

ATC_MWD	ATC_MWD	Auto Trak Curve MWD
ATC_LCPM	ATC_LCPM	Auto Trak Curve LCPM

Comments

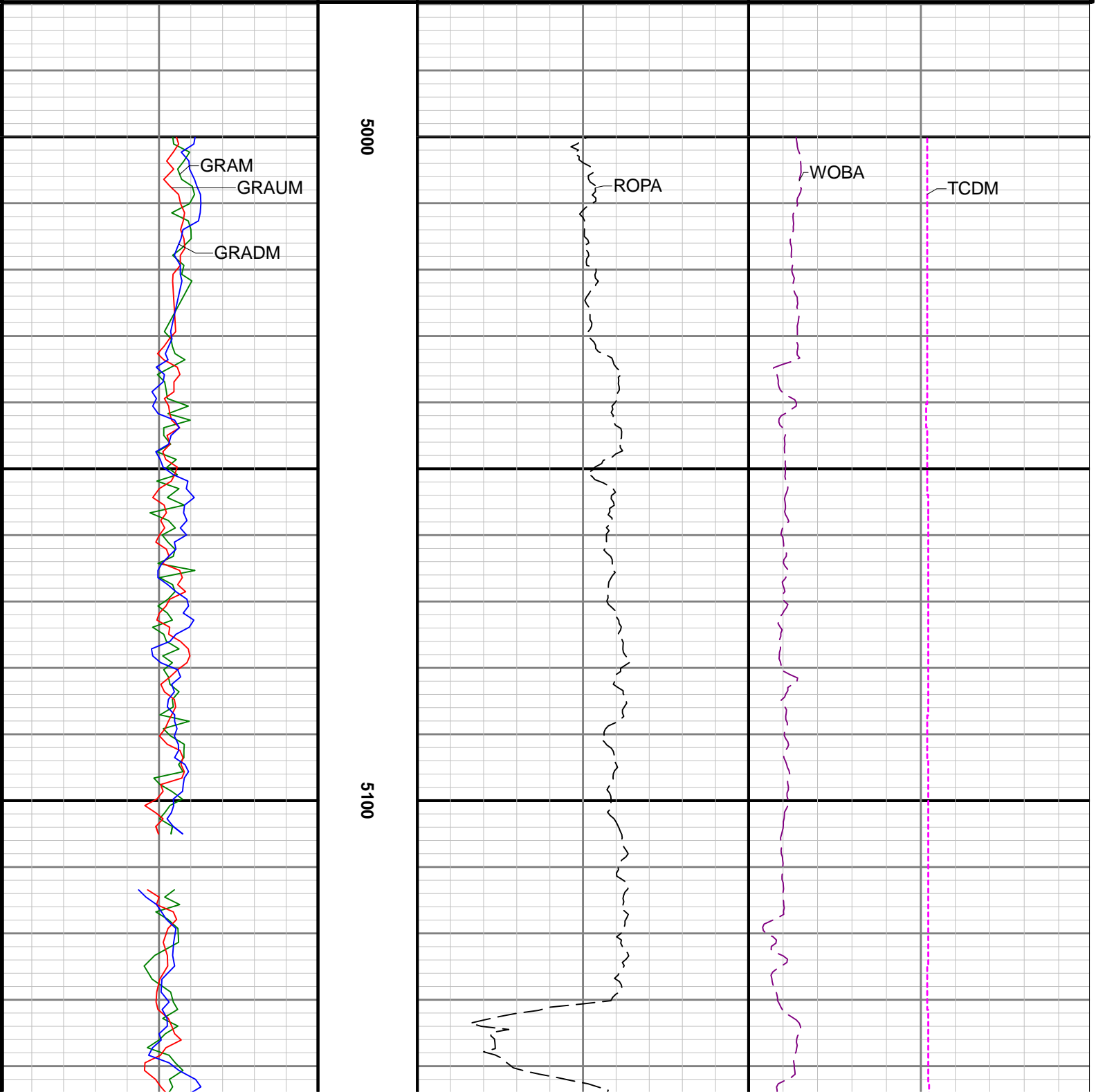
- 1
- Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to the lack of control by Baker Hughes, depth calibrations and measurements could not be independently verified.
- 2
- Baker Hughes LWD Run 1 used the 8 inch NaviTrak service (Directional) behind a 13 1/2 inch bit and steerable assembly to drill from 17 to 1612 feet MD (17 to 1612 feet TVD).
- 3
- Baker Hughes LWD Runs 2 through 3 used the 6 3/4 inch NaviGamma service (Gamma Ray, Azimuthal Gamma Ray and Directional) behind an 8 1/2 inch bit and rotary steerable assembly to drill from 1612 to 11537 feet MD (1622 to 6329 feet TVD).
- 4
- The Gamma Ray Apparent (GRAM) data is presented from 0 to 200 API, per customer's request.
- 5
- There are numerous gaps in Gamma Ray data due to sensor failing downhole.

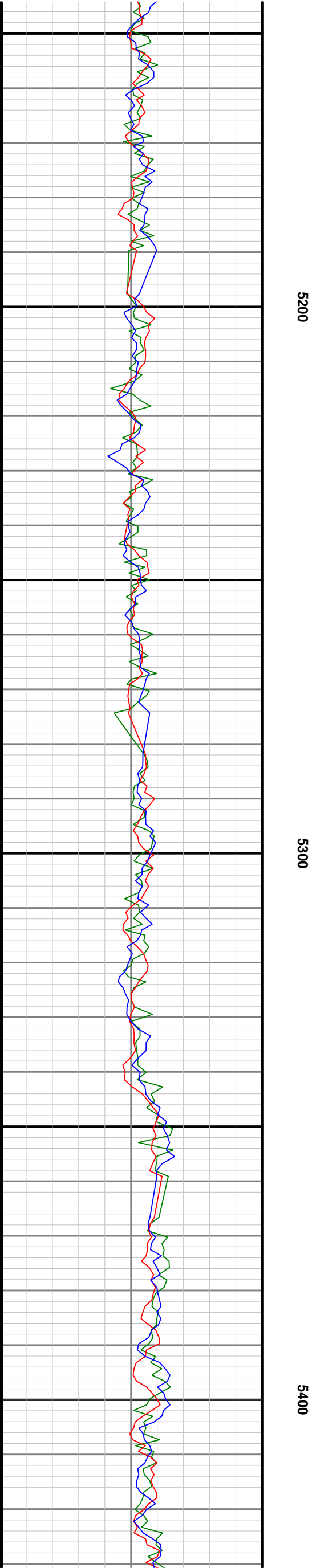
Remarks

Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	5000.00	8.500	2	The Gamma Ray Apparent (GRAM) log starts at 5000 feet, per customer's request.
2	10334.43	8.500	3	The GRTM curve exceeds the 600 min scale in the interval from 10331 to 10344 feet MD (6329 TVD) because it was not logged for up to 12 hours after a trip out of hole to change BHA.
3	11535.00	8.500	3	The interval from 11524 to 11537 feet MD (6329 feet TVD) was not logged due to sensor to bit offset at well TD.

<div><div><div><div><div></div><div>BAKER HUGHES</div><div>a GE company</div></div><div><div><div><div></div><div>GE</div></div></div></div></div></div></div>	Company	Bonanza Creek Oil Company		
	Well	North Platte F21-J24-28HNB		
	Interval	Date From:	2018-09-07 01:18	Top: 17.00 ft
	Created	Date To:	2018-09-19 05:46	Bottom: 11537.00 ft
		2018-09-19 10:26:35		

Gamma Ray - Apparent 0.5 ft Average GRAM 0 200 API	TVD 1:240 feet	Depth Averaged ROP 3 ft Average ROPA 1000 0 ft/h	Weight On Bit, Average 1 ft Average WOBA 0 100 klb
Azimuthal Gamma Ray - Apparent - Up Quadrant 0.5 ft Average GRAUM 0 200 API			Downhole Temperature TCDM 0 300 degF
Azimuthal Gamma Ray - Apparent - Down Quadrant 0.5 ft Average GRADM 0 200 API			
API			



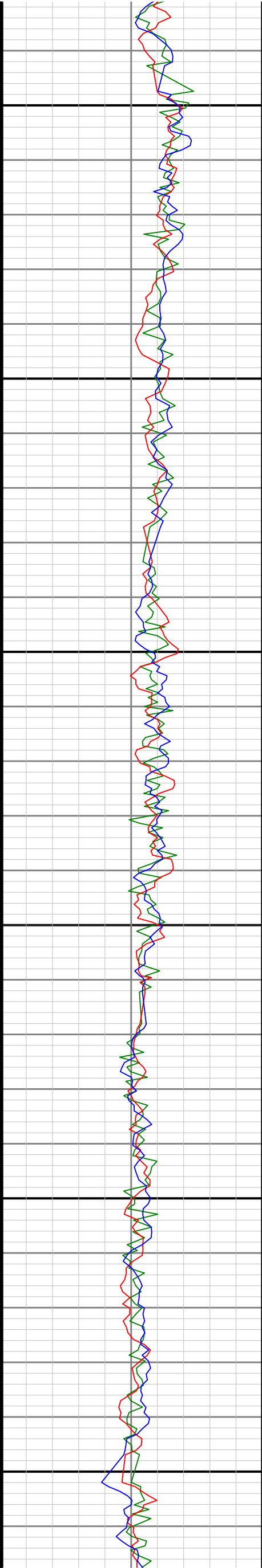


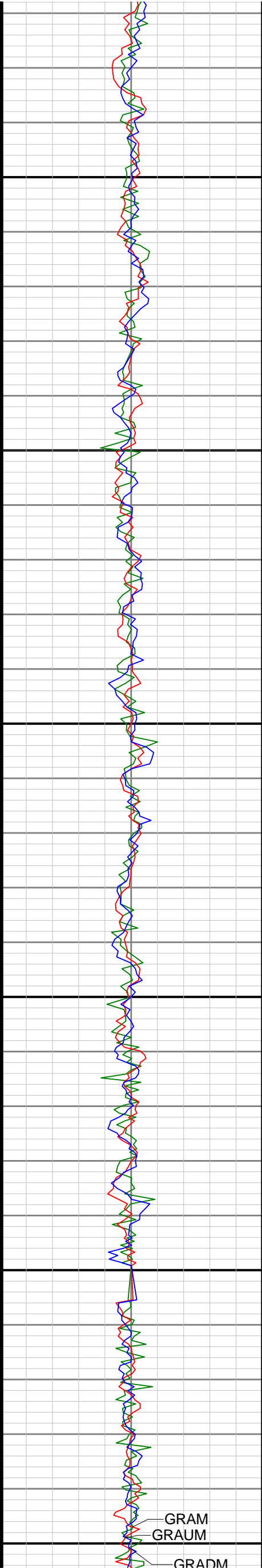


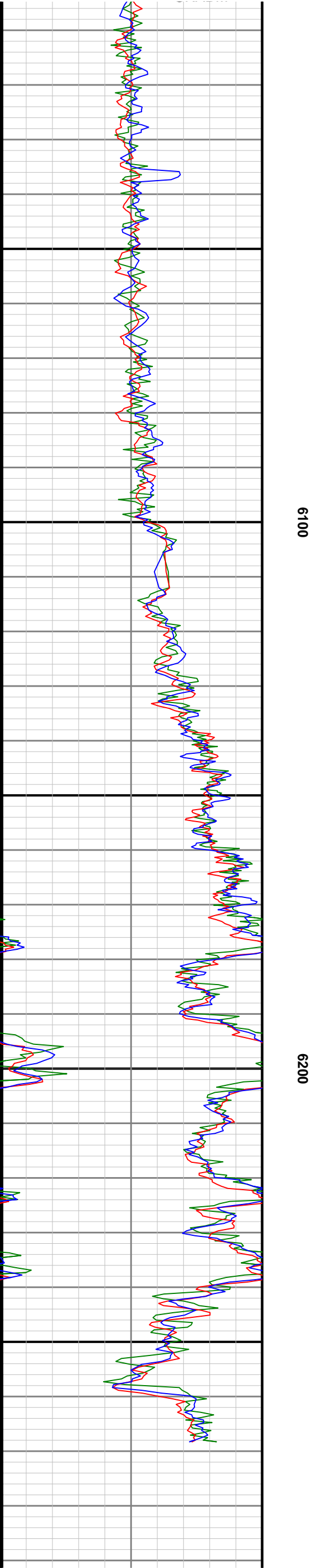
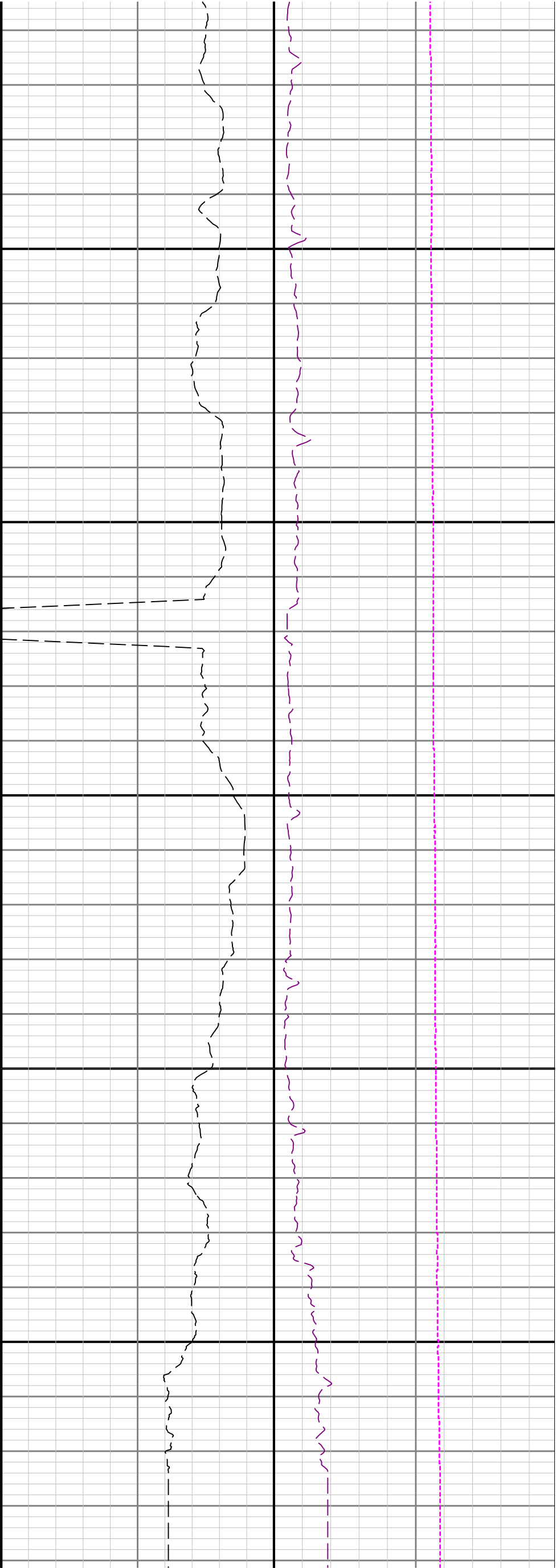
5500

5600

5700







	4128.00	14.71	155.01	136.5	-414.90	94.02	4075.50	-494.50	417.86	87.00	1.68	-0.18	-6.53
	4215.00	14.76	152.37	139.2	-434.73	103.83	4159.64	-410.36	438.01	87.00	0.77	0.06	-3.03
	4302.00	14.93	155.35	277.1	-454.73	113.64	4243.74	-326.26	458.34	87.00	0.90	0.20	3.43
	4390.00	14.78	157.16	141.9	-475.38	122.73	4328.80	-241.20	479.28	88.00	0.55	-0.17	2.06
	4478.00	14.63	159.98	144.6	-496.17	130.89	4413.92	-156.08	500.33	88.00	0.83	-0.17	3.20
	4565.00	15.28	165.45	144.6	-517.59	137.53	4497.97	-72.03	521.97	87.00	1.79	0.75	6.29
	4654.00	15.30	171.41	147.3	-540.55	142.23	4583.83	13.83	545.08	89.00	1.77	0.02	6.70
	4743.00	15.54	174.88	147.3	-564.04	145.05	4669.63	99.63	568.65	89.00	1.07	0.27	3.90
	4831.00	15.27	174.69	150.0	-587.32	147.18	4754.46	184.46	591.99	88.00	0.31	-0.31	-0.22
	4920.00	14.74	177.07	152.7	-610.29	148.84	4840.43	270.43	615.01	89.00	0.91	-0.60	2.67
	5008.00	14.35	182.55	152.7	-632.37	148.93	4925.61	355.61	637.07	88.00	1.62	-0.44	6.23
	5096.00	15.38	187.16	155.4	-654.85	146.99	5010.67	440.67	659.47	88.00	1.78	1.17	5.24
	5183.00	15.57	185.57	155.4	-677.91	144.41	5094.52	524.52	682.43	87.00	0.53	0.22	-1.83
	5270.00	15.87	183.08	155.4	-701.41	142.64	5178.26	608.26	705.86	87.00	0.85	0.34	-2.86
	5358.00	15.71	179.16	158.1	-725.34	142.17	5262.94	692.94	729.76	88.00	1.23	-0.18	-4.45
	5446.00	15.96	175.81	158.1	-749.32	143.23	5347.61	777.61	753.76	88.00	1.08	0.28	-3.81
	5534.00	15.68	171.05	160.8	-773.13	145.96	5432.28	862.28	777.65	88.00	1.51	-0.32	-5.41
	5623.00	15.73	164.62	160.8	-796.65	151.03	5517.96	947.96	801.33	89.00	1.96	0.06	-7.22
	5711.00	15.89	158.28	163.5	-819.34	158.66	5602.64	1032.64	824.27	88.00	1.97	0.18	-7.20
	5798.00	15.72	159.97	163.5	-841.48	167.10	5686.35	1116.35	846.68	87.00	0.56	-0.20	1.94
	5887.00	15.66	160.60	166.2	-864.14	175.22	5772.03	1202.03	869.60	89.00	0.20	-0.07	0.71
	5975.00	15.68	162.63	166.2	-886.69	182.72	5856.76	1286.76	892.39	88.00	0.62	0.02	2.31
	6064.00	19.43	162.77	163.5	-912.32	190.69	5941.60	1371.60	918.28	89.00	4.21	4.21	0.16
	6152.00	26.79	164.40	166.2	-945.44	200.38	6022.49	1452.49	951.71	88.00	8.39	8.36	1.85
	6240.00	35.59	169.16	168.9	-989.79	210.55	6097.70	1527.70	996.38	88.00	10.38	10.00	5.41
	6328.00	45.43	175.78	171.6	-1046.36	217.69	6164.56	1594.56	1053.17	88.00	12.19	11.18	7.52
	6415.00	54.96	179.94	171.6	-1113.06	220.01	6220.20	1650.20	1119.90	87.00	11.55	10.95	4.78
	6504.00	64.48	179.93	177.0	-1189.83	220.10	6265.03	1695.03	1196.63	89.00	10.70	10.70	-0.01
	6591.00	74.83	179.98	174.3	-1271.29	220.16	6295.24	1725.24	1278.04	87.00	11.90	11.90	0.06
	6679.00	78.69	180.14	174.3	-1356.93	220.07	6315.39	1745.39	1363.63	88.00	4.39	4.39	0.18
	6766.00	85.87	179.50	177.0	-1443.09	220.35	6327.07	1757.07	1449.75	87.00	8.28	8.25	-0.74
	6853.00	89.88	179.00	177.0	-1530.00	221.49	6330.29	1760.29	1536.65	87.00	4.64	4.61	-0.57
	6942.00	90.18	178.44	179.7	-1618.98	223.47	6330.24	1760.24	1625.64	89.00	0.71	0.34	-0.63
	7028.00	89.72	178.53	182.5	-1704.95	225.75	6330.32	1760.32	1711.64	86.00	0.55	-0.53	0.10
	7116.00	90.22	182.66	179.7	-1792.92	224.83	6330.37	1760.37	1799.54	88.00	4.73	0.57	4.69
	7205.00	90.09	188.15	182.5	-1881.49	216.45	6330.12	1760.12	1887.77	89.00	6.17	-0.15	6.17
	7293.00	89.88	189.75	185.2	-1968.42	202.76	6330.15	1760.15	1974.18	88.00	1.83	-0.24	1.82
	7380.00	89.94	186.04	185.2	-2054.58	190.82	6330.28	1760.28	2059.88	87.00	4.26	0.07	-4.26
	7467.00	89.88	181.36	185.2	-2141.37	185.20	6330.42	1760.42	2146.44	87.00	5.38	-0.07	-5.38
	7556.00	90.15	179.71	190.6	-2230.37	184.37	6330.40	1760.40	2235.35	89.00	1.88	0.30	-1.85
	7643.00	89.91	179.81	190.6	-2317.37	184.74	6330.35	1760.35	2322.31	87.00	0.30	-0.28	0.11
	7731.00	89.88	179.51	193.3	-2405.36	185.26	6330.51	1760.51	2410.27	88.00	0.34	-0.03	-0.34
	7820.00	89.82	178.27	193.3	-2494.35	186.98	6330.75	1760.75	2499.26	89.00	1.39	-0.07	-1.39
	7908.00	90.18	177.69	196.0	-2582.29	190.08	6330.75	1760.75	2587.26	88.00	0.78	0.41	-0.66
	7996.00	89.97	176.90	198.7	-2670.19	194.24	6330.63	1760.63	2675.25	88.00	0.93	-0.24	-0.90
	8085.00	89.91	176.35	198.7	-2759.04	199.48	6330.72	1760.72	2764.23	89.00	0.62	-0.07	-0.62
	8173.00	89.97	174.92	201.4	-2846.78	206.17	6330.82	1760.82	2852.15	88.00	1.63	0.07	-1.62
	8262.00	90.15	174.72	201.4	-2935.42	214.21	6330.72	1760.72	2941.00	89.00	0.30	0.20	-0.22
	8350.00	90.03	176.40	201.4	-3023.15	221.02	6330.59	1760.59	3028.92	88.00	1.91	-0.14	1.91
	8437.00	89.94	178.14	204.1	-3110.05	225.17	6330.61	1760.61	3115.91	87.00	2.00	-0.10	2.00
	8525.00	89.91	179.74	204.1	-3198.03	226.79	6330.72	1760.72	3203.89	88.00	1.82	-0.03	1.82
	8613.00	90.12	181.36	206.8	-3286.02	225.95	6330.70	1760.70	3291.81	88.00	1.86	0.24	1.84
	8701.00	90.03	183.94	206.8	-3373.92	221.88	6330.59	1760.59	3379.52	88.00	2.93	-0.10	2.93
	8791.00	89.78	183.91	209.5	-3463.71	215.72	6330.73	1760.73	3469.04	90.00	0.28	-0.28	-0.03
	8879.00	89.94	182.85	209.5	-3551.55	210.53	6330.95	1760.95	3556.66	88.00	1.22	0.18	-1.20
	8967.00	89.88	181.45	212.2	-3639.49	207.23	6331.09	1761.09	3644.43	88.00	1.59	-0.07	-1.59
	9053.00	89.97	180.13	152.7	-3725.48	206.05	6331.20	1761.20	3730.33	86.00	1.54	0.10	-1.53
	9141.00	90.00	178.24	212.2	-3813.47	207.30	6331.22	1761.22	3818.31	88.00	2.15	0.03	-2.15
	9230.00	90.18	178.05	212.2	-3902.42	210.18	6331.08	1761.08	3907.31	89.00	0.29	0.20	-0.21
	9317.00	89.97	178.77	214.9	-3989.38	212.59	6330.97	1760.97	3994.31	87.00	0.86	-0.24	0.83
	9405.00	89.97	179.41	214.9	-4077.37	213.99	6331.02	1761.02	4082.29	88.00	0.73	0.00	0.73
	9493.00	89.94	178.46	214.9	-4165.36	215.62	6331.08	1761.08	4170.28	88.00	1.08	-0.03	-1.08
	9581.00	89.94	181.27	217.6	-4253.35	215.83	6331.18	1761.18	4258.23	88.00	3.19	0.00	3.19
	9668.00	90.18	185.25	217.6	-4340.19	210.89	6331.09	1761.09	4344.85	87.00	4.58	0.28	4.57
	9755.00	90.37	186.99	217.6	-4426.69	201.61	6330.67	1760.67	4430.99	87.00	2.01	0.22	2.00
	9843.00	90.00	187.23	220.3	-4514.01	190.72	6330.38	1760.38	4517.89	88.00	0.50	-0.42	0.27
	9932.00	89.97	185.97	220.3	-4602.42	180.49	6330.41	1760.41	4605.90	89.00	1.42	-0.03	-1.42
	10019.00	90.09	184.31	220.3	-4689.07	172.70	6330.36	1760.36	4692.23	87.00	1.91	0.14	-1.91
	10107.00	90.12	179.34	220.3	-4777.00	169.89	6330.20	1760.20	4780.01	88.00	5.65	0.03	-5.65
	10195.00	90.09	176.36	214.9	-4864.92	173.20	6330.04	1760.04	4868.00	88.00	3.39	-0.03	-3.39
	10281.00	90.18	176.17	217.6	-4950.74	178.80	6329.84	1759.84	4953.96	86.00	0.24	0.10	-0.22
	10370.00	89.82	176.26	217.6	-5039.55	184.67	6329.84	1759.84	5042.91	89.00	0.42	-0.40	0.10
	10457.00	89.82	176.73	214.9	-5126.38	189.99	6330.11	1760.11	5129.88	87.00	0.54	0.00	0.54
	10544.00	89.78	176.66	214.9	-5213.24	195.01	6330.41	1760.41	5216.85	87.00	0.09	-0.05	-0.08
	10632.00	89.94	177.32	217.6	-5301.12	199.63	6330.63	1760.63	5304.84	88.00	0.77	0.18	0.75
	10721.00	89.97	177.83	220.3	-5390.04	203.39	6330.70	1760.70	5393.83	89.00	0.57	0.03	0.57
	10809.00	90.09	178.76	220.3	-5478.00	206.01	6330.65	1760.65	5481.83	88.00	1.07	0.14	1.06
	10897.00	89.88	179.05	220.3	-5565.98	207.69	6330.68	1760.68	5569.82	88.00	0.41	-0.24	0.33
	10985.00	90.00	179.96	223.0	-5653.97	208.45	6330.77	1760.77	5657.79	88.00	1.04	0.14	1.03
	11073.00	89.97	181.12	223.0	-5741.97	207.62	6330.79	1760.79	5745.71	88.00	1.32	-0.03	1.32
	11161.00	90.37	182.19	225.7	-5829.93	205.08	6330.53	1760.53	5833.53	88.00	1.30	0.45	1.22
	11249.00	90.09	180.35	225.7	-5917.90	203.13	6330.18	1760.18	5921.39	88.00	2.11	-0.32	-2.09
	11337.00	90.18	180.73	228.4	-6005.90	202.30	6329.97	1759.97	6009.31	88.00	0.44	0.10	0.43
	11425.00	90.12	179.54	225.7	-6093.90	202.10	6329.74	1759.74	6097.25	88.00	1.35	-0.07	-1.35
	11512.00	90.06	179.08	228.4	-6180								