

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Thursday, September 08, 2016

Winder #9

Production

Job Date: Thursday, September 08, 2016

Sincerely,
Lauren Roberts

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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 #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.

65 bbl. 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]

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3535913		Quote #:		Sales Order #: 0903526707				
Customer: EXTRACTION OIL & GAS				Customer Rep: Shane						
Well Name: WINDER			Well #: 9		API/UWI #: 05-123-39580-00					
Field: SEVERANCE		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO				
Legal Description: NE NE-9-6N-67W-884FNL-684FEL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 341						
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srvc Supervisor: Vaughn Oteri						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		16940ft		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	1560	0	1560
Casing		5.5	4.778	20			0	16920	0	7120
Open Hole Section			7.875				1560	16940	1560	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			16920		Bottom Plug	5.5			
Float Collar	5.5			16916		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	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		5	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 W/ Super CBL	ELASTICEM (TM) SYSTEM	2050	sack	13.2	1.57		5	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	373.8	bbl	8.33			8	
Cement Left In Pipe		Amount	ft		Reason			Shoe Joint	
Comment 65bbl 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	PS Pump Press (psi)	DH Density (ppg)	PS Pump Rate (bbl/min)	DS Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	9/7/2016	14:00:00	USER					Call out from ARC hub
Event	2	Arrive At Loc	Arrive At Loc	9/8/2016	00:00:00	USER					Arrived on location at 0000 met with company rep to discuss job process and concerns
Event	3	Other	Other	9/8/2016	00:01:00	USER					TD-16940 TP-16920 FC-16916 Surf-1560 Mud-9.5 Casing 5.5 20#
Event	4	Check Weight	Check weight	9/8/2016	03:42:10	COM4	-6.00	8.48	0.00	0.00	Confirm weight of 11.5ppg on scales
Event	5	Start Job	Start Job	9/8/2016	03:45:42	COM4	-6.00	8.49	0.00	0.00	Held pre-job safety meeting with all hands on location to discuss job process and hazards
Event	6	Other	Other	9/8/2016	03:51:13	COM4	-7.00	8.49	0.00	0.00	Primed pumps and lines with fresh water
Event	7	Test Lines	Test Lines	9/8/2016	03:53:22	COM4	205.00	8.42	0.00	0.00	Pressure tested pumps and lines with fresh water 4928psi
Event	8	Pump Spacer 1	Pump Spacer 1	9/8/2016	03:55:31	COM4	191.00	8.41	0.00	0.00	Mixed 50bbl of 11.5ppg Tuned spacer III at 6.0bpm 974psi
Event	9	Pump Lead Cement	Pump Lead Cement	9/8/2016	04:06:50	COM4	589.00	13.29	4.20	1.80	Mixed 150sks or 42bbl of 13.2ppg Y-1.57 g/sk 7.48 ElastiCem at 8.0bpm 580psi
Event	10	Pump Tail Cement	Pump Tail Cement	9/8/2016	04:12:14	COM4	551.00	13.24	4.00	4.00	Mixed 2050sks or 573bbl of 13.2ppg Y-1.57 g/sk 7.48 ElastiCem at 8.0bpm 520psi
Event	11	Check Weight	Check weight	9/8/2016	04:12:25	COM4	558.00	13.22	4.00	4.00	Confirm weight on scales
Event	12	Shutdown	Shutdown	9/8/2016	05:26:42	COM4	92.00	2.91	0.80	0.60	Shut down so that rig could blow lines clear with air
Event	13	Clean Lines	Clean Lines	9/8/2016	05:26:49	COM4	61.00	0.21	0.00	0.00	Washed pumps and lines with fresh water
Event	14	Drop Top Plug	Drop Top Plug	9/8/2016	05:26:53	COM4	50.00	-0.06	0.00	0.00	Released plug witnessed by company rep and KLX tool hand
Event	15	Pump Displacement	Pump Displacement	9/8/2016	05:35:23	COM4	15.00	7.97	0.00	0.00	Pumped 373bbl of fresh water to displace

											cement
Event	16	Displ Reached Cmnt	Displ Reached Cmnt	9/8/2016	05:38:27	COM4	1055.00	8.40	6.00	6.00	Caught cement
Event	17	Bump Plug	Bump Plug	9/8/2016	06:20:12	COM4	3897.00	8.55	0.00	0.00	Bumped plug 500psi over final pump pressure
Event	18	Other	Other	9/8/2016	06:22:05	COM4	2292.00	8.51	0.00	0.00	Released pressure back to pump truck to check floats, floats held good 2.5bbl back
Event	19	End Job	End Job	9/8/2016	06:26:54	COM4	4.00	8.46	0.00	0.00	65bbl of cement back to surface

3.0 Attachments

3.1 Case 1-Custom Results.png

