



MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company Cobalt Energy, LLC
 Well Darwin #1-22
 Field Wildcat
 County Graham
 State Kansas

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 Well Darwin #1-22
 Field Wildcat
 County Graham State Kansas

Location: API #: 15-065-24303-00-00
 NE NW SW SE
 1207 FSL & 2076 FEL
 SEC 20 TWP 10S RGE 22W
 Permanent Datum Ground Level Elevation 2331
 Log Measured From Kelly Bushing
 Drilling Measured From Kelly Bushing
 Other Services
 CNL/CDL
 DIL/BHCS
 Elevation
 K.B. 2336
 D.F.
 G.L. 2331

Date	11/24/2023
Run Number	One
Depth Driller	3900
Depth Logger	3898
Bottom Logged Interval	3897
Top Log Interval	3200
Casing Driller	8:625 @ 259
Casing Logger	258
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	1600
Density / Viscosity	9.2 50
pH / Fluid Loss	10.0 6.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.75 @ 55
Rmt @ Meas. Temp	0.56 @ 55
Rmc @ Meas. Temp	1.01 @ 55
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.36 @ 115
Operating Rig Time	5 Hours
Max Rec. Temp. F	115
Equipment Number	P-108
Location	HAYS
Recorded By	D. Schmidt
Witnessed By	Larry Nicholson

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

Wakeeney,
 North to Rd D (Graham County),
 5 East, 1 South Rd C, 1/2 East,
 North into

39.164528688 -99.761612634

Log Measured From: Kelly Bushing 5 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
 785-625-3858

Your Midwest Wireline Crew

Engineer: D. Schmidt
 Operator:
 Operator:
 Operator:

This Log Record Was Witnessed By

Primary Witness: Larry Nicholson
 Secondary Witness:
 Secondary Witness:
 Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.23		GR-M&W (105)	3.00	3.50	50.00
CNLSC CNSSC	37.13 36.38		CNT-M&W (210)	5.00	3.50	100.00
LCAL	28.21		MWLith-STEP LITHO Short (701-01)	8.40	5.00	250.00
LLW8N	28.21		ML-PSI STKBL ML (402)	7.58	4.00	65.00
LLW7N	28.21					
LLW6N	28.21					
LLW5N	28.21					
LLW4N	28.21					
LLW3N	28.21					
LLW2N	28.21					
LLW1N	28.21					
LSLOCK	27.96					
LLLOCK	27.96					
PELTMPR	27.96		DIL-M&W (505 HT)	18.25	3.50	220.00
LSHVNG	27.96					
LLHVNG	27.96					
LSW8N	27.71					
LSW7N	27.71					
LSW6N	27.71					
LSW5N	27.71					
LSW4N	27.71					
LSW3N	27.71					
LSW2N	27.71					
LSW1N	27.71					
MCAL	19.58					
MI	19.58					
MN	19.58					
RLL3F	15.50					
RLL3	15.50					
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset: cobalt_darvin 1-22.db: field/well/stkml/pass4.1
 Total length: 42.23 ft
 Total weight: 685.00 lb
 O.D.: 5.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\cobalt_darvin 1-22.db
 Dataset field/well/stkml/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	No	-1	5.35	184	30	Off	3898

Variable Description

A : Cement Factor (a)
 BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 FLUIDDEN : Fluid Density
 M : Cement Exp (m)
 MATRXDEN : Matrix Density

NPORSEL : Neutron Porosity Curve Select
 PERFS : Perforation Flag
 SNDERR : Deep Sonde Error Correction
 SNDERRM : Medium Sonde Error Correction
 SPSHIFT : S.P. Baseline Offset
 SRFTEMP : Surface Temperature
 SZCOR : CN Size Cor. ?
 TDEPTH : Total Depth



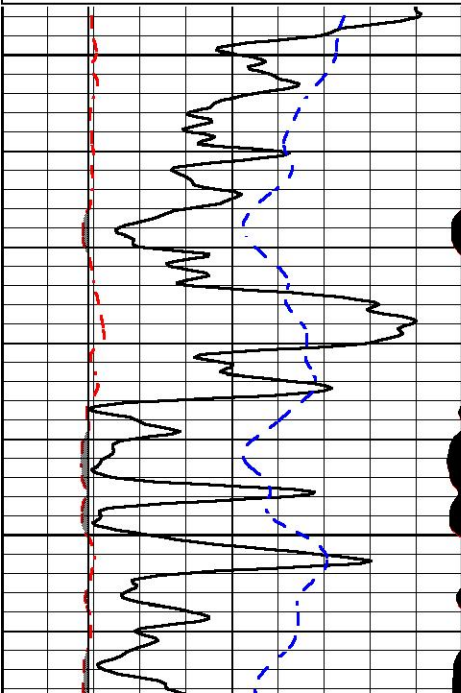
DETAIL SECTION

MAIN PASS

Database File cobalt_darvin 1-22.db
 Dataset Pathname stkml/pass4.1
 Presentation Format _micro
 Dataset Creation Fri Nov 24 17:17:58 2023
 Charted by Depth in Feet scaled 1:240

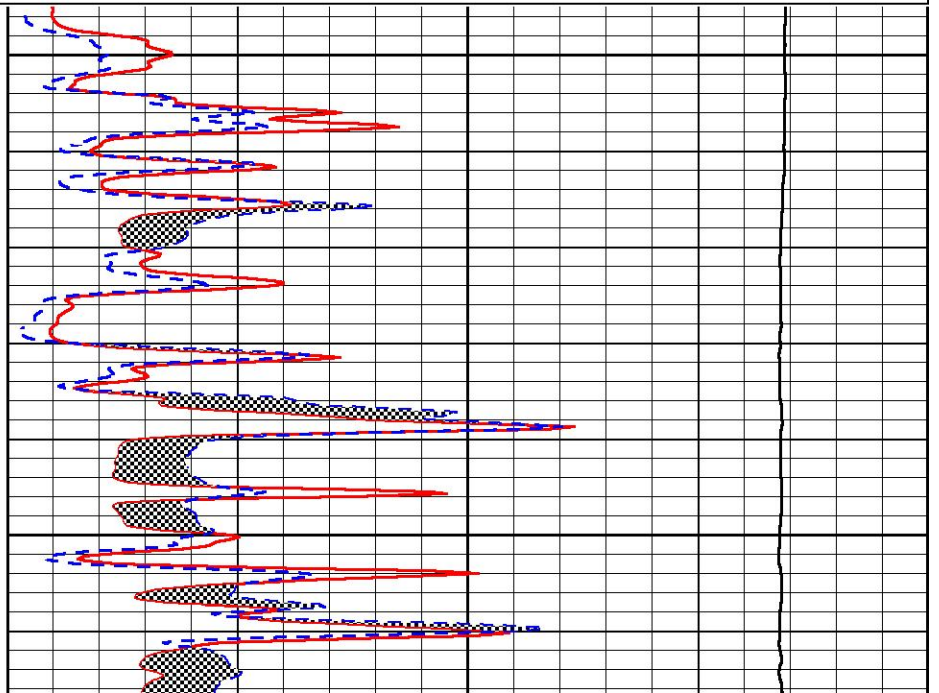
0	Gamma Ray (GAPI)	150
6	Micro Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

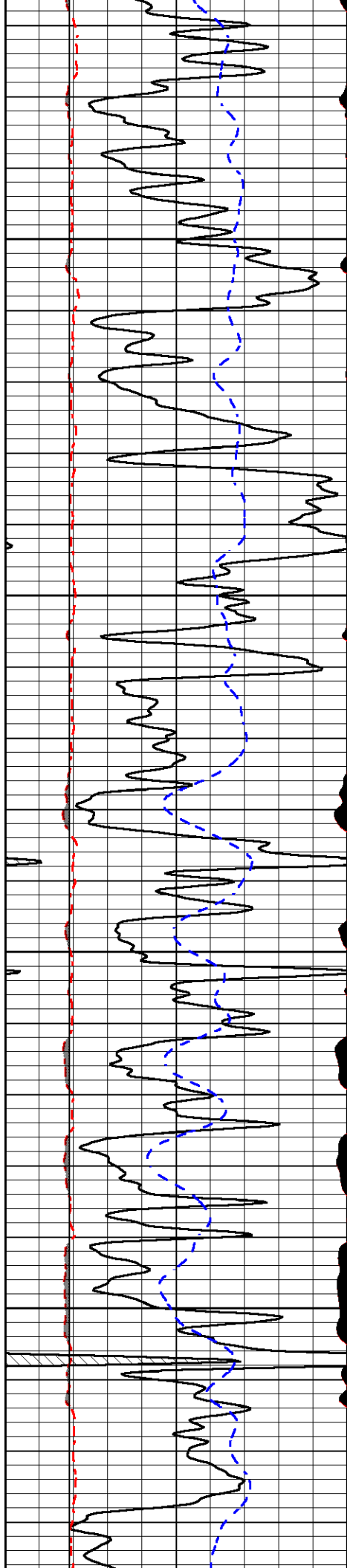
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



3200

3250



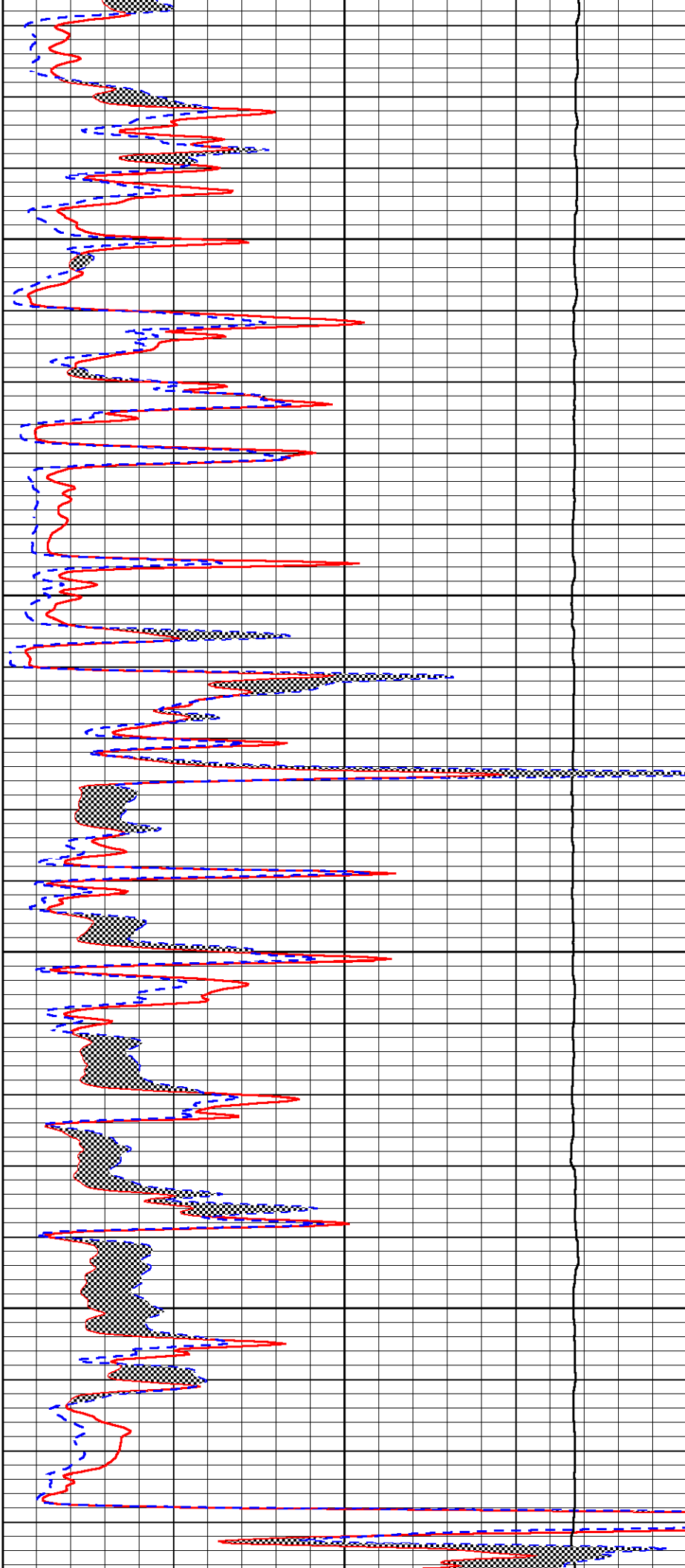


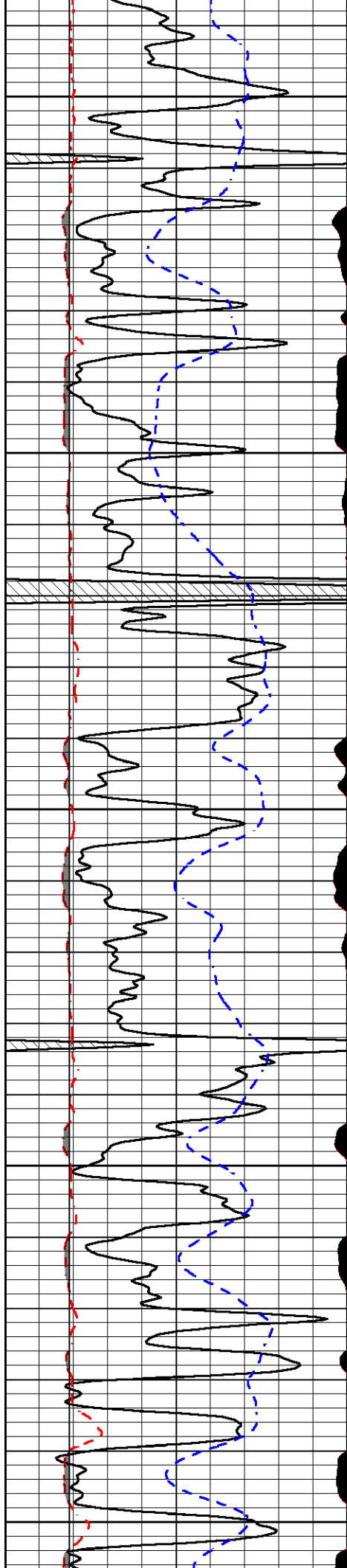
3300

3350

3400

3450





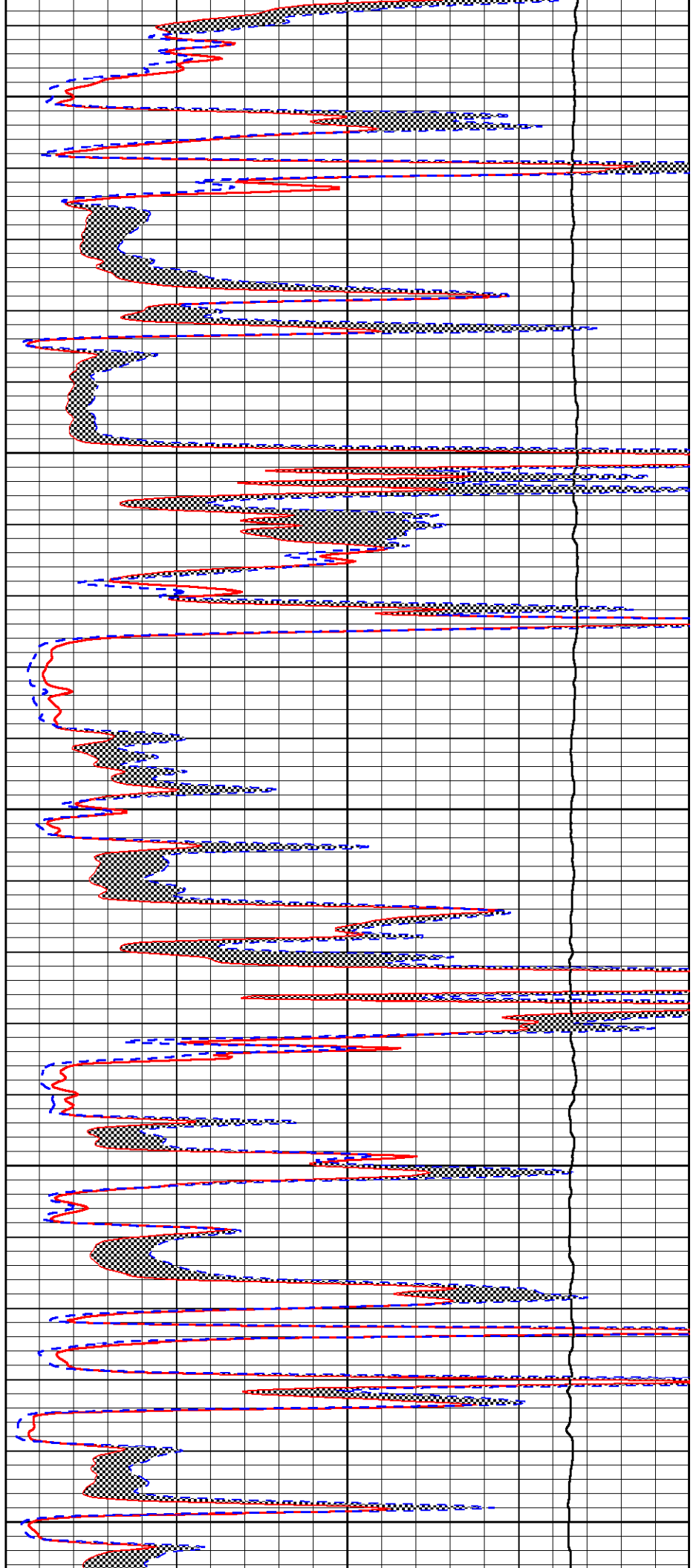
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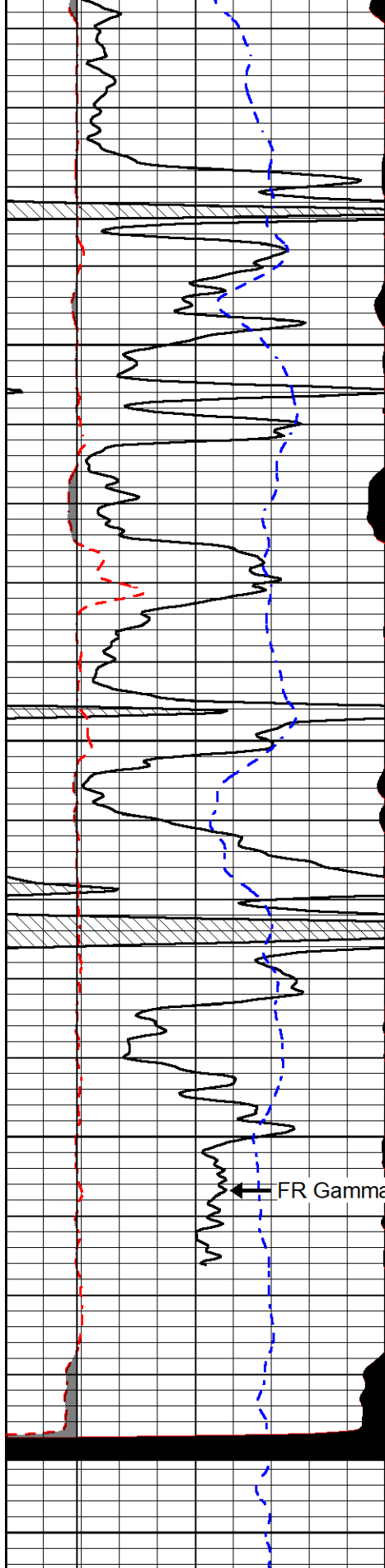
3550

3600

3650

3700





3750

3800

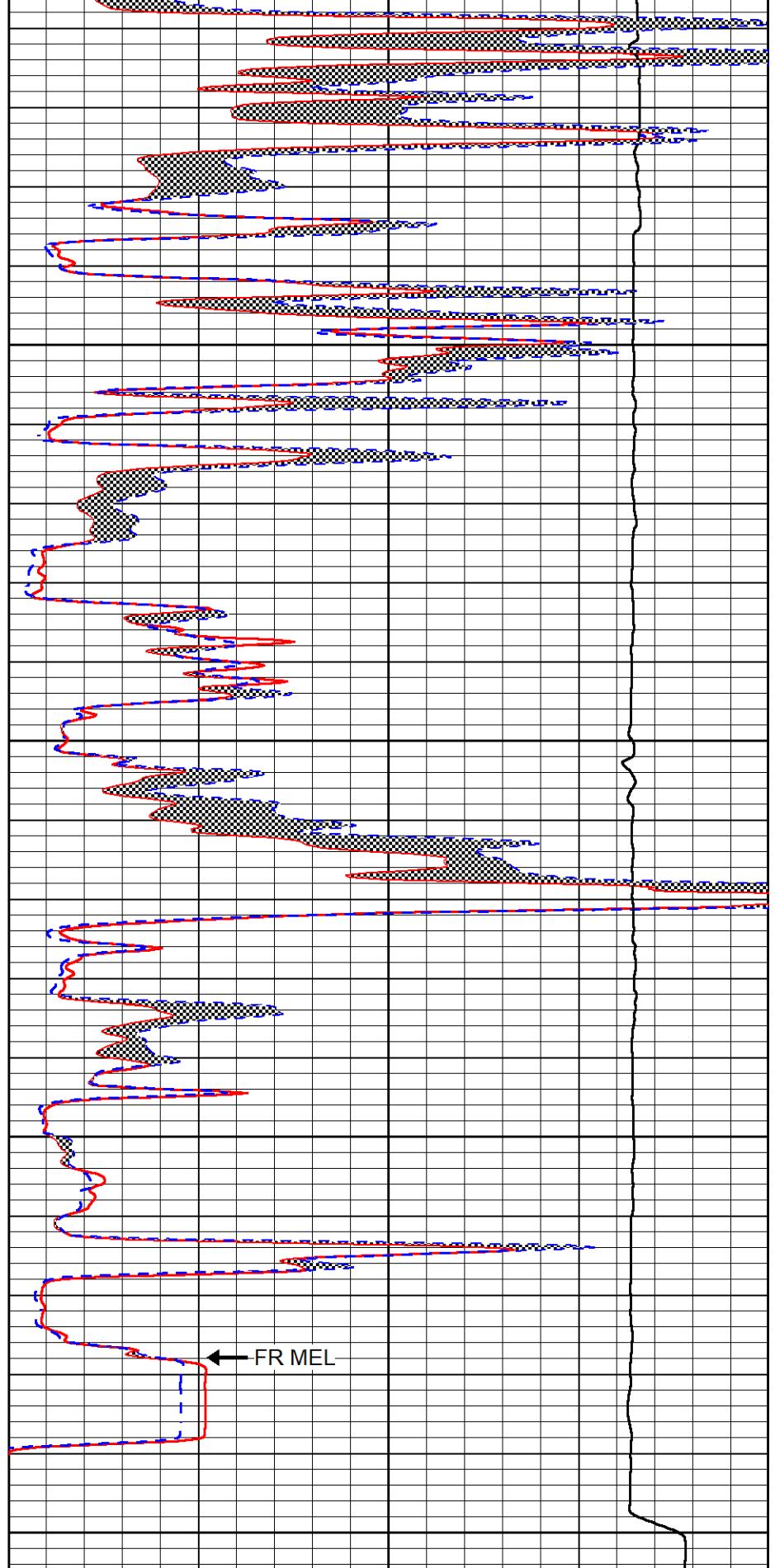
3850

3900

0	Gamma Ray (GAPI)	150
6	Micro Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

← FR Gamma Ray

← FR MEL



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



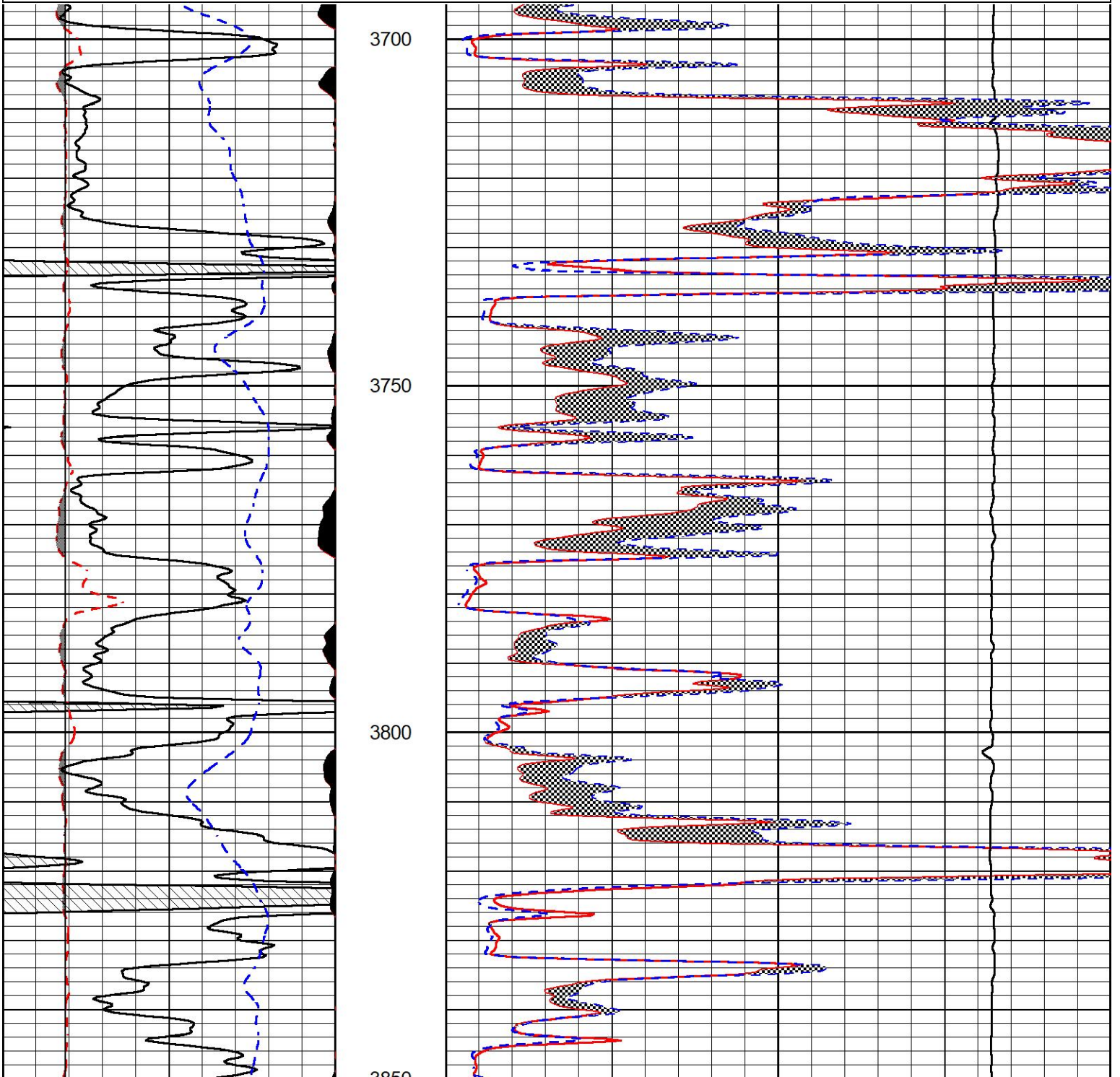
REPEAT SECTION

REPEAT PASS

Database File cobalt_darvin 1-22.db
 Dataset Pathname stkml/pass3.1
 Presentation Format _micro
 Dataset Creation Fri Nov 24 17:06:01 2023
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	Micro Caliper (in)	16
2.875	mcal (in)	7.875
-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



SS:	52	54	204	232	23	67	44	1	cps
LS:	78	87	326	426	46	135	86	3	cps
Aluminum:									
SS:	790	958	2239	2075	45	71	45	2	cps
LS:	877	1656	3109	1518	56	132	85	4	cps
Magnesium:									
SS:	1295	1558	3653	2988	50	71	47	3	cps
LS:	3705	6851	12249	4886	93	127	85	12	cps
Aluminum+Iron:									
SS:	500	668	1858	1761	40	72	47	2	cps
LS:	514	1150	2612	1334	53	134	84	4	cps

	Density			PE					
	Actual	Calibrated		Actual	Calibrated	Quality			
Background:									
SS:						0.209			
LS:						0.223			
Aluminum:									
SS:	2.6000	2.6000	g/cc			0.229			
LS:	2.6000	2.6000	g/cc			0.218			
Magnesium:									
SS:	1.6800	1.6800	g/cc	2.5700	2.5700	0.203			
LS:	1.6800	1.6800	g/cc	2.5700	2.5700	0.195			
Aluminum+Iron:									
SS:						6.1800	0.207		
LS:						6.1800	0.229		

Caliper:	Reference:	Reading:
Small Ring:	6.0 in	100.0
Large Ring:	16.0 in	400.0
Gain:	14.000	
Offset:	1.960	

Compensated Neutron Calibration Report

Serial Number: 210
Tool Model: M&W

CALIBRATION

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: 105
Tool Model: M&W
Performed: Sat Oct 21 23:48:19 2023

Calibrator Value: 500.0 GAPI

Background Reading: 24.0 cps
Calibrator Reading: 637.0 cps

Sensitivity: 0.6000 GAPI/cps



Company: Cobalt Energy, LLC
Well: Darwin #1-22
Field: Wildcat



Field	Wireline
County	Graham
State	Kansas