

part of Baker Hughes. Unless other contract terms have been agreed to by the parties, each party's liabilities and

Log Run Summary

Run No	Bit Run No.	Bit Size (in)	Bit Type	Bit Gauge Length (in)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ.
						Top	Bottom	From	To	Start Logging	End Logging	Hours
						(ft)	(ft)	(ft)	(ft)			
1	1	8.500	PDC	0.61	AutoTrak Curve	1877.84	11873.83	1890.00	11880.37	2016-03-28 18:52	2016-03-30 16:10	40.18

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Austin Small	2016-03-27	2016-03-31	David Browning	2016-03-27	2016-03-31	Hans Carey	2016-03-27	2016-03-31
Will Drake	2016-03-27	2016-03-31						

Mud Properties Record

Date / Time	Run No.	Measured Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2016-03-27 09:39	1	1890.00	Oil Based Mud	9.0	26	N/A	0.0	0/99.6	Active Pit	350	0.00
2016-03-28 14:45	1	1890.00	Oil Based Mud	10.2	70	N/A	0.0	72/28	Active Pit	44000	0.00
2016-03-29 16:00	1	7257.32	Oil Based Mud	9.9	47	N/A	0.0	72/28	Active Pit	44000	0.00
2016-03-30 13:45	1	11470.27	Oil Based Mud	10.1	46	N/A	0.0	74/26	Active Pit	48000	0.00

Equipment and Service Data

Run No.	Tool	Serial Number	Measurement	Sensor Offset (ft)	Bit Offset (ft)	Max O.D. (in)	Min I.D. (in)
1	ATC_SU	12161973	Near Bit VSS	5.93	6.54	7.000	4.330
1	ATC_SU	12161973	Near Bit Inclination	5.93	6.54	7.000	4.330
1	ATC_MWD	12023678	Gamma (single)	2.17	12.16	7.000	3.250
1	ATC_MWD	12023678	Directional (mag)	12.24	22.23	7.000	3.250

Service and Tool Mnemonics

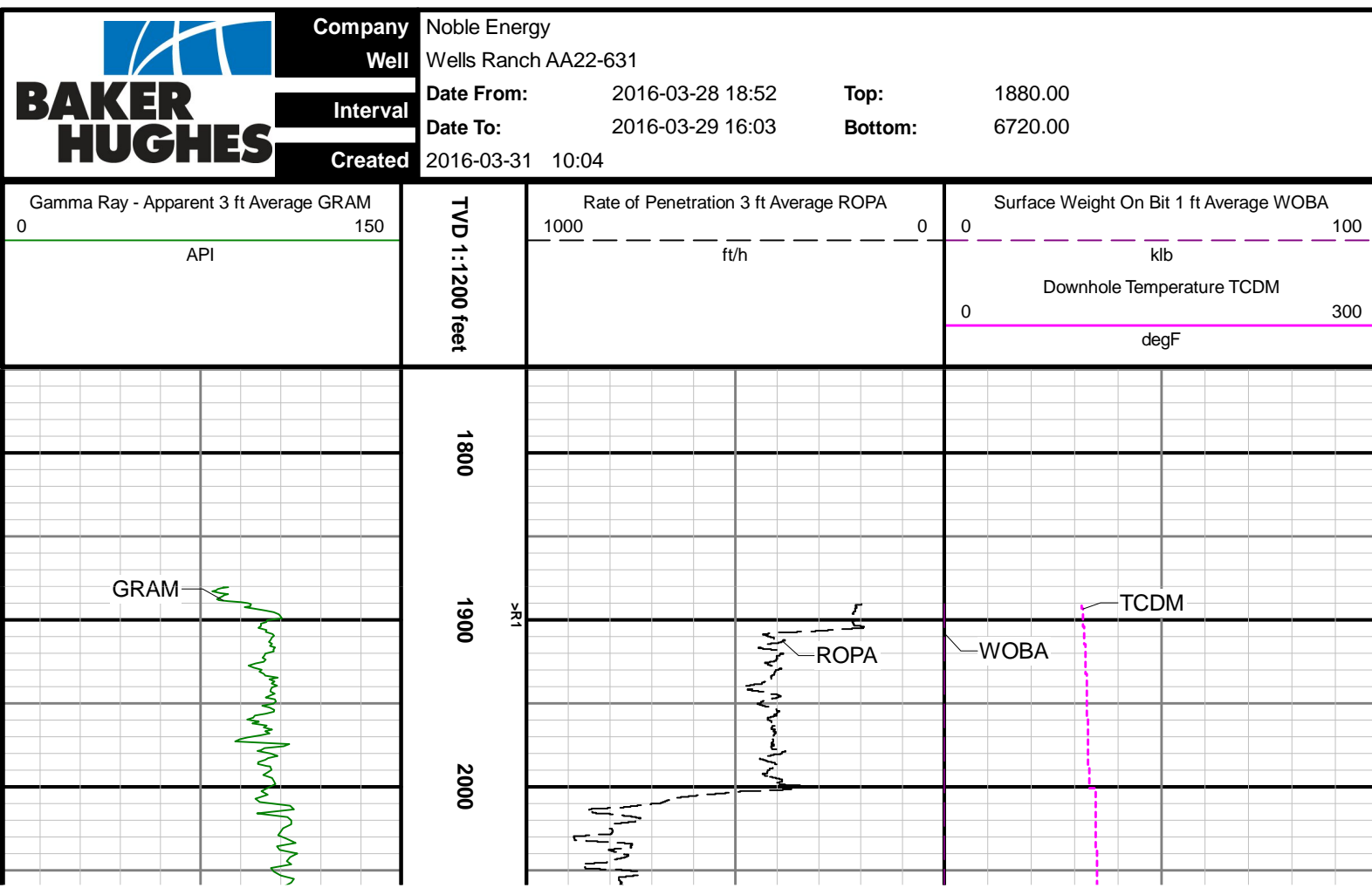
Mnemonic	Name	Description
ATC_SU	ATC_SU	Auto Trak Curve Steering Unit
ATC_MWD	ATC_MWD	Auto Trak Curve MWD
ATC_LCPM	ATC_LCPM	Auto Trak Curve LCPM

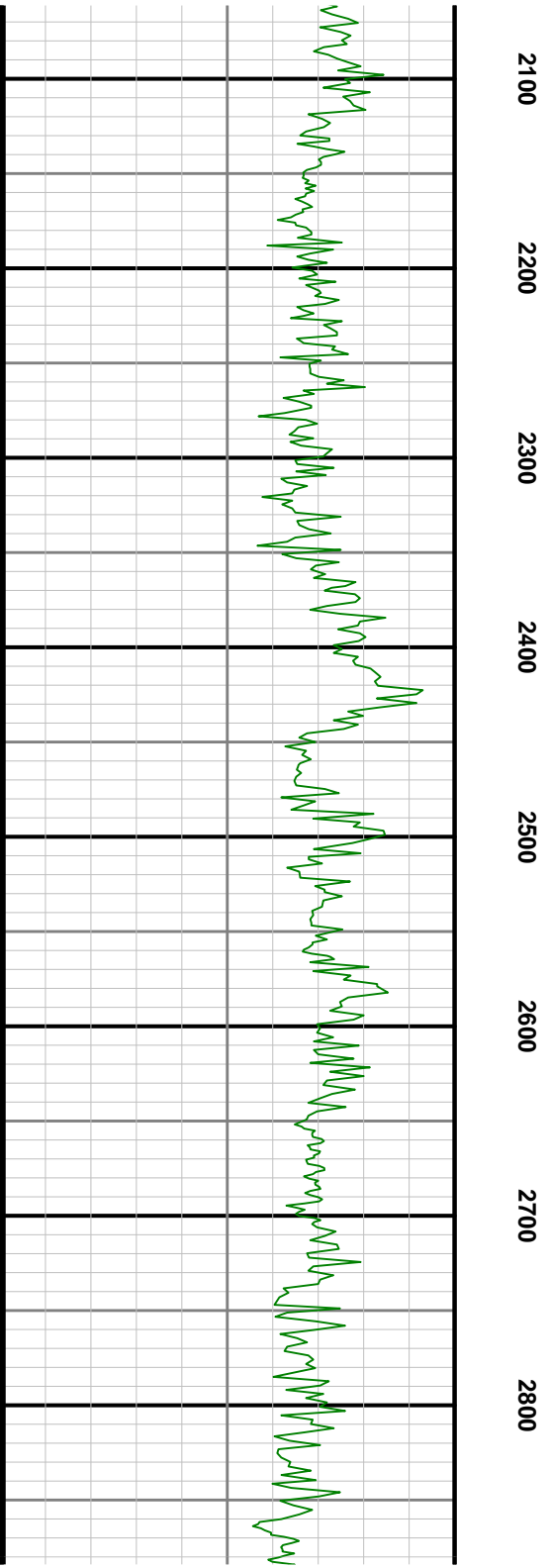
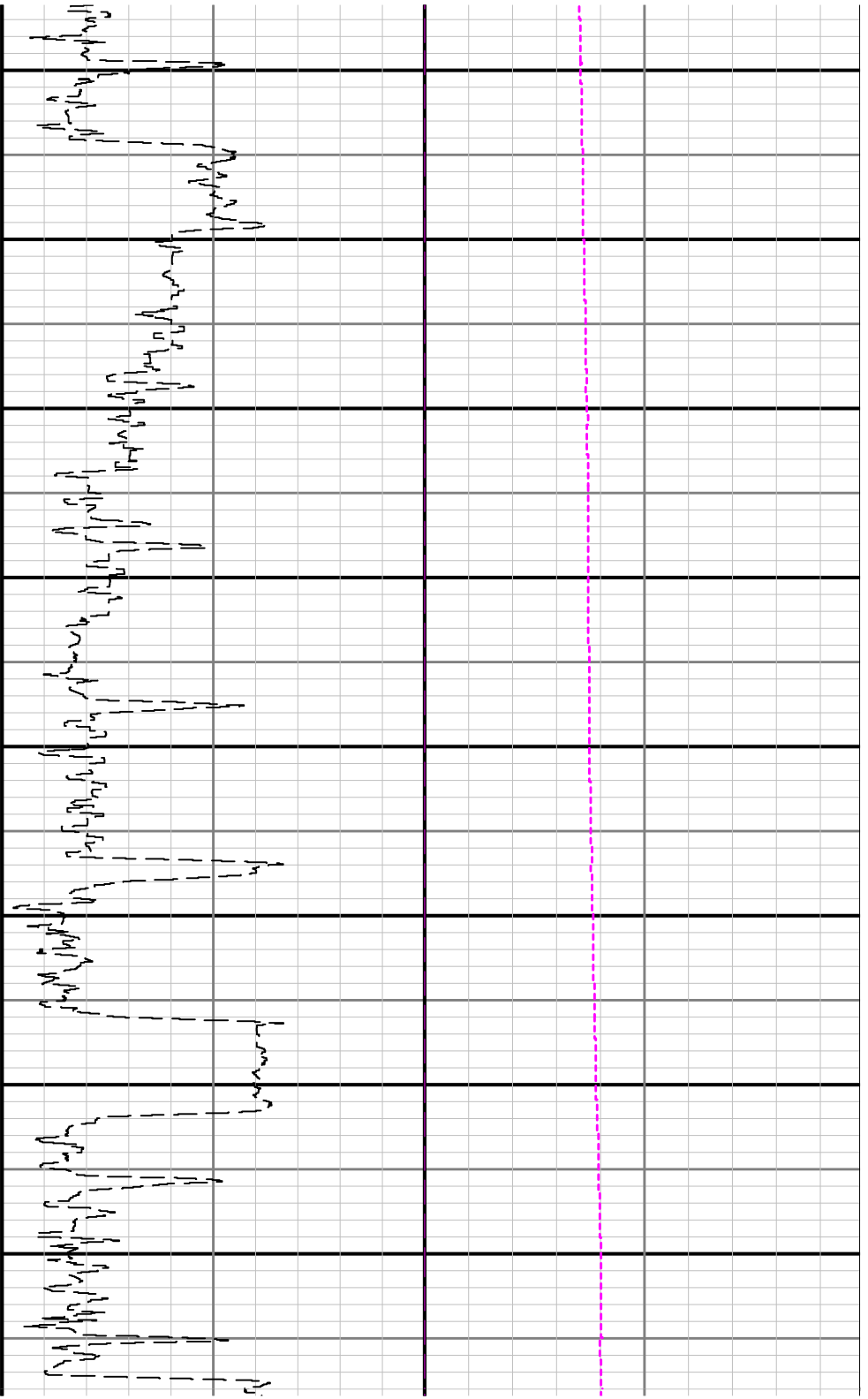
Comments

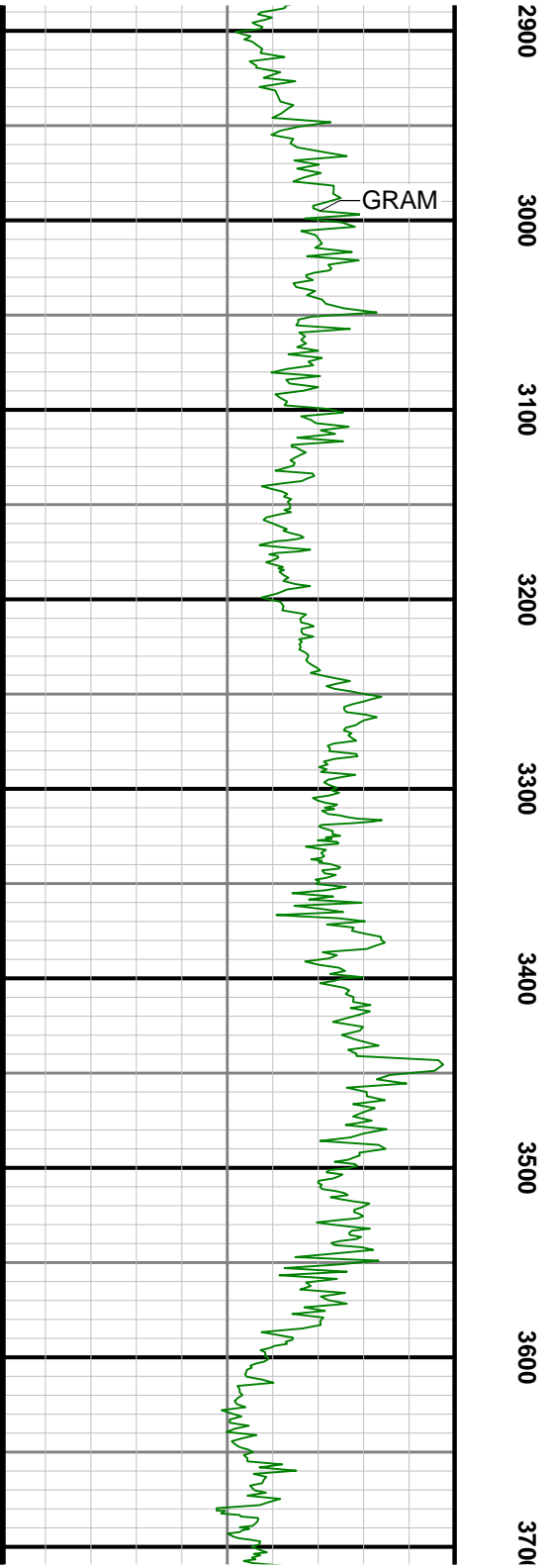
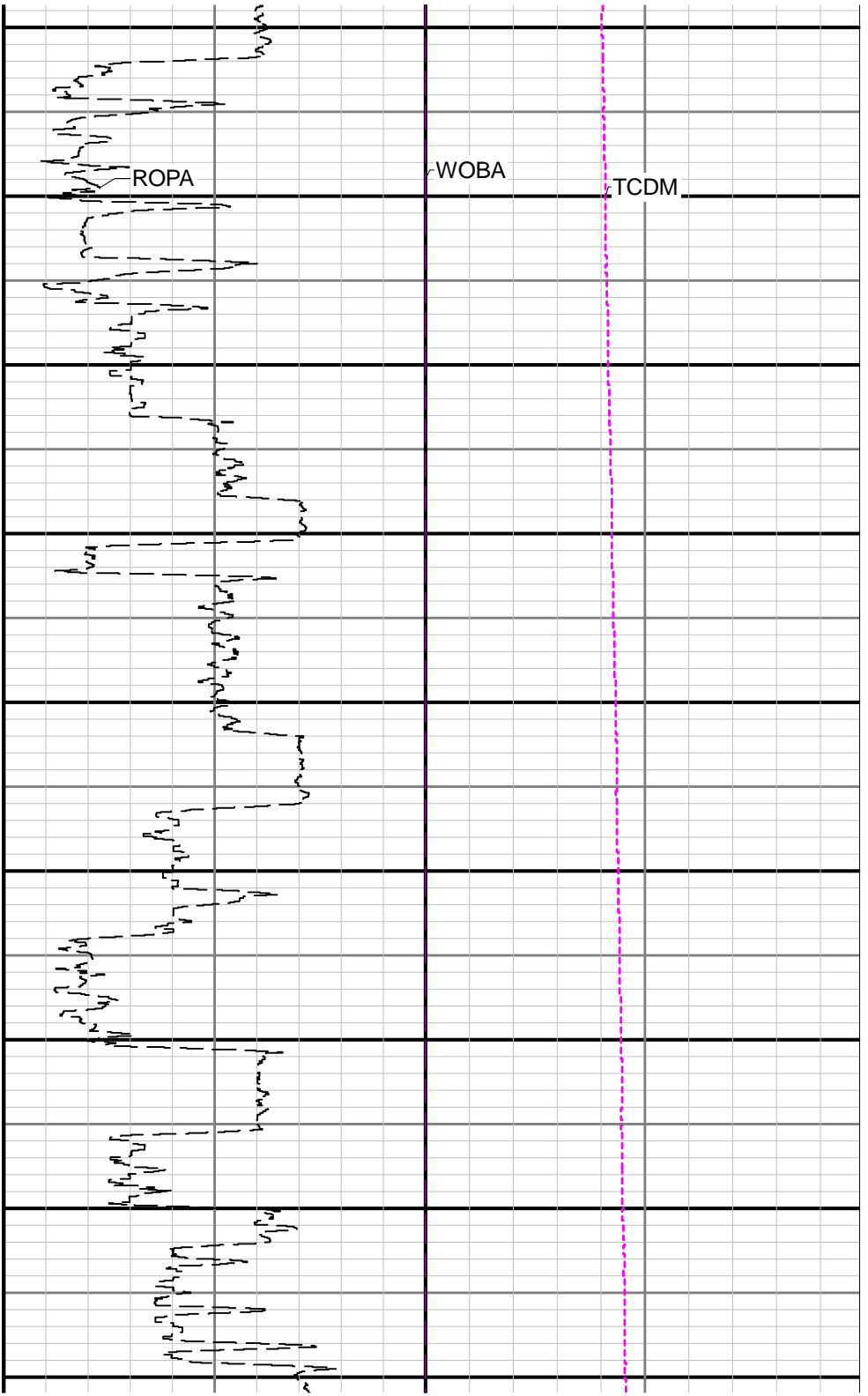
- 1 Baker Hughes Run 1 utilized a 6 3/4 inch AutoTrak Curve (Rotary Steerable, Directional and Gamma Ray) tool behind an 8 1/2 inch bit and rotary steerable assembly from 1890.0 ft. MD (1890 ft. TVD) to 11877.0 ft. MD (6699.57 ft. TVD).
- 2 Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to represent logging data.

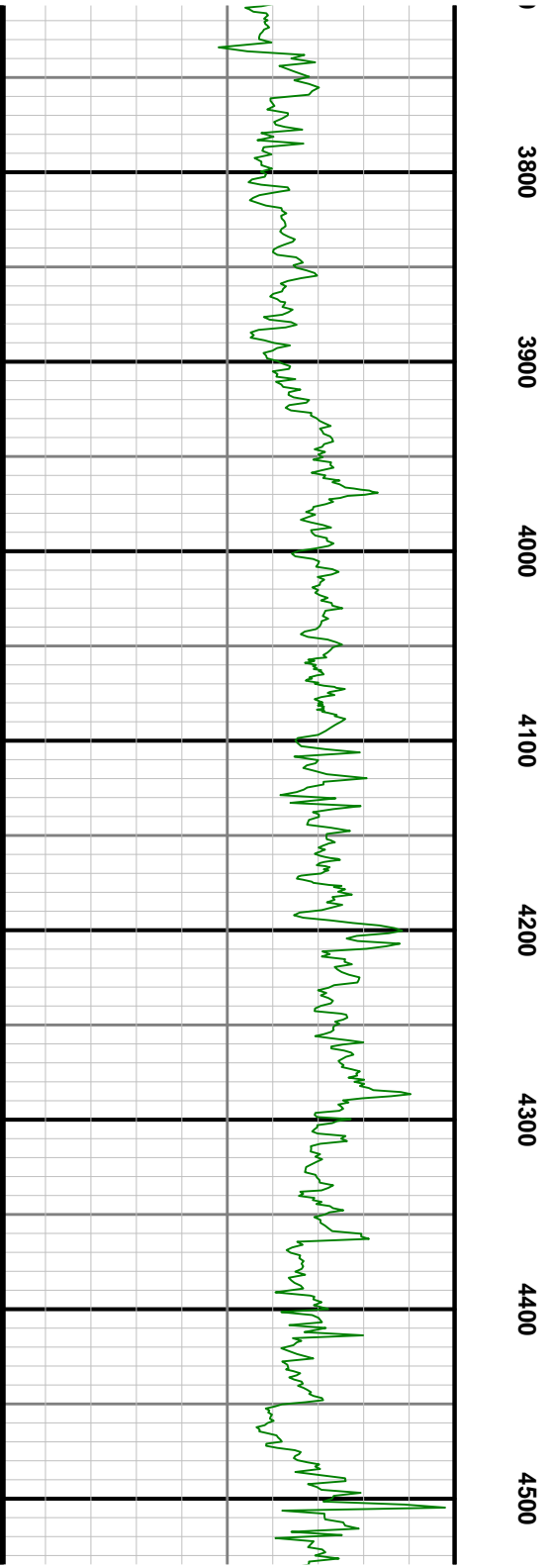
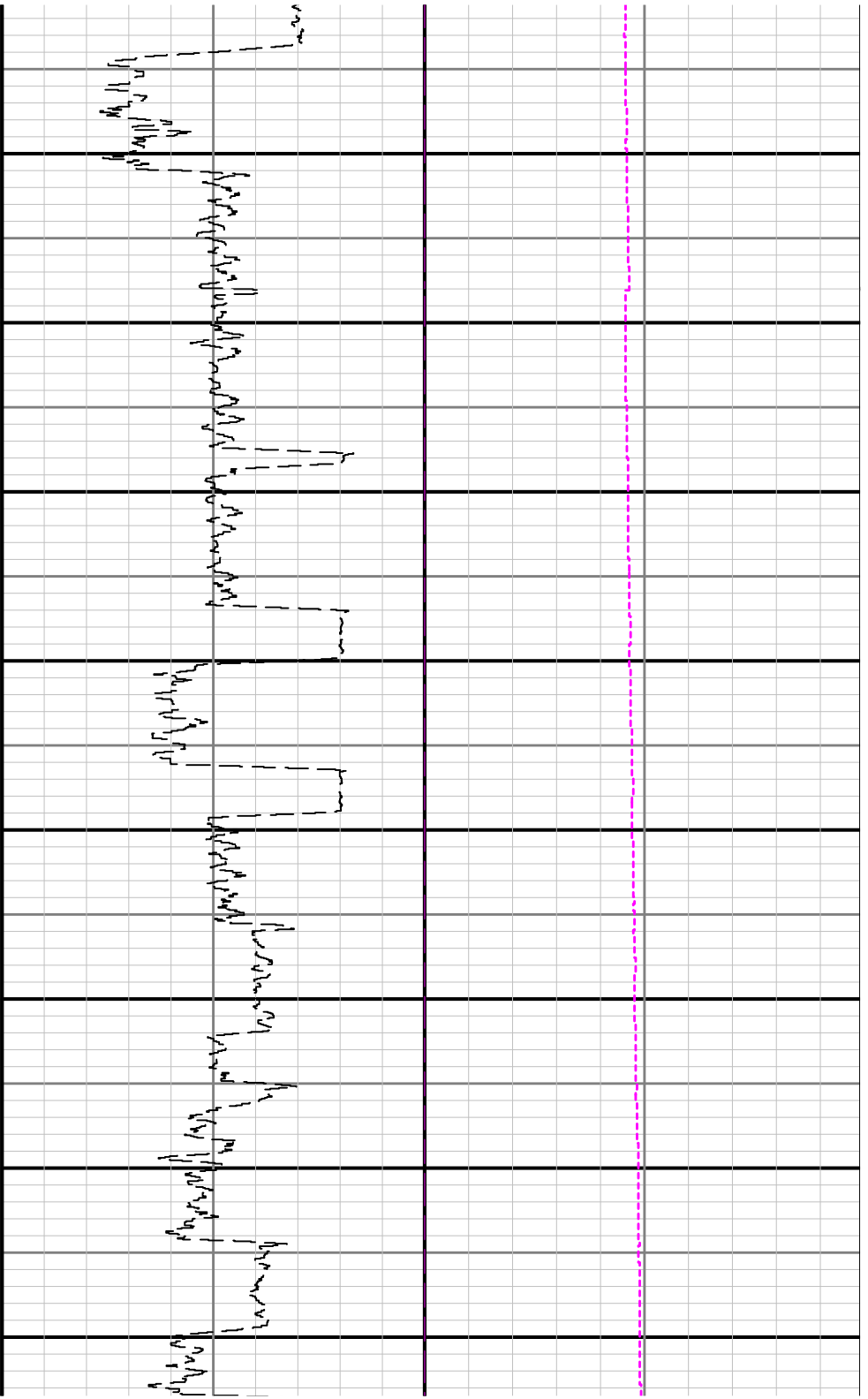
Curve Mnemonics

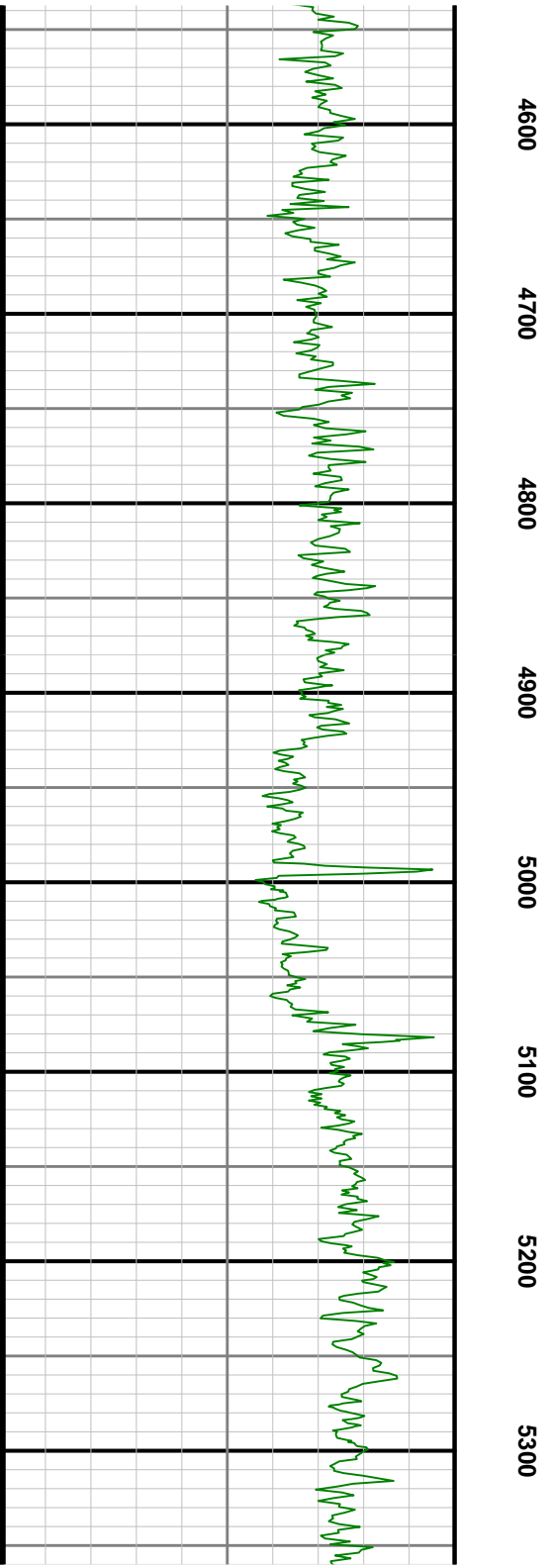
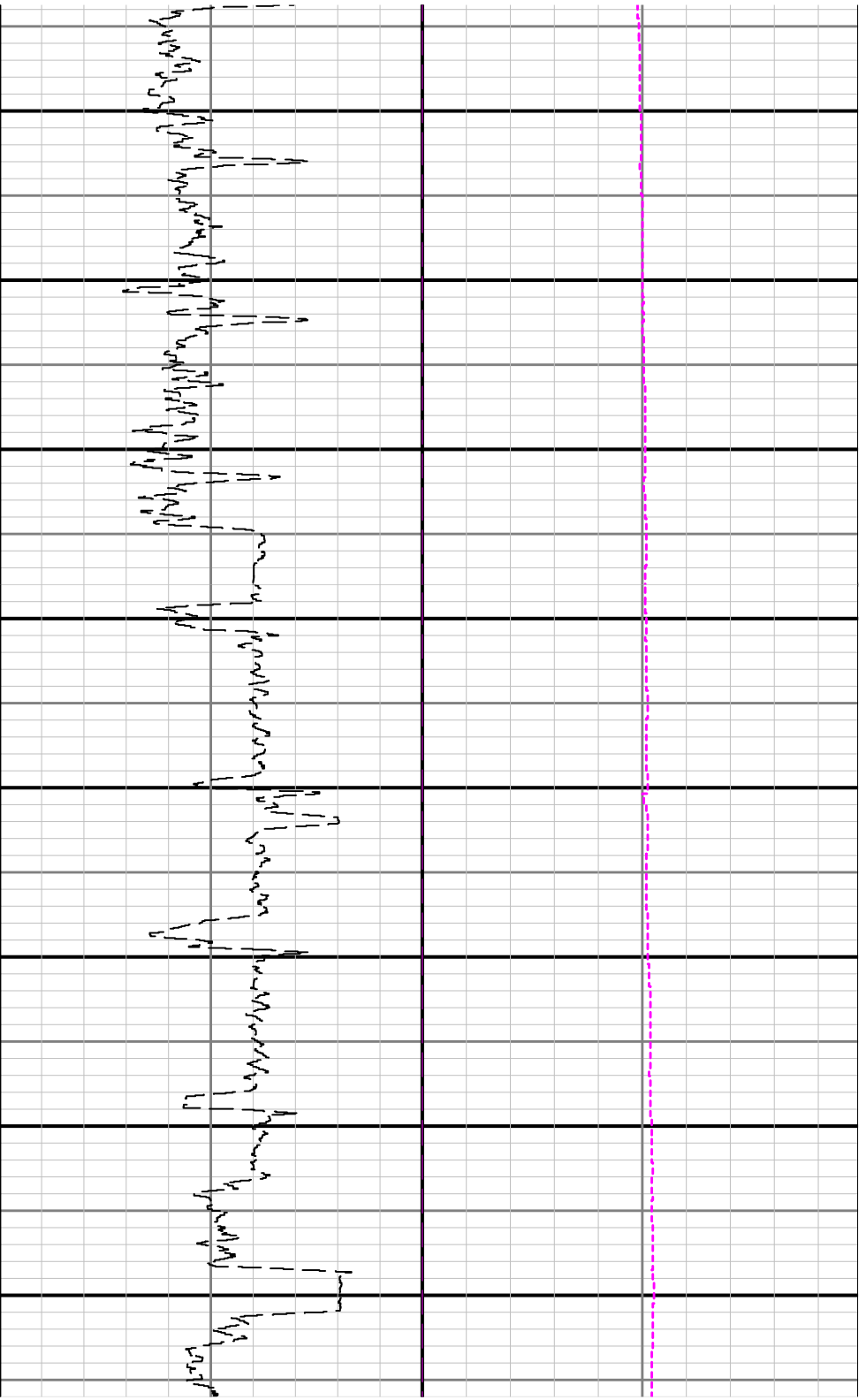
Presented Curves	Description	Units
ROPA	Depth Averaged ROP 3 ft Average	ft/h
GRAM	Gamma Ray - Apparent 3 ft Average	API
TCDM	Downhole Temperature	degF
WOBA	Weight On Bit, Average 1 ft Average	klb

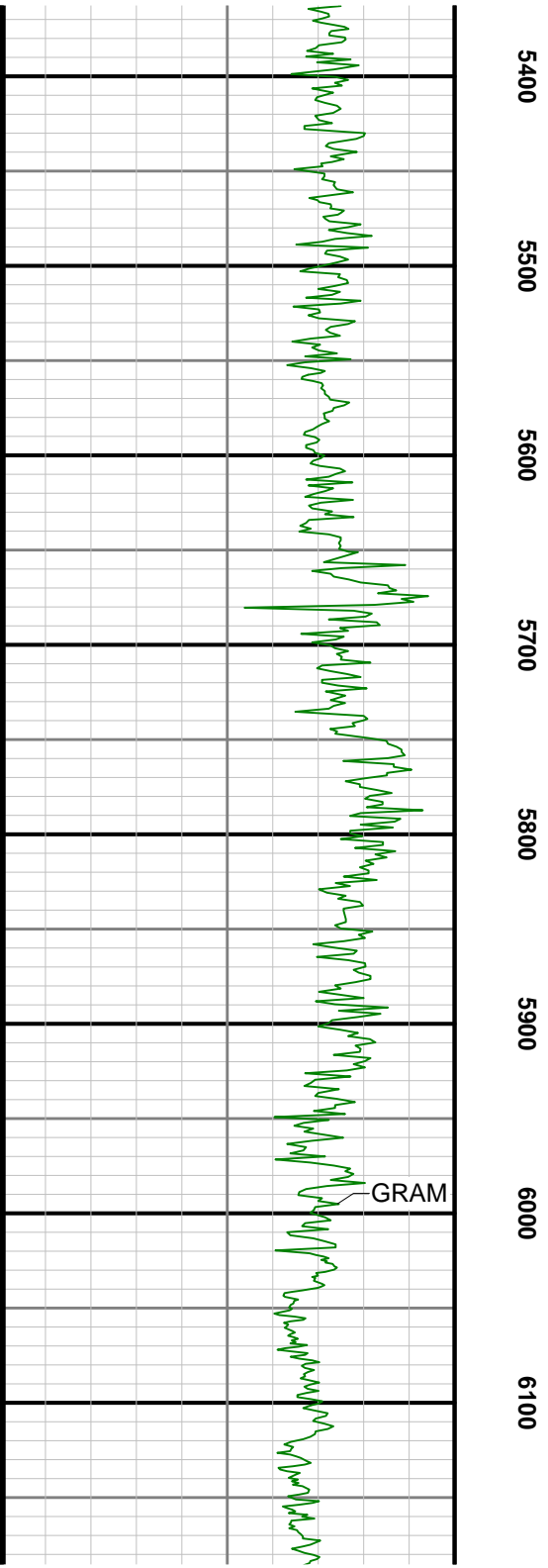
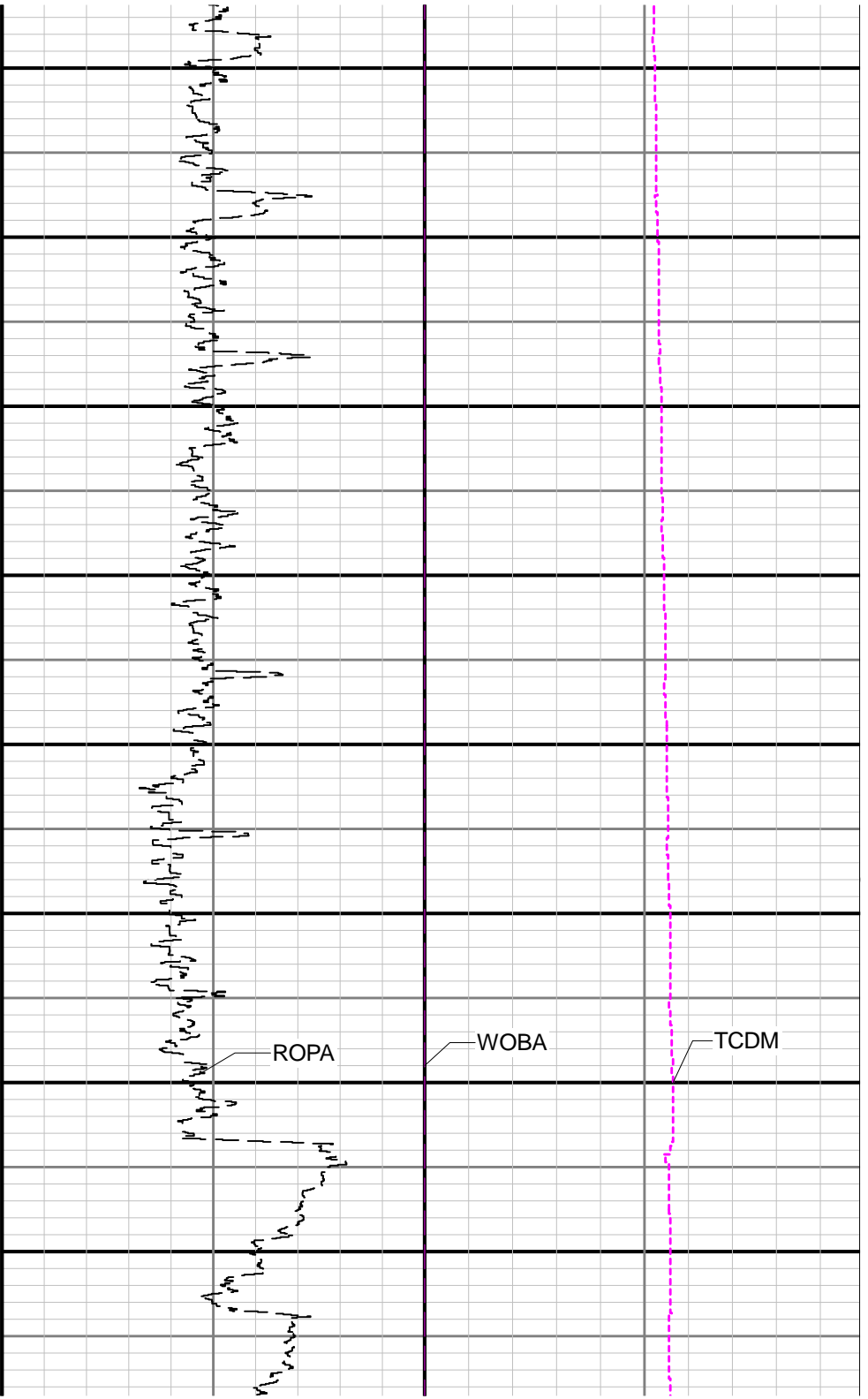


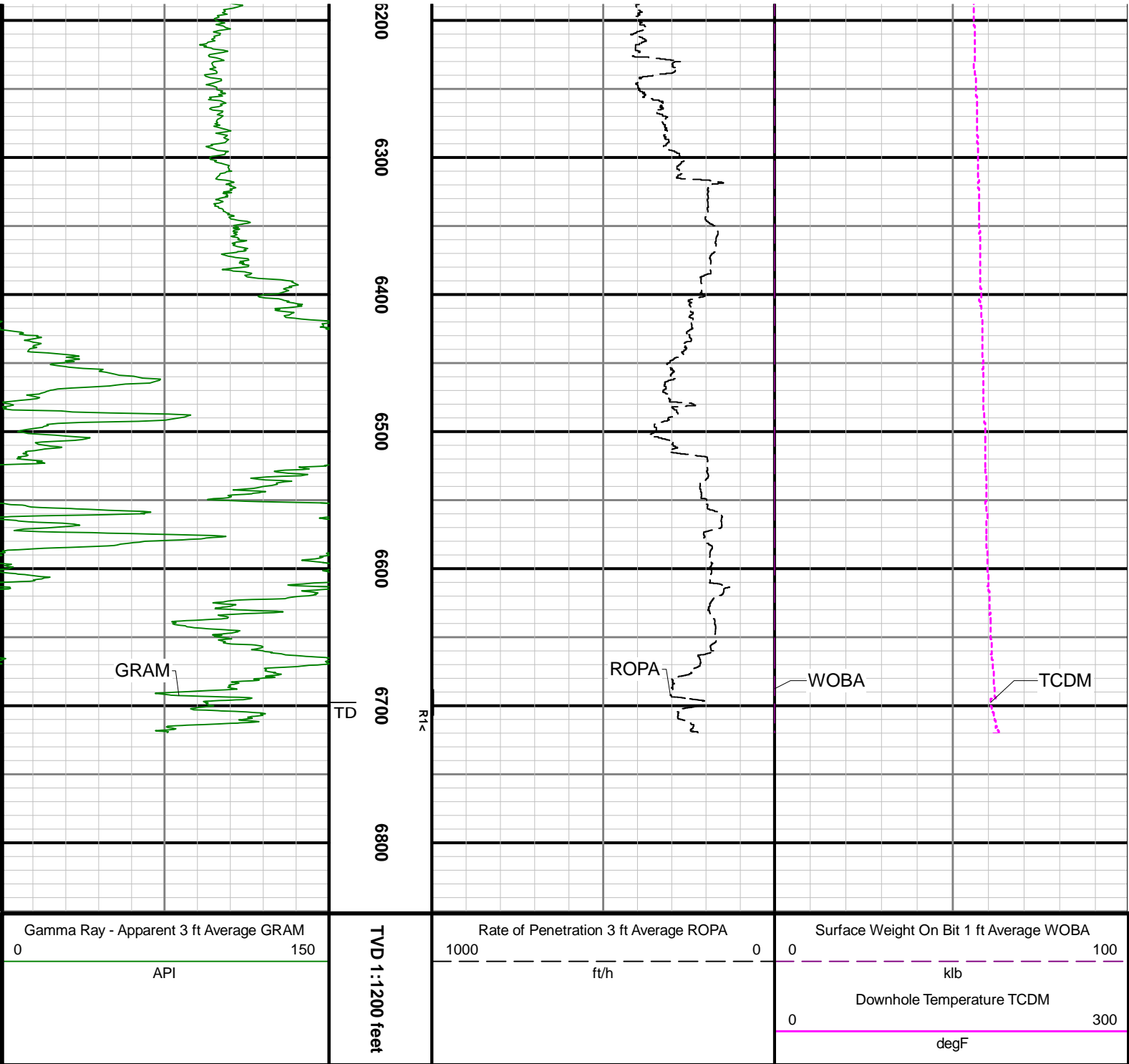












Directional Survey Summary

Latitude: 40° 00' 00" N Longitude: 100° 00' 00" W

North Reference:	Grid	Drill Depth Zero:	Rig Floor
Vertical Datum is:	Mean Sea Level	Vertical Datum to DDZ: (ft)	4775.00
Vertical Section North: (m)	0.00	Vertical Section East: (m)	0.00
Vertical Section Azimuth: (deg)	85.91		
Grid Convergence: (deg)	-0.69	Magnetic Declination: (deg)	7.96
Total Correction: (deg)	7.27	TVD Calculation Method:	Minimum Curvature
Magnetic Correction:	Off	Local Magnetic Field: (nT)	52448
Local Magnetic Dip Angle: (deg)	67.18	Local Gravity Field: (m/s2)	9.800

Tie-In / Projection	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Temperature (degF)	North (ft)	East (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Course Length (ft)	Dog Leg Severity (deg/100ft)	Build Rate (deg/100ft)	Turn Rate (deg/100ft)
Tie-In	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1870.00	0.23	212.25	N/A	-1.53	-0.28	1869.98	-0.39	1870.00	0.23	-0.14	36.43
	1978.00	0.39	298.48	N/A	-1.53	-0.72	1977.98	-0.83	108.00	0.41	0.15	79.84
	2072.00	0.00	7.31	N/A	-1.38	-1.00	2071.98	-1.10	94.00	0.41	-0.41	73.22
	2167.00	0.06	218.05	N/A	-1.42	-1.03	2166.98	-1.13	95.00	0.06	0.06	-157.12
	2262.00	2.22	339.29	N/A	0.26	-1.71	2261.95	-1.69	95.00	2.37	2.27	127.62
	2357.00	5.38	337.91	N/A	6.11	-4.04	2356.73	-3.59	95.00	3.33	3.33	-1.45
	2451.00	7.64	346.41	N/A	16.27	-7.16	2450.12	-5.99	94.00	2.61	2.40	9.04
	2546.00	8.50	353.12	N/A	29.38	-9.49	2544.18	-7.37	95.00	1.34	0.91	7.06
	2640.00	8.53	356.97	N/A	43.24	-10.69	2637.15	-7.58	94.00	0.61	0.03	4.10
	2735.00	8.06	356.81	N/A	56.92	-11.43	2731.15	-7.34	95.00	0.50	-0.49	-0.17
	2829.00	8.19	346.82	N/A	70.02	-13.33	2824.22	-8.30	94.00	1.51	0.14	-10.63
	2924.00	8.17	320.50	N/A	81.82	-19.17	2918.28	-13.28	95.00	3.91	-0.02	-27.71
	3019.00	7.89	297.09	N/A	90.00	-29.27	3012.38	-22.77	95.00	3.43	-0.29	-24.64
	3114.00	8.07	294.15	N/A	95.70	-41.16	3106.46	-34.23	95.00	0.47	0.19	-3.09
	3208.00	7.85	317.36	N/A	103.12	-51.53	3199.57	-44.04	94.00	3.40	-0.23	24.69
	3303.00	7.74	339.45	N/A	113.89	-58.17	3293.72	-49.90	95.00	3.14	-0.12	23.25
	3398.00	8.22	359.16	N/A	126.67	-60.52	3387.82	-51.33	95.00	2.91	0.51	20.75
	3492.00	7.23	19.01	133.8	138.99	-58.69	3480.98	-48.62	94.00	3.01	-1.05	21.12
	3587.00	8.61	32.73	N/A	150.62	-52.89	3575.08	-42.02	95.00	2.45	1.45	14.44
	3682.00	9.34	7.43	N/A	164.25	-48.05	3668.95	-36.21	95.00	4.19	0.77	-26.63
	3777.00	9.23	324.73	N/A	178.13	-51.46	3762.81	-38.62	95.00	7.09	-0.12	-44.95
	3872.00	8.10	278.18	N/A	185.32	-62.49	3856.84	-49.12	95.00	7.27	-1.19	-49.00
	3966.00	8.10	294.90	N/A	189.05	-75.06	3949.91	-61.38	94.00	2.50	0.00	17.79
	4061.00	8.10	325.63	N/A	197.39	-84.91	4044.01	-70.62	95.00	4.50	0.00	32.35
	4156.00	9.41	345.15	N/A	210.43	-90.68	4137.92	-75.44	95.00	3.40	1.38	20.55
	4250.00	9.38	345.11	N/A	225.26	-94.62	4230.66	-78.31	94.00	0.03	-0.03	-0.04
	4345.00	9.47	350.64	N/A	240.45	-97.88	4324.38	-80.48	95.00	0.96	0.09	5.82
	4440.00	9.41	2.22	N/A	255.92	-98.85	4418.10	-80.34	95.00	2.00	-0.06	12.19
	4534.00	9.51	12.57	N/A	271.18	-96.86	4510.83	-77.27	94.00	1.81	0.11	11.01
	4629.00	9.53	13.62	N/A	286.49	-93.30	4604.52	-72.63	95.00	0.18	0.02	1.11
	4723.00	9.76	12.64	N/A	301.82	-89.73	4697.19	-67.97	94.00	0.30	0.24	-1.04
	4818.00	9.52	9.79	N/A	317.42	-86.63	4790.85	-63.77	95.00	0.56	-0.25	-3.00
	4913.00	9.34	10.99	N/A	332.73	-83.82	4884.57	-59.88	95.00	0.28	-0.19	1.26
	5007.00	9.19	12.59	N/A	347.54	-80.73	4977.34	-55.74	94.00	0.32	-0.16	1.70
	5102.00	6.94	12.48	N/A	360.55	-77.84	5071.40	-51.92	95.00	2.37	-2.37	-0.12
	5197.00	5.13	16.95	N/A	370.22	-75.36	5165.87	-48.76	95.00	1.97	-1.91	4.71
	5291.00	3.20	357.02	N/A	376.86	-74.27	5259.62	-47.20	94.00	2.54	-2.05	-21.20
	5386.00	0.32	209.60	N/A	379.28	-74.54	5354.57	-47.30	95.00	3.66	-3.03	-155.18
	5481.00	0.04	242.87	N/A	379.03	-74.70	5449.57	-47.48	95.00	0.30	-0.29	35.02
	5575.00	0.13	177.30	N/A	378.91	-74.72	5543.57	-47.51	94.00	0.13	0.10	-69.76
	5670.00	0.07	105.73	N/A	378.79	-74.66	5638.57	-47.46	95.00	0.13	-0.06	-75.34
	5765.00	0.22	151.88	N/A	378.61	-74.52	5733.57	-47.33	95.00	0.19	0.16	48.58
	5860.00	0.45	118.42	N/A	378.30	-74.23	5828.57	-47.15	95.00	0.42	0.07	25.30

	5860.00	0.15	118.42	N/A	378.39	-74.33	5828.57	-47.15	95.00	0.13	-0.07	-35.22
	5954.00	0.13	116.54	N/A	378.29	-74.12	5922.57	-46.95	94.00	0.02	-0.02	-2.00
	6049.00	0.44	114.05	N/A	378.09	-73.69	6017.57	-46.54	95.00	0.33	0.33	-2.62
	6144.00	9.30	79.46	N/A	379.35	-65.80	6112.14	-38.57	95.00	9.41	9.33	-36.41
	6238.00	16.20	87.11	N/A	381.40	-45.21	6203.77	-17.89	94.00	7.54	7.34	8.14
	6333.00	21.03	89.35	N/A	382.26	-14.91	6293.77	12.39	95.00	5.14	5.08	2.36
	6428.00	28.30	87.29	N/A	383.52	24.68	6380.05	51.97	95.00	7.70	7.65	-2.17
	6522.00	37.17	88.03	N/A	385.56	75.42	6459.04	102.73	94.00	9.45	9.44	0.79
	6617.00	42.75	91.71	N/A	385.58	136.39	6531.84	163.54	95.00	6.38	5.87	3.87
	6712.00	51.38	90.23	N/A	384.47	205.86	6596.49	232.76	95.00	9.16	9.08	-1.56
	6806.00	60.98	87.62	N/A	386.03	283.84	6648.76	310.65	94.00	10.47	10.21	-2.78
	6901.00	71.39	88.00	N/A	389.34	370.57	6687.06	397.39	95.00	10.96	10.96	0.40
	6996.00	79.42	89.58	N/A	391.25	462.40	6710.98	489.13	95.00	8.60	8.45	1.66
	7090.00	89.43	91.31	N/A	390.52	555.83	6720.11	582.27	94.00	10.80	10.65	1.84
	7185.00	90.17	91.30	N/A	388.35	650.81	6720.44	676.85	95.00	0.78	0.78	-0.01
	7280.00	90.41	90.42	N/A	386.93	745.79	6719.96	771.49	95.00	0.96	0.25	-0.93
	7374.00	90.20	89.63	N/A	386.88	839.79	6719.46	865.25	94.00	0.87	-0.22	-0.84
	7469.00	90.23	89.15	N/A	387.90	934.79	6719.10	960.07	95.00	0.51	0.03	-0.51
	7564.00	90.11	89.18	N/A	389.28	1029.78	6718.82	1054.92	95.00	0.13	-0.13	0.03
	7658.00	89.98	92.09	N/A	388.24	1123.76	6718.74	1148.59	94.00	3.10	-0.14	3.10
	7753.00	90.14	91.13	N/A	385.57	1218.72	6718.64	1243.12	95.00	1.02	0.17	-1.01
	7848.00	90.23	90.90	N/A	383.89	1313.71	6718.34	1337.74	95.00	0.26	0.09	-0.24
	7943.00	90.20	86.82	N/A	385.78	1408.67	6717.98	1432.59	95.00	4.29	-0.03	-4.29
	8037.00	90.08	87.46	N/A	390.47	1502.55	6717.75	1526.57	94.00	0.69	-0.13	0.68
	8132.00	90.48	89.27	N/A	393.18	1597.50	6717.29	1621.48	95.00	1.95	0.42	1.91
	8227.00	90.54	90.43	N/A	393.43	1692.50	6716.44	1716.25	95.00	1.22	0.06	1.22
	8321.00	90.79	91.84	N/A	391.56	1786.47	6715.35	1809.85	94.00	1.52	0.27	1.50
	8416.00	90.39	91.67	N/A	388.65	1881.42	6714.37	1904.35	95.00	0.46	-0.42	-0.18
	8511.00	91.25	91.31	N/A	386.18	1976.38	6713.01	1998.89	95.00	0.98	0.91	-0.38
	8606.00	90.63	89.87	N/A	385.21	2071.36	6711.45	2093.56	95.00	1.65	-0.65	-1.52
	8700.00	90.11	89.18	N/A	385.99	2165.35	6710.85	2187.37	94.00	0.92	-0.55	-0.73
	8795.00	90.85	90.17	N/A	386.53	2260.34	6710.05	2282.16	95.00	1.30	0.78	1.04
	8890.00	90.02	91.11	N/A	385.46	2355.33	6709.33	2376.83	95.00	1.32	-0.87	0.99
	8984.00	89.68	92.07	N/A	382.86	2449.30	6709.58	2470.37	94.00	1.08	-0.36	1.02
	9079.00	89.62	92.46	N/A	379.10	2544.22	6710.16	2564.78	95.00	0.42	-0.06	0.41
	9174.00	89.83	90.82	N/A	376.38	2639.18	6710.61	2659.30	95.00	1.74	0.22	-1.73
	9268.00	90.23	91.71	N/A	374.31	2733.15	6710.56	2752.89	94.00	1.04	0.43	0.95
	9363.00	90.14	92.50	N/A	370.82	2828.09	6710.26	2847.33	95.00	0.84	-0.09	0.83
	9457.00	90.08	91.60	N/A	367.46	2922.03	6710.08	2940.79	94.00	0.96	-0.06	-0.96
	9552.00	90.14	89.26	N/A	366.74	3017.02	6709.89	3035.49	95.00	2.46	0.06	-2.46
	9647.00	90.29	85.45	N/A	371.13	3111.90	6709.54	3130.44	95.00	4.01	0.16	-4.01
	9741.00	90.32	86.11	N/A	378.04	3205.64	6709.04	3224.44	94.00	0.70	0.03	0.70
	9836.00	90.48	89.27	N/A	381.87	3300.55	6708.37	3319.38	95.00	3.33	0.17	3.33
	9930.00	90.23	91.32	N/A	381.39	3394.54	6707.79	3413.10	94.00	2.20	-0.27	2.18
	10025.00	90.29	93.18	N/A	377.66	3489.46	6707.36	3507.51	95.00	1.96	0.06	1.96
	10120.00	90.38	93.78	N/A	371.89	3584.29	6706.80	3601.68	95.00	0.64	0.09	0.63
	10215.00	90.26	92.62	N/A	366.59	3679.13	6706.27	3695.91	95.00	1.23	-0.13	-1.22
	10309.00	90.35	90.69	N/A	363.87	3773.09	6705.77	3789.43	94.00	2.06	0.10	-2.05
	10404.00	90.23	87.82	N/A	365.11	3868.07	6705.29	3884.26	95.00	3.02	-0.13	-3.02
	10498.00	90.32	85.72	N/A	370.41	3961.91	6704.84	3978.24	94.00	2.24	0.10	-2.23
	10593.00	90.14	86.96	N/A	376.47	4056.72	6704.46	4073.24	95.00	1.32	-0.19	1.31
	10688.00	90.11	87.85	N/A	380.77	4151.62	6704.25	4168.20	95.00	0.94	-0.03	0.94
	10782.00	90.26	88.05	N/A	384.13	4245.56	6703.95	4262.14	94.00	0.27	0.16	0.21
	10877.00	90.14	88.83	N/A	386.72	4340.52	6703.62	4357.05	95.00	0.83	-0.13	0.82
	10971.00	90.20	91.45	N/A	386.49	4434.51	6703.34	4450.79	94.00	2.79	0.06	2.79
	11066.00	90.47	88.55	N/A	386.40	4528.50	6703.03	4545.52	95.00	3.05	0.03	3.05

	11066.00	90.17	88.55	N/A	386.49	4529.50	6703.03	4545.53	95.00	3.05	-0.03	-3.05
	11161.00	90.23	84.82	N/A	391.98	4624.33	6702.70	4640.51	95.00	3.93	0.06	-3.93
	11255.00	90.17	85.90	N/A	399.59	4718.02	6702.37	4734.50	94.00	1.15	-0.06	1.15
	11350.00	90.17	87.78	N/A	404.82	4812.87	6702.09	4829.48	95.00	1.98	0.00	1.98
	11445.00	90.11	87.78	N/A	408.50	4907.80	6701.86	4924.43	95.00	0.06	-0.06	0.00
	11540.00	90.05	89.07	N/A	411.11	5002.76	6701.72	5019.34	95.00	1.36	-0.06	1.36
	11634.00	90.32	89.71	N/A	412.11	5096.75	6701.42	5113.16	94.00	0.74	0.29	0.68
	11729.00	90.85	90.87	N/A	411.63	5191.74	6700.45	5207.88	95.00	1.34	0.56	1.22
	11823.00	90.14	88.67	N/A	412.01	5285.73	6699.64	5301.66	94.00	2.46	-0.76	-2.34
	11853.00	90.11	87.27	N/A	413.07	5315.71	6699.57	5331.64	30.00	4.67	-0.10	-4.67
Projection	11877.00	90.11	87.27	N/A	414.22	5339.69	6699.53	5355.63	24.00	0.00	0.00	0.00