.6
32.00	32.00	-0.06	0.34	0.3	99.3	2.0	88.7
33.00	32.99	-0.06	0.38	0.4	98.6	2.1	100.2
34.00	33.99	-0.06	0.42	0.4	97.9	2.5	91.7
35.00	34.99	-0.06	0.46	0.5	97.4	2.1	92.5
36.00	35.99	-0.06	0.50	0.5	96.9	2.3	88.3
37.00	36.99	-0.06	0.55	0.6	96.2	3.0	89.0
38.00	37.99	-0.06	0.60	0.6	95.9	2.7	92.7
39.00	38.99	-0.06	0.65	0.6	95.7	2.8	90.6
40.00	39.99	-0.06	0.70	0.7	95.3	3.0	90.5
41.00	40.99	-0.06	0.75	0.7	94.9	2.8	92.3
42.00	41.98	-0.06	0.80	0.8	94.5	3.3	89.1
43.00	42.98	-0.06	0.85	0.9	94.2	2.9	89.2
44.00	43.98	-0.06	0.90	0.9	93.8	3.0	89.1
45.00	44.98	-0.06	0.96	1.0	93.3	3.3	86.9
46.00	45.98	-0.05	1.02	1.0	92.9	3.4	84.1
47.00	46.98	-0.04	1.08	1.1	92.4	3.5	84.1
48.00	47.98	-0.04	1.14	1.1	91.9	3.4	77.6
49.00	48.97	-0.03	1.20	1.2	91.5	3.5	83.3
50.00	49.97	-0.03	1.25	1.3	91.2	3.4	84.9
51.00	50.97	-0.02	1.31	1.3	90.8	3.5	81.0
52.00	51.97	-0.01	1.38	1.4	90.5	4.0	93.6
53.00	52.96	-0.00	1.45	1.5	90.2	4.5	84.2
54.00	53.96	0.00	1.53	1.5	89.8	4.2	84.1
55.00	54.96	0.01	1.59	1.6	89.6	3.9	88.3
56.00	55.96	0.02	1.67	1.7	89.4	4.9	86.5
57.00	56.95	0.02	1.76	1.8	89.2	4.7	83.8
58.00	57.95	0.03	1.84	1.8	89.1	4.8	88.0
59.00	58.95	0.03	1.93	1.9	89.1	5.2	90.2
60.00	59.94	0.03	2.01	2.0	89.1	5.0	93.5
61.00	60.94	0.03	2.10	2.1	89.3	5.4	92.5
62.00	61.93	0.02	2.20	2.2	89.5	5.1	92.1
63.00	62.93	0.01	2.30	2.3	89.8	6.0	93.4
64.00	63.92	0.00	2.40	2.4	90.0	6.2	94.5
65.00	64.92	-0.01	2.51	2.5	90.2	5.7	95.9
66.00	65.91	-0.02	2.61	2.6	90.4	6.1	95.4
67.00	66.90	-0.03	2.73	2.7	90.6	6.9	96.8
68.00	67.90	-0.04	2.85	2.8	90.9	6.4	93.0
69.00	68.89	-0.05	2.96	3.0	91.0	6.7	100.8
70.00	69.88	-0.07	3.07	3.1	91.3	6.7	100.3
71.00	70.88	-0.09	3.18	3.2	91.6	6.5	99.1
72.00	71.87	-0.10	3.30	3.3	91.8	6.8	100.5
73.00	72.86	-0.12	3.41	3.4	92.1	6.9	99.1
74.00	73.86	-0.15	3.53	3.5	92.4	6.6	101.7
75.00	74.85	-0.17	3.64	3.6	92.6	6.9	101.5
76.00	75.84	-0.19	3.76	3.8	92.9	6.9	102.8
77.00	76.84	-0.22	3.87	3.9	93.2	6.9	104.5
78.00	77.83	-0.24	3.99	4.0	93.5	7.0	104.6
79.00	78.82	-0.27	4.11	4.1	93.8	7.0	101.4
80.00	79.82	-0.30	4.22	4.2	94.0	6.7	103.8
81.00	80.81	-0.32	4.34	4.3	94.3	6.6	101.6
82.00	81.80	-0.35	4.45	4.5	94.5	6.1	101.2
83.00	82.80	-0.37	4.54	4.6	94.7	5.7	105.7
84.00	83.79	-0.39	4.64	4.7	94.8	5.7	104.6
85.00	84.79	-0.42	4.74	4.8	95.0	6.1	105.0
86.00	85.78	-0.45	4.85	4.9	95.3	6.3	107.7
87.00	86.77	-0.48	4.95	5.0	95.5	6.4	108.2
88.00	87.77	-0.51	5.06	5.1	95.8	6.8	106.5
89.00	88.76	-0.54	5.17	5.2	96.0	6.3	106.6
90.00	89.76	-0.58	5.28	5.3	96.3	6.7	108.7
91.00	90.75	-0.61	5.39	5.4	96.5	7.2	108.8
92.00	91.74	-0.65	5.50	5.5	96.8	7.4	109.2
93.00	92.73	-0.69	5.62	5.7	97.0	6.9	107.3
94.00	93.73	-0.73	5.74	5.8	97.3	8.2	109.1
95.00	94.72	-0.77	5.87	5.9	97.5	8.5	107.3
96.00	95.71	-0.81	6.01	6.1	97.7	8.1	109.0
97.00	96.70	-0.86	6.14	6.2	98.0	8.3	112.0
98.00	97.69	-0.91	6.27	6.3	98.3	8.0	111.2
99.00	98.67	-0.96	6.41	6.5	98.5	8.4	114.6
99.68	99.35	-0.99	6.48	6.6	98.7	0.0	0.0

COMPENSATED DENSITY
GAMMA-CALIPER-RES
LR15RF-01

COMPANY	CENTURY WIRELINE SERVICES
WELL	LR15RF-01
WELL EXT	N/A
FIELD	LOOP RIDGE
COUNTY	B.C.
PROVINCE	CANADA
COUNTRY	N/A
API NO.	

COMPANY	: CENTURY WIRELINE SERVICES
WELL	: LR15RF-01
WELL EXT	:
FIELD	: N/A
COUNTY	: LOOP RIDGE
PROVINCE	: B.C.
COUNTRY	: CANADA
API NO.	: N/A
UNIQ ID	: N/A
LSD	: N/A SECTION: N/A TOWNSHIP: N/A RANGE: N/A
LOCATION	: N/A
LAT GPS UTM	N/A
LON GPS UTM	N/A

Version 3.65 JK999

PERMANENT DATUM	GL		Elevations:			Other Services:
DRL MEASURED FROM	GL		KB	N/A	M	DEV
LOG MEASURED FROM	GL		DF	N/A	M	
ELEV. PERM. DATUM	GL	M	GL	N/A	M	

DATE	07/26/15 11:26			
DEPTH DRILLER	62.00	M		
DEPTH LOGGER	62.01	M		
FIRST READING	62.01	M		
LAST READING	0.00	M		
BIT SIZE	457.20	MM		
CASING -- DRILLER	9.00	M		
CASING -- LOGGER	9.10	M		
CASING O.D.	508.00	MM		
CASING TYPE	SURFACE			
FLUID TYPE	H2O			
FLUID DENSITY	1.00	G/CC		
FLUID VISCOSITY	N/A			
FLUID PH	N/A			
MUD SOURCE	N/A			
RM @ MEAS TEMP	N/A @ N/A C			
RMF @ MEAS TEMP	N/A @ N/A C			
RMC @ MEAS TEMP	N/A @ N/A C			
CIRC STOPPED	N/A			
RIG NUMBER	FORACO			
RECORDED BY	S. O'DONNELL			
WITNESSED BY	D. THOMPSON			
REMARKS 1				
REMARKS 2				
REMARKS 3				

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY RESISTIVITY 1:100 LR15RF-01 07/26/15

LOG PARAMETERS

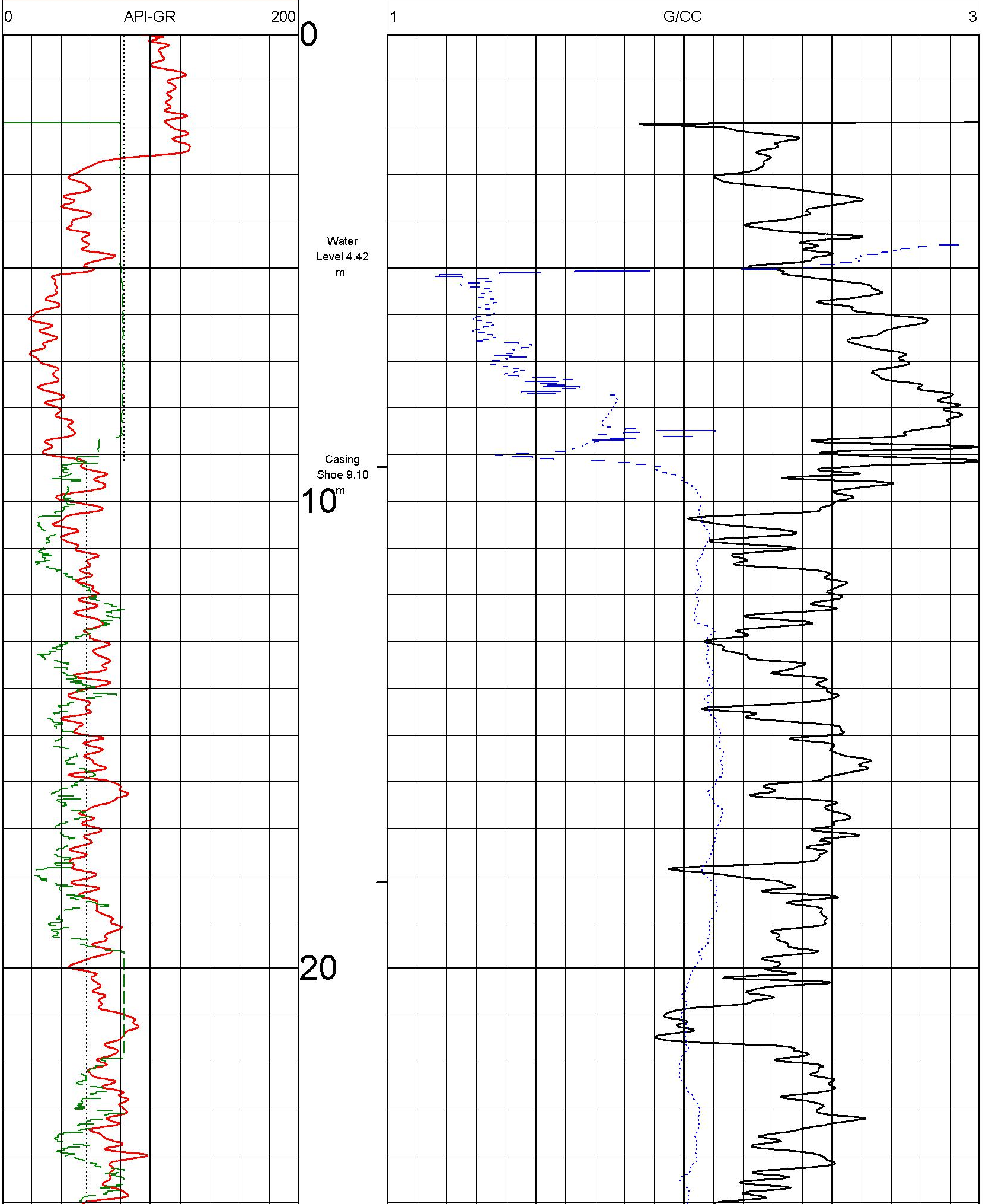
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 457.20 MM	
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015		Version 3.65 JK999	

			COMP	
			G/CC	-0.05
			0.45	
		RES(SG)		
			OHM-M	20000
			2	
			DEN(CDL)	

METERS

SPEED --

BIT_SIZE			
MM		600	
400			
	CALIPERL		
	MM	600	
400			
	GAMMA		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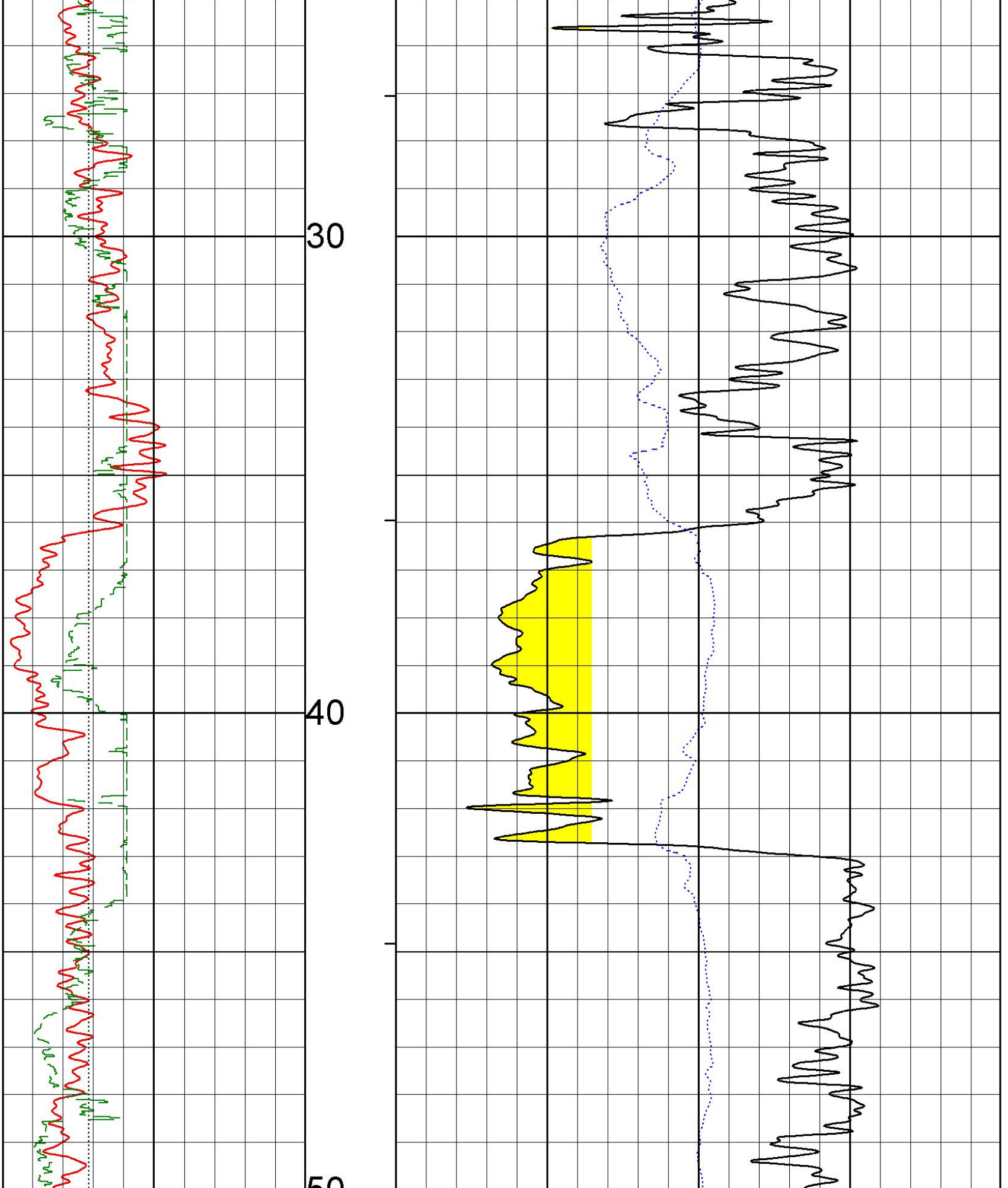
API-GR
200
1
G/CC
3
0
Water
Level 4.42
m
Casing
Shoe 9.10
m
10
20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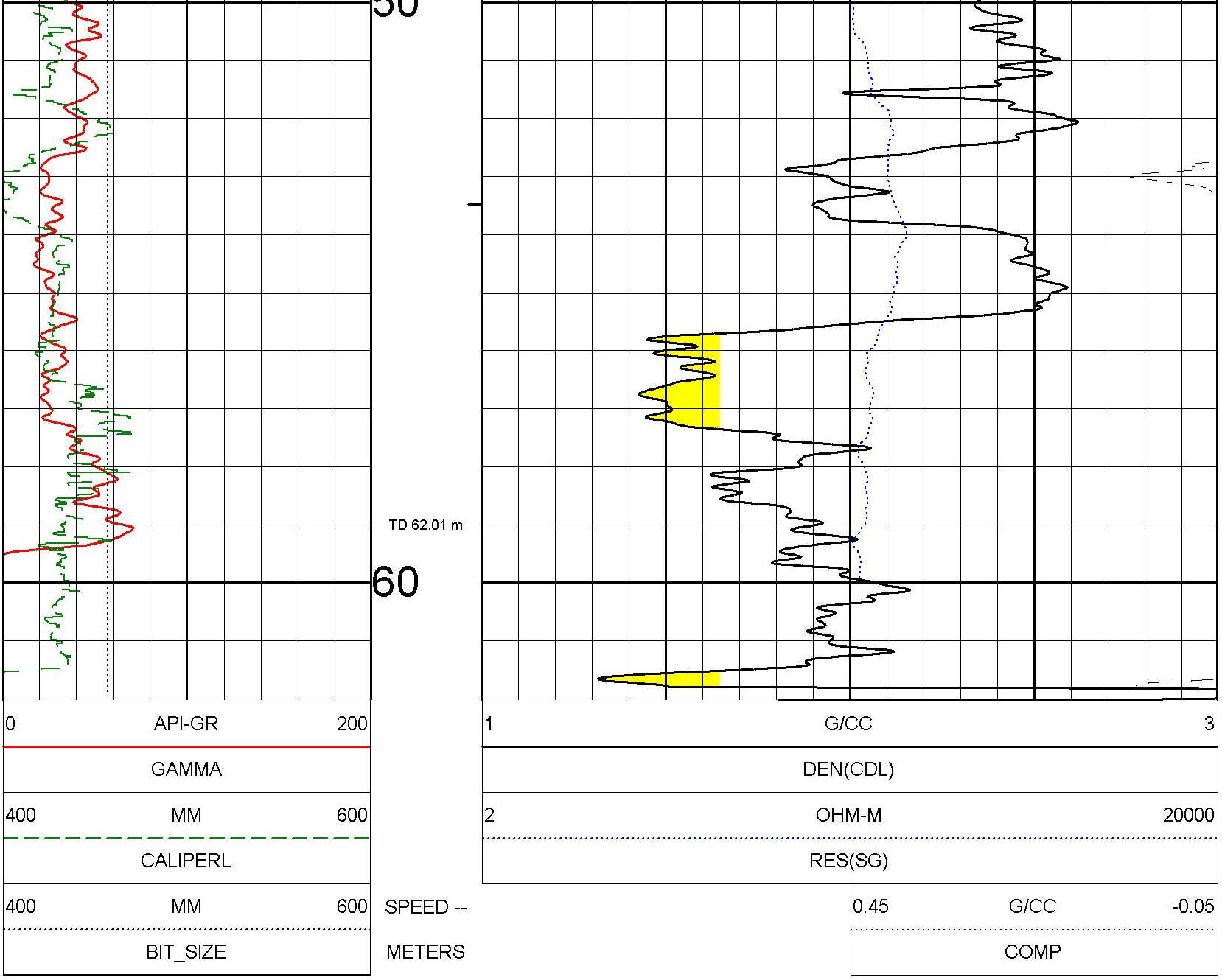
40
50



DENSITY RESISTIVITY 1:100 LR15RF-01 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM

PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015 Version 3.65 JK999

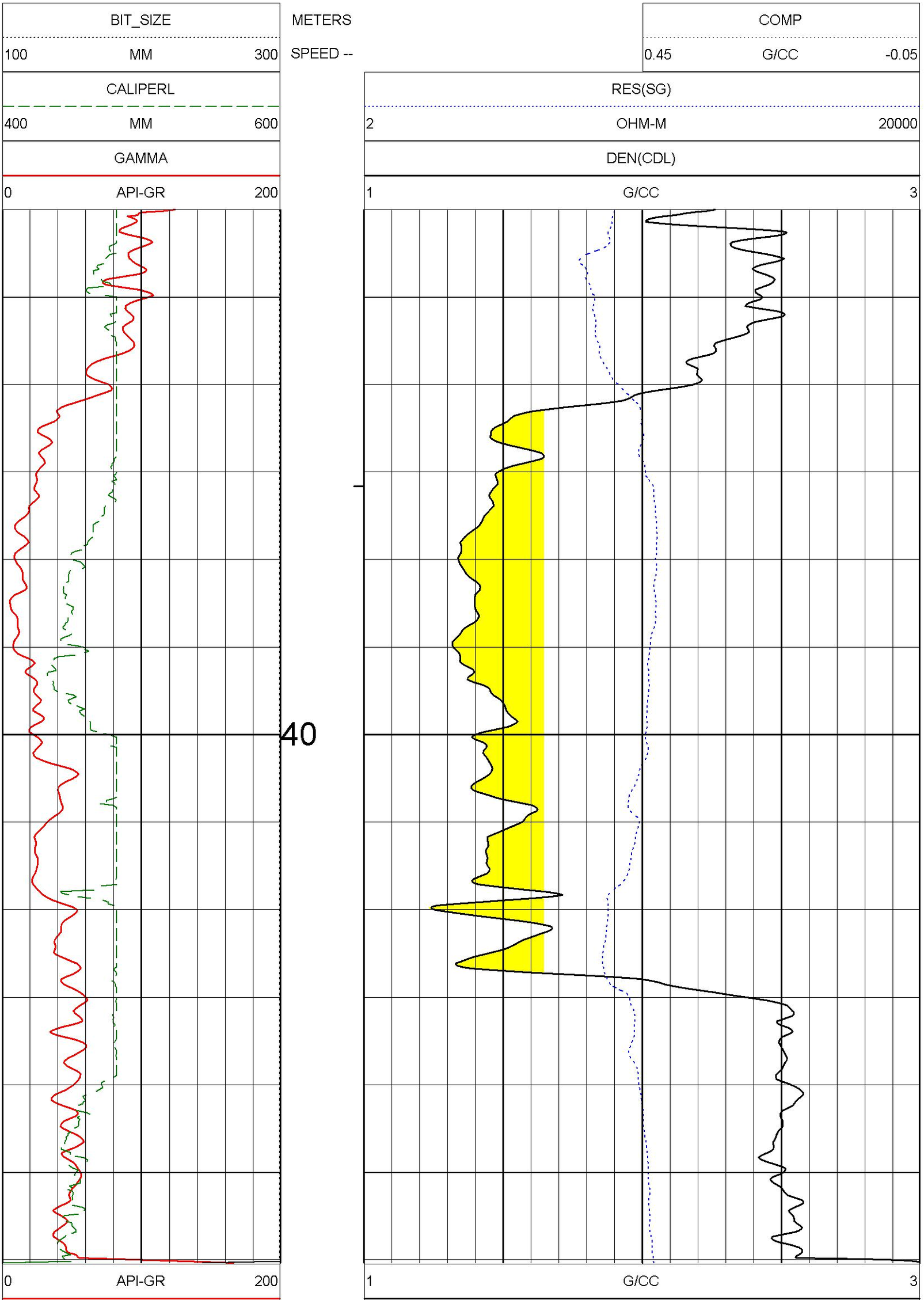
DENSITY RESISTIVITY 1:50 LR15RF-01 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM

PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/21/2015 Version 3.65 JK999


BIT_SIZE
100 MM 300
METERS
SPEED --
COMP
0.45 G/CC -0.05
CALIPERL
400 MM 600
RES(SG)
2 OHM-M 20000
GAMMA
0 API-GR 200
DEN(CDL)
1 G/CC 3
40
0 API-GR 200
1 G/CC 3

GAMMA				DEN(CDL)		
400	MM	600		2	OHM-M	20000
CALIPERL				RES(SG)		
100	MM	300	SPEED --	0.45	G/CC	-0.05
BIT_SIZE			METERS	COMP		

DENSITY RESISTIVITY 1:50 LR15RF-01 07/26/15

LOG PARAMETERS

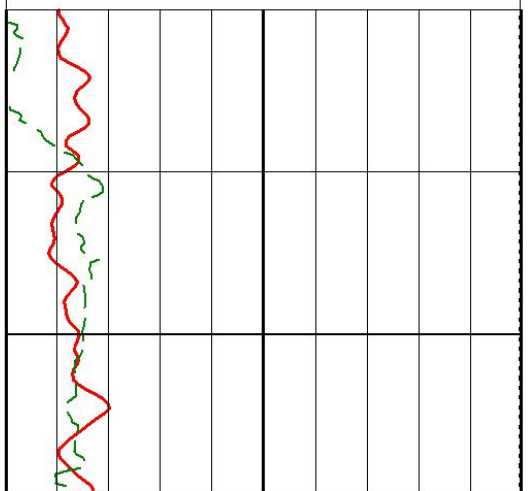
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/21/2015		Version 3.65 JK999

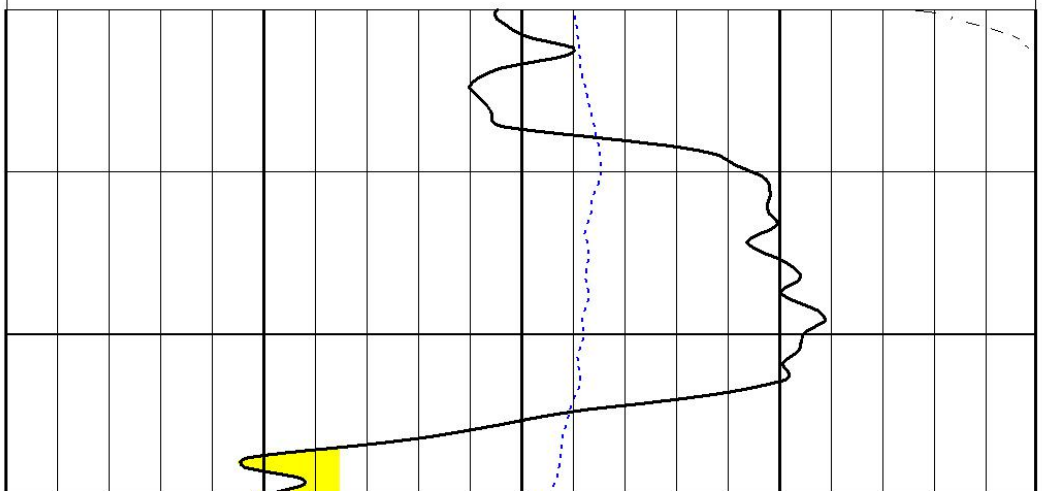
DENSITY RESISTIVITY 1:50 LR15RF-01 07/26/15

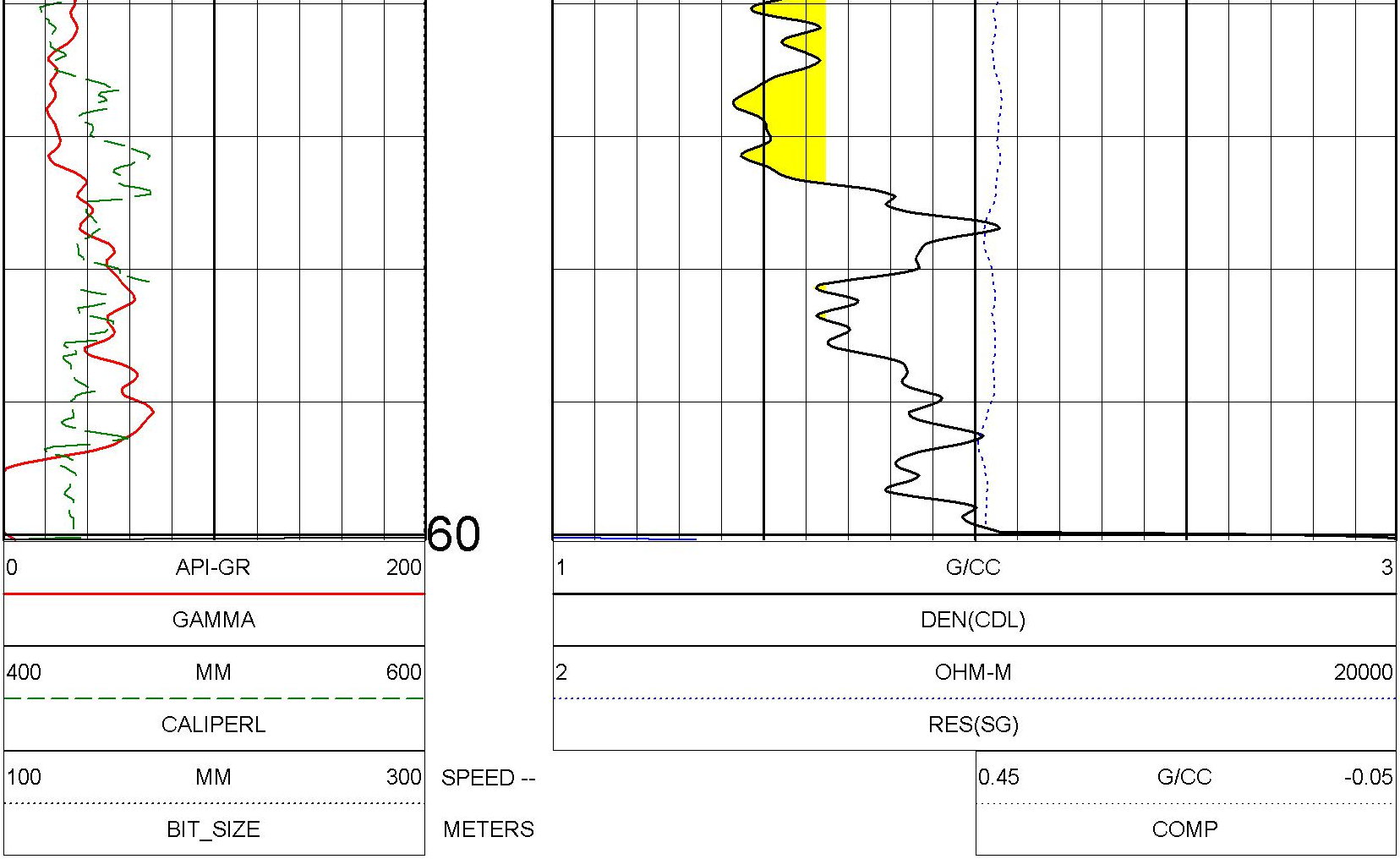
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/21/2015		Version 3.65 JK999

BIT_SIZE				COMP		
100	MM	300	SPEED --	0.45	G/CC	-0.05
CALIPERL				RES(SG)		
400	MM	600		2	OHM-M	20000
GAMMA				DEN(CDL)		
0	API-GR	200		1	G/CC	3







DENSITY RESISTIVITY 1:50 LR15RF-01 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/21/2015		Version 3.65 JK999

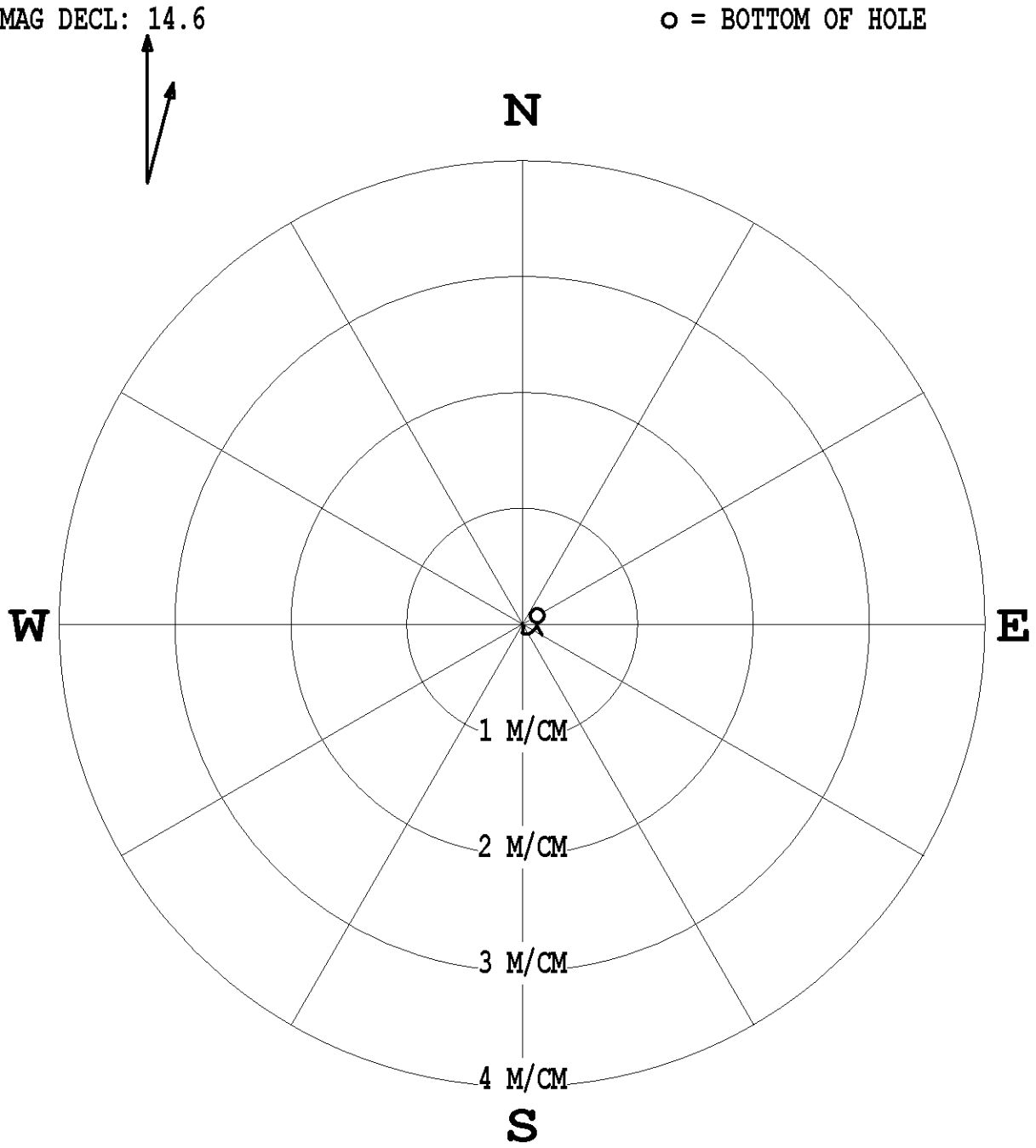
TOOL CALIBRATION LR15RF-01 07/26/15 11:26
TOOL 9239C1 TM VERSION 5023
SERIAL NUMBER 449

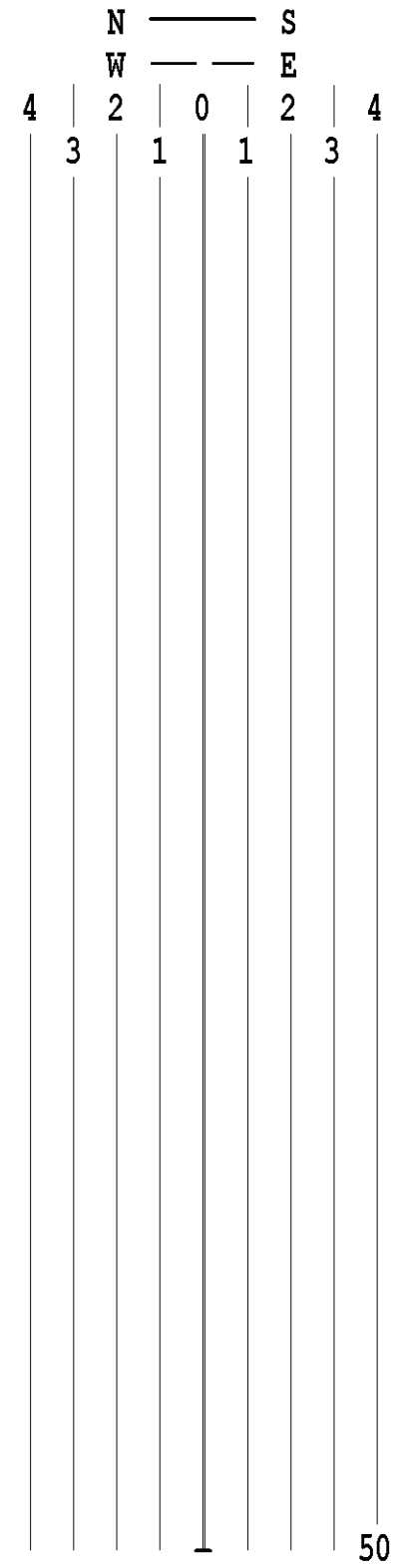
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul26,15	11:12:18	CALIPERL	[MM]	285.750	508.000	235141	491900
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RF-01
DATE OF LOG: 07/26/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 61.80 M
AZIMUTH: 62.1
DISTANCE: 0.1 M
+ = 50 M INCR
o = BOTTOM OF HOLE

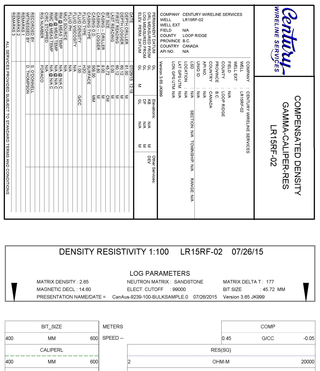




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CENTURY WIRELINE SE HOLE ID. : LR15RF-01
FIELD OFFICE : CENTURY DATE OF LOG : 07/26/15
DATA FROM : N/A PROBE : 9058A , 2615
MAG. DECL. : 14.600 DEPTH UNITS : METERS
LOG: LR15RF-01_07-26-15_11-43_9058A_.02_10.00_62.00_DEVI.log

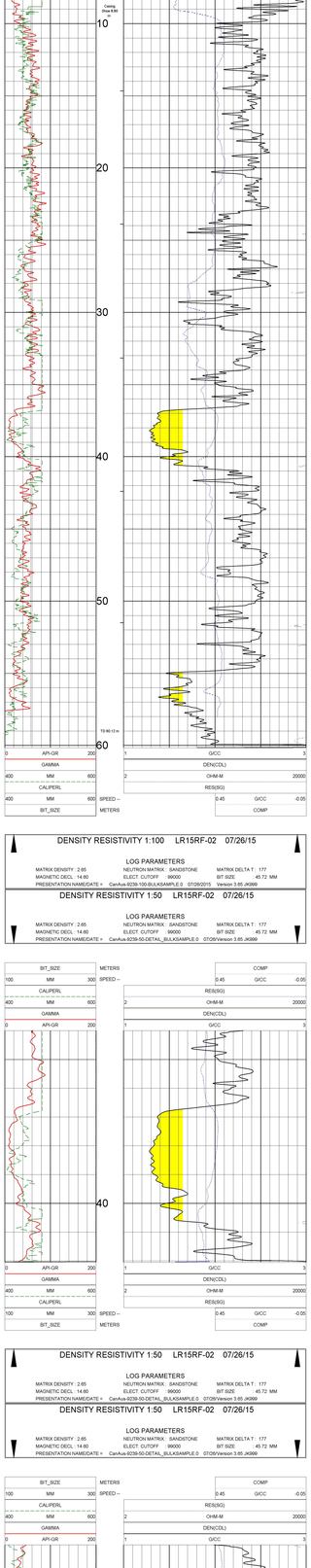
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.00	-0.00	-0.00	0.0	246.6	0.3	246.6
11.00	11.00	-0.00	-0.00	0.0	230.8	0.4	161.7
12.00	12.00	-0.01	0.00	0.0	166.0	0.5	153.2
13.00	13.00	-0.01	0.01	0.0	144.3	0.5	117.9
14.00	14.00	-0.02	0.01	0.0	141.5	0.2	163.2
15.00	15.00	-0.02	0.01	0.0	149.3	0.3	222.9
16.00	16.00	-0.02	0.01	0.0	159.2	0.3	220.6
17.00	17.00	-0.03	0.01	0.0	166.8	0.3	213.9
18.00	18.00	-0.03	0.00	0.0	173.5	0.3	217.9
19.00	19.00	-0.04	0.00	0.0	176.7	0.2	189.6
20.00	20.00	-0.04	0.00	0.0	175.2	0.3	169.1
21.00	21.00	-0.04	0.00	0.0	174.4	0.3	175.4
22.00	22.00	-0.05	0.00	0.0	174.4	0.3	142.5
23.00	23.00	-0.05	0.01	0.1	174.3	0.2	199.9
24.00	24.00	-0.06	0.00	0.1	176.4	0.3	199.4
25.00	25.00	-0.06	0.00	0.1	177.7	0.3	195.0
26.00	26.00	-0.07	0.00	0.1	178.7	0.3	196.9
27.00	27.00	-0.07	0.00	0.1	179.3	0.3	185.4
28.00	28.00	-0.08	0.00	0.1	179.6	0.3	175.9
29.00	29.00	-0.08	0.00	0.1	177.4	0.3	104.0
30.00	30.00	-0.08	0.01	0.1	173.6	0.3	107.4
31.00	31.00	-0.08	0.01	0.1	169.9	0.4	105.9
32.00	32.00	-0.09	0.02	0.1	164.6	0.5	102.9
33.00	33.00	-0.09	0.03	0.1	159.4	0.5	113.6
34.00	34.00	-0.09	0.04	0.1	153.8	0.6	84.4
35.00	35.00	-0.09	0.05	0.1	148.1	0.6	61.4
36.00	36.00	-0.08	0.06	0.1	143.3	0.4	55.1
37.00	37.00	-0.08	0.07	0.1	139.8	0.3	35.2
38.00	38.00	-0.07	0.07	0.1	134.5	0.6	55.8
39.00	39.00	-0.07	0.08	0.1	129.4	0.5	51.6
40.00	40.00	-0.06	0.09	0.1	124.5	0.5	50.3
41.00	41.00	-0.05	0.10	0.1	119.8	0.5	47.1
42.00	42.00	-0.05	0.10	0.1	116.2	0.4	38.9
43.00	43.00	-0.04	0.10	0.1	112.7	0.5	36.5
44.00	44.00	-0.04	0.11	0.1	108.8	0.5	46.9
45.00	45.00	-0.03	0.11	0.1	105.3	0.4	33.7
46.00	46.00	-0.03	0.12	0.1	102.7	0.3	27.3
47.00	47.00	-0.02	0.12	0.1	100.0	0.3	21.0
48.00	48.00	-0.02	0.12	0.1	97.5	0.4	14.8
49.00	49.00	-0.01	0.12	0.1	95.1	0.3	359.4
50.00	50.00	-0.01	0.12	0.1	92.8	0.3	349.0
51.00	51.00	-0.00	0.12	0.1	90.6	0.3	345.5
52.00	52.00	0.01	0.12	0.1	87.3	0.4	14.9
53.00	53.00	0.01	0.12	0.1	84.1	0.4	2.1
54.00	54.00	0.02	0.12	0.1	81.5	0.3	354.7
55.00	55.00	0.03	0.12	0.1	78.3	0.4	4.2
56.00	56.00	0.03	0.12	0.1	75.4	0.3	348.7
57.00	57.00	0.04	0.12	0.1	72.9	0.3	332.5
58.00	58.00	0.04	0.12	0.1	70.3	0.3	0.2
59.00	59.00	0.05	0.12	0.1	67.8	0.4	1.9
60.00	60.00	0.06	0.12	0.1	65.6	0.4	10.9
61.00	61.00	0.06	0.12	0.1	63.6	0.4	15.2
62.00	61.96	0.07	0.13	0.1	62.1	0.0	0.0



DENSITY RESISTIVITY 1:100 LR15RF-02 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 | NEUTRON MATRIX : SANDSTONE | MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 | ELECT CUTOFF : 99000 | BIT SIZE : 45.72 MM
PRESENTATION NAMEDATE = | CanAus-9239-100-BULKSAMPLE.G | 07/26/2015 | Version 3.65 JK999



DENSITY RESISTIVITY 1:100 LR15RF-02 07/26/15

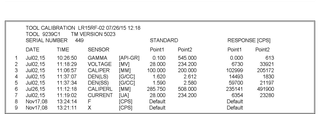
LOG PARAMETERS

MATRIX DENSITY : 2.65 | NEUTRON MATRIX : SANDSTONE | MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 | ELECT CUTOFF : 99000 | BIT SIZE : 45.72 MM
PRESENTATION NAMEDATE = | CanAus-9239-100-BULKSAMPLE.G | 07/26/2015 | Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RF-02 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 | NEUTRON MATRIX : SANDSTONE | MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 | ELECT CUTOFF : 99000 | BIT SIZE : 45.72 MM
PRESENTATION NAMEDATE = | CanAus-9239-50-DETAIL_BULKSAMPLE.G | 07/26/Version 3.65 JK999



DENSITY RESISTIVITY 1:50 LR15RF-02 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 | NEUTRON MATRIX : SANDSTONE | MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 | ELECT CUTOFF : 99000 | BIT SIZE : 45.72 MM
PRESENTATION NAMEDATE = | CanAus-9239-50-DETAIL_BULKSAMPLE.G | 07/26/Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RF-02 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 | NEUTRON MATRIX : SANDSTONE | MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 | ELECT CUTOFF : 99000 | BIT SIZE : 45.72 MM
PRESENTATION NAMEDATE = | CanAus-9239-50-DETAIL_BULKSAMPLE.G | 07/26/Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RF-02 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 | NEUTRON MATRIX : SANDSTONE | MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 | ELECT CUTOFF : 99000 | BIT SIZE : 45.72 MM
PRESENTATION NAMEDATE = | CanAus-9239-50-DETAIL_BULKSAMPLE.G | 07/26/Version 3.65 JK999

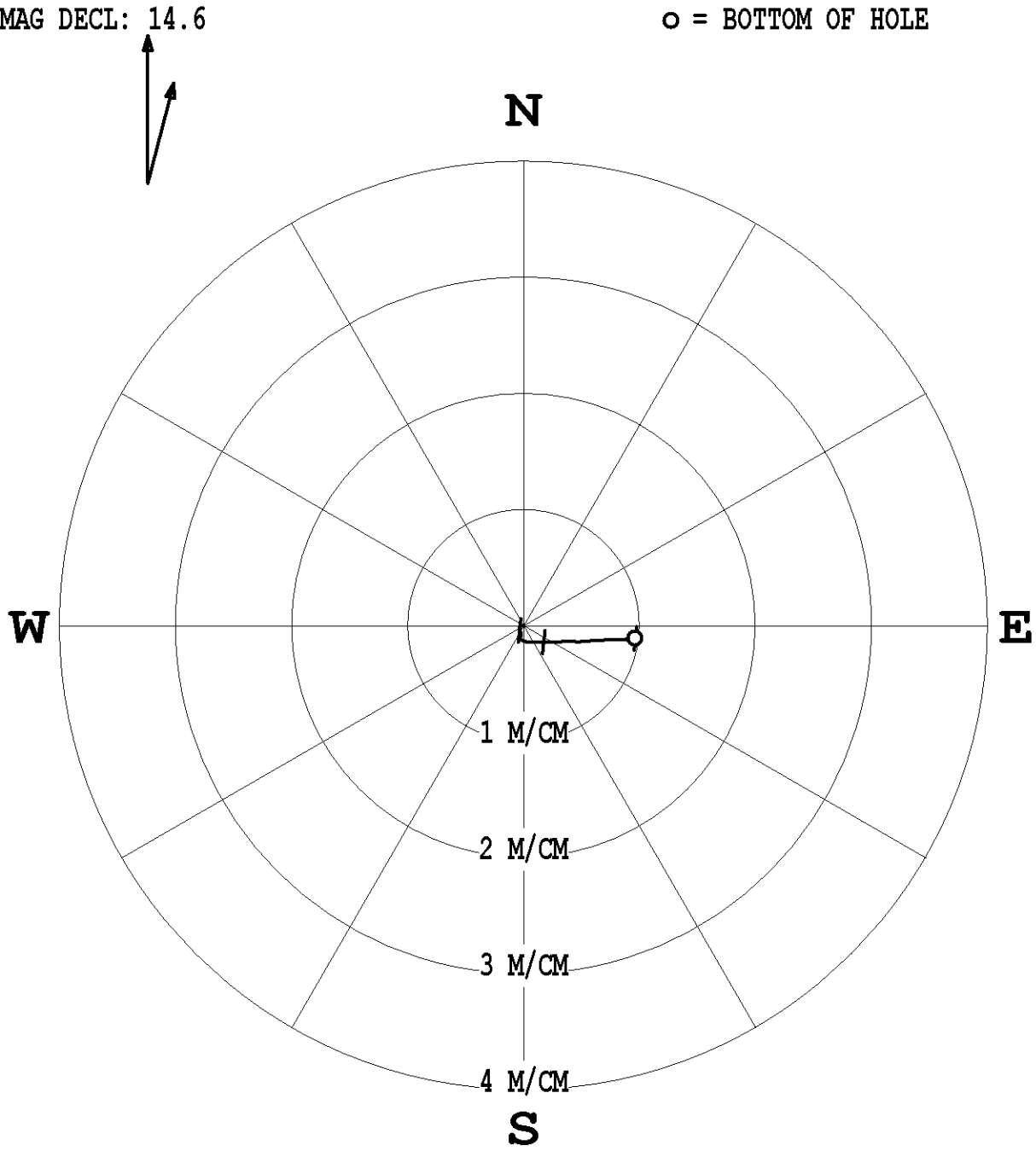
TOOL CALIBRATION : LR15RF-02 07/26/15 12:18
TOOL 9239C1 TM VERSION 5023
SERIAL NUMBER 446

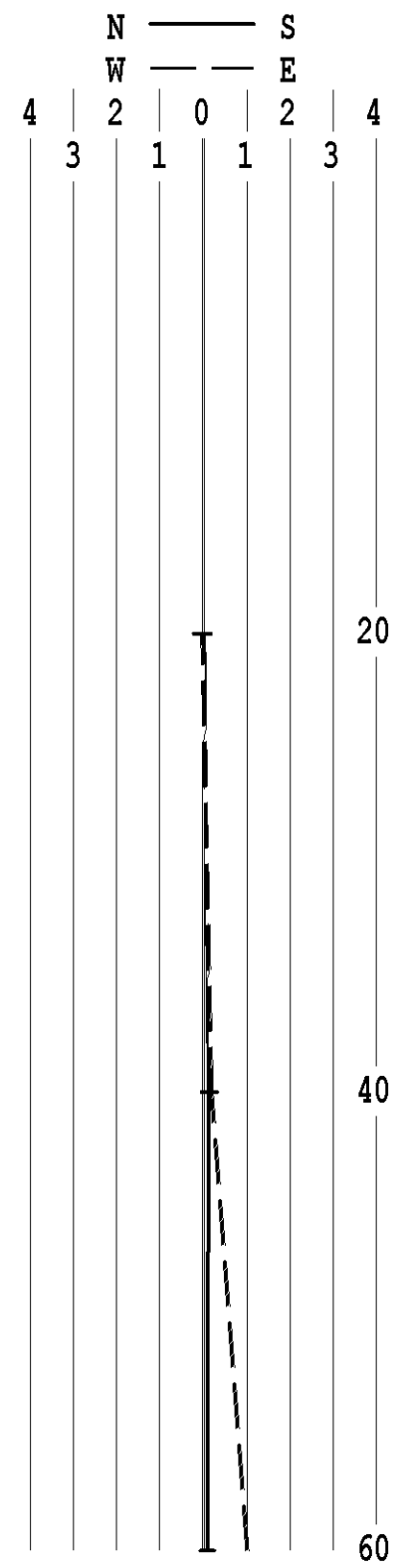
	DATE	TIME	SENSOR		STANDARD		RESPONSE [CPS]	
					Point1	Point2	Point1	Point2
1	Jul02.15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02.15	11:16:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02.15	11:08:57	CALIPER	[MM]	100.000	200.000	102969	205172
4	Jul02.15	11:37:07	DEN(LS)	[GCC]	1.620	2.612	14493	1830
5	Jul02.15	11:37:34	DEN(SS)	[GCC]	1.500	2.580	50700	21197
6	Jul06.15	11:12:18	CALIPER	[MM]	285.750	508.000	235141	491900
7	Jul02.15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17.08	13:24:14	F	[CPS]	Default		Default	
9	Nov17.08	13:21:11	K	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RF-02
DATE OF LOG: 07/26/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 59.94 M
AZIMUTH: 96.5
DISTANCE: 1.0 M
+ = 20 M INCR
o = BOTTOM OF HOLE





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CENTURY WIRELINE SE HOLE ID. : LR15RF-02
FIELD OFFICE : CENTURY DATE OF LOG : 07/26/15
DATA FROM : N/A PROBE : 9058A , 2615
MAG. DECL. : 14.600 DEPTH UNITS : METERS
LOG: LR15RF-02_07-26-15_12-01_9058A_.02_10.00_60.16_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.00	-0.00	0.00	0.0	168.8	0.5	168.8
11.00	11.00	-0.00	-0.01	0.0	249.0	0.4	271.4
12.00	12.00	-0.00	-0.01	0.0	260.9	0.4	271.2
13.00	13.00	-0.00	-0.02	0.0	261.8	0.4	257.0
14.00	14.00	-0.01	-0.03	0.0	258.5	0.3	221.1
15.00	15.00	-0.01	-0.03	0.0	251.8	0.4	217.1
16.00	16.00	-0.02	-0.04	0.0	246.9	0.4	226.7
17.00	17.00	-0.02	-0.04	0.0	244.1	0.2	186.4
18.00	18.00	-0.03	-0.04	0.0	238.2	0.3	179.8
19.00	19.00	-0.03	-0.04	0.1	230.3	0.4	179.9
20.00	20.00	-0.04	-0.04	0.1	221.3	0.7	132.9
21.00	21.00	-0.05	-0.03	0.1	210.4	0.7	148.8
22.00	22.00	-0.06	-0.03	0.1	202.4	0.6	162.7
23.00	23.00	-0.07	-0.02	0.1	197.3	0.4	218.3
24.00	24.00	-0.08	-0.02	0.1	194.9	0.4	183.3
25.00	25.00	-0.08	-0.02	0.1	196.1	0.5	228.2
26.00	26.00	-0.09	-0.03	0.1	198.5	0.4	234.6
27.00	27.00	-0.09	-0.04	0.1	201.0	0.4	216.6
28.00	28.00	-0.10	-0.03	0.1	197.8	0.7	151.2
29.00	29.00	-0.11	-0.03	0.1	194.6	0.3	183.1
30.00	30.00	-0.12	-0.02	0.1	189.6	0.6	118.8
31.00	31.00	-0.13	-0.01	0.1	185.8	0.7	132.6
32.00	32.00	-0.13	-0.00	0.1	180.3	0.7	102.9
33.00	33.00	-0.14	0.01	0.1	175.4	0.7	105.0
34.00	34.00	-0.14	0.02	0.1	171.7	0.5	109.4
35.00	35.00	-0.14	0.04	0.1	164.7	1.4	82.8
36.00	36.00	-0.14	0.06	0.2	156.7	1.0	84.9
37.00	37.00	-0.14	0.08	0.2	149.4	1.7	87.2
38.00	38.00	-0.14	0.10	0.2	143.0	1.4	87.6
39.00	39.00	-0.14	0.14	0.2	135.5	1.9	89.5
40.00	40.00	-0.14	0.17	0.2	129.2	1.8	90.0
41.00	41.00	-0.14	0.20	0.2	124.8	1.7	84.7
42.00	42.00	-0.14	0.24	0.3	120.2	2.3	90.5
43.00	43.00	-0.14	0.28	0.3	116.7	2.3	87.9
44.00	43.99	-0.14	0.31	0.3	113.9	1.7	87.0
45.00	44.99	-0.14	0.33	0.4	112.1	0.8	71.6
46.00	45.99	-0.13	0.35	0.4	110.7	1.7	89.3
47.00	46.99	-0.13	0.39	0.4	109.1	1.9	92.2
48.00	47.99	-0.14	0.42	0.4	107.8	3.0	95.0
49.00	48.99	-0.14	0.46	0.5	106.6	2.0	92.5
50.00	49.99	-0.14	0.49	0.5	105.7	0.8	76.0
51.00	50.99	-0.13	0.51	0.5	104.6	2.7	87.9
52.00	51.99	-0.13	0.56	0.6	103.4	1.9	86.5
53.00	52.99	-0.13	0.58	0.6	102.5	2.2	84.8
54.00	53.99	-0.13	0.63	0.6	101.5	2.9	89.6
55.00	54.99	-0.13	0.67	0.7	100.6	2.2	83.8
56.00	55.99	-0.12	0.71	0.7	99.6	3.8	87.0
57.00	56.98	-0.12	0.78	0.8	98.8	3.4	88.6
58.00	57.98	-0.12	0.84	0.8	98.1	3.8	88.7
59.00	58.98	-0.12	0.90	0.9	97.3	3.5	86.0
60.00	59.98	-0.11	0.96	1.0	96.5	0.0	0.0
60.14	60.12	-0.11	0.96	1.0	96.5	0.0	0.0

COMPANY CENTURY WIRELINE SERVICES
WELL LR15RF-03
WELL EXT
FIELD N/A
COUNTY LOOP RIDGE
PROVINCE B.C.
COUNTRY CANADA
API NO. N/A

CENTURY WIRELINE SERVICES

COMPENSATED DENSITY GAMMA-CALIPER-RES
LR15RF-03

COMPANY : CENTURY WIRELINE SERVICES
WELL : LR15RF-03
WELL EXT :
FIELD : N/A
COUNTY : LOOP RIDGE
PROVINCE : B.C.
COUNTRY : CANADA
API NO. : N/A
UNIQ ID : N/A
LSD : N/A SECTION: N/A TOWNSHIP: N/A RANGE: N/A
LOCATION : N/A
LAT GPS UTM N/A
LON GPS UTM N/A
Version 3.65 JK999

PERMANENT DATUM	GL	Elevations:		Other Services:
DRL MEASURED FROM	GL	KB	N/A M	DEV
LOG MEASURED FROM	GL	DF	N/A M	
ELEV. PERM. DATUM	GL M	GL	N/A M	

DATE	07/26/15 10:51
DEPTH DRILLER	61.00 M
DEPTH LOGGER	60.24 M
FIRST READING	60.24 M
LAST READING	3.25 M
BIT SIZE	457.20 MM
CASING -- DRILLER	9.00 M
CASING -- LOGGER	9.34 M
CASING O.D.	508.00 MM
CASING TYPE	SURFACE
FLUID TYPE	H2O
FLUID DENSITY	1.00 G/CC
FLUID VISCOSITY	N/A
FLUID PH	N/A
MUD SOURCE	N/A
RM @ MEAS TEMP	N/A @ N/A C
RMF @ MEAS TEMP	N/A @ N/A C
RMC @ MEAS TEMP	N/A @ N/A C
CIRC STOPPED	N/A
RIG NUMBER	FORACO
RECORDED BY	S. O'DONNELL
WITNESSED BY	D. THOMPSON
REMARKS 1	CALIPER STUCK @ 3.07m
REMARKS 2	
REMARKS 3	

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY RESISTIVITY 1:100 LR15RF-03 07/26/15

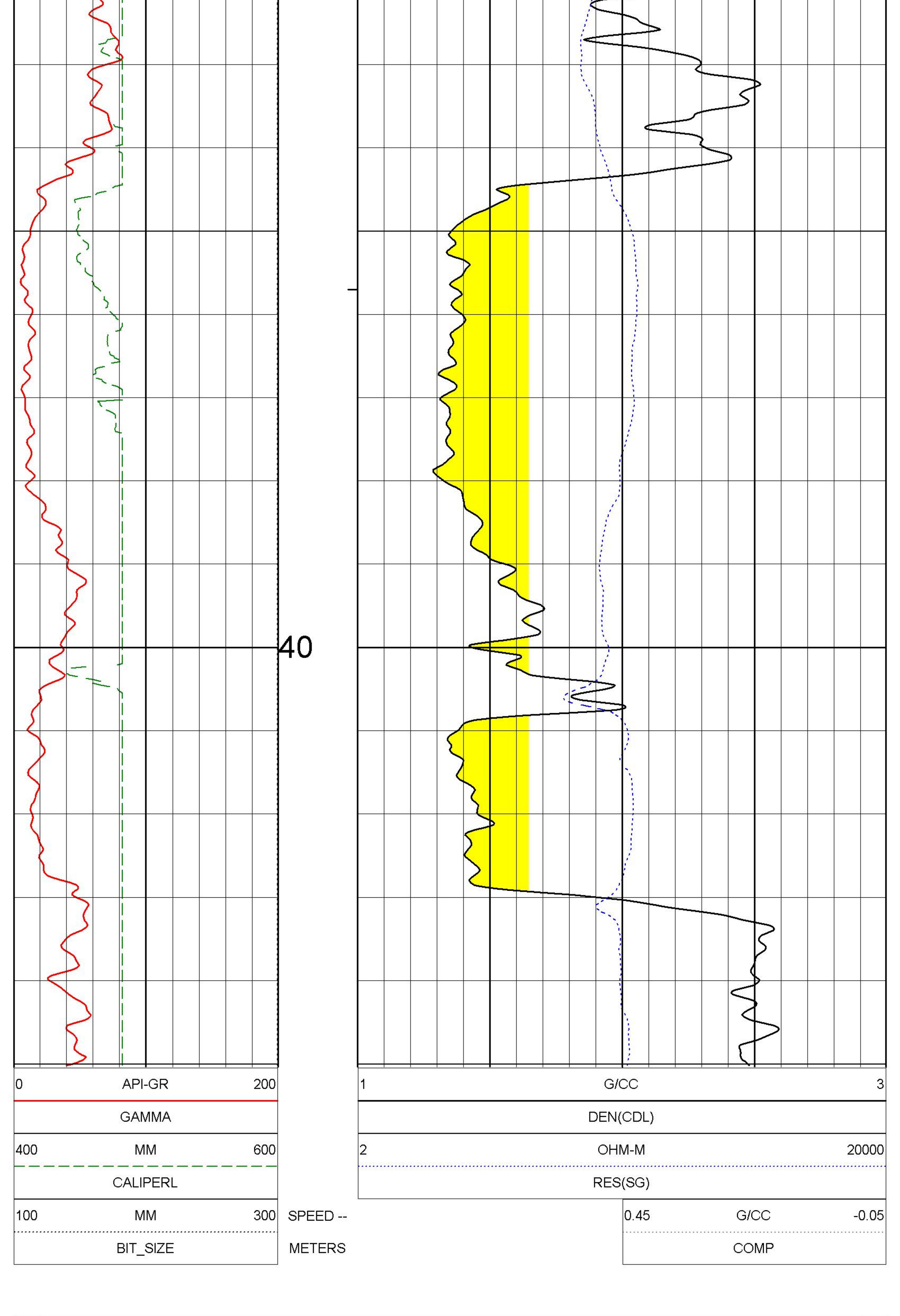
LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015 Version 3.65 JK999

DENSITY RESISTIVITY 1:100 LR15RF-03 07/26/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015 Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RF-03 07/26/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

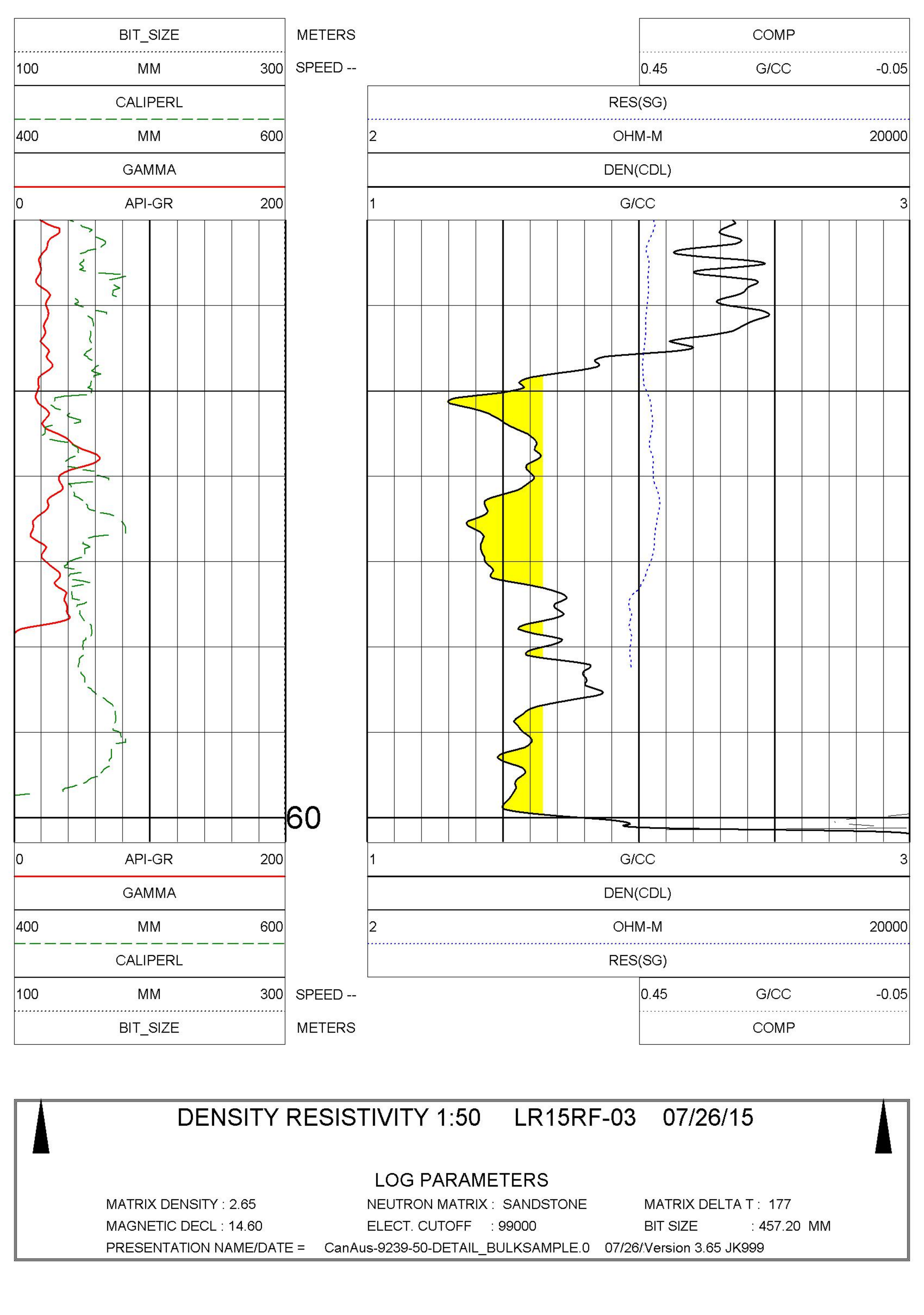


DENSITY RESISTIVITY 1:50 LR15RF-03 07/26/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RF-03 07/26/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999



DENSITY RESISTIVITY 1:50 LR15RF-03 07/26/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

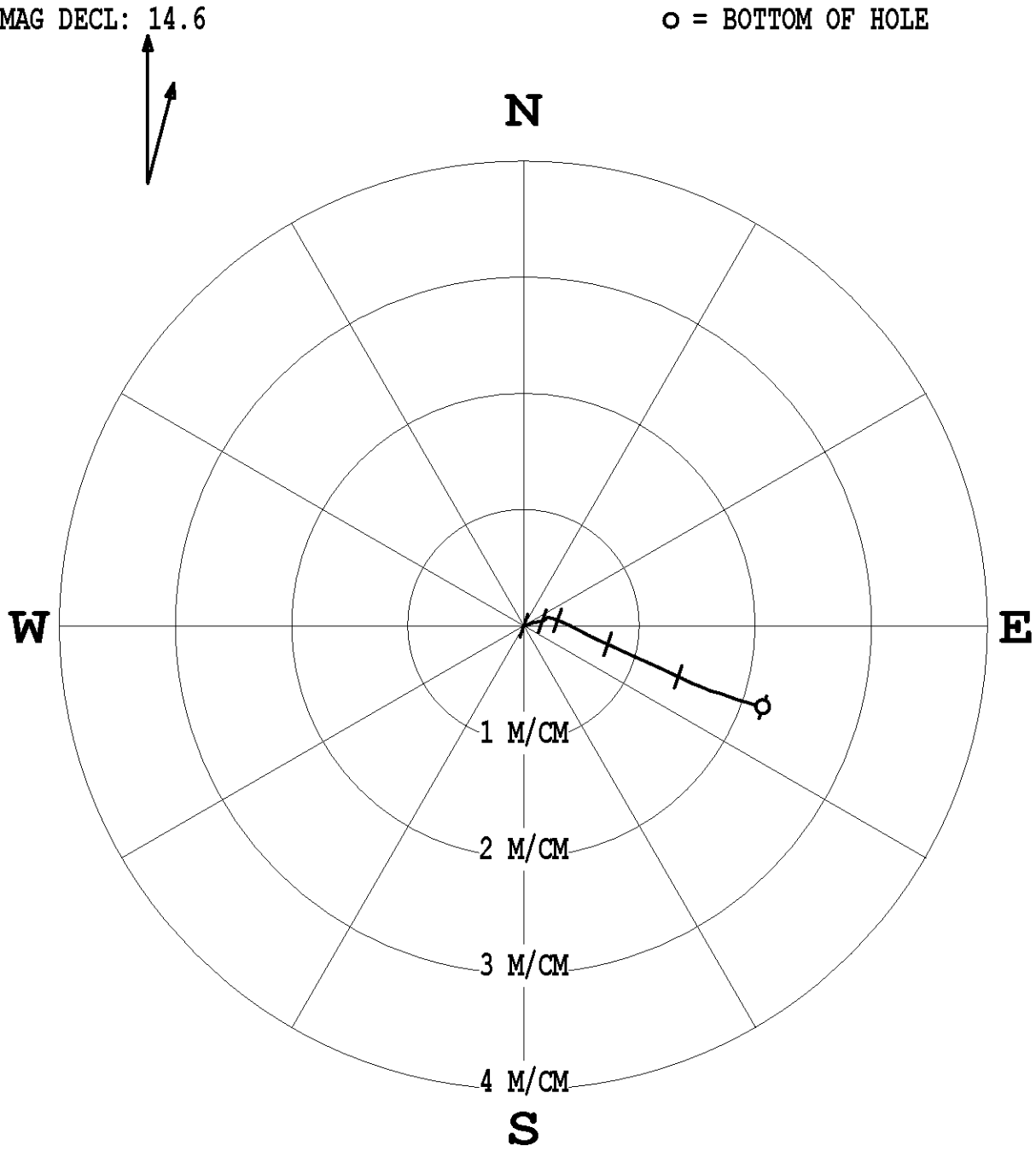
TOOL CALIBRATION LR15RF-03 07/26/15 10:51
TOOL 9239C1 TM VERSION 5023
SERIAL NUMBER 449

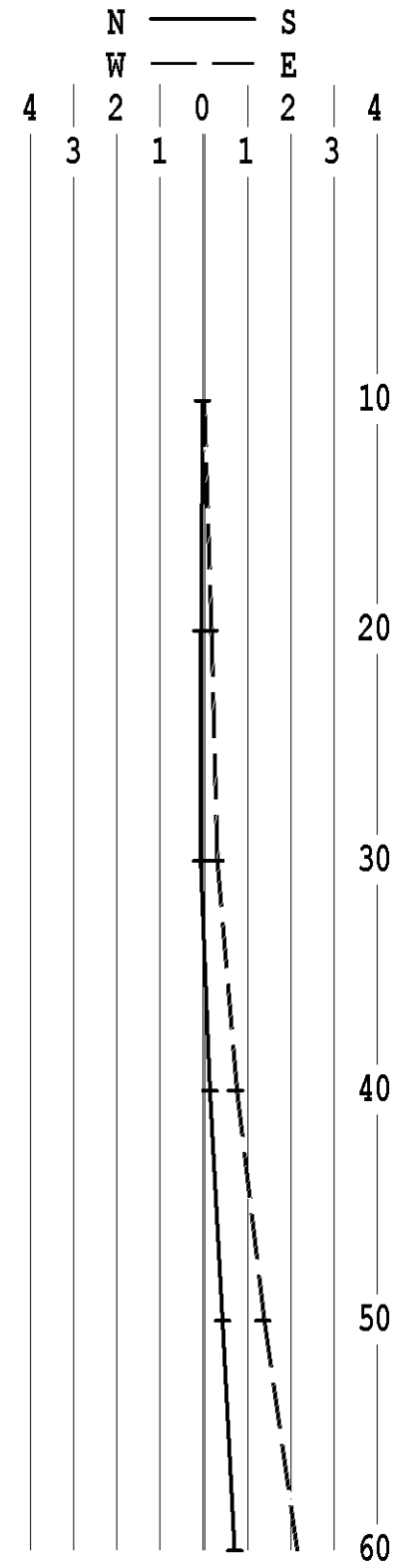
					STANDARD		RESPONSE [CPS]	
	DATE	TIME	SENSOR		Point1	Point2	Point1	Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul26,15	10:14:19	CALIPERL	[MM]	285.750	482.600	235141	476974
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RF-03
DATE OF LOG: 07/26/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 59.91 M
AZIMUTH: 108.9
DISTANCE: 2.2 M
+ = 10 M INCR
o = BOTTOM OF HOLE





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CENTURY WIRELINE SE HOLE ID. : LR15RF-03
FIELD OFFICE : CENTURY DATE OF LOG : 07/26/15
DATA FROM : N/A PROBE : 9058A , 2615
MAG. DECL. : 14.600 DEPTH UNITS : METERS
LOG: LR15RF-03_07-26-15_10-34_9058A_.02_10.00_60.16_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.00	-0.00	0.00	0.0	101.3	1.0	101.3
11.00	11.00	-0.00	0.01	0.0	98.9	0.9	65.0
12.00	12.00	0.01	0.03	0.0	78.7	0.8	57.3
13.00	13.00	0.01	0.04	0.0	71.9	1.0	66.8
14.00	14.00	0.02	0.06	0.1	72.1	0.9	71.3
15.00	15.00	0.02	0.07	0.1	72.4	0.9	76.9
16.00	16.00	0.03	0.09	0.1	73.3	0.8	66.1
17.00	17.00	0.03	0.11	0.1	74.2	1.3	86.0
18.00	18.00	0.03	0.12	0.1	74.7	1.1	84.6
19.00	19.00	0.04	0.14	0.1	75.6	0.8	69.1
20.00	20.00	0.04	0.16	0.2	76.0	0.8	75.9
21.00	21.00	0.04	0.17	0.2	75.4	0.5	57.9
22.00	22.00	0.05	0.18	0.2	75.1	0.9	49.3
23.00	23.00	0.05	0.18	0.2	74.3	0.7	47.5
24.00	24.00	0.06	0.19	0.2	73.0	0.4	356.0
25.00	25.00	0.06	0.19	0.2	71.0	0.5	71.0
26.00	26.00	0.07	0.21	0.2	71.7	1.2	86.5
27.00	27.00	0.07	0.23	0.2	73.5	1.4	98.5
28.00	28.00	0.06	0.24	0.3	75.3	0.6	101.9
29.00	29.00	0.06	0.26	0.3	78.2	1.5	108.4
30.00	30.00	0.05	0.29	0.3	81.0	1.9	103.0
31.00	31.00	0.04	0.32	0.3	83.7	2.0	119.1
32.00	32.00	0.02	0.35	0.4	86.5	2.1	108.4
33.00	33.00	0.01	0.39	0.4	89.2	2.6	113.3
34.00	33.99	-0.01	0.42	0.4	91.4	1.8	125.6
35.00	34.99	-0.03	0.46	0.5	93.9	3.6	118.4
36.00	35.99	-0.06	0.51	0.5	96.4	3.0	119.3
37.00	36.99	-0.08	0.56	0.6	98.5	3.7	116.7
38.00	37.99	-0.11	0.61	0.6	100.2	3.8	119.4
39.00	38.99	-0.14	0.67	0.7	101.5	3.3	114.2
40.00	39.98	-0.16	0.72	0.7	102.5	3.2	114.0
41.00	40.98	-0.19	0.78	0.8	103.5	3.2	115.9
42.00	41.98	-0.21	0.84	0.9	104.4	3.6	120.2
43.00	42.98	-0.24	0.90	0.9	105.1	4.3	114.9
44.00	43.98	-0.27	0.96	1.0	105.7	4.0	113.8
45.00	44.97	-0.30	1.03	1.1	106.2	4.2	113.0
46.00	45.97	-0.33	1.09	1.1	106.7	3.9	115.6
47.00	46.97	-0.36	1.15	1.2	107.1	3.8	113.5
48.00	47.97	-0.38	1.21	1.3	107.5	3.6	114.6
49.00	48.96	-0.41	1.27	1.3	107.9	3.8	114.7
50.00	49.96	-0.44	1.33	1.4	108.2	3.9	108.1
51.00	50.96	-0.47	1.39	1.5	108.6	3.9	113.6
52.00	51.96	-0.50	1.45	1.5	108.9	3.6	108.9
53.00	52.96	-0.52	1.51	1.6	109.0	4.5	112.5
54.00	53.95	-0.55	1.58	1.7	109.2	3.5	116.4
55.00	54.95	-0.57	1.63	1.7	109.2	4.6	109.0
56.00	55.95	-0.60	1.73	1.8	109.0	5.1	110.0
57.00	56.94	-0.63	1.81	1.9	109.1	5.3	108.1
58.00	57.94	-0.65	1.90	2.0	109.0	5.2	104.4
59.00	58.93	-0.68	1.98	2.1	108.9	4.6	106.8
60.00	59.93	-0.70	2.06	2.2	108.9	0.0	0.0
60.14	60.07	-0.70	2.06	2.2	108.9	0.0	0.0

COMPENSATED DENSITY
GAMMA-CALIPER-RES
LR15RF-04

Century WIRELINE SERVICES

COMPANY	CENTURY WIRELINE SERVICES
WELL	LR15RF-04
WELL EXT	N/A
FIELD	LOOP RIDGE
COUNTY	B.C.
PROVINCE	CANADA
COUNTRY	N/A
API NO.	

COMPANY	: CENTURY WIRELINE SERVICES
WELL	: LR15RF-04
WELL EXT	:
FIELD	: N/A
COUNTY	: LOOP RIDGE
PROVINCE	: B.C.
COUNTRY	: CANADA
API NO.	: N/A
UNIQ ID	: N/A
LSD	: N/A SECTION: N/A TOWNSHIP: N/A RANGE: N/A
LOCATION	: N/A
LAT GPS UTM	N/A
LON GPS UTM	N/A

Version 3.65 JK999

PERMANENT DATUM	GL		Elevations:			Other Services:
DRL MEASURED FROM	GL		KB	N/A	M	DEV
LOG MEASURED FROM	GL		DF	N/A	M	
ELEV. PERM. DATUM	GL	M	GL	N/A	M	

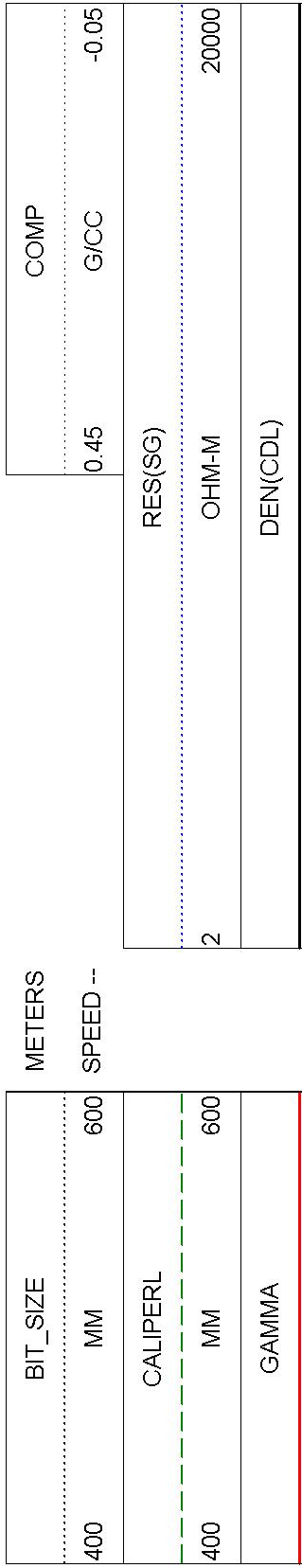
DATE	07/26/15 09:48			
DEPTH DRILLER	72.20	M		
DEPTH LOGGER	71.52	M		
FIRST READING	71.52	M		
LAST READING	0.00	M		
BIT SIZE	45.72	CM		
CASING -- DRILLER	9.00	M		
CASING -- LOGGER	8.70	M		
CASING O.D.	508.00	MM		
CASING TYPE	SURFACE			
FLUID TYPE	H2O			
FLUID DENSITY	1.00	G/CC		
FLUID VISCOSITY	N/A			
FLUID PH	N/A			
MUD SOURCE	N/A			
RM @ MEAS TEMP	N/A @ N/A C			
RMF @ MEAS TEMP	N/A @ N/A C			
RMC @ MEAS TEMP	N/A @ N/A C			
CIRC STOPPED	N/A			
RIG NUMBER	FORACO			
RECORDED BY	S. O'DONNELL			
WITNESSED BY	D. THOMPSON			
REMARKS 1				
REMARKS 2				
REMARKS 3				

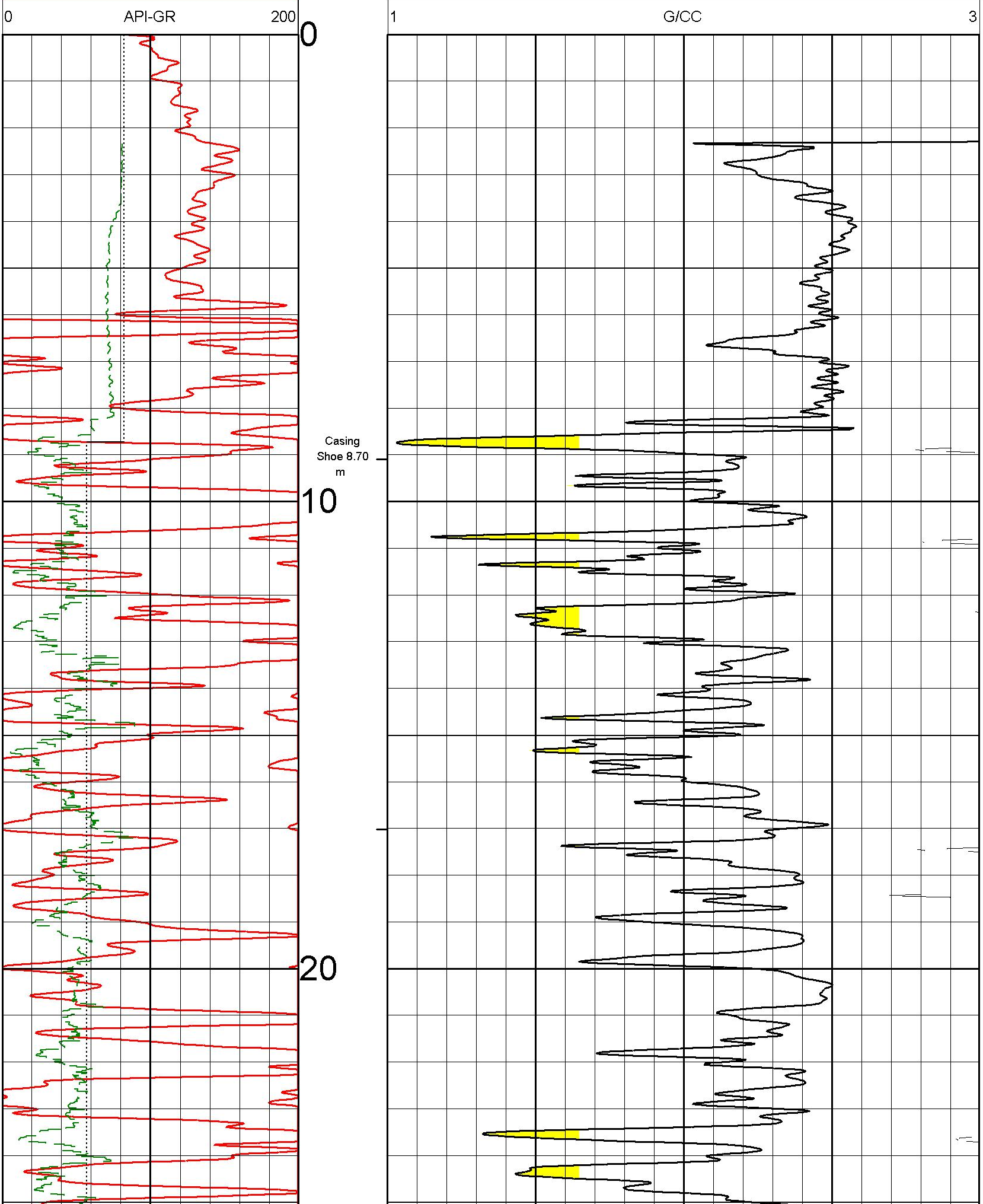
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY RESISTIVITY 1:100 LR15RF-04 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 45.72 MM	
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015		Version 3.65 JK999	

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API-GR
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G/CC
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10
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Casing
Shoe 8.70
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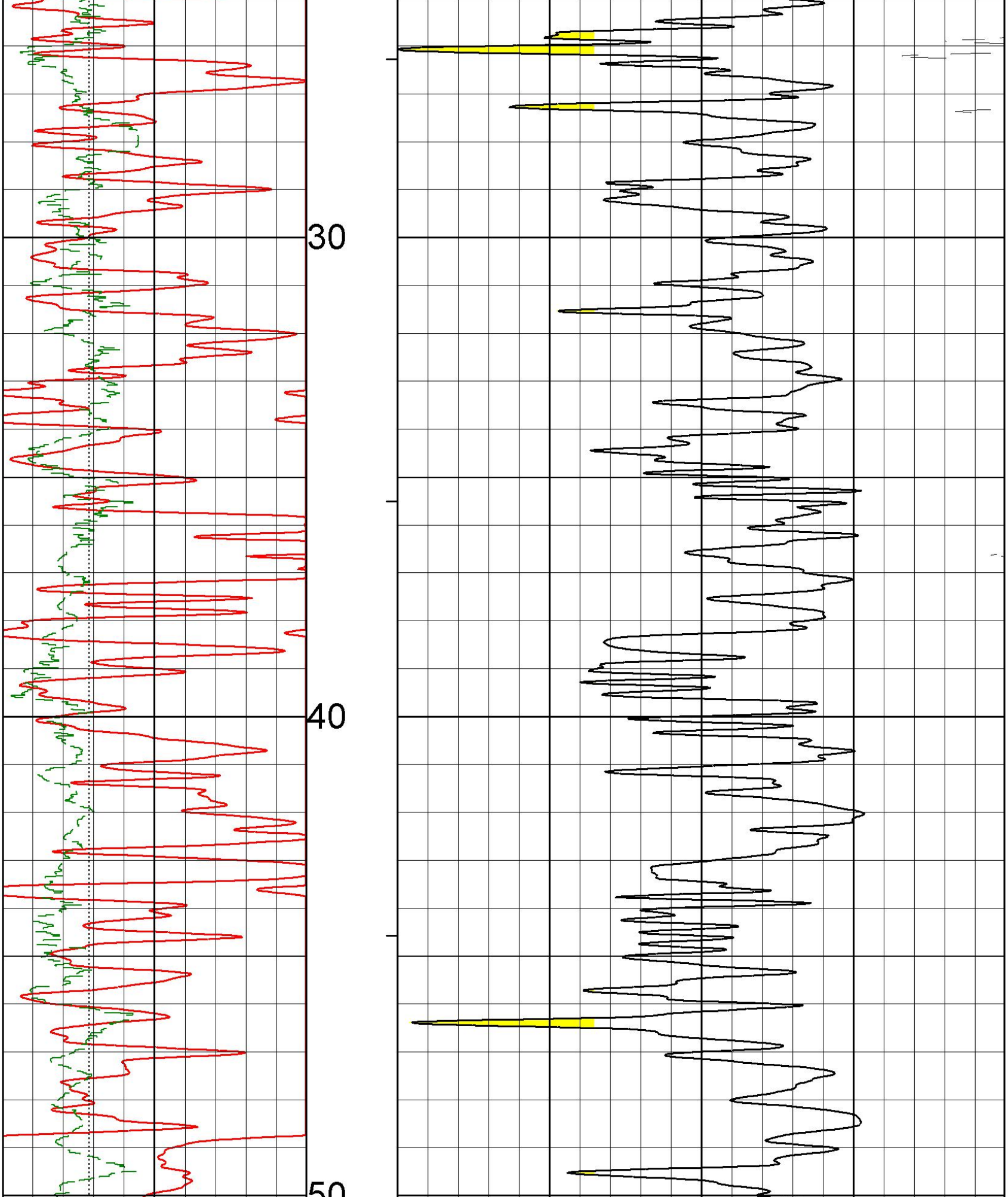
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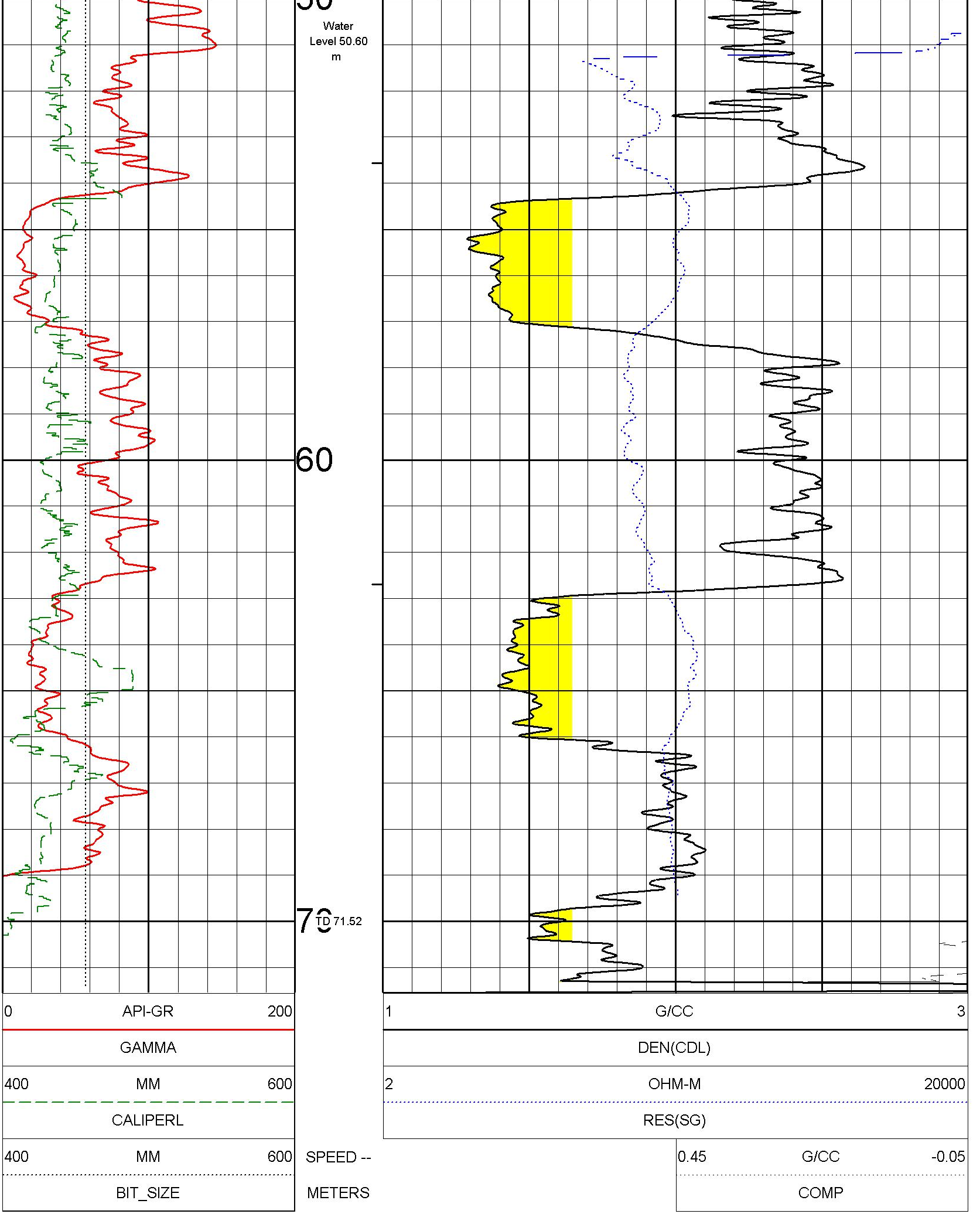
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Water
Level 50.60
m
60
70
TD 71.52
0
API-GR
200
GAMMA
400
MM
600
CALIPERL
400
MM
600
BIT_SIZE
SPEED --
METERS
1
G/CC
3
DEN(CDL)
2
OHM-M
20000
RES(SG)
0.45
G/CC
-0.05
COMP

DENSITY RESISTIVITY 1:100 LR15RF-04 07/26/15

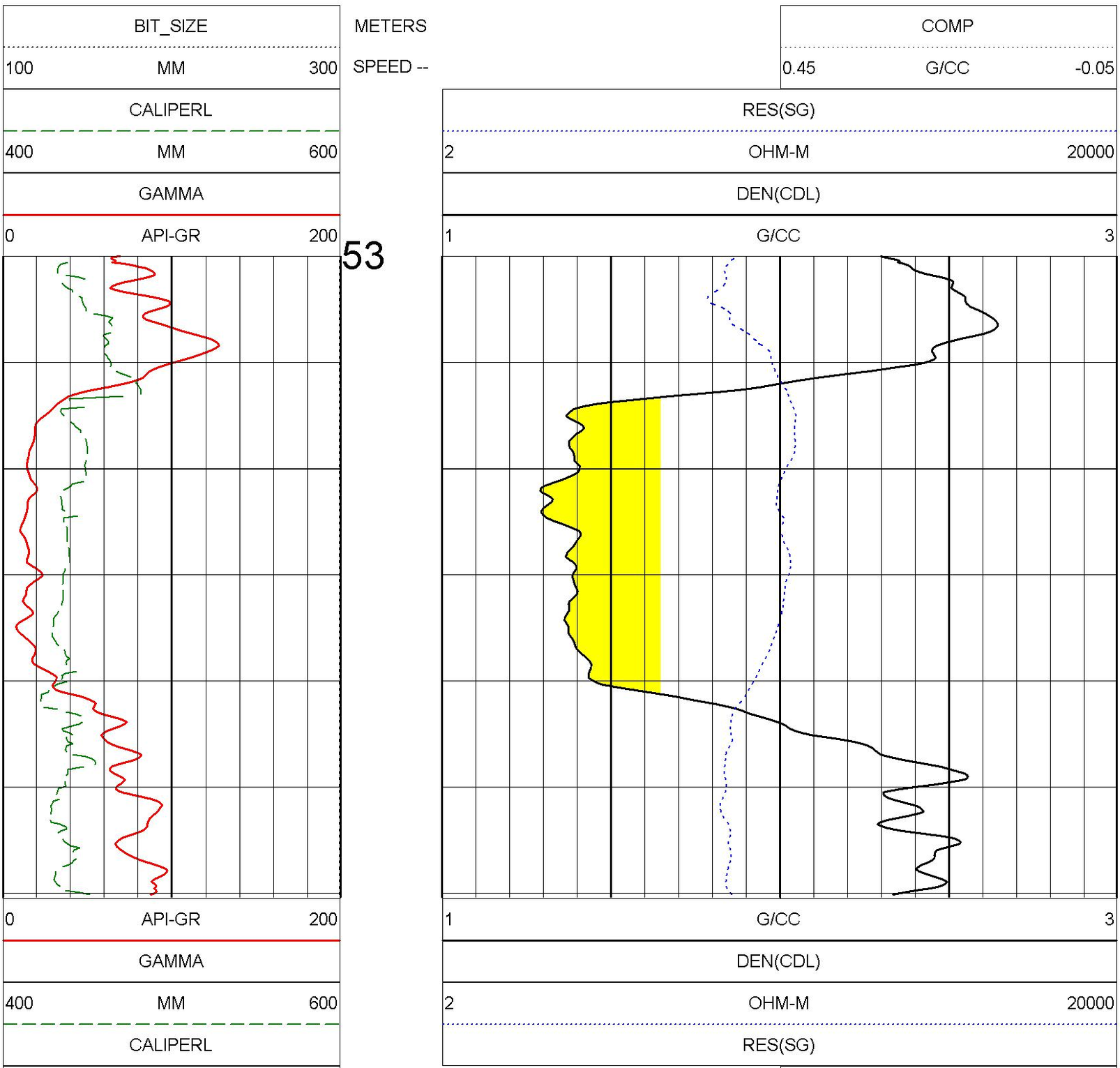
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 45.72 MM
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015		Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RF-04 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 45.72 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/		Version 3.65 JK999



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BIT_SIZE			METERS	COMP		

DENSITY RESISTIVITY 1:50 LR15RF-04 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 45.72 MM

PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RF-04 07/26/15

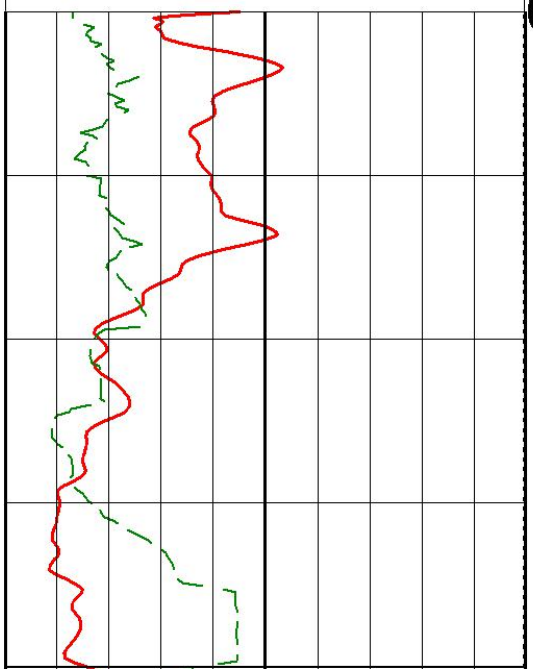
LOG PARAMETERS

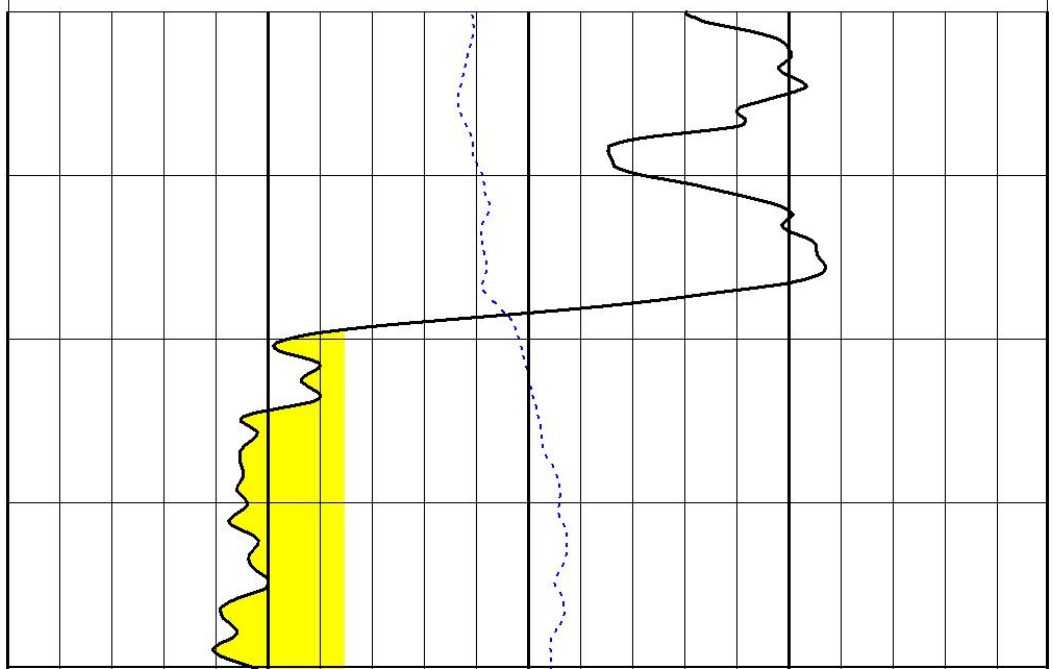
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

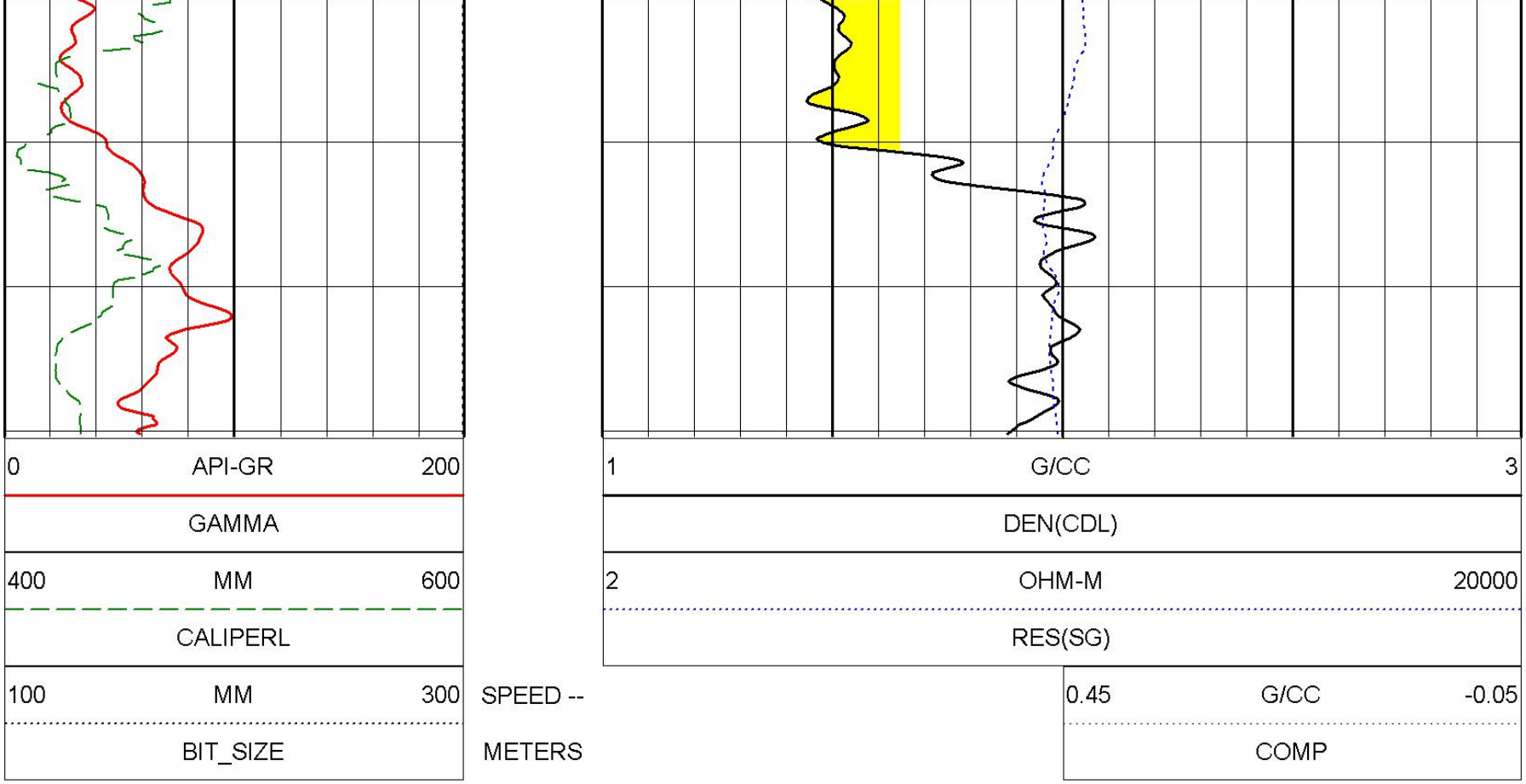
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 45.72 MM

PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

BIT_SIZE			METERS	COMP		
100	MM	300	SPEED --	0.45	G/CC	-0.05
CALIPERL				RES(SG)		
400	MM	600		2	OHM-M	20000
GAMMA				DEN(CDL)		
0	API-GR	200		1	G/CC	3







DENSITY RESISTIVITY 1:50 LR15RF-04 07/26/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 45.72 MM

PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/.Version 3.65 JK999

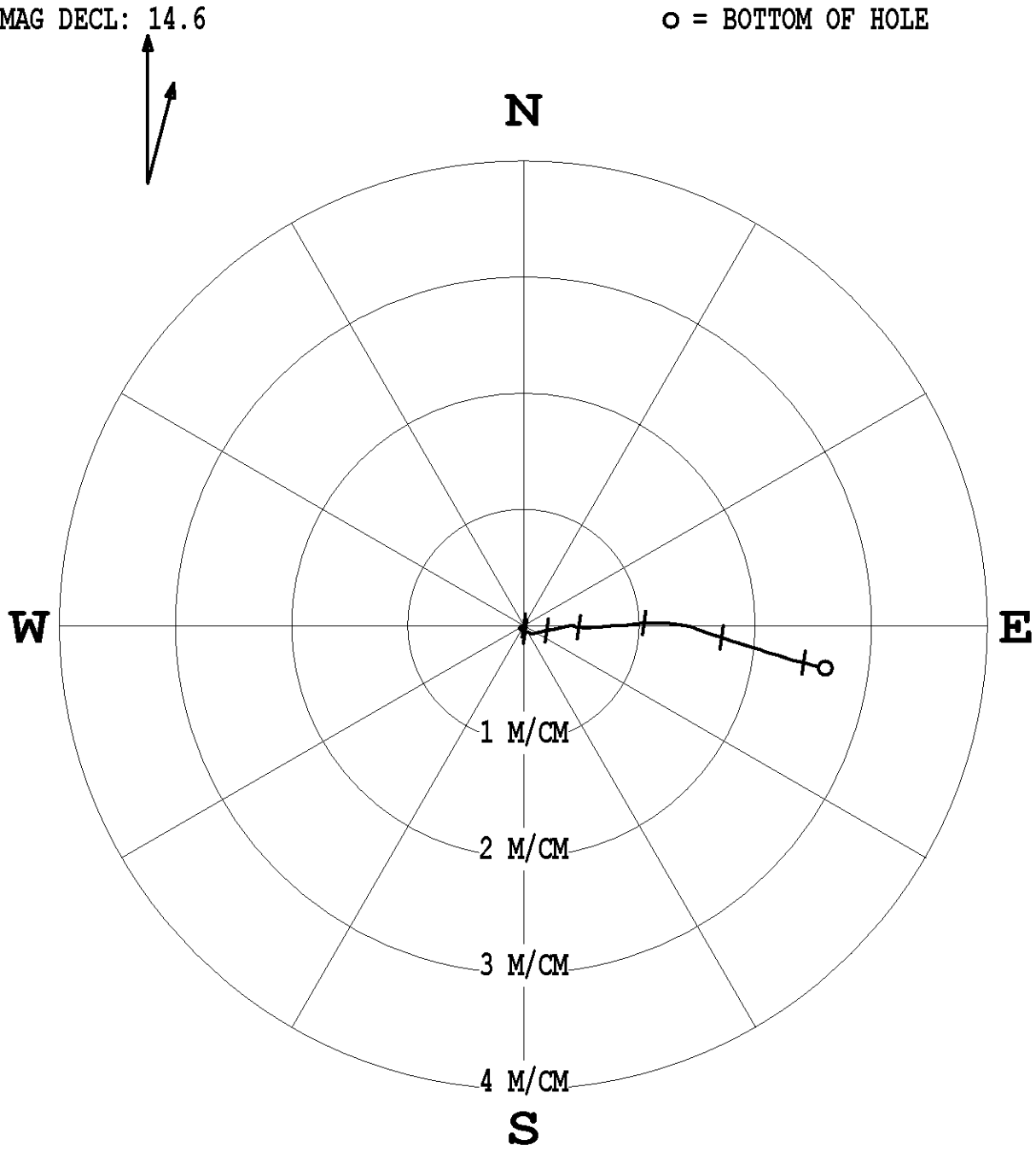
TOOL CALIBRATION LR15RF-04 07/26/15 09:48
TOOL 9239C1 TM VERSION 5023
SERIAL NUMBER 449

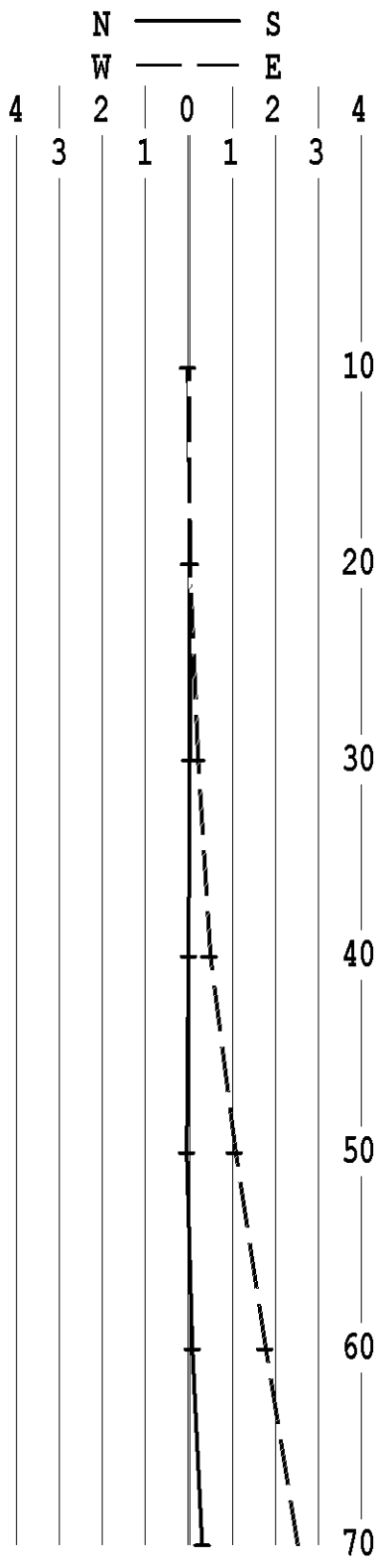
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul26,15	15:45:35	CALIPERL	[MM]	285.750	508.000	235141	410950
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RF-02
DATE OF LOG: 07/26/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 71.83 M
AZIMUTH: 98.1
DISTANCE: 2.6 M
+ = 10 M INCR
o = BOTTOM OF HOLE

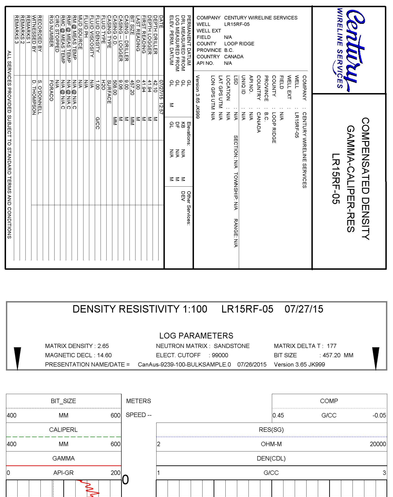




* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CENTURY WIRELINE SE HOLE ID. : LR15RF-02
FIELD OFFICE : CENTURY DATE OF LOG : 07/26/15
DATA FROM : N/A PROBE : 9058A , 2615
MAG. DECL. : 14.600 DEPTH UNITS : METERS
LOG: LR15RF-02_07-26-15_09-20_9058A_.02_10.00_72.12_DEVI.log

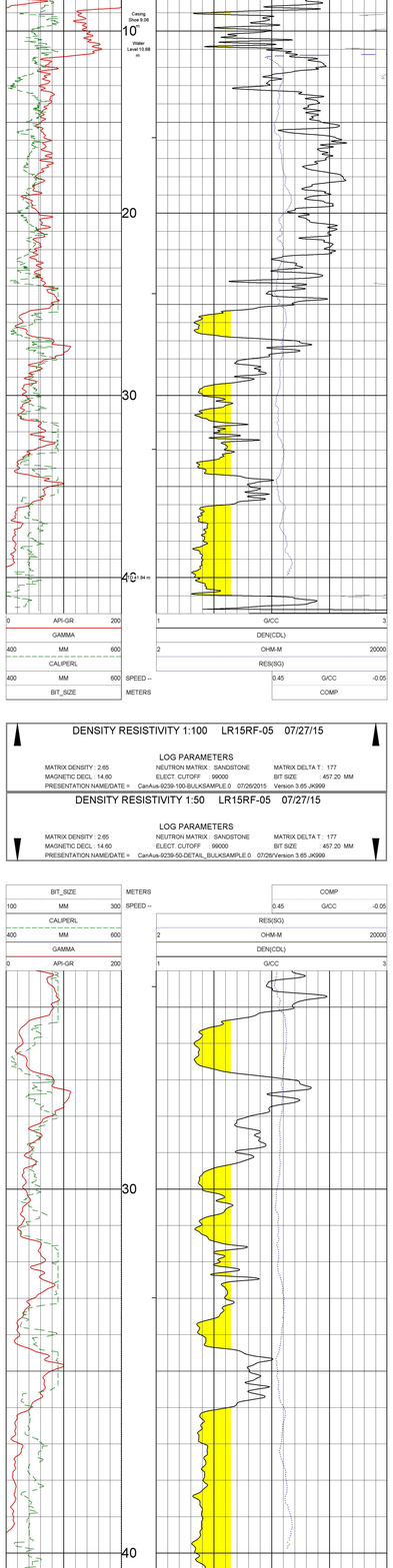
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.00	0.00	-0.00	0.0	284.0	0.6	284.0
11.00	11.00	-0.00	-0.01	0.0	263.6	0.5	256.7
12.00	12.00	-0.00	-0.02	0.0	260.6	0.5	247.8
13.00	13.00	-0.01	-0.03	0.0	255.0	0.6	221.1
14.00	14.00	-0.02	-0.03	0.0	245.4	0.5	195.9
15.00	15.00	-0.02	-0.04	0.0	235.7	0.7	191.1
16.00	16.00	-0.03	-0.03	0.0	223.8	0.4	110.9
17.00	17.00	-0.04	-0.02	0.0	211.7	0.5	152.2
18.00	18.00	-0.04	-0.01	0.0	198.4	0.7	128.2
19.00	19.00	-0.05	-0.00	0.1	182.6	0.9	109.4
20.00	20.00	-0.05	0.01	0.1	167.7	0.7	51.5
21.00	21.00	-0.05	0.02	0.1	156.9	0.7	115.6
22.00	22.00	-0.06	0.03	0.1	149.7	0.7	113.4
23.00	23.00	-0.06	0.04	0.1	143.6	0.6	104.1
24.00	24.00	-0.07	0.05	0.1	140.6	0.6	144.5
25.00	25.00	-0.07	0.07	0.1	134.2	1.1	95.4
26.00	26.00	-0.07	0.09	0.1	125.9	1.3	82.1
27.00	27.00	-0.06	0.12	0.1	118.2	1.9	64.3
28.00	28.00	-0.06	0.14	0.2	111.4	1.7	87.6
29.00	29.00	-0.05	0.17	0.2	106.3	1.4	80.9
30.00	30.00	-0.04	0.20	0.2	102.5	1.5	86.5
31.00	31.00	-0.04	0.23	0.2	99.4	2.0	82.6
32.00	32.00	-0.03	0.26	0.3	96.9	2.2	76.9
33.00	33.00	-0.02	0.30	0.3	94.6	2.2	73.2
34.00	33.99	-0.02	0.34	0.3	92.6	1.8	72.5
35.00	34.99	-0.01	0.37	0.4	91.0	2.3	84.7
36.00	35.99	0.00	0.40	0.4	89.9	1.5	66.4
37.00	36.99	0.00	0.42	0.4	89.7	0.7	102.7
38.00	37.99	-0.00	0.43	0.4	90.3	0.3	137.0
39.00	38.99	-0.01	0.44	0.4	91.1	1.2	113.7
40.00	39.99	-0.01	0.47	0.5	91.7	3.0	90.4
41.00	40.99	-0.02	0.52	0.5	92.1	2.7	100.8
42.00	41.99	-0.02	0.58	0.6	91.8	3.4	82.0
43.00	42.99	-0.02	0.63	0.6	91.4	2.7	84.7
44.00	43.99	-0.01	0.67	0.7	90.9	2.9	77.9
45.00	44.99	-0.01	0.73	0.7	90.4	3.8	87.6
46.00	45.98	-0.00	0.80	0.8	90.0	4.1	84.1
47.00	46.98	0.00	0.88	0.9	89.8	3.7	87.5
48.00	47.98	0.01	0.93	0.9	89.4	3.2	73.7
49.00	48.98	0.02	0.98	1.0	89.0	3.1	86.3
50.00	49.98	0.02	1.03	1.0	88.8	2.7	90.0
51.00	50.97	0.02	1.10	1.1	88.8	4.0	89.4
52.00	51.97	0.02	1.18	1.2	88.9	5.2	90.3
53.00	52.97	0.02	1.26	1.3	89.2	5.3	93.0
54.00	53.96	0.01	1.35	1.3	89.8	4.7	99.0
55.00	54.96	-0.01	1.42	1.4	90.2	3.6	100.0
56.00	55.96	-0.02	1.46	1.5	90.7	2.7	110.9
57.00	56.96	-0.04	1.51	1.5	91.5	2.9	108.8
58.00	57.96	-0.06	1.56	1.6	92.1	3.1	111.4
59.00	58.95	-0.08	1.62	1.6	92.8	4.5	104.9
60.00	59.95	-0.10	1.70	1.7	93.4	4.7	108.0
61.00	60.95	-0.13	1.77	1.8	94.1	3.6	110.2
62.00	61.95	-0.14	1.83	1.8	94.5	3.8	102.2
63.00	62.94	-0.17	1.90	1.9	95.1	4.9	108.2
64.00	63.94	-0.19	1.99	2.0	95.6	4.9	107.0
65.00	64.94	-0.22	2.06	2.1	96.1	4.3	114.2
66.00	65.93	-0.24	2.13	2.1	96.5	3.6	105.0
67.00	66.93	-0.26	2.19	2.2	96.7	3.6	108.5
68.00	67.93	-0.28	2.26	2.3	97.1	4.2	110.1
69.00	68.93	-0.30	2.33	2.3	97.4	4.2	105.1
70.00	69.92	-0.32	2.41	2.4	97.5	4.9	104.1
71.00	70.92	-0.34	2.50	2.5	97.8	6.3	103.5
72.00	71.91	-0.37	2.60	2.6	98.1	0.0	0.0
72.10	72.01	-0.37	2.60	2.6	98.1	0.0	0.0



DENSITY RESISTIVITY 1:100 LR15RF-05 07/27/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015 Version 3.65 JK999



DENSITY RESISTIVITY 1:100 LR15RF-05 07/27/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015 Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RF-05 07/27/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RF-05 07/27/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

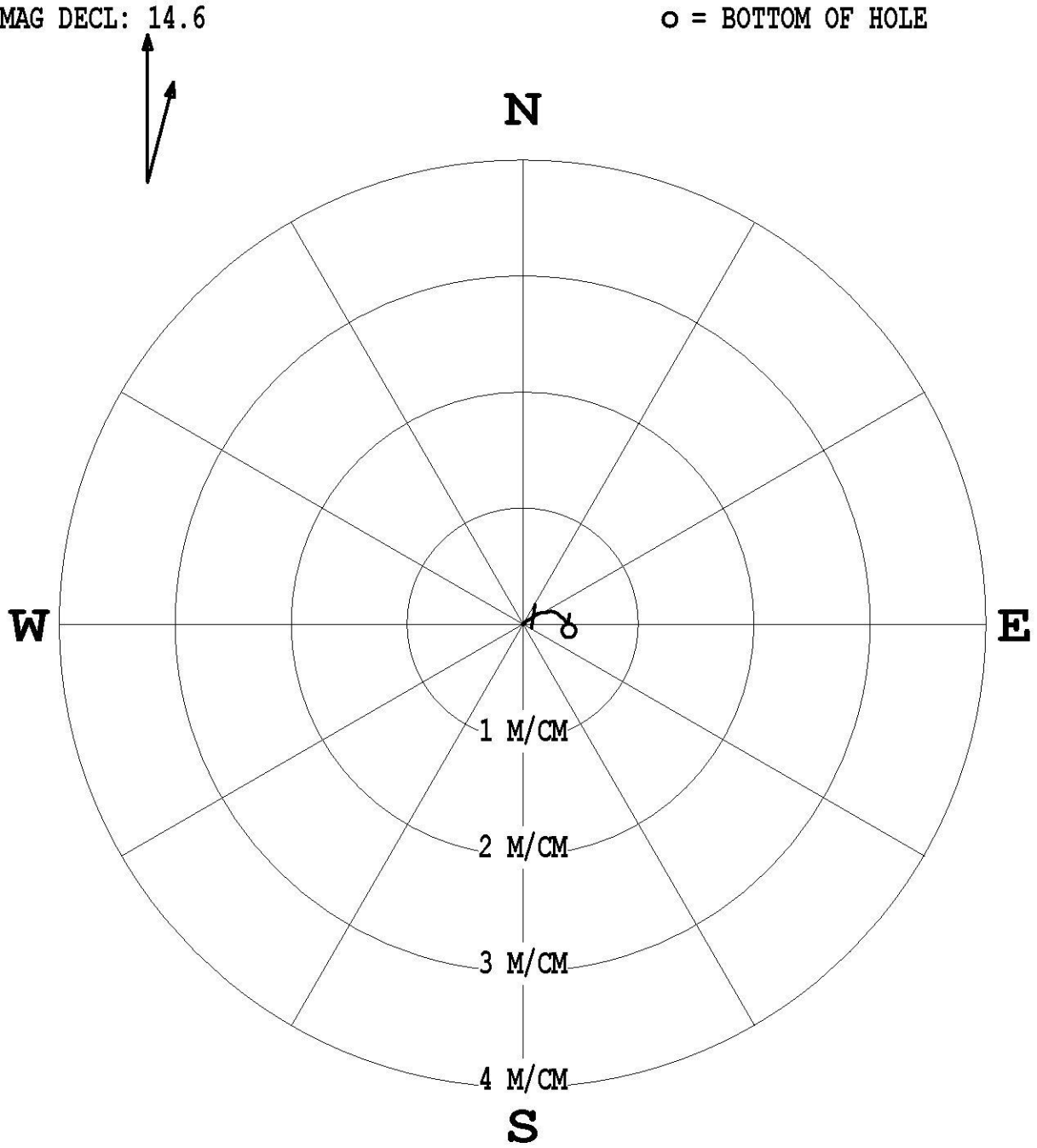
TOOL CALIBRATION LR15RF-05 07/27/15 12:57
TOOL 9259C1 TM VERSION 5023
SERIAL NUMBER 449

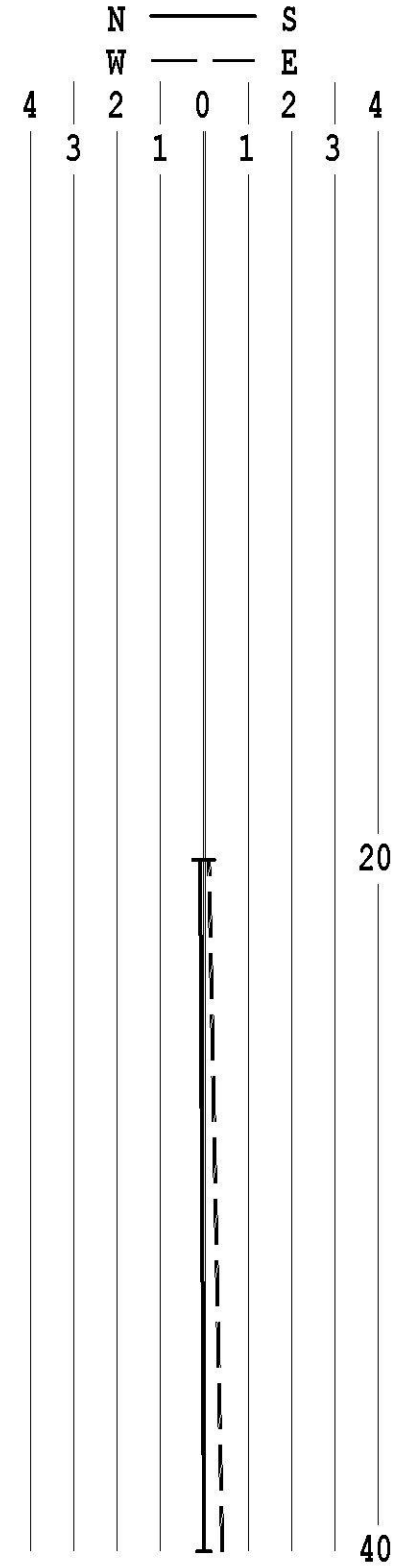
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul27,15	14:46:45	CALIPER1	[MM]	285.750	508.000	235141	481500
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RF-05
DATE OF LOG: 07/27/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 41.79 M
AZIMUTH: 99.0
DISTANCE: 0.4 M
+ = 20 M INCR
o = BOTTOM OF HOLE





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CENTURY WIRELINE SE
FIELD OFFICE : CENTURY
DATA FROM : N/A
MAG. DECL. : 14.600
LOG: LR15RF-05_07-27-15_12-43_9058A_.02_10.00_42.00_DEVI.log

HOLE ID. : LR15RF-05
DATE OF LOG : 07/27/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.00	0.00	0.00	0.0	67.8	0.5	67.8
11.00	11.00	0.00	0.01	0.0	65.2	0.6	60.4
12.00	12.00	0.01	0.02	0.0	56.0	0.6	39.9
13.00	13.00	0.02	0.02	0.0	49.5	0.7	51.4
14.00	14.00	0.03	0.03	0.0	50.3	0.7	46.2
15.00	15.00	0.04	0.04	0.1	49.4	0.6	52.3
16.00	16.00	0.04	0.06	0.1	55.6	0.9	76.0
17.00	17.00	0.04	0.07	0.1	57.0	0.7	55.9
18.00	18.00	0.05	0.08	0.1	55.7	0.6	38.0
19.00	19.00	0.06	0.08	0.1	54.1	0.6	43.7
20.00	20.00	0.07	0.09	0.1	52.7	0.7	39.7
21.00	21.00	0.08	0.10	0.1	53.5	1.0	63.4
22.00	22.00	0.08	0.12	0.1	54.4	0.8	57.0
23.00	23.00	0.09	0.13	0.2	54.9	0.6	64.9
24.00	24.00	0.09	0.14	0.2	56.6	1.2	79.9
25.00	25.00	0.10	0.16	0.2	59.6	1.3	87.7
26.00	26.00	0.10	0.18	0.2	62.1	0.8	72.7
27.00	27.00	0.10	0.20	0.2	63.2	0.5	55.2
28.00	28.00	0.10	0.21	0.2	64.5	0.8	83.8
29.00	29.00	0.11	0.22	0.2	64.8	0.5	29.8
30.00	30.00	0.11	0.23	0.3	64.7	0.5	71.1
31.00	31.00	0.11	0.24	0.3	65.7	1.1	101.5
32.00	32.00	0.10	0.26	0.3	68.5	1.1	102.2
33.00	33.00	0.10	0.28	0.3	70.7	1.0	110.9
34.00	34.00	0.09	0.30	0.3	73.1	1.4	129.2
35.00	35.00	0.07	0.32	0.3	77.1	1.4	133.5
36.00	36.00	0.06	0.33	0.3	79.9	1.0	130.4
37.00	37.00	0.05	0.34	0.3	81.7	0.9	133.9
38.00	38.00	0.04	0.36	0.4	84.4	1.1	140.8
39.00	39.00	0.01	0.37	0.4	88.0	1.3	147.7
40.00	40.00	-0.02	0.39	0.4	92.3	1.5	155.4
41.00	41.00	-0.04	0.39	0.4	96.0	1.5	162.1
42.00	41.95	-0.06	0.40	0.4	99.0	0.0	0.0

COMPENSATED DENSITY
GAMMA-CALIPER-RES
LR15RF-06

COMPANY	CENTURY WIRELINE SERVICES
WELL	LR15RF-06
WELL EXT	N/A
FIELD	LOOP RIDGE
COUNTY	B.C.
PROVINCE	CANADA
COUNTRY	N/A
API NO.	

COMPANY	: CENTURY WIRELINE SERVICES
WELL	: LR15RF-06
WELL EXT	:
FIELD	: N/A
COUNTY	: LOOP RIDGE
PROVINCE	: B.C.
COUNTRY	: CANADA
API NO.	: N/A
UNIQ ID	: N/A
LSD	: N/A SECTION: N/A TOWNSHIP: N/A RANGE: N/A
LOCATION	: N/A
LAT GPS UTM	N/A
LON GPS UTM	N/A

Version 3.65 JK999

PERMANENT DATUM	GL		Elevations:			Other Services:
DRL MEASURED FROM	GL		KB	N/A	M	DEV
LOG MEASURED FROM	GL		DF	N/A	M	
ELEV. PERM. DATUM	GL	M	GL	N/A	M	

DATE	07/29/15 15:53			
DEPTH DRILLER	115.00	M		
DEPTH LOGGER	114.54	M		
FIRST READING	114.54	M		
LAST READING	0.00	M		
BIT SIZE	457.20	MM		
CASING -- DRILLER	13.50	M		
CASING -- LOGGER	13.40	M		
CASING O.D.	508.00	MM		
CASING TYPE	SURFACE			
FLUID TYPE	H2O			
FLUID DENSITY	1.00	G/CC		
FLUID VISCOSITY	N/A			
FLUID PH	N/A			
MUD SOURCE	N/A			
RM @ MEAS TEMP	N/A @ N/A C			
RMF @ MEAS TEMP	N/A @ N/A C			
RMC @ MEAS TEMP	N/A @ N/A C			
CIRC STOPPED	N/A			
RIG NUMBER	FORACO			
RECORDED BY	S. O'DONNELL			
WITNESSED BY	D. THOMPSON			
REMARKS 1				
REMARKS 2				
REMARKS 3				

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY RESISTIVITY 1:100 LR15RF-06 07/29/15

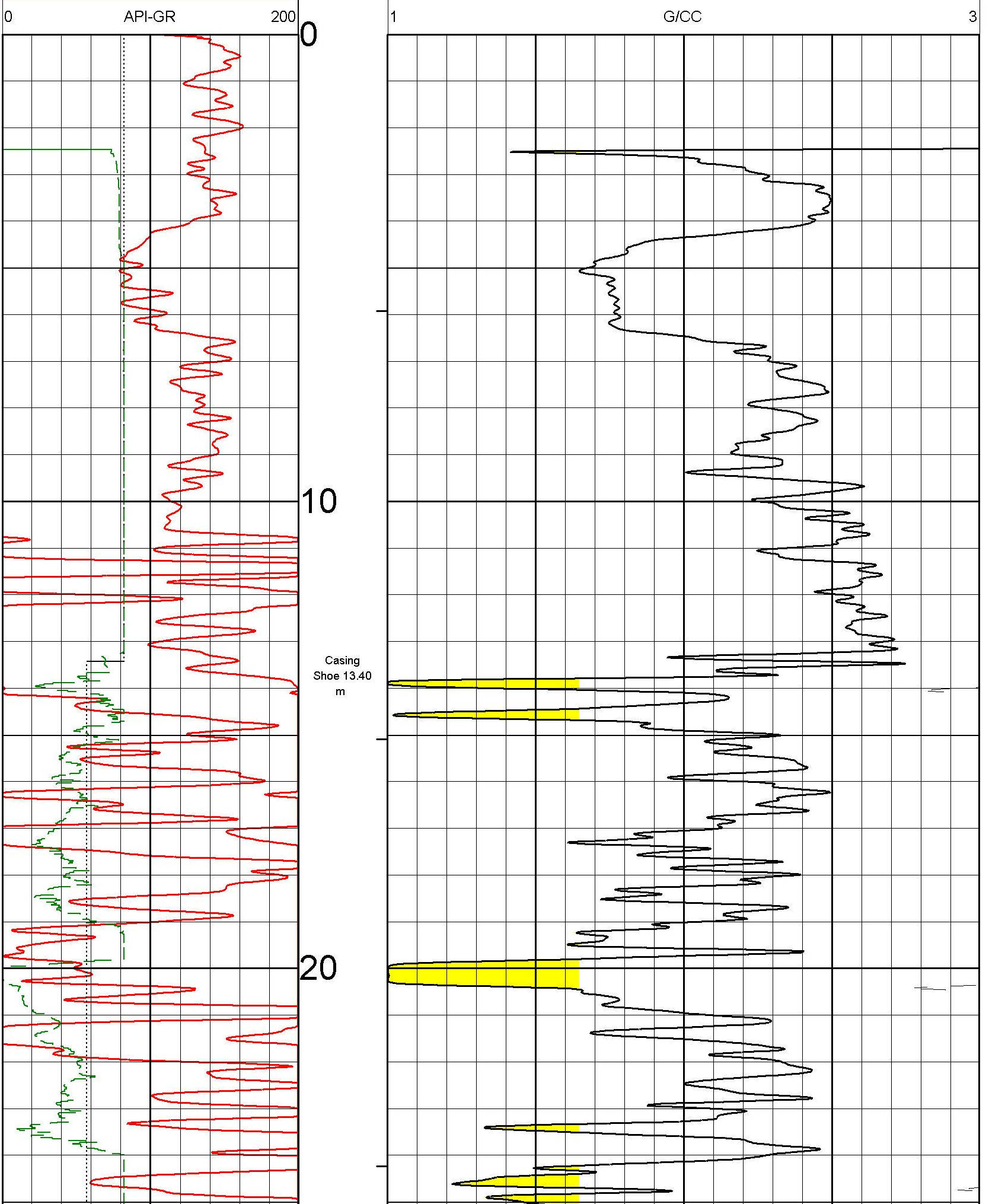
LOG PARAMETERS

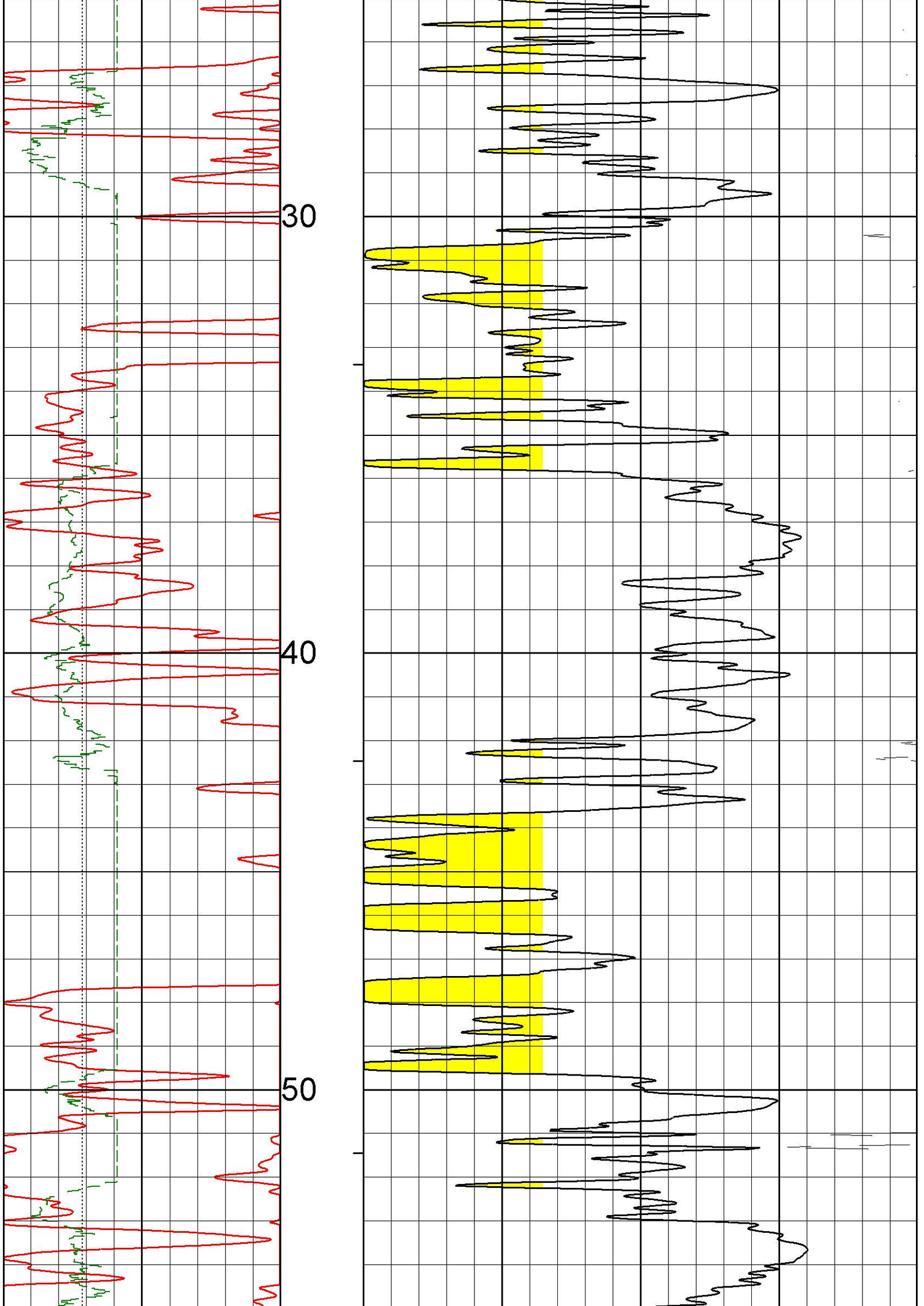
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 457.20 MM	
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015		Version 3.65 JK999	

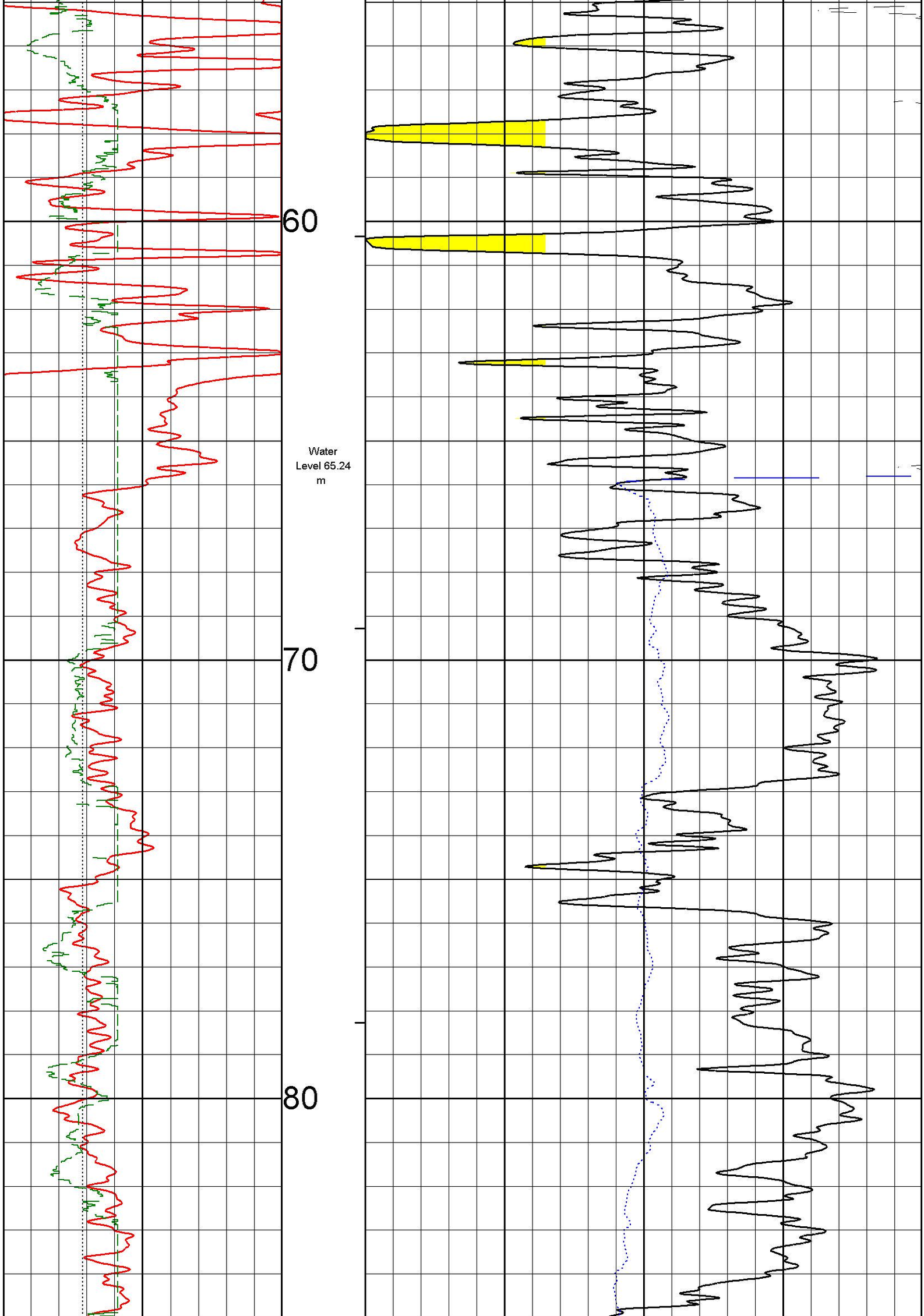
BIT_SIZE	CALIPERL	GAMMA	RES(SG)	DEN(CDL)	COMP
MM	MM		OHM-M		G/CC
400	400		2		0.45
600	600		20000		-0.05

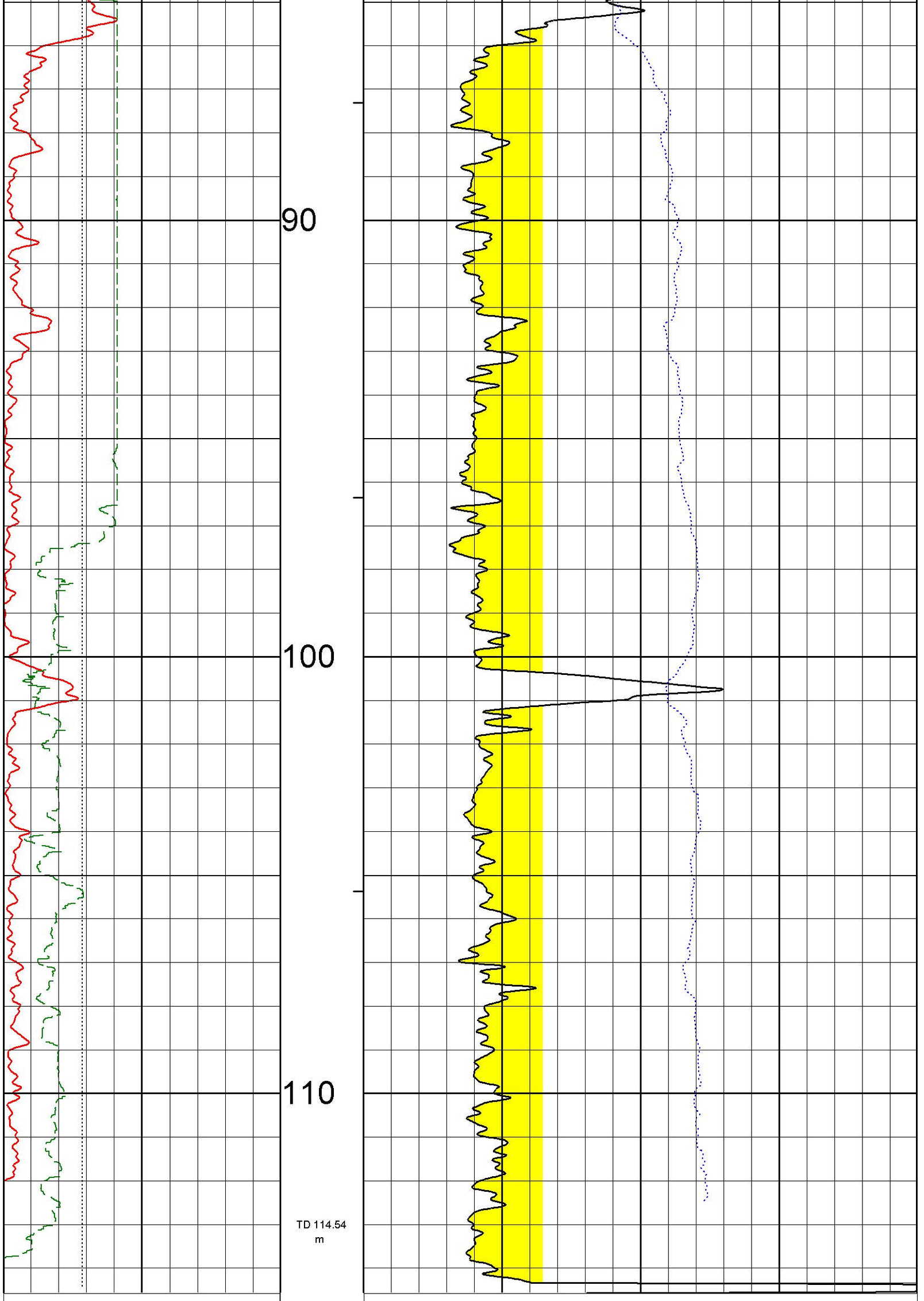
METERS

SPEED --


0
API-GR
200
1
G/CC
3
0
10
20
Casing
Shoe 13.40
m


30
40
50


60
70
80
Water
Level 65.24
m


90
100
110
TD 114.54
m

0	API-GR	200		1	G/CC	3		
GAMMA				DEN(CDL)				
400	MM	600		2	OHM-M	20000		
CALIPERL				RES(SG)				
400	MM	600	SPEED --				0.45	G/CC -0.05
BIT_SIZE			METERS				COMP	

DENSITY RESISTIVITY 1:100 LR15RF-06 07/29/15

LOG PARAMETERS

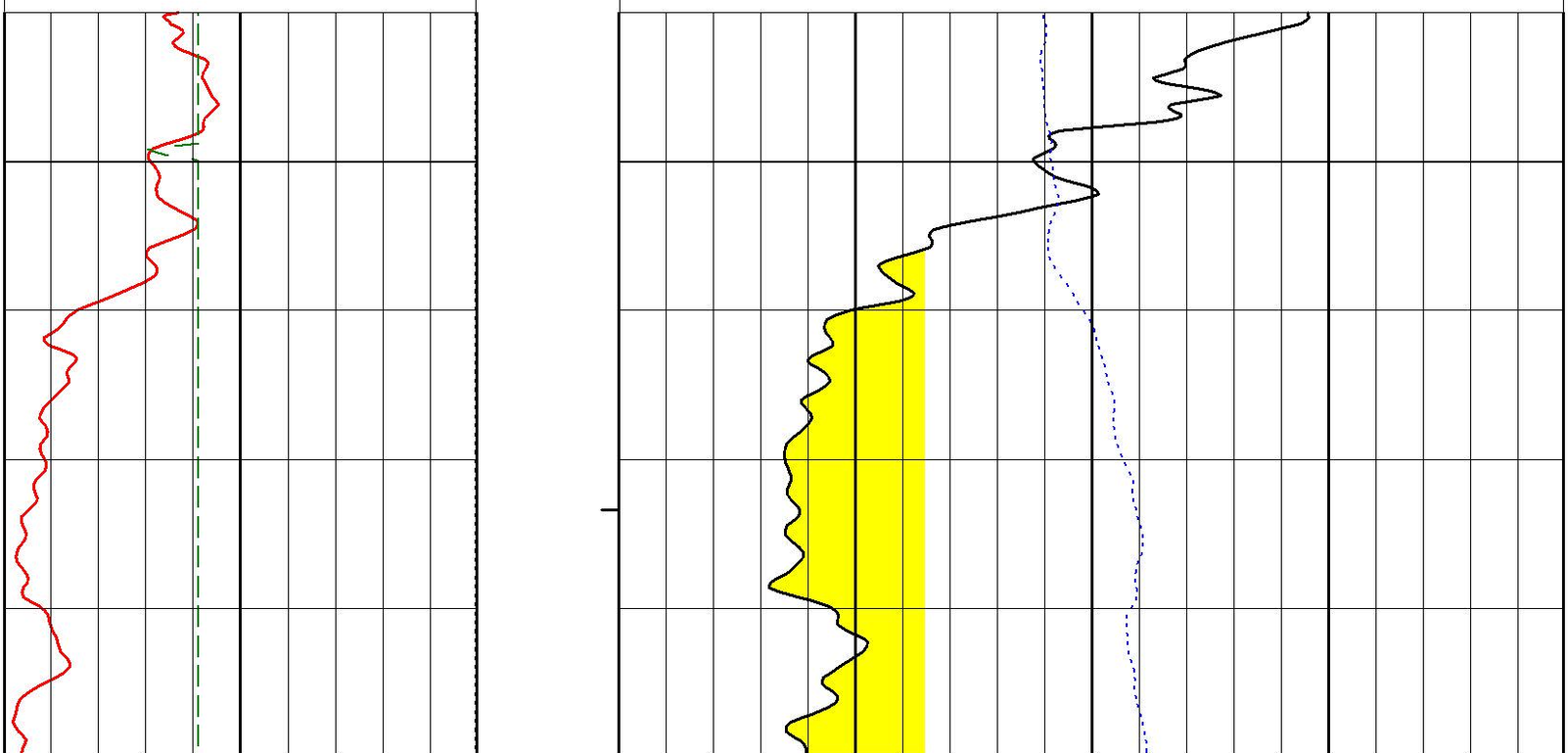
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015 Version 3.65 JK999

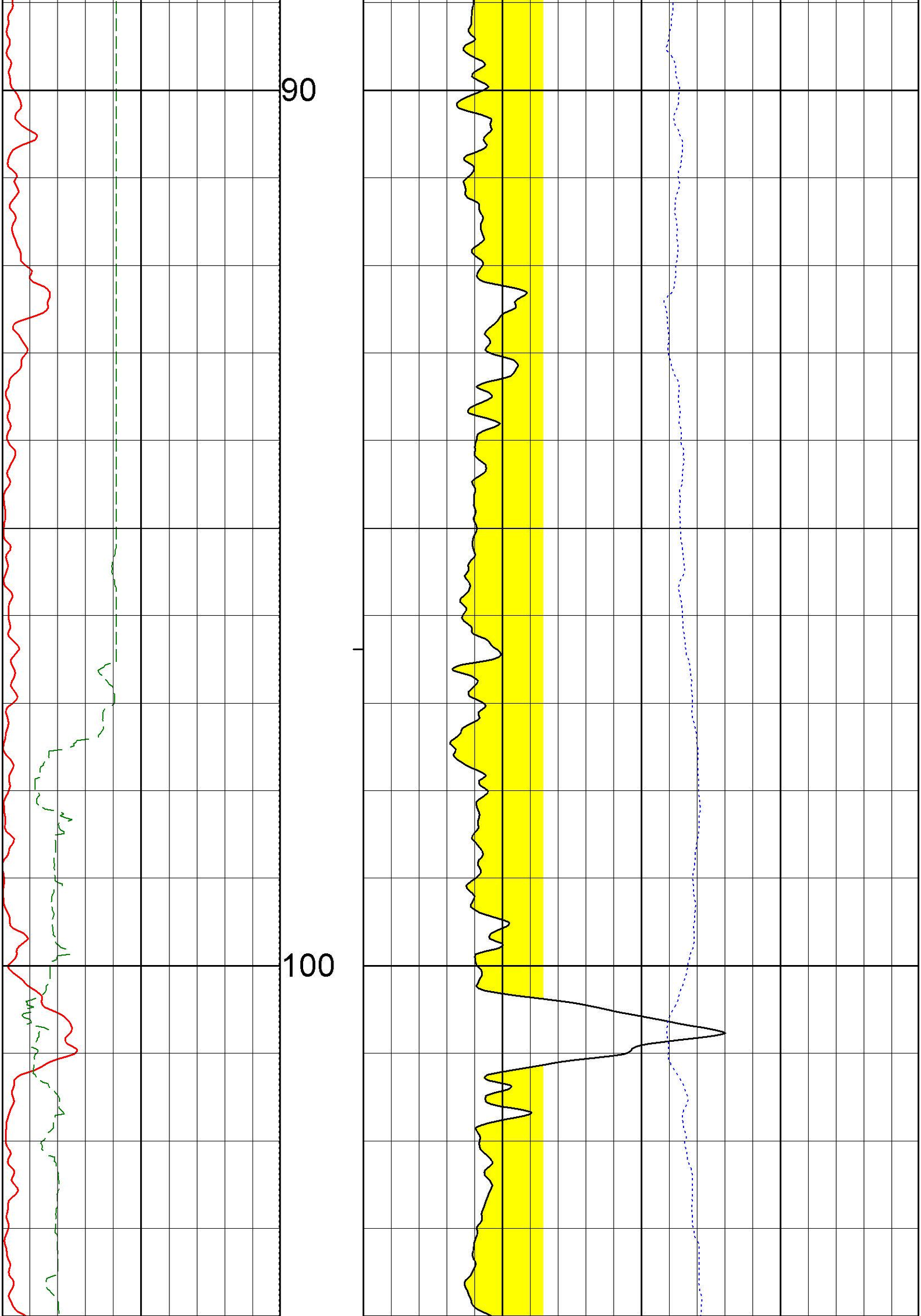
DENSITY RESISTIVITY 1:50 LR15RF-06 07/29/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

BIT_SIZE			METERS				COMP	
100	MM	300	SPEED --				0.45	G/CC -0.05
CALIPERL				RES(SG)				
400	MM	600		2	OHM-M	20000		
GAMMA				DEN(CDL)				
0	API-GR	200		1	G/CC	3		

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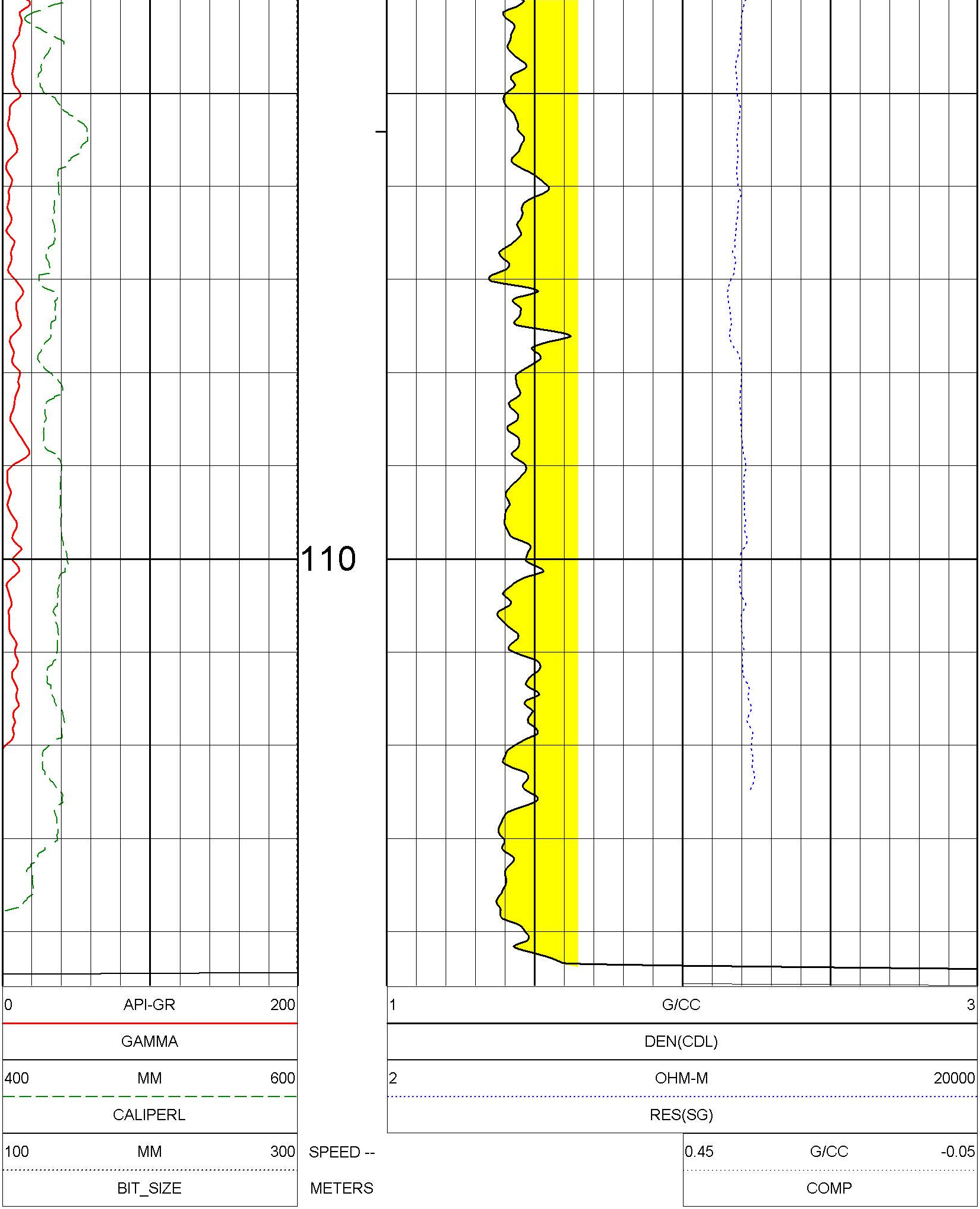
100


110
0
API-GR
200
GAMMA
400
MM
600
CALIPERL
100
MM
300
BIT_SIZE
SPEED --
METERS
1
G/CC
3
DEN(CDL)
2
OHM-M
20000
RES(SG)
0.45
G/CC
-0.05
COMP

DENSITY RESISTIVITY 1:50 LR15RF-06 07/29/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM

PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

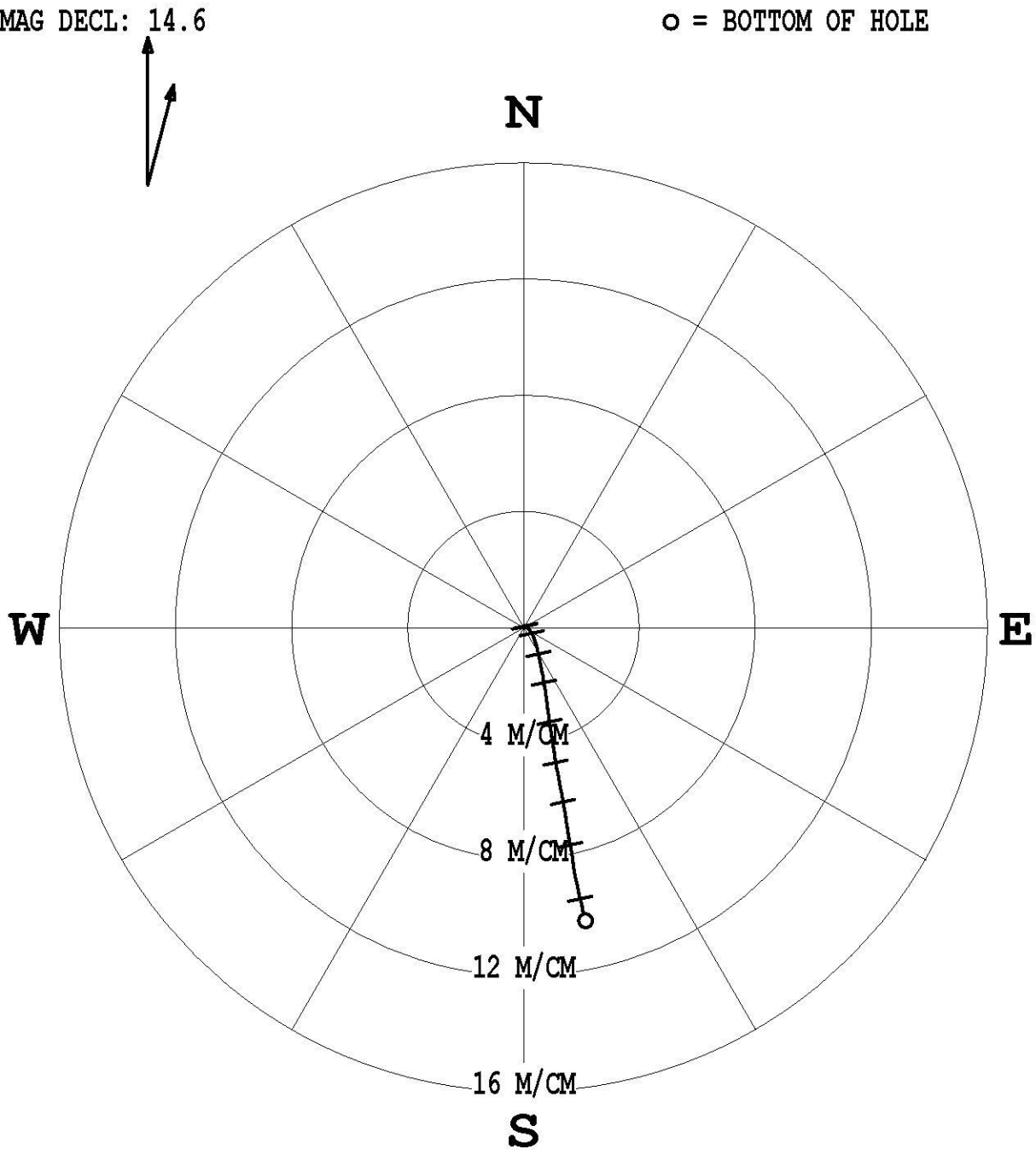
TOOL CALIBRATION LR15RF-06 07/29/15 15:53
TOOL 9239C1 TM VERSION 5023
SERIAL NUMBER 449

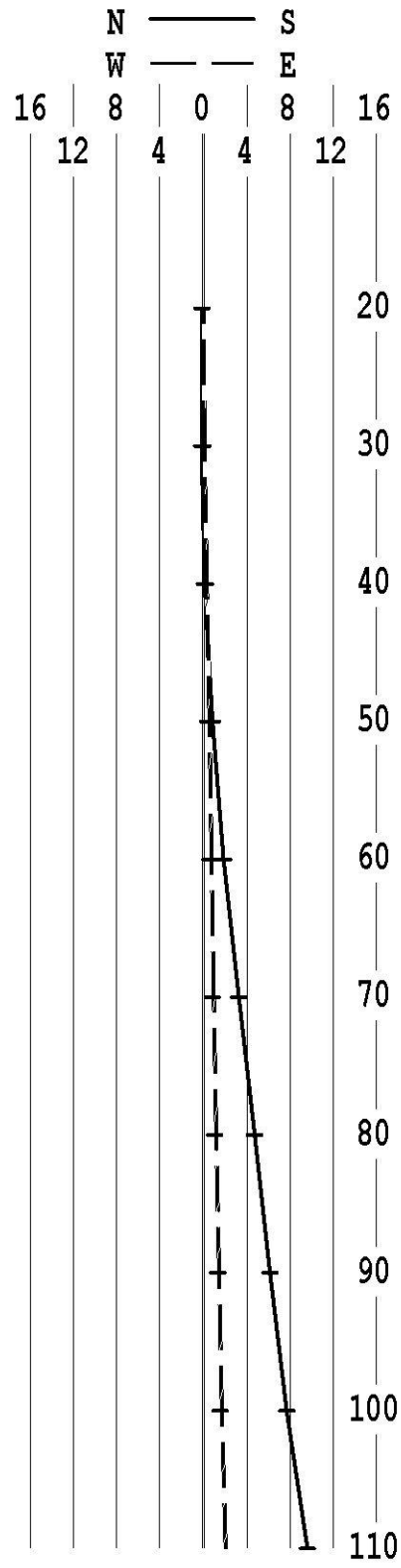
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul29,15	14:29:28	CALIPERL	[MM]	285.750	482.600	235141	476909
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RF-06
DATE OF LOG: 07/29/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 2 M/CM
TRUE DEPTH: 113.63 M
AZIMUTH: 168.0
DISTANCE: 10.3 M
+ = 10 M INCR
o = BOTTOM OF HOLE





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CENTURY WIRELINE SE
FIELD OFFICE : CENTURY
DATA FROM : N/A
MAG. DECL. : 14.600
LOG: LR15RF-06_07-29-15_15-13_9058A_.02_15.00_114.56_DEVI.log

HOLE ID. : LR15RF-06
DATE OF LOG : 07/29/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
15.00	15.00	0.00	0.00	0.0	16.3	0.4	16.3
16.00	16.00	0.01	0.00	0.0	18.5	0.4	17.7
17.00	17.00	0.01	0.00	0.0	17.9	0.5	9.5
18.00	18.00	0.02	0.01	0.0	18.6	0.5	13.9
19.00	19.00	0.03	0.01	0.0	13.7	0.4	341.1
20.00	20.00	0.03	0.00	0.0	6.8	0.4	337.2
21.00	21.00	0.04	0.00	0.0	1.6	0.4	337.4
22.00	22.00	0.05	-0.00	0.0	357.3	0.4	329.7
23.00	23.00	0.05	-0.00	0.1	355.2	0.4	28.8
24.00	24.00	0.06	-0.00	0.1	358.8	0.4	30.1
25.00	25.00	0.07	0.00	0.1	1.9	0.5	80.0
26.00	26.00	0.07	0.01	0.1	6.1	0.5	54.3
27.00	27.00	0.07	0.02	0.1	12.1	0.5	104.2
28.00	28.00	0.07	0.03	0.1	19.0	0.8	100.3
29.00	29.00	0.07	0.04	0.1	30.5	1.1	112.1
30.00	30.00	0.06	0.06	0.1	42.3	0.7	94.4
31.00	31.00	0.06	0.07	0.1	46.6	0.4	41.6
32.00	32.00	0.07	0.07	0.1	45.2	0.1	44.9
33.00	33.00	0.06	0.07	0.1	50.1	0.7	153.1
34.00	34.00	0.05	0.09	0.1	60.8	1.1	109.9
35.00	35.00	0.02	0.11	0.1	77.7	2.3	127.6
36.00	36.00	-0.01	0.15	0.1	94.0	3.2	138.1
37.00	37.00	-0.05	0.18	0.2	106.2	3.2	138.2
38.00	37.99	-0.09	0.21	0.2	113.4	2.5	140.6
39.00	38.99	-0.14	0.24	0.3	120.2	3.3	155.6
40.00	39.99	-0.19	0.27	0.3	125.4	3.9	149.8
41.00	40.99	-0.25	0.30	0.4	130.0	4.7	156.4
42.00	41.99	-0.32	0.33	0.5	133.5	3.5	151.6
43.00	42.98	-0.38	0.36	0.5	136.7	3.5	160.2
44.00	43.98	-0.44	0.37	0.6	139.5	3.2	161.4
45.00	44.98	-0.49	0.39	0.6	141.3	4.3	175.6
46.00	45.98	-0.58	0.42	0.7	143.8	4.6	160.6
47.00	46.97	-0.65	0.44	0.8	145.8	4.8	167.5
48.00	47.97	-0.72	0.46	0.9	147.3	3.4	160.1
49.00	48.97	-0.79	0.48	0.9	148.8	4.8	189.7
50.00	49.96	-0.90	0.50	1.0	151.0	7.9	169.4
51.00	50.95	-1.02	0.52	1.1	152.8	5.7	167.8
52.00	51.95	-1.09	0.54	1.2	153.7	4.0	168.8
53.00	52.95	-1.17	0.56	1.3	154.7	6.3	168.5
54.00	53.94	-1.28	0.58	1.4	155.8	6.6	165.2
55.00	54.93	-1.38	0.60	1.5	156.7	4.5	170.1
56.00	55.93	-1.45	0.61	1.6	157.2	4.0	173.7
57.00	56.93	-1.53	0.63	1.7	157.7	5.2	164.1
58.00	57.93	-1.61	0.65	1.7	158.1	5.8	151.8
59.00	58.92	-1.73	0.67	1.9	159.0	8.5	173.4
60.00	59.91	-1.88	0.69	2.0	159.9	8.5	172.0
61.00	60.90	-2.01	0.71	2.1	160.5	7.2	167.7
62.00	61.89	-2.15	0.74	2.3	161.0	8.1	164.4
63.00	62.88	-2.27	0.76	2.4	161.5	7.4	166.2
64.00	63.87	-2.40	0.77	2.5	162.2	8.2	169.6
65.00	64.86	-2.54	0.79	2.7	162.7	8.1	174.4
66.00	65.85	-2.68	0.81	2.8	163.1	7.3	170.6
67.00	66.84	-2.80	0.82	2.9	163.6	7.0	172.0
68.00	67.84	-2.93	0.84	3.0	164.0	7.7	175.7
69.00	68.82	-3.07	0.86	3.2	164.3	8.6	170.4
70.00	69.81	-3.22	0.88	3.3	164.7	8.2	172.6
71.00	70.80	-3.35	0.90	3.5	164.9	7.8	171.1
72.00	71.80	-3.48	0.92	3.6	165.2	7.3	174.0
73.00	72.79	-3.62	0.94	3.7	165.4	7.8	157.4
74.00	73.78	-3.75	0.96	3.9	165.6	7.9	165.9
75.00	74.77	-3.88	0.99	4.0	165.7	6.8	172.0
76.00	75.76	-3.99	1.00	4.1	165.9	7.4	164.3
77.00	76.75	-4.13	1.02	4.3	166.1	8.4	175.0
78.00	77.74	-4.29	1.05	4.4	166.3	9.8	174.5
79.00	78.72	-4.45	1.07	4.6	166.5	8.6	172.4
80.00	79.71	-4.60	1.09	4.7	166.7	9.2	170.4
81.00	80.70	-4.74	1.11	4.9	166.8	7.5	170.6
82.00	81.69	-4.87	1.14	5.0	166.9	7.8	175.0
83.00	82.68	-5.01	1.17	5.1	166.8	8.4	169.9
84.00	83.67	-5.15	1.20	5.3	166.9	8.1	168.9
85.00	84.66	-5.29	1.22	5.4	167.0	8.0	170.7
86.00	85.65	-5.42	1.24	5.6	167.1	7.8	172.4
87.00	86.64	-5.55	1.27	5.7	167.1	7.8	175.0
88.00	87.63	-5.68	1.30	5.8	167.1	8.3	164.5
89.00	88.63	-5.82	1.32	6.0	167.2	7.7	169.7
90.00	89.62	-5.95	1.34	6.1	167.3	7.8	171.3
91.00	90.61	-6.08	1.37	6.2	167.3	8.0	171.5
92.00	91.60	-6.22	1.39	6.4	167.4	8.0	169.7
93.00	92.59	-6.35	1.41	6.5	167.4	7.5	177.8
94.00	93.58	-6.49	1.44	6.6	167.5	8.2	178.4
95.00	94.57	-6.63	1.46	6.8	167.6	8.3	173.2
96.00	95.56	-6.78	1.48	6.9	167.7	9.0	171.3
97.00	96.55	-6.90	1.50	7.1	167.7	6.8	167.8
98.00	97.54	-7.04	1.52	7.2	167.8	10.4	163.2
99.00	98.52	-7.23	1.55	7.4	167.9	11.0	171.8
100.00	99.50	-7.40	1.58	7.6	167.9	9.7	168.5
101.00	100.49	-7.55	1.61	7.7	168.0	9.0	152.8
102.00	101.48	-7.73	1.65	7.9	168.0	10.8	170.5
103.00	102.46	-7.90	1.67	8.1	168.0	9.8	170.4
104.00	103.45	-8.07	1.69	8.2	168.1	9.8	174.3
105.00	104.43	-8.24	1.71	8.4	168.2	11.1	168.4
106.00	105.41	-8.43	1.75	8.6	168.3	10.3	167.6
107.00	106.40	-8.59	1.78	8.8	168.3	10.3	154.9
108.00	107.38	-8.77	1.82	9.0	168.3	12.2	167.6
109.00	108.36	-8.99	1.87	9.2	168.3	13.2	171.0
110.00	109.33	-9.20	1.91	9.4	168.3	11.7	168.1
111.00	110.31	-9.39	1.96	9.6	168.2	12.3	178.4
112.00	111.29	-9.59	2.01	9.8	168.2	12.3	152.9
113.00	112.27	-9.80	2.05	10.0	168.2	14.0	167.4
114.00	113.24	-10.01	2.10	10.2	168.1	14.0	173.1
114.54	113.77	-10.10	2.14	10.3	168.0	0.0	0.0

COMPENSATED DENSITY
GAMMA-CALIPER-RES
LR15RF-07

COMPANY	CENTURY WIRELINE SERVICES
WELL	LR15RF-07
WELL EXT	
FIELD	N/A
COUNTY	LOOP RIDGE
PROVINCE	B.C.
COUNTRY	CANADA
API NO.	N/A

COMPANY	:	CENTURY WIRELINE SERVICES
WELL	:	LR15RF-07
WELL EXT	:	
FIELD	:	N/A
COUNTY	:	LOOP RIDGE
PROVINCE	:	B.C.
COUNTRY	:	CANADA
API NO.	:	N/A
UNIQ ID	:	N/A
LSD	:	N/A SECTION: N/A TOWNSHIP: N/A RANGE: N/A
LOCATION	:	N/A
LAT GPS UTM		N/A
LON GPS UTM		N/A

Version 3.65 JK999

PERMANENT DATUM	GL		Elevations:			Other Services:
DRL MEASURED FROM	GL		KB	N/A	M	DEV
LOG MEASURED FROM	GL		DF	N/A	M	
ELEV. PERM. DATUM	GL	M	GL	N/A	M	

DATE	07/31/15 16:17			
DEPTH DRILLER	31.00	M		
DEPTH LOGGER	30.54	M		
FIRST READING	30.54	M		
LAST READING	0.14	M		
BIT SIZE	457.20	MM		
CASING -- DRILLER	9.00	M		
CASING -- LOGGER	9.22	M		
CASING O.D.	508.00	MM		
CASING TYPE	SURFACE			
FLUID TYPE	H2O			
FLUID DENSITY	1.00	G/CC		
FLUID VISCOSITY	N/A			
FLUID PH	N/A			
MUD SOURCE	N/A			
RM @ MEAS TEMP	N/A @ N/A C			
RMF @ MEAS TEMP	N/A @ N/A C			
RMC @ MEAS TEMP	N/A @ N/A C			
CIRC STOPPED	N/A			
RIG NUMBER	FORACO			
RECORDED BY	S. O'DONNELL			
WITNESSED BY	D. THOMPSON			
REMARKS 1				
REMARKS 2				
REMARKS 3				

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY RESISTIVITY 1:100 LR15RF-07 07/31/15

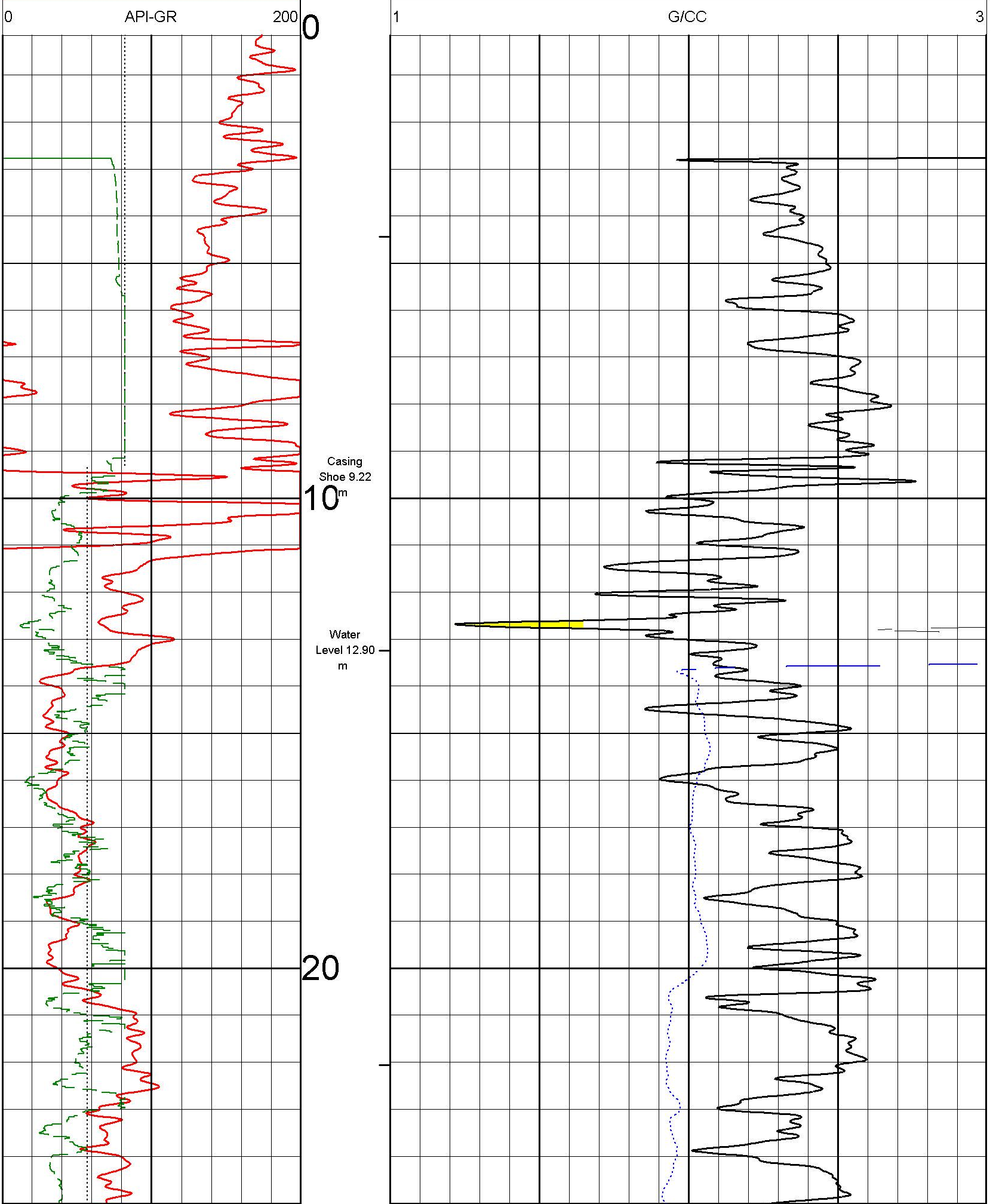
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 457.20 MM	
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015		Version 3.65 JK999	

BIT_SIZE	CALIPERL	GAMMA	RES(SG)	DEN(CDL)	COMP
MM	MM		OHM-M		G/CC
600	600		20000		-0.05
400	400		2		0.45

METERS

SPEED --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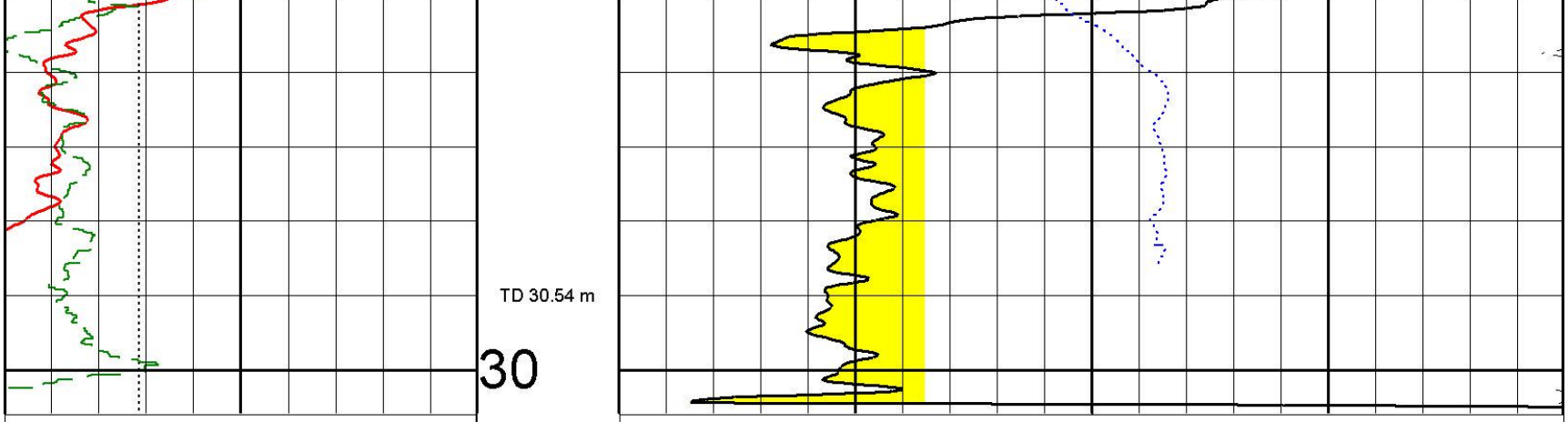
API-GR
200
0
1
G/CC
3
Casing
Shoe 9.22
m
10
Water
Level 12.90
m
20



0	API-GR	200		1	G/CC	3
	GAMMA				DEN(CDL)	
400	MM	600		2	OHM-M	20000
	CALIPERL				RES(SG)	
400	MM	600	SPEED --		0.45 G/CC	-0.05
	BIT_SIZE		METERS		COMP	

DENSITY RESISTIVITY 1:100 LR15RF-07 07/31/15

LOG PARAMETERS

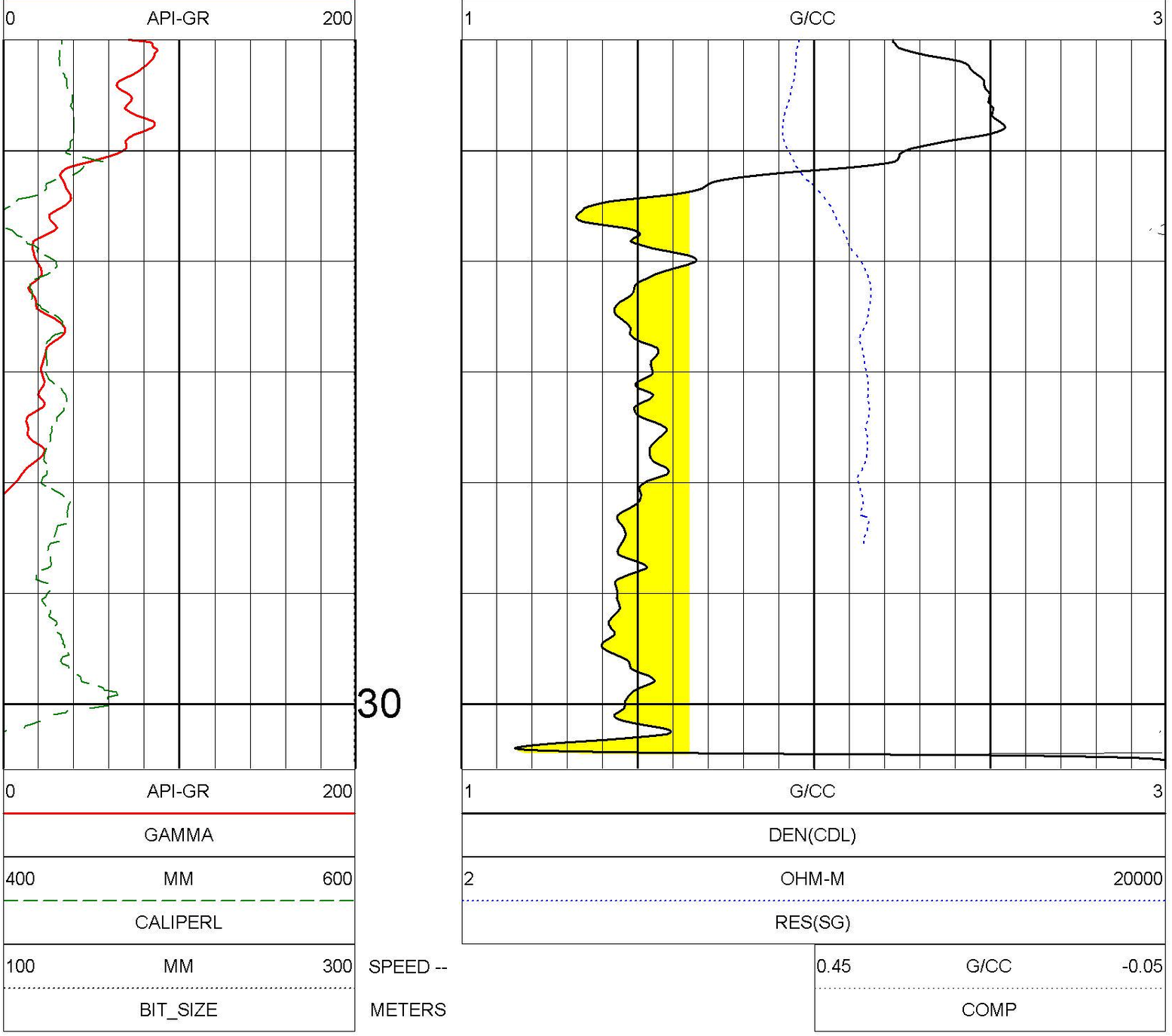
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015 Version 3.65 JK999

DENSITY RESISTIVITY 1:50 LR15RF-07 07/31/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

	BIT_SIZE		METERS		COMP	
100	MM	300	SPEED --		0.45 G/CC	-0.05
	CALIPERL				RES(SG)	
400	MM	600		2	OHM-M	20000
	GAMMA				DEN(CDL)	



DENSITY RESISTIVITY 1:50 LR15RF-07 07/31/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM

PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

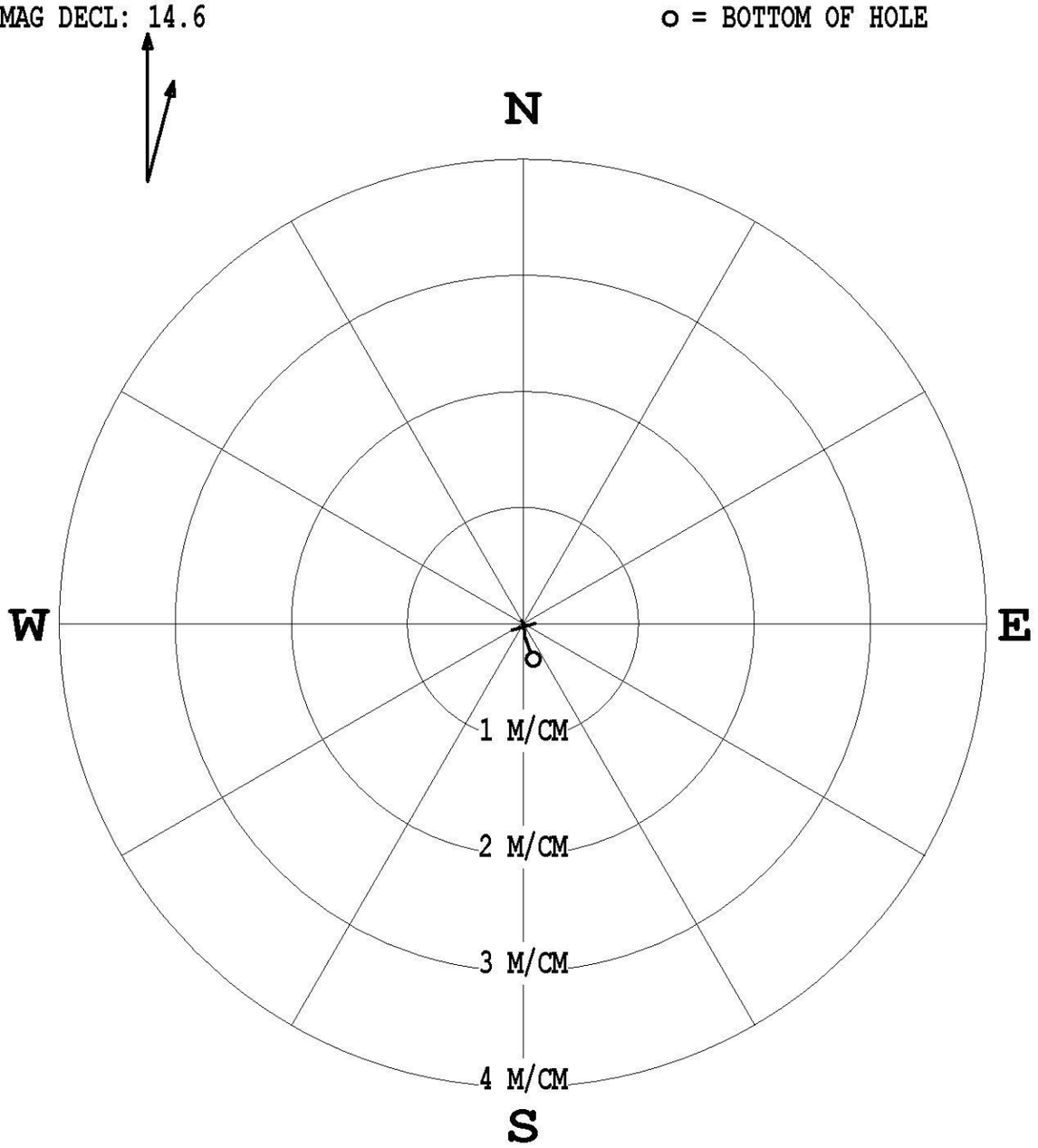
TOOL CALIBRATION LR15RF-07 07/31/15 16:17
TOOL 9239C1 TM VERSION 5023
SERIAL NUMBER 449

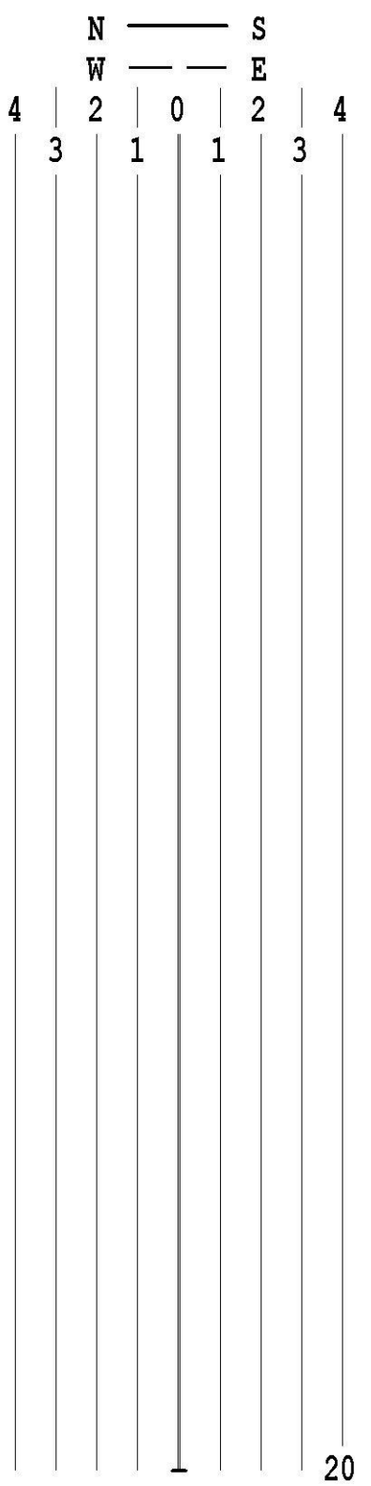
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul29,15	14:29:28	CALIPERL	[MM]	285.750	482.600	235141	476909
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RF-07
DATE OF LOG: 07/31/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 29.77 M
AZIMUTH: 163.7
DISTANCE: 0.3 M
+ = 20 M INCR
o = BOTTOM OF HOLE





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CENTURY WIRELINE SE
FIELD OFFICE : CENTURY
DATA FROM : N/A
MAG. DECL. : 14.600
LOG: LR15RF-07_07-31-15_16-28_9058A_.02_10.00_29.96_DEVI.log

HOLE ID. : LR15RF-07
DATE OF LOG : 07/31/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.00	-0.00	0.00	0.0	95.6	0.4	95.6
11.00	11.00	0.00	0.00	0.0	13.7	0.3	334.8
12.00	12.00	0.01	-0.00	0.0	350.4	0.4	333.2
13.00	13.00	0.02	-0.01	0.0	342.5	0.3	327.3
14.00	14.00	0.02	-0.01	0.0	337.9	0.4	324.5
15.00	15.00	0.02	-0.01	0.0	334.1	0.1	341.1
16.00	16.00	0.02	-0.01	0.0	331.2	0.0	161.7
17.00	17.00	0.02	-0.01	0.0	330.9	0.6	145.5
18.00	18.00	0.01	-0.00	0.0	335.5	0.3	161.5
19.00	19.00	-0.01	-0.00	0.0	193.1	1.3	174.9
20.00	20.00	-0.03	0.00	0.0	174.8	1.2	173.8
21.00	21.00	-0.05	0.01	0.1	171.1	1.5	164.7
22.00	22.00	-0.07	0.01	0.1	170.1	1.2	170.5
23.00	23.00	-0.09	0.01	0.1	171.6	0.6	191.4
24.00	24.00	-0.10	0.01	0.1	172.4	1.0	174.0
25.00	25.00	-0.12	0.02	0.1	172.5	1.2	169.3
26.00	26.00	-0.15	0.03	0.1	169.6	2.6	154.6
27.00	27.00	-0.18	0.04	0.2	167.6	2.6	159.7
28.00	28.00	-0.22	0.05	0.2	166.5	2.2	166.2
29.00	29.00	-0.27	0.07	0.3	164.8	2.8	156.5
29.94	29.93	-0.31	0.09	0.3	163.7	0.0	0.0

COMPENSATED DENSITY
GAMMA-CALIPER-RES
LR15RF-08

Century WIRELINE SERVICES

COMPANY	CENTURY WIRELINE SERVICES
WELL	LR15RF-08
WELL EXT	N/A
FIELD	LOOP RIDGE
COUNTY	B.C.
PROVINCE	CANADA
COUNTRY	N/A
API NO.	

COMPANY	: CENTURY WIRELINE SERVICES
WELL	: LR15RF-08
WELL EXT	:
FIELD	: N/A
COUNTY	: LOOP RIDGE
PROVINCE	: B.C.
COUNTRY	: CANADA
API NO.	: N/A
UNIQ ID	: N/A
LSD	: N/A SECTION: N/A TOWNSHIP: N/A RANGE: N/A
LOCATION	: N/A
LAT GPS UTM	N/A
LON GPS UTM	N/A

Version 3.65 JK999

PERMANENT DATUM	GL		Elevations:			Other Services:
DRL MEASURED FROM	GL		KB	N/A	M	DEV
LOG MEASURED FROM	GL		DF	N/A	M	
ELEV. PERM. DATUM	GL	M	GL	N/A	M	

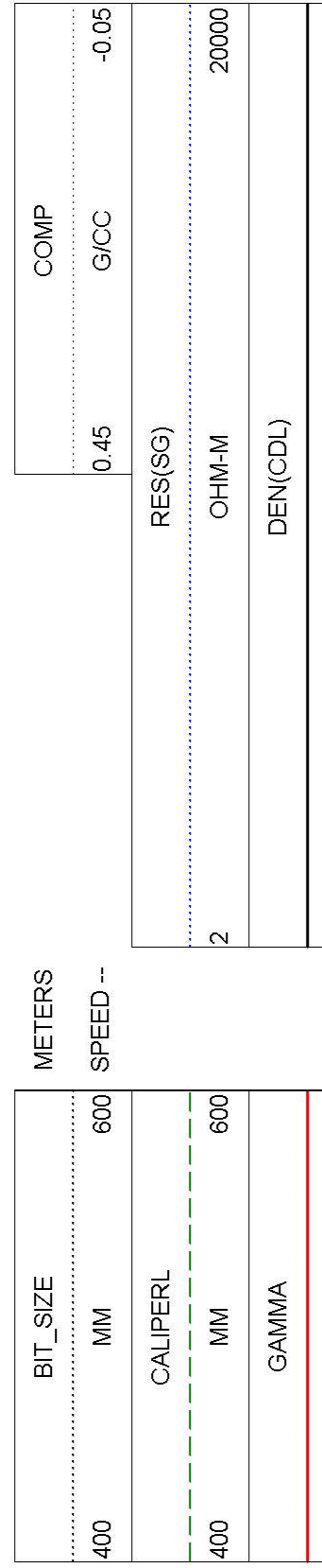
DATE	07/31/15 16:04			
DEPTH DRILLER	30.00	M		
DEPTH LOGGER	29.58	M		
FIRST READING	29.58	M		
LAST READING	0.04	M		
BIT SIZE	457.20	MM		
CASING -- DRILLER	9.00	M		
CASING -- LOGGER	8.90	M		
CASING O.D.	508.00	MM		
CASING TYPE	SURFACE			
FLUID TYPE	H2O			
FLUID DENSITY	1.00	G/CC		
FLUID VISCOSITY	N/A			
FLUID PH	N/A			
MUD SOURCE	N/A			
RM @ MEAS TEMP	N/A @ N/A C			
RMF @ MEAS TEMP	N/A @ N/A C			
RMC @ MEAS TEMP	N/A @ N/A C			
CIRC STOPPED	N/A			
RIG NUMBER	FORACO			
RECORDED BY	S. O'DONNELL			
WITNESSED BY	D. THOMPSON			
REMARKS 1				
REMARKS 2				
REMARKS 3				

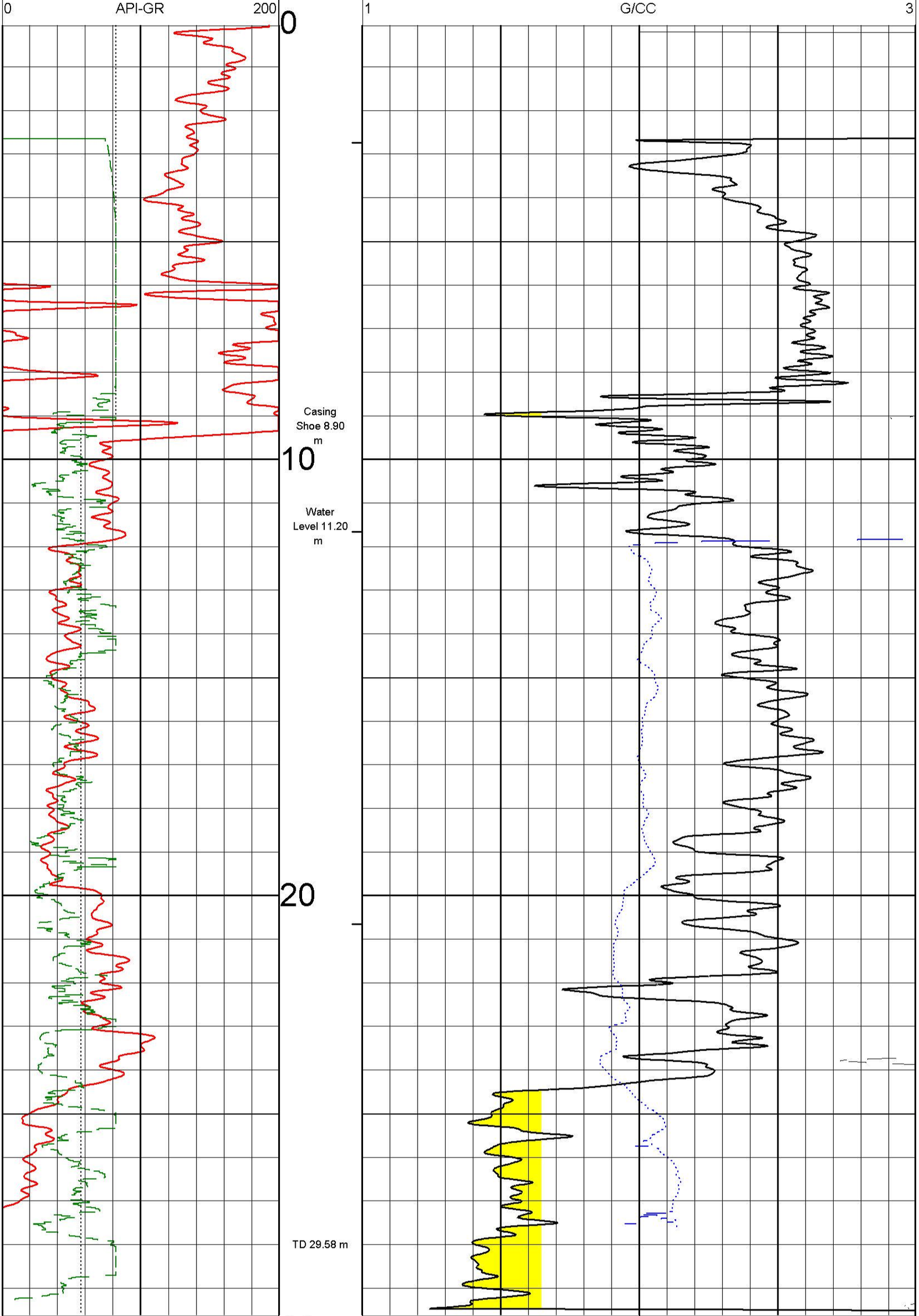
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY RESISTIVITY 1:100 LR15RF-08 07/31/15

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 457.20 MM	
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015		Version 3.65 JK999	




0
API-GR
200
1
G/CC
3
0
10
20
Casing
Shoe 8.90
m
Water
Level 11.20
m
TD 29.58 m

0	API-GR	200	30	1	G/CC	3
	GAMMA				DEN(CDL)	
400	MM	600		2	OHM-M	20000
	CALIPERL				RES(SG)	
400	MM	600	SPEED --	0.45	G/CC	-0.05
	BIT_SIZE		METERS		COMP	

DENSITY RESISTIVITY 1:100 LR15RF-08 07/31/15

LOG PARAMETERS

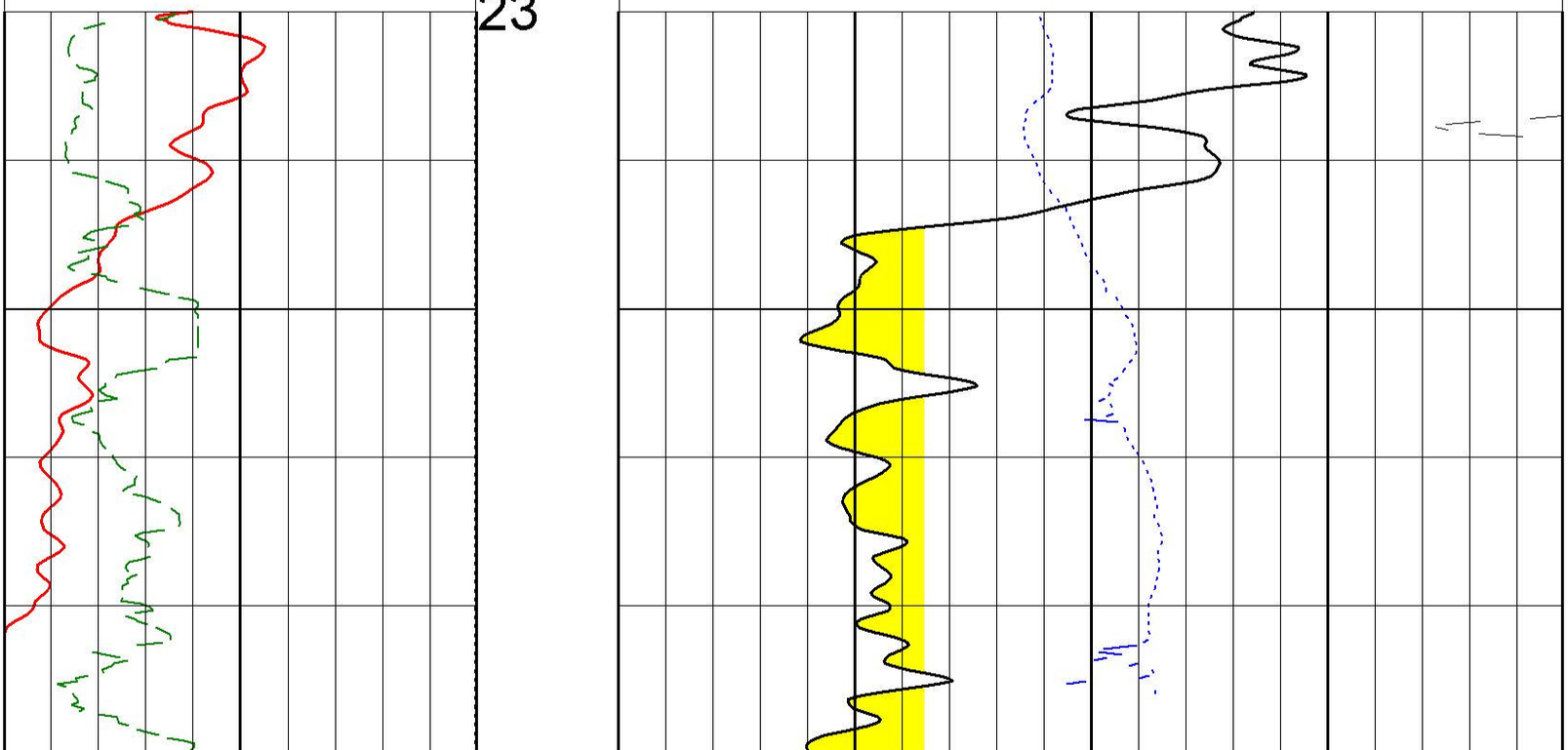
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-100-BULKSAMPLE.0 07/26/2015 Version 3.65 JK999

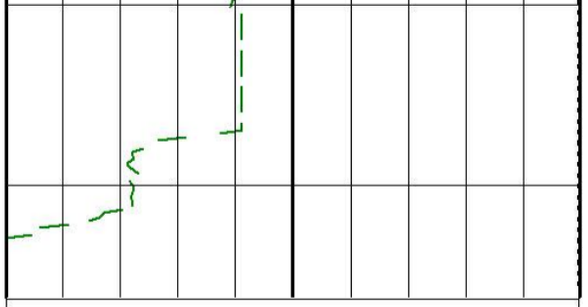
DENSITY RESISTIVITY 1:50 LR15RF-08 07/31/15

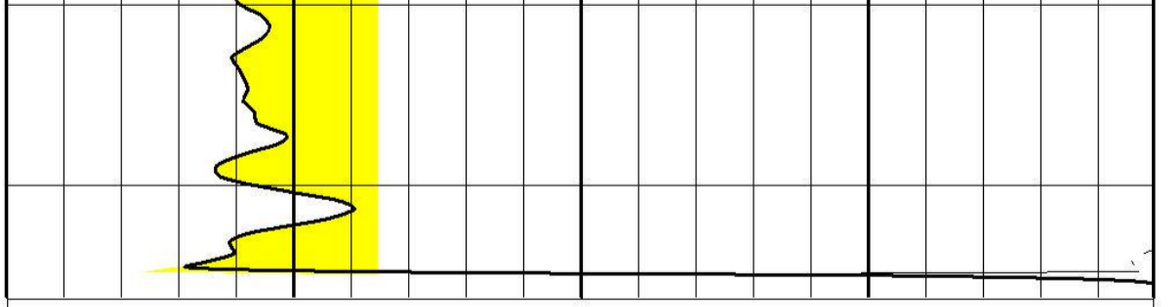
LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

	BIT_SIZE		METERS		COMP	
100	MM	300	SPEED --	0.45	G/CC	-0.05
	CALIPERL				RES(SG)	
400	MM	600		2	OHM-M	20000
	GAMMA				DEN(CDL)	
0	API-GR	200	23	1	G/CC	3







0	API-GR	200		1	G/CC	3	
	GAMMA				DEN(CDL)		
400	MM	600		2	OHM-M	20000	
	CALIPERL				RES(SG)		
100	MM	300	SPEED --	0.45	G/CC	-0.05	
	BIT_SIZE		METERS		COMP		

DENSITY RESISTIVITY 1:50 LR15RF-08 07/31/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 457.20 MM

PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL_BULKSAMPLE.0 07/26/Version 3.65 JK999

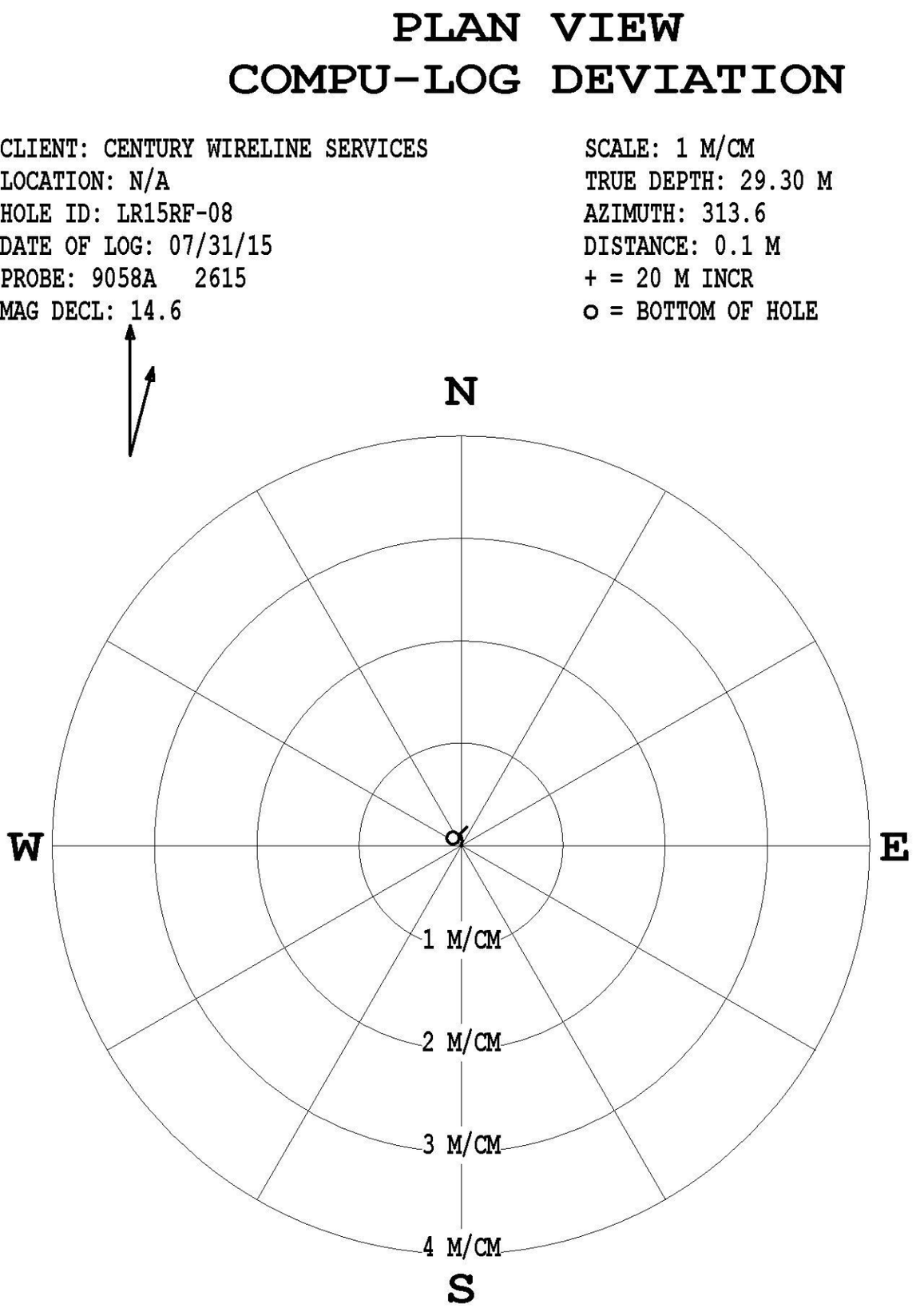
TOOL CALIBRATION LR15RF-08 07/31/15 16:04
TOOL 9239C1 TM VERSION 5023
SERIAL NUMBER 449

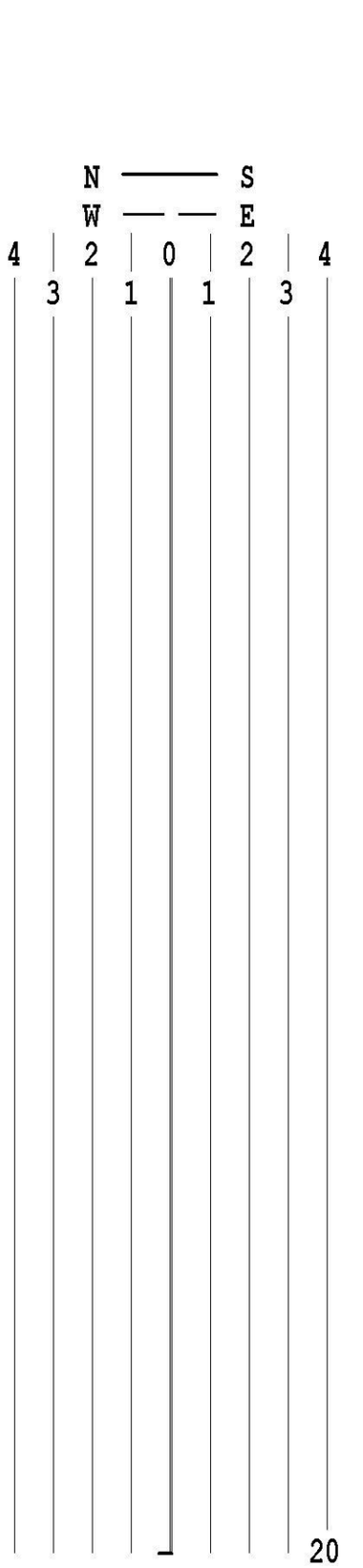
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul29,15	14:29:28	CALIPERL	[MM]	285.750	482.600	235141	476909
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CENTURY WIRELINE SERVICES
LOCATION: N/A
HOLE ID: LR15RF-08
DATE OF LOG: 07/31/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 29.30 M
AZIMUTH: 313.6
DISTANCE: 0.1 M
+ = 20 M INCR
o = BOTTOM OF HOLE





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CENTURY WIRELINE SE
FIELD OFFICE : CENTURY
DATA FROM : N/A
MAG. DECL. : 14.600
HOLE ID. : LR15RF-08
DATE OF LOG : 07/31/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS
LOG: LR15RF-08_07-31-15_15-51_9058A_.02_10.00_29.48_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.00	0.00	0.00	0.0	15.2	0.7	15.2
11.00	11.00	0.01	0.00	0.0	16.6	0.7	14.4
12.00	12.00	0.02	0.01	0.0	15.4	0.7	11.2
13.00	13.00	0.03	0.01	0.0	12.9	0.7	3.9
14.00	14.00	0.05	0.01	0.0	9.7	0.7	356.6
15.00	15.00	0.06	0.01	0.1	6.5	0.7	351.6
16.00	16.00	0.07	0.00	0.1	3.8	0.7	349.9
17.00	17.00	0.08	0.00	0.1	1.4	0.6	345.8
18.00	18.00	0.09	-0.00	0.1	359.3	0.7	343.5
19.00	19.00	0.10	-0.01	0.1	355.6	0.7	307.5
20.00	20.00	0.11	-0.02	0.1	350.7	0.7	298.0
21.00	21.00	0.11	-0.03	0.1	346.0	0.7	289.9
22.00	22.00	0.11	-0.04	0.1	341.3	0.7	281.5
23.00	23.00	0.12	-0.05	0.1	336.6	0.7	289.3
24.00	24.00	0.12	-0.06	0.1	333.2	0.6	280.3
25.00	25.00	0.12	-0.07	0.1	330.1	0.6	267.0
26.00	26.00	0.11	-0.07	0.1	327.1	0.5	215.4
27.00	27.00	0.11	-0.08	0.1	323.9	0.7	183.0
28.00	28.00	0.09	-0.08	0.1	319.9	0.7	192.4
29.00	29.00	0.08	-0.08	0.1	315.3	1.0	172.2
29.46	29.46	0.07	-0.08	0.1	313.6	0.0	0.0

COMPENSATED DENSITY
GAMMA-CALIPER-RES
LR15RFP-01

Century WIRELINE SERVICES

COMPANY	: CANAUS
WELL	: LR15RFP-01
WELL EXT	:
FIELD	: LOOP RIDGE
COUNTY	:
STATE	: B.C.
COUNTRY	: CANADA
API NO.	: N/A
UNIQ ID	: N/A
LSD	: N/A
LOCATION	: N/A
LAT GPS UTM	N/A
LON GPS UTM	N/A

SECTION: N/A TOWNSHIP: N/A RANGE: N/A

DISPLAY7_JL7

COMPANY	CANAUS
WELL	LR15RFP-01
WELL EXT	
FIELD	LOOP RIDGE
COUNTY	
STATE	B.C.
COUNTRY	CANADA
API NO.	N/A

			Elevations:			Other Services:
PERMANENT DATUM	GL		KB	N/A	M	DEV
DRL MEASURED FROM	GL		DF	N/A	M	
LOG MEASURED FROM	GL		GL	N/A	M	
ELEV. PERM. DATUM	N/A	M				

DATE	07/14/15 16:37	
DEPTH DRILLER	66.00	M
DEPTH LOGGER	65.51	M
FIRST READING	65.50	M
LAST READING	0.00	M
BIT SIZE	139.70	MM
CASING -- DRILLER	6.00	M
CASING -- LOGGER	5.72	M
CASING O.D.	177.00	MM
CASING TYPE	STEEL	
FLUID TYPE	WATER	
FLUID DENSITY	1.00	G/CC
FLUID VISCOSITY	N/A	
FLUID PH	N/A	
MUD SOURCE	N/A	
RM @ MEAS TEMP	N/A @ N/A C	
RMF @ MEAS TEMP	N/A @ N/A C	
RMC @ MEAS TEMP	N/A @ N/A C	
CIRC STOPPED	N/A	
RIG NUMBER	FORACO	
RECORDED BY	S. O'DONNELL	
WITNESSED BY	D. THOMPSON	
REMARKS 1	WATER LEVEL @ 54.36M	
REMARKS 2		
REMARKS 3		

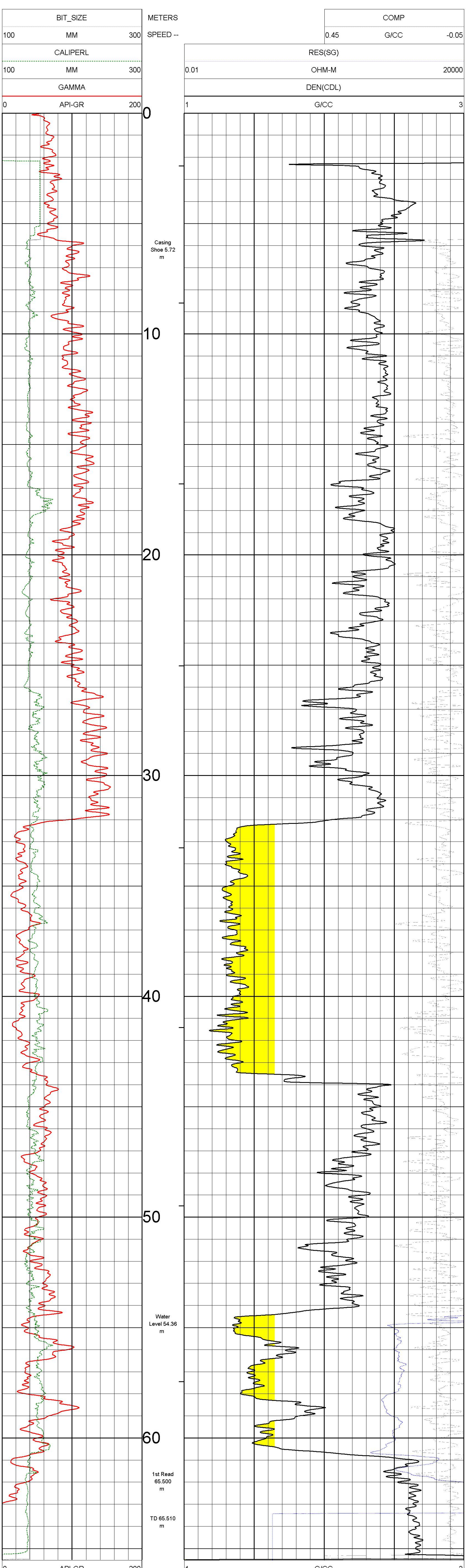
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY RESISTIVITY 1:100 LR15RFP-01 07/14/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-100-MH.0 08/19/2014 DISPLAY7_JL7

BIT_SIZE			METERS			COMP		
100	MM	300	SPEED --			0.45	G/CC	-0.05
CALIPERL				RES(SG)				
100	MM	300		0.01	OHM-M	20000		
GAMMA				DEN(CDL)				
0	API-GR	200		1	G/CC	3		



0	API-GR	200		1	G/CC	3		
GAMMA				DEN(CDL)				
100	MM	300		0.01	OHM-M	20000		
CALIPERL				RES(SG)				
100	MM	300	SPEED --			0.45	G/CC	-0.05
BIT_SIZE			METERS			COMP		

DENSITY RESISTIVITY 1:100 LR15RFP-01 07/14/15

LOG PARAMETERS

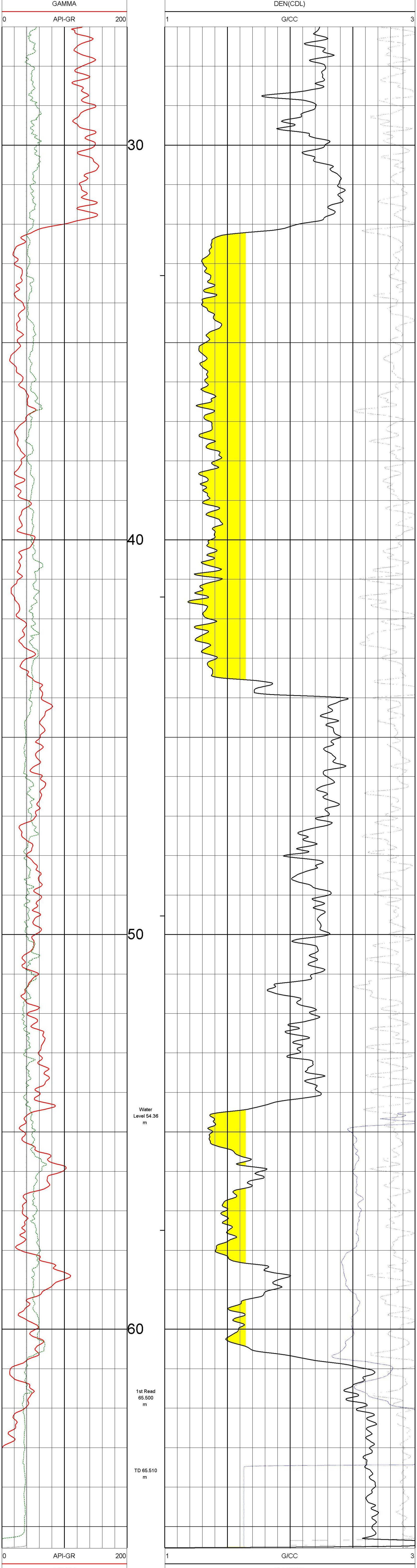
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-100-MH.0 08/19/2014 DISPLAY7_JL7

DENSITY RESISTIVITY 1:50 LR15RFP-01 07/14/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/15/2015 DISPLAY7_JL7

BIT_SIZE			METERS			COMP		
100	MM	300	SPEED --			0.45	G/CC	-0.05
CALIPERL				RES(SG)				
100	MM	300		0.01	OHM-M	20000		
GAMMA				DEN(CDL)				
0	API-GR	200		1	G/CC	3		



0	API-GR	200		1	G/CC	3		
GAMMA				DEN(CDL)				
100	MM	300		0.01	OHM-M	20000		
CALIPERL				RES(SG)				
100	MM	300	SPEED --			0.45	G/CC	-0.05
BIT_SIZE			METERS			COMP		

DENSITY RESISTIVITY 1:50 LR15RFP-01 07/14/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/15/2015 DISPLAY7_JL7

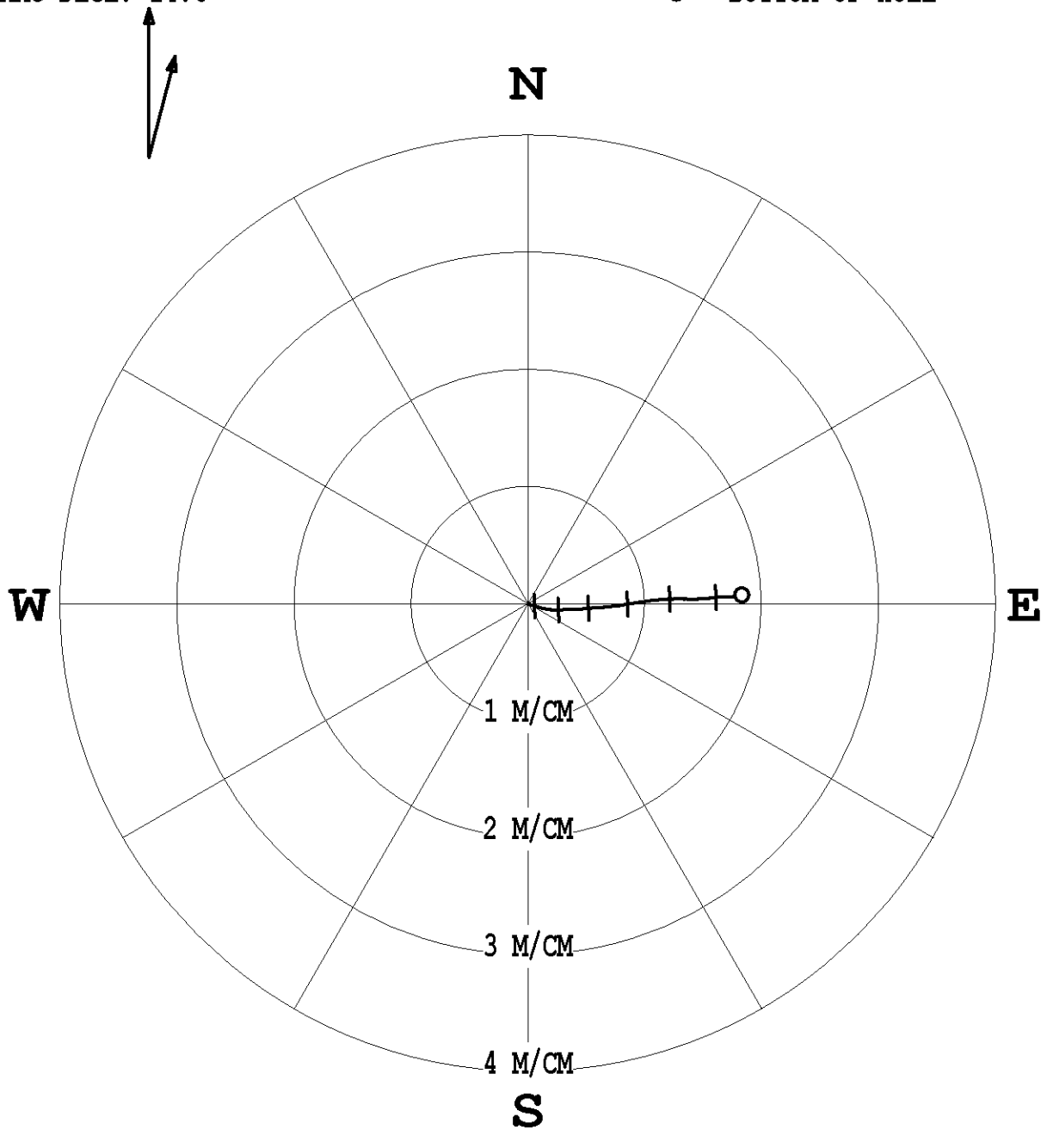
TOOL CALIBRATION LR15RFP-01 07/14/15 16:37
TOOL 9239C1 TM VERSION 2025
SERIAL NUMBER 449

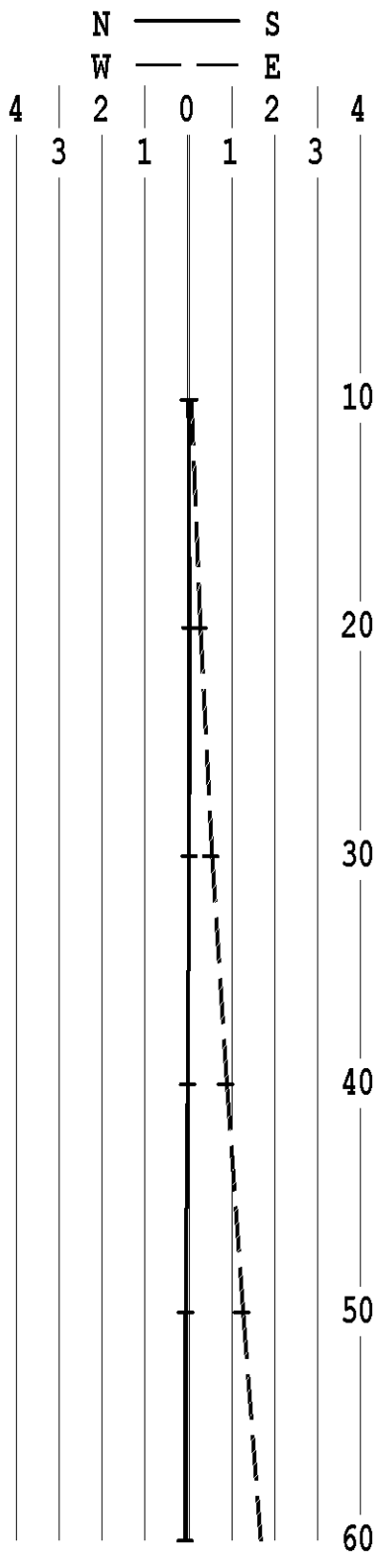
					STANDARD		RESPONSE [CPS]	
	DATE	TIME	SENSOR		Point1	Point2	Point1	Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul14,15	21:20:50	CALIPERL	[MM]	100.000	200.000	104652	205940
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CANAUS
LOCATION: LOOP RIDGE
HOLE ID: LR15RFP-01
DATE OF LOG: 07/14/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 65.31 M
AZIMUTH: 87.8
DISTANCE: 1.8 M
+ = 10 M INCR
o = BOTTOM OF HOLE





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CANAUS
FIELD OFFICE : CENTURY GEO
DATA FROM : N/A
MAG. DECL. : 14.600
HOLE ID. : LR15RFP-01
DATE OF LOG : 07/14/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS
LOG: LR15RFP-01_07-14-15_18-58_9058A_.02_6.88_65.54_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
6.88	6.88	-0.00	0.00	0.0	121.5	1.0	121.5
7.88	7.88	-0.01	0.02	0.0	115.6	1.2	112.5
8.88	8.88	-0.01	0.03	0.0	113.0	1.1	106.2
9.88	9.88	-0.02	0.05	0.1	110.6	1.2	105.9
10.88	10.88	-0.03	0.07	0.1	109.8	1.2	103.5
11.88	11.88	-0.03	0.09	0.1	108.7	1.2	104.4
12.88	12.88	-0.04	0.11	0.1	108.5	1.0	109.4
13.88	13.88	-0.04	0.13	0.1	108.4	0.9	106.9
14.88	14.88	-0.05	0.15	0.2	107.4	1.3	98.0
15.88	15.88	-0.05	0.17	0.2	106.5	1.2	98.2
16.88	16.88	-0.05	0.19	0.2	105.5	1.4	98.5
17.88	17.88	-0.06	0.21	0.2	105.0	1.1	99.0
18.88	18.88	-0.06	0.23	0.2	103.8	1.5	88.5
19.88	19.88	-0.06	0.26	0.3	102.1	1.4	86.9
20.88	20.88	-0.05	0.28	0.3	100.9	1.2	89.0
21.88	21.88	-0.05	0.30	0.3	100.0	1.3	86.5
22.88	22.88	-0.05	0.32	0.3	99.1	1.4	88.1
23.88	23.88	-0.05	0.35	0.4	98.5	1.2	92.2
24.88	24.88	-0.05	0.37	0.4	98.0	1.4	91.4
25.88	25.88	-0.05	0.39	0.4	97.5	1.4	92.0
26.88	26.88	-0.05	0.42	0.4	96.9	1.9	84.7
27.88	27.87	-0.05	0.45	0.5	96.0	1.7	84.5
28.88	28.87	-0.04	0.48	0.5	95.2	1.9	86.2
29.88	29.87	-0.04	0.51	0.5	94.6	1.9	91.7
30.88	30.87	-0.04	0.55	0.5	94.1	2.0	85.2
31.88	31.87	-0.04	0.58	0.6	93.5	1.8	85.6
32.88	32.87	-0.03	0.61	0.6	93.1	1.8	86.0
33.88	33.87	-0.03	0.64	0.6	92.8	1.6	88.1
34.88	34.87	-0.03	0.68	0.7	92.5	2.0	79.7
35.88	35.87	-0.03	0.71	0.7	92.1	1.8	86.2
36.88	36.87	-0.02	0.74	0.7	91.8	1.9	88.1
37.88	37.87	-0.02	0.77	0.8	91.4	2.1	83.1
38.88	38.87	-0.01	0.81	0.8	90.9	2.2	80.0
39.88	39.87	-0.01	0.85	0.8	90.4	2.0	80.2
40.88	40.87	-0.00	0.88	0.9	90.0	1.8	80.4
41.88	41.87	0.00	0.91	0.9	89.7	2.2	81.5
42.88	42.87	0.01	0.95	1.0	89.4	2.2	80.2
43.88	43.87	0.02	0.99	1.0	89.1	2.2	83.3
44.88	44.86	0.02	1.03	1.0	88.8	2.0	82.7
45.88	45.86	0.03	1.06	1.1	88.6	2.1	83.9
46.88	46.86	0.03	1.10	1.1	88.4	2.2	83.4
47.88	47.86	0.03	1.13	1.1	88.3	1.9	81.3
48.88	48.86	0.04	1.17	1.2	88.2	2.0	84.5
49.88	49.86	0.04	1.21	1.2	88.2	2.2	90.5
50.88	50.86	0.04	1.24	1.2	88.2	2.2	84.9
51.88	51.86	0.04	1.28	1.3	88.2	1.9	90.5
52.88	52.86	0.04	1.31	1.3	88.3	2.0	88.3
53.88	53.86	0.04	1.35	1.4	88.4	2.2	90.2
54.88	54.86	0.04	1.39	1.4	88.5	2.0	93.7
55.88	55.86	0.04	1.42	1.4	88.5	2.2	88.7
56.88	56.86	0.04	1.46	1.5	88.4	2.5	79.3
57.88	57.86	0.04	1.51	1.5	88.4	2.9	87.0
58.88	58.85	0.05	1.55	1.6	88.3	2.7	84.4
59.88	59.85	0.05	1.60	1.6	88.2	2.6	85.7
60.88	60.85	0.05	1.64	1.6	88.1	2.6	86.7
61.88	61.85	0.06	1.69	1.7	88.1	2.3	87.2
62.88	62.85	0.06	1.73	1.7	88.1	2.1	85.9
63.88	63.85	0.06	1.76	1.8	88.0	2.4	86.9
64.88	64.85	0.07	1.81	1.8	87.9	2.4	81.1
65.52	65.49	0.07	1.83	1.8	87.9	0.0	0.0

COMPENSATED DENSITY
GAMMA-CALIPER-RES
LR15RFP-02

Century WIRELINE SERVICES

COMPANY	CANAUS
WELL	LR15RFP-02
WELL EXT	
FIELD	LOOP RIDGE
COUNTY	
STATE	B.C.
COUNTRY	CANADA
API NO.	N/A
UNIQ ID	N/A
LSD	N/A SECTION: N/A TOWNSHIP: N/A RANGE: N/A
LOCATION	N/A
LAT GPS UTM	N/A
LON GPS UTM	N/A

DISPLAY7_JL7

PERMANENT DATUM	GL	
DRL MEASURED FROM	GL	
LOG MEASURED FROM	GL	
ELEV. PERM. DATUM	N/A	M

Elevations:		
KB	N/A	M
DF	N/A	M
GL	N/A	M

Other Services:
DEV

DATE	07/14/15 17:19	
DEPTH DRILLER	88.00	M
DEPTH LOGGER	88.20	M
FIRST READING	88.20	M
LAST READING	0.00	M
BIT SIZE	139.70	MM
CASING -- DRILLER	9.00	M
CASING -- LOGGER	8.84	M
CASING O.D.	177.00	MM
CASING TYPE	STEEL	
FLUID TYPE	WATER	
FLUID DENSITY	1.00	G/CC
FLUID VISCOSITY	N/A	
FLUID PH	N/A	
MUD SOURCE	N/A	
RM @ MEAS TEMP	N/A @ N/A C	
RMF @ MEAS TEMP	N/A @ N/A C	
RMC @ MEAS TEMP	N/A @ N/A C	
CIRC STOPPED	N/A	
RIG NUMBER	FORACO	
RECORDED BY	S. O'DONNELL	
WITNESSED BY	D. THOMPSON	
REMARKS 1	WATER LEVEL @ 82.56M	
REMARKS 2		
REMARKS 3		

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

DENSITY RESISTIVITY 1:100 LR15RFP-02 07/14/15

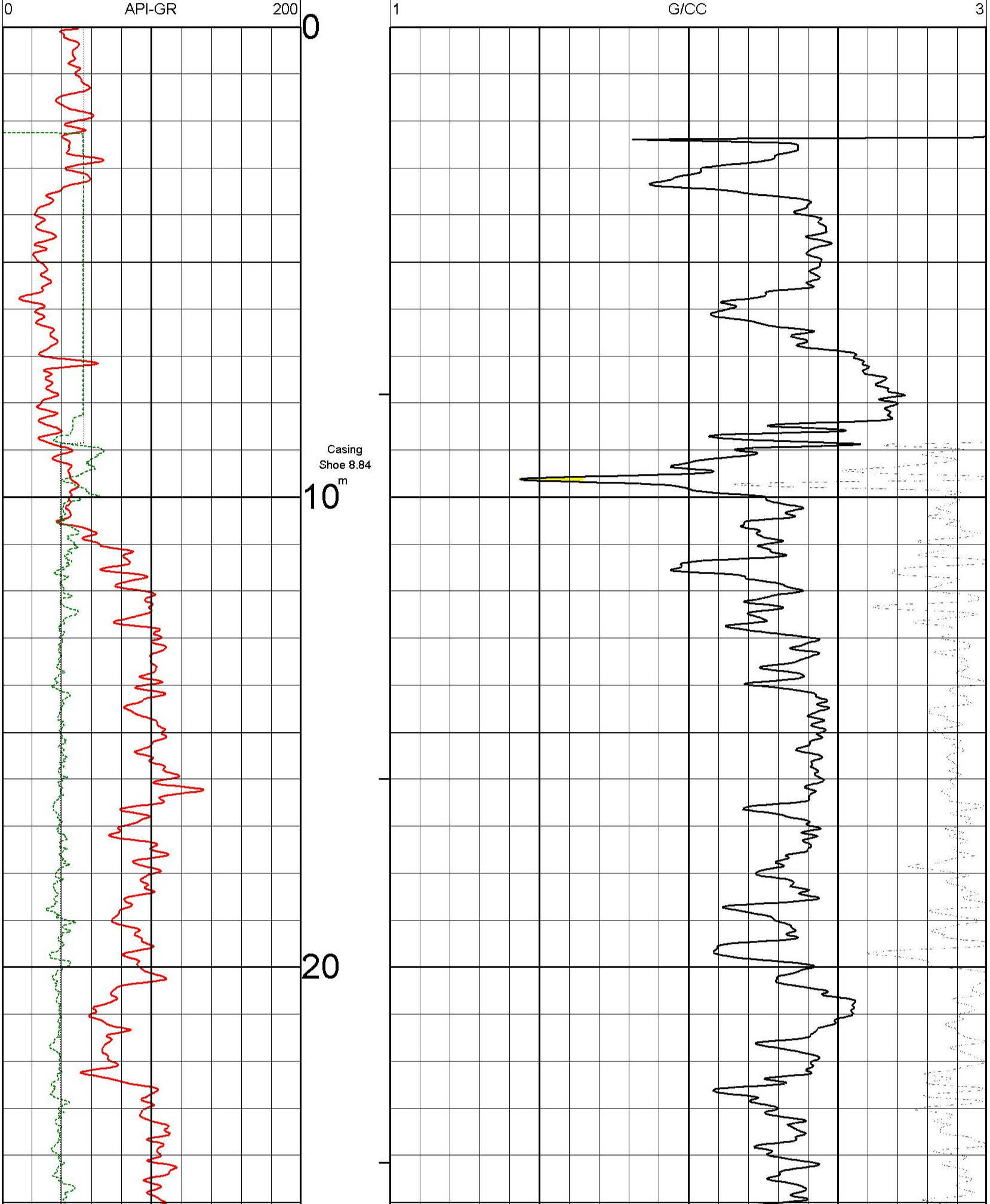
LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177	
MAGNETIC DECL : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 139.70 MM	
PRESENTATION NAME/DATE = CanAus-9239-100-MH.0 08/19/2014		DISPLAY7_JL7	

		COMP	
		G/CC	-0.05
		0.45	
	RES(SG)		
	OHM-M		20000
	0.01		
	DEN(CDL)		

METERS
SPEED --

BIT_SIZE			
MM			300
100			
	CALIPERL		
MM			300
100			
	GAMMA		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API-GR
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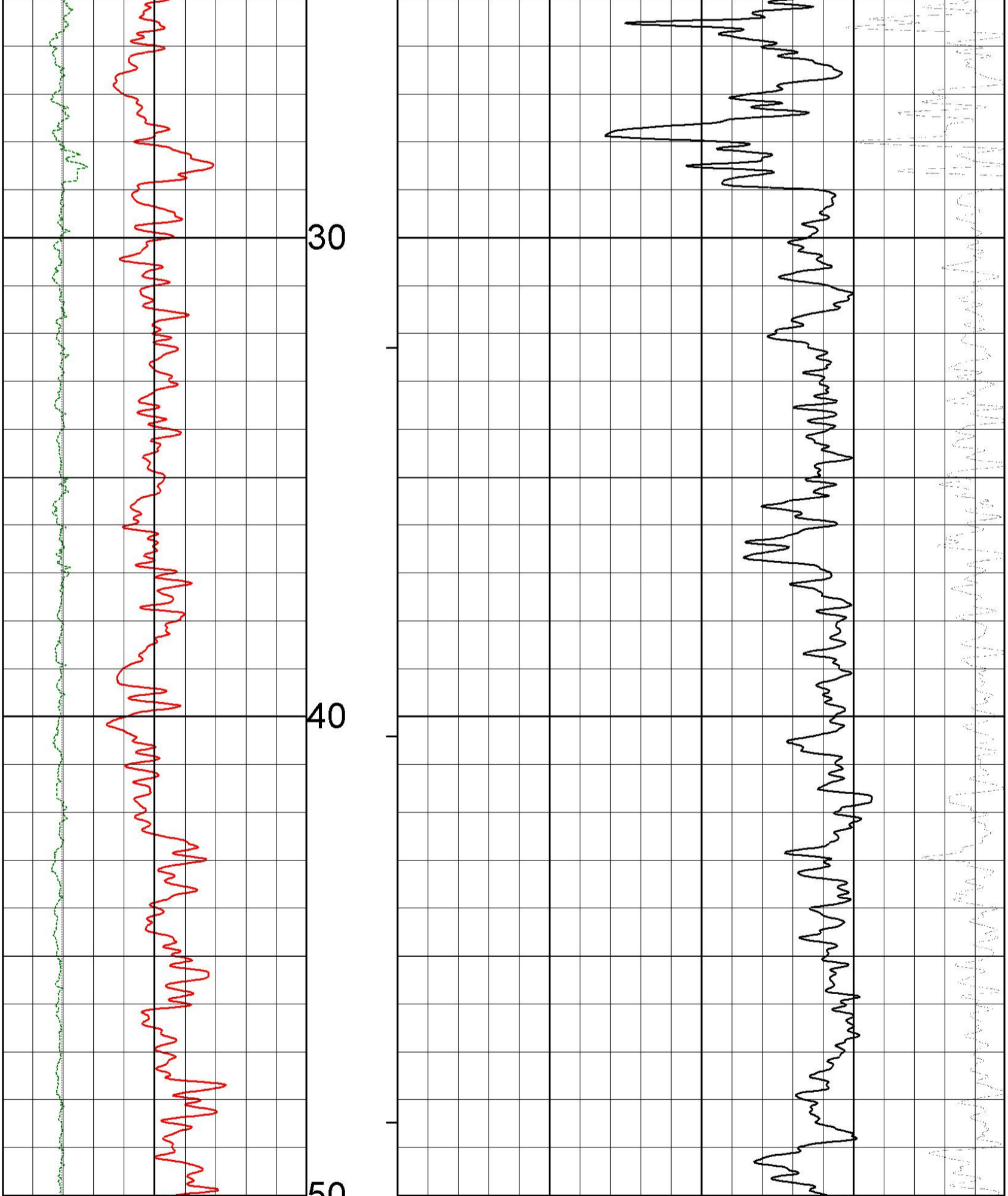
1
G/CC
3
0
Casing
Shoe 8.84
m
10
20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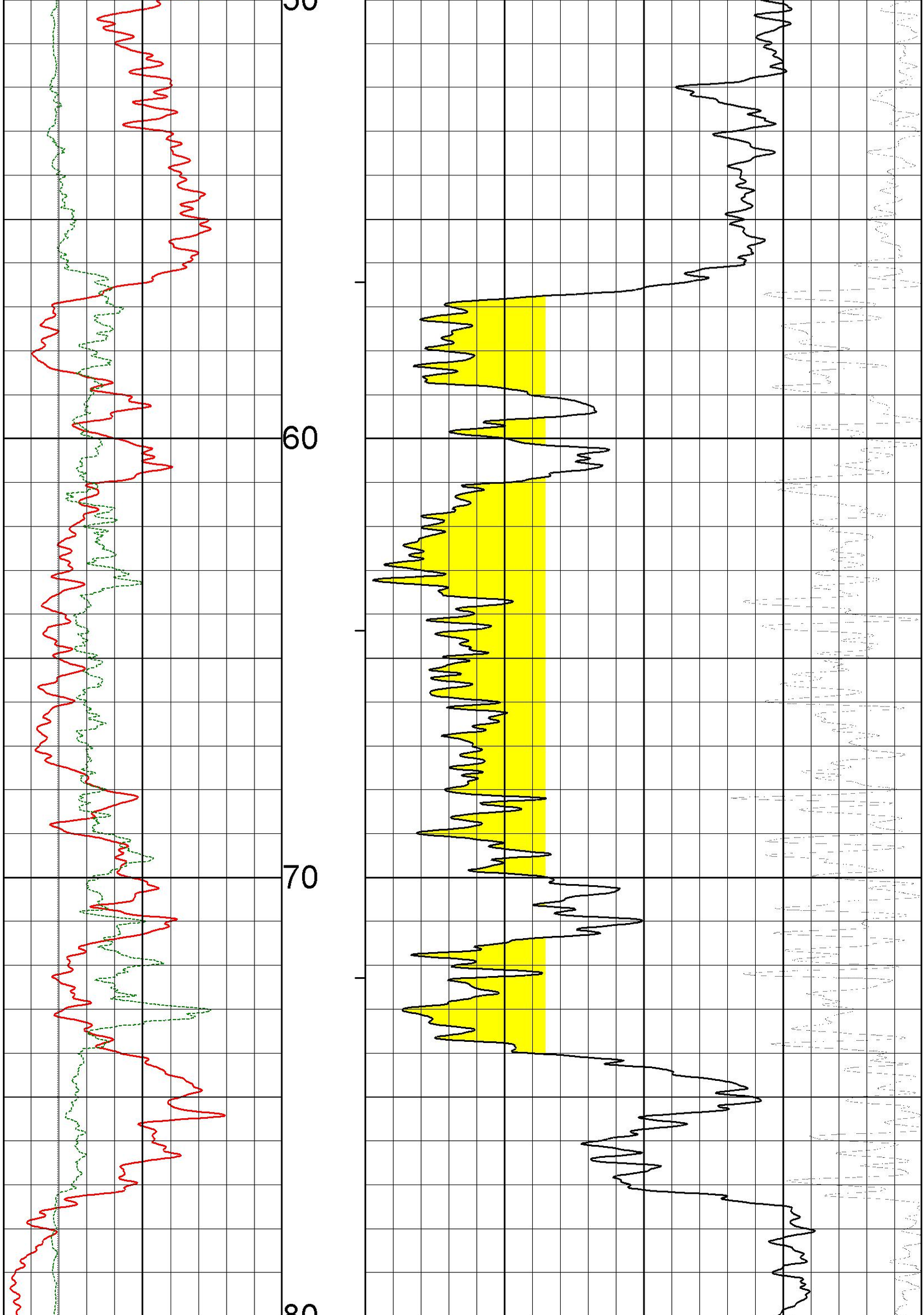
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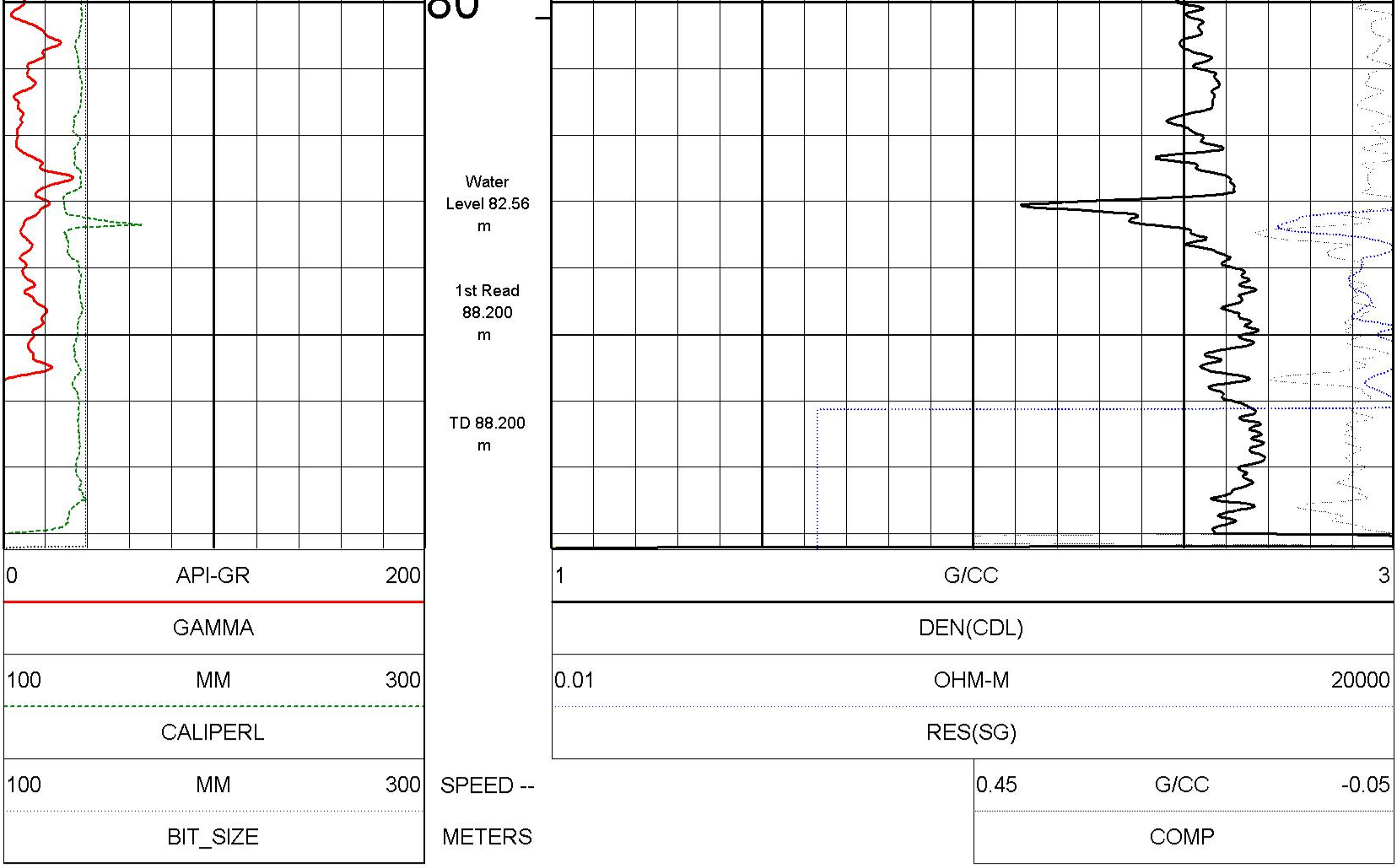


DENSITY RESISTIVITY 1:100 LR15RFP-02 07/14/15

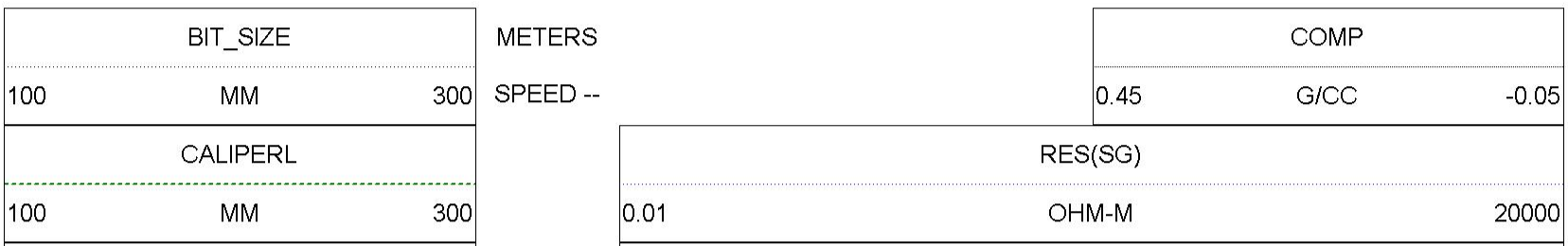
LOG PARAMETERS

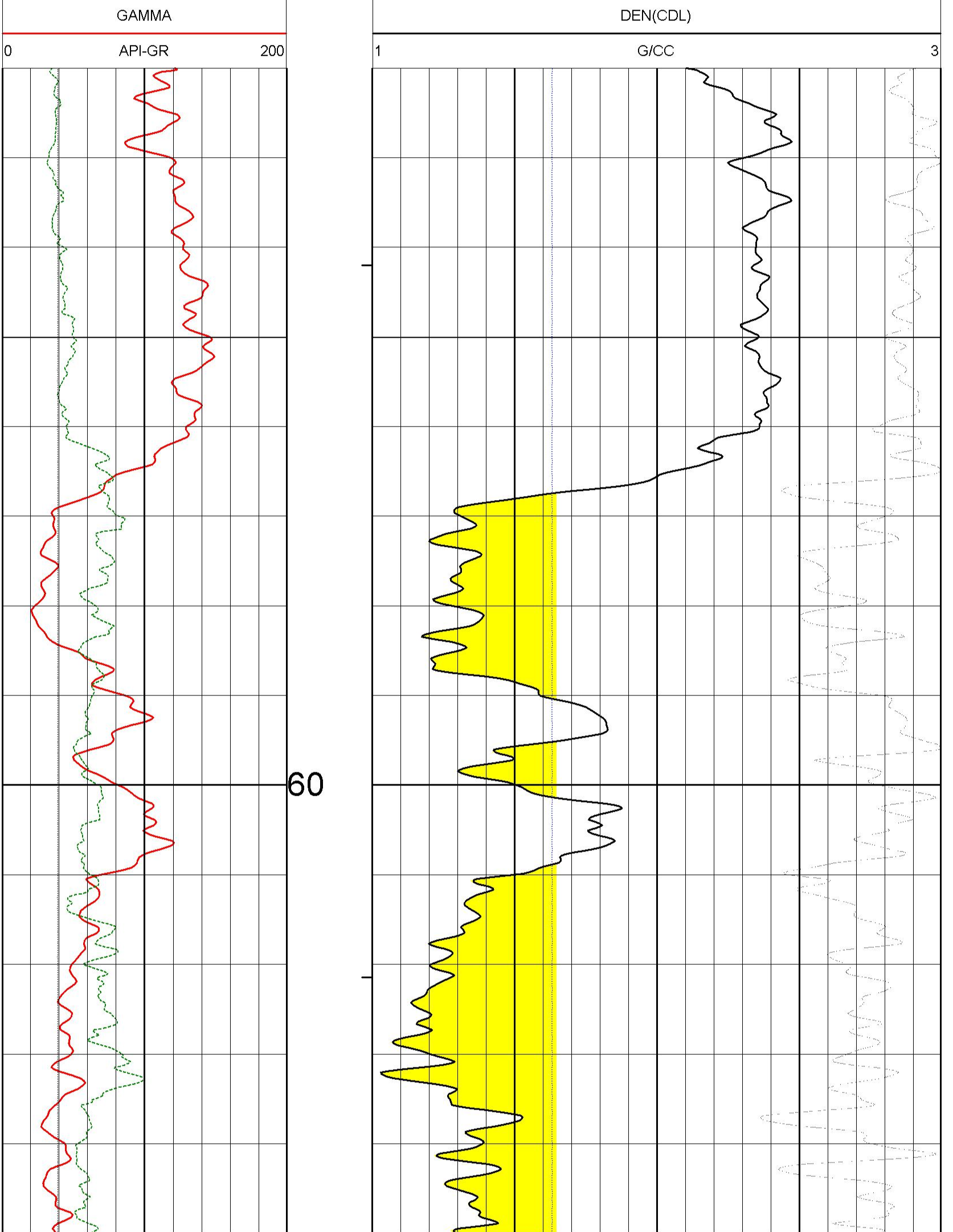
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-100-MH.0 08/19/2014 DISPLAY7_JL7

DENSITY RESISTIVITY 1:50 LR15RFP-02 07/14/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/15/2015 DISPLAY7_JL7

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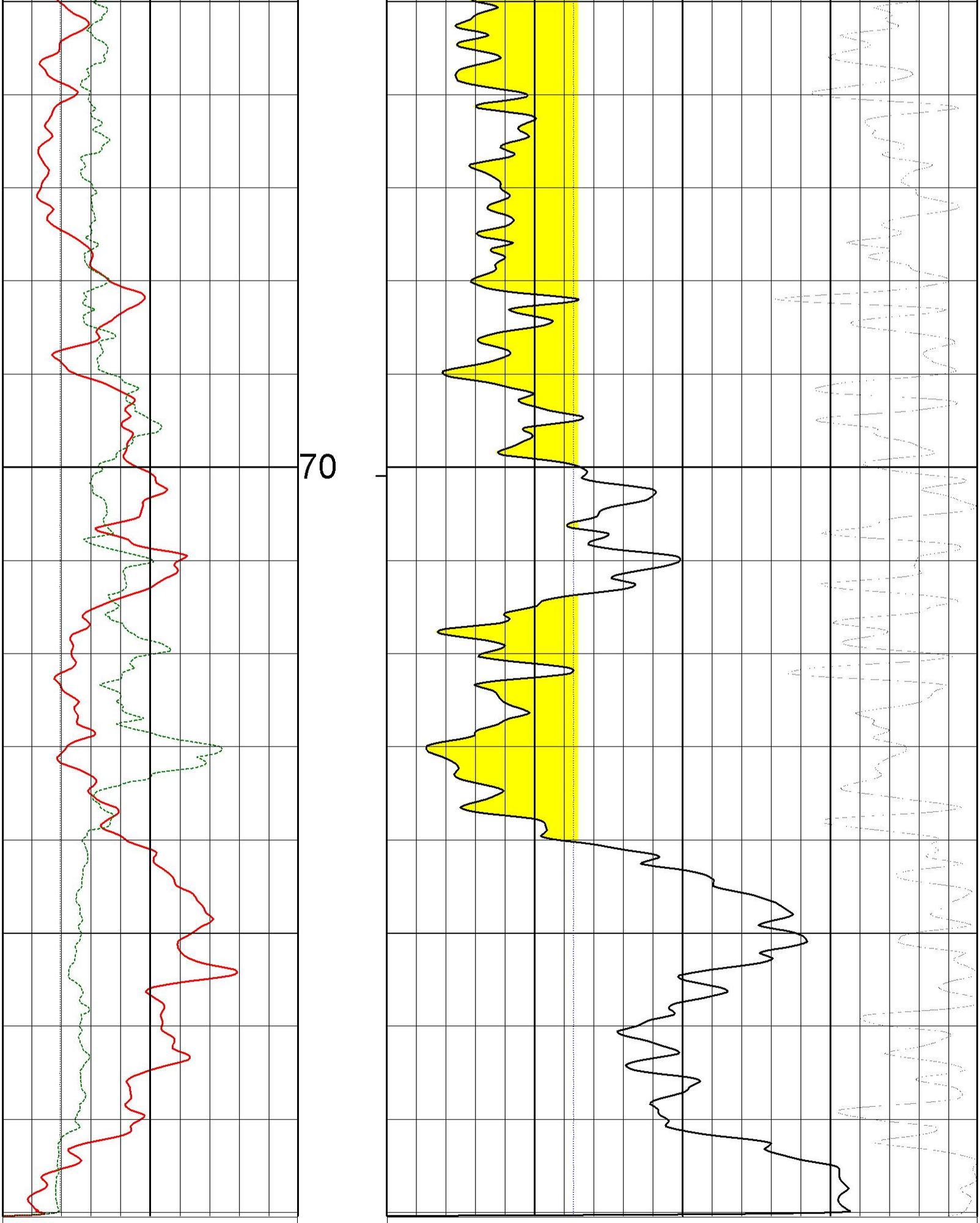
API-GR
200
DEN(CDL)
1
G/CC
3
60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0
API-GR
200
GAMMA
100
MM
300
CALIPERL
1
G/CC
3
DEN(CDL)
0.01
OHM-M
20000
RES(SG)

100	MM	300	SPEED --	0.45	G/CC	-0.05
BIT_SIZE			METERS	COMP		

DENSITY RESISTIVITY 1:50 LR15RFP-02 07/14/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM

PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/15/2015 DISPLAY7_JL7

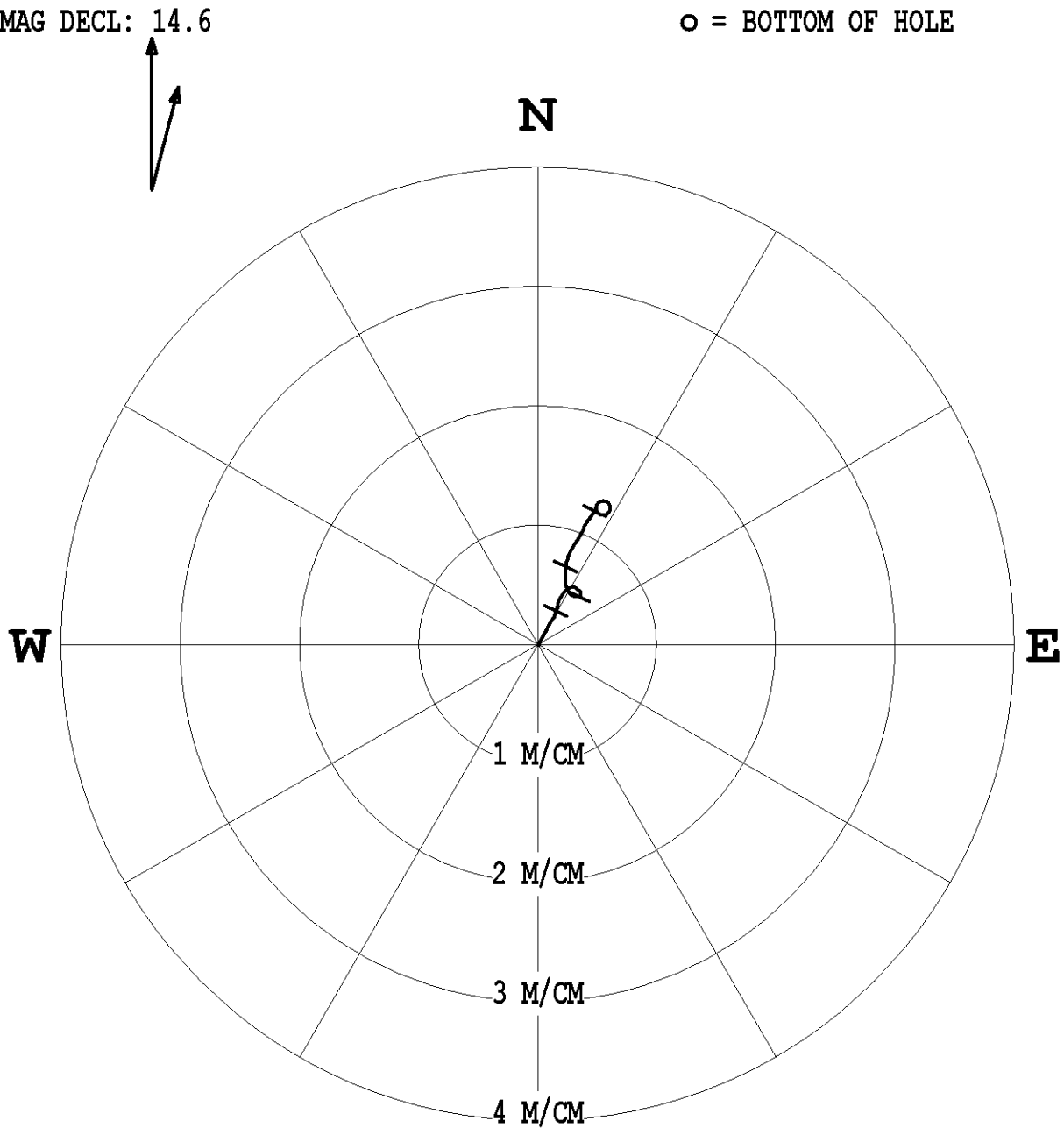
TOOL CALIBRATION LR15RFP-02 07/14/15 17:19
TOOL 9239C1 TM VERSION 2025
SERIAL NUMBER 449

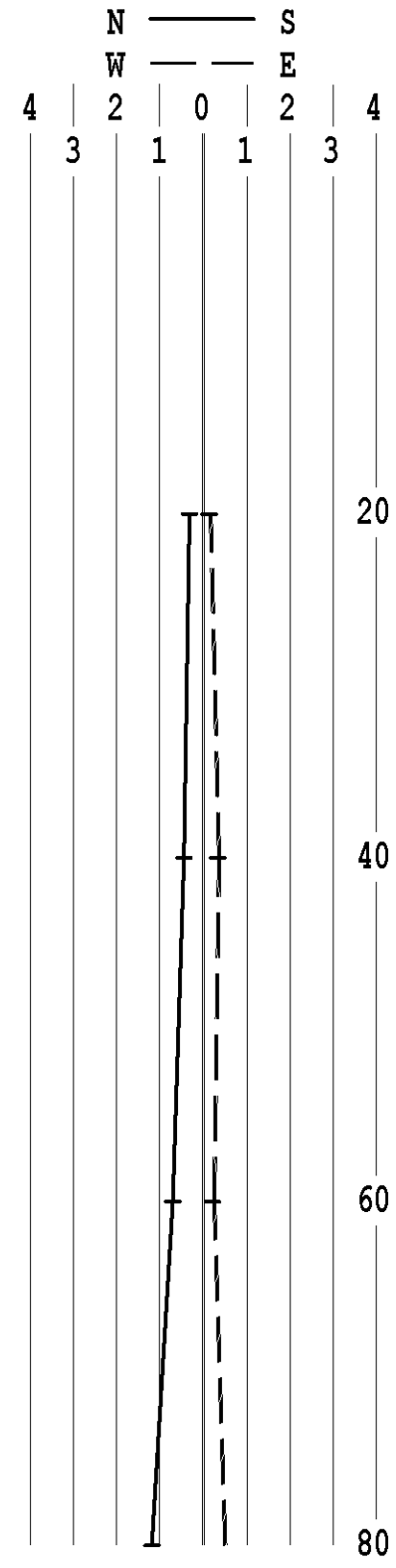
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul14,15	22:05:35	CALIPERL	[MM]	100.000	200.000	104652	205940
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CANAUS
LOCATION: LOOP RIDGE
HOLE ID: LR15RFP-02
DATE OF LOG: 07/14/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 88.00 M
AZIMUTH: 25.8
DISTANCE: 1.3 M
+ = 20 M INCR
o = BOTTOM OF HOLE

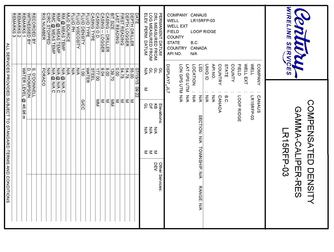


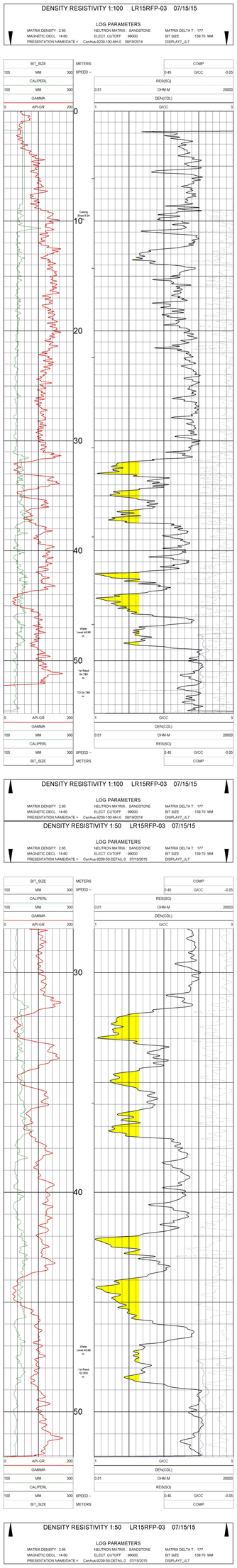


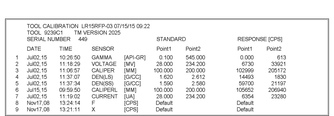
* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CANAUS
FIELD OFFICE : CENTURY GEO
DATA FROM : N/A
MAG. DECL. : 14.600
HOLE ID. : LR15RFP-02
DATE OF LOG : 07/14/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS
LOG: LR15RFP-02_07-14-15_18-24_9058A_.02_9.00_88.22_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
9.00	9.00	-0.00	0.00	0.0	123.2	1.8	123.2
10.00	10.00	0.01	0.01	0.0	65.6	1.8	20.7
11.00	11.00	0.03	0.02	0.0	35.0	1.8	24.3
12.00	12.00	0.06	0.04	0.1	31.8	1.8	32.3
13.00	13.00	0.09	0.05	0.1	31.0	1.7	31.1
14.00	14.00	0.11	0.07	0.1	30.9	1.8	28.0
15.00	15.00	0.14	0.08	0.2	29.9	1.9	25.7
16.00	16.00	0.17	0.10	0.2	29.6	1.8	29.4
17.00	17.00	0.20	0.11	0.2	29.8	1.7	32.5
18.00	18.00	0.22	0.13	0.3	30.6	1.6	40.5
19.00	19.00	0.25	0.14	0.3	29.9	2.0	13.2
20.00	19.99	0.28	0.15	0.3	28.3	2.0	15.4
21.00	20.99	0.31	0.16	0.4	27.1	2.0	16.9
22.00	21.99	0.35	0.17	0.4	26.1	1.9	16.5
23.00	22.99	0.38	0.18	0.4	25.6	1.8	31.4
24.00	23.99	0.40	0.20	0.4	26.0	1.8	32.9
25.00	24.99	0.43	0.21	0.5	26.5	1.9	29.1
26.00	25.99	0.45	0.23	0.5	27.2	1.7	44.4
27.00	26.99	0.47	0.26	0.5	28.6	1.4	61.6
28.00	27.99	0.48	0.28	0.6	30.3	1.5	65.8
29.00	28.99	0.48	0.30	0.6	32.0	1.0	105.7
30.00	29.99	0.47	0.31	0.6	33.6	0.9	120.8
31.00	30.99	0.46	0.33	0.6	35.1	0.8	137.7
32.00	31.99	0.46	0.34	0.6	36.5	0.8	126.9
33.00	32.99	0.45	0.35	0.6	37.8	0.7	131.8
34.00	33.99	0.44	0.36	0.6	38.9	0.7	143.9
35.00	34.99	0.43	0.36	0.6	39.9	0.6	182.1
36.00	35.99	0.42	0.36	0.6	40.3	0.4	198.0
37.00	36.99	0.41	0.35	0.5	40.6	0.3	191.4
38.00	37.99	0.41	0.35	0.5	40.8	0.4	237.4
39.00	38.99	0.41	0.35	0.5	40.5	0.4	250.8
40.00	39.99	0.40	0.34	0.5	40.0	0.6	259.1
41.00	40.99	0.40	0.33	0.5	39.4	0.6	261.2
42.00	41.99	0.40	0.32	0.5	38.6	0.5	281.7
43.00	42.99	0.40	0.31	0.5	37.6	0.7	277.8
44.00	43.99	0.40	0.30	0.5	36.3	0.8	282.3
45.00	44.99	0.41	0.29	0.5	34.8	0.8	304.2
46.00	45.99	0.42	0.28	0.5	33.3	0.9	313.9
47.00	46.99	0.43	0.27	0.5	31.6	0.8	314.9
48.00	47.99	0.44	0.26	0.5	30.3	0.7	323.9
49.00	48.99	0.45	0.25	0.5	28.9	0.9	336.4
50.00	49.99	0.47	0.24	0.5	27.6	0.9	333.2
51.00	50.99	0.48	0.24	0.5	26.2	0.9	338.2
52.00	51.99	0.50	0.23	0.5	25.0	0.8	354.7
53.00	52.99	0.52	0.23	0.6	24.1	0.9	348.0
54.00	53.99	0.53	0.23	0.6	23.1	1.1	0.2
55.00	54.99	0.55	0.23	0.6	22.4	1.0	357.0
56.00	55.99	0.57	0.23	0.6	21.7	1.0	2.9
57.00	56.99	0.59	0.23	0.6	21.1	1.2	359.4
58.00	57.99	0.61	0.23	0.7	20.4	1.0	349.9
59.00	58.99	0.63	0.23	0.7	19.9	1.2	1.7
60.00	59.99	0.65	0.23	0.7	19.4	1.2	9.4
61.00	60.99	0.67	0.23	0.7	19.2	1.4	13.6
62.00	61.99	0.70	0.24	0.7	19.1	1.6	22.2
63.00	62.99	0.72	0.25	0.8	19.2	1.4	6.7
64.00	63.99	0.75	0.26	0.8	19.0	1.3	15.5
65.00	64.99	0.77	0.27	0.8	19.2	1.9	30.8
66.00	65.99	0.80	0.28	0.8	19.6	1.8	30.6
67.00	66.98	0.83	0.30	0.9	19.9	1.8	29.7
68.00	67.98	0.85	0.32	0.9	20.3	1.7	32.4
69.00	68.98	0.88	0.33	0.9	20.8	1.9	34.3
70.00	69.98	0.91	0.35	1.0	21.2	1.7	30.7
71.00	70.98	0.93	0.36	1.0	21.4	1.6	27.4
72.00	71.98	0.96	0.38	1.0	21.6	1.8	26.3
73.00	72.98	0.98	0.39	1.1	21.5	0.9	9.2
74.00	73.98	1.00	0.39	1.1	21.5	1.5	32.1
75.00	74.98	1.02	0.41	1.1	21.7	1.3	24.5
76.00	75.98	1.04	0.42	1.1	22.0	1.5	36.4
77.00	76.98	1.06	0.44	1.1	22.4	1.6	36.1
78.00	77.98	1.08	0.45	1.2	22.6	1.2	36.4
79.00	78.98	1.10	0.47	1.2	22.9	1.3	35.9
80.00	79.98	1.12	0.48	1.2	23.0	1.1	26.7
81.00	80.98	1.13	0.48	1.2	23.0	0.9	19.9
82.00	81.98	1.15	0.49	1.2	22.9	0.8	21.0
83.00	82.98	1.16	0.49	1.3	22.9	0.9	30.7
84.00	83.98	1.16	0.50	1.3	23.3	0.7	89.2
85.00	84.98	1.16	0.51	1.3	23.7	0.7	139.4
86.00	85.98	1.15	0.52	1.3	24.2	0.7	127.7
87.00	86.98	1.15	0.53	1.3	24.8	0.9	116.9
88.00	87.98	1.14	0.55	1.3	25.7	1.5	115.5
88.20	88.18	1.14	0.55	1.3	25.8	0.0	0.0







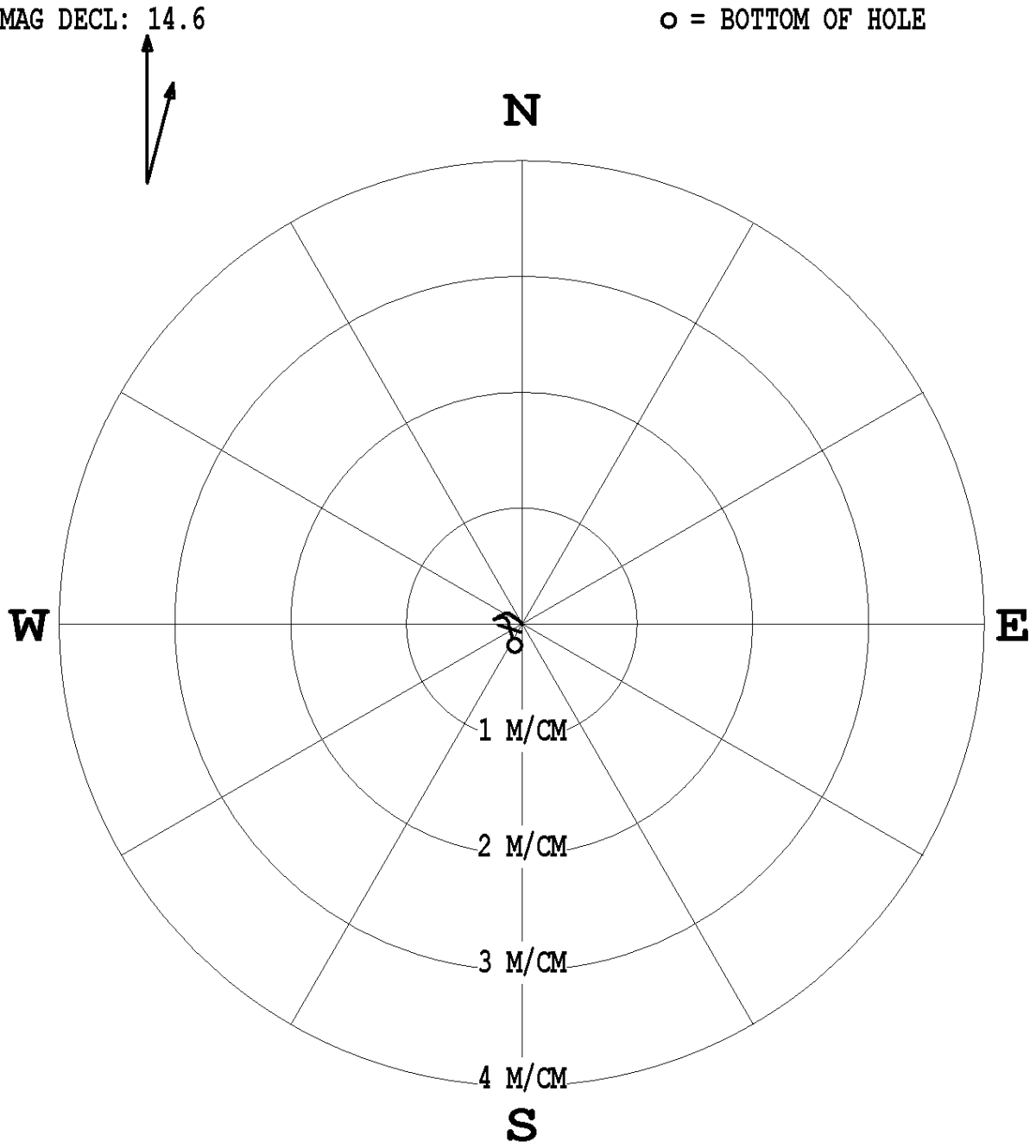
TOOL CALIBRATION LR15RFP-03 07/15/15 09:22
TOOL 9239C1 TM VERSION 2025
SERIAL_NUMBER 449

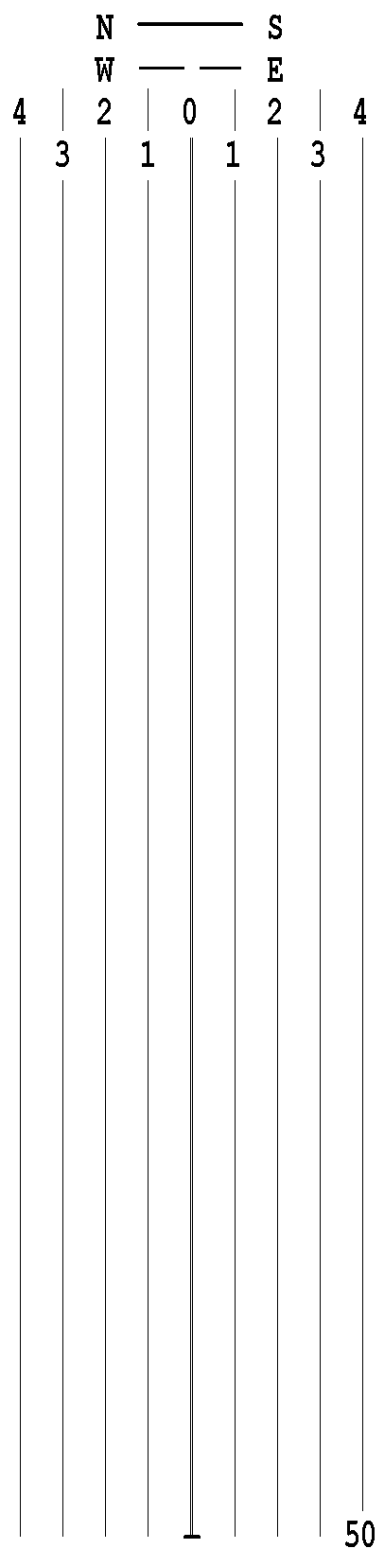
	DATE	TIME	SENSOR		STANDARD		RESPONSE [CPS]	
					Point1	Point2	Point1	Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul15,15	09:59:50	CALIPERL	[MM]	100.000	200.000	105652	206940
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6054	37280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CANAUS
LOCATION: LOOP RIDGE
HOLE ID: LR15RFP-03
DATE OF LOG: 07/15/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 54.27 M
AZIMUTH: 197.5
DISTANCE: 0.2 M
+ = 50 M INCR
o = BOTTOM OF HOLE



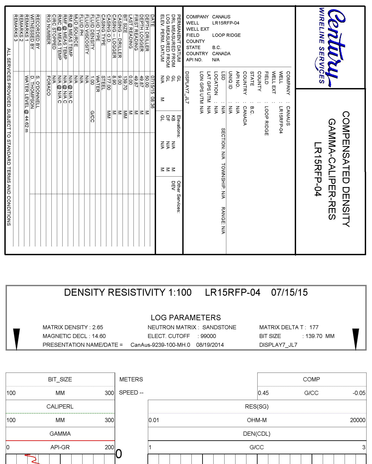


* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CANAUS
FIELD OFFICE : CENTURY GEO
DATA FROM : N/A
MAG. DECL. : 14.600
LOG: LR15RFP-03_07-15-15_09-04_9058A_.02_10.00_54.48_DEVI.log

HOLE ID. : LR15RFP-03
DATE OF LOG : 07/15/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS

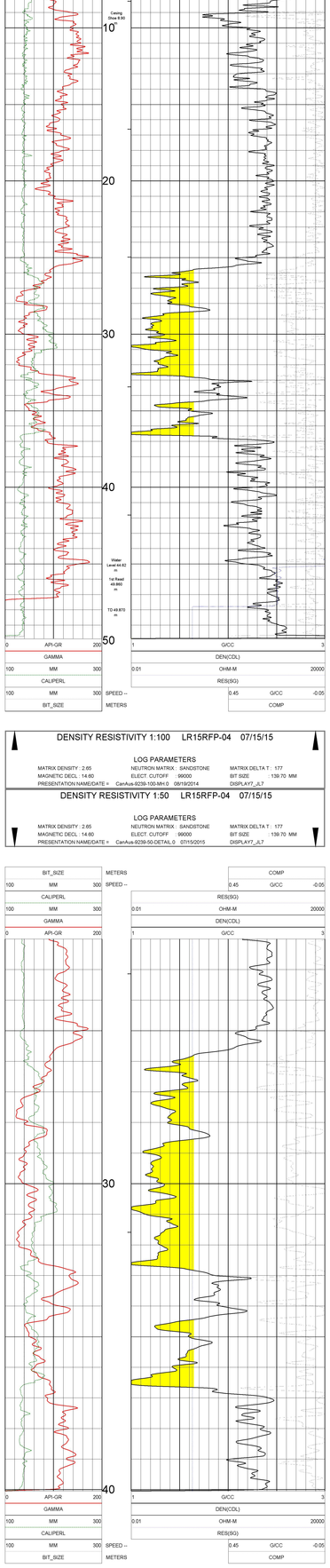
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.00	0.00	-0.00	0.0	320.5	1.2	320.5
11.00	11.00	0.02	-0.01	0.0	315.6	1.2	313.7
12.00	12.00	0.03	-0.03	0.0	314.0	1.2	308.5
13.00	13.00	0.04	-0.05	0.1	312.9	1.2	308.7
14.00	14.00	0.05	-0.06	0.1	311.9	1.1	304.4
15.00	15.00	0.06	-0.07	0.1	310.6	1.0	304.8
16.00	16.00	0.07	-0.09	0.1	309.8	1.0	309.1
17.00	17.00	0.08	-0.10	0.1	309.4	0.8	299.8
18.00	18.00	0.09	-0.11	0.1	308.8	0.8	288.4
19.00	19.00	0.09	-0.13	0.2	306.3	0.7	261.1
20.00	20.00	0.09	-0.14	0.2	303.2	0.8	264.4
21.00	21.00	0.09	-0.15	0.2	300.1	0.6	244.5
22.00	22.00	0.08	-0.16	0.2	296.5	0.9	234.4
23.00	23.00	0.07	-0.17	0.2	292.8	0.6	260.8
24.00	24.00	0.07	-0.18	0.2	291.2	0.7	260.8
25.00	25.00	0.07	-0.19	0.2	289.4	0.6	234.6
26.00	26.00	0.06	-0.20	0.2	287.3	0.5	233.1
27.00	27.00	0.06	-0.21	0.2	285.2	0.6	239.6
28.00	28.00	0.05	-0.22	0.2	282.9	0.8	218.1
29.00	29.00	0.04	-0.23	0.2	281.0	0.4	279.0
30.00	30.00	0.04	-0.23	0.2	280.3	0.1	316.4
31.00	31.00	0.04	-0.24	0.2	280.5	0.2	242.2
32.00	32.00	0.04	-0.24	0.2	280.2	0.2	304.8
33.00	33.00	0.04	-0.24	0.2	280.0	0.2	159.4
34.00	34.00	0.04	-0.24	0.2	279.3	0.2	179.1
35.00	35.00	0.04	-0.24	0.2	279.2	0.7	67.3
36.00	36.00	0.04	-0.23	0.2	280.9	0.6	54.9
37.00	37.00	0.05	-0.22	0.2	282.4	0.7	84.6
38.00	38.00	0.05	-0.20	0.2	283.9	0.9	74.7
39.00	39.00	0.05	-0.19	0.2	285.9	0.6	76.5
40.00	40.00	0.06	-0.17	0.2	287.5	0.9	93.6
41.00	41.00	0.06	-0.16	0.2	288.9	0.8	92.4
42.00	42.00	0.05	-0.15	0.2	288.9	0.6	110.1
43.00	43.00	0.05	-0.14	0.2	289.5	0.7	110.4
44.00	44.00	0.04	-0.13	0.1	287.7	0.6	145.3
45.00	45.00	0.03	-0.13	0.1	284.4	0.7	148.2
46.00	46.00	0.02	-0.12	0.1	280.9	0.6	153.8
47.00	47.00	0.01	-0.12	0.1	275.6	0.8	156.3
48.00	48.00	0.00	-0.12	0.1	271.0	0.5	194.7
49.00	49.00	-0.01	-0.12	0.1	263.5	1.6	164.2
50.00	50.00	-0.04	-0.11	0.1	249.1	1.8	163.3
51.00	51.00	-0.07	-0.10	0.1	234.4	2.0	162.8
52.00	52.00	-0.10	-0.09	0.1	221.0	1.8	166.6
53.00	52.99	-0.14	-0.08	0.2	209.5	2.5	156.8
54.00	53.99	-0.18	-0.06	0.2	199.3	2.1	161.9
54.46	54.45	-0.19	-0.06	0.2	197.5	0.0	0.0



DENSITY RESISTIVITY 1:100 LR15RFP-04 07/15/15

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL. : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE =	CanAus-9239-100-MH.0 09/19/2014	DISPLAY7_JL7



DENSITY RESISTIVITY 1:100 LR15RFP-04 07/15/15

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL. : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE =	CanAus-9239-100-MH.0 09/19/2014	DISPLAY7_JL7

DENSITY RESISTIVITY 1:50 LR15RFP-04 07/15/15

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL. : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE =	CanAus-9239-50-DETAIL.0 07/15/2015	DISPLAY7_JL7

DENSITY RESISTIVITY 1:50 LR15RFP-04 07/15/15

LOG PARAMETERS

MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL. : 14.60	ELECT. CUTOFF : 99000	BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE =	CanAus-9239-50-DETAIL.0 07/15/2015	DISPLAY7_JL7

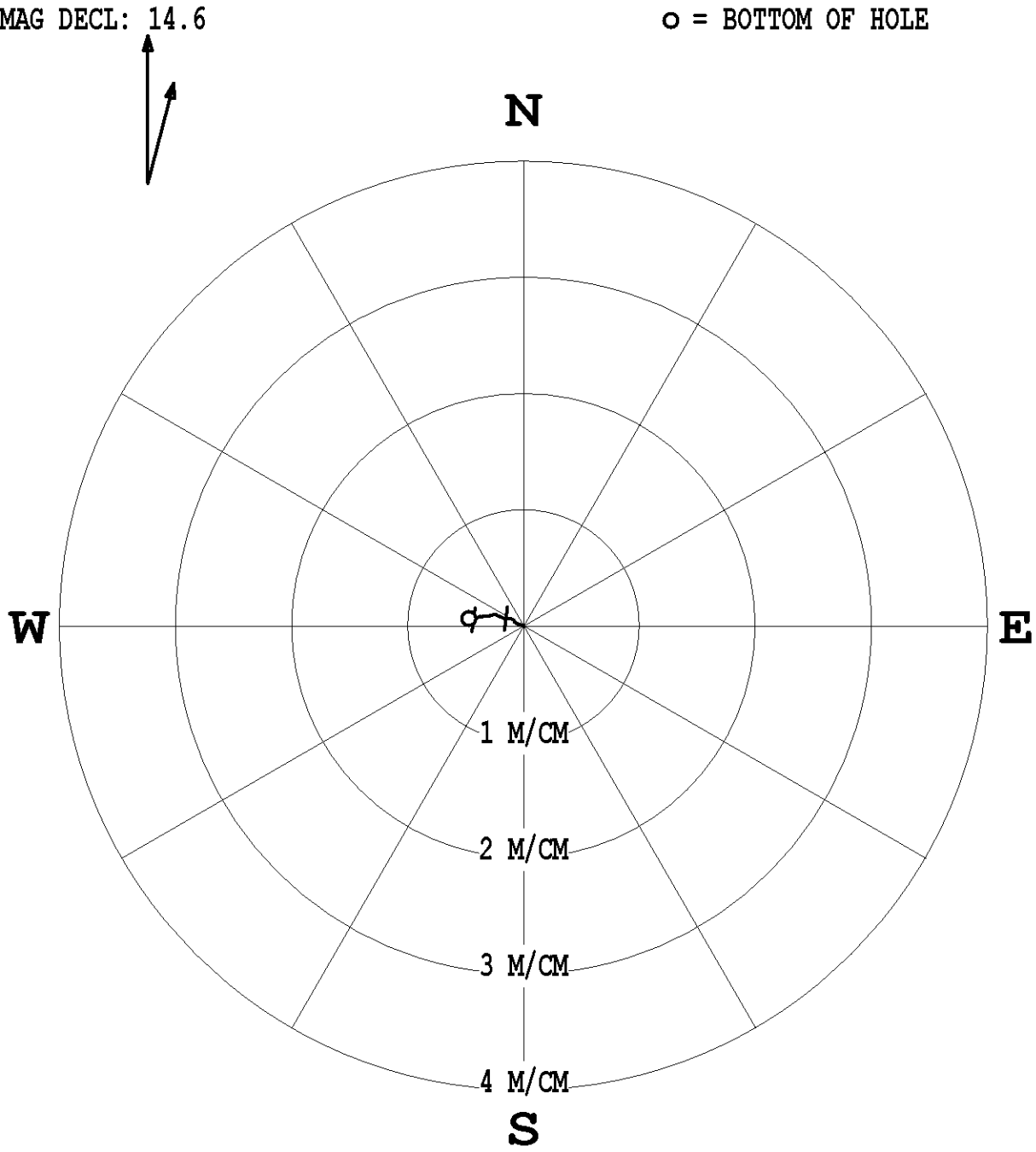
TOOL CALIBRATION LR15RFP-04 07/15/15 08:36
TOOL 9239C1 TM VERSION 2025
SERIAL NUMBER 449

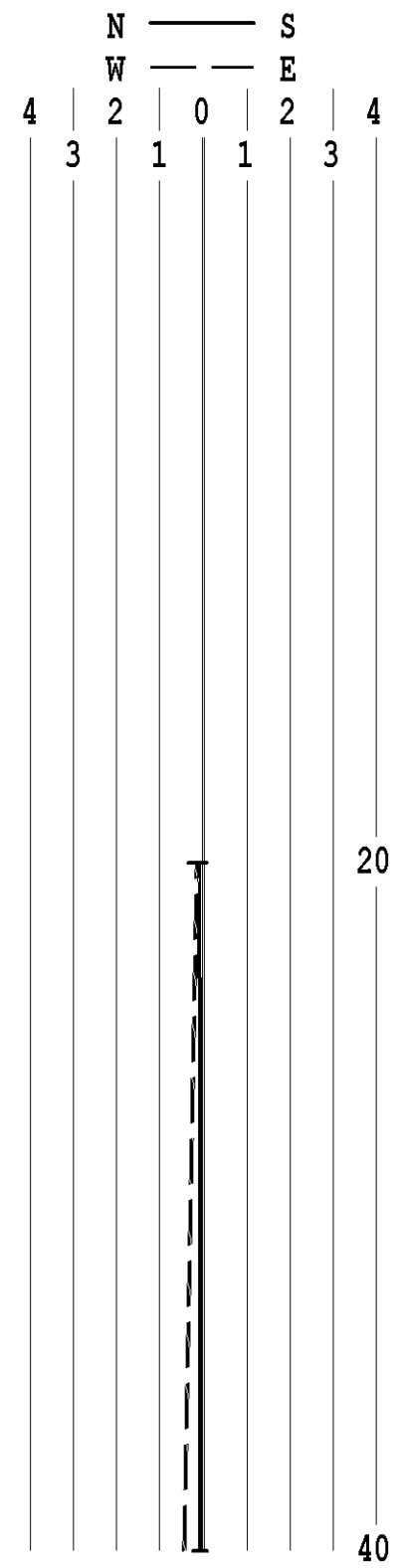
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:16:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14483	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul15,15	09:43:18	CALIPER	[MM]	100.000	200.000	104552	205940
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CANAUS
LOCATION: LOOP RIDGE
HOLE ID: LR15RFP-04
DATE OF LOG: 07/15/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 49.72 M
AZIMUTH: 277.7
DISTANCE: 0.5 M
+ = 20 M INCR
o = BOTTOM OF HOLE





* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * *

CLIENT : CANAUS
FIELD OFFICE : CENTURY GEO
DATA FROM : N/A
MAG. DECL. : 14.600
HOLE ID. : LR15RFP-04
DATE OF LOG : 07/15/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS
LOG: LR15RFP-04_07-15-15_08-11_9058A_.02_10.00_49.92_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	10.00	0.00	-0.00	0.0	296.7	1.1	296.7
11.00	11.00	0.01	-0.02	0.0	293.6	1.0	293.1
12.00	12.00	0.01	-0.03	0.0	290.1	1.1	282.9
13.00	13.00	0.02	-0.05	0.1	288.0	1.0	286.6
14.00	14.00	0.02	-0.06	0.1	290.6	1.0	299.4
15.00	15.00	0.03	-0.08	0.1	293.4	0.9	328.6
16.00	16.00	0.05	-0.09	0.1	299.8	1.0	319.0
17.00	17.00	0.06	-0.10	0.1	299.6	1.0	291.5
18.00	18.00	0.06	-0.12	0.1	297.9	1.0	285.5
19.00	19.00	0.06	-0.14	0.2	295.4	1.0	279.2
20.00	20.00	0.06	-0.15	0.2	292.0	1.1	233.8
21.00	21.00	0.06	-0.17	0.2	290.9	1.0	293.9
22.00	22.00	0.07	-0.19	0.2	291.0	1.0	293.6
23.00	23.00	0.08	-0.20	0.2	291.4	1.0	299.0
24.00	24.00	0.09	-0.22	0.2	291.5	1.0	287.3
25.00	25.00	0.09	-0.23	0.2	291.4	1.0	299.6
26.00	26.00	0.10	-0.25	0.3	291.8	0.9	252.1
27.00	27.00	0.10	-0.26	0.3	290.5	1.0	257.7
28.00	28.00	0.09	-0.28	0.3	288.7	1.0	276.5
29.00	29.00	0.09	-0.29	0.3	286.9	0.9	250.2
30.00	30.00	0.08	-0.31	0.3	285.4	0.8	262.6
31.00	31.00	0.08	-0.32	0.3	284.5	0.9	275.8
32.00	32.00	0.08	-0.33	0.3	284.1	0.8	275.3
33.00	33.00	0.08	-0.35	0.4	283.5	0.8	243.5
34.00	34.00	0.08	-0.36	0.4	282.3	0.9	253.1
35.00	35.00	0.08	-0.37	0.4	281.7	0.7	298.3
36.00	36.00	0.08	-0.38	0.4	281.7	1.0	242.0
37.00	37.00	0.07	-0.40	0.4	280.3	0.8	261.9
38.00	38.00	0.07	-0.41	0.4	279.3	0.8	255.7
39.00	39.00	0.06	-0.42	0.4	277.9	1.0	219.6
40.00	40.00	0.05	-0.43	0.4	277.1	0.5	328.5
41.00	41.00	0.06	-0.44	0.4	277.8	0.3	311.2
42.00	42.00	0.06	-0.44	0.4	277.9	0.7	267.9
43.00	43.00	0.06	-0.46	0.5	277.4	0.6	239.2
44.00	44.00	0.06	-0.47	0.5	276.8	0.7	229.1
45.00	45.00	0.05	-0.48	0.5	276.2	0.6	269.1
46.00	46.00	0.05	-0.49	0.5	276.1	0.6	237.0
47.00	47.00	0.05	-0.49	0.5	275.9	0.0	301.1
48.00	48.00	0.05	-0.49	0.5	276.3	0.5	17.7
49.00	49.00	0.06	-0.48	0.5	277.3	0.8	77.9
49.90	49.90	0.06	-0.47	0.5	277.7	0.0	0.0

Century WIRELINE SERVICES

COMPENSATED DENSITY
GAMMA-CALIPER-RES
LR15RFP-05

COMPANY CANAUS
WELL LR15RFP-05
WELL EXT
FIELD LOOP RIDGE
COUNTY
STATE B.C.
COUNTRY CANADA
API NO. N/A

COMPANY : CANAUS
WELL : LR15RFP-05
WELL EXT :
FIELD : LOOP RIDGE
COUNTY :
STATE : B.C.
COUNTRY : CANADA
API NO. : N/A
UNIQ ID : N/A
LSD : N/A
LOCATION : N/A SECTION: N/A TOWNSHIP: N/A RANGE: N/A
LAT GPS UTM N/A
LON GPS UTM N/A

DISPLAY7_JL7

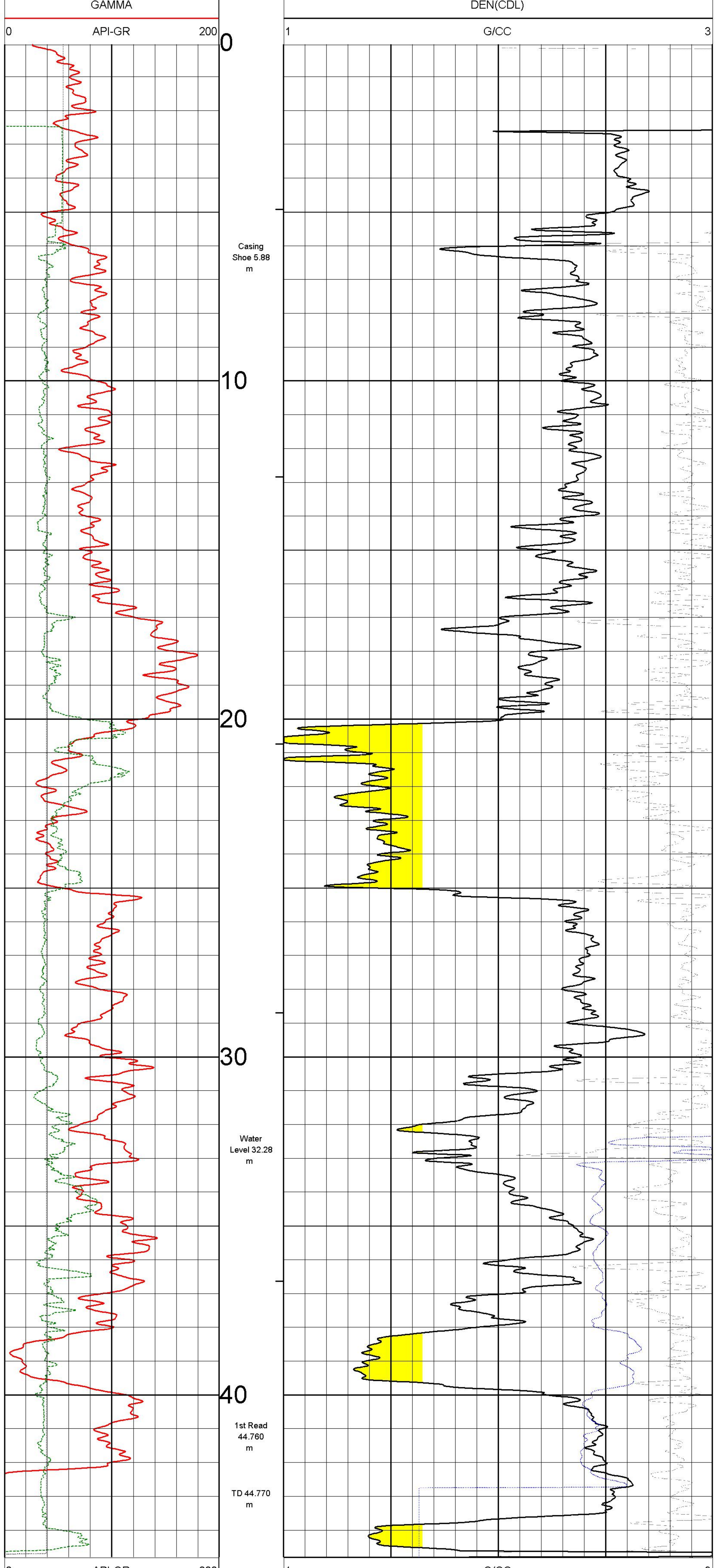
PERMANENT DATUM	GL	Elevations:		Other Services:
DRL MEASURED FROM	GL	KB	N/A M	DEV
LOG MEASURED FROM	GL	DF	N/A M	
ELEV. PERM. DATUM	N/A M	GL	N/A M	

DATE	07/16/15 03:08	
DEPTH DRILLER	45.00	M
DEPTH LOGGER	44.77	M
FIRST READING	44.77	M
LAST READING	0.04	M
BIT SIZE	139.70	MM
CASING -- DRILLER	6.00	M
CASING -- LOGGER	5.88	M
CASING O.D.	177.00	MM
CASING TYPE	STEEL	
FLUID TYPE	WATER	
FLUID DENSITY	1.00	G/CC
FLUID VISCOSITY	N/A	
FLUID PH	N/A	
MUD SOURCE	N/A	
RM @ MEAS TEMP	N/A @ N/A C	
RMF @ MEAS TEMP	N/A @ N/A C	
RMC @ MEAS TEMP	N/A @ N/A C	
CIRC STOPPED	N/A	
RIG NUMBER	FORACO	
RECORDED BY	S. ODONNELL	
WITNESSED BY	D. THOMPSON	
REMARKS 1	WATER LEVEL @ 32.28m	
REMARKS 2		
REMARKS 3		

DENSITY RESISTIVITY 1:100 LR15RFP-05 07/16/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-100-MH.0 08/19/2014 DISPLAY7_JL7

BIT_SIZE: 100 MM 300 | METERS | COMP: 0.45 G/CC -0.05
CALIPERL: 100 MM 300 | SPEED -- | RES(SG): 0.01 OHM-M 20000
GAMMA: 0 API-GR 200 | | DEN(CDL): 1 G/CC 3

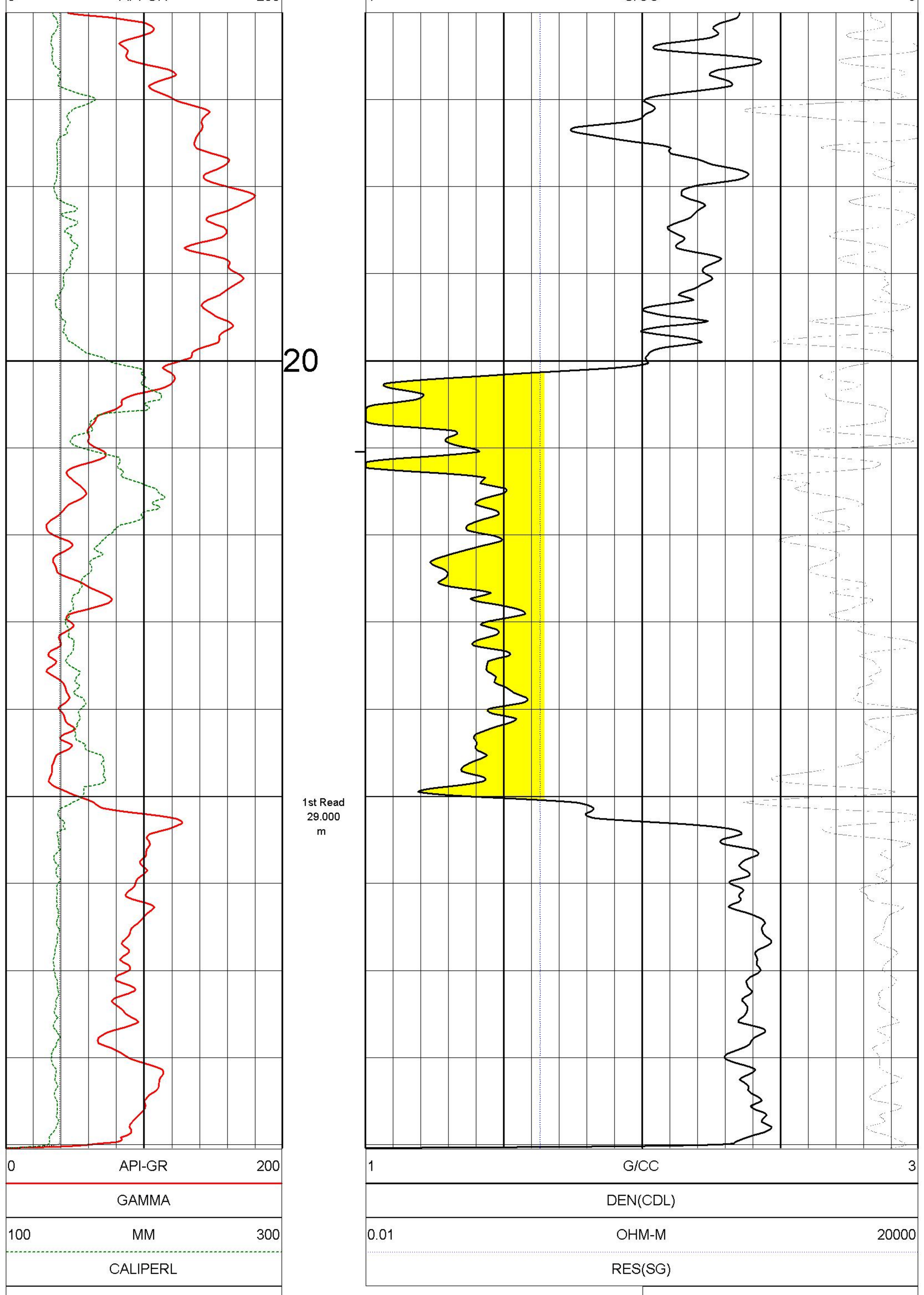


DENSITY RESISTIVITY 1:100 LR15RFP-05 07/16/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-100-MH.0 08/19/2014 DISPLAY7_JL7

DENSITY RESISTIVITY 1:50 LR15RFP-05 07/16/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/15/2015 DISPLAY7_JL7



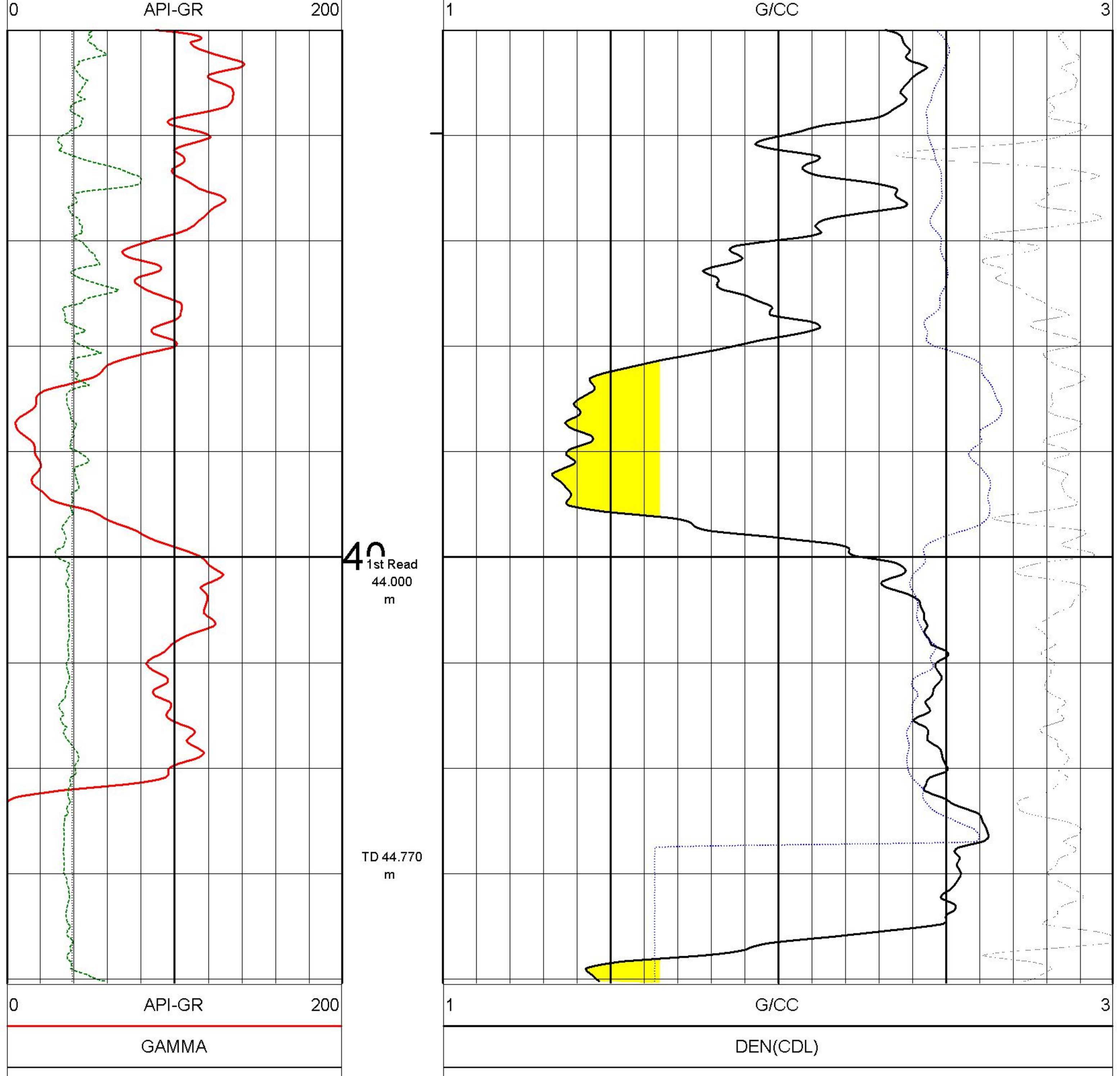
DENSITY RESISTIVITY 1:50 LR15RFP-05 07/16/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/15/2015 DISPLAY7_JL7

DENSITY RESISTIVITY 1:50 LR15RFP-05 07/16/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/15/2015 DISPLAY7_JL7

Water Level 32.38



DENSITY RESISTIVITY 1:50 LR15RFP-05 07/16/15

LOG PARAMETERS
MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/15/2015 DISPLAY7_JL7

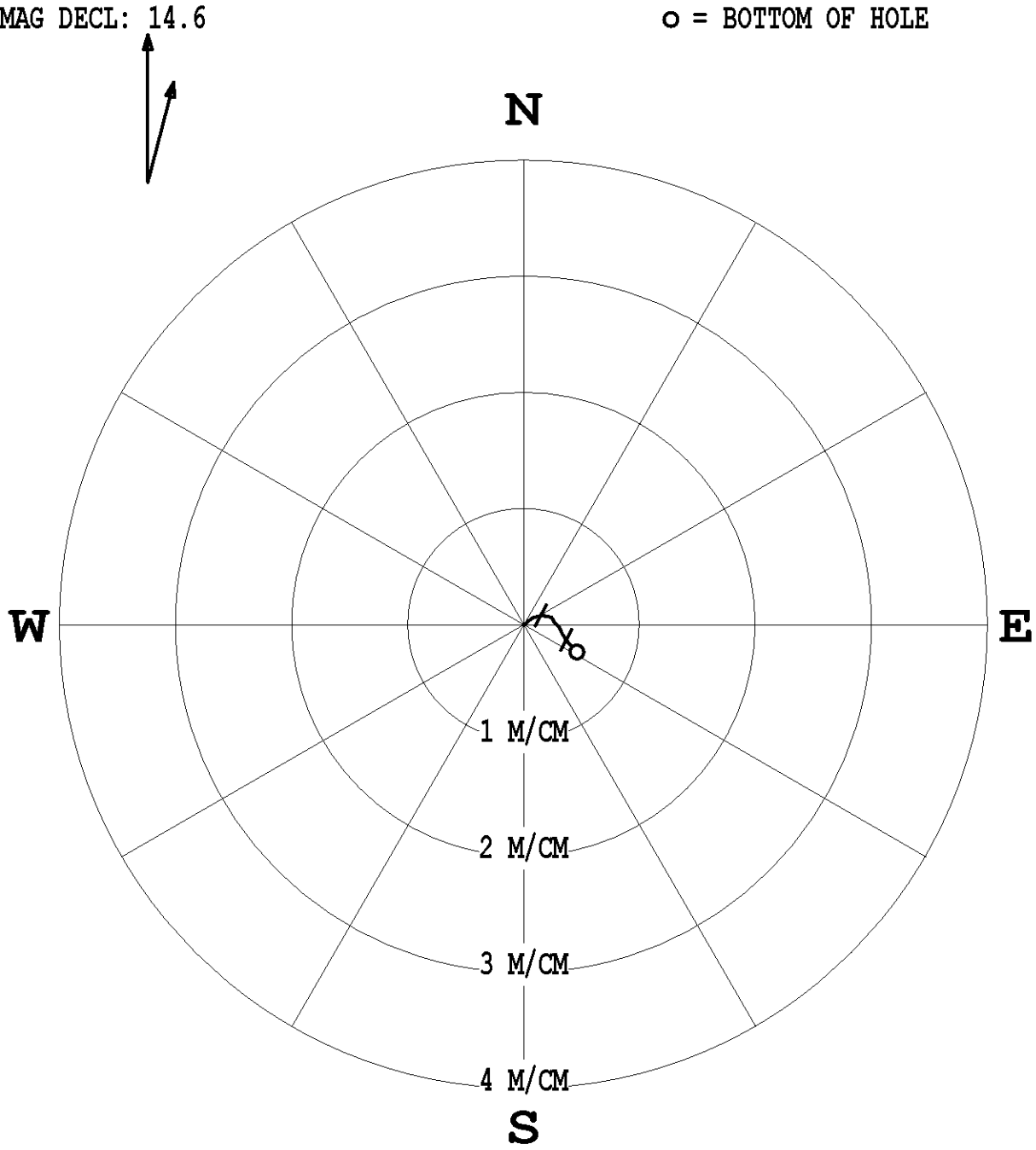
TOOL CALIBRATION LR15RFP-05 07/16/15 03:08
TOOL 9239C1 TM VERSION 2025
SERIAL NUMBER 449

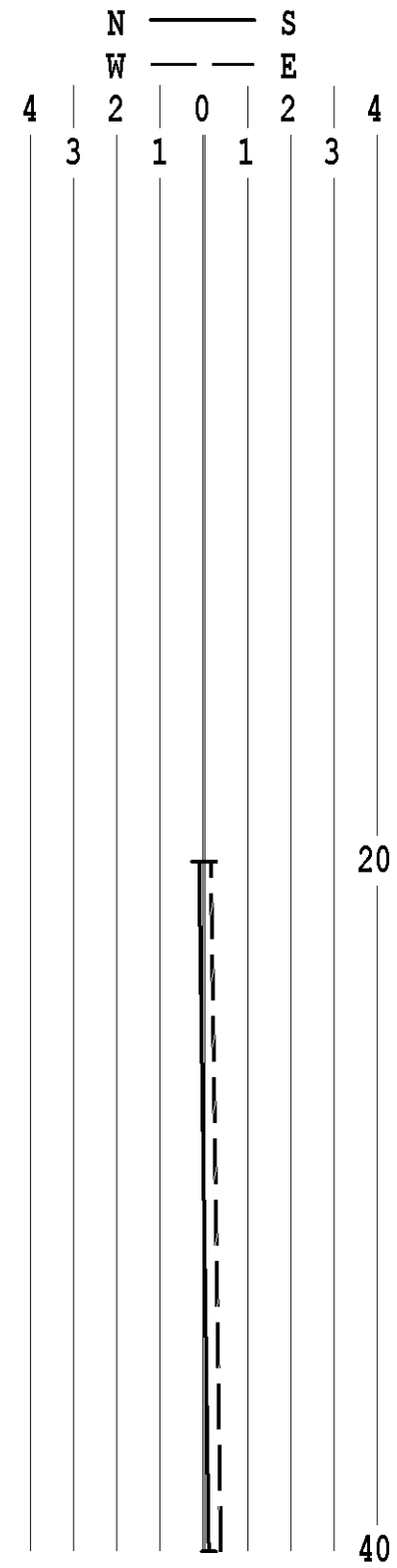
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul16,15	04:09:11	CALIPERL	[MM]	100.000	200.000	105652	206940
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CANAUS
LOCATION: LOOP RIDGE
HOLE ID: LR15RFP-05
DATE OF LOG: 07/16/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 44.61 M
AZIMUTH: 117.8
DISTANCE: 0.5 M
+ = 20 M INCR
o = BOTTOM OF HOLE





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CANAUS
FIELD OFFICE : CENTURY GEO
DATA FROM : N/A
MAG. DECL. : 14.600
LOG: LR15RFP-05_07-16-15_02-50_9058A_.02_6.00_44.80_DEVI.log

HOLE ID. : LR15RFP-05
DATE OF LOG : 07/16/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
6.00	6.00	0.00	0.00	0.0	67.6	0.7	67.6
7.00	7.00	0.00	0.01	0.0	64.9	0.7	60.4
8.00	8.00	0.01	0.02	0.0	59.7	0.7	52.0
9.00	9.00	0.02	0.03	0.0	54.1	0.6	37.0
10.00	10.00	0.03	0.04	0.0	50.5	0.6	45.5
11.00	11.00	0.04	0.04	0.1	50.6	0.7	51.0
12.00	12.00	0.04	0.05	0.1	52.9	0.7	64.0
13.00	13.00	0.05	0.06	0.1	52.6	0.6	42.5
14.00	14.00	0.06	0.07	0.1	51.5	0.6	50.0
15.00	15.00	0.06	0.08	0.1	53.4	0.8	78.3
16.00	16.00	0.07	0.10	0.1	56.2	0.8	77.0
17.00	17.00	0.07	0.11	0.1	58.9	1.0	80.3
18.00	18.00	0.07	0.13	0.1	60.4	1.1	75.7
19.00	19.00	0.08	0.14	0.2	60.9	0.4	35.3
20.00	20.00	0.08	0.15	0.2	61.5	0.6	78.0
21.00	21.00	0.08	0.15	0.2	62.7	0.3	93.7
22.00	22.00	0.08	0.16	0.2	63.7	0.9	97.9
23.00	23.00	0.08	0.17	0.2	66.3	0.8	100.6
24.00	24.00	0.07	0.19	0.2	68.7	0.8	103.0
25.00	25.00	0.07	0.20	0.2	70.2	0.6	90.5
26.00	26.00	0.07	0.21	0.2	71.8	0.6	118.3
27.00	27.00	0.07	0.22	0.2	73.3	0.7	101.5
28.00	28.00	0.06	0.24	0.2	74.9	0.8	97.8
29.00	29.00	0.06	0.24	0.2	77.2	0.6	168.0
30.00	30.00	0.04	0.25	0.3	80.1	1.1	143.1
31.00	31.00	0.03	0.26	0.3	83.8	0.9	143.7
32.00	32.00	0.02	0.27	0.3	86.7	0.9	129.2
33.00	33.00	0.00	0.28	0.3	89.4	0.8	136.8
34.00	34.00	-0.01	0.29	0.3	91.8	0.9	127.4
35.00	35.00	-0.02	0.30	0.3	94.4	1.5	150.3
36.00	36.00	-0.05	0.32	0.3	98.5	1.4	156.9
37.00	37.00	-0.07	0.33	0.3	102.0	1.3	160.9
38.00	38.00	-0.09	0.34	0.3	104.4	1.6	143.1
39.00	39.00	-0.11	0.35	0.4	107.6	1.5	155.7
40.00	40.00	-0.13	0.36	0.4	110.0	1.8	137.9
41.00	41.00	-0.16	0.39	0.4	112.2	1.9	141.5
42.00	41.99	-0.18	0.41	0.4	114.3	1.8	139.7
43.00	42.99	-0.21	0.42	0.5	116.0	1.5	143.0
44.00	43.99	-0.23	0.45	0.5	117.0	1.6	139.0
44.78	44.77	-0.24	0.46	0.5	117.8	0.0	0.0

Century WIRELINE SERVICES

COMPENSATED DENSITY GAMMA-CALIPER-RES LR15RFP-06

COMPANY : CANAUS
WELL : LR15RFP-06
WELL EXT :
FIELD : LOOP RIDGE
COUNTY :
STATE : B.C.
COUNTRY : CANADA
API NO. : N/A
UNIQ ID : N/A
LSD : N/A SECTION: N/A TOWNSHIP: N/A RANGE: N/A
LOCATION : N/A
LAT GPS UTM N/A
LON GPS UTM N/A
DISPLAY7_JL7

COMPANY CANAUS
WELL LR15RFP-06
WELL EXT
FIELD LOOP RIDGE
COUNTY
STATE B.C.
COUNTRY CANADA
API NO. N/A

PERMANENT DATUM GL
DRL MEASURED FROM GL
LOG MEASURED FROM GL
ELEV. PERM. DATUM N/A M

Elevations: KB N/A M; DF N/A M; GL N/A M

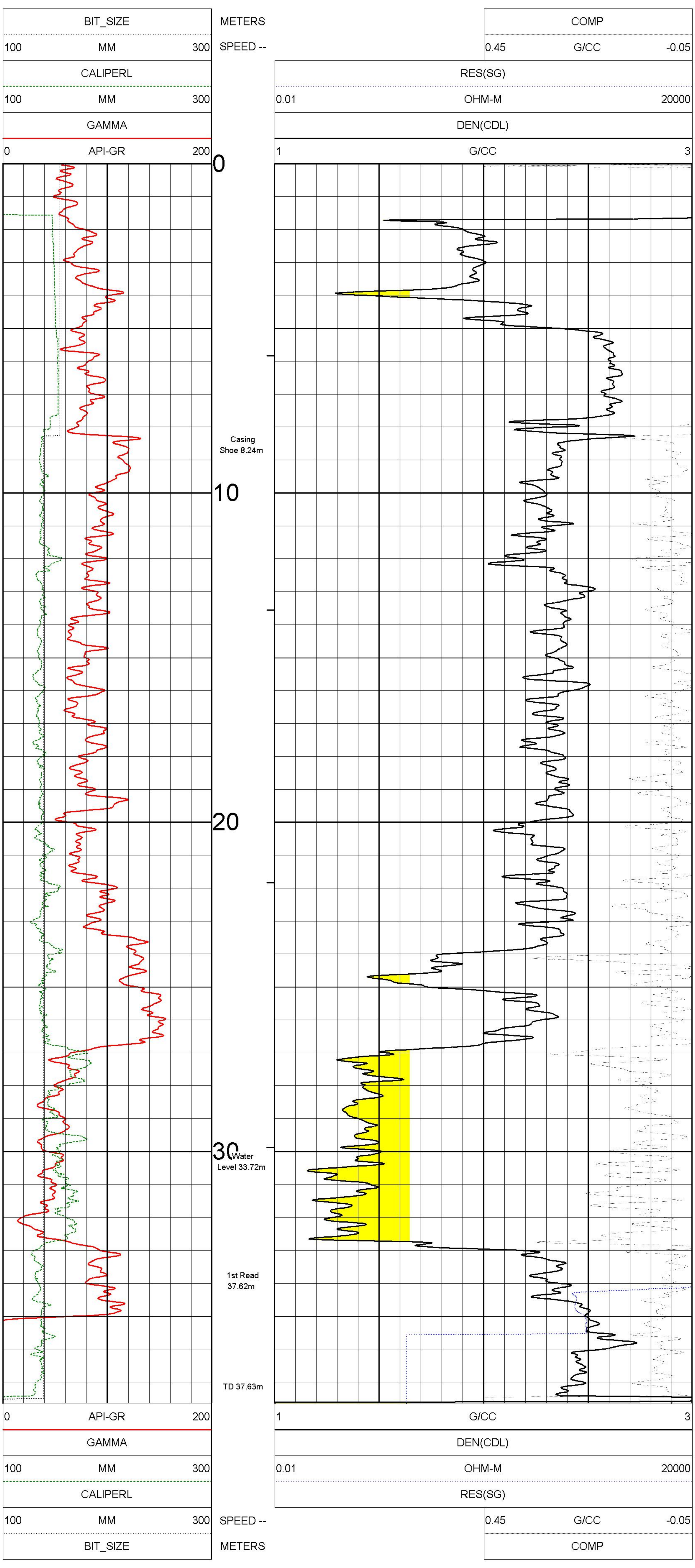
Other Services: DEV

DATE	07/16/15 02:19	
DEPTH DRILLER	38.00	M
DEPTH LOGGER	37.63	M
FIRST READING	37.63	M
LAST READING	0.00	M
BIT SIZE	139.70	MM
CASING -- DRILLER	9.00	M
CASING -- LOGGER	8.24	M
CASING O.D.	177.00	MM
CASING TYPE	STEEL	
FLUID TYPE	WATER	
FLUID DENSITY	1.00	G/CC
FLUID VISCOSITY	N/A	
FLUID PH	N/A	
MUD SOURCE	N/A	
RM @ MEAS TEMP	N/A @ N/A C	
RMF @ MEAS TEMP	N/A @ N/A C	
RMC @ MEAS TEMP	N/A @ N/A C	
CIRC STOPPED	N/A	
RIG NUMBER	FORACO	
RECORDED BY	S. O'DONNELL	
WITNESSED BY	D. THOMPSON	
REMARKS 1	WATER LEVEL @ 33.72m	
REMARKS 2		
REMARKS 3		

DENSITY RESISTIVITY 1:100 LR15RFP-06 07/16/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-100-MH.0 08/19/2014 DISPLAY7_JL7



DENSITY RESISTIVITY 1:100 LR15RFP-06 07/16/15

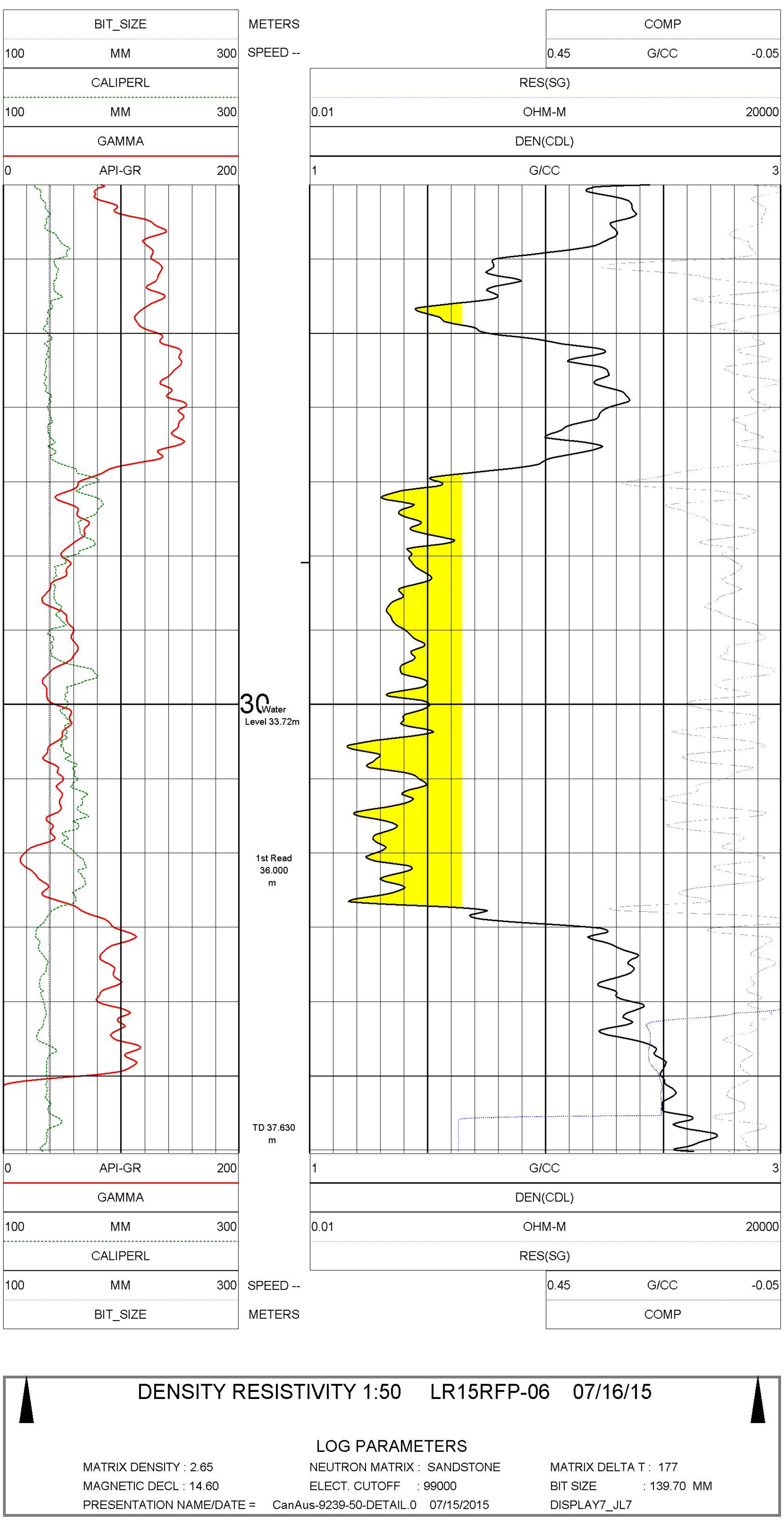
LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-100-MH.0 08/19/2014 DISPLAY7_JL7

DENSITY RESISTIVITY 1:50 LR15RFP-06 07/16/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/15/2015 DISPLAY7_JL7



DENSITY RESISTIVITY 1:50 LR15RFP-06 07/16/15

LOG PARAMETERS

MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177
MAGNETIC DECL : 14.60 ELECT. CUTOFF : 99000 BIT SIZE : 139.70 MM
PRESENTATION NAME/DATE = CanAus-9239-50-DETAIL.0 07/15/2015 DISPLAY7_JL7

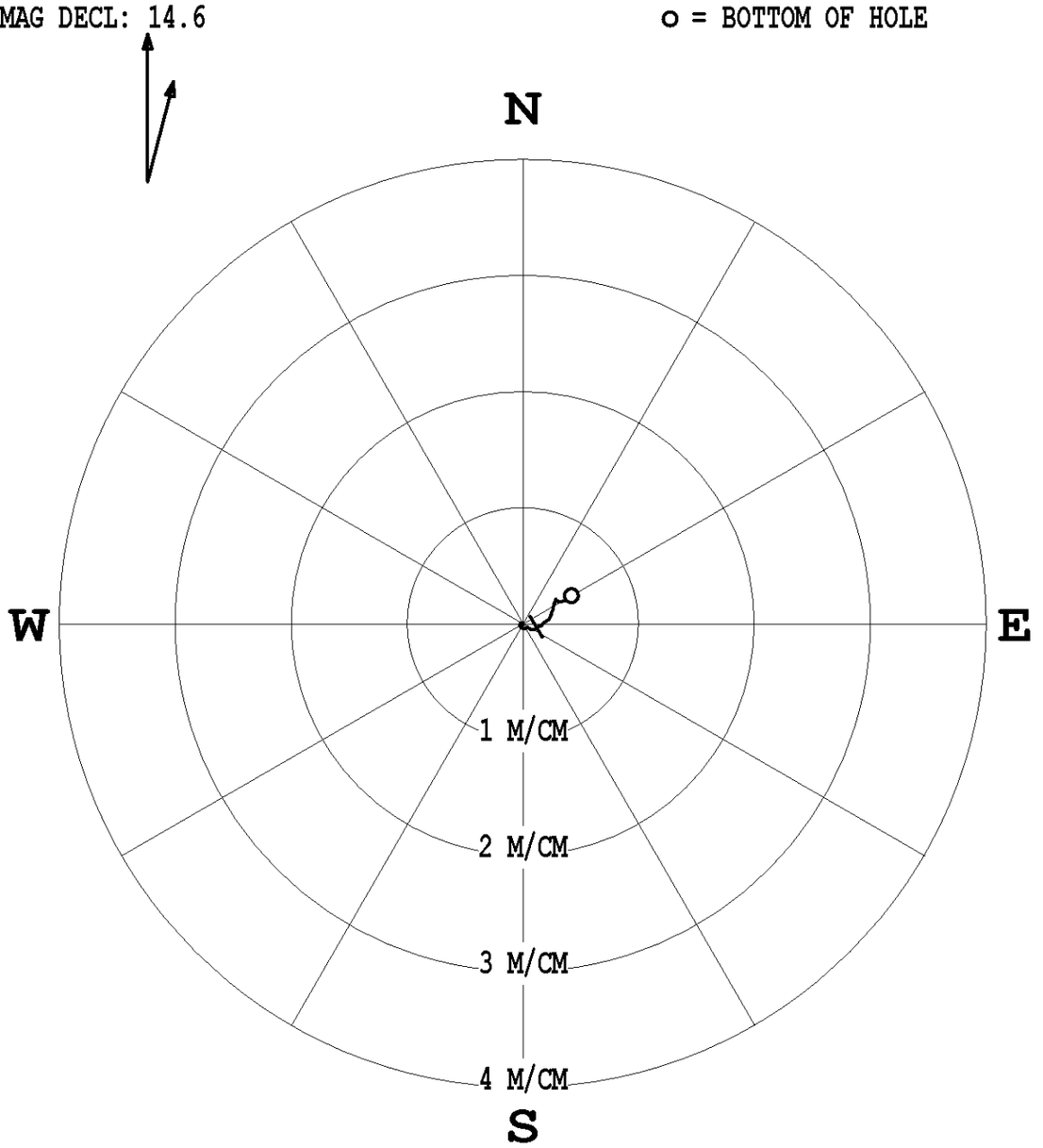
TOOL CALIBRATION LR15RFP-06 07/16/15 02:19
TOOL 9239C1 TM VERSION 2025
SERIAL NUMBER 449

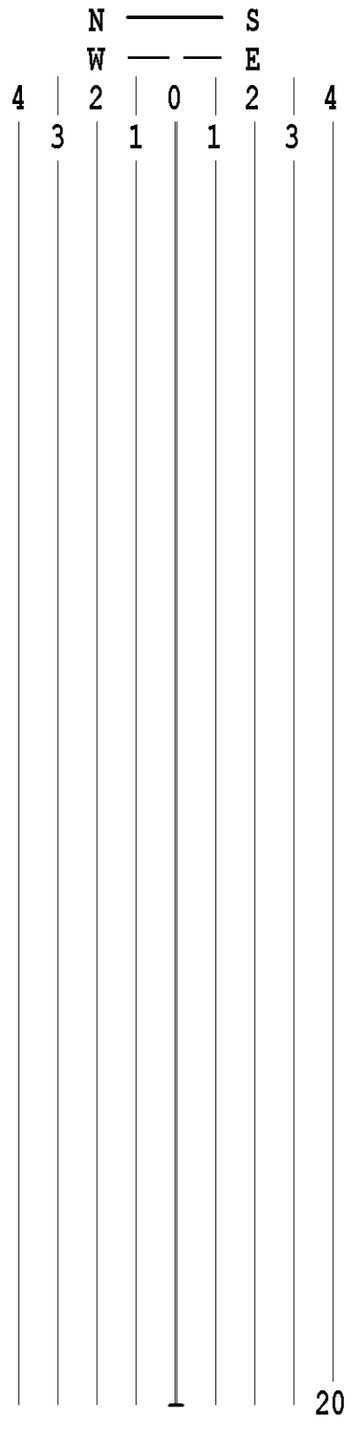
	DATE	TIME	SENSOR		STANDARD Point1	STANDARD Point2	RESPONSE [CPS] Point1	RESPONSE [CPS] Point2
1	Jul02,15	10:26:50	GAMMA	[API-GR]	0.100	545.000	0.000	613
2	Jul02,15	11:18:29	VOLTAGE	[MV]	28.000	234.200	6730	33921
3	Jul02,15	11:06:57	CALIPER	[MM]	100.000	200.000	102999	205172
4	Jul02,15	11:37:07	DEN(LS)	[G/CC]	1.620	2.612	14493	1830
5	Jul02,15	11:37:34	DEN(SS)	[G/CC]	1.590	2.580	59700	21197
6	Jul16,15	04:36:15	CALIPERL	[MM]	100.000	200.000	105652	206940
7	Jul02,15	11:19:02	CURRENT	[UA]	28.000	234.200	6354	23280
8	Nov17,08	13:24:14	F	[CPS]	Default		Default	
9	Nov17,08	13:21:11	X	[CPS]	Default		Default	

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: CANAUS
LOCATION: LOOP RIDGE
HOLE ID: LR15RFP-06
DATE OF LOG: 07/16/15
PROBE: 9058A 2615
MAG DECL: 14.6

SCALE: 1 M/CM
TRUE DEPTH: 37.47 M
AZIMUTH: 59.8
DISTANCE: 0.5 M
+ = 20 M INCR
o = BOTTOM OF HOLE





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT : CANAUS
FIELD OFFICE : CENTURY GEO
DATA FROM : N/A
MAG. DECL. : 14.600
HOLE ID. : LR15RFP-06
DATE OF LOG : 07/16/15
PROBE : 9058A , 2615
DEPTH UNITS : METERS
LOG: LR15RFP-06_07-16-15_02-02_9058A_.02_9.00_37.66_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
9.00	9.00	-0.00	-0.00	0.0	190.5	1.5	190.5
10.00	10.00	0.01	-0.01	0.0	304.8	1.2	268.7
11.00	11.00	-0.00	-0.03	0.0	265.2	1.1	201.0
12.00	12.00	-0.02	-0.03	0.0	234.4	1.1	165.9
13.00	13.00	-0.03	-0.02	0.0	205.8	1.1	130.3
14.00	14.00	-0.04	0.00	0.0	177.4	1.2	102.4
15.00	15.00	-0.04	0.03	0.0	145.7	1.4	71.6
16.00	16.00	-0.03	0.04	0.1	128.0	1.0	137.9
17.00	17.00	-0.04	0.06	0.1	127.4	1.2	112.2
18.00	18.00	-0.05	0.08	0.1	121.1	1.4	90.6
19.00	19.00	-0.04	0.11	0.1	112.1	1.7	35.8
20.00	20.00	-0.03	0.11	0.1	103.4	1.6	85.8
21.00	21.00	-0.02	0.14	0.1	99.3	1.5	73.3
22.00	22.00	-0.01	0.16	0.2	93.9	1.5	27.9
23.00	23.00	0.01	0.18	0.2	86.4	1.7	29.5
24.00	24.00	0.03	0.21	0.2	82.4	1.8	55.1
25.00	25.00	0.05	0.23	0.2	77.6	1.9	29.2
26.00	25.99	0.08	0.24	0.3	72.1	1.8	32.7
27.00	26.99	0.10	0.25	0.3	67.6	1.7	32.6
28.00	27.99	0.13	0.26	0.3	63.7	1.4	10.1
29.00	28.99	0.15	0.26	0.3	60.2	1.6	25.4
30.00	29.99	0.17	0.27	0.3	57.2	1.4	17.6
31.00	30.99	0.20	0.28	0.3	54.6	1.4	17.4
32.00	31.99	0.21	0.28	0.4	53.0	0.5	184.8
33.00	32.99	0.20	0.30	0.4	56.7	1.9	115.9
34.00	33.99	0.19	0.34	0.4	60.2	2.5	80.7
35.00	34.99	0.21	0.37	0.4	60.6	2.1	61.6
36.00	35.99	0.23	0.40	0.5	60.4	1.8	51.9
37.00	36.99	0.25	0.42	0.5	59.6	0.5	22.6
37.64	37.63	0.24	0.42	0.5	59.8	0.0	0.0

2015 LDRF Sampling Summary

Hole ID	Sample Bag Number	Seam	Sample Interval, Driller's Depths			Seam Interval, Corrected to Geop Log		Bag Content	Notes
			From (m)	To (m)	Interval (m)	From (m)	To (m)		
LR15RF-01	1	10U	36.0	40.0	4.0	36.28	42.70	Chip	
LR15RF-01	2	10U	40.0	43.0	3.0			Chip	
LR15RF-01	3	10U	43.0	46.1	3.1			Chip	
LR15RF-01	4	10U	36.6	46.1	9.5			Fines	
LR15RF-01	5	10L	55.5	59.5	4.0	55.70	n/a	Chip	
LR15RF-01	6	10L	59.5	63.5	4.0			Chip	
LR15RF-01	7	10L	55.5	63.5	8.0			Fines	
LR15RF-02	1	10U	36.7	41.0	4.3	36.74	40.64	Chip	Tank sludge discarded
LR15RF-02	2	10L	55.0	59.4	4.4	54.90	n/a	Chip	
LR15RF-02	3	10L	55.0	59.4	4.4			Fines	
LR15RF-03	1	10U	35.0	39.0	4.0	34.44	42.90	Chip	
LR15RF-03	2	10U	39.0	43.0	4.0			Chip	
LR15RF-03	3	10U	43.2	44.5	1.3			Chip	
LR15RF-03	4	10U	35.0	44.5	9.5			Fines	
LR15RF-03	5	10L	55.0	60.3	5.3	54.84	n/a	Chip	
LR15RF-03	6	10L	55.0	60.3	5.3			Fines	
LR15RF-04	1	10U	54.5	57.6	3.1	54.34	57.10	Chip	
LR15RF-04	2	10L	65.4	66.6	1.2	62.96	66.04	Chip	
LR15RF-04	3	10U + 10L						Fines	
LR15RF-05	1	11	25.0	31.0	6.0	25.34	n/a	Chip	
LR15RF-05	2	11	31.0	35.2	4.2			Chip	
LR15RF-05	3	11	35.6	40.0	4.4			Chip	
LR15RF-05	4	11	40.0	41.0	1.0			Chip	
LR15RF-05	5	11	25.0	41.0	16.0			Fines	
LR15RF-06	1	20	97.4	101.4	4.0	5.44 (bad log	n/a	Chip	Hammered to 90m, shaley coal to 95m not sampled
LR15RF-06	2	20	101.4	106.0	4.6			Chip	
LR15RF-06	3	20	106.0	111.0	5.0			Chip	
LR15RF-06	4	20	111.0	115.0	4.0			Chip	TD 115m ended in coal. Bottom of seam not sampled.
LR15RF-06	5	20	97.4	115.0	17.6			Fines	
LR15RF-07	1	18	25.5	28.8	3.3			Chip	
LR15RF-07	2	18	28.8	30.7	1.9			Chip	
LR15RF-07	3	18	25.5	30.7	5.2			Fines	LR15RF-07 fines & LR15RF-08 fines combined in one bag
LR15RF-08	1	18	25.6	28.8	3.2			Chip	
LR15RF-08	2	18	28.8	29.8	1.1			Chip	
LR15RF-08	n/a	18	25.6	29.8	4.2			Fines	LR15RF-07 fines & LR15RF-08 fines combined in one bag

Appendix E

Analytical Process Guidelines

Large Diameter Reverse Flood Sampling

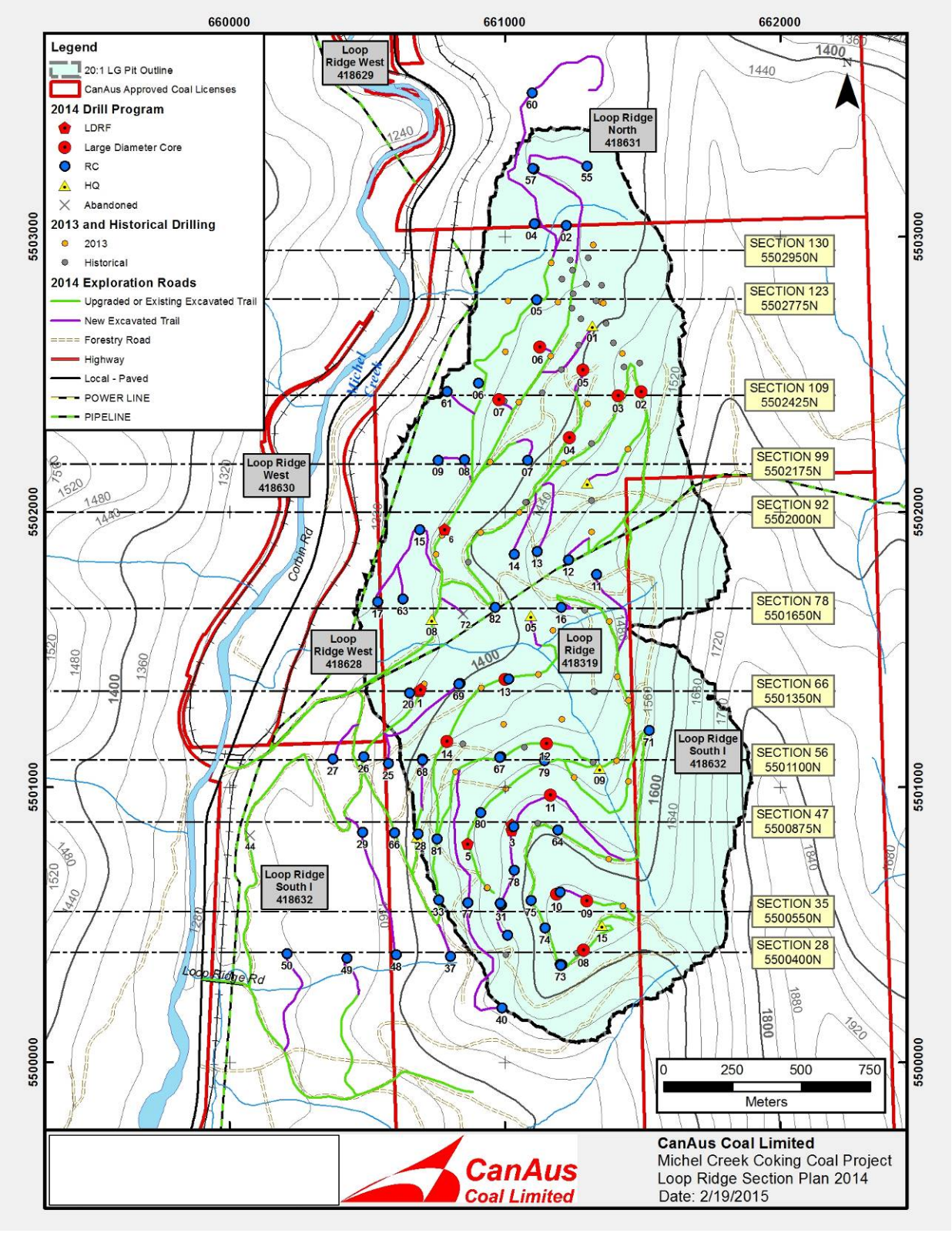
Samples were shipped to Hazen Research in Golden, Colorado for pilot scale washing. Each seam was processed separately. The coal was sized at nominal 2mm, creating a coarse fraction -25mm+2mm, then the -2mm fraction was wet screened at nominal 0.25mm. The resultant streams were washed in a batch process.

A dense medium bath was employed for the -25mm+2mm fraction. The product from the bath was screened and rinsed to remove magnetite. The -2mm+0.15mm fraction was washed in an industrial scale spiral, feed rate approximately 1000kg/h. Preliminary dewatering of the product was undertaken on a fine screen. The fines (-0.25mm) were washed in column flotation cells at a nominal throughput rate of 25kg/hr to 50kg/hr. Preliminary dewatering of the product was undertaken on a batch scale vacuum filter. All of the products were air dried in an open environment by laying the materials on concrete pads.

Head and product sub-samples were shipped to Birtley Labs in Calgary for testing. Each sample was crushed to pass nominal 12mm and wet sized at 0.25mm, then the -12mm+0.25mm fraction was float sunk at 1.40, 1.45 and 1.50 densities with floats fractions analysed for proximates and FSI. The -0.25mm fraction was floated using a time release procedure collecting froths at 30, 60 and 90 seconds with floats fractions analysed for proximates and FSI. A clean coal product was constructed of the F1.45 coarse fraction and 90sec flotation froth. Sub-samples were sent to Pearson Labs for petrographic analysis.

Samples of the clean products at Hazen were sent to ALS Labs in Queensland, Australia for carbonisation testing.

Loop Ridge Cross Sections



Loop Ridge Cross Section Plan

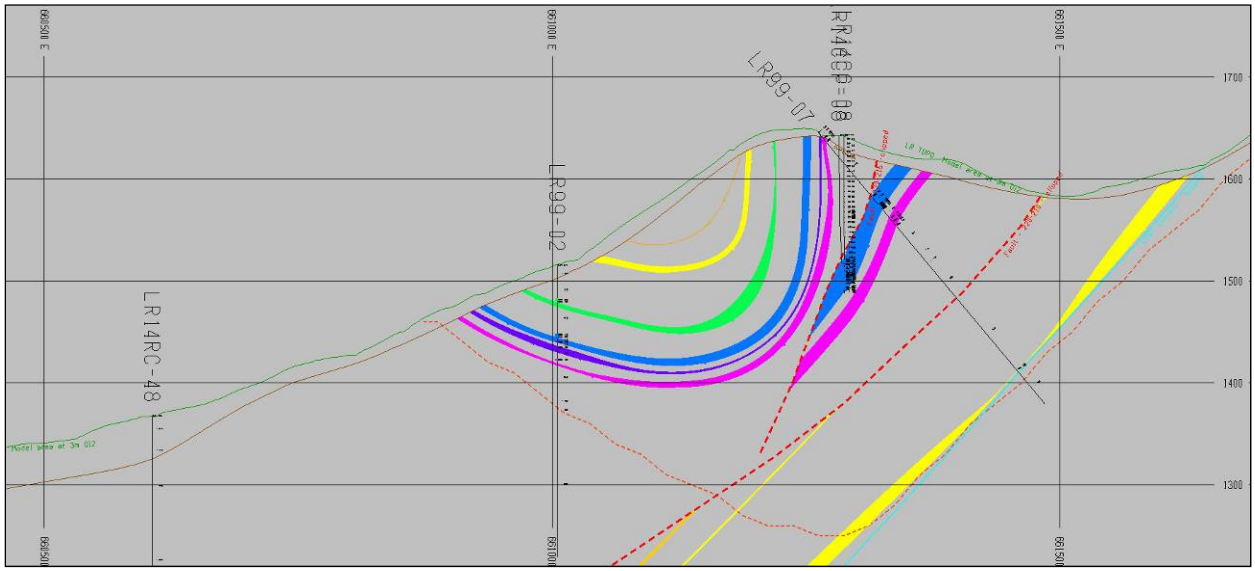
Loop Ridge Cross Sections

Illustrated:

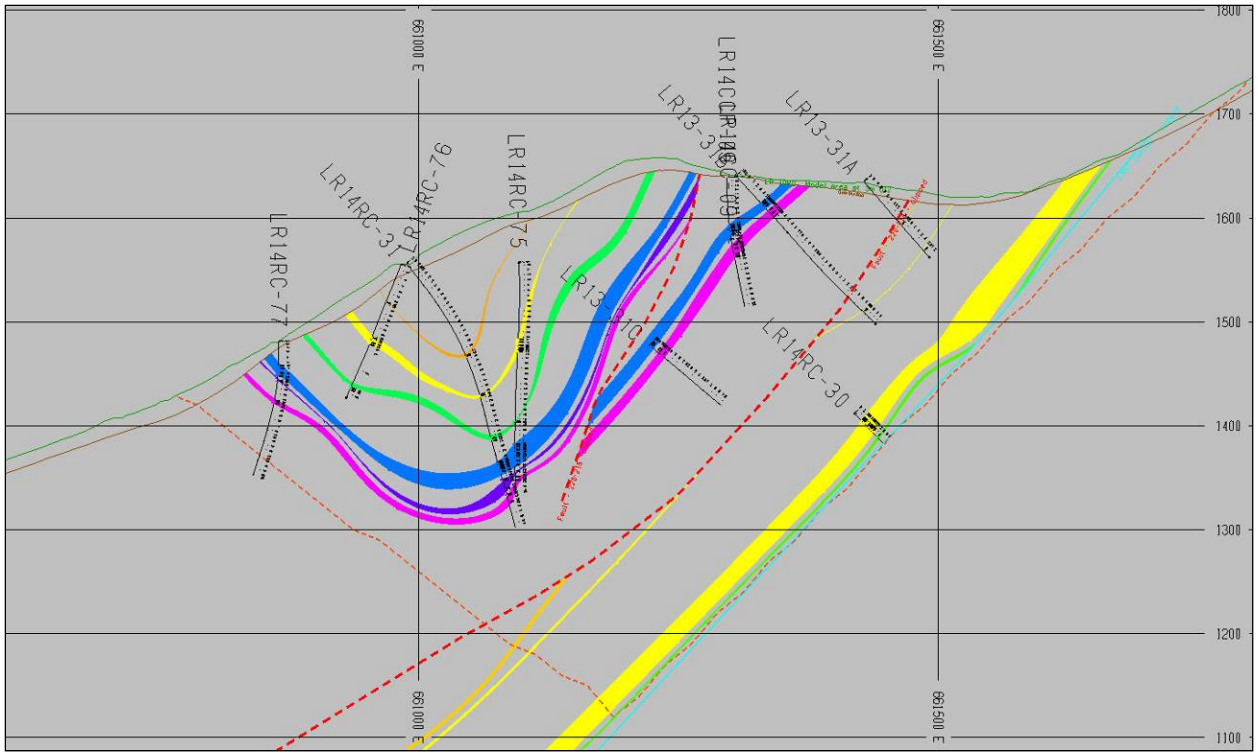
- the topography profile along the section line,
- the interpolated overburden thickness (marked as red at the top of the drillholes),
- the drillholes,
- the coal seams and their interpolated thickness,
- the interpreted faults,
- the 20:1 pit is outlined as a blue dashed line

The coal seam colours are:

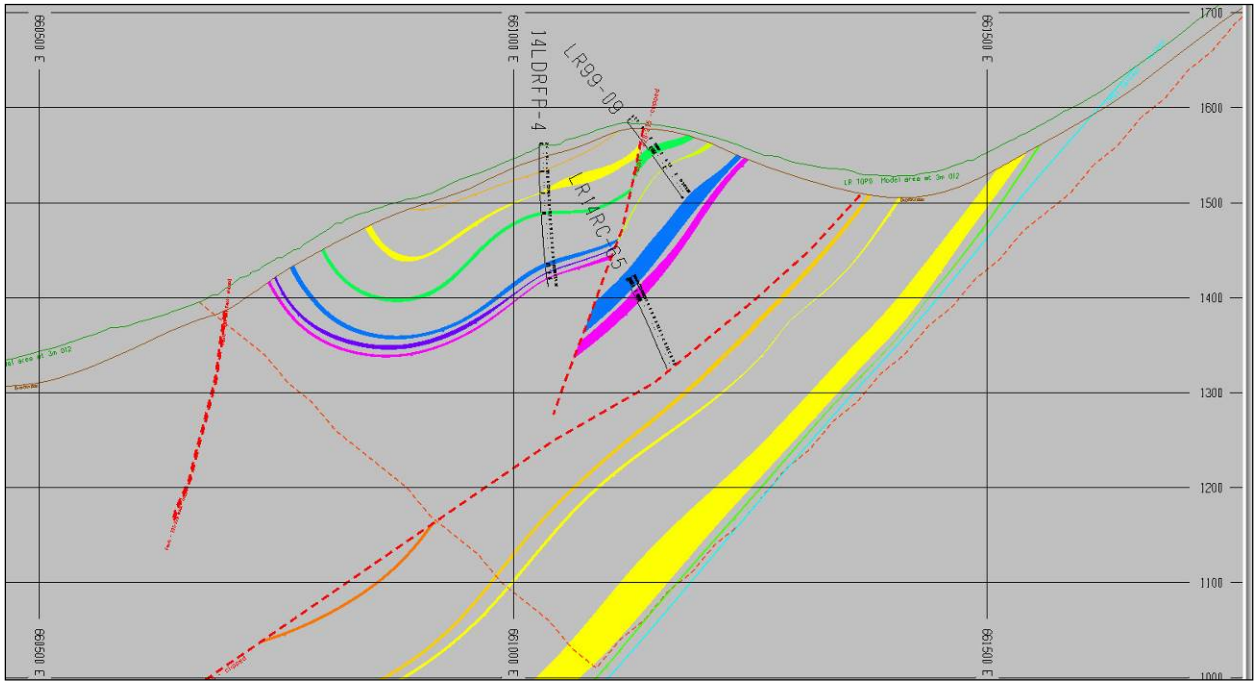
□ upper yellow	- seam 20
□ green	- seam 19
□ blue	- seam 18
□ purple	- seam 15
□ thin yellow line	- seam 11
□ lower yellow	- seam 10



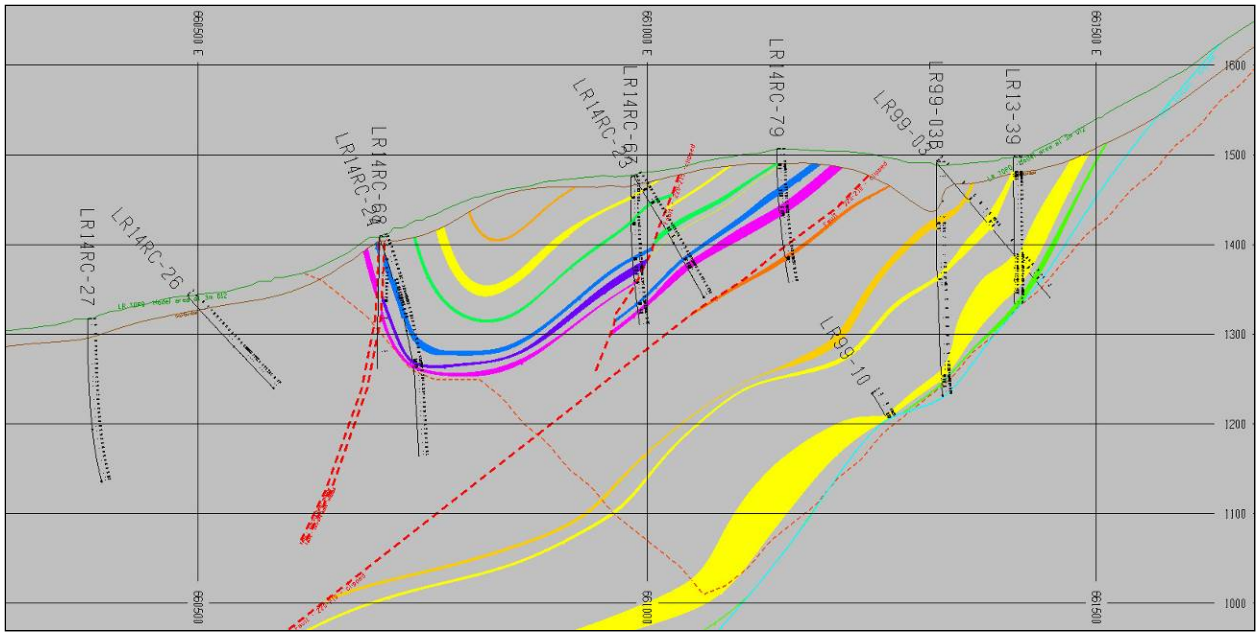
Loop Ridge Cross Section 28



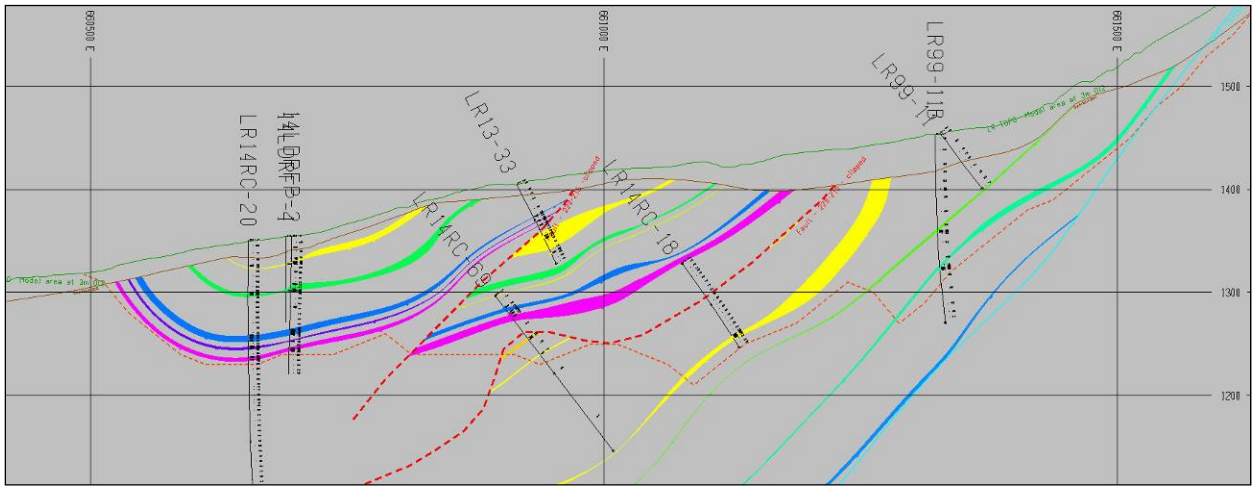
Loop Ridge Cross Section 35



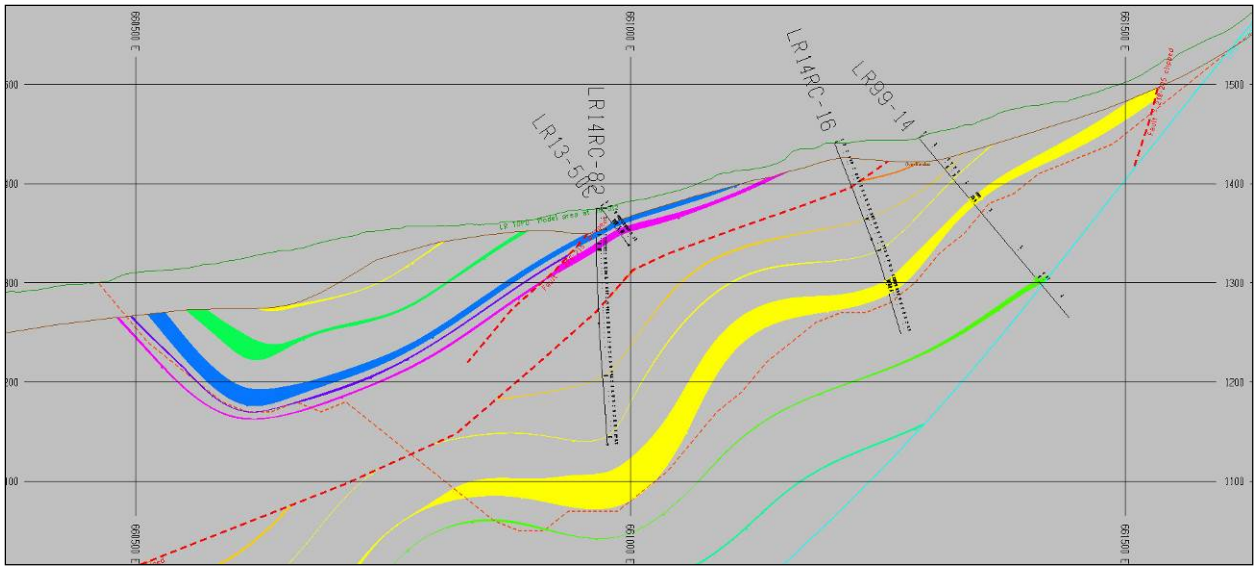
Loop Ridge Cross Section 47



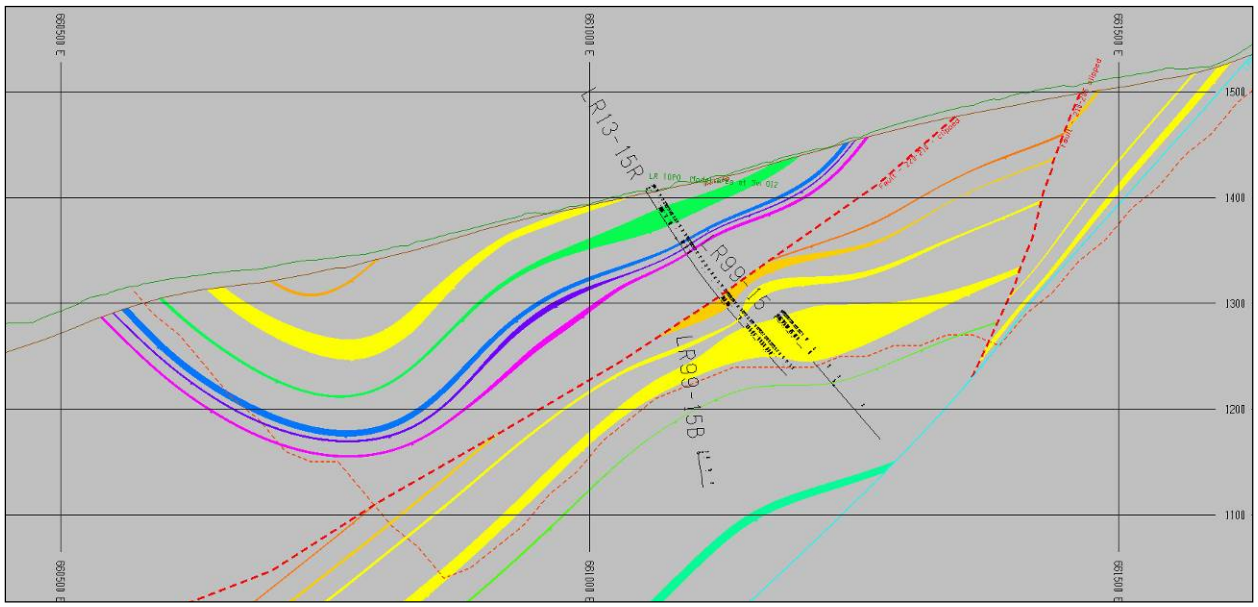
Loop Ridge Cross Section 56



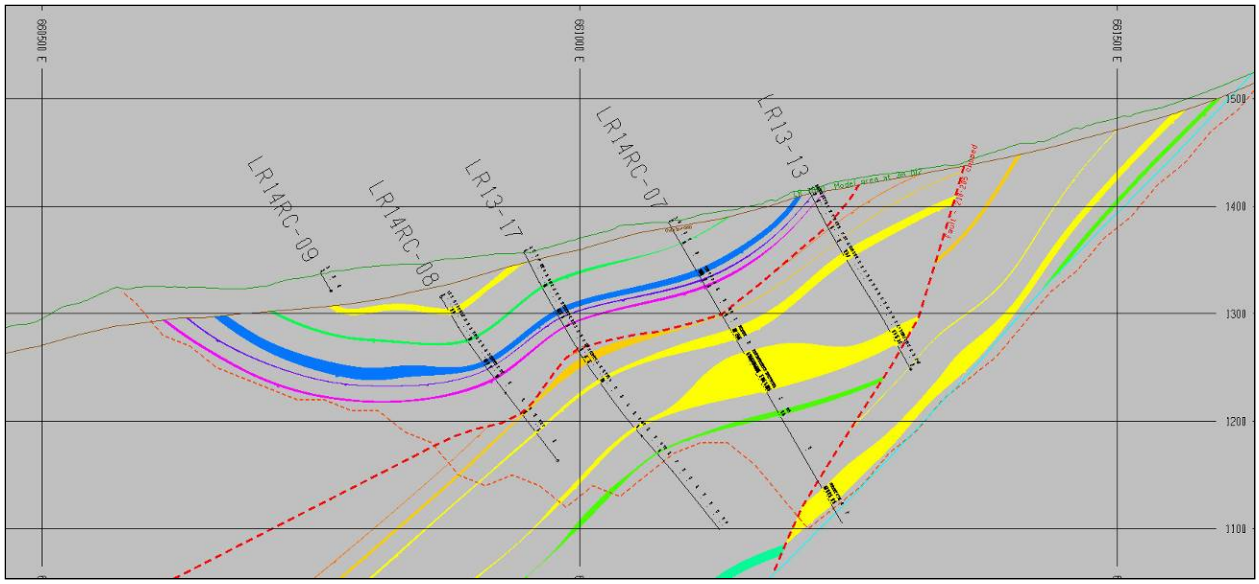
Loop Ridge Cross Section 66



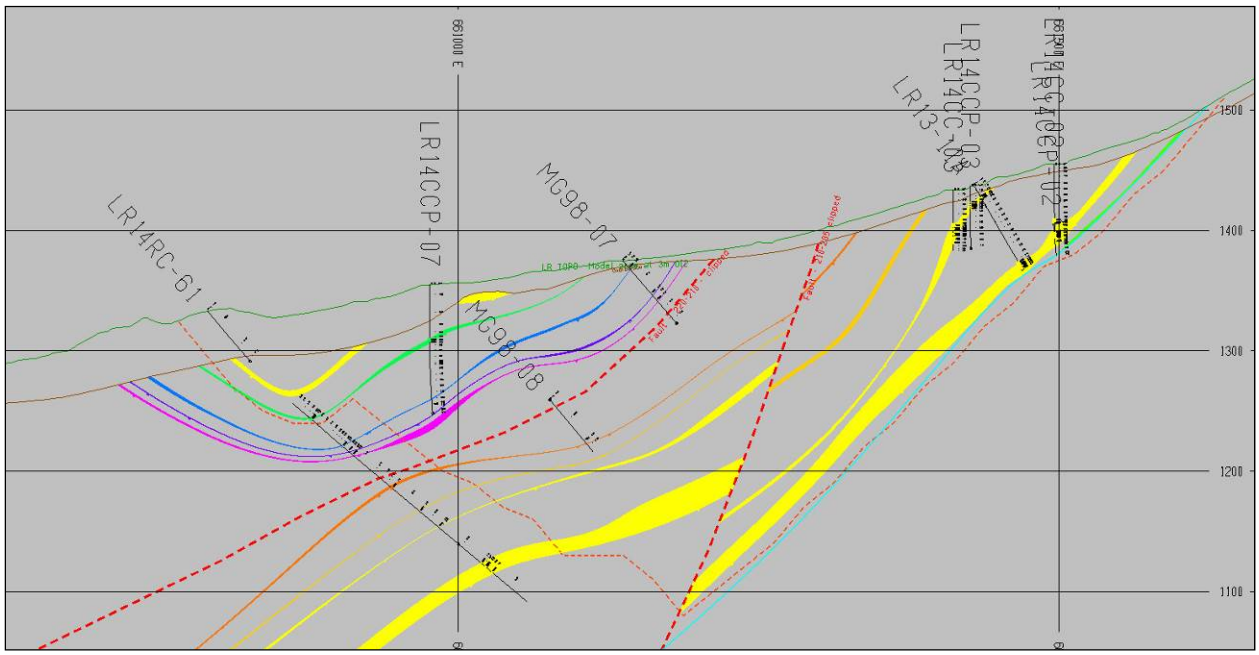
Loop Ridge Cross Section 78



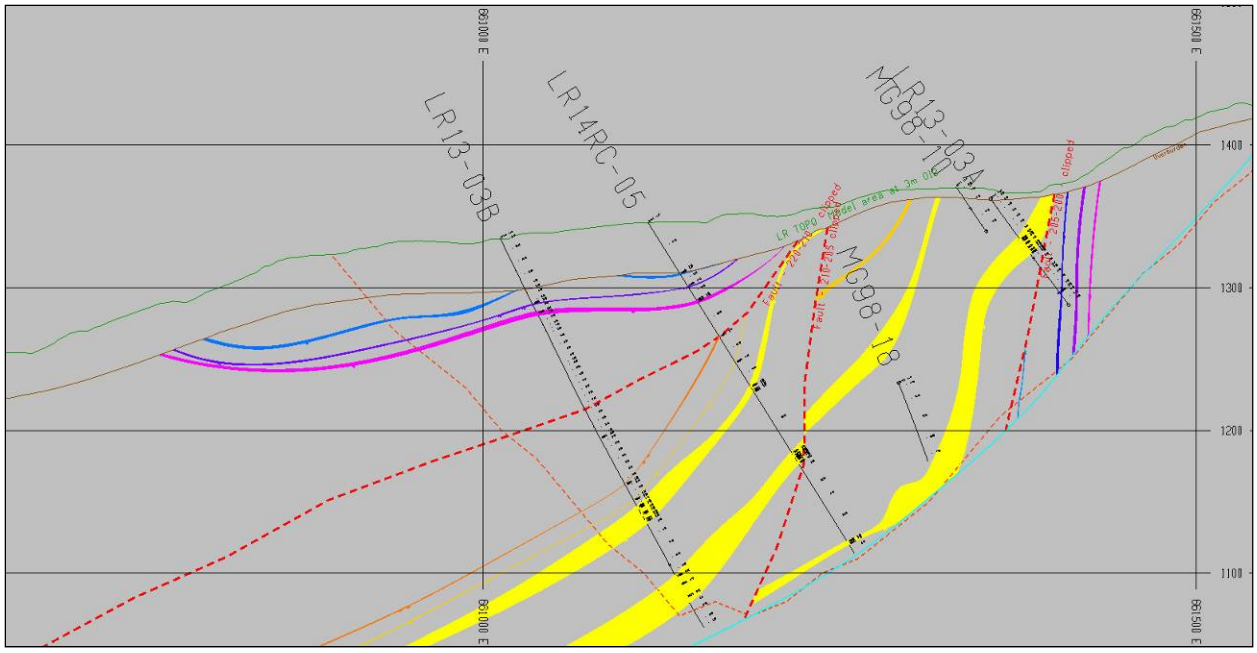
Loop Ridge Cross Section 92



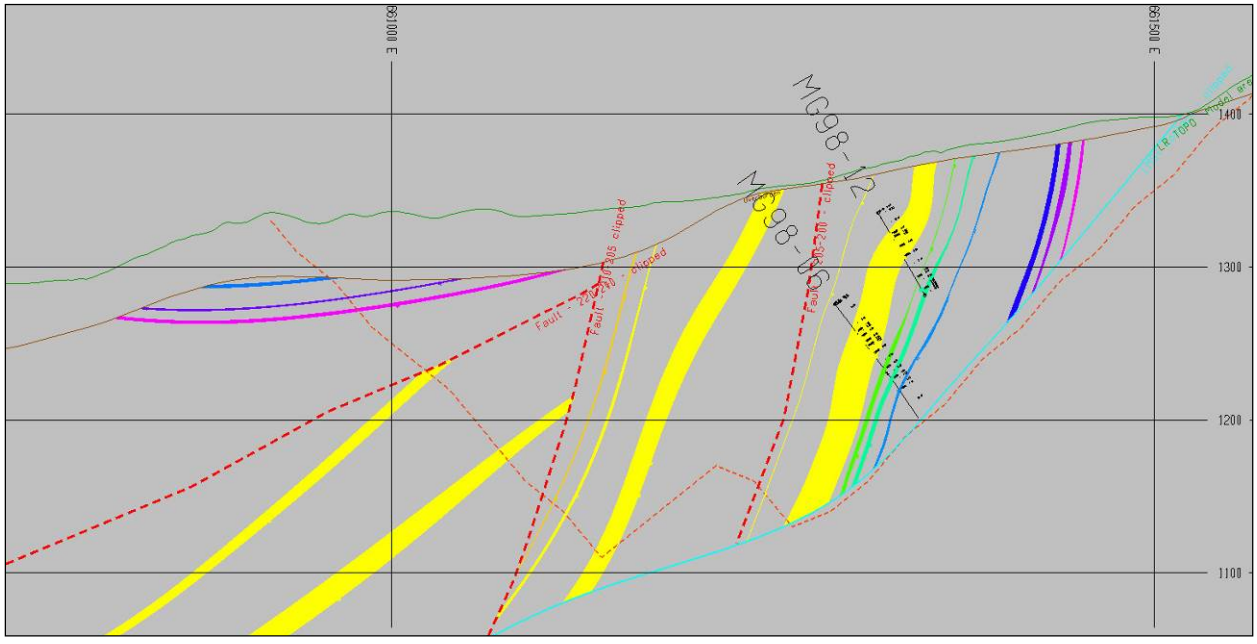
Loop Ridge Cross Section 99



Loop Ridge Cross Section 109



Loop Ridge Cross Section 123



Loop Ridge Cross Section 130

Appendix G – Statement of Costs

2015 Loop Ridge Exploration

Statement of Costs

Major Budget Items	Contractor	Total ($)
Drilling	Good Earth Drilling	134,411.00
	Foraco International	379,471.75
	Subtotal	**513,882.75**
Technical Services	Moose Mtn Technical Services	306,341.51
	Century Wireline	25,500.00
	Silenus Resources Management	45,546.55
	Bob Leach Pty.	94,006.36
	Cameron Enterprises	522.05
	Subtotal	**471,916.47**
Analytical	Hazen Research (pilot wash)	354,829.98
	Birtley Coal & Minerals Testing	38,029.50
	Elk Valley Environmental Services	960.00
	Pearson & Associates	1,500.00
	Subtotal	**395,319.48**
Heavy Equipment	Down to Earth Excavating	81,989.19
	Subtotal	**81,989.19**
Safety	Trucut Logging (1st Aid)	37,152.50
	Subtotal	**37,152.50**
Licences and Permits	Ministry of Finance (BC)	30,886.95
	Jemi Fibre (option fee)	300,000.00
	CPR (road crossing)	1,000.00
	Subtotal	**331,886.95**
Personnel	CanAus Geologists (contract)	35,063.78
	Subtotal	**35,063.78**
Miscellaneous	Canada Culvert	2,930.65
	Manitoulin Transport (samples)	14,929.32
	Acklands Grainger	228.50
	Subtotal	**18,088.47**
Total		**1,885,299.59**