



WELLS RANCH AA21-67HN

MD 1" : 100'

Company: NOBLE ENERGY
Well Name: WELLS RANCH AA21-67HN
API: 05-123-37741
Rig Id: H&P 277
State: CO
County/Parish: WELD COUNTY
Country: USA
Survey Company: DRILTECH, LLC
Job number: 2014-033-IDDT-CO
MARK LARUE MWD OPERATOR
JOSH CAYLOR MWD OPERATOR

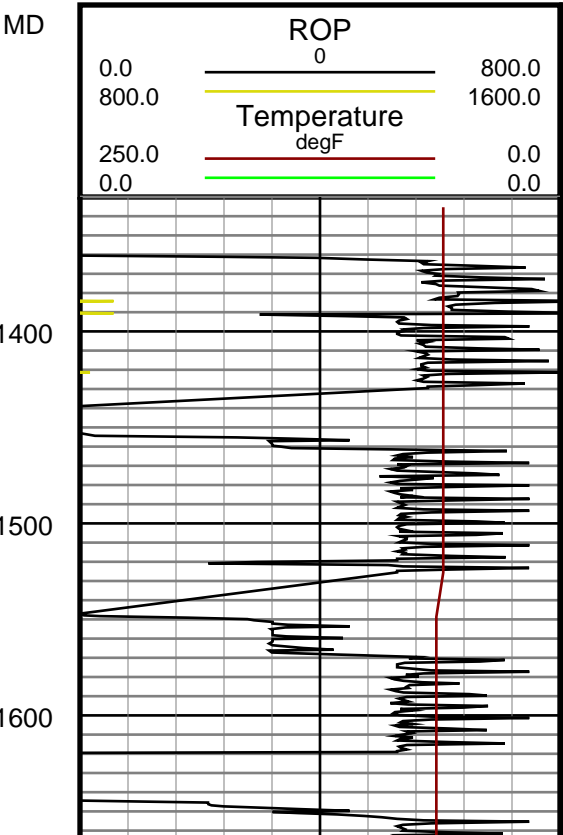
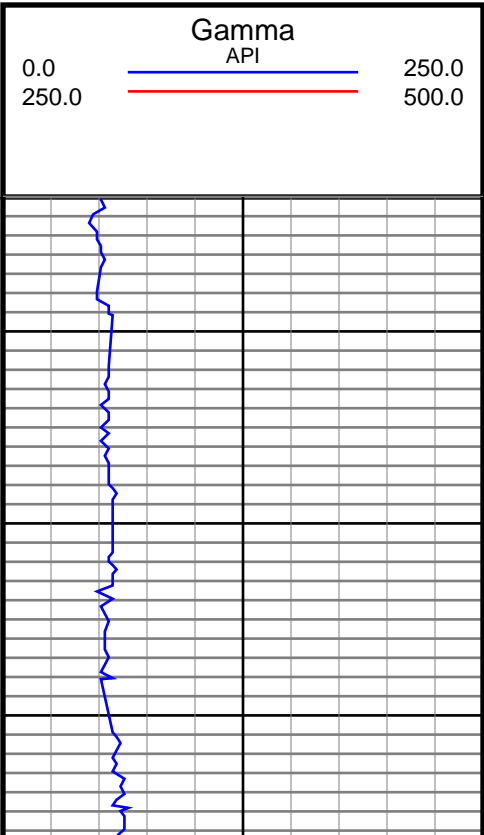
Log measurements:
Depth measured from:
Maximum temperature:

Depth Date
Start: 1350 ft 2-5-2014
End: 10904 ft 2-12-2014

Casing Depth Size
Surface: 951 9.625
Intermediate: 7086 7.0
Mud Type: WATER BASE
Density: 9.25
Viscosity: 38
Rm: Rmf: Rmc:
Elevations
KB: 4727
GL: 4751
DF: 4751

Run	Bit Size	Gamma	Offsets	Survey	Start	End	Start	End	Dates
1	8 3/4	38.00	55.00	1350	6047	2-5-2014	2-7-2014	2-9-2014	
2	8 3/4	45.00	62.00	6047	7096	2-7-2014	2-9-2014	2-12-2014	
3	6 1/8	47.00	64.00	7096	10904	2-10-2014	2-12-2014		
4									
5									
6									
7									
8									
9									
10									

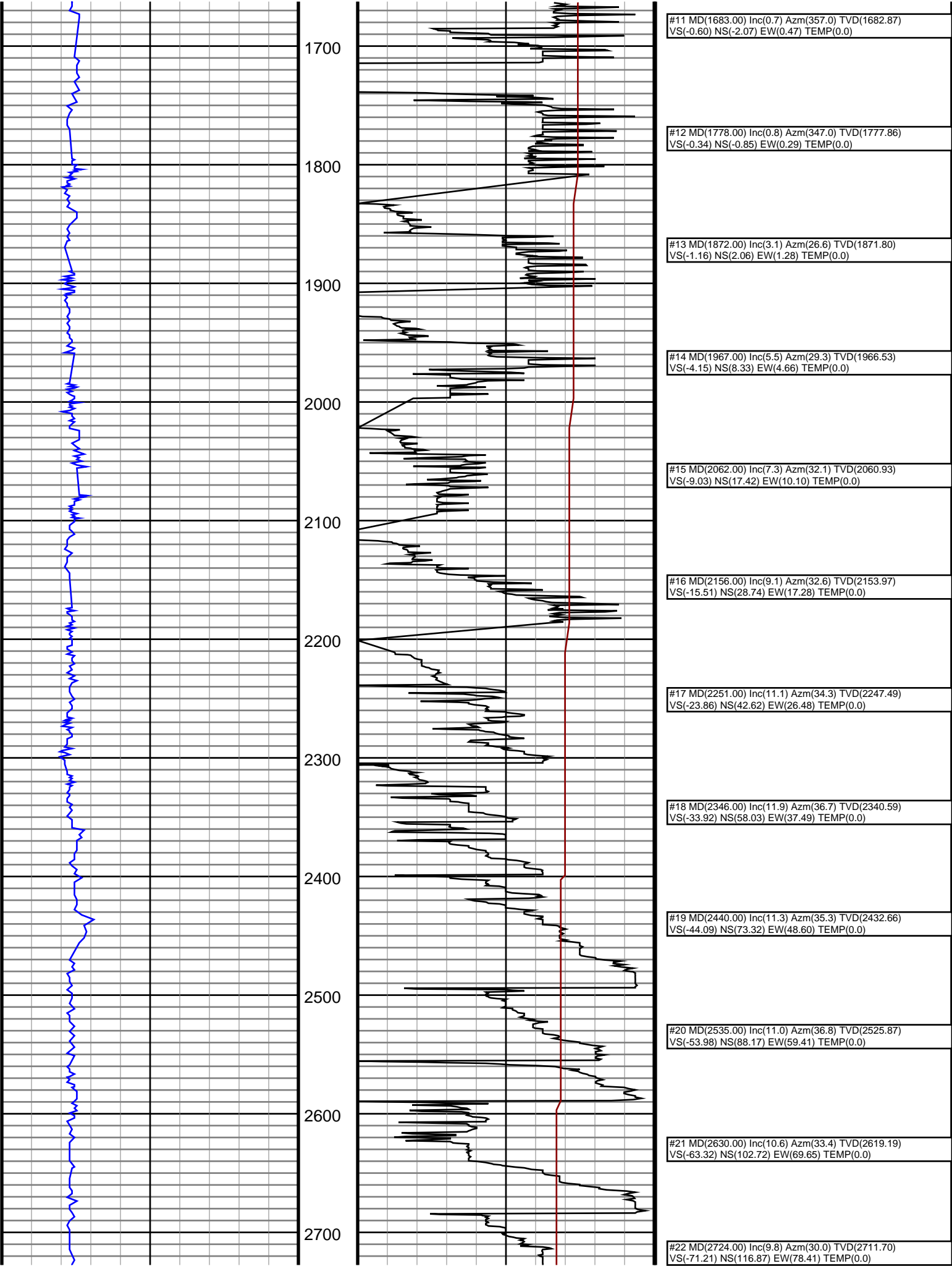
DRILTECH, LLC uses its best efforts to provide its customers with accurate information and interpretations in conjunction with services performed but will not be held liable or responsible for the accuracy of such information or interpretation.

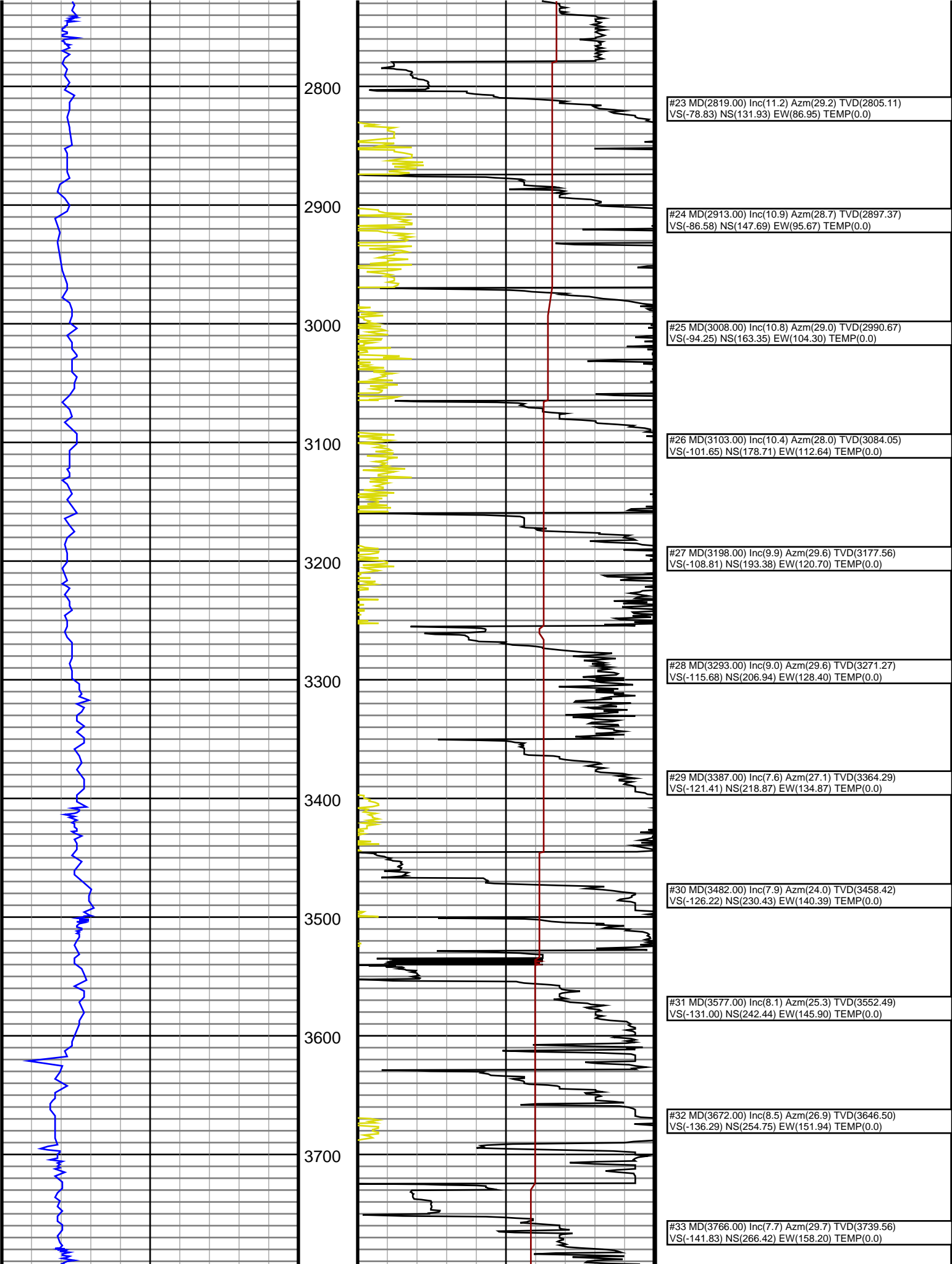


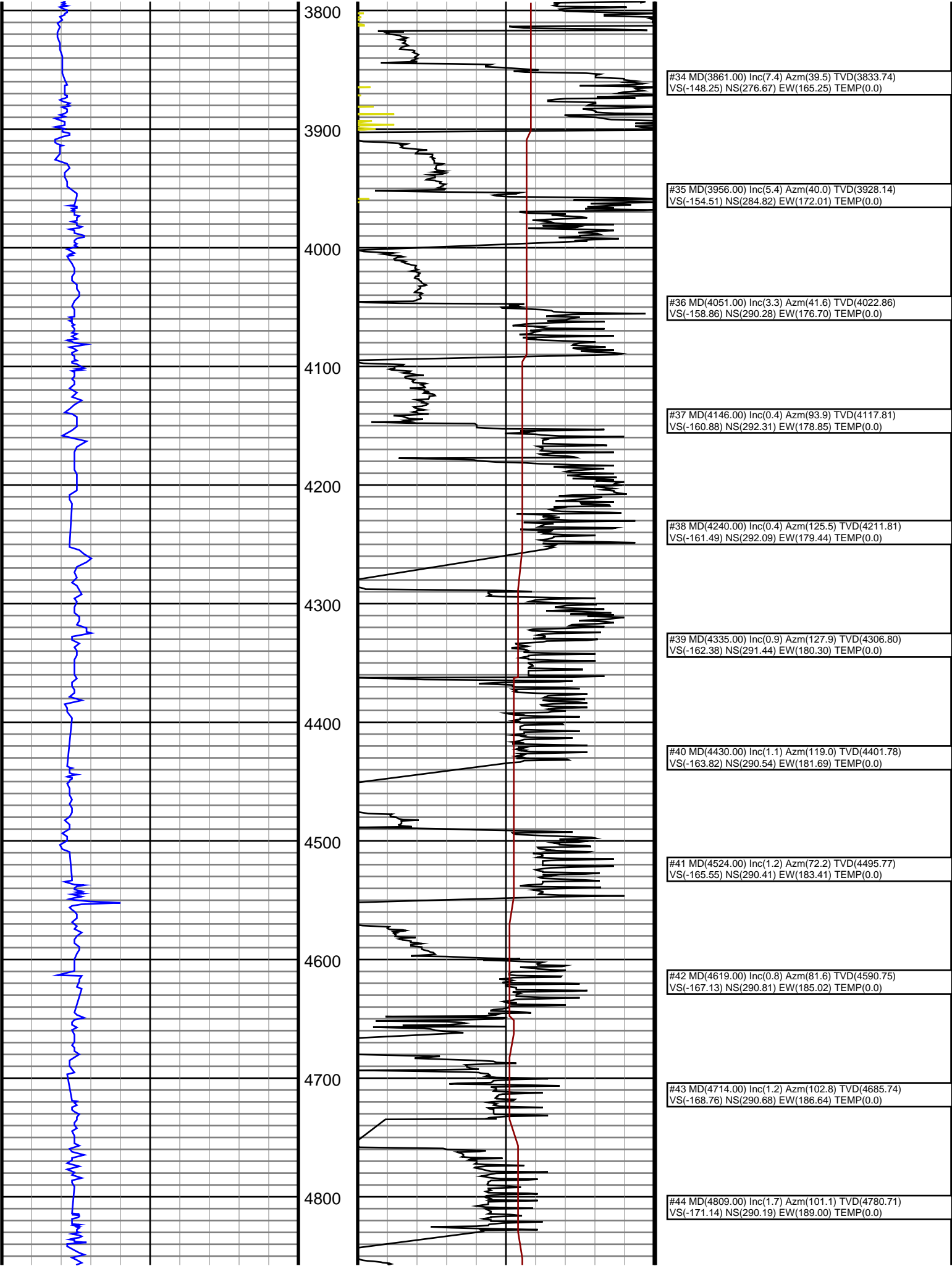
#8 MD(1400.00) Inc(1.1) Azm(16.5) TVD(1399.91)
VS(0.36) NS(-6.48) EW(-0.75) TEMP(0.0)

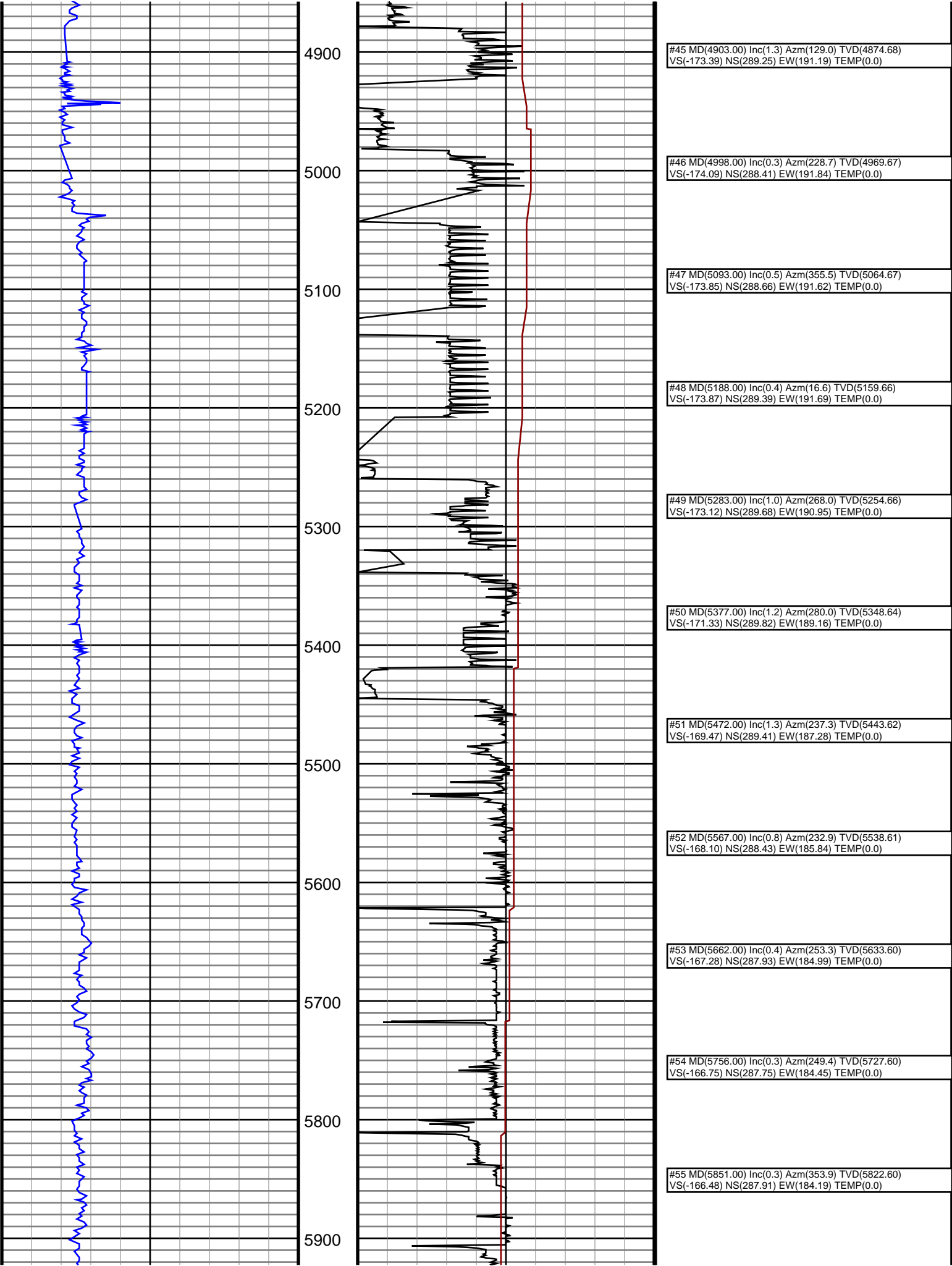
#9 MD(1494.00) Inc(1.0) Azm(20.2) TVD(1493.89)
VS(-0.08) NS(-4.85) EW(-0.21) TEMP(0.0)

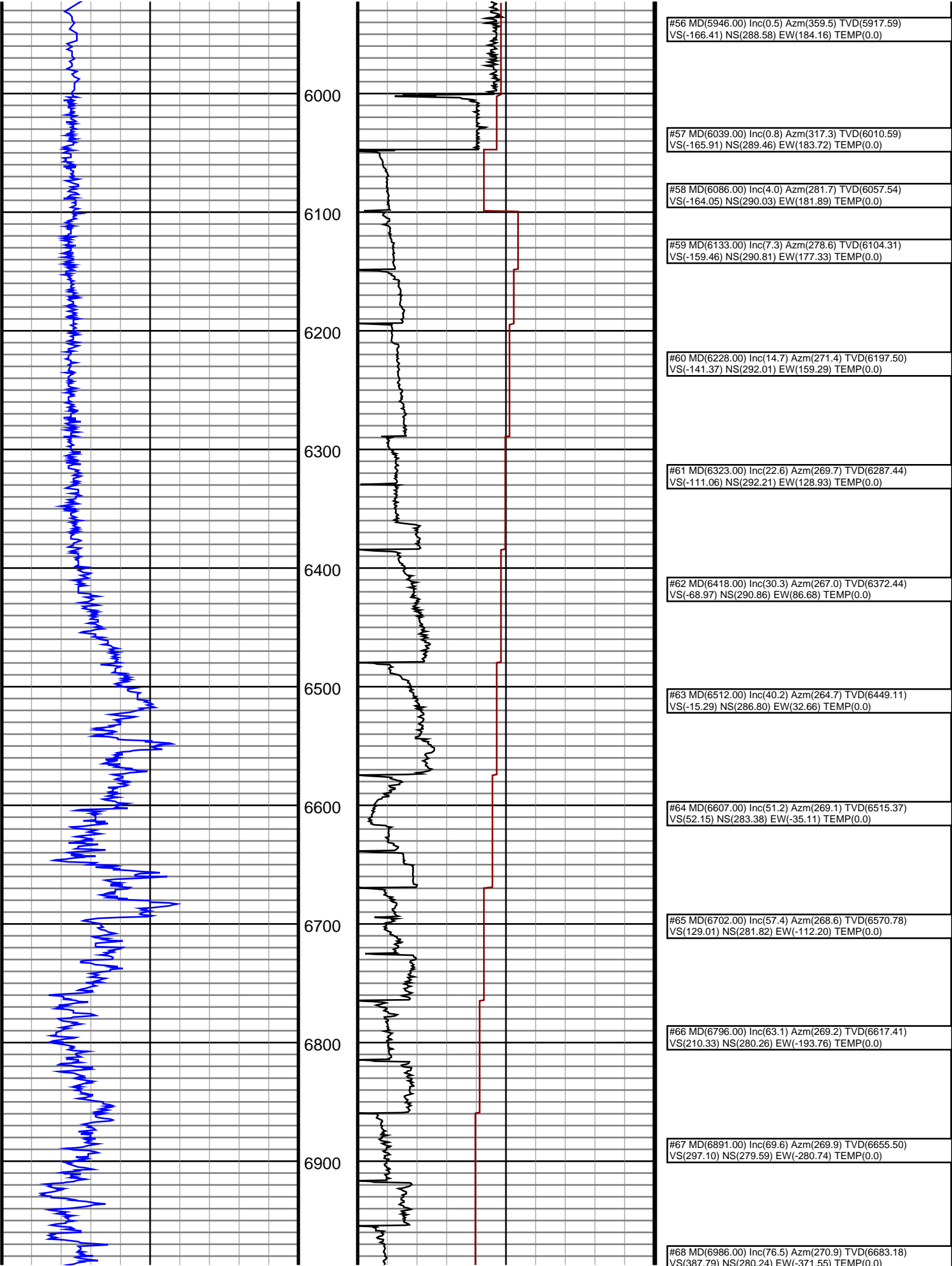
#10 MD(1589.00) Inc(0.9) Azm(16.7) TVD(1588.88)
VS(-0.49) NS(-3.36) EW(0.29) TEMP(0.0)

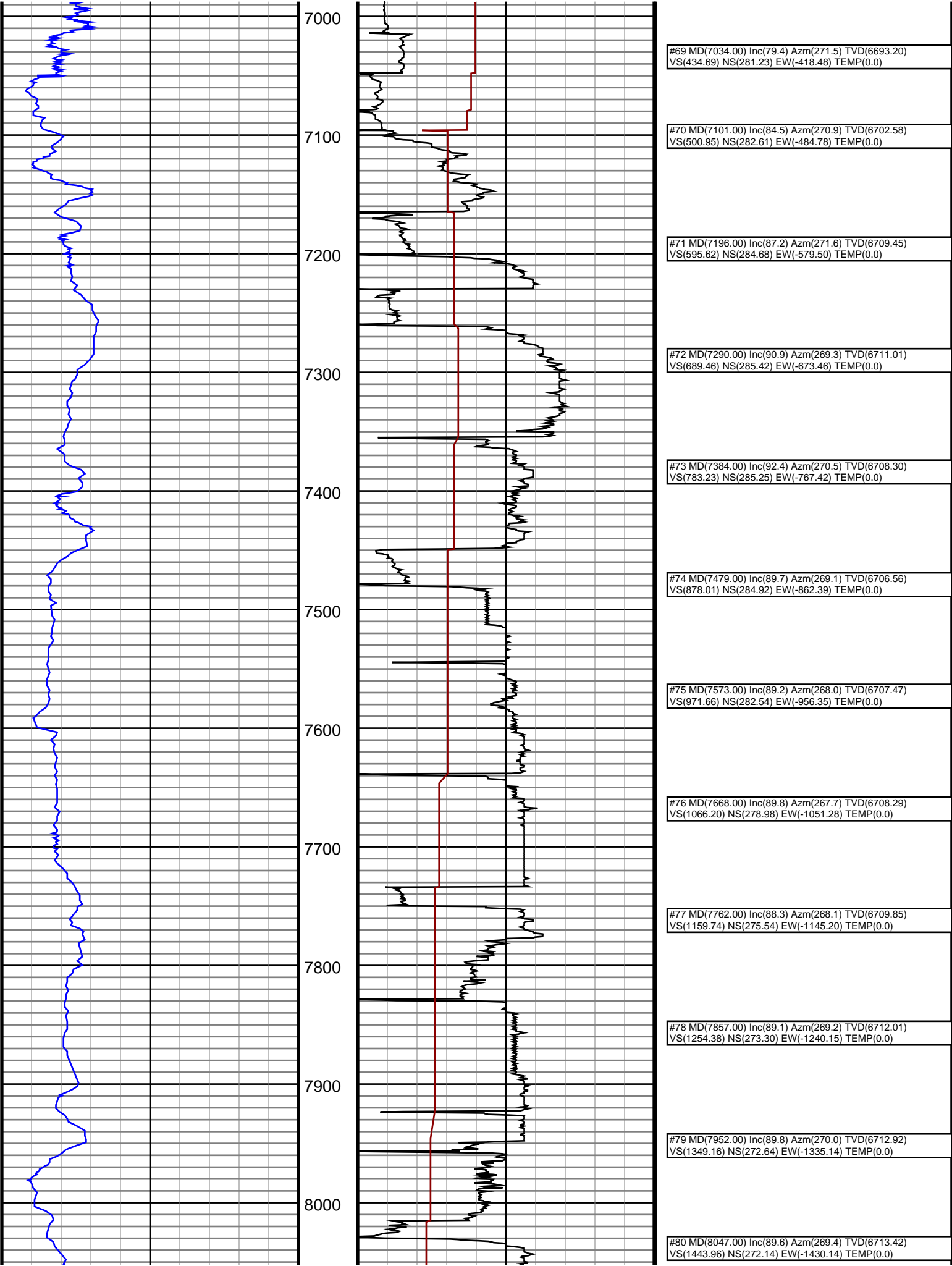


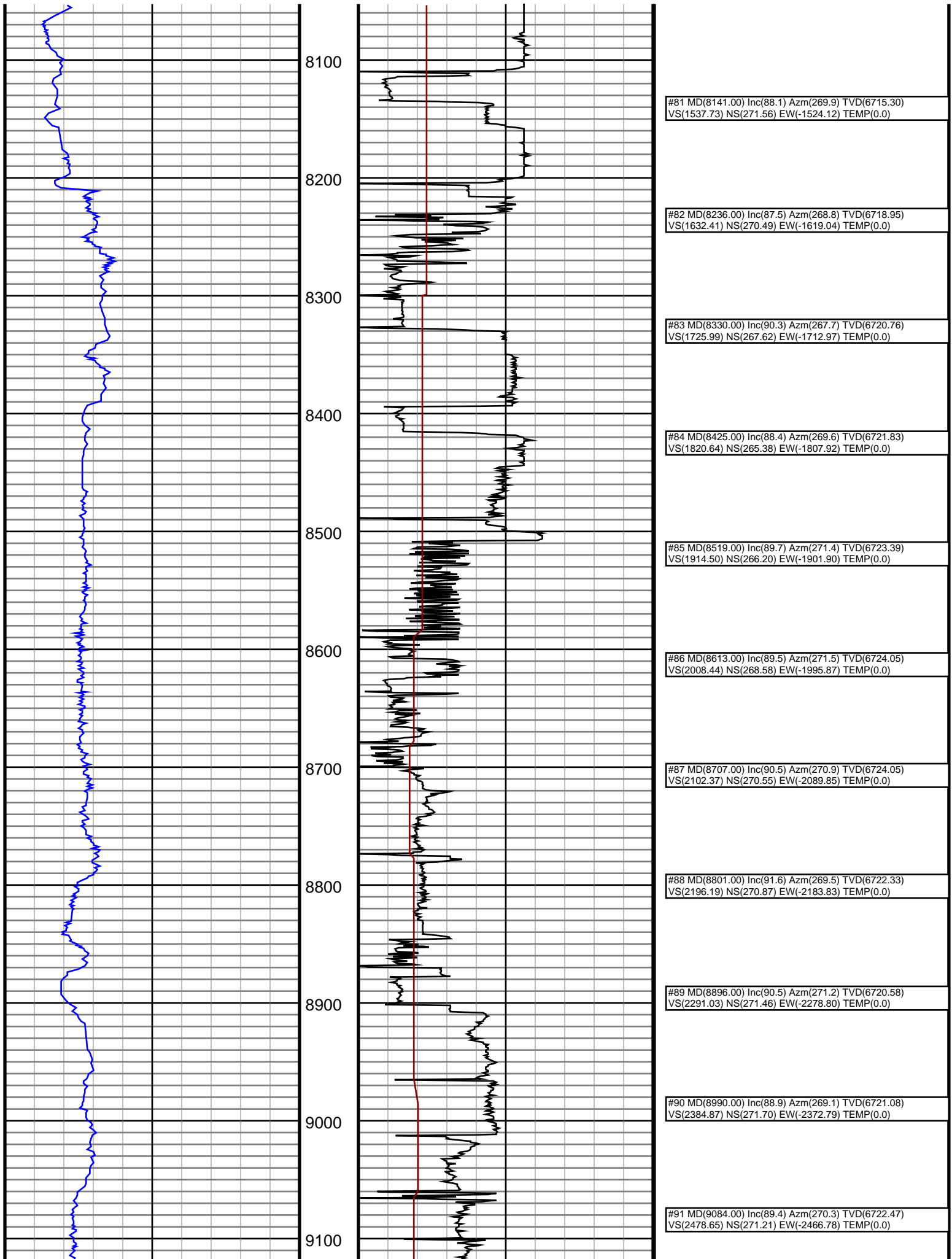


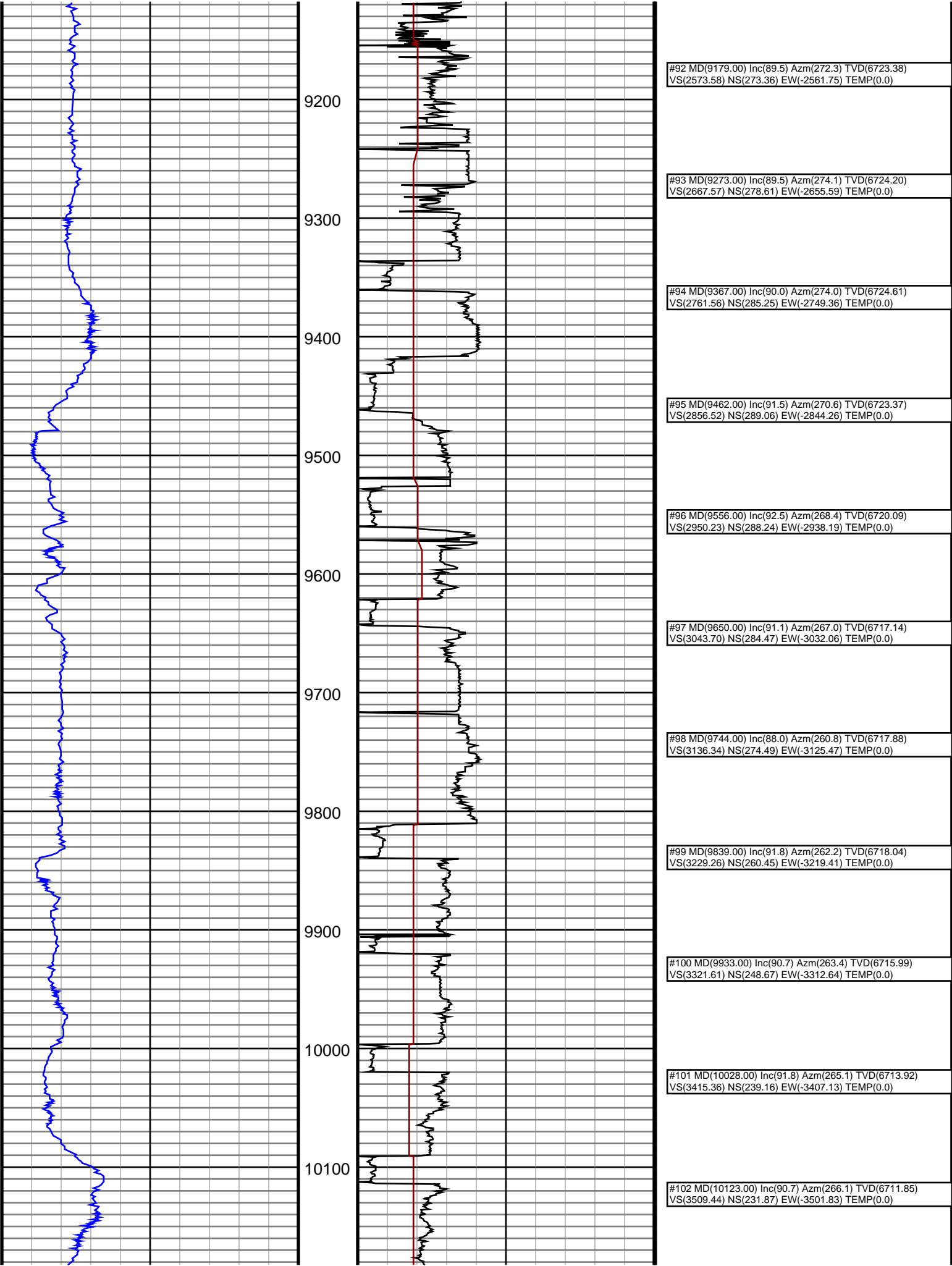


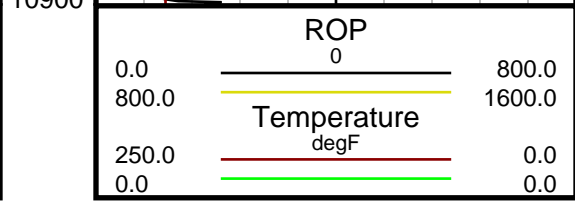
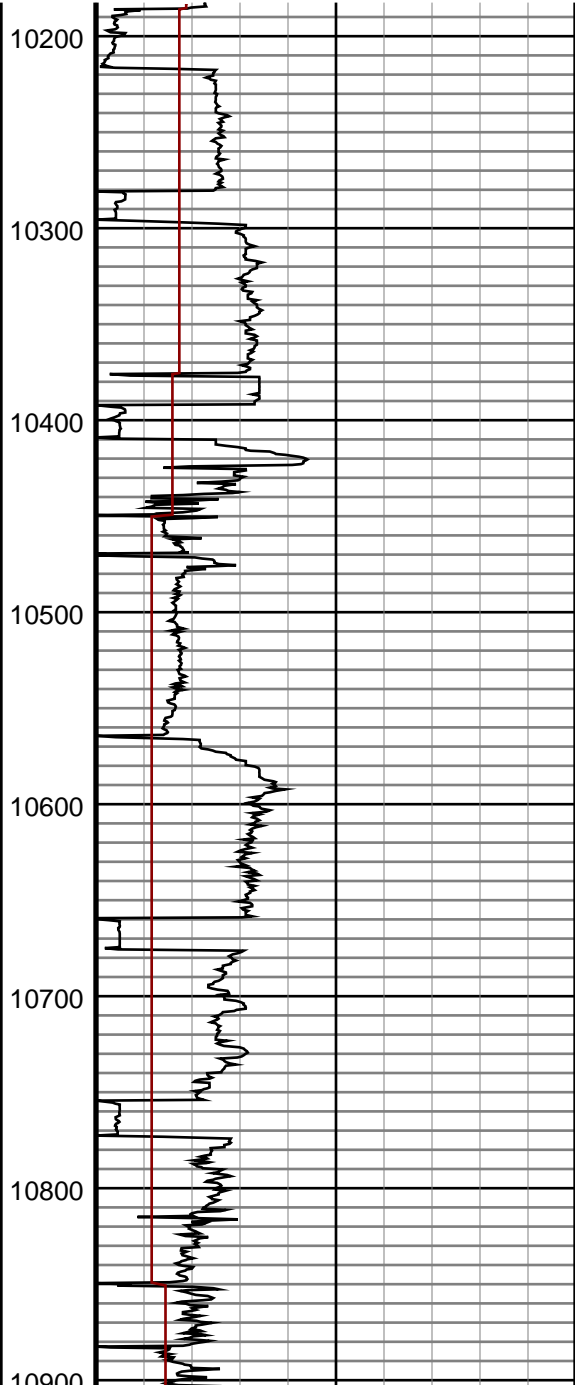
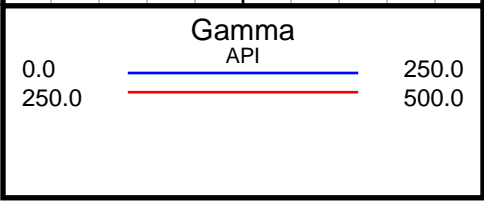
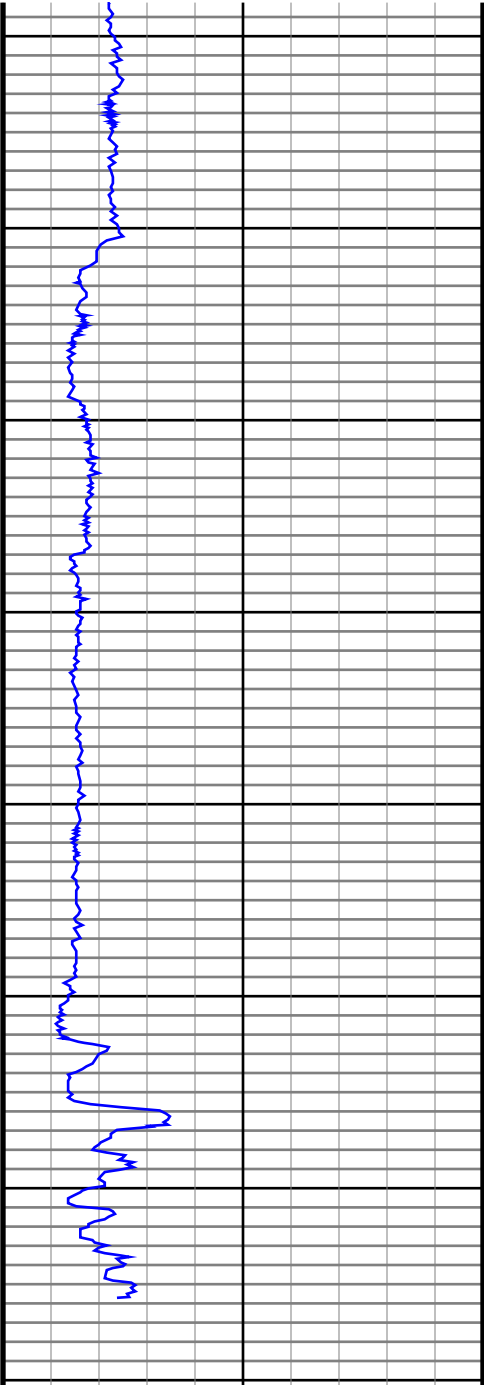












#103 MD(10217.00) Inc(90.4) Azm(269.6) TVD(6710.94)
VS(3602.97) NS(228.35) EW(-3595.74) TEMP(0.0)

#104 MD(10312.00) Inc(88.5) Azm(269.9) TVD(6711.85)
VS(3697.76) NS(227.93) EW(-3690.73) TEMP(0.0)

#105 MD(10407.00) Inc(89.2) Azm(271.5) TVD(6713.76)
VS(3792.63) NS(229.09) EW(-3785.70) TEMP(0.0)

#106 MD(10502.00) Inc(90.0) Azm(271.5) TVD(6714.42)
VS(3887.57) NS(231.58) EW(-3880.67) TEMP(0.0)

#107 MD(10597.00) Inc(90.8) Azm(271.3) TVD(6713.76)
VS(3982.51) NS(233.90) EW(-3975.64) TEMP(0.0)

#108 MD(10691.00) Inc(90.9) Azm(273.5) TVD(6712.37)
VS(4076.47) NS(237.84) EW(-4069.54) TEMP(0.0)

#109 MD(10786.00) Inc(89.3) Azm(274.7) TVD(6712.20)
VS(4171.46) NS(244.63) EW(-4164.29) TEMP(0.0)

#110 MD(10840.00) Inc(88.7) Azm(275.1) TVD(6713.14)
VS(4225.44) NS(249.24) EW(-4218.08) TEMP(0.0)

#111 MD(10904.00) Inc(88.7) Azm(275.1) TVD(6714.60)
VS(4280.22) NS(254.03) EW(-4281.84) TEMP(0.0)