

ANADARKO CANADA CORPORATION

ANADARKO EMILE LAKE A-77

**UNIT A, SEC. 77, GRID AREA 60° 50', 122° 30'
60° 46' 09.6" N. LAT.
122° 43' 33.9" W. LONG**

GEOLOGICAL WELLSITE REPORT

Prepared for:

Mr. Wayne Dwyer
Anadarko Canada Corporation

Prepared by:

Merlin Petroleum Services
Harold Cowan

March 18, 2004

ANADARKO ANADARKO EMILE LAKE A-77

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WELL DATA SUMMARY

Well Name: Anadarko Emile Lake A-77

Location: Unit A, Sec. 77, Grid Area 60° 50', 122° 30'

Coordinates: 60° 46' 09.6" N. Lat., 122° 43' 33.9" W. Long

Operator: Anadarko Canada Corporation

Elevations: Grd. 624.7 m KB. 630.8 m

Total Depth: 2265.3 m Driller - Bottom in Pre-Devonian
2262.5 m Logger

Surface Casing: 244.5 mm, set @ 648 m. Cement with good returns.

Intermediate Casing: 177.8 mm, set @ 1969 m

Spud Date: 02-03-2004 @ 17:15 hrs.

Rig Release:

Classification: Potential Gas Well

Well Status: Confidential

Primary Objective: Slave Point - Landry

Province: NWT Area: Ft. Liard, NWT

Hole Data: Surface Hole: 311.2 mm, Surface – 648
Intermediate Hole: 215.9 mm, 648 – 1969
Main Hole: 155.6 mm, 1969 – 2265.3

Mud System: Invert – Intermediate Hole
Polymer – Main Hole

Drilling Contractor: Akita, Rig 37

Wellsite Engineer: Brian Preece

Wellsite Geologist: Harold Cowan

Note: Initial well name was Netla A-77

DRILLING HISTORY

Date 2004	Depth (m)	Mud Properties				Operations Conducted
		Dens.	Vis.	WL	PH	
Mar. 1						<ul style="list-style-type: none"> • Rigging up.
Mar. 2						<ul style="list-style-type: none"> • Rigging up Akita 37.
Mar. 3	199					<ul style="list-style-type: none"> • Drill 311 mm hole. Spud 17:15 hrs., 02-03-2004.
Mar. 4	514					<ul style="list-style-type: none"> • Drilling.
Mar. 5	648					<ul style="list-style-type: none"> • Prep to run surface casing.
Mar. 6	648					<ul style="list-style-type: none"> • W.O.C. Rig in BOP's. Ran 46 jts., 244.5 mm casing, set at 648 m. Cement with good returns. Plug down @16:00 hrs., 05-03-2004
Mar. 7	648					<ul style="list-style-type: none"> • Complete pressure testing, pick up BHA (MWD, square motor and PDC).
Mar. 8	945	945	57			<ul style="list-style-type: none"> • Drilling intermediate hole at 945. Drill out of shoe @ 16:45 hrs., 07-03-2004. Mud system – Invert.
Mar. 9	1565	950	57			<ul style="list-style-type: none"> • Drill 215.9 mm hole.
Mar. 10	1710	940	53			<ul style="list-style-type: none"> • Directional drilling. Trip for bit and directional tools at 1668 m.
Mar. 11	1920	950	53			<ul style="list-style-type: none"> • Drill.
Mar. 12	1969	950	56			<ul style="list-style-type: none"> • Prep to run in with gyro. Completed logging with Precision. Reached intermediate casing point @ 13:15 hrs., 11-03-2004.
Mar. 13	1969					<ul style="list-style-type: none"> • Run gyro, lay down 4-1/2" drill pipe. • Run 140 jts., 177.8 mm casing, cement with good returns.
Mar. 14	1969					<ul style="list-style-type: none"> • Pressure test BOP's.
Mar. 15	2004	1020	48		10.5	<ul style="list-style-type: none"> • Drilling 155.9 mm hole with PDC and MWD. • Drill with polymer. Drilled out @ 01:00 hrs., 15-03-2004. Drilled 5 m out of shoe and ran a FIT test.
Mar. 16	2235	1025	46		10.5	<ul style="list-style-type: none"> • Drilling, recorded 2000 units of gas at 2212 m.
Mar. 17	2265.3					<ul style="list-style-type: none"> • Reached TD @ 12:30 hrs., 16-03-2004. • Logging by Precision. Run #1 HMI failed. Run #2 HMI okay. Run #3 Density Neutron and Laterolog.
Mar. 18	2265.3					<ul style="list-style-type: none"> • Run and cement a 4-1/2" liner over the main hole.

BIT RECORD

BIT NO.	SIZE MM	SERIAL NO.	MAKE	TYPE	HOURS	DEPTH OUT	METRES DRILLED
1	311	LR0070	Smith	FDS	11.50	199.0	199.0
2	311	2084	United	UD516	22.00	648.0	449.0
3	215	10092	Hycalog	DSX 145	35.75	1667.0	1019.0
4	215	1041	UD	UD513		1969.0	302.0
5	155	1739	UD	UD 513	29.5	2265.3	296.3

FORMATION TOPS

	SAMPLE MD (m)	SAMPLE SS (m)	LOG TOPS (m)	SUBSEA (m)
Exshaw	661.6	-30.8	662.3	-31.5
Kotcho	671.2	-40.4	673.0	-42.2
Tetcho	1020.2	-389.4	1021.0	-390.2
Trout River	1108.0	-477.2	1105.0	-474.2
Kakisa	1185.0	-554.2	1184.0	-553.2
Ft. Simpson	1199.5	-568.7	1194.5	-563.3
Ft. Simpson MKR	1730.8	-1100.0		
Muskwa	1937.2	-1306.4	1928.0	-1297.2
Slave Point	1965.0	-1334.2	1964.0	-1333.2
Watt Mtn.	2072.0	-1441.2	2072.0	-1441.2
Sulphur Point	2086.0	-1455.2	2081.0	-1450.2
Landry	2201.9	-1571.1	2204.0	-1573.2
Pre-Devonian	2263.6	-1632.8	2263.6	-1632.8
Total Depth	2265.3 TD	-1634.5	2265.3	-1634.5

SAMPLE DESCRIPTIONS

648-655 Shale, black, blocky, fissile in part.

660-665 Shale, grey, micaceous, glauconitic in part.

670 Shale, grey, micaceous, trace Shale, green, splintery. Trace Sandstone, clear, salt and pepper, apparent dead oil stain, no porosity, very dull fluorescence, no cut.

675 Shale, dark brown, bituminous. Dolomite, brown, argillaceous, possible light oil stain, dull fluorescence, slow milky cut, no permeability.

680 Siltstone, light grey, dolomitic, sandy. Shale, dark grey-brown, bituminous in part, waxy in part.

685 Siltstone, light grey, dolomitic, sandy. Trace limestone, buff, finely crystalline, fossiliferous, dense.

690 Siltstone, light grey, dolomitic, sandy.

695 Siltstone, grey-light grey, dolomitic, sandy. Trace Limestone, brown, finely crystalline, fossiliferous, chalky in part, dense.

700 Siltstone, grey, dolomitic, sandy. Trace Dolomite, buff, microcrystalline, dense.

705 Shale, greenish grey, dolomitic, blocky.

710-715 Shale, as above.

720 Shale, as above. Trace crinoidal ossicles.

725-740 Shale, as above.

745 Limestone, buff, finely crystalline, chalky in part, dense. Shale, as above (50%).

750 Limestone, buff, finely crystalline, chalky in part, dense.

755-765 Limestone, as above.

770-785 Limestone, as above (50%). Shale, grey, micro-micaceous, blocky, dolomitic.

790 No sample.

795 Shale, grey, micro-micaceous, flaky, dolomitic.

800-815 Shale, greenish grey, dolomitic, micro-micaceous.

820 Shale, greenish grey, micro-micaceous, dolomitic. Limestone, buff, finely crystalline, dense.

825 Shale, as above. Trace Limestone, buff, crinoidal, dense.

830-900 Shale, greenish grey, dolomitic, blocky.

905-920 Shale, as above.

925 Shale, dark brown, bituminous. Shale, medium grey, micaceous.

930-1000 Shale, greenish grey, micaceous, splintery, dolomitic.

1005 No sample.

1010 Shale, greenish grey, as above.

1015 Shale, medium grey, blocky, dolomitic.

1020 Shale, medium grey, blocky, dolomitic. Trace Siltstone, brown, dolomitic.

1025 Limestone, cream, chalky.

1030 Limestone, cream, silty.

1035 Shale, medium grey, micaceous, dolomitic. Limestone, as above (25%).

1040 Limestone, buff, microcrystalline, dense.

1045 Limestone, as above.

1050-1055 Limestone, buff, microcrystalline, dense.

1060-1065 Limestone, buff, microcrystalline, chalky in part, dense.

1070 Limestone, buff, finely crystalline, chalky in part, dense.

1075 Limestone, brown, microcrystalline, dense.

1080 Limestone, buff, chalky, dense.

1085 Limestone, buff, microcrystalline, dense. Limestone, cream, chalky, dense.

1090 Shale, green-grey, micro-micaceous. Limestone, buff, chalky, dense.

1095 Limestone, cream, chalky. Shale, grey, limey.

1100 Limestone, cream, chalky. Shale, grey, dolomitic, blocky.

1105 Limestone, grey, argillaceous. Shale, medium grey, dolomitic, blocky.

1110 Shale, medium grey, dolomitic, blocky.

1115 Shale, medium grey, micro-micaceous, blocky. Limestone, grey, finely crystalline, dense.

1120 Shale, as above. Limestone, as above.

1125 Shale, grey, micro-micaceous, blocky. Siltstone, grey, sandy.

1130 Shale, grey-medium grey, micro-micaceous. Siltstone, grey, sandy.

1135 Shale, as above. Pyrite common.

1140 Shale, grey-medium grey, micro-micaceous, dolomitic.

1145-1160 Shale, as above.

1165 Siltstone, grey, argillaceous, dolomitic.

1170 Shale, grey-medium grey, micro-micaceous, dolomitic. Siltstone, grey, dolomitic.

1175-1185 Shale, as above. Siltstone, as above.

1190 Limestone, grey, argillaceous. Shale, medium grey, blocky.

1195 Limestone, as above. Trace Shale, brown, bituminous.

1200 Shale, brown, bituminous, fissile. Limestone, grey, argillaceous, sandy in part.

1205-1215 Shale, as above. Limestone, as above.

1220 Shale, green-grey, dolomitic, splintery.

1225 Shale, green-grey, splintery, dolomitic. Shale, dark brown, bituminous, fissile.

1230-1240 Shale, as above.

1245 Shale, green-grey, splintery, dolomitic.

1250 Shale, medium grey, micro-micaceous, blocky, silty in part.

1255-1280 Shale, as above.

1285 Shale, as above. Siltstone, grey, sandy.

1290-1315 Shale, as above.

1320-1325 Shale, medium grey, micro-micaceous, splintery.

1330 Shale, medium grey, micro-micaceous, splintery. Siltstone, grey, sandy.

1335-1340 Shale, green-grey-medium grey, micro-micaceous, flaky.

1345-1375 Shale, as above. Siltstone, grey, sandy (10%).

1380 Shale, as above. Increase in Siltstone, grey, sandy.

1385-1400 Shale, green-grey-medium grey, micro-micaceous, flaky.

1405-1450 Shale, as above.

1455-1495 Shale, medium grey, micro-micaceous, blocky.

1500-1525 Shale, green-grey, micro-micaceous, blocky, silty in part.

1530-1545 Shale, green-grey, micro-micaceous, splintery.

1550-1570 Shale, medium grey, micro-micaceous, blocky.

1575-1595 Shale, medium grey, micro-micaceous, splintery, blocky in part.

1600 Shale, medium grey, micro-micaceous, splintery.

1605-1630 Shale, medium grey-grey, micro-micaceous, blocky.

1635-1650	Shale, medium grey, non-calcareous, micro-micaceous, blocky.
1655-1670	Shale, medium grey, micro-micaceous, blocky.
1675-1685	Shale, grey-medium grey, blocky, micro-micaceous.
1690-1715	Shale, grey-medium grey, blocky, flaky, micaceous in part.
1720	Shale, grey, blocky.
1725-1730	Shale, grey-medium grey, blocky.
1735	Shale, medium grey, blocky. Limestone, cream, chalky.
1740	Shale, medium grey, fissile in part, blocky.
1745	Shale, dark grey, flaky, blocky in part.
1750-1765	Shale, grey, blocky.
1770-1780	Shale, grey, blocky, splintery in part.
1785-1810	Shale, medium grey, blocky.
1815-1855	Shale, grey-medium grey, blocky
1860-1890	Shale, medium grey, blocky.
1895	Shale, dark grey, flaky, trace disseminated pyrite.
1900-1910	Shale, medium-dark grey, blocky, flaky, non-calcareous.
1915-1920	Shale, as above.
1925	Shale, as above.
1930	Shale, as above. Trace Shale, dark brown, blocky.
1935	Shale, black, dark brown, bituminous in part, flaky, trace disseminated pyrite, non calcareous.
1940	Shale, dark brown, bituminous, flaky, pyritic in part.
1945	Shale, as above.

1950 Shale, dark brown, bituminous, flaky.

1955 Shale, dark brown-black, bituminous, flaky.

1960 Shale, dark brown-black, bituminous, flaky. Trace Dolomite, brown, argillaceous.

1965 Shale, dark brown-black, bituminous. Trace Limestone, grey, argillaceous, dense.

1969 Dolomite, buff-black, mottled, brecciated, dolomite, fossiliferous, finely crystalline, with black Shale fragments, dense, no shows.

1975 Cement.

1980 Limestone, dark brown-black, micritic, dense.

1985 Limestone, dark brown-black, micritic. Trace Limestone, white, chalky. Limestone, buff, microcrystalline.

1990 Limestone, cream, white, chalky, styolitic, no porosity, no shows.

1995 Limestone, cream, chalky, finely crystalline in part, styolitic in part, no porosity, dense.

2000 Limestone, as above.

2005 Limestone, cream, chalky, finely sucrosic, few incipient fractures with fine-medium dolomite crystals, interspersed with scattered pyrobitumen blebs, no porosity, no shows.

2010 Limestone, cream, chalky, finely sucrosic, stylistic in part, no porosity, no shows.

2015 Limestone, cream, as above. Trace scattered clear Dolomite rhombs.

2020 Limestone, cream, chalky.

2025 Limestone, cream, chalky, finely sucrosic, trace finely crystalline, impermeable, no shows.

2030 Limestone, as above.

2035 Shale, grey-green, dolomitic (5%). Limestone, cream, as above. Trace Limestone, buff, fragmental, dense.

2040 Limestone, cream, chalky, finely sucrosic, impermeable, no shows.

2045 Limestone, cream, chalky, finely sucrosic, with Limestone, buff, fragmental, dense, no shows.

2050 Limestone, buff, finely fragmental, finely crystalline, pyritic, dense, no shows.

2055 Limestone, buff, chalky, finely crystalline in part, dense, no shows.

2060 Limestone, cream, chalky. Limestone, buff, finely crystalline, dense.

2065 Limestone, buff, finely crystalline, dense, with thin interbeds of pyrobitumen. Limestone, cream chalky.

2070 Limestone, cream, chalky with thin interbeds of pyrobitumen. Limestone, cream, finely crystalline, dense.

2075 Shale, black, fissile. Limestone, buff, finely crystalline, dense. Limestone, cream, chalky.

2080 Shale, black, fissile, dolomitic. Limestone, buff, finely crystalline, chalky in part, dense.

2085 Shale, black, brittle. Limestone, brown-dark brown, microcrystalline, dense.

2090 Limestone, brown, dark brown, microcrystalline. Limestone, buff, finely crystalline, dense.

2095 Limestone, brown, dark brown, microcrystalline. Limestone, cream, argillaceous, dense.

2100 Limestone, brown, dark brown, microcrystalline, dense. Limestone, buff, argillaceous, dense.

2105 Limestone, as above.

2110 Limestone, dark brown, microcrystalline, dense. Limestone, buff, finely crystalline, dense. Limestone, cream, argillaceous, dense.

2115 Limestone, dark brown, microcrystalline, dense. Shale, black, brittle, dolomitic.

2120 Limestone, as above. Limestone, buff, argillaceous, finely crystalline in part, dense.

2125 Limestone, brown-dark brown, microcrystalline. Limestone, cream, argillaceous, chalky, dense.

2130 Limestone, brown-dark brown, microcrystalline, dense.

2135 Limestone, brown-dark brown, microcrystalline, dense, increase in Limestone, buff, finely crystalline, dense.

2140 Limestone, buff, microcrystalline, dense.

2145 Limestone, buff, microcrystalline, dense. Limestone, dark brown, micritic.

2150 Limestone, buff, microcrystalline, dense.

2155 Limestone, dark brown, micritic. Limestone, buff, argillaceous, with thin pyrobitumen streaks, dense, no shows.

2160 Limestone, dark brown, micritic. Limestone, buff, argillaceous, as above.

2165 Limestone, buff, finely crystalline, dense. Limestone, buff, argillaceous, dense.

2170 Limestone, dark brown, microcrystalline, dense. Limestone, buff, argillaceous, finely crystalline in part, dense.

2175 Limestone, dark brown, microcrystalline, dense. Limestone, buff, argillaceous, as above.

2180 Limestone, buff, brown, microcrystalline, dense.

2185 Limestone, brown, dark brown, microcrystalline, dense. Trace Dolomite, white, coarsely crystalline, massive, no porosity, no shows.

2190 Limestone, dark brown, microcrystalline, dense. Trace Shale, green, blocky, pyritic, non-calcareous.

2195 Limestone, brown, micritic, dense.

2200 Limestone, brown, buff, micritic, pyritic, dense.

2205 Shale, grey, blocky, pyritic. Limestone, buff, micritic, becoming, cream, argillaceous.

2210 Limestone, buff, finely crystalline, dense. Limestone, cream, chalky.

2215 Dolomite, white, coarsely crystalline-massive, trace finely crystalline, vug lining, porosity probably good, no fluorescence, good gas response.

2220 Limestone, buff, finely crystalline, dense. Limestone, cream, chalky, dense.

2225 Limestone, as above.

2230 Limestone, cream, chalky. Limestone, buff, finely crystalline, as above.

2235 Limestone, cream, chalky. Dolomite, white, coarsely crystalline-massive, no apparent porosity, no shows.

2240 Limestone, buff, finely crystalline, dense. Dolomite, white, coarsely crystalline-massive, no apparent porosity, no shows (25%). Siltstone, grey-green, dolomitic, blocky, hard (5%).

2245 Siltstone, grey-green, dolomitic, hard. Trace Shale, green, waxy, pyritic.

2250-2255 Dolomite, buff, finely crystalline, dense.

2260 Dolomite, buff, finely crystalline, trace crystalline dolomite filled vugs, no porosity, no shows.

2265.3 Shale, black, siliceous. Trace Quartzite, greenish-grey, hard.

CD0304G_098

gyrodata

ANADARKO CANADA CORPORATION
ANADARKO NETLA LAKE A77
FORT LIARD, N.W.T.

CD0304G_098

gyrodata

A Gyrodata Directional Survey

for

ANADARKO CANADA CORPORATION

Surface Location: **AKITA #37, FORT LIARD, N.W.T.**
Well Name: **ANADARKO NETLA LAKE A77,**

Job Number: **CD0304G_098**

Run Date: **12/03/2004 3:20:51 PM**

Surveyor: **DAVE DEVLIN**

Calculation Method: **MINIMUM CURVATURE**

Survey Latitude: **60.769300 °N** Longitude: **122.726100 °W**

Azimuth Correction: **NONE**

Gyro: Bearings are Relative to True North

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

CD0304G_098

gyrodata

A Gyrodata Directional Survey

ANADARKO CANADA CORPORATION

Job Name: ANADARKO NETLA LAKE A77

Surface Location: AKITA #37, FORT LIARD, N.W.T.

Job Number: CD0304G_098

MEASURED DEPTH meters	INCL deg	AZIMUTH deg	VERTICAL DEPTH meters	HORIZONTAL COORDINATES meters		CLOSURE DIST. AZIMUTH meters deg.		DOGLEG SEVERITY deg/30m
0.00	0.00	0.00	0.00	0.00	N	0.00	E	0.0
ALL MEASURED DEPTHS ARE REFERENCED TO AN R.K.B. OF 4.08 M								
70.00	0.42	171.41	70.00	0.25	S	0.04	E	0.3 171.4
100.00	0.60	208.54	100.00	0.50	S	0.02	W	0.5 182.3
130.00	0.42	200.27	130.00	0.74	S	0.13	W	0.8 190.1
160.00	0.63	232.81	160.00	0.94	S	0.30	W	1.0 197.7
190.00	0.46	250.09	189.99	1.09	S	0.55	W	1.2 206.7
220.00	0.38	244.43	219.99	1.17	S	0.75	W	1.4 212.7
250.00	0.48	258.73	249.99	1.24	S	0.96	W	1.6 217.9
280.00	0.43	236.59	279.99	1.32	S	1.18	W	1.8 221.7
310.00	0.72	229.91	309.99	1.51	S	1.42	W	2.1 223.3
340.00	0.54	241.23	339.99	1.70	S	1.69	W	2.4 224.9
370.00	0.69	257.40	369.99	1.81	S	1.99	W	2.7 227.8
400.00	0.96	244.76	399.98	1.95	S	2.39	W	3.1 230.8
430.00	0.71	249.33	429.98	2.12	S	2.79	W	3.5 232.7
460.00	0.72	250.58	459.98	2.25	S	3.14	W	3.9 234.4
490.00	1.02	250.36	489.97	2.41	S	3.58	W	4.3 236.1
520.00	0.92	259.90	519.97	2.54	S	4.06	W	4.8 238.0
550.00	0.94	262.33	549.97	2.61	S	4.54	W	5.2 240.1
580.00	0.76	252.43	579.96	2.71	S	4.97	W	5.7 241.5
610.00	0.93	266.87	609.96	2.78	S	5.41	W	6.1 242.8
640.00	1.06	263.07	639.96	2.83	S	5.93	W	6.6 244.5
670.00	0.86	261.92	669.95	2.89	S	6.43	W	7.0 245.8
700.00	0.78	271.53	699.95	2.92	S	6.86	W	7.5 247.0
730.00	0.56	293.00	729.95	2.85	S	7.20	W	7.7 248.4
760.00	0.58	300.06	759.94	2.72	S	7.46	W	7.9 250.0
790.00	0.79	298.56	789.94	2.55	S	7.78	W	8.2 251.9
820.00	0.86	311.46	819.94	2.30	S	8.13	W	8.4 254.2
850.00	0.77	312.19	849.94	2.01	S	8.45	W	8.7 256.6
880.00	0.81	316.83	879.93	1.72	S	8.74	W	8.9 258.8
910.00	0.96	318.50	909.93	1.38	S	9.05	W	9.2 251.3
940.00	1.10	323.06	939.92	0.96	S	9.39	W	9.4 264.1
970.00	1.19	328.01	969.92	0.47	S	9.73	W	9.7 267.2
1000.00	1.38	322.01	999.91	0.08	N	10.12	W	10.1 270.4
1030.00	1.24	329.13	1029.90	0.64	N	10.51	W	10.5 273.5
1060.00	1.33	333.38	1059.90	1.23	N	10.83	W	10.9 276.5
1090.00	1.77	337.59	1089.88	1.97	N	11.16	W	11.3 280.0
1120.00	1.96	333.41	1119.87	2.86	N	11.57	W	11.9 283.9

CD0304G_098

gyrodata

A Gyrodata Directional Survey

ANADARKO CANADA CORPORATION

Job Name: ANADARKO NETLA LAKE A77

Surface Location: AKITA #37, FORT LIARD, N.W.T.

Job Number: CD0304G_098

MEASURED DEPTH meters	INCL deg	AZIMUTH deg	VERTICAL DEPTH meters	HORIZONTAL COORDINATES meters	CLOSURE DIST. meters	AZIMUTH deg.	DOGLEG SEVERITY deg/30m	
1150.00	2.00	331.82	1149.85	3.78 N	12.04 W	12.6	287.4	0.07
1180.00	1.78	328.66	1179.83	4.64 N	12.54 W	13.4	290.3	0.24
1210.00	1.58	325.20	1209.82	5.38 N	13.01 W	14.1	292.5	0.23
1240.00	1.58	323.13	1239.81	6.05 N	13.50 W	14.8	294.1	0.06
1270.00	1.51	321.01	1269.80	6.69 N	13.99 W	15.5	295.5	0.09
1300.00	1.35	317.22	1299.79	7.25 N	14.48 W	16.2	296.6	0.19
1330.00	1.36	311.96	1329.78	7.75 N	14.99 W	16.9	297.3	0.12
1360.00	1.39	304.63	1359.77	8.20 N	15.55 W	17.6	297.8	0.18
1390.00	1.56	296.37	1389.76	8.59 N	16.22 W	18.3	297.9	0.27
1420.00	0.68	263.57	1419.76	8.75 N	16.76 W	18.9	297.6	1.05
1450.00	0.68	204.11	1449.76	8.56 N	17.01 W	19.0	296.7	0.68
1480.00	1.02	168.41	1479.75	8.14 N	17.03 W	18.9	295.5	0.61
1510.00	1.67	161.07	1509.74	7.46 N	16.84 W	18.4	293.9	0.67
1540.00	2.37	156.61	1539.73	6.48 N	16.45 W	17.7	291.5	0.71
1570.00	1.09	154.54	1569.71	5.65 N	16.08 W	17.0	289.4	1.28
1600.00	0.11	338.85	1599.71	5.42 N	15.97 W	16.9	288.8	1.20
1630.00	0.95	297.08	1629.71	5.56 N	16.20 W	17.1	289.0	0.87
1660.00	1.17	297.73	1659.70	5.82 N	16.69 W	17.7	289.2	0.23
1690.00	0.72	270.28	1689.70	5.96 N	17.15 W	18.2	289.2	0.63
1720.00	0.65	169.17	1719.70	5.80 N	17.31 W	18.3	288.5	1.06
1750.00	0.92	70.26	1749.70	5.71 N	17.05 W	18.0	288.5	1.21
1780.00	1.06	173.37	1779.69	5.52 N	16.79 W	17.7	288.2	1.55
1810.00	0.59	315.95	1809.69	5.35 N	16.86 W	17.7	287.6	1.57
1840.00	0.90	215.08	1839.69	5.27 N	17.11 W	17.9	287.1	1.17
1870.00	1.09	302.09	1869.69	5.23 N	17.48 W	18.2	286.7	1.38
1900.00	0.86	185.19	1899.68	5.16 N	17.75 W	18.5	286.2	1.66
1930.00	0.40	173.84	1929.68	4.83 N	17.75 W	18.4	285.2	0.47
1960.00	0.77	332.76	1959.68	4.91 N	17.84 W	18.5	285.4	1.15

Final Station Closure: Distance: 18.50 m Az: 285.39 °

COMPANY NAME: Sperry-Sun Drilling Services
 CUSTOMER NAME: ANADARKO CANADA CORPORATION
 WELL: ANADARKO EMILE LAKE A-77

FIELD: NETLA

LOCATION: 60:46:09.6N 122:43:33.9W

JOB NUMBER: CX-MW-2874459

REFERENCE NORTH: TRUE

DISTANCE UNITS: METRES

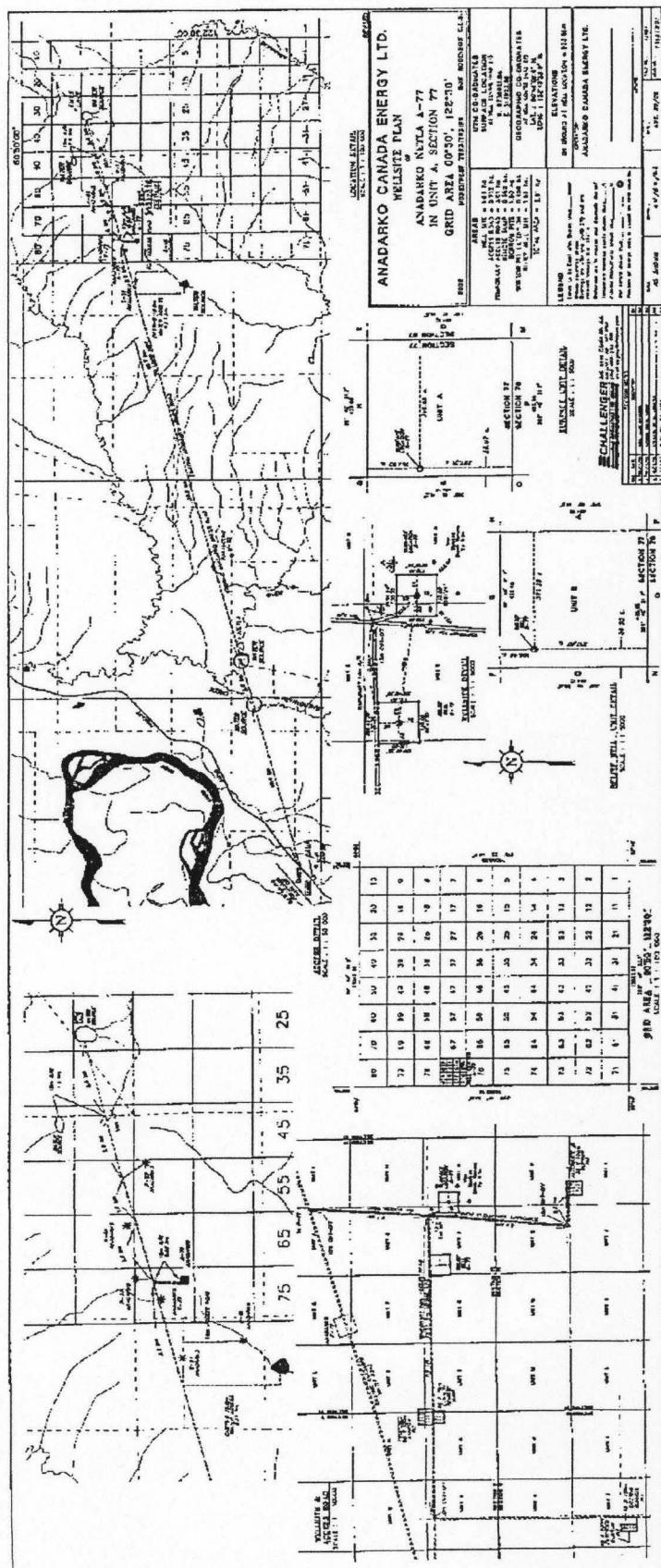
DATE PROCESSED: 16-MAR-2004, 15:41:46 VERTICAL SECTION ALONG 285.4 DEGREES
 CORRECTION APPLIED IS 24.6 DEG (DEC: 24.6)

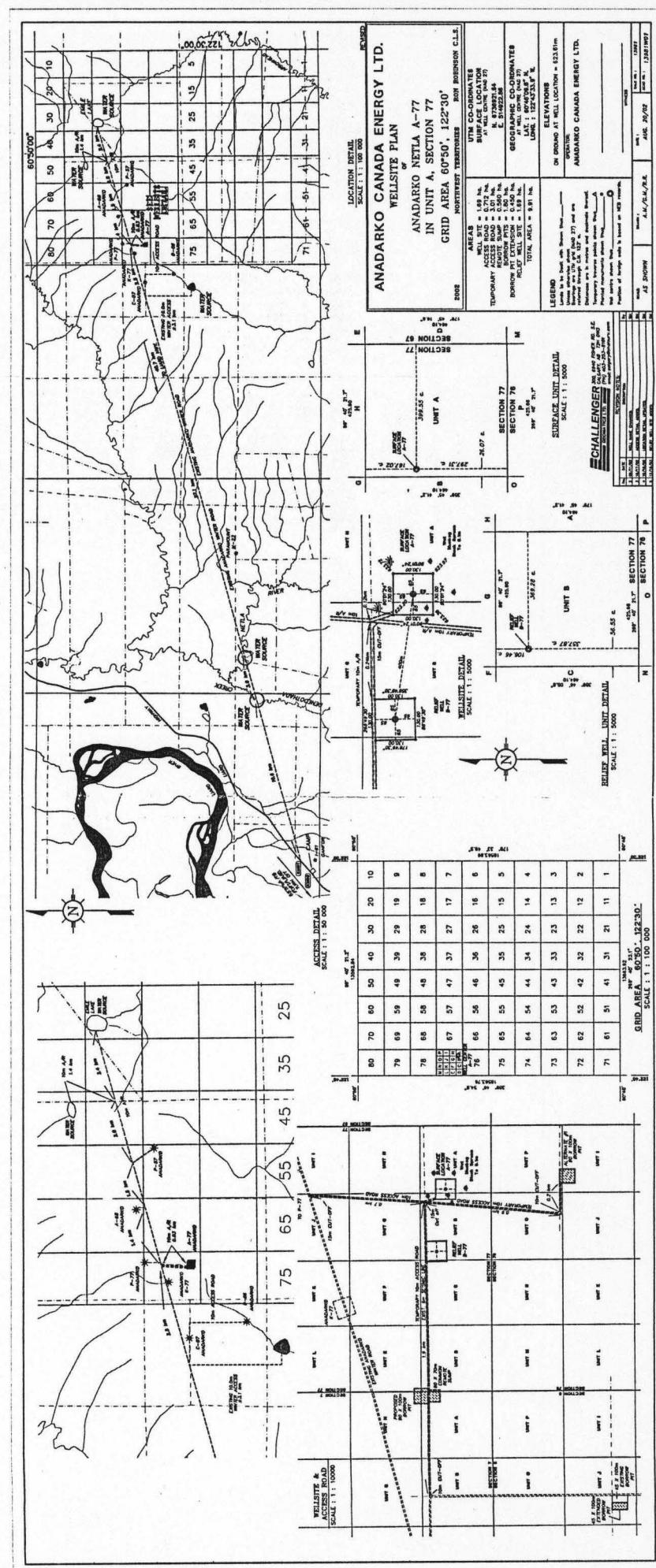
MEASURED DEPTH	INC	AZIMUTH	TRUE	NORTH	EAST	VERTICAL	SEVERITY /30m	DOGLEG
			VERTICAL DEPTH			SECTION		
* 0.00	0.00	0.00	0.00	0.00	0.00
70.00	0.42	171.41	70.00	-0.25	0.04	-0.10	0.18	
100.00	0.60	208.54	100.00	-0.50	-0.02	-0.11	0.37	
130.00	0.42	200.27	130.00	-0.74	-0.13	-0.07	0.19	
160.00	0.63	232.81	159.99	-0.94	-0.30	0.04	0.36	
190.00	0.46	250.09	189.99	-1.09	-0.55	0.24	0.23	
220.00	0.38	244.43	219.99	-1.17	-0.75	0.41	0.09	
250.00	0.48	258.73	249.99	-1.24	-0.96	0.60	0.15	
280.00	0.43	236.59	279.99	-1.32	-1.18	0.79	0.18	
310.00	0.72	229.91	309.99	-1.51	-1.42	0.97	0.30	
340.00	0.54	241.23	339.99	-1.70	-1.69	1.18	0.22	
370.00	0.69	257.40	369.99	-1.80	-1.99	1.44	0.23	
400.00	0.96	244.76	399.98	-1.95	-2.39	1.79	0.32	
430.00	0.71	249.33	429.98	-2.12	-2.79	2.13	0.26	
460.00	0.72	250.58	459.98	-2.25	-3.14	2.43	0.02	
490.00	1.02	250.36	489.97	-2.40	-3.57	2.81	0.30	
520.00	0.92	259.90	519.97	-2.54	-4.06	3.24	0.19	
550.00	0.94	262.33	549.97	-2.61	-4.54	3.69	0.04	
580.00	0.76	252.43	579.96	-2.70	-4.98	4.08	0.23	
610.00	0.93	266.87	609.96	-2.78	-5.41	4.48	0.27	
640.00	1.06	263.07	639.95	-2.82	-5.93	4.96	0.15	
670.00	0.86	261.92	669.95	-2.89	-6.43	5.43	0.20	
700.00	0.78	271.53	699.95	-2.91	-6.85	5.83	0.16	
730.00	0.55	293.00	729.95	-2.85	-7.19	6.18	0.33	
760.00	0.58	300.06	759.94	-2.72	-7.46	6.47	0.07	
790.00	0.79	298.56	789.94	-2.54	-7.77	6.82	0.21	
820.00	0.86	311.46	819.94	-2.30	-8.12	7.22	0.20	
850.00	0.77	312.19	849.94	-2.01	-8.44	7.60	0.09	
880.00	0.81	316.83	879.93	-1.72	-8.73	7.96	0.08	
910.00	0.96	318.50	909.93	-1.38	-9.05	8.36	0.15	
940.00	1.10	323.06	939.92	-0.96	-9.39	8.79	0.16	
970.00	1.19	328.01	969.92	-0.47	-9.72	9.25	0.13	
1000.00	1.38	322.01	999.91	0.08	-10.11	9.77	0.23	
1030.00	1.24	329.13	1029.90	0.65	-10.50	10.29	0.21	
1060.00	1.33	333.38	1059.90	1.24	-10.82	10.76	0.13	
1090.00	1.77	337.59	1089.88	1.98	-11.16	11.28	0.45	
1120.00	1.96	333.41	1119.87	2.86	-11.56	11.91	0.23	
1150.00	2.00	331.82	1149.85	3.78	-12.04	12.61	0.07	
1180.00	1.78	328.66	1179.83	4.64	-12.53	13.31	0.24	
1210.00	1.58	325.20	1209.82	5.38	-13.01	13.97	0.22	
1240.00	1.58	323.13	1239.81	6.05	-13.49	14.61	0.06	

1330.00	1.36	311.96	1329.78	7.75	-14.98	16.50	0.12	
1360.00	1.39	304.63	1359.77	8.20	-15.54	17.16	0.18	
1390.00	1.56	296.37	1389.76	8.59	-16.21	17.91	0.27	
1420.00	0.68	263.57	1419.76	8.75	-16.75	18.47	1.05	
1450.00	0.68	204.11	1449.75	8.56	-17.00	18.67	0.67	
1480.00	1.02	168.41	1479.75	8.14	-17.02	18.57	0.61	
1510.00	1.67	161.07	1509.74	7.47	-16.83	18.20	0.67	
1540.00	2.37	156.61	1539.72	6.48	-16.44	17.57	0.72	
1570.00	1.09	154.54	1569.71	5.66	-16.07	16.99	1.28	
1600.00	0.11	338.85	1599.71	5.43	-15.96	16.82	1.20	
1630.00	0.95	297.08	1629.71	5.57	-16.19	17.09	0.87	
1660.00	1.17	297.73	1659.70	5.82	-16.68	17.63	0.22	
1690.00	0.72	270.28	1689.70	5.96	-17.14	18.11	0.63	
1720.00	0.65	169.17	1719.70	5.80	-17.30	18.22	1.06	
1750.00	0.92	70.26	1749.69	5.71	-17.04	17.94	1.21	
1780.00	1.06	173.37	1779.69	5.52	-16.78	17.64	1.55	
1810.00	0.59	315.95	1809.69	5.35	-16.86	17.67	1.57	
1840.00	0.90	215.08	1839.69	5.27	-17.10	17.88	1.17	
1870.00	1.09	302.09	1869.69	5.23	-17.48	18.24	1.38	
1900.00	0.86	185.19	1899.68	5.16	-17.74	18.47	1.67	
1930.00	0.40	173.84	1929.68	4.83	-17.75	18.39	0.47	
1960.00	0.77	332.76	1959.68	4.90	-17.83	18.49	1.15	
1990.75	1.40	268.10	1990.43	5.08	-18.30	18.99	1.25	
2019.27	2.90	244.10	2018.93	4.75	-19.29	19.86	1.81	
2047.55	3.90	229.70	2047.16	3.81	-20.67	20.94	1.39	
2076.45	6.40	214.40	2075.94	1.85	-22.33	22.02	2.94	
2105.35	8.60	205.60	2104.59	-1.43	-24.18	22.93	2.57	
2134.48	10.60	201.70	2133.31	-5.88	-26.11	23.61	2.16	
2163.38	12.20	198.70	2161.64	-11.25	-28.07	24.08	1.77	
2192.30	13.00	196.10	2189.86	-17.27	-29.95	24.29	1.02	
2220.57	13.30	193.60	2217.39	-23.48	-31.60	24.23	0.68	
2250.30	14.20	194.60	2246.27	-30.33	-33.32	24.07	0.94	
*	2265.30	14.20	194.60	2260.81	-33.89	-34.25	24.02	0.00

Based on Minimum Curvature Calculations, the Bottom Hole Displacement is
48.19 Metres along an Azimuth of 225.30 degrees

*Last Survey is an Extrapolation to the Bit





LITHOLOGY STRIP LOG

WellSight Systems

Scale 1:240 (5"=100') Metric

Well Name: ANADARKO EMILE LK . A - 77

Location: Unit A , Section 77 , Grid Area 60° 50' , 122° 30'

Region: Ft. Liard , NWT

Licence Number:

Spud Date: 2 -03 -2004

Drilling Completed: 16 -03 -2004

Surface Coordinates: 60° 46' 09.6" N. Lat. : 122° 43' 33.9" W. Long

Bottom Hole Coordinates: Vertical

Ground Elevation (m): 624.7m K.B. Elevation (m): 630.8

Logged Interval (m): 648m To: 2265.3m Total Depth (m): 2265.3m

Formation: Kotcho / Pre Devonian

Type of Drilling Fluid: Intermediate Hole : Invert / Main Hole : Polymer

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: ANADARKO CANADA CORPORATION

Address:

GEOLOGIST

Name: Harold Cowan

Company: Merlin Petroleum Services

Address:

Cores

None

DSTs

None

Comments

ROCK TYPES

Anhy
Bent
Brec
Cht

Clyst
Coal
Congl
Dol

Gyp
Igne
Lmst
Meta

Mrst
Salt
Shale
Shcol

Shgy
Slst
Ss
Till

MINERAL

Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chtlt
Dol
Feldspar
Ferrpel
Ferr
Glau

Gyp

Hvymn
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff

FOSSIL

Algae
Amph
Belm
Bioclst
Brach
Bryozoa
Cephal
Coral
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite

Ostra

Pelec
Pellet
Pisolite
Plant
Strom

TEXTURE

Boundst
Chalky
Cryxl
Earthy
Finexln
Grainst
Lithogr
Microxln
Mudst
Packst
Wackest

Vuggy

Well
Moderate
Poor

ROUNDING

Rounded
Subrnd
Subang
Angular

Spotted

Ques
Dead

EVENT

Rft
Sidewall

SORTING

Well
Moderate
Poor

Subang

Angular

Core

Dst

Angular

Angular

Even

Even

OIL SHOW

Even

Curve Track 1

ROP (min/m)
Gas (units)

Depth

Depth

Porosity

Porosity

Lithology

Lithology

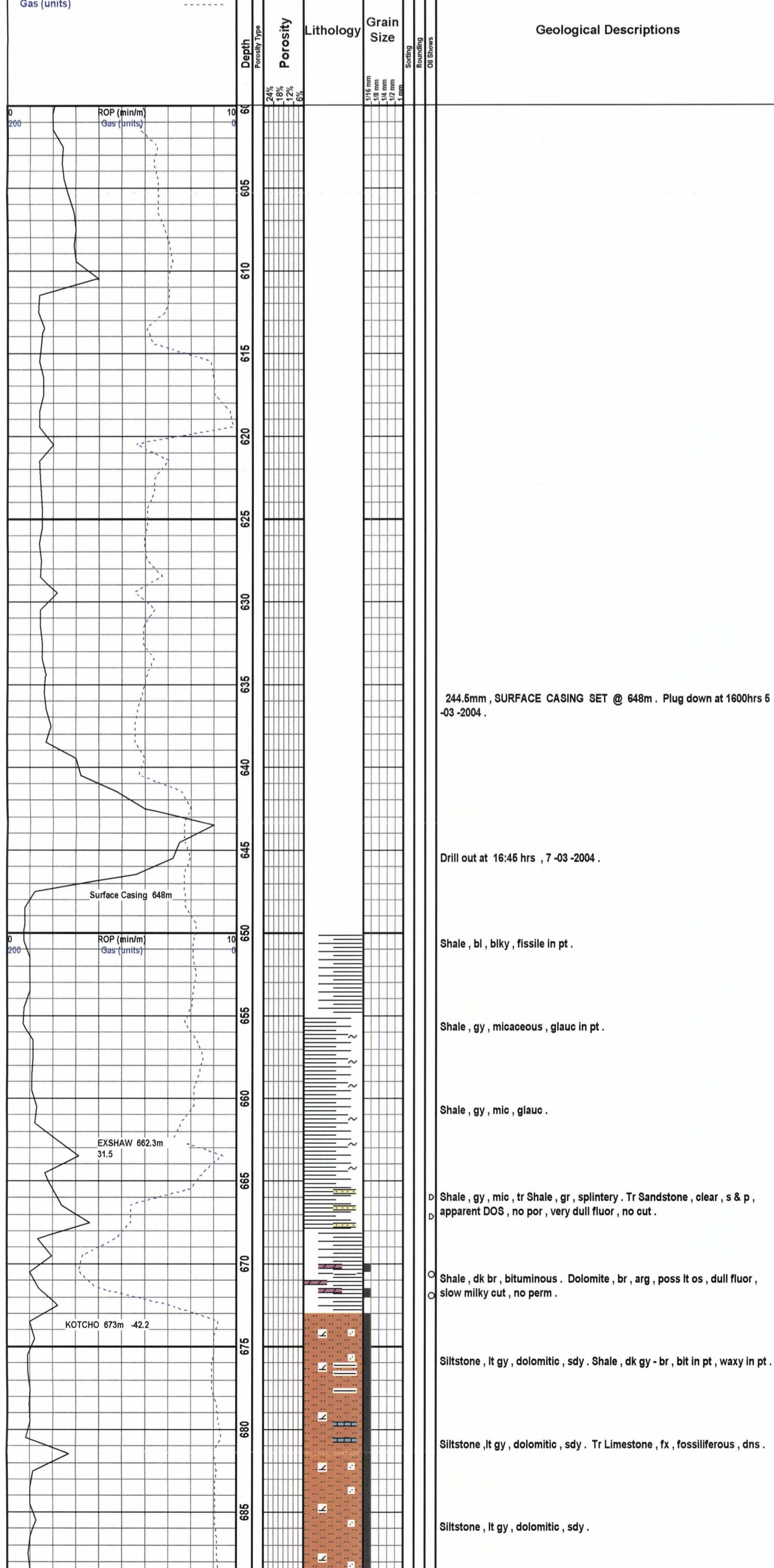
Grain Size

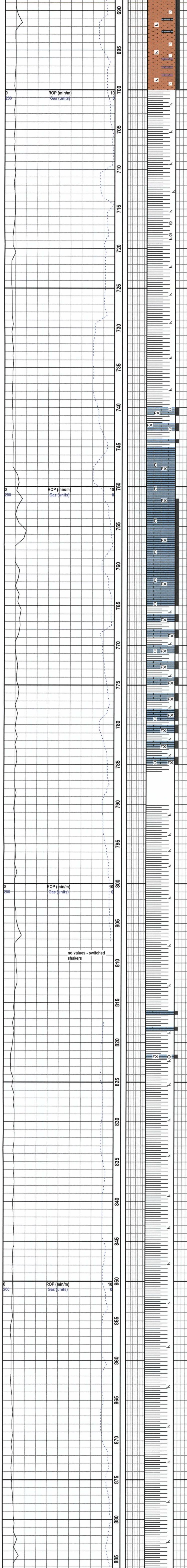
Grain Size

Stringer

Stringer

Geological Descriptions





Siltstone, gy - lt gy, dolomitic, sdy. Tr Limestone, br, fx, foss, chky in pt, dns.

11. *Leucosia* (Leucosia) *leucostoma* (Fabricius) (Fig. 11)

114 of 114

THE INFLUENCE OF CULTURE ON PARENTING

Shale, gn gy, dolomitic, blk

1000

Journal of Management Education 35(10)

114 of 114

Shale , gn gy , dolomitic , micromic .

1

Shale, gn gy, dol, blky.

1000 JOURNAL OF CLIMATE

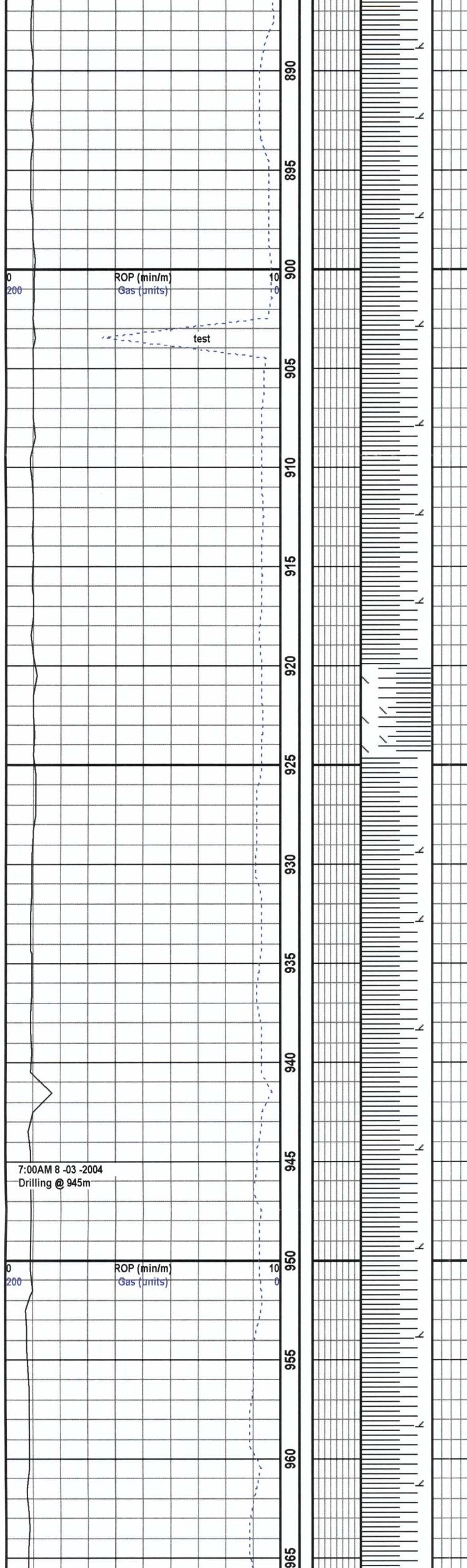
Shale, gneiss, dolomitic, blky.

1

1

1

1



Shale, gn gy, dol, blky.

Shale, gn gy, dol, blky.

Shale, dk br, bituminous. Shale, md gy, micaceous.

Shale, gn gy, mic, splintery, dol.

Shale, gn gy, mic, splintery, dolomitic.

Shale, a/a.

Shale, gn gy, mic, splintery, dol.

no spl.

Shale, gn gy, a/a.

Shale, md gy, blky, dolomitic. Tr Siltstone, br, dolomitic.

Limestone, cr, chky.

Limestone, cr, silty.

Shale, md gy, micaceous, dol. Limestone, a/a (25%).

Limestone, bf, mx, dns.

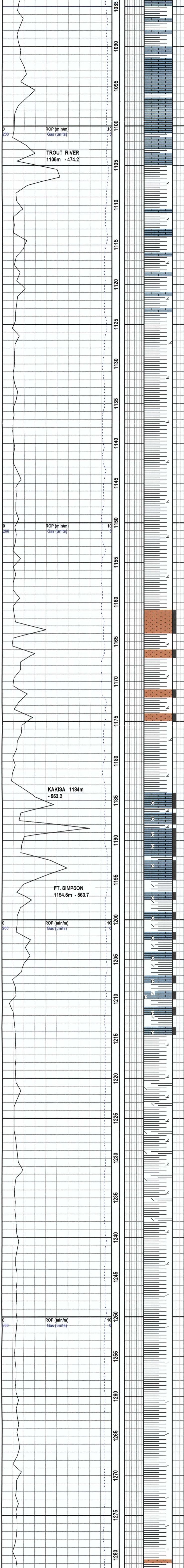
Limestone, a/a.

Limestone, bf, mx, dns.

Limestone, bf, mx, dns. Ls, cr, chky, dns.

Limestone, bf, chky, dns.

Limestone, bf, mx, dns.



Shale, gneiss, micromic. Limestone, bf, chky, dns

THE PRACTICE OF THE PRACTICIAN

THEORY OF THE STATE

Shale, md gy, micromic, blky. Limestone, c.

11

Shale, av.-md. av. micromic. Siltstone, av. sandy.

114 of 114

Shale , a / a .

114 of 114

Siltstone

1

Shale, br, bit, fissile. Limestone, gy, arg, sand

10

THE INFLUENCE OF CULTURE ON PARENTING

Shale, gneiss, dolomitic, splinter

1100 J. Neurosci., November 1, 2006 • 26(44):1092–1100

Shale, a / a.

Shale, gray, splintery, dolomitic

1

Shale, a / a .

114 of 114

Shale , md gy , micromic , blk , silty in pt .

Shale , a / a .

Shale , a / a .

Shale , md gy , micromic , splintery .

Shale , md gy , micromic , splintery . Siltstone , gy , sandy .

Shale , gn gy - md gy , micromic , flaky .

Shale , a / a . Siltstone , gy , sandy (10%) .

Shale , a / a . Inc in Siltstone , gy , sdy .

Shale , gn gy - md gy , micromic , flaky .

Shale , a / a .

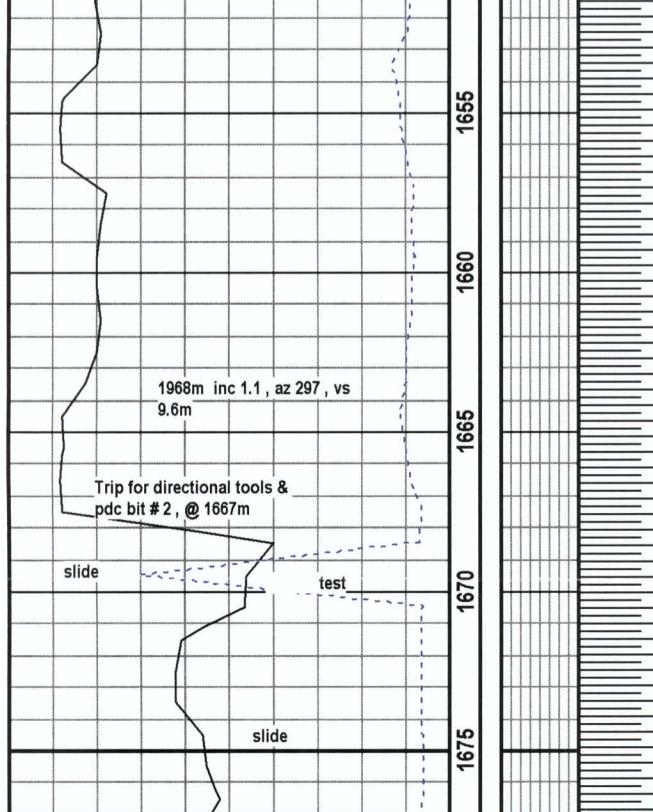
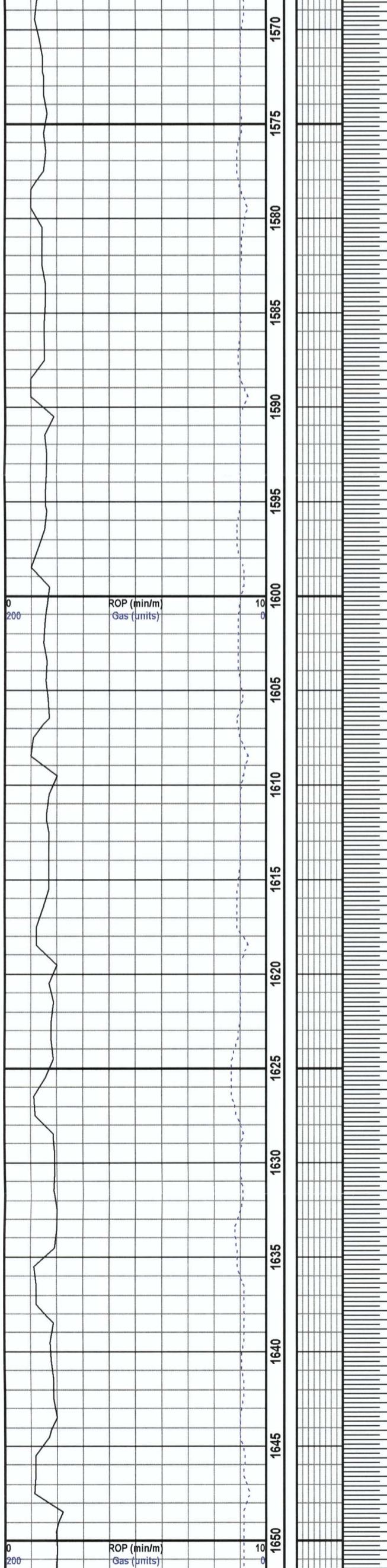
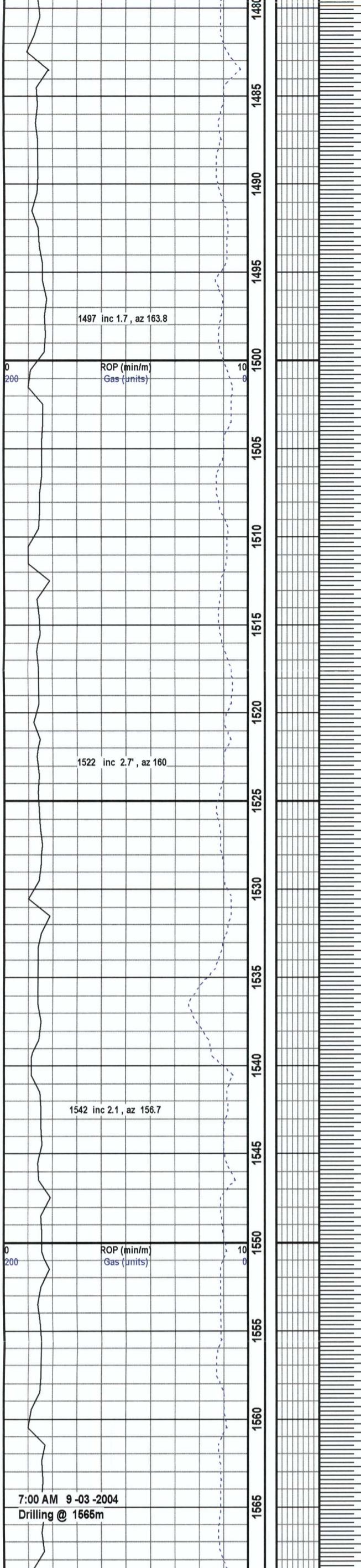
Shale , a / a .

Shale , md gy , micromic , silty in pt , blk .

Shale , a / a .

Shale , gy - md gy , micromic , blk , splintery in pt .

Shale , a / a .



Shale , md gy , micromic , non calc , blky .

Shale , a / a .

Shale , md gy , micromic , splintery .

Shale , a / a .

Shale , gn gy , micromic , splintery .

Shale , a / a .

Shale , md gy , micromic , blky .

Shale , md gy , micromic , splintery , blky in pt .

Shale , md gy , micromic , blky .

Shale , md gy , non calc , micromic , blky .

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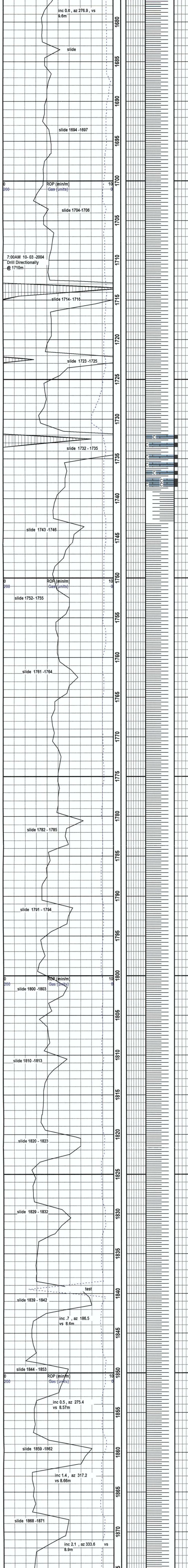
Shale , md gy , micromic , blky .

Shale , md gy , micromic , blky .

Shale , md gy , micromic , blky .

Shale , md gy , micromic , blky .

Shale , md gy , micromic , blky .



11. *Leptodora* (Leptodora) *hirsutum* (L.) Schlecht. (Fig. 11)

1

Shale, md gy, blky.

Shale , md gy

Shale , md gy , fis

Shale, gy, blky.

11. *Leucosia* (Leucosia) *leucostoma* (Fabricius) (Fig. 11)

1

Shale , md gy , blky .

1

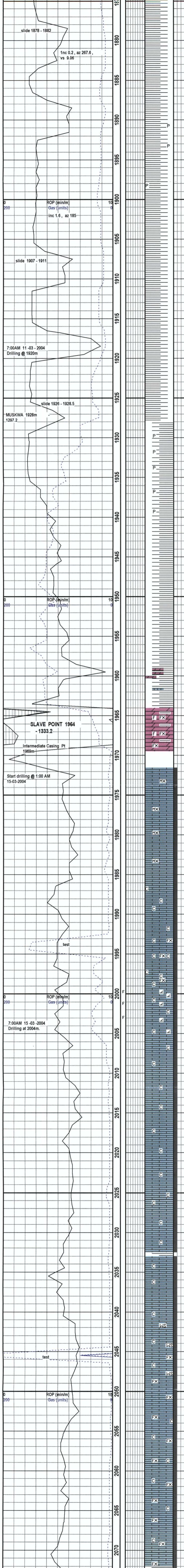
Shale , md gy , bl

Shale , md gy , bl

1

1

Shale, mud gy, br



Shale, md-dk gy, blk.

SOS

Shale, dk gy, flaky, blk, tr disseminated pyrite.

Shale, md-dk gy, blk, flaky, non calc.

Shale, a/a.

Shale, a/a.

Shale, md-dk gy, blk, flaky, non calc.

Shale, a/a. Tr Shale, dk br, blk.

Shale, bl, dk br, bit in pt, flaky. Tr disseminated pyrite, non calc.

Shale, dk br, bituminous, flaky, pyritic.

Shale, dk br, bit, flaky.

Shale, dk br-bl, bit, flaky.

Shale, dk br-bl, bit, blk. Tr Dolomite, br, arg.

Shale, dk br-bl, bit. Tr Limestone, gy, arg, dns.

Dolomite, bf-bl, mottled, brecciated, dolomitic, fossiliferous, fx, w/ black shale fragments, dns. No shows.

Cement

Limestone, dk br, bl, micritic, dns.

Limestone, dk br, tr bf, micritic. Limestone, cr, chalky.

Limestone, cr, wh, chalky, stylitic, no porosity, no shows.

Limestone, cr, chalky, fx in pt, stylitic in pt. dns, no shows.

Limestone, a/a.

Limestone, cr, chalky, finely sucrosic, few incipient fractures w/ md dolomite xls interspersed w/ scattered pyrobitumen blebs. No permeability, no shows.

Limestone, cr, chalky, finely sucrosic, stylitic in pt, no permeability, no shows.

Limestone, cr, a/a, Tr scattered clear Dolomite rhombs

Limestone, cr, chalky.

Limestone, cr, chalky, finely sucrosic, tr fx, impermeable, no shows.

Limestone, a/a.

Limestone, gy, an, dolomitic (5%). Limestone, cr, a/a. Tr Limestone, bf, fragmental, dns.

Limestone, cr, chalky, finely sucrosic, impermeable, no shows.

Limestone, cr, chalky, f suc, becoming bf, frag, dns, no shows.

Limestone, bf, frag-fx, pyritic, dns, no shows.

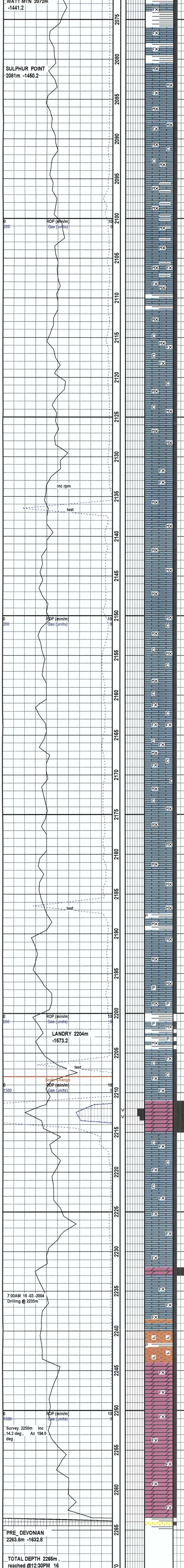
Limestone, bf, chalky, fx in pt, dns. No shows.

Limestone, cr, chalky. Limestone, bf, fx, dns.

Limestone, bf, fx, dns, w/ thin interbeds of pyrobitumen. Limestone, cr, chalky.

Limestone, cr, chalky, w/ thin interbeds of pyrobit. Limestone, cr, fx, dns.

Shale, bl, fissile. Limestone, bf, fx, dns. Limestone, cr, chalky.



—td—