

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Interchange B S22-30-20N

Surface Casing

Job Date: Monday, August 30, 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 B S22-30-20N 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 28 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 #: 9007993		Quote #:		Sales Order #: 0907349829				
Customer: EXTRACTION OIL & GAS-EBUS					Customer Rep: Larry Siegel					
Well Name: INTERCHANGE B			Well #: S22-30-20N			API/UWI #: 05-014-20851-00				
Field: WATTENBERG		City (SAP): BROOMFIELD		County/Parish: BROOMFIELD		State: COLORADO				
Legal Description: NE SW-10-1S-68W-2222FSL-1776FWL										
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		1671ft			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
Casing		9.625	8.921	36			0	1671		1671
Open Hole Section			13.5				0	1681		1681
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	9.625			1671		Top Plug	9.625	1	HES	
Float Collar	9.625			1631		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	126	bbl	8.34			10	5292	
Cement Left In Pipe										
Amount		40 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		Disp. Temperature:		65 °F
Cement Returns:		28 bbl.		Bump Pressure:		1050 psi		Floats Held?		Yes
Comment: Got 28 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	Arrive at Location from Service Center	8/30/2021	00:00:00					Upon arrival to location, signed in with onsite safety personnel. Met with company man and discussed job specific requirements and specifications.
2	Call Out	8/30/2021	02:00:00					Called out by service coordinator for OL time of 0800.
3	Pre-Rig Up Safety Meeting	8/30/2021	09:00:00					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	8/30/2021	09:15:00					Begin rig up with crew.
5	Rig-Up Completed	8/30/2021	09:45:00					Complete rig up for job to nearest point before red zone.
6	Other	8/30/2021	09:45:00					Mix water test results- PH-7, Chlo-0, Temp-65F.
7	Safety Meeting - Pre Job	8/30/2021	10:00:00					Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.
8	Start Job	8/30/2021	10:55:31	7.93	0.00	109.00	2.20	TD-1681' OH-13.5", TP-1671' 9.625" 36#, FC-1631'
9	Test Lines	8/30/2021	10:55:35	7.93	0.00	94.00	2.20	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. Pressure stabilized and held with no leaks.
10	Drop Bottom Plug	8/30/2021	11:01:05	7.94	0.00	10.00	2.20	Dropped by HES supervisor, witnessed by company man.

11	Pump Spacer 1	8/30/2021	11:01:08	7.94	0.00	10.00	2.20	Pumped 10bbls fresh water with 1/3 bottle green dye at 6bpm 140psi.
12	Pump Cement	8/30/2021	11:04:33	7.89	3.60	117.00	0.00	Pumped 575sks or 178bbls 13.5# 1.74y 9.2g/s SwiftCem at 9bpm 310psi.
13	Check Weight	8/30/2021	11:04:57	13.31	3.60	142.00	1.50	Weight verified with pressurized mud scales.
14	Shutdown	8/30/2021	11:27:06	13.70	0.00	54.00	194.60	
15	Drop Top Plug	8/30/2021	11:28:03	20.85	0.00	1.00	194.60	Dropped by HES supervisor, witnessed by company man.
16	Pump Displacement	8/30/2021	11:28:05	20.72	0.00	1.00	194.60	Pumped 126bbls of fresh water at 10bpm.
17	Bump Plug	8/30/2021	11:44:47	8.37	0.00	1134.00	126.60	Slowed down to 3bpm at 116bbls away, final circulating pressure - 550psi, Bumped at 1050psi. Held
18	Pre-Rig Down Safety Meeting	8/30/2021	11:45:00	8.37	0.00	1175.00	126.60	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.
19	Other	8/30/2021	11:45:08	8.38	0.00	532.00	126.60	Released pressure and got 0.5bbls back. Floats held.
20	End Job	8/30/2021	11:45:24	8.36	0.00	41.00	126.60	Got 28bbls cement to surface.
21	Rig Down Lines	8/30/2021	12:00:00					Begin rig down
22	Pre-Convoy Safety Meeting	8/30/2021	12:45:00					Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.
23	Rig-Down Completed	8/30/2021	12:45:00					Rig down complete with no injuries, spills or damage to equipment.
24	Depart Location for Service Center or Other Site	8/30/2021	13:00:00					Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 Job Chart

