

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

United States of America

Date: Thursday, February 16, 2017

Burroughs South 11

Production

Job Date: Tuesday, January 24, 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 **Burroughs South 11** 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]

The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3628478	Quote #:	Sales Order #: 0903793617
Customer: EXTRACTION OIL & GAS		Customer Rep: Jose Torres	
Well Name: BURROUGHS SOUTH		Well #: 11	API/UWI #: 05-123-40740-00
Field: WATTENBERG	City (SAP): AULT	County/Parish: WELD	State: COLORADO
Legal Description: SE NE-14-7N-65W-2266FNL-230FEL			
Contractor: CYCLONE		Rig/Platform Name/Num: CYCLONE 37	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HX38199		Srv Supervisor: Vaughn Oteri	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	17238ft		Job Depth TVD
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	1565	0	1565
Casing		5.5	4.778	20			0	17223	0	7120
Open Hole Section			8.5				1565	17238	1565	7120

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	KLX
Float Shoe	5.5			17223	Bottom Plug	5.5		
Float Collar	5.5			17218	SSR plug set	5.5		
Insert Float	5.5				Plug Container	5.5	1	HES
Stage Tool	5.5				Centralizers	5.5		

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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.74		5		

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	ElastiCem W/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		8	7.48
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 Tail	ELASTICEM (TM) SYSTEM	2600	sack	13.2	1.57		8	7.49
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	380.5	bbl	8.33			10	
Cement Left In Pipe	Amount	4 ft		Reason			Shoe Joint		
Comment 60bbl of cement back 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	1/24/2017	11:00:00	USER	Call out from ARC hub
Event	2	Arrive At Loc	Arrive At Loc	1/24/2017	12:00:00	USER	Arrived on location met with company rep to discuss job process and concerns
Event	3	Other	Other	1/24/2017	12:10:10	USER	TD-17238 TP-17223 FC-17218 Surf-1565 Casing-5.5 20# OH-8.5
Event	4	Start Job	Start Job	1/25/2017	02:27:42	COM4	Held pre-job safety meeting with all hands on location to discuss job process and hazards, found as we were putting cement head on casing that the collar was over sized discussed with company rep and company rep had casing crew return to location with proper swadge
Event	5	Pump Spacer 1	Pump Spacer 1	1/25/2017	02:45:48	COM4	Mixed 50bbl of 11.5ppg Tuned spacer III at 5.0bpm 345psi
Event	6	Pump Cement	Pump Cement	1/25/2017	02:59:50	COM4	Mixed 2750sks or 768bbl of 13.2ppg Y1.57 G/sk-7.48 Elasticem at 8.0bpm 370psi
Event	7	Shutdown	Shutdown	1/25/2017	04:46:38	COM4	
Event	8	Clean Lines	Clean Lines	1/25/2017	04:46:45	COM4	Washed pumps and lines with fresh water
Event	9	Drop Top Plug	Drop Top Plug	1/25/2017	04:46:49	COM4	KLX tool hand released plug witnessed by company rep and HES supervisor
Event	10	Pump Displacement	Pump Displacement	1/25/2017	04:57:43	COM4	Pumped 380.5bbl of fresh water to displace cement

Event	11	Bump Plug	Bump Plug	1/25/2017	05:39:51	COM4	Bumped plug 500psi over final pump pressure
Event	12	Other	Other	1/25/2017	05:42:18	COM4	Pressure up on plug to blow disc and pump 5bbl of fresh water into shoe
Event	13	End Job	End Job	1/25/2017	06:03:01	COM4	60bbl of cement back to surface

2.2 Custom Graph

