PIONEER

Pioneer Energy Services

Microresistivity Log

Company H&C Oil Operating, Inc.

Well Newell #23-2

Field

County Graham State Kansas

API No. 15-065-24,053-00-00

Location 600' FSL & 2,550' FEL

Sec: 23 Twp: 8S Rge: 21W

Permanent Datum Ground Level Elevation 2080

Log Measured From Kelly Bushing 8 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

Other Services
CNL/CDL
DIL

Elevation
K.B. 2088
D.F.
G.L. 2080

Date	7/28/2014		
Run Number	Two		
Depth Driller	3621		
Depth Logger	3621		
Bottom Logged Interval	3620		
Top Log Interval	2950		
Casing Driller	8.625 @ 221		
Casing Logger	220		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	4000		
Density / Viscosity	9.2 56		
pH / Fluid Loss	9.0 8.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	.66 @ 76		
Rmf @ Meas. Temp	.50 @ 76		
Rmc @ Meas. Temp	.89 @ 76		
Source of Rmf / Rmc	Charts		
Rm @ BHT	.45 @ 112		
Operating Rig Time	3 1/2 Hours		
Max Rec. Temp. F	112		
Equipment Number	108		
Location	Hays		
Recorded By	J. Long		
Witnessed By	Marc Downing		

<<< Fold Here >>>

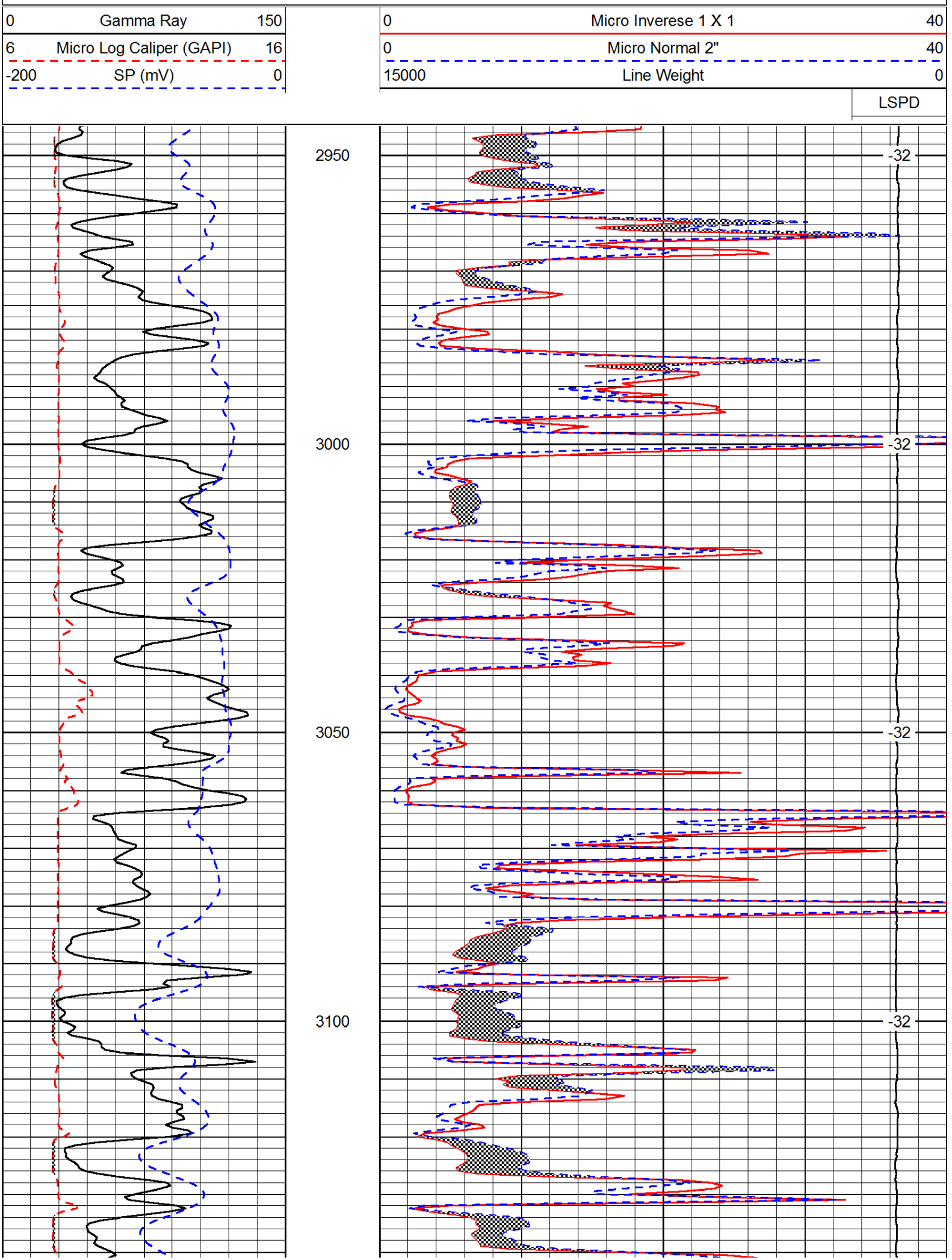
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

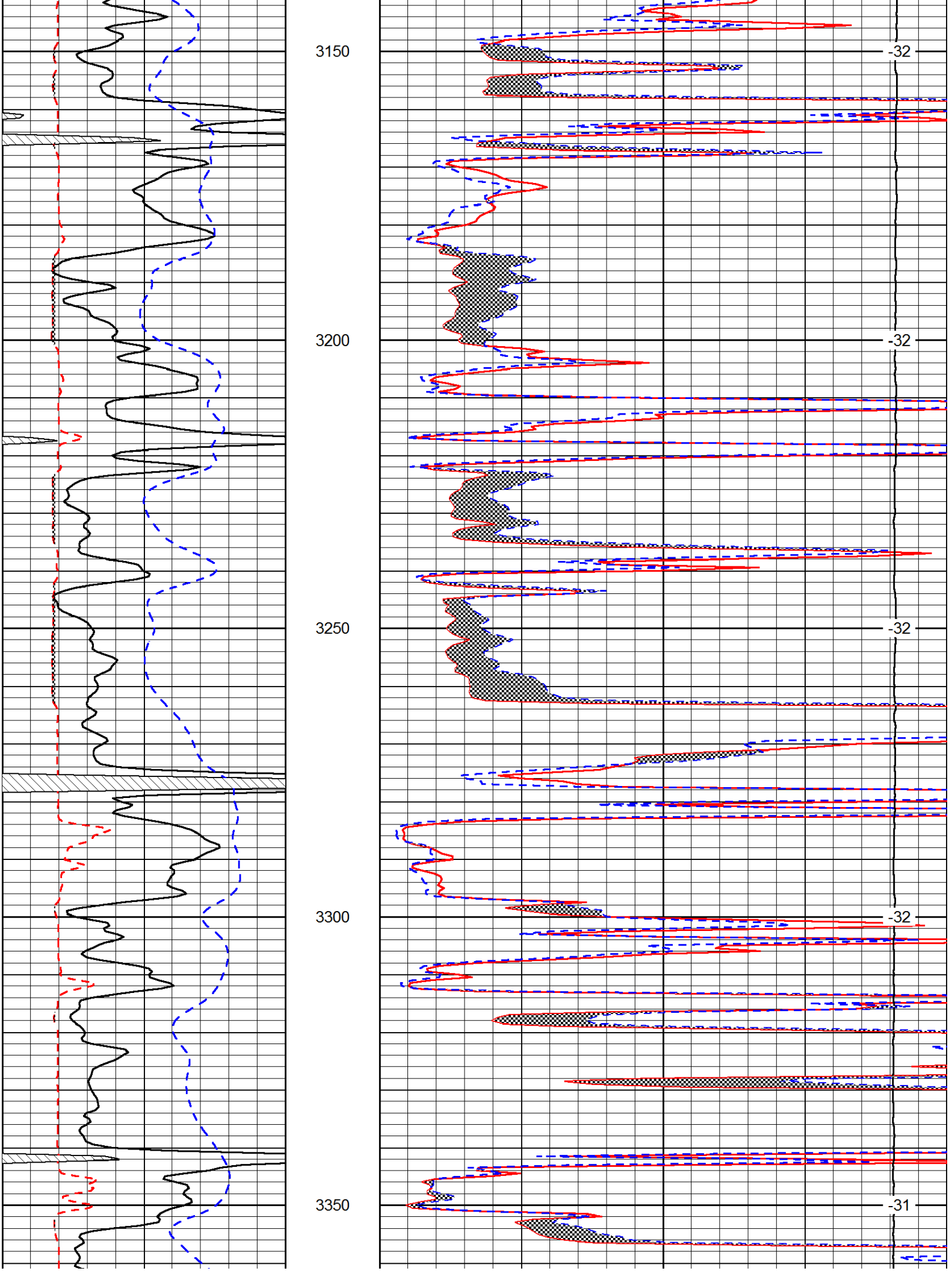
Comments

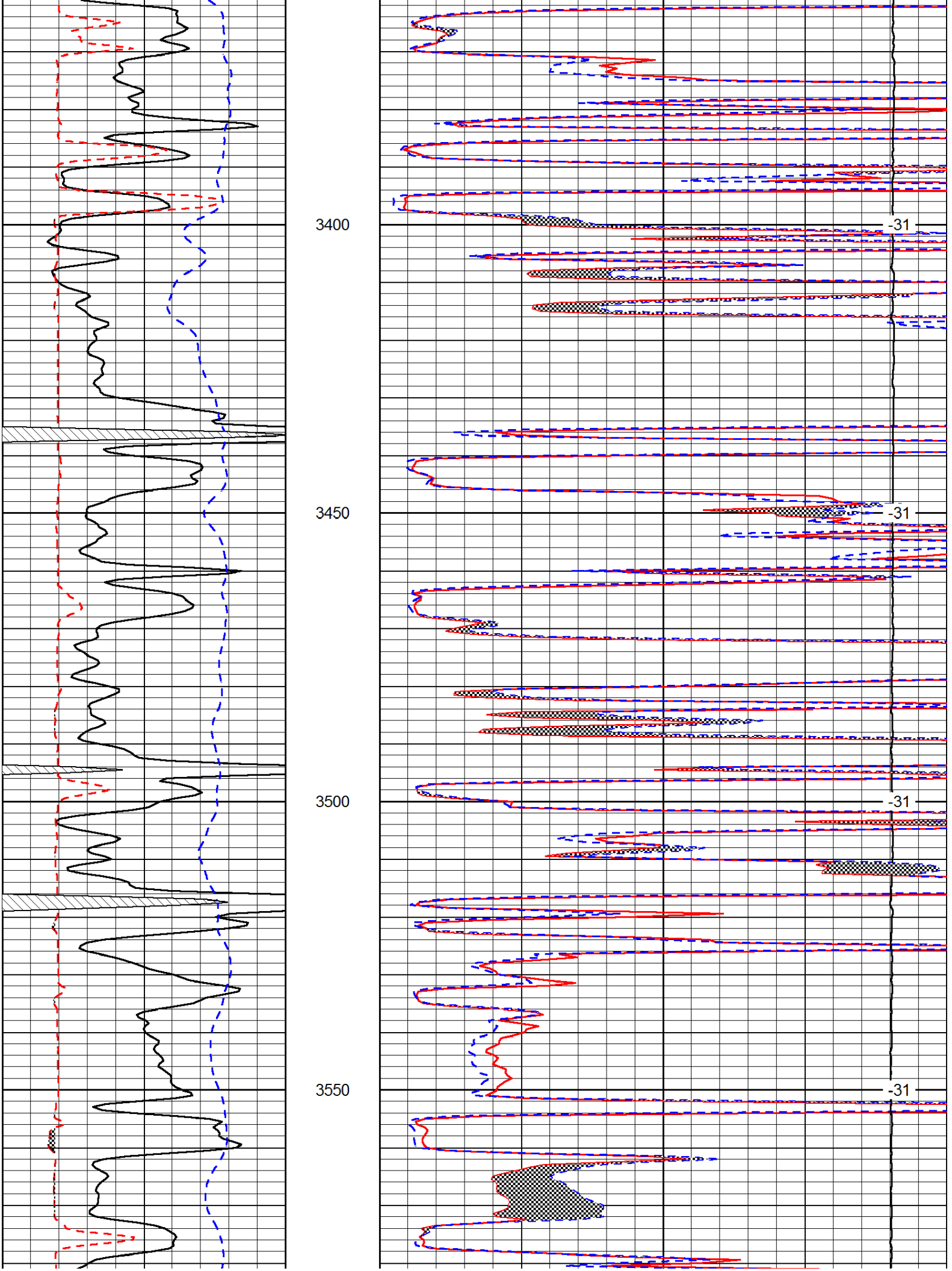
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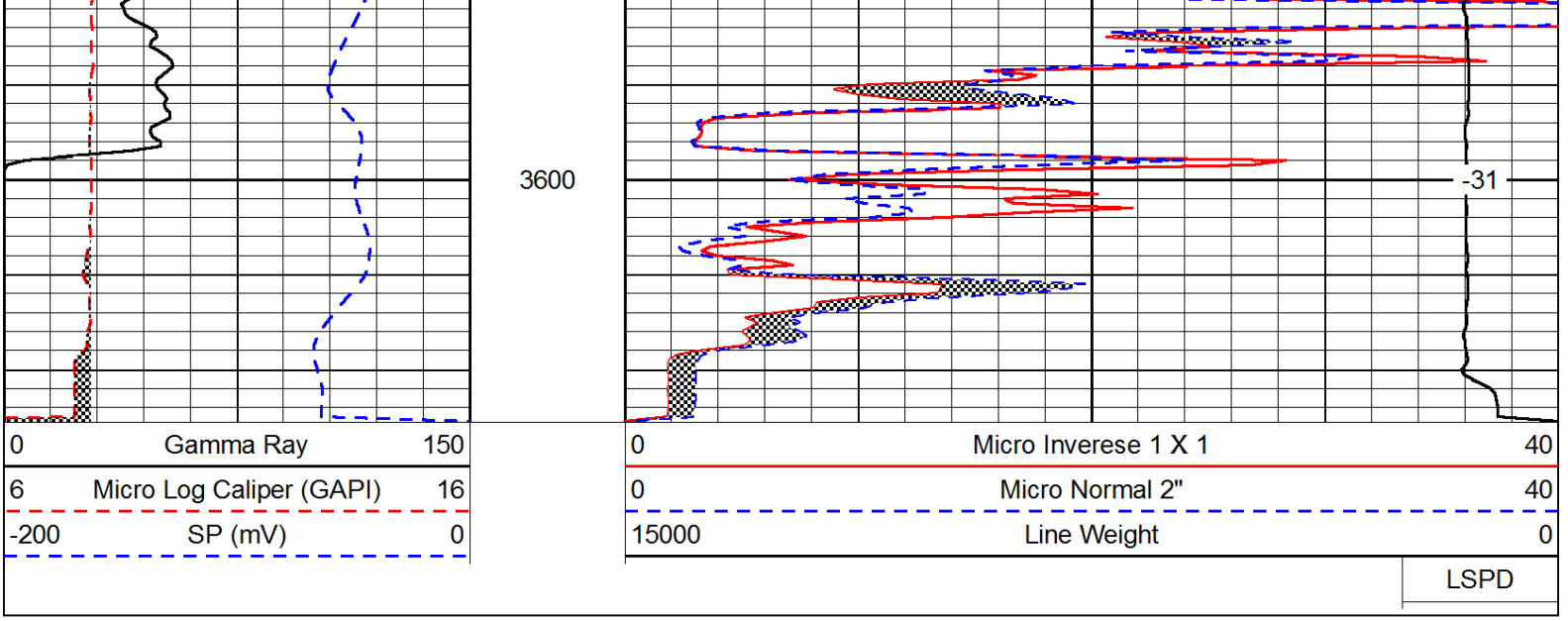
Damar, 2 1/2 Northwest on Highway 18 to Road 390, 1/4 South, 1/3 West, Northwest Into

Database File:	c:\warrior\data\h&c_newell #23-2\h&c_newell_23-2hd.db
Dataset Pathname:	dil/hcstck
Presentation Format:	micro
Dataset Creation:	Mon Jul 28 05:48:15 2014
Charted by:	Depth in Feet scaled 1:240


0 Gamma Ray 150
6 Micro Log Caliper (GAPI) 16
-200 SP (mV) 0
0 Micro Inverese 1 X 1 40
0 Micro Normal 2" 40
15000 Line Weight 0
LSPD
2950
3000
3050
3100
-32
-32
-32
-32


3150
3200
3250
3300
3350
-32
-32
-32
-32
-31


3400
3450
3500
3550
-31
-31
-31
-31



0	Gamma Ray	150
6	Micro Log Caliper (GAPI)	16
-200	SP (mV)	0

0	Micro Inverese 1 X 1	40
0	Micro Normal 2"	40
15000	Line Weight	0

LSPD