PIONEER

Pioneer Energy Services

Microresistivity Log

API No. 15-065-24019-00-00

Company Spiral Energy Corp.

Well Kuehnl #4

Field Cooper

County Graham State Kansas

Location 500' FSL & 1800' FWL

Sec: 34 Twp: 9S Rge: 21W

Other Services: RAG

Elevation: K.B. 2331, D.F. 2331, G.L. 2321

Permanent Datum: Ground Level — Elevation 2321

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

Drilling Measured From: Kelly Bushing

Date	4/12/2014		
Run Number	Two		
Depth Driller	3953		
Depth Logger	3955		
Bottom Logged Interval	3954		
Top Log Interval	3200		
Casing Driller	8.625 @ 225		
Casing Logger	224		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	1200		
Density / Viscosity	9.2 / 54		
pH / Fluid Loss	10.5 / 6.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.98 @ 56		
Rmf @ Meas. Temp	0.74 @ 56		
Rmc @ Meas. Temp	1.32 @ 56		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.47 @ 118		
Operating Rig Time	4 Hours		
Max. Rec. Temp. F	118		
Equipment Number	91		
Location	Hays		
Recorded By	D. Schmidt		
Witnessed By	Bill Robinson		

<<< Fold Here >>>

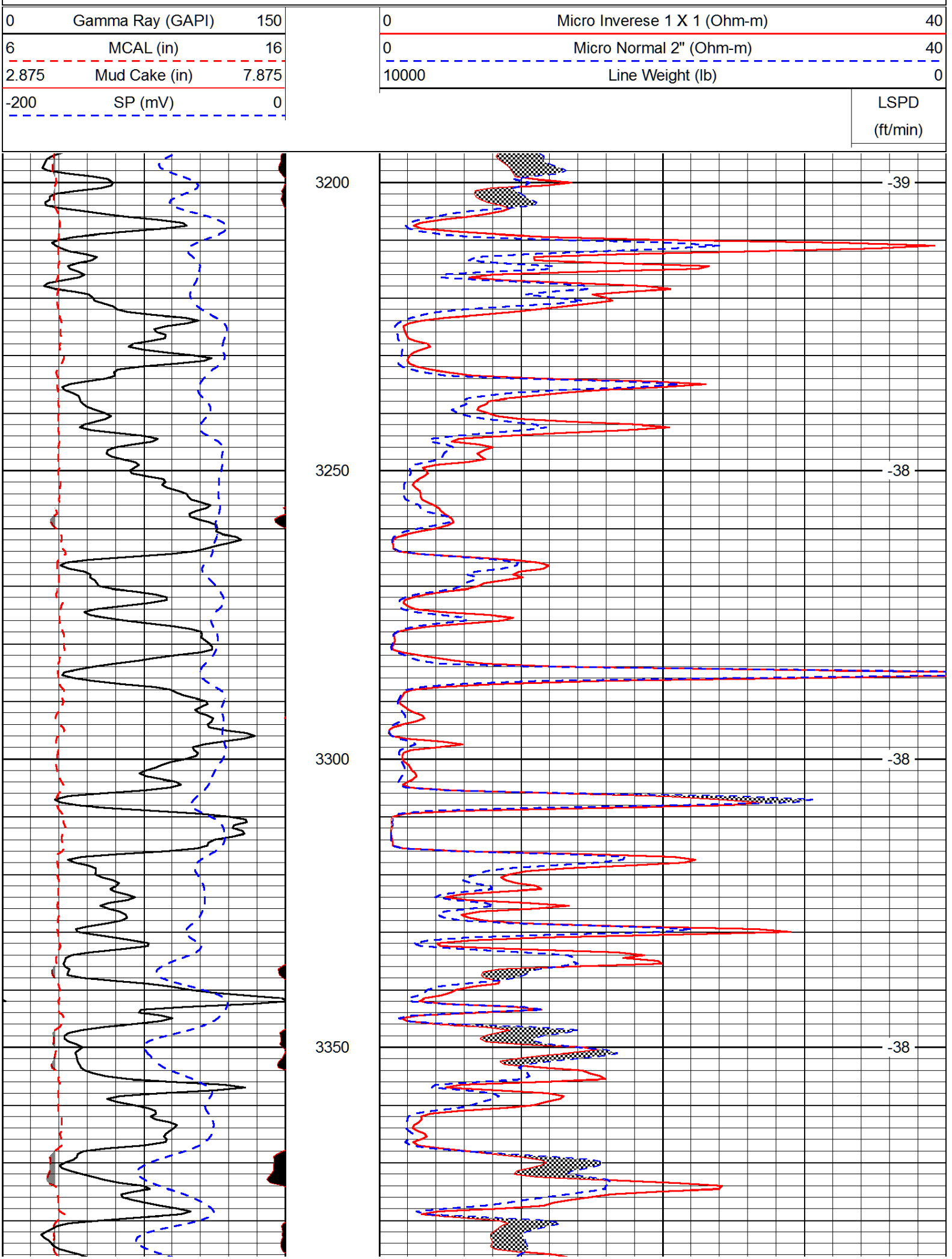
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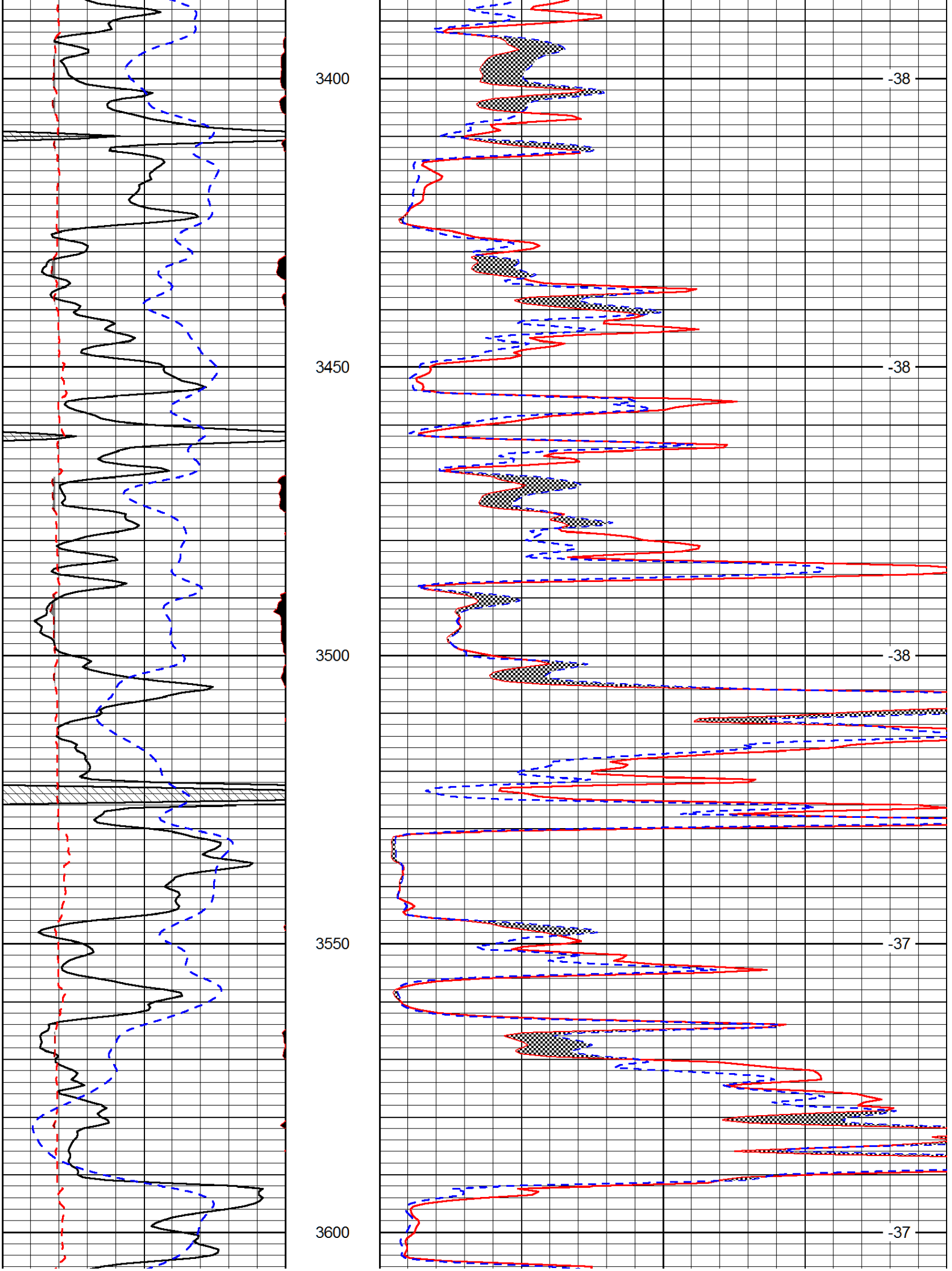
Comments

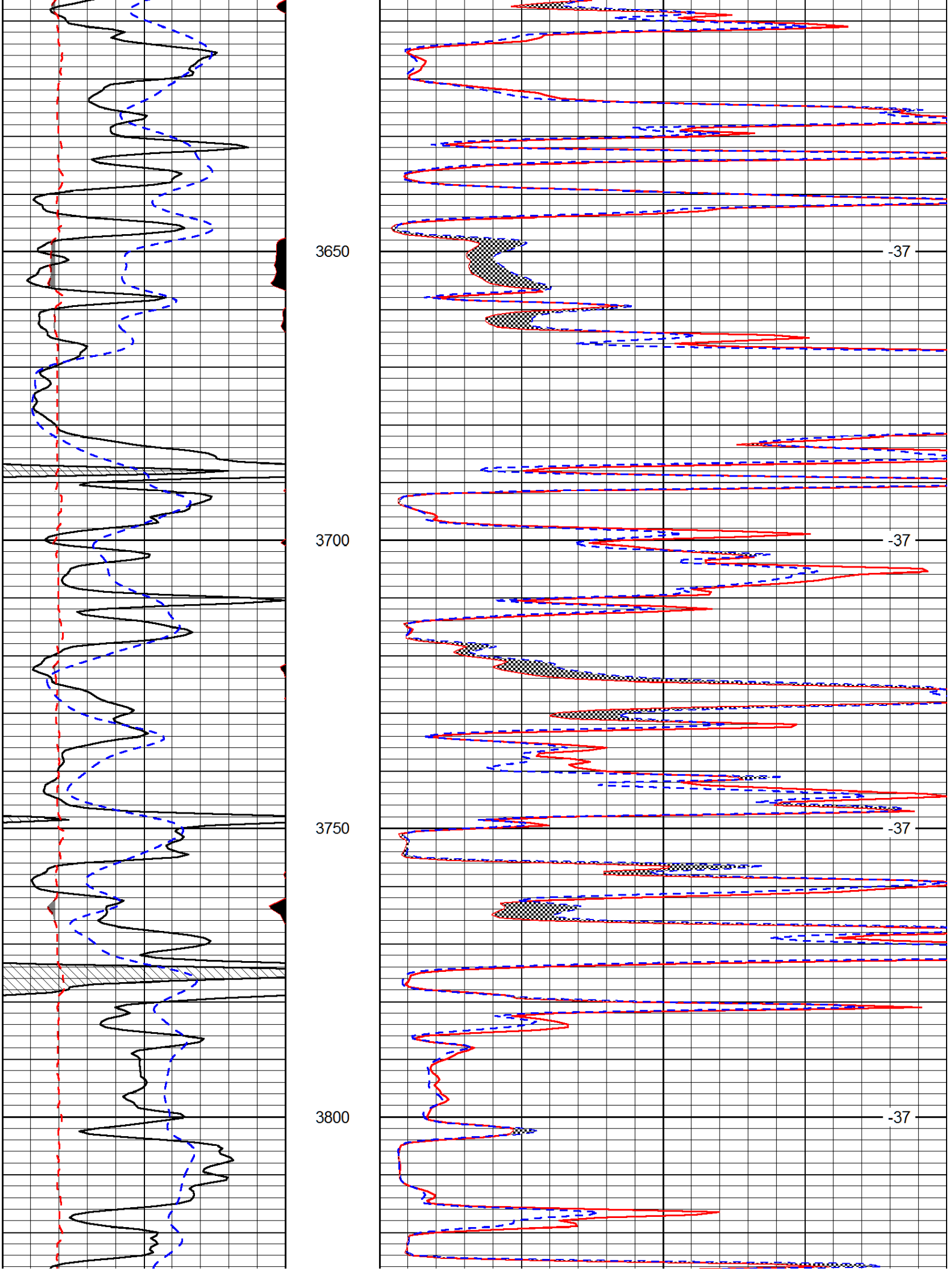
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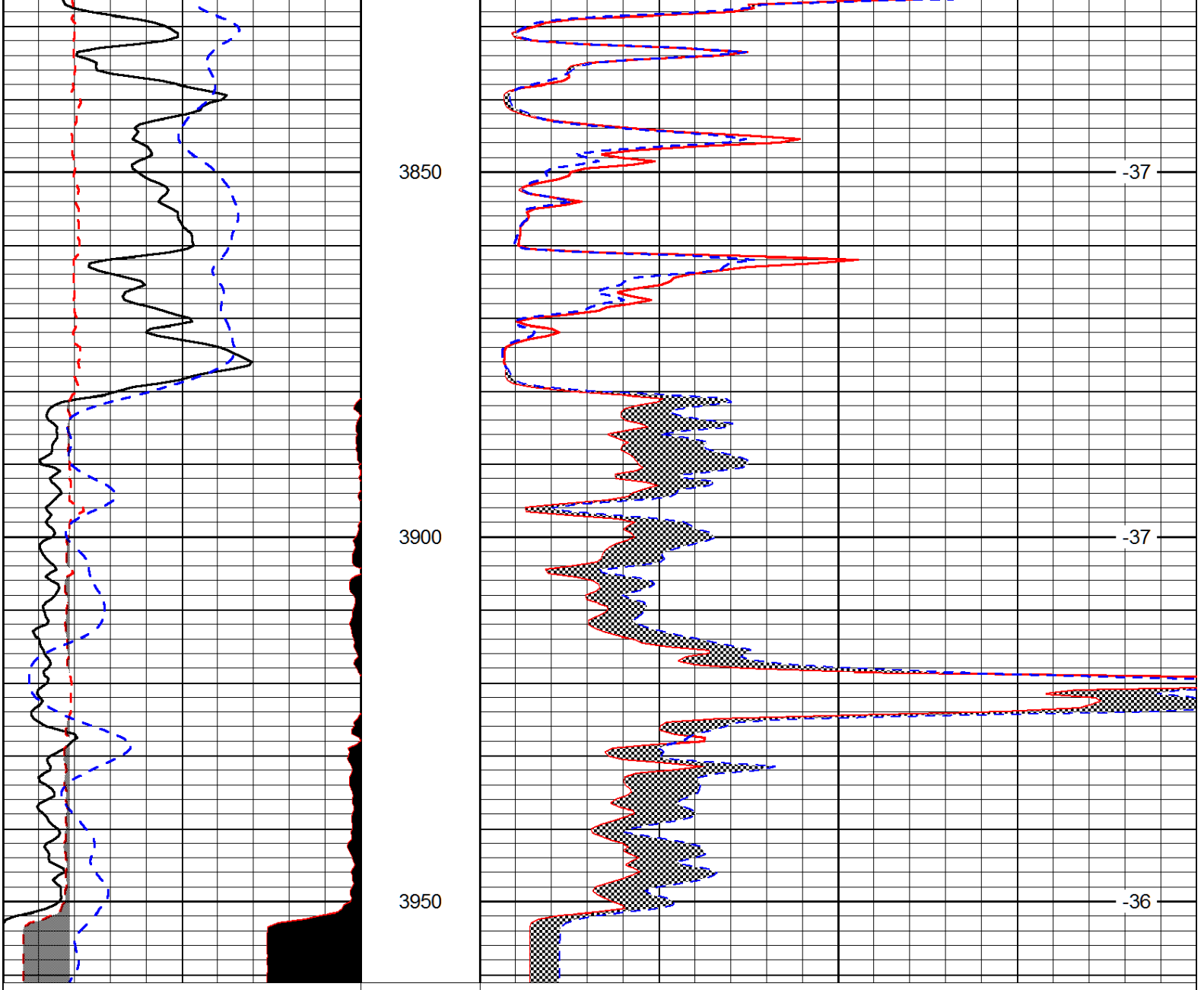
Palco,
South to X Rd,
4 West to Red Line Church, 1 South, 1/2 West,
North into

Database File:	spiral_041214hd.db
Dataset Pathname:	rag/spirag
Presentation Format:	micro
Dataset Creation:	Sat Apr 12 12:14:12 2014
Charted by:	Depth in Feet scaled 1:240


0 Gamma Ray (GAPI) 150
6 MCAL (in) 16
2.875 Mud Cake (in) 7.875
-200 SP (mV) 0
0 Micro Inverese 1 X 1 (Ohm-m) 40
0 Micro Normal 2" (Ohm-m) 40
10000 Line Weight (lb) 0
LSPD (ft/min)
3200
3250
3300
3350
-39
-38
-38
-38


3400
3450
3500
3550
3600
-38
-38
-38
-37
-37


3650
-37
3700
-37
3750
-37
3800
-37



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0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

LSPD
(ft/min)