

Submit 1 Copy To Appropriate District Office
 District I – (575) 393-6161
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 District II – (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III – (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV – (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

Form C-103
 Revised July 18, 2013

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-48081
1. Type of Well: Oil Well ☐ Gas Well ☐ Other: Acid Gas Injection Well ☒		5. Indicate Type of Lease STATE ☐ FEE ☒
2. Name of Operator Ameredev Operating, LLC		6. State Oil & Gas Lease No.
3. Address of Operator 2901 Via Fortuna, Ste. 600, Austin, TX 78746		7. Lease Name or Unit Agreement Name Independence AGI
4. Well Location Unit Letter <u>C</u> : <u>829</u> feet from the NORTH line and <u>1,443</u> feet from the EAST line Section <u>20</u> Township <u>25S</u> Range <u>36E</u> NMPM County <u>Lea</u>		8. Well Number 1
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3,103 (GR)		9. OGRID Number 372224
		10. Pool name or Wildcat AGI: Devonian/Fusselman

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☒	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. This well is permitted under NMOCC Order #R-21455-A as a UIC Class II AGI well.

On December 31, 2020 to January 1, 2021, the 24-inch surface casing was installed in a 26-inch, 1,423-foot borehole. The casing float shoe was set at 1,383 feet and cemented through drill pipe with 850 sacks of 13.5 lbs/gal lead and 330 sacks of 14.8 lbs/gal tail in a single stage as indicated below. Cement was circulated to the surface (129 sacks). The casing tally, cement laboratory report, and cementing activity report are attached.

Casing	Joints	Size	Wt. (lb/ft)	Grade	Threads	Set Depth	Cement	Type/Class	Sacks	Yield
Surface	46	24"	186.41	X65	XLE	0 – 1,383	Stage 1 Lead	HalCem C	850	1.739
							Stage 1 Tail	HalCem C	330	1.332

After waiting on cement for at least 8 hours a cement bond log was run that verified that a successful bond had been achieved. Prior to drilling out the shoe the casing was tested and held at 1,500 psi. The cement bond log, casing pressure test chart, and updated completion diagram are attached.

Spud Date: December 27, 2020

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Dale Littlejohn TITLE Consultant to Ameredev DATE January 6, 2021

Type or print name Dale Littlejohn E-mail address: dale@geolex.com PHONE: 505-842-8000

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

Date: Friday, January 1st, 2021 Hole TD: 1423 Casing Set @: 1383
Csg Specs @: 24" 186.41# X65 XLE

Weight	Running Order	Length	Running Depth ft/RKB	Landed Depth, top ft/RKB	Landed Depth, btm ft/RKB	Capacity per ft bbls	Disp per ft bbls	Running Capacity bbls	Running CL Disp bbls	Strokes to fill	Running Ann Vol bbls	Running OP Disp bbls	Comments
186.41	FS	2.50	2.50	1380.50	1383.00	0.39	0.06	0.39	0.43	4.23	0.31	0.06	
186.41	1	36.99	39.49	1343.51	1386.50	5.72	0.89	6.10	6.86	66.79	4.89	0.95	
186.41	2	39.63	79.12	1303.88	1343.51	6.13	0.95	12.23	13.75	133.82	9.79	1.90	
186.41	3	39.62	118.74	1264.26	1303.88	6.12	0.95	18.36	20.63	200.84	14.69	2.86	
186.41	4	39.62	158.36	1224.64	1264.26	6.12	0.95	24.48	27.52	267.85	19.59	3.81	
186.41	5	39.58	197.94	1185.06	1224.64	6.12	0.95	30.60	34.40	334.79	24.49	4.76	
186.41	6	39.58	237.52	1145.48	1185.06	6.12	0.95	36.72	41.28	401.74	29.39	5.71	
186.41	7	39.62	277.14	1105.86	1145.48	6.12	0.95	42.84	48.16	468.75	34.29	6.67	
186.41	8	39.61	316.75	1066.25	1105.86	6.12	0.95	48.97	55.05	535.75	39.19	7.62	
186.41	9	39.56	356.31	1026.69	1066.25	6.12	0.95	55.08	61.92	602.66	44.08	8.57	
186.41	10	39.62	395.93	987.07	1026.69	6.12	0.95	61.21	68.81	669.67	48.99	9.52	
186.41	11	39.58	435.51	947.49	987.07	6.12	0.95	67.33	75.68	736.62	53.88	10.47	
186.41	12	39.75	475.26	907.74	947.49	6.15	0.96	73.47	82.59	803.85	58.80	11.43	
186.41	13	39.63	514.89	868.11	907.74	6.13	0.95	79.60	89.48	870.88	63.70	12.38	
186.41	14	39.52	554.41	828.59	868.11	6.11	0.95	85.71	96.35	937.72	68.59	13.33	
186.41	15	39.62	594.03	788.97	828.59	6.12	0.95	91.83	103.23	1004.74	73.49	14.29	
186.41	16	39.75	633.78	749.22	788.97	6.15	0.96	97.98	110.14	1107.97	78.41	15.24	
186.41	17	39.63	673.41	709.99	749.22	6.13	0.95	104.10	117.03	1139.00	83.32	16.20	
186.41	18	39.75	713.16	669.84	709.99	6.15	0.96	110.25	123.93	1206.23	88.23	17.15	
186.41	19	39.55	752.71	630.29	669.84	6.11	0.95	116.36	130.81	1273.13	93.13	18.10	
186.41	20	39.6	792.31	590.69	630.29	6.12	0.95	122.49	137.69	1340.11	98.03	19.06	
186.41	21	39.58	831.89	551.11	590.69	6.12	0.95	128.60	144.57	1407.05	102.92	20.01	
186.41	22	39.64	871.53	511.47	551.11	6.13	0.95	134.73	151.46	1474.10	107.83	20.96	
186.41	23	39.58	911.11	471.89	511.47	6.12	0.95	140.85	158.33	1541.04	112.72	21.91	
186.41	24	39.62	950.73	432.27	471.89	6.12	0.95	146.98	165.22	1608.06	117.63	22.87	
186.41	25	39.62	990.35	392.65	432.27	6.12	0.95	153.10	172.10	1675.07	122.53	23.82	
186.41	26	39.56	1029.91	353.09	392.65	6.12	0.95	159.22	178.98	1741.98	127.42	24.77	
186.41	27	39.15	1069.06	313.94	353.09	6.05	0.94	165.27	185.78	1808.20	132.27	25.71	
186.41	28	39.61	1108.67	274.33	313.94	6.12	0.95	171.39	192.67	1875.20	137.17	26.66	
186.41	29	39.32	1147.99	235.01	274.33	6.08	0.95	177.47	199.50	1941.70	142.03	27.61	
186.41	30	39.58	1187.57	195.43	235.01	6.12	0.95	183.59	206.38	2008.65	146.93	28.56	
186.41	31	39.63	1227.20	155.80	195.43	6.13	0.95	189.72	213.26	2075.68	151.83	29.52	
186.41	32	39.7	1266.90	116.10	155.80	6.14	0.95	195.85	220.16	2142.82	156.74	30.47	
186.41	33	39.7	1306.60	76.40	116.10	6.14	0.95	201.99	227.06	2209.97	161.66	31.43	
186.41	34	39.41	1346.01	36.99	76.40	6.09	0.95	208.08	233.91	2276.63	166.53	32.37	
186.41	35	39.61	1385.62	-2.62	36.99	6.12	0.95	214.21	240.80	2343.63	171.43	33.33	
186.41	36	39.26	1424.88	0.00	0.00	6.07	0.94	220.28	247.62	2410.03	176.29	34.27	
186.41	37	39.61	1464.49	0.00	0.00	6.12	0.95	226.40	254.50	2477.03	181.19	35.22	
186.41	38	39.65	1504.14	0.00	0.00	6.13	0.95	232.53	261.39	2544.09	186.10	36.18	
186.41	39	39.58	1543.72	0.00	0.00	6.12	0.95	238.65	268.27	2611.03	190.99	37.13	
186.41	40	39.59	1583.31	0.00	0.00	6.12	0.95	244.77	275.15	2678.00	195.89	38.08	
186.41	41	39.69	1623.00	0.00	0.00	6.14	0.95	250.90	282.05	2745.13	200.80	39.04	
186.41	42	39.59	1662.59	0.00	0.00	6.12	0.95	257.03	288.93	2812.09	205.70	39.99	
186.41	43	39.62	1702.21	0.00	0.00	6.12	0.95	263.15	295.81	2879.10	210.60	40.94	
186.41	44	39.6	1741.81	0.00	0.00	6.12	0.95	269.27	302.69	2946.08	215.50	41.89	
186.41	45	39.6	1781.41	0.00	0.00	6.12	0.95	275.39	309.58	3013.06	220.40	42.85	
186.41	46	39.56	1820.97	0.00	0.00	6.12	0.95	281.51	316.45	3079.97	225.29	43.80	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

HALLIBURTON**Permian Basin****Lab Results - Lead****Job Information**

Request/Slurry	2654809/1	Rig Name	Citadel 3	Date	24/DEC/2020
Submitted By	Ryan Wilcoxson	Job Type	Surface Casing	Bulk Plant	
Customer	Ameredev Operating LLC	Location	Lea	Well	Independence AGI 1

Well Information

Casing/Liner Size	24 in	Depth MD	1400 ft	BHST	90°F
Hole Size	26 in	Depth TVD	1400 ft	BHCT	82°F
Pressure	900 psi				

Cement Information - Lead Design

<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Cement Properties</u>		
		ExtendaCem	Slurry Density	13.5	lbm/gal
100	% BWOC	Cement Blend	Slurry Yield	1.739	ft3/sack
9.231	gal/sack	Fresh Water	Water Requirement	9.231	gal/sack
4	% BWOC	Bentonite Wyoming - PB	Water Source	Fresh Water	
1	lb/sk	Bridgemaker II			

Pilot Test Results Request ID 2654809/1**API Rheology**

Temp (degF)	300	200	100	60	30	6	3
80	78	74	67	64	60	26	19

Free Fluid API 10B-2

Con. Temp (degF)	Cond. Time (min)	Static time (min)	Incl. (deg)	% Fluid
82	30	120	0	0.4

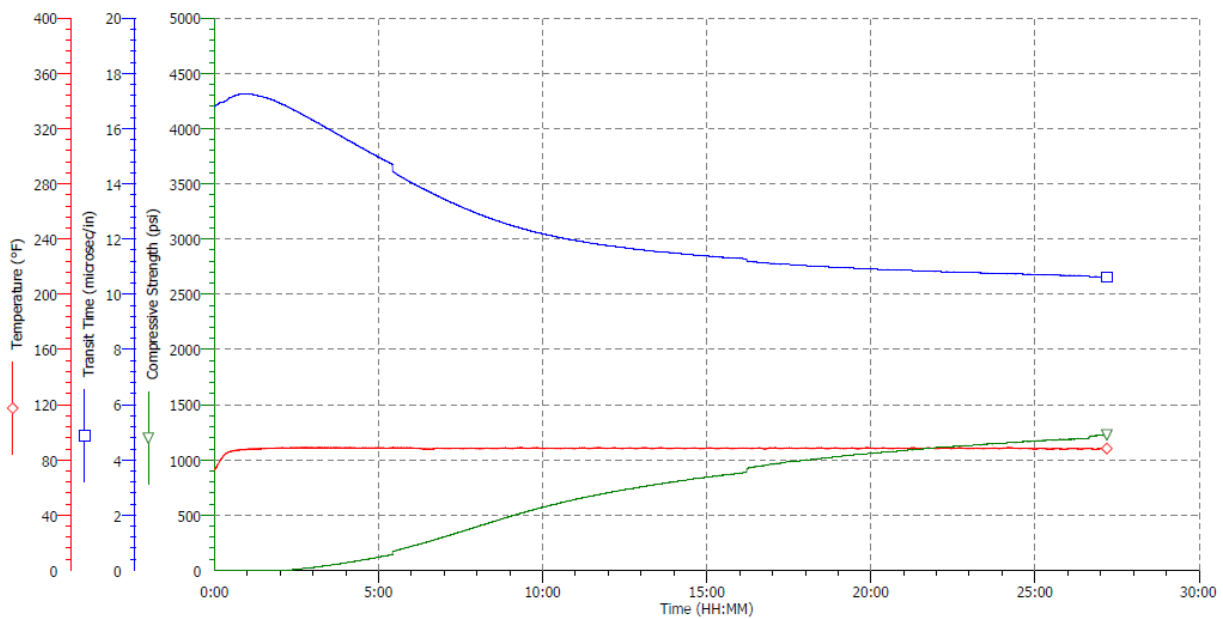
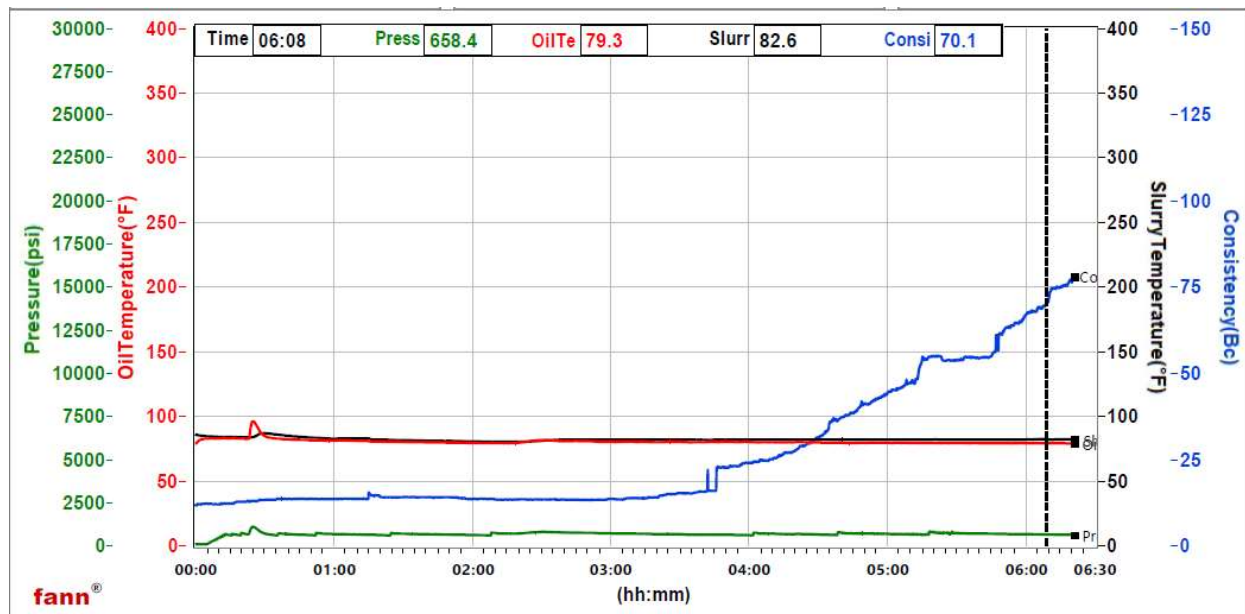
Thickening Time - ON-OFF-ON

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Termination time (hh:mm)	Termination Bc
82	900	13	4:27	5:13	6:08	12	60	15	6:20	78

UCA Comp. Strength

End Temp (degF)	Pressure (psi)	50 psi (hh:mm)	100 psi (hh:mm)	500 psi (hh:mm)	1000 psi (hh:mm)	8hr CS (psi)	12 hr CS (psi)	16 hr CS (psi)	24 hr CS (psi)	End CS (psi)	End Time (hrs)
88	4000	3:38	4:40	9:09	18:03	393	702	880	1150	1224	27

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HALLIBURTON

Permian Basin

Lab Results - Tail

Job Information

Request/Slurry	2653824/1	Rig Name	Citadel 3	Date	24/DEC/2020
Submitted By	Ryan Wilcoxson	Job Type	Surface Casing	Bulk Plant	
Customer	Ameredev Operating LLC	Location	Lea	Well	Independence AGI 1

Well Information

Casing/Liner Size	24 in	Depth MD	1400 ft	BHST	90°F
Hole Size	26 in	Depth TVD	1400 ft	BHCT	82°F
Pressure	900 psi				

Cement Information - Tail Design

<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Cement Properties</u>		
		HalCem	Slurry Density	14.8	lbm/gal
100	% BWOC	Cement Blend	Slurry Yield	1.33	ft3/sack
6.42	gal/sack	Fresh Water	Water Requirement	6.42	gal/sack
			Water Source	Fresh Water	

Pilot Test Results Request ID 2653824/1

API Rheology

Temp (degF)	300	200	100	60	30	6	3
80	50	43	34	29	24	14	10

Free Fluid API 10B-2

Con. Temp (degF)	Cond. Time (min)	Static time (min)	Incl. (deg)	% Fluid
82	30	120	0	1.4

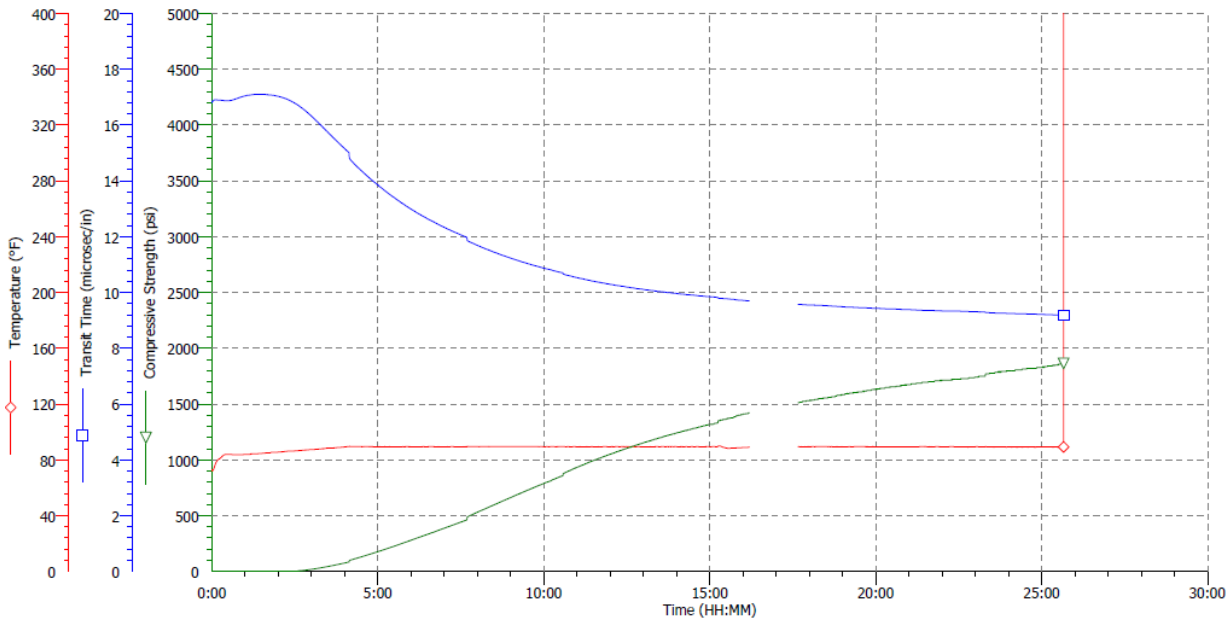
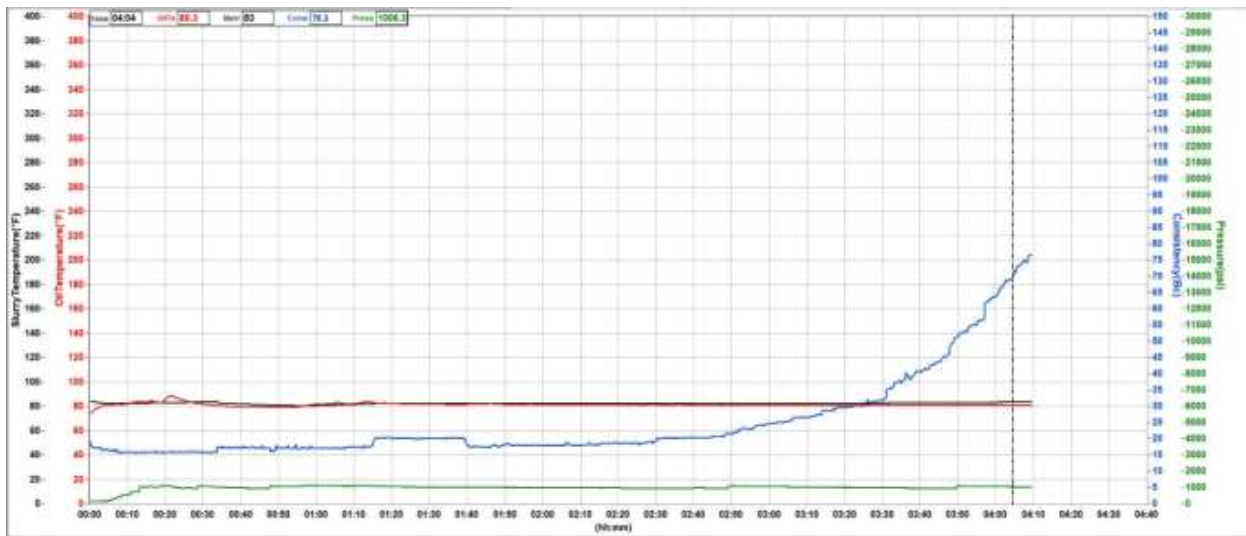
Thickening Time - ON-OFF-ON

Test Temp (degF)	Pressure (psi)	Batch Mix (min)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Termination time (hh:mm)	Termination Bc
82	1000	0	13	03:22	03:49	04:04	25.5	18	15	04:09	76.3

UCA Comp. Strength

End Temp (degF)	Pressure (psi)	50 psi (hh:mm)	100 psi (hh:mm)	500 psi (hh:mm)	1000 psi (hh:mm)	8hr CS (psi)	12 hr CS (psi)	16 hr CS (psi)	24 hr CS (psi)
89	4000	3:37	4:10	7:47	11:33	529	1051	1409	1798

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HALLIBURTON

iCem[®] Service

Ameredev Operating LLC-EBUS

Independence AGI #1 Surface SO#906888080

For:

Date: Saturday, January 02, 2021

Case 1

Job Date: Saturday, January 02, 2021

Sincerely,

HALLIBURTON*Counting Job Summary***The Road to Excellence Starts with Safety**

Sold To #: 381298		Ship To #: 9060895		Quote #: 0022790898		Sales Order #: 0906888080				
Customer: AMEREDEV OPERATING LLC-EBUS				Customer Rep: Unknown						
Well Name: INDEPENDENCE AGI		Well #: 1		API/UWI #: 30-025-48081-00						
Field:		City (SAP): JAL		County/Parish: LEA		State: NEW MEXICO				
Legal Description: 20-25S-36E-829FNL-1443FWL										
Contractor: CITADEL DRLG				Rig/Platform Name/Num: CITADEL 3						
Job BOM: 7521 7521										
Well Type: INJECTION										
Sales Person: HALAMERICA/H125894				Srv Supervisor: Robert Billman						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		1423ft		Job Depth TVD						
Water Depth				Wk Ht Above Floor						
Perforation Depth (MD)		From		To						
Well Data										
Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Open Hole Section			26				0	1100		
Casing		24	22.5	186.23	XLF	X-65	0	1423		1423
Open Hole Section			26				1100	1423		1423
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	24			1423		Top Plug	24		HES	
Float Shoe	24					Bottom Plug	24		HES	
Float Collar	24					SSR plug set	24		HES	
Insert Float	24					Plug Container	24		HES	
Stage Tool	24					Centralizers	24		HES	
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Gel Spacer w/Red Dye	Gel Spacer w/Red Dye	20	bbl	8.4					
2.50 lbm/bbl										
0.10 lbm/bbl										
WG-36, 50 LB BAG (101627238)										
RHODAMINE RED LIQUID DYE # 2 (101201084)										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
2	HalCem C	HALCEM (TM) SYSTEM	850	sack	13.5	1.739		5	9.22	

last updated on 1/2/2021 1:52:01 AM

Page 1 of 3

HALLIBURTON*Cementing Job Summary*

1 lbm	BRIDGEMAKER II LCM, 50 LB SACK - (1062609)								
4 %	BENTONITE, BULK (100003682)								
9.22 Gal	FRESH WATER								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	HalCem™ C	HALCEM (TM) SYSTEM	330	sack	14.8	1.332		5	6.42
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Displacement Fluid		24	bbl	8.4				
Cement Left In Pipe	Amount	1 ft	Reason				Shoe Joint		
Mix Water: pH ##			Mix Water Chloride: ## ppm				Mix Water Temperature: ## °F °C		
Cement Temperature: ## °F °C			Plug Displaced by: ## lb/gal kg/m ³ XXXX				Disp. Temperature: ## °F °C		
Plug Bumped? Yes/No			Bump Pressure: ##### psi MPa				Floats Held? Yes/No		
Cement Returns: ## bbl m ³			Returns Density: ## lb/gal kg/m ³				Returns Temperature: ## °F °C		
Comment									

HALLIBURTON

Customer: HALLIBURTON
Job: Surface
Case: Case 1

1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	12/31/2020	16:00:00	USER				
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/31/2020	16:15:00	USER				
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	12/31/2020	16:30:00	USER				
Event	4	Arrive At Loc	Arrive At Loc	12/31/2020	18:00:00	USER				Requested on location @ 22:00
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/31/2020	18:15:00	USER				
Event	6	Rig-Up Equipment	Rig-Up Equipment	12/31/2020	18:30:00	USER				
Event	7	Standby - Other - see comments	Standby - Other - see comments	12/31/2020	19:30:00	USER				Wait for rig to finish running 1423' of 24" 186.23# casing with no shoe trac, then run 1423' of 5" 19.5# S Grade drill pipe for innerstring
Event	8	Other	Other	1/1/2021	21:30:00	USER				Casing on bottom and innerstring ran, rig start circulating with 9.1# WBM 10bbl/min @ 375psi
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	1/1/2021	22:30:00	USER	12.33	8.47	0.00	
Event	10	Start Job	Start Job	1/1/2021	22:51:52	COM4	11.78	8.50	0.00	
Event	11	Test Lines	Test Lines	1/1/2021	22:54:39	COM4	29.57	8.31	0.00	3000psi

iCem Service

(v. 4.5.139)

Created: Saturday, January 02, 2021

HALLIBURTON

Customer: HALLIBURTON

Job: Surface

Case: Case 1

Event	12	Pump Spacer 1	Pump Spacer 1	1/1/2021	22:57:25	COM4	90.30	8.32	2.97	20bbls Gel W/ Red Dye 3bbl/min @ 170psi
Event	13	Pump Lead Cement	Pump Lead Cement	1/1/2021	23:04:25	COM4	163.49	8.32	2.81	263bbls HalCem 13.5# 8bbl/min @ 565psi Estimated height of lead- 621'. Estimated top of lead- Surface. 13.7# Verified on mud scale
Event	14	Pump Tail Cement	Pump Tail Cement	1/1/2021	23:36:19	COM4	409.12	14.54	5.05	78bbls HalCem 14.8# 5bbl/min @ 430psi Estimated height of tail- 802'. Estimated top of tail- 621'. 14.8# Verified on mud scale
Event	15	Drop Top Plug	Drop Top Plug	1/2/2021	00:15:11	COM4	33.17	11.92	0.00	Halliburton Drill Pipe Dart
Event	16	Pump Displacement	Pump Displacement	1/2/2021	00:15:14	COM4	33.38	11.92	0.00	24bbls Fresh Water 5bbl/min @ 400psi. Got 40bbls, 129sks of cement back to surface
Event	17	Shutdown	Shutdown	1/2/2021	00:21:02	COM4	407.96	8.39	0.00	Pressure climbed from 400psi to 650psi but no definite bump
Event	18	Check Floats	Check Floats	1/2/2021	00:31:10	COM4	371.38	8.41	0.00	Bled back 5bbls and shut in, pressure climbed back up to 330psi. Floats not holding
Event	19	Other	Other	1/2/2021	00:43:07	COM4	253.67	8.42	0.00	Company man made phone calls, decided to pump 5bbls back in to make sure drill pipe clear of cement and shut in and wait on cement
Event	20	Shutdown	Shutdown	1/2/2021	00:45:05	COM4	445.53	8.44	0.00	
Event	21	End Job	End Job	1/2/2021	00:47:14	COM4	35.21	8.41	0.00	
Event	22	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	1/2/2021	01:00:00	USER	8.84	8.40	0.00	

iCem Service

(v. 4.5.139)

Created: Saturday, January 02, 2021

HALLIBURTON

Customer: HALLIBURTON
Job: Surface
Case: Case 1

Event	23	Rig-Down Equipment	Rig-Down Equipment	1/2/2021	01:30:00	USER
Event	24	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	1/2/2021	02:00:00	USER
Event	25	Depart Location	Depart Location	1/2/2021	02:30:00	USER

iCem® Service

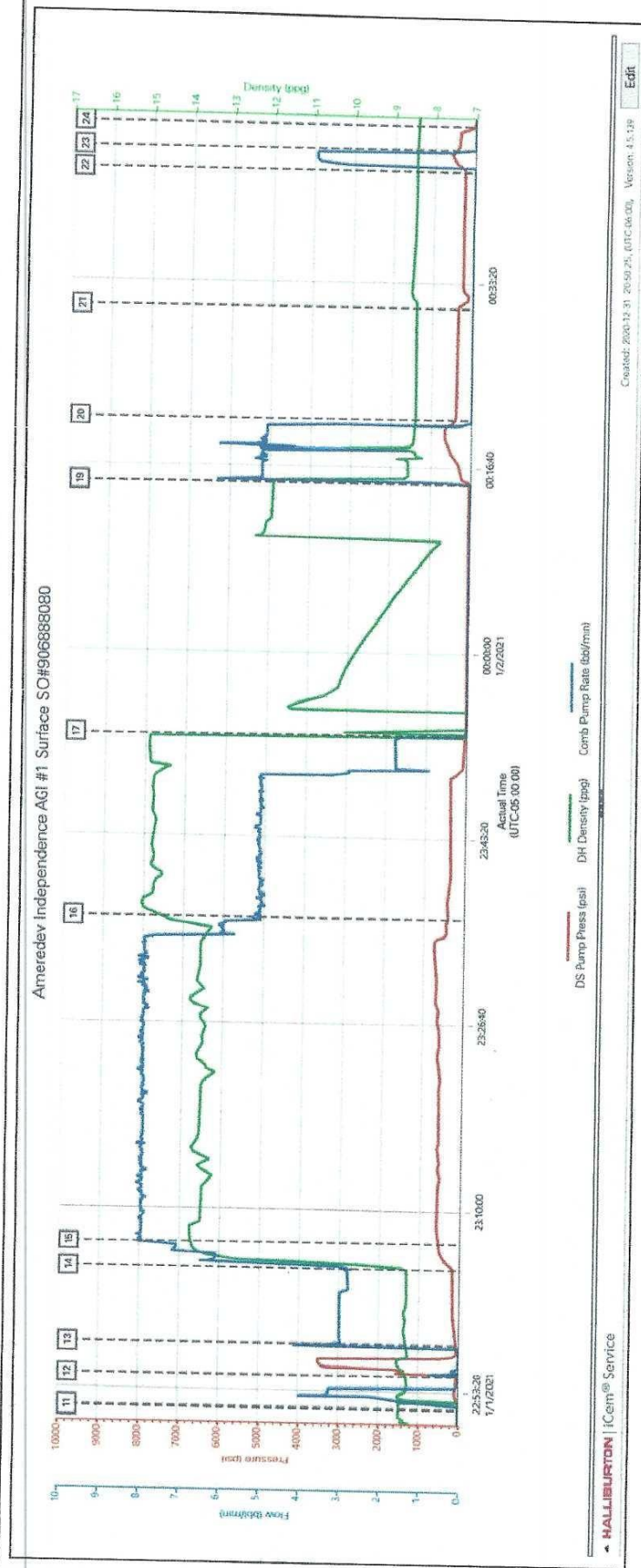
(v. 4.5.139)
Created: Saturday, January 02, 2021

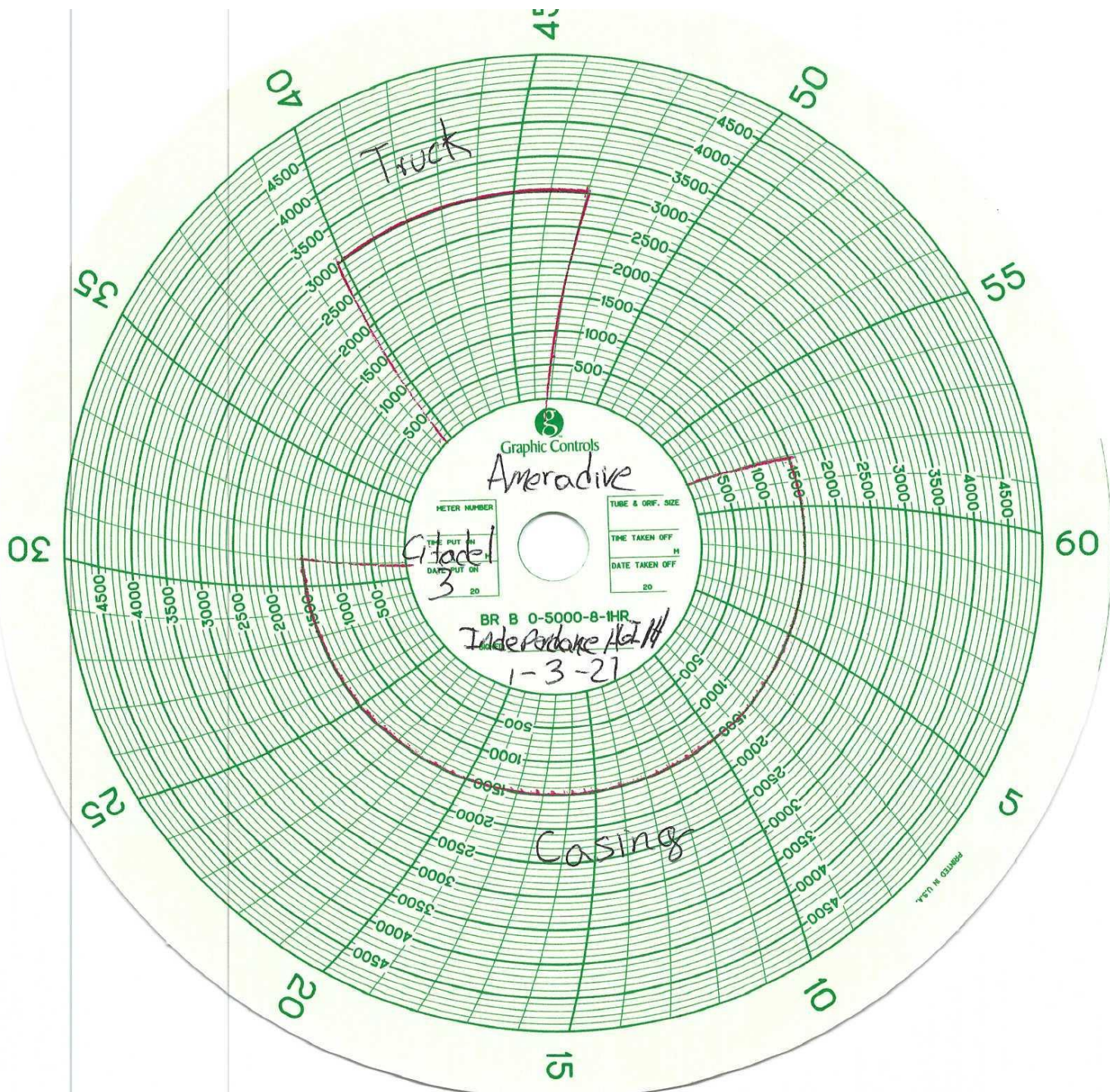
HALLIBURTON

Customer: HALLIBURTON
Job: Surface
Case: Case 1

2.0 Attachments

2.1 Case 1-Custom Results.png







Wellhead: A - 26 3/4" 3M X 24" SOW
B - 26 3/4" 3M X 20 3/4" 3M
C - 20 3/4" 3M X 13 5/8" 5M
D - 13 5/8" 5M X 11" 5M
E - 11" 5M X 7 1/16" 5M

Independence AGI #1

Lea County, New Mexico
Section 20, T25S, R36E

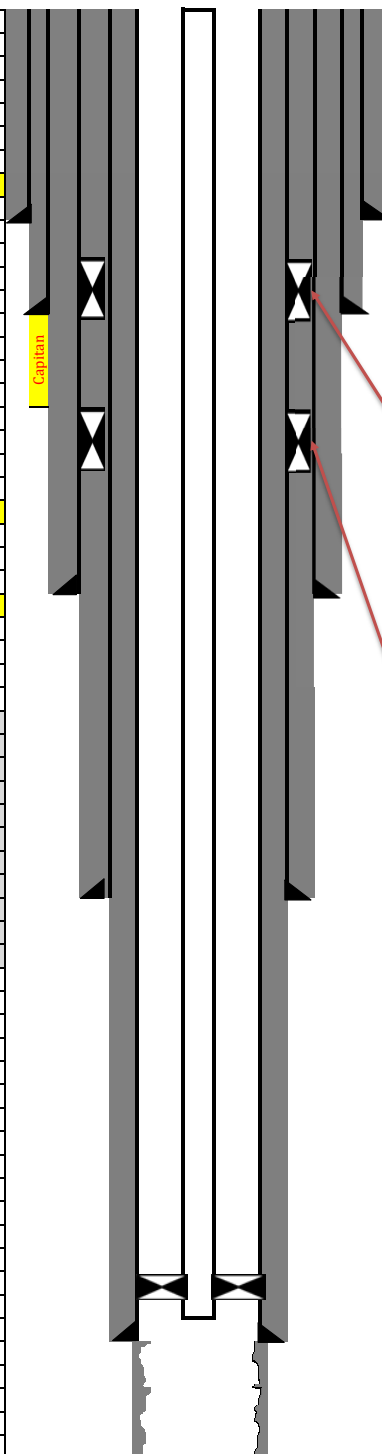
**SHL/BHL: Sec. 20 25S-36E 829' FNL &
1443' FLW**

Co. Well ID: 40004
AFE No.: 2020-013
API No.: 30-025-48081
GL:3103'

Field: Delaware
Objective: Montoya Injection
TVD: 17,900'
MD: 17,900'

Email: DrillingCR@ameredev.com

Injection Tree: 3 1/8" 5M Dry Acid Gas
Tubing: 3 1/2" 9.3 #/ft HCL-80, VAM (15,880' - Surface)
3 1/2" 9.3 #/ft inonel G3 (CRA), VAM (16,180' - 15,880')

[illegible]

36" Conductor to 116" (.33 wall) 125.72#
26" Surface
Casing size: 24" X65 186.41# / XLF
Depth: 0' to 1,400'
Mud: 8.4-9.4ppg; Spud Mud
CMT: Lead 495sks - HalCem C 13.5ppg
CMT: Tail 330sks - HalCem 14.8ppg
TOC: 0' / Surface Lead 50% / Tail 100% Excess
22" 1st Intermediate
Casing Size: 20" NT-80DE 133# / BTC
Depth: 0' to 3,200' :: Section Depths: 1,400' - 3,200'
Mud: 10.0ppg BW
CMT: Lead 580sks - NeoCem 11ppg
CMT: Tail 435sks - HalCem 15.6ppg
TOC: 0' / Surface / 50% Excess
13 5/8" Halliburton DV Tool & ECP @ 3,776' (+/-)
17 1/2" 2nd Intermediate
Casing Size 13 5/8" Q125 88.2# / BTC
Depth: 0' to 7,150' :: Section Depths: 3,200' - 7,150'
Mud: 8.4ppg; FR
Stg 1: CMT: Lead 581 sks NeoCem Light 9.3ppg
Stg 1: CMT: Tail 300sks HalCem H 15.6ppg
Stg 2: CMT: Lead 286sks - NeoCem Light 9.3ppg
Stg 2: CMT: Tail 185sks - HalCem 15.6ppg
Stg 3: CMT: Lead 1143sks - NeoCem Light 9.3ppg
Stg 3: CMT: Tail 184sks - HalCem 15.6ppg
TOC: 0' / Surface / 50% Excess
13 5/8" Halliburton DV Tool & ECP @ 4,932' (+/-)
12 1/4" 3rd Intermediate
Casing Size: 9 5/8" L80-HC 47# / BTC
Depth: 0' - 9,000'
Casing Size: 9 5/8" P110HP 47# / BTC
Depth: 9,000' - 13,200'
Section Depths: 7,150' - 13,200'
Mud: 8.6-9.8ppg CBW; 9.8-12.0 BR/POLY
CMT: Lead 1149sks - NeoCem PL2 11ppg
CMT: Tail 961sks - VersaCem H 14.5ppg
TOC: 0' / Surface / 50% Excess
8 1/2" Production
Casing Size: 7" VA HC P110 32# VARN/Turned Down
Depth: 0' - 15,930'
7" 32# P110HC VAM HC Box x VARN Pin R3 w/ P110 Float & Collar
Casing Size: 7" G3(CRA) 32# VAM
Depth: 15,930' - 16,230'
Section Depth: 13,200' - 16,230'
Mud: 10.5-14.5 BR/POLY; 14.5-14.7 BR/POLY; 14.7-15.3 BR/POLY
CMT: Lead 935sks - NeoCem PL2 12ppg
CMT: Tail 190sks - VersaCem 14.5ppg
CMT: Tail 160sks - LockCem 15.34ppg
TOC: 0' / Surface / 20% Excess on Tail
<i>Final cement volumes will be dependent upon final weight of drilling fluid at TD; current volumes are best estimates only</i>
6" Injection Hole
Tubing Size: 3 1/2" HCL-80 9.3# / VAM
Depth: 0' to 15,880'
Tubing Size: 3 1/2" G3 9.3# / VAM
Depth: 15,880' to 16,180'
Section Depths: 16,230' - 17,900' TD
Mud: 8.4-8.6ppg Fresh Water / Recycled Water
Total Depth: 17,900' x 6" Hole Size (OH)
Halliburton BWS NICKEL ALLOY 925 Permanent Packer @ 16,180'

Prepared by: JTW & DAB 12/18/2020

Company: Ameredev Operating, LLC

Well: Independence AGI #1

Field: Delaware

County: Lea State: New Mexico

Cement Print

Gamma Ray

Casing Collar Locator

County: Lea
Field: Delaware
Location: Footages: 829' FNL & 1443' FWL
Well: Independence AGI #1
Company: Ameredev Operating, LLC

Location:		Footages: 829' FNL & 1443' FWL	Elev.:	K.B.	3127.50 ft
		LAT/LONG 32.120835 / -103.291025		G.L.	3103.00 ft
				D.F.	3126.50 ft
Permanent Datum:		Ground Level	Elev.:	3103.00 f	
Log Measured From:		Kelly Bushing	24.50 ft	above Perm. Datum	
Drilling Measured From:		Kelly Bushing			
API Serial No.	Section:	Township:	Range:		
30-025-48081	20	25S	36E		

Logging Date	02-Jan-2021
Run Number	2A
Depth Driller	1423.00 ft
Schlumberger Depth	1411.00 ft
Bottom Log Interval	1375.00 ft
Top Log Interval	140.00 ft
Casing Fluid Type	Fresh Water
Salinity	
Density	9 lbm/gal
Fluid Level	8.00 ft
BIT/CASING/TUBING STRING	
Bit Size	26.00 in
Form	116.00 ft
Form	1411.00 ft
Casing/Tubing Size	24 in
Weight	186.41 lbm/ft
Grade	N/A
Form	0.00 ft
Form	1400.00 ft
Max Recorded Temperatures	94.4 degF
Logger on Bottom	02-Jan-2021 21:33:00
Unit Number	9113
Location:	Midland, TX
Recorded By	D. May/Q. Smith
Witnessed By	Marcus Jenkins

Disclaimer

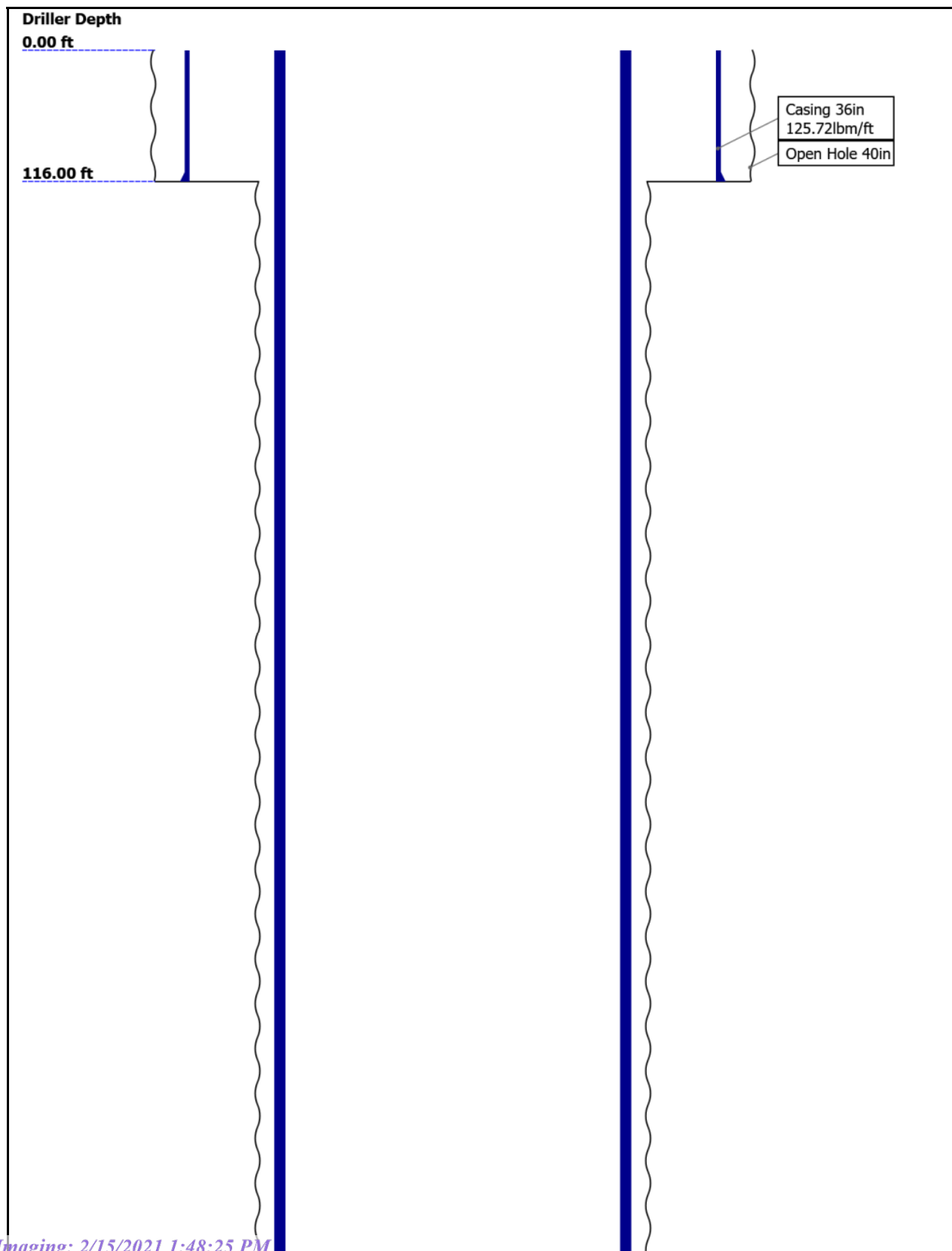
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

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 - 11.4 Parameter Listing

Well Sketch



1400.00 ft

1423.00 ft

Casing 24in
186.41lbm/ft

Open Hole 26in

Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	40	26				
Top Driller (ft)	0	116				
Top Logger (ft)	0	116				
Bottom Driller (ft)	116	1423				
Bottom Logger (ft)	116	1411				
Casing						
Size (in)	36	24				
Weight (lbm/ft)	125.72	186.41				
Inner Diameter (in)	35.355	22.533				
Grade	N/A	N/A				
Top Driller (ft)	0	0				
Top Logger (ft)	0	0				
Bottom Driller (ft)	116	1400				
Bottom Logger (ft)	140	1400				

Remarks and Equipment Summary

2A: Toolstring

2A: Remarks

Equip name Length
LEH-QT 25.96
LEH-QT

MP name Offset

Main Pass logged at 5 deg 1.5 in resolution.
Repeat Pass logged at 5 deg 3 in resolution.

Tools run with 21.625" Gemco centralizers

Tool was run as per tool sketch

All logging intervals as per client request

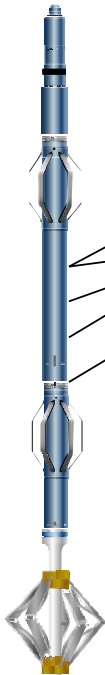
EDTC-B:9 22.47
247

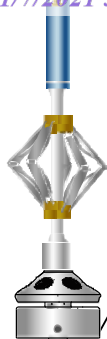
EDTH-B:93
09
EDTG-B:79
445
EDTC-B:92
47

CTEM 18.97
ACCZ 0.00
HV 0.00
Gamma 17.1
Ray
TelStatu
s 15.97

USIT-E:98 15.97
1

EGH-MFA:
1923
USAC-A:9
81
USIS-A:99
0
3.3RPS
USSC-B:78
6
USRS-F:72
2
USI-SENS





USI Sen 0.41
sor
Read ZERO
nsion

Lengths are in ft

Maximum Outer Diameter = 22.500 in
Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

Depth Summary

2A

Depth Measuring Device

Type	IDW-JA
Serial Number	6483
Calibration Date	15-APR-2020
Calibrator Serial Number	IDW-C-57
Calibration Cable Type	7-32 ASXS
Wheel Correction 1	-1
Wheel Correction 2	0

Tension Device

Type	CMTD-B/A
Serial Number	2295
Calibration Date	25-JUN-2020
Calibrator Serial Number	TDC-C 1035
Number of Calibration Points	10
Calibration Root Mean Square Error	2
Calibration Peak Error	5

Logging Cable

Type	7-32AS-XS
Serial Number	1496132
Length	24700.00 ft
Conveyance Type	Wireline
Rig Type	Land

2A:Depth Control Parameters

Log Sequence	First Log In the Well
Rig Up Length At Surface	
Rig Up Length At Bottom	
Rig Up Length Correction	
Stretch Correction	
Tool Zero Check At Surface	

Depth Control Remarks

Schlumberger depth control procedures followed
IDW used as primary depth control system
Z-Chart used as secondary depth control system

USIT - Fluid Properties Measurement

Run Name	Pass Name	Start Depth(ft)	Stop Depth(ft)
Run 1	Log[3]-Up	1375.25	-3.32

CFVL equals DFSL channel

Start Depth(ft)	Stop Depth(ft)	Start Value(us/ft)	End Value(us/ft)
-----------------	----------------	--------------------	------------------

Mud Impedance = "Theoretical".
CZMD uses theoretical results.
MUD_N_THE=1.00
DFD=1.08g/cm3(9.00lbm/gal)

Start Depth(ft)	Stop Depth(ft)	Start Value(Mrayl)	End Value(Mrayl)
-----------------	----------------	--------------------	------------------

2A

USI Goodwin Compressed

Software Version

Acquisition System	Version
Maxwell 2020.1	10.1.205256.3100
Application Patch	Wireline_Hotfix-Mandatory-2020.1_10.1.209000

Computation	Description	Version
USI Impedance Goodwin	USI Goodwin ensemble Application	10.1.205256.3100
Cementation	Cementation Computation Application	10.1.205256.3100

Tool Interface	Baseline Version	System Firmware Version
eWAFE	eWAFE12_Release_78	1229

Tool Elements	Description	Software Version	Firmware Version
EDTC-B	Enhanced Digital Telemetry Cartridge - B	10.1.205256.3100	
USI-SENSOR	USIT Transducer Element	10.1.205256.3100	DSP: v02.99

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
2A	Log[3]:Up	Up	-3.32 ft	1375.25 ft	02-Jan-2021 10:35:33 PM	02-Jan-2021 11:42:54 PM	ON	0.00 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Ameredev Operating, LLC Well:Independence AGI #1
2A: Log[3]:Up:S011

Description: USI Cement Format: Log (USI Goodwin All Resolutions) Index Scale: 0.2 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 03-Jan-2021 01:17:46

TIME_1900 - Time Marked every 60.00 (s)

Average Acoustic Impedance 1 (AV_AI1) USIT-E	Average Acoustic Impedance 3 (AV_AI3) USIT-E	Average Acoustic Impedance 5 (AV_AI5) USIT-E	Average Acoustic Impedance 7 (AV_AI7) USIT-E
0 Mrayl 15	0 Mrayl 15	0 Mrayl 15	0 Mrayl 15
Maximum Acoustic Impedance 1 (MAX_AI1) USIT-E	Maximum Acoustic Impedance 3 (MAX_AI3) USIT-E	Maximum Acoustic Impedance 5 (MAX_AI5) USIT-E	Maximum Acoustic Impedance 7 (MAX_AI7) USIT-E
0 Mrayl 15	0 Mrayl 15	0 Mrayl 15	0 Mrayl 15
Minimum Acoustic Impedance 1 (MIN_AI1) USIT-E	Minimum Acoustic Impedance 3 (MIN_AI3) USIT-E	Minimum Acoustic Impedance 5 (MIN_AI5) USIT-E	Minimum Acoustic Impedance 7 (MIN_AI7) USIT-E
0 Mrayl 15	0 Mrayl 15	0 Mrayl 15	0 Mrayl 15

Released to Imaging: 2/15/2021 1:48:25 PM

Acoustic Impedance 2 (AV_AI2) USIT-E	Acoustic Impedance 4 (AV_AI4) USIT-E	Acoustic Impedance 6 (AV_AI6) USIT-E	Acoustic Impedance 8 (AV_AI8) USIT-E
-7.5 7.5 Mrayl	-7.5 7.5 Mrayl	-7.5 7.5 Mrayl	-7.5 7.5 Mrayl
Maximum Acoustic Impedance 2 (MAX_AI2) USIT-E	Maximum Acoustic Impedance 4 (MAX_AI4) USIT-E	Maximum Acoustic Impedance 6 (MAX_AI6) USIT-E	Maximum Acoustic Impedance 8 (MAX_AI8) USIT-E
-7.5 7.5 Mrayl	-7.5 7.5 Mrayl	-7.5 7.5 Mrayl	-7.5 7.5 Mrayl
Minimum Acoustic Impedance 2 (MIN_AI2) USIT-E	Minimum Acoustic Impedance 4 (MIN_AI4) USIT-E	Minimum Acoustic Impedance 6 (MIN_AI6) USIT-E	Minimum Acoustic Impedance 8 (MIN_AI8) USIT-E
-7.5 7.5 Mrayl	-7.5 7.5 Mrayl	-7.5 7.5 Mrayl	-7.5 7.5 Mrayl

TIME_1900 - Time Marked every 60.00 (s)

Description: USI Cement Format: Log (USI Goodwin All Resolutions) Index Scale: 0.2 in per 100 ft Index Unit: ft Index Type: Measured Depth
 Creation Date: 03-Jan-2021 01:17:46

Channel Processing Parameters

2A: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BERJ	Bad Echo Rejection	USIT-E	On	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CASING_PRATIO	Casing Poisson Ratio	USIT-E	Standard Poisson Ratio	
CBLO	Casing Bottom (Logger)	WLSESSION	1400	ft
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CENT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	9	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	185	us/ft
FDII	FPM Data Interpolation Interval	USIT-E	0	ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
GR_MULTIPLIER	Gamma Ray Multiplier	EDTC-B	1	
HEMA	Hematite Presence Flag	Borehole	No	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	47.38	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1	
RCOD	Reference Calibrator Outer Diameter	USIT-E	7	in
RCSO	Reference Calibrator Standoff	USIT-E	1.378	in
RCTH	Reference Calibrator Thickness	USIT-E	0.295	in
RPLUS_PROCESS	Ultrasonic R+ Processing	USIT-E	No	
SDNV	Number of Vertical Samples used for Micro-debonding Computation	USIT-E	5	
SDTHOR	Acoustic Impedance STD Horizontal Threshold for Micro-debonding	USIT-E	0.5	Mrayl

Received by OCD: 1/7/2021 3:02:55 PM

USIT-E	Acoustic Impedance STD Vertical Threshold for Micro-debonding	USIT-E	0.3	Mrayl
SOCN	Standoff Distance	EDTC-B	0.125	in
SOCO	Standoff Correction Option	EDTC-B	No	
THDH	Maximum Search Thickness (percentage of nominal)	USIT-E	130	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	70	%
TPOS_EDTC	Tool Position: Centered or Eccentered	EDTC-B	Eccentered	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.64	Mrayl
USI_FVEL_SEL	USI Fluid Velocity Selection	USIT-E	Automatic	
USI_ZMUD_SEL	USI Mud Impedance Selection	USIT-E	Theoretical	
THDP	Thickness Detection Policy	USIT-E	Fundamental	
VCAS	Ultrasonic Transversal Velocity in Casing	USIT-E	51.4	us/ft
ZCAS	Acoustic Impedance of Casing	USIT-E	46.25	Mrayl
ZINI	Initial Estimate of Cement Impedance	USIT-E	-1	Mrayl
ZMUD	Acoustic Impedance of Mud	Borehole	1.8	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

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Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	40	0	116
BS	26	116	1400

All depth are actual.

Tool Control Parameters

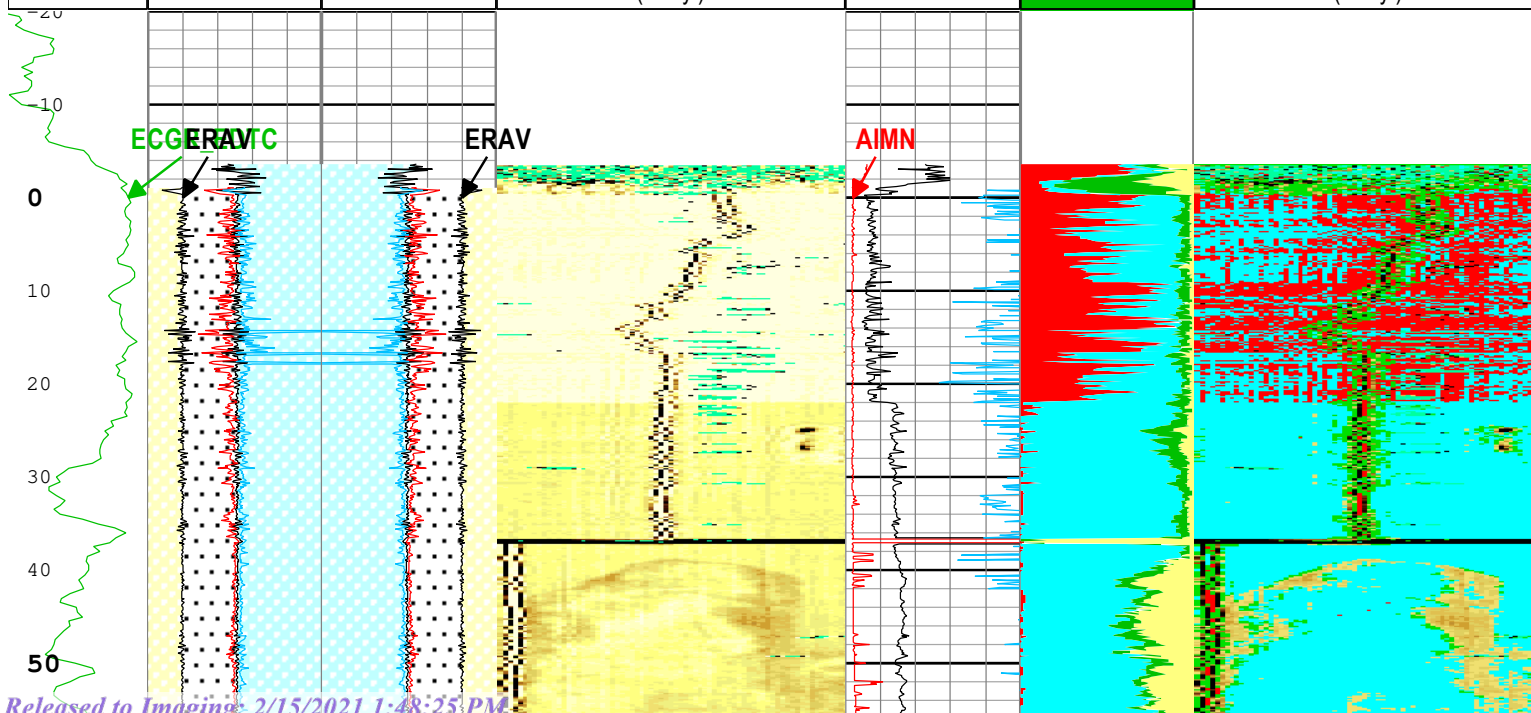
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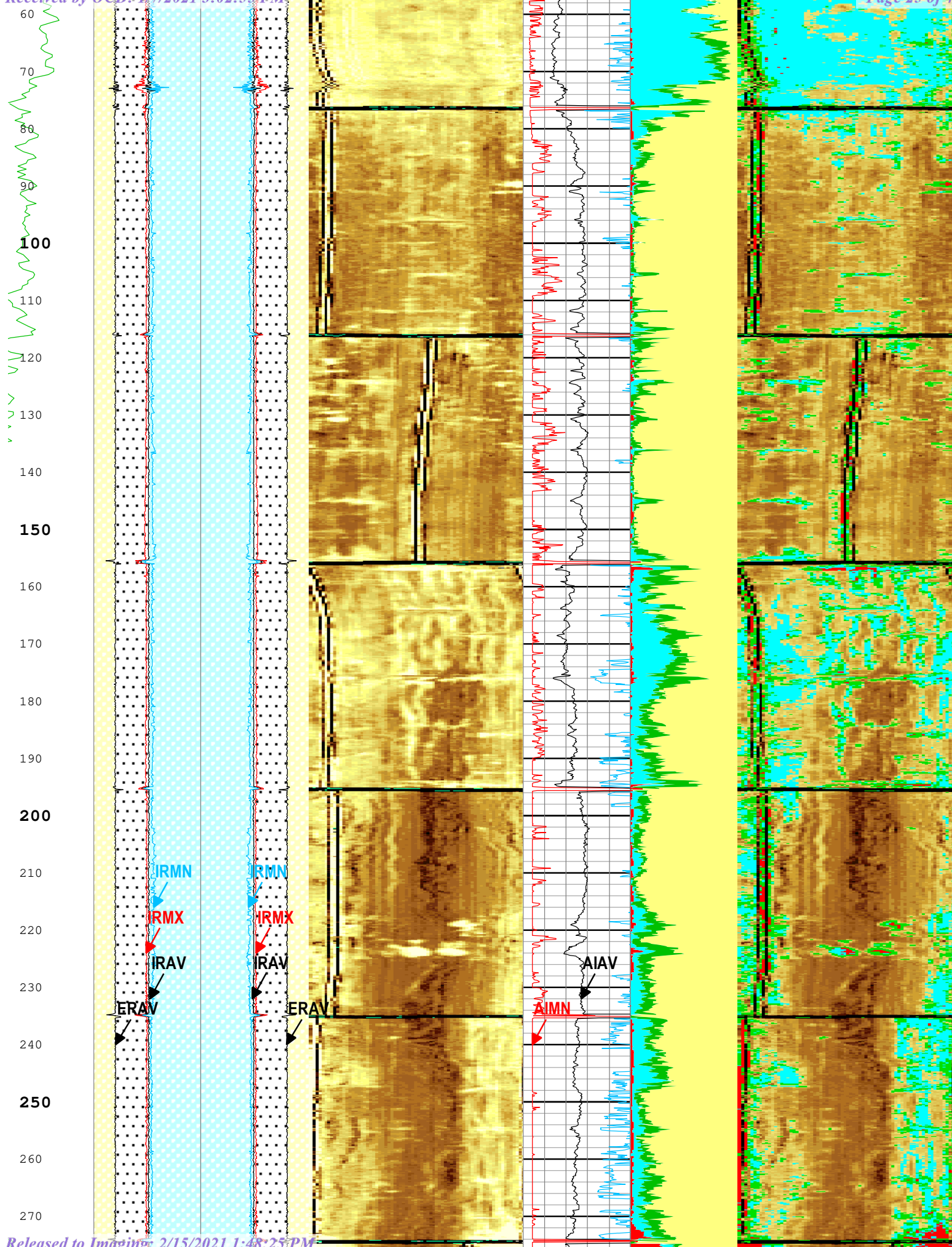
Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
U-USIT_DDT5	USIC Downhole Decimation for T5 only	USIT-E	0_NONE	
DOT(DOS)	Distance between Opposite Transducer Faces	USIT-E	10.964	in
EMXV	EMEX Voltage	USIT-E	15	V
HRES	Horizontal Resolution	USIT-E	5 deg	
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
MOTOR_PROTECT	Motor Protection	USIT-E	On	
UACLV_PERM	Ultrasonic ACLV Permanent	USIT-E	Yes	
ULOG	Logging Objective	USIT-E	MEASUREMENT	
USFR	Ultrasonic Sampling Frequency	USIT-E	666667	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 173.9 KHz Bipolar	
UWKM	USIT Working Mode	USIT-E	Uncompressed 5 deg at 1.5 in Thick casing	
USSP	Ultrasonic Service	USIT-E	USI	
VRES	Vertical Resolution	USIT-E	1.5 in	
WINB	Window Begin Time	USIT-E	Time Zoned	us
WINE	Window End Time	USIT-E	220	us

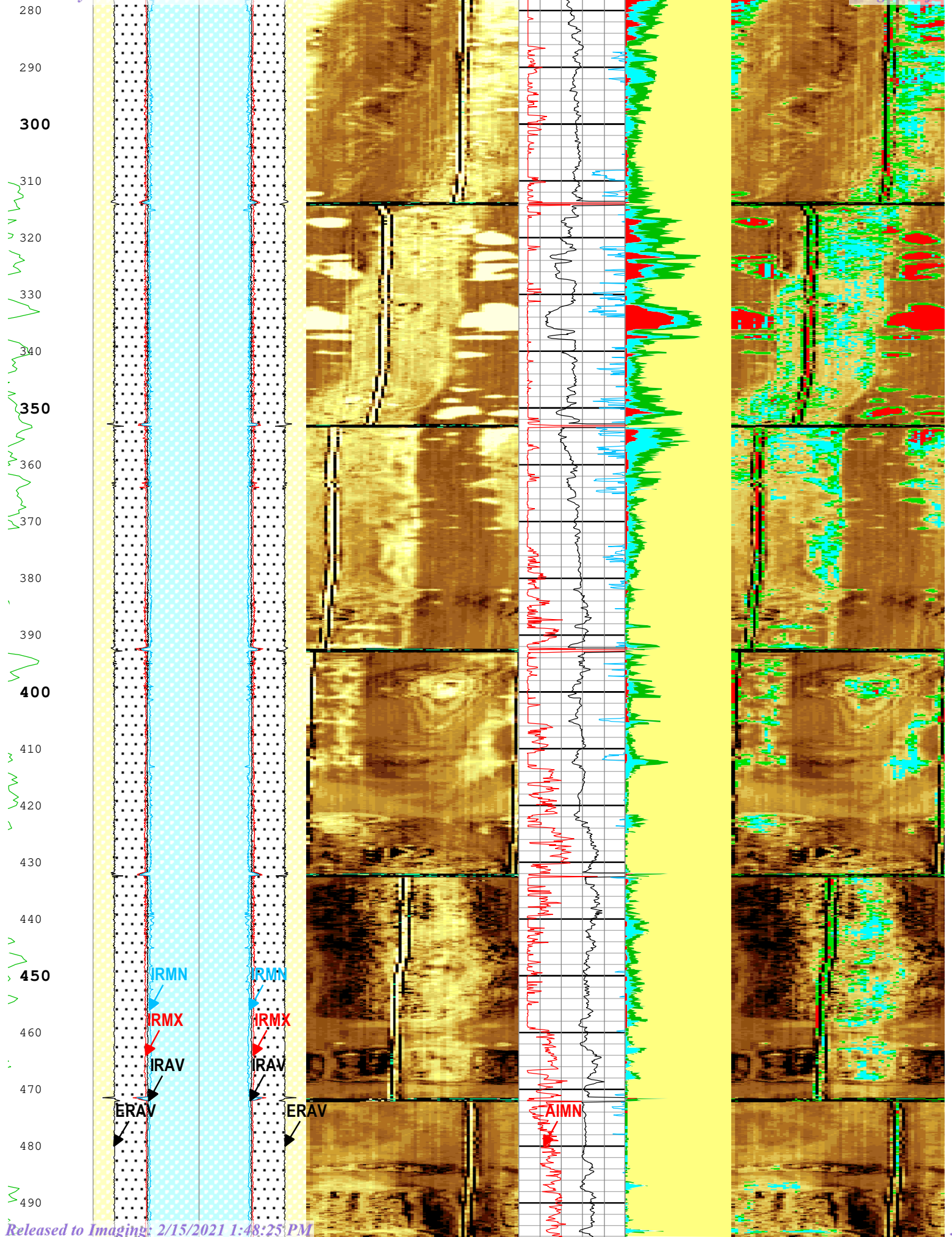
Time Zone Parameters

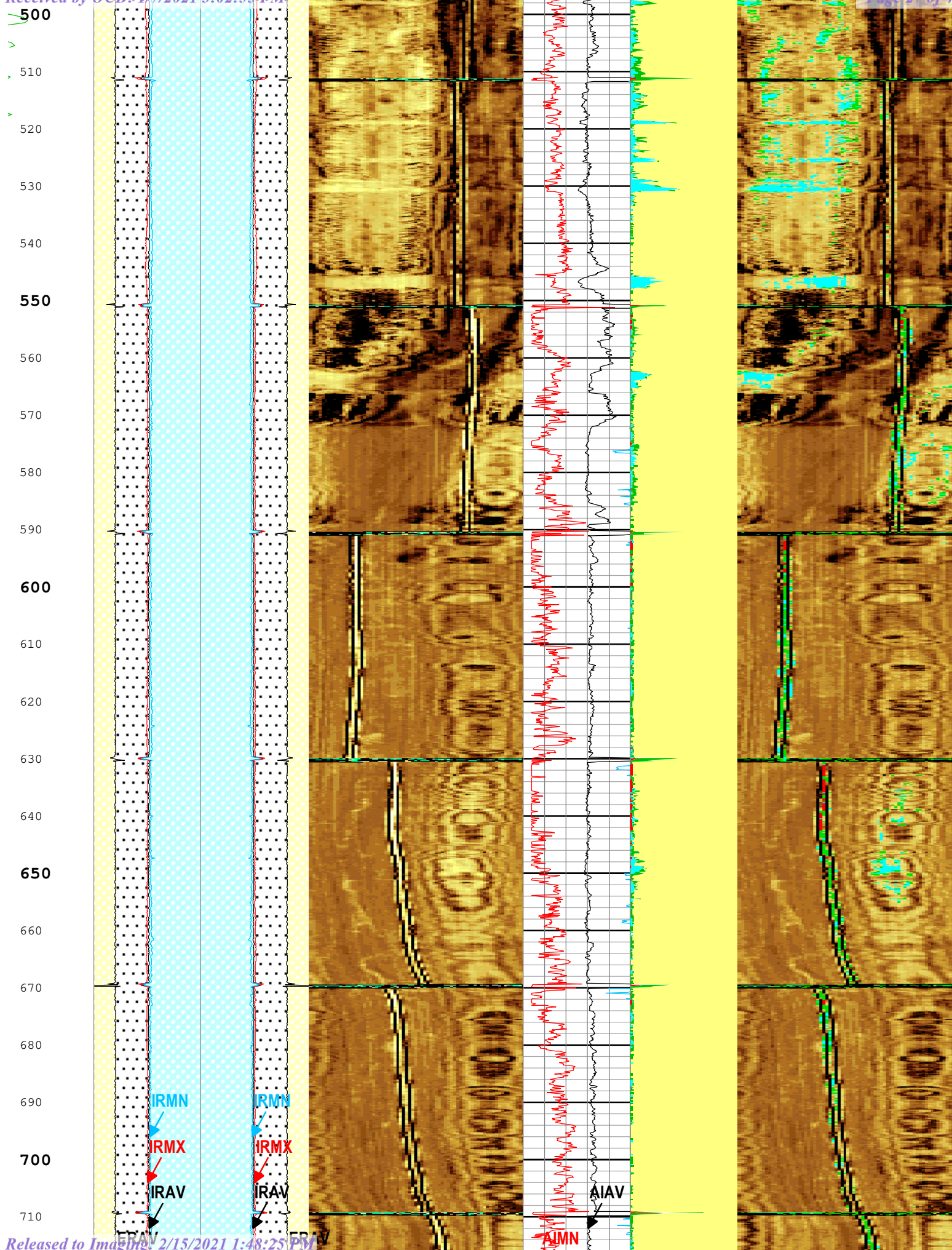
Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
WINB	140	02-Jan-2021 22:35:33	02-Jan-2021 23:07:17	1375.25	727.08
WINB	130	02-Jan-2021 23:07:17	02-Jan-2021 23:42:54	727.08	-3.32

All depth are at tool zero.

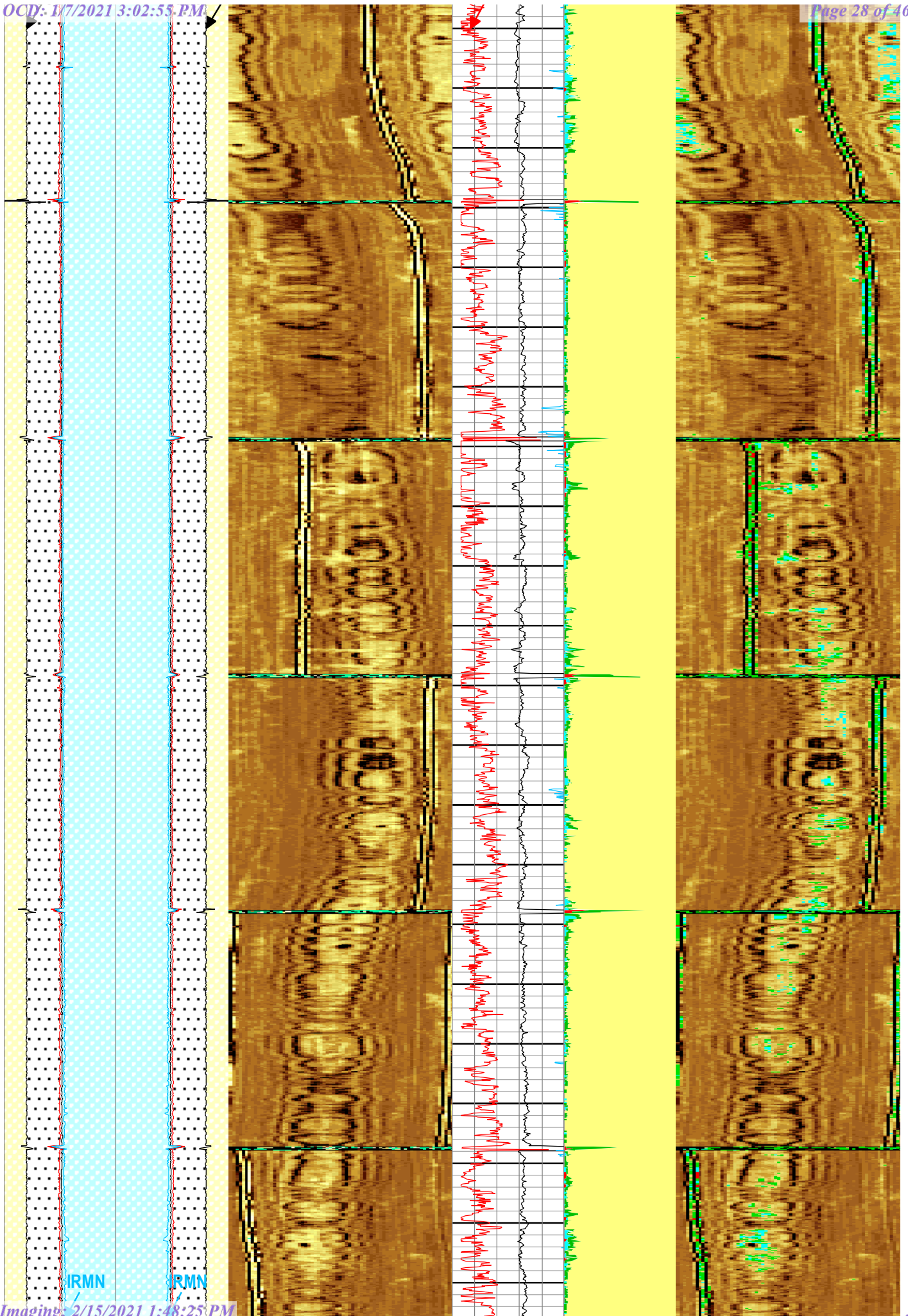


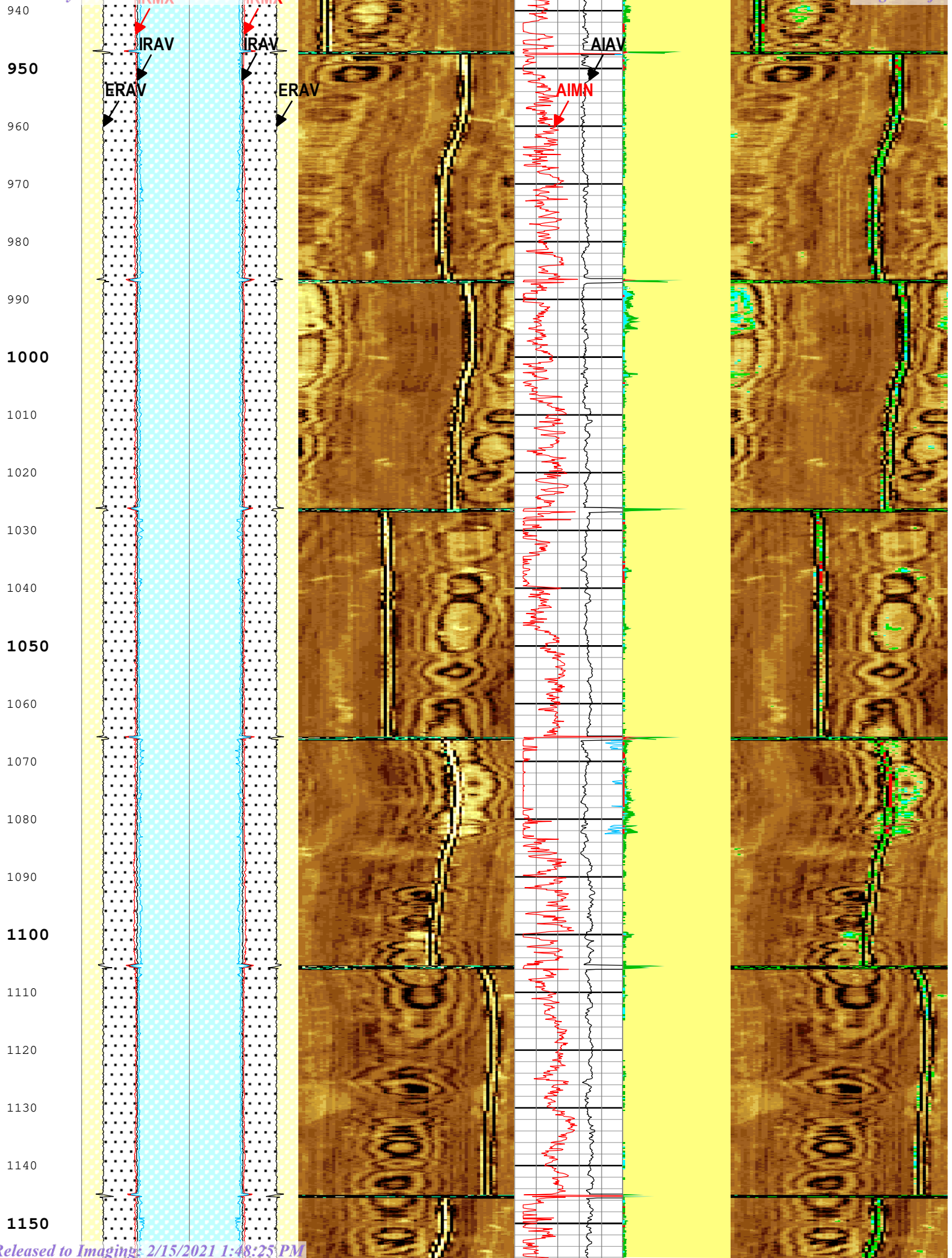


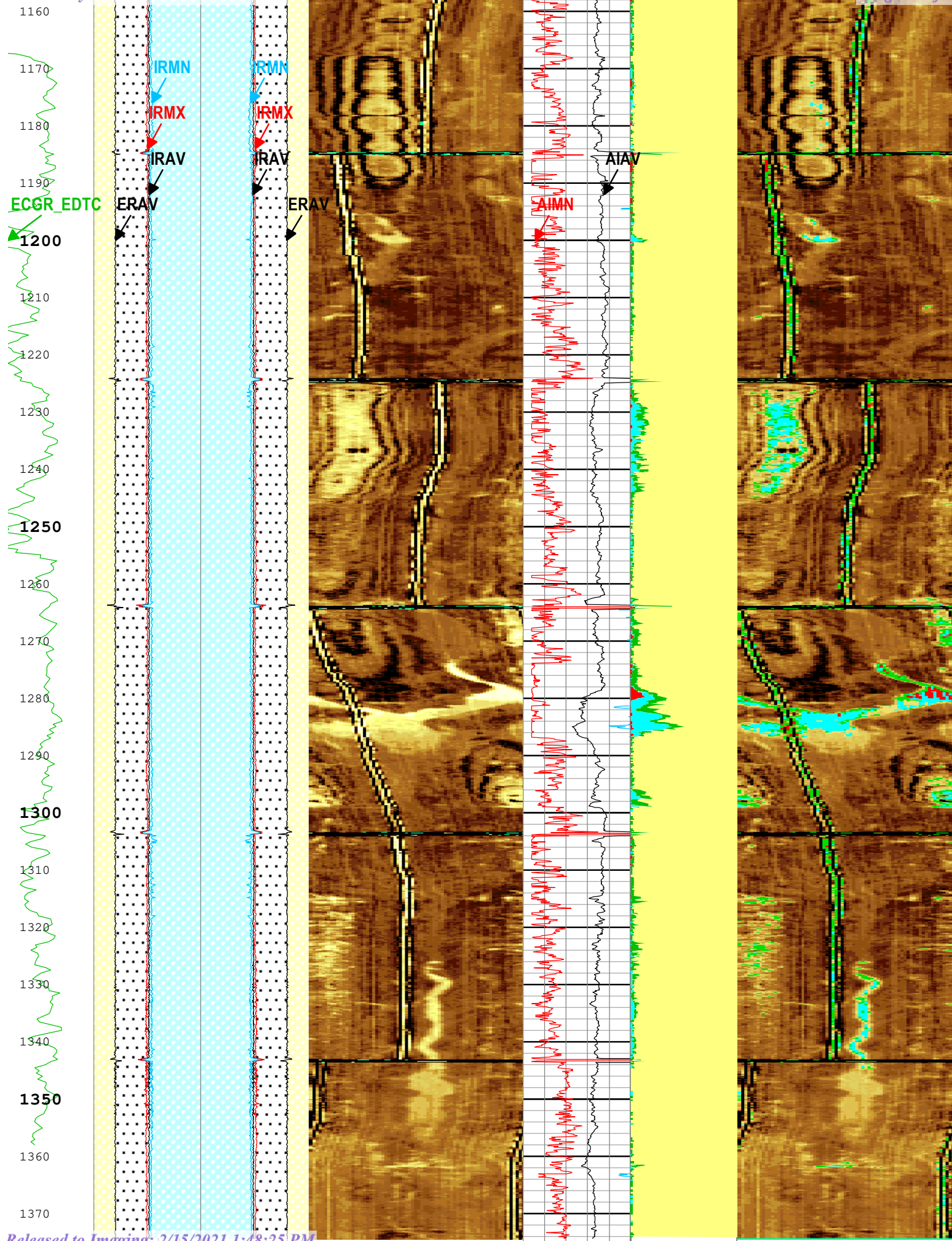




720
730
740
750
760
770
780
790
800
810
820
830
840
850
860
870
880
890
900
910
920
930







Gamma Ray

(ECGR_EDT C) EDTC-B

0 gAPI 150

Motor Revolution Speed (RSAV) USIT-E

6 c/s 8

ERAV_IRAV

IRAV_LHF1

LHF1_ERAV

External Radii Average (ERAV) USIT-E

12.5 in 10

Internal Radius Averaged Value (IRAV) USIT-E

12.5 in 10

Internal Radius Maximum Value (IRMX) USIT-E

12.5 in 10

Internal Radius Minimum Value (IRMN) USIT-E

12.5 in 10

ERAV_RHF1

IRAV_IRAV

RHF1_IRAV

External Radii Average (ERAV) USIT-E

10 in 12.5

Internal Radius Averaged Value (IRAV) USIT-E

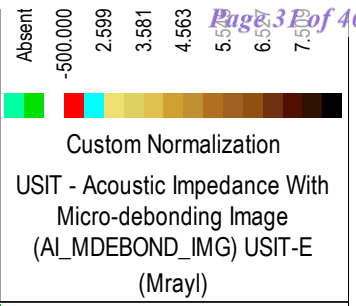
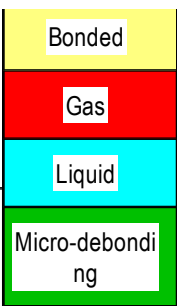
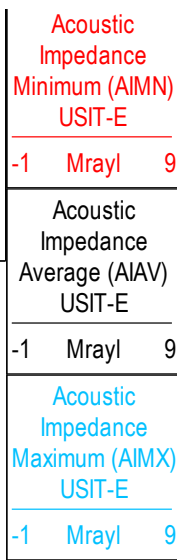
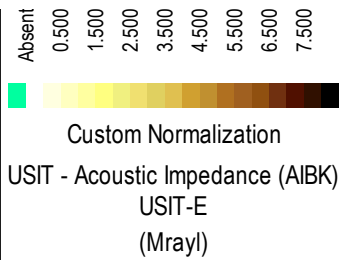
10 in 12.5

Internal Radius Maximum Value (IRMX) USIT-E

10 in 12.5

Internal Radius Minimum Value (IRMN) USIT-E

10 in 12.5



TIME_1900 - Time Marked every 60.00 (s)

Description: USI Cement Format: Log (USI Cement) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 03-Jan-2021 01:17:51

Channel Processing Parameters				
2A: Parameters				
Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	1400	ft
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CENT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	9	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	185	us/ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
HEMA	Hematite Presence Flag	Borehole	No	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	47.38	us
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.64	Mrayl
USI_FVEL_SEL	USI Fluid Velocity Selection	USIT-E	Automatic	
USI_ZMUD_SEL	USI Mud Impedance Selection	USIT-E	Theoretical	
ZMUD	Acoustic Impedance of Mud	Borehole	1.8	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl
Depth Zone Parameters				
Parameter	Value	Start (ft)	Stop (ft)	

BS	26	116	1375
----	----	-----	------

All depth are actual.

Tool Control Parameters

2A: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
EMXV	EMEX Voltage	USIT-E	15	V
HRES	Horizontal Resolution	USIT-E	5 deg	
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
ULOG	Logging Objective	USIT-E	MEASUREMENT	
USFR	Ultrasonic Sampling Frequency	USIT-E	666667	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 173.9 KHz Bipolar	
UWKM	USIT Working Mode	USIT-E	Uncompressed 5 deg at 1.5 in Thick casing	
VRES	Vertical Resolution	USIT-E	1.5 in	
WINB	Window Begin Time	USIT-E	Time Zoned	us
WINE	Window End Time	USIT-E	220	us

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
WINB	140	02-Jan-2021 22:35:33	02-Jan-2021 23:07:17	1375.25	727.08
WINB	130	02-Jan-2021 23:07:17	02-Jan-2021 23:42:54	727.08	-3.32

All depth are at tool zero.

2A

Repeat Pass 5" = 100'

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
2A	Log[2]:Up	Up	6.86 ft	1375.42 ft	02-Jan-2021 9:38:47 PM	02-Jan-2021 10:14:20 PM	ON	0.35 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Ameredev Operating, LLCWell:Independence AGI #1

2A: Log[2]:Up:S011

Description: USI Cement Format: Log (USI Cement) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 03-Jan-2021 01:18:02

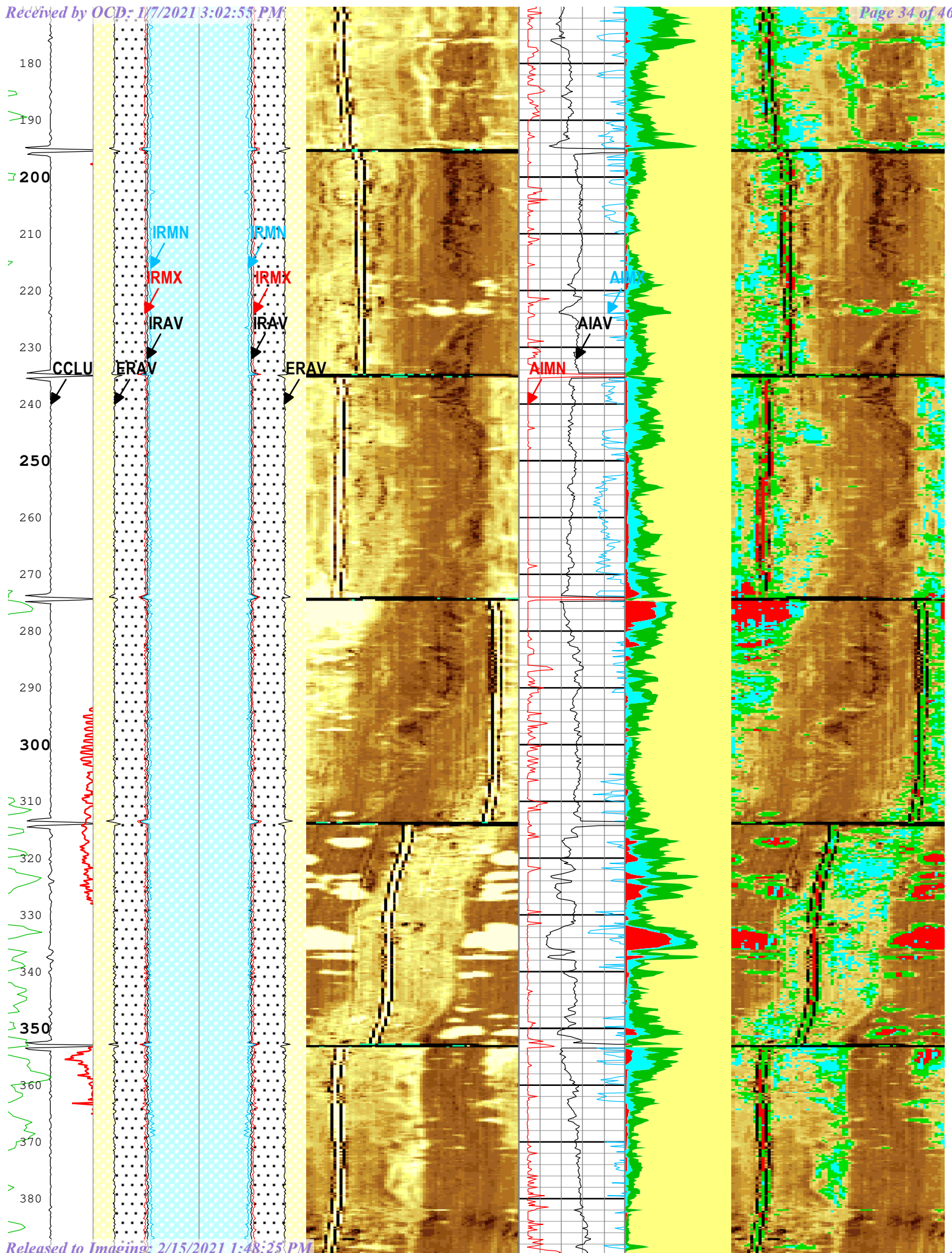
TIME_1900 - Time Marked every 60.00 (s)

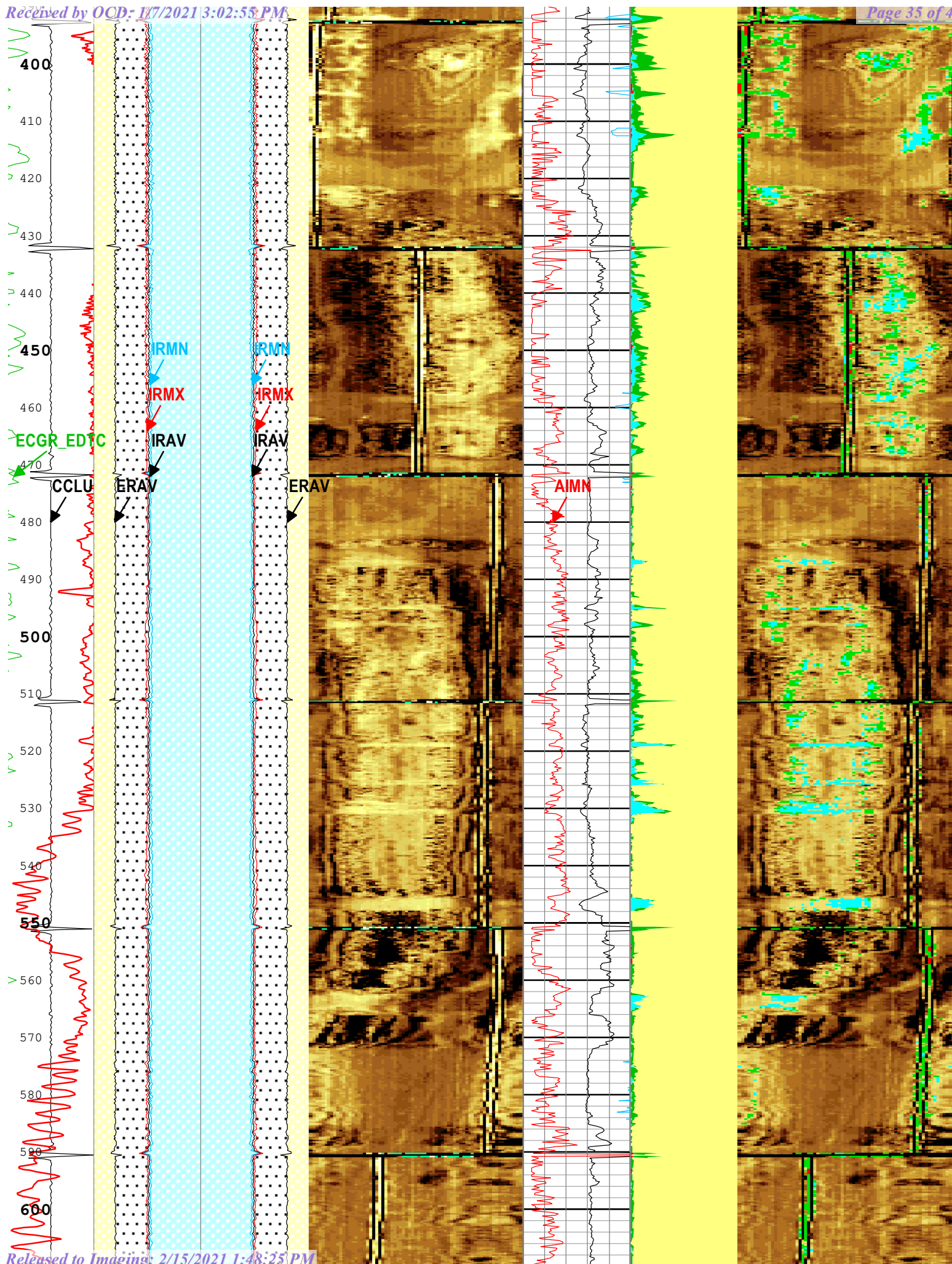
Casing Collar Locator Ultrasonic (CCLU) USIT-E	ERAV_IRAV	ERAV_RHF1
	IRAV_LHF1	IRAV_IRAV
	LHF1_ERAV	RHF1_IRAV
	External Radii Average (ERAV) USIT-E	External Radii Average (ERAV) USIT-E
-20 in 20	12.5 in 10	10 in 12.5
Gamma Ray (ECGR_EDT C) EDTC-B		
0 gAPI 150	Internal Radius Averaged Value (IRAV) USIT-E	Internal Radius Averaged Value (IRAV) USIT-E

Acoustic Impedance Minimum (AIMN) USIT-E

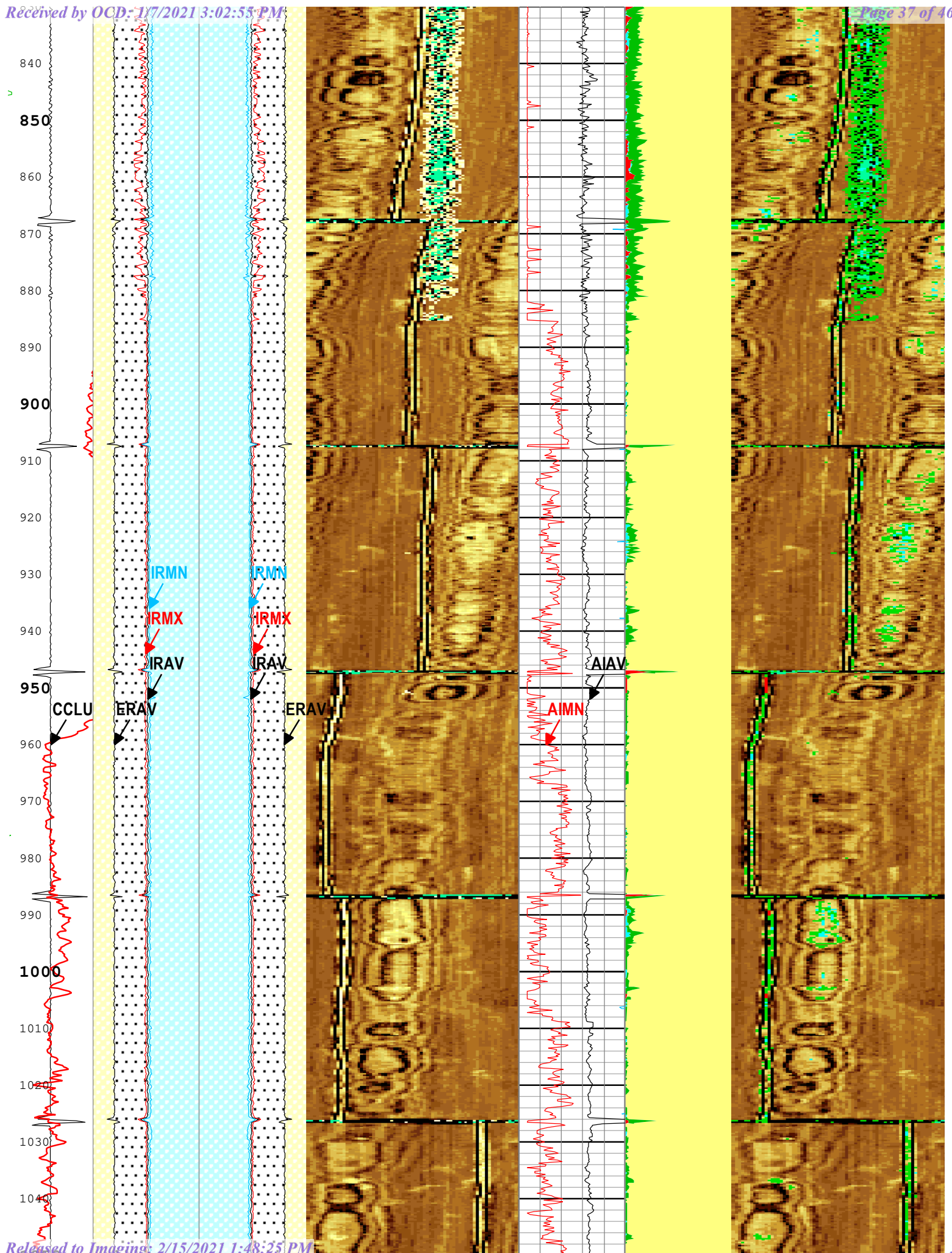
-1Mrayl9

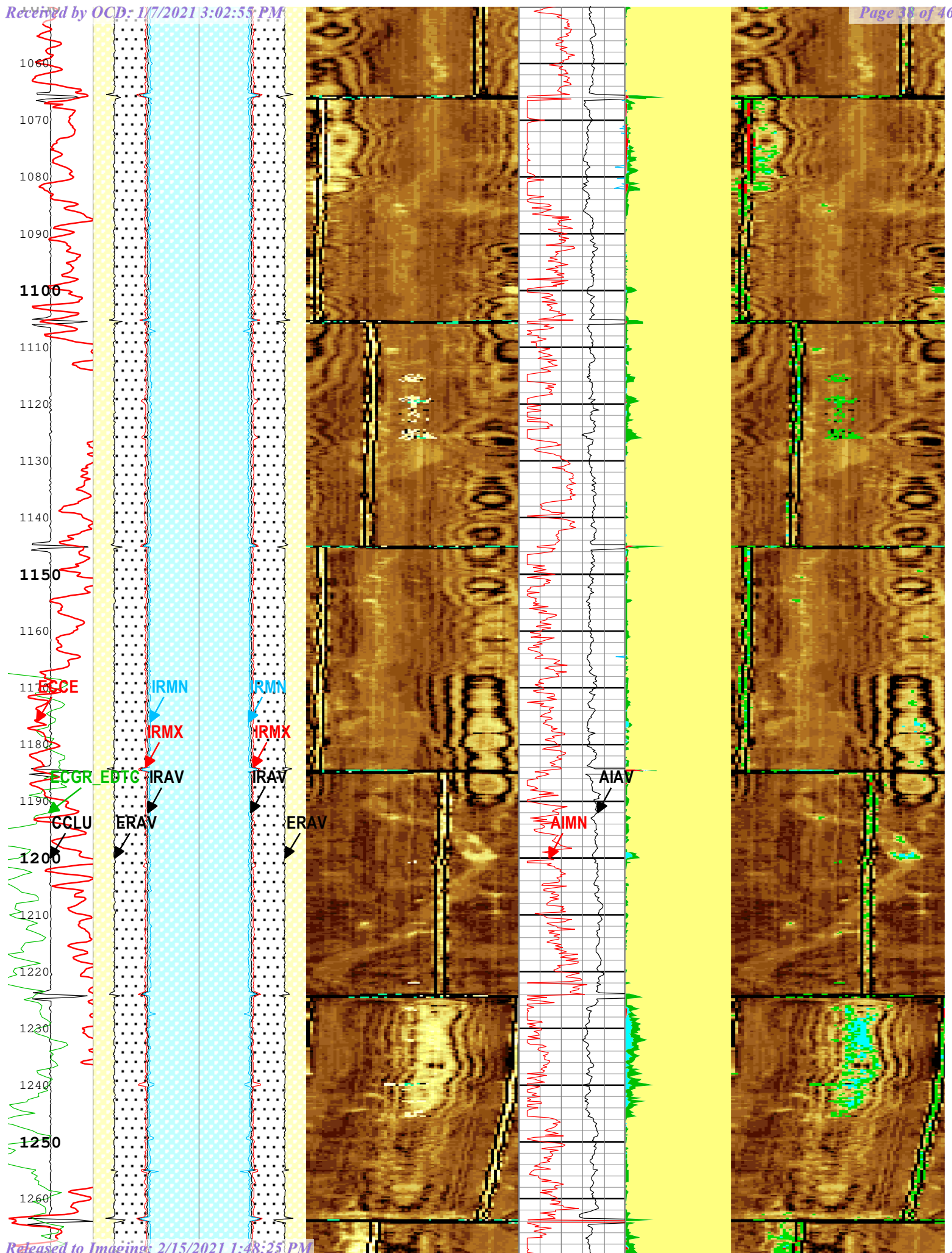
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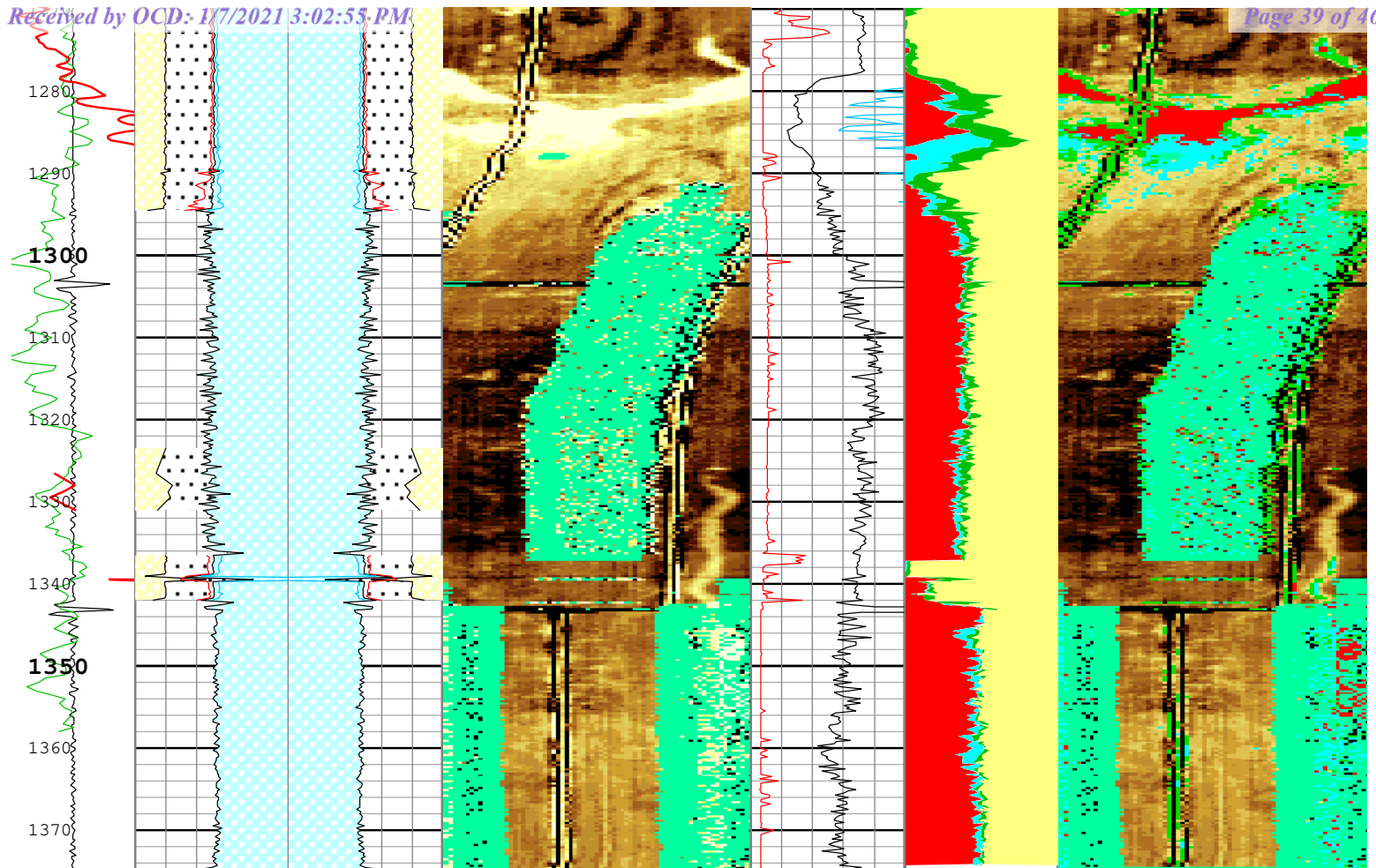












Casing Collar Locator Ultrasonic (CCLU) USIT-E	ERAV_IRAV	ERAV_RHF1	Absent 0.500 1.500 2.500 3.500 4.500 5.500 6.500 7.500	Acoustic Impedance Minimum (AIMN) USIT-E	Bonded	Absent -500.000 2.599 3.581 4.563 5.545 6.527 7.509
-20 in 20	IRAV_LHF1	IRAV_IRAV	Custom Normalization	-1 Mrayl 9	Gas	Custom Normalization
Gamma Ray (ECGR_EDT C) EDTC-B	LHF1_ERAV	RHF1_IRAV	USIT - Acoustic Impedance (AIBK) USIT-E (Mrayl)	Acoustic Impedance Average (AIAV) USIT-E	Liquid	USIT - Acoustic Impedance With Micro-debonding Image (AI_MDEBOND_IMG) USIT-E (Mrayl)
0 gAPI 150	External Radii Average (ERAV) USIT-E	External Radii Average (ERAV) USIT-E		-1 Mrayl 9	Micro-debonding	
Motor Revolution Speed (RSAV) USIT-E	12.5 in 10	10 in 12.5		Acoustic Impedance Maximum (AIMX) USIT-E		
6 c/s 8	Internal Radius Averaged Value (IRAV) USIT-E	Internal Radius Averaged Value (IRAV) USIT-E		-1 Mrayl 9		
Amplitude of Eccentering (ECCE) USIT-E	12.5 in 10	10 in 12.5				
0 in 0.5	Internal Radius Maximum Value (IRMX) USIT-E	Internal Radius Maximum Value (IRMX) USIT-E				
	12.5 in 10	10 in 12.5				
	Internal Radius Minimum Value (IRMN) USIT-E	Internal Radius Minimum Value (IRMN) USIT-E				
	12.5 in 10	10 in 12.5				

TIME_1900 - Time Marked every 60.00 (s)

Description: USI Cement Format: Log (USI Cement) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 03-Jan-2021 01:18:02

Channel Processing Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	1400	ft
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	9	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	185	us/ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
HEMA	Hematite Presence Flag	Borehole	No	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	47.38	us
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.64	Mrayl
USI_FVEL_SEL	USI Fluid Velocity Selection	USIT-E	Automatic	
USI_ZMUD_SEL	USI Mud Impedance Selection	USIT-E	Theoretical	
ZMUD	Acoustic Impedance of Mud	Borehole	1.8	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	40	0	116
BS	26	116	1375
All depth are actual.			

Tool Control Parameters

2A: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
EMXV	EMEX Voltage	USIT-E	Time Zoned	V
HRES	Horizontal Resolution	USIT-E	5 deg	
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
ULOG	Logging Objective	USIT-E	MEASUREMENT	
USFR	Ultrasonic Sampling Frequency	USIT-E	666667	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 173.9 KHz Bipolar	
UWKM	USIT Working Mode	USIT-E	Uncompressed 5 deg at 3.0 in Thick casing	
VRES	Vertical Resolution	USIT-E	3.0 in	
WINB	Window Begin Time	USIT-E	Time Zoned	us
WINE	Window End Time	USIT-E	Time Zoned	us

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	10	02-Jan-2021 21:38:47	02-Jan-2021 21:39:28	1375.42	1356.08
EMXV	15	02-Jan-2021 21:39:28	02-Jan-2021 21:39:37	1356.08	1349.86
EMXV	20	02-Jan-2021 21:39:37	02-Jan-2021 21:40:11	1349.86	1327.29
EMXV	60	02-Jan-2021 21:40:11	02-Jan-2021 21:40:37	1327.29	1309.7

EMXV	80	02-Jan-2021 21:40:37	02-Jan-2021 21:41:23	1309.7	1279.04
EMXV	20	02-Jan-2021 21:41:23	02-Jan-2021 21:44:54	1279.04	1139
EMXV	15	02-Jan-2021 21:44:54	02-Jan-2021 21:45:10	1139	1128.28
EMXV	10	02-Jan-2021 21:45:10	02-Jan-2021 21:45:22	1128.28	1120.36
EMXV	12	02-Jan-2021 21:45:22	02-Jan-2021 22:14:20	1120.36	6.86
WINB	172.82	02-Jan-2021 21:38:47	02-Jan-2021 21:39:47	1375.42	1343.08
WINB	147.29	02-Jan-2021 21:39:47	02-Jan-2021 21:39:52	1343.08	1340.09
WINB	126.33	02-Jan-2021 21:39:52	02-Jan-2021 21:40:20	1340.09	1321.58
WINB	121.57	02-Jan-2021 21:40:20	02-Jan-2021 21:40:50	1321.58	1300.97
WINB	135.86	02-Jan-2021 21:40:50	02-Jan-2021 21:41:06	1300.97	1290.46
WINB	152.05	02-Jan-2021 21:41:06	02-Jan-2021 21:41:58	1290.46	1255.84
WINB	142.52	02-Jan-2021 21:41:58	02-Jan-2021 21:42:21	1255.84	1240.66
WINB	135.86	02-Jan-2021 21:42:21	02-Jan-2021 21:55:50	1240.66	708.9
WINB	135	02-Jan-2021 21:55:50	02-Jan-2021 22:12:14	708.9	57.91
WINB	150	02-Jan-2021 22:12:14	02-Jan-2021 22:14:20	57.91	6.86
WINE	212.82	02-Jan-2021 21:38:47	02-Jan-2021 21:39:56	1375.42	1337.42
WINE	185.39	02-Jan-2021 21:39:56	02-Jan-2021 21:40:58	1337.42	1295.59
WINE	196.82	02-Jan-2021 21:40:58	02-Jan-2021 21:41:04	1295.59	1292.03
WINE	215.87	02-Jan-2021 21:41:04	02-Jan-2021 21:42:12	1292.03	1246.51
WINE	198.72	02-Jan-2021 21:42:12	02-Jan-2021 21:45:44	1246.51	1105.42
WINE	199.68	02-Jan-2021 21:45:44	02-Jan-2021 21:45:51	1105.42	1100.82
WINE	196.82	02-Jan-2021 21:45:51	02-Jan-2021 21:45:56	1100.82	1097.88
WINE	199.68	02-Jan-2021 21:45:56	02-Jan-2021 21:55:32	1097.88	721.18
WINE	205	02-Jan-2021 21:55:32	02-Jan-2021 21:56:01	721.18	701.84
WINE	210	02-Jan-2021 21:56:01	02-Jan-2021 22:12:02	701.84	65.91
WINE	226.35	02-Jan-2021 22:12:02	02-Jan-2021 22:14:20	65.91	6.86

All depth are at tool zero.

XYZ

Company:Ameredev Operating, LLC Well:Independence AGI #1

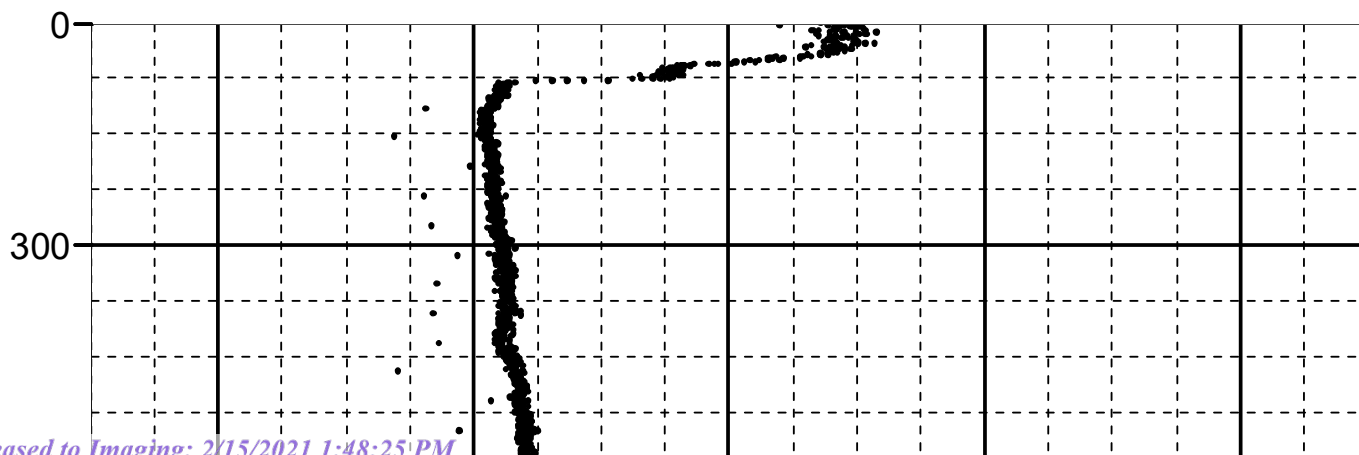
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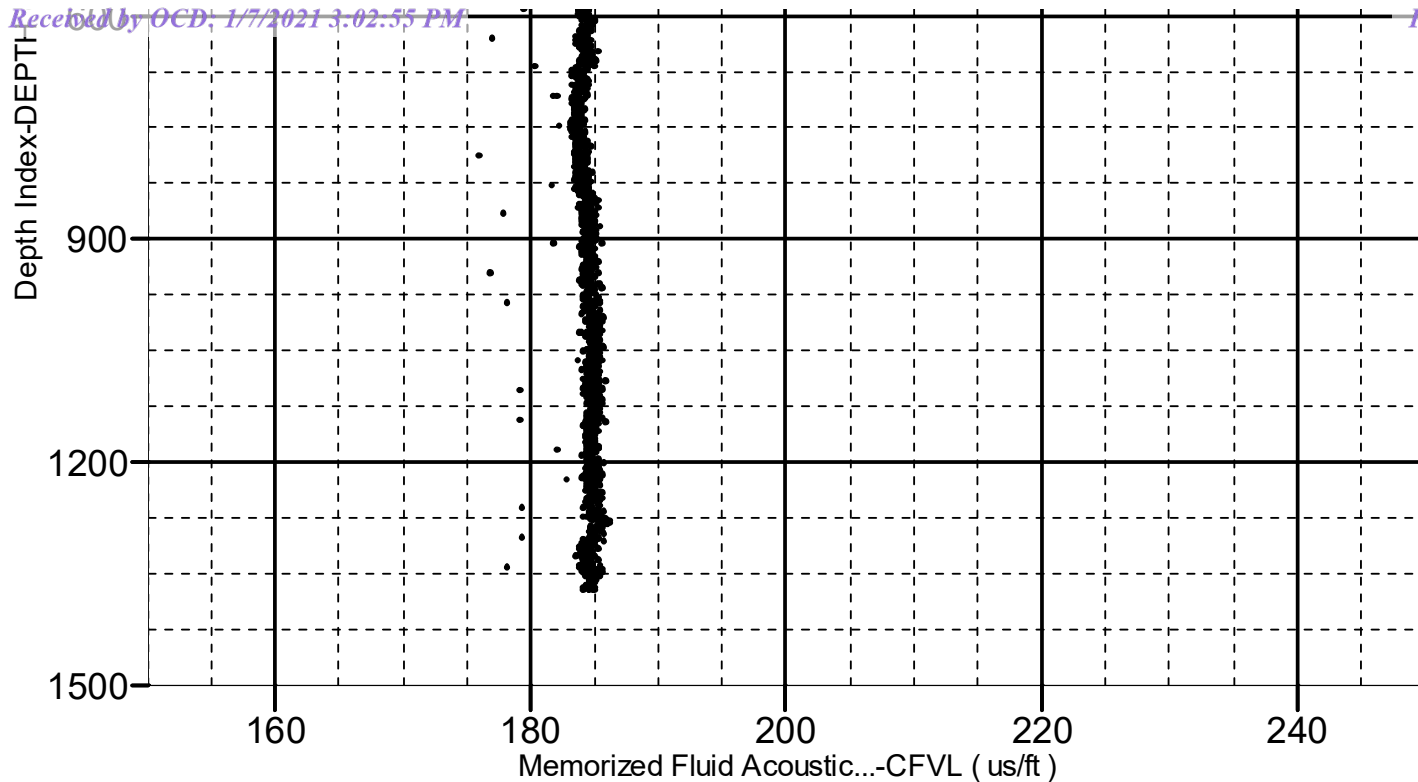
Fluid Acoustic Slowness vs Depth

2D Cross Plot

Index Range: From 1375.50 to -3.62 ft

● CFVL-DEPTH





XYZ

Company: Ameredev Operating, LLC Well: Independence AGI #1

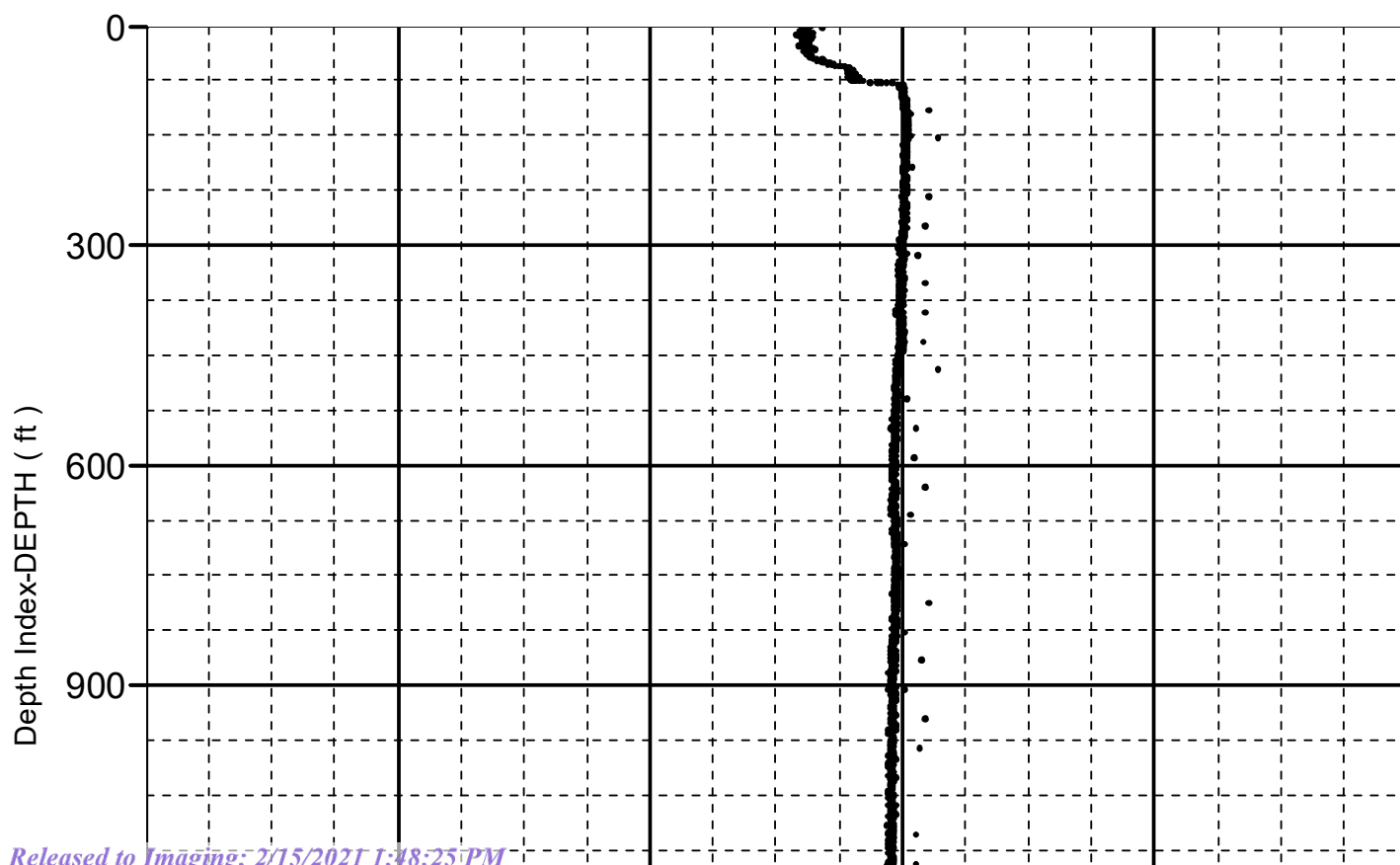
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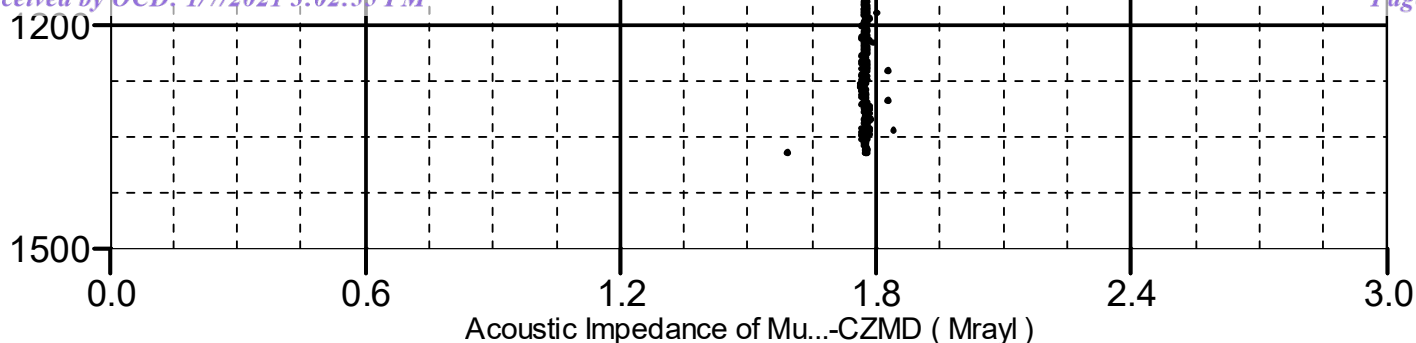
Acoustic Impedance of Mud vs Depth

2D Cross Plot

Index Range: From 1375.50 to -3.62 ft

● CZMD-DEPTH





Calibration Report

EDTC-B (Enhanced Digital Telemetry Cartridge - Version B) Calibration - Run 2A

Primary Equipment :

EDTC-B

EDTC-B

9247

Calibration Parameter :

Plus Reference (Jig minus background reference)

167.6

EDTC-B Accelerometer Calibration - EDTC-B Accelerometer Calibration

Before (Measured): 21:02:12 02-Jan-2021

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.19	31.53	31.96	32.84	

EDTC-B Memory Data - EDTC-B Memory Data

Master (EEPROM): 20:55:05 02-Jan-2021

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Initial PMT HV	V	Master			1401.000		
Accelerometer Serial Number		Master			1475		
Accelerometer Coefficients - 0		Master	----	----	2.992E+000	----	
Accelerometer Coefficients - 1		Master	----	----	2.629E-004	----	
Accelerometer Coefficients - 2		Master	----	----	1.576E-007	----	
Accelerometer Coefficients - 3		Master	----	----	-6.197E-008	----	
Accelerometer Coefficients - 4		Master	----	----	1.538E-009	----	
Accelerometer Coefficients - 5		Master	----	----	-1.181E-011	----	
Accelerometer Coefficients - 6		Master	----	----	3.047E-014	----	
Accelerometer Coefficients - 7		Master	----	----	1.950E-003	----	
Accelerometer Coefficients - 8		Master	----	----	3.849E-005	----	
Accelerometer Coefficients - 9		Master	----	----	-1.197E-007	----	
Accelerometer Coefficients - 10		Master	----	----	3.312E-010	----	
Accelerometer Coefficients - 11		Master	----	----	-1.034E-012	----	
Gamma-Ray Detector Serial Number		Master			79445		

EDTC-B Gamma-Ray Calibration - Gamma Ray Coefficients

Before: After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Gamma Ray Gain		Before	1.000	0.900	NOT DONE	1.100	
		After	----	----	----	----	
		After-Before	----	----	----	----	

EDTC-B Gamma-Ray Calibration - Gamma Ray Accumulations

Before: After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement - 0	gAPI	Before	----	----	----	----	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RGR Plus Measurement	gAPI	Before			NOT DONE		
		After			NOT DONE		
		After-Before	----	----	----	----	

2A

Primary Equipment :

Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor

LEH-QT

HTEN Master Calibration - HTEN Master Calibration

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
HTEN Shop Gain		Master	1.000	0.800	NOT DONE	4.500		
HTEN Shop Offset	lbf	Master	0	-1000.000	NOT DONE	1000.000		

HTEN Before Calibration - HTEN Before Calibration

Before:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
RHTE Zero Measurement - 0	lbf	Before	----	----	----	----		
RHTE Plus Measurement - 0	lbf	Before	----	----	----	----		
HTEN Gain - 0		Before	----	----	----	----		
HTEN Offset - 0	lbf	Before	----	----	----	----		

Company: Ameredev Operating, LLC

Schlumberger

Well: Independence AGI #1

Field: Delaware

County: Lea

State: New Mexico

Cement Print

Gamma Ray

Casing Collar Locator

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 13947

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
AMEREDEV OPERATING, LLC Suite 600 Austin, TX78746	372224	13947	C-103N
2901 Via Fortuna			
OCD Reviewer	Condition		
plmartinez	None		