PIONEER

Pioneer Energy Services

Dual Induction Log

API No. 15-197-20301-00-00

Company Glacier Petroleum Company, Inc.

Well Olsen #9

Field Asburn North

County Wabaunsee State Kansas

Location 3795' FSL & 1980' FEL

Sec: 20 Twp: 14S Rge: 10E

Other Services: CNL/CDL

Elevation: K.B. 1537, D.F. , G.L. 1527

Permanent Datum: Ground Level — Elevation 1527

Log Measured From: Kelly Bushing — 10 Ft. Above Perm. Datum

Drilling Measured From: Kelly Bushing

Date	9/25/2014		
Run Number	One		
Depth Driller	3470		
Depth Logger	3462		
Bottom Logged Interval	3461		
Top Log Interval	350		
Casing Driller	8.625 @ 352		
Casing Logger	362		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	800		
Density / Viscosity	9.4 | 39		
pH / Fluid Loss	9.0 | 8.6		
Source of Sample	Flowline		
Rm @ Meas. Temp	2.10 @ 78		
Rmf @ Meas. Temp	1.58 @ 78		
Rmc @ Meas. Temp	2.84 @ 78		
Source of Rmf / Rmc	Charts		
Rm @ BHT	1.45 @ 113		
Operating Rig Time	3 Hours		
Max. Rec. Temp. F	113		
Equipment Number	91		
Location	Hays		
Recorded By	D. Schmidt		
Witnessed By	Pat Deenihan		

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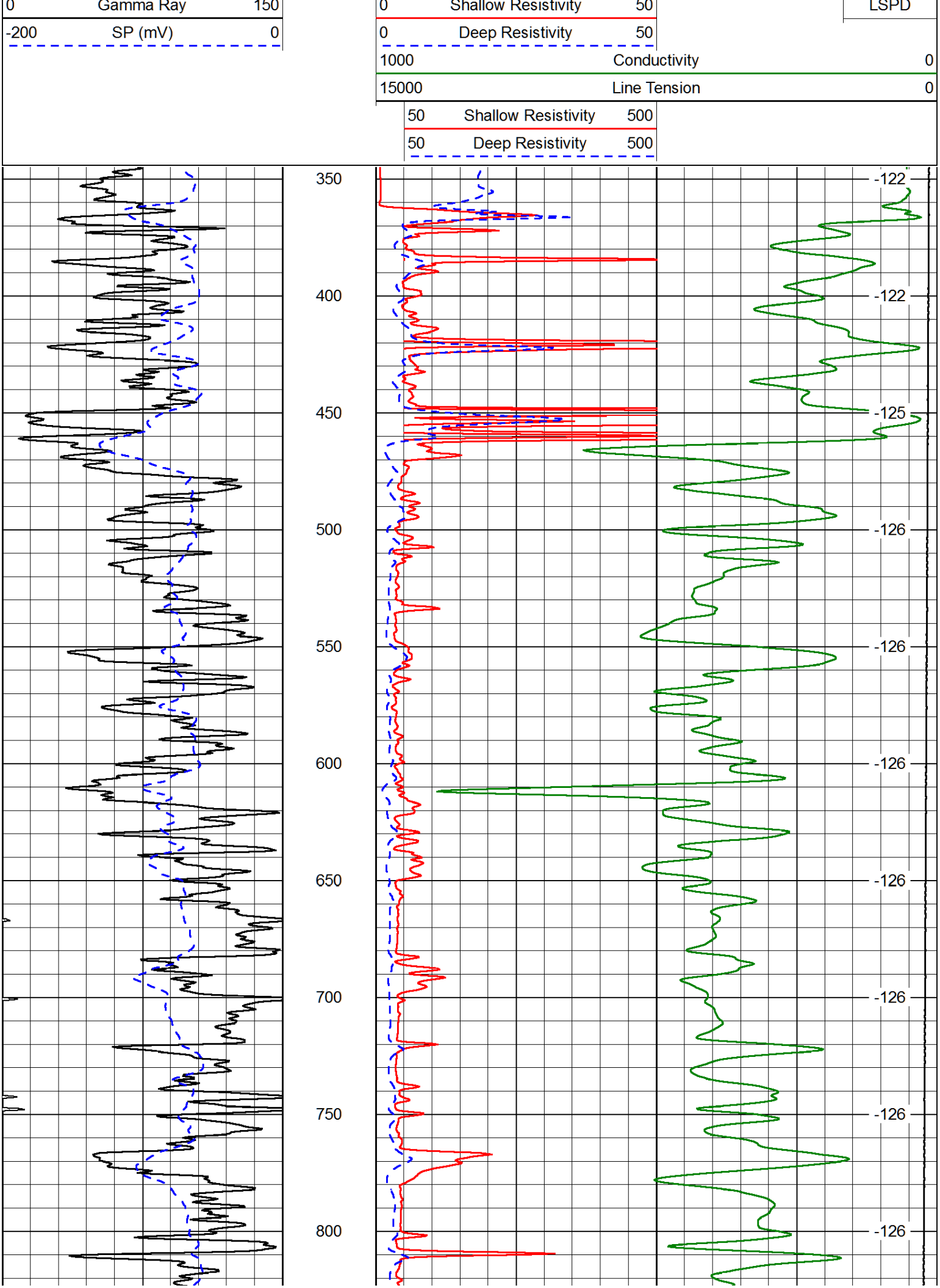
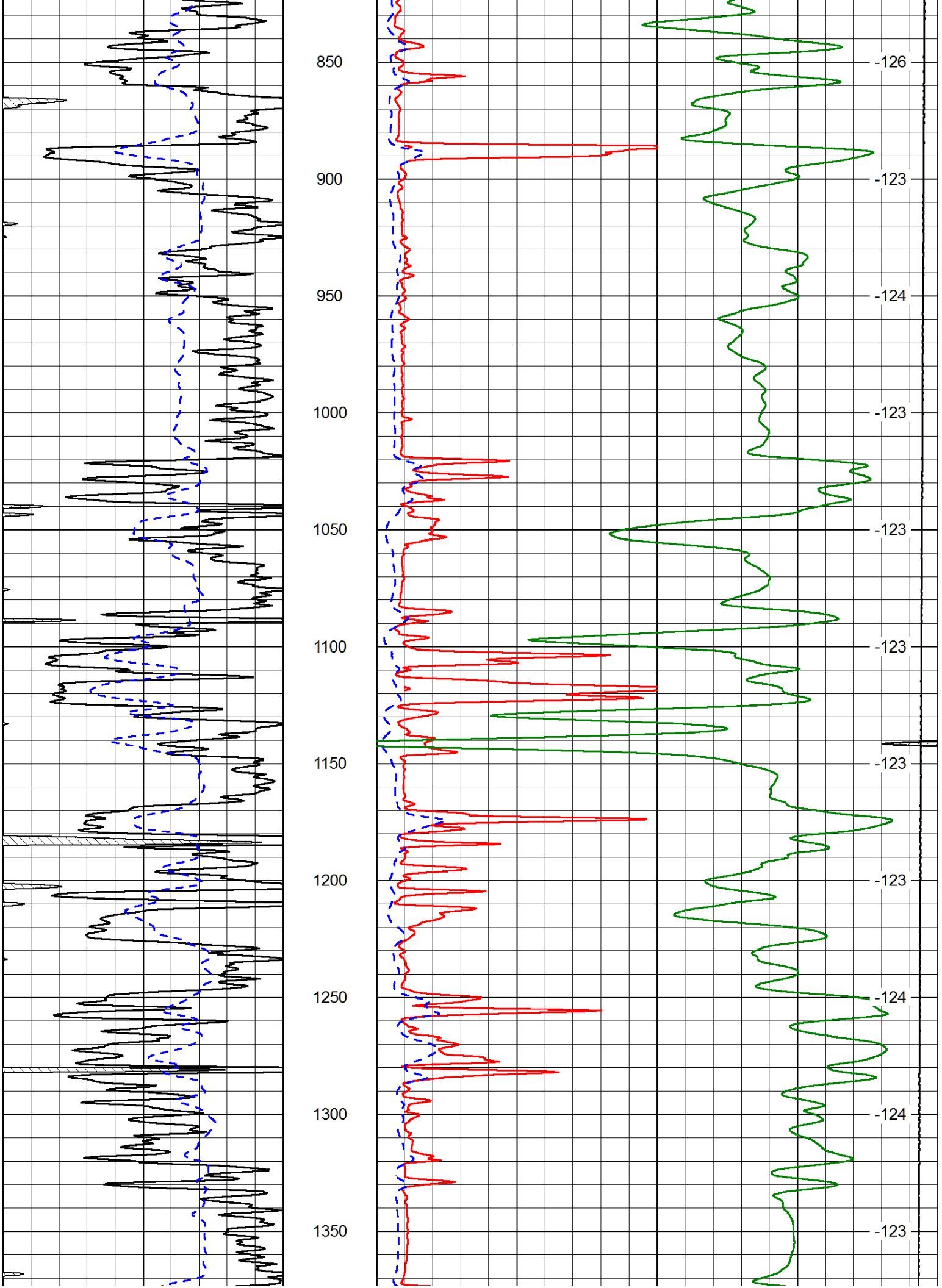
Comments

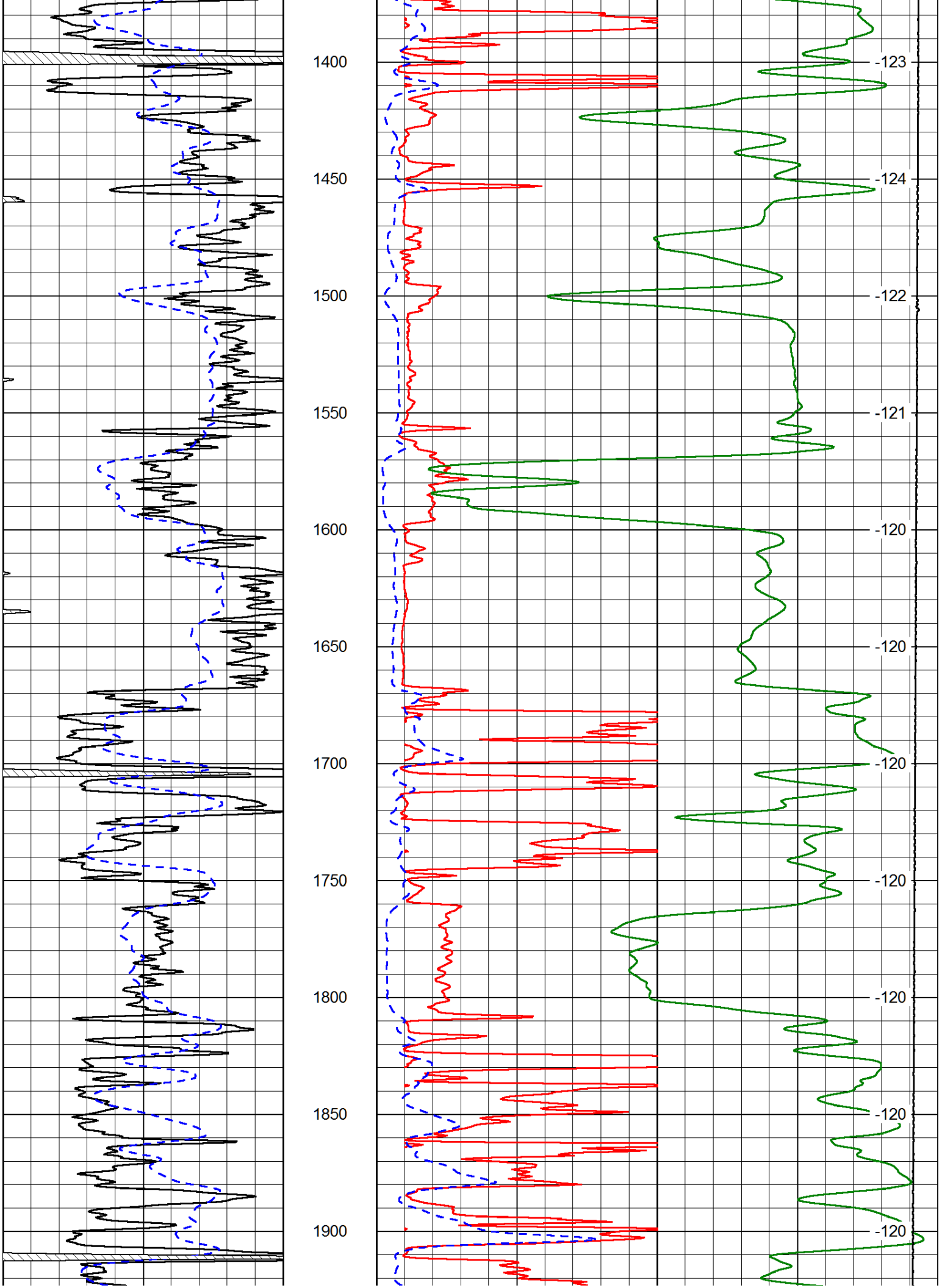
Thank you for using Log-Tech, Inc.
(785) 625-3858

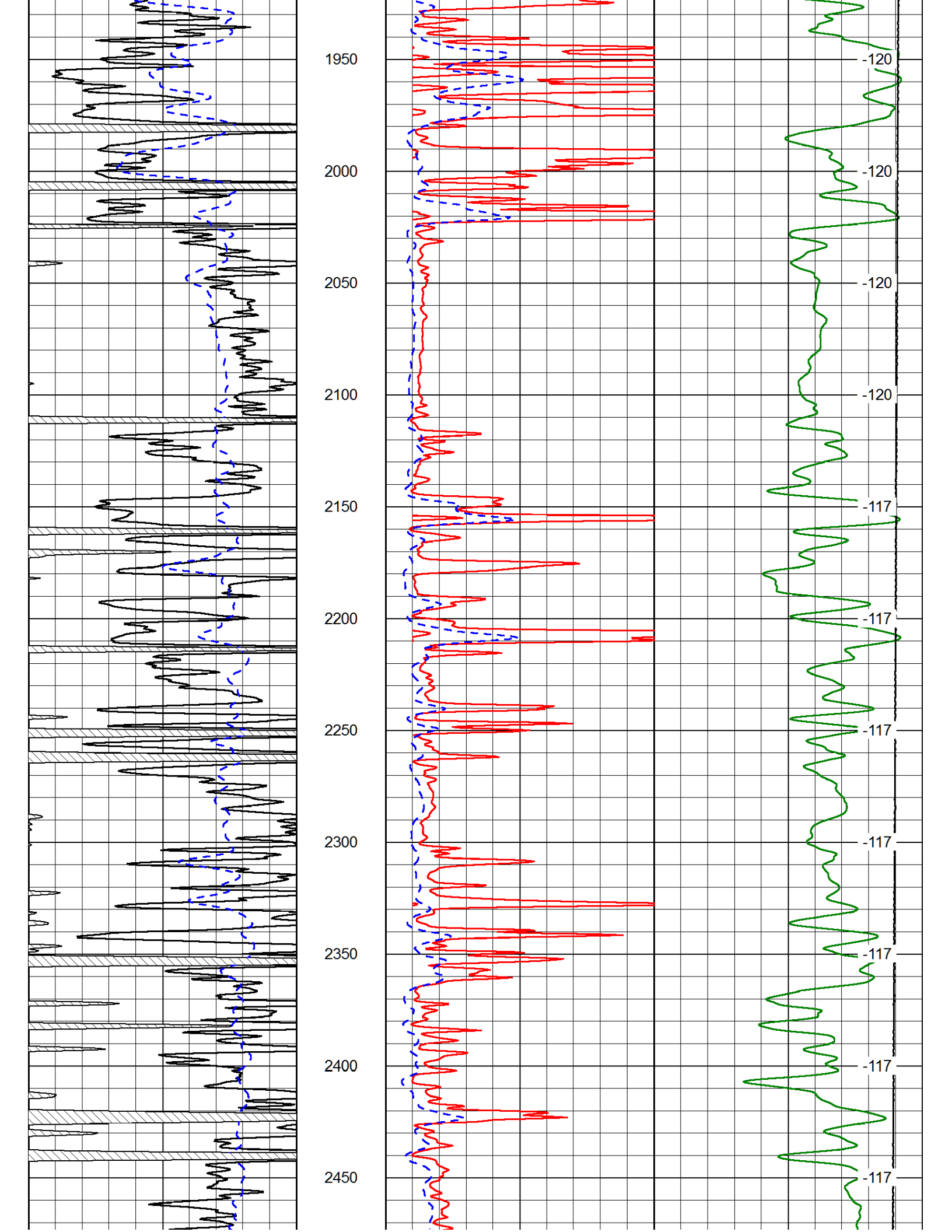
Alta Vista,
East on Hwy 4 to North Pole Rd, 3 South to Emanuel Rd,
1 East to curve, continue East for 2 miles, 1 North at the T, 1/4 West,
South into

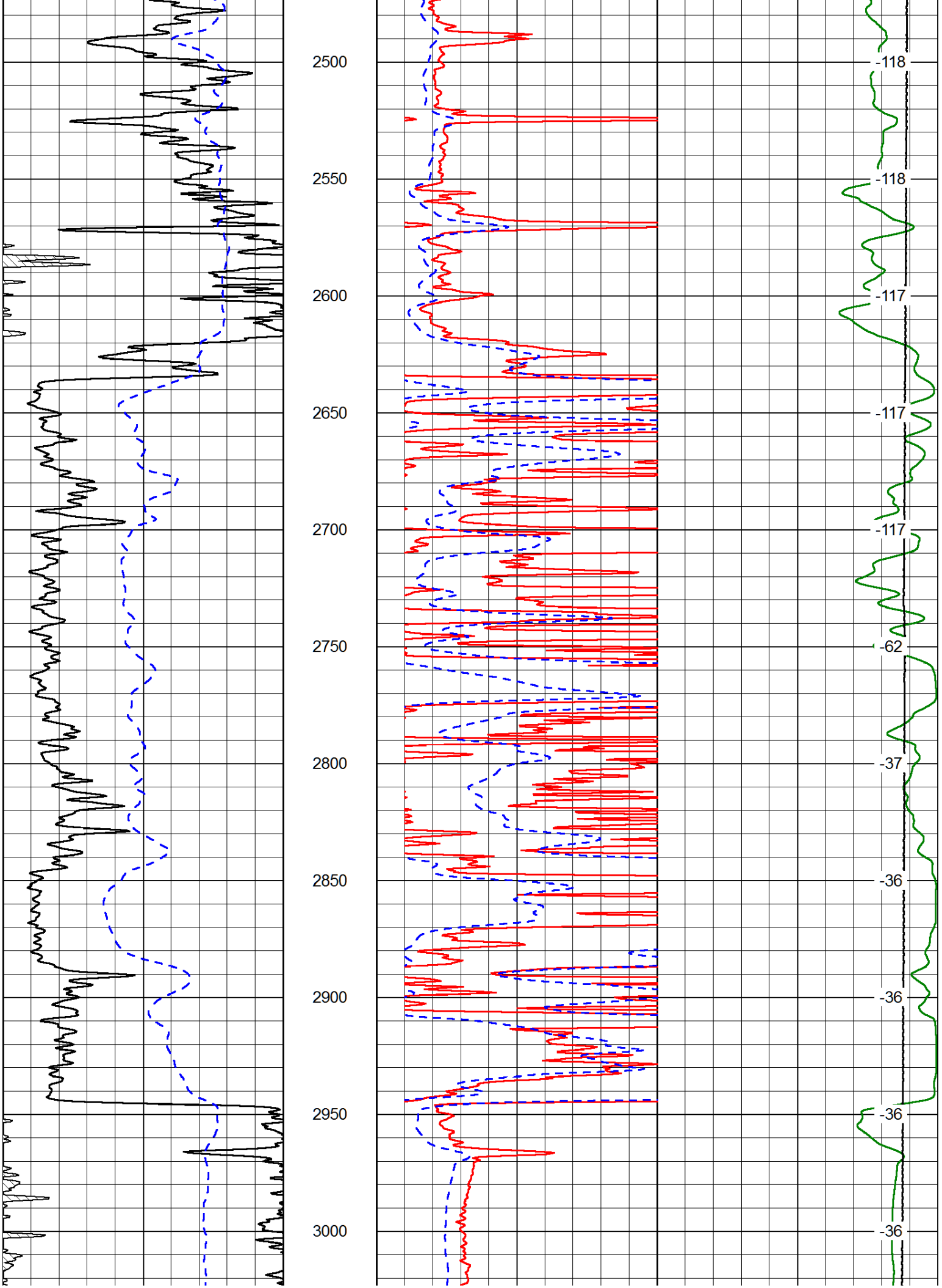
Database File:	glacier_olsen_9hd.db
Dataset Pathname:	dil/glstack
Presentation Format:	dil2in
Dataset Creation:	Thu Sep 25 22:17:45 2014
Charted by:	Depth in Feet scaled 1:600

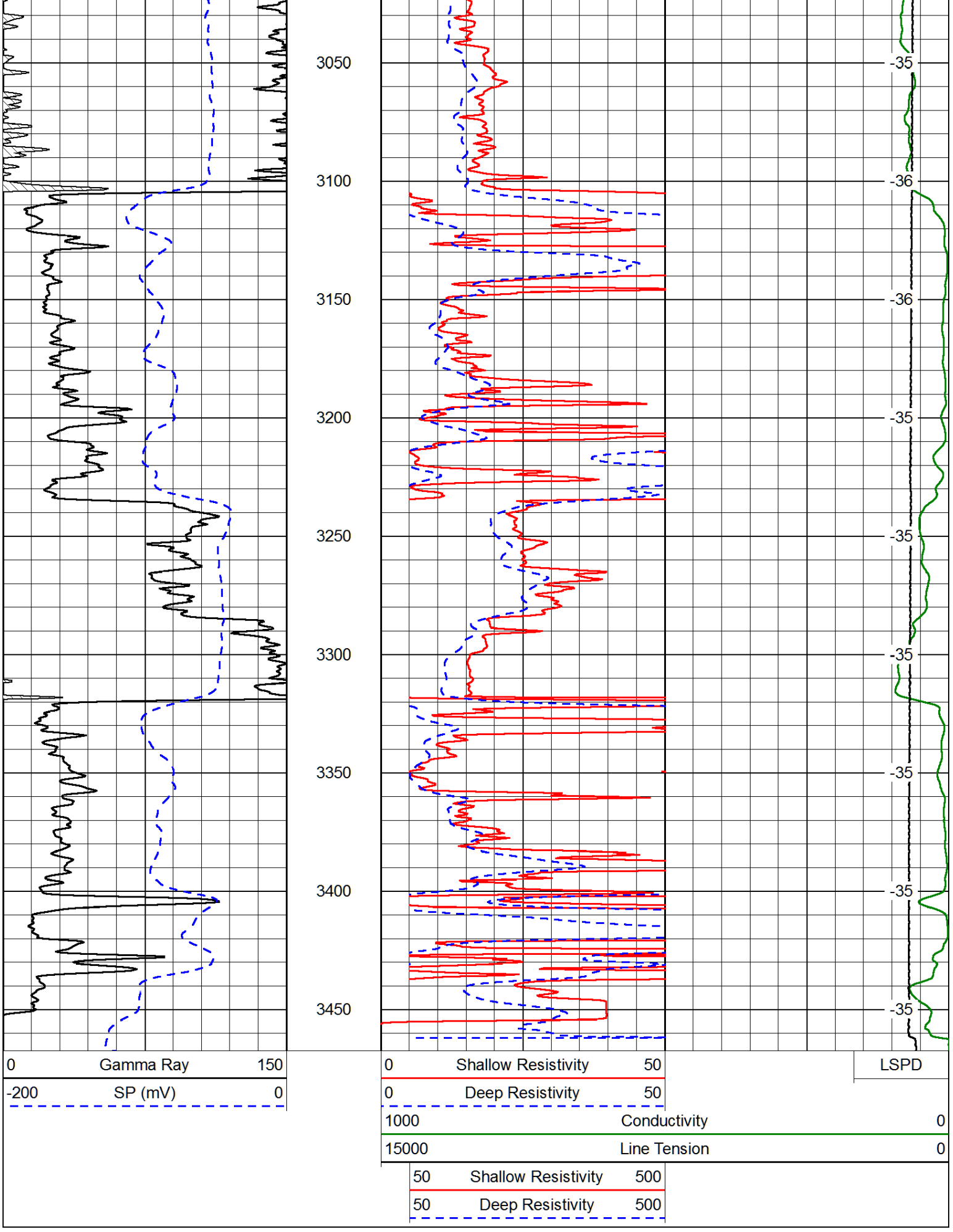

0 Gamma Ray 150
-200 SP (mV) 0
0 Shallow Resistivity 50
0 Deep Resistivity 50
1000 Conductivity 0
15000 Line Tension 0
50 Shallow Resistivity 500
50 Deep Resistivity 500
LSPD
350
400
450
500
550
600
650
700
750
800
-122
-122
-125
-126
-126
-126
-126
-126
-126


850
900
950
1000
1050
1100
1150
1200
1250
1300
1350
-126
-123
-124
-123
-123
-123
-123
-123
-124
-124
-123


1400
1450
1500
1550
1600
1650
1700
1750
1800
1850
1900
-123
-124
-122
-121
-120
-120
-120
-120
-120
-120
-120


1950
2000
2050
2100
2150
2200
2250
2300
2350
2400
2450
-120
-120
-120
-117
-117
-117
-117
-117
-117


2500
2550
2600
2650
2700
2750
2800
2850
2900
2950
3000
-118
-118
-117
-117
-117
-62
-37
-36
-36
-36



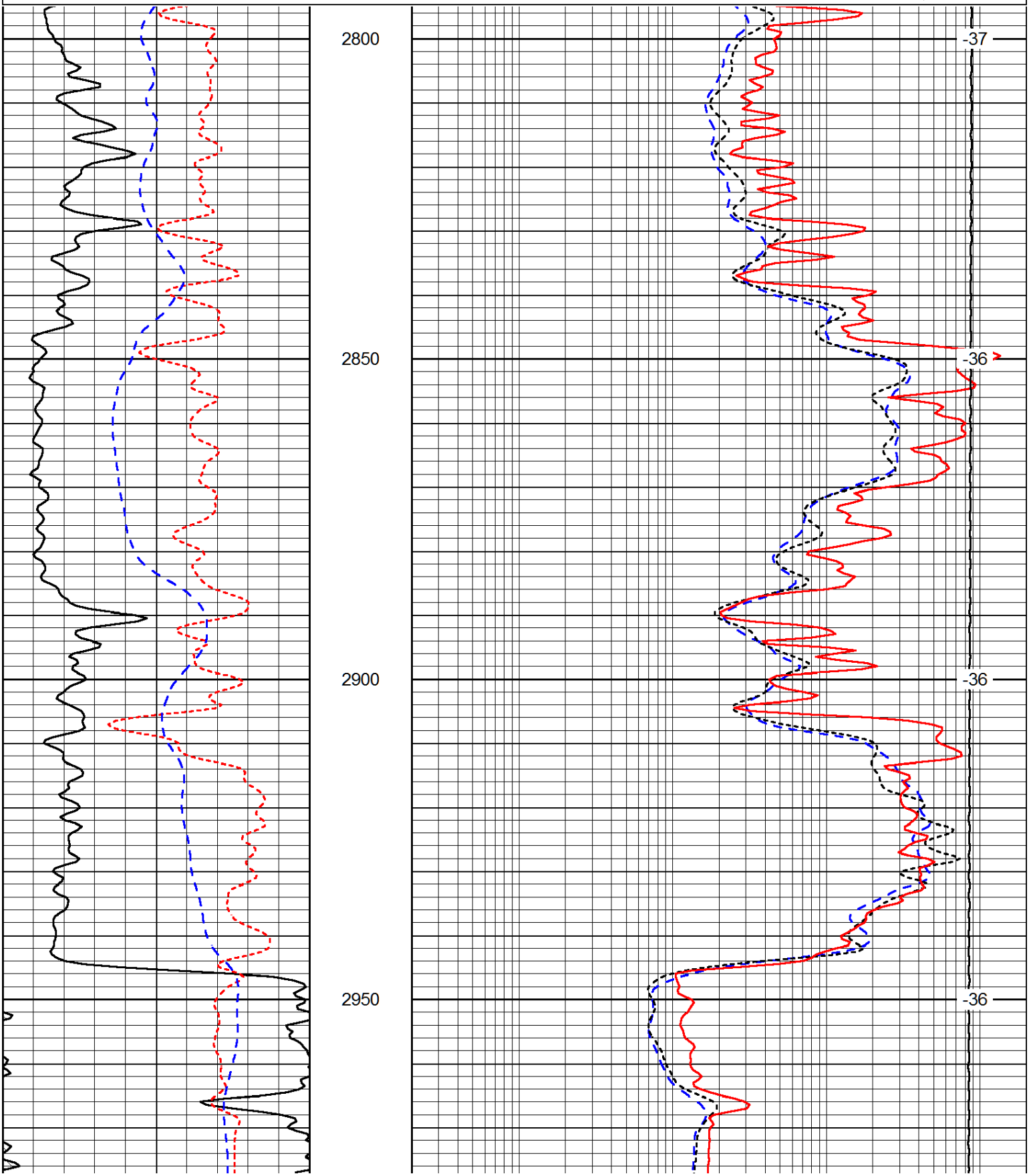
Database File: glacier_olsen_9hd.db
Dataset Pathname: dil/glstack

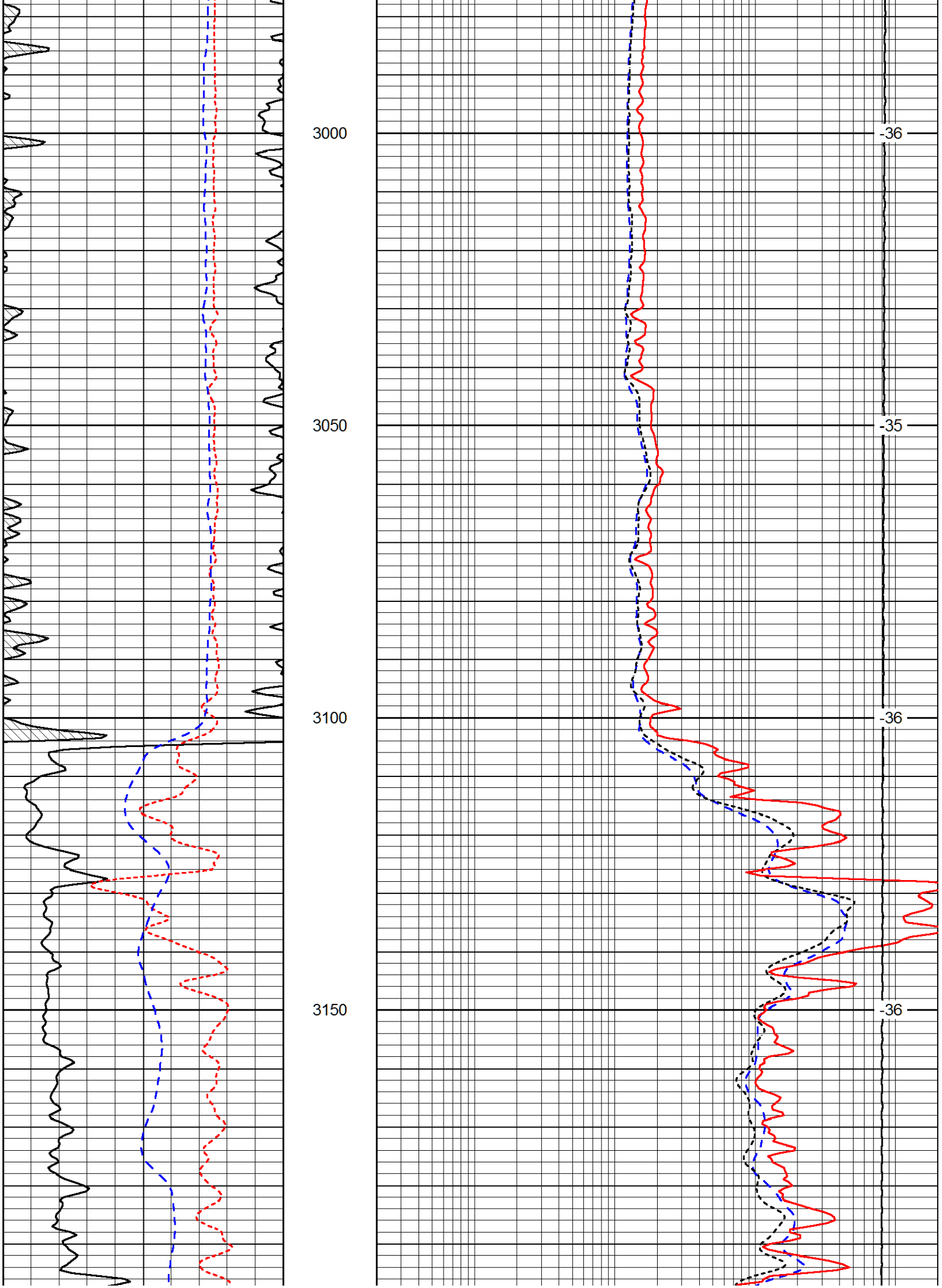
Presentation Format: dil
Dataset Creation: Thu Sep 25 22:17:45 2014
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
-160	RxoRt	40
-200	SP (mV)	0

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD

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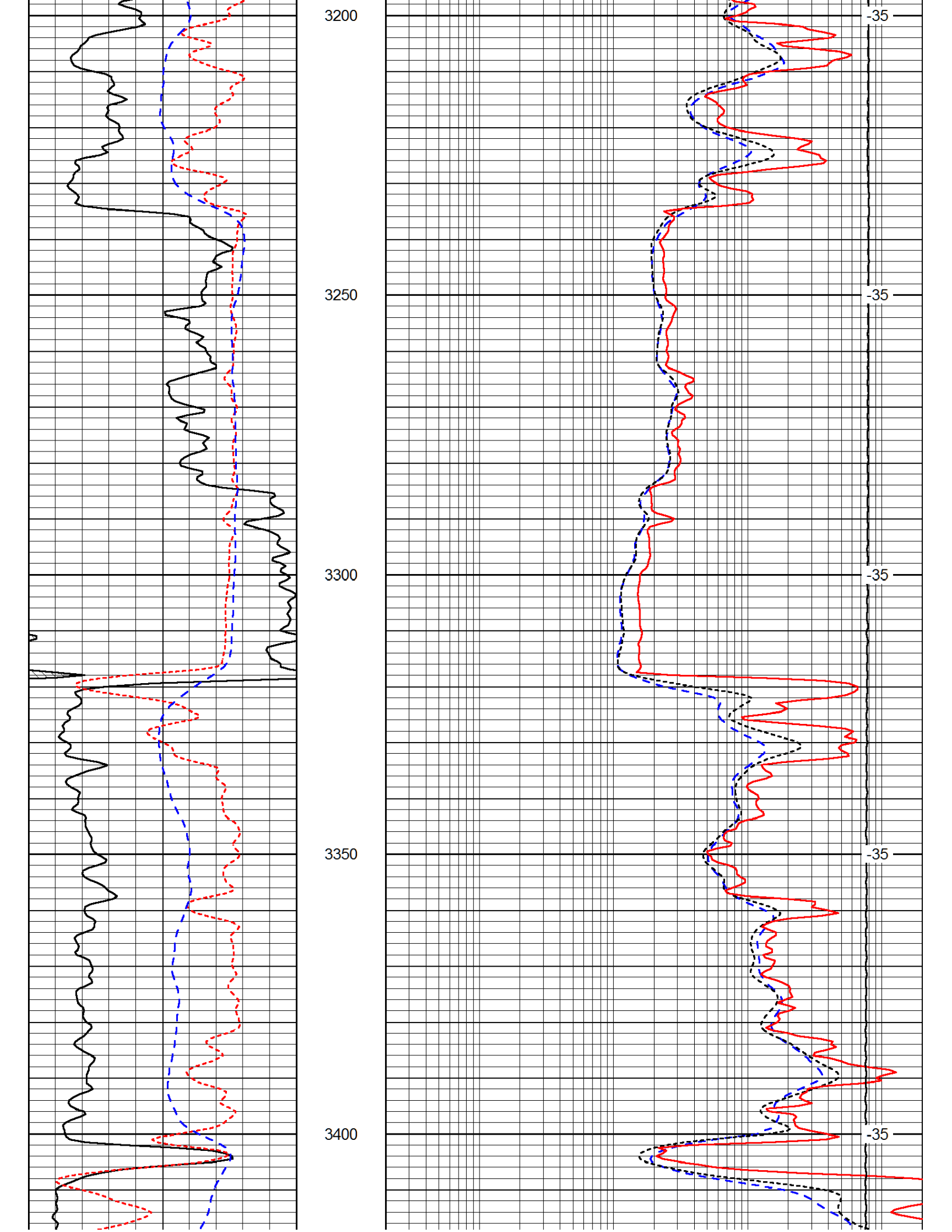
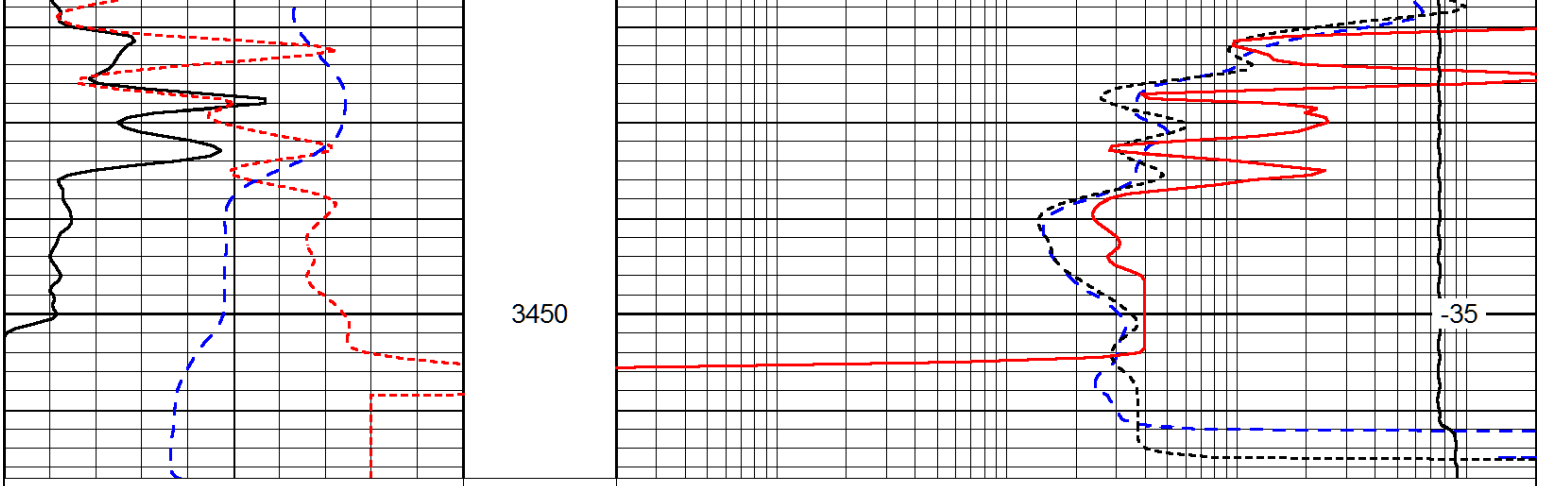
3050
3100
3150
-36
-35
-36
-36


3200
3250
3300
3350
3400
-35
-35
-35
-35
-35



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LSPD