

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Friday, December 09, 2016

Varra #12 Production

Job Date: Saturday, November 26, 2016

Sincerely,

Julia Nichols

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 **Varra #12** 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 20 barrels 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 #: 389404		Ship To #: 3583352		Quote #:		Sales Order #: 0903678673					
Customer: EXTRACTION OIL & GAS				Customer Rep:							
Well Name: VARRA			Well #: 12		API/UWI #: 05-123-39992-00						
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO					
Legal Description: NW SW-5-8N-87W-1459FSL-784FWL											
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 341							
Job BOM: 7523											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srcv Supervisor: Andrew Brennecke							
Job											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type					BHST						
Job depth MD		17085ft			Job Depth TVD		7150				
Water Depth					Wk Ht Above Floor 3						
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	1600			
Casing		5.5	4.778	20		P-110	0	17065	7150	7150	
Open Hole Section			8.5				1600	17070	7150	7150	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe						Top Plug	5.5	1	KLX		
Float Shoe	5.5	1		17085		Bottom Plug					
Float Collar	5.5	1		17015		SSR plug set					
Insert Float						Plug Container	5.5	1	HES		
Stage Tool						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		5	
0.30 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)									
149.34 lbm/bbl		BARITE, BULK (100003681)									
36.09 gal/bbl		FRESH WATER									
0.30 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003685)									

last updated on 12/9/2016 11:38:08 AM

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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/mi n	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/mi n	Total Mix Fluid Gal	
3	ElastiCem	ELASTICEM (TM) SYSTEM	2550	sack	13.2	1.57		7	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/mi n	Total Mix Fluid Gal	
4	Displacement	Displacement	376	bbl	8.33			10		
Cement Left In Pipe		Amount	50 ft		Reason			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:		0 ppm		Mix Water Temperature:			44 °F °C
Cement Temperature:			Plug Displaced by:		8.4 lb/gal		Disp. Temperature:			
Plug Bumped?		Yes	Bump Pressure:		3112 psi		Floats Held?			Yes
Cement Returns:		20 bbl	Returns Density:				Returns Temperature:			
Comment										

2.0 Real-Time Job Summary

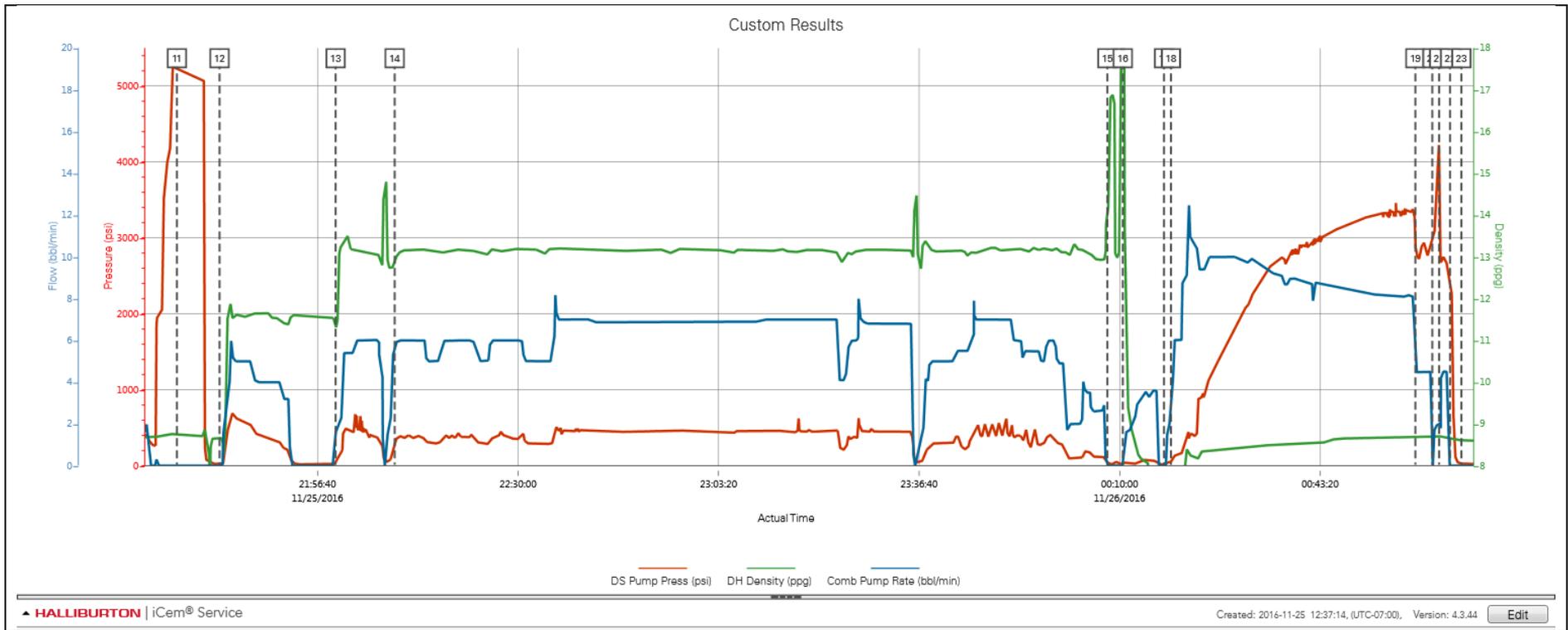
2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Comments
Event	1	Call Out	Call Out	11/25/2016	10:00:00	USER				
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/25/2016	14:00:00	USER				ALL HES PRESENT
Event	3	Crew Leave Yard	Crew Leave Yard	11/25/2016	14:30:00	USER				
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	11/25/2016	15:30:00	USER				RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	11/25/2016	15:45:00	USER				
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/26/2016	17:00:00	USER				ALL HES PRESENT
Event	7	Rig-Up Completed	Rig-Up Completed	11/26/2016	19:45:00	USER	13.00	0.07	0.00	1-ELITE, 3-660 BULK TRAILERS, 2-1600 FIELD BINS, 5.5" QUICK LATCH PLUG CONTAINER, 2" PUMP IRON, 4" SUCTION HOSE
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/26/2016	20:00:00	USER	12.00	0.08	0.00	ALL HES AND RIG CREW PRESENT
Event	9	Start Job	Start Job	11/26/2016	21:24:00	USER	13.00	6.23	0.00	TD-17070', TVD-7150', TP-17065', TS-17600', CSG-5.5" 20# P110, SCSG- 9.625" 36# 0-1600', OH-8.5", MUD-10PPG
Event	10	Prime Pumps	Prime Pumps	11/26/2016	21:26:12	USER	14.00	8.56	0.80	FRESH WATER
Event	11	Test Lines	Test Lines	11/26/2016	21:33:18	COM5	5227.00	8.76	0.00	ALL PRESSURE HELD ON LINES
Event	12	Pump Spacer 1	Pump Spacer 1	11/26/2016	21:40:23	COM5	19.00	8.67	0.00	TUNED SPACER III, 11.5PPG, 3.74CF/SK, 23.7GAL/SK
Event	13	Pump Lead Cement	Pump Lead Cement	11/26/2016	21:59:41	COM5	34.00	11.31	1.60	ELASTICEM NO CBL 150SKS, 1.57CF/SK, 7.48GAL/SK
Event	14	Pump Tail Cement	Pump Tail Cement	11/26/2016	22:09:29	COM5	294.00	12.87	5.70	ELASTICEM W/ CBL 2550 SKS, 1.57CF/SK, 7.48GAL/SK
Event	15	Shutdown	Shutdown	11/26/2016	00:07:58	USER	40.00	14.00	0.00	

Event	16	Clean Lines	Clean Lines	11/26/2016	00:10:32	COM5	15.00	20.24	0.00	CLEANED PUMPS AND LINES TO CATCH TANK
Event	17	Drop Top Plug	Drop Top Plug	11/26/2016	00:17:23	COM5	13.00	7.76	0.00	
Event	18	Pump Displacement	Pump Displacement	11/26/2016	00:18:32	COM5	53.00	7.80	2.80	
Event	19	Slow Rate	Slow Rate	11/26/2016	00:59:09	USER	2874.00	8.69	4.50	
Event	20	Bump Plug	Bump Plug	11/26/2016	01:01:58	USER	3026.00	8.68	0.00	
Event	21	Other	Rupture Disk	11/26/2016	01:03:06	USER	3371.00	8.77	2.10	
Event	22	Check Floats	Check Floats	11/26/2016	01:04:55	USER	2368.00	8.66	0.00	
Event	23	End Job	End Job	11/26/2016	01:06:48	COM5				
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/26/2016	01:15:00	USER	20.00	8.58	0.00	
Event	25	Rig-Down Completed	Rig-Down Completed	11/26/2016	02:30:00	USER				
Event	26	Crew Leave Location	Crew Leave Location	11/26/2016	03:00:00	USER				

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

