PIONEER
Pioneer Energy Services

GAMMA RAY, C.C.L.
SECTOR BOND LOG

Company	ANADARKO PETROLEUM CORPORATION
Well	SACK STATE 4N-30HZ
Field	WATTENBERG
County	WELD
State	COLORADO

Company ANADARKO PETROLEUM CORPORATION
Well SACK STATE 4N-30HZ
Field WATTENBERG
County WELD State COLORADO

Location: API # : 0512339243
SHL: 825' FSL X 919' FWL
SEC 31 TWP 1N RGE 67W

Other Services
XIPE

			Elevation
Permanent Datum	GL	Elevation 5065'	K.B. 5090'
Log Measured From	KB		D.F. 5089'
Drilling Measured From	KB		G.L. 5065'

Date	13-DEC-14					
Run Number	ONE					
Depth Driller	17,112'					
Depth Logger	7460'					
Bottom Logged Interval	7448'					
Top Log Interval	SURFACE					
Open Hole Size	NA					
Type Fluid	WATER					
Density / Viscosity	NA					
Max. Recorded Temp.	228 DEG. F.					
Estimated Cement Top	NA					
Time Well Ready	ROA					
Time Logger on Bottom	7:31					
Equipment Number	41					
Location	FORT MORGAN CO					
Recorded By	RANDY AZEVEDO					
Witnessed By	RYAN SCHOCK					

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#	SURFACE	1287'
Prot. String				
Production String	7"	26#	SURFACE	8049'
Liner	4.5"	11.6#	6968'	17,108'

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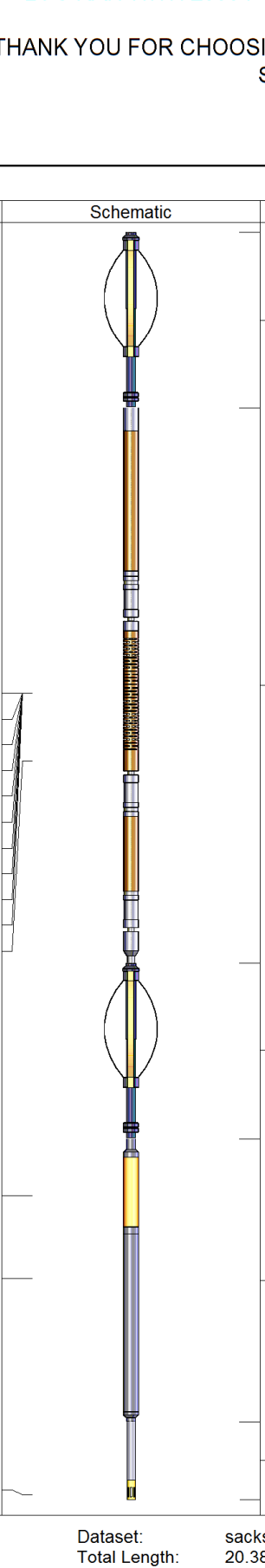
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 RAN AS PER CUSTOMER REQUEST.
DEPTH REFERNECE TO CASING TALLY REPORTED LINER TOP AT 6968'.
ADJUSTED LOG 16' TO CORRELATE WITH LINER TOP
GUAGE RING RAN DOWN TO 7412' NO DEBRIS FOUND IN GUAGE RING
LOG RAN WITH 2800 PSI SURFACE INDUCED PRESSURE..

THANK YOU FOR CHOOSING PIONEER ENERGY SERVICES INC.
SO # 2-310011

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			PTS275	2.83	2.75	
WVF3FT WVFCAL WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF5FT	12.96 12.96 12.96 12.96 12.96 12.96 12.96 12.96 12.96 12.96 11.88		RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
			PTS275	2.83	2.75	
CCL GR	4.88 3.55		GR_CCL-Probe (111211) Probe Gamma CCL	4.54	2.75	100.00
TEMP	0.08		TEMP-1.375TEMP (0001) Temperature Tool	1.25	1.38	30.00

Dataset: sackstate 4n-30hz rbl.db: field/well/run1/pass4
Total Length: 20.38 ft
Total Weight: 220.00 lb
O.D. 2.75 in

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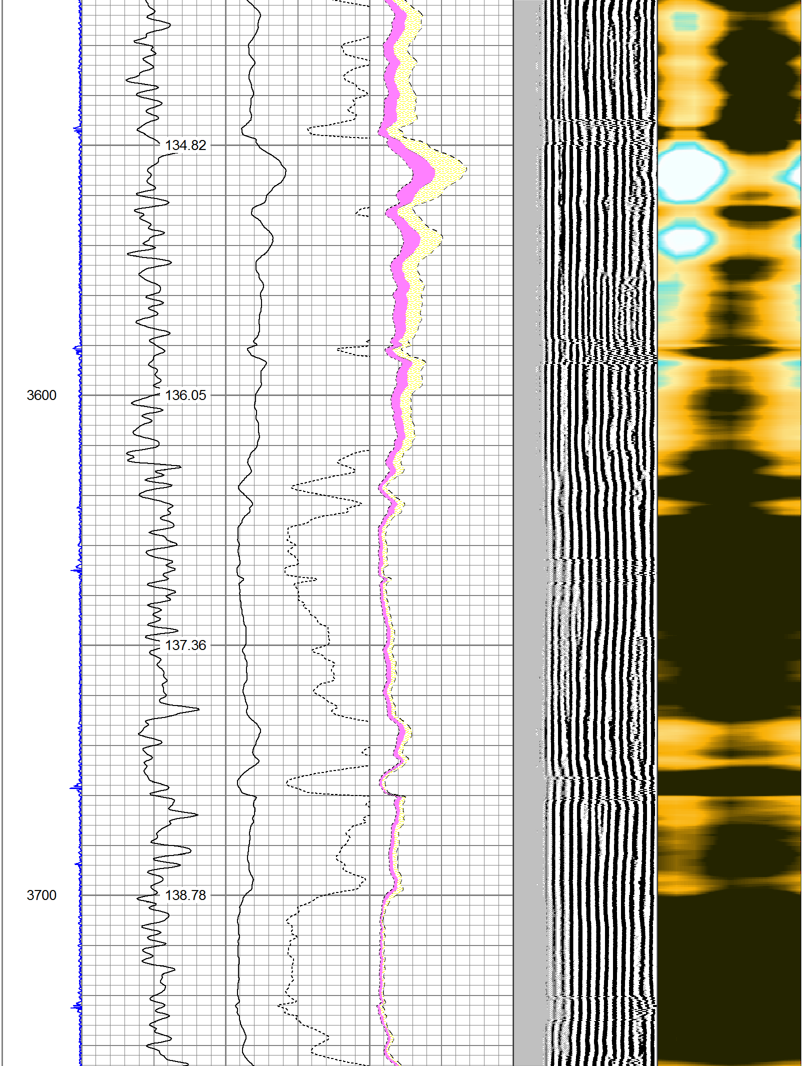
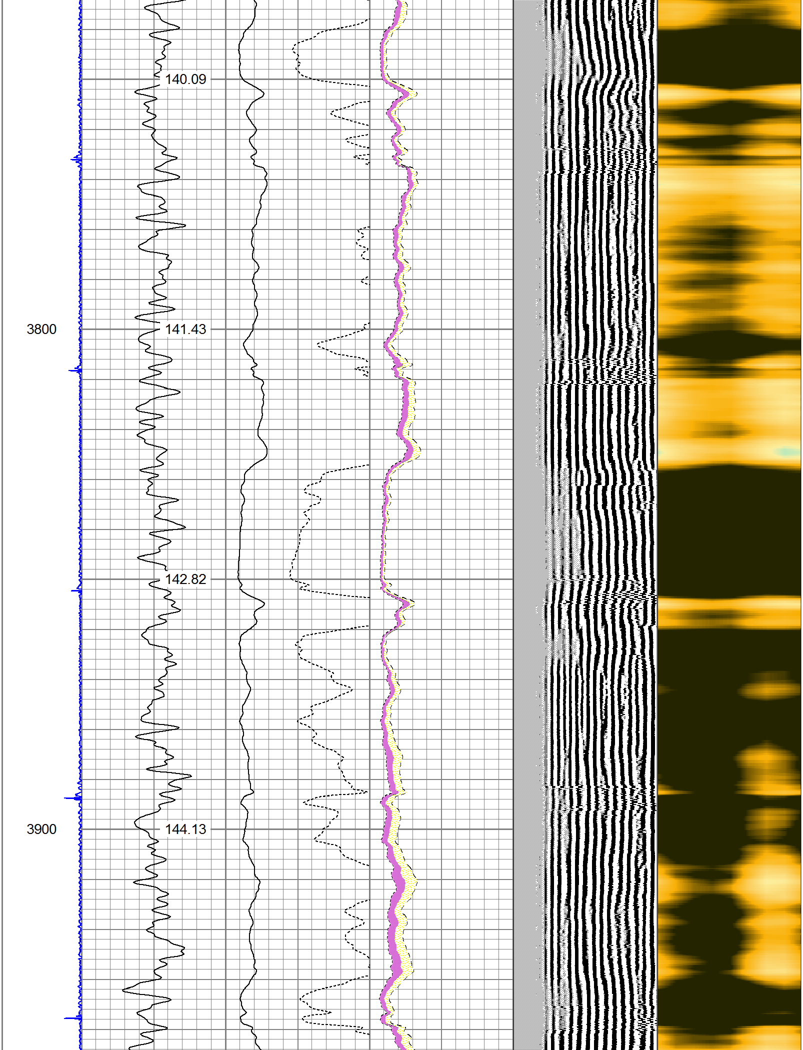
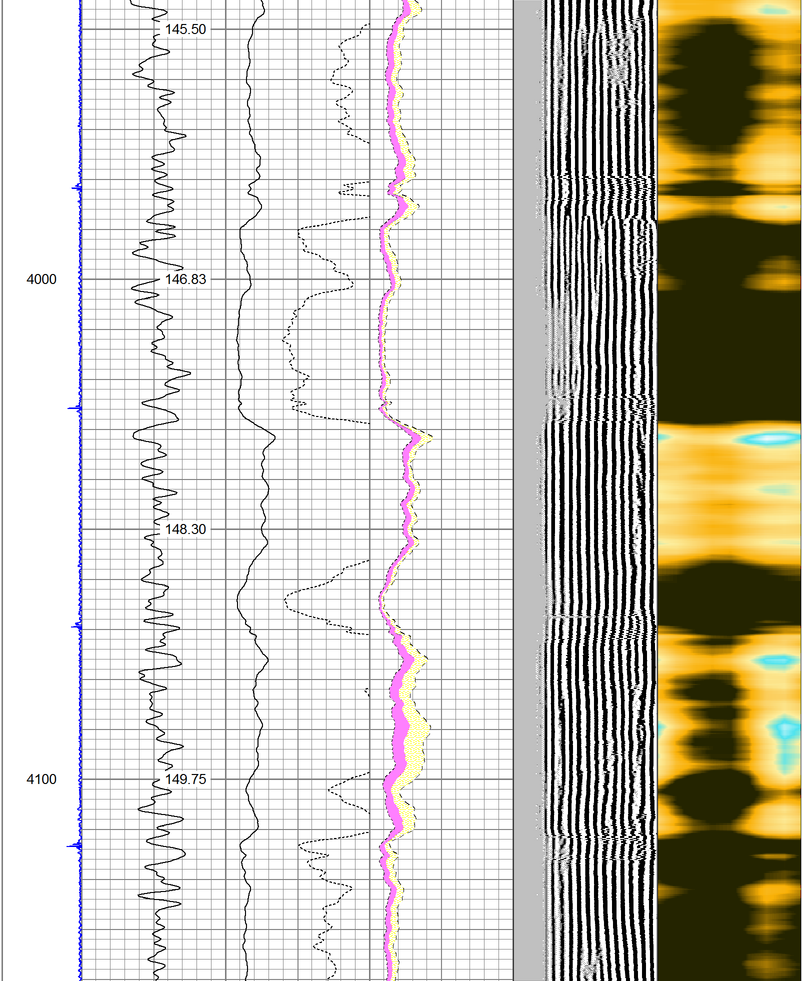
7" Main Pass

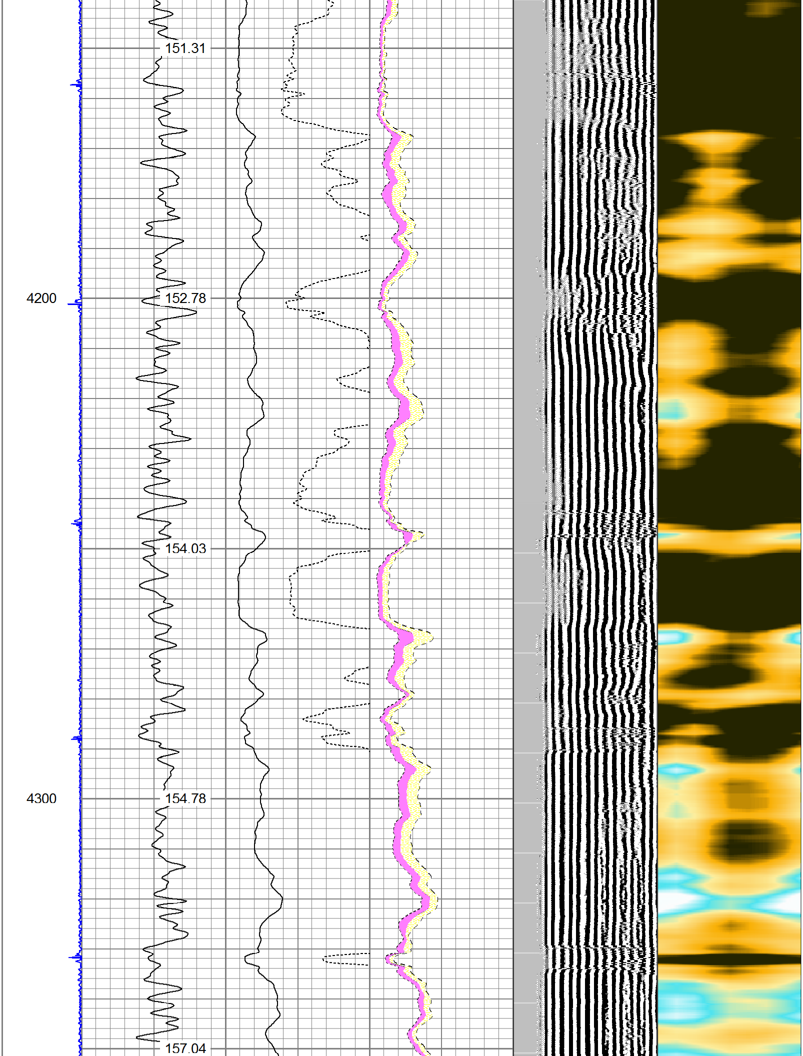
Log ran under 2800 PSI surface induced pressure

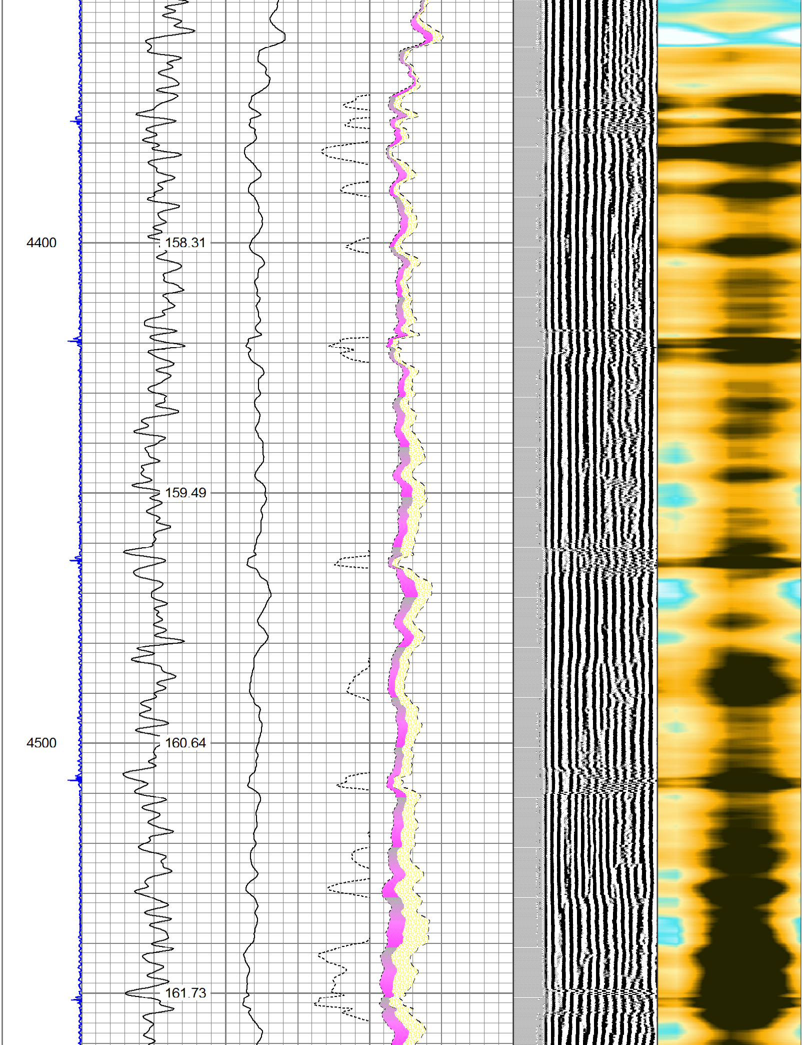
Database File: sackstate 4n-30hz rbl.db
Dataset Pathname: pass4
Presentation Format: scbl02
Dataset Creation: Sat Dec 13 07:43:43 2014 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

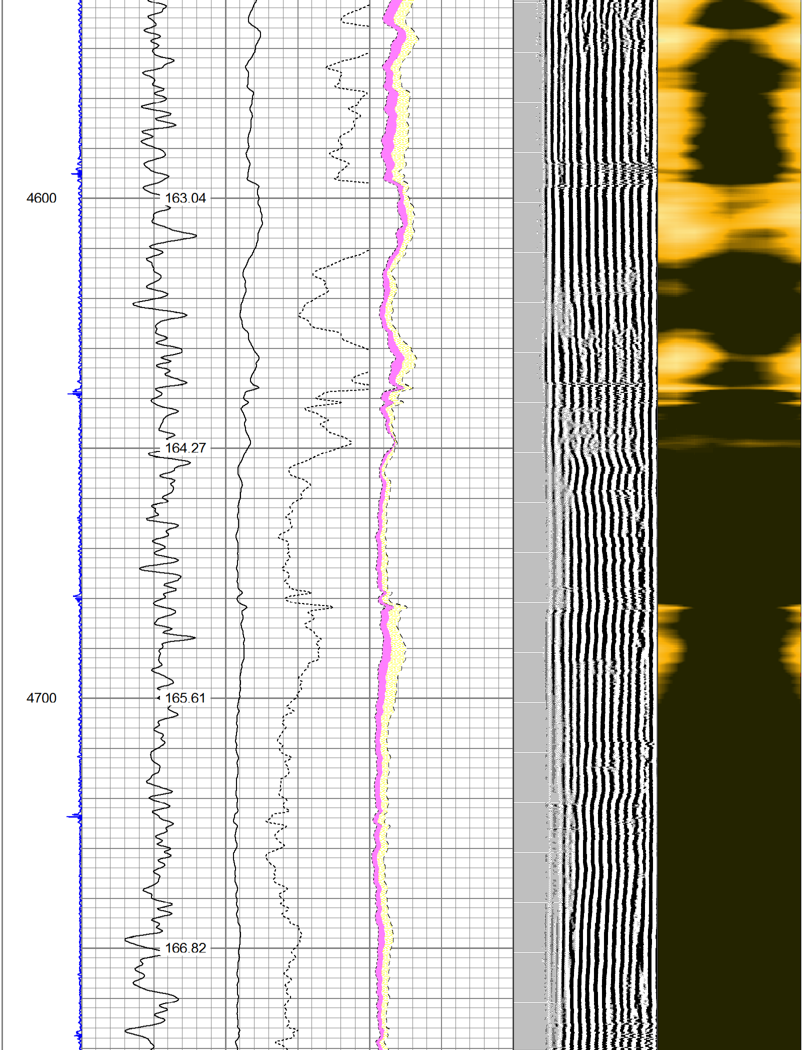


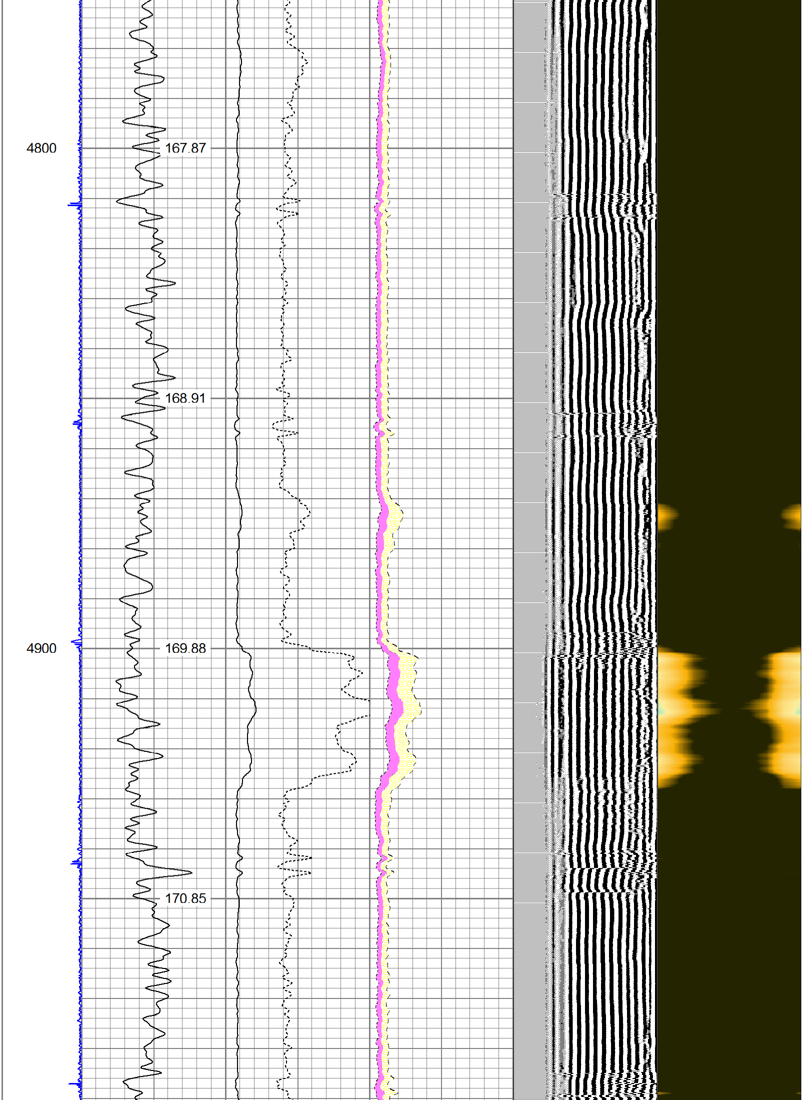


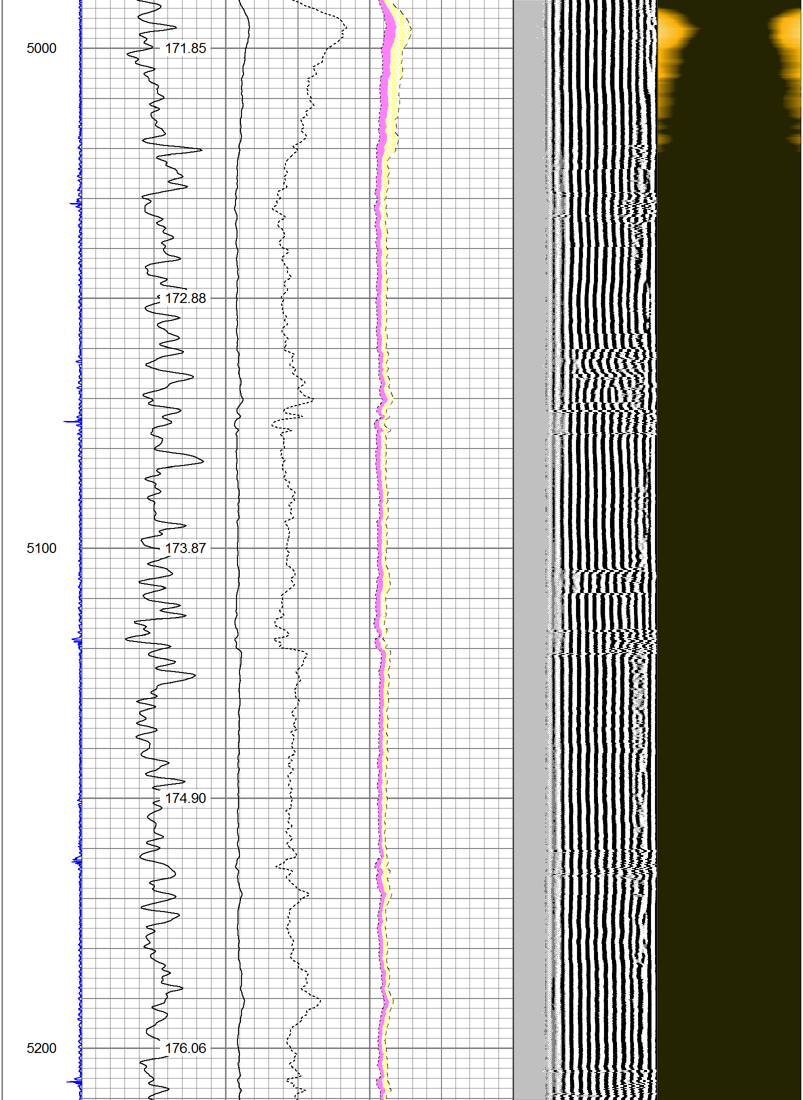


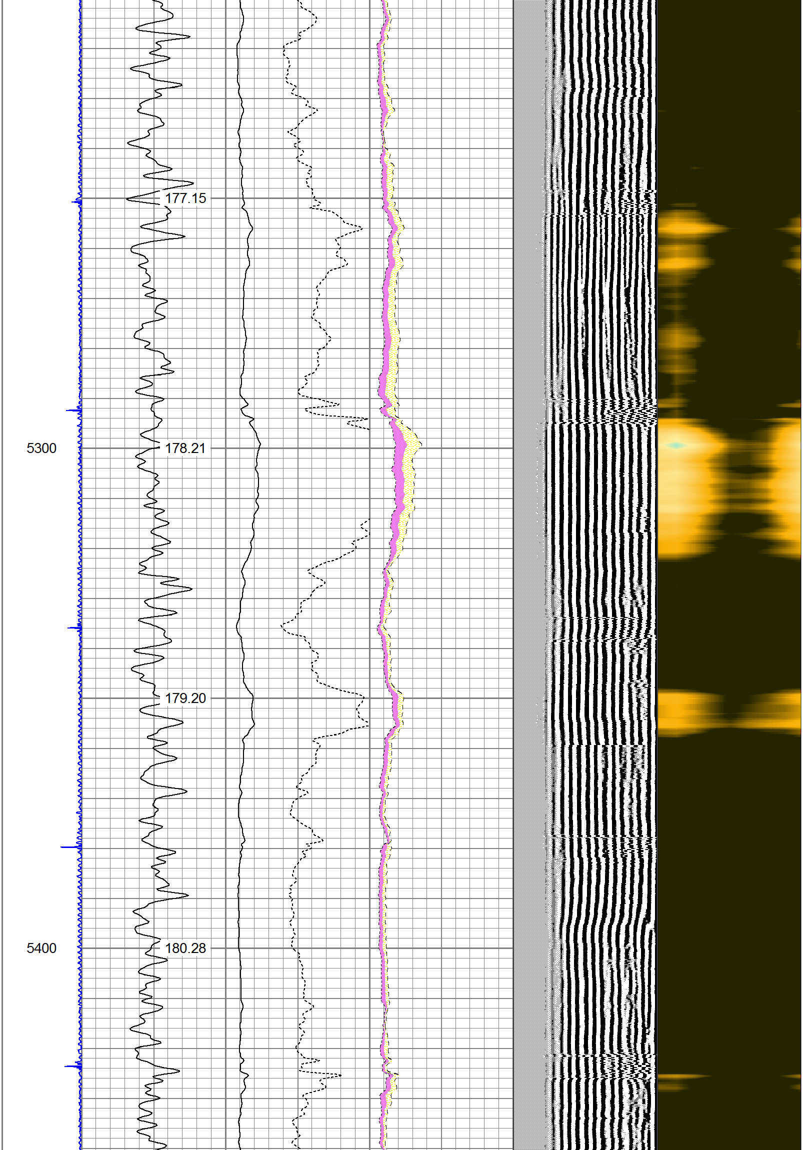


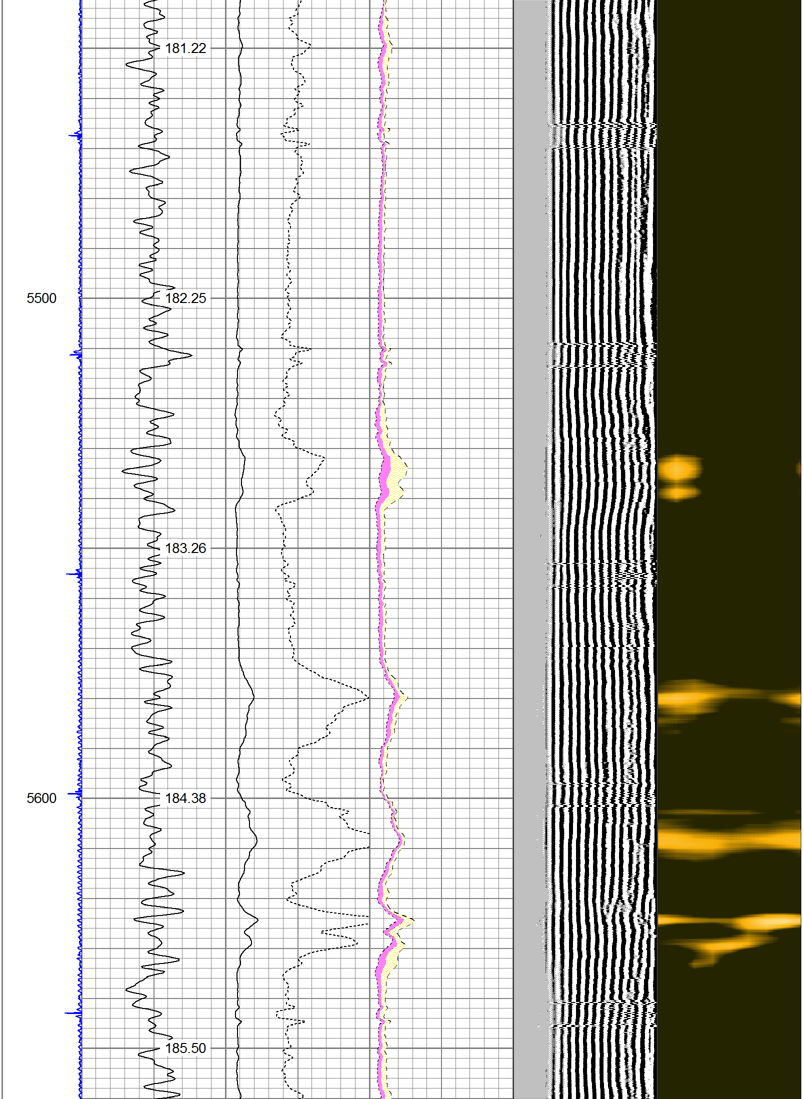


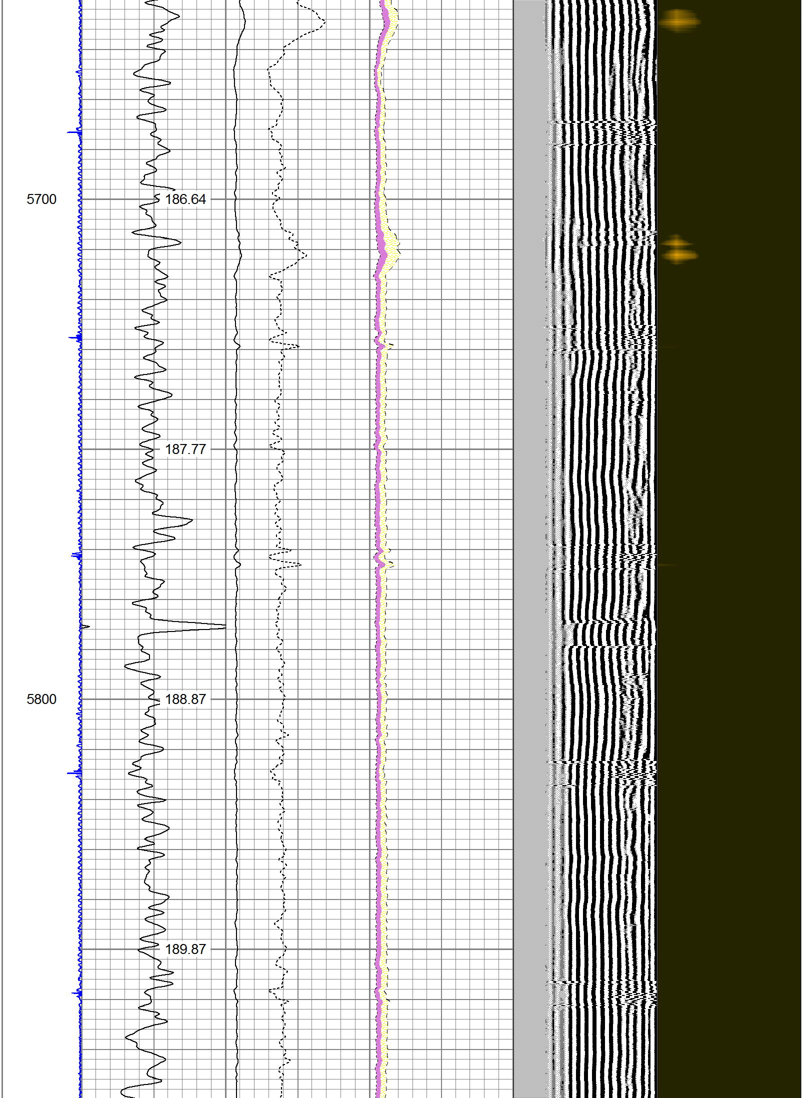


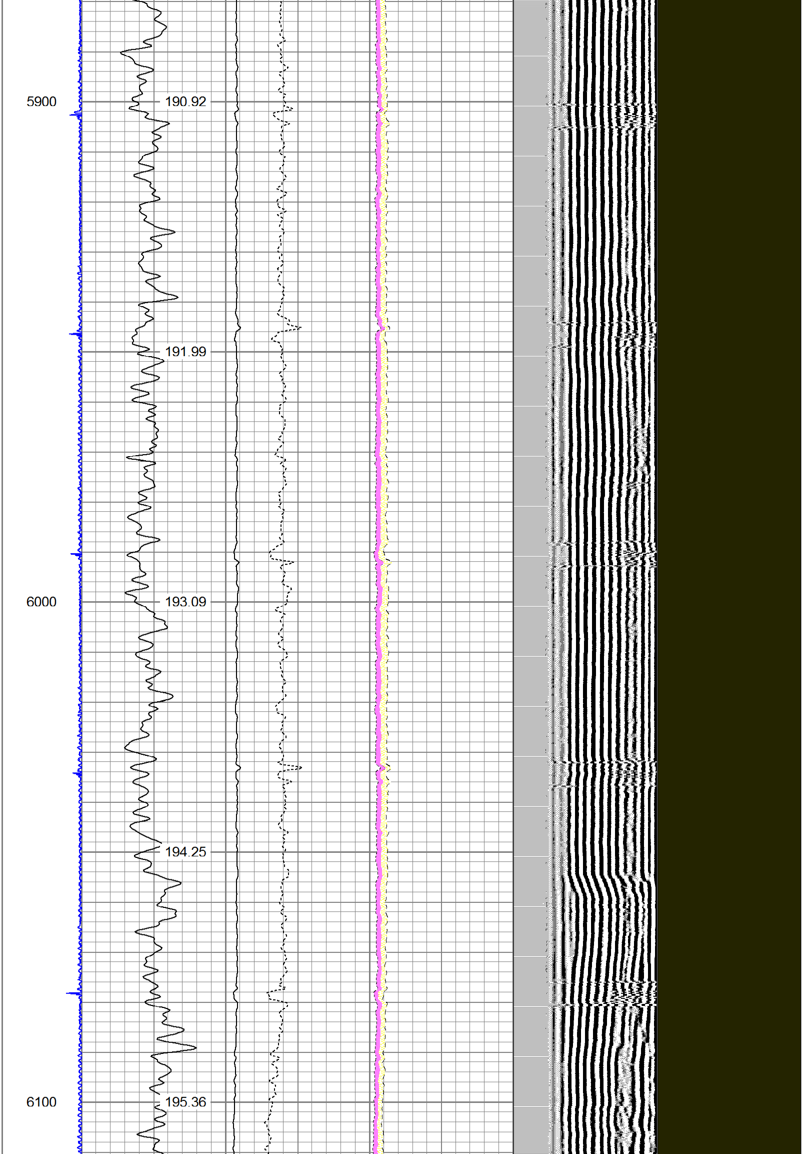


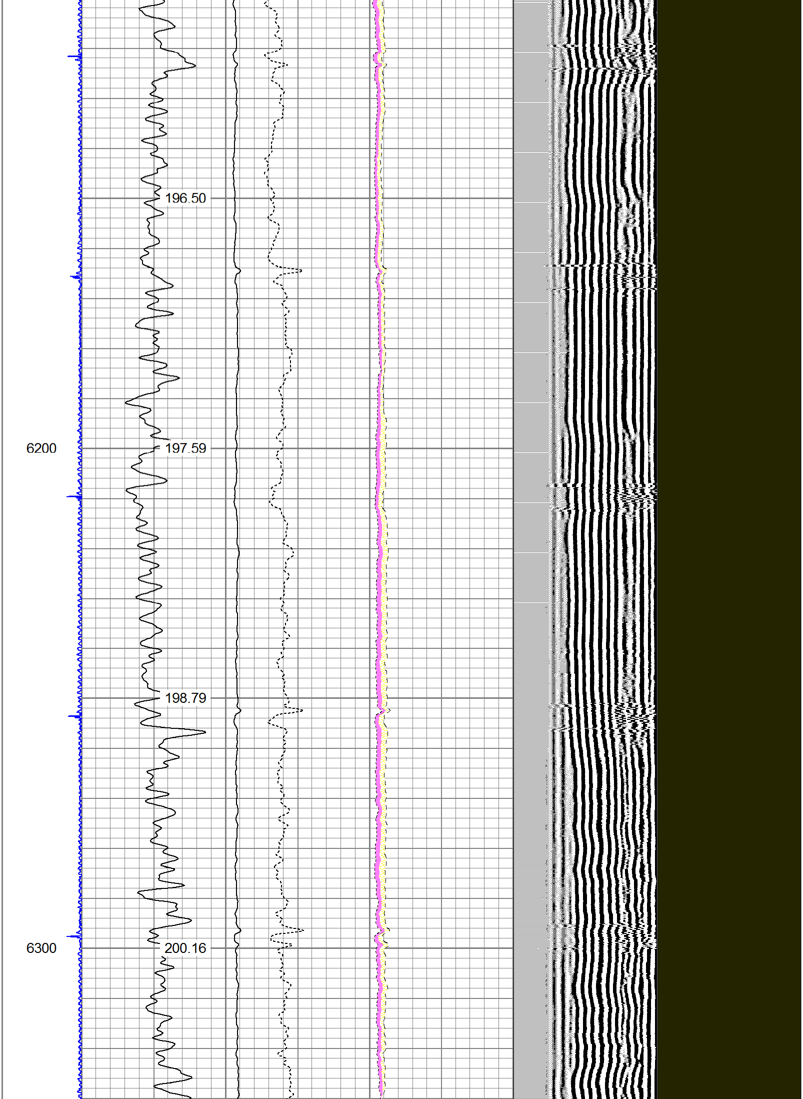


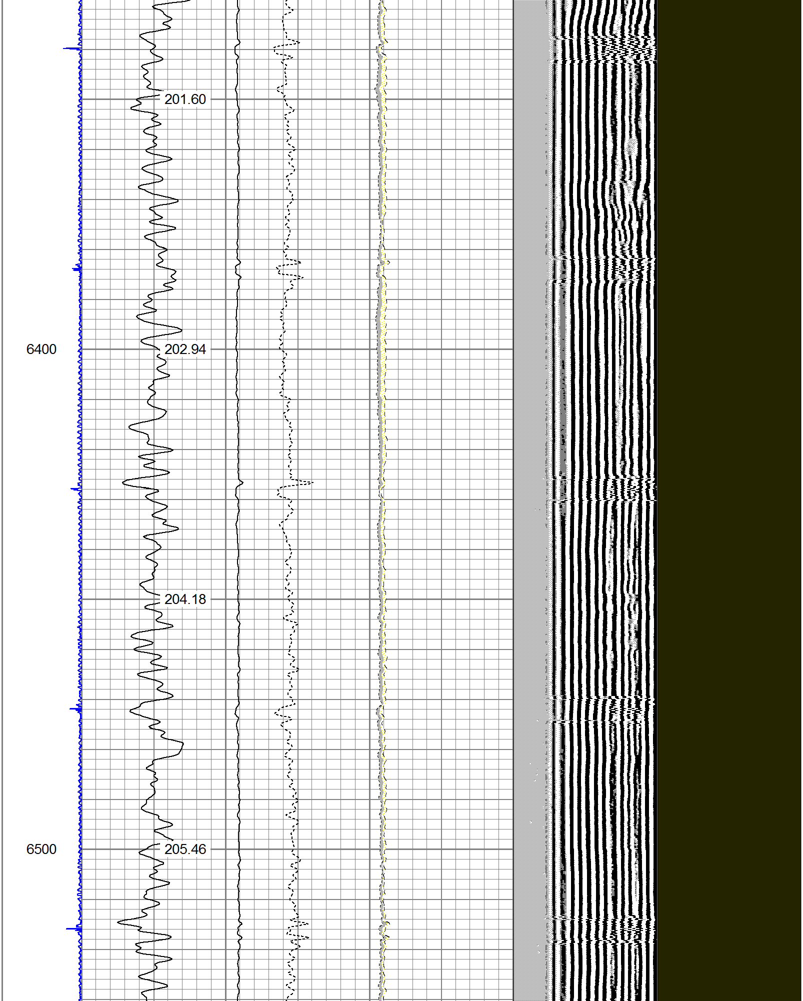


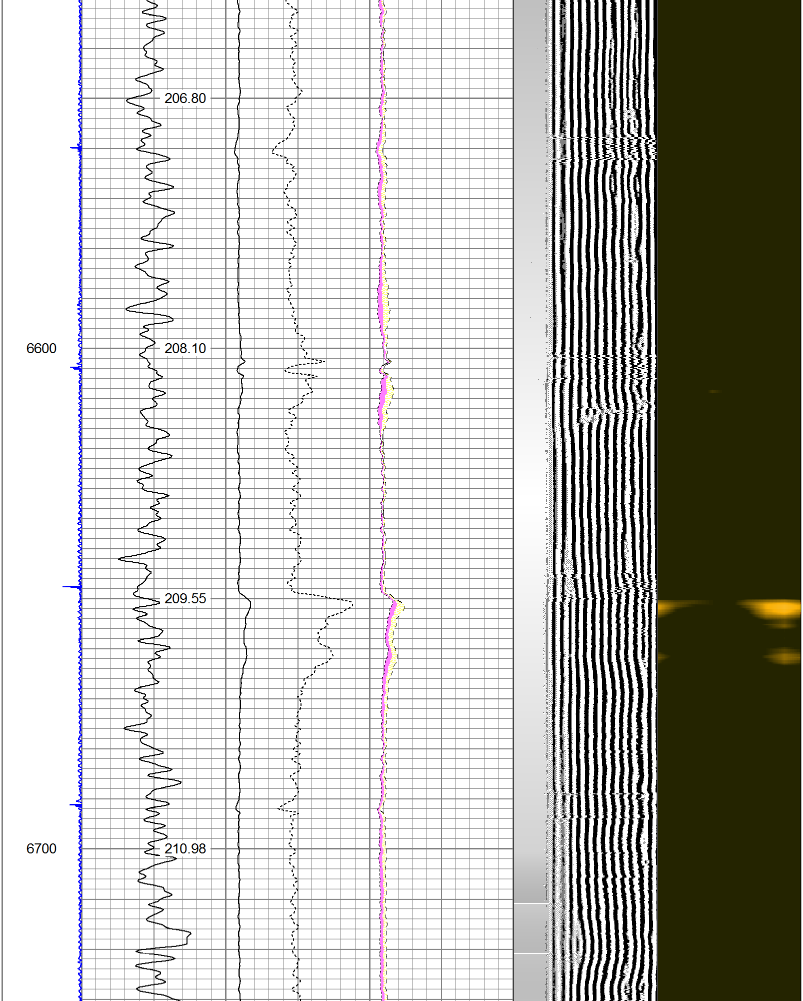


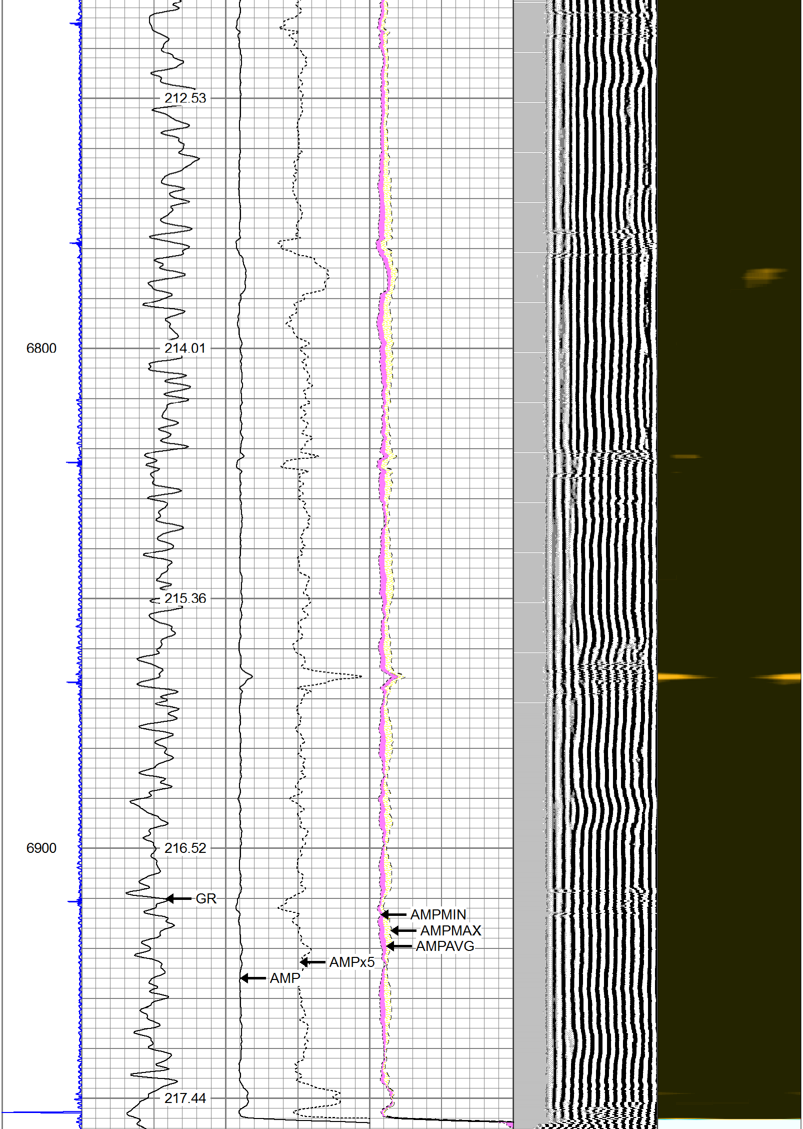


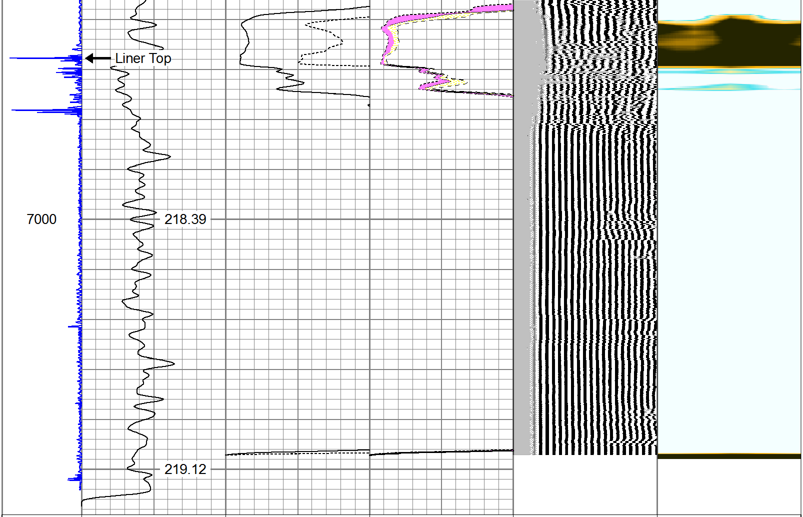












-5 CCL 0	0 GR (GAPI) 200	0 AMP (mV) 100	0 AMPAVG 150	200 VDL 1200	1 SECTOR MAP 8
	TEMP (degF)	0 AMPx5 (mV) 20	0 AMPMAX 150		25 75
			0 AMPMIN 150		

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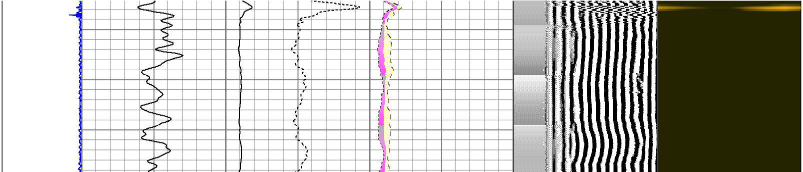
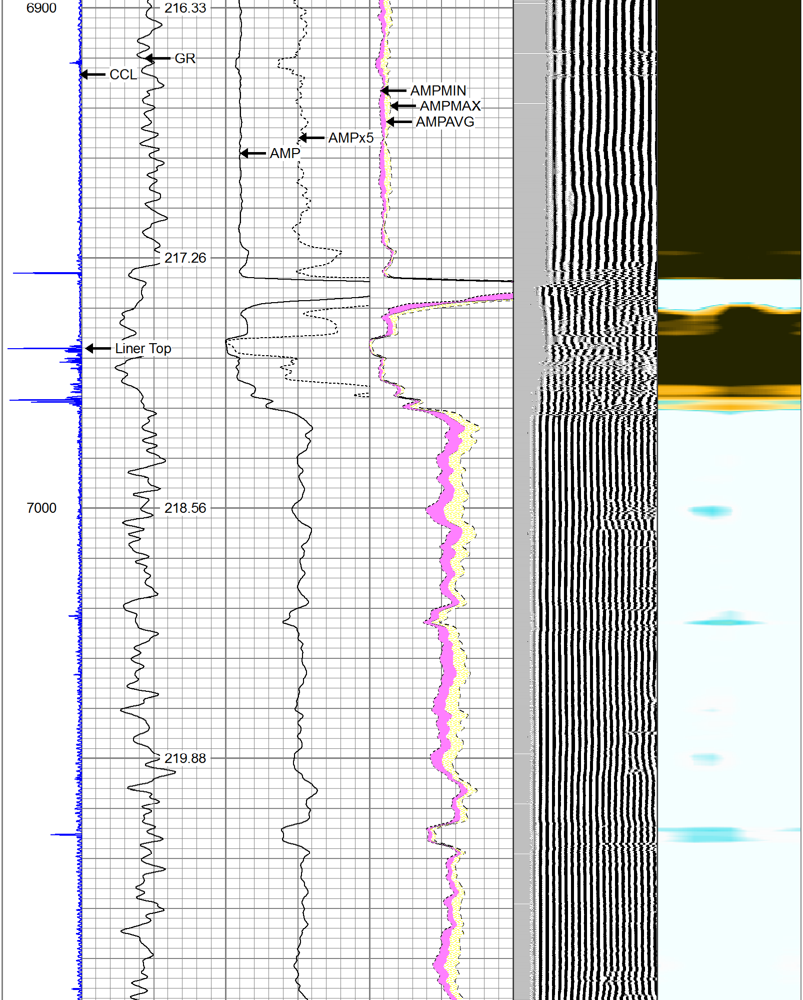
4.5" Main Pass

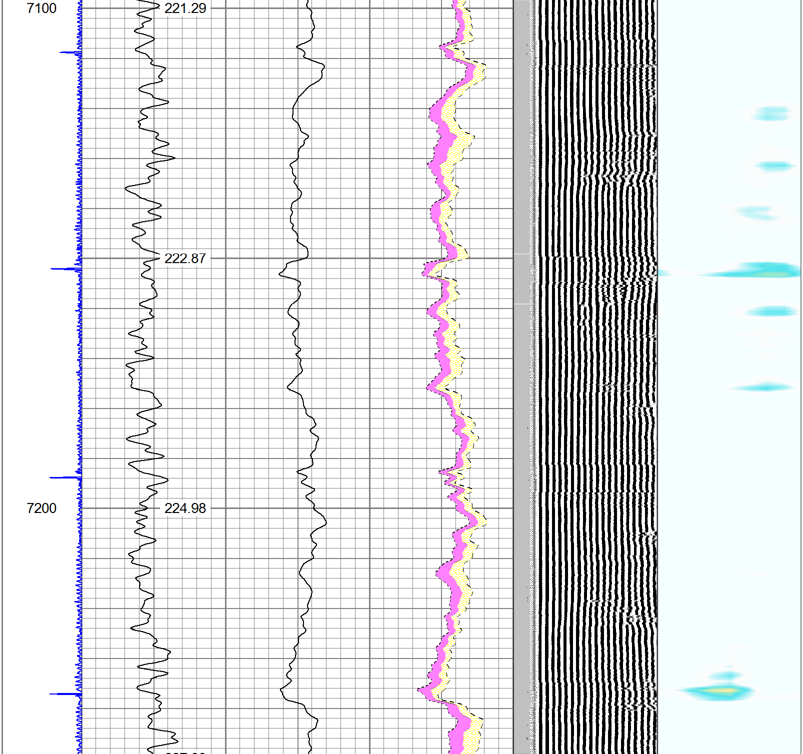
Log Ran Under 2800 PSI surface induced pressure.

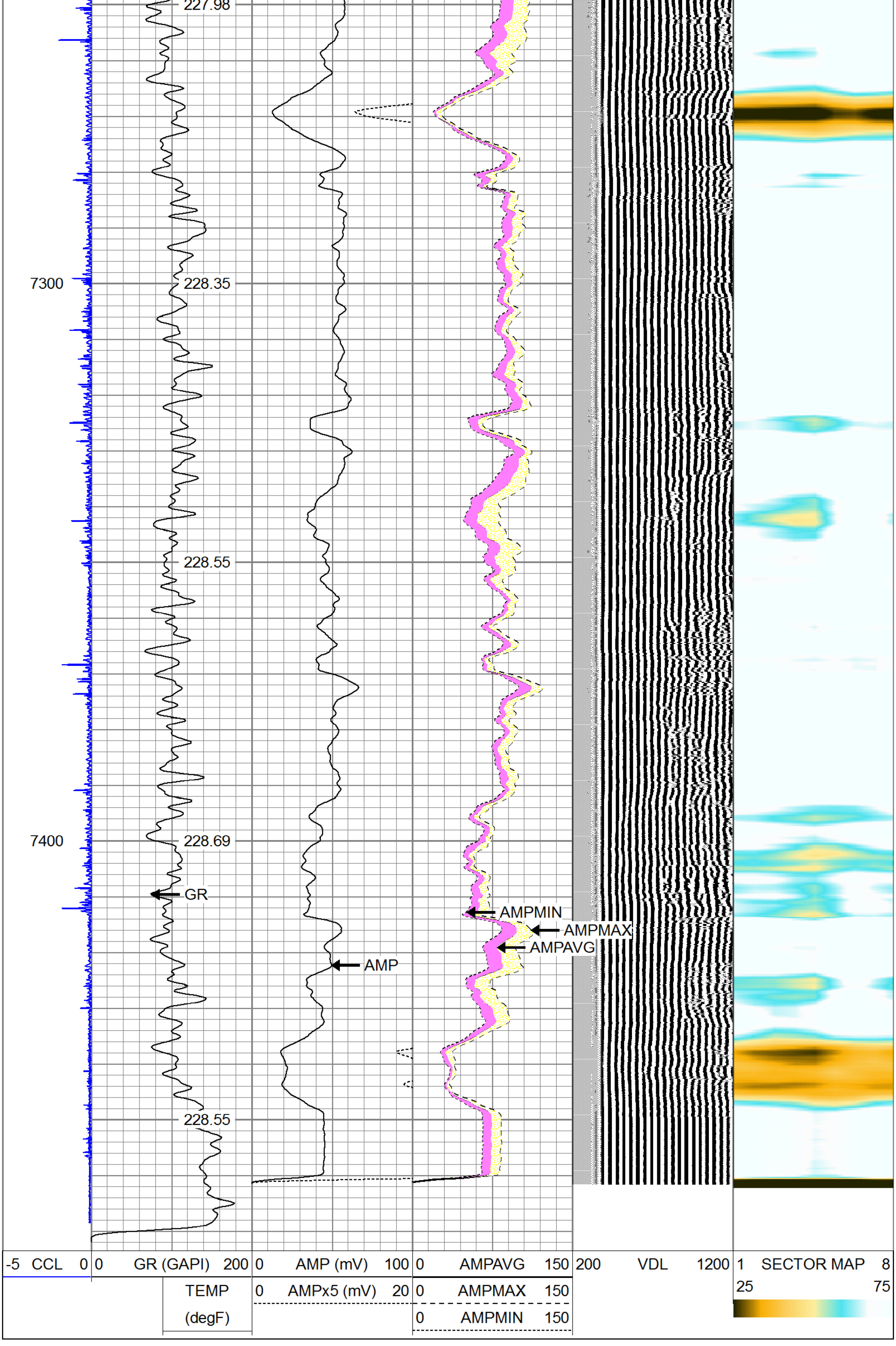
Database File:	sackstate 4n-30hz rbl.db
Dataset Pathname:	pass3
Presentation Format:	scbl02
Dataset Creation:	Sat Dec 13 07:30:22 2014 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240

-5 CCL 0	0 GR (GAPI) 200	0 AMP (mV) 100	0 AMPAVG 150	200 VDL 1200	1 SECTOR MAP 8
	TEMP (degF)	0 AMPx5 (mV) 20	0 AMPMAX 150		25 75
			0 AMPMIN 150		









Calibration Report

Database File:	sackstate 4n-30hz rbl.db
Dataset Pathname:	pass4
Dataset Creation:	Sat Dec 13 07:43:43 2014 by Log 7.0 B1

Temperature Calibration Report

Serial Number:	0001	
Tool Model:	1.375TEMP	
Performed:	Wed Dec 10 17:24:24 2014	
	Reference	Reading
Low Reference:	0.00 degF	0.00 cps
High Reference:	100.00 degF	1000.00cps
Gain:	0.10	
Offset:	0.00	
Delta Spacing	2	

Gamma Ray Calibration Report

Serial Number:	111211	
Tool Model:	Probe	
Performed:	Sun Jun 13 13:33:21 1993	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	Base	
Tool Model:	Probe	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	519.842	ft

Master Calibration, performed Fri Dec 12 15:37:53 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.018	0.998	0.000	62.165	63.416	-1.136
CAL	0.012	1.510				
5'	0.012	0.733	0.000	62.165	86.316	-1.064
SUM						
S1	0.024	0.838	0.000	100.000	122.857	-2.998
S2	0.027	0.862	0.000	100.000	119.700	-3.219
S3	0.027	0.947	0.000	100.000	108.721	-2.981
S4	0.031	1.070	0.000	100.000	96.264	-2.964
S5	0.035	1.161	0.000	100.000	88.803	-3.137
S6	0.020	1.138	0.000	100.000	89.474	-1.791
S7	0.030	1.023	0.000	100.000	100.691	-3.003
S8	0.026	0.905	0.000	100.000	113.751	-2.995

Internal Reference Calibration, performed Wed Aug 21 11:08:58 2013:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.012	1.510	1.000	0.000

Air Zero Calibration, performed Wed Aug 21 10:24:02 2013:

	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

PIONEER

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Company	ANADARKO PETROLEUM CORPORAT
Well	SACK STATE 4N-30HZ
Field	WATTENBERG
County	WELD
State	COLORADO