

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Thursday, November 16, 2017

Milkshake 31W-20-6C Surface

Job Date: Monday, November 13, 2017

Sincerely,

Justin Lansdale

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Milkshake 31W-20-6C** 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.

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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*Cementing Job Summary**The Road to Excellence Starts with Safety*

Sold To #: 369404	Ship To #: 3836781	Quote #:	Sales Order #: 0904433839							
Customer: EXTRACTION OIL & GAS -		Customer Rep: SEAN								
Well Name: MILKSHAKE	Well #: 31W-20-6C	API/UWI #: 05-123-45827-00								
Field: WATTENBERG	City (SAP): WINDSOR	County/Parish: WELD	State: COLORADO							
Legal Description: SW SW-32-6N-67W-1081FSL-275FWL										
Contractor:		Rig/Platform Name/Num: Cartel 41								
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srv Supervisor: Robert Davis								
Job										
Formation Name										
Formation Depth (MD)	Top 0	Bottom	1554							
Form Type	BHST									
Job depth MD	1554ft	Job Depth TVD								
Water Depth		Wk Ht Above Floor	3							
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	8 RD	J-55	0	1554	0	0
Open Hole Section			13.5				0	1554	0	0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625			1554		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	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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Red Dye Spacer	Red Dye Spacer	10	bbl	8.33			8		
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	SwiftCem	SWIFTCCEM (TM) SYSTEM	525	sack	13.5	1.74		8	9.2	
9.20 Gal		FRESH WATER								

last updated on 11/13/2017 12:41:33 PM

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Cementing Job Summary

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	117	bbl	8.33			8	
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		200 ppm	Mix Water Temperature:		#65°F °C	
Cement Temperature:		## °F °C	Plug Displaced by:		8.33lb/gal kg/m3 XXXX	Disp. Temperature:		## °F °C	
Plug Bumped?		Yes	Bump Pressure:		480-1014 psi MPa	Floats Held?		Yes	
Cement Returns:		25 bbl m3	Returns Density:		## lb/gal kg/m3	Returns Temperature:		## °F °C	
Comment BUMPED PLUG @ CACULATED DISPLACEMENT, FLOATS HELD 1 BBLS BACK, FULL RETURNS THOUGHOUT, 25 BBLS OF CEMENT BACK.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	11/13/2017	06:00:00	USER	CALLED OUT FROM FT. LUPTON COLORADO
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	11/13/2017	07:30:00	USER	LEAVE YARD AFTER SAFTEY MEETING
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	11/13/2017	08:30:00	USER	ARRIVED ON LOCATION AND TALKED TO COMPANY MAN ABOUT JOB FIGURES AND THE SPOTTING OF OUR EQUIPMENT
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	11/13/2017	08:40:00	USER	ASSESSED LOCATION AN TOOK WATER SAMPLE
Event	5	Rig-Up Equipment	Rig-Up Equipment	11/13/2017	09:00:00	USER	SPOTTED EQUIPMENT AND RIGGED UP TO FLOOR RIG IS RUNNING CASING
Event	6	Other	Other	11/13/2017	09:10:00	USER	Water test=pH: 7____, Cl: 200____, temp ____60____degrees Tannin-Lignin: _NEG.____; Sulfate: _200____
Event	7	Other	Other	11/13/2017	10:00:00	USER	Rig Circulation: ____ bbls Circulation Rate: ____ bbl/min Mud Density _8.5____ lb/gal Mud YP/PV: _____
Event	8	Other	Other	11/13/2017	10:10:00	USER	Spacer: 20____ bbl TOS _0____ Lead Cement: _163____ bbl, _525____ sks, TOC _0____ Tail Cement: ____ bbl, ____ sks, TOC____ Displacement: __117____ bblCMT left in Pipe _3____ Reason ____SHOE____
Event	9	Other	Other	11/13/2017	10:30:00	USER	TD: ____ , TP _1554____, SJ: 42____, OH: 13.5____, Casing: Size/Weight/Grade: _9.625, 36#/, J-55____, Previous Casing Shoe: _0____
Event	10	Rig-Up Completed	Rig-Up Completed	11/13/2017	11:00:00	USER	RIG UP COMPLETE SAFETY MEETING WITH RIG HANDS AND HALLIBURTON ABOUT THE DANGERS OF OUR EQUIPMENT AND WENT OVER JOB FIGURES. READY TO TEST LINES

Event	11	Test Lines	Test Lines	11/13/2017	11:26:37	COM4	LOW PRESSURE TO 500 PSI, HIGH PRESSURE TO 3000 PSI
Event	12	Pump Spacer 1	Pump Spacer 1	11/13/2017	11:29:39	COM4	10 BBLS OF WATER SPACER, PUMPED @ 8 BPM @ 224 PSI
Event	13	Pump Spacer 2	Pump Spacer 2	11/13/2017	11:31:22	COM4	10 BBLS OF RED DYE SPACER, PUMPED @ 8 BPM @ 224 PSI
Event	14	Pump Lead Cement	Pump Lead Cement	11/13/2017	11:32:52	COM4	SWIFTCM, 525 SKS @ 13.5 PPG, YEILD @ 1.74, GAL/SK @ 9.2, 913.5 FT3, 163 BBLS, 115 BBLS OF WATER TO MIX, PUMPED @ 8 BPM @ 325 PSI, HOC-1554, TOC-0
Event	15	Drop Top Plug	Drop Top Plug	11/13/2017	11:55:37	COM4	
Event	16	Pump Displacement	Pump Displacement	11/13/2017	11:55:40	COM4	FRESH WATER, 117 BBLS @ 8 BPM @ 300 PSI SLOWED RATE WHEN GOT CEMENT BACK TO 2 BPM @ 400 PSI, FULL RETURNS THOUGHOUT THE JOB, 25 BBLS OF CEMENT RETURNS TO SURFACE
Event	17	Bump Plug	Bump Plug	11/13/2017	12:20:28	COM4	500 OVER, BUMPED @ 480 PSI TOOK TO 1014 PSI AND HELD FOR 2 MIN.
Event	18	Other	Other	11/13/2017	12:21:51	COM4	CASING TEST TO 1580 PSI AND HELD FOR 5 MIN., CHECKED FLOATS FLOATS HELD 1 BBL BACK.
Event	19	End Job	End Job	11/13/2017	12:27:24	COM4	
Event	20	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	11/13/2017	12:35:00	USER	SAFETY MEETING OVER RIGGING DOWN
Event	21	Rig-Down Equipment	Rig-Down Equipment	11/13/2017	12:45:00	USER	RIG DOWN EQUIPMENT AND HOSES
Event	22	Rig-Down Completed	Rig-Down Completed	11/13/2017	13:15:00	USER	RIG DOWN COMPLETE
Event	23	Safety Meeting - Departing Location	Safety Meeting - Departing Location	11/13/2017	13:20:00	USER	SAFETY MEETING OVER DEPARTURE AND JOURNEY HOME
Event	24	Depart Location for Home	Depart Location for Home	11/13/2017	13:30:00	USER	LEAVE LOCATION

3.0 Attachments

3.1 Job Chart



