

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Sunday, October 23, 2016

Winder South #9

Production

Job Date: Friday, October 14, 2016

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 **Winder South #9** cement **Production** 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 #: 3749890	Quote #:	Sales Order #: 0903593622							
Customer: EXTRACTION OIL & GAS		Customer Rep: JOSE								
Well Name: WINDER SOUTH	Well #: 9	API/UWI #: 05-123-43406-00								
Field: WATTENBERG	City (SAP): WINDSOR	County/Parish: WELD	State: COLORADO							
Legal Description: SE NE-9-6N-67W-2306FNL-368FEL										
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 346								
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srv Supervisor: Joseph Fantasia								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom	17255							
Form Type	BHST									
Job depth MD	17250ft	Job Depth TVD	6912ft							
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		9.625	8.921	36			0	1556		0
Casing		5.5	4.778	20			0	17250	0	6912
Open Hole Section			7.875				1556	17255	0	0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	5.5			17250	Top Plug	5.5		HES		
Float Shoe	5.5				Bottom Plug	5.5		HES		
Float Collar	5.5				SSR plug set	5.5		HES		
Insert Float	5.5				Plug Container	5.5		HES		
Stage Tool	5.5				Centralizers	5.5		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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.74		6		
149.34 lbm/bbl		BARITE, BULK (100003681)								
35.40 gal/bbl		FRESH WATER								
0.30 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								
0.30 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								

last updated on 10/14/2016 1:48:46 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
2	ElastiCemW/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		8	7.48
7.48 Gal		FRESH WATER							
0.90 %		HR-5, 50 LB SK (100005050)							
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	ElastiCem W/ Super CBL	ELASTICEM (TM) SYSTEM	2050	sack	13.2	1.57		8	7.49
7.49 Gal		FRESH WATER							
0.80 %		HR-5, 50 LB SK (100005050)							
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
4	Displacement	Displacement	380	bbl	8.33			8	
Cement Left in Pipe		Amount	4 ft		Reason			Shoe Joint	
Comment got 60bbbls cement to surface									

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	10/13/2016	22:30:00	USER	CREW CALL OUT BY COORDINATOR FOR O/L 0330
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/14/2016	01:15:00	USER	ALL HSE PRESENT AND AWARE OF HAZARDS AND FIT TO DRIVE
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	10/14/2016	01:30:00	USER	PRE JOURNEY MANAGMENT PRIOR TO DEPARTURE ALL HSE PRESENT
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	10/14/2016	02:30:00	USER	MET WITH TOOL HAND TO DISCUSS JOB DETAILS AND PROCEDURE. PERFORMED SITE ASSESMENT AND HAZARD HUNT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	10/14/2016	02:45:00	USER	ALL HSE PRESENT. WATER TEST- PH-7 CHLO-O TEMP 60
Event	6	Start Job	Start Job	10/14/2016	09:17:08	COM6	17255' 7.875" OH 5.5" 20# CASING SET AT 17250' 9.625" 36# SURFACE AT 1556' TVD 6912'
Event	7	Test Lines	Test Lines	10/14/2016	09:23:07	COM6	FILLED LINES WITH 5BBLS FRESH WATER. 500K/O TEST BUMPED UP TO 5000PSI HELD GOOD NO LEAKS
Event	8	Pump Spacer 1	Pump Spacer 1	10/14/2016	09:32:44	COM6	PUMPED 50BBLS OF 11.5PPG 3.74Y 23.7G/S SPACER AT 5BPM AT 150PSI
Event	9	Check Weight	Check weight	10/14/2016	09:35:42	COM6	VERIFIED WITH PRESSURIZED MUD SCALES
Event	10	Pump Lead Cement	Pump Lead Cement	10/14/2016	09:50:59	COM6	PUMPED 42BBLS (150SKS) 13.2PPG 1.57Y 7.48G/S LEAD CEMENT W/O CBL AT 8BPM 200PSI
Event	11	Check Weight	Check weight	10/14/2016	09:52:29	COM6	VERIFIED WITH PRESSURIZED MUD SCALES

Event	12	Other	Other	10/14/2016	10:02:52	USER	LOST PRIME ON PUMP. CHECKED WEIGHT WITH PRESSURIZED MUD SCALES
Event	13	Pump Tail Cement	Pump Tail Cement	10/14/2016	10:04:58	COM6	PUMPED 573BBLS (2050SKS) 13.2PPG 1.57Y 7.49G/S TAIL CEMENT W/ CBL AT 8BPM 460PSI
Event	14	Check Weight	Check weight	10/14/2016	10:17:09	COM6	VERIFIED WITH PRESSURIZED MUD SCALES
Event	15	Check Weight	Check Weight	10/14/2016	10:48:46	USER	VERIFIED WITH PRESSURIZED MUD SCALES
Event	16	Shutdown	Shutdown	10/14/2016	11:16:42	USER	BLOW DOWN LINES AND WASH PUMP WITH FRESH WATER
Event	17	Drop Top Plug	Drop Top Plug	10/14/2016	11:32:00	COM6	DROPPED BY TOOL HAND O/L WITNESSED BY COMPANY REP AND HSE SUPERVISOR
Event	18	Pump Displacement	Pump Displacement	10/14/2016	11:32:05	COM6	PUMPED 380 BBLS FRESH WATER AT 10 BPM 1800 PSI
Event	19	Bump Plug	Bump Plug	10/14/2016	12:18:19	COM6	SLOWED TO 5BPM 20BBLS OUT. FINAL CIRCULATING PRESSURE 2780PSI BUMPED AT 3300. HELD FOR 3MIN.
Event	20	Other	Other	10/14/2016	12:20:01	USER	TOOK 2BBLS TO BURST PLUG. BURST AT 4160PSI AT 2BPM PUMPED 5BBL WET SHOE AT 5BPM 2100PSI
Event	21	Check Floats	Check Floats	10/14/2016	12:24:00	USER	FLOATS HELD GOT 3BBLS BACK
Event	22	End Job	End Job	10/14/2016	12:24:48	COM6	GOT 60BBLS CEMENT BACK
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/14/2016	12:30:00	USER	ALL HSE PRESENT AND AWARE OF HAZARDS

Event	24	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/14/2016	14:00:00	USER	ALL HSE PRESENT AND FIT TO DRIVE. AWARE OF HAZARDS AND DIRECTIONS
Event	25	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	10/14/2016	14:30:00	USER	ALL HSE PRESENT
Event	26	Other	Other	10/14/2016	14:35:00	USER	THANK YOU FOR CHOOSING HALLIBURTON NICK ROLES AND CREW

2.2 Custom Graph

