



DUAL COMP POROSITY LOG

Company CANYON OPERATING, LLC
 Well B BAR B # 25-2
 Field HILL CITY SOUTH
 County GRAHAM
 State KANSAS

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Location: API #: 15-065-24167-00-00
 860' FSL & 1520' FEL
 SEC 25 TWP 8S RGE 23W
 Permanent Datum GROUND LEVEL Elevation 2281'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services
 DIL
 MEL
 Elevation
 K.B. 2288'
 D.F. N/A
 G.L. 2281'

Date	7/22/2019						
Run Number	ONE						
Type Log	CNL/CDL						
Depth Driller	3850'						
Depth Logger	3848'						
Bottom Logged Interval	3827'						
Top Logged Interval	3200'						
Type Fluid In Hole	CHEMICAL						
Salinity, PPM CL	2800						
Density	9.3						
Level	FULL						
Max. Rec. Temp. F	115 DEG/F						
Operating Rig Time	3 HOURS						
Equipment -- Location	P-108 HAYS						
Recorded By	J. HENRICKSON						
Witnessed By	CLAYTON ERICKSON						
Borehole Record							
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	0	210'	8.625"	23#	0	210'
TWO	7.875"	210'	TD				
Casing Record							

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
 HILL CITY, KANSAS
 SOUTH TO N TERRACE ROAD, 1 EAST, SOUTH INTO

Log Measured From: KELLY BUSHING 7 Ft. Above Permanent Datum

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www.pioneerenergy.com 785-625-3858


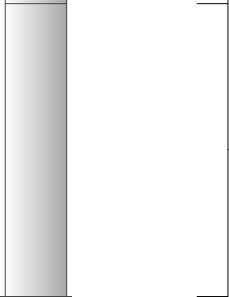
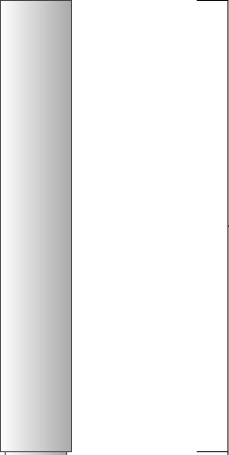

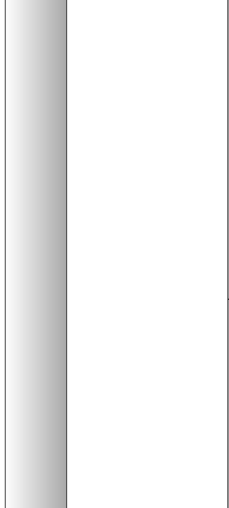
<p style="text-align: center;">Your Pioneer Energy Services Crew</p> <p>Engineer: J. HENRICKSON Operator: Operator: Operator:</p>	<p style="text-align: center;">This Log Record Was Witnessed By</p> <p>Primary Witness: CLAYTON ERICKSON Secondary Witness: Secondary Witness: Secondary Witness:</p>
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\canyon_b_bar_b_25_2.db
 Dataset field/well/stack/pass4.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	115	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	135	72	Off	3848

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	29.90 29.15		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	20.85 20.83 20.35		CDL-M&W (144-84)	8.50	4.00	250.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (PSI 988)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: canyon_b_bar_b_25_2.db: field/well/stack/pass4.1
 Total length: 35.50 ft
 Total weight: 620.00 lb
 O.D.: 4.00 in

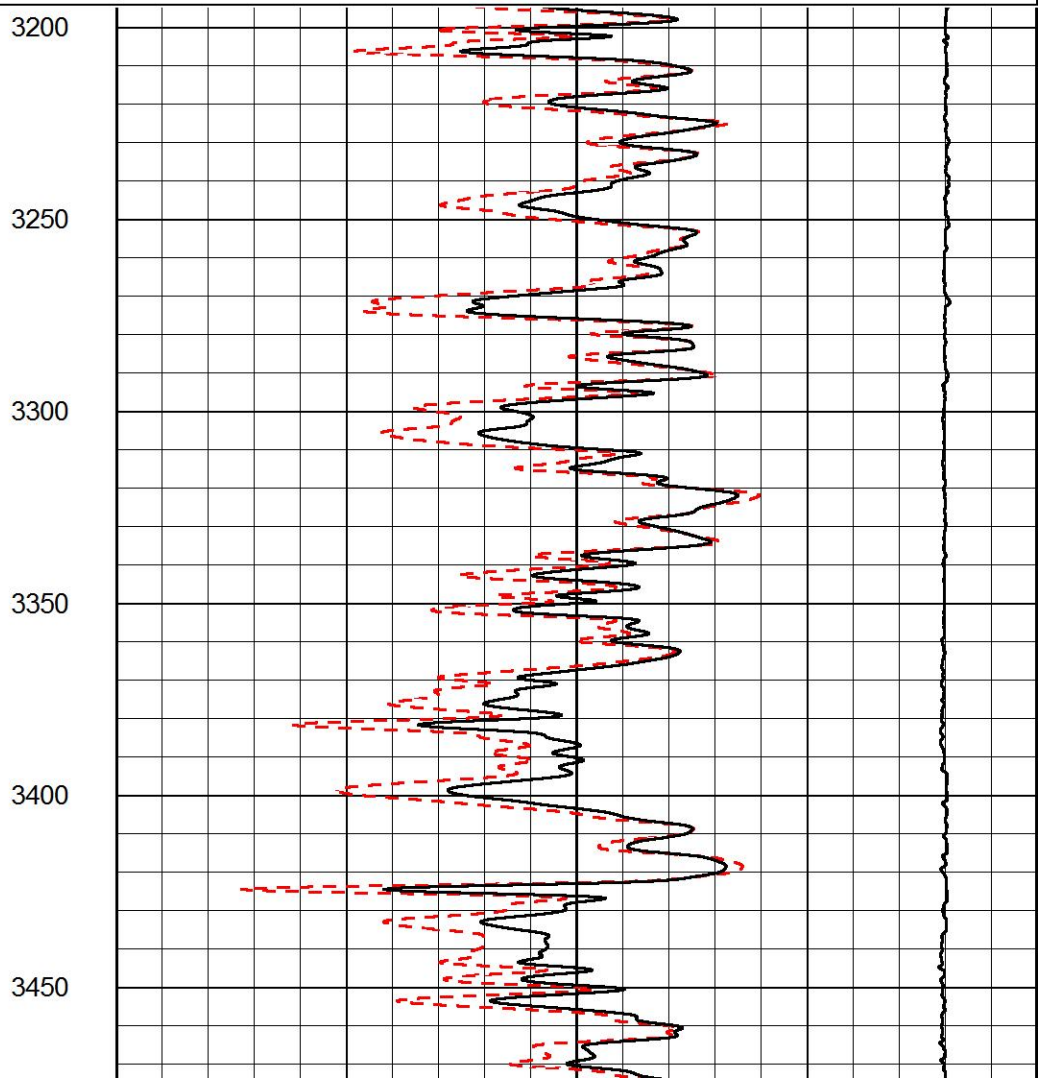
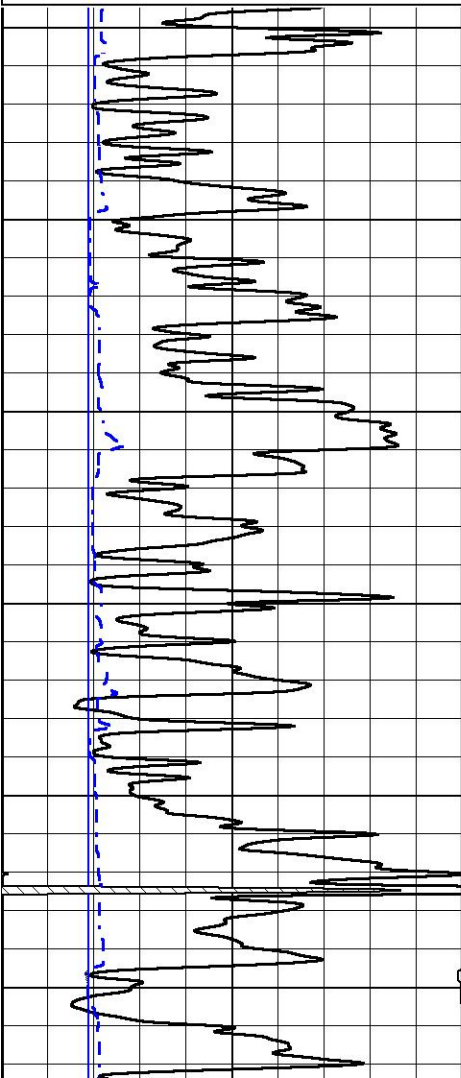


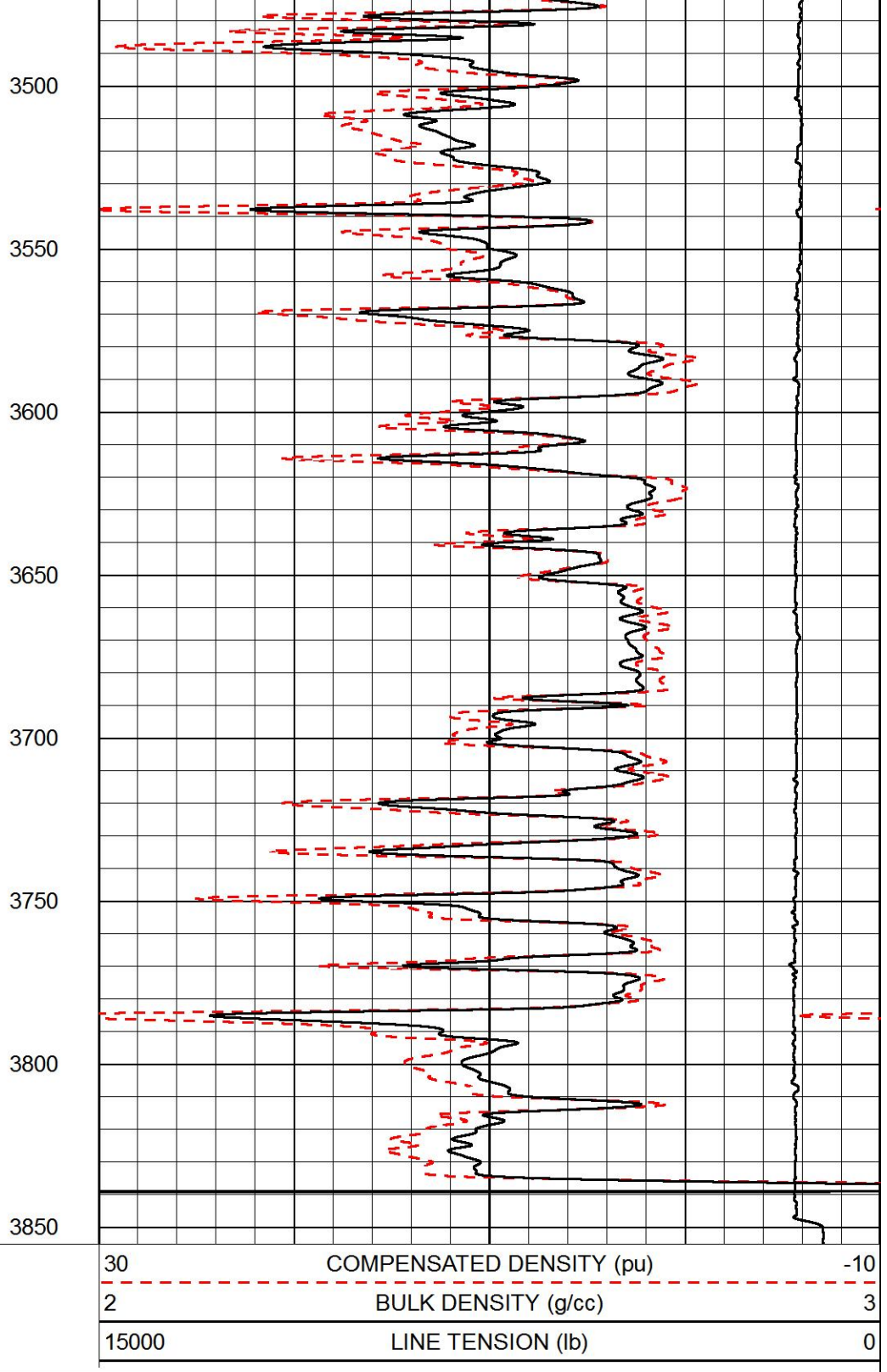
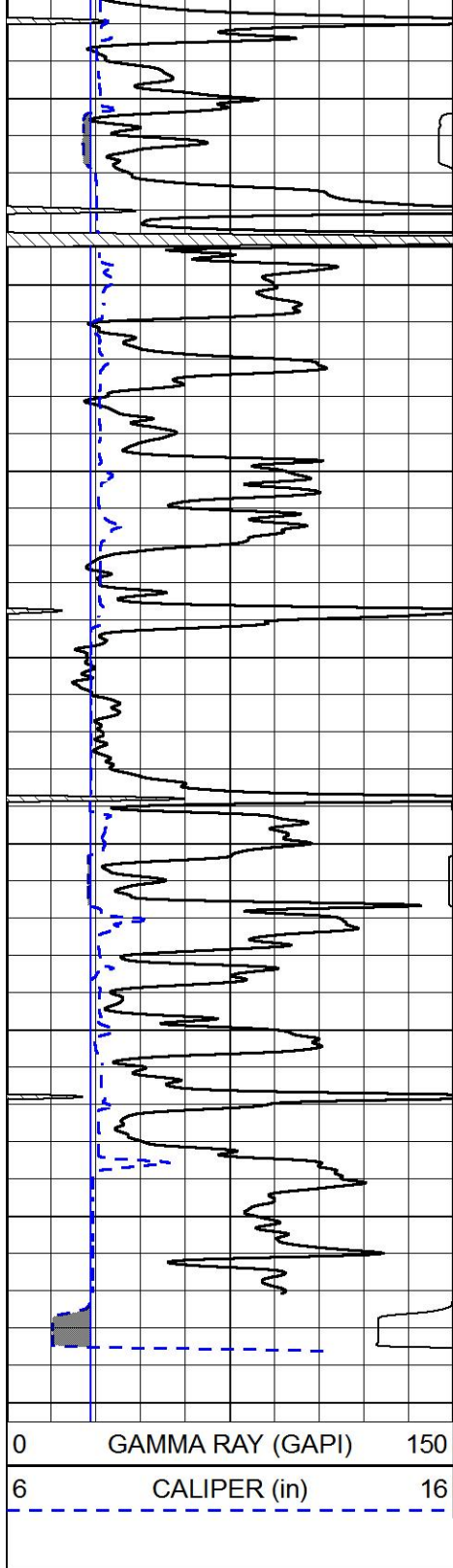
MAIN PASS

Database File canyon_b_bar_b_25_2.db
 Dataset Pathname stack/pass4.1
 Presentation Format cdl
 Dataset Creation Mon Jul 22 15:20:06 2019
 Charted by Depth in Feet scaled 1:600

0	GAMMA RAY (GAPI)	150
6	CALIPER (in)	16

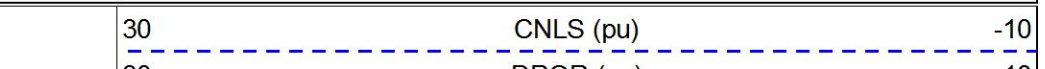
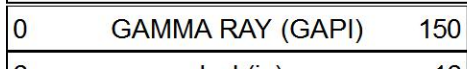
30	COMPENSATED DENSITY (pu)	-10
2	BULK DENSITY (g/cc)	3
15000	LINE TENSION (lb)	0





MAIN PASS

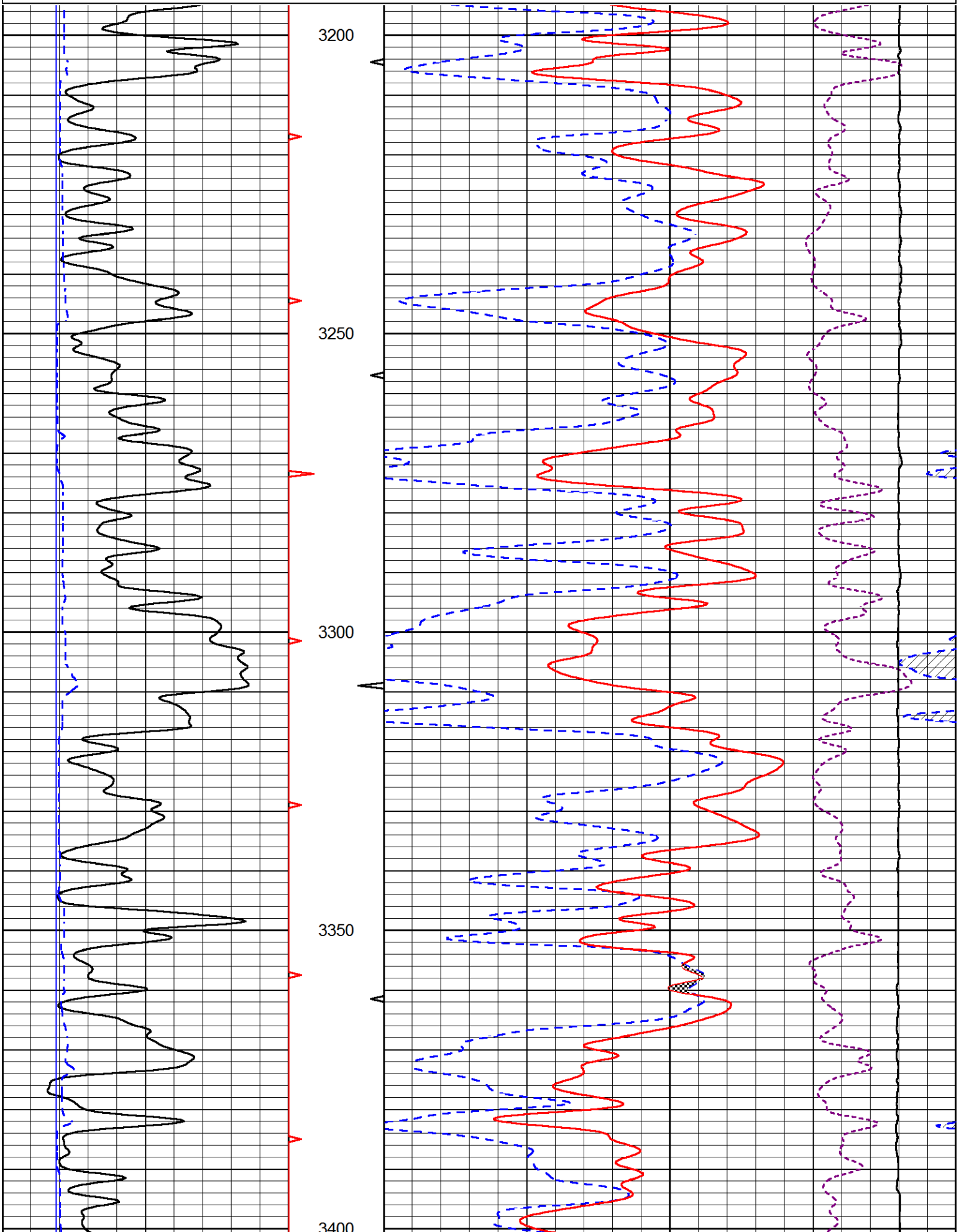
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 Dataset Pathname stack/pass4.1
 Presentation Format cndlspec
 Dataset Creation Mon Jul 22 15:20:06 2019
 Charted by Depth in Feet scaled 1:240

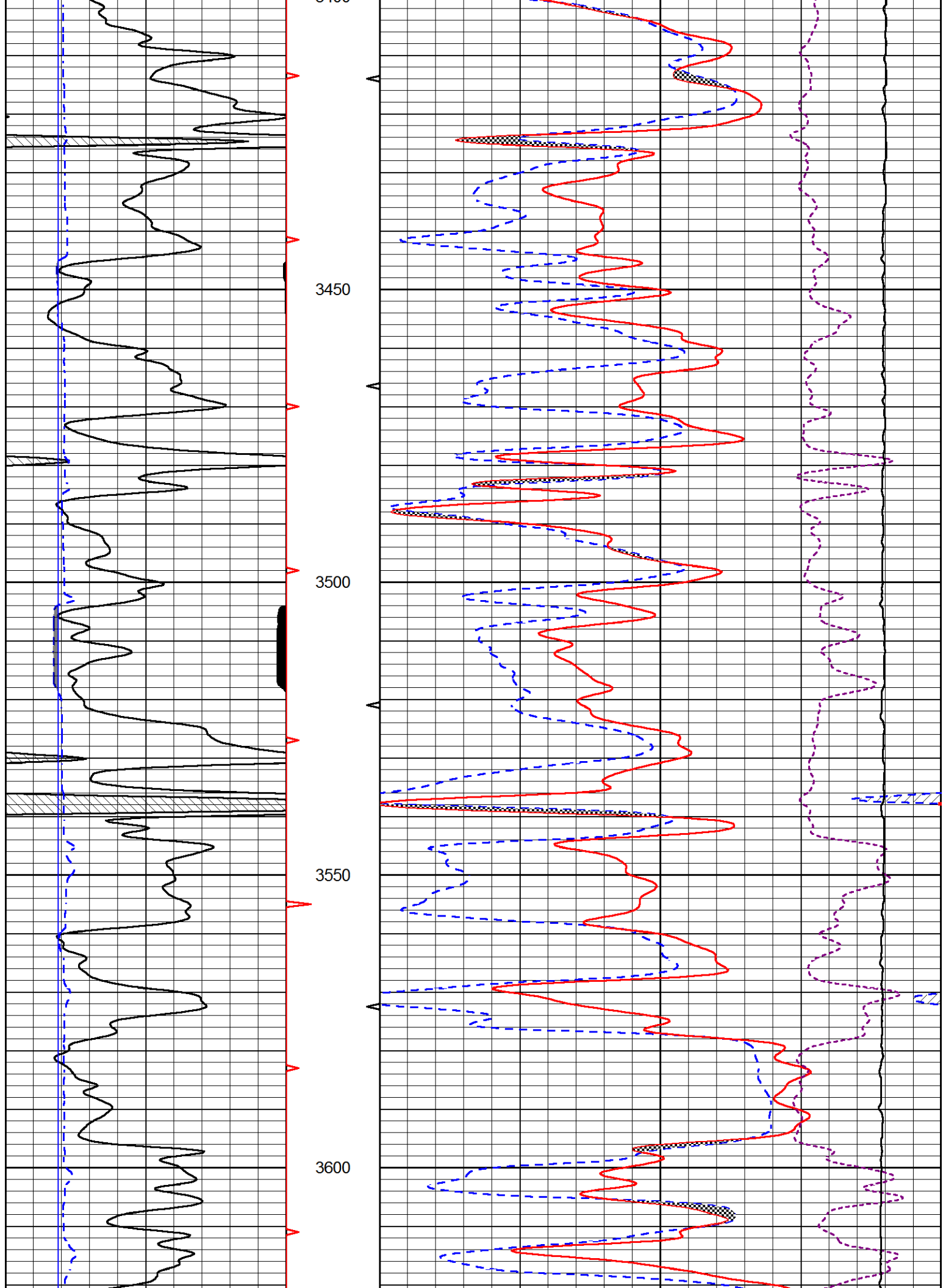


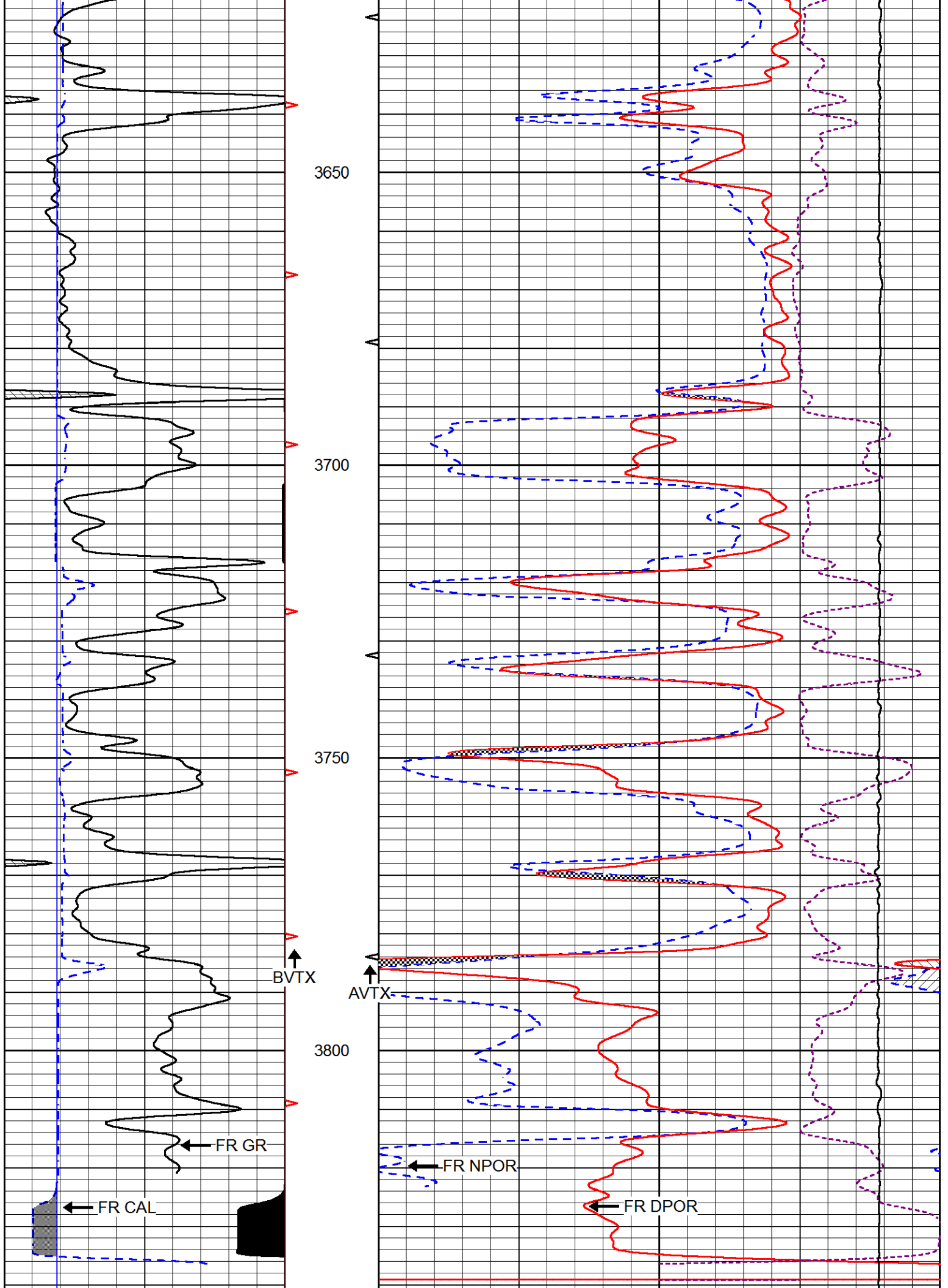
6 dcal (in) 16
6 BIT SIZE (in) 16

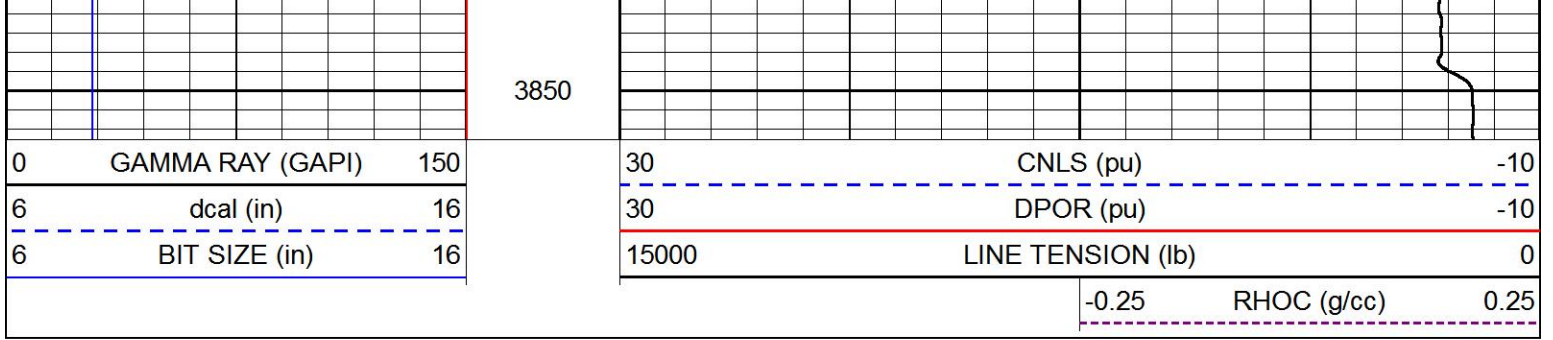
30 DPOR (pu) -10
15000 LINE TENSION (lb) 0

-0.25 RHOC (g/cc) 0.25



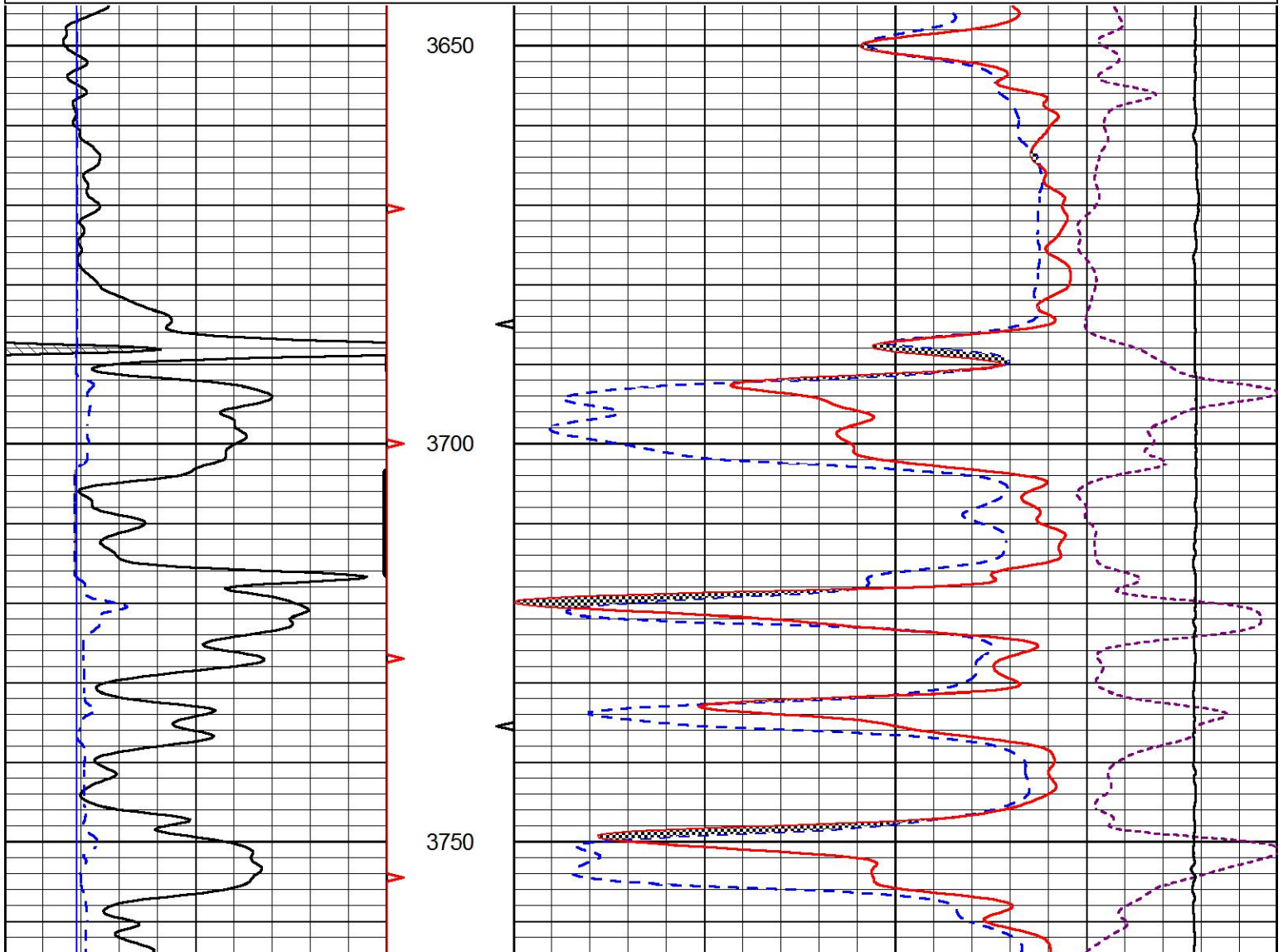
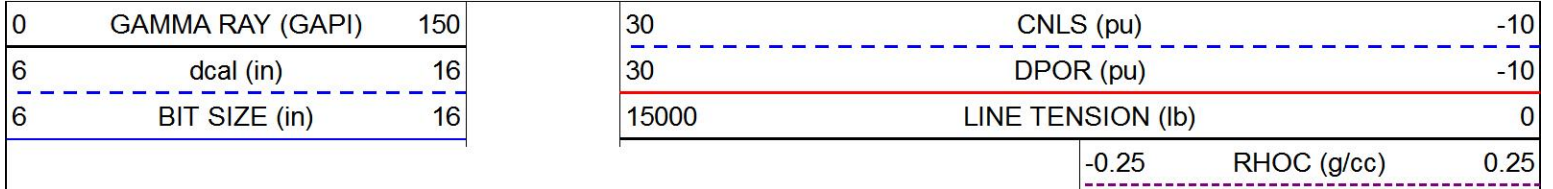


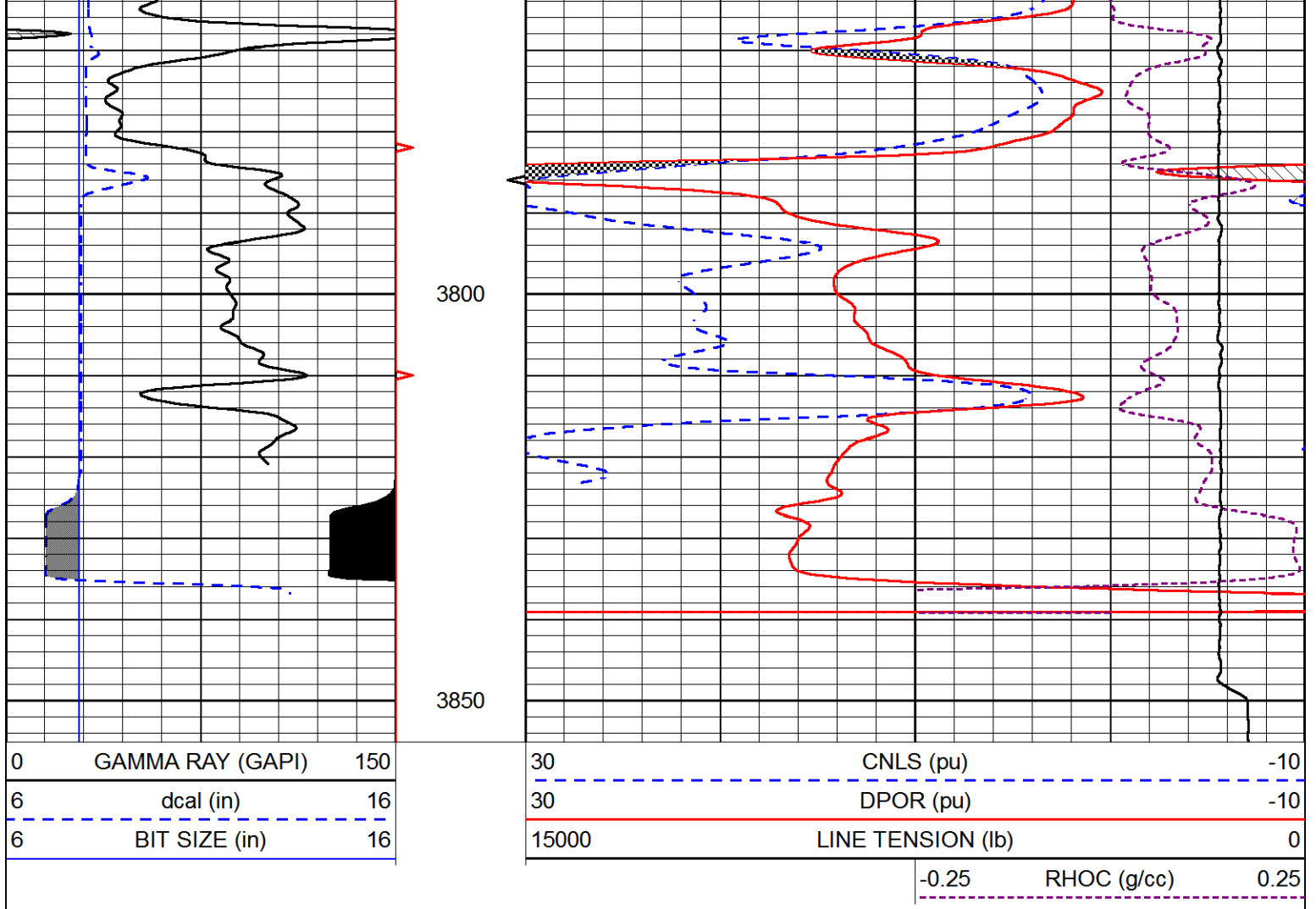




REPEAT SECTION

Database File canyon_b_bar_b_25_2.db
 Dataset Pathname stack/pass2.1
 Presentation Format cndlspec
 Dataset Creation Mon Jul 22 14:43:53 2019
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File canyon_b_bar_b_25_2.db
 Dataset Pathname stack/pass4.1
 Dataset Creation Mon Jul 22 15:20:06 2019

Dual Induction Calibration Report

Serial-Model: PSI 988-M&W
 Calibration Performed: Tue Nov 20 10:50:19 2018

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop	mmho/m	Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.525	-44.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.380	-17.000

Compensated Density Calibration Report

Serial-Model: 144-84-M&W
 Source / Verifier: /
 Master Calibration Performed: Mon Jan 07 15:00:31 2019

Master Calibration

	Density	Far Detector	Near Detector
Magnesium	1.755 g/cc	1215.40	5200.80

Magnesium	1.755	g/cc	4315.49	5309.89	cps
Aluminum	2.675	g/cc	825.26	3443.46	cps

Spine Angle = 75.33

Density/Spine Ratio = 0.538

	Size		Reading
Small Ring	4.00	in	0.69
Large Ring	14.00	in	0.04

Compensated Neutron Calibration Report

Serial Number:	tk10-MW
Tool Model:	M&W
Calibration Performed:	Wed Nov 16 11:21:36 2016

Detector	Readings	Target	Normalization
Short Space	6240.00 cps	1000.00 cps	1.6025
Long Space	460.00 cps	1000.00 cps	1.9500

Gamma Ray Calibration Report

Serial Number:	89-M&W	
Tool Model:	M&W	
Calibration Performed:	Tue Apr 11 17:08:01 2017	
Calibrator Value:	1000.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps



PIONEER
Pioneer Energy Services

Company	CANYON OPERATING, LLC
Well	B BAR B # 25-2
Field	HILL CITY SOUTH
County	GRAHAM
State	KANSAS