

Dunk 1



Scale 1:500








































Wellsite Lithology Log

Well Data							
Well Name: Dunk 1		Rigs: TCL 1, EWE106		Geologists			
Status: Exploration		Latitude: 27° 04' 04.3781" S		Operations Geologist: Anthony Mountford			
Area: Surat (8743)		Longitude: 149° 25' 30.8309" E		Wellsite Geologist: Anthony Drake			
Basin: Bowen Basin		Spud Date: 20-09-2014 (TCL 1)		Wellsite Geologist: Jim Mitchell			
Location: ATP 645		TD Date: 27-12-2014 (EWE 106)		Wellsite Geologist: Brendan Lacy			
		Rig Release: 15-01-2015 (EWE 106)		Wellsite Geologist: John Pitman			
UWI: 100000789132		Datum: Mean Sea Level		Contractors			
Partners:		RT Elevation: 295.71m		Drilling: Easternwell Energy			
BNG (Surat) Pty Ltd 100%		GL Elevation: 286.94m		Wireline Logging: Schlumberger			
		TD Formation: Combarngo Volcanics		Cementing: Halliburton			
		TD Depth: 3180.00mMDRT		Mud Engineering: Newpark			
		Remarks:		Mud Logging: Weatherford			
				MWD: Pathfinder			
				Coring: Halliburton			
Hole and Casing				Well Structure		Profile View of Well Path	
Bit Size (inch)	Depth (m)	Casing Size (inch)	Shoe Depth (m)				
26"	68.61	20"	64.91				
17 1/2"	1106.38	13 3/8"	1101.04				
12 1/4"	2330.00	9 5/8"	2326.84				
6 3/4"	3180.00	4 1/2"	3178.00				
Location Map							

Events and Remarks

Date	Depth (mMDRT)	Details
24-09-2014		TCL 1 moved onto location and commence rig up
25-09-2014		Continue rig up
26-09-2014		Complete rig up and spud well.
27-09-2014		Continue to drill ahead to section TD. Rig up and run conductor casing.
28-09-2014		Continue to run casing. Cement casing. Rig release.
20-11-2014	68.61	Spudded Dunk 1 at 17:30 hours on the 20-11-2014 and drilled 17 1/2" Surface hole to 66.40m MDRT.
21-11-2014	75.30	Drilled 17 1/2" surface hole from 66.40 to 75.30m MDRT. POOH. Made up 17 1/2" rotary BHA with Pathfinder LWD/MWD tools. RIH to shoe, performed flow rate test. Max flow 450 gpm. Made repairs to mud ta
22-11-2014	127.00	Completed repairs on mud tanks. RIH and drilled 17 1/2" surface hole to 127.00m MDRT.
23-11-2014	402.00	Drilled 17 1/2" surface hole to 402.00m MDRT.
24-11-2014	995.00	Drilled 17 1/2" surface hole to 995m MDRT.
25-11-2014	1106.38	Drilled 17 1/2" surface hole to 1106.38m MDRT. Conducted Wiper Trip.
26-11-2014	1106.38	POOH to surface. Broke out BHA and laid down MWD. Rigged up to run 13 3/8" casing.
27-11-2014	1106.38	Ran in hole with 13 3/8" casing to target depth. Landed casing. Rigged down CRT and rigged up cement head. Broke circulation and conditioned mud. Cemented casing as per programme.
28-11-2014	1106.38	Displaced cement as per programme. Pressure tested casing. WOC. Nipped down bell nipple and riser. Cut and dressed casing. Nipped up well head.
29-11-2014	1106.38	Nipped up well head. Nipped up BOP and pressure tested.
30-11-2014	1106.38	Pressure tested BOP. Installed wear bushing. Made up 12 1/4" BHA and RIH to ~ 250m MDRT.
01-12-2014	1106.38	Slip and cut drilling line. Continued to RIH with the 12 1/4" BHA picking up singles. Circulated and conditioned mud. Conducted stripping drill. Drilled out shoe track.
02-12-2014	1328.50	Drilled out shoe track and new formation to 1110.63m MDRT & circulated, displacing well to new drilling fluid. Rigged up & performed XLOT. EMW=19.3ppg. Drilled 12 1/4" hole to 1328.50m MDRT
03-12-2014	1687.00	Drilled ahead 12 1/4" hole section from 1328.50m to 1687.00m MDRT
04-12-2014	1994.00	Drilled ahead 12 1/4" hole section from 1687.00m to 1871.5m MDRT. Repaired leak in bell nipple. Resumed drilling to 1994m MDRT.
05-12-2014	2240.00	Drilled ahead 12 1/4" hole section from 1994.00m to 2240.00m MDRT.
06-12-2014	2330.00	Drilled ahead 12 1/4" hole section from 2240.00m to 2330.00m MDRT. Circulated. POOH to casing shoe. Slipped and cut drill line. RIH to 1986m MDRT.

07-12-2014	2330.00	Continued to RIH to section TD. Circulated hole. POOH to surface. Laid down BHA. Rigged up for wireline logging. RIH with wireline logging tools.
08-12-2014	2330.00	Continued to RIH with wireline logging tools from ~400m to 12 ¼" TD. Tagged bottom and logged up. POOH with logging tools. Rigged down Schlumberger wire line.
09-12-2014	2330.00	Ran 9 5/8" casing as per programme. No hole issues observed. Total of 174 joints of casing run. Circulated 2 x open hole volumes while reciprocating casing. Picked up casing hanger.
10-12-2014	2330.00	Landed out 9 5/8" casing hanger in well head with 9 5/8" casing shoe set at 2326.84 mRT. Circulated 2 x open hole volumes. Held PJSM, cemented casing as per Halliburton programme. Install BOP's.
11-12-2014	2330.00	Pressure tested wellhead and BOP's.
12-12-2014	2330.00	Made up 6 3/4" MWD/LWD rotary BHA. Function tested tools. RIH picking up 4 3/4" DC's, 4" HWDP and 4" DP from racks. Continued to run in the hole on 5 1/2" DP from mast.
13-12-2014	2370.00	Drilled out shoe and 5m of new formation. Conducted XLOT. Drilled 6 3/4" production hole from 2335m to 2370m MDRT.
14-12-2014	2555.00	Drilled 6 3/4" production hole from 2370m to 2555m MDRT. Conducted Wiper Trp to 2259m MDRT.
15-12-2014	2703.00	Drilled 6 3/4" production hole from 2555m to 2703m MDRT.
16-12-2014	2870.00	Drilled 6 3/4" production hole from 2703m to 2870m MDRT. (Core Point). Circulated hole clean.
17-12-2014	2870.00	Wiper Tripped. 2870m-2308m. RIH to 2857m, Washed to 2870m. Circulate hole clean. POOH logging up GR-Resistivity in memory mode from 2870m to casing shoe. Continued to POOH to 342mRT.
18-12-2014	2870.00	POOH 6 3/4" BHA from 342 mRT to surface. Made up and RIH with Halliburton 6 3/4" x 3 1/4" coring assembly. Worked through tight spots from 2737-2400m & 2561-2752m. Washed down from 2752-2767mMDRT.
19-12-2014	2893.00	Cored 6 3/4" hole from 2870m to 2893m MDRT.
20-12-2014	2897.00	Cored 6 3/4" hole from 2893m to 2897m MDRT. Pulled out of the hole and recovered core 1. Recovered 26.66m (98.7% recovery)
21-12-2014	2924.27	Cored 6 3/4" hole from 2897m to 2924.27m MDRT. Pulled out of the hole with core to 1182m MDRT.
22-12-2014	2924.27	Pulled out of the hole with core from to 1182m MDRT to surface. Recovered Core 2. 27.27m (100%). Made up 6 3/4" drilling BHA and RIH & logged cored section to 2882m MDRT.
23-12-2014	3030.47	Continued logging cored section from 2882m to 2924.27 MDRT. Drilled ahead 6 3/4" hole from 2924.27 to 3030.47m MDRT.
24-12-2014	3059.55	Drilled ahead 6 3/4" hole from 3030.47m MDRT to 3059.55m MDRT. POOH to change BHA. (Last survey at 3040.20m Inc: 15.3° Azi: 203.03°)
25-12-2014	3082.50	Made up 6 3/4" BHA with MWD/LWD Motor. Ran in hole and directional drill ahead 6 3/4" hole from 3059.55m to 3082.50m MDRT.
26-12-2014	3155.00	Drilled 6 3/4" BHA with MWD/LWD Motor from 3082.50m to 3155.00m MDRT.
27-12-2014	3180.00	Continued to drill ahead 6 ¾" hole from 3155m to 3180m MDRT (TD). Circulated hole clean and POOH. Broke down and laid down BHA. Prepared for wireline loggers rig up Run 1.
28-12-2014	3180.00	Riged up and ran wireline logging Run 1. Rigged down Run 1 tool string and rigged up and ran logging Run 2. Rigged down logging Run 2 and rigged up for Run 3.
29-12-2014	3180.00	Continued to RIH with logging Run 3. Tagged bottom and logged up. POOH and rigged down Run 3 tools. Safety meeting and rigged up for wireline Run 4. Ran wireline log Run 4.
30-12-2014	3180.00	Continued logging Run 4. Pulled out of hole with Run 4 tool string. Rigged down loggers and prepared for wiper trip. Picked & made up BHA and RIH. Circulated hole clean. Slipped and cut drill line.
31-12-2014	3180.00	Pulled out of hole with wiper assembly. Laid down BHA. Rigged up and ran wireline logging Run 5 (MSCT). Tool failed. Pulled out of hole. Ran in with replacement tool and resumed MSCT(Run 6).
01-01-2015	3180.00	Continued logging run 6 - MSCT. Cut sidewall cores from point 21 to 55. POOH and recovered cores. Made up tools, ran in and conducted logging run 7 - VSI4-EDTC-LEH.
02-01-2015	3180.00	Completed logging run 7. Pulled out of the hole and laid out logging tool string 7. Made up USIT-CBL-VDL-EDTC-CCL-LEH toolstring, ran in hole and conducted logging run 8. Pressure tested BOP's.
03-01-2015	3180.00	Completed pressure testing BOP's and well control equipment. Made up 6 3/4" clean out / 9 5/8" casing scraper assembly and ran in the hole to 2130mMDRT.
04-01-2015	3180.00	Ran in the hole with 6 3/4" clean out / 9 5/8" casing scraper assembly from 2130m to 3148m MDRT. Reamed and washed down to 3180mMDRT. Dropped pipe drift & pulled out to surface.
05-01-2015	3180.00	Cleared rig floor of BHA. Picked up cement head & torqued up 2 x 2m 5 1/2" drill pipe pups one top and bottom. Laid down cement head. Picked up and ran 4 1/2" liner as per tally.
06-01-2015	3180.00	Picked up hanger assembly with running tools & made up to 4 1/2" liner string. Ran in hole with 4 1/2" liner assembly on 5 1/2" drill pipe to 3180m MDRT. Set liner hanger & cemented liner at 3178mMDRT
07-01-2015	3180.00	Racked back 5 1/2" drill pipe to mast.and laid out liner running tools. Rigged up & ran in the hole with 4 1/2" liner cleanup tools on 2 3/8" tubing to 206mMDRT.
08-01-2015	3180.00	Completed running in hole with 4 1/2" liner cleanout assembly. Ran in hole on 5 1/2" drill pipe to top of cement at 2846m MDRT. Drilled out cement with 3 1/2" bit and mud motor to 2969m MDRT
09-01-2015	3180.00	Completed drilling out cement to 3122.11m RT with mud motor. Polished PBR's.
10-01-2015	3180.00	Pressure tested 4 1/2" liner shoe to 5000psi. Pumped chemical train, displaced to fresh water, conducted inflow test. Displaced to 5% brine. POOH, laid down 5 1/2" drill pipe.
11-01-2015	3180.00	Completed laying out 5 1/2" drill pipe and well bore cleanup BHA. Rigged up Weatherford CRT & associated equipment for running in hole with 4 1/2" tie in. Ran in hole seal assembly & gauge mandrel.
12-01-2015	3180.00	Ran in hole with 4 1/2" tie in string with gauge cable to 65.5m RT. Encountered backing up tubing while torquing up with overdrive. Ran in on elevators & power tong to 1619mRT.
13-01-2015	3180.00	RIH with 4.5" tieback string c/w PDHG cable from 1619m to 2235.51mRT. Tagged lower PBR. Pressure tested seals. Spaced out & picked up TRSCSSV & hanger assembly. Latched seal assembly and landed hanger
14-01-2015	3180.00	Engaged tie down bolts. Pressure tested hanger seals, 4 1/2" to 9 5/8" annulus and 4 1/2" tubing string. Ran inflow test on TRSCSSV & on open tubing. Backed out landing joint. Installed BPV. ND BOP.
15-01-2015	3180.00	Installed tubing head, terminated gauge cable & TRSCSSV line. Installed side outlet valves. Replaced BPV with TWCV. Installed frac sleeve. Capped and secured well. Rig released at 17:00 hrs.

Key							
	Breccia		Limestone		Boundstone		Carbonaceous
	Conglomerate		Dolomitic Limestone		Grainstone		Bituminous
	Sand/Sandstone		Dolomite		Mudstone		Oolitic
	Silt/Siltstone		Calcareous Dolomite		Packstone		Chalky
	Clay/Claystone		Chert		Wackestone		Glauconitic
	Marl		Anhydrite		Silty		Micaceous
	Shale		Halite		Argillaceous		Pyritic
	Tuff		Polyhalite		Calcareous		Spicules
	Volcanics		Coal/Lignite		Dolomitic		Fossiliferous
			No Sample		Brecciated		

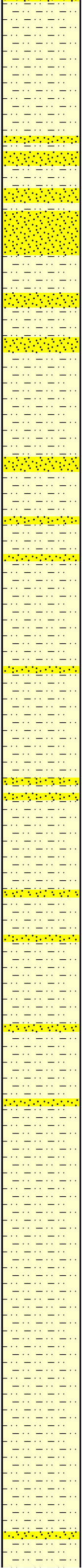
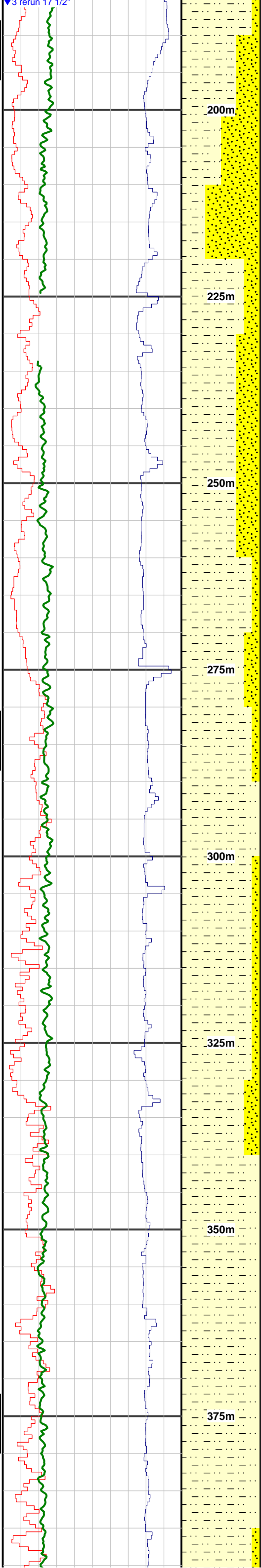
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Date		Parameters		Logging		Stratigraphy		Sh		Resistivity	
		Gamma - GRCA (API) Units		ROP m/hr		Formation		Member/Unit		Deep Resistivity (ohm.m)	
		250		0						0.2 2000	
		0		50						0.2 2000	
		WOB (klbs)								0.2 2000	
		0		50						0.1 1000	
										Total Gas (Units)	
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20 Nov 2014		20 Nov 2014		20 Nov 20							

WOB: 3 klbs
TRQ: 4164 lbs.ft
SPP: 1847 psi
Flow: 1041 gpm
RPM: 98

WOB: 7 klbs
TRQ: 6483 lbs.ft
SPP: 2065 psi
Flow: 1068 gpm
RPM: 97

WOB: 9 klbs
TRQ: 7975 lbs.ft
SPP: 2057 psi
Flow: 1058 gpm
RPM: 99



SILTSTONE: medium grey, argillaceous, arenaceous in parts interbedded with very fine SANDSTONE, moderately hard, blocky to sub blocky, trace very fine lithics, trace carbonaceous inclusions.

SANDSTONE: light grey, translucent, clear, very fine to predominantly fine grained, well sorted, sub angular to sub rounded, friable to moderately hard, weak calcareous cement, rare siliceous cement, common light grey argillaceous matrix, interbedded with and grading to SILTSTONE, minor carbonaceous fragments, poor to fair visual porosity, no fluorescence

SANDSTONE: off white, translucent, light grey, very fine to predominantly fine grained, moderately well sorted, sub angular to sub rounded, moderately hard, friable in parts, moderately strong siliceous cement, minor light grey argillaceous matrix, minor carbonaceous inclusions, trace lithics, poor to fair visual porosity, no fluorescence

SILTSTONE: light to medium brownish grey, light to medium grey, moderately hard, arenaceous grading to silty SANDSTONE, trace carbonaceous specks, trace fine grained lithics.

SILTSTONE: medium brownish grey, medium grey, moderately hard, arenaceous grading to silty SANDSTONE, trace carbonaceous specks, trace fine grained lithics.

SANDSTONE: light to medium brownish grey, off white, translucent, very fine to fine grained, moderately well sorted, sub angular to sub rounded, moderately hard, friable in parts, moderately strong siliceous and calcareous cement, common light grey argillaceous matrix, minor carbonaceous inclusions, trace lithics, poor visual porosity, no fluorescence

SILTSTONE: medium brownish grey, medium grey, moderately hard, argillaceous, arenaceous in parts, trace carbonaceous specks, trace fine grained lithics.

SANDSTONE: light grey, off white, light to medium brownish grey, translucent, very fine to fine grained, moderately well sorted, sub angular to sub rounded, moderately hard, friable in parts, moderately strong calcareous and siliceous cement, minor very light grey argillaceous matrix, minor carbonaceous inclusions, trace lithics, poor visual porosity, no fluorescence

SILTSTONE: medium to dark grey, medium to dark brownish grey, moderately hard, argillaceous, trace very finely arenaceous, sub blocky to sub fissile, blocky in part, trace carbonaceous specks.

SANDSTONE: light grey, off white in parts, very fine to fine grained, well sorted, sub angular to sub rounded, silty, interbedded with arenaceous SILTSTONE, moderately hard, friable in parts, moderately strong calcareous and siliceous cement, common light grey argillaceous matrix, common carbonaceous fragments and thin laminae, trace very fine cream lithics, very poor to poor visual porosity, no fluorescence.

SILTSTONE: medium to dark grey, medium to dark brownish grey, moderately hard, argillaceous, trace very finely arenaceous, sub blocky to sub fissile, blocky in part, trace carbonaceous specks.

SILTSTONE: medium to dark grey, medium to dark brownish grey, moderately hard to hard, dominantly argillaceous, trace very finely arenaceous, sub blocky to sub fissile, trace micromicaceous, trace disseminated pyrite.

SILTSTONE: dark grey, dark brownish grey, moderately hard to hard, argillaceous, trace very finely arenaceous, sub blocky to sub fissile, trace micromicaceous, trace disseminated pyrite, rare micro cream lithics .

SANDSTONE: light grey, light green, very fine to fine, well sorted, sub angular to sub rounded, hard, strong calcareous and siliceous

208.800m
208.8m TVDBRT
Inc: 0.26°
Azi: 324.93°

No LWD data
recorded from
224m to 233m

Mud Type:
KCl/Polymer
Dens: 8.6ppg
PV/YP: 21/24
pH: 9.5
Additives:
Barite, Rheopac LV,
Xanthan Gum,
MAGOX, Rheoben NT
Trugel 13A

Mud Type:
KCl/Polymer
Dens: 9.0ppg
PV/YP: 10/35
pH: 9.0
Additives: Soda Ash,
Rheopac LV, KCL,
Xanthan Gum

WOB: 9 klbs
TRQ: 6928 lbs.ft
SPP: 2038 psi
Flow: 1041 gpm
RPM: 112

Bungil Formation

Mooga Sandstone

cement, common light grey argillaceous to silty matrix, common glauconite, common cream lithics, very poor to poor visual porosity, no fluorescence.

SILTSTONE: medium to predominantly dark grey, moderately hard to hard, sub blocky to sub fissile, blocky in parts, argillaceous, trace very finely arenaceous, trace micromicaceous, trace micro carbonaceous specks, trace disseminated pyrite.

SANDSTONE: off white, light grey, very fine to fine, well sorted, sub angular to sub rounded, moderately hard to hard, firm in parts, strong calcareous cement, weak siliceous cement in parts, white to light grey argillaceous to silty matrix, common micro carbonaceous specks and cream lithics, trace green lithics, very poor to poor visual porosity, trace dull orange mineral fluorescence.

SILTSTONE: dominantly medium brown, medium grey, moderately hard, sub blocky to sub fissile, argillaceous, trace very fine arenaceous, minor carbonaceous specks & laminations, trace micro cream lithics, trace medium brown DOLOMITE fragments.

COAL: black, very dark brown, dull to sub vitreous, hard, blocky, uneven fracture.

SANDSTONE: off white, light grey, very fine to fine, well sorted, sub angular to sub rounded, moderately hard to hard, firm in parts, common loose grains, strong calcareous cement, weak siliceous cement in parts, white to light grey argillaceous to silty matrix, common micro carbonaceous specks and cream lithics, trace green lithics, very poor to poor visual porosity, trace to 5% dull orange mineral fluorescence.

SILTSTONE: medium grey, moderately hard, sub blocky to sub fissile, argillaceous, trace very fine arenaceous, minor carbonaceous specks & laminations, trace micro cream lithics.

SANDSTONE: off white, light grey in parts, very fine to medium, predominantly fine, moderately well sorted, sub angular to sub rounded, moderately hard to hard aggregates, friable in parts, common loose grains, strong calcareous cement, weak siliceous cement in parts, off white argillaceous matrix, common micro carbonaceous specks and laminations, common cream lithics, trace mica flakes, trace green lithics, very poor to porosity visual porosity, 5% dull orange mineral fluorescence.

SILTSTONE: medium to dark brown, light grey in parts, moderately hard, sub blocky to sub fissile, common micro carbonaceous laminations and specks, minor micro cream lithics. trace micromicaceous.

SANDSTONE: white, translucent, clear, light grey, fine to medium, moderately sorted, sub angular to sub rounded, white argillaceous matrix, trace carbonaceous fragments, trace coarse quartz grains, common lithics, fair inferred porosity. no fluorescence.

SILTSTONE: light to medium brown, brownish grey, moderately hard, blocky to sub fissile, trace carbonaceous specks

SANDSTONE: translucent, clear, white, fine to coarse predominantly medium, poor sorting, sub angular to sub rounded, common calcareous cement, minor white argillaceous matrix, trace carbonaceous inclusions, minor lithics, fair to good inferred porosity, trace dull orange mineral fluorescence.

SILTSTONE: light to medium brown, brownish grey, moderately hard, blocky to sub fissile, trace carbonaceous specks

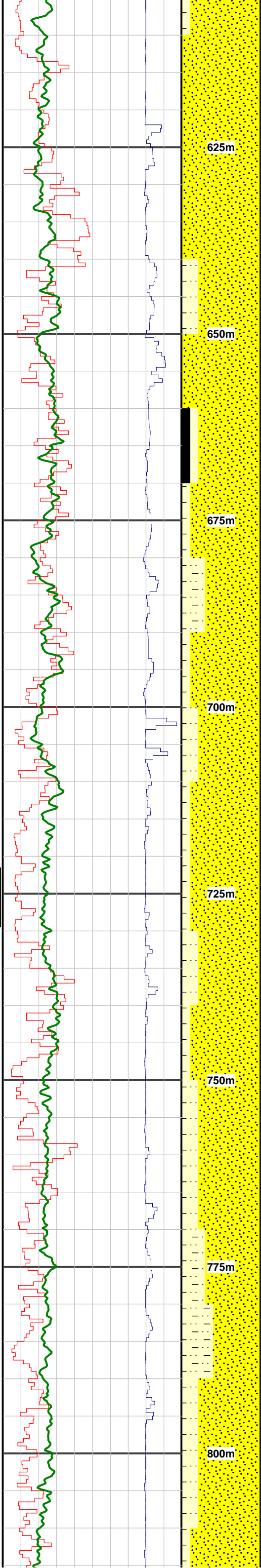
SANDSTONE: translucent, clear, white, fine to coarse predominantly medium, poor sorting, sub angular to sub rounded, common calcareous cement, minor white argillaceous matrix, trace carbonaceous inclusions, minor lithics, fair to grain inferred porosity, trace dull orange mineral fluorescence.

SILTSTONE: light to medium brown, brownish grey, moderately hard, blocky to sub fissile, trace carbonaceous specks

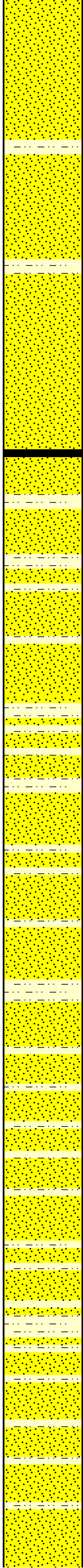


Mud Type:
KCl/Polymer
Dens: 9.1ppg
PV/YP: 8/40
pH: 9.0
Additives: Soda Ash,
Rheopac LV, KCL,
Xanthan Gum

WOB: 4 klbs
TRQ: 5021 lbs.ft
SPP: 2208 psi
Flow: 1040 gpm
RPM: 112



Orallo Formation



SANDSTONE: translucent, clear, fine to predominantly medium grained, sub angular to predominantly sub rounded, moderately sorted, friable to loose, trace siliceous cement, minor white argillaceous matrix, rare carbonaceous fragments, trace lithics, good inferred porosity, trace dull orange mineral fluorescence

SANDSTONE: translucent, clear, fine to coarse, poor sorting, predominantly sub rounded, slightly silty, predominantly loose, friable in parts, trace siliceous cement, minor light grey silty matrix, trace carbonaceous fragments, trace lithics, fair inferred porosity, trace dull orange mineral fluorescence.

SILTSTONE: light to medium brownish grey, very finely arenaceous, moderately hard, trace lithics, trace carbonaceous fragments.

COAL: black, dull to sub vitreous lustre, moderately hard to brittle, blocky.

SILTSTONE: light to medium brownish grey, very finely arenaceous, moderately hard, blocky to sub fissile, trace very fine lithics.

SANDSTONE: translucent, clear, light brownish grey, fine to coarse, poor sorting, sub angular to sub rounded, moderately hard fine grained aggregates, medium to coarse grains predominantly loose, moderately strong cement in fine grained aggregates, minor light grey argillaceous matrix, trace lithics, trace carbonaceous fragments, poor visual porosity in fine grained aggregates, trace dull orange mineral fluorescence

SILTSTONE: light grey, light to medium brownish grey, moderately hard, very finely arenaceous grading to and interbedded with very fine sandstone, trace carbonaceous fragments, trace lithics.

SANDSTONE: translucent, clear, off white, fine to coarse, poor sorting, sub angular to predominantly sub rounded, friable to moderately hard fine grained aggregates, moderately strong siliceous cement in aggregates, trace calcareous cement, predominantly loose medium to coarse grains, rare off white to light grey argillaceous matrix, trace carbonaceous specks, fair inferred porosity, trace dull mineral fluorescence.

SILTSTONE: light grey, light to medium brownish grey, moderately hard, very finely arenaceous grading to and interbedded with very fine sandstone, trace carbonaceous fragments, trace lithics.

SANDSTONE: translucent, clear, off white, fine to coarse, poor sorting, sub angular to predominantly sub rounded, friable to moderately hard fine grained aggregates, moderately strong siliceous cement in aggregates, trace calcareous cement, predominantly loose medium to coarse grains, rare off white to light grey argillaceous matrix, trace carbonaceous specks, fair inferred porosity, trace dull mineral fluorescence

SILTSTONE: medium grey brown, moderately hard, slightly arenaceous, trace carbonaceous specks, trace lithics.

SANDSTONE: white, translucent, clear, fine to medium grained, moderately sorted, sub angular to sub rounded, moderately hard, moderately strong siliceous cement, trace calcareous cement, common white argillaceous matrix, trace lithics, trace carbonaceous specks, poor visual porosity, no fluorescence

SILTSTONE: light to medium grey brown, moderately hard, locally slightly arenaceous interbedded with very fine SANDSTONE, trace carbonaceous specks, trace lithics.

SANDSTONE: white, translucent, clear, fine to coarse grained, poor sorting, sub angular to sub rounded, moderately hard fine grained aggregates, loose medium to coarse grains, moderately strong siliceous cement in fine grained aggregates, trace calcareous cement, common white argillaceous matrix, trace carbonaceous specks, poor visual porosity, no fluorescence.

612.900m
612.88m TVDBRT
Inc: 0.53°
Azi: 347.55°

814.700m

WOB: 10 klbs
TRQ: 7302 lbs.ft
SPP: 2307 psi
Flow: 1069 gpm
RPM: 112

825m

850m

875m

900m

925m

950m

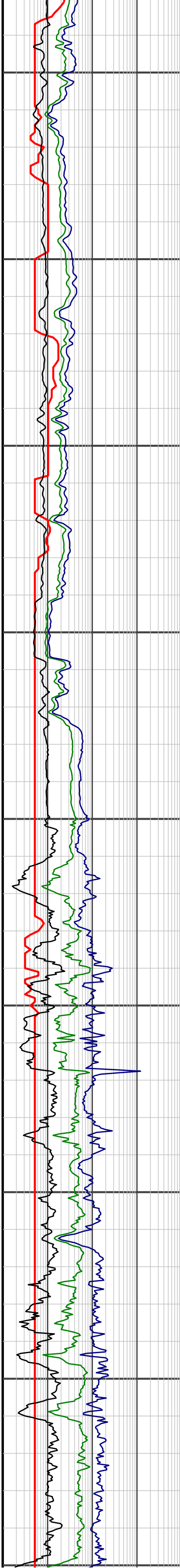
975m

1000m

1025m

Gubberamunda Sandstone

SILTSTONE: (Tr) light brown, dark grey in parts, argillaceous, firm sub blocky to sub fissile.



1007.100m
1007.08m TVDBRT
Inc: 0.44°
Azi: 164.24°

WOB: 18 klbs
TRQ: 9943 lbs.ft
SPP: 2245 psi
Flow: 1040 gpm
RPM: 88

13 3/8" Shoe @
1101.04mMDRT

3 made 921.48m in 35.5 hrs

▼ 4 new bit 12 1/4"

Mud Type: KCl/Polymer
Dens: 8.8ppg
PV/YP: 5/10
pH: 9.5
Additives: Rheopac LV, Xanthan Gum, JK-161 LV, KCl, Magox, Sodium Bicarbonate, Ildicide-20

WOB: 13 klbs
TRQ: 9611 lbs.ft
SPP: 1079 psi
Flow: 725 gpm
RPM: 68

SILTSTONE: light brownish grey, light to medium brown, firm to friable, very finely arenaceous, blocky, common carbonaceous

Tagged TOC at
1074.34mMDRT

GR 1090-1101m logged
inside casing

1106.38mMDRT

17 1/2"

XLOT
19.3ppg EMW


 1201.500m
 1201.46m TVD(BRT)
 Inc: 0.97°
 Azi: 205.67°


Mud Type: KCl/Polymer
Dens: 9.0ppg
PV/YP: 6/14
pH: 9.5
Additives: Circal 60/16, JK-161, Sodium Bicarbonate, Rheopac LV, Xanthan Gum (P), KCl, MagOx.

Springbok Sandstone

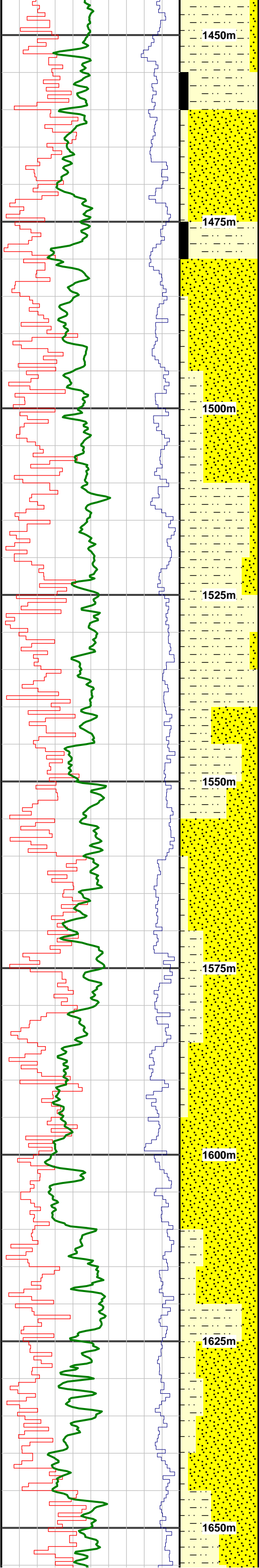
Walloon Coal Measures

SILTSTONE: medium brown, medium brownish grey, firm, argillaceous grading to CLAYSTONE, blocky to sub fissile, trace

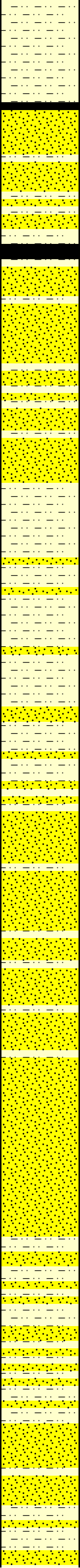
TG 52 Units


 1404.000m
 1403.92m TVDBRT
 Inc: 1.49°
 Azj: 210.15°

Mud Type:
KCl/Polymer
Dens: 9.1ppg
PV/YP: 8/13
pH: 9.6
Additives: Circal 60/16,
JK-161, Sodium
Bicarbonate, Rheopac
LV, Xanthan Gum (P),
KCl, MagOx.



Hutton Sandstone



carbonaceous specks.

COAL: black, dull to sub vitreous lustre, hard to brittle, blocky to splintery.

SANDSTONE: white, very fine to fine grained, well sorted, sub angular to sub rounded, friable, well siliceous cement, common white to very light grey argillaceous matrix, minor carbonaceous fragments, poor visual porosity, no fluorescence.

SANDSTONE: white, very fine to medium grained, moderately sorted, sub angular to sub rounded, friable, well siliceous cement, common white to very light grey argillaceous matrix, minor carbonaceous fragments, poor visual porosity, no fluorescence.

SILTSTONE: medium brown, firm, argillaceous, arenaceous in part, blocky to sub blocky, minor carbonaceous fragments.

SANDSTONE: white, very fine to medium grained, moderately sorted, sub angular to sub rounded, friable, moderately strong siliceous cement, weak calcareous cement, common white to very light grey argillaceous matrix, minor carbonaceous fragments, poor visual porosity, no fluorescence.

SILTSTONE: medium brown, medium brownish grey, firm, argillaceous grading to CLAYSTONE, arenaceous in part, blocky to sub blocky, minor carbonaceous fragments.

CaCO3 added to the mud system.

SILTSTONE: light to medium grey, light to medium brownish grey, medium brown, moderately hard, slightly arenaceous locally grading to very fine SANDSTONE, blocky to sub fissile, trace micro carbonaceous specks.

SILTSTONE: light to medium grey, light to medium brownish grey, medium brown, moderately hard, slightly arenaceous locally grading to very fine SANDSTONE, blocky to sub fissile, trace micro carbonaceous specks.

SANDSTONE: translucent, clear, white, fine to medium grained, moderately sorted, sub rounded, friable to loose, trace weak siliceous cement, rare white argillaceous matrix, minor red and cream lithics, fair inferred porosity, no fluorescence

SILTSTONE: medium grey, firm, arenaceous grading to very fine SANDSTONE, blocky, trace carbonaceous fragments.

SANDSTONE: white, very fine to fine grained, well sorted, sub angular to predominantly sub rounded, moderately hard, moderately strong siliceous cement, trace calcareous cement, common white argillaceous matrix, common fine carbonaceous specks, poor visual porosity, no fluorescence.

SANDSTONE: translucent, clear, white in part, fine to coarse, poor sorting, sub rounded, predominantly loose clean quartz grains, trace white argillaceous matrix, good inferred porosity, no fluorescence.

SANDSTONE: translucent, clear, white in part, fine to coarse, poor sorting, sub rounded, predominantly loose clean quartz grains, trace white argillaceous matrix, good inferred porosity, no fluorescence.

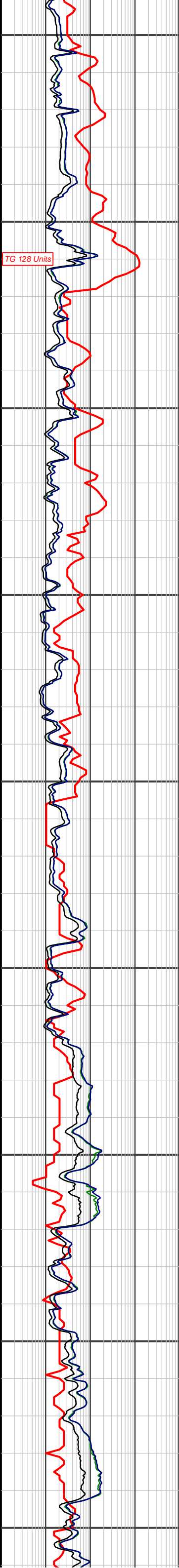
SILTSTONE: medium brownish grey, moderately hard, argillaceous grading to CLAYSTONE, blocky, trace micro mica.

SANDSTONE: translucent, clear, white in part, fine to coarse, poor sorting, sub rounded, predominantly loose, rare white argillaceous matrix, good inferred porosity, no fluorescence.

SILTSTONE: light brownish grey to medium brownish grey, light bluish grey, firm to moderately hard, sub blocky to sub fissile, argillaceous grading to CLAYSTONE, blocky, trace micro mica, trace carbonaceous specks.

SANDSTONE: translucent, clear, white to very light grey in part, very fine to coarse, poor sorting, sub rounded, commonly loose, rare white argillaceous matrix, moderately hard to hard aggregates, trace lithics, trace carbonaceous specks, poor to fair visible

TG 128 Units



1606.300m
1606.14m TVDBRT
Inc: 2.02°
Azi: 199.69°

04 Dec 2014 03 Dec 2014

Mud Type:
KCl/Polymer
Dens: 9.2ppg
PV/YP: 9/14
pH: 9.5
Additives: Circal 60/16,
JK-161, Sodium
Bicarbonate, Rheopac
LV, Xanthan Gum (P),
KCl, MagOx.

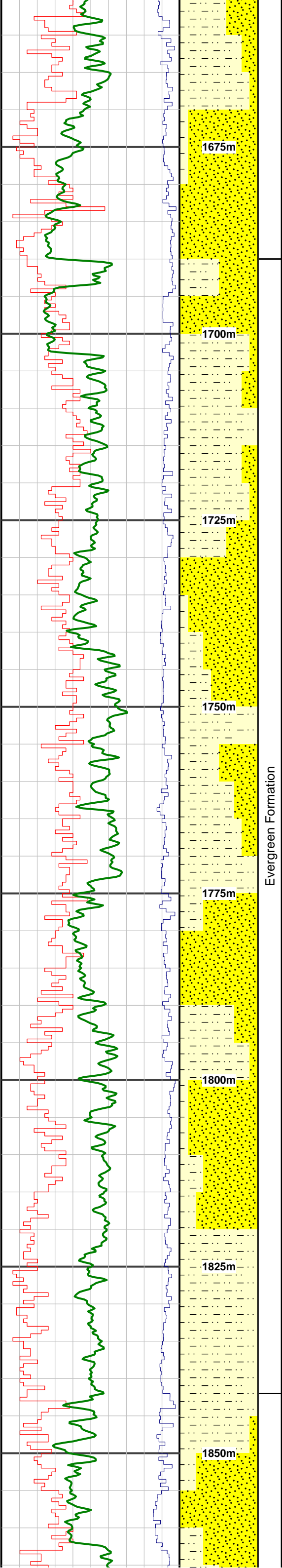
WOB: 10 klbs
TRQ: 7551 lbs.ft
SPP: 1519 psi
Flow: 767 gpm
RPM: 39

Mud Type:
KCl/Polymer
Dens: 9.2ppg
PV/YP: 10/12
pH: 9.5
Additives: Circal 60/16,
JK-161, Sodium
Bicarbonate, Rheopac
LV, Xanthan Gum (P),
KCl, MagOx, Soda
Ash, Idcide-20.

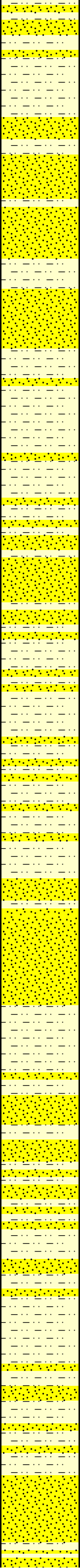
WOB: 5 klbs
TRQ: 8141 lbs.ft
SPP: 1487 psi
Flow: 769 gpm
RPM: 59

Mud Type:
KCl/Polymer
Dens: 9.2ppg
PV/YP: 9/13
pH: 9.5
Additives: Circal 60/16,
JK-161, Sodium
Bicarbonate, Rheopac
LV, Xanthan Gum (P),
KCl, MagOx, Soda
Ash, Idcide-20.

04 Dec 2014



Evergreen Formation



carbonaceous specks, poor to fair visible porosity, fair to good inferred porosity, no fluorescence.

SANDSTONE: very light grey to light grey, transparent to translucent, very fine to medium grain, predominantly fine, trace coarse to very coarse, moderately well sorted, sub rounded to sub angular, moderately argillaceous cement, white argillaceous matrix, firm to moderately hard, loose, trace lithics, trace carbonaceous specks, poor to fair visual porosity, fair inferred porosity, no fluorescence.

SILTSTONE: light grey to moderately brownish grey, blocky to sub blocky, soft to firm, trace carbonaceous fragments.

SANDSTONE: white to very light grey, very fine to very coarse, predominantly fine to medium, poorly sorted, angular to sub rounded, minor calcareous cement, abundant white argillaceous matrix, rare lithics, trace carbonaceous specks, minor loose and fractured medium to very coarse quartz, loose, rare moderately hard aggregates, poor visual porosity, poor inferred porosity, no fluorescence.

SILTSTONE: pale brown, very light grey, blocky to sub blocky, argillaceous in part grading to CLAYSTONE, trace carbonaceous specks, firm, sub blocky to sub fissile.

SILTSTONE: very light grey to medium brownish grey, commonly arenaceous grading to very fine SANDSTONE, argillaceous grading to CLAYSTONE in parts, rare to minor carbonaceous specks and micro laminations, firm to hard, sub blocky to sub fissile.

SANDSTONE: very light grey to light grey, very fine to fine grained, moderately well sorted, sub angular to sub rounded, moderately cemented, minor white argillaceous matrix, argillaceous grading to SILTSTONE, hard, minor carbonaceous specks and micro laminations, trace lithics.

SILTSTONE: medium grey, medium dark grey, firm to moderately hard, blocky, very finely arenaceous in parts, common fine carbonaceous specks.

SANDSTONE: very light grey to off white, very fine to fine grained, well sorted, sub angular to sub rounded, friable to moderately hard, moderately strong siliceous cement, abundant white argillaceous matrix, minor micro carbonaceous specks and laminae, poor visual porosity, no fluorescence.

SILTSTONE: medium grey to medium dark grey, medium dark brownish grey, firm to moderately hard, argillaceous in parts, blocky, rare fine carbonaceous specks.

SANDSTONE: translucent, clear, white, very fine to medium grained, moderately sorted, sub angular to predominantly sub rounded, loose to friable, trace weak siliceous cement, minor white argillaceous matrix, trace fine carbonaceous specks, fair inferred porosity, no fluorescence.

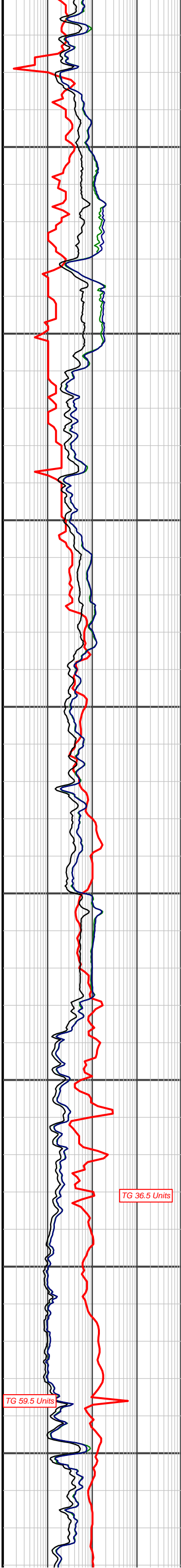
SILTSTONE: medium dark grey, medium brownish grey, moderately hard, blocky to sub fissile, argillaceous.

SILTSTONE: medium dark grey, medium to dark brownish grey, moderately hard, sub blocky to sub fissile, argillaceous, trace carbonaceous fragments.

SILTSTONE: medium dark grey, medium to dark brownish grey, moderately hard, sub blocky to sub fissile, argillaceous, trace carbonaceous fragments.

SANDSTONE: light to medium grey, translucent, fine to medium grained, sub angular to sub rounded, moderately hard, strong siliceous cement, minor white argillaceous matrix, common carbonaceous fragments, trace green lithics, poor visual porosity, no fluorescence.

SILTSTONE: medium dark grey, medium to dark brownish grey, moderately hard, sub blocky to sub fissile, argillaceous, trace



1808.700m
1808.41m TVDBRT
Inc: 2.55°
Azi: 202.59°

TG 36.5 Units

TG 59.5 Units

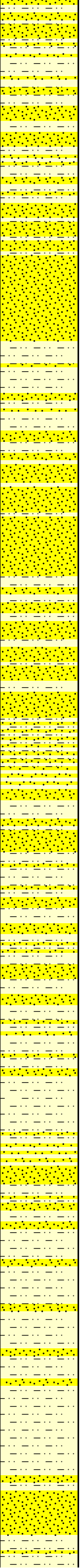
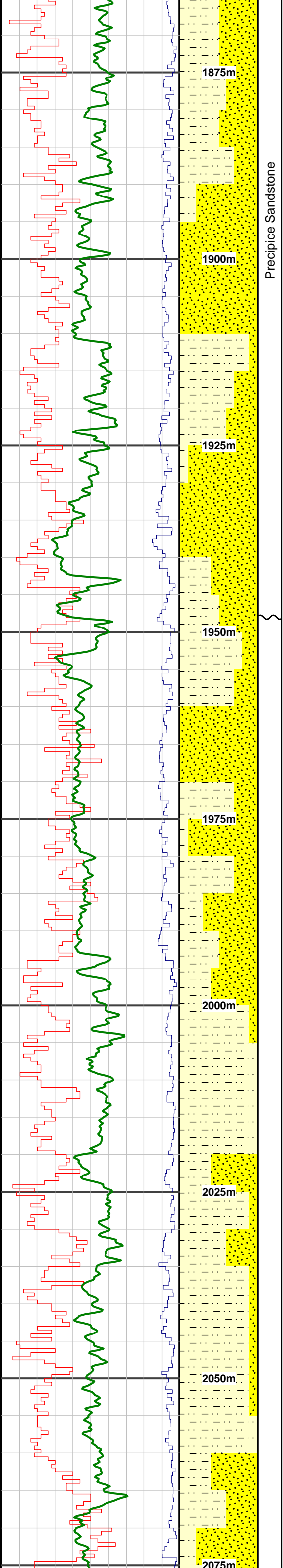
05 Dec 2014 04 Dec 2014

Mud Type:
KCl/Polymer
Dens: 9.3ppg
PV/YP: 9/14
pH: 9.0
Additives: Circal 60/16,
JK-161, Sodium
Bicarbonate, Rheopac
LV, Xanthan Gum (P),
KCl, MagOx, Soda
Ash, Idcide-20.

Mud Type:
KCl/Polymer
Dens: 9.3ppg
PV/YP: 11/18
pH: 9.6
Additives: Circal 60/16,
JK-161, Sodium
Bicarbonate, Rheopac
LV, Xanthan Gum (P),
KCl, MagOx, Soda
Ash, Idcide-20.

WOB: 11 klbs
TRQ: 8258 lbs.ft
SPP: 1789 psi
Flow: 826 gpm
RPM: 83

Mud Type:
KCl/Polymer
Dens: 9.5ppg
PV/YP: 11/18
pH: 9.5
Additives: Circal 60/16,
Rheopac-LV, Xanthan
Gum (P), MagOx,
Soda Ash.



carbonaceous fragments.

SANDSTONE: white, very light brownish grey, fine to medium, moderately sorted, sub angular to sub rounded, minor calcareous and siliceous cement, common white argillaceous matrix, rare carbonaceous fragments, poor visual porosity, no fluorescence.

SILTSTONE: medium dark brownish grey, medium to dark grey, moderately hard, sub blocky to sub fissile, argillaceous, trace carbonaceous flecks.

SANDSTONE: very light brownish grey, fine to medium, moderately sorted, sub angular to sub rounded, siliceous cement, common off white argillaceous matrix, rare carbonaceous fragments, trace medium to coarse loose quartz grains, poor visual porosity, no fluorescence.

SANDSTONE: very light grey, very fine to medium grain, trace coarse, predominantly very fine to fine, well sorted, sub rounded to sub angular, firm to very hard, minor calcareous cement, localized strong siliceous cement, abundant white argillaceous matrix/rock flour?, trace lithics, trace carbonaceous specks, loose in parts, poor visual porosity, no fluorescence.

SILTSTONE: light grey to brownish grey, arenaceous grading to very fine SANDSTONE, minor to common carbonaceous specks and micro laminations, firm to moderately hard, sub blocky to sub fissile.

SANDSTONE: very light grey to light grey, very fine to medium, trace coarse, predominantly fine, moderately to well sorted, rounded to sub angular, predominantly rounded, moderately strong siliceous cement, moderately common white argillaceous matrix, trace carbonaceous specks, trace mica.

SILTSTONE: light grey to light brownish grey, olive grey, argillaceous grading to very fine SANDSTONE, slightly carbonaceous, firm, blocky to sub fissile.

SANDSTONE: white, very light grey, transparent to translucent, very fine to coarse, predominantly fine to medium, poorly sorted, sub rounded to sub angular, predominantly loose, rare siliceous cement, common white argillaceous matrix/rock flour, trace lithics poor to fair inferred porosity.

SILTSTONE: light grey to light brownish grey, olive grey, argillaceous grading to very fine SANDSTONE, slightly carbonaceous, firm, sub fissile.

SANDSTONE: very light grey to light grey, transparent to translucent, very fine to medium grain, moderately well sorted, sub rounded to sub angular, loose, rare argillaceous cement, abundant white argillaceous matrix/rock flour, minor lithics, trace carbonaceous specks, poor to fair inferred porosity.

SILTSTONE: very light grey to light grey, brownish grey, olive grey, argillaceous grading to CLAYSTONE, arenaceous grading to SANDSTONE, minor carbonaceous specks, firm to hard, sub blocky to sub fissile.

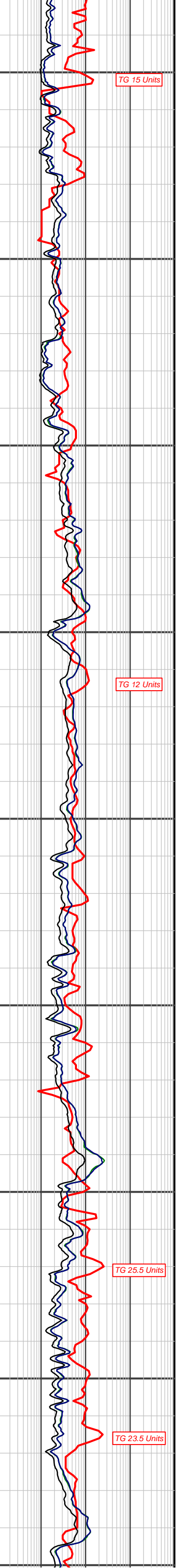
SANDSTONE: very light grey to light grey, very fine to fine grained, well sorted, sub rounded, predominantly loose, minor firm to moderately hard, moderately argillaceous cement, minor white argillaceous matrix, trace lithics, trace carbonaceous specks, poor visual porosity, poor to fair inferred porosity.

SILTSTONE: light grey, brownish grey to dark grey, carbonaceous grading to CARBONACEOUS CLAYSTONE, firm, sub blocky to sub fissile.

SANDSTONE: white, very light grey to light grey, very fine to fine grain, well sorted, sub angular to sub rounded, predominantly loose, minor firm aggregates, minor argillaceous cement, rare argillaceous matrix, poor to fair visual porosity, no fluorescence.

SILTSTONE: medium dark grey to medium dark brownish grey, firm to moderately hard, blocky to sub fissile, argillaceous in part grading to CLAYSTONE, trace carbonaceous fragments.

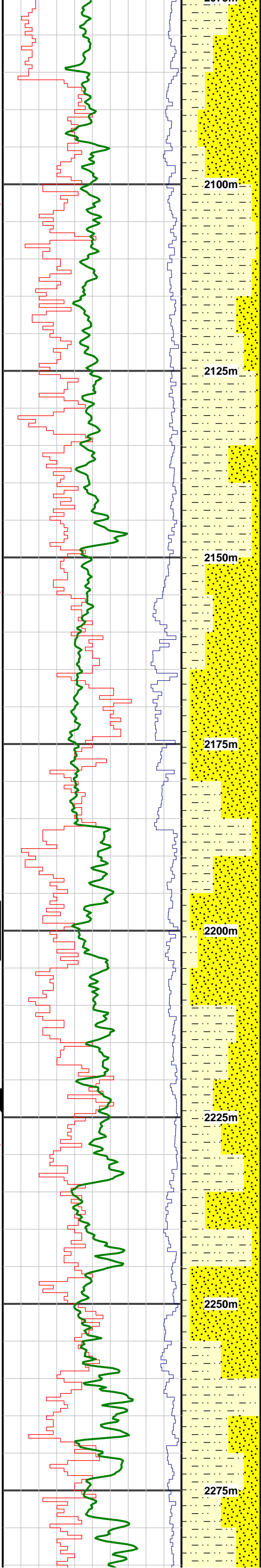
SILTSTONE: medium grey to medium dark grey, blocky to sub blocky, firm to moderately hard, very finely arenaceous in parts, trace



2011.100m
2010.57m TVDBRT
Inc: 3.25°
Azi: 199.86°

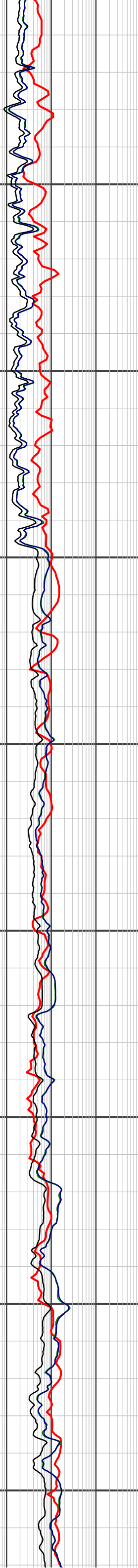
c 2014

Mud Type:
KCl/Polymer
Dens: 9.4ppg
PV/YP: 4.1/2" Hanger
pH: 9.5 @ 2221.13m
Additives: Circal 60/16,
Rheopac-LV, Xanthan
Gum (P), MagOx,
Soda Ash.



A vertical strip of 100 small, identical rectangular panels. Each panel contains a yellow background with a black dot pattern, resembling a film strip or a sequence of frames. The dots are arranged in a grid-like pattern, with some dots missing or faded, creating a textured, pixelated appearance. The panels are stacked vertically, with thin black lines separating them, giving the overall image the look of a film strip or a digital sequence.

SANDSTONE: very light grey to light grey,
fine to fine grain, well sorted, sub-

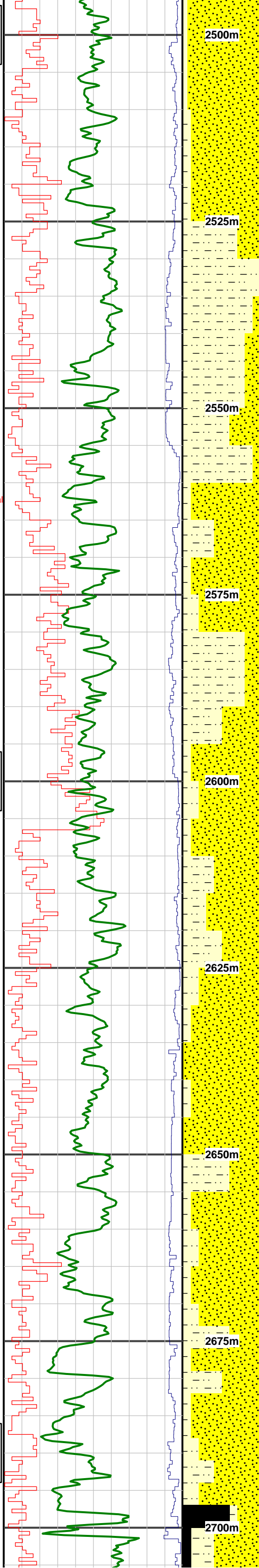


2213.100m
2212.22m TVD(BRT)
Inc: 3.87°
Azi: 204.88°

TG 6.0 Units

WOB: 9 klbs
TRQ: 3928 lbs.ft
SPP: 2785 psi
Flow: 357 gpm
RPM: 117

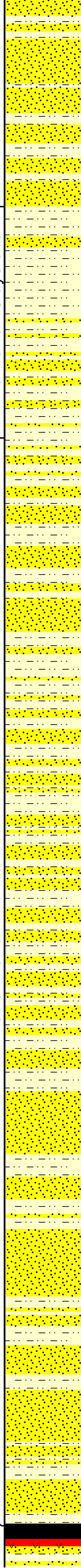
2014	15 Dec 2014
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Rewan Formation

Intra Rewan Claystone

Lower Rewan



COAL: black, very dark brown in parts, dull to sub vitreous, moderately hard, sub blocky to sub fissile, blocky in parts, uneven to sub conchoidal fracture in parts.

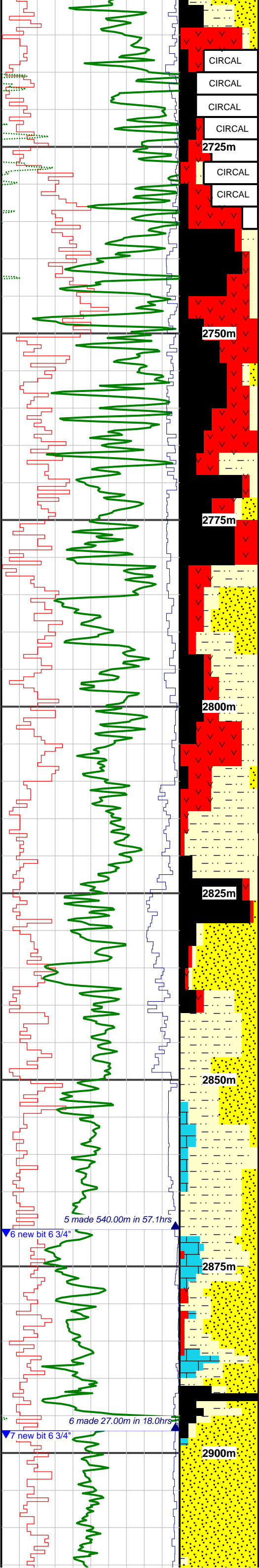
TG 37.0 Units

Wiper Trip from
2555m to 2259m

2616.200m
2613.81m TVDBRT
Inc: 8°
Azi: 193.75°

21 Dec 2014

Mud Type: KCl/Polymer
Dens: 12.1ppg
PV/YP: 18/42
pH: 9.5
Additives: Defoam A,
Sodium Sulphite,



Kianga Formation

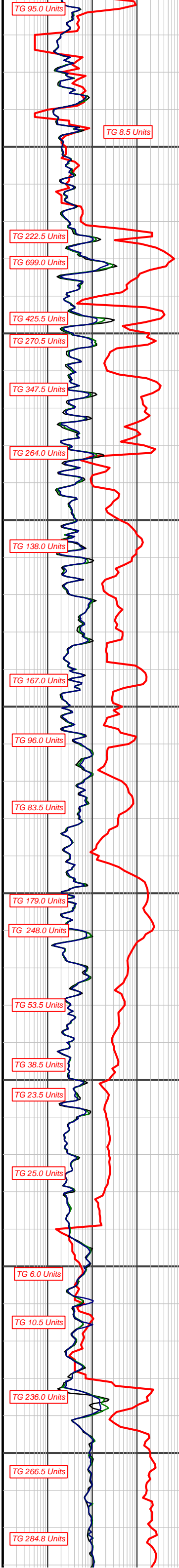
Black Alley Shale

Scotia Coal Cycle

Tinowon Formation

Upper Tinowon SST

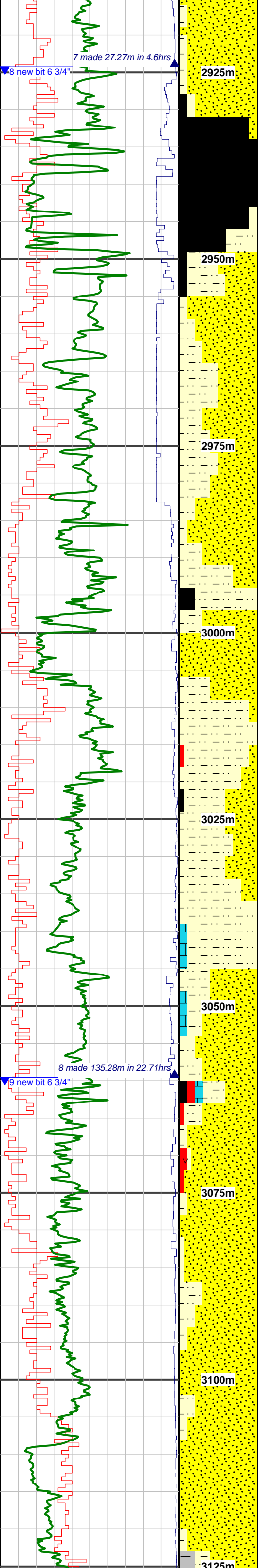
SANDSTONE: white to very light grey, translucent, clear, fine to medium grained, sub angular to sub rounded, fair sorting, friable, rare calcareous cement, common light grey and white argillaceous matrix, trace lithics, trace carbonaceous fragments, poor visual porosity, trace dull orange mineral fluorescence



Core 2:
2897.00 - 2924.27m
(Cut 27.27m)
Rec 27.27m (100%)

23 Dec 2014 21 Dec 2014
23 Dec 2014
23 Dec 2014
24 Dec 2014 23 Dec 2014
24 Dec 2014
25 Dec 2014 24 Dec 2014
25 Dec 2014
26 Dec 2014 25 Dec 2014
26 Dec 2014

MAGOX, Barite, Evocon
Mud Type: KCl/Polymer
Dens: 12.0ppg
PV/YP: 19/38
pH: 9.5
Additives: Barite, Sodium Sulphite, Defoam A, Evocon E, JK-261
WOB: 5 klbs
TRQ: 4286 lbs.ft
SPP: 2272 psi
Flow: 340 gpm
RPM: 174
Mud Type: KCl/Polymer
Dens: 12.0ppg
PV/YP: 18/38
pH: 9.5
Additives: Barite, Sodium Sulphite, Defoam A, Evocon E, JK-261
WOB: 4 klbs
TRQ: 5602 lbs.ft
SPP: 2184 psi
Flow: 328 gpm
RPM: 187
Mud Type: KCl/Polymer
Dens: 12.0ppg
PV/YP: 22/41
pH: 9.5
Additives: MAGOX, Sodium Sulphite, Idcide-20, Barite, KCL
Mud Type: KCl/Polymer
Dens: 12.0ppg
PV/YP: 22/40
pH: 9.5
Additives: Defoam A, MAGOX, Sodium Sulphite
Mud Type: KCl/Polymer
Dens: 12.0ppg
PV/YP: 22/40
pH: 9.5
Additives: MAGOX, Sodium Sulphite, Defoam A, Rheopac LV
WOB: 13 klbs
TRQ: 3414 lbs.ft
SPP: 3256 psi
Flow: 334 gpm
RPM: 147
Mud Type: KCl/Polymer
Dens: 12.0ppg
PV/YP: 22/41
pH: 9.5



Wallabella Coal Cycle

Lower Tinowon

Overston Sandstone

Lorelle Sandstone

SANDSTONE: translucent, clear, light grey, fine to medium grained, sub angular to sub rounded, moderate sorting, friable to loose, weak calcareous cement, minor light grey argillaceous matrix, poor to fair visual porosity, trace dull orange mineral fluorescence

COAL: very dark brown to black in parts, dull to earthy, moderately hard, blocky to sub blocky, even to uneven fracture.

CARBONACEOUS SILTSTONE: dark grey to very dark grey black, grading to silty COAL, moderately hard, blocky.

SANDSTONE: translucent, clear, light brown, very fine to medium, fair sorting, sub angular to sub rounded, friable to moderately hard, minor siliceous cement, common light brownish grey argillaceous matrix, rare lithics, rare carbonaceous inclusions, poor visual porosity, trace dull orange mineral fluorescence.

SILTSTONE: medium to dark brownish grey, medium to dark grey, grey black grading to CARBONACEOUS SILTSTONE, trace lithics, moderately hard, sub blocky to sub fissile.

SANDSTONE: light to medium grey, translucent, very fine to medium grained, predominantly medium, moderately sorted, sub angular to sub rounded, friable, weak calcareous cement, common light grey argillaceous matrix, rare green lithics, rare carbonaceous specks, poor visual porosity, trace dull orange mineral fluorescence.

SANDSTONE: translucent, clear, light grey, very fine to medium, poor sorting, sub angular to predominantly sub rounded, friable to loose, weak calcareous cement, minor off white to very light grey argillaceous matrix, commonly loose clean quartz grains, rare green lithics, fair inferred porosity, trace dull orange mineral fluorescence.

SANDSTONE: translucent, clear, medium to coarse grained, fair sorting, sub angular to sub rounded, loose, trace calcareous cement, predominantly loose clean quartz grains, fair inferred porosity, no fluorescence.

SILTSTONE: dark to very dark grey, moderately hard, argillaceous, trace very fine arenaceous, sub fissile to fissile, sub blocky in parts, micro micaceous, trace carbonaceous specks.

SANDSTONE: clear to translucent, off white to pale grey in parts, fine to coarse, predominantly medium, moderately sorted, sub angular to sub rounded, angular in parts, generally loose and clean grains, occasionally friable aggregates, weak calcareous cement, poor to fair inferred porosity, poor visual porosity, no fluorescence.

SILTSTONE: very dark grey, grey black in parts, firm to moderately hard, sub fissile to fissile, sub blocky in parts, argillaceous, trace carbonaceous specks.

LIMESTONE: white, translucent, microcrystalline, hard, brittle in parts, blocky to shardy.

SILTSTONE: medium dark brownish grey, medium dark grey, firm to moderately hard, blocky, slightly arenaceous, slightly calcareous, trace lithics.

SANDSTONE: translucent, clear, white, light grey, fine to medium grained, trace coarse, fair sorting, sub angular to predominantly sub rounded, friable, loose in parts, rare calcareous cement, loose, trace green lithics, trace carbonaceous specks, poor to fair visual porosity, no fluorescence

SILTSTONE: dark grey, dark brown in parts, moderately hard, sub blocky to blocky, argillaceous, micro mica in parts, trace micro carbonaceous specks.

SANDSTONE: clear to translucent, off white to pale grey in parts, very fine to very coarse, predominantly fine to medium, poorly sorted, sub angular to angular, sub rounded in parts, generally loose and clean, common fractured quartz, rare friable aggregates, weak siliceous and calcareous cement, no visual matrix, trace carbonaceous specks, trace TUFF fragments, poor to fair inferred porosity, poor visual porosity, trace dull orange mineral fluorescence.

SANDSTONE: translucent, clear, trace green staining of grains, white, very fine to medium, poor sorting, sub angular to sub rounded, trace coarse angular quartz grains, loose, friable, common calcareous cement, trace light grey silty matrix, predominantly loose clean quartz grains, trace LIMESTONE fragments, fair to good inferred porosity, trace dull orange mineral fluorescence.

SANDSTONE: white, very fine to medium predominantly fine grained, moderately sorted, sub angular to sub rounded, firm to moderately hard, abundant white calcareous matrix, minor moderately strong calcareous cement, trace green staining, trace spherical pyrite nodules, poor visual porosity, no fluorescence

TG 279.9 Units

TG 786.5 Units

TG 663.5 Units

TG 904.0 Units

TG 611.5 Units

TG 196.0 Units

TG 122.0 Units

TG 102.0 Units

TG 195.5 Units

TG 43.5 Units

TG 34.0 Units

TG 67.0 Units

TG 80.0 Units

TG 75.0 Units

3002.300m
2993.33m TVDBRT
Inc: 14.51°
Azi: 201.62°

Depth (mMDRT)	Recovery	Lithology/Comments
3133.75	Good	Volcanics/Metamorphics: mottled red brown fine to medium quartz groundmass, some large green grey deformed phenocrysts/inclusions, trace dark mafic inclusions.
3126.00	Good	Meta-SILTSTONE: light grey to light green grey, red brown, silty groundmass with light green grey granule to pebble TUFF fragments and lithics, with diffuse boundaries.
3120.00	Poor	SANDSTONE: light grey, very fine to fine, occasional medium, re-crystallised in part, hard, very poor visible porosity, no fluorescence.
3116.00	Good	SANDSTONE, light grey mottled with dark grey, very fine to fine, some re-crystallised with diffuse grain boundaries, moderately hard, very poor to tight visible porosity, no fluorescence.

3112.78	Good	SANDSTONE: light grey, very fine to fine, occasional medium. recrystallised in part, occasional red brown silty inclusions, moderately hard to hard, very poor visible porosity, no fluorescence.
3093.00	Good	SANDSTONE: medium dark grey to dark grey, very fine to fine, trace medium grains, occasional light grey LIMESTONE micro laminations and inclusions, silty matrix, very poor visible porosity, trace patchy orange mineral fluorescence.
3085.33	Fair	CONGLOMERATE: medium to dark grey, fine to coarse, common granule to pebble white to light grey and green grey siliceous inclusions, occasional silty inclusions, hard, very poor visible porosity, trace patchy orange mineral fluorescence.
3083.00	Fair	SANDSTONE: brown grey, very fine to medium, occasional coarse grains, sub angular to sub round, trace lithics, occasional quartz overgrowths, hard, very poor visible porosity, trace patchy dull orange mineral fluorescence.
3081.43	Poor	SANDSTONE: very light grey, very fine to very coarse clear to translucent quartz grains, sub angular to sub round, poorly sorted, abundant white to light grey matrix, moderately hard, very poor visible porosity, trace fluorescence as above.
3076.47	Fair	SANDSTONE: light to medium grey, very fine to medium, common coarse to pebble sized inclusions, moderately sorted, trace dark grey lithics, moderately hard, poor to very poor visible porosity, trace dull orange patchy mineral fluorescence.
3075.00	Good	SANDSTONE: light to medium grey, very fine to medium, common coarse to pebble sized inclusions, silty matrix, moderately hard, very poor visible porosity, trace patchy dull orange mineral fluorescence.
3061.00	Good	SANDSTONE: medium dark grey, very fine to medium, trace coarse grains, sub angular to sub round, moderately sorted, silty matrix, occasional light grey to white lithics, silty matrix, moderately hard to hard, very poor visible porosity, patchy dull orange mineral fluorescence.
3046.48	Good	SANDSTONE: medium dark grey, very fine to fine, occasional medium to coarse grains, occasional lithics, silty matrix, moderately hard to hard, very poor visible porosity, trace patchy dull orange mineral fluorescence.
3043.10	Good	SILTSTONE: dark grey, dark brown grey, argillaceous, occasional LIMESTONE micro laminations, moderately hard to hard.
3037.50	None	No sample recovered
3025.00	Good	SILTSTONE: dark grey, dark brown grey, argillaceous, occasionally arenaceous in part, trace lithics, trace micro-mica, moderately hard to hard.
3021.58	Good	SILTSTONE: very dark grey, dark brown grey, argillaceous, trace micro-mica, hard.
3008.72	None	No sample recovered.
3007.76	None	No sample recovered.
3006.58	None	No sample recovered.
3005.00	Fair	Sample recovered (broken) from damaged core head of Run 5. SANDSTONE: light grey, fine to coarse, occasional granular grains, very poorly sorted, trace lithics, quartz overgrowths, moderately hard to hard, poor visible porosity, trace patchy dull orange mineral fluorescence.
3008.80	Good	SANDSTONE: light brown grey, fine to coarse, angular to sub round, poorly sorted, occasional argillaceous matrix, occasional broken grains, trace to occasional lithics, moderately hard, poor visible porosity, patchy dull orange mineral fluorescence.
3007.90	Fair	SANDSTONE: fine to coarse as above.
3006.80	Good	SANDSTONE: light brown grey, fine to very coarse, occasional granular grains, very poorly sorted, angular to sub round, occasional lithics, occasional matrix, poor visible porosity, trace patchy dull orange mineral fluorescence.
3005.20	Poor	Poor quality sample – rubble. SANDSTONE: as above.
3002.30	None	No sample recovered
2992.40	Good	SANDSTONE: medium dark grey brown grey, very fine to fine, trace medium grains, sub angular to sub round, silty matrix, very poor visible porosity, occasional patchy dull orange mineral fluorescence.
2975.90	Good	SANDSTONE with interbedded SILTSTONE. SANDSTONE: as described above. SILTSTONE: dark grey, argillaceous, slightly arenaceous, hard.
2970.90	Good	SANDSTONE: light to medium grey, very fine to fine, trace medium grains, sub angular to sub round, moderately sorted, trace matrix, trace lithics, moderately hard, very poor visible porosity, occasional patchy dull orange mineral fluorescence.
2967.80	Fair	SANDSTONE: light to medium grey, very fine to coarse, angular to sub round, poorly sorted, trace argillaceous matrix, occasional lithics, very rare pyrite, quartz overgrowths, very poor visible porosity, rare patchy dull orange mineral fluorescence.
2934.95	Good	SANDSTONE: medium to dark grey, fine to medium, occasional coarse, poorly sorted, angular to sub round, trace matrix, common altered feldspar, occasional quartz overgrowths, very poor visible porosity, no fluorescence.
2931.50	Good	SANDSTONE: medium dark grey, fine to medium, occasional coarse, angular to sub round, common to abundant altered feldspar (cream to light brown), trace matrix, occasional quartz overgrowths, very poor visible porosity, no fluorescence.
2920.70	Good	SANDSTONE: generally as described above – common to abundant altered feldspar, trace to occasional matrix, trace lithics, moderately hard to hard, very poor visible porosity, no fluorescence.
2912.30	Good	SANDSTONE: medium grey, light brown grey, fine to coarse, trace very coarse grains, trace argillaceous matrix, common lithics, common altered feldspar, occasional quartz overgrowths, moderately hard to hard, very poor visible porosity, no fluorescence.
2882.50	Good	SANDSTONE: medium grey, fine to medium, occasional coarse, sub angular to sub round, moderately sorted, common lithics, occasional altered feldspar (cream, pale brown), moderately hard, very poor visible porosity, no fluorescence.
2882.00	Good	SANDSTONE" medium grey, fine to medium, trace coarse grains, occasional lithics, trace to occasional altered feldspar, moderately hard to hard, very poor visible porosity, no fluorescence.
2868.00	None	No sample recovered
2864.30	Good	SILTSTONE: medium dark grey, abundant LIMESTONE fragments, fossil fragments.
2858.00	None	No sample recovered.
2848.00	Good	SANDSTONE with interbedded SILTSTONE separated by Tuffaceous laminae. SANDSTONE: medium dark grey, very fine to fine, grades to SILTSTONE, occasional lithics, rare carbonaceous specks, moderately hard, very poor visible porosity, no fluorescence. SILTSTONE: light grey, very finely arenaceous and grades to SANDSTONE. TUFF / CLAYSTONE?: pale brown firm.
2818.49	Good	SILTSTONE: light to medium grey, very finely arenaceous and grades to very fine SANDSTONE in part, occasional carbonaceous specks, micro-mica, moderately hard to hard.
2816.57	None	No sample recovered.
2813.00	Fair	SANDSTONE: light grey, very fine, grades to SILTSTONE, sub angular to sub round, occasional cark micro-specks, moderately hard, very poor visible porosity, no fluorescence.
2810.00	None	No sample recovered.
2796.11	None	No sample recovered.
2779.00	None	No sample recovered.
2790.07	None	No sample recovered.
2731.91	None	No sample recovered.
2719.45	None	No sample recovered.
2691.00	None	No sample recovered.
2669.12	Good	SANDSTONE: light to medium grey, green grey, very fine to medium, trace coarse grains, sub angular to sub round, trace carbonaceous specks, common to abundant lithics (green grey, grey, pale orange), trace altered feldspar, moderately hard, very poor visible porosity, no fluorescence.
2650.50	None	No sample recovered.
2582.99	None	No sample recovered.
2520.97	None	No sample recovered.
2384.85	Good	SANDSTONE: light grey, light brown grey, fine to very coarse, angular to sub round, occasional matrix, trace lithics, occasional altered feldspar, poor to fair visible porosity, no fluorescence.