HALLIBURTON

iCem® Service

EXTRACTION OIL & GAS-EBUS

Ft. Lupton District, CO

Date: Thursday, September 26, 2019

Interchange A S22-30-13C Surface

Job Date: Thursday, September 26, 2019

Sincerely,
Bryce Hinsch

Legal Notice

Disclaimer:

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Table of Contents

1.0 Cementing Job Summary

1.1   Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Interchange A S22-30-13C** cement **surface** casing job. 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 29 bbls 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

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The Road to Excellence Starts with Safety

Sold To #: 369404	**Ship To #:** 3901399	**Quote #:**	**Sales Order #:** 0905995020
Customer: EXTRACTION OIL & GAS -		**Customer Rep:** Colby Hanson	
Well Name: INTERCHANGE A	**Well #:** S22-30-13C		**API/UWI #:** 05-014-20759-00
Field: WATTENBERG	**City (SAP):** BROOMFIELD	**County/Parish:** BROOMFIELD	**State:** COLORADO
Legal Description: SW NW-10-1S-68W-2215FNL-1191FWL			
Contractor: ENSIGN DRLG		**Rig/Platform Name/Num:** ENSIGN 147	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		**Srvc Supervisor:** Michael Loughran	

Job

Formation Name			
Formation Depth (MD)	**Top**	**Bottom**	
Form Type		**BHST**	
Job depth MD	1701ft	**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
Casing	0	9.625	8.921	36			0	1701	0	1701
OH		13.5					0	1706	0	1706

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	9.625					**Top Plug**	9.625	1	HES
Float Shoe	9.625			1701		**Bottom Plug**	9.625		HES
Float Collar	9.625					**SSR plug set**	9.625		HES
Insert Float	9.625					**Plug Container**	9.625	1	HES
Stage Tool	9.625					**Centralizers**	9.625		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	Red Dye Spacer	Red Dye Spacer	10	bbl	8.33			3	

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	SwiftCem	SWIFTCEM (TM) SYSTEM	600	sack	13.5	1.74		8	9.17
9.17 Gal		**FRESH WATER**							

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
3	Fresh Water	Fresh Water	128	bbl	8.33			10	

Cement Left In Pipe	**Amount**	43 ft	Reason	**Shoe Joint**
Mix Water:	pH 7	**Mix Water Chloride:** Less 200 ppm	Mix Water Temperature:	**60°F**
Cement Temperature:		**Plug Displaced by:** 8.33 lb/gal	Disp. Temperature:	
Plug Bumped?	Yes	**Bump Pressure:** 1080 psi	Floats Held?	**Yes**
Cement Returns:		**Returns Density:**	Returns Temperature:	

Comment Good returns throughout job. Plug bumped, floats held, 1 bbl back to pump truck. 29 bbl cement to surface.   Top cement=Surface

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	9/26/2019	00:30:00	USER					Crew called out for on location time of 0600 hrs. 9/25/2019
Event	2	Crew Leave Yard	Crew Leave Yard	9/26/2019	03:00:00	USER					Crew Leaves Yard
Event	3	Arrive At Loc	Arrive At Loc	9/26/2019	04:00:00	USER					Arrive at location, Rig Drilling, Meet with customer, TP 1701 36# J55, TD 1706, 13.5 Hole, FC 1658, TVD 1658, PC 108' 16", WF 8.4 WBM, Top Plug By HES, Water 60 Deg., PH 7, Chlorides and sulfates less than 200 ppm
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	9/26/2019	09:40:00	USER					Pre rig up safety meeting
Event	5	Rig-Up Equipment	Rig-Up Equipment	9/26/2019	09:50:00	USER					Rig up all service lines and iron to buffer zone
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	9/26/2019	12:20:00	USER	8.28	0.00	1.00	20.60	Discuss job procedures, Discuss job hazards and hazards of Halliburton Equipment.
Event	7	Start Job	Start Job	9/26/2019	12:57:36	USER	7.98	0.00	5.00	0.00	Begin recording data
Event	8	Test Lines	Test Lines	9/26/2019	12:59:13	COM6	8.26	0.00	37.00	2.50	Pressure test to 3800 psi
Event	9	Pump Spacer 1	Pump Spacer 1	9/26/2019	13:03:29	COM6	8.28	0.00	18.00	0.00	10 bbl. water spacer w/red dye 1/2 bottle

Event	10	Pump Cement	Pump Cement	9/26/2019	13:08:29	COM6	8.25	2.40	53.00	0.00	600 sacks SwiftCem, 185.94 bbl., 13.5#, 1.74 yield, 9.17 gal/sack
Event	11	Shutdown	Shutdown	9/26/2019	13:34:56	COM6	13.64	1.70	30.00	189.60	Shutdown
Event	12	Drop Top Plug	Drop Top Plug	9/26/2019	13:35:34	COM6	12.99	0.00	15.00	189.80	Verified by CM
Event	13	Pump Displacement	Pump Displacement	9/26/2019	13:38:48	COM6	8.19	3.30	34.00	198.70	128 bbl. fresh water displace
Event	14	Bump Plug	Bump Plug	9/26/2019	13:56:15	COM6	8.18	3.10	539.00	122.00	FCP 518 psi @ 3 bbl./min. Bump pressure 1080 psi. Floats hold. 1 bbl. back to pump truck. 29 bbl. cement to surface. Top Cement=Surface
Event	15	End Job	End Job	9/26/2019	13:58:35	COM6	8.19	0.00	-1.00	122.50	Stop recording data
Event	16	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	9/26/2019	14:00:00	USER					JSA safe Rig-Down
Event	17	Rig-Down Equipment	Rig-Down Equipment	9/26/2019	14:35:00	USER					Rig down equipment
Event	18	Crew Leave Location	Crew Leave Location	9/26/2019	15:30:00	USER					Thanks for choosing Halliburton Energy Services!

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3.0 Attachments

3.1   Interchange A   S22-30-13C.png

Interchange A   S22-30-13C

| DH Density (ppg) 8.19 | Comb Pump Rate (bbl/min) 0 | DS Pump Press (psi) 0 | Pump Stg Tot (bbl) 122.5 |

HALLIBURTON | iCem® Service Created: 2019-09-26 10:05:16, (UTC-06:00),   Version: 5.1.101.0   Edit

Customer : EXTRACTION OIL & GAS-EBUS
Representative : Colby Hanson

Job Date : 9/26/2019
Sales Order # : 905995020

Well : Interchange A
Operator:Pump : Kouma/Sheets:11368474