

**COAL ASSESSMENT REPORT ROMAN NORTHWEST PROPERTY****PEACE RIVER DISTRICT****REPORT ON EXPLORATION ACTIVITIES 2015**

**LOCATED AT UTM: 6084800 N, 628400 E**

**COAL LICENSES: 409701, 409702, 417533.**

**COAL LEASE: 417059.**

**Peace River Coal Inc. - Anglo American Coal Pty Ltd**

**800 – 700 West Pender Street**

**Vancouver, British Columbia**

**V6C 1G8**

**Author: David Lortie P.Geo.**

**March 15, 2016**

This page left blank on purpose



## COAL ASSESSMENT REPORT TITLE PAGE AND SUMMARY

**TITLE OF REPORT:** *Coal Assessment Report Roman Northwest Project Peace River District*

**TOTAL COST:** \$905,868

**AUTHOR(S):** *David Lortie*

**SIGNATURE(S):** *David Lortie*

**NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):** *CX-9-8, September 7, 2012, October 20, 2014.*

**YEAR OF WORK:** *2015*

**PROPERTY NAME:** *Roman Northwest Property*

**COAL LICENSE(S) AND/OR LEASES ON WHICH PHYSICAL WORK WAS DONE:** *417059, 409701.*

**MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:**

**MINING DIVISION:** *Liard*

**NTS / BCGS:** *0931 15*

**LATITUDE:** 54.90

**LONGITUDE:** -120.00 (at centre of work)

**UTM Zone:** *10*      **EASTING:** *628,400*      **NORTHING:** *6,0848,000*

**OWNER(S):** *Peace River Coal Inc.*

**MAILING ADDRESS:** *Suite 800 – 700 West Pender Street, Vancouver, BC V6C 1G8*

**OPERATOR(S) [who paid for the work]:** *Peace River Coal Inc.*

**MAILING ADDRESS:** *Suite 800 – 700 West Pender Street, Vancouver, BC V6C 1G8*

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

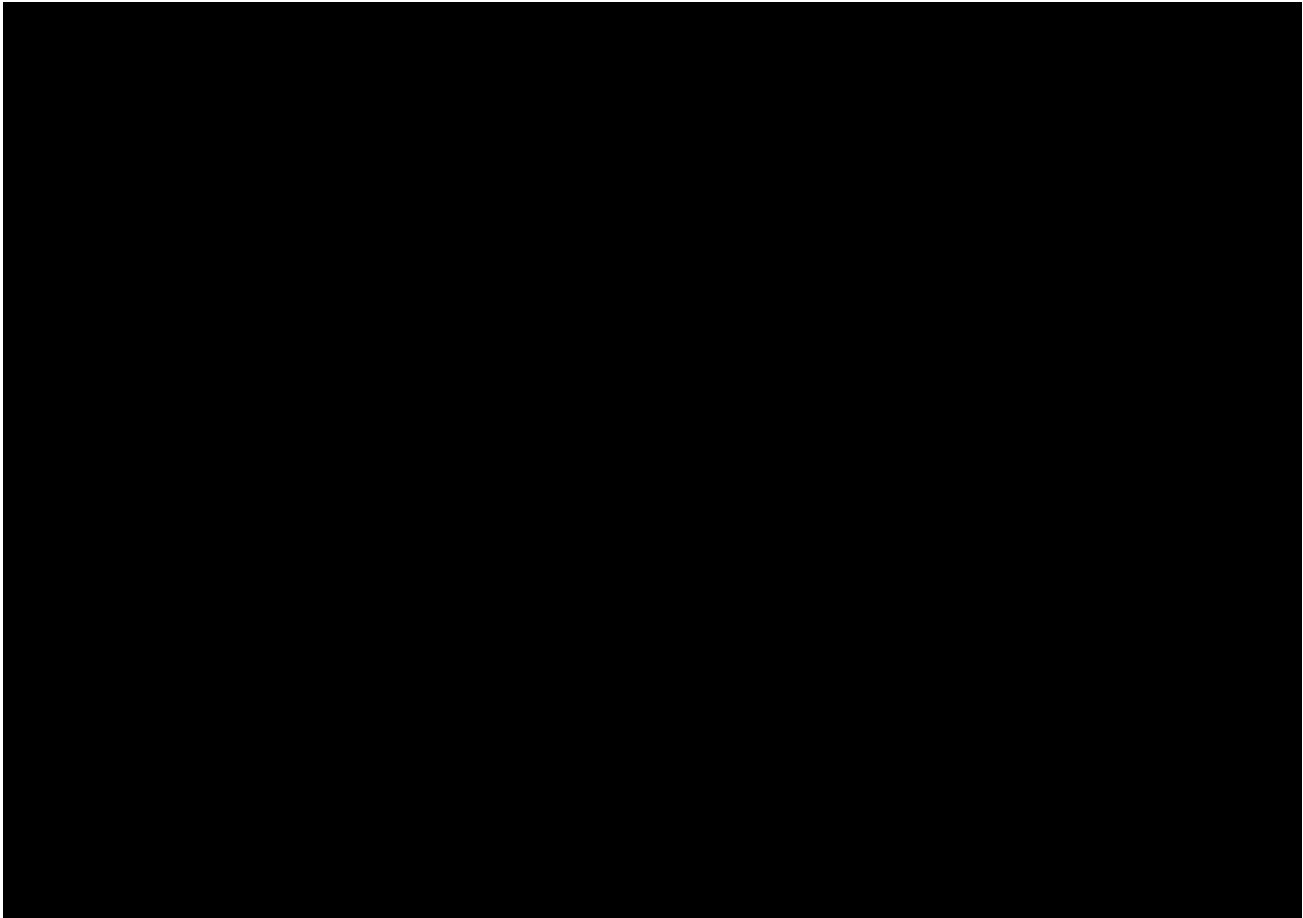
*Coal, sandstone, siltstone, mudstone, shale, Gates Formation, folding, faulting*

**REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:**

1. *Mitsui Mining Co., Ltd. Report on the Geological Exploration of the Babcock Property, September 1974. Report 605*
2. *Denison Mines Limited. 1976. Quintette Coal Limited: Information Summary, August 1976. Report 608*
3. *Denison Mines Limited. 1976. Quintette Coal Limited: 1976 Geological Assessment Report, December 1976. Report 609*
4. *Lortie, David, 2015: Roman Northwest Coal Assessment Report March 15, 2015. Peace River Coal Inc. B.C. Ministry Of Energy and Mines, Coal Assessment Report 00-973*

SUMMARY OF TYPES OF WORK IN THIS REPORT		EXTENT OF WORK (in metric units)	ON WHICH TENURES
GEOLOGICAL (scale, area)			
	Ground, mapping		
	Photo interpretation		
GEOPHYSICAL (line-kilometres)			
	Ground (Specify types)		
	Airborne (Specify types)		
	Borehole		
	Gamma, Resistivity,	1531	<b>417059, 409701</b>
	Resistivity	1531	<b>417059, 409701</b>
	Caliper	1531	<b>417059, 409701</b>
	Deviation	1531	<b>417059, 409701</b>
	Dip	1531	<b>417059, 409701</b>
	Core	0	<b>417059, 409701</b>
	Non-core	1531	<b>417059, 409701</b>
SAMPLING AND ANALYSES			
Total # of Samples			

PROSPECTING (scale/area)			
PREPARATORY/PHYSICAL			
Line/grid (km)			
Trench (number, metres)			
Bulk sample(s)			



Section 5 remains 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](http://www.bclaws.ca/civix/document/id/complete/statreg/251_2004)

# COAL ASSESSMENT REPORT

## ROMAN NORTHWEST

### Contents

1	SUMMARY	9
2	INTRODUCTION	10
	2.1 Purpose of Report	10
	2.2 Project Description	10
	2.3 Property Description & Location	10
	2.4 Mineral Rights & Surface Title	10
	2.5 Accessibility, Climate, Infrastructure & Physiography	11
	2.6 Adjacent Properties	12
	2.7 Historical Information	12
	2.8 Exploration by Other Parties	13
3	Exploration	14
	3.1 Historical Drilling	14
	3.2 2006 – 2012 Drilling	14
	3.3 2013 – 2014 Drilling	14
	3.4 2015 Drilling	14
	3.5 Geological & Geophysical Logging	15
	3.6 Data Location / Topographical Data	15
	3.7 Data Orientation Relative to Geological Structure	16
	3.8 Reporting Archives / Database	16
4	Geology	17
	4.1 Geology General	17
	4.2 Coal Seam Geology	17
	4.3 Structural Setting	19
	4.4 Further Work	20
5	Resources ( <b>CONFIDENTIAL</b> )	21
	5.1 Resource Modelling	21
6	Reclamation	22
	6.1 General Practices	22
	6.2 Revegetation Prescriptions	22
	6.3 2015 Roman Northwest Reclamation Summary	23
7	OTHERS	24
	7.1 Interpretation & Conclusions	24
	7.2 Recommendations	24

7.3	Competent Person, Date & Signature Page	24
7.4	Illustrations & Diagrams	24
7.5	References	25



## Tables

- 2.4.1 Summary of Rights
- 3.1 Summary of Boreholes and Trenches Roman Northwest
- 4.2.1 Drilled Thickness of Seams of Economic Interest
- 5.1 Resource Statement
- 6.2.1 Seed Mix A used for ESSF biogeoclimatic zones
- 6.2.2 Seed Mix B, used for BWBS biogeoclimatic zones

## List of Attachments

- 1 Location Map
- 2 General Property Map
- 3 Regional Geology Map
- 4 2015 Borehole Plan
- 5 Borehole Collar Information 2015
- 6 Geological Map
- 7 2015 Reclamation Map
- 8 Stratigraphic Column
- 9 Competent Person Signature page
- 10 Exploration Cost 2015 programs

## List of Appendices

- 1 2015 Geophysical Logs
- 2 2015 Lithological Logs
- 3 Maps

---

## 1 SUMMARY

Roman Northwest is the northwest extension of the Roman Mountain deposit to the northwest of Babcock Creek. The same coal seams are present at both Roman Mountain and the Roman Northwest property. The seams strike in a north-westerly direction along the Murray syncline. This property is a logical extension to the Roman Mountain resource base; increasing the total reserve and resource available for future mining.

Roman and Roman Northwest are located immediately to the southwest of Peace River Coal's Trend Mine. The strata of the Murray Syncline are Upper-Jurassic to Lower-Cretaceous. Coal measures are found in the Bullhead Group and Fort St. John Group which is an alternating sequence of marine and non-marine clastic lithologies. The Minnes Group formations are the oldest strata to outcrop and are located on the northeast and southwest extents of the Murray Syncline. The youngest strata belong to the Hulcross and Gates Formations which occupy the axis of the Murray Syncline. The economic coal seams are contained in the Lower-Cretaceous aged Gates and Gething Formations and likely formed within deltaic depositional environments. The Gates and Gething Formations are separated by the marine deposits of the Moosebar Formation. The strata have been significantly affected by thrust faulting and folding during the Cordilleran orogenesis.

The Roman Northwest property extends for approximately two kilometres northwest of Babcock Creek until it intersects the Teck Coal coal licences. Economic coal seams that were targets of the drill program are Early Cretaceous in age and are found within the Gates Formation and the older Gething Formation. Within the Middle Gates Member, the hard-coking coal seams that have been identified as holding an economic potential are: D2, E1, F, G, J, and K1, with the D2 seam being the youngest in age. Within the Gething Formation, the identified seams (youngest to oldest) are: the Bird Seam, GT1, GT2, and GT3. The Gething is typically harder to correlate due to the nature of its deposition, occasionally not all the GT seams are intersected down hole.

Exploration on the Roman Northwest property started in 1975 with a detailed mapping program that cover the ridge areas around the Roman Northwest property. This information was used to develop seam structure contour maps that outlined the basic geology of the property. There was no further work carried out on the property until 2006.

Peace River Coal (PRC) started exploring the property in 2006 to determine the extension of the Roman Mountain Murray Syncline across Babcock Creek. In 2006 and 2007 the drilling was restricted to the drilling of 6 air rotary boreholes along an existing access road.

The main exploration activity on the Roman Northwest property started in 2008 and has continued each year up to 2015.

The focus of all the work has been on Coal Lease 417059 and Coal License 409701.

In 2012 a preliminary geological model was constructed using the data from the 2006 to 2012 exploration programs. This model was used as the bases for the 2013 - 2014 exploration programs carried out on the Roman Northwest Property. Since then the model has been revised twice using the 2013 and the 2014 exploration data.

---

## 2 INTRODUCTION

### 2.1 Purpose of Report

---

This report has been prepared to report on the exploration activities undertaken in 2015 on the Roman Northwest property as part of the requirements for holding coal tenure under the British Columbia Coal Act. The exploration program was undertaken under Notice of Work permit CX-9-8.

### 2.2 Project Description

---

Peace River Coal Inc. (PRC) is a producer of high-quality metallurgical coal in Canada. In addition to holding significant coal resources in western Canada, PRC conducts mining operations at the Trend Mine in the Tumbler Ridge area of northeast British Columbia

Until December 2006, the Trend Mine was owned and operated by NEMI Northern Energy and Mining Inc. (NEMI). In November 2 2006 NEMI's assets were consolidated with Hillsborough Resources Ltd. and Anglo Canadian Coal Inc. assets to form a new coal mining company, Peace River Coal Limited Partnership (PRCLP). NEMI and Hillsborough Resources Ltd. remained as minority shareholders in PRCLP, and PRC managed the PRCLP assets as general partner.

In October 2011, the NEMI and Hillsborough Resources Ltd. minority interests were sold to PRC. PRC now manages the assets and is a wholly owned subsidiary of Anglo American plc. PRC operates as part of Anglo American's Coal business unit based in Brisbane Australia.

### 2.3 Property Description & Location

---

The Roman Northwest coal deposit located on Peace River Coal Inc. owned licenses: 409701, 409702 and 417533 and Coal Lease 417059. This property is located in the Peace River Coalfield of British Columbia approximately 25km south-southwest of the town of Tumbler Ridge. Tumbler Ridge is about 400 km northeast of Prince George, British Columbia by Highways 97 and 29. Dawson Creek is 115 km to the northeast via Highways 97 and 52. Access to the project is gained by paved and gravel roads from Tumbler Ridge, located 20 kilometres to the north (attachment 2). The project encompasses an area extending approximately two kilometres northwest from Babcock Creek. The centre of the property is in UTM Zone 10, NAD 83 at coordinates 6084800 Northing, 628400 Easting.

### 2.4 Mineral Rights & Surface Title

---

The Roman Northwest property occurs on several Crown Coal Licences. Table 2.4.1 lists the licences and their present status including data concerning the coal licences. The company advises that the property has not been legally surveyed.

**Table 2.4.1: Summary of Mineral Rights**

Tenure Type	Coal Lease	Coal Licence	Coal Licence	Coal Licence
Tenure Number	417059	409701	409702	417533
Site	Roman	Roman Northwest	Roman Northwest	Roman Northwest
Name	Roman	Roman Northwest	Roman Northwest	Roman Northwest
Holder	PRC	PRC	PRC	PRC
Holder %	100	100	100	100
Area	3201	298	298	149
Units	Ha	Ha	Ha	Ha
Expiry Date	2030.09.14	2015.03.15	2015.03.15	2015.03.15

## 2.5 Accessibility, Climate, Infrastructure & Physiography

The Roman Northwest property is accessed via the paved Heritage Highway and an all-season gravel road, Petroleum Development Road 46 (PDR 46), also known as the Core Lodge Road, via Tumbler Ridge. PDR 46 is owned and operated by Canadian Natural Resources Limited (CNRL) and PRC has entered into a Road Use Agreement for its mine access and coal hauling. A seasonal road extends further along the northwestern side of Babcock Creek which allows access to the Roman Northwest property. See Attachment 2.

All weather data was obtained from the Trend Mine weather station. The station is located in UTM Zone 10, NAD 83 at coordinates 6085666 Northing, 630950 Easting and 1,434 m above mean sea level.

The climate within the project area is characterized by long, cold winters, from November through March, and short, cool summers, from June through August. Summer temperatures generally range between 5°C and 15°C but maximum values of up to 30°C have been recorded. Average winter temperatures range between -10°C and -5°C with minimum temperatures as low as -30°C. Rainfall occurs during the summer months with an annual average of 306 mm. Snow pack at the Trend South Mine normally averages 200 cm per annum but may exceed 275 cm. Wind speeds vary throughout the year averaging approximately 16 km per hour. Maximum wind speeds of up to 111 km per hour have been recorded.

The centre of the Roman Northwest Project area is located about 100 km south of Dawson Creek, British Columbia and 175 km south of Fort St. John, British Columbia. Dawson Creek and Fort St. John have populations of approximately 11,000 and 17,400 respectively. In addition, the Roman Northwest Project is located approximately 175 km northeast of Prince George, British Columbia and 120 km southwest of Grande Prairie, Alberta both of which have populations greater than 40,000. Each of these cities has regularly scheduled flights to and from major western Canadian cities such as Vancouver, Edmonton and Calgary. Tumbler Ridge is a small town with a population of approximately 2,500 located 20 km to the north of the Roman Northwest Project.

The nearest railhead is the CN Rail Tumbler Subdivision, which terminates 12 km south of Tumbler Ridge at the Quintette rail load-out. PRC constructed a rail load-out facility in 2005 located

approximately 4 km north of the Quintette rail load-out which also connects with the CN Rail Tumbler Subdivision railhead. Distance from this load-out to the Ridley Terminal Inc., in Prince Rupert, British Columbia is approximately 1,000 km. An airstrip is situated 11 km south of Tumbler Ridge along the Heritage Highway. The unmanned airstrip is primarily used for chartered flights. Primary industrial development activities in the region include oil and natural gas exploration and production, coal exploration and mining, forestry and wind energy generation.

The Roman Northwest Project is located in the Rocky Mountain Foothills of British Columbia. The Foothills consist of a series of ridges and valleys that parallel the Rocky Mountains to the west. The topography of the Roman Northwest Project area varies from gentle slopes to rugged cliffs and steep valleys. The total elevation change across the project area is approximately 240 m, from 1,400 m above mean sea level at Babcock Creek to 1,640 m above mean sea level at the top of Roman Northwest property. Mount Kostuik is the highest peak in the area at 1,900m.

All water drainage from the project area will be into the Babcock Creek from the northwest and southeast. The Babcock Creek drains into the Murray River.

## 2.6 Adjacent Properties

---

The Roman Northwest Project is located within an area that contains a number of both closed and currently operating metallurgical coal properties including Perry Creek, Bullmoose, Wolverine, Quintette and the Trend Mine.

## 2.7 Historical Information

---

Commercial coal deposits were first discovered north of the Roman Northwest Project area beside the Sukunka River in 1965, and this discovery triggered a coal “staking rush” by various companies led mainly by Brameda Resources and Denison Mines Limited.

In 1970 and subsequent years Denison Mines Limited (Denison) acquired a large number of crown coal licences in the Wolverine Valley, Quintette Mountain and Roman Mountain areas.. In April 1971 Denison entered into an agreement with Mitsui Mining Co. Ltd., Alco Standard Corporation and Tokyo Boeki Ltd. to form Quintette Coal Ltd. Several changes in the partnership took place in the 1970’s and 1980’s leaving Denison as the major shareholder and managing partner. By 1983 Denison had accumulated a 50% stake in the partnership with Mitsui Mining Co. Ltd. holding 12.5%. The remainder of the partnership comprised twelve other companies, mainly representing interests in the Japanese steel industry.

This activity occurred in response to global expansion of steel production which stimulated worldwide exploration for coking coal. Intensive exploration from the late 1960’s to the 1980’s followed that culminated in the development of the Quintette and Bullmoose Coal Mines.

Infrastructure development included the construction of the town of Tumbler Ridge, 129 km of rail line, 95 km of highway, 127 km of high voltage transmission line, a new port at Ridley Island and the upgrading of the 752 km existing rail line from Prince George to the port at Prince Rupert.

The Quintette Mine made its first coal shipment in December 1983 and operated until August 2000. The mine had a raw coal production capacity in excess of 6 million tonnes per annum, making it one of Canada’s largest mines. Production came from four open pits named Mesa, Wolverine, Shikano and Babcock. Clean coal production capacity was 2.3 million tonnes per annum, although shipments toward the end of the mine’s life in 2000 ranged from 1.4 to 1.9 million tonnes per annum.

The Bullmoose Mine produced 34 million tonnes of high quality metallurgical coal from 1983 until its closure in April 2003. Teck, which acquired the property through the purchase of Brameda Resources,

operated the mine and owns the majority of the remaining mine assets along with minority partners.

In response to decreasing economic certainty and rulings by federal authorities to reduce coal prices, Teck Corporation took control of Quintette Coal Limited from Denison in 1991 and the Quintette Operating Corporation was created. As a result of diminishing coal prices the Roman Northwest licenses reverted to the crown in 1999 to 2000.

Since 2004, four new open pit coal mines have opened in the region. Two of these which are the Wolverine and Trend Mines, are located in the Tumbler Ridge area and produce metallurgical coal. The others, the Pine Valley Coal Mine and the Brule Mine, are located in the Chetwynd area. The Brule Mine produces Pulverized Coal Injection (PCI) coal while Pine Valley produces both PCI and metallurgical coal.

Ownership of the Roman Northwest coal licenses were obtained by NEMI in early 2000. When NEMI joined the PRC partnership in 2006 control of the Roman Northwest coal licenses were transferred to PRC.

## 2.8 Exploration by Other Parties

---

Denison Mines Limited carried out exploration work on the Roman Northwest area in 1975. The work included detailed surface geological and topographical mapping, structural interpretation and mechanical exploration including drilling. Activities in the field included rotary percussion and diamond core drilling.

---

## 3 EXPLORATION

### 3.1 Historical Drilling

---

Denison carried out drilling exploration on the Roman Northwest property in 1975, the focus of the drilling was to the east of the current Roman Northwest property.

### 3.2 2006 – 2012 Drilling

---

Exploration activities were carried out on the Roman Northwest property by PRC from 2006 - 2012. During this time a total of 169 rotary percussion boreholes, 24 diamond core boreholes and 16 large diameter core boreholes were completed. The Roman Northwest work extended up to and included the exploration drilling on the Core Lodge road on the western side of the Babcock Creek in 2006 and 2007. Exploration on Roman Northwest further west of the Core Lodge road started in 2008 and continued in 2009.

The Roman Northwest 2008 – 2009 work consisted of 46 rotary percussion boreholes, 2 diamond core borehole, 3 large diameter core boreholes and 18 trenches. The boreholes on the Core Lodge road are included in both the Roman Northwest and Roman Mountain projects.

The 2010 – 2012 exploration programs consisted of 88 rotary percussion boreholes, 11 diamond core borehole, 5 large diameter core boreholes and 24 trenches. This work increased the geological confidence level in the resource and also extends the explored area into the second kilometre.

### 3.3 2013 – 2014 Drilling

---

PRC conducted an exploration program in the summer of 2013 to better understand the Roman Northwest property and specifically to define coal seams of the Gates formation to a concept or inferred level of resource definition based on a planned desktop pit. The drilling program consisted of 17 trenches and 27 boreholes. A total of 3168 metres of new drilling was completed on this property in the course of the 2013 summer drilling program.

In early 2014 the drill program started in 2013 was continued on the Roman Northwest property by Peace River Coal Inc. The work consisted of 11 rotary percussion boreholes and 9 PQ core boreholes and 1 trench. A total of 20 drillholes were completed from which 2129 meters of rotary and 1563 meters of PQ core was obtained. All core holes were actually combined rotary and core drilling, selectively coring coal intervals with geological guidance from drilled rotary pilot holes.

Drill core from the HQ and PQ fully cored boreholes drilled in Roman Northwest over various years are stored at the Trend Mine Site.

### 3.4 2015 Drilling

---

PRC conducted an exploration program in the early winter of 2015 to better understand the Roman Northwest property and specifically to define coal seams of the Gates formation in the center of the Second syncline. The drilling program consisted of 4 rotary percussion boreholes. A total of 1531 metres of new drilling was completed on this property in the course of the 2015 drilling program. The program was shut down in early February when it was decided to suspend exploration activities in northeast British Columbia.

Table 3.1 outlines a summary of drilling and trenching on the Roman Northwest property.

The cost for the 2015 exploration programs are recorded in Attachment 10.

**Table 3.1: Summary of Boreholes and Trenches Roman Northwest**

Year	Total boreholes		Rotary boreholes		HQ/PQ core boreholes		Large diameter core boreholes		Trenches
	number	metres	number	metres	number	Metres	number	metres	
1975	1	96	1	96	0	0	0	0	0
2006	3	0	3	0	0	0	0	0	0
2007	3	0	3	0	0	0	0	0	0
2008	18	3372	16	3113	1	171	1	88	0
2009	33	7992	30	7492	1	382	2	118	18
2010	22	3349	16	2856	1	310	5	183	22
2011	58	14389	56	14094	2	295	0	0	0
2012	24	4128	16	2946	8	1182	0	0	2
2013	27	3136	17	2209	2	200	8	727	17
2014	20	3619	11	2109	9	1510	0	0	1
2015	4	1531	4	1531	0	0	0	0	0
<b>Totals</b>	<b>213</b>	<b>41612</b>	<b>173</b>	<b>36446</b>	<b>24</b>	<b>4050</b>	<b>16</b>	<b>1116</b>	<b>60</b>

### 3.5 Geological & Geophysical Logging

All the PRC rotary and core boreholes were logged by borehole geophysical techniques employing the following Century Geophysical Corporation tools:

- gamma / neutron / deviation;
- gamma / density / resistivity / calliper;
- dipmeter / deviation;
- through the rod logs used a gamma-gamma.

Century Geophysical Corporation carried out the geophysical logging. Deliverables included compiled raw geophysical data based on industry standards; digital and paper logs, based on PRC Standard Operating Procedures. In addition to lithological measurements, strata dip and borehole deviation was also measured.

Borehole collar positions and trench locations for the Hillsborough and PRC exploration programs were initially surveyed using a GPS operated by the field geologist, with follow-up by a professionally registered land surveyor.

All coal seams were picked according to the company's Standard Operating Practice (SOP). The geophysical logs were used as the basis for measuring coal sample recoveries and detecting and recording coal seam lithology variations.

The copies of the geophysical logs from the 2015 boreholes are contained in Appendix 1.

The borehole data for Roman Northwest is sufficient to support the current resource statement for both the Canadian 43-101 requirements for structure and the JORC standard for quality. The boreholes were mainly drilled on cross section with an average of 150 m between drilled cross sections

### 3.6 Data Location / Topographical Data

The Roman Northwest area was flown for an aerial survey in 2005 using LIDAR technology with the generation of detail contours and DTM data. This data was used as the basis for the topographic surface used in the geological Resource Model.



---

### 3.7 Data Orientation Relative to Geological Structure

---

Wherever possible, boreholes have been logged with a verticality tool to survey tilt and azimuth down the hole. The data was loaded into MineSight which displays the seam locations based on the downhole survey. Boreholes without downhole surveys were considered as vertical for the purpose of geological modelling. Percussion rotary boreholes tend to deviate more than core holes and are likely to turn into the bedding.

### 3.8 Reporting Archives / Database

---

The geological data for Roman Northwest property is in electronic format with the exception of early historic borehole data from the 1975. New field information is collected digitally and then transferred directly into acQuire.

PRC uses the Mincom MineSight software package for all geological modelling purposes.

An acQuire database for Peace River Coal has been set up and is now the primary geological database for all borehole and trench data. Data is transferred from acQuire into a MineSight model to facilitate interrogation and modelling.

The validation of non-core borehole data includes the following:

- inspection, encoding and loading of lithological logs,
- visual inspection and loading geophysical logs,
- correction of coal seam depths and thicknesses to geophysical picks, and
- checking of seam correlations with surrounding boreholes

The validation of cored borehole data includes the following:

- inspection, encoding and loading of lithological logs,
- visual inspection and loading geophysical logs,
- correction of coal seam depths and thicknesses to geophysical picks,
- apportioning core losses,
- checking of seam correlations with surrounding boreholes, and
- ensuring sample depths and thicknesses correspond to corrected log depths and thicknesses

---

## 4 GEOLOGY

### 4.1 Geology General

---

The Roman Northwest Project is located in the south-central region of the Peace River Coalfield and lies within the Quintette Trend Fold Zone. It is composed of Mesozoic strata that form part of the Rocky Mountain Foothills of north-eastern British Columbia. The strata have been significantly affected by thrust faulting and folding that occurred during the Cordilleran orogeny. Refer to Attachment 6 for an overview of the detailed geology and Attachment 8 for general stratigraphic columns.

Within the Roman Northwest property, three stratigraphic units are particularly valuable for regional correlation. These are the prominent Cadomin Formation conglomerate and the recessive Moosebar Formation and Hulcross Formation shales. The two main coal-bearing units, the Gates Formation and the Gething Formation, are easily distinguished based on their stratigraphic relationship to the Cadomin and Moosebar Formations.

### 4.2 Coal Seam Geology

---

#### 4.2.1 Gates Formation

The Gates Formation is the most significant hard coking coal coal-bearing sequence for surface mining in northeast British Columbia. Coal seams of economic thickness are continuous from the Bullmoose Mountain area to the Alberta provincial border, a distance of almost 140 km.

Coal seams and major lithological units correspond closely to those found at the nearby Trend Mine. Eleven coal seams have been identified in the Roman Northwest Project area. These are named A, at the top of the sequence then B, C, D, E, F, G, I, J and K. Within these coal seams, individual coal splits are distinguished by a number (e.g., Seams E1, E2 and E3). Of the eleven seams, only the D2, E1, E2, F, G, J, K1 and K2 Seams are considered to have economic potential for development.

Seam thickness data, for Gates and Gething Formations seams, obtained from the geological model, are shown in Table 4.2.1. These values are based on borehole intersections, with true thickness interpolated from seam structure in the geological model.

The D Seam package, the uppermost economic package within the project area, consists of the upper D1 and the lower D2 Seams. It is also common to have one or two coaly zones between D1 and D2. Only the D2 Seam is of economic importance.

The D Seam package is only present in the Roman Northwest north limb area and occurs immediately below the Babcock Member Conglomerate. D2 has an average thickness of 2.9 metres and displays gradational contacts with carbonaceous claystone at the top and bottom of the seam. The top is a sharp contact with immediate minor parting while the bottom contact is more gradational. The D2 Seam has little variation of thickness and quality throughout the Roman Northwest Project area. The average raw ash content (adb), raw FSI and raw sulphur content values for the seam are 22.6%, 4 and 0.46%, respectively.

The E Seam Zone occurs approximately 20 m to 25 m below the D Seam. It is composed of as many as three seams but only the E1 Seam is of economic importance over the whole property. E2 has been identified in some areas of the property as having a thickness that will make it economic to mine.

The E1 Seam is persistent throughout the Roman Northwest Project area with the main variations occurring in the number and thickness of partings. These partings rarely exceed 0.3 m in thickness and

are normally regarded as intra-seam partings or rock bands. Typically E1 Seam raw ash content (adb), raw FSI and raw sulphur values are 21.1%, 6 and 0.42% respectively. In general the lower part of the seam has higher ash content.

The F Seam occurs 15 m to 20 m below the E Seam and is persistent throughout the project area. The roof of the F Seam is claystone that gives a high gamma log response. This contrasts with the low gamma response of the seam and consequently facilitates identification and correlation. The lower part of the F Seam sometimes displays a high ash zone and gradational lower contact to the seam floor. Raw Ash content (adb), raw FSI and raw sulphur content values for the seam are 30.1%, 8 and 0.39% respectively.

The G Seam is located 40 m and 50 m below the F Seam. The G Seam is developed over the entire Roman Northwest Project area. The G Seam tends to thicken to the northwest. Variation is common in the G Seam with average thicknesses ranging between 2.6 on the Roman Northwest South Limb, 4.8 metres on the north limb and 5.8 metres for the south syncline area. The top contact is generally sharp. The upper third or half of the seam contains thin claystone laminae while the bottom metre grades into a carbonaceous siltstone that forms the floor of the seam.

The seam average raw ash content (adb), raw FSI and raw sulphur content values are 18.0%, 6 and 0.41%, respectively.

The G Seam frequently displays anomalous thicknesses due to fault repetition and fold axis structural thickening. The seam is generally thicker in the fold hinge and on the south-western limb of the syncline.

The J Seam is separated from the G Seam by a carbonaceous claystone zone 2.5 to 3.0 m thick. This zone may contain one or more coaly stringers that are referred to as the I Seam. The J Seam has an average thickness ranging from 2.6 metres to 7.9 metres depending on the area. The upper half of the seam may contain thin shaley partings, but the lower half has very low ash consistently with a low gamma signature and sharp contact. The upper half of the seam may contain thin shaley partings, but the lower half is always clean with a low gamma signature and sharp basal contact.

The J Seam normally forms the base of the Gates Formation economic coal zone and has a raw ash content (adb), raw FSI and raw sulphur content of 13.1%, 6 and 0.26% respectively.

The K Seam Zone comprises up to three seams: K1, K2 and K3 in descending stratigraphic order. Each seam is separated by 1.0 to 4.0 metres of siltstone. The K1 and K2 Seams range in thickness from 0.7m – 1.0m and 0.8m – 1.0m respectively. K1 is considered economic over the property, K2 has been identified to be economic in areas where the seam thickness is greater than the minimum mining thickness of 0.8m. K3 is not economically significant. Raw ash content (adb), raw FSI and raw sulphur for the K1 and K2 Seams are 21.8%, 6 and 0.5% for the K1 Seam and 20.4%, 6 and 0.81% for the K2 Seam.

The sequence below the K Seam Zone is a 20 m thick siltstone unit overlying a persistent, approximately 1.0 m thick, clay unit. This clay bed is composed of unconsolidated ash fall tuff and has significant implications with respect to geotechnical design due to its mineralogical properties.

**Table 4.2.1: Drilled Thicknesses of Seams of Economic Interest**

SEAM	MIN	MAX	MEAN
D2	0.07	6.07	2.55
E1	0.23	10.93	1.90
E2	0.05	6.98	0.90
F	0.03	8.35	2.23
G	0.33	15.90	3.61
J	0.10	31.63	4.50
K1	0.06	3.71	0.88
K2	0.07	3.02	0.86
Bird	0.05	5.25	2.31
GT1	0.05	6.43	2.93
GT2	0.05	2.46	0.86

#### 4.2.2 Gething Formation

The hanging wall of the Bird Seam is defined by a glauconitic sandstone unit. There has been much debate on whether this glauconitic unit is the base of the Moosebar Formation or the top of the Gething Formation. The Bird Seam varies in thickness from 4.0 to 5.0 metres. It is a relatively clean seam with only minor clastic partings on the north limb of the syncline. Larger clastic partings become more apparent on the northwest portion of the south limb and can complicate correlation of the Gething Seams.

The parting between the Bird Seam and the GT Coal Zone comprises a 1.0 to 3.0 metre thick claystone.

The GT Coal Zone is comprised of the GT1, GT2 and GT3 Seams. The zone varies in thickness between 10 and 15 metres with individual seam thicknesses ranging between 1.0 and 2.0 metres. Coal accounts for approximately 65% of the coal zone. Seams GT1 and GT2 are the most laterally consistent seams within Roman Northwest with GT3 generally occurring as a carbonaceous zone. Only the GT1 and GT2 Seams are of economic interest.

### 4.3 Structural Setting

The Roman Northwest regional structure is characterised by thrust faulting and associated folding along a northwest – southeast axis, which forms part of the larger Rocky Mountain and Cordilleran deformation. The primary compressional stress direction was from the southwest. The region is dominated by sequences of syncline / anticline pairs with southwest dipping axial planes, often truncated by high angle thrust faults. This has led to the repetition of coal-bearing sections. The structure within the syncline / anticline pairs can vary from simple with gentle dips, to complex with steeply dipping strata. The fold axes display gentle plunges to the northwest.

Roman Northwest is a continuation of the Roman Mountain deposit and is located on the western side of Babcock Creek. The Murray Syncline is the predominant feature at Roman Mountain and is a moderate to tight fold structure typical of the area. In Roman Northwest the Murray Syncline becomes part of a double syncline and pinches out to the Northeast. The Second syncline is the main structure in Roman Northwest and runs parallel to the Murray Syncline and continues to the northwest. The

southern extent of this syncline is thought to go southeast under Babcock Creek and continue on the Roman Mountain side of the creek. Drilling in 2014 on Roman Mountain near the creek intersect coal by due to deep overburden no geophysical logs were obtained. Additional work will be required to verify the extent of the second syncline. Previous interpretations completed on Roman Northwest suggested a fault that paralleled Babcock Creek to explained the offset of the Murray syncline. Drilling from 2012 – 2014 have shown that this fault does not exist. This syncline has not yet been named but lines up with what has been identified in historical assessment reports as the Murray Syncline.

The major fault modelled across the Roman Northwest deposit is a northwest trending thrust fault primarily resulting in a repeated G, J and K sequence along the western limb of the Gates Formation. This thrust fault is a continuation of the fault in Roman Mountain Phase 1 that cuts across the deposit removing the eastern limb of the syncline.

Borehole data indicates that there are numerous unmodeled splays coming off from the major fault in the south near Babcock Creek underneath the anticline. This area falls outside the current resource shell due to its proximity to Babcock Creek, however if a creek diversion is ever considered there is potential for a slight increase in coal resources. However, seam identification and continuation significantly hinders the interpretation process with the current dataset.

#### 4.4 Further Work

Additional drilling and trenching will continue to be carried out on the property. The drilling will include LDC and PQ coring to obtain additional samples to better define the quality of the area. Structural drilling using percussion air rotary drilling will continue to define the structural location of the faults defined in the resource area and better define the location of the Gething seams on the flanks of the Second syncline.

This work has been put on hold until the world price of metallurgical coal rebounds, the PRC exploration team has been put on hiatus until that time.

## 6 RECLAMATION

Peace River Coal Exploration undertook reclamation activities during the summer of 2015 at its Roman Northwest property. The purpose for reclamation in Roman Northwest was to return selected areas to an end land use for wildlife habitat and the remaining areas to a state of partial reclamation until exploration work recommenced.

The reclamation work completed for Roman Northwest followed the Reclamation Plan for Roman Northwest Surface Exploration Program (Stantec 2012), which was submitted as part of the Notice of Work permit requirements for Peace River Coal's Roman Northwest property (CX-9-8).

### 6.1 General Practices

The basis for the general practices that were used were derived from The Handbook for Mineral and Coal Exploration in British Columbia (BC MEMPR 2009), The Health, Safety and Reclamation Code for Mines in British Columbia (BC MEMPR 2008), and The Reclamation Plan for Roman Northwest Exploration program (Stantec 2012).

- Exploration trails and drill sites proposed for reclamation will be recontoured to original ground slope.
- Soils will be decompacted and/or scarified as part of the recontouring process, to allow for formation of microsites and to promote seed germination.
- Ditches will be re-sloped to allow for reestablishment of natural drainage patterns.
- Culverts and stream crossings will be removed and stream channels restored to their natural state.
- Recontoured sites will be covered with topsoil material and coarse woody debris where available.
- Recontoured sites will be revegetated as described in "Revegetation Prescriptions".
- Predator access blocks will be installed along exploration trails near core caribou habitat.

### 6.2 Revegetation Prescriptions

Sites and exploration trails were seeded based on the recommendations from the Reclamation Plan for Roman Northwest. Seed mixes and seed mix application densities are dependent on slope gradients with respect to erosion and sediment control, as well as biogeoclimatic zones. In Roman Northwest two seed mixes were used depending on the biogeoclimatic zone. Table 6.2.1 and 6.2.2 list the two seed mixes used on the property.

**Table 6.2.1 Seed Mix A used for ESSF biogeoclimatic zones**

Species	Scientific Name	Percent by weight	Plant type	Persistence	Growth habit
Canada milkvetch	<i>Astragalus alpinus or canadensis</i>	3	Native legume	Perennial	Rhizomatous legume
Slender wheatgrass	<i>Elymus trachycaulus</i>	32	Native grass	Perennial	Bunch/tufted grass
Rocky Mountain fescue	<i>Festuca saximontana</i>	10	Native grass	Perennial	Dense bunch/tufted grass
Annual ryegrass (diploid)	<i>Lolium multiflorum</i>	10	Agronomic grass	Annual	Bunch/tufted grass
Alpine bluegrass	<i>Poa alpine</i>	6	Native grass	Perennial	Dense, low bunch/tufted grass
Fall rye	<i>Secale cereal</i>	36	Agronomic grass	Annual	Bunch/tufted grass
Spike trisetum	<i>Trisetum spicatum</i>	3	Native grass	Perennial	Bunch/tufted grass

**Table 6.2.2 Seed Mix B, used for BWBS biogeoclimatic zones**

Species	Scientific Name	Percent by weight	Plant type	Persistence	Growth habit
Annual ryegrass (diploid)	<i>Lolium multiflorum</i>	15	Agronomic grass	Annual	Bunch/tufted grass
Fall rye	<i>Secale cereal</i>	45	Agronomic grass	Annual	Bunch/tufted grass
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>	4.5	Native grass	Perennial	Sod grass
Slender wheatgrass	<i>Elymus trachycaulus</i>	15	Native grass	Perennial	Bunch/tufted grass
Fuzzy-spiked wild rye	<i>Leymus innovatus</i>	13	Native grass	Perennial	Tufted grass
Fowl bluegrass	<i>Poa palustris</i>	4.44	Native grass	Perennial	Bunch/tufted grass
Spike trisetum	<i>Trisetum spicatum</i>	2.2	Native grass	Perennial	Bunch/tufted grass
Mountain/sitka alder	<i>Alnus viridis</i>	.63	Native shrub	Perennial	Multi-stemmed shrub
Fireweed	<i>Epilobium angustifolium</i>	.23	Native forb	Perennial	Rhizomatous

### 6.3 2015 Roman Northwest Reclamation Summary

A total of 30 drill pads and 2 km of trails were fully reclaimed on the property in 2015.

The work included, recontouring and sloping backed to original ground, placement of woody material for slope stability and seeding with the prescribed seed mix. The work was carried out on both the drill sites and along the exploration trails.

On the main access trail 1.8 km of trail was partially reclaimed with the removal of all culverts and the installation of water bars. A total 3.3 km of trails were inspected and water bars and ditches were added where required.

To help with caribou habitat preservation, 2 new predator access blocks were built and the existing 4 were inspected. The map in Attachment 7 display the reclamation that has been carried out on the Roman Northwest property in the last few years.

---

## 7 OTHERS

### 7.1 Interpretation & Conclusions

---

The resource model used to produce the 2014 resources is an update from the previous version released late 2013. It contains an additional 20 drillholes and 1 trench from the 2014 exploration program. The coal quality and simulations are update to date with no outstanding data. The borehole data from the 2015 drill program has not been used to update the resources.

### 7.2 Recommendations

---

It is recommended that:

- To undertake a LOX program to better understand the Base of Weathering
- confirm the structural interpretation with extra exploration drilling
  - to confirm the syncline extension into the Roman deposit
  - to further drilling to locate and follow the base of the syncline toward the north of the deposit
  - to understanding the Gething formation location along the Western limb
- Complete spatial studies of the coal quality information currently available and fit for purpose
- Extend model further northwest so that it extends beyond the end wall (will subsequently enlarge 20:1)

In February 2015 Anglo American Coal made the decision to suspend coal exploration on properties held by Peace River Coal. The exploration was disbanded and staffing was reduced throughout 2015. In February 2016 Anglo American Plc. Made an announcement that the plan to divest of their coal properties worldwide. This announcement affects Peace River Coal and at this time it is uncertain what will happen to the PRC coal properties.

### 7.3 Competent Person, Date & Signature Page

---

Details of the Competent Person, together with a signatory page, are given at the back of this report Attachment 9.

### 7.4 Illustrations & Diagrams

---

See Attachments below and text for references.



---

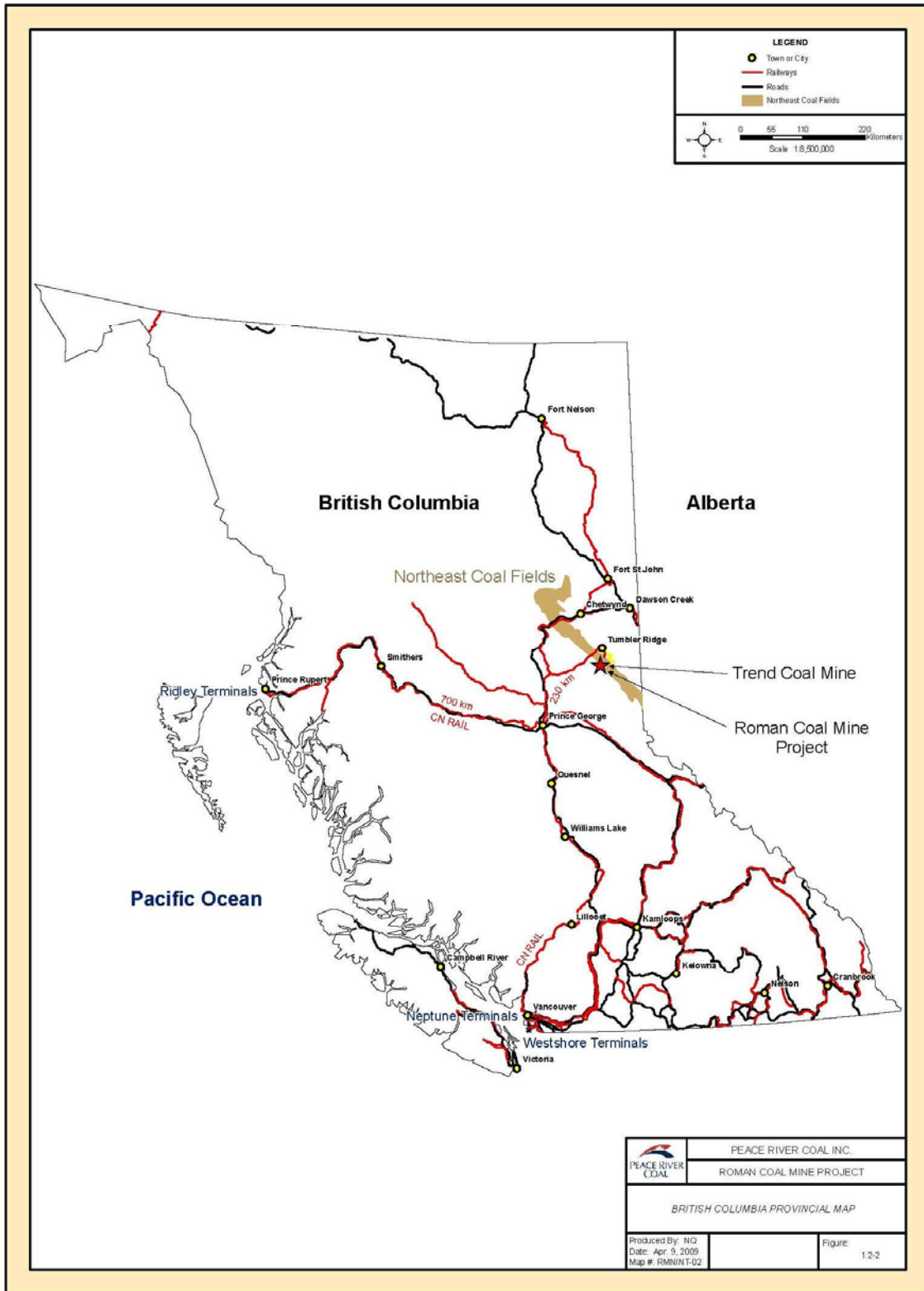
## 7.5 References

---

1. Canadian Institute of Mining, Metallurgy, and Petroleum (CIM). 2005. CIM Definition of Standards - For Mineral Resources and Mineral Reserves, 10 p.
2. Canadian Securities Administrators. 2005. National Instrument 43-101 - Standards of Disclosure for Mineral Projects, Form 43-101 and Companion Policy 43-101CP. Ontario Securities Commission Bulletin, Volume 28, Issue 51, p 10355-10367 (Rules and Policies) p 10368-10374 (Form 43-101F1 Technical Report, Table of Contents) and p 10375-10383 (Companion Policy 43-101CP to National Instrument 43-101 Standards of Disclosure for Mineral Projects).
3. Hughes, J.D., Klatzel-Maudry, L. and Nikols, D.J. 1989. A Standardized Coal Resource/Reserve Reporting System for Canada. Geological Survey of Canada Paper 88-21, 17 p.
4. Denison Mines Limited. 1976. Quintette Coal: Limited 1975 Exploration and Development Report, January 1976.
5. Denison Mines Limited. 1976. Quintette Coal Limited: Information Summary, August 1976.
6. Denison Mines Limited. 1976. Quintette Coal Limited: 1976 Geological Assessment Report, December 1976.
7. Schalekemp, B., 2010: Roman Northwest Technical Report, Peace River Coal Inc., Internal Report.
8. Lortie, David, 2015: Roman Northwest Coal Assessment Report March 15, 2015. Peace River Coal Inc. B.C. Ministry of Energy and Mines, Coal Assessment Report 00-973

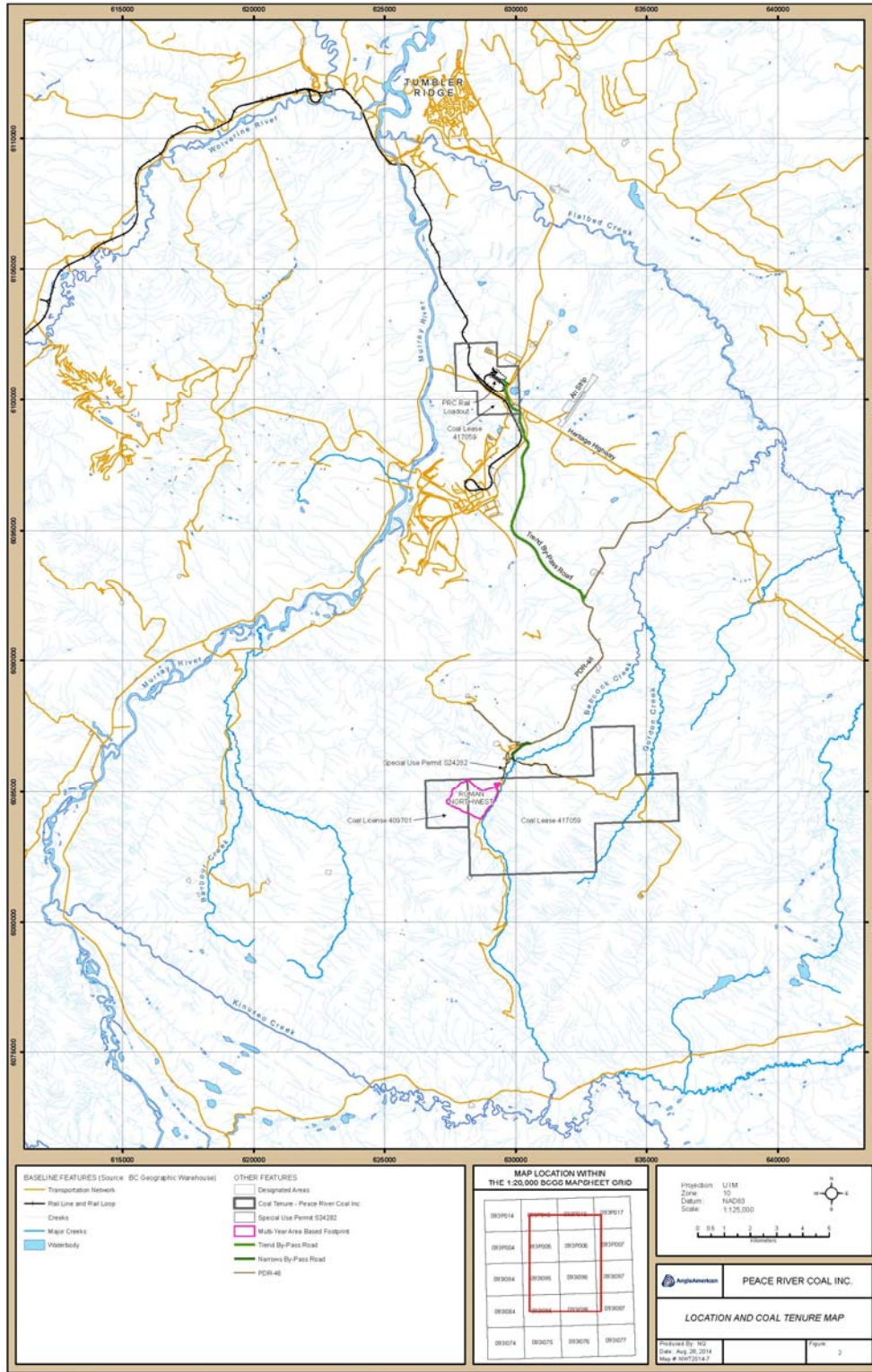
# Attachment 1

## Location Map



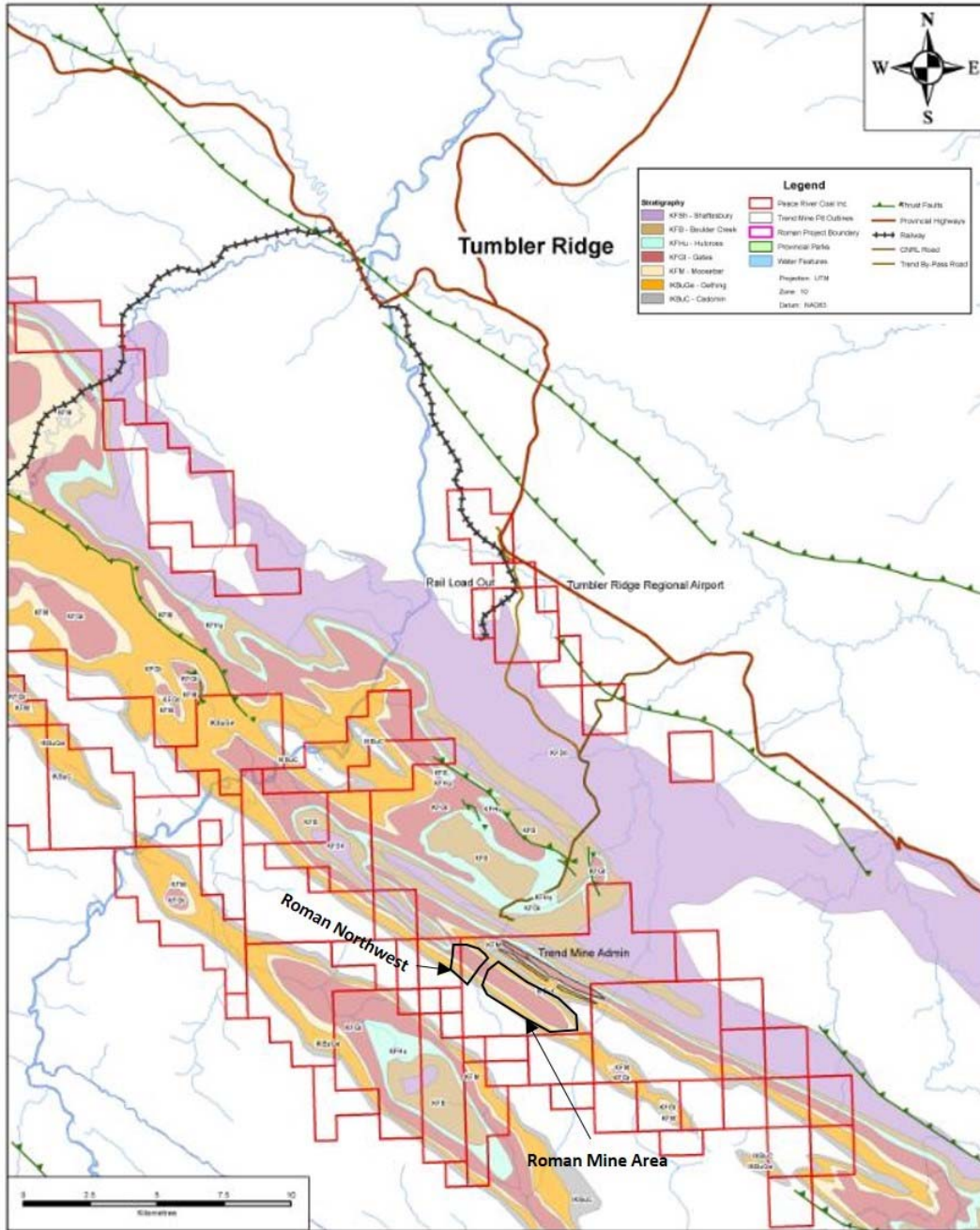
# Attachment 2

## General Property Map



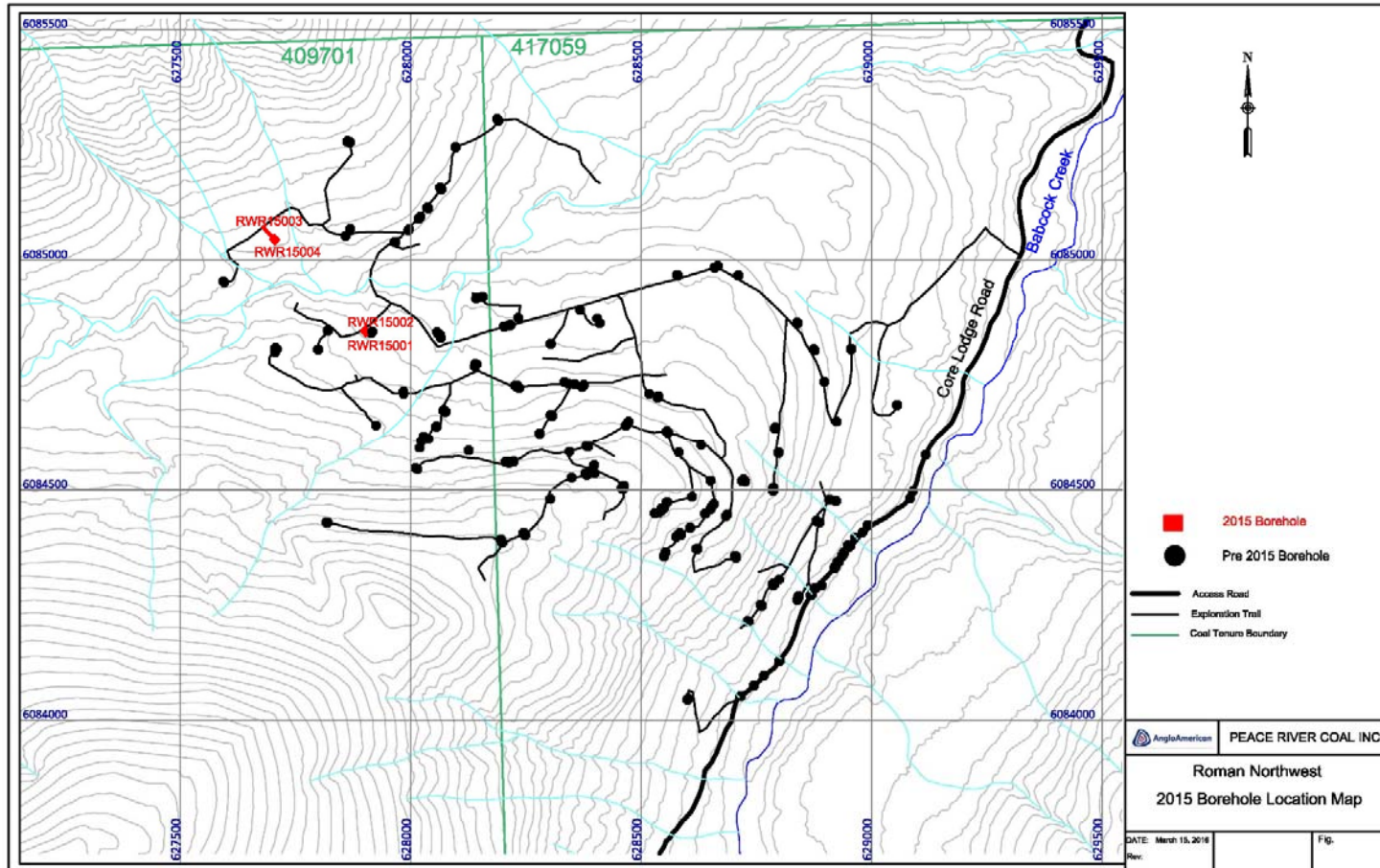
# Attachment 3

## Regional Geology Plan



# Attachment 4

## Borehole Plan



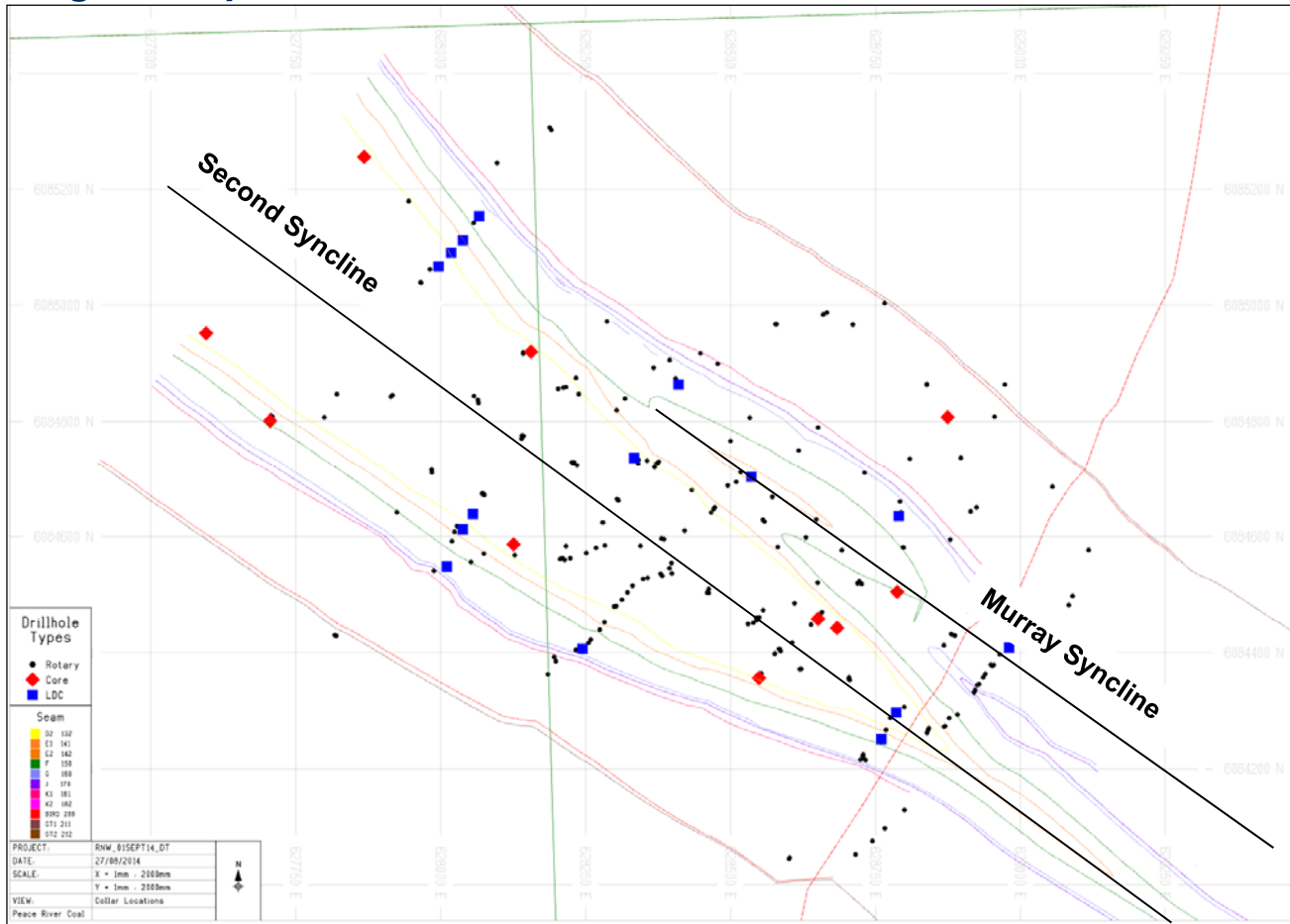
# Attachment 5

## Borehole Collar Information 2015

HOLE ID	EASTING	NORTHING	COLLAR	DEPTH	YEAR	AZIMUTH	DIP
RWR15001	627901	6084847	1508	390.12	2015	35	-65
RWR15002	627902	6084844	1508	350.13	2015	215	-70
RWR15003	627705	6085045	1523	399.27	2015	215	-65
RWR15004	627705	6085043	1523	391.03	2015	20	-67

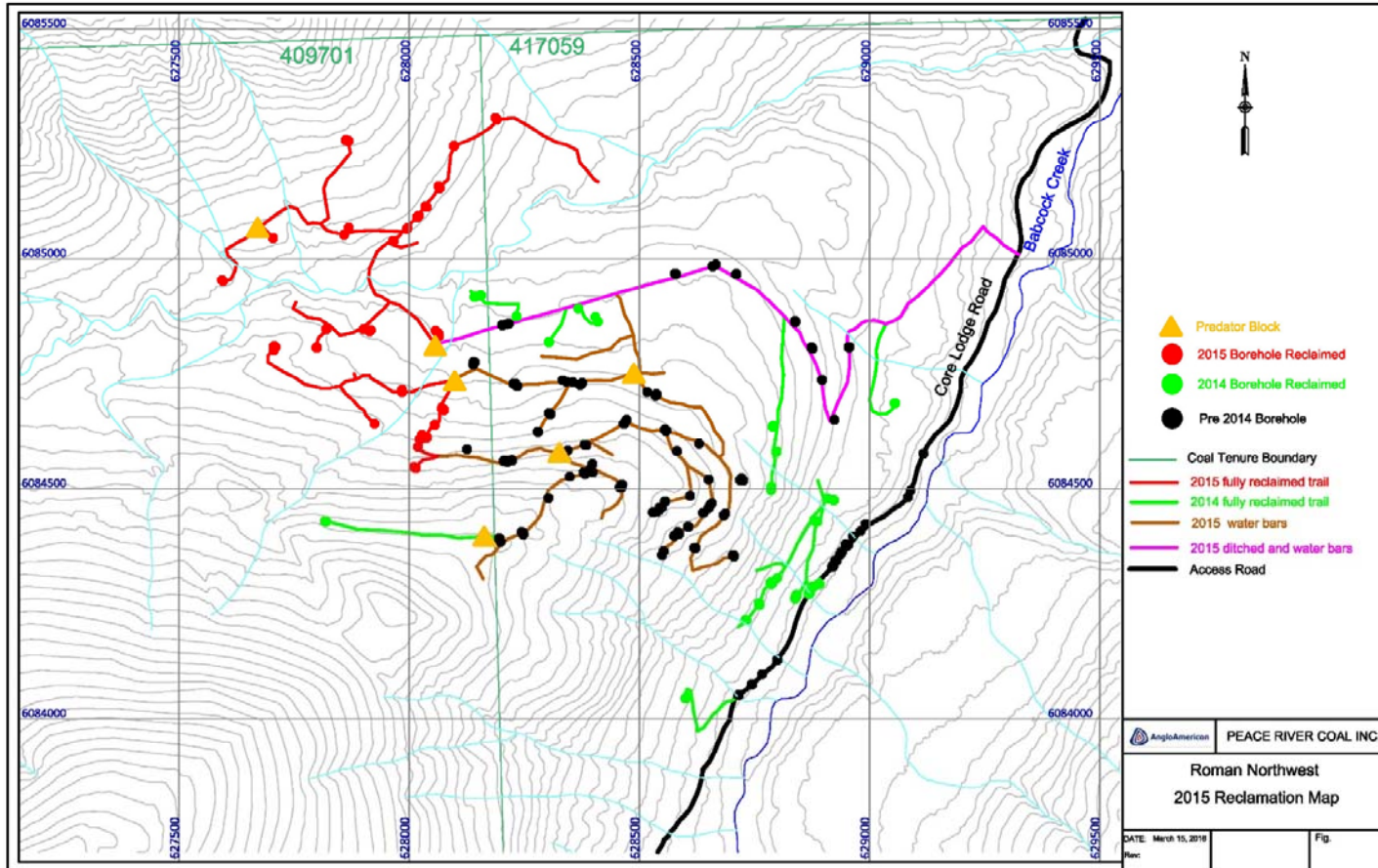
# Attachment 6

## Detailed Geological Map



# Attachment 7

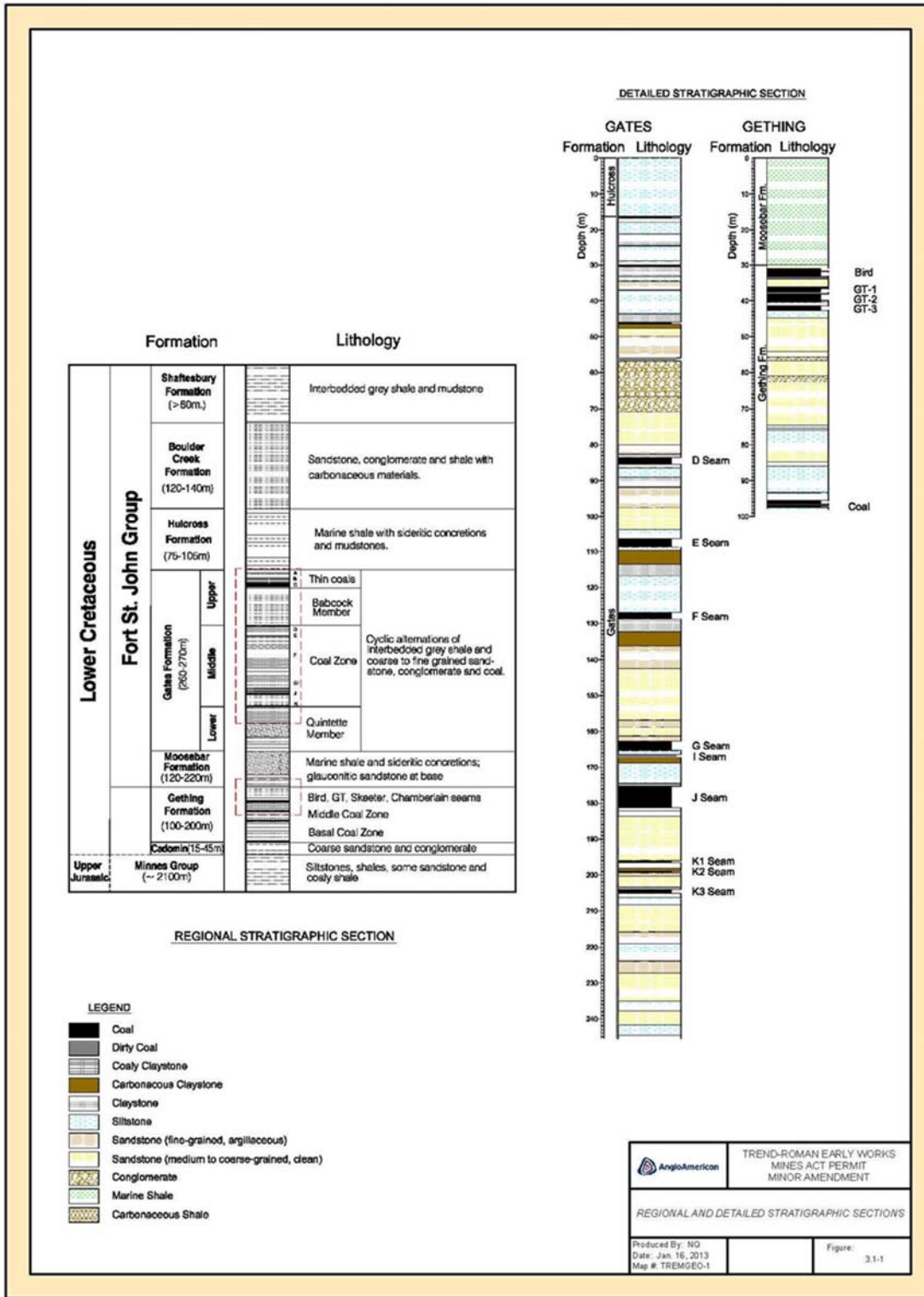
## 2015 Reclamation Map





# Attachment 8

## Stratigraphic Column



---

# Attachment 9

## Competent Person Signature page

---

I, David Phillippe Lortie, P. Geo., do hereby certify that:

- a) I am currently employed as Coal Resource Manager by Peace River Coal Inc., Suite 800 - 700 West Pender Street, Vancouver, British Columbia, Canada V6C 1G8. Peace River Coal Inc. is a subsidiary of Anglo American Plc.
- b) This certificate applies to the Coal Assessment Report entitled "Coal Assessment Report Roman Northwest Property Peace River Coal District", dated March 15, 2016.
- c) I graduated with a Bachelor of Science in Geology degree from Acadia University in 1976. I have worked as a Geologist for more than 22 years since my graduation from university. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (License #31067) I am a "qualified person" for purposes of National Instrument 43-101 ("NI 43-101").
- d) I am responsible for the preparation of this Coal Assessment Report.
- e) I have previously been involved with the Northeast British Columbia coal fields since 2004 as the Chief Geologist with Western Coal Corp. (previously Western Canadian Coal Corp.) and now with Peace River Coal Inc. planning and supervising the exploration work.

Dated this 15 March 2016



---

D.P. Lortie P. Geo.

# Attachment 10

## Cost 2015

Exploration Cost	
Type of Work	2015
Total for Downhole Geophysics	\$ 34,652
Total for Reclamation	\$ 82,456
Total for Site/Pit Preparation	\$ 121,852
Total for Fire Safety First Aid	\$ 550
Total for Drilling (including Fuel)	\$ 286,295
Total for Project Roman Exploration	\$ 525,805
Coal Tenure	\$ 8,580
Staffing	\$ 371,483
<b>Total Roman Northwest Exploration cost</b>	<b>\$ 905,868</b>

# Appendix 1

---

## 2015 Geophysical Logs (Attached as separate folder on DVD)

- RWR15001
- RWR15002
- RWR15003
- RWR15004

## Appendix 2

---

### 2015 Lithological Logs (Attached as separate folder on DVD)

- RWR15001
- RWR15002
- RWR15003



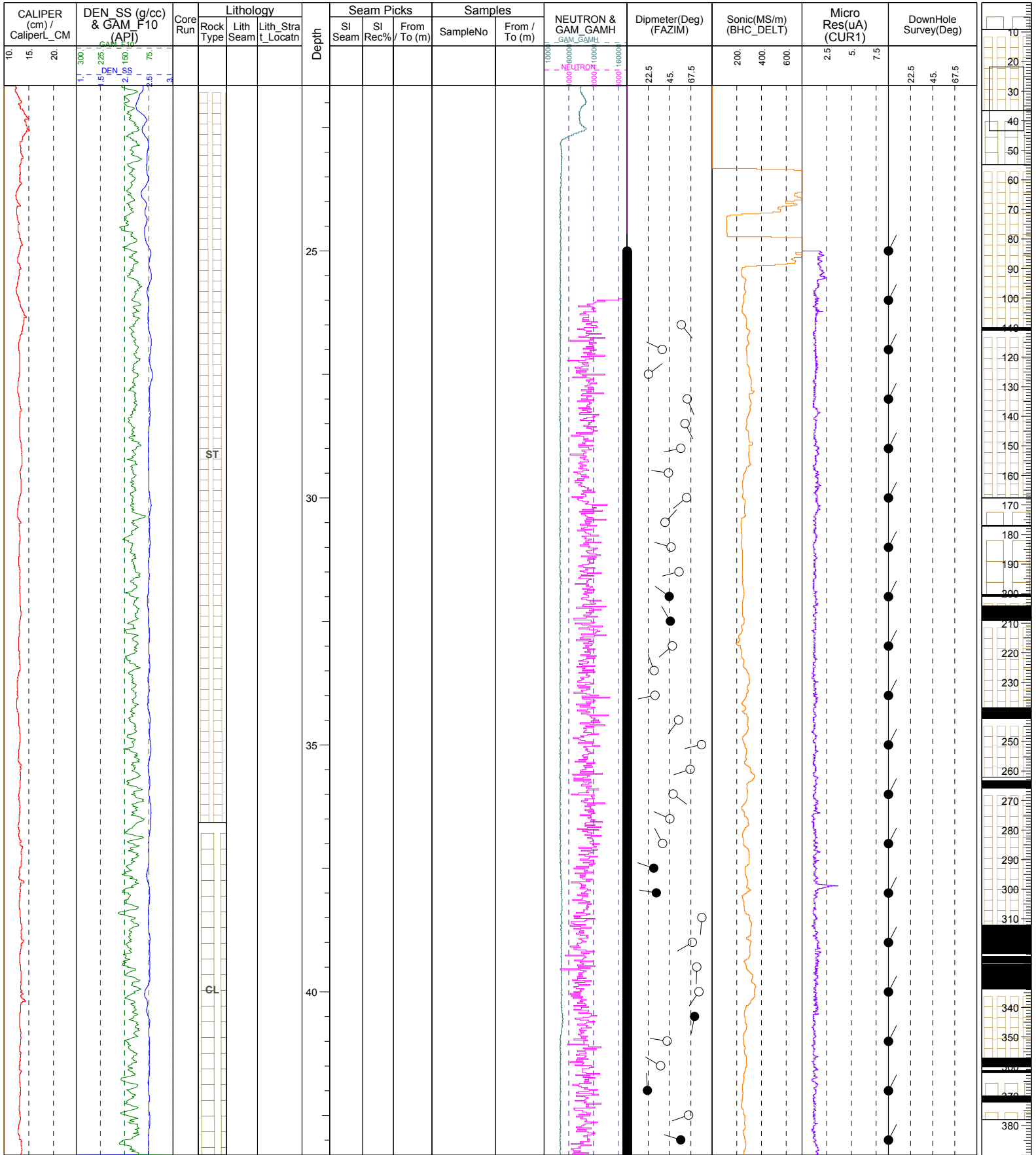
# 1:100 Geology & Geophysics QAQC RWR15001

Printed: 12/02/2015

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 16-Jan-15  
**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627901.235  
**Best Northing (Y):** 6084846.54  
**Best RL (Z):** 1508.22

**Geologist 1:** Nick Rizopoulos  
**Geologist 2:** Fahmi Aminuddin  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin



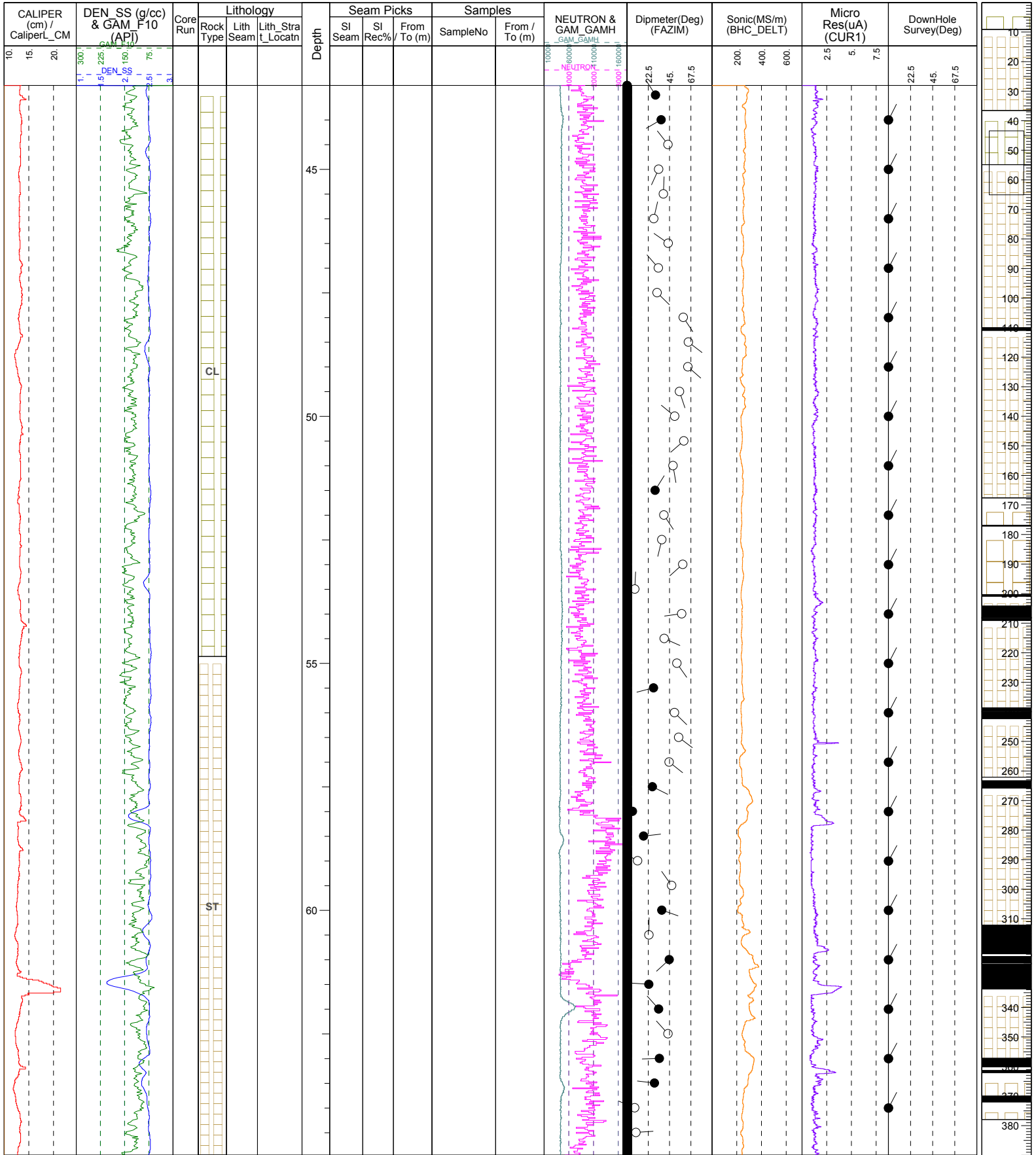
# 1:100 Geology & Geophysics QAQC RWR15001

Printed: 12/02/2015

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 16-Jan-15  
**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627901.235  
**Best Northing (Y):** 6084846.54  
**Best RL (Z):** 1508.22

**Geologist 1:** Nick Rizopoulos  
**Geologist 2:** Fahmi Aminuddin  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin



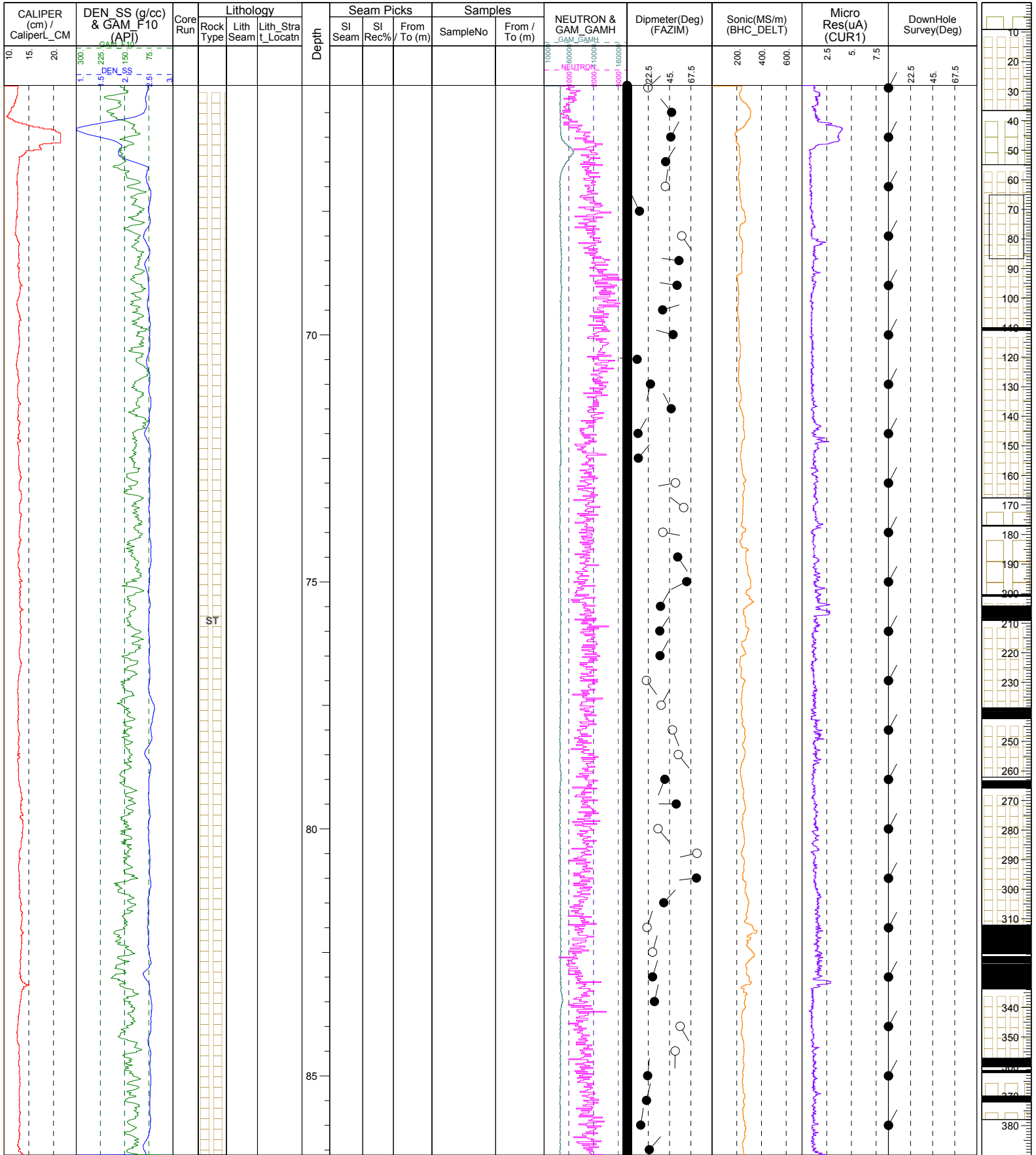


# 1:100 Geology & Geophysics QAQC RWR15001

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 16-Jan-15  
**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627901.235  
**Best Northing (Y):** 6084846.54  
**Best RL (Z):** 1508.22

**Geologist 1:** Nick Rizopoulos  
**Geologist 2:** Fahmi Aminuddin  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin

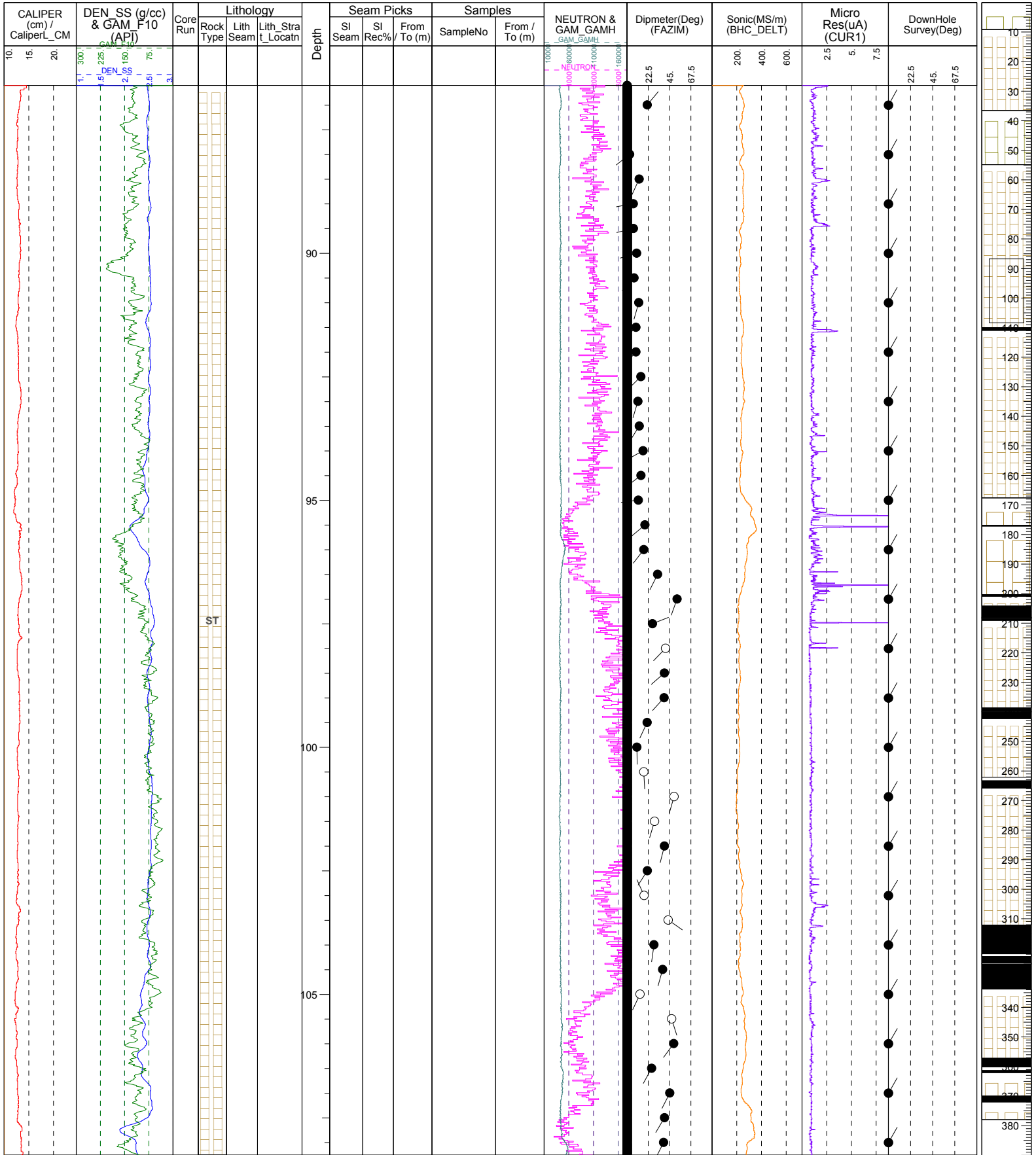


# 1:100 Geology & Geophysics QAQC RWR15001

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 16-Jan-15  
**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627901.235  
**Best Northing (Y):** 6084846.54  
**Best RL (Z):** 1508.22

**Geologist 1:** Nick Rizopoulos  
**Geologist 2:** Fahmi Aminuddin  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin



# 1:100 Geology & Geophysics QAQC RWR15001

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 16-Jan-15

**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627901.235

**Best Northing (Y):** 6084846.54

**Best RL (Z):** 1508.22

**Azimuth (RePegged):** 35

**Dip (RePegged):** -65

**Casing Depth (m):** 12.19

**DEPTH (m):** 390.12

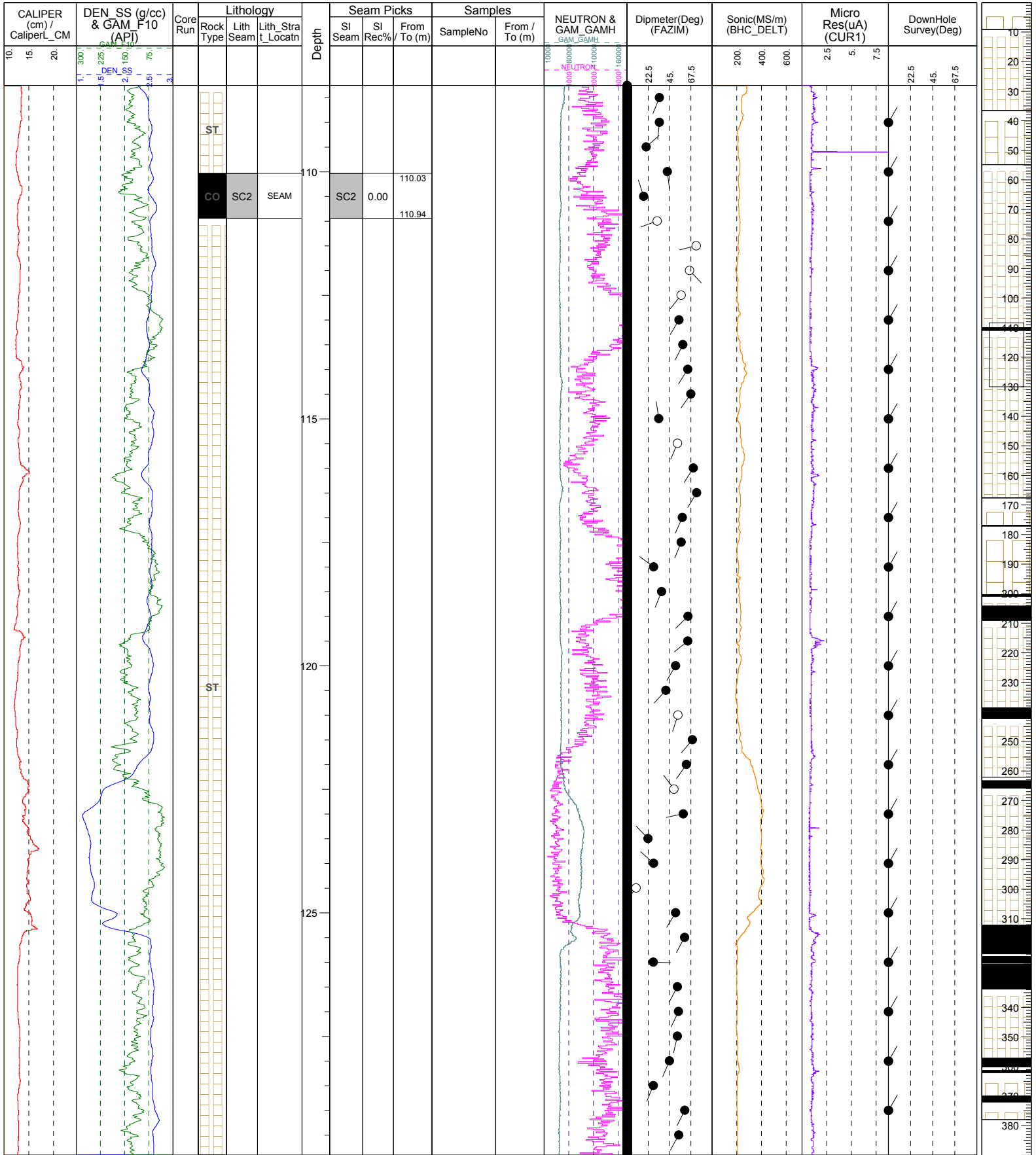
**Geologist 1:** Nick Rizopoulos

**Geologist 2:** Fahmi Aminuddin

**Geologist 3:** Ian MacLeod

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin



# 1:100 Geology & Geophysics QAQC RWR15001

Printed: 12/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 16-Jan-15

**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627901.235

**Best Northing (Y):** 6084846.54

**Best RL (Z):** 1508.22

**Azimuth (RePegged):** 35

**Dip (RePegged):** -65

**Casing Depth (m):** 12.19

**DEPTH (m):** 390.12

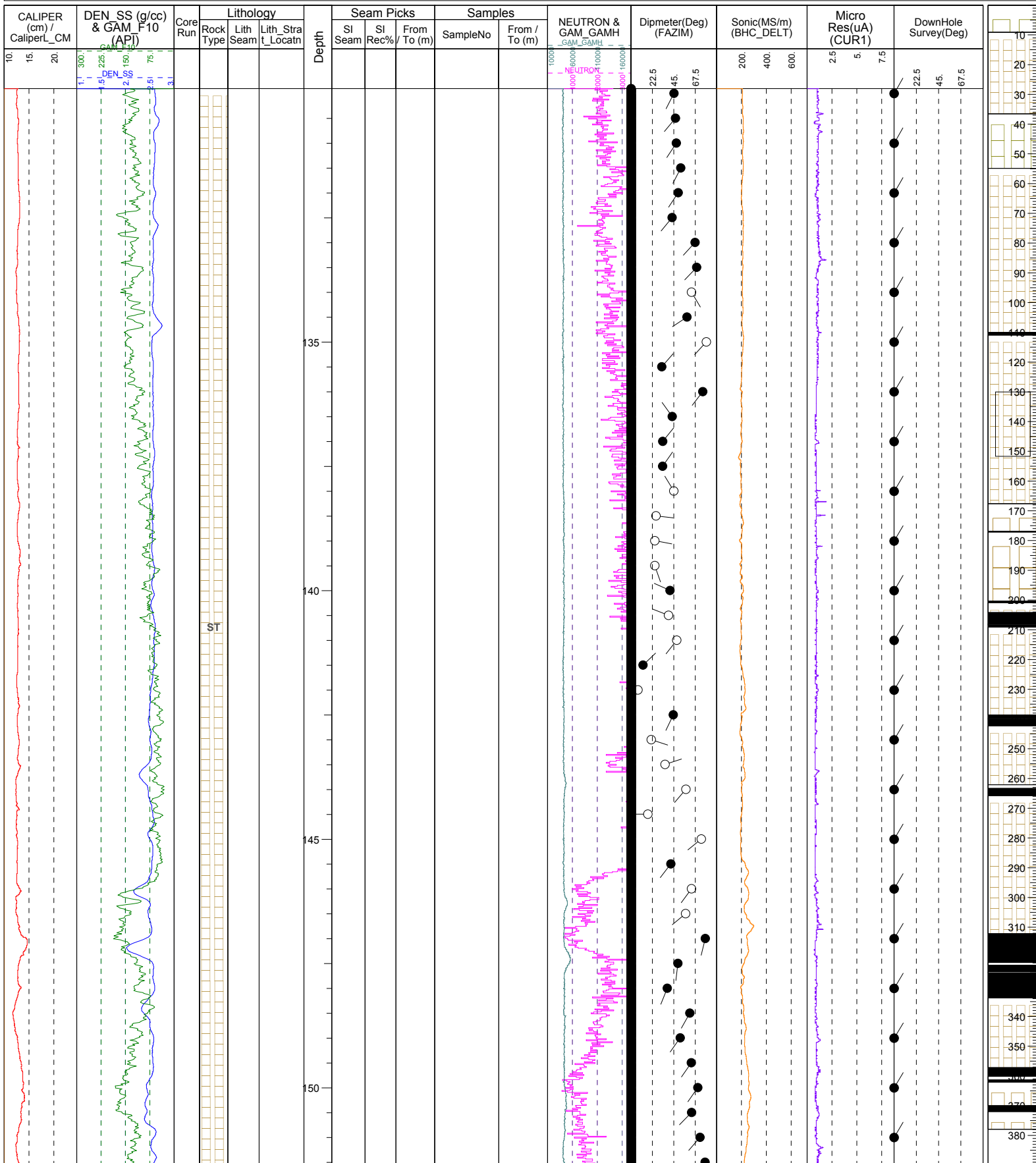
**Geologist 1:** Nick Rizopoulos

**Geologist 2:** Fahmi Aminuddin

**Geologist 3:** Ian MacLeod

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin

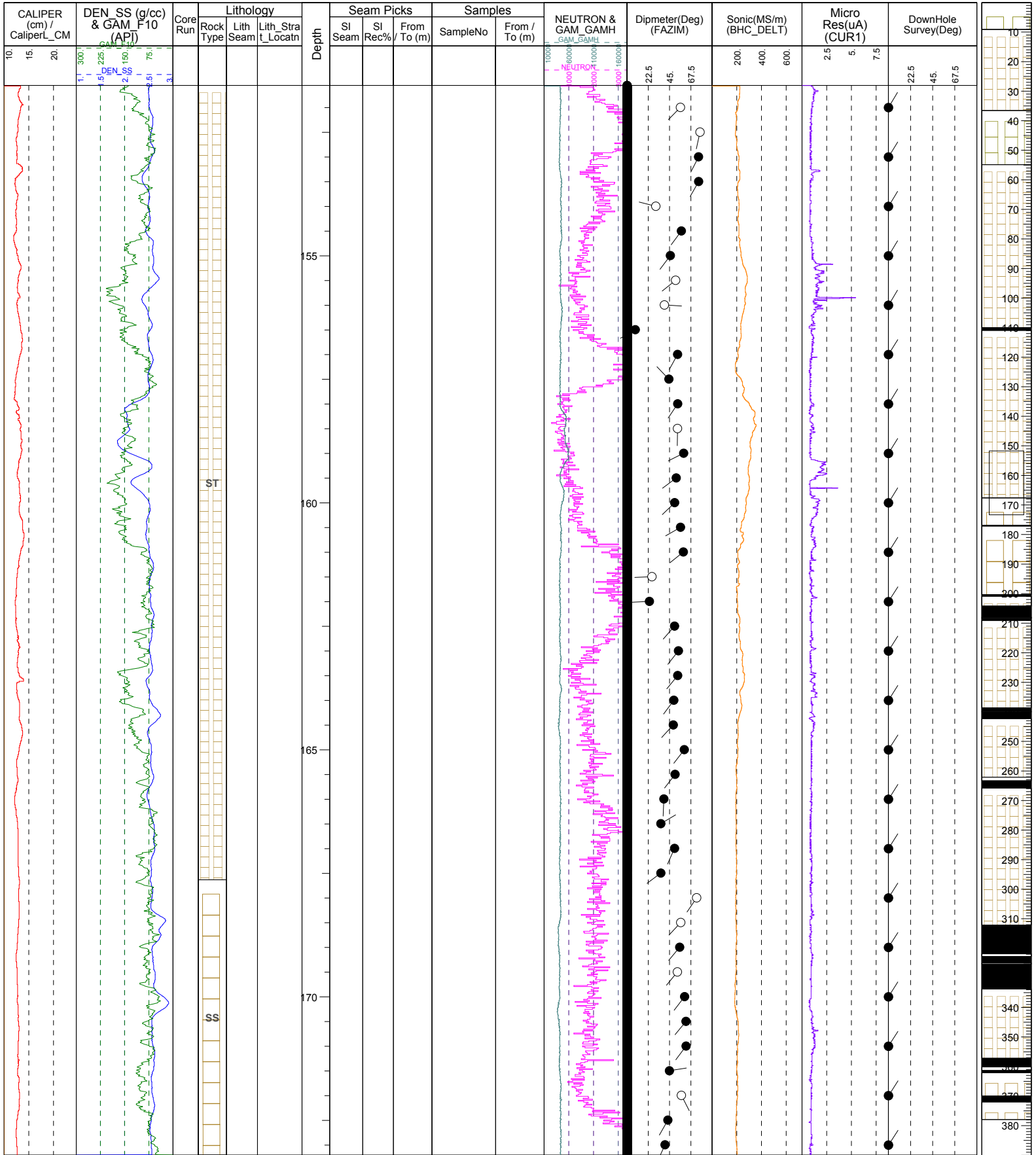


# 1:100 Geology & Geophysics QAQC RWR15001

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 16-Jan-15  
**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627901.235  
**Best Northing (Y):** 6084846.54  
**Best RL (Z):** 1508.22

**Geologist 1:** Nick Rizopoulos  
**Geologist 2:** Fahmi Aminuddin  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin



# 1:100 Geology & Geophysics QAQC RWR15001

Printed: 12/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 16-Jan-15

**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627901.235

**Best Northing (Y):** 6084846.54

**Best RL (Z):** 1508.22

**Azimuth (RePegged):** 35

**Dip (RePegged):** -65

**Casing Depth (m):** 12.19

**DEPTH (m):** 390.12

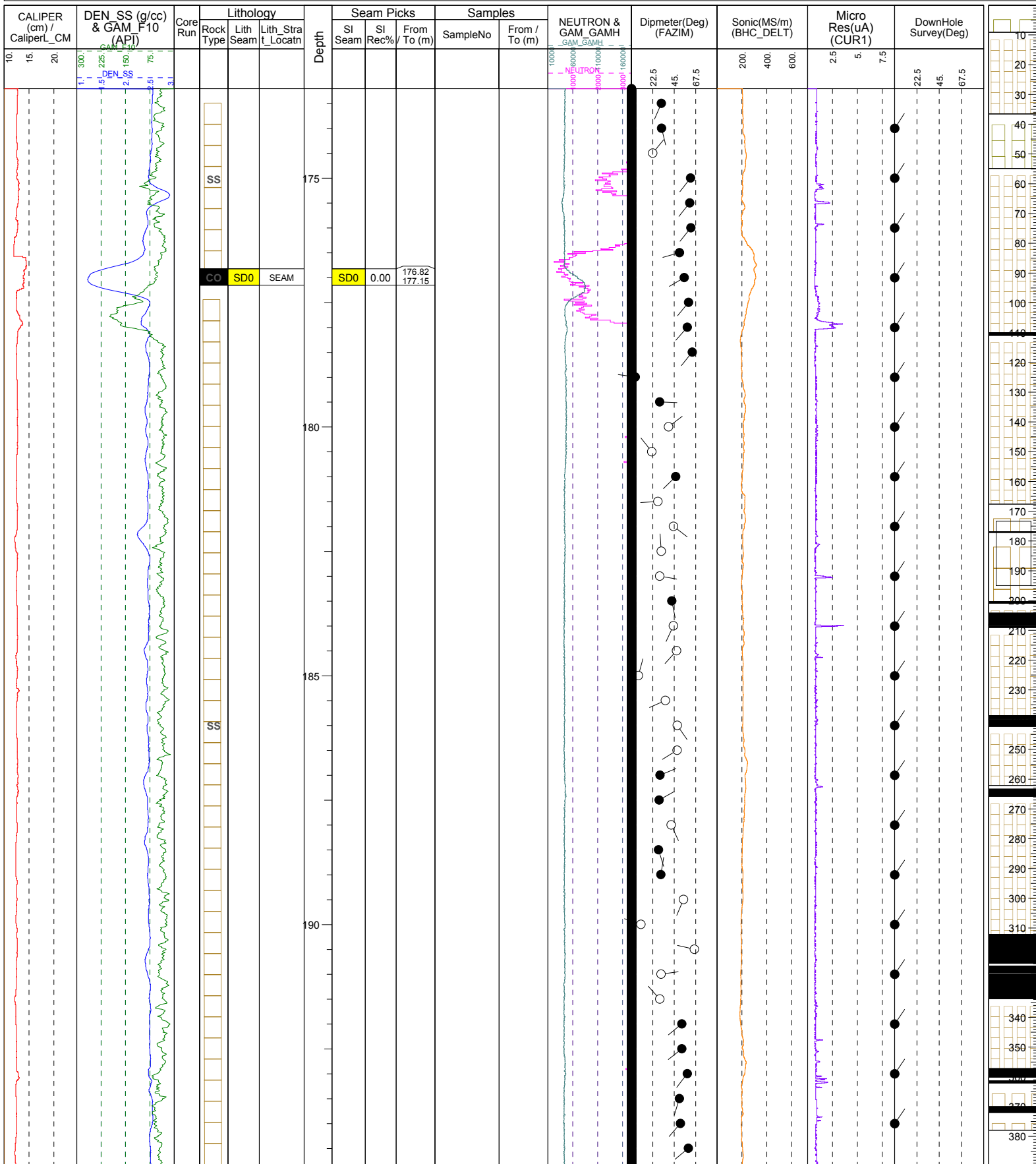
**Geologist 1:** Nick Rizopoulos

**Geologist 2:** Fahmi Aminuddin

**Geologist 3:** Ian MacLeod

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin

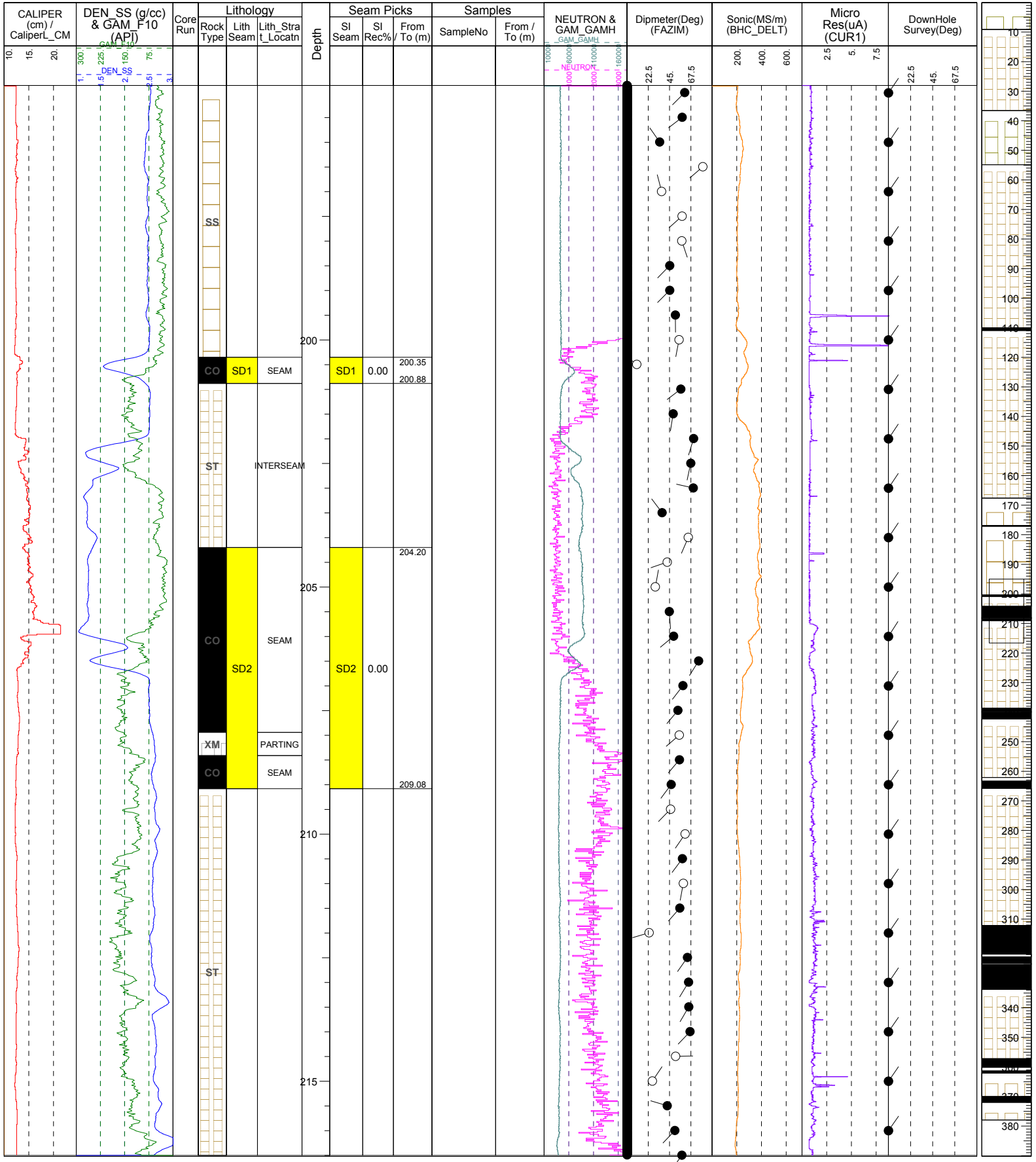


# 1:100 Geology & Geophysics QAQC RWR15001

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 16-Jan-15  
**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed **Azimuth (RePegged):** 35  
**Best Easting (X):** 627901.235 **Dip (RePegged):** -65  
**Best Northing (Y):** 6084846.54 **Casing Depth (m):** 12.19  
**Best RL (Z):** 1508.22 **DEPTH (m):** 390.12

**Geologist 1:** Nick Rizopoulos  
**Geologist 2:** Fahmi Aminuddin  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin



# 1:100 Geology & Geophysics QAQC RWR15001

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 16-Jan-15

**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627901.235

**Best Northing (Y):** 6084846.54

**Best RL (Z):** 1508.22

**Azimuth (RePegged):** 35

**Dip (RePegged):** -65

**Casing Depth (m):** 12.19

**DEPTH (m):** 390.12

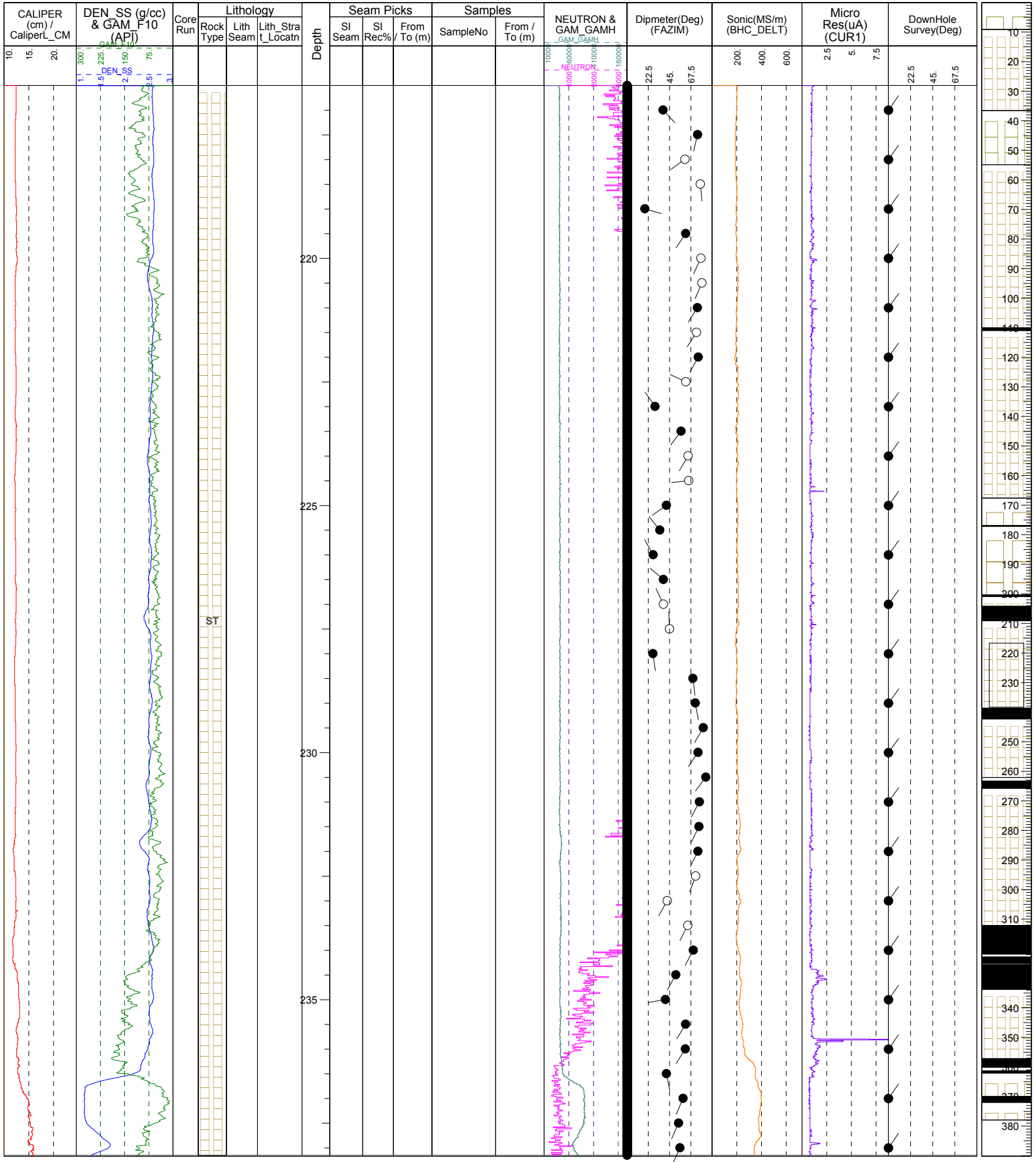
**Geologist 1:** Nick Rizopoulos

**Geologist 2:** Fahmi Aminuddin

**Geologist 3:** Ian MacLeod

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin









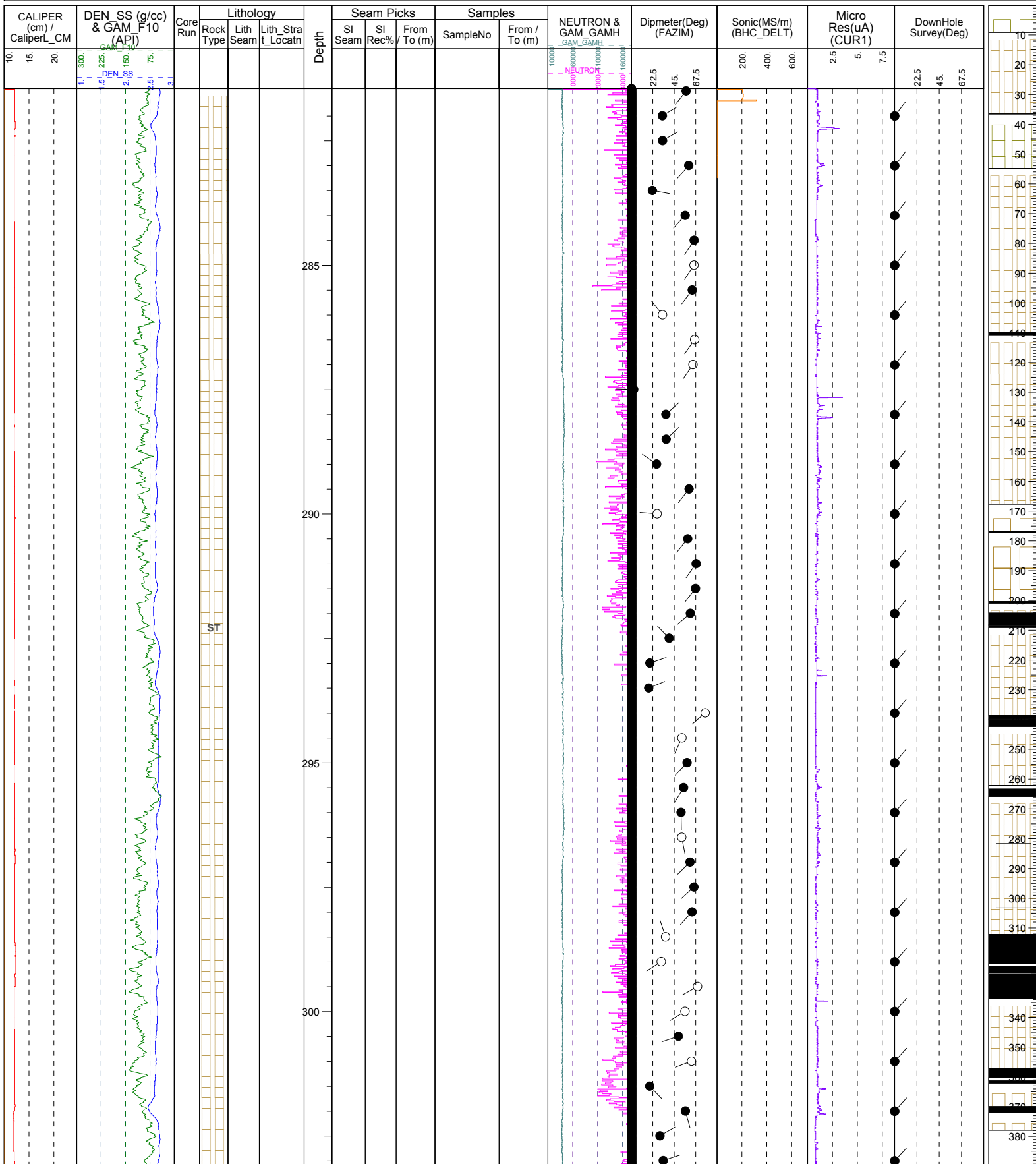
# 1:100 Geology & Geophysics QAQC RWR15001

Printed: 12/02/2015

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 16-Jan-15  
**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627901.235  
**Best Northing (Y):** 6084846.54  
**Best RL (Z):** 1508.22

**Geologist 1:** Nick Rizopoulos  
**Geologist 2:** Fahmi Aminuddin  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin

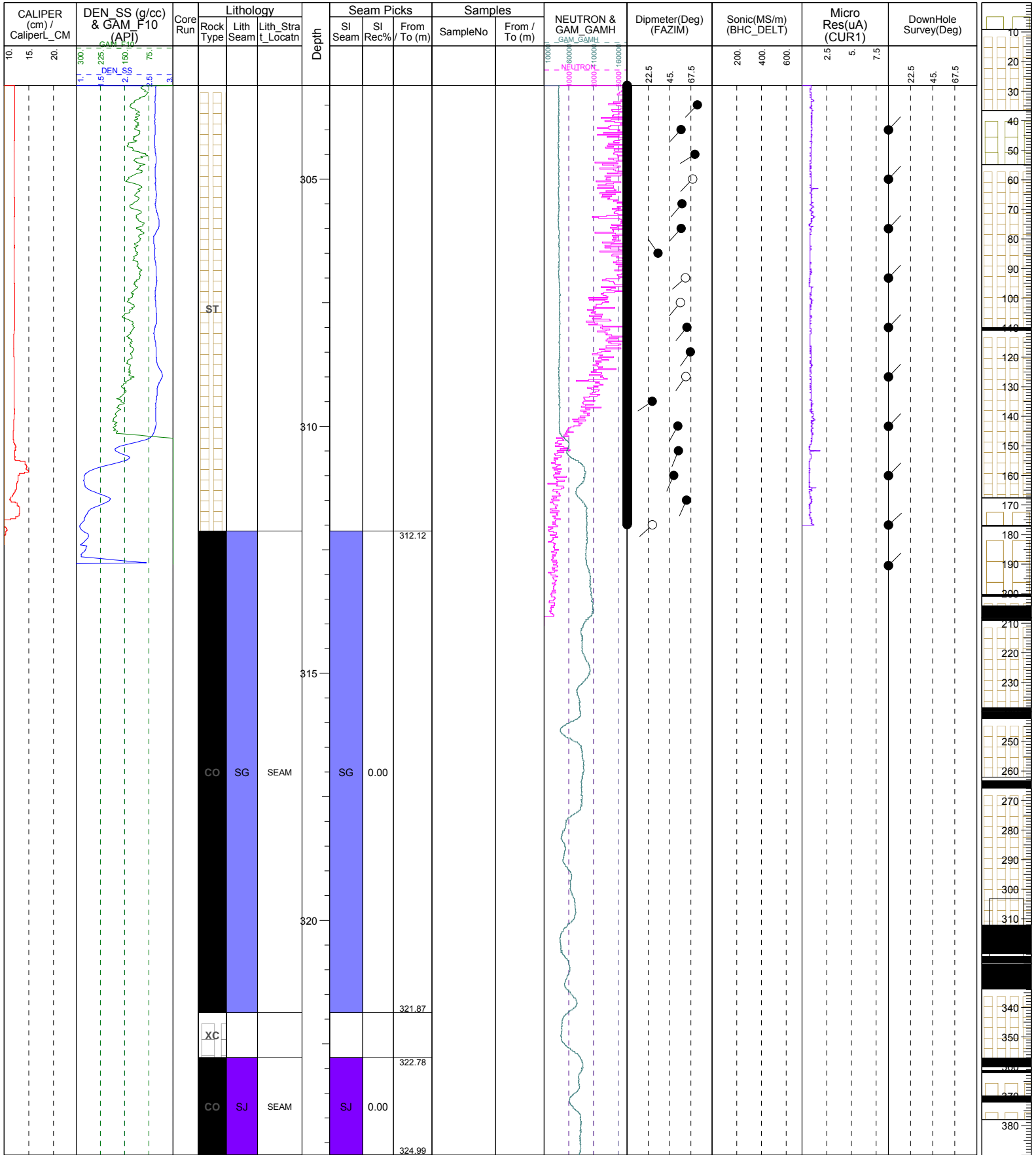


# 1:100 Geology & Geophysics QAQC RWR15001

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 16-Jan-15  
**ENDDATE:** 19-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627901.235  
**Best Northing (Y):** 6084846.54  
**Best RL (Z):** 1508.22

**Geologist 1:** Nick Rizopoulos  
**Geologist 2:** Fahmi Aminuddin  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin









# 1:100 Geology & Geophysics QAQC

## RWR15002

Printed: 14/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 20-Jan-15

**ENDDATE:** 21-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627902.447

**Best Northing (Y):** 6084844.179

**Best RL (Z):** 1508.43

**Azimuth (RePegged):** 215

**Dip (RePegged):** -70

**Casing Depth (m):** 18.29

**DEPTH (m):** 350.19

**Geologist 1:** Fahmi Aminuddin

**Geologist 2:** Nick Rizopoulos

**Geologist 3:** Ian MacLeod

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin





# 1:100 Geology & Geophysics QAQC RWR15002

Printed: 14/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 20-Jan-15

**ENDDATE:** 21-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627902.447

**Best Northing (Y):** 6084844.179

**Best RL (Z):** 1508.43

**Azimuth (RePegged):** 215

**Dip (RePegged):** -70

**Casing Depth (m):** 18.29

**DEPTH (m):** 350.19

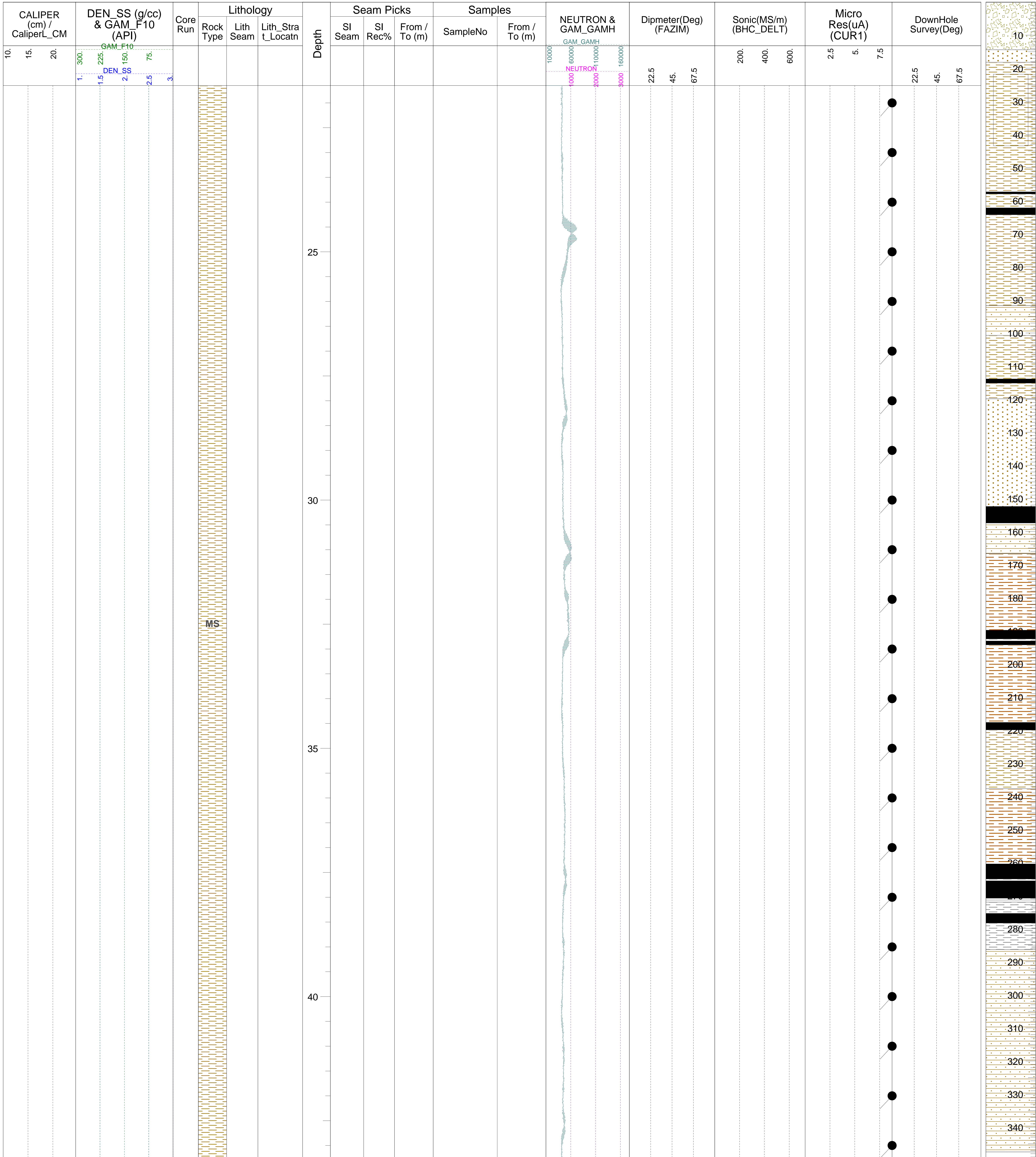
**Geologist 1:** Fahmi Aminuddin

**Geologist 2:** Nick Rizopoulos

**Geologist 3:** Ian MacLeod

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin







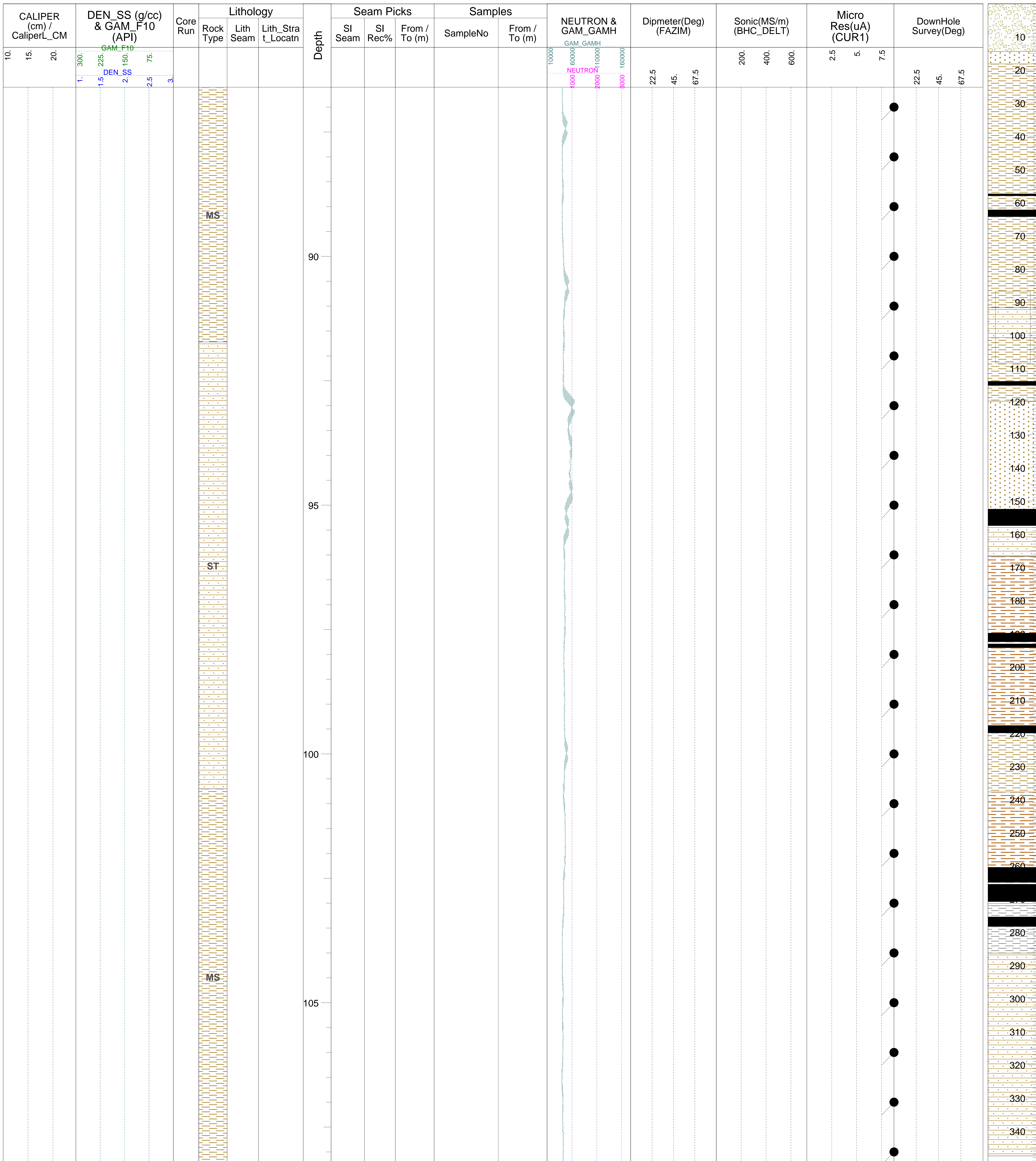
# 1:100 Geology & Geophysics QAQC RWR15002

PROJECTCODE: RMW  
 PROSPECT: RNW  
 Type of Hole: ROT  
 STARTDATE: 20-Jan-15  
 ENDDATE: 21-Jan-15

Best Coord. Set: NAD83\_Z10N\_Surveyed  
 Best Easting (X): 627902.447  
 Best Northing (Y): 6084844.179  
 Best RL (Z): 1508.43

Azimuth (RePegged): 215  
 Dip (RePegged): -70  
 Casing Depth (m): 18.29  
 DEPTH (m): 350.19

Geologist 1: Fahmi Aminuddin  
 Geologist 2: Nick Rizopoulos  
 Geologist 3: Ian MacLeod  
 Lithology Corrected By: Fahmi Aminuddin  
 QAQC Drillhole By: Fahmi Aminuddin









# 1:100 Geology & Geophysics QAQC

## RWR15002

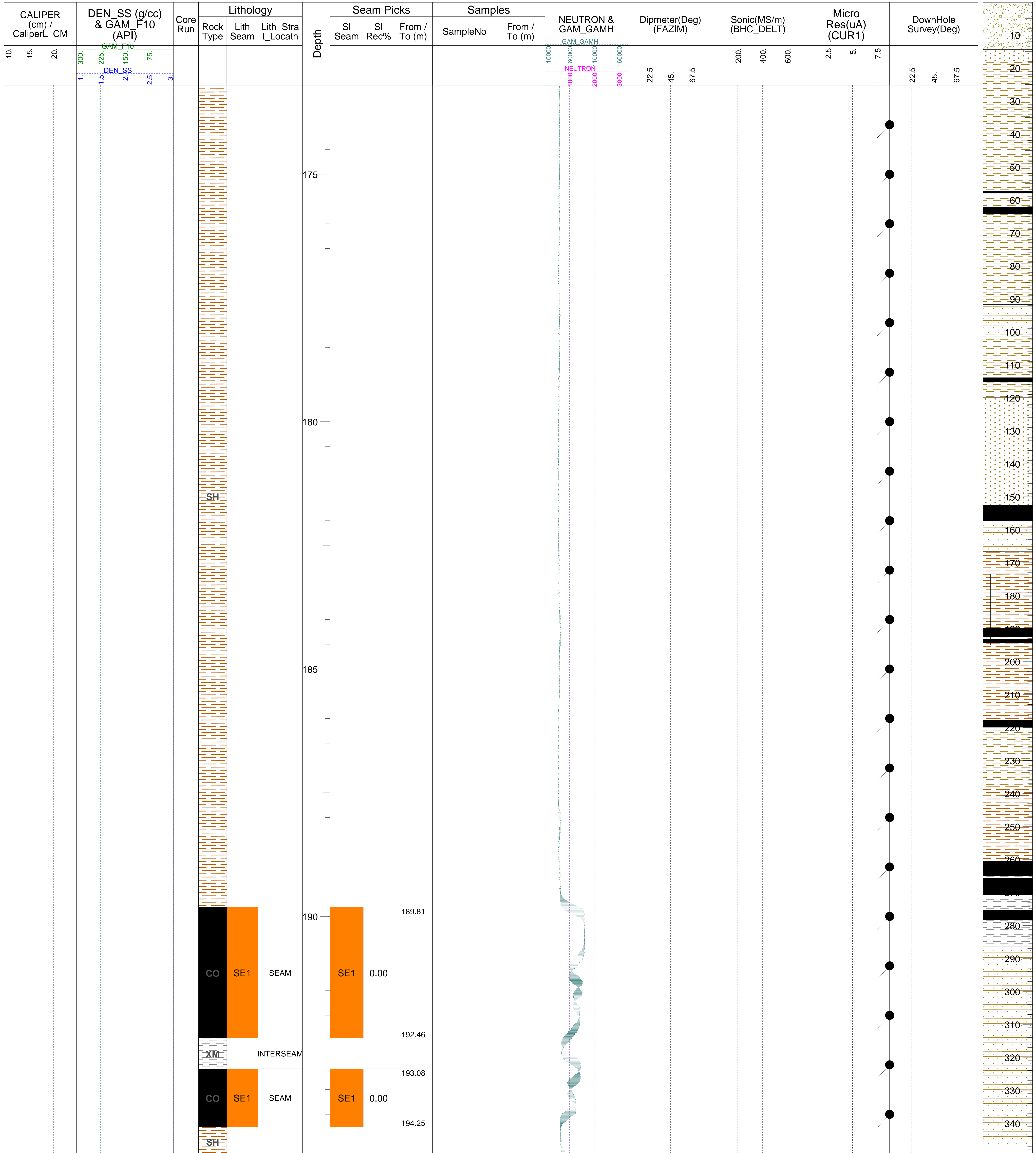
Printed: 14/02/2015

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 20-Jan-15  
**ENDDATE:** 21-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627902.447  
**Best Northing (Y):** 6084844.179  
**Best RL (Z):** 1508.43

**Azimuth (RePegged):** 215  
**Dip (RePegged):** -70  
**Casing Depth (m):** 18.29  
**DEPTH (m):** 350.19

**Geologist 1:** Fahmi Aminuddin  
**Geologist 2:** Nick Rizopoulos  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin





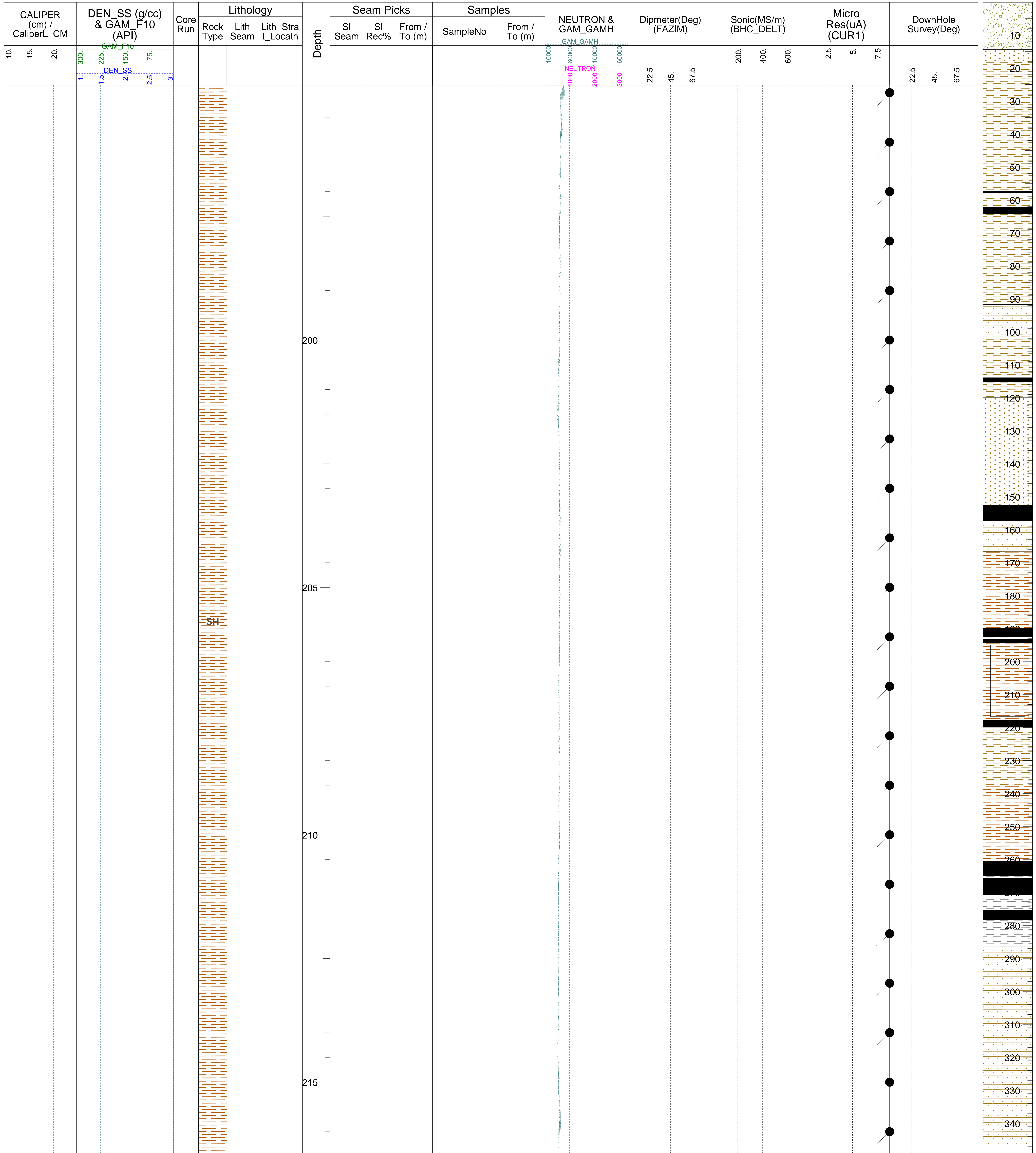
# 1:100 Geology & Geophysics QAQC RWR15002

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 20-Jan-15  
**ENDDATE:** 21-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627902.447  
**Best Northing (Y):** 6084844.179  
**Best RL (Z):** 1508.43

**Azimuth (RePegged):** 215  
**Dip (RePegged):** -70  
**Casing Depth (m):** 18.29  
**DEPTH (m):** 350.19

**Geologist 1:** Fahmi Aminuddin  
**Geologist 2:** Nick Rizopoulos  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin





# 1:100 Geology & Geophysics QAQC

## RWR15002

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 20-Jan-15  
**ENDDATE:** 21-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627902.447  
**Best Northing (Y):** 6084844.179  
**Best RL (Z):** 1508.43

**Azimuth (RePegged):** 215  
**Dip (RePegged):** -70  
**Casing Depth (m):** 18.29  
**DEPTH (m):** 350.19

**Geologist 1:** Fahmi Aminuddin  
**Geologist 2:** Nick Rizopoulos  
**Geologist 3:** Ian MacLeod  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin

CALIPER (cm) / CaliperL_CM			DEN_SS (g/cc) & GAM_F10 (API)				Core Run	Lithology			Depth	Seam Picks			Samples		NEUTRON & GAM_GAMH			Dipmeter(Deg) (FAZIM)			Sonic(MS/m) (BHC_DELT)			Micro Res(uA) (CUR1)			DownHole Survey(Deg)		
10.	15.	20.	1.	1.5	2.	2.5		3.	Rock Type	Lith Seam		Lith_Strat_Locaton	SI Seam	SI Rec%	From / To (m)	SampleNo	From / To (m)	10000	60000	100000	160000	22.5	45.	67.5	200.	400.	600.	2.5	5.	7.5	22.5
			<div style="display: flex; justify-content: space-between;"> <span>GAM_F10</span> <span>DEN_SS</span> </div>					SH			240						NEUTRON GAM_GAMH			22.5, 45., 67.5			200., 400., 600.			2.5, 5., 7.5			22.5, 45., 67.5		
											245																				
											250																				
											255																				

# 1:100 Geology & Geophysics QAQC RWR15002

Printed: 14/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 20-Jan-15

**ENDDATE:** 21-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627902.447

**Best Northing (Y):** 6084844.179

**Best RL (Z):** 1508.43

**Azimuth (RePegged):** 215

**Dip (RePegged):** -70

**Casing Depth (m):** 18.29

**DEPTH (m):** 350.19

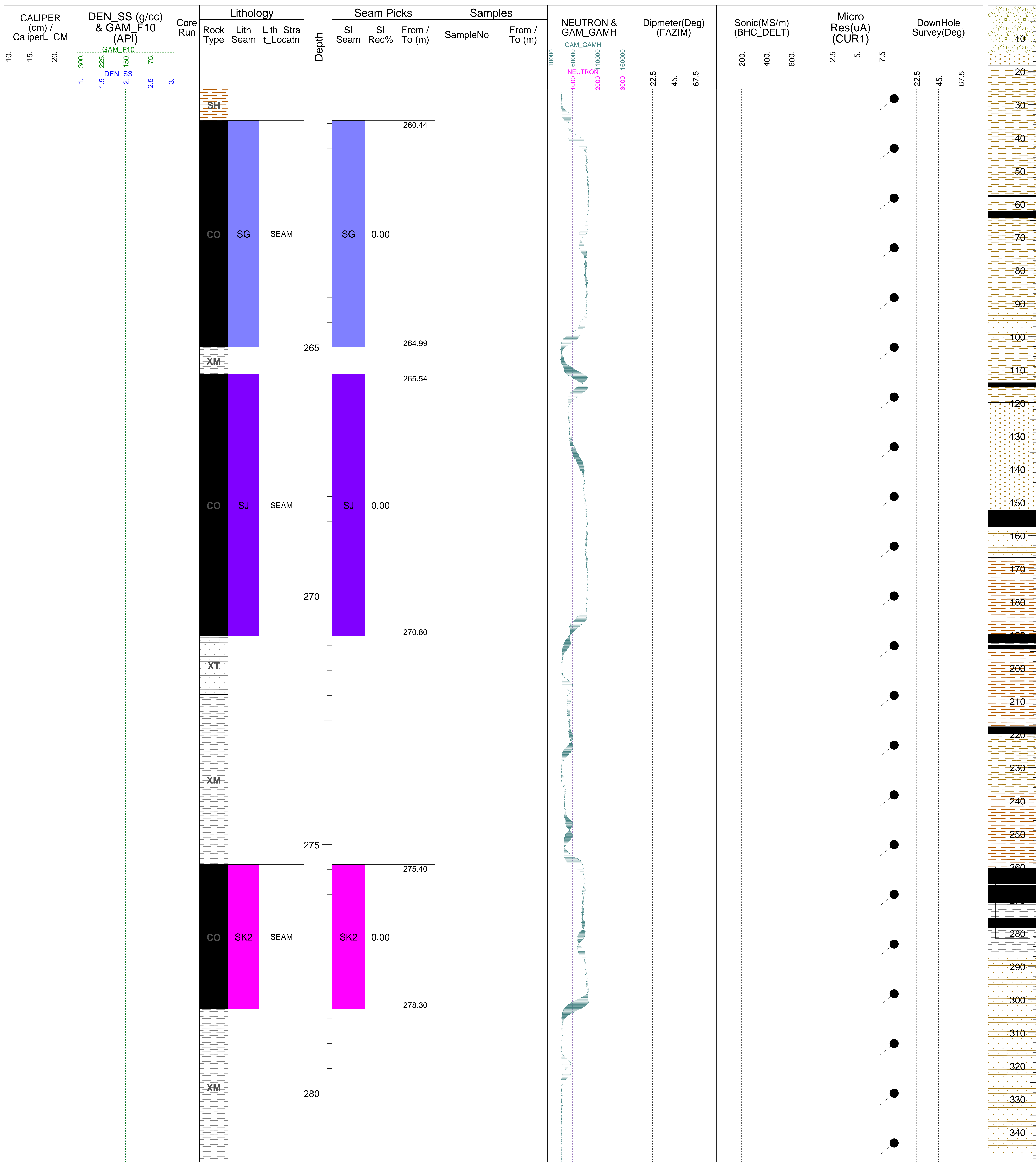
**Geologist 1:** Fahmi Aminuddin

**Geologist 2:** Nick Rizopoulos

**Geologist 3:** Ian MacLeod

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin







**1:100 Geology & Geophysics QAQC**  
**RWR15002**

Printed: 14/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 20-Jan-15

**ENDDATE:** 21-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627902.447

**Best Northing (Y):** 6084844.179

**Best RL (Z):** 1508.43

**Azimuth (RePegged):** 215

**Dip (RePegged):** -70

**Casing Depth (m):** 18.29

**DEPTH (m):** 350.19

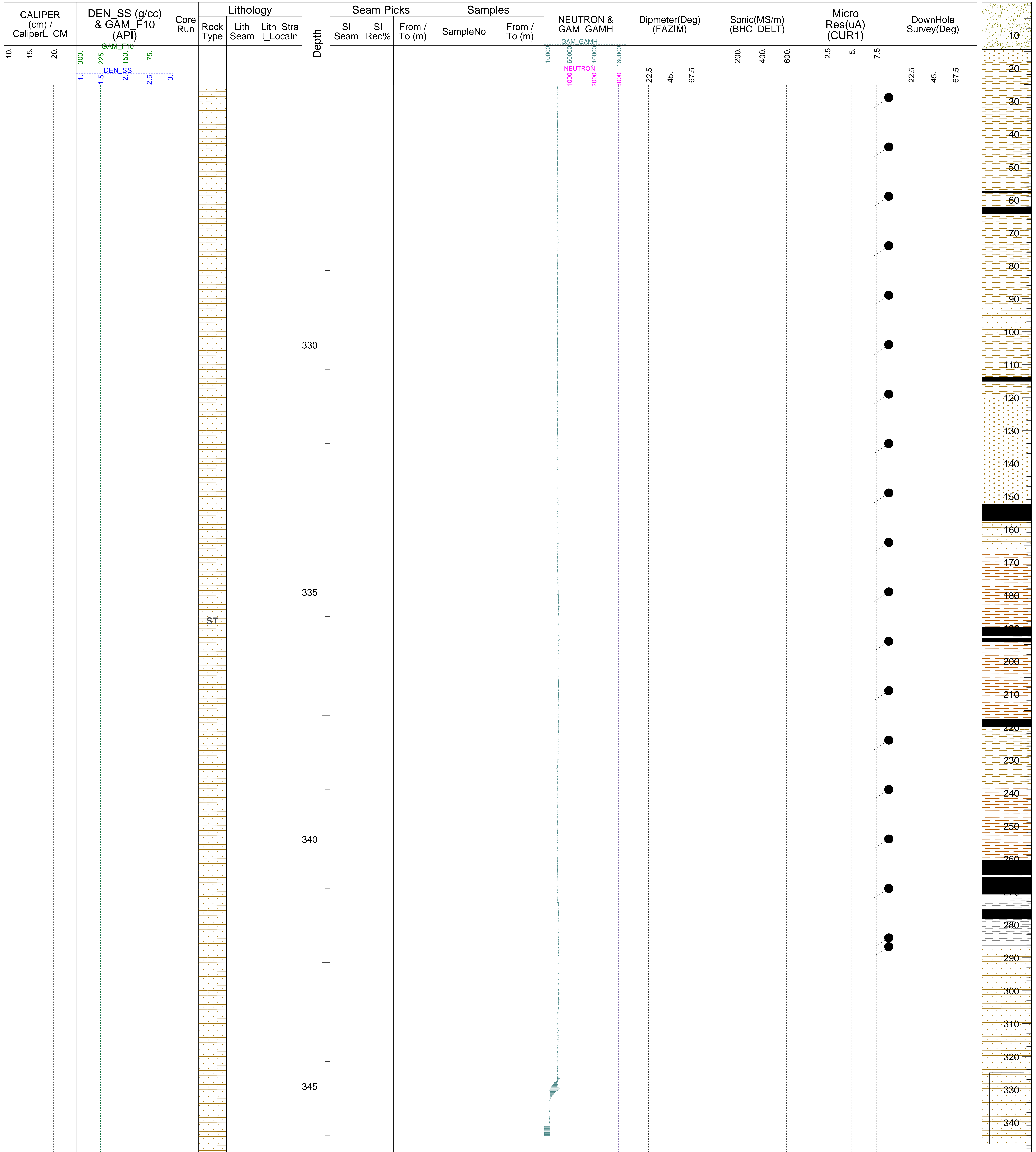
**Geologist 1:** Fahmi Aminuddin

**Geologist 2:** Nick Rizopoulos

**Geologist 3:** Ian MacLeod

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin











# 1:100 Geology & Geophysics QAQC

## RWR15003

Printed: 14/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 23-Jan-15

**ENDDATE:** 25-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627704.533

**Best Northing (Y):** 6085044.819

**Best RL (Z):** 1522.72

**Azimuth (RePegged):** 215

**Dip (RePegged):** -65

**Casing Depth (m):** 27.43

**DEPTH (m):** 399.27

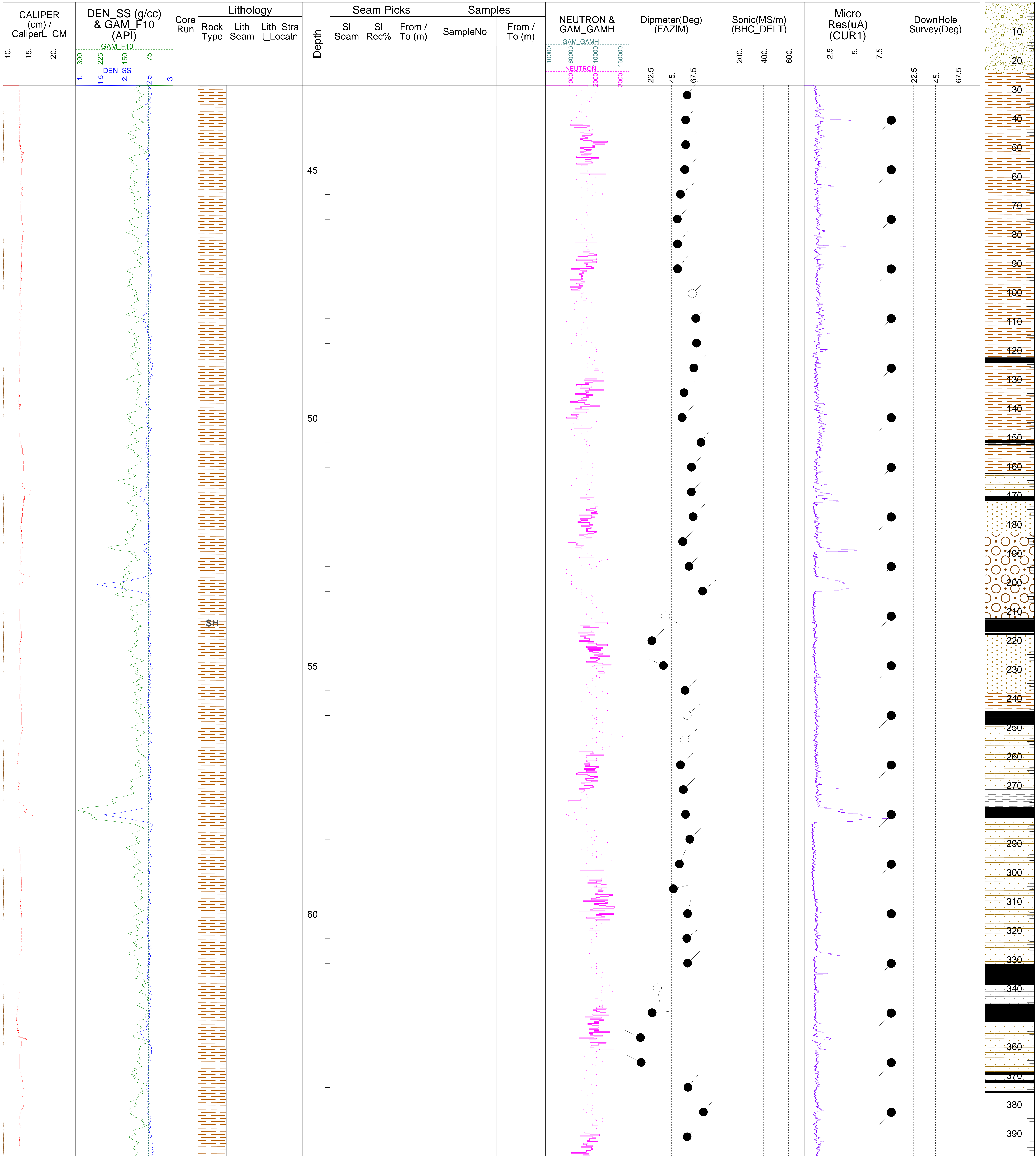
**Geologist 1:** Ian MacLeod

**Geologist 2:** Nick Rizopoulos

**Geologist 3:** Fahmi Aminuddin

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin



# 1:100 Geology & Geophysics QAQC RWR15003

Printed: 14/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 23-Jan-15

**ENDDATE:** 25-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627704.533

**Best Northing (Y):** 6085044.819

**Best RL (Z):** 1522.72

**Azimuth (RePegged):** 215

**Dip (RePegged):** -65

**Casing Depth (m):** 27.43

**DEPTH (m):** 399.27

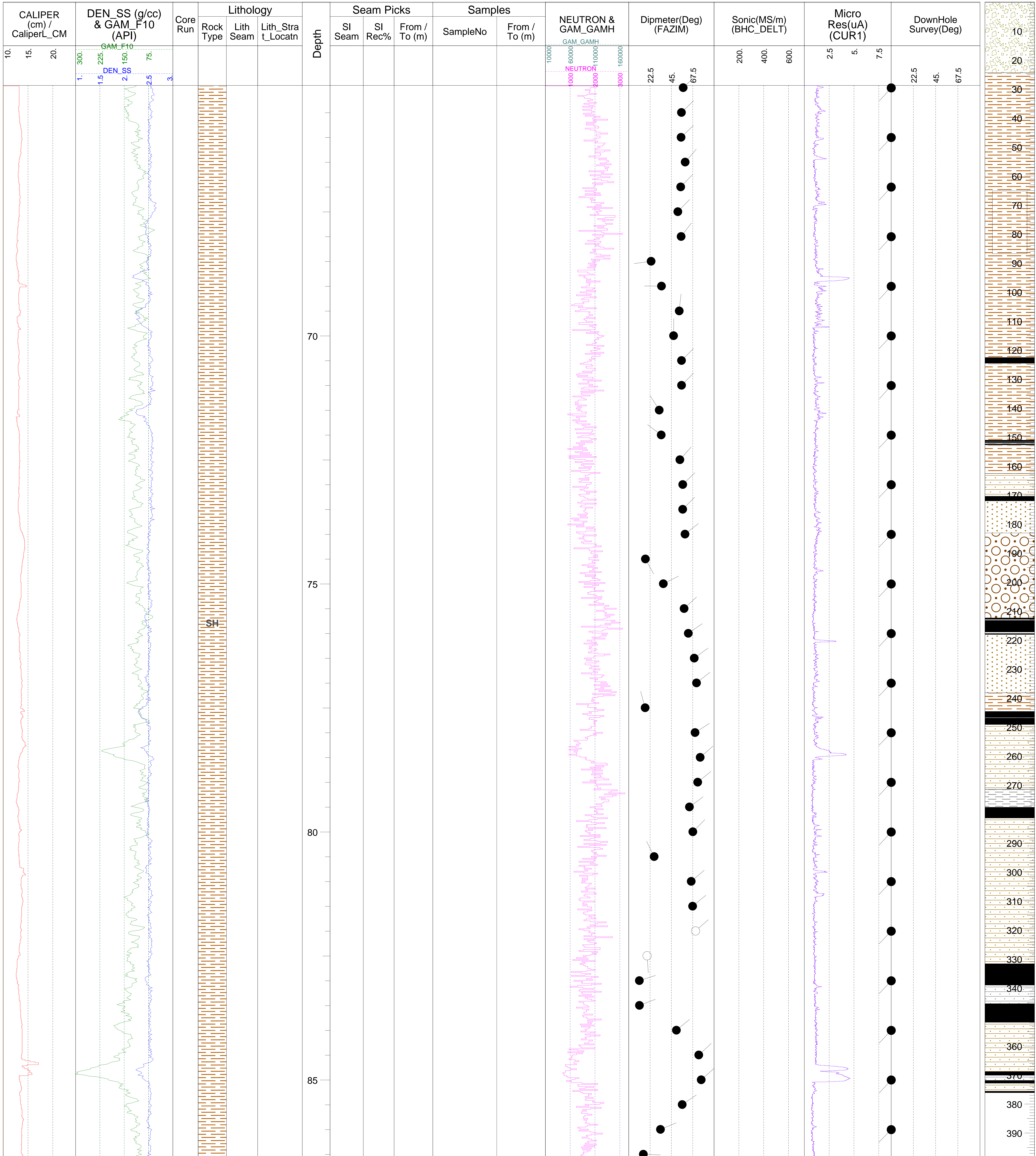
**Geologist 1:** Ian MacLeod

**Geologist 2:** Nick Rizopoulos

**Geologist 3:** Fahmi Aminuddin

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin



# 1:100 Geology & Geophysics QAQC

## RWR15003

Printed: 14/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 23-Jan-15

**ENDDATE:** 25-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627704.533

**Best Northing (Y):** 6085044.819

**Best RL (Z):** 1522.72

**Azimuth (RePegged):** 215

**Dip (RePegged):** -65

**Casing Depth (m):** 27.43

**DEPTH (m):** 399.27

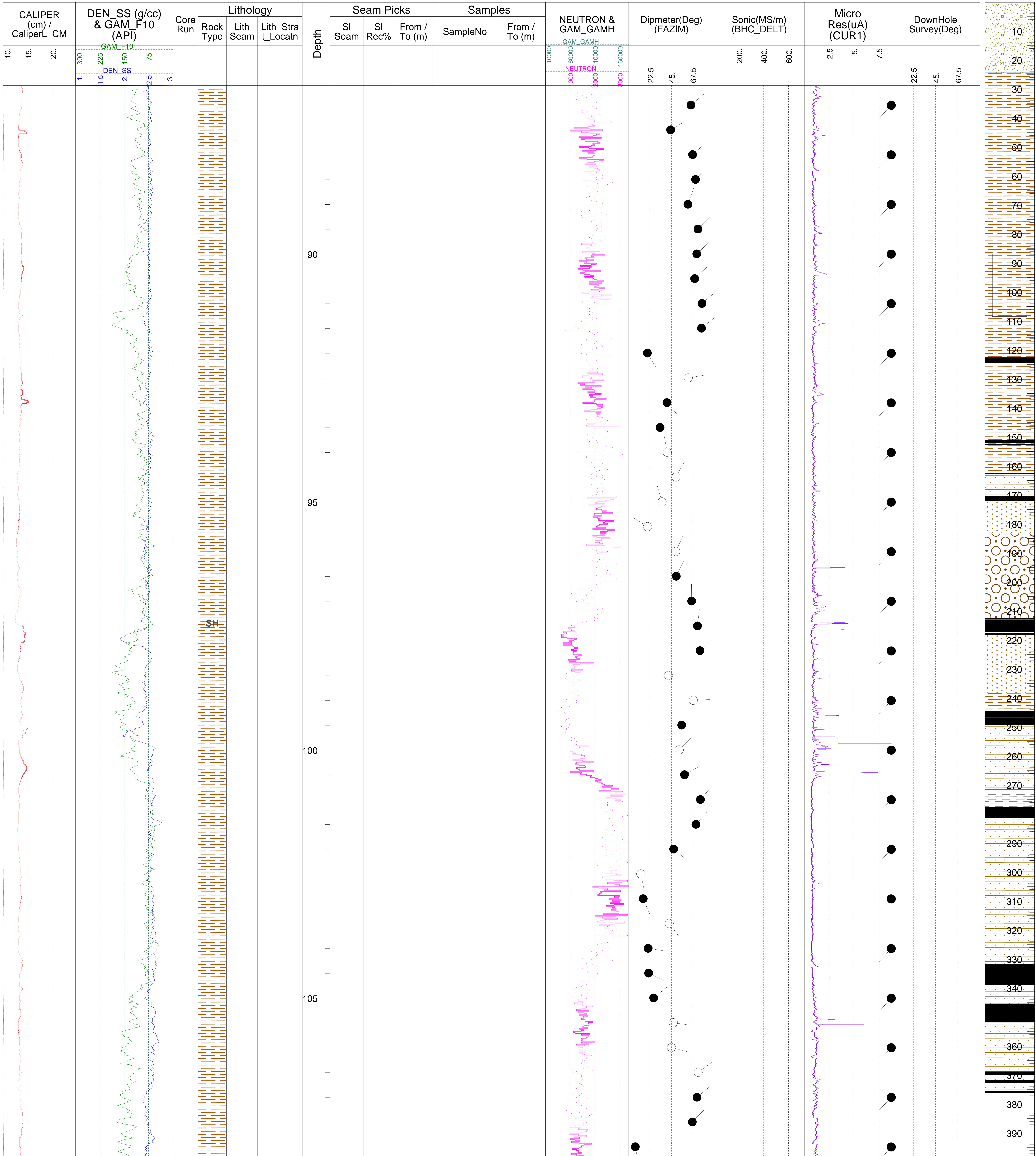
**Geologist 1:** Ian MacLeod

**Geologist 2:** Nick Rizopoulos

**Geologist 3:** Fahmi Aminuddin

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin





# 1:100 Geology & Geophysics QAQC

## RWR15003

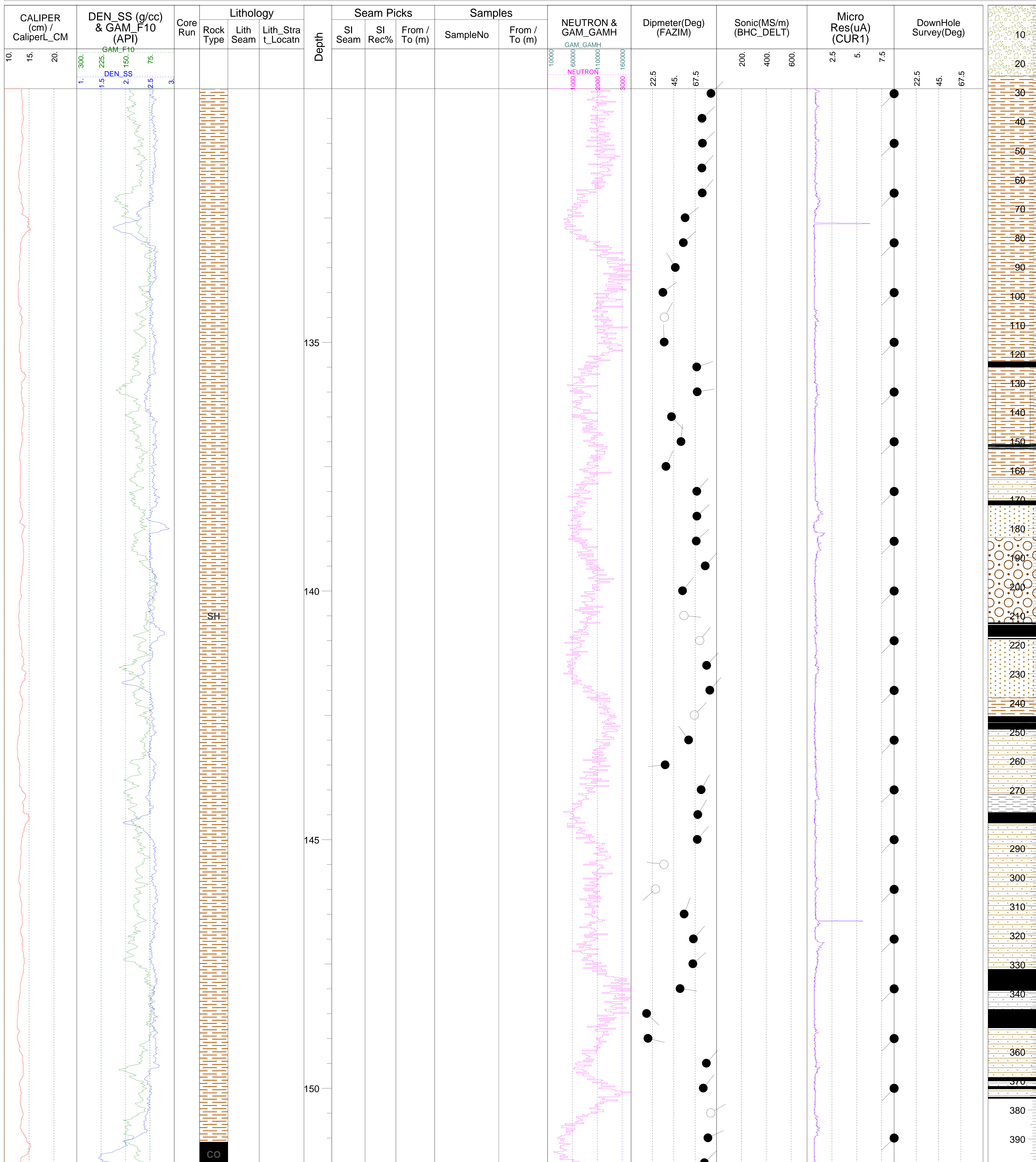
Printed: 14/02/2015

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 23-Jan-15  
**ENDDATE:** 25-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627704.533  
**Best Northing (Y):** 6085044.819  
**Best RL (Z):** 1522.72

**Azimuth (RePegged):** 215  
**Dip (RePegged):** -65  
**Casing Depth (m):** 27.43  
**DEPTH (m):** 399.27

**Geologist 1:** Ian MacLeod  
**Geologist 2:** Nick Rizopoulos  
**Geologist 3:** Fahmi Aminuddin  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin



# 1:100 Geology & Geophysics QAQC

## RWR15003

Printed: 14/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 23-Jan-15

**ENDDATE:** 25-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627704.533

**Best Northing (Y):** 6085044.819

**Best RL (Z):** 1522.72

**Azimuth (RePegged):** 215

**Dip (RePegged):** -65

**Casing Depth (m):** 27.43

**DEPTH (m):** 399.27

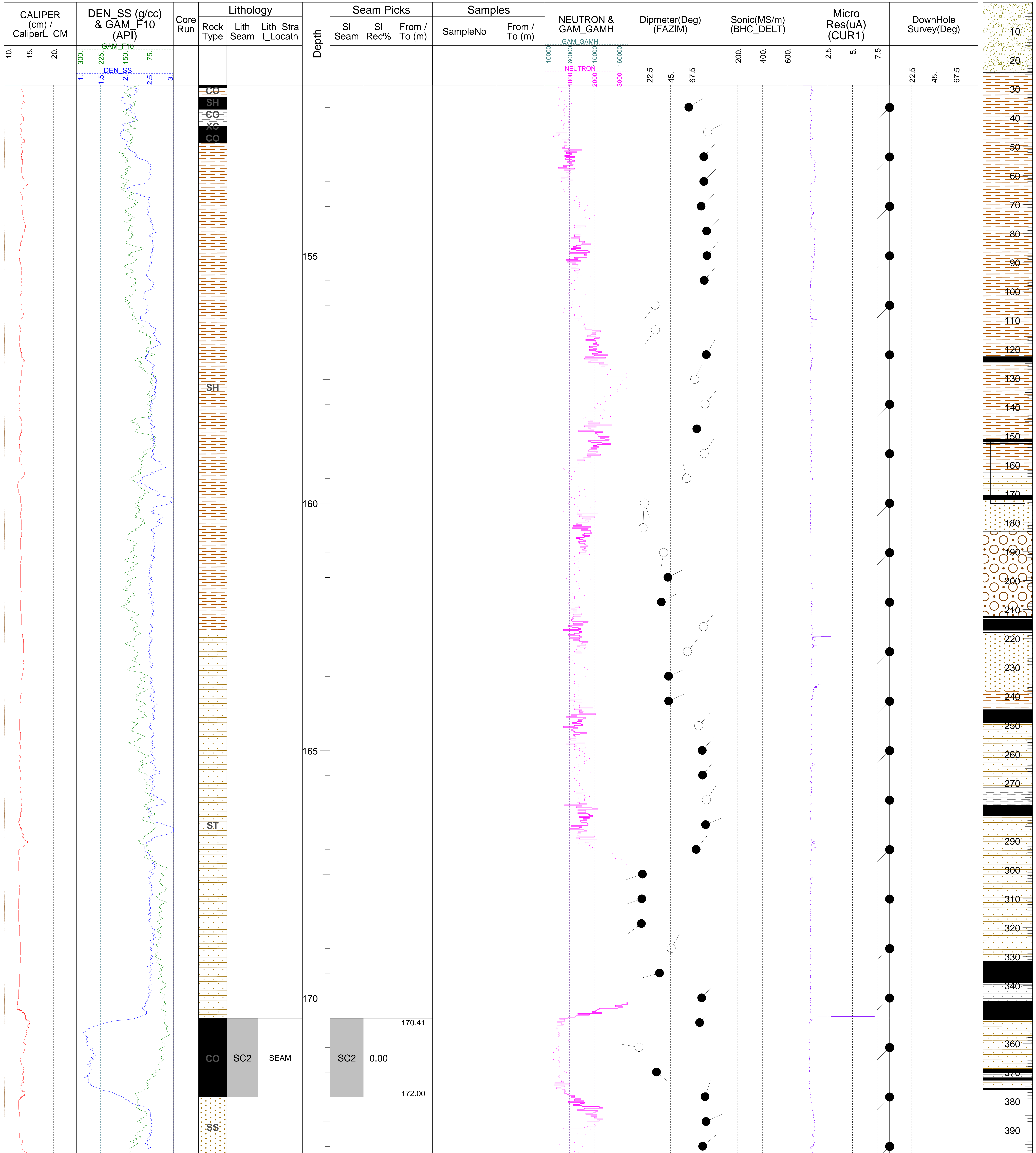
**Geologist 1:** Ian MacLeod

**Geologist 2:** Nick Rizopoulos

**Geologist 3:** Fahmi Aminuddin

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin







# 1:100 Geology & Geophysics QAQC

## RWR15003

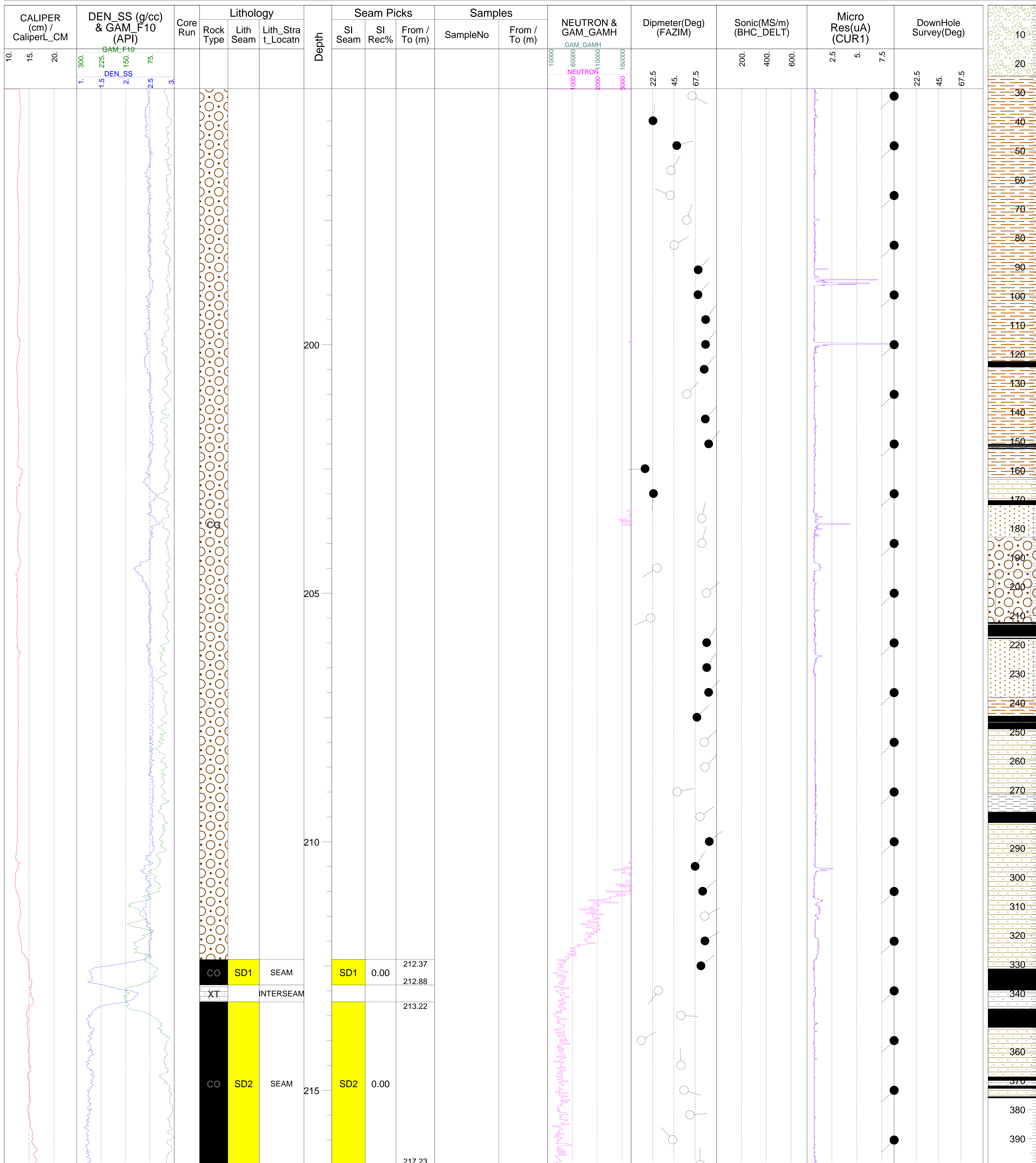
Printed: 14/02/2015

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 23-Jan-15  
**ENDDATE:** 25-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627704.533  
**Best Northing (Y):** 6085044.819  
**Best RL (Z):** 1522.72

**Azimuth (RePegged):** 215  
**Dip (RePegged):** -65  
**Casing Depth (m):** 27.43  
**DEPTH (m):** 399.27

**Geologist 1:** Ian MacLeod  
**Geologist 2:** Nick Rizopoulos  
**Geologist 3:** Fahmi Aminuddin  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin





# 1:100 Geology & Geophysics QAQC

## RWR15003

Printed: 14/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 23-Jan-15

**ENDDATE:** 25-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627704.533

**Best Northing (Y):** 6085044.819

**Best RL (Z):** 1522.72

**Azimuth (RePegged):** 215

**Dip (RePegged):** -65

**Casing Depth (m):** 27.43

**DEPTH (m):** 399.27

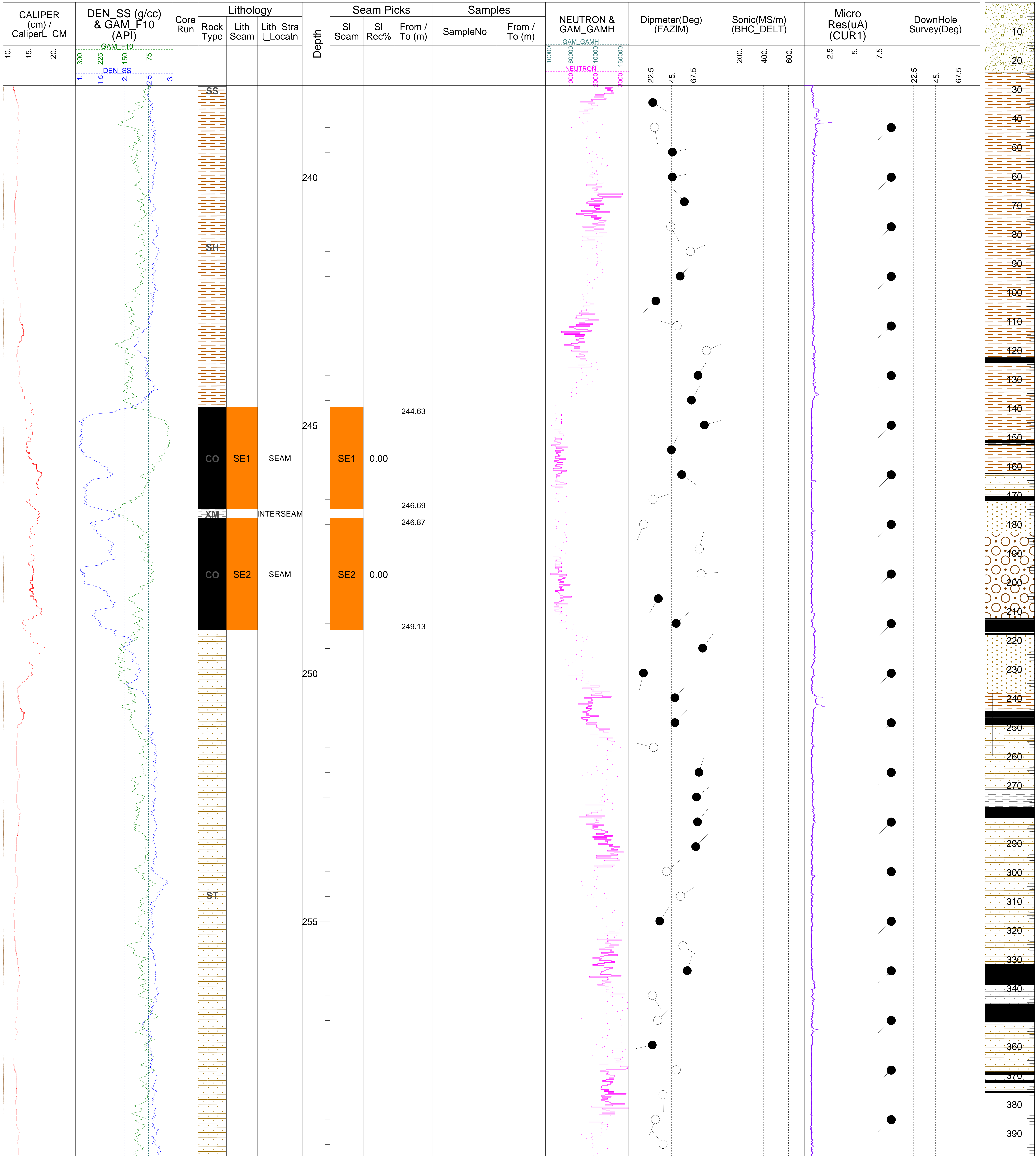
**Geologist 1:** Ian MacLeod

**Geologist 2:** Nick Rizopoulos

**Geologist 3:** Fahmi Aminuddin

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin



# 1:100 Geology & Geophysics QAQC

## RWR15003

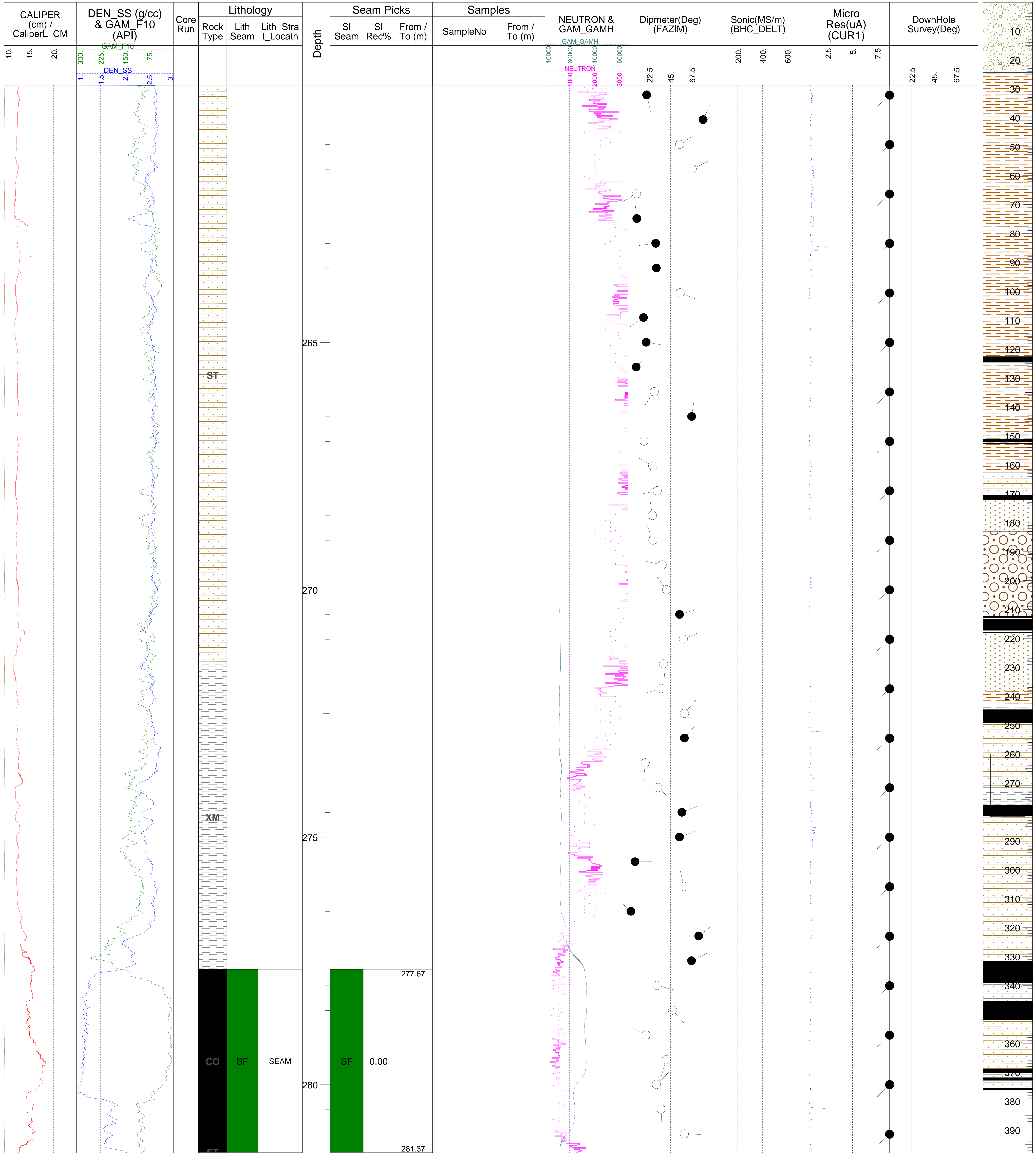
Printed: 14/02/2015

**PROJECTCODE:** RMW  
**PROSPECT:** RNW  
**Type of Hole:** ROT  
**STARTDATE:** 23-Jan-15  
**ENDDATE:** 25-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed  
**Best Easting (X):** 627704.533  
**Best Northing (Y):** 6085044.819  
**Best RL (Z):** 1522.72

**Azimuth (RePegged):** 215  
**Dip (RePegged):** -65  
**Casing Depth (m):** 27.43  
**DEPTH (m):** 399.27

**Geologist 1:** Ian MacLeod  
**Geologist 2:** Nick Rizopoulos  
**Geologist 3:** Fahmi Aminuddin  
**Lithology Corrected By:** Fahmi Aminuddin  
**QAQC Drillhole By:** Fahmi Aminuddin







# 1:100 Geology & Geophysics QAQC

## RWR15003

Printed: 14/02/2015

**PROJECTCODE:** RMW

**PROSPECT:** RNW

**Type of Hole:** ROT

**STARTDATE:** 23-Jan-15

**ENDDATE:** 25-Jan-15

**Best Coord. Set:** NAD83\_Z10N\_Surveyed

**Best Easting (X):** 627704.533

**Best Northing (Y):** 6085044.819

**Best RL (Z):** 1522.72

**Azimuth (RePegged):** 215

**Dip (RePegged):** -65

**Casing Depth (m):** 27.43

**DEPTH (m):** 399.27

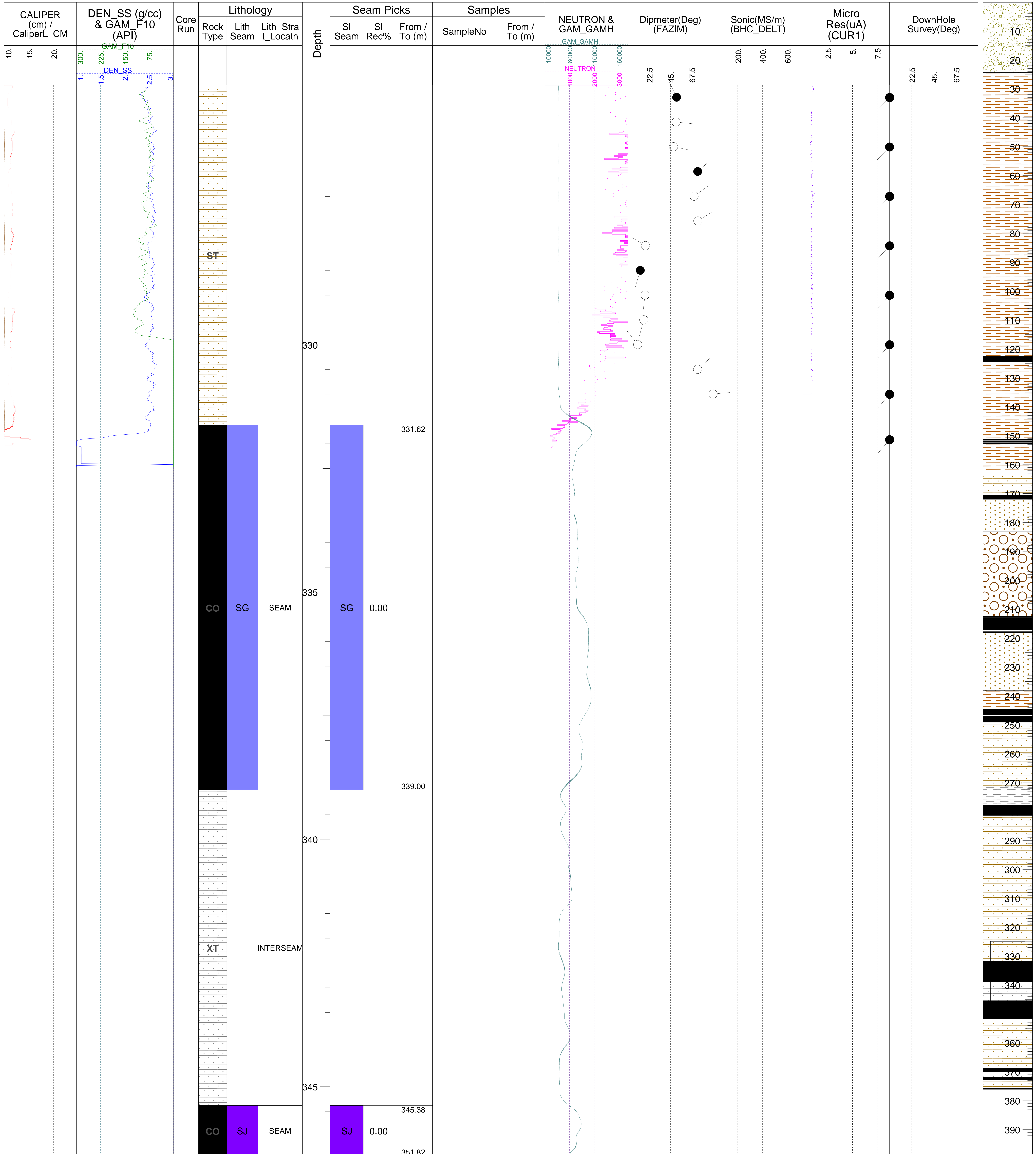
**Geologist 1:** Ian MacLeod

**Geologist 2:** Nick Rizopoulos

**Geologist 3:** Fahmi Aminuddin

**Lithology Corrected By:** Fahmi Aminuddin

**QAQC Drillhole By:** Fahmi Aminuddin









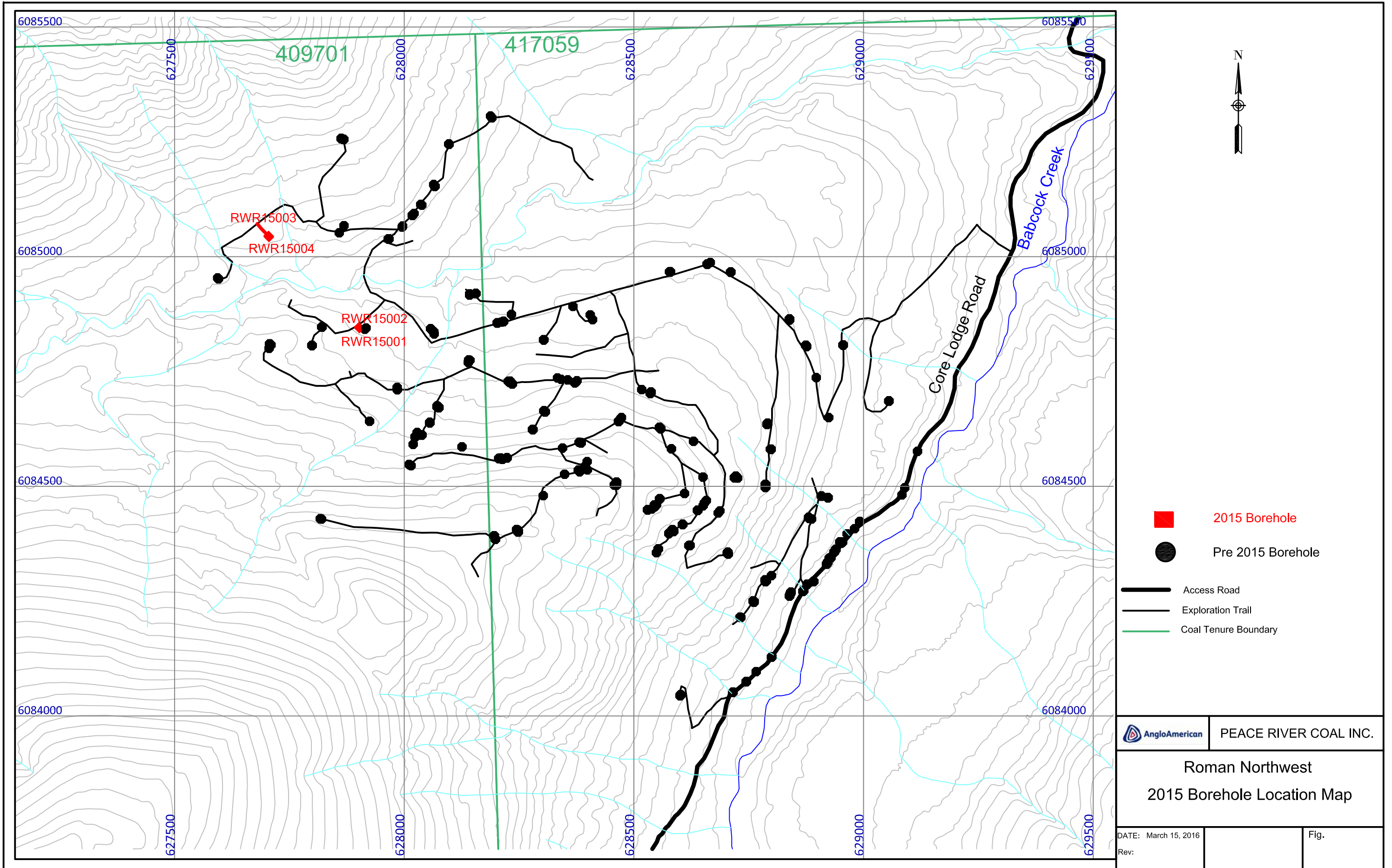


## Appendix 3

---

### Maps Attachment 2 – 4, 6 (Attached as separate folder on DVD)

- 2015 Borehole Location Map.pdf
- 2015 Reclamation Map.pdf

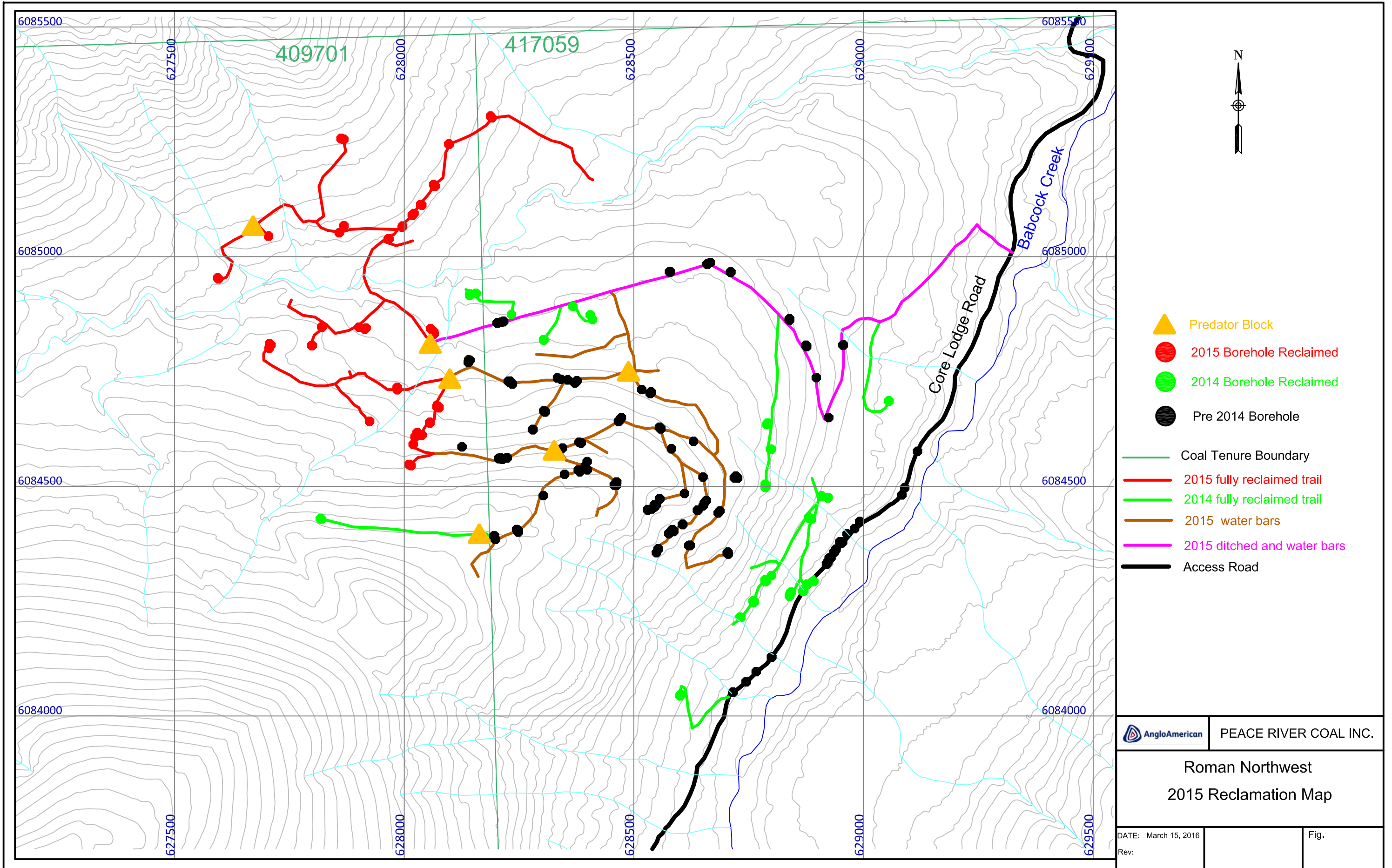


- 2015 Borehole
- Pre 2015 Borehole
- Access Road
- Exploration Trail
- Coal Tenure Boundary


PEACE RIVER COAL INC.

**Roman Northwest**  
**2015 Borehole Location Map**

DATE: March 15, 2016	Fig.
Rev:	




PEACE RIVER COAL INC.

**Roman Northwest**  
**2015 Reclamation Map**

DATE: March 15, 2016	Fig.
Rev:	