

HALLIBURTON

iCem[®] Service

ADVANCED EXTRACTION TECHNOLOGIES

Date: Wednesday, December 30, 2015

Janssen 5

Production

Job Date: Saturday, December 26, 2015

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 **Janssen 5** 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 bbls 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 #: 3701568		Quote #: 0022140631		Sales Order #: 0903007267					
Customer: EXTRACTION OIL & GAS				Customer Rep: Hugh McGraw							
Well Name: JANSSEN			Well #: 5		API/UWI #: 05-123-42362-00						
Field: WATTENBERG		City (SAP): EATON		County/Parish: WELD		State: COLORADO					
Legal Description: SE NW-8-6N-65W-2231FNL-2397FWL											
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 346							
Job BOM: 7523											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Vaughn Oteri							
Job											
Formation Name											
Formation Depth (MD)	Top		Bottom								
Form Type			BHST								
Job depth MD	11642ft		Job Depth TVD								
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	1592			
Casing		5.5	4.892	17			0	11642		7154	
Open Hole Section			7.875				1592	11652		7154	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5					Top Plug	5.5	1		3 rd Party	
Float Shoe	5.5	1		11642'		Bottom Plug	5.5			HES	
Float Collar	5.5	1		11599'		SSR plug set	5.5			HES	
Insert Float	5.5					Plug Container	5.5	1		HES	
Stage Tool	5.5					Centralizers	5.5			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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III			50	bbl	11.5	7.17		6	

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 WO Super CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.602		6	7.69
7.69 Gal		FRESH WATER							
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 with CBL	ELASTICEM (TM) SYSTEM	1550	sack	13.2	1.603		8	7.7
7.70 Gal		FRESH WATER							
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	MMCR Displacement	MMCR Displacement	10	bbl	8.33			8	
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)							
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
5	Displacement	Displacement	246	bbl	8.33			8	
Cement Left In Pipe		Amount	ft		Reason			Shoe Joint	
Comment: 50 bbls Spacer and 65 bbls Cement 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)	Comments
Event	1	Safety Meeting - Service Center or other Site	Safety Meeting - Service Center or other Site	12/26/2015	17:30:00	USER				Journey Management Meeting with HES Crew Prior to Departing Yard
Event	2	Arrive At Loc	Arrive At Loc	12/26/2015	18:30:00	USER				Arrive on Location @ 1830, Requested @ 1900.
Event	3	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	12/26/2015	19:30:00	USER				Safety Meeting with HES Crew prior to rigging-up.
Event	4	Safety Meeting - Pre Job	Safety Meeting - Pre Job	12/26/2015	21:15:00	USER				Safety Meeting with HES Crew and all 3rd Party Employees
Event	5	Other	Other	12/26/2015	21:15:01	USER				TD-11652', TP-11642', Float Collar @ 11599', 9 5/8" Surface Casing set @ 1592', 9 lb/gal OBM.
Event	6	Start Job	Start Job	12/26/2015	21:48:36	COM4	83.00	9.09	0.00	Water Provided by Rig, Tested as follows: PH-7.5, Chlorides-0, Sulfates-<200, 65 Deg.
Event	7	Test Lines	Test Lines	12/26/2015	21:49:31	COM4	4066.00	9.15	0.00	Pressure Test Lines to 4066 PSI, Monitor for Leaks
Event	8	Pump Spacer	Pump Tuned Spacer	12/26/2015	21:54:04	USER	264.00	11.63	5.00	Mix and Pump 50 bbls Tuned Spacer III @ 11.5 lb/gal (15 Gals of Musol A, 15 Gals Dual Surfactant B, and 10 gals D-Air 3000L added on Batch Mixer) Density Verified By Pressurized Scales
Event	9	Pump Lead Cement	Pump Lead Cement	12/26/2015	22:13:18	COM4	418.00	13.43	8.00	Mix and Pump 42 bbls (150 sks) ElastiCem Cement @ 13.2 lb/gal (Density Verified by Pressurized Scales)
Event	10	Pump Tail Cement	Pump Tail Cement	12/26/2015	22:13:51	USER	435.00	13.37	8.00	Mix and Pump 441 bbls (1550 sks) ElastiCem Cement @ 13.2 lb/gal (Density Verified by Pressurized Scales)
Event	11	Shutdown	Shutdown	12/26/2015	23:18:05	COM4	65.00	1.26	0.00	Shut-Down, Prepare to Drop Plug
Event	12	Drop Top Plug	Drop Top Plug	12/26/2015	23:25:53	COM4	21.00	0.00	0.00	Drop wiper dart by Hand (Witnessed by Tool Rep.) (Provided by KLX Energy Services)
Event	13	Clean Lines	Clean Lines	12/26/2015	23:27:19	COM4	43.00	9.37	2.10	Wash pumps and lines to wash-up Tank.
Event	14	Pump Displacement	Pump Displacement	12/26/2015	23:30:06	COM4	23.00	-0.06	0.00	Pump Water Displacement (10 gals. MMCR in first 10 bbls)

Event	15	Spacer Returns to Surface	Spacer Returns to Surface	12/26/2015	23:47:22	USER	2688.00	8.17	7.40	Tuned Spacer Returns to Surface @ 147 bbls away. (50 bbls Returned to Pit)
Event	16	Cement Returns to Surface	Cement Returns to Surface	12/26/2015	23:54:55	USER	2900.00	8.15	6.30	Cement Returns to Surface @ 197 bbls away. (65 bbls Returned to Pit)
Event	17	Shutdown	Shutdown	12/27/2015	00:09:30	USER	2267.00	8.13	0.00	Shutdown @ 259 bbls away, Plug did not Bump. Discuss with Customer Rep. and Tool Rep. Customer and Tool Rep. made decision to pump an additional 3 bbls. Plug did not bump after pumping additional fluid. End Displacement
Event	18	Other	Other	12/27/2015	00:13:35	COM4	168.00	8.13	0.00	Check Floats, Floats Holding, Returned 2 bbls back to pump truck.
Event	19	End Job	End Job	12/27/2015	00:25:30	COM4	32.00	1.13	1.20	Samples of Spacer Left on Location, and returned to service center.
Event	20	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	12/27/2015	00:34:38	USER				Safety Meeting with HES Crew Prior to rigging-down.
Event	21	Safety Meeting - Departing Location	Safety Meeting - Departing Location	12/27/2015	00:34:45	USER				Journey Management Meeting with HES Crew Prior to Departing Location.

3.0 Attachments

3.1 Case 1-Custom Results.png

