



Well Completion Report

Cam 164

PL 277

Document No: PRJ-WCR-CAM-164-01

UWI No: 10000746053

Issued Date: 15/08/2018

Originator:

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1 WELL DATA CARD



Well Name	Cam 164	Rig	Saxon 165
Well Type	CSG Development	Ground Level	29G52m
Licence	PL 277	Rotary Table	AGJ1.12m
Joint Venture	BG International Toyota Tsusho CBM Queensland	Spud Date	00:30 hours on the 01-12-2012
Latitude	26° 12' 06.6807" S	Final TD (m MDRT)	779.00 (Driller); 780.20 (Logger)
Longitude	149° 44' 44.9036" E	TD Date	18:00 hours on the 03-12-2012
Easting	774 387.119 mE	Rig Release	17:30 hours on the 06-12-2012
Northing	7 099 057.139 mN	Status at Rig	Suspended
Map Zone / Sheet	55 (GDA-94) / Wandoan (8845)	Release	

Well Summary

Cam 164 is a coal seam gas development well operated by QGC Pty Limited (QGC), in Petroleum Lease (PL) 277 (Refer Figure 1). The aim of the well was to target, evaluate and produce coal seam gas out of the Walloon Subgroup Coal Measures. The well was drilled to 779.00mMDRT and encountered coals in the Walloon Subgroup. One wireline run and under-reaming were performed post drilling. The well was cased and suspended.

Hole and Casing Design (Drillers Depths) - Refer to Figure.2 **Drilling Fluid**

Type	Hole Size	Depth (m MDRT)	Casing Size	Shoe (m MDRT)	Shoe (m TVDRT)	Hole Size	Mud Type
Conductor	17"	10.34	14"	10.00	10.00	17"	Not recorded
Surface	12 1/4"	85.00	9 5/8"	82.00	82.00	12 1/4"	Water and KCL
Production	8 1/2"	779.00	7"	739.00	739.00	8 1/2"	Water and KCL

Stratigraphy - Formation Tops (Loggers Depths) **Formation Evaluation**

Formation	Depth			Run	Measurement	Depth Interval	
	m MDRT	m TVDRT	m TVDGL			From (m MDRT)	To (m MDRT)
Norwood Mudstone	4.60	4.60	0.00	1	GR-RHOB-ILD2-DT	780.20	10.00
Springbok Sandstone	152.58	152.58	147.98				
Upper Juandah Coal Measures	237.82	237.82	233.22				
Lower Juandah Coal Measures	366.78	366.78	362.18				
Tangalooma Sandstone	547.37	547.37	542.77				
Taroom Coal Measures	629.89	629.89	625.29				
Eurombah Formation	745.16	745.16	740.56				

Mud Logging **Formation Testing**

Cuttings were monitored and sampled at 10.00m intervals from 80.00mRT to TD. Samples were not retained.

None

Coring **Under-Reaming**

None









A total of 22.40m of the Juandah and Taroom Coal Measures were under-reamed with a 16" under-reamer.

Completion

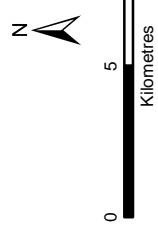
Cased with 7" casing from surface to the top of the ECP at 248.99m MDRT, and 7" casing and pre-perforated casing from the base of ECP at 250.58m MDRT to the casing shoe at 739.00m MDRT.

Other Information / Remarks

Mud Map of Selected Cam Wells from Wandoan

-  Well location
-  Route to Town
-  Railway
-  Principal Road
-  Secondary Road
-  Minor Road
-  Track
-  Built Up Area

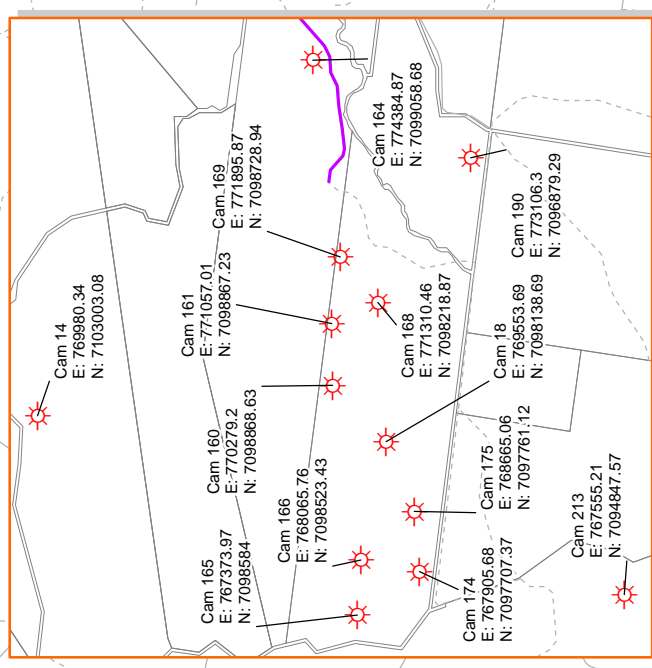
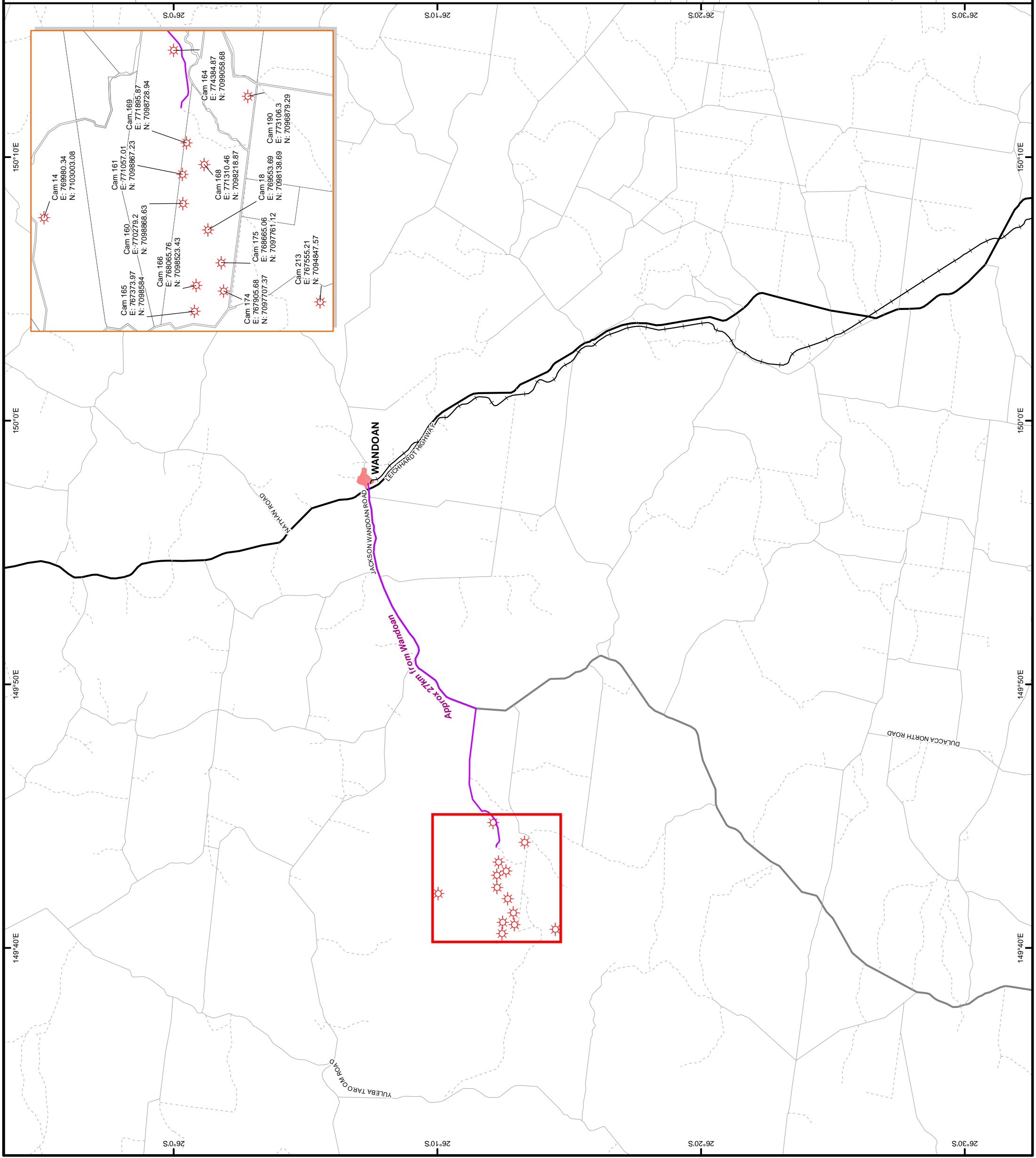
DATE: 24/07/2012 MAP NO: M_18463_01
 CREATED BY: WP REV NO: A
 CHECKED BY: MAP TYPE: v4 Other
 PLAN REF:



Map Projection: GDA 94 SCALE: 1:250,000 (A3)

DATA SOURCE: Tenements - DME

Note: Every effort has been made to ensure this information is spatially accurate. The location of this information should not be relied on as the exact field location.
*Based on or contains data provided by the State of Queensland (Department of Environment and Resource Management) 2011. In consideration of the State permitting use of this data you acknowledge and agree that the State gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws.



3. WELL SCHEMATIC AND SUMMARY

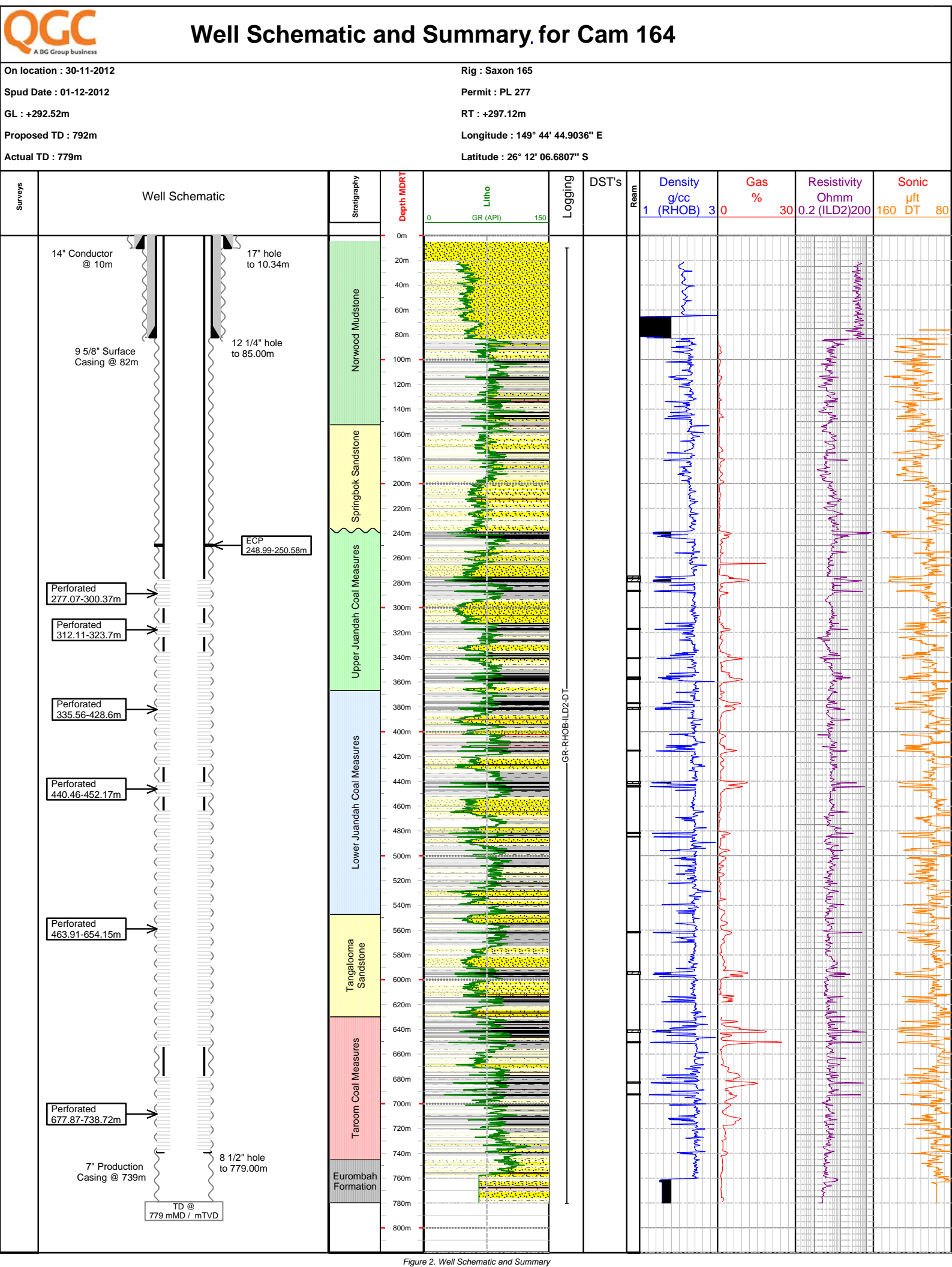


Figure 2. Well Schematic and Summary

3 DRILLING DATA

3.1 Drill Bit Record

Bit Number	Size	Make	Type	Serial No.	In (m MDRT)	Out (m MDRT)	Meters Drilled	Drilled Hours	ROP (m/hr)	Bit Dull Grading
1	12 1/4"	Not recorded			10.34	85.00	74.66	3.00	24.90	Not recorded
2	8 1/2"	Smith	MS0112	MS0112	85.00	264.00	179.00	7.00	25.60	4-4-BT-A-X-2-BU-PR
3	8 1/2"	Smith	ER25816	ER25816	264.00	779.00	515.00	15.75	32.70	3-2-BT-G-X-I-NO-TD

3.2 Drilling Mud Data

Top (m MDRT)	Base (m MDRT)	Hole Size	Mud Type	Mud Weight (ppg)	Viscosity (s/qt)	Additives
10.34	85.00	12 1/4"	Water and KCL	8.8	31.0	KCL
85.00	779.00	8 1/2"	Water and KCL	8.9 - 9.0	33.0 – 36.0	KCL

3.3 Deviation / Surveys

Depth (m MDRT)	Inclination (°)	Azimuth (°)	m TVDRT	m TVDGL
777.00	1.00	170.00	776.96	-446.84

3.4 Under-Reaming

Coal Measures	From (m MDRT)	To (m MDRT)	Diameter (m)	Thickness (m)
Juandah Coal Measures	274.50	276.10	16"	1.60
	276.60	279.20		2.60
	286.00	286.90		0.90
	316.80	317.50		0.70
	340.40	341.00		0.60
	355.90	356.40		0.50
	356.90	357.90		1.00
	376.60	377.40		0.80
	380.30	381.90		1.60
	414.90	415.50		0.60
	440.30	441.90		1.60
	443.50	444.50		1.00
	481.30	481.90		0.60
484.30	484.90	0.60		
Tangalooma Sandstone	561.20	562.10	0.90	
	593.60	595.60	2.00	
Taroom Coal Measures	640.40	642.50	2.10	
	649.90	650.80	0.90	
	682.40	683.40	1.00	
	692.00	692.80	0.80	

3.5 Perforations

Top (m MDRT)	Base (m MDRT)	Net Pay (m)	Comments
277.07	300.37	3.74	Pre-perforated
312.11	323.70	1.09	Pre-perforated
335.56	428.60	6.77	Pre-perforated
440.46	452.17	2.45	Pre-perforated
463.91	654.15	12.11	Pre-perforated
677.87	738.72	3.82	Pre-perforated

3.6 Casing and Cementing

Casing Interval	OD	Shoe (m MDRT)	Weight (lbs/ft)	Grade	Thread
Conductor	14"	10.00	Not recorded		
Surface	9 5/8"	82.00	36lbs/ft	K55	BTC
Production	7"	739.00	23lbs/ft	K55	BTC

Cementing Interval	Class	Slurry Volume (bbls)	Weight (ppg)	Additives	Displacement Water Volume (bbls)	Cement Returns Volume (bbls)	Cemented By
Surface	A	37.8	14.6	Antifoam - 2gal	23.3	12.3	Schlumberger
Production	A	33.0	14.6	Antifoam - 5gal	33.0	5.0	Schlumberger

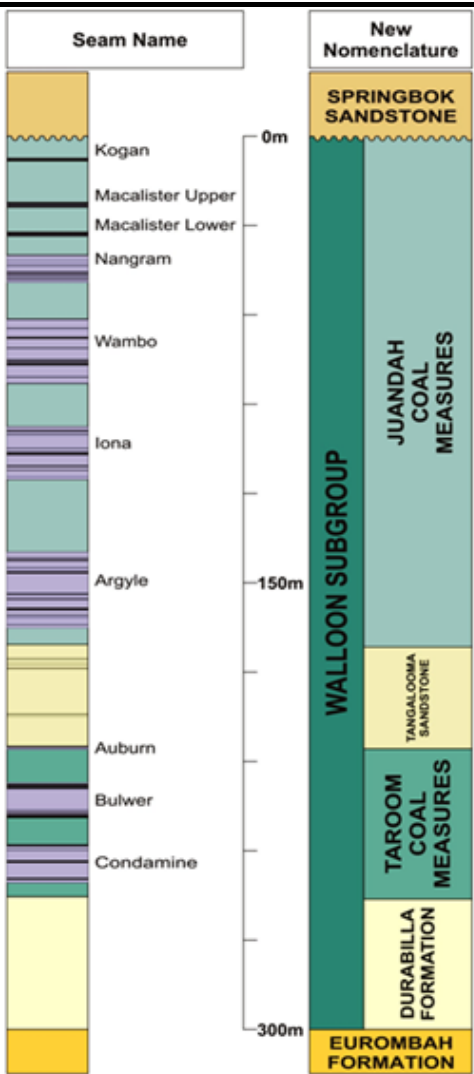
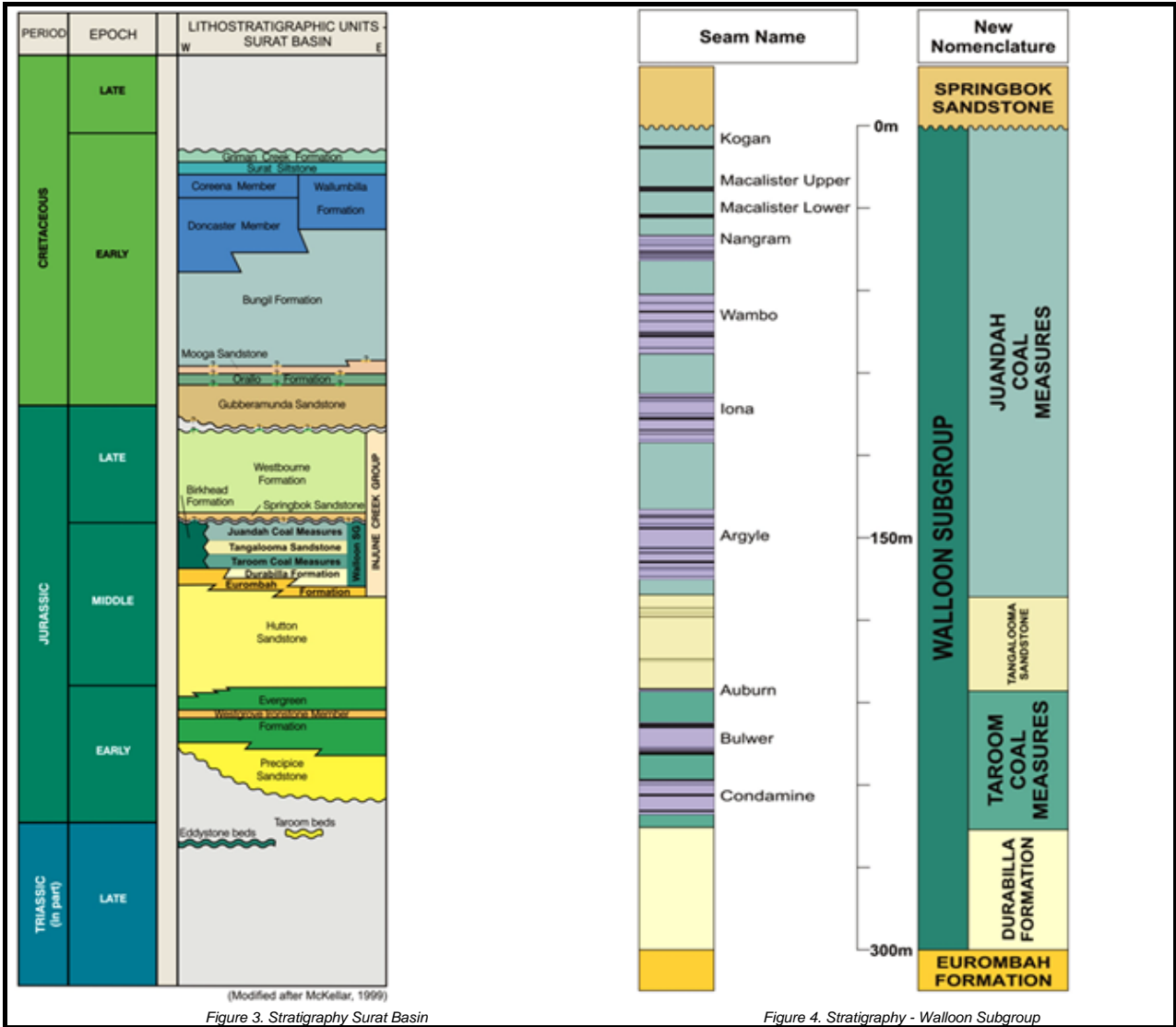
**Refer to Appendices for Cementing Report*

Top Cement Plug (m MDRT)	Bottom (m MDRT)	Comments
		None

4 GEOLOGY AND EVALUATION

4.1 Surat Basin Setting

The Surat Basin is a large intracratonic basin of Mesozoic age covering approximately 300,000km² of south-eastern Queensland and northern New South Wales. The basin forms part of the larger Great Australian Basin, and interfingers westward across the Nebine Ridge with the Eromanga Basin, and eastward across the Kumbarilla Ridge with the Clarence-Moreton Basin. Basement blocks consisting of the Central West Fold Belt and the New England Fold Belt limit the basin to the south, while in the north the basin has been eroded and unconformably overlies Triassic and Permian sediments of the Bowen Basin. The Surat Basin contains up to 2500m of sedimentary rocks deposited during the Latest Triassic to Early Cretaceous periods (Figure 3). The Latest Triassic to Earliest Cretaceous succession in the basin consists of five fining-upwards sedimentary cycles dominated by fluvio-lacustrine deposits. The lower part of each cycle typically comprises coarse-grained mature sandstone, grading up into more labile sandstone and siltstone, mudstone and coal in the upper part. In the Cretaceous, inundation of the land through an increase in sea level led to deposition of predominantly coastal plain and shallow marine sediments in two cycles.



Structurally the Surat Basin is relatively simple, with the area of maximum deposition, the Mimosa Syncline, overlying the thickest Permian-Triassic rocks in the Taroom Trough of the underlying Bowen Basin. Major faulting within the basin predominantly mirrors basal boundary faults of the underlying Bowen Basin. There is substantial folding across the basin, which is due to compaction and draping, as well as some rejuvenation of older pre-Jurassic structures and faults. Formations outcrop along the northern erosional boundary and dip gently to the south and southwest at less than 5°.

The middle Jurassic Walloon Subgroup forms part of the Injune Creek Group and is developed throughout the Surat Basin, ranging in thickness from less than 50m to greater than 700m. It comprises very-fine to medium grained, argillaceous sandstone, siltstone, mudstone and coal with minor calcareous sandstone, impure limestone and ironstone. In the northeast Surat Basin, the formation is divided into the Taroom Coal Measures, Tangalooma Sandstone and Juandah Coal Measures.

The Juandah Coal Measures generally comprise six named coal groups or seams. In descending stratigraphic order these are the Kogan, Macalister, Nangram, Wambo, Iona and Argyle Seams (Figure 4). The Macalister Seam can occur as two distinctive intervals and have been informally referred to as the Macalister Upper and Macalister Lower Seams by QGC. The Taroom Coal Measures generally comprises three coal groups or seams, informally referred to by QGC as the Auburn, Bulwer and Condamine Seams. The section of the Walloon Subgroup beneath the Taroom Coal Measures is defined by QGC as the Durabilla Formation, from exploration work by QGC.

References

SCOTT, S., ANDERSON, B., CROSDALE, P., DINGWALL, J. AND LEBLANG G., 2004: Revised geology and coal seam gas characteristics of the Walloon Subgroup - Surat Basin, Queensland. In: Boulton, P.J., Johns, D.R. and Lang, S.C. (Eds), Eastern Australasian Basins Symposium II, Petroleum Exploration Society of Australia, Special Publication, 345-355.

4.2 Stratigraphic Units Drilled

Age	Unit	Depth (m MDRT)	Depth (m TVDGL)	Thickness (m)	Net Coal (m)
Late Jurassic	Norwood Mudstone	4.60	295.52	147.98	0.00
Late Jurassic	Springbok Sandstone	152.58	147.54	85.24	1.19
Middle Jurassic	Upper Juandah Coal Measures	237.82	62.3	128.96	13.52
Middle Jurassic	Lower Juandah Coal Measures	366.78	-66.66	180.59	9.27
Middle Jurassic	Tangalooma Sandstone	547.37	-247.25	82.52	4.78
Middle Jurassic	Taroom Coal Measures	629.89	-329.77	115.27	8.20
Middle Jurassic	Eurombah Formation	745.16	-445.04	-	0.00
TD		779.00	-478.88		

4.3 Mudlogging

Ditch gas was monitored and recorded constantly from a gas trap via a Pason gas detection system. The Pason data is recorded and presented in the Wellsite Lithology Log (Appendix 5) and Final Composite Log (Appendix 4). Ditch cuttings were monitored from 80.00mRT to total depth and described as required. Washed and dried samples were not retained. Cuttings descriptions are recorded in the Wellsite Lithology Log (Appendix 5) and Final Composite Log (Appendix 4).

4.4 Wireline Logs

Run	Date	Measurement	From (m MDRT)	To (m MDRT)	BHT (degC)	Time since last circulation	Contractor
1	04-12-2012	GR-RHOB-ILD2-DT	780.20	10.00	46°C BHT	395 minutes	Schlumberger

* Wireline Log data enclosed in Enclosure 1 and 2.

4.5 Formation Test (DST/Wireline)

None

LIST OF APPENDICES

- Appendix 1 Survey Location Plan
 - Appendix 2 Daily Drilling Reports
 - Appendix 3 Daily Geological Reports
 - Appendix 4 Composite Log
 - Appendix 5 Lithology Log
 - Appendix 6 Pason Log
 - Appendix 7 Cementing Report
-

LIST OF ENCLOSURES

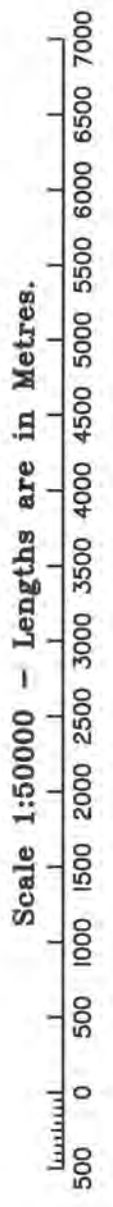
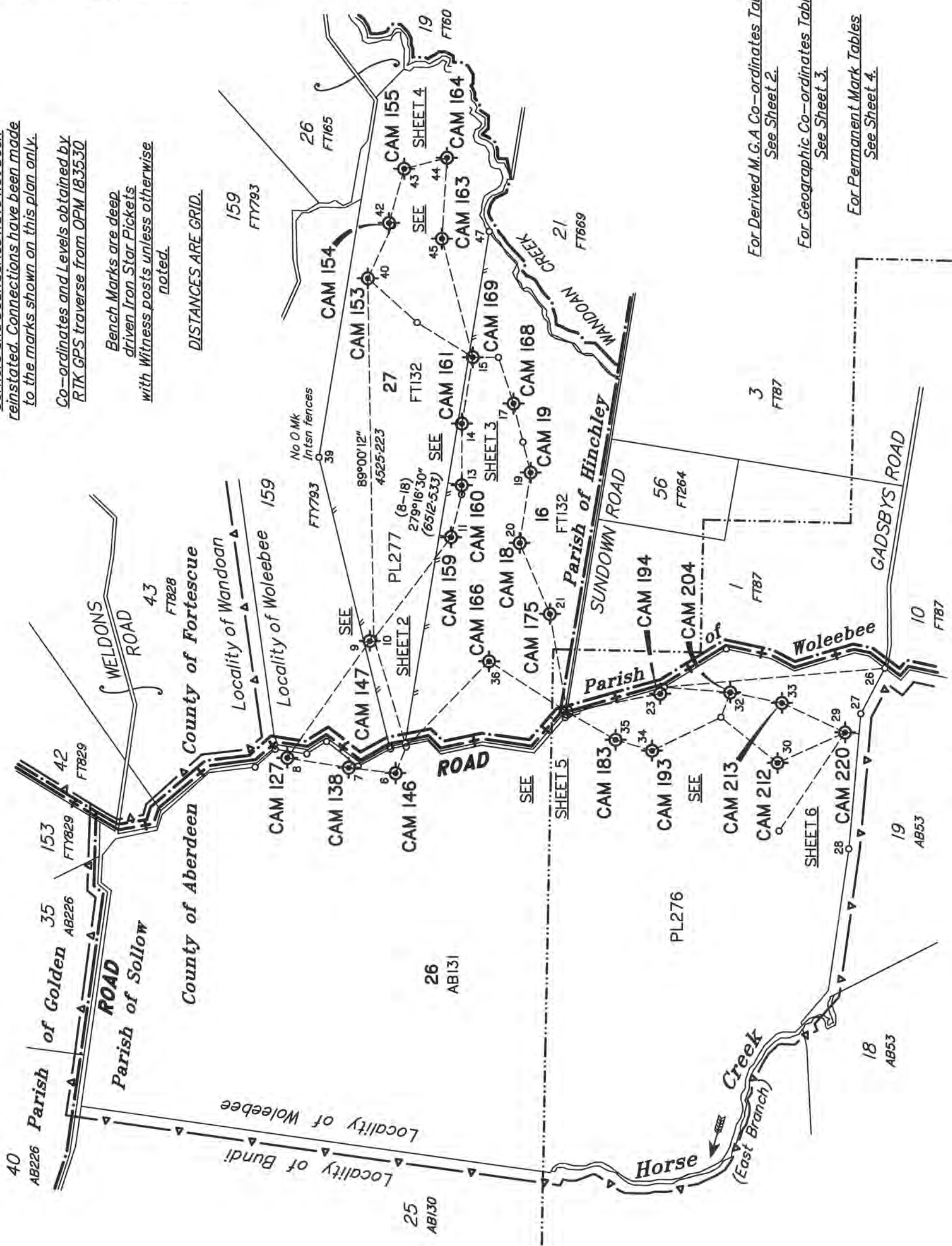
- Enclosure 1 Wireline Log Data (LAS Format)
- Enclosure 2 Wireline Log Prints

APPENDIX 1
SURVEY LOCATION PLAN



Corners and boundaries have not been reinstated. Connections have been made to the marks shown on this plan only.
 Co-ordinates and Levels obtained by RTK GPS traverse from OPM 183530
 Bench Marks are deep driven Iron Star Pickets with Witness posts unless otherwise noted.
 DISTANCES ARE GRID.

For Derived M.G.A Co-ordinates Tables See Sheet 2.
 For Geographic Co-ordinates Tables See Sheet 3.
 For Permanent Mark Tables See Sheet 4.



Fyfe Pty Ltd (ACN 008 116 130) hereby certify that I have/the Company has surveyed the location of the petroleum well as shown on this plan, that the survey was performed in accordance with the Petroleum and Gas (Production and Safety) Act 2004 and the Survey and Mapping Infrastructure Act 2003 and associated Regulations and Standards and achieves the accuracies of the Standards and the survey was completed on 18/10/2012.

Authorised Delegate: *[Signature]* Date: 28/11/12

MINING RESOURCES
Plan of PWL of CAM 18,19,127,138,146, 147,153-155,159-161,163,164,166,168,169, 175,183,193,194,204,212,213 & 220
 Fortescue/
 PARISH: **HINCHLEY/SOLLOW** COUNTY: **Aberdeen**
 LOCALITY: **WOLEEBEE** LOCAL AUTHORITY: **WESTERN DOWNS R.C**

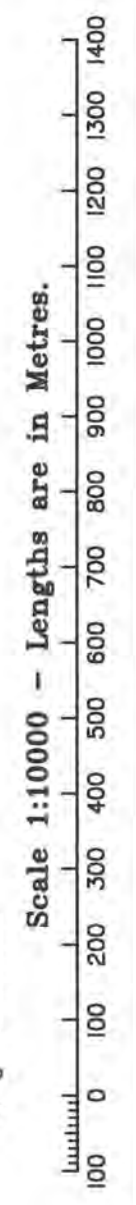
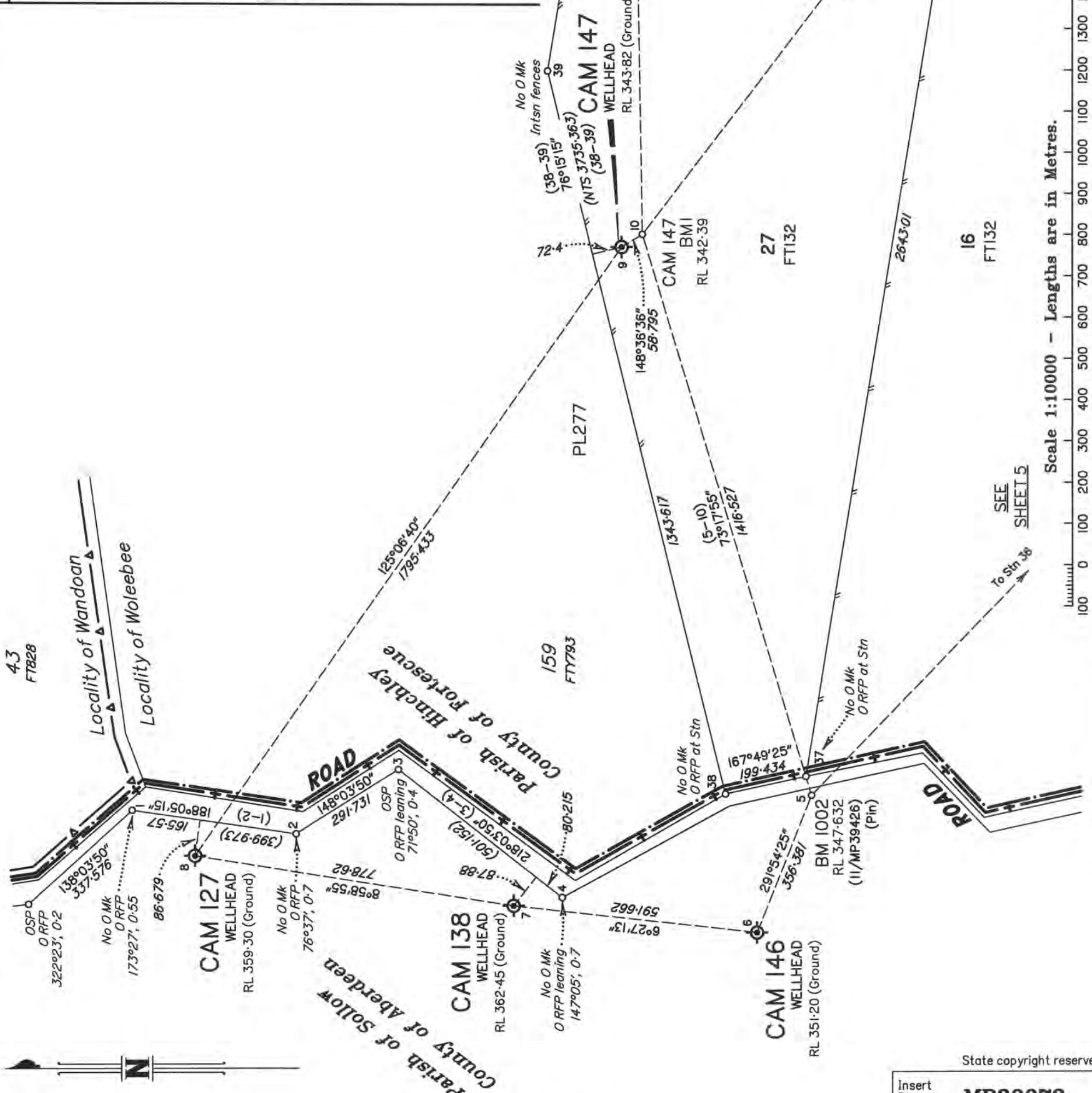
SCALE: **1:50000**
 Mining District: **Dalby**



Catalogued: Examined: Registered: Chief Surveyor

Drawn by: **CWW** Meridian: **MGA Zone 55 by GPS** Field Notes: **NO**

STN	DESCRIPTION	EASTING	NORTHING	ZONE
5	BM1002	766 994.318	7 099 562.118	55
6	CAM 146	766 663.669	7 099 695.080	55
7	CAM 138	766 730.172	7 100 282.993	55
8	CAM 127	766 851.731	7 101 052.065	55
9	CAM 147	768 320.465	7 100 019.398	55
10	CAM 147 BMI	768 351.089	7 099 969.208	55
11	CAM 159	769 624.465	7 099 001.446	55
12	CAM 159 BM2	770 161.586	7 098 869.747	55
13	CAM 160	770 279.470	7 098 868.706	55
14	CAM 161	771 057.088	7 098 866.474	55
15	CAM 169	771 889.607	7 098 730.565	55
16	CAM 170 BMI	771 889.910	7 098 408.775	55
17	CAM 168	771 309.639	7 098 218.909	55
18	CAM BM1001	770 826.374	7 098 101.351	55
19	CAM 19	770 441.642	7 098 004.907	55
20	CAM 18	769 553.854	7 097 761.135	55
21	CAM 175	768 664.812	7 097 139.124	55
22	OPM183530	767 433.725	7 097 546.202	55
23	CAM 194	767 662.648	7 096 378.452	55
24	CAM BM1003	767 743.050	7 096 327.801	55
29	CAM 220	767 178.213	7 094 056.621	55
30	CAM 212	766 794.405	7 094 905.563	55
31	CAM 204 BMI	767 368.321	7 095 614.801	55
32	CAM 204	767 678.963	7 095 499.449	55
33	CAM 213	767 547.484	7 094 850.662	55
34	CAM 193	766 947.491	7 096 479.717	55
35	CAM 183	767 084.473	7 086 937.652	55
36	CAM 166	768 065.874	7 098 523.695	55
40	CAM 153	772 875.627	7 100 047.920	55
41	CAM 154 BMI	773 536.459	7 099 741.200	55
42	CAM 154	773 569.488	7 099 783.194	55
43	CAM 155	774 247.514	7 099 593.694	55
44	CAM 164	774 387.119	7 099 057.139	55
45	CAM 163	773 374.151	7 099 119.562	55
46	CAM 152 BM2	772 326.088	7 099 430.328	55
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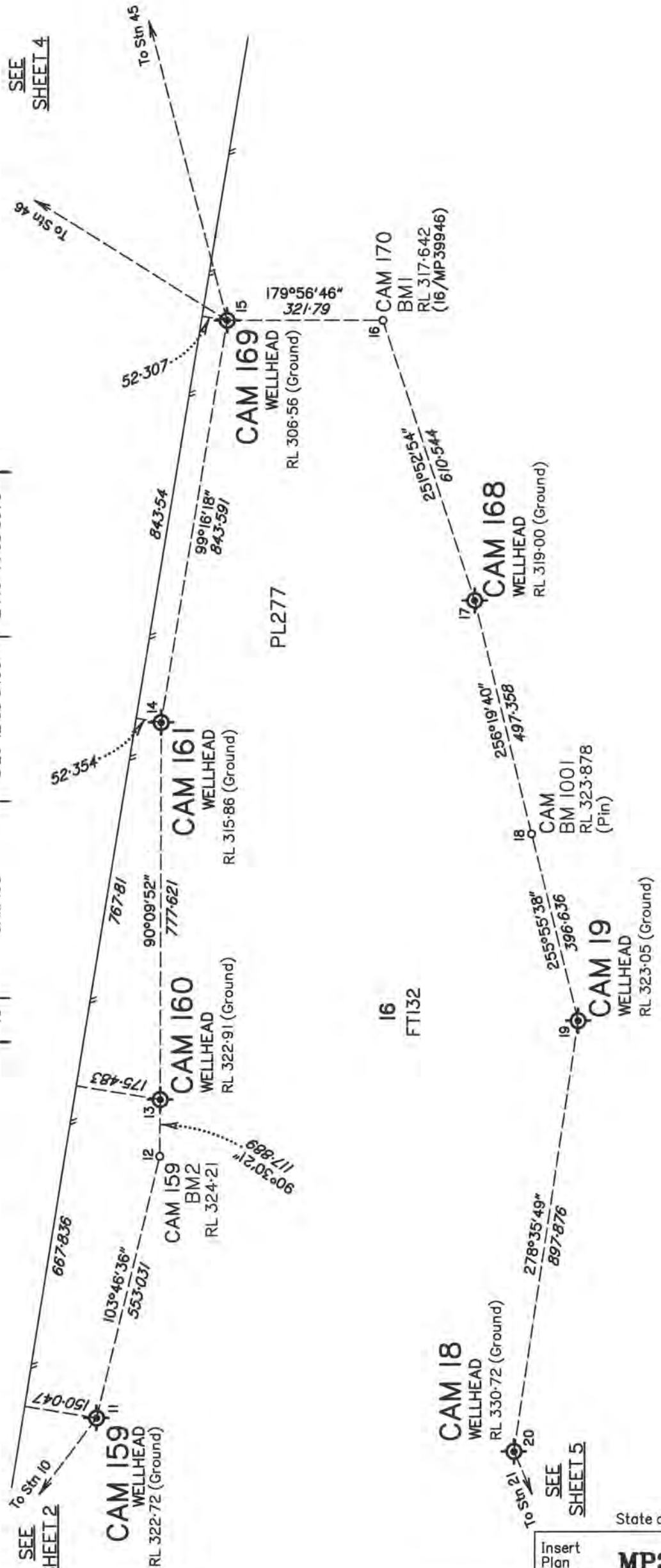
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Insert Plan Number **MP39973**

GEOGRAPHIC CO-ORDINATES (GDA-94)

STN	DESCRIPTION	LATITUDE	LONGITUDE
6	CAM 146	S 26°11'51.2020"	E 149°40'06.4356"
7	CAM 138	S 26°11'32.0672"	E 149°40'08.3938"
8	CAM 127	S 26°11'07.0133"	E 149°40'12.1992"
9	CAM 147	S 26°11'39.5607"	E 149°41'05.8270"
11	CAM 159	S 26°12'11.7354"	E 149°41'53.5223"
13	CAM 160	S 26°12'15.6024"	E 149°42'17.1983"
14	CAM 161	S 26°12'15.1473"	E 149°42'45.1897"
15	CAM 169	S 26°12'18.9939"	E 149°43'15.2579"
17	CAM 168	S 26°12'36.0021"	E 149°42'54.7682"
19	CAM 19	S 26°12'43.5402"	E 149°42'23.6847"
20	CAM 18	S 26°12'39.7830"	E 149°41'51.6266"
21	CAM 175	S 26°12'52.6563"	E 149°41'19.9062"
23	CAM 194	S 26°13'38.2270"	E 149°40'44.8593"
29	CAM 220	S 26°14'53.9439"	E 149°40'29.1451"
30	CAM 212	S 26°14'26.6352"	E 149°40'14.6940"
32	CAM 204	S 26°14'06.7580"	E 149°40'46.1013"
33	CAM 213	S 26°14'27.9129"	E 149°40'41.8505"
34	CAM 193	S 26°13'35.4184"	E 149°40'19.0368"
35	CAM 183	S 26°13'20.4571"	E 149°40'23.6283"
36	CAM 166	S 26°12'28.2984"	E 149°40'57.7775"
40	CAM 153	S 26°11'35.5469"	E 149°43'49.7503"
42	CAM 154	S 26°11'43.6675"	E 149°44'14.9234"
43	CAM 155	S 26°11'49.3551"	E 149°44'39.4702"
44	CAM 164	S 26°12'06.6807"	E 149°44'44.9036"
45	CAM 163	S 26°12'05.3490"	E 149°44'08.3970"

27
FT132



Scale 1:10000 - Lengths are in Metres.

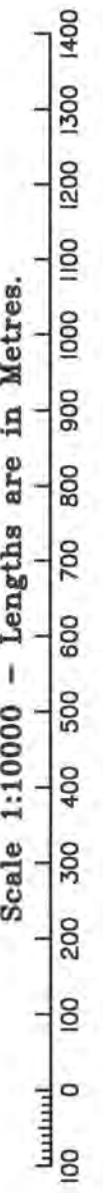
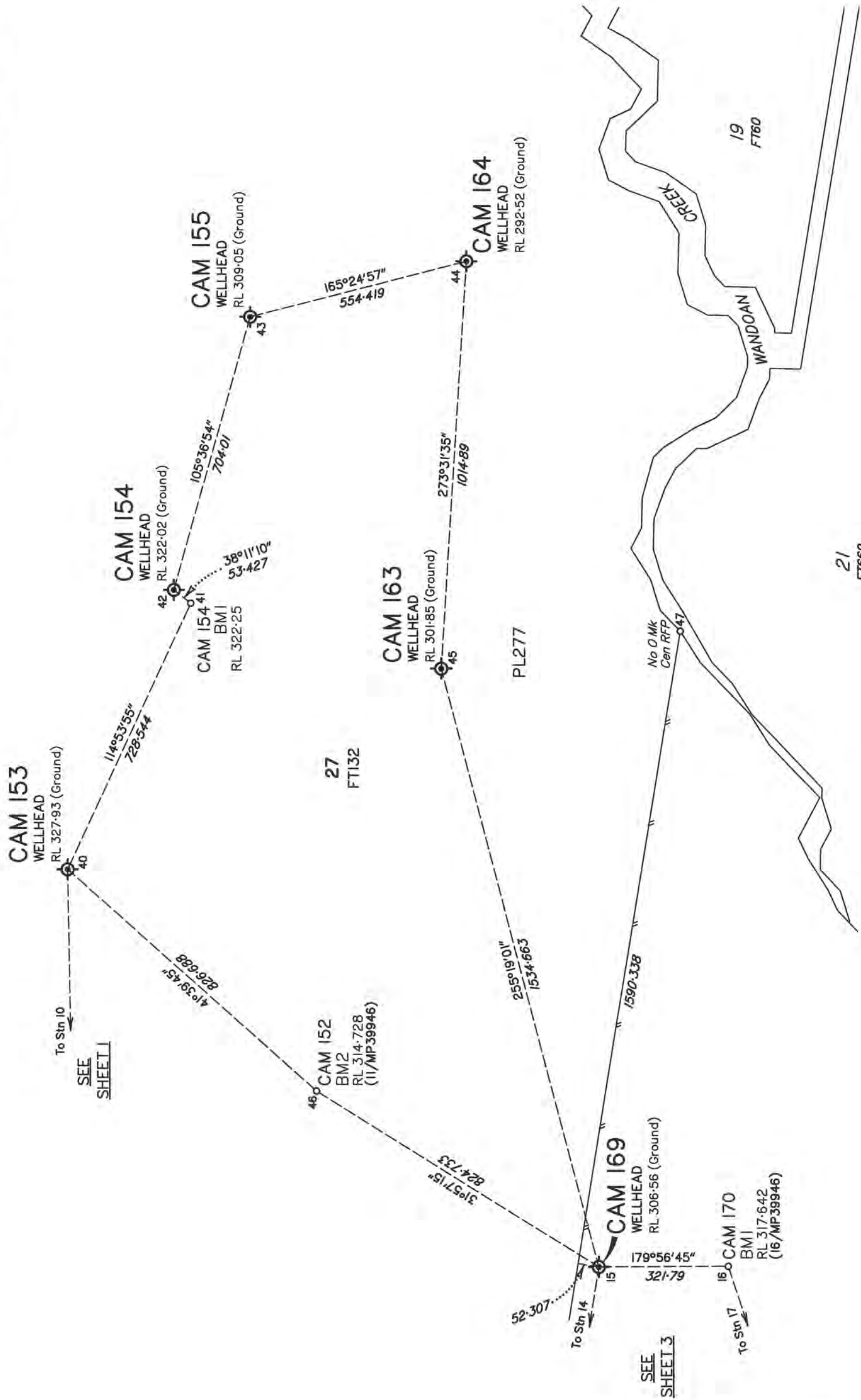
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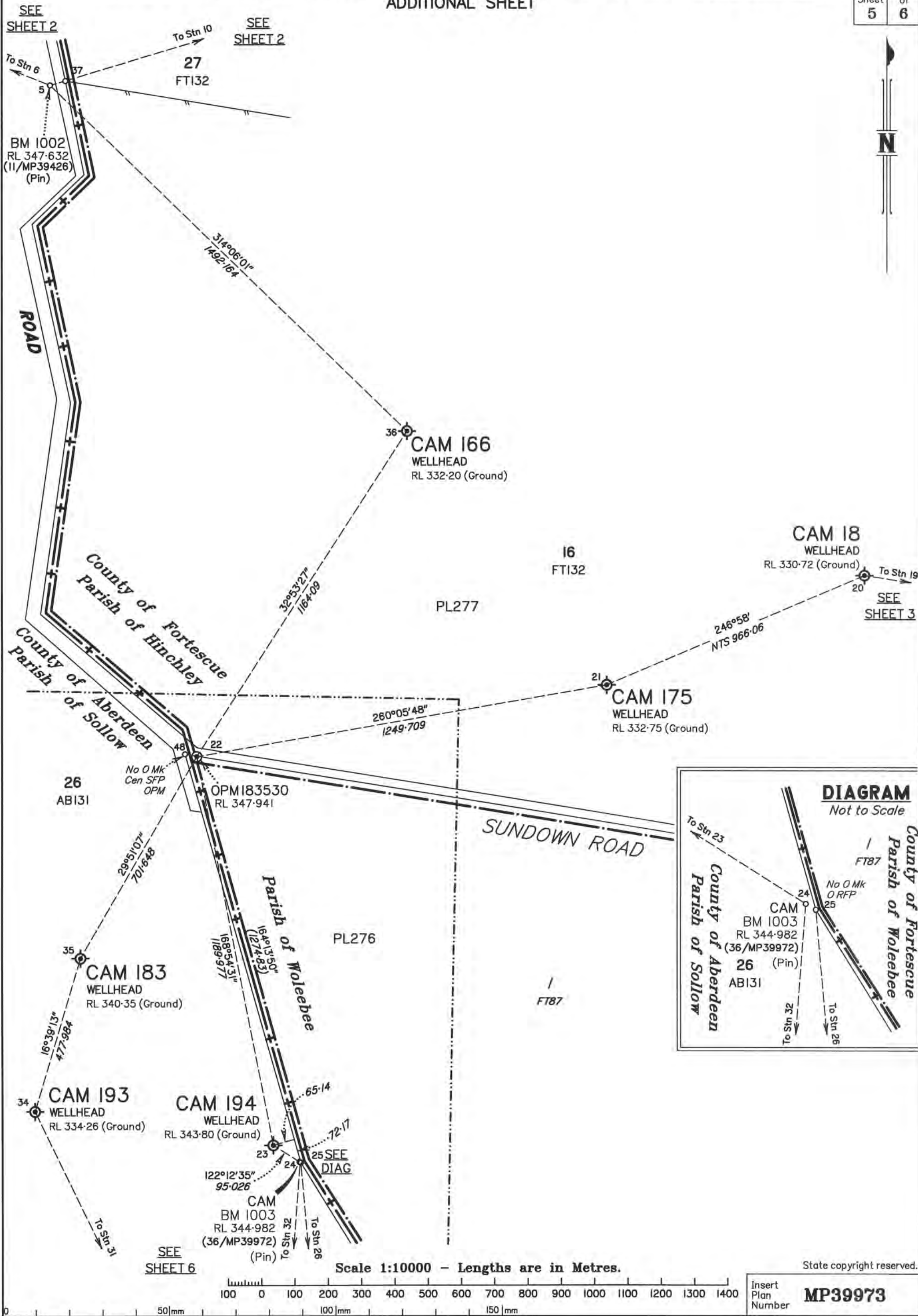
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MP39973

CONTROL COORDINATES MGA ZONE 55

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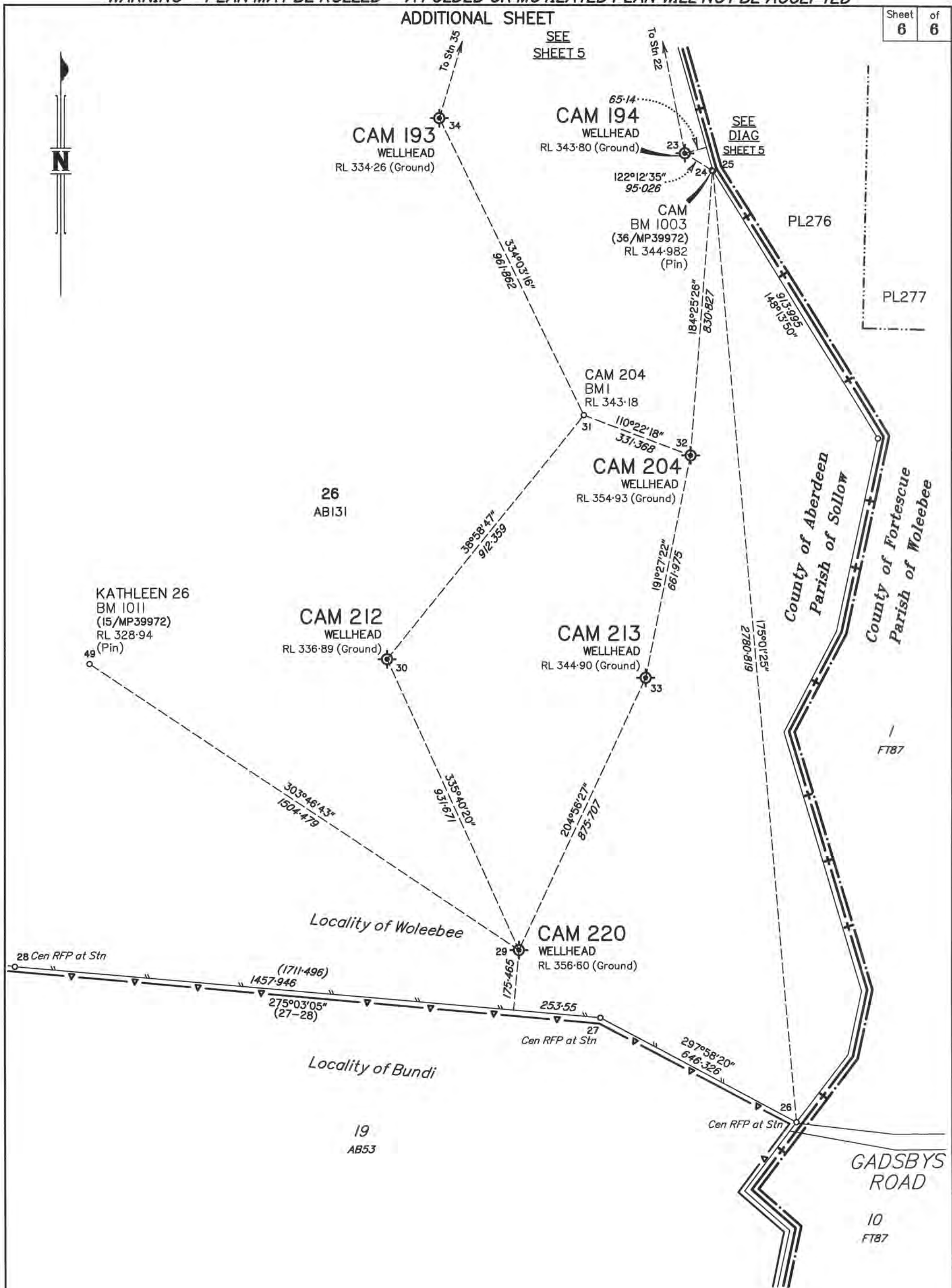




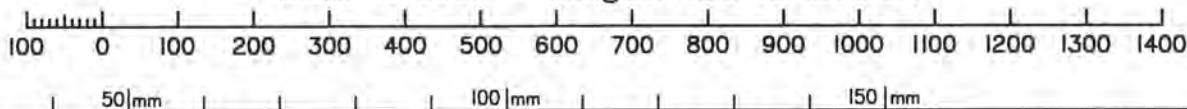
ADDITIONAL SHEET

SEE SHEET 5

SEE DIAG SHEET 5



Scale 1:10000 - Lengths are in Metres.



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Insert Plan Number **MP39973**

APPENDIX 2
DAILY DRILLING REPORTS



DAILY DRILLING REPORT

Cam_164

TRC: 135.00
Report Start Date: 30/11/2012
Report #: 1

UWI 100000746053	Well PID CAM_WH164	Tenure PL 277	Field Name Cam	Well Type Development	State/Province Queensland	Country AUS
Well Configuration Type Vertical	Well Status Available	Well Sub-Status	Spud Date 1/12/2012 00:30	Rig Release Date 6/12/2012 17:30	Job Start Date 30/11/2012 12:00	Job End Date 7/12/2012 07:00

JOB DETAILS					
AFE Number 01	Total AFE + Supp Amount (Cost) 657,142.00	Daily Field Est Total (Cost) 202,267.16	Cum Field Est To Date (Cost) 202,267.16	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
Target Formation Juandah and Taroom	Cum Time Log Days (days) 0.50	Problem Time Hours (hr) 0.00	Cum Problem Time Hours (hr) 0.00	Percent Problem Time (%) 0.00	Cum Percent Problem Time (%) 0.00

DAILY OPERATIONS					
Most Likely Duration (no plan ch...) 3.50	Original KB/RT Elevation (m) 299.60	Ground Elevation (m) 295.00	KB-Ground Distance (m) 4.60	Latitude (°) 26° 12' 10.64" S	Longitude (°) 149° 44' 39.652" E
Rig (Names) Saxon 165	Planned TD (mKB) 792.00	TD (max) (mKB) 779.00	End Depth (m...) 0.00	Depth Progress (m)	Weather Clear & Hot

HSSE	
Days Since Lost Time Incident (days) 135.00	Days Since Recordable Incident (days) 135.00

Safety Observations	
Type	# Rpts
Hazard Hunt	2
Hazard Id	6
Good Observations	2

SAFETY CHECK SUMMARY			
Type	Last Date	Days Last Chk (days)	Next Date
Daily Observation	30/11/2012	0	1/12/2012
Induction	30/11/2012	0	1/12/2012
Permit to Work	30/11/2012	0	1/12/2012
Post/Pre Shift Meeting	30/11/2012	0	1/12/2012
Toolbox Talk	30/11/2012	0	1/12/2012

DAILY CONTACTS		
Contact Name	Title	Mobile
Anthony Clarke	IPM Drilling Sup	0467785174
Scott Lowen	IPM WSS	0417404078
Liam O'Mara	Rig Manager	0499250585

POB		
Company	Job Title	Count
Saxon	Crew	16
Easternwell Group	Camp Management	3
IPM Schlumberger	WSS/FWE	2
QGC	Wellsite Geologist	1
Tresed	Truck Drivers	1
Neil Mansel Transport	Truck Drivers	0
Schlumberger Cementers	Cement Crew	0
Schlumberger WL	Wireline Crew	0
GE	Field technicians	0

DAILY REPORT
 Last 24hr Op's Summary
 Rig Move f/ Cam_155 to Cam_164 Total distance 1.0km, 3 Hi-boy's & 1 Bed Truck, 20 Loads, First Load off Cam_155 @ 07:30, Move Mini Camp to new Location, Spot and Rig Up, Move Rig Components, Last Load spotted on Location @14:00. Rig Up and Clean Derrick before raising it. Raised Derrick @ 18:00, Continue Rig in & Prep to Spud,

Summary 00:00 - 06:00
 Continue Rig Up, PJSM, Hazard Hunt found a Cracked Gaurd and a broken hinge pin on Rig floor plating, the gaurd was welded and the hinge was welded back in place. Spud in @ 00:30, Tag Bttm @ 10.34mkb, Drill Ahead w/ 5 WOB, 170 RPM, 420gpm, f/ 10.34m to 85m, Wiper Trip to Surface, Circ Hole clean on Bttm, POOH

Planned Op's
 Run Csg & Cement, Nipple Up, Pressure Test, M/U BHA & Drill out

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00							
Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
12:00	14:00	2.00	P		RMI	RM	Rig Move f/ Cam_155 to Cam_164 Total distance 1.0km, 3 Hi-boy's & 1 Bed Truck, 20 Loads, First Load off Cam_155 @ 07:30, Move Mini Camp to new Location, Spot and Rig Up
14:00	18:00	4.00	P		RMI	RU	Move Rig Components, Lay Matting, Spot Derrick Carrier, Mud Tanks, Pump House & Shaker Tank, Last Load spotted on Location @14:00. Rig Up And Clean Derrick before raising it.
18:00	19:00	1.00	P		RMI	RU	PJSM, Hazard Hunt found a Cracked Gaurd and a broken hinge pin on Rig floor plating, the gaurd was welded and the hinge was welded back in place. Raise Derrick @ 18:00,
19:00	00:00	5.00	P		RMI	RU	Rig up to Spud

CASING STRINGS		
Csg Des	OD (in)	SD (mKB)
Conductor	14	10.00



DAILY DRILLING REPORT

Cam_164

TRC: 135.00
 Report Start Date: 30/11/2012
 Report #: 1

MUD PROPERTIES

Mud Type	Time	Depth (mKB)	Weight (lb/gal)	Funnel Viscosity (s/qt)
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MUD USED

Des	Units	Vendor	Rec	Consumed	On Loc	Daily Field Est (Cost)

MUD PUMP

1, Gardner-Denver, PZ-8

Pump Rating (hp)	750.0	Rod Diameter (in)	2.2441	Stroke Length (in)	7.99
Liner Size (in)	6 1/2	Volume Per Stroke Override (bbl/stk)	0.092		
Pressure (psi)	Slow Speed Check?	Strokes (spm)	Volumetric Efficiency (%)		

FORMATIONS (LAST 5)

Formation Name	Prog Top MD (mKB)	Drill Top MD (mKB)

LEASE FLUIDS

Fluid	To Lease (bbl)	Source	From Lease (bbl)	Dest	BS&W (%)	Carrier	Ref #	Note
Formation Water	300.0	Production / Well Test				TRESED		

JOB SUPPLIES

Supply Item Des	Unit Label	Loc	Vendor	Received	Consumed	Cum On Loc

DRILL STRING AND BIT INFORMATION

BHA #<stringno>, <des>

Bit Run	Size (in)	Make	Model	IADC Codes	Serial Number	Length (m)
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)		IADC Bit Dull			
Drill String Length (m)	BHA Weight in Air (1000lbf)		BHA ROP (m/hr)			
String Components						

DRILLING PARAMETERS

Wellbore	Start Depth (mKB)	End Depth (mKB)	Cum Depth Drilled (m)	Drilling Time (hr)	Cum Drilling Time (hr)	Interval ROP (m/hr)	Flow Rate (gpm)
Weight on Bit (1000lbf)	Surface RPM (rpm)	SPP (psi)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque (ft•lb)	Off Bottom Torque (ft•lb)

ANNULAR VELOCITIES (DP & DC)

Inner Bound	Sz Inner Bound (in)	Outer Boundary	Sz Outer Bound (in)	Top (mKB)	Btm (mKB)	AV (m/min)

SURVEY DATA

Date	MD (mKB)	Incl (°)	Azm (°)	TVD (mKB)

UNDERREAMING INTERVALS

Top (mKB)	Btm (mKB)	OD (in)	Com



DAILY DRILLING REPORT

Cam_164

TRC: 136.00
Report Start Date: 1/12/2012
Report #: 2

UWI 100000746053	Well PID CAM_WH164	Tenure PL 277	Field Name Cam	Well Type Development	State/Province Queensland	Country AUS
Well Configuration Type Vertical	Well Status Available	Well Sub-Status	Spud Date 1/12/2012 00:30	Rig Release Date 6/12/2012 17:30	Job Start Date 30/11/2012 12:00	Job End Date 7/12/2012 07:00

JOB DETAILS

AFE Number 01	Total AFE + Supp Amount (Cost) 657,142.00	Daily Field Est Total (Cost) 63,572.38	Cum Field Est To Date (Cost) 265,839.54	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
Target Formation Juandah and Taroom	Cum Time Log Days (days) 1.50	Problem Time Hours (hr) 0.00	Cum Problem Time Hours (hr) 0.00	Percent Problem Time (%) 0.00	Cum Percent Problem Time (%) 0.00

DAILY OPERATIONS

Most Likely Duration (no plan ch...) 3.50	Original KB/RT Elevation (m) 299.60	Ground Elevation (m) 295.00	KB-Ground Distance (m) 4.60	Latitude (°) 26° 12' 10.64" S	Longitude (°) 149° 44' 39.652" E
Rig (Names) Saxon 165	Planned TD (mKB) 792.00	TD (max) (mKB) 779.00	End Depth (m...) 85.00	Depth Progress (m) 74.66	Weather Clear & Hot

HSSE

Days Since Lost Time Incident (days) 136.00	Days Since Recordable Incident (days) 136.00
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Safety Observations

Type	# Rpts

SAFETY CHECK SUMMARY

Type	Last Date	Days Last Chk (days)	Next Date
Daily Observation	30/11/2012	1	1/12/2012
Induction	30/11/2012	1	1/12/2012
Permit to Work	30/11/2012	1	1/12/2012
Post/Pre Shift Meeting	30/11/2012	1	1/12/2012
Toolbox Talk	30/11/2012	1	1/12/2012

DAILY CONTACTS

Contact Name	Title	Mobile
Anthony Clarke	IPM Drilling Sup	0467785174
Scott Lowen	IPM WSS	0417404078
Liam O'Mara	Rig Manager	0499250585

POB

Company	Job Title	Count
Saxon	Crew	16
Easternwell Group	Camp Management	3
IPM Schlumberger	WSS/FWE	1
QGC	Wellsite Geologist	1
Tresed	Truck Drivers	1
Neil Mansel Transport	Truck Drivers	6
Schlumberger Cementers	Cement Crew	4
Schlumberger WL	Wireline Crew	0
GE	Field technicians	1

DAILY REPORT

Last 24hr Op's Summary
 Spud in @ 00:30, Tag Bttm @ 10.34mkb, Drill Ahead w/ 5 WOB, 170 RPM, 420gpm, f/ 10.34m to 85m, Wiper Trip to Surface, Circ Hole clean on Bttm, POOH, PJSM & RIH w/ 9-5/8" Csg, Circ on Bttm & Wait for Cementers to arrive!, Rig in Cementers & Land Wellhead S/N# B8050 002001-04 (pb 11497-015) Cement Surface Csg, Rig out Cementers, L/D Landing Jt, Nipple Up BOP & Pressure Test All Components to 250psi Low / 10min, 1500psi High / 10min,

Summary 00:00 - 06:00
 Install pressure test pump. Test as per WDI BMS,

Planned Op's
 Drill 8-1/2" Hole

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00

Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
00:00	00:30	0.50	P		RMI	SM	Pre-Spud Safety Mtg, Function ESD's
00:30	03:30	3.00	P		SH	RDR	Tag Bttm @ 10.34m, Drill 12-1/4" Surface Hole to 85m, w/ 5 WOB, 170 RPM, 420gpm
03:30	04:45	1.25	P		SH	WT	Circulate w/ 420gpm & Wiper Trip
04:45	05:15	0.50	P		SH	CIC	Circulate Hole Clean, w/ 420gpm
05:15	06:15	1.00	P		SH	TO	POOH f/ 85m to Surface
06:15	08:30	2.25	P		SC	RC	PJSM & RIH w/ 9-5/8" Csg
08:30	11:30	3.00	P		SC	CIC	Circulate And Wait for cementers
11:30	12:30	1.00	P		SC	RC	Rig in Cementers & Land Wellhead S/N# B8050 002001-04 (pb 11497-015)
12:30	14:00	1.50	P		SC	CMC	Cmt 9-5/8" Csg w/ 37.8bbbls of 14.6ppg slurry. Displace w/23.30bbbls of fresh water, Bump plug with 1720psi and hold for 10mins, Bleed back pressure, Check Float OK, 12.3bbbls of Good Cmt Returns
14:00	14:15	0.25	P		SC	SM	PJSM, Rig out Cementers
14:15	19:00	4.75	P		BOP	BOP	Nipple Up 11" 3000# BOP & GE Pressure Tested Adapter Flange to 250psi Low/ 10min, 1500psi High / 10min.



DAILY DRILLING REPORT

Cam_164

TRC: 136.00
 Report Start Date: 1/12/2012
 Report #: 2

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00

Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
19:00	00:00	5.00	P		BOP	PT	Test as per WDI BMS, Test All Manifold Valves, Test Kill Line & Choke Lines, Annular, Stabbing Valve, FOSV, IBOP, Standpipe Valves & Blind Rams to 250psi Low / 1500psi high for 10in ea. Tested Blinds Rams to 250psi Low / 1500psi High for 10min

CASING STRINGS

Csg Des	OD (in)	SD (mKB)
Conductor	14	10.00
Surface Casing	9 5/8	82.00

MUD PROPERTIES

Mud Type	Time	Depth (mKB)	Weight (lb/gal)	Funnel Viscosity (s/qt)
Water/KCL	01:00	54.00	8.80	31

MUD USED

Des	Units	Vendor	Rec	Consumed	On Loc	Daily Field Est (Cost)
Bentonite	sacks		42.0	0.0	42.0	
Bentonite f/ Prev Well	Sx		32.0	10.0	22.0	
P- Chlor f/ Prev Well	Sx		30.0	20.0	10.0	
Potassium Chloride	sacks		126.0	0.0	126.0	

MUD PUMP

# 1, Gardner-Denver, PZ-8						
Pump Rating (hp)	Rod Diameter (in)	Stroke Length (in)				
750.0	2.2441	7.99				
Liner Size (in)	Volume Per Stroke Override (bbl/stk)					
6 1/2	0.092					
Pressure (psi)	Slow Speed Check?	Strokes (spm)	Volumetric Efficiency (%)			

FORMATIONS (LAST 5)

Formation Name	Prog Top MD (mKB)	Drill Top MD (mKB)

LEASE FLUIDS

Fluid	To Lease (bbl)	Source	From Lease (bbl)	Dest	BS&W (%)	Carrier	Ref #	Note
	300.0					TRESED		

JOB SUPPLIES

Supply Item Des	Unit Label	Loc	Vendor	Received	Consumed	Cum On Loc

DRILL STRING AND BIT INFORMATION

BHA #1, Surface Hole							
Bit Run	Size (in)	Make	Model	IADC Codes	Serial Number	Length (m)	
1RR10	12 1/4	Smith	Si519		JF9919	0.30	
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)			IADC Bit Dull			
11/11/11/11/11/11	0.56			-----			
Drill String Length (m)	BHA Weight in Air (1000lbf)			BHA ROP (m/hr)			
77.10	15			24.9			
String Components							
Smith Si519, Bit, Bit Sub w/Float, Drill Collar, Drill Collar, Drill Collar, Drill Collar, HWDP, HWDP, HWDP, HWDP							

DRILLING PARAMETERS

Wellbore	Start Depth (mKB)	End Depth (mKB)	Cum Depth Drilled (m)	Drilling Time (hr)	Cum Drilling Time (hr)	Interval ROP (m/hr)	Flow Rate (gpm)
Original Hole	10.34	85.00	74.66	3.00	3.00	24.9	
Weight on Bit (1000lbf)	Surface RPM (rpm)	SPP (psi)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque (ft•lb)	Off Bottom Torque (ft•lb)

ANNULAR VELOCITIES (DP & DC)

Inner Bound	Sz Inner Bound (in)	Outer Boundary	Sz Outer Bound (in)	Top (mKB)	Btm (mKB)	AV (m/min)

SURVEY DATA

Date	MD (mKB)	Incl (°)	Azm (°)	TVD (mKB)

UNDERREAMING INTERVALS

Top (mKB)	Btm (mKB)	OD (in)	Com



DAILY DRILLING REPORT

Cam_164

TRC: 137.00
Report Start Date: 2/12/2012
Report #: 3

UWI 100000746053	Well PID CAM_WH164	Tenure PL 277	Field Name Cam	Well Type Development	State/Province Queensland	Country AUS
Well Configuration Type Vertical	Well Status Available	Well Sub-Status	Spud Date 1/12/2012 00:30	Rig Release Date 6/12/2012 17:30	Job Start Date 30/11/2012 12:00	Job End Date 7/12/2012 07:00

JOB DETAILS					
AFE Number 01	Total AFE + Supp Amount (Cost) 657,142.00	Daily Field Est Total (Cost) 34,356.12	Cum Field Est To Date (Cost) 300,195.66	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
Target Formation Juandah and Taroom	Cum Time Log Days (days) 2.50	Problem Time Hours (hr) 6.25	Cum Problem Time Hours (hr) 6.25	Percent Problem Time (%) 26.04	Cum Percent Problem Time (%) 10.42

DAILY OPERATIONS					
Most Likely Duration (no plan ch...) 3.50	Original KB/RT Elevation (m) 299.60	Ground Elevation (m) 295.00	KB-Ground Distance (m) 4.60	Latitude (°) 26° 12' 10.64" S	Longitude (°) 149° 44' 39.652" E
Rig (Names) Saxon 165	Planned TD (mKB) 792.00	TD (max) (mKB) 779.00	End Depth (m...) 295.00	Depth Progress (m) 210.00	Weather Clear

HSSE	
Days Since Lost Time Incident (days) 137.00	Days Since Recordable Incident (days) 137.00

Safety Observations	
Type	# Rpts
Hazard ID	6

SAFETY CHECK SUMMARY			
Type	Last Date	Days Last Chk (days)	Next Date
Daily Observation	30/11/2012	2	1/12/2012
Induction	30/11/2012	2	1/12/2012
Permit to Work	30/11/2012	2	1/12/2012
Post/Pre Shift Meeting	30/11/2012	2	1/12/2012
Toolbox Talk	30/11/2012	2	1/12/2012

DAILY CONTACTS		
Contact Name	Title	Mobile
Anthony Clarke	IPM Drilling Sup	0467785174
Scott Lowen	IPM WSS	0417404078
Liam O'Mara	Rig Manager	0499250585

POB		
Company	Job Title	Count
Saxon	Crew	16
Easternwell Group	Camp Management	3
IPM Schlumberger	WSS/FWE	1
QGC	Wellsite Geologist	1
Tresed	Truck Drivers	1
Neil Mansel Transport	Truck Drivers	0
Schlumberger Cementers	Cement Crew	0
Schlumberger WL	Wireline Crew	0
GE	Field technicians	2

DAILY REPORT
 Last 24hr Op's Summary
 Pressure Test All Components to 250psi Low / 10min, 1500psi High / 10min, Test as per WDI BMS, M/U Bit & BHA #2, RIH Tag Cmt @ 76.2m, Held BOP Drill and Safety Mtg, Drill out Plug to Shoe, Drill 8-1/2" Hole f/ 85m to 264m, ROP dropped off, POOH for Bit, Change Bit and RIH, Continue Drilling 8-1/2" Hole f/264m to 294m

Summary 00:00 - 06:00
 Drig 8-1/2" Hole f/ 294m to 494m

Planned Op's
 Wiper Trip, POOH, LOG, RIH w/ Under Reamer, Under Ream,

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00							
Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
00:00	04:45	4.75	P		BOP	PT	Test as per WDI BMS, Test All Manifold Valves, Test Kill Line & Choke Lines, Annular, Stabbing Valve, FOSV, IBOP, Standpipe Valves & Blind Rams to 250psi Low / 1500psi high for 10in ea. Tested Blinds Rams to 250psi Low / 1500psi High for 10min,
04:45	06:00	1.25	P		PH1	HBH	M/U BHA & Stab's w/ Bit #2 RR13
06:00	07:00	1.00	P		PH1	TI	RIH, Tag Cement @ 76.2m
07:00	07:15	0.25	P		PH1	ED	BOP Drill & Safety Mtg
07:15	09:00	1.75	P		PH1	DFS	Drill out Plug, F/C, Cmt & Csg Shoe w/ 12klb WOB, 60rpm, 300gpm, Pressure 150psi
09:00	16:00	7.00	P		PH1	RDR	Work Shoe Track & Drill ahead f/ 85m to 264m w/ 10-14klb WOB, 160rpm, 400gpm, Pressure 450psi
16:00	19:30	3.50	TP	3.50	PH1	TO	Circ bttm's up, Flow Chk, POOH
19:30	22:00	2.50	TP	2.50	PH1	TI	Change Bit, RIH to 262m
22:00	22:15	0.25	TP	0.25	PH1	CIC	Circ Bttm's up w/ 380gpm, PP 560psi,
22:15	00:00	1.75	P		PH1	RDR	Drill ahead f/ 264m to 295m

CASING STRINGS		
Csg Des	OD (in)	SD (mKB)
Conductor	14	10.00



DAILY DRILLING REPORT

Cam_164

TRC: 137.00
 Report Start Date: 2/12/2012
 Report #: 3

CASING STRINGS		
Csg Des	OD (in)	SD (mKB)
Surface Casing	9 5/8	82.00

MUD PROPERTIES				
Mud Type	Time	Depth (mKB)	Weight (lb/gal)	Funnel Viscosity (s/qt)
Water/KCL	00:00	270.00	9.00	36

MUD USED						
Des	Units	Vendor	Rec	Consumed	On Loc	Daily Field Est (Cost)
P- Chlor f/ Prev Well	Sx		0.0	10.0	0.0	

MUD PUMP			
# 1, Gardner-Denver, PZ-8			
Pump Rating (hp)	Rod Diameter (in)	Stroke Length (in)	
750.0		2.2441	7.99
Liner Size (in)	Volume Per Stroke Override (bbl/stk)		
6 1/2			0.092
Pressure (psi)	Slow Speed Check?	Strokes (spm)	Volumetric Efficiency (%)

FORMATIONS (LAST 5)		
Formation Name	Prog Top MD (mKB)	Drill Top MD (mKB)
Springbok Sandstone	106.00	152.58
Upper Juandah Coal Measures	246.00	237.82

LEASE FLUIDS								
Fluid	To Lease (bbl)	Source	From Lease (bbl)	Dest	BS&W (%)	Carrier	Ref #	Note
	300.0					TRESED		

JOB SUPPLIES						
Supply Item Des	Unit Label	Loc	Vendor	Received	Consumed	Cum On Loc

DRILL STRING AND BIT INFORMATION							
BHA #2, Production Hole							
Bit Run	Size (in)	Make	Model	IADC Codes	Serial Number	Length (m)	
2RR13	8 1/2	SMITH	SX519VHPX	123	MS0112	0.25	
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull					
11/11/11/12/12/12	0.61	4-4-BT-A-X-2-BU-PR					
Drill String Length (m)	BHA Weight in Air (1000lbf)	BHA ROP (m/hr)					
143.20	33						
String Components							
SMITH SX519VHPX, Bit, Bit Sub w/Float, Drill Collar, Drill Collar, Drill Collar, Drill Collar, Drill Collar, Drill Collar, Drill Collar, Drill Collar, Drill Collar, HWDP, HWDP, HWDP, HWDP, DP							

DRILLING PARAMETERS							
Wellbore	Start Depth (mKB)	End Depth (mKB)	Cum Depth Drilled (m)	Drilling Time (hr)	Cum Drilling Time (hr)	Interval ROP (m/hr)	Flow Rate (gpm)
Original Hole	85.00	264.00	179.00	7.00	7.00	25.6	400
Weight on Bit (1000lbf)	Surface RPM (rpm)	SPP (psi)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque (ft•lb)	Off Bottom Torque (ft•lb)
12	170	400.0	58	60	56	2,000	1,200

ANNULAR VELOCITIES (DP & DC)						
Inner Bound	Sz Inner Bound (in)	Outer Boundary	Sz Outer Bound (in)	Top (mKB)	Btm (mKB)	AV (m/min)
HWDP	4.000	Wellbore	8 1/2	130.25	168.05	53.1

BHA #3, Production Hole							
Bit Run	Size (in)	Make	Model	IADC Codes	Serial Number	Length (m)	
3RR6	8 1/2	SMITH	Mi419HUPX	123	ER25816	0.25	
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull					
11/11/11/11/11/11	0.56	-----					
Drill String Length (m)	BHA Weight in Air (1000lbf)	BHA ROP (m/hr)					
133.75	30						
String Components							
SMITH Mi419HUPX, Bit, Stabilizer - Near Bit, Drill Collar, Stabilizer, Drill Collar, Drill Collar, Drill Collar, Drill Collar, Drill Collar, Drill Collar, HWDP, HWDP, HWDP, HWDP, DP							

DRILLING PARAMETERS							
Wellbore	Start Depth (mKB)	End Depth (mKB)	Cum Depth Drilled (m)	Drilling Time (hr)	Cum Drilling Time (hr)	Interval ROP (m/hr)	Flow Rate (gpm)
Original Hole	264.00	295.00	31.00	1.75	1.75	17.7	400
Weight on Bit (1000lbf)	Surface RPM (rpm)	SPP (psi)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque (ft•lb)	Off Bottom Torque (ft•lb)
8	150	450.0	58	60	56	2,000	1,200

ANNULAR VELOCITIES (DP & DC)						
Inner Bound	Sz Inner Bound (in)	Outer Boundary	Sz Outer Bound (in)	Top (mKB)	Btm (mKB)	AV (m/min)
HWDP	4.000	Wellbore	8 1/2	170.70	208.50	53.1

SURVEY DATA				
Date	MD (mKB)	Incl (°)	Azm (°)	TVD (mKB)

UNDERREAMING INTERVALS			
Top (mKB)	Btm (mKB)	OD (in)	Com



DAILY DRILLING REPORT

Cam_164

TRC: 138.00
Report Start Date: 3/12/2012
Report #: 4

UWI 100000746053	Well PID CAM_WH164	Tenure PL 277	Field Name Cam	Well Type Development	State/Province Queensland	Country AUS
Well Configuration Type Vertical	Well Status Available	Well Sub-Status	Spud Date 1/12/2012 00:30	Rig Release Date 6/12/2012 17:30	Job Start Date 30/11/2012 12:00	Job End Date 7/12/2012 07:00

JOB DETAILS

AFE Number 01	Total AFE + Supp Amount (Cost) 657,142.00	Daily Field Est Total (Cost) 39,695.92	Cum Field Est To Date (Cost) 339,891.58	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
Target Formation Juandah and Taroom	Cum Time Log Days (days) 3.50	Problem Time Hours (hr) 4.00	Cum Problem Time Hours (hr) 10.25	Percent Problem Time (%) 16.67	Cum Percent Problem Time (%) 12.20

DAILY OPERATIONS

Most Likely Duration (no plan ch...) 3.50	Original KB/RT Elevation (m) 299.60	Ground Elevation (m) 295.00	KB-Ground Distance (m) 4.60	Latitude (°) 26° 12' 10.64" S	Longitude (°) 149° 44' 39.652" E
Rig (Names) Saxon 165	Planned TD (mKB) 792.00	TD (max) (mKB) 779.00	End Depth (m...) 779.00	Depth Progress (m) 484.00	Weather Cloudy in Morn, Sunny by 10

HSSE

Days Since Lost Time Incident (days) 138.00	Days Since Recordable Incident (days) 138.00
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Safety Observations

Type	# Rpts
Hazard ID	4

SAFETY CHECK SUMMARY

Type	Last Date	Days Last Chk (days)	Next Date
Daily Observation	30/11/2012	3	1/12/2012
Induction	3/12/2012	0	4/12/2012
Permit to Work	3/12/2012	0	4/12/2012
Post/Pre Shift Meeting	3/12/2012	0	4/12/2012
Toolbox Talk	30/11/2012	3	1/12/2012

DAILY CONTACTS

Contact Name	Title	Mobile
Anthony Clarke	IPM Drilling Sup	0467785174
Scott Lowen	IPM WSS	0417404078
Liam O'Mara	Rig Manager	0499250585

POB

Company	Job Title	Count
Saxon	Crew	16
Easternwell Group	Camp Management	3
IPM Schlumberger	WSS/FWE	1
QGC	Wellsite Geologist	1
Tresed	Truck Drivers	1
Neil Mansel Transport	Truck Drivers	0
Schlumberger Cementers	Cement Crew	0
Schlumberger WL	Wireline Crew	0
GE	Field technicians	2

DAILY REPORT

Last 24hr Op's Summary
 Drlg 8-1/2" Hole f/ 295m to 516m, Stop Drlg due to Tank Volume, Circ at Reduced rate, Vac truck unable to make it to Rig due to Rain, Wait on vac Hauler. Moved some volume around & drilled f/ 516m to 530m, Wait on vac Truck. Drill ahead f/ 530m to TD @ 779m, Circ btms up, Wiper Trip to Csg shoe @ 82m, RIH to 192m

Summary 00:00 - 06:00
 Continue Wiper Trip, Circ back on Btm, POOH to LOG

Planned Op's
 LOG, rig out loggers, M/U U/R BHA, RIH & UnderReam

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00

Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
00:00	06:00	6.00	P		PH1	RDR	Drill ahead f/ 295m to 516m, w/ 14klb WOB, 140rpm, 700psi, 3000ft/lb Torque
06:00	07:30	1.50	TP	1.50	PH1	WOE	Circulate at Reduced rate 180gpm & 260psi and wait on Vac Truck, Mud tanks to full, Vac truck unable to get to Rig due to Rain
07:30	08:00	0.50	P		PH1	RDR	Drill f/ 516m to 530m, w/ 54klb WOB, 140rpm, 750psi, 3000ft/lb Torque, Stopped due to Full tank volume
08:00	10:30	2.50	TP	2.50	PH1	WOE	Circulate at Reduced rate 180gpm & 260psi and wait on Vac Truck, Mud tanks to full, Vac truck unable to get to Rig due to Rain
10:30	18:00	7.50	P		PH1	RDR	Drill f/ 530m to 779m, w/ 16klb WOB, 140rpm, 800psi, 4000ft/lb Torque
18:00	18:30	0.50	P		PH1	CIC	Circ btms up, 380gpm & 800psi,
18:30	00:00	5.50	P		PH1	WT	Wiper Trip f/ 779m to 82m, Flow Chk, RIH

CASING STRINGS

Csg Des	OD (in)	SD (mKB)
Conductor	14	10.00
Surface Casing	9 5/8	82.00



DAILY DRILLING REPORT

Cam_164

TRC: 138.00
 Report Start Date: 3/12/2012
 Report #: 4

MUD PROPERTIES				
Mud Type	Time	Depth (mKB)	Weight (lb/gal)	Funnel Viscosity (s/qt)
Water/KCL	15:00	650.00	8.90	36

MUD USED						
Des	Units	Vendor	Rec	Consumed	On Loc	Daily Field Est (Cost)
Potassium Chloride	sacks		0.0	25.0	101.0	

MUD PUMP			
# 1, Gardner-Denver, PZ-8			
Pump Rating (hp)	Rod Diameter (in)	Stroke Length (in)	
750.0		2.2441	7.99
Liner Size (in)	Volume Per Stroke Override (bbl/stk)		
6 1/2	0.092		
Pressure (psi)	Slow Speed Check?	Strokes (spm)	Volumetric Efficiency (%)

FORMATIONS (LAST 5)		
Formation Name	Prog Top MD (mKB)	Drill Top MD (mKB)
Springbok Sandstone	106.00	152.58
Upper Juandah Coal Measures	246.00	237.82
Lower Juandah Coal Measures	395.00	366.78
Tangalooma	514.00	547.37
Taroom Coal Measures	636.00	629.89

LEASE FLUIDS								
Fluid	To Lease (bbl)	Source	From Lease (bbl)	Dest	BS&W (%)	Carrier	Ref #	Note
Drilling Water	900.0	Kathleen Tank Farm				TRESED		
Drilling Water	300.0	Kathleen Tank Farm				TRESED		

JOB SUPPLIES						
Supply Item Des	Unit Label	Loc	Vendor	Received	Consumed	Cum On Loc

DRILL STRING AND BIT INFORMATION							
BHA #3, Production Hole							
Bit Run	Size (in)	Make	Model	IADC Codes	Serial Number	Length (m)	
3RR6	8 1/2	SMITH	Mi419HUPX	123	ER25816	0.25	
Nozzles (1/32")			Bit Total Fluid Area (nozzles) (in²)		IADC Bit Dull		
11/11/11/11/11/11			0.56		-----		
Drill String Length (m)			BHA Weight in Air (1000lbf)		BHA ROP (m/hr)		
133.75			30		32.7		

String Components
 SMITH Mi419HUPX, Bit, Stabilizer - Near Bit, Drill Collar, Stabilizer, Drill Collar, Drill Collar, Drill Collar, Drill Collar, Drill Collar, Drill Collar, Drill Collar, HWDP, HWDP, HWDP, HWDP, DP

DRILLING PARAMETERS							
Wellbore	Start Depth (mKB)	End Depth (mKB)	Cum Depth Drilled (m)	Drilling Time (hr)	Cum Drilling Time (hr)	Interval ROP (m/hr)	Flow Rate (gpm)
Original Hole	295.00	779.00	515.00	14.00	15.75	34.6	400
Weight on Bit (1000lbf)	Surface RPM (rpm)	SPP (psi)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque (ft•lb)	Off Bottom Torque (ft•lb)
14	140	450.0	58	60	56	4,000	2,000

ANNULAR VELOCITIES (DP & DC)						
Inner Bound	Sz Inner Bound (in)	Outer Boundary	Sz Outer Bound (in)	Top (mKB)	Btm (mKB)	AV (m/min)
HWDP	4.000	Wellbore	8 1/2	654.70	692.50	53.1

SURVEY DATA				
Date	MD (mKB)	Incl (°)	Azm (°)	TVD (mKB)

UNDERREAMING INTERVALS			
Top (mKB)	Btm (mKB)	OD (in)	Com



DAILY DRILLING REPORT

Cam_164

TRC: 139.00
 Report Start Date: 4/12/2012
 Report #: 5

UWI 100000746053	Well PID CAM_WH164	Tenure PL 277	Field Name Cam	Well Type Development	State/Province Queensland	Country AUS
Well Configuration Type Vertical	Well Status Available	Well Sub-Status	Spud Date 1/12/2012 00:30	Rig Release Date 6/12/2012 17:30	Job Start Date 30/11/2012 12:00	Job End Date 7/12/2012 07:00

JOB DETAILS					
AFE Number 01	Total AFE + Supp Amount (Cost) 657,142.00	Daily Field Est Total (Cost) 69,536.52	Cum Field Est To Date (Cost) 409,428.10	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
Target Formation Juandah and Taroom	Cum Time Log Days (days) 4.50	Problem Time Hours (hr) 0.00	Cum Problem Time Hours (hr) 10.25	Percent Problem Time (%) 0.00	Cum Percent Problem Time (%) 9.49

DAILY OPERATIONS					
Most Likely Duration (no plan ch...) 3.50	Original KB/RT Elevation (m) 299.60	Ground Elevation (m) 295.00	KB-Ground Distance (m) 4.60	Latitude (°) 26° 12' 10.64" S	Longitude (°) 149° 44' 39.652" E
Rig (Names) Saxon 165	Planned TD (mKB) 792.00	TD (max) (mKB) 779.00	End Depth (m...) 779.00	Depth Progress (m) 0.00	Weather Overcast

HSSE	
Days Since Lost Time Incident (days) 139.00	Days Since Recordable Incident (days) 139.00

Safety Observations	
Type	# Rpts
Good Observations	6
Hazard ID	12
Leadership Visits	10

SAFETY CHECK SUMMARY			
Type	Last Date	Days Last Chk (days)	Next Date
Daily Observation	30/11/2012	4	1/12/2012
Induction	3/12/2012	1	4/12/2012
Permit to Work	4/12/2012	0	5/12/2012
Post/Pre Shift Meeting	4/12/2012	0	5/12/2012
Toolbox Talk	30/11/2012	4	1/12/2012

DAILY CONTACTS		
Contact Name	Title	Mobile
Anthony Clarke	IPM Drilling Sup	0467785174
Scott Lowen	IPM WSS	0417404078
Liam O'Mara	Rig Manager	0499250585
Guy Irvine	Rig Manager	0417823427

POB		
Company	Job Title	Count
Saxon	Crew	20
Easternwell Group	Camp Management	3
IPM Schlumberger	WSS/FWE	12
QGC	Wellsite Geologist	1
Tresed	Truck Drivers	2
Neil Mansel Transport	Truck Drivers	0
Schlumberger Cementers	Cement Crew	0
Schlumberger WL	Wireline Crew	4
GE	Field technicians	2

DAILY REPORT
 Last 24hr Op's Summary
 Continue RIH f/ 192m to 779m, Circ Shakers Clean, Flow Chk, drop Survey, POOH to LOG, PJSM & Rig in Wireliners, RIH w/ Wireline Tools to 780m, LOG Well, L/D Tools & Rig out Wireliners, M/U Under Reaming BHA, Surface test open @ 50psi, RIH to 690m. Start U/R Interval #1- 692.0m to 692.8m, U/R Interval #2- 682.4m to 683.4m, U/R Interval #3- 649.9m to 650.8m, U/R Interval #4- 640.4m to 642.5m, U/R Interval #5- 593.6m to 595.6m, U/R Interval #6- 561.2m to 562.1m,

 Site Visit by Schlumberger Exec's
 Satish Pia - Executive VP World Operations
 Hinda Gharbi - President of Asia Pacific Operations
 Harjinder Rai - VP Asia Operations
 Gavin Rennick - Managing Director Australia
 Craig Vandenberg, Ahmed El-Toukhy, Richard de Groot, John Redrup,
 Juan Snyder, Gerry O'Dwyer, Craig Stolz

Summary 00:00 - 06:00
 Continue Under Reaming, U/R Interval #7- 484.3m to 484.9m, U/R Interval #8- 481.3m to 481.9m, U/R Interval #9- 443.5m to 444.5m, U/R Interval #10- 440.3m to 441.9m, U/R Interval #11- 414.9m to 415.5m, U/R Interval #12- 380.3m to 381.9m, U/R Interval #13- 376.6m to 377.4m, U/R Interval #14- 356.9m to 357.9m, U/R Interval #15- 355.9m to 356.4m, U/R Interval #16- 340.4m to 341.0m, U/R Interval #17- 316.8m to 317.5m, U/R Interval #18- 286.0m to 286.9m, U/R Interval #19- 276.6m to 279.2m, U/R Interval #20- 274.5m to 276.1m, Circulate

Planned Op's
 POOH, RIH w/ 7" Csg, Cement, Nipple Down, Rig Out to Move



DAILY DRILLING REPORT

Cam_164

TRC: 139.00
 Report Start Date: 4/12/2012
 Report #: 5

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00

Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
00:00	03:30	3.50	P		PH1	TI	Continue RIH f/ 192m to 779m
03:30	04:15	0.75	P		PH1	CIC	Circ btms up, 350gpm & 700psi,
04:15	08:15	4.00	P		PH1	TO	PJSM, Drop Survey, Flow Chk, POOH f/779m to Surface, Flow Chk @ BHA And Surface
08:15	09:00	0.75	P		PH1	HBH	L/D BHA & Clean Floor
09:00	10:00	1.00	P		ELS	HT	PJSM & Rig Up Wireline Loggers
10:00	10:15	0.25	P		ELS	SM	RIH w/ Wireline Tools
10:15	12:30	2.25	P		ELS	LOG	LOG f/ 779m out, LOG Multi Express 1 pass
12:30	13:30	1.00	P		ELS	HT	L/D Log Tools & rig out wireliners
13:30	15:00	1.50	P		PH2	HBH	M/U Under Reaming BHA
15:00	20:30	5.50	P		PH2	TI	RIH to 692.8m
20:30	00:00	3.50	P		PH2	RW	Start U/R Interval #1- 692.0m to 692.8m, U/R Interval #2- 682.4m to 683.4m, U/R Interval #3- 649.9m to 650.8m, U/R Interval #4- 640.4m to 642.5m, U/R Interval #5- 593.6m to 595.6m, U/R Interval #6- 561.2m to 562.1m,

CASING STRINGS

Csg Des	OD (in)	SD (mKB)
Conductor	14	10.00
Surface Casing	9 5/8	82.00

MUD PROPERTIES

Mud Type	Time	Depth (mKB)	Weight (lb/gal)	Funnel Viscosity (s/qt)
Water/KCL	22:00	779.00	9.00	34

MUD USED

Des	Units	Vendor	Rec	Consumed	On Loc	Daily Field Est (Cost)

MUD PUMP

1, Gardner-Denver, PZ-8

Pump Rating (hp)	750.0	Rod Diameter (in)	2.2441	Stroke Length (in)	7.99
Liner Size (in)	6 1/2	Volume Per Stroke Override (bbl/stk)	0.092		
Pressure (psi)	Slow Speed Check?	Strokes (spm)	Volumetric Efficiency (%)		

FORMATIONS (LAST 5)

Formation Name	Prog Top MD (mKB)	Drill Top MD (mKB)
Springbok Sandstone	106.00	152.58
Upper Juandah Coal Measures	246.00	237.82
Lower Juandah Coal Measures	395.00	366.78
Tangalooma	514.00	547.37
Taroom Coal Measures	636.00	629.89

LEASE FLUIDS

Fluid	To Lease (bbl)	Source	From Lease (bbl)	Dest	BS&W (%)	Carrier	Ref #	Note
Drilling Water	900.0	Production / Well Test				TRESED		
Drilling Water	900.0	Production / Well Test				TRESED		
Drilling Water	300.0	Production / Well Test				TRESED		

JOB SUPPLIES

Supply Item Des	Unit Label	Loc	Vendor	Received	Consumed	Cum On Loc

DRILL STRING AND BIT INFORMATION

BHA #<stringno>, <des>

Bit Run	Size (in)	Make	Model	IADC Codes	Serial Number	Length (m)
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)			IADC Bit Dull		
Drill String Length (m)	BHA Weight in Air (1000lbf)			BHA ROP (m/hr)		
String Components						

DRILLING PARAMETERS

Wellbore	Start Depth (mKB)	End Depth (mKB)	Cum Depth Drilled (m)	Drilling Time (hr)	Cum Drilling Time (hr)	Interval ROP (m/hr)	Flow Rate (gpm)
Weight on Bit (1000lbf)	Surface RPM (rpm)	SPP (psi)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque (ft*lb)	Off Bottom Torque (ft*lb)



DAILY DRILLING REPORT

Cam_164

TRC: 139.00

Report Start Date: 4/12/2012

Report #: 5

ANNULAR VELOCITIES (DP & DC)						
Inner Bound	Sz Inner Bound (in)	Outer Boundary	Sz Outer Bound (in)	Top (mKB)	Btm (mKB)	AV (m/min)

SURVEY DATA				
Date	MD (mKB)	Incl (°)	Azm (°)	TVD (mKB)

UNDERREAMING INTERVALS				
Top (mKB)	Btm (mKB)	OD (in)	Com	
481.30	481.90	16	1.79% Gas	
484.30	484.90	16	2.34% Gas	
561.20	562.10	16	5.03% Gas	
593.60	595.60	16	8.8% Gas	
640.40	642.50	16	13.4% Gas	
649.90	650.80	16	16.3% Gas	
682.40	683.40	16	8.8% Gas	
692.00	692.80	16	2.3% Gas	



DAILY DRILLING REPORT

Cam_164

TRC: 140.00
Report Start Date: 5/12/2012
Report #: 6

UWI 100000746053	Well PID CAM_WH164	Tenure PL 277	Field Name Cam	Well Type Development	State/Province Queensland	Country AUS
Well Configuration Type Vertical	Well Status Available	Well Sub-Status	Spud Date 1/12/2012 00:30	Rig Release Date 6/12/2012 17:30	Job Start Date 30/11/2012 12:00	Job End Date 7/12/2012 07:00

JOB DETAILS					
AFE Number 01	Total AFE + Supp Amount (Cost) 657,142.00	Daily Field Est Total (Cost) 111,640.90	Cum Field Est To Date (Cost) 521,069.00	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
Target Formation Juandah and Taroom	Cum Time Log Days (days) 5.50	Problem Time Hours (hr) 6.25	Cum Problem Time Hours (hr) 16.50	Percent Problem Time (%) 26.04	Cum Percent Problem Time (%) 12.50

DAILY OPERATIONS					
Most Likely Duration (no plan ch...) 3.50	Original KB/RT Elevation (m) 299.60	Ground Elevation (m) 295.00	KB-Ground Distance (m) 4.60	Latitude (°) 26° 12' 10.64" S	Longitude (°) 149° 44' 39.652" E
Rig (Names) Saxon 165	Planned TD (mKB) 792.00	TD (max) (mKB) 779.00	End Depth (m...) 779.00	Depth Progress (m) 0.00	Weather Sunny

HSSE	
Days Since Lost Time Incident (days) 140.00	Days Since Recordable Incident (days) 140.00

Safety Observations	
Type	# Rpts
Hazard ID	14

SAFETY CHECK SUMMARY			
Type	Last Date	Days Last Chk (days)	Next Date
Daily Observation	30/11/2012	5	1/12/2012
Induction	3/12/2012	2	4/12/2012
Permit to Work	4/12/2012	1	5/12/2012
Post/Pre Shift Meeting	4/12/2012	1	5/12/2012
Toolbox Talk	30/11/2012	5	1/12/2012

DAILY CONTACTS		
Contact Name	Title	Mobile
Anthony Clarke	IPM Drilling Sup	0467785174
Scott Lowen	IPM WSS	0417404078
Liam O'Mara	Rig Manager	0499250585
Guy Irvine	Rig Manager	0417823427

POB		
Company	Job Title	Count
Saxon	Crew	20
Easternwell Group	Camp Management	3
IPM Schlumberger	WSS/FWE	12
QGC	Wellsite Geologist	1
Tresed	Truck Drivers	2
Neil Mansel Transport	Truck Drivers	0
Schlumberger Cementers	Cement Crew	0
Schlumberger WL	Wireline Crew	4
GE	Field technicians	2

DAILY REPORT
 Last 24hr Op's Summary
 Continue Under Reaming, U/R Intervals # 7 thru 15, stop and repair hydraulic hose on Pipe arm, U/R Intervals #16 thru 20, Circulate, Flow Chk, POOH, L/D BHA, Prep to run 7" Csg, RIH w/ 7" Csg to 48m, Stop to replace 2 other hydraulic lines, Continue to Run 7" Csg f/ 48m to 731m, Circulate & Wait on Cementers, At 20:45 Cement Unit and Operators arrived but Refused to Rig in, Circulate at Reduced Rate and reciprocate String until 06:00.

****One Incident Reported & entered into HSE Incidents****

Summary 00:00 - 06:00
 Wait on Cementers

Planned Op's
 Rig in Cementers, Cement, WOC, Nipple Down, Derrick Inspection & Rig out

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00							
Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
00:00	03:45	3.75	P		PH2	RW	Continue Under Reaming, U/R Interval #7- 484.3m to 484.9m, U/R Interval #8- 481.3m to 481.9m, U/R Interval #9- 443.5m to 444.5m, U/R Interval #10- 440.3m to 441.9m, U/R Interval #11- 414.9m to 415.5m, U/R Interval #12- 380.3m to 381.9m, U/R Interval #13- 376.6m to 377.4m, U/R Interval #14- 356.9m to 357.9m, U/R Interval #15- 355.9m to 356.4m
03:45	04:30	0.75	TP	0.75	PH2	RR	PJSM & JHA, Change out Hydraulic Hose on Pipe Arm
04:30	06:30	2.00	P		PH2	RW	U/R Interval #16- 340.4m to 341.0m, U/R Interval #17- 316.8m to 317.5m, U/R Interval #18- 286.0m to 286.9m, U/R Interval #19- 276.6m to 279.2m, U/R Interval #20- 274.5m to 276.1m
06:30	09:00	2.50	P		PH2	TO	POOH w/ 16" Under Reamer Assembly, Flow Check at BHA
09:00	09:45	0.75	P		PH2	HBH	PJSM, L/D Under reaming Assembly
09:45	10:45	1.00	P		PC1	RRC	Clean Rig floor & Prep to Run 7" Csg
10:45	11:30	0.75	P		PC1	RC	RIH w/ 4jts of 7"- 23lb/ft - K55, Csg to 48m
11:30	12:30	1.00	TP	1.00	PC1	RR	PJSM & JHA, Repair and Replace 2 Hydraulic Hoses on Pipe Arm



DAILY DRILLING REPORT

Cam_164

TRC: 140.00
 Report Start Date: 5/12/2012
 Report #: 6

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00

Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
12:30	18:45	6.25	P		PC1	RC	RIH w/ 7", K55, 23lb/ft Csg to 441m, Install ECP/DV Assembly (to be Landed at 249.05m), Break Circ, Check floats, Attach Centralizers & Stop Collars every 3jts as per Drilling Program, RIH w/ 7" Csg f/ 441m to 731m.
18:45	19:30	0.75	P		PC1	CIC	Circulate at reduced rate of 180gpm, 65psi for 2 X btms up as per Drilling Program
19:30	20:45	1.25	TP	1.25	PC1	WOP	Circulate at reduced rate of 180gpm, 65psi, while waiting for Cementers to arrive
20:45	00:00	3.25	TP	3.25	PC1	WOP	Circulate intermediately until 06:00 because Cementers arrived @ 20:45 & would not rig in due to Hours of service

CASING STRINGS		
Csg Des	OD (in)	SD (mKB)
Conductor	14	10.00
Surface Casing	9 5/8	82.00
Production Casing/Liner (1)	7	739.00

Mud Type	Time	Depth (mKB)	Weight (lb/gal)	Funnel Viscosity (s/qt)
Water/KCL	00:00	250.00	8.90	33

MUD USED							
Des	Units	Vendor	Rec	Consumed	On Loc	Daily Field Est (Cost)	

MUD PUMP			
# 1, Gardner-Denver, PZ-8			
Pump Rating (hp)	Rod Diameter (in)	Stroke Length (in)	
750.0	2.2441	7.99	
Liner Size (in)	Volume Per Stroke Override (bbl/stk)		
6 1/2	0.092		
Pressure (psi)	Slow Speed Check?	Strokes (spm)	Volumetric Efficiency (%)

FORMATIONS (LAST 5)		
Formation Name	Prog Top MD (mKB)	Drill Top MD (mKB)
Springbok Sandstone	106.00	152.58
Upper Juandah Coal Measures	246.00	237.82
Lower Juandah Coal Measures	395.00	366.78
Tangalooma	514.00	547.37
Taroom Coal Measures	636.00	629.89

LEASE FLUIDS								
Fluid	To Lease (bbl)	Source	From Lease (bbl)	Dest	BS&W (%)	Carrier	Ref #	Note
	900.0					TRESED		
	900.0					TRESED		
	300.0					TRESED		

JOB SUPPLIES						
Supply Item Des	Unit Label	Loc	Vendor	Received	Consumed	Cum On Loc

DRILL STRING AND BIT INFORMATION							
BHA #<stringno>, <des>							
Bit Run	Size (in)	Make	Model	IADC Codes	Serial Number	Length (m)	
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull					
Drill String Length (m)	BHA Weight in Air (1000lbf)	BHA ROP (m/hr)					
String Components							

DRILLING PARAMETERS							
Wellbore	Start Depth (mKB)	End Depth (mKB)	Cum Depth Drilled (m)	Drilling Time (hr)	Cum Drilling Time (hr)	Interval ROP (m/hr)	Flow Rate (gpm)
Weight on Bit (1000lbf)	Surface RPM (rpm)	SPP (psi)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque (ft•lb)	Off Bottom Torque (ft•lb)

ANNULAR VELOCITIES (DP & DC)						
Inner Bound	Sz Inner Bound (in)	Outer Boundary	Sz Outer Bound (in)	Top (mKB)	Btm (mKB)	AV (m/min)

SURVEY DATA				
Date	MD (mKB)	Incl (°)	Azm (°)	TVD (mKB)
5/12/2012 08:00	777.00	1.00	170.00	

UNDERREAMING INTERVALS			
Top (mKB)	Btm (mKB)	OD (in)	Com
274.50	276.10	16	6.56% Gas



DAILY DRILLING REPORT

Cam_164

TRC: 140.00

Report Start Date: 5/12/2012

Report #: 6

UNDERREAMING INTERVALS

Top (mKB)	Btm (mKB)	OD (in)	Com
276.60	279.20	16	5.88% Gas
286.00	286.90	16	.64% Gas
316.80	317.50	16	.15% Gas
340.40	341.00	16	.18% Gas
355.90	356.40	16	.24% Gas
356.90	357.90	16	.15% Gas
376.60	377.40	16	.90% Gas
380.30	381.90	16	.90% Gas
414.90	415.50	16	.92% Gas
440.30	441.90	16	3.02% Gas
443.50	444.50	16	1.58% Gas
481.30	481.90	16	1.79% Gas
484.30	484.90	16	2.34% Gas
561.20	562.10	16	5.03% Gas
593.60	595.60	16	8.8% Gas
640.40	642.50	16	13.4% Gas
649.90	650.80	16	16.3% Gas
682.40	683.40	16	8.8% Gas
692.00	692.80	16	2.3% Gas



DAILY DRILLING REPORT

Cam_164

TRC: 141.00
Report Start Date: 6/12/2012
Report #: 7

UWI 100000746053	Well PID CAM_WH164	Tenure PL 277	Field Name Cam	Well Type Development	State/Province Queensland	Country AUS
Well Configuration Type Vertical	Well Status Available	Well Sub-Status	Spud Date 1/12/2012 00:30	Rig Release Date 6/12/2012 17:30	Job Start Date 30/11/2012 12:00	Job End Date 7/12/2012 07:00

JOB DETAILS					
AFE Number 01	Total AFE + Supp Amount (Cost) 657,142.00	Daily Field Est Total (Cost) 30,529.72	Cum Field Est To Date (Cost) 551,598.72	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
Target Formation Juandah and Taroom	Cum Time Log Days (days) 6.50	Problem Time Hours (hr) 6.25	Cum Problem Time Hours (hr) 22.75	Percent Problem Time (%) 26.04	Cum Percent Problem Time (%) 14.58

DAILY OPERATIONS					
Most Likely Duration (no plan ch...) 3.50	Original KB/RT Elevation (m) 299.60	Ground Elevation (m) 295.00	KB-Ground Distance (m) 4.60	Latitude (°) 26° 12' 10.64" S	Longitude (°) 149° 44' 39.652" E
Rig (Names) Saxon 165	Planned TD (mKB) 792.00	TD (max) (mKB) 779.00	End Depth (m...) 779.00	Depth Progress (m) 0.00	Weather Sunny

HSSE	
Days Since Lost Time Incident (days) 141.00	Days Since Recordable Incident (days) 141.00

Safety Observations	
Type	# Rpts
Hazard ID	16

SAFETY CHECK SUMMARY			
Type	Last Date	Days Last Chk (days)	Next Date
Daily Observation	30/11/2012	6	1/12/2012
Induction	3/12/2012	3	4/12/2012
Permit to Work	4/12/2012	2	5/12/2012
Post/Pre Shift Meeting	4/12/2012	2	5/12/2012
Toolbox Talk	30/11/2012	6	1/12/2012

DAILY CONTACTS		
Contact Name	Title	Mobile
Anthony Clarke	IPM Drilling Sup	0467785174
Scott Lowen	IPM WSS	0417404078
Liam O'Mara	Rig Manager	0499250585
Guy Irvine	Rig Manager	0417823427

POB		
Company	Job Title	Count
Saxon	Crew	16
Easternwell Group	Camp Management	3
IPM Schlumberger	WSS/FWE	1
QGC	Wellsite Geologist	1
Tresed	Truck Drivers	2
Neil Mansel Transport	Truck Drivers	0
Schlumberger Cementers	Cement Crew	0
Schlumberger WL	Wireline Crew	0
GE	Field technicians	0

DAILY REPORT
Last 24hr Op's Summary Circulate intermediately until 06:00 and Wait on cementers, Rig in Cementers & Cement around 7" Csg thru Stage Tool, Rig out Cementers, WOC, Nipple down, Rig Released @ 17:30 Rig out & Perform Derrick inspection and Partical testing welds by Saxon
Summary 00:00 - 06:00 Rig Released, Continued Derrick inspection And Partical testing welds
Planned Op's Move to Cam_163

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00							
Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
00:00	06:15	6.25	TP	6.25	PC1	WOP	WOP, Circulate intermediately until 06:00 because Cementers arrived @ 20:45 & would not rig in due to Hours of service
06:15	06:30	0.25	P		PC1	RC	Land Liner Hanger (Pb 11508-1-15), Pressure Test Hanger and STS, Low 250psi for 10 mins & High of 1500psi for 10 mins, all held OK, And Rig in cementers
06:30	09:15	2.75	P		PC1	RU	Cementers Rigging in at a snails pace
09:15	09:30	0.25	P		PC1	SM	PJSM w/ Cement Crew, Rig crew, RM & WSS
09:30	11:30	2.00	P		PC1	CMC	Insert Dart, Install Cement Head, Pump 5.0bbl, Pressure Test lines to 3000psi continue displace with a total of 33bbls water, Bump Dart & Inflate Packer (750psi), Open stage tool w/ 1800psi, Pumped 10.0bbl of water, Mix and pump 33bbls of Cmt Slurry, Release Plug and Displace w/ 33bbls, Bumped Plug to 2000psi, 5bbls of Good Cement returns to surface.
11:30	12:00	0.50	P		PC1	RD	Rig Out Cementers
12:00	15:00	3.00	P		PC1	WOC	WOC
15:00	17:30	2.50	P		PC1	RD	Nipple Down BOP & Release Rig @ 17:30



DAILY DRILLING REPORT

Cam_164

TRC: 141.00
 Report Start Date: 6/12/2012
 Report #: 7

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00

Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
17:30	00:00	6.50	P		RMO	RR	Rig Released @ 17:30 Saxon Inspectors doing a Derrick Crack inspection & Partical testing of Welds, Prior to Moving to Cam_163

CASING STRINGS

Csg Des	OD (in)	SD (mKB)
Conductor	14	10.00
Surface Casing	9 5/8	82.00
Production Casing/Liner (1)	7	739.00

MUD PROPERTIES

Mud Type	Time	Depth (mKB)	Weight (lb/gal)	Funnel Viscosity (s/qt)

MUD USED

Des	Units	Vendor	Rec	Consumed	On Loc	Daily Field Est (Cost)

MUD PUMP

1, Gardner-Denver, PZ-8

Pump Rating (hp)	750.0	Rod Diameter (in)	2.2441	Stroke Length (in)	7.99
Liner Size (in)	6 1/2	Volume Per Stroke Override (bbl/stk)			0.092
Pressure (psi)		Slow Speed Check?		Strokes (spm)	Volumetric Efficiency (%)

FORMATIONS (LAST 5)

Formation Name	Prog Top MD (mKB)	Drill Top MD (mKB)
Springbok Sandstone	106.00	152.58
Upper Juandah Coal Measures	246.00	237.82
Lower Juandah Coal Measures	395.00	366.78
Tangalooma	514.00	547.37
Taroom Coal Measures	636.00	629.89

LEASE FLUIDS

Fluid	To Lease (bbl)	Source	From Lease (bbl)	Dest	BS&W (%)	Carrier	Ref #	Note
	900.0					TRESED		
	900.0					TRESED		
	300.0					TRESED		

JOB SUPPLIES

Supply Item Des	Unit Label	Loc	Vendor	Received	Consumed	Cum On Loc

DRILL STRING AND BIT INFORMATION

BHA #<stringno>, <des>

Bit Run	Size (in)	Make	Model	IADC Codes	Serial Number	Length (m)
Nozzles (1/32")		Bit Total Fluid Area (nozzles) (in ²)		IADC Bit Dull		
Drill String Length (m)		BHA Weight in Air (1000lbf)		BHA ROP (m/hr)		
String Components						

DRILLING PARAMETERS

Wellbore	Start Depth (mKB)	End Depth (mKB)	Cum Depth Drilled (m)	Drilling Time (hr)	Cum Drilling Time (hr)	Interval ROP (m/hr)	Flow Rate (gpm)
Weight on Bit (1000lbf)	Surface RPM (rpm)	SPP (psi)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque (ft•lb)	Off Bottom Torque (ft•lb)

ANNULAR VELOCITIES (DP & DC)

Inner Bound	Sz Inner Bound (in)	Outer Boundary	Sz Outer Bound (in)	Top (mKB)	Btm (mKB)	AV (m/min)

SURVEY DATA

Date	MD (mKB)	Incl (°)	Azm (°)	TVD (mKB)

UNDERREAMING INTERVALS

Top (mKB)	Btm (mKB)	OD (in)	Com
274.50	276.10	16	6.56% Gas
276.60	279.20	16	5.88% Gas
286.00	286.90	16	.64% Gas
316.80	317.50	16	.15% Gas



DAILY DRILLING REPORT

Cam_164

TRC: 141.00

Report Start Date: 6/12/2012

Report #: 7

UNDERREAMING INTERVALS

Top (mKB)	Btm (mKB)	OD (in)	Com
340.40	341.00	16	.18% Gas
355.90	356.40	16	.24% Gas
356.90	357.90	16	.15% Gas
376.60	377.40	16	.90% Gas
380.30	381.90	16	.90% Gas
414.90	415.50	16	.92% Gas
440.30	441.90	16	3.02% Gas
443.50	444.50	16	1.58% Gas
481.30	481.90	16	1.79% Gas
484.30	484.90	16	2.34% Gas
561.20	562.10	16	5.03% Gas
593.60	595.60	16	8.8% Gas
640.40	642.50	16	13.4% Gas
649.90	650.80	16	16.3% Gas
682.40	683.40	16	8.8% Gas
692.00	692.80	16	2.3% Gas



DAILY DRILLING REPORT

Cam_164

TRC: 142.00

Report Start Date: 7/12/2012

Report #: 8

UWI 100000746053	Well PID CAM_WH164	Tenure PL 277	Field Name Cam	Well Type Development	State/Province Queensland	Country AUS
Well Configuration Type Vertical	Well Status Available	Well Sub-Status	Spud Date 1/12/2012 00:30	Rig Release Date 6/12/2012 17:30	Job Start Date 30/11/2012 12:00	Job End Date 7/12/2012 07:00

JOB DETAILS					
AFE Number 01	Total AFE + Supp Amount (Cost) 657,142.00	Daily Field Est Total (Cost) 6,392.71	Cum Field Est To Date (Cost) 557,991.43	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
Target Formation Juandah and Taroom	Cum Time Log Days (days) 6.79	Problem Time Hours (hr) 0.00	Cum Problem Time Hours (hr) 22.75	Percent Problem Time (%) 0.00	Cum Percent Problem Time (%) 13.96

DAILY OPERATIONS					
Most Likely Duration (no plan ch...) 3.50	Original KB/RT Elevation (m) 299.60	Ground Elevation (m) 295.00	KB-Ground Distance (m) 4.60	Latitude (°) 26° 12' 10.64" S	Longitude (°) 149° 44' 39.652" E
Rig (Names) Saxon 165	Planned TD (mKB) 792.00	TD (max) (mKB) 779.00	End Depth (m...) 779.00	Depth Progress (m) 0.00	Weather Sun

HSSE	
Days Since Lost Time Incident (days) 142.00	Days Since Recordable Incident (days) 142.00

Safety Observations	
Type	# Rpts

SAFETY CHECK SUMMARY			
Type	Last Date	Days Last Chk (days)	Next Date
Daily Observation	30/11/2012	6	2/12/2012
Induction	3/12/2012	3	5/12/2012
Permit to Work	4/12/2012	2	6/12/2012
Post/Pre Shift Meeting	4/12/2012	2	6/12/2012
Toolbox Talk	30/11/2012	6	2/12/2012

DAILY CONTACTS		
Contact Name	Title	Mobile
Anthony Clarke	IPM Drilling Sup	0467785174
Scott Lowen	IPM WSS	0417404078
Liam O'Mara	Rig Manager	0499250585
Guy Irvine	Rig Manager	0417823427

POB		
Company	Job Title	Count
Saxon	Crew	16
Easternwell Group	Camp Management	3
IPM Schlumberger	WSS/FWE	1
QGC	Wellsite Geologist	1
Tresed	Truck Drivers	2
Neil Mansel Transport	Truck Drivers	0
Schlumberger Cementers	Cement Crew	0
Schlumberger WL	Wireline Crew	0
GE	Field technicians	0

DAILY REPORT	
Last 24hr Op's Summary Rig Released @ 17:30 Dec 6/12 Rig out & Continued Derrick inspection And Partical testing welds First Load off Cam_164 & moved to Cam_163 @ 07:00 Summary 00:00 - 06:00	
Planned Op's	

HOURLY OPERATIONS SUMMARY 00:00 TO 24:00							
Start Time	End Time	Dur (hr)	Class	NPT (hr)	Phase	Op	Act Desc
00:00	07:00	7.00	P		RMO	RR	Rig Realeased @ 17:30 Saxon Inspectors doing a Derrick Crack inspection & Partical testing of Welds, Prior to Moving to Cam_163

CASING STRINGS		
Csg Des	OD (in)	SD (mKB)
Conductor	14	10.00
Surface Casing	9 5/8	82.00
Production Casing/Liner (1)	7	739.00

MUD PROPERTIES			
Mud Type	Time	Depth (mKB)	Weight (lb/gal)
			Funnel Viscosity (s/qt)

MUD USED						
Des	Units	Vendor	Rec	Consumed	On Loc	Daily Field Est (Cost)



DAILY DRILLING REPORT

Cam_164

TRC: 142.00
 Report Start Date: 7/12/2012
 Report #: 8

MUD PUMP

# 1, Gardner-Denver, PZ-8			
Pump Rating (hp)	750.0	Rod Diameter (in)	2.2441
Liner Size (in)	6 1/2	Stroke Length (in)	7.99
Volume Per Stroke Override (bbl/stk)	0.092		
Pressure (psi)	Slow Speed Check?	Strokes (spm)	Volumetric Efficiency (%)

FORMATIONS (LAST 5)

Formation Name	Prog Top MD (mKB)	Drill Top MD (mKB)
Springbok Sandstone	106.00	152.58
Upper Juandah Coal Measures	246.00	237.82
Lower Juandah Coal Measures	395.00	366.78
Tangalooma	514.00	547.37
Taroom Coal Measures	636.00	629.89

LEASE FLUIDS

Fluid	To Lease (bbl)	Source	From Lease (bbl)	Dest	BS&W (%)	Carrier	Ref #	Note
	900.0					TRESED		
	900.0					TRESED		
	300.0					TRESED		

JOB SUPPLIES

Supply Item Des	Unit Label	Loc	Vendor	Received	Consumed	Cum On Loc

DRILL STRING AND BIT INFORMATION

BHA #<stringno>, <des>							
Bit Run	Size (in)	Make	Model	IADC Codes	Serial Number	Length (m)	
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)			IADC Bit Dull			
Drill String Length (m)	BHA Weight in Air (1000lbf)			BHA ROP (m/hr)			
String Components							

DRILLING PARAMETERS

Wellbore	Start Depth (mKB)	End Depth (mKB)	Cum Depth Drilled (m)	Drilling Time (hr)	Cum Drilling Time (hr)	Interval ROP (m/hr)	Flow Rate (gpm)
Weight on Bit (1000lbf)	Surface RPM (rpm)	SPP (psi)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque (ft•lb)	Off Bottom Torque (ft•lb)

ANNULAR VELOCITIES (DP & DC)

Inner Bound	Sz Inner Bound (in)	Outer Boundary	Sz Outer Bound (in)	Top (mKB)	Btm (mKB)	AV (m/min)

SURVEY DATA

Date	MD (mKB)	Incl (°)	Azm (°)	TVD (mKB)

UNDERREAMING INTERVALS

Top (mKB)	Btm (mKB)	OD (in)	Com
274.50	276.10	16	6.56% Gas
276.60	279.20	16	5.88% Gas
286.00	286.90	16	.64% Gas
316.80	317.50	16	.15% Gas
340.40	341.00	16	.18% Gas
355.90	356.40	16	.24% Gas
356.90	357.90	16	.15% Gas
376.60	377.40	16	.90% Gas
380.30	381.90	16	.90% Gas
414.90	415.50	16	.92% Gas
440.30	441.90	16	3.02% Gas
443.50	444.50	16	1.58% Gas
481.30	481.90	16	1.79% Gas
484.30	484.90	16	2.34% Gas
561.20	562.10	16	5.03% Gas
593.60	595.60	16	8.8% Gas
640.40	642.50	16	13.4% Gas
649.90	650.80	16	16.3% Gas
682.40	683.40	16	8.8% Gas
692.00	692.80	16	2.3% Gas

APPENDIX 3
DAILY GEOLOGY REPORTS

Daily Geological Report #1 for 30-11-2012

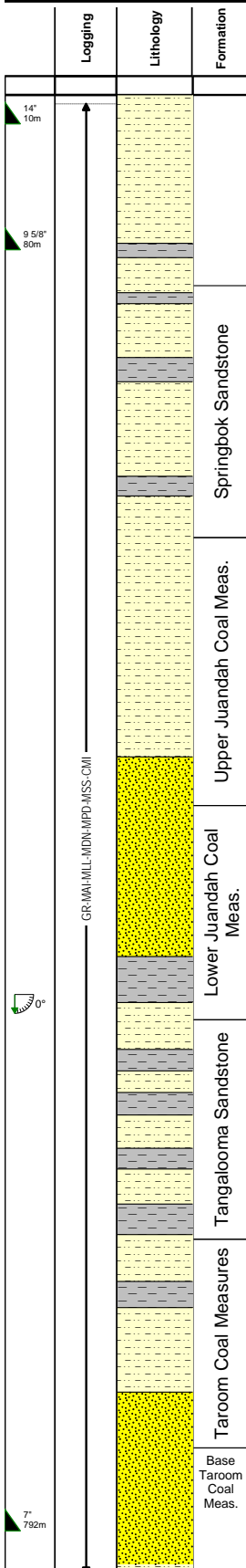
Cam 164
Surat Basin
CSG Development well

LICENCE PL 277	MIDNIGHT DEPTH	06:00am DEPTH	ON LOCATION : 30-11-2012	RIG : Saxon 165
	10 mMDRT	85 mMDRT	SPUD DATE : 01-12-2012	TD DATE :
	Operations Status at Midnight: Rig up & prepare for spud.		GL : +295m	RT : +299.5m
			PLAN TD : 792m	LONGITUDE : 149 ° 44 ' 39.65208" E
			ACTUAL TD : m	LATITUDE : -26° 12 ' 10.64041" S

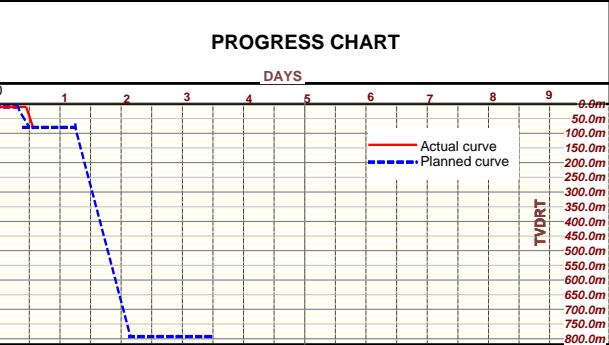
PROGNOSIS

ACTUAL

WELLSITE GEOLOGIST : Adam Rope



Depth (MDRT)	Litho	Ream	DST	Formation	Total Gas %	ROP m/hr	Casing Surveys
0m					0	200	0
50m							
100m							
150m							
200m							
250m							
300m							
350m							
400m							
450m							
500m							
550m							
600m							
650m							
700m							
750m							
800m							



DAILY DRILLING PROGRESS:
FROM: 10 m TO: 10 mMDRT; 24Hrs Progress: 0 m

SUMMARY OF LAST 24 HOURS :
Complete rig move to Cam 164. Spot all rig equipment, mud tanks & buildings. Conduct PJSM and hazard hunt. Rectify same. Hold PJSM, raise dog-house & mast. Test ESD's and conduct pre-spud checklists. Test surface lines and standpipe manifold. Pick up and M/U 12 1/4" BHA. Drill 12 1/4" surface section to 85m MDRT. Pump his-vis sweep, circulate hole clean. Conduct Wiper trip, POOH & lay out BHA.

CURRENT OPERATION :
Rig-up to RIH 9 5/8" casing

24 HOUR FORECAST :
RIH 9 5/8" casing. Cement same with SLB. L/D landing joint. Nipple up BOP & conduct full pressure test. M/U 8 1/2" drilling BHA. RIH, tag cement, drill out shoetrack and float equipment. Drill ahead 8 1/2" hole section to projected TD @ 792m MDRT.

COMMENTS :
1 x Wireline run required using SLB tools comprising PEX-BHC-AIT or MultiExpress slim tools.
No DST's or FRT's required. This well will be under-reamed to 16".

LOG RUNS

Run	Log suite	Start	End

DST

Test No.	Unit/Seam Tested	From (mRT)	To (mRT)	Shut In Times (mins)	Flow Times (min)	Recovery (Formation Fluid)

Daily Geological Report #2 for 02-12-2012

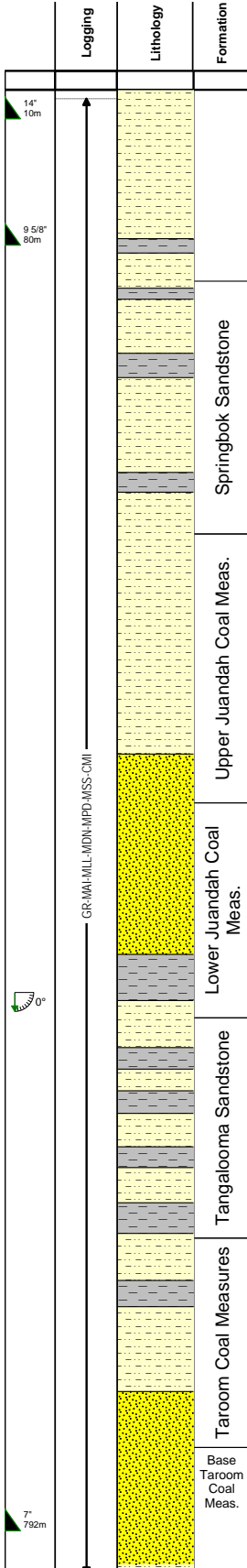
Cam 164
Surat Basin
CSG Development well

LICENCE PL 277	MIDNIGHT DEPTH	06:00am DEPTH	ON LOCATION : 30-11-2012	RIG : Saxon 165
	85 mMDRT	85 mMDRT	SPUD DATE : 01-12-2012	TD DATE :
Operations Status at Midnight: Pressure test BOP.			GL : +295m	RT : +299.5m
			PLAN TD : 792m	LONGITUDE : 149 ° 44 ' 39.65208" E
			ACTUAL TD : m	LATITUDE : -26° 12 ' 10.64041" S

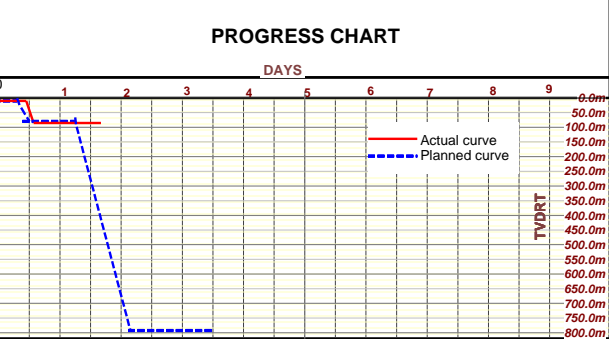
PROGNOSIS

ACTUAL

WELLSITE GEOLOGIST : Adam Rope



Depth (MDRT)	Litho	Ream	DST	Formation	Total Gas 0 % 25	ROP 200 m/hr	Casing Surveys
0m							
10m							
80m							
100m							
150m							
200m							
250m							
300m							
350m							
400m							
450m							
500m							
550m							
600m							
650m							
700m							
750m							
800m							



DAILY DRILLING PROGRESS:
FROM: 10m TO: 85 mMDRT; 24Hrs Progress: 75 m

SUMMARY OF LAST 24 HOURS :
Rig up & RIH 9 5/8" casing. Wait on cementers. PJSM w/cementers, and cement 9 5/8" casing as per programme. L/O landing joint. Nipple up BOP & conduct full pressure test.

CURRENT OPERATION :
Complete full BOP pressure test.

24 HOUR FORECAST :
M/U 8 1/2" drilling BHA. RIH, tag cement, drill out shoetrack and float equipment. Drill ahead 8 1/2" hole section to projected TD @ 792m MDRT. Circulate hole clean, pump hi-vis sweep. Conduct wiper trip to 9 5/8" casing shoe. RIH to TD, drop MSS survey, POOH to surface, retrieve MSS. Lay out 8 1/2" drilling BHA. Prepare and rig up SLB Wireline for logging run. Complete MultiExpress slim tools logging run, POOH & L/O logging tools.

COMMENTS :
1 x Wireline run required using SLB tools comprising PEX-BHC-AIT or MultiExpress slim tools.

SLB Wireline have been contacted and are due on site (camp) tonight.

No DST's or FRT's required. This well will be under-reamed to 16".

LOG RUNS

Run	Log suite	Start	End

DST

Test No.	Unit/Seam Tested	From (mRT)	To (mRT)	Shut In Times (mins)	Flow Times (min)	Recovery (Formation Fluid)

Daily Geological Report #3 for 03-12-2012

Cam 164
Surat Basin
CSG Development well

LICENCE PL 277	MIDNIGHT DEPTH	06:00am DEPTH	ON LOCATION : 30-11-2012	RIG : Saxon 165
	296 mMDRT	507.22 mMDRT	SPUD DATE : 01-12-2012	TD DATE :
Operations Status at Midnight: Drill ahead 8 1/2" production hole.			GL : +295m	RT : +299.5m
			PLAN TD : 792m	LONGITUDE : 149 ° 44 ' 39.65208" E
			ACTUAL TD : m	LATITUDE : -26° 12 ' 10.64041" S

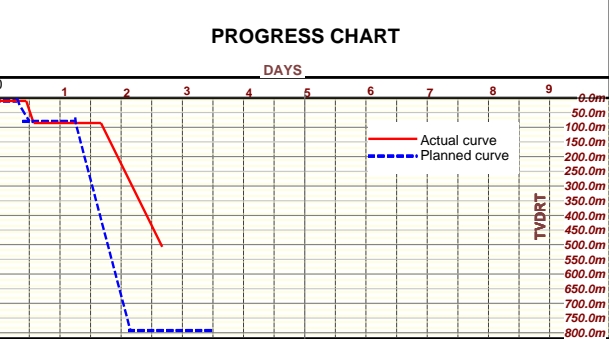
PROGNOSIS

ACTUAL

WELLSITE GEOLOGIST : Adam Rope

Logging	Lithology	Formation
14" 10m		
9 5/8" 80m		Springbok Sandstone
		Upper Juandah Coal Meas.
		Lower Juandah Coal Meas.
		Tangalooma Sandstone
		Taroom Coal Measures
7" 792m		Base Taroom Coal Meas.

Depth (MDRT)	Litho	Ream	DST	Formation	Total Gas	ROP	Casing Surveys
					% 25	200 m/hr	
0m							
50m							
100m							
150m							
200m							
250m							
300m							
350m							
400m							
450m							
500m							
550m							
600m							
650m							
700m							
750m							
800m							



DAILY DRILLING PROGRESS:
FROM: 85 m TO: 296 mMDRT; 24Hrs Progress: 211 m

SUMMARY OF LAST 24 HOURS :
M/U 8 1/2" drilling BHA. RIH, tag cement, drill out shoetrack and float equipment. Drill ahead 8 1/2" hole section to 264m MDRT. Low ROP, suspect bit wear (RR13), POOH for bit change. RIH with replacement RR bit, & drill ahead 8 1/2" production hole section.

CURRENT OPERATION :
Drill ahead 8 1/2" production hole.

24 HOUR FORECAST :
Drill ahead 8 1/2" hole section to projected TD @ 792m MDRT. Circulate hole clean, pump hi-vis sweep. Conduct wiper trip to 9 5/8" casing shoe. RIH to TD, circulate hole clean. Drop MSS survey, POOH to surface, retrieve MSS. Lay out 8 1/2" drilling BHA. Rig up SLB Wireline, conduct 1 x wireline run - MultiExpress Combo. Rig down & release loggers. M/U 16" Under reamer and surface test. RIH to lowest interval, commence under reaming programme in Walloon Sub Group.

COMMENTS :
1 x Wireline run required using SLB tools comprising MultiExpress slim tools.
SLB Wireline have been contacted and are due on site later on today.
No DST's or FRT's required. This well will be under-reamed to 16".

LOG RUNS

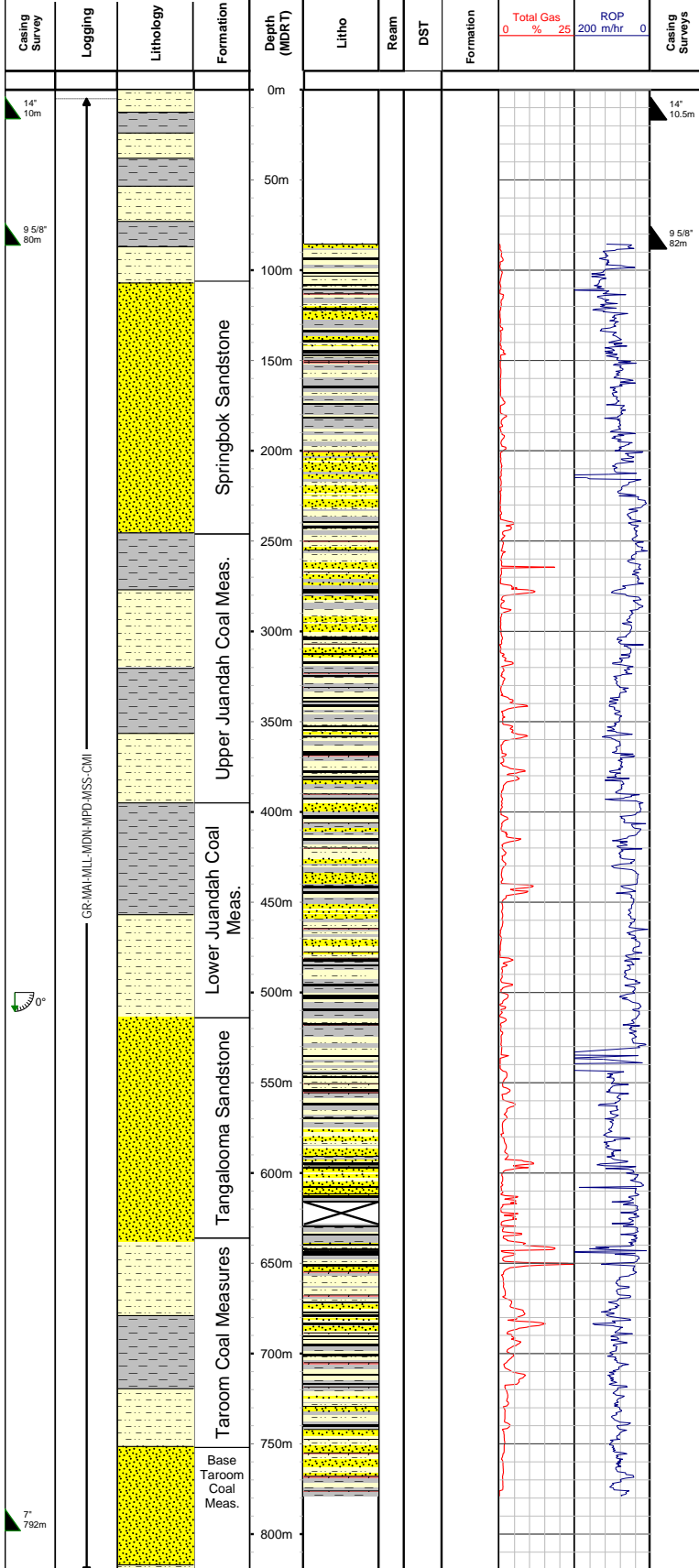
Run	Log suite	Start	End			
DST						
Test No.	Unit/Seam Tested	From (mRT)	To (mRT)	Shut In Times (mins)	Flow Times (min)	Recovery (Formation Fluid)

Daily Geological Report #4 for 04-12-2012

Cam 164
Surat Basin
 CSG Development well

LICENCE PL 277	MIDNIGHT DEPTH	06:00am DEPTH	ON LOCATION : 30-11-2012	RIG : Saxon 165
	779.77 mMDRT	779.77 mMDRT	SPUD DATE : 01-12-2012	TD DATE : 03-12-2012
Operations Status at Midnight: Wiper trip to 9 5/8" casing shoe.			GL : +295m	RT : +299.5m
			PLAN TD : 792m	LONGITUDE : 149 ° 44 ' 39.65208" E
			ACTUAL TD : 779.77m	LATITUDE : -26° 12 ' 10.64041" S

PROGNOSIS | **ACTUAL** | **WELLSITE GEOLOGIST : Adam Rope**



PROGRESS CHART

Graph showing Actual curve (red) and Planned curve (blue) over 9 days. Y-axis is TVDRT (0.0m to 800.0m). X-axis is DAYS (0 to 9).

DAILY DRILLING PROGRESS:
 FROM: 296 m TO: 779.77 mMDRT; 24Hrs Progress: 483.77 m

SUMMARY OF LAST 24 HOURS :
 Drill 8 1/2" hole section to 516m MDRT. Circulate hole while wait on suction truck to remove cuttings debris from tanks – tanks full. Truck stuck en route from camp to rig due to overnight rain and slippery roads. Drill ahead 8 1/2" hole section f/519 – 530m MDRT. Circulate hole while continue wait on suction truck. Continue drill ahead 8 1/2" production hole section to TD @ 779.77m MDRT. Circulate hole clean, pump hi-vis sweep. Conduct wiper trip to 9 5/8" casing shoe. RIH to TD, circulate hole clean. Drop MSS survey, POOH to surface.

CURRENT OPERATION :
 POOH to surface.

24 HOUR FORECAST :
 POOH to surface, retrieve MSS. Lay out 8 1/2" drilling BHA. Rig up SLB Wireline, conduct 1 x wireline run - MultiExpress Combo. Rig down & release loggers. M/U 16" Under reamer and surface test. RIH to lowest interval, commence under reaming programme in Walloon Sub Group.

COMMENTS :
 1 x Wireline run required using SLB tools comprising MultiExpress slim tools.
 SLB Wireline have been contacted and are due on site this AM.
 No DST's or FRT's required. This well will be under-reamed to 16".

LOG RUNS

Run	Log suite	Start	End
1	MultiExpress	m	m

DST

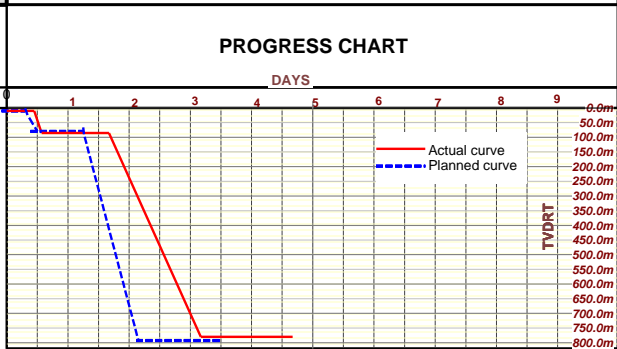
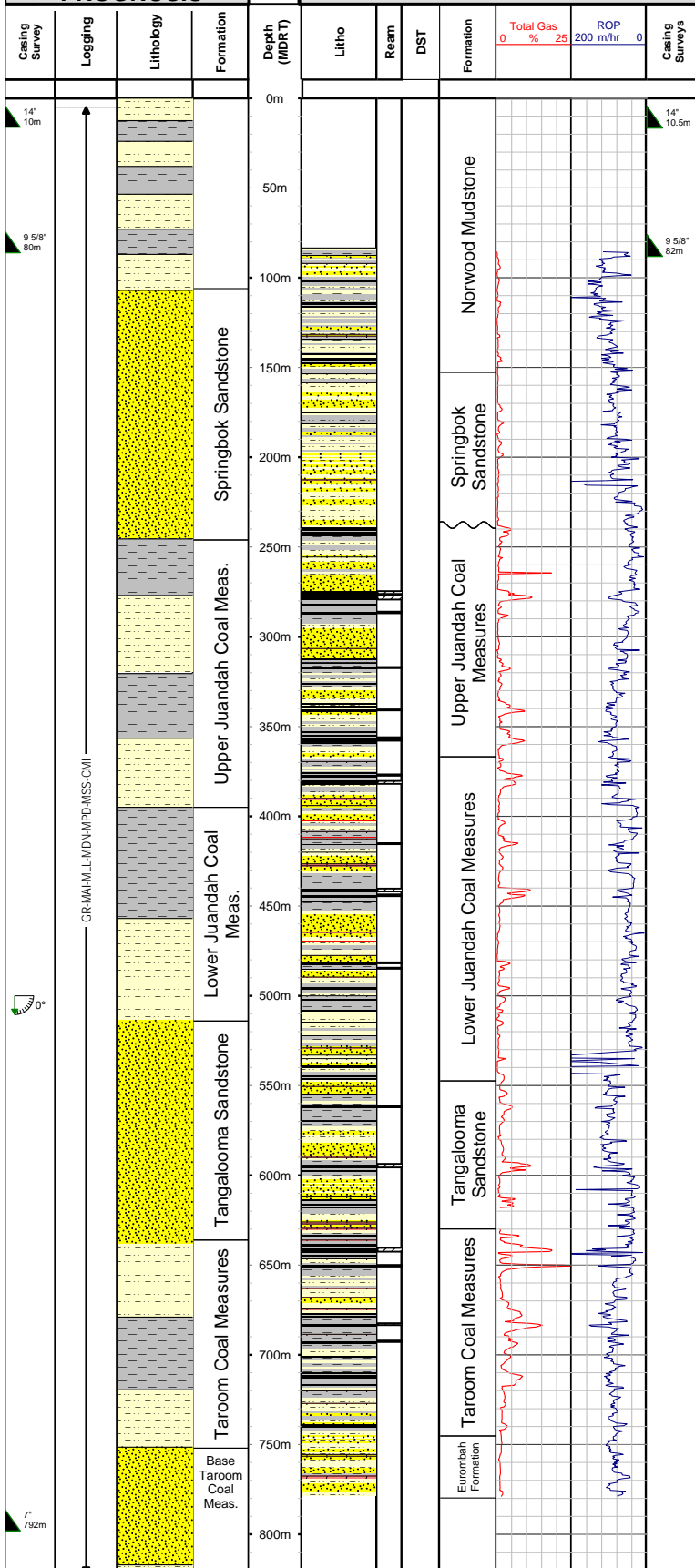
Test No.	Unit/Seam Tested	From (mRT)	To (mRT)	Shut In Times (mins)	Flow Times (min)	Recovery (Formation Fluid)
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Daily Geological Report #5 for 05-12-2012

Cam 164
Surat Basin
CSG Development well

LICENCE PL 277	MIDNIGHT DEPTH	06:00am DEPTH	ON LOCATION : 30-11-2012	RIG : Saxon 165
	779.77 mMDRT	779.77 mMDRT	SPUD DATE : 01-12-2012	TD DATE : 03-12-2012
Operations Status at Midnight: Conduct under reaming programme.			GL : +295m	RT : +299.5m
			PLAN TD : 792m	LONGITUDE : 149° 44' 39.65208" E
			ACTUAL TD : 779.77m	LATITUDE : -26° 12' 10.64041" S

PROGNOSIS | **ACTUAL** | **WELLSITE GEOLOGIST : Adam Rope**



DAILY DRILLING PROGRESS:
FROM: 779.77 m TO: 779.77 mMDRT; 24Hrs Progress: 0 m

SUMMARY OF LAST 24 HOURS :
POOH to surface, retrieve MSS. Lay out 8 1/2" drilling BHA. Rig up SLB Wireline, conduct 1 x wireline run - MultiExpress Combo. Rig down & release loggers. M/U 16" Under reamer and surface test. RIH to lowest interval, commence under reaming programme in Walloon Sub Group.

CURRENT OPERATION :
Complete under reaming programme.

24 HOUR FORECAST :
POOH and lay down under-reaming assembly. Rig up and start run 7" plain and pre-perforated casing. Rig up to cement, cement 7" production casing. WOC. Commence general rig down of non-essential lighter loads and move to next lease. Back out landing joint and lay out same. Nipple down BOP's and release rig. Hold PJSM & commence general rig down. Wait on daylight to move.

COMMENTS :
1 x Wireline run completed using SLB MultiExpress slim tools.
No DST's or FRT's required. This well will be under-reamed to 16".

LOG RUNS

Run	Log suite	Start	End
1	MultiExpress	780.2m	10m

DST

Test No.	Unit/Seam Tested	From (mRT)	To (mRT)	Shut In Times (mins)	Flow Times (min)	Recovery (Formation Fluid)

Daily Geological Report #6 for 06-12-2012

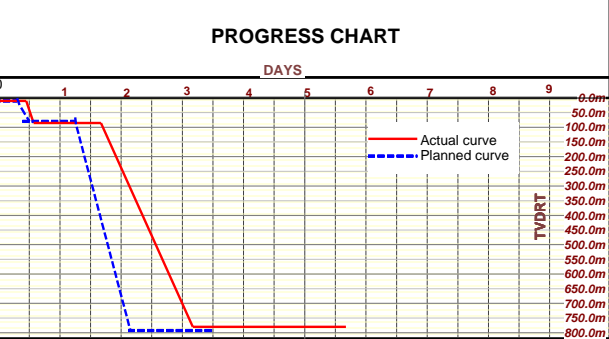
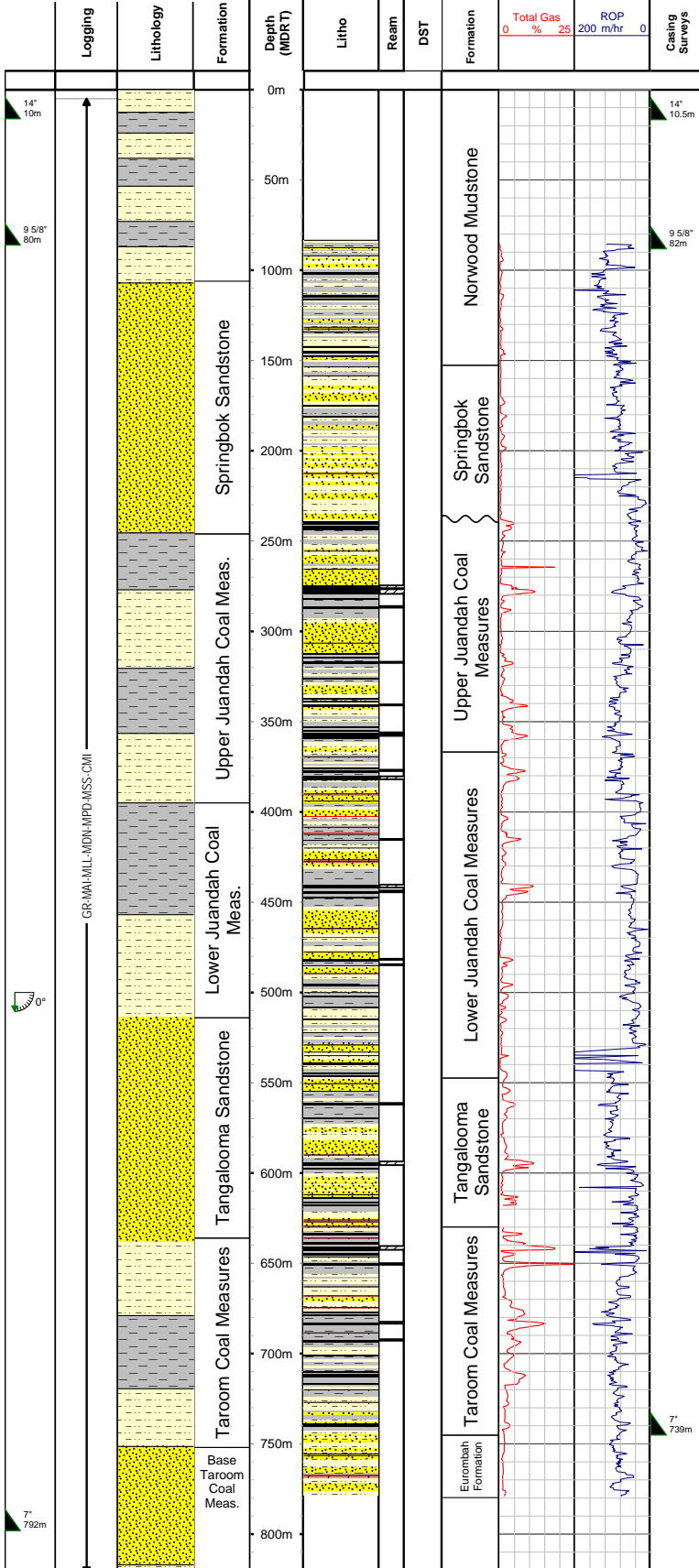
Cam 164
Surat Basin
 CSG Development well

LICENCE PL 277	MIDNIGHT DEPTH	06:00am DEPTH	ON LOCATION : 30-11-2012	RIG : Saxon 165
	779.77 mMDRT	779.77 mMDRT	SPUD DATE : 01-12-2012	TD DATE : 03-12-2012
Operations Status at Midnight: Circulate, Wait on cementers.			GL : +295m	RT : +299.5m
			PLAN TD : 792m	LONGITUDE : 149 ° 44 ' 39.65208" E
			ACTUAL TD : 779.77m	LATITUDE : -26° 12 ' 10.64041" S

PROGNOSIS

ACTUAL

WELLSITE GEOLOGIST : Adam Rope / Stephen Mitchell



DAILY DRILLING PROGRESS:
 FROM: 779.77 m TO: 779.77 mMDRT; 24Hrs Progress: 0 m

SUMMARY OF LAST 24 HOURS :
 RIH w/16" under reamer to lowest interval, commence under reaming programme in Walloon Sub Group. Complete under-reaming as per programme. POOH and lay down under-reaming assembly. Rig up and start run 7" plain and pre-perforated casing. Rig repair - hydraulic pipe arm lines. Continue RIH 7" plain and pre-perforated casing. Circ casing contents. Cementers arrive at 20:45 - wait on cementers to rest - houred out until 06:00

CURRENT OPERATION :
 Rig up Cementers to conduct 7" Production casing cement job.

24 HOUR FORECAST :
 Land out and set casing hanger - conduct cement job. Wait on cement, back out landing joint and lay out same. Release rig, commence nipping down BOP's. Commence partial rig down prior to rig move. Conduct NDT inspections (12 hours) - 500 day inspection on the mast. Complete rig down. Wait on daylight to conduct rig move to next lease.

COMMENTS :
 1 x Wireline run completed using SLB tools comprising MultiExpress Combo.
 22.4m of Coals under reamed to 16" in 20 intervals. Typical gas results for the field - max gas 17%.
 No DST's or FRT's required.
 Next well will be Cam 163.

LOG RUNS

Run	Log suite	Start	End
1	MultiExpress	780.2m	10m

DST

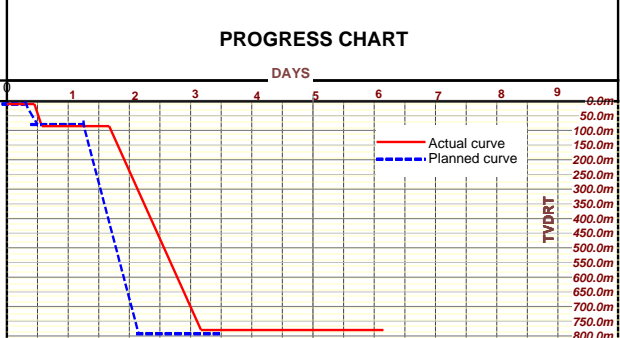
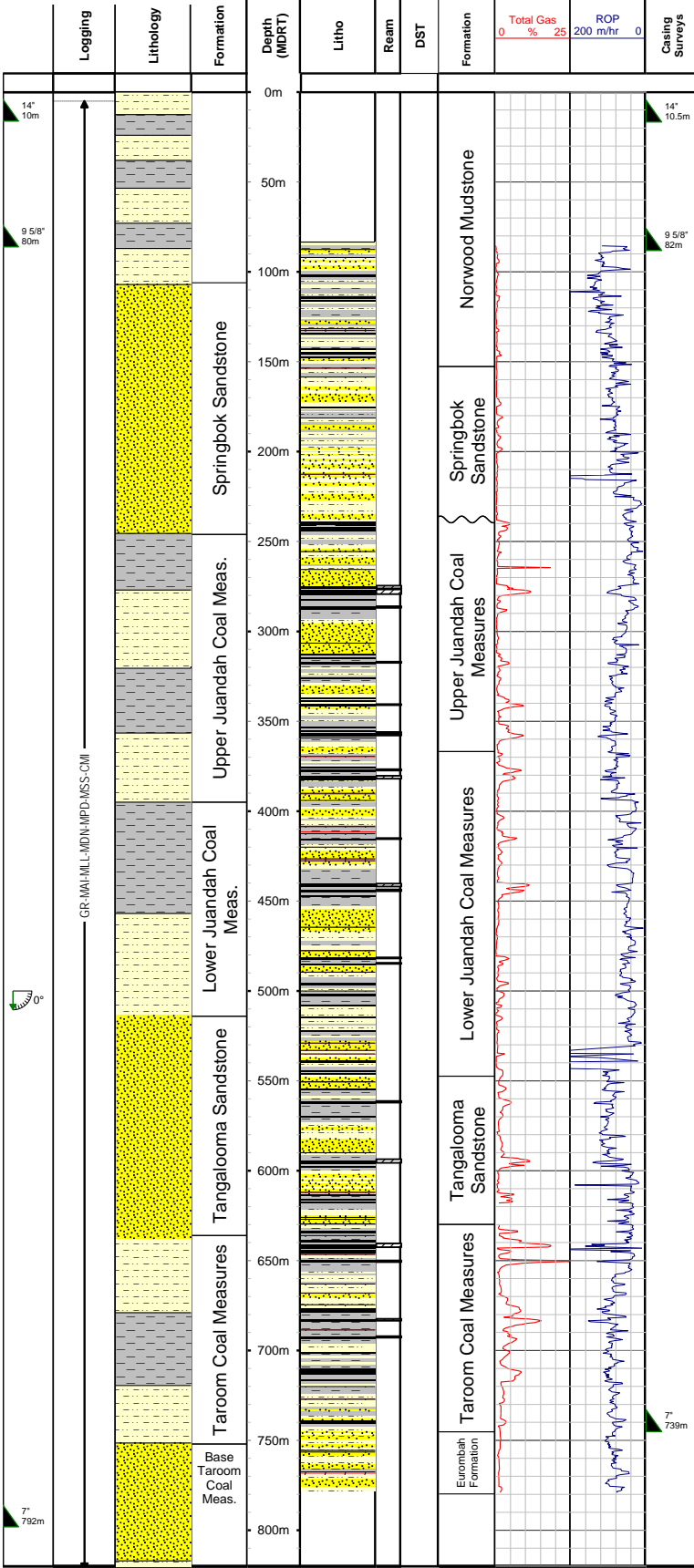
Test No.	Unit/Seam Tested	From (mRT)	To (mRT)	Shut In Times (mins)	Flow Times (min)	Recovery (Formation Fluid)

Daily Geological Report #7 for 07-12-2012

Cam 164
Surat Basin
CSG Development well

LICENCE PL 277	MIDNIGHT DEPTH	06:00am DEPTH	ON LOCATION : 30-11-2012	RIG : Saxon 165
	779.77 mMDRT	779.77 mMDRT	SPUD DATE : 01-12-2012	TD DATE : 03-12-2012
Operations Status at Midnight: Conduct NDT's			GL : +295m	RT : +299.5m
			PLAN TD : 792m	LONGITUDE : 149 ° 44 ' 39.65208" E
			ACTUAL TD : 779.77m	LATITUDE : -26 ° 12 ' 10.64041" S

PROGNOSIS | **ACTUAL** | **WELLSITE GEOLOGIST : Stephen Mitchell**



DAILY DRILLING PROGRESS:
FROM: 779.77 m TO: 779.77 mMDRT; 24Hrs Progress: 0 m

SUMMARY OF LAST 24 HOURS :
Cement 7" production casing. Lay down landing joint. Nipple down BOP's, Release rig at 17:30. Conduct NDT's on Mast. Conduct Modifications to Rigfloor Hydraulics lines. Conduct partial rig move to next lease.

CURRENT OPERATION :
Continue relocate hydraulics & rig down.

24 HOUR FORECAST :
Complete rig down. Complete rig move of all loads to next lease (Cam 163). Commence rig up. Spud Cam 163.

COMMENTS :
Next well will be Cam 163.
No DST's or FRT's required on Cam 163.
1 x Wireline Run using SLB MultiExpress & Under-reaming Required.

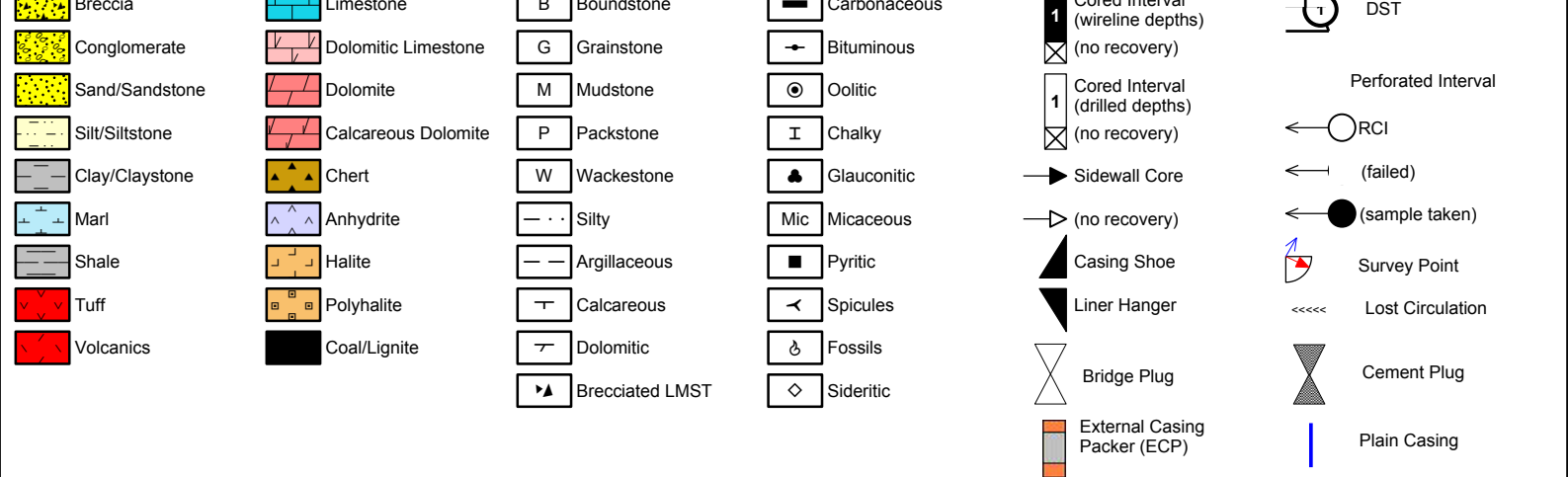
LOG RUNS

Run	Log suite	Start	End
1	MultiExpress	780.2m	10m

DST

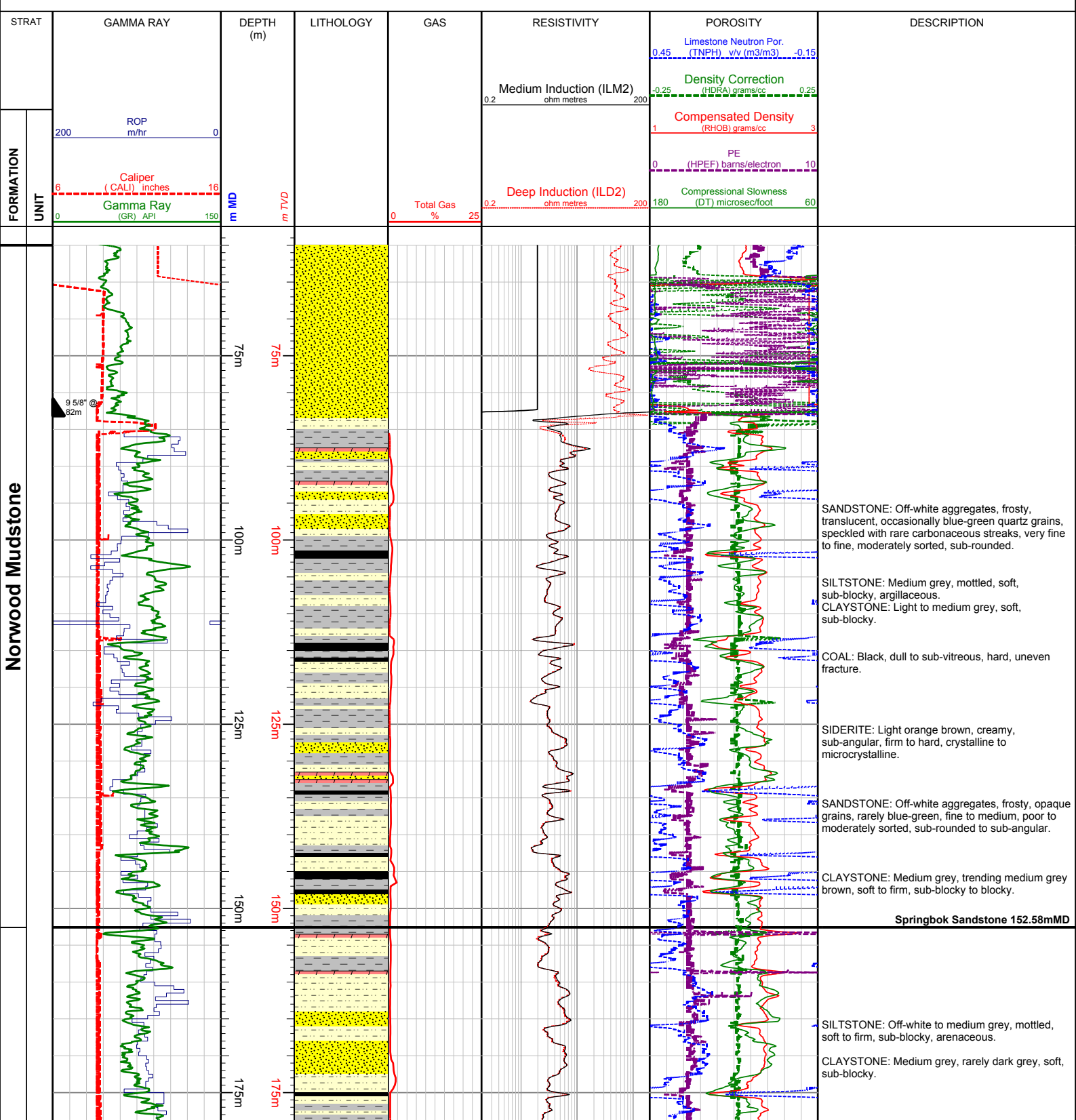
Test No.	Unit/Seam Tested	From (mRT)	To (mRT)	Shut In Times (mins)	Flow Times (min)	Recovery (Formation Fluid)

APPENDIX 4
COMPOSITE LOG



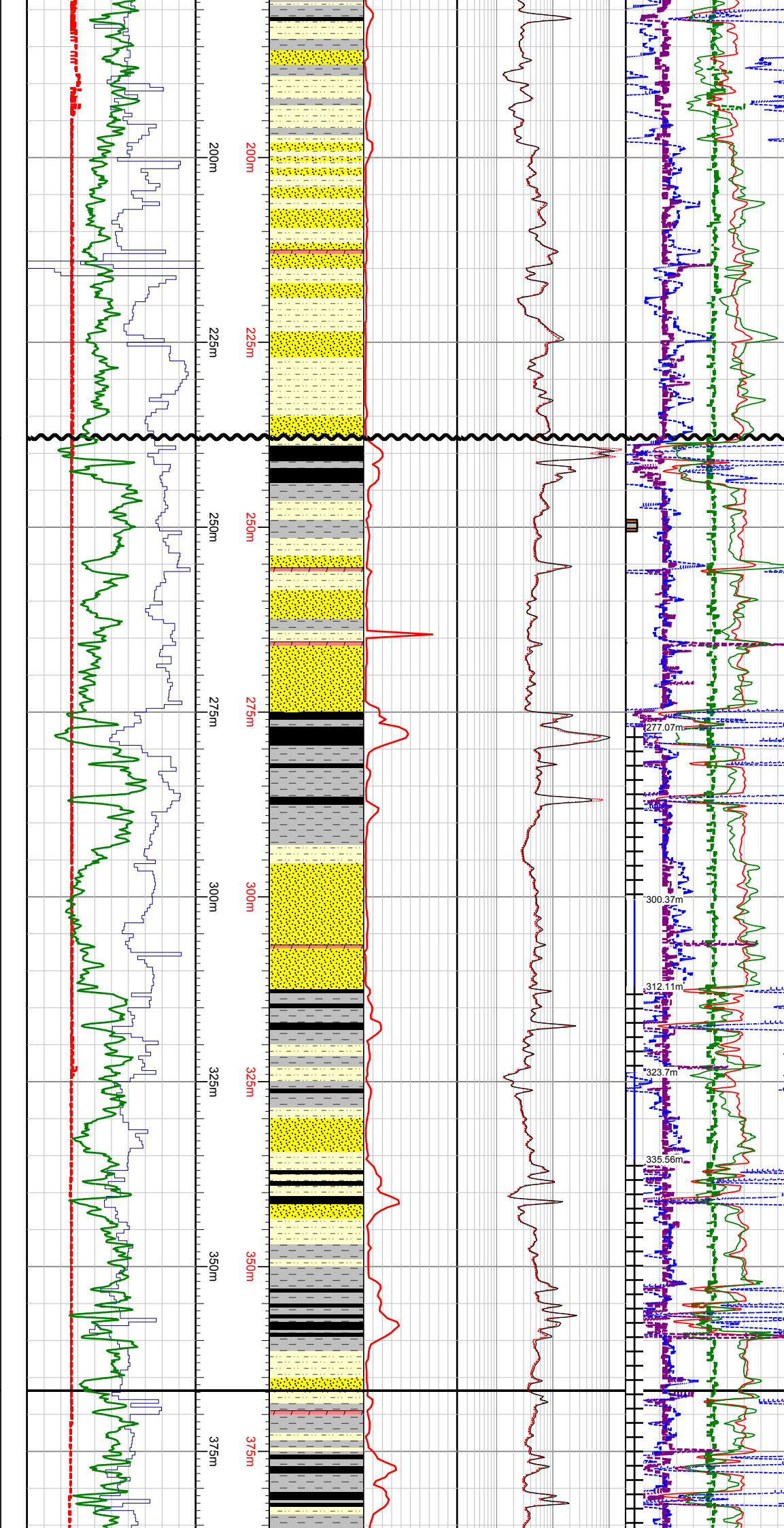
Scale 1:500

Date: 13/03/2013



Springbok Sandstone

Upper Juandah Coal Measures



CLAYSTONE: Light to medium grey, soft, slightly dispersive, rarely amorphous to sub-blocky, rare carbonaceous matter.

SILTSTONE: Light to medium grey, arenaceous and argillaceous, lightly mottled, soft to firm, sub-blocky.

SANDSTONE: White to off-white, frosty, translucent, loose grains, occasionally blue-green, becoming agglomerated with depth, very fine to rarely medium, poor to moderately sorted, sub-angular to sub-rounded.

Upper Juandah Coal Measures 237.82mMD

COAL: Black, dull to sub-vitreous, rarely striated, hard, uneven to sub-conchoidal fracture.
CLAYSTONE: Medium to dark grey, trending medium grey brown, soft to firm, sub-blocky.

Base of ECP set at 250.58m MDRT

SILTSTONE: Light to medium grey, mottled, arenaceous, soft to firm, sub-blocky to blocky. Trending to SANDSTONE: Off-white to light grey, speckled, very fine to fine, moderately sorted, sub-angular to sub-rounded.

SANDSTONE: Off-white, frosty, translucent, speckled, very fine to fine, sub-angular to sub-rounded, poorly sorted, mildly calcareous.
SILTSTONE: Light grey brown, mottled, firm, occasional carbonaceous streaks.

COAL: Black, sub-vitreous to vitreous, hard to brittle, blocky, uneven to sub-conchoidal fracture, commonly shards.
CLAYSTONE: Medium grey brown, soft to firm, sub-blocky to blocky, common carbonaceous laminations and streaks.

CLAYSTONE: Medium grey, dispersive, soft, rare inter-laminations of COAL.

SANDSTONE: Clear, glassy, translucent, occasionally blue-green, predominantly loose quartz grains, very fine, sub-rounded, moderately sorted, with weak, very mildly calcareous, cement.
SILTSTONE: Medium grey, mottled, firm, sub-blocky to blocky, rarely laminated with carbonaceous streaks.

CLAYSTONE: Medium grey, occasionally dark grey, trending grey brown, soft, sub-blocky, occasional carbonaceous laminations.

SIDERITE: Light orange brown, creamy, sub-angular, hard, crystalline to microcrystalline.

CLAYSTONE: Medium to dark grey, trending medium grey brown, soft to firm, sub-blocky, occasional carbonaceous laminations.
COAL: Black, sub-vitreous to vitreous, hard, blocky, uneven fracture.

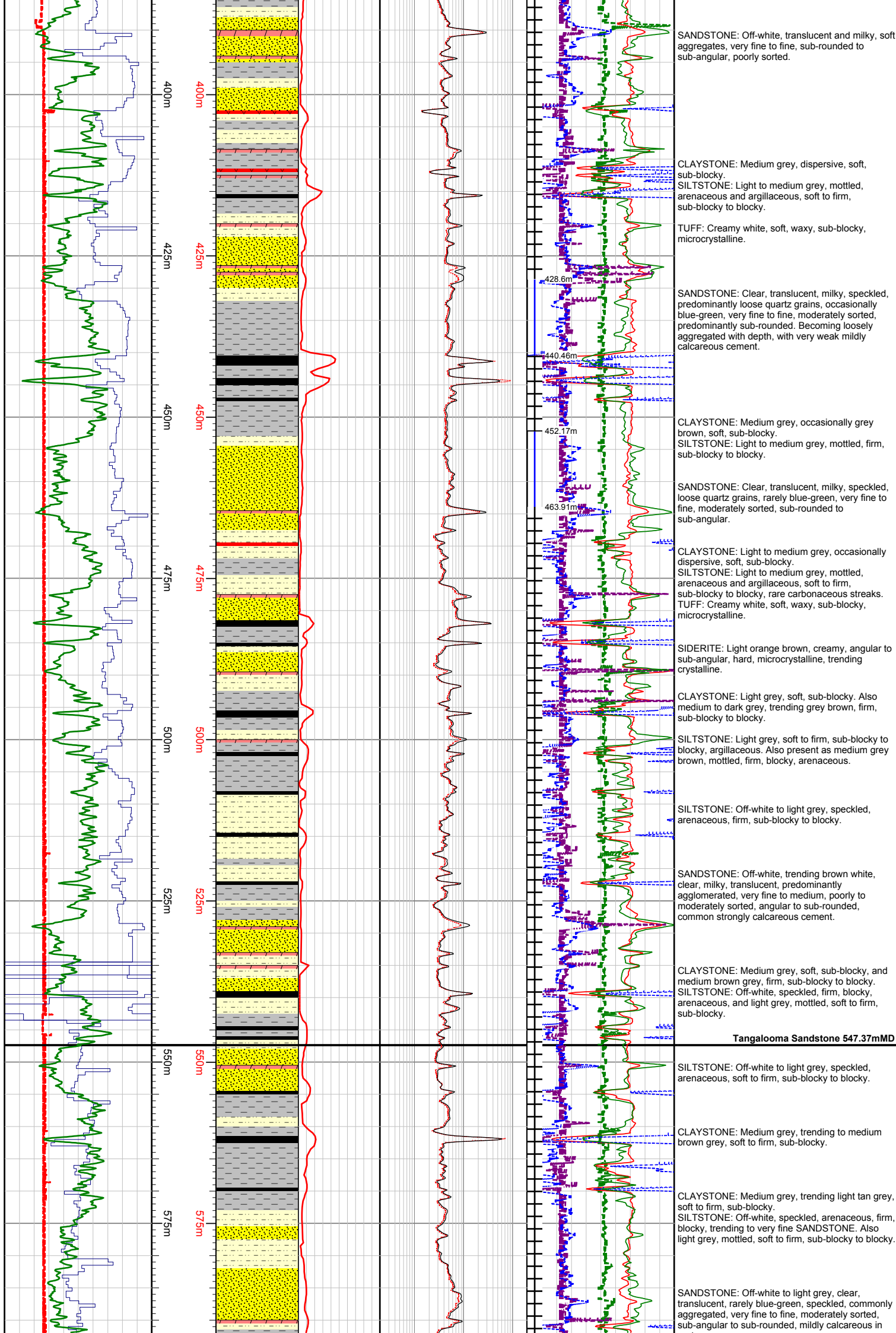
Lower Juandah Coal Measures 366.78mMD

SILTSTONE: Light to medium grey, mottled, arenaceous, soft to firm, sub-blocky to blocky.

SIDERITE: Tan brown, creamy, sub-angular to angular, hard, crystalline.

Lower Juandah Coal Measures

Ma Sandstone



SANDSTONE: Off-white, translucent and milky, soft aggregates, very fine to fine, sub-rounded to sub-angular, poorly sorted.

CLAYSTONE: Medium grey, dispersive, soft, sub-blocky.
SILTSTONE: Light to medium grey, mottled, arenaceous and argillaceous, soft to firm, sub-blocky to blocky.

TUFF: Creamy white, soft, waxy, sub-blocky, microcrystalline.

SANDSTONE: Clear, translucent, milky, speckled, predominantly loose quartz grains, occasionally blue-green, very fine to fine, moderately sorted, predominantly sub-rounded. Becoming loosely aggregated with depth, with very weak mildly calcareous cement.

CLAYSTONE: Medium grey, occasionally grey brown, soft, sub-blocky.
SILTSTONE: Light to medium grey, mottled, firm, sub-blocky to blocky.

SANDSTONE: Clear, translucent, milky, speckled, loose quartz grains, rarely blue-green, very fine to fine, moderately sorted, sub-rounded to sub-angular.

CLAYSTONE: Light to medium grey, occasionally dispersive, soft, sub-blocky.
SILTSTONE: Light to medium grey, mottled, arenaceous and argillaceous, soft to firm, sub-blocky to blocky, rare carbonaceous streaks.
TUFF: Creamy white, soft, waxy, sub-blocky, microcrystalline.

SIDERITE: Light orange brown, creamy, angular to sub-angular, hard, microcrystalline, trending crystalline.

CLAYSTONE: Light grey, soft, sub-blocky. Also medium to dark grey, trending grey brown, firm, sub-blocky to blocky.

SILTSTONE: Light grey, soft to firm, sub-blocky to blocky, argillaceous. Also present as medium grey brown, mottled, firm, blocky, arenaceous.

SILTSTONE: Off-white to light grey, speckled, arenaceous, firm, sub-blocky to blocky.

SANDSTONE: Off-white, trending brown white, clear, milky, translucent, predominantly agglomerated, very fine to medium, poorly to moderately sorted, angular to sub-rounded, common strongly calcareous cement.

CLAYSTONE: Medium grey, soft, sub-blocky, and medium brown grey, firm, sub-blocky to blocky.
SILTSTONE: Off-white, speckled, firm, blocky, arenaceous, and light grey, mottled, soft to firm, sub-blocky.

Tangalooma Sandstone 547.37mMD

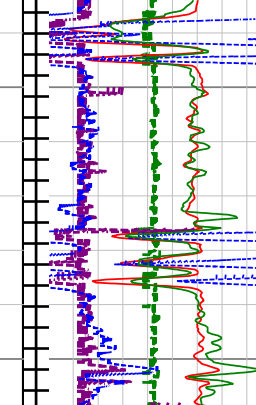
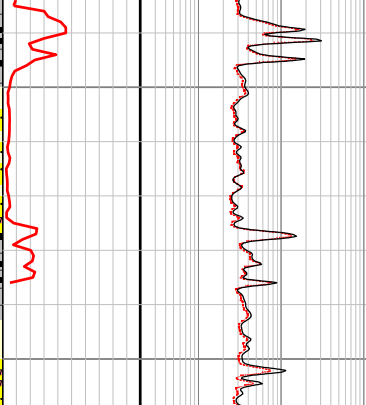
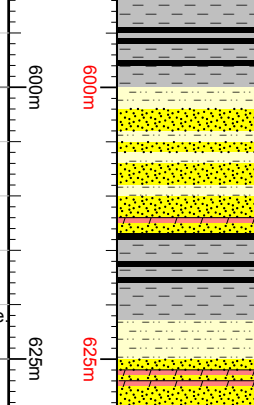
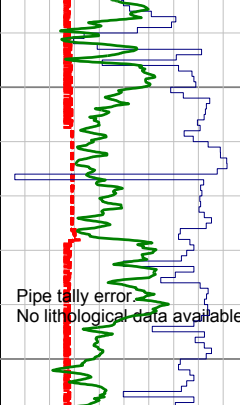
SILTSTONE: Off-white to light grey, speckled, arenaceous, soft to firm, sub-blocky to blocky.

CLAYSTONE: Medium grey, trending to medium brown grey, soft to firm, sub-blocky.

CLAYSTONE: Medium grey, trending light tan grey, soft to firm, sub-blocky.
SILTSTONE: Off-white, speckled, arenaceous, firm, blocky, trending to very fine SANDSTONE. Also light grey, mottled, soft to firm, sub-blocky to blocky.

SANDSTONE: Off-white to light grey, clear, translucent, rarely blue-green, speckled, commonly aggregated, very fine to fine, moderately sorted, sub-angular to sub-rounded, mildly calcareous in

Tangaloo



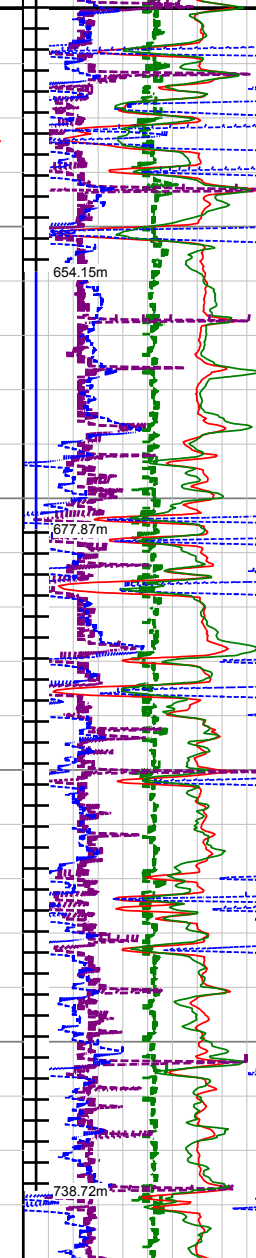
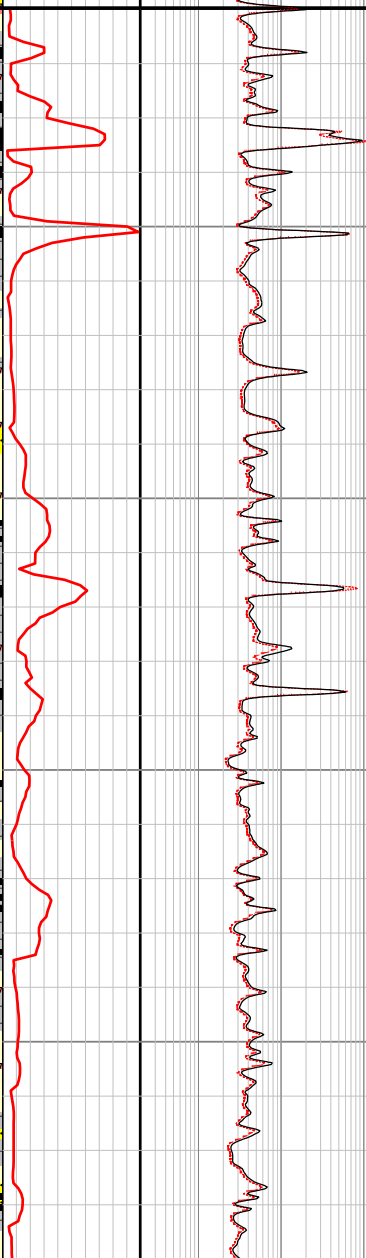
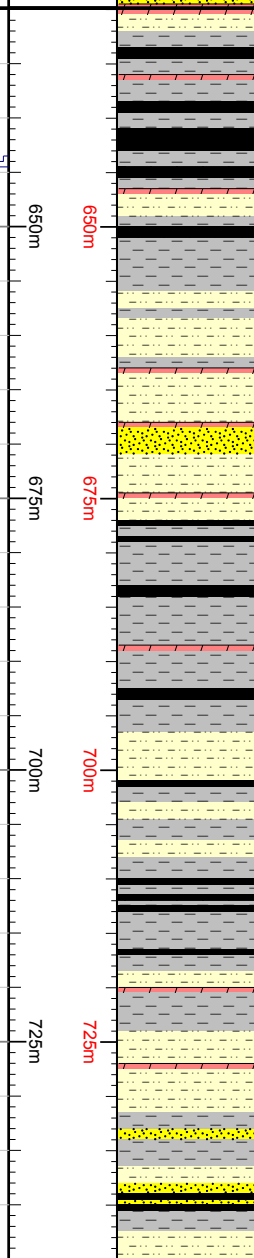
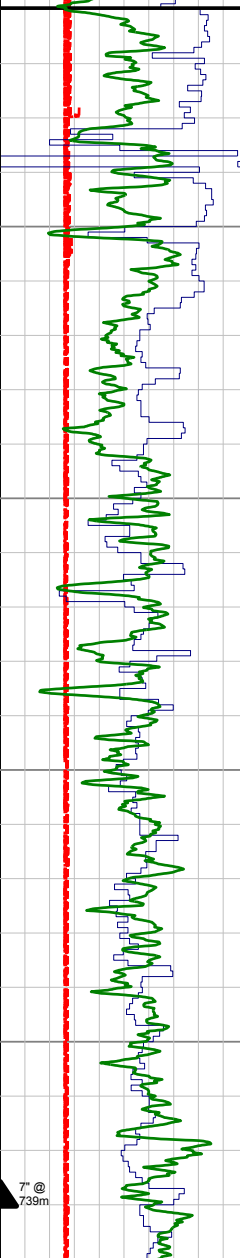
SILTSTONE: Off-white to light grey, speckled, firm, sub-blocky to blocky, arenaceous.

COAL: Black, sub-vitreous to vitreous, rarely striated, hard, blocky, uneven fracture, sub-conchoidal in parts.

SANDSTONE: Off-white to light grey, clear, milky, speckled, aggregates, very fine to fine, poorly sorted, sub-rounded to sub-angular.

SIDERITE: Light orange brown, creamy, angular, hard, microcrystalline.

Taroom Coal Measures 629.89mMD



CLAYSTONE: Light to medium grey, trending to medium grey brown, soft, sub-blocky to blocky.

COAL: Black, dull to sub-vitreous, hard, uneven to rarely sub-conchoidal fracture.

SILTSTONE: Medium grey, trending to grey brown, arenaceous, mottled, firm, sub-blocky to blocky.

SANDSTONE: Off-white, clear, milky, rarely blue-green, speckled, commonly aggregated, very fine to fine, moderately sorted, predominantly sub-rounded.

SILTSTONE: Light to medium grey, mottled, firm, sub-blocky to blocky, carbonaceous in parts.

CLAYSTONE: Medium to dark grey, soft to firm, sub-blocky.

COAL: Black, sub-vitreous to vitreous, hard, occasionally striated, uneven to even fracture.

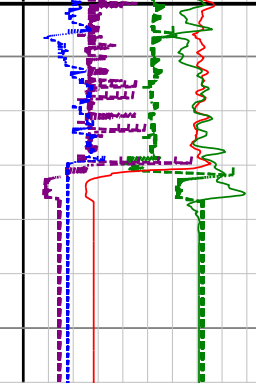
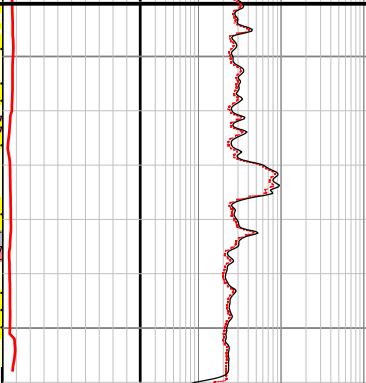
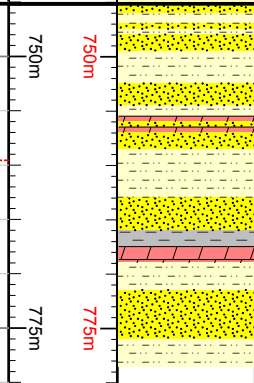
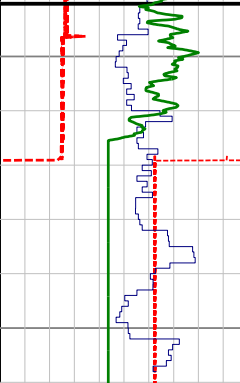
SIDERITE: Light orange brown, creamy, angular, hard, microcrystalline.

SILTSTONE: Light to medium grey, mottled, firm, sub-blocky to blocky, carbonaceous in parts.

CLAYSTONE: Medium to dark grey, trending to brown grey, soft to firm, sub-blocky.

CLAYSTONE: Medium to dark grey, trending to grey brown, soft to firm, sub-blocky.

Eurombah Formation 745.16mMD



SANDSTONE: Off-white, clear, translucent, milky, speckled aggregates, very fine to fine, poorly sorted, sub-rounded to sub-angular.

SIDERITE: Deep orange brown, hard, angular, microcrystalline and crystalline.

SILTSTONE: Medium grey, also medium brown grey, mottled, firm to hard, blocky.

Total Depth
Driller: 779m MDRT (778.96 m TVD)
Logger: 780.2m MDRT (780.16 m TVD)

STRAT	Gamma Ray (GR) API	0	150	Total Gas %	0	25	0.2	200	Deep Induction (ILD2) ohm metres	0.45	Limestone Neutron Por. (TNPH) v/v (m3/m3)	-0.15		
	Caliper (CAL) inches	6	18								Density Correction (HDFEA) grams/cc	-0.25		
	ROP m/hr	200	0						Medium Induction (ILM2) ohm metres	0.2	Compensated Density (RHOB) grams/cc	3		
	GAMMA RAY - ROP - CALIPER			DEPTH		LITHOLOGY		GAS		RESISTIVITY		PE (HPEF) barns/electron	10	
											Compressional Slowness (DT) microsec/foot	180	60	DESCRIPTION

Cam 164

DST

Test#	Unit/Seam Tested	From (mRT)	To (mRT)	Shut In Time (min)	Flow Time (min)	Surface Flow Descriptions	Recovery (Formation Fluid)
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APPENDIX 5
LITHOLOGY LOG

Wellsite Lithology Log (MD)



Cam 164

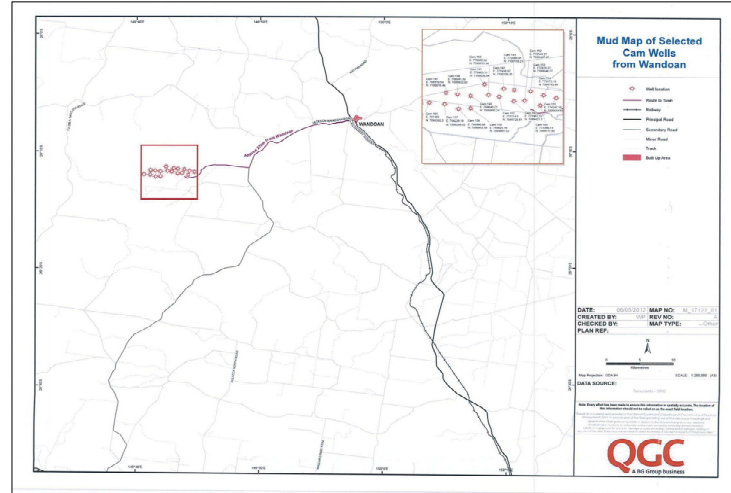
PARTNERS
BG International ,
Toyota Tsusho CBM
Queensland

PERMIT
PL 277
OPERATOR
QGC

GENERAL WELL DATA

DRILLING RIG : Saxon 165	GL : 292.52m
DATE ON LOC : 30-11-2012	RT : 297.12m
SPUD DATE : 01-12-2012	TARGET DEPTH : 792m
RELEASE DATE : 06-12-2012	DRILLER DEPTH : 779m
LAT : 26° 12' 06.6807" S	LOGGER DEPTH : 780.2m
LONG : 149° 44' 44.9036" E	
LAT (DEC) : 26.202956	WELLSITE GEO : Adam Rope
LONG (DEC) : 149.744348	OPERATIONS GEO : Stephen Mitchell
BASIN : Surat	OPERATIONS GEO : Christine Sheerin

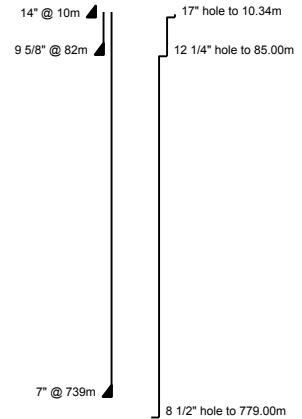
LOCATION MAP



HOLE AND CASING DATA

Hole Size	Hole TD (m)		Casing Diameter	Shoe Depth (m)		Comments
	Driller	TVD		MD	TVD	
17"	10.34		14"	10		
12 1/4"	85.00		9 5/8"	82		
8 1/2"	779.00		7"	739		

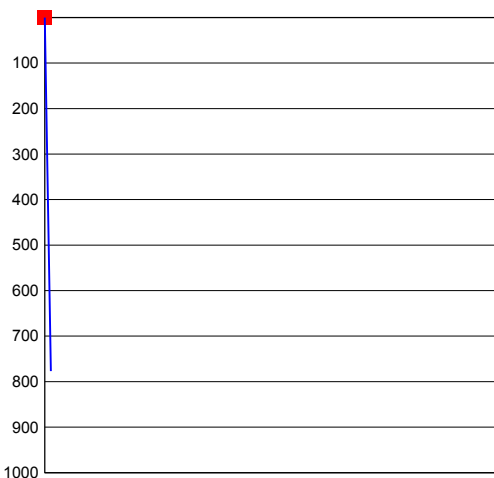
WELL STRUCTURE



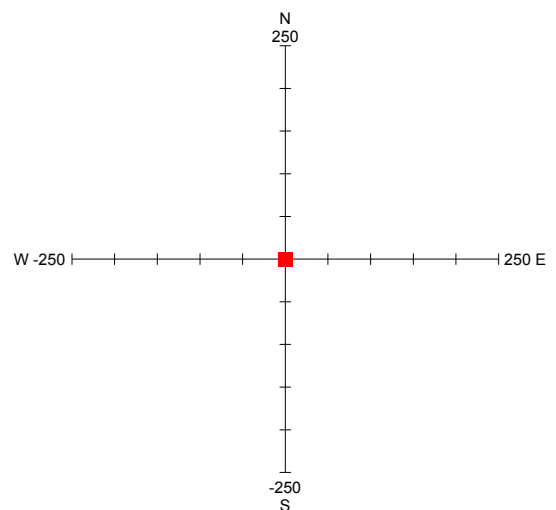
CONTRACTORS

Drilling	TCL & IPM / Schlumberger
Geology	Fossil Energy Services
Wireline	Schlumberger
Cementing	TCL / Schlumberger

Well Profile view



Plan view



Log created using Winlog 12.2.1.3. Print date: 13/03/2013

Events and Remarks

Date(s)	Depth(s)	Event / Remark
30-11-2012	10	Conduct rig-move, spot all loads & equipment, complete rig-up.
01-12-2012	85	Drill 12 1/4" surface section. Run 9 5/8" Casing & cement. WOC. Install BOP's. Conduct pressure test.
02-12-2012	295	Drill 8 1/2" production hole section. POOH bit change.
03-12-2012	779	Drill 8 1/2" production hole section to TD @ 779.00m MDRT. Circulate hole clean, POOH to surface.
04-12-2012	779	Conduct wireline logging run. Start under roaming programme.

04-12-2012
05-12-2012
06-12-2012
07-12-2012

779
779
779

Conduct wireline logging run. Start under-reaming programme.
Complete under reaming programme. Rig up and run 7" casing to TD, Circulate contents. Wait on cements hours.
Continue Circ casing - Wait on Cements. Land out. Cement 7" casing, WOC. Release rig and nipple down BOP's. Conduct modifications to Rig Hydraulics. Conduct NDT Inspections on mast. Conduct Partial Rig down.
Complete rig down and Conduct Rig move to next lease.

GEOLOGICAL SYMBOLS

Breccia	Clay/Claystone	Limestone	Lignite/Coal	PolyHalite
Conglomerate	Marl	Dolomitic Limestone	Chert	Tuff
Sand/Sandstone	Shale	Dolomite	Anhydrite	Volcanics
Silt/Siltstone	Limestone (Chalky)	Calcareous Dolomite	Halite	Cement

QUALIFIERS, ACCESSORIES AND FOSSILS

Boundstone	Wackestone	Calcareous	Oolitic	Pyritic
Grainstone	Silty	Brecciated LMST	Chalky	Spicules
Mudstone	Argillaceous	Carbonaceous	Glauconitic	Fossils
Packstone	Sandy	Bituminous	Micaceous	Sideritic

Cam 164

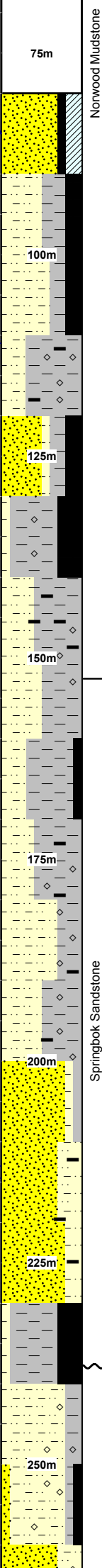
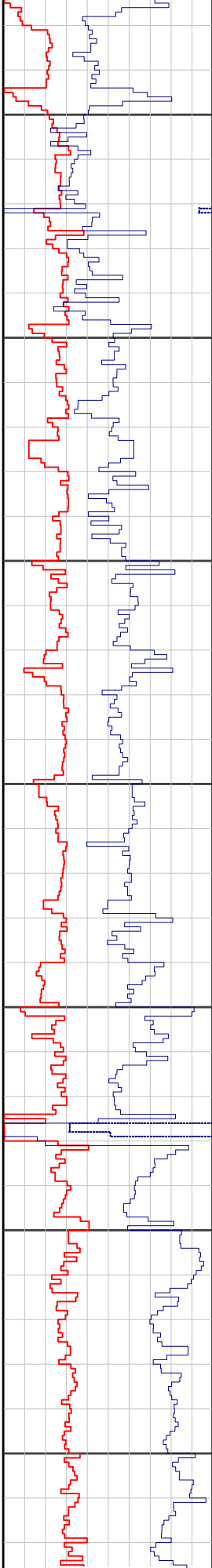
Wellsite Lithology Log at 1 / 500

DATES	MUD AND CASING DATA	DRILLING PARAMETERS	CUTTINGS LITHOLOGY	STRAT		INTERPRETED LITHOLOGY	REAMING	DESCRIPTIONS	GAS	REMARKS
				FORMATION	MEMBER/UNIT					
		<p style="text-align: center;">WOB kpbs</p> <p style="text-align: center;">ROP m/hr</p> <p style="text-align: center;">0 50</p> <p style="text-align: center;">200 0</p>	20 40 60 80 9m					<p style="text-align: center;">Total Gas %</p> <p style="text-align: center;">0 30</p>		
01-12-2012	<p>14" Shoe @ 10m</p> <p>Mud Type : Water and KCL Dens : 8.8ppg Visc : 31sec Additive : KCL</p>	<p>▼ 1 12 14" Not recorded Not recorded</p>	25m						10.34	
			50m							17"

9 5/8" Shoe @ 82m

Mud Type : Water and native clays
Dens : 8.9 - 9.0ppg
Visc : 33 - 36sec
Additive : KCL

3RR62 8 1/2" Smith MS0112
-1 made 74.66m in 3.00hrs



Nonwood Mudstone

Springbok Sandstone

SANDSTONE: Off-white aggregates, frosty, translucent, occasionally blue-green quartz grains, speckled with rare carbonaceous streaks, very fine to fine, moderately sorted, sub-rounded.

SILTSTONE: Medium grey, mottled, soft, sub-blocky, argillaceous.

CLAYSTONE: Light to medium grey, soft, sub-blocky.

COAL: Black, dull to sub-vitreous, hard, uneven fracture.

SIDERITE: Light orange brown, creamy, sub-angular, firm to hard, crystalline to microcrystalline.

SANDSTONE: Off-white aggregates, frosty, opaque grains, rarely blue-green, fine to medium, poor to moderately sorted, sub-rounded to sub-angular.

CLAYSTONE: Medium grey, trending medium grey brown, soft to firm, sub-blocky to blocky.

SILTSTONE: Off-white to medium grey, mottled, soft to firm, sub-blocky, arenaceous.

CLAYSTONE: Medium grey, rarely dark grey, soft, sub-blocky.

CLAYSTONE: Light to medium grey, soft, slightly dispersive, rarely amorphous to sub-blocky, rare carbonaceous matter.

SILTSTONE: Light to medium grey, arenaceous and argillaceous, lightly mottled, soft to firm, sub-blocky.

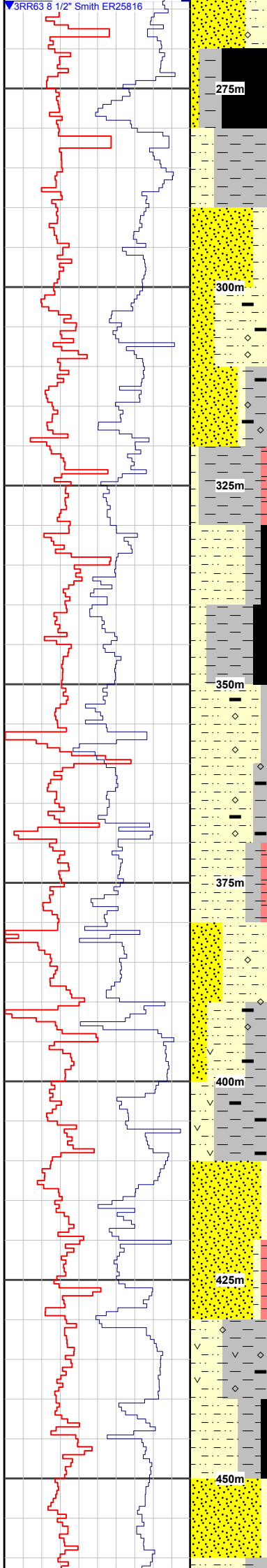
SANDSTONE: White to off-white, frosty, translucent, loose grains, occasionally blue-green, becoming agglomerated with depth, very fine to rarely medium, poor to moderately sorted, sub-angular to sub-rounded.

COAL: Black, dull to sub-vitreous, rarely striated, hard, uneven to sub-conchoidal fracture.

CLAYSTONE: Medium to dark grey, trending medium grey brown, soft to firm, sub-blocky.

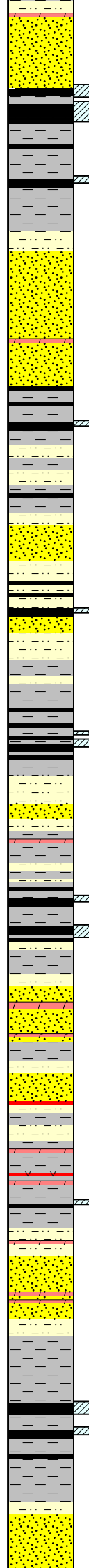
SILTSTONE: Light to medium grey, mottled, arenaceous, soft to firm, sub-blocky to blocky. Trending to SANDSTONE: Off-white to light grey, speckled, very fine to fine, moderately sorted, sub-angular to sub-rounded.

FG 5%
FG 4%



Upper Juandah Coal Measures

Lower Juandah Coal Measures



SANDSTONE: Off-white, frosty, translucent, speckled, very fine to fine, sub-angular to sub-rounded, poorly sorted, mildly calcareous.
 SILTSTONE: Light grey brown, mottled, firm, occasional carbonaceous streaks.

COAL: Black, sub-vitreous to vitreous, hard to brittle, blocky, uneven to sub-conchoidal fracture, commonly shards.
 CLAYSTONE: Medium grey brown, soft to firm, sub-blocky to blocky, common carbonaceous laminations and streaks.

CLAYSTONE: Medium grey, dispersive, soft, rare inter-laminations of COAL.

SANDSTONE: Clear, glassy, translucent, occasionally blue-green, predominantly loose quartz grains, very fine, sub-rounded, moderately sorted, with weak, very mildly calcareous cement.
 SILTSTONE: Medium grey, mottled, firm, sub-blocky to blocky, rarely laminated with carbonaceous streaks.

CLAYSTONE: Medium grey, occasionally dark grey, trending grey brown, soft, sub-blocky, occasional carbonaceous laminations.

SIDERITE: Light orange brown, creamy, sub-angular, hard, crystalline to microcrystalline.

CLAYSTONE: Medium to dark grey, trending medium grey brown, soft to firm, sub-blocky, occasional carbonaceous laminations.
 COAL: Black, sub-vitreous to vitreous, hard, blocky, uneven fracture.

SILTSTONE: Light to medium grey, mottled, arenaceous, soft to firm, sub-blocky to blocky.

SIDERITE: Tan brown, creamy, sub-angular to angular, hard, crystalline.

SANDSTONE: Off-white, translucent and milky, soft aggregates, very fine to fine, sub-rounded to sub-angular, poorly sorted.

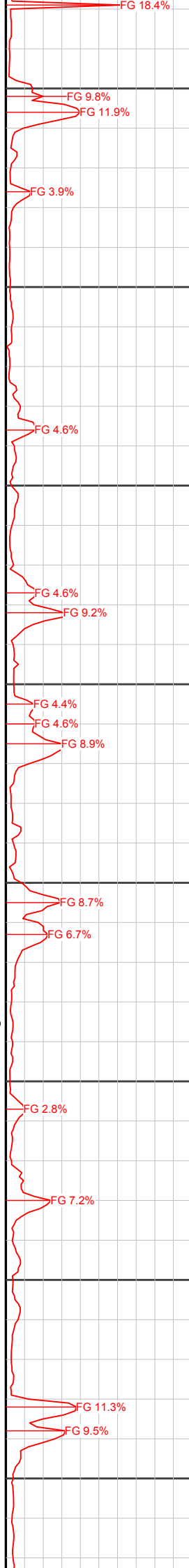
CLAYSTONE: Medium grey, dispersive, soft, sub-blocky.
 SILTSTONE: Light to medium grey, mottled, arenaceous and argillaceous, soft to firm, sub-blocky to blocky.

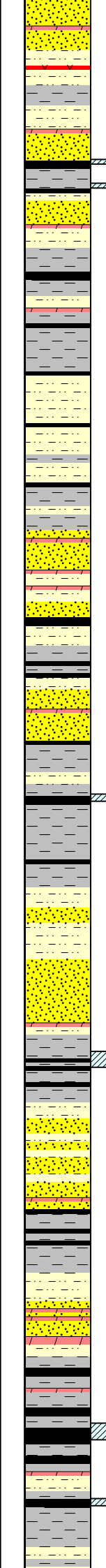
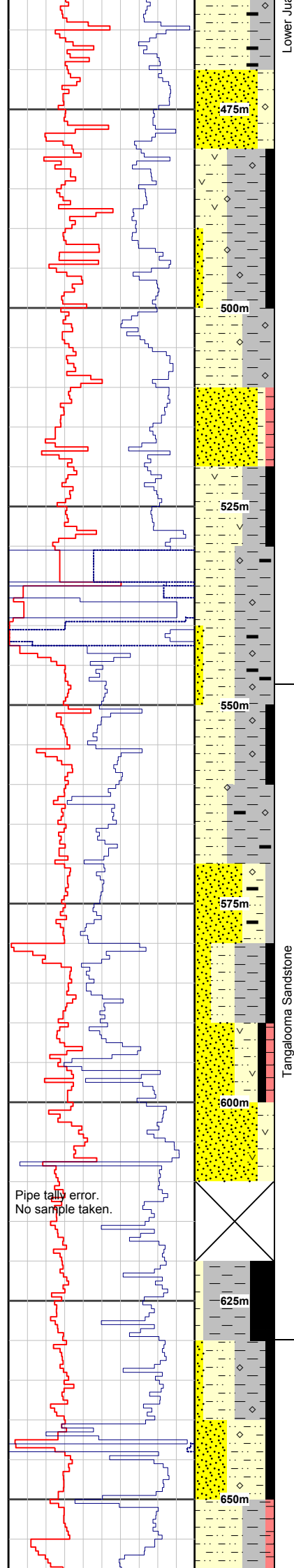
TUFF: Creamy white, soft, waxy, sub-blocky, microcrystalline.

SANDSTONE: Clear, translucent, milky, speckled, predominantly loose quartz grains, occasionally blue-green, very fine to fine, moderately sorted, predominantly sub-rounded. Becoming loosely aggregated with depth, with very weak mildly calcareous cement.

CLAYSTONE: Medium grey, occasionally grey brown, soft, sub-blocky.
 SILTSTONE: Light to medium grey, mottled, firm, sub-blocky to blocky.

SANDSTONE: Clear, translucent milky





speckled, loose quartz grains, rarely blue-green, very fine to fine, moderately sorted, sub-rounded to sub-angular.

CLAYSTONE: Light to medium grey, occasionally dispersive, soft, sub-blocky.
SILTSTONE: Light to medium grey, mottled, arenaceous and argillaceous, soft to firm, sub-blocky to blocky, rare carbonaceous streaks.
TUFF: Creamy white, soft, waxy, sub-blocky, microcrystalline.

SIDERITE: Light orange brown, creamy, angular to sub-angular, hard, microcrystalline, trending crystalline.

CLAYSTONE: Light grey, soft, sub-blocky. Also medium to dark grey, trending grey brown, firm, sub-blocky to blocky.

SILTSTONE: Light grey, soft to firm, sub-blocky to blocky, argillaceous. Also present as medium grey brown, mottled, firm, blocky, arenaceous.

SILTSTONE: Off-white to light grey, speckled, arenaceous, firm, sub-blocky to blocky.

SANDSTONE: Off-white, trending brown white, clear, milky, translucent, predominantly agglomerated, very fine to medium, poorly to moderately sorted, angular to sub-rounded, common strongly calcareous cement.

CLAYSTONE: Medium grey, soft, sub-blocky, and medium brown grey, firm, sub-blocky to blocky.
SILTSTONE: Off-white, speckled, firm, blocky, arenaceous, and light grey, mottled, soft to firm, sub-blocky.

SILTSTONE: Off-white to light grey, speckled, arenaceous, soft to firm, sub-blocky to blocky.

CLAYSTONE: Medium grey, trending to medium brown grey, soft to firm, sub-blocky.

CLAYSTONE: Medium grey, trending light tan grey, soft to firm, sub-blocky.
SILTSTONE: Off-white, speckled, arenaceous, firm, blocky, trending to very fine SANDSTONE. Also light grey, mottled, soft to firm, sub-blocky to blocky.

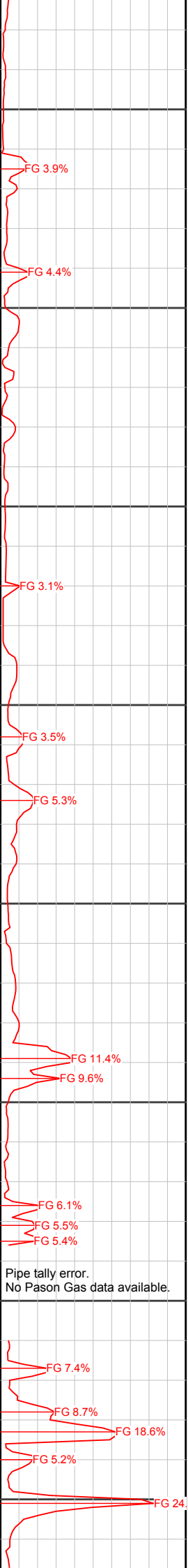
SANDSTONE: Off-white to light grey, clear, translucent, rarely blue-green, speckled, commonly aggregated, very fine to fine, moderately sorted, sub-angular to sub-rounded, mildly calcareous in parts.

SILTSTONE: Off-white to light grey, speckled, firm, sub-blocky to blocky, arenaceous.

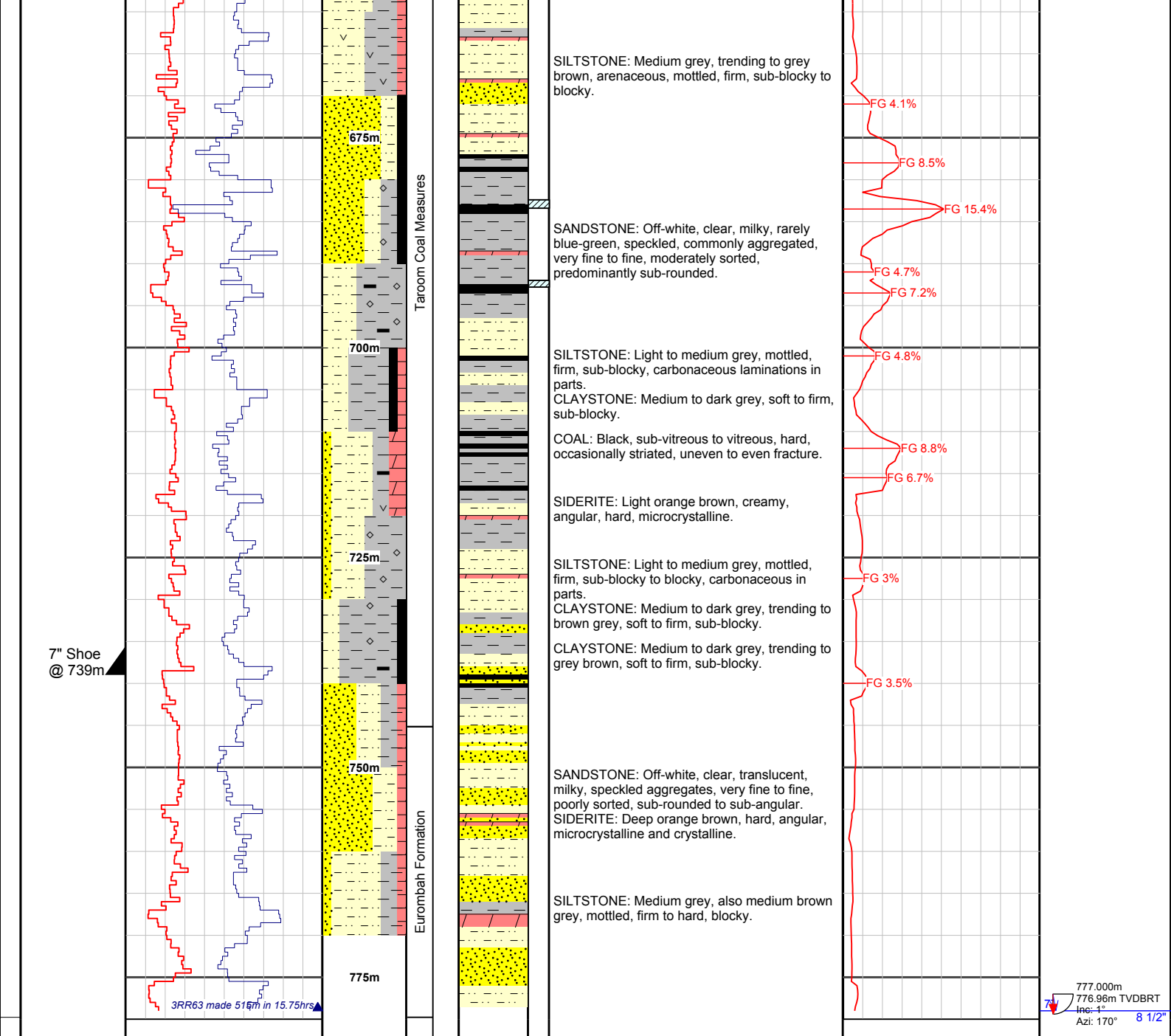
COAL: Black, sub-vitreous to vitreous, rarely striated, hard, blocky, uneven fracture, sub-conchoidal in parts.

SANDSTONE: Off-white to light grey, clear, milky, speckled, aggregates, very fine to fine, poorly sorted, sub-rounded to sub-angular.
SIDERITE: Light orange brown, creamy, angular, hard, microcrystalline.

CLAYSTONE: Light to medium grey, trending to medium grey brown, soft, sub-blocky to blocky.
COAL: Black, dull to sub-vitreous, hard, uneven to rarely sub-conchoidal fracture.



Pipe tally error. No Pason Gas data available.



DATES	MUD AND CASING DATA	ROP m/hr	200	0	CUTTINGS LITHOLOGY	FORMATION MEMBER / UNIT	INTERPRETATED LITHOLOGY	REMARKS	DESCRIPTORS	GAS	REMARKS
		WOB kbs	0	50							

Cam 164

BIT SUMMARY TABLE

BHA No	BIT No	BIT STATUS	MAKE	TYPE	SIZE	TFA / JETS	DEPTH IN (m)	PROGRESS MADE	ROTATING HOURS	AVERAGE ROP	GRADING	REMARKS
1	1	-	Not recorded	Not recorded	12 1/4"	Not recorded	10.34	74.66	3.00	24.9	Not recorded	-
2	2	3RR6	Smith	MS0112	8 1/2"	3x11, 3x12	85	179	7.00	25.6	4-4-BT-A-X-2-BU-PR	-
2	3	3RR6	Smith	ER25816	8 1/2"	6x11	264	515	15.75	32.7	3-2-BT-G-X-I-NO-TD	-

LOGS SUMMARY

Run	Measurement	Dates	Hole Size	Start Depth	End Depth	Max Temperature	Contractor
1	GR-RHOB-ILD2-DT	04-12-2012	8 1/2"	780.2	10	46°C BHT	Schlumberger

UNDER REAMING

Coal Measures	Ream From MD	Ream To MD	Diameter	Thickness
Juandah Coal Measures	274.50	276.10	16"	1.60
Juandah Coal Measures	276.60	279.20	16"	2.60
Juandah Coal Measures	286.00	286.90	16"	0.90
Juandah Coal Measures	316.80	317.50	16"	0.70
Juandah Coal Measures	340.40	341.00	16"	0.60
Juandah Coal Measures	355.90	356.40	16"	0.50
Juandah Coal Measures	356.90	357.90	16"	1.00
Juandah Coal Measures	376.60	377.40	16"	0.80
Juandah Coal Measures	380.30	381.90	16"	1.60
Juandah Coal Measures	414.90	415.50	16"	0.60
Juandah Coal Measures	440.30	441.90	16"	1.60
Juandah Coal Measures	443.50	444.50	16"	1.00
Juandah Coal Measures	481.30	481.90	16"	0.60
Juandah Coal Measures	484.30	484.90	16"	0.60
Tangalooma Sandstone	561.20	562.10	16"	0.90
Tangalooma Sandstone	593.60	595.60	16"	2.00
Taroom Coal Measures	640.40	642.50	16"	2.10
Taroom Coal Measures	649.90	650.80	16"	0.90
Taroom Coal Measures	682.40	683.40	16"	1.00
Taroom Coal Measures	692.00	692.80	16"	0.80

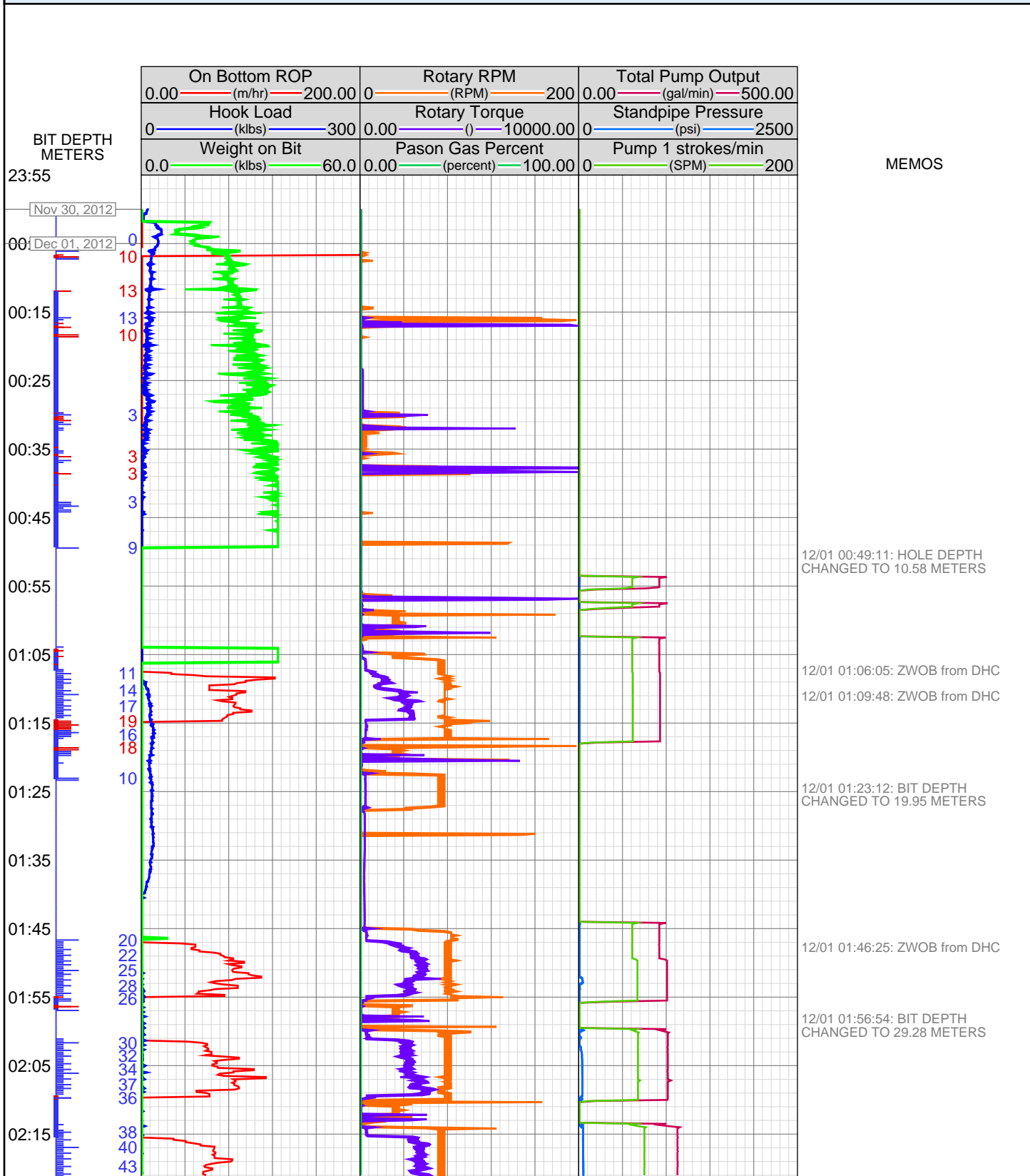
APPENDIX 6

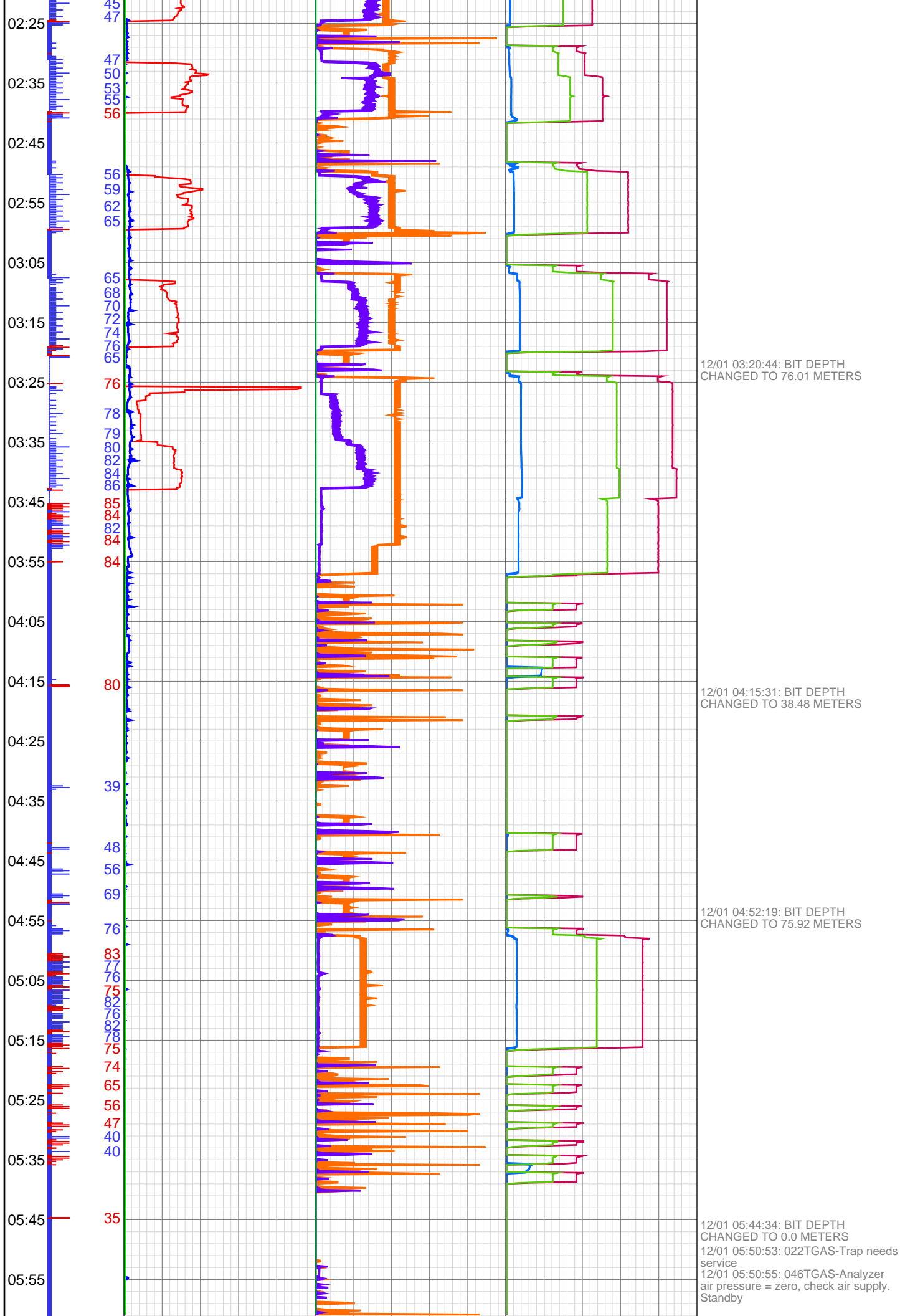
PASON LOG

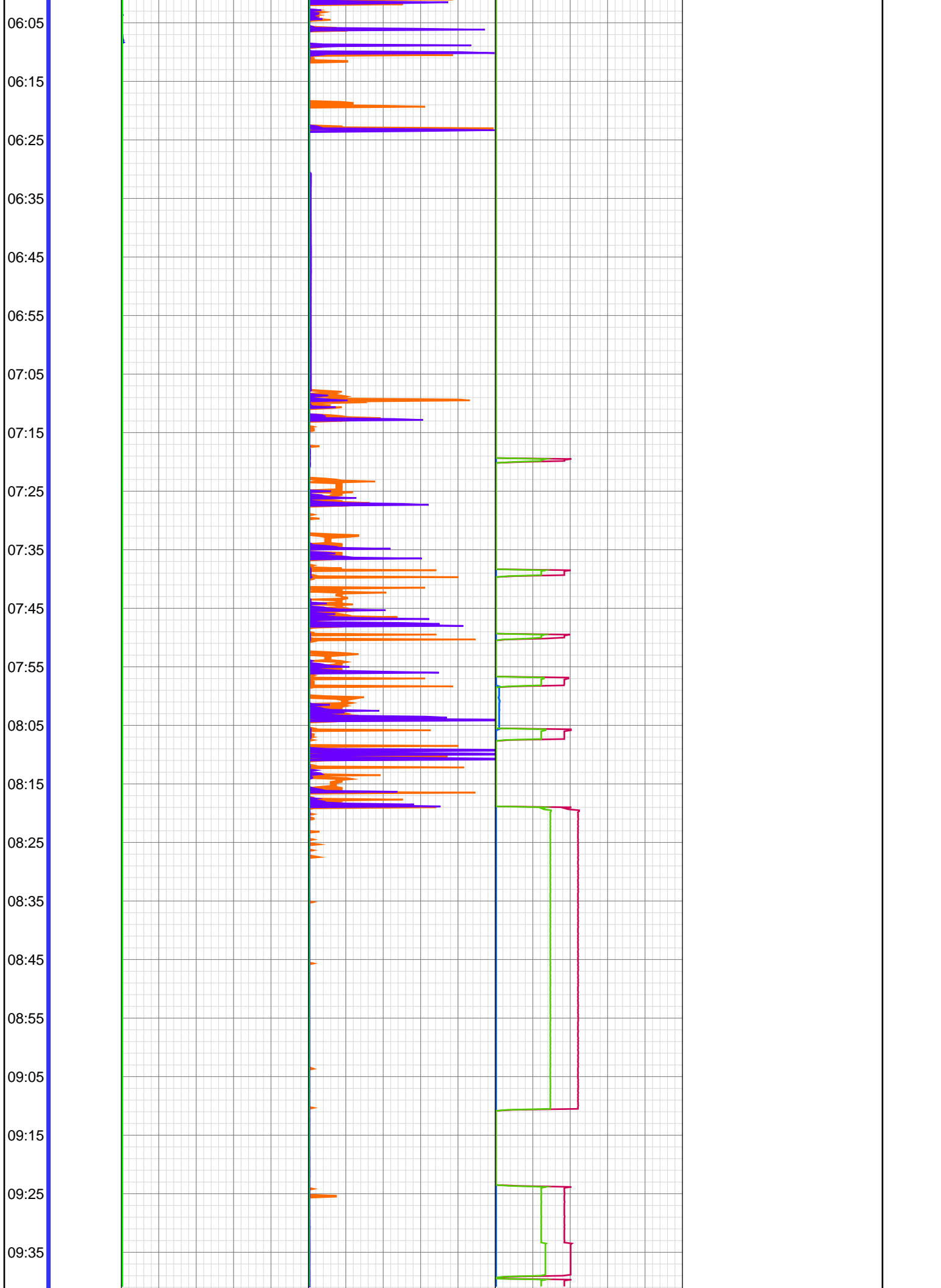
DataHub EDR Log

Wed Dec 05, 2012 19:37:30
Well Dossier 1354257678
Stephen Mitchell

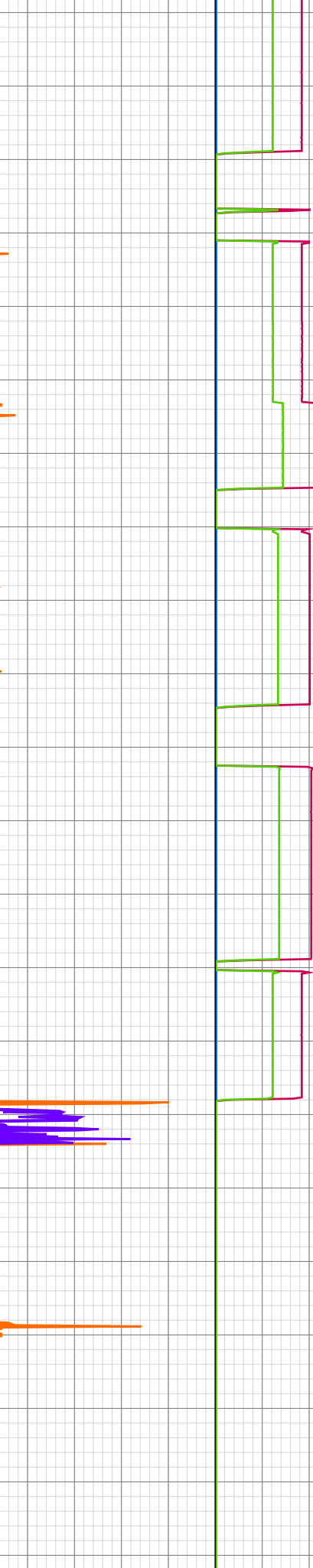
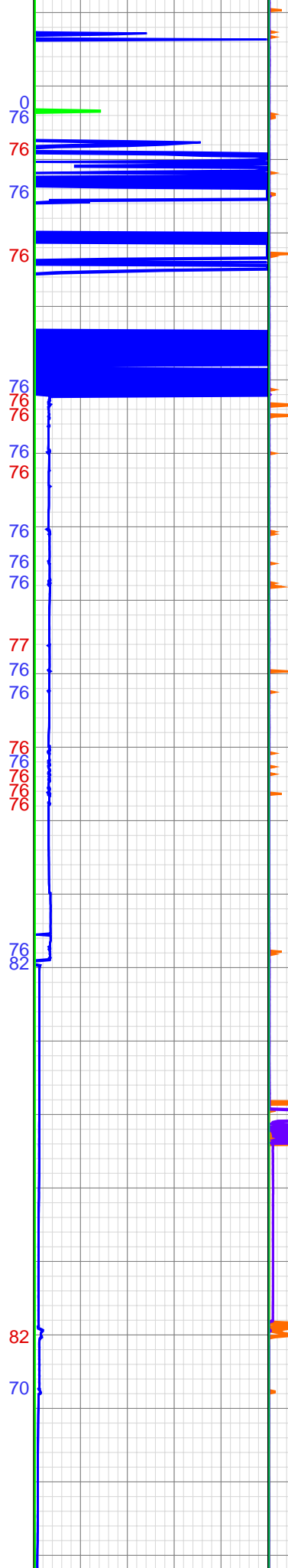
OPERATOR: QGC	CONTRACTOR: Saxon Energy Services Australia Pty Ltd
WELL: CAM 164	UNIQUE WELL ID:
FIELD:	SPUD DATE: Dec 01, 2012 00:00
LOCATION:	RELEASE DATE:
COUNTRY: Australia Metric	FROM DATE: Dec 01, 2012 00:00
RIG: Saxon Australia 165	TO DATE: Dec 06, 2012 23:59







09:45
09:55
10:05
10:15
10:25
10:35
10:45
10:55
11:05
11:15
11:25
11:35
11:45
11:55
12:05
12:15
12:25
12:35
12:45
12:55
13:05
13:15



12/01 09:44:52: ZWOB from DHC
12/01 09:47:42: HOOKLOAD WAS RECALIBRATED
12/01 09:50:59: PVT:Volume alarm reactivated: un-muted
12/01 09:57:12: BIT DEPTH CHANGED TO 75.0 METERS
12/01 09:58:24: ZWOB from DHC
12/01 10:02:29: HOOKLOAD WAS RECALIBRATED

12/01 10:10:23: HOOKLOAD WAS RECALIBRATED

12/01 10:37:07: HOOKLOAD WAS RECALIBRATED
12/01 10:40:00: TO ALL. HOOKLOAD CABLE GOT WATER IN IT. ALL FIXED MARIUS
12/01 10:44:54: 021TGAS 05121676 SW0.30 HW33.00 - 119 days on
12/01 10:45:59: HGAS_004: Horn Muted
12/01 10:46:00: HGAS_004: Horn Muted
12/01 10:46:01: HGAS_004: Horn Muted
12/01 10:53:15: 043TGAS-Check trap cable (unplugged?)
12/01 10:55:27: MUD WEIGHT 8.70
12/01 10:57:39: MUD VIS 32.00
12/01 11:00:57: 021TGAS 05121676 SW0.30 HW33.00 - 119 days on

12/01 11:33:19: 021TGAS 05121676 SW0.30 HW33.00 - 119 days on

12/01 11:42:58: 042TGAS-Check dryer cable (unplugged?)

12/01 11:57:54: PVT:Volume alarm muted

12/01 12:26:00: PJSM WITH CEMENTERS

12/01 12:44:00: INSTALL CEMENT HEAD

12/01 13:00:00: CEMENT 9/58 CASING

13:25
13:35
13:45
13:55
14:05
14:15
14:25
14:35
14:45
14:55
15:05
15:15
15:25
15:35
15:45
15:55
16:05
16:15
16:25
16:35
16:45
16:55

80

70

76

12/01 14:21:47: 012TGAS-Analyzer
air pressure low, check air supply.
Standby
12/01 14:22:03: 022TGAS-Trap needs
service
12/01 14:22:14: 046TGAS-Analyzer
air pressure = zero, check air supply.
Standby
12/01 14:28:00: LAYOUT CEMENT
HEAD AND XOVER LAYOUT
CEMENT HEAD ANDE XOVER

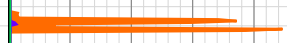
12/01 15:18:00: LAYOUT 9/58
LANDING JOINT

12/01 16:03:03: HGAS_200:
Light/Horn with no AC power detected
12/01 16:04:55: 043TGAS-Check trap
cable (unplugged?)

12/01 16:39:58: 021TGAS 05121634
SW0.30 HW33.00 - 18 days on
12/01 16:44:53: HGAS_200:
Light/Horn with no AC power detected
12/01 16:50:02: 012TGAS-Analyzer
air pressure low, check air supply.
Standby
12/01 16:50:09: 022TGAS-Trap needs
service
12/01 16:50:29: 046TGAS-Analyzer
air pressure = zero, check air supply.

17:05
17:15
17:25
17:35
17:45
17:55
18:05
18:15
18:25
18:35
18:45
18:55
19:05
19:15
19:25
19:35
19:45
19:55
20:05
20:15
20:25
20:35

Standby
12/01 17:09:00: LAND BOP ONTO WELLHEAD
12/01 17:21:55: 043TGAS-Check trap cable (unplugged?)
12/01 17:26:00: PRESSURE TEST STS.
12/01 17:28:40: 038TGAS-Check trap cable (temp)
12/01 17:36:25: 042TGAS-Check dryer cable (unplugged?)
12/01 19:53:15: 021TGAS 05121664 SW0.30 HW30.00 - 144 days on
12/01 20:03:33: 043TGAS-Check trap cable (unplugged?)
12/01 20:03:44: 022TGAS-Trap needs service

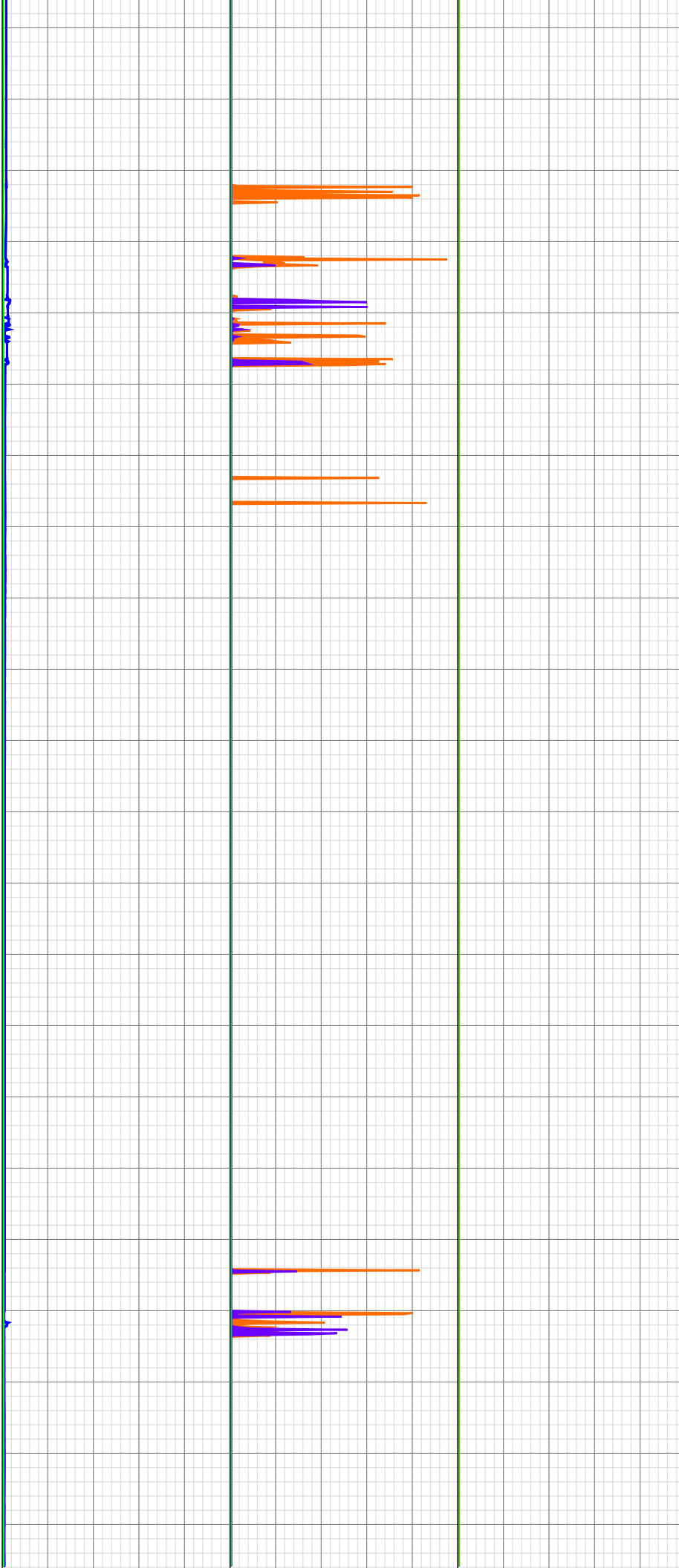


20:45
20:55
21:05
21:15
21:25
21:35
21:45
21:55
22:05
22:15
22:25
22:35
22:45
22:55
23:05
23:15
23:25
23:35
23:45
23:55
00
00:15

12/01 21:31:58: 012TGAS-Analyzer
air pressure low, check air supply.
Standby
12/01 21:32:25: 046TGAS-Analyzer
air pressure = zero, check air supply.
Standby

00 Dec 02, 2012

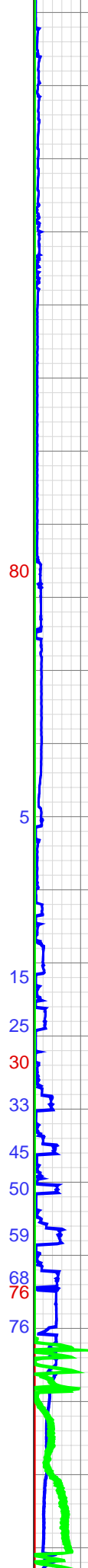
00:25
00:35
00:45
00:55
01:05
01:15
01:25
01:35
01:45
01:55
02:05
02:15
02:25
02:35
02:45
02:55
03:05
03:15
03:25
03:35
03:45
03:55



12/02 02:03:44: 022TGAS-Trap needs service

12/02 03:31:49: 046TGAS-Analyzer air pressure = zero, check air supply. Standby

04:05
04:15
04:25
04:35
04:45
04:55
05:05
05:15
05:25
05:35
05:45
05:55
06:05
06:15
06:25
06:35
06:45
06:55
07:05
07:15
07:25
07:35



12/02 04:52:52: MUD WEIGHT 8.70
12/02 04:55:08: MUD VIS 31.00

12/02 05:17:59: PVT:Flow and volume
alarm reactivated: un-muted
12/02 05:19:00: MAKE UP BIT/RIH
TO DRILL OUT FLOAT AN SHOE
12/02 05:21:18: BIT DEPTH
CHANGED TO 0.0 METERS

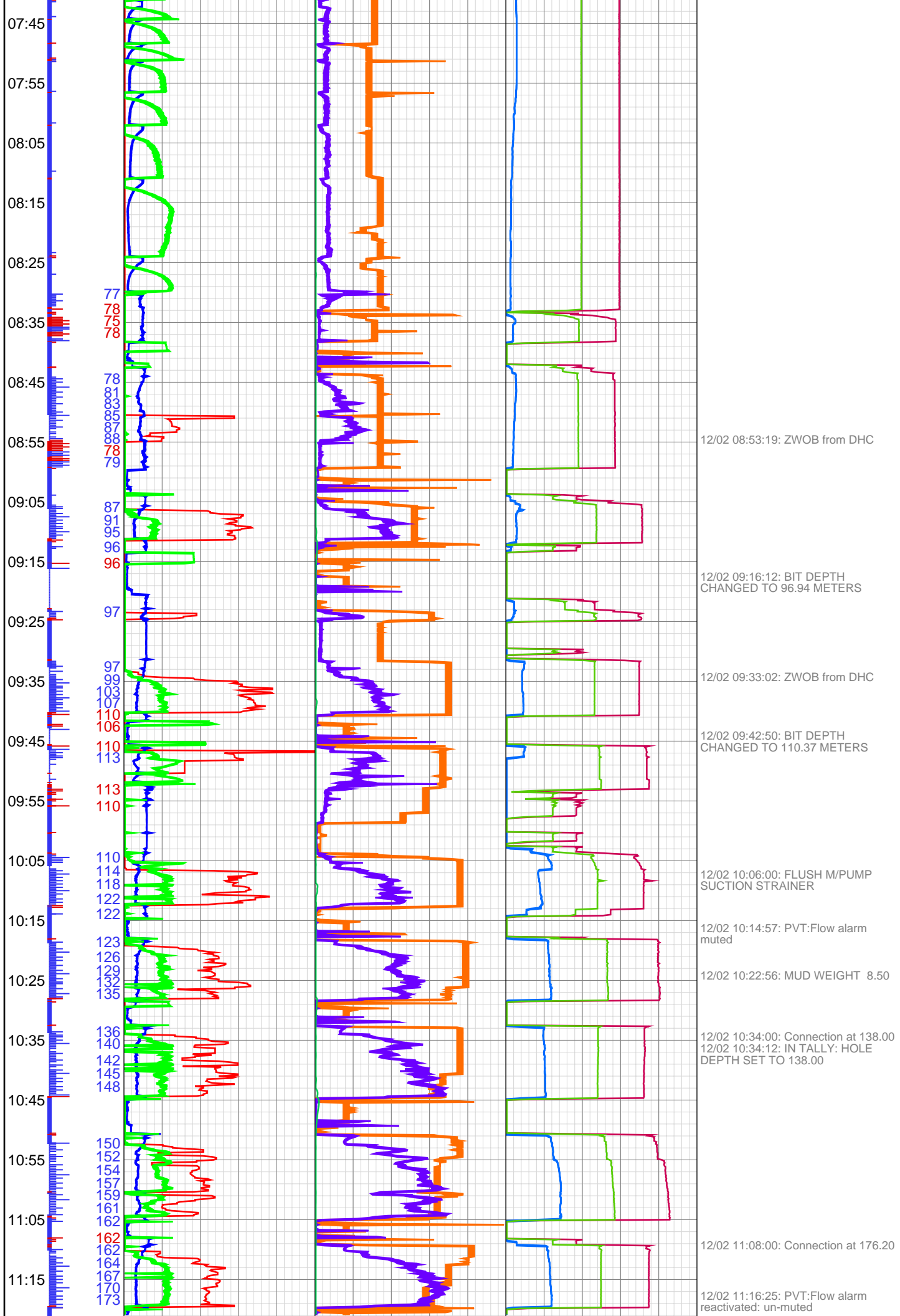
12/02 05:55:06: BIT DEPTH
CHANGED TO 11.49 METERS
12/02 05:57:01: 012TGAS-Analyzer
air pressure low, check air supply.
Standby

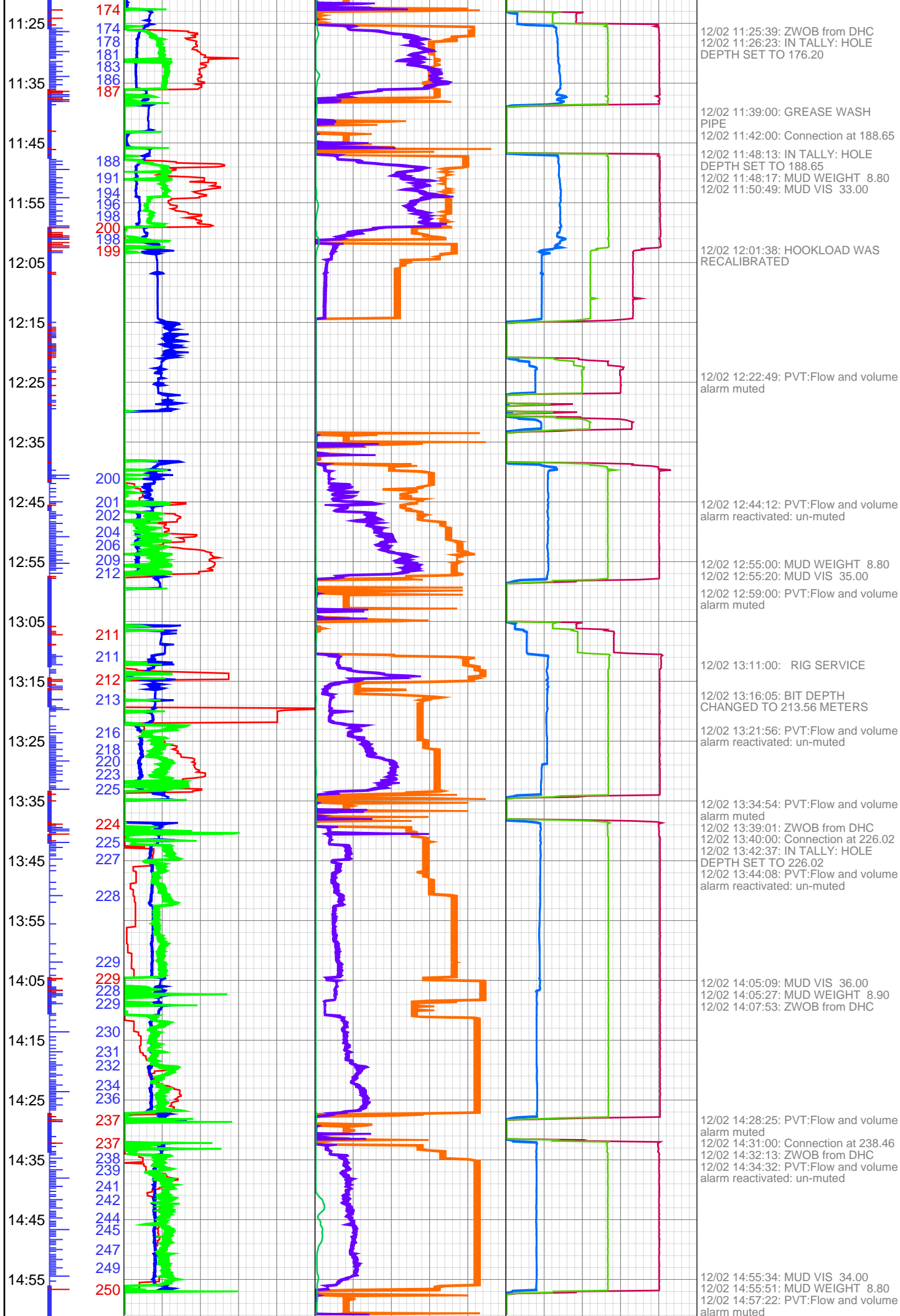
12/02 06:16:55: BIT DEPTH
CHANGED TO 22.76 METERS

12/02 06:29:11: BIT DEPTH
CHANGED TO 32.14 METERS

12/02 07:00:00: TAG CEMENT PLUG
AT 76.19M
12/02 07:03:00: DRILL OUT FLOAT
AN SHOE

12/02 07:13:39: ZWOB from DHC





12/02 11:25:39: ZWOB from DHC
 12/02 11:26:23: IN TALLY: HOLE
 DEPTH SET TO 176.20

12/02 11:39:00: GREASE WASH
 PIPE
 12/02 11:42:00: Connection at 188.65

12/02 11:48:13: IN TALLY: HOLE
 DEPTH SET TO 188.65
 12/02 11:48:17: MUD WEIGHT 8.80
 12/02 11:50:49: MUD VIS 33.00

12/02 12:01:38: HOOKLOAD WAS
 RECALIBRATED

12/02 12:22:49: PVT:Flow and volume
 alarm muted

12/02 12:44:12: PVT:Flow and volume
 alarm reactivated: un-muted

12/02 12:55:00: MUD WEIGHT 8.80
 12/02 12:55:20: MUD VIS 35.00

12/02 12:59:00: PVT:Flow and volume
 alarm muted

12/02 13:11:00: RIG SERVICE

12/02 13:16:05: BIT DEPTH
 CHANGED TO 213.56 METERS

12/02 13:21:56: PVT:Flow and volume
 alarm reactivated: un-muted

12/02 13:34:54: PVT:Flow and volume
 alarm muted

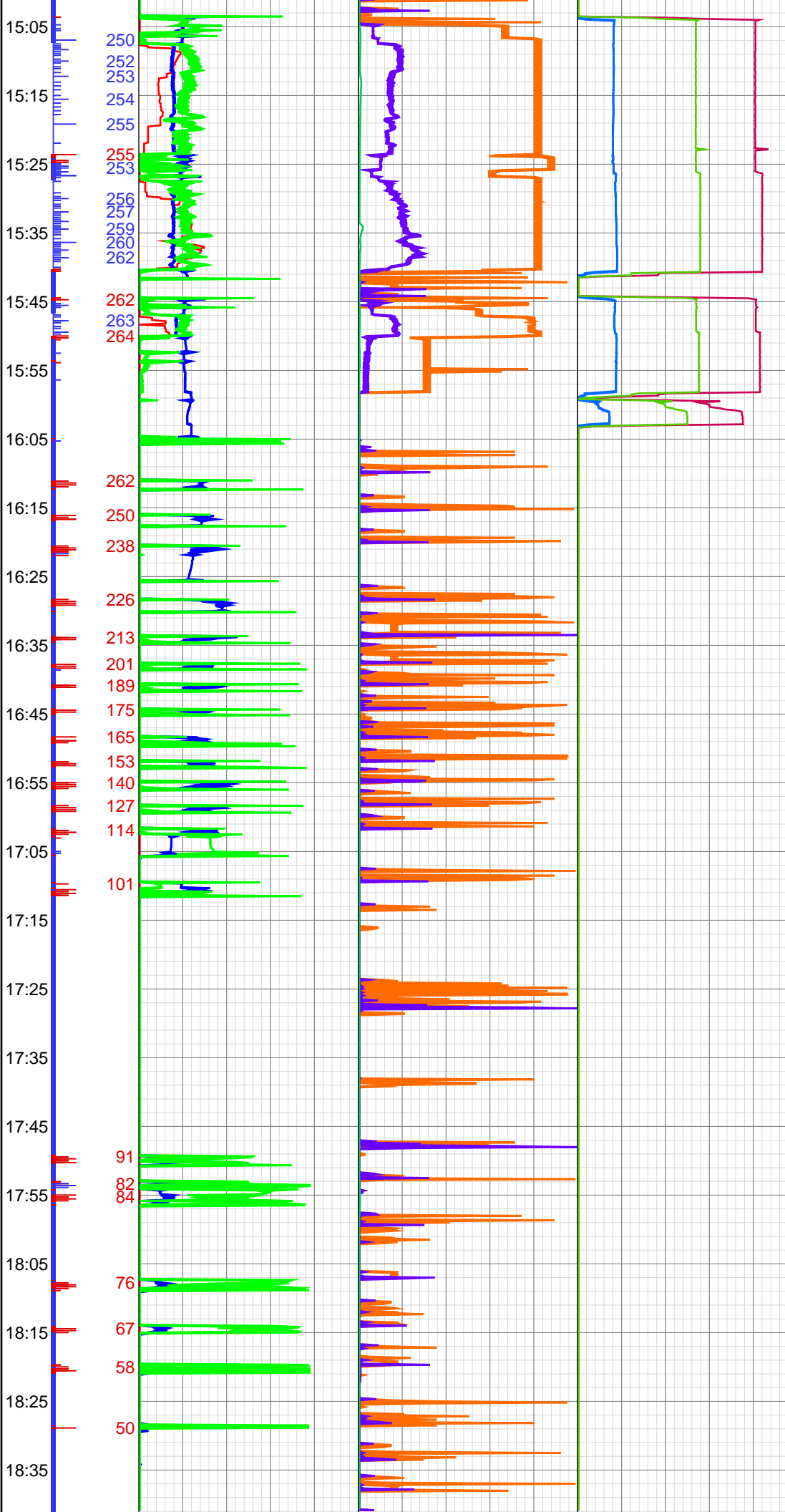
12/02 13:39:01: ZWOB from DHC
 12/02 13:40:00: Connection at 226.02
 12/02 13:42:37: IN TALLY: HOLE
 DEPTH SET TO 226.02
 12/02 13:44:08: PVT:Flow and volume
 alarm reactivated: un-muted

12/02 14:05:09: MUD VIS 36.00
 12/02 14:05:27: MUD WEIGHT 8.90
 12/02 14:07:53: ZWOB from DHC

12/02 14:28:25: PVT:Flow and volume
 alarm muted

12/02 14:31:00: Connection at 238.46
 12/02 14:32:13: ZWOB from DHC
 12/02 14:34:32: PVT:Flow and volume
 alarm reactivated: un-muted

12/02 14:55:34: MUD VIS 34.00
 12/02 14:55:51: MUD WEIGHT 8.80
 12/02 14:57:22: PVT:Flow and volume
 alarm muted



12/02 15:03:30: ZWOB from DHC
 12/02 15:04:00: Connection at 238.46
 12/02 15:05:18: PVT:Flow and volume alarm reactivated: un-muted
 12/02 15:05:48: ZWOB from DHC
 12/02 15:05:55: ZWOB from DHC

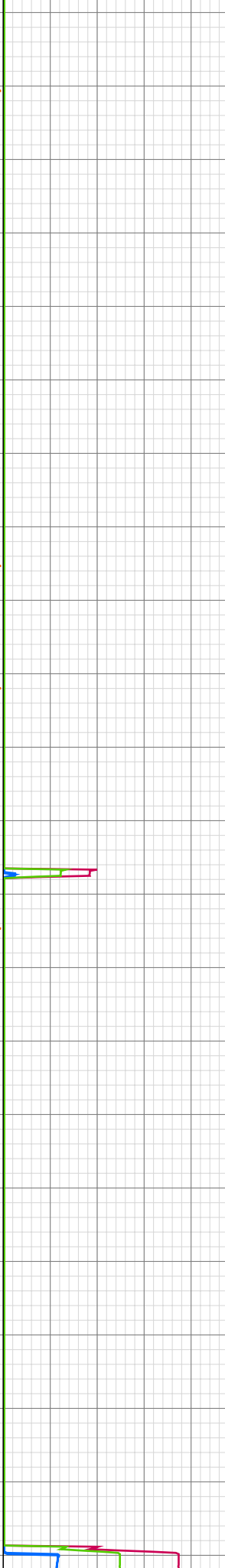
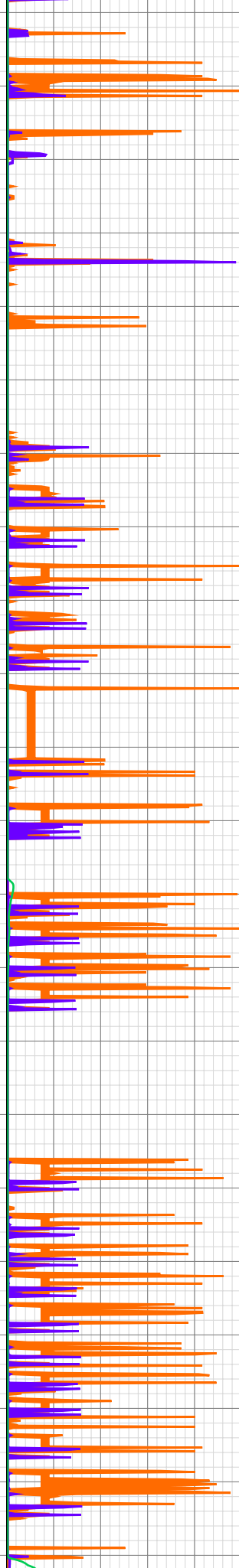
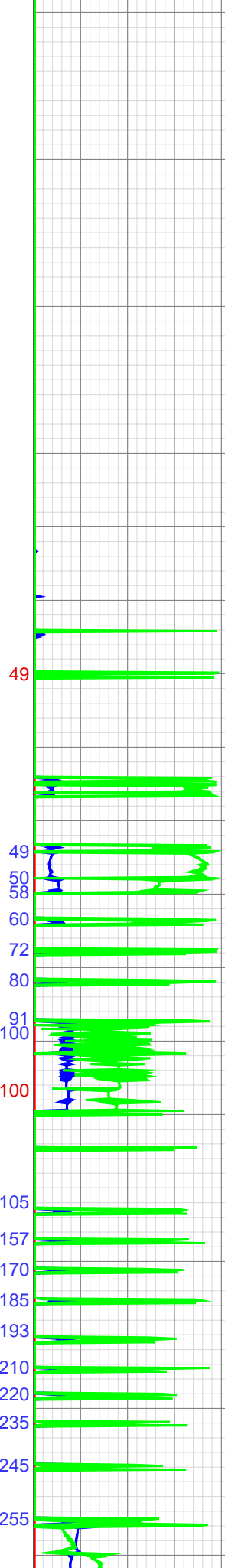
12/02 15:41:15: PVT:Flow and volume alarm muted
 12/02 15:44:59: ZWOB from DHC
 12/02 15:45:30: PVT:Flow and volume alarm reactivated: un-muted
 12/02 15:48:00: Connection at 263.42
 12/02 15:50:00: CIRCULATE BTMS UP

12/02 15:59:58: PVT:Flow and volume alarm muted
 12/02 16:03:00: FLOW CHECK
 12/02 16:05:28: PVT:Flow and volume alarm reactivated: un-muted
 12/02 16:07:43: MUD VIS 34.00
 12/02 16:07:57: MUD WEIGHT 8.90
 12/02 16:10:00: POOH

12/02 17:03:00: FLOW CHECK

12/02 18:30:49: MUD VIS 74.00
 12/02 18:31:05: MUD WEIGHT 9.00

18:45
18:55
19:05
19:15
19:25
19:35
19:45
19:55
20:05
20:15
20:25
20:35
20:45
20:55
21:05
21:15
21:25
21:35
21:45
21:55
22:05
22:15



12/02 19:30:00: RIH BACK TO 264M

12/02 19:52:48: 021TGAS 05121664
SW0.30 HW30.00 - 145 days on

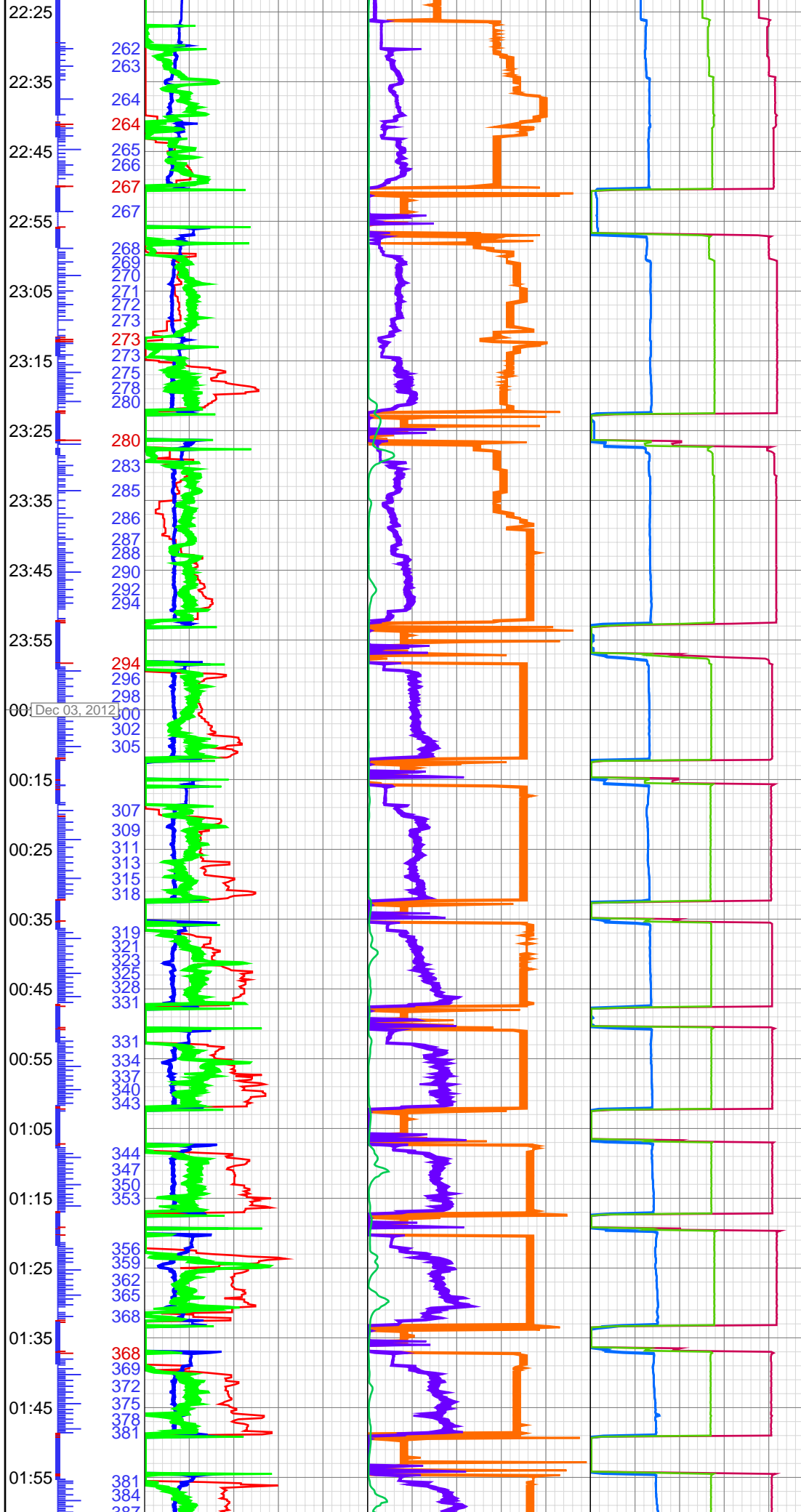
12/02 20:40:00: FLOW CHECK AT
BHA

12/02 21:16:00: CHANGE OUT SLIPS

12/02 21:27:09: BIT DEPTH
CHANGED TO 144.0 METERS

12/02 21:58:59: HOOK LOAD
THRESHOLD RECALIBRATED TO
17

12/02 22:16:00: RIH TAG BOTTOM
AT 262M
12/02 22:17:00: CIRCULATE BTM/UP
12/02 22:18:36: ZWQR from DHC



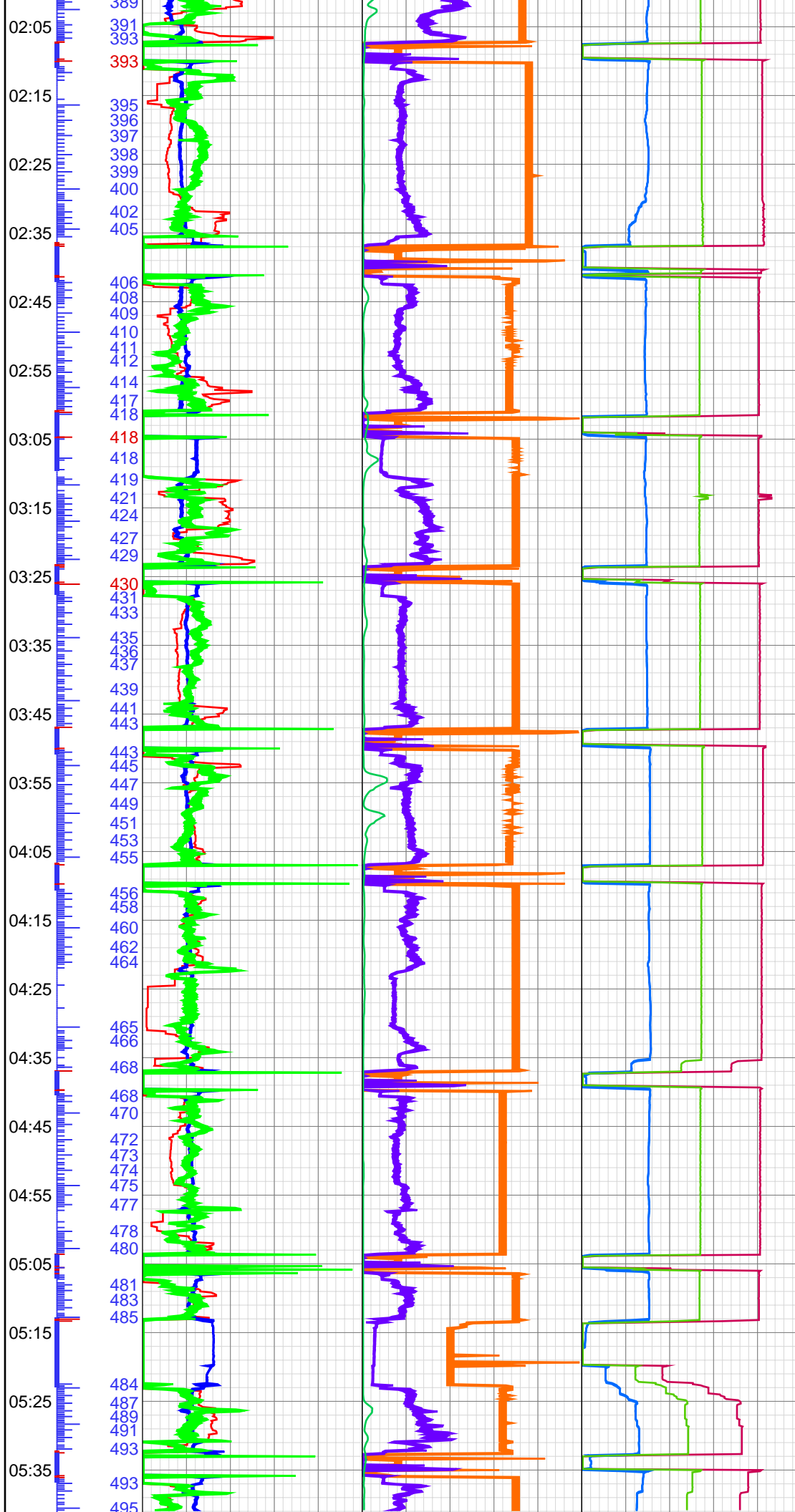
12/02 22:51:44: PVT:Flow and volume alarm muted
 12/02 22:54:18: MUD VIS 49.00
 12/02 22:54:30: MUD WEIGHT 9.00
 12/02 22:57:35: ZWOB from DHC
 12/02 22:59:34: PVT:Flow and volume alarm reactivated: un-muted

12/02 23:23:10: PVT:Flow and volume alarm muted
 12/02 23:26:54: IN TALLY: HOLE DEPTH SET TO 282.02
 12/02 23:27:30: ZWOB from DHC
 12/02 23:30:23: PVT:Flow and volume alarm reactivated: un-muted

12/02 23:53:12: PVT:Flow and volume alarm muted
 12/02 23:59:40: PVT:Flow and volume alarm reactivated: un-muted
 12/02 23:59:47: MUD VIS 39.00
 12/03 00:00:01: MUD WEIGHT 8.90

12/03 01:22:25: IN TALLY: HOLE DEPTH SET TO 356.75

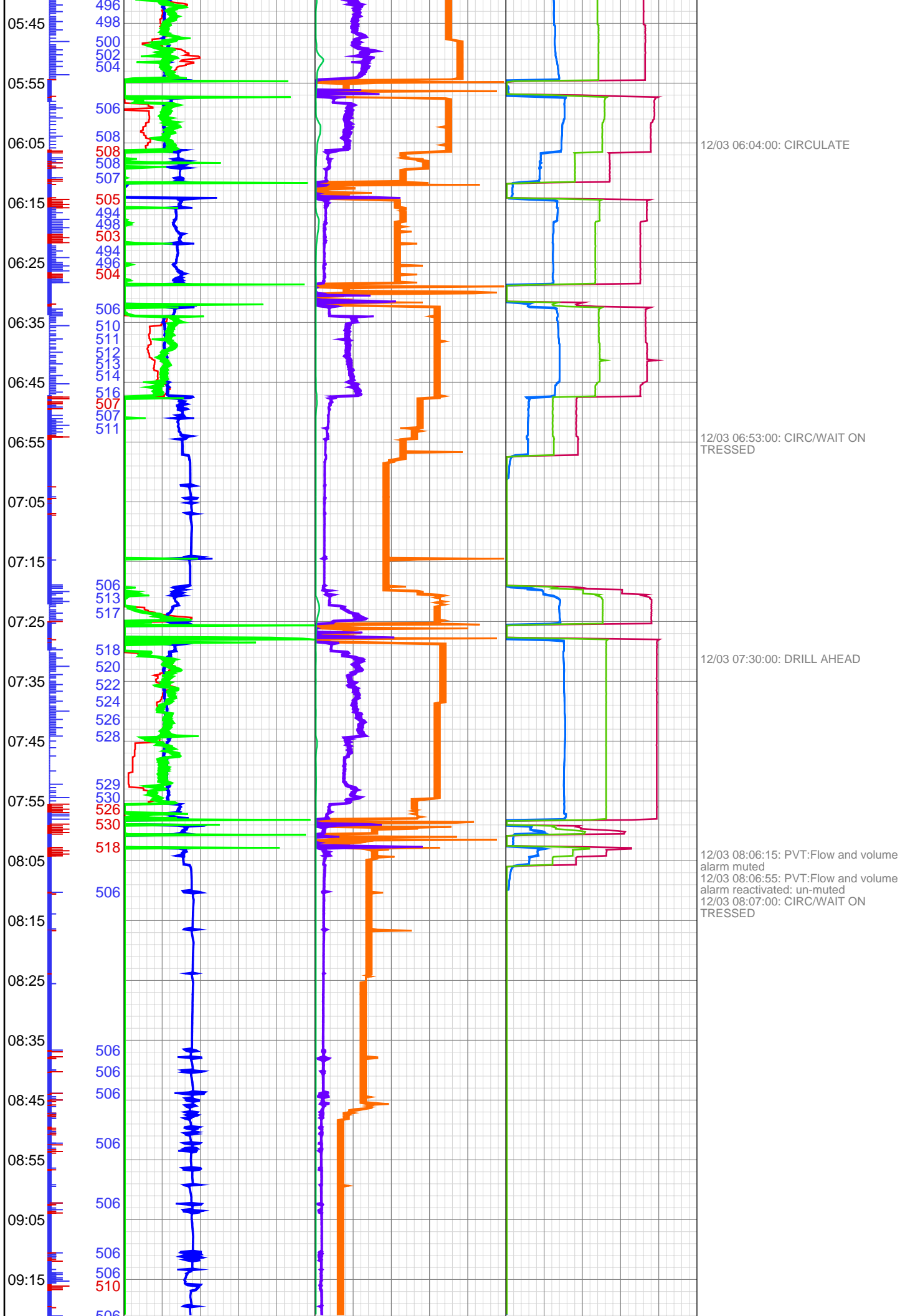
Dec 03, 2012



12/03 02:10:15: ZWOB from DHC

12/03 03:26:18: ZWOB from DHC
12/03 03:28:08: IN TALLY: HOLE
DEPTH SET TO 431.56

12/03 04:40:00: ZWOB from DHC



APPENDIX 7
CEMENTING REPORT



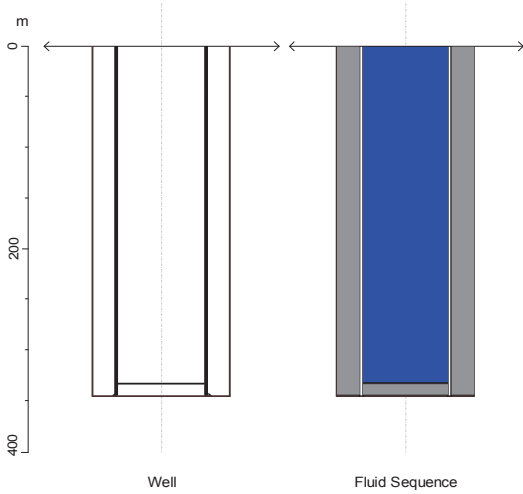
Schlumberger

Cam 164 9 5/8 in End of Job Report

Version 1.0
23 January 2013
James Baker



Well Data



Well Data	
Job Type	Casing Cementing
Total Depth (Measured):	81.0 m
True Vertical Depth (TVD):	81.0 m
Casing Depth (Measured)	81.0 m
Float Collar Depth (Measured)	68.5 m
BHST (Tubular Bottom Static Temperature):	27 degC
BHCT (Tubular Bottom Circulating Temperature):	27 degC

Open Hole		
Mean Diameter without Excess	Treated Depth	Annular Excess
12.25in	81.0 m	100 %

Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom depth
9 5/8in	36.0 lb/ft	K-55	BTC	0.253654 bbl/m	81.0 m

IMPORTANT:
 The well data shown on this page is based on information available when this treatment program was prepared. This data must be confirmed on location with the wellsite supervisor prior to the treatment. Any changes in the well data need to be reviewed for their impact on the treatment design.

Fluid Placement			
Fluid Name	Volume bbl	Density lb/gal	Top of m
Water	10.0	8.32	0
Slurry	32.8	14.6	0
Water	17.4	8.32	0

Capacities	
Casing Capacity	0.2537 bbl/m
Annular Capacity Csg/OH (No Excess) :	0.1830 bbl/m



Fluid Systems

<i>14.6ppg single slurry</i>			
System	<i>Conventional</i>		
Density	<i>14.6 lb/gal</i>		
Yield	<i>1.28 ft³/sk</i>		
Mixed Water	<i>5.959 gal/sk</i>		
Mixed Fluid	<i>5.968 gal/sk</i>		
Total Volume	<i>32.8 bbl</i>		
Additives	Code	Description	Concentration
	<i>D910</i>	<i>Cement Blend</i>	<i>90 lb/sk WBWOB</i>
	<i>D047</i>	<i>Antifoam</i>	<i>0.010 gal/sk VBWOB</i>
	<i>S001</i>	<i>CaCl₂</i>	<i>0.00 % BWOC</i>



Well Data

1. Move in Schlumberger equipment.
2. Conduct rig-up, prime and pressure test safety meeting.
3. When 9 5/8" casing is at setting depth, circulate 1.5 times casing volume at 5bbls/min (or max rate agreed by IPM).
4. Rig up cement head to landing joint and cementing lines.
5. Pump 5bbls of water ahead at 5bbls/min.
6. Pressure test lines to 3000psi.
7. Pump 15bbls of water ahead at 5bbls/min
8. Mix and pump 32.8 bbls of 14.6ppg slurry at 3-4bbls/min.
9. Drop top plug.
10. Commence displacing 17.4 bbl of water at 3-4bbls/min.
11. Bump plug to 1500psi. Bleed off and check returns. If plug does not hold, pump all returns back into well, shut in well until cement has set. DO NOT OVERDISPLACE.
12. Conduct post job rig down meeting.
13. Rig down Schlumberger equipment.
14. Conduct convoy meeting and move out Schlumberger equipment.



Pump Rates

Sequence chart:

Name	Rate (bbl/min)	Volume (bbl)	Time (min)	Comments
Water	4	20.0		Pump water ahead
Slurry	4	29.6	7.4	Mix and pump slurry
Drop plug	-	-	10.0	Drop top plug
Water	4	17.4	4.3	Displace with water
Total	-	67.0	21.8	-

Thickening Time:

Slurry

Job time 21.8 mins

Safety margin (+ 2hrs)* 141.8 mins

Thickening Time at 70Bc TBA mins

Optimum Pump rates

Operation	Min pumping rate	Max pumping rate
Mix slurry	2.0 bbl/min	5.0 bbl/min
Displacing	2.0 bbl/min	6.5 bbl/min (max horsepower required 41hhp)

NOTE:

- At no point must the average pumping or displacement rate be lower than the specified pump rates.
- If the mixing and pumping takes longer than 45mins (3/4 hour), contact the SLB Cementing Engineer immediately.
- If the total job time exceeds 90mins (1.5 hour), contact the SLB Cementing Engineer immediately.

Fluid loss control in the slurry

The slurry has no fluid loss control additives, and will lose around 800mL/30min. With no fluid control the following could happen:

- Slurry stability: If the slurry has no fluid loss, it could lose a considerable amount of base fluid to the formation thus becoming high in solids and could become unstable and settle.
- Channeling and incomplete cement coverage: Again the more fluid the slurry loses, the more viscous it will become. This could lead to higher pumping pressures as well as channeling, leading to incomplete cement coverage.

*Pumping Time Safety Factor: The minimum Thickening Time (T.T.) of a slurry should be the greater of: 1.5 times the job pumping time or pumping time plus 2 hours.



Summary

The job was completed as per the program.

Job Execution

Job Started: 1/12/2012 11:45

Job Finished: 1/12/2012 15:00

The 9 5/8in Casing show was set at 82.00m

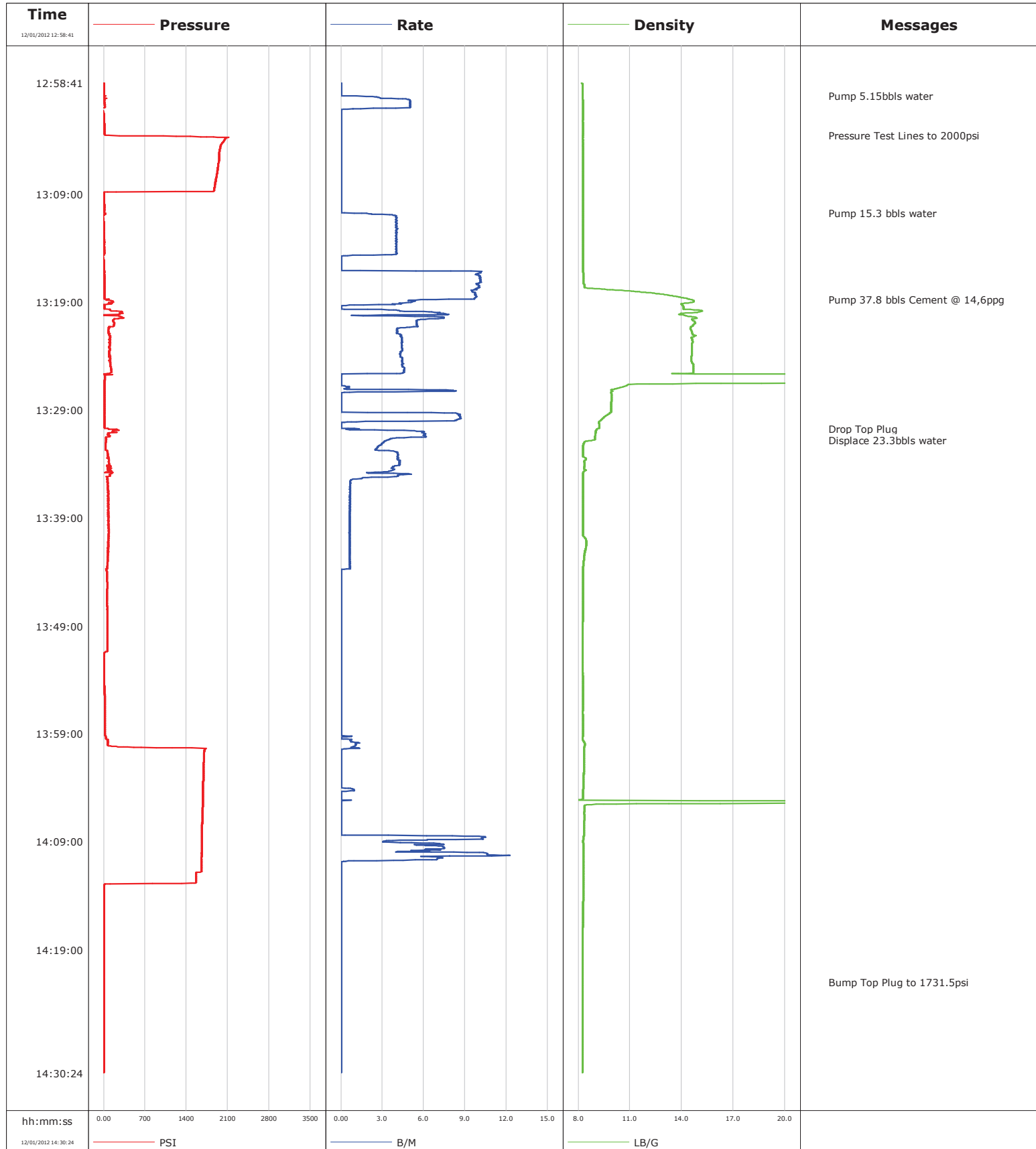
The job was carried out as shown below:

- 1 Load top plug into cement head*
- 2 Pump 5.1 bbl water*
- 3 Test cement lines to 2117 psi*
- 4 Pump 15.3 bbl water*
- 5 Mix and Pump 37.80 bbl of slurry*
- 6 Drop top plug*
- 7 Displace with 23.3 bbl of water*
- 8 Bumped plug to 1732 psi*

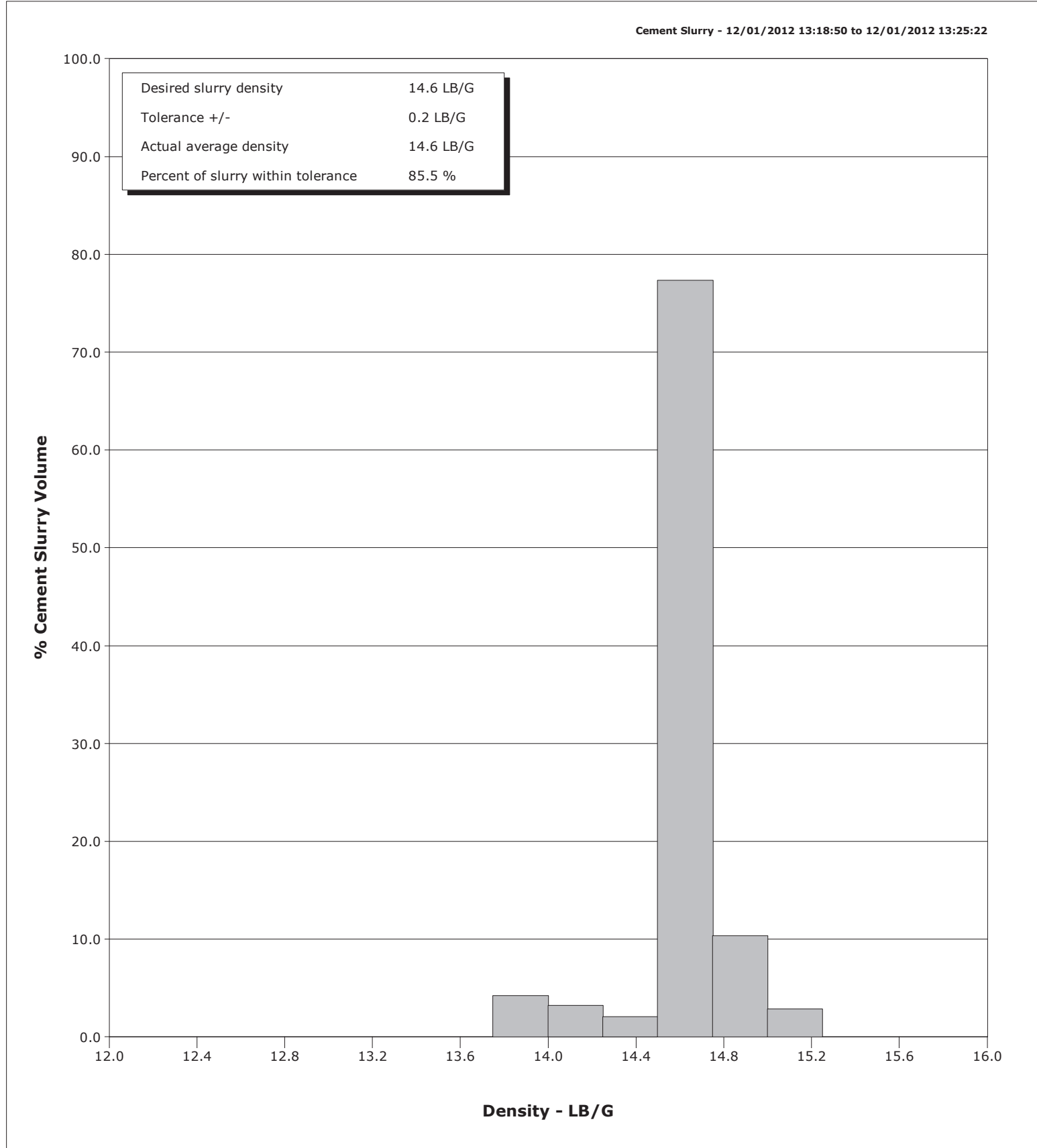
*Cement returns observed after 11.0 bbl displacement
(12.3 bbl cement returns to surface)*



<i>Stage #</i>	<i>Description</i>	<i>Density (ppg)</i>	<i>Pump rate (bpm)</i>	<i>Vol (bbl)</i>
<i>1</i>	<i>Water</i>	<i>8.33</i>	<i>3.5</i>	<i>20.4</i>
<i>2</i>	<i>Cement</i>	<i>14.6</i>	<i>3.5</i>	<i>37.8</i>
<i>3</i>	<i>Water</i>	<i>8.33</i>	<i>3.7</i>	<i>23.3</i>

Well	Cam 164	Client	IPM QGC
Field	Cam	SIR No.	C2BB-00040
Engineer	Jay T. Fales	Job Type	CEMENT 9 5/8" SURFACE CASING
Country	Australia	Job Date	12-01-2012



Well	Cam 164	Client	IPM QGC
Field	Cam	SIR No.	C2BB-00040
Engineer	Jay T. Fales	Job Type	CEMENT 9 5/8" SURFACE CASING
Country	Australia	Job Date	12-01-2012



DISTRICT ASA	STATION APG	TYPE SERVICE: Cement 9 5/8" Surface		COMPANY IPM QGC		Schlumberger					
RIG Saxon 165		TYPE OF WELL CBM		Well No. 164	Field Cam	SERVICE REPORT					
TIME AND DATE JOB STARTED 01-Dec-12 11:45		TOTAL DEPTH (m) 85	SIZE HOLE (in) 12.25"	DEVIATION Vertical	BHST (°C) 27	BHCT (°C) 27	FTL NUMBER C2BB-00040				
TIME & DATE JOB COMPLETED 01-Dec-12 15:00		DRILL FLUID Type WBM Wt (lb/gal) 9.0		MUD CIRCULATION PRE JOB 15 Minutes		FORMATION Coal		i-District NUMBER			
CASING 9 5/8 Size (In)		82 Depth (m)	K55 Type	36 Wt. (lb/ft)	ECP Depth (m) Type		STAGE TOOL Depth (m)	CEMENT HEAD SLB	PREVIOUS CASING Size (In) Depth (m) Wt. (lb/ft)		
2CPT25740 Pump Unit S/No.	8.33 Wt (ppg)	5.0 Vol (bbl)	FW Fill (bbl)	LEAD SLURRY NA Wt. (ppg) NA Vol. NA Fill			TAIL SLURRY 14.6 Wt. (ppg) 37.80 Vol.(bbl) FW Fill		CEMENT RETURNS 12.3 BBLs		
LEAD SLURRY N/A			TAIL SLURRY 14.6ppg 80:20 GP Cement:Flyash Blend D047 Antifoam 0.01 gal/sk				MATERIALS USED D910 Cement Blend 5.0 MT D047 Antifoam 2.0 gal				
	PRESSURE (psi)	VOLUME		RECORD OF SERVICE							
		BBL	BPM	Fluid	9 5/8 in Casing						
11:30:00					Arrive At Wellsite						
11:45:00					Rig Up						
12:58:40					Start Job						
12:58:41		5.1	3.5	Water	Pump 5 bbl Water as Spacer						
13:03:45	2117			Water	Pressure test lines @ 2000psi						
13:08:33	0			Water	Bleed off						
13:10:43	0	15.3	3.5	Water	Pump 15.3bbls Water as Spacer						
13:18:45	0	37.8	0	Slurry	Pump 37.8 bbls Cement @ 14.6ppg						
13:29:48	0	0.0	0	Water	Drop Top Plug						
13:30:48	0	23.3	3.7	Water	Displace 23.3 bbls water						
14:00:17	0	0.0	0	Water	Bump plug to 1731.5 psi						
14:12:48	0	0.0	0	Water	Bleed off pressure 1/4bbl back						
14:12:49	0	0.0	0	Slurry	Rig down, wash up Unit						
STEM1 DONE?		<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	TOTAL LOST TIME		0	hrs	TOTAL OPERATING TIME		2 Hrs 27 min	
No. OF SLB PERSONNEL ON JOB		CUSTOMER COMMENTS				SLB WCS REPRESENTATIVE					
SUP	<input type="checkbox"/>	F.S.	<input type="checkbox"/> 1								 Heimanath Naidu
MECH	<input type="checkbox"/>	F.E.	<input type="checkbox"/> 1								
QUALITY OF SERVICE		GOOD	<input type="checkbox"/>	SATISFACTORY	<input type="checkbox"/>	POOR	<input type="checkbox"/>	 Scott Lowen			

Client:	IPM QGC
Field:	Cam
Rig:	
Well:	Cam 164
Service Line:	Cementing
Job Type:	CEMENT 9 5/8" SURFACE CASING

Service Order #:	
Date:	Dec/01/2012
Operating Time (hh:mm):	00:00
Client Rep:	Scott Lowan
Schlumberger Engineer:	Jay T. Fales
Schlumberger FSM:	

Main Objective:

To be completed by Company Rep. Please answer Y (Yes) or N (No) and add any comments below.

		Score	Yes / No		Result
1	HSE				
1a	Free of lost time injury and compliance with SLB and loc. spec. HSE practice	5	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
1b	Free of environmental spill or non-compliant discharge	5	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
1c	Wellsite left clean	4	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
Sub-total					0%


2	Design / Preparation				
2a	Program incl. job simulation (CemCADE) & pump schedule / tool hydraulic calcs	3	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
2b	Equipment maintenance schedule completed / Green tagged	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
2c	All materials and equipment required for job/contingency checked & on location	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
2d	Safety / pre-job meeting conducted with all involved present	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
Sub-total					0%

3	Execution				
3a	Lost time < 30 mins	3	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3b	Equipment pressure tested successfully	3	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3c	All key parameters monitored and recorded accurately (Pressure, Rate, Density)	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3d	Plugs / darts released and tested successfully	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3e	Density variation met expectations	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3f	Personnel performed as per expectations	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3g	Equipment performed as per expectations	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3h	Job pumped as per design	3	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3i	Did job start on time	2	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
3j	Free of Operational failures (screen out, Cementing Example, etc.)	3	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
Sub-total					0%

4	Evaluation				
4a	Main job objective achieved with no consequential non-productive time	10	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>	0
Sub-total					0%

Total 0%

Comments: (Please include a brief explanation for a "NO" response and summarize any innovations attempted on this well.)

<p>Client:</p> <p>Good Job</p>	<p>Schlumberger:</p>
<p>Client Signature:</p> 	<p>Schlumberger Signature:</p>



Schlumberger

INTEGRATED PROJECT MANAGEMENT

Cam 164 7in End of Job Report

Version 1.0
13 December 2012
James Baker



*Cam 164 7in
End of Job Report*

Schlumberger

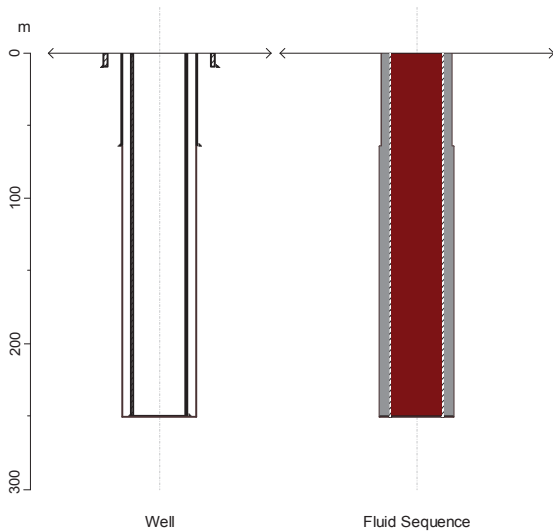
INTEGRATED PROJECT MANAGEMENT

Contents

Cam 164 Cement Program
Job Execution Summary
Job Recording Plot
Job Evaluation
Appendix - Service Report and Service Quality Evaluation



Well Data



Well Data	
Job Type	Casing Cementing
Total Depth (Measured):	792.0 m
True Vertical Depth (TVD):	792.0 m
ECP Setting Depth (Measured)	251.0 m
Stage Tool Depth (Measured)	252.0 m
BHST (Tubular Bottom Static Temperature):	30 degC
BHCT (Tubular Bottom Circulating Temperature):	28 degC

Open Hole		
Mean Diameter without Excess	Treated Depth	Excess
8.50in	252.0 m	100.0 %

Previous Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom depth
9 5/8 in	36.0 lb/ft	K-55	BTC	0.2551 bbl/m	80 m

Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom depth
7 in	23.0 lb/ft	K-55	BTC	0.129166 bbl/m	792.0 m

IMPORTANT:
The well data shown on this page is based on information available when this treatment program was prepared. This data must be confirmed on location with the wellsite supervisor prior to the treatment. Any changes in the well data need to be reviewed for their impact on the treatment design.

Fluid Placement			
Fluid Name	Volume bbl	Density lb/gal	Top of Fluid m
Mud	32.4	9.00	0
Water	5.0	8.32	0
Slurry	33.3	14.60	0
Mud	32.6	9.00	0

Capacities	
Casing Capacity	0.1292 bbl/m
Annular Capacity Csg/OH (No Excess) :	0.0741 bbl/m
Annular Capacity Csg/Csg (No Excess) :	0.0975 bbl/m

Job Volume	
33.3 bbl =	8.5 in OH Caliper + 0% OH Excess + 12.7bbl Excess
33.3 bbl =	8.5in Bit Size + 100.0 % Annular Excess



Fluid Systems

<i>14.6ppg single slurry</i>			
System	<i>Conventional</i>		
Density	<i>14.6 lb/gal</i>		
Yield	<i>1.28 ft³/sk</i>		
Mixed Water	<i>5.959 gal/sk</i>		
Mixed Fluid	<i>5.968 gal/sk</i>		
Total Volume	<i>33.3 bbl</i>		
Additives	Code	Description	Concentration
	<i>D910</i>	<i>Cement Blend</i>	<i>90 lb/sk WBWOB</i>
	<i>D047</i>	<i>Antifoam</i>	<i>0.010 gal/sk VBWOB</i>



Well Data

1. Move in Schlumberger equipment.
2. Conduct rig-up, prime and pressure test safety meeting.
3. When 7" casing is at setting depth, circulate 1.5 times casing volume at 5bbls/min (or max rate agreed by QGC).
4. Rig up cement head to landing joint and cementing lines.
5. Pressure test unit and cement lines to 250 psi for 5 min and 3000psi for 10 min.
6. Drop opening dart and install closing plug into the cement head (IPM Drilling supervisor to witness installation of top plug).
7. Displace dart with 32.4 bbls of mud. Bump and pressure up to 500psi and hold for 2 minutes. Slowly increase pressure to 950psi +/- 10% (ECP opening valve will operate at 855 - 1045 psi). Pressure will drop slightly at shear, allow pressure to stabilise and hold for 3-5 minutes. Pressure to be verified by Company Man. NOTE: Do not let pressure drop below 600 psi.
8. Bleed pressure to zero allowing ACP valve to seal. Gauge returns.
9. Pressure up to 1800psi +/- 10% to open stage tool. Pressure to be verified by Company Man.
10. Pump 5bbls of water ahead at 5bbls/min.
11. Mix and pump 33.3 bbls of 14.6ppg slurry at 3-4bbls/min.
12. Drop top plug.
13. Commence displacing 32.6 bbl of mud at 3 bbl/min.
14. Bump plug to 2000psi. Bleed off and check returns. If plug does not hold, pump all returns back into well, shut in well until cement has set. DO NOT OVERDISPLACE.
15. Conduct post job rig down meeting.
16. Rig down Schlumberger equipment.
17. Conduct convoy meeting and move out Schlumberger equipment.



Pump Rates

Sequence chart:

Name	Rate (bbl/min)	Volume (bbl)	Time (min)	Comments
Mud	4	32.4		Displace dart
Water	4	5.0		Pump water ahead
Slurry	4	33.3	8.3	Mix and pump slurry
Drop plug	-	-	10.0	Drop top plug
Mud	3	32.6	10.9	Displace with water
Total	-	103.3	29.2	-

Thickening Time:

Slurry

Job time 29.2 mins

Safety margin (+ 2hrs)* 149.2 mins

Thickening Time at 70Bc TBA mins

Optimum Pump rates

Operation	Min pumping rate	Max pumping rate
Mix slurry	2.0 bbl/min	5.0 bbl/min
Displacing	2.0 bbl/min	6.5 bbl/min (max horsepower required 41hhp)

NOTE:

- At no point must the average pumping or displacement rate be lower than the specified pump rates.
- If the mixing and pumping takes longer than 45mins (3/4 hour), contact the SLB Cementing Engineer immediately.
- If the total job time exceeds 90mins (1.5 hour), contact the SLB Cementing Engineer immediately.

Fluid loss control in the slurry

The slurry has no fluid loss control additives, and will lose around 800mL/30min. With no fluid control the following could happen:

- Slurry stability: If the slurry has no fluid loss, it could lose a considerable amount of base fluid to the formation thus becoming high in solids and could become unstable and settle.
- Channeling and incomplete cement coverage: Again the more fluid the slurry loses, the more viscous it will become. This could lead to higher pumping pressures as well as channeling, leading to incomplete cement coverage.

*Pumping Time Safety Factor: The minimum Thickening Time (T.T.) of a slurry should be the greater of: 1.5 times the job pumping time or pumping time plus 2 hours.



*Cam 164 7in
End of Job Report*



INTEGRATED PROJECT MANAGEMENT

Summary

Job performed as per program

Job Execution

Job Started: 6/12/2012 9:44

Job Finished: 6/12/2012 11:20

After drilling the well to TD, the 7in casing was run with ECP at 250.6m

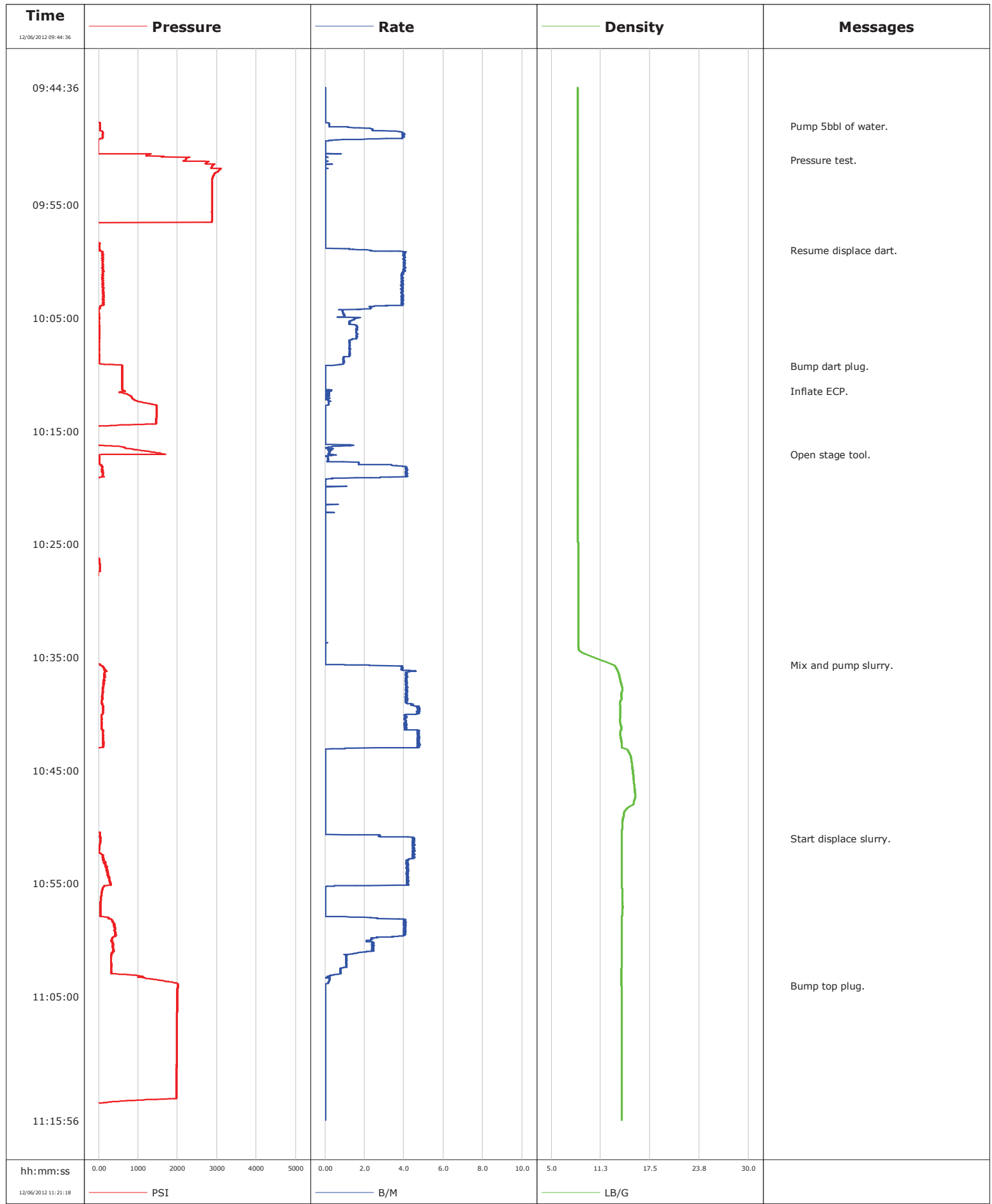
The job was carried out as shown below:

- 1 Load dart and plug into cement head
- 2 Pump 5.0 bbl water
- 3 Test cement lines to 3000 psi
- 4 Pump 28.2 bbl water
- 5 Bump dart to 500 psi
- 6 Pressure up to set ECP at 800 psi
- 7 Open stage collar at 1710 psi
- 8 Pump 5.0 bbl of water to confirm circulation
- 9 Mix and Pump 33.0 bbl of slurry
- 10 Drop top plug
- 11 Displace with 33.0 bbl of mud
- 12 Bumped plug to 2170 psi

*Cement returns observed after 28.0 bbl displacement
(5.0 bbl cement returns to surface)*

<i>Stage #</i>	<i>Description</i>	<i>Density (ppg)</i>	<i>Pump rate (bpm)</i>	<i>Vol (bbl)</i>
1	Mud	9.00	4	28.2
2	Water	8.33	4	5.0
3	Cement	14.60	4	33.0
4	Mud	9.00	4	33.0

Well	164	Client	IPM
Field	CAM	SIR No.	C86M-00037
Engineer	Rbia Ibrahim	Job Type	7in ECP
Country	Australia	Job Date	06/12/2012

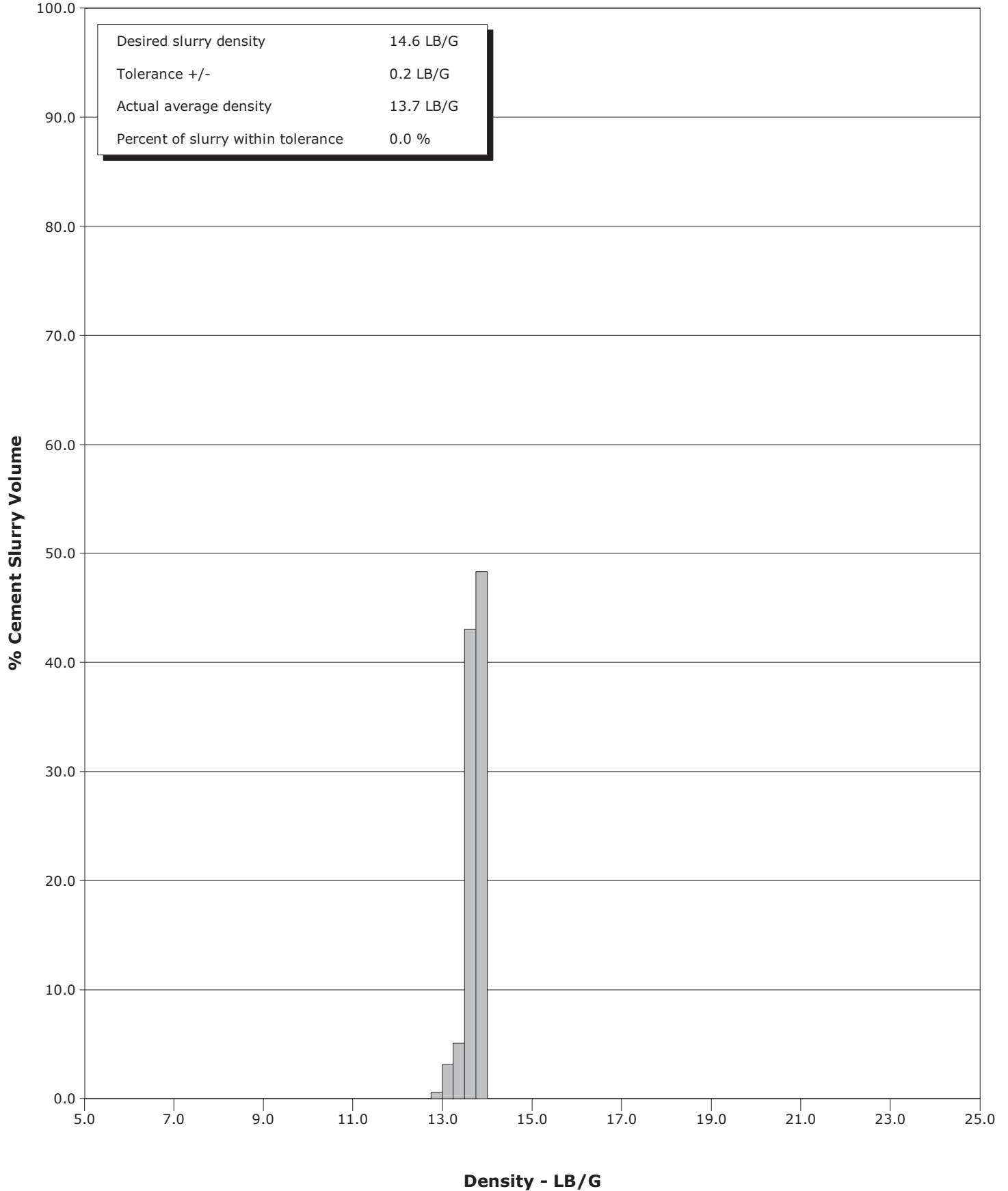


Schlumberger Cementing Qa/Qc Density Report

Well 164
Field CAM
Engineer Rbia Ibrahim
Country Australia

Client IPM
SIR No. C86M-00037
Job Type 7in ECP
Job Date 06/12/2012

Cement Slurry - 12/06/2012 10:35:38 to 12/06/2012 10:42:53



DISTRICT ASA	STATION APG	TYPE SERVICE: Cement 7" ECP	COMPANY IPM	Schlumberger				
RIG Saxon 165	TYPE OF WELL Gas	FIELD CAM	WELL No. 164	SERVICE REPORT				
TIME AND DATE JOB STARTED 09:44 06-12-2012	TOTAL DEPTH 779.7 m	SIZE HOLE 8.5"	DEVIATION Vertical	BHST 35 Deg C	BHCT 27 Deg C	FTL NUMBER C86M-00037		
TIME & DATE JOB COMPLETED 11:20 06-12-2012	DRILL FLUID Type WBM Wt (lb/gal) 9.0	MUD CIRCULATION PRE JOB Minutes	FORMATION Coal	I-District NUMBER 887804				
CASING		ECP		STAGE TOOL	CEMENT HEAD	PREVIOUS CASING		
7 Size (In)	739 Depth (m)	K55 Type	23 Wt. (lb/ft)	250.64 Depth (m)	ECP Type	248.17 Depth (m)	Single plug	
CPS-361 Pump Unit S/No.		WASH Wt (ppg) 8.3	FW Vol (bbl) 38.0	FW Fill (bbl)	LEAD SLURRY NA Wt. (ppg) NA Vol. NA Fill	TAIL SLURRY 14.6 Wt. (ppg) 33 Vol.(bbl) FW Fill	CEMENT RETURNS 5 BBLs	
LEAD SLURRY N/A		TAIL SLURRY 14.6ppg 80:30 GP Cement:Flyash Blend D047 Antifoam 0.01 gal/sk			MATERIALS USED D910 Cement Blend 6.0 MT D047 Antifoam 5.0 gal			
	PRESSURE (psi)	VOLUME		RECORD OF SERVICE				
		BBL	BPM	Fluid	7 in Casing			
20:40:00					Arrive at Rig Site			
9:00:00					Load Dart and Plug into cement head			
9:25:00					Safety Meeting			
9:48:00		5.0	4	Water	Displace dart 5 bbl			
9:51:00	3000			Water	Start Pressure Test			
9:59:00		28.2	4	Water	Displace dart 38.2bbl (Total dart displacement volume = 33.2bbl)			
10:09:13	500			Water	Bump dart			
10:11:27	800			Water	Inflate Packer to 800psi			
10:17:00	1710			Water	Open Stage tool at 1710psi.			
10:17:30		5.0	4	Water	Pump 5bbl water spacer ahead of cement			
10:34:19				Cement	Start Mixing Slurry			
10:35:38				Cement	Start Pumping Slurry			
10:42:53		33.0	4	Cement	End Slurry			
10:46:00					Drop top plug			
10:51:00				Mud	Start Displacement			
10:04:00	2000	33.0	4	Mud	Bump plug to 2000psi. Cement returns after 28 bbl displacement.			
11:14:00					Bleed back pressure (0.7bbl returns).			
11:20:00					Rig down equipment.			
					0.35 bbl returns from the ECP.			
STEM1 DONE?		YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	TOTAL LOST TIME	0 hrs	TOTAL OPERATING TIME	1.5 Hrs	
No. OF SLB PERSONNEL ON JOB	CUSTOMER COMMENTS				SLB WCS REPRESENTATIVE Rbia Ibrahim <i>Rbia Ibrahim</i> Supervisor Name			
SUP <input type="checkbox"/>	F.S. <input type="checkbox"/>	1	HEL <input type="checkbox"/>	3	CUSTOMER REPRESENTATIVE Scott Lower <i>Scott Lower</i> Client Rep Name			
MECH <input type="checkbox"/>	F.E. <input type="checkbox"/>				QUALITY OF SERVICE GOOD <input type="checkbox"/> SATISFACTORY <input type="checkbox"/> POOR <input type="checkbox"/>			

Client:	IPM
Field:	CAM
Rig:	Saxon 165
Well:	164
Service Line:	Cementing
Job Type:	7in ECP

Service Order #:	
Date:	Dec/06/2012
Operating Time:	90.0
Client Rep:	IPM
Schlumberger Engineer:	Rbia Ibrahim
Schlumberger FSM:	Haytham Elmokashfi

Main Objective: 7in ECP.

To be completed by Company Rep. Please answer Y (Yes) or N (No) and add any comments below.

		Score	Yes / No	
1	HSE			
1a	Free of lost time injury and compliance with SLB and loc. spec. HSE practice	5	yes <input type="checkbox"/>	no <input type="checkbox"/>
1b	Free of environmental spill or non-compliant discharge	5	yes <input type="checkbox"/>	no <input type="checkbox"/>
1c	Free of RIRs	5	yes <input type="checkbox"/>	no <input type="checkbox"/>
1d	Wellsite left clean	4	yes <input type="checkbox"/>	no <input type="checkbox"/>
			Sub-total	

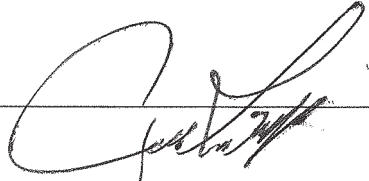
2	Design / Preparation			
2a	Program incl. job simulation (CemCADE) & pump schedule / tool hydraulic calcs	3	yes <input type="checkbox"/>	no <input type="checkbox"/>
2b	Equipment maintenance schedule completed / Green tagged	2	yes <input type="checkbox"/>	no <input type="checkbox"/>
2c	All materials and equipment required for job/contingency checked & on location	2	yes <input type="checkbox"/>	no <input type="checkbox"/>
2d	Safety / pre-job meeting conducted with all involved present	2	yes <input type="checkbox"/>	no <input type="checkbox"/>
			Sub-total	

3	Execution			
3a	Lost time < 30 mins	3	yes <input type="checkbox"/>	no <input type="checkbox"/>
3b	Equipment pressure tested successfully	3	yes <input type="checkbox"/>	no <input type="checkbox"/>
3c	All key parameters monitored and recorded accurately (Pressure, Rate, Density)	2	yes <input type="checkbox"/>	no <input type="checkbox"/>
3d	Plugs / darts released and tested successfully	2	yes <input type="checkbox"/>	no <input type="checkbox"/>
3e	Density variation met expectations	2	yes <input type="checkbox"/>	no <input type="checkbox"/>
3f	Personnel performed as per expectations	2	yes <input type="checkbox"/>	no <input type="checkbox"/>
3g	Equipment performed as per expectations	2	yes <input type="checkbox"/>	no <input type="checkbox"/>
3h	Job pumped per design	3	yes <input type="checkbox"/>	no <input type="checkbox"/>
3i	Did job start on time	2	yes <input type="checkbox"/>	no <input type="checkbox"/>
3j	Free of Operational failures (screen out, Cementing Example, etc.)	3	yes <input type="checkbox"/>	no <input type="checkbox"/>
			Sub-total	

4	Evaluation			
4a	Main job objective achieved with no consequential non-productive time	10	yes <input type="checkbox"/>	no <input type="checkbox"/>
			Sub-total	

Total

Comments: (Please include a brief explanation for a "NO" response and summarize any innovations attempted on this well.)

Client:	Schlumberger:
	<p>Job performed as per design.</p> 
Client Signature:	Schlumberger Signature: