AEC (WEST) LTD.

GEOLOGICAL REPORT

AEC (WEST) RENAISSANCE

TATE G-18

NWT

CABRA CONSULTING

A Division of Cabra Enterprises Ltd.

CALGARY, ALBERTA

AEC (WEST) LTD.

GEOLOGICAL REPORT

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TATE G-18

NWT

Prepared by: Brian Hester, P.Geol.

Cabra Consulting
1623 - 48th Avenue S.W.
Calgary, Alberta
T2T 2S9
(403) 243-5022

Reported to: Mr. Glen Andrews

AEC (WEST) RENAISSANCE TATE G-18

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AEC (WEST) RENAISSANCE TATE G-18

WELL DATA SUMMARY

Company:	AEC (West)
Well Name:	AEC (West) Renaissance Tate G-18
Surface Location:	64°27'17.30666" N, 125°17'33.14821" W
Surface Co-ordinates:	Northing: 7149492.633, Easting: 389706.952
Elevations:	***Ground:*** 381.0 meters ***Kelly Bushing:*** 386.4 meters ***K.B. to Ground:*** 5.4 meters
Unique Well I.D.:	NWT
Field:	Tate
Classification:	NPW
Objectives:	***Primary*** – Hume ***Secondary*** – Arnica, Franklin Mountain
Terminating Zone:	Ordovician
Security:	Tight
AFE Number:	5000044
Licence Number:	392
Spud Date:	0945 Hrs., February 17, 2000
Total Depth:	2030 meters @ 0900 Hrs, March 4, 2000
Sampled Interval:	***AEC/Ren:*** 585 to 2030 meters (5 meter intervals) ***ISPG:*** 585 to 2030 meters (5 meter intervals
Contractor:	Akita/Sahtu Drilling # 51
Drilling Supervision:	Allan Anger
Geological Supervision:	Brian Hester

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Hole Size:
Surface: 311.2 mm
Main: 222 mm

Surface Casing:
Size: 244.5 mm
Type: 43 joints of 53.7 kg/m J-55
Landed @ 586.0 meters
Cement: 47.0 tonnes Arctic set
Plug down @ 1412 Hrs, February 21, 2000

Coring: No Cores

Testing: No Tests

Directional Services:
Anadrill
Directional Driller: Eric Erikson
MWD Services: Barry Worm

Open Hole Logs: Schlumberger

Log	***Interval Logged***	***Scale***
DLTE-MSFL-LDTD-CNTH-SGTL	1218 to 690 meters	1:240 & 1:600
BHC-GR	1217 to 358 meters	1:240 & 1:600
VSP	Every 20 m from T.D. to 800 m then every 100m	

Final Status: Dry and Abandoned

Rig Release: 1200 Hrs, March 09, 2000

Final Costs: ~~$2,405,616~~

WELL HISTORY

This well was spudded in on February 17 at 0945 Hrs. Surface casing was set at 586 meters in the East Fork Formation. The well was then drilled ahead with water. The Little Bear Formation came in over 100 meters high and circulation was lost and regained in several of the highly permeable sands of this formation starting at 940 meters. The Slater River also came in high. The well was drilled ahead to 1462 meters where tight hole conditions forced a mud up. This was just below the contact with the Upper Hume which came in 227 meters high. Sample evaluation of the Hume was difficult due to abundant cavings created during the mud up. The well was control drilled through the Hume in anticipation of coring but porosity and hydrocarbons were not encountered. The well was then drilled ahead to the secondary objective. No shows were encountered in the Arnica. A thick evaporitic sequence composed of anhydrites and then salts was encountered in the Camsell which caused problems in maintaining reasonable mud properties. The well was terminated in what was believed to be the Mount Kindle Formation at a depth of 2030 meters at 0900 Hrs. on March 4th. Two conventional logging runs were made in the hole. VSP tools were flown in and run in the hole. At the first shot point the tool became stuck. A wireline stretch test indicated that the line was stuck around 1000 meters. Fishing tools were flown in and a sidedoor overshot was run in on pipe. The wireline came free at 1235 meters. The VSP was logged out and the logging and fishing tools were laid down. Four cement plugs were run to abandon the well and the rig was released at 1200 Hrs. on March 9th.

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GEOLOGICAL MARKERS

386.4 K.B. meters

Formation	Prognosis		Samples		Logs	
	Depth (m)	Subsea (m)	Depth (m)	Subsea (m)	Depth (m)	Subsea (m)
Cretaceous						
East Fork	286.4	100.0	NP	NP	NP	NP
Little Bear	982.4	-596.0	892.0	-505.6	882.3	-495.9
Slater River	1307.4	-921.0	1206.0	-819.6	1156.0	-769.6
Slater River Source	1527.4	-1141.0	1345.0	-958.6	1345.0	-958.6
Upper Devonian						
Detrital	NP	NP	NP	NP	1440.0	-1053.6
Canol	1592.4	-1206.0	NP	NP	NP	NP
Middle Devonian						
Hare Indian	1611.4	-1225.0	NP	NP	NP	NP
Bluefish Member	1661.4	-1275.0	1442.0	-1055.6	1443.0	-1056.6
Upper Hume	1676.4	-1290.0	1457.0	-1070.6	1449.0	-1062.6
Middle Hume	NP	NP	1494.0	-1107.6	1495.5	-1109.1
Lower Hume	1716.4	-1330.0	1512.0	-1125.6	1507.3	-1120.9
Lower Devonian						
Landry	1798.4	-1412.0	1574.0	-1187.6	1578.0	-1191.6
Arnica	1858.4	-1472.0	1609.0	-1222.6	1603.0	-1216.6
Camsell	NP	NP	1696.0	-1309.6	1697.0	-1310.6
Upper Silurian						
Camsell Evaporite	NP	NP	1774.0	-1387.6	1777.0	-1390.6
Detrital	NP	NP	1959.0	-1572.6	NP	NP
Lower Silurian						
Mount Kindle	NP	NP	1965.0	-1578.6	1964.0	-1577.6
Ordovician						
Franklin Mountain	1958.4	-1572.0	NP	NP	NP	NP
Total Depth	2200.4	-1814.0	2030.0	-1643.6	2031.9	-1645.5

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DAILY PROGRESS SUMMARY

Date	Days from Spud	Costs	Depth @ 2400 Hrs.	Progress (meters)	ROP (m/hr)	Formation	Operation	Operations Summary
00/02/16	0	$790,171	0	0	0.0	Surface	Rig up	Rig to Spud.
00/02/17	1	$836,994	50	50	5.6	Surface	Wait on casing	Rig to spud. Spud 311mm pilot hole @ 0945 hrs. Drill ahead to 34m. Pull out of hole. Ream 444mm. Pull out. Wait on casing truck.
00/02/18	2	$915,256	71	21	21.0	Surface	Drill	Wait on casing. Ream hole. Run 340 mm casing to 51 m. Cement same & head up. Drill out cement & drill ahead with 311 bit.
00/02/19	3	$952,387	472	401	19.8	Surface	Drill	Drill ahead & survey.
00/02/20	4	$1,000,642	586	114	12.7	Surface	Trip out	Drill ahead & survey to 474 m. Trip for bit. Run in & drill ahead to 586 m. Circulate & trip to run casing.
00/02/21	5	$1,214,962	586	0	0.0	Surface	Weld bowl	Trip out, run & cement casing. Weld on bowl.
00/02/22	6	$1,260,092	586	0	0.0	Surface	Drill out	Weld on bowl. Nipple up & pressure test. Run in & pressure test. Drill out cement.
00/02/23	7	$1,306,827	925	339	19.1	East Fork	Drill	Drill out cement. Formation leak off. Drill ahead directionally.
00/02/24	8	$1,425,161	1160	235	11.5	Little Bear	Drill	Drill ahead to 934 m. Lose 12m3/hr. Pump pill and losses drop to nil by 1025 m. Drill ahead directionally and pump sweeps to control losses.

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Date	Days from Spud	Costs	Depth @ 2400 Hrs.	Progress (meters)	ROP (m/hr)	Formation	Operation	Operations Summary
00/02/25	9	$1,480,992	1273	113	7.8	Slater River	Run in	Drill ahead directionally to 1273 m. Circulate sample & trip out. Lost 9.0 m3.
00/02/26	10	$1,523,289	1462	189	12.0	Hume	Mud up	Run in & drill ahead directionally. Losing approximately 2 m3/hr. Work tight hole at 1452 m. Drill to 1462 m & work tight hole. Start mudding up. Losses stopped on mud up.
00/02/27	11	$1,609,826	1491	29	6.1	Hume	Run in	Circulate & condition hole. Drill to 1465 m & circulate sample. Wait on orders. Drill ahead to 1491 m. Circulate sample & trip for bit #3. Run in hole.
00/02/28	12	$1,650,379	1594	103	4.6	Landry	Drill ahead	Run in. Drill ahead directionally.
00/02/29	13	$1,692,209	1712	118	6.1	Camsell	Drill ahead	Drill ahead to 1622 m. Circulate sample. Drill ahead to 1670 m. Lost 5 m3. Circulate sample. Drill ahead directionally.
00/03/01	14	$1,763,723	1768	56	3.6	Camsell	Trip out	Drill ahead to 1712 to 1768 m. Trip for bit #4. Lay down mud motors.
00/03/02	15	$1,806,280	1902	134	11.2	Camsell	Drill ahead	Run in to 168 m & repair rig. Run in to 570 m & slip & cut. Run in & wash to bottom. Drill ahead to 1750 m. Circulate sample. Drill ahead directionally.
00/03/03	16	$1,849,052	2009	107	4.9	Mount Kindle	Drill ahead	Drill ahead directionally. Lost 10 m3 to formation at 1960 m. Possible lost at 934 m. LCM stopped losses.

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Date	Days from Spud	Costs	Depth @ 2400 Hrs.	Progress (meters)	ROP (m/hr)	Formation	Operation	Operations Summary
00/03/04	17	$1,893,919	2030	21	2.5	Mount Kindle	Logging	Drill ahead to T.D. T.D. at 0900 Hrs. Circulate, wiper trip & circulate. Chain out to log. Lay down mud motor.
00/03/05	18	$1,974,791	2030	0	0.0	Mount Kindle	Wait on tools	Lay down tools. Rig in loggers at 0045 Hrs. Run in to log at 0145 Hrs. Log out DLTE/MSFL/LDTD/CNTH/SGTL. Rig up BHC & log. Run in with VSP tool . Differentially stuck at +/- 1000 m. Wait on fishing tools.
00/03/06	19	$2,119,358	2030	0	0.0	Mount Kindle	Lay down collars	Wait on tools. Rig up sidedoor 7 run in. Circulate @ 931 & 1187 m. Run in to 1235 m & free wireline. Hoist drill pipe & log out VSP. Lay down fishing & logging tools. Run in with collars & heavyweight & lay down same.
00/03/07	20	$2,260,650	2030	0	0.0	Mount Kindle	Wait on cement	Lay down collars. Run in open ended. Circulate & wait on cementers. Plug #1 2030 to 1965 m. Plug #2 1510 to 1410 m. Pull up to 1225 m & wait on cement.
00/03/08	21	$2,292,637	2030	0	0.0	Mount Kindle	Feel plug	Wait on cement. Feel plug #2 @ 1412 m. Run plug #3 1200 to 1100 m. Wait on cement. Tag plug #3 @ 1119 m. Run plug #4 650 to 550 m. Run to feel plug.
00/03/09	22	$2,405,616	2030	0	0.0	Mount Kindle	Rig release	Feel plug #4 @ 540 m. Lay down drill string. Tear out BOPE's. Cap casing with plug. Tear out rig. Rig release @ 1200 Hrs. 00/03/09.

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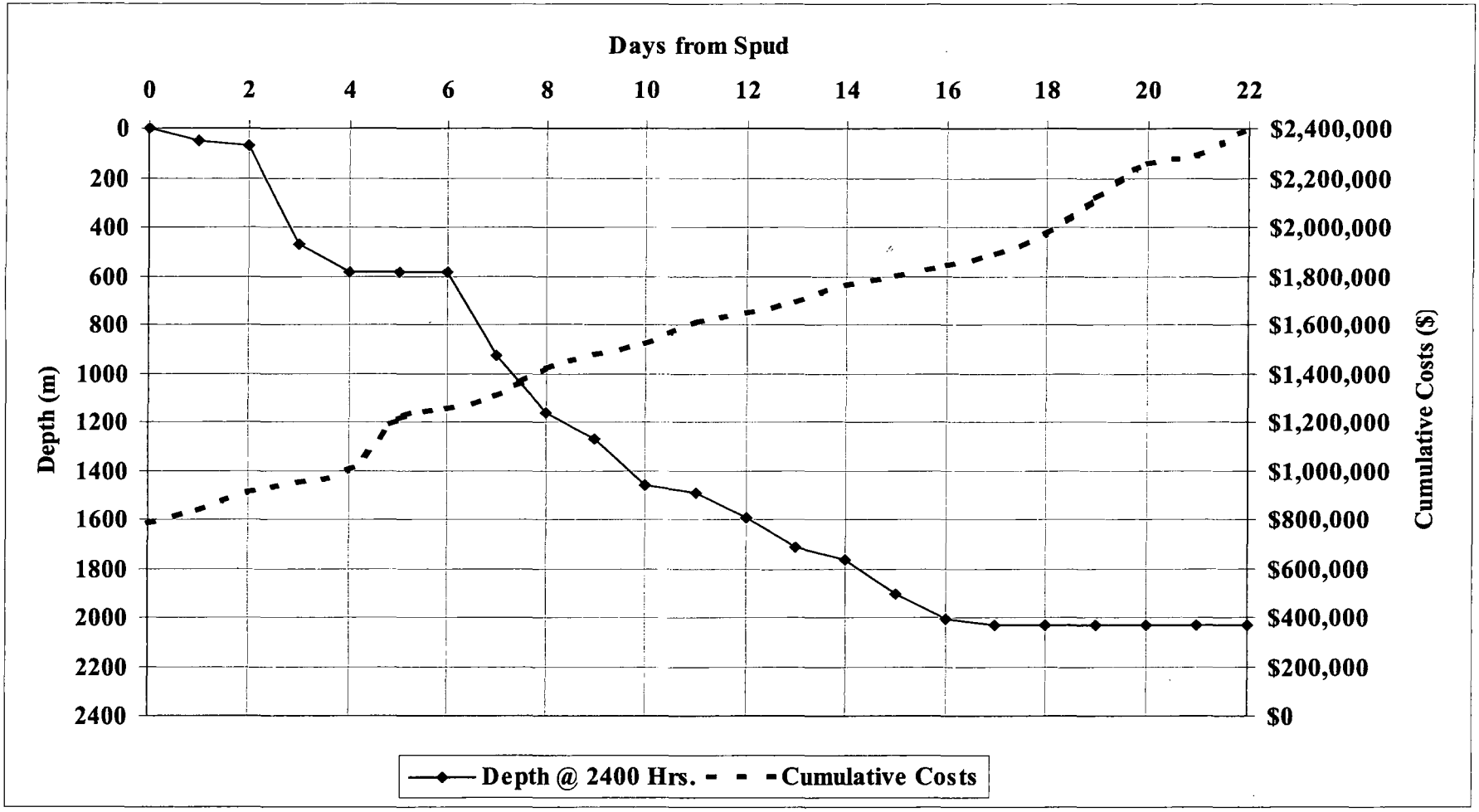
DEPTH & CUMULATIVE COSTS VS DAYS FROM SPUD CHART



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MUD RECORD

Mud up @ 1462 meters

Date	Depth (m)	Density (kg/m3)	Viscosity (s/l)	pH	Water Loss	Cl-	Ca+
00/02/16	0						
00/02/17	50	1140	75	9.0			
00/02/18	71	1080	44	9.0			
00/02/19	472	1130	42	9.0			
00/02/20	586	1180	120	9.0			
00/02/21	586	1000	28	9.0			
00/02/22	586	1000	28	9.0			
00/02/23	925	1000	25	9.0			
00/02/24	1160	1000	28	9.0			
00/02/25	1273	1000	28	9.0			
00/02/26	1462	1070	50	9.0	17.0	350	650
00/02/27	1491	1060	56	9.0	9.0	300	160
00/02/28	1594	1060	49	9.0	9.0		
00/02/29	1712	1065	48	9.0	9.2	300	60
00/03/01	1768	1065	55	10.5	11.4	320	240
00/03/02	1902	1160	68	9.0	100.0	63000	60
00/03/03	2009	1210	46	8.0	48.0	230000	210
00/03/04	2030	1210	57	8.0	38.0	250000	120
00/03/05	2030	1210	57	8.0	38.0	250000	120
00/03/06	2030	1210	57	8.0	38.0	250000	120
00/03/07	2030	1210	57	8.0	38	250000	120
00/03/08	2030	1210	66	10.0	33	225000	520
00/03/09	2030	1210	66	10.0	33	225000	520

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BIT RECORD

Bit No.	Type	Size (mm)	Depth Out(m)	Interval Cut(m)	Hrs	FOB (daN)	RPM	Cond'n T	B	G	ROP (m/hr)	Comments
1A	HP13GJ	311	34	34	6.0	2-5000	180	4	1	2	5.7	Pilot hole
1B	SDSC	444	51	51	2.0	2-5000	180	1	1	1	25.5	T.D. Conductor
2A	DSSH	311	474	423	20.8	10-1500	180	5	5	1	20.4	ROP
3A	FDSSHC	311	586	214	9.0	10-1500	180	5	5	1	23.8	T.D. Surface
1	FDS+2	222	1273	687	51.8	16-18000	90/15	6	E	1	13.3	ROP
2	F10T	222	1491	218	20.5	16-18000	90/15	7	E	1	10.6	ROP
3	F37P	222	1768	277	55.5	16-18000	90/15	5	E	1	5.0	ROP
4	F37P	222	2030	262	42.5	16-18000	90/15	4	E	1	6.2	T.D.

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DEVIATION RECORD

Survey No.	Depth (meters)	Deviation (degrees)	Interval (meters)	Survey No.	Depth (meters)	Deviation (degrees)	Interval (meters)
1	67	0.500	67	10	330	0.750	29
2	105	0.500	38	11	357	0.750	27
3	132	0.750	27	12	386	0.250	29
4	160	0.750	28	13	413	1.000	27
5	188	0.750	28	14	441	1.000	28
6	215	0.500	27	15	460	1.000	19
7	244	0.750	29	16	480	0.750	20
8	273	0.500	29	17	510	0.750	30
9	301	0.750	28	18	547	1.000	37
				19	573	0.750	26

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DIRECTIONAL RECORD

Survey No.	Depth (meters)	Inclination (degrees)	Azimuth (degrees)	TVD (meters)	Subsea (meters)	North+/South - (meters)	East+/West- (meters)	Vertical section (meters)	Dogleg (deg/30m)
0	0.00	0.00	0.00	0.00	386.40	0.00	0.00	0.00	0.00
1	586.00	0.00	0.00	586.00	-199.60	0.00	0.00	0.00	0.00
2	594.90	1.10	304.90	594.90	-208.50	0.05	-0.07	0.05	3.71
3	604.50	0.80	288.70	604.50	-218.10	0.12	-0.21	0.12	1.25
4	614.20	1.10	312.00	614.20	-227.80	0.21	-0.34	0.21	1.49
5	621.00	1.10	288.00	621.00	-234.60	0.27	-0.45	0.27	2.02
6	632.40	0.90	310.50	632.39	-245.99	0.36	-0.63	0.36	1.15
7	642.10	0.90	304.20	642.09	-255.69	0.46	-0.75	0.46	0.31
8	651.60	0.70	294.40	651.59	-265.19	0.52	-0.86	0.52	0.76
9	661.00	1.10	304.90	660.99	-274.59	0.60	-0.99	0.60	1.38
10	670.50	1.10	282.40	670.49	-284.09	0.67	-1.15	0.67	1.36
11	680.30	1.30	295.10	680.29	-293.89	0.74	-1.34	0.74	1.02
12	699.60	1.10	316.90	699.58	-313.18	0.96	-1.67	0.96	0.77
13	709.00	0.90	304.90	708.98	-322.58	1.07	-1.79	1.07	0.92
14	718.60	1.10	321.10	718.58	-332.18	1.19	-1.91	1.19	1.08
15	728.00	0.90	325.70	727.98	-341.58	1.32	-2.01	1.32	0.69
16	737.60	0.80	314.30	737.58	-351.18	1.43	-2.10	1.43	0.61
17	747.20	1.10	315.50	747.18	-360.78	1.54	-2.21	1.54	0.94
18	766.30	0.90	326.00	766.27	-379.87	1.79	-2.42	1.79	0.42
19	775.80	0.50	334.60	775.77	-389.37	1.89	-2.48	1.89	1.30
20	785.50	1.10	311.20	785.47	-399.07	1.99	-2.57	1.99	2.08
21	795.10	1.30	308.40	795.07	-408.67	2.12	-2.73	2.12	0.65
22	804.60	1.10	296.50	804.57	-418.17	2.23	-2.89	2.23	1.01

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Survey No.	Depth (meters)	Inclination (degrees)	Azimuth (degrees)	TVD (meters)	Subsea (meters)	North+/South - (meters)	East+/West- (meters)	Vertical section (meters)	Dogleg (deg/30m)
23	813.50	0.80	288.00	813.47	-427.07	2.29	-3.03	2.29	1.11
24	822.70	1.20	306.30	822.66	-436.26	2.36	-3.17	2.36	1.65
25	832.30	1.10	313.40	832.26	-445.86	2.49	-3.31	2.49	0.54
26	841.90	1.20	309.10	841.86	-455.46	2.61	-3.46	2.61	0.41
27	851.50	1.10	309.10	851.46	-465.06	2.73	-3.61	2.73	0.31
28	861.10	1.30	304.20	861.06	-474.66	2.85	-3.77	2.85	0.70
29	870.00	1.30	304.20	869.95	-483.55	2.97	-3.94	2.97	0.00
30	879.60	1.40	300.00	879.55	-493.15	3.09	-4.13	3.09	0.44
31	889.20	1.10	299.30	889.15	-502.75	3.19	-4.31	3.19	0.94
32	898.80	0.40	307.70	898.75	-512.35	3.26	-4.42	3.26	2.21
33	908.00	0.40	300.70	907.95	-521.55	3.29	-4.47	3.29	0.16
34	917.60	0.90	289.50	917.55	-531.15	3.34	-4.57	3.34	1.60
35	927.60	1.00	287.30	927.55	-541.15	3.39	-4.73	3.39	0.32
36	936.70	1.10	298.60	936.64	-550.24	3.45	-4.88	3.45	0.76
37	955.80	1.40	320.80	955.74	-569.34	3.72	-5.19	3.72	0.89
38	964.90	1.20	310.50	964.84	-578.44	3.87	-5.33	3.87	1.01
39	974.40	1.80	312.00	974.33	-587.93	4.03	-5.52	4.03	1.90
40	984.00	1.40	316.90	983.93	-597.53	4.22	-5.71	4.22	1.32
41	993.60	0.90	315.50	993.53	-607.13	4.36	-5.84	4.36	1.56
42	1003.00	0.40	296.50	1002.93	-616.53	4.43	-5.92	4.43	1.72
43	1012.60	0.20	212.80	1012.53	-626.13	4.43	-5.96	4.43	1.33
44	1021.80	0.10	250.10	1021.73	-635.33	4.41	-5.98	4.41	0.44
45	1031.10	0.20	341.50	1031.03	-644.63	4.42	-5.99	4.42	0.73
46	1040.70	0.20	294.40	1040.63	-654.23	4.45	-6.01	4.45	0.50
47	1050.40	0.00	33.50	1050.33	-663.93	4.45	-6.03	4.45	0.62
48	1060.00	0.10	158.00	1059.93	-673.53	4.45	-6.03	4.45	0.31

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Survey No.	Depth (meters)	Inclination (degrees)	Azimuth (degrees)	TVD (meters)	Subsea (meters)	North+/South - (meters)	East+/West- (meters)	Vertical section (meters)	Dogleg (deg/30m)
49	1069.10	0.30	188.20	1069.03	-682.63	4.42	-6.03	4.42	0.72
50	1078.70	0.10	160.80	1078.63	-692.23	4.38	-6.03	4.38	0.68
51	1088.40	0.40	183.30	1088.33	-701.93	4.34	-6.03	4.34	0.96
52	1097.90	0.60	153.00	1097.83	-711.43	4.26	-6.01	4.26	1.03
53	1107.60	0.40	172.70	1107.53	-721.13	4.18	-5.98	4.18	0.81
54	1117.10	0.60	150.20	1117.03	-730.63	4.11	-5.95	4.11	0.87
55	1126.70	1.00	149.50	1126.63	-740.23	3.99	-5.88	3.99	1.25
56	1136.20	0.70	126.30	1136.12	-749.72	3.89	-5.79	3.89	1.42
57	1145.10	0.80	193.80	1145.02	-758.62	3.79	-5.76	3.79	2.82
58	1154.50	1.10	193.10	1154.42	-768.02	3.64	-5.80	3.64	0.96
59	1164.10	1.30	179.10	1164.02	-777.62	3.44	-5.82	3.44	1.10
60	1173.70	1.50	179.80	1173.62	-787.22	3.21	-5.82	3.21	0.63
61	1183.20	1.40	165.00	1183.11	-796.71	2.97	-5.79	2.97	1.22
62	1192.90	1.00	157.30	1192.81	-806.41	2.78	-5.72	2.78	1.33
63	1202.40	1.00	158.00	1202.31	-815.91	2.63	-5.66	2.63	0.04
64	1212.10	1.10	146.70	1212.01	-825.61	2.47	-5.58	2.47	0.71
65	1221.70	0.80	146.00	1221.61	-835.21	2.34	-5.49	2.34	0.94
66	1231.20	1.60	142.00	1231.11	-844.71	2.18	-5.37	2.18	2.54
67	1240.60	2.00	140.00	1240.50	-854.10	1.95	-5.18	1.95	1.29
68	1250.30	2.20	145.30	1250.19	-863.79	1.67	-4.97	1.67	0.86
69	1259.90	2.00	151.20	1259.79	-873.39	1.37	-4.78	1.37	0.92
70	1269.00	1.90	147.40	1268.88	-882.48	1.10	-4.63	1.10	0.54
71	1278.00	1.90	145.30	1277.88	-891.48	0.85	-4.46	0.85	0.23
72	1287.60	1.90	160.80	1287.47	-901.07	0.57	-4.32	0.57	1.60
73	1297.20	2.00	160.80	1297.07	-910.67	0.26	-4.21	0.26	0.31
74	1306.70	1.30	185.40	1306.56	-920.16	0.00	-4.17	0.00	3.10

AEC (WEST) RENAISSANCE TATE G-18

Survey No.	Depth (meters)	Inclination (degrees)	Azimuth (degrees)	TVD (meters)	Subsea (meters)	North+/South - (meters)	East+/West- (meters)	Vertical section (meters)	Dogleg (deg/30m)
75	1316.30	1.10	143.20	1316.16	-929.76	-0.18	-4.12	-0.18	2.76
76	1325.90	1.40	195.20	1325.76	-939.36	-0.37	-4.10	-0.37	3.53
77	1335.00	1.30	170.60	1334.86	-948.46	-0.58	-4.11	-0.58	1.92
78	1344.60	1.50	186.80	1344.45	-958.05	-0.81	-4.11	-0.81	1.38
79	1354.20	1.70	178.40	1354.05	-967.65	-1.08	-4.12	-1.08	0.96
80	1363.80	1.30	150.20	1363.65	-977.25	-1.31	-4.06	-1.31	2.59
81	1373.30	1.10	96.10	1373.15	-986.75	-1.42	-3.91	-1.42	3.49
82	1382.30	1.40	108.60	1382.14	-995.74	-1.46	-3.72	-1.46	1.35
83	1391.90	1.70	102.40	1391.74	-1005.34	-1.53	-3.47	-1.53	1.07
84	1401.50	1.30	104.50	1401.34	-1014.94	-1.59	-3.23	-1.59	1.26
85	1411.00	1.10	109.50	1410.83	-1024.43	-1.64	-3.04	-1.64	0.71
86	1420.60	1.30	115.10	1420.43	-1034.03	-1.72	-2.85	-1.72	0.72
87	1430.20	1.30	103.10	1430.03	-1043.63	-1.79	-2.65	-1.79	0.85
88	1439.30	1.30	105.20	1439.13	-1052.73	-1.84	-2.45	-1.84	0.16
89	1449.00	1.10	144.60	1448.83	-1062.43	-1.95	-2.29	-1.95	2.57
90	1458.50	1.20	165.00	1458.32	-1071.92	-2.12	-2.21	-2.12	1.32
91	1467.60	1.30	160.10	1467.42	-1081.02	-2.31	-2.15	-2.31	0.48
92	1477.10	1.30	159.40	1476.92	-1090.52	-2.51	-2.08	-2.51	0.05
93	1490.20	1.10	155.20	1490.02	-1103.62	-2.76	-1.97	-2.76	0.50
94	1499.80	1.30	142.50	1499.61	-1113.21	-2.93	-1.87	-2.93	1.04
95	1509.40	1.10	138.30	1509.21	-1122.81	-3.09	-1.74	-3.09	0.68
96	1528.10	1.30	131.90	1527.91	-1141.51	-3.36	-1.46	-3.36	0.39
97	1537.60	1.10	106.60	1537.41	-1151.01	-3.46	-1.29	-3.46	1.77
98	1547.20	1.80	94.60	1547.00	-1160.60	-3.50	-1.05	-3.50	2.37
99	1556.80	1.70	82.00	1556.60	-1170.20	-3.49	-0.76	-3.49	1.24
100	1565.90	1.30	63.70	1565.70	-1179.30	-3.43	-0.54	-3.43	2.04

AEC (WEST) RENAISSANCE TATE G-18

Survey No.	Depth (meters)	Inclination (degrees)	Azimuth (degrees)	TVD (meters)	Subsea (meters)	North+/South - (meters)	East+/West- (meters)	Vertical section (meters)	Dogleg (deg/30m)
101	1575.50	0.70	70.10	1575.29	-1188.89	-3.36	-0.38	-3.36	1.90
102	1585.10	1.20	45.50	1584.89	-1198.49	-3.27	-0.26	-3.27	1.98
103	1594.60	1.30	51.10	1594.39	-1207.99	-3.13	-0.10	-3.13	0.50
104	1604.10	1.40	54.60	1603.89	-1217.49	-3.00	0.08	-3.00	0.41
105	1613.20	1.10	68.70	1612.98	-1226.58	-2.90	0.25	-2.90	1.41
106	1622.70	1.10	86.20	1622.48	-1236.08	-2.86	0.42	-2.86	1.06
107	1632.30	0.80	88.40	1632.08	-1245.68	-2.85	0.58	-2.85	0.94
108	1641.90	1.00	68.70	1641.68	-1255.28	-2.82	0.73	-2.82	1.14
109	1651.50	1.00	89.10	1651.28	-1264.88	-2.79	0.89	-2.79	1.11
110	1661.00	1.30	77.10	1660.78	-1274.38	-2.76	1.08	-2.76	1.21
111	1670.60	1.50	94.50	1670.37	-1283.97	-2.75	1.31	-2.75	1.46
112	1680.20	1.30	75.70	1679.97	-1293.57	-2.73	1.54	-2.73	1.56
113	1689.70	1.00	30.00	1689.47	-1303.07	-2.63	1.69	-2.63	2.95
114	1699.30	1.10	8.90	1699.07	-1312.67	-2.47	1.74	-2.47	1.24
115	1708.90	1.20	359.10	1708.67	-1322.27	-2.28	1.75	-2.28	0.69
116	1718.10	1.10	359.80	1717.86	-1331.46	-2.09	1.75	-2.09	0.33
117	1727.60	0.70	9.60	1727.36	-1340.96	-1.95	1.76	-1.95	1.35
118	1737.20	0.90	357.70	1736.96	-1350.56	-1.81	1.77	-1.81	0.81
119	1746.20	1.00	355.50	1745.96	-1359.56	-1.66	1.76	-1.66	0.35
120	1755.80	1.10	351.30	1755.56	-1369.16	-1.49	1.74	-1.49	0.39
121	1765.40	1.10	355.50	1765.16	-1378.76	-1.31	1.72	-1.31	0.25
122	1775.00	1.20	337.30	1774.76	-1388.36	-1.12	1.67	-1.12	1.18
123	1784.50	1.00	357.60	1784.25	-1397.85	-0.95	1.63	-0.95	1.37
124	1794.10	1.00	338.00	1793.85	-1407.45	-0.79	1.59	-0.79	1.06
125	1803.60	0.90	328.80	1803.35	-1416.95	-0.65	1.53	-0.65	0.57
126	1813.30	1.10	343.60	1813.05	-1426.65	-0.49	1.46	-0.49	1.01

AEC (WEST) RENAISSANCE TATE G-18

Survey No.	Depth (meters)	Inclination (degrees)	Azimuth (degrees)	TVD (meters)	Subsea (meters)	North+/South - (meters)	East+/West- (meters)	Vertical section (meters)	Dogleg (deg/30m)
127	1822.90	1.10	349.90	1822.65	-1436.25	-0.31	1.42	-0.31	0.38
128	1832.40	1.00	338.00	1832.15	-1445.75	-0.14	1.37	-0.14	0.76
129	1841.00	1.00	354.80	1840.75	-1454.35	0.00	1.34	0.00	1.02
130	1850.90	0.90	2.60	1850.64	-1464.24	0.16	1.33	0.16	0.49
131	1860.50	1.10	8.20	1860.24	-1473.84	0.33	1.35	0.33	0.69
132	1869.60	0.90	27.90	1869.34	-1482.94	0.48	1.39	0.48	1.30
133	1879.10	0.70	18.00	1878.84	-1492.44	0.60	1.45	0.60	0.77
134	1897.70	1.10	23.70	1897.44	-1511.04	0.87	1.55	0.87	0.66
135	1907.00	0.40	13.10	1906.74	-1520.34	0.99	1.60	0.99	2.29
136	1916.60	0.20	321.80	1916.34	-1529.94	1.03	1.59	1.03	0.99
137	1926.10	0.20	347.80	1925.84	-1539.44	1.06	1.58	1.06	0.28
138	1935.70	0.40	339.40	1935.44	-1549.04	1.11	1.56	1.11	0.64
139	1955.80	0.20	172.00	1955.54	-1569.14	1.14	1.54	1.14	0.89
140	1965.40	0.60	193.10	1965.14	-1578.74	1.07	1.54	1.07	1.31
141	1974.50	0.40	199.40	1974.24	-1587.84	1.00	1.51	1.00	0.68
142	1983.00	0.30	212.10	1982.74	-1596.34	0.95	1.49	0.95	0.44
143	1992.10	0.60	177.00	1991.84	-1605.44	0.88	1.48	0.88	1.30
144	2001.70	0.50	163.60	2001.44	-1615.04	0.79	1.50	0.79	0.51
145	2011.30	0.90	155.90	2011.03	-1624.63	0.68	1.54	0.68	1.28

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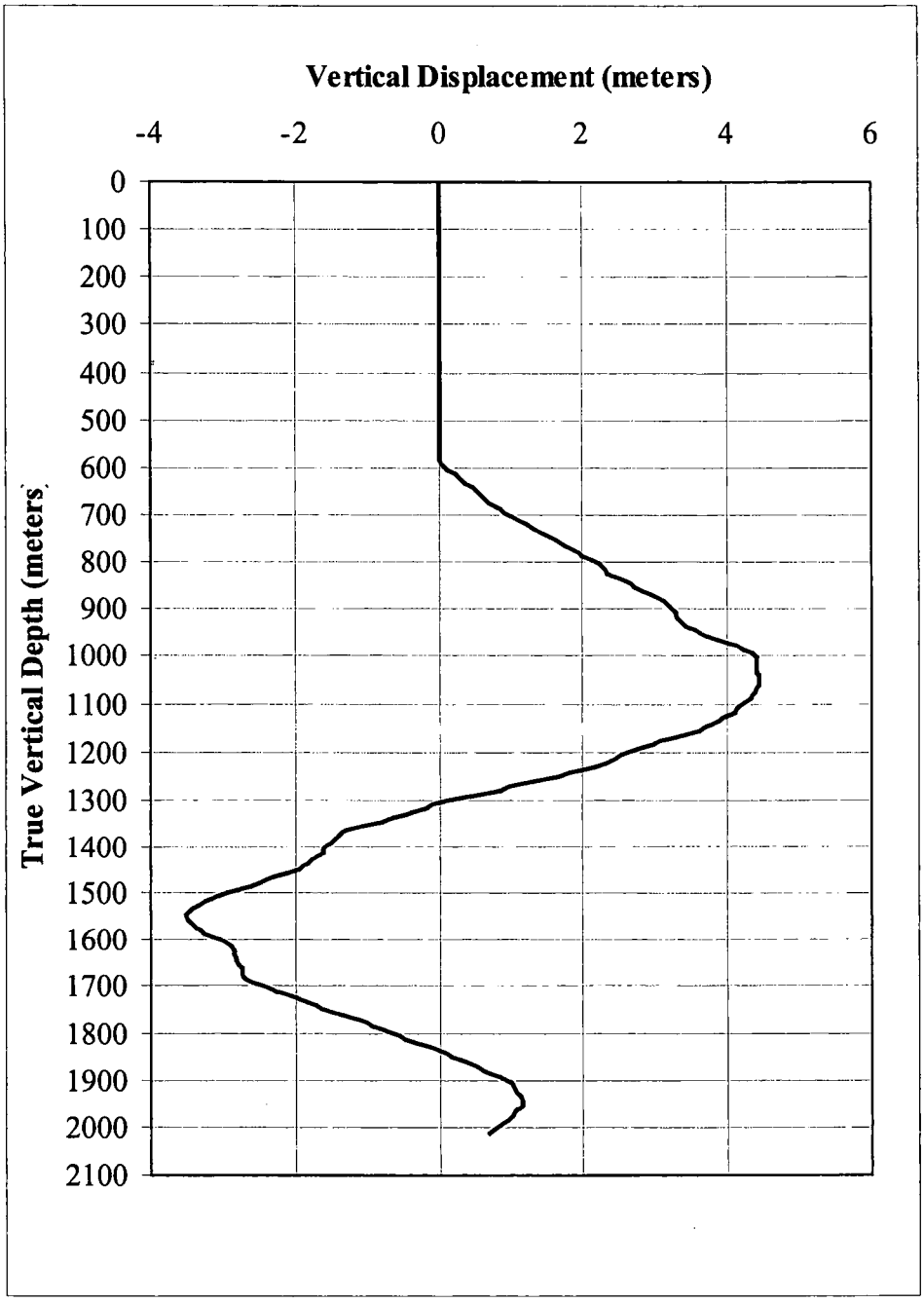
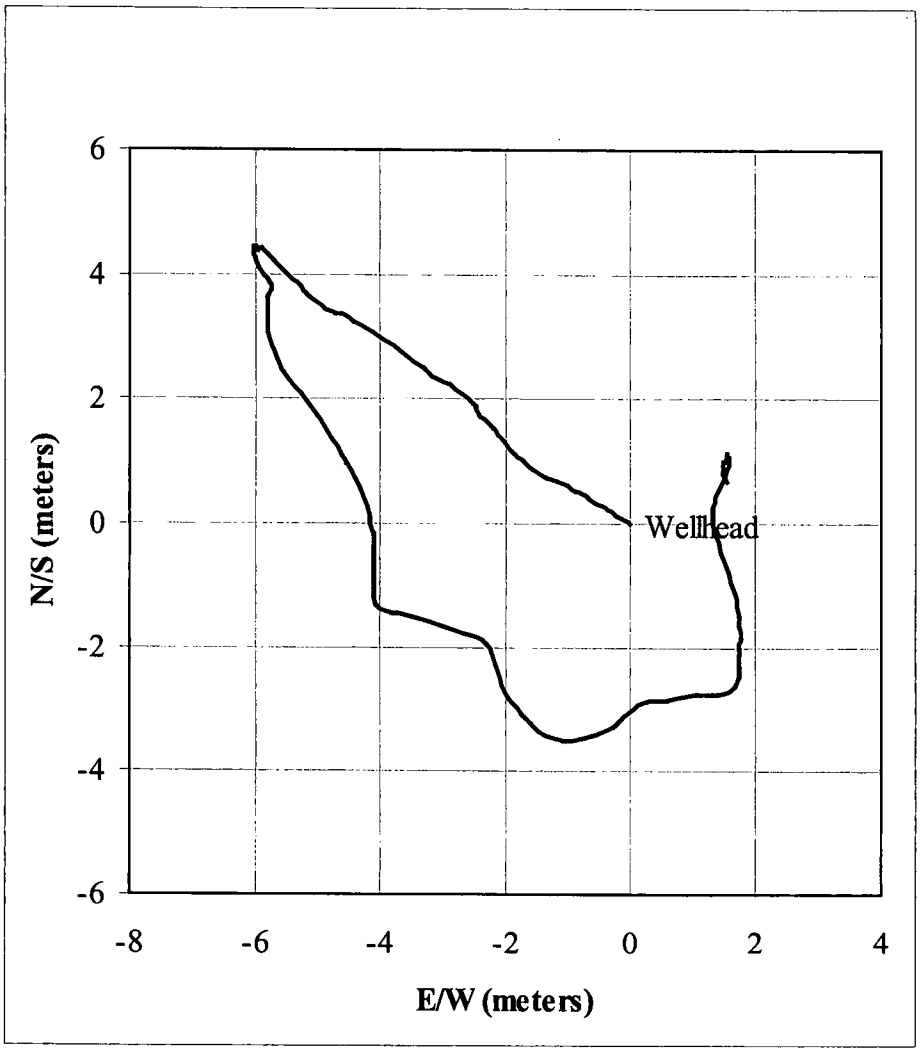
DIRECTIONAL RECORD

True Vertical Depth vs Vertical Displacement



AEC (WEST) RENAISSANCE TATE G-18

Plan View



AEC (WEST) RENAISSANCE TATE G-18

OPEN HOLE LOG SUMMARY

Contractor:	Schlumberger	**Engineer:**	Sean McConkey
District:	Norman Wells	**Truck No.:**	8416
Circulation End:	00/03/04 17:00	**Finish Trip:**	00/03/04 23:00
On Location:	00/03/04 18:00	**Off Location:**	00/03/06 23:00
Rig Up:	00/03/05 00:45	**Rig Down:**	00/03/06 22:30

Mud Properties:

Type: Gel Chemical
Density: 1180 **pH:** 8
Viscosity: 47 **WL:** 38
Cl- 230000 ppm **RMF** 0.21 @ 17°C

BHT: 55 °C **Total Depth:** **Driller:** 2030.0 meters
Logger: 2031.9 meters

Services:

Log	Interval Logged From	To	Meters Logged	Comments
DLTE-MSFL	2025.0	586.0	1439.0	Combo with LDTD-CNTH
LDTD-CNTH	2016.5	586.0	1430.5	Combo with DLTE-MSFL
BHC	2029.5	586.0	1443.5	
VSP	2019.4	586.0	1433.4	20 m intervals to 800 m. 100 m intervals to surf. Csg.

Times:

Tool Combo	Date	Run in	First on bottom	Last on bottom	Clear Hole	Total Hours
DLTE-MSFL-LDTD-CNTH-SGTL	00/03/05	01:30	02:00	02:30	06:00	4.50
BHC-GR	00/03/05	07:30	08:45	09:15	13:00	5.50
VSP	00/03/05	15:00	16:00	16:00		1.00
	00/03/06			10:15	21:30	11.25

Logging Time:	22.25 Hrs	**Rig In/Out:**	5.25 Hrs
Time Losses:	18.25 Hrs	**Total Time:**	45.75 Hrs

AEC (WEST) RENAISSANCE TATE G-18

Remarks: Good job done by personnel on keeping AEC representatives informed. Major problems with satellite communications needs to be resolved. Differential stuck in hole with wireline at 1000 to 1200 m when tool got to bottom. Lost time was time spent fishing VSP tool. Note high chloride content of mud.

Copies: 1 field, 7 final - 8 Total.

Witness: Brian Hester

GEOLOGICAL SUMMARY

This well was drilled to evaluate the oil potential of the Middle Devonian Upper Hume. The Lower Devonian Arnica and Ordovician Franklin Mountain were secondary targets. Samples were caught from 586 m to the T.D. of 2030 meters. A gas detector was also run over this interval. Formations started coming in high in the Cretaceous section where the Little Bear was 90 meters high and the Slater River & Slater River source came in at 101 m and 182 m high respectively in samples. Mud up was done after tight hole was encountered in the top of the Hume which came in 219 m high in samples. Formation markers continued to come in high over the rest of the well with the Arnica 249 m high to prognosis. A very thick section of Camsell evaporites consisting of Anhydrites and Salts was encountered at 1774 m. The mud clobbered up and then the salinity began to climb reaching 260,000 ppm chlorides. This caused difficulties in maintaining a good quality mud. The well was drilled ahead into the Silurian Mount Kindle and T.D.'ed at 2030 m, no Franklin Mountain was penetrated. Gas readings were very low in all formations with the exception of the Slater River source. No live shows were encountered in this well and it was abandoned.
A complete microphoto record of this well is included on CD and microphotos through the potential intervals of the offset wells are also included in this study.

East Fork Formation - Late Cretaceous
Surface casing was set at 586 m in the East Fork Formation. Lithology was shales, siltstones and unconsolidated sands. No shows were noted through this section.

Little Bear Formation - Late Cretaceous
This formation came in at 892 m (Log 882 m) and was composed of variable cemented sands with shales. The quartz sandstones were poorly cemented to unconsolidated with porosity ranging from 15 to 20% and intervals with permeabilities greater then 1 darcy. Circulation was lost in several of these sands and was recovered by mixing LCM. However lost circulation reoccurred in these intervals as the drilling of the well progressed. If this well had encountered significant hydrocarbons in the zones of interest these lost circulation zones would have been a major concern in well control. This interval also caused problems in the logging of the well when the wireline became differential stuck while running the VSP. A very minor show was noted in the 1160 m sample, however no other shows were noted throughout this section.

Slater River Formation – Late Cretaceous
This formation was picked at 1207 m in samples (Log 1156 m). The transition from the sands and shales of the Little Bear was gradational. This formation is composed of continental shales with minor silts and sands and minor amounts of carbonaceous material. Shales are sideritic in part. There are scattered forams throughout this section.

Slater River Formation Source Rock – Early Cretaceous
This formation came in at 1345 m in samples (Log 1345 m). It is a very good marker as it marks an abrupt change from the continental shales of the Slater River to bituminous marine shales with abundant fish remains and scattered coccoliths. Background gas increased to 100 to 200 units and ROP increased. At 1423 m fossil fragments decreased as did the bituminous nature of the shales.

Bluefish Member Source Rock – Middle Devonian
This formation came in at 1442 m in samples (Log 1443 m). The black to dark brown shales were slightly bituminous with disseminated and nodular pyrite. The contact with the overlying Slater River was difficult to define as they are both dark shales.

Upper Hume Formation – Middle Devonian
This formation was picked in samples at 1457 m (Log 1449 m). On penetrating the Hume the well got tight and mud up commenced at 1462 m. Due to this the sample quality over the Upper Hume is poor as there were a lot of cavings. The rock was predominately dolostone although logs suggest that there are shale beds present. Porosity was mostly 3-5% with scattered chips showing 5-8% porosity. There were scattered traces of gilsonite. No live shows were noted in these dolostones however a faint halo was noted in the watch glasses after the chlorothene had evaporated. This suggests that at one time hydrocarbons were present and were possibly flushed. Traces of saddle dolostone point to hydrothermal alteration for this rock, however there were very few euhedral crystals as seen in the Tate B-65 well.

Middle Hume Formation - Middle Devonian
This formation was picked in samples at 1494 m (Log 1496 m). The crystallinity of the dolostones becomes finer and traces of argillite are noted downsection. Porosity is 3-4% and shows are the same as in the Upper Hume with a faint halo after evaporation.

Lower Hume Formation – Middle Devonian
This formation was picked in samples at 1512 m (Log 1507 m). It is a composed of a slightly argillaceous brachiopod intrabiomicrite (mudstone to wackestone)with minor dolostone interbeds containing crinoidal fossil ghosts. Deposition was on a carbonate shelf. It is tight with no shows.

Landry Formation – Lower to Middle Devonian
This formation was picked in samples at 1574 m (Log 1578 m). It is an amphipora intrapelmicrite (wackestone to packstone). Deposition was probably in a lagoonal or subtidal environment. At 1596 m (Log 1592 m) the section becomes dolomitized with laminations atypical of stromatopoids. This is possibly a mudmound or reefal facies within the Landry. No shows were noted through this section.

Arnica Formation – Lower Devonian
This formation was picked in samples at 1609 m (Log 1603 m). This formation is composed of aphano to microcrystalline dolomites with fossil ghosts of Amphipora and tabular Stromatoporoids. There are rare scattered breccias which may have resulted from dissolution of anhydrites. 4 cubic meters of mud were lost to a fracture at 1670 m. This formation was deposited on a carbonate platform in a subtidal environment. The formation is tight with no shows.

Camsell Formation– Lower Devonian
This formation was picked in samples at 1696 m (Log 1697 m). This formation is composed aphanocrystalline dolostones, siltstone and shales with minor breccia interbeds. The anhydritic content increases downsection and there are interbeds of anhydrite downsection. The breccias increase downsection and are made up of dolostone and shale fragments and are a result of dissolution of anhydrites. This formation was deposited in a supratidal environment that became increasingly restricted downsection. There are no shows in this formation.

Camsell Evaporites – Upper Silurian to Lower Devonian
This formation was picked in samples at 1774 m (log 1777 m). This formation in samples is composed of anhydritic mudstones to argillaceous anhydrites with increasing salt content (from salt casts) downsection. The sonic log suggests this may be a massive salt. Salinity in the mud increased to 230,000 ppm eventually. This formation was deposited in a restricted subtidal environment. Salinity increases downsection.

Mount Kindle – Lower Silurian
This formation was picked in samples at 1965 m (log 1964 m). This formation is composed of marine fissile shales and micro to fine crystalline dolostones. This formation was deposited on a deep marine shelf. T.D. was called at 2030 meters in this formation.

SAMPLE DESCRIPTIONS

586-610 m	SHALE - medium to dark grey, silty in part, bentonitic, very slightly calcareous, soft.
610-625 m	Shale with Siltstone interbeds. SHALE - medium to dark grey, soft, bentonitic. SILTSTONE - medium to dark greyish brown, argillaceous, poorly cemented, rare fine to coarse sand grains.
625-638 m	Siltstone with Shale interbeds. SILTSTONE - medium to dark grey brown, silt grading to very fine Sandstone in part, poorly cemented, argillaceous. SHALE - medium to dark grey, silty, soft, trace carbonaceous.
638-650 m	SANDSTONE - clear quartz to light brown, minor chert, very fine to fine grained, rare coarse frags, subround to angular, well sorted, unconsolidated, argillaceous, trace pyrite, poor (3%)porosity.
650-670 m	SANDSTONE - as above, silty grading to Siltstone, argillaceous, poor porosity. Shale laminae.
670-685 m	Predominantly cement cavings, poor returns over shaker.
685-695 m	SANDSTONE - quartz & chert grains and fragments, very fine to fine grained, occasional coarse to very coarse chert frags, generally well sorted, unconsolidated, silty, argillaceous. Possible cavings?.
695-700 m	Cement cavings.
700-715 m	SHALE - medium to dark grey, arenaceous to highly arenaceous, soft, minor pyrite. Abundant loose sand grains.
715-730 m	SANDSTONE - white to light grey to grey brown, S&P, quartz & lithics, fine to medium, rare coarse grains, subangular to angular, poorly cemented, calcareous cement, minor clay, slightly micaceous, poor to fair porosity. Claystone interbed at top.
730-745 m	SHALE - medium to dark grey, arenaceous to highly areanceous, soft. Shale is mostly washed, Abundant loose sand grains.

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745-760 m	SHALE - medium to dark grey, arenaceous to highly areanceous, soft, minor pyrite. Shale is mostly washed, Abundant loose sand grains.
760-770 m	SANDSTONE - medium to dark brown, quartz, lithics & chert, very fine to medium grained, subround to angular, poorly cemented, calcareous, argillaceous, silty, pyrite, poor porosity.
770-790 m	SHALE - medium to dark grey, blocky, very soft, highly arenaceous. SANDSTONE - light brown, quartz & lithics, very fine to fine, well sorted, subround to angular, argillaceous, poor porosity. Samples contain abundant loose sand grains, shale has been washed.
790-810 m	SHALE - medium to dark grey to grey green, blocky, waxy in part, very soft, highly arenaceous, minor pyrite. Samples contain abundant loose sand grains, shale has been washed.
810-820 m	Shale with Sandstone interbeds. SHALE - medium to dark grey to grey green, blocky, waxy in part, soft, arenaceous to highly arenaceous, grading to argillaceous Siltstone. SANDSTONE - light to medium grey brown, quartz & chert, silt to fine grained, well sorted, subangular to angular, poorly cemented to loose, argillaceous to highly argillaceous, poor porosity.
820-835 m	Shale with Siltstone interbeds. SHALE - medium to dark grey to dark green, subfissile, blocky, waxy in part, soft, arenaceous to highly arenaceous, grading to Siltstone in part. SILTSTONE - dark grey, argillaceous, sandy in part.
835-850 m	SHALE - medium to dark grey, blocky to subblocky, soft, silty grading to argillaceous Siltstone in part, minor pyrite.
850-870 m	SHALE - medium to dark grey, blocky, soft, arenaceous, minor pyrite. Abundant loose sand grains.
870-892 m	Shale with minor Clay interbeds. SHALE - medium to dark grey to grey green , blocky, subfissile, waxy in part, soft, arenaceous. CLAY - white, bentonitic, soft.

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Little Bear 892.0 m -505.6 m Logs 882.3 m -495.9 m

892-900 m — SANDSTONE - off white to light brown, quartz with minor chert, very fine to fine grained, well sorted, subround to angular, poorly cemented to loose, argillaceous, poor porosity, no show. Scattered black chert nodules.

900-910 m — Conglomerate grading to Sandstone.
CONGLOMERATE - varicoloured chert in a light brown quartz sand matrix, matrix supported, excellent porosity.
SANDSTONE - light brown to off white, clear quartz & chert, very fine to fine grained, well sorted, subround to subangular, unconsolidated, trace carbonaceous mostly clean, trace disseminated pyrite, fair to excellent porosity, no shows.

910-924 m — Shale with Sandstone interbeds.
SHALE - medium to dark grey, blocky, arenaceous to highly arenaceous.
SANDSTONE - light brown, quartz & chert, very fine to medium grained, subround to angular, moderately sorted, poorly cemented to loose, argillaceous, tight, no shows.

924-942 m — Interbedded Sandstone & Shale with minor Conglomerate.
SANDSTONE - light grey to tan, quartz minor chert, very fine to medium grained, subround to angular, moderately sorted, poorly cemented to loose, argillaceous, poor to fair porosity, no shows.
SHALE - medium to dark grey, blocky, arenaceous to highly arenaceous.
CONGLOMERATE - varicoloured chert in a light brown very fine to medium quartz sand matrix, matrix supported, good porosity.

942-959 m — SANDSTONE - light grey white, quartz minor lithics, very fine to medium grained, moderately sorted, subround to angular, loose, fair to good porosity, no shows.

959-971 m — Sandstone with Shale interbeds.
SANDSTONE - light grey to grey tan, quartz minor chert, very fine to medium grained, subround to angular, moderately sorted, siliceous cement, moderate to well cemented, semifriable, kaolinitic, tight to fair porosity, no shows.
SHALE - medium to dark grey, blocky, arenaceous to highly arenaceous.

971-984 m — SANDSTONE - light grey white, quartz minor chert, very fine to medium with interbeds of medium to coarse grained, moderately to well sorted, angular to subround, loose with minor clay cement becoming siliceous cemented & friable downsection, kaolinitic, fair to good porosity, no shows.

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984-1013 m Sandstone with interbedded Shales minor Siltstone.
SANDSTONE - light to medium grey, quartz minor chert, very fine to fine grained becoming silt to very fine grained downsection minor interbed of very fine to medium grained, moderate to well sorted, subangular to round, clay & siliceous cement, well cemented, trace carbonaceous, trace disseminated pyrite, tight, no shows.
SHALE - medium to dark grey, blocky, arenaceous to highly arenaceous.
SILTSTONE - light grey, clay with siliceous cement, well cemented, sandy.

1013-1023 m SANDSTONE - light grey white to grey tan, quartz and chert, medium to coarse grained, moderately to well sorted, angular to subangular, loose with minor clay cement, trace kaolinitic, poor to good porosity, no shows.

1023-1040 m Sandstone with interbedded Shale.
SANDSTONE - light to medium grey, quartz minor chert, very fine grained, well sorted, subround to round, clay & siliceous cement, well cemented, trace disseminated pyrite, tight, no shows.
SHALE - medium to dark grey to buff white, blocky, arenaceous to highly arenaceous, bentonitic in part, trace chitinous fish remains.

1040-1052 m Interbedded Shale & Sandstone.
SHALE - medium to dark grey, blocky, arenaceous to highly arenaceous.
SANDSTONE - light to medium grey, quartz minor chert, very fine grained minor interbeds of very fine to medium grained trace coarse, moderate to well sorted, angular to round, clay & siliceous cement, well cemented, tight to fair porosity, no shows.

1052-1077 m Interbedded Sandstone, Siltstone & Shale with minor Siderite.
SANDSTONE - light to medium grey, quartz minor chert, silt to very fine grained, well sorted, subangular to round, clay & siliceous cement, scattered carbonaceous flakes, well cemented, tight, no shows.
SILTSTONE - light grey, clay with siliceous cement, well cemented, sandy.
SHALE - medium to dark grey trace grey white, blocky, subfissile, arenaceous to highly arenaceous, trace disseminated pyrite, calcareous in part.
SIDERITE - light tan, bedded, argillaceous.

1077-1092 m Interbedded Sandstone & Shale with minor Siltstone.
SANDSTONE - light to medium grey to light tan, quartz trace lithics, silt to very fine grained, well sorted, subangular to round, clay & siliceous cement, scattered carbonaceous flakes, well cemented, tight, no shows.
SHALE - medium to dark grey, blocky, subfissile, arenaceous to highly arenaceous.
SILTSTONE - light grey, clay with siliceous cement, well cemented, sandy. Scattered Inoceramus prisms.

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1092-1113 m Sandstone with interlaminated Siltstone & Shale minor Siderite.
SANDSTONE - light to medium grey to light tan, quartz trace lithics, silt to very fine rare fine grained, well sorted, subangular to round, clay & siliceous cement, trace carbonaceous flakes, well cemented, tight, no shows.
SILTSTONE - light grey, clay with siliceous cement, well cemented, sandy.
SHALE - medium to dark grey, blocky, subfissile, arenaceous to highly arenaceous.
SIDERITE - light brown, argillaceous, bedded
Scattered Inoceramus prisms & fossil fragments minor loose Chert nodules.

1113-1115 m SANDSTONE - light to medium grey, quartz & chert, very fine to fine grained, well sorted, subangular, clay & siliceous cement, trace carbonaceous flakes, well cemented, tight to poor porosity, no shows.

1118-1138 m Interbedded Sandstone & Shale with minor Siltstone.
SANDSTONE - light to medium grey to light tan, quartz trace lithics, very fine to fine grained becoming silt to very fine grained downsection, well sorted, subangular to round, clay & siliceous cement, scattered carbonaceous flakes, trace kaolinite, well cemented, tight, no shows.
SHALE - medium to dark grey, blocky, subfissile, arenaceous to highly arenaceous.
SILTSTONE - light grey, clay with siliceous cement, well cemented, sandy.

1138-1155 m Shale with interbedded Sandstone & Siltstone.
SHALE - medium to dark grey to grey brown, blocky, subfissile, arenaceous to highly arenaceous.
SANDSTONE - light tan to medium grey, quartz trace lithics, silt to very fine grained, well sorted, subangular to round, clay & siliceous cement, trace kaolinite, well cemented, tight, no shows.
SILTSTONE - medium brown to light grey, clay with siliceous cement, well cemented, sandy.
Scattered loose Chert nodules, trace fossil fragments.

1155-1177 m Interbedded & interlaminated Sandstone & Shale.
SANDSTONE - grey white to light tan, quartz trace lithics, very fine to occasionally fine grained becoming silt to very fine grained downsection, well sorted, subangular to round, clay & siliceous cement, kaolinitic, trace disseminated pyrite, trace micaceous, well cemented, poor porosity to tight, trace scattered light stain, light yellow fluorescence, very light cut to ? becoming no shows downsection.
SHALE - medium to dark grey to grey white, blocky, subfissile, arenaceous to highly arenaceous, bentonitic in part.

1177-1206 m Shale with Sandstone & Siltstone interbeds & stringers.
SHALE - medium to dark grey to grey tan, blocky, subfissile, arenaceous to highly arenaceous, carbonaceous with scattered plant fossils, trace bentonitic.
SANDSTONE - grey white to light tan, quartz trace lithics, silt to very fine grained occasionally fine grained, well sorted, subangular to round, clay & siliceous cement, kaolinitic, trace carbonaceous flakes, well cemented, tight, no shows.
SILTSTONE - light grey to grey white, clay with siliceous cement, well cemented, carbonaceous flakes, sandy.

Slater River 1207.0 m -820.6 m Logs 1156.0 m -769.6 m

1206-1221 m Shale with Siltstone & Sandstone stringers.
SHALE - dark grey to grey tan, platy, fissile, sideritic in part, arenaceous in part, carbonaceous with scattered plant fossils, trace bentonitic, micromicaceous.
Scattered coal fragments & black chert nodules.

1221-1245 m Shale with minor Siltstone & Sandstone interbeds & stringers.
SHALE - dark grey to grey tan, platy to blocky, fissile to subfissile, sideritic in part, arenaceous to highly arenaceous, carbonaceous in part with trace plant fossils, pyritic, micromicaceous.
SILTSTONE - light to medium grey, siliceous cement trace sideritic, well cemented, carbonaceous flakes, argillaceous in part, sandy.
SANDSTONE - grey tan, quartz trace lithics, very fine to fine grained downsection silt to very fine grained, well sorted, subangular to round, clay cement, kaolinitic, carbonaceous flakes, well cemented, tight, no shows.
Scattered black and grey chert nodules & trace pyritized fossil fragments.

1245-1266 m Shale with stringers of Sandstone and Siltstone.
SHALE - dark grey to grey tan trace white to grey green, platy to blocky, fissile to subfissile, trace waxy, sideritic in part, arenaceous, carbonaceous in part, bentonitic in part, micromicaceous.
Scattered black & grey chert nodules, rare loose foramifera at base of section.

1266-1291 m Shale with Siltstone stringers & minor interbeds & lenses of Sandstone.
SHALE - dark grey to grey tan trace white to grey green, platy to blocky, fissile to subfissile, trace waxy, arenaceous, carbonaceous in part with plant fossils, bentonitic, trace sideritic, micromicaceous.
SILTSTONE - grey white, siliceous with minor sideritic & trace calcareous cement, well cemented, argillaceous in part.
SANDSTONE - grey tan, quartz trace lithics, silt to very fine grained, well sorted, subangular to round, clay cement, micaceous, disseminated pyrite, well cemented, tight, no shows.

1291-1316 m Shale with minor laminae & lenses of Sandstone.
SHALE - dark grey to grey tan trace white to grey green, platy minor blocky, mostly fissile, trace waxy, arenaceous in part, carbonaceous in part with plant fossils, scattered bentonitic patches, trace sideritic, pyritic in part, micromicaceous.
SANDSTONE - grey tan, quartz trace lithics, silt to very fine grained, well sorted, subangular to round, siliceous with clay cement, well cemented to highly friable, tight trace good porosity, no shows.
Scattered varicoloured chert nodules throughout.

1316-1340 m Shale with interbeds & lenses of Sandstone & Siderite interbeds minor Siltstone lenses.
SHALE - dark grey to grey tan slight trace white, blocky to platy, subfissile in part, trace waxy, arenaceous in part, carbonaceous, trace sideritic, pyritic in part, micromicaceous.
SANDSTONE - grey tan, quartz trace lithics, silt to very fine grained, well sorted, subangular to round, siliceous with clay cement, well cemented, tight, no shows.
SIDERITE - chocolate brown, argillaceous, bedded.
Scattered loose forams at base of section.

1340-1345 m Shale with Siltstone lenses.
SHALE - dark grey to grey tan, blocky to platy, subfissile in part, arenaceous in part, trace sideritic, pyritic in part, micromicaceous.

Slater River Source Rock 1345.0 m -958.6 m Logs 1345.0 m -958.6 m

1345-1368 m Shale with minor Sandstone lenses.
SHALE - medium to dark grey trace white speckled, platy, fissile to subfissile, bituminous in part, calcareous in part, scattered fish scales and black to amber chitinous fish remains.
Trace Foramifera.

1368-1382 m Shale with minor Siltstone lenses.
SHALE - medium to dark grey to black, trace white speckled, platy, fissile to subfissile, bituminous in part, calcareous in part, disseminated pyrite, scattered fish scales.

1382-1395 m SHALE - dark grey to black, platy, fissile, bituminous in part, calcareous in part, scattered fine fractures with calcite infilling, scattered fish scales & chitinous fish remains.

1395-1405 m Shale with minor Siltstone lenses.
SHALE - dark grey to black to dark grey brown, platy, fissile to subfissile, bituminous in part, calcareous in part, trace amber chitinous fish remains, scattered fine fractures with calcite infilling.
Trace foramifera.

1405-1423 m Shale with minor Sandstone lenses.
SHALE - dark grey to black, platy, fissile to subfissile, bituminous in part, calcareous in part, scattered fish scales and trace black chitinous fish remains, scattered fine fractures with calcite infilling.

1423-1442 m Shale with minor Sandstone lenses.
SHALE - dark grey to black, blocky to platy, subfissile to fissile, calcareous in part, trace fish scales, disseminated pyrite, scattered fine fractures with calcite infilling.
Scattered Foramifera at base of section.

Bluefish Member Source Rock 1442.0 m -1055.6 m Logs 1443.0 m -1056.6 m

1442-1457 m Shale with stringers of Sandstone.
SHALE - black to dark grey brown, platy to blocky, fissile to subfissile, waxy in part, calcareous in part, disseminated pyrite & scattered nodules, scattered slickensides.
SANDSTONE - white to tan, fine to medium grained, quartz & dolomite breccia, well sorted, subangular to subround, loose, fair to good porosity, no shows.
Rare scattered snow white Dolomite fragments, trace gilsonite fragments.

Upper Hume 1457.0 m -1070.6 m Logs 1449.0 m -1062.6 m

1457-1472 m DOLOSTONE - light tan to snow white to mottled grey white, fine to medium crystalline minor coarse crystalline, subhedral to anhedral crystals, trace molds with white dolostone infilling, trace arenaceous, trace siliceous, trace bitumen waxes along crystal faces, poor intercrystalline porosity (3-5%), minor interbeds fair intercrystalline porosity (6-8%), trace moldic porosity, no visible shows.
Note - Abundant shale cavings decreasing downsection. Rock is highly ground up over this interval with a large percent <.5 mm which makes porosity estimates difficult.

1472-1481 m DOLOSTONE - snow white to light tan to laminated grey brown, very fine to fine with medium crystalline rare coarse crystalline, anhedral with scattered subhedral crystals, trace arenaceous, scattered pyrite nodules, trace anhydrite, rare bitumen waxes along crystal faces, tight to poor intercrystalline porosity (3-5%), trace moldic porosity, ? shows, very faint cut after 3 min.

1481-1491 m. DOLOSTONE - dark grey brown to buff white, very fine to fine with scattered medium crystalline rare coarse crystalline, subhedral to anhedral crystals, slightly calcareous, trace disseminated pyrite, trace arenaceous, rare trace bitumen waxes along crystal faces, subhedral crystals appear to line molds in the dark dolostone, tight with poor to fair moldic porosity (5-8%), ? shows, very faint cut after 3 min.

Middle Hume 1494.0 m -1107.6 m Logs 1495.5 m -1109.1 m

1494-1512 m DOLOSTONE - light tan to grey tan to mottled grey white, micro to very fine with scattered fine crystalline, anhedral with rare subhedral crystals, calcareous in part, trace disseminated pyrite, arenaceous, trace argillaceous downsection, trace bitumen waxes, trace yellow sulphur residue, scattered infilled fractures bi-directional, mostly tight with poor intercrystalline porosity (3-4%), scattered mineral fluorescence, trace very faint cut after 3 min.
Trace Limestone stringers downsection.

Lower Hume 1512.0 m -1125.6 m Logs 1507.3 m -1120.9 m

1512-1531 m Limestone with interbeds & stringers of Dolostone.
LIMESTONE - buff white, calcilutite with minor fine to medium calcarenite, brachiopod biomicrite, wackestone, argillaceous, dolomitic in part, tight, no shows.
DOLOSTONE - medium brown to grey brown, micro to very fine crystalline minor very fine to fine crystalline, calcareous in part, trace disseminated pyrite, arenaceous, argillaceous in part, tight, no visible shows.

1531-1546 m Limestone with stringers of Dolostone increasing downsection.
LIMESTONE - light grey brown to buff white, calcilutite with minor very fine to medium calcarenite, brachiopod biomicrite to biomicrite, wackestone to mudstone, argillaceous, dolomitic in part, tight, no shows.

1546-1556 m Dolostone with Siltstone stringers.
DOLOSTONE - light tan to mottled white tan to dark grey, very fine to fine crystalline, subhedral crystals, arenaceous to highly arenaceous, scattered fossil ghosts, crinoids, poor intercrystalline porosity (3-5%), no immediate shows, trace cut after 5 min.

1556-1574 m Limestone with interbeds of Shale and stringers of Dolostone.
LIMESTONE - light grey brown to buff white, calcilutite with minor very fine to medium calcarenite, biomicrite with brachiopod biomicrite, mudstone to wackestone, argillaceous, trace arenaceous, dolomitic in part, disseminated pyrite, tight, no shows, trace cut after 5 min..
SHALE - medium to dark grey, blocky, subfissile, calcareous to highly calcareous, disseminated pyrite.

Landry 1574.0 m -1187.6 m Logs 1578.0 m -1191.6 m

1574-1591 m LIMESTONE - light grey to dark grey brown, calcilutite to fine calcarenite, brachiopod amphipora intrapelmicrite, wackestone, argillaceous to highly argillaceous, abundant calcite filled fractures at base of section, tight, no shows, trace cut after 5 min.

1591-1614 m Interbedded Dolostone & Limestone with minor Shale.
DOLOSTONE - snow white with interbedded dark grey to dark brown, fine to occasionally coarse crystalline with interbeds of micro to very fine crystalline, subhedral to euhedral crystals, dark grey is highly arenaceous, laminated possibly bulbous stroms, tight to poor moldic porosity (4-6%), no shows.
LIMESTONE - medium brown, calcilutite, biomicrite, wackestone, dolomitic, argillaceous, tight, no shows.
Basal reefal facies within Landry.

Arnica 1609.0 m -1222.6 m Logs 1603.0 m -1216.6 m

1609-1619 m DOLOSTONE - light to grey tan, micro to aphano crystalline, trace fossil ghosts (Amphipora), rare scattered fractures with white dolomitic infilling, tight, trace fine web bitumen waxes, no visible shows.

1619-1631 m Dolostone with minor Breccia interbeds.
DOLOSTONE - medium brown to light tan, aphano to microcrystalline, fossil ghosts (Amphipora), trace arenaceous, scattered molds with white euhedral to subhedral dolomite infilling, tight to fair moldic porosity (6-7%), no shows.
BRECCIA - medium brown, coarse to very coarse angular dolostone fragments with clear euhedral dolomite cement, good intergranular porosity (10-12%), no shows.

1631-1647 m DOLOSTONE - light tan to brown to grey tan, aphano to microcrystalline, trace fossil ghosts (Amphipora), trace arenaceous, disseminated pyrite, trace argillaceous at base of section, trace scattered hairline fractures, tight, trace bitumen waxes, no shows.

1647-1662 m DOLOSTONE - light grey tan to light tan, aphano to microcrystalline, trace fossil ghosts (Amphipora & tabular stromataporoid), very slight trace

arenaceous, disseminated pyrite, trace styolites, tight, no shows.

1662-1677 m DOLOSTONE - light tan to brown to buff white, aphano to microcrystalline rare very fine crystalline interbeds of dololutite, trace scattered micromolds, trace loose coarse white subhedral crystals, tight, no shows. Lost 4 m3 to fracture at 1670 m - lagged to 1664-1665 m 1670 m sample contains loose crystals, possibly an open fracture in this interval?.

1677-1690 m DOLOSTONE - light tan to buff white, aphano to microcrystalline with dololutite, dololutite increases downsection, trace fossil ghosts (Amphipora), tight, trace sulphurous, no shows.

1690-1696 m Dolostone with Shale partings.
DOLOSTONE - buff white, dololutite, arenaceous in part, disseminated pyrite, tight, no shows.

Camsell 1696.0 m -1309.6 m Logs 1697.0 m -1310.6 m

1696-1712 m Dolostone with Siltstone & Shale interbeds & stringers.
DOLOSTONE - light tan to buff white, aphano to microcrystalline, arenaceous, argillaceous, anhydritic in part, tight, no shows.
SILTSTONE - buff white, dolomitic cement, highly cemented.
SHALE - grey green, blocky, dolomitic, arenaceous, disseminated pyrite.

1712-1725 m Interbedded & interlaminated Dolostone, Siltstone, Shale & Anhydrite.
DOLOSTONE - light tan to buff white, aphano to microcrystalline, arenaceous, argillaceous, anhydritic, tight, no shows.
SILTSTONE - buff white, dolomitic cement, highly cemented, anhydritic in part.
SHALE - grey green to apple green to black, blocky to platy, subfissile, waxy in part, dolomitic, arenaceous, anhydritic, disseminated pyrite.
ANHYDRITE - snow white, microcrystalline, nodular, dolomitic, trace argillaceous.

1725-1743 m Dolostone with interbedded & interlaminated Siltstone, Shale, Breccia & Anhydrite.
DOLOSTONE - light tan to buff tan, aphano to microcrystalline, highly arenaceous, anhydritic, tight, no shows.
SILTSTONE - buff white to medium grey trace yellow, dolomitic cement, highly cemented, anhydritic in part.
SHALE - grey green to apple green to black, blocky to platy, subfissile, waxy in part, dolomitic, arenaceous, anhydritic, disseminated pyrite.
BRECCIA - medium to coarse rounded grains of shale & dolomite in a matrix of dolomite cement, low matrix to grain ratio.
ANHYDRITE - snow white, microcrystalline, nodular, dolomitic, trace

argillaceous.

1743-1761 m Dolostone with interbedded & interlaminated Shale, Breccia, Anhydrite & Siltstone.
DOLOSTONE - light tan to buff tan, aphano to microcrystalline, highly arenaceous, anhydritic, tight, no shows.
SHALE - black to grey green, blocky, subfissile, waxy in part, dolomitic, arenaceous, anhydritic, dolomite veining, scattered fractures.
BRECCIA - medium to coarse rounded grains of shale & dolomite in a matrix of dolomite cement, low matrix to grain ratio.
ANHYDRITE - snow white trace Fe stained, microcrystalline, dolomitic, trace argillaceous.
SILTSTONE - buff white to medium grey, dolomitic cement, highly cemented, anhydritic in part.
Scattered loose ostracods throughout, trace loose quartz grains.

1761-1774 m Shale with interbedded Dolostone, Breccia & Siltstone.
SHALE - dark grey to black to dark grey green, blocky, subfissile, dolomitic, anhydritic in part.
BRECCIA - medium to coarse rounded grains of shale in a matrix of anhydrite & dolomite cement, low matrix to grain ratio.
SILTSTONE - buff white, dolomitic cement, highly cemented, anhydritic in part.

Camsell Evaporite 1774.0 m -1387.6 m Logs 1777.0 m -1390.6 m

1774-1797 m Anhydrite with interlaminae & interbeds of Dolostone, Breccia & Shale trace Siltstone stringers.
ANHYDRITE - light brown to reddish orange to light green, microcrystalline, bedded, slightly dolomitic, slightly argillaceous, laminated in part.
DOLOSTONE - light tan to buff tan, aphano to microcrystalline, arenaceous, anhydritic, tight, no shows.
SHALE - dark grey, blocky, dolomitic, anhydritic.
BRECCIA - rounded green shale clasts in a matrix of anhydrite, low to even grain to matrix ratio.
Scattered loose euhedral to subhedral quartz.

1797-1814 m Anhydrite with interlaminae & interbeds of Dolostone & Shale trace Sandstone laminae.
ANHYDRITE - buff white to reddish purple to light green, microcrystalline, bedded, dolomitic, arenaceous, laminated in part.
DOLOSTONE - light brown to buff tan, aphano to microcrystalline, arenaceous, anhydritic, tight, no shows.
SHALE - dark grey to black, blocky, dolomitic, anhydritic, trace slickensided, waxy.

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1814-1831 m Anhydrite with interlaminae & interbeds of Dolostone & Shale trace Sandstone laminae & Salt casts.
ANHYDRITE - buff white to reddish purple to light green, microcrystalline, bedded, dolomitic, arenaceous, laminated in part, colours increase downsection, casts (salt??) noted in 1825 sample.
DOLOSTONE - light brown to buff tan, aphano to microcrystalline, arenaceous, anhydritic, tight, no shows.
SHALE - dark grey to black, blocky, dolomitic, anhydritic, trace slickensided, waxy.
Scattered loose euhedral to subhedral quartz. Note - Salt symbol does not indicate bed of salt but only where concentration of same is from salt casts.

1831-1842 m Anhydrite with interlaminae & interbeds of Dolostone & Shale trace Sandstone laminae & Salt casts.
ANHYDRITE - buff white to greeny cream, microcrystalline, bedded, dolomitic, arenaceous, highly laminated in part, scattered casts.
DOLOSTONE - as above.
SHALE - purple to green to black, platy, subfissile, dolomitic, anhydritic, trace slickensided, waxy.

1842-1859 m Anhydrite with interlaminae & interbeds of Dolostone trace Sandstone laminae & Salt casts.
ANHYDRITE - buff white to buff tan to mottled reddish purple to light green, microcrystalline, bedded, dolomitic, arenaceous, laminated in part, casts (salt??) noted in 1855 m sample.
DOLOSTONE - light brown to buff tan, aphano to microcrystalline interbeds of fine crystalline, subhedral crystals, arenaceous in part, anhydritic, tight, no shows.
Scattered quartz grains.

1859-1872 m Anhydrite with interlaminae & interbeds of Dolostone & Shale.
ANHYDRITE - buff white tan to reddish to light green, microcrystalline, bedded, dolomitic, arenaceous, laminated in part, casts (salt??) noted in 1870 m sample.
DOLOSTONE - light brown to buff tan, aphano to microcrystalline, arenaceous in part, anhydritic, tight, no shows.
SHALE - black to light green, platy, subfissile, dolomitic, anhydritic, waxy.
Scattered quartz grains.

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1872-1898 m Anhydrite with interlaminae & interbeds of Dolostone & Shale.
ANHYDRITE - buff white tan to reddish to light green, microcrystalline, bedded, dolomitic, arenaceous, laminated in part, casts (salt??).
DOLOSTONE - light brown to buff tan, aphano to microcrystalline scattered very fine crystalline, arenaceous in part, anhydritic, tight, no shows.
Abundant scattered euhedral to subhedral coarse quartz crystals. 1885 to 1895 m samples contain black Shale cavings. Sample quality decreasing, interpretation difficult.

1898-1930 m Interlaminated Anhydrite & Sandstone with Salt.
ANHYDRITE - pinkish tan to light green, microcrystalline, argillaceous, calcareous to dolomitic, scattered salt casts.
SANDSTONE - clear quartz, fine to coarse euhedral crystals, loose, good porosity, no shows.
Salt is shown as interbeds but occurs as casts in anhydrite, ROP used to position same. Abundant cavings. Sample quality poor to fair.

1930-1947 m Interlaminated Anhydrite, Sandstone & Shale with Salt.
ANHYDRITE - pinkish tan to light green, microcrystalline, argillaceous, calcareous to dolomitic, scattered salt casts.
SANDSTONE - clear quartz, fine to coarse euhedral crystals, loose, good porosity, no shows.
SHALE - grey green, platy, waxy, laminated, anhydritic, dolomitic.
Salt is shown as interbeds but occurs as casts in anhydrite, ROP used to position same. Abundant cavings. Sample quality poor to fair.

1947-1959 m Interbedded & interlaminated Anhydrite, Dolostone & Shale with Sandstone stringers & Salt Casts.
ANHYDRITE - pinkish tan to light green, microcrystalline, argillaceous, calcareous to dolomitic, scattered salt casts.
DOLOSTONE - light brown to buff tan, aphano to microcrystalline, arenaceous in part, anhydritic, tight, no shows.
SHALE - grey green, platy, waxy, laminated, anhydritic, dolomitic, scattered casts some containing euhedral quartz grains.

Detrital 1959.0 m -1572.6 m Logs No Pick

1959-1963 m DOLOSTONE - mottled dark grey white, micro to very fine crystalline, anhedral crystals, dense, arenaceous, tight, no shows. Abundant cavings.

1963-1965 m SHALE - black, platy to blocky, subfissile, slickensided, dolomitic in part.

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Mount Kindle 1965.0 m -1578.6 m Logs 1964.0 m -1577.6 m

1965-1980 m Interbedded Dolostone, Mudstone & Shale.
DOLOSTONE - mottled dark grey to brown, micro to very fine crystalline, anhedral crystals, dense, argillaceous in part, tight, no shows.
MUDSTONE - dark grey, dolomitic, argillaceous, disseminated pyrite.
SHALE - medium to dark grey, blocky, subfissile to fissile, slightly dolomitic.
Poor samples. Abundant cavings make interpretation difficult.

1980-1993 m Interbedded Shale & Dolostone with Mudstone.
SHALE - grey green to medium to dark grey, platy to splintery, highly fissile to fissile, slightly dolomitic in part, micromicaceous.
DOLOSTONE - mottled dark grey with white inclusions to brown, micro to very fine crystalline, dense, argillaceous in part, fossil ghosts, tight, no shows.
MUDSTONE - dark grey, dolomitic, argillaceous.
Poor samples. Abundant cavings to 1985 m sample.

1993-2008 m Dolostone with Shale & Mudstone interbeds.
DOLOSTONE - mottled dark grey with white inclusions to brown, micro to very fine crystalline, anhedral crystals, dense, argillaceous in part, fossil ghosts, siliceous in part, tight, no shows.
SHALE - grey green to medium to dark grey, platy, highly fissile to fissile, slightly dolomitic in part, micromicaceous.
MUDSTONE - mottled dark grey, dolomitic, argillaceous.

2008-2013 m DOLOSTONE - mottled dark grey brown to grey white, micro with fine to medium crystalline, anhedral to subhedral, argillaceous in part, fossil ghosts, tight to poor intercrystalline porosity (3-5%), no shows.

2013-2030 m Shale with minor Dolostone & Mudstone interbeds.
SHALE - grey green to medium to dark grey to black, platy to splintery, fissile, slightly dolomitic in part, micromicaceous.
DOLOSTONE - mottled dark grey, microcrystalline, dense, argillaceous in part, tight, no shows.
MUDSTONE - mottled dark grey, dolomitic, argillaceous.

Total Depth 2030.0 m-1643.6 m Logs 2031.9 m -1645.5 m

APPENDIX

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
586	0.1	3	636	3.7	5
587	4.7	3	637	4.1	7
588	5.3	4	638	3.8	8
589	7.7	4	639	3.2	8
590	5.3	4	640	3.1	7
591	4.2	4	641	3.1	8
592	2.7	4	642	3.1	8
593	2.5	4	643	3.1	8
594	2.7	4	644	3.1	9
595	3.3	4	645	3.3	10
596	4.0	5	646	3.8	10
597	3.7	5	647	3.6	10
598	4.0	4	648	3.4	7
599	3.7	4	649	3.1	6
600	2.7	4	650	3.1	6
601	2.6	5	651	3.0	6
602	2.6	5	652	3.2	6
603	2.8	4	653	3.0	6
604	2.7	5	654	3.0	5
605	2.7	5	655	3.1	6
606	2.7	4	656	3.4	7
607	2.7	4	657	3.1	7
608	4.0	5	658	2.8	7
609	3.7	5	659	2.8	6
610	2.8	5	660	2.7	6
611	2.7	5	661	2.8	6
612	2.7	4	662	2.9	6
613	2.8	5	663	3.0	6
614	2.7	5	664	2.8	6
615	2.7	5	665	4.0	7
616	2.8	5	666	3.1	7
617	2.8	4	667	3.2	7
618	4.0	5	668	3.0	6
619	3.2	5	669	2.9	6
620	3.8	5	670	2.8	5
621	3.8	5	671	2.7	5
622	3.8	5	672	2.8	5
623	3.5	5	673	2.7	6
624	3.3	5	674	3.3	5
625	3.5	5	675	3.2	5
626	3.3	5	676	2.4	5
627	3.6	4	677	2.9	5
628	4.4	5	678	3.0	6
629	3.4	5	679	2.8	5
630	3.5	5	680	2.9	5
631	4.1	5	681	3.1	5
632	3.8	5	682	3.1	5
633	3.7	5	683	3.2	5
634	3.3	5	684	3.2	6
635	3.5	5	685	3.7	7

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
686	2.7	5	736	2.5	12
687	3.1	4	737	2.5	13
688	3.3	4	738	2.7	11
689	3.3	4	739	2.8	12
690	3.1	4	740	2.8	12
691	3.0	4	741	2.9	17
692	3.2	4	742	2.7	18
693	3.0	4	743	2.5	12
694	3.3	4	744	2.5	12
695	4.7	5	745	2.7	11
696	2.8	4	746	2.7	12
697	2.7	4	747	2.6	12
698	2.7	4	748	2.8	12
699	2.8	4	749	2.7	13
700	2.8	4	750	2.8	16
701	2.6	4	751	2.8	18
702	2.8	4	752	2.2	13
703	2.8	4	753	3.6	13
704	2.4	4	754	2.4	10
705	2.9	4	755	2.5	13
706	3.3	4	756	2.5	13
707	2.8	4	757	2.5	13
708	2.4	4	758	2.5	13
709	2.3	4	759	2.5	14
710	2.3	5	760	2.7	15
711	2.3	5	761	2.3	18
712	2.5	6	762	2.3	14
713	3.2	6	763	2.2	12
714	3.3	6	764	2.1	15
715	2.5	13	765	2.2	15
716	2.7	13	766	2.1	15
717	2.7	12	767	2.3	15
718	2.0	12	768	2.4	16
719	2.8	13	769	2.4	17
720	2.9	13	770	3.2	21
721	2.8	13	771	2.3	15
722	3.1	15	772	2.5	14
723	3.0	19	773	2.4	12
724	2.5	13	774	2.4	14
725	2.4	13	775	2.6	14
726	2.3	10	776	2.7	14
727	2.5	8	777	2.3	14
728	2.6	11	778	2.6	15
729	2.6	12	779	2.8	20
730	2.6	12	780	2.8	20
731	2.7	13	781	2.8	13
732	2.9	17	782	2.7	13
733	2.3	12	783	3.8	11
734	2.6	12	784	3.7	14
735	2.5	12	785	2.3	14

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
786	2.3	14	836	3.8	14
787	2.3	15	837	2.1	12
788	2.4	16	838	2.6	10
789	3.2	20	839	2.7	11
790	2.0	15	840	2.7	10
791	2.4	13	841	2.5	10
792	2.6	12	842	2.4	10
793	2.5	13	843	2.3	11
794	2.3	14	844	2.3	11
795	2.4	14	845	2.3	13
796	2.4	9	846	2.8	13
797	2.0	13	847	2.2	8
798	2.2	14	848	2.2	9
799	2.8	16	849	2.3	9
800	2.0	11	850	2.3	9
801	2.1	11	851	2.4	10
802	2.3	11	852	2.3	10
803	2.2	10	853	2.5	10
804	2.2	10	854	2.4	11
805	2.1	11	855	2.8	11
806	2.1	11	856	2.5	10
807	1.9	11	857	2.3	8
808	2.0	7	858	2.4	9
809	2.4	15	859	2.6	9
810	2.6	12	860	2.6	10
811	2.6	12	861	2.7	10
812	2.6	9	862	2.6	10
813	2.6	11	863	2.6	10
814	2.5	12	864	2.5	11
815	2.5	12	865	3.1	11
816	2.6	13	866	2.1	6
817	2.6	13	867	2.3	9
818	3.1	14	868	2.4	10
819	2.4	13	869	2.3	10
820	2.5	12	870	2.3	10
821	2.5	10	871	2.4	10
822	2.4	12	872	2.3	11
823	2.5	12	873	2.3	13
824	2.5	12	874	3.9	14
825	2.5	12	875	2.3	8
826	2.6	13	876	2.7	6
827	2.5	14	877	2.7	7
828	2.1	8	878	2.5	8
829	2.3	12	879	2.2	9
830	2.3	12	880	2.3	9
831	2.2	12	881	2.2	9
832	2.4	12	882	2.1	9
833	2.5	12	883	3.7	11
834	2.4	13	884	2.9	11
835	2.4	13	885	1.5	11

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
886	2.0	12	936	2.1	14
887	2.0	12	937	3.1	14
888	2.1	12	938	2.5	14
889	2.3	11	939	2.4	14
890	2.8	11	940	2.9	12
891	2.8	14	941	3.3	12
892	2.1	14	942	3.4	10
893	3.6	11	943	1.9	10
894	5.9	8	944	1.8	11
895	8.2	8	945	1.6	13
896	5.8	11	946	1.5	14
897	2.9	13	947	1.3	2
898	2.4	14	948	1.5	2
899	2.3	14	949	1.8	2
900	2.6	16	950	3.2	2
901	1.3	16	951	1.5	2
902	1.3	16	952	1.5	2
903	2.4	16	953	1.4	10
904	2.2	18	954	1.3	13
905	1.9	18	955	1.8	15
906	1.8	9	956	1.6	11
907	3.3	12	957	1.4	13
908	3.7	12	958	1.3	14
909	3.3	11	959	1.3	15
910	3.3	11	960	3.4	24
911	3.5	11	961	2.3	13
912	4.4	11	962	2.8	5
913	3.3	9	963	3.1	7
914	3.0	10	964	3.6	4
915	2.4	10	965	3.2	9
916	3.3	10	966	3.3	12
917	3.6	10	967	3.7	14
918	3.4	13	968	3.0	16
919	3.0	13	969	4.5	17
920	3.0	14	970	5.4	9
921	4.2	14	971	4.8	8
922	2.9	11	972	1.6	9
923	2.9	10	973	2.1	11
924	2.4	10	974	2.4	12
925	1.8	11	975	1.7	12
926	1.6	13	976	1.7	12
927	1.6	13	977	1.8	12
928	1.3	14	978	2.3	13
929	0.7	14	979	1.8	9
930	1.3	23	980	2.3	9
931	1.9	23	981	4.7	10
932	1.0	11	982	4.6	9
933	1.5	13	983	3.9	10
934	3.3	16	984	4.6	8
935	2.8	14	985	6.6	6

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
986	3.8	9	1036	5.3	9
987	4.4	10	1037	4.8	9
988	5.6	11	1038	5.3	9
989	13.4	10	1039	5.6	9
990	14.3	8	1040	5.3	10
991	6.2	8	1041	4.3	10
992	8.8	8	1042	5.5	9
993	7.8	8	1043	6.4	9
994	3.1	10	1044	6.4	9
995	2.7	11	1045	5.8	8
996	3.8	11	1046	4.9	8
997	4.5	10	1047	5.8	8
998	5.4	10	1048	6.3	8
999	5.3	9	1049	5.6	8
1000	5.7	9	1050	5.6	8
1001	6.0	8	1051	6.0	8
1002	5.0	8	1052	6.3	8
1003	4.6	8	1053	5.8	8
1004	5.3	8	1054	5.5	8
1005	4.4	11	1055	5.0	9
1006	5.5	11	1056	5.0	9
1007	6.0	10	1057	4.9	9
1008	5.3	8	1058	5.0	9
1009	5.3	8	1059	6.8	8
1010	5.1	8	1060	5.7	8
1011	4.8	8	1061	5.3	8
1012	5.0	8	1062	7.0	8
1013	5.4	8	1063	6.4	8
1014	2.3	10	1064	5.8	8
1015	2.5	13	1065	5.0	8
1016	3.2	13	1066	4.7	8
1017	4.3	12	1067	4.8	9
1018	3.5	9	1068	4.7	10
1019	4.4	9	1069	5.0	10
1020	4.7	7	1070	6.2	10
1021	4.6	9	1071	5.2	11
1022	4.3	9	1072	4.1	11
1023	3.3	10	1073	5.2	11
1024	4.8	9	1074	5.3	9
1025	6.0	8	1075	6.9	10
1026	5.3	8	1076	6.7	10
1027	4.7	8	1077	7.2	9
1028	4.7	8	1078	5.8	9
1029	4.5	8	1079	5.5	9
1030	4.6	10	1080	5.8	9
1031	4.7	10	1081	5.8	9
1032	4.5	10	1082	6.2	9
1033	4.8	10	1083	6.3	9
1034	4.8	10	1084	6.1	10
1035	5.3	10	1085	4.7	10

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
1086	6.1	10	1136	6.2	12
1087	5.3	10	1137	6.1	11
1088	5.4	10	1138	6.3	11
1089	4.1	10	1139	6.5	10
1090	4.7	10	1140	7.3	11
1091	5.8	10	1141	5.7	12
1092	6.2	10	1142	5.9	12
1093	5.6	11	1143	6.0	12
1094	5.6	11	1144	6.2	12
1095	4.8	11	1145	6.5	13
1096	5.3	11	1146	5.3	13
1097	5.3	11	1147	5.6	14
1098	5.9	11	1148	5.8	14
1099	5.7	11	1149	6.1	14
1100	5.8	10	1150	7.0	13
1101	5.7	10	1151	6.7	13
1102	5.8	10	1152	5.3	14
1103	5.7	10	1153	3.8	15
1104	5.8	11	1154	4.7	14
1105	5.7	10	1155	4.8	14
1106	5.9	10	1156	6.3	13
1107	5.4	11	1157	5.8	13
1108	5.4	11	1158	5.8	13
1109	5.5	12	1159	6.6	12
1110	5.4	12	1160	5.9	13
1111	6.0	10	1161	6.3	13
1112	5.3	10	1162	6.3	13
1113	6.0	12	1163	6.3	13
1114	3.3	12	1164	6.3	14
1115	2.8	13	1165	6.2	14
1116	3.1	13	1166	6.1	14
1117	3.2	13	1167	6.3	14
1118	3.9	12	1168	7.1	13
1119	4.6	12	1169	6.4	13
1120	6.7	12	1170	6.3	13
1121	6.0	11	1171	6.3	12
1122	5.9	11	1172	6.4	12
1123	7.0	11	1173	6.6	12
1124	7.1	11	1174	6.5	12
1125	7.8	10	1175	6.7	12
1126	8.3	10	1176	6.5	12
1127	6.6	11	1177	6.8	12
1128	6.2	11	1178	8.1	12
1129	6.8	11	1179	7.3	12
1130	6.5	11	1180	7.0	12
1131	7.0	10	1181	7.3	12
1132	5.8	11	1182	6.1	14
1133	6.4	11	1183	6.6	12
1134	6.2	11	1184	6.9	11
1135	5.3	11	1185	7.4	13

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
1186	6.9	12	1236	7.1	19
1187	11.2	10	1237	6.8	20
1188	14.3	10	1238	7.0	21
1189	13.3	11	1239	6.9	21
1190	13.9	13	1240	7.0	22
1191	10.0	10	1241	7.3	23
1192	7.3	13	1242	7.4	22
1193	7.6	13	1243	7.3	22
1194	7.3	13	1244	7.8	23
1195	7.0	13	1245	6.6	25
1196	7.5	14	1246	7.1	25
1197	7.6	15	1247	7.1	25
1198	7.0	16	1248	6.9	25
1199	6.5	14	1249	6.9	21
1200	7.8	15	1250	6.9	21
1201	7.2	15	1251	6.8	20
1202	6.5	16	1252	7.0	20
1203	6.6	17	1253	6.9	17
1204	6.8	16	1254	11.7	16
1205	6.9	16	1255	16.7	11
1206	7.5	16	1256	16.3	11
1207	7.0	16	1257	17.4	12
1208	6.9	20	1258	14.6	12
1209	7.1	21	1259	6.4	16
1210	7.0	21	1260	7.2	15
1211	6.9	19	1261	7.3	18
1212	8.1	19	1262	7.0	18
1213	6.6	19	1263	7.1	17
1214	6.5	21	1264	14.2	14
1215	7.1	21	1265	15.1	13
1216	6.2	19	1266	11.3	17
1217	6.7	19	1267	7.3	17
1218	5.9	19	1268	7.7	17
1219	6.1	19	1269	7.8	17
1220	5.9	17	1270	7.8	17
1221	6.1	19	1271	8.2	16
1222	5.0	20	1272	8.4	23
1223	5.8	19	1273	8.6	25
1224	5.8	19	1274	11.5	30
1225	6.1	18	1275	6.3	30
1226	6.9	17	1276	5.5	29
1227	6.3	18	1277	5.8	32
1228	6.5	19	1278	6.0	32
1229	6.8	19	1279	6.0	32
1230	6.6	19	1280	5.5	33
1231	6.8	20	1281	6.2	26
1232	6.6	20	1282	6.5	26
1233	6.6	20	1283	5.0	30
1234	7.2	20	1284	5.4	30
1235	7.3	20	1285	5.4	30

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
1286	5.6	31	1336	5.3	28
1287	5.3	33	1337	5.1	28
1288	5.3	35	1338	5.1	29
1289	5.4	35	1339	5.3	29
1290	5.4	36	1340	4.5	27
1291	5.3	36	1341	7.4	21
1292	9.4	36	1342	7.5	22
1293	7.8	27	1343	7.3	21
1294	6.8	30	1344	7.3	23
1295	6.4	32	1345	5.0	36
1296	6.7	33	1346	3.5	73
1297	6.7	34	1347	3.3	108
1298	7.4	34	1348	2.7	135
1299	6.4	35	1349	2.9	134
1300	6.1	31	1350	2.2	155
1301	5.3	32	1351	2.3	168
1302	7.9	28	1352	2.3	167
1303	7.6	28	1353	2.4	163
1304	7.8	28	1354	2.6	148
1305	8.2	29	1355	2.4	118
1306	5.5	34	1356	2.4	142
1307	5.6	37	1357	2.3	151
1308	5.2	38	1358	2.9	151
1309	5.3	38	1359	2.4	131
1310	5.4	39	1360	2.3	143
1311	4.1	36	1361	2.3	154
1312	6.8	24	1362	2.3	158
1313	8.1	26	1363	2.3	158
1314	7.8	27	1364	2.7	153
1315	7.7	28	1365	2.4	158
1316	6.8	29	1366	2.3	165
1317	4.9	37	1367	2.8	166
1318	5.2	37	1368	3.1	87
1319	5.3	38	1369	4.3	85
1320	5.4	37	1370	4.8	84
1321	5.3	39	1371	4.8	80
1322	3.7	30	1372	4.5	101
1323	6.3	32	1373	2.8	101
1324	6.1	27	1374	2.5	148
1325	6.1	27	1375	2.4	155
1326	5.6	24	1376	2.4	158
1327	5.3	22	1377	3.0	167
1328	5.3	23	1378	4.0	169
1329	5.4	23	1379	3.6	143
1330	5.6	25	1380	2.8	150
1331	6.2	27	1381	2.9	202
1332	5.3	25	1382	2.9	203
1333	5.2	27	1383	2.3	209
1334	5.5	27	1384	2.3	242
1335	5.4	27	1385	2.4	252

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
1386	2.5	252	1436	5.5	47
1387	1.4	232	1437	5.7	46
1388	1.5	200	1438	5.8	46
1389	2.2	244	1439	5.7	50
1390	2.3	254	1440	4.8	55
1391	2.3	252	1441	4.9	50
1392	2.4	268	1442	3.9	54
1393	2.2	269	1443	4.3	87
1394	2.1	265	1444	2.0	101
1395	2.3	263	1445	3.3	65
1396	4.3	260	1446	3.9	109
1397	3.5	113	1447	4.4	84
1398	3.3	117	1448	4.3	101
1399	5.9	114	1449	3.0	112
1400	4.8	114	1450	3.8	146
1401	2.4	111	1451	3.7	152
1402	3.2	147	1452	3.2	128
1403	2.7	168	1453	3.6	83
1404	2.6	184	1454	3.4	69
1405	3.0	204	1455	3.5	67
1406	3.7	204	1456	5.5	44
1407	3.8	115	1457	5.2	84
1408	3.8	121	1458	4.3	69
1409	3.2	120	1459	5.0	38
1410	3.3	156	1460	5.3	44
1411	3.1	161	1461	3.8	52
1412	3.3	161	1462	4.0	52
1413	3.2	156	1463	7.8	10
1414	3.3	144	1464	8.1	10
1415	4.1	108	1465	7.0	10
1416	2.9	85	1466	8.0	10
1417	4.1	82	1467	7.6	9
1418	3.8	82	1468	6.9	9
1419	4.3	114	1469	7.7	10
1420	4.2	167	1470	7.8	10
1421	3.9	176	1471	7.3	10
1422	3.8	160	1472	6.3	9
1423	3.8	139	1473	8.3	9
1424	4.0	131	1474	7.6	9
1425	3.8	110	1475	7.9	9
1426	4.2	81	1476	8.8	9
1427	3.8	75	1477	8.0	9
1428	3.9	71	1478	6.8	9
1429	4.0	66	1479	7.3	10
1430	4.3	64	1480	8.3	10
1431	4.7	60	1481	8.3	9
1432	3.8	56	1482	9.7	9
1433	3.9	58	1483	7.1	7
1434	4.0	60	1484	8.3	7
1435	5.1	44	1485	10.3	6

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
1486	9.7	9	1536	14.1	9
1487	9.2	9	1537	13.7	9
1488	10.5	9	1538	12.8	9
1489	26.0	14	1539	11.0	10
1490	26.2	15	1540	10.3	11
1491	26.0	10	1541	10.9	11
1492	15.0	17	1542	11.1	10
1493	12.0	19	1543	10.9	9
1494	14.2	19	1544	11.3	10
1495	12.1	15	1545	10.8	10
1496	11.4	15	1546	10.7	10
1497	12.1		1547	9.0	10
1498	10.2	16	1548	8.3	12
1499	10.6	14	1549	9.0	13
1500	11.9	14	1550	10.0	13
1501	11.3	14	1551	11.5	11
1502	10.7	14	1552	11.5	11
1503	10.5	14	1553	10.5	14
1504	14.2	12	1554	10.8	13
1505	11.7	12	1555	10.4	11
1506	11.4	14	1556	11.4	11
1507	11.4	14	1557	13.8	10
1508	12.2	13	1558	12.1	10
1509	13.3	11	1559	11.2	10
1510	11.9	11	1560	12.3	10
1511	11.2	11	1561	17.1	10
1512	10.1	12	1562	13.7	10
1513	12.4	11	1563	11.8	10
1514	11.9	10	1564	12.2	10
1515	11.5	10	1565	11.8	9
1516	11.7	11	1566	12.6	9
1517	11.8	11	1567	9.2	9
1518	10.2	11	1568	13.8	8
1519	11.0	10	1569	13.1	8
1520	11.3	11	1570	12.7	9
1521	10.6	12	1571	17.3	8
1522	11.0	12	1572	13.1	8
1523	11.7	11	1573	12.7	8
1524	9.5	12	1574	12.3	8
1525	9.8	12	1575	11.3	8
1526	10.3	12	1576	10.9	14
1527	10.3	12	1577	10.8	18
1528	10.6	13	1578	10.0	17
1529	9.9	14	1579	10.9	14
1530	10.3	14	1580	10.9	12
1531	10.0	13	1581	10.3	12
1532	16.3	9	1582	10.5	12
1533	14.4	9	1583	11.1	12
1534	12.7	9	1584	10.4	12
1535	13.6	9	1585	10.6	10

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
1586	11.3	12	1636	6.2	8
1587	11.5	12	1637	10.1	9
1588	10.8	12	1638	7.7	8
1589	10.4	11	1639	9.1	9
1590	10.8	12	1640	6.4	7
1591	10.0	13	1641	8.1	8
1592	12.1	14	1642	6.8	8
1593	10.5	12	1643	6.5	8
1594	11.8	12	1644	7.0	8
1595	10.3	11	1645	10.1	8
1596	8.7	12	1646	8.0	8
1597	8.1	12	1647	9.3	7
1598	10.8	13	1648	6.3	7
1599	11.0	18	1649	6.5	6
1600	10.3	19	1650	7.4	7
1601	10.8	18	1651	8.2	7
1602	11.7	12	1652	6.5	7
1603	10.4	10	1653	7.1	7
1604	10.3	11	1654	6.3	7
1605	9.6	13	1655	8.9	7
1606	9.3	16	1656	7.2	6
1607	8.9	17	1657	7.0	7
1608	12.6	14	1658	6.5	6
1609	12.0	11	1659	7.7	6
1610	7.8	11	1660	7.5	7
1611	10.0	11	1661	7.2	7
1612	10.3	10	1662	8.3	9
1613	9.7	9	1663	5.9	8
1614	7.0	11	1664	6.1	8
1615	7.4	10	1665	7.0	8
1616	8.3	10	1666	5.8	8
1617	11.1	9	1667	5.9	8
1618	8.4	10	1668	5.4	8
1619	9.0	12	1669	6.9	8
1620	7.2	12	1670	6.5	8
1621	4.8	10	1671	7.9	8
1622	5.5	8	1672	7.0	7
1623	7.3	8	1673	7.3	8
1624	6.6	9	1674	6.4	9
1625	5.3	9	1675	7.2	9
1626	8.3	9	1676	6.3	8
1627	8.8	10	1677	7.3	8
1628	4.9	10	1678	10.8	7
1629	6.6	10	1679	10.7	8
1630	6.4	9	1680	6.2	7
1631	4.3	7	1681	6.4	8
1632	8.3	7	1682	4.5	8
1633	9.7	8	1683	6.3	8
1634	7.7	9	1684	10.5	7
1635	6.8	8	1685	10.5	7

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
1686	10.4	7	1736	13.8	6
1687	14.6	7	1737	13.8	6
1688	10.4	6	1738	14.3	6
1689	9.4	6	1739	14.2	6
1690	7.8	6	1740	14.3	6
1691	9.3	6	1741	12.8	5
1692	8.3	6	1742	13.3	6
1693	8.2	6	1743	13.6	6
1694	6.8	6	1744	16.3	6
1695	8.4	6	1745	15.3	6
1696	7.3	6	1746	14.9	6
1697	11.7	6	1747	16.3	6
1698	15.3	6	1748	16.4	6
1699	15.5	6	1749	16.7	6
1700	16.7	6	1750	17.7	7
1701	15.8	6	1751	20.3	7
1702	18.6	6	1752	18.2	7
1703	16.6	6	1753	15.5	7
1704	18.2	6	1754	18.9	7
1705	15.0	6	1755	19.3	7
1706	12.7	6	1756	18.8	7
1707	15.6	6	1757	17.6	7
1708	14.8	6	1758	18.9	8
1709	17.1	6	1759	14.3	8
1710	17.3	6	1760	15.3	9
1711	17.3	6	1761	15.3	8
1712	16.7	6	1762	18.7	8
1713	17.9	6	1763	19.2	8
1714	17.8	6	1764	19.2	8
1715	16.0	6	1765	20.1	8
1716	14.2	6	1766	19.9	8
1717	14.5	6	1767	21.3	5
1718	14.5	6	1768	19.2	5
1719	16.0	6	1769	25.0	5
1720	19.6	6	1770	6.7	5
1721	20.0	6	1771	14.2	6
1722	17.8	6	1772	11.0	6
1723	19.2	6	1773	12.7	9
1724	15.8	6	1774	8.4	9
1725	14.3	6	1775	6.1	9
1726	11.5	6	1776	10.5	9
1727	11.8	5	1777	4.1	9
1728	10.9	5	1778	4.3	8
1729	13.3	5	1779	2.3	7
1730	16.8	6	1780	2.8	7
1731	13.9	6	1781	2.4	8
1732	12.3	6	1782	2.6	8
1733	10.8	6	1783	4.0	8
1734	11.8	6	1784	4.2	8
1735	11.9	6	1785	2.3	8

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
1786	3.1	7	1836	6.2	6
1787	4.1	7	1837	3.1	6
1788	3.7	7	1838	2.7	6
1789	4.9	6	1839	3.8	6
1790	4.1	6	1840	8.3	6
1791	3.8	8	1841	6.1	6
1792	2.8	6	1842	6.9	6
1793	2.8	6	1843	2.8	6
1794	3.7	6	1844	2.9	6
1795	3.3	6	1845	3.3	6
1796	3.2	6	1846	3.2	6
1797	3.3	7	1847	4.5	6
1798	4.8	7	1848	2.9	6
1799	7.3	10	1849	4.2	6
1800	3.8	7	1850	3.9	6
1801	4.9	7	1851	2.8	6
1802	8.5	7	1852	2.5	6
1803	6.4	7	1853	4.5	6
1804	3.5	7	1854	4.1	7
1805	3.3	7	1855	3.9	7
1806	4.0	7	1856	4.8	7
1807	3.7	7	1857	3.1	7
1808	3.9	7	1858	2.8	6
1809	3.5	7	1859	2.8	6
1810	3.4	7	1860	6.8	6
1811	3.3	7	1861	4.4	6
1812	3.3	7	1862	8.5	6
1813	3.1	7	1863	5.7	6
1814	3.9	7	1864	4.9	6
1815	7.0	7	1865	3.9	6
1816	7.5	7	1866	4.1	6
1817	3.9	7	1867	3.6	6
1818	4.8	7	1868	2.8	6
1819	3.0	7	1869	3.9	6
1820	4.1	7	1870	4.4	6
1821	3.3	7	1871	3.2	6
1822	5.4	7	1872	3.6	6
1823	5.6	7	1873	2.8	7
1824	4.1	7	1874	3.1	7
1825	5.5	7	1875	2.7	7
1826	2.9	6	1876	2.5	6
1827	2.7	6	1877	2.7	6
1828	4.6	6	1878	2.8	6
1829	2.9	6	1879	2.8	6
1830	3.0	6	1880	2.5	6
1831	3.0	6	1881	2.7	6
1832	9.1	6	1882	2.5	6
1833	7.2	6	1883	2.9	6
1834	3.9	6	1884	3.1	6
1835	2.9	6	1885	2.8	6

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
1886	2.6	6	1936	2.3	6
1887	2.9	6	1937	2.3	6
1888	2.8	6	1938	2.5	6
1889	2.8	6	1939	2.5	6
1890	2.7	6	1940	2.3	6
1891	3.0	6	1941	3.0	6
1892	2.8	6	1942	2.5	6
1893	2.8	6	1943	2.3	6
1894	3.2	6	1944	2.4	6
1895	2.7	6	1945	2.4	6
1896	2.8	6	1946	2.3	6
1897	2.8	6	1947	2.4	6
1898	2.9	6	1948	2.0	6
1899	2.7	6	1949	2.2	6
1900	2.6	6	1950	2.5	6
1901	2.7	6	1951	2.4	5
1902	3.2	6	1952	2.5	5
1903	3.0	6	1953	2.4	5
1904	3.5	6	1954	2.5	5
1905	2.8	6	1955	2.6	5
1906	2.6	6	1956	2.7	5
1907	2.7	6	1957	2.8	5
1908	2.5	6	1958	3.0	5
1909	2.6	6	1959	2.8	5
1910	2.7	6	1960	4.7	5
1911	2.5	6	1961	3.8	5
1912	3.0	6	1962	3.5	5
1913	2.6	6	1963	14.0	5
1914	2.5	6	1964	47.1	6
1915	2.8	6	1965	35.9	6
1916	2.5	6	1966	20.9	7
1917	2.6	6	1967	21.7	6
1918	2.4	6	1968	23.7	6
1919	2.4	6	1969	20.6	7
1920	2.7	6	1970	22.6	7
1921	2.6	6	1971	20.3	7
1922	2.9	6	1972	23.3	7
1923	2.7	6	1973	22.7	8
1924	2.5	6	1974	25.9	7
1925	2.7	6	1975	25.3	8
1926	2.7	6	1976	22.4	8
1927	2.4	6	1977	23.3	8
1928	2.5	6	1978	25.9	8
1929	2.6	6	1979	23.0	7
1930	2.6	6	1980	24.3	8
1931	4.0	6	1981	17.6	8
1932	2.6	6	1982	23.9	8
1933	2.4	6	1983	24.3	7
1934	2.6	6	1984	21.4	8
1935	2.4	6	1985	24.7	7

AEC (West) Renaissance Tate G-18

Depth (m)	ROP (min/m)	Total Gas (units)	Depth (m)	ROP (min/m)	Total Gas (units)
1986	25.7	7			
1987	24.5	7			
1988	21.8	10			
1989	24.2	10			
1990	22.9	10			
1991	18.6	11			
1992	24.7	10			
1993	25.7	10			
1994	17.7	10			
1995	19.8	11			
1996	22.9	10			
1997	21.4	10			
1998	21.3	10			
1999	23.8	11			
2000	22.2	12			
2001	20.5	12			
2002	22.2	11			
2003	21.9	12			
2004	20.9	12			
2005	20.6	14			
2006	19.7	14			
2007	20.6	12			
2008	21.3	11			
2009	18.2	12			
2010	18.3	12			
2011	14.0	15			
2012	9.7	15			
2013	21.2	14			
2014	24.9	10			
2015	23.5	11			
2016	27.6	12			
2017	23.4	11			
2018	24.4	10			
2019	25.3	10			
2020	26.0	10			
2021	26.6	10			
2022	23.7	10			
2023	23.0	9			
2024	29.5	9			
2025	22.7	9			
2026	19.7	12			
2027	22.5	12			
2028	24.0	12			
2029	28.5	12			
2030	26.4	13