COMPENSATED DENSITY NEUTRON LOG

GEMINI WIRELINE

Company Palomino Petroleum
Well Betz-Kleweno #1
Field Betty B
County Ness State Kansas

Location: API # : 15 135 25810
1243' FNL & 121' FWL
SEC 14 TWP 19S RGE 22W

Other Services
DIL

Permanent Datum Ground Level Elevation 2220'
Log Measured From KB 5' AGL
Drilling Measured From KB

Elevation
K.B. 2225'
D.F. 2224'
G.L. 2220'

Company	Palomino Petroleum		
Well	Betz-Kleweno #1		
Field	Betty B		
County	Ness		
State	Kansas		
Date	9-10-14		
Run Number	One		
Depth Driller	4353'		
Depth Logger	4353'		
Bottom Logged Interval	4330'		
Top Log Interval	3500'		
Casing Driller	8 5/8" @ 217"		
Casing Logger	217"		
Bit Size	7 7/8"		
Type Fluid in Hole	Chemical		
Density / Viscosity	9.4/60		
pH / Fluid Loss	11/8.4		
Source of Sample	Pit		
Rm @ Meas. Temp	1.2@65degf		
Rmf @ Meas. Temp	9@65degf		
Rmc @ Meas. Temp	1.44@65degf		
Source of Rmf / Rmc	Calculated		
Rm @ BHT	.65@120degf		
Time Circulation Stopped	9:00 a.m.		
Time Logger on Bottom	12:30 p.m.		
Maximum Recorded Temperature	120degf		
Equipment Number	T127		
Location	Hays, KS		
Recorded By	Gus Pfanenstiel		
Witnessed By	Mr. Andrew Stenzel		

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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

West of Bazine 2 miles to BB Rd.
2 1/4 South, East into.

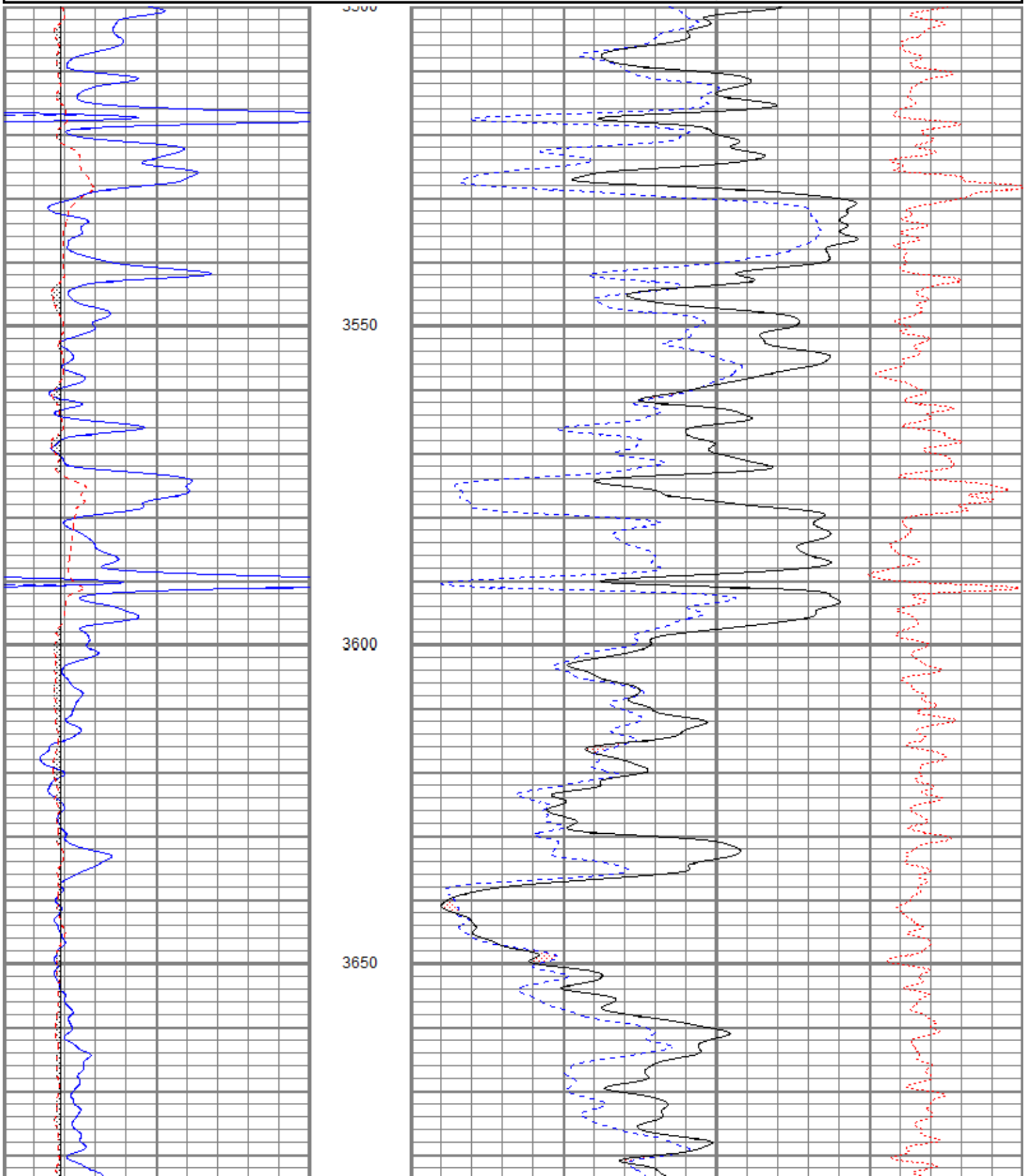
GEMINI WIRELINE

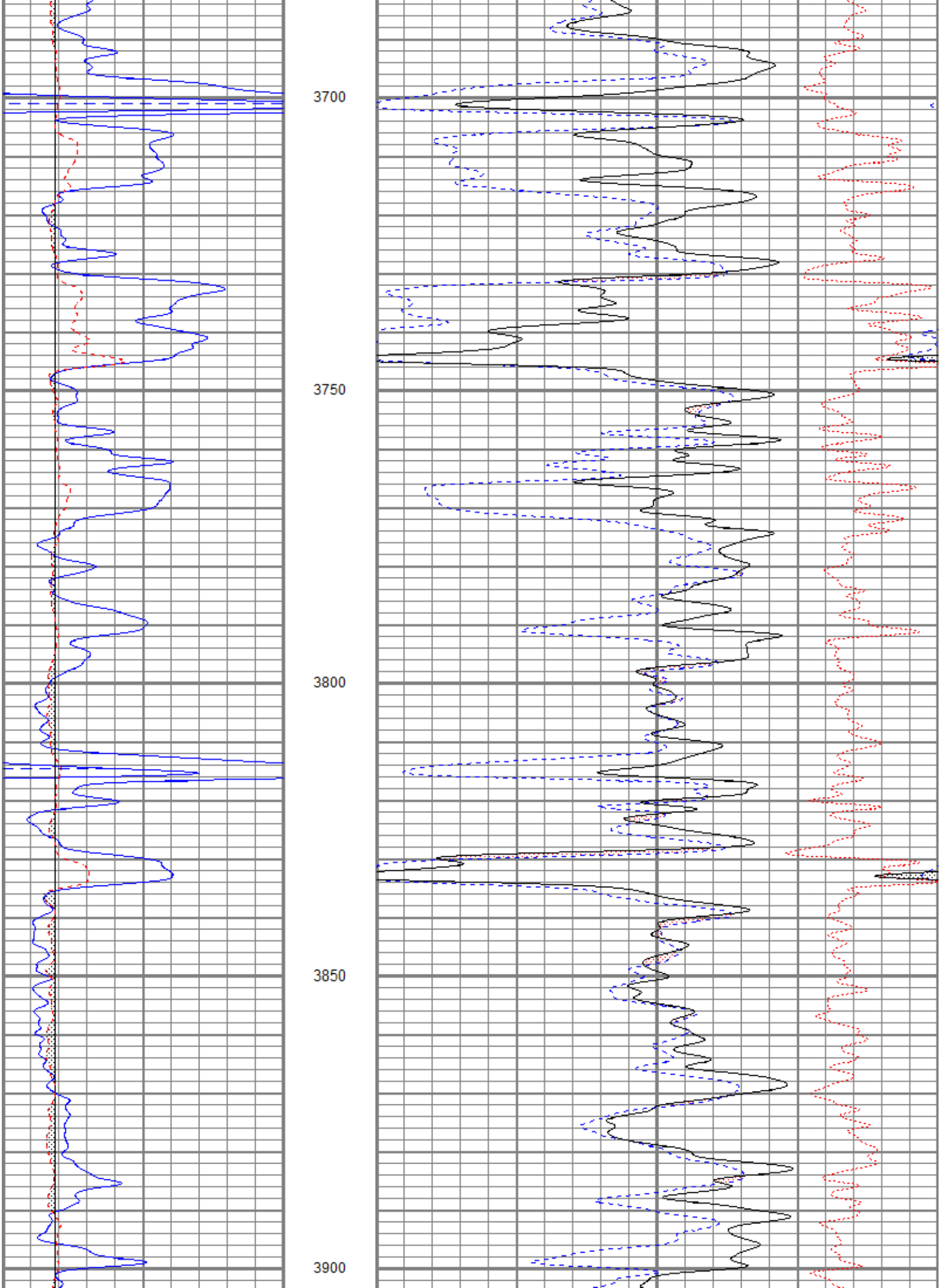
Main Pass

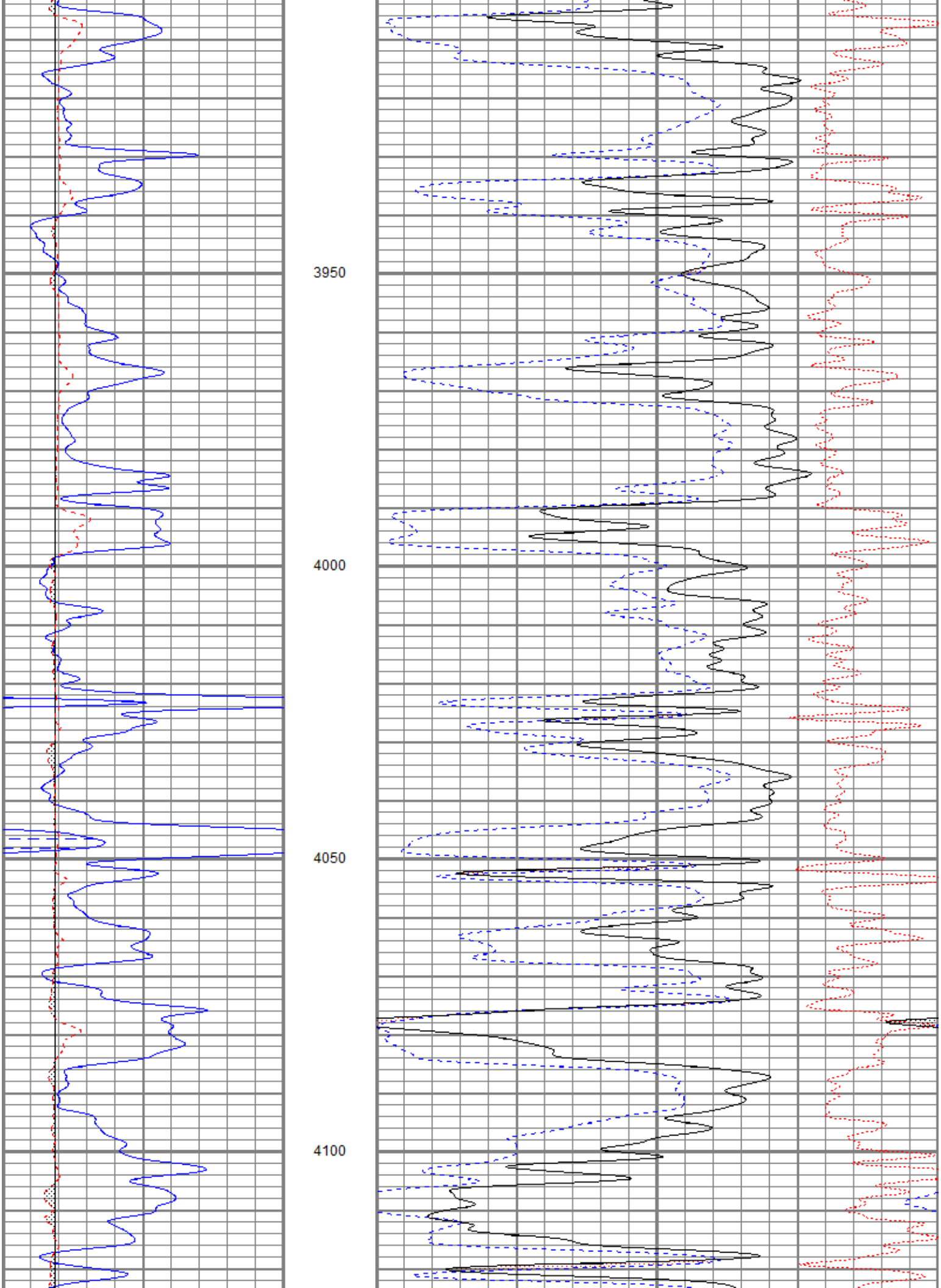
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Dataset Pathname	pass2.1
Presentation Format	kcdnl
Dataset Creation	Wed Sep 10 14:03:46 2014
Charted by	Depth in Feet scaled 1:240

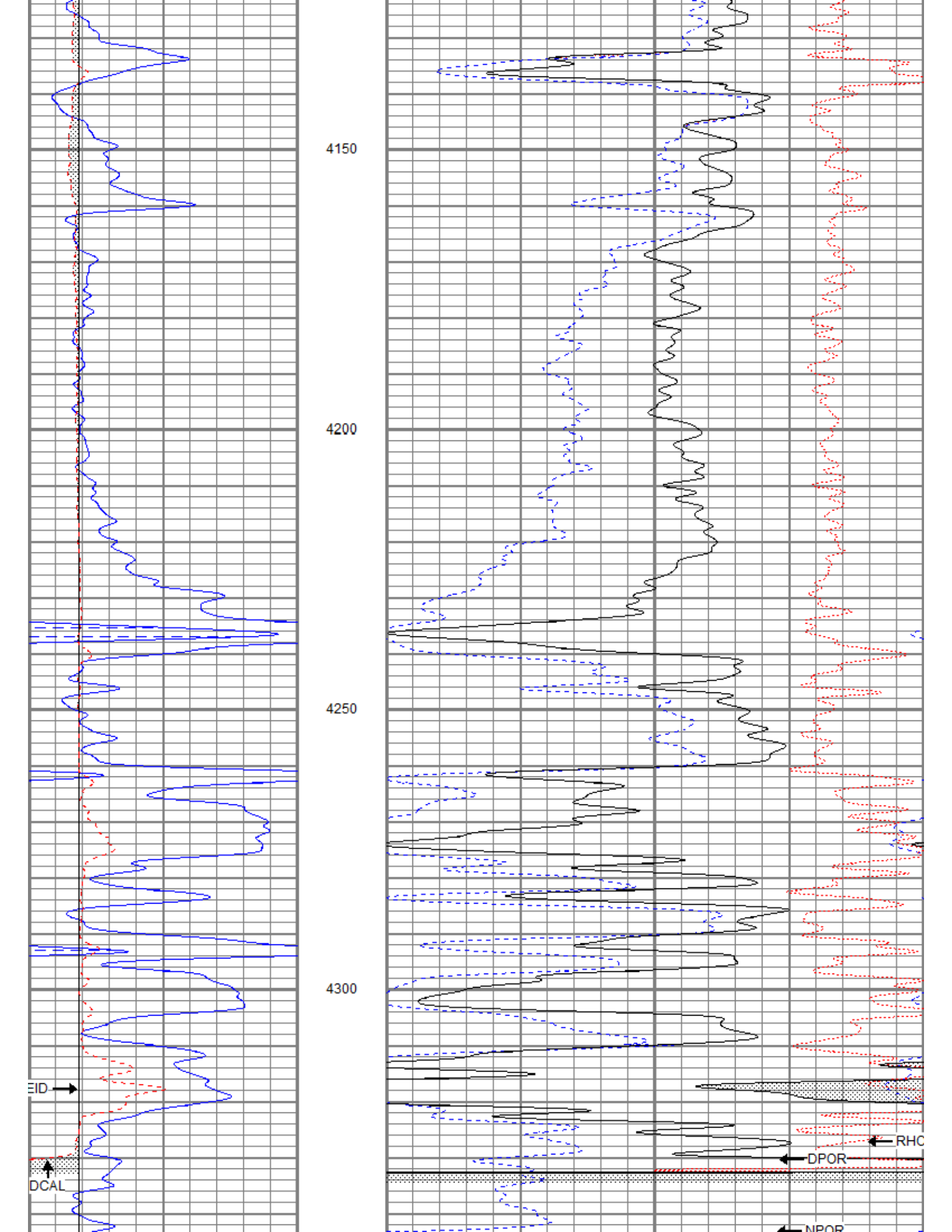
0	GR (GAPI)	150
6	BOREID (in)	16
6	DCAL (in)	16

30	NPOR (pu)	-10
30	DPOR (pu)	-10
70	DPOR (pu)	30
-0.25	RHOC (g/cc)	0.25




3700
3750
3800
3850
3900


3950
4000
4050
4100


4150
4200
4250
4300
EID
DCAL
RHO
DPOR
NPOR

GR

0	GR (GAPI)	150
6	BOREID (in)	16
6	DCAL (in)	16

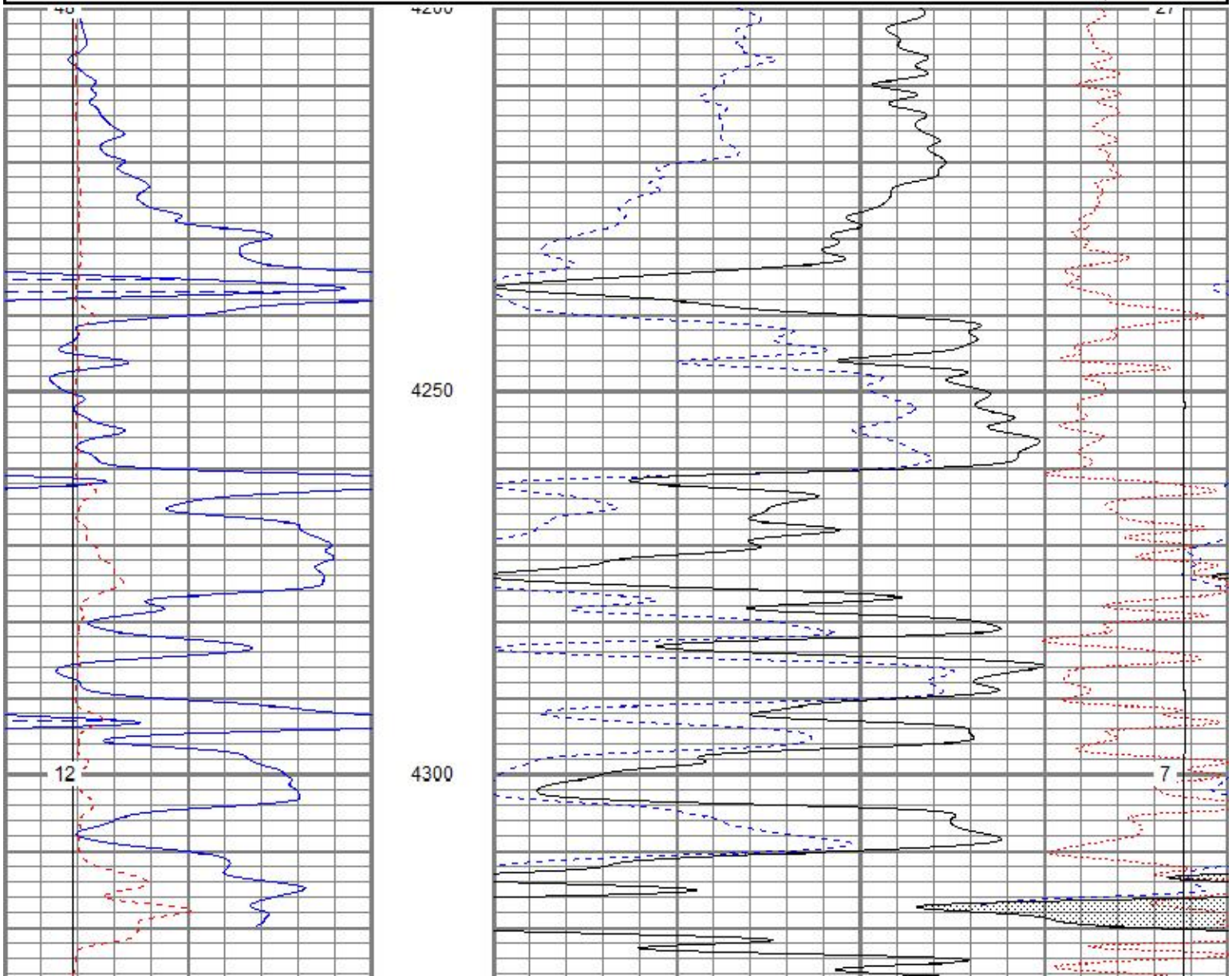
30	NPOR (pu)	-10
30	DPOR (pu)	-10
70	DPOR (pu)	30
-0.25	RHOC (g/cc)	0.25

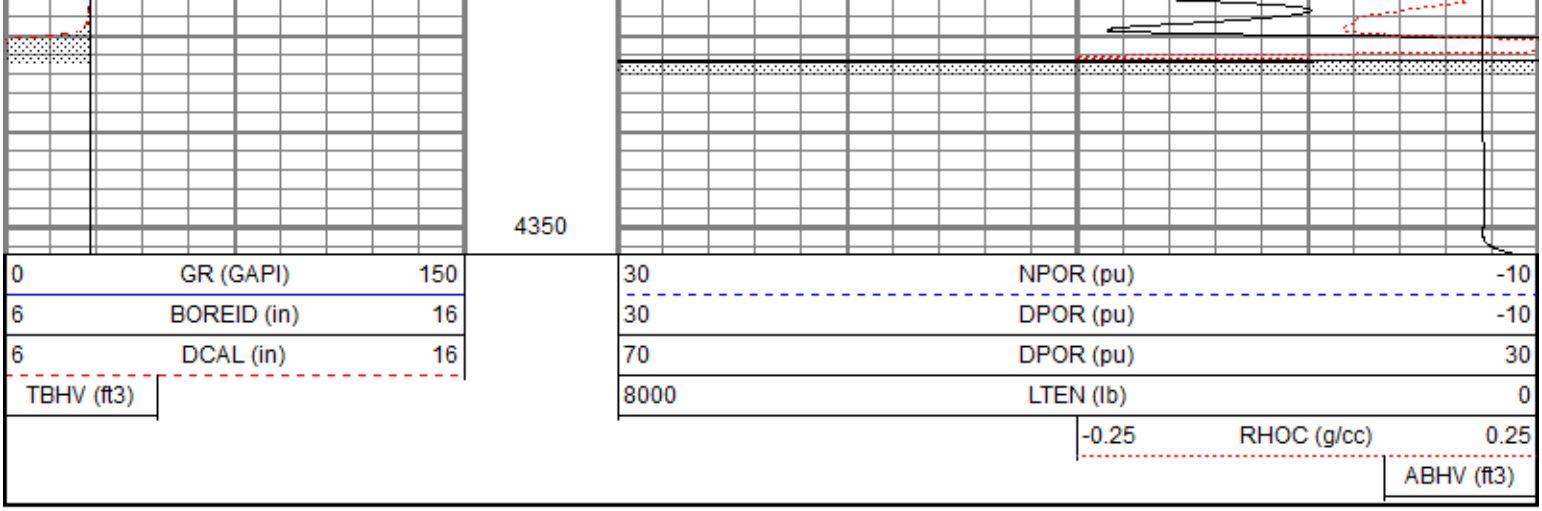
Repeat Pass

Database File	ppbetzkleweno#1oh.db
Dataset Pathname	pass1.1
Presentation Format	kcdnl
Dataset Creation	Wed Sep 10 13:09:46 2014
Charted by	Depth in Feet scaled 1:240

0	GR (GAPI)	150
6	BOREID (in)	16
6	DCAL (in)	16
	TBHV (ft3)	

30	NPOR (pu)	-10
30	DPOR (pu)	-10
70	DPOR (pu)	30
8000	LTEN (lb)	0
-0.25	RHOC (g/cc)	0.25
	ABHV (ft3)	





Calibration Report

Database File	ppbetzkleweno#1oh.db
Dataset Pathname	pass1.1
Dataset Creation	Wed Sep 10 13:09:46 2014

Dual Induction Calibration Report

Serial-Model:	1989-ADM
Surface Cal Performed:	Wed Jun 18 07:01:39 2014
Downhole Cal Performed:	Wed Jun 18 07:02:10 2014
After Survey Verification Performed:	Wed Jun 18 07:02:10 2014

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.001	0.638	V	0.000	350.000	mmho/m	548.175	0.361
Medium	0.000	0.751	V	0.000	400.000	mmho/m	532.735	-0.176
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-0.001	0.638	V	0.000	350.000	mmho/m	548.395	0.365
Medium	0.000	0.751	V	0.000	550.000	mmho/m	732.683	-0.259

Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.110	350.130	mmho/m	-0.003	349.856	mmho/m	1.000	-0.114
Medium	-0.020	399.993	mmho/m	0.013	399.919	mmho/m	1.000	0.033
Shallow	2.504	0.015	V	500.000	2.000	Ohm-m	200.041	-1.975

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.110	350.130	mmho/m	1.000	-0.114
Medium	0.000	0.000	mmho/m	-0.020	399.993	mmho/m	1.000	0.033
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Compensated Density Calibration Report

Serial-Model:	2501DHT-DHT
Source / Verifier:	csv-j12 /
Master Calibration Performed:	Fri Aug 01 09:10:46 2014
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	1089.36	311.27	cps
Aluminum	2.660	g/cc	355.31	193.84	cps

Spine Angle = 67.09 Density/Spine Ratio = 0.748

	Size		Reading
Small Ring	8.15	in	2807.27
Large Ring	14.00	in	4206.90

Before Survey Verification

Target		Measured	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc

After Survey Verification

Target		Measured	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc

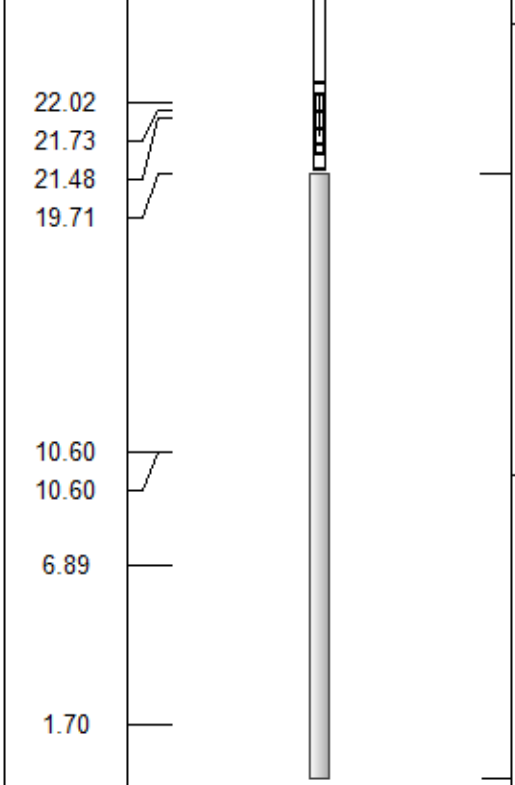
Gamma Ray Calibration Report

Serial Number:	2000	
Tool Model:	P2000	
Performed:	Fri Nov 01 23:01:15 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2200	GAPI/cps

Neutron Calibration Report

Serial Number:	5108	
Tool Model:	PROBE	
Performed:	Tue Jun 03 06:35:57 2014	
Calibrator Value:	1	NAPI
Calibrator Reading:	1	cps
Sensitivity:	1	NAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			None	0.75	1.50	5.00
NEU	36.60		NEU-PROBE (5108) Probe	4.92	3.63	85.00
GR	30.81		GR-P2000 (2000)	3.67	3.25	40.00



		DHT (2501DHT) Digital High Temp CDL Tool	9.69	4.00	201.00
LSD	22.02				
DCAL	21.73				
SSD	21.48				
HEADVOLT	19.71				
SP	10.60	DIL-ADM (1989) Dual Induction	19.71	4.00	300.00
CILD	10.60				
CILM	6.89				
RLL3	1.70				

Dataset:	ppbetzkleweno#1oh.db: field/well/run1/pass1.1
Total length:	38.73 ft
Total weight:	631.00 lb
O.D.:	4.00 in