

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Interchange A S16-20-20N

Surface Casing

Job Date: Saturday, August 28, 2021

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 Interchange A S16-20-20N surface casing. 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 35 bbl. 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 Fort Lupton

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 9007957		Quote #:		Sales Order #: 0907349341				
Customer: EXTRACTION OIL & GAS-EBUS					Customer Rep: Larry Siegel					
Well Name: INTERCHANGE -A-			Well #: S16-20-20N			API/UWI #: 05-014-20849-00				
Field: WATTENBERG		City (SAP): BROOMFIELD		County/Parish: BROOMFIELD		State: COLORADO				
Legal Description: SW NW-10-1S-68W-2093FNL-930FWL										
Contractor:					Rig/Platform Name/Num: CARTEL 15					
Job BOM: 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Nicholas Roles					
Job										
Job depth MD		1634ft			Job Depth TVD					
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			13.5				0	1634		1634
Casing		9.625	8.921	36			0	1634		1634
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	9.625			1634		Top Plug	9.625	1	HES	
Float Collar	9.625			1592		Bottom Plug	9.625	1	HES	
						Plug Container	9.625	1	HES	

Fluid Data									
Stage #: 1									
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
1	Spacer	Fresh Water with Dye	10	bbl	8.34			6	420
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
2	Cement	SwiftCem™ Cement	575	sack	13.5	1.74	9.17	9	5273
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	Displacement	Displacement	123	bbl	8.34			10	5166
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		0 ppm		Mix Water Temperature:		65°F
Plug Bumped?		Yes	Plug Displaced by:		8.33 lb/gal Fresh Water		Disp. Temperature:		65°F
Cement Returns:		35 bbl.	Bump Pressure:		1050 psi		Floats Held?		Yes
Comment: Got 35 bbl. cement to surface.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Date	Time	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
1	Call Out	8/28/2021	08:30:00					Called out by service coordinator for OL time of 1230.
2	Arrive at Location from Service Center	8/28/2021	08:30:00					Upon arrival to location, signed in with onsite safety personnel. Met with company man and discussed job specific requirements and specifications.
3	Pre-Rig Up Safety Meeting	8/28/2021	11:30:00					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.
4	Rig-Up Equipment	8/28/2021	11:45:00					Begin rig up with crew.
5	Rig-Up Completed	8/28/2021	12:15:00					Complete rig up for job to nearest point before red zone.
6	Other	8/28/2021	12:30:00					Mix water test results- PH-7, Chlo-0, Temp-65F.
7	Safety Meeting - Pre Job	8/28/2021	14:00:00					Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.
8	Start Job	8/28/2021	16:02:25	7.71	0.00	21.00	0.00	TD-1634' OH-13.5", TP-1634' 9.625" 36#, FC-1592
9	Test Lines	8/28/2021	16:03:54	7.89	0.00	99.00	2.10	Pumped 3bbls to fill lines, established circulation, shutdown and closed manifold, performed 500psi k/o function test, continued with 5th gear stall at 1400psi proceeded to bring pressure to 3500psi. Held good no leaks.

10	Drop Bottom Plug	8/28/2021	16:06:48	2.37	0.00	-2.00	2.10	Dropped by HES supervisor, witnessed by company man.
11	Pump Spacer 1	8/28/2021	16:07:07	7.59	0.00	-2.00	2.10	Pumped 10bbls fresh water with 1/3 bottle green dye at 6bpm 140psi.
12	Pump Cement	8/28/2021	16:10:20	8.34	0.00	30.00	0.00	Pumped 575sks or 178bbls 13.5# 1.74y 9.2g/s Swiftcem at 9bpm 310psi.
13	Check Weight	8/28/2021	16:22:36	13.36	9.00	274.00	76.90	Weight verified with pressurized mud scales.
14	Drop Top Plug	8/28/2021	16:38:35	17.14	0.00	-23.00	187.20	Dropped by HES supervisor, witnessed by company man.
15	Pump Displacement	8/28/2021	16:38:38	17.17	0.00	-24.00	187.20	Pumped 123bbls of fresh water at 10bpm.
16	Bump Plug	8/28/2021	16:54:40	8.48	0.00	1216.00	123.70	Slowed down to 3bpm at 110bbls away, final circulating pressure - 490psi, Bumped at 1050psi.
17	Other	8/28/2021	16:55:06	8.46	0.00	76.00	123.70	Released pressure and got 0.5bbls back. Floats held.
18	End Job	8/28/2021	16:55:44	8.46	0.00	-24.00	0.00	Got 35bbls cement to surface.
19	Pre-Rig Down Safety Meeting	8/28/2021	17:00:00	8.48	7.50	106.00	7.30	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.
20	Rig Down Lines	8/28/2021	17:05:00	8.48	0.00	-23.00	8.70	Begin rig down
21	Rig-Down Completed	8/28/2021	17:40:00					Rig down complete with no injuries, spills or damage to equipment.
22	Pre-Convoy Safety Meeting	8/28/2021	17:45:00					Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.
23	Depart Location for Service Center or Other Site	8/28/2021	18:00:00					Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 Job Chart

