

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

Disclaimer:

All information in this report is provided subject to the terms and conditions which govern the services provided by Halliburton. Halliburton personnel use their best efforts in gathering information and their best judgment in interpreting it, but any interpretation, research, analysis or recommendation furnished by Halliburton are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and empirical relationships and assumptions are not infallible, and with respect to which professionals in the industry may differ. Accordingly, HALLIBURTON IS UNABLE TO GUARANTEE THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, OR JOB RECOMMENDATION and any interpretation or recommendation is not for use of or reliance upon by any third party. The customer has full responsibility for any of its decisions which are based on the information provided in this report.

Table of Contents

1.0 Cementing Job Summary 4

 1.1 Executive Summary4

2.0 Real-Time Job Summary 7

 2.1 Job Event Log7

3.0 Attachments..... 9

 3.1 Custom Results – Job Chart with Events9

 3.2 Custom Results – Job Chart without Events.....10

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]

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3563352	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	17065ft	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		17065		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

Page 1 of 2

HALLIBURTON

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	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/min	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

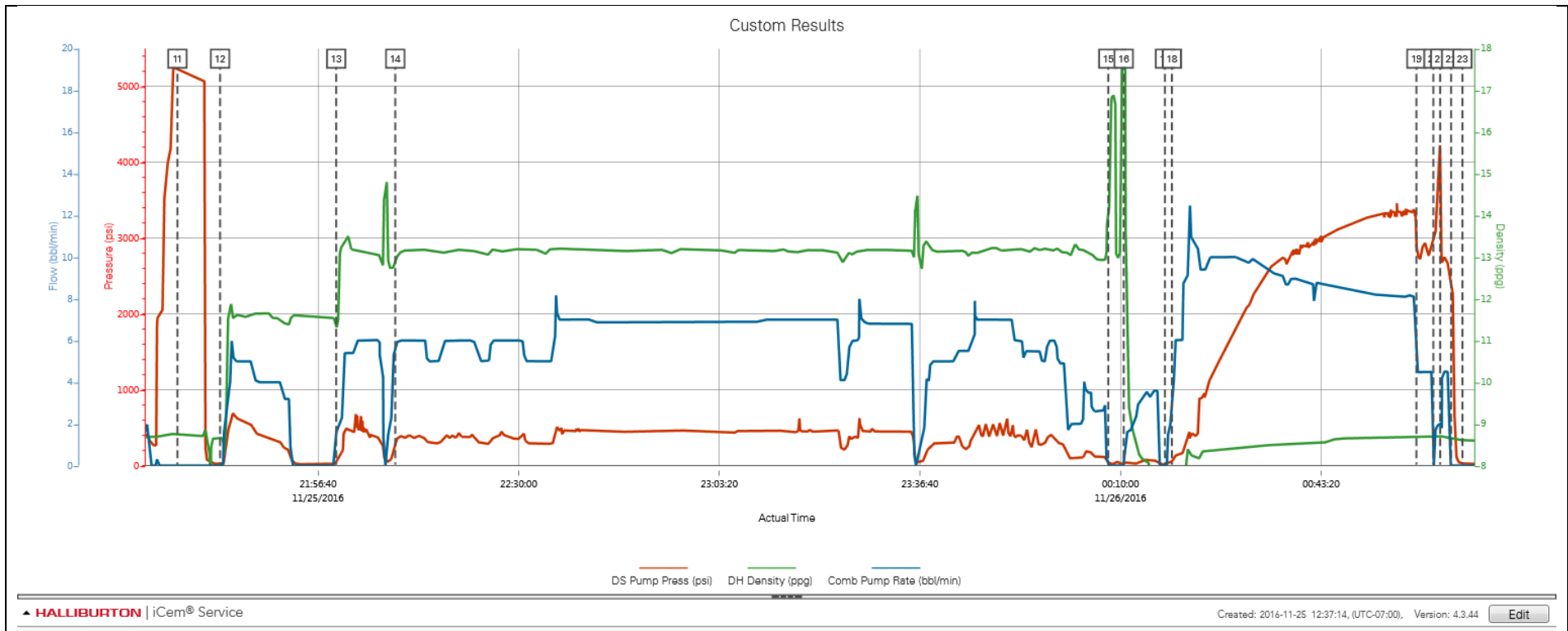
2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	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

