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Pioneer Energy Services

CEMENT BOND LOG WITH GAMMA RAY

Comp. ANADARKO PETROLEUM CORP.
Well KERR MCGEE 9-13
Field WATTENBERG
Co. WELD
State COLORADO

Company **ANADARKO PETROLEUM CORP.**
Well **KERR MCGEE 9-13**
Field **WATTENBERG**
County **WELD** State **COLORADO**

Location: API # : 05-123-21402
NE SE
180' FSL & 465 FEL
SEC 13 TWP 3N RGE 66W

Other Services

Permanent Datum GL Elevation 5027
Log Measured From GL Above Perm. Datum
Drilling Measured From KB

Elevation
K.B. 5039
D.F.
G.L. 5027

Date of Service	02/18/2021		
Run Number	ONE		
Depth Driller or PBTD	8060		
Depth Logger	1190		
Bottom Log Interval	1189		
Top Log Interval	SURFACE		
Open Hole Size	7-7/8"		
Type Fluid	WATER		
Fluid Level	SURFACE		
Fluid Density	N/A		
Max. Recorded Temperature	N/A		
Max. Wellhead Pressure	ZERO		
Wellhead Connection	FULL LUB		
Estimated Cement Top	950		
Unit Number	P-132		
Wireline Size	9/32"		
Location	FORT MORGAN CO.		
Recorded By	P LOPEZ		
Witnessed By	MR. RAY BISHOB		

	Size	Wt/Ft	Top	Bottom
Tubing Record				
Surface Casing	8.63	24	SURFACE	747
Production Casing	4.50	11.6	SURFACE	8054
Liner Record				

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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.
ALL WIRELINE DEPTH
TOOL ZEROED AT GROUND LEVEL

THANK YOU FOR USING PIONEER ENERGY SERVICES!

Tool Data - Services	Serial Number
RBL-DC	140141
GR CCL	110246

Your Pioneer Energy Services Crew
Engineer: P LOPEZ
Operator: M BATREZ
Operator: J PARRISH
Operator:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\anadarko_kerr mcgee 9 -13_05-123-21402_20210218
Dataset field/well/run1/pass13/_vars_

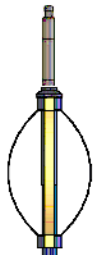
Top - Bottom

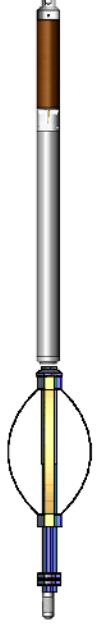
BHTEMP_Src	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV
TEMP	7.875	100	4.5	0	11.6	0

MINAMPL mV	MINATTN db/ft	PERFS	PPT usec	SRFTEMP degF	TDEPTH ft
1	0.8	No	0	0	0

Variable Description

BHTEMP_Src : BHTEMP Input Source Selector
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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Cable Head-Titan_144 1 7/16" Titan Cable Head	1.03	1.44	2.00
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00
TEMP	17.26					
			PROBE-RBT-DIGITAL-RBL-DCT (FW1411-67) Probe 2 3/4" Radii Bond with Temp-Corrosion Package	9.25	2.75	105.00
WVFS8	14.97					
WVFS7	14.97					
WVFS6	14.97					
WVFS5	14.97					
WVFS4	14.97					
WVFS3	14.97					
WVFS2	14.97					
WVFS1	14.97					
WVFCAL	14.97					
WVF3FT	14.97					
WVF5FT	13.97					
HEADVOLT	10.78					
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00

CCL	7.09					
GCT_TEMP	6.29					
GR	5.71		PROBE-GR/CCL-DIGITAL-275 Probe GCT (130588) Probe 2 3/4" Gamma Ray/Temp/CCL	4.69	2.75	60.00
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00
			Bullnose-PROBE Probe Go Pin Pressure Cap	0.33	1.38	1.00

Dataset: anadarko_kerr mcgee 9 -13_05-123-21402_20210218_scbl.db: field/well/run1/pass13
Total length: 23.94 ft
Total weight: 213.00 lb
O.D.: 2.75 in

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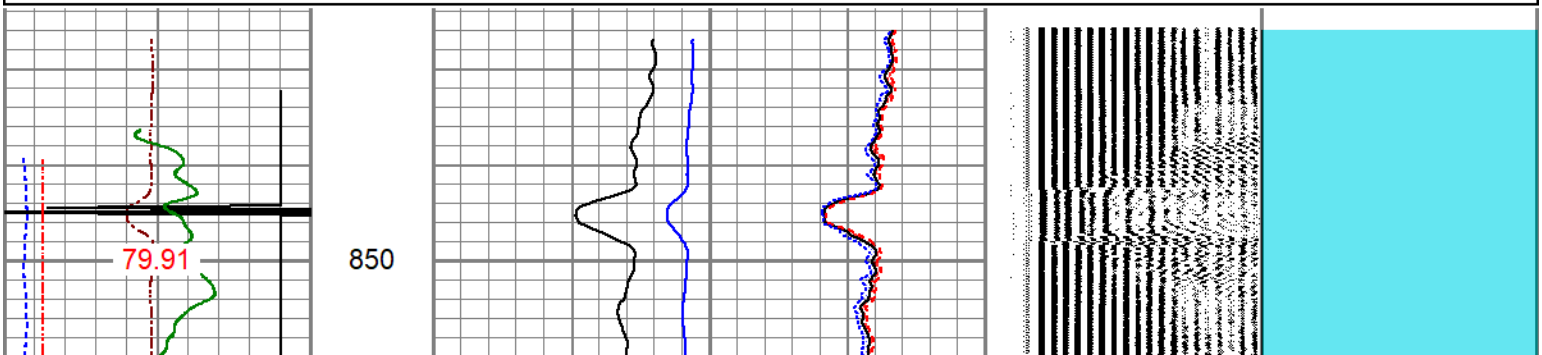
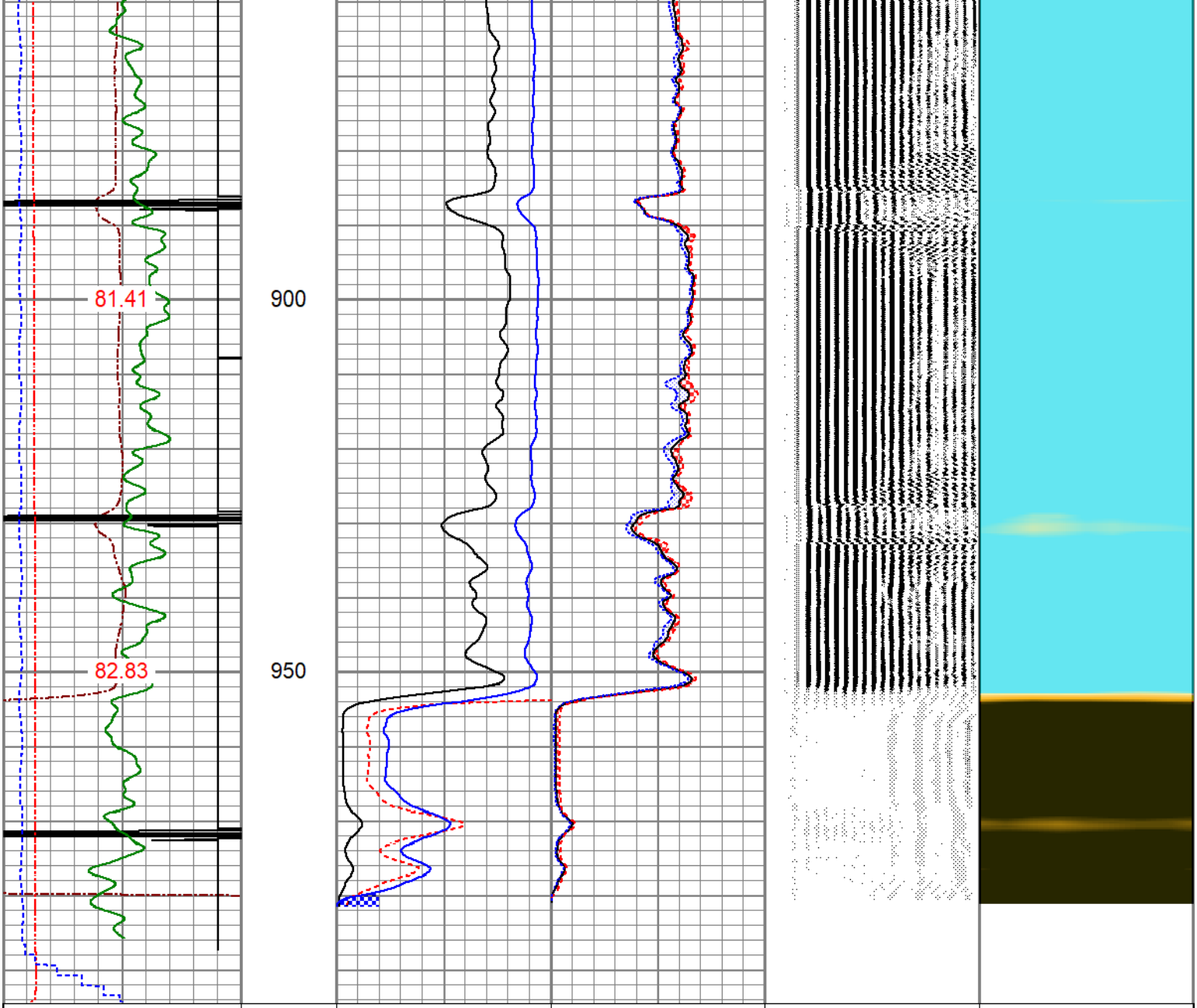
FREE PIPE SECTION

ZERO PSI APPLIED AT SURFACE

Database File	anadarko_kerr mcgee 9 -13_05-123-21402_20210218_scbl.db
Dataset Pathname	pass9
Presentation Format	pinr_scbl
Dataset Creation	Thu Feb 18 08:15:12 2021
Charted by	Depth in Feet scaled 1:240

3Ft Travel Time			3' Amplitude		Sector Amplitude Average		VDL	1 Sector Map 8
280	(usec)	180	0 (mV) 100		0 150	200	(usec) 1200	
-9	Collar Locator	1	3' Amplified Amplitude X 5		Sector Amplitude Maximum			
Gamma Ray			0 (mV) 20		0 150			
0	(GAPI)	150	1 BONDIX 0		Sector Amplitude Minimum			
LineTension					0 150			
0	(lb)	2000						
Line Speed								
-100	(ft/min)	100						
TEMP								
(degF)								





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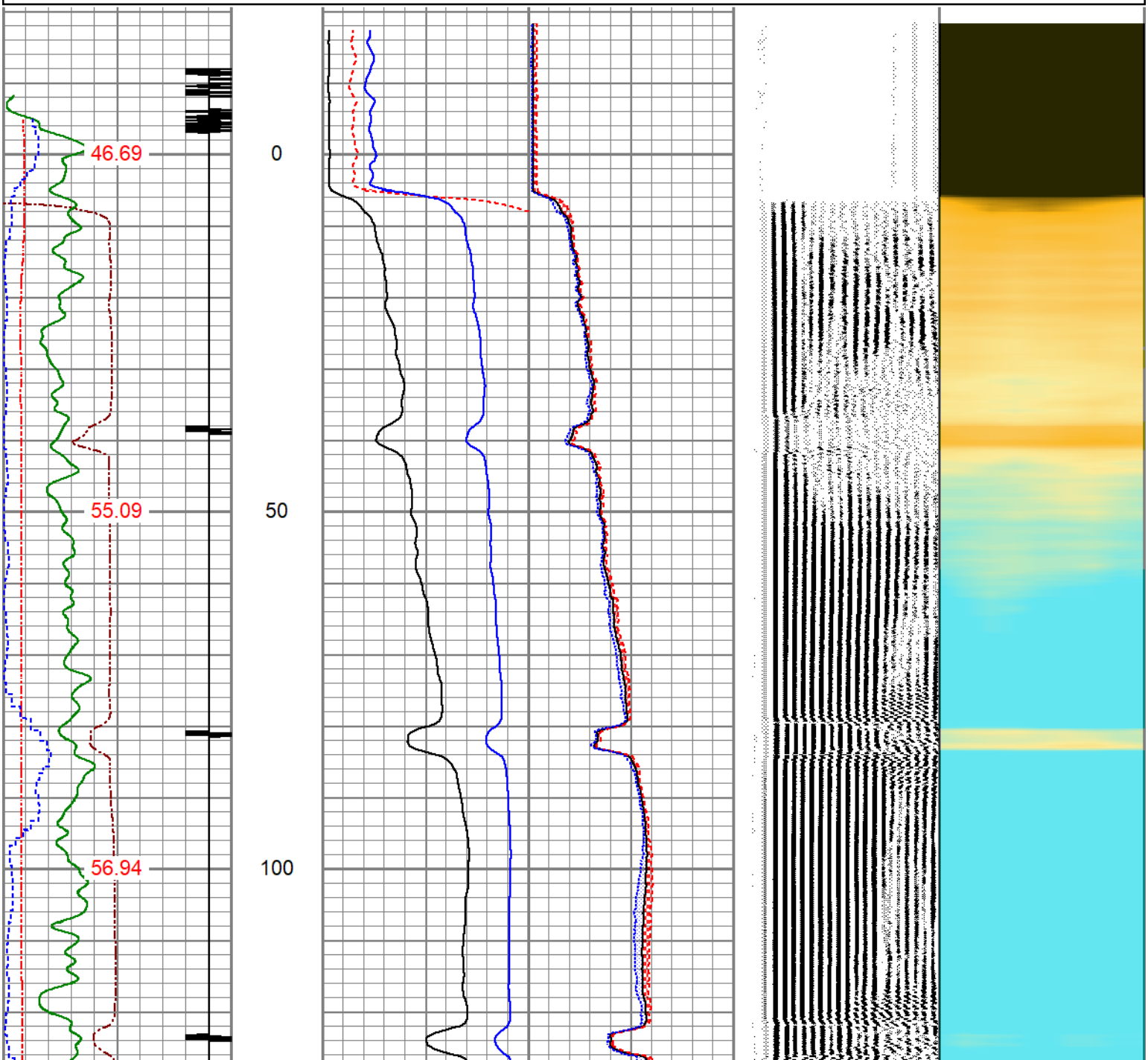
MAIN LOG

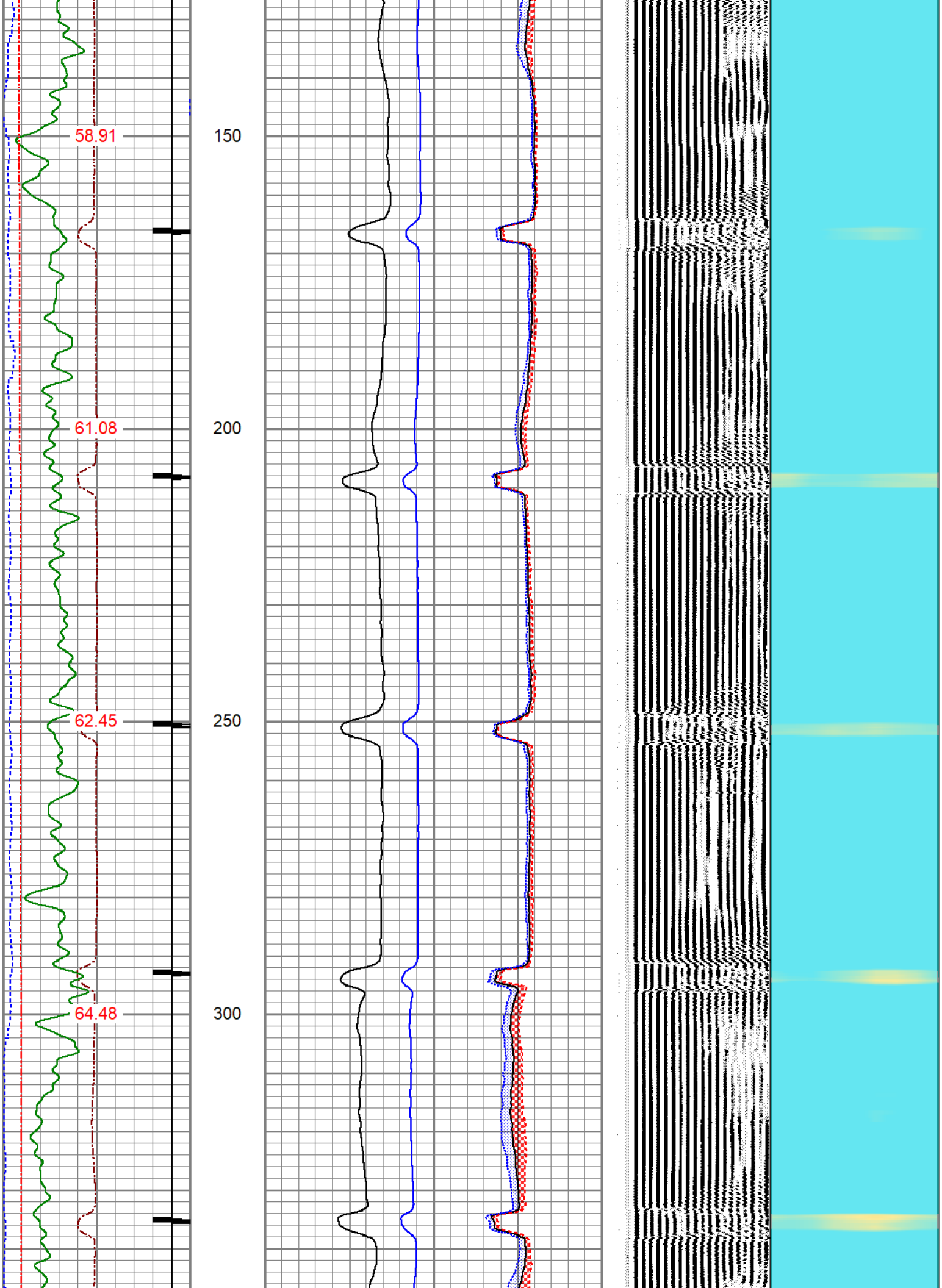
ZERO PSI APPLIED AT SURFACE

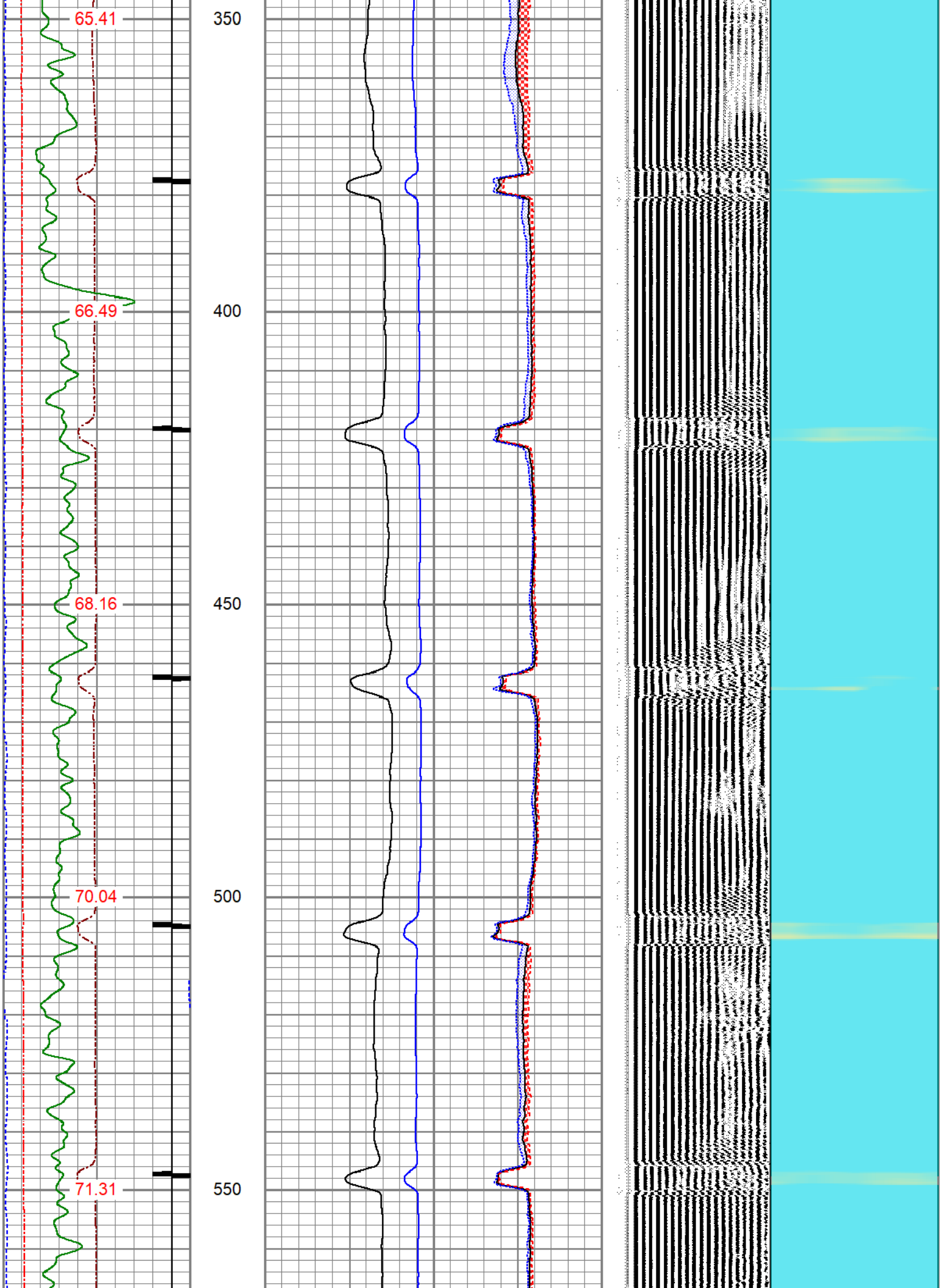
Database File anadarko kerr mcgee 9 -13 05-123-21402 20210218 scbl.db

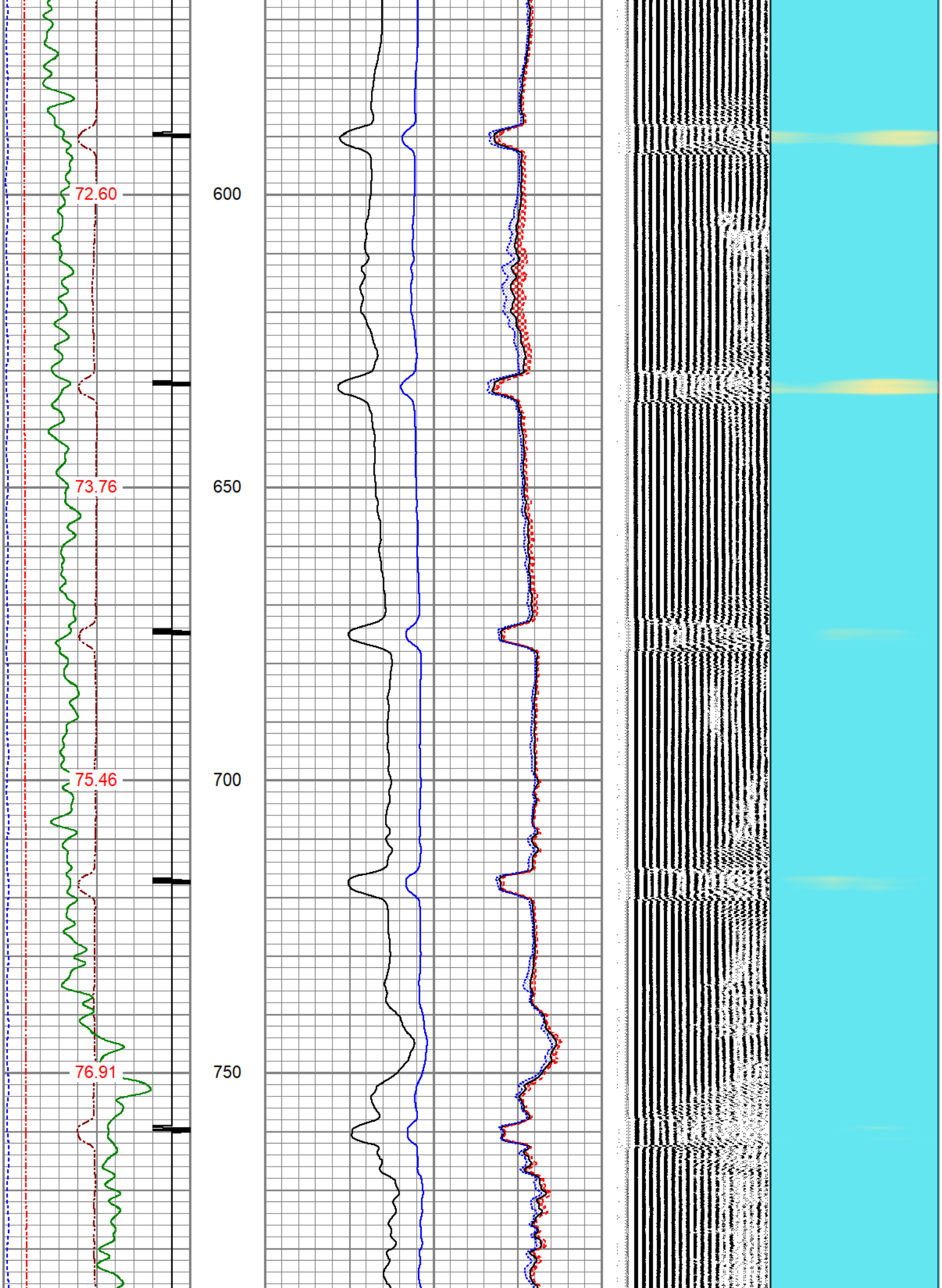
Dataset Pathname	pass13
Presentation Format	pinr_scbl
Dataset Creation	Thu Feb 18 08:25:07 2021
Charted by	Depth in Feet scaled 1:240

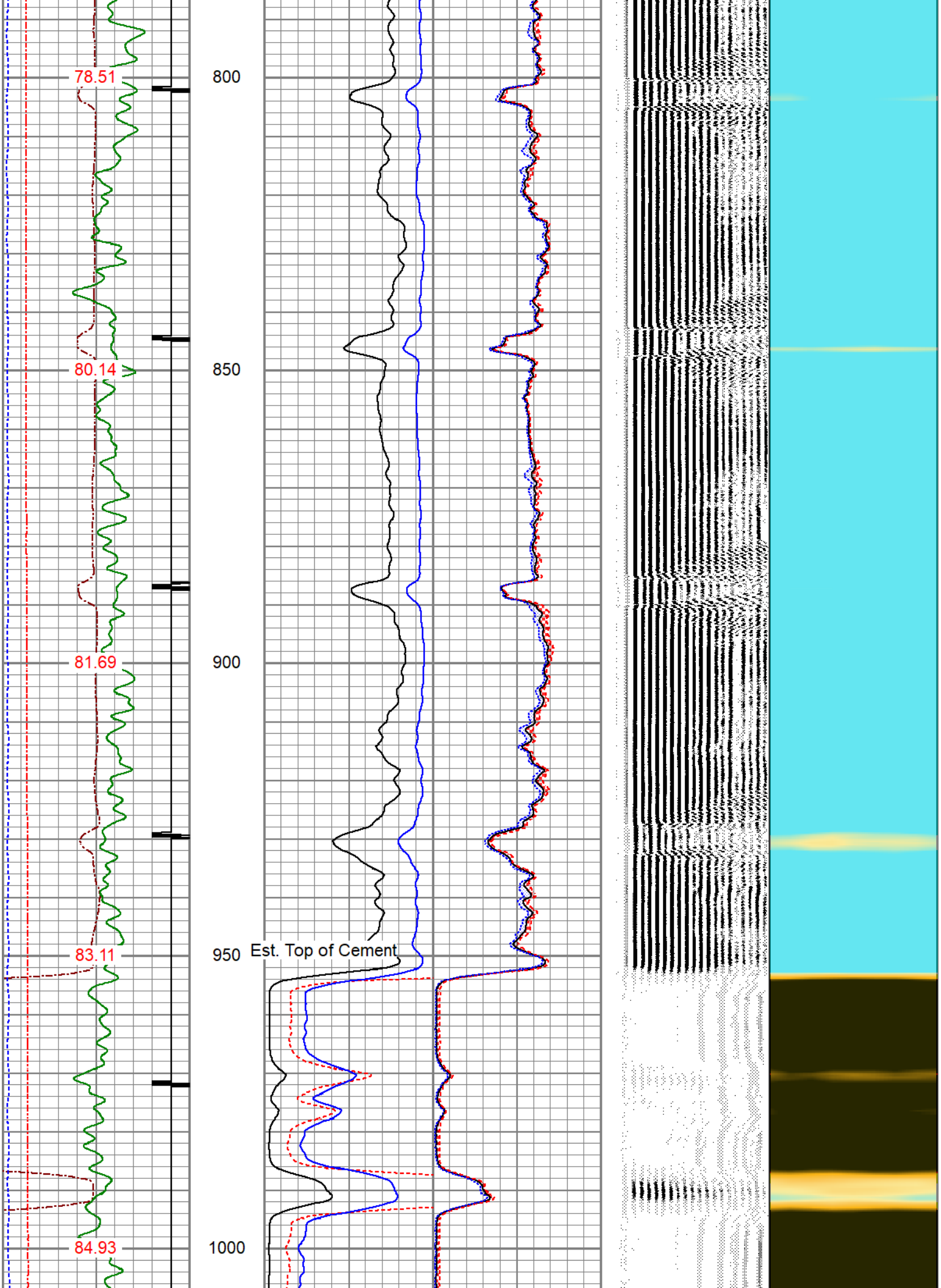
3Ft Travel Time	280 (usec) 180	
Collar Locator	-9 1	
Gamma Ray	0 (GAPI) 150	
LineTension	0 (lb) 2000	
Line Speed	-100 (ft/min) 100	
TEMP	(degF)	
3' Amplitude	0 (mV) 100	
3' Amplified Amplitude X 5	0 (mV) 20	
BONDIX	1 0	
Sector Amplitude Average	0 150	
Sector Amplitude Maximum	0 150	
Sector Amplitude Minimum	0 150	
VDL	200 (usec) 1200	
Sector Map	1 8	

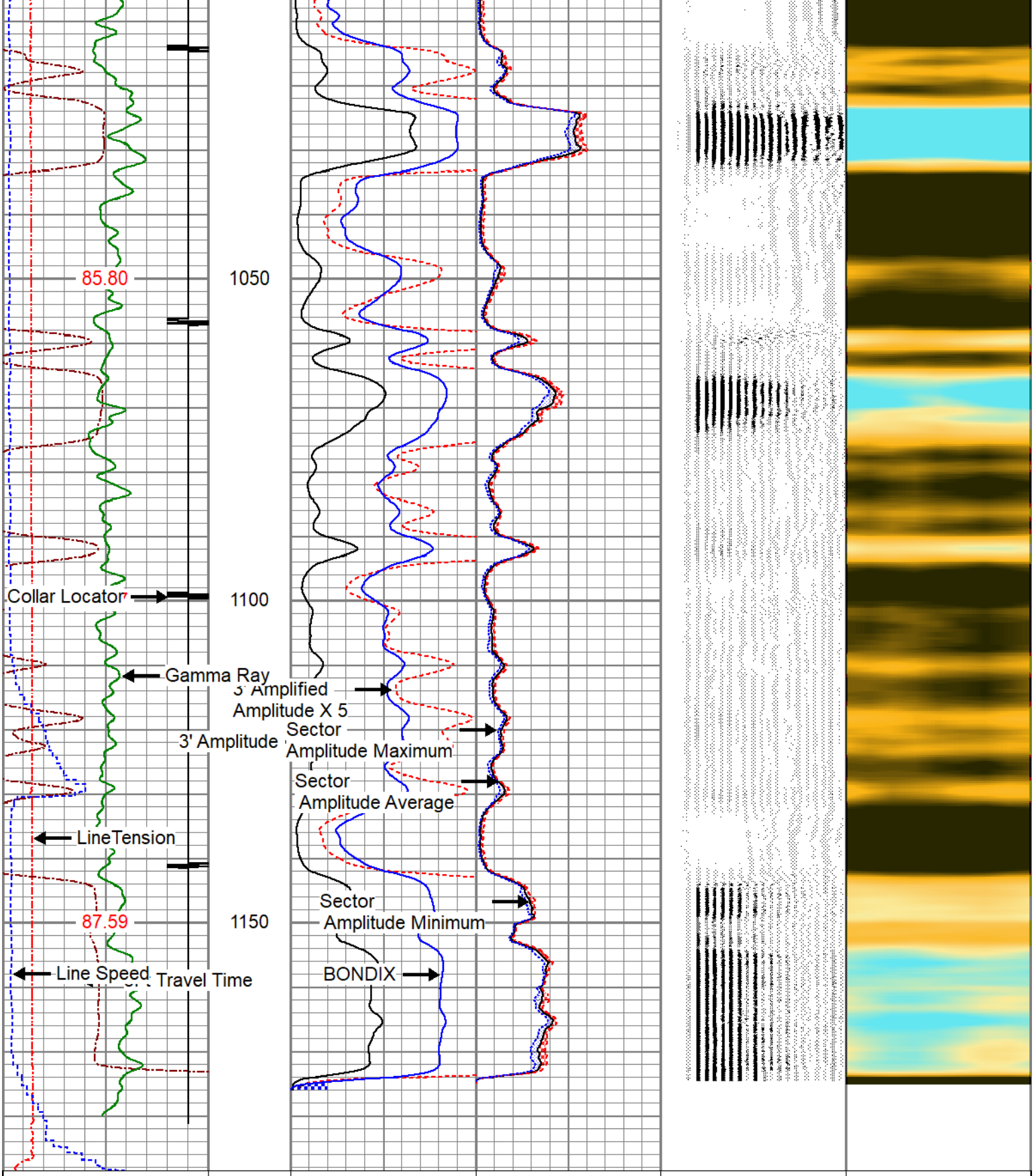



58.91
61.08
62.45
64.48
150
200
250
300


65.41
66.49
68.16
70.04
71.31
350
400
450
500
550


72.60
600
73.76
650
75.46
700
76.91
750


78.51
80.14
81.69
83.11
84.93
800
850
900
950
1000
Est. Top of Cement



3Ft Travel Time	280 (usec) 180	
-9 Collar Locator 1		
Gamma Ray	0 (GAPI) 150	
LineTension	0 (lb) 2000	
Line Speed		
3' Amplitude	0 (mV) 100	
3' Amplified Amplitude X 5	0 (mV) 20	
1 BONDIX 0		
Sector Amplitude Average	0 150	
Sector Amplitude Maximum	0 150	
Sector Amplitude Minimum		
VDL	200 (usec) 1200	
1 Sector Map 8		

-100 (ft/min) 100

TEMP (degF)

0 150

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REPEAT SECTION

ZERO PSI APPLIED AT SURFACE

Database File	anadarko_kerr mcgee 9 -13_05-123-21402_20210218_scbl.db
Dataset Pathname	pass11
Presentation Format	pinr_scbl
Dataset Creation	Thu Feb 18 08:20:09 2021
Charted by	Depth in Feet scaled 1:240

3Ft Travel Time
280 (usec) 180

-9 Collar Locator 1

Gamma Ray
0 (GAPI) 150

LineTension
0 (lb) 2000

Line Speed
-100 (ft/min) 100

TEMP (degF)

3' Amplitude
0 (mV) 100

3' Amplified Amplitude X 5
0 (mV) 20

1 BONDIX 0

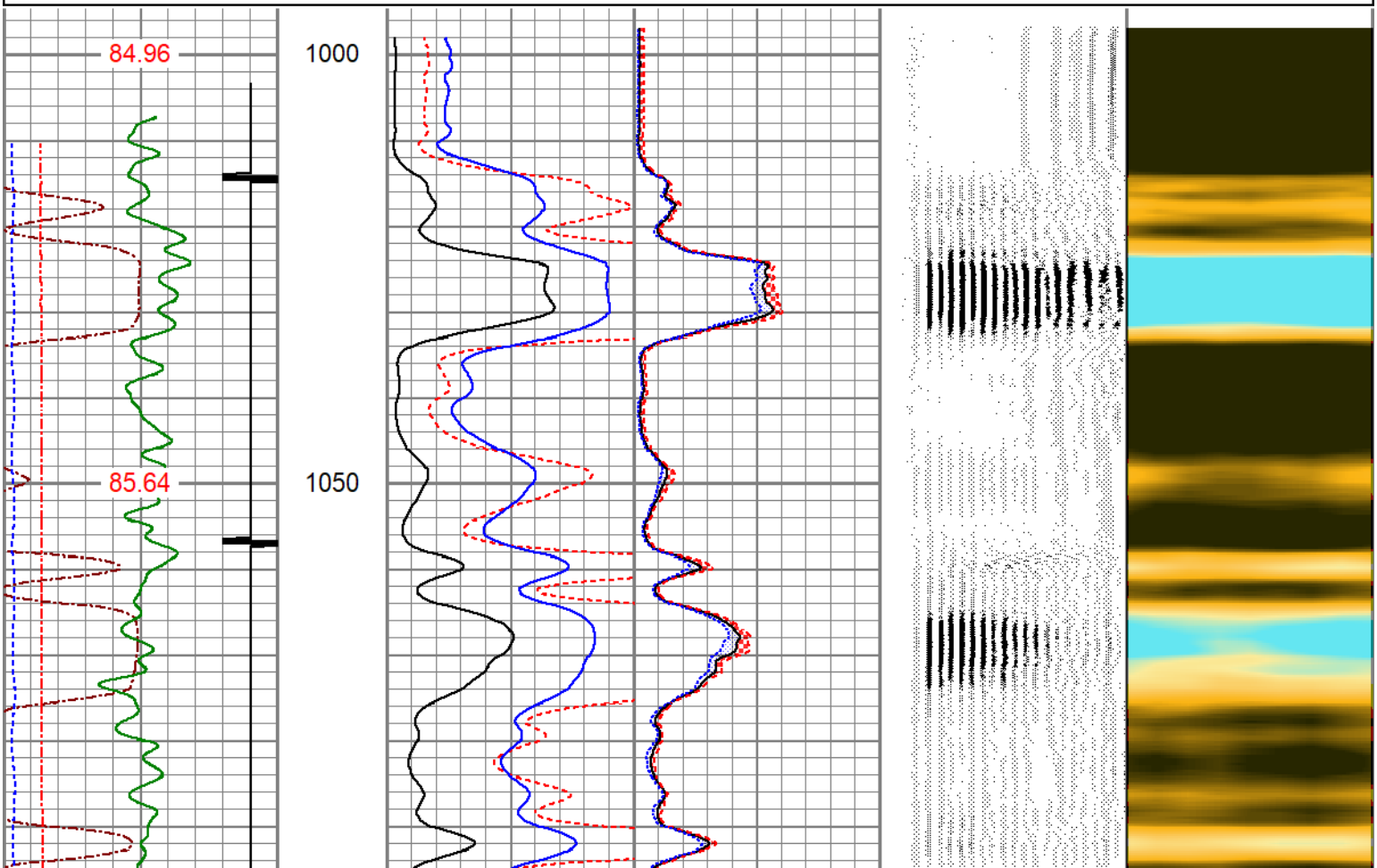
Sector Amplitude Average
0 150

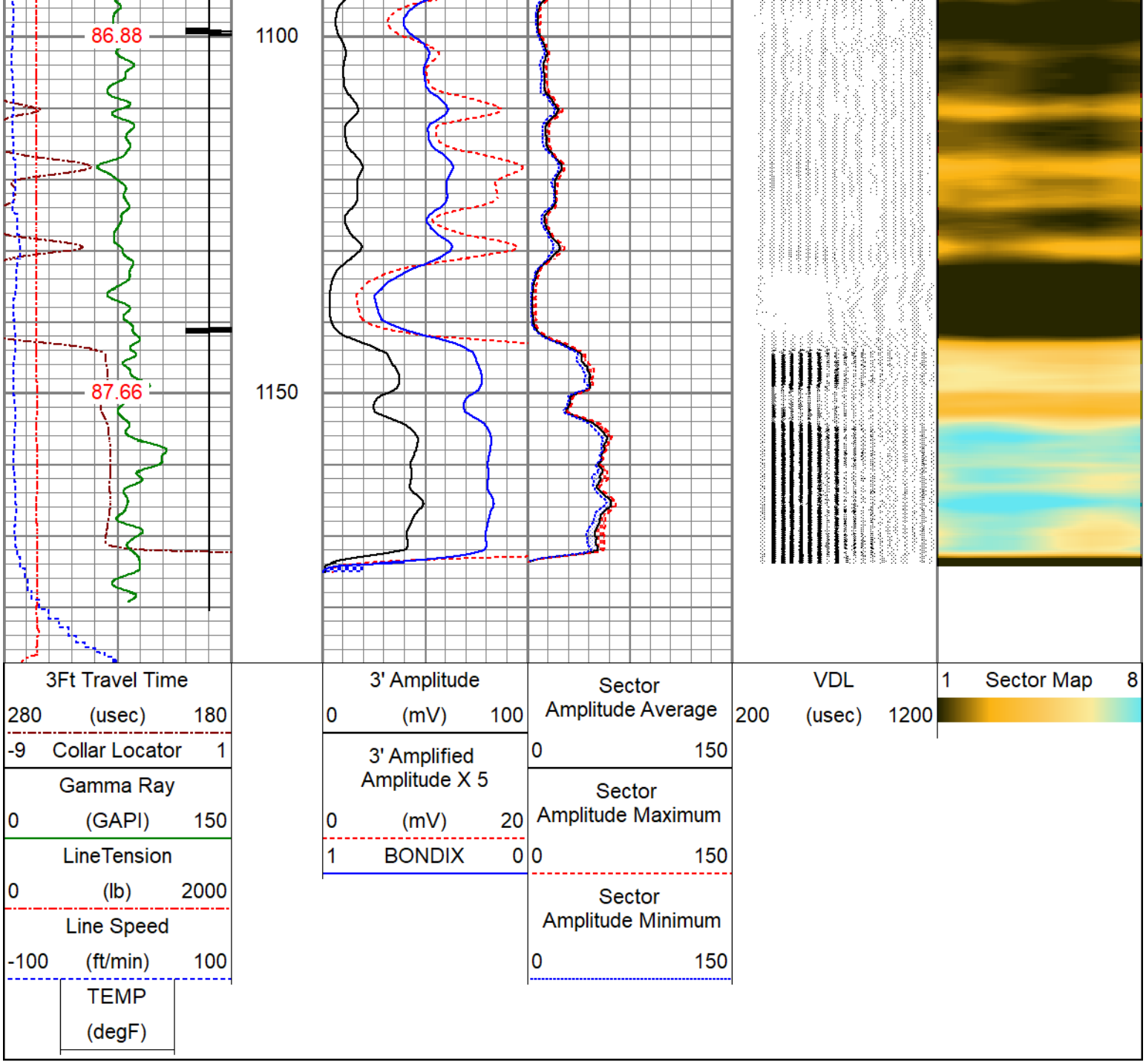
Sector Amplitude Maximum
0 150

Sector Amplitude Minimum
0 150

VDL
200 (usec) 1200

1 Sector Map 8





Calibration Report

Database File	anadarko_kerr mcgee 9 -13_05-123-21402_20210218_scbl.db
Dataset Pathname	pass13
Dataset Creation	Thu Feb 18 08:25:07 2021

Gamma Ray Calibration Report

Serial Number:	130588	
Tool Model:	275 Probe GCT	
Performed:	Wed Dec 09 15:38:33 2020	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.7000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1411-67	
Tool Model:	RBL-DCT	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	915.270	ft

Master Calibration, performed Thu Feb 18 08:14:33 2021:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.583	1.000	81.196	137.593	1.000
CAL	0.000	1.072				
5'	0.000	0.598	1.000	81.196	134.058	1.000
SUM						
S1	0.000	0.586	0.000	100.000	170.745	0.000
S2	0.000	0.640	0.000	100.000	156.351	0.000
S3	0.000	0.660	0.000	100.000	151.462	0.000
S4	0.000	0.653	0.000	100.000	153.164	0.000
S5	0.000	0.635	0.000	100.000	157.520	0.000
S6	0.000	0.613	0.000	100.000	163.129	0.000
S7	0.000	0.598	0.000	100.000	167.262	0.000
S8	0.000	0.571	0.000	100.000	175.002	0.000

Air Zero Calibration, performed Mon Aug 03 16:41:04 2020:

	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

Temperature Calibration Report

Serial Number:	FW1411-67			
Tool Model:	RBL-DCT			
Performed:	(Not Performed)			
	Reference		Reading	
Low Reference:	0.00	degF	0.00	degF
High Reference:	1.00	degF	1.00	degF
Gain:	1.00			
Offset:	0.00			
Delta Spacing	1			

Company	ANADARKO PETROLEUM CORP.
Well	KERR MCGEE 9-13

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Field	WATTENBERG	
County	WELD	
State	COLORADO	Country