



PROPAGATION RESISTIVITY  
GAMMA RAY

5" = 100' FEET MD

COMPANY : CATAMOUNT ENERGY PARTNERS  
WELL : LAMKE 33-5-29 #1  
FIELD : FRUITLAND  
COUNTY : ARCHULETAA  
STATE : COLORADO  
COUNTRY : U.S.A.  
UWI : 05007063220000

COMPANY : CATAMOUNT ENERGY PARTNERS  
WELL : LAMKE 33-5-29 #1  
FIELD : FRUITLAND  
COUNTY : ARCHULETAA  
STATE : COLORADO  
COUNTRY : U.S.A.  
UWI : 05007063220000

WELL LOCATION  
LAT:37.0699919°N LONG:107.4073558°W  
N:1152541.71 ft E:2443521.11 ft

SEC:29 TWP:29N RANGE:05W

OTHER SERVICES

DIRECTIONAL  
ROP  
CONDUCTIVITY  
FETR

DEPTH REF. : RKB

REF. HEIGHT : 11.000 ft RKB to Ground Level

GROUND LEVEL : 6119.000 ft G.L. to MEAN SEA LEVEL

BOREHOLE RECORD

DEVIATION RECORD

HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft
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12.250	0	399			
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7.875	399				
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CASING RECORD

CASING SIZE in	FROM ft	TO ft
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8 5/8	0	389
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DRILLING CO. : AZTEC

RIG : 507

LWD UNIT NO. : 253 DISTRICT : GRAND JUNCTION

SPUD DATE : 4/17/16

LWD START DATE : 4/18/16 DEPTH : 500 ft

LWD END DATE : DEPTH :

TOTAL DEPTH :

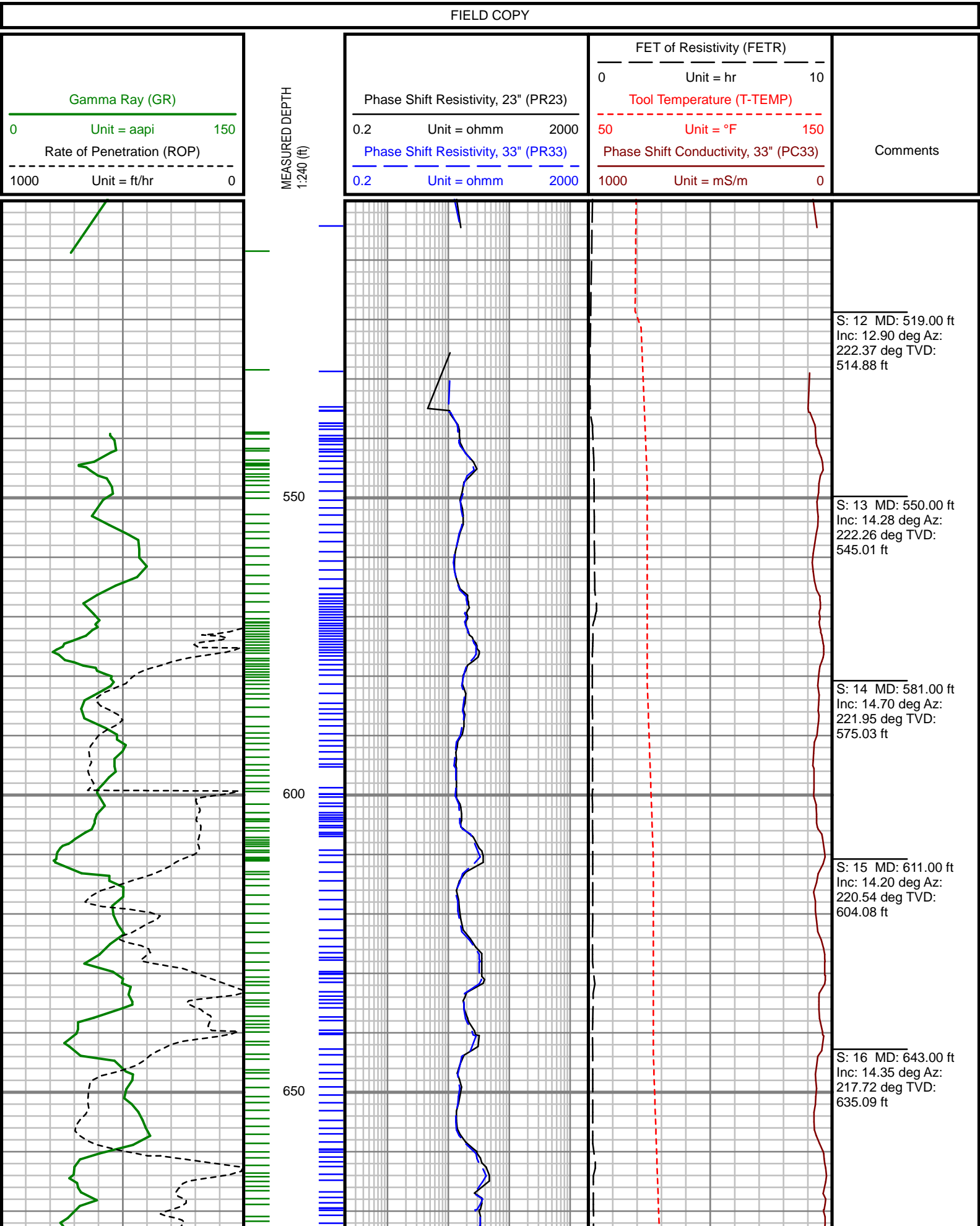
Run Data

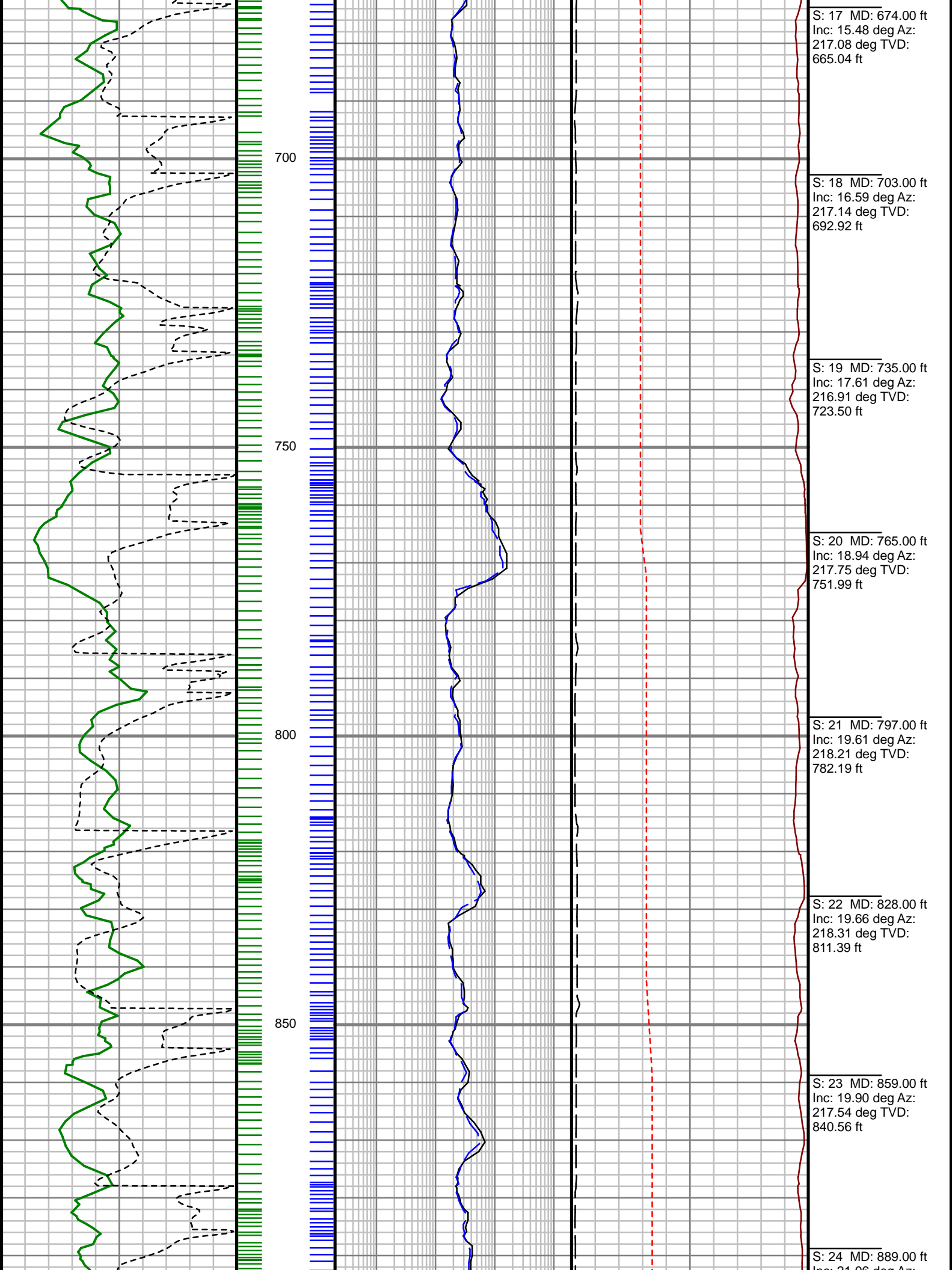
RUN NUMBER	1	2	4	
START DATE	4/18/2016	4/18/2016	4/18/2016	
START TIME	01:15	06:15	10:00	
END DATE	4/18/2016	4/18/2016		
END TIME	05:05	09:00		
DEPTH IN (ft)	399	571	571	
DEPTH OUT (ft)	571	571		
LOG TOP (ft)			500	
LOG BOTTOM (ft)				
HOLE SIZE (in)	7 7/8	7 7/8	7 7/8	
MUD DATA @ (ft)			2382	
MUD TYPE			LSND	
DENSITY (lb / gal)			9.7	
VISCOSITY (s / qt)			41	
pH			8.1	
FLUID LOSS (cm3 / 30)			8.8	
SALINITY (ppm)			1500	
Rm (ohmm @ deg F)				
Rmf (ohmm @ deg F)				
MAX TEMP (deg F)			98	
Rm @ MAX TEMP (ohmm)				
LWD ENGINEER #1	M. WHILMS	M. WHILMS	M. WHILMS	
LWD ENGINEER #2	J. HOAGLUND	J. HOAGLUND	J. HOAGLUND	
LWD ENGINEER #3				
LOG WITNESS #1				
LOG WITNESS #2				

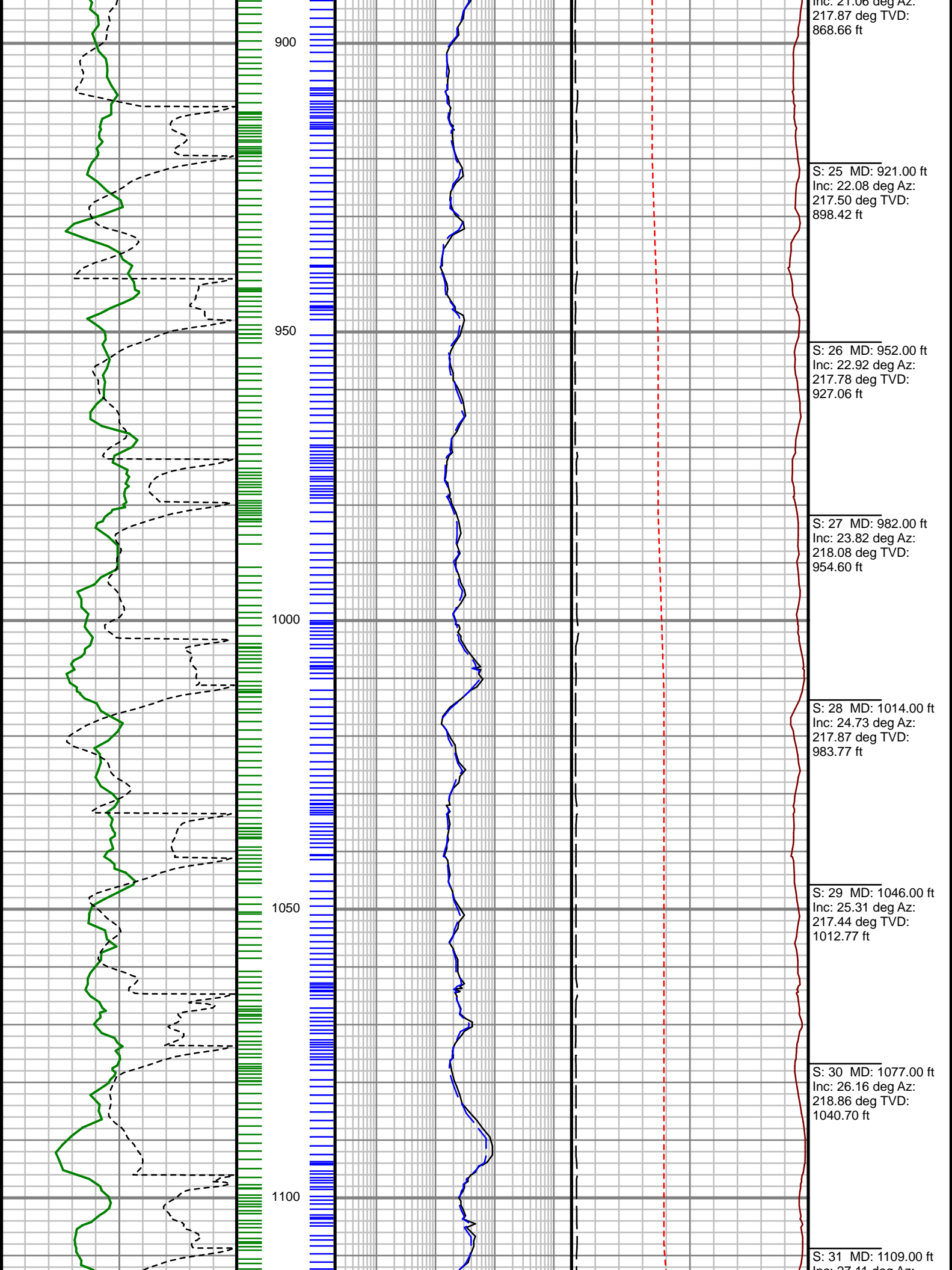
Remarks	
CATAMOUNT ENERGY PARTNERS PRODUCTION AFE#	
SCIENTIFIC DRILLING INTERNATIONAL JOB# 355925	
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.	
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.	
FLAT AVERAGE FILTER OF 2.00 FT APPLIED TO GAMMA RAY CURVE	
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO FET OF RESISTIVITY CURVE	
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO TOOL TEMPERATURE CURVE	
INTERMEDIATE RUN # 1: MWD / GAMMA RAY / PRT	
SENSORS S/N: CONTROLLER = 1348 / MWD EYE = 026 / GAMMA RAY = 009 / PRT = 364	
BIT TO SENSOR OFFSETS: SURVEY= 53.00 FT. / GAMMA RAY = 28.51 FT. / PRT = 32.76 FT.	
INTERMEDIATE RUN # 2: MWD / GAMMA RAY / PRT	
SENSORS S/N: CONTROLLER = 1272 / MWD EYE = 1129 / GAMMA RAY = 012 / PRT = 364	
BIT TO SENSOR OFFSETS: SURVEY= 53.00 FT. / GAMMA RAY = 28.51 FT. / PRT = 32.76 FT.	
INTERMEDIATE RUN # 4: MWD / GAMMA RAY / PRT	
SENSORS S/N: CONTROLLER = 1272 / MWD EYE = 1129 / GAMMA RAY = 012 / PRT = 364	
BIT TO SENSOR OFFSETS: SURVEY= 49.00 FT. / GAMMA RAY = 28.43 FT. / PRT = 32.68 FT.	
MNEMONICS LIST:	
GR = GAMMA RAY	T-TEMP = TOOL TEMPERATURE
ROP = RATE OF PENETRATION	PC33 = PHASE SHIFT CONDUCTIVITY, 33"
PR23 = PHASE SHIFT RESISTIVITY, 23"	

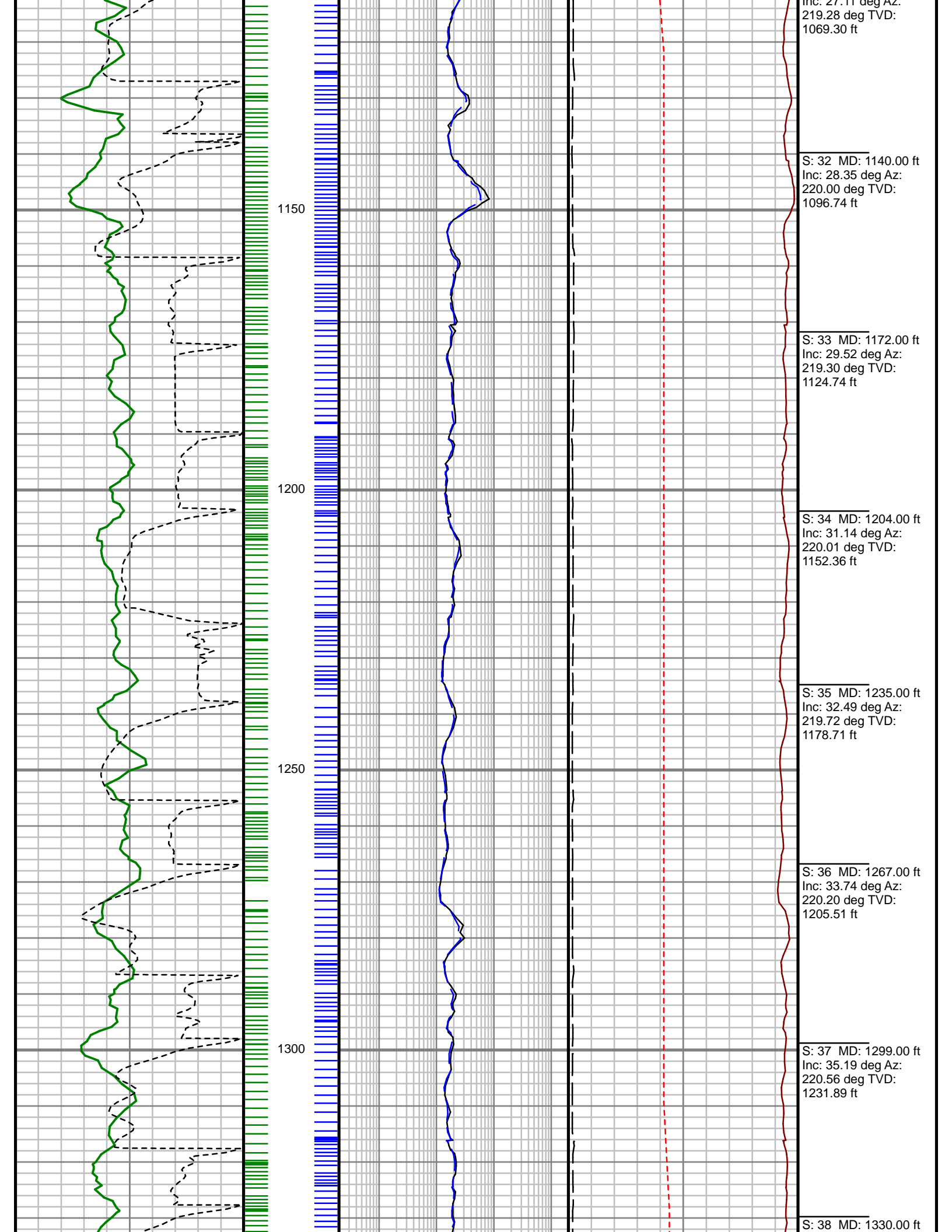
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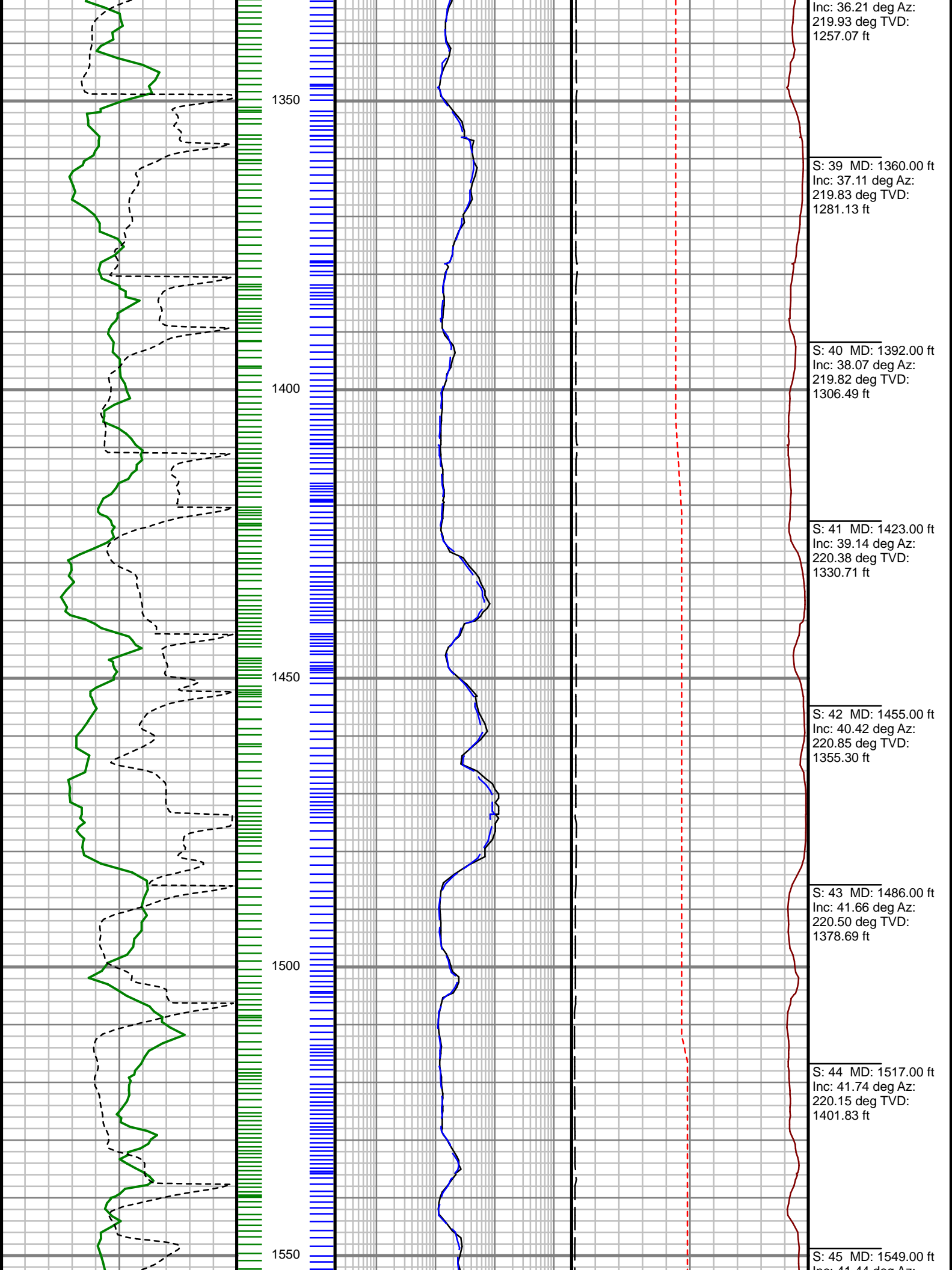
All interpretations are opinions based on measurements from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss,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

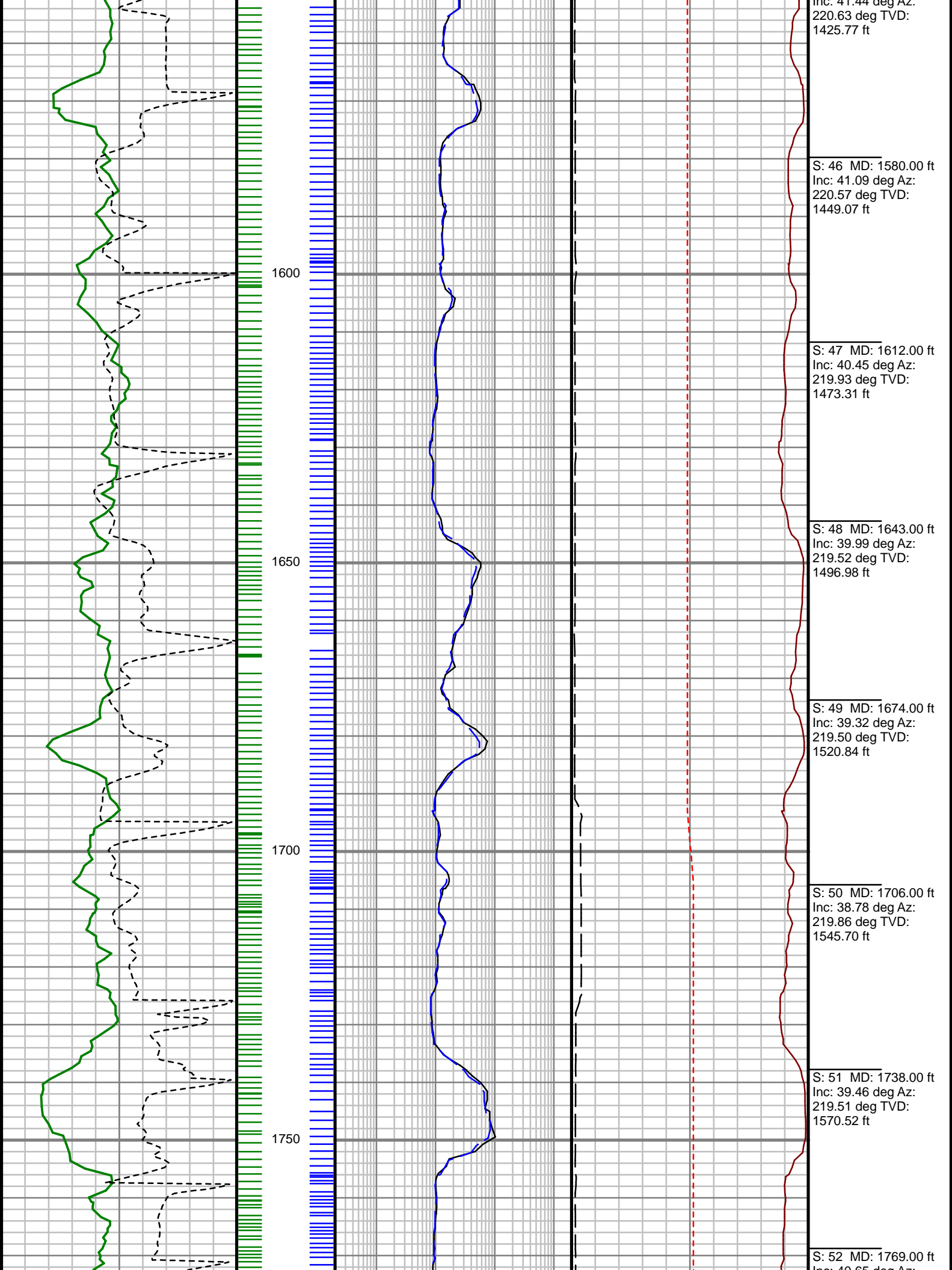




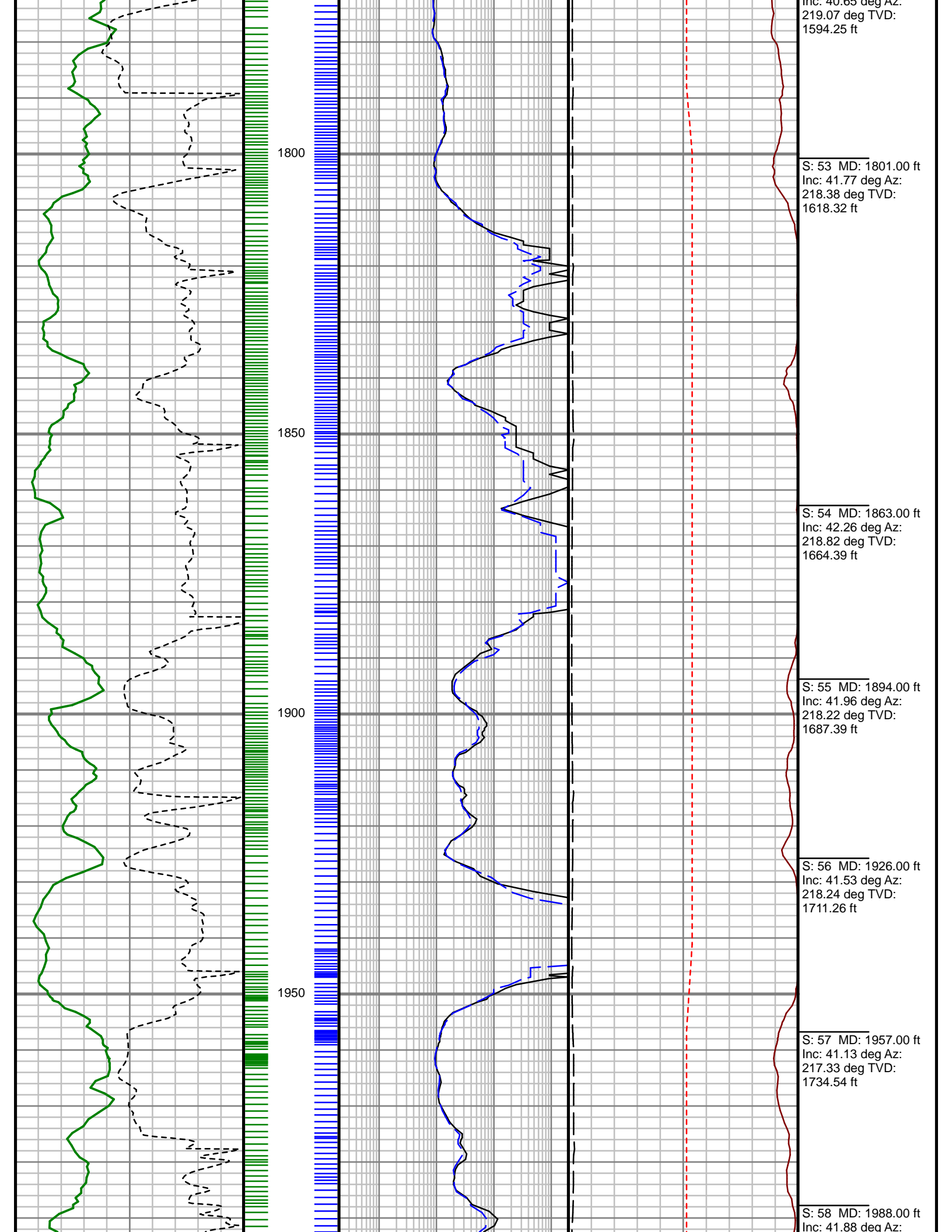


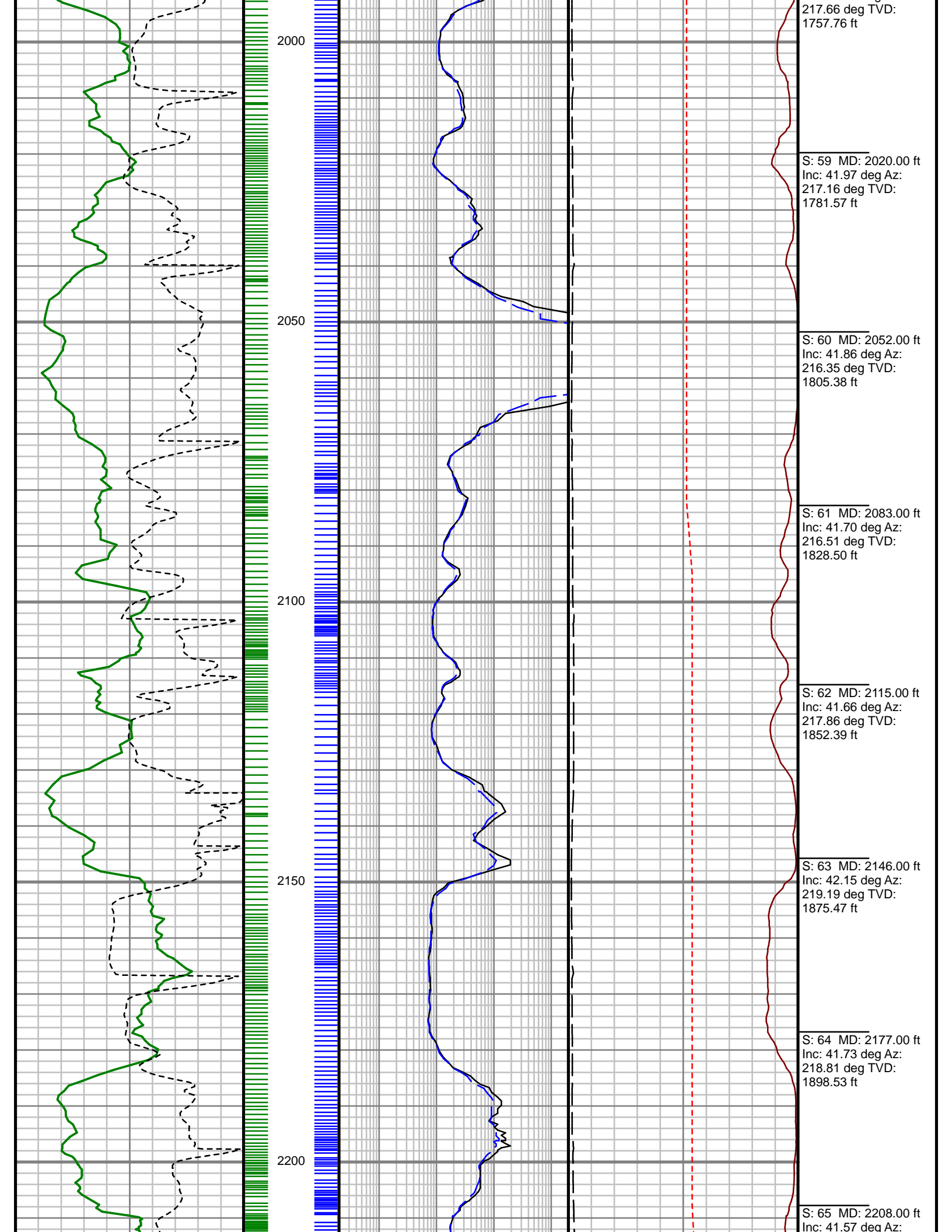


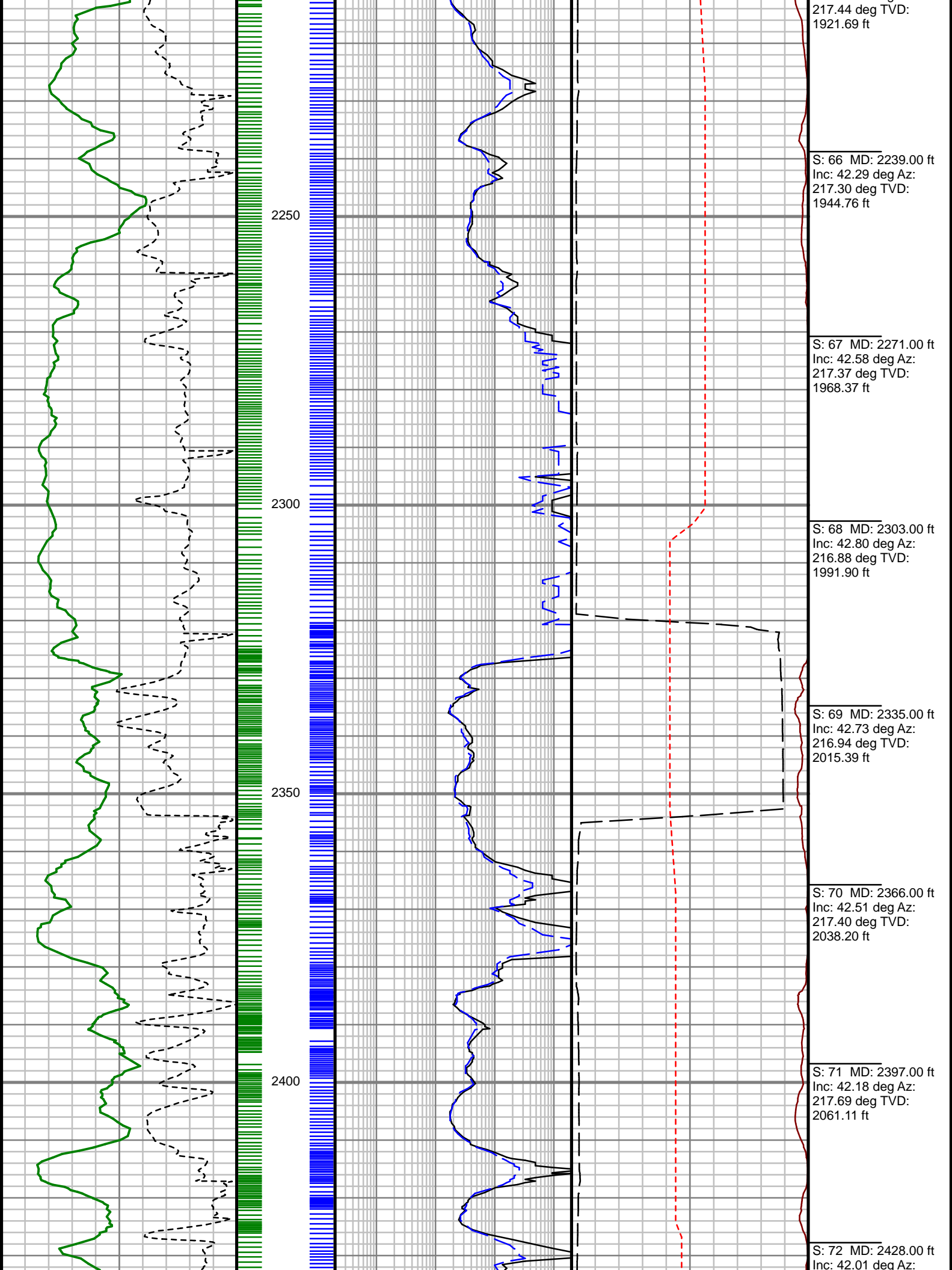


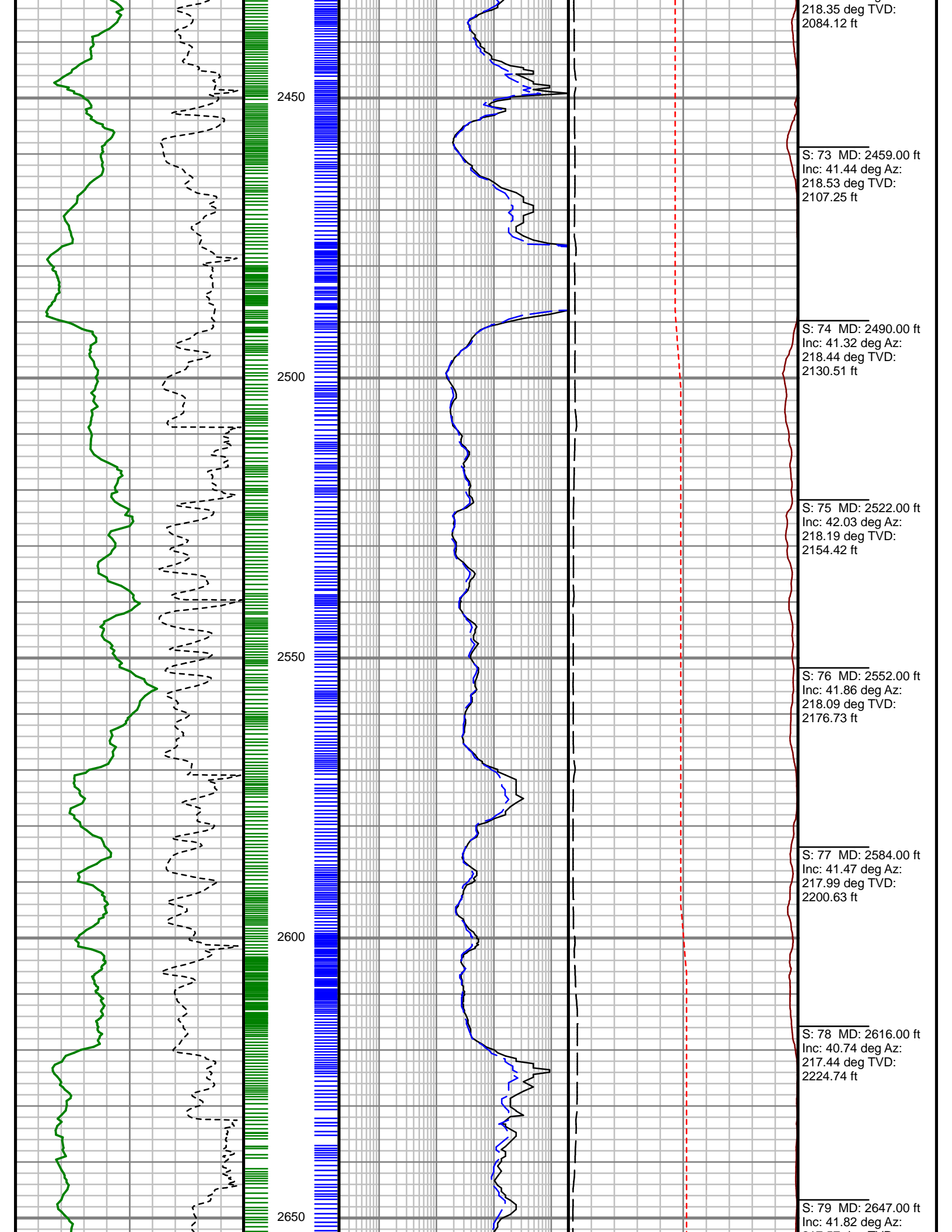


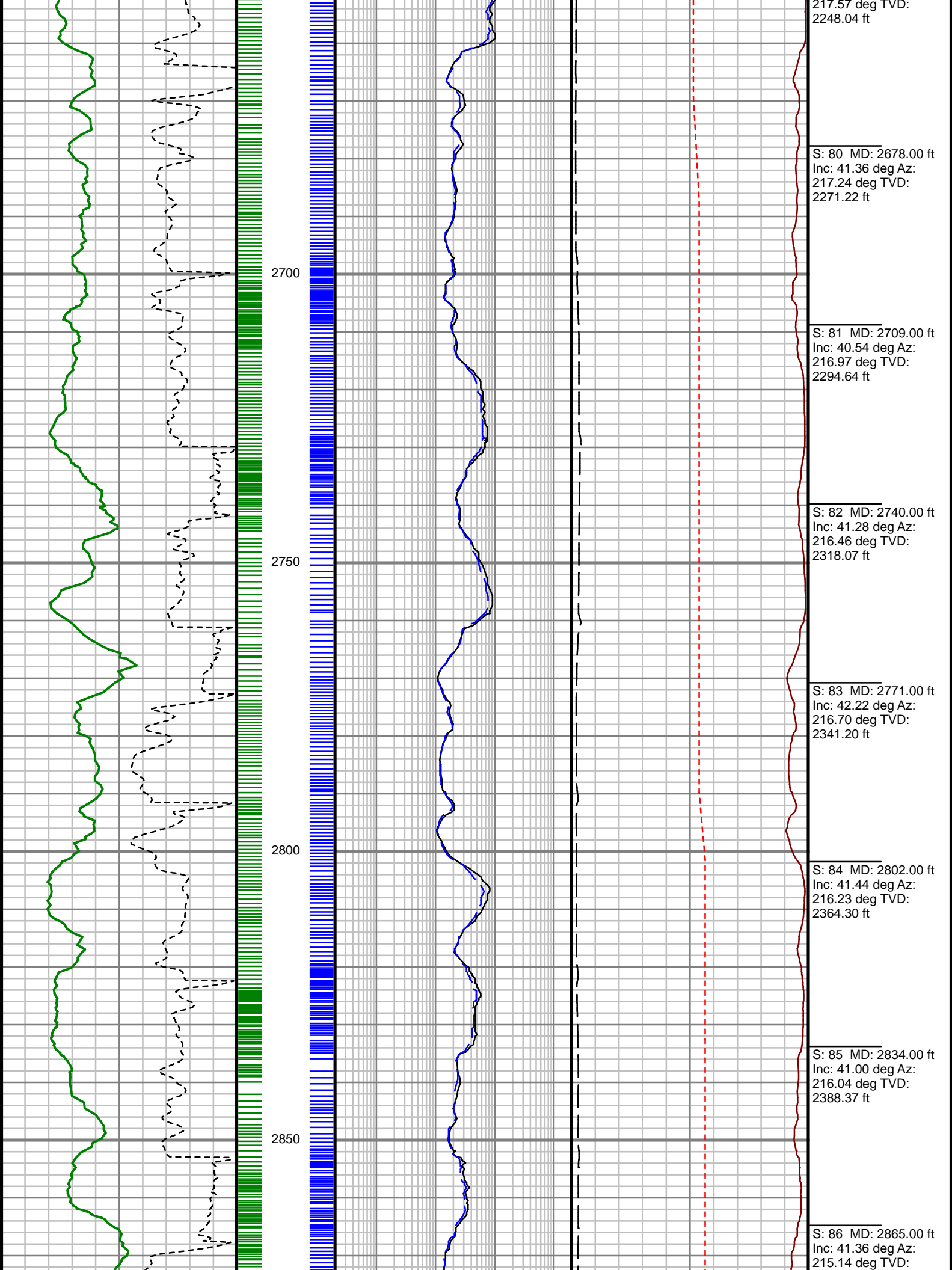


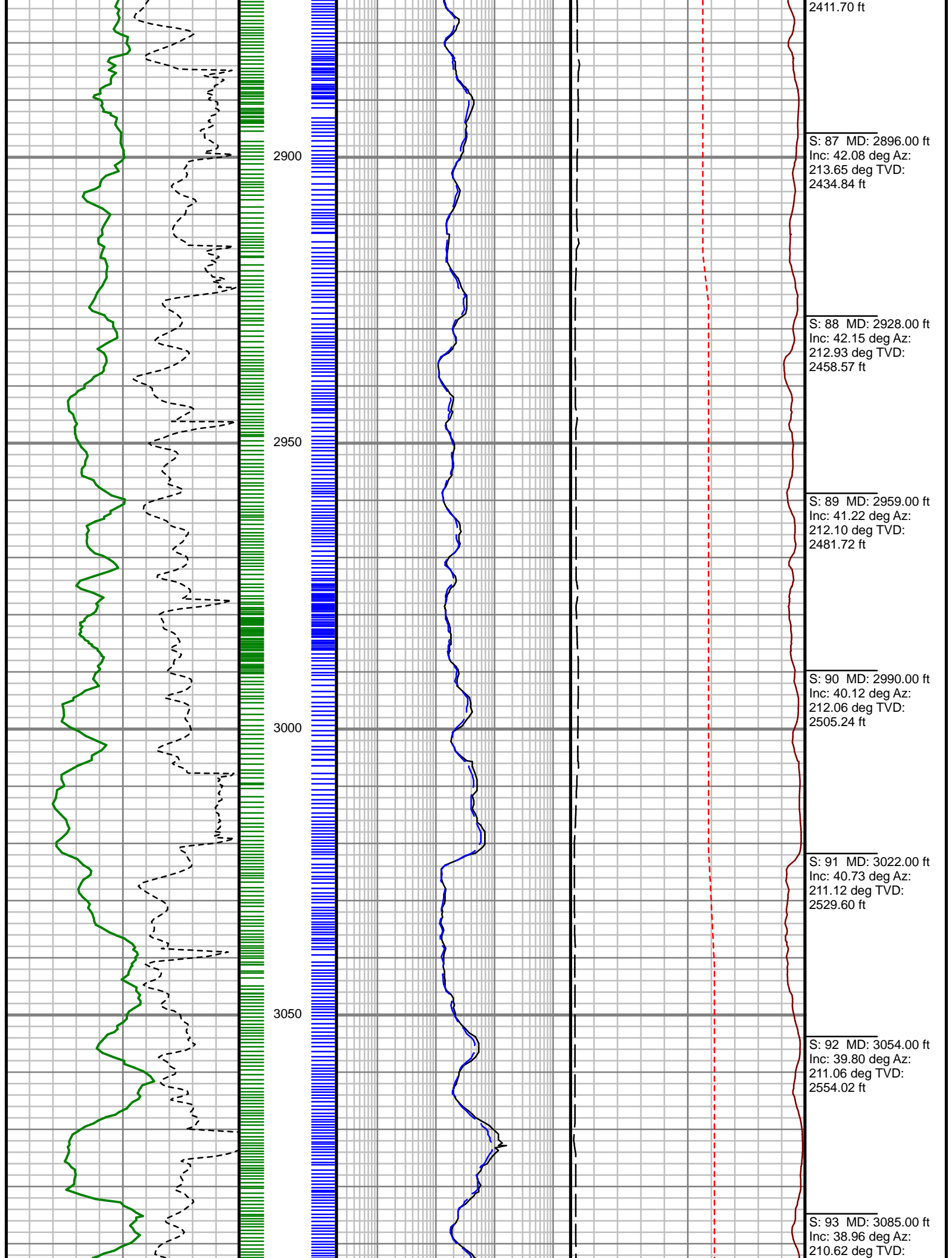


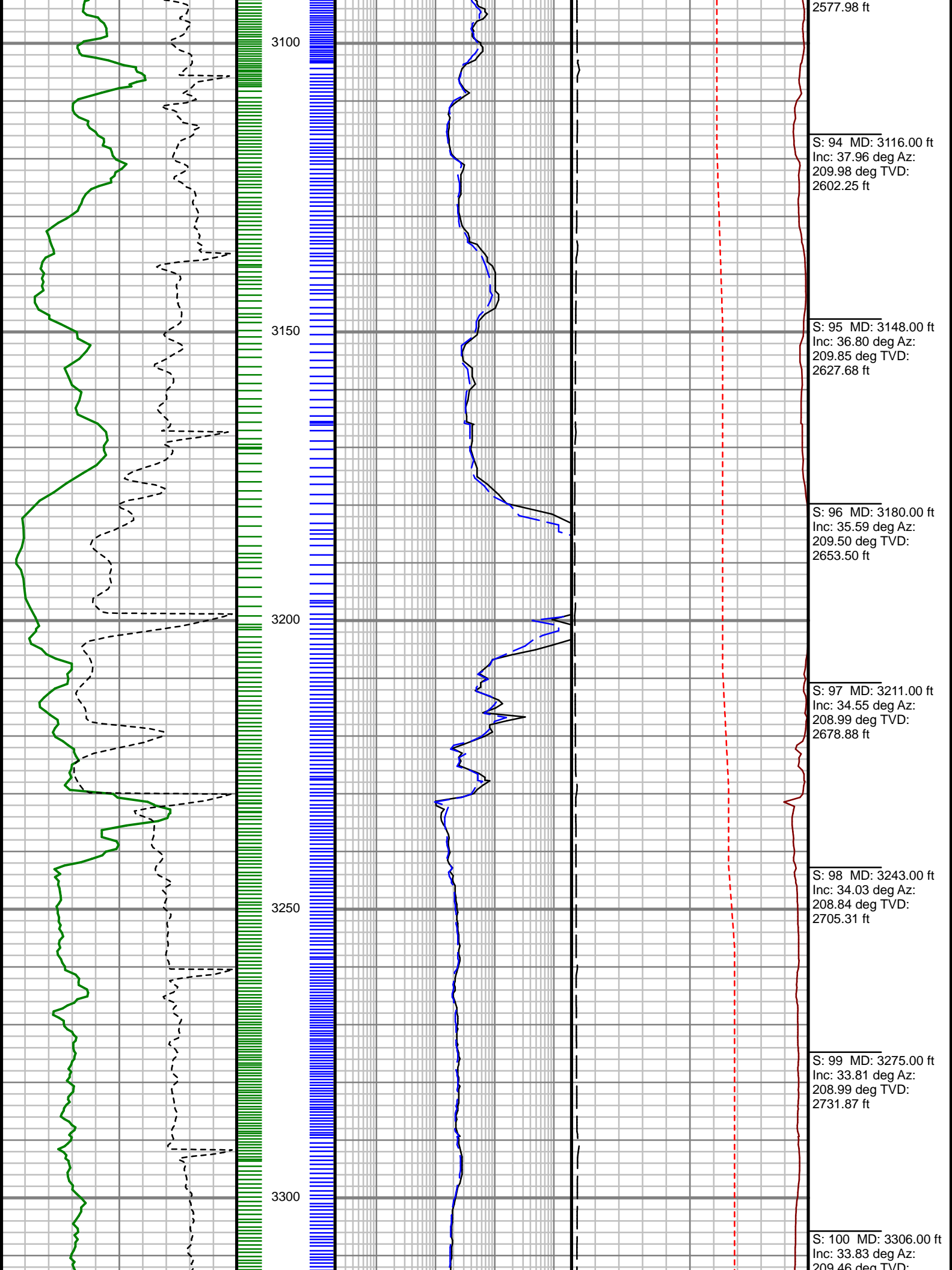


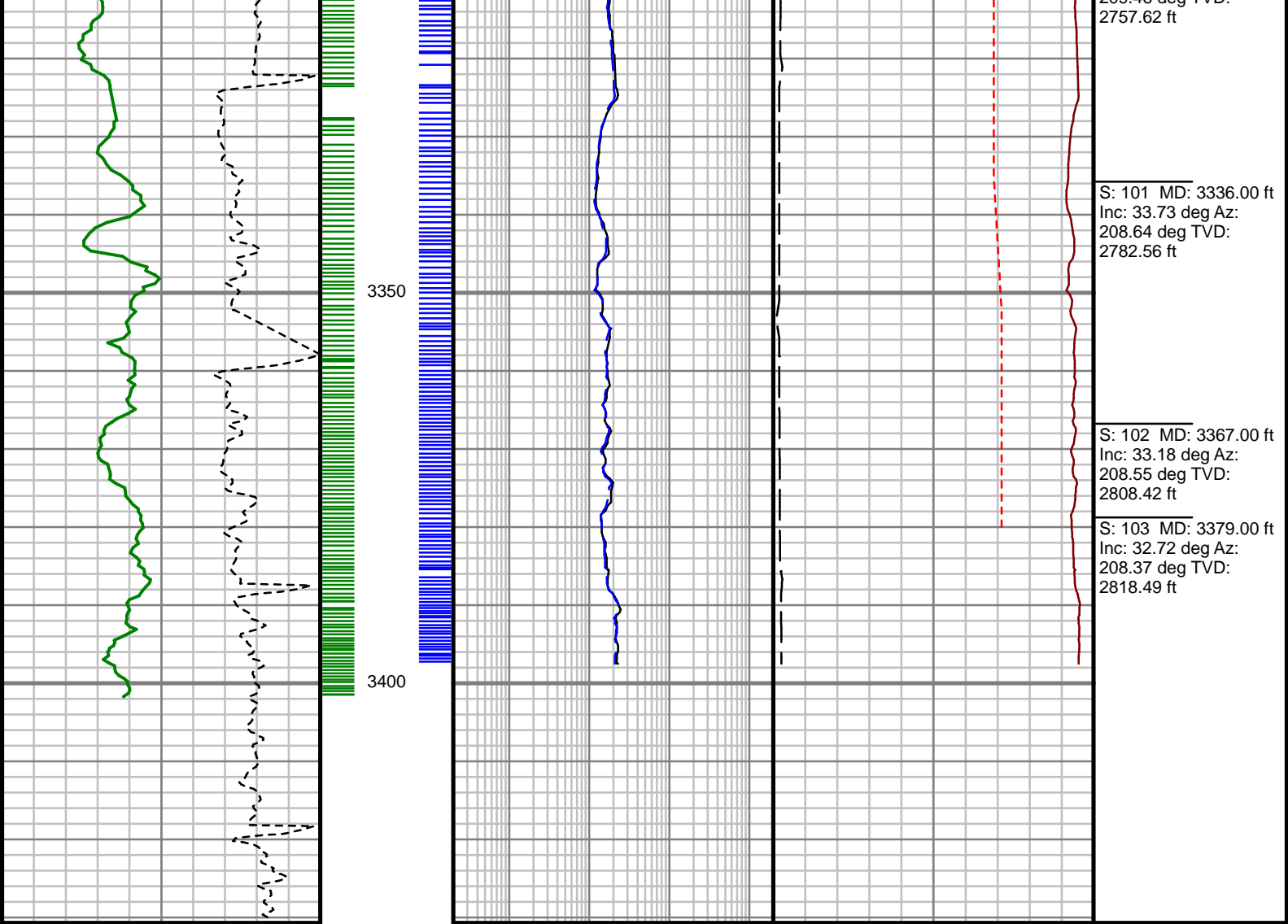












208.64 deg TVD:  
2757.62 ft

S: 101 MD: 3336.00 ft  
Inc: 33.73 deg Az:  
208.64 deg TVD:  
2782.56 ft

S: 102 MD: 3367.00 ft  
Inc: 33.18 deg Az:  
208.55 deg TVD:  
2808.42 ft

S: 103 MD: 3379.00 ft  
Inc: 32.72 deg Az:  
208.37 deg TVD:  
2818.49 ft

Rate of Penetration (ROP)		
1000	Unit = ft/hr	0
Gamma Ray (GR)		
0	Unit = aapi	150

MEASURED DEPTH  
1:240 (ft)

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

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

Comments



PROPAGATION RESISTIVITY  
GAMMA RAY

5" = 100' FEET MD