

DENE DIRECTIONAL & RENTALS LTD.

Standard Survey Report

N.E.B. COPY

Company: PARAMOUNT RESOURCES LTD.
Ref: #epflN-01
Site: PARA et al FORT LIARD
Well: N-01
Wellpath: Original hole

Date: 9/1/2001 Time: 11:55:49 Page: 1
Co-ordinate(NE) Reference: Site: PARA et al FORT LIARD, Grid North
Vertical (TVD) Reference: Est. KB Elev. 491.2 above Mean Sea Level
Section (VS) Reference: Slot (0.0E,0.0N,0.0Azi)
Survey Calculation Method: Minimum Curvature

N-01 60-10-123-15

Map Projection & Zone: Universal Transverse Mercator
UTM Zone 10, South 126W to 120W
Ellipsoid: WGS 1984

Direction of Local North: Grid

Field Datum: Mean Sea Level

Geomagnetic Model: WMM2000

Site: PARA et al FORT LIARD
Ground Elev. = 486.2m

Site Centre: 485149.57 m E 60 1 5.000 N Latitude
16653451.90 m N 123 15 59.000 W Longitude

Site Water Depth: 0.00 m Position Uncertainty: 0.00 m

Magnetic Declination: 25.42 deg
Grid Convergence: 0.00 deg

Measured Depths Referenced To: Est. KB Elev. 491.20 m above Mean Sea Level

Well: N-01

Originating From: 0.00 m +N/-S Map Easting: 485149.57 m
0.00 m +E/-W Map Northing: 16653451.90 m

Wellpath: Original hole

Origin of Vertical Section: Slot 0.00 m +N/-S
0.00 m +E/-W

Direction of Vertical Section: 0.00 deg

Survey: Survey #1

Start Date: 9/1/2001

Company: Dene Directional & Rentals Ltd
Tool:

Engineer:

Drilled Wellpath: Survey #1

MD m	Incl deg	Azim deg	TVD m	+N/-S m	+E/-W m	VS m	DLS deg/30m	Build deg/30m	Turn deg/30m	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	
501.00	0.00	0.00	501.00	0.00	0.00	0.00	0.000	0.000	0.000	
512.30	1.10	274.70	512.30	0.01	-0.11	0.01	2.920	2.920	0.000	
521.80	1.20	276.80	521.80	0.03	-0.30	0.03	0.343	0.316	6.632	
531.30	1.10	270.50	531.30	0.04	-0.49	0.04	0.509	-0.316	-19.895	
540.80	1.10	261.30	540.79	0.03	-0.67	0.03	0.557	0.000	-29.053	
569.40	0.70	278.20	569.39	0.01	-1.11	0.01	0.499	-0.420	17.727	
597.90	0.50	306.70	597.89	0.11	-1.39	0.11	0.372	-0.211	30.000	
627.50	0.50	304.90	627.49	0.26	-1.59	0.26	0.016	0.000	-1.824	
655.10	0.90	295.80	655.09	0.42	-1.89	0.42	0.450	0.435	-9.891	
664.60	0.70	300.00	664.58	0.49	-2.01	0.49	0.658	-0.632	13.263	
702.70	0.50	353.10	702.68	0.77	-2.23	0.77	0.445	-0.157	41.811	
731.30	1.90	90.80	731.28	0.88	-1.77	0.88	2.128	1.469	102.483	
750.30	2.10	92.60	750.27	0.86	-1.11	0.86	0.331	0.316	2.842	
759.80	2.10	91.10	759.76	0.85	-0.76	0.85	0.174	0.000	-4.737	
769.40	1.80	91.20	769.35	0.85	-0.43	0.85	0.938	-0.937	0.312	
797.90	1.60	86.90	797.84	0.86	0.41	0.86	0.250	-0.211	-4.526	
807.40	1.60	85.50	807.34	0.88	0.68	0.88	0.123	0.000	-4.421	

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Co-ordinate(NE) Reference: Site: PARA et al FORT LIARD, Grid North
Vertical (TVD) Reference: Est. KB Elev. 491.2 above Mean Sea Level
Section (VS) Reference: Slot (0.0E, 0.0N, 0.0Az)
Survey Calculation Method: Minimum Curvature

Drilled Wellpath: Survey #1

MD m	Incl deg	Azim deg	TVD m	+N/-S m	+E/-W m	VS m	DLS deg/30m	Build deg/30m	Turn deg/30m	Tool/Comment
836.00	1.40	90.50	835.93	0.90	1.43	0.90	0.251	-0.210	5.245	
864.60	1.40	100.70	864.52	0.84	2.12	0.84	0.261	0.000	10.699	
893.10	1.40	119.60	893.01	0.60	2.76	0.60	0.484	0.000	19.895	
902.60	1.20	129.60	902.51	0.48	2.94	0.48	0.953	-0.632	31.579	
911.09	1.37	136.06	911.00	0.35	3.08	0.35	0.787	0.599	22.801	Scatter
921.70	1.60	142.10	921.60	0.14	3.26	0.14	0.787	0.651	17.097	
931.20	1.80	147.40	931.10	-0.09	3.42	-0.09	0.803	0.632	16.737	
950.20	1.60	160.40	950.09	-0.59	3.67	-0.59	0.684	-0.316	20.526	
959.70	1.60	162.50	959.59	-0.84	3.75	-0.84	0.185	0.000	6.632	
969.10	1.20	179.10	968.98	-1.07	3.80	-1.07	1.805	-1.277	52.979	
980.10	1.20	206.50	979.98	-1.28	3.75	-1.28	1.550	0.000	74.727	
989.60	1.10	210.70	989.48	-1.45	3.65	-1.45	0.413	-0.316	13.263	
999.10	1.10	227.60	998.98	-1.59	3.54	-1.59	1.021	0.000	53.368	
1027.70	0.70	217.40	1027.57	-1.91	3.23	-1.91	0.450	-0.420	-10.699	
1046.70	0.70	250.40	1046.57	-2.05	3.05	-2.05	0.628	0.000	52.105	
1051.13	0.67	250.03	1051.00	-2.06	3.00	-2.06	0.217	-0.215	-2.484	Garbutt
1074.70	0.50	247.30	1074.57	-2.15	2.78	-2.15	0.217	-0.214	-3.479	
1103.20	0.50	260.60	1103.07	-2.22	2.54	-2.22	0.122	0.000	14.000	
1135.40	0.90	283.50	1135.27	-2.18	2.16	-2.18	0.448	0.373	21.335	
1159.60	0.30	213.50	1159.47	-2.19	1.94	-2.19	1.048	-0.744	-86.777	
1188.10	0.30	173.10	1187.97	-2.33	1.90	-2.33	0.218	0.000	-42.526	
1202.13	0.36	176.82	1202.00	-2.41	1.91	-2.41	0.131	0.123	7.957	CHINKEH SAND**
1214.13	0.41	179.16	1214.00	-2.49	1.91	-2.49	0.131	0.125	5.851	Triassic
1235.90	0.50	182.20	1235.76	-2.66	1.91	-2.66	0.131	0.127	4.186	
1274.10	0.70	168.90	1273.96	-3.06	1.95	-3.06	0.190	0.157	-10.445	
1307.30	0.70	165.30	1307.16	-3.45	2.04	-3.45	0.040	0.000	-3.253	
1309.14	0.70	167.02	1309.00	-3.47	2.05	-3.47	0.346	0.046	27.984	Belloy
1349.80	0.90	198.00	1349.66	-4.02	2.00	-4.02	0.346	0.145	22.861	
1362.15	0.82	203.10	1362.00	-4.19	1.94	-4.19	0.265	-0.190	12.383	FANTASQUE**
1385.00	0.70	215.30	1384.85	-4.46	1.79	-4.46	0.265	-0.160	16.020	
1425.90	0.50	14.50	1425.75	-4.49	1.69	-4.49	0.866	-0.147	116.773	
1454.70	1.90	57.80	1454.55	-4.11	2.13	-4.11	1.639	1.458	45.104	
1464.30	1.80	55.70	1464.14	-3.94	2.39	-3.94	0.377	-0.312	-6.562	
1473.90	1.40	54.60	1473.74	-3.79	2.61	-3.79	1.254	-1.250	-3.437	
1483.40	1.40	52.80	1483.23	-3.65	2.80	-3.65	0.139	0.000	-5.684	
1490.17	1.32	50.59	1490.00	-3.55	2.92	-3.55	0.409	-0.336	-9.802	Kindle
1511.70	1.10	41.60	1511.53	-3.24	3.25	-3.24	0.409	-0.312	-12.524	
1517.17	1.09	35.25	1517.00	-3.16	3.32	-3.16	0.667	-0.032	-34.808	*MATTSON*
1539.00	1.20	11.40	1538.82	-2.76	3.48	-2.76	0.667	0.146	-32.780	
1552.00	1.40	356.60	1551.82	-2.47	3.50	-2.47	0.898	0.462	-34.154	
1577.80	1.40	350.60	1577.61	-1.85	3.43	-1.85	0.170	0.000	-6.977	
1596.40	1.40	1.20	1596.21	-1.40	3.40	-1.40	0.417	0.000	17.097	
1615.00	1.80	352.40	1614.80	-0.88	3.36	-0.88	0.755	0.645	-14.194	
1626.00	1.80	352.00	1625.79	-0.54	3.32	-0.54	0.034	0.000	-1.091	
1653.00	1.80	341.10	1652.78	0.28	3.12	0.28	0.380	0.000	-12.111	
1681.60	1.40	345.00	1681.37	1.05	2.88	1.05	0.435	-0.420	4.091	
1700.40	1.20	1.20	1700.16	1.47	2.83	1.47	0.664	-0.319	25.851	
1709.70	1.10	355.20	1709.46	1.65	2.82	1.65	0.505	-0.323	-19.355	
1728.90	1.40	0.10	1728.66	2.07	2.81	2.07	0.497	0.469	7.656	
1755.00	1.60	348.50	1754.75	2.75	2.74	2.75	0.417	0.230	-13.333	
1767.30	1.60	345.70	1767.04	3.08	2.66	3.08	0.191	0.000	-6.829	
1796.10	2.10	346.80	1795.83	3.98	2.44	3.98	0.522	0.521	1.146	
1805.70	2.50	353.10	1805.42	4.36	2.37	4.36	1.477	1.250	19.687	

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Well: N-01
Wellpath: Original hole

Date: 9/1/2001 Time: 11:55:49 Page: 3
Co-ordinate(NE) Reference: Site: PARA et al FORT LIARD, Grid North.
Vertical (TVD) Reference: Est. KB Elev. 491.2 above Mean Sea Level
Section (VS) Reference: Slot (0.0E,0.0N,0.0Azi)
Survey Calculation Method: Minimum Curvature

Drilled Wellpath: Survey #1

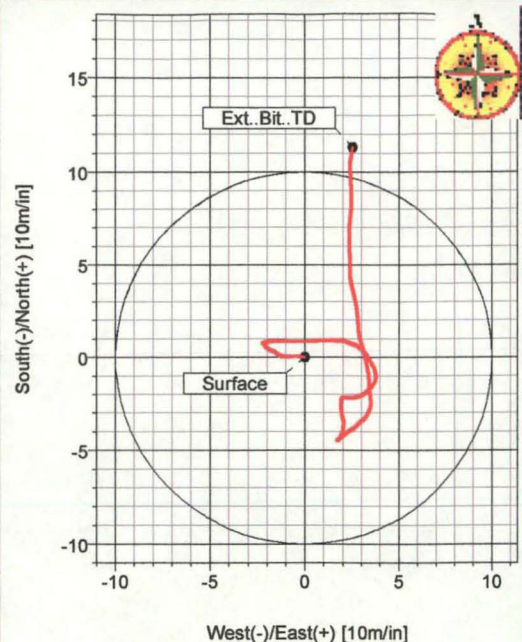
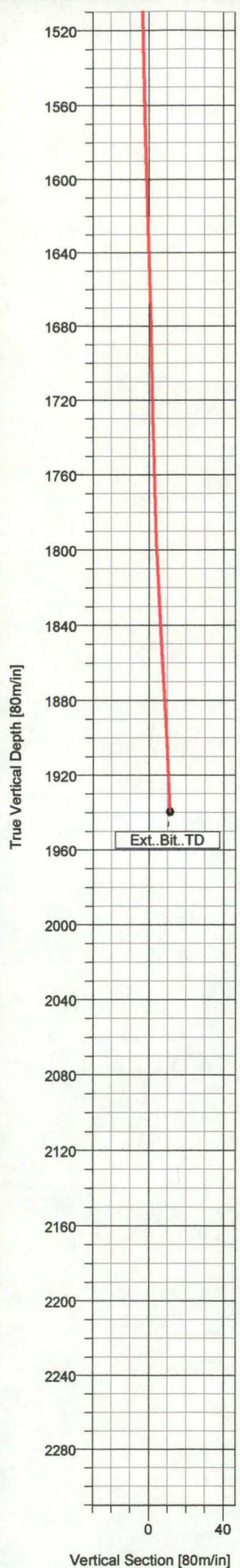
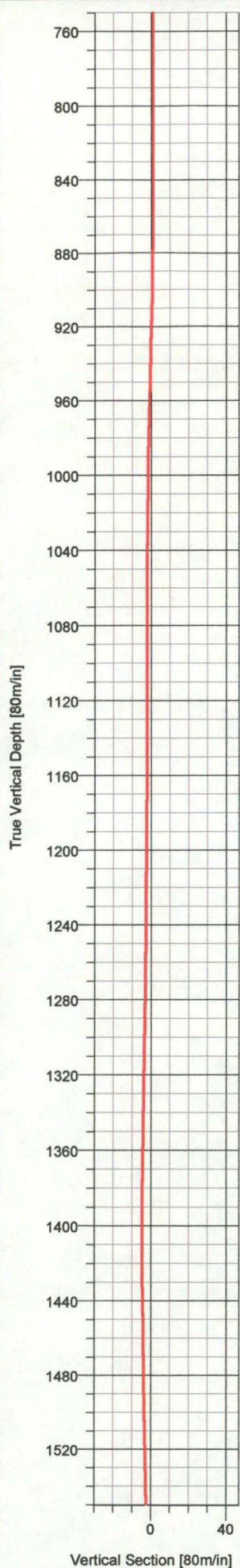
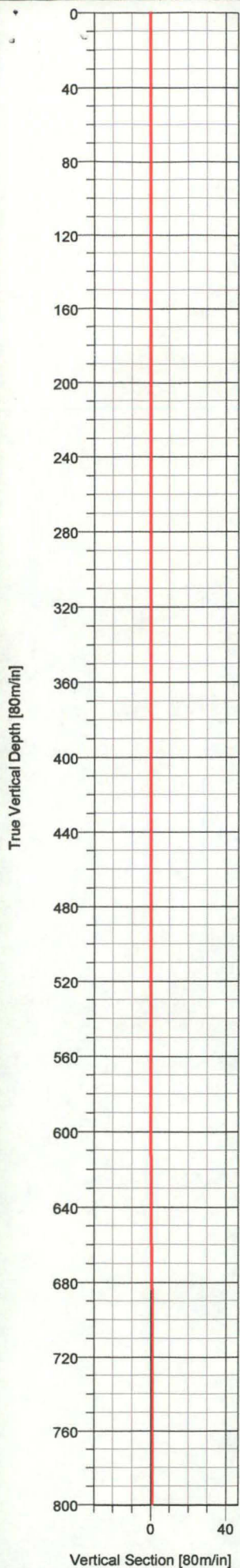
MD m	Incl deg	Azim deg	TVD m	+N/-S m	+E/-W m	VS m	DLS deg/30m	Build deg/30m	Turn deg/30m	Tool/Comment
1853.80	3.50	3.60	1853.45	6.87	2.34	6.87	0.709	0.624	6.549	
1863.50	3.50	6.10	1863.14	7.46	2.39	7.46	0.472	0.000	7.732	
1873.10	3.30	4.30	1872.72	8.03	2.44	8.03	0.708	-0.625	-5.625	
1882.70	3.20	359.80	1882.30	8.57	2.46	8.57	0.856	-0.312	-14.063	
1892.30	2.80	357.60	1891.89	9.07	2.45	9.07	1.301	-1.250	-6.875	
1902.20	2.50	352.40	1901.78	9.53	2.41	9.53	1.164	-0.909	-15.758	
1922.00	2.80	5.00	1921.56	10.44	2.40	10.44	0.990	0.455	19.091	
1940.00	2.98	10.00	1939.54	11.34	2.52	11.34	0.516	0.300	8.333	Ext..Bit..TD

Formations (per Prognosis, NOT "As Drilled")

MD m	TVD m	Formations	Lithology	Dip Angle deg	Dip Direction deg
0.00	46.00	Durvegan		0.00	0.00
0.00	406.00	Lepine		0.00	0.00
911.09	911.00	Scatter		0.00	0.00
1051.13	1051.00	Garbutt		0.00	0.00
1202.13	1202.00	CHINKEH SAND**		0.00	0.00
1214.13	1214.00	Triassic		0.00	0.00
1309.14	1309.00	Belloy		0.00	0.00
1362.15	1362.00	FANTASQUE**		0.00	0.00
1490.17	1490.00	Kindle		0.00	0.00
1517.17	1517.00	*MATTSON*		0.00	0.00
1960.49	1960.00	Mattson Fault		0.00	0.00

Annotation

MD m	TVD m	
1940.00	1939.54	Ext..Bit..TD (Extrapolation to Bit)



PARAMOUNT RESOURCES LTD.
 Ref: #epfIN-01
 Site: PARA et al FORT LIARD
 Well: N-01
 Wellpath: Drilled Path
 Survey: Survey #1

SITE DETAILS
 PARA et al FORT LIARD
 Site Centre Latitude: 60 1 5.000 N
 Longitude: 123 15 59.000 W
 Magnetic Declination: 25.42°

WELLPATH DETAILS
 Original hole
 Vertical Section Origin: Slot - (0.00,0.00)
 Vertical Section Angle: 0.00°
 Depth Reference, Ground Elev.: 486.20m
 Depth Reference, Est. KB Elev.: 491.20m

LEGEND
 — Survey #1 - DRILLED WELLPATH

FORMATION TOP DETAILS
 (per Prognosis, NOT "As Drilled")

No.	TVD	MD	Formation
1	911.00	911.09	Scatter
2	1051.00	1051.13	Garbutt
3	1202.00	1202.13	CHINKEH SAND**
4	1214.00	1214.13	Triassic
5	1309.00	1309.14	Belloy
6	1362.00	1362.15	FANTASQUE**
7	1490.00	1490.17	Kindle
8	1517.00	1517.17	*MATTSON*
9	1960.00	1960.49	Mattson Fault

Dene Directional & Rentals Ltd

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Survey: Survey #1 (N-01/Original hole)

Created By: Isobel G. Irvine Date: 9/1/2001

Checked: _____ Date: _____

Approved: _____ Date: _____