

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS-EBUS**

**For: Manny Parras**

Date: Thursday, May 21, 2020

**United A S16-20-10C**

United A S16-20-10C

Job Date: Thursday, May 21, 2020

Sincerely,

**Nick Roles and Crew**

## Legal Notice

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### Disclaimer:

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## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the United A S16-20-10C 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 8 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**

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 369404	<b>Ship To #:</b> 3909405	<b>Quote #:</b> 0022708754	<b>Sales Order #:</b> 0906516855
<b>Customer:</b> EXTRACTION OIL & GAS-EBUS		<b>Customer Rep:</b> Manny Parras	
<b>Well Name:</b> UNITED A		<b>Well #:</b> S16-20-10C	<b>API/UWI #:</b> 05-014-20812-00
<b>Field:</b> WATTENBERG	<b>City (SAP):</b> BROOMFIELD	<b>County/Parish:</b> BROOMFIELD	<b>State:</b> COLORADO
<b>Legal Description:</b> NE NE-9-1S-68W-356FNL-1205FEL			
<b>Contractor:</b> ENSIGN DRLG		<b>Rig/Platform Name/Num:</b> ENSIGN 147	
<b>Job BOM:</b> 7521 7521			
<b>Well Type:</b> HORIZONTAL OIL			
<b>Sales Person:</b> HALAMERICA\HX41066		<b>Srvc Supervisor:</b> Nicholas Roles	

**Job**

<b>Formation Name</b>			
<b>Formation Depth (MD)</b>	<b>Top</b>		<b>Bottom</b>
<b>Form Type</b>	<b>BHST</b>		
<b>Job depth MD</b>	1633ft		<b>Job Depth TVD</b> 1633ft
<b>Water Depth</b>			<b>Wk Ht Above Floor</b>
<b>Perforation Depth (MD)</b>	<b>From</b>		<b>To</b>

**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	1633		1633
Open Hole Section			13.5				0	1640		1640

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
<b>Guide Shoe</b>					<b>Top Plug</b>	9.625	1	HES
<b>Float Shoe</b>	9.625			1633	<b>Bottom Plug</b>			
<b>Float Collar</b>	9.625			1589	<b>SSR plug set</b>			
<b>Insert Float</b>					<b>Plug Container</b>	9.625	1	HES
<b>Stage Tool</b>					<b>Centralizers</b>			

**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	Water with dye	Water with dye	10	bbl	8.34			5	

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
2	SwiftCem	SWIFTCEM (TM) SYSTEM	550	sack	13.5	1.74		8	9.17	
9.17 Gal		<b>FRESH WATER</b>								
0.1250 lbm		<b>POLY-E-FLAKE (101216940)</b>								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
3	Displacement	Displacement	123	bbl	8.34			10		
<b>Cement Left In Pipe</b>										
<b>Amount</b>		44ft			<b>Reason</b>			<b>Shoe Joint</b>		
<b>Mix Water:</b>		pH 07		<b>Mix Water Chloride:</b>		1000 ppm		<b>Mix Water Temperature:</b>		65 °F °C
<b>Cement Temperature:</b>		65 °F °C		<b>Plug Displaced by:</b>		8.33 lb/gal		<b>Disp. Temperature:</b>		65 °F °C
<b>Plug Bumped?</b>		Yes		<b>Bump Pressure:</b>		1200 psi MPa		<b>Floats Held?</b>		Yes
<b>Cement Returns:</b>		8 bbl		<b>Returns Density:</b>				<b>Returns Temperature:</b>		
<b>Comment</b> Got 8bbls cement to surface.										

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Dwnhole Density <i>(ppg)</i>	Cmb Pump Rate <i>(bbl/min)</i>	Pump A Pressure <i>(psi)</i>	Cmb Stg Total <i>(bbl)</i>	Comments
Event	1	Check Weight	Call Out	5/20/2020	09:45:22	USER					Called out by Service Coordinator for O/L at 0600
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/21/2020	00:15:00	USER					Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	5/21/2020	00:30:00	USER					Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	5/21/2020	01:00:00	USER					Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/21/2020	08:00:00	USER					Discussed rigging up hazards and procedure according to HMS.
Event	6	Rig-Up Date/Time	Rig-Up Date/Time	5/21/2020	08:15:00	USER					Begin Rig-up.
Event	7	Rig-Up Completed	Rig-Up Completed	5/21/2020	08:45:00	USER					Rig-up complete with no injuries.
Event	8	Other	Other	5/21/2020	09:00:00	USER					Water test- PH-6, Chlor-0, Temp-65. Cement temp-70.
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/21/2020	10:30:00	USER					Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.

Event	10	Start Job	Start Job	5/21/2020	10:39:41	NONE	TD-1640' OH-13.5", TP-1633' 9.625" 36#, FC-1589, Mud-8.8#
Event	11	Test Lines	Test Lines	5/21/2020	10:41:26	NONE	Pumped 3bbls to fill lines, established circulation, shutdown and closed manifold, performed 500psi k/o function test, continued with 5th gear stall at 1200psi proceeded to bring pressure to 3000psi. Pressure stabilized and held with no leaks.
Event	12	Pump Spacer 1	Pump Spacer 1	5/21/2020	10:44:45	NONE	Pumped 10bbls fresh water with 1# Red Dye at 5bpm 140psi.
Event	13	Pump Cement	Pump Cement	5/21/2020	10:50:30	NONE	Pumped 550sks or 170.5bbls 13.5# 1.74y 9.17g/s SwiftCem at 8bpm 310psi.
Event	14	Check Weight	Check Weight	5/21/2020	10:54:57	USER	Weight verified with pressurized mud scales. 13.6#
Event	15	Check Weight	Check Weight	5/21/2020	11:06:19	NONE	Weight verified with pressurized mud scales. 13.5#
Event	16	Drop Top Plug	Drop Top Plug	5/21/2020	11:16:28	NONE	Dropped by HES supervisor, witnessed by company man.
Event	17	Pump Displacement	Pump Displacement	5/21/2020	11:16:38	NONE	Pumped 123bbls of fresh water at 10bpm.
Event	18	Bump Plug	Bump Plug	5/21/2020	11:37:00	NONE	Slowed down to 3bpm at 110bbls away, final circulating pressure - 527psi, Bumped at 1200psi.

Event	19	Check Floats	Check Floats	5/21/2020	11:37:00	USER	Released pressure and got 0.5bbls back. Floats held.
Event	20	End Job	End Job	5/21/2020	11:38:20	NONE	Got 8bbls cement to surface.
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/21/2020	11:40:00	USER	Discussed rigging down hazards and procedure according to HMS with all HES personnel
Event	22	Rig-Down Date/Time	Rig-Down Date/Time	5/21/2020	11:45:00	USER	
Event	23	Rig-Down Completed	Rig-Down Completed	5/21/2020	11:55:00	USER	Rigged down floor and disconnected from rig. Left everything else rigged up for next surface.
Event	24	Safety Meeting - Departing Location	Safety Meeting - Departing Location	5/21/2020	12:00:00	USER	Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	25	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	5/21/2020	12:15:00	USER	Pre journey management prior to departure.

## 3.0 Attachments

### 3.1 United A S16-20-10C-Custom Results.png

