

	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Sairav Parab	14/Sep/2012	07/Oct/2012	David Luttrell	14/Sep/2012	22/Sep/2012	Wes Thornhill	22/Sep/2012	30/Sep/2012
Jose Rodriguez	15/Sep/2012	06/Oct/2012	Andrew Sims	15/Sep/2012	05/Oct/2012	Gary Igleheart	30/Sep/2012	07/Oct/2012

Witness

Name	LWD Run Number
Ryan Logsdon	1, 2, 3, 4, 5, 6

Mud Properties Record

Date / Time	LWD Run No.	Measured Depth (ft.)	Mud Type	Density (ppg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
18/Sep/2012 07:30	1	4077.0	Water Based	9.0	18	9.5	4.2	0/95.4	Flow Line	6000	N/A
21/Sep/2012 07:30	2	4477.0	Water Based	9.0	18	9.5	4.2	0/99	Flow Line	6000	N/A
23/Sep/2012 07:30	3	5815.0	Water Based	8.4	18	9.5	6.4	0/99	Flow Line	6000	N/A
27/Sep/2012 07:30	4	6806.0	Water Based	9.0	26	9.5	2.5	0/95.2	Flow Line	400	N/A
28/Sep/2012 07:30	5	7050.0	Water Based	8.8	25	9.5	6.4	0/96.5	Flow Line	400	N/A
01/Oct/2012 17:30	6	7476.0	Water Based	8.9	27	9.0	6.4	0/95.7	Flow Line	400	N/A

Mud Resistivity Record

Date / Time	LWD Run No.	Measured Depth (ft.)	Surface Temp (deg F)	Surface			BHCT (deg F)	Downhole		
				Rm (ohm.m)	Rmf (ohm.m)	Rmc (ohm.m)		Rm @ BHCT (ohm.m)	Rmf @ BHCT (ohm.m)	Rmc @ BHCT (ohm.m)
21/Sep/2012 07:00	2	4077.0	78	1.50	1.50	1.50	128	0.93	0.93	0.93
23/Sep/2012 12:01	3	5896.0	87	1.50	1.50	1.50	134	0.99	0.99	0.99
27/Sep/2012 12:01	4	6806.0	75	1.50	1.50	1.50	134	1.11	1.11	1.11
28/Sep/2012 23:00	5	7050.0	70	1.50	1.50	1.50	134	0.81	0.81	0.81
01/Oct/2012 01:45	6	7422.0	87	1.50	1.50	1.50	139	0.95	0.95	0.95

Mnemonics

Curve	Description	Units
GRAX	Average Gamma Ray Apparent, 0.5 ft average	API
INNX	Survey Inclination	deg
ROP	Rate of Penetration	ft / hr
GRTVDX	Gamma Ray True Vertical Depth	ft
GRAUX	Gamma Ray Apparent – Up Quadrant	API
GRADX	Gamma Ray Apparent – Down Quadrant	API
RPCHX	Compensated and Corrected Resistivity, 2 Mhz, Long Space, Phase Difference	ohm.m
RACHX	Compensated and Corrected Resistivity, 2 Mhz, Long Space, Attenuation	ohm.m

Equipment and Service Data

LWD Run	Tool	Serial Number	Measurement	Bit Offset	Max O.D.	Min I.D.

No.				(ft)	(in.)	(in.)
1	SRIG	10433831	Gamma	47.21	6.750	2.569
1	DIR	12168817	Directional	42.21	6.750	2.569
2	DIR	11592386	Directional	47.14	4.750	2.569
2	GAM	11592386	Gamma	42.46	4.750	1.750
2	MPR	11592386	Multiple Propagation Resistivity	33.97	4.750	1.750
2	APR	11592383	Azimuthal Propagation Resistivity	33.97	4.750	1.750
2	AP	11592386	Annular Pressure	38.40	4.750	1.750
3	DIR	11592386	Directional	47.14	4.750	1.750
3	GAM	11592386	Gamma	42.46	4.750	1.750
3	MPR	11592386	Multiple Propagation Resistivity	33.97	4.750	1.750
3	APR	11592386	Azimuthal Propagation Resistivity	33.97	4.750	1.750
3	AP	11592386	Annular Pressure	38.40	4.750	1.750
4	DIR	11592386	Directional	45.23	4.750	1.750
4	GAM	11592386	Gamma	40.55	4.750	1.750
4	MPR	11592386	Multiple Propagation Resistivity	32.06	4.750	1.750
4	APR	11592386	Azimuthal Propagation Resistivity	32.06	4.750	1.750
4	AP	11592386	Annular Pressure	36.49	4.750	1.750
5	DIR	11592386	Directional	40.91	4.750	1.750
5	GAM	11592386	Gamma	36.23	4.750	1.750
5	MPR	11592386	Multiple Propagation Resistivity	27.74	4.750	1.750
5	APR	11592386	Azimuthal Propagation Resistivity	27.74	4.750	1.750
5	AP	11592386	Annular Pressure	32.17	4.750	1.750
6	DIR	12517557	Directional	38.43	4.750	1.750
6	GAM	12517557	Gamma	25.27	4.750	1.750
6	MPR	12517557	Multiple Propagation Resistivity	32.46	4.750	1.750
6	APR	12517557	Azimuthal Propagation Resistivity	27.74	4.750	1.750
6	AP	12517557	Annular Pressure	27.90	4.750	1.750

Service and Tool Mnemonics

Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module
GAM	Gamma	Collar based Azimuthal Gamma Ray Module
MPR	Resistivity	Collar based Multiple Propagation Resistivity Module
AP	Annular Pressure	Annular Pressure Sensor
APR	Azimuthal Restivity	Azimuthal Propagation Resistivity Module

Comments

- 1) Baker Hughes Inteq run 1 utilized 6 3/4 NaviGamma Service (Directional and Gamma Ray) behind an 8 3/4 inch bit and steerable assembly from 3353 to 4475 feet MD (3353 to 3999 feet TVD).
- 2) Baker Hughes Inteq runs 2 through x utilized 4 3/4 Multiple Propagation Resistivity Service (Azitrak) behind a 6 1/8 inch bit and steerable assembly from 4476 to 7476 feet MD (3999 to 3997 feet TVD).
- 3) Depth measurements were obtained from a depth control system not supplied by Baker Hughes INTEQ. Due to the lack of control by Baker Hughes INTEQ logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to INTEQ are being used to present logging data.

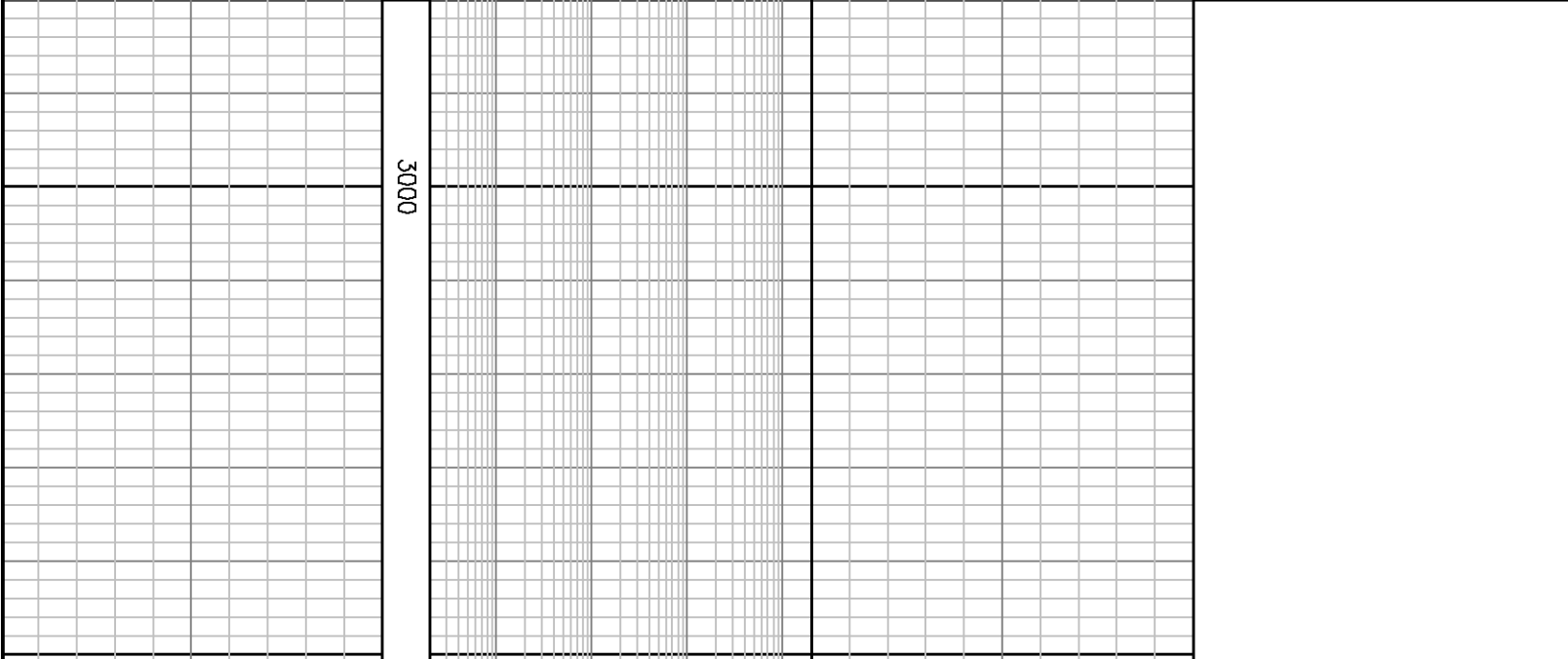
Remarks

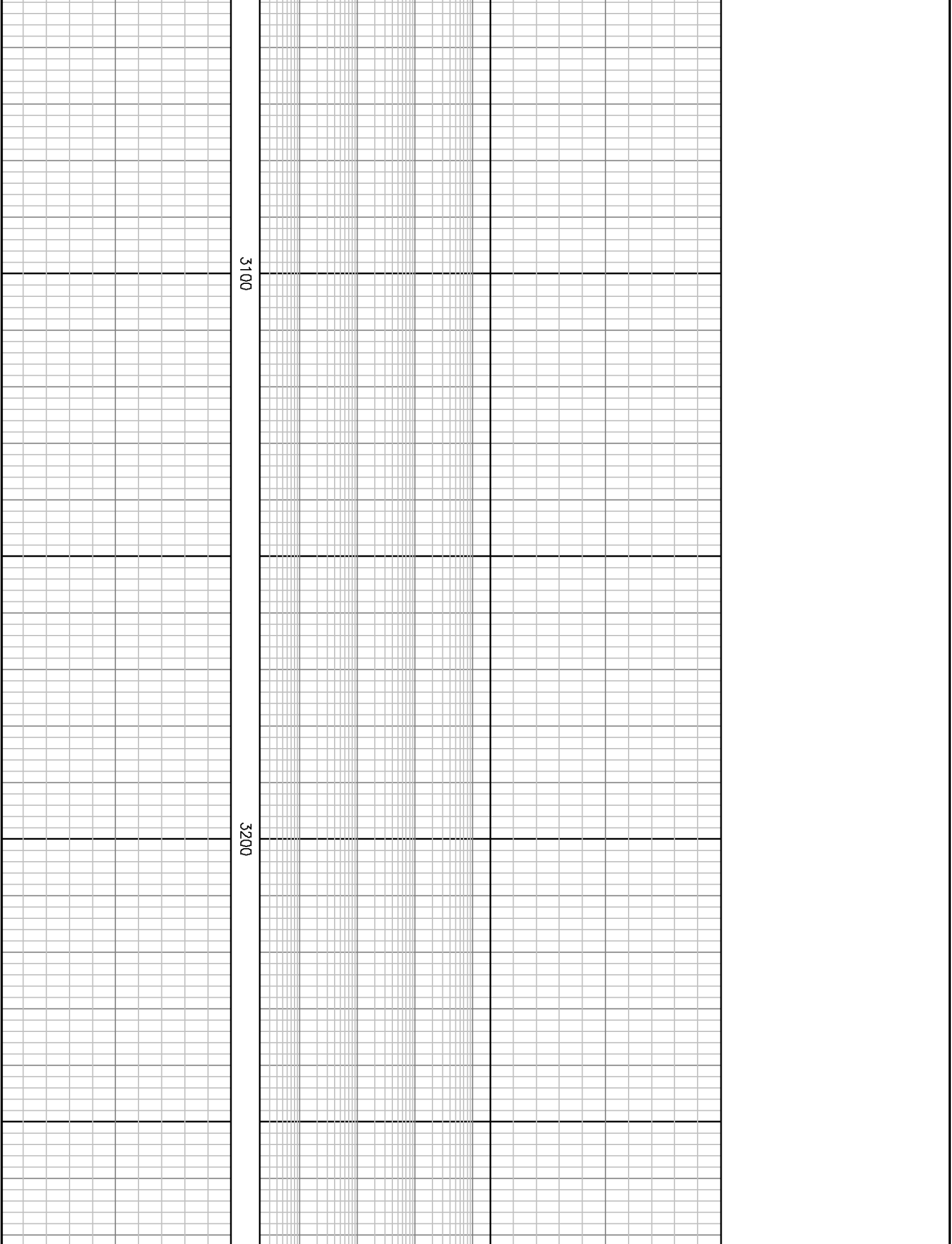
Number	Measured Depth (ft)	Hole Section (in.)	LWD Run No.	Remark
1	3353	8.750	1	The interval from 3353 to 3401 feet MD (3353 to 3400 feet TVD) was logged due to Gamma Ray sensor to bit offset at the start of well logging.
2	4428	6.125	1	The interval from 4428 to 4476 feet MD (4001 to 3999 feet TVD) was logged upto 53 hours after being drilled due to a trip out of hole to run the casing and pickup lateral assembly.
3	5473	6.125	2	The interval from 5473 to 5514 feet MD (4009 to 4011 feet TVD) was logged up to 9 hours after being drilled due to a trip out of hole to change the bit.
4	6547	6.125	3	The interval from 6547 to 6592 feet MD (4022 to 4023 feet TVD) was logged up to 10 hours after being drilled due to a trip out of hole to change the bit.
5	6767	6.125	4	The interval from 6767 to 6811 feet MD (4007 to 4002 feet TVD) was logged up to 13 hours after being drilled due to a trip out of hole to pick up an Agitator and change the bit.
6	7344	6.125	5	The interval from 7344 to 7407 feet MD (3944 to 3995 feet TVD) was logged up to 42.3 hours after being drilled due to a trip out of hole to pick up an Agitator and change the bit.
7	7476	6.125	6	The interval from 7452 to 7476 feet MD (3997 to 3997 feet TVD) was not logged due to Gamma Ray sensor to bit offset at well TD.



Company : MIDCON Energy
 Well : Holland 1-12H
 Interval : 2980.00 - 4110.00 feet
 Created : 06/Oct/2012 2:19:12 PM

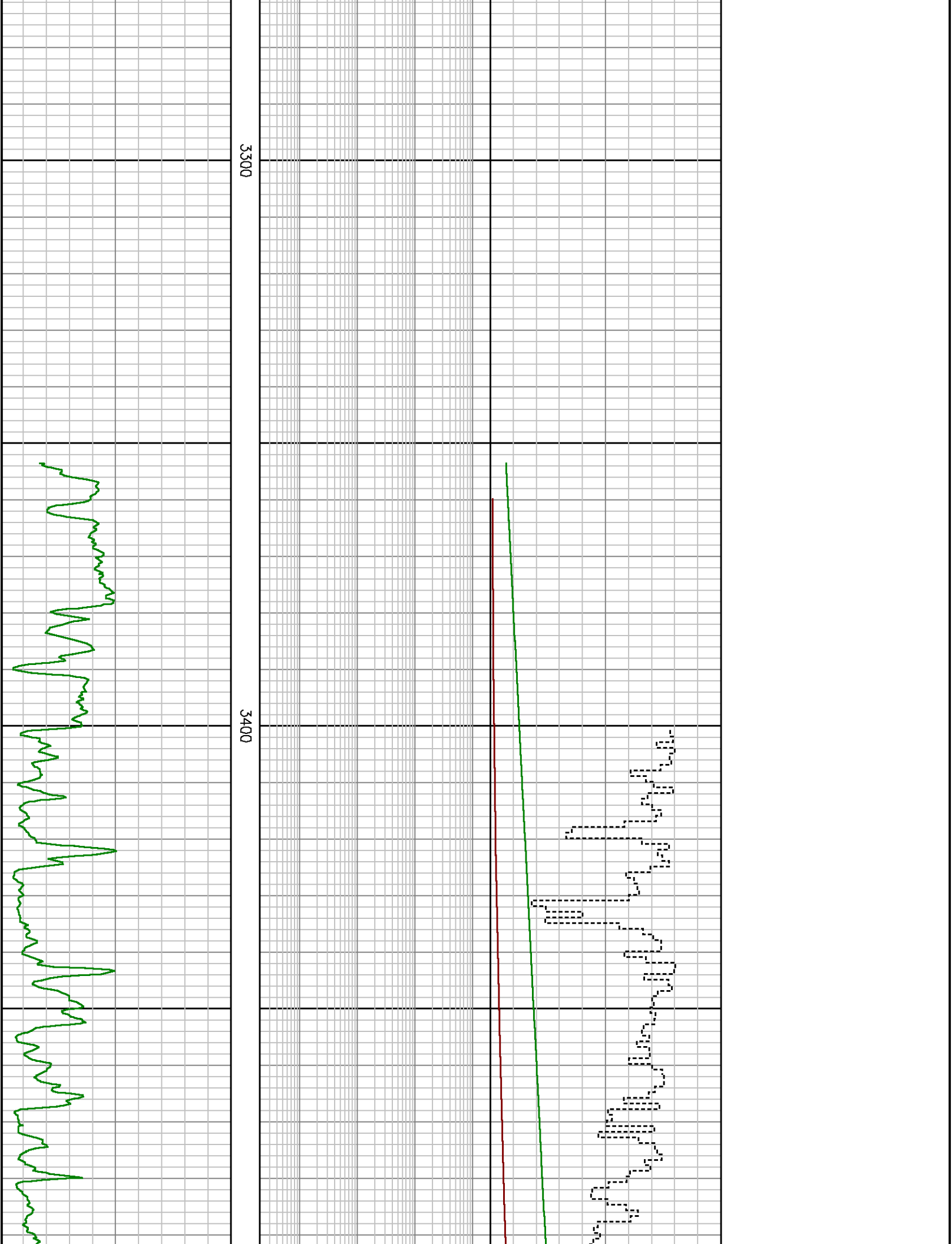
0	Gamma Down (GRADX)	300	TVD feet 1:240	0.2	2MHz PD LS (RPCHX)	2000	3300	Gamma TVD (GRTVDX)	4100	Azimuthal Gamma Image
	API			ohm.m				ft		
0	Gamma Up (GRAUX)	300		0.2	2Mhz AT LS (RACHX)	2000	0	Inclination (INNX)	100	
	API			ohm.m				deg		
0	Gamma Ray 0.5 ft. Avg. (GRAX)	300				100	Rate of Penetration (ROP)	0		
	API						ft/hr			

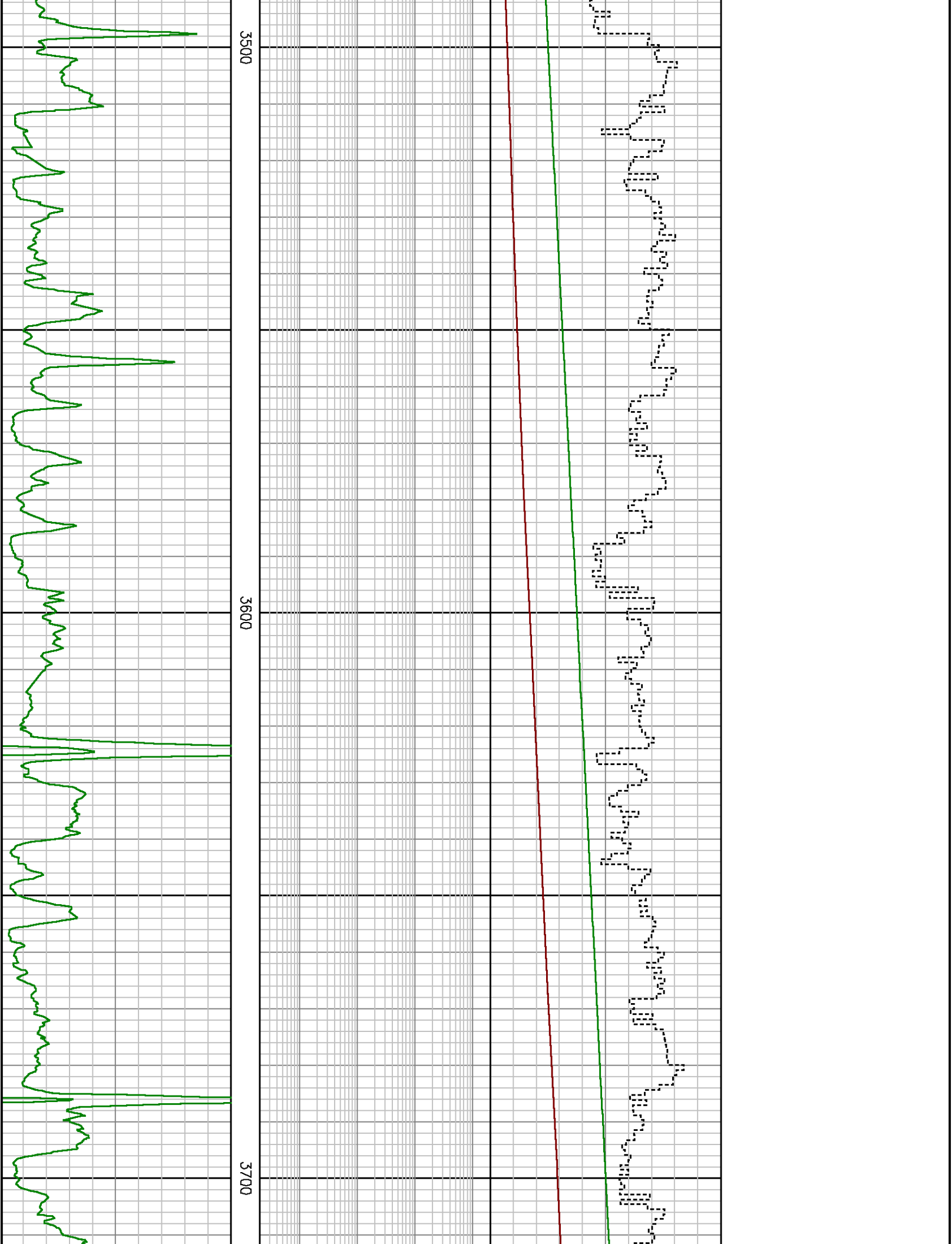


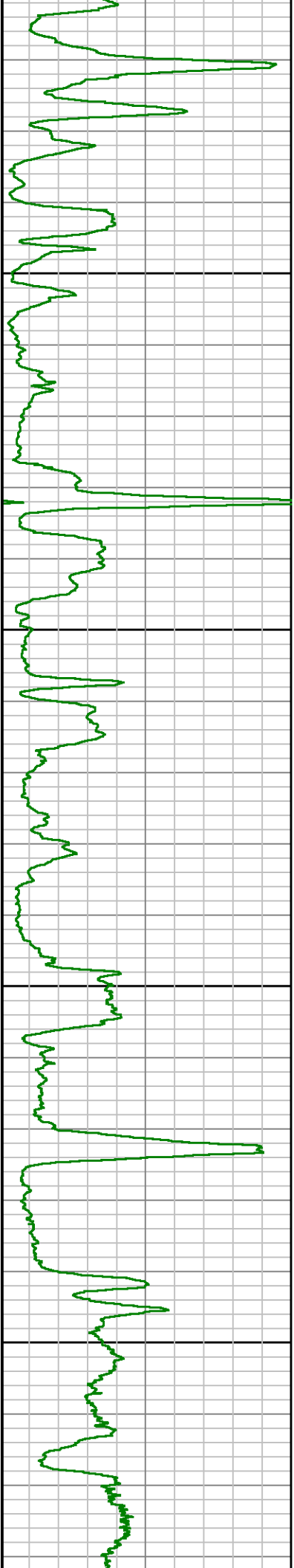


3100

3200

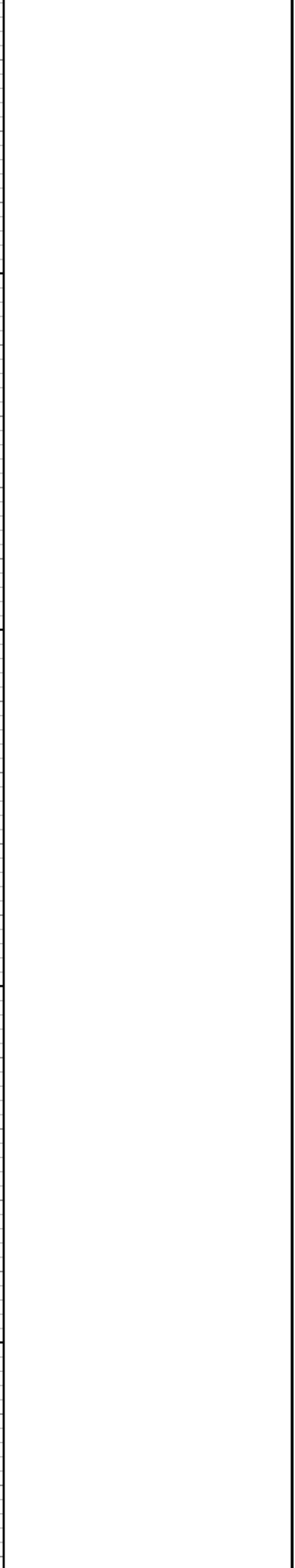
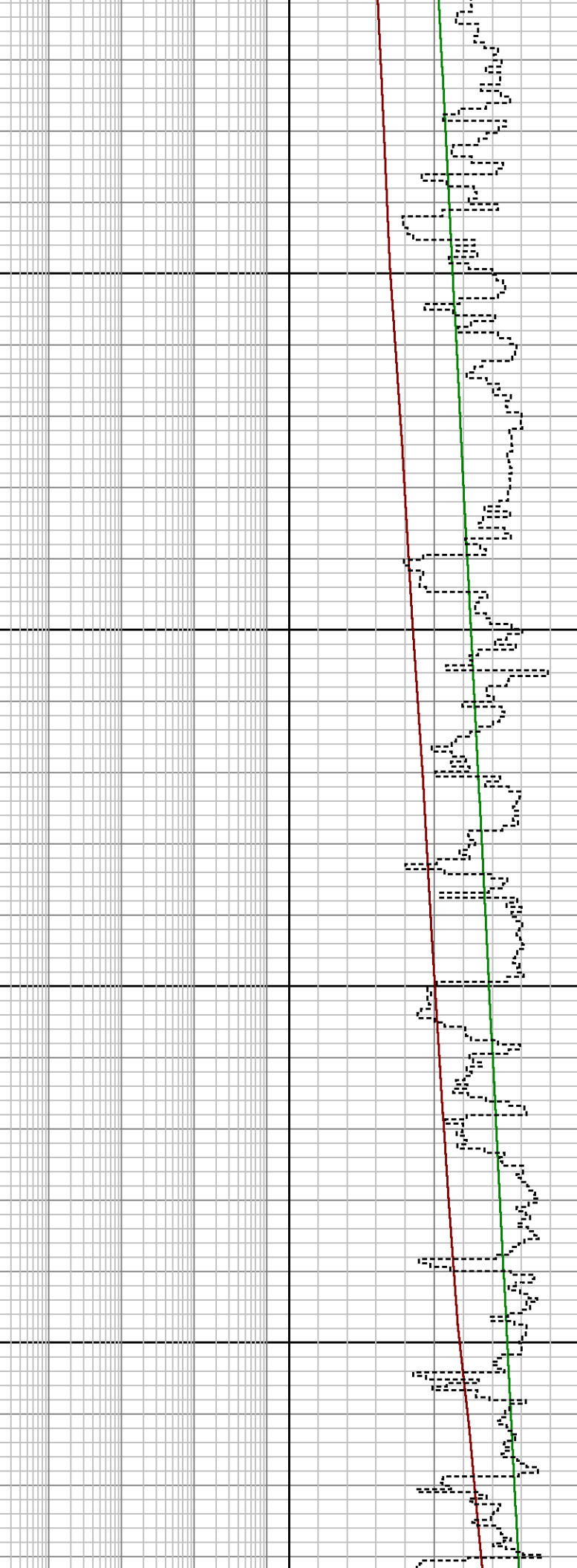


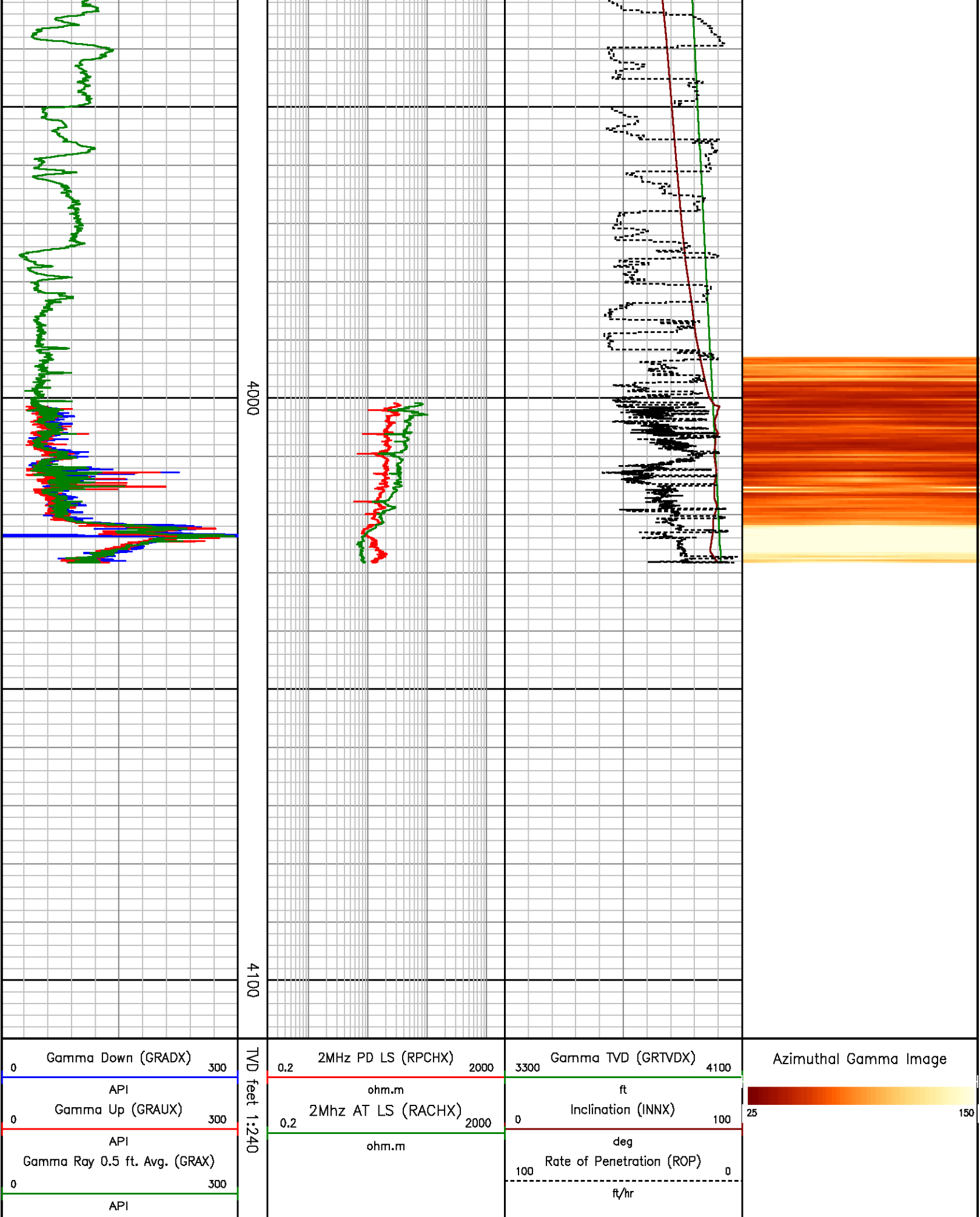




3800

3900



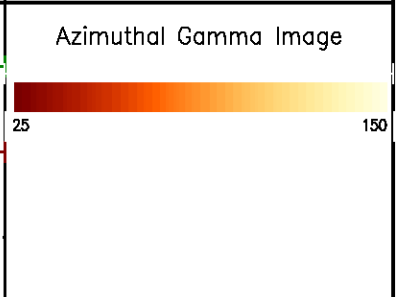


0	Gamma Down (GRADX)	300
API		
0	Gamma Up (GRAUX)	300
API		
0	Gamma Ray 0.5 ft. Avg. (GRAX)	300
API		

TVD feet 1:240

0.2	2MHz PD LS (RPCHX)	2000
ohm.m		
0.2	2MHz AT LS (RACHX)	2000
ohm.m		

3300	Gamma TVD (GRTVDX)	4100
ft		
0	Inclination (INNX)	100
deg		
100	Rate of Penetration (ROP)	0
ft/hr		



ADVANTAGE Final Survey Listing

Operator : Midcon Energy Field : LKC API No : 15195228110100
 Well : Holland 1-12H Rig : Trinidad 215 Job : 4945920
 Wellbore : Holland 1-12H Orig Hole

Well Origin

Latitude 39.02 deg Longitude -99.72 deg
 North Reference Grid Drill Depth Zero Kelly Bushing
 Vertical Datum is Ground Level Vertical Datum to DDZ 10.00 ft
 Vertical Section North 0.00 ft Vertical Section East 0.00 ft
 Vertical Section Azimuth 349.98 deg Vertical Section Depth 0.00ft
 Grid Convergence 1.09 deg Magnetic Declination 5.79 deg
 Total Correction 6.88 deg TVD Calculation Method Minimal Curvature
 D-Raw Calculation Magcorr1 Local Magnetic Field 52674 nT
 Local Magnetic Dip Angle 66.64 deg Local Gravity Field 0.9992 gravity

Tie	MD ft	Incl deg	Azim deg	North ft	East ft	TVD ft	VS ft	Incr VS ft	Crs Len ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft
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0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
623.00	0.22	183.07	-1.18	-0.06	623.00	-1.15	1.18	623.00	0.03	0.03	-28.40	
1194.00	0.00	6.88	-2.27	-0.12	1194.00	-2.21	2.27	571.00	0.04	-0.04	-30.86	
1856.00	0.52	286.60	-1.42	-2.98	1854.99	-0.88	5.25	661.00	0.08	0.08	-12.14	
2325.00	0.09	170.13	-1.16	-4.94	2324.98	-0.28	7.23	470.00	0.12	-0.09	-24.78	
2748.00	0.35	99.63	-1.70	-3.61	2747.98	-1.04	6.67	423.00	0.08	0.06	-16.67	
3380.00	1.08	239.99	-4.89	-6.75	3359.95	-3.64	13.15	612.00	0.22	0.12	22.93	
3392.00	1.43	283.20	-5.09	-7.41	3391.94	-3.72	13.84	32.00	1.92	1.11	72.54	
3423.00	2.35	307.89	-4.74	-8.29	3422.92	-3.23	14.79	31.00	5.39	2.96	144.16	
3455.00	4.05	330.30	-3.36	-9.37	3454.87	-1.68	16.54	32.00	6.49	5.30	70.04	

3485.00	6.18	341.78	-0.91	-10.40	3484.75	0.92	19.21	30.00	7.85	7.11	38.25	
3517.00	8.70	343.99	3.06	-11.61	3516.48	5.03	23.35	32.00	7.93	7.88	6.92	
3549.00	11.49	344.78	8.46	-13.11	3547.98	10.62	28.98	32.00	8.72	8.71	2.44	
3580.00	14.62	345.81	15.24	-14.88	3578.18	17.59	35.98	31.00	10.11	10.08	3.32	
3611.00	18.09	347.18	23.72	-16.91	3607.92	26.30	44.69	31.00	11.26	11.20	4.43	
3643.00	21.51	349.16	34.33	-19.12	3638.03	37.13	55.52	32.00	10.90	10.70	6.19	
3675.00	25.04	349.86	46.76	-21.41	3667.42	49.78	68.16	32.00	11.08	11.03	2.20	
3706.00	28.65	350.61	60.56	-23.78	3695.07	63.77	82.16	31.00	11.71	11.66	2.40	
3738.00	31.83	352.12	76.49	-26.19	3722.71	79.88	98.27	32.00	10.20	9.92	4.72	
3770.00	34.90	352.15	93.92	-28.60	3749.44	97.46	115.87	32.00	9.60	9.60	0.10	

3801.00	38.89	352.00	112.35	-31.17	3774.22	116.06	134.48	31.00	12.89	12.88	-0.46	
3833.00	42.49	352.22	133.01	-34.03	3798.48	136.91	155.34	32.00	11.26	11.25	0.68	
3864.00	46.10	351.93	154.45	-37.01	3820.67	158.54	176.98	31.00	11.64	11.62	-0.93	
3896.00	48.93	351.54	177.80	-40.41	3842.28	182.12	200.58	32.00	8.92	8.87	-1.23	
3926.00	51.90	351.31	200.66	-43.86	3861.39	205.23	223.70	30.00	9.92	9.90	-0.77	
3957.00	54.86	351.35	225.28	-47.61	3879.88	230.10	248.58	31.00	9.54	9.54	0.12	
3989.00	58.12	351.32	251.63	-51.63	3897.54	256.77	275.25	32.00	10.17	10.17	-0.09	
4018.00	62.09	351.02	276.47	-55.49	3912.00	281.90	300.39	29.00	13.73	13.70	-1.02	
4050.00	65.35	351.03	304.80	-59.96	3926.16	310.59	329.08	32.00	10.20	10.20	0.03	
4081.00	68.12	351.38	332.95	-64.31	3938.40	339.06	357.55	31.00	9.00	8.94	1.12	

4112.00	70.29	351.10	361.59	-68.73	3949.41	368.03	386.53	31.00	7.04	6.99	-0.90	
4143.00	72.33	350.51	390.57	-73.42	3959.34	397.39	415.90	31.00	6.82	6.58	-1.89	
4175.00	74.33	350.05	420.79	-78.59	3968.52	428.04	446.55	32.00	6.39	6.23	-1.46	
4207.00	76.29	349.70	451.28	-84.04	3976.64	459.00	477.50	32.00	6.24	6.15	-1.08	
4238.00	78.76	349.80	481.04	-89.42	3983.33	489.26	507.77	31.00	7.97	7.96	0.33	
4270.00	80.50	350.19	512.04	-94.89	3989.09	520.74	539.24	32.00	5.58	5.45	1.20	
4301.00	82.43	350.00	542.24	-100.16	3993.89	551.39	589.90	31.00	6.25	6.22	-0.60	
4333.00	84.48	350.00	573.54	-105.68	3997.34	583.18	601.69	32.00	6.40	6.40	0.00	
4364.00	86.20	350.09	603.98	-111.02	3999.85	614.08	632.59	31.00	5.56	5.55	0.30	
4396.00	88.52	350.94	635.50	-116.29	4001.33	646.04	664.55	32.00	7.71	7.24	2.66	

4428.00	90.65	350.65	667.09	-121.40	4001.56	678.04	696.55	32.00	6.72	6.65	-0.93	
4483.00	92.16	350.90	721.36	-130.22	4000.21	733.01	751.53	55.00	2.78	2.74	0.47	
4528.00	91.42	350.33	815.04	-145.69	3997.25	827.96	846.48	95.00	0.98	-0.78	-0.60	

4578.00	91.42	330.33	810.04	-143.89	3997.23	827.98	840.48	93.00	0.98	-0.78	-0.88
4642.00	88.43	349.80	878.08	-158.84	3997.34	891.95	910.47	64.00	4.80	-4.87	-1.14
4706.00	88.64	349.14	940.94	-168.64	3998.97	955.93	974.45	64.00	0.80	0.34	-0.73
4789.00	88.95	349.09	1002.79	-180.53	4000.29	1018.91	1037.44	63.00	0.49	0.49	-0.07
4832.00	88.92	348.43	1064.57	-192.81	4001.46	1081.88	1100.43	63.00	1.05	-0.05	-1.05
4894.00	89.91	348.85	1125.35	-205.01	4002.09	1143.86	1162.42	62.00	1.73	1.59	0.67
4958.00	89.57	348.91	1188.15	-217.35	4002.39	1207.85	1226.42	64.00	0.54	-0.53	0.09
5021.00	89.54	348.61	1249.94	-229.63	4002.88	1270.83	1289.42	63.00	0.49	-0.05	-0.48

Tie	MD ft	Incl deg	Azim deg	North ft	East ft	TVD ft	VS ft	Incr VS ft	Crs Len ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft
	5084.00	88.46	348.63	1311.69	-242.06	4003.98	1333.80	1352.41	63.00	1.71	-1.71	0.04
	5148.00	88.98	349.62	1374.53	-254.13	4005.41	1397.78	1416.39	64.00	1.74	0.82	1.54
	5211.00	89.85	351.32	1436.65	-264.56	4006.05	1460.77	1479.39	63.00	3.03	1.37	2.70
	5275.00	90.00	351.50	1499.93	-274.12	4006.13	1524.75	1543.39	64.00	0.36	0.24	0.27
	5338.00	88.86	351.37	1562.23	-283.51	4006.76	1587.73	1606.38	63.00	1.82	-1.81	-0.21
	5402.00	88.80	351.01	1625.46	-293.32	4008.07	1651.70	1670.37	64.00	0.57	-0.10	-0.56
	5465.00	88.28	350.36	1687.60	-303.51	4009.68	1714.67	1733.35	63.00	1.32	-0.83	-1.03
	5526.00	88.71	350.09	1747.70	-313.87	4011.28	1775.65	1794.33	61.00	0.83	0.71	-0.44
	5589.00	89.14	350.15	1809.75	-324.67	4012.47	1838.64	1857.32	63.00	0.69	0.69	0.09
	5653.00	88.89	350.57	1872.84	-335.39	4013.57	1902.63	1921.31	64.00	0.77	-0.38	0.66
	5716.00	88.18	350.10	1934.92	-345.96	4015.18	1965.61	1984.28	63.00	1.36	-1.13	-0.76
	5779.00	88.15	349.51	1996.90	-357.11	4017.19	2028.57	2047.25	63.00	0.93	-0.05	-0.92
	5842.00	89.48	349.31	2058.81	-368.68	4018.50	2091.55	2110.24	63.00	2.13	2.11	-0.32
	5905.00	89.29	347.83	2120.58	-381.16	4019.17	2154.53	2173.23	63.00	2.36	-0.29	-2.34
	5968.00	87.91	349.48	2182.30	-393.55	4020.71	2217.49	2236.21	63.00	3.41	-2.20	2.61
	6031.00	87.66	350.16	2244.26	-404.68	4023.15	2280.44	2299.16	63.00	1.15	-0.39	1.08
	6094.00	86.58	350.38	2306.28	-415.31	4026.32	2343.36	2362.08	63.00	1.75	-1.71	0.36
	6158.00	89.85	351.83	2369.47	-425.20	4028.31	2407.31	2426.04	64.00	5.58	5.10	2.28
	6221.00	91.36	352.43	2431.87	-433.82	4027.65	2470.26	2489.03	63.00	2.58	2.40	0.96
	6284.00	91.91	351.33	2494.21	-442.72	4025.86	2533.20	2552.01	63.00	1.97	0.88	-1.76
	6347.00	92.00	350.62	2556.39	-452.59	4023.71	2596.15	2614.97	63.00	1.12	0.15	-1.12
	6411.00	89.26	349.32	2619.41	-463.74	4023.00	2660.14	2678.96	64.00	4.74	-4.28	-2.04
	6471.00	91.57	349.88	2678.41	-474.56	4022.57	2720.13	2738.95	60.00	3.96	3.85	0.94
	6535.00	89.23	349.62	2741.39	-485.95	4022.12	2784.12	2802.95	64.00	3.68	-3.66	-0.42
	6599.00	91.63	350.79	2804.45	-496.84	4021.64	2848.12	2866.94	64.00	4.17	3.75	1.83
	6661.00	95.46	351.98	2865.62	-506.11	4017.81	2909.97	2928.81	62.00	6.46	6.17	1.93
	6724.00	95.86	351.65	2927.67	-515.04	4011.60	2972.63	2991.50	63.00	0.83	0.64	-0.52
	6778.00	96.36	352.13	2980.83	-522.61	4005.85	3026.29	3045.19	54.00	1.28	0.93	0.88
	6841.00	94.78	351.55	3042.89	-531.51	3999.73	3088.96	3107.89	63.00	2.68	-2.52	-0.92
	6904.00	91.17	350.44	3105.02	-541.35	3996.46	3151.85	3170.80	63.00	5.99	-5.73	-1.77
	6967.00	89.82	349.89	3167.09	-552.11	3995.92	3214.85	3233.79	63.00	2.32	-2.15	-0.87
	7030.00	89.91	349.85	3229.11	-563.19	3996.08	3277.85	3296.79	63.00	0.16	0.15	-0.06
	7094.00	91.63	349.56	3292.07	-574.63	3995.22	3341.84	3360.79	64.00	2.73	2.69	-0.46
	7157.00	90.12	350.01	3354.06	-585.80	3994.25	3404.83	3423.78	63.00	2.50	-2.39	0.72
	7220.00	91.72	350.17	3416.11	-596.64	3993.23	3467.82	3486.77	63.00	2.55	2.54	0.25
	7283.00	88.98	349.32	3478.10	-607.86	3992.84	3530.81	3549.76	63.00	4.55	-4.35	-1.34
	7346.00	88.43	349.40	3540.00	-619.49	3994.27	3593.79	3612.74	63.00	0.89	-0.88	0.13
	7422.00	88.43	348.78	3614.60	-633.86	3996.35	3669.75	3688.71	76.00	0.82	-0.00	-0.82
	Projection to TD:											
	7476.00	88.43	348.78	3667.55	-644.36	3997.83	3723.72	3742.69	54.00	0.00	0.00	0.00