

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Wednesday, June 28, 2017

Longmeadow 2-1-13 Surface

Job Date: Friday, June 16, 2017

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 Summary	4
2.0	Real-Time Job Summary	7
2.1	Job Event Log	7
3.0	Attachments.....	8
3.1	Custom Results – Job Chart with Events	8
3.2	Custom Results – Job Chart without Events.....	9

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Longmeadow 2-1-13** cement **Surface** 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 29 barrels of cement were 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 #: 389404		Ship To #: 3708585		Quote #:		Sales Order #: 0904107606						
Customer: EXTRACTION OIL & GAS				Customer Rep: Kalyn Holgate and Larry Siegel								
Well Name: CS-LONGMEADOW			Well #: 2-1-13			API/UWI #: 05-123-42475-00						
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO						
Legal Description: SW SE-36-6N-66W-338FSL-1824FEL												
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 341								
Job BOM: 7521 7521												
Well Type: HORIZONTAL OIL												
Sales Person: HALAMERICA\HX38199						Srcv Supervisor: Brad Hinkle						
Job												
Formation Name												
Formation Depth (MD)		Top			Bottom							
Form Type						BHST						
Job depth MD		1585ft			Job Depth TVD		1585ft					
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	1585		1585	
Open Hole Section				13.5				0	1595		1595	
Tools and Accessories												
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make			
Guide Shoe	9.625					Top Plug	9.625	1	HES			
Float Shoe	9.625	1		1585		Bottom Plug	9.625		HES			
Float Collar	9.625	1		1540		SSR plug set	9.625		HES			
Insert Float	9.625					Plug Container	9.625	1	HES			
Stage Tool	9.625					Centralizers	9.625		HES			
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	Spacer	Red Dye Water			10	bbl	8.34			3		
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	Primary Cement	SWIFTCEM			550	sack	13.5	1.74		7	9.2	

HALLIBURTON

Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	Displacement	Fresh Water	119	bbl	8.34			8	
Cement Left In Pipe		Amount	45 ft		Reason			Shoe Joint	
Mix Water:	pH 6	Mix Water Chloride:	0 ppm		Mix Water Temperature:		85 °F		
Cement Temperature:	85 °F	Plug Displaced by:	## lb/gal kg/m3 XXXX		Disp. Temperature:		## °F °C		
Plug Bumped?	Yes	Bump Pressure:	330 psi		Floats Held?		Yes		
Cement Returns:	## bbl m3	Returns Density:	## lb/gal kg/m3		Returns Temperature:		## °F °C		
Comment 29 bbls Cement to surface.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	6/16/2017	07:00:00	USER				Crew called for an on location of 1200. Crew was Bradley Hinkle, Thomas Haas, Justin Toler, Luis Ramirez, Niklaus Kornafels and Knoell Coombs.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	6/16/2017	10:30:00	USER				Pre-journey safety meeting.
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	6/16/2017	11:30:00	USER				Sign in, perform a site assessment and pre rig-up safety meeting.
Event	4	Safety Meeting - Pre Job	Safety Meeting - Pre Job	6/16/2017	15:30:00	USER	8.44	0.00	-11.00	Pre-job safety meeting with all personnel on location.
Event	5	Start Job	Start Job	6/16/2017	15:46:04	COM4	8.00	0.00	-10.00	
Event	6	Test Lines	Test Lines	6/16/2017	15:49:59	COM4	8.14	0.00	3171.00	Pressure test lines with a 500 PSI kick-out test.
Event	7	Pump Spacer 1	Pump Spacer 1	6/16/2017	15:54:25	COM4	0.16	0.00	7.00	Pump 20 bbls red-dye water.
Event	8	Pump Cement	Pump Cement	6/16/2017	16:09:58	COM4	13.81	6.00	309.00	Pump 170 bbls (550 sacks) SwiftCem mixed at 13.5 ppg. Density verified by pressurized scales. Initially recirc and downhole were all over. Scaled cement consistently until both micromotion's were reading correctly.
Event	9	Check Weight	Check Weight	6/16/2017	16:23:37	COM4	13.46	6.20	259.00	Cement weighed at 13.4 ppg.
Event	10	Drop Top Plug	Drop Top Plug	6/16/2017	16:39:58	COM4	14.82	0.00	18.00	Top plug preloaded and witnessed by customer.
Event	11	Pump Displacement	Pump Displacement	6/16/2017	16:40:03	COM4	14.81	0.00	18.00	Pump 119 bbls fresh water. Good returns throughout. 29 bbls cement to surface.
Event	12	Bump Plug	Bump Plug	6/16/2017	17:03:19	COM4	7.82	0.00	1035.00	Bump plug at 630 PSI and brought pressure 500 PSI over.
Event	13	Check Floats	Check Floats	6/16/2017	17:03:45	USER	7.82	0.00	1113.00	Floats held. Half bbl back.
Event	14	End Job	End Job	6/16/2017	17:06:04	COM4	7.86	0.00	28.00	

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

