



5" = 100' FEET TVD

COMPANY : TRIO PETROLRUM LLC
WELL : HH-4 ST1
FIELD : HANGMAN HOLLOW
COUNTY : MONTEREY
STATE : CALIFORNIA
COUNTRY : US
UWI :

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UWI :

WELL LOCATION
LAT: 35°59'39.974"N LONG: 120°51'41.634"W
N: 1886431.79 Ft E: 6011000.61 Ft
SEC: 23 TWP: 22S RANGE: 10E

OTHER SERVICES

DIRECTIONAL

ROP

CONDUCTIVITY

FETR

DEPTH REF. : RKB

REF. HEIGHT : 10.000 Ft

GROUND LEVEL : 717.930 Ft

G.I. to MEAN SEA LEVEL

RKB to Ground Level

BOREHOLE RECORD

DEVIATION RECORD

HOLE SIZE in	FROM Ft	TO Ft	INCLINATION deg	FROM Ft	TO Ft
11	0	2611	0-1	0	1000
7 7/8	2611	3812	1-96 (+/-1)	1000	2716
			96-92 (+/-5)	2716	3812
CASING RECORD					
CASING SIZE in	FROM Ft	TO Ft			
8 5/8	0	2592			

DRILLING CO. : ENSIGN

RIG : 509

LWD UNIT NO. : LWD 6 DISTRICT : BAKERSFIELD

SPUD DATE : 11-22-2013

LWD START DATE : 11-22-2013

LWD END DATE : 11/27/13

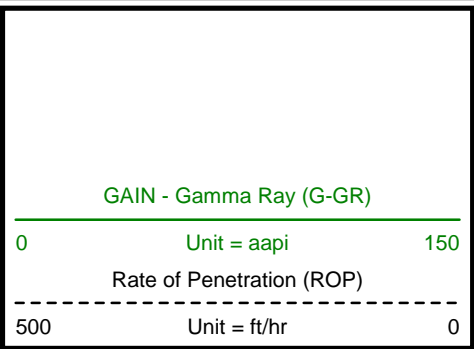
DEPT: 261 Ft
DEPT: 3812 Ft
TOTAL DEPTH : 3812 Ft

Run Data

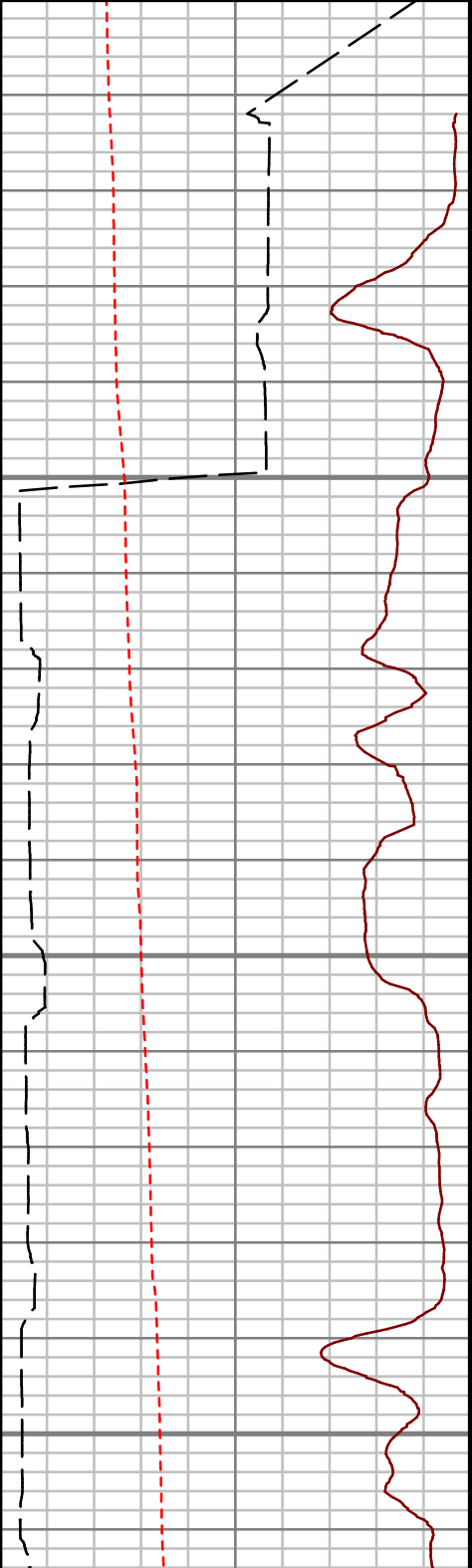
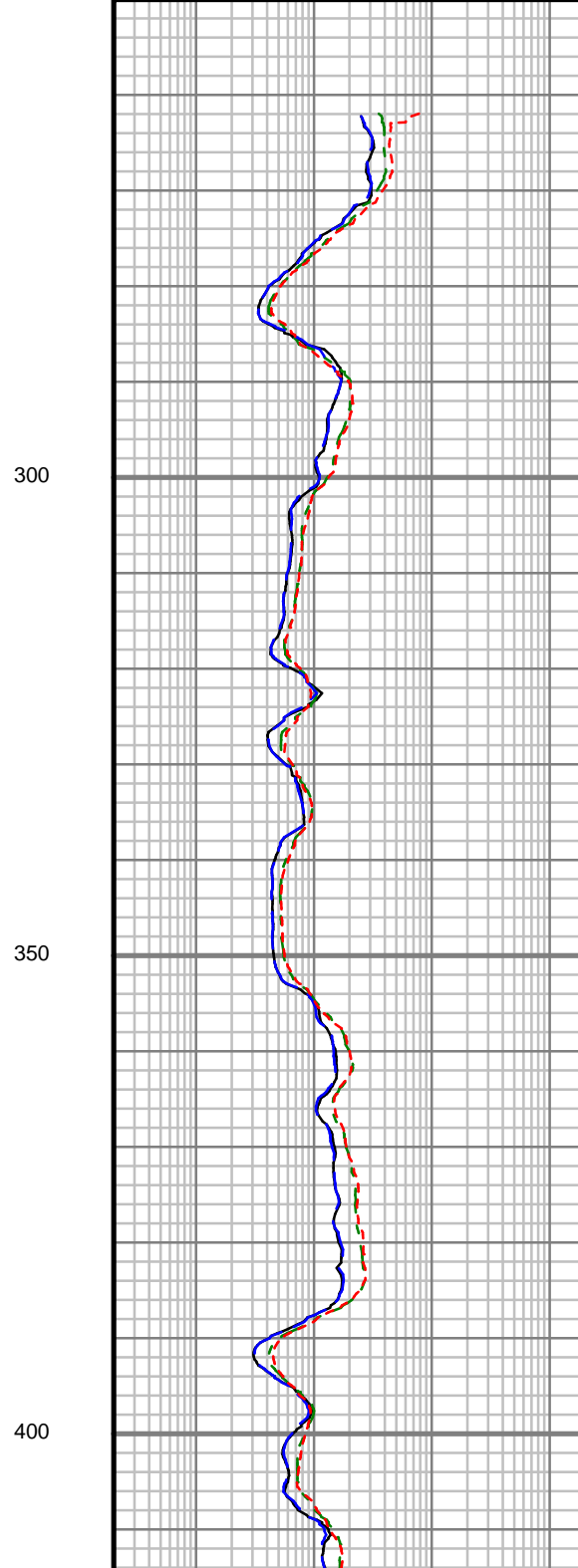
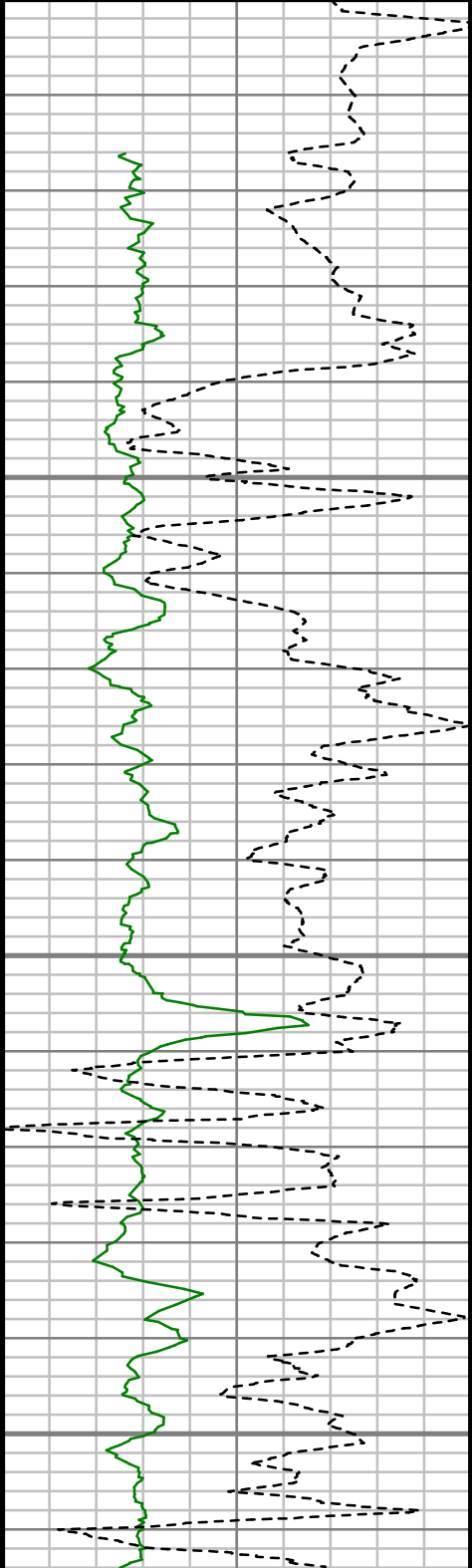
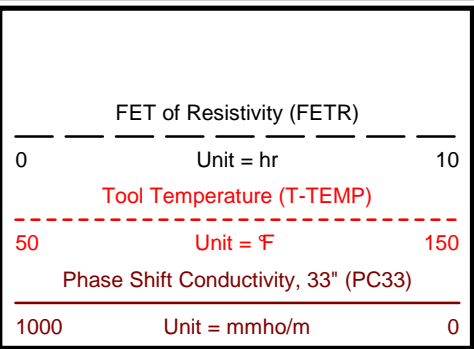
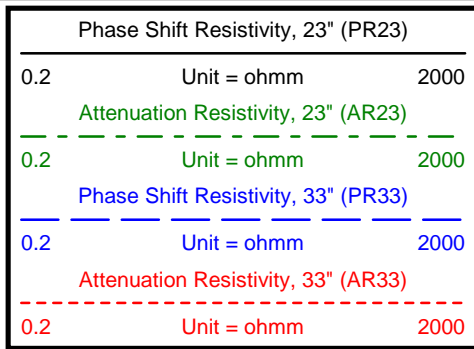
RUN NUMBER	1	2	3		
START DATE	11/22/13	11/25/13	11/26/13		
START TIME	05:00	17:00	06:00		
END DATE	11/24/13	11/26/13	11/27/13		
END TIME	08:00	06:00	03:00		
DEPTH IN (ft)	261	2611	2635		
DEPTH OUT (ft)	2611	2635	3812		
LOG TOP (ft)	265	2611	2635		
LOG BOTTOM (ft)	2611	2611	3812		
HOLE SIZE (in)	11	7 7/8	7 7/8		
MUD DATA @ (ft)	1538	2630	2630		
MUD TYPE	LSND	GEOZAN	GEOZAN		
DENSITY (lb / gal)	9.0	8.5	8.5		
VISCOSITY (s / qt)	47	38	38		
pH	8	8.5	8.5		
FLUID LOSS (cm3 / 30)	5.7	15.3	15.3		
SALINITY (ppm)	550	17200	17200		
Rm (ohmm @ deg F)	-	-	-		
Rmf (ohmm @ deg F)	-	-	-		
MAX TEMP (deg F)	113	103	119		
Rm @ MAX TEMP (ohmm)	-	-	-		
LWD ENGINEER #1	J. BIHM	J. BIHM	J. BIHM		
LWD ENGINEER #2	L. CLEVINGER	L. CLEVINGER	L. CLEVINGER		
LWD ENGINEER #3	N. LUTU	N. LUTU	N. LUTU		
LOG WITNESS #1	-	-	-		
LOG WITNESS #2	-	-	-		

All interpretations are opinions based on inferences from electrical and other measurements and we do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions as set out in our current price schedule.

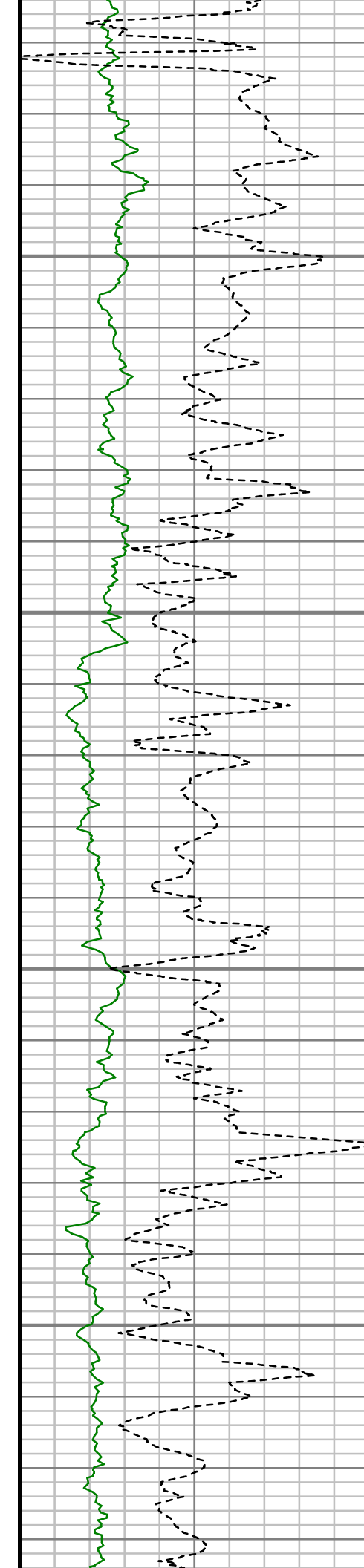
FINAL COPY



TRUE VERTICAL DEPTH
 1:240 (ft)



300
 350
 400

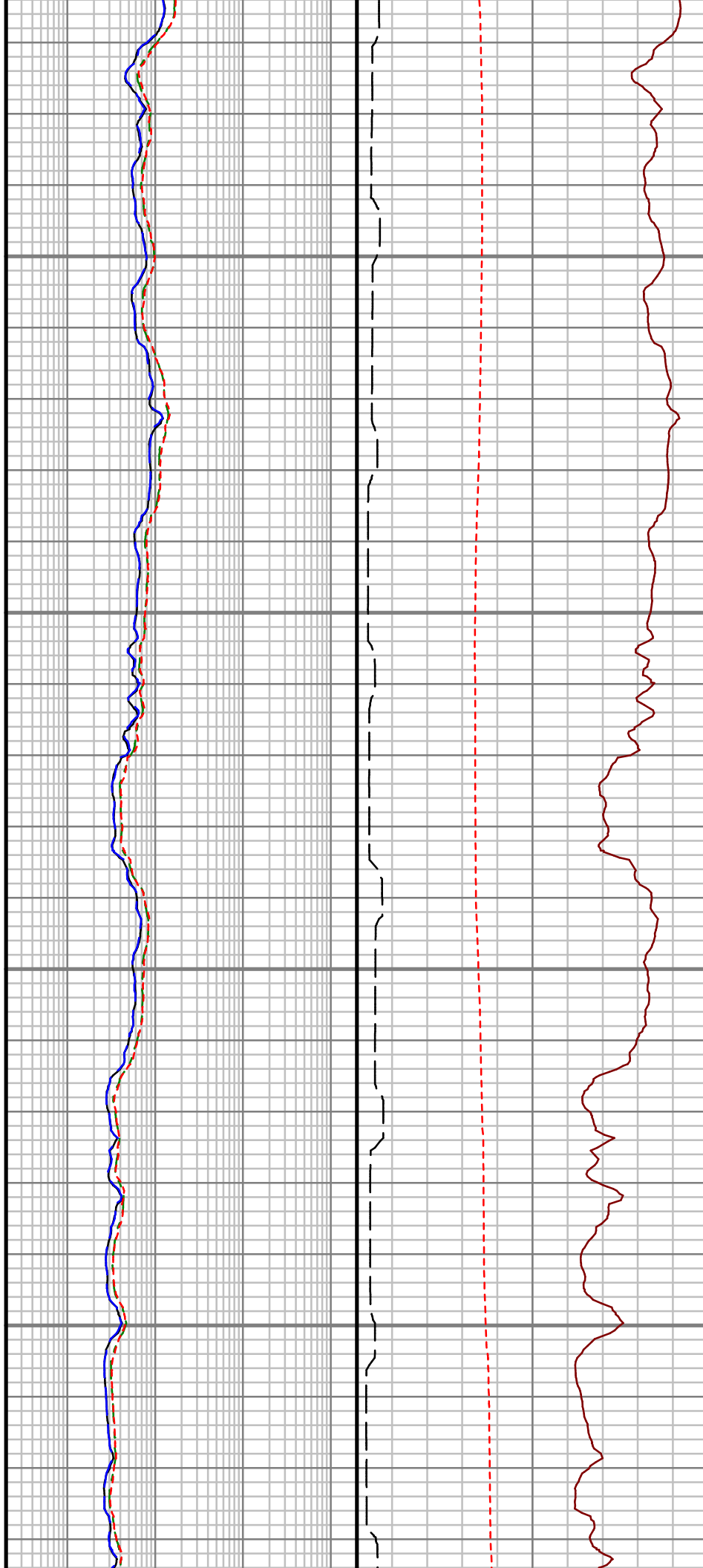


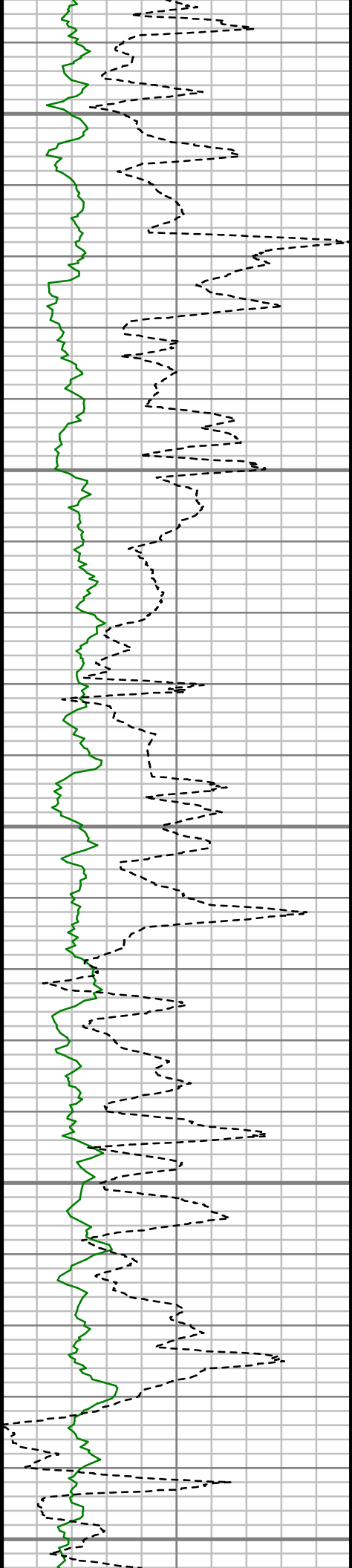
450

500

550

600





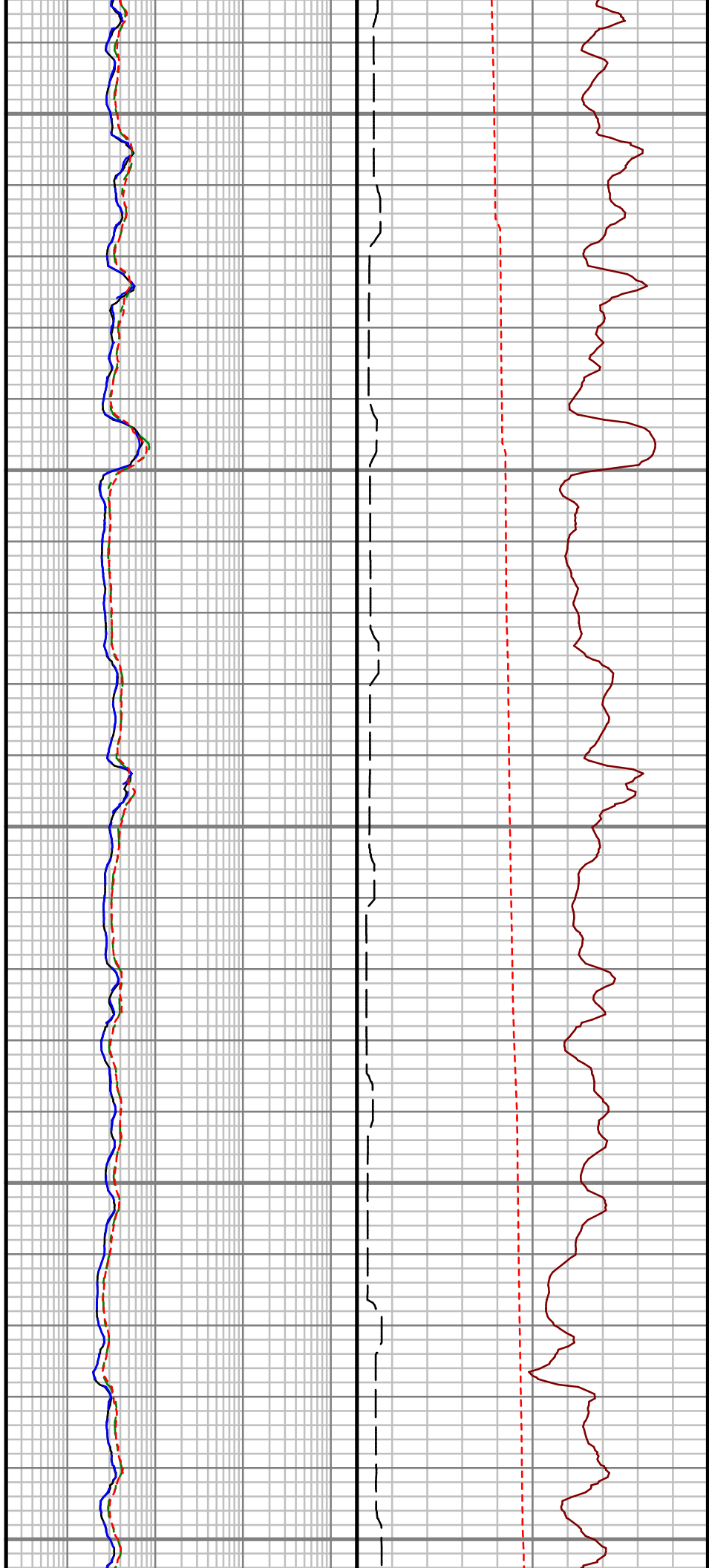
650

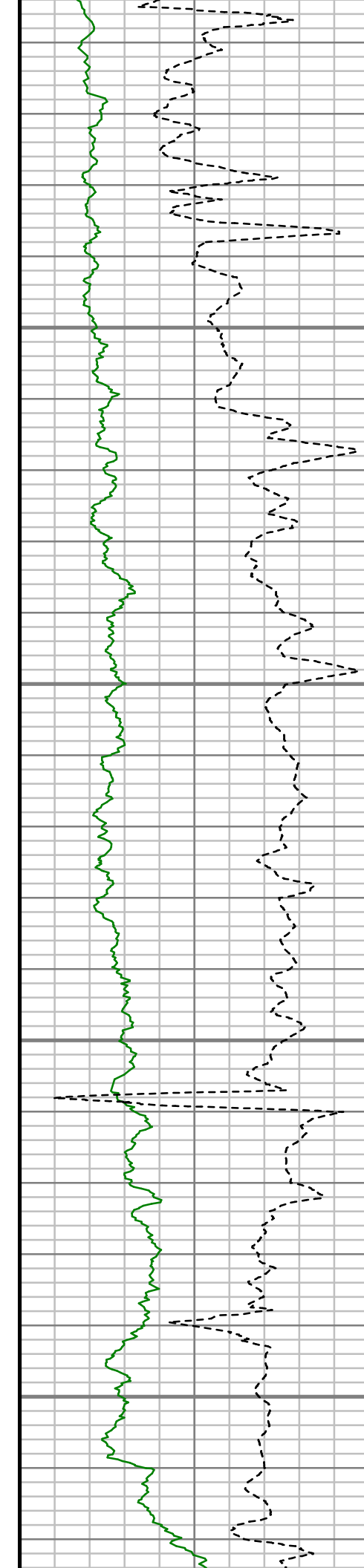
700

750

800

850



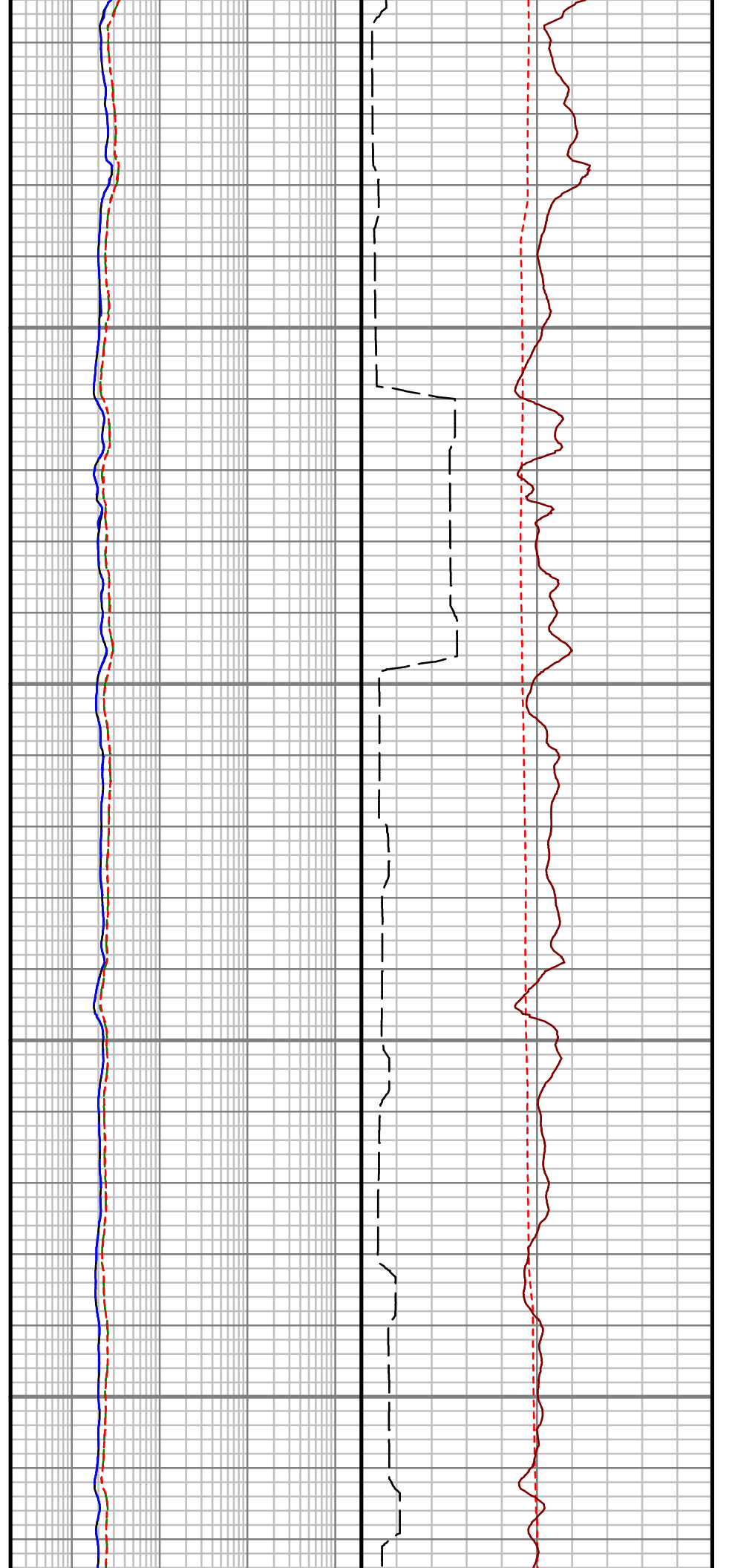


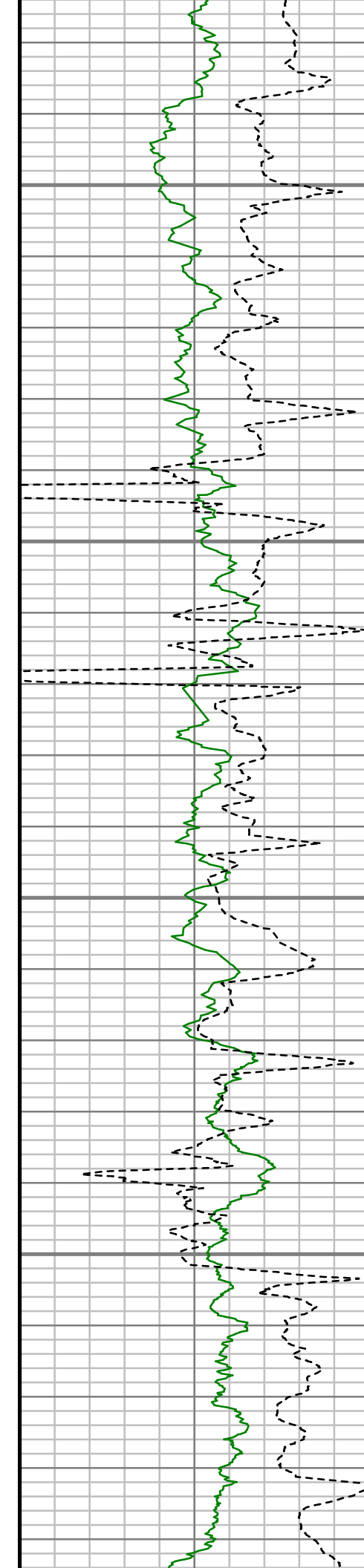
900

950

1000

1050



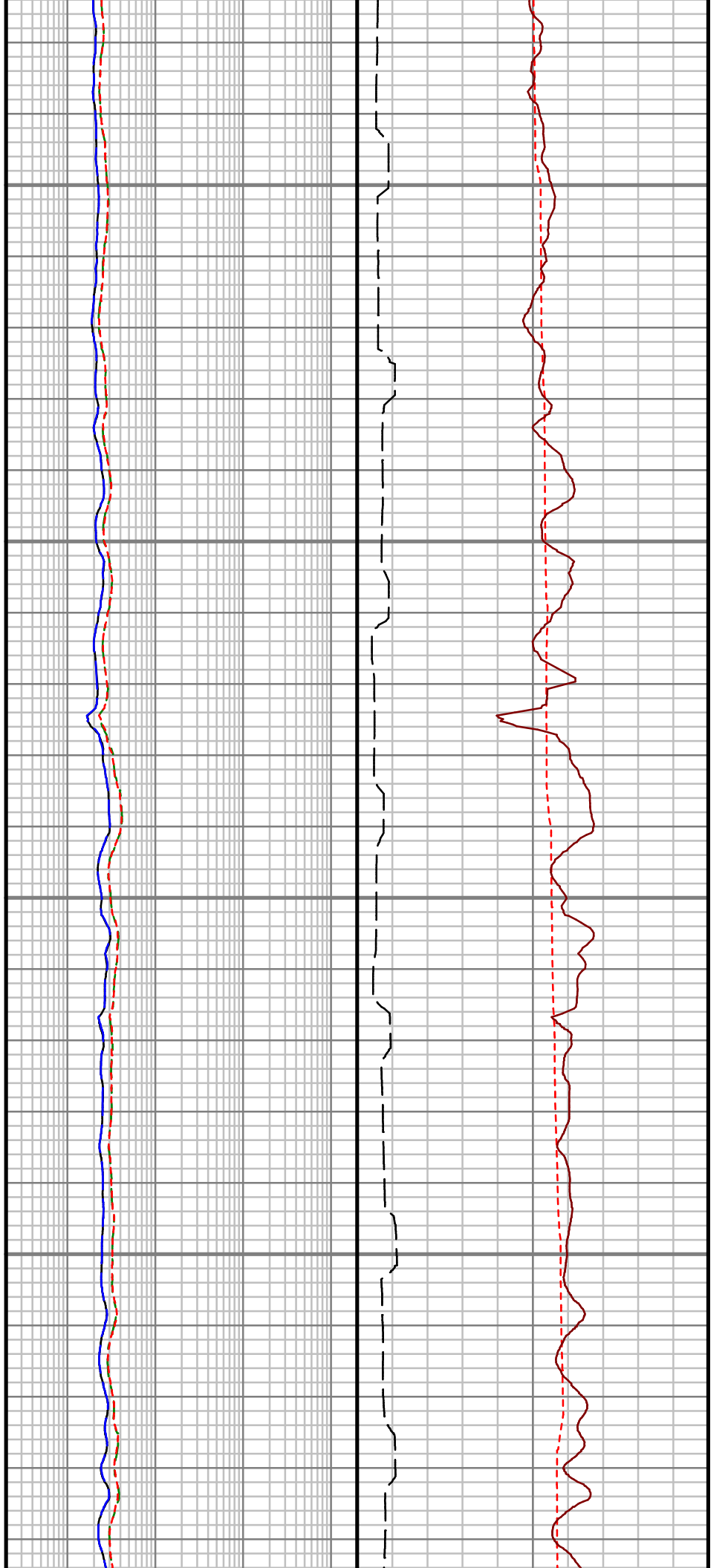


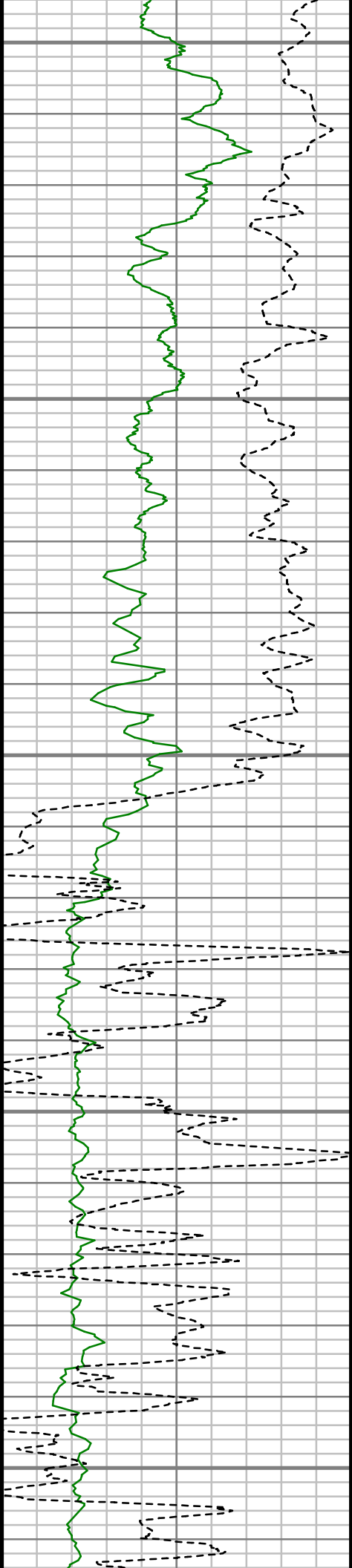
1100

1150

1200

1250





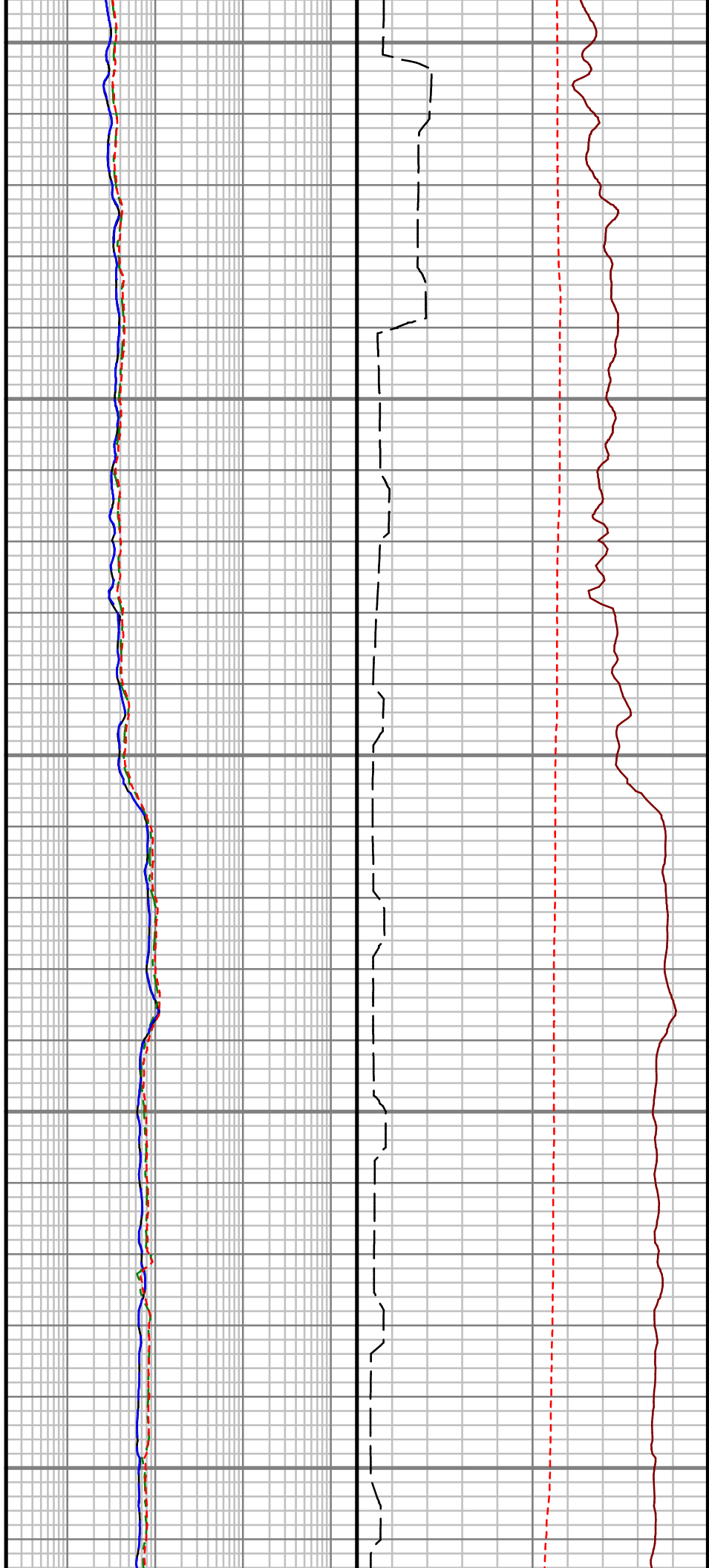
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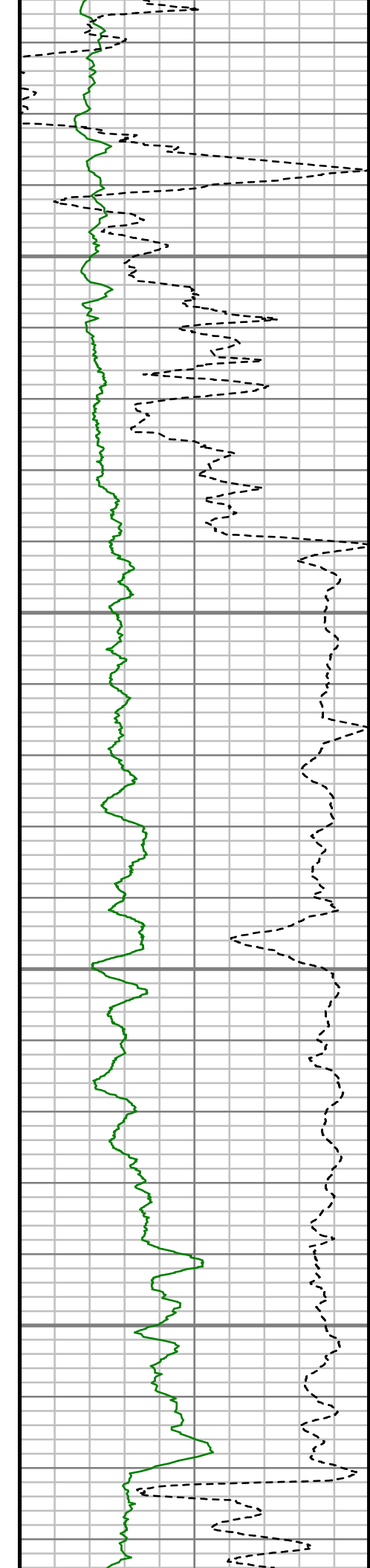
1350

1400

1450

1500



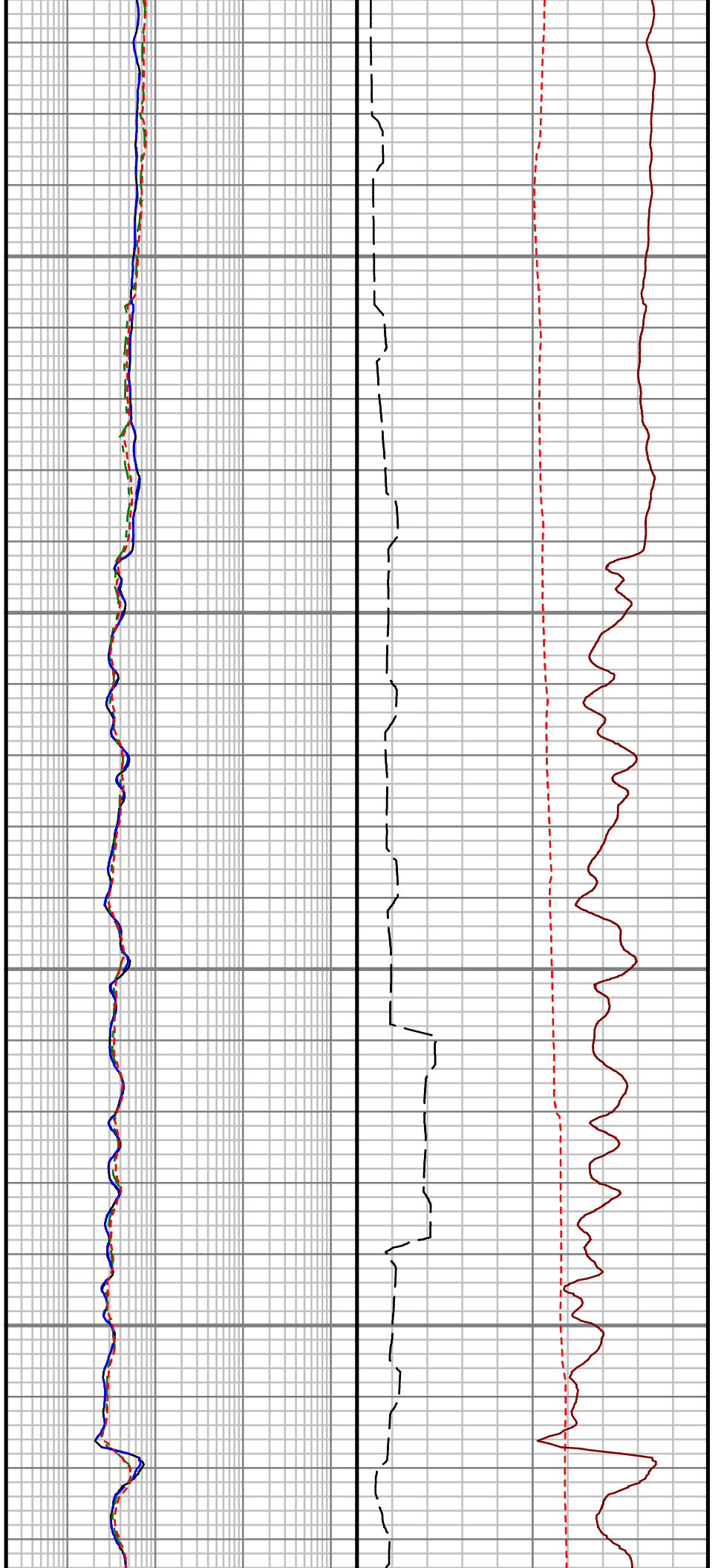


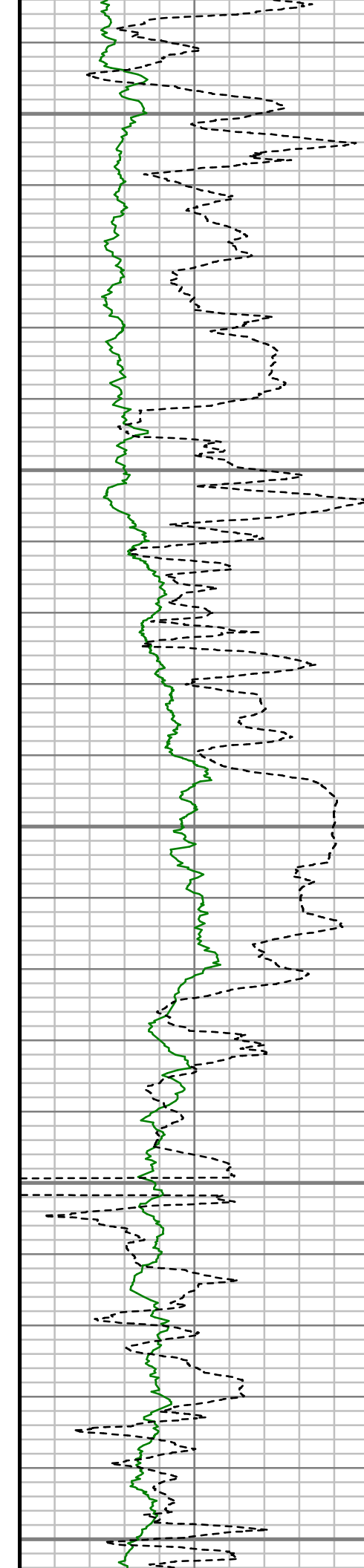
1550

1600

1650

1700





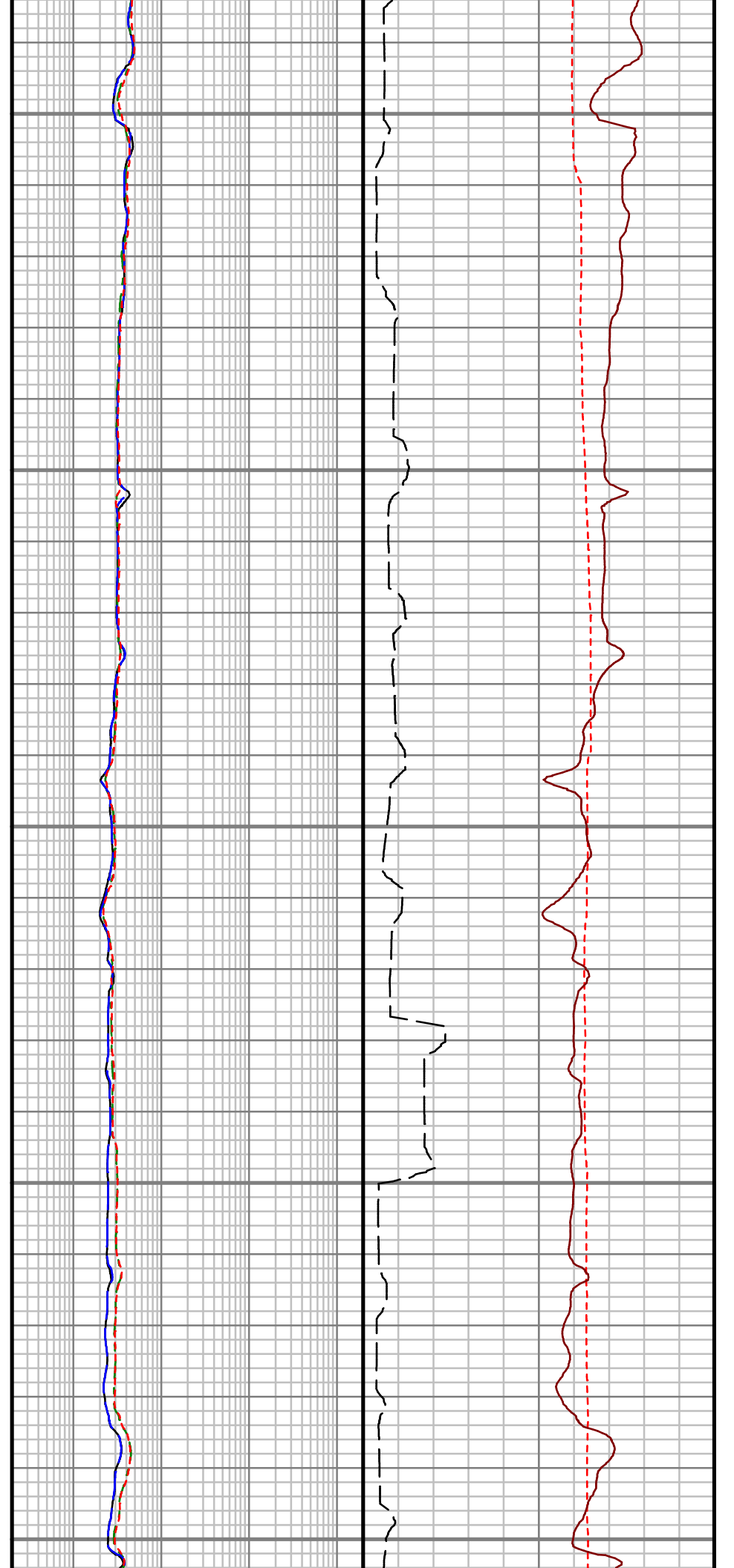
1750

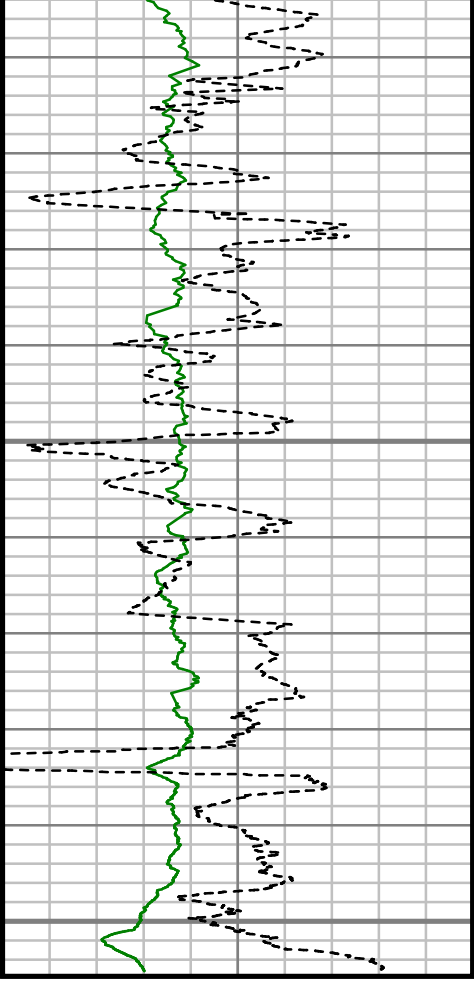
1800

1850

1900

1950





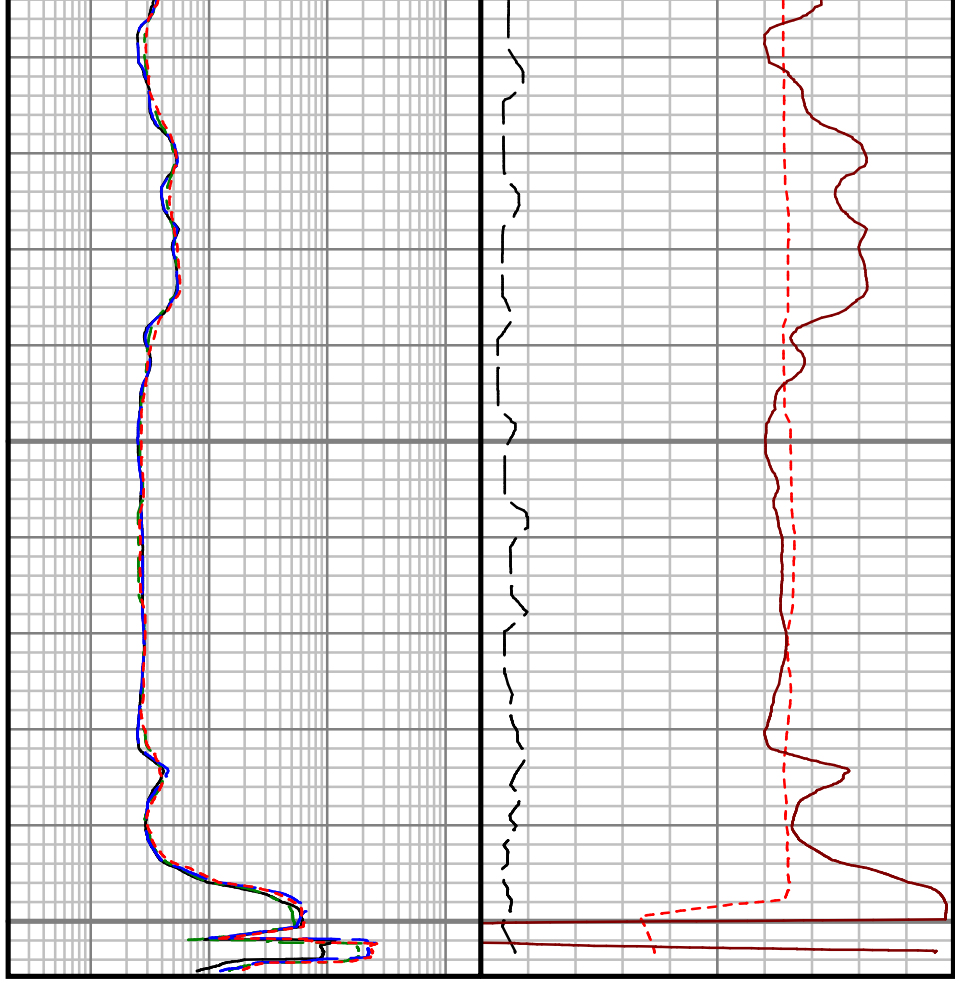
Rate of Penetration (ROP)		
500	Unit = ft/hr	0
GAIN - Gamma Ray (G-GR)		
0	Unit = aapi	150

2000

2050

TRUE VERTICAL DEPTH

1-240 (#)



Attenuation Resistivity, 33" (AR33)		
0.2	Unit = ohmm	2000
Phase Shift Resistivity, 33" (PR33)		
0.2	Unit = ohmm	2000
Attenuation Resistivity, 23" (AR23)		
0.2	Unit = ohmm	2000
Phase Shift Resistivity, 23" (PR23)		
0.2	Unit = ohmm	2000

Phase Shift Conductivity, 33" (PC33)		
1000	Unit = mmho/m	0
Tool Temperature (T-TEMP)		
50	Unit = °F	150
FET of Resistivity (FETR)		
0	Unit = hr	10

Customer Name:	TRIO PETROLRUM LLC
Site Name:	SECTION 23
Well Name:	HH-4 ST1
Survey:	HH4_ST
Survey Date:	11/26/2013
Magnetic Declination:	13.28 deg
Grid Correction:	1.11 deg
North Reference:	Grid North
Calculation Method:	Minimum Curvature
Section (VS) Ref:	0.00N (ft), 0.00E (ft), 341.22Azim (deg)

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
50.00	0.00	0.00	50.00	0.00	0.00	0.00	Invalid
104.00	0.27	206.99	104.00	-0.09	-0.11	-0.06	0.50
229.00	0.17	308.01	229.00	-0.14	-0.26	-0.34	0.28
322.00	0.35	295.93	322.00	0.17	-0.06	-0.70	0.20
416.00	0.10	288.20	416.00	0.42	0.09	-1.03	0.26
509.00	0.64	221.70	509.00	0.21	-0.27	-1.45	0.65
602.00	0.73	277.09	601.99	0.22	-0.58	-2.39	0.69
696.00	0.24	13.00	695.99	0.65	-0.31	-2.94	0.85

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
789.00	0.27	28.08	788.99	0.97	0.07	-2.79	0.08
881.00	0.50	108.29	880.98	0.87	0.14	-2.31	0.57
974.00	0.34	77.37	973.98	0.60	0.07	-1.65	0.29
1034.00	1.14	273.09	1033.98	0.80	0.14	-2.08	2.46
1064.00	2.19	277.28	1063.97	1.16	0.23	-2.94	3.50
1094.00	4.10	277.11	1093.92	1.88	0.43	-4.57	6.36
1125.00	6.02	285.03	1124.80	3.27	0.99	-7.24	6.60
1154.00	7.70	289.44	1153.59	5.32	2.03	-10.54	6.07
1184.00	8.19	290.76	1183.30	7.93	3.46	-14.44	1.74
1215.00	8.76	290.02	1213.96	10.81	5.05	-18.72	1.86
1246.00	10.03	288.64	1244.55	13.93	6.72	-23.50	4.17
1276.00	10.99	286.67	1274.04	17.18	8.38	-28.71	3.42
1307.00	12.16	284.13	1304.41	20.66	10.02	-34.71	4.10
1337.00	14.01	282.02	1333.63	24.24	11.55	-41.33	6.37
1368.00	16.44	280.54	1363.54	28.31	13.13	-49.31	7.95
1399.00	19.02	281.57	1393.07	33.01	14.95	-58.57	8.38
1429.00	21.23	282.53	1421.23	38.30	17.11	-68.66	7.45
1460.00	22.94	283.63	1449.96	44.46	19.75	-80.01	5.68
1490.00	24.23	282.50	1477.45	50.79	22.46	-91.70	4.57
1521.00	26.52	282.93	1505.46	57.73	25.39	-104.66	7.42

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N-S ft	+E-W ft	DLS 7100ft
1552.00	29.46	283.34	1532.83	65.42	28.70	-118.83	9.50
1582.00	31.40	284.92	1558.70	73.68	32.41	-133.56	6.99
1613.00	32.58	285.14	1584.99	82.82	36.67	-149.42	3.81
1643.00	34.73	286.15	1609.96	92.22	41.16	-165.43	7.43
1673.00	36.34	289.16	1634.37	102.58	46.45	-182.04	7.91
1704.00	37.23	293.70	1659.21	114.57	53.24	-199.30	9.23
1735.00	38.71	299.03	1683.65	128.09	61.71	-216.37	11.59
1765.00	39.98	303.24	1706.85	142.64	71.55	-232.64	9.86
1796.00	41.59	306.29	1730.33	158.93	83.10	-249.26	8.26
1828.00	43.78	308.56	1753.85	176.96	96.29	-266.48	8.37
1859.00	45.05	309.87	1775.99	195.35	110.01	-283.29	5.03
1890.00	46.36	311.98	1797.64	214.51	124.55	-300.05	6.46
1921.00	47.04	314.02	1818.90	234.39	139.93	-316.55	5.28
1952.00	48.54	316.62	1839.73	255.05	156.26	-332.69	7.86
1983.00	50.61	319.29	1859.83	276.72	173.79	-348.48	9.36
2015.00	53.26	322.01	1879.56	300.31	193.27	-364.44	10.64
2046.00	54.58	324.75	1897.82	324.15	213.38	-379.38	8.32
2077.00	56.57	326.79	1915.35	348.80	234.52	-393.76	8.39
2108.00	59.20	328.52	1931.83	374.32	256.70	-407.80	9.73

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N-S ft	+E-W ft	DLS 7100ft
2139.00	61.76	330.24	1947.10	400.72	279.91	-421.53	9.57
2170.00	64.16	332.75	1961.20	427.93	304.18	-434.70	10.58
2201.00	65.67	333.62	1974.34	455.73	329.23	-447.37	5.49
2233.00	67.79	335.32	1986.98	484.92	355.76	-460.03	8.25
2264.00	69.51	336.82	1998.27	513.67	382.15	-471.74	7.14
2295.00	71.15	339.07	2008.70	542.81	409.20	-482.70	8.64
2326.00	73.44	341.37	2018.13	572.34	436.99	-492.69	10.22
2357.00	76.72	343.55	2026.11	602.28	465.55	-501.71	12.57
2388.00	79.97	345.34	2032.37	632.59	494.79	-509.85	11.91
2419.00	82.60	346.83	2037.07	663.11	524.53	-517.22	9.71
2450.00	84.63	347.98	2040.52	693.74	554.59	-523.93	7.53
2481.00	85.29	349.52	2043.24	724.35	584.88	-529.95	5.38
2512.00	85.32	350.74	2045.78	754.88	615.32	-535.25	3.92
2546.00	84.14	351.37	2048.90	788.23	648.76	-540.51	3.93
2623.00	87.76	355.49	2054.34	863.27	725.04	-549.29	7.11
2654.00	89.34	356.11	2055.13	893.26	755.94	-551.55	5.48
2684.00	93.21	355.93	2054.46	922.25	785.86	-553.63	12.91
2715.00	95.94	356.20	2051.99	952.12	816.68	-555.75	8.83
2745.00	94.97	356.11	2049.14	980.98	846.48	-557.76	3.24
2775.00	92.68	355.67	2047.14	1009.93	876.33	-559.90	7.76

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
2806.00	91.80	355.76	2045.92	1039.92	907.22	-562.22	2.85
2837.00	91.45	356.46	2045.04	1069.87	938.14	-564.32	2.54
2867.00	91.45	356.02	2044.28	1098.83	968.07	-566.29	1.46
2899.00	91.10	355.41	2043.57	1129.81	999.97	-568.68	2.21
2930.00	91.36	354.97	2042.90	1159.88	1030.85	-571.28	1.65
2961.00	91.28	354.88	2042.19	1189.99	1061.72	-574.02	0.40
2992.00	91.54	353.39	2041.43	1220.20	1092.55	-577.19	4.89
3023.00	92.24	352.86	2040.41	1250.52	1123.31	-580.90	2.84
3055.00	91.98	353.21	2039.23	1281.82	1155.05	-584.78	1.37
3086.00	91.89	353.56	2038.18	1312.10	1185.83	-588.35	1.17
3117.00	92.15	354.35	2037.09	1342.32	1216.64	-591.61	2.69
3148.00	92.95	354.09	2035.71	1372.50	1247.45	-594.73	2.69
3179.00	93.47	352.86	2033.97	1402.74	1278.20	-598.24	4.31
3210.00	91.63	352.15	2032.59	1433.11	1308.90	-602.28	6.37
3241.00	90.22	351.80	2032.09	1463.56	1339.59	-606.61	4.68
3272.00	89.78	352.07	2032.09	1494.02	1370.29	-610.96	1.65
3303.00	89.34	352.59	2032.33	1524.44	1401.01	-615.09	2.21
3335.00	87.85	354.09	2033.12	1555.72	1432.78	-618.80	6.60
3366.00	88.02	355.49	2034.24	1585.83	1463.63	-621.62	4.57

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
3397.00	90.92	356.99	2034.52	1615.76	1494.56	-623.65	10.53
3428.00	91.98	357.87	2033.74	1645.52	1525.52	-625.04	4.43
3459.00	92.33	357.52	2032.57	1675.23	1556.47	-626.29	1.60
3490.00	91.71	356.29	2031.48	1705.06	1587.40	-627.96	4.44
3521.00	90.13	355.49	2030.98	1735.04	1618.32	-630.18	5.71
3553.00	91.36	355.14	2030.56	1766.07	1650.21	-632.79	4.00
3584.00	93.03	353.12	2029.37	1796.26	1681.02	-635.96	8.46
3615.00	94.26	351.28	2027.40	1826.63	1711.67	-640.16	7.15
3646.00	93.21	350.31	2025.38	1857.14	1742.21	-645.11	4.61
3677.00	91.89	350.05	2024.00	1887.73	1772.72	-650.39	4.34
3708.00	92.22	350.35	2022.89	1918.33	1803.25	-655.67	1.45
3739.00	93.30	350.57	2021.39	1948.89	1833.78	-660.80	3.55
3747.00	93.80	350.80	2020.90	1956.76	1841.66	-662.09	6.89



PROPAGATION RESISTIVITY
GAMMA RAY

5" = 100' FEET TVD