



MICRORESISTIVITY LOG

PIONEER
Pioneer Energy Services

Company AINSWORTH OPERATING CO.
Well DAVIS #5
Field RED SUN
County GRAHAM
State KANSAS

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Well DAVIS #5
Field RED SUN
County GRAHAM State KANSAS

Location: API #: 15-065-24140-00-00

1005' FNL & 2300' FWL

SEC 33 TWP 6S RGE 22W

Permanent Datum GROUND LEVEL Elevation 2283'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Other Services
CNL/CDL
DIL
Elevation
K.B. 2290'
D.F. N/A
G.L. 2283'

Date	7/19/2017		
Run Number	ONE		
Depth Driller	3900'		
Depth Logger	3901'		
Bottom Logged Interval	3900'		
Top Log Interval	3200'		
Casing Driller	8.625" @ 222'		
Casing Logger	220'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	500		
Density / Viscosity	8.7 48		
pH / Fluid Loss	10.0 8.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.60 @ 80		
Rmt @ Meas. Temp	0.45 @ 80		
Rmc @ Meas. Temp	0.81 @ 80		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.42 @ 115		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	115		
Equipment Number	91		
Location	HAYS		
Recorded By	D. SCHMIDT		
Witnessed By	RANDY KILIAN		

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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,
4 EAST TO 310 RD, NORTH TO Z RD, 1/4 EAST,
SOUTH INTO

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

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

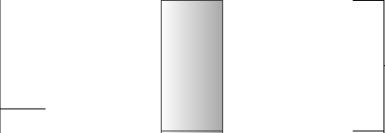
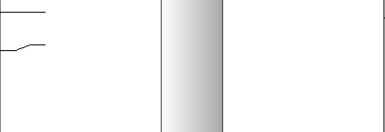
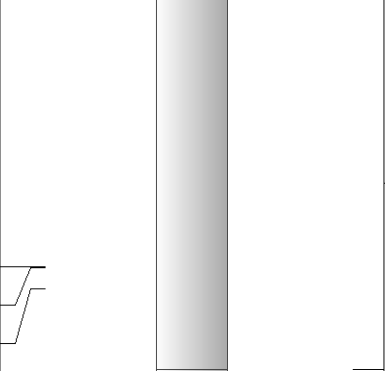
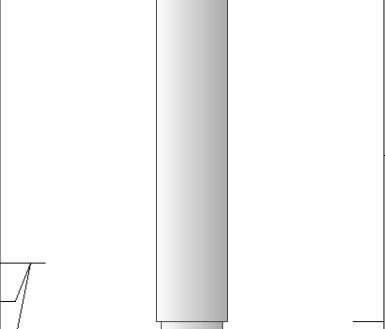
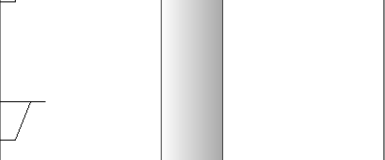
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: RANDY KILIAN
Secondary Witness:
Secondary Witness:
Secondary Witness:

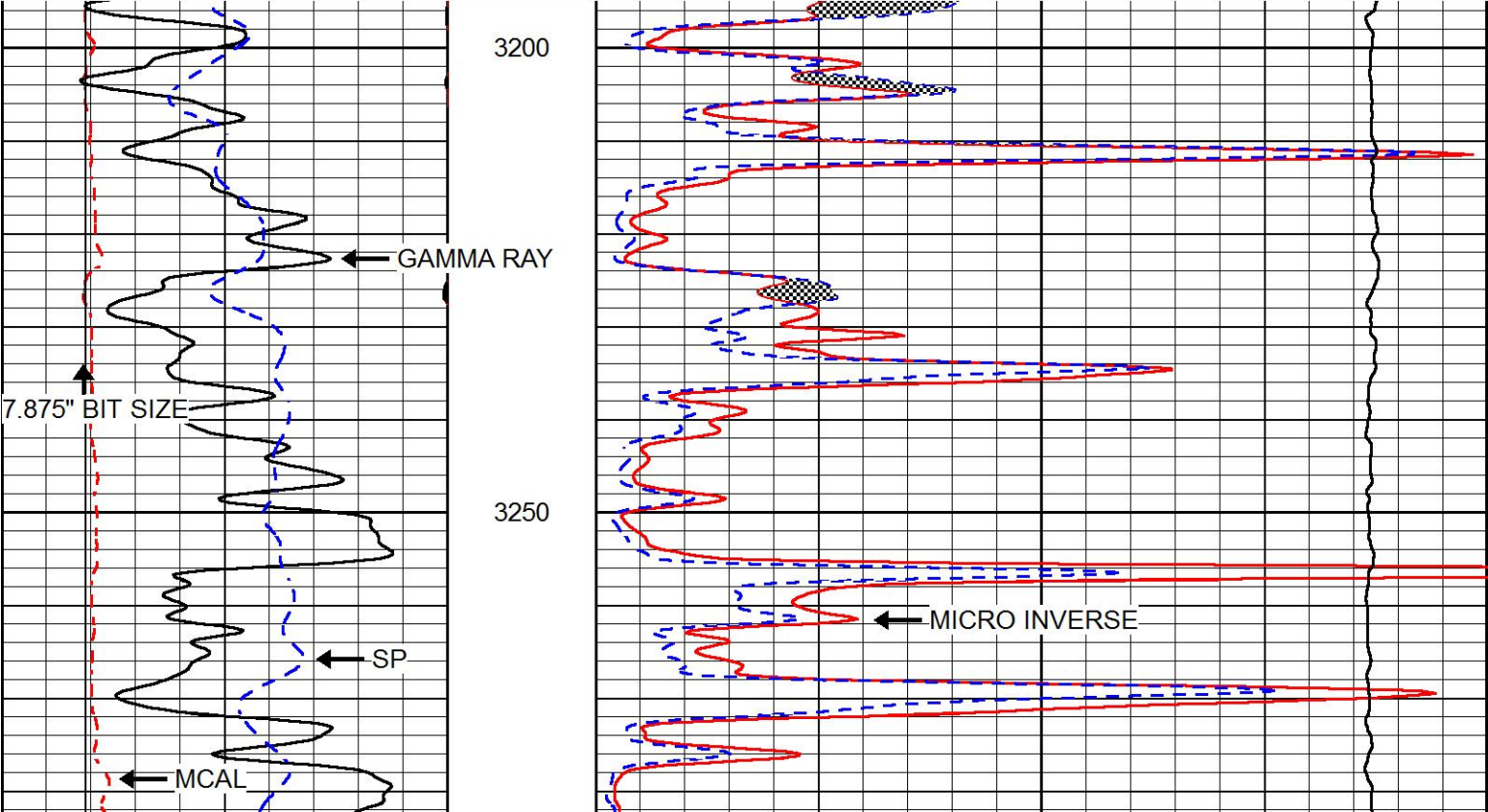
Top - Bottom

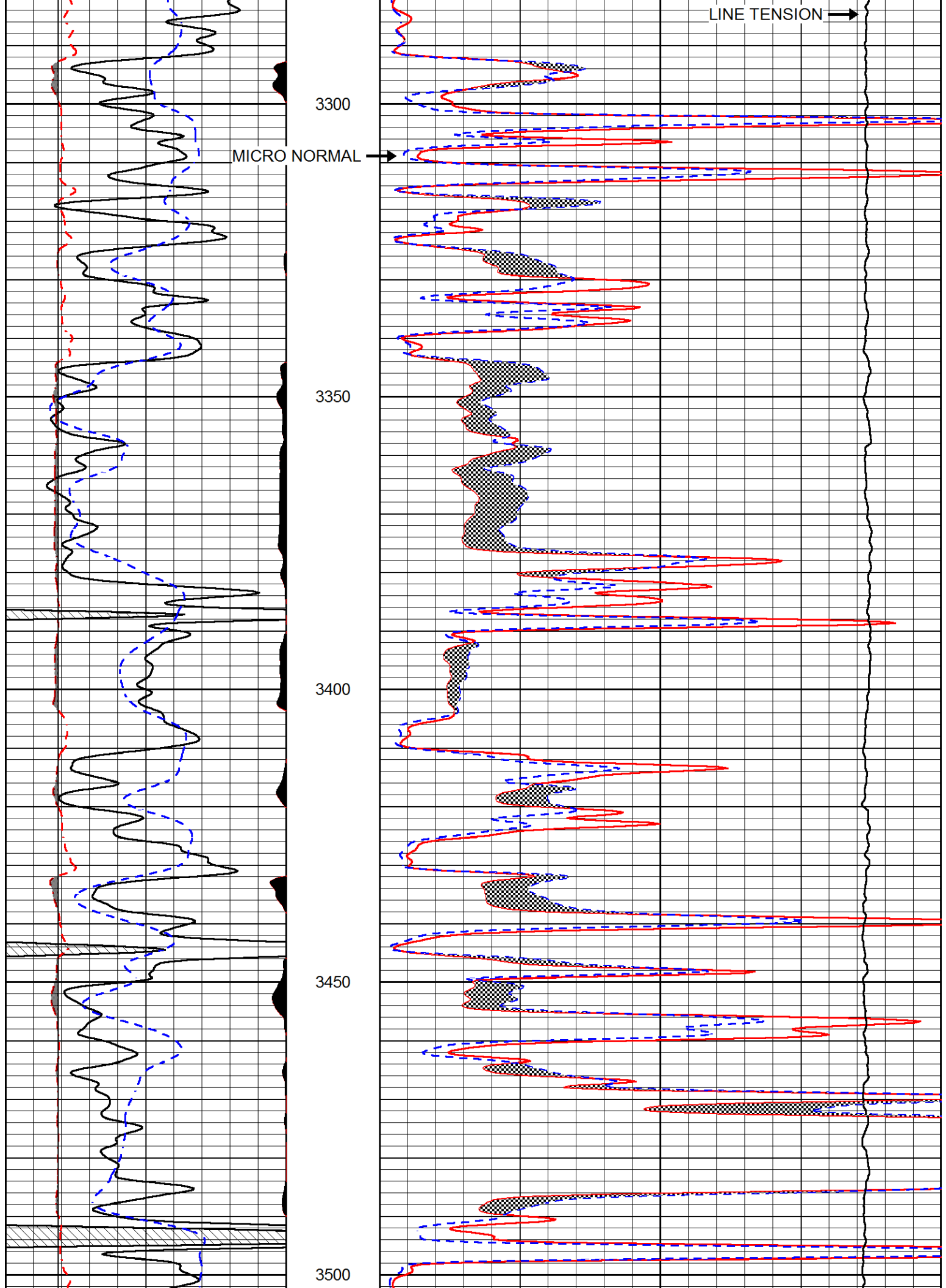
M	A	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m	SNDERR mmho/m	SZCOR
2	1	1	2.71	130	0	0	Off
NPORSEL	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
Limestone	80	0	5.5	0	3901	115	7.875

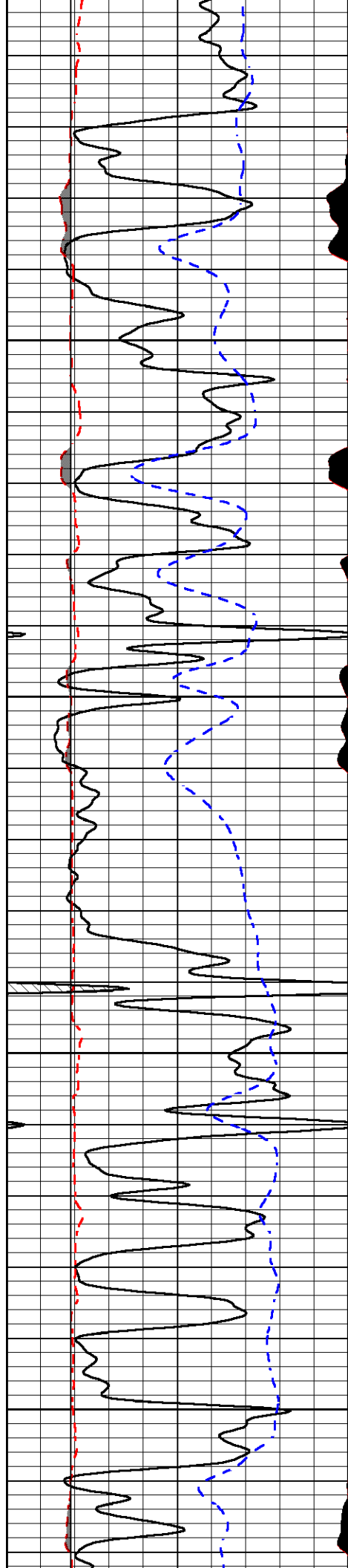
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (90-1031)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					

			DIL-M&W (PSI 91)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset: ainsworth_davis_5.db: field/well/STKML/pass3.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in						

			MAIN PASS		
Database File	ainsworth_davis_5.db		0	Gamma Ray (GAPI) 150	
Dataset Pathname	STKML/pass3.1		6	MCAL (in) 16	
Presentation Format	micro		2.875	mcal (in) 7.875	
Dataset Creation	Wed Jul 19 04:57:51 2017		6	Bit Size (in) 16	
Charted by	Depth in Feet scaled 1:240		-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	





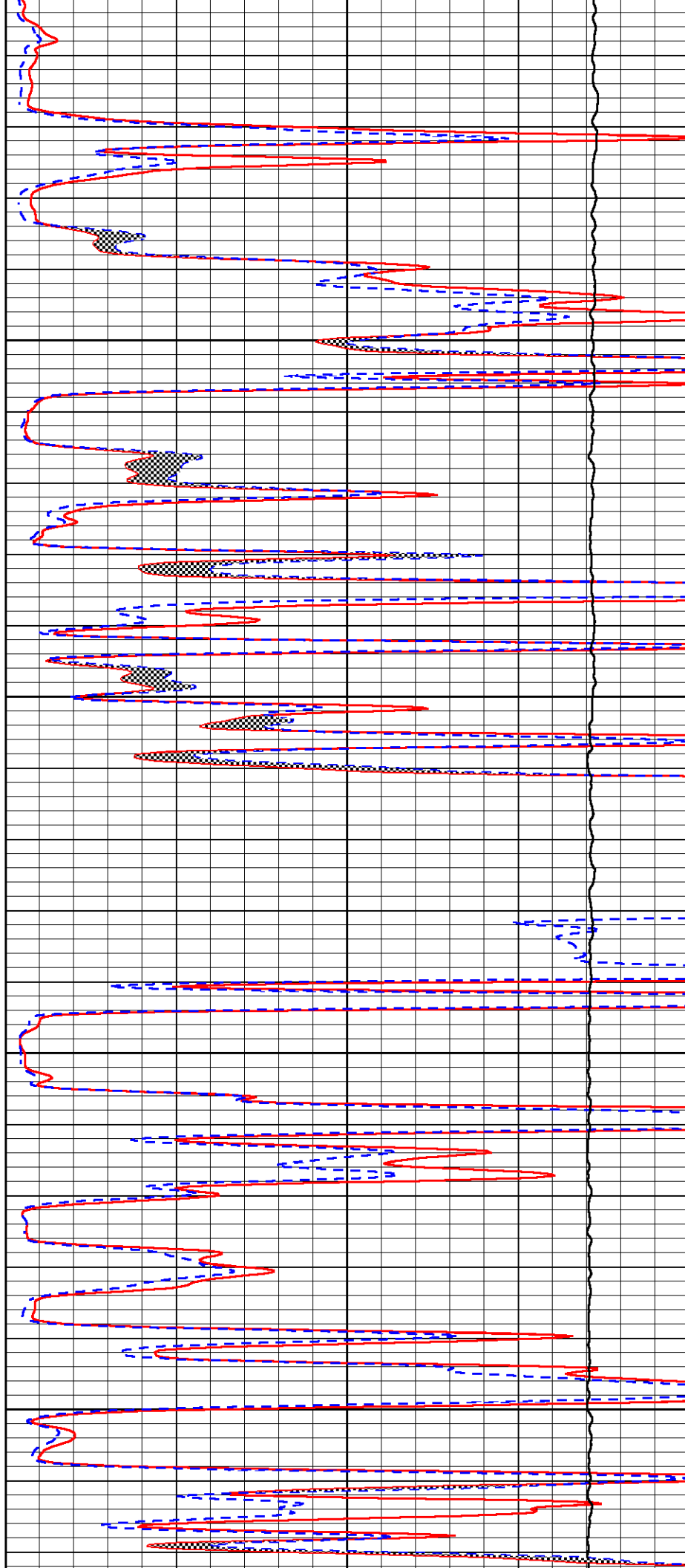


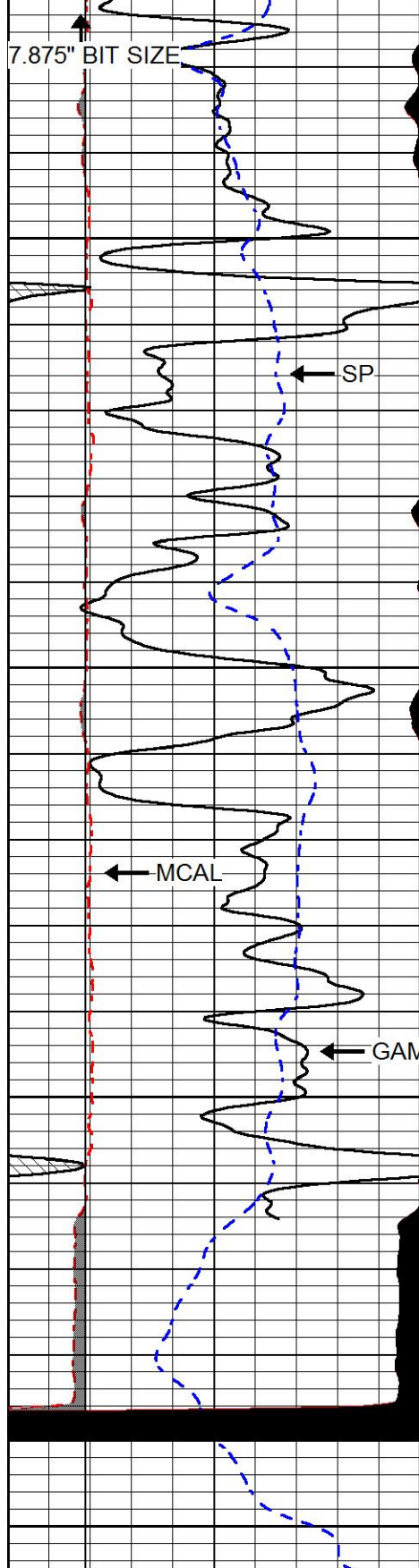
3550

3600

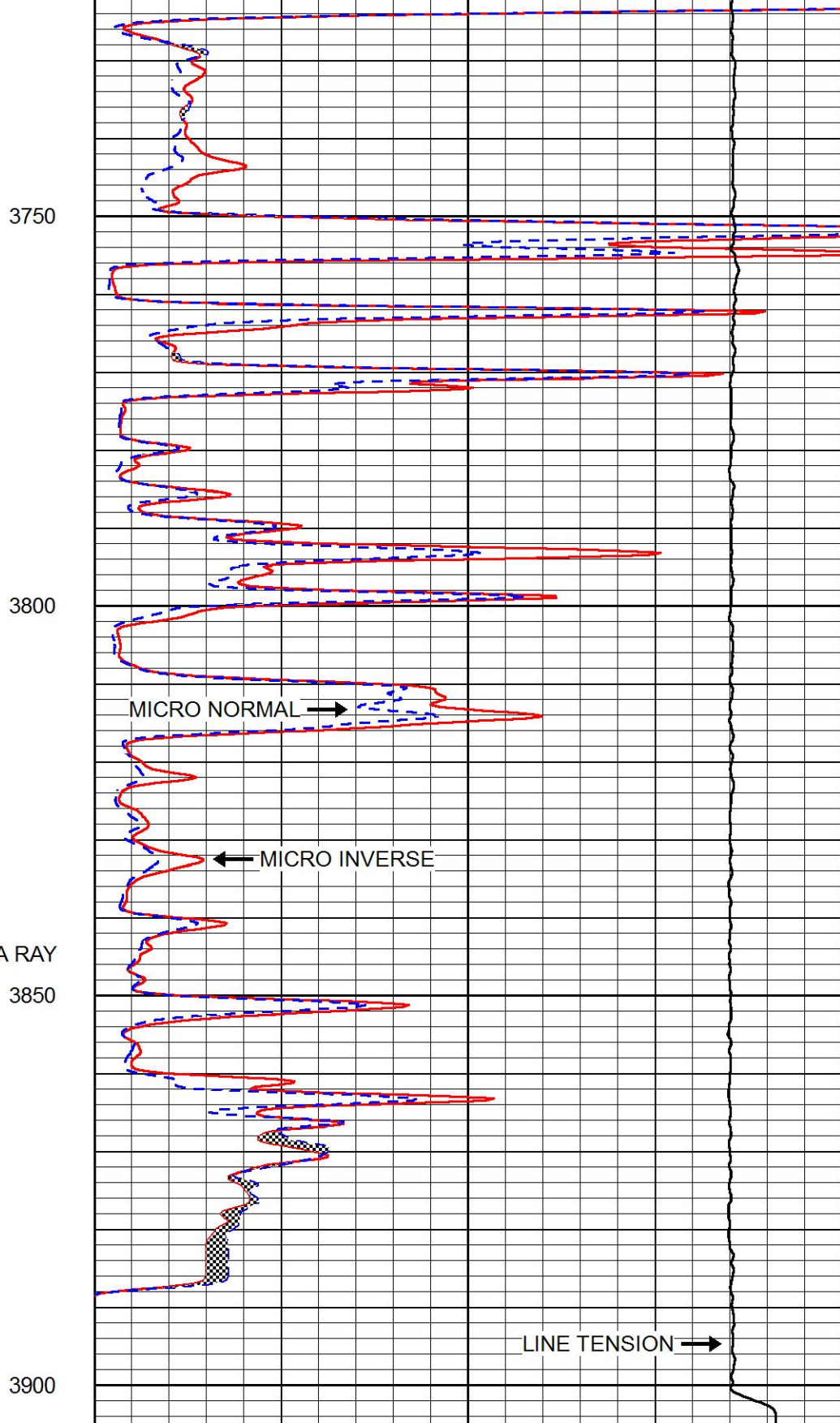
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3700

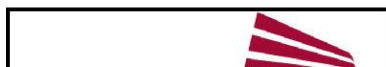




0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0



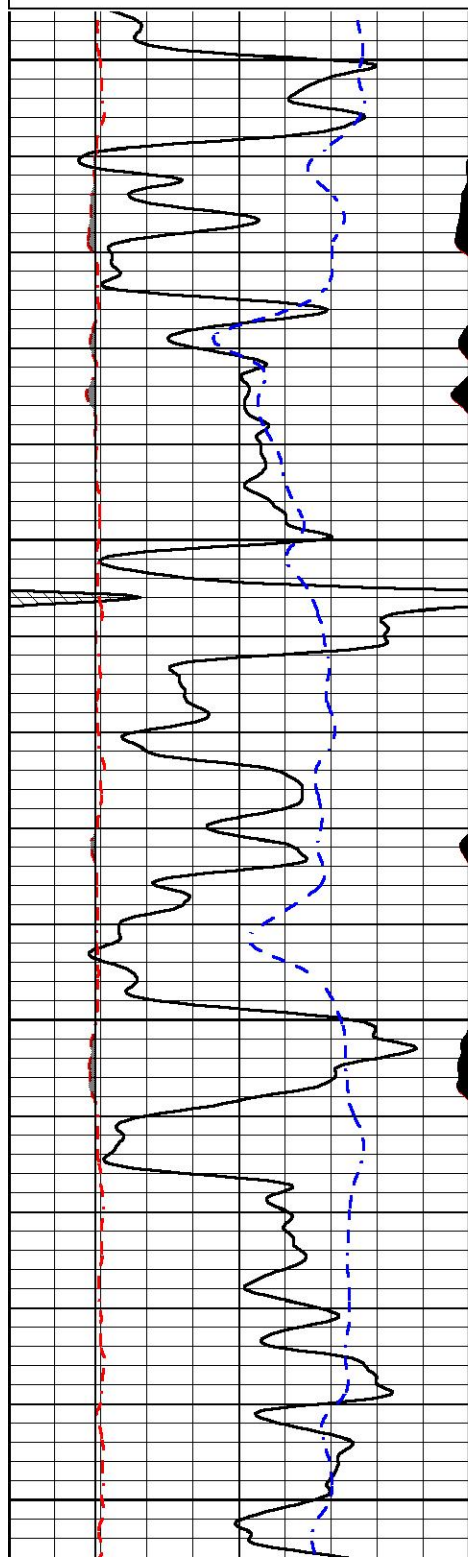
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



Database File ainsworth_davis_5.db
 Dataset Pathname STKML/pass2.1
 Presentation Format micro
 Dataset Creation Wed Jul 19 04:56:00 2017
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

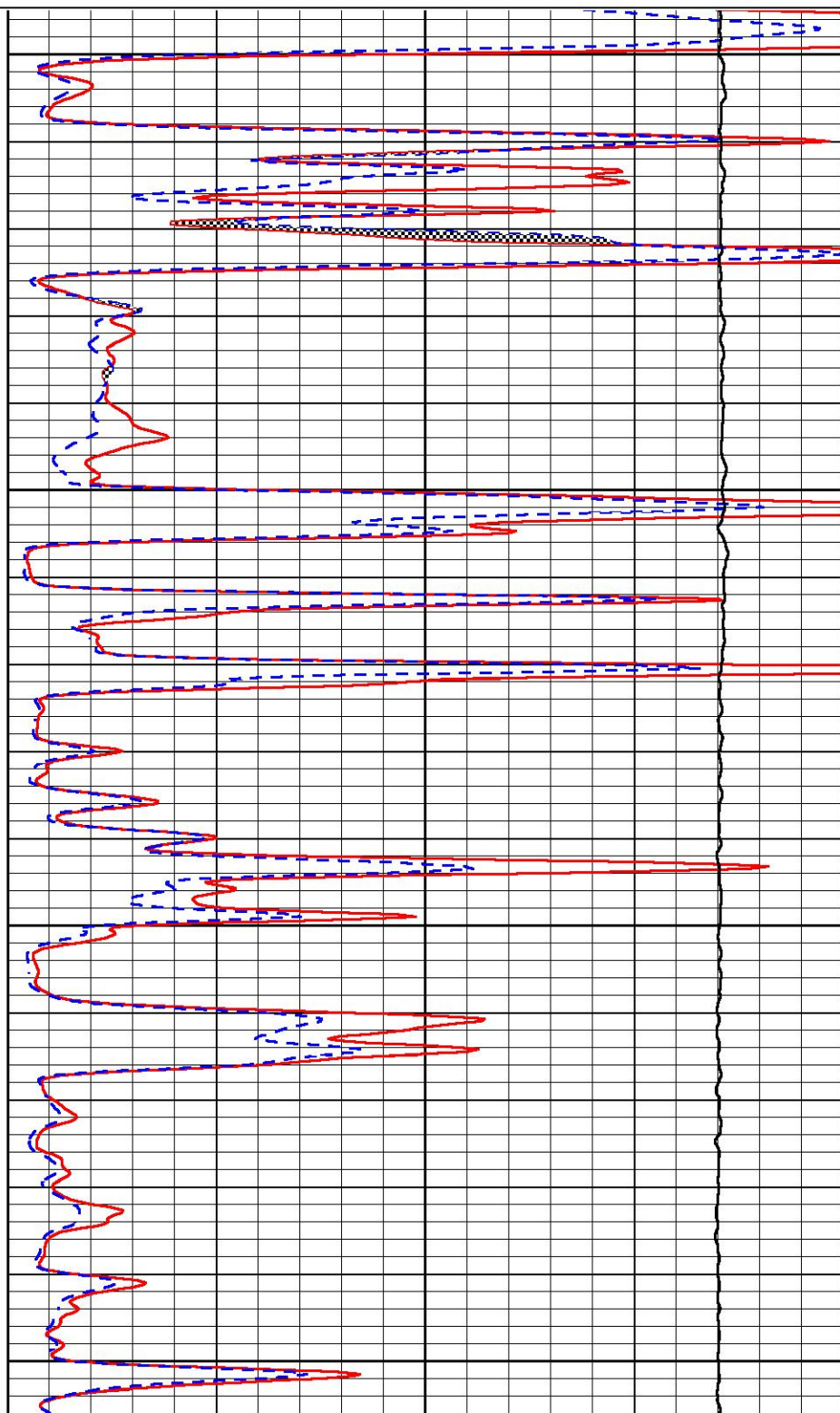


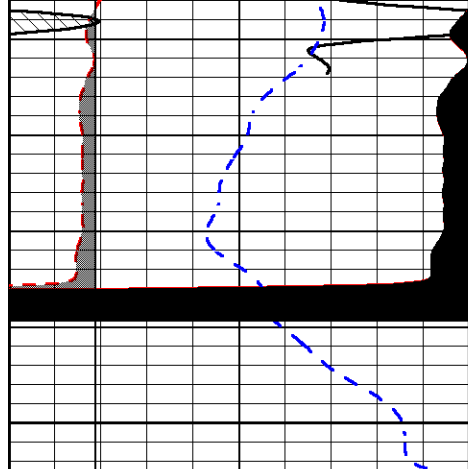
3700

3750

3800

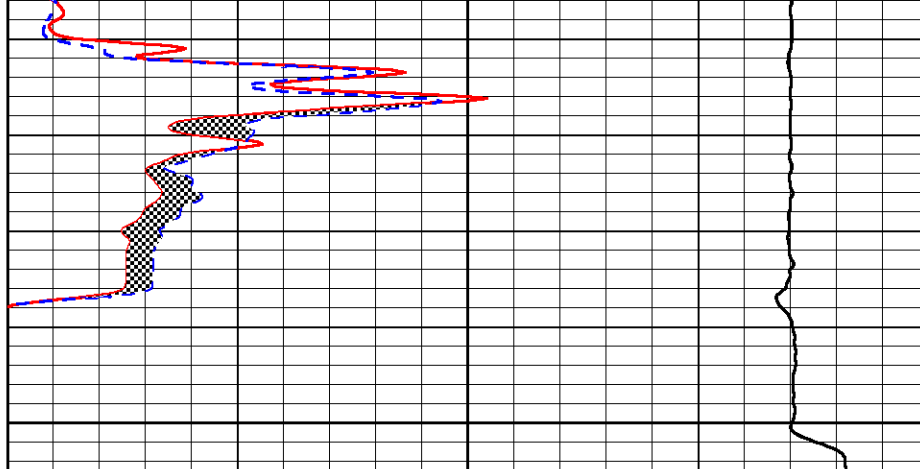
3850





3900

0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0



0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

Calibration Report

Database File ainsworth_davis_5.db
 Dataset Pathname STKML/pass3.1
 Dataset Creation Wed Jul 19 04:57:51 2017

Dual Induction Calibration Report

Serial-Model: PSI 91-M&W
 Calibration Performed: Thu Jul 13 13:00:25 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	166.796	835.089	0.000	255.800	mmho/m	0.430	-32.850
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.360	-31.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Thu Jul 13 13:00:38 2017

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	12500.0000	-0.5500
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	14000.0000	-0.3000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.3000

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Thu Jul 13 13:00:48 2017

Master Calibration

	Density			Far Detector	Near Detector	
Magnesium	1.755	g/cc		4903.44	6153.79	cps
Aluminum	2.685	g/cc		934.50	4021.31	cps
Spine Angle = 75.61			Density/Spine Ratio = 0.543			
	Size			Reading		
Small Ring	8.00	in		1.84		
Large Ring	22.00	in		1.46		

Compensated Neutron Calibration Report
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Serial Number:	207-MW
Tool Model:	M&W
Calibration Performed:	Sat Jun 17 10:30:30 2017

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	
Tool Model:	M&W	
Calibration Performed:	Thu Jul 13 13:01:02 2017	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps

 PIONEER Pioneer Energy Services	Company	AINSWORTH OPERATING CO.
	Well	DAVIS #5
	Field	RED SUN
	County	GRAHAM
	State	KANSAS