

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Friday, December 01, 2017

**Alma 1S-66-2524 20CDH Surface**

Job Date: Monday, November 13, 2017

Sincerely,

**Bryce Hinsch**

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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 **Alma 1S-66-2524 20CDH** 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.

**Plug did not land.**

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> 3791363		<b>Quote #:</b>		<b>Sales Order #:</b> 0904435606					
<b>Customer:</b> EXTRACTION OIL & GAS -				<b>Customer Rep:</b> JOSE TORRES							
<b>Well Name:</b> ALMA 1S-66-2524			<b>Well #:</b> 20CDH		<b>API/UWI #:</b> 05-001-10027-00						
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> IRONDALE		<b>County/Parish:</b> ADAMS		<b>State:</b> COLORADO					
<b>Legal Description:</b> SW SE-25-1S-66W-287FSL-1979FEL											
<b>Contractor:</b>				<b>Rig/Platform Name/Num:</b> Cyclone 37							
<b>Job BOM:</b> 7521 7521											
<b>Well Type:</b> HORIZONTAL OIL											
<b>Sales Person:</b> HALAMERICA\HX38199				<b>Srv Supervisor:</b> Jason Welton							
<b>Job</b>											
<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>		1675ft		<b>Job Depth TVD</b>		1675					
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>		5					
<b>Perforation Depth (MD)</b>		<b>From</b>		<b>To</b>							
<b>Well Data</b>											
<b>Description</b>	<b>New / Used</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>	<b>Top MD ft</b>	<b>Bottom MD ft</b>	<b>Top TVD ft</b>	<b>Bottom TVD ft</b>	
Casing	0	9.625	8.921	36	8 RD	J-55	0	1675	0	0	
Open Hole Section			13.5				0	1690	0	1690	
<b>Tools and Accessories</b>											
<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	<b>Depth ft</b>		<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>		
Guide Shoe	9.625			1675		Top Plug	9.625	1	HES		
Float Shoe	9.625					Bottom Plug	9.625		HES		
Float Collar	9.625					SSR plug set	9.625		HES		
Insert Float	9.625					Plug Container	9.625		HES		
Stage Tool	9.625					Centralizers	9.625		HES		
<b>Fluid Data</b>											
<b>Stage/Plug #: 1</b>											
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>			<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>
1	Red Dye Spacer	Red Dye Spacer			10	bbl	8.33				

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	575	sack	13.5	1.74		5	9.2
9.20 Gal		<b>FRESH WATER</b>							
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	126	bbl	8.33				
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint	
Mix Water:		pH ##	Mix Water Chloride:## ppm			Mix Water Temperature:## °F °C			
Cement Temperature:## °F °C		Plug Displaced by:## lb/gal kg/m3 XXXX			Disp. Temperature:## °F °C				
Plug Bumped?		Yes/No	Bump Pressure:#### psi MPa			Floats Held?		Yes/No	
Cement Returns:## bbl m3		Returns Density:## lb/gal kg/m3			Returns Temperature:## °F °C				
Comment JOB WENT AS PER DESIGN									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Arrive At Loc	Arrive At Loc	11/13/2017	01:00:00	USER				CREW CALLED OUT AT 2300/REQUESTED ON LOCATION AT 0300/RIG TOO H W/DP
Event	2	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	11/13/2017	01:15:00	USER				SPOT IN HES EQUIPMENT/TEST WATER
Event	3	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/13/2017	01:25:00	USER				LINE OF FIRE/SUSPENDEED LOADS
Event	4	Rig-Up Equipment	Rig-Up Equipment	11/13/2017	01:30:00	USER				
Event	5	Rig-Up Completed	Rig-Up Completed	11/13/2017	02:15:00	USER				HES READY
Event	6	Wait on Customer or Customer Sub-Contractor Equip - Start Time	Wait on Customer or Customer Sub-Contractor Equip - Start Time	11/13/2017	02:20:00	USER				RIG FINISH TOO H/RUN CASING/CONDITION WELL
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/13/2017	04:29:12	USER	-13.00	8.35	0.00	REVIEW JOB AND SAFETY PROCEDURES
Event	8	Start Job	Start Job	11/13/2017	07:08:46	COM4	-14.00	8.40	0.00	
Event	9	Test Lines	Test Lines	11/13/2017	07:10:23	COM4	-18.00	8.35	0.00	500PSI LOW/2500PSI HIGH/TESTS GOOD
Event	10	Pump Spacer 1	Pump Spacer 1	11/13/2017	07:14:42	COM4	19.00	8.51	1.20	10BBLS FRESHWATER/BREAK CIRCULATION
Event	11	Pump Spacer 2	Pump Spacer 2	11/13/2017	07:17:50	COM4	149.00	8.45	3.00	10BBLS FRESHWATER w/RED DYE/3BPM/250PSI

Event	12	Pump Cement	Pump Cement	11/13/2017	07:21:55	COM4	262.00	11.75	4.50	575SKS/178BBLS @ 13.5PPG/6BPM/392PSI
Event	13	Shutdown	Shutdown	11/13/2017	07:53:31	COM4	59.00	13.55	0.00	
Event	14	Drop Plug	Drop Plug	11/13/2017	07:53:59	COM4				HES TOP PLUG
Event	15	Pump Displacement	Pump Displacement	11/13/2017	07:54:00	COM4	13.00	13.45	0.00	126BBLS FRESHWATER/7BPM/300PSI
Event	16	Shutdown	Shutdown	11/13/2017	08:21:29	COM4				DID NOT LAND PLUG
Event	17	Other	Other	11/13/2017	08:21:34	COM4				PUMPED ADDITIONAL 2BBLS FRESHWATER PER CUSTOMER/DID NOT LAND PLUG/CHECKED FLOATS/HELD/0.5BBL BACK
Event	18	End Job	End Job	11/13/2017	08:22:37	COM4	4.00	8.32	0.00	
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/13/2017	08:30:00	USER	1.00	8.31	0.00	
Event	20	Rig-Down Equipment	Rig-Down Equipment	11/13/2017	08:35:00	USER				
Event	21	Rig-Down Completed	Rig-Down Completed	11/13/2017	09:00:00	USER				
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/13/2017	09:05:00	USER				
Event	23	Depart Location	Depart Location	11/13/2017	09:30:00	USER				THANK YOU

## 3.0 Attachments

### 3.1 Extraction Alma 1S-66-2524 20CDH Surface Job Chart

