

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Wednesday, October 11, 2017

Silverback 25N-20-3N Surface

Job Date: Thursday, September 28, 2017

Sincerely,

Justin Lansdale

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 **Silverback 25N-20-3N** 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 #: 3697990		Quote #:		Sales Order #: 0904322304					
Customer: EXTRACTION OIL & GAS -				Customer Rep: JON DOE							
Well Name: SILVERBACK			Well #: 25N-20-3N			API/UWI #: 05-123-42282-00					
Field: WILDCAT		City (SAP): KEOTA		County/Parish: WELD			State: COLORADO				
Legal Description: NE NW-36-12N-62W-300FNL-1463FWL											
Contractor:					Rig/Platform Name/Num: Patterson 346						
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199					Srvc Supervisor: Robert Davis						
Job											
Formation Name											
Formation Depth (MD)		Top 0		Bottom		1600					
Form Type											
BHST											
Job depth MD		1585ft		Job Depth TVD							
Water Depth											
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	1585	0	0	
Open Hole Section			13.5				0	1600	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make			
Guide Shoe	9.625			1585	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			5			
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	SWIFTCEM (TM) SYSTEM	600	sack	13.5	1.74		8	9.2		
9.20 Gal		FRESH WATER									

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Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	Fresh Water	Fresh Water	120.4	bbl	8.33			5	
Cement Left In Pipe		Amount	35 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		200 ppm		Mix Water Temperature: 80°F °C		
Cement Temperature:		## °F °C	Plug Displaced by:		8.33 lb/gal kg/m ³ XXXX		Disp. Temperature: ## °F °C		
Plug Bumped?		Yes	Bump Pressure:		490-1180 psi MPa		Floats Held? Yes		
Cement Returns:		45 bbl m ³	Returns Density:		## lb/gal kg/m ³		Returns Temperature: ## °F °C		
Comment BUMPED PLUG @ CALCULATED, FLOATS HELD W/ 1 BBLS BACK TO THE TRUCK ,45 BBLS OF CEMENT BACK TO SURFACE, JOB WENT AS DESIGNNED									

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	9/27/2017	19:00:00	USER	CALLED OUT FROM FT LUPTON COLORADO
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	9/27/2017	20:00:00	USER	LEAVE YARD AFTER SAFTEY MEETING
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	9/27/2017	22:00:00	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	9/27/2017	22:30:00	USER	ASSESSED LOCATION AN TOOK WATER SAMPLE
Event	5	Rig-Up Equipment	Rig-Up Equipment	9/28/2017	00:00:00	USER	SPOTTED EQUIPMENT AND RIGGED UP TO FLOOR RIG IS RUNNING CASING
Event	6	Other	Other	9/28/2017	00:30:00	USER	Water test=pH: _7___, Cl: _150___, temp 60___degrees Tannin-Lignin: __NEG.____; Sulfate: _200_____
Event	7	Other	Other	9/28/2017	01:00:00	USER	Rig Circulation: ___ bbls Circulation Rate: ___ bbl/min Mud Density __8.4__ lb/gal Mud YP/PV: _____
Event	8	Other	Other	9/28/2017	01:15:00	USER	Spacer: 10_____ bbl TOS ___0___ Lead Cement: 186_____ bbl, _600___ sks, TOC_0___ Tail Cement: _____ bbl, ___ sks, TOC_____
Event	9	Other	Other	9/28/2017	01:20:00	USER	Displacement: 120_____ bblCMT left in Pipe ___2___ Reason __SHOE___ TD: _1600___, TP _1585___, SJ: _35___, OH: _13 1/2___, Casing: Size/Weight/Grade: ___9.625/36#/J-55_____, Previous Casing Shoe: _0_____
Event	10	Rig-Up Completed	Rig-Up Completed	9/28/2017	02:30:00	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	9/28/2017	02:48:46	COM4	FLOOD LINES WITH 2 BBLS FRESH WATER, LOW TEST TO 500 PSI, HIGH TEST TO 2500 PSI
Event	12	Pump Spacer 1	Pump Spacer 1	9/28/2017	02:51:26	COM4	FRESH WATER 10 BBLS TO BREAK CIRCULATION, PUMPED @ 5 BPM @ 143 PSI
Event	13	Pump Spacer 2	Pump Spacer 2	9/28/2017	02:52:50	COM4	RED DYE SPACER, 10 BBLS PUMPED @ 5 BPM @ 143 PSI
Event	14	Pump Lead Cement	Pump Lead Cement	9/28/2017	02:58:05	COM4	SWIFTCEM, 600 SKS @ 13.5 PPG, YEILD @ 1.74, GAL/SK @ 9.2, 1044 FT3, 186 BBLS, 131 BBLS OF WATER TO MIX, PUMPED @ 8 BPM @ 418 PSI, HOC-1585, TOC-0
Event	15	Drop Top Plug	Drop Top Plug	9/28/2017	03:28:37	COM4	HWE TOP PLUG
Event	16	Pump Displacement	Pump Displacement	9/28/2017	03:28:39	COM4	120 BBLS OF FRESH WATER, PUMPED @ 9.5 BPM @ FIRST THEN SLOWED RATE TO 5 BPM SO PUMPS COULD KEEP UP, @ 450 PSI, SLOWED RATE 15 BBLS EARLY @ 3.5 BPM @ 425 PSI, FULL RETURNS THOUGHOUT THE JOB, 45 BBLS OF CEMENT BACK TO SURFACE.
Event	17	Bump Plug	Bump Plug	9/28/2017	03:55:05	COM4	BUMPED PLUG @ CALCULATED DISPLACEMENT, BUMPED @ 490 PSI TOOK TO 1180 PSI
Event	18	Check Floats	Check Floats	9/28/2017	03:59:17	USER	FLOATS HELD GOT 1 BBL BACK AND COMPANY MAN IS HAPPY
Event	19	End Job	End Job	9/28/2017	03:59:49	COM4	
Event	20	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	9/28/2017	04:05:00	USER	SAFETY MEETING OVER RIGGING DOWN

Event	21	Rig-Down Equipment	Rig-Down Equipment	9/28/2017	04:15:00	USER	RIG DOWN EQUIPMENT AND HOSES
Event	22	Rig-Down Completed	Rig-Down Completed	9/28/2017	05:00:00	USER	RIG DOWN COMPLETE
Event	23	Safety Meeting - Departing Location	Safety Meeting - Departing Location	9/28/2017	05:15:00	USER	SAFETY MEETING OVER DEPARTURE AND JOURNEY HOME
Event	24	Depart Location for Home	Depart Location for Home	9/28/2017	05:30:00	USER	LEAVE LOCATION

3.0 Attachments

3.1 Job Chart



