BASIC WELL COMPLETION REPORT
NT EP-168 – Tarlee-1

Prepared For:	**NT Department of Mines & Energy**
Date:	**March 2016**
Revision No:	**A**

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Title:	Basic Well Completion Report_EP-168_Tarlee-1		

REVISIONS				
Revision A		Initial Document	G&G and Engineering	G&G/Ops.
Rev	**Date**	**Reason For Revision**	**Author**	**Initial**

THIS REVISION			
Geology By:		**Engineering By:**	
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1 WELL CARD (DATA SUMMARY SHEET)

GENERAL WELL INFORMATION	
Well Name and Number:	Tarlee-1
Designation:	Petroleum Appraisal Well
Permit:	EP-168
Basin:	Roper Basin
Mapsheet (1:100K):	Western Creek
Graticular Block No:	[3395] (5 minute blocks)
Surveyed Location: (MGA94, Zone 53)	Latitude 15° 57' 16.3209"S (GDA94) Longitude 132° 50' 23.5612"E (GDA94) Easting 268,786.158mE (MGA94,Z53) Northing 8,234,895.399mN (MGA94,Z53)
Pastoral lease holder:	Gregory John Saunders "Tarlee", Western Creek Road, Larrimah, NT
Property Description:	Parcel 3048 "Tarlee Station"
Seismic Reference:	Top Hole: Hidden Valley 2013 2D Line PB13-16, SP 3921 (offset 70 m north)
Nearest Well (penetrating target):	Tarlee-S3 (2014), TD 1650.6 mRT (36 km N)
Surveyed Elevation:	201.88 mAMSL
Well Total Depth (TD):	1335.5 mRT (Driller)
Spud Date:	10-Jun-2015
Reach TD Date:	19-Jul-2015
Rig Release Date:	23-Jul-2015
Re-entry Date:	03-Aug-2015
Suspended Date:	03-Sep-2015
Well Status/Result:	Cased and suspended / Hydrocarbon Shows
OPERATOR AND DRILLING CONTRACTOR	
Operator:	Pangaea (NT) Pty Ltd (88%)
Operator Postal Address:	Locked Bag 1, 1 Farrer Place Sydney, NSW, 2000
Drilling Contractor:	DDH1 Drilling
Rig Name and Type:	Rig-33 (WEI-DS75)
Height of RT above GL:	4.02 m
RT Elevation:	205.90 mAMSL

CORED INTERVAL			
From	To	Total Interval	Core Recovery
[mRT]	[mRT]	[m]	[%]
630.00	754.40	124.40	98.99
1008.72	1309.00	300.28	99.72

FINAL WELL CONSTRUCTION									
Interval	Hole Specifications			Casing Specifications					
	Hole Size	From	To	OD	Weight	Grade	Thread	Casing Top	Shoe Depth
	[in]	[mRT]	[mRT]	[in]	[lb/ft]			[mRT]	[mRT]
Conductor	17-1/2	5.5	23.30	13-3/8	68.0	K-55	BTC	5.5	23.30
Surface	12-1/4	23.30	133.78	9-5/8	36.0	K-55	BTC	5.3	130.78
Intermediate	8.719	133.78	292.08	7	23.0	K-55	BTC	4.4	583.13
	8-1/2	292.08	590.00						
Production	6-1/8	590.00	1335.5	4-1/2	11.6	P-110	Supermax-RS	3.6	1332.92

DRILLING MEDIUM				
Interval	Hole Size	From	To	Fluid System
	[in]	[mRT]	[mRT]	
Conductor	17-1/2	5.5	23.30	Water
Surface	12-1/4	23.30	133.78	Dry Air
Intermediate	8.719	113.78	292.08	Dry Air, Mist, Stiff Foam
	8-1/2	292.08	590.00	WBM – KCl / Polymer
Production	6-1/8	590.00	1335.50	WBM – KCl / Polymer

LOGS FOR 8-1/2" OPEN HOLE SECTION	
Logging Run	Service
Run #1	Gamma Ray (GR) Spontaneous Potential (SP) Laterologs, Micro-resistivity Photo electric / Density / Caliper (Pe-Den-Cal) Neutron Sonic Maximum temperature
LOGS FOR 6-1/8" OPEN HOLE SECTION	
Logging Run	Service
Run #2	Gamma Ray (GR) / Spectral Gamma Ray Spontaneous Potential (SP) Laterologs, Micro-resistivity Photo electric / Density / Caliper (Pe-Den-Cal) Neutron / Pulse Neutron (APS) Maximum temperature
Run #3	Deviation Survey Resistivity Imager (FMI) Dipole Sonic (SonicScanner)
Run #4	Nuclear Magnetic Resonance (NMR) Spectral Lithology
Run #5	Checkshot Survey
LOGS FOR 4-1/2" CASED HOLE SECTION	
Logging Run	Service
Cement Bond Log	Gamma Ray / Casing Collar Locator Radial Bond Log
Explosive Runs	Perforation Setting Plugs (WRBP & CIBP)

FORMATION TOPS						
Formation	**Predicted Depth**	**Depth**	**Depth**	**Depth**	**Depth**	**Thickness**
	(mRT)	**(mRT)**	**(mGL)**	**(mTVD)**	**(mSS)**	**(m)**
Surficial Sediments	-	No Samples taken during drilling of conductor hole				
Montijinni Limestone	-					
Antrim Plateau Volcanics	89.00	75.9	71.88	75.9	-125.68	103.03
Bukalara Sandstone	-	178.93	174.91	178.93	-22.65	34.87
Base Cambrian Unconformity	286.00	213.8	209.78	213.8	12.22	-
Hayfield Mudstone	-	213.8	209.78	213.8	12.22	160.03
Jamison Sandstone	-	373.83	369.81	373.83	172.25	109.89
McMinn Formation	286.00	483.72	479.7	483.72	282.14	171.32
Kyalla Shale	602.00	655.04	651.02	655.04	453.46	97.56
Moroak Sandstone	771.00	752.6	748.58	752.6	551.02	42.81
Upper Velkerri	917.00	795.41	791.39	795.41	593.83	244.45
Middle Velkerri	1041.00	1039.86	1035.84	1039.86	838.28	253.21
Lower Velkerri	1388.00	1293.07	1289.05	1293.07	1091.49	42.43
TD	1388.00	1335.5	1331.48	1335.5	1133.92	-

2 DRILLING

Tarlee 1 was spudded on the 10th of June, 2015 by DDH1's Rig-33. A 17-1/2" hole was drilled from surface to 23.30mRT where a 13-3/8" 68.0lb/ft K-55 conductor was set at a depth of 23.30mRT and cemented in place.

A 12-1/4" surface hole was then drilled to a depth of 133.78mRT and a 9-5/8" 36.0lb/ft K-55 conductor-2 was set at 130.78mRT and cemented in place.

An FIT (EMW 16ppg) was performed following drilling out the 9-5/8" shoe track and 3m of new formation. Drilling operations continued to a depth of 292.08mRT using an 8.719" hammer bit and air drilling techniques until an increase in water flow was observed requiring the drilling fluid to be changed over to a mud system. The intermediate section was drilled to a total depth of 590mRT. A 7" 23.0lb/ft K-55 intermediate casing was run and cemented in place at a depth of 583.13mRT.

An FIT (EMW 21.5ppg) was performed following drilling out the 7" shoe track and 3m of new formation. The 6-1/8" hole was drilled and cored to a TD of 1335.5mRT. Following logging operations the well was cased with a 4-1/2" 11.6lb/ft P-110 production casing and cemented to surface.

DDH1's Rig-33 was released on the 23rd of July, 2015. The well was suspended as per the NT DME Suspension guidelines.

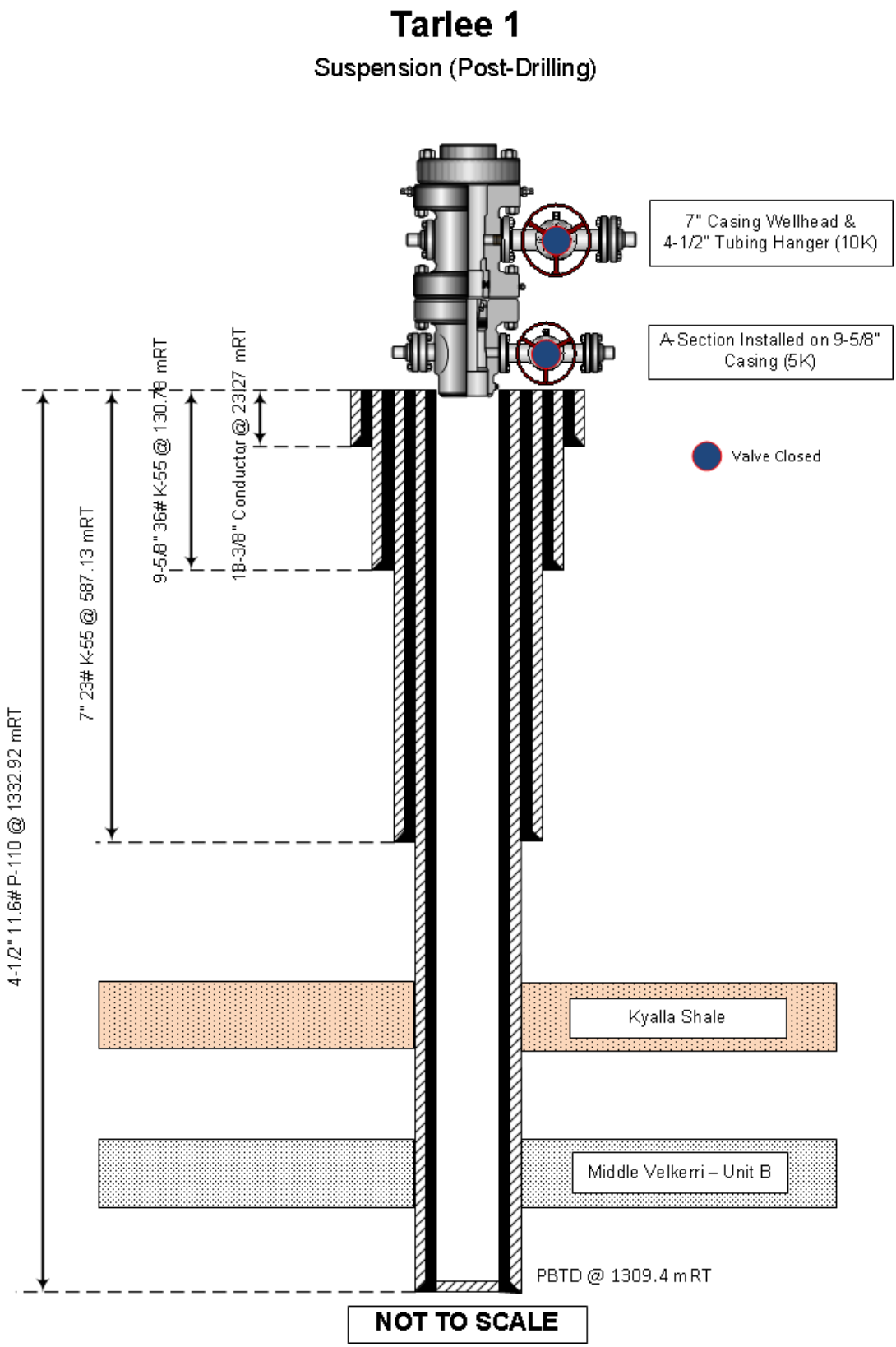

Figure 1. Tarlee 1 Well Schematic (Post-Drilling)

2.1 Cementing

	Surface Casing	Intermediate Casing	Production Casing
Hole Size	12-1/4” (311 mm)	8-1/2” (216 mm)	6-1/8” (155.58 mm)
Casing Size	9-5/8” (245 mm)	7” (178 mm)	4-1/2” (114.3 mm)
Setting Depth	130.8 mRT	587.1 mRT	1332.92 mRT
Cement Type	Class G	Class G	Class G
Cement Top	No returns at surface Topped Up	Lead - Surface Tail – 461 mRT	Lead – Surface Tail – 799 mRT
Yield	1.61 ft3/sk	Lead - 2.15 ft3/sk Tail - 1.16 ft3/sk	Lead - 2.13 ft3/sk Tail - 1.16 ft3/sk
Volume	54 bbl	Lead – 49.4 bbl Tail – 18.2 bbl	Lead – 54.0 bbl Tail – 32.0 bbl
Basis of Calculation	50% excess	50% excess	Gauge + 10%
Slurry Density	Lead - 13.5 ppg Tail – 13.5 ppg	Lead - 12.5 ppg Tail - 15.8 ppg	Lead - 12.5 ppg Tail - 15.8 ppg
Bump Plug	1000psi	1530psi	1600psi/2600psi*
Additives	D-Air 3000L Econolite Liquid CFR-3 (PH)	D-Air 3000L, Bentonite Halad-344, HR-5 Halad-413 (PH) CFR-3 (PH), HR-5 (PH)	D-Air 3000L, Bentonite Halad-344, HR-5 Halad-413 (PH) CFR-3 (PH), HR-5 (PH)

Table 1. Tarlee 1 Cement Summary

*the 4-1/2” production casing was pressure tested to 2600psi / Held for 15min

3 CORES AND SAMPLING

The sampling program for Tarlee-1 comprised the following:

- Wireline retrieval coring
- Cuttings collection
- Desorption
- Wax preservation of whole core
- Isotube sampling

Please see **Appendix 1** for details of cores and samples taken.

4 EVALUATION LOGS

Please see **Enclosure 1** for digital wireline log data.

Please see **Enclosure 2** for graphical mud log.

No measurement, logging or pressure while drilling logs were performed in Tarlee-1.

5 RE-ENTRY (DFIT)

5.1 Cement Evaluation Log

A cement evaluation log of the 4-1/2" casing was acquired by Vause Wireline with a Radial Bond Tool (RBT).

Good cement bond was achieved over the proposed perforation intervals in the middle Velkerri and Kyalla Shales.

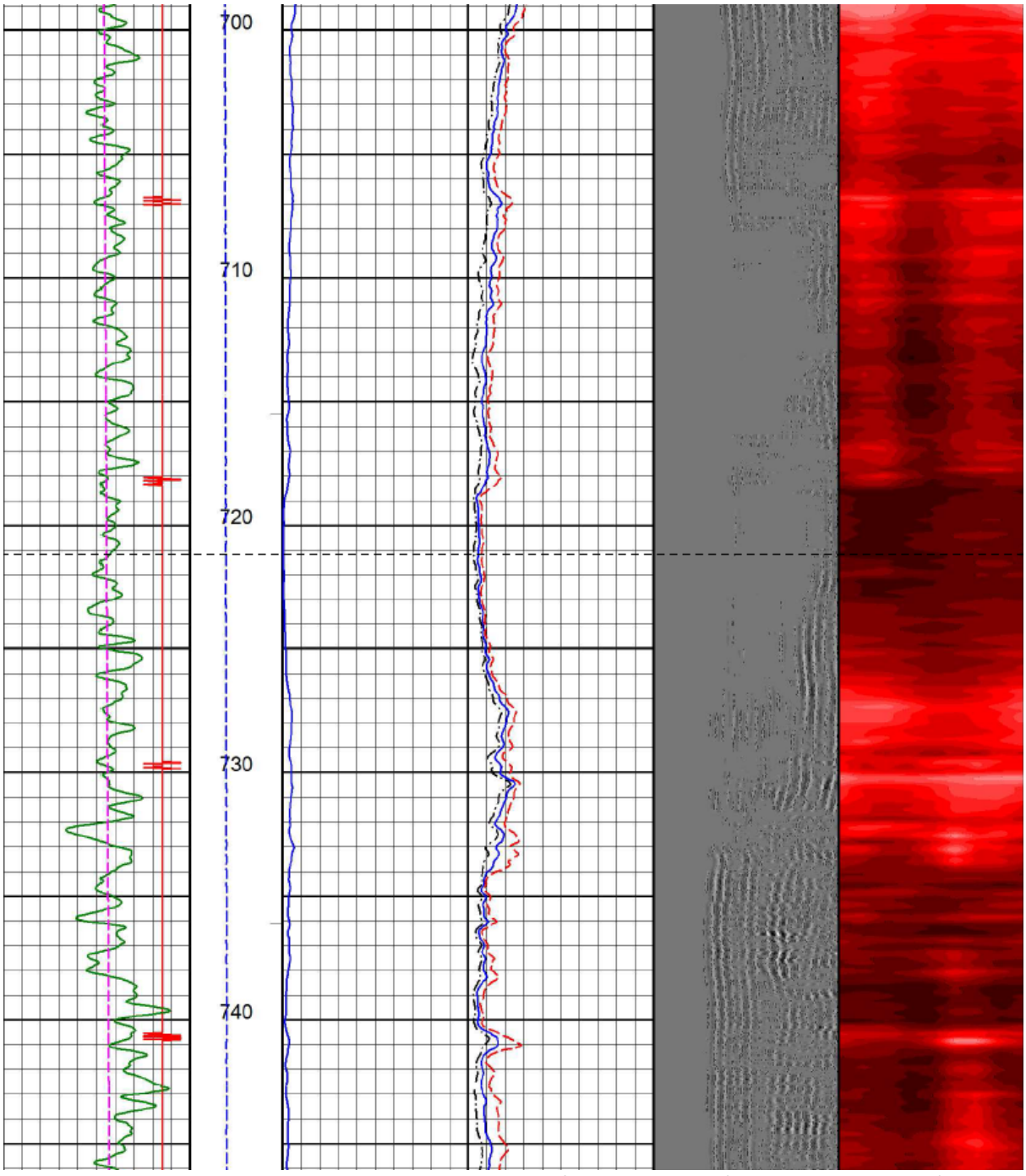

Figure 2. Cement Bond Log across Kyalla Shale Perforated Interval (718.00 – 718.91mRT)

Due to differences in cable stress, the main pass was correlated to the Schlumberger's APS-Pex-HRLA-SP dated 20-Jul-2015 over the 1240 – 1290mRT interval. The upper zone (Kyalla Shale) was correlated to the reference log over the 690 – 760mRT interval.

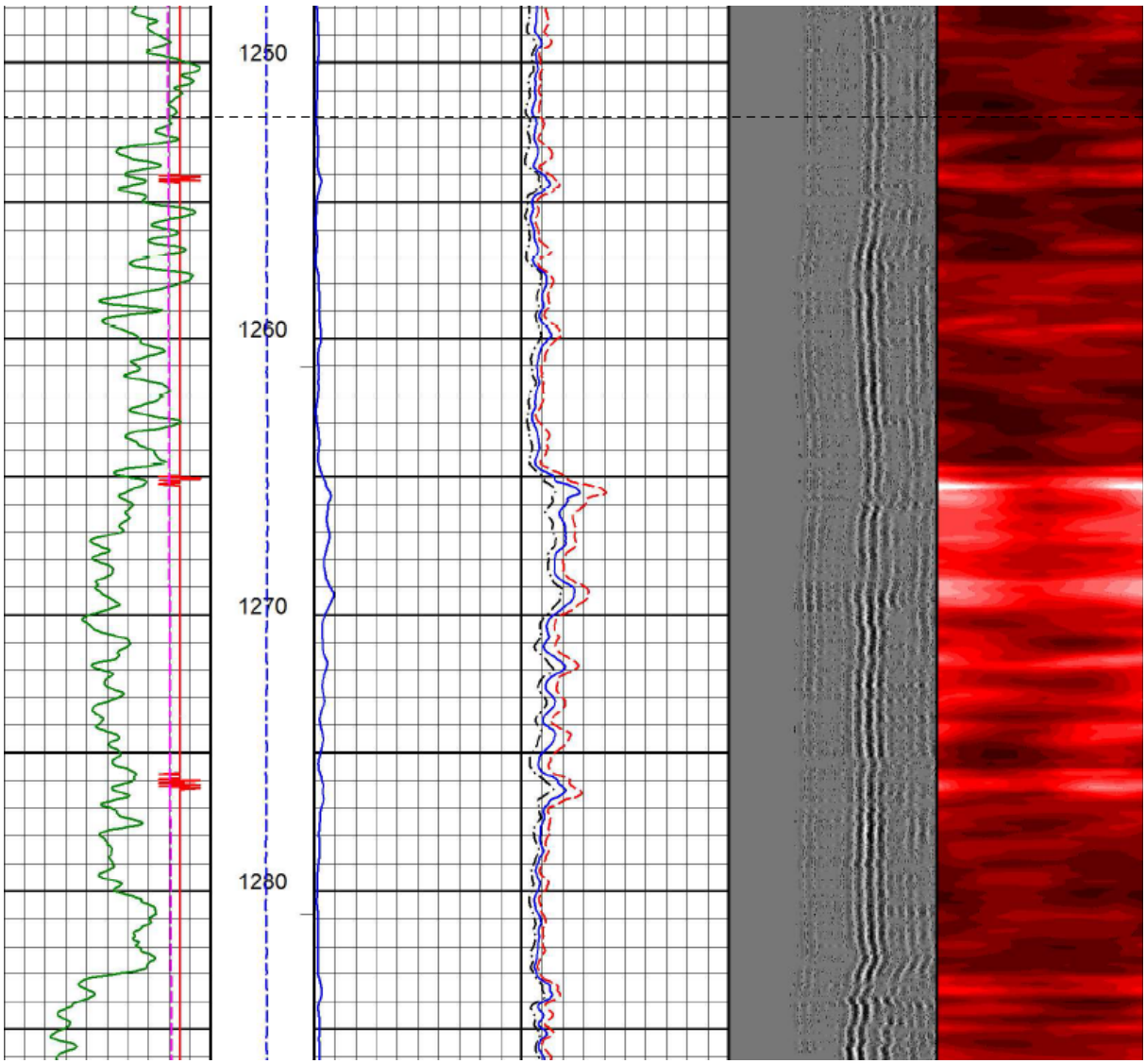

Figure 3. Cement Bond Log across middle Velkerri Perforated Interval (1264.00 – 1264.91mRT)

Please see **Enclosure 1** for Cement Evaluation Log.

5.2 Diagnostic Fracture Injection Testing (DFIT)

Two DFIT's were performed to gather information on both the middle Velkerri and Kyalla shales.

5.2.1 DFIT–1: Middle Velkerri

The test within the middle Velkerri involved perforating the shale formation over an interval of 1264.00 – 1264.91mRT. The perforation consisted of a 3ft, 3-3/8" 6SPF Owen's shape charge SDP-3375-411NT, 25.0gm, HMX.

A 4-1/2" Wireline Retrievable Bridge Plug (WRBP # 1) with a tandem set of Omega downhole pressure & temperature gauges were run in hole to 1250.0mRT. An attempt to pump around the 4-1/2" WRBP

to initiate formation break down was made by pumping at 2.5bpm up to a pressure of 4,700psi, but was insufficient to break down the formation. The 4-1/2" WRBP was pulled back to surface, and pumping operations recommenced at 1 bpm until a formation break down was observed requiring a surface pressure of 6,500psi. Then break down pumping operations continued at a constant rate of 1 bpm for 10 min before shutting down the pump to monitor pressure fall off.

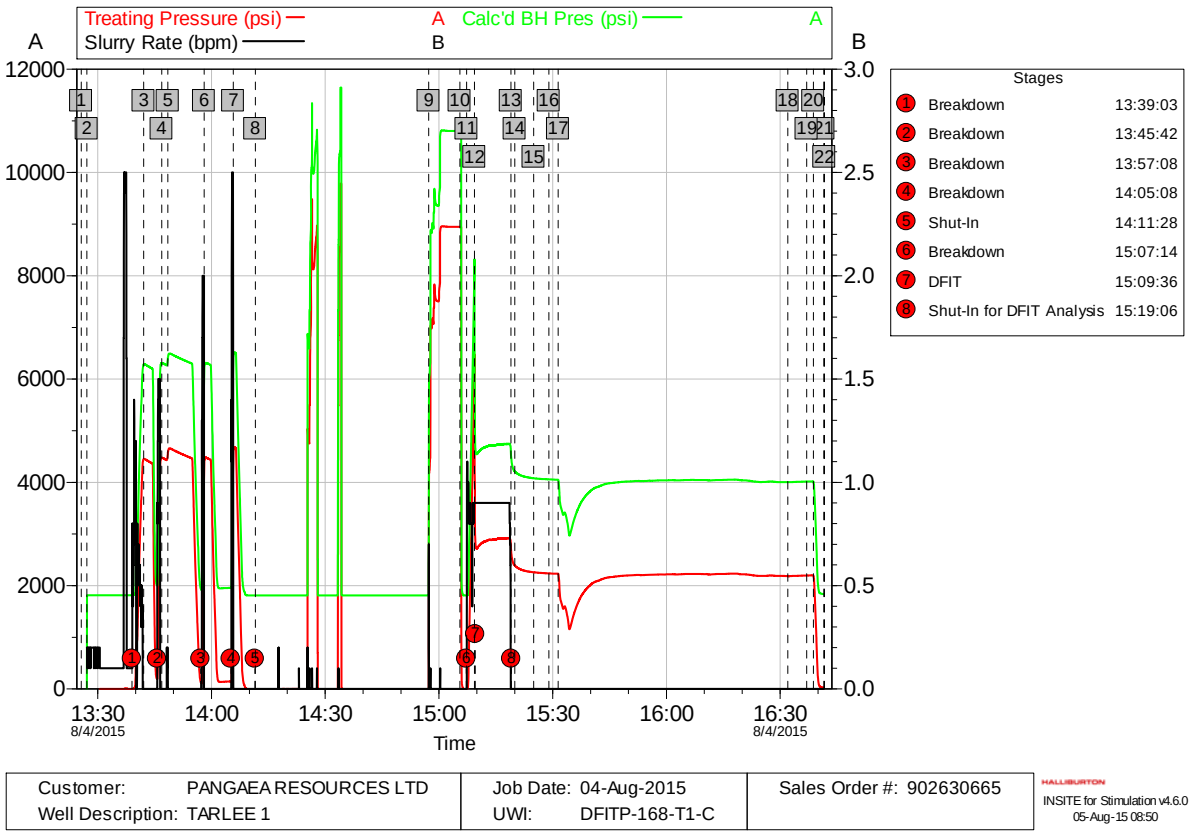

Figure 4. Middle Velkerri DFIT Surface Pressure Chart

Following the break down and pressure fall off the 4-1/2" WRBP with the downhole gauges was RIH and set at 1250.0mRT. In order to minimise interference to the downhole memory gauges during the pumping stage of the next DFIT stage (Kyalla Shale), a second WRBP was set at 1240mRT.

5.2.2 DFIT–2: Kyalla Shale

The Kyalla Shale was perforated over 718.00 – 718.91mRT (3ft, 3-3/8" 6SPF) with Owen's shape charge SDP-3375-411NT, 25.0gm, HMX.

The break down of the shale formation occurred at 5,240psi surface pressure while pumping at a rate of 1 bpm. After break down pumping operations continued at a constant rate of 1 bpm for 10 minutes before shutting down the pump to monitor pressure fall off.

Halliburton Self Power Intelligent Data Retrieve (SPIDR) surface pressure gauge was used to record pressure data for the Kyalla Shale DFIT.

5.2.3 Pressure Recording / Monitoring

Pressure recording / monitoring was carried out from 5-Aug-2015 to 1-Sep-2015. Pressure data from SPIDR was periodically downloaded and sent to Pangaea's Sydney office.

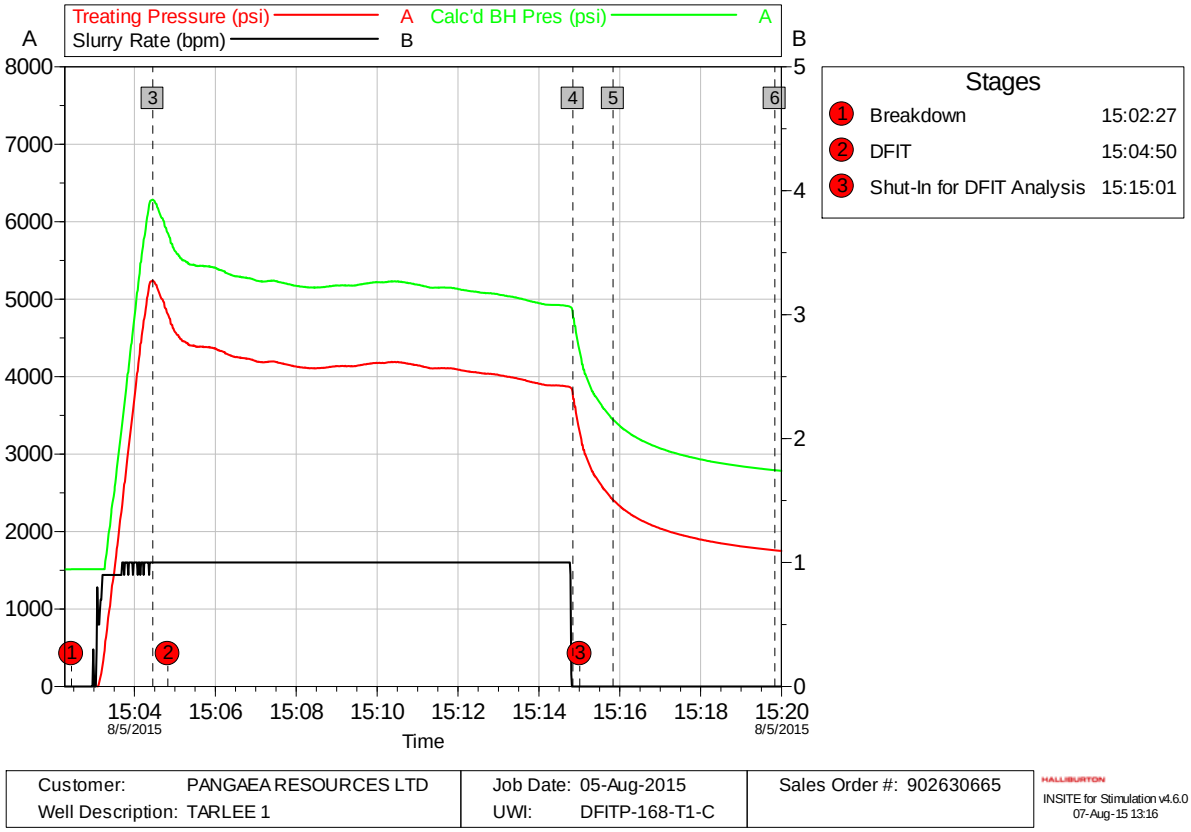

Figure 5. Kyalla Shale DFIT Surface Pressure Chart

Please see **Enclosure 3** for recorded pressure data.

6 SUSPENSION

Following the retrieval of the downhole pressure gauges the well was suspended by placing a Cast Iron Bridge Plug (CIBP) above the middle Velkerri "B" perforations at 1264.00mRT (28m above the middle Velkerri top perforation). An additional CIBP was placed above the Kyalla perforation at 690.00mRT (28m above the Kyalla Shale top perforation) and pressure tested to 1,000psi for 15 minutes. A 16.8m cement plug was then place above CIBP#2 using a cement dump bailer. The well was secured and suspended as per the DME Well Suspension Guidelines.

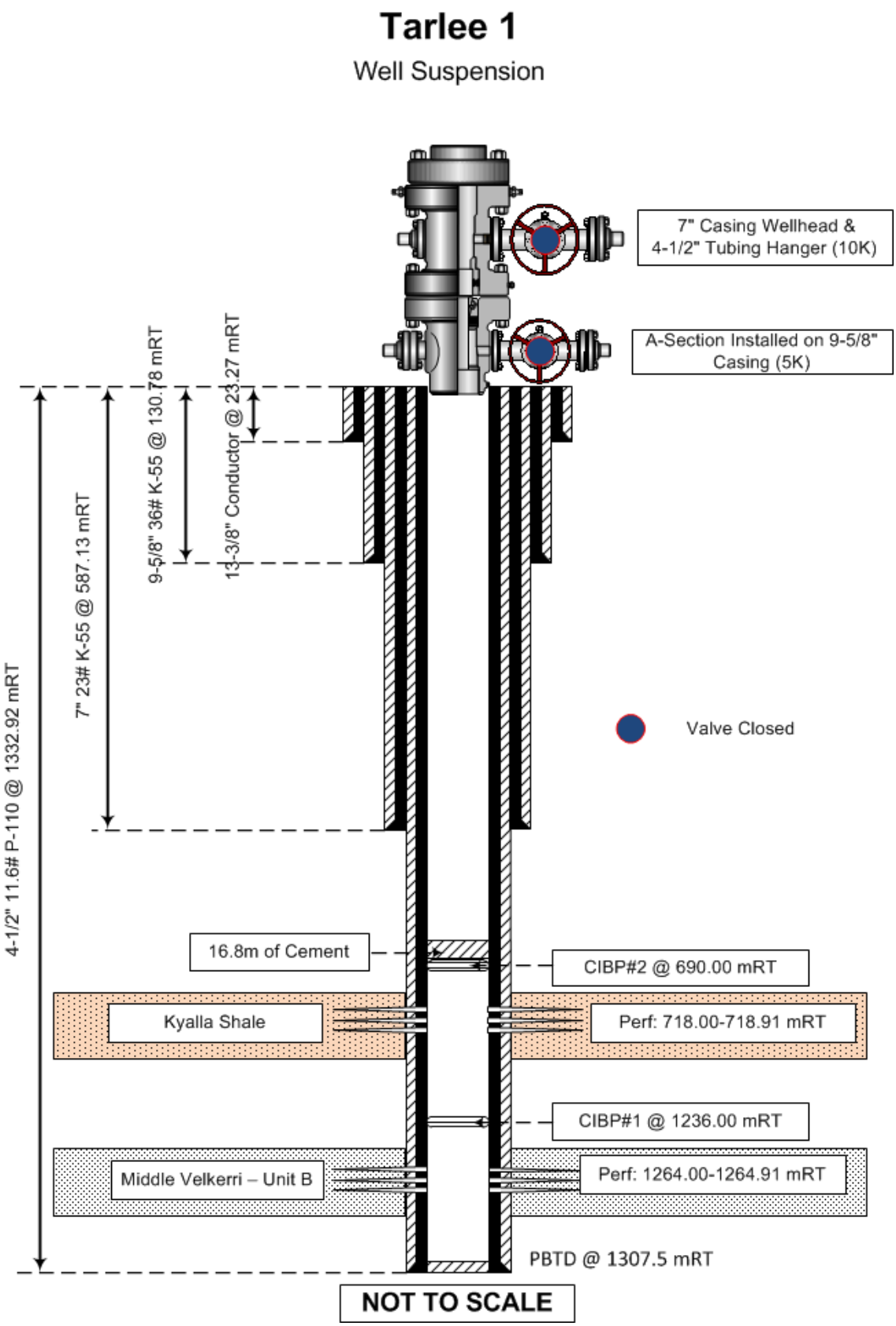

Figure 6. Tarlee 1 Suspension Diagram

7 CORE PHOTOGRAPHY

N/A

8 WELL TRAJECTORY

Please see **Appendix 2** for deviation survey results.

9 BIT RECORD

Please see **Appendix 3** for bit record.

10 MUD RECORD

Please see **Appendix 4** for mud record.

APPENDIX 1. CORES / SAMPLES DETAILS

CORE RUN DETAILS

Client: Pangaea
Well: Tarlee-1
Job Number: AB-77344
Rig: DDH1 Rig 33
Permit: NT EP-168

Run No.	Start Drilling/Coring	Stop Drilling/Coring	Left Bottom	At Surface	Top Depth	Bottom Depth	Drilled/Cored	Recovery	Loss/Gain	Recovery	Comments
	dd/mm/yyyy hh:mm	dd/mm/yyyy hh:mm	dd/mm/yyyy hh:mm	dd/mm/yyyy hh:mm	m	m	m	m	m	%	
1	29/06/2015 23:35	30/06/2015 00:37	30/06/2015 02:40	30/06/2015 03:05	**630.00**	637.00	7.00	6.80	-0.20	97.14	
2	30/06/2015 04:52	30/06/2015 05:24	30/06/2015 06:15	30/06/2015 06:37	637.00	645.50	8.50	8.72	0.22	102.59	
3	30/06/2015 07:35	30/06/2015 10:26	30/06/2015 11:05	30/06/2015 11:30	645.50	654.50	9.00	8.98	-0.02	99.78	
4	30/06/2015 13:04	30/06/2015 14:08	30/06/2015 15:20	30/06/2015 16:24	645.50	663.50	9.00	9.13	0.13	101.44	
5	30/06/2015 17:32	30/06/2015 18:10	30/06/2015 19:07	30/06/2015 19:32	663.50	672.50	9.00	9.13	0.13	101.44	Desorption #1 taken
6	30/06/2015 20:35	30/06/2015 21:41	01/07/2015 00:30	01/07/2015 00:51	672.50	681.50	9.00	8.93	-0.07	99.22	
7	01/07/2015 02:06	01/07/2015 04:15	01/07/2015 04:55	01/07/2015 06:35	681.50	690.50	9.00	8.98	-0.02	99.78	
8	01/07/2015 07:34	01/07/2015 08:20	01/07/2015 19:55	01/07/2015 20:32	690.50	697.27	6.77	6.95	0.18	102.66	
9	01/07/2015 22:25	01/07/2015 22:45	01/07/2015 23:47	02/07/2015 00:01	697.27	697.55	0.28	0.00	-0.28	0.00	Drilled Ahead from 697.55m - 697.81m
10	02/07/2015 11:51	02/07/2015 12:23	02/07/2015 13:15	02/07/2015 13:26	697.81	706.81	9.00	8.92	-0.08	99.11	Desorption #2 taken
11	02/07/2015 14:11	02/07/2015 14:35	02/07/2015 15:35	02/07/2015 15:43	706.81	715.81	9.00	9.13	0.13	101.44	
12	02/07/2015 16:40	02/07/2015 17:10	02/07/2015 17:45	02/07/2015 17:56	715.81	724.81	9.00	8.89	-0.11	98.78	Desorption #3 taken
13	02/07/2015 18:44	02/07/2015 19:03	02/07/2015 19:30	02/07/2015 19:38	724.81	725.40	0.59	0.49	-0.10	83.05	
14	02/07/2015 20:31	02/07/2015 21:40	02/07/2015 22:22	02/07/2015 22:37	725.40	734.40	9.00	9.17	0.17	101.89	
15	02/07/2015 23:22	03/07/2015 00:33	03/07/2015 01:54	03/07/2015 02:41	734.40	735.06	0.66	0.59	-0.07	89.39	
16	03/07/2015 04:12	03/07/2015 06:35	03/07/2015 07:25	03/07/2015 07:40	735.06	735.41	0.35	0.00	-0.35	0.00	Drilled ahead from 735.41m - 736.00m
17	03/07/2015 15:37	03/07/2015 17:21	03/07/2015 17:43	03/07/2015 18:01	736.00	745.00	9.00	9.08	0.08	100.89	Desorption #4 taken
18	03/07/2015 19:05	03/07/2015 21:08	03/07/2015 21:48	03/07/2015 22:08	745.00	754.00	9.00	8.92	-0.08	99.11	
19	03/07/2015 23:15	04/07/2015 00:30	04/07/2015 01:10	04/07/2015 01:36	754.00	754.40	0.40	0.33	-0.07	82.50	Finished coring Kyalla Formation Drill Ahead from 754.33m - 1008.72m
20	09/07/2015 12:20	09/07/2015 13:10	09/07/2015 14:05	09/07/2015 14:50	1008.72	1017.72	9.00	9.18	0.18	102.00	
21	09/07/2015 19:18	09/07/2015 20:37	09/07/2015 21:50	09/07/2015 22:24	1017.72	1026.72	9.00	8.63	-0.37	95.89	Desorption #5 taken
22	09/07/2015 23:58	10/07/2015 01:43	10/07/2015 01:43	10/07/2015 02:25	1026.72	1031.39	4.67	3.57	-1.10	76.45	Lost Pipe down hole, Drilled ahead from 1031.39m - 1031.60m
23	12/07/2015 17:28	12/07/2015 19:29	12/07/2015 20:17	12/07/2015 20:48	1031.60	1040.00	8.40	8.40	0.00	100.00	
24	12/07/2015 21:49	12/07/2015 23:00	12/07/2015 23:46	13/07/2015 00:21	1040.00	1049.00	9.00	9.12	0.12	101.33	

25	13/07/2015 01:12	13/07/2015 02:21	13/07/2015 03:14	13/07/2015 03:45	1049.00	1058.00	9.00	9.15	0.15	101.67	Desorption #6 taken
26	13/07/2015 04:30	13/07/2015 06:02	13/07/2015 06:55	13/07/2015 07:20	1058.00	1067.00	9.00	9.06	0.06	100.67	
27	13/07/2015 08:15	13/07/2015 10:50	13/07/2015 11:30	13/07/2015 11:48	1067.00	1076.00	9.00	9.06	0.06	100.67	
28	13/07/2015 12:40	13/07/2015 15:14	13/07/2015 15:58	13/07/2015 16:29	1076.00	1085.00	9.00	9.11	0.11	101.22	
29	13/07/2015 17:27	13/07/2015 20:30	13/07/2015 21:20	13/07/2015 21:50	1085.00	1094.00	9.00	9.09	0.09	101.00	Desorption #7 taken
30	13/07/2015 22:43	14/07/2015 01:34	14/07/2015 02:20	14/07/2015 03:00	1094.00	1103.00	9.00	9.00	0.00	100.00	
31	14/07/2015 03:49	14/07/2015 06:35	14/07/2015 07:09	14/07/2015 07:48	1103.00	1112.00	9.00	9.06	0.06	100.67	
32	14/07/2015 08:39	14/07/2015 11:05	14/07/2015 11:51	14/07/2015 12:17	1112.00	1121.00	9.00	9.01	0.01	100.11	Desorption #8 taken
33	14/07/2015 13:20	14/07/2015 16:06	14/07/2015 16:57	14/07/2015 17:29	1121.00	1130.00	9.00	8.95	-0.05	99.44	
34	14/07/2015 18:21	15/07/2015 00:41	15/07/2015 01:38	15/07/2015 02:05	1130.00	1138.73	8.73	8.74	0.01	100.11	
35	15/07/2015 03:09	15/07/2015 04:45	15/07/2015 05:28	15/07/2015 05:52	1138.73	1147.73	9.00	9.00	0.00	100.00	Desorption #9 taken
36	15/07/2015 06:36	15/07/2015 08:39	15/07/2015 09:36	15/07/2015 09:56	1147.73	1156.73	9.00	9.03	0.03	100.33	
37	15/07/2015 10:44	15/07/2015 12:52	15/07/2015 13:56	15/07/2015 14:29	1156.73	1166.00	9.27	9.34	0.07	100.76	Desorption #10 taken
38	15/07/2015 15:27	15/07/2015 17:49	15/07/2015 18:38	15/07/2015 19:03	1166.00	1175.00	9.00	8.97	-0.03	99.67	
39	15/07/2015 19:40	15/07/2015 22:17	15/07/2015 22:58	15/07/2015 23:23	1175.00	1183.00	8.00	8.04	0.04	100.50	
40	16/07/2015 00:13	16/07/2015 03:00	16/07/2015 03:58	16/07/2015 04:20	1183.00	1192.00	9.00	8.80	-0.20	97.78	Desorption #11 taken
41	16/07/2015 05:17	16/07/2015 08:30	16/07/2015 09:23	16/07/2015 09:46	1192.00	1200.90	8.90	9.19	0.29	103.26	Desorption #12 taken
42	16/07/2015 10:46	16/07/2015 13:10	16/07/2015 14:19	16/07/2015 14:44	1200.90	1210.00	9.10	9.06	-0.04	99.56	
43	16/07/2015 15:34	16/07/2015 17:17	16/07/2015 18:09	16/07/2015 18:30	1210.00	1219.00	9.00	8.89	-0.11	98.78	
44	16/07/2015 21:30	17/07/2015 00:12	17/07/2015 01:04	17/07/2015 01:33	1219.00	1228.00	9.00	9.01	0.01	100.11	Desorption#13 taken
45	17/07/2015 02:19	17/07/2015 03:21	17/07/2015 04:09	17/07/2015 04:39	1228.00	1237.00	9.00	8.93	-0.07	99.22	
46	17/07/2015 05:26	17/07/2015 06:40	17/07/2015 07:35	17/07/2015 08:00	1237.00	1246.00	9.00	9.10	0.10	101.11	Desorption #14 taken
47	17/07/2015 14:45	17/07/2015 16:05	17/07/2015 16:57	17/07/2015 17:21	1246.00	1255.00	9.00	9.09	0.09	101.00	
48	17/07/2015 18:28	17/07/2015 19:47	17/07/2015 20:30	17/07/2015 20:57	1255.00	1264.00	9.00	8.84	-0.16	98.22	Desorption #15 taken
49	17/07/2015 21:53	17/07/2015 22:27	17/07/2015 23:15	17/07/2015 23:46	1264.00	1273.00	9.00	9.09	0.09	101.00	
50	18/07/2015 00:39	18/07/2015 01:15	18/07/2015 02:20	18/07/2015 02:50	1273.00	1282.00	9.00	9.14	0.14	101.56	Desorption #16 taken
51	18/07/2015 03:35	18/07/2015 04:21	18/07/2015 05:35	18/07/2015 05:56	1282.00	1291.00	9.00	9.02	0.02	100.22	
52	18/07/2015 11:25	18/07/2015 12:25	18/07/2015 13:25	18/07/2015 13:40	1291.00	1300.00	9.00	8.92	-0.08	99.11	
53	-	-	-	-	1300.00	1309.00	9.00	8.84	-0.16	98.22	

CUTTINGS SAMPLE DETAILS

Washed and Dried Cuttings for Pangaea (Set A) with duplicate set for NTGS (Set B):			
Sample Box	**Type**	**Depth (mRT)**	**Remarks**
A	Cloth Bag	599 –630	Mixed Intervals
B	Cloth Bag	754.4 – 825	5m Interval
C	Cloth Bag	825 – 915	5m Intervals
D	Cloth Bag	915 – 1008.72	5m intervals
E	Cloth Bag	1310-1335.5	5m intervals
A	Cloth Bag	599 –630	Mixed Intervals

Washed and Dried Cuttings Set C (for Pangaea Records):			
Sample Bag	**Depth mRT**	**No of Sample**	**Remarks**
1	Samplex Tray	5.62 –1335.5	Mixed Intervals 48 Trays (237 Samples)

DESORPTION SAMPLE DETAILS

Tarlee-1 Desorption Samples				
Sample	**Top depth (m)**	**Bottom Depth (m)**	**Length (m)**	**Formation**
TL1_DS1	670.80	671.15	0.35	Kyalla
TL1_DS2	701.05	701.35	0.30	Kyalla
TL1_DS3	721.05	721.35	0.30	Kyalla
TL1_DS4	742.30	742.60	0.30	Kyalla
TL1_DS5	1023.80	1024.10	0.30	Middle Velkerri
TL1_DS6	1052.30	1052.60	0.30	Middle Velkerri
TL1_DS7	1092.84	1093.14	0.30	Middle Velkerri
TL1_DS8	1116.80	1117.10	0.30	Middle Velkerri
TL1_DS9	1141.05	1141.35	0.30	Middle Velkerri
TL1_DS10	1160.56	1160.86	0.30	Middle Velkerri
TL1_DS11	1189.84	1190.15	0.31	Middle Velkerri
TL1_DS12	1200.82	1201.11	0.29	Middle Velkerri
TL1_DS13	1227.29	1227.58	0.29	Middle Velkerri
TL1_DS14	1239.90	1240.20	0.30	Middle Velkerri
TL1_DS15	1259.16	1259.48	0.32	Lower Velkerri
TL1_DS16	1277.06	1277.35	0.29	Lower Velkerri

PRESERVED CORE SAMPLES

Tarlee-1 Preserved Core Samples			
Sample	**Top depth (m)**	**Bottom Depth (m)**	**Length (m)**
PS-1	636.50	636.80	0.30
PS-2	644.75	645.00	0.25
PS-3	645.00	645.23	0.23
PS-4	670.50	670.80	0.30
PS-5	671.15	671.50	0.35
PS-6	700.75	701.05	0.30
PS-7	701.35	701.75	0.40
PS-8	720.75	721.05	0.30

PS-9	721.35	721.75	0.40
PS-10	742.00	742.30	0.30
PS-11	742.60	743.00	0.40
PS-12	1013.50	1013.80	0.30
PS-12B	1013.80	1014.10	0.30
PS-13	1014.10	1014.50	0.40
PS-14	1023.50	1023.80	0.30
PS-15	1024.10	1024.50	0.40
PS-16	1052.00	1052.38	0.38
PS-17	1052.68	1053.00	0.32
PS18	1092.50	1092.84	0.34
PS19	1093.14	1093.52	0.38
PS20	1116.50	1116.80	0.30
PS21	1117.10	1117.50	0.40
PS22	1140.75	1141.05	0.30
PS23	1141.35	1141.75	0.40
PS24	1160.25	1160.55	0.30
PS25	1160.85	1161.25	0.40
PS26	1189.50	1189.84	0.34
PS27	1190.15	1190.50	0.35
PS28	1200.50	1200.82	0.32
PS29	1201.11	1201.50	0.39
PS30	1227.00	1227.29	0.29
PS31	1227.58	1228.00	0.42
PS32	1239.50	1239.90	0.40
PS33	1240.20	1240.50	0.30
PS34	1258.75	1259.16	0.41
PS35	1259.48	1259.75	0.27
PS36	1276.75	1277.06	0.31
PS37	1277.35	1277.75	0.40

ISOTUBE SAMPLE DETAILS

Tarlee-1 Isotube Samples			
Sample Number	**Depth (mMDRT)**	**Total Gas Unit**	**Date & Time**
01	1115.0	93	14 July 2015 / 09:07
02	1159.2	191	15 July 2015 / 11:25
03	1217.6	112	16 July 2015 / 17:07
04	1222.6	91	16 July 2015 / 23:00
05	1235.0	324	17 July 2015 / 03:17
06	1240.0	1003	17 July 2015 / 05:54
07	1257.8	482	17 July 2015 / 19:01
08	1278.0	985	18 July 2015 / 01:11

APPENDIX 2. DEVIATION SURVEY

Pangaea Tarlee-1 Deviation Survey Results			
Depth	**Date/Time**	**Deviation**	**Azimuth**
[mRT]		[deg]	[deg]
164.0	21-Jun-15 - 16:30	0.3	339.4
360.0	23-Jun-15 - 10:00	0.3	146.0
483.0	24-Jun-14 - 14:00	0.8	204.5
754.4	04-Jul-15 - 03:45	1.1	312.4
892.1	07-Jul-15 - 06:00	1.9	184.9
1320.0	19-Jul-15 – 11:45	3.2	N/A

A Wireline Logging Deviation Survey using Schlumberger's General Purpose Inclinometry Tool (GPIT) was performed. Data can be found in **Enclosure 1**. From this survey at the Wireline Total Depth (TD) of 1335.50m (MD) and 1334.96m (TVD) the Axial Coordinates (N/-S, E/-W) are (-16.61, -17.71) from the target origin at (0, 0).

APPENDIX 3. BIT RECORD

TARLEE-1 BIT RECORD									
Bit Number	Size (in)	Make	Type	IADC Code or Specification	Serial Number	Nozzles	Depth In (m)	Depth Out (m)	Total Meters
1	12.250	Smith	Mill Tooth	117	PT3306	3 x 18/32 1 x 16/32	0	21.7	21.7
2	17.500	Carbide	Mill Tooth	117	H24459L	3 x 20/32 1 x 32/32	0	23.3	23.3
3	12.125	Halco	Mach132	N/A	H3	3 x 32/32	23.3	133.8	110.5
4	8.500	Smith	TCI	627Y	RA7292	3 x 18/32	133.8	137.0	3.2
5	8.719	Halco	Hammer	N/A	N/A	3 x 32/32	137.0	292.0	155.0
6	8.500	Baker	TCI	617	5231054	3 x 16/32	292.0	590.0	298.0
7	6.125	NOV	PDC (Drilling)	Core Head	A167415	7 x 12/32	590.0	630.0	40.0
8	6.125	NOV	PDC (Coring)	Core Head	A167415	7 x 12/32	630.0	754.4	124.4
9	6.125	Tercel	PDC	M432	S5D3674	6 x 14/32	754.4	1008.7	254.3
10	6.125	NOV	PDC (Coring)	Core Head	A164667	7 x 12/32 3 x 10/32	1008.7	1309.0	300.3
11	6.125	NOV	PDC (Drilling)	Core Head	A164667	7 x 12/32 3 x 10/32	1309.0	1335.5	26.5

APPENDIX 4. FLUID RECORD

TARLEE-1 FLUID PROPERTIES SUMMARY							
DATE	DEPTH (M)	WEIGHT (PPG)	Vis (sec/qt)	pH	Fluid Loss (mls)	OPERATION	MUD USED
10/06/15	23.3	n/a	n/a	n/a	n/a	Drilling	Water
11/06/15	23.3	n/a	n/a	n/a	n/a	Cementing	Water
12/06/15	23.3	n/a	n/a	n/a	n/a	Rig Repair	Water
13/06/15	23.3	n/a	n/a	n/a	n/a	Rig Repair	Dry Air
14/06/15	90.3	n/a	n/a	n/a	n/a	Air Drilling	Dry Air
15/06/15	133.8	n/a	n/a	n/a	n/a	Air Drilling	Dry Air
16/06/15	133.8	n/a	n/a	n/a	n/a	Air Drilling	Dry Air
17/06/15	133.8	n/a	n/a	n/a	n/a	Air Drilling	Dry Air
18/06/15	137.0	8.33	n/a	n/a	n/a	Drilling	Water
19/06/15	146.8	n/a	n/a	n/a	n/a	Air Drilling	Dry Air
20/06/15	146.8	n/a	n/a	n/a	n/a	Rig Repair	Dry Air
21/06/15	245.0	n/a	n/a	n/a	n/a	Air Drilling	Mist / Foam
22/06/15	292.1	8.60	40	9.5	9.0	Drilling	Mist / Foam KCl / Polymer
23/06/15	403.0	8.75	38	9.0	6.0	Drilling WBM	KCl / Polymer
24/06/15	525.0	8.90	39	9.5	5.6	Drilling WBM	KCl / Polymer
25/06/15	587.0	9.25	38	9.0	7.0	Drilling WBM	KCl / Polymer
26/06/15	590.0	9.00	36	8.5	1.0	Cementing	KCl / Polymer
27/06/15	590.0	n/a	n/a	n/a	n/a	WOC	KCl / Polymer
28/06/15	590.0	8.70	39	9.5	8.0	Coring	KCl / Polymer
29/06/15	630.0	8.80	36	9.5	7.4	Coring	KCl / Polymer
30/06/15	666.0	8.80	37	9.5	6.2	Coring	KCl / Polymer
01/07/15	697.2	8.75	35	9.0	7.0	Coring	KCl / Polymer
02/07/15	724.8	8.80	36	9.0	6.2	Coring	KCl / Polymer
03/07/15	744.3	8.80	36	9.5	6.2	Coring	KCl / Polymer
04/07/15	754.4	8.80	34	9.5	6.8	Coring	KCl / Polymer
05/07/15	754.4	8.80	32	9.0	7.2	BOP Test	KCl / Polymer
06/07/15	789.7	8.85	36	9.5	5.2	Drilling WBM	KCl / Polymer
07/07/15	1008.0	9.10	36	9.0	6.4	Drilling WBM	KCl / Polymer
08/07/15	1008.0	9.15	34	9.0	6.6	Trip Pipe	KCl / Polymer
09/07/15	1017.0	8.80	34	8.5	6.5	Coring	KCl / Polymer
10/07/15	1031.4	n/a	n/a	n/a	n/a	Fishing	KCl / Polymer
11/07/15	1031.4	n/a	n/a	n/a	n/a	Rig Repair	KCl / Polymer
12/07/15	1031.0	8.90	34	8.5	6.0	Coring	KCl / Polymer
13/07/15	1058.0	8.90	38	8.5	4.8	Coring	KCl / Polymer
14/07/15	1121.0	8.90	40	8.5	4.9	Coring	KCl / Polymer
15/07/15	1166.0	8.90	39	8.5	4.6	Coring	KCl / Polymer
16/07/15	1210.0	9.00	39	9.0	4.5	Coring	KCl / Polymer

17/07/15	1253.0	9.00	39	8.5	4.6	Coring	KCl / Polymer
18/07/15	1309.0	8.90	38	8.5	4.8	Coring	KCl / Polymer
19/07/15	1334.0	8.90	39	8.5	4.9	Coring	KCl / Polymer
20/07/15	1335.5	8.9	40	8.5	4.8	Logging	KCl / Polymer