FINAL WELL REPORT

Revision:	**Version 2**
Operating Company:	**Vulcan Minerals Inc.**
Partner Company:	**Investcan Energy Corp.**
Well Name:	**Vulcan Investcan Red Brook #2**
Rig:	**Stoneham Drilling Rig #11**
Field:	**Bay St. George Basin, Permit #03-107**
Location:	**Western Newfoundland, Canada**
Submission Date:	**11-Mar-2010**
Revised On:	**4-Jun-2010**

Prepared by: Shane Halley, B.Eng Vulcan Minerals Date:	Reviewed by: Patrick Laracy, P.Geo Vulcan Minerals Date:

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List of Appendices

1 Introduction (2.2)

The Vulcan Investcan Red Brook #2 well was drilled by Vulcan Minerals Inc. (Vulcan) (pursuant to a 50/50 joint venture with Investcan Energy Corp.) to test a flank play along the west side of the Flat Bay Anticline which is mapped at surface over a 20 km strike length. The main objective of the Red Brook #2 exploration well was to explore and evaluate the hydrocarbon bearing potential of structures at and below the Fischells Brook conglomerate identified off surface seismic of the Bay St. George basin. This exploratory oil and gas well is located approximately 1.5 km due east of the community of Heatherton in the Bay St. George area of western Newfoundland.

The well spudded on October 21st, 2009 using Stoneham Drilling's Rig #11, drilled to 1965 mMD, was cased with 178 mm production casing and suspended. Based on numerous gas shows and data from a full suite of wireline evaluation logs run over the potential pay zones, five drill stem tests were run on this well. The Red Brook #2 well flowed natural gas to surface on three drill stem tests. This was the first flow of natural gas to surface for any petroleum well in the Bay St. George basin and clearly demonstrates the hydrocarbon potential of this under-explored area.

On site drilling supervision was provided by Mr. Bill Williams and Don Campbell and site geological work by Mr. Michael Smith. Operations management was by Mr. Terry Brooker, P. Eng..

2 Map (2.3)

A map showing the location of the well and the final legal site survey are included in Appendix #1.

3 General Information (2.4)

Well Name	- Vulcan Investcan Red Brook #2
Operator	- Vulcan Minerals Inc.
Partner	- Investcan Energy Corp.
Permit	- Exploration Permit #03-107
DPA	- #2009-116-03
ADW	- #2009-116-03-01
Contractor	- Stoneham Drilling

Drilling Rig - Rig #11

Location - NAD 27, UTM Zone 21; N 5,347,380.564m, E 370,104.380m

Survey Summary

While drilling single shot surveys and the mud-pulse Teledrift tool were used to track wellbore deviation. The final survey list used totco single-shot (inclination only) surveys from 36 - 890 m and then the Baker wireline deviation survey from 920 – 1940m.

4 Difficulties and Delays (2.5)

See the drilling curve and time breakdown included in Appendix #2 with highlights as follows:

- 2.5 days waiting on the 339.7mm casing to arrive from supplier in Ontario.
- 1 day waiting on Stoneham's BOP technician from Calgary to arrive and fix the remote BOP control.
- 6 days curing losses with LCM and cement plugs from 242-321 m.
- Drilled into a pressured zone at 948m and increased mud weight up to 1200 kg/m3.
- 2 days delayed waiting on Wireline crew to arrive on site for the main hole logging.

5 Drilling Operations (3.0)

5.1 Ground Elev. - 57.1 m (ref. MSL)
KB Elev. - 6.3 m (ref. GL)

5.2 Total Depth - 1965.00 meters MD KB/ 1951.64 meters TVD KB
Total Depth logged – 1955 meters MD KB
Elevation of casing flange – -0.27 m (ref. GL)

5.3 Spud Date - 0000 hrs, Oct. 21st, 2009

5.4 TD Date - 1015 hrs, Nov. 23rd, 2009

5.5 Rig Release - 2359 hrs, Dec. 5th, 2009

5.6 Well Status - well is suspended with 177.8mm casing set to 1947.0 meters.

5.7 Hole Size and Depths

- Conductor - Drilled 431.8 mm hole to 220 m
- Surface - Drilled 340 mm hole to 889 m
- Main - Drilled 215.9 mm hole to 1965 m

5.8 Bit records

There were a total of 8 bit runs during the well. See Appendix #2 for details.

5.0 Drilling Operations (continued)

5.9 Casing and Cementing Record

- Conductor

Ran 339.7mm, 71.4 kg/m, H-40 to 220m KB.
Cemented with 33.75t BJ Portland + 2% CaCl2 @ 1878 kg/m3. Full returns to surface.

- Surface

Ran 244.5 mm, 64.7 kg/m L-80 casing 0 - 331m KB;
Ran 244.5 mm, 53.6 kg/m J-55 casing 331 - 885m KB;
Cemented with 6.4 t Class "G" @1826kg/m3 (w/ 3% CaCl2 & 6.94% NaCl) + 24.6t BJMaxxCem*@1650kg/m3 (w/ 3% CaCl2 & 6.94% NaCl). Returns to surface.

- Main

Ran 177.8 mm, 38.7 kg/m J-55 casing to 1947m KB;
Cemented with 13.27t Fill-Lite w/0.9% FL-5 + 2%A-11 + 0.7% R-3 @ 1518 kg/m3 & 8t Class 'G' w/ 2% Microsil 12P + 0.4% FL-5 + 0.5% CD-3 @1901 kg/m3. Approximately 50% of scavenger returns back to surface; Calculated TOC at 107m.
*****a 0.70m MARKER JOINT was run at 1240.79m MD KB with a limiting ID of 165.1254mm (6.501")*****

							ELEV:	GND	57.10 m
					Hanger	Seals	(ref. MSL)	KB	63.40 m
Hole SIZE (mm)	**Csg SIZE (mm)**	**kg/m**	**GRADE**	**CONN**	**Type/ Make***	**Type/ Make***	**JNTS**	**Shoe mMD-KB**	**Joints that have centralizers (1st joint is after float collar)**
431.8	339.7	71.4	H-40	STC	STREAM-FLO CROWN CASING HANGER MANDREL C9FBD	STREAM-FLO CROWN PACKOFF BUSHING FBD	18	220.18	none
311	244	64.7	L-80	LTC	STREAM-FLO CROWN CASING HANGER MANDREL	STREAM-FLO CROWN PACKOFF BUSHING	27	331	1, 1, 2, 2, 5, 8, 11,14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44, 47, 50, 53
311	244	53.6	J-55	LTC	CUFBD	STANDARD FBD	46	885	
216	178	38.7	j-55	LTC	STREAM-FLO CROWN CASING HANGER MANDREL CUFBD	STREAM-FLO CROWN PRIMARY PACKOFF FBD	153	1947.04	1, 1, 2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44, 47, 50, 53, 56, 59, 62, 65, 68, 71, 74, 77, 80, 83, 86, 89, 92, 95, 98, 101, 104, 107, 110, 113, 116, 119, 121, 124, 127, 130

5.10 Sidetracked Hole

There were no sidetracks during the well.

5.11 Drilling Fluid

The well was drilled with a simple low viscosity water-based mud. A summary table is shown below:

Casing	Depth [m]	Size [mm]	Fluid Type	Viscosity	Weight kg/m3
Conductor Hole	212	431.8	Polymer Water Based Mud	102-111	1115-1145
Surface Hole	889	311.15	Salt Saturated Water Based Mud	34-55	1080-1255
Production Casing	1965	215.9	Polymer Water Based Mud	41-86	1190-1270
Completion	1965	215.9	Water with Oxygen Scavanger, Biocide, Filming Amine and Caustic Soda		1000

5.0 Drilling Operations (continued)

5.12 Fluid Disposal

The drilling mud and cuttings were transported to the Jefferys municipal landfill for disposal in accordance with the applicable government regulations.

5.13 Fishing Operations

There were no fishing operations.

5.14 Well Influxes

At 20:45 on November 12th, 2009 there was an influx of 0.25m3. The BOPs were closed and the influx was circulated out using the Driller's Method. The mud density was increased from 1020 kg/m3 to 1200 kg/m3. There was no gas to surface, nor sheen on the surface of the mud tanks observed.

5.15 Formation Leak-Off Tests

There were no Leak-Off tests performed during drilling operations.

A FIT was performed on 21-Nov-2009; 7000 Kpa at surface with a hole depth of 892m and mud weight of 1020 kg/m3 for a calculated gradient of 17.91 kpa/m (1826 kg/m3 equivalent mud weight).

5.16 Time Distribution

A daily detailed time breakdown is available from the Vulcan morning reports included in Appendix #3.

5.17 Deviation Plot

There was very little well deviation for the first 700 mMD KB of drilling. From 754 to 890 meters the well angle built from 3.00 to 7.02 degrees inclination. At that point a packed BHA was used and effectively held the well angle between 7.0 to 9.5 degrees from 890 to 1965 meters.

5.0 Drilling Operations (continued)

While drilling single shot surveys and the mud-pulse Teledrift tool were used to track wellbore deviation. The final survey list used totco single-shot (inclination only) surveys from 36 - 890 m and then the Baker wireline deviation survey from 920 – 1940m. The wellbore position is calculated using the average angle method for both inclination and azimuth. The deviation plot and surveys are in Appendix #1.

5.18 Suspension / Abandonment Plugs

There are no plugs in the main hole as it was cased and cemented.

5.19 Well Schematic

A schematic showing hole sizes and depths, casing sizes and depths, and cementing tops is included in Appendix #4. The final installed wellhead configuration is also included.

5.20 Fluid Samples

There were no formation fluid samples taken during the drilling of the well. However during the DST runs in the main hole 3 gas samples were obtained in the downhole testing tool. The analysis of these samples in included in Appendix #5.

6 Geological (4.0) (Prepared by Mr. Michael Smith)

The geological summary report and final geological column diagram is included in Appendix #6. A description of all cuttings collected is in the detailed report. All bagged and vialed cuttings samples are stored in Vulcan's St. John's office.

6.1 Sidewall cores

Thirty one (31) sidewall cores were taken in the 216mm open hole section with Baker Inteq's RCOR tool. The core descriptions are included in the geology report in Appendix #6. The analysis of these samples is still pending at the time of this report's submission.

6.2 Hydrocarbon Shows

The Red Brook #2 well flowed natural gas to surface on three drill stem tests. This is the first flow of natural gas to surface for any petroleum well in the Bay St. George basin and clearly demonstrates the hydrocarbon potential of this under-explored area. The well was cased to a total depth of 1965 metres for further evaluation and determination of accurate sustainable flow rates in order to fully assess the discovery. The well tested a flank play along the west side of the Flat Bay Anticline which is mapped at surface over a 20 km strike length. It was drilled pursuant to a 50/50 joint venture with Investcan Energy Corp.

During drilling of the well an over pressured zone was encountered which required using a heavy mud system to control the well. Based on the drill stem test results significant formation damage was caused by this heavy drilling fluid. This damage constricted the formation's ability to flow natural gas into the well bore. As a result the flow rates achieved at Red Brook on the drill stem tests are not an accurate reflection of the potential flow rates achievable after the reservoirs have been stimulated by hydraulic fracturing. A fracture stimulation is designed to increase permeability and access formation fluids deep beyond the damaged zone. Consequently, flow rates can increase significantly as evidenced by the results achieved in similar rocks in New Brunswick. As a result, the Company is having all evaluation data analyzed towards designing a fracture stimulation program. This program will also include an evaluation of the Robinsons #1 well which encountered a significant number of gas shows as reported on October 15, 2009.

A full geological striplog is attached for detailed reference in Appendix #7.

7 Well Evaluation (5.0)

7.1 Logging Program

All wireline logging information is attached in Appendix #8. For reference a summary of the wireline logs run by BAKER ATLAS is shown below:

Hole size	Logging Depth		Services Run	Run #	Date
	Start	Stop			
311.15 mm	883.9	220	Laterlog/GR/Caliper	3	10-Nov-2009
311.15 mm	888	20	DENSITY/NEUTRON/GR/X-Y CAL	2	10-Nov-2009
311.15 mm	881	220	SONIC/GR/Digital Spectralog	1	10-Nov-2009
215.9 mm	1956.7	885	INDUCTION/GR/Caliper/SP	1	25-Nov-2009
215.9 mm	1956.7	885	DENSITY/NEUTRON/GR/X-Y CAL	1	25-Nov-2009
215.9 mm	1952	800	SONIC/GR/Digital Spectralog	2	25-Nov-2009
215.9 mm	1955	885	Zero Offset Vertical Seismic Profile w/ Gamma Ray	6	27-Nov-2009
215.9 mm	1945	890	Rotary Sidewall Coring	4	26-Nov-2009
215.9 mm			ForMation Tester (Pressure tester)	5	27-Nov-2009
215.9 mm	1950	885	STAR DIP/IMAGER	3	25-Nov-2009

7.2 Drill Stem Tests

All DST information (HOLLAND TESTERS) is provided in Appendix #9. A summary of the DSTs is shown below:

DST #	Hole size	Test Type	Testing Depth mMD		Result
			Top	Bottom	
1	215.9 mm	Conventional Straddle	1556	1574	Successful test- Gas to surface on Main Flow
2	215.9 mm	Conventional Straddle	1360	1383	Successful Test- No gas to surface
3	215.9 mm	Conventional Straddle	1297	1338	Successful test- Gas to surface on Main Flow
4	215.9 mm	Conventional Straddle	1587	1641	Successful Test- No gas to surface
5	215.9 mm	Conventional Straddle	872	908	Successful test- Gas to surface on Main Flow

Formation Pressures from the Baker wireline FMT tool is also included in Appendix #8.

8 Synthetic Seismograms

The synthetic seismogram for Red Brook #2 is shown in Appendix #10.

9 Vertical Seismic Profiles/Velocity Surveys

The complete ZVSP Processing report is included in Appendix #11.

10 Formation Stimulation

A fracture stimulation program is planned for the well in 2010.

11 Benefits tracking

Included in Appendix #12 is the complete benefits tracking for the well.

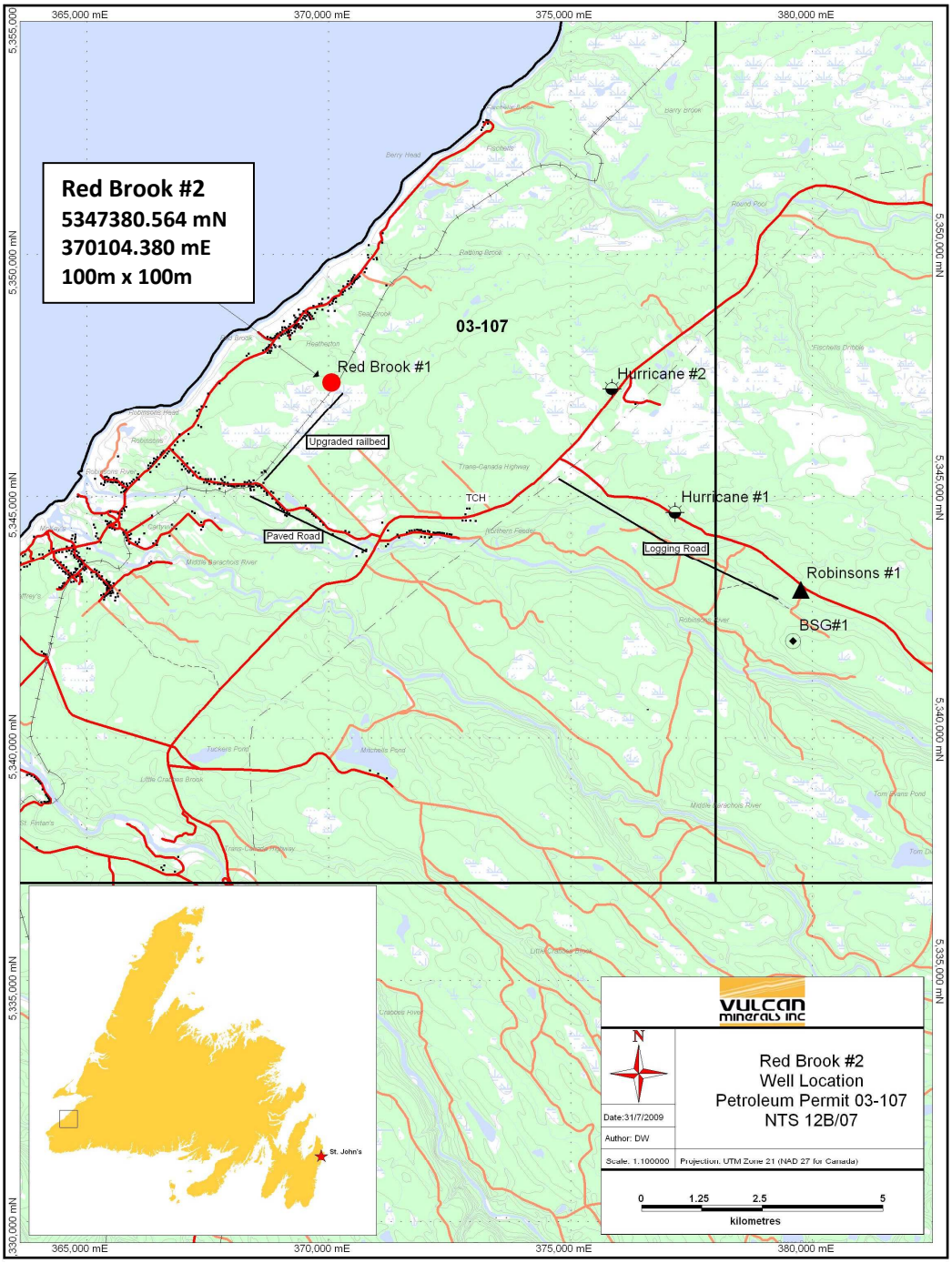
12 Drilling costs

Included in Appendix #13 is a summary of the drilling costs for the well.

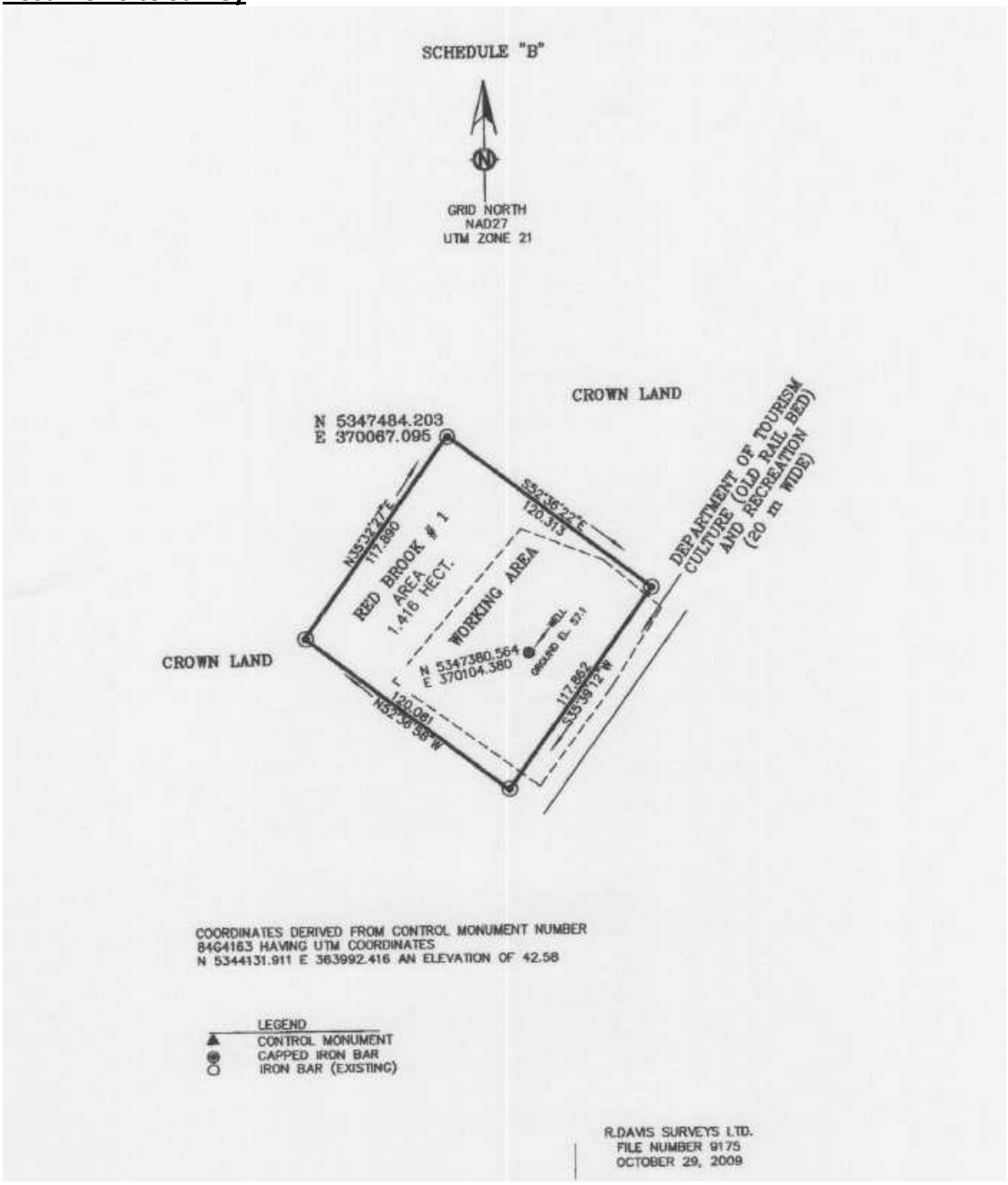
13 Approvals

Included in Appendix #14 are copies of the various government approvals granted during operations.

APPENDIX 1: WELL LOCATION MAP AND DEVIATION SURVEY


Red Brook #2
5347380.564 mN
370104.380 mE
100m x 100m
03-107
Red Brook #1
Hurricane #2
Hurricane #1
Robinsons #1
BSG#1
Upgraded railbed
Paved Road
Logging Road
TCH
Trans-Canada Highway
365,000 mE
370,000 mE
375,000 mE
380,000 mE
5,355,000 mN
5,350,000 mN
5,345,000 mN
5,340,000 mN
5,335,000 mN
5,330,000 mN
St. John's
VULCAN minerals inc
N
Red Brook #2
Well Location
Petroleum Permit 03-107
NTS 12B/07
Date:31/7/2009
Author: DW
Scale: 1:100000
Projection: UTM Zone 21 (NAD 27 for Canada)
0
1.25
2.5
5
kilometres

Post-well Site Survey



Vulcan Investcan Red Brook #2 Surveys

Surface Location
N: 5347380.564 m
E: 370104.380 m
Lat: 48 16 5.78926 N
Long: 058 45 1.45041 W

Datum: Grid North
NAD27
UTM ZONE 21

MD Ref.: Kelly Bushing
KB Elevation: 63.4m above MSL
GL Elevation: 57.1m above MSL

Spud Date: 21-Oct-09
TD Date: 23-Nov-09
North Ref: Grid North
Survey Computational Method: Average Angle

Mag Declinaton: -20.44
Mag Dip: 69.442
Grid Correction: n/a

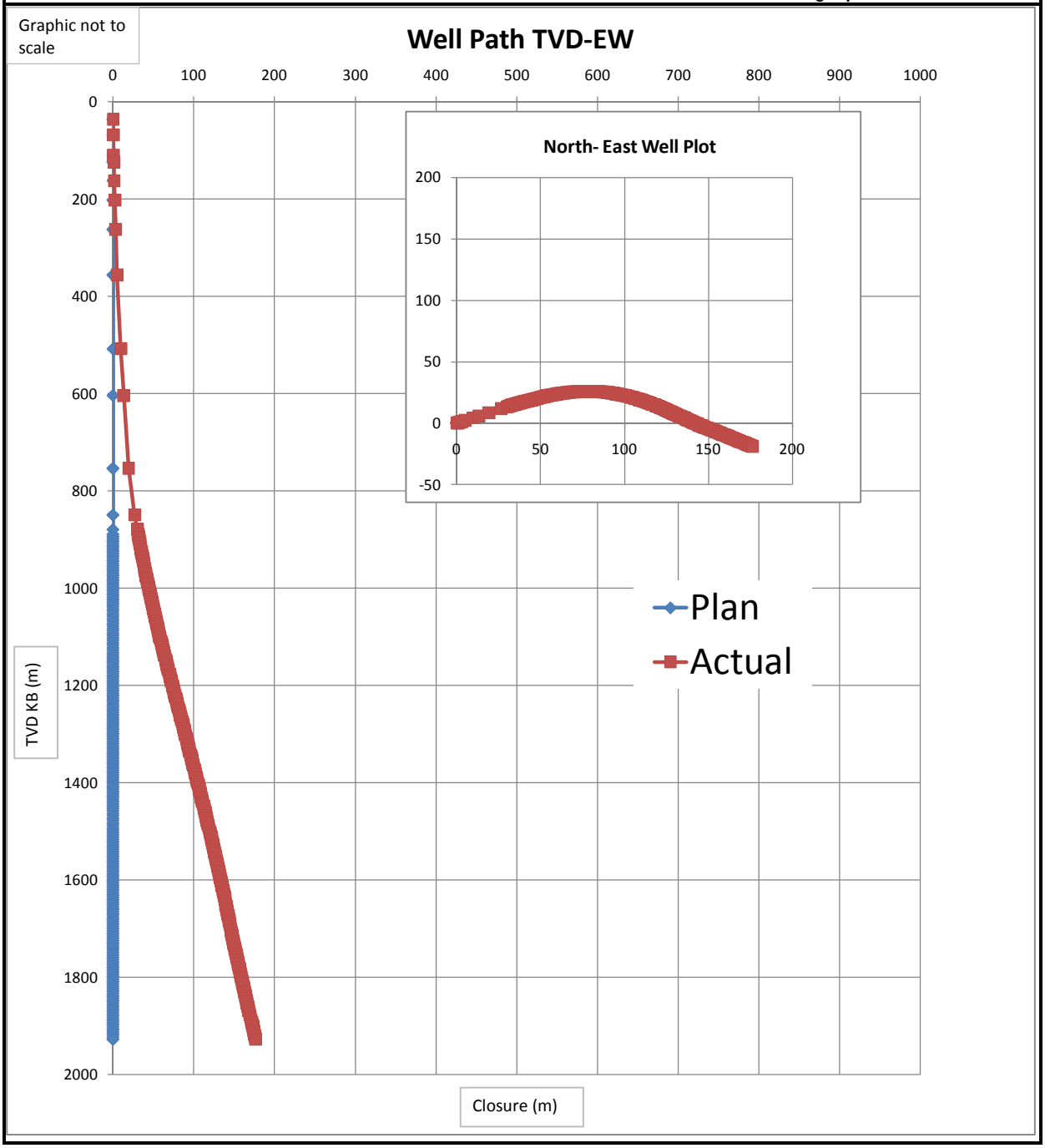
Measured Depth (m)	Inclination (deg)	Azimuth (deg)	Delta md	Ave Incl (deg)	Ave Azm (deg)	dTVD (m)	TVD (m)	dNS (m)	dEW (m)	Horizontal Disp (m)	NS (m)	EW (m)	Closure (m)	Closure Azimuth (deg)	Dogleg (deg)	DLS (deg/30m)	Comment
36.00	0.75	65.97	36.00	0.38	65.97	36.00	36.00	0.10	0.22	0.24	0.10	0.22	0.24	1.15	0.75	0.63	Incl. only totco
68.00	0.50	65.97	32.00	0.63	65.97	32.00	68.00	0.14	0.32	0.58	0.24	0.53	0.58	1.15	0.25	0.23	Incl. only totco
109.00	0.25	65.97	41.00	0.38	65.97	41.00	109.00	0.11	0.25	0.85	0.35	0.78	0.85	1.15	0.25	0.18	Incl. only totco
162.00	1.00	65.97	53.00	0.63	65.97	53.00	161.99	0.24	0.53	1.43	0.58	1.31	1.43	1.15	0.75	0.42	Incl. only totco
202.00	1.50	65.97	40.00	1.25	65.97	39.99	201.98	0.36	0.80	2.30	0.94	2.10	2.30	1.15	0.50	0.37	Incl. only totco
262.00	0.75	65.97	60.00	1.13	65.97	59.99	261.97	0.48	1.08	3.48	1.42	3.18	3.48	1.15	0.75	0.38	Incl. only totco
356.00	1.25	65.97	94.00	1.00	65.97	93.99	355.96	0.67	1.50	5.12	2.09	4.68	5.12	1.15	0.50	0.16	Incl. only totco
508.00	2.75	65.97	152.00	2.00	65.97	151.91	507.87	2.16	4.84	10.43	4.25	9.52	10.43	1.15	1.50	0.30	Incl. only totco
604.00	2.00	65.97	96.00	2.38	65.97	95.92	603.78	1.62	3.63	14.41	5.87	13.16	14.41	1.15	0.75	0.23	Incl. only totco
754.00	3.00	65.97	150.00	2.50	65.97	149.86	753.64	2.66	5.98	20.95	8.53	19.13	20.95	1.15	1.00	0.20	Incl. only totco
850.00	6.70	65.97	96.00	4.85	65.97	95.66	849.30	3.31	7.41	29.06	11.84	26.55	29.06	1.15	3.70	1.16	Incl. only totco
880.00	7.10	65.97	30.00	6.90	65.97	29.78	879.08	1.47	3.29	32.67	13.30	29.84	32.67	1.15	0.40	0.40	Incl. only totco
890.00	7.02	65.97	10.00	7.06	65.97	9.92	889.00	0.50	1.12	33.90	13.80	30.96	33.90	1.15	0.08	0.24	Incl. only totco
920.00	6.94	68.45	30.00	6.98	67.21	29.78	918.78	1.41	3.36	37.54	15.22	34.32	37.54	1.15	0.31	0.31	From Baker W/L
950.00	7.21	69.99	30.00	7.07	69.22	29.77	948.55	1.31	3.45	41.23	16.53	37.78	41.23	1.16	0.32	0.32	From Baker W/L
980.00	7.50	70.19	30.00	7.35	70.09	29.75	978.31	1.31	3.61	45.06	17.83	41.39	45.06	1.16	0.30	0.30	From Baker W/L
1010.00	7.83	70.39	30.00	7.66	70.29	29.73	1008.04	1.35	3.77	49.06	19.18	45.15	49.06	1.17	0.33	0.33	From Baker W/L
1040.00	8.17	70.97	30.00	8.00	70.68	29.71	1037.75	1.38	3.94	53.22	20.57	49.09	53.22	1.17	0.35	0.35	From Baker W/L
1070.00	8.41	72.37	30.00	8.29	71.67	29.69	1067.43	1.36	4.11	57.54	21.93	53.20	57.54	1.18	0.32	0.32	From Baker W/L
1100.00	8.67	75.48	30.00	8.54	73.92	29.67	1097.10	1.23	4.28	61.97	23.16	57.48	61.97	1.19	0.53	0.53	From Baker W/L
1130.00	8.90	78.19	30.00	8.78	76.83	29.65	1126.75	1.04	4.46	66.50	24.20	61.94	66.50	1.20	0.47	0.47	From Baker W/L
1160.00	8.95	81.96	30.0	8.92	80.08	29.64	1156.39	0.80	4.58	71.07	25.00	66.52	71.07	1.21	0.59	0.59	From Baker W/L
1190.00	9.07	84.84	30.0	9.01	83.40	29.63	1186.01	0.54	4.67	75.63	25.54	71.19	75.63	1.23	0.47	0.47	From Baker W/L
1220.00	9.10	87.31	30.0	9.09	86.07	29.62	1215.64	0.32	4.73	80.20	25.87	75.91	80.20	1.24	0.39	0.39	From Baker W/L
1250.00	9.22	91.82	30.0	9.16	89.56	29.62	1245.26	0.04	4.78	84.75	25.91	80.69	84.75	1.26	0.73	0.73	From Baker W/L

1280.00	9.18	96.15	30.0	9.20	93.98	29.61	1274.87	-0.33	4.79	89.22	25.57	85.48	89.22	1.28	0.69	0.69	From Baker W/L
1310.00	8.75	100.26	30.0	8.97	98.20	29.63	1304.50	-0.67	4.63	93.48	24.91	90.10	93.48	1.30	0.77	0.77	From Baker W/L
1340.00	8.94	103.94	30.0	8.85	102.10	29.64	1334.15	-0.97	4.51	97.60	23.94	94.62	97.60	1.32	0.60	0.60	From Baker W/L
1370.00	9.31	106.98	30.0	9.13	105.46	29.62	1363.77	-1.27	4.59	101.76	22.67	99.20	101.76	1.35	0.60	0.60	From Baker W/L
1400.00	9.38	110.33	30.0	9.34	108.66	29.60	1393.37	-1.56	4.61	105.94	21.11	103.82	105.94	1.37	0.55	0.55	From Baker W/L
1430.00	9.27	113.10	30.0	9.32	111.72	29.60	1422.97	-1.80	4.52	110.04	19.31	108.33	110.04	1.39	0.46	0.46	From Baker W/L
1460.00	9.23	115.65	30.0	9.25	114.37	29.61	1452.58	-1.99	4.39	114.05	17.32	112.72	114.05	1.42	0.41	0.41	From Baker W/L
1490.00	9.44	117.75	30.0	9.33	116.70	29.60	1482.19	-2.19	4.35	118.04	15.14	117.07	118.04	1.44	0.40	0.40	From Baker W/L
1520.00	9.50	120.62	30.0	9.47	119.18	29.59	1511.78	-2.41	4.31	122.04	12.73	121.38	122.04	1.47	0.48	0.48	From Baker W/L
1550.00	9.41	122.03	30.0	9.46	121.33	29.59	1541.37	-2.56	4.21	126.00	10.17	125.59	126.00	1.49	0.25	0.25	From Baker W/L
1580.00	9.20	122.03	30.0	9.31	122.03	29.61	1570.97	-2.57	4.11	129.92	7.60	129.70	129.92	1.51	0.21	0.21	From Baker W/L
1610.00	8.66	121.51	30.0	8.93	121.77	29.64	1600.61	-2.45	3.96	133.76	5.14	133.66	133.76	1.53	0.54	0.54	From Baker W/L
1640.00	8.03	122.18	30.0	8.35	121.84	29.68	1630.29	-2.30	3.70	137.39	2.85	137.36	137.39	1.55	0.64	0.64	From Baker W/L
1670.00	7.88	121.79	30.0	7.96	121.99	29.71	1660.00	-2.20	3.52	140.88	0.65	140.88	140.88	1.57	0.16	0.16	From Baker W/L
1700.00	8.14	120.35	30.0	8.01	121.07	29.71	1689.71	-2.16	3.58	144.47	-1.51	144.46	144.47	-1.56	0.33	0.33	From Baker W/L
1730.00	8.44	119.15	30.0	8.29	119.75	29.69	1719.40	-2.15	3.75	148.26	-3.66	148.21	148.26	-1.55	0.34	0.34	From Baker W/L
1760.00	8.65	117.55	30.0	8.54	118.35	29.67	1749.07	-2.12	3.92	152.25	-5.77	152.14	152.25	-1.53	0.32	0.32	From Baker W/L
1790.00	8.64	117.73	30.0	8.64	117.64	29.66	1778.72	-2.09	3.99	156.33	-7.86	156.13	156.33	-1.52	0.03	0.03	From Baker W/L
1820.00	8.71	118.95	30.0	8.67	118.34	29.66	1808.38	-2.15	3.98	160.42	-10.01	160.11	160.42	-1.51	0.20	0.20	From Baker W/L
1850.00	8.81	119.69	30.0	8.76	119.32	29.65	1838.03	-2.24	3.98	164.55	-12.25	164.09	164.55	-1.50	0.15	0.15	From Baker W/L
1880.00	9.06	118.23	30.0	8.93	118.96	29.64	1867.67	-2.25	4.08	168.79	-14.50	168.17	168.79	-1.48	0.34	0.34	From Baker W/L
1910.00	8.78	118.49	30.0	8.92	118.36	29.64	1897.31	-2.21	4.09	173.07	-16.71	172.26	173.07	-1.47	0.28	0.28	From Baker W/L
1940.00	9.01	118.50	30.0	8.90	118.49	29.64	1926.94	-2.21	4.08	177.35	-18.93	176.34	177.35	-1.46	0.23	0.23	From Baker W/L
1965.00	9.01	118.50	25.0	9.01	118.50	24.69	1951.64	-1.87	3.44	180.98	-20.79	179.78	180.98	-1.46	0.00	0.00	Proj. to TD

Vulcan Investcan Red Brook #2 Surveys

Surface Location	**Datum:**	**Grid North, NAD27, UTM ZONE 21**	**Spud Date:** 21-Oct-09
N: 5347380.564 m	**MD Ref.:**	**Kelly Bushing**	**TD Date:** 23-Nov-09
E: 370104.380 m	**KB Elevation:**	**63.4m above MSL**	**North Ref:** True North
Lat: 48 16 5.78926 N	**GL Elevation:**	**57.1m above MSL**	**Grid Correction:** n/a
Long: 058 45 1.45041 W	**Survey Computational Method:**	**Average Angle**	**Mag Declinaton:** -20.442
			Mag Dip: 69.442

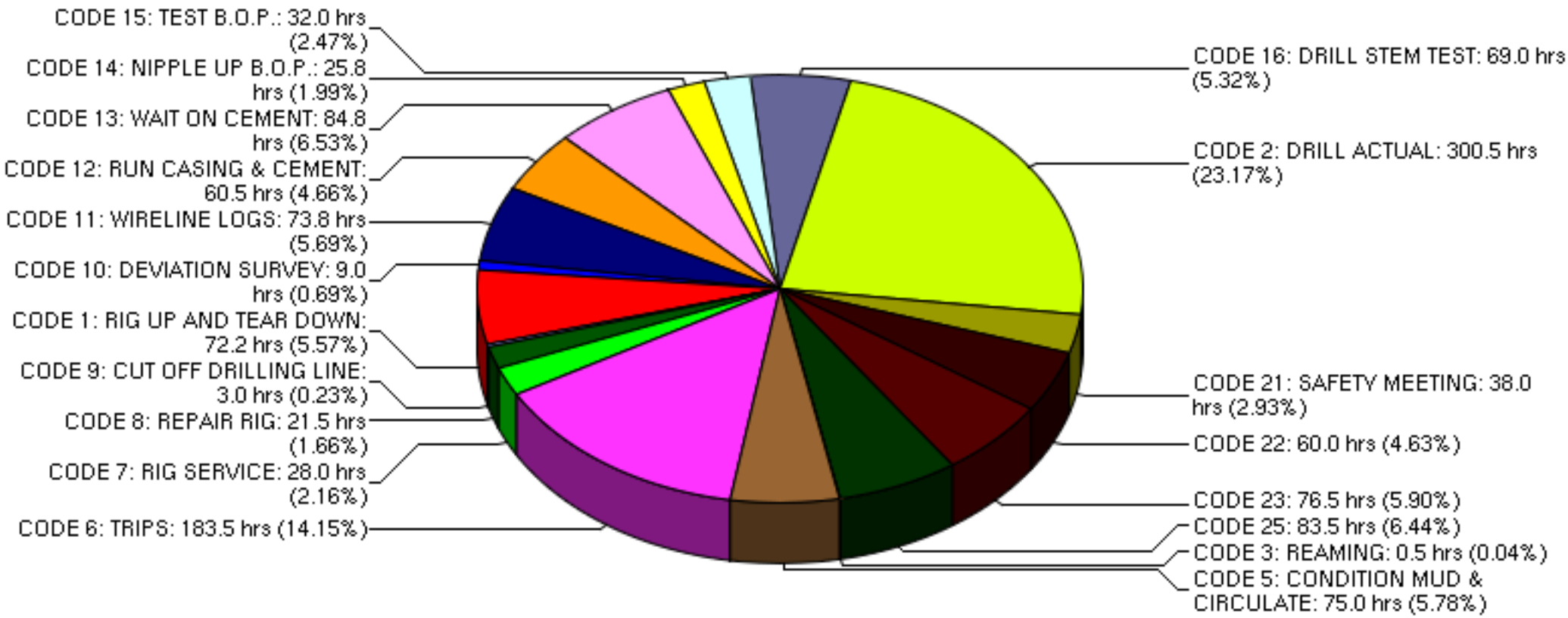
Graphic not to scale



APPENDIX 2: DRILLING CURVE, TIME BREAKDOWN & BIT RUN SUMMARIES

Daily Drilling Reports Time Breakdown

Well name:	VULCAN INVESTCAN RED BROOK #2	Spud Date:	Oct 21,2009
Operator:	Vulcan Minerals Inc.	Release Date:	Dec 07,2009
Contractor:	Stoneham Drilling Inc.	From Date:	Oct 16,2009
Rig:	Stoneham 11	To Date:	Dec 08,2009



TOTAL HOURS: 1297.0 hrs

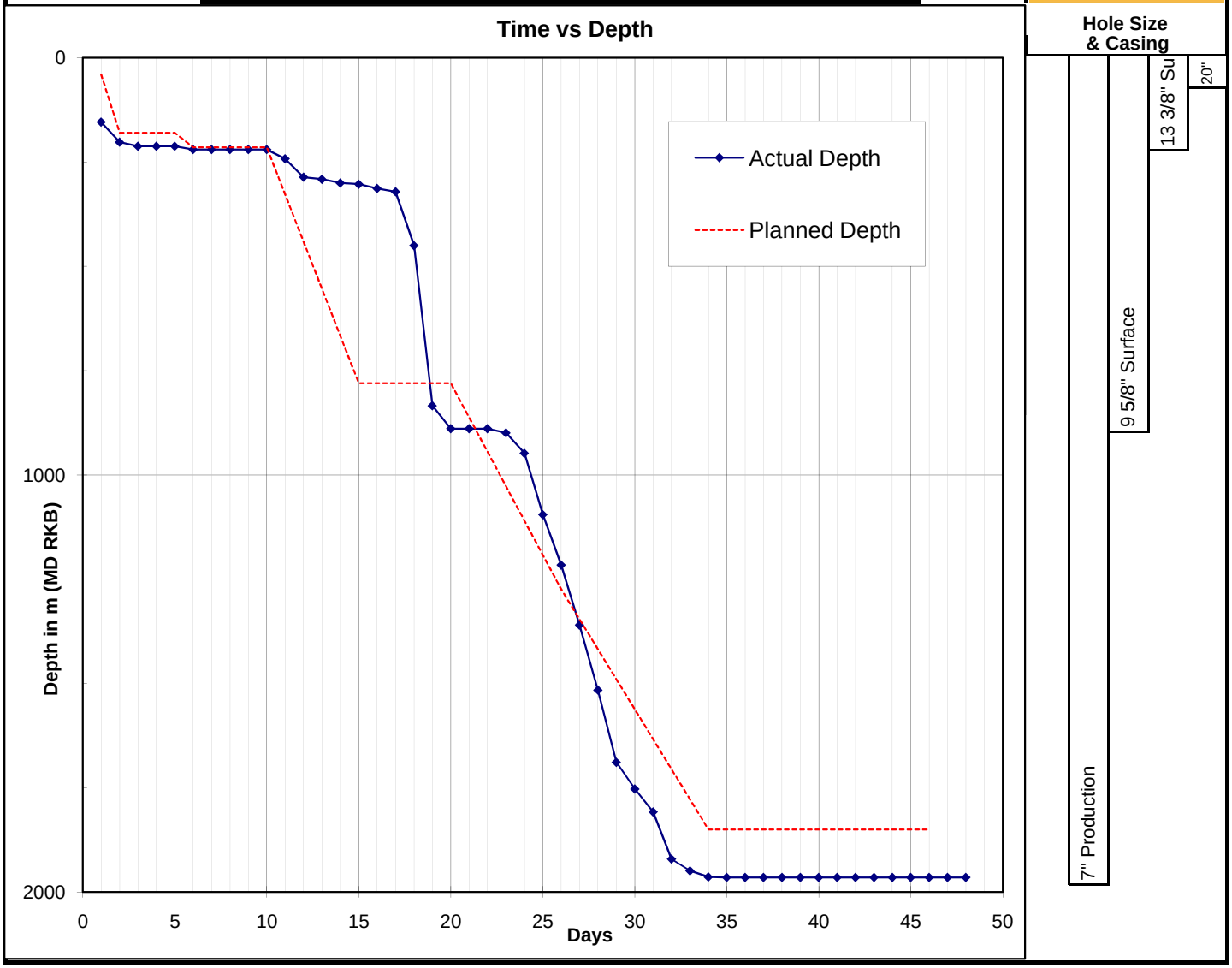
Time vs Depth Data

Operating Company	Vulcan Minerals Inc.	**Spud Date**	21-Oct-09	**Planned End Date**	30-Nov-09
Well Name	Vulcan Invescan Red B	**To Date**		**Expected End Date**	08-Dec-09
Rig	Stoneham #11				
Field (if applicable)	Bay St. George Basin				

Plan			**Actual**			
Operation	**Planned Days**	**Planned Depth**	**Operation**	**Date**	**Actual Days**	**Actual Depth**
Lease prep	**-35**	**0**	Spud 17" hole	21-Oct-09	1	154
Cellar/lease prep + eng	**-30**	**0**	Drilling 17" hole	22-Oct-09	2	202
Cellar/lease prep + eng	**-25**	**0**	TD 17" hole- waiting on casing	23-Oct-09	3	212
Mob cost + Demob + eng	**-20**	**0**	Waiting on Casing	24-Oct-09	4	212
Cellar/lease prep + eng	**-15**	**0**	Waiting on Casing	25-Oct-09	5	212
Cellar/lease prep + eng	**-10**	**0**	Drill to 220m run casing	26-Oct-09	6	220
Rig-down	**-5**	**0**	POOH with casing- RIH clean out trip	27-Oct-09	7	220
Spud 17.5" conductor	1	40	Cement and istall wellhead	28-Oct-09	8	220
Drill to Lost Circ Zone	2	180	Pressure Test Casing and BOPs	29-Oct-09	9	220
Fix Lost Circ	5	180	Pickup BHA- waiting on BOP tech	30-Oct-09	10	220
Drill to 13 3/8" casing pt	6	215	FIT and Drilling 12 1/4" hole- losses	31-Oct-09	11	242
Casing and cementing	10	215	Pumping cement for losses- drilling	01-Nov-09	12	286
	10	215	Pumping cement for losses- drilling	02-Nov-09	13	291
Drill to 9 5/8" casing pt	15	780	Pumping cement for losses- drilling	03-Nov-09	14	300
Logging	16	780	Pumping cement for losses- drilling	04-Nov-09	15	303
Casing and cementing	20	780	Pumping cement for losses- drilling	05-Nov-09	16	313
Drilling 8.5" section	26	1274	Pumping cement for losses- drilling	06-Nov-09	17	321
Drill to 7" casing point	34	1850	Drilling 17 1/2" hole	07-Nov-09	18	450
Logging	36	1850	Drilling 17 1/2" hole	08-Nov-09	19	834
Testing	38	1850	TD section- W/L logging	09-Nov-09	20	889
Casing and cementing	40	1850	W/L logging & run 9 5/8" casing	10-Nov-09	21	889
Rig Release	46	1850	Cement and install wellhead	11-Nov-09	22	889
			RIH 8 1/8" section, drilled into influx	12-Nov-09	23	899
			Weight up to 1.2sg and RIH packed BHA	13-Nov-09	24	948
			Drilling	14-Nov-09	25	1095
			Drilling	15-Nov-09	26	1216
			Drilling	16-Nov-09	27	1360
			Drilling	17-Nov-09	28	1516
			Drilling	18-Nov-09	29	1689
			POOH due to low ROP, RIH Insert	19-Nov-09	30	1753
			POOH to change to PDC	20-Nov-09	31	1808
			Drilling	21-Nov-09	32	1921
			Pooh to check bit	22-Nov-09	33	1949
			TD Well- Circulate	23-Nov-09	34	1964
			Circ- WL	24-Nov-09	35	1965
			Clean out, Wireline Run #1: TCB, Run #2: Sonic	25-Nov-09	36	1965
			Run #3: STAR Imager, Run #4: RCOR	26-Nov-09	37	1965
			Run #5: FMT, Run #6: VSP	27-Nov-09	38	1965
			Clean out run, DST#1	28-Nov-09	39	1965
			DST#2	29-Nov-09	40	1965
			DST#3	30-Nov-09	41	1965
			DST#4	01-Dec-09	42	1965
			DST#5	02-Dec-09	43	1965
			Clean Out run	03-Dec-09	44	1965
			Run Casing and cement	04-Dec-09	45	1965
			Nipple down BOPs, rig release at 23:59	05-Dec-09	46	1965
			Tear-out rig	06-Dec-09	47	1965
			Finish tear out- lay derrick down	07-Dec-09	48	1965
				08-Dec-09	49	0
				09-Dec-09	50	0

Prepared By Shane Halley
Date 24-Feb-10

Operating Company	Vulcan Minerals Inc.	**Spud Date**	21-Oct-09	
Well Name	Vulcan Invescan Red Brook #2			
Rig	Stoneham #11	**Planned End Date**	30-Nov-09	
Field (if applicable)	Bay St. George Basin	**Actual End Date**	08-Dec-09	



Bitrun Summary Table

Well: **Vulcan Investcan Red Brook #2**

Spud: **21-Oct-09**

No.	Size	Mfr	Type	IADC	Serial No.	Depth Out	Depth Drilled	Hours	Accum. Hrs	ROP	Weight	RPM	Date Run
1	432	REED	17T11		LX2077	220	220	37.5	37.5	5.87	5/12	130/175	2009-Oct-26
2	311	HUGHES	GT-CS1		5157199	242	22	7.25		3.03	10	120	2009-Oct-30
3	311	HUGHES	TN1593		109973	889	647	53.5		12.09	5/15	70/150	2009-Nov-10
4	216	HUGHES	GX-30DX	537	6065996	899	10	4.25		2.35	6	70	2009-Nov-12
5	216	HUGHES	HCD506ZX		7120914	1750	851	117.75		7.23	6/15	60/130	2009-Nov-18
RR	216	HUGHES	GX-30DX	537	6065996	1776	26	9		2.89	14/15	65/70	2009-Nov-19
7	216	HUGHES	HC505ZX	M32	7114926	1935	159	32.75		4.85	9/18	55/80	2009-Nov-21
8RR	216	HUGHES	GX30DX	537	6065996	1965	30	17	279	1.76	0/18	1/60	2009-Dec-05

Vulcan-Investcan Red Brook #2 Exploration Well, Oct-Dec 2009

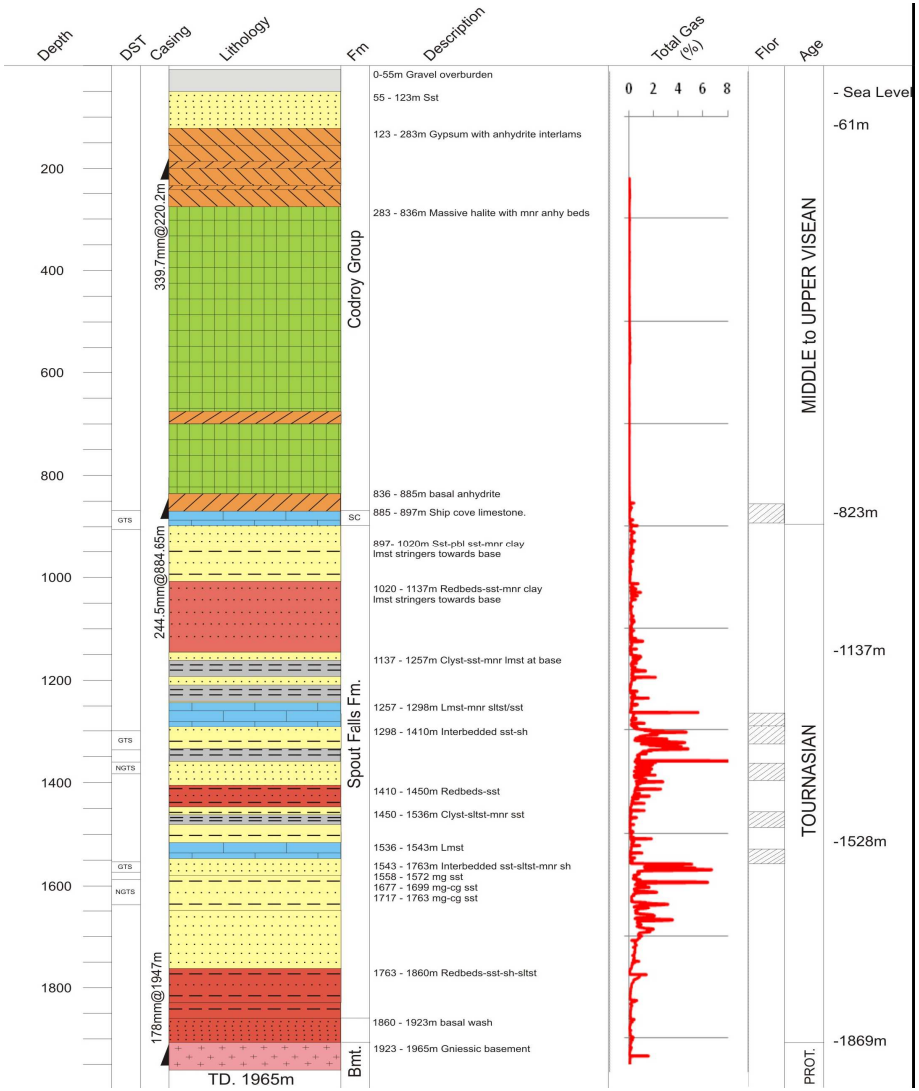
Position: projection NAD 27, UTM Zone 21; N 5,347,380.564m, E 370,104.380m

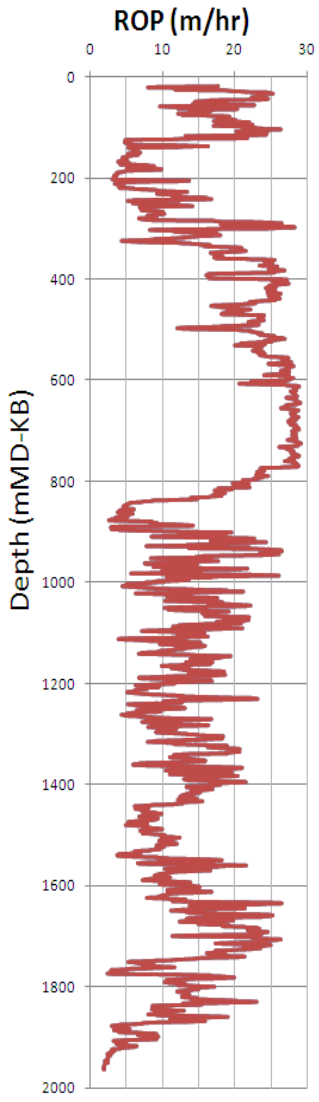
GL= +57.1 m (rel. MSL), KB Ref = + 6.3 m (rel. GL)

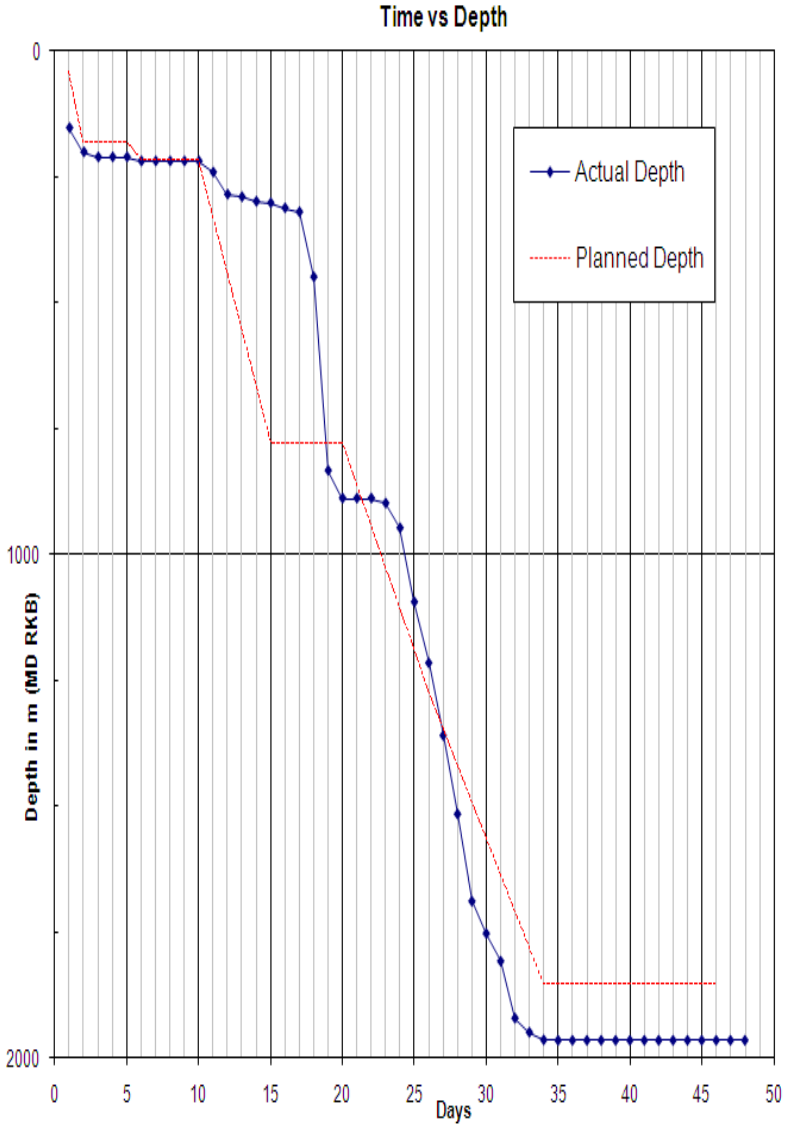
All depths are MD KB

Total Depth: 1965 meters MD KB/ 1951.64 meters TVD KB

Lithology, DSTs and Casing Shoe Depths	Gas Detector	Drilling Rate of Penetration	Time Vs. Depth Curve







REMARKS: Exploration Permit #03-107 | Spud Date: 0000 hrs, Oct. 21st, 2009 | Drilling Program Approval No. 2009-116-03

Rig: Stoneham Drilling Rig #11 | Rig Release: 2359 hrs, Dec. 5th, 2009 | Authority to Drill a Well Approval No. 2009-116-02301 | Well Status after TD: Suspended with 177.8mm casing set to 1947.04 meters

APPENDIX 3: DAILY REPORTS

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	1			**Date:**	21-Oct-09
Depth:	154.0 **mKB**	**Progress:**	154.0	**Drilling:**		**hrs ROP, m/hr:**		**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Pull out to spot LCM pill							**KB elev:**	61.75 m.
the next da	Spot LCM pill, drill ahead							**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
1	432	T11	LX2077	0					150	5-10	

		Pump 1	Pump 2	Drilling Assembly:	Bit / Sub,Float sub 1-230 mm DC, 420 mm stab,1 230 mm DC,Jars, 8 165 mm DC				
Model		PZ-11	PZ-11				**Pump Pressure:**	0	**kPa**
Liner	(mm)	165	165	**BHA Length:**	182.02 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**			**mm**
SPM			0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**			**m/min**
Vol.	m^3/min @ 95%		0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**			**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
36.00		0.75			
68.00		0.5			
109.00		0.25			
124.00		1			

MUD

Time		
Density	1145	
Vis.	102	
pH		
Fluid Loss		
P.V.		
Y.P.		
Gel S.		
Filter Ck		
Solids %		
Oil		
Ca (mg/l)		
Cl (mg/l)		
MBT		
Temp		
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Envirofloc		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	
Newedge		**Sapp**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Lignite		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**MSDS**	
Soda Ash		**pellets**	
Supervision		**Day Cost**	$2,935
Mud Van		**Well Cost**	$5,306

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	56.0			**Last Casing Test**		**Underflow Density**	
Today losses down hole		**Total hole**		**Last BOP Test**		**Overflow Density**	
Today losses at surface		**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	
RSPP #1					**Drag Dn**				**Connection**	
RSPP #2					**Hook Load**				**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Plug Back**	
2. Drill	**19.00**	**10. Survey**	**0.50**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**1.50**	**13. Pump Out Cement**		**21. Safety Meeting**	**1.00**
6. Trip	**1.25**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other WO daylight**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-22:00 Spud well @ 0:00 hrs and drill 432 mm hole to 154 m.
22:00-2400 Wiper trip to surface
Note: lost circulation @ 173 m @)700 hrs

No Incidents today.

Tops:

Prev Cost	**$607,744**	**Today**	**$34,945**	**Total Cost**	**$642,689**	**Weather:**	7deg, rain.
						Mud Type	
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2				**Day:**	2			**Date:**	22-Oct-09	
Depth:	202.0	**mKB**	**Progress:**	48.0	**Drilling:**	13.50	**hrs ROP, m/hr:**	3.50	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Circulate								**KB elev:**	**61.75 m.**	
the next da	Wait on casing								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
1	432	T11	LX2077	0					150	5-10	

		Pump 1	Pump 2	Drilling Assembly:	Bit / Sub,Float sub 1-230 mm DC, 420 mm stab,1 230 mm DC,Jars, 8 165 mm DC				
Model		PZ-11	PZ-11				**Pump Pressure:**	0	**kPa**
Liner	(mm)	165	165	**BHA Length:**	182.02 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**	
SPM			0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**	
Vol.	m^3/min @ 95%		0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**	

SURVEYS

Depth		Drift	Azimuth	North	East
36.00		0.75			
68.00		0.5			
109.00		0.25			
124.00		1			
162.00		1			
202.00		1.50			

MUD

Time		
Density	1145	
Vis.	102	
pH	7.8	
Fluid Loss		
P.V.	24.0	
Y.P.	20.0	
Gel S.		
Filter Ck		
Solids %	7.0	
Oil		
Ca (mg/l)		
Cl (mg/l)	4800.0	
MBT	57.5	
Temp		
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Envirofloc		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	
Newedge		**Sapp**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Lignite		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**MSDS**	
Soda Ash		**pellets**	
Supervision		**Day Cost**	$17,883
Mud Van		**Well Cost**	$23,189

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	56.0			**Last Casing Test**		**Underflow Density**	
Today losses down hole	8.0	**Total hole**		**Last BOP Test**		**Overflow Density**	
Today losses at surface		**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa

Pump	Strokes	Pressure	MACP	Depth
RSPP #1				
RSPP #2				

Hole Condition kdaN & Kft/#			
Drag up		**Torque**	
Drag Dn			
Hook Load			

Total Gas Readings (%)	
Background	
Connection	
Trip	

1. Rig up/Out		**9. Slip & Cut**		**17. Plug Back**	
2. Drill	**13.50**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream	**0.25**	**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**2.50**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip	**6.00**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other WO daylight**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-00:45 Run in hole,wash from 140 to 154 m.
00:45--07:0(Drilled to 173 m. Lost circulation.
07:00-10:45 Pulled out of hole. 30 dan overpull.
10:45-12:30 Picked up drill pipe and ran in hole open ended and pumped 4 m3 LCM pill at 171 m.
12:30-13:00 Pulled out of hole.
13:00-15:30 Ran in hole with bit,layed out stabilizer.Washed to 173 m. No losses
15:30-24:00 Drilled from 173 m to 202 m. No losses.
Total losses 8 m3
No Incidents today.

Tops:

Prev Cost	**$658,500**	**Today**	**$41,110**	**Total Cost**	**$699,610**	**Weather:**	1deg, snow
						Mud Type	Polamer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**3**		**Date:**	**23-Oct-09**
Depth:	212.0	**mKB**	**Progress:**	10.0	**Drilling:**	2.75	**hrs ROP, m/hr:**	3.50	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Circulate								**KB elev:**	**61.75 m.**
the next da	Wait on casing								**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
1	432	T11	LX2077	0					150	5-10	

		Pump 1	Pump 2	Drilling Assembly:	Bit / Sub,Float sub 1-230 mm DC, 420 mm stab,1 230 mm DC,Jars, 8 165 mm DC				
Model		PZ-11	PZ-11				**Pump Pressure:**	0	**kPa**
Liner	(mm)	165	165	**BHA Length:**	182.02 **m**	**Strap:**	**Board:**		
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**	
SPM			0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**	
Vol.	m^3/min @ 95%		0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**	431.8

SURVEYS					MUD			MUD ADDITIVES			
Depth	Drift	Azimuth	North	East	Time			Gel		CaC03	
36.00	0.75				Density	1115		Caustic		Percol	
68.00	0.5				Vis.	111		Envirofloc		Sulphamic	
109.00	0.25				pH	7.5		Kelzan	1	T-352	
124.00	1				Fluid Loss			Cello	16	Defoamer	
162.00	1				P.V.	24.0		Bicarb		2K-7	
202.00	1.50				Y.P.	20.0		Newedge		Sapp	
					Gel S.			Drispac		Dyna det	
					Filter Ck			Desco		Walnut	
					Solids %	7.0		Barite		Lime Hydrated	
					Oil			Lignite		Dyna fiber	
					Ca (mg/l)			PHPA		Bioside	
					Cl (mg/l)	5200.0		Sawdust	61	MSDS	
					MBT	57.5		Soda Ash		pellets	
					Temp	29.0		Supervision		Day Cost	$4,684
					XSPolymer			Mud Van		Well Cost	$28,032

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	68.0			**Last Casing Test**		**Underflow Density**	
Today losses down hole	0.0	**Total hole**		**Last BOP Test**		**Overflow Density**	
Today losses at surface	2.0	**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	
RSPP #1					**Drag Dn**				**Connection**	
RSPP #2					**Hook Load**				**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Plug Back**	
2. Drill	**2.75**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**6.50**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip	**5.00**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other WO casing**	**8.25**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-03:00	Drill to 212 m.
03:00--08:1	Circulate & condition mud. Survey
08:15-12:30	Wiper trip to surface. No fill
12:30-14:15	Circulate & condition mud.
14:15-16:00	Pull out of hole
16:00-24:00	Wait on arrival of casing
	No losses
	No Incidents today.

Tops:

Prev Cost	**$699,610**	**Today**	**$32,589**	**Total Cost**	**$732,199**	**Weather:**	1deg, Cloud
						Mud Type	Polamer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	4		**Date:**	24-Oct-09
Depth:	212.0 **mKB**	**Progress:**	0.0	**Drilling:**		**hrs ROP, m/hr:**	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Circulate						**KB elev:**	61.75 m.
the next da	Run casing.cement.						**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
1	432	T11	LX2077	0							

		Pump 1	Pump 2	Drilling Assembly:	Bit / Sub,Float sub 1-230 mm DC, 420 mm stab,1 230 mm DC,Jars, 8 165 mm DC				
Model		PZ-11	PZ-11					**Pump Pressure:**	0 kPa
Liner	(mm)	165	165	**BHA Length:**	182.02 m	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	mm	**Drill Pipe O.D.**		mm	
SPM			0	**D.C. Annular Vel.:**	m/min	**D.P Annular Vel.:**		m/min	
Vol.	m^3/min @ 95%		0.0000	**Jet Velocity:**	m/sec	**True Hydraulic HP:**		kW	

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			

MUD

Time		
Density	1105	
Vis.	111	
pH	7.5	
Fluid Loss		
P.V.	24.0	
Y.P.	20.0	
Gel S.		
Filter Ck		
Solids %	6.3	
Oil		
Ca (mg/l)		
Cl (mg/l)	5200.0	
MBT	30.0	
Temp	36.0	
XSPolymer		

MUD ADDITIVES

Gel		CaC03	
Caustic		Percol	
Envirofloc		Sulphamic	
Kelzan	1	T-352	
Cello	16	Defoamer	
Bicarb		2K-7	
Newedge		Sapp	
Drispac		Dyna det	
Desco		Walnut	
Barite		Lime Hydrated	
Lignite		Dyna fiber	
PHPA		Bioside	
Sawdust	61	MSDS	
Soda Ash		pellets	
Supervision		Day Cost	$11,177
Mud Van		Well Cost	$36,950

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	68.0			Last Casing Test		Underflow Density	
Today losses down hole	0.0	Total hole		Last BOP Test		Overflow Density	
Today losses at surface	2.0	Total surf.		Next Casing Test		Flow Rate,m3/min	
Today total losses		Cumulative		Next BOP Test		Operating hours	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	Strokes	Pressure	MACP	Depth	Drag up		Torque		Background	
RSPP #1					Drag Dn				Connection	
RSPP #2					Hook Load				Trip	

1. Rig up/Out		9. Slip & Cut		17. Plug Back	
2. Drill		10. Survey		18. Wash to Btm	
3. Ream		11. Wireline Logs		19. Flow checks	
4. Drill Out		12. Casing/Cement		20. Wk on mud pumps	
5. Circ. & Cond.		13. Pump Out Cement		21. Safety Meeting	
6. Trip		14. Nipple Up BOP		22. Handle Tools	
7. Rig Service		15. Test BOP & FIT		23 Other WO casing	24.00
8. Rig Repair		16. BOP Drill		Total Hours	24.00

REMARKS

00:00-24:00 Wait on casing.

No Incidents today.

Tops:

Prev Cost	$732,199	**Today**	$110,210	**Total Cost**	$842,409	**Weather:**	1deg, Cloud
						Mud Type	Polamer
Foreman	Bill Williams		**Rig Phone**	709-649-7106		**Taken By:**	Terry Brooker / Shane Halley

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	5		**Date:**	25-Oct-09
Depth:	212.0 **mKB**	**Progress:**	0.0	**Drilling:**		**hrs ROP, m/hr:**	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Circulate @ 220 m. to run casing						**KB elev:**	61.75 m.
the next da	Run casing.cement.						**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
1	432	T11	LX2077	0							

		Pump 1	Pump 2	Drilling Assembly:	Bit / Sub,Float sub 1-230 mm DC, 420 mm stab,1 230 mm DC,Jars, 8 165 mm DC				
Model		PZ-11	PZ-11					**Pump Pressure:**	3,200 kPa
Liner	(mm)	165	165	**BHA Length:**	202.00 m	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	mm	**Drill Pipe O.D.**			mm
SPM		84	0	**D.C. Annular Vel.:**	m/min	**D.P Annular Vel.:**			m/min
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	m/sec	**True Hydraulic HP:**			kW

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			

MUD

Time		
Density	1105	
Vis.	111	
pH	7.5	
Fluid Loss		
P.V.	24.0	
Y.P.	20.0	
Gel S.		
Filter Ck		
Solids %	6.3	
Oil		
Ca (mg/l)		
Cl (mg/l)	5200.0	
MBT	30.0	
Temp	36.0	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Envirofloc		**Sulphamic**	
Kelzan	1	**T-352**	
Cello	16	**Defoamer**	
Bicarb		**2K-7**	
Newedge		**Sapp**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Lignite		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust	61	**MSDS**	
Soda Ash		**pellets**	
Supervision		**Day Cost**	$11,177
Mud Van		**Well Cost**	$36,950

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	68.0			**Last Casing Test**		**Underflow Density**	
Today losses down hole	0.0	**Total hole**		**Last BOP Test**		**Overflow Density**	
Today losses at surface	2.0	**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	
RSPP #1					**Drag Dn**				**Connection**	
RSPP #2					**Hook Load**				**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Plug Back**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service		**15. Test BOP & FIT**		**23 Other WO casing**	**24.00**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-24:00 Wait on casing.

08:00 drill to casing point 220 m.

No Incidents today.

Tops:

Prev Cost	**$842,409**	**Today**	**$24,908**	**Total Cost**	**$867,317**	**Weather:**	5deg, Cloud
						Mud Type	Polamer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**6**				**Date:**	**26-Oct-09**	
Depth:	220.0	**mKB**	**Progress:**	8.0	**Drilling:**	3.00	**hrs ROP, m/hr:**		**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Circulate @ 220 m. to run								**KB elev:**	**61.75 m.**	
the next da	Run casing.cement.								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
1	432	T11	LX2077	0	**220**	220	35	4 X 20	170	8-12	

		Pump 1	Pump 2	Drilling Assembly:	Bit / Sub,Float sub 1-230 mm DC, 420 mm stab,1 230 mm DC,Jars, 8 165 mm DC				
Model		PZ-11	PZ-11				**Pump Pressure:**	3,200	**kPa**
Liner	(mm)	165	165	**BHA Length:**	202.00 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**	
SPM		84	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**	
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**	

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			

MUD

Time		
Density	1110	
Vis.	120	
pH	7.5	
Fluid Loss		
P.V.	24.0	
Y.P.	20.0	
Gel S.		
Filter Ck		
Solids %	6.3	
Oil		
Ca (mg/l)		
Cl (mg/l)	5200.0	
MBT	30.0	
Temp	36.0	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Envirofloc		**Sulphamic**	
Kelzan	1	**T-352**	
Cello	16	**Defoamer**	
Bicarb		**2K-7**	
Newedge		**Cal carb**	56
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Lignite		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**MSDS**	
Soda Ash		**pellets**	
Supervision		**Day Cost**	$1,835
Mud Van		**Well Cost**	$33,391

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	68.0			**Last Casing Test**		**Underflow Density**	
Today losses down hole	0.0	**Total hole**		**Last BOP Test**		**Overflow Density**	
Today losses at surface	2.0	**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	
RSPP #1					**Drag Dn**				**Connection**	
RSPP #2					**Hook Load**				**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Plug Back**	
2. Drill	**2.25**	**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**11.00**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**2.75**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip	**2.75**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.50**	**15. Test BOP & FIT**		**23 Other WO casing**	**4.25**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-04:15 Wait on casing.
06:00-08:30 Drillrd from 212 m to 220 m. Casing point.
)8:30-12:45 Circulate and condition mud. Pulled out of hole.
12:45-1400 Rig to run casing. Held safety meeting.
14:00-24:00 Run casing to 150 m. Unable to pass.Work tight spot.
08:00. Pulled casing,ran in hole with bit for cleanout trip

No Incidents today.

Tops:

Prev Cost	**$867,317**	**Today**	**$81,548**	**Total Cost**	**$948,865**	**Weather:**	3deg, Rain
						Mud Type	Polamer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2		**Day:** 7		**Date:**	27-Oct-09	
Depth:	220.0 **mKB**	**Progress:**	**Drilling:**	**hrs ROP, m/hr:**	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Cut conductor,weld casing bowl.				**KB elev:**	61.75 m.	
the next da	Nipple up,pressure test				**KB - GL**	6.30 m.	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
1	432	T11	LX2077	0	**220**	220	35	4 X 20	170	8-12	

		Pump 1	Pump 2	Drilling Assembly:	Bit / Sub,Float sub 1-230 mm DC, 420 mm stab,1 230 mm DC,Jars, 8 165 mm DC				
Model		PZ-11	PZ-11					**Pump Pressure:**	3,200 **kPa**
Liner	(mm)	165	165	**BHA Length:**	202.00 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**	
SPM		84	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**	
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**	

SURVEYS

Depth		Drift	Azimuth	North	East
36.00		0.75			
68.00		0.5			
109.00		0.25			
124.00		1			
162.00		1			
202.00		1.50			

MUD

Time		
Density	1110	
Vis.	120	
pH	7.5	
Fluid Loss		
P.V.	24.0	
Y.P.	20.0	
Gel S.		
Filter Ck		
Solids %	6.3	
Oil		
Ca (mg/l)		
Cl (mg/l)	5200.0	
MBT	30.0	
Temp	36.0	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Envirofloc		**Sulphamic**	
Kelzan	1	**T-352**	
Cello	16	**Defoamer**	
Bicarb		**2K-7**	
Newedge		**Cal carb**	56
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Lignite		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**MSDS**	
Soda Ash		**pellets**	
Supervision		**Day Cost**	$6,904
Mud Van		**Well Cost**	$40,296

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	68.0			**Last Casing Test**		**Underflow Density**	
Today losses down hole	0.0	**Total hole**		**Last BOP Test**		**Overflow Density**	
Today losses at surface	2.0	**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa

Pump	Strokes	Pressure	MACP	Depth
RSPP #1				
RSPP #2				

Hole Condition kdaN & Kft/#			
Drag up		**Torque**	
Drag Dn			
Hook Load			

Total Gas Readings (%)	
Background	
Connection	
Trip	

1. Rig up/Out		**9. Slip & Cut**		**17. Plug Back**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**13.00**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**4.50**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip	**5.50**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.25**	**15. Test BOP & FIT**		**23 Other WO casing**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-07:00	Pulled casing out of hole
07:00-08:15	Run in hole with bit.
08:15-09:00	Pulled out to 80 m.
09:00--11:3(	Washed to bottom.
11:30-14:45	Pulled out of hole and rig to run casing.
14:45-22:30	Ran casing to 220 m. Tagged bottom, 1 m stickup.
22:30-23:15	Minor losses 3 m3 . Spot LCM pill . Full returnes
23:15-2400	Rig to and cement.
	Ran 18 joints J-55 48 lb/ft 13 3/8"casing to TD 220 mkb.
	Cement with BJ services. Pumped 3 m3 preflush, 33.76 ton, 26.23 m3, 1878 kg/m3, portland cement. 2 % CaC12, 100 % excess.
	Displaced with 17.3 m3 water. Bumped plug. 3 m3 good cement returnes. Annulas static.
	No Incidents today.

Tops:

Prev Cost	**$867,317**	**Today**	**$81,548**	**Total Cost**	**$948,865**	**Weather:**	3deg, Rain
						Mud Type	Polamer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**8**			**Date:**	**28-Oct-09**		
Depth:	220.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**		**Rig:**	Stoneham # 11		
Operation @ 0800 hrs:	Nipple up BOP's							**KB elev:**	**61.75 m.**		
the next da	Nipple up,pressure test							**KB - GL**	**6.30 m.**		

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
1	432	T11	LX2077	0	**220**	220	35	4 X 20	170	8-12	

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	Bit / Sub,Float sub 1-230 mm DC, 420 mm stab,1 230 mm DC,Jars, 8 165 mm DC			**Pump Pressure:**	3,200 **kPa**
Liner	(mm)	165	165	**BHA Length:**	202.00 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**	
SPM		84	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**	
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**	

SURVEYS

Depth		Drift	Azimuth	North	East
36.00		0.75			
68.00		0.5			
109.00		0.25			
124.00		1			
162.00		1			
202.00		1.50			

MUD

Time		
Density	1110	
Vis.	120	
pH	7.5	
Fluid Loss		
P.V.	24.0	
Y.P.	20.0	
Gel S.		
Filter Ck		
Solids %	6.3	
Oil		
Ca (mg/l)		
Cl (mg/l)	5200.0	
MBT	30.0	
Temp	36.0	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Envirofloc		**Sulphamic**	
Kelzan	7	**T-352**	
Cello	20	**Defoamer**	
Bicarb		**2K-7**	
Newedge		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Lignite		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust	40	**MSDS**	
Soda Ash		**pellets**	
Supervision		**Day Cost**	$6,314
Mud Van		**Well Cost**	$40,296

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	68.0			**Last Casing Test**		**Underflow Density**	
Today losses down hole	0.0	**Total hole**		**Last BOP Test**		**Overflow Density**	
Today losses at surface	2.0	**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	
RSPP #1					**Drag Dn**				**Connection**	
RSPP #2					**Hook Load**				**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	**15.00**
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**1.00**	**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**1.25**
6. Trip		**14. Nipple Up BOP**	**0.50**	**22. Handle Tools**	
7. Rig Service	**0.25**	**15. Test BOP & FIT**		**23 Other WO cement**	**6.00**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-01:00 Continued with cement job.Plug down @ 00:54 hrs
01:00-07:00 Wait on cement Pressure test choke manifold valves 1400 kpa low - 7000 kpa high, 10 min each test.
07:00-09:30 Cut conductor and casing.
09:30-11:30 Prep casing for casing bowl.
11:30-16:00 Pre heat bowl piror to welding as per procedure.
16:00-17:00 Install streamflo crown 13 3/8" X 5000 casing bowl. Ser # 156826-03. Weld casing bowl
17:00-23:15 Wrap bowl with insulation and allow to cool as per procedure. Pressure test bowl weld to 5000 kpa - 10 min - ok.
23:15-24:00 Held safety meeting and nipple up tubing hangers and bop's
Ran 18 joints J-55 48 lb/ft 13 3/8"casing to TD 220 mkb.
Cement with BJ services. Pumped 3 m3 preflush, 33.76 ton, 26.23 m3, 1878 kg/m3, portland cement. 2 % CaC12, 100 % excess.
Displaced with 17.3 m3 water. Bumped plug. 3 m3 good cement returnes. Annulas static.

No Incidents today.

Tops:

Prev Cost	**$1,051,690**	**Today**	**$624,195**	**Total Cost**	**$1,675,885**	**Weather:**	1deg, Cloud
						Mud Type	Polamer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2		**Day:** 9		**Date:**	29-Oct-09
Depth:	220.0 **mKB**	**Progress:**	**Drilling:**	**hrs ROP, m/hr:**	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Wait on tech.from Alberta				**KB elev:**	61.75 m.
the next da	repair remote for accumulator				**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
1	432	T11	LX2077	0	**220**	220	35	4 X 20	170	8-12	

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	Bit / Sub,Float sub 1-230 mm DC, 420 mm stab,1 230 mm DC,Jars, 8 165 mm DC			**Pump Pressure:**	3,200 **kPa**
Liner	(mm)	165	165	**BHA Length:**	202.00 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**	
SPM		84	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**	
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**	

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			

MUD

Time		
Density	1110	
Vis.	120	
pH	7.5	
Fluid Loss		
P.V.	24.0	
Y.P.	20.0	
Gel S.		
Filter Ck		
Solids %	6.3	
Oil		
Ca (mg/l)		
Cl (mg/l)	5200.0	
MBT	30.0	
Temp	36.0	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Envirofloc		**Sulphamic**	
Kelzan	7	**T-352**	
Cello	20	**Defoamer**	
Bicarb		**2K-7**	
Newedge		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Lignite		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust	40	**MSDS**	
Soda Ash		**pellets**	
Supervision		**Day Cost**	$13,253
Mud Van		**Well Cost**	$59,864

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	68.0			**Last Casing Test**		**Underflow Density**	
Today losses down hole	0.0	**Total hole**		**Last BOP Test**		**Overflow Density**	
Today losses at surface	2.0	**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	
RSPP #1					**Drag Dn**				**Connection**	
RSPP #2					**Hook Load**				**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip		**14. Nipple Up BOP**	**11.25**	**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**	**11.25**	**23 Other WO cement**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-12:30 Nipple up and function test BOP's. Pressure test choke manifold

12:30-24:00 Pressure test casing and BOP's

Pressure test all valves on choke manifold 1500 kpa low - 7500 kpa high 10 min.

Pressure test blind rams - casing, inside HCR. Inside kill valve. Lower pipe rams. Upper pipe rams,manuel HCR valve, outside kill line valve.

Annular preventor choke line.Picked up kelly and pressure tested upper and lower kelly cock valves All test 1400 kpa low - 3000 kpa high - 10 min.

Note: 08:00 Remote control for BOP's not functioning. Waiting on arrival of technician from Alberta at 22:00 hrs today, piror to accumulator function test and drill out.

No Incidents today.

Tops:

Prev Cost	**$1,677,862**	**Today**	**$37,350**	**Total Cost**	**$1,715,212**	**Weather:**	1deg, Cloud
						Mud Type	Polamer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**10**			**Date:**	**30-Oct-09**	
Depth:	220.0	**mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**		**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Drilling								**KB elev:**	**61.75 m.**	
the next da	Drill ahead								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
2	311	GT-C51	5157199	220				4 X 20	170	8-12	

		Pump 1	Pump 2	Drilling Assembly:	Bit / Sub,Float sub 1-230 mm DC, 420 mm stab,1 230 mm DC,Jars, 8 165 mm DC			
Model		PZ-11	PZ-11			**Pump Pressure:**	3,200	**kPa**
Liner	(mm)	165	165	**BHA Length:**	202.00 **m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**
SPM		84	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
36.00		0.75			
68.00		0.5			
109.00		0.25			
124.00		1			
162.00		1			
202.00		1.50			

MUD

Time		
Density	1255	
Vis.	55	
pH	9.6	
Fluid Loss		
P.V.	23.0	
Y.P.	13.0	
Gel S.		
Filter Ck		
Solids %	6.3	
Oil		
Ca (mg/l)	480.0	
Cl (mg/l)	150000.0	
MBT	27.0	
Temp	26.0	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Salt	130	**Sulphamic**	
Kelzan	7	**T-352**	
Cello	20	**Defoamer**	
Bicarb		**2K-7**	
Newedge		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Lignite		**Dyna fiber**	
PHPA		**Bioside**	1
Sawdust		**MSDS**	
Soda Ash	14	**pellets**	
Supervision		**Day Cost**	$4,513
Mud Van		**Well Cost**	$64,377

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	68.0			**Last Casing Test**		**Underflow Density**	
Today losses down hole	0.0	**Total hole**		**Last BOP Test**		**Overflow Density**	
Today losses at surface	2.0	**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa

Pump	Strokes	Pressure	MACP	Depth
RSPP #1				
RSPP #2				

Hole Condition kdaN & Kft/#			
Drag up		**Torque**	
Drag Dn			
Hook Load			

Total Gas Readings (%)	
Background	
Connection	
Trip	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**1.25**
6. Trip	**5.00**	**14. Nipple Up BOP**	**1.00**	**22. Handle Tools**	
7. Rig Service	**0.50**	**15. Test BOP & FIT**		**23 Other WO cement**	
8. Rig Repair	**16.25**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-07:30 Install flow T. Make up new BHA and run in hole to 192 m. Held bop drill with both crews.

07:30-24:00 Wait on arrival of accumulator tech.

Note: Accumulator repaired @ 02:00 hrs. Functioned tested from building and remote control.

No Incidents today.

Tops:

Prev Cost	**$1,677,862**	**Today**	**$37,350**	**Total Cost**	**$1,715,212**	**Weather:**	1deg, Cloud
						Mud Type	Polamer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**11**			**Date:**	**31-Oct-09**		
Depth:	242.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**		**Rig:**	Stoneham # 11		
Operation @ 0800 hrs:	Drilling							**KB elev:**	**61.75 m.**		
the next da	Drill ahead							**KB - GL**	**6.30 m.**		

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
2	311	GT-C51	5157199	220				4 X 20	170	8-12	

		Pump 1	Pump 2	Drilling Assembly:	Bit /121/8" NB stab, 2-230 mm DC, 121/8" mm stab, XO, Jars,1 230 mm DC, 8 165 mm DC.			
Model		PZ-11	PZ-11				**Pump Pressure:**	3,200 **kPa**
Liner	(mm)	165	165	**BHA Length:**	151.00 **m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**
SPM		84	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			
262.00	0.75			

MUD

Time		
Density	1155	
Vis.	58	
pH	11.2	
Fluid Loss		
P.V.	20.0	
Y.P.	10.5	
Gel S.		
Filter Ck		
Solids %	1.0	
Oil		
Ca (mg/l)	1160.0	
Cl (mg/l)	80000.0	
MBT	22.5	
Temp	27.8	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Salt		**Sulphamic**	3
Kelzan	17	**T-352**	
Cello		**Defoamer**	
Bicarb	6	**2K-7**	
Kwickseal	15	**Cal carb**	
Drispac		**Dyna det**	
Desco	2	**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal	14	**Dyna fiber**	14
PHPA		**Bioside**	1
Sawdust	185	**MSDS**	
Soda Ash	14	**pellets**	
Supervision		**Day Cost**	$450
Mud Van	30	**Well Cost**	$64,377

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	63.0			**Last Casing Test**	01-Oct-30	**Underflow Density**	
Today losses down hole	28.0	**Total hole**	15.2	**Last BOP Test**	01-Oct-30	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	48.0	**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	
RSPP #1					**Drag Dn**				**Connection**	
RSPP #2					**Hook Load**				**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**7.25**	**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**4.25**	**13. Pump Out Cement**	**0.75**	**21. Safety Meeting**	**0.75**
6. Trip	**4.00**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**1.00**	**15. Test BOP & FIT**	**0.75**	**23 Other WO cement**	**3.75**
8. Rig Repair	**1.50**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-02:00 Continued to wait on accumulator tech.Functioned tested accumulator.
4 function test. Start pressure 21500 kpa.. Total pressure loss 8300 kpa. Pressure left on accumulator 13200 kpa.
Time to recharge 1 min, 30 secs..
02:00-06:15 Run in hole tag cement @ 202 m. Drilled float @ 207 m. and shoe @ 220 m.
06:15-07:30 Drill 311 mm hole from 220 m to 229 m.
07:30-08:15 Formation intregity test. Pressure build to 2000 kpa.
)8:15-08:30 Displace hol to salt saturated mud.
08:30-10:15 Drill 311 mm hole from 229 m to 240 m.
10:15-13:30 Lost circulation.Drilled to 242 m, no returnes.Pumped LCM pill and spot on bottom. Top fill. No returnes.. Spot 2 nd LCM pill on bottom.
13:30-16:00 Pulled out of hole
16:00-17:15 Rin in hole open ended drill pipe to 233 m
17:15-18:00 Waited on cement truck.
18:00-1845 Safety meeting and pumped 6 m3 Class A,1800 kg/m3, /2 bags fiber seal/m3,+ 2 bags celloflake
18:45-20:00 Pulled out of hole
20:00-24:00 Waited on cement.

No Incidents today.

Tops:

Prev Cost	**$1,777,837**	**Today**	**$41,848**	**Total Cost**	**$1,819,685**	**Weather:**	9deg, Rain
						Mud Type	Polamer / salt
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**12**			**Date:**	**01-Nov-09**		
Depth:	242.0	**mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**			**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Pump cement plug.									**KB elev:**	**61.75 m.**
the next da	WOC, Drill ahead									**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
2	311	GT-C51	5157199	220	**242**	42	5	4 X 20	170	8-12	
3	311	HCM 608	109973	242				8 X 11.1	120	08-Oct	

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	Bit /121/8" NB stab, 2-230 mm DC, 121/8" mm stab, XO, Jars,1 230 mm DC, 8 165 mm DC.			**Pump Pressure:**	3,200 **kPa**
Liner	(mm)	165	165	**BHA Length:**	151.00 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**	
SPM		84	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**	
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**	

SURVEYS						MUD			MUD ADDITIVES			
Depth		Drift	Azimuth	North	East	Time			Gel		CaC03	
36.00		0.75				Density	1155		Caustic	1	Percol	
68.00		0.5				Vis.	58		Salt		Sulphamic	3
109.00		0.25				pH	11.2		Kelzan	17	T-352	
124.00		1				Fluid Loss			Cello		Defoamer	
162.00		1				P.V.	20.0		Bicarb	6	2K-7	
202.00		1.50				Y.P.	10.5		Kwickseal	15	Cal carb	
262.00		0.75				Gel S.			Drispac		Dyna det	
						Filter Ck			Desco	2	Walnut	
						Solids %	1.0		Barite		Lime Hydrated	
						Oil			Fiberseal	14	Dyna fiber	14
						Ca (mg/l)	1160.0		PHPA		Bioside	1
						Cl (mg/l)	80000.0		Sawdust	185	MSDS	
						MBT	22.5		Soda Ash	14	pellets	
						Temp	27.8		Supervision		Day Cost	$9,999
						XSPolymer			Mud Van	30	Well Cost	$74,827

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	63.0			**Last Casing Test**	01-Oct-30	**Underflow Density**	
Today losses down hole	28.0	**Total hole**	15.2	**Last BOP Test**	01-Oct-30	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	48.0	**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	
RSPP #1	**35**	**1120**	1742	**250**	**Drag Dn**				**Connection**	
RSPP #2					**Hook Load**	**38000**	**3500**		**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**7.75**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**0.75**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**2.50**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip	**3.75**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.50**	**15. Test BOP & FIT**		**23 Other WO cement**	**8.00**
8. Rig Repair	**0.00**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-01:00 Wait on cement
01:00-02:00 Run in hole,tag cement @ 225 m.
02:00-04:00 Condition mud and drill cement from 225 m to 242 m
04:00-11:45 Drilled from 242 m. to 284 m.
11:45-13:15 Lost circulation @ 284 m. Drilled blind to 286 m. Mixed and spotted LCM pill on bottom. No returnes.
03:15-15:15 Pulled out of hole and ran in to 274 m. with open end drill pipe
15:15-17:00 Waited on cement truck.
17:00-17:45 Pump 2 M3 water, 6 m3 class A, 1800 kg/m3, mixed with fiber seal and .5 bag celloflake/m3. Displace with 1 m3 water.
17:45-18:30 Pull out of hole
18:30-24:00 Wait on cement
Note: Lost circulation after drilling out plug @ 0030 hrs Nov 02 @ 287 m.

No Incidents today.

Tops:

Prev Cost	**$1,819,685**	**Today**	**$40,312**	**Total Cost**	**$1,859,997**	**Weather:**	5deg, Sunny.
						Mud Type	Polamer / salt
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	13			**Date:**	02-Nov-09		
Depth:	242.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**		**Rig:**	Stoneham # 11		
Operation @ 0800 hrs:	Lost circulation							**KB elev:**	61.75 m.		
the next da	Cement plug							**KB - GL**	6.30 m.		

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
3	311	HCM 608	109973	242				8 X 11.1	120	08-Oct	

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	Bit /121/8" NB stab, 2-230 mm DC, 121/8" mm stab, XO, Jars,1 230 mm DC, 8 165 mm DC.			**Pump Pressure:**	3,200 **kPa**
Liner	(mm)	165	165	**BHA Length:**	151.00 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**	
SPM		84	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**	
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**	

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			
262.00	0.75			

MUD

Time		
Density	1105	
Vis.	48	
pH	11.6	
Fluid Loss	17.4	
P.V.	15.0	
Y.P.	6.0	
Gel S.		
Filter Ck		
Solids %	11.0	
Oil		
Ca (mg/l)	920.0	
Cl (mg/l)	76000.0	
MBT	17.5	
Temp	0.0	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Salt	210	**Sulphamic**	2
Kelzan	4	**T-352**	
Cello	10	**Defoamer**	
Bicarb	6	**2K-7**	1
Kwickseal	11	**Cal carb**	
Drispac		**Dyna det**	
Desco	10	**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal	14	**Dyna fiber**	14
PHPA		**Bioside**	1
Sawdust	14	**MSDS**	
Soda Ash	40	**pellets**	
Supervision		**Day Cost**	$12,004
Mud Van	30	**Well Cost**	$86,831

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	63.0			**Last Casing Test**	01-Oct-30	**Underflow Density**	
Today losses down hole	28.0	**Total hole**	110.0	**Last BOP Test**	01-Oct-30	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	22.0	**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**	132.0	**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	
RSPP #1	**35**	**1120**	1742	**250**	**Drag Dn**				**Connection**	
RSPP #2					**Hook Load**	**38000**	**3500**		**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**1.75**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**0.50**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**2.50**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip	**7.00**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other WO cement**	**8.50**
8. Rig Repair	**0.00**	**16. BOP Drill**		**Total Hours**	**21.75**

REMARKS

00:00-00:30 Wait on cement
00:30-03:00 Run in hole, tag cement @ 279 m. Drill cement to 286 m.
03:00-04:00 Lost circulation,mix LCM pill,and drill to 290 m. No returnes
04:00-06:15 Pump LCM pill and pulled out of hole.
06:15-07:30 Run in hloe opended drill pipe to 287 m.
07:30-08:15 Wait on cement truck
08:15-09:00 Pump 6 m3 Class A cement with LCM material and displaced with 1 m3 water.
09:00-15:00 Wait on cement.
15:00-16:45 Run in hole and drill cement from 284 to 291 m. Lost circulation.
16:45-17:15 Drill to 294 m,no returnes.
17:15-18:30 Pull out of hole
18:30-19:30 Run in hole open ended drill pipe to 287 m.
19:30-20:30 Wait on cement truck.
20:30-21:00 Pump 6 m3 Class A cement with LCM material and displaced with 1 m3 water.
21:00-22:00 Pull out of hole
22:00-24:00 Wait on cement.

Note: Lost returnes @ 287 m while drilling out cement. @ 08:00 hrs

No Incidents today.

Tops:

Prev Cost	**$1,859,997**	**Today**	**$26,726**	**Total Cost**	**$1,886,723**	**Weather:**	5deg, Sunny.
						Mud Type	Polamer / salt
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**14**			**Date:**	**03-Nov-09**	
Depth:	300.0	**mKB**	**Progress:**	13.0	**Drilling:**	7.60	**hrs ROP, m/hr:**	7.60	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Lost circulation								**KB elev:**	**61.75 m.**	
the next da	Cement plug								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
3	311	HCM 608	109973	242				8 X 11.1	120		

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	Bit /121/8" NB stab, 2-230 mm DC, 121/8" mm stab, XO, Jars,1 230 mm DC, 8 165 mm DC.			**Pump Pressure:**	3,200 **kPa**
Liner	(mm)	165	165	**BHA Length:**	233.00 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**	
SPM		84	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**	
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**	

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			
262.00	0.75			

MUD

Time		
Density	1105	
Vis.	45	
pH	11.8	
Fluid Loss	21.0	
P.V.	10.0	
Y.P.	3.5	
Gel S.		
Filter Ck		
Solids %	6.5	
Oil		
Ca (mg/l)	1080.0	
Cl (mg/l)	38000.0	
MBT	15.0	
Temp	22.0	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	2
Kelzan	2	**T-352**	2
Cello	3	**Defoamer**	
Bicarb	2	**2K-7**	2
Kwickseal		**Cal carb**	
Drispac	5	**Dyna det**	
Desco	-4	**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	14
PHPA	1	**Bioside**	1
Sawdust	36	**MSDS**	
Soda Ash	2	**pellets**	
Supervision		**Day Cost**	$3,592
Mud Van	30	**Well Cost**	$90,424

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	35.0			**Last Casing Test**	01-Oct-30	**Underflow Density**	
Today losses down hole	30.0	**Total hole**	110.0	**Last BOP Test**	01-Oct-30	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses	30.0	**Cumulative**	132.0	**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	**0.00**
RSPP #1	**35**	**1120**	1742	**250**	**Drag Dn**				**Connection**	**0.00**
RSPP #2					**Hook Load**	**38000**	**3500**		**Trip**	**0.00**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**3.25**	**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**1.25**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**3.50**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip	**3.50**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other WO cement**	**11.25**
8. Rig Repair	**0.00**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-04:15 Wait on cement
04:15-08:00 Run in hole, tag cement @ 273 m. Drill cement to 287 m.
08:00-10:00 Lost circulation @ 287 m. Drill cement to 296 m. No returnes. Drill to 300 m.No returnes.
10:00-12:30 Mix and Pump 15 m3 LCM pill and pulled out of hole.No returnes.
12:30-13:30 Run in hloe opended drill pipe to 287 m.
13:30-14:15 Wait on cement truck
14:15-15:30 Pump 6 m3 Class A cement with LCM material and displaced with 1 m3 water.
15:30-22:45 Wait on cement.
22:45-24:00 Run in hole to 260m

No Incidents today.

Tops:

Prev Cost	**$1,886,723**	**Today**	**$40,567**	**Total Cost**	**$1,927,290**	**Weather:**	2deg, Heavy rain.
						Mud Type	Polamer / salt
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2				**Day:**	15		**Date:**	04-Nov-09
Depth:	303.0	**mKB**	**Progress:**	3.0	**Drilling:**	1.00	**hrs ROP, m/hr:**	7.60	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Wait on cement plug								**KB elev:**	61.75 m.
the next da	Drill out plug, Drill ahead.								**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
3	311	HCM 608	109973	242				8 X 11.1	120		

		Pump 1	Pump 2						
Drilling Assembly:	Bit /308mm NB stab, 2-230mm DC, 308mm stab, XO, Jars,1 203mm DC, 8 165mm DC.							**Pump Pressure:**	3,200 kPa
Model		PZ-11	PZ-11						
Liner	(mm)	165	165	**BHA Length:**	233.00	**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**		**mm**	**Drill Pipe O.D.**		**mm**
SPM		84	0	**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**		**m/min**
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**		**m/sec**	**True Hydraulic HP:**		**kW**

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			
262.00	0.75			

MUD

Time	16:19	
Density	1080	
Vis.	41	
pH	10.4	
Fluid Loss	26.0	
P.V.	9.0	
Y.P.	3.5	
Gel S.	1/2/2.5	
Filter Ck	3.0	
Solids %	5.0	
Oil		
Ca (mg/l)	760.0	
Cl (mg/l)	40000.0	
MBT	15.0	
Temp	25.6	
XSPolymer		

MUD ADDITIVES

Gel	65	**CaC03**	
Caustic		**Percol**	
Salt	132	**Sulphamic**	4
Kelzan	2	**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	
Kwickseal	10	**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust	25	**MSDS**	
Soda Ash		**pellets**	
Supervision		**Day Cost**	$7,619
Mud Van	1	**Well Cost**	$98,043

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	35.2			**Last Casing Test**	01-Oct-30	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	110.0	**Last BOP Test**	01-Oct-30	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses	30.0	**Cumulative**	132.0	**Next BOP Test**		**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	**0.00**
RSPP #1	**35**	**1120**	1742	**250**	**Drag Dn**				**Connection**	**0.00**
RSPP #2					**Hook Load**	**38000**	**3500**		**Trip**	**0.00**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**3.75**	**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**0.50**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**6.00**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip	**5.00**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other WO cement**	**7.25**
8. Rig Repair	**0.00**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-07:00 Tag cement @ 281m, Drill to 291m. Spot LCM to cure losses, Drill cement to 300m
07:00-07:15 Drill new hole from 300 to 303m. Losses recurred.
07:15-09:00 Mix, spot and soak LCM pill.
09:00-11:00 Trip out and run open end drill pipe to cement
11:00-13:15 Set cement plug using 2m3 water ahead, 6m3 class"A" cement at 1800kg/m3, displace with 1.2m3 water. POH drill pipe.
13:15-18:00 WOC.
18:00-21:45 RIH to casing shoe, wash down to TOC at 273m. Drill cement to 289m. Green cement at shakers. WOC.
21:45-24:00 Wait on cement.

No Incidents today.

Tops:

Prev Cost	**$1,938,844**	**Today**	**$39,345**	**Total Cost**	**$1,978,189**	**Weather:**	-2deg, Broken Clouds wind 20km.
						Mud Type	Polamer / salt
Foreman	**Bill Williams/Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**16**			**Date:**	**05-Nov-09**	
Depth:	313.0	**mKB**	**Progress:**	10.0	**Drilling:**	1.00	**hrs ROP, m/hr:**	10.00	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Preparing for cement plug #8								**KB elev:**	**61.75 m.**	
the next da	Drill out plug, Drill ahead.								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
3	311	HCM 608	109973	242				8 X 11.1	120		

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	Bit /308mm NB stab, 2-230mm DC, 308mm stab, XO, Jars,1 203mm DC, 8 165mm DC.			**Pump Pressure:**	3,200 **kPa**
Liner	(mm)	165	165	**BHA Length:**	233.00 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	230.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**		
SPM		84	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**	**m/min**		
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**	**kW**		

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			
262.00	0.75			

MUD

Time	21:57	
Density	1115	
Vis.	34	
pH	12.0	
Fluid Loss	26.0	
P.V.	5.0	
Y.P.	1.0	
Gel S.	1/2/2.5	
Filter Ck	3.0	
Solids %	7.2	
Oil		
Ca (mg/l)	1320.0	
Cl (mg/l)	50000.0	
MBT	10.0	
Temp	23.2	
XSPolymer		

MUD ADDITIVES

Gel	33	**CaC03**	
Caustic		**Percol**	
Salt	19	**Sulphamic**	10
Kelzan		**T-352**	
Cello	10	**Defoamer**	
Bicarb		**2K-7**	
Kwickseal	10	**Cal carb**	
Drispac	4	**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal	4	**Dyna fiber**	16
PHPA		**Bioside**	
Sawdust	25	**MSDS**	
Soda Ash		**pellets**	
Supervision		**Day Cost**	$5,880
Mud Van	1	**Well Cost**	$103,924

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	35.2			**Last Casing Test**	01-Oct-30	**Underflow Density**	
Today losses down hole	21.0	**Total hole**	110.0	**Last BOP Test**	01-Oct-30	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**	500 hrs	**Flow Rate,m3/min**	
Today total losses	30.0	**Cumulative**	153.0	**Next BOP Test**	13-Nov-09	**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**		**Torque**		**Background**	**0.00**
RSPP #1	**35**	**1120**	1742	**250**	**Drag Dn**				**Connection**	**0.00**
RSPP #2					**Hook Load**	**38000**	**3500**		**Trip**	**0.00**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**3.25**	**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**1.00**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**2.25**	**13. Pump Out Cement**		**21. Safety Meeting**	**1.25**
6. Trip	**7.50**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.50**	**15. Test BOP & FIT**		**23 Other WO cement**	**8.25**
8. Rig Repair	**0.00**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-00:30 Wait on cement.
00:30--00:4 Drill cement from 289 to 291m.No returnes.
00:45-02:15 Mix, LCM and drill to 295 m. No returnes.
02:15-04:15 Trip out and run open end drill pipe to 287 m.
04:15-05:00 Set cement plug, 2m3 water, 7.3m3 MaxxCem NP cement,4 % cac12,10 % NaC cement at 1900kg/m3, displace with 1m3 water. POH drill pipe.
05:00-06:15 Trip out of hole.
06:15-11:30 Wait on cement. Conduct BOP drill with crew. Well secure 27 sec.
11:30-13:30 Run in hole,taged cement @ 280 m.
11:30-14:45 Drill cement from 280 m to 303 m. Full returnes
14:45-15:45 Drilled 311 mm hole from 303 m to 313 m. Lost circulation.
15:45-18:45 Mix, LCM and pull out of hole. Function LPR
18:45-19:45 Run in hole with open end drill pipe to 287 m.
19:45-21:00 Set cement plug, 2m3 water,8m3 MaxxCem NP cement,4 % cac12,10 % NaC cement at 1900kg/m3, displace with 2m3 water. POH drill pipe.
21:00-24:00 Wait on cement.
No Incidents today.

Tops:

Prev Cost	**$1,978,189**	**Today**	**$31,792**	**Total Cost**	**$2,009,981**	**Weather:**	1deg, Light snow.
						Mud Type	Polamer / salt
Foreman	**Bill Williams/Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2				**Day:**	17			**Date:**	06-Nov-09	
Depth:	321.0	**mKB**	**Progress:**	8.0	**Drilling:**	1.00	**hrs ROP, m/hr:**	8.00	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Preparing for cement plug #8								**KB elev:**	61.75 m.	
the next da	Drill out plug, Drill ahead.								**KB - GL**	6.30 m.	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
3	311	HCM 608	109973	242				8 X 11.1	120		

		Pump 1	Pump 2						
Drilling Assembly:	Bit /308mm NB stab, 2-230mm DC, 308mm stab, XO, Jars,1 203mm DC, 8 165mm DC.							**Pump Pressure:**	3,200 kPa
Model		PZ-11	PZ-11						
Liner	(mm)	165	165	**BHA Length:**	233.00	**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	230.0	**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		84	0	**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**		**m/min**
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**		**m/sec**	**True Hydraulic HP:**		**kW**

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			
262.00	0.75			

MUD

Time	21:57	
Density	1060	
Vis.	39	
pH	12.0	
Fluid Loss	26.0	
P.V.	6.0	
Y.P.	2.5	
Gel S.	1/2/2.5	
Filter Ck	3.0	
Solids %	3.8	
Oil		
Ca (mg/l)	800.0	
Cl (mg/l)	17000.0	
MBT	15.0	
Temp	16.5	
XSPolymer		

MUD ADDITIVES

Gel	55	**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	3
Kelzan	2	**T-352**	
Cello	25	**Defoamer**	
Bicarb	3	**2K-7**	
Kwickseal	10	**Cal carb**	
Drispac	2	**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal	4	**Dyna fiber**	16
PHPA		**Bioside**	
Sawdust	25	**MSDS**	
Soda Ash	10	**pellets**	
Supervision		**Day Cost**	$7,263
Mud Van	1	**Well Cost**	$111,188

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	35.2			**Last Casing Test**	01-Oct-30	**Underflow Density**	
Today losses down hole	65.0	**Total hole**	110.0	**Last BOP Test**	01-Oct-30	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**	500 hrs	**Flow Rate,m3/min**	
Today total losses	65.0	**Cumulative**	218.0	**Next BOP Test**	13-Nov-09	**Operating hours**	

Well Control - kPa

Pump	Strokes	Pressure	MACP	Depth
RSPP #1	**35**	**1120**	1742	**250**
RSPP #2				

Hole Condition kdaN & Kft/#			
Drag up		**Torque**	
Drag Dn			
Hook Load	**38000**	**3500**	

Total Gas Readings (%)	
Background	**0.00**
Connection	**0.00**
Trip	**0.00**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**3.75**	**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**3.75**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**1.00**	**13. Pump Out Cement**		**21. Safety Meeting**	**1.00**
6. Trip	**7.25**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other WO cement**	**6.50**
8. Rig Repair	**0.00**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-01:15 Wait on cement.
01:15--03:0(Run in hole,tagg cement @ 273 m.
03:00-05:00 Drill cement from 273 m to 313 m. Full returnes
05:00-06:30 Drilled 311 mm hole from 313 m to 321 m. Lost circulation.
06:30-08:00 Trip out of hole.
08:00-12:15 Set cement plug, 2m3 water,4m3 MaxxCem NP cement,4 % cac12,10 % NaC cement at 1900kg/m3, displace with 2m3 water. POH drill pipe.
12:15-17:15 Wait on cement.
17:15-19:00 Run in hole,taged cement @ 283 m.
19:00-19:30 Drill cement from 283 m to 289 m. No returnes
19:30-21:00 Pulled out of hole.
21:00-22:00 Run in hole with open end drill pipe to 287 m.
22:00-23:00 Set cement plug,2m3 water 7.3 m3 MaxxCem NP cement,4 % CaC12, 10% NaC @ 1800 kg/m3. Displaced with 1.3 m3 water.
23:00-23:45 Trip out of hole.
23:45-24:00 Wait on cement.
No Incidents today.

Tops:

Prev Cost	**$2,009,981**	**Today**	**$35,595**	**Total Cost**	**$2,045,576**	**Weather:**	1deg, Light snow.
						Mud Type	Polamer / salt
Foreman	**Bill Williams/Don Campbell**		**Rig Phone**		**709-649-7106**	**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**18**			**Date:**	**07-Nov-09**	
Depth:	450.0	**mKB**	**Progress:**	129.0	**Drilling:**	9.25	**hrs ROP, m/hr:**	13.95	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Drill ahead								**KB elev:**	**61.75 m.**	
the next da									**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
3	311	HCM 608	109973	242		208	21.9	8 X 11.1	110	15-Jan	

		Pump 1	Pump 2	Drilling Assembly:	Bit /308mm NB stab, 2-230mm DC, 308mm stab, XO, Jars,1 203mm DC, 8 165mm DC.					
Model		PZ-11	PZ-11					**Pump Pressure:**	6,600	**kPa**
Liner	(mm)	165	165	**BHA Length:**	233.00	**m**	**Strap:**	**Board:**		
Stroke	(mm)	279	279	**Drill Collar O.D.**	230.0	**mm**	**Drill Pipe O.D.**	127.0	**mm**	
SPM		84	0	**D.C. Annular Vel.:**	41.0	**m/min**	**D.P Annular Vel.:**	22.0	**m/min**	
Vol.	m^3/min @ 95%	1.4300	0.0000	**Jet Velocity:**	68.0	**m/sec**	**True Hydraulic HP:**	103 HP	**kW**	

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			
262.00	0.75			
356.00	1.25			
508.00	2.75			

MUD

Time	19:10	
Density	1245	
Vis.	38	
pH	11.2	
Fluid Loss	16.0	
P.V.	5.0	
Y.P.	2.0	
Gel S.	1/0/0	
Filter Ck	2.0	
Solids %	1.5	
Oil		
Ca (mg/l)	1280.0	
Cl (mg/l)	170000.0	
MBT	7.5	
Temp	27.3	
XSPolymer		

MUD ADDITIVES

Gel	80	**CaC03**	
Caustic		**Percol**	
Salt	270	**Sulphamic**	6
Kelzan	5	**T-352**	
Cello		**Defoamer**	1
Bicarb		**2K-7**	
Kwickseal	10	**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust	70	**MSDS**	
Soda Ash	10	**pellets**	
Supervision		**Day Cost**	$13,963
Mud Van	1	**Well Cost**	$125,152

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	70.2			**Last Casing Test**	01-Oct-30	**Underflow Density**	
Today losses down hole	65.0	**Total hole**	110.0	**Last BOP Test**	01-Oct-30	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**	500 hrs	**Flow Rate,m3/min**	
Today total losses	65.0	**Cumulative**	283.0	**Next BOP Test**	13-Nov-09	**Operating hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**1**	**Torque**		**Background**	**0.08**
RSPP #1					**Drag Dn**	**1**			**Connection**	**0.00**
RSPP #2	**45**	**1500**	**1570**	**330**	**Hook Load**	**42**	**7000**		**Trip**	**0.00**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**12.50**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**1.00**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip	**1.00**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other WO cement**	**8.00**
8. Rig Repair	**0.00**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-09:30 Wait on cement. Function Blind Rams.

09:30-10:15 Circulate condition mud to increase clorides to 160000

10:15-13:45 Tag cement at 269m. Drill cement to 288m. Wash down to TD @ 321m.

13:45-24:00 Drilled 311 mm hole from 321m to 450m. Function Annular.

Boiler is on for 17 hrs today

One Incidents today, Derrickman's rope got caught in travelling block sheave. 7 hazzards ID'd

Tops:

Prev Cost	**$2,045,576**	**Today**	**$83,177**	**Total Cost**	**$2,128,753**	**Weather:**	-2deg, wind 20kph.
						Mud Type	Polamer / salt
Foreman	**Bill Williams/Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**19**			**Date:**	**08-Nov-09**	
Depth:	834.0	**mKB**	**Progress:**	384.0	**Drilling:**	22.00	**hrs ROP, m/hr:**	17.45	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Drill ahead								**KB elev:**	**61.75 m.**	
the next da	Run Casing								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
3	311	HCM 608	109973	242		592	43	8 X 11.1	110	15-Jan	

		Pump 1	Pump 2	Drilling Assembly:	Bit /308mm NB stab, 2-230mm DC, 308mm stab, XO, Jars,1 203mm DC, 8 165mm DC.
Model		PZ-11	PZ-11		**Pump Pressure:** 6,600 **kPa**
Liner	(mm)	165	165	**BHA Length:** 233.00 **m**	**Strap:** **Board:**
Stroke	(mm)	279	279	**Drill Collar O.D.** 230.0 **mm**	**Drill Pipe O.D.** 127.0 **mm**
SPM		90	0	**D.C. Annular Vel.:** 44.0 **m/min**	**D.P Annular Vel.:** 24.0 **m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:** 72.0 **m/sec**	**True Hydraulic HP:** 110 HP **kW**

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			
262.00	0.75			
356.00	1.25			
508.00	2.75			
604.00	2			
754.00	3			

MUD

Time	5:15	
Density	1250	
Vis.	34	
pH	11.0	
Fluid Loss	N/C	
P.V.	5.0	
Y.P.	3.0	
Gel S.	1.5/3/4	
Filter Ck	2.0	
Solids %	1.5	
Oil		
Ca (mg/l)	920.0	
Cl (mg/l)	178000.0	
MBT	7.5	
Temp	23.4	
XSPolymer		

MUD ADDITIVES

Gel	40	**CaC03**	
Caustic		**Percol**	
Salt	300	**Sulphamic**	10
Kelzan		**T-352**	1
Cello		**Defoamer**	2
Bicarb	10	**2K-7**	
Kwickseal		**Cal carb**	
Drispac	1	**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust	15	**Coronox**	3
Soda Ash		**pellets**	
Supervision		**Day Cost**	$11,800
Mud Van	1	**Well Cost**	$13,692

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	70.2			**Last Casing Test**	01-Oct-30	**Underflow Density**	1400.0
Today losses down hole	65.0	**Total hole**	110.0	**Last BOP Test**	01-Oct-30	**Overflow Density**	1240
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**	500 hrs	**Flow Rate,m3/min**	800.0
Today total losses	65.0	**Cumulative**	283.0	**Next BOP Test**	13-Nov-09	**Combined hours**	18.0

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**1**	**Torque**		**Background**	**0.08**
RSPP #1					**Drag Dn**	**1**			**Connection**	**0.00**
RSPP #2	**45**	**1500**	**1570**	**330**	**Hook Load**	**42**	**7000**		**Trip**	**0.00**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**22.00**	**10. Survey**	**0.75**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other WO cement**	
8. Rig Repair	**0.00**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-24:00 Drill from 450m to 834m. Function LPR and HCR. Wireline surveys @ 508, 604, and 754m.

Boiler is on for 17 hrs today

No Incidents today, 8 hazzards ID'd

Tops:

Prev Cost	**$2,128,753**	**Today**	**$37,972**	**Total Cost**	**$2,166,725**	**Weather:**	-2deg, wind 20kph.
						Mud Type	Polamer / salt
Foreman	**Bill Williams/Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**20**			**Date:**	**09-Nov-09**	
Depth:	889.0	**mKB**	**Progress:**	55.0	**Drilling:**	12.25	**hrs ROP, m/hr:**	4.49	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Logging with Baker Atlas								**KB elev:**	**61.75 m.**	
the next da	Run Casing, cement, Pressure test BOP								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
3	311	HCM 608	109973	242		592	43	8 X 11.1	110	15-Jan	0-0-No-A-X-0-NO-LOG

Drilling Assembly: Bit /308mm NB stab, 2-230mm DC, 308mm stab, XO, Jars,1 203mm DC, 8 165mm DC.

		Pump 1	Pump 2					
Model		PZ-11	PZ-11				**Pump Pressure:**	6,600 **kPa**
Liner	(mm)	165	165	**BHA Length:**	233.00 **m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	230.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**	
SPM		90	0	**D.C. Annular Vel.:**	44.0 **m/min**	**D.P Annular Vel.:**	24.0 **m/min**	
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	72.0 **m/sec**	**True Hydraulic HP:**	110 HP **kW**	

SURVEYS

Depth	Drift	Azimuth	North	East
36.00	0.75			
68.00	0.5			
109.00	0.25			
124.00	1			
162.00	1			
202.00	1.50			
262.00	0.75			
356.00	1.25			
508.00	2.75			
604.00	2			
754.00	3			
850	4			

MUD

Time	5:39	18:00
Density	1240	1210
Vis.	50	70
pH	10.8	10.5
Fluid Loss	18.4	18.0
P.V.	15.0	
Y.P.	7.5	
Gel S.	3/9	
Filter Ck	14.0	
Solids %	0.3	
Oil		
Ca (mg/l)	840.0	
Cl (mg/l)	184000.0	
MBT	5.0	
Temp	23.7	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt	30	**Sulphamic**	10
Kelzan	13	**T-352**	
Cello		**Defoamer**	
Bicarb	24	**2K-7**	
Kwickseal		**Cal carb**	
Drispac	18	**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**Coronox**	1
Soda Ash	8	**pellets**	
Supervision		**Day Cost**	$13,421
Mud Van	1	**Well Cost**	$136,952

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	70.2			**Last Casing Test**	01-Oct-30	**Underflow Density**	1800.0
Today losses down hole	65.0	**Total hole**	110.0	**Last BOP Test**	01-Oct-30	**Overflow Density**	1230
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**	500 hrs	**Flow Rate,m3/min**	800.0
Today total losses	65.0	**Cumulative**	283.0	**Next BOP Test**	13-Nov-09	**Combined hours**	36.0

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**1**	**Torque**		**Background**	**0.06**
RSPP #1	**45**	**2025**	**1570**	**870**	**Drag Dn**	**1**			**Connection**	**0.00**
RSPP #2			**1570**		**Hook Load**	**56**	**10500**		**Trip**	**0.08**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**12.75**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**4.25**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip	**5.75**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.50**	**15. Test BOP & FIT**		**23 Other WO cement**	
8. Rig Repair	**0.00**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-14:15 Drill from 834m to 889m. Function UPR and HCR. Wireline surveys @ 850

14:15-20:45 Circulate condition hole for logging. Wiper trip to shoe. No overpull, no fill. Circulate increase Vis to 70.

20:45-24:00 Pull out of the hole to Log and run casing.

Boiler is on for 3 hrs today

No Incidents today, 7 hazzards ID'd

Tops:

Prev Cost	**$2,166,725**	**Today**	**$45,285**	**Total Cost**	**$2,212,010**	**Weather:**	-2deg, wind 20kph.
						Mud Type	Polamer / salt
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2				**Day:**	21			**Date:**	10-Nov-09	
Depth:	889.0	**mKB**	**Progress:**	0.0	**Drilling:**	0.00	**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Install 9 5/8" seal assembly and pressure test								**KB elev:**	61.75 m.	
the next da	Pressure test BOP and drill out								**KB - GL**	6.30 m.	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
3	311	HCM 608	109973	242		592	43	8 X 11.1	110	15-Jan	0-0-No-A-X-0-NO-LOC

		Pump 1	Pump 2	Drilling Assembly:	Bit /308mm NB stab, 2-230mm DC, 308mm stab, XO, Jars,1 203mm DC, 8 165mm DC.				
Model		PZ-11	PZ-11					**Pump Pressure:**	6,600 kPa
Liner	(mm)	165	165	**BHA Length:**	233.00 m	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	230.0 mm	**Drill Pipe O.D.**		127.0 mm	
SPM		90	0	**D.C. Annular Vel.:**	44.0 m/min	**D.P Annular Vel.:**		24.0 m/min	
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	72.0 m/sec	**True Hydraulic HP:**		110 HP kW	

SURVEYS

Depth		Drift	Azimuth	North	East
36.00		0.75			
68.00		0.5			
109.00		0.25			
124.00		1			
162.00		1			
202.00		1.50			
262.00		0.75			
356.00		0.64			
508.00		1.70			
604.00		2.66			
754.00		5.1			
850		6.7			
880		7.1			

MUD

Time	6:37	
Density	1210	
Vis.	50	
pH	11.0	
Fluid Loss	17.0	
P.V.	12.0	
Y.P.	7.0	
Gel S.	2.5/9/14	
Filter Ck	1.0	
Solids %	2.0	
Oil		
Ca (mg/l)	1120.0	
Cl (mg/l)	145000.0	
MBT	5.0	
Temp	21.1	
XSPolymer		

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan	7	**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	
Kwickseal		**Cal carb**	
Drispac	9	**Dyna det**	
Desco		**Walnut**	
Barite	35	**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust	10	**Coronox**	2
Soda Ash	13	**pellets**	
Supervision		**Day Cost**	$7,647
Mud Van	1	**Well Cost**	$158,021

Mud losses Surface & Downhole Estimates m3

Total circulating Vol.	106.0		
Today losses down hole	0.0	**Total hole**	110.0
Today losses at surface	0.0	**Total surf.**	32.0
Today total losses	0.0	**Cumulative**	283.0

BOP & Casing Tests

	Date
Last Casing Test	01-Oct-30
Last BOP Test	01-Oct-30
Next Casing Test	500 hrs
Next BOP Test	13-Nov-09

Centrifuge

Underflow Density	1870.0
Overflow Density	1220
Flow Rate,m3/min	800.0
Combined hours	24.0

Well Control - kPa

Pump	Strokes	Pressure	MACP	Depth
RSPP #1	**45**	**2025**	**1570**	**870**
RSPP #2			**1570**	

Hole Condition kdaN & Kft/#

Drag up	**1**	**Torque**	
Drag Dn	**1**		
Hook Load	**56**	**10500**	

Total Gas Readings (%)

Background	**0.06**
Connection	**0.00**
Trip	**0.08**

1. Rig up/Out		**9. Slip & Cut**	**11.00**	**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**9.25**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**1.25**	**13. Pump Out Cement**		**21. Safety Meeting**	**1.00**
6. Trip	**0.50**	**14. Nipple Up BOP**	**0.75**	**22. Handle Tools**	
7. Rig Service	**0.25**	**15. Test BOP & FIT**		**23 Other WO cement**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-00:30 Finish Pull out of hole for logging. Survey barrel was found lodged in the top of HWDP. All survey data from this bit run are Suspect.

00:30-12:15 Wire line logs with Baker. Run #1 DSL-XMAC-GR (Density) Run #2 ZDL-CN-GR-X-YCAL (Restivity), Run #3DLL-GR

12:15-13:00 Pull wear bushing

13:00-22:45 PJSM, Rig up and run surface casing. 543m J55, 53.6kg/m LTC + 331.8m 64.7kg/m L80, LTC. Shoe @ 885m.

22:45-24:00 Circulate and condition prior to cementing.

Baker resurveyed the well. The new surveys are entered above.

Boiler is on for 3 hrs today

No Incidents today, 8 hazzards ID'd

Tops:

Prev Cost	**$2,214,070**	**Today**	**$180,326**	**Total Cost**	**$2,394,396**	**Weather:**	2.5 deg, raining.
						Mud Type	Polamer / salt
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**22**			**Date:**	**11-Nov-09**		
Depth:	889.0	**mKB**	**Progress:**	0.0	**Drilling:**	0.00	**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Run in hole to drill out (drift drill pipe)								**KB elev:**	**61.75 m.**	
the next da	Drill ahead								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2							
Model		PZ-11	PZ-11	**Drilling Assembly:**	216mm bit, Bit sub, teledrift sub, XO, 27m 165mm DC, Jar, 121m 165mm DC,			**Pump Pressure:**	6,600	**kPa**
Liner	(mm)	165	165	81m HWDP						
Stroke	(mm)	279	279	**BHA Length:**		**m**	**Strap:**		**Board:**	
SPM		0	0	**Drill Collar O.D.**	165.0	**mm**	**Drill Pipe O.D.**			**mm**
Vol.	m^3/min @ 95%	1.5300	0.0000	**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**			**m/min**
				Jet Velocity:		**m/sec**	**True Hydraulic HP:**			**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
36.00		0.75			
68.00		0.5			
109.00		0.25			
124.00		1			
162.00		1			
202.00		1.50			
262.00		0.75			
356.00		0.64			
508.00		1.70			
604.00		2.66			
754.00		5.1			
850		6.7			
880		7.1			

MUD

Time	6:37			
Density	Cleaning			
Vis.	tanks			
pH				
Fluid Loss				
P.V.				
Y.P.				
Gel S.				
Filter Ck				
Solids %				
Oil				
Ca (mg/l)				
Cl (mg/l)				
MBT				
Temp				
XSPolymer				

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco	3	**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**Coronox**	
Soda Ash		**pellets**	
Supervision		**Day Cost**	$243
Mud Van	1	**Well Cost**	$158,264

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	35.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	110.0	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**	25-Nov-09	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	283.0	**Next BOP Test**	500 rotating hrs	**Combined hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**1**	**Torque**		**Background**	
RSPP #1					**Drag Dn**	**1**			**Connection**	
RSPP #2					**Hook Load**	**56**	**10500**		**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**3.00**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**0.50**	**13. Pump Out Cement**		**21. Safety Meeting**	**1.00**
6. Trip	**1.25**	**14. Nipple Up BOP**	**8.00**	**22. Handle Tools**	
7. Rig Service		**15. Test BOP & FIT**	**9.75**	**23 Other WO cement**	**0.50**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-03:45 Cfinish condition mud for cementing. BJ cement casing with 5m3 NaCl water ahead, 27m3 fill Maxxcem cement W 3% CaCl + 10% NaCl, @ 1650kg/m3 , 5.4M3 tail Maxxcem +3% CaCl +10% NaCl @ 1826kg/m3. Displace with 35.5m3 water. Plug bumped 10000kpa over final displacemer pressure to 17000kpa for casing pressure test 10 min OK. Pressure held. 3m3 cement returned.

03:45-05:00 Flush BOP, lay down casing tools, and cement head

05:00-09:45 Install 9 5/8" X 13 3/8" pack off bushing and test to 1000 and 28000kpa 10 min each. OK.

09:45-10:15 Skid doghouse out 6" due to rig settling.

10:15-19:30 Pressure test BOP, choke manifold, and surface equipment to 1000kPa low and 10000kPa haigh for 10 men each test.

19:30-22:00 Fill manifold with antifreeze, Center BOP, Install wear bushing,

22:00-24:00 Lay down cement string from the mast.

One Incidents today, Drill collar rolled off the trailer. No damage, no injury. 7 hazzards ID'd

Tops:

Prev Cost	**$2,394,186**	**Today**	**$201,357**	**Total Cost**	**$2,595,543**	**Weather:**	2.5 deg, raining.
						Mud Type	Polamer / salt
Foreman	**Don Campbell**		**Rig Phone**		**709-649-7106**	**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**23**			**Date:**	**12-Nov-09**	
Depth:	899.0	**mKB**	**Progress:**	10.0	**Drilling:**	4.50	**hrs ROP, m/hr:**	2.22	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Finish circulating around 1200 density mud								**KB elev:**	**61.75 m.**	
the next da	Chahge assembly and drill ahead								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
4	216	GX-30DX	6065996	889		10	4.5	3 X 12/32	60	6	

		Pump 1	Pump 2	Drilling Assembly:	216mm bit, Bit sub, teledrift sub, XO, 27m 165mm DC, Jar, 121m 165mm DC,			
Model		PZ-11	PZ-11	81m HWDP			**Pump Pressure:**	6,600 **kPa**
Liner	(mm)	165	165	**BHA Length:**	241.00 **m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**	
SPM		78	0	**D.C. Annular Vel.:**	105.0 **m/min**	**D.P Annular Vel.:**	67.0 **m/min**	
Vol.	m^3/min @ 95%	1.3200	0.0000	**Jet Velocity:**	118.0 **m/sec**	**True Hydraulic HP:**	298.0 **kW**	

SURVEYS

Depth		Drift	Azimuth	North	East
36.00		0.75			
68.00		0.5			
109.00		0.25			
124.00		1			
162.00		1			
202.00		1.50			
262.00		0.75			
356.00		0.64			
508.00		1.70			
604.00		2.66			
754.00		5.1			
850		6.7			
880		7.1			
897		7	teledrift		

MUD

Time	11:00	18;00	
Density	1010	1020	
Vis.	47	45	
pH	12.0	11.0	
Fluid Loss	32.0		
P.V.	10.0		
Y.P.	6.0		
Gel S.	1.5/2/2.5		
Filter Ck	0.5		
Solids %	1.0		
Oil			
Ca (mg/l)	40.0		
Cl (mg/l)	1200.0		
MBT			
Temp	19.0		
XSPolymer			

MUD ADDITIVES

Gel	42	**CaC03**	
Caustic		**Percol**	
Salt	34	**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	1
Bicarb		**2K-7**	
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco	3	**Walnut**	
Barite	35	**Lime Hydrated**	
Fiberseal	-5	**Dyna fiber**	
PHPA		**Bioside**	
Sawdust	36	**Coronox**	
Soda Ash		**Mica med**	5
Supervision		**Day Cost**	$4,403
Mud Van	1	**Well Cost**	$158,264

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	75.9			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	110.0	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**	25-Nov-09	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	283.0	**Next BOP Test**	500 rotating hrs	**Combined hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**1**	**Torque**		**Background**	
RSPP #1					**Drag Dn**	**1**			**Connection**	
RSPP #2	**45**	**3250**	**7075**	**898**	**Hook Load**	**56**	**10500**		**Trip**	

1. Rig up/Out		**9. Slip & Cut**	**1.00**	**17. Weld bowl**	
2. Drill	**7.75**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**1.50**	**13. Pump Out Cement**		**21. Safety Meeting**	**1.00**
6. Trip	**3.75**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.50**	**15. Test BOP & FIT**	**0.75**	**23 Other**	**3.75**
8. Rig Repair	**3.75**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-00:15 Lay out cement stinger from the mast
00:15-04:00 Replace broken drive line on drawworks
04:00-0915 Make up BHA. RIH to to 850m
09:15-10:15 Slip and cut
10:15-10:45 Accumulator test. Function motor kill.
10:45-14:30 Drill out plugs, float collar, shoe and pocket to 889m. Conduct BOP drill. Well secure 36sec.
14:30-20:45 Drill 216mm hole from 899m Held BOP drill. Well secure 81 sec. Deviation survey w/Teledrift @ 897m, 7deg. Function annular.
Formation integrity test @ 892m. Mud in use 1020kg/m3 polymer. Volume 170litres. Max surface pressure 7000kPa. EMG = 1826KG/m3
20:45-24:00 Well flowing. 250L increase. Close in. SIDP 1400kPa. Mud density 1020kg/m3. Circulate out drillers method. Shut down to mix barite on surface.
No gas to surface, no sheen on the tanks. SIDPP vs SICP
One Incidents today, Drive line on rig engine broke and caused arcing on barrery cables. No injury. 8 hazzards ID'd

Tops:

Prev Cost	**$2,632,485**	**Today**	**$32,795**	**Total Cost**	**$2,665,280**	**Weather:**	+5 deg, fair.
						Mud Type	Polamer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**24**			**Date:**	**13-Nov-09**		
Depth:	948899.0	**mKB**	**Progress:**	49.0	**Drilling:**	4.50	**hrs ROP, m/hr:**	10.89	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Drill ahead								**KB elev:**	**61.75 m.**	
the next da	Drill ahead								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
4	216	GX-30DX	6065996	889		10	4.5	3 X 12/32	60	6	0-0-NO-A-E-0-NO-BH
5	216	HCD506ZX	7120914	899		49	4.5	3X10, 3X1	60	6	

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String				
Liner	(mm)	165	165	**BHA Length:**	245.76	**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0	**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		80	0	**D.C. Annular Vel.:**	112.0	**m/min**	**D.P Annular Vel.:**	71.0	**m/min**
Vol.	m^3/min @ 95%	1.3600	0.0000	**Jet Velocity:**	129.0	**m/sec**	**True Hydraulic HP:**	406HP	**kW**

Pump Pressure: 6,600 **kPa**

SURVEYS

Depth		Drift	Azimuth	North	East
917.00	teledrift	7			
931.00	teledrift	6.5			
			teledrift		

MUD

Time	8:41	22:00	
Density	1200	1200	
Vis.	51	61	
pH	11.3	11.0	
Fluid Loss	8.4	8.6	
P.V.	13.0		
Y.P.	8.5		
Gel S.	3/4/5		
Filter Ck	1.0		
Solids %	1.3		
Oil			
Ca (mg/l)	280.0		
Cl (mg/l)	7500.0		
MBT	2.5		
Temp	19.6		
XSPolymer	0.6		

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	8
Kelzan	9	**T-352**	3
Cello		**Defoamer**	2
Bicarb	15	**2K-7**	
Kwickseal		**Cal carb**	
Drispac	12	**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA	13	**Bioside**	
Sawdust		**Coronox**	
Soda Ash	5	**Mica med**	
Supervision		**Day Cost**	$13,296
Mud Van	1	**Well Cost**	$175,991

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	76.1			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	110.0	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**	25-Nov-09	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	283.0	**Next BOP Test**	491 rotating hrs	**Combined hours**	

Well Control - kPa

Pump	Strokes	Pressure	MACP	Depth
RSPP #1	**40**	**1950**	**5512**	**947**
RSPP #2				

Hole Condition kdaN & Kft/#

Drag up	**1**	**Torque**	
Drag Dn	**1**		
Hook Load	**56**	**4500**	

Total Gas Readings (%)

Background	**0.10**
Connection	**0.10**
Trip	**0.10**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**	**0.50**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out	**4.50**	**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**6.75**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip	**7.50**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.50**	**15. Test BOP & FIT**		**23 Other Kill well**	**3.50**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-05:15 Circulate and increase density, to 1150, Shut in well with annular and check for pressure. 385 kPa.
05:15-10:30 Mix barite and condition mud to 1200kg/m3. Flow check. OK
10:30-14:30 Pull out of the hole for BHA change. Function BR
14:30-18:45 Make up "Stiff" assembly. Run in the hole. Function UPR
18:45-24:00 Drill ahead with bit #5 from 899 to 948m. Function HCR, Fill choke line with RV antifreeze.

No Incident today, 7 hazzards ID'd **Please see report for Nov 12. FIT Details now included.**

Tops:

Prev Cost	**$2,665,485**	**Today**	**$47,247**	**Total Cost**	**$2,712,732**	**Weather:**	-2 deg, fair.
						Mud Type	Polamer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	25		**Date:**	14-Nov-09	
Depth:	1095.0 **mKB**	**Progress:**	147.0	**Drilling:**	21.75	**hrs ROP, m/hr:**	6.76	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Drill ahead							**KB elev:**	61.75 m.
the next da	Drill ahead							**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
5	216	HCD506ZX	7120914	899		49	4.5	3X10, 3X1	60	6	

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String			**Pump Pressure:**	5,889 **kPa**
Liner	(mm)	165	165	**BHA Length:**	245.76 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**		
SPM		80	0	**D.C. Annular Vel.:**	112.0 **m/min**	**D.P Annular Vel.:**	71.0 **m/min**		
Vol.	m^3/min @ 95%	1.3600	0.0000	**Jet Velocity:**	129.0 **m/sec**	**True Hydraulic HP:**	406HP **kW**		

SURVEYS

Depth		Drift	Azimuth	North	East
917.00	teledrift	7			
931.00	teledrift	6.5			
973.00	teledrift	7			
1014.00	teledrift	8			
1082.00	teledrift	8.5			
			teledrift		

MUD

Time	6:51	20:00	
Density	1200	1180	
Vis.	55	61	
pH	10.6	10.0	
Fluid Loss	7.2	7.6	
P.V.	17.0		
Y.P.	13.0		
Gel S.	3.5/4/5		
Filter Ck	1.0		
Solids %	1.3		
Oil			
Ca (mg/l)	320.0		
Cl (mg/l)	7200.0		
MBT	2.5		
Temp	26.2		
XSPolymer	0.7		

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan	3	**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco	1	**Walnut**	
Barite	850	**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**Coronox**	
Soda Ash		**Mica med**	
Supervision		**Day Cost**	$13,296
Mud Van	1	**Well Cost**	$175,991

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	82.2			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.7	**Total hole**	110.0	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**	25-Nov-09	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	284.0	**Next BOP Test**	469 rotating hrs	**Combined hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**1**	**Torque**		**Background**	**0.12**
RSPP #1	**41**	**2400**	**5512**	**1057**	**Drag Dn**	**1**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**57**	**4500**		**Trip**	**0.10**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**21.75**	**10. Survey**	**1.00**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other Kill well**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-24:00 Drill from 948m to 1095m with teledrift surveys. Function Annular, LPR and UPR.

No Incident today, 7 hazzards ID'd **Please see report for Nov 12. FIT Details now included.**

Tops:

Prev Cost	**$2,710,982**	**Today**	**$78,005**	**Total Cost**	**$2,788,987**	**Weather:**	+6, overcast, East wind @ 20
						Mud Type	Polamer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2				**Day:**	26		**Date:**	15-Nov-09
Depth:	1216.0	**mKB**	**Progress:**	121.0	**Drilling:**	21.25	**hrs ROP, m/hr:**	5.69	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Drill ahead								**KB elev:**	61.75 m.
the next da	Drill ahead, Change the bit								**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
5	216	HCD506ZX	7120914	899		317	46.75	3X10, 3X1	130	11	

		Pump 1	Pump 2	Drilling Assembly:	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String				
Model		PZ-11	PZ-11	stab, 9m DC, 209mm string stab, 13m DC, Jar, 102m DC, 81m	**Pump Pressure:**	6,900	**kPa**		
Liner	(mm)	165	165	**BHA Length:**	245.76	**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0	**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		80	0	**D.C. Annular Vel.:**	112.0	**m/min**	**D.P Annular Vel.:**	71.0	**m/min**
Vol.	m^3/min @ 95%	1.3600	0.0000	**Jet Velocity:**	129.0	**m/sec**	**True Hydraulic HP:**	406HP	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
917.00	teledrift	7			
931.00	teledrift	6.5			
973.00	teledrift	7			
1014.00	teledrift	8			
1082.00	teledrift	8.5			
1124.00	teledrift	8.5			
1151.00	teledrift	9.00			
1175.00	Wireline	8.87			

MUD

Time	7;28	20:00
Density	1190	1195
Vis.	65	66
pH	11.5	11.0
Fluid Loss	6.0	6.8
P.V.	26.0	
Y.P.	13.0	
Gel S.	4/5/5.5	
Filter Ck	0.5	
Solids %	1.2	
Oil		
Ca (mg/l)	20.0	
Cl (mg/l)	8700.0	
MBT	2.5	
Temp	28.3	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan	2	**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	1
Kwickseal		**Cal carb**	
Drispac	4	**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA	6	**Bioside**	
Sawdust		**Lignite**	4
Soda Ash	3	**Alcomer**	6
Supervision		**Day Cost**	$13,296
Mud Van	1	**Well Cost**	$175,991

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	94.4			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.7	**Total hole**	110.0	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	32.0	**Next Casing Test**	25-Nov-09	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	284.0	**Next BOP Test**	447rotating hrs	**Combined hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**2**	**Torque**		**Background**	**0.19**
RSPP #1	**40**	**2250**	**5512**	**1200**	**Drag Dn**	**2**			**Connection**	**0.71**
RSPP #2					**Hook Load**	**60**	**6500**		**Trip**	**0.10**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**21.25**	**10. Survey**	**1.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other**	**0.25**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-24:00 Drill from 1095m to 1216m. Function LPR, Annular, and UPR on rig service.

No Incident today, 7 hazzards ID'd

Tops:

Prev Cost	**$2,788,987**	**Today**	**$29,392**	**Total Cost**	**$2,818,379**	**Weather:**	+7, Rain, South wind @ 10
						Mud Type	Polamer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2				**Day:**	27			**Date:**	16-Nov-09	
Depth:	1360.0	**mKB**	**Progress:**	144.0	**Drilling:**	22.00	**hrs ROP, m/hr:**	6.55	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Drill ahead								**KB elev:**	**61.75 m.**	
the next da	Drill ahead								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
5	216	HCD506ZX	7120914	899		461	71.6	3X10, 3X1	115	11	

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String stab, 9m DC, 209mm string stab, 13m DC, Jar, 102m DC, 81m			**Pump Pressure:**	7,900 **kPa**
Liner	(mm)	165	165	**BHA Length:**	245.76 **m**	**Strap:**		**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**		
SPM		80	0	**D.C. Annular Vel.:**	112.0 **m/min**	**D.P Annular Vel.:**	71.0 **m/min**		
Vol.	m^3/min @ 95%	1.3600	0.0000	**Jet Velocity:**	129.0 **m/sec**	**True Hydraulic HP:**	406HP **kW**		

SURVEYS

Depth		Drift	Azimuth	North	East
917.00	teledrift	7			
931.00	teledrift	6.5			
973.00	teledrift	7			
1014.00	teledrift	8			
1082.00	teledrift	8.5			
1124.00	teledrift	8.5			
1151.00	teledrift	9.00			
1175.00	Wireline	8.87			
1244.00	Wireline	9.07			
1323.00	Wireline	8.87			

MUD

Time	6:42	18:00
Density	1200	1200
Vis.	62	65
pH	10.4	10.3
Fluid Loss	5.6	6.0
P.V.	21.0	
Y.P.	17.5	
Gel S.	4/5/5.5	
Filter Ck	0.5	
Solids %	0.1	
Oil	0.000	
Ca (mg/l)	20.0	
Cl (mg/l)	10100.0	
MBT	5.0	
Temp	28.7	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic	2	**Percol**	
Salt		**Sulphamic**	
Kelzan	3	**T-352**	1
Cello		**Defoamer**	
Bicarb		**2K-7**	1
Kwickseal		**Cal carb**	
Drispac	1	**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA	10	**Bioside**	
Sawdust		**Lignite**	1
Soda Ash	5	**Alcomer**	4
Supervision		**Day Cost**	$5,411
Mud Van	1	**Well Cost**	$220,017

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	98.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.7	**Total hole**	110.0	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	0.7	**Total surf.**	32.0	**Next Casing Test**	25-Nov-09	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	291.8	**Next BOP Test**	425rotating hrs	**Combined hours**	

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**2**	**Torque**		**Background**	**0.43**
RSPP #1	**40**	**2250**	**5512**	**1200**	**Drag Dn**	**2**			**Connection**	**2.10**
RSPP #2					**Hook Load**	**60**	**6500**		**Trip**	**0.10**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**22.00**	**10. Survey**	**0.75**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-24:00 Drill from 1216m to 1360m. Wire line surveys at 1244, and 1323.Function annular, LPR, and UPR.

No Incident today, 8 hazzards ID'd

Tops:

Prev Cost	**$2,819,499**	**Today**	**$61,278**	**Total Cost**	**$2,880,777**	**Weather:**	+3, West wind @ 15
						Mud Type	Polamer
Foreman	**Don Campbell**		**Rig Phone**		**709-649-7106**	**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	28			**Date:**	17-Nov-09		
Depth:	1516.0	**mKB**	**Progress:**	156.0	**Drilling:**	22.00	**hrs ROP, m/hr:**	7.09	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Drill ahead								**KB elev:**	**61.75 m.**	
the next da	Drill ahead								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
5	216	HCD506ZX	7120914	899		617	95.6	3X10, 3X1	115	11	

		Pump 1	Pump 2	Drilling Assembly:	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String			
Model		PZ-11	PZ-11	stab, 9m DC, 209mm string stab, 13m DC, Jar, 102m DC, 81m	**Pump Pressure:**	7,900	**kPa**	
Liner	(mm)	165	165	**BHA Length:**	245.76 **m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**	
SPM		80	0	**D.C. Annular Vel.:**	112.0 **m/min**	**D.P Annular Vel.:**	71.0 **m/min**	
Vol.	m^3/min @ 95%	1.3600	0.0000	**Jet Velocity:**	129.0 **m/sec**	**True Hydraulic HP:**	406HP **kW**	

SURVEYS

Depth		Drift	Azimuth	North	East
917.00	teledrift	7			
931.00	teledrift	6.5			
973.00	teledrift	7			
1014.00	teledrift	8			
1082.00	teledrift	8.5			
1124.00	teledrift	8.5			
1151.00	teledrift	9.00			
1175.00	Wireline	8.87			
1244.00	Wireline	9.07			
1323.00	Wireline	8.87			
1452.00	teledrift	9			

MUD

Time	6:23	20:00
Density	1190	1
Vis.	56	61
pH	10.8	10.5
Fluid Loss	5.4	6.0
P.V.	20.0	
Y.P.	14.0	
Gel S.	3/4/5	
Filter Ck	0.5	
Solids %	1.2	
Oil	0.000	
Ca (mg/l)	360.0	
Cl (mg/l)	13500.0	
MBT	5.0	
Temp	28.1	
XSPolymer	0.9	

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	1
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrate**	1
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust	40	**Lignite**	
Soda Ash		**Alcomer**	5
Supervision		**Day Cost**	$5,411
Mud Van	1	**Well Cost**	$220,017

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	105.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	3.2	**Total hole**	113.2	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	10.0	**Total surf.**	42.0	**Next Casing Test**	25-Nov-09	**Flow Rate,m3/min**	
Today total losses	13.2	**Cumulative**	305.0	**Next BOP Test**	403rotating hrs	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**2**	**Torque**		**Background**	**0.11**
RSPP #1	**40**	**2250**	**5512**	**1200**	**Drag Dn**	**2**			**Connection**	**0.89**
RSPP #2					**Hook Load**	**60**	**6500**		**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**22.00**	**10. Survey**	**0.75**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-24:00 Drill from 1360m to 1516m. Wire line surveys at 1341, and teledrift at 1452m. Function annular, LPR, and UPR.

No Incident today, 8 hazzards ID'd

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$2,880,777**	**Today**	**$54,231**	**Total Cost**	**$2,935,008**	**Weather:**	-2, overcast, West wind @ 10
						Mud Type	Polymer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	29		**Date:**	18-Nov-09	
Depth:	1689.0 **mKB**	**Progress:**	173.0	**Drilling:**	21.75	**hrs ROP, m/hr:**	7.95	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Drill ahead							**KB elev:**	61.75 m.
the next da	Drill ahead Change bit.							**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
5	216	HCD506ZX	7120914	899		790	112.5	3X10, 3X1	115	11	

		Pump 1	Pump 2	Drilling Assembly:	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String			
Model		PZ-11	PZ-11	stab, 9m DC, 209mm string stab, 13m DC, Jar, 102m DC, 81m	**Pump Pressure:**	7,900	**kPa**	
Liner	(mm)	165	165	**BHA Length:**	245.76 **m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**	
SPM		90	0	**D.C. Annular Vel.:**	126.0 **m/min**	**D.P Annular Vel.:**	79.0 **m/min**	
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	145.0 **m/sec**	**True Hydraulic HP:**	513.0 **kW**	

SURVEYS

Depth		Drift	Azimuth	North	East
917.00	teledrift	7			
931.00	teledrift	6.5			
973.00	teledrift	7			
1014.00	teledrift	8			
1082.00	teledrift	8.5			
1124.00	teledrift	8.5			
1151.00	teledrift	9.00			
1175.00	Wireline	8.87			
1244.00	Wireline	9.07			
1323.00	Wireline	8.87			
1452.00	teledrift	9			
1544	Wireline	9.28			

MUD

Time	6:40	20:00	
Density	1205	1200	
Vis.	57	62	
pH	10.7	10.5	
Fluid Loss	5.2	6.0	
P.V.	21.0		
Y.P.	14.0		
Gel S.	3/4/5		
Filter Ck	0.5		
Solids %	1.3		
Oil	0.000		
Ca (mg/l)	440.0		
Cl (mg/l)	13500.0		
MBT	7.5		
Temp	29.1		
XSPolymer	1.2		

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Salt		**Sulphamic**	
Kelzan	4	**T-352**	2
Cello		**Defoamer**	
Bicarb		**2K-7**	
Kwickseal		**Cal carb**	
Drispac	3	**Dyna det**	
Desco		**Walnut**	
Barite	40	**Lime Hydrate**	1
Fiberseal		**Dyna fiber**	
PHPA	3	**Bioside**	
Sawdust	29	**Lignite**	3
Soda Ash	4	**Alcomer**	7
Supervision		**Day Cost**	$6,408
Mud Van	1	**Well Cost**	$220,017

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	103.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	2.3	**Total hole**	113.2	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	5.0	**Total surf.**	42.0	**Next Casing Test**	381rotating hrs	**Flow Rate,m3/min**	
Today total losses	7.3	**Cumulative**	312.0	**Next BOP Test**	25-Nov-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.29**
RSPP #1	**35**	**2120**	**5512**	**1551**	**Drag Dn**	**5**			**Connection**	**0.46**
RSPP #2					**Hook Load**	**71**	**10500**		**Trip**	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**21.75**	**10. Survey**	**0.75**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-24:00 Drill from 1516m to 1689m. Wire line surveys at 1544, Function annular, HCR and Manual choke line, BOP drill. Well secure 90 sec.
Function UPR, and LPR.

No Incident today, 8 hazzards ID'd

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$2,935,008**	**Today**	**$35,243**	**Total Cost**	**$2,970,251**	**Weather:**	+4, Clear, West wind @ 15
						Mud Type	Polymer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**30**			**Date:**	**19-Nov-09**	
Depth:	1753.0	**mKB**	**Progress:**	64.0	**Drilling:**	6.75	**hrs ROP, m/hr:**	9.48	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Drill ahead								**KB elev:**	**61.75 m.**	
the next da	Drill ahead Change bit.								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
5	216	HCD506ZX	7120914	899	**1750**	851	117	3X10, 3X1	115	11	**8-3-CR-C-X-0-PN-PR**
6RR	216	GX-39DX	6065996	1750		3	1.5	3 X 12	70	16	

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String				
Liner	(mm)	165	165	**BHA Length:**	245.76	**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0	**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		90	0	**D.C. Annular Vel.:**	126.0	**m/min**	**D.P Annular Vel.:**	79.0	**m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	145.0	**m/sec**	**True Hydraulic HP:**	513.0	**kW**

Pump Pressure: 7,900 **kPa**

SURVEYS

Depth		Drift	Azimuth	North	East
917.00	teledrift	7			
931.00	teledrift	6.5			
973.00	teledrift	7			
1014.00	teledrift	8			
1082.00	teledrift	8.5			
1124.00	teledrift	8.5			
1151.00	teledrift	9.00			
1175.00	Wireline	8.87			
1244.00	Wireline	9.07			
1323.00	Wireline	8.87			
1452.00	teledrift	9			
1544.00	Wireline	9.28			
1714.00	teledrift	8.5			
1737.00	Totco	8.85			

MUD

Time	6:36	23;30
Density	1205	1230
Vis.	59	66
pH	10.0	10.0
Fluid Loss	6.4	9.0
P.V.	23.0	
Y.P.	14.0	
Gel S.	3.5/5/6	
Filter Ck	0.5	
Solids %	1.3	
Oil		
Ca (mg/l)	720.0	
Cl (mg/l)	17700.0	
MBT	7.5	
Temp	21.3	
XSPolymer	1.2	

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Salt		**Sulphamic**	
Kelzan	2	**T-352**	
Cello		**Defoamer**	1
Bicarb		**2K-7**	2
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite	45	**Lime Hydrate**	1
Fiberseal		**Dyna fiber**	
PHPA	4	**Bioside**	
Sawdust	22	**Lignite**	
Soda Ash	3	**Alcomer**	3
Supervision		**Day Cost**	$4,422
Mud Van	1	**Well Cost**	$231,733

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	110.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	113.2	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	42.0	**Next Casing Test**	374rotating hrs	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	312.0	**Next BOP Test**	25-Nov-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.20**
RSPP #1	**35**	**2560**	**5338**	**1750**	**Drag Dn**	**5**			**Connection**	**0.46**
RSPP #2					**Hook Load**	**71**	**4600**		**Trip**	**1.50**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**6.75**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**2.00**	**13. Pump Out Cement**		**21. Safety Meeting**	**1.00**
6. Trip	**13.25**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-06:15 Drill from 1689m to 1750m. Teledrift survey at 1714m. Function annular. ROP slowed to 0.1m/hr, Circulate out sample.

06:15-11:45 Drop totco survey @ 1737 , Pull out of the hole to 1436m. Calculated hole fill 2.2, Measured 1.9m3. Run back to bottom, circulate increase density to 1220

11:45-23:30 Pull out of the hole, change bit. BOP drill while tripping. 60 sec to secure well. Function Blind rams, Run in the hole.

23:30-24:00 Drill from 1750 to 1753m.

No Incident today, 7 hazzards ID'd

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$2,970,251**	**Today**	**$48,104**	**Total Cost**	**$3,018,355**	**Weather:**	-3, Clear, East wind @ 10
						Mud Type	Polymer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	31		**Date:**	20-Nov-09	
Depth:	1808.0 mKB	**Progress:**	55.0	**Drilling:**	11.25 hrs	**ROP, m/hr:**	4.89	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Drill ahead							**KB elev:**	61.75 m.
the next da	Drill ahead							**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
6RR	216	GX-39DX	6065996	1750	**1776**	26	9	3 X 12	70	16	**1-1-NO-A-E-0-NO-PR**
7	216	HC505ZX	7174926	1776				4X10 3X11			

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String				
Liner	(mm)	165	165	stab, 9m DC, 209mm string stab, 13m DC, Jar, 102m DC, 81m			**Pump Pressure:**	9,300	**kPa**
Stroke	(mm)	279	279	**BHA Length:**	245.76	**m**	**Strap:**	**Board:**	
SPM		90	0	**Drill Collar O.D.**	165.0	**mm**	**Drill Pipe O.D.**	127.0	**mm**
Vol.	m^3/min @ 95%	1.5300	0.0000	**D.C. Annular Vel.:**	99.0	**m/min**	**D.P Annular Vel.:**	63.0	**m/min**
				Jet Velocity:	62.0	**m/sec**	**True Hydraulic HP:**	85HP	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
917.00	teledrift	7			
931.00	teledrift	6.5			
973.00	teledrift	7			
1014.00	teledrift	8			
1082.00	teledrift	8.5			
1124.00	teledrift	8.5			
1151.00	teledrift	9.00			
1175.00	Wireline	8.87			
1244.00	Wireline	9.07			
1323.00	Wireline	8.87			
1452.00	teledrift	9			
1544.00	Wireline	9.28			
1714.00	teledrift	8.5			
1737.00	Totco	8.85			

MUD

Time	6:45	23:00
Density	1240	1240
Vis.	56	61
pH	11.7	10.0
Fluid Loss	6.0	6.0
P.V.	23.0	
Y.P.	12.5	
Gel S.	3/4.5/6	
Filter Ck	0.5	
Solids %	1.5	
Oil		
Ca (mg/l)	280.0	
Cl (mg/l)	15300.0	
MBT	7.5	
Temp	24.1	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Salt		**Sulphamic**	
Kelzan	1	**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	
Kwickseal		**Cal carb**	
Drispac	3	**Dyna det**	
Desco		**Walnut**	
Barite	130	**Lime Hydrate**	1
Fiberseal		**Dyna fiber**	
PHPA	6	**Bioside**	
Sawdust	18	**Lignite**	3
Soda Ash	4	**Alcomer**	
Supervision		**Day Cost**	$7,608
Mud Van	1	**Well Cost**	$239,341

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	1.3	**Total hole**	113.2	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	0.6	**Total surf.**	42.0	**Next Casing Test**	363rotating hrs	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	314.2	**Next BOP Test**	25-Nov-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.20**
RSPP #1	**45**	**3365**	**5165**	**1798**	**Drag Dn**	**5**			**Connection**	**0.35**
RSPP #2					**Hook Load**	**71**	**4600**		**Trip**	**8.39**

1. Rig up/Out		**9. Slip & Cut**	**1.00**	**17. Weld bowl**	
2. Drill	**11.25**	**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**0.75**	**13. Pump Out Cement**		**21. Safety Meeting**	**1.00**
6. Trip	**8.50**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other**	
8. Rig Repair	**0.75**	**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-08:45 Drill from 1753m to 1776m. Function LPR and Annular. ROP 2.9m/hr, Circulate out sample.
08:45-13:45 Pull out of the hole to change bit. No tight spots. Function Blind rams.
13:45-19:15 Run in the hole. Slip and cut. BOP drill. Well secure 90 sec
19:15-20:00 Change out swivel packing
20:00-20:15 Finish RIH.
20:15-24:00 Drill from 1776 to 1808m. Trip gas 8.39%

No Incident today,8 hazzards ID'd

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,018,355**	**Today**	**$43,592**	**Total Cost**	**$3,061,947**	**Weather:**	0, rain, East wind @ 10
						Mud Type	Polymer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**32**			**Date:**	**21-Nov-09**	
Depth:	1921.0	**mKB**	**Progress:**	113.0	**Drilling:**	22.40	**hrs**	**ROP, m/hr:**	5.04	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Drill ahead									**KB elev:**	**61.75 m.**
the next da	Drill ahead									**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
7	216	HC506ZX	7114926	1776		145	26.25	4X11, 3X1	70	15	

		Pump 1	Pump 2	Drilling Assembly:	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String			
Model		PZ-11	PZ-11	stab, 9m DC, 209mm string stab, 13m DC, Jar, 102m DC, 81m	**Pump Pressure:**	9,300	**kPa**	
Liner	(mm)	165	165	**BHA Length:**	245.76 **m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**	
SPM		90	0	**D.C. Annular Vel.:**	99.0 **m/min**	**D.P Annular Vel.:**	63.0 **m/min**	
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	62.0 **m/sec**	**True Hydraulic HP:**	85HP **kW**	

SURVEYS

Depth		Drift	Azimuth	North	East
917.00	teledrift	7			
931.00	teledrift	6.5			
973.00	teledrift	7			
1014.00	teledrift	8			
1082.00	teledrift	8.5			
1124.00	teledrift	8.5			
1151.00	teledrift	9.00			
1175.00	Wireline	8.87			
1244.00	Wireline	9.07			
1323.00	Wireline	8.87			
1452.00	teledrift	9			
1544.00	Wireline	9.28			
1714.00	teledrift	8.5			
1737.00	Totco	8.85			
1836.00	teledrift	8.5			

MUD

Time	6:28	20:00
Density	1235	1220
Vis.	57	65
pH	11.5	10.5
Fluid Loss	5.6	5.8
P.V.	24.0	
Y.P.	13.0	
Gel S.	2.5/4/5	
Filter Ck	1.0	
Solids %	8.7	
Oil		
Ca (mg/l)	520.0	
Cl (mg/l)	16700.0	
MBT	7.5	
Temp	28.3	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic	3	**Percol**	
Salt		**Sulphamic**	
Kelzan	1	**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	1
Kwickseal		**Cal carb**	
Drispac	2	**Dyna det**	
Desco		**Walnut**	
Barite	40	**Lime Hydrate**	3
Fiberseal		**Dyna fiber**	
PHPA	2	**Bioside**	
Sawdust		**Lignite**	2
Soda Ash		**Alcomer**	
Supervision		**Day Cost**	$2,967
Mud Van	1	**Well Cost**	$242,308

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	1.1	**Total hole**	113.2	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	4.0	**Total surf.**	42.0	**Next Casing Test**	341rotating hrs	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	319.0	**Next BOP Test**	25-Nov-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.20**
RSPP #1	**45**	**2600**	**5165**	**1908**	**Drag Dn**	**6**			**Connection**	**0.35**
RSPP #2					**Hook Load**	**79**	**10500**		**Trip**	**8.39**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**22.50**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-24:00 Drill from 1808m to 1921m. Function LPR and Annular. ROP 2.9m/hr, Teledrift survey @ 1836

No Incident today,7 hazzards ID'd

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,061,947**	**Today**	**$29,692**	**Total Cost**	**$3,091,639**	**Weather:**	0, snow, West wind @ 10
						Mud Type	Polymer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	33		**Date:**	22-Nov-09	
Depth:	1949.0 **mKB**	**Progress:**	28.0	**Drilling:**	14.00	**hrs ROP, m/hr:**	2.00	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Drill ahead							**KB elev:**	61.75 m.
the next da	Drill ahead ToTD							**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
7	216	HC506ZX	7114926	1776	**1935**	159	32.75	4X11, 3X1	70	15	**1-3-CT-T-X-0-CT-PR**
8RR	216	GX-30DX	6065996	1935		7.5	7.5	3X12	60	18	

		Pump 1	Pump 2					
Model		PZ-11	PZ-11	**Drilling Assembly:**	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String stab, 9m DC, 209mm string stab, 13m DC, Jar, 102m DC, 81m	**Pump Pressure:**	9,300	**kPa**
Liner	(mm)	165	165	**BHA Length:**	245.76 **m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**	
SPM		90	0	**D.C. Annular Vel.:**	99.0 **m/min**	**D.P Annular Vel.:**	63.0 **m/min**	
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	117.0 **m/sec**	**True Hydraulic HP:**	310.0 **kW**	

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			

MUD

Time	7:07	20:00	
Density	1220	1220	
Vis.	63	66	
pH	11.5	11.0	
Fluid Loss	5.2	5.3	
P.V.	25.0		
Y.P.	15.0		
Gel S.	3/5.5/7		
Filter Ck	0.5		
Solids %	8.0		
Oil			
Ca (mg/l)	280.0		
Cl (mg/l)	15300.0		
MBT	7.5		
Temp	25.8		
XSPolymer	1.1		

MUD ADDITIVES

Gel		**CaC03**	
Caustic	2	**Percol**	
Salt		**Sulphamic**	
Kelzan	8	**T-352**	
Cello		**Defoamer**	1
Bicarb		**2K-7**	2
Kwickseal		**Cal carb**	
Drispac	4	**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrate**	2
Fiberseal		**Dyna fiber**	
PHPA	4	**Bioside**	
Sawdust	2	**Lignite**	4
Soda Ash	4	**Alcomer**	
Supervision		**Day Cost**	$6,018
Mud Van	1	**Well Cost**	$248,326

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	120.5			**Last Casing Test**	11-Nov-09	**Underflow Density**	1860.0
Today losses down hole	0.0	**Total hole**	113.2	**Last BOP Test**	11-Nov-09	**Overflow Density**	1180
Today losses at surface	0.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	400.0
Today total losses	0.0	**Cumulative**	328.0	**Next BOP Test**	25-Nov-09	**Combined hours**	1.5

Well Control - kPa

Pump	Strokes	Pressure	MACP	Depth
RSPP #1	**45**	**4775**	**5165**	**1949**
RSPP #2				

Hole Condition kdaN & Kft/#			
Drag up	**5**	**Torque**	
Drag Dn	**6**		
Hook Load	**79**	**5200**	

Total Gas Readings (%)	
Background	**0.10**
Connection	**0.10**
Trip	**2.30**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**9.50**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**4.50**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip	**5.25**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**	**3.00**	**23 Other**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-07:15 Drill from 1921m to 1935 m.Rop slowed to 1 m/hr. Function test Annular.Tele drift survey @ 1919 m.
07:15-11:45 Pull out of hole to change the bit.Function blind rams.
11:45-16:00 Run in hole
16:00-24:00 Drill ahead with bit 8RR. Function LPR.

No Incident today,8 hazzards ID'd

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls @ 898m, Baswement @1930m

Prev Cost	**$3,091,639**	**Today**	**$30,785**	**Total Cost**	**$3,122,424**	**Weather:**	-3, light clear, east wind @ 10
						Mud Type	Polymer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	34			**Date:**	23-Nov-09		
Depth:	1965.0	**mKB**	**Progress:**	16.0	**Drilling:**	9.50	**hrs ROP, m/hr:**	1.68	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Wait on Wire line loggers								**KB elev:**	**61.75 m.**	
the next da	Run Wireline logs								**KB - GL**	**6.30 m.**	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
8RR	216	GX-30DX	6055996	1935	**1965**	30	17	3X12	60	18	**1-2-WT-I-E-0-NO-TD**

		Pump 1	Pump 2						
Model		PZ-11	PZ-11	**Drilling Assembly:**	216mm bit, 214mm NBS, 212mm String stab, teledrift sub, Ponn DC, 212mm String			**Pump Pressure:**	9,300 **kPa**
Liner	(mm)	165	165	stab, 9m DC, 209mm string stab, 13m DC, Jar, 102m DC, 81m					
Stroke	(mm)	279	279	**BHA Length:**	245.76 **m**	**Strap:**		**Board:**	
SPM		90	0	**Drill Collar O.D.**	165.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**		
Vol.	m^3/min @ 95%	1.5300	0.0000	**D.C. Annular Vel.:**	99.0 **m/min**	**D.P Annular Vel.:**	63.0 **m/min**		
				Jet Velocity:	117.0 **m/sec**	**True Hydraulic HP:**	310.0 **kW**		

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			
1946.00	Teledrift	8.5			

MUD

Time	6:56	
Density	1220	
Vis.	60	
pH	10.9	
Fluid Loss	5.6	
P.V.	24.0	
Y.P.	15.0	
Gel S.	3.5/5/7	
Filter Ck	0.5	
Solids %	8.0	
Oil		
Ca (mg/l)	200.0	
Cl (mg/l)	15500.0	
MBT	7.5	
Temp	31.1	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Salt		**Sulphamic**	
Kelzan	9	**T-352**	
Cello		**Defoamer**	1
Bicarb		**2K-7**	2
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite	90	**Lime Hydrate**	1
Fiberseal		**Dyna fiber**	
PHPA	5	**Bioside**	
Sawdust		**Lignite**	2
Soda Ash	7	**Alcomer**	
Supervision		**Day Cost**	$9,163
Mud Van	1	**Well Cost**	$257,490

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	122.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	3.9	**Total hole**	113.2	**Last BOP Test**	11-Nov-09	**Overflow Density**	
Today losses at surface	5.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	8.9	**Cumulative**	328.0	**Next BOP Test**	25-Nov-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**2.30**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill	**14.00**	**10. Survey**	**0.25**	**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**0.75**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip	**7.75**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP & FIT**		**23 Other**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-10:15 Drill from 1946m to TD @ 1965 m. Function UPR.
10:15-15:00 Circulate,increase mud density to 1240 kg/m3.
15:00-20:45 Pull out of hole,lay out stabilizers.teledrift and short DC's
20:45-24:00 Pull wear bushing,set test plug,Press test BOP components 1000 kpa and 10000 kpa 10 min each. OK

No Incident today,8 hazzards ID'd

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,122,424**	**Today**	**$33,530**	**Total Cost**	**$3,155,954**	**Weather:**	+1, light cloud, east wind @ 10
						Mud Type	Polymer
Foreman	**Don Campbell**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**35**		**Date:**	**24-Nov-09**
Depth:	1965.0 **mKB**	**Progress:**		**Drilling:**	**hrs**	**ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Wait on Wire line loggers							**KB elev:**	**63.40 m.**
the next da	Run Wireline logs							**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
8RR	216	GX-30DX	6055996	1935	**1965**	30	17	3X12	60	18	**1-2-WT-I-E-0-NO-TD**

		Pump 1	Pump 2	Drilling Assembly:	216mm bit,bit sub,3 165 mm DC, Jars, 7 165 mm DC. 6 HWDP.			
Model		PZ-11	PZ-11				**Pump Pressure:**	9,300 **kPa**
Liner	(mm)	165	165	**BHA Length:**	163.00 **m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0 **mm**	**Drill Pipe O.D.**	127.0 **mm**	
SPM		90	0	**D.C. Annular Vel.:**	99.0 **m/min**	**D.P Annular Vel.:**	63.0 **m/min**	
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	117.0 **m/sec**	**True Hydraulic HP:**	310.0 **kW**	

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			

MUD

Time	6:56	
Density	1260	
Vis.	80	
pH	10.9	
Fluid Loss	5.6	
P.V.	24.0	
Y.P.	20.0	
Gel S.	3.5/5/7	
Filter Ck	0.5	
Solids %	8.0	
Oil		
Ca (mg/l)	200.0	
Cl (mg/l)	15500.0	
MBT	7.5	
Temp	31.1	
XSPolymer	1.1	

MUD ADDITIVES

Gel	35	**CaC03**	
Caustic	1	**Percol**	
Salt		**Sulphamic**	
Kelzan	12	**T-352**	
Cello		**Defoamer**	1
Bicarb	7	**2K-7**	2
Kwickseal		**Cal carb**	
Drispac	2	**Dyna det**	
Desco		**Walnut**	
Barite	144	**Lime Hydrate**	1
Fiberseal		**Dyna fiber**	5
PHPA	5	**Bioside**	
Sawdust		**Lignite**	2
Soda Ash	7	**Alcomer**	
Supervision		**Day Cost**	$10,804
Mud Van	1	**Well Cost**	$268,292

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	122.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	3.9	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	5.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	8.9	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**2.30**

1. Rig up/Out		**9. Slip & Cut**	**1.00**	**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**0.75**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip	**2.00**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP**	**7.25**	**23 Other**	**11.50**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-03:00 Continued to test BOP's
03:00-04:45 Run in hole to 884 m.
04:45-12:30 Pressure test choke manifold and function test accumulator.
12:30-13:30 Slip and cut 7.5 m. drill line
13:30-23:45 Wait on loggers.
23:45-24:00 Run in hole for wiper trip
4 function accumulator test. Start pressure 20000 kpa.. Total pressure loss 10000 kpa. Pressure left on accumulator 10500 kpa.
Time to recharge 1 min, 34 secs..
Pressure test all valves on choke manifold 1500 kpa low - 1000 kpa high 10 min.
Pressure test blind rams - inside HCR. Inside kill valve. Lower pipe rams. Upper pipe rams,manuel HCR valve, outside kill line valve.
Annular preventor choke line.Picked up kelly and pressure tested upper and lower kelly cock valves All test 1400 kpa low - 10000 kpa high - 10 min.
No Incident today,2 hazzards ID'd

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,156,454**	**Today**	**$37,879**	**Total Cost**	**$3,194,333**	**Weather:**	+1, light cloud.
						Mud Type	Polymer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	36		**Date:**	25-Nov-09	
Depth:	1965.0 mKB	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Run Wire line logs							**KB elev:**	63.40 m.
the next da	Run Wireline logs							**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
8RR	216	GX-30DX	6055996	1935	**1965**	30	17	3X12	60	18	**1-2-WT-I-E-0-NO-TD**

		Pump 1	Pump 2	Drilling Assembly:	216mm bit,bit sub,3 165 mm DC, Jars, 7 165 mm DC. 6 HWDP.				
Model		PZ-11	PZ-11				**Pump Pressure:**	9,300	**kPa**
Liner	(mm)	165	165	**BHA Length:**	163.00	**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0	**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		90	0	**D.C. Annular Vel.:**	99.0	**m/min**	**D.P Annular Vel.:**	63.0	**m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	117.0	**m/sec**	**True Hydraulic HP:**	310.0	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			

MUD

Time	6:56	
Density	1260	
Vis.	80	
pH	10.9	
Fluid Loss	5.6	
P.V.	24.0	
Y.P.	20.0	
Gel S.	3.5/5/7	
Filter Ck	0.5	
Solids %	8.0	
Oil		
Ca (mg/l)	200.0	
Cl (mg/l)	15500.0	
MBT	7.5	
Temp	31.1	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
Bicarb	7	**2K-7**	
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**Lignite**	
Soda Ash		**Alcomer**	
Supervision		**Day Cost**	$324
Mud Van	1	**Well Cost**	$268,818

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	122.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	3.9	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	5.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	8.9	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**2.30**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**	**13.25**	**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**0.75**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip	**6.75**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.25**	**15. Test BOP**		**23 Other**	**2.50**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-08:00 Continued to run in hole to bottom,circulate hole clean,and pull out of hole.
08:00-10:30 Wait on wire line loggers.
10:30-17:45 Rig in wireline unit and run 1GR-CN-ZDL-HDL-CAL logs.
17:45-24:00 Run DSL- MAC logs.

No incidents reported

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,194,333**	**Today**	**$27,230**	**Total Cost**	**$3,221,563**	**Weather:**	+5, Sunny.
						Mud Type	Polymer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	37			**Date:**	26-Nov-09		
Depth:	1965.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11		
Operation @ 0800 hrs:	Run Wire line logs							**KB elev:**	63.40 m.		
the next da	Run Wireline logs VSP							**KB - GL**	6.30 m.		

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
8RR	216	GX-30DX	6055996	1935	**1965**	30	17	3X12	60	18	**1-2-WT-I-E-0-NO-TD**

		Pump 1	Pump 2	Drilling Assembly:	216mm bit,bit sub,3 165 mm DC, Jars, 7 165 mm DC. 6 HWDP.				
Model		PZ-11	PZ-11				**Pump Pressure:**	9,300	**kPa**
Liner	(mm)	165	165	**BHA Length:**	163.00 **m**	**Strap:**	**Board:**		
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0 **mm**	**Drill Pipe O.D.**	127.0	**mm**	
SPM		90	0	**D.C. Annular Vel.:**	99.0 **m/min**	**D.P Annular Vel.:**	63.0	**m/min**	
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	117.0 **m/sec**	**True Hydraulic HP:**	310.0	**kW**	

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			
1946.00	Teledrift	8.5			

MUD

Time	6:56	
Density	1255	
Vis.	84	
pH	11.4	
Fluid Loss	5.0	
P.V.	29.0	
Y.P.	20.0	
Gel S.	3.5/5/7	
Filter Ck	0.5	
Solids %	8.0	
Oil		
Ca (mg/l)	200.0	
Cl (mg/l)	15500.0	
MBT	7.5	
Temp	16.0	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite	38	**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**Lignite**	
Soda Ash		**Alcomer**	
Supervision		**Day Cost**	$1,483
Mud Van	1	**Well Cost**	$270,101

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	3.9	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	5.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	8.9	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**2.30**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**	**23.75**	**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.25**
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service		**15. Test BOP**		**23 Other**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-24:00 Run wireline logs.# 3 Star-Gamma. # 4 RCOR sidewall cores.

No incidents reported

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,221,563**	**Today**	**$27,200**	**Total Cost**	**$3,248,763**	**Weather:**	+2, Cloud
						Mud Type	Polymer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	38			**Date:**	27-Nov-09
Depth:	1965.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Circulate							**KB elev:**	63.40 m.
the next da	Pooh Run DST.							**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R
8RR	216	GX-30DX	6055996	1935	**1965**	30	17	3X12	60	18	**1-2-WT-I-E-0-NO-TD**

		Pump 1	Pump 2	Drilling Assembly:	216mm bit,bit sub,3 165 mm DC, Jars, 7 165 mm DC. 6 HWDP.				
Model		PZ-11	PZ-11				**Pump Pressure:**	9,300	**kPa**
Liner	(mm)	165	165	**BHA Length:**	163.00	**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	165.0	**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		90	0	**D.C. Annular Vel.:**	99.0	**m/min**	**D.P Annular Vel.:**	63.0	**m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	117.0	**m/sec**	**True Hydraulic HP:**	310.0	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			
1946.00	Teledrift	8.5			

MUD

Time	6:56	
Density	1255	
Vis.	83	
pH	11.3	
Fluid Loss	5.0	
P.V.	30.0	
Y.P.	19.5	
Gel S.	3.5/5/7	
Filter Ck	0.5	
Solids %	8.0	
Oil		
Ca (mg/l)	240.0	
Cl (mg/l)	5200.0	
MBT	7.5	
Temp	16.0	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**Lignite**	
Soda Ash		**Alcomer**	
Supervision		**Day Cost**	$180
Mud Van	1	**Well Cost**	$270,281

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	3.9	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	5.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	8.9	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**0.50**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**	**23.75**	**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.25**
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service		**15. Test BOP**		**23 Other**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-24:00 Run wireline logs.# 5 FMT. # 6 VSP

No incidents reported

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,248,763**	**Today**	**$30,757**	**Total Cost**	**$3,279,520**	**Weather:**	+2, Cloud
						Mud Type	Polymer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**39**		**Date:**	**28-Nov-09**	
Depth:	1965.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	POOH with DST#1							**KB elev:**	**63.40 m.**
the next da	POOH / DST#1 Rig/Run DST #2							**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2	Drilling Assembly:					
Model		PZ-11	PZ-11				**Pump Pressure:**		**kPa**
Liner	(mm)	165	165	**BHA Length:**		**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**		**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		90	0	**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**	63.0	**m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**		**m/sec**	**True Hydraulic HP:**	310.0	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			
1946.00	Teledrift	8.5			

MUD

Time	6:56	
Density	1260	
Vis.	71	
pH	11.3	
Fluid Loss	5.4	
P.V.	28.0	
Y.P.	21.0	
Gel S.	4/7/8.5	
Filter Ck	0.5	
Solids %	9.5	
Oil		
Ca (mg/l)	220.0	
Cl (mg/l)	5200.0	
MBT	7.5	
Temp	20.8	
XSPolymer	1.1	

MUD ADDITIVES

Gel	10	**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrate**	5
Fiberseal	33	**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**Lignite**	
Soda Ash		**Alcomer**	
Supervision		**Day Cost**	$3,713
Mud Van	1	**Well Cost**	$273,245

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa				
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**
RSPP #1	**45**	**4775**	**5165**	**1949**
RSPP #2				

Hole Condition kdaN & Kft/#			
Drag up	**5**	**Torque**	
Drag Dn	**6**		
Hook Load	**79**	**5200**	

Total Gas Readings (%)	
Background	**0.10**
Connection	**0.10**
Trip	**0.10**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**	**2.00**	**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**3.00**	**13. Pump Out Cement**		**21. Safety Meeting**	**1.00**
6. Trip	**11.25**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP**		**23 DST**	**6.00**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-02:00 Complete Logging Run #6 VSP
02:00-13:00 Clean out trip prior to DST
13:00-24:00 DST # 1 (1555-1574 m)

No incidents reported

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,279,745**	**Today**	**$30,130**	**Total Cost**	**$3,309,875**	**Weather:**	+2, Cloud/Rain
						Mud Type	Polymer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**40**		**Date:**	**29-Nov-09**	
Depth:	1965.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	POOH with DST# 2							**KB elev:**	**63.40 m.**
the next da	POOH / DST# 2 Rig/Run DST # 3							**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2	Drilling Assembly:					
Model		PZ-11	PZ-11				**Pump Pressure:**		**kPa**
Liner	(mm)	165	165	**BHA Length:**		**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**		**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		90	0	**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**	63.0	**m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**		**m/sec**	**True Hydraulic HP:**	310.0	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			
1946.00	Teledrift	8.5			

MUD

Time	6:56	
Density	1265	
Vis.	69	
pH	11.3	
Fluid Loss	5.4	
P.V.	27.0	
Y.P.	20.5	
Gel S.	4/7/8.5	
Filter Ck	0.5	
Solids %	1.0	
Oil		
Ca (mg/l)	220.0	
Cl (mg/l)	15900.0	
MBT	7.5	
Temp	23.0	
XSPolymer	1.1	

MUD ADDITIVES

Gel	10	**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	1
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite	61	**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**Lignite**	
Soda Ash		**Alcomer**	
Supervision		**Day Cost**	$2,434
Mud Van	1	**Well Cost**	$275,679

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**0.10**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip	**7.50**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP**		**23 DST**	**15.00**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-07:00 DST #1 (Final Shut In)
07:00-13:00 POOH and recover fluid / samples
13:00-19:15 DST #2 Make up interval and RIH
19:15-24:00 DST # 2

No incidents reported

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,309,875**	**Today**	**$228,555**	**Total Cost**	**$3,538,430**	**Weather:**	+2, Cloudy
						Mud Type	Polymer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**41**		**Date:**	**30-Nov-09**	
Depth:	1965.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	POOH with DST# 3							**KB elev:**	**63.40 m.**
the next da	POOH / DST# 3 Rig/Run DST # 4							**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2	Drilling Assembly:					
Model		PZ-11	PZ-11				**Pump Pressure:**		**kPa**
Liner	(mm)	165	165	**BHA Length:**		**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**		**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		90	0	**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**	63.0	**m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**		**m/sec**	**True Hydraulic HP:**	310.0	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			
1946.00	Teledrift	8.5			

MUD

Time	6:56	
Density	1265	
Vis.	72	
pH	11.2	
Fluid Loss	5.4	
P.V.	28.0	
Y.P.	20.5	
Gel S.	4/7/8	
Filter Ck	0.5	
Solids %	1.0	
Oil		
Ca (mg/l)	240.0	
Cl (mg/l)	16000.0	
MBT	10.0	
Temp	22.0	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
Bicarb		**2K-7**	1
Kwickseal		**Cal carb**	
Drispac		**Dyna det**	
Desco		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Bioside**	
Sawdust		**Lignite**	
Soda Ash		**Alcomer**	
Supervision		**Day Cost**	$101
Mud Van	1	**Well Cost**	$275,780

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**0.10**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip	**7.50**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP**		**23 DST**	**15.00**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-04:00 DST#2 Shut In

04:00-09:30 Unseat Packer - POOH DST #2 -Recover fluid-recorders

09:30-14:00 Make up DST #3 (Interval changed so make up DST#3 for larger interval)

14:00-17:45 RIH DST#3

17:45-24:00 DST#3

Function Test Lower and Upper Pipe Rams during tripping

No incidents reported

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,538,700**	**Today**	**$27,120**	**Total Cost**	**$3,565,820**	**Weather:**	+2, Rain
						Mud Type	Polymer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**42**			**Date:**	**01-Dec-09**
Depth:	1965.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Make up test tools,DST # 5							**KB elev:**	**63.40 m.**
the next da	DST test # 5							**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2	Drilling Assembly:				
Model		PZ-11	PZ-11				**Pump Pressure:**	**kPa**
Liner	(mm)	165	165	**BHA Length:**	**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		90	0	**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**	63.0	**m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**	310.0	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			
1946.00	Teledrift	8.5			

MUD

Time	6:56	
Density	1265	
Vis.	70	
pH	11.2	
Fluid Loss	5.6	
P.V.	29.0	
Y.P.	20.0	
Gel S.	4/8/8.5	
Filter Ck	0.5	
Solids %	1.0	
Oil		
Ca (mg/l)	240.0	
Cl (mg/l)	16000.0	
MBT	10.0	
Temp	21.0	
XSPolymer	1.2	

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	-5
Kelzan	2	**T-352**	2
Cello		**Defoamer**	1
H. Perm	3	**2K-7**	4
Polyseal	20	**Cal carb**	
Drispac	3	**Dyna det**	
EnvirPlug	5	**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal	2	**Dyna fiber**	2
PHPA	1	**Lignite**	1
Sawdust		**Load. Chg**	1
Soda Ash	17	**Pallets**	65
Supervision		**Day Cost**	$7,452
Mud Van	1	**Well Cost**	$283,232

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**0.10**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**0.50**
6. Trip	**8.50**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP**		**23 DST**	**14.25**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-03:00 DST#3 Final Shut In
03:00-08:30 Useat Packer, POOH / DST#3, Recover fluid - download recorders, Break down tools
08:30-13:40 DST#4, Make up tools, install recorder, RIH and rig in surface test manifold
13:40-xxxx DST#4 - Open Valve - Run Test

No incidents reported

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,565,820**	**Today**	**$29,869**	**Total Cost**	**$3,595,689**	**Weather:**	-2, Snow
						Mud Type	Polymer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**43**			**Date:**	**02-Dec-09**
Depth:	1965.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	RIH for clean out prior to Csg							**KB elev:**	**63.40 m.**
the next da	RIH, Circ and Condition, POOH Sideways for Casing							**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2	Drilling Assembly:					
Model		PZ-11	PZ-11				**Pump Pressure:**		**kPa**
Liner	(mm)	165	165	**BHA Length:**		**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**		**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		90	0	**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**	63.0	**m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**		**m/sec**	**True Hydraulic HP:**	310.0	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			
1946.00	Teledrift	8.5			

MUD

Time	6:56	
Density	1260	
Vis.	79	
pH	11.1	
Fluid Loss	5.4	
P.V.	31.0	
Y.P.	22.0	
Gel S.	4/7/8.5	
Filter Ck	0.5	
Solids %	1.0	
Oil		
Ca (mg/l)	240.0	
Cl (mg/l)	16400.0	
MBT	10.0	
Temp	18.1	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
H. Perm		**2K-7**	
Polyseal		**Cal carb**	
Drispac		**Dyna det**	
EnvirPlug		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Lignite**	
Sawdust		**Load. Chg**	
Soda Ash		**Pallets**	
Supervision		**Day Cost**	$30
Mud Van	1	**Well Cost**	$283,262

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**0.10**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**1.25**
6. Trip	**6.75**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.50**	**15. Test BOP**		**23 DST**	**15.50**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-03:00 POOH DST#4
03:00-04:45 Handle Test Tools - Download recorders
04:45-08:00 RIH extra 26stds for Tail pipe / Make up DST# 5, Load recorders
08:00-11:00 RIH
11:00-22:00 DST#5
22:00-24:00 Unlach Packers, POOH with DST#5
No incidents reported
Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,595,689**	**Today**	**$23,327**	**Total Cost**	**$3,619,016**	**Weather:**	-2, Cloudy
						Mud Type	Polymer
Foreman	**Bill Williams**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2			**Day:**	44		**Date:**	03-Dec-09	
Depth:	1965.0 **mKB**	**Progress:**		**Drilling:**		**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	RUN 177.8 mm Csg							**KB elev:**	63.40 m.
the next da	Run Csg, Circ, Cmt Csg							**KB - GL**	6.30 m.

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2	Drilling Assembly:					
Model		PZ-11	PZ-11				**Pump Pressure:**		kPa
Liner	(mm)	165	165	**BHA Length:**		m	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**		mm	**Drill Pipe O.D.**	127.0	mm
SPM		90	0	**D.C. Annular Vel.:**		m/min	**D.P Annular Vel.:**	63.0	m/min
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**		m/sec	**True Hydraulic HP:**	310.0	kW

SURVEYS

Depth		Drift	Azimuth	North	East
1919.00	Teledrift	9			
1946.00	Teledrift	8.5			

MUD

Time	15:00	
Density	1270	
Vis.	86	
pH	10.3	
Fluid Loss	4.8	
P.V.	29.0	
Y.P.	23.0	
Gel S.	5.5/9/11	
Filter Ck	0.5	
Solids %	1.5	
Oil		
Ca (mg/l)	760.0	
Cl (mg/l)	22800.0	
MBT	10.0	
Temp	20.8	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	
Cello		**Defoamer**	
H. Perm		**2K-7**	
Polyseal		**Cal carb**	
Drispac		**Dyna det**	
EnvirPlug		**Walnut**	
Barite		**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Lignite**	
Sawdust		**Load. Chg**	
Soda Ash		**Pallets**	
Supervision		**Day Cost**	$30
Mud Van	1	**Well Cost**	$283,292

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	42.0	**Next Casing Test**	327rotating hrs	**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**48.70**

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream	**0.25**	**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.	**6.00**	**13. Pump Out Cement**		**21. Safety Meeting**	**0.75**
6. Trip	**13.25**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.50**	**15. Test BOP**		**23 DST**	**3.25**
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-01:45 POOH DST#5
01:45-05:15 Handle Test tools - Lay out DST Tools
05:15-07:30 POOH
07:30-15:30 Make up Bit, RIH, Circ B.Ups at 940,1380,1652,1965m
15:30-19:00 Circ and Condition
19:00-24:00 POOH - Lay Down / Out Drill Pipe Sideway for Casing

Function Test Annular and Blind Rams
No incidents reported

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,619,316**	**Today**	**$57,609**	**Total Cost**	**$3,676,925**	**Weather:**	-2, Cloudy
						Mud Type	Polymer
Foreman	**Bill Williams / Mike Smith**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	Vulcan Investcan Red Brook #2				**Day:**	45			**Date:**	04-Dec-09	
Depth:	1965.0	**mKB**	**Progress:**	0.0	**Drilling:**	0.00	**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11	
Operation @ 0800 hrs:	Nipple down BOP's								**KB elev:**	63.40 m.	
the next da	Tear Out Rig								**KB - GL**	6.30 m.	

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2	Drilling Assembly:					
Model		PZ-11	PZ-11				**Pump Pressure:**		**kPa**
Liner	(mm)	165	165	**BHA Length:**		**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**		**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		90	0	**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**	63.0	**m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**		**m/sec**	**True Hydraulic HP:**	310.0	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
920.00	Baker	6.94	68.45		
1010.00	Baker	7.83	70.38		
1100.00	Baker	8.67	75.48		
1190.00	Baker	9.07	84.84		
1280.00	Baker	9.18	96.15		
1370.00	Baker	9.31	106.98		
1460.00	Baker	9.23	115.65		
1550.00	Baker	9.41	122.03		
1640.00	Baker	8.03	122.18		
1730.00	Baker	8.44	119.15		
1820.00	Baker	8.71	118.95		
1910.00	Baker	8.78	118.49		
1965.00	Baker	9.01	118.5		

MUD

Time	0:00	
Density	1270	
Vis.	85	
pH	10.2	
Fluid Loss	4.6	
P.V.	28.0	
Y.P.	23.5	
Gel S.	6/9/11	
Filter Ck	0.5	
Solids %	1.5	
Oil		
Ca (mg/l)	740.0	
Cl (mg/l)	23100.0	
MBT	10.0	
Temp	21.5	
XSPolymer	1.1	

MUD ADDITIVES

Gel		**CaC03**	
Caustic		**Percol**	
Salt		**Sulphamic**	
Kelzan	3	**T-352**	
Cello		**Defoamer**	
H. Perm		**2K-7**	
Polyseal		**Cal carb**	
Drispac	2	**Dyna det**	
EnvirPlug		**Walnut**	
Barite	160	**Lime Hydrated**	
Fiberseal		**Dyna fiber**	
PHPA		**Lignite**	
Sawdust		**Load. Chg**	
Soda Ash	11	**Desco CF**	1
Supervision		**Day Cost**	$8,551
Mud Van	1	**Well Cost**	$291,842

Mud losses Surface & Downhole Estimates m3			
Total circulating Vol.	116.0		
Today losses down hole	0.0	**Total hole**	113.2
Today losses at surface	0.0	**Total surf.**	42.0
Today total losses	0.0	**Cumulative**	328.0

BOP & Casing Tests	Date
Last Casing Test	11-Nov-09
Last BOP Test	23-Nov-09
Next Casing Test	
Next BOP Test	08-Dec-09

Centrifuge	
Underflow Density	
Overflow Density	
Flow Rate,m3/min	
Combined hours	OFF

Well Control - kPa

Pump	Strokes	Pressure	MACP	Depth
RSPP #1	**45**	**4775**	**5165**	**1949**
RSPP #2				

Hole Condition kdaN & Kft/#			
Drag up	**5**	**Torque**	
Drag Dn	**6**		
Hook Load	**79**	**5200**	

Total Gas Readings (%)	
Background	**0.10**
Connection	**0.10**
Trip	**0.78**

1. Rig up/Out	**2.75**	**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**	**16.00**	**20. Wk on mud pumps**	
5. Circ. & Cond.	**3.25**	**13. Pump Out Cement**		**21. Safety Meeting**	**1.00**
6. Trip	**0.75**	**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service	**0.25**	**15. Test BOP**		**23 DST**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-01:00 POOH
01:00-02:00 Pull Wear Bushing - Safety Meeting with Crew / Tong Hands
02:00-16:30 Run 178 mm Casing, Circulate B.Up's at 899,1502,1941 m
16:30-18:45 Circulate and Condition Mud
18:45-21:00 Safety Meeting with Crew /Supervisors/ Cementers- Cement 178mm Casing
21:00-24:00 Wait on Cement - Start Cleaning Tanks - Rig out.

Ran 151 jts 177.8mm J-55 38.63 kg/m LT+C. Casing Landed @ 1947.0 m Marker Joint @ 1240.79 m RKB (ID = 165.125 mm)

Cemented with BJ services. Pumped 3m3 Water Preflush, Pumped 3m3 Scavenger 1.1t Fill-Lite 2-100 @ 1250kg/m3 +0.9% FL-5+2%A-11+0.7% R3
Pumped 17.47 m3 Fill 13.27t Fill-Lite 2-10@ 1518kg/m3 + 0.9% FL-5 + 2% A-11 + 0.7% R-3
Pumped 6.06 m3 Tail 8.0t "G" Oil Well Bulk Cement @ 1901 kg/m3 = 2%Microsil 12P + 0.4% FL-5 + 0.5% CD-32
Displaced / 38.6m3 H2O Full Returns Throughout, 4m3 Preflush / Scavenger Returns.
Bump Plug @ 20:24 hrs Dec 4, 2009, Floats held, Annulas Static

No incidents reported

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,676,925**	**Today**	**$88,775**	**Total Cost**	**$3,765,700**	**Weather:**	0, Sunny
						Mud Type	Polymer
Foreman	**Bill Williams / Mike Smith**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**				**Day:**	**46**			**Date:**	**05-Dec-09**	
Depth:	1965.0	**mKB**	**Progress:**	0.0	**Drilling:**	0.00	**hrs**	**ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Complete Tear Out of Rig									**KB elev:**	**63.40 m.**
the next da	Tear Out Rig / Lay down Derrick									**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2	Drilling Assembly:					
Model		PZ-11	PZ-11				**Pump Pressure:**		**kPa**
Liner	(mm)	165	165	**BHA Length:**		**m**	**Strap:**	**Board:**	
Stroke	(mm)	279	279	**Drill Collar O.D.**		**mm**	**Drill Pipe O.D.**	127.0	**mm**
SPM		90	0	**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**	63.0	**m/min**
Vol.	m^3/min @ 95%	1.5300	0.0000	**Jet Velocity:**		**m/sec**	**True Hydraulic HP:**	310.0	**kW**

SURVEYS

Depth		Drift	Azimuth	North	East
920.00	Baker	6.94	68.45		
1010.00	Baker	7.83	70.38		
1100.00	Baker	8.67	75.48		
1190.00	Baker	9.07	84.84		
1280.00	Baker	9.18	96.15		
1370.00	Baker	9.31	106.98		
1460.00	Baker	9.23	115.65		
1550.00	Baker	9.41	122.03		
1640.00	Baker	8.03	122.18		
1730.00	Baker	8.44	119.15		
1820.00	Baker	8.71	118.95		
1910.00	Baker	8.78	118.49		
1965.00	Baker	9.01	118.5		

MUD

Time	0:00		
Density	1265		
Vis.	64		
pH	9.9		
Fluid Loss	6.2		
P.V.	24.0		
Y.P.	15.0		
Gel S.	3.5		
Filter Ck	0.5		
Solids %	1.0		
Oil			
Ca (mg/l)	720.0		
Cl (mg/l)	20100.0		
MBT	7.5		
Temp	20.4		
XSPolymer	1.0		

MUD ADDITIVES

Gel		**CaC03**	
Caustic	1	**Percol**	
Salt		**Sulphamic**	
Kelzan		**T-352**	4
Cello		**Defoamer**	
H. Perm	-3	**2K-7**	1
Polyseal		**Cal carb**	
Drispac		**Dyna det**	
EnvirPlug		**Walnut**	
Barite	68	**Desco CF**	8
Fiberseal		**Corinox**	4
PHPA		**Safe-Kote**	3
Sawdust	14	**Load. Chg**	300
Soda Ash		**Desco CF**	
Supervision		**Day Cost**	$7,002
Mud Van	1	**Well Cost**	$295,451

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.	116.0			**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole	0.0	**Total hole**	113.2	**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface	0.0	**Total surf.**	42.0	**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses	0.0	**Cumulative**	328.0	**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	**Strokes**	**Pressure**	**MACP**	**Depth**	**Drag up**	**5**	**Torque**		**Background**	**0.10**
RSPP #1	**45**	**4775**	**5165**	**1949**	**Drag Dn**	**6**			**Connection**	**0.10**
RSPP #2					**Hook Load**	**79**	**5200**		**Trip**	**0.78**

1. Rig up/Out	**12.25**	**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	**1.25**
6. Trip		**14. Nipple Up BOP**	**9.75**	**22. Handle Tools**	
7. Rig Service	**0.75**	**15. Test BOP**		**23 DST**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**24.00**

REMARKS

00:00-10:00 Safety Meeting - Nipple Down BOP's
10:00-11:00 Clean Hanger - Nipple up Tree on Wellhead
11:00-24:00 Tear out Rig / Ship out Mud Van - High boy / mud supplies, Ship out 178 Csg / Lease Cleanup.

Mud Report is for Casing Job.

RIG RELEASE DEC 05, 2009 @ 23:59 hrs

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,765,700**	**Today**	**$160,939**	**Total Cost**	**$3,926,639**	**Weather:**	0, Cloudy
						Mud Type	Polymer
Foreman	**Bill Williams / Mike Smith**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**47**			**Date:**	**06-Dec-09**
Depth:	1965.0 **mKB**	**Progress:**	0.0	**Drilling:**	0.00	**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Complete Tear Out of Rig							**KB elev:**	**63.40 m.**
the next da	Complete Tear Out of Rig							**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2	Drilling Assembly:				
Model							**Pump Pressure:**	**kPa**
Liner	(mm)			**BHA Length:**	**m**	**Strap:**	**Board:**	
Stroke	(mm)			**Drill Collar O.D.**	**mm**	**Drill Pipe O.D.**		**mm**
SPM				**D.C. Annular Vel.:**	**m/min**	**D.P Annular Vel.:**		**m/min**
Vol.	m^3/min @ 95%			**Jet Velocity:**	**m/sec**	**True Hydraulic HP:**		**kW**

SURVEYS						MUD			MUD ADDITIVES			
Depth		Drift	Azimuth	North	East	Time			Gel		CaC03	
						Density			Caustic		Percol	
						Vis.			Salt		Sulphamic	
						pH			Kelzan		T-352	
						Fluid Loss			Cello		Defoamer	
						P.V.			H. Perm		2K-7	
						Y.P.			Polyseal		Cal carb	
						Gel S.			Drispac		Dyna det	
						Filter Ck			EnvirPlug		Walnut	
						Solids %			Barite		Desco CF	
						Oil			Fiberseal		Corinox	
						Ca (mg/l)			PHPA		Safe-Kote	
						Cl (mg/l)			Sawdust		Load. Chg	
						MBT			Soda Ash		Desco CF	
						Temp			Supervision		**Day Cost**	
						XSPolymer			Mud Van		**Well Cost**	$295,451

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.				**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole		**Total hole**		**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface		**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	Strokes	Pressure	MACP	Depth	Drag up		Torque		Background	
RSPP #1					Drag Dn				Connection	
RSPP #2					Hook Load				Trip	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service		**15. Test BOP**		**23 DST**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**0.00**

REMARKS

00:00-10:15	Tear out Rig
10:15-10:45	Scope down Derrick
10:45-20:15	Continue Tear out Rig
20:15-20:30	Lower Derrick
20:30-24:00	Continue Tear out Rig
	Last Crew Night Shift completed at 07:00 hrs, Dec 7, 2009
	Rig on Hour Rate of $105/man hour
	120 man hours for Dec 6th

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,926,639**	**Today**	**$18,617**	**Total Cost**	**$3,945,256**	**Weather:**	Cloudy, -2
						Mud Type	
Foreman	**Mike Smith**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**48**			**Date:**	**07-Dec-09**
Depth:	1965.0 **mKB**	**Progress:**	0.0	**Drilling:**	0.00	**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Continue packing - sorting - inventory of equiptment							**KB elev:**	**63.40 m.**
the next da	De-Mobe - Inventory of equiptment / Wait on final services.							**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

		Pump 1	Pump 2	Drilling Assembly:					
Model							**Pump Pressure:**		**kPa**
Liner	(mm)			**BHA Length:**		**m**	**Strap:**	**Board:**	
Stroke	(mm)			**Drill Collar O.D.**		**mm**	**Drill Pipe O.D.**		**mm**
SPM				**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**		**m/min**
Vol.	m^3/min @ 95%			**Jet Velocity:**		**m/sec**	**True Hydraulic HP:**		**kW**

SURVEYS						MUD			MUD ADDITIVES			
Depth		Drift	Azimuth	North	East	Time			Gel		CaC03	
						Density			Caustic		Percol	
						Vis.			Salt		Sulphamic	
						pH			Kelzan		T-352	
						Fluid Loss			Cello		Defoamer	
						P.V.			H. Perm		2K-7	
						Y.P.			Polyseal		Cal carb	
						Gel S.			Drispac		Dyna det	
						Filter Ck			EnvirPlug		Walnut	
						Solids %			Barite		Desco CF	
						Oil			Fiberseal		Corinox	
						Ca (mg/l)			PHPA		Safe-Kote	
						Cl (mg/l)			Sawdust		Load. Chg	
						MBT			Soda Ash		Desco CF	
						Temp			Supervision		**Day Cost**	
						XSPolymer			Mud Van		**Well Cost**	$295,451

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.				**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole		**Total hole**		**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface		**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	Strokes	Pressure	MACP	Depth	Drag up		Torque		Background	
RSPP #1					Drag Dn				Connection	
RSPP #2					Hook Load				Trip	

1. Rig up/Out	**19.00**	**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service		**15. Test BOP**		**23 DST**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**19.00**

REMARKS

00:00-19:00 Continuing tear out of rig, (Day Crew Only) Sort - Pack - Inventory Equiptment on site

19:00-24:00 Rig Watch

Adjustments to Daily Cost last 2 days made by Shane H.

See Corrected Costs on Cost Sheet

7" Casing Trucking Costs included in Costs.

Rig on Hour Rate of $105/man hour

60 man hours for Dec 7th (Day Crew Only)

Night Security provided from 21:00-06:00 hrs

Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,945,256**	**Today**	**$36,144**	**Total Cost**	**$3,981,400**	**Weather:**	Cloudy, 0
						Mud Type	
Foreman	**Mike Smith**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

Vulcan Minerals Daily Drilling Report

Well:	**Vulcan Investcan Red Brook #2**			**Day:**	**49**			**Date:**	**08-Dec-09**
Depth:	1965.0 **mKB**	**Progress:**	0.0	**Drilling:**	0.00	**hrs ROP, m/hr:**	#DIV/0!	**Rig:**	Stoneham # 11
Operation @ 0800 hrs:	Shut Down at night							**KB elev:**	**63.40 m.**
the next da	Transport remainder of Equiptment (See Manifest), Winterize trailers, Pull Septic							**KB - GL**	**6.30 m.**

Bit #	Size/Make	Model IADC	Serial No.	In	Out	Metres	Hours	Nozzles	RPM	WOB kdaN	I O D L B G O R

	Pump 1	Pump 2	Drilling Assembly:					
Model						**Pump Pressure:**		**kPa**
Liner (mm)			**BHA Length:**		**m**	**Strap:**	**Board:**	
Stroke (mm)			**Drill Collar O.D.**		**mm**	**Drill Pipe O.D.**		**mm**
SPM			**D.C. Annular Vel.:**		**m/min**	**D.P Annular Vel.:**		**m/min**
Vol. m^3/min @ 95%			**Jet Velocity:**		**m/sec**	**True Hydraulic HP:**		**kW**

SURVEYS						MUD			MUD ADDITIVES			
Depth		Drift	Azimuth	North	East	Time			Gel		CaC03	
						Density			Caustic		Percol	
						Vis.			Salt		Sulphamic	
						pH			Kelzan		T-352	
						Fluid Loss			Cello		Defoamer	
						P.V.			H. Perm		2K-7	
						Y.P.			Polyseal		Cal carb	
						Gel S.			Drispac		Dyna det	
						Filter Ck			EnvirPlug		Walnut	
						Solids %			Barite		Desco CF	
						Oil			Fiberseal		Corinox	
						Ca (mg/l)			PHPA		Safe-Kote	
						Cl (mg/l)			Sawdust		Load. Chg	
						MBT			Soda Ash		Desco CF	
						Temp			Supervision		Day Cost	
						XSPolymer			Mud Van		Well Cost	$295,451

Mud losses Surface & Downhole Estimates m3				BOP & Casing Tests	Date	Centrifuge	
Total circulating Vol.				**Last Casing Test**	11-Nov-09	**Underflow Density**	
Today losses down hole		**Total hole**		**Last BOP Test**	23-Nov-09	**Overflow Density**	
Today losses at surface		**Total surf.**		**Next Casing Test**		**Flow Rate,m3/min**	
Today total losses		**Cumulative**		**Next BOP Test**	08-Dec-09	**Combined hours**	OFF

Well Control - kPa					Hole Condition kdaN & Kft/#				Total Gas Readings (%)	
Pump	Strokes	Pressure	MACP	Depth	Drag up		Torque		Background	
RSPP #1					Drag Dn				Connection	
RSPP #2					Hook Load				Trip	

1. Rig up/Out		**9. Slip & Cut**		**17. Weld bowl**	
2. Drill		**10. Survey**		**18. Wash to Btm**	
3. Ream		**11. Wireline Logs**		**19. Flow checks**	
4. Drill Out		**12. Casing/Cement**		**20. Wk on mud pumps**	
5. Circ. & Cond.		**13. Pump Out Cement**		**21. Safety Meeting**	
6. Trip		**14. Nipple Up BOP**		**22. Handle Tools**	
7. Rig Service		**15. Test BOP**		**23 DST**	
8. Rig Repair		**16. BOP Drill**		**Total Hours**	**0.00**

REMARKS

00:00-24:00 Continue to move out equipment and clean up site

Stable Drill Shipped out, Septic Tank drained and ready to Pull Out,

BattleField Equiptment picked up, Oil Waste Container Drained and ready to ship.

Remainder of Inventory stored in Seacan - Ready to leave location

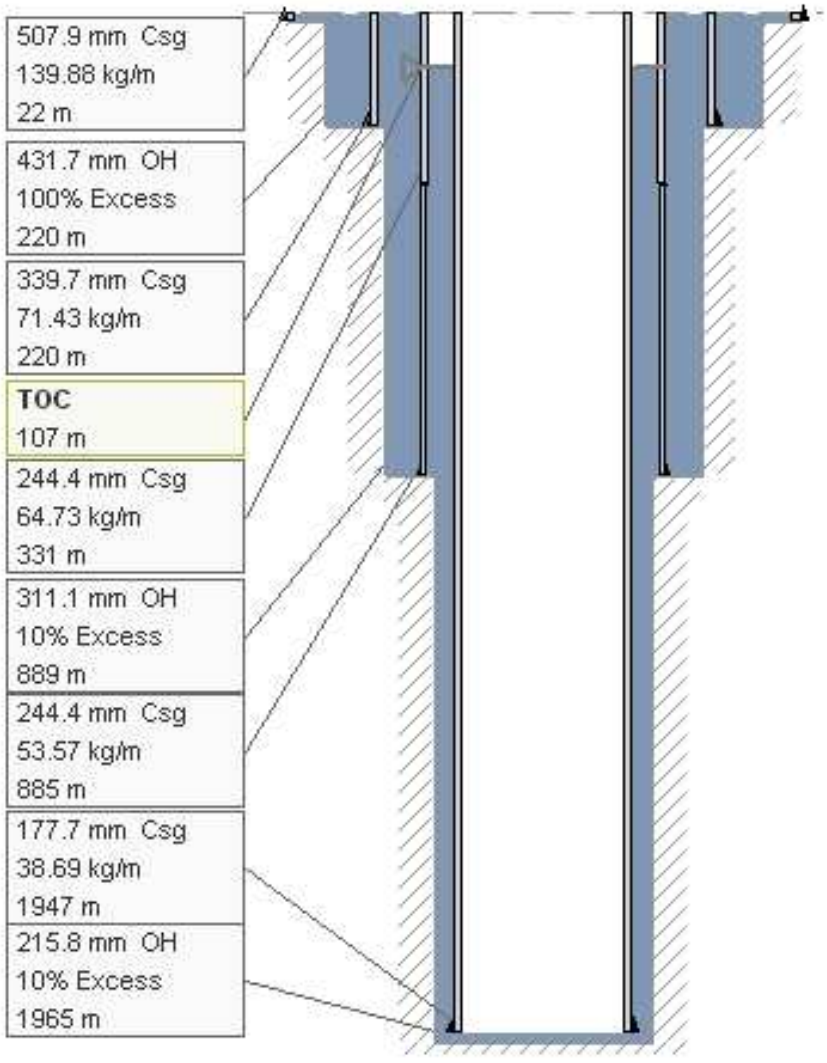
Tops: Codroy @ 123m, Ship Cove 885m, Spout Falls 898m,

Prev Cost	**$3,981,720**	**Today**	**$3,791**	**Total Cost**	**$3,985,511**	**Weather:**	Cloudy, 0
						Mud Type	
Foreman	**Mike Smith**		**Rig Phone**	**709-649-7106**		**Taken By:**	**Terry Brooker / Shane Halley**

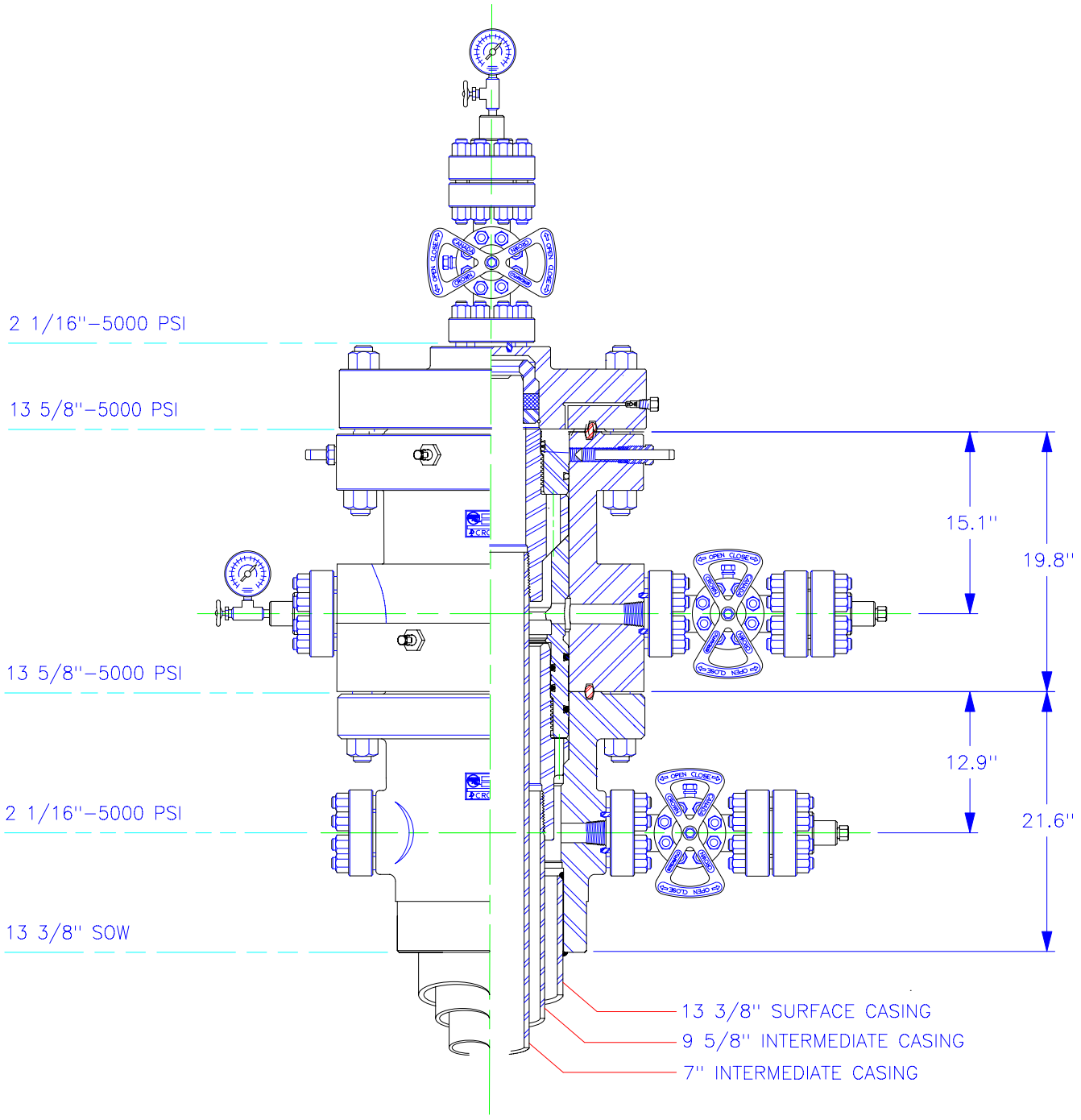
APPENDIX 4: WELLBORE & WELLHEAD SCHEMATICS

WELLBORE SCHEMATIC

Vulcan Investcan Red Brook #2
Vulcan Minerals Inc. 2009-002
Exploration Wildcat
432/311mm: Cement returns to surface
216mm: TOC calculated at 107m based on 50% scavenger back to surface.
*****a 0.70m MARKER JOINT was run at 1240.79m MD KB with a limiting ID of 165.1254mm (6.501")*****



i-Handbook* - *a mark of Schlumberger



NOTE:
DIMENSIONS MAY VARY ±1/2" DUE TO FORGING TOLERANCES

VULCAN MINERALS INC. WESTERN NEWFOUNDLAND RED BROOK#2	DWN.	JL	18-12-09	Stream Flo INDUSTRIES LTD. EDMONTON, AB. CANADA	DRAWING No. CR-8533
	CHK.				
	APPR.				
		BY:	DATE		

QUOTATION
TECHNICAL

CROWN ENERGY PRODUCTS

*** HEAD OFFICE**
SALES, SERVICE & MANUFACTURING
4505 - 74th AVE
EDMONTON, AB
CANADA T6B 2H5
PHONE (780) 468-6789
FAX (780) 469-7724

MARKETING OFFICE
400 BOW VALLEY SQ. ONE
202-6th AVE. S.W.
CALGARY, AB
CANADA T2P 2R9
PHONE (403) 269-5531
FAX (403) 266-3307

INTERNATIONAL SALES & SERVICE
INDONESIA
UNITED KINGDOM
UNITED ARAB EMIRATES
U.S.A.

CANADIAN SALES & SERVICE LOCATIONS

GRANDE PRAIRIE, AB
PHONE (780) 532-1433
FAX (780) 538-4191

BROOKS, AB
PHONE (403) 362-7600
FAX (403) 362-8329

SLAVE LAKE , AB
PHONE (780) 849-6100
FAX (780) 849-2264

RED DEER COUNTY , AB
PHONE (403) 346-2550
FAX (403) 347-2022

RAINBOW LAKE, AB
PHONE (780) 956-3655
FAX (780) 956-3690

ESTEVAN, SK
PHONE (306) 634-4719
FAX (306) 634-3287

FT. ST. JOHN, BC
PHONE (250) 785-9500
FAX (250) 785-8139

EDSON, AB
PHONE (780) 712-5505
FAX (780) 712-5542

FORT MCMURRAY, AB
PHONE (780) 743-0744
FAX (780) 743-8177

FORT NELSON, B.C.
PHONE (250) 775-6789
FAX (250) 775-6790

To: VULCAN MINERLS INC
333 DUCKWORTH STREET
ST. JOHN'S NL CAN A1C 1G9

Attn: TERRY BROOKER

Ref:

FBD WELLHEAD

Date: September 09, 2009

We are pleased to submit the following quotation: (QUOTATION SUBJECT TO TERMS HEREON)

Quote No : 0000081139

No.	Quantity	Description
		PLEASE REFER TO QUOTE 81139 WHEN ORDERING QUOTE 3: FULL BORE DRILL-THRU (FBD) WELLHEAD ASSEMBLY 346mm 34.5MPa x 338.7mm x 244.5mm x 177.8mm x 114.3mm - SWEET TRIM ********** ***** SECTION A: CASING HEAD HOUSING ASSEMBLY **********
1	1	STREAM-FLO CROWN CASING HEAD CC-29 13-5/8 5000 X 13-3/8 SOW W/ TEST SEAL C/W 2 - 2-1/16 5000 STUDDED SIDE OUTLET W/ 1-1/2 SHARP-V VRT SPECIAL FOR USE W/ FBD100 WELLHEAD API 6A LUDD-NL PSL-2 PR2 **Part : CC9-CH135X1338SOWSV-10-2**
2	1	STREAM-FLO CROWN CASING HANGER MANDREL C9FBD 13-5/8 NOM X 9-5/8 LONG CSG BOX BOTTOM X 10.5-2-ACME LH STUB LIFT THREAD 9-5/8 NOM X 6.00 EFFECTIVE LENGTH SLICK EXTENDED NECK 8.69 DIA THRU BORE 10-5/8 DIA X 6.75 LG TONGING NECK & FOUR FLUTES API 6A LDD PSL-2 PR1 *TOOL C9FBD-RT105X958LTC-00* **Part : C9FBD-CH13X958LTC-00-2**
3	1	STREAM-FLO CROWN PACKOFF BUSHING FBD 13-5/8 NOM X 9-5/8 CSG J-SLOTS S-SEALS ON OD FS CSG SEALS FOR USE WITH 3/5000 PSI FBD SPOOL & CC-29 HEAD (W/FBD TOLS) 8.69 BORE 26 LG API 6A LDD-NL PSL-2 PR1 *REF RUNNING TOOL FBD-RT11* **Part : FBD-PB13X958-00-2**
4	1	GATE VALVE 2-1/16 API 5000 FLANGED ENDS T-36 TRIM API 6A LAA PSL-1 **Part : 2G-52SB50-T36-OS**
5	1	FLANGE COMPANION 2-1/16 5000 X 2 LP API 6A LUDD-NL PSL-1 **Part : CF-25X2LP-1-00**
6	1	STREAM-FLO CROWN FLANGE BLIND 2-1/16 5000 API 6A LUDD-NL PSL-1 **Part : BF-25**

PRICES DO NOT INCLUDE GST / PST

7	1	BULL PLUG 2 LP XXH TAPPED 1/2 NPT CSA 44W **Part : BP-2X12XXH**
8	1	PIPE PLUG 1/2 NPT HEX HEAD ASTM A105 FORGED STEEL IML **Part : PP-12**
9	3	RING GASKET R-24 MILD STEEL **Part : RG-R24MS**
10	8	STUD 7/8 9UNC X 6 LONG ASTM A320 L7 LOW TEMPERATURE SERVICE **Part : S-L7-78X6**
11	16	NUT 7/8 9UNC ASTM A194 2H STANDARD SERVICE **Part : N-2H-78**
		**********
		SECTION B: INTERMEDIATE CASING SPOOL ASSY
		**********
12	1	STREAM-FLO CROWN INTERMEDIATE HEAD FBD 13-5/8 5000 STUDDED BOTTOM X 13-5/8 5000 FLANGE TOP C/W 2-2-1/16 5000 STUDDED SIDE OUTLET W/1-1/2 SHARP-V VRT (10) P L/SCREWS IN BOTTOM FLANGE & (16) P L/SCREWS IN TOP FLANGE 13.50 BORE 26.25 LG NACE CLASS III BOLTING (L7 STUDS IN BOTTOM FLG) API 6A LDD-NL PSL-2 PR1 **Part : FBD-IH135X135SVPB-00-2**
13	1	STREAM-FLO CROWN CASING HANGER MANDREL CUFBD 13 X 7 LC BOX BOTTOM X 8.125-2 LH STUB ACME LIFT THREAD 7 NOM X 6.00 EFFECTIVE LENGTH SLICK EXTENDED NECK 6.38 DIA THRU BORE 8 DIA X 5.88 LONG TONGING NECK & FOUR FLUTES 600000 LBS MAX LOAD *RUNNING TOOL C9FBD-RT8125X7LTC-00* API 6A LUDD-NL PSL-2 PR1 **Part : CUFBD-CH13X7LTC20-00-2**
14	1	STREAM-FLO CROWN PACKOFF BUSHING STANDARD FBD 13 NOM X 7 SLICK EXTENDED NECK C/W THREE J-SLOTS DUAL S-SEALS & FS CASING SEALS FOR USE WITH CUFBD MANDREL HANGER & CU PROFILE LOAD SHOULDER 6.44 BORE 24.78 OVERALL LENGTH *RUNNING TOOL FBD-RT11* API 6A LUDD-NL PSL-2 PR1 **Part : FBD-PB13X7-00-2**
15	1	GATE VALVE 2-1/16 API 5000 FLANGED ENDS T-36 TRIM API 6A LAA PSL-1 **Part : 2G-52SB50-T36-OS**
16	2	FLANGE COMPANION 2-1/16 5000 X 2 LP API 6A LUDD-NL PSL-1 **Part : CF-25X2LP-1-00**
17	2	BULL PLUG 2 LP XXH TAPPED 1/2 NPT CSA 44W **Part : BP-2X12XXH**

QUOTATION - TECHNICAL

CROWN ENERGY PRODUCTS

18	2	PIPE PLUG 1/2 NPT HEX HEAD ASTM A105 FORGED STEEL IML **Part : PP-12**
19	1	NEEDLE VALVE 1/2 ANGLE MALE X FEMALE 10000 PSIG WP CARBON STEEL **Part : NV-12ANG**
20	1	PRESSURE GAUGE 0-5000 PSI 1/2 CONNECTION 316SS TUBE 4-1/2 FACE LIQUID FILLED SERIES 901 **Part : GAU-5M**
21	1	CASING VENT ASSEMBLY 2 LP C/W BALL VALVE **Part : CV-2LP**
22	3	RING GASKET R-24 MILD STEEL **Part : RG-R24MS**
23	8	STUD 7/8 9UNC X 6 LONG ASTM A320 L7 LOW TEMPERATURE SERVICE **Part : S-L7-78X6**
24	16	NUT 7/8 9UNC ASTM A194 2H STANDARD SERVICE **Part : N-2H-78**
25	1	RING GASKET BX-160 MILD STEEL **Part : RG-BX160MS**
		**********
		SECTION C: PRODUCTION CASING SPOOL ASSEMBLY
		**********
26	1	STREAM-FLO CROWN INTERMEDIATE HEAD FBD 13-5/8 5000 STUDDED BOTTOM X 13-5/8 5000 FLANGE TOP C/W 2-2-1/16 5000 STUDDED SIDE OUTLET W/1-1/2 SHARP-V VRT (10) P L/SCREWS IN BOTTOM FLANGE & (16) P L/SCREWS IN TOP FLANGE 13.50 BORE 26.25 LG NACE CLASS III BOLTING (L7 STUDS IN BOTTOM FLG) API 6A LDD-NL PSL-2 PR1 **Part : FBD-IH135X135SVPB-00-2**
27	1	NON-STOCK PARTS SALES **Part : NCN PARTS** CASING HANGER MANDREL CUFBD 13 X 4-1/2 LC BOX BTM W/ SLICK EXTENDED NECK X LONG TONGING NECK & FLUTED BODY, LUDD-NL PSL-2 PR1
28	1	STREAM-FLO CROWN PRIMARY PACKOFF FBD 13 NOMINAL X 4 1/2 CASING FOR USE WITH CU PROFILE HEAD & CC-21 SLIPS FOR USE WITH 3/5000 PSI RWP FBD SPOOLS ONLY API 6A DD-NL L-U PSL-2 PR2 **Part : FBD-PP13X412L-00-2**

PRICES DO NOT INCLUDE GST / PST

QUOTATION - TECHNICAL

CROWN ENERGY PRODUCTS

29	1	GATE VALVE 2-1/16 API 5000 FLANGED ENDS T-36 TRIM API 6A LAA PSL-1 **Part : 2G-52SB50-T36-OS**
30	2	FLANGE COMPANION 2-1/16 5000 X 2 LP API 6A LUDD-NL PSL-1 **Part : CF-25X2LP-1-00**
31	2	BULL PLUG 2 LP XXH TAPPED 1/2 NPT CSA 44W **Part : BP-2X12XXH**
32	2	PIPE PLUG 1/2 NPT HEX HEAD ASTM A105 FORGED STEEL IML **Part : PP-12**
33	1	NEEDLE VALVE 1/2 ANGLE MALE X FEMALE 10000 PSIG WP CARBON STEEL **Part : NV-12ANG**
34	1	PRESSURE GAUGE 0-5000 PSI 1/2 CONNECTION 316SS TUBE 4-1/2 FACE LIQUID FILLED SERIES 901 **Part : GAU-5M**
35	3	RING GASKET R-24 MILD STEEL **Part : RG-R24MS**
36	8	STUD 7/8 9UNC X 6 LONG ASTM A320 L7 LOW TEMPERATURE SERVICE **Part : S-L7-78X6**
37	16	NUT 7/8 9UNC ASTM A194 2H STANDARD SERVICE **Part : N-2H-78**
38	1	RING GASKET BX-160 MILD STEEL **Part : RG-BX160MS**
		**********
		SECTION D: CAPPING FLANGE ASSEMBLY
		**********
39	1	STREAM-FLO CROWN CASING CAP ASSY 13-5/8 5000 X 2-1/16 5000 STUDDED UP 10.88 CP SECONDARY PREP 6.00 CSG CUTOFF API 6A LDD-NL PSL-1 **Part : CF-135X25-CP**
40	1	GATE VALVE 2-1/16 API 5000 FLANGED ENDS T-36 TRIM API 6A LAA PSL-1 **Part : 2G-52SB50-T36-OS**
41	1	FLANGE COMPANION 2-1/16 5000 X 2 LP API 6A LUDD-NL PSL-1 **Part : CF-25X2LP-1-00**

PRICES DO NOT INCLUDE GST / PST

QUOTATION - TECHNICAL

CROWN ENERGY PRODUCTS

42	1	BULL PLUG 2 LP XXH TAPPED 1/2 NPT CSA 44W **Part : BP-2X12XXH**
43	1	NEEDLE VALVE 1/2 STRAIGHT MALE X FEMALE 10000 PSIG WP CARBON STEEL **Part : NV-12STR**
44	1	PRESSURE GAUGE 0-5000 PSI 1/2 CONNECTION 316SS TUBE 4-1/2 FACE LIQUID FILLED SERIES 901 **Part : GAU-5M**
45	2	RING GASKET R-24 MILD STEEL **Part : RG-R24MS**
46	8	STUD 7/8 9UNC X 6 LONG ASTM A320 L7 LOW TEMPERATURE SERVICE **Part : S-L7-78X6**
47	16	NUT 7/8 9UNC ASTM A194 2H STANDARD SERVICE **Part : N-2H-78**
48	1	RING GASKET BX-160 MILD STEEL **Part : RG-BX160MS**
49	12	STUD 1-5/8 8UN X 12-1/2 LONG ASTM A320 L7 LOW TEMPERATURE SERVICE **Part : S-L7-158X1212**
50	24	NUT 1-5/8 8UN ASTM A194 2H STANDARD SERVICE **Part : N-2H-158** **********
51	1	NON-STOCK PARTS SALES **Part : NCN PARTS** **** FOR BELOW CASING HANGER **** CHARGES FOR HALLMARK TUBULARS TO CUT, THREAD & SUPPLY CASING. 2 PIECES, 8 FT LENGTH FOR 9-5/8" & 7" CUSTOMER SPECIFIC WEIGHT AND GRADE

PRICES DO NOT INCLUDE GST / PST

QUOTATION - TECHNICAL

CROWN ENERGY PRODUCTS

****

DELIVERY: CURRENTLY (1) COMPLETE SYSTEM IN STOCK,
ADDITIONAL FBD SYSTEM(S) 8 WEEKS EX-WORKS EDMONTON AB,
AFTER RECEIPT & ACCEPTANCE OF PURCHASE ORDER

PRICES ARE VALID FOR 30 DAYS
PAYMENT TERMS: NET 30 DAYS
PRICES EXCLUDE GST AND/OR PST
SHIPPING POINT: FOB STREAM-FLO PLANT, EDMONTON,
ALBERTA.

SALES REP: RUSS GARDINER (403) 269-5531
rgardiner@streamflo.com

PRICES DO NOT INCLUDE GST / PST

APPENDIX 5: GAS PVT ANALYSIS

LIST OF TEST SAMPLE CYLINDERS FOR RED BROOK#2

REDBROOK #2				Date	Methane (%)	Ethane (%)	Total Organic Sulphur (ppm)
DST#1	1555-1574 m		AGAT#04001075 (Initial GTS) caught at manifold	28-Nov-09	80%	5%	-
DST#1	1555-1574 m		AGAT#05003561 (Bottom hole sampler)	28-Nov-09	80%	5%	20.5
DST#2	1360-1383 m		AGAT#05005092 (Bottom hole sampler)	29-Nov-09	82%	4%	1.7

AGAT® Laboratories

EXTENDED GAS ANALYSIS

Container Identification
4001075

Operator Name	Laboratory Number
VULCAN MINERALS INC.	09E375947D

Unique Well Identifier	Well Name
NOT AVAILABLE	VULCAN INVESTCAN REDBROOK#2

Field or Area	Pool or Zone	Sampler's Company
	NOT AVAILABLE	HOLLAND TESTERS

Well License	Elevation				Test Type	Test No.	Name of Sampler
	KB m	62.00	GRD m	56.00			

Test Interval or Perfs mKB		Sampling Point
1555.0 - 1574.0		NOT AVAILABLE
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)			65	65	40
Temperature			4	4	21

Date Sampled	Date Received	Date Analyzed	Date Reported	Entered By	Certified By
Nov 28, 2009	Dec 15, 2009	Dec 18, 2009	Dec 18, 2009	Binh Nguyen	Binh Nguyen

Other Information
(INITIAL GTS) CAUGHT AT MANIFOLD, DST 1A

** Results relate only to the items tested*

Note: Sampling Point, Unique Well Identifier and/or Pool or Zone information was unavailable at time of reporting. This information is integral to AGAT's WebFLUIDs, a comparison, history and trending analysis system.

COMPONENT	Mole Fraction		LIQUID VOLUMES mL / m³
	As Received	Air & Acid Gas Free	
Hydrogen	0.00233	0.00233	
Helium	0.00131	0.00131	
Nitrogen	0.12442	0.12442	
Carbon Dioxide	0.00000	0.00000	
Hydrogen Sulfide	0.00000	0.00000	
Methane	0.80413	0.80413	
Ethane	0.04904	0.04904	174.2
Propane	0.01273	0.01273	46.8
Isobutane	0.00115	0.00115	5.0
n-Butane	0.00306	0.00306	12.9
Isopentane	0.00049	0.00049	2.4
n-Pentane	0.00073	0.00073	3.5
Hexanes	0.00037	0.00037	1.9
Heptanes+	0.00023	0.00023	1.3
TOTAL	**1.00000**	**1.00000**	**248.1**

Gross Heating Value MJ/m³ 15 °C and 101.325 kPa

Moisture Free (MJ/m³)	Moisture and Acid Gas Free (MJ/m³)
35.66	35.66

Calculated Relative Density Moisture Free

0.650

Calculated Density C7+ Fraction (kg/m³) Moisture Free

728.5

Calculated pseudo critical properties

As Sampled		Acid Gas Free	
Ppc (kPa abs)	pTC (K)	Ppc (kPa abs)	pTC (K)
4438.90	191.36	4438.90	191.36

Calculated molecular weight (g/mol)

Total Sample	C7+ Fraction
18.82	101.85

Calculated C5+ Vapour Pressure (kPa abs)

98.84

Field H2S (ppm)

0.00

Laboratory H2S (ppm)

0.00

Constants taken from the most recent editions of GPA TP-17 and GPA 2145 have been used to calculate the physical properties of the gas.
This analysis was performed based on method GPA 2286.

AGAT® Laboratories

PROPERTIES OF C6+ FRACTION

File No.	Company	UWI / LSD
09E375947D	VULCAN MINERALS INC.	NOT AVAILABLE

BOILING POINT RANGE (°C)	SUMMARY	AIR FREE AS RECEIVED MOLE FRACTION	AIR FREE AS RECEIVED (ppm)	AIR & ACID GAS FREE MOLE FRACTION	AIR FREE AS RECEIVED LIQUID VOLUMES (mL / m³)
36.2+	Hexanes+ (C6+)	0.00060	597	0.00060	3.2904
98.6+	Octanes+ (C8+)	0.00010	101	0.00010	0.5948
125.8+	Nonanes+ (C9+)	0.00002	22	0.00002	0.1266
150.9+	Decanes+ (C10+)	0.00000	0	0.00000	0.0000
174.3+	Undecanes+ (C11+)	0.00000	0	0.00000	0.0000
196.00+	Dodecanes+ (C12+)	0.00000	0	0.00000	0.0000
216.4+	Tridecanes+ (C13+)	0.00000	0	0.00000	0.0000
235.6 - 270.7	Tetradecanes+ (C14+)	0.00000	0	0.00000	0.0000

BOILING POINT RANGE (°C)	GROUPINGS	AIR FREE AS RECEIVED MOLE FRACTION	AIR FREE AS RECEIVED (ppm)	AIR & ACID GAS FREE MOLE FRACTION	AIR FREE AS RECEIVED LIQUID VOLUMES (mL / m³)
68.9 - 98.6	Heptanes (C7)	0.00013	126	0.00013	0.7475
98.6 - 125.8	Octanes (C8)	0.00008	80	0.00008	0.4682
125.8 - 150.9	Nonanes (C9)	0.00002	22	0.00002	0.1266
150.9 - 174.3	Decanes (C10)	0.00000	0	0.00000	0.0000
174.3 - 196.00	Undecanes (C11)	0.00000	0	0.00000	0.0000
196.00 - 216.4	Dodecanes (C12)	0.00000	0	0.00000	0.0000
216.4 - 235.6	Tridecanes (C13)	0.00000	0	0.00000	0.0000
235.6 - 253.6	Tetradecanes (C14)	0.00000	0	0.00000	0.0000
253.6 - 270.69	Pentadecanes (C15)	0.00000	0	0.00000	0.0000

BOILING POINT RANGE (°C)	RELEVENT COMPONENTS	AIR FREE AS RECEIVED MOLE FRACTION	AIR FREE AS RECEIVED (ppm)	AIR & ACID GAS FREE MOLE FRACTION	AIR FREE AS RECEIVED LIQUID VOLUMES (mL / m³)
49.28	Cyclopentane	0.00013	131	0.00013	0.6364
68.73	n-Hexane	0.00016	159	0.00016	0.8725
71.83	Methylcyclopentane	0.00000	0	0.00000	0.0000
80.06	Benzene	0.00001	< 10	0.00001	0.0232
80.78	Cyclohexane	0.00001	12	0.00001	0.0615
99.24	2,2,4-Trimethylpentane	0.00000	< 10	0.00000	0.0280
100.94	Methylcyclohexane	0.00002	21	0.00002	0.1117
110.61	Toluene	0.00002	20	0.00002	0.0882
136.16	Ethylbenzene	0.00000	0	0.00000	0.0000
138.33; 139.09	m&p-Xylene	0.00000	< 10	0.00000	0.0151
144.42	o-Xylene	0.00000	< 10	0.00000	0.0232
169.34	1,2,4-Trimethylbenzene	0.00000	0	0.00000	0.0000

AGAT® Laboratories

EXTENDED GAS ANALYSIS

Container Identification
5003561

Operator Name	Laboratory Number
VULCAN MINERALS INC.	09E375947E

Unique Well Identifier	Well Name
NOT AVAILABLE	VULCAN INVESTCAN REDBROOK#2

Field or Area	Pool or Zone	Sampler's Company
	NOT AVAILABLE	HOLLAND TESTERS

Well License	Elevation				Test Type	Test No.	Name of Sampler
	KB m	62.00	GRD m	56.00			

Test Interval or Perfs mKB		Sampling Point
1555.0 - 1574.0		NOT AVAILABLE
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)			742	742	100
Temperature			21	21	21

Date Sampled	Date Received	Date Analyzed	Date Reported	Entered By	Certified By
Nov 28, 2009	Dec 15, 2009	Dec 18, 2009	Dec 18, 2009	Binh Nguyen	Binh Nguyen

Other Information
BOTTOM HOLE SAMPLER , DST 1B

** Results relate only to the items tested*

Note: Sampling Point, Unique Well Identifier and/or Pool or Zone information was unavailable at time of reporting. This information is integral to AGAT's WebFLUIDs, a comparison, history and trending analysis system.

COMPONENT	Mole Fraction		LIQUID VOLUMES mL / m³
	As Received	Air & Acid Gas Free	
Hydrogen	0.00240	0.00240	
Helium	0.00127	0.00127	
Nitrogen	0.12212	0.12212	
Carbon Dioxide	0.00000	0.00000	
Hydrogen Sulfide	0.00000	0.00000	
Methane	0.80260	0.80260	
Ethane	0.04766	0.04766	169.3
Propane	0.01205	0.01205	44.2
Isobutane	0.00122	0.00122	5.3
n-Butane	0.00357	0.00357	15.0
Isopentane	0.00216	0.00216	10.6
n-Pentane	0.00249	0.00249	12.0
Hexanes	0.00150	0.00150	7.8
Heptanes+	0.00096	0.00096	5.7
TOTAL	**1.00000**	**1.00000**	**270.0**

Gross Heating Value MJ/m³ 15 °C and 101.325 kPa

Moisture Free (MJ/m³)	Moisture and Acid Gas Free (MJ/m³)
36.38	36.38

Calculated Relative Density Moisture Free

0.660

Calculated Density C7+ Fraction (kg/m³) Moisture Free

715.2

Calculated pseudo critical properties

As Sampled		Acid Gas Free	
Ppc (kPa abs)	pTC (K)	Ppc (kPa abs)	pTC (K)
4433.86	192.91	4433.86	192.91

Calculated molecular weight (g/mol)

Total Sample	C7+ Fraction
19.11	100.32

Calculated C5+ Vapour Pressure (kPa abs)

99.28

Field H2S (ppm)

0.00

Laboratory H2S (ppm)

0.00

Constants taken from the most recent editions of GPA TP-17 and GPA 2145 have been used to calculate the physical properties of the gas.
This analysis was performed based on method GPA 2286.

AGAT® Laboratories

PROPERTIES OF C6+ FRACTION

File No.	Company	UWI / LSD
09E375947E	VULCAN MINERALS INC.	NOT AVAILABLE

BOILING POINT RANGE (°C)	SUMMARY	AIR FREE AS RECEIVED MOLE FRACTION	AIR FREE AS RECEIVED (ppm)	AIR & ACID GAS FREE MOLE FRACTION	AIR FREE AS RECEIVED LIQUID VOLUMES (mL / m³)
36.2+	Hexanes+ (C6+)	0.00246	2457	0.00246	13.4866
98.6+	Octanes+ (C8+)	0.00030	302	0.00030	1.7710
125.8+	Nonanes+ (C9+)	0.00002	24	0.00002	0.1458
150.9+	Decanes+ (C10+)	0.00000	0	0.00000	0.0000
174.3+	Undecanes+ (C11+)	0.00000	0	0.00000	0.0000
196.00+	Dodecanes+ (C12+)	0.00000	0	0.00000	0.0000
216.4+	Tridecanes+ (C13+)	0.00000	0	0.00000	0.0000
235.6 - 270.7	Tetradecanes+ (C14+)	0.00000	0	0.00000	0.0000

BOILING POINT RANGE (°C)	GROUPINGS	AIR FREE AS RECEIVED MOLE FRACTION	AIR FREE AS RECEIVED (ppm)	AIR & ACID GAS FREE MOLE FRACTION	AIR FREE AS RECEIVED LIQUID VOLUMES (mL / m³)
68.9 - 98.6	Heptanes (C7)	0.00066	657	0.00066	3.9068
98.6 - 125.8	Octanes (C8)	0.00028	278	0.00028	1.6252
125.8 - 150.9	Nonanes (C9)	0.00002	24	0.00002	0.1458
150.9 - 174.3	Decanes (C10)	0.00000	0	0.00000	0.0000
174.3 - 196.00	Undecanes (C11)	0.00000	0	0.00000	0.0000
196.00 - 216.4	Dodecanes (C12)	0.00000	0	0.00000	0.0000
216.4 - 235.6	Tridecanes (C13)	0.00000	0	0.00000	0.0000
235.6 - 253.6	Tetradecanes (C14)	0.00000	0	0.00000	0.0000
253.6 - 270.69	Pentadecanes (C15)	0.00000	0	0.00000	0.0000

BOILING POINT RANGE (°C)	RELEVENT COMPONENTS	AIR FREE AS RECEIVED MOLE FRACTION	AIR FREE AS RECEIVED (ppm)	AIR & ACID GAS FREE MOLE FRACTION	AIR FREE AS RECEIVED LIQUID VOLUMES (mL / m³)
49.28	Cyclopentane	0.00067	667	0.00067	3.2494
68.73	n-Hexane	0.00053	525	0.00053	2.8830
71.83	Methylcyclopentane	0.00000	< 10	0.00000	0.0219
80.06	Benzene	0.00001	< 10	0.00001	0.0360
80.78	Cyclohexane	0.00013	128	0.00013	0.6703
99.24	2,2,4-Trimethylpentane	0.00003	27	0.00003	0.1875
100.94	Methylcyclohexane	0.00011	109	0.00011	0.5864
110.61	Toluene	0.00005	49	0.00005	0.2206
136.16	Ethylbenzene	0.00000	< 10	0.00000	0.0155
138.33; 139.09	m&p-Xylene	0.00001	< 10	0.00001	0.0435
144.42	o-Xylene	0.00000	0	0.00000	0.0000
169.34	1,2,4-Trimethylbenzene	0.00000	0	0.00000	0.0000

AGAT® Laboratories

EXTENDED GAS ANALYSIS

Container Identification
5005092

Operator Name	Laboratory Number
VULCAN MINERALS INC.	09E375947F

Unique Well Identifier	Well Name
NOT AVAILABLE	VULCAN INVESTCAN REDBROOK#2

Field or Area	Pool or Zone	Sampler's Company
	NOT AVAILABLE	HOLLAND TESTERS

Well License	Elevation				Test Type	Test No.	Name of Sampler
	KB m	62.00	GRD m	56.00			

Test Interval or Perfs mKB		Sampling Point
1360.0 - 1383.0		NOT AVAILABLE
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)			1780	1780	600
Temperature			19	19	21

Date Sampled	Date Received	Date Analyzed	Date Reported	Entered By	Certified By
Nov 29, 2009	Dec 15, 2009	Dec 18, 2009	Dec 18, 2009	Binh Nguyen	Binh Nguyen

Other Information
BOTTOM HOLE SAMPLER , DST 2

** Results relate only to the items tested*

Note: Sampling Point, Unique Well Identifier and/or Pool or Zone information was unavailable at time of reporting. This information is integral to AGAT's WebFLUIDs, a comparison, history and trending analysis system.

COMPONENT	Mole Fraction		LIQUID VOLUMES mL / m³
	As Received	Air & Acid Gas Free	
Hydrogen	0.00045	0.00045	
Helium	0.00168	0.00168	
Nitrogen	0.11023	0.11023	
Carbon Dioxide	0.00000	0.00000	
Hydrogen Sulfide	0.00000	0.00000	
Methane	0.82254	0.82254	
Ethane	0.04379	0.04379	155.6
Propane	0.01395	0.01395	51.3
Isobutane	0.00187	0.00187	8.2
n-Butane	0.00352	0.00352	14.8
Isopentane	0.00063	0.00063	3.1
n-Pentane	0.00080	0.00080	3.9
Hexanes	0.00040	0.00040	2.1
Heptanes+	0.00014	0.00014	0.8
TOTAL	**1.00000**	**1.00000**	**239.7**

Gross Heating Value MJ/m³ 15 °C and 101.325 kPa

Moisture Free (MJ/m³)	Moisture and Acid Gas Free (MJ/m³)
36.27	36.27

Calculated Relative Density Moisture Free

0.645

Calculated Density C7+ Fraction (kg/m³) Moisture Free

716.9

Calculated pseudo critical properties

As Sampled		Acid Gas Free	
Ppc (kPa abs)	pTC (K)	Ppc (kPa abs)	pTC (K)
4457.51	192.41	4457.51	192.41

Calculated molecular weight (g/mol)

Total Sample	C7+ Fraction
18.69	101.79

Calculated C5+ Vapour Pressure (kPa abs)

106.37

Field H2S (ppm)

0.00

Laboratory H2S (ppm)

0.00

Constants taken from the most recent editions of GPA TP-17 and GPA 2145 have been used to calculate the physical properties of the gas.
This analysis was performed based on method GPA 2286.

AGAT® Laboratories

PROPERTIES OF C6+ FRACTION

File No.	Company	UWI / LSD
09E375947F	VULCAN MINERALS INC.	NOT AVAILABLE

BOILING POINT RANGE (°C)	SUMMARY	AIR FREE AS RECEIVED MOLE FRACTION	AIR FREE AS RECEIVED (ppm)	AIR & ACID GAS FREE MOLE FRACTION	AIR FREE AS RECEIVED LIQUID VOLUMES (mL / m³)
36.2+	Hexanes+ (C6+)	0.00054	541	0.00054	2.9526
98.6+	Octanes+ (C8+)	0.00004	40	0.00004	0.2560
125.8+	Nonanes+ (C9+)	0.00001	< 10	0.00001	0.0550
150.9+	Decanes+ (C10+)	0.00001	< 10	0.00001	0.0369
174.3+	Undecanes+ (C11+)	0.00000	0	0.00000	0.0000
196.00+	Dodecanes+ (C12+)	0.00000	0	0.00000	0.0000
216.4+	Tridecanes+ (C13+)	0.00000	0	0.00000	0.0000
235.6 - 270.7	Tetradecanes+ (C14+)	0.00000	0	0.00000	0.0000

BOILING POINT RANGE (°C)	GROUPINGS	AIR FREE AS RECEIVED MOLE FRACTION	AIR FREE AS RECEIVED (ppm)	AIR & ACID GAS FREE MOLE FRACTION	AIR FREE AS RECEIVED LIQUID VOLUMES (mL / m³)
68.9 - 98.6	Heptanes (C7)	0.00010	102	0.00010	0.5932
98.6 - 125.8	Octanes (C8)	0.00003	32	0.00003	0.2009
125.8 - 150.9	Nonanes (C9)	0.00000	< 10	0.00000	0.0181
150.9 - 174.3	Decanes (C10)	0.00001	< 10	0.00001	0.0369
174.3 - 196.00	Undecanes (C11)	0.00000	0	0.00000	0.0000
196.00 - 216.4	Dodecanes (C12)	0.00000	0	0.00000	0.0000
216.4 - 235.6	Tridecanes (C13)	0.00000	0	0.00000	0.0000
235.6 - 253.6	Tetradecanes (C14)	0.00000	0	0.00000	0.0000
253.6 - 270.69	Pentadecanes (C15)	0.00000	0	0.00000	0.0000

BOILING POINT RANGE (°C)	RELEVENT COMPONENTS	AIR FREE AS RECEIVED MOLE FRACTION	AIR FREE AS RECEIVED (ppm)	AIR & ACID GAS FREE MOLE FRACTION	AIR FREE AS RECEIVED LIQUID VOLUMES (mL / m³)
49.28	Cyclopentane	0.00015	148	0.00015	0.7197
68.73	n-Hexane	0.00017	174	0.00017	0.9558
71.83	Methylcyclopentane	0.00000	0	0.00000	0.0000
80.06	Benzene	0.00001	< 10	0.00001	0.0352
80.78	Cyclohexane	0.00001	< 10	0.00001	0.0493
99.24	2,2,4-Trimethylpentane	0.00001	12	0.00001	0.0857
100.94	Methylcyclohexane	0.00001	< 10	0.00001	0.0334
110.61	Toluene	0.00000	< 10	0.00000	0.0200
136.16	Ethylbenzene	0.00000	0	0.00000	0.0000
138.33; 139.09	m&p-Xylene	0.00000	0	0.00000	0.0000
144.42	o-Xylene	0.00000	0	0.00000	0.0000
169.34	1,2,4-Trimethylbenzene	0.00000	< 10	0.00000	0.0206

Certificate of Analysis

CLIENT NAME: VULCAN MINERALS INC. **AGAT WORK ORDER: 09C375947**

PROJECT NO: **ATTENTION TO: SHANE HALLEY**

Trace Sulphur Analysis (GC/SCD) - Gas

SAMPLE TYPE: Gas **SAMPLE ID: 05003561** **DATE RECEIVED: Dec 15, 2009**

DATE SAMPLED: Nov 28, 2009 **DATE REPORTED:**

SAMPLE DESCRIPTION: VULCAN INVESTCAN REDBROOK#2; DST 1B

PARAMETER	UNIT	RESULT	G / S	RDL	DATE ANALYZED	INITIAL	DATE PREPARED
Hydrogen Sulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Carbonyl Sulphide	ppm (v/v)	2.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Methyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Ethyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Dimethyl Sulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Carbon Disulphide	ppm (v/v)	18.4		0.1	Dec 18, 2009	YH	Dec 15, 2009
iso-Propyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
tert-Butyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
n-Propyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Methyl Ethyl Sulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
s-Butyl Mercaptan/Thiophene	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
iso-Butyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Diethyl Sulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
n-Butyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
tert-Butyl Methyl Sulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Dimethyl Disulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Diethyl Disulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Total Unidentified Sulphur Compounds	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Total Organic Sulphur	ppm (v/v)	20.5		0.1	Dec 18, 2009	YH	Dec 15, 2009

COMMENTS:

RDL - Reported Detection Limit; G / S - Guideline / Standard
Field Hydrogen Sulphide : Not Available.
Identification based on retention time relative to standards.
All compounds quantified as ideal gases. Carbonyl sulphide quantified using its standard response factor, all other compounds quantified using Hydrogen sulphide's response factor.
Total organic sulphur includes compounds with chromatographic retention up to and including that of ethyl disulphide.

Certified By:

Certificate of Analysis

CLIENT NAME: VULCAN MINERALS INC. **AGAT WORK ORDER: 09C375947**

PROJECT NO: **ATTENTION TO: SHANE HALLEY**

Trace Sulphur Analysis (GC/SCD) - Gas

SAMPLE TYPE: Gas **SAMPLE ID: 05005092** **DATE RECEIVED: Dec 15, 2009**

DATE SAMPLED: Nov 29, 2009 **DATE REPORTED:**

SAMPLE DESCRIPTION: VULCAN INVESTCAN REDBROOK#2; DST 2

PARAMETER	UNIT	RESULT	G / S	RDL	DATE ANALYZED	INITIAL	DATE PREPARED
Hydrogen Sulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Carbonyl Sulphide	ppm (v/v)	1.7		0.1	Dec 18, 2009	YH	Dec 15, 2009
Methyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Ethyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Dimethyl Sulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Carbon Disulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
iso-Propyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
tert-Butyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
n-Propyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Methyl Ethyl Sulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
s-Butyl Mercaptan/Thiophene	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
iso-Butyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Diethyl Sulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
n-Butyl Mercaptan	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
tert-Butyl Methyl Sulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Dimethyl Disulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Diethyl Disulphide	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Total Unidentified Sulphur Compounds	ppm (v/v)	<0.1		0.1	Dec 18, 2009	YH	Dec 15, 2009
Total Organic Sulphur	ppm (v/v)	1.7		0.1	Dec 18, 2009	YH	Dec 15, 2009

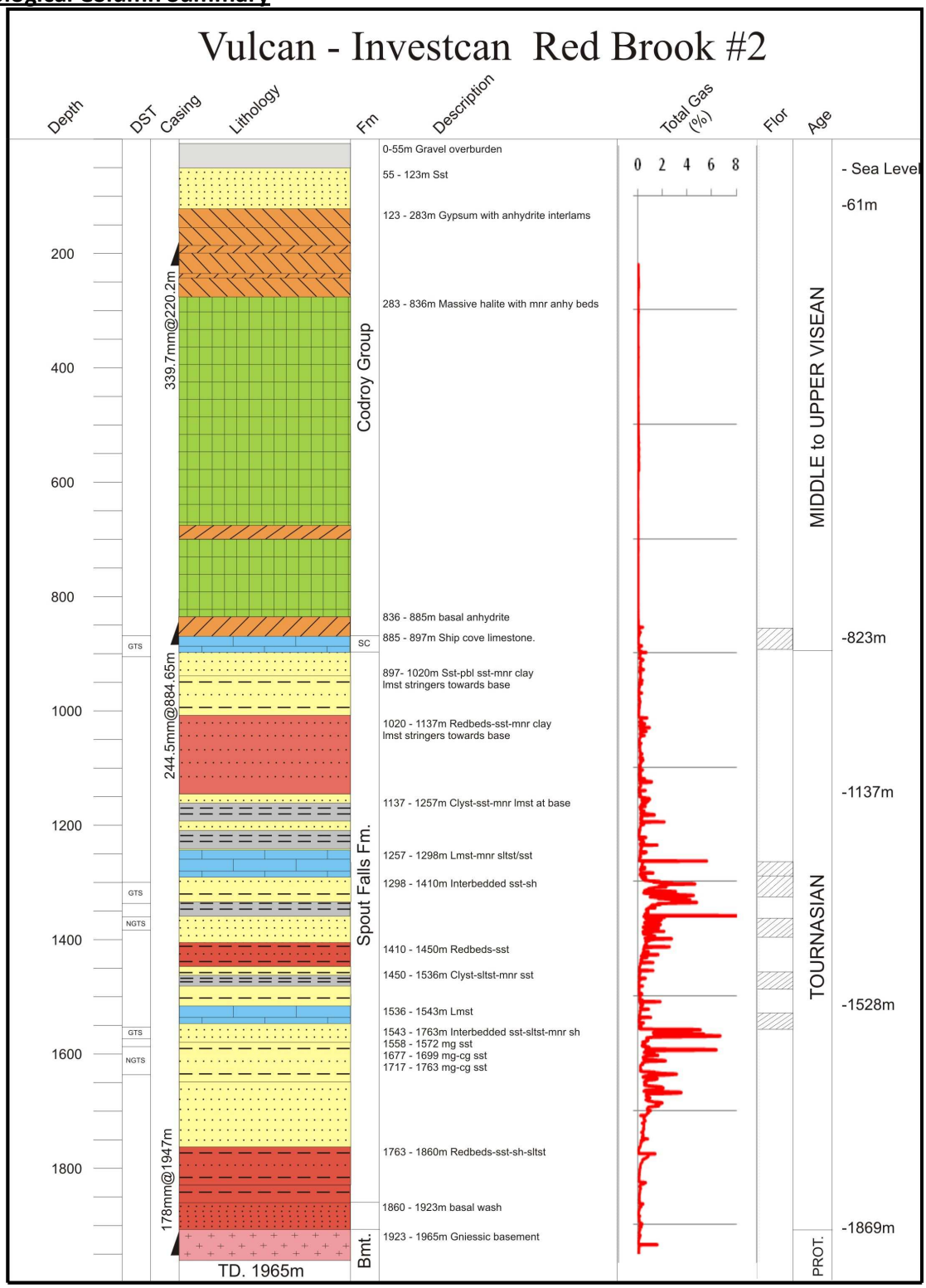
COMMENTS:

RDL - Reported Detection Limit; G / S - Guideline / Standard
Field Hydrogen Sulphide : Not Available.
Identification based on retention time relative to standards.
All compounds quantified as ideal gases. Carbonyl sulphide quantified using its standard response factor, all other compounds quantified using Hydrogen sulphide's response factor.
Total organic sulphur includes compounds with chromatographic retention up to and including that of ethyl disulphide.

Certified By:

APPENDIX 6: GEOLOGY COLUMN & REPORT

Geological Column Summary



Geological Report

on

VULCAN INVESTCAN RED BROOK# 2

(FTD 1965 m)

November 23, 2009

Prepared For: Patrick Laracy

VULCAN MINERALS INC.

Prepared By: J. Michael Smith

JDS CONSULTANTS

403-589-4998 (c)

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VULCAN INVESTCAN RED BROOK # 2 was drilled during the fall of 2009 within the north eastern section of the Bay St. George Basin, located in the south western area of the province of Newfoundland, Canada. (Carboniferous Age, 355-300 million Years).

The well was located apx 2 km west of the Robinson Outport main intersection and 3 km north on the old railway bed. Vulcan Minerals Inc. was the Primary contractor / operator with Stoneham # 11 (telescopic triple) the drilling company contracted for the project.

This well abstract is intended as a drilling - time summary verses a detailed "geological summary". Geology information - interesting "zones" will be noted. Please see Geologic Striplog for a detailed Geologic Well Summary. Depositional environment , Tectonic events, Structural interpretation and "timelines" are not discussed. Please read the publication from the Newfoundland Department of Mines and Energy, (1983), complied by Ian Knight titled "Geology of the Carboniferous Bay St. George Sub basin, Western Newfoundland.

Vulcan Investcan Red Brook # 2 was spudded on October 21, 2009 at 00:00 hrs.

510 mm (20 inch) casing was preset at apx 29 m KB prior to the rig on location.

432 mm Surface hole was drilled down to 220 meters. Minor to no seepages through the upper 55 meters of a Glacial Till Gravel. A very weakly cemented Reddish Sandstone was intersected from 55 - 123 meters. Gypsum was penetrated at 123 meters to Casing point at 220 meters. Lost Circulation at 173 meters (no returns) within a drill break. The bit was POOH and the pipe RIH open ended and a High Viscosity pill was pumped sealing the zone. Drilling continued to 212 meters. Operations were halted for 60 hours as the rig waited for Surface Casing to arrive from the mainland. Drilling continued down to 220 meters. The first attempt at running the 340 mm Casing failed as the Casing became stuck at apx 150 meters. When the casing was POOH, a partial Centralizer was left in hole. A clean out was completed and drilling an additional 0.5 meters milled up the steel at the bottom of the hole. The second attempt at running the 340 mm Surface Casing was successful. A high viscosity LCM pill was pumped at 170 m RIH. Casing was cemented with no problems. Plug down on October 28th at 0700 hrs.

Surface equipment including BOP"s were rigged up and pressure tested with no problems. The remote unit for the BOP"s in the dog house was not working and the operation was stalled for 18 hours waiting for a computer Tech to arrive from Alberta.

311 mm Intermediate hole was drilled out from 220.2 meters on October 31st at 06:30 hrs. A Formation Integrity Test was done at 229 meters. Drilling continued but at 239 meters, circulation was lost. Drilling continued to 242 meters. A 4 m3 high viscosity LCM plug was pumped and the well bore was top filled to squeeze the pill into the lost zone.
The LCM pill did not hold and a 6 m3 Cement Plug was pumped sealing the zone.

Drilling continued from 242 meters and circulation was again lost at 284 m on November 1st. Nine (9) Cement Plugs were pumped over the following five days. It was assumed that losses were occurring at the top of a Salt Zone and was confirmed by later wire line logs. As each plug was drilled out, circulation was quickly lost in new formation ? or in the plug being drilled out. Hole depth was 303 meters when the final 9th plug was displaced. The lost zone was assumed from apx 283 - 291 m. The last 4 plugs were pumped with the drill pipe at 287 meters. Generally there was no cement below apx

290 meters indicating that the pumped cement flowed into the lost zone and not filling the bottom of the hole. After the 9th cement plug was pumped and prior to drillout, the mud system was saturated with salt. The theory was, that the saturated salt mud would not erode the salt around the cement, causing the cement plug to loose integrity and losses continuing. It was evident that the 7-8 cement plugs were holding better and it is not known if it was the saturated drilling mud or the 9th cement plug itself that finally sealed the zone.

Drilling continued from 303 meters with no mud losses. 100% Massive Salt was intersected from 327 to 836 meters (509 m thick). A basal Anhydrite was present from 836 - 885 meters. Top of the Ship Cove was intersected at 885 meters and Casing Point was called at 889 meters.

Three Logging runs were completed by Baker Hughes with no problems in apx eleven (11) hours.

245 mm Intermediate Casing was RIH and cemented with no problems. Wait on Cement (WOC) on November 11th at 0300 hrs.

216 mm Main Hole was drilled out on November 12th at 14:45 hrs. Bedded very fine calcareous Sandstones and silty Limestone were encountered to 898 meters. A drill break from apx 888 - 889.5 meters was flow checked and it was evident that there was a steady but very slow influx. A upper medium very good quality Sandstone was penetrated. The influx was circulated up to surface but there was no gas to surface. The influx appeared to possible be water with some trapped dissolved gas. Mud weight was increased to 1200 kg/m3 to make the well static. The tricone was POOH and a PDC with stabilizers were RIH in order to increase penetration and hold the hole angle at seven degrees.

The 216 mm PDC drilled ahead from 889 meters on November 13th and was POOH at 1750 meters on November 19th. The PDC bit run averaged over 7 m/hr (861 m/118 hrs). ROP varied from a high of 30 m/hr down to 2 m/hr based on formation. Several interesting Gas shows with over 500 units of gas was observed in Sandstones. The Sequence within the Spout Falls consisted of Sandstones - Redbeds, localized Limestones and minor grey to greenish grey Shales. Of particular Geological Interest would be a Limestone Unit from 1255- 1270 meters that had traces of oil staining - and two Sandstone Units from 1300-1340 meters and 1558 - 1573 meters that had good gas shows with the mud weight at 1200 kg/m3. (See Striplog for complete details).

The PDC was POOH due to Zero ROP at 1750 meters. The center of the PDC was Cored out. In Hindsight, it was believed that the PDC probably self destructed as the formation did not change. At the time, because of the cored out PDC, it was uncertain what rock was penetrated to destroy the bit. A Tricone was RIH and drilling continued at a much slower ROP. Cutting samples indicated the formation had not changed and nothing in the samples indicated the formation could of damaged the PDC. Because of the slow ROP within Redbeds down to 1.5 m/hr, the Tricone was POOH at 1776 meters and a new PDC was RIH to maximize penetration rate.

The new PDC drilled ahead on November 20th from 1776 meters and was POOH at a depth of 1935 meters after drilling through a granite detrital ? and apx 5 meters into the granite basement proper. A rerun tricone was RIH and drilled ahead in the granite basement at apx 1.6 m/hr to a Final Total Depth of 1965 meters on November 23, 2009 at 10:30 hrs.

Forty eight (48) hours were lost waiting on the Baker Hughes Loggers to arrive from Ontario. A wiper trip and pressure testing of all surface equipment was performed during the down time.

Baker Hughes (Atlas) Loggers were rigged up on November 25th at 11:00 hrs. A total of 6 Runs were made with a total logging time of 63 hours. There were no issues or lost time during the logging job. The following logging runs were completed with no problems.

1) HDIL-DGR(DSL)-SP-ZDL-CN-XY Cal
2) DSI-XMAC (Sonic)
3) STAR/DIP/IMAGER (Picture of well bore)
4) RCOR (Rotary Sidewall Coring tool)
5) FMT (Formation Pressure Testing)
6) ZVSP-GR (Zero Offset Vertical Seismic Profile) (9 hrs lost waiting on Water Pit)

Logging was completed on November 28th and a Wiper / Clean out trip was completed prior to DST"s. Trip Gas from wiper only 31 units with MW = 1260 kg.

Holland Testers, out of Ontario were responsible for the DST"s. Operations commenced on November 28th at 13:30 hrs and were completed on December 3rd at 07:00 hrs. A total of 5 DST"s were completed in a total Rig time of 113.5 hrs hours.

The Following DST"s were completed:

DST#1 1556 - 1574 m (23.5 hours) Gas to surface on Main Flow.
DST#2 1360 - 1383 m (23.0 hours)
DST#3 1297 - 1338 m (21.5 hours) Gas to Surface on Main Flow
DST#4 1587 - 1641 m (22.5 hours)
DST#5 872 - 908 m (24.0 hours) Gas to Surface on Main Flow

The Bit was RIH for a clean out trip and to circulate out gas from the DST intervals prior to running casing. Gas was Circulated out of the hole from the following Depths:

945 m - DST#5 - 1411 u (C1=1296u / C3=115u)
1380 m - DST #2+#3 - 4870 u (C1=4563u / C3=307u)
1652 m - DST #1+#4 - 2258 u (C1=2094u / C3=163u)
1965 m - FTD - 4290 u (C1=4022u / C3=268u)

The Drill String was POOH and laid down prior to Casing.

Main Hole Casing (177.8 mm) was RIH on December 4th and the casing was cemented and set at 1947.0 m, with no problems. WOC at 21:00 hrs December 4th, 2009.

Rig release on December 05, 2009 at 23:59 hrs.

Well Summary

Storage Units: Metric

Well Information

Operator:	**Vulcan Minerals Inc.**
Well Name:	**Vulcan Investcan Red Brook 2**
Location:	**Robinsons, NL**
UWI:	Red Brook 2
Pool:	Undefined
Field:	Red Brook
State / Province:	Newfoundland
Country:	Canada
License Number:	ADW 2009-116-03-01
Well Status:	**Cased for Gas**

Surface Co-ordinates

Hole Type: Vertical **Fault Indicator:**

Latitude: **Longitude:**

N / S: UTM Northing 5347345 m (NAD 27)
E / W: UTM Easting 370125 m (NAD 27)

Bottom Hole Co-ordinates

Latitude: **Longitude:**

N / S:
E / W:

Elevations

		Reference:	Gd
Ground Elevation:	57.10	**Kelly Bushing to Ground:**	6.20
Kelly Bushing Elevation:	61.75	**Cut (-):**	0.00
Casing Flange Elevation:		**Fill (+):**	0.00

Total Depth

	Measured Depth	**True Vertical Depth**
Total Depth Driller (Tally) :	1,965.00	1,950.41
Total Depth Driller (Strap or SLM):		
Total Depth Logger:	1,952.20	1,937.77

Miscellaneous Depths

Plugback Depth:	**Water Depth Reference:**
Sidetrack Depth:	**Water Depth:**

Well Summary

Drilling Contractor:	Stoneham # 11	**Spud Date:**	Oct 21, 2009 @ 00:00
Rig Release Date:	Dec 5, 2009 @ 23:00	**Total Depth Date:**	Nov 23, 2009 @ 10:30

Cores

#	Formation	Interval	Cut	Recovered	%

Casing Summary

Casing Type	Casing Size	Landed Depth	Hole Size
Surface	339.7	220.20	432.0
Intermediate	244.5	884.65	311.0
Production	177.8	1,947.00	216.0

Logging Summary

Company	Engineer	Total Depth (MD)	Logging tools
Baker Hughes	Demriti Shkolnikov	889.00	Duel Laterlog-Gamma Ray-Caliper DLL-GR (883.9-220 m)
			Conpensated Z-Densilog-Compensated Neutron-Gamma Ray-XY Caliper ZDL-CN-GR-XY Cal (888 - 20.0
			Cross Multipole Array Acoustilog - Gamma Ray- Digital Sprectalog-Cal XMAC-DSI-GR 220-881 m
	J.House / R. Neupa	1,965.00	Zero Offset Vertical Seismic Profile / Gamma VSP 1955 - 885 (Surface Casing)
			Formation Tester FMT
			Rotary Sidewall Coring RCOR / GR 1945 - 890 Cut 31 cores / Rec 31 cores
			STAR DIP / IMAGER 1950 - 885 m
			Cross-Multipole Array AcousticLog / Gamma Ray / Caliper XMAC-GR / DSI 1952.0 - 800 m
			Compentated Z-Densilog / Compensated Newtron / Induction / Gamma Ray / XY Cal HDIL-GR(DSL)-ZDL-CN-CCAL 1956.7 - 885 m

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Oct 21, 09	55.00		6.00		Spud Well 00:00 hrs Oct 21, 2009 Drill 432 mm Surface hole from 17 meters. Drill through to morning at 55 m
Oct 22, 09	173.00	118.00	20.00	5.9	Drill ahead 432 mm Surface hole 22:00 hrs - 154 m POOH for wiper trip, change BHA, RIH MD = 154 m 00:30 hrs - Wash clean 140-154 m 00:45 hrs - Drill - ream 154 - 173 m 07:00 hrs - Lost Circulation
Oct 23, 09	212.00	39.00	11.50	3.4	07:00 hrs - Lost Circ, Pipe stuck apx 1hr from gravel falling in, Pull free and POOH, RIH open ended with pipe and spot 4 m3 high vis sawdust pill. 12:30 hrs - Pick up bit - RIH 14:30 hrs - Wash 121 - 173 m 15:30 hrs - Drill ahead from 173 m MD = 202 m 03:00 hrs - 212 m, Circ and Condition
Oct 24, 09	212.00	0.00	0.00	0.0	Circ and Condition Mud 08:15 hrs - POOH 11:00 hrs - Wiper trip 16:00 hrs - Wait on Casing to arrive to rig MD = 212 m Wait on Casing
Oct 25, 09	212.00	0.00	0.00	0.0	Wait on Casing to arrive from Mainland
Oct 26, 09	215.00	3.00	0.70	4.3	Wait on Casing MD = 212 m 04:00 hrs - RIH with bit 05:00 hrs - Unload Casing and Strap for TD 06:15 hrs - Drill ahead 432 mm Surface hole to casing depth
Oct 27, 09	220.00	5.00	1.50	3.3	Drill 215-220 m, Circ and condition hole prior to Csg 08:30 hrs - POOH for Csg 13:30 hrs - Run 340 mm H-90 Casing, Trouble screwing together casing - Weld several Joints as required. RIH 147 m - Unable to push Casing into hole - Work Casing (tight from 100 m) MD = 220 m 01:00 hrs - POOH / 340 mm Csg - Cut welds on Casing joints to POOH 05:30 hrs - RIH with bit - 8 inch collar, Wash and circ to bottom 08:00 hrs - Circ and condition hole prior to second Casing attempt.

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Oct 28, 09	220.00	0.00	0.00	0.0	RIH - Clean out trip 08:30 - POOH to 100 m 09:00 hrs - Wash and ream back to bottom 12:00 hrs - POOH for Casing 14:30 hrs - Run 340 mm Surface Casing 20:00 hrs - Spot pill at 171 m, RIH 22:30 hrs - On Bottom with Casing - circulate MD = 220 m, Cement Casing 01:00 hrs - WOC 02:30 hrs - Cut casing - pressure test manifold 07:00 hrs - Weld Bowl - Pressure test surface equiptment
Oct 29, 09	220.00	0.00	0.00	0.0	WOC 09:30 hrs - Cut casing to remove diverter 13:00 hrs - Cut Casing to height - prep and Weld on Bowl 17:00 hrs - Allow bowl to cool to 100F. MD = 220 m Nipple up - Build BOP's 08:00 hrs - Complete install of BOP's.
Oct 30, 09	220.00	0.00	0.00	0.0	08:00 hrs - Complete install of BOP's 11:00 hrs - Pressure test accumultor 12:30 hrs - Start pressure testing BOP's 23:00 hrs - Finish Pressure testing BOP's - Install Wear Bushing MD = 220 m Install Flow T - Line 04:00 hrs - Make up Stab - Bit - BHA + RIH 07:00 hrs - Wait on Accumulator Tech from Alberta for Rig repair.
Oct 31, 09	229.00	9.00	1.00	9.0	Wait on Tech to arrive from Calgary MD = 220 m 02:00 hrs - Tech on location - re set / correct programing ? computer on accumulators 04:30 hrs - Tag Float - Drill out Cement 06:15 hrs - Drill out Shoe - Drill ahead 311 mm Int Hole 07:30 hrs - Circ for Leakoff test @ 229 m 08:00 hrs - FIT @ 2000 kPa surface pressure

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Nov 1, 09	257.00	28.00	4.00	7.0	FIT 08:30 Drill ahead 311 Int Hole 10:00 hrs - 242 m - Lost Circ at apx 239 meters (No Returns) Mix LCM Plug - Top Fill, Mix 2nd LCM plug - Top Fill 13:45 hrs - POOH and RIH Hole open ended with pipe 18:20 hrs - Pump 6 m3 Cement 17:25 hrs - WOC MD = 242 m 01:30 hrs - Make up PDC Bit - RIH 02:00 hrs - Circ and Condition 03:30 hrs - Tag Cmt 229.5 m - Drill cmt 04:15 hrs - Drill ahead from 242 m
Nov 2, 09	287.00	30.00	4.50	6.7	Drill ahead 311 mm hole in Anhydrite ? 11:45 hrs - 284 m - Lost Circ at 283 m, No Returns, Pump 2 LCM Pills. Drill Blind 284 - 286 m, POOH 14:00 hrs - RIH Open ended - Wait on Cement truck 17:00 hrs - Pump 6 m3 cement plug with LCM (no returns) @ 286 m 17:30 - WOC MD = 284 m 01:00 hrs - RIH / bit 02:45 hrs - Hit cmt apx 280 m, drill hard cmt, lost Circ after Cmt at 286 m, drill blind 286-290 m, Pump LCM Pill, POOH 07:00 hrs - RIH open ended and wait on Cmt Truck

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Nov 3, 09	294.00	7.00	1.00	7.0	07:00 hrs - Wait on Cement Truck 08:30 hrs - Pump 6m3 Cement Plug at 290 m 09:00 hrs - WOC 15:00 hrs - RIH with bit 16:15 hrs - Drill cement from 285 m? 16:45 hrs - Drill ahead - Lost Circ below cmt, Drill blind 290-294 m 17:15 hrs - POOH - Wait on Cmt Truck, RIH open ended 21:00 hrs - Pump 6 m3 cement 21:30 hrs - POOH - WOC MD = 294 m RIH - Tag cmt at 273 m 05:45 hrs - Drill cmt from 273 m (Out of Pill Tank only) 07:20 hrs - Lost Circ in Cement plug # 2 286 -288 m. 08:00 hrs - Confirm depth - Start transfer of water to rig for drilling
Nov 4, 09	303.00	9.00	0.70	12.9	Transfer water to rig tanks 09:25 hrs - Drill blind 288 - 294 m from pill tank (cmt) 09:45 hrs - Drill blind new hole from rig tanks 294 - 300 m 10:05 hrs - Mix thick LCM Gel Pill 11:15 hrs - Pump 15 m3 LCM Slug, POOH, RIH open ended 13:00 hrs - Wait on Cerment Truck 15:30 hrs - Pump 6m3 cmt, POOH with pipe 16:00 hrs - WOC MD = 300 m 01:00 hrs - Tag cmt @ 281 m, Drill cmt 281-292, Losses starting mix and pump LCM Pill Wait on pill, Top fill 3 m3 H2O over two hours to keep hole filled 06:15 hrs - Drill 292 - 300 m Cmt, Drill Part Rtns 300 - 303 m, Lost Circ 07:15 hrs - Mix and Pump away LCM Pill

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Nov 5, 09	303.00	0.00	0.00	0.0	Pump LCM Slug, POOH and Wait on Cement Truck 11:30 hrs - Pump 6 m3 Cmt plug 12:00 hrs - POOH - WOC 18:00 hrs - RIH / Bit - Tag cmt @ 273 m - drill cmt to 289 m 21:40 hrs - Losses - Pos green Cmt ? - WOC MD = 303 m, Mix LCM Pill 00:30 hrs - Drill 289-291 m, No returns, Build volumn in tanks, Drill 291-295 m 02:30 hrs - Lost 17 m 3, POOH, Wait on BJ Cementers, RIH Open ended 04:30 hrs - Cement 8m3 Plug #6 with BJ Cementers 05:00 hrs - WOC, POOH
Nov 6, 09	322.00	19.00	2.00	9.5	WOC 11:45 hrs - RIH - Tag Cmt top at 280 m, Drill Cmt 280-303 m full Rtns. Drill from 303-305 m and make Cnx. 15:00 hrs - Drill with losses after cnx, 305-313 m - No Rtns, Pump LCM Slug and Trip Bit - RIH open ended 19:30 hrs - Pump 8m3 cmt / BJ 20:00 hrs - WOC MD = 313 m 01:30 hrs - Make up Bit - RIH, Tag Cmt Top at 273 m, Drill Cmt 273 - 283 m, Drill Hard Cmt 283 - 288 m, No Cmt - some stringers from 288 - 313 m 05:00 hrs - Drill 313 - 319 m 06:00 hrs - Cnx at 319 m, Drill ahead and Lost Circ after cnx, Drill No Rtns 319 - 322 m 07:00 hrs - POOH for Cmt Plug - RIH Open Ended
Nov 7, 09	322.00	0.00	0.00	0.0	RIH, Wait on BJ, Safety Meeting prior to cementing, Wait on BJ Repairs 11:00 hrs - Pump 4 m3 Cmt Plug # 8 / Pipe at 287 m 11:30 hrs - WOC 17:00 hrs - RIH / bit - No Rtns, Top of Cmt Stringers at 283 m, No Rtns 19:45 hrs - POOH and RIH open ended to 287 m 22:15 hrs - Pump 7m3 Cmt Plug # 9 22:30 hrs - POOH / WOC MD = 322 m 08:00 hrs - WOC - RIH with bit.

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Nov 8, 09	545.00	223.00	14.00	15.9	RIH / WOC 10:30 hrs - Tag cement 269 m and drill solid Cement to 288 m, Drill and wash to bottom 13:45 hrs - Drill ahead formation from 322 m (No Losses) MD = 449 m Drill through to morning. Massive salt at shakers.
Nov 9, 09	864.00	319.00	22.00	14.5	Drill ahead in Salt at apx 25 m/hr MD = 835 m Drill through to morning in Anhydrite at apx 4 m/hr
Nov 10, 09	889.00	25.00	6.00	4.2	Drill ahead 311 mm Int Hole 12:45 hrs - 881 m, Circ and check samples 14:15 hrs - 889 m, Casing Point, Circ and POOH for Wiper 18:15 hrs - Circ on Bottom, Raise Vis for Logging 21:00 hrs - POOH for Logging, Lay down DC's - Stabs. MD = 889 m 01:00 hrs - Rig to and Log # 1 (DSI-XMAC-GR) 05:45 hrs - Rig to and Log # 2 (ZDL-CN-GR-XY Cal) 07:00 hrs - Completing Run # 2
Nov 11, 09	889.00	0.00	0.00	0.0	
Nov 12, 09	889.00	0.00	0.00	0.0	07:00 hrs - Install Seal Assembly. tighten and Pressure Test 11:00 hrs - Set up / Pressure test 23:00 hrs - RIH with Drill pipe used to cement plugs MD = 889 m 05:30 hrs - Make up BHA - RIH
Nov 13, 09	899.50	10.50	4.90	2.1	Make up BHA - RIH, Slip and cut, etc, Drill out shoe - cmt 14:45 hrs - Drill out 216 main hole 16:30 hrs - 892 m, FIT 17:15 hrs - Drill ahead 20:00 hrs - 889.5 m, 1.5 m drill break, Flow Check - well not static, Circ out influx, NGTS 22:15 hrs - Shut in well - mix barite MD = 889.5 m Continue to mix barite and check well (not static)
Nov 14, 09	990.00	90.50	11.00	8.2	Increase MW = 1200 kg/m3 10:35 hrs - Well Static, POOH for BHA 15:00 hrs - Pick up new BHA, PDC - Stabs, RIH 18:45 hrs - Drill ahead 216 mm Main hole / PDC MD = 949 m Drill through to morning

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Nov 15, 09	1,129.00	139.00	22.00	6.3	Drill ahead last 24 hours MD = 1094 m Drill through to morning
Nov 16, 09	1,255.00	126.00	22.00	5.7	Drill ahead last 24 hours MD = 1216 m Drill through to morning at apx 6 m/hr
Nov 17, 09	1,415.00	160.00	22.00	7.3	Drill ahead last 24 hours MD = 1360 Drill through to morning at apx 8 m/hr
Nov 18, 09	1,547.00	132.00	22.00	6.0	Drill ahead last 24 hours MD = 1516 m Drill through to morning
Nov 19, 09	1,750.00	203.00	21.00	9.7	Drill ahead 216 mm Main hole MD = 1672 m Drill through cln SS at apx 15 m/hr 05:30 hrs - 1750 m Possible plugged nozzel - ROP dropped to zero Circ 06:45 hrs - POOH to check PDC.
Nov 20, 09	1,776.00	26.00	8.50	3.1	POOH 09:15 hrs - Bit at 1200 m, Well bore not taking enough fluid, RIH and Circ BU - TG = 158 u 12:00 hrs - Well Static, POOH for Bit, (PDC Cored out) - RIH / Tricone 22:30 hrs - Drill ahead 216 mm hole / Tricone MD = 1753 m 08:00 hrs - 1776 m - POOH to pick up PDC due to poor ROP at 2 m/hr in Redbeds.
Nov 21, 09	1,862.00	86.00	10.00	8.6	POOH / Tricone and RIH with PDC to drill up Redbeds 20:30 hrs - Drill ahead 216 mm main hole at apx 10 m/hr TG = 839 units (early) MD = 1808 m Drill through to morning
Nov 22, 09	1,935.00	73.00	22.00	3.3	Drill ahead last 24 hours MD = 1921 m Drill through to morning, slowing down to 1.3 m/hr Circ to POOH
Nov 23, 09	1,960.00	25.00	13.00	1.9	07:30 hrs - POOH / PDC and RIH with Tricone 16:30 hrs - Drill ahead with Tricone MD = 1949 m Drill through to morning at apx 1.5 m/hr in Granite Basement

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Nov 24, 09	1,965.00	5.00	3.00	1.7	Drill ahead 10:30 hrs FTD well 1965 meters. Circ and Condition - Incr MW from 1220 to 1240 kg for tripping. 15:30 hrs - POOH and Lay out BHA 20:00 hrs - Wait on Loggers 23:00 hrs - Pressure Test MD = 1965 m 07:00 hrs - Wait on Loggers - Pressure test
Nov 25, 09	1,965.00	0.00	0.00	0.0	Pressure test / Wait on Loggers RIH to shoe / Wait on Loggers 23:30 hrs - RIH and Circ, TG = 29 u (MW = 1240) 03:00 hrs - POOH 08:00 hrs - OOH, Wait on Loggers
Nov 26, 09	1,965.00	0.00	0.00	0.0	Wait on Loggers 11:00 hrs - Rig up Loggers RUN #1 - HDIL-GR-CN-ZDL-XY Cal 17:45 hrs - RUN #2 - DSI-XMAC MD = 1965 m 00:15 hrs - RUN #3 - STAR / DIP IMAGER
Nov 27, 09	1,965.00	0.00	0.00	0.0	07:00 hrs - Run # 3 STAR/DIP IMAGER (Picture image) 12:00 hrs - Run # 4 RCOR (Sidewall Cores) MD = 1965 02:00 hrs - Recover Cores 02:30 hrs - Run # 5 FMT (Pressure Tester
Nov 28, 09	1,965.00	0.00	0.00	0.0	02:00 hrs - Recover Sidewall cores 02:30 hrs - Run # 5 - FMT 16:00 hrs - Run # 6 - VSP MD = 1965 m 02:00 hrs - Logging Completed - (63 hrs total) 02:30 hrs - RIH for cleanout 07:00 hrs - Circ on Bottom prior to DST's
Nov 29, 09	1,965.00	0.00	0.00	0.0	Circ and Condition on bottom after logging 09:00 hrs - POOH 13:30 hrs - Rig in Tester and Make up DST # 1 21:46 hrs - DST # 1 (1555-1574 m) 00:30 hrs - Final Shut in (6 hours) 06:30 hrs - Unseat Packer and POOH / DST #1

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Nov 30, 09	1,965.00	0.00	0.00	0.0	07:00 hrs - POOH with DST # 1 10:30 hrs - Recover fluid and samples from bottom hole sampler Service and break down tools 13:00 hrs - DST # 2 - RIH tailpipe, Make up test interval and RIH 19:00 hrs - DST # 2 Initial Preflow - Valve open 21:40 hrs - Final Shut In MD = 1965 m 03:40 hrs - Un Seat packer and POOH 07:30 hrs - Recover fluid and sample from Bottom hole sampler
Dec 1, 09	1,965.00	0.00	0.00	0.0	DST#2 Handle test tools and recover fluid 10:00 hrs - DST # 3 Make up tools - load recorders 11:30 hrs - DST# 3 Interval increased - Re make up test tools and load recorders, RIH 17:35 hrs - DST # 3 Open Valve 20:45 hrs - Final Shut in MD = 1965 m 02:45 hrs - Unseat DST#3 and POOH 06:30 hrs - Recover fluids and down load recorders 07:30 hrs - DST # 4 - make up tools
Dec 2, 09	1,965.00	0.00	0.00	0.0	Make up DST # 4 10:15 hrs - RIH with DST # 4 13:48 hrs - Open Valve - Preflow 16:30 hrs - Final Shut in 22:45 hrs - Unseat Packer - POOH with DST # 4 MD = 1965 m 03:00 hrs - Recover fluid and download recorders 05:00 hrs - RIH 26 stnd pipe 06:00 hrs - Make up DST # 5, Load recorders 08:00 hrs - RIH DST #5
Dec 3, 09	1,965.00	0.00	0.00	0.0	RIH for DST#5 (880-908 m) 11:04 hrs - Open Valve for DST #5 14:45 hrs - Final Shut in 20:45 hrs - Unseat packers and POOH wet (830 m fluid in pipe) MD = 1965 m 01:45 hrs - Handle test tools, download recorders, service and clean, Lay down Test tools 05:00 hrs - POOH tail pipe 07:00 hrs - Make up Bit / BHA - RIH for Cleanout prior to Casing.

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Dec 4, 09	1,965.00		0.00	0.0	RIH for Cleanout Circ at 945 m, 1392 m, 1652m, 1965 m 15:30 hrs - Circ on Bottom 19:00 hrs - POOH Sideways fro Casing MD = 1965 m 02:00 hrs - Rig to run 177.8 mm Casing
Dec 5, 09	1,965.00		0.00	0.0	Run 177.8 mm Casing 16:30 hrs - Circ Casing on Bottom 18:45 hrs - Cement Casing 21:00 hrs - WOC (Start cleaning tanks - etc) MD = 1965 m Tear out Rig

Casing Data Summary

Storage Units: Metric

Casing Type	Casing Size	Casing Landed @	Hole Size
Surface	339.7	220.20	432.0
Intermediate	244.5	884.65	311.0
Production	177.8	1,947.00	216.0

Bit Record Table (IADC Grading System)

Storage Units: Metric

**** For more detailed Bit Information refer to Bit Record ****

Bit #	Make	Type	Size	Depth In	Depth Out	Made	Hours	Avg. P.R.	I.A.D.C. Bit Condition								
									I	O	MDC	Loc	B	G	ODC	RP1	RP2
1	Reed	17T11	432.0	17.0	220.0	203.0	37.75	5.38									
2	Hughes	GT-CS1	311.0	220.0	242.0	22.0	2.50	8.80									
3	Hughes	TN1593	311.0	242.0	889.0	647.0	53.50	12.09	0	0	NO	A	0		NO	LOG	
4	Hughes	GX-30DX	216.0	889.0	899.0	10.0	4.25	2.35	0	0	NO	A	0		NO	BHA	
5	Hughes	HCD506Z	216.0	899.0	1,750.0	851.0	117.75	7.23	8	3	CR	N	0		CC	PR	
RR4	Hughes	GX-30DX	216.0	1,750.0	1,776.0	26.0	7.50	3.47	1	1	NO	A	0		NO	PR	
6	Hughes	HC505ZX	216.0	1,776.0	1,935.0	159.0	32.75	4.85	1	3	CT	T	0		CT	PR	
7rr	Hughes	GX30DX	216.0	1,935.0	1,965.0	30.0	16.00	1.88	2	1							

Total Rotating Hours: 272.00

Wireline Logging Summary

Storage Units: Metric

Logging Suite Number:	1		
Wireline Logging Company:	Baker Hughes	**Engineer:**	Demriti Shkolnikov
District:	Sarnia	**Unit Number:**	4126
Witness:	Michael SMith		

Was Pressure Control Equipment Utilized:	No	**Maximum Deviation:**	6.800 º
Was the Logging Job Mechanically Assisted:	No	**Hole Size:**	311.0

Total Lost Time:	0.00
Loggers' Total Down Time:	0.00
Total Job Time (From Rig up to Rig down):	11.00

	Measured Depth	True Vertical Depth
Casing Depth Driller	220.20	220.20
Casing Depth Logger	220.20	220.20
Total Depth Driller (Tally)	889.00	889.00
Total Depth Driller (Strap or SLM)		

General Remarks: 3 runs required
No Problems
Good fast smooth job.
Good Crews

Wireline Logging Summary

Storage Units: Metric

Logging Run #: 1
Date: Nov 9, 2009

Drilling Fluid Data

Drilling Fluid Type: Sat Salt Poly

Fluid Density:	1240.0	**Viscosity:**	69	**pH:**	10.8	**Fluid Loss:**	18.4

Mud Resistivity (Rm):	0.07	@	21.0 º		
Mud Resistivity (Rm) @ BHT:	0.07	@	19.9 º	**Maximum Temperature:**	19.9 º
Mud Filtrate Resistivity (Rmf):	0.06	@	21.0 º	**Source (Rmf):**	Calculated
Mud Cake Resistivity (Rmc):	0.08	@	21.0 º	**Source (Rmc):**	Calculated

Logging Run Information

Date on Bottom: Nov 10, 2009
Total Depth Logger: 880.90 (MD) 880.90 (TVD)

Logging Tools: Cross Multipole Array Acoustilog - Gamma Ray- Digital Sprectalog-Cal
XMAC-DSI-GR 220-881 m

Remarks: No Problems (4.75 hrs)

Hole Conditions: Excellent

Wireline Logging Summary

Storage Units: Metric

Logging Run #: 2
Date: Nov 9, 2009

Drilling Fluid Data

Drilling Fluid Type: Sat Salt Poly

Fluid Density:	1240.0	**Viscosity:**	69	**pH:**	10.8	**Fluid Loss:**	18.4

Mud Resistivity (Rm):	0.07	@	21.0 º		
Mud Resistivity (Rm) @ BHT:	0.07	@	19.1 º	**Maximum Temperature:**	19.9 º
Mud Filtrate Resistivity (Rmf):	0.06	@	21.0 º	**Source (Rmf):**	Calculated
Mud Cake Resistivity (Rmc):	0.08	@	21.0 º	**Source (Rmc):**	Caculated

Logging Run Information

Date on Bottom: Nov 10, 2009
Total Depth Logger: 887.70 (MD) 887.70 (TVD)

Logging Tools: Conpensated Z-Densilog-Compensated Neutron-Gamma Ray-XY Caliper
ZDL-CN-GR-XY Cal (888 - 20.0

Remarks: No Problems (2.25 hrs)

Hole Conditions: Excellent

Wireline Logging Summary

Storage Units: Metric

Logging Run #: 3
Date: Nov 9, 2009

Drilling Fluid Data

Drilling Fluid Type: Sat Salt Poly

Fluid Density:	1240.0	**Viscosity:**	69	**pH:**	10.8	**Fluid Loss:**	18.4

Mud Resistivity (Rm):	0.07	@	21.0 º		
Mud Resistivity (Rm) @ BHT:	0.07	@	19.9 º	**Maximum Temperature:**	19.9 º
Mud Filtrate Resistivity (Rmf):	0.06	@	21.0 º	**Source (Rmf):**	Calculated
Mud Cake Resistivity (Rmc):	0.08	@	21.0 º	**Source (Rmc):**	Calculated

Logging Run Information

Date on Bottom:	Nov 10, 2009			
Total Depth Logger:	883.90	(MD)	883.90	(TVD)

Logging Tools: Duel Laterlog-Gamma Ray-Caliper
DLL-GR (883.9-220 m)

Remarks: No Problems (2.75 hrs)

Hole Conditions: Excellent

Wireline Logging Summary

Storage Units: Metric

Logging Suite Number:	2		
Wireline Logging Company:	Baker Hughes	**Engineer:**	J.House / R. Neupane
District:	OH Nisku	**Unit Number:**	E6555
Witness:	Michael Smith		

Was Pressure Control Equipment Utilized:	No	**Maximum Deviation:**	9.000 º
Was the Logging Job Mechanically Assisted:	No	**Hole Size:**	216.0

Total Lost Time:	0.00
Loggers' Total Down Time:	0.00
Total Job Time (From Rig up to Rig down):	63.00

	Measured Depth	True Vertical Depth
Casing Depth Driller	884.60	884.60
Casing Depth Logger	885.00	885.00
Total Depth Driller (Tally)	1,965.00	1,950.41
Total Depth Driller (Strap or SLM)		

General Remarks: 6 Runs Total
No Hole Problems
No Tool Problems
9 hours between FMT - VSP Logs to improve access to Water Pit for VSP..
Great Crews

Logging Run #: 1
Date: Nov 25, 2009

Drilling Fluid Data

Drilling Fluid Type: Polymer Water Based

Fluid Density:	1260.0	**Viscosity:**	80	**pH:**	11.2	**Fluid Loss:**	4.8

Mud Resistivity (Rm):	0.30	@	23.4 º		
Mud Resistivity (Rm) @ BHT:	0.30	@	23.4 º	**Maximum Temperature:**	23.5 º
Mud Filtrate Resistivity (Rmf):	0.24	@	23.4 º	**Source (Rmf):**	calculated
Mud Cake Resistivity (Rmc):	0.36	@	23.4 º	**Source (Rmc):**	calculated

Logging Run Information

Date on Bottom: Nov 25, 2009
Total Depth Logger: 1,952.20 (MD) 1,952.20 (TVD)

Logging Tools: Compentated Z-Densilog / Compensated Newtron / Induction / Gamma Ray / XY Cal
HDIL-GR(DSL)-ZDL-CN-CCAL
1956.7 - 885 m

Remarks: No Problems - slightly sticky on bottom
7.75 hours for Logging Run

Hole Conditions: Excellent

Wireline Logging Summary

Storage Units: Metric

Logging Run #: 2
Date: Nov 25, 2009

Drilling Fluid Data

Drilling Fluid Type: Polymer

Fluid Density:	**Viscosity:**	**pH:**	**Fluid Loss:**

Mud Resistivity (Rm):	@	o			
Mud Resistivity (Rm) @ BHT:	@	o	**Maximum Temperature:**	o	
Mud Filtrate Resistivity (Rmf):	@	o	**Source (Rmf):**		
Mud Cake Resistivity (Rmc):	@	o	**Source (Rmc):**		

Logging Run Information

Date on Bottom: Nov 25, 2009
Total Depth Logger: (MD) (TVD)

Logging Tools: Cross-Multipole Array AcousticLog / Gamma Ray / Caliper
XMAC-GR / DSI
1952.0 - 800 m

Remarks: 6.25 hours for log

Hole Conditions: Excellent

Logging Run #: 3
Date: Nov 25, 2009

Drilling Fluid Data

Drilling Fluid Type: Polymer

Fluid Density:	**Viscosity:**		**pH:**	**Fluid Loss:**
Mud Resistivity (Rm):	@	º		
Mud Resistivity (Rm) @ BHT:	@	º	**Maximum Temperature:**	27.4 º
Mud Filtrate Resistivity (Rmf):	@	º	**Source (Rmf):**	
Mud Cake Resistivity (Rmc):	@	º	**Source (Rmc):**	

Logging Run Information

Date on Bottom: Nov 26, 2009
Total Depth Logger: 1,950.00 (MD) 1,950.00 (TVD)

Logging Tools: STAR DIP / IMAGER
1950 - 885 m

Remarks: 12.0 hours for log

Hole Conditions: Excellent

Logging Run #: 4
Date: Nov 25, 2009

Drilling Fluid Data

Drilling Fluid Type: Polymer

Fluid Density:	**Viscosity:**	**pH:**	**Fluid Loss:**

Mud Resistivity (Rm):	@	o			
Mud Resistivity (Rm) @ BHT:	@	o	**Maximum Temperature:**	o	
Mud Filtrate Resistivity (Rmf):	@	o	**Source (Rmf):**		
Mud Cake Resistivity (Rmc):	@	o	**Source (Rmc):**		

Logging Run Information

Date on Bottom: Nov 26, 2009
Total Depth Logger: (MD) (TVD)

Logging Tools: Rotary Sidewall Coring
RCOR / GR
1945 - 890 Cut 31 cores / Rec 31 cores

Remarks: 14.5 hours for Logging Run

Hole Conditions: Excellent

Logging Run #: 5
Date: Nov 25, 2009

Drilling Fluid Data

Drilling Fluid Type: Polymer

Fluid Density:	**Viscosity:**	**pH:**	**Fluid Loss:**

Mud Resistivity (Rm):	@	o			
Mud Resistivity (Rm) @ BHT:	@	o	**Maximum Temperature:**	o	
Mud Filtrate Resistivity (Rmf):	@	o	**Source (Rmf):**		
Mud Cake Resistivity (Rmc):	@	o	**Source (Rmc):**		

Logging Run Information

Date on Bottom: Nov 27, 2009
Total Depth Logger: (MD) (TVD)

Logging Tools: Formation Tester
FMT

Remarks: 5 hours for Log

Hole Conditions: Excellent
Good Bore hole / good seats

Wireline Logging Summary

Storage Units: Metric

Logging Run #: 6
Date: Nov 25, 2009

Drilling Fluid Data

Drilling Fluid Type: Polymer

Fluid Density:	**Viscosity:**	**pH:**	**Fluid Loss:**

Mud Resistivity (Rm):	@	o			
Mud Resistivity (Rm) @ BHT:	@	o	**Maximum Temperature:**	o	
Mud Filtrate Resistivity (Rmf):	@	o	**Source (Rmf):**		
Mud Cake Resistivity (Rmc):	@	o	**Source (Rmc):**		

Logging Run Information

Date on Bottom: Nov 27, 2009
Total Depth Logger: (MD) (TVD)

Logging Tools: Zero Offset Vertical Seismic Profile / Gamma
VSP
1955 - 885 (Surface Casing)

Remarks: 2 Geo phones / GR
10.0 hours for Logging run.

Hole Conditions: Excellent

VULCAN INVESTCAN
REDBROOK# 2

DST REPORT

-For-

Compiled for

Patrick Laracy
Vulcan Minerals Inc

-By-

Michael Smith
JDS Consultants
403-589-4998

Drill Stem Test Report

Storage Units: Metric

Run #:	1	**Date:**	Nov 28, 2009
Test #:	1	**Misrun:**	
Test Company:	Holland Testers	**Closed Chamber Company:**	n/a
Representative:	Dale Holland	**Representative:**	n/a
Unit #:		**K.B. Elevation:**	61.75
Test Type:	Conventional Straddle		

Formations Tested **From the:**
To the: **Spout Falls ?**

Test Interval: **From:** 1,555.00 (MD) **To:** 1,574.00 (MD) (19.00)
From: 1,555.00 (TVD) **To:** 1,574.00 (TVD) (19.00)

Total Depth: 1,965.00 (MD) 1,965.00 (TVD) ***(At the time of the Test)***

String Configuration:
Drill Pipe - Collars
Recorder above tool
Upper Packer Depth 1555.0 m
Inside Recorder with 1.2 m perfs
Lower Packer Depth 1574.1 m
Recorder below Tool
391 meters Tail pipe to bottom

Drilling Fluid Type and Properties:
MW = 1265
VIS = 69
pH = 11.2
WL = 5.4
FC = 0.5 mm

Cushion Type / Amount: No Cushions

Hole Condition: Excellent

Bottom Hole Temperature: 20.5 º **Tool Chased Distance:** **Mud Drop:** 0.0

Period	Intitial Pressure	Final Pressure	Times	Flow Description
Initial Hydrostatic	19,609.0			
Flow 1	396.0	433.0	10	Open for Preflow with fair initial puff to bottom of pail in 30 seconds. Steady throughout, NGTS.
Shut-in 1	433.0	10,939.0	90	
Flow 2	423.0	742.0	60	Open for valve open strong air blow immediately to bottom of pail. GTS (Gas to surface) in 10 mins. Start recording with GTS.

Flow Details

Time / Pressure / Flow Rate Measurements	Choke Type	Orifice Diameter	Units of measurement
20 mins 11 kPa @ 4 deg -- 71 m3 / day	6" Pos	3.18	m³/day
30 mins 19 kpa @ 4 deg -- 131 m3 / day			
40 mins 35 kPa @ 4 deg -- 182 m3 / day			
50 mins 50 kPa @ 4 deg -- 222 m3 / day			
60 mins 65 kPa @ 4 deg -- 257 m3 / day			

Flow Rate through Surface Manifold with 6 inch

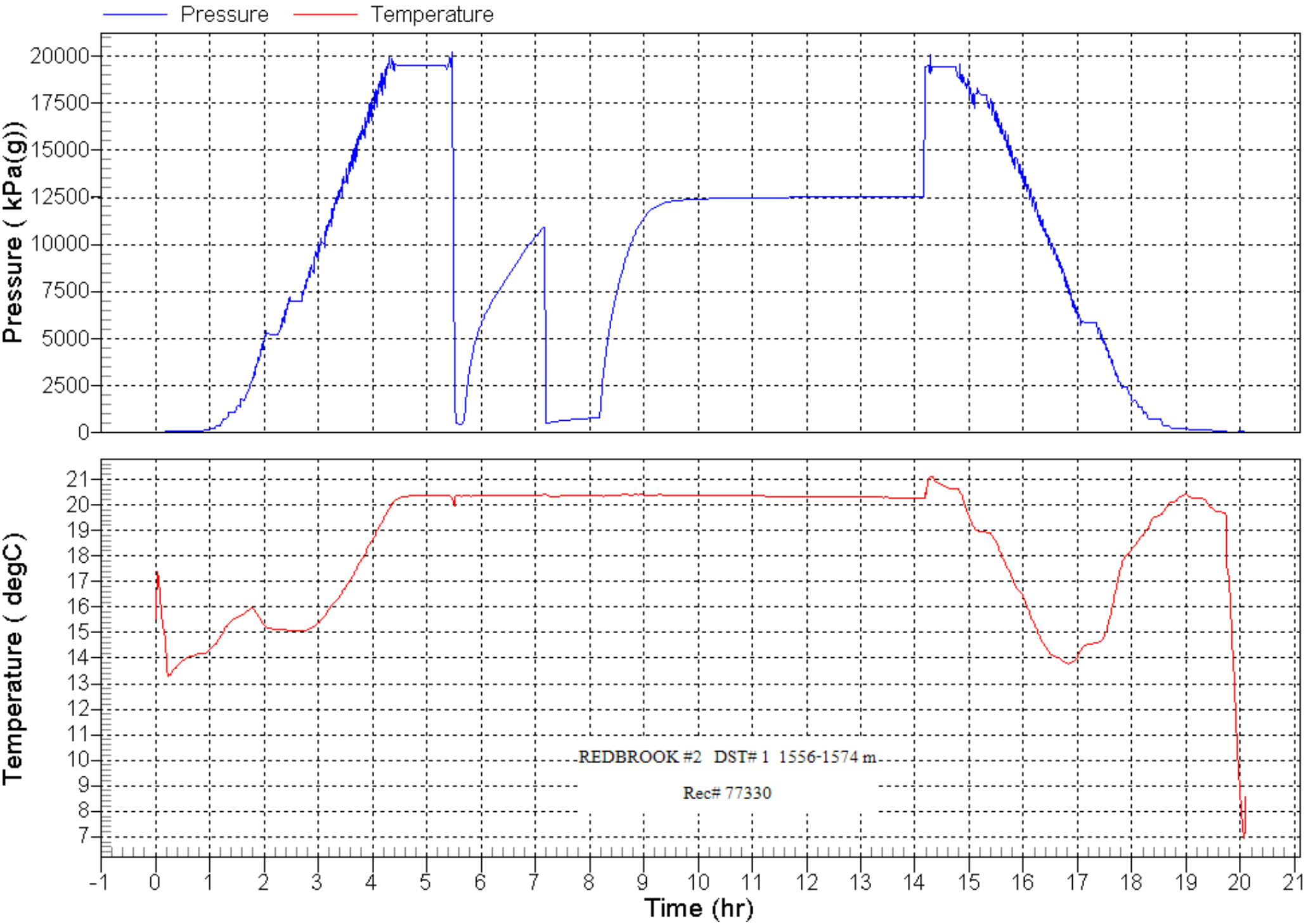
Positive Choke with 8/64 inch (3.175 mm) inside diameter. 257 m3/day = 9 mcf / day			
Shut-in 2	742.0	12,506.0	360
Final Hydrostatic		19,431.0	

Recovery: 54 meters Gasified Mud
Fluid sample caught at 41, 13 and 1.5 meters above tool

Analyses: Gas collected in Bottom Hole Sampler
Gas Sample # AGAT 04001075 (Initial flow GTS) + AGAT 05003561(Bottom hole sampler)

Remarks: Excellent Mechanical Test - No Problems
Gas to Surface in 10 minutes after start if Initial Flow

5 meters fill on bottom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Temperature
Pressure (kPa(g))
20000
17500
15000
12500
10000
7500
5000
2500
0
Temperature (degC)
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REDBROOK #2 DST# 1 1556-1574 m
Rec# 77330
-1
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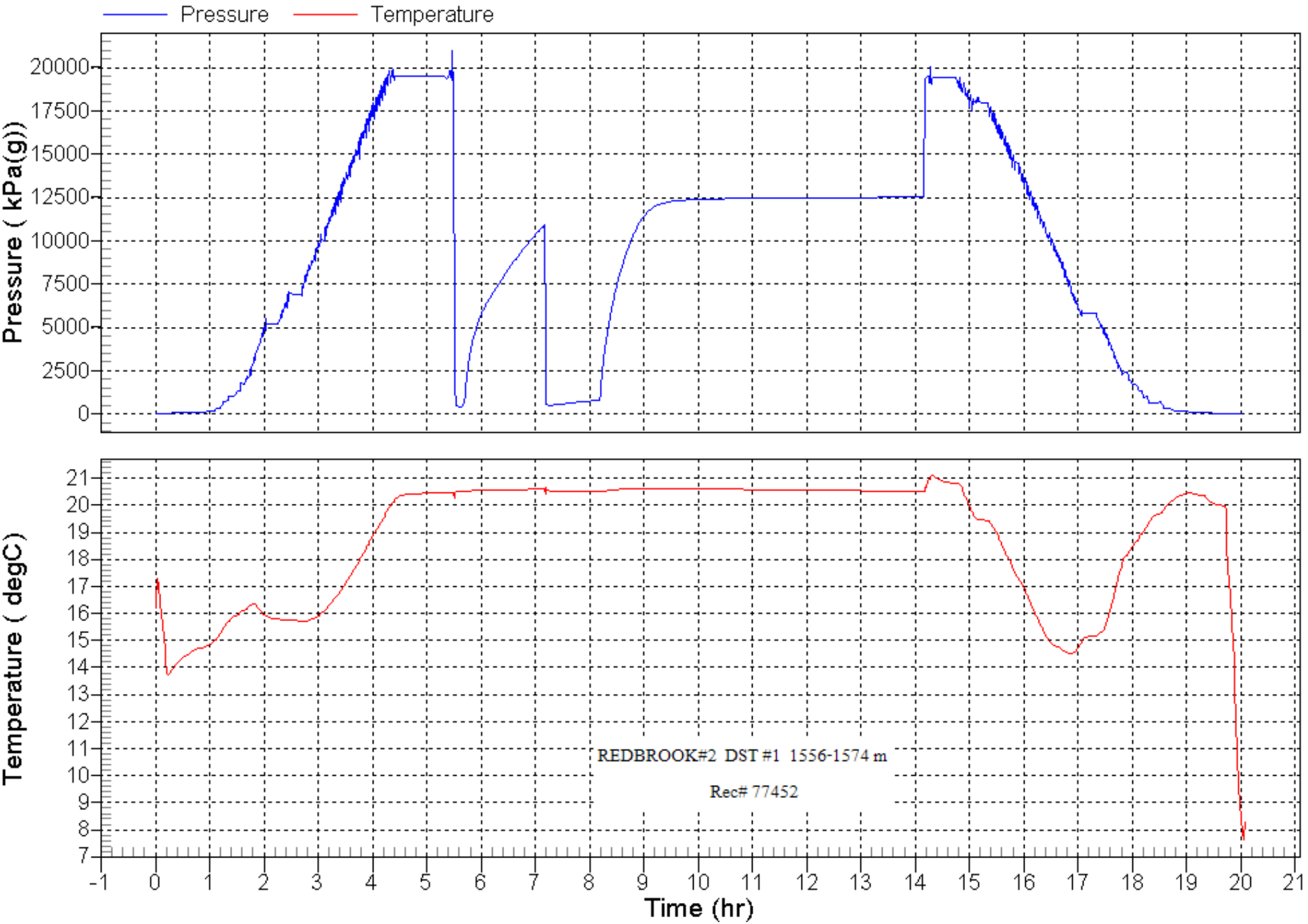
21
Time (hr)


Pressure
Temperature
Pressure (kPa(g))
20000
17500
15000
12500
10000
7500
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2500
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Temperature (degC)
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7
REDBROOK#2 DST #1 1556-1574 m
Rec# 77452
-1
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20
21
Time (hr)

Drill Stem Test Report

Storage Units: Metric

Run #:	2	**Date:**	Nov 28, 2009
Test #:	1	**Misrun:**	
Test Company:	Holland Testers	**Closed Chamber Company:**	n/a
Representative:	Dale Holland	**Representative:**	n/a
Unit #:		**K.B. Elevation:**	61.75
Test Type:	Conventional Straddle		

Formations Tested **From the:** **To the:** **Spout Falls**

Test Interval: **From:** 1,360.00 (MD) **To:** 1,383.00 (MD) (23.00)
From: 1,360.00 (TVD) **To:** 1,383.00 (TVD) (23.00)

Total Depth: 1,965.00 (MD) 1,965.00 (TVD) ***(At the time of the Test)***

String Configuration:
Drill Pipe - Collars
Recorder above tool
Upper Packer Depth 1359.2 m
Inside Recorder with 5.18 m perfs
Lower Packer Depth 1382.6 m
Recorder below Tool
582.4 meters Tail pipe to bottom

Drilling Fluid Type and Properties:
MW = 1265
VIS = 69
pH = 11.2
WL = 5.4
FC = 0.5 mm

Cushion Type / Amount: No Cushions

Hole Condition: Excellent

Bottom Hole Temperature: 18.5 º **Tool Chased Distance:** **Mud Drop:** 0.0

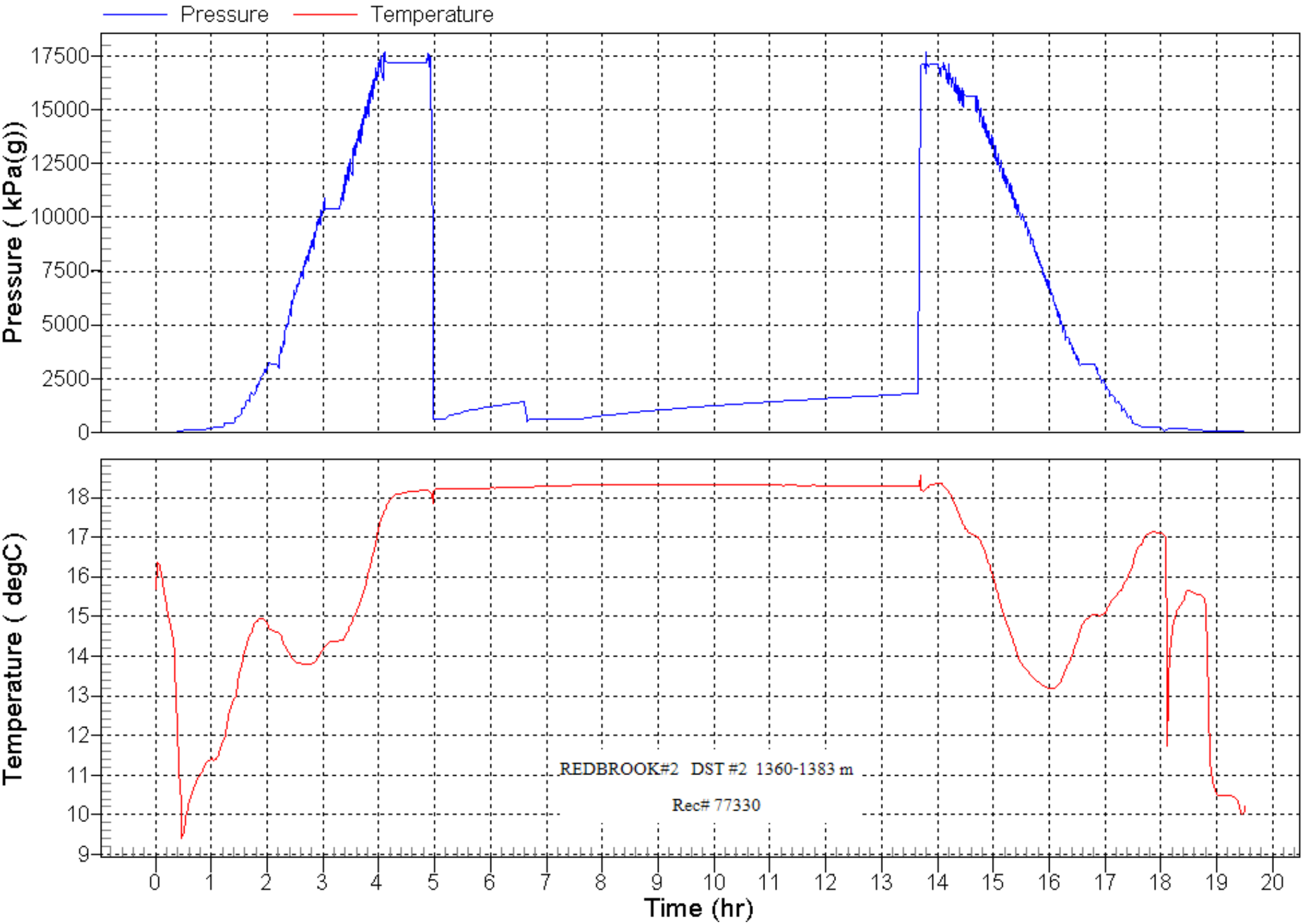
Period	Intitial Pressure	Final Pressure	Times	Flow Description
Initial Hydrostatic	17,248.0			
Flow 1	559.0	564.0	10	Open for Preflow with weak initial puff increasing to 8 inches in bubble Pail after 10 minutes.
Shut-in 1	564.0	1,414.0	90	
Flow 2	466.0	613.0	60	Open for Valve Open had weak initial Puff increasing to 10 inches in bubble pail after 15 minutes then slowly decreasing.
Flow Details				
Time / Pressure / Flow Rate Measurements				Choke Type Orifice Diameter Units of measurement
No GTS (Gas to Surface)				
Shut-in 2	613.0	1,788.0	360	

Final Hydrostatic	17,084.0

Recovery: 27 meters Drilling Mud
Fluid samples caught at 13 m, 1.5 meters above tool.

Analyses: (1) Bottom hole Sampler (#05005092)

Remarks: Good Mechanical Test - No problems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Temperature
Pressure (kPa(g))
17500
15000
12500
10000
7500
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0
Temperature (degC)
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REDBROOK#2 DST #2 1360-1383 m
Rec# 77330
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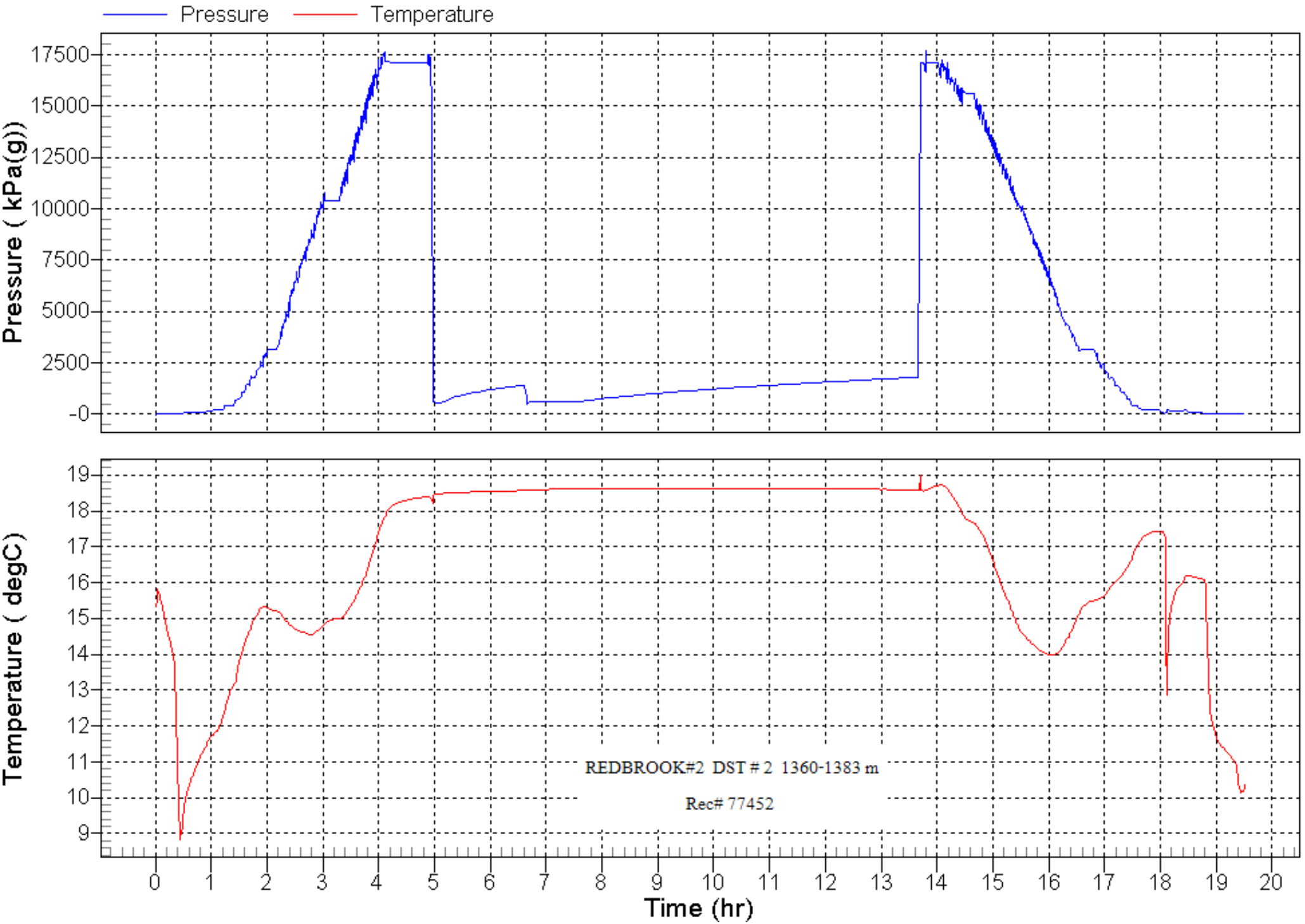
20
Time (hr)


Pressure
Temperature
Pressure (kPa(g))
17500
15000
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10000
7500
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2500
-0
Temperature (degC)
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REDBROOK#2 DST # 2 1360-1383 m
Rec# 77452
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20
Time (hr)

Drill Stem Test Report

Storage Units: Metric

Run #:	3	**Date:**	Nov 30, 2009
Test #:	1	**Misrun:**	
Test Company:	Holland Testers	**Closed Chamber Company:**	n/a
Representative:	Dale Holland	**Representative:**	n/a
Unit #:		**K.B. Elevation:**	61.75
Test Type:	Conventional Straddle		

Formations Tested **From the:**
To the: **Spout Falls**

Test Interval: **From:** 1,297.00 (MD) **To:** 1,338.00 (MD) (41.00)
From: 1,297.00 (TVD) **To:** 1,338.00 (TVD) (41.00)

Total Depth: 1,965.00 (MD) 1,965.00 (TVD) ***(At the time of the Test)***

String Configuration:
Drill Pipe - Collars
Recorder above tool
Upper Packer Depth 1297.2 m
Inside Recorder with 9.45 m perfs
Lower Packer Depth 1338.1 m
Recorder below Tool
626.9 meters Tail pipe to bottom

Drilling Fluid Type and Properties:
MW = 1265
VIS = 69
pH = 11.2
WL = 5.4
FC = 0.5 mm

Cushion Type / Amount: No Cushion

Hole Condition: Excellent

Bottom Hole Temperature: 17.7 º **Tool Chased Distance:** **Mud Drop:** 0.0

Period	Intitial Pressure	Final Pressure	Times	Flow Description
Initial Hydrostatic	16,525.0			
Flow 1	493.0	509.0	10	Open for Preflow with weak initial puff to bottom of pail in 1 minute. Steady throughout
Shut-in 1	509.0	4,767.0	90	
Flow 2	341.0	476.0	90	Open for valve open had strong initial puff to bottom of pail immediately decreasing to weak initial blow. After 10 minutes, weak steady blow throughout. Gas to Surface (GTS) at 75 minutes.

Flow Details

Time / Pressure / Flow Rate Measurements	Choke Type	Orifice Diameter	Units of measurement
80 mins 1.25 kPa @ 1 deg 23.9 m3/day	6" Pos.	3.18	m³/day
85 mins 2.74 kPa @ 1 deg 35.8 m3/day			
90 mins 4.48 kPa @ 1 deg 45.6 m3/day			

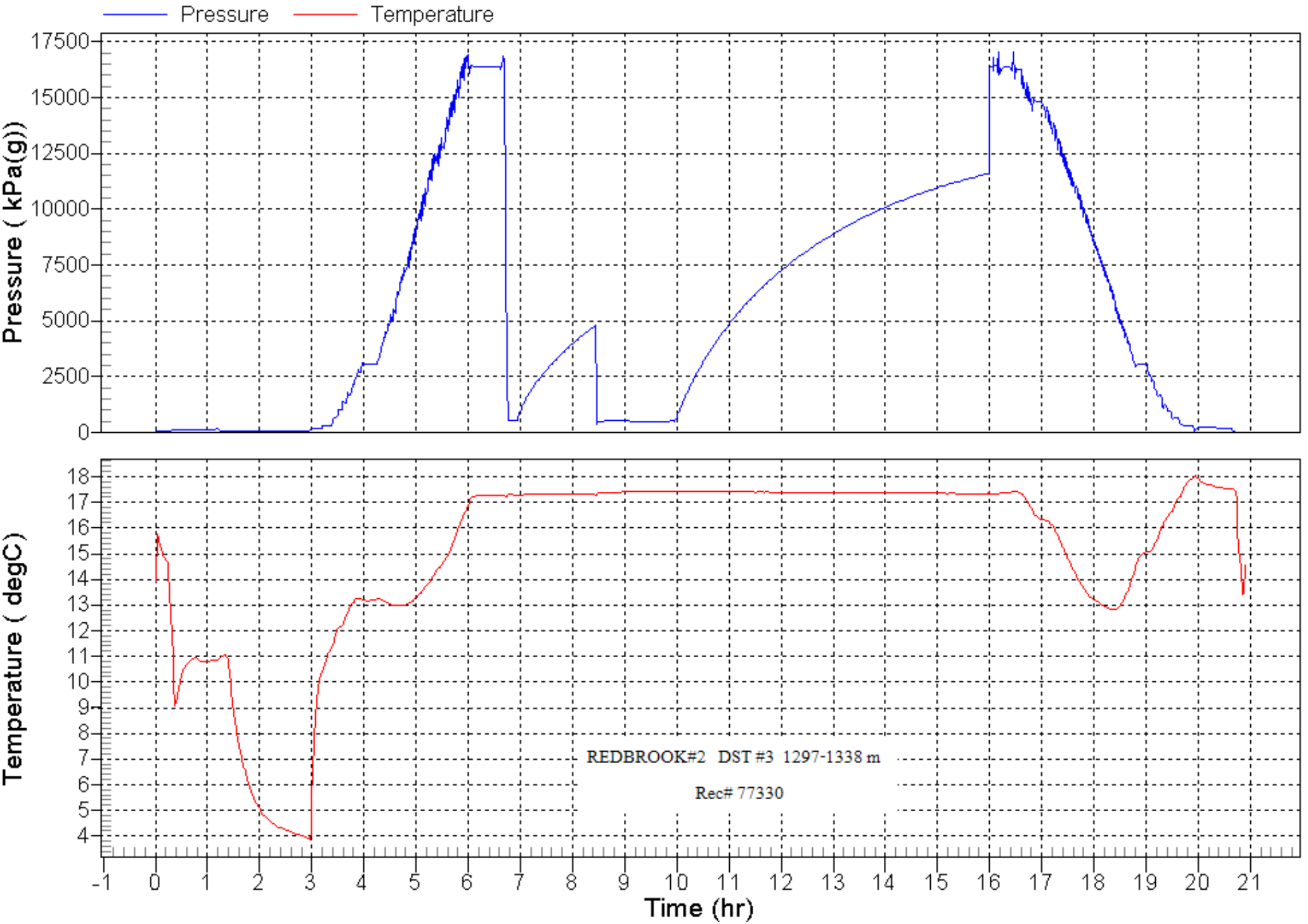
Flow Rate through Surface Manifold with 6 inch Positive Choke with 8/64 inch (3.175 mm) inside

diameter.						
Shut-in 2	476.0	11,562.0	360			
Flow Details						
Time / Pressure / Flow Rate Measurements				Choke Type	Orifice Diameter	Units of measurement
Pressure continuing to build after Six hours. Charts indicate that Final Shut in should be longer than 6 hours.						
Final Hydrostatic		16,411.0				

Recovery: 10 meters drilling mud
Fluid sample caught at 1.5 m above tool.

Analyses: Gas present in Bottom Hole Sampler but no test cylinders available to take sample..
Gas to Surface but no test cylinders available to take sample.

Remarks: Good Sucessful Mechanical Test
Indications at end of 60 minute main flow of potential gas to surface. Main flow extended to 90 minutes with Gas to Surface in 75 minutes.
Charts indicate longer Shut In Required.


Pressure
Temperature
Pressure (kPa(g))
17500
15000
12500
10000
7500
5000
2500
0
Temperature (degC)
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REDBROOK#2 DST #3 1297-1338 m
Rec# 77330
-1
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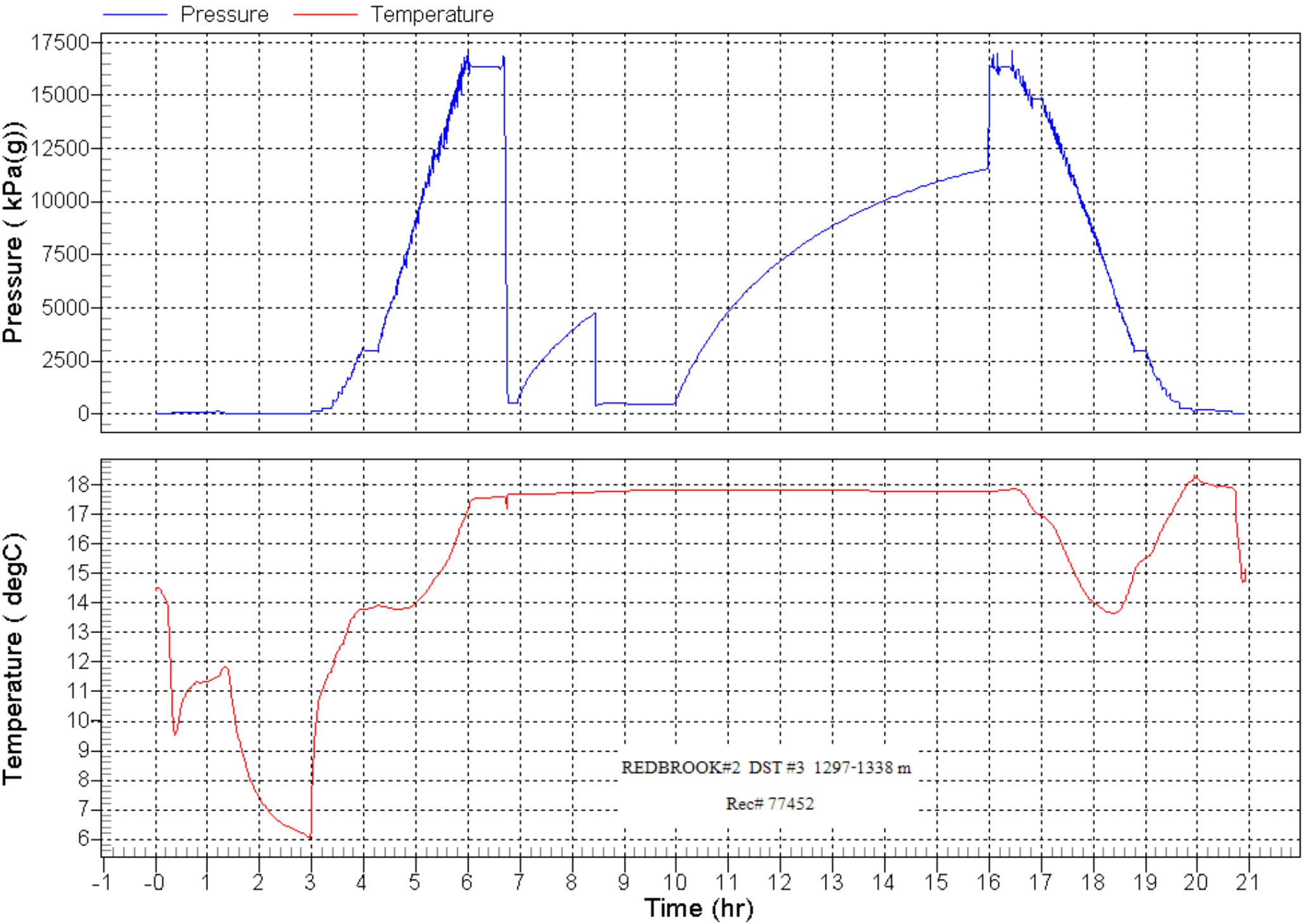
21
Time (hr)


Pressure
Temperature
Pressure (kPa(g))
17500
15000
12500
10000
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Temperature (degC)
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REDBROOK#2 DST #3 1297-1338 m
Rec# 77452
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-0
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15
16
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19
20
21
Time (hr)

Drill Stem Test Report

Storage Units: Metric

Run #: 4
Test #: 1
Test Company: Holland Testers
Representative: Dale Holland
Unit #:
Test Type: Conventional Straddle

Date: Dec 01, 2009
Misrun:
Closed Chamber Company: n/a
Representative: n/a
K.B. Elevation: 61.75

Formations Tested **From the:**
To the: **Spout Falls**

Test Interval: **From:** 1,587.00 (MD) **To:** 1,641.00 (MD) (54.00)
From: 1,587.00 (TVD) **To:** 1,641.00 (TVD) (54.00)

Total Depth: 1,965.00 (MD) 1,965.00 (TVD) ***(At the time of the Test)***

String Configuration:
Drill Pipe - Collars
Recorder above tool
Upper Packer Depth 1586.7 m
Inside Recorder with 9.14 m perfs
Lower Packer Depth 1640.97 m
Recorder below Tool
324.0 meters Tail pipe to bottom

Drilling Fluid Type and Properties:
MW = 1265
VIS = 69
pH = 11.2
WL = 5.4
FC = 0.5 mm

Cushion Type / Amount: No Cushion

Hole Condition: Excellent

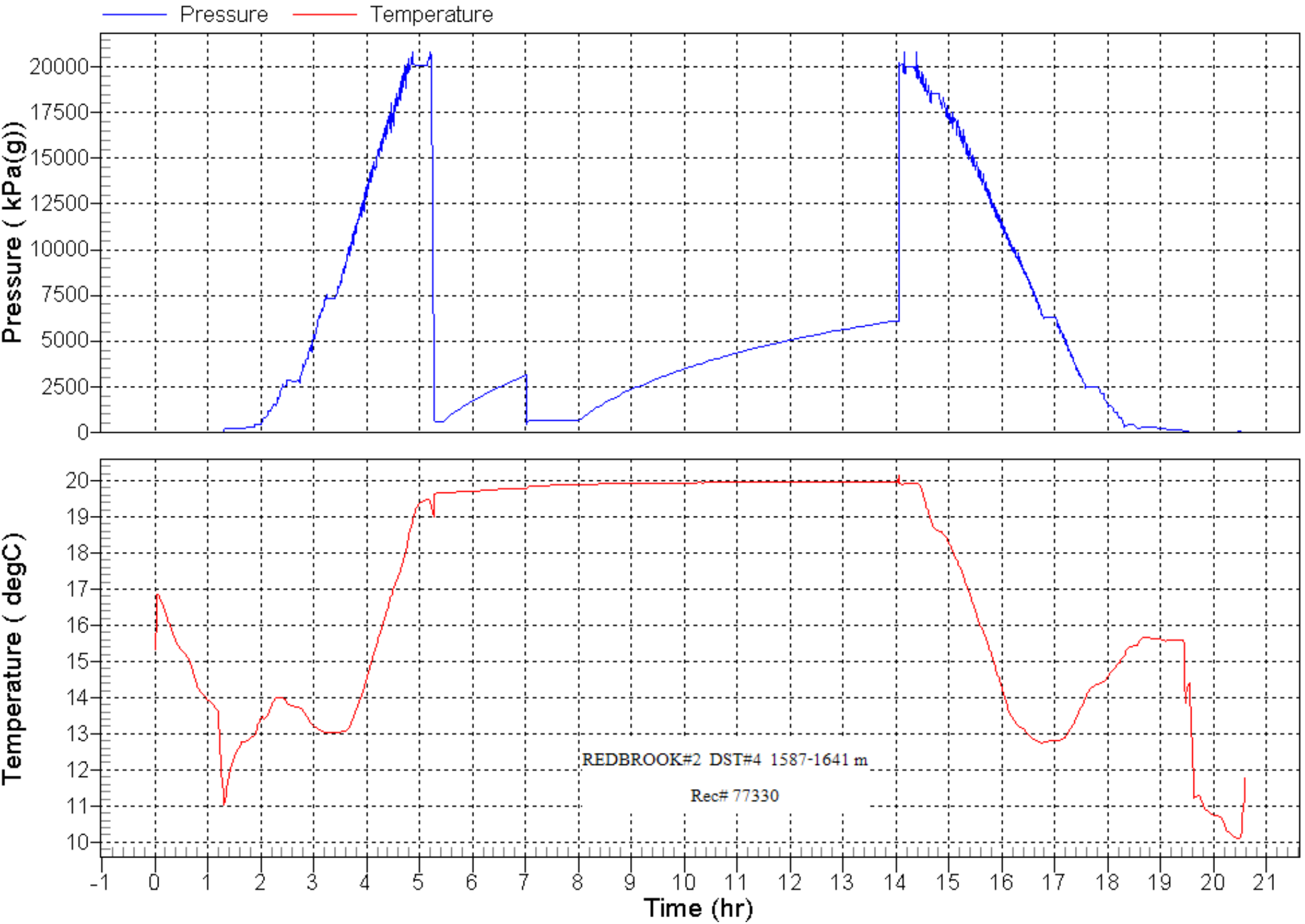
Bottom Hole Temperature: 20.1 º **Tool Chased Distance:** **Mud Drop:** 0.0

Period	Intitial Pressure	Final Pressure	Times	Flow Description
Initial Hydrostatic	20,254.0			
Flow 1	674.0	545.0	10	On valve open weak initial puff to bottom of pail in 3 minutes, steady throughout, no gas to surface.
Shut-in 1	545.0	3,093.0	90	
Flow 2	380.0	640.0	60	On valve open, had strong initial puff to bottom of pail in 20 seconds. Decreasing to very weak by 10 mins, then steady weak throughout, no gas to surface.
Shut-in 2	640.0	6,097.0	360	
Final Hydrostatic		19,963.0		

Recovery: 20 Meters Drilling Fluid
Fluid samples caught 13 m and 1.5 m above tool

Analyses:

Remarks: Good Mechanical Test - no issues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Temperature
Pressure (kPa(g))
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17500
15000
12500
10000
7500
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2500
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Temperature (degC)
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REDBROOK#2 DST#4 1587-1641 m
Rec# 77330
-1
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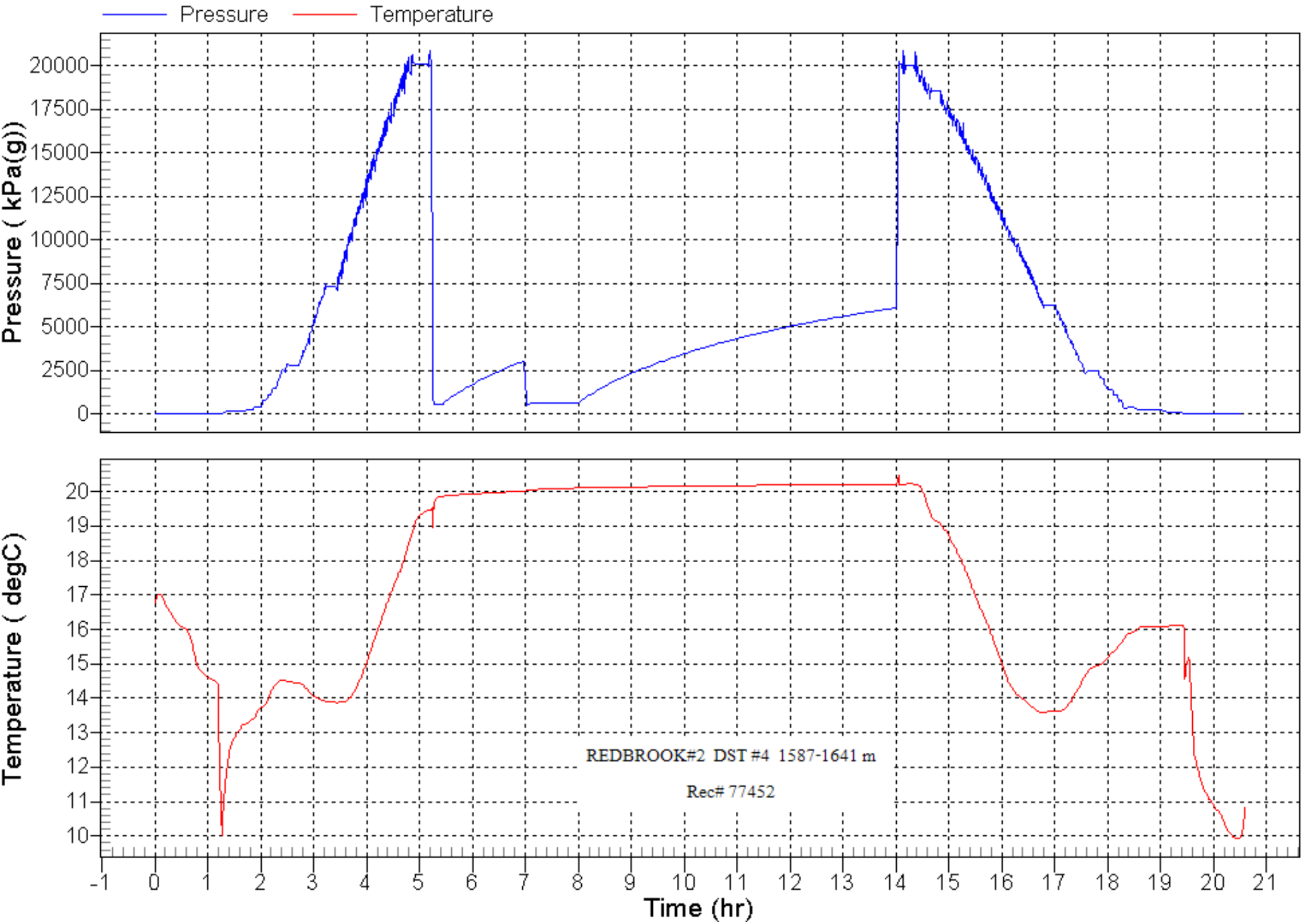
21
Time (hr)


Pressure
Temperature
Pressure (kPa(g))
20000
17500
15000
12500
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7500
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Temperature (degC)
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REDBROOK#2 DST #4 1587-1641 m
Rec# 77452
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12
13
14
15
16
17
18
19
20
21
Time (hr)

Drill Stem Test Report

Storage Units: Metric

Run #:	5	**Date:**	Dec 02, 2009
Test #:	1	**Misrun:**	
Test Company:	Holland Testers	**Closed Chamber Company:**	n/a
Representative:	Dale Holland	**Representative:**	n/a
Unit #:		**K.B. Elevation:**	61.75
Test Type:	Conventional Straddle		

Formations Tested **From the:**
To the: **Spout Falls**

Test Interval: **From:** 872.00 (MD) **To:** 908.00 (MD) (36.00)
From: 872.00 (TVD) **To:** 908.00 (TVD) (36.00)

Total Depth: 1,965.00 (MD) 1,965.00 (TVD) ***(At the time of the Test)***

String Configuration:
Drill Pipe - Collars
Recorder above tool
Upper Packer Depth 871.8 m
Inside Recorder with 4.88 m perfs
Lower Packer Depth 908.15 m
Recorder below Tool
1056.85 meters Tail pipe to bottom

Drilling Fluid Type and Properties:
MW = 1265
VIS = 69
pH = 11.2
WL = 5.4
FC = 0.5 mm

Cushion Type / Amount:

Hole Condition:
Excellent
5 DST's in a row with all good seats.

Bottom Hole Temperature: 14.8 º **Tool Chased Distance:** **Mud Drop:** 0.0

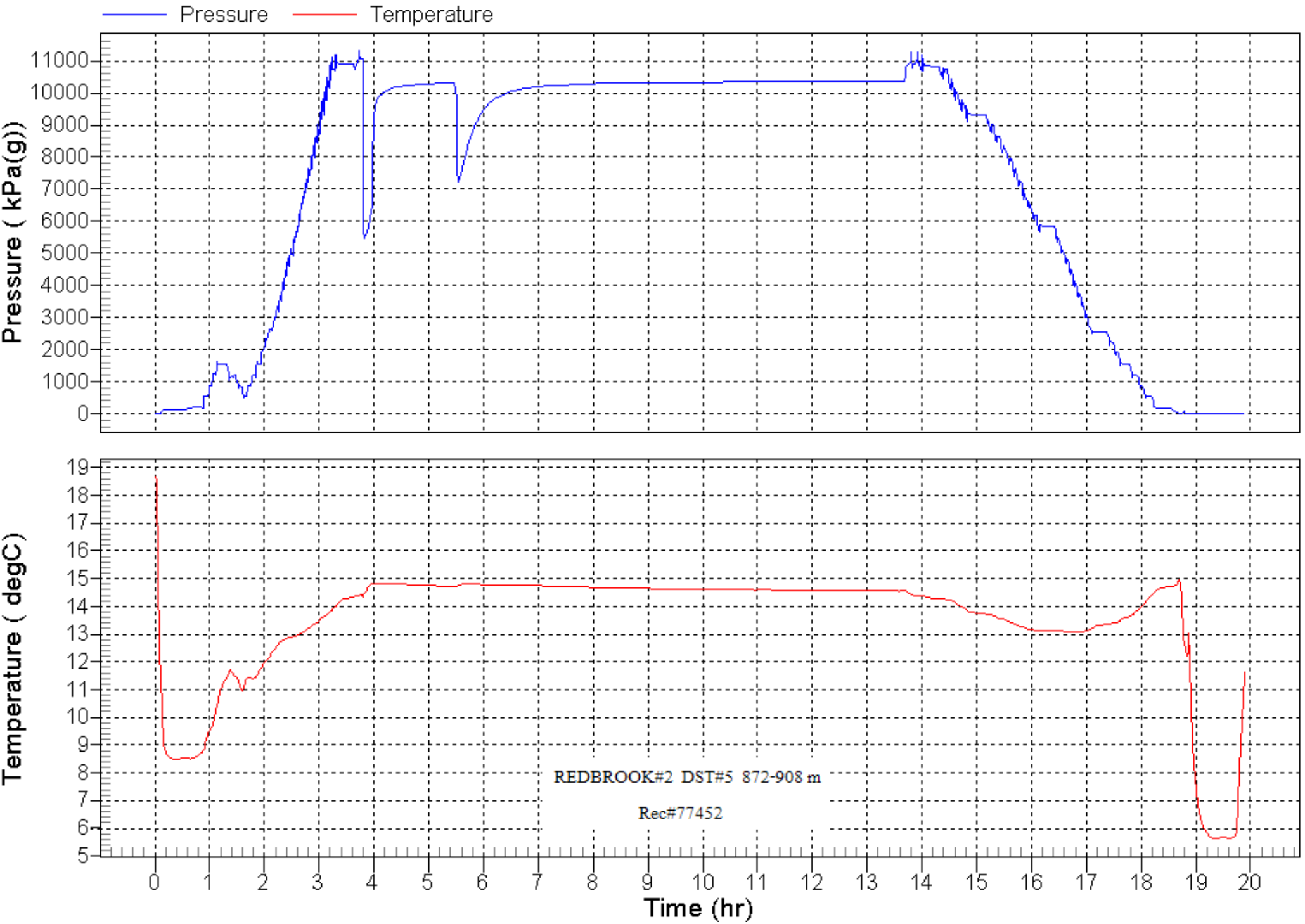
Period	Intitial Pressure	Final Pressure	Times	Flow Description
Initial Hydrostatic	11,072.0			
Flow 1	5,456.0	6,566.0	10	Open for preflow, had strong initial puff to bottom of pail in 30 seconds, steady throughout, no gas to surface.
Shut-in 1	6,566.0	10,317.0	90	
Flow 2	10,317.0	7,230.0	125	On valve open, had weak initial puff to bottom of pail in 1 minute, slowly decreasing throughout. Gas to surface in 118 minutes.
Flow Details				
Time / Pressure / Flow Rate Measurements				Choke Type: Orifice Diameter: Units of measurement
GTS rate was not measureable.				
Shut-in 2	10,256.0	10,354.0	360	

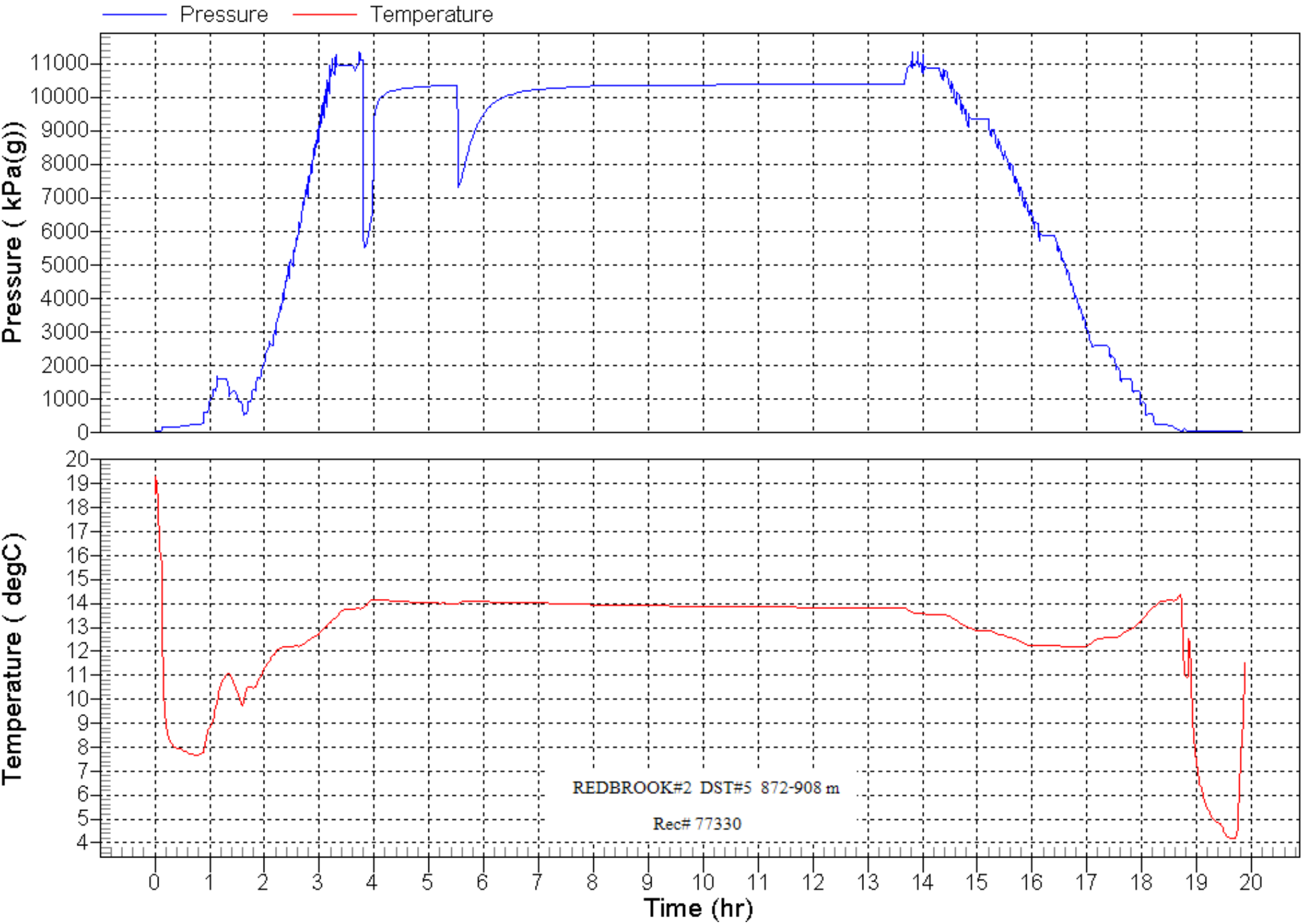
Final Hydrostatic	10,908.0

Recovery: 830 m Gasified Fluids
Fluid Samples caught at 830 m, 400 m, 1.5 m above tools.

Analyses:

Remarks: Good test (s)
The 5 DST's were completed with absolute perfection and safety. Dale Holland and the Rig crews worked great together with optimun efficiency. There were zero issues throughout the Testing period.


Pressure
Temperature
Pressure (kPa(g))
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Temperature (degC)
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
REDBROOK#2 DST#5 872-908 m
Rec#77452
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Time (hr)


Pressure
Temperature
Pressure (kPa(g))
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Temperature (degC)
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
REDBROOK#2 DST#5 872-908 m
Rec# 77330
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Time (hr)

HOLLAND TESTERS LTD.

R.R. #3 Wheatley, Ontario N0P 2P0 1-519-825-3680

Customer VULCAN MINERALS — Customer Rep. MR. BILL WILLIAMS

Location VULCAN INVESTCAN RED BROOK #2

Interval 1555-1574 — Total Depth 1965.0 — Formation SPOUT FALLS

Test Number ONE — Tester K. DALE HOLLAND

Test Type DUAL STRADDLE CONVENTIONAL — K. B. Elevation 634 — Ground Elevation 617.1

Test Date NOVEMBER 25, 2009 — Bottom Hole Temperature (C)

RECOVERY: 54

	Metres Total Fluid	Sampler # ; #
	Metres of	SAMPLED AT:
54	Metres of GASIFIED DRILLING FLUID	Metres
	Metres of	41.00 Metres
	Metres of	13.00 Metres
	Metres of	1.524 Metres
	Metres of SKIDDED TO BOTTOM.	BOTTOM HOLE SAMPLER Above Tool

REMARKS: HAD 5m FILL ON BOTTOM, OPEN FOR PREFLOW WITH FAIR INITAL PUFF, TO BOTTOM OF PAIL IN 30 SEC. STEADY THROUGHOUT NO GAS TO SURFACE. ON VALVE OPEN STRONG AIR BLOW, TO BOTTOM OF PAIL IMMEDIATELY, GAS TO SURFACE IN 10 MIN.

GAS READINGS

TIME min.	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d	TIME min	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d
20	42"	4	3.175	171					
30	19	4	3.175	131					
40	35	4	3.175	182					
50	50	4	3.175	222					
60	65	4	3.175	257					

Gas Samples: #0400 1075 #0503561; Sent to

Gas Measured by: FLOOR MANIFOLD 6" POSITIVE CHOKE.

TOOL TALLY

PO Sub	.305
XOver	.305
Recorder	1.524
Shut-in	1.650
Sampler	1.000
Sampler	
Hydraulic	1.720
Jars	2.030
M/Record	
E/Record	
Temp Rec	
By-pass	
Safety Jt	.660
Packer	2.500
Packer	2.195
Upper Packer depth	1555.008

DOWNHOLE PRESSURE DATA (KPAG)

Test Times: PF 10 ISN 90 VO 60 FSN 360

Recorder Number		110977			77330	77452	25726
Recorder Range		32751			68950	68950	59110
Clock Hour -Emp		24			6MP	6MP	24
Depth - Metres		1542.106			1557.142	1557.447	1578.704
Position of Pressure Port		FLUID	INSIDE	INSIDE	OUTSIDE	OUTSIDE	OUTSIDE
Initial Hydrostatic	(A)					19609	
Start First Flow	(B)					1054	
End First Flow	(B1)					433	
First Shut-In	(C)					10939	
Start Second flow	(D)					1185	
End Second flow	(E)					742	
Second Shut-In	(F					12506	
Start Third Flow	(H)						
End Third Flow	(I)						
Third Shut-In	(J)						
Final Hydroststic	(G					19431	

DOWNHOLE TOOL TALLY

Packer	.305
Perfs	1.219
By-pass	
M / Record	
E / Record	1.829
X Over	.305
DC	13.530
X Over	.305
Blank	.305
Packer	1.33
Lower Packer depth	1574.136

Packer	1.150
Packer	2.500
Perfs	.610
Recorder	1.524
X Over	.305
DP / DC	383.96
X Over	.305
Bullnose	.610
Total depth	965.000

TEST IS: Misrun; ✓ Satisfactory

Started in hole @ 1715 — Opened tool @ 2146 — Out of hole @ 1100

DP size (mm) — Weight (kg/m) — Main hole size (mm) 215.90

DP length (m) — DC size ID (mm) — DC above tool (m) 109.01

Mud weight (kg/m3) — Visc (s/L) — Water loss (cm3)

PACKER RUBBER SIZE (MM) 196.85 — BOTTOM HOLE COKE (MM) 19.05

Total Interval 19.08

Total Tail Pipe 390.564

Tool Make up Time 4.0 Hr

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Customer VULCAN MINERALS — Customer Rep. MR. BILL WILLIAMS

Location VULCAN INVESTCAN RED BROOK #2

Interval 1360-1383 Total Depth 1965 — Formation SPOUT FALLS

Test Number TWO — Tester K. DALE HOLLAND

Test Type DUAL STRADDLE CONVENTIONAL — K. B. Elevation 63.4 — Ground Elevation 57.1

Test Date NOVEMBER 29-30, 2009 — Bottom Hole Temperature (C) 18.5

RECOVERY: 27 — Metres Total Fluid — Sampler # 004 ; # —

Metres of — SAMPLED AT:

27 — Metres of DRILLING FLUID — 13 Metres

Metres of — 1.524 Metres

Metres of — Metres

Metres of — Metres

SLIGHT TO BOTTOM — BOTTOM HOLE SAMPLE — Above Tool

REMARKS: HAD 1½ M FILL ON BOTTOM, OPEN FOR PREFLOW WITH WEAK INITIAL PUFF. INCREASING TO 3" IN PAIL BY END OF PREFLOW. ON BACK OPEN HAD WEAK INITIAL PUFF INCREASING TO 10" IN PAIL BY 15 MIN THEN SLOWLY DECREASING THROUGHOUT

GAS READINGS — NO GAS TO SURFACE

TIME min.	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d	TIME min	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d

Gas Samples: # AGAT 0500 5092 — Sent to —

Gas Measured by:

TOOL TALLY

PO Sub	.305
~~DP~~ XOver	.305
Recorder	1.524
Shut-in	1.650
Sampler	1.000
Sampler	
Hydraulic	1.720
Jars	2.030
M/Record	
E/Record	
Temp Rec	
By-pass	
Safety Jt	.660
Packer	2.500
Packer	2.195
Upper Packer depth	1359.510

DOWNHOLE PRESSURE DATA (KPAG) Test Times: PF 10 ISN 90 VO 60 FSN 360

Recorder Number		11077			77330	77452	25726
Recorder Range		32751			68950	68950	59140
Clock Hour -Emp		24			EMP	EMP	24
Depth - Metres		1346.53			1365.607	1365.912	1386.861
Position of Pressure Port		FLUID	INSIDE	INSIDE	OUTSIDE	OUTSIDE	OUTSIDE
Initial Hydrostatic	(A)					17248	
Start First Flow	(B)					559	
End First Flow	(B1)					564	
First Shut-In	(C)					1414	
Start Second flow	(D)					466	
End Second flow	(E)					613	
Second Shut-In	(F					1988	
Start Third Flow	(H)						
End Third Flow	(I)						
Third Shut-In	(J)						
Final Hydroststic	(G					17084	

Packer	.305
Perfs	5.182
By-pass	
M / Record	
E / Record	1.829
X Over	.305
DP ~~DC~~	13.530
X Over	.305
Blank	.305
Packer	1.330
Lower Packer depth	1382.601

Packer	1.150
Packer	2.500
Perfs	.305
Recorder	1.524
X Over	.305
DP ~~DC~~	575.70
X Over	.305
Bullnose	.610
Total depth	1965.000

Total Interval	23.091
Total Tail Pipe	582.399
Tool Make up Time	2.0 Hr

TEST IS: — Misrun; — ✓ Satisfactory

Started in hole @	1515	Opened tool @	1900	Out of hole @	0800
DP size (mm)	114 ~~88.9~~ IF	Weight (kg/m)	31.90	Main hole size (mm)	215.90
DP length (m)	1284.680	DC size ID (mm)	60	DC above tool (m)	109.01
Mud weight (kg/m3)	1260	Visc (s/L)	79	Water loss (cm3)	5.4

PACKER RUBBER SIZE (MM) 196.85 — BOTTOM HOLE COKE (MM) 19.05

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Customer VULCAN MINERALS — Customer Rep. MR. BILL WILLIAMS

Location VULCAN INVESTCAN RED BROOK #2

Interval 1297-1339 Total Depth 1965 — Formation SPOUT FALLS

Test Number THREE — Tester K. DALE HOLLAND

Test Type ANL STRADDLE CONVENTIONAL — K. B. Elevation 63.4 — Ground Elevation 57.1

Test Date NOVEMBER 30, 2009 — Bottom Hole Temperature (C) 17.7

RECOVERY: 10

Metres Total Fluid

Metres of

10 Metres of DRILLING MUD

Metres of

Metres of

Metres of

Sampler # 004 ; #

SAMPLED AT:

1.524 Metres

Metres

Metres

Metres

Above Tool

REMARKS: OPEN FOR PREFLOW WITH WEAK INITIAL PUFF TO BOTTOM OF PAIL IN 1 MIN. STEADY THROUGH OUT ON VALVE OPEN HAD STRONG INITIAL PUFF TO BOTTOM OF PAIL IMMEDIATELY, DECREASING TO WEAK AFTER 10 MIN. GAS TO SURFACE AT 75 MIN.

GAS READINGS

TIME min.	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d	TIME min	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d
80	1.25	1	3.175	23.4					
85	2.174	1	3.175	35.8					
90	4.48	1	3.175	45.6					

Gas Samples: # ; # ; Sent to

Gas Measured by:

DOWNHOLE PRESSURE DATA (KPAG) Test Times: PF 10 ISN 90 VO 90 FSN 360

Recorder Number		11077			77330	77452	25726
Recorder Range		32751			68950	68950	59110
Clock Hour -Emp		24			EMP	EMP	24
Depth - Metres		1284.196			1307.534	1307.839	1346.393
Position of Pressure Port		FLUID	INSIDE	INSIDE	OUTSIDE	OUTSIDE	OUTSIDE
Initial Hydrostatic	(A)					16554	
Start First Flow	(B)					493	
End First Flow	(B1)					509	
First Shut-In	(C)					47169	
Start Second flow	(D)					341	
End Second flow	(E)					476	
Second Shut-In	(F					11562	
Start Third Flow	(H)						
End Third Flow	(I)						
Third Shut-In	(J)						
Final Hydroststic	(G					16411	

TEST IS: Misrun; ✓ Satisfactory

Started in hole @ 1400 — Opened tool @ 1738 — Out of hole @ 0645

DP size (mm) 114 ~~X 88~~ IF — Weight (kg/m) 31.90 — Main hole size (mm) 215.90

DP length (m) 1198.876 — DC size ID (mm) 60 — DC above tool (m) 95.46

Mud weight (kg/m3) 1260 — Visc (s/L) 79 — Water loss (cm3) 5.4

PACKER RUBBER SIZE (MM) 196.85 — BOTTOM HOLE COKE (MM) 19.05

TOOL TALLY

PO Sub	0.305
~~BP~~ XOver	0.305
Recorder	1.524
Shut-in	1.650
Sampler	1.000
Sampler	
Hydraulic	1.720
Jars	2.030
M/Record	
E/Record	
Temp Rec	
By-pass	
Safety Jt	0.660
Packer	2.500
Packer	2.195
Upper Packer depth	1297.170
Packer	0.305
Perfs	9.449
By-pass	
M / Record	
E / Record	1.829
X Over	0.305
~~DP~~ DC	27.080
X Over	0.305
Blank	0.305
Packer	1.330
Lower Packer depth	1338.700
Packer	1.150
Packer	2.500
Perfs	3.658
Recorder	1.524
X Over	0.305
DP / ~~DC~~	616.87
X Over	0.305
Bullnose	0.610
Total depth	1965.000
Total Interval	40.908
Total Tail Pipe	626.922
Tool Make up Time	2.0 Hr

HOLLAND TESTERS LTD.

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Customer VULCAN MINERALS — Customer Rep. MR. BILL WILLIAMS.
Location VULCAN INVESTCAN RED BROOK #2
Interval 1587-1641 — Total Depth 1965 — Formation SPOUT FALLS
Test Number FOUR — Tester K-DALE HOLLAND
Test Type DUAL STRADDLE CONVENTIONAL — K.B. Elevation 634 — Ground Elevation 59.1
Test Date DECEMBER 2-3, 2009 — Bottom Hole Temperature (C) 20.1

RECOVERY: 20 — Sampler # 004 ; # ____

	Metres Total Fluid	SAMPLED AT:	
	Metres of		
20	Metres of DRILLING MUD	13	Metres
	Metres of	1.524	Metres
	Metres of		Metres
	Metres of		Metres
			Above Tool

REMARKS: WEAK INITAL PUFF TO BOTTOM OF PAIL IN 3 MIN. STEADY THROUGH OUT, NO GAS TO SURFACE. ON VALVE OPEN HAD STRONG INITAL PUFF TO BOTTOM OF PAIL IN 20 SEC. DECREASING TO VERY WEAK BY 10 MIN THEN STEADY THROUGH OUT. NO GAS TO SURFACE.

GAS READINGS

TIME min.	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d	TIME min	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d

Gas Samples: # ____ ; # ____ ; Sent to ____
Gas Measured by: ____

DOWNHOLE PRESSURE DATA (KPAG) Test Times: PF 10 ISN 90 VO 60 FSN 360

Recorder Number		11077			177330	177452	25726
Recorder Range		32751			68950	68950	59110
Clock Hour -Emp		24			EMP	EMP	24
Depth - Metres		1514.321			1596.804	1598.809	1647.311
Position of Pressure Port		FLUID	INSIDE	INSIDE	OUTSIDE	OUTSIDE	OUTSIDE
Initial Hydrostatic	(A)					20254	
Start First Flow	(B)					674	
End First Flow	(B1)					545	
First Shut-In	(C)					3093	
Start Second flow	(D)					380	
End Second flow	(E)					640	
Second Shut-In	(F					6097	
Start Third Flow	(H)						
End Third Flow	(I)						
Third Shut-In	(J)						
Final Hydroststic	(G				✓	19963	

TEST IS: ____ Misrun; ____ Satisfactory

Started in hole @ 1015	Opened tool @ 1338	Out of hole @ 0300
DP size (mm) 114. IF	Weight (kg/m) 31.90	Main hole size (mm) 215.90
DP length (m) 1495.576	DC size ID (mm) 60	DC above tool (m) 81.83
Mud weight (kg/m3) 1260	Visc (s/L) 79	Water loss (cm3) 5.4

PACKER RUBBER SIZE (MM) 196.85 — BOTTOM HOLE COKE (MM) 19.05

TOOL TALLY

PO Sub	.305
~~DP~~ XOver	.305
Recorder	1.524
Shut-in	1.650
Sampler	
Sampler	
Hydraulic	1.720
Jars	2.030
M/Record	
E/Record	
Temp Rec	
By-pass	
Safety Jt	.610
Packer	2.500
Packer	2.195
Upper Packer depth	1586.745
Packer	.305
Perfs	9.144
By-pass	
M / Record	
E / Record	1.829
X Over	.305
DC	40.710
X Over	.305
Blank	.305
Packer	1.330
Lower Packer depth	1640.978
Packer	1.150
Packer	2.500
Perfs	2.438
Recorder	1.524
X Over	.305
DP	315.19
X Over	.305
Bullnose	.610
Total depth	1965.000
Total Interval	54.233
Total Tail Pipe	324.022
Tool Make up Time	1½ Hr

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Customer VULCAN MINERALS — Customer Rep. MR. BILL WILLIAMS

Location VULCAN INVESTCAN RED BROOK #2

Interval 872-908 — Total Depth 1965 — Formation SHIPS COVE

Test Number FIVE — Tester K. DALE HOLLAND

Test Type DUAL STRADDLE CONVENTIONAL — K. B. Elevation 63.4 — Ground Elevation 57.1

Test Date DECEMBER 2, 2009 — Bottom Hole Temperature (C) 14.8

RECOVERY: 830

	Metres Total Fluid	Sampler # 004 ; #
	Metres of	SAMPLED AT:
	Metres of	830 Metres
830	Metres of GASIFIED WATER	400 Metres
	Metres of	1.524 Metres
	Metres of	Metres

Above Tool

REMARKS: OPEN FOR PREFLOW, HAD STRONG INITIAL PUFF TO BOTTOM OF PAIL IN 30 SEC. STEADY THROUGH OUT NO GAS TO SURFACE. ON VALVE OPEN HAD WEAK INITIAL PUFF TO BOTTOM OF PAIL IN 1 MIN. SLOWLY DECREASING THROUGH OUT. GAS TO SURFACE

GAS READINGS AT 118 MINS

TIME min.	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d	TIME min	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d

Gas Samples: # ; # ; Sent to

Gas Measured by:

TOOL TALLY

PO Sub	.305
B/ XOver	.305
Recorder	1.524
Shut-in	1.650
Sampler	
Sampler	
Hydraulic	1.720
Jars	2.030
M/Record	
E/Record	
Temp Rec	
By-pass	
Safety Jt	.610
Packer	2.500
Packer	2.195
Upper Packer depth	871.816

DOWNHOLE PRESSURE DATA (KPAG) Test Times: PF 10 ISN 90 VO 125" FSN 360

Recorder Number		110177			177330	177452	251726
Recorder Range		32751			68950	68950	59110
Clock Hour -Emp		24			EMP	EMP	24
Depth - Metres		859.892			877.608	877.913	920.641
Position of Pressure Port		FLUID	INSIDE	INSIDE	OUTSIDE	OUTSIDE	OUTSIDE
Initial Hydrostatic	(A)					11077	
Start First Flow	(B)					5456	
End First Flow	(B1)					6566	
First Shut-In	(C)					10317	
Start Second flow	(D)					7230	
End Second flow	(E)					10256	
Second Shut-In	(F					10354	
Start Third Flow	(H)						
End Third Flow	(I)						
Third Shut-In	(J)						
Final Hydroststic	(G				✓	10908	

Packer	.305
Perfs	4.877
By-pass	
M / Record	
E / Record	1.829
X Over	.305
B/ DC	27.080
X Over	.305
Blank	.305
Packer	1.330
Lower Packer depth	905.152

Packer	1.150
Packer	2.500
Perfs	8.534
Recorder	1.524
X Over	.305
DP SDC	1041.920
X Over	.305
Bullnose	.610
Total depth	1965.000

TEST IS: Misrun; ✓ Satisfactory

Started in hole @ 0800	Opened tool @ 1106	Out of hole @ 0130
DP size (mm) 114 IF	Weight (kg/m) 31.90	Main hole size (mm) 215.90
DP length (m) 761.518	DC size ID (mm) 60	DC above tool (m) 95.46
Mud weight (kg/m3) 1260	Visc (s/L) 79	Water loss (cm3) 5.4
PACKER RUBBER SIZE (MM) 196.85	BOTTOM HOLE COKE (MM) 19.05	

Total Interval	36.336
Total Tail Pipe	1056.848
Tool Make up Time	2.0 Hr

Deviation / Directional Survey Report

Directional Drilling Company:
Directional Drillers:
Measured While Drilling (MWD) Hands:
Survey Type: magnetic
Survey Mode: wireline
Survey Date: Nov 27, 2009
Survey Calculation Method: minimum curvature
Target Azimuth: 100.00 °
Dog Leg Severity Characteristic: 30.00

Survey Tie-In Information

Tie-In Co-Ordinantes
Latitude:
Longitude:
N / S:
E / W:

Measured Depth	T.V.D.	Drift Angle (º)	Azimuth (º)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00

Kick-Off (Whipstock) Information

Kick-Off Co-Ordinantes
Latitude:
Longitude:
N / S:
E / W:

Measured Depth	T.V.D.	Drift Angle (º)	Azimuth (º)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity

Remarks: Surveys Surface - 890 meters from Totco Teledrift. Surveys 890 - FTD from Baker Hughes Wireline Logs.TVD Calculated based on average trend at bottom section of hole at apx 100 degs. Bottom hole location Estimate only.

Survey Points

Storage Units: Metric

Measured Depth	T.V.D.	Drift Angle (º)	Azimuth (º)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
36.00		0.750					
109.00		0.250					
162.00		1.000					
202.00		1.500					
262.00		0.750					
356.00		1.250					
508.00		2.750					
604.00		2.000					
754.00		3.000					
850.00		6.700					
890.00	887.77	7.020	65.97	22.17	49.73	45.13	0.24
950.00	947.31	7.210	69.99	24.96	56.62	51.43	0.27
1,070.00	1,066.20	8.410	72.37	30.19	72.06	65.72	0.31
1,160.00	1,155.17	8.950	81.96	33.16	85.27	78.21	0.51
1,250.00	1,244.05	9.220	91.82	33.91	99.41	92.01	0.53
1,340.00	1,332.93	8.940	103.94	32.00	113.40	106.12	0.64
1,430.00	1,421.80	9.270	113.10	27.47	126.86	120.16	0.49
1,520.00	1,510.60	9.500	120.62	20.84	139.92	134.17	0.42
1,610.00	1,599.47	8.660	121.51	13.52	152.08	147.43	0.28
1,700.00	1,688.50	8.140	120.35	6.76	163.36	159.70	0.18
1,790.00	1,777.54	8.640	117.73	0.39	174.84	172.12	0.21
1,880.00	1,866.47	9.060	118.23	-6.10	187.07	185.29	0.14
1,965.00	1,950.41	9.010	118.50	-12.45	198.81	197.95	0.02

Drilling Fluid Summary

Storage Units: Metric

Drilling Fluid Type:	Gel Chem Surface	**From:**	0	**To:**	220
Drilling Fluid Type:	Saturated Salt / Poly	**From:**	220	**To:**	889
Drilling Fluid Type:	PHPA Polymer	**From:**	889	**To:**	1,965

Work Schedule

Storage Units: Metric

Company: JDS Consultants
Geologist: **Michael Smith (403-589-4998)**

Work Performed	**From:**	Oct 23, 2009	**To:**	Dec 03, 2009
Depths Logged	**From:**	17.0	**To:**	1,965.0

Remarks:

Formation Top Summary

Storage Units: Metric

Kelly Bushing Elevation: 61.75 **Casing Flange Elevation:**
Ground Elevation: 57.10

***** All Depths measured from Kelly Bushing Elevation *****

Group *Formation* Member	Prognosis (TVD)	Sample Top (MD)	Sample Top (TVD)	Log Top (MD)	Log Top (TVD)	Subsea	Thickness
Gravel		0.00		0.00		0.00	
Codroy Group	233.00	53.00	53.00	53.00	53.00	8.75	
Ship Cove	760.00	885.00	885.00	885.00	885.00	-823.25	
Spout Falls	807.00	897.00	894.72	897.00	894.72	-832.97	
Anguille Group	1700.00					-1638.25	
Anguille Basal Wash		1860.00	1846.71	1860.00	1846.71	-1784.96	
Gneissic Basement	2250.00	1923.00	1908.93	1923.00	1908.93	-1847.18	
FTD	2200.00	1965.00	1950.41	1962.20	1947.64	-1885.89	

SAMPLE DESCRIPTIONS

Geologist Comments regarding visual / microscopic porosity estimates:

The estimates of porosity / cementation in the Sidewall Cores and Cuttings during the drilling operation of the Red Brook #2 well are based on the Geologists System and Methods, developed during the drilling of the McCully Gas Field in New Brunswick, and adopted for Vulcan Minerals in order to remain consistent within the Carboniferous Basin as a whole.

To avoid confusion with terminology over the Porosity estimates for the Sidewall Cores and Cuttings recorded in the sample descriptions - The following definitions should be reviewed.

Porosity Estimates Criteria: Sample / Sidewall Core Descriptions and Porosity Estimates are generally recorded under an x10 power magnification. The Well Site geologist used an x20 power magnification for the Red Brook #2 well. Maximum magnification of x45 power was used as required but as a general "rule of thumb" - any visual porosity not seen with an x20 magnification would be considered ineffective.

Visual Porosity: Naturally occurring "holes" within the rock matrix or generally – between or besides touching grains that can be seen with the naked eye - or up to and including an x20 magnification. Also would include secondary "after the fact" porosity generally found in Carbonates but also possible within clastics such as Sandstone – Siltstones resulting from fracturing, digenesis or leaching.

Effective Porosity: The volume of rock that would be filled by Recoverable Oil and or Gas. For the Red Brook #2 well, the stated effective porosity is for possible Gas, as generally, effective gas porosity would be higher than effective oil porosity. Effective Porosity does not always equal visible porosity but visible porosity is generally effective. Effective porosity as qualified in this report would also include an educated unseen porosity estimate.

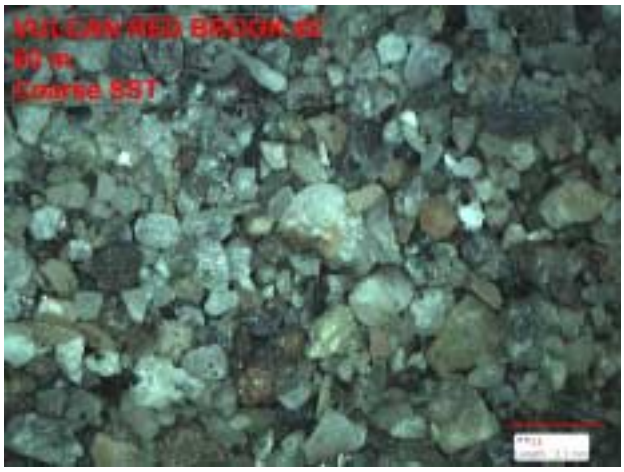
Ineffective Porosity: The volume of rock that is occupied by "hidden" porosity such as Clays, Argillaceous material such as Shale clasts, grains, laminae, and or other material such as a weaker cemented silica silty matrix. Although the Neutron Porosity Tool would record this hidden porosity, the physical characteristics of the "fill" material would not be capable of holding gas within its volume and/or incapable of liberating gas, and could be considered as non Recoverable porosity.

Total Porosity: Visual porosity including Effective + Ineffective porosity. (Generally Neutron Logging Tool)

Grain Relief / Cementation: The Relief of the rock / grains / cuttings / sidewall cores is generally inversely proportional to the cementation. High Relief cuttings generally required weaker cement and/or compaction, and the matrix of the rock will break and/or fracture prior to the quartz grains. Low Relief cuttings are generally very well cemented, resulting in much lower total porosity. The cement is generally silica or calcite/dolomite. The rock with the estimated low relief will be observed to break through the grains as the cement is harder / tougher and the lower stress point would be the quartz grains verses the matrix/cement. High relief can also be observed in cuttings with high ineffective porosity due to the intergranular volume being filled by clays, silica material, argillaceous / shale, pyrobitumen or any other "filling" material.

SAMPLE DESCRIPTIONS

5.0 to 38.0	Gravel Till	
(13.0)	Assorted pebbles from screens and washed samples, muddy clay component? larger cobbles to possible boulders based on drillers information.	
38.0 to 40.0	SANDSTONE	
(2.0)	Coarse to very coarse loose clean Sandstone? varied quartz, lithic, feldspathic angular to subrounded to rounded grains, possible not from interval and bagged filled off depth.	
40.0 to 53.0	Gravel	
(13.0)	Loose clean? probable clay infilling, assorted pebbles, varied colored Sandstone, off white to grey to micaceous, some igneous, lithic hard siliceous, varied, probably cobbles with some boulders? assumed based on drillers comments.	
53.0 to 70.0	SANDSTONE	
(17.0)	Coarse to upper coarse, loose, varied colored quartz to lithics, varied Sandstone lithics, white, red, cream, grey, black micaceous, abundant white to translucent quartz, fractured to angular to subrounded, abundant rounded, probable pebbles to some cobbles?, uniform with depth. Apparent boulder at 61 meters based on Drill rate (torque).	

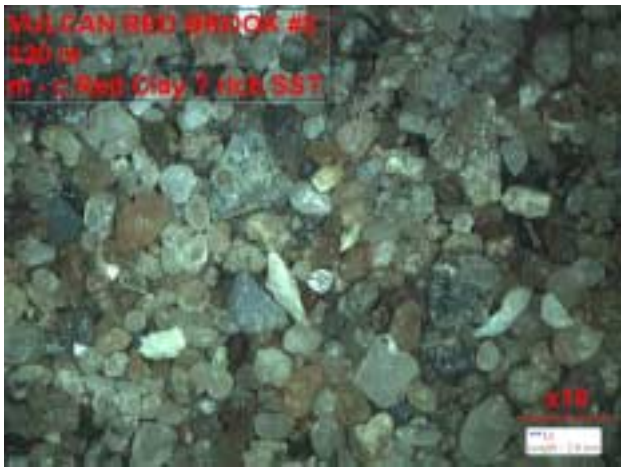


70.0 to 90.0	SANDSTONE	
(20.0)	Medium to upper coarse, loose, clean, probably some clay infilling, varied colored quartz, predominately white, opaque, grey, abundant varied lithics, cream to grey to reddish, abundant black igneous with black mica to white quartz anorthorsite ?.	
90.0 to 105.0	SANDSTONE	
(15.0)	Loose, medium to coarse to very coarse, no cement, assuming reddish clay matrix infilling, clean washed sands predominately quartz, opaque, white, translucent, abundant reddish feldspars, abundant varied lithics, reddish, whitish micaceous igneous lithics, some shale?, minor cherty, siliceous, overall slightly reddish brown samples when dried, bagged samples muddy red, uniform with depth.	

SAMPLE DESCRIPTIONS

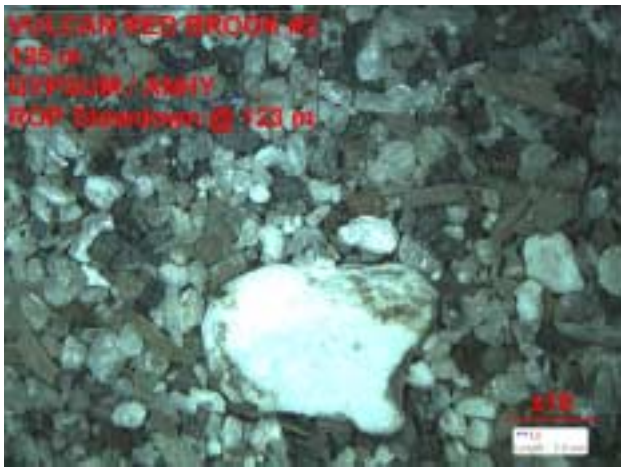
105.0 to 123.0 SANDSTONE

(18.0) As above, loose, medium to coarse to very coarse, predominately quartz, opaque, white, translucent, abundant stained orange to reddish, abundant lithics, greyish shale?, to crystalline quartz to micaceous igneous, minor greenish, some limonite altered siliceous sandstone to igneous fragments, overall reddish brown color to dried bulk sample, assuming reddish clay rich matrix to infilling, uniform with depth.



123.0 to 135.0 GYPSUM to ANHYDRITE

(12.0) Off white chalky amorphous to microcrystalline Anhydrite with very abundant to predominately opaque, semi translucent to slightly grayish crystalline to tabular Gypsum, minor quartz grains, ROP slowdown at top of zone, uniform with depth.



135.0 to 155.0 GYPSUM

(20.0) Off white microcrystalline chalky very clean to micro sucrosic Anhydrite grading with depth to predominately Gypsum, semi translucent medium to coarse crystalline tabular to rhombs semi opaque massive crystals to fragments, very uniform, very soft, uniform with depth. Brownish sawdust in samples.

SAMPLE DESCRIPTIONS

155.0 to 173.0 GYPSUM

(18.0) Pure clean semi translucent crystalline to tabular gypsum, very soft, predominately crystals, very uniform, see photo, uniform / depth.

173.0 to 175.0 SANDSTONE ? to Probable GYPSUM

(2.0) Identical to Sandstone from up hole, Lost circulate at 173 meters, Pipe stuck apx 1 hour, POOH and RIH with open ended drill pipe and spot high viscosity plug with sawdust. Assuming Sandstone from up hole, Losses from probably dissolved to karst erosional surface? or possible underground water flow as per original Well on location.

175.0 to 185.0 GYPSUM

(10.0) Predominately off white to semi translucent clean, massive crystalline to tabular Gypsum, good trace colored quartz grains decreasing to trace rounded medium quartz grains with depth, possible within gypsum?, or cavings up hole from healing losses from 173 meters.

185.0 to 200.0 GYPSUM

(15.0) Off white to crystalline, semi translucent massive Gypsum, tabular to crystalline crystals, slightly dirty overall?, abundant Sawdust to LCM washed from samples, no sands to no quartz, uniform with depth.

200.0 to 212.0 GYPSUM

(12.0) Off white to semi translucent to opaque crystalline to tabular crystals, massive, very soft, no sands, no apparent chalky anhydrite, uniform with depth. (ROP break from 2003-2006 meters could possible be some Salt?, no losses and no indications in samples.

212.0 to 220.0 GYPSUM

(8.0) Off white to semi translucent, massive, soft, very clean, crystalline tabular crystals, uniform with depth. POOH for Surface Casing. (340 mm Casing Set 220.2 m)

SAMPLE DESCRIPTIONS

220.0 to 235.0 GYPSUM

(15.0) Off white to semi translucent, clean, pure crystalline to crystals, minor chalky amorphous anhydrite with depth, uniform.

235.0 to 242.0 LOST CIRCULATION

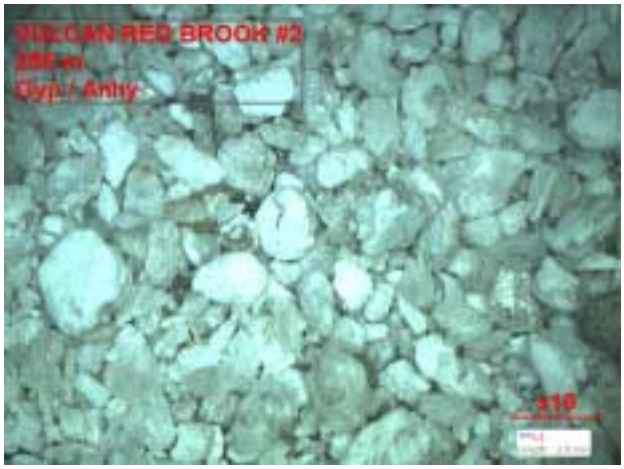
(7.0) No Sample, Lost Circulation (no returns) at 239 meters, drill to 242 meters, attempt several high viscosity LCM plugs, RIH and cement open ended to plug Lost Zone.

242.0 to 245.0 GYPSUM?

(3.0) 95% Cement in samples, No indications of Salt.

245.0 to 255.0 GYPSUM to ANHYDRITE

(10.00) Off white to semi translucent micro to coarsely crystalline, very clean, with interlaminated to bedded Anhydrite (60%), off white, chalky, soft, amorphous, clean, trace very slightly brownish red micro laminations?, uniform with depth, Appears that PDC is balling up in Anhydrite.



255.0 to 270.0 ANHYDRITE

(15.0) Chalky off white, massive, blocky to lumpy, soft, non calcareous, amorphous, less than 10% semi translucent crystalline Gypsum, uniform with depth, PDC possible balling up, overall ROP apx 8 m/hr.

270.0 to 280.0 ANHYDRITE

(10.0) Off white, massive, amorphous, very soft, chalky, "ground up powder lumps" with crystalline semi translucent micro to fine fragments, Gypsum?, assuming predominately Anhydrite due to chalky character of samples verses upper crystalline unit assumed Gypsum.

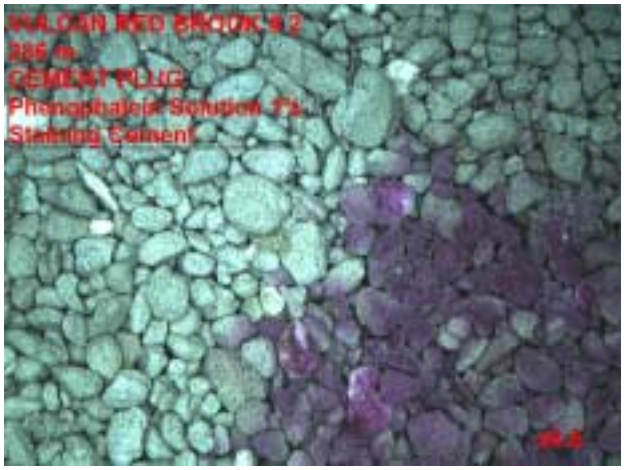
280.0 to 284.0 ANHYDRITE to Possible SALT?

(4.0) Lost Circulation at 283 meters, No Returns, Drill break 15 m/hr, Pump LCM Slug, POOH for Cement at 286 meters. Plug Held, Lost Circulation past plug.

SAMPLE DESCRIPTIONS

284.0 to 303.0 LOST CIRCULATION – NO SAMPLES

(19.0)



303.00 to 305.0 GYPSUM to ANHYDRITE?

(2.0) Very poor sample, 99% Cement, trace off white soft chalky to microcrystalline Anhydrite? with several crystalline semi translucent Gypsum crystals only.

305.0 to 313.0 NO RETURNS

(8.0)

313.0 to 322.0 NO RETURNS

(9.0) No Formation cuttings, Cement over shakers prior to Lost Circulation, trace Gypsum with Anhydrite in samples

322.0 to 327.0 ANHYDRITE with GYPSUM

(5.0) 95-99% Grey Cement in samples, trace white chalky Anhydrite to microcrystalline to semi translucent crystalline crystals. (Slow ROP)

327.0 to 350.0 SALT

(23.0) Massive Salt at shakers, Samples bagged directly off shakers and not washed, white to semi translucent, opaque, clean, slightly cubic crystalline, rounded edges due to erosion in hole, Drilling with saturated Salt mud system.

350.0 to 360.0 SALT with Possible ANHYDRITE

(10.0) Predominately Salt, off white to semi translucent, opaque, abundant softer chalky white Anhydritic fragments, minor dirty grey Cement fragments, possible cavings?.

360.0 to 400.0 SALT

(40.0) Off white, massive, amorphous, blocky, minor semi translucent only, uniform with depth, ROP 18-24 m/hr steady.

400.0 to 450.0 SALT

(50.0) Uniform with depth, as above, continued to bag samples directly off shakers, no washing, amorphous, massive, whitish blocky, abundant semi translucent, abundant "Polymer" in samples reacting with salt, rubber like, Uniform ROP apx 20 m/hr.

450.0 to 500.0 SALT

(50.0) Samples bagged directly off of Shakers to preserve Salt, white, massive, uniform, white chalky powdered to semi translucent amorphous, blocky, steady uniform ROP with depth. (possible slightly anhydritic component?)

500.0 to 550.0 SALT

(50.0) Bagged directly off shakers, white, massive, blocky, abundant white powdery amorphous, clean, opaque to rare semi translucent, uniform ROP with depth up to 25 m/hr.

SAMPLE DESCRIPTIONS

550.0 to 600.0 SALT

(50.0) Off white to opaque, massive, general amorphous, blocky to lumpy, structure less, abundant chalky? powdery, cleaner more massive to coarse with depth, Good uniform ROP increasing to apx 25 m/hr with depth.

600.0 to 650.0 SALT

(50.0) Massive Salt at shakers, cleaner overall (Less to No Polymer in samples) predominately opaque, whitish, massive, amorphous, minor slightly chalky, ROP 25 to 30 m/hr, Uniform with depth.

650.0 to 690.0 SALT

(40.0) Off white, massive, blocky, amorphous, clean, uniform, crystalline, very uniform, ROP 25-30 m/hr.

690.0 to 740.0 SALT

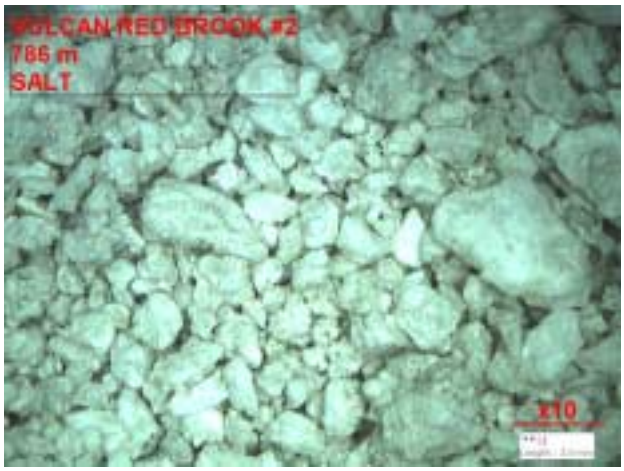
(50.0) Slight color change from white to very slightly mottled off white to cream, apparent clean, blocky, massive, amorphous, abundant slightly opaque, minor semi translucent, minor chalky powder, continued coarser fragments, Good ROP up to 30 m/hr, uniform with depth, No Fluorescence, no cut.

740.0 to 780.0 SALT

(40.0) Very light cream to very slightly whitish buff, massive, amorphous, blocky, opaque, abundant slightly powdery due to drilling, massive coarser overall, uniform with depth, Continued ROP apx 25 m/hr.

780.0 to 810.0 SALT

(30.0) Off white to very slightly cream overall to very light buff (larger fragment when broken are white), continued larger massive, amorphous fragments to abundant powdered to finer fragments, uniform with depth, continued steady ROP apx 20 m/hr.

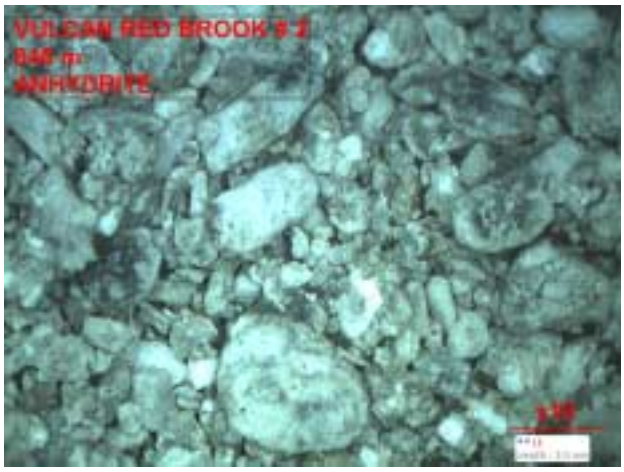


810.0 to 838.0 SALT

(28.0) Overall slightly cream to light buff, massive, amorphous, blocky to abundant powdery, clean? probably becoming slightly harder ?, move massive with depth, grading to anhydrite?, based on ROP only.

838.0 to 849.0 ANHYDRITE

(11.0) Predominately powdery to liquid mush at shakers, (samples not washed at shakers to preserve cuttings), minor fragments chalky white, soft to medium to darker grey, massive, hard, PDC milling Anhydrite, No fluorescence, instant weak pale yellow cut, becoming stronger over time, slight petroleum smell to cuttings.(Overall calcareous samples with petroleum smell when acid added).



SAMPLE DESCRIPTIONS

849.0 to 862.0 ANHYDRITE

(13.0) As above, predominately light grayish powdery mush at shakers due to PDC ?, washed and dried samples are overall slightly grayish, drying to an off white, minor to no fragments, dried clumps to aggregate of smaller anhydrite grains, overall chalky texture, minor salt cavings?, No florescence, instant bright white cut becoming a mottled pale yellow over time, continued slight petroleum smell to samples, no evidence of staining, no visible oil, ROP apx 4 m/hr. Slight possible gas show of 35 units at 856 meters. MW = 1250. (Overall calcareous samples).

862.0 to 870.0 LIMESTONE with ANHYDRITE

(8.0) Over all dried samples slightly greyish, minor very light grayish buff, massive, amorphous to silty texture, minor fragments cryptocrystalline, darker grey, argillaceous in part, Marlstone to apparent micro Wackestone fragments, predominately off white, chalky, soft, very calcareous, anhydritic in part ?, assuming bedded Limestone to Anhydrite, No fluorescence, instant pale weaker whitish cut becoming very slightly pale yellowish over time, better overall fragments, no staining.

870.0 to 875.0 ANHYDRITE

(5.0) Off white, clean, massive, very calcareous component, microcrystalline to rare very slightly microsucrosic, predominately amorphous, very soft, with 10-20% darker grayish dirty Limestone, thin laminations or cavings.

875.0 to 881.0 ANHYDRITE?

(6.0) Massive thick gumbo clay like at shakers, Pure white, massive, soft, sticky, no fragments, very slightly calcareous only, does not dissolve in hot acid, (initially binding off shaker), Dries very poorly but rock hard. ROP down to 2.5 m/hr but increased FOB to 15000 dN and ROP increased to apx 7 m/hr. No Fluorescence no cut. Mud has turned brown since hitting this stick anhydrite.

881.0 to 885.0 ANHYDRITE with minor LIMESTONE?

(4.0) Off white, massive, very soft, sticky at shakers, dried samples predominately soft, chalky, moderate to very calcareous in part, abundant microcrystalline to minor cryptocrystalline opaque, apparent soft very calcareous Silty Limestone laminations?, anhydritic in part, some silty anhydrite, slower steady ROP, no gas, very slightly mineral fluorescence, instant pale whitish grading to slightly pale yellow cut over time in Anhydrite, (silty to calcareous fragments to grading to anhydritic Limestone.

Ship Cove: 885.00 MD, 885.00 TVD, -823.25 SSL

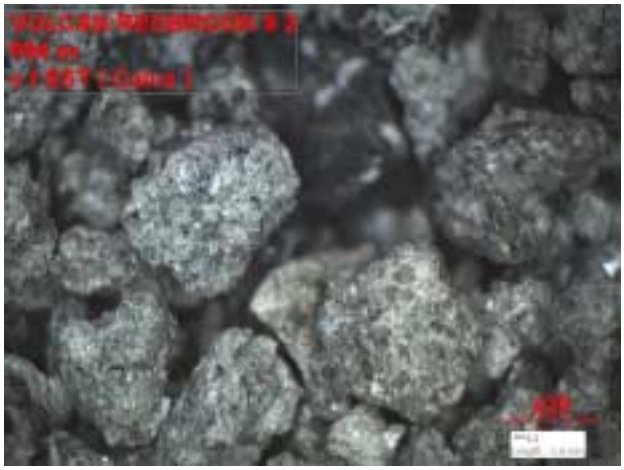
885.0 to 889.0 LIMESTONE to MARLSTONE

(4.0) Mudstone, (1A), mottled of white to very slightly buff, massive, slightly silty quartz, very calcareous, soft, minor microcrystalline buff fragments, silty to micro Wackestone laminations, also interlaminated darker grey to grey black argillaceous, dirty Marlstone, cryptocrystalline to microcrystalline, no stain, several silty fragments with very pale dull fluorescence, weak instant cut, abundant soft chalky calcareous Anhydrite, instant pale white cut, Drill break up to 12 m/hr, minor Gas show of 35 units with MW = 1250. POOH For Logging and Casing.

SAMPLE DESCRIPTIONS

889.0 to 898.0 LIMESTONE with interbedded SANDSTONE

(9.0) Buff to slightly brownish, cryptocrystalline, massive, blocky, very silty, slightly argillaceous, Marlstone, interbedded with Sandstone, off white, very fine, quartz, translucent, good trace white mica, trace black argillaceous to carbonaceous? specks, calcareous, slightly chalky, massive, blocky, moderate cemented, easily crushable, slow ROP, trace to no gas only, slight weak white cut to Sandstone, moderate fast pale yellowish white cut on Limestone.

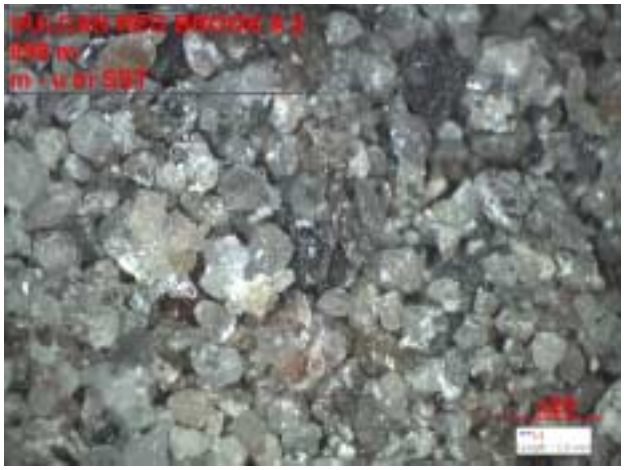


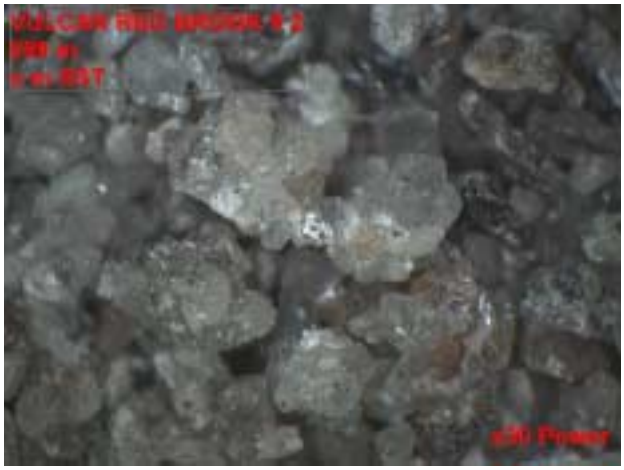
SAMPLE DESCRIPTIONS

Spout Falls: 898.00 MD, 898.00 TVD, -836.25 SSL

898.0 to 899.5 SANDSTONE

(1.5) Off white, loose, upper medium, quartz, translucent, opaque, trace yellowish, pinkish, trace greenish black mica, rare orange feldspars, moderate well sorted, subrounded to abundant rounded, overall slightly calcareous component, predominately very weakly cemented, very high relief clean (no matrix) grain supported, with visible porosity up to 0.15 mm between grains, abundant secondary recrystallization on quartz, also high relief fragments with chalky white clay infilling, some lower relief calcareous, tighter, assuming streaky effective porosity up to 10%, No fluorescence, no cut. Well Shut In for influx, Kick circulated out, No Gas to Surface.





899.50 to 910.0 PEBBLE SANDSTONE

(10.5) Lower to upper medium loose to weakly cemented clean quartz Sandstone, as above, medium to high relief, very slightly calcareous, minor secondary recrystallization, trace pinpoint porosity, with coarser quartz to feldspars, lithics, grading to increasing coarser to pebble Quartz Sandstone, translucent, opaque, pinkish, abundant reddish to pinkish feldspars, tan to cream to grey cherty pebbles, greenish to greyish lithics, abundant upper medium clean moderate sorted quartz, subrounded, apparent slightly calcareous to chalky matrix, weakly cemented, very poorly sorted, subangular to subrounded, interlaminated varied Sands to pebble Sandstone, very ragged ROP overall, minor trace gas background only, no florescence, no cut.

910.0 to 924.0 SANDSTONE

(14.0) Loose, off white, medium to lower coarse, predominately quartz, opaque, translucent, minor yellowish to rose, purple, very slightly calcareous, apparent chalky matrix to cement, weakly cemented, moderate well sorted, subrounded to rounded, less than 5% coarser fractured pebbles, varied colored quartz, yellowish to pinkish, cherty tan to grey, pinkish orange feldspars, minor fragments are very high relief, no chalky matrix, 7-9% matrix porosity to white chalky filled fragments with no effective porosity, rare fragments greenish clay infilling, minor slightly carbonaceous? very fine calcareous Sandstone to silty laminations?, overall uniform with depth, ROP apx 15 m/hr, minor upper gas show of 50 units, no fluorescence, no cut.

924.0 to 933.0 PEBBLE SANDSTONE

(9.0) Loose, off white to very light grey?, medium to upper coarse quartz matrix, opaque, translucent, moderate well sorted, subrounded to rounded, as above, apparent slightly chalky matrix, very weakly cemented, with 15-20% very coarse to fractured pebbles of quartz, opaque, white, pinkish, yellowish, varied cherty fragments, greyish, minor pinkish feldspars, minor assorted greenish to grayish lithics, trace white limestone fragments, slower ROP down to 6 m/hr, minor gas shows only to apx 50 units, No fluorescence, no cut.

933.0 to 945.0 SANDSTONE

(12.0) Loose, off white, upper medium to lower coarse, quartz, opaque, translucent, trace orange to pinkish only, moderate well sorted, subrounded to rounded, very weakly cemented, chalky white matrix infilling destroyed by drilling?, minor very coarse pinkish to orange fractured fragments to pebbles only, no Gas, ROP up to 20 m/hr, no fluorescence, no cut, uniform with depth.

945.0 to 951.0 SANDSTONE

(6.0) As above, loose, medium to lower coarse quartz, opaque, translucent, moderate well sorted, subrounded to rounded, assuming chalky matrix infilling, weakly cemented, possible increasing calcareous cement with depth, trace varied colored fractured very coarse fragments, floating pebbles?, no fluorescence, no cut.

951.0 to 960.0 REDBEDS Interbedded with SANDSTONE

(9.0) Loose, lower to upper medium, quartz, opaque, translucent, (no staining), very chalky white appearance, minor fragments chalky white to very light greenish clay infilling, very weakly cemented, samples overall slightly reddish, Mud at shakers changed from very light grey white to red, assuming interbedded with softer sandy to silty? redbeds to red Claystones, coarser floating pebbles, yellowish to pinkish quartz to cherty gray to black tan, minor lithics, or possible thinner coarse laminations to bedding, varied ROP from 12 to 5 m/hr indicating bedded softer Clays to redbeds (PDC Balling up?) to chalky coarser white clay rich Sands, no fluorescence, no cut, trace gas decreasing to no gas with depth.

960.0 to 972.0 Chalky SANDSTONE with Redbeds?

(12.0) Off white to very white chalky, very fine to upper medium loose Sandstone, quartz, opaque, translucent, poorer sorted, subangular to subrounded to rounded, very weakly cemented, white clay rich with overall moderate calcareous component to dried sample, minor localized greenish clay infilling, minor floating varied colored pebbles? to coarse quartz, pinkish to yellow, assorted grayish to blackish lithics to cherty, probably softer interbedded reddish Claystone?, (washed to destroyed by drilling ?), very ragged ROP from 3 to 12 m/hr, assuming PDC balling up in softer chalky beds, no fluorescence, no cut.

972.0 to 980.0 Chalky SANDSTONE

(8.0) Loose, off white, fine to upper medium, coarse quartz, opaque, white, semi translucent, very chalky overall samples with calcareous component, abundant increasing coarser to fractured pebbles with depth, orange to yellowish, minor lithics, weakly cemented, chalky, no indications of redbeds but drilling mud is red at shakers, possible some softer Claystone with Redbed interlams to bedding?, as above, slower drilling from PDC balling? or increased coarseness of quartz, no gas, no florescence, no cut.

980.0 to 990.0 SANDSTONE

(10.0) Loose, fine to upper medium to lower coarse, quartz, opaque, translucent, minor orange, very chalky overall samples with calcareous component, as above, quartz, opaque, semi translucent, moderate sorted, subrounded to rounded, weakly cemented, very uniform samples, poorly drying samples, abundant polymer in samples, minor very coarse only, trace gas, no fluorescence, no cut.

990.0 to 1000.0 SANDSTONE

(10.0) Loose, fine to upper medium grading to upper medium to lower coarse, quartz, opaque, white, translucent, minor yellowish to pinkish, rare rose, minor pinkish feldspars, trace black to greyish lithics, chalky residual clays on quartz grains, minor floating fractured very coarse to small pebbles, weakly cemented, calcareous component to dried samples, rare fragments well cemented, siliceous, trace greenish silty to semi waxy marine green clay fragments, moderate sorted quartz, subrounded to rounded, minor subangular, varied ROP 12 to 4 m/hr, Slower ROP clay rich with PDC balling or harder better cemented sands?, no gas, no fluorescence, no cut.

1000.0 to 1010.0 SANDSTONE with CLAYS ?

(10.0) Loose, fine to upper medium, as above, quartz, opaque, white, translucent, minor pinkish, rose, weakly cemented, chalky, overall calcareous component, increasing apparent chalky fragments with depth, off white, soft to very firm, non to local very calcareous, some apparent clean white Limestone fragments, possible thin laminations?, trace greenish clays, massive fragments to micro green clay infilling around orange brown quartz grains, rare blackish lithics, trace greenish silty clays?, non calcareous, moderate hard, siliceous, appear increase silty to clay ? fragments with depth, siliceous, non calcareous, some coarser quartz to trace feldspars, lithics, overall ROP very poor at apx 2 m/hr, decreased Sandstone, increasing reddish clays at shakers, No conglomerate in samples, zero gas, no florescence, no cut.

1010.0 to 1020.0 Pebble SANDSTONE

(10.0) Loose, lower to upper medium to lower coarse grading to coarse to very coarse, fractured coarse to pebbles, medium quartz, translucent, white, opaque, well sorted, subrounded to rounded, with intermixed varied colored quartz, white, translucent, pink, yellow, lithic green, yellow, feldspathic well cement siliceous Sandstone lithics, very light to dark grey, yellow, green quartz to cherty fragments, microcrystalline to cryptocrystalline, trace chalky white to harder whitish tripolitic chert ?, white cryptocrystalline Limestone lithics to thin laminations ?, increase ROP with depth, gas show 75 units at 1014 metes, no fluorescence, no cut.

1020.0 to 1030.0 SANDSTONE REDBEDS

(10.0) Red muddy at shakers, red clays washed out of dried samples. loose, fine to upper medium with minor lower coarse, quartz, opaque, slightly stained red translucent, minor yellow, 5% fractured very coarse to possible pebbles, light to dark grey lithic, translucent to white quartz, trace pinkish feldspars, mottled pink grey lithics, rare softer chalky white matrix fragments with reddish stained quartz, overall dirty clay rich Sandstone, poorer ROP probable red Claystone to Shale (low torque), minor gas shows from top of drill breaks, no fluorescence, no cut, uniform / depth.

SAMPLE DESCRIPTIONS

1030.0 to 1045.0 REDBEDS to SANDSTONE

(15.0) Reddish brown, loose, very red brown muddy samples and red clays at shakers, lower to upper medium to lower coarse, minor fractured quartz pebbles?, quartz, opaque, translucent with general slight reddish staining, minor yellowish, moderate well sorted, subangular to subrounded with minor upper medium to coarse rounded, very weakly cemented, clay matrix, non to very slightly calcareous, slower ROP due to clay rich intervals (PDC spinning to balling up), uniform with depth, no fluorescence, no cut

1045.0 to 1060.0 REDBEDS to Pebble SANDSTONE

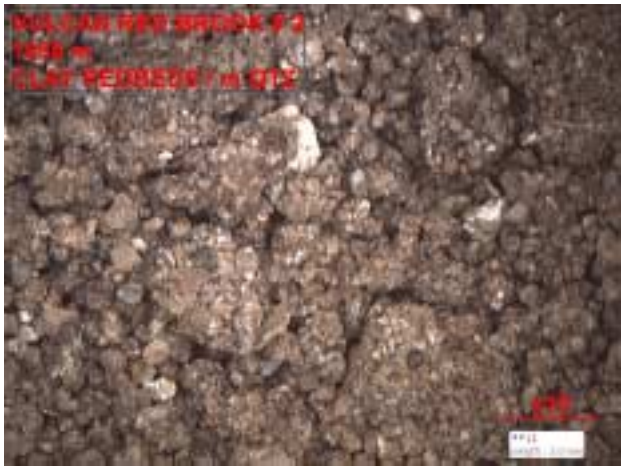
(15.0) Very thick muddy at shakers, red muddy bagged samples, loose, medium to lower coarse to abundant fractured pebbles, quartz, opaque, white, translucent to reddish stained, moderate sorted, subangular to subrounded to rounded, fractured lithics, grayish, blackish, translucent quartz, grey to yellow cherty fragments, overall reddish chalky muddy matrix throughout, very slightly calcareous, no fluorescence, no cut, uniform with depth.

1060.0 to 1075.0 REDBEDS to SANDSTONE

(15.0) Very muddy samples, loose, lower to upper medium, quartz, opaque, translucent, reddish stained from clays, moderate sorted, subrounded to subangular, abundant rounded, minor coarser black to grayish lithics, subrounded to rounded, minor fractured, apparent red clay rich, moderate calcareous component, rare to no fragments, weakly cemented with clay matrix, as above.

1075.0 to 1100.0 REDBEDS with SANDSTONE

(25.0) Very muddy, thick red clays at shakers, 90%+ of sample lost when washed and dried due to clays. Remainder of sample loose quartz, fine to upper medium to lower coarse, opaque, translucent, reddish stained from clays, moderate sorted, subangular to rounded, minor black to grey lithics, trace shaly fragments, minor to 5% increasing white chalky clays, very slightly calcareous, minor floating lithic to quartz pebbles?, assuming varied red Clay Rich bedding with loose Quartz to very weakly cemented Sands. (Slow ROP had low torque indicating probable rich Clays and PDC spinning and balling up), minor trace gas only from slightly cleaner sandy intervals, no florescence, no cut.



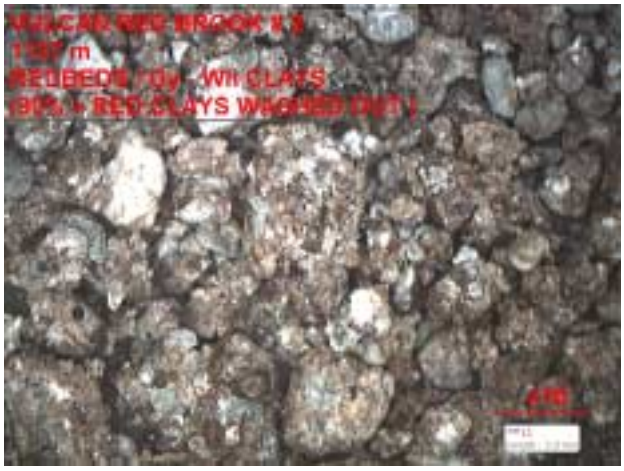
SAMPLE DESCRIPTIONS

1100.0 to 1120.0 REDBEDS

(20.0) Heavy red gumbo clays at shakers, (very hard to wash bagged samples off shakers), 90% plus bagged samples lost while washing and drying for vials. Remainder of sample loose quartz, fine to upper medium to lower coarse, subangular to rounded, opaque, translucent, reddish stained, 1-3% apparent white slightly chalky very calcareous clays to Limestone, assuming thin laminations within reddish clays to sandstone, Slower ROP from Clay rich intervals (low torque), Varied ROP due to clay content ? minor floating greenish black lithics, rounded quartz, trace harder red shale fragments, some pebbles to thinner coarser sorted laminations to bedding?, overall samples slightly calcareous, no fluorescence, no cut.

1120.0 to 1137.0 REDBEDS to CLYSTONE?

(17.0) As above, predominately red clays at shakers lost while washing samples, loose quartz, fine to upper medium to lower coarse with minor black to greenish lithic pebbles, very coarse quartz, opaque, white, translucent, red stained, ragged ROP, slower drilling within Clay rich beds, 1-3% white very calcareous Siltstone to very fine Sandstone to silty Limestone?, assuming thin laminations to bedding with clay redbeds, very hard to wash samples, 90% plus lost while washing and drying samples for vials, overall moderate calcareous dried samples, no fluorescence, no cut, minor gas shows from cleaner sands?, Gas show 113 units at 1126 metes with MW = 1200.



1137.0 to 1143.0 CLAYSTONE

(6.0) Off white, soft, chalky, very calcareous, (stable in water), slow ROP under 2 m/hr (PDC balling to spinning on clays), loose colored Quartz to red shale fragments, no gas.

1143.0 to 1152.0 CLAYSTONE with SANDSTONE ?

(9.0) Very muddy samples, lighter reddish, clays 90% plus washed out ?, died samples predominately off white soft chalky very calcareous clays?, loose quartz, opaque, white, translucent, stained red, minor reddish to greenish Shales to firmer Claystone, non calcareous, better ROP up to 20 m/hr indicating less clays or clay rich Sandstone, no gas, no fluorescence, no cut.

SAMPLE DESCRIPTIONS

1152.0 to 1163.0 Interbedded SANDSTONE with CLAYSTONE

(11.0) Soft mushy muddy light greyish samples, 90% lost at shakers and washing samples, dried samples grayish to whitish chalky clays with loose quartz, fine to upper medium, opaque, translucent, rare trace rose, trace reddish stained, no solid fragments, Ragged ROP with faster ROP up to 20 m/hr with spiky Gas shows under 75 units, no fluorescence, no cut.

1163.0 to 1170.0 CLAYSTONE

(7.0) Muddy poor samples, as above, loose quartz, Clays destroyed by PDC and washed out. Dried samples overall very light grey, abundant white chalky fragments, calcareous component, no solid fragments, Slower ROP indicating Clays?.

1170.0 to 1185.0 CLAYSTONE with SANDSTONE

(15.0) Very poor runny thinner muddy samples, (very little grit at shakers, bagged samples predominately soft mushy clays?, 95% plus of bagged sample washed out, very poor drying. Dried samples predominately whitish non to very calcareous Clays?, remaining loose quartz, fine to upper medium, More apparent redbeds, possible better sand at 1184 meters, Gas show of 137 units, no fluorescence, no cut.

1185.0 to 1195.0 CLAYSTONE with SANDSTONE

(10.0) Continued very muddy samples, as above, 90% of bagged sample lost while washing and drying, abundant white soft calcareous clay?, loose fine to upper medium quartz, opaque, translucent, rare rose, minor red stained, rare very coarse, moderate sorted, subangular to rounded, minor trace reddish to greenish shale lithic fragments, 1195 meter sample has several Sandstone fragment, medium, weakly cemented, pyritic, better ROP apx 9 m/hr, no fluorescence, no cut.

1195.0 to 1210.0 CLAYSTONE with SANDSTONE

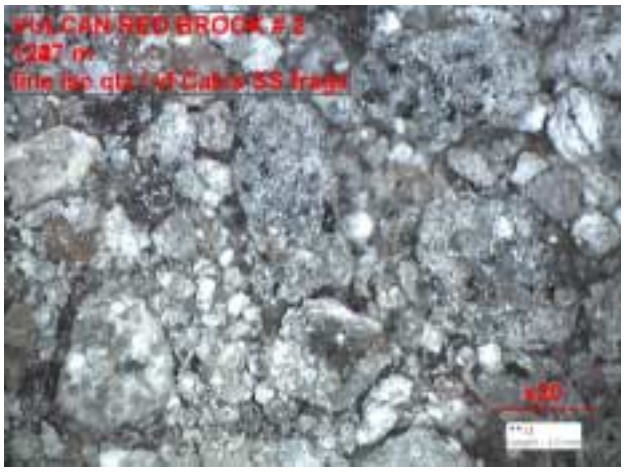
(15.0) As above, continued grey white chalky at shakers, (Drilling mud red), 90% of sample lost or washed out, residual loose quartz, fine to upper medium, rare lower coarse, opaque, white, translucent, trace rose, rare stained red, minor trace reddish to greenish Shale fragments, rare trace fine Sandstone, greenish white, friable, competent, siliceous, no sandstone fragments, abundant softer calcareous chalky clays? in dried samples, (destroyed by drilling?), no fluorescence, no cut.

1210.0 to 1223.0 CLAYSTONE with SANDSTONE

(13.0) As above, predominately slower drilling 4-5 m/hr, continued very mushy chalky, Bagged Samples from 1221 meters and deeper very light greyish white, thicker chalky gumbo clay like, dried samples chalky white calcareous fragments to lumps with loose quartz, fine to medium, assorted, moderate sorted, subangular to subrounded, no fragments, No gas.

1223.0 to 1233.0 SANDSTONE

(10.0) Thick chalky off white to very light grey white gumbo clay in sample bags, 90% of sample washed out to lost, dried samples, loose, quartz, well sorted, subangular to subrounded, minor medium only, chalky to calcareous matrix?, minor very fine Sandstone fragments, very slightly greenish white, calcareous, weakly cemented, friable, assuming better cleaner weak cemented calcareous Sandstone, ROP up to 15 m/hr, trace gas only, no fluorescence, no cut.



1233.0 to 1240.0 SANDSTONE with CLAYS

(7.0) As above, continued very chalky gumbo to sticky clays at shakers, dried samples chalky white calcareous lumpy to fragments, loose quartz, predominately fine, well sorted, subangular to subrounded, no harder Sandstone fragments, slower ROP apx 8 m/hr.

1240.0 to 1248.0 CLAYSTONE

(8.0) Very white chalky sticky clays in sample bags, predominately dried white chalky clays (calcareous) in samples, loose quartz, as above, fine, slower ROP apx 3 m/hr.

1248.0 to 1257.0 CLAYS with SANDSTONE to trace LIMESTONE

(9.0) Continued white chalky gumbo clay rich sample bags, Cuttings at shakers very chalky white with greenish clays within soft fragments, dried samples predominately dried calcareous whitish clays?, trace very fine to medium weakly cemented calcareous Sandstone, apparent minor microcrystalline to cryptocrystalline Limestone fragments, thin laminations, predominately loose fine to medium quartz, rock destroyed by PDC drilling, Slower ROP overall apx 5 m/hr, Samples indicate with more visible fragments that the rock may be becoming more competent. No Gas, no fluorescence, no cut.

SAMPLE DESCRIPTIONS

1257.0 to 1265.0 LIMESTONE

(8.0) Muddy chalky thick clay samples at shakers, dried samples predominant Limestone Mudstone, (1A), off white, chalky, to cryptocrystalline, softer, silty to very fine to fine quartz component in part, quartz clastic grains decreasing with depth to cleaner chalky mudstone, to cryptocrystalline very slightly buff white, Slow ROP apx 3 m/hr, 5% quartz decreasing with depth, no fluorescence, trace spotted weak pale white cut, no visible porosity, tight, no gas.

1265.0 to 1268.0 LIMESTONE

(3.0) Mudstone, (1A), off white, chalky, massive, soft to abundant harder amorphous to cryptocrystalline, light tan to buff, abundant white silty slightly chalky mudstone, several fragments very slight blotchy light oil staining within a micro sucrosic matrix, (pale white fluorescence, slow blooming yellow white cut), overall 30% pale white cut, (chalky fragments stronger white cut), no loose quartz, Survey Gas of 562 units but possible from fracture?.

1268.0 to 1272.0 LIMESTONE

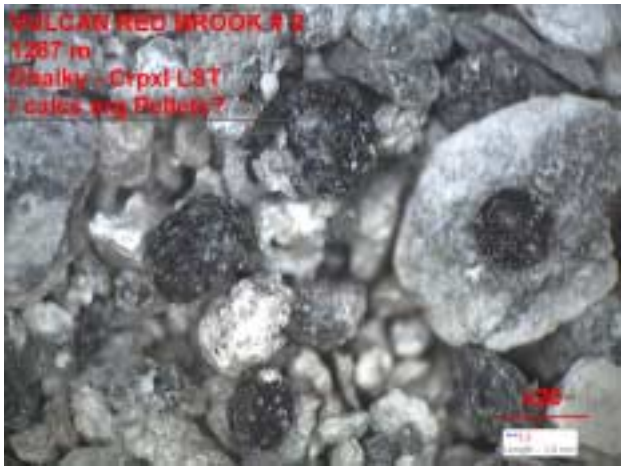
(4.0) Mudstone, (1A), off white, massive, blocky, softer, chalky, clean, minor trace silty only with interlams harder cryptocrystalline light buff, grading with depth to predominately chalky, ROP up to apx 15 m/hr, no fluorescence, trace only v pale white cut.

1272.0 to 1278.0 Marlstone grading to LIMESTONE

(6.0) Lighter grey dirty silty Limestone, minor grayish shales, no cut, grading with depth to cleaner continued Mudstone, (1A), off white, chalky to apx 10% off white to very slightly tan cryptocrystalline interlams, minor slightly dirty marly laminations throughout?, no fluorescence, lower cleaner chalky Mudstone slow weaker pale residual yellow white cut., no visible porosity.

1278.0 to 1287.0 LIMESTONE

(9.0) Mudstone, (IA), predominately off white, chalky in part, massive, blocky, firm, local very slightly silty, trace black rounded argillaceous nodulars or possible pellets? up to 1 mm, minor harder cryptocrystalline interlams, slightly buff, massive, minor trace grayish calcareous shaly laminations?, uniform samples, overall very slightly grey color to dried samples throughout, Gas show 126 units at 1285 meters, possible fracture?, no fluorescence, 1284 to 1287 samples instant pale yellow white cut, some chalky fragments bright white, no visible staining, no apparent porosity, 2-3% inferred non effective.



1287.0 to 1298.0 LIMESTONE with minor Siltstone to Sandstone

(11.0) Mudstone, (1A), off white, abundant chalky, moderate clean, to minor cryptocrystalline greyish to light buff, overall slightly grey dirty sample, with depth increasing slightly argillaceous Marly? to silty laminations, minor lithic micro to fine Wackestone, possible some minor calcareous grayish laminations throughout, minor but increasing with depth interbedded to laminated silty to very fine very calcareous Sandstone, well cemented, 10-15% shaly with depth, good trace loose black rounded spherical argillaceous calcareous pellets up to 1.5 mm down to 0.2 mm within a well cemented clean to dirty silty Limestone, no fluorescence, weak residual pale white mottled cut.

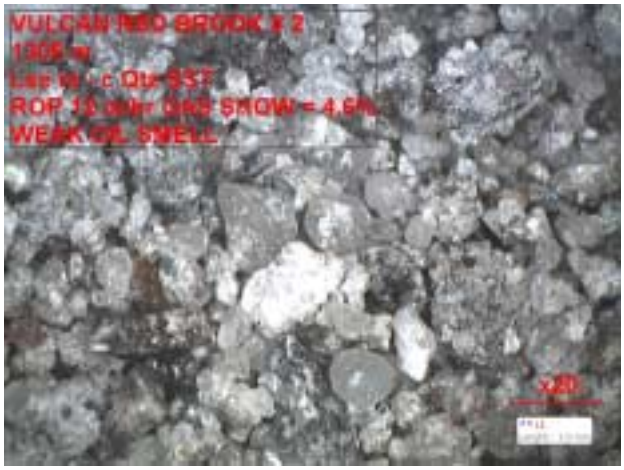
1298.0 to 1302.0 SANDSTONE

(4.0) Loose, very fine to upper fine quartz Sandstone, minor fragments well cemented, quartz, opaque, translucent, rare trace lithics, very fine to Siltstone fragments, moderate calcareous with finer Sandstone to moderate to weaker cemented, low relief, no visible porosity from fragments, Increased ROP and Gas Show to 150 units indicate some weaker cemented Sands with porosity, minor upper medium to rare lower coarse quartz grains, abundant chalky to cryptocrystalline Limestone throughout, possible interlams ?, no fluorescence, rare spotted instant white yellow cut only from several Sandstone fragments, no staining.

SAMPLE DESCRIPTIONS

1302.0 to 1311.0 SANDSTONE

(9.0) Loose, fine to medium to lower coarse quartz, opaque, white, semi translucent, rare rose, rare black lithic fragment, rare trace black shaly microlams?, chalky coating on coarser grains, minor chalky to cryptocrystalline Limestone, abundant softer chalky calcareous fragments to lumps, rare trace pyrite specks, minor very fine to silty fragments, well cemented, calcareous in part, assuming laminations within weaker cemented Sandstone, ROP up to 12 m/hr, Gas Show up to 456 units, Slight Oil Smell to samples when washed and dried, no staining, trace fluorescence and cut from Limestone fragments, overall bright fast residual cut to samples.



1311.0 to 1323.0 CLAYSTONE with SANDSTONE

(12.00) Thick white clays, very muddy sticky at shakers, dried samples predominately loose quartz, fine to upper medium to coarse, quartz, opaque, white, translucent, trace rose, rare reddish, rare trace lithic, moderate poor sorted, subangular to subrounded to well rounded, weakly cemented, chalky material very calcareous throughout, slower ROP indicating possible PDC spinning, no fluorescence, no cut, uniform / depth.

1323.0 to 1329.0 SANDSTONE

(6.0) Loose quartz, fine to upper medium, minor coarse, as above, poorly sorted, subangular to rounded, abundant chalky white very calcareous material to clays?, very weakly cemented, very slight Oil Smell to 1323 sample, no fluorescence, very slow residual cut, becoming brighter yellow white cut throughout softer chalky material, Gas show1325 meters of 454 units.

1329.0 to 1341.0 SANDSTONE

(12.0) Chalky muddy white to light grey sticky clays? at shakers and bagged samples, 80% of sample washed out, Dried samples loose quartz, fine to medium to lower coarse, quartz, opaque, white, semi translucent, rare rose, trace slightly orange, trace black lithics, poorer sorted, subangular to rounded, abundant coarser fragments with chalky white coating, assuming chalky calcareous matrix, trace fragments Sandstone, very fine to fine, semi crystalline, clean, calcareous in part, quartz, trace lithic, weaker cemented, abundant chalky material, very calcareous, no fluorescence, trace spotted within chalky softer fragments with instant bright yellow white cut (less than 0.1%), no staining, Gas shows up to 482 units, ROP apx 12 m/hr.

1341.0 to 1353.0 SHALE with MARLSTONE ?

(12.0) Medium grey muddy sticky bagged samples, Dried samples predominately mottled light grey, moderate soft, silty with moderate calcareous component, interlaminated with softy silty Marlstone to abundant cleaner off white very calcareous Siltstone to silty limy Mudstone?, rare trace speckled pyrite within argillaceous clays to Shale, uniform samples, becoming increasing argillaceous to shaly with depth, no fluorescence, minor yellow white cut from chalky white fragments (cavings?), No gas, decreasing to low background of apx 60 units.

1353.0 to 1362.0 SHALE

(9.0) Very muddy sticky medium grey bagged samples and muddy clays at shakers, dried samples predominately medium to lighter grey Shale, massive, amorphous, platy, abundant lighter grey very slightly semi waxy, non calcareous, rare silty, minor slightly calcareous overall, abundant softer slightly chalky to calcareous dirty Marlstone to calcareous Claystone to Shales?, abundant light grey, mottled silty calcareous laminations?, Over all shaly with depth, no fluorescence, minor spotted yellow white cut from whiter chalky fragments, with depth overall residual slow but brighter yellow white cut over time, No Gas, ROP down to 4 m/hr in basal shale.

1362.0 to 1370.0 SANDSTONE

(8.0) Chalky white bagged muddy samples, dried samples loose quartz, fine to upper medium to abundant coarse, grading finer with depth, opaque, white, translucent, no fragments, abundant soft chalky calcareous material to clays?, abundant dried lumpy sandy fragments, no fluorescence, instant white cut from chalky fragments becoming brighter over time, Gas show 195 units.

1370.0 to 1378.0 SHALE with SANDSTONE

(8.0) White chalky muddy bagged samples, As above, decreasing coarse sands, apparent finer to possible very fine to silty, general loose quartz, abundant very chalky white calcareous lumpy dried fragments, minor Shale, calcareous, mottled to more massive non calcareous, residual yellow white cut over time.

1378.0 to 1380.0 REDBEDS

(2.00) Red brown muddy bagged samples, dried samples loose quartz, fine to very coarse, opaque, translucent, minor softer red brown argillaceous silty fragments, abundant white chalky calcareous fragments, minor interlaminated grayish to greenish gray shales, no fluorescence, no cut.

1380.0 to 1384.0 SANDSTONE

(4.0) Chalky white to light grey muddy samples, Dried samples loose quartz, fine to coarse, opaque, translucent, chalky white matrix?, very calcareous, moderate poor sorted, subangular to rounded, no fragments, no fluorescence, minor instant pale yellow white cut through chalky fragments, overall whitish residual cut.

1384.0 to 1393.0 REDBEDS

(9.00) Very thick red muddy samples, Dried samples abundant red brown argillaceous slightly silty shales?, minor greyish to slightly greenish grey shale interlams, abundant softer chalky white fragments, loose quartz, very fine to medium, possible thinner chalky Sandstone laminations to thin bedding.

1393.0 to 1402.0 SANDSTONE

(9.0) Chalky white muddy clay ? Bagged samples, Dried samples loose quartz, medium to coarse, opaque, translucent, abundant chalky soft calcareous material to matrix?, appears to be grading finer with depth, no fluorescence, instant bright yellow white cut throughout soft chalky fragments, decreasing with depth, weaker gas show apx 120 units.

1402.0 to 1420.0 REDBEDS

(18.0) Red brown muddy samples, Interlaminated red brown silty Shales, argillaceous, slightly calcareous only to more calcareous silty, abundant very fine to upper medium chalky Sandstone?, thinly laminated?, abundant chalky white calcareous fragments, minor Siltstone, of white to very slightly greenish white, calcareous, well cemented, no fluorescence, minor white pale cut through out very chalky fragments., uniform ROP apx 8 m/hr, no gas.

1420.0 to 1440.0 Interbedded REDBEDS with SANDSTONE

(20.0) Muddy red at shakers and bagged samples, 90% of red clays washed out, dried samples, predominant loose, fine to minor medium, quartz, opaque, translucent, white, abundant chalky white calcareous matrix?, minor very fine to silty fragments, off white to very light greenish grey, calcareous, clean, abundant red brown silty to argillaceous Shale, non to very slightly calcareous only, Uniform ROP, No Gas, no fluorescence, no cut, minor cut from chalky white fragments only.

1440.00 to 1450.0 SANDSTONE with REDBEDS

(10.00) Lighter reddish brown grading to light grayish muddy bagged samples with depth. Loose quartz, fine to medium to coarse, quartz, opaque, translucent, poor sorted, subangular to subrounded to rounded, abundant white chalky material on grains, abundant chalky very calcareous fragments to matrix? throughout interval, minor interbedded Redbeds, red brown, massive, amorphous, platy, argillaceous, slightly silty, slightly calcareous only, minor trace grayish shale fragments, trace fragments only, very fine to silty off white to very slightly greenish white, quartz, clean, calcareous, well cemented, rare weakly cemented medium quartz Sandstone, crystalline in part, slightly calcareous, Overall ROP slowing down due to chalkier matrix ?, no fluorescence, trace spotted yellow white slow cut from chalky fragments only, no gas.

1450.0 to 1465.0 CLAYSTONE with SANDSTONE

(15.0) White chalky sticky clay (with greenish laminations?) at shakers, 90% of sample Washed out, dried samples very chalky, off white, very calcareous with loose fine to medium quartz, opaque, translucent, white, as above, no fragments, moderate sorted, subangular to subrounded, slower ROP apx 7m/hr, assuming due to overall increasing chalky material to matrix, some clay redbeds, uniform with depth, no gas, no fluorescence, no cut.

1465.0 to 1483.0 CLAYSTONE with LIMESTONE?

(18.0) Very white chalky at shakers, 90% plus calcareous clays? or with soft LIMESTONE ?, washed out, PDC destroying formation?, upper loose sandy quartz with chalky matrix?, fine to medium grading to 90% soft chalky very calcareous white lumpy fragments?, minor medium to coarse loose quartz, lower Torque through slower ROP intervals, no gas, no fluorescence, localized instant yellow white cut on chalky fragments.

1483.0 to 1486.0 REDBEDS

(3.0) Red muddy sample, Reddish Brown, massive, amorphous to silty, blocky, firm, non to local moderate calcareous fragments, minor grayish fragments non calcareous, abundant softer chalky white material, minor loose quartz from grey white sands.

1486.0 to 1495.0 CLAYSTONE

(9.0) Off white to very light grey thick muddy samples to clay rich at shakers, dried samples predominately off white chalky lumpy powdery very calcareous clay?, trace no quartz, no gas, minor weaker spotted whitish cut on chalky fragments.

1495.0 to 1505.0 CLAYSTONE to LIMESTONE? with minor SILTSTONE - SANDSTONE

(10.0) Off white chalky clay rich samples, 90% of clays and samples washed out, dried samples predominately off white chalky very calcareous lumpy clays?, minor to localized fine to medium chalky Sandstone?, no gas, no fluorescence, instant pale white cut grading over time to brighter yellow white within chalky fragments.

SAMPLE DESCRIPTIONS

1505.0 to 1520.0 CLAYS with LIMESTONE? with minor SILTSTONE

(15.0) Sample bags filled with off white to light grey very thick clays, 90% of sample lost and washed out. Dried samples predominately off white chalky soft lumpy Clays?, local interbedded very slightly greenish grey calcareous moderate firm Siltstone, minor thin redbeds, probably minor very chalky calcareous fine to medium clay rich Sandstone throughout, uniform samples, no to trace gas only, no fluorescence, overall moderate slow but brighter white to slightly yellow white cut to chalky fragments, 1512 sample has increased duller yellow to yellow white cut to chalky powdery fragments.

1520.0 to 1527.0 REDBEDS

(7.0) Red brown thick muddy samples, 75% of red clays washed out and lost, Dried samples red brown argillaceous to silty shales? non to minor calcareous, increasing calcareous with depth, becoming mottled red brown with increasing white clays interlaminated, possible minor grayish basal clays, no sands, no gas.

1527.0 to 1536.0 CLAYSTONE to minor LIMESTONE?

(9.0) Muddy white chalky calcareous clay rich samples, as above, predominately off white chalky soft lumpy calcareous clays?, minor firmer fragments Limestone?, minor overall slower moderate bright white cut, no gas.

1536.0 to 1544.0 LIMESTONE to CLAYSTONE?

(8.0) Off white very soft chalky Bagged samples. Dried samples off white, soft blocky fragments, very calcareous, trace fragments Limestone, off white, very slightly grayish white, cryptocrystalline, harder, massive, 2-3% silty component, ROP down to 3 m/hr, no Gas, no fluorescence, very weak pale white residual cut.

1544.0 to 1551.0 LIMESTONE with CLAYSTONE? with minor SANDSTONE

(7.0) Muddy white clay sticky samples. Dried samples predominant off white chalky fragments, very calcareous, clean, massive? minor cryptocrystalline off white to very light grey white Limestone fragments, (non to very fine sandy to silty), trace loose fine to medium rounded quartz, possible very weak cemented poor sorted chalky calcareous Sandstone fragments (or from drying to clumping of powder/grains?), trace very slightly greenish Siltstone, calcareous in part, rare white loose mica flakes, trace darker greenish fragments with micro black mica flakes, with depth, slightly dirtier silty Limestone to very calcareous matrix supported siltstone to very fine sandstone, possible minor argillaceous black Shaly silty laminations? no gas, no fluorescence, weak pale residual cut.

1551.0 to 1558.0 REDBEDS with SANDSTONE

(7.0) Red and green to grey Shales interlaminated with greenish micaceous Siltstone to very fine Sandstone, abundant chalky very calcareous, grading with depth to loose fine to medium rounded to subrounded quartz, very calcareous chalky samples, slower basal ROP possible red to grey shales interlaminated with calcareous very fine slightly dirty Sandstone to Siltstone, continued overall very chalky white thick muddy samples, No Gas, no fluorescence, no cut.

SAMPLE DESCRIPTIONS

1558.0 to 1566.0 SANDSTONE

(8.0) Light grey very muddy thick calcareous chalky? samples, Dried samples loose quartz, fine to medium with minor coarse, subrounded to rounded, grains with partial chalky white coating, no fractured grains, good coarse loose white mica flakes, minor very fine to silty fragments only, off white to very slightly greenish, calcareous, trace several quartz fragments, translucent, weakly cemented, no apparent clay, Gas show 511 units, no fluorescence, no staining, no cut.

1566.0 to 1572.0 SANDSTONE

(6.0) As above, very light grey chalky muddy clay? rich sample bags, Cuttings at shakers light grayish, mushy, clay like with greenish grey streaking. Dried samples loose quartz, fine to medium, subrounded to rounded, no fractured quartz, chalky coating on grains, calcareous chalky white fragments, possible slightly finer than above, no fluorescence, slow residual yellow white cut, Gas Shows 672 units.

1572.0 to 1586.0 SILTSTONE with SANDSTONE

(14.0) Medium gray muddy sticky bagged samples, muddy grey at shakers, dried samples loose, silt to very fine to minor fine, grayish overall, slightly calcareous, minor off white chalky, very uniform ROP slightly slowing with depth, minor dirty argillaceous moderate cemented fragments, silt to very fine, non calcareous, overall very uniform samples, steady ROP, very constant torque, background gas steady decreasing with depth, no fluorescence, some residual very slow yellow white cut.

1586.0 to 1593.0 SILTSTONE with SHALE

(7.0) Darker grey muddy samples, dried samples medium grey argillaceous to dirty siliceous to slightly calcareous, firm, mottled medium grey, local slightly chalky with depth, minor grayish shale fragments, minor softer slightly brownish chalky, becoming clean to more calcareous, chalky with depth, some very fine to fine quartz laminations?, no fluorescence, no cut (only cut from chalky white fragments).

1593.0 to 1596.0 CLAYSTONE to Chalky LIMESTONE?

(3.0) Off white muddy samples, predominant dried chalky off white very calcareous fragments, no quartz ?, minor cleaner Siltstone to very fine Sandstone, non to slightly calcareous, micromicaceous, very calcareous sample, Gas show of 640 units, Nothing in samples to support show, no fluorescence, no cut. Possible Connection Gas?

1596.0 to 1610.0 SILTSTONE

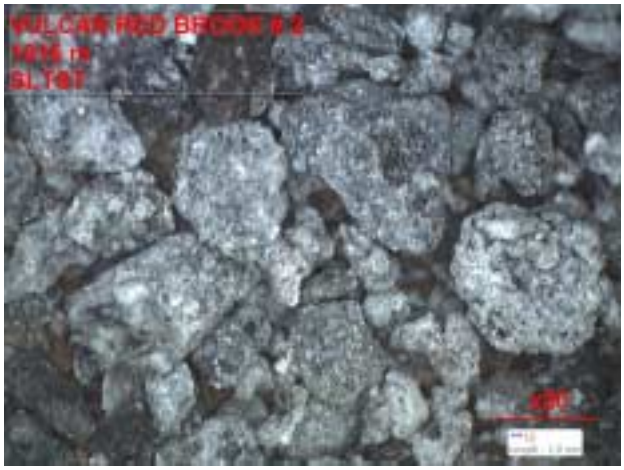
(14.0) Medium grey muddy samples, dried samples very light grey, off white, slightly dirty, quartz, good trace white micromicaceous, firm, blocky, easily crushable, general very slightly calcareous only, does not dissolve in acid, good argillaceous component, uniform with depth, moderate calcareous powdered dry samples, no florescence, no cut.

1610.0 to 1615.0 SILTSTONE

(5.0) Off white chalky fragments, very calcareous, minor cleaner Siltstone fragments, off white, quartz, calcareous, trace micromicaceous, well sorted, semi crystalline, slightly chalky only, no fluorescence, no cut, Gas show 200 units.

1615.0 to 1625.0 SILTSTONE

(10.0) Medium grey muddy sticky clay rich bagged samples, 90% lost and washed away. Dried samples very light grey micaceous Siltstone, non calcareous, argillaceous, dirty with interlaminated cleaner off white micaceous calcareous Siltstone, lower basal Shale, greenish grey, massive, amorphous, non calcareous, with interlaminated to bedded cleaner Siltstone, no fluorescence, no cut.



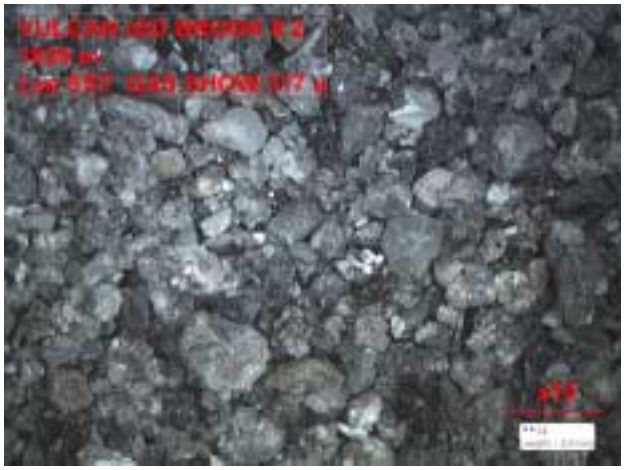
1625.0 to 1632.0 SILTSTONE

(7.0) Very light grey to very slightly greenish grey, soft to friable, quartz, micromicaceous, slightly chalky to calcareous, abundant interlaminated very calcareous with minor calcareous, minor shale interlams, no gas, no fluorescence, no cut.

SAMPLE DESCRIPTIONS

1632.0 to 1638.0 SANDSTONE

(6.0) Lighter grey muddy sample, loose quartz, fine to medium to very coarse, quartz, opaque, white, semi translucent, rare very slightly cream orange, moderate poor sorted, subrounded to rounded, some indications of chalky matrix, rare trace weakly cemented fragments, clean, quartz, grain support, siliceous with interstitial clay infilling, minor chalky calcareous fragments, trace slightly dirty Siltstone to greenish grey shales as above, Gas show 317 units at 1637 meters, no fluorescence, no cut.

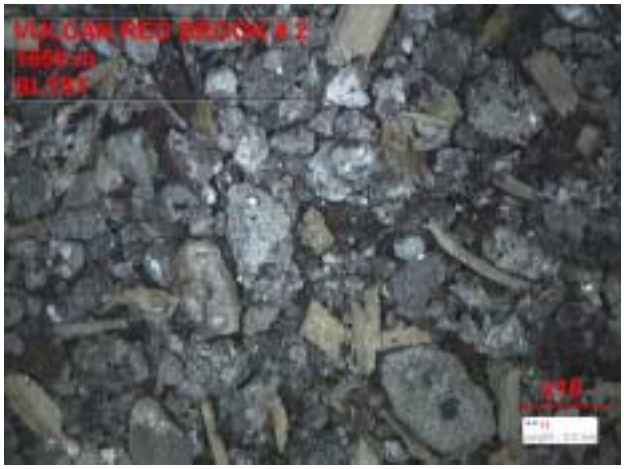


1638.0 to 1650.0 SILTSTONE

(12.0) Lighter grey, mottled, quartz, very slightly argillaceous, minor slightly calcareous, micromicaceous, firm, competent but friable, interlaminated with cleaner calcareous Siltstone to very fine clean Sandstone to minor chalky Sandstone as above, possible minor silty Shales, no florescence, no cut.

1650.0 to 1657.0 SILTSTONE

(7.0) Mottled lighter grey, slightly argillaceous, non to slightly calcareous, micromicaceous, interbedded with cleaner calcareous Siltstone, grading to very fine Sandstone, quartz, micromicaceous, minor varied micromicaceous Siltstone, possible minor softer shales, abundant loose quartz, very fine to coarse, possible minor interlaminated chalky Sandstone, no fluorescence, no cut.



1657.0 to 1668.0 SILTSTONE

(11.0) As above, interlaminated slightly argillaceous micromicaceous Siltstone and cleaner calcareous Siltstone, micromicaceous, minor possible very light greenish grey shale laminations, continued loose quartz, minor chalky white fragments, slower ROP, no gas, assuming tighter to no sands, no florescence, no cut.

1668.0 to 1671.0 SANDSTONE

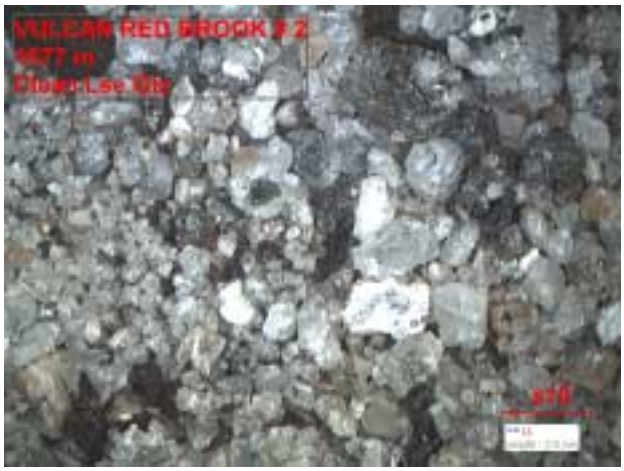
(3.0) Loose, fine to upper medium, minor coarse, quartz, semi translucent, opaque, white, trace rose, rare slightly orange, no visible fragments, no visible cement, clean, poor sorted, subrounded to rounded, abundant fractured grains indicating some stronger cement, no clay matrix ?, Gas show 355 units, no fluorescence, no cut, no staining.

1671.0 to 1674.0 REDBEDS

(3.0) Red brown, clay rich, dried samples predominately loose quartz, very fine to medium, trace lithics, abundant firmer silty to argillaceous red brown fragments, slightly non calcareous.

1674.0 to 1685.0 SANDSTONE

(11.0) Very light grey muddy bagged samples, (good samples), Loose Quartz, fine to upper medium to coarse, quartz, translucent, minor opaque, trace slightly orange, minor trace possible pinkish orange feldspars, trace white coarse mica, moderate poor sorted, subangular to subrounded, minor fractured grains, very clean, no apparent matrix, no fragments, possible minimum chalky component?, (some fragments with apparent traces white chalky coating), no florescence, no cut.



1685.0 to 1698.0 SANDSTONE

(13.0) Loose quartz, fine to upper medium to coarse, minor very fine, quartz, translucent, opaque, minor trace slightly orange to yellow, very slightly creamy orange, possible feldspars, trace white mica, no apparent lithics, no fragments, moderate poorer sorted, subangular to subrounded, minor rounded, minor fractured grains, no visible cemented, no gas, no fluorescence, no cut. Average ROP apx 15 m/hr steady.

1698.0 to 1707.0 REDBEDS

(9.0) Very muddy red clay rich sample bags, 95% of clays washed out of samples, minor to 5% red brown silty to argillaceous competent firm fragments, sample bags becoming lighter reddish to reddish grey with depth to 1713 sample, Dried samples predominately loose quartz, fine to medium to minor coarse (finer than above), opaque, translucent, rare trace very slightly creamy orange, trace coarse white mica, rare rose, no fragments, no visible cement, clean, possible some chalky component, no gas, no fluorescence, no cut.

1707.0 to 1720.0 SANDSTONE

(13.0) Lighter grey muddy samples, very good overall samples, loose, fine to coarse, translucent, opaque, trace orange, possible trace feldspar grain, good trace white coarse mica, moderate poor sorted, subangular to subrounded, rare rounded, minor fractured grains, no visible cement. Steady ROP apx 15 -18 m/hr, uniform with depth, no gas, no fluorescence, no cut.

1720.0 to 1742.0 SANDSTONE

(22.0) Loose, medium to coarse to very coarse, quartz, translucent, opaque, trace orange, possible trace feldspars?, moderate poor sorted, subangular to subrounded, minor rounded, minor to increasing fractured coarser quartz, no visible cement, no gas, no fluorescence, no cut, uniform ROP with depth.

1742.0 to 1750.0 SANDSTONE

(8.0) Slowdown in ROP from 15 m/hr to 7 m/hr, Loose quartz, fine to medium to very coarse , opaque, translucent, rare trace rose, trace creamy orange, minor trace coarse white mica, moderate poor sorted, subangular to subrounded to minor rounded, abundant fractured coarse quartz, no fragments, no visible cement, minor quartz grains with trace greenish clay?, overall clean, no gas, no fluorescence, no cut. POOH to check PDC. (Nothing in samples to explain change in ROP

SAMPLE DESCRIPTIONS

1750.0 to 1755.0 REDBEDS with SANDSTONE

(5.0) Red brown muddy bagged samples, 90% of clays washed out, dried samples red brown to interlaminated grey to greenish grey competent Shales, siliceous to very slightly calcareous only, continued cleaner loose fine to upper medium to coarse quartz grains as above, no fluorescence no cut.

1755.0 to 1764.0 SANDSTONE

(9.0) Loose, fine to coarse to very coarse to predominately very coarse with depth, quartz, translucent, opaque, rare trace slightly stained reddish cream, no lithics, moderate poorly to moderate sorted with depth, subangular to subrounded to minor rounded, minor fractured very coarse quartz, no visible fragments, no cement?, minor apparent chalky white coatings, trace white very firm chalky fragments, non calcareous, possible tripolitic chert?, or matrix, no gas, no fluorescence, no cut. (ROP up to 8 m/hr with tricone).

1764.0 to 1773.0 SANDY REDBEDS

(9.0) Red brown bagged samples, very clay rich, 90% washed out, dried samples predominately loose fine to medium quartz, (powder coatings on grains from red clays), abundant soft clay material, non calcareous, weakly cemented, with depth minor greyish black shales to slightly greenish grey shales, trace greenish matrix infilling around some cleaner white to translucent sand to quartz, 1773 sample has minor greyish black argillaceous fine cemented sands, good trace white clean coarse quartz, minor white chalky fragments, no gas, no florescence, no cut.

17733.0 to 1776.0 REDBEDS

(3.0) Very red brown muddy samples, predominately red brown shaly fragments, silty, non calcareous, massive, with interlaminated greyish shales, POOH to run PDC (Poor ROP at 2 m/hr).

SAMPLE DESCRIPTIONS

1776.0 to 1794.0 REDBEDS

(18.0) Muddy red brown samples, heavy clays, 50% washing out, dried samples predominately loose quartz, fine to upper medium, minor coarse, opaque, translucent, reddish stained to minor orange, possible minor orange feldspars, trace lithics?, moderate sorted, subangular to subrounded, minor rounded, no fragments, weakly cemented, interbedded clay rich Sandstone to sandy Shale to Siltstone, slightly to local moderate calcareous decreasing to slightly calcareous only with depth.

1794.0 to 1810.0 REDBEDS

(16.0) As above, argillaceous silty competent weakly cemented clay rich Siltstone to silty to sandy Shale, loose quartz, fine to upper medium to rare coarse, non calcareous, rare Sandstone fragments, minor interlaminated fine to medium greenish clay rich Sandstone and cleaner siliceous medium to coarse cleaner Sandstone, less than 10% greyish to slightly greenish grey Shales to sandy Shale, very uniform with depth, no gas, ROP 10-12 m/hr steady.

1810.0 to 1825.0 REDBEDS

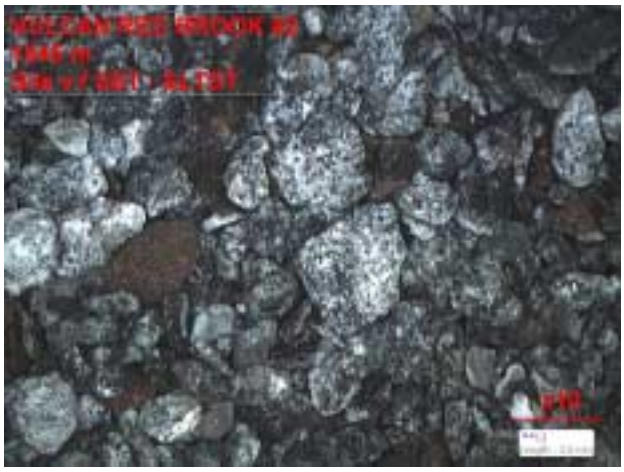
(15.0) Red brown clay rich sample bags, 50% washed out, dried samples as above, predominant red brown silty non calcareous fragments to bedding, interlaminated with minor clay rich sands to cleaner weakly cemented greenish clay infilling, continued minor greyish Shales to minor marine green semi waxy Shale to clays, continued very uniform with depth, no gas.

1825.0 to 1837.0 TRANSITION ZONE

(12.0) Redbeds as above, interbedded with very hard massive greenish black to off white siliceous very fine Sandstone to Siltstone, some fragments with red silty lithics within siliceous greenish white Sandstone, minor bedded coarser white siliceous well cemented Sandstone ?, some apparent cherty lithics, reddish to grayish, black, minor trace orange feldspars grains, good trace white chalky siliceous fragments, Ragged ROP from 18 to 4 m/hr, trace gas show only.

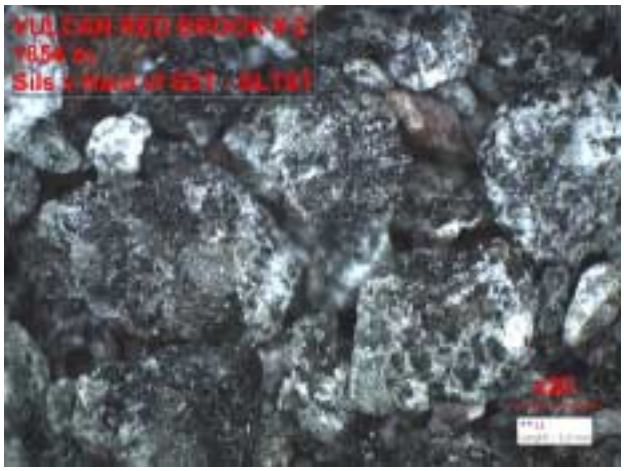
1837.0 to 1847.0 SILTSTONE to SANDSTONE

(10.0) Massive, mottled greyish black to slightly overall greenish black crystalline Siltstone to very fine Sandstone, very very hard, siliceous, non crushable, angular fractured fragments, quartz, opaque, white, black lithics to siliceous argillaceous matrix, extremely well cemented, interbedded with very hard crystalline siliceous whiter to cleaner very fine Sandstone to Siltstone, very uniform with depth.



1847.0 to 1858.0 SILTSTONE to SANDSTONE

(11.0) As above, mottled greenish grey to whitish black, to abundant lighter off white, cleaner, interbedded to laminated siliceous very hard crystalline very well cemented Siltstone to very fine Sandstone, quartz, lithics to black argillaceous matrix?, siliceous cemented, minor trace cherty to coarser fragments from above?, very uniform samples, no gas, no fluorescence, no cut.



1858.0 to 1867.0 REDBEDS

(9.0) Moderate red brown samples, Most softer clays washed out?, very intermixed, red brown silty shale to redbeds to red stained very fine to fine siliceous Sandstone to mottled greenish white to intermixed reddish to greenish poor sorted moderate well cemented Sandstone, trace grayish hard siliceous fine sandstone, trace coarser green black lithic? to crystalline feldspars granite? lithics, 40% chalky siliceous fragments, white to mottled stained to some greenish red, no gas.

SAMPLE DESCRIPTIONS

1867.0 to 1871.0 TRANSITION ZONE?

(4.0) Continued lighter red brown samples, predominately chalky siliceous fragments, white to red stained, intermixed, abundant loose fine to medium quartz throughout and within chalky fragments due to drying?, assorted grayish black silty lithics to mottled reddish sandy, very slight trace gas only, ROP apx 8 m/hr.

1871.0 to 1882.0 SANDSTONE

(11.0) Predominately off white chalky siliceous fragments to lumpy powdered, soft streaky abundant greenish to minor reddish, minor quartz, fine to medium, opaque, translucent, some softer fragments, trace black metallic lustre specks to micro laminations?, minor mottled greenish to very slightly greenish to white fragments, quartz, feldspars?, moderate weakly cemented, rare harder cemented fragments, possible lithics?, floating fragments within a chalky siliceous Claystone or chalky Sandstone?, Slower ROP under 3 m/hr, no gas.

1882.0 to 1885.0 REDBEDS

(3.0) Reddish brown samples, clays washed out, remaining sample predominately chalky off white fragments with greenish streaky to mottled appearance, intermixed to sheared appearance, abundant harder fragments, quartz, white to opaque, feldspars to creamy orange to whitish, some fragments with greenish clay infilling, siliceous, assuming some floating pebbles to lithic fragments, better ROP within Redbeds.

1885.0 to 1892.0 SANDSTONE

(7.0) Overall very slightly pinkish cream white color, predominately chalky white fragments to soft greenish mottled chalky fragments, abundant harder very slightly creamy orange blocky angular feldspars to rare trace blocky mottled greenish pink sandy fragments, very poorly sorted, quartz, feldspars, white to greenish chalky siliceous matrix, moderate cemented, varied Sandstone laminations or lithic fragments? slower ROP down to 2 m/hr.

SAMPLE DESCRIPTIONS

1892.0 to 1905.0 REDBEDS with SILTSTONE to SANDSTONE

(13.0) Red brown to light grey samples bags, Interbedded Redbeds to silty Shale (red clays predominately washed out) interbedded with chalky to slightly dirty off white to slightly greenish Siltstone to weakly cemented fine to medium off white Sandstone, 30-40% chalky white non calcareous to siliceous fragments, abundant loose quartz, subangular to rounded to coarse fractured, minor whitish to pinkish feldspars, some fragments with greenish matrix, overall sands apparent crystalline but friable, weakly cemented, some apparent lithics, mottled greenish to pinkish, possible some lithic pebbles or coarser fragments, trace gas only

1905.0 to 1915.0 SANDSTONE?

(10.0) Lighter grey sample bags, 50% soft chalky siliceous fragments throughout samples, loose fine to medium quartz, subangular to angular to some fractured, trace fine to lower medium Sandstone fragments, greenish white clay matrix, with rounded to subrounded quartz , pink feldspars, minor coarser weakly cemented quartz Sandstone, slightly greenish matrix, possible black mica, apparent softer chalky greenish white Siltstone.

1915.0 to 1922.0 SILTSTONE to SANDSTONE?

(7.0) 50% soft chalky white non calcareous fragments, assorted softer mottled greenish white intermixed? Siltstone? chalky, siliceous, quartz to lithic to feldspars? grains, chalky to non calcareous matrix?, also fine to medium mottled Sandstone, rounded quartz to pink feldspars within chalky white to slightly greenish clay matrix, increase coarser pebbles? to larger fractured lithics, quartz, orange pink feldspars, rare trace black mica, Slower ROP due to hardness or probably chalkier matrix (PDC dulling?).

1922.0 to 1931.0 SANDSTONE / Granite Detritial ?

(9.0) 40% soft chalky off white fragments, minor fragments of Sandstone, poorer sorted greenish to whitish, quartz, opaque, white with reddish pink subrounded feldspars to minor angular plagioclase?, cleaner off white chalky? matrix to abundant greenish clay to silty matrix to cement, increasing angular to fractured quartz, opaque to translucent to greenish, minor black to greenish lithics, trace orange feldspars to possible plagioclase, Slower ROP down to 2 m/hr, Assuming chalky white to greenish clay rich matrix with poorer sorted laminated fine to coarser Sandstone?, some softer chalky Siltstone?, minor firmer "granite" type fractured lithic? pebbles.

Basement: 1,931.00 MD, 1,931.00 TVD, -1,869.25 SSL

1931.0 to 1935.0 GNEISSIC BASEMENT

(4.0) ROP down to 1.3 m/hr with PDC, continued as above, 50% chalky white non calcareous fragments, assorted minor weaker cemented? Sandstone, minor coarser quartz, black to greenish igneous lithics?, overall finer to smaller fragments, (no coarse fragments at shakers other than red to green fissile thin cavings from hole, POOH at 1935 meters due to slow ROP.

1935.0 to 1945.0 GNEISSIC BASEMENT

(10.0) Clean samples, overall slightly greenish color to samples when wet, medium to coarse to very coarse fractured angular fragments, predominately quartz, translucent to opaque, greenish, minor pinkish quartz to feldspars, trace black mafic minimum, trace black mica, ROP apx 2 m/hr with tricone.

1945.0 to 1960.0 GNEISSIC BASEMENT

(15.0) Overall lighter green colour to samples when wet, fractured to angular medium to very coarse to pebble quartz, opaque, translucent, greenish, pinkish feldspars, black mica, possible minor black mafics, ROP slowing down to 1.5 m/hr.

1960.0 to 1965.0 GNEISSIC BASEMENT

(5.0) Over all greenish bulk sample, very clean - not muddy, Dried samples fractured quartz, white - light grey opaque, greenish, pinkish?, with abundant light orange feldspars?, some white plagioclase, minor black mafic, rare trace white mica, ROP apx 1.5 m/hr.

Well FTD at 1965.0 meters on November 23, 2009 at 1030 hrs.

SIDEWALL CORE DESCRIPTIONS

Date	Nov 26, 2009	Service Company	Baker Hughes / Baker Atlas
Run No	1	Tool Type	RCOR
Top Depth	890.0	Cores Requested	30
Base Depth	1945.0	Cores Obtained	31
Geologist	Michael Smith	Cores Lost	0

Geologist Comments regarding visual / microscopic porosity estimates:

The estimates of porosity / cementation in the Sidewall Cores and Cuttings during the drilling operation of the Red Brook # 2 well are based on the Geologists System and Methods, developed during the drilling of the McCully Gas Field in New Brunswick, and adopted for Vulcan Minerals in order to remain consistent within the Carboniferous Basin as a whole.

To avoid confusion with terminology over the Porosity estimates for the Sidewall Cores below and Rock Cuttings recorded in the sample descriptions - The following definitions should be reviewed.

Porosity Estimates Criteria: Sample / Sidewall Core Descriptions and Porosity Estimates are generally recorded under an x10 power magnification. The Well Site geologist used an x20 power magnification for the Red Brook#2 well. Maximum magnification of x45 power was used as required but as a general “rule of thumb” - any visual porosity not seen with an x20 magnification would be considered ineffective.

Visual Porosity: Naturally occurring “holes” within the rock matrix or generally – between or besides touching grains that can be seen with the naked eye - or up to and including an x20 magnification. Also would include secondary “after the fact” porosity generally found in Carbonates but also possible within clastics such as Sandstone – Siltstones resulting from fracturing, digenesis or leaching.

Effective Porosity: The volume of rock that would be filled by Recoverable Oil and or Gas. For the Red Brook #2 Well, the stated effective porosity is for possible Gas, as generally, effective gas porosity would be higher than effective oil porosity. Effective Porosity does not always equal visible porosity but visible porosity is generally effective. Effective porosity as qualified in this report would also include an educated unseen porosity estimate.

Ineffective Porosity: The volume of rock that is occupied by “hidden” porosity such as Clays, Argillaceous material such as Shale clasts, grains, laminae, and or other material such as a weaker cemented silica silty matrix. Although the Neutron Porosity Tool would record this hidden porosity, the physical characteristics of the “fill” material would not be capable of holding gas within its volume and/or incapable of liberating gas, and could be considered as non Recoverable porosity.

Total Porosity: Visual porosity including Effective + Ineffective porosity. (Generally Neutron Logging Tool)

Grain Relief / Cementation: The Relief of the rock / grains / cuttings / sidewall cores is generally inversely proportional to the cementation. High Relief cuttings generally required weaker cement and/or compaction, and the matrix of the rock will break and/or fracture prior to the quartz grains. Low Relief cuttings are generally very well cemented, resulting in much lower total porosity. The cement is generally silica or calcite/dolomite. The rock with the estimated low relief will be observed to break through the grains as the cement is harder / tougher and the lower stress point would be the quartz grains verses the matrix/cement. High relief can also be observed in cuttings with high ineffective porosity due to the intergranular volume being filled by clays, silica material, argillaceous / shale, pyrobitumen or any other “filling” material.

SIDEWALL CORE DESCRIPTIONS

Date	Nov 26, 2009	Service Company	Baker Hughes / Baker Atlas
Run No	1	Tool Type	RCOR
Top Depth	890.0	Cores Requested	30
Base Depth	1945.0	Cores Obtained	31
Geologist	Michael Smith	Cores Lost	0

Core # 1
Recovered 90%
890.00 m

Laminated MARLSTONE - LIMESTONE with Shale

Mudstone, (1a), fresh fractured surface very light mottled buff grey, microcrystalline, overall core light grayish, micro laminated silty Limestone with dirtier argillaceous Marlstone - micro argillaceous laminations, moderate calcareous, hard, well cemented but fragments crushable, some calcareous - dolomitic cleaner microcrystalline (silty) deposited sorted blebs within laminations, thicker calcareous shale laminae parallel to core axis, (5 mm), no fluorescence, no cut, 4-5% hidden, 1-2% effective porosity, CNCSS 12.1%, PZSS -2.7%, Gamma 54 API.

SIDEWALL CORE DESCRIPTIONS

Core # 2
Recovered 70%
900.00 m

SANDSTONE

Medium grey, lower - upper medium with minor lower coarse, quartz, opaque, whitish to minor semi translucent, 2-5% slightly orange to minor apparent feldspars, minor black lithics, rare trace medium - coarse greenish clay clasts, very weakly consolidated - apparent cement, non calcareous, grain supported, moderate sorted, subangular - subround, very clean, no visible clays, extremely high relief on broken core end, no fluorescence, no cut, 3-5% visible very clean deep pore throats between quartz grains, 0.1-0.15 mm irregular diameter, 15-20% overall porosity, 12-15% effective, CNCSS 16.5%, PZSS 12.3%, Gamma 36 API.

SIDEWALL CORE DESCRIPTIONS

Core # 3
Recovered 100%
1945.00 m

GNEISSIC BASEMENT

Massive tombstone, quartz, plagioclase, feldspars, minor black mafic to black mica. (22 minutes to cut core). CNCSS 11.3%, PZSS - 2.4% Gamma 81 API.

SIDEWALL CORE DESCRIPTIONS

Core # 4
Recovered 80%
1899.00 m

DETRITAL BASEMENT?

Mottled light greenish, massive tombstone, very hard, crystalline quartz, plagioclase, minor black mafic - mica, trace subrounded black metallic magnetite, some hematite fracturing, massive igneous basement or possible some breccia with detrital ?, CNCSS 13.1%, PZSS -0.3%, Gamma 84 API.

SIDEWALL CORE DESCRIPTIONS

Core # 5
Recovered 75%
1761.60 m

SANDSTONE

Mottled light greenish, medium - very coarse - pebble rounded to angular quartz, opaque, white, trace very slightly orange, grain supported with 100% soft light greenish non calcareous clay infilling matrix, very friable crumbly core, grain supported, very poorly sorted, no fluorescence, no cut, no visible porosity, 20% hidden matrix porosity, no effective porosity due to clays?, CNCSS 18.5%, PZSS 12.5%, Gamma 55 API.

SIDEWALL CORE DESCRIPTIONS

Core # 6
Recovered 60%
1728.41 m

SANDSTONE

Mottled light greenish, fine - pebble quartz, opaque, white, semi translucent, rare trace black lithic to very slightly orange quartz? friable, weakly consolidated - light greenish clay matrix - cement, non calcareous, very poorly sorted, subangular - subrounded to rounded to angular quartz, slightly more compact and less clay than 1761 meter core, moderate high relief due to softness of matrix, no fluorescence, no cut, no visible porosity, 15-18% hidden matrix porosity, 1% effective? CNCSS 16.7%, PZSS 8.6%, Gamma 51 API.

SIDEWALL CORE DESCRIPTIONS

Core # 7
Recovered 80%
1691.95 m

SANDSTONE

Mottled light grey, medium - very coarse, quartz, opaque grayish, white, translucent, minor very slightly orange, minor traces plagioclase?, clean, non calcareous, weakly cemented with white chalky? clay infilling matrix, grain support, moderately sorted, subangular - subrounded to rounded, rare trace white mica flakes, rare very slightly greenish clay, high relief, very friable coarse visual texture, possible trace pinpoint porosity,12-15% hidden porosity, 3-4% effective due to clays?, no fluorescence, *instant bright yellow mottled cut across core, possible micro pyrobitumen through higher micro porosity?*, CNCSS 15.6%, PZSS 10.8%, Gamma 57 API.

SIDEWALL CORE DESCRIPTIONS

Core # 8
Recovered 20%
1669.00 m

SANDSTONE

Mottled very slightly greenish grey (poor sample), medium - coarse - small pebble, quartz, opaque off white, semi translucent, very light pinkish orange quartz, minor feldspars?, very slightly creamy white with parallel striations, clean, one larger argillaceous clast?, vitreous black, argillaceous, microscopic (x45) black vitreous secondary crystal growth?, (possible pyrobitumen?) within larger mass, rare trace black lithic only, grain support, subangular - subrounded to rounded, (note very angular orange crystals in photo), non calcareous, weaker consolidated, whitish clay matrix infilling, rare trace greenish clay, abundant quartz grain to grain contact, no fluorescence, no cut, 8 -10% hidden porosity due to clays, very friable high relief, possible 3-4% effective?, Gas show 355 units, CNCSS 15.4%, PZSS 10.3%, Gamma 67 API.

SIDEWALL CORE DESCRIPTIONS

Core # 9
Recovered 45%
1667.79 m

SANDSTONE

Mottled lighter grey, medium - very coarse to pebbles, quartz, opaque, grayish - white, semi translucent, some orange, minor possible orange pinkish feldspars, possible trace white plagioclase, moderate clean, white and very light greenish clay matrix infilling, very weakly cemented, very friable, non calcareous, trace greenish silty small pebble clasts, minor trace slightly brownish dirty ? inclusions with possible very lightly oil stained?, no fluorescence, *weaker slow moderate yellow white cut over time, possible minor micro pyrobitumen within finer micro porosity?*, very high relief, very rough friable visual texture, poorer core sample, no visible porosity, 15-20% hidden porosity, 3-5% inferred effective, CNCSS 15.2%, PZSS 10.3%, Gamma 79 API.

SIDEWALL CORE DESCRIPTIONS

Core #10
Recovered 100%
1638.05 m

SANDSTONE

Mottled salt and pepper off white, lower - upper medium with coarse - small floating pebbles, quartz, opaque, white, semi translucent, minor orange, trace black lithics, foliated black micaceous, rare trace coarser white mica, moderate well cemented, 7-10% calcareous component, crystalline texture, clean, possible minor chalky white clay only, grain supported, moderate relief, core broken through and around quartz grains, no visible porosity, 6-9% hidden porosity, 2-3% inferred effective, no fluorescence, no cut, CNCSS 16.2%, PZSS 9.9%, Gamma 79 API.

SIDEWALL CORE DESCRIPTIONS

Core # 11
Recovered 90%
1593.58 m

SANDSTONE

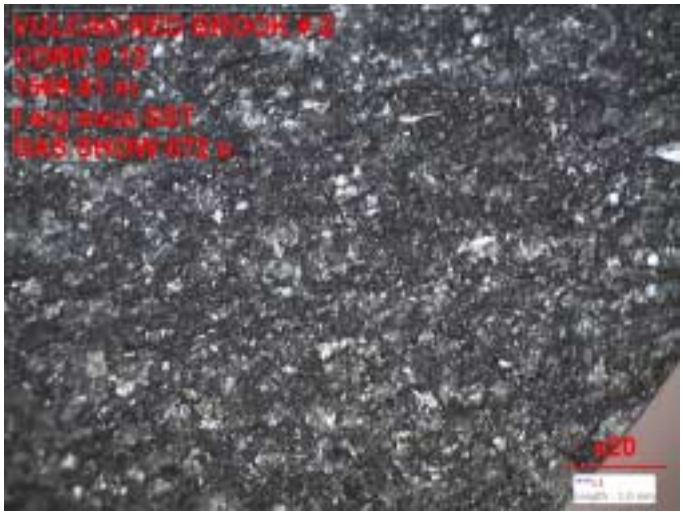
Lighter grey, fine - medium, quartz, opaque, semi translucent, possible trace plagioclase only, 1-2% orientated - foliated black mica, trace random coarser white mica, moderate well cemented, siliceous component, non calcareous, no apparent clay infilling, grain supported, subangular - subround, moderate relief with apparent micro streaky higher - very high relief, minor apparent micro secondary quartz recrystallization, 2-3% micro - pinpoint irregular visible porosity, deep clean pore throats, core breaks around and through quartz grains, no staining, no fluorescence, no cut, 8-10% overall porosity, 7-8% effective, CNCSS 18.1%, PZSS 10.8%, Gamma 61 API.

SIDEWALL CORE DESCRIPTIONS

Core # 12
Recovered 100%
1569.41 m

SANDSTONE

Darker - medium grey, fine, quartz, opaque, greyish, rare translucent, 5% black foliated mica , 1% white mica, (foliated aligned mica appears to be apx 80 degs to bedding laminations?), predominately argillaceous shaly matrix support, moderate sorted quartz, subangular - subrounded, non calcareous, competent - solid core, no fluorescence, no cut, Gas show 672 units, no visible porosity, 15-18% hidden non effective porosity due to argillaceous matrix, 1% effective?, CNCSS 20.3%, PZSS 13.5%, Gamma 107 API.

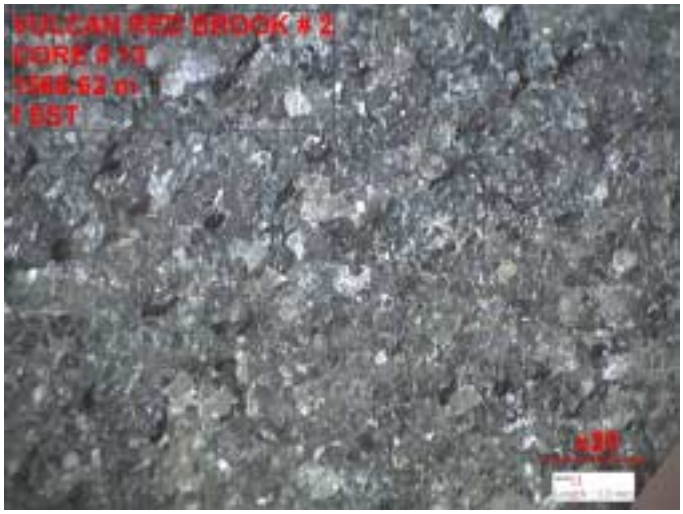


SIDEWALL CORE DESCRIPTIONS

Core # 13
Recovered 100%
1565.62 m

SANDSTONE

Medium Grey, lower - upper fine, quartz, opaque, slightly greyish, some translucent, rare trace rose, very slightly yellow, less than 1% black foliated mica, good trace white mica, cleaner with no argillaceous shaly matrix, rare trace - no lithics, moderate sorted, subangular - subrounded, moderate cemented, non calcareous, predominately grain supported, apparent light grayish clay infilling, moderate high relief, rough visual texture to sample, no fluorescence, no cut, no visible porosity, 12-15% hidden porosity, 2-3% inferred effective porosity,
CNCSS 17.0%, PZCC 11.5%, Gamma 86 API.



SIDEWALL CORE DESCRIPTIONS

Core # 14
Recovered 80%
1562.81 m

SANDSTONE

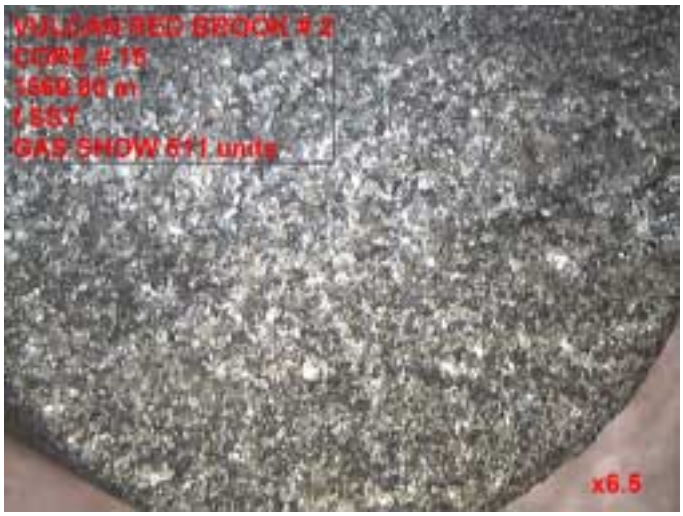
Lighter grey, fine, minor lower medium, rare trace floating very coarse rounded, quartz, opaque, light grey, translucent, trace very slightly yellow, no lithics, good trace white medium mica, no black mica, moderate cemented, non calcareous, grain supported, very light grey to very slightly greenish grey matrix infilling, moderate sorted, subangular - subrounded, moderate high relief, overall rough visual texture to core, core broken around and through some grains, no fluorescence, no cut, 1% micro - pinpoint porosity up to 0.15 mm, clean deep irregular pore throats between quartz grains, 10-12% hidden porosity due to clay matrix, 3-4% effective?, CNCSS 16.5%, PZSS 13.0%, Gamma 63 API.

SIDEWALL CORE DESCRIPTIONS

Core # 15
Recovered 100%
1560.00 m

SANDSTONE

Medium grey, lower - upper fine with minor medium, abundant very fine matrix, quartz, opaque, greyish, translucent, rare trace rose, no lithics, minor foliated black mica, minor trace white mica, overall weakly laminated, very fine - fine very slightly dirty slightly micaceous within cleaner upper fine - minor medium slightly calcareous, grain supported, moderate sorted, subangular - subrounded, minor - 5% white clay infilling, matrix appears to be more siliceous - silty?, slightly calcareous, moderate cemented, moderate relief, core breaks through coarser quartz grains, moderate rough visual texture to core, no fluorescence, no cut, Gas show 511 units, no visible porosity, 8-10% hidden porosity, 3-4% inferred effective, CNCSS 23.8%, PZSS 14.5%, Gamma 85 API.



SIDEWALL CORE DESCRIPTIONS

Core # 16
Recovered 100%
1536.62 m

SHALE

Lighter greenish grey with mottled reddish, massive moderate competent core, non calcareous, silty to some very fine loose quartz, amorphous, uniform, Core Cut off Depth?, CNCSS 4.1%, PZSS -3.5%, Gamma 16 API.

SIDEWALL CORE DESCRIPTIONS

Core #17
Recovered 100%
1464.6 m

SANDSTONE

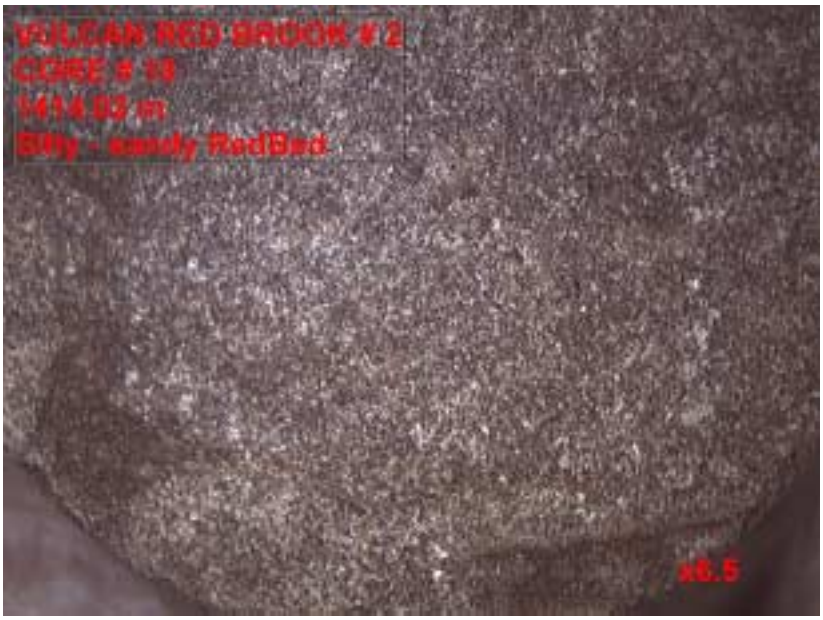
Lighter grey, fine - medium matrix with coarse - small pebbles, speckled pink, quartz, opaque, translucent, good trace slightly orange, trace pinkish orange feldspars, minor trace darker grey argillaceous lithics, trace pyrite, well cemented, crystalline, siliceous with 5-10% calcareous component, hard, massive, moderate poorer sorted, finer quartz matrix, minor white clay?, grain supported, lower relief, core broken through quartz grains, no fluorescence, no cut, no visible porosity, 4-5% hidden porosity, 1-2% effective?, tight, CNCSS 12.7%, PZSS 9.9%, Gamma 58 API.

SIDEWALL CORE DESCRIPTIONS

Core #18
Recovered 90%
1414.02 m

REDBEDS

Lighter reddish brown, very fine - silt, argillaceous, massive, moderate well consolidated, quartz, whitish, reddish stained, translucent, minor possible feldspars, minor black lithics, argillaceous reddish - grayish matrix, siliceous with calcareous component, uniform, no fluorescence, no cut, no visible porosity, no effective porosity, CNCSS 20.0%, PZSS 13.2%, Gamma 73 API.



SIDEWALL CORE DESCRIPTIONS

Core #19
Recovered 100%
1401.79 m

SANDSTONE

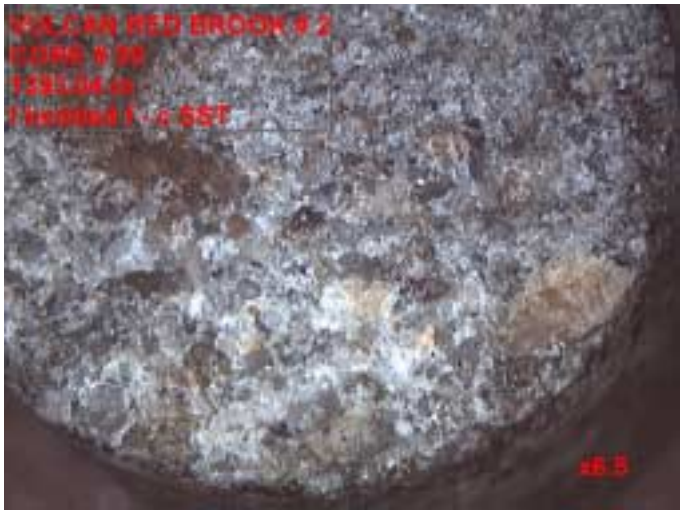
Lighter grey - off white, fine - medium - coarse - very coarse, small pebbles, quartz, opaque, whitish, greyish to slightly creamy orange, minor trace feldspar?, minor assorted colored lithics, very well cemented, hard, massive, 15-20% calcareous, grain to matrix supported, poorer sorted, subangular - angular - rounded, no fluorescence, no cut, no visible porosity, no effective porosity due to calcite cement, tight, CNCSS 17.1%, PZSS 12.5%, Gamma 58 API.

SIDEWALL CORE DESCRIPTIONS

Core #20
Recovered 90%
1393.04 m

SANDSTONE

Medium grey, finely bedded lower fine with medium to very coarse, quartz, opaque, light grayish, translucent, minor trace orange - creamy feldspars, clean, rare trace lithics, visible poorly sorted bedded coarse - fine layers, moderate well consolidated, minor - 10% white clay, non calcareous, overall 2-4% calcareous component, very poorly sorted core, subangular - subrounded, minor coarse rounded, no fluorescence, no cut, crystalline appearance, semi rough visual texture, moderate lower relief, no visible porosity, 6-8% hidden porosity, 2-3% inferred effective porosity, CNCSS 14.1%, PZSS 7.7%, Gamma 44 API.



SIDEWALL CORE DESCRIPTIONS

Core #21
Recovered 40%
1376.81 m

Pebble SANDSTONE

Lighter grayish, lower medium - coarse - pebble, quartz, opaque grey, slightly semi translucent, minor slightly creamy grey, blackish grey lithics, very poorly sorted, angular - subangular - rounded, grain supported, moderate well cemented, 7-10% calcareous infilling with 5% white chalky? non calcareous clays, poor core sample, friable?, core breaks through grains, no fluorescence, no cut, no visible porosity, 12-15% hidden porosity, 1-2% effective due to clays - calcite matrix infilling, CNCSS 16.3%, PZSS 12.7%, Gamma 45 API.

SIDEWALL CORE DESCRIPTIONS

Core # 22
Recovered 20%
1366.2 m

SANDSTONE

Excellent high porosity Sand, lighter grey, fine - very coarse, quartz, opaque, grayish, minor translucent, rare trace lithics, very weakly cemented, non calcareous, very friable, poor core sample due to friability, clean, rare apparent clay infilling, poorer sorted, subangular - subrounded, grain supported, Gas show 195 units, no fluorescence, *instant pale yellow even cut*, extremely high relief, very rough visual surface, 7-10% plus visual porosity, very clean very deep irregular pore throats (no blockage), no hidden porosity, 12-15% effective, CNCSS 14.8%, PZSS 8.5%, Gamma 45 API.

Continued

Core # 22
Recovered 20%
1366.2 m

SANDSTONE

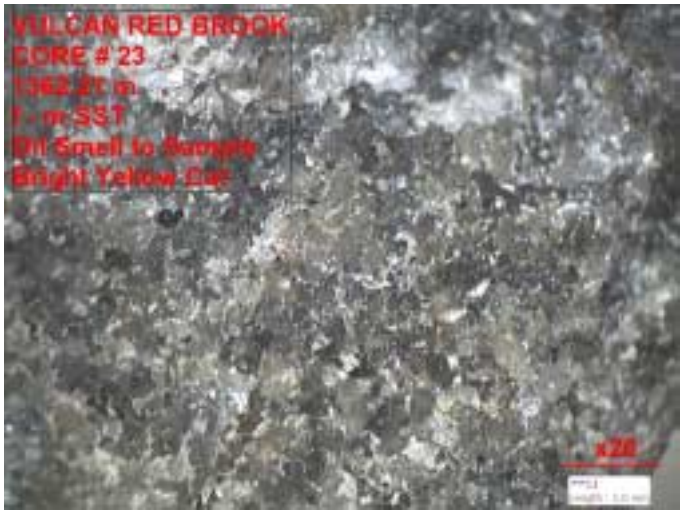
Excellent high porosity Sand, lighter grey, fine - very coarse, quartz, opaque, grayish, minor translucent, rare trace lithics, very weakly cemented, non calcareous, very friable, poor core sample due to friability, clean, rare apparent clay infilling, poorer sorted, subangular - subrounded, grain supported, Gas show 195 units, no fluorescence, *instant pale yellow even cut*, extremely high relief, very rough visual surface, 7-10% plus visual porosity, very clean very deep irregular pore throats (no blockage), no hidden porosity, 12-15% effective, CNCSS 14.8%, PZSS 8.5%, Gamma 45 API.

SIDEWALL CORE DESCRIPTIONS

Core # 23
Recovered 75%
1362.21 m

SANDSTONE

Lighter grey, fine - medium, quartz, opaque, light greyish, minor translucent, clean, possible trace plagioclase?, trace shale lithic fragments, trace pyrite - possible chalcopyrite, well cemented, siliceous?, 3-5% calcareous cement, minor - 5% chalky infilling, moderate sorted, subangular - subrounded - rounded, grain supported, moderate relief, core breaks predominately around quartz grains*, Oil smell to core, slight gas smell when acid added, instant bright yellow cut*, no visible porosity, 8-10% ineffective porosity, 2-3% inferred effective porosity, CNCSS 11.8%, PZSS 5.3%, Gamma 51 API.

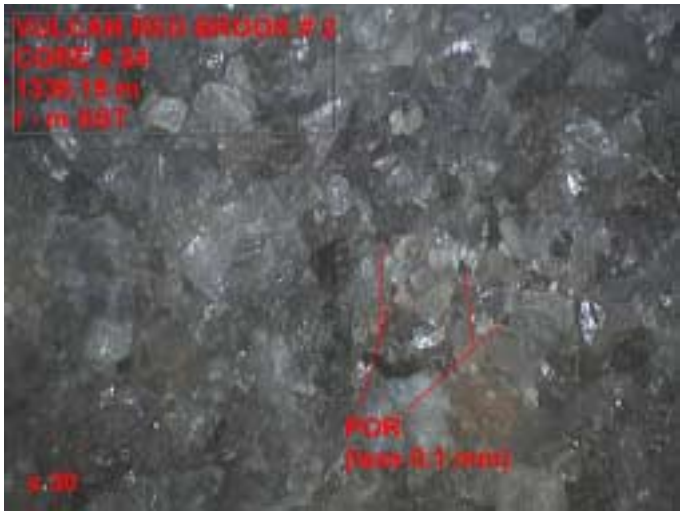


SIDEWALL CORE DESCRIPTIONS

Core # 24
Recovered 60%
1336.19 m

SANDSTONE

Light Grey, fine - medium, quartz, opaque grayish, some translucent, clean, trace - no lithics, minor trace medium - coarse black mica, rare white mica, grain supported, moderate sorted, subangular - subrounded, weakly cemented, 1-2% calcareous only, 2-3% clay infilling, moderate friable - firmer, no fluorescence, no cut, high relief, visual rough texture to core, Gas Show 482 units, 3-4% visible pinpoint to 0.1 mm porosity, clean deep irregular pore throats between quartz grains, 4-5% hidden, 8-9% effective porosity, CNCSS 20.4%, PZSS 11.2%, Gamma 50 API.



SIDEWALL CORE DESCRIPTIONS

Core # 25
Recovered 50%
1324.02 m

SANDSTONE

Mottled lighter grey to slightly greyish white, fine - upper medium with minor lower coarse, quartz, opaque, greyish, rare whitish, trace very slightly creamy - yellow, trace translucent rose, trace black lithics, no mica, rare trace disseminated pyrite, moderate sorted, subangular - subrounded with some rounded, moderate cemented, siliceous?, 5-6% calcareous component, 1% very light greyish blue? clays only, competent, harder, high relief on broken core end, cement weaker as core broken around quartz grains, *blotchy yellow fluorescence, instant moderate bright yellow (whitish) mottled overall cut,* trace micro secondary quartz crystal growth, good 3-4% visible porosity, irregular clean deep pore throats between quartz grains under 0.1 mm, 3-4% hidden?, 6-7% effective porosity, CNCSS 16.3%, PZSS 6.8%, Gamma 49 API.

Continued

Core # 25
Recovered 50%
1324.02 m

SANDSTONE

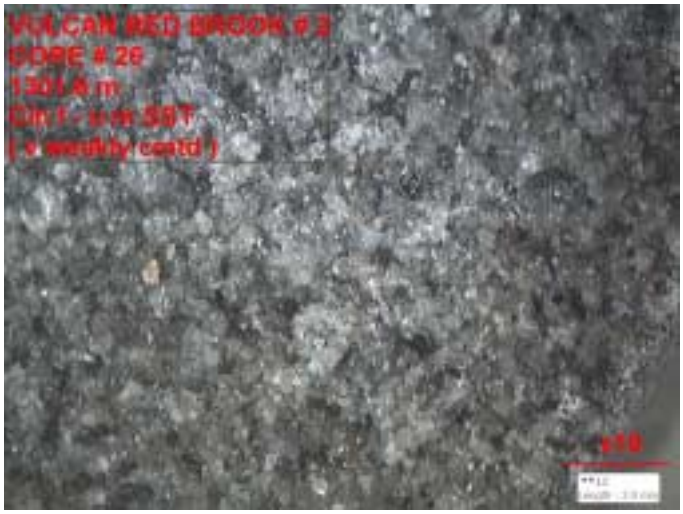
Mottled lighter grey to slightly greyish white, fine - upper medium with minor lower coarse, quartz, opaque, greyish, rare whitish, trace very slightly creamy - yellow, trace translucent rose, trace black lithics, no mica, rare trace disseminated pyrite, moderate sorted, subangular - subrounded with some rounded, moderate cemented, siliceous?, 5-6% calcareous component, 1% very light greyish blue? clays only, competent, harder, high relief on broken core end, cement weaker as core broken around quartz grains, *blotchy yellow fluorescence, instant moderate bright yellow (whitish) mottled overall cut,* trace micro secondary quartz crystal growth, good 3-4% visible porosity, irregular clean deep pore throats between quartz grains under 0.1 mm, 3-4% hidden?, 6-7% effective porosity, CNCSS 16.3%, PZSS 6.8%, Gamma 49 API.

SIDEWALL CORE DESCRIPTIONS

Core # 26
Recovered 70%
1301.60 m

SANDSTONE

Very light grey, fine - upper medium, quartz, opaque, translucent, rare rose, trace black lithic only, rare trace disseminated micro pyrite blebs, very clean, abundant micro secondary - partial secondary quartz recrystallization - growths, moderate sorted, subangular - subrounded to rounded, grain supported, very weakly cemented, non calcareous, no clays, no fluorescence, no cut, Apx 200 unit Gas Show, extremely high relief, rough visual texture to core, no hidden porosity ?, 6-8% visible porosity with irregular visible voids averaging 0.1 mm, several voids up to .25 mm between quartz grains, 10-12% effective porosity, CNCSS 16.0%, PZSS 4.6%, Gamma 45 API.

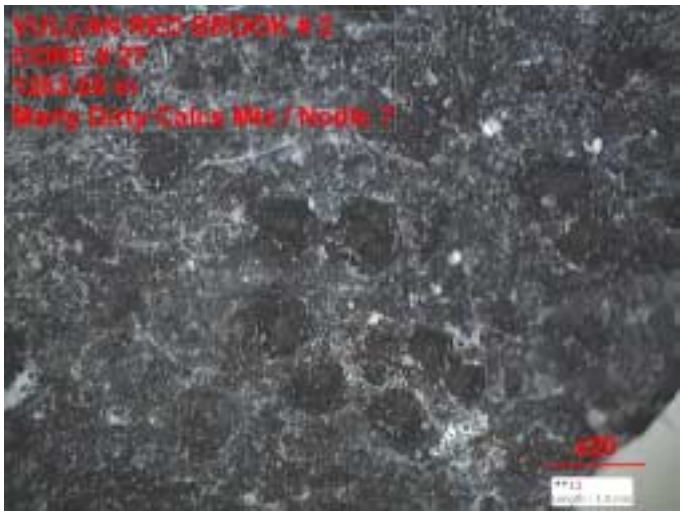


SIDEWALL CORE DESCRIPTIONS

Core # 27
Recovered 100%
1283.05 m

MARLSTONE – SHALE

Medium grey, finely bedded to laminated very slightly calcareous shale with silty calcareous very dirty argillaceous Marlstone with black calcareous nodulars 0.2-0.5 mm diameter, hard massive well cemented, competent rock, no fluorescence, no cut, no visible, no effective porosity, CNCSS 27.7%, PZSS 1.1%, Gamma 74 API.

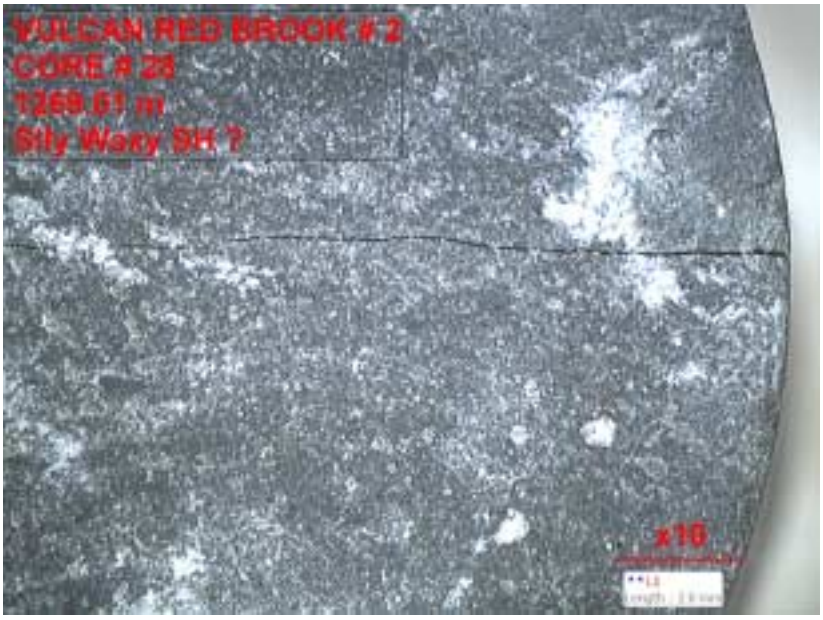


SIDEWALL CORE DESCRIPTIONS

Core # 28
Recovered 90%
1269.01 m

SHALE

Lighter grey with very slight greenish tinge, massive, amorphous, microcrystalline? competent, well consolidated, calcareous component, semi waxy lustre under microscope, harder "clay" like, no fluorescence, no cut, no visible, no effective porosity, CNCSS 16.1%, PZSS 10.2%, Gamma 83 API.

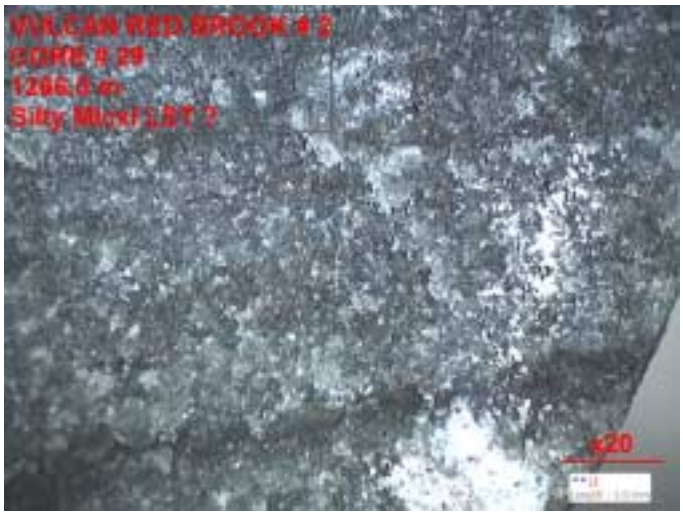


SIDEWALL CORE DESCRIPTIONS

Core #29
Recovered 90%
1266.0 m

SILTSTONE with MARLSTONE ?

Lighter greyish to slightly off white with some slightly greenish grey argillaceous clay rich microlams, massive, amorphous, very silty, calcareous matrix, well consolidated, competent, no fluorescence, no cut, no visible porosity, 4-6% hidden, no effective porosity, CNCSS 12.0%, PZSS -1.4%, Gamma 53 API.

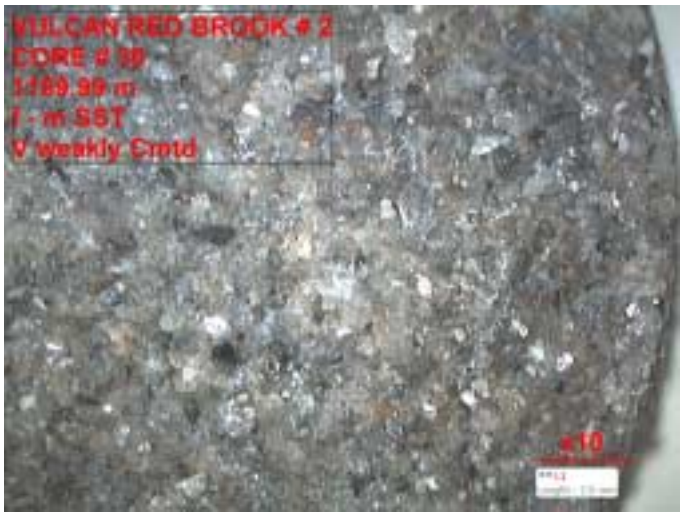


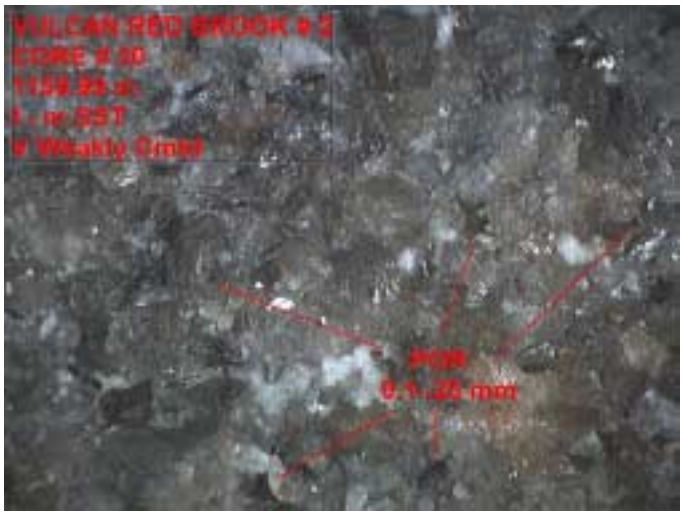
SIDEWALL CORE DESCRIPTIONS

Core # 30
Recovered 100%
1159.99 m

SANDSTONE

Lighter grey, fine - medium, quartz, opaque, translucent, minor trace orange, trace black lithic, trace black - white mica, moderate sorted, subangular - subrounded, minor rounded, very weakly cemented, 7-10% whitish clay component, 3-5% calcareous?, grain supported, high relief, rough visual texture to core, core breaks easily around quartz grains, no fluorescence, no cut, 4-5% visible porosity,12-15% hidden porosity, 6-8% effective, CNCSS 16.6%, PZSS 9.7%, Gamma 39 API. (Note - Geologist spilt extra acid on sample resulting in higher apparent visual porosity due to calcite dissolved out between quartz grains).





SIDEWALL CORE DESCRIPTIONS

Core # 31
Recovered 30%
1668.91 m

SANDSTONE (Re Cut of Core # 8)

Mottled very slightly greenish grey (poor sample), medium - coarse - small pebble, quartz, opaque off white, semi translucent, very light pinkish orange quartz, minor feldspars?, very slightly creamy white with parallel striations, clean, one larger argillaceous clast?, vitreous black, argillaceous, microscopic (x45) black vitreous secondary crystal growth?, (possible pyrobitumen?) within larger mass, rare trace black lithic only, grain support, subangular - subrounded to rounded, (note very angular orange crystals in photo), non calcareous, weaker consolidated, whitish clay matrix infilling, rare trace greenish clay, abundant quartz grain to grain contact, 8-10% hidden porosity due to clays, very friable high relief, possible 3-4% effective?, Gas show 355 units, no fluorescence, no cut, CNCSS 15.4%, PZSS 10.0%, Gamma 63 API.

END OF CORE DESCRIPTIONS

VULCAN INVESTCAN RED BROOK # 2

END OF GEOLOGICAL WELLSITE REPORT

(SEE WELLSITE STRIPLOGS)

PREPARED FOR PATRICK LARACY

VULCAN MINERALS INC

DECEMBER 2009

Author

J. Michael Smith

JDS CONSULTANTS

(403-589-4998)

APPENDIX 7: GEOLOGICAL STRIPLOG

(A full copy of the log is on the CD accompanying this report)

APPENDIX 8: WIRELINE LOGS

(hardcopies of all logs were submitted with this report and full digital copies are included on the accompanying CD)

APPENDIX 9: DST SUMMARIES (RED BROOK #2)

VULCAN INVESTCAN
REDBROOK# 2

DST REPORT

-For-

Compiled for

Patrick Laracy
Vulcan Minerals Inc

-By-

Michael Smith
JDS Consultants
403-589-4998

Drill Stem Test Report

Storage Units: Metric

Run #:	1	**Date:**	Nov 28, 2009
Test #:	1	**Misrun:**	
Test Company:	Holland Testers	**Closed Chamber Company:**	n/a
Representative:	Dale Holland	**Representative:**	n/a
Unit #:		**K.B. Elevation:**	61.75
Test Type:	Conventional Straddle		

Formations Tested **From the:**
To the: **Spout Falls ?**

Test Interval: **From:** 1,555.00 (MD) **To:** 1,574.00 (MD) (19.00)
From: 1,555.00 (TVD) **To:** 1,574.00 (TVD) (19.00)

Total Depth: 1,965.00 (MD) 1,965.00 (TVD) ***(At the time of the Test)***

String Configuration:
Drill Pipe - Collars
Recorder above tool
Upper Packer Depth 1555.0 m
Inside Recorder with 1.2 m perfs
Lower Packer Depth 1574.1 m
Recorder below Tool
391 meters Tail pipe to bottom

Drilling Fluid Type and Properties:
MW = 1265
VIS = 69
pH = 11.2
WL = 5.4
FC = 0.5 mm

Cushion Type / Amount: No Cushions

Hole Condition: Excellent

Bottom Hole Temperature: 20.5 º **Tool Chased Distance:** **Mud Drop:** 0.0

Period	Intitial Pressure	Final Pressure	Times	Flow Description
Initial Hydrostatic	19,609.0			
Flow 1	396.0	433.0	10	Open for Preflow with fair initial puff to bottom of pail in 30 seconds. Steady throughout, NGTS.
Shut-in 1	433.0	10,939.0	90	
Flow 2	423.0	742.0	60	Open for valve open strong air blow immediately to bottom of pail. GTS (Gas to surface) in 10 mins. Start recording with GTS.

Flow Details

Time / Pressure / Flow Rate Measurements	Choke Type	Orifice Diameter	Units of measurement
20 mins 11 kPa @ 4 deg -- 71 m3 / day	6" Pos	3.18	m³/day
30 mins 19 kpa @ 4 deg -- 131 m3 / day			
40 mins 35 kPa @ 4 deg -- 182 m3 / day			
50 mins 50 kPa @ 4 deg -- 222 m3 / day			
60 mins 65 kPa @ 4 deg -- 257 m3 / day			

Flow Rate through Surface Manifold with 6 inch

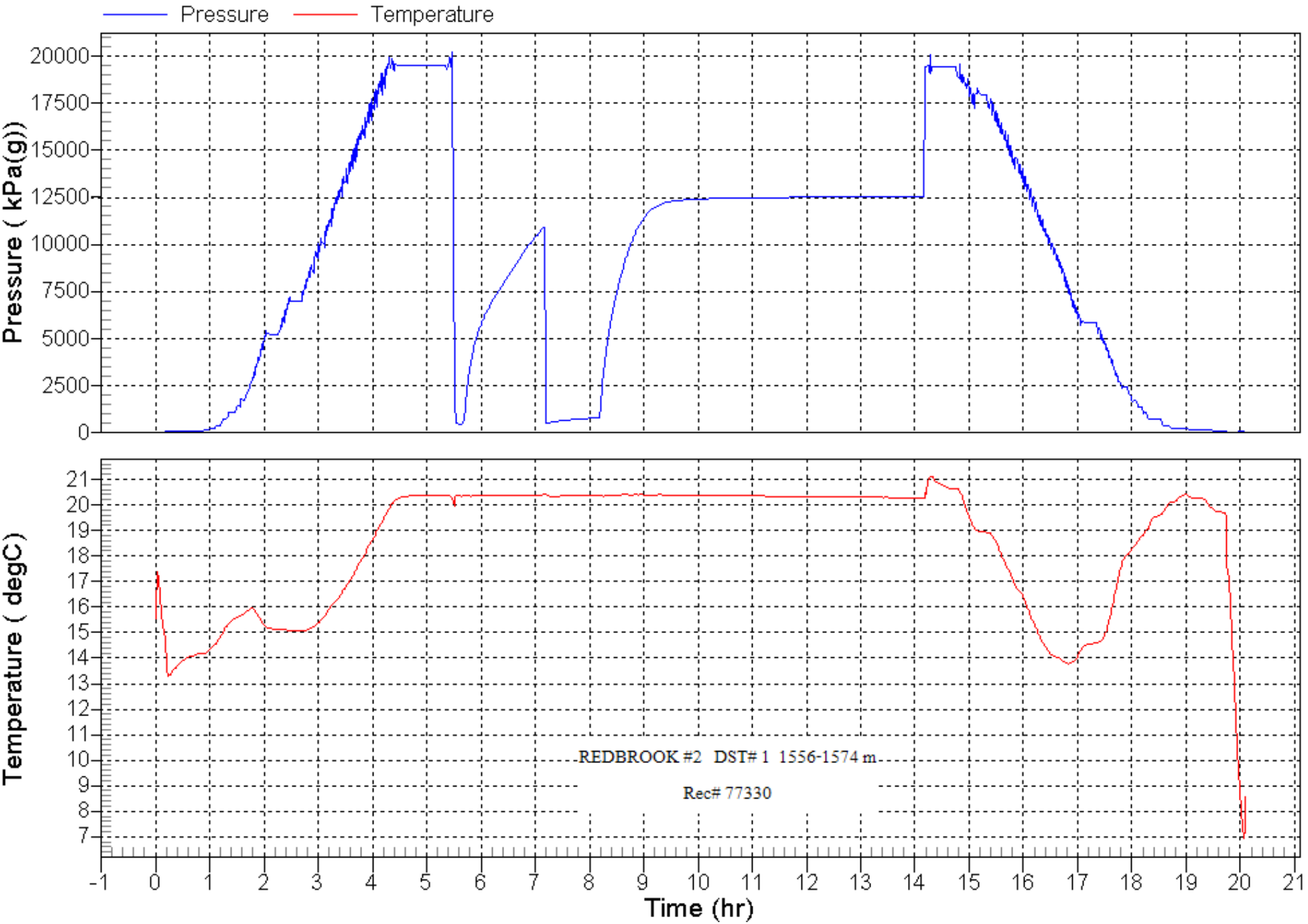
Positive Choke with 8/64 inch (3.175 mm) inside diameter. 257 m3/day = 9 mcf / day			
Shut-in 2	742.0	12,506.0	360
Final Hydrostatic		19,431.0	

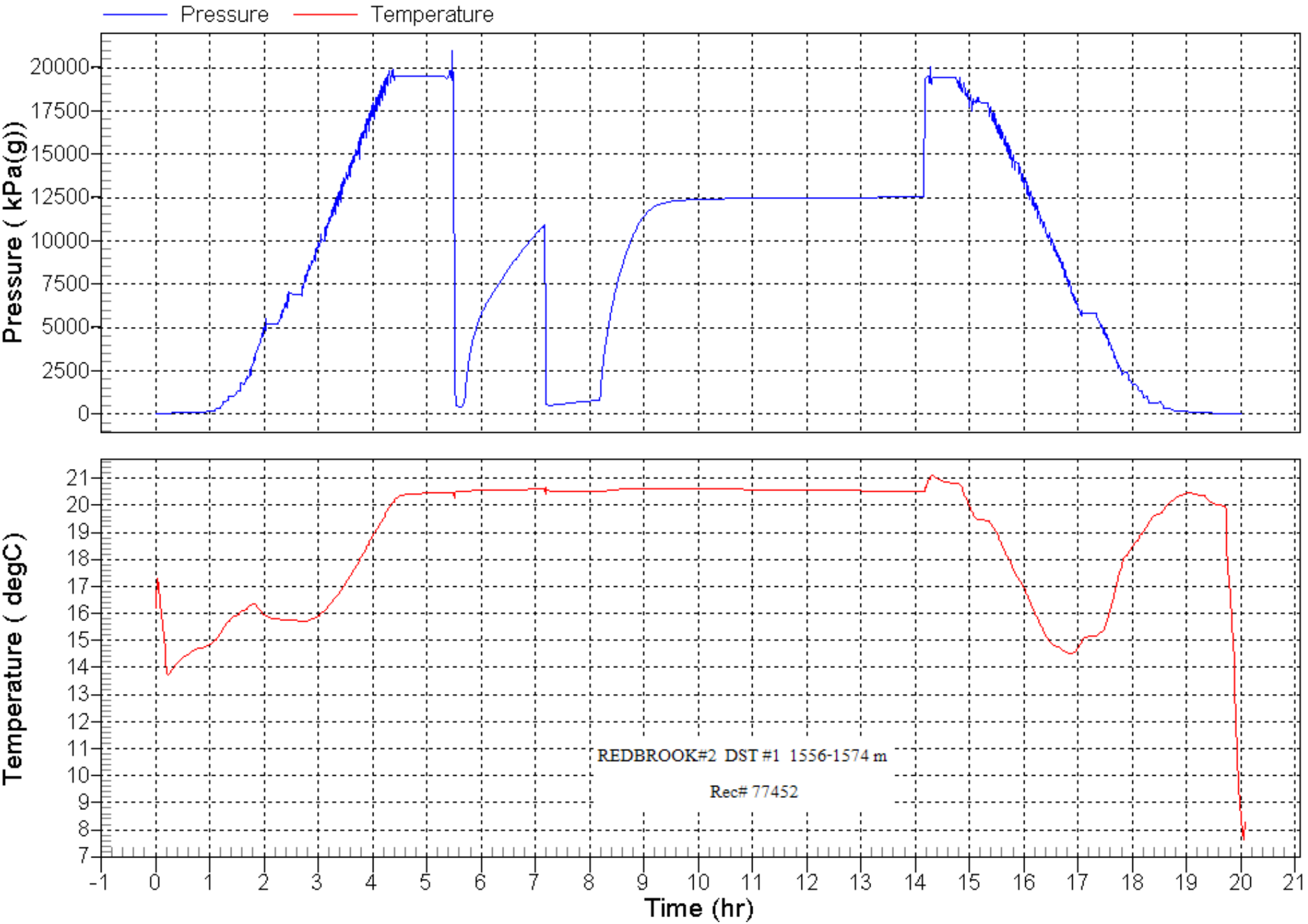
Recovery: 54 meters Gasified Mud
Fluid sample caught at 41, 13 and 1.5 meters above tool

Analyses: Gas collected in Bottom Hole Sampler
Gas Sample # AGAT 04001075 (Initial flow GTS) + AGAT 05003561(Bottom hole sampler)

Remarks: Excellent Mechanical Test - No Problems
Gas to Surface in 10 minutes after start if Initial Flow

5 meters fill on bottom


Pressure
Temperature
Pressure (kPa(g))
20000
17500
15000
12500
10000
7500
5000
2500
0
Temperature (degC)
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
REDBROOK #2 DST# 1 1556-1574 m
Rec# 77330
-1
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
Time (hr)


Pressure
Temperature
Pressure (kPa(g))
20000
17500
15000
12500
10000
7500
5000
2500
0
Temperature (degC)
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
REDBROOK#2 DST #1 1556-1574 m
Rec# 77452
-1
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
Time (hr)

Drill Stem Test Report

Storage Units: Metric

Run #:	2	**Date:**	Nov 28, 2009
Test #:	1	**Misrun:**	
Test Company:	Holland Testers	**Closed Chamber Company:**	n/a
Representative:	Dale Holland	**Representative:**	n/a
Unit #:		**K.B. Elevation:**	61.75
Test Type:	Conventional Straddle		

Formations Tested **From the:** **To the:** **Spout Falls**

Test Interval: **From:** 1,360.00 (MD) **To:** 1,383.00 (MD) (23.00)
From: 1,360.00 (TVD) **To:** 1,383.00 (TVD) (23.00)

Total Depth: 1,965.00 (MD) 1,965.00 (TVD) ***(At the time of the Test)***

String Configuration:
Drill Pipe - Collars
Recorder above tool
Upper Packer Depth 1359.2 m
Inside Recorder with 5.18 m perfs
Lower Packer Depth 1382.6 m
Recorder below Tool
582.4 meters Tail pipe to bottom

Drilling Fluid Type and Properties:
MW = 1265
VIS = 69
pH = 11.2
WL = 5.4
FC = 0.5 mm

Cushion Type / Amount: No Cushions

Hole Condition: Excellent

Bottom Hole Temperature: 18.5 º **Tool Chased Distance:** **Mud Drop:** 0.0

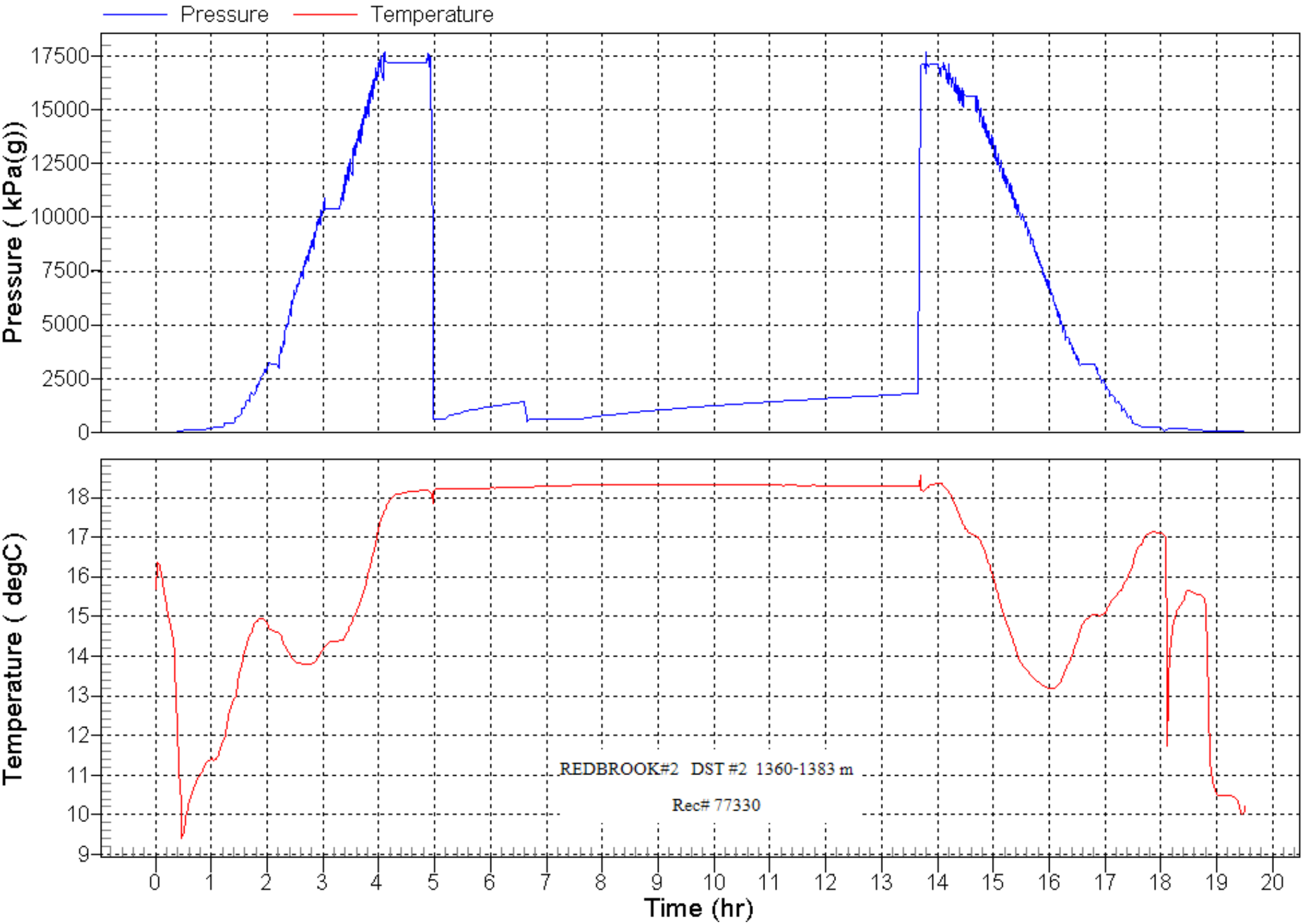
Period	Intitial Pressure	Final Pressure	Times	Flow Description
Initial Hydrostatic	17,248.0			
Flow 1	559.0	564.0	10	Open for Preflow with weak initial puff increasing to 8 inches in bubble Pail after 10 minutes.
Shut-in 1	564.0	1,414.0	90	
Flow 2	466.0	613.0	60	Open for Valve Open had weak initial Puff increasing to 10 inches in bubble pail after 15 minutes then slowly decreasing.
Flow Details				
Time / Pressure / Flow Rate Measurements				Choke Type Orifice Diameter Units of measurement
No GTS (Gas to Surface)				
Shut-in 2	613.0	1,788.0	360	

Final Hydrostatic	17,084.0

Recovery: 27 meters Drilling Mud
Fluid samples caught at 13 m, 1.5 meters above tool.

Analyses: (1) Bottom hole Sampler (#05005092)

Remarks: Good Mechanical Test - No problems


Pressure
Temperature
Pressure (kPa(g))
17500
15000
12500
10000
7500
5000
2500
0
Temperature (degC)
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17
16
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13
12
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9
REDBROOK#2 DST #2 1360-1383 m
Rec# 77330
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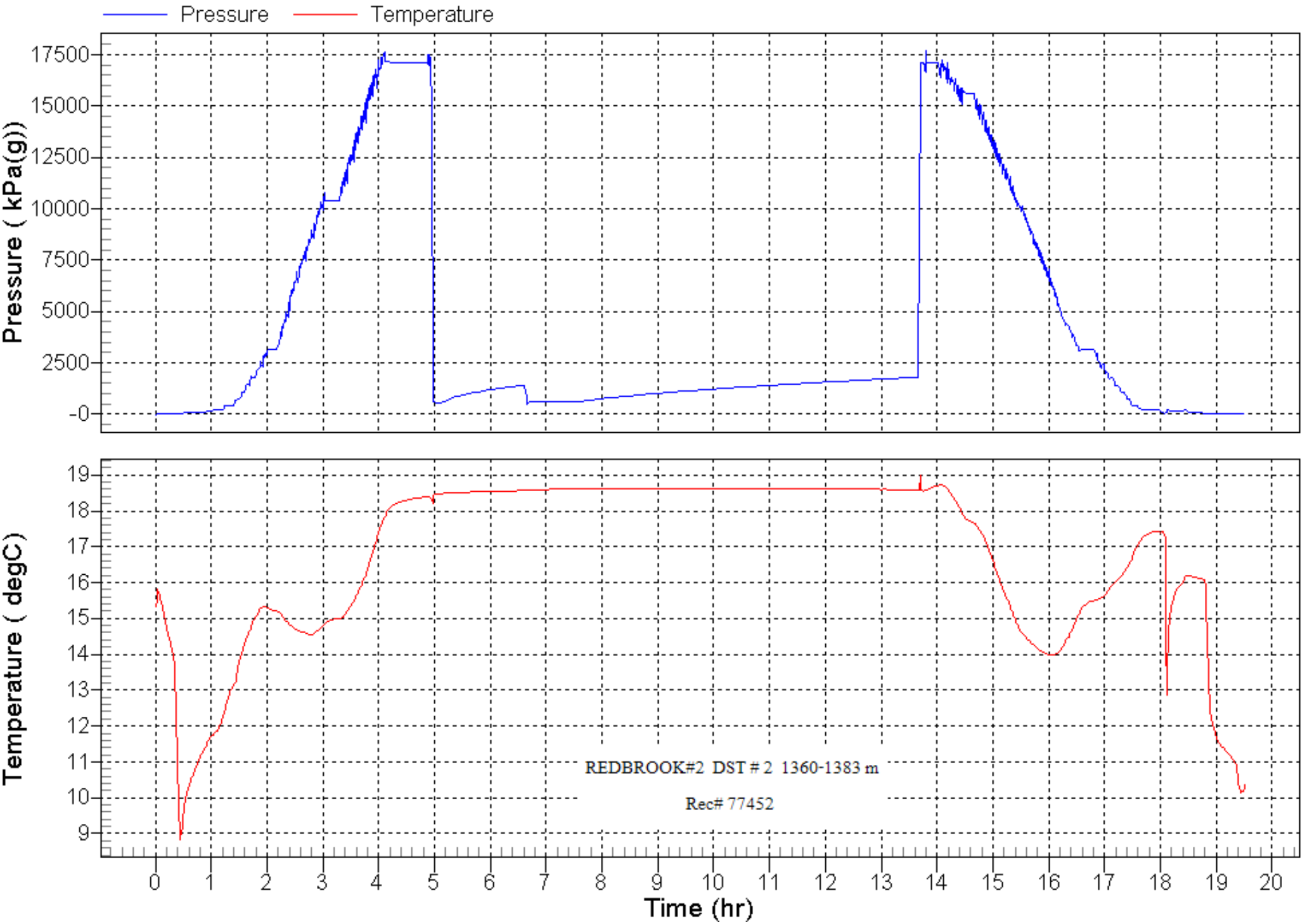
19
20
Time (hr)


Pressure
Temperature
Pressure (kPa(g))
17500
15000
12500
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7500
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2500
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Temperature (degC)
19
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9
REDBROOK#2 DST # 2 1360-1383 m
Rec# 77452
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Time (hr)

Drill Stem Test Report

Storage Units: Metric

Run #:	3	**Date:**	Nov 30, 2009
Test #:	1	**Misrun:**	
Test Company:	Holland Testers	**Closed Chamber Company:**	n/a
Representative:	Dale Holland	**Representative:**	n/a
Unit #:		**K.B. Elevation:**	61.75
Test Type:	Conventional Straddle		

Formations Tested **From the:**
To the: **Spout Falls**

Test Interval: **From:** 1,297.00 (MD) **To:** 1,338.00 (MD) (41.00)
From: 1,297.00 (TVD) **To:** 1,338.00 (TVD) (41.00)

Total Depth: 1,965.00 (MD) 1,965.00 (TVD) ***(At the time of the Test)***

String Configuration:
Drill Pipe - Collars
Recorder above tool
Upper Packer Depth 1297.2 m
Inside Recorder with 9.45 m perfs
Lower Packer Depth 1338.1 m
Recorder below Tool
626.9 meters Tail pipe to bottom

Drilling Fluid Type and Properties:
MW = 1265
VIS = 69
pH = 11.2
WL = 5.4
FC = 0.5 mm

Cushion Type / Amount: No Cushion

Hole Condition: Excellent

Bottom Hole Temperature: 17.7 º **Tool Chased Distance:** **Mud Drop:** 0.0

Period	Intitial Pressure	Final Pressure	Times	Flow Description
Initial Hydrostatic	16,525.0			
Flow 1	493.0	509.0	10	Open for Preflow with weak initial puff to bottom of pail in 1 minute. Steady throughout
Shut-in 1	509.0	4,767.0	90	
Flow 2	341.0	476.0	90	Open for valve open had strong initial puff to bottom of pail immediately decreasing to weak initial blow. After 10 minutes, weak steady blow throughout. Gas to Surface (GTS) at 75 minutes.

Flow Details

Time / Pressure / Flow Rate Measurements	Choke Type	Orifice Diameter	Units of measurement
80 mins 1.25 kPa @ 1 deg 23.9 m3/day	6" Pos.	3.18	m³/day
85 mins 2.74 kPa @ 1 deg 35.8 m3/day			
90 mins 4.48 kPa @ 1 deg 45.6 m3/day			

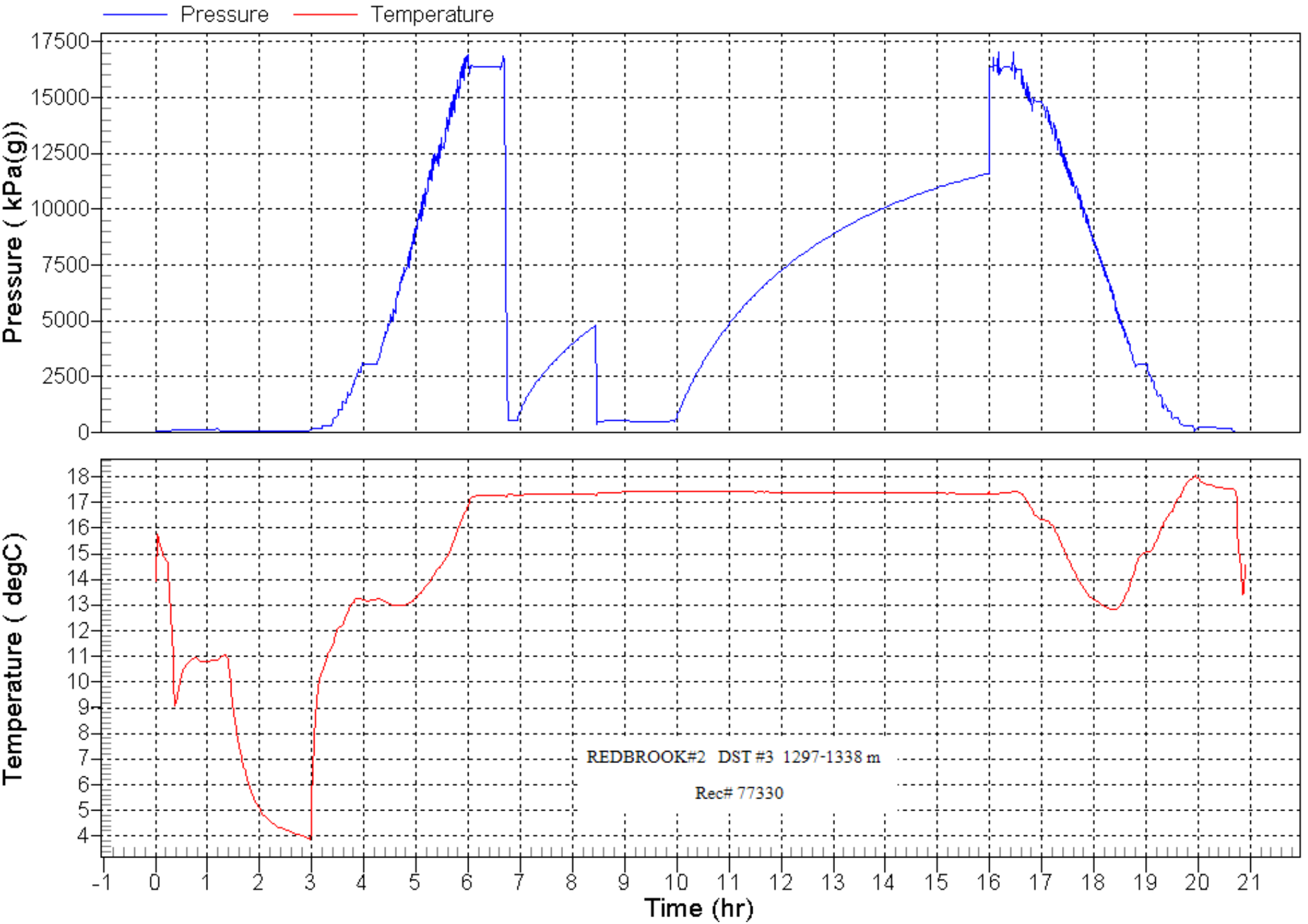
Flow Rate through Surface Manifold with 6 inch Positive Choke with 8/64 inch (3.175 mm) inside

diameter.						
Shut-in 2	476.0	11,562.0	360			
Flow Details						
Time / Pressure / Flow Rate Measurements				Choke Type	Orifice Diameter	Units of measurement
Pressure continuing to build after Six hours. Charts indicate that Final Shut in should be longer than 6 hours.						
Final Hydrostatic		16,411.0				

Recovery: 10 meters drilling mud
Fluid sample caught at 1.5 m above tool.

Analyses: Gas present in Bottom Hole Sampler but no test cylinders available to take sample..
Gas to Surface but no test cylinders available to take sample.

Remarks: Good Sucessful Mechanical Test
Indications at end of 60 minute main flow of potential gas to surface. Main flow extended to 90 minutes with Gas to Surface in 75 minutes.
Charts indicate longer Shut In Required.


Pressure
Temperature
Pressure (kPa(g))
17500
15000
12500
10000
7500
5000
2500
0
Temperature (degC)
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REDBROOK#2 DST #3 1297-1338 m
Rec# 77330
-1
0
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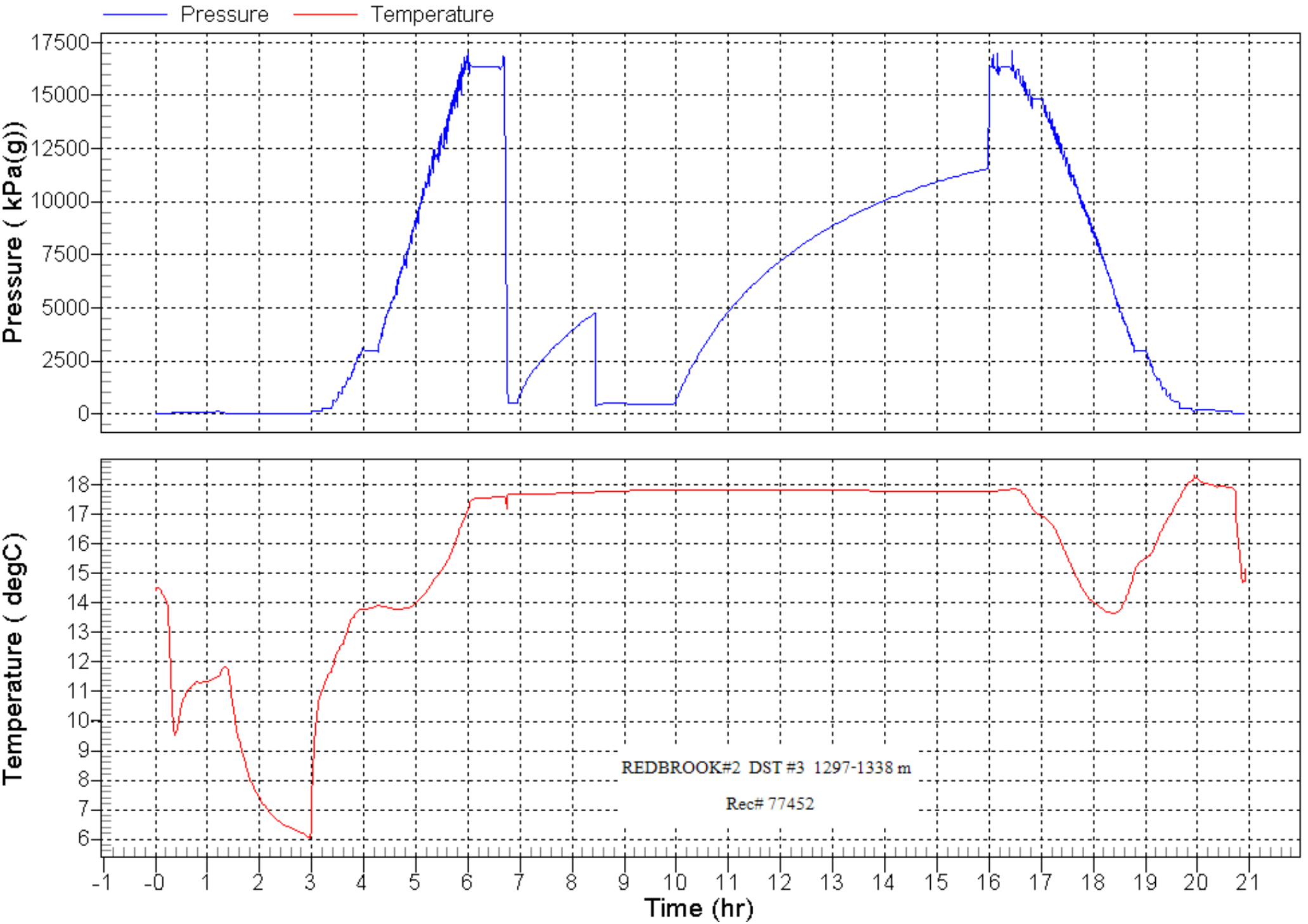
20
21
Time (hr)


Pressure
Temperature
Pressure (kPa(g))
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12500
10000
7500
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Temperature (degC)
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REDBROOK#2 DST #3 1297-1338 m
Rec# 77452
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-0
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21
Time (hr)

Drill Stem Test Report

Storage Units: Metric

Run #: 4
Test #: 1
Test Company: Holland Testers
Representative: Dale Holland
Unit #:
Test Type: Conventional Straddle

Date: Dec 01, 2009
Misrun:
Closed Chamber Company: n/a
Representative: n/a
K.B. Elevation: 61.75

Formations Tested **From the:**
To the: **Spout Falls**

Test Interval: **From:** 1,587.00 (MD) **To:** 1,641.00 (MD) (54.00)
From: 1,587.00 (TVD) **To:** 1,641.00 (TVD) (54.00)

Total Depth: 1,965.00 (MD) 1,965.00 (TVD) ***(At the time of the Test)***

String Configuration:
Drill Pipe - Collars
Recorder above tool
Upper Packer Depth 1586.7 m
Inside Recorder with 9.14 m perfs
Lower Packer Depth 1640.97 m
Recorder below Tool
324.0 meters Tail pipe to bottom

Drilling Fluid Type and Properties:
MW = 1265
VIS = 69
pH = 11.2
WL = 5.4
FC = 0.5 mm

Cushion Type / Amount: No Cushion

Hole Condition: Excellent

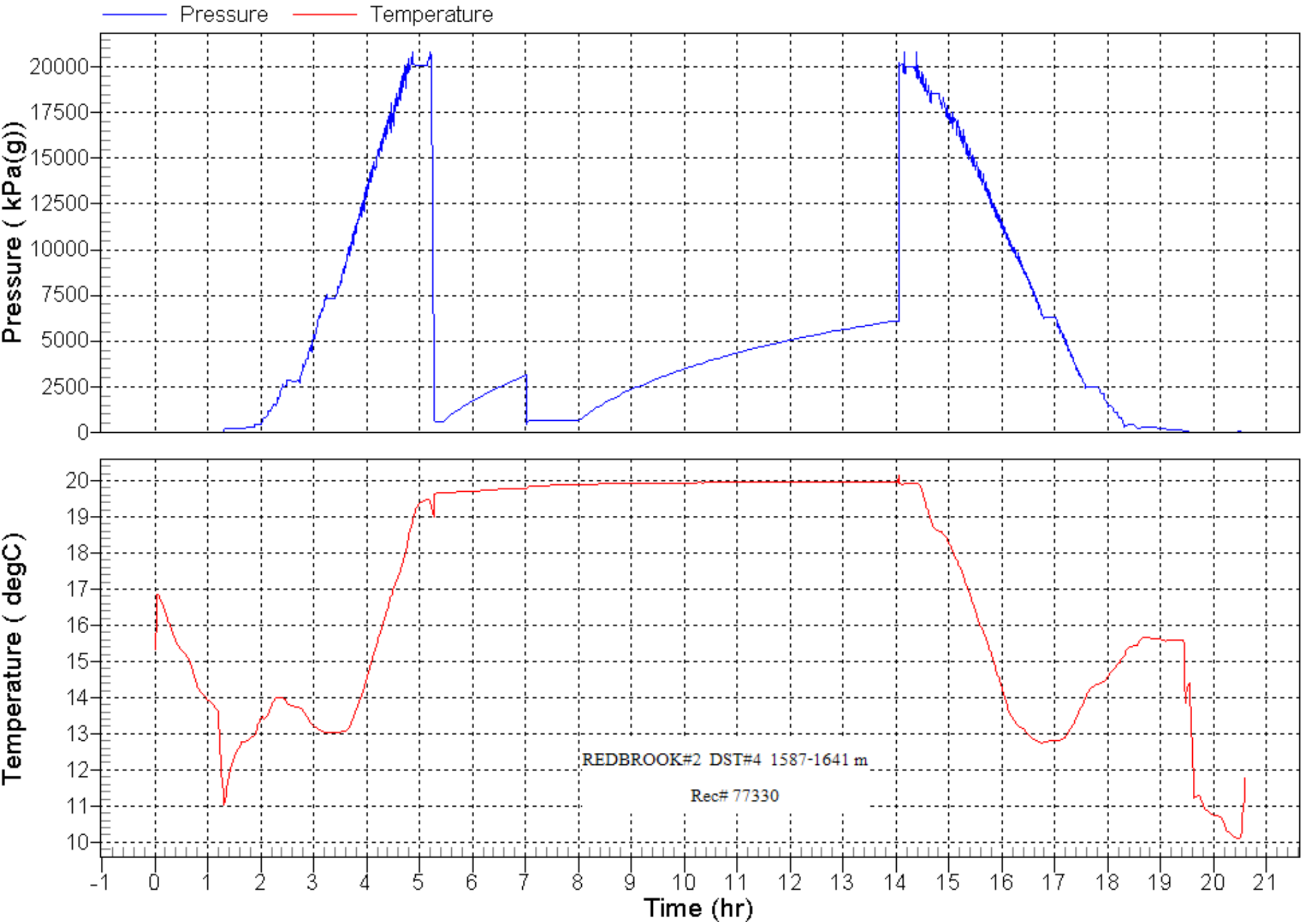
Bottom Hole Temperature: 20.1 º **Tool Chased Distance:** **Mud Drop:** 0.0

Period	Intitial Pressure	Final Pressure	Times	Flow Description
Initial Hydrostatic	20,254.0			
Flow 1	674.0	545.0	10	On valve open weak initial puff to bottom of pail in 3 minutes, steady throughout, no gas to surface.
Shut-in 1	545.0	3,093.0	90	
Flow 2	380.0	640.0	60	On valve open, had strong initial puff to bottom of pail in 20 seconds. Decreasing to very weak by 10 mins, then steady weak throughout, no gas to surface.
Shut-in 2	640.0	6,097.0	360	
Final Hydrostatic		19,963.0		

Recovery: 20 Meters Drilling Fluid
Fluid samples caught 13 m and 1.5 m above tool

Analyses:

Remarks: Good Mechanical Test - no issues


Pressure
Temperature
Pressure (kPa(g))
20000
17500
15000
12500
10000
7500
5000
2500
0
Temperature (degC)
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REDBROOK#2 DST#4 1587-1641 m
Rec# 77330
-1
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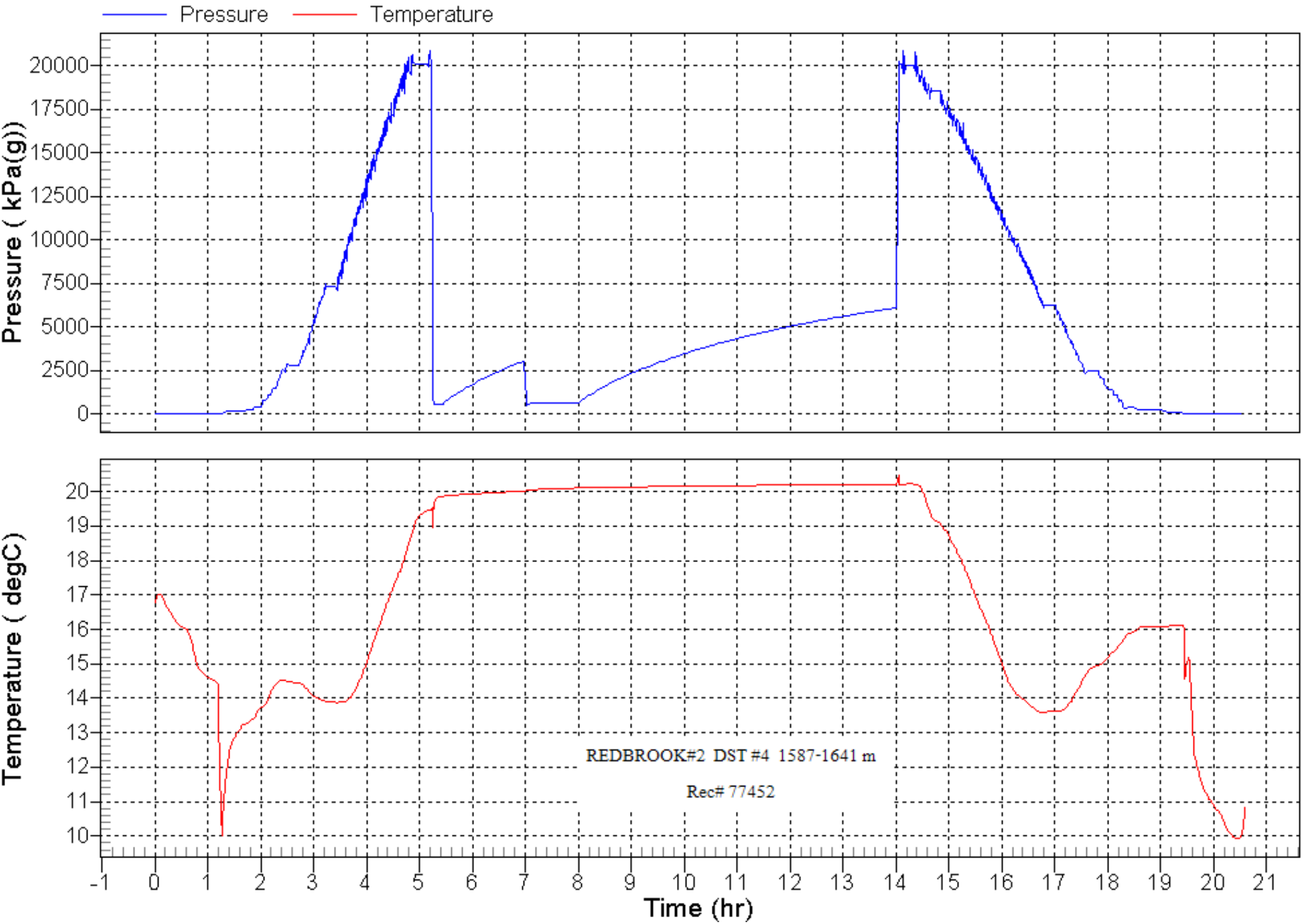
21
Time (hr)


Pressure
Temperature
Pressure (kPa(g))
20000
17500
15000
12500
10000
7500
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2500
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Temperature (degC)
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REDBROOK#2 DST #4 1587-1641 m
Rec# 77452
-1
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21
Time (hr)

Drill Stem Test Report

Storage Units: Metric

Run #:	5	**Date:**	Dec 02, 2009
Test #:	1	**Misrun:**	
Test Company:	Holland Testers	**Closed Chamber Company:**	n/a
Representative:	Dale Holland	**Representative:**	n/a
Unit #:		**K.B. Elevation:**	61.75
Test Type:	Conventional Straddle		

Formations Tested **From the:**
To the: **Spout Falls**

Test Interval: **From:** 872.00 (MD) **To:** 908.00 (MD) (36.00)
From: 872.00 (TVD) **To:** 908.00 (TVD) (36.00)

Total Depth: 1,965.00 (MD) 1,965.00 (TVD) ***(At the time of the Test)***

String Configuration:
Drill Pipe - Collars
Recorder above tool
Upper Packer Depth 871.8 m
Inside Recorder with 4.88 m perfs
Lower Packer Depth 908.15 m
Recorder below Tool
1056.85 meters Tail pipe to bottom

Drilling Fluid Type and Properties:
MW = 1265
VIS = 69
pH = 11.2
WL = 5.4
FC = 0.5 mm

Cushion Type / Amount:

Hole Condition:
Excellent
5 DST's in a row with all good seats.

Bottom Hole Temperature: 14.8 º **Tool Chased Distance:** **Mud Drop:** 0.0

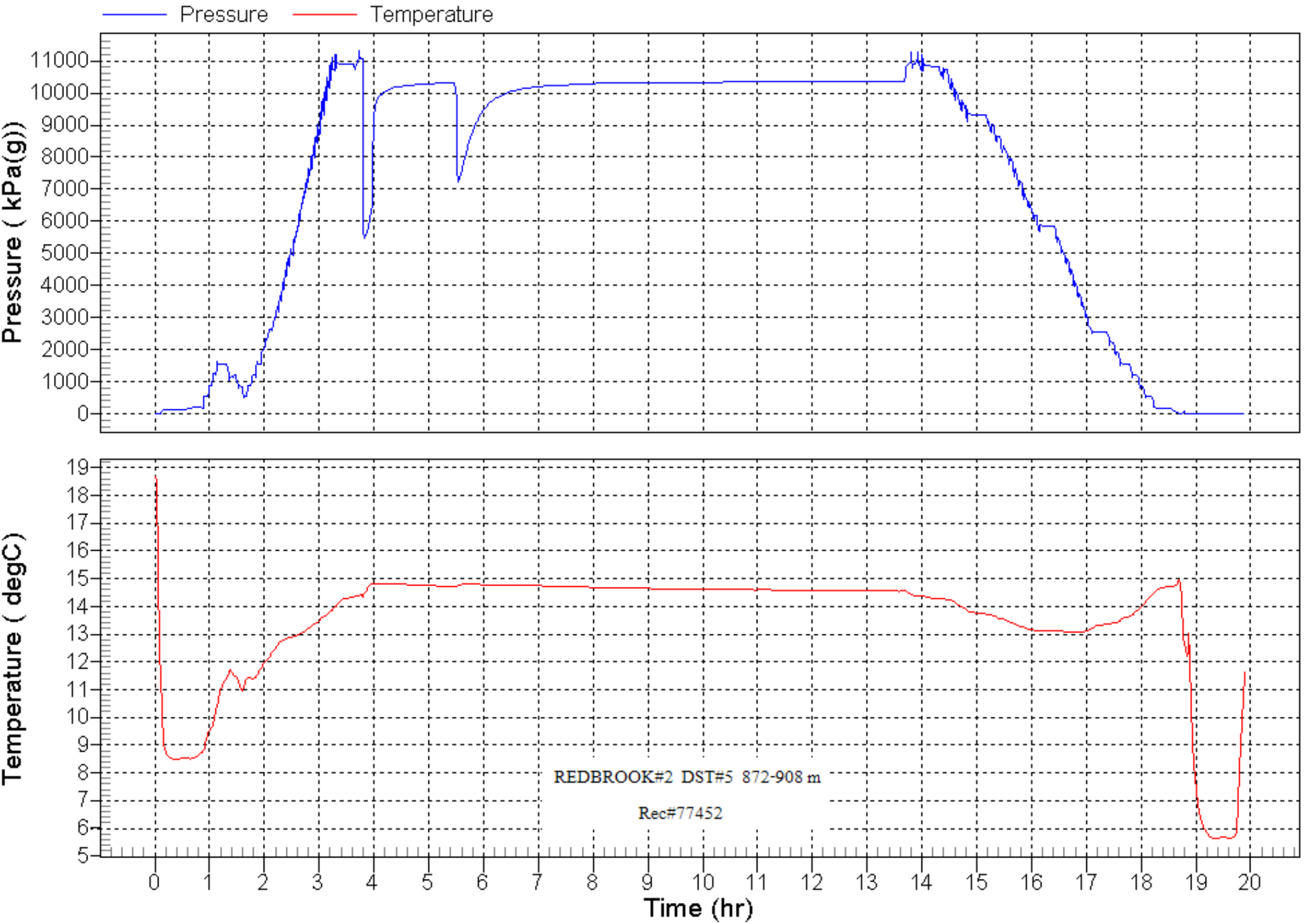
Period	Intitial Pressure	Final Pressure	Times	Flow Description
Initial Hydrostatic	11,072.0			
Flow 1	5,456.0	6,566.0	10	Open for preflow, had strong initial puff to bottom of pail in 30 seconds, steady throughout, no gas to surface.
Shut-in 1	6,566.0	10,317.0	90	
Flow 2	10,317.0	7,230.0	125	On valve open, had weak initial puff to bottom of pail in 1 minute, slowly decreasing throughout. Gas to surface in 118 minutes.
Flow Details				
Time / Pressure / Flow Rate Measurements				Choke Type: Orifice Diameter: Units of measurement
GTS rate was not measureable.				
Shut-in 2	10,256.0	10,354.0	360	

Final Hydrostatic	10,908.0

Recovery: 830 m Gasified Fluids
Fluid Samples caught at 830 m, 400 m, 1.5 m above tools.

Analyses:

Remarks: Good test (s)
The 5 DST's were completed with absolute perfection and safety. Dale Holland and the Rig crews worked great together with optimun efficiency. There were zero issues throughout the Testing period.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Temperature
Pressure (kPa(g))
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10000
9000
8000
7000
6000
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4000
3000
2000
1000
0
Temperature (degC)
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REDBROOK#2 DST#5 872-908 m
Rec#77452
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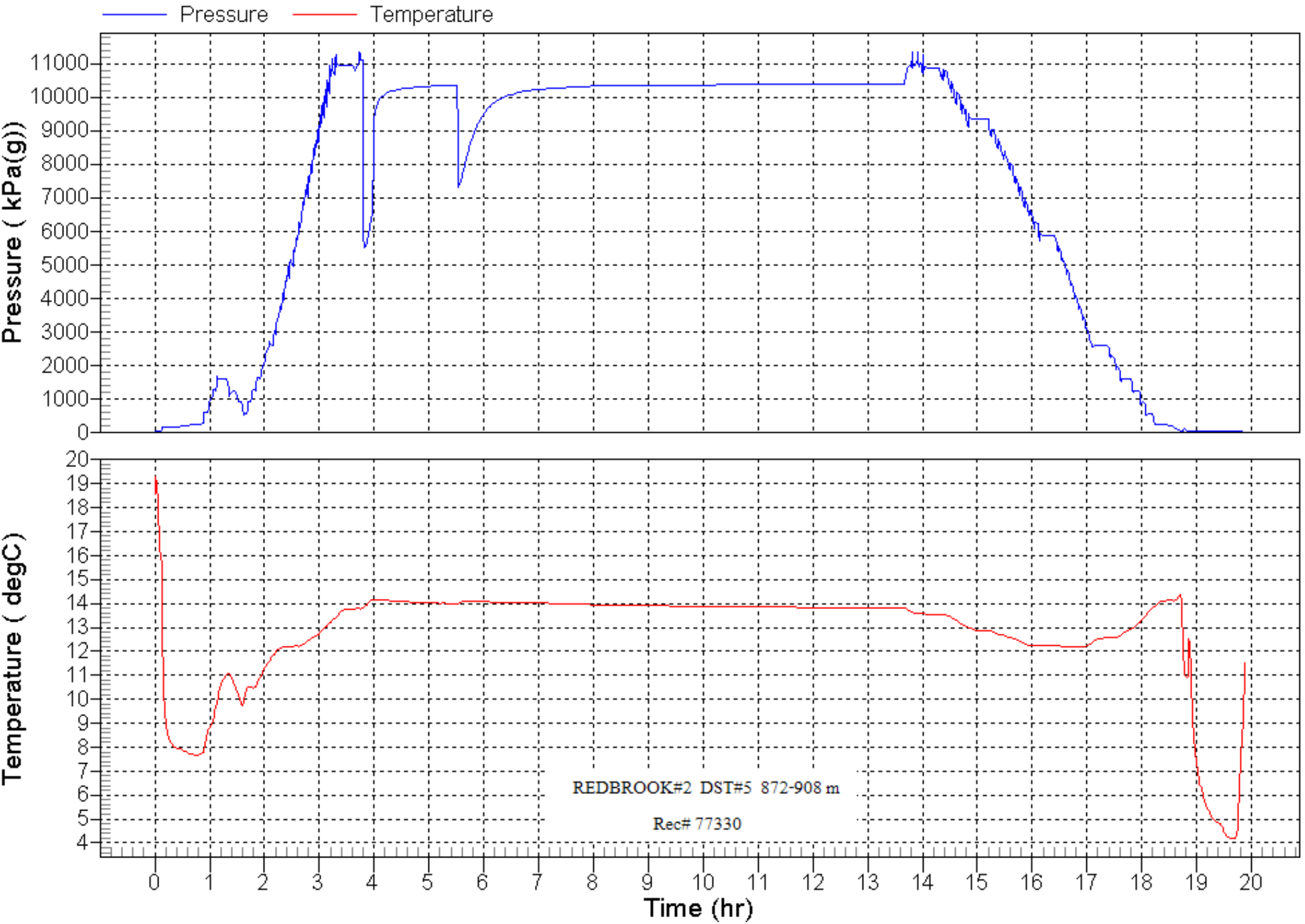
Time (hr)


Pressure
Temperature
Pressure (kPa(g))
11000
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Temperature (degC)
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REDBROOK#2 DST#5 872-908 m
Rec# 77330
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18
19
20
Time (hr)

HOLLAND TESTERS LTD.

R.R. #3 Wheatley, Ontario N0P 2P0 1-519-825-3680

Customer VULCAN MINERALS — Customer Rep. MR. BILL WILLIAMS

Location VULCAN INVESTCAN RED BROOK #2

Interval 1555-1574 — Total Depth 1965.0 — Formation SPOUT FALLS

Test Number ONE — Tester K. DALE HOLLAND

Test Type DUAL STRADDLE CONVENTIONAL — K. B. Elevation 634 — Ground Elevation 617.1

Test Date NOVEMBER 25, 2009 — Bottom Hole Temperature (C)

RECOVERY: 54

	Metres Total Fluid	Sampler # ; #
	Metres of	SAMPLED AT:
54	Metres of GASIFIED DRILLING FLUID	Metres
	Metres of	41.00 Metres
	Metres of	13.00 Metres
	Metres of	1.524 Metres
	Metres of SKIDDED TO BOTTOM.	BOTTOM HOLE SAMPLER Above Tool

REMARKS: HAD 5m FILL ON BOTTOM, OPEN FOR PREFLOW WITH FAIR INITAL PUFF, TO BOTTOM OF PAIL IN 30 SEC. STEADY THROUGHOUT NO GAS TO SURFACE. ON VALVE OPEN STRONG AIR BLOW, TO BOTTOM OF PAIL IMMEDIATELY, GAS TO SURFACE IN 10 MIN.

GAS READINGS

TIME min.	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d	TIME min	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d
20	42"	4	3.175	171					
30	19	4	3.175	131					
40	35	4	3.175	182					
50	50	4	3.175	222					
60	65	4	3.175	257					

Gas Samples: #0400 1075 #0503561; Sent to

Gas Measured by: FLOOR MANIFOLD 6" POSITIVE CHOKE.

TOOL TALLY

PO Sub	.305
XOver	.305
Recorder	1.524
Shut-in	1.650
Sampler	1.000
Sampler	
Hydraulic	1.720
Jars	2.030
M/Record	
E/Record	
Temp Rec	
By-pass	
Safety Jt	.660
Packer	2.500
Packer	2.195
Upper Packer depth	1555.008

DOWNHOLE PRESSURE DATA (KPAG)

Test Times: PF 10 ISN 90 VO 60 FSN 360

Recorder Number		110977			77330	77452	25726
Recorder Range		32751			68950	68950	59110
Clock Hour -Emp		24			6MP	6MP	24
Depth - Metres		1542.106			1557.142	1557.447	1578.704
Position of Pressure Port		FLUID	INSIDE	INSIDE	OUTSIDE	OUTSIDE	OUTSIDE
Initial Hydrostatic	(A)					19609	
Start First Flow	(B)					1054	
End First Flow	(B1)					433	
First Shut-In	(C)					10939	
Start Second flow	(D)					1185	
End Second flow	(E)					742	
Second Shut-In	(F					12506	
Start Third Flow	(H)						
End Third Flow	(I)						
Third Shut-In	(J)						
Final Hydroststic	(G					19431	

DOWNHOLE TOOL TALLY

Packer	.305
Perfs	1.219
By-pass	
M / Record	
E / Record	1.829
X Over	.305
DC	13.530
X Over	.305
Blank	.305
Packer	1.33
Lower Packer depth	1574.136

Packer	1.150
Packer	2.500
Perfs	.610
Recorder	1.524
X Over	.305
DP / DC	383.96
X Over	.305
Bullnose	.610
Total depth	965.000

TEST IS: Misrun; ✓ Satisfactory

Started in hole @ 1715 — Opened tool @ 2146 — Out of hole @ 1100

DP size (mm) — Weight (kg/m) — Main hole size (mm) 215.90

DP length (m) — DC size ID (mm) — DC above tool (m) 109.01

Mud weight (kg/m3) — Visc (s/L) — Water loss (cm3)

PACKER RUBBER SIZE (MM) 196.85 — BOTTOM HOLE COKE (MM) 19.05

Total Interval 19.08

Total Tail Pipe 390.564

Tool Make up Time 4.0 Hr

HOLLAND TESTERS LTD.

R.R. #3 Wheatley, Ontario N0P 2P0 1-519-825-3680

Customer VULCAN MINERALS — Customer Rep. MR. BILL WILLIAMS

Location VULCAN INVESTCAN RED BROOK #2

Interval 1360-1383 Total Depth 1965 — Formation SPOUT FALLS

Test Number TWO — Tester K. DALE HOLLAND

Test Type DUAL STRADDLE CONVENTIONAL — K. B. Elevation 63.4 — Ground Elevation 57.1

Test Date NOVEMBER 29-30, 2009 — Bottom Hole Temperature (C) 18.5

RECOVERY: 27 — Metres Total Fluid — Sampler # 004 ; # —

Metres of — SAMPLED AT:

27 — Metres of DRILLING FLUID — 13 Metres

Metres of — 1.524 Metres

Metres of — Metres

Metres of — Metres

SLIGHT TO BOTTOM — BOTTOM HOLE SAMPLE — Above Tool

REMARKS: HAD 1½ M FILL ON BOTTOM, OPEN FOR PREFLOW WITH WEAK INITIAL PUFF. INCREASING TO 3" IN PAIL BY END OF PREFLOW. ON BACK OPEN HAD WEAK INITIAL PUFF INCREASING TO 10" IN PAIL BY 15 MIN THEN SLOWLY DECREASING THROUGHOUT

GAS READINGS — NO GAS TO SURFACE

TIME min.	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d	TIME min	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d

Gas Samples: # AGAT 0500 5092 — Sent to —

Gas Measured by:

TOOL TALLY

PO Sub	.305
~~DP~~ XOver	.305
Recorder	1.524
Shut-in	1.650
Sampler	1.000
Sampler	
Hydraulic	1.720
Jars	2.030
M/Record	
E/Record	
Temp Rec	
By-pass	
Safety Jt	.660
Packer	2.500
Packer	2.195
Upper Packer depth	1359.510

DOWNHOLE PRESSURE DATA (KPAG) Test Times: PF 10 ISN 90 VO 60 FSN 360

Recorder Number		11077			77330	77452	25726
Recorder Range		32751			68950	68950	59140
Clock Hour -Emp		24			EMP	EMP	24
Depth - Metres		1346.53			1365.607	1365.912	1386.861
Position of Pressure Port		FLUID	INSIDE	INSIDE	OUTSIDE	OUTSIDE	OUTSIDE
Initial Hydrostatic	(A)					17248	
Start First Flow	(B)					559	
End First Flow	(B1)					564	
First Shut-In	(C)					1414	
Start Second flow	(D)					466	
End Second flow	(E)					613	
Second Shut-In	(F					1988	
Start Third Flow	(H)						
End Third Flow	(I)						
Third Shut-In	(J)						
Final Hydroststic	(G					17084	

Packer	.305
Perfs	5.182
By-pass	
M / Record	
E / Record	1.829
X Over	.305
DP ~~DC~~	13.530
X Over	.305
Blank	.305
Packer	1.330
Lower Packer depth	1382.601

Packer	1.150
Packer	2.500
Perfs	.305
Recorder	1.524
X Over	.305
DP ~~DC~~	575.70
X Over	.305
Bullnose	.610
Total depth	1965.000

Total Interval	23.091
Total Tail Pipe	582.399
Tool Make up Time	2.0 Hr

TEST IS: — Misrun; — ✓ Satisfactory

Started in hole @	1515	Opened tool @	1900	Out of hole @	0800
DP size (mm)	114 ~~88.9~~ IF	Weight (kg/m)	31.90	Main hole size (mm)	215.90
DP length (m)	1284.680	DC size ID (mm)	60	DC above tool (m)	109.01
Mud weight (kg/m3)	1260	Visc (s/L)	79	Water loss (cm3)	5.4

PACKER RUBBER SIZE (MM) 196.85 — BOTTOM HOLE COKE (MM) 19.05

HOLLAND TESTERS LTD.

R.R. #3 Wheatley, Ontario N0P 2P0 1-519-825-3680

Customer VULCAN MINERALS — Customer Rep. MR. BILL WILLIAMS

Location VULCAN INVESTCAN RED BROOK #2

Interval 1297-1339 Total Depth 1965 — Formation SPOUT FALLS

Test Number THREE — Tester K. DALE HOLLAND

Test Type ANL STRADDLE CONVENTIONAL — K. B. Elevation 63.4 — Ground Elevation 57.1

Test Date NOVEMBER 30, 2009 — Bottom Hole Temperature (C) 17.7

RECOVERY: 10

Metres Total Fluid

Metres of

10 Metres of DRILLING MUD

Metres of

Metres of

Metres of

Sampler # 004 ; #

SAMPLED AT:

1.524 Metres

Metres

Metres

Metres

Above Tool

REMARKS: OPEN FOR PREFLOW WITH WEAK INITIAL PUFF TO BOTTOM OF PAIL IN 1 MIN. STEADY THROUGH OUT ON VALVE OPEN HAD STRONG INITIAL PUFF TO BOTTOM OF PAIL IMMEDIATELY, DECREASING TO WEAK AFTER 10 MIN. GAS TO SURFACE AT 75 MIN.

GAS READINGS

TIME min.	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d	TIME min	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d
80	1.25	1	3.175	23.4					
85	2.174	1	3.175	35.8					
90	4.48	1	3.175	45.6					

Gas Samples: # ; # ; Sent to

Gas Measured by:

DOWNHOLE PRESSURE DATA (KPAG) Test Times: PF 10 ISN 90 VO 90 FSN 360

Recorder Number		11077			77330	77452	25726
Recorder Range		32751			68950	68950	59110
Clock Hour -Emp		24			EMP	EMP	24
Depth - Metres		1284.196			1307.534	1307.839	1346.393
Position of Pressure Port		FLUID	INSIDE	INSIDE	OUTSIDE	OUTSIDE	OUTSIDE
Initial Hydrostatic	(A)					16554	
Start First Flow	(B)					493	
End First Flow	(B1)					509	
First Shut-In	(C)					47169	
Start Second flow	(D)					341	
End Second flow	(E)					476	
Second Shut-In	(F					11562	
Start Third Flow	(H)						
End Third Flow	(I)						
Third Shut-In	(J)						
Final Hydroststic	(G					16411	

TEST IS: Misrun; ✓ Satisfactory

Started in hole @ 1400 — Opened tool @ 1738 — Out of hole @ 0645

DP size (mm) 114 ~~X 88~~ IF — Weight (kg/m) 31.90 — Main hole size (mm) 215.90

DP length (m) 1198.876 — DC size ID (mm) 60 — DC above tool (m) 95.46

Mud weight (kg/m3) 1260 — Visc (s/L) 79 — Water loss (cm3) 5.4

PACKER RUBBER SIZE (MM) 196.85 — BOTTOM HOLE COKE (MM) 19.05

TOOL TALLY

PO Sub	0.305
~~BP~~ XOver	0.305
Recorder	1.524
Shut-in	1.650
Sampler	1.000
Sampler	
Hydraulic	1.720
Jars	2.030
M/Record	
E/Record	
Temp Rec	
By-pass	
Safety Jt	0.660
Packer	2.500
Packer	2.195
Upper Packer depth	1297.170
Packer	0.305
Perfs	9.449
By-pass	
M / Record	
E / Record	1.829
X Over	0.305
~~DP~~ DC	27.080
X Over	0.305
Blank	0.305
Packer	1.330
Lower Packer depth	1338.700
Packer	1.150
Packer	2.500
Perfs	3.658
Recorder	1.524
X Over	0.305
DP / ~~DC~~	616.87
X Over	0.305
Bullnose	0.610
Total depth	1965.000
Total Interval	40.908
Total Tail Pipe	626.922
Tool Make up Time	2.0 Hr

HOLLAND TESTERS LTD.

R.R. #3 Wheatley, Ontario N0P 2P0 1-519-825-3680

Customer VULCAN MINERALS — Customer Rep. MR. BILL WILLIAMS.
Location VULCAN INVESTCAN RED BROOK #2
Interval 1587-1641 — Total Depth 1965 — Formation SPOUT FALLS
Test Number FOUR — Tester K-DALE HOLLAND
Test Type DUAL STRADDLE CONVENTIONAL — K.B. Elevation 634 — Ground Elevation 59.1
Test Date DECEMBER 2-3, 2009 — Bottom Hole Temperature (C) 20.1

RECOVERY: 20 — Sampler # 004 ; # ____

	Metres Total Fluid	SAMPLED AT:	
	Metres of		
20	Metres of DRILLING MUD	13	Metres
	Metres of	1.524	Metres
	Metres of		Metres
	Metres of		Metres
			Above Tool

REMARKS: WEAK INITAL PUFF TO BOTTOM OF PAIL IN 3 MIN. STEADY THROUGH OUT, NO GAS TO SURFACE. ON VALVE OPEN HAD STRONG INITAL PUFF TO BOTTOM OF PAIL IN 20 SEC. DECREASING TO VERY WEAK BY 10 MIN THEN STEADY THROUGH OUT. NO GAS TO SURFACE.

GAS READINGS

TIME min.	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d	TIME min	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d

Gas Samples: # ____ ; # ____ ; Sent to ____
Gas Measured by: ____

DOWNHOLE PRESSURE DATA (KPAG) Test Times: PF 10 ISN 90 VO 60 FSN 360

Recorder Number		11077			177330	177452	25726
Recorder Range		32751			68950	68950	59110
Clock Hour -Emp		24			EMP	EMP	24
Depth - Metres		1514.321			1596.804	1598.809	1647.311
Position of Pressure Port		FLUID	INSIDE	INSIDE	OUTSIDE	OUTSIDE	OUTSIDE
Initial Hydrostatic	(A)					20254	
Start First Flow	(B)					674	
End First Flow	(B1)					545	
First Shut-In	(C)					3093	
Start Second flow	(D)					380	
End Second flow	(E)					640	
Second Shut-In	(F					6097	
Start Third Flow	(H)						
End Third Flow	(I)						
Third Shut-In	(J)						
Final Hydroststic	(G				✓	19963	

TEST IS: ____ Misrun; ____ Satisfactory

Started in hole @ 1015	Opened tool @ 1338	Out of hole @ 0300
DP size (mm) 114. IF	Weight (kg/m) 31.90	Main hole size (mm) 215.90
DP length (m) 1495.576	DC size ID (mm) 60	DC above tool (m) 81.83
Mud weight (kg/m3) 1260	Visc (s/L) 79	Water loss (cm3) 5.4

PACKER RUBBER SIZE (MM) 196.85 — BOTTOM HOLE COKE (MM) 19.05

TOOL TALLY

PO Sub	.305
~~DP~~ XOver	.305
Recorder	1.524
Shut-in	1.650
Sampler	
Sampler	
Hydraulic	1.720
Jars	2.030
M/Record	
E/Record	
Temp Rec	
By-pass	
Safety Jt	.610
Packer	2.500
Packer	2.195
Upper Packer depth	1586.745
Packer	.305
Perfs	9.144
By-pass	
M / Record	
E / Record	1.829
X Over	.305
DC	40.710
X Over	.305
Blank	.305
Packer	1.330
Lower Packer depth	1640.978
Packer	1.150
Packer	2.500
Perfs	2.438
Recorder	1.524
X Over	.305
DP	315.19
X Over	.305
Bullnose	.610
Total depth	1965.000
Total Interval	54.233
Total Tail Pipe	324.022
Tool Make up Time	1½ Hr

HOLLAND TESTERS LTD.

R.R. #3 Wheatley, Ontario N0P 2P0 1-519-825-3680

Customer VULCAN MINERALS — Customer Rep. MR. BILL WILLIAMS

Location VULCAN INVESTCAN RED BROOK #2

Interval 872-908 — Total Depth 1965 — Formation SHIPS COVE

Test Number FIVE — Tester K. DALE HOLLAND

Test Type DUAL STRADDLE CONVENTIONAL — K. B. Elevation 63.4 — Ground Elevation 57.1

Test Date DECEMBER 2, 2009 — Bottom Hole Temperature (C) 14.8

RECOVERY: 830

	Metres Total Fluid	Sampler # 004 ; #
	Metres of	SAMPLED AT:
	Metres of	830 Metres
830	Metres of GASIFIED WATER	400 Metres
	Metres of	1.524 Metres
	Metres of	Metres

Above Tool

REMARKS: OPEN FOR PREFLOW, HAD STRONG INITIAL PUFF TO BOTTOM OF PAIL IN 30 SEC. STEADY THROUGH OUT NO GAS TO SURFACE. ON VALVE OPEN HAD WEAK INITIAL PUFF TO BOTTOM OF PAIL IN 1 MIN. SLOWLY DECREASING THROUGH OUT. GAS TO SURFACE

GAS READINGS AT 118 MINS

TIME min.	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d	TIME min	PRESS kPa	TEMP C	ORIFICE mm	RATE m3/d

Gas Samples: # ; # ; Sent to

Gas Measured by:

TOOL TALLY

PO Sub	.305
B/ XOver	.305
Recorder	1.524
Shut-in	1.650
Sampler	
Sampler	
Hydraulic	1.720
Jars	2.030
M/Record	
E/Record	
Temp Rec	
By-pass	
Safety Jt	.610
Packer	2.500
Packer	2.195
Upper Packer depth	871.816

DOWNHOLE PRESSURE DATA (KPAG) Test Times: PF 10 ISN 90 VO 125" FSN 360

Recorder Number		110177			177330	177452	251726
Recorder Range		32751			68950	68950	59110
Clock Hour -Emp		24			EMP	EMP	24
Depth - Metres		859.892			877.608	877.913	920.641
Position of Pressure Port		FLUID	INSIDE	INSIDE	OUTSIDE	OUTSIDE	OUTSIDE
Initial Hydrostatic	(A)					11077	
Start First Flow	(B)					5456	
End First Flow	(B1)					6566	
First Shut-In	(C)					10317	
Start Second flow	(D)					7230	
End Second flow	(E)					10256	
Second Shut-In	(F					10354	
Start Third Flow	(H)						
End Third Flow	(I)						
Third Shut-In	(J)						
Final Hydroststic	(G				✓	10908	

Packer	.305
Perfs	4.877
By-pass	
M / Record	
E / Record	1.829
X Over	.305
B/ DC	27.080
X Over	.305
Blank	.305
Packer	1.330
Lower Packer depth	905.152

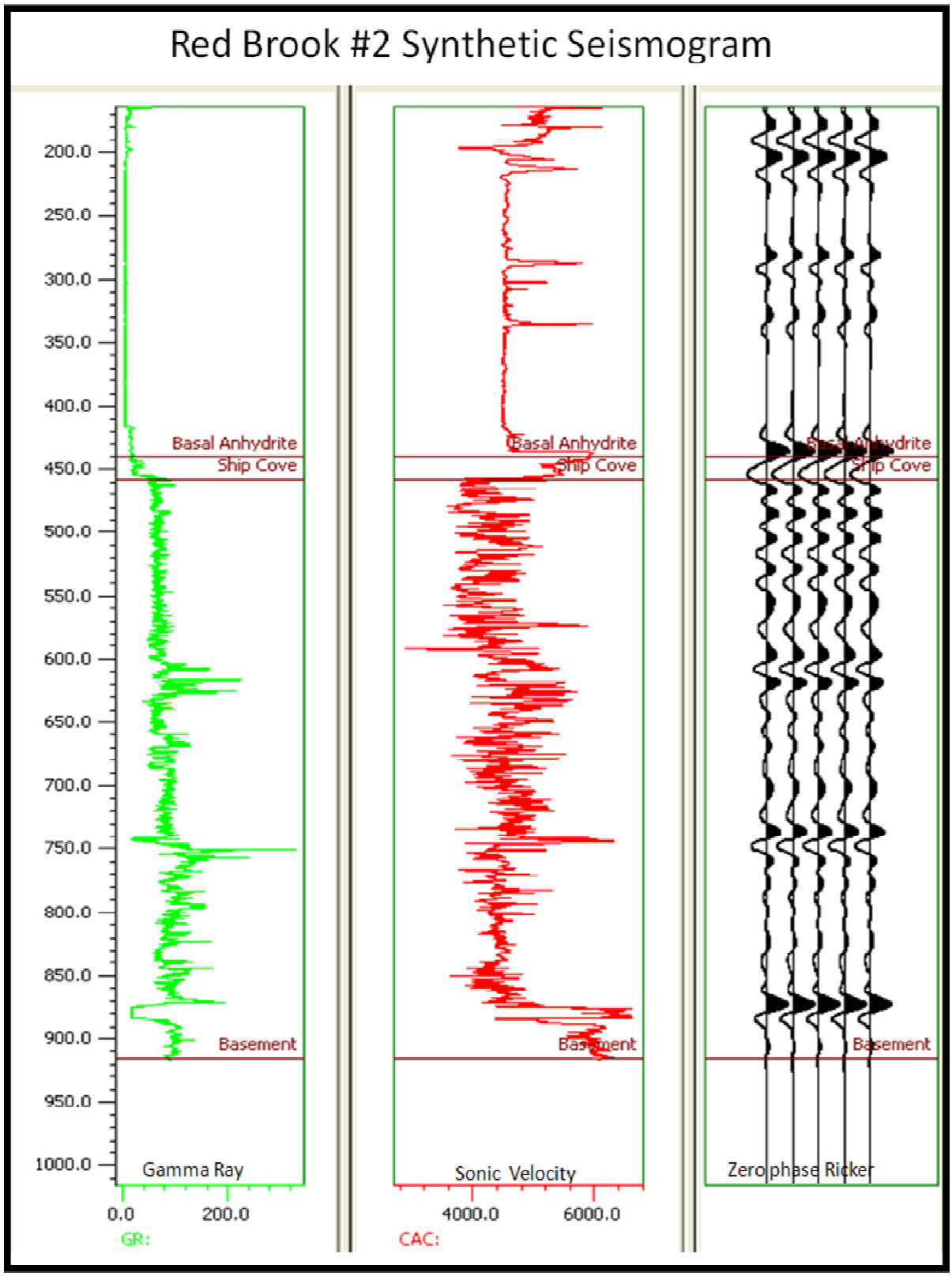
Packer	1.150
Packer	2.500
Perfs	8.534
Recorder	1.524
X Over	.305
DP SDC	1041.920
X Over	.305
Bullnose	.610
Total depth	1965.000

TEST IS: Misrun; ✓ Satisfactory

Started in hole @ 0800	Opened tool @ 1106	Out of hole @ 0130
DP size (mm) 114 IF	Weight (kg/m) 31.90	Main hole size (mm) 215.90
DP length (m) 761.518	DC size ID (mm) 60	DC above tool (m) 95.46
Mud weight (kg/m3) 1260	Visc (s/L) 79	Water loss (cm3) 5.4
PACKER RUBBER SIZE (MM) 196.85	BOTTOM HOLE COKE (MM) 19.05	

Total Interval	36.336
Total Tail Pipe	1056.848
Tool Make up Time	2.0 Hr

APPENDIX 10: SYNTHETIC SEISMIC INFORMATION


Red Brook #2 Synthetic Seismogram
200.0
250.0
300.0
350.0
400.0
450.0
500.0
550.0
600.0
650.0
700.0
750.0
800.0
850.0
900.0
950.0
1000.0
Basal Anhydrite
Ship Cove
Basement
Gamma Ray
0.0
200.0
GR:
Basal Anhydrite
Ship Cove
Basement
Sonic Velocity
4000.0
6000.0
CAC:
Basal Anhydrite
Ship Cove
Basement
Zero phase Ricker

APPENDIX 11: ZVSP REPORT

ZERO OFFSET VSP
&
ACOUSTIC LOG CALIBRATION

REPORT

for

Vulcan Minerals Inc.

Well: Vulcan Investcan Red Brook #2
Field: St. George Basin
Location: Canada

Report Status:	**Final Report**
Authors:	Zhiqiang Luo
Reviewer:	Nicholas Dray
Date:	December 2009

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VSfusion
A Baker Hughes - CGGVeritas Company

In the processing and interpretation of the data, VSFusion employees have relied on experience and have exercised their best judgment. However, since all interpretations are opinions based on inferences from acoustical or other measurements, we cannot and we do not guarantee the accuracy or the correctness of any interpretations. As such, we shall not be liable for any loss, damages or expenses resulting from reliance on such interpretation.

CONTENTS

1 ACQUISTION AND PROCESSING

1.1 INTRODUCTION

Baker Atlas conducted a Zero Offset VSP Survey (ZVSP) for **Vulcan Minerals Inc.** in their **Vulcan Investcan Red Brook #2** well, located in St. George basin field, Canada.

The objectives of the VSP survey were to:

- Provide time-depth information
- Calibrate the acoustic log
- Generate a VSP corridor stack

At the time of the survey, the well had been drilled to depth of 1,955 m and cased to a depth of 885 m. All measured depths are referenced to the Kelly Bushing *(KB.)* elevation of 63.4 m above MSL. The ground elevation at the wellhead was 57.1 m above mean sea level.

The well had a maximum deviation of 9.53^{o} at 1,515 m. KB. A well deviation survey report was used to correct the wireline measured depths to true vertical depth. A copy of the deviation survey is included as Enclosure 1B in the back of this report. The display of the deviation survey is included (Figure 2A).

Table 1 is a summary of the survey acquisition information.

Table 1: Survey information

Run #	Survey Type	Depth Range from KB	# Levels	# of files	Tool	# Receivers
1	VSP	100 – 1,955 m	120	598	ASR	2 Level MLR

1.2 DATA ACQUISITION

The survey began at 15:58 *hrs* on November 27, 2009 and was finished at 00:47 *hrs* on November 28, 2009.

The source used for both runs of the ZVSP survey was 500 cu. In. H-Rack airgun array. The array was positioned at an offset of 63.97 m from the wellhead at a bearing of 125 deg. from North. The gun array was submerged at a depth of 0.5 m below ground level. The ground elevation of the source was 57.1 m above MSL. A reference hydrophone was positioned 1.4 m from the gun source array. The reference hydrophone was used for the time break correction and to monitor the source signature.

A 3-component, 2 level, ASR downhole receiver array was used to record the survey. The inter-tool spacing was 15 m.

At the start of the survey, the wireline depth sensor was zeroed at the KB elevation and the tool was lowered down the well. As the tool was lowered down the well, it was stopped at a number of depths to check the equipment performance and depth control before reaching TD. The tool was stopped at 800, 1820, and 1850 m. KB going down the well until reaching a maximum depth of 1955 m. KB. VSP recording then proceeded as the geophone was raised to the shallowest station depth of 100 m. KB.

Data was gathered at 120 downhole receiver stations. There were a total of 598 files acquired during the survey. Data was recorded for 5 seconds using a one millisecond sampling rate.

The VSP survey configuration is shown on Figure 2. Enclosure 1 contains the Field Engineer's reports for the survey.

For depth correlation, a gamma-ray wireline tool was placed at the top of the array tool to check on the geophone depth locations. As the receiver descends into the borehole, measurements are taken periodically using the gamma ray tool. Readings from the original wireline gamma ray and the receiver gamma ray are correlated. If a difference between the two gamma ray readings is found, the geophone tool depth is corrected to the original gamma-ray log depth. This ensures that the borehole seismic data will depth tie the wireline logs.

1.3 DATA PROCESSING

1.3.1 - Edit and Stack Raw Data

The three component digital data were reformatted and displayed. To determine the true digital start time, the true reference signal traces were examined and their onset times were picked. Each downhole geophone trace was subsequently shifted by the first break arrival time of its corresponding true reference trace. These arrival times were then corrected by 3.13 ms to compensate for the instrument (gun) delay. Each downhole geophone trace was subsequently shifted by the first break time value of the corresponding reference hydrophone trace. This shift will reference the downhole geophone traces to the depth of the source.

The downhole geophone traces for each depth level were edited as necessary and then stacked using a median summation algorithm. First break times were picked for each stacked trace. *Enclosure 5* displays the stacked raw data (3-component) for the VSP survey.

The vertical component was used for VSP processing and velocity analysis.

The accuracy of the depth sensor was checked by comparing the first-break times of the same levels occupied during the down and up runs of the tool and between runs. The time agreement was found to be acceptable. For consistency, the data occupied during the down trip of the tool was not used in any of the computations.

1.3.2 - Velocity Survey Computations

The observed first break times at each depth were converted to vertical times and then referenced to the seismic reference datum (SRD) of ground level using a correction velocity of 1,500 m/sec. These time-depth pairs were then used as the input data for the velocity survey computations. The computed average, RMS, and interval velocities are listed in Section 2 and displayed in *Enclosure 2*. The geophone levels not used in the computations are denoted on the time / depth listing by an asterisk and on the display by a small red box on the average/interval velocity track.

1.3.3- Acoustic Log Calibration

The input log data consisted of acoustic, density, caliper and gamma ray logs over the interval of 202.4 – 1,954.9 m measured depth below KB.

Prior to performing the acoustic log calibration, the VSP data are edited to remove levels affected by noise or casing arrivals. The data are then interactively examined during the calibration routine to check the first arrival times and ensure that no anomalous data are used.

For the log calibration, the acoustic log is integrated to produce a depth-indexed time log. The difference between the corrected checkshot time of the shallowest checkshot level (within the logged interval) and the corresponding log derived time is computed and the time log is then shifted by adding this value to all values of the acoustic time log. This will force the acoustic log to time tie the checkshot time at the depth of the first checkshot.

At each checkshot depth the time difference (drift) between the checkshot times and the acoustic times are computed. Calibration points are selected at discrete depth levels. The depths of these calibration points are chosen using two criteria. The first is that the calibration points divide the drift curve into intervals that contain approximately linear drift. The second is that the calibration points occur at a depth where a velocity contrast (typically formation boundaries) already exists. Choosing the calibration point at an area that exhibits a velocity change insures that no new (calibration generated) velocity contrasts are created. The calibration points used in the acoustic calibration are indicated with a triangular mark on the drift curve displayed in *Enclosure 2*.

Over each calibration interval, a constant time shift for each log sample is computed using the linear drift curve slope value. This constant time is added to all acoustic log values over the calibration interval. This effectively shifts the acoustic log over the calibration interval to match the check shot generated velocity values. This process is done over each calibration interval on the acoustic log. The calibrated log is then re-integrated and a residual drift curve is computed using the same methodology discussed above. The residual drift curve is shown in *Enclosure 2*.

Sections 2.1, 2.2, 2.3, & 2.4 contain the tabulated depth-time and velocity tables. Sections 3.1 & 3.2 contain the acoustic log calibration details.

The calibrated acoustic log corrected to TVD is supplied in digital form as an ascii file on the accompanying CD.

1.3.4 - ZVSP Processing

Spherical Divergence Correction

A compensation for amplitude decay due to spherical divergence was applied to the stacked vertical component data using an exponential gain function of T**1.8 (where T is the recorded time).

A display of the gained VSP total wavefield is shown in *panel 1* of *Enclosure 3*.

An F-K spectral analysis display of the gained VSP total wavefield is shown as Figure 3.

There is a strong tube wave present in the data set. This has largely been attenuated using a 11-trace dip median filter. Data after tube wave attenuation are shown on *panel 2 of Enclosure 3* and in F-K spectral analysis display as Figure 4.

Wavefield Separation

The upcoming and downgoing wavefields were separated using a median filter. The VSP total wavefield was time aligned using the direct arrival time of each trace. This time shift will align the compressional P downgoing wavefield. A constant 200 ms shift is then applied to ensure that no data is lost when the time shifts are removed.

An 11-trace median filter was applied to the aligned VSP total wavefield. This filter will pass the downgoing wavefield. The downgoing wavefield is then arithmetically subtracted from the total wavefield. This subtracted dataset will contain the upcoming P waves, as well as any residual wave energy and noise.

A zero phase 10(18)-80(36) Hz (dB/Oct) bandpass filter was applied to the downgoing and residual upcoming wavefield.

The downgoing wavefield after wavefield separation is shown in *panel 3* of *Enclosure 3*.

The residual upcoming wavefield after wavefield separation is shown in *panel 5* of *Enclosure 3*.

Residual Upcoming Wavefield Enhancement

The residual upcoming wavefield is time aligned to two-way time. A 3-trace median filter was applied to the upcoming wavefield to remove unwanted wave modes and unwanted residual energy left in the dataset after the wavefield separation.

A zero phase 10(18)-80(36) Hz (dB/Oct) bandpass filter was applied to the enhanced upcoming wavefield. The upcoming wavefield is shown in *panel 7* of *Enclosure 3*.

VSP Downwave Deconvolution

VSP downwave deconvolution is a deterministic process. Because the downgoing wavetrain can be isolated from the VSP dataset, the reflectivity response of the earth at the well location is known for the VSP source wavelet. The downgoing VSP wavetrain contains the direct arrival source wavelet followed by multiple arrivals. Every event that follows the direct arrival is a downgoing multiple reflection.

The deconvolution process will analyze the downgoing wavetrain and compute an operator that will collapse a user specified portion of the downgoing wavetrain to a unit spike. This operator is then applied to the upcoming waves. The VSP downwave deconvolution will shape the input source wavelet to zero phase and collapse upcoming multiple reflections generated above the depth of the deepest receiver.

A 500 ms operator was used to collapse the downgoing wavetrain to a unit spike. A zero phase 10(18)-80(36) Hz (dB/Oct) bandpass filter was applied to the deconvolved data. The deconvolved downgoing and upcoming wavefields are shown in *panel 4* and *panel 8* of *Enclosure 3*.

Datum Correction

The upcoming wavefield data was time corrected to seismic datum using a correctional velocity of 1,500 m/sec.

Post Deconvolution Median Filter

A 3-trace median filter is applied to the datum corrected upcoming waves. This filter will remove random high frequency noise generated by the deconvolution process. A zero phase 10(18)-80(36) Hz (dB/Oct) bandpass filter was applied to the median filtered upcoming wavefield. The post deconvolution median filtered upcoming wavefield is shown in *panel 9* of *Enclosure 3*.

Corridor Mute and Stack

A narrow time window close to the first arrival time on each trace was carefully chosen. The time window is designed to include only traces whose reflection character is similar enough to be included in the stack and is kept relatively short to exclude long travel path reflections. The data that lies outside of the stacking corridor is muted. The display of the corridor window is shown in *panel 10* of *Enclosure 3*.

The data in this time window is then stacked to generate a single VSP corridor stack trace. This stacked trace is repeated 16 times for visual clarity and represents the seismic response at the wellbore. The corridor stack, normal and reverse polarity, is shown in *panel 11* and *panel 12 of Enclosure 3.*

Bandpass filters of 10(18)-80(36), 10(18)-60(36), 10(18)-50(36), 10(18)-40(36), 10(18)-30(36) and 10(18)-20(36) Hz (dB/Oct) were applied to the corridor stack data. Displays of the corridor stacks for both normal and reversed polarities at six frequency bands are included on *Enclosure 4* at 5 in/sec (Corridor Stack Display).

Polarity

VSP data after deconvolution, normal polarity shows a positive reflection coefficient as a peak. This corresponds to SEG convention.

1.4 ACQUISITION PARAMETERS

Client:	**Vulcan Minerals Inc.**
Well:	**Vulcan Investcan Red Brook #2**
Location:	**Canada**
Survey Type:	Zero Offset VSP
Date Survey Completed:	28 November, 2009
Wireline Contractor:	Baker Atlas
Casing:	339.7 mm from 0 to 220.2 m MDKB
	244.5 mm from 0 to 885 m MDKB
Total Depth:	1,955 m MDKB

Elevations:

Kelly Bushing Elevation:	63.4 m above sea level
Ground Elevation at Wellhead:	57.1 m above mean sea level
Seismic Datum:	Ground level

Recording System:

Type:	VSProwess
Format:	RCD
Record Length:	5 seconds
Sample Rate:	1 msec

Geophone

Geophone Type:	3-component, 2 level ASR
Total Number of Levels Occupied:	120 levels
Shallowest Geophone Level:	100 m (K.B.)
Deepest Geophone Level:	1,955 m (K.B.)
Quality of Geophone Breaks:	fair to good

Source:

Type:	500 cu. in. H-Rack Airgun
Source Elevation:	57.1 m above mean sea level
Source Depth:	0.5 m below ground elevation
Source Location:	63.97 m from wellhead with azimuth 125°N

Personnel:

Seismic Observer:	M. Smith
Client Representative:	Phonse Fagan

2 VELOCITY SURVEY COMPUTATIONS

2.1 VELOCITY SURVEY

CLIENT	VULCAN MINERALS INC.
WELL	VULCAN INVESTCAN RED BROOK #2
AREA	CANADA
CONTRACTOR	BAKER ATLAS
SURVEY DATE	28 NOV 09
SURVEY UNITS	M
RCVR REF. ELEVATION	63.40 M ABOVE SEA LEVEL
DATUM ELEVATION	57.10 M ABOVE SEA LEVEL
KB ELEVATION	63.40 M ABOVE SEA LEVEL
WELL GROUND ELEVATION	57.10 M ABOVE SEA LEVEL
DATUM CORRECT. VELOCITY	1500.00 M /SEC
SOURCE TYPE	AIR GUN
GEOPHONE TYPE	ANALOG
SAMPLE RATE	1.00 MSEC
WELL CASING	339.7 MM FROM 0 TO 220.2 M
	244.5 MM FROM 0 TO 885 M

VULCAN MINERALS INC.
WELL VULCAN INVESTCAN RED BROOK #2

2.2 DIRECTIONAL SURVEY

CONTRACTOR BAKER ATLAS
SURVEY DATE 28 NOV 09
REFERENCE ELEVATION 63.40 M ABOVE SEA LEVEL

MEASURED DEPTH	VERTICAL DEPTH	NORTH-SOUTH COORDINATE NORTH = +	EAST-WEST COORDINATE EAST = +
(M)	(M)	(M)	(M)
0.00	0.00	0.00	0.00
890.00	888.33	45.71	29.66
895.00	893.29	45.95	30.22
900.00	898.26	46.18	30.77
905.00	903.22	46.42	31.33
910.00	908.19	46.64	31.88
915.00	913.15	46.87	32.44
920.00	918.11	47.09	33.00
925.00	923.08	47.32	33.56
930.00	928.04	47.54	34.13
935.00	933.00	47.76	34.70
940.00	937.96	47.98	35.28
945.00	942.92	48.20	35.86
950.00	947.88	48.42	36.44
955.00	952.84	48.63	37.03
960.00	957.80	48.85	37.63
965.00	962.76	49.06	38.22
970.00	967.72	49.29	38.82
975.00	972.68	49.51	39.43
980.00	977.64	49.74	40.04
985.00	982.60	49.96	40.65
990.00	987.55	50.18	41.27
995.00	992.51	50.41	41.90
1000.00	997.46	50.63	42.53
1005.00	1002.42	50.86	43.16
1010.00	1007.37	51.09	43.80
1015.00	1012.32	51.32	44.44
1020.00	1017.28	51.55	45.09
1025.00	1022.23	51.77	45.75
1030.00	1027.18	51.99	46.41
1035.00	1032.13	52.22	47.07
1040.00	1037.08	52.45	47.74
1045.00	1042.03	52.68	48.41
1050.00	1046.98	52.91	49.09
1055.00	1051.93	53.15	49.77
1060.00	1056.87	53.37	50.46
1065.00	1061.82	53.60	51.15
1070.00	1066.77	53.82	51.85
1075.00	1071.71	54.04	52.55
1080.00	1076.66	54.25	53.25
1085.00	1081.60	54.46	53.96
1090.00	1086.55	54.66	54.68
1095.00	1091.49	54.85	55.40
1100.00	1096.43	55.04	56.13
1105.00	1101.38	55.23	56.86
1110.00	1106.32	55.42	57.60
1115.00	1111.26	55.60	58.34
1120.00	1116.20	55.77	59.09
1125.00	1121.14	55.94	59.84

MEASURED DEPTH	VERTICAL DEPTH	NORTH-SOUTH COORDINATE NORTH = +	EAST-WEST COORDINATE EAST = +
(M)	(M)	(M)	(M)
1130.00	1126.08	56.10	60.60
1135.00	1131.02	56.26	61.36
1140.00	1135.96	56.40	62.12
1145.00	1140.90	56.54	62.88
1150.00	1145.84	56.67	63.65
1155.00	1150.78	56.79	64.41
1160.00	1155.72	56.90	65.18
1165.00	1160.66	57.00	65.96
1170.00	1165.59	57.10	66.74
1175.00	1170.53	57.19	67.51
1180.00	1175.47	57.28	68.29
1185.00	1180.41	57.36	69.07
1190.00	1185.35	57.43	69.86
1195.00	1190.28	57.50	70.64
1200.00	1195.22	57.56	71.43
1205.00	1200.16	57.62	72.21
1210.00	1205.10	57.68	73.00
1215.00	1210.03	57.73	73.79
1220.00	1214.97	57.77	74.58
1225.00	1219.91	57.80	75.37
1230.00	1224.84	57.82	76.16
1235.00	1229.78	57.83	76.96
1240.00	1234.72	57.83	77.76
1245.00	1239.65	57.82	78.56
1250.00	1244.59	57.80	79.36
1255.00	1249.52	57.77	80.16
1260.00	1254.46	57.73	80.95
1265.00	1259.39	57.68	81.75
1270.00	1264.33	57.62	82.54
1275.00	1269.27	57.55	83.34
1280.00	1274.20	57.47	84.13
1285.00	1279.14	57.38	84.92
1290.00	1284.08	57.27	85.70
1295.00	1289.02	57.16	86.46
1300.00	1293.96	57.04	87.21
1305.00	1298.90	56.91	87.96
1310.00	1303.84	56.78	88.71
1315.00	1308.78	56.64	89.46
1320.00	1313.72	56.49	90.21
1325.00	1318.67	56.34	90.96
1330.00	1323.61	56.18	91.71
1335.00	1328.55	56.01	92.46
1340.00	1333.49	55.83	93.22
1345.00	1338.43	55.64	93.97
1350.00	1343.36	55.43	94.73
1355.00	1348.30	55.21	95.49
1360.00	1353.24	54.99	96.25
1365.00	1358.17	54.76	97.02
1370.00	1363.11	54.52	97.80
1375.00	1368.04	54.29	98.57
1380.00	1372.97	54.04	99.34
1385.00	1377.91	53.79	100.11
1390.00	1382.84	53.53	100.88
1395.00	1387.77	53.26	101.66
1400.00	1392.71	52.98	102.43
1405.00	1397.64	52.69	103.18
1410.00	1402.57	52.39	103.94
1415.00	1407.51	52.09	104.68

MEASURED DEPTH	VERTICAL DEPTH	NORTH-SOUTH COORDINATE NORTH = +	EAST-WEST COORDINATE EAST = +
(M)	(M)	(M)	(M)
1420.00	1412.44	51.78	105.43
1425.00	1417.38	51.47	106.17
1430.00	1422.31	51.16	106.92
1435.00	1427.25	50.84	107.65
1440.00	1432.18	50.51	108.39
1445.00	1437.12	50.18	109.13
1450.00	1442.05	49.84	109.86
1455.00	1446.99	49.50	110.58
1460.00	1451.92	49.16	111.31
1465.00	1456.86	48.81	112.03
1470.00	1461.79	48.46	112.75
1475.00	1466.73	48.10	113.47
1480.00	1471.66	47.74	114.20
1485.00	1476.59	47.37	114.92
1490.00	1481.53	46.99	115.64
1495.00	1486.46	46.61	116.37
1500.00	1491.39	46.21	117.09
1505.00	1496.32	45.81	117.81
1510.00	1501.25	45.40	118.53
1515.00	1506.18	44.99	119.25
1520.00	1511.12	44.57	119.96
1525.00	1516.05	44.15	120.67
1530.00	1520.98	43.72	121.37
1535.00	1525.91	43.30	122.08
1540.00	1530.84	42.87	122.78
1545.00	1535.78	42.44	123.48
1550.00	1540.71	42.01	124.17
1555.00	1545.64	41.57	124.86
1560.00	1550.57	41.14	125.55
1565.00	1555.51	40.70	126.24
1570.00	1560.44	40.28	126.93
1575.00	1565.38	39.85	127.61
1580.00	1570.31	39.42	128.29
1585.00	1575.25	39.00	128.96
1590.00	1580.18	38.58	129.64
1595.00	1585.12	38.17	130.31
1600.00	1590.06	37.77	130.97
1605.00	1595.00	37.37	131.62
1610.00	1599.95	36.97	132.26
1615.00	1604.89	36.58	132.89
1620.00	1609.84	36.19	133.52
1625.00	1614.78	35.81	134.13
1630.00	1619.73	35.43	134.73
1635.00	1624.68	35.05	135.33
1640.00	1629.63	34.68	135.92
1645.00	1634.59	34.31	136.50
1650.00	1639.54	33.94	137.09
1655.00	1644.49	33.58	137.67
1660.00	1649.45	33.23	138.25
1665.00	1654.40	32.87	138.83
1670.00	1659.35	32.51	139.41
1675.00	1664.30	32.15	139.99
1680.00	1669.26	31.79	140.59
1685.00	1674.21	31.43	141.18
1690.00	1679.16	31.07	141.78
1695.00	1684.11	30.71	142.39
1700.00	1689.06	30.35	142.99
1705.00	1694.01	29.99	143.61

MEASURED DEPTH (M)	VERTICAL DEPTH (M)	NORTH-SOUTH COORDINATE NORTH = + (M)	EAST-WEST COORDINATE EAST = + (M)
1710.00	1698.96	29.63	144.23
1715.00	1703.90	29.27	144.86
1720.00	1708.85	28.91	145.49
1725.00	1713.80	28.56	146.13
1730.00	1718.74	28.20	146.77
1735.00	1723.69	27.84	147.41
1740.00	1728.63	27.49	148.06
1745.00	1733.58	27.14	148.72
1750.00	1738.52	26.80	149.38
1755.00	1743.46	26.45	150.04
1760.00	1748.41	26.10	150.71
1765.00	1753.35	25.76	151.37
1770.00	1758.30	25.41	152.03
1775.00	1763.24	25.05	152.69
1780.00	1768.18	24.71	153.34
1785.00	1773.13	24.36	153.99
1790.00	1778.07	24.01	154.65
1795.00	1783.02	23.66	155.31
1800.00	1787.96	23.30	155.97
1805.00	1792.90	22.95	156.63
1810.00	1797.85	22.59	157.29
1815.00	1802.79	22.22	157.96
1820.00	1807.73	21.86	158.62
1825.00	1812.67	21.48	159.29
1830.00	1817.61	21.11	159.96
1835.00	1822.56	20.73	160.62
1840.00	1827.50	20.36	161.29
1845.00	1832.44	19.99	161.95
1850.00	1837.38	19.60	162.62
1855.00	1842.32	19.22	163.28
1860.00	1847.26	18.83	163.95
1865.00	1852.20	18.45	164.63
1870.00	1857.14	18.07	165.31
1875.00	1862.07	17.69	166.00
1880.00	1867.01	17.31	166.69
1885.00	1871.95	16.93	167.38
1890.00	1876.89	16.54	168.07
1895.00	1881.82	16.16	168.75
1900.00	1886.76	15.78	169.43
1905.00	1891.70	15.40	170.10
1910.00	1896.65	15.02	170.77
1915.00	1901.59	14.66	171.44
1920.00	1906.53	14.28	172.12
1925.00	1911.47	13.91	172.80
1930.00	1916.40	13.53	173.48
1935.00	1921.34	13.16	174.17
1940.00	1926.28	12.78	174.86
1956.00	1942.10	11.78	176.86

VULCAN MINERALS INC.
WELL VULCAN INVESTCAN RED BROOK #2

2.3 SOURCE / RECEIVER GEOMETRY TABLE

RECEIVER REFERENCE ELEVATION = 63.40 M ABOVE SEA LEVEL
SOURCE / RECEIVER COORDINATES ARE REFERENCED TO WELLHEAD
SOURCE / RECEIVER (S-R) OFFSET IS PLAN VIEW

---------- RECEIVER ----------				--------- SOURCE ----------				OFFSET
MEASURED DEPTH (DGM) (M)	VERT. DEPTH (M)	X COORD. (M)	Y COORD. (M)	ELEV (ES) (M)	DEPTH (DS) (M)	X COORD. (M)	Y COORD. (M)	(S-R) (M)
100.0	99.8	3.3	5.1	57.1	0.5	-36.7	-52.4	70.1
115.0	114.8	3.8	5.9	57.1	0.5	-36.7	-52.4	71.0
200.0	199.6	6.7	10.3	57.1	0.5	-36.7	-52.4	76.2
215.0	214.6	7.2	11.0	57.1	0.5	-36.7	-52.4	77.1
230.0	229.6	7.7	11.8	57.1	0.5	-36.7	-52.4	78.0
245.0	244.5	8.2	12.6	57.1	0.5	-36.7	-52.4	79.0
260.0	259.5	8.7	13.4	57.1	0.5	-36.7	-52.4	79.9
275.0	274.5	9.2	14.1	57.1	0.5	-36.7	-52.4	80.8
290.0	289.5	9.7	14.9	57.1	0.5	-36.7	-52.4	81.7
305.0	304.4	10.2	15.7	57.1	0.5	-36.7	-52.4	82.6
320.0	319.4	10.7	16.4	57.1	0.5	-36.7	-52.4	83.6
335.0	334.4	11.2	17.2	57.1	0.5	-36.7	-52.4	84.5
350.0	349.3	11.7	18.0	57.1	0.5	-36.7	-52.4	85.4
365.0	364.3	12.2	18.7	57.1	0.5	-36.7	-52.4	86.3
380.0	379.3	12.7	19.5	57.1	0.5	-36.7	-52.4	87.2
395.0	394.3	13.2	20.3	57.1	0.5	-36.7	-52.4	88.1
410.0	409.2	13.7	21.1	57.1	0.5	-36.7	-52.4	89.1
425.0	424.2	14.2	21.8	57.1	0.5	-36.7	-52.4	90.0
440.0	439.2	14.7	22.6	57.1	0.5	-36.7	-52.4	90.9
455.0	454.1	15.2	23.4	57.1	0.5	-36.7	-52.4	91.8
470.0	469.1	15.7	24.1	57.1	0.5	-36.7	-52.4	92.7
485.0	484.1	16.2	24.9	57.1	0.5	-36.7	-52.4	93.7
500.0	499.1	16.7	25.7	57.1	0.5	-36.7	-52.4	94.6
515.0	514.0	17.2	26.5	57.1	0.5	-36.7	-52.4	95.5
530.0	529.0	17.7	27.2	57.1	0.5	-36.7	-52.4	96.4
545.0	544.0	18.2	28.0	57.1	0.5	-36.7	-52.4	97.3
560.0	558.9	18.7	28.8	57.1	0.5	-36.7	-52.4	98.2
575.0	573.9	19.2	29.5	57.1	0.5	-36.7	-52.4	99.2
590.0	588.9	19.7	30.3	57.1	0.5	-36.7	-52.4	100.1
605.0	603.9	20.2	31.1	57.1	0.5	-36.7	-52.4	101.0
620.0	618.8	20.7	31.8	57.1	0.5	-36.7	-52.4	101.9
635.0	633.8	21.2	32.6	57.1	0.5	-36.7	-52.4	102.8
650.0	648.8	21.7	33.4	57.1	0.5	-36.7	-52.4	103.8
665.0	663.8	22.2	34.2	57.1	0.5	-36.7	-52.4	104.7
680.0	678.7	22.7	34.9	57.1	0.5	-36.7	-52.4	105.6
695.0	693.7	23.2	35.7	57.1	0.5	-36.7	-52.4	106.5
710.0	708.7	23.7	36.5	57.1	0.5	-36.7	-52.4	107.4
725.0	723.6	24.2	37.2	57.1	0.5	-36.7	-52.4	108.3
740.0	738.6	24.7	38.0	57.1	0.5	-36.7	-52.4	109.3
755.0	753.6	25.2	38.8	57.1	0.5	-36.7	-52.4	110.2
770.0	768.6	25.7	39.5	57.1	0.5	-36.7	-52.4	111.1
785.0	783.5	26.2	40.3	57.1	0.5	-36.7	-52.4	112.0
800.0	798.5	26.7	41.1	57.1	0.5	-36.7	-52.4	112.9
815.0	813.5	27.2	41.9	57.1	0.5	-36.7	-52.4	113.9
830.0	828.4	27.7	42.6	57.1	0.5	-36.7	-52.4	114.8
845.0	843.4	28.2	43.4	57.1	0.5	-36.7	-52.4	115.7
860.0	858.4	28.7	44.2	57.1	0.5	-36.7	-52.4	116.6
875.0	873.4	29.2	44.9	57.1	0.5	-36.7	-52.4	117.5

---------- RECEIVER ----------				--------- SOURCE ----------				OFFSET
MEASURED DEPTH (DGM) (M)	VERT. DEPTH (M)	X COORD. (M)	Y COORD. (M)	ELEV (ES) (M)	DEPTH (DS) (M)	X COORD. (M)	Y COORD. (M)	(S-R) (M)
890.0	888.3	29.7	45.7	57.1	0.5	-36.7	-52.4	118.4
905.0	903.2	31.3	46.4	57.1	0.5	-36.7	-52.4	120.0
920.0	918.1	33.0	47.1	57.1	0.5	-36.7	-52.4	121.5
935.0	933.0	34.7	47.8	57.1	0.5	-36.7	-52.4	123.0
950.0	947.9	36.4	48.4	57.1	0.5	-36.7	-52.4	124.6
965.0	962.8	38.2	49.1	57.1	0.5	-36.7	-52.4	126.1
980.0	977.6	40.0	49.7	57.1	0.5	-36.7	-52.4	127.8
995.0	992.5	41.9	50.4	57.1	0.5	-36.7	-52.4	129.4
1010.0	1007.4	43.8	51.1	57.1	0.5	-36.7	-52.4	131.1
1025.0	1022.2	45.8	51.8	57.1	0.5	-36.7	-52.4	132.9
1040.0	1037.1	47.7	52.5	57.1	0.5	-36.7	-52.4	134.6
1055.0	1051.9	49.8	53.2	57.1	0.5	-36.7	-52.4	136.4
1070.0	1066.8	51.8	53.8	57.1	0.5	-36.7	-52.4	138.3
1085.0	1081.6	54.0	54.5	57.1	0.5	-36.7	-52.4	140.1
1100.0	1096.4	56.1	55.0	57.1	0.5	-36.7	-52.4	142.0
1115.0	1111.3	58.3	55.6	57.1	0.5	-36.7	-52.4	143.9
1130.0	1126.1	60.6	56.1	57.1	0.5	-36.7	-52.4	145.7
1145.0	1140.9	62.9	56.5	57.1	0.5	-36.7	-52.4	147.6
1160.0	1155.7	65.2	56.9	57.1	0.5	-36.7	-52.4	149.4
1175.0	1170.5	67.5	57.2	57.1	0.5	-36.7	-52.4	151.2
1190.0	1185.3	69.9	57.4	57.1	0.5	-36.7	-52.4	153.0
1205.0	1200.2	72.2	57.6	57.1	0.5	-36.7	-52.4	154.8
1220.0	1215.0	74.6	57.8	57.1	0.5	-36.7	-52.4	156.6
1235.0	1229.8	77.0	57.8	57.1	0.5	-36.7	-52.4	158.3
1250.0	1244.6	79.4	57.8	57.1	0.5	-36.7	-52.4	160.0
1265.0	1259.4	81.8	57.7	57.1	0.5	-36.7	-52.4	161.7
1280.0	1274.2	84.1	57.5	57.1	0.5	-36.7	-52.4	163.3
1295.0	1289.0	86.5	57.2	57.1	0.5	-36.7	-52.4	164.8
1310.0	1303.8	88.7	56.8	57.1	0.5	-36.7	-52.4	166.3
1325.0	1318.7	91.0	56.3	57.1	0.5	-36.7	-52.4	167.7
1340.0	1333.5	93.2	55.8	57.1	0.5	-36.7	-52.4	169.1
1355.0	1348.3	95.5	55.2	57.1	0.5	-36.7	-52.4	170.5
1370.0	1363.1	97.8	54.5	57.1	0.5	-36.7	-52.4	171.8
1385.0	1377.9	100.1	53.8	57.1	0.5	-36.7	-52.4	173.2
1400.0	1392.7	102.4	53.0	57.1	0.5	-36.7	-52.4	174.5
1415.0	1407.5	104.7	52.1	57.1	0.5	-36.7	-52.4	175.8
1430.0	1422.3	106.9	51.2	57.1	0.5	-36.7	-52.4	177.1
1445.0	1437.1	109.1	50.2	57.1	0.5	-36.7	-52.4	178.3
1460.0	1451.9	111.3	49.2	57.1	0.5	-36.7	-52.4	179.5
1475.0	1466.7	113.5	48.1	57.1	0.5	-36.7	-52.4	180.7
1490.0	1481.5	115.6	47.0	57.1	0.5	-36.7	-52.4	181.9
1505.0	1496.3	117.8	45.8	57.1	0.5	-36.7	-52.4	183.1
1520.0	1511.1	120.0	44.6	57.1	0.5	-36.7	-52.4	184.2
1535.0	1525.9	122.1	43.3	57.1	0.5	-36.7	-52.4	185.4
1550.0	1540.7	124.2	42.0	57.1	0.5	-36.7	-52.4	186.5
1565.0	1555.5	126.2	40.7	57.1	0.5	-36.7	-52.4	187.7
1580.0	1570.3	128.3	39.4	57.1	0.5	-36.7	-52.4	188.8
1595.0	1585.1	130.3	38.2	57.1	0.5	-36.7	-52.4	190.0
1610.0	1599.9	132.3	37.0	57.1	0.5	-36.7	-52.4	191.1
1625.0	1614.8	134.1	35.8	57.1	0.5	-36.7	-52.4	192.3
1640.0	1629.6	135.9	34.7	57.1	0.5	-36.7	-52.4	193.3
1655.0	1644.5	137.7	33.6	57.1	0.5	-36.7	-52.4	194.4
1670.0	1659.3	139.4	32.5	57.1	0.5	-36.7	-52.4	195.5
1685.0	1674.2	141.2	31.4	57.1	0.5	-36.7	-52.4	196.6
1700.0	1689.1	143.0	30.4	57.1	0.5	-36.7	-52.4	197.8
1715.0	1703.9	144.9	29.3	57.1	0.5	-36.7	-52.4	199.1
1730.0	1718.7	146.8	28.2	57.1	0.5	-36.7	-52.4	200.4

---------- RECEIVER ----------				--------- SOURCE ----------				OFFSET
MEASURED DEPTH (DGM) (M)	VERT. DEPTH (M)	X COORD. (M)	Y COORD. (M)	ELEV (ES) (M)	DEPTH (DS) (M)	X COORD. (M)	Y COORD. (M)	(S-R) (M)
1745.0	1733.6	148.7	27.1	57.1	0.5	-36.7	-52.4	201.8
1760.0	1748.4	150.7	26.1	57.1	0.5	-36.7	-52.4	203.2
1775.0	1763.2	152.7	25.0	57.1	0.5	-36.7	-52.4	204.6
1790.0	1778.1	154.6	24.0	57.1	0.5	-36.7	-52.4	206.0
1805.0	1792.9	156.6	23.0	57.1	0.5	-36.7	-52.4	207.5
1820.0	1807.7	158.6	21.9	57.1	0.5	-36.7	-52.4	209.0
1835.0	1822.6	160.6	20.7	57.1	0.5	-36.7	-52.4	210.4
1850.0	1837.4	162.6	19.6	57.1	0.5	-36.7	-52.4	211.9
1865.0	1852.2	164.6	18.5	57.1	0.5	-36.7	-52.4	213.4
1880.0	1867.0	166.7	17.3	57.1	0.5	-36.7	-52.4	215.0
1895.0	1881.8	168.8	16.2	57.1	0.5	-36.7	-52.4	216.6
1910.0	1896.7	170.8	15.0	57.1	0.5	-36.7	-52.4	218.1
1925.0	1911.5	172.8	13.9	57.1	0.5	-36.7	-52.4	219.7
1940.0	1926.3	174.9	12.8	57.1	0.5	-36.7	-52.4	221.4
1955.0	1941.1	176.7	11.8	57.1	0.5	-36.7	-52.4	222.9

VULCAN MINERALS INC.
WELL VULCAN INVESTCAN RED BROOK #2

2.4 TIME / DEPTH INFORMATION TABLE

ALL TIMES ARE ONE-WAY TIMES
* = NOT USED IN VELOCITY COMPUTATIONS

DATUM ELEVATION 57.10 M ABOVE SEA LEVEL
DATUM CORRECT. VELOCITY 1500.00 M /SEC

MEASURED GEOPHONE DEPTH (DGM) (M)	RAW TIME PICK (MS)	SRC-REC DIST. PLAN-VIEW (SRC_REC) (M)	COS(I)	TIME CORRECTION COS (MS)	DATUM (MS)	VERTICAL TIME (TGD) (MS)	
100.0	52.2	70.1	0.799	-10.5	0.3	42.0	
115.0	58.0	71.0	0.836	-9.5	0.3	48.8	
200.0	76.9	76.2	0.930	-5.4	0.3	71.8	
215.0	79.8	77.1	0.938	-5.0	0.3	75.2	*
230.0	82.3	78.0	0.944	-4.6	0.3	78.0	*
245.0	85.0	79.0	0.949	-4.3	0.3	81.0	*
260.0	87.8	79.9	0.953	-4.1	0.3	84.1	
275.0	91.0	80.8	0.957	-3.9	0.3	87.4	*
290.0	94.2	81.7	0.961	-3.7	0.3	90.9	*
305.0	97.2	82.6	0.964	-3.5	0.3	94.0	*
320.0	100.1	83.6	0.966	-3.4	0.3	97.1	
335.0	103.1	84.5	0.968	-3.3	0.3	100.2	*
350.0	106.1	85.4	0.970	-3.2	0.3	103.3	*
365.0	109.3	86.3	0.972	-3.1	0.3	106.5	*
380.0	112.2	87.2	0.974	-3.0	0.3	109.6	
395.0	115.4	88.1	0.975	-2.9	0.3	112.9	*
410.0	118.6	89.1	0.976	-2.8	0.3	116.1	*
425.0	121.9	90.0	0.978	-2.7	0.3	119.5	*
440.0	125.2	90.9	0.979	-2.7	0.3	122.9	
455.0	128.4	91.8	0.980	-2.6	0.3	126.1	*
470.0	131.4	92.7	0.980	-2.6	0.3	129.1	*
485.0	134.6	93.7	0.981	-2.5	0.3	132.4	*
500.0	137.7	94.6	0.982	-2.5	0.3	135.6	
515.0	141.1	95.5	0.983	-2.4	0.3	139.0	*
530.0	144.1	96.4	0.983	-2.4	0.3	142.1	*
545.0	147.5	97.3	0.984	-2.4	0.3	145.5	*
560.0	150.7	98.2	0.985	-2.3	0.3	148.7	
575.0	153.9	99.2	0.985	-2.3	0.3	151.9	*
590.0	157.1	100.1	0.986	-2.3	0.3	155.2	*
605.0	160.2	101.0	0.986	-2.2	0.3	158.3	*
620.0	163.5	101.9	0.986	-2.2	0.3	161.6	
635.0	166.8	102.8	0.987	-2.2	0.3	165.0	*
650.0	170.0	103.8	0.987	-2.2	0.3	168.2	*
665.0	173.4	104.7	0.988	-2.2	0.3	171.6	*
680.0	176.6	105.6	0.988	-2.1	0.3	174.8	
695.0	180.1	106.5	0.988	-2.1	0.3	178.3	*
710.0	183.4	107.4	0.988	-2.1	0.3	181.6	*
725.0	186.7	108.3	0.989	-2.1	0.3	184.9	*
740.0	189.8	109.3	0.989	-2.1	0.3	188.0	
755.0	193.2	110.2	0.989	-2.1	0.3	191.5	*
770.0	196.6	111.1	0.990	-2.1	0.3	194.9	*
785.0	200.1	112.0	0.990	-2.0	0.3	198.3	*
800.0	203.5	112.9	0.990	-2.0	0.3	201.8	*
815.0	206.9	113.9	0.990	-2.0	0.3	205.2	*
830.0	209.6	114.8	0.990	-2.0	0.3	207.9	*
845.0	212.3	115.7	0.991	-2.0	0.3	210.7	*

MEASURED GEOPHONE DEPTH (DGM)	RAW TIME PICK	SRC-REC DIST. PLAN-VIEW (SRC_REC)	COS(I)	TIME CORRECTION COS	DATUM	VERTICAL TIME (TGD)	
(M)	(MS)	(M)		(MS)	(MS)	(MS)	
860.0	215.1	116.6	0.991	-2.0	0.3	213.4	
875.0	217.9	117.5	0.991	-2.0	0.3	216.3	*
890.0	220.8	118.4	0.991	-2.0	0.3	219.2	*
905.0	224.8	120.0	0.991	-2.0	0.3	223.1	*
920.0	228.0	121.5	0.991	-2.0	0.3	226.3	
935.0	232.4	123.0	0.991	-2.0	0.3	230.7	*
950.0	235.7	124.6	0.991	-2.0	0.3	234.0	*
965.0	239.5	126.1	0.991	-2.1	0.3	237.8	*
980.0	242.5	127.8	0.991	-2.1	0.3	240.8	
995.0	246.1	129.4	0.991	-2.1	0.3	244.4	*
1010.0	249.4	131.1	0.992	-2.1	0.3	247.6	*
1025.0	253.4	132.9	0.992	-2.1	0.3	251.6	*
1040.0	256.2	134.6	0.992	-2.2	0.3	254.4	
1055.0	259.7	136.4	0.992	-2.2	0.3	257.8	*
1070.0	263.1	138.3	0.992	-2.2	0.3	261.2	*
1085.0	266.8	140.1	0.992	-2.2	0.3	264.8	*
1100.0	270.2	142.0	0.992	-2.3	0.3	268.3	
1115.0	273.9	143.9	0.992	-2.3	0.3	272.0	*
1130.0	277.2	145.7	0.992	-2.3	0.3	275.2	*
1145.0	281.1	147.6	0.992	-2.4	0.3	279.1	*
1160.0	284.8	149.4	0.992	-2.4	0.3	282.7	
1175.0	288.2	151.2	0.992	-2.4	0.3	286.1	*
1190.0	291.2	153.0	0.992	-2.4	0.3	289.1	*
1205.0	294.3	154.8	0.992	-2.4	0.3	292.2	*
1220.0	297.4	156.6	0.992	-2.5	0.3	295.3	
1235.0	301.0	158.3	0.992	-2.5	0.3	298.8	*
1250.0	304.0	160.0	0.992	-2.5	0.3	301.8	*
1265.0	306.9	161.7	0.992	-2.5	0.3	304.7	*
1280.0	309.9	163.3	0.992	-2.5	0.3	307.7	
1295.0	313.1	164.8	0.992	-2.6	0.3	310.9	*
1310.0	316.2	166.3	0.992	-2.6	0.3	313.9	*
1325.0	319.7	167.7	0.992	-2.6	0.3	317.4	*
1340.0	323.1	169.1	0.992	-2.6	0.3	320.9	
1355.0	326.4	170.5	0.992	-2.6	0.3	324.1	*
1370.0	329.8	171.8	0.992	-2.6	0.3	327.5	*
1385.0	333.1	173.2	0.992	-2.6	0.3	330.8	*
1400.0	336.0	174.5	0.992	-2.6	0.3	333.7	
1415.0	339.3	175.8	0.992	-2.6	0.3	337.0	*
1430.0	342.7	177.1	0.992	-2.7	0.3	340.4	*
1445.0	346.2	178.3	0.992	-2.7	0.3	343.9	*
1460.0	349.2	179.5	0.992	-2.7	0.3	346.9	
1475.0	352.4	180.7	0.992	-2.7	0.3	350.0	*
1490.0	355.2	181.9	0.992	-2.7	0.3	352.9	*
1505.0	358.5	183.1	0.993	-2.7	0.3	356.1	*
1520.0	361.8	184.2	0.993	-2.7	0.3	359.5	
1535.0	365.1	185.4	0.993	-2.7	0.3	362.7	*
1550.0	368.1	186.5	0.993	-2.7	0.3	365.8	*
1565.0	371.4	187.7	0.993	-2.7	0.3	369.0	*
1580.0	374.6	188.8	0.993	-2.7	0.3	372.2	
1595.0	377.9	190.0	0.993	-2.7	0.3	375.6	*
1610.0	381.2	191.1	0.993	-2.7	0.3	378.8	*
1625.0	384.9	192.3	0.993	-2.7	0.3	382.5	*
1640.0	388.1	193.3	0.993	-2.7	0.3	385.7	
1655.0	391.7	194.4	0.993	-2.7	0.3	389.3	*
1670.0	394.8	195.5	0.993	-2.7	0.3	392.4	*
1685.0	398.2	196.6	0.993	-2.7	0.3	395.8	*
1700.0	401.4	197.8	0.993	-2.7	0.3	399.0	

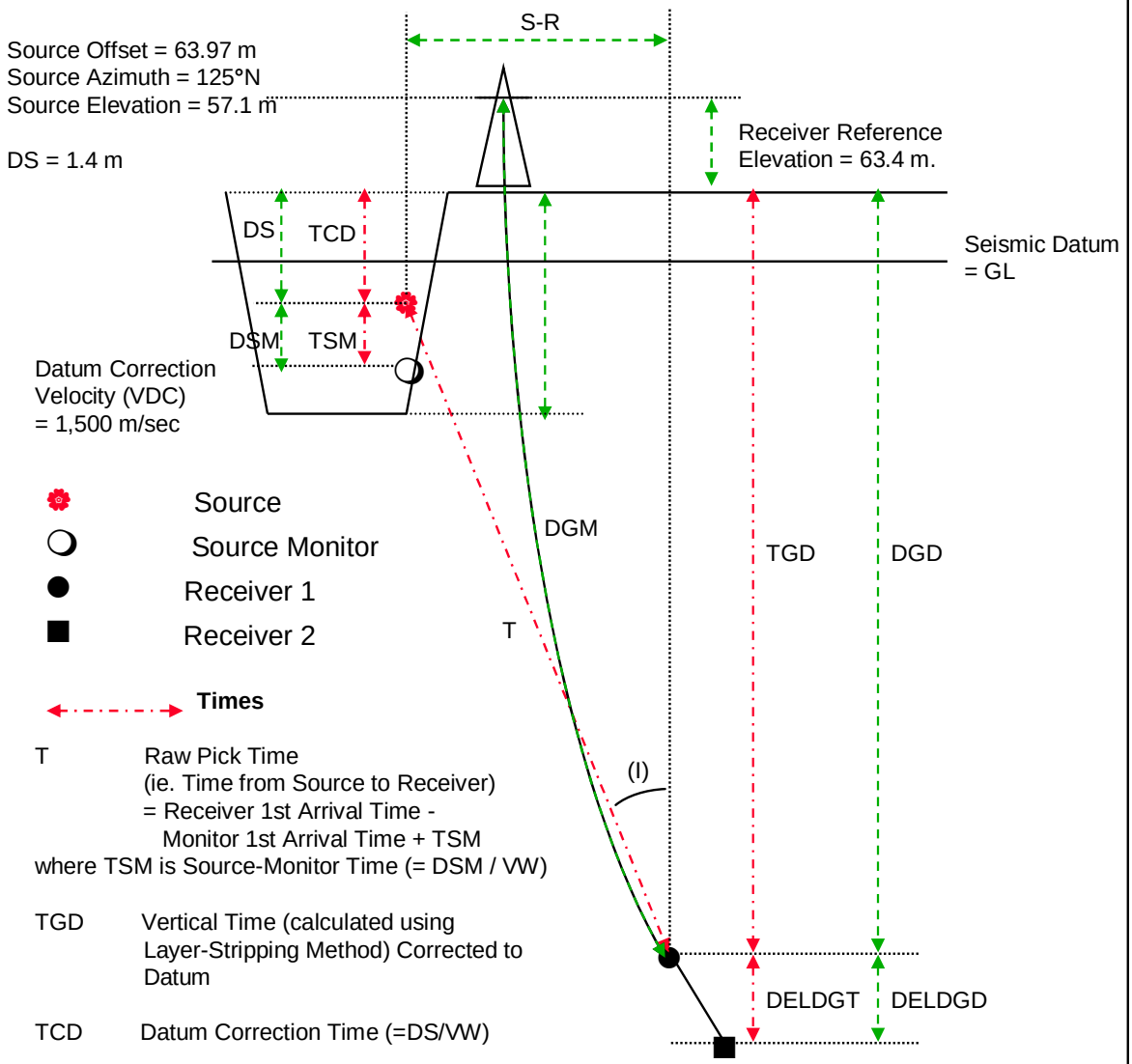
MEASURED GEOPHONE DEPTH (DGM)	RAW TIME PICK	SRC-REC DIST. PLAN-VIEW (SRC_REC)	COS(I)	TIME CORRECTION COS	DATUM	VERTICAL TIME (TGD)	
(M)	(MS)	(M)		(MS)	(MS)	(MS)	
1715.0	404.9	199.1	0.993	-2.8	0.3	402.5	*
1730.0	408.1	200.4	0.993	-2.8	0.3	405.7	*
1745.0	411.4	201.8	0.993	-2.8	0.3	408.9	*
1760.0	414.8	203.2	0.993	-2.8	0.3	412.3	
1775.0	418.5	204.6	0.993	-2.8	0.3	416.0	*
1790.0	422.1	206.0	0.993	-2.8	0.3	419.6	*
1805.0	425.8	207.5	0.993	-2.8	0.3	423.3	*
1820.0	428.7	209.0	0.993	-2.9	0.3	426.2	
1835.0	431.4	210.4	0.993	-2.9	0.3	428.9	*
1850.0	433.8	211.9	0.993	-2.9	0.3	431.2	*
1865.0	436.2	213.4	0.993	-2.9	0.3	433.7	*
1880.0	438.9	215.0	0.993	-2.9	0.3	436.3	
1895.0	441.4	216.6	0.993	-2.9	0.3	438.8	*
1910.0	444.0	218.1	0.993	-2.9	0.3	441.4	*
1925.0	446.6	219.7	0.993	-2.9	0.3	444.0	*
1940.0	449.2	221.4	0.993	-3.0	0.3	446.6	
1955.0	451.7	222.9	0.993	-3.0	0.3	449.0	

3. LIST OF FIGURES

Figure 1 Onshore Acquisition Parameters

Client: Vulcan Minerals Inc.

Well: Vulcan Investcan Red Brook #2



Times

T Raw Pick Time (ie. Time from Source to Receiver) = Receiver 1st Arrival Time - Monitor 1st Arrival Time + TSM where TSM is Source-Monitor Time (= DSM / VW)

TGD Vertical Time (calculated using Layer-Stripping Method) Corrected to Datum

TCD Datum Correction Time (=DS/VW)

DELDGT Difference in TGD between Receivers

Distances

DSM Distance of Source Monitor from Source
DS Depth of Source Referenced to Ground Elevation
S-R Source-Receiver Offset (SRC_REC)
DGM Measured Depth of Receiver below Reference
DGD True Vertical Depth of Receiver below Datum
DELDGD Difference in DGD between Receivers

Velocity

VDC Datum Correction Velocity

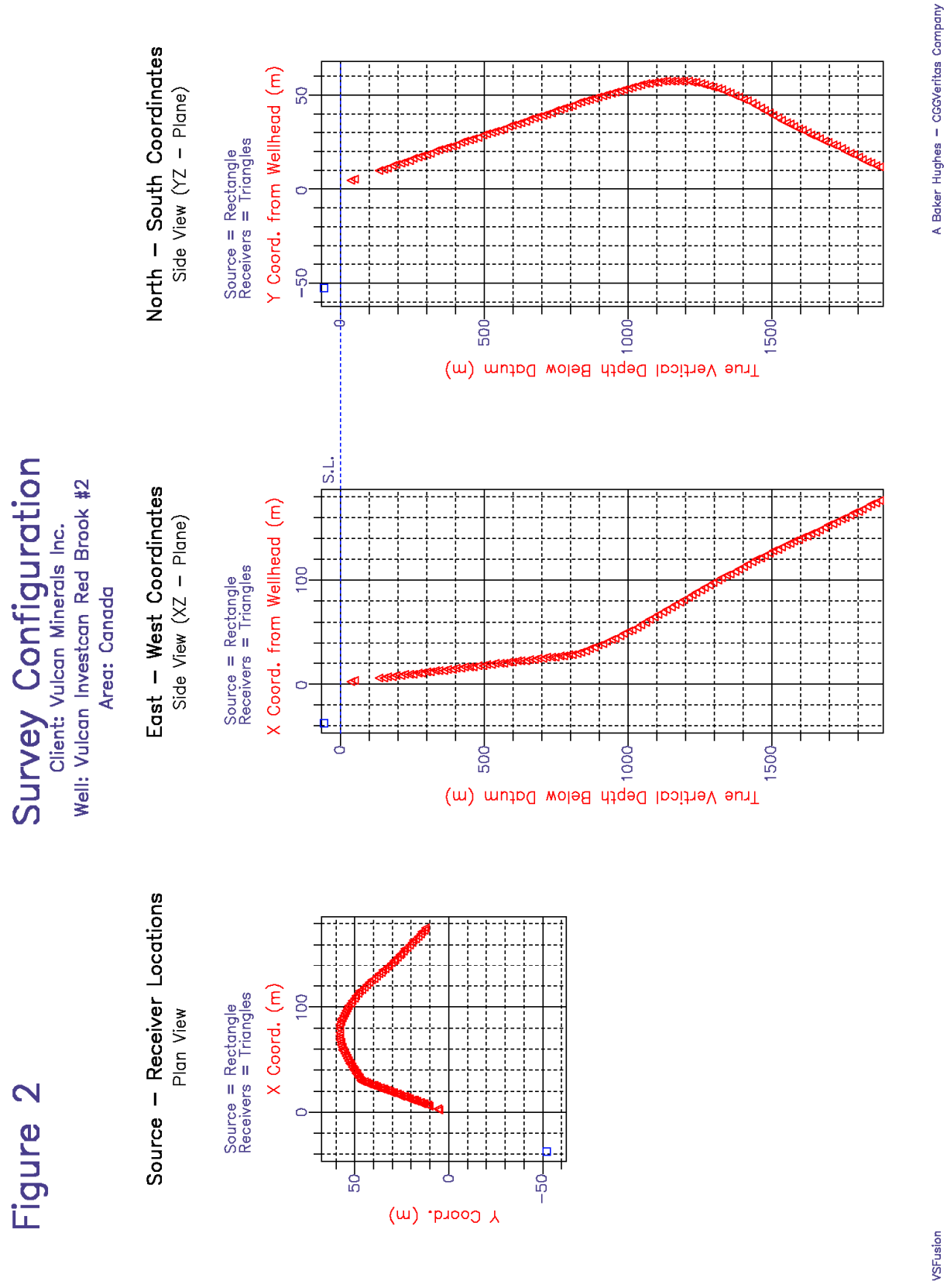


Figure 2
Survey Configuration
Client: Vulcan Minerals Inc.
Well: Vulcan Investcan Red Brook #2
Area: Canada
Source – Receiver Locations
Plan View
Source = Rectangle
Receivers = Triangles
X Coord. (m)
Y Coord. (m)
East – West Coordinates
Side View (XZ – Plane)
X Coord. from Wellhead (m)
True Vertical Depth Below Datum (m)
S.L.
North – South Coordinates
Side View (YZ – Plane)
Y Coord. from Wellhead (m)
A Baker Hughes – CGGVeritas Company
VSFusion

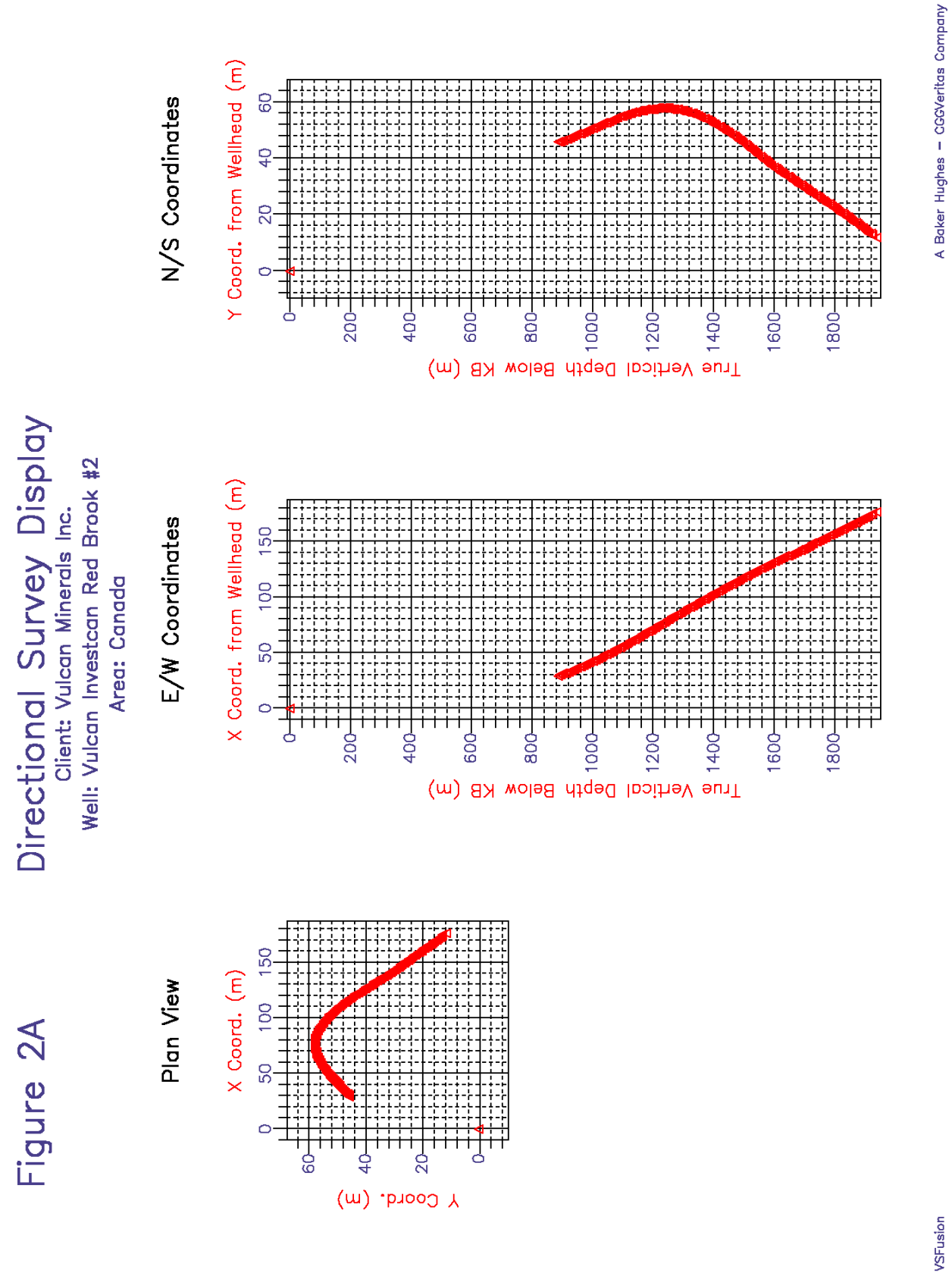


Figure 2A
Directional Survey Display
Client: Vulcan Minerals Inc.
Well: Vulcan Investcan Red Brook #2
Area: Canada
Plan View
X Coord. (m)
Y Coord. (m)
E/W Coordinates
X Coord. from Wellhead (m)
True Vertical Depth Below KB (m)
N/S Coordinates
Y Coord. from Wellhead (m)
True Vertical Depth Below KB (m)
A Baker Hughes – CGGVeritas Company
VSFusion

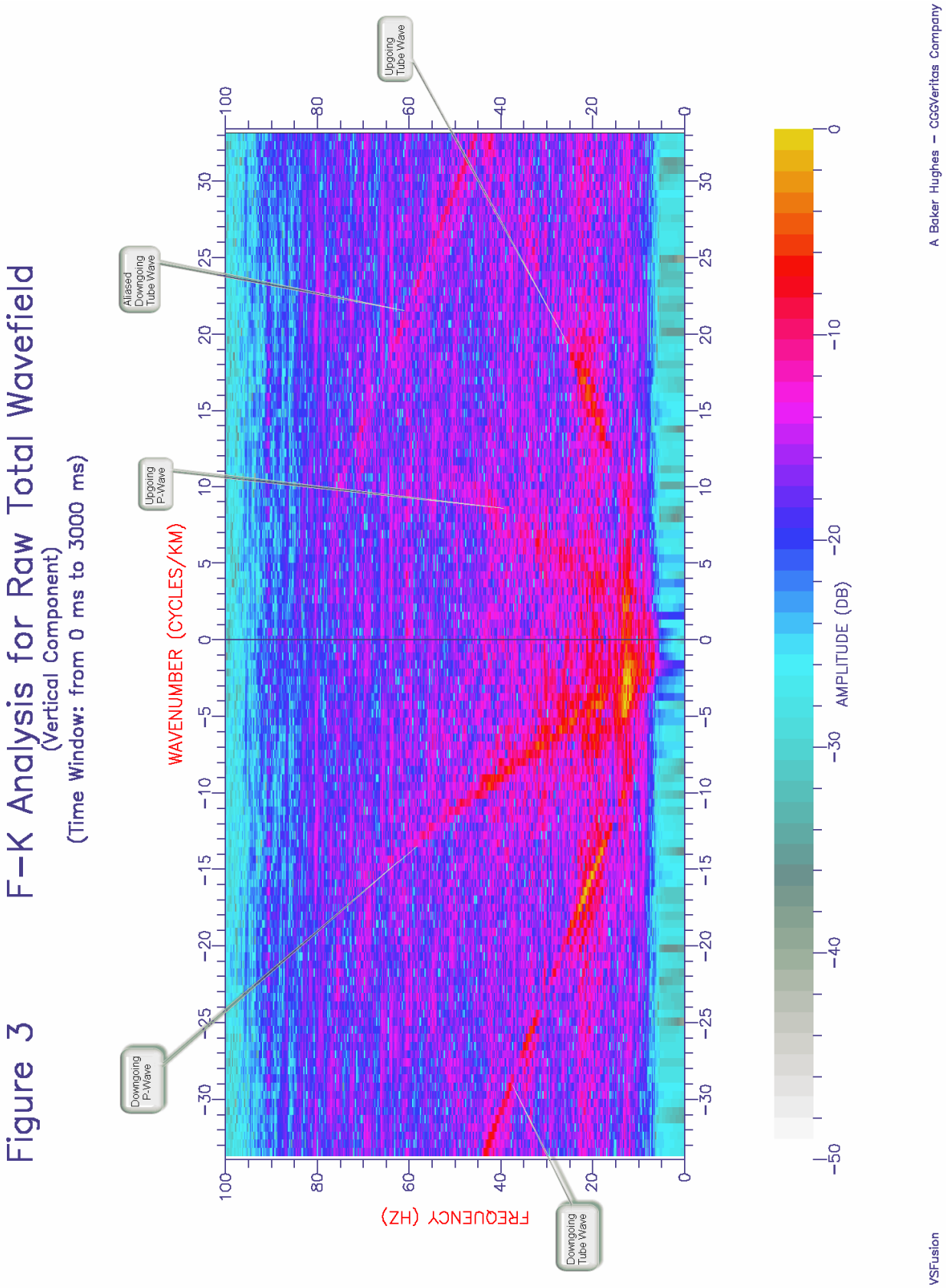
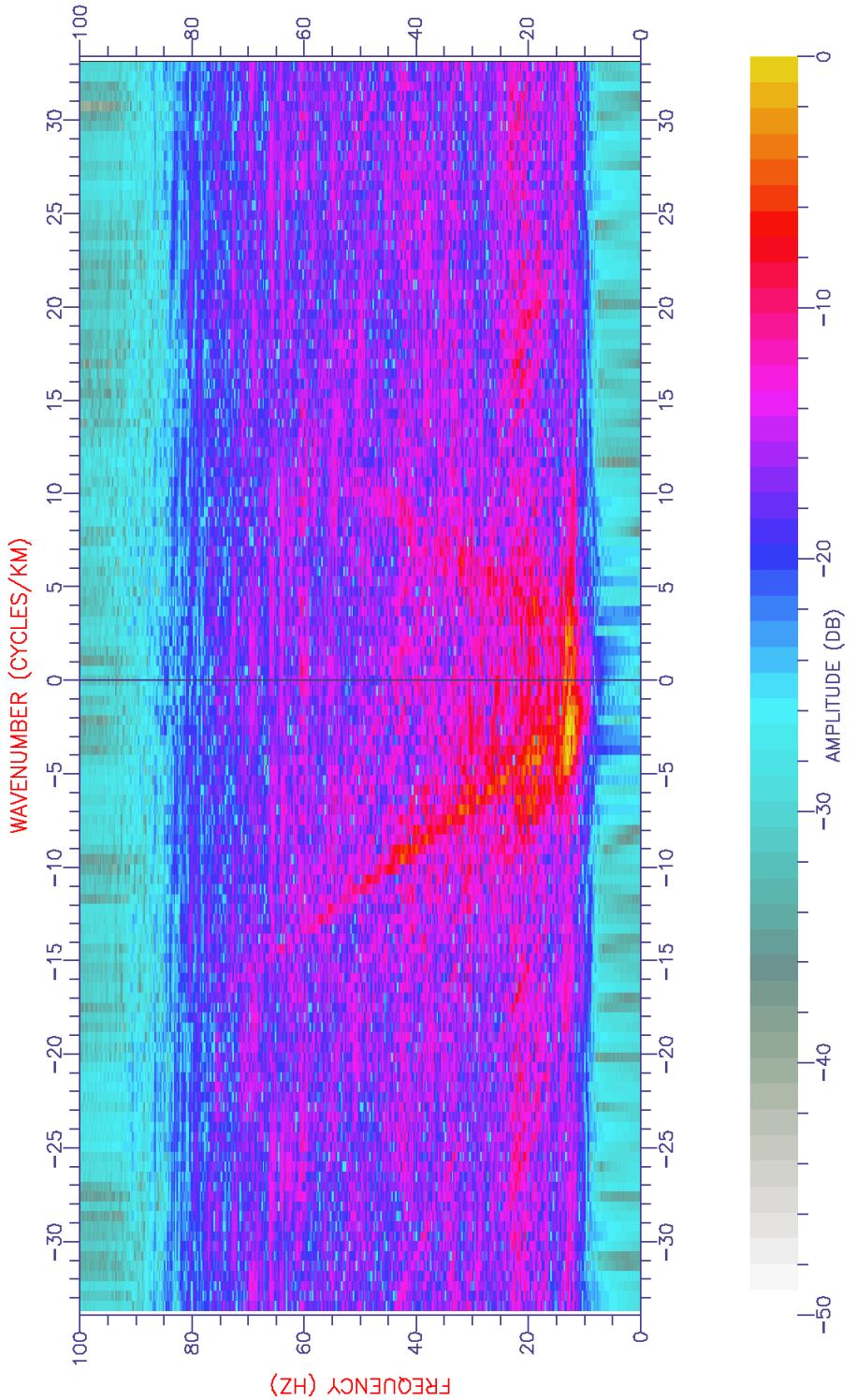


Figure 3 F-K Analysis for Raw Total Wavefield
(Vertical Component)
(Time Window: from 0 ms to 3000 ms)
Upgoing Tube Wave
Aliased Downgoing Tube Wave
Upgoing P-Wave
Downgoing P-Wave
Downgoing Tube Wave
WAVENUMBER (CYCLES/KM)
FREQUENCY (HZ)
AMPLITUDE (DB)
A Baker Hughes - CGGVeritas Company
VSFusion

Figure 4 F-K Analysis for Raw Total Wavefield

(Vertical Component after Removing Tube Waves)

(Time Window: from 0 ms to 3000 ms)



APPENDIX 12: EMPLOYEE BENEFITS SUMMARY

Vulcan Investcan Red Brook #2: Drilling Operations

	Residence		
Week	**NL**	**Other**	**Total**
1	20	2	**22**
2	19	6	**25**
3	17	11	**28**
4	17	2	**19**
5	17	2	**19**
6	18	6	**24**
7	17	9	**26**
8	0	0	**0**
9	0	0	**0**
10	0	0	**0**
11	0	0	**0**
12	0	0	**0**
13	0	0	**0**
14	0	0	**0**
15	0	0	**0**

Average number of workers on site each week	23
Percentage of workers residents of NL	76.7%
Percentage of workers non-residents of NL	23.3%

Week	1: 16 Oct - 22 Oct					2: 23 Oct - 29 Oct				
Position	**NL Residents**	**# of Days Worked**	**Non- NL Residents**	**# of Days Worked**	**Total**	**NL Residents**	**# of Days Worked**	**Non- NL Residents**	**# of Days Worked**	**Total**
Project Manager / Engineer	1	5			1	1	5			1
Supervisors	1	7	1	3	2	1	7			1
Rig Mangers	1	7			1	1	7			1
Drillers	2	7			2	2	7			2
Floorhands	7	7	1	7	8	7	7	1	7	8
Geologists					0			1	7	1
Mud Loggers					0					0
MWD/Directional					0					0
Wireline Logging					0					0
Cementing					0			3	4	3
Testing					0					0
Casing Handling					0			1	4	1
Administration	1	4			1	1	3			1
Security	1	7			1	1	7			1
Heavy Equipment Operators	2	5			2	1	3			1
Welders & Helpers	2	3			2	2	4			2
Fuel Hauler	1	1			1	1	4			1
Winterization					0					0
Waste Disposal	1	1			1	1	3			1
Total	**20**		**2**		**22**	**19**		**6**		**25**

Week	3: 30 Oct - 5 Nov					4: 6 Nov - 12 Nov				
Position	**NL Residents**	**# of Days Worked**	**Non- NL Residents**	**# of Days Worked**	**Total**	**NL Residents**	**# of Days Worked**	**Non- NL Residents**	**# of Days Worked**	**Total**
Project Manager / Engineer	1	5			1	1	5			1
Supervisors	0	0			0	0	0	1	7	1
Rig Mangers	1	3	1	7	2	1	7			1
Drillers	2	7			2	2	7			2
Floorhands	7	7			7	7	7			7
Geologists			1	7	1			1	7	1
Mud Loggers					0					0
MWD/Directional					0					0
Wireline Logging			3	4	3					0
Cementing			3	5	3					0
Testing					0					0
Casing Handling			2	3	2					
Administration	1	4			1	1	2			1
Security	1	7			1	1	7			1
Heavy Equipment Operators	1	2			1	1	3			1
Welders & Helpers	1	4	1	5	2	1	2			1
Fuel Hauler	1	3			1	1	4			1
Winterization					0					0
Waste Disposal	1	5			1	1	3			1
Total	**17**		**11**		**28**	**17**		**2**		**19**

Week	5: 13 Nov - 19 Nov					6: 20 Nov - 26 Nov					7: 27 Nov - 4 Dec				
Position	**NL Residents**	**# of Days Worked**	**Non- NL Residents**	**# of Days Worked**	**Total**	**NL Residents**	**# of Days Worked**	**Non- NL Residents**	**# of Days Worked**	**Total**	**NL Residents**	**# of Days Worked**	**Non- NL Residents**	**# of Days Worked**	**Total**
Project Manager / Engineer	1	5			1	1	5			1	1	5			1
Supervisors	0	0	1	7	1	1	7	0	0	1	1	7	0	0	1
Rig Mangers	1	7			1	1	2	1	5	2	0	0	1	7	1
Drillers	2	7			2	2	7			2	2	7			2
Floorhands	7	7			7	7	7			7	7	7			7
Geologists			1	7	1			1	7	1			1	7	1
Mud Loggers					0					0					0
MWD/Directional					0					0					0
Wireline Logging					0			4	3	4			4	2	4
Cementing					0					0			2	3	2
Testing					0					0			1	5	1
Casing Handling															
Administration	1	2			1	1	1			1	1	1			1
Security	1	7			1	1	7			1	1	7			1
Heavy Equipment Operators	1	2			1	1	2			1	1	2			1
Welders & Helpers	1	3			1	1	2			1	1	1			1
Fuel Hauler	1	4			1	1	2			1	1	1			1
Winterization					0					0					0
Waste Disposal	1	2			1	1	1			1	1	5			1
Total	**17**		**2**		**19**	**18**		**6**		**24**	**17**		**9**		**26**

APPENDIX 13: OPERATIONAL COST SUMMARY

Well: Vulcan Investcan Red Brook #2
Well Cost Summary (All funds in CAD)

Category	Cost (48 days)
Pre-spud costs	$ 338,833
Rig/Camp Mob/Demob	$ 249,653
Site to Site move costs	$ 223,378
Rig-up/down costs	$ 125,209
Drilling - Rat/Mouse hole & Cellar	$ 108,748
Fuel & Boiler	$ 84,020
Crew Travel & Subsistence	$ 84,700
Drilling - day work	$ 660,845
Drilling Bits & BHA	$ 225,964
Drilling - mud, chemicals	$ 390,711
Casing	$ 201,528
Casing Handling	$ 56,145
Cementing Services	$ 123,032
Wellhead	$ 144,798
Welding	$ 18,886
Trucking and hauling (no rig move)	$ 93,216
Safety services / Security	$ 31,710
Drill stem testing	$ 37,540
Logging	$ 397,630
Solids,Fluids & Waste Disposal	$ 126,179
Drilling supervision- wellsite	$ 72,513
Geological supervision- wellsite	$ 45,050
Equipment Rental	$ 200,393
Pason and Gas detection	$ 48,714
Pipe & collar inspection	$ 15,500
Overhead Costs	$ 58,102
Consulting Services-PreDrilling	$ 42,000
Consulting Services-Engineering/PM	$ 144,033
Travel & Subsistence	$ 17,572
Accomodation Expense	$ 2,675
Geological office work	$ 75,200
Maps, Other Office Misc.	$ 562
Inventory	$ 137,735
Total	**$ 4,582,775**

APPENDIX 14: COPIES OF GOVERNMENT APPROVALS

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Natural Resources
Office of the Assistant Deputy Minister, Petroleum Development

October 16, 2009

Mr. Patrick Laracy, President
Vulcan Minerals Inc.
333 Duckworth Street
St. John's, NL, A1C 1G9

Dear Mr. Laracy:

RE: Drilling Program Approval and Authority to Drill a Well for Vulcan - Investcan Red Brook #2, Permit 03-107

Please find attached the following executed documents pertaining to the subject well drilling operations:

(1) Drilling Program Approval (DPA 2009-116-03); and
(2) Authority to Drill a Well (ADW 2009-116-03-01).

These documents contain attached conditions. Please ensure that they are prominently displayed at the wellsite at all times.

If you have any questions please call Keith Hynes at 729-7188. Thank you for your interest in western Newfoundland and good luck with your exploration efforts.

Yours sincerely,

Pierre Tobin
Associate Deputy Minister
Energy

c. File

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Natural Resources
Energy Branch

AUTHORITY TO DRILL A WELL - APPLICATION

Pursuant to sections 8 and 9 of the *Petroleum and Natural Gas Act (R.S.N.L. 1990. c. P-10)* and in compliance with section 29 of the *Petroleum Drilling Regulations,(CNR 1150/96)* Vulcan Minerals Inc. , as operator, hereby applies for Authority to Drill a Well to be known as Vulcan Investcan Red Brook #2 using the equipment and procedures described in the well program dated October 12th ,20 09

Permit, Licence or Lease to which this Program applies: Exploration Permit # 03-107

Area: Western Newfoundland	CO-ORDINATES	UTM (NAD 27)
Field/Pool: Bay St. George Basin	Long:	Northing: 5347345 m
Drilling Rig: Stoneham Drilling Rig #11	Lat:	Easting: 370125 m
Rig Type: Tele-triple kelly rig	ELEVATION	DEPTH
Drilling Contractor: Stoneham Drilling	☐ RT ☒ KB ☐ RF 61.75 m	T.D.: 2200 m
	G.L.: 55.45 m	TVD: 2200 m
ESTIMATES		TARGET HORIZONS
Spud Date: ~~20 Sept~~ Oct-2009	Well Cost: 5M	Vertical well targets; Fischells Brook, Anguille Grp
Days on Location: 50		

EVALUATION PROGRAM

Ten-metre sample intervals: During high ROP rates	Conventional cores at: N/A
Five-metre sample intervals: 20 - 2200 m	Logs and Tests: Densilog, GR, Sonic, Resist, Neutron, Caliper and DST if required
Canned sample intervals: N/A	

CASING AND CEMENTING PROGRAM

O.D. (mm)	Weight (kg/m)	Grade	Setting Depth (m)	Cementing Program
340	71.43	H-40	215	Class G, 1.87 SG: see attached ADW doc for full details
244	59.53	J-55	1201	Class G, 1.79 SG: see attached ADW doc for full details
178	38.7	J-55	1300	Class G, 1.90 SG: see attached ADW doc for full details
114.3	23.81	J-55	2200	Class G, 1.90 SG: see attached ADW doc for full details
Other Equipment:				

The undersigned operator's Representative hereby declares that, to the best of the Representative's knowledge, the information contrained herein and in the attached detailed program is true, accurate and complete.

Signed: _____ Date: 16-Oct-09

Operator's Representative

AUTHORIZATION

Whereas the Minister of Natural Resources has jurisdiction under the *Petroleum Drilling Regulations*, ("the Regulations").

In accordance with section 32 of the Regulations, the operator named in the Application is authorized to undertake the proposed well program described above subject to the following conditions:

1. This Authorization shall be prominently displayed at the well sita at all times during which operations are being conducted;
2. Copies of all logs and well test data shall be submitted to the director by the operator promptly after their aquistition;
3. The operator shall comply with all conditions of the Drilling Program Approval No. 2009-116-03 under which the above well is to be drilled;
4. No change in the well program hereby approved may be made unless it is first approved by the director in writing;
5. This Authorization is conditional on the operator commencing drilling within 120 days of the effective Authorization date; and
6. The operator shall comply with such other conditions as are appended to this Authorization.

Signed: _____ Effective Date: Oct. 16/09

Authority to Drill a Well No. 2009-116-03-01

AUTHORITY TO DRILL A WELL #2009-116-03-01
OTHER CONDITIONS

1. The Operator shall, prior to commencement of major site operations, ensure that an approved Operator's representative is on site to supervise all site operations.

2. The Operator shall ensure that the well is drilled in a prudent and reasonable manner, consistent with good oilfield practices and with due consideration for the safety of personnel, property and the environment.

3. Notwithstanding condition #3 of the Authorization (see previous page), the Operator shall comply with the requirements of the *Petroleum Drilling Regulations, (CNR 1150/96)* (the Regulations) unless the Operator has received written approval from the Director to deviate from the Regulations.

4. The Operator shall be liable for its actions and the actions of its agents, contractors, employees and any others acting under the Operator's authority in drilling the well.

5. The Operator's liability for the actions of its agents, contractors, employees and any others acting under the Operator's authority in drilling the well does not limit any liability that those agents, contractors, employees or others acting under the Operator's authority may have to the Operator.

6. The Operator shall ensure that all necessary approvals have been acquired from other government agencies and other rights holders, in respect of access to and use of land for the purpose of the drilling and testing operations, and disposal of all materials.

7. The Operator shall attorn to the jurisdiction of the courts of the Province of Newfoundland and Labrador.

8. Prior to spud, the Operator shall ensure a rig and site inspection, equivalent to the CAODC Drilling Rig Pre-spud Inspection Checklist, is completed by the wellsite supervisor and rig manager and the rig is completely operational and the inspection checklist is submitted to the Department.

9. Prior to commencing drilling operations out of the conductor, the Operator shall ensure the PVT system and fluid returns monitoring system have been installed, inspected and are operational. In addition, gas monitoring equipment (H_2S, HC's and LEL) and industry approved respiratory protective equipment is available on site, has been properly inspected and is ready for use.

10. Prior to commencing drilling operations out of the surface casing, the Operator shall ensure the Blow-out Preventer system and manifold has been installed, inspected, pressure tested and is completely operational. In addition, the operator shall ensure a drilling rig Blow-out Prevention Equipment checklist, equivalent to the CAODC checklist, is completed and submitted to the Department.

11. A summary report of all operations performed during this phase of drilling, normally referred to as the daily drilling report and daily geological reports, shall be submitted on a daily basis.

12. The DST details, including a downhole tool schematic, as well as surface testing equipment details and layout, must be submitted for approval prior to carrying out those operations.

13. The details of any completion program must be submitted for approval prior to carrying out those operations.

14. Where the well is to be terminated, a termination program must be submitted for approval prior to carrying out those operations. As per section 122 of the Regulations, a termination record signed by the operator's representative must be submitted within 21 days of the rig release date.

15. The Operator shall provide the Director with a videotape, or photographs showing the final condition of the drillsite.

16. Prior to the end of drilling operations, the Operator shall provide a legal survey of the site acceptable to the Director to confirm the location of the well.

17. Prior to the end of drilling operations, the Operator shall provide a copy of the ADW document corrected for discrepancies and grammatical errors to the Director.

18. The Operator shall, prior to commencement of drilling operations, supply to the Department a security deposit in total for the amount of $155,000 to ensure abandonment, reclamation, and reporting requirements are met. The security deposit secures the Operator's commitments to comply with the *Petroleum and Natural Gas Act*, the regulations under this Act and the terms and conditions of the Vulcan-Investcan Red Brook #2 Authority to Drill a Well and Drilling Program Approval.

19. The Minister may use the security deposit to compensate the Province for any losses, costs, demands or other charges that the Province incurs as a result of licensee's non-compliance with the *Petroleum and Natural Gas Act*, the regulations under this Act and the terms and conditions of the Vulcan-Investcan Red Brook #2 Authority to Drill a Well and Drilling Program Approval.

20. The submission of a security deposit and any usage of that deposit by the Minister shall not limit or restrict the liability of the licensee for its actions or the actions of its agents, contractors, employees and other acting under the licensee's authority, or limit or restrict the licensee's obligation to indemnify the Province pursuant to the *Petroleum and Natural Gas Act* and the regulations under that Act..

21. If, during the exploration and drilling activities, all or part of the security deposit is expended by the Minister pursuant to this section, the licensee shall, on request by the Director, provide further security so that the security deposit is replenished to its original amount.

22. The security deposit or any unexpended balance shall be refunded without interest to the applicant after all of the Operator's obligations listed herein are completed.

October 16, 2009

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Natural Resources
Energy Branch

DRILLING PROGRAM APPROVAL - APPLICATION

Pursuant to sections 8 and 9 of the *Petroleum and Natural Gas Act(1,)*, Vulcan Minerals Inc.
as operator on behalf of Vulcan Minerals Inc. - Investcan, holding a
subsisting licence, permit or lease issued pursuant to the *Petroleum Regulations(2)*, namely; Exploration Permit # 03-107
(licence, permit, or lease #)

hereby applies for approval to conduct a drilling program using the drilling rig Stoneham Drilling #11
and equipment and procedures described in the detailed program dated. OCTOBER 12, 2009
The undersigned operator's Representative hereby declares that, to the best of the operator's knowledge, the information contained herein and in the attached detailed program is true, accurate and complete.

Signed: _____ Date: Aug 14/09.
Operator's Representative

APPROVAL

Pursuant to sections 8 and 9 of the *Petroleum and Natural Gas Act*, the operator named in the Application is hereby authorized to conduct the proposed drilling program subject to the following conditions:

1. This Drilling Program Approval shall, unless otherwise extended or terminated, expire upon the 16th day of OCTOBER, 20 09

2. This Authorization shall be prominently displayed at the well site at all times during which operations are being conducted;

3. Evidence of financial responsibility, as required pursuant to Section 14 of the *Petroleum Drilling Regulations (3)*, shall be provided by the operator to the Minister of Natural Resources;

4. The operator shall use the equipment and procedures described in the detailed program dated OCTOBER 12, 2009 unless a change in the equipment or procedures is approved in writing by the Director; and

5. The operator shall comply with such other conditions as are appended to this Approval.

Signed: _____ Effective Date: 09.10.16

Drilling Program Approved No. 2009-116-03

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(1) - (R.S.N.L. 1990, c. P-10)

(2) - CNR 1151/96

(3) - CNR 1150/96

SCHEDULE "A"
TO
DRILLING PROGRAM APPROVAL #2009-116-03
OTHER CONDITIONS

1. Notwithstanding condition #4 of the Approval (see previous page), the Operator shall comply with the requirements of the *Petroleum Drilling Regulations (CNR 1150/96)* (the Regulations) unless the Operator has received written approval from the Director to deviate from the Regulations.

2. Pursuant to Section 154 of the Regulations, the director shall release to the public, general information including the name, classification, location, identity of the drilling contractor and rig used by the Operator, depth and operational status of the drilling program.

3. It is a condition of approval of this DPA that the Operator, pursuant to Section 88 of the Regulations, shall submit tour sheets to the director on a weekly basis.

4. It is a condition of approval of this DPA that the Operator, pursuant to Section 52(2)(a) of the *Petroleum Regulations, (CNR1151/96)* provide to the director at the end of the well a benefits monitoring report as well as a cost summary report showing AFE costs, costs to date and variances for all major cost categories.

5. The Operator shall, prior to commencement of drilling operations, supply to the Department a security deposit in total for the amount of $155,000 to ensure abandonment, reclamation, and reporting requirements are met. The security deposit secures the Operator's commitments to comply with the *Petroleum and Natural Gas Act*, the regulations under this Act and the terms and conditions of the Vulcan-Investcan Red Brook #2 Authority to Drill a Well and Drilling Program Approval.

6. The Minister may use the security deposit to compensate the Province for any losses, costs, demands or other charges that the Province incurs as a result of licensee's non-compliance with the *Petroleum and Natural Gas Act*, the regulations under this Act and the terms and conditions of the Vulcan-Investcan Red Brook #2 Authority to Drill a Well and Drilling Program Approval.

7. The submission of a security deposit and any usage of that deposit by the Minister shall not limit or restrict the liability of the licensee for its actions or the actions of its agents, contractors, employees and other acting under the licensee's authority, or limit or restrict the licensee's obligation to indemnify the Province pursuant to the *Petroleum and Natural Gas Act* and the regulations under that Act.

8. If, during the exploration and drilling activities, all or part of the security deposit is expended by the Minister pursuant to this section, the licensee shall, on request

by the Director, provide further security so that the security deposit is replenished to its original amount.

9. The security deposit or any unexpended balance shall be refunded without interest to the applicant after all of the Operator's obligations listed herein are completed.

October 16, 2009

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Natural Resources
Mines Branch
Mineral Lands Division

E090172

October 6, 2009

David Walsh
Vulcan Minerals Inc.
333 Duckworth St.
St. John's, NL
A1C 1G9

Dear Mr. Walsh:

Re: Exploration Approval (1 DDH) & Notification Work (Geology)
for Vulcan Minerals Inc. on the Robinsons #1 (aka Red Brook) Property,
NTS 12B/07
Licences 012669M

Your proposed exploration program submitted in compliance with Section 5(4) of the *Mineral Act* has been reviewed and approved.

The following conditions apply to your approval:

1. The proponent must comply with any other Provincial and Federal Act or Regulation, or obtain all permits that may be required in connection with the exploration activity.
2. All personnel must comply with the *Mineral Regulations,* in particular sections 41 - 45 and section 46 which refers to the "Guidelines for Exploration and Construction Companies".
3. You are required to provide the Mineral Lands Division with:
   a. 24 hour prior notification of mobilizing equipment to the project area;
   b. two day prior notification of completion of the exploration activity;
   c. a brief monthly update of the progress of your exploration program;
4. As per section 12(2) of the Mineral Act, when exploration work is to take place on private land or upon land where a legal or equitable interests are held, the licencee will obtain prior written permission and forward copies to the department.
5. The proponent must abide by Section 28(4) of the Petroleum Drilling Regulations. Also, the proponent must ensure that the proper precautions are taken when drilling into a salt horizon.
6. You are directed to obtain permission from Frank Turner (Tel: 709-635-3851), Parks and Natural Areas Division to use the Newfoundland and Labrador T'Railway Provincial Park for the purposes of accessing or gaining access to your exploration program.
7. If trees have to be cut to access the sites then you are advised to contact the nearest Natural Resources, Forest Resources Branch, local office to obtain a cutting permit before starting your exploration program.
8. You are required to abide by the conditions referenced in your Water Use Licence. Upon receipt of WUL, the Notification of Acceptance of the licence must be returned to the Water Rights Section of the Department of Environment and Conservation. Also, the water use report "Appendix B of the licence" must be completed and filed within thirty (30) days of the completion of the mineral exploration activities.
9. Pursuant to Section 106 of the *Wildlife Regulations*; "A person shall not operate an aircraft, motor vehicle, vessel, snow machine or all-terrain vehicle in a manner that will harass any wild life."
   a. Companies are advised not to over-fly caribou if possible or to maintain an altitude of 300 metres over concentrations of caribou.

b. Under no circumstances should nesting raptors be approached, not even for a "harmless" look. The startle effect that helicopters have on nesting raptors can be detrimental and therefore either a 600m horizontal buffer from cliff faces or an altitude of 300 metres must be observed.
c. The breeding and brood rearing periods (May15 - August 31) are considered critical to the Harlequin Duck, and disturbance should be minimized. During this critical period and a 300 metre horizontal buffer above ground level must be observed when crossing river valleys.
d. You are advised to use snowmobiles responsibly in a manner that will not disturb, harass or harm any animal life you encounter.

10. Please be advised on the provisions of the *Historic Resources Act*, protecting archaeological sites and artifacts, and procedures to be followed in the event that either are found:
    a A person who discovers an archaeological object in, on or forming part of the land within the province shall report the discovery forthwith to the Minister stating the nature of the object, the location where it was discovered and the date of the discovery.
    b No person other than one to whom a permit has been issued under this Act, who discovers an archaeological object shall move, destroy, damage, deface, obliterate, alter, add to, mark or in any other way interfere with, remove, or cause to be removed from the province that object.
    c The property in all archaeological objects found in, on or taken from the land within the province, whether or not these objects are in the possession of Her Majesty is vested in Her Majesty.

    Should any archaeological remains be encountered, such as stone, bone or iron tools, concentrations of bone, charcoal or burned rock, fireplaces, house pits and/or foundations, activity in the area of the find must cease immediately and contact should be made with the Provincial Archaeologist in St. John's (729- 2462) as soon as possible.

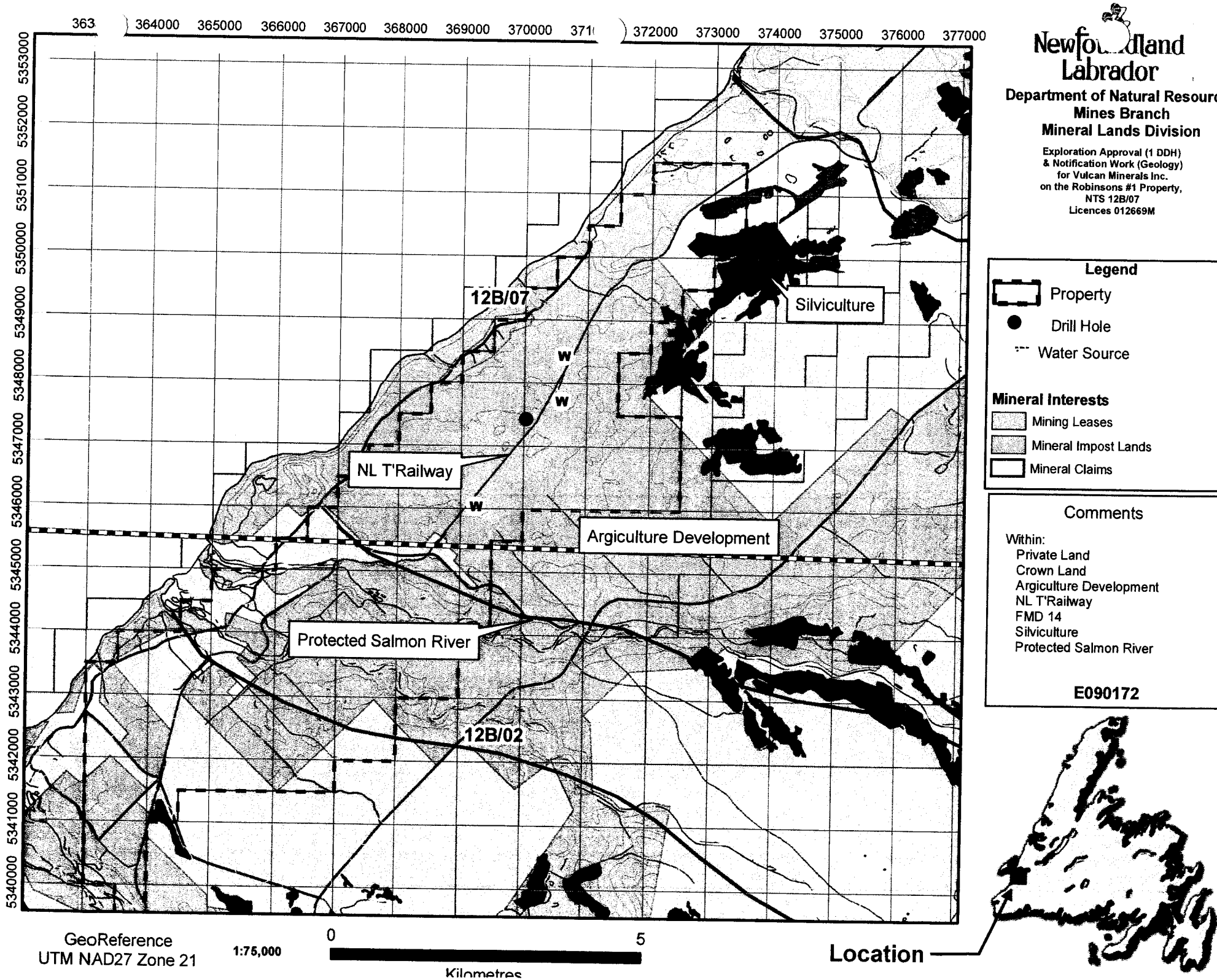
    Copies of the *Historic Resources Act*, and information on archaeology in the province may be obtained from the Provincial Archaeology office upon request.
11. This approval is due to expire on December 31, 2009.

If you have any questions concerning this, please contact Heather Hickman, Geologist, Exploration Approval and Land Use, at 729-6408.

Regards,

Kenneth C.M. Andrews, P. Geo.
Director, Mineral Lands Division

c: Jim Hinchey, Manager of Mineral Rights
Jamie Kennedy, Forestry



Newfoundland Labrador

Department of Natural Resources
Mines Branch
Mineral Lands Division

Exploration Approval (1 DDH)
& Notification Work (Geology)
for Vulcan Minerals Inc.
on the Robinsons #1 Property,
NTS 12B/07
Licences 012669M

Legend

- Property
- Drill Hole
- Water Source

Mineral Interests

- Mining Leases
- Mineral Impost Lands
- Mineral Claims

Comments

Within:
- Private Land
- Crown Land
- Argiculture Development
- NL T'Railway
- FMD 14
- Silviculture
- Protected Salmon River

E090172

Newfoundland Labrador

FILE No.: 3014503
FOLDER RSN: 148591
PEOPLE RSN: 66447
PROPERTY RSN: 89500
GIS No.: 10089485

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

RENEWAL OF LICENCE TO OCCUPY 129224

WHEREAS Licence to Occupy **129224** issued by the Crown on **September 26, 2006** under the authority of Section 6 of the **Lands Act** for the purpose of **Oil Exploration**;

AND WHEREAS VULCAN MINERALS INC. is the present holder of the said Licence as registered in the Registry of Crown Titles for the Province of Newfoundland & Labrador;

AND WHEREAS the said Licence to Occupy **129224** expired on **September 26, 2009;**

AND WHEREAS VULCAN MINERALS INC. made application for a renewal of the said Licence to Occupy.

NOW KNOW YOU ALL BY THESE PRESENTS:

The Minister of Environment and Conservation hereby renews the said Licence to Occupy for a further term of **3 years** commencing on **September 26, 2009;**

SUBJECT TO the terms and conditions of Schedules B and C in the original Licence to Occupy **129224** and also subject to the terms and conditions in Schedules B and C attached hereto.

YIELDING AND PAYING in advance the set rental fees during the said term of this licence.

PROVIDED that the said Licence to Occupy dated **September 26, 2006**, except to the extent modified by these present shall continue in full force and effect.

SIGNED by the Licence Holder
on the 01 day of Oct A.D. 2009

.....
Licence Holder

SIGNED by the Minister of Environment and Conservation
on the 8th day of OCTOBER A.D. 2009 .

.....
for Minister of Environment and Conservation

SCHEDULE B

1. The Licence does not authorize the Licence Holder to enter upon private land, to dispute private claims to land, or to obstruct any public right-of-way.

2. The Licence does not convey the right to extract any minerals including, limestone, granite, slate, marble, gypsum, marl, clay, sand, gravel, peat, coal, natural gas, petroleum or salt from or under the demised premises.

3. The Licence Holder shall pay and discharge all taxes and charges that may be levied by any Municipal, Provincial or Federal authority on or in respect to the demised premises.

4. The Licence constitutes the approval of the Lands Branch, Department of Environment and Conservation only and does not waive the required consent of other government departments or agencies.

5. The Licence Holder shall indemnify and save harmless the Minister against any loss, cost or damage resulting directly or indirectly from the Licence Holders use or occupation of the demised premises, and the Licence Holder shall remain liable for all improvements carried out on the demised premises in the event the Licence is cancelled or not renewed.

6. The Licence Holder shall display on the demised premises and in a conspicuous manner a sign containing the Licence number.

7. The demised premises shall be kept neat and tidy to the satisfaction of the Minister.

8. Disposal of garbage on the demised premises or underwater is not acceptable and shall be burned in an acceptable manner or disposed of at an approved waste disposal site.

9. The Licence is subject to the condition that the demised premises shall be holden upon, under and subject to all other regulations and conditions of the *Lands Act*, Chapter 36 of the Statutes of Newfoundland and Labrador, 1991, as amended, and to such regulations as are now in force or which may at any time hereafter be made by law.

10. Should the Licence Holder, the heirs, executors, administrators and assigns default in the performance of any of the provisions herein contained, the Minister may give thirty (30) days notice for the termination of this Licence, and upon the expiration of the thirty (30) days, this Licence shall cease and the Licence Holder shall forthwith vacate the demised premises.

11. In the event the Licence is cancelled or not renewed, the Licence Holder shall remove all buildings, structures and personal property from the demised premises and restore the demised premises to the satisfaction of the Minister of Government Services and the Minister of Environment and Conservation within ninety (90) days from the date of cancellation or expiration. Should the Licence Holder fail to comply with this condition, the Minister may remove or demolish all buildings, structures and personal property remaining on the demised premises and restore the demised premises in any manner the Minister sees fit, and the costs incurred by the Minister in the removal or demolition and restoration of the demised premises shall be recovered from the Licence Holder as a debt due to the Minister. Furthermore, the indemnity contained in Condition 5 of this Licence shall remain in full force and effect until all structures and property are removed or demolished and the demised premises is restored to the satisfaction of the Minister of Government Services and the Minister of Environment and Conservation.

SCHEDULE B

12. If during the term of the Licence the Minister requires the demised premises for any reason the Licence may be terminated after thirty (30) days written notice and the Licence Holder shall have the demised premises restored to the satisfaction of the Minister of Government Services and the Minister of Environment and Conservation and the Licence Holder shall indemnify and save harmless the Minister against any loss, cost or damage resulting directly or indirectly from the Licence Holders use, occupation or restoration of the demised premises.

13. The failure of the Crown to insist upon strict performance of any of the covenants and provisos contained in this Licence shall not be deemed a waiver of any rights or remedies that the Crown may have or a waiver of any subsequent breach or default.

14. The Licence Holder shall permit access to the demised premises at all times by Officers authorized by law or by the Minister.

15. This Licence shall be governed by and construed in accordance with the laws of the Province of Newfoundland and Labrador.

SCHEDULE C

LTO OIL EXPLORATION

1. The Licence Holder shall develop the demised premises within a period of three (3) years.

2. The demised premises shall be used solely for the purpose of storage of equipment for oil and gas production.

3. The use of the demised premises will, for its intended purpose, be subject to and in accordance with all Provincial Acts and Regulations respecting environmental control.

4. This Licence constitutes approval of the Lands Branch, Department of Environment and Conservation, only and does not waive the required consent of other Government Departments or Agencies.

5. This Licence does not authorize the Licence Holder to erect any permanent buildings on the demised premises.

6. All onsite fuel storage must be approved by the Government Service Centre.

7. All waste material produced on site must be disposed of at an approved waste disposal site, with permission of the owner/operation, on a weekly basis.

8. A plan approved by the Government Service Centre to handle any hazardous waste must be in place before development can proceed.

9. Prior to any development taking place, a plan review must be carried out by the Government Service Centre to insure compliance with the Buildings Accessibility Regulations and the Fire and Life Safety Codes.

10. Any water supply or sewage disposal installations must be approved by the Government Service Centre.

11. The Licence Holder is not permitted to access the site by All-Terrain Vehicles excepted in accordance with the Motorized Snow Vehicles and All-Terrain Vehicles Regulations. Contravention of the Regulations shall constitute grounds to revoke the Licence.

12. The issuance of this Licence does not commit Government to the issuance of a Licence for the purposes of constructing a designated access trail pursuant to the Lands Act and the Motorized Snow Vehicles and All-Terrain Vehicles Regulations.

13. Pursuant to subsection 7(1) of the Lands Act, a reservation fifteen (15) metres wide, is to be maintained around all waterbodies and the Licence Holder covenants and agrees that:

    a. the Licence does not authorize the Licence Holder to occupy the said reservation.

    b. cutting of trees or development of any type on this reservation is prohibited unless an application to develop is duly processed and approved by the Minister.

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Natural Resources

October 16, 2009

Shane Halley
Drilling Project Manager
Vulcan Minerals Inc.
333 Duckworth Street
St. John's, NL
A1C 1G9

Dear Mr. Halley:

RE: Casing Ram Waiver Request

In the September 10th submission of the Red Brook #2 Authority to Drill a Well document, you applied for exemption under Section 56, which states:

> "An operator shall ensure that a blowout preventer system is installed on the wellhead consisting of at least one annular preventer and one ram-type preventer fitted with rams to fit the casing while running intermediate and production casing."

You stated in your waiver request that:

- The use of casing rams is not consistent with onshore industry practice.
- No new hole is being made during casing operations nor is there a risk of swabbing as there is no tripping out of the hole.
- The annular preventer is designed to seal around the casing if a kick did occur during casing operations.

When the following additional factors are taken into account:

- Depending on the Class of BOP utilized, Class III or Class IV, two or three rams would be available. With only two rams available modifications to add a third would involve major expense and time to complete;
- Setting a bridge plug, then opening the BOP to change the ram as well as associated pressure testing involves additional expense and time and is not risk free;
- Two barriers to well flow, drilling fluid hydrostatic head and annular BOP, are available when running casing;

The main risk is with unnecessarily surging the well with excessive casing running speeds and breaking down a formation. Lost circulation could result in a well control situation. Care and attention to ensure appropriate casing running speeds will prevent this from happening.

Your casing ram requirement is waived using Section 34 (1)(b) Equivalent standards and exemptions. Specifically, the exemption would be based on this section which states that the Director may:

> (b)"grant an exemption from any requirement in these regulations in respect of equipment, methods, measures or standards, where the director is satisfied with the level of safety, protection of the environment and conservation of petroleum resources that will be achieved without compliance with that requirement."

Yours sincerely,

Keith Hynes, P. Eng.
Director Petroleum Engineering

...exploring for petroleum and minerals in Canada...
Searching new areas for large deposits...

6-March-2009

Parks and Natural Areas Division
Department of Environment and Conservation
33 Reid's Lane
Deer Lake, NL
A8A 2A3

Re: Temporary Access to Worksite via Newfoundland T'Railway Provincial Park

Mr. Stephen Hodgett,

Vulcan Minerals would like to apply for access to a temporary work site via the Newfoundland T'Railway Provincial Park. This temporary work site has been approved and permitted by the Department of Environment and Conservation Crown Lands Registry (reference 129150) as a drilling locations for Vulcan Minerals. The access to the work site is located near Robinsons (see attached map).

Depending on when we secure a rig we may require access as early as 20-May-09, however it is possible that Vulcan may drill another well before this one, in which case the access would not be required until 15-July-09. The temporary work site would be used for approximately four to five weeks. The types of vehicles that would be used during that period would be:

- Transport trucks to mobilize and demobilize the equipment at the beginning and end of the project.
- Personal vehicles of the crew at 7am and 7pm each day.
- Fuel delivery truck once every second day.
- Water delivery truck once every second day.

Sincerely,

Shane Hailey
Project Manager of Petroleum Exploration
Vulcan Minerals Inc.

333 Duckworth Street, St. John's, NL, A1C 1G9
Telephone: (709) 754-3186 Fax: (709) 754-3946, Email: info@vulcaminerals.ca, Website: www.vulcanminerals.ca

Map above shows the Red Brook #1 location, the Trailway access point and the nearby communities of Robinsons and Heatherton for reference

333 Duckworth Street, St. John's, NL, A1C 1G9
Telephone: (709) 754-3186 Fax: (709) 754-3946, Email: info@vulcaminerals.ca, Website: www.vulcanminerals.ca