PATRIOT
WELL SOLUTIONS

RADIAL CEMENT BOND LOG
GAMMA RAY
CCL

Company	SYNERGY RESOURCES CORP
Well	GOETZEL 31N-30B-M
Field	WATTENBERG
County	WELD
State	CO

Company SYNERGY RESOURCES CORP
Well GOETZEL 31N-30B-M
Field WATTENBERG
County WELD State CO

Location: API # : 05123441370000
SHL: 1913' FNL & 2446' FEL SWNE
LAT 40.461064
LONG -104.801185
SEC 29 TWP 6N RGE 66W

Other Services
JBGR
RBP

Permanent Datum	GL	Elevation	4729'
Log Measured From	GL		
Drilling Measured From	KB		

Elevation
K.B. N/A
D.F. N/A
G.L. 4729'

Date	JUNE 11, 2017
Run Number	1
Depth Driller	15468'
Depth Logger	6500'
Bottom Logged Interval	6498'
Top Log Interval	SURFACE
Open Hole Size	8.5"
Type Fluid	WATER
Density / Viscosity	8.33 / 32
Max. Recorded Temp.	N/A
Estimated Cement Top	SEE LOG
Time Well Ready	ROA
Time Logger on Bottom	02:00
Equipment Number	1007
Location	BRIGHTON, CO
Recorded By	SCHUMAN
Witnessed By	MR GRAHAM

Borehole Record

Run Number	Bit	From	To

Tubing Record

Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9.625"	36#	SURFACE	N/A
Prot. String				
Production String	5.5"	20#	SURFACE	15468'
Liner				

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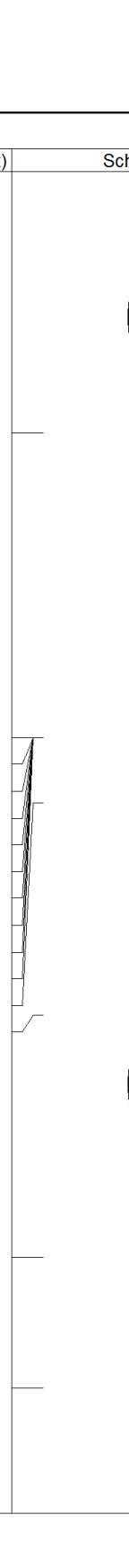
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

LOG CORRELATED TO MARKER JOINT @ 6211'

LOG RAN WITH 2500 PSI APPLIED AT SURFACE.



Sensor	Offset (ft)	Description	Length (ft)	O.D. (in)	Weight (lb
		Cable_Head-1_7/16 Titan 1 7/16" Cable Head	1.02	1.44	3.31
		CENT-PTS275	2.83	2.75	
HEADVOLT	16.29				
WVFS8	11.63	RBT-Probe (080114) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	100.00
WVFS7	11.63				
WVFS6	11.63				
WVFS5	11.63				
WVFS4	11.63				
WVFS3	11.63				
WVFS2	11.63				
WVFS1	11.63				
WVFCAL	11.63				
WVF3FT	11.63				
WVF5FT	10.63				
HEADVOLT	7.38				
		CENT-PTS275	2.83	2.75	
CCL	3.67				
GR	1.67	GR-Probe275dig (071129) Probe Digital Gamma CCL	4.54	2.75	55.00

Dataset: 31n-30b-m_rbl.db: field/well/rbl/pass3
Total length: 20.14 ft
Total weight: 158.31 lb
O.D.: 2.75 in

Calibration Report

Database File 31n-30b-m_rbl.db
Dataset Pathname rbl/pass3
Dataset Creation Sun Jun 11 02:42:37 2017

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 071129

SHOP CALIBRATION Sun Jun 11 03:22:12 2017

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.7500			GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 080114
Tool Model: Probe

Calibration Casing Diameter: 5.500 in
Calibration Depth: 1800.499 ft

Master Calibration, performed Sun Jun 11 01:36:47 2017:

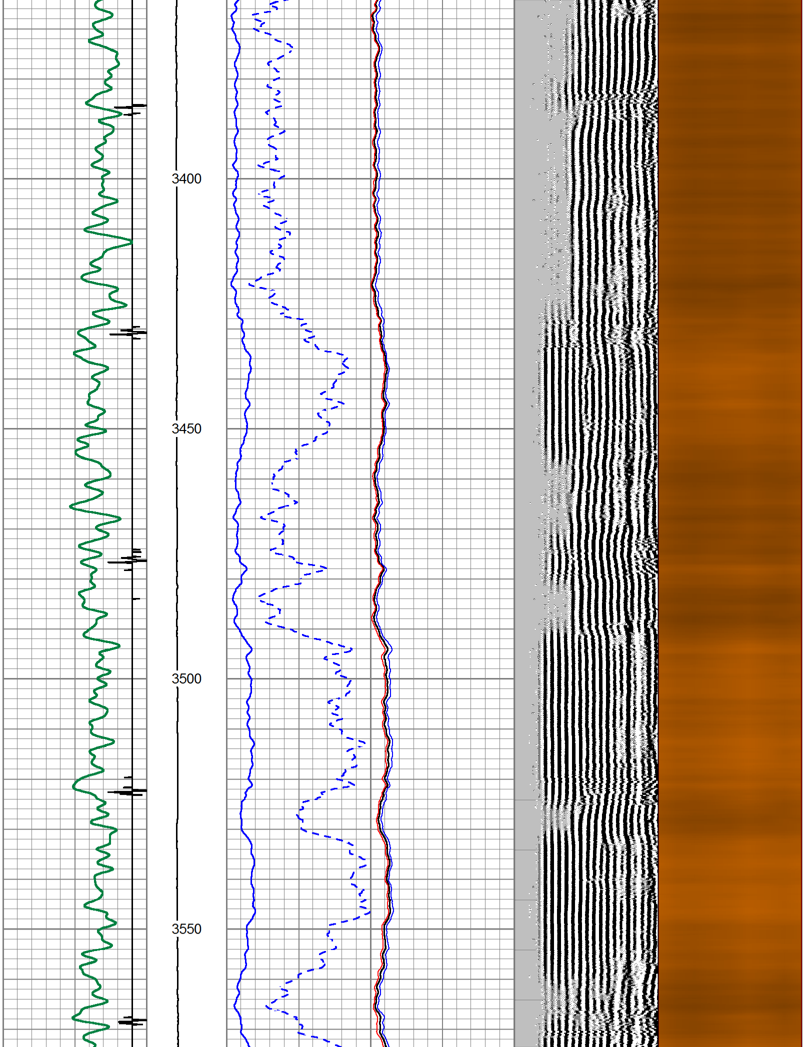
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.003	1.762	2.200	71.921	39.504	2.331
CAL	1.760	1.760				
5'	-0.002	1.606	2.200	71.921	43.359	2.302
SUM						
S1	-0.040	1.782	0.000	100.000	54.867	2.219
S2	-0.012	1.752	0.000	100.000	56.684	0.680
S3	0.010	1.754	0.000	100.000	57.340	-0.596
S4	-0.001	1.753	0.000	100.000	57.006	0.071
S5	0.005	1.749	0.000	100.000	57.340	-0.260
S6	-0.011	1.752	0.000	100.000	56.725	0.646
S7	0.003	1.746	0.000	100.000	57.388	-0.185
S8	-0.006	1.752	0.000	100.000	56.896	0.333

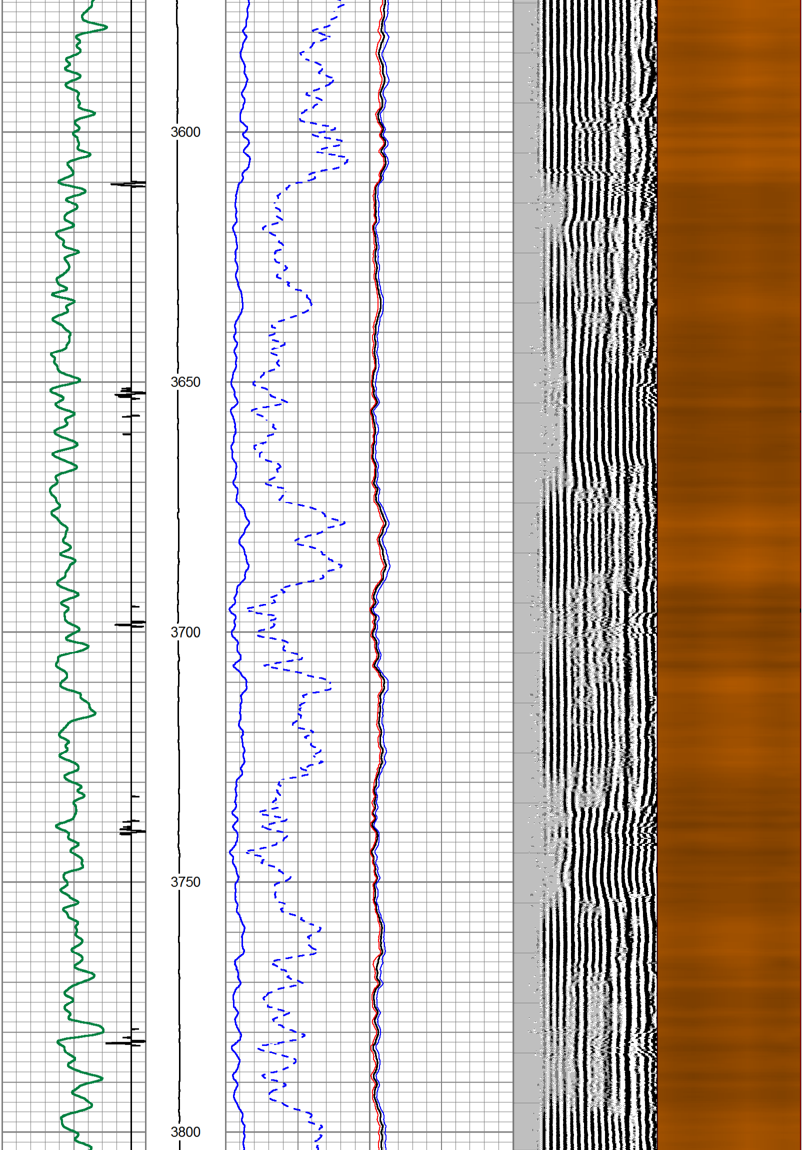
PATRIOT
WELL SOLUTIONS

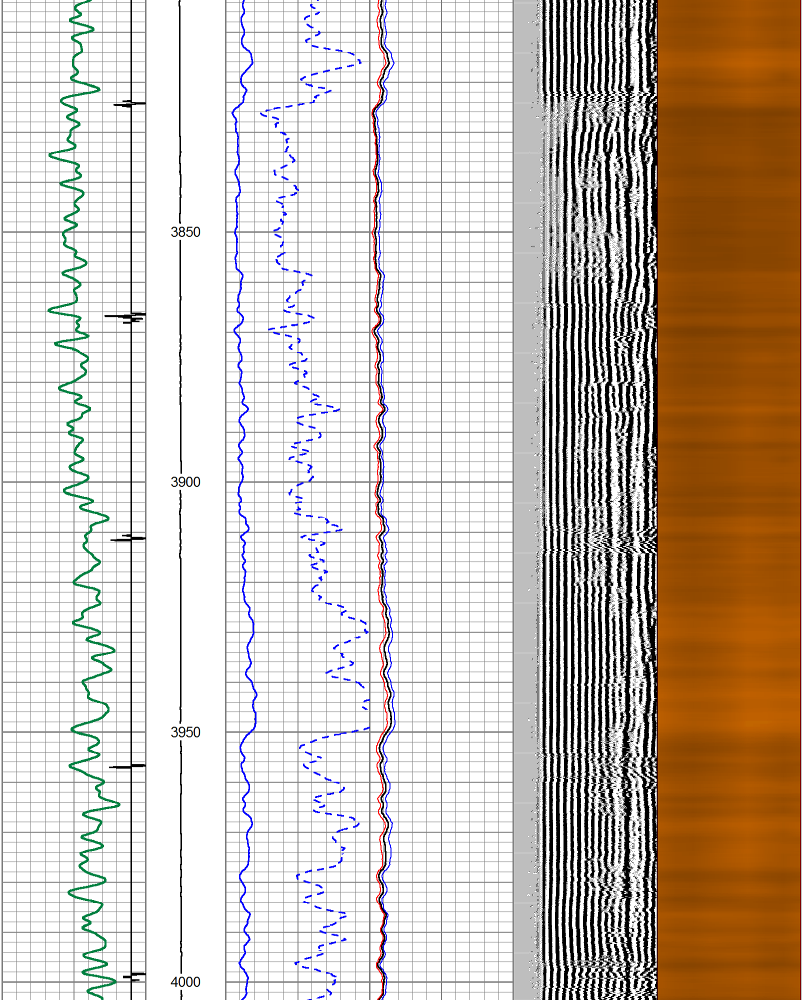
MAIN PASS

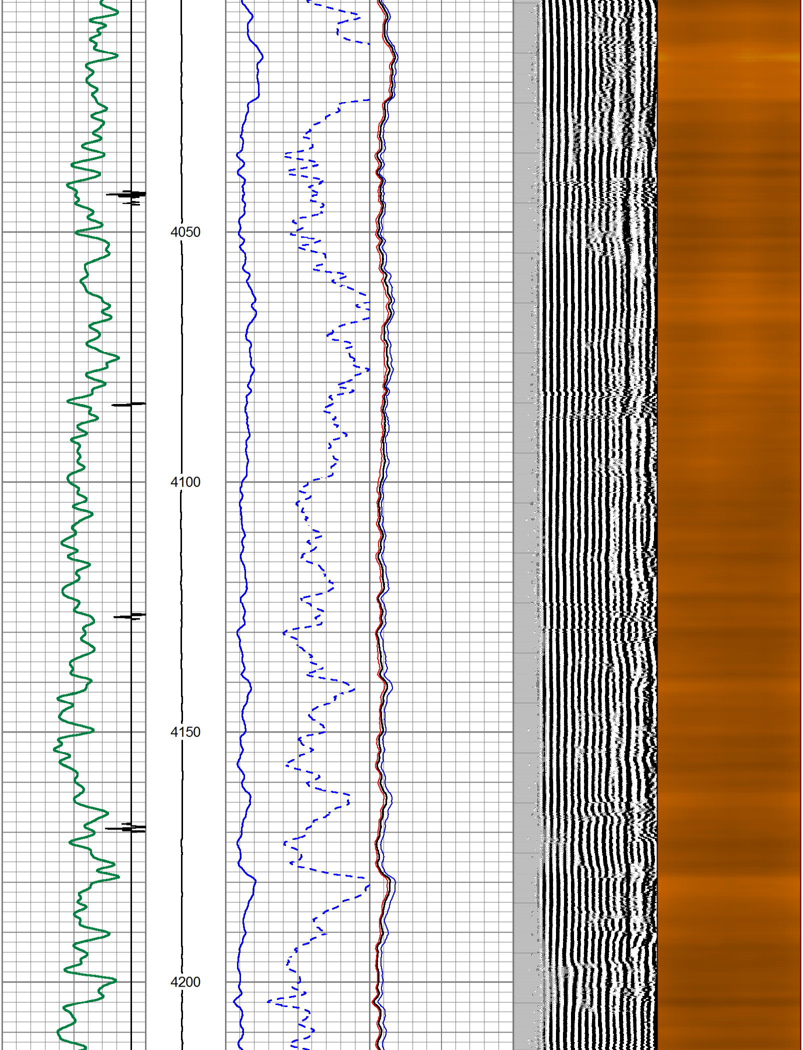
LOGGED WITH 2500 PSI APPLIED AT SURFACE

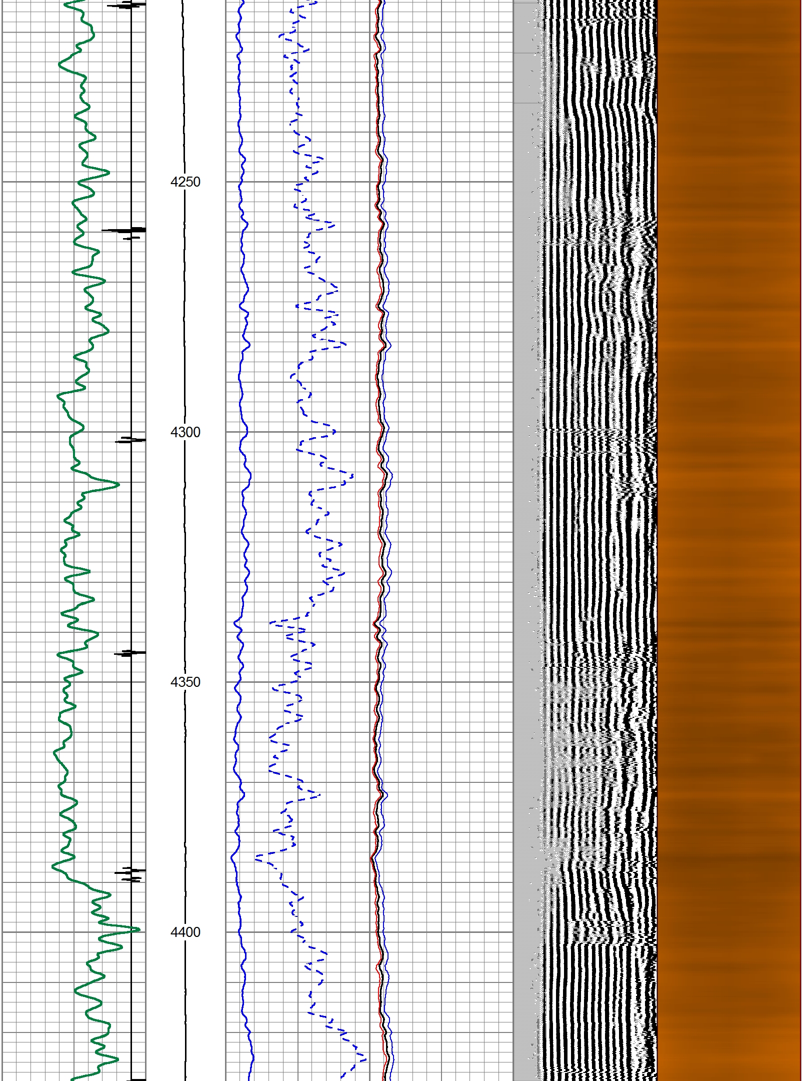
Database File 31n-30b-m_rbl.db
Dataset Pathname rbl/pass3
Presentation Format PATRIO~2
Dataset Creation Sun Jun 11 02:42:37 2017
Charted by Depth in Feet scaled 1:240

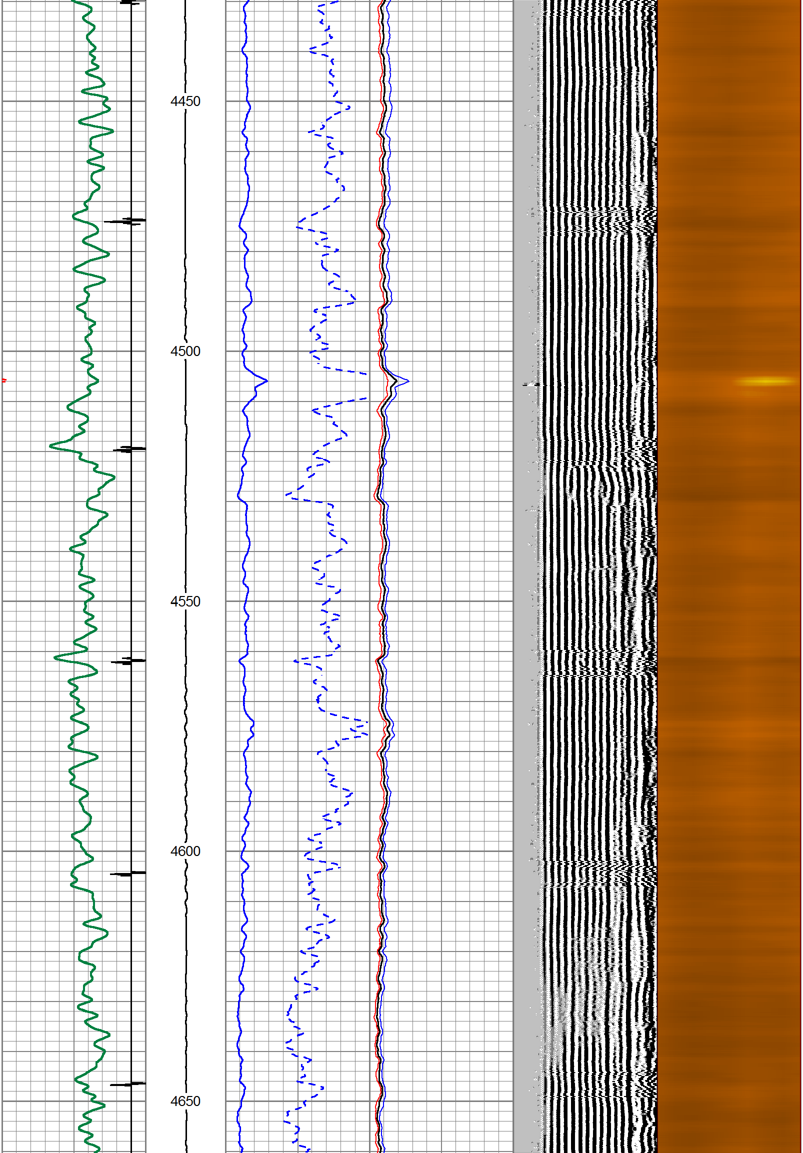


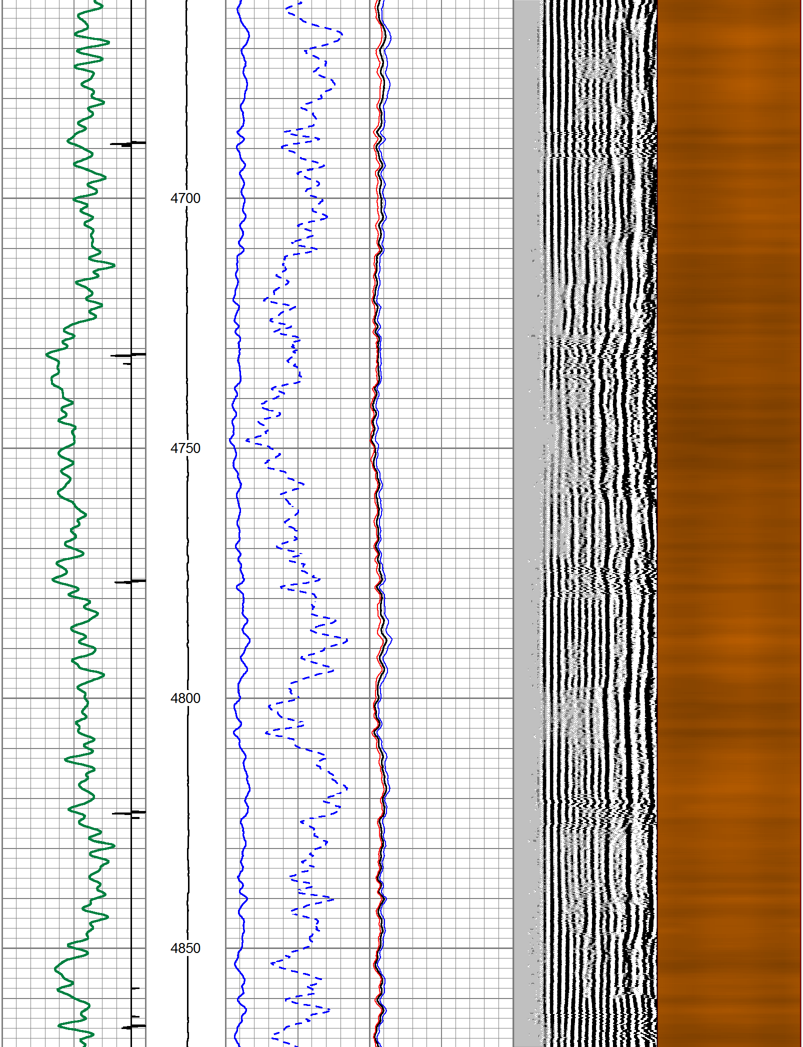


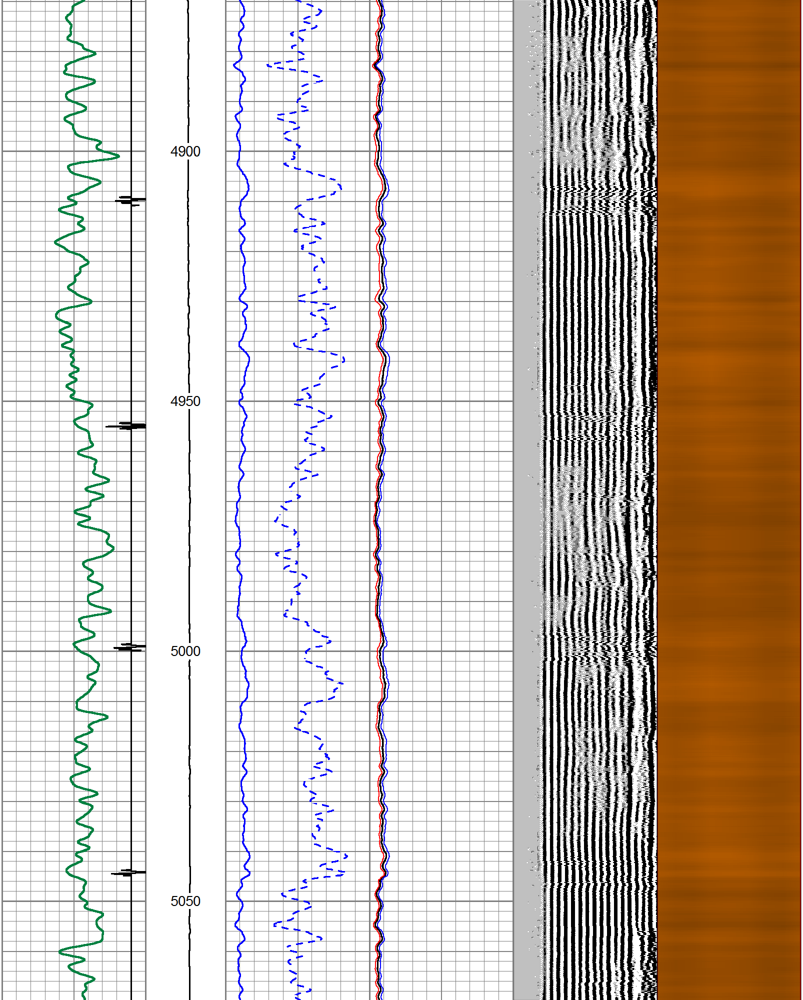


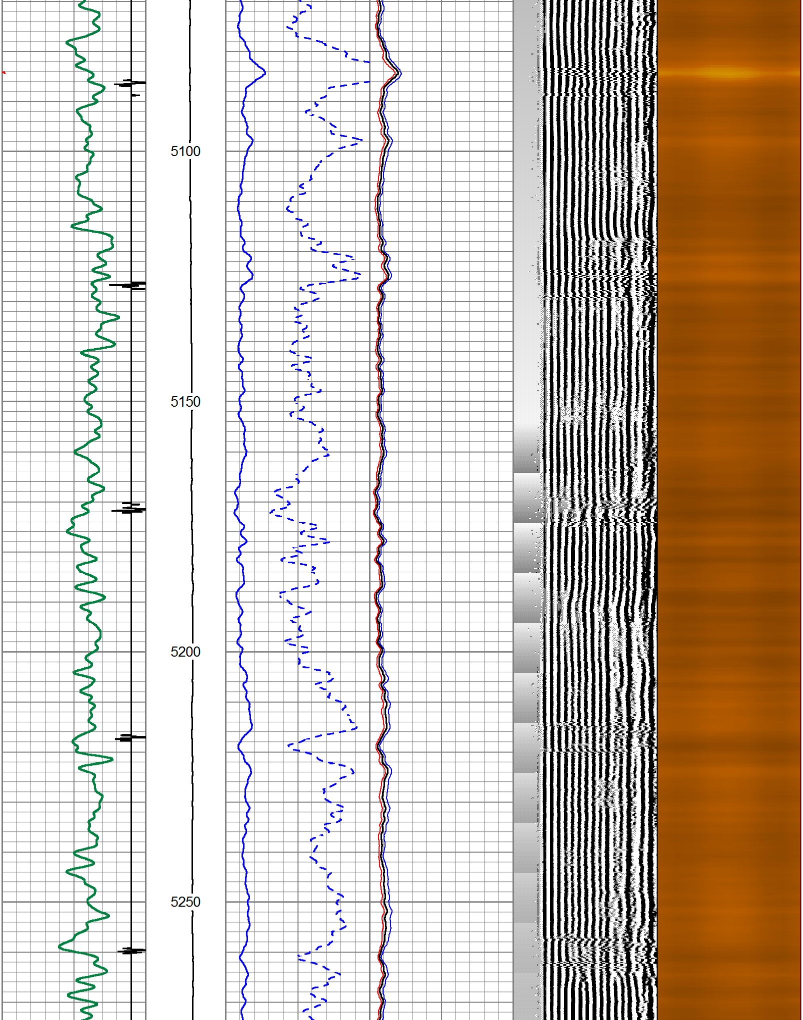


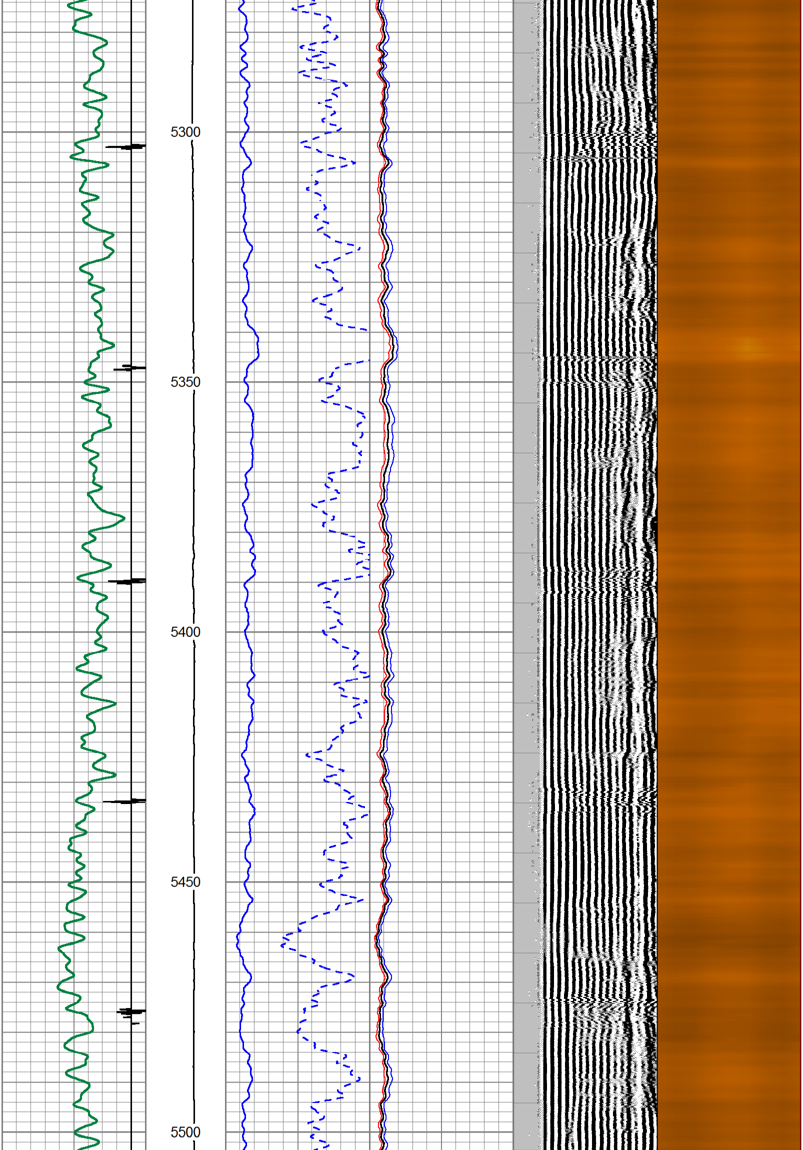


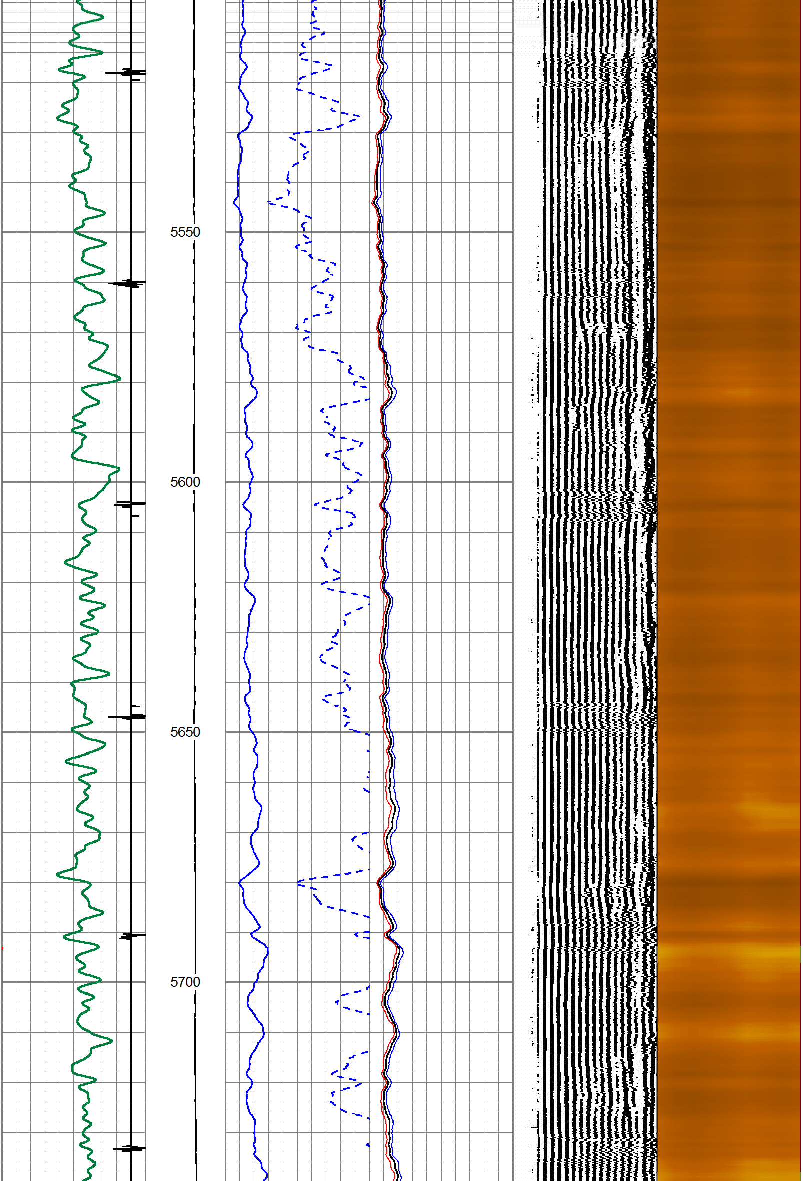


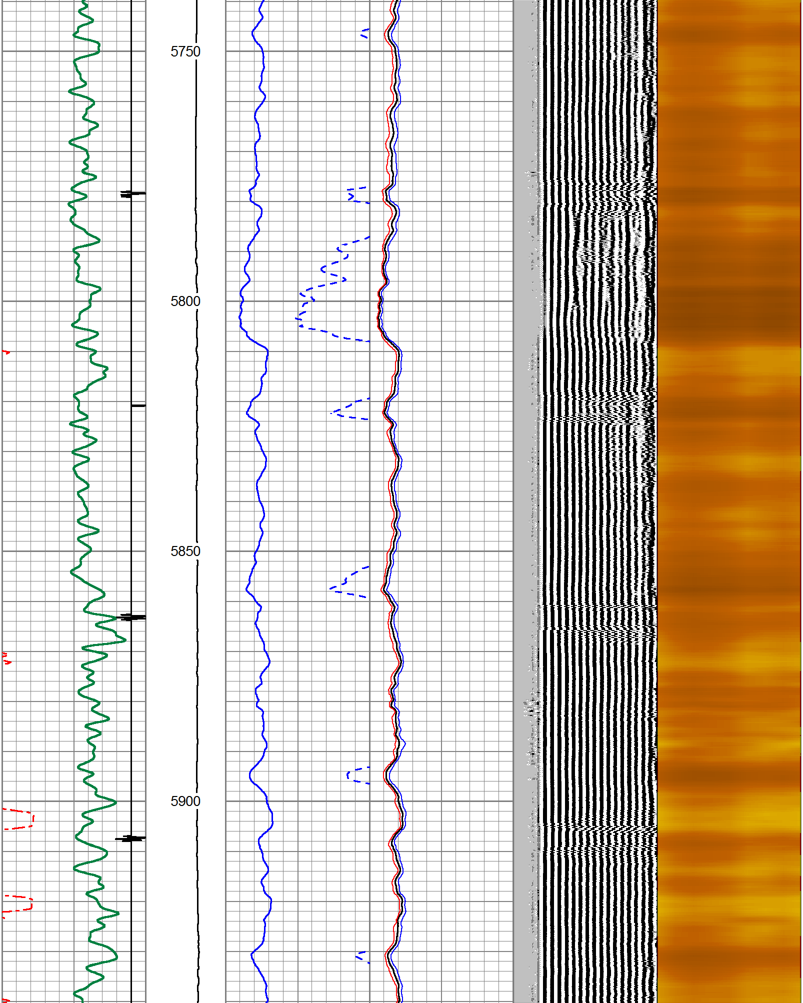


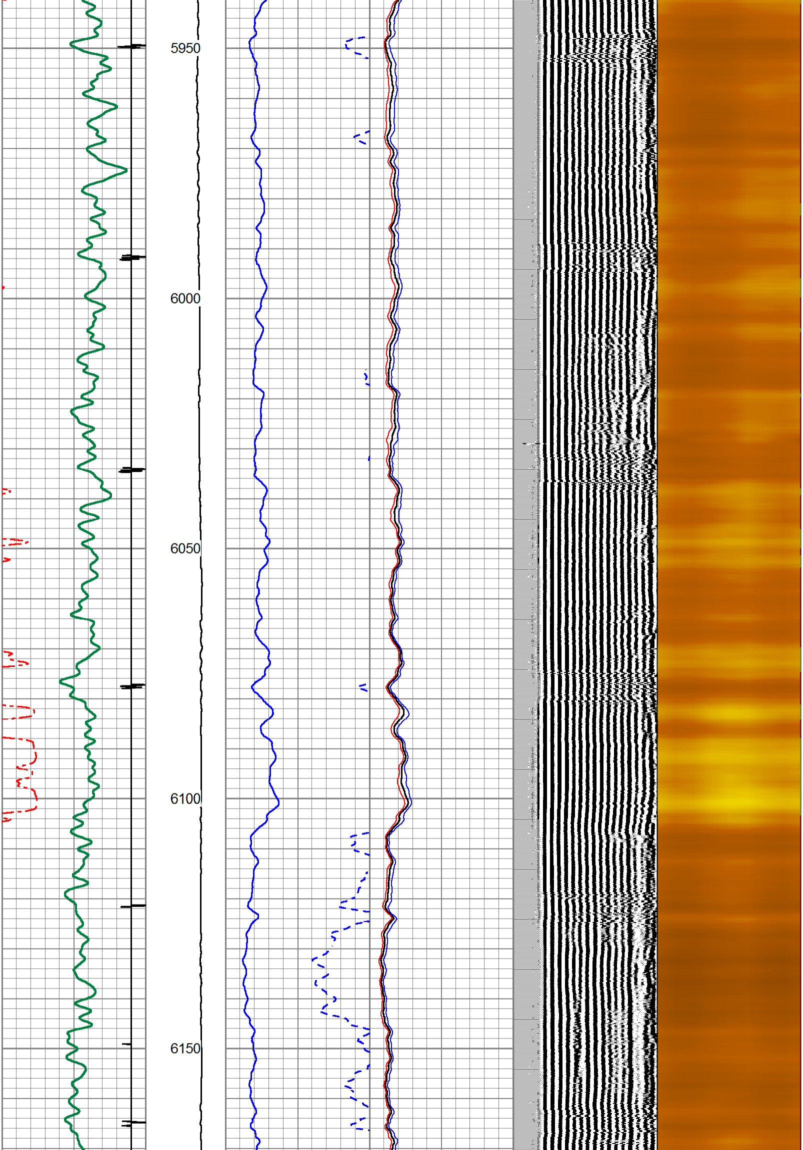


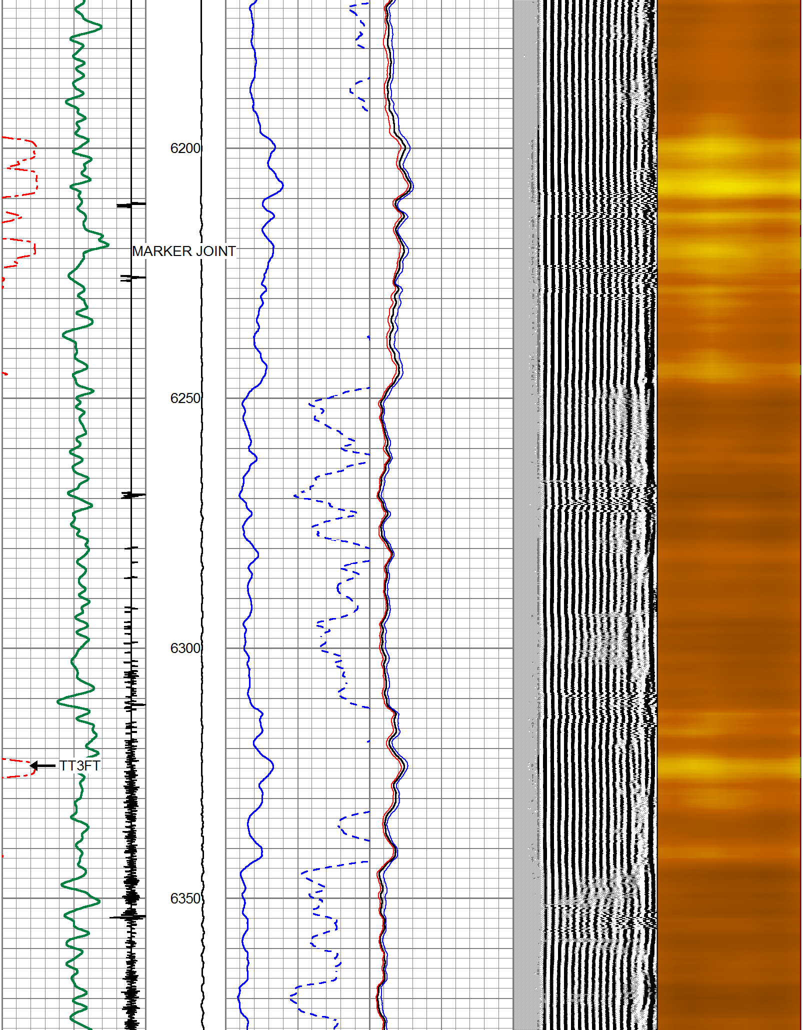


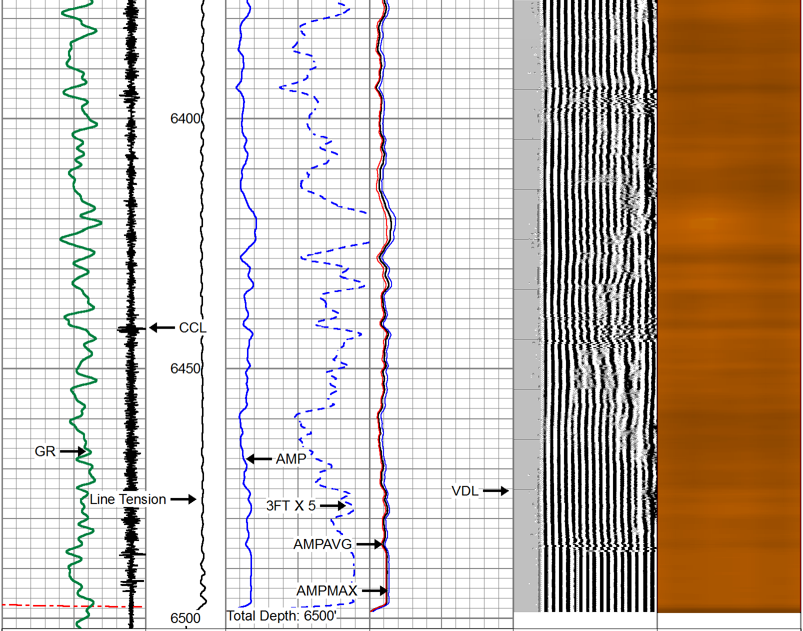












280 TT (usec) 180	LTEN	0 AMP (mV) 100	0 AMPAVG 150	200 VDL (usec) 1200	1 RADIAL MAP 8
-9 CCL 1	0 (lb 2000	0 3FT X 5 (mV) 20	0 AMPMAX 150		
0 GR (GAPI) 150			0 AMPMIN 150		

PATRIOT
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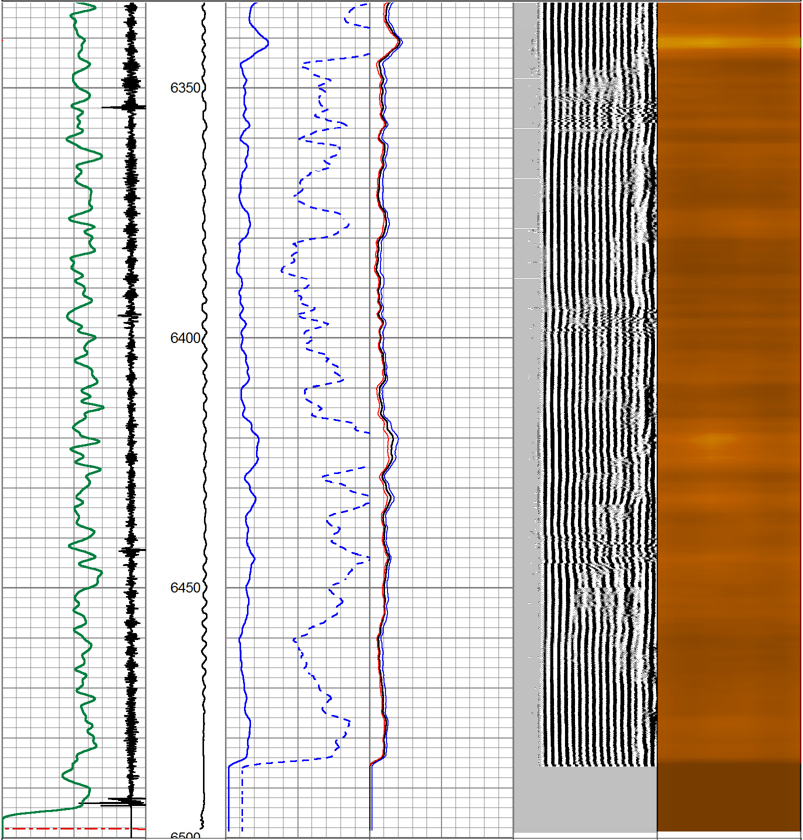
REPEAT PASS

LOGGED WITH 2500 PSI APPLIED AT SURFACE

Database File	31n-30b-m_rbl.db
Dataset Pathname	rbl/pass2
Presentation Format	PATRIO~2
Dataset Creation	Sun Jun 11 02:30:52 2017
Charted by	Depth in Feet scaled 1:240

280 TT (usec) 180	LTEN	0 AMP (mV) 100	0 AMPAVG 150	200 VDL (usec) 1200	1 RADIAL MAP 8
-9 CCL 1	0 (lb 2000	0 3FT X 5 (mV) 20	0 AMPMAX 150		
0 GR (GAPI) 150			0 AMPMIN 150		



280 TT (usec) 180	LTEN	0 AMP (mV) 100	0 AMPAVG 150	200 VDL (usec) 1200	1 RADIAL MAP 8
-9 CCL 1	0 (lb 2000	0 3FT X 5 (mV) 20	0 AMPMAX 150		
0 GR (GAPI) 150			0 AMPMIN 150		

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Field	WATTENBERG
County	WELD
State	CO
Country	USA