

2" = 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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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

FETTR

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
<b>CASING RECORD</b>					
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

DEPTH : 261 Ft

DEPTH : 3812 Ft

TOTAL DEPTH : 3812 Ft

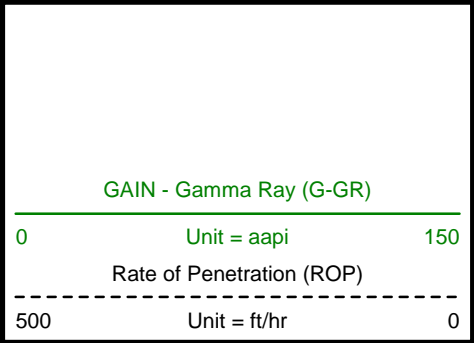
**Run Data**

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	-	-	-		

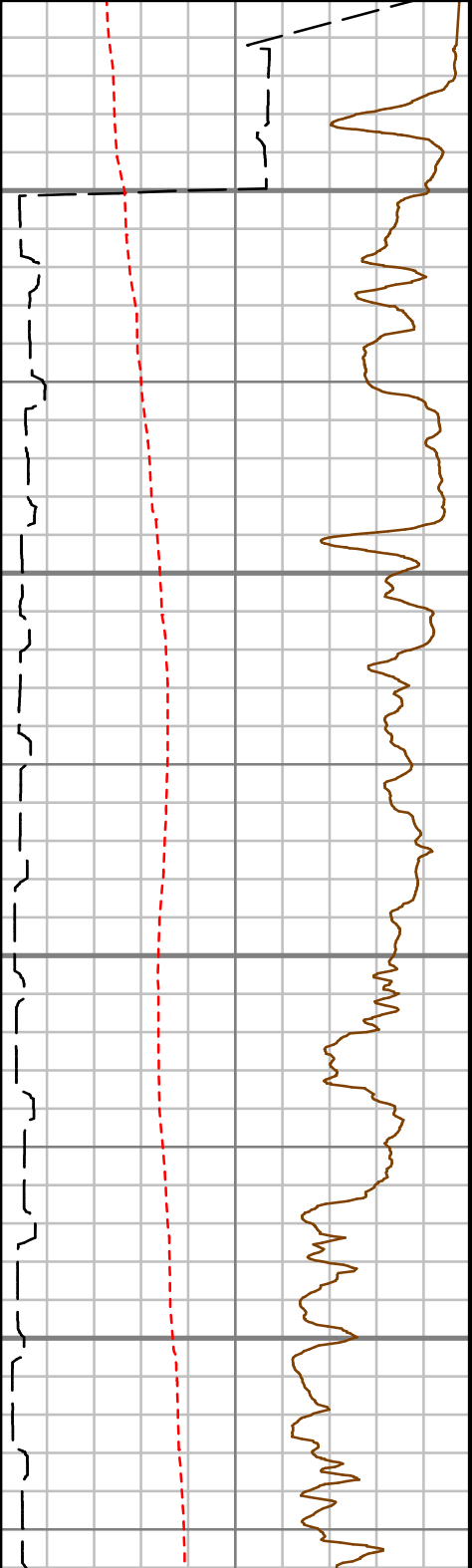
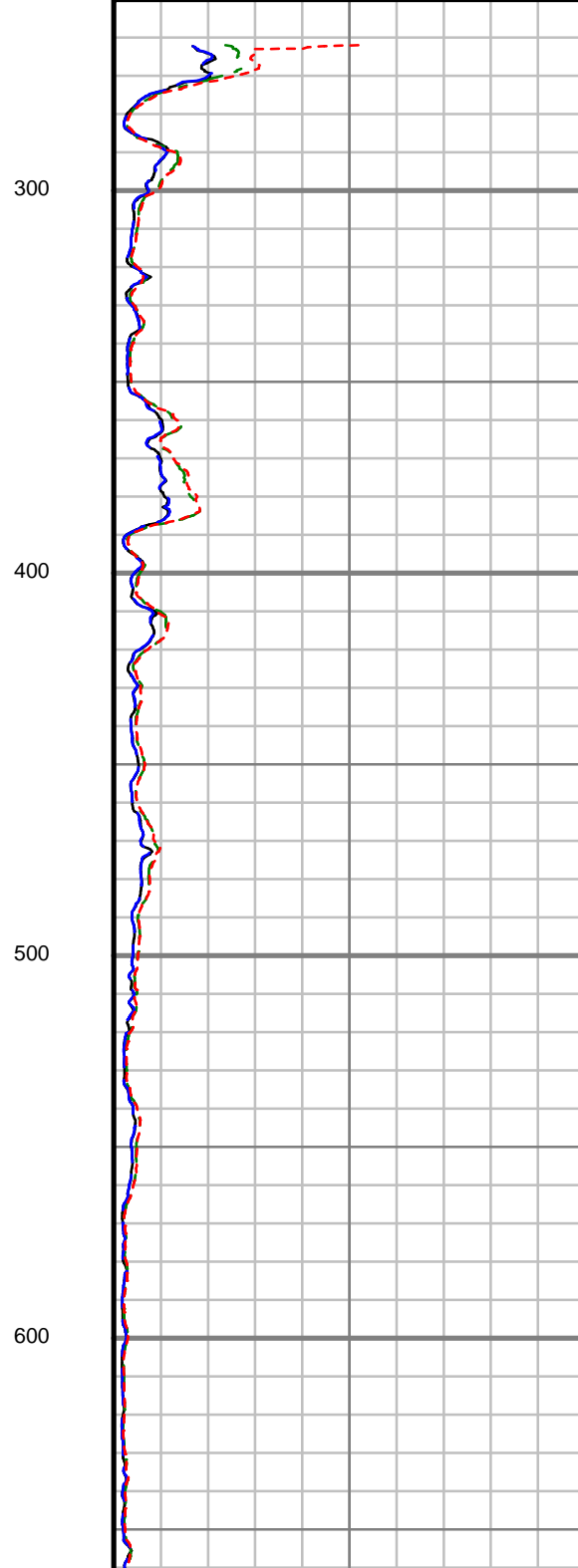
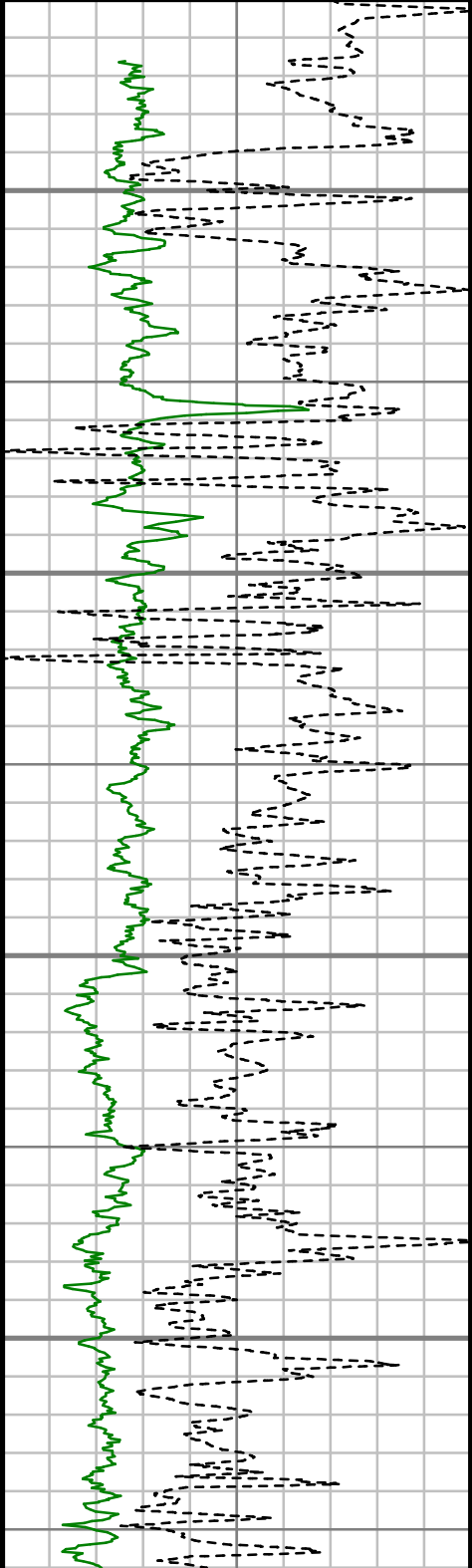
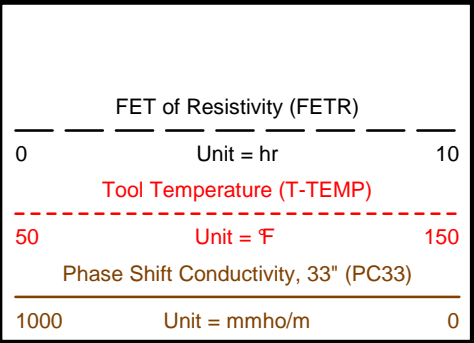
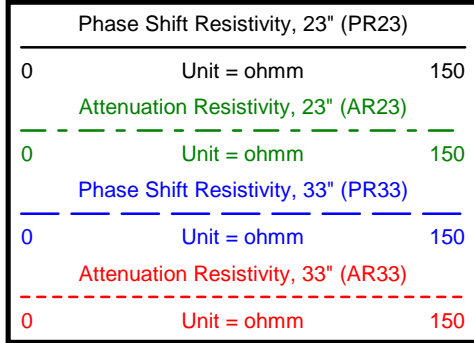


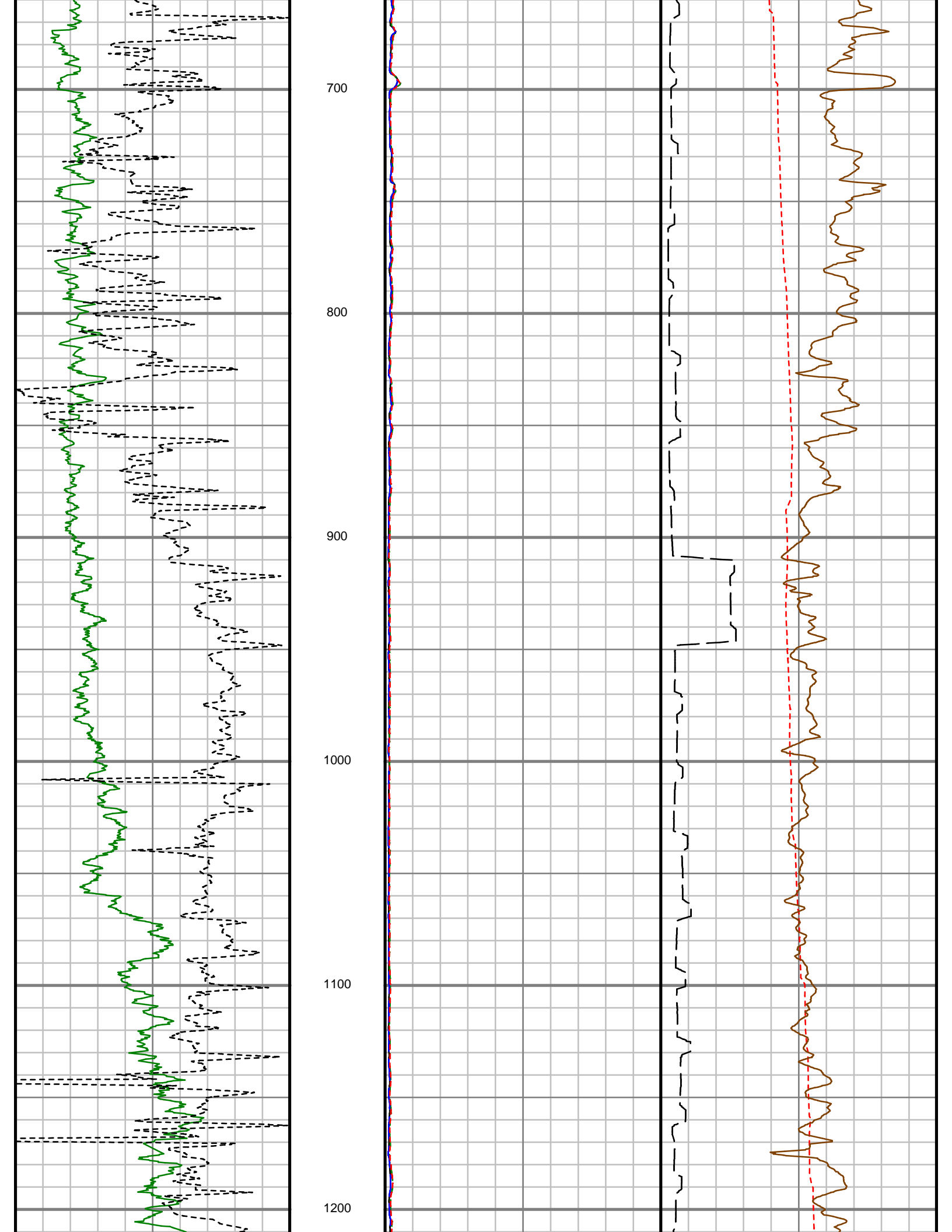
All interpretations are opinions based on inferences from electrical and other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

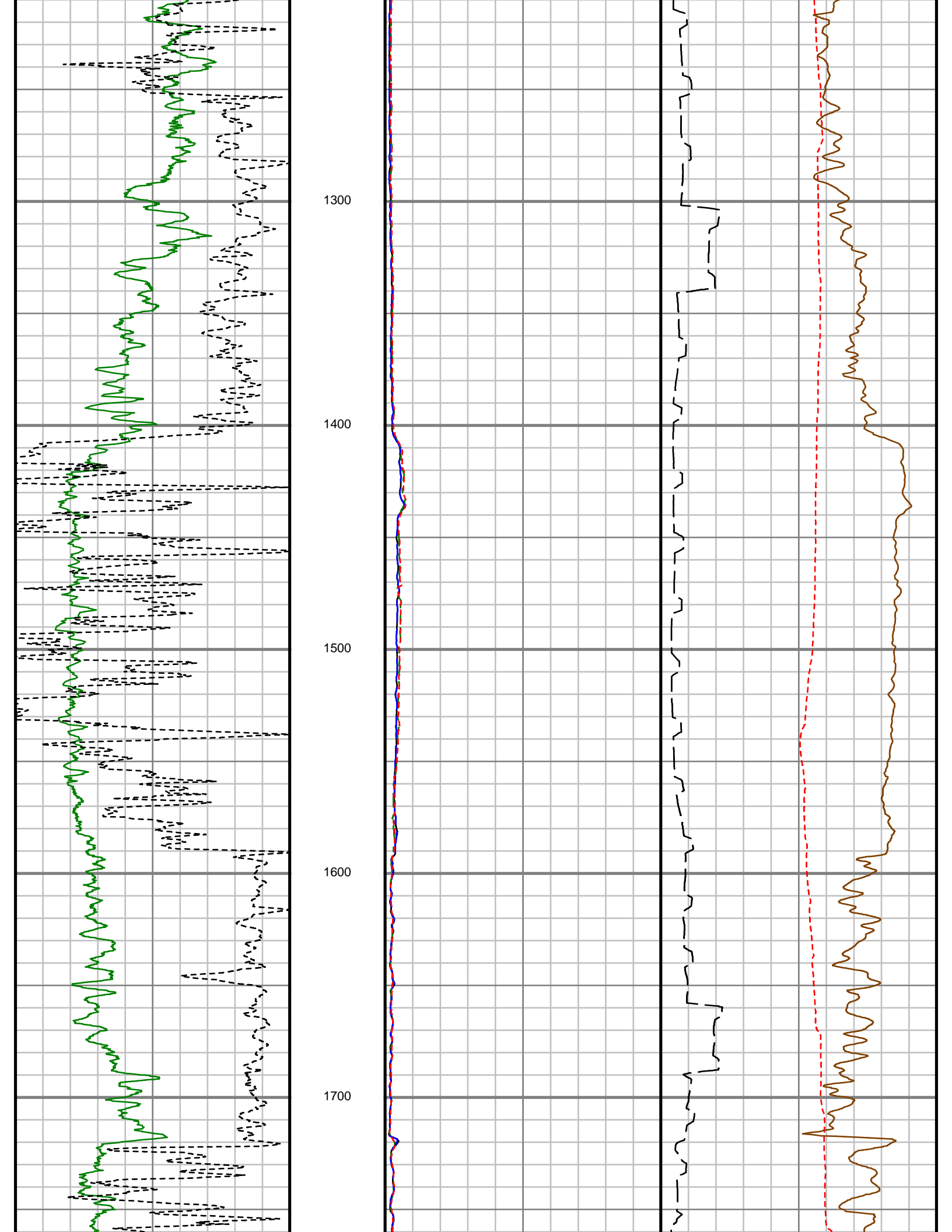
FINAL COPY

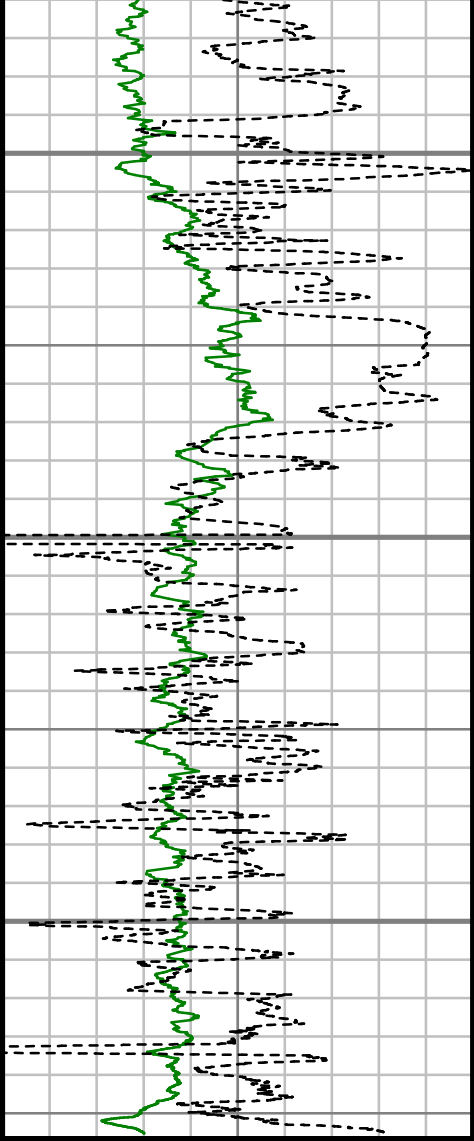


TRUE VERTICAL DEPTH  
 1:600 (ft)

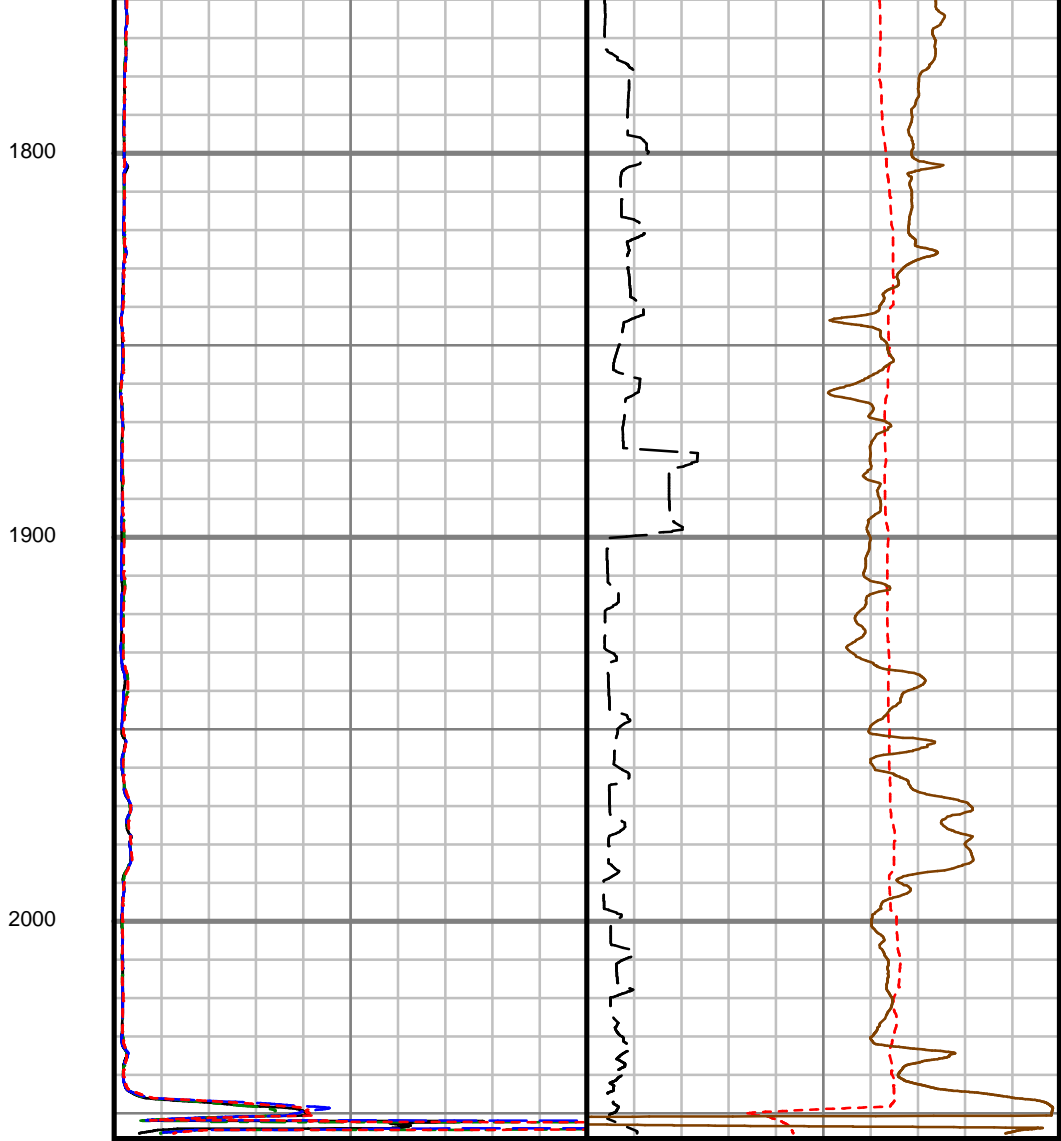








Rate of Penetration (ROP)		
500	Unit = ft/hr	0
GAIN - Gamma Ray (G-GR)		
0	Unit = aapi	150



Attenuation Resistivity, 33" (AR33)			Phase Shift Conductivity, 33" (PC33)		
0	Unit = ohmm	150	1000	Unit = mmho/m	0
Phase Shift Resistivity, 33" (PR33)			Tool Temperature (T-TEMP)		
0	Unit = ohmm	150	50	Unit = °F	150
Attenuation Resistivity, 23" (AR23)			FET of Resistivity (FETR)		
0	Unit = ohmm	150	0	Unit = hr	10
Phase Shift Resistivity, 23" (PR23)					
0	Unit = ohmm	150			

TRUE VERTICAL DEPTH  
1:600 (ft)

<b>Customer Name:</b>	TRIO PETROLRUM LLC
<b>Site Name:</b>	SECTION 23
<b>Well Name:</b>	HH-4 ST1
<b>Survey:</b>	HH4_ST
<b>Survey Date:</b>	11/26/2013
<b>Magnetic Declination:</b>	13.28 deg
<b>Grid Correction:</b>	1.11 deg
<b>North Reference:</b>	Grid North
<b>Calculation Method:</b>	Minimum Curvature
<b>Section (VS) Ref:</b>	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

<b>MD</b> ft	<b>Inc</b> deg	<b>Azim</b> deg	<b>TVD</b> ft	<b>VS</b> ft	<b>+N-S</b> ft	<b>+E-W</b> ft	<b>DLS</b> 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

<b>MD</b> ft	<b>Inc</b> deg	<b>Azim</b> deg	<b>TVD</b> ft	<b>VS</b> ft	<b>+N-S</b> ft	<b>+E-W</b> ft	<b>DLS</b> 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



<b>MD</b> ft	<b>Inc</b> deg	<b>Azim</b> deg	<b>TVD</b> ft	<b>VS</b> ft	<b>+N/-S</b> ft	<b>+E/-W</b> ft	<b>DLS</b> 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

<b>MD</b> ft	<b>Inc</b> deg	<b>Azim</b> deg	<b>TVD</b> ft	<b>VS</b> ft	<b>+N/-S</b> ft	<b>+E/-W</b> ft	<b>DLS</b> 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

2" = 100' FEET TVD