

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Friday, October 20, 2017

CS-LONGMEADOW 1-1-13 PRODUCTION

Job Date: Friday, October 06, 2017

Sincerely,

JULIA NICHOLS

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **CS-LONGMEADOW 1-1-13** 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 44 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 [Fort Lupton]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3706585	Quote #:	Sales Order #: 0904342266							
Customer: EXTRACTION OIL & GAS		Customer Rep: KALYN HOLGATE								
Well Name: CS-LONGMEADOW	Well #: 1-1-13	API/UWI #: 05-123-42476-00								
Field: WATTENBERG	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO							
Legal Description: SW SE-36-6N-66W-338FSL-1840FEL										
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 341								
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Vitali Neverdasov								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	20288ft	Job Depth TVD	6900							
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	1587	0	1587
Casing		5.5	4.67	23			0	20288	0	0
Open Hole Section			8.75				1587	7841	0	0
Open Hole Section			8.5				7841	20308		0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1	NA	
Float Shoe	5.5	1	NA	20288		Bottom Plug	5.5	0	NA	
Float Collar	5.5	1	NA	20283		SSR plug set	5.5			
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5	200	NA	
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	3.73		6		
0.50 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								
149.34 lbm/bbl		BARITE, BULK (100003681)								
35 gal/bbl		FRESH WATER								
0.50 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								

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Cement Service

(v. 4.4.18)

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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 Lead	ELASTICEM (TM) SYSTEM	3250	sack	13.2	1.57		6	7.54
7.54 Gal		FRESH WATER							
0.25 %		SCR-100 (100003749)							
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	Displacement	Displacement	429.7	bbl	8.33			8	
Cement Left In Pipe		Amount	0		Reason				
Comment : 44 BBLs OF CEMENT BACK TO SURFACE.									

2.0 Real-Time Job Summary

2.1 Job Event Log

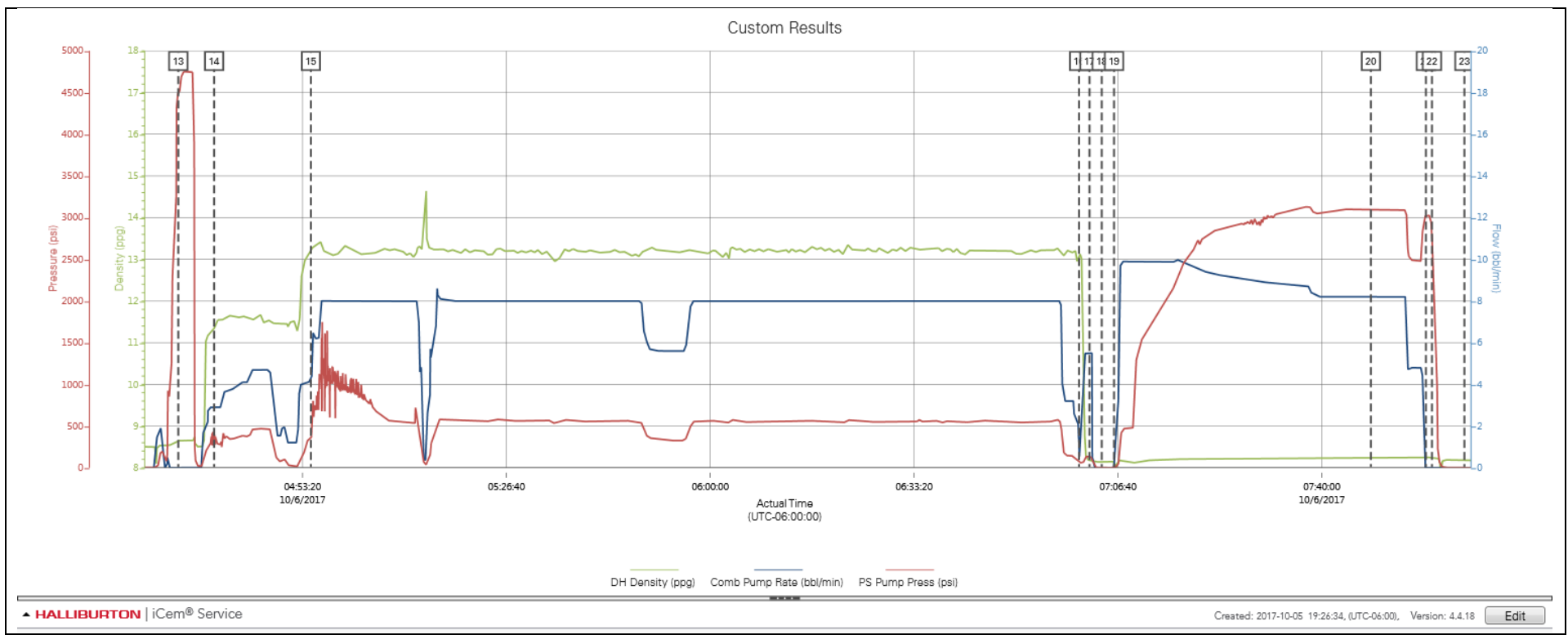
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	10/5/2017	19:00:00	USER				ON LOCATION @ 02:00
Event	2	Depart Shop for Location	Depart Shop for Location	10/5/2017	22:00:00	USER				HELD JSA PRIOR LEAVING LOCATION
Event	3	Depart Yard Safety Meeting	Depart Yard Safety Meeting	10/5/2017	22:10:00	USER				CALLED JORNEY
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	10/5/2017	23:30:00	USER				ARRIVED TO LOCATION, 38 MILES. DISCUSS NUMBERS AND JOB PROCEDURE WITH CUSTOMER. RIG IS RUNNING CASING
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	10/5/2017	23:45:00	USER				HELD PRE RIG UP SAFETY MEETING
Event	6	Other	Other	10/5/2017	23:55:00	USER				SPOT TRUCKS
Event	7	Rig-up Lines	Rig-up Lines	10/6/2017	00:10:00	USER				RIG UP ALL SURFACE LINES TO THE BUFFER ZONE.
Event	8	Other	Other	10/6/2017	00:50:00	USER				RIG IS RUNNING CASING. CEMENT CREW IS ON STANDBY
Event	9	Casing on Bottom	Casing on Bottom	10/6/2017	03:42:00	USER	8.49	0.00	6.00	CASING LANDED. CEMENT CREW IS FINISHING RIG UP
Event	10	Other	Other	10/6/2017	03:55:00	USER	8.50	0.00	6.00	RIG IS CIRCULATING. 12BPM/ 1425 PSI
Event	11	Safety Meeting - Pre Job	Safety Meeting - Pre Job	10/6/2017	03:58:00	USER	8.50	0.00	6.00	HELD JSA WITH ALL PERSONEL INVOLVED
Event	12	Start Job	Start Job	10/6/2017	04:10:08	COM4	8.50	0.00	6.00	
Event	13	Pressure Test	Pressure Test	10/6/2017	04:33:00	USER	8.65	0.00	4505.00	LOAD LINE AND PRESSURE TEST TO 3000 PSI
Event	14	Pump Spacer	Pump Spacer	10/6/2017	04:38:51	USER	11.36	2.90	270.00	BATCH/WEIGH/PUMP 50 BBLS OF SPACER WITH SURFACTANS @ 11.5 PPG
Event	15	Pump Cement	Pump Cement	10/6/2017	04:54:41	USER	13.26	4.30	354.00	BATCH/ WEIGH/ PUMP 3250 SKS (908.8 BBLS) OF ELASTICEM @ 13.2 PPG
Event	16	Other	Other	10/6/2017	07:00:17	USER	13.16	0.50	56.00	PER CUSTOMER REQUEST PUMP 7 BBLS OF WATER WITH

MMCR BEHIND CEMENT

Event	17	Shutdown	Shutdown	10/6/2017	07:02:00	USER	8.17	5.50	133.00	
Event	18	Drop Top Plug	Drop Top Plug	10/6/2017	07:04:00	USER	8.14	0.00	2.00	LOAD AND DROP TOP PLUG
Event	19	Pump Displacement	Pump Displacement	10/6/2017	07:06:00	USER	8.15	0.00	1.00	FRESH WATER DISPLACEMENT. FIRST 10 BBLS WITH MMCR
Event	20	Cement Returns to Surface	Cement Returns to Surface	10/6/2017	07:48:00	USER	8.26	8.20	3109.00	
Event	21	Bump Plug	Bump Plug	10/6/2017	07:57:00	USER	8.25	0.00	3014.00	BUMP PLUG @ 3034 PSI. FINAL CIRCULATING PRESSURE 2510. 44 BBLS OF CEMENT BACK.
Event	22	Check Floats	Check Floats	10/6/2017	07:58:00	USER	8.24	0.00	2760.00	FLOATS HELD
Event	23	End Job	End Job	10/6/2017	08:03:18	COM4				
Event	24	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	10/6/2017	08:07:00	USER	8.17	0.00	-1.00	HELD SAFETY MEETING PRIOR TO RIG DOWN
Event	25	Depart Location Safety Meeting	Depart Location Safety Meeting	10/6/2017	08:58:00	USER				
Event	26	Depart Location	Depart Location	10/6/2017	09:15:00	USER				CALLED JORNEY

3.0 Attachments

3.1 CUSTOM RESULTS – JOB CHART WITH EVENTS



3.2 CUSTOM RESULTS – JOB CHART WITHOUT EVENTS

