

LWD Composite Log



Natural Formation Evaluation  
Gamma Ray

Scale:

1:1200 TVD

Company: Noble Energy Inc

Well: Wells Ranch AF05-645

Depth Reference:

Field: Weld County

Driller's Depth

County: Weld State: Colorado

Status:

Final Print

Surface Location:

Latitude:

Longitude:

040° 25' 47.856" N

104° 21' 16.596" W

Other Services:

Directional  
Rotary Steerable  
VSS

API No: 05-123-42132-00

Job ID: 7744200

SEC: 5

TWN: 5N

RGE: 62W

Permanent Datum (P.D.): Ground Level

Elevation: 4681.00 ft

N/A

Log Measured From: Rig Floor

Above P.D.

KB:  
DF:  
GL:

4711.00 ft  
4681.00 ft

Dates

Interval Logged

Magnetic Field Reference

Date From: 2016-02-11 Top: (ft) 1865.00

Date To: 2016-02-19 Bottom: (ft) 6497.00

Spud Date: 2016-02-10

Azi Reference North: Grid Dip Angle: (deg) 67.05

Total Magnetic Field Strength: (nT) 52676

Mag to Reference North Correction: (deg) 7.52 E

Borehole Record

Casing Record

Hole Size (in)

From (ft)

To (ft)

Size (in)

Weight (lb/ft)

From (ft)

To (ft)

8.500

1882.00

16168.00

9.625

36.00

30.00

1872.00

Mud Record

Deviation Record

Type

From (ft)

To (ft)

Hole Size (in)

Interval (ft)

Inc | Az (Start) Inc | Az (End)

Oil Based Mud

1882.00

16168.00

8.500

14286.00

0.34 | 203.16

90.43 | 90.73

Acquisition System

Software Version

Other

Baker Hughes Cadence

G3.2

Rig: H&P 321

Pilot Studio

3.2.7268.7

Contractor: Helmerich & Payne Drilling Co

District:

RMD

Unit:

D&E

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part of Baker Hughes. Unless other contract terms have been agreed to by the parties, each party's liabilities and obligations shall be governed by Baker Hughes Incorporated's Worldwide Terms and Conditions."												
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. Hours (h)
						Top	Bottom	From	To	Start Logging	End Logging	
						(ft)	(ft)	(ft)	(ft)			
1	2	8.500	PDC	2.00	AutoTrak Curve	1869.27	10958.54	1882.00	10965.10	2016-02-12 00:02	2016-02-14 15:23	55.92
2	3	8.500	PDC	2.00	AutoTrak Curve	10952.37	15348.04	10965.10	15354.60	2016-02-15 05:01	2016-02-17 02:36	44.35
3	4	8.500	PDC	2.00	AutoTrak Curve	15335.27	16161.57	15348.00	16168.13	2016-02-18 06:51	2016-02-18 19:14	14.02
Crew												
Name			Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite
Matthew Delmore			2016-02-10	2016-02-19	Mike Gurnsey		2016-02-10	2016-02-19	Nick Williams		2016-02-11	2016-02-19
Will Drake			2016-02-11	2016-02-19								
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+ (%)
2016-02-11 13:30		1	1872.00	Oil Based Mud	9.6	17	N/A	13.2	59.2/29.0	Active Pit	49000	0.00
2016-02-12 02:30		1	2470.00	Oil Based Mud	9.5	20	N/A	12.8	59.6/29.0	Active Pit	46000	0.00
2016-02-12 13:30		1	5394.00	Oil Based Mud	9.5	21	N/A	13.2	58.8/30.0	Active Pit	48000	0.00
2016-02-13 02:30		1	7190.00	Oil Based Mud	9.8	21	N/A	10.0	60.0/27.0	Active Pit	48000	0.00
2016-02-13 13:00		1	8600.00	Oil Based Mud	10.0	26	N/A	9.6	59.6/30.4	Active Pit	47000	0.00
2016-02-14 02:30		1	9795.00	Oil Based Mud	10.2	31	N/A	8.8	58.6/26.0	Active Pit	46000	0.00
2016-02-14 13:30		1	10800.00	Oil Based Mud	10.3	35	N/A	9.2	57.0/27.0	Active Pit	48000	0.00
2016-02-15 13:30		2	11935.00	Oil Based Mud	10.4	36	N/A	8.4	58.0/25.0	Active Pit	42000	0.00
2016-02-16 02:30		2	13186.00	Oil Based Mud	10.7	39	N/A	9.2	57.6/24.0	Active Pit	40000	0.00
2016-02-16 13:30		2	14302.00	Oil Based Mud	10.7	34	N/A	10.4	59.0/22.0	Active Pit	43000	0.00
2016-02-17 02:30		2	15343.00	Oil Based Mud	10.7	37	N/A	10.8	60.0/20.4	Active Pit	35000	0.00
2016-02-15 02:30		2	10960.00	Oil Based Mud	10.5	33	N/A	8.4	57.0/26.2	Active Pit	45000	0.00
2016-02-18 02:30		3	15348.00	Oil Based Mud	10.8	30	N/A	8.2	59.0/21.0	Active Pit	40000	0.00
2016-02-18 13:15		3	15728.00	Oil Based Mud	10.8	34	N/A	8.4	59.0/20.0	Active Pit	38000	0.00
Equipment and Service Data												
Run No.	Tool		Serial Number		Measurement			Sensor Offset	Bit Offset	Max O.D.	Min I.D.	

				(ft)	(ft)	(in)	(in)
1	ATC_SU	12565115	Near Bit Inclination	5.93	6.56	7.000	4.330
1	ATC_SU	12565115	Near Bit VSS	5.93	6.56	7.000	4.330
1	ATC_MWD	12118670	Gamma (single)	2.75	12.73	7.000	3.250
1	ATC_MWD	12118670	Directional (mag)	12.27	22.25	7.000	3.250
2	ATC_SU	11781618	Near Bit Inclination	5.93	6.56	7.000	4.330
2	ATC_SU	11781618	Near Bit VSS	5.93	6.56	7.000	4.330
2	ATC_MWD	12656433	Gamma (single)	2.75	12.73	7.000	3.250
2	ATC_MWD	12656433	Directional (mag)	12.27	22.25	7.000	3.250
3	ATC_SU	12160765	Near Bit VSS	5.93	6.56	7.000	4.330
3	ATC_SU	12160765	Near Bit Inclination	5.93	6.56	7.000	4.330
3	ATC_MWD	12178893	Gamma (single)	2.77	12.73	7.000	3.250
3	ATC_MWD	12178893	Directional (mag)	12.29	22.25	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, 2 and 3 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 1882 to 16168 feet MD (1881.95 to 6435.61 feet 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.



Company

Well

Interval

Created

Noble Energy Inc

Wells Ranch AF05-645

Date From:

2016-02-11 17:00

Top:

1865.00

Date To:

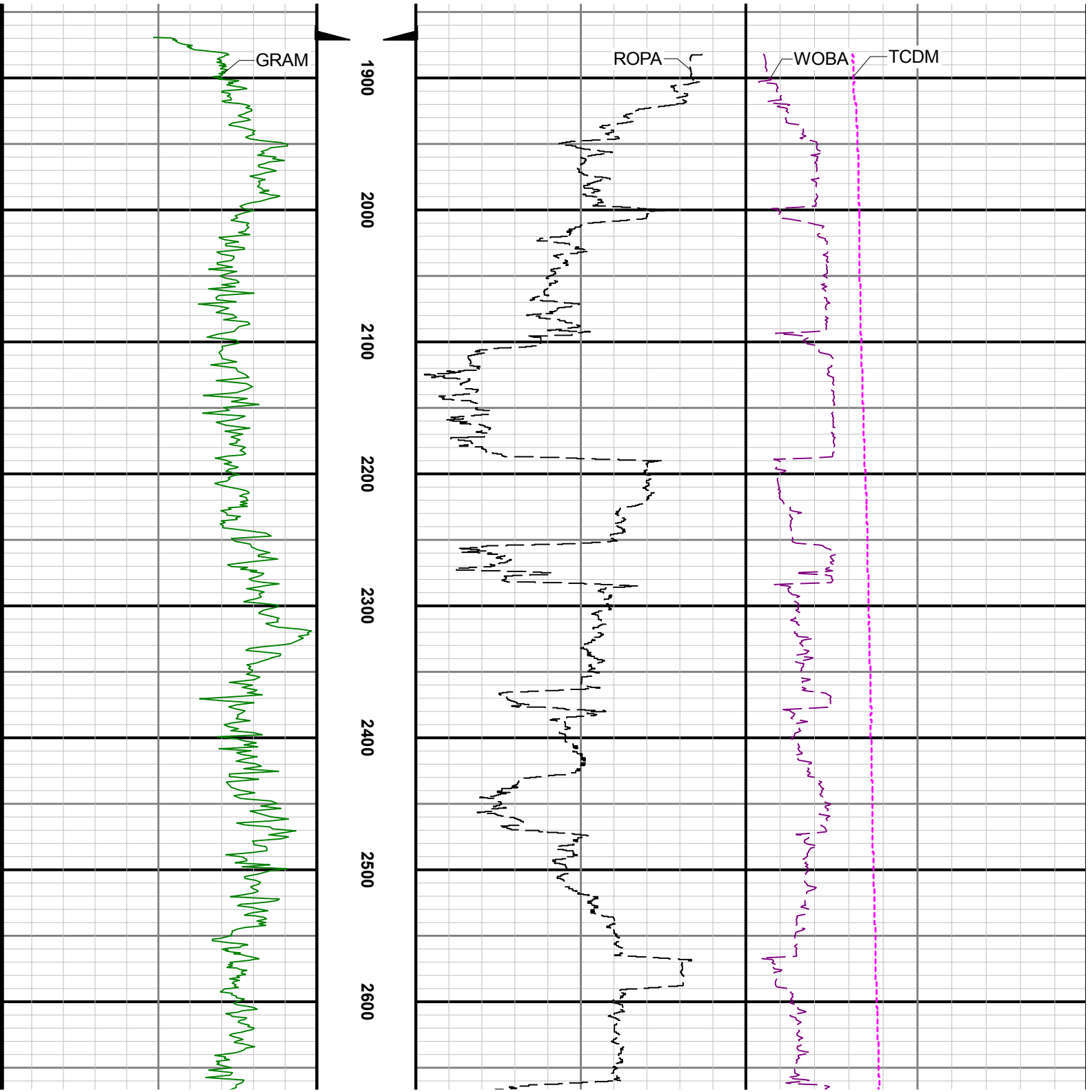
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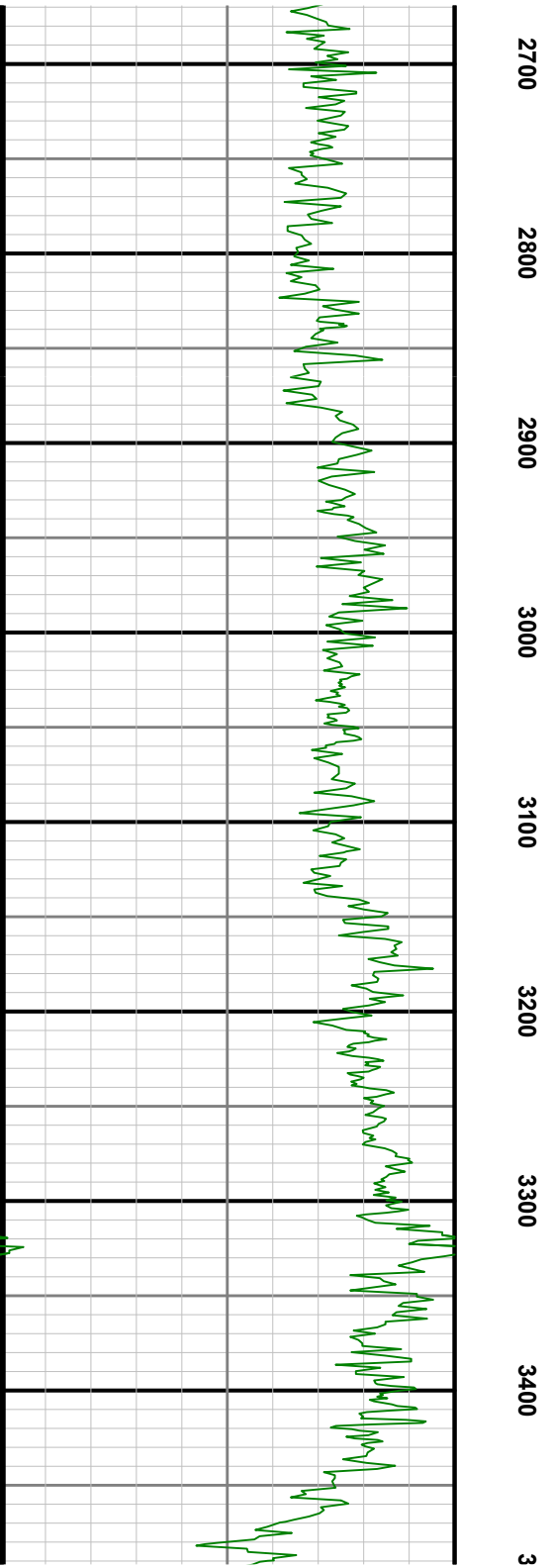
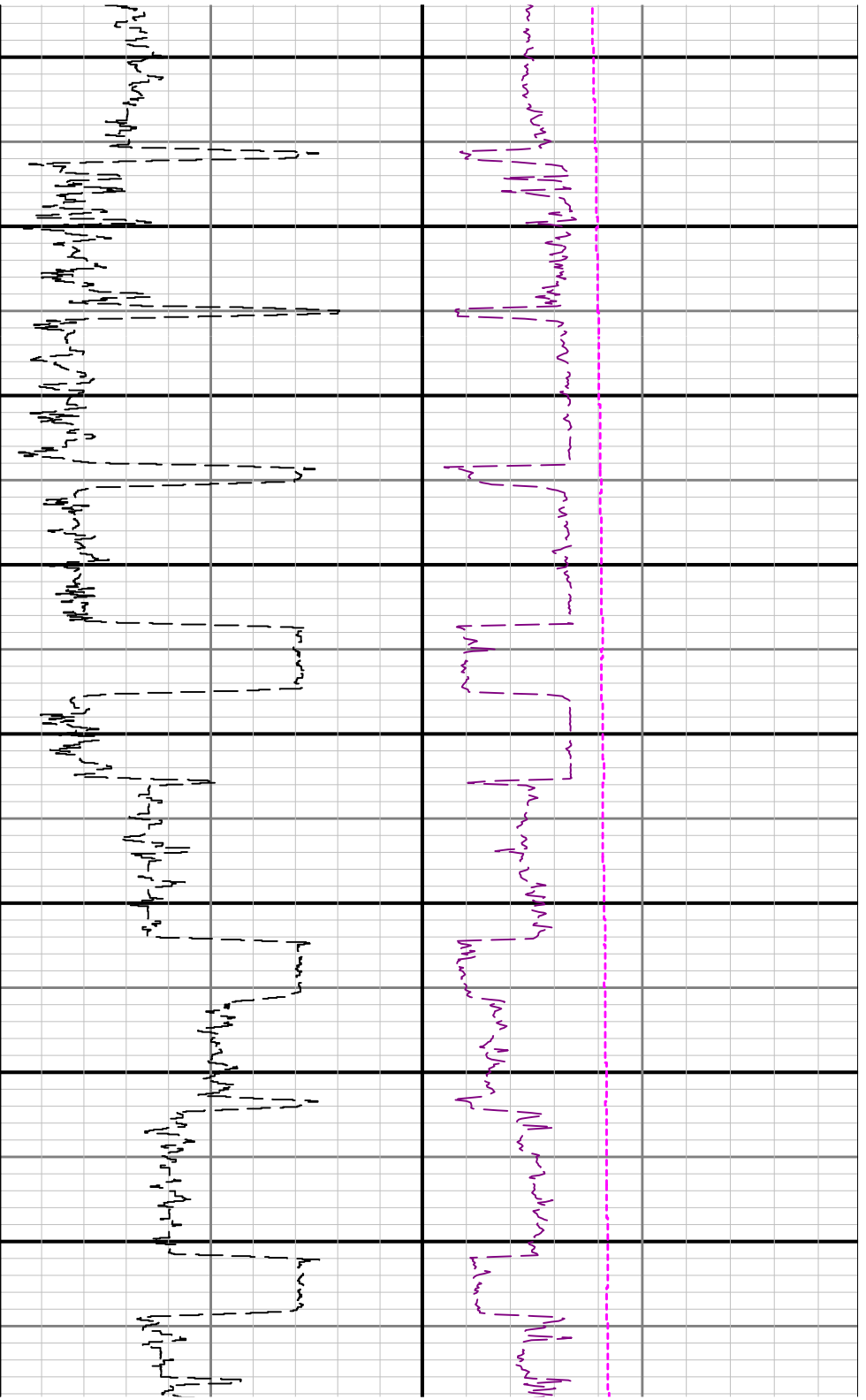
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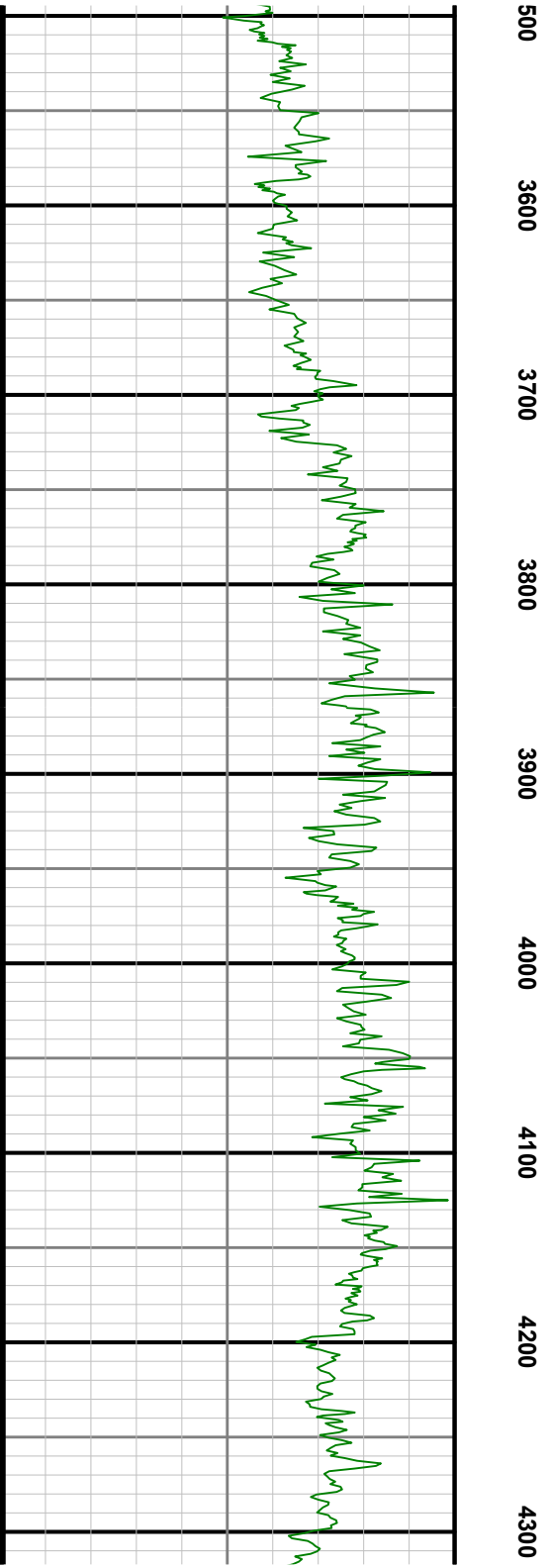
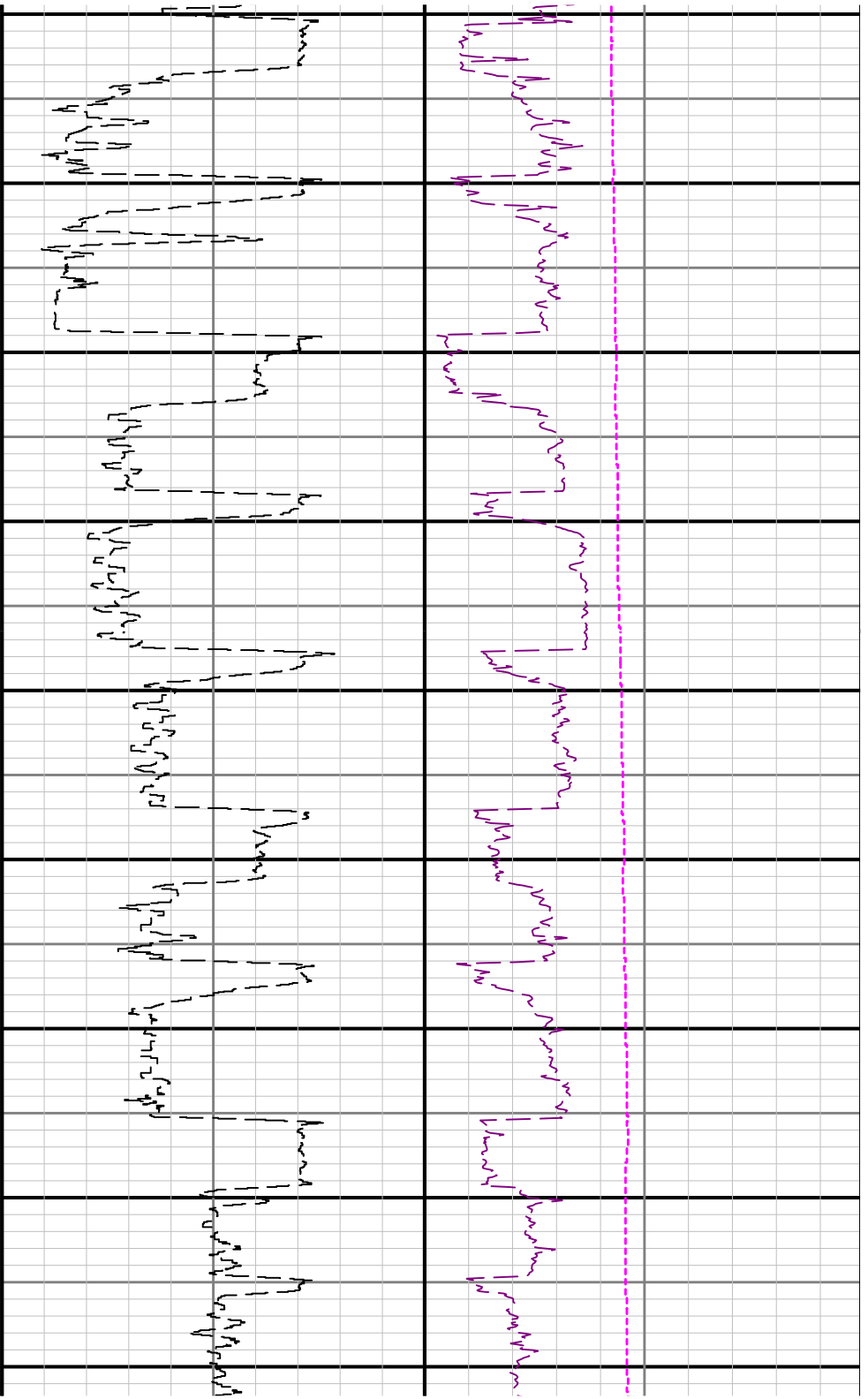
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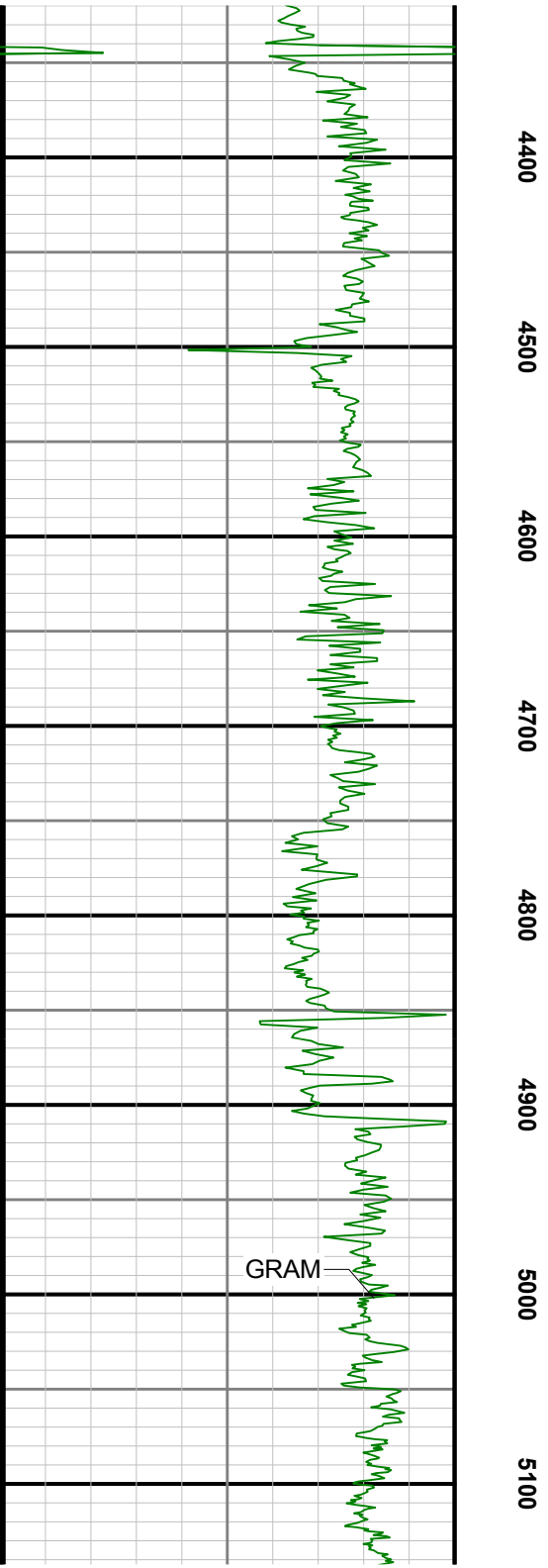
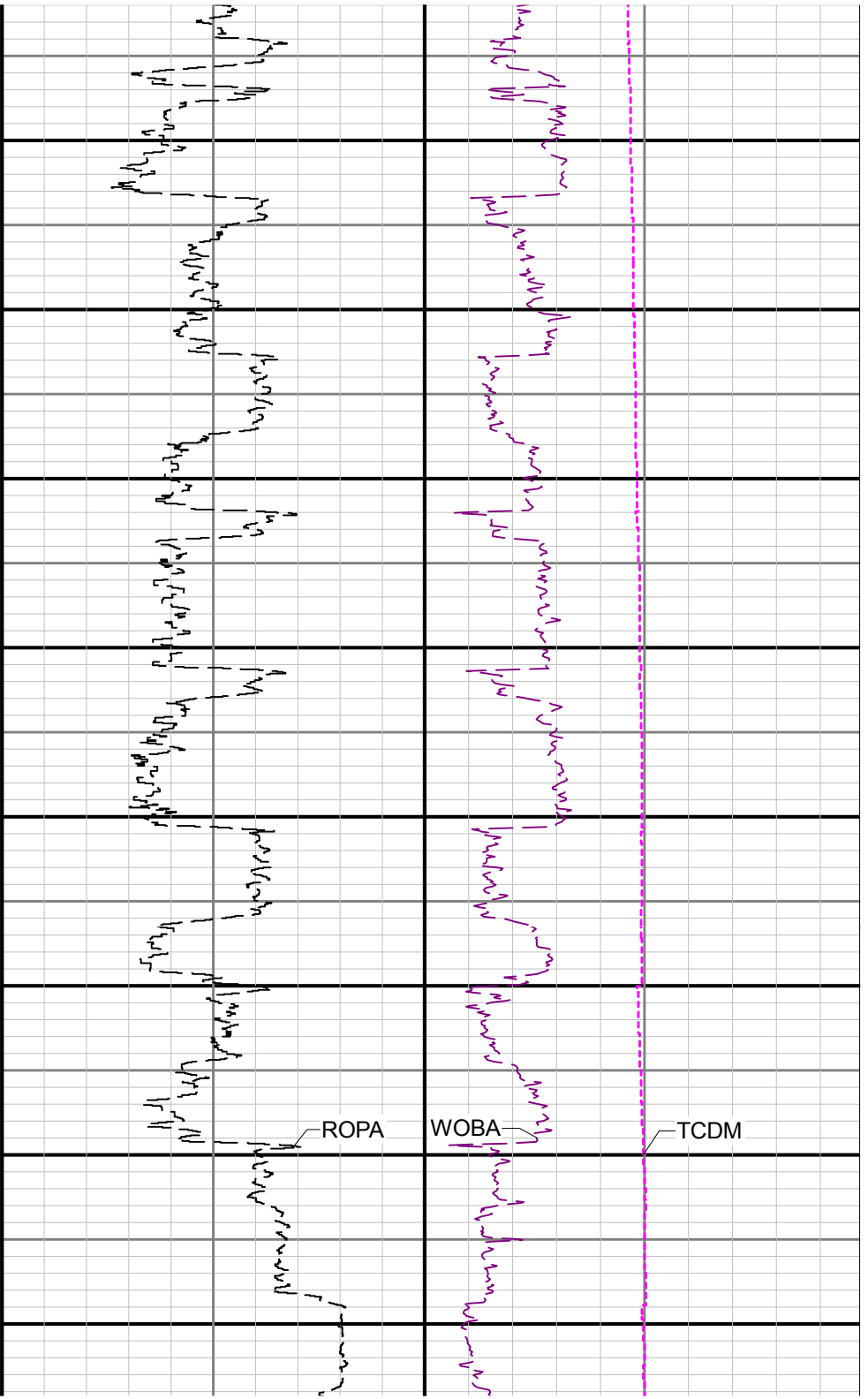
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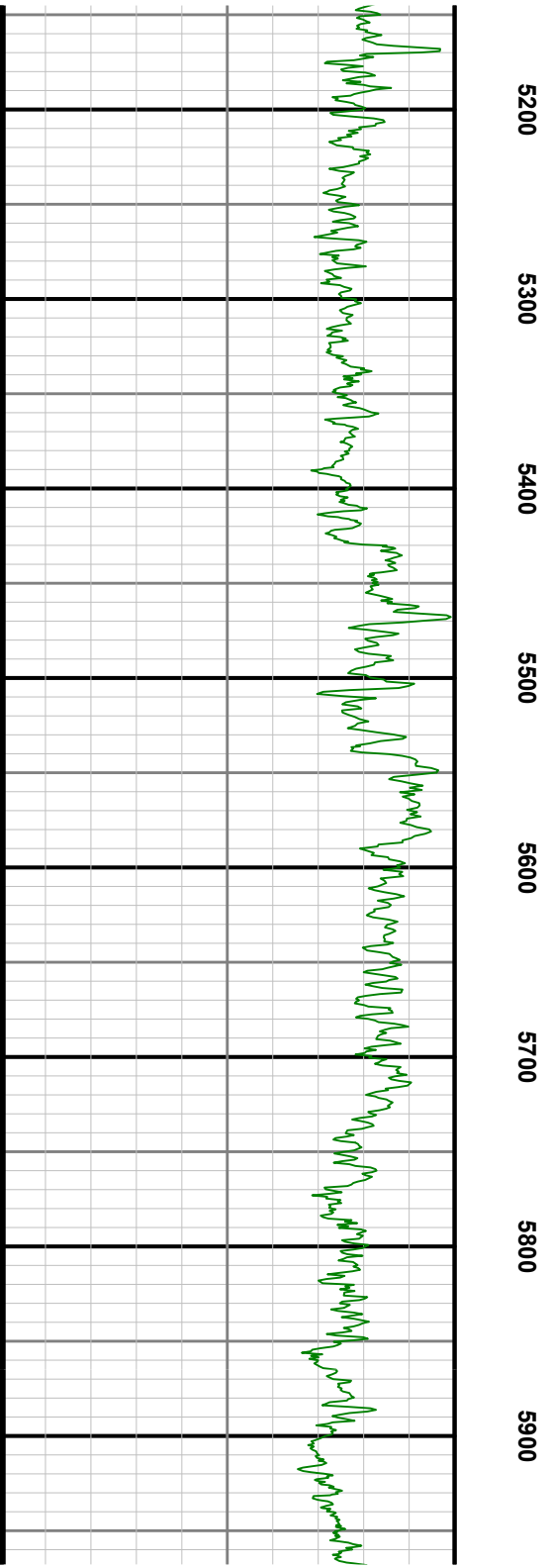
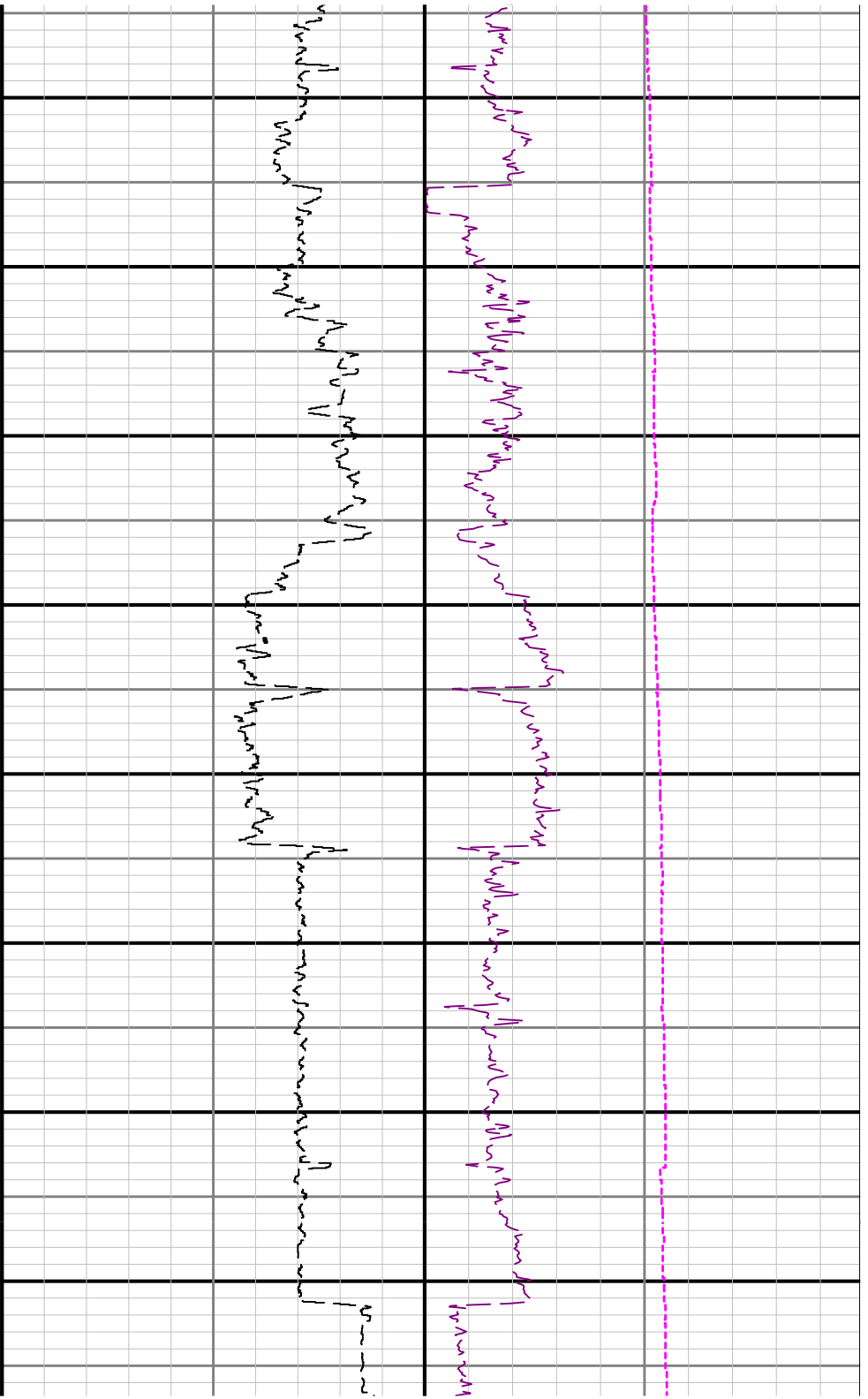
Gamma Ray - Apparent 3 ft Average GRAM	TVD 1:1200 feet	Rate of Penetration 3 ft Average ROPA	Surface Weight On Bit 1 ft Average WOBA
0150		1000ft/h0	0100
API			klb
	1800		Downhole Temperature TCDM
			0300
			degF



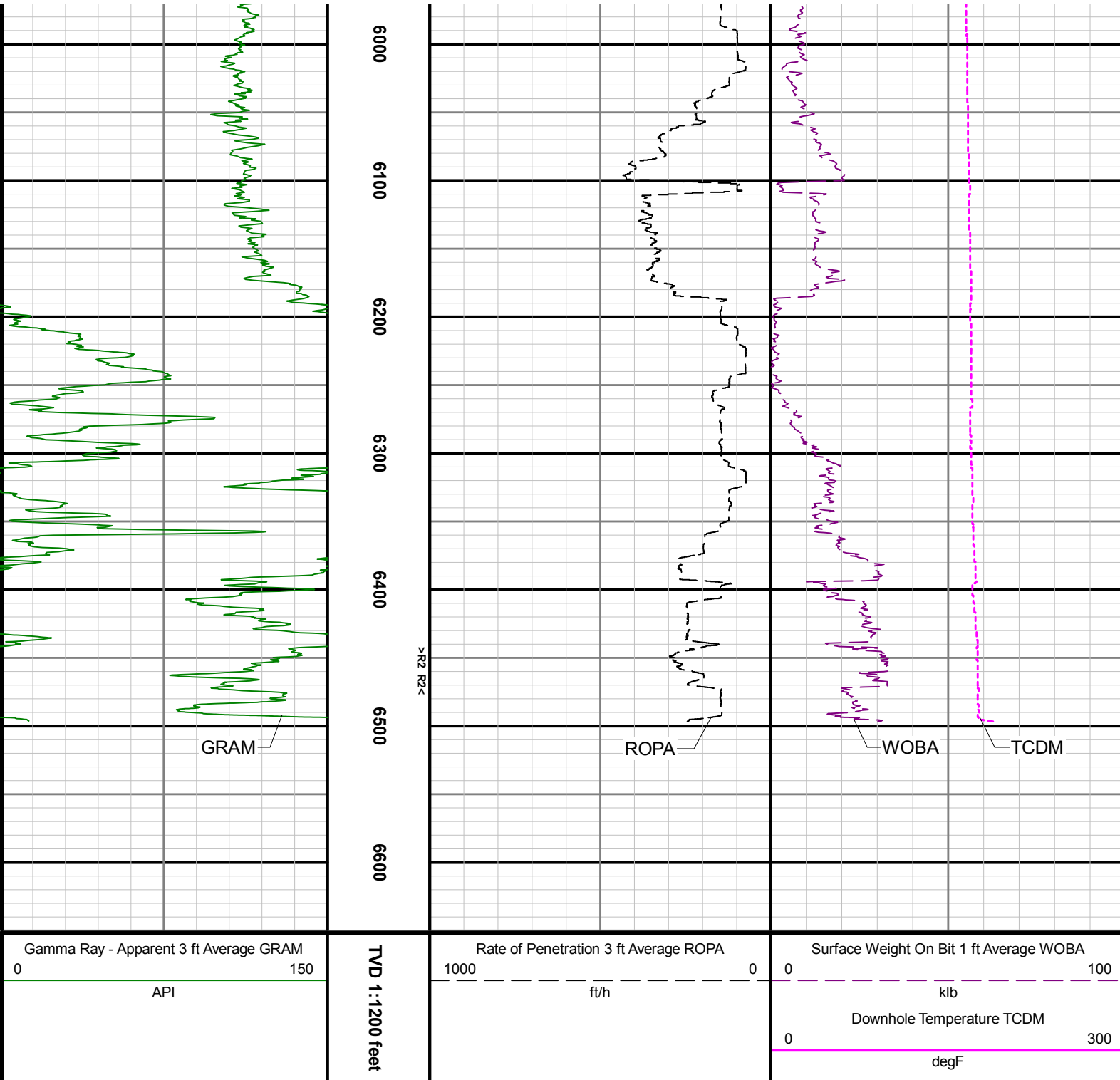












Latitude: 040° 25' 47.856" N		Longitude: 104° 21' 16.596" W										
North Reference: Grid		Drill Depth Zero: Rig Floor										
Vertical Datum is: Ground Level		Vertical Datum to DDZ: (ft) 30.00										
Vertical Section North: (m) 0.00		Vertical Section East: (m) 0.00										
Vertical Section Azimuth: (deg) 93.03												
Grid Convergence: (deg) -0.74		Magnetic Declination: (deg) 8.26										
Total Correction: (deg) 7.52		TVD Calculation Method: Minimum Curvature										
Magnetic Correction: Off		Local Magnetic Field: (nT) 52676										
Local Magnetic Dip Angle: (deg) 67.05		Local Gravity Field: (m/s2) 9.801										
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
	1865.00	0.34	203.16	N/A	5.46	4.71	1864.95	4.41	1865.00	0.11	-0.06	13.95
	1976.00	0.04	144.56	96.0	5.13	4.60	1975.95	4.32	111.00	0.29	-0.27	-52.79
	2071.00	0.06	1.50	98.7	5.15	4.62	2070.95	4.34	95.00	0.10	0.02	-150.59
	2165.00	0.16	82.85	101.4	5.21	4.75	2164.95	4.47	94.00	0.17	0.11	86.54
	2260.00	2.16	167.50	106.8	3.48	5.27	2259.93	5.08	95.00	2.26	2.11	89.11
	2355.00	4.25	178.62	106.8	-1.78	5.74	2354.78	5.83	95.00	2.29	2.20	11.71
	2449.00	6.38	184.47	109.5	-10.47	5.42	2448.37	5.96	94.00	2.34	2.27	6.22
	2544.00	7.17	184.06	109.5	-21.65	4.59	2542.70	5.73	95.00	0.83	0.83	-0.43
	2639.00	8.89	171.08	114.9	-34.82	5.31	2636.78	7.14	95.00	2.62	1.81	-13.66
	2733.00	9.97	172.56	114.9	-50.06	7.49	2729.50	10.12	94.00	1.18	1.15	1.57
	2828.00	9.95	172.33	117.6	-66.35	9.65	2823.07	13.14	95.00	0.05	-0.02	-0.24
	2923.00	9.93	172.04	120.3	-82.60	11.88	2916.65	16.23	95.00	0.06	-0.02	-0.31
	3018.00	9.91	180.20	120.3	-98.89	12.98	3010.23	18.19	95.00	1.48	-0.02	8.59
	3112.00	9.97	179.93	393.3	-115.11	12.96	3102.82	19.03	94.00	0.08	0.06	-0.29
	3207.00	9.96	185.06	123.0	-131.52	12.25	3196.39	19.18	95.00	0.93	-0.01	5.40
	3302.00	9.96	181.69	125.7	-147.91	11.28	3289.96	19.08	95.00	0.61	0.00	-3.55
	3397.00	10.00	174.81	125.7	-164.34	11.79	3383.52	20.46	95.00	1.26	0.04	-7.24
	3491.00	10.21	159.56	125.7	-180.28	15.43	3476.08	24.94	94.00	2.85	0.22	-16.22
	3586.00	10.36	161.67	128.4	-196.28	21.06	3569.56	31.41	95.00	0.43	0.16	2.22
	3681.00	10.22	167.04	128.4	-212.60	25.64	3663.03	36.84	95.00	1.02	-0.15	5.65
	3775.00	10.11	170.56	131.1	-228.87	28.86	3755.56	40.92	94.00	0.67	-0.12	3.74
	3870.00	10.21	172.15	131.1	-245.43	31.38	3849.07	44.31	95.00	0.31	0.11	1.67
	3965.00	10.15	175.30	133.8	-262.11	33.21	3942.57	47.02	95.00	0.59	-0.06	3.32
	4059.00	10.07	177.29	136.5	-278.58	34.28	4035.11	48.96	94.00	0.38	-0.09	2.12
	4154.00	9.73	182.40	136.5	-294.90	34.34	4128.70	49.88	95.00	0.99	-0.36	5.38
	4248.00	10.09	182.24	136.5	-311.06	33.68	4221.30	50.08	94.00	0.38	0.38	-0.17
	4343.00	10.08	177.29	139.2	-327.68	33.75	4314.83	51.02	95.00	0.91	-0.01	-5.21
	4438.00	9.90	172.96	239.2	-344.09	35.15	4408.39	53.28	95.00	0.81	-0.19	-4.56
	4532.00	9.59	180.57	144.6	-359.94	36.06	4501.04	55.03	94.00	1.41	-0.33	8.10
	4627.00	9.96	181.93	144.6	-376.06	35.70	4594.66	55.53	95.00	0.46	0.39	1.43
	4721.00	10.12	178.18	147.3	-392.44	35.69	4687.22	56.39	94.00	0.72	0.17	-3.99
	4816.00	9.97	168.01	147.3	-408.83	37.66	4780.77	59.22	95.00	1.87	-0.16	-10.71
	4910.00	10.15	163.38	150.0	-424.73	41.72	4873.33	64.12	94.00	0.88	0.19	-4.93
	5005.00	8.44	171.86	150.0	-439.65	45.11	4967.08	68.28	95.00	2.30	-1.80	8.93
	5099.00	7.93	187.39	150.0	-452.91	45.25	5060.14	69.13	94.00	2.41	-0.54	16.52
	5194.00	10.34	174.11	150.0	-467.90	45.28	5153.93	69.95	95.00	3.35	2.54	-13.98
	5289.00	10.13	175.89	152.7	-484.71	46.75	5247.42	72.31	95.00	0.40	-0.22	1.87
	5383.00	10.51	176.83	158.1	-501.51	47.82	5339.90	74.26	94.00	0.44	0.40	1.00
	5478.00	10.06	173.50	155.4	-518.41	49.24	5433.38	76.57	95.00	0.78	-0.47	-3.51
	5572.00	9.99	173.19	158.1	-534.66	51.14	5525.94	79.33	94.00	0.09	-0.07	-0.33
	5667.00	9.69	178.97	160.8	-550.84	52.26	5619.55	81.30	95.00	1.09	-0.32	6.08

	5762.00	10.44	178.75	160.8	-567.44	52.59	5713.08	82.51	95.00	0.79	0.79	-0.23
	5856.00	10.51	171.06	163.5	-584.42	54.11	5805.52	84.92	94.00	1.49	0.07	-8.18
	5951.00	10.48	165.84	163.5	-601.36	57.57	5898.93	89.27	95.00	1.00	-0.03	-5.49
	6045.00	16.28	131.44	166.2	-618.41	69.56	5990.48	102.15	94.00	10.22	6.17	-36.60
	6140.00	24.45	112.26	166.2	-634.71	97.82	6079.56	131.23	95.00	11.00	8.60	-20.19
	6234.00	26.97	109.94	168.9	-649.36	135.87	6164.25	170.00	94.00	2.89	2.68	-2.47
	6329.00	34.91	104.97	171.6	-663.75	182.46	6245.68	217.29	95.00	8.77	8.36	-5.23
	6424.00	44.22	98.63	171.6	-675.77	241.63	6318.87	277.01	95.00	10.67	9.80	-6.67
	6519.00	55.51	92.70	174.3	-682.61	313.76	6380.04	349.40	95.00	12.80	11.88	-6.24
	6614.00	63.93	92.30	174.3	-686.18	395.65	6427.89	431.36	95.00	8.87	8.86	-0.42
	6709.00	71.66	94.58	174.3	-691.50	483.37	6463.77	519.24	95.00	8.43	8.14	2.40
	6803.00	80.29	94.07	177.0	-698.36	574.22	6486.53	610.33	94.00	9.20	9.18	-0.54
	6898.00	89.48	90.55	177.0	-702.15	668.65	6495.00	704.83	95.00	10.35	9.67	-3.71
	6992.00	89.75	88.99	179.7	-701.77	762.64	6495.63	798.67	94.00	1.68	0.29	-1.66
	7087.00	89.78	89.32	182.5	-700.37	857.63	6496.02	893.45	95.00	0.35	0.03	0.35
	7182.00	89.82	89.65	185.2	-699.52	952.63	6496.35	988.27	95.00	0.35	0.04	0.35
	7276.00	89.85	89.41	187.9	-698.75	1046.62	6496.62	1082.09	94.00	0.26	0.03	-0.26
	7371.00	90.58	88.95	187.9	-697.39	1141.61	6496.26	1176.88	95.00	0.91	0.77	-0.48
	7466.00	90.55	88.37	190.6	-695.17	1236.58	6495.33	1271.60	95.00	0.61	-0.03	-0.61
	7560.00	90.62	88.71	193.3	-692.77	1330.54	6494.37	1365.30	94.00	0.37	0.07	0.36
	7655.00	90.65	89.13	196.0	-690.98	1425.52	6493.31	1460.05	95.00	0.44	0.03	0.44
	7749.00	90.46	89.91	196.0	-690.19	1519.51	6492.40	1553.87	94.00	0.85	-0.20	0.83
	7844.00	90.49	89.66	196.0	-689.84	1614.51	6491.62	1648.72	95.00	0.27	0.03	-0.26
	7939.00	90.28	89.46	196.0	-689.11	1709.50	6490.98	1743.54	95.00	0.31	-0.22	-0.21
	8034.00	90.55	90.65	79.7	-689.20	1804.50	6490.29	1838.41	95.00	1.28	0.28	1.25
	8128.00	90.34	93.54	187.9	-692.63	1898.42	6489.56	1932.38	94.00	3.08	-0.22	3.07
	8223.00	89.97	90.59	193.3	-696.06	1993.35	6489.30	2027.36	95.00	3.13	-0.39	-3.11
	8317.00	90.03	89.61	196.0	-696.22	2087.35	6489.30	2121.23	94.00	1.04	0.06	-1.04
	8412.00	89.97	89.99	198.7	-695.89	2182.35	6489.30	2216.08	95.00	0.40	-0.06	0.40
	8507.00	89.97	88.12	198.7	-694.32	2277.33	6489.35	2310.85	95.00	1.97	0.00	-1.97
	8601.00	89.88	87.10	193.3	-690.40	2371.25	6489.48	2404.43	94.00	1.09	-0.10	-1.09
	8696.00	90.09	87.17	198.7	-685.65	2466.13	6489.50	2498.93	95.00	0.23	0.22	0.07
	8790.00	90.46	87.29	379.8	-681.11	2560.02	6489.05	2592.44	94.00	0.41	0.39	0.13
	8885.00	90.46	88.18	312.2	-677.36	2654.94	6488.29	2687.03	95.00	0.94	0.00	0.94
	8980.00	90.52	87.70	198.7	-673.94	2749.88	6487.47	2781.66	95.00	0.51	0.06	-0.51
	9074.00	90.49	89.50	201.4	-671.65	2843.84	6486.65	2875.37	94.00	1.92	-0.03	1.91
	9169.00	90.58	89.37	204.1	-670.71	2938.83	6485.76	2970.18	95.00	0.17	0.09	-0.14
	9264.00	90.65	88.18	206.8	-668.68	3033.80	6484.74	3064.91	95.00	1.25	0.07	-1.25
	9359.00	90.74	84.54	206.8	-662.65	3128.59	6483.59	3159.24	95.00	3.83	0.09	-3.83
	9453.00	90.65	88.19	201.4	-656.69	3222.38	6482.45	3252.58	94.00	3.88	-0.10	3.88
	9548.00	90.80	90.13	201.4	-655.30	3317.35	6481.24	3347.35	95.00	2.05	0.16	2.04
	9643.00	90.89	89.59	204.1	-655.07	3412.34	6479.84	3442.20	95.00	0.58	0.09	-0.57
	9737.00	90.74	89.29	206.8	-654.15	3506.33	6478.50	3536.00	94.00	0.36	-0.16	-0.32
	9832.00	90.77	89.49	206.8	-653.14	3601.31	6477.25	3630.80	95.00	0.21	0.03	0.21
	9927.00	90.80	89.33	209.5	-652.16	3696.30	6475.95	3725.61	95.00	0.17	0.03	-0.17
	10021.00	90.74	89.87	209.5	-651.50	3790.29	6474.69	3819.43	94.00	0.58	-0.06	0.57
	10116.00	90.52	87.86	206.8	-649.62	3885.26	6473.64	3914.17	95.00	2.13	-0.23	-2.12
	10210.00	90.37	89.81	206.8	-647.71	3979.23	6472.91	4007.91	94.00	2.08	-0.16	2.07
	10305.00	90.77	89.49	209.5	-647.13	4074.23	6471.97	4102.74	95.00	0.54	0.42	-0.34
	10400.00	90.40	89.64	212.2	-646.41	4169.22	6471.00	4197.56	95.00	0.42	-0.39	0.16
	10494.00	90.09	87.35	214.9	-643.94	4263.18	6470.60	4291.26	94.00	2.46	-0.33	-2.44
	10589.00	90.12	86.18	214.9	-638.58	4358.03	6470.42	4385.69	95.00	1.23	0.03	-1.23
	10684.00	90.12	87.16	206.8	-633.06	4452.86	6470.22	4480.10	95.00	1.03	0.00	1.03
	10779.00	89.97	87.22	214.9	-628.40	4547.75	6470.15	4574.61	95.00	0.17	-0.16	0.06
	10873.00	90.00	87.66	217.6	-624.20	4641.66	6470.17	4668.16	94.00	0.47	0.03	0.47

	10968.00	90.06	88.26	201.4	-620.82	4736.60	6470.12	4762.79	95.00	0.63	0.06	0.63
	11063.00	90.03	88.83	201.4	-618.41	4831.56	6470.05	4857.50	95.00	0.60	-0.03	0.60
	11157.00	89.94	88.48	204.1	-616.20	4925.54	6470.07	4951.22	94.00	0.38	-0.10	-0.37
	11252.00	90.06	88.02	201.4	-613.30	5020.49	6470.07	5045.89	95.00	0.50	0.13	-0.48
	11347.00	90.28	87.40	206.8	-609.51	5115.42	6469.79	5140.48	95.00	0.69	0.23	-0.65
	11441.00	90.59	87.64	190.6	-605.44	5209.33	6469.08	5234.05	94.00	0.42	0.33	0.26
	11536.00	90.03	88.56	179.7	-602.29	5304.27	6468.56	5328.69	95.00	1.13	-0.59	0.97
	11631.00	89.78	88.83	212.2	-600.13	5399.25	6468.72	5423.42	95.00	0.39	-0.26	0.28
	11725.00	89.91	89.19	217.6	-598.50	5493.23	6468.98	5517.19	94.00	0.41	0.14	0.38
	11820.00	89.85	90.00	217.6	-597.83	5588.23	6469.17	5612.02	95.00	0.85	-0.06	0.85
	11915.00	89.82	88.76	217.6	-596.80	5683.22	6469.45	5706.82	95.00	1.31	-0.03	-1.31
	12009.00	89.75	87.43	220.3	-593.68	5777.17	6469.80	5800.47	94.00	1.42	-0.07	-1.41
	12104.00	89.94	90.67	220.3	-592.10	5872.14	6470.06	5895.23	95.00	3.42	0.20	3.41
	12199.00	89.85	91.71	223.0	-594.08	5967.12	6470.23	5990.18	95.00	1.10	-0.09	1.09
	12293.00	90.00	89.55	217.6	-595.11	6061.11	6470.36	6084.09	94.00	2.30	0.16	-2.30
	12388.00	89.94	91.01	290.6	-595.57	6156.10	6470.41	6178.98	95.00	1.54	-0.06	1.54
	12482.00	89.94	92.23	225.7	-598.23	6250.06	6470.50	6272.95	94.00	1.30	0.00	1.30
	12577.00	89.91	93.61	225.7	-603.07	6344.94	6470.63	6367.94	95.00	1.45	-0.03	1.45
	12672.00	89.88	91.24	225.7	-607.09	6439.85	6470.80	6462.93	95.00	2.49	-0.03	-2.49
	12766.00	90.46	90.88	225.7	-608.83	6533.83	6470.52	6556.88	94.00	0.73	0.62	-0.38
	12861.00	90.46	90.98	225.7	-610.37	6628.81	6469.76	6651.81	95.00	0.11	0.00	0.11
	12955.00	90.46	90.40	225.7	-611.50	6722.80	6469.01	6745.73	94.00	0.62	0.00	-0.62
	13050.00	91.14	89.01	228.4	-611.01	6817.79	6467.68	6840.55	95.00	1.63	0.72	-1.46
	13145.00	90.55	85.52	223.0	-606.48	6912.66	6466.28	6935.05	95.00	3.73	-0.62	-3.67
	13239.00	90.62	87.59	225.7	-600.83	7006.48	6465.32	7028.44	94.00	2.20	0.07	2.20
	13334.00	90.62	86.75	225.7	-596.14	7101.35	6464.29	7122.94	95.00	0.88	0.00	-0.88
	13429.00	90.58	88.32	50.0	-592.06	7196.26	6463.30	7217.49	95.00	1.65	-0.04	1.65
	13523.00	90.52	85.75	225.7	-587.20	7290.12	6462.39	7310.97	94.00	2.73	-0.06	-2.73
	13617.00	90.52	86.32	228.4	-580.70	7383.89	6461.54	7404.26	94.00	0.61	0.00	0.61
	13712.00	90.55	89.94	228.4	-577.60	7478.82	6460.65	7498.89	95.00	3.81	0.03	3.81
	13806.00	90.59	88.80	231.1	-576.56	7572.81	6459.72	7592.70	94.00	1.21	0.04	-1.21
	13901.00	90.58	86.14	231.1	-572.37	7667.70	6458.75	7687.24	95.00	2.80	-0.01	-2.80
	13995.00	90.49	84.89	231.1	-565.02	7761.41	6457.87	7780.42	94.00	1.33	-0.10	-1.33
	14090.00	90.55	85.98	233.8	-557.46	7856.10	6457.01	7874.58	95.00	1.15	0.06	1.15
	14184.00	90.52	86.87	233.8	-551.60	7949.91	6456.13	7967.96	94.00	0.95	-0.03	0.95
	14279.00	90.74	89.38	236.5	-548.49	8044.85	6455.08	8062.59	95.00	2.65	0.23	2.64
	14374.00	90.55	93.44	236.5	-550.83	8139.79	6454.01	8157.53	95.00	4.28	-0.20	4.27
	14468.00	90.52	92.05	239.2	-555.33	8233.68	6453.14	8251.52	94.00	1.48	-0.03	-1.48
	14563.00	90.71	90.05	236.5	-557.07	8328.65	6452.12	8346.46	95.00	2.11	0.20	-2.11
	14658.00	90.68	90.94	231.1	-557.89	8423.64	6450.96	8441.35	95.00	0.94	-0.03	0.94
	14753.00	90.71	85.13	52.7	-554.64	8518.54	6449.81	8535.95	95.00	6.12	0.03	-6.12
	14848.00	90.68	85.68	239.2	-547.03	8613.23	6448.66	8630.10	95.00	0.58	-0.03	0.58
	14942.00	90.52	87.15	236.5	-541.15	8707.03	6447.67	8723.47	94.00	1.57	-0.17	1.56
	15037.00	90.58	88.16	239.2	-537.26	8801.95	6446.76	8818.04	95.00	1.06	0.06	1.06
	15132.00	90.74	87.76	236.5	-533.88	8896.88	6445.67	8912.66	95.00	0.45	0.17	-0.42
	15226.00	90.55	88.38	236.5	-530.71	8990.82	6444.61	9006.31	94.00	0.69	-0.20	0.66
	15321.00	91.36	88.66	236.5	-528.26	9085.78	6443.03	9101.00	95.00	0.90	0.85	0.29
	15415.00	90.43	87.52	223.0	-525.13	9179.71	6441.56	9194.63	94.00	1.57	-0.99	-1.21
	15509.00	90.43	87.94	220.3	-521.41	9273.63	6440.85	9288.23	94.00	0.45	0.00	0.45
	15604.00	90.46	88.18	223.0	-518.19	9368.58	6440.12	9382.87	95.00	0.25	0.03	0.25
	15699.00	90.55	88.31	228.4	-515.28	9463.53	6439.28	9477.53	95.00	0.17	0.09	0.14
	15793.00	90.52	88.47	93.2	-512.64	9557.49	6438.40	9571.22	94.00	0.17	-0.03	0.17
	15888.00	90.43	89.61	231.1	-511.05	9652.47	6437.61	9665.99	95.00	1.20	-0.09	1.20
	15983.00	90.37	89.81	231.1	-510.57	9747.46	6436.95	9760.83	95.00	0.22	-0.06	0.21
	16077.00	90.43	90.09	233.8	-510.48	9841.46	6436.29	9854.69	94.00	0.30	0.06	0.30

	16144.00	90.43	90.73	233.8	-510.96	9908.46	6435.79	9921.62	67.00	0.96	0.00	0.96
Projection	16168.00	90.43	90.73	N/A	-511.27	9932.46	6435.61	9945.60	24.00	0.00	0.00	0.00