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Pioneer Energy Services

RADIAL SECTOR BOND LOG WITH GAMMA RAY

Company KERR-MCGEE OIL & GAS ONSHORE
Well NRC 29N-32HZ
Field WATTENBERG
County WELD State CO

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Well NRC 29N-32HZ
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County WELD State CO

Location: API # : 05123392930000
SHL: 612' FNL & 2035' FWL
NENW
SEC 8 TWP 1N RGE 67W

Other Services
JBGR
Caliper

Permanent Datum GL Elevation 5035
Log Measured From KB
Drilling Measured From KB

Elevation
K.B. 5060
D.F. 5060
G.L. 5035

Date of Service	AUGUST 16, 2014
Run Number	ONE
Depth Driller or PBTD	18535
Depth Logger	7750
Bottom Log Interval	7746
Top Log Interval	SURFACE
Open Hole Size	8+7/8"
Type Fluid	WATER
Fluid Level	SURFACE
Fluid Density	8.33
Max. Recorded Temperature	NA
Max. Wellhead Pressure	2500 PSI
Wellhead Connection	10K WELL HEAD
Estimated Cement Top	SURFACE
Unit Number	59
Wireline Size	9/32"
Location	FT MORGAN, CO
Recorded By	SCHUMAN
Witnessed By	MR. JIM ADAMS

	Size	Wt/Ft	Top	Bottom
Tubing Record				
Surface Casing	9+5/8"	36#	SURFACE	NA
Production Casing	7"	26#	SURFACE	NA
Liner Record	4+1/2"	11.6#	6783	NA

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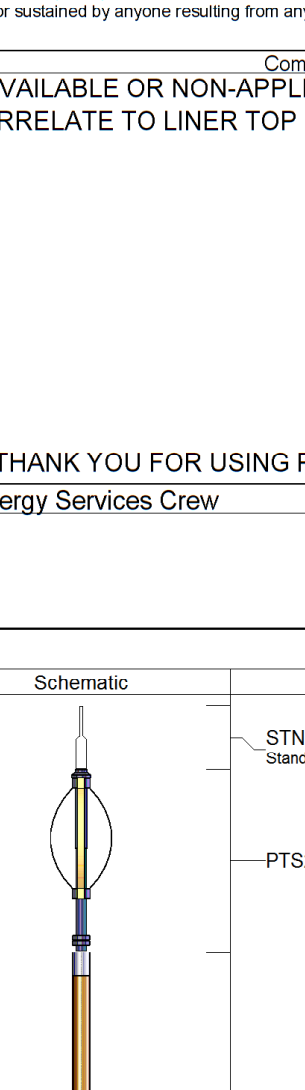
All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not be liable or responsible for any loss, costs, damages, 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.
LOG SHIFT -6' TO CORRELATE TO LINER TOP

THANK YOU FOR USING PIONEER Energy SERVICES

Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: Shaun	Sector CBL	111206
Operator: Geno		
Operator: Igor		
Operator: AJ; BRIAN		



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			STNDRD Standard Cable Head	1.00	1.69	10.00
			PTS275	2.83	2.75	
WVF3FT	14.44		RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
WVFCAL	14.44					
WVFS1	14.44					
WVFS2	14.44					
WVFS3	14.44					
WVFS4	14.44					
WVFS5	14.44					
WVFS6	14.44					
WVFS7	14.44					
WVFS8	14.44					
WVF5FT	13.35					
			PTS275	2.83	2.75	
CCL	6.36					
GR	5.03		GR_CCL-Probe (111211) Probe Gamma CCL	4.54	2.75	100.00
			2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00

Dataset: nrc29n-32hz_rbl.db: field/well/RBL/pass5
Total Length: 22.69 ft
Total Weight: 225.00 lb
O.D. 2.75 in

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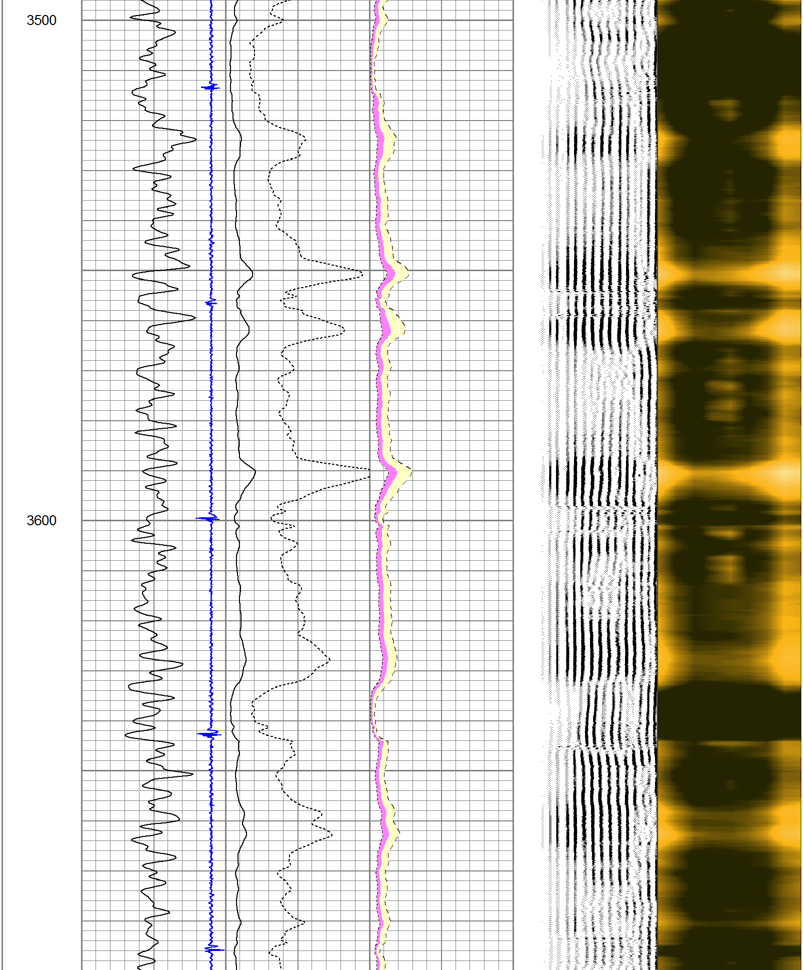
MAIN PASS

LOGGED WITH 2500 PSI APPLIED AT WELLHEAD

Database File: nrc29n-32hz_rbl.db
Dataset Pathname: RBL/MAIN
Presentation Format: scbl02
Dataset Creation: Sat Aug 16 14:56:35 2014
Charted by: Depth in Feet scaled 1:240

Track 1	Track 2	Track 3	VDL	Sector Map
-9 CCL 1	0 3' Amplitude (mV) 100	0 AMPAVG 150	200 VDL 1200	1 SECTOR MAP 8
Gamma Ray 0 (GAPI) 200	0 AMPx5 (mV) 20	0 AMPMAX 150 0 AMPMIN 150		10 60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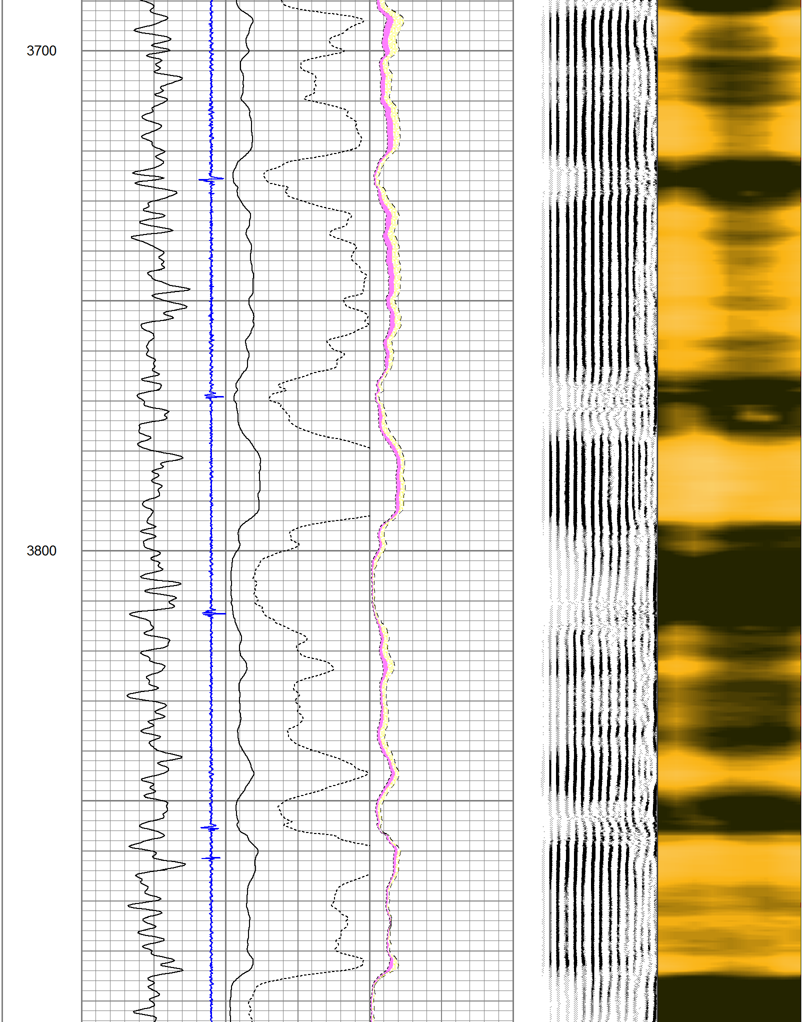
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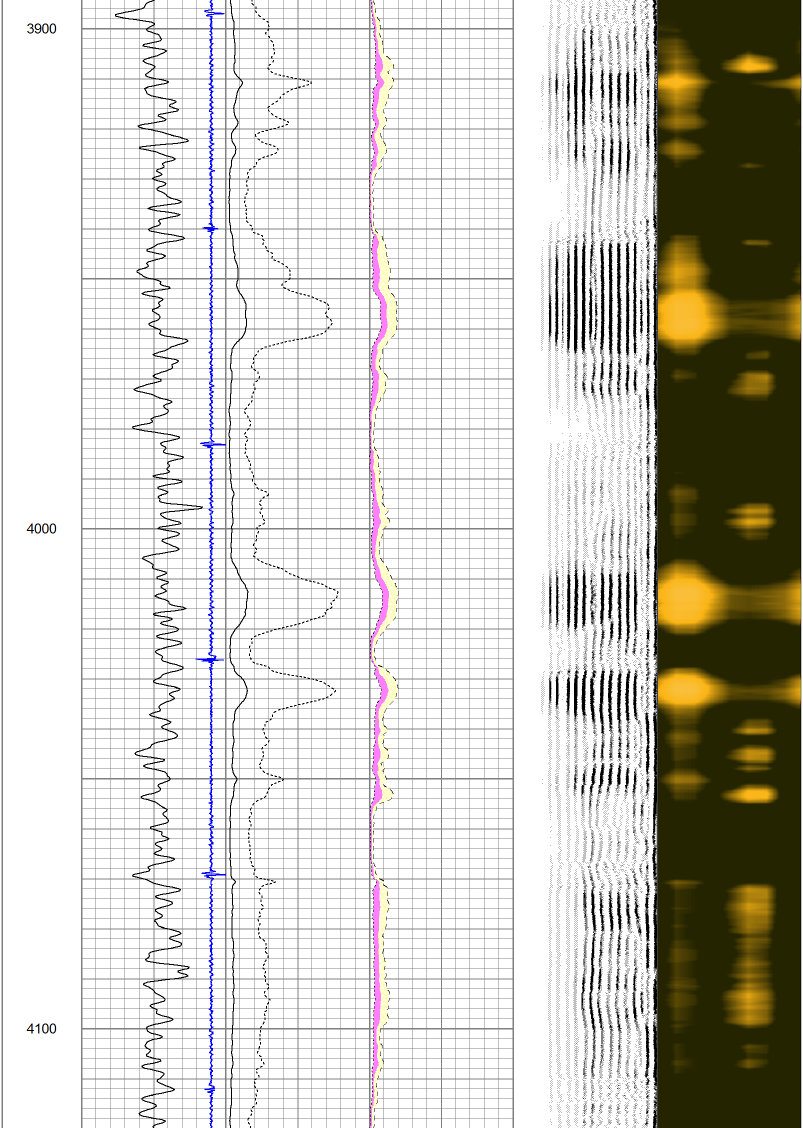
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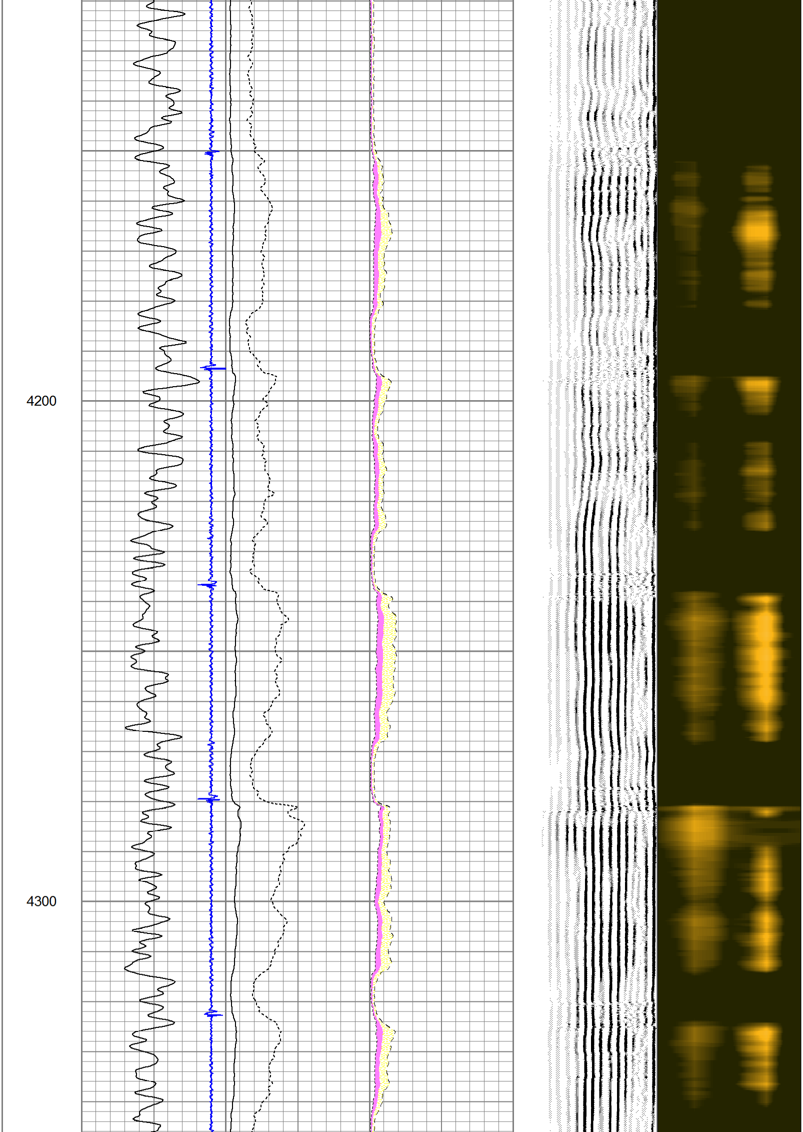
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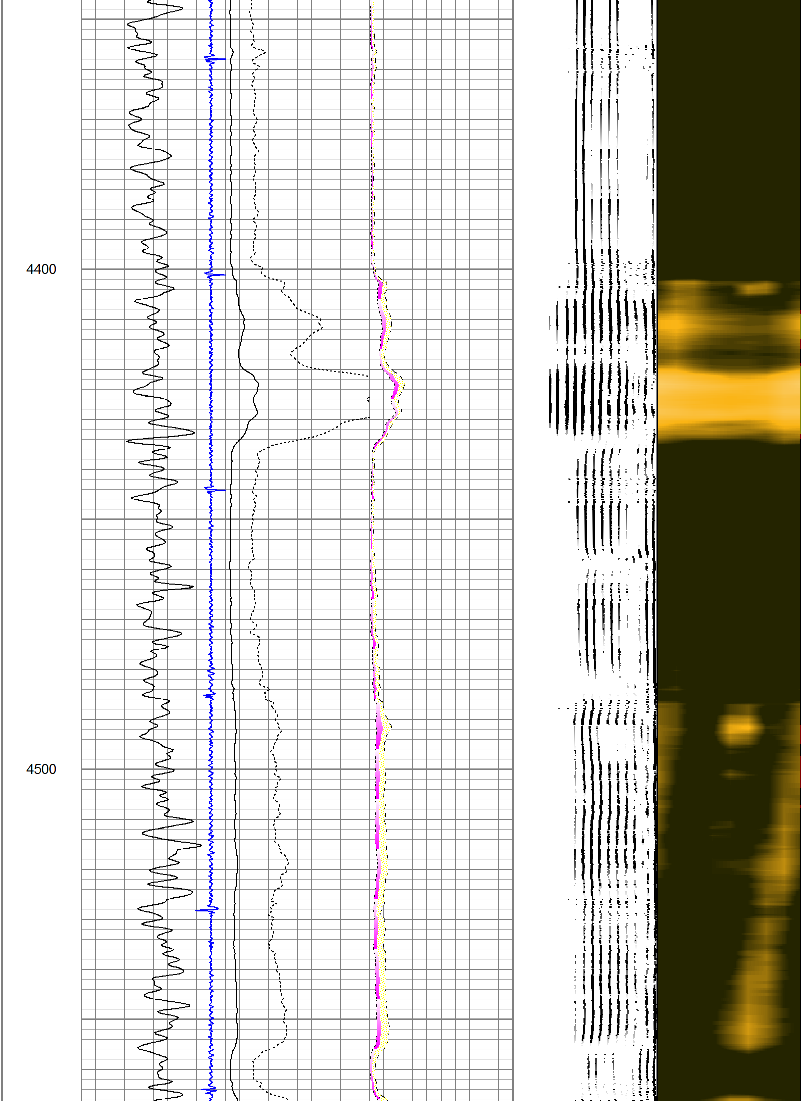
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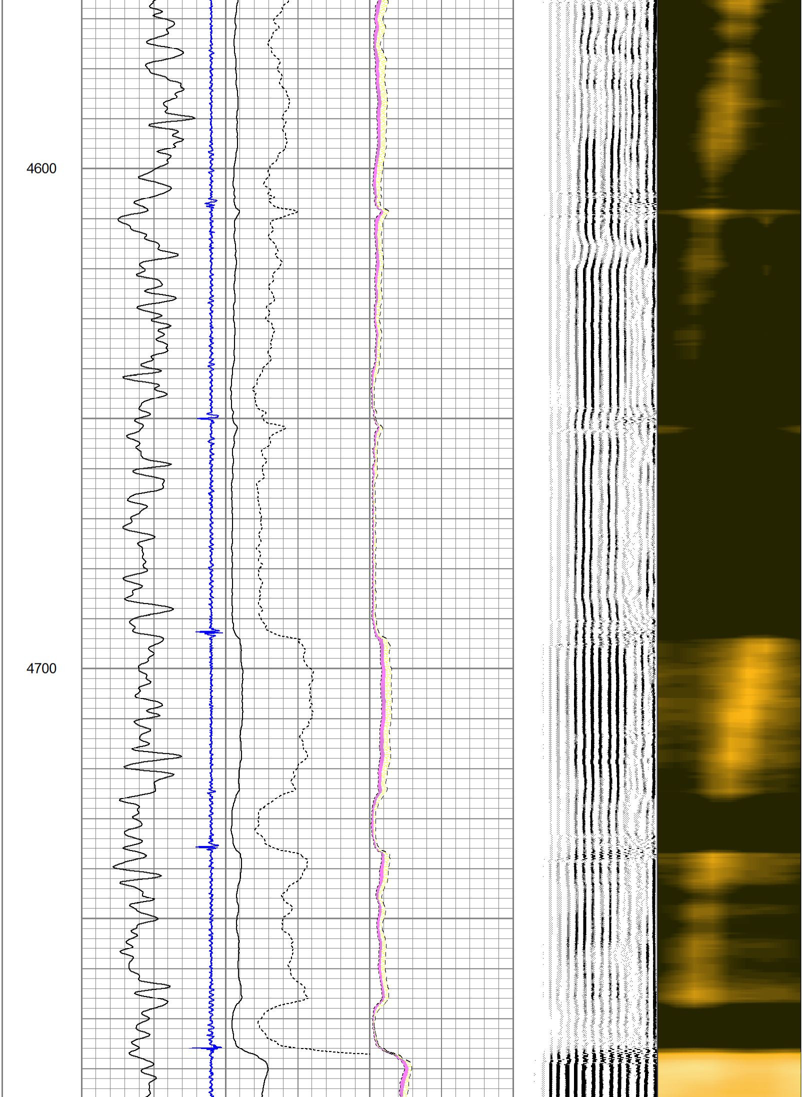
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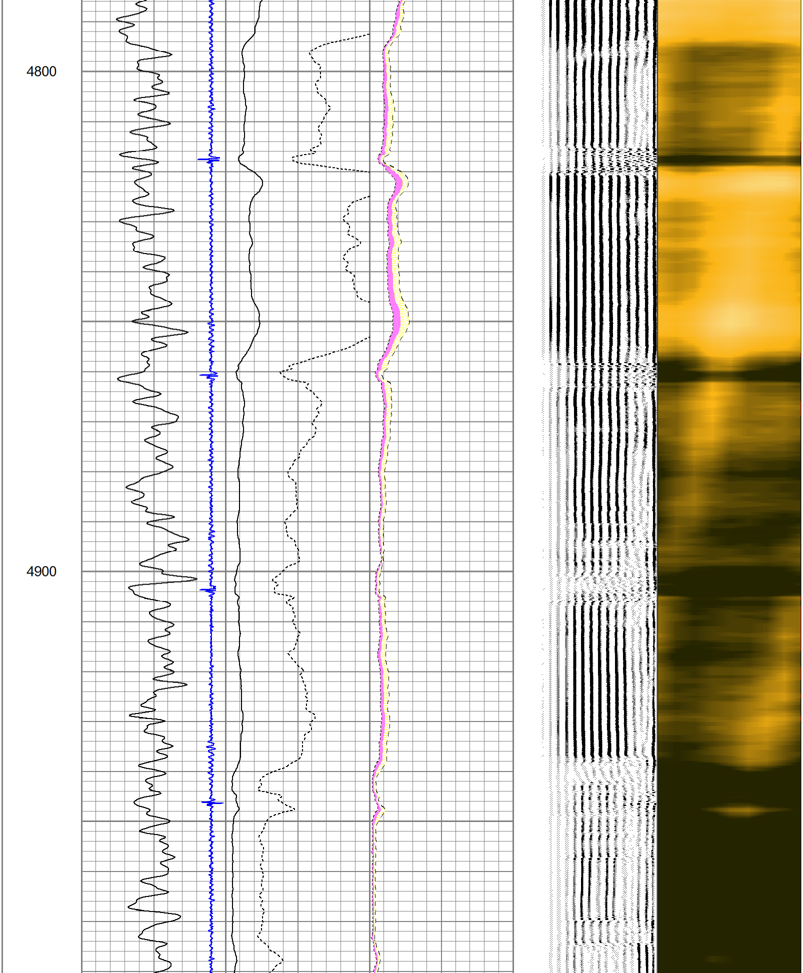
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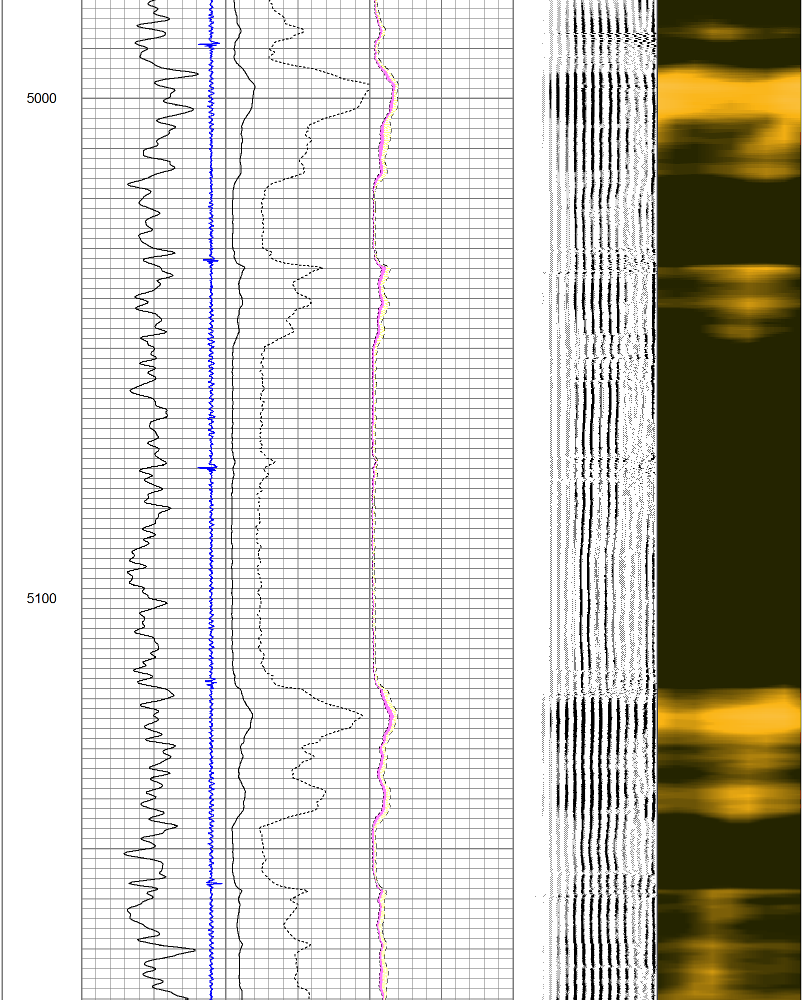
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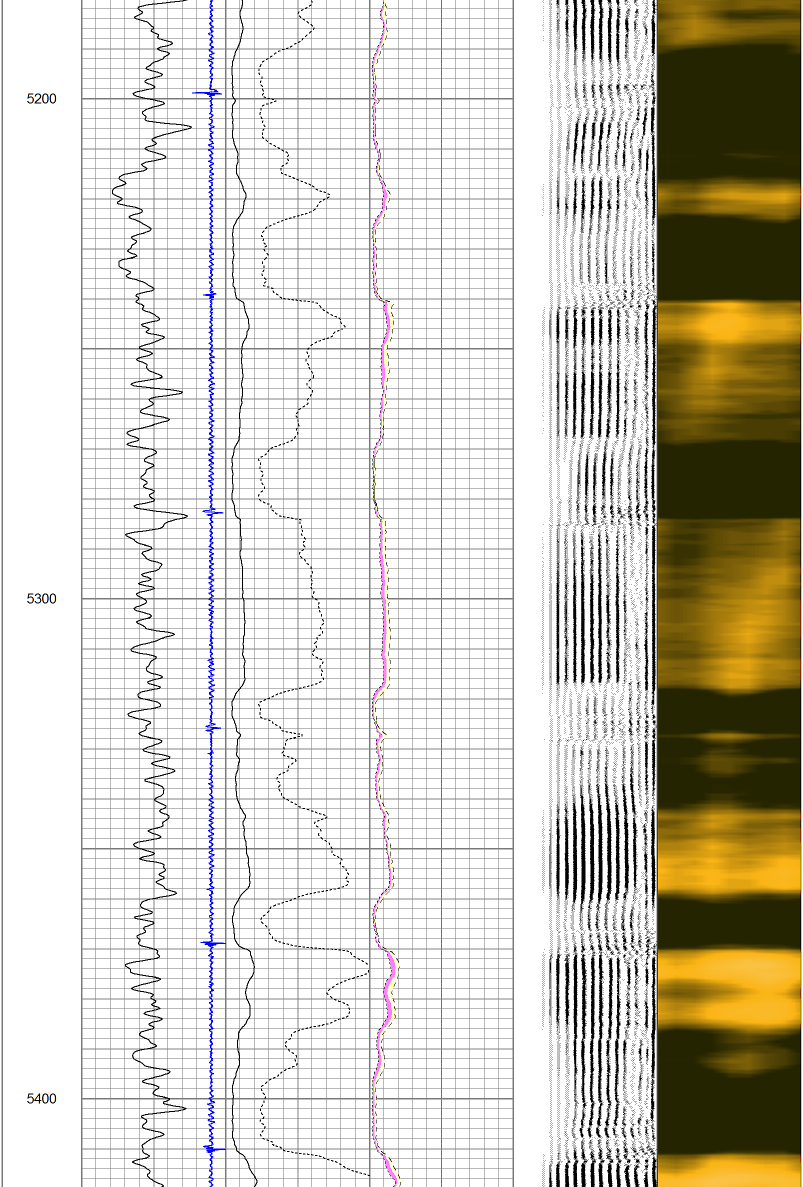
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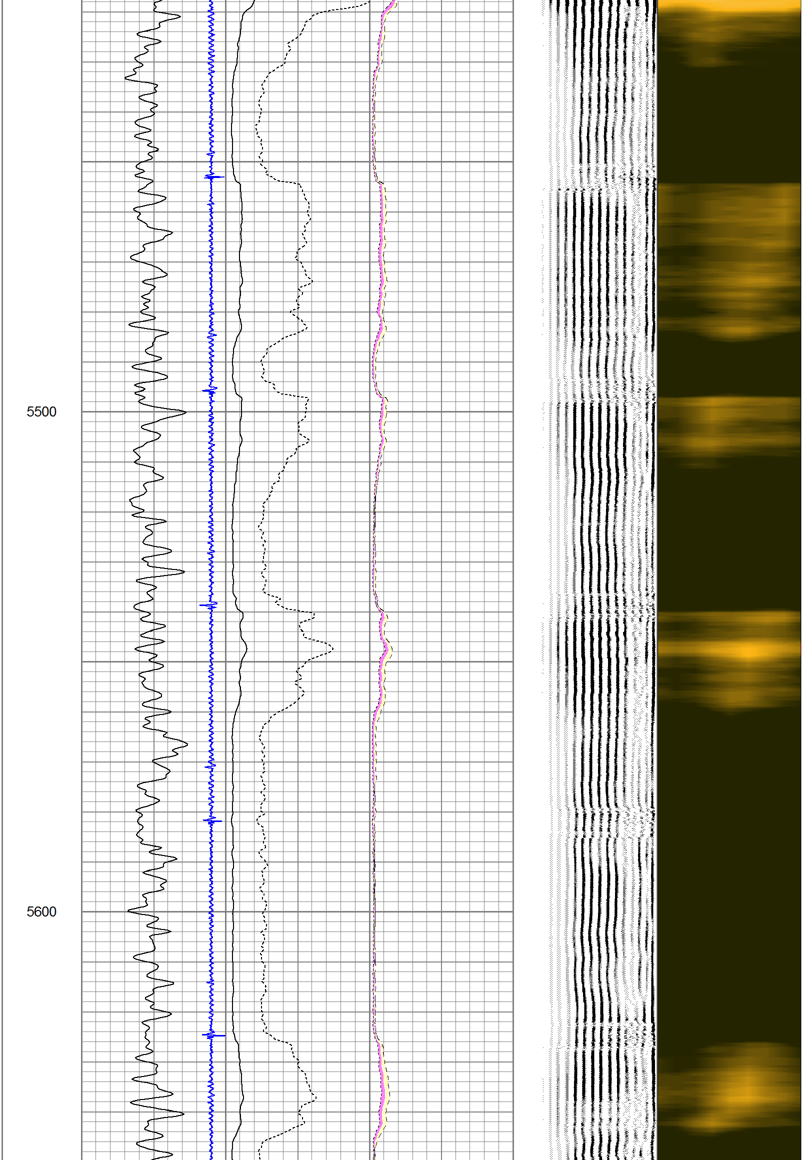
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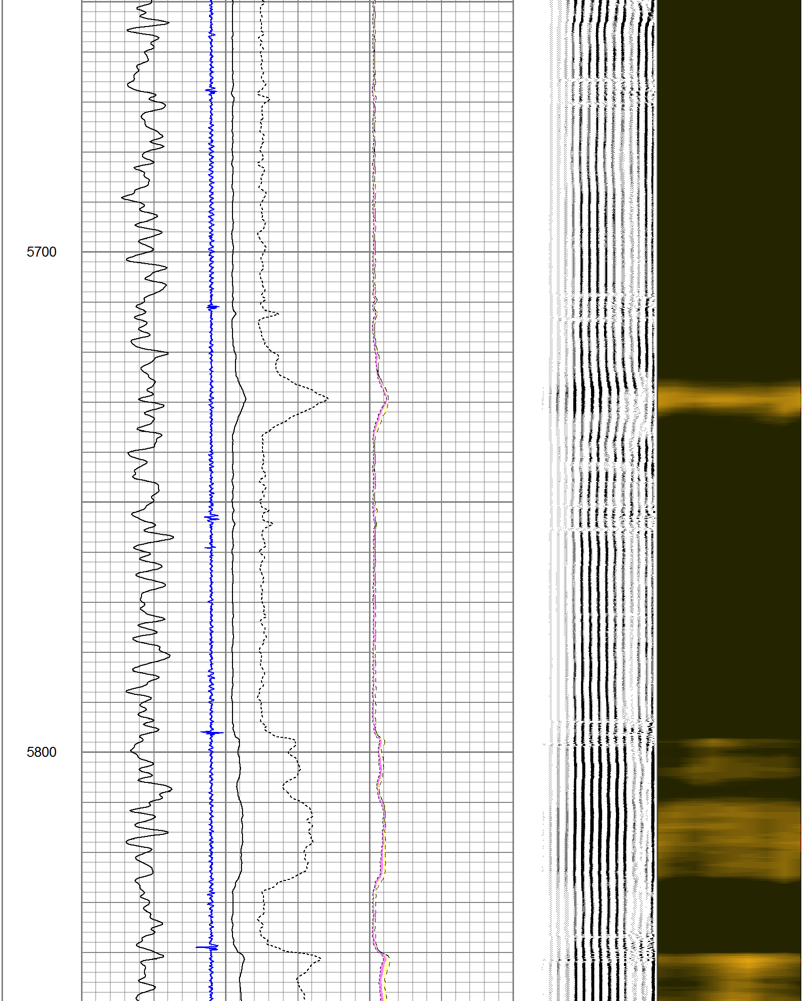
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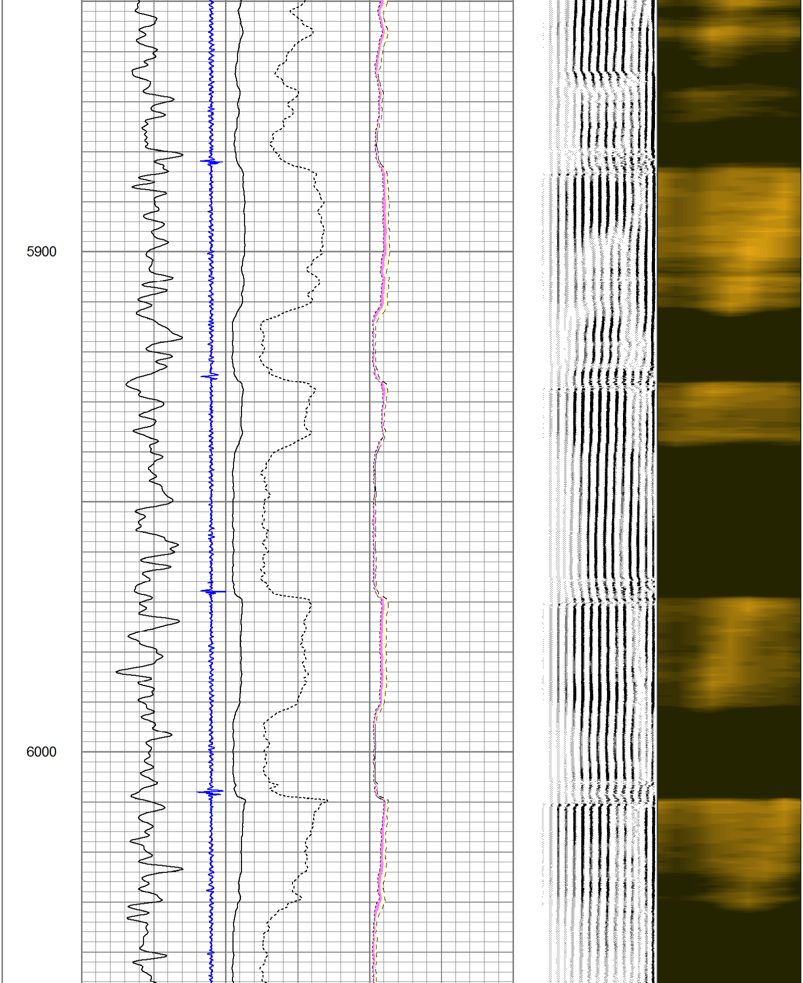
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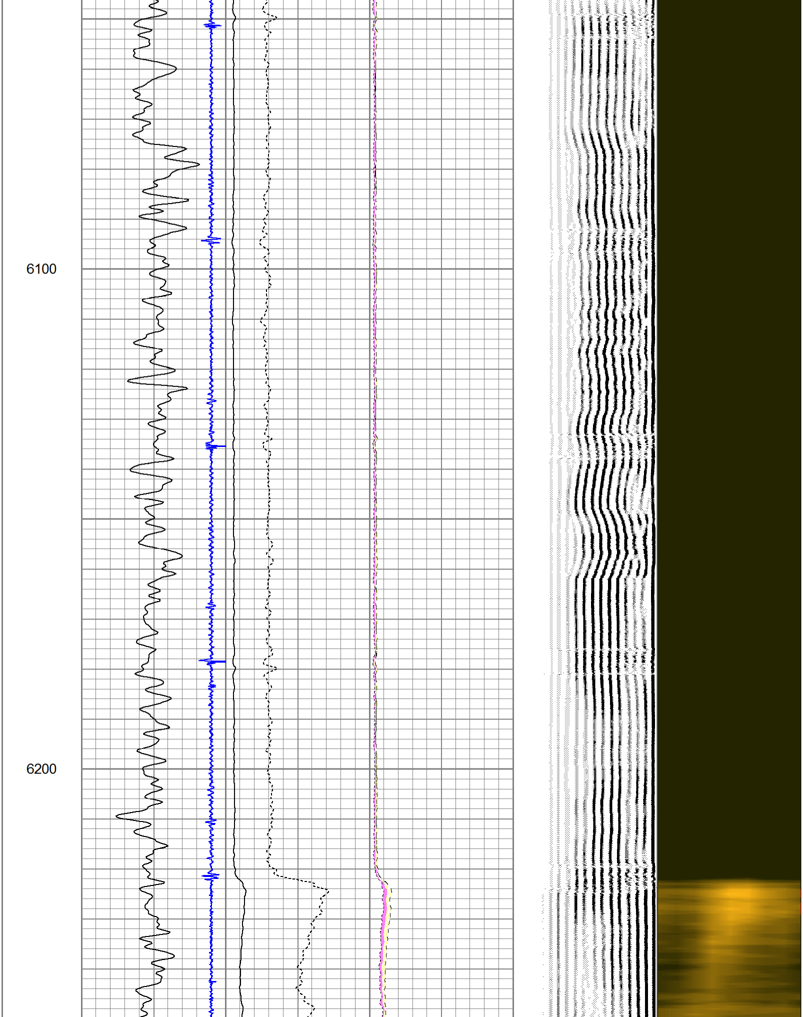
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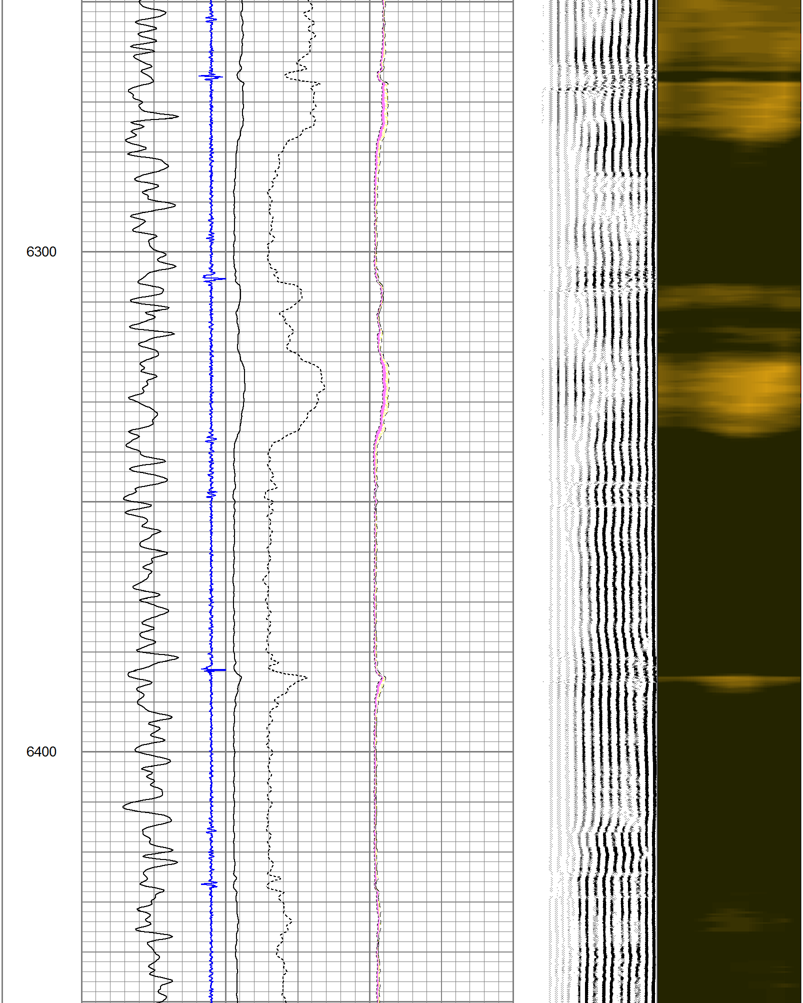
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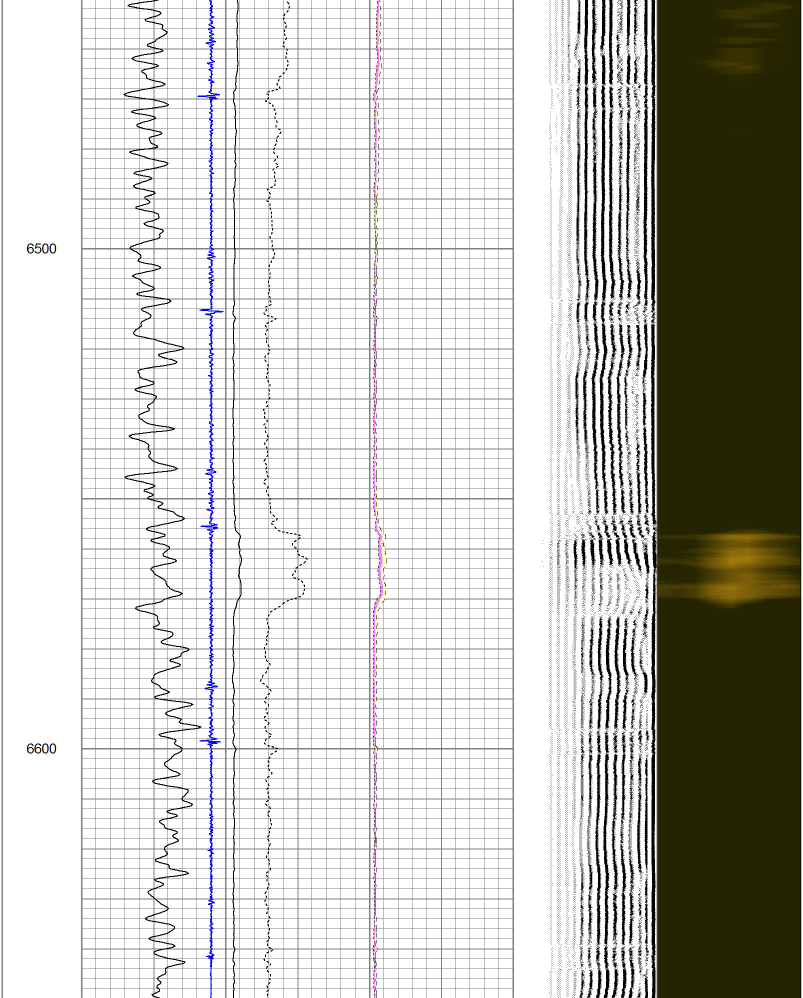
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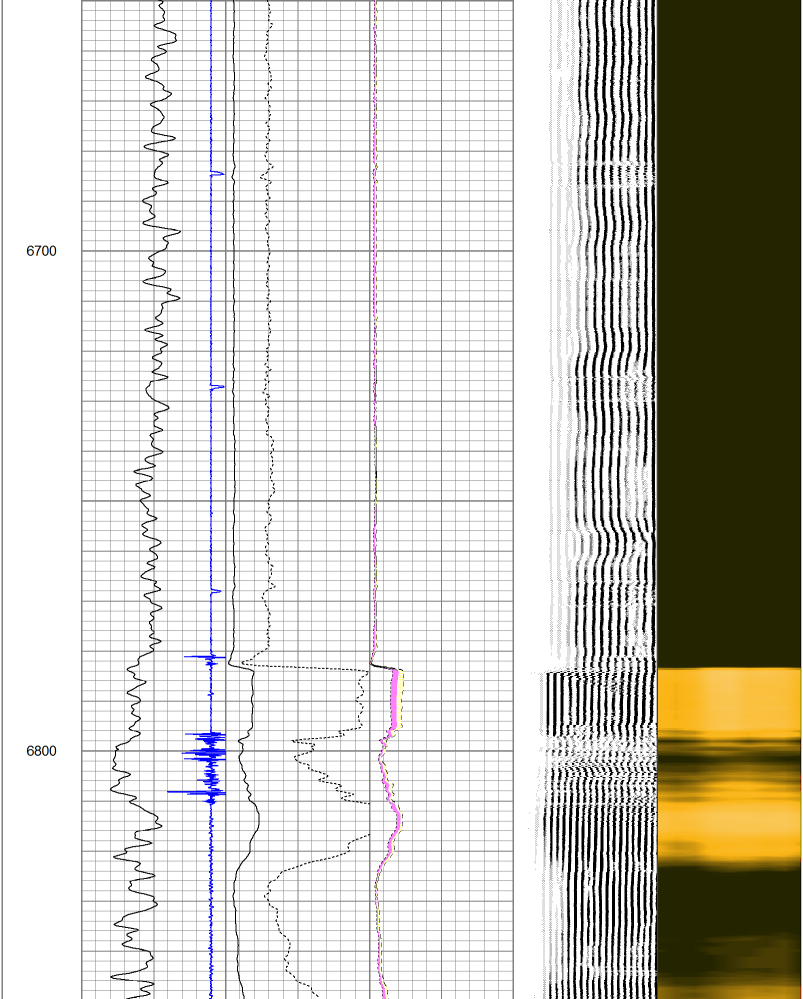
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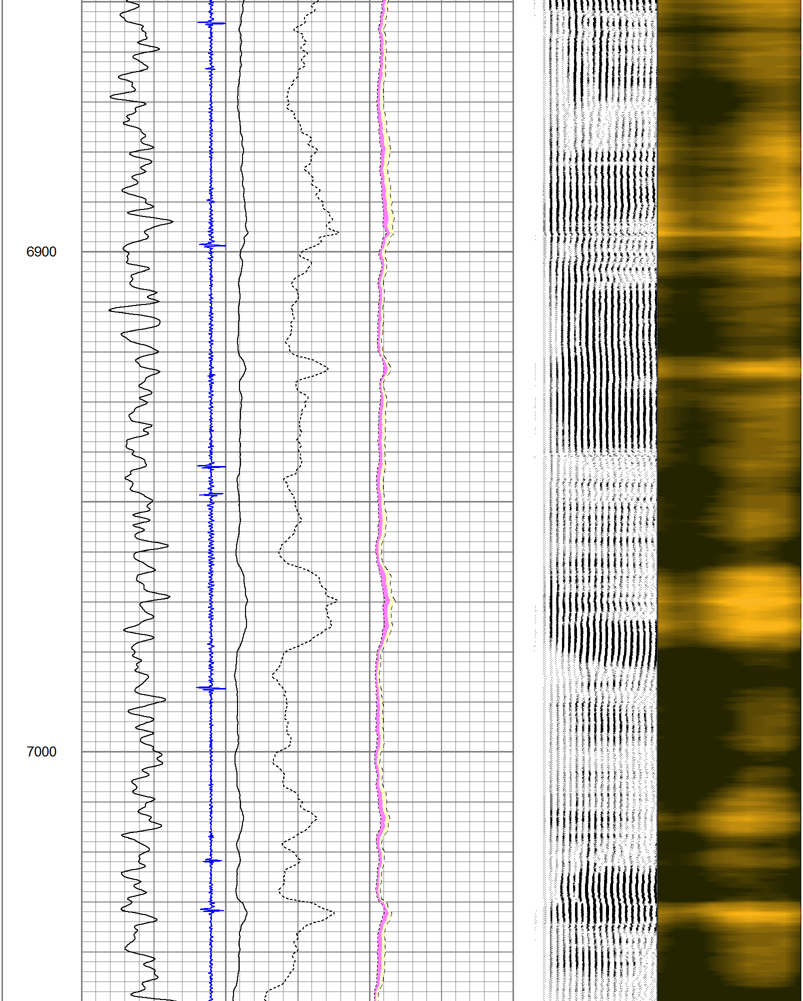
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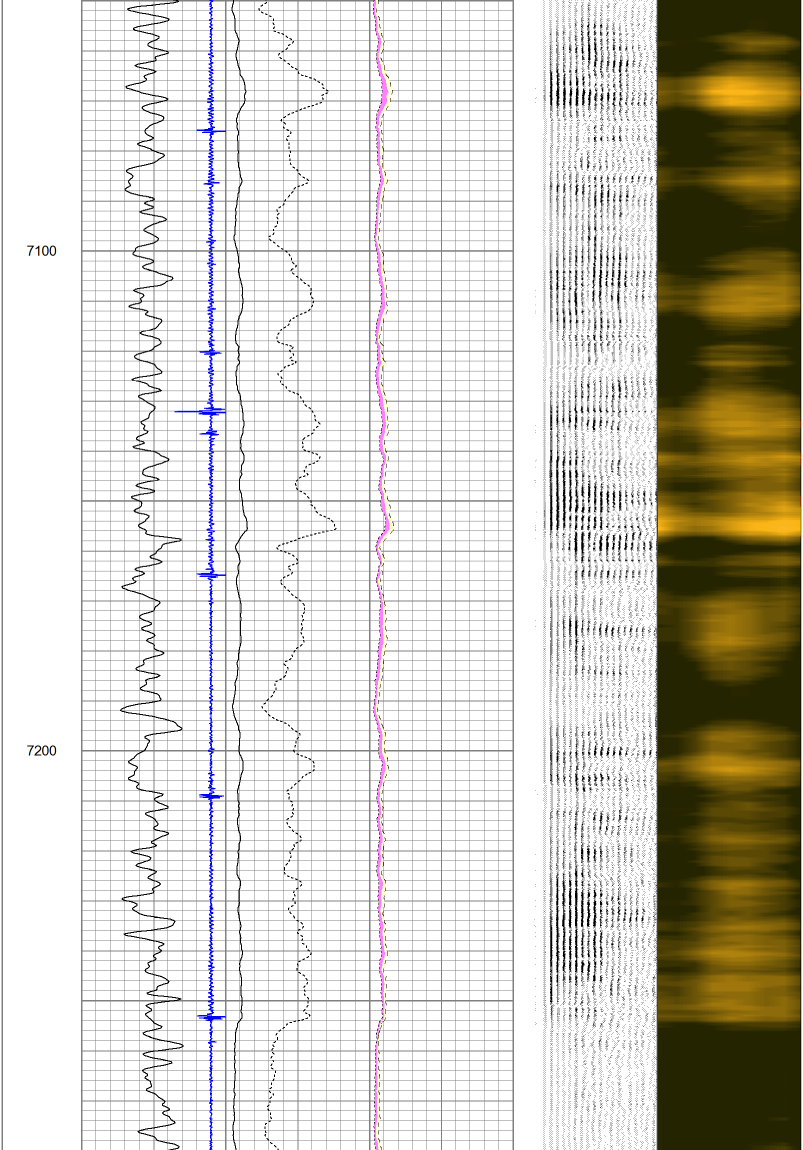
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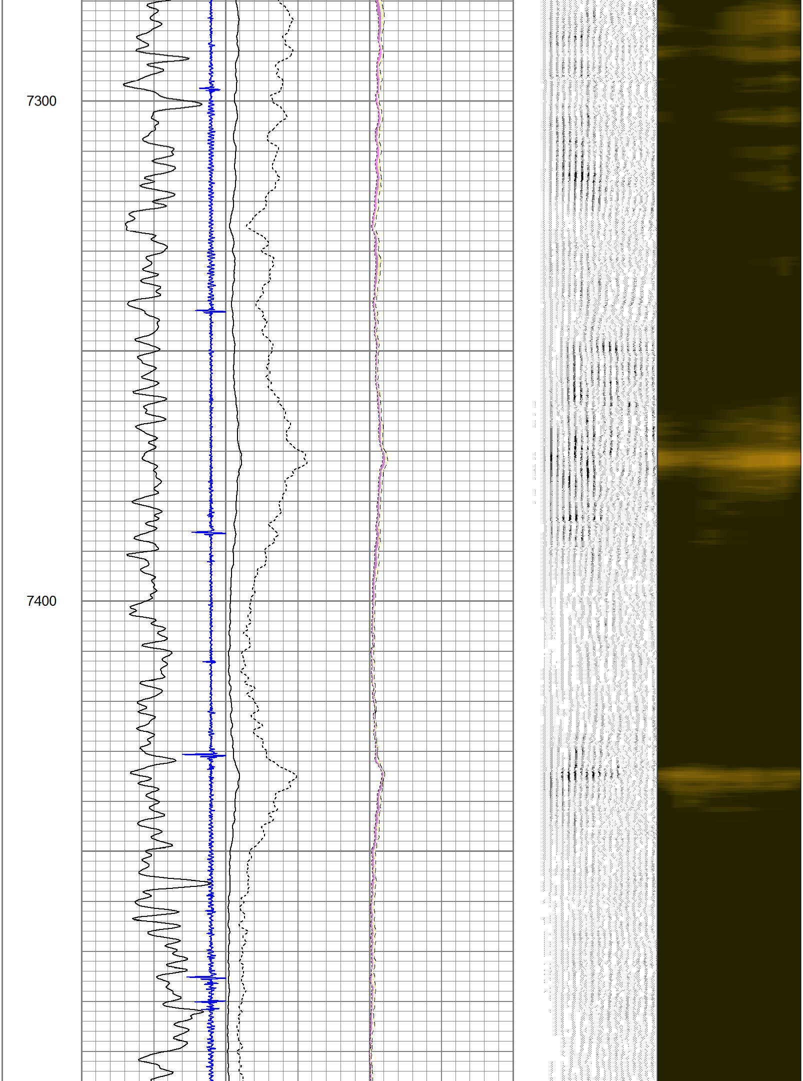
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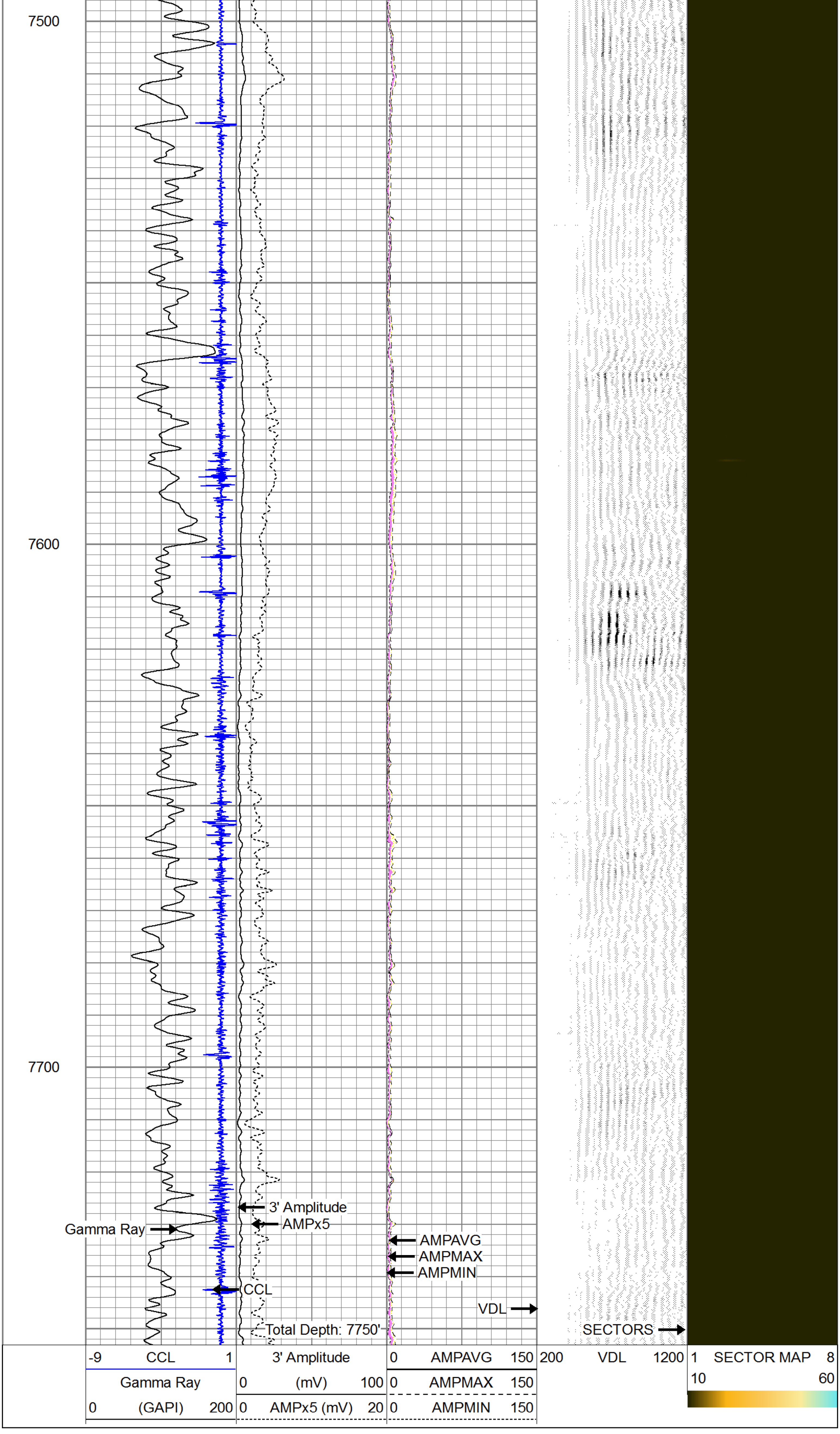

Calibration Report

Database File: nrc29n-32hz_rbl.db
Dataset Pathname: RBL/pass4
Dataset Creation: Sat Aug 16 13:18:30 2014 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number:	111211	
Tool Model:	Probe	
Performed:	Tue Aug 12 07:49:53 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.2800	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	Base	
Tool Model:	Probe	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	624.692	ft

Master Calibration, performed Fri Aug 15 16:03:17 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.005	0.685	1.500	62.165	87.937	1.904
CAL	-0.004	1.111				
5'	-0.005	0.527	1.500	62.165	114.159	2.017
SUM						
S1	-0.003	0.737	0.000	95.000	128.406	0.382
S2	-0.006	0.821	0.000	95.000	114.912	0.673
S3	-0.006	0.824	0.000	95.000	114.496	0.661
S4	-0.006	0.758	0.000	95.000	124.365	0.712
S5	-0.005	0.734	0.000	95.000	128.459	0.654
S6	-0.005	0.724	0.000	95.000	130.306	0.681
S7	-0.005	0.697	0.000	95.000	135.445	0.635
S8	-0.004	0.686	0.000	95.000	137.523	0.596

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	-0.004	1.111	1.000	0.000

Air Zero Calibration, performed Tue Aug 12 07:50:37 2014:

	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

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Company	KERR-MCGEE OIL & GAS ONSHORE
Well	NRC 29N-32HZ
Field	WATTENBERG
County	WELD
State	CO