

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

United States of America, COLORADO

Burroughs South 10

Production

Job Date: Wednesday, February 01, 2017

Sincerely,

Derek Trier

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 **Burroughs South 10** 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.

Approximately, 55bbl of cement returned to surface.

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 [Ft. Lupton]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3628477	Quote #:	Sales Order #: 0903806188							
Customer: EXTRACTION OIL & GAS		Customer Rep: Shane Hackford								
Well Name: BURROUGHS SOUTH	Well #: 10	API/UWI #: 05-123-40737-00								
Field: WATTENBERG	City (SAP): AULT	County/Parish: WELD	State: COLORADO							
Legal Description: SE NE-14-7N-65W-2241FNL-230FEL										
Contractor: CYCLONE		Rig/Platform Name/Num: CYCLONE 37								
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srv Supervisor: Michael Loughran								
Job										
Formation Name										
Formation Depth (MD)	Top	0	Bottom 17375							
Form Type	BHST									
Job depth MD	17360	Job Depth TVD	7370							
Water Depth	Wk Ht Above Floor 5									
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	0
Casing	0	5.5	4.778	20			0	17360	0	0
Open Hole Section			8.5				1565	17375	0	7370
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	1		17360	Bottom Plug	5.5				
Float Collar	5.5	1		17364	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 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		
	0.30 gal/bbl	MUSOL A, 330 GAL TOTE - (790828)								
	149.34 lbm/bbl	BARITE, BULK (100003681)								
	35.40 gal/bbl	FRESH WATER								
	0.30 gal/bbl	DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								

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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	ElastiCem W/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		6	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 Tail	ELASTICEM (TM) SYSTEM	2650	sack	13.2	1.57		6	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	368	bbl	8.33			8		
Cement Left In Pipe		Amount	4 ft		Reason			Shoe Joint		

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate <i>(bbl/min)</i>	DH Density <i>(ppg)</i>	DS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	1/31/2017	17:15:00	USER					Crew called out
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	1/31/2017	21:00:00	USER					Start journey management
Event	3	Crew Leave Yard	Crew Leave Yard	1/31/2017	21:05:00	USER					Crew leaves yard
Event	4	Arrive At Loc	Arrive At Loc	1/31/2017	22:00:00	USER					Assess loc- hazard hunt. Rig was on bottom circulating
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	1/31/2017	22:15:00	USER					JSA safe rig up
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	1/31/2017	23:35:00	USER					With all associated personnel
Event	7	Start Job	Start Job	2/1/2017	00:06:07	COM1	0.00	8.71	2.00	0.00	Begin recording data
Event	8	Test Lines	Test Lines	2/1/2017	00:10:11	COM1	0.00	8.36	73.00	3.40	HMS pressure test to 4500 psi
Event	9	Check Weight	Check Weight	2/1/2017	00:16:35	COM1	0.00	8.41	4.00	3.40	Spacer @11.6 ppg
Event	10	Pump Spacer	Pump Spacer	2/1/2017	00:19:16	USER	2.00	8.34	158.00	4.10	50 bbls tuner spacer with 15 gal Musol, 15 gal Dual spacer B and 20 gal d-air
Event	11	Pump Lead Cement	Pump Lead Cement	2/1/2017	00:30:17	COM1	6.00	13.14	382.00	0.10	41.94 bbls lead cmt @ 13.2 ppg, 150 sacks
Event	12	Pump Tail Cement	Pump Tail Cement	2/1/2017	00:35:53	COM1	8.00	13.19	350.00	0.10	Pump 740.98 bbls tail cmt @ 13.2 ppg, 2650 sacks
Event	13	Clean Lines	Clean lines	2/1/2017	02:18:42	COM1	0.00	0.05	26.00	794.40	Rig uses air to clean stand pipe to wash up tank, Wash lines with pump truck to wash up tank.
Event	14	Drop Top Plug	Drop Top Plug	2/1/2017	02:30:21	COM1	0.00	8.04	3.00	6.00	Top plug dropped by KLX
Event	15	Pump Displacement	Pump Displacement	2/1/2017	02:30:27	COM1	0.00	8.04	3.00	6.00	383.50 bbls fresh water displacement
Event	16	Bump Plug	Bump Plug	2/1/2017	03:21:37	COM1	0.00	8.65	2320.00	386.70	Bump plug, Burst plug @ 3760 psi. Pump 5

											bbl wet shoe. Floats hold , 3 bbls back
Event	17	End Job	End Job	2/1/2017	03:24:13	COM1					Stop recording data. 55 bbls cement to surface
Event	18	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/1/2017	03:26:00	USER	0.00	8.52	9.00	0.00	JSA safe rig down
Event	19	Rig-Down Completed	Rig-Down Completed	2/1/2017	04:30:00	USER					No incidents or injuries
Event	20	Crew Leave Location	Crew Leave Location	2/1/2017	05:00:00	USER					Crew departs location after starting journey management.

3.0 Attachments

3.1 Extraction Oil Burroughs South #10-Custom Results.png

