



**SECTOR CEMENT BOND  
GAMMA RAY  
CCL LOG**

Comp. OCCIDENTAL PETROLEUM CORP.  
Well COOLEY 22-16  
Field WATTENBERG  
Co. WELD  
State COLORADO

Company **OCCIDENTAL PETROLEUM CORP.**  
Well **COOLEY 22-16**  
Field **WATTENBERG**  
County **WELD** State **COLORADO**

Location: API # : 05-123-32276 Other Services  
998' FSL & 1151' FWL  
SEC 16 TWP 2N RGE 68W  
Permanent Datum GL Elevation 4885'  
Log Measured From GL 0' Above Perm. Datum  
Drilling Measured From KB  
K.B. 4899'  
D.F. N/A  
G.L. 4885'

Date of Service	31-AUG-2022				
Run Number	ONE				
Depth Driller or PBTD	8260'				
Depth Logger	1052'				
Bottom Log Interval	1050'				
Top Log Interval	SURFACE				
Open Hole Size	7-7/8"				
Type Fluid	H2O				
Fluid Level	SURFACE				
Fluid Density	N/A				
Max. Recorded Temperature	N/A				
Max. Wellhead Pressure	0 PSI				
Wellhead Connection	7-1/16" 5K				
Estimated Cement Top	620'				
Unit Number	1007				
Wireline Size	9/32"				
Location	BRIGHTON				
Recorded By	J. KOTT				
Witnessed By	MR. JEREMY DUTY				
Surface Casing	8-5/8"	Size	WFt	Top	Bottom
Production Casing	4-1/2"		24#	SURFACE	947'
Liner Casing			11.6#	SURFACE	8249'
Tubing Record					

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All interpretations are opinions based on inferences from electrical or other measurements and Ranger Energy Services cannot and does not guarantee the accuracy or correctness of any interpretation, and Ranger Energy Services 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 CORRELATED TO GL PER REQUEST

THANK YOU FOR USING RANGER ENERGY SERVICES! FIELD TICKET #67539

Your Ranger Energy Services Crew	Tool Data - Services	Serial Number
Engineer: J. KOTT Operator: B. TOOLEY Operator: C. PROPST Operator:		

Operator	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
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Sensor	Offset (ft)	Schematic	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	
WVFSYNC	16.00						
WVFCAL	16.00						
TEMP	14.87						
WVFS8	13.58			SCBLTEKSECT-275 Temp JS (234RIBT-2096) TekCo 2 3/4" 400 Deg. F Sector Tool with Temperature (JS)	9.13	2.75	130.00
WVFS7	13.58						
WVFS6	13.58						
WVFS5	13.58						
WVFS4	13.58						
WVFS3	13.58						
WVFS2	13.58						
WVFS1	13.58						
WVF3FT	12.83						
WVF5FT	11.83						
WVFTEMP	8.50						
CCL	7.35		CCL-275tekco (111) Tekco 2 3/4" 450 Deg. F Rare Earth Magnets	1.83	2.75	33.00	
GR	4.04		GR-Tek-Co 2 3/4 (234GR4-267) Tekco 2 3/4" 400 Deg. F Logging Gamma Ray	3.67	2.75	40.00	
			Centralizers-8071-275-200 Tekco 2 3/4" Adjustable Centralizer	2.73	2.75	25.00	
			Bull_Plug-1_7/16_GO Titan 1 7/16" Female Bull Plug	0.27	1.44	1.00	

Dataset: 467539\_oxy\_cooley 22-16\_0512332276\_20220831\_scbl-ccl.db: field/well/run1/pass4.1  
 Total length: 18.64 ft  
 Total weight: 232.31 lb  
 O.D.: 2.75 in

# Log Variables

DatabaseC:\ProgramData\Warrior\Data\467539\_oxy\_cooley 22-16\_0512332276\_20220831\_scbl-cc  
Dataset field/well/run1/pass4.1/\_vars\_

## Top - Bottom

BHTEMP_Src TEMP	BOREID in 8.75	BOTTEMP degF 100	CASEOD in 4.5	CASETHCK in 0.408	CASEWGHT lb/ft 11.6	MAXAMPL mV 81.2	MINAMPL mV 0.7
MINATTN db/ft 0.8	PERFS No	PPT usec 0	SRFTEMP degF 0	TDEPTH ft 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

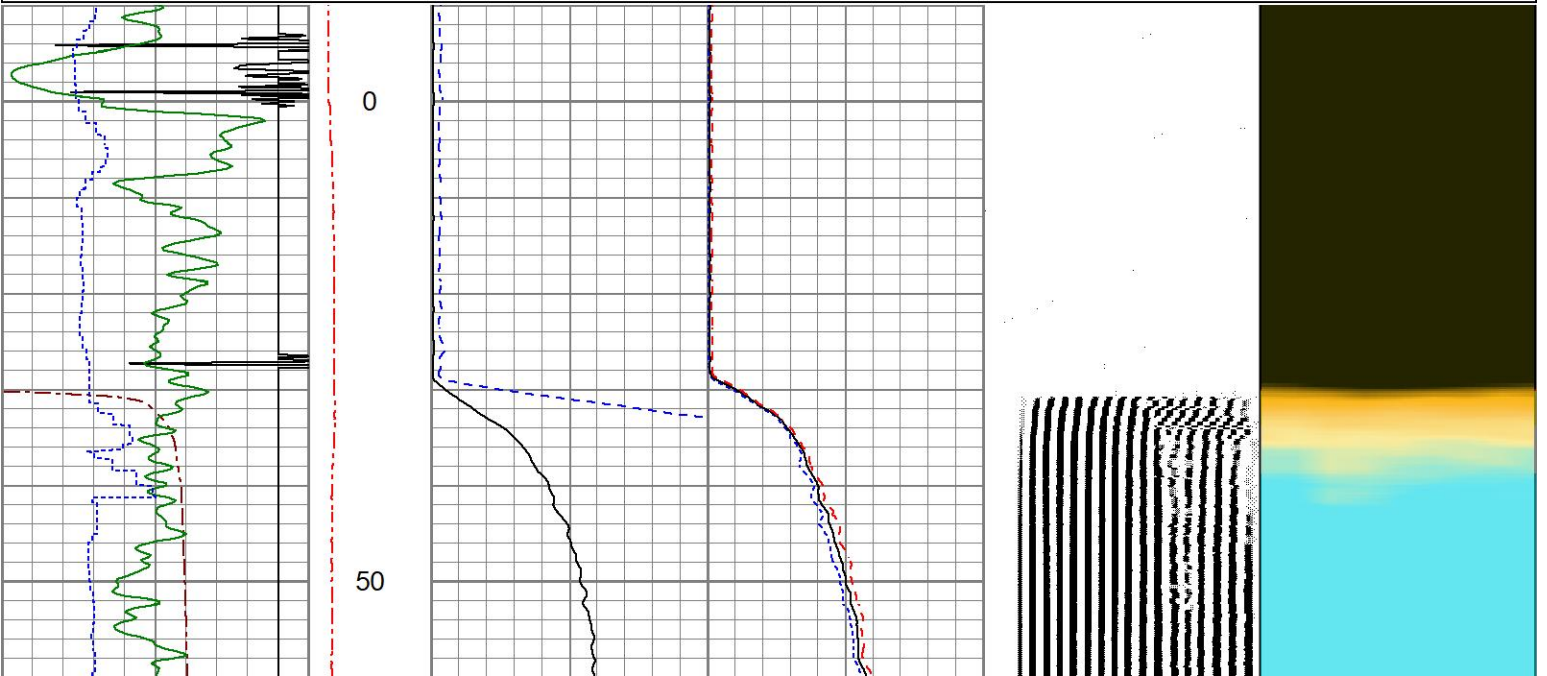


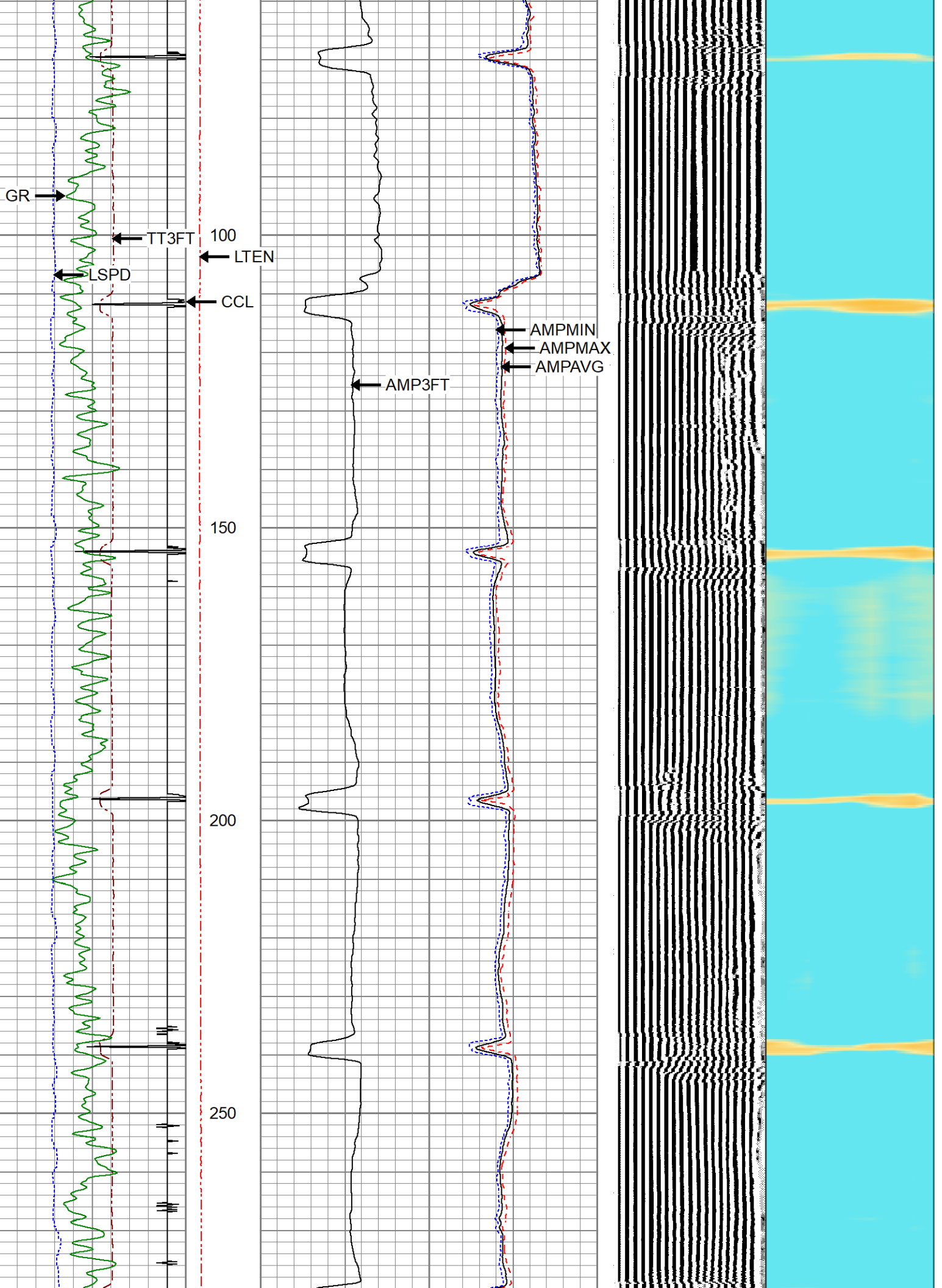
## MAIN PASS

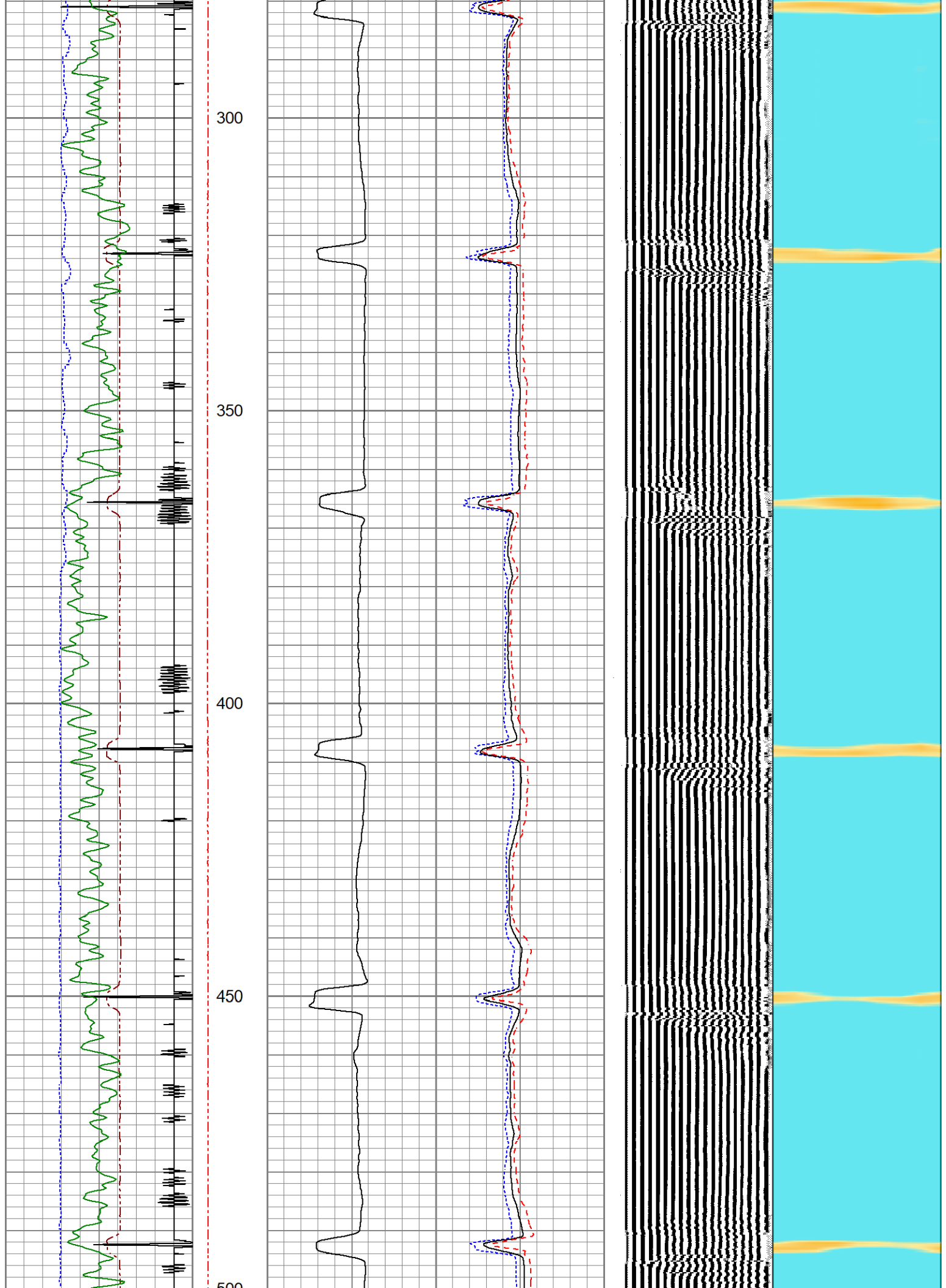
0 PSI APPLIED AT SURFACE

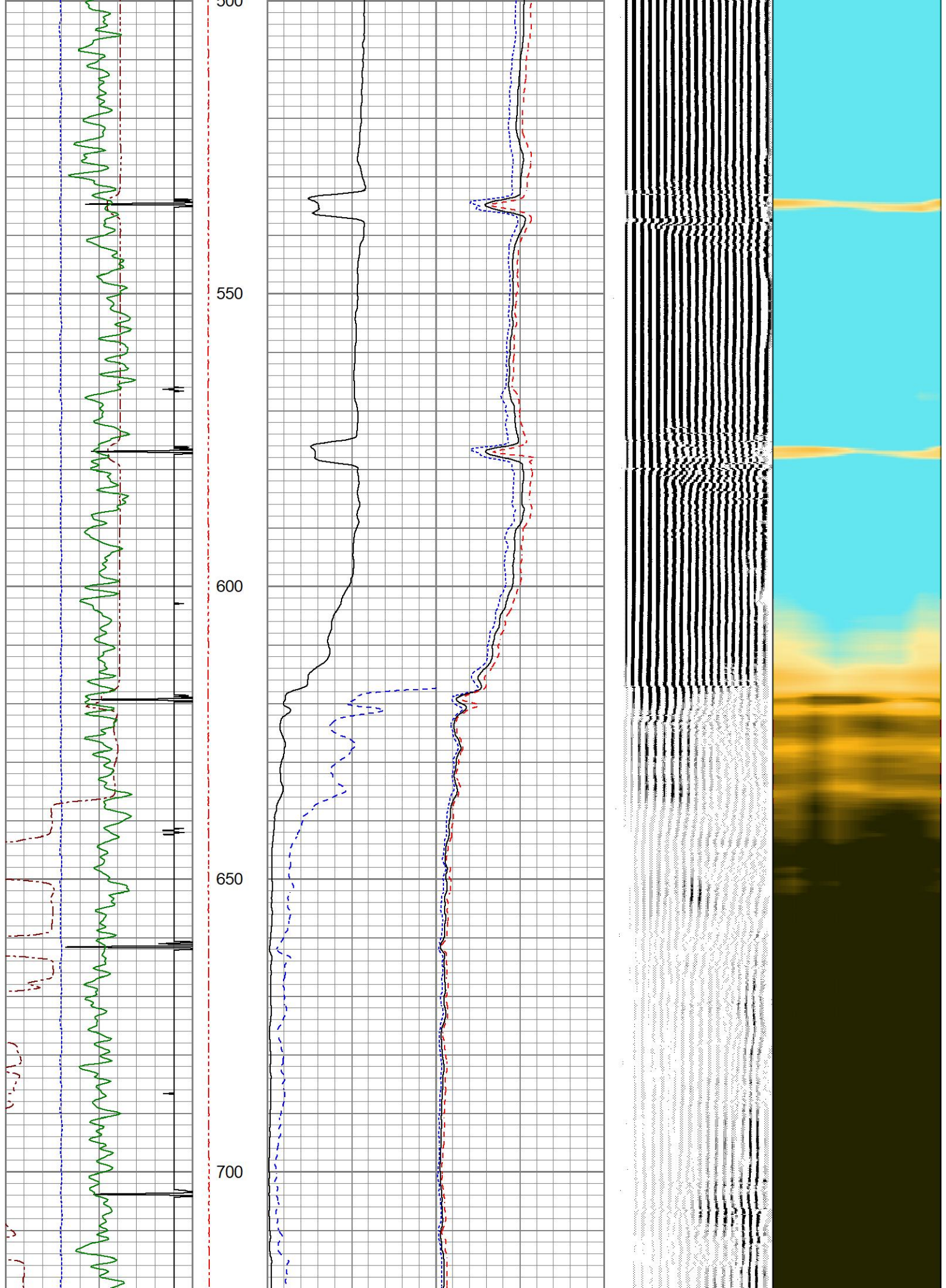
Database File 467539\_oxy\_cooley 22-16\_0512332276\_20220831\_scbl-ccl.db  
Dataset Pathname pass4.1  
Presentation Format res\_scbl 8sec-gr-ccl  
Dataset Creation Wed Aug 31 14:24:44 2022  
Charted by Depth in Feet scaled 1:240

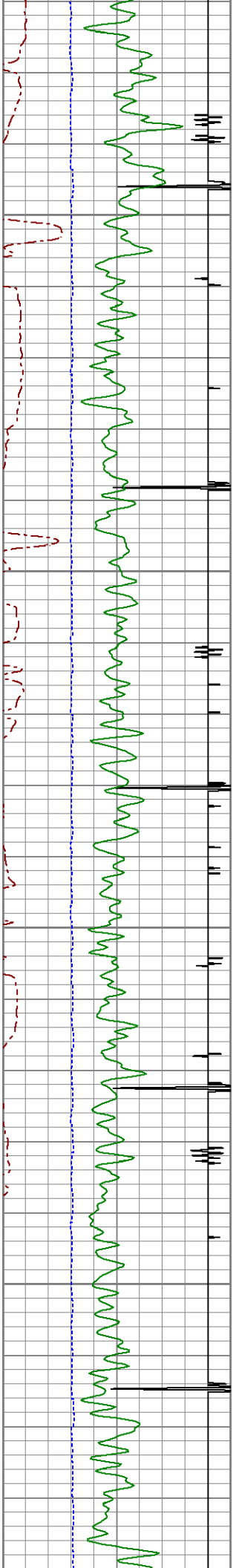
270 3FT TT (usec) 170	LTEN	3' Amplitude	0 Sector Min Amp	150	200 VDL (usec) 1200	1 Sector Map	8
-9 CCL 1	(lb)	(mV) 100	Sector Avg Amp	150			
0 GR 150	0 2000	3' Amplified Amplitude X 5	Sector Max Amp	150			
-150 LSPD (ft/min) 150		(mV) 20		150			









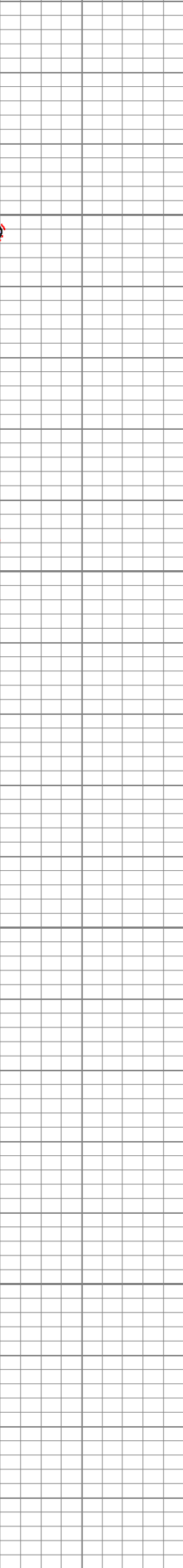
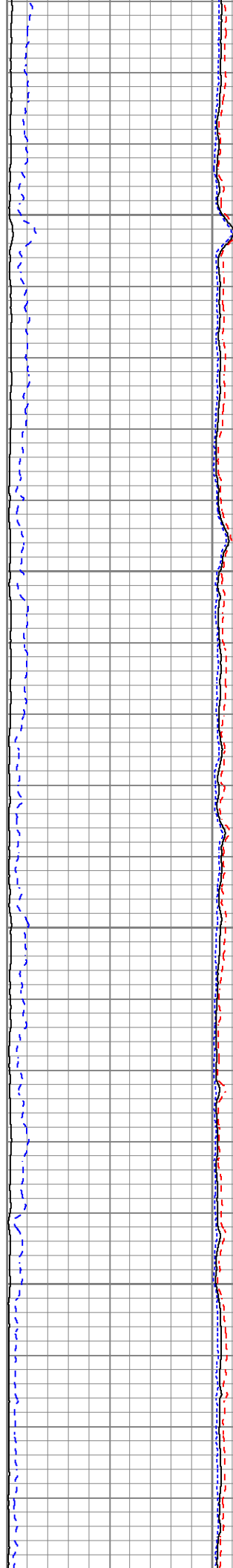


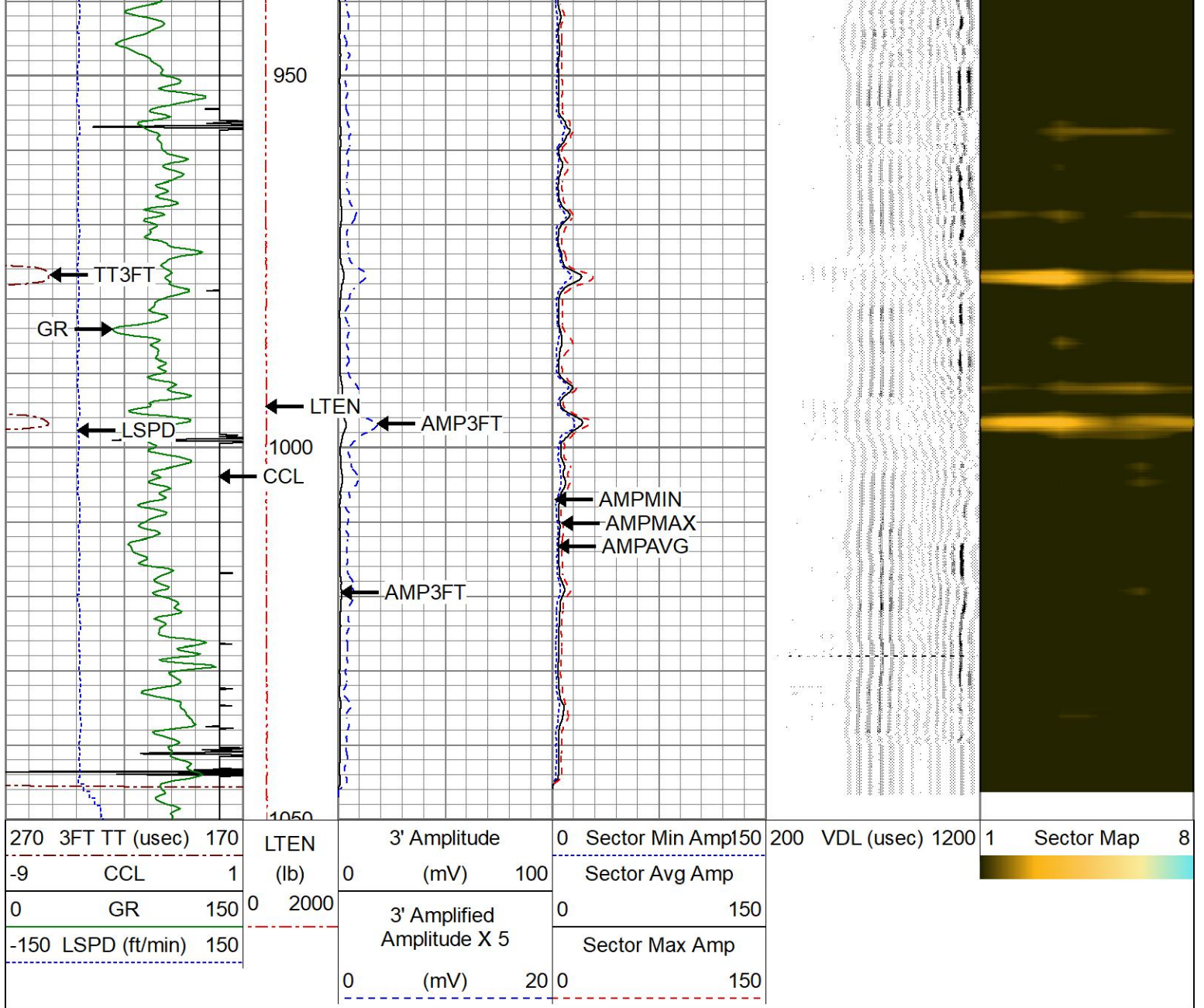
750

800

850

900

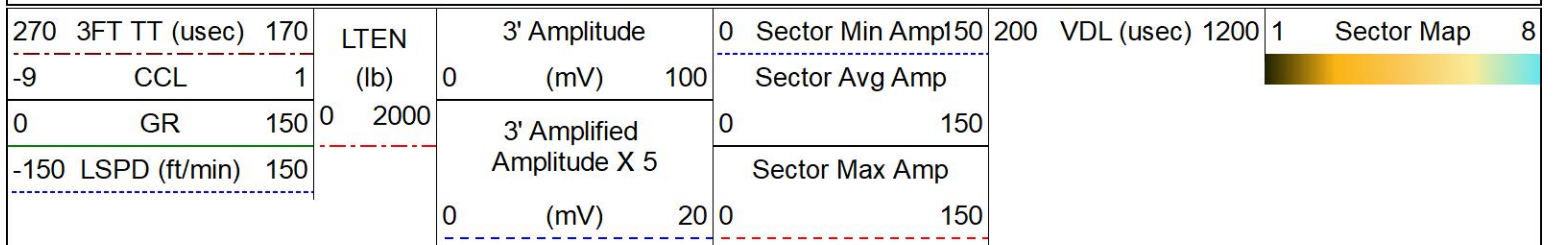


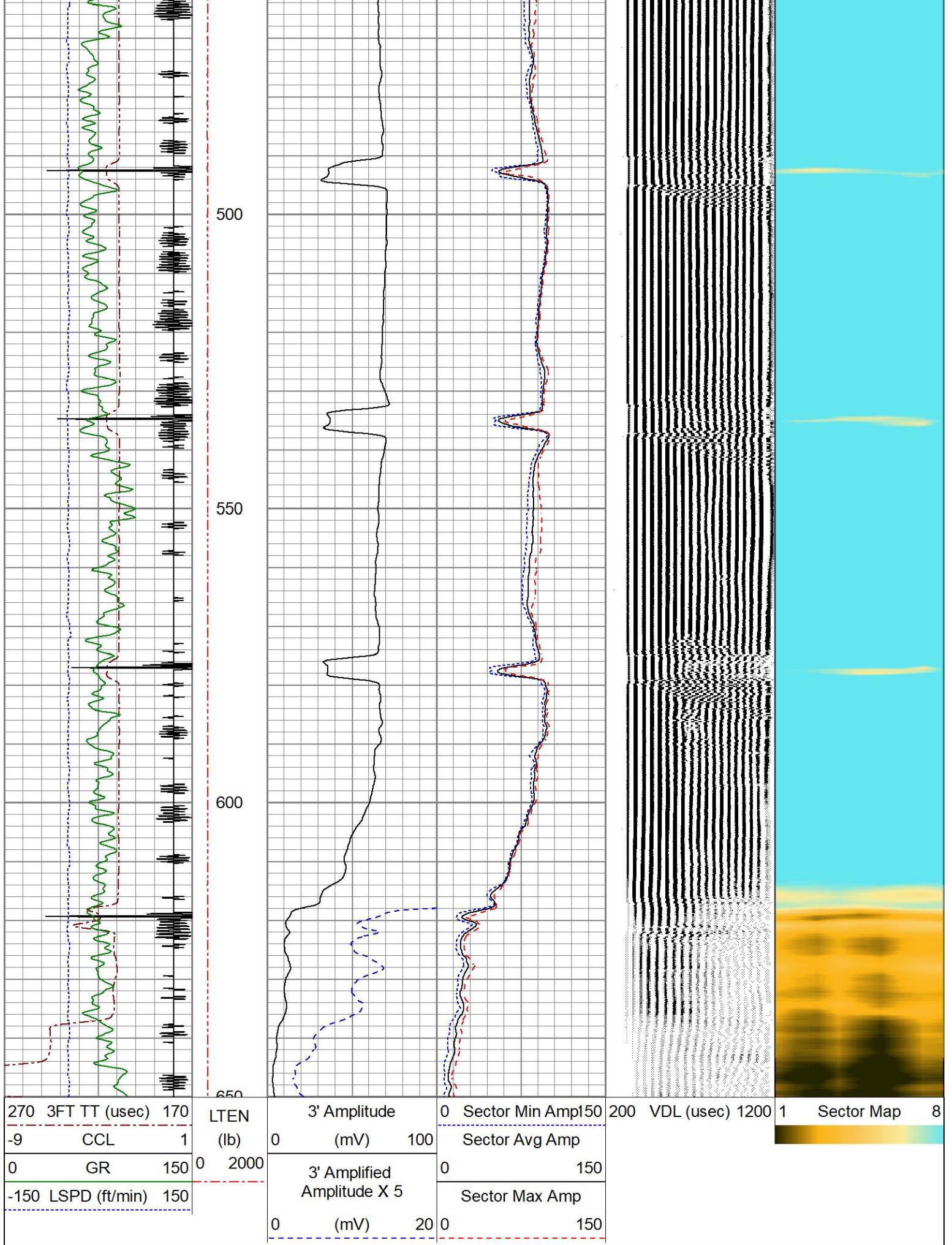


## REPEAT PASS

0 PSI APPLIED AT SURFACE

Database File 467539\_oxy\_cooley 22-16\_0512332276\_20220831\_scbl-ccl.db  
 Dataset Pathname pass2.1  
 Presentation Format res\_scbl 8sec-gr-ccl  
 Dataset Creation Wed Aug 31 14:26:15 2022  
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File 467539\_oxy\_cooley 22-16\_0512332276\_20220831\_scbl-ccl.db  
 Dataset Pathname pass4.1  
 Dataset Creation Wed Aug 31 14:24:44 2022

Gamma Ray Calibration Report

Serial Number: 234GR4-267  
 Tool Model: Tek-Co 2 3/4  
 Performed: (Not Performed)

Calibrator Value: 1.0

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 /cps

Segmented Cement Bond Log Calibration Report

Serial Number: 234RIBT-2096  
 Tool Model: 275 Temp JS

Calibration Casing Diameter: 5.500 in  
 Calibration Depth: 973.133 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	1.669	0.000	71.921	43.084	-0.000
CAL	0.000	0.860				
5'	0.000	2.099	0.000	71.921	34.268	-0.000
SUM						
S1	0.000	1.726	0.000	100.000	57.950	-0.001
S2	0.000	1.742	0.000	100.000	57.406	-0.001
S3	0.000	1.685	0.000	100.000	59.344	-0.001
S4	0.000	1.602	0.000	100.000	62.424	-0.001
S5	0.000	1.509	0.000	100.000	66.264	-0.001
S6	0.000	1.561	0.000	100.000	64.042	-0.001
S7	0.000	1.600	0.000	100.000	62.504	-0.001
S8	0.000	1.493	0.000	100.000	66.967	-0.001

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	0.860	1.000	0.000

Air Zero Calibration, performed Mon May 9 07:31:51 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

Temperature Calibration Report

Serial Number: 234RIBT-2096  
Tool Model: 275 Temp JS  
Performed: (Not Performed)

	Reference	Reading
Low Reference:	0.00 degF	0.00 usec
High Reference:	1.00 degF	1.00 usec
Gain:	1.00	
Offset:	0.00	
Delta Spacing	1	



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