

HALLIBURTON

iCem[®] Service

CRESTONE PEAK RESOURCES-EBUS

For: Josh Kliesen

Date: Tuesday, March 21, 2023

COSSLETT EAST 1M-22H-H168

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Job Date: Tuesday, March 21, 2023

Sincerely,

Nick Roles and Crew

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the : COSSLETT EAST 1M-22H-H168 CONDUCTOR. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Approximately 25bbls of cement were returned to surface.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton Rockies Cement Team

1.2 Job Overview

Job Details	
API #:	05-123-51943
County:	Weld
Field:	Wattenberg
Legal Discription:	SENE SEC 22 TOWN 1N RANGE 68W

Job Times			
	Date (mm/dd/yyyy)	Time (hh:mm)	Time Zone
Requested Time On Location:	03/21/2023	16:00	MTN
Called Out Time:	03/20/2023	11:00	MTN
Arrived On Location:	03/21/2023	11:00	MTN
Job Started:	03/21/2023	18:00	MTN
Job Completed:	03/21/2023	21:00	MTN
Departed Location:	03/21/2023	22:00	MTN

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	55
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	WBM
3	Mud density	ppg	8.8
4	Casing set depth (shoe)	ft	619
5	TVD	ft	619
6	Float collar depth	ft	572
7	Length of rate hole	ft	10
8	Previous casing shoe depth	ft	145
9	Pre-job mud circulation time	hh:mm	00:15

10	Pre-job mud circulation rate	bpm	5
11	Pre-job mud circulation volume	bbls	40
12	Pre-job mud circulation pressure	psi	50
13	Annual flow before the start of job	Y/N	N
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	88.4
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	50
18	Fluid returns to surface	Spacer/Cement, bbls	Cement
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	110
20	Number of Centralizers	-	15
21	Number of plugs	-	2

1.3 Water Field Test

	Recorded Value	Unit	Acceptable Limit	Potential Problems if Values Exceed the Limit
pH	7		6.0 - 8.0	Chemicals in water can cause severe retardation
Temperature	65	F	60 - 80 F	
Chlorides	<3000	ppm	3000 ppm	Can shorten thickening time

1.4 Actual Pump Schedule

	Density (ppg)	Volume (bbls)	Yield (ft ³ /sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
1st stage Cement	14.2	116	1.15	5.74	567	3254
2nd stage Cement	14.2	72.4	1.15	5.74	353	2026
Tail Cement	NA					
Top Plug	2					
1st stage Displacement Fluid	8.33	88.4				3712
2nd stage Displacement Fluid	8.33	52.4				2201

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq No.	Activity	Graph Label	Date	Time	Source	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/mi n)	Pump B Pressure (psi)	Cmb Stg Total (bbl)	Comments
Event	1	Arrive at Location from Service Center	Arrive at Location from Service Center	3/21/2023	11:00:00	USER					Upon arrival to location, signed in with onsite safety personnel. Met with company man and discussed job specific requirements and specifications.
Event	2	Call Out	Call Out	3/21/2023	11:00:00	USER					Called out by service coordinator for OL time of 1600.
Event	3	Other	Other	3/21/2023	14:00:00	USER					Mix water test results- PH-7, Chlo-0, Temp-65F.
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	3/21/2023	17:00:00	USER					Held pre rig up JSA for hazards, hazard hunt with crew, and discussed plan for spotting equipment and rigging up lines for job. Discussed muster points and

											closest emergency location as well as coordinates.
Event	5	Rig-Up Equipment	Rig-Up Equipment	3/21/20 23	17:15:0 0	USER					Begin rig up with crew.
Event	6	Rig-Up Completed	Rig-Up Completed	3/21/20 23	17:45:0 0	USER	8.24	0.00	-7.26	0.00	Complete rig up for job to nearest point before red zone.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	3/21/20 23	17:45:0 0	USER	8.24	0.00	-7.26	0.00	Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.
Event	8	Start Job	Start Job	3/21/20 23	17:57:2 4	NONE	8.24	0.00	-3.93	0.00	TD-629', TP-618' 13.375" 54.5#, FC-572', OH-17.5", Cond.-145' 20# 19.5" ID, MUD-8.8#
Event	9	Test Lines	Test Lines	3/21/20 23	17:59:1 6	NONE	8.34	0.00	6.93	2.98	Pumped 5bbls fresh water to fill lines, shutdown, closed manifold, performed 500psi k/o function test, continued with 5th gear stall at 1350psi, proceeded to bring pressure to 3500psi. Held well, no leaks.

Event	10	Pump Cement	Pump Cement	3/21/20 23	18:02:3 2	NONE	8.34	0.00	-3.66	0.00	Pumped 542sks or 111bbls of 14.2# 1.15y 5.74g/s SwiftCem at 6bpm 100psi.
Event	11	Check Weight	Check Weight	3/21/20 23	18:10:1 2	NONE	15.02	2.79	129.13	10.00	Weight verified with pressurized mud scales.
Event	12	Check Weight	Check Weight	3/21/20 23	18:13:2 6	NONE	14.33	4.18	251.16	21.90	Weight verified with pressurized mud scales.
Event	13	Check Weight	Check Weight	3/21/20 23	18:15:1 1	NONE	14.17	5.99	425.44	32.18	Weight verified with pressurized mud scales.
Event	14	Check Weight	Check Weight	3/21/20 23	18:25:0 6	NONE	14.15	6.13	419.48	91.36	Weight verified with pressurized mud scales.
Event	15	Shutdown	Shutdown	3/21/20 23	18:28:5 6	NONE	14.71	0.00	130.76	107.65	
Event	16	Drop Top Plug	Drop Top Plug	3/21/20 23	18:31:3 0	NONE	14.84	0.00	6.80	107.65	Dropped by tool hand witnessed by HES supervisor and company man.
Event	17	Pump Displacement	Pump Displacement	3/21/20 23	18:31:3 2	USER	14.84	0.00	6.80	0.00	Displaced first 10bbls with cement water, followed by 78.4bbls fresh water, total 88.4bbl displacement.

Event	18	Bump Plug	Bump Plug	3/21/20 23	18:53:1 7	NONE	8.42	0.00	498.73	86.99	Slowed down to 3bpm at 78bbbls away, final circulating pressure-60psi, Bump Pressure 550psi.
Event	19	Other	Other	3/21/20 23	18:53:5 3	NONE	8.42	0.00	545.90	86.99	Inflate lower packer 560, 750, 950 to 1130psi until opened. fell to 300psi, brought up to 1150psi. held there.
Event	20	Other	Other	3/21/20 23	18:57:0 8	NONE	8.40	0.00	317.01	0.32	Released pressure to 550psi, took 3/4bbl.
Event	21	Other	Other	3/21/20 23	19:00:0 3	NONE	8.48	0.00	1134.39	1.19	Brought pressure up to 1100psi, released at 1200psi dropped to 350psi. Pressured up to 1200psi. Released to 1100psi took 3/4bbl.
Event	22	Other	Other	3/21/20 23	19:09:2 3	NONE	8.47	0.31	1033.24	2.19	Released pressure and got 2bbls back, floats held.
Event	23	Drop Ball	Drop Ball	3/21/20 23	19:21:2 0	NONE	8.39	0.00	-6.33	0.00	Dropped Bomb Opened Tool at 1bpm to 493psi, 1bbl to open. Pumped additional 60bbbls fresh water at

											5bpm to ensure circulation and circulate bottoms up.
Event	24	Resume	Resume	3/21/2023	19:21:38	USER	8.39	0.00	-7.22	0.00	2nd stage DV TOOL-338.8', Upper PACKER-341.6', Lower PACKER-559', OH-17.5", Conductor 145' 19.5" ID, MUD-8.8#
Event	25	Pump Cement	Pump Cement	3/21/2023	19:35:07	NONE	8.30	0.00	-3.23	0.00	Pumped 378sks or 77.4bbl of 14.2# 1.15y 5.74g/s SwiftCem at 6bpm 410psi.
Event	26	Check Weight	Check Weight	3/21/2023	19:37:15	NONE	13.90	3.21	162.25	5.92	Weight verified with pressurized mud scales.
Event	27	Check Weight	Check Weight	3/21/2023	19:38:31	NONE	14.16	4.19	251.89	11.23	Weight verified with pressurized mud scales.
Event	28	Shutdown	Shutdown	3/21/2023	19:52:16	NONE	14.81	0.00	125.93	83.01	
Event	29	Drop Top Plug	Drop Top Plug	3/21/2023	19:53:45	NONE	14.67	0.00	7.66	83.01	Dropped by tool hand witnessed by HES supervisor and company man.

Event	30	Pump Displacement	Pump Displacement	3/21/2023	19:53:47	NONE	14.66	0.00	7.62	0.00	Displaced first 10bbls with cement water, followed by 42.4bbls fresh water, total of 52.4bbls Fresh water Displacement.
Event	31	Bump Plug	Bump Plug	3/21/2023	20:07:07	NONE	8.44	0.00	1508.55	52.84	Slowed down to 3bpm at 42bbls away, final circulating pressure-110psi, Bump Pressure 620psi.
Event	32	Other	Other	3/21/2023	20:09:41	NONE	8.43	0.00	1526.54	52.84	Released pressure and got 1bbls back, floats held.
Event	33	End Job	End Job	3/21/2023	20:12:17	NONE	8.29	0.00	-1.88	0.00	Got 25bbls cement to surface.
Event	34	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	3/21/2023	20:15:00	USER	-1.07	0.00	-4.51	0.00	Held safety meeting with crew prior to rig down, discussed possibility of trapped pressure, swing radius, slips trips and falls, pinch points and risks associated with rig down.
Event	35	Rig Down Lines	Rig Down Lines	3/21/2023	20:30:00	USER					Begin rig down
Event	36	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/21/2023	21:15:00	USER					Held safety meeting with convoy, discussed trip hazards,

							directions and all crew fit for duty prior to departure.
Event	37	Rig-Down Completed	Rig-Down Completed	3/21/2023	21:15:00	USER	Rig down complete with no injuries, spills or damage to equipment.
Event	38	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	3/21/2023	21:30:00	USER	Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 COSSLETT EAST 1M-22H-H168 -Custom Results.png

