Company	BONANZA CREEK ENERGY
Well	STATE ANTELOPE O24-K21-31HNC
Field	WATTENBERG
County	WELD
State	COLORADO
Country	U.S.A.

CEMENT BOND LOG

Company BONANZA CREEK ENERGY OPERATING
Well STATE ANTELOPE O24-K21-31HNC
Field WATTENBERG
County WELD
State COLORADO Country U.S.A.

Location: API #: 05-123-51159-00
541 FSL 2492 FEL
LAT: 40.350544 N LONG: 104.366040 W
SEC 31 TWP 5N RGE 62W

Other Services

Permanent Datum GROUND LEVEL Elevation 4,552'
Log Measured From KB, 24' ABOVE GL
Drilling Measured From KB

Elevation
K.B. 4,576'
D.F. 4,575'
G.L. 4,552'

Date	11-MAR-2022
Run Number	ONE
Depth Driller	NA
Depth Logger	6,595'
Bottom Logged Interval	6,591'
Top Log Interval	SURFACE
Open Hole Size	NA
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	216 degF
Estimated Cement Top	356'
Time Well Ready	ROA
Time Logger on Bottom	10:20
Equipment Number	504
Location	WILLISTON, ND
Recorded By	M. NETTELL
Witnessed By	D. HERRERA

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9-5/8"	36 LB/FT	SURFACE	1,600'
Prot. String				
Production String	5-1/2"	17 LB/FT	SURFACE	12,021'
Liner				

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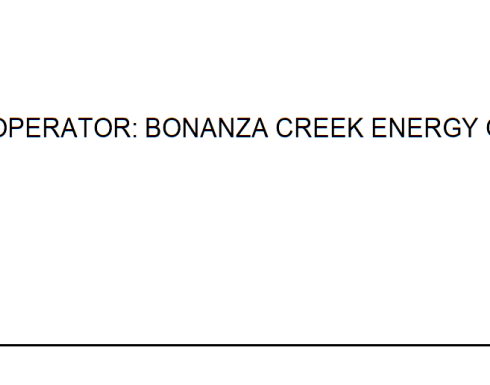
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

OPERATOR: BONANZA CREEK ENERGY OPERATING COMPANY LLC

Sensor	Offset (ft)
GCT_FMWR	22.80
mSec_Count	22.80
RBT_Status	22.80
Error_Ct	22.80
RBT_HV	19.97
RBT_Temp	17.17
RBT_ACCZ	15.02
RBT_ACCY	15.02
RBT_ACCX	15.02
WVFSYNC	15.02
WVFS8	15.02
WVFS7	15.02
WVFS6	15.02
WVFS5	15.02
WVFS4	15.02
WVFS3	15.02
WVFS2	15.02
WVFS1	15.02
WVFCAL	15.02
WVF3FT	15.02
WVF5FT	14.02
GCT_HV	7.94
CCL$2	6.97
CCL$1	6.97
GCT_Temp	6.42
GR	5.56
GCT_IntTemp	4.83

Schematic

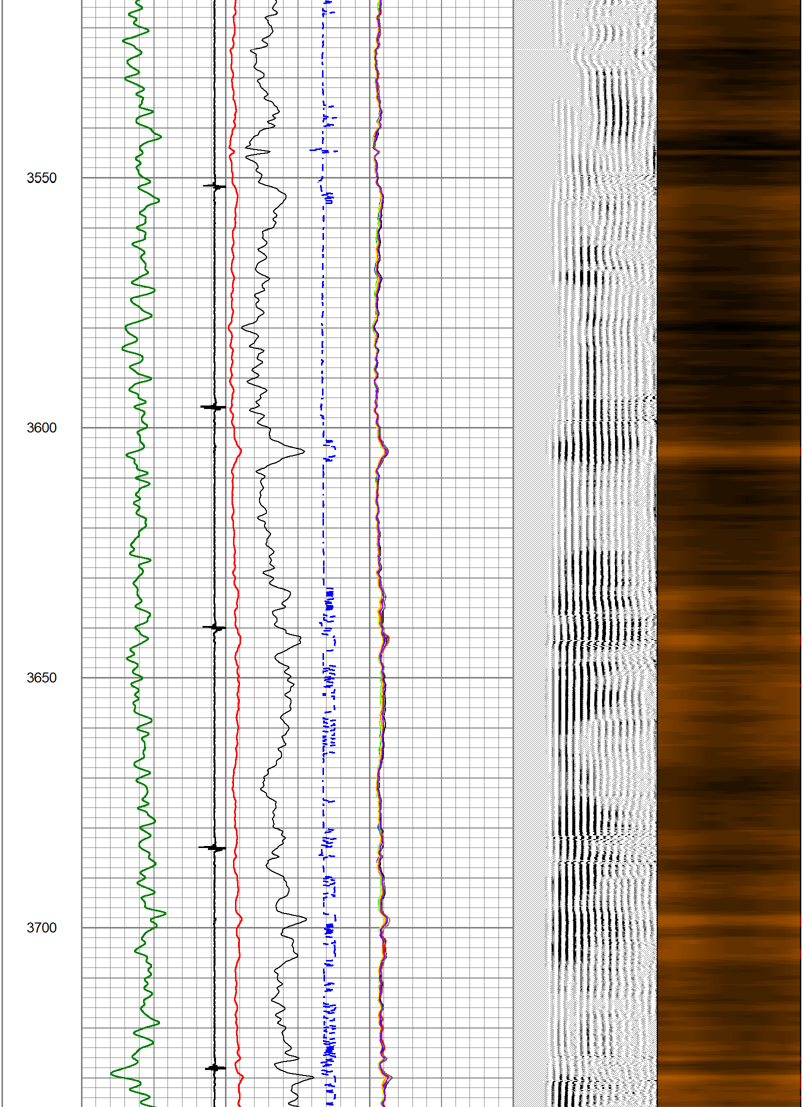


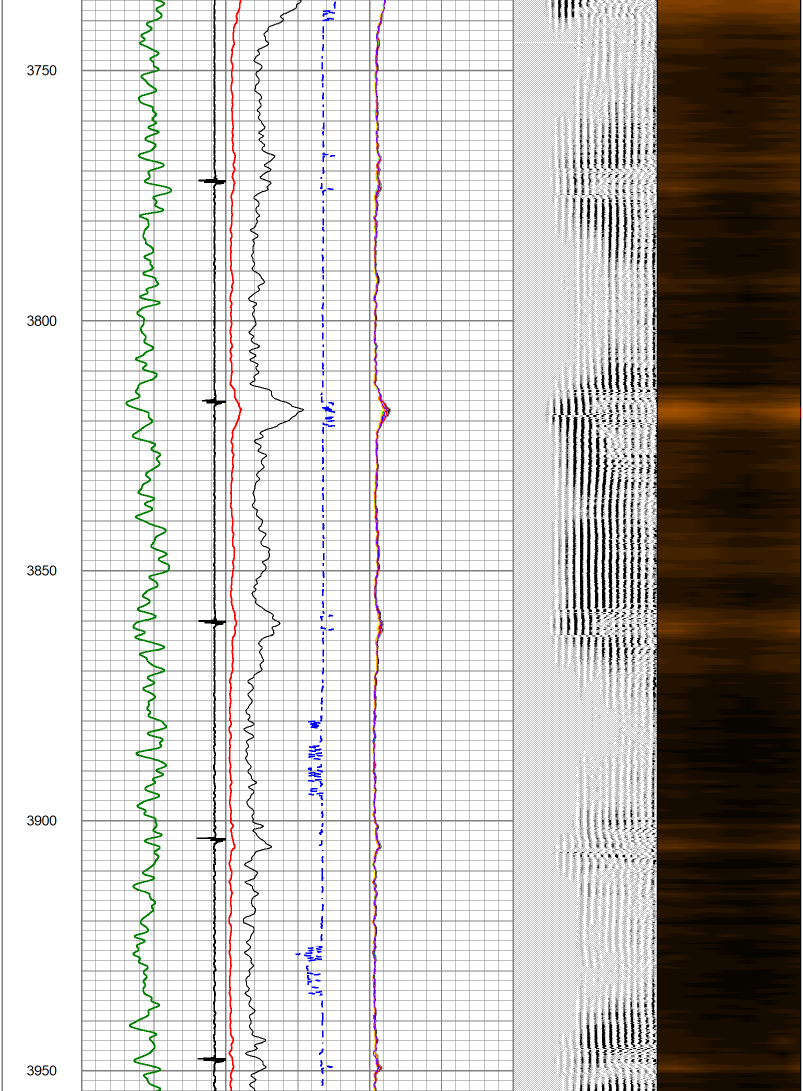
Description	Length (ft)	O.D. (in)	Weight (lb
CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00
RBT8-RADII-275T (FW2102-033) Probe 2.75" RADII 8 Sector Bond Tool w/ Temperature	9.20	2.75	
CENT-BC275-0000 Probe 2.75" Bowspring Centralizer	2.83	2.75	24.00
GCacc-GCT275-0000 (FW2103-050) Probe 2.75" Gamma Ray - CCL w/ Temp	4.77	2.75	55.00
CENT-PTS275 BC275-0000 Centralizer	2.83	2.75	24.00
Plug-FA108-0000 1.38" Bull Plug	0.33	1.38	1.00

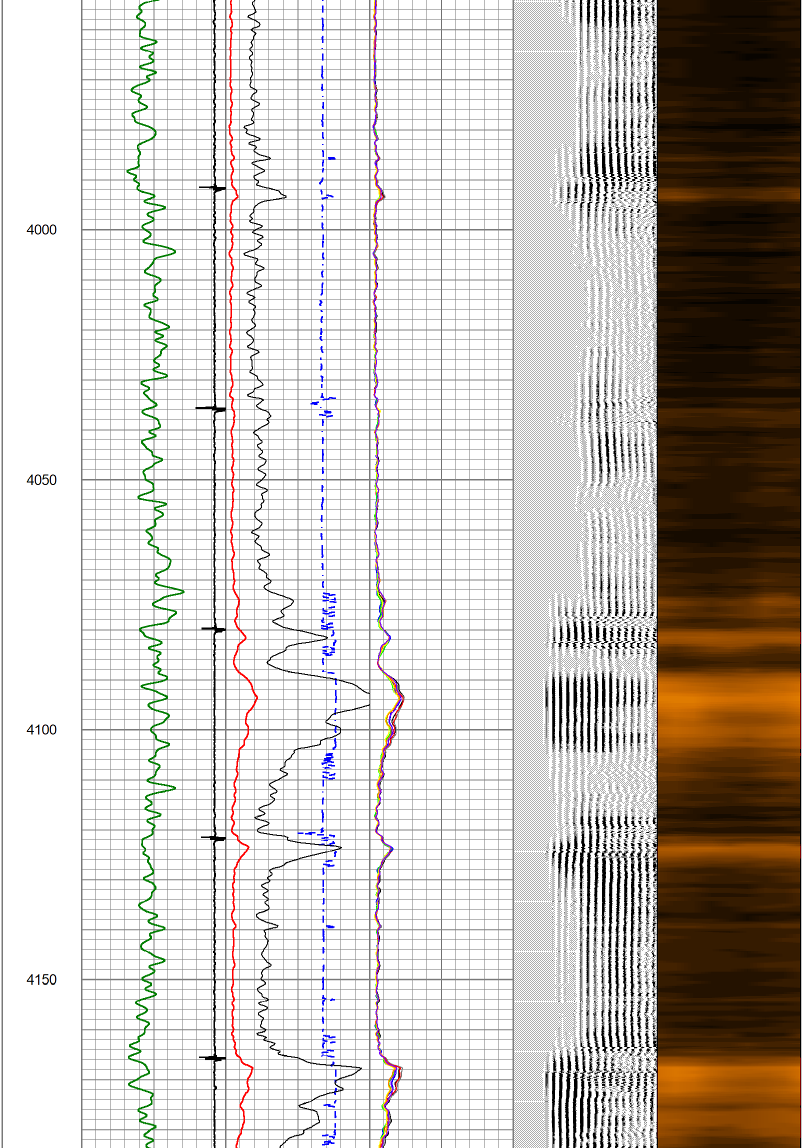
Dataset:	bonanza creek(state_antelope_o24-k21-31hnc)_cbl_03112022.db: field/well/run1/main
Total length:	22.80 ft
Total weight:	128.00 lb
O.D.:	2.75 in

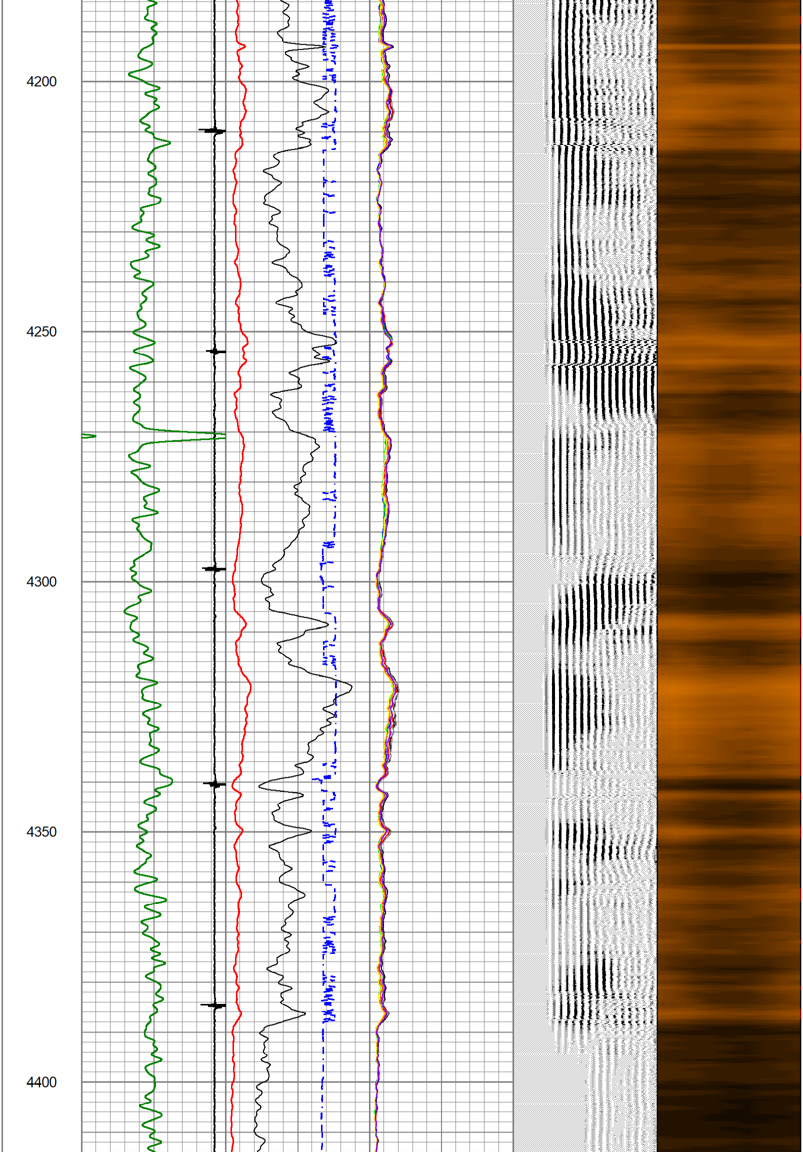
MAIN PASS

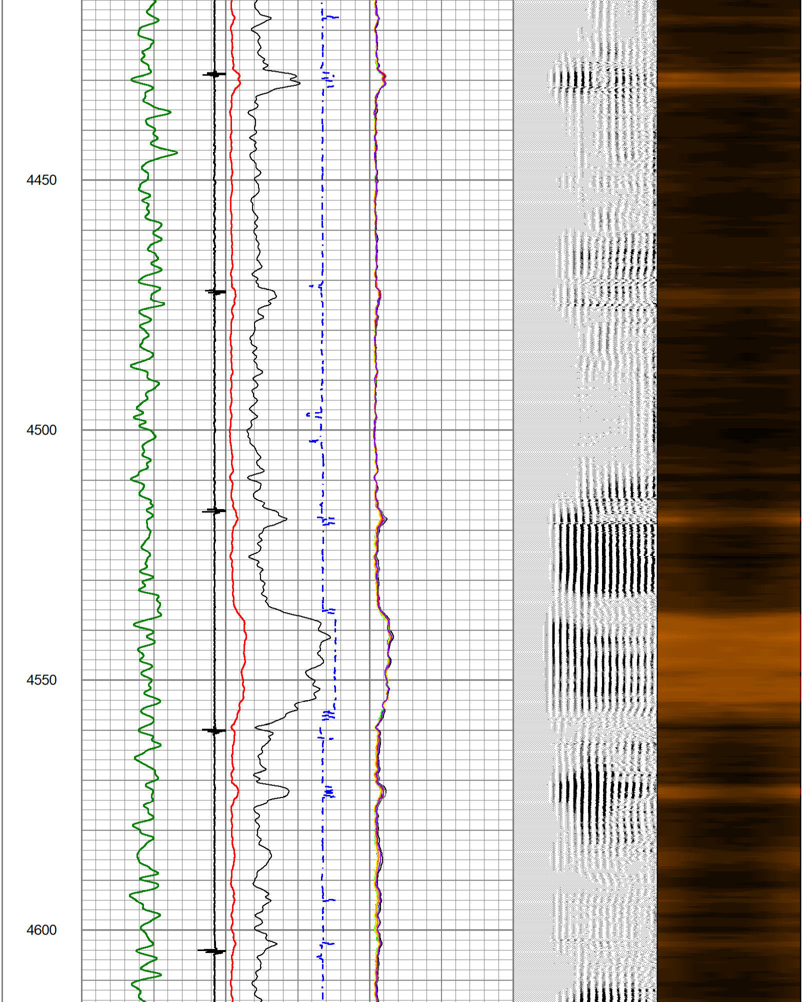
Database File	bonanza creek(state_antelope_o24-k21-31hnc)_cbl_03112022.db
Dataset Pathname	main
Presentation Format	sfww_cbl_oasis-sectors
Dataset Creation	Fri Mar 11 11:23:46 2022
Charted by	Depth in Feet scaled 1:240

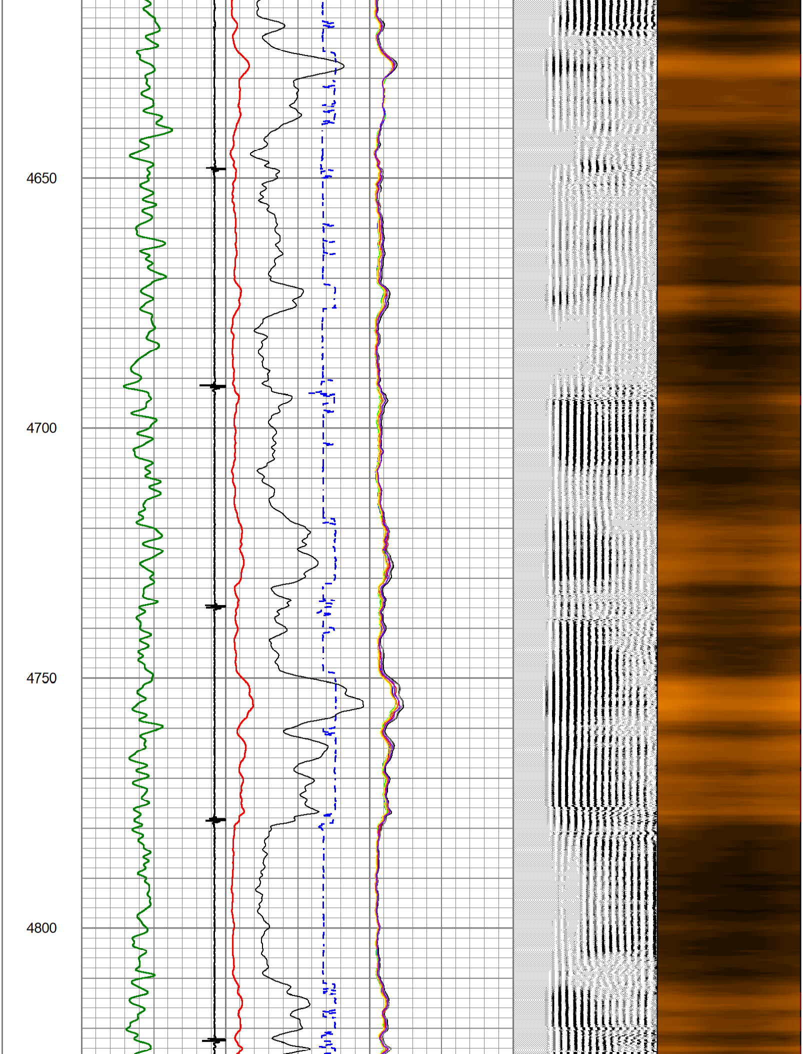


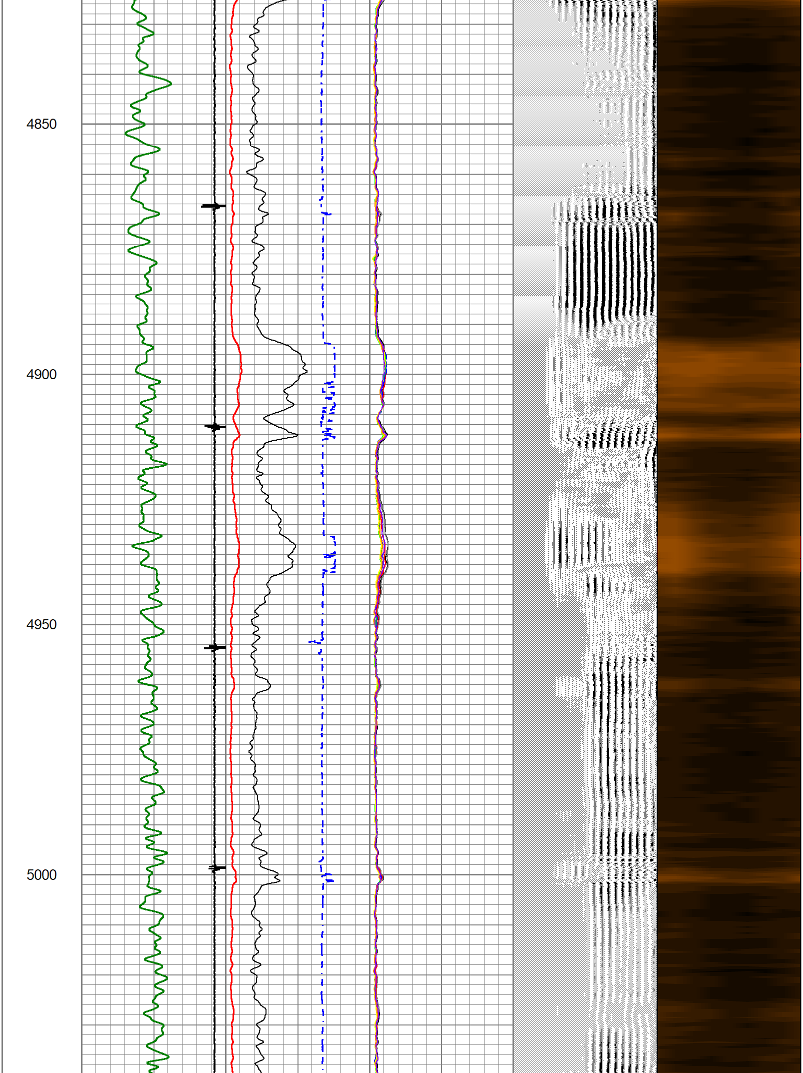


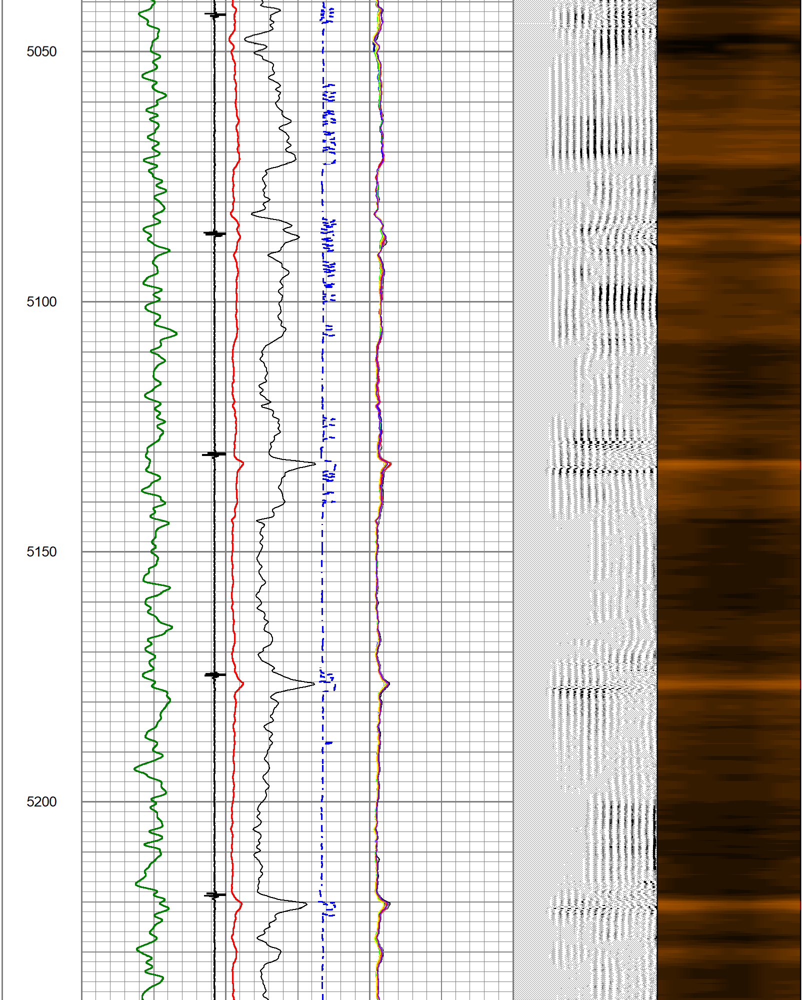


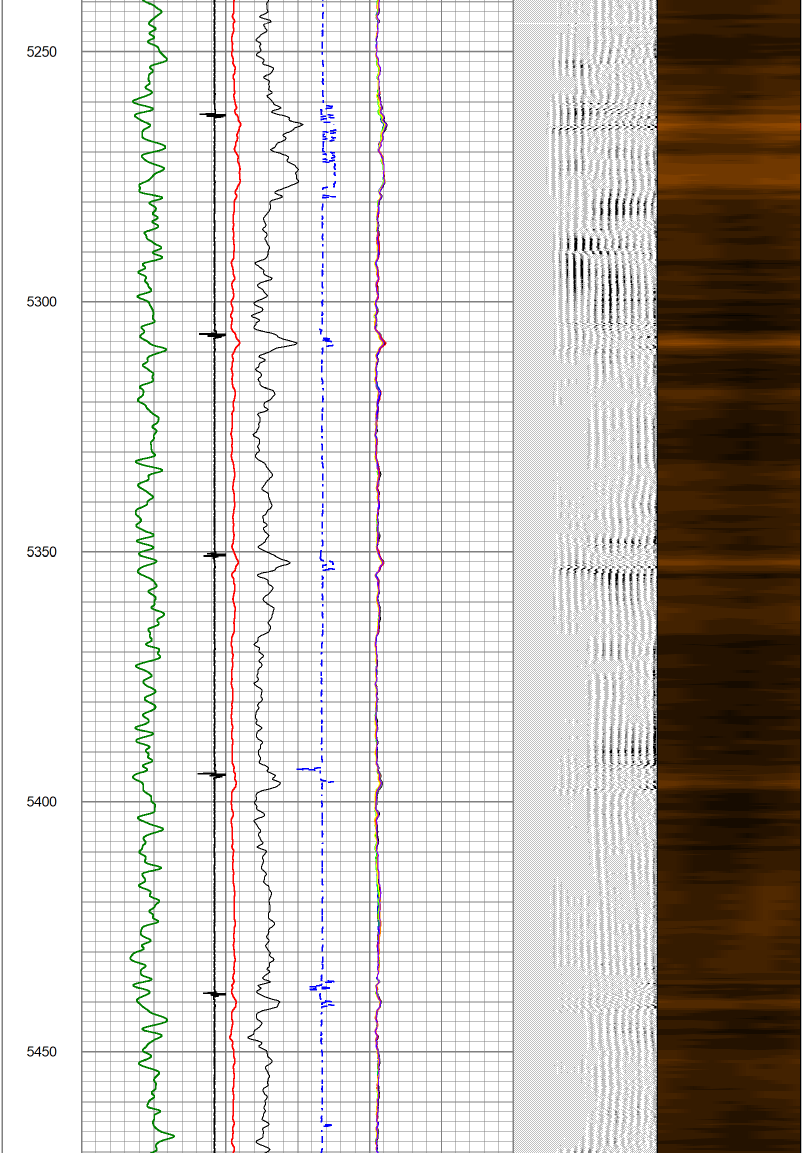


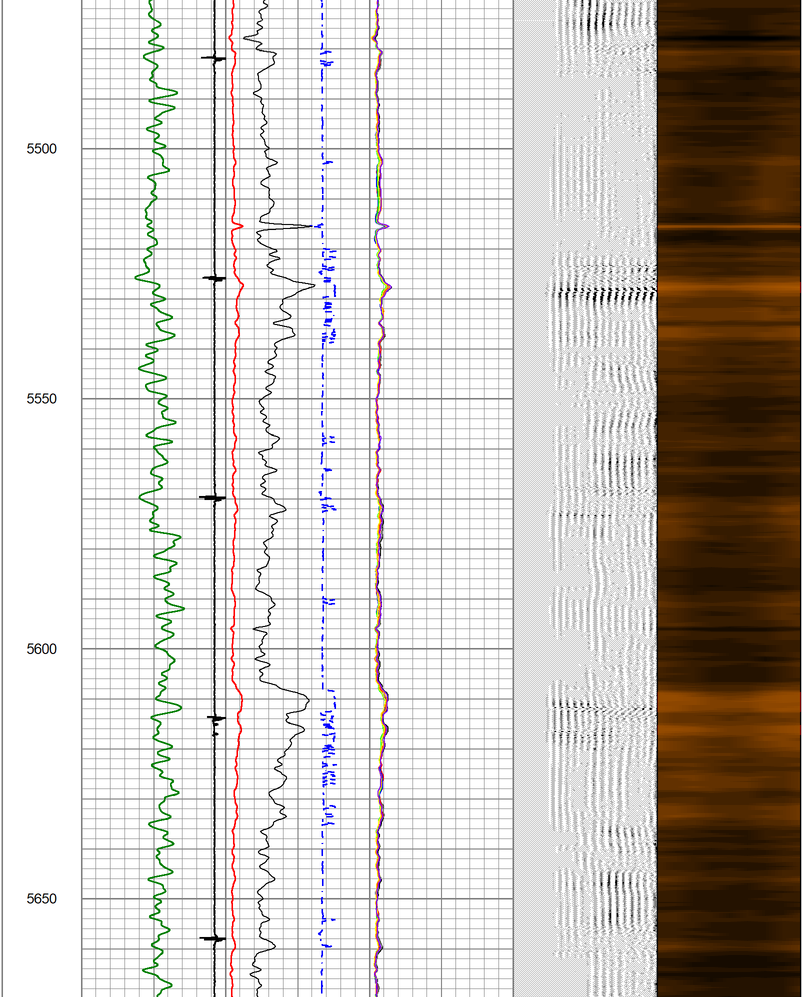


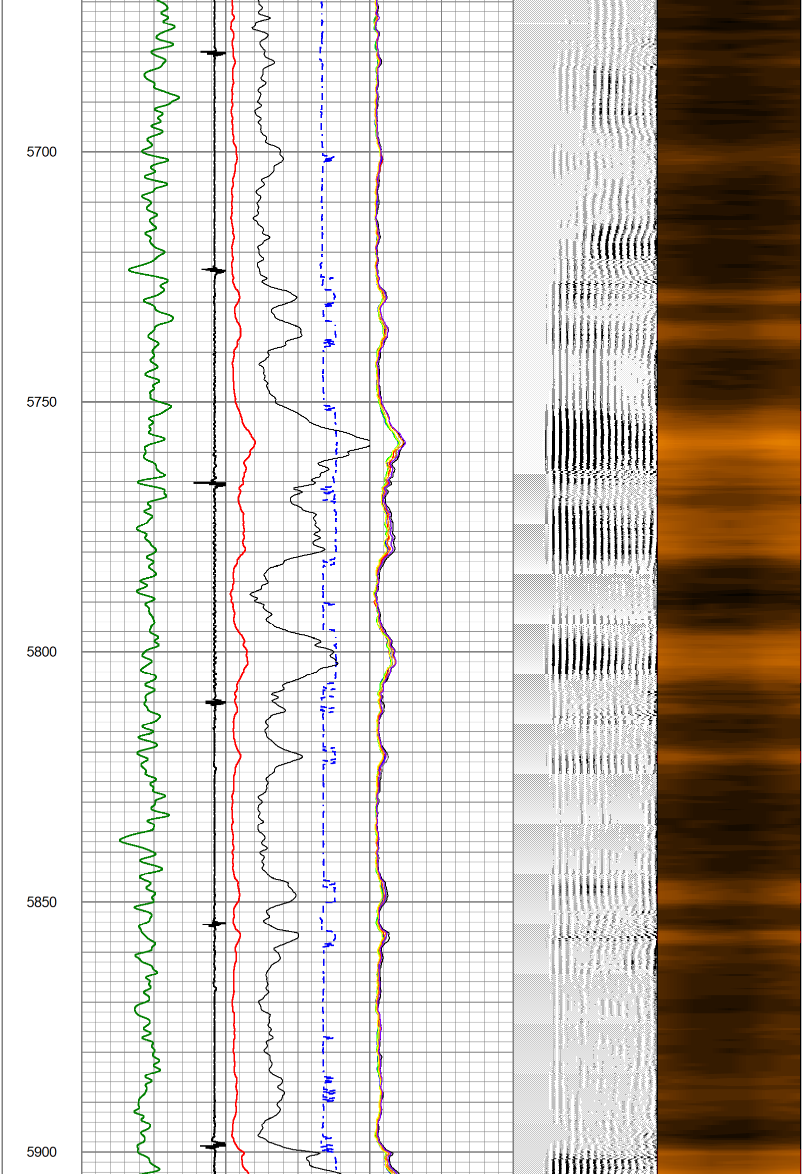


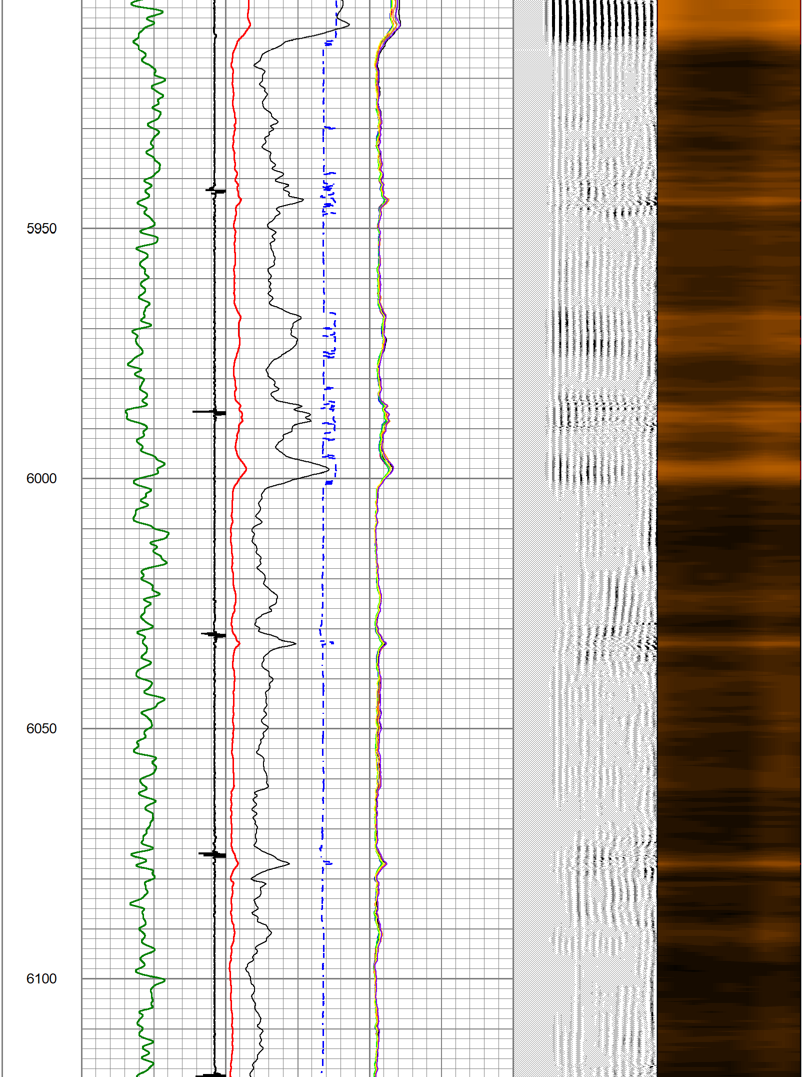


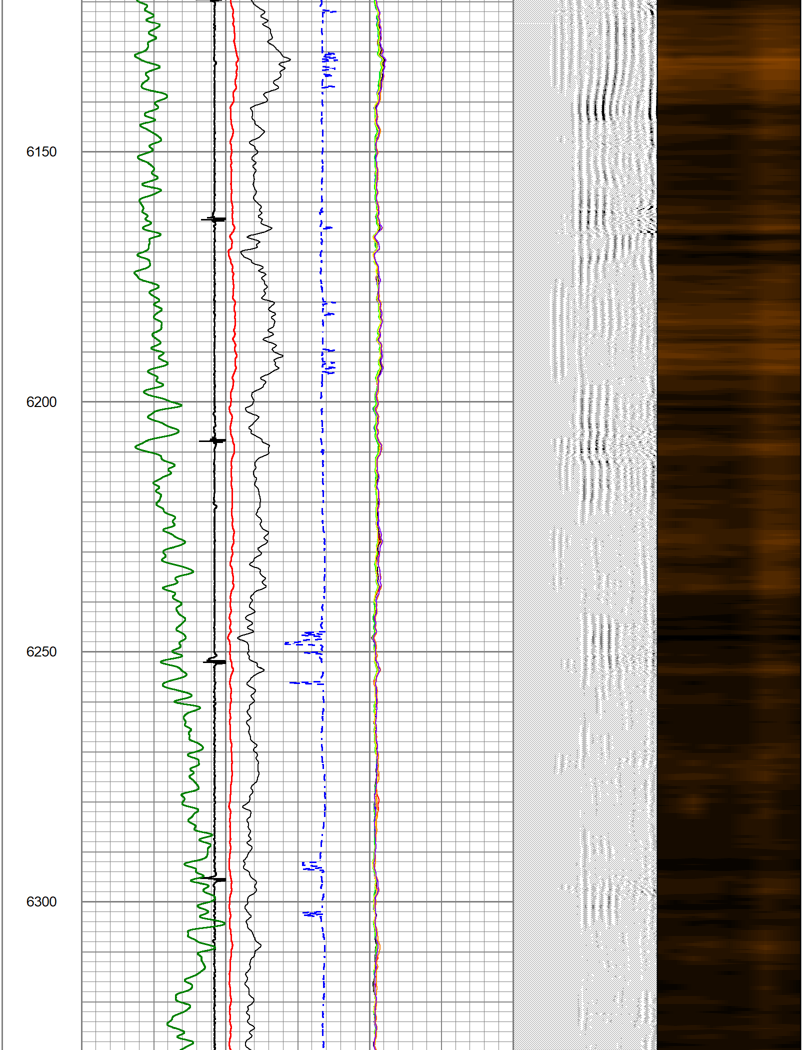


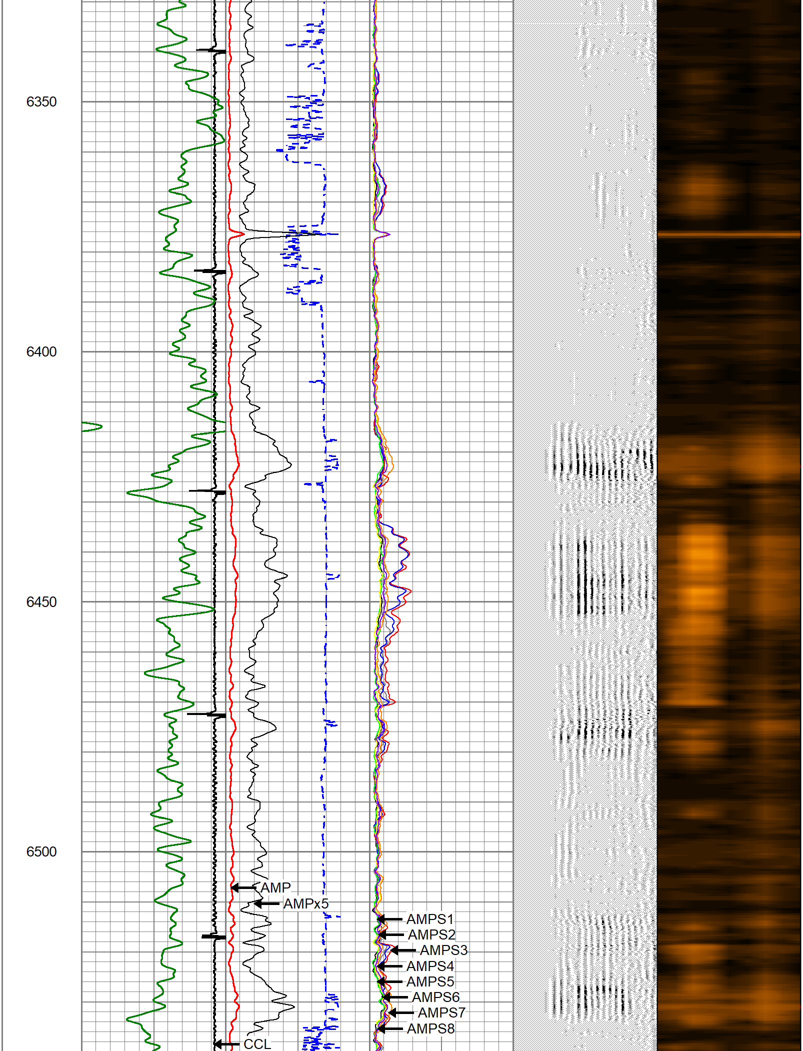


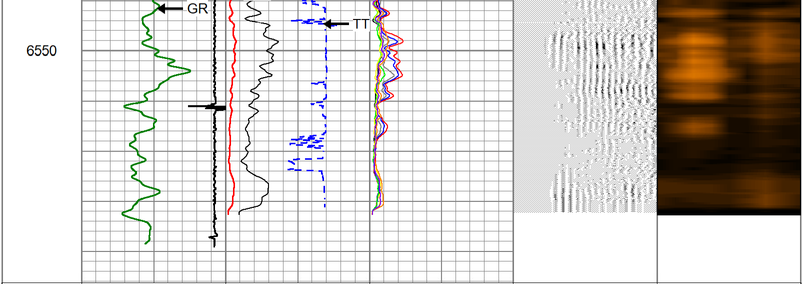












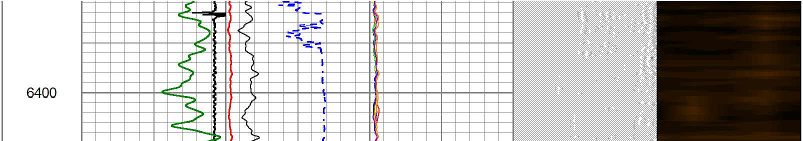
-5 CCL 5	0 AMP (mV) 100	0 AMPS1 100	200 VDL (usec) 1200	1 RADIAL MAP 8
0 GR (GAPI) 150	650 TT (usec) 150	0 AMPS2 100		
	0 AMPx5 (mV) 20	0 AMPS3 100		
		0 AMPS4 100		
		0 AMPS5 100		
		0 AMPS6 100		
		0 AMPS7 100		
		0 AMPS8 100		

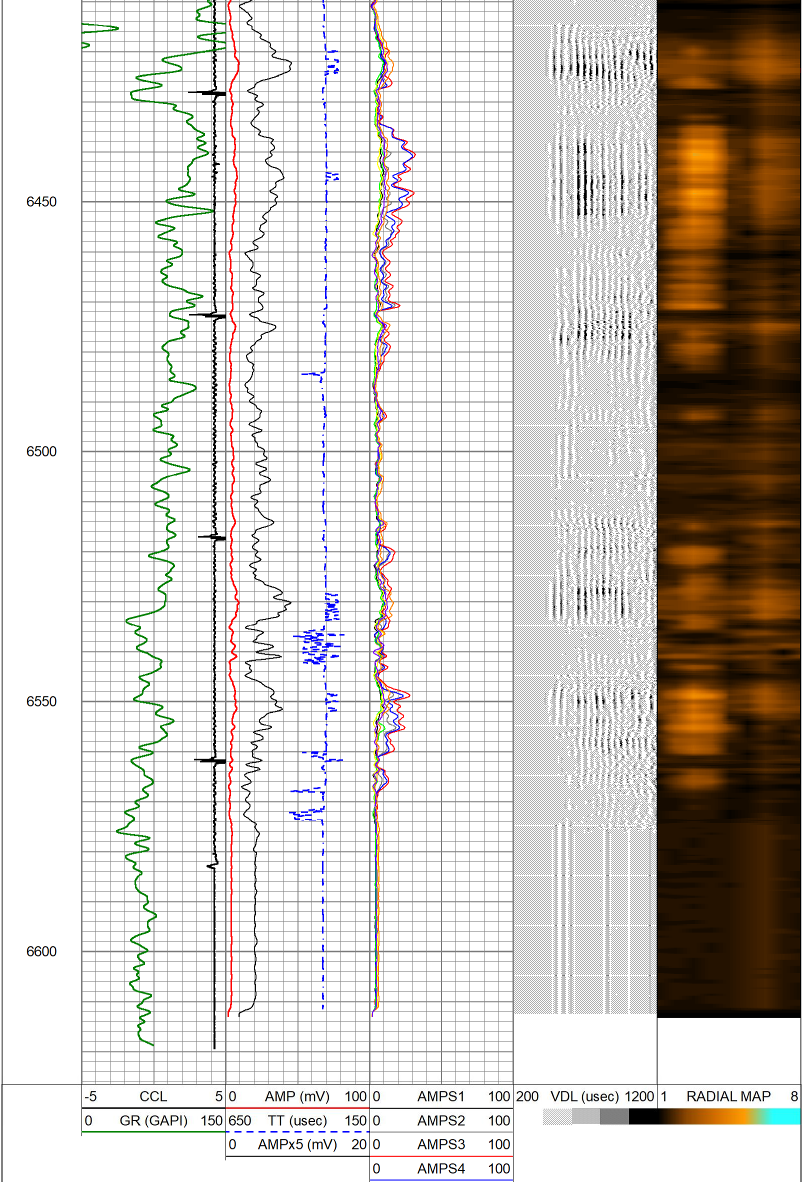
SureFire WIRELINE WEST LLC

REPEAT PASS

Database File	bonanza creek(state_antelope_o24-k21-31hnc)_cbl_03112022.db
Dataset Pathname	repeat
Presentation Format	sfww_cbl_oasis-sectors
Dataset Creation	Fri Mar 11 11:18:57 2022
Charted by	Depth in Feet scaled 1:240

-5 CCL 5	0 AMP (mV) 100	0 AMPS1 100	200 VDL (usec) 1200	1 RADIAL MAP 8
0 GR (GAPI) 150	650 TT (usec) 150	0 AMPS2 100		
	0 AMPx5 (mV) 20	0 AMPS3 100		
		0 AMPS4 100		
		0 AMPS5 100		
		0 AMPS6 100		
		0 AMPS7 100		
		0 AMPS8 100		





0	AMPS5	100
0	AMPS6	100
0	AMPS7	100
0	AMPS8	100

Calibration Report

Database File	bonanza creek(state_antelope_o24-k21-31hnc)_cbl_03112022.db
Dataset Pathname	main
Dataset Creation	Fri Mar 11 11:23:46 2022

Gamma Ray Calibration Report

Serial Number:	FW2103-050	
Tool Model:	GCT275-0000	
Performed:	Sat Dec 18 00:30:45 2021	
Calibrator Value:	120.0	GAPI
Background Reading:	30.0	cps
Calibrator Reading:	210.0	cps
Sensitivity:	0.6667	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW2102-033	
Tool Model:	RADII-275T	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	34.767	ft

Master Calibration, performed Fri Mar 11 09:17:46 2022:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.003	1.067	2.000	71.921	65.704	1.831
CAL	-0.002	1.005				
5'	0.002	0.983	2.000	71.921	71.340	1.828
SUM						
S1	0.002	1.012	2.000	71.921	69.228	1.843
S2	0.003	1.018	2.000	71.921	68.851	1.802
S3	0.003	1.023	2.000	71.921	68.549	1.797
S4	0.002	1.018	2.000	71.921	68.783	1.892
S5	0.003	1.014	2.000	71.921	69.190	1.787
S6	0.004	1.007	2.000	71.921	69.735	1.696
S7	0.004	0.997	2.000	71.921	70.433	1.724
S8	0.004	1.060	2.000	71.921	66.187	1.747

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.002	1.005	1.000	0.000

Air Zero Calibration, performed Fri Mar 11 09:16:39 2022:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

Inclinometer Calibration Report

Performed: (Not Performed)

	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	0.00	1.00	0.00	1.00	gee
Y Accelerometer	0.00	1.00	0.00	1.00	gee
Z Accelerometer	0.00	1.00	0.00	1.00	gee

Log Variables

DatabaseC:\ProgramData\Warrior\Data\bonanza creek(state_antelope_o24-k21-31hnc)_cbl_03112
Dataset field/well/run1/main/_vars_

Top - Bottom

BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft
7.875	100	5.5	0.304	17	71.9	1	0.8

PERFS	PPT usec	SRFTEMP degF	TDEPTH ft
No	0	0	0

Variable Description

BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
CASEWGHT : Casing Weight
MAXAMPL : Maximum Amplitude
MINAMPL : Minimum Amplitude
MINATTN : Minimum Attenuation
PERFS : Perforation Flag
PPT : Predicted Pipe Time
SRFTEMP : Surface Temperature
TDEPTH : Total Depth

SureFire
WIRELINE WEST
LLC

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