

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3768200		Quote #:		Sales Order #: 0903912979																																																																																																														
Customer: NOBLE ENERGY INC - EBUS				Customer Rep: Gary Stapleton																																																																																																																
Well Name: WELLS RANCH STATE			Well #: AA33-785			API/UWI #: 05-123-43875-00																																																																																																														
Field: WATTENBERG		City (SAP): GILL		County/Parish: WELD			State: COLORADO																																																																																																													
Legal Description: SW SW-21-6N-63W-255FSL-772FWL																																																																																																																				
Contractor: Noble				Rig/Platform Name/Num: H&P 524																																																																																																																
Job BOM: 7523																																																																																																																				
Well Type: HORIZONTAL OIL																																																																																																																				
Sales Person: HALAMERICA\HB70026					Srvc Supervisor: Mike Loughran																																																																																																															
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Formation Name																																																																																																																				
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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	150	sack	13.2	1.57		7.5	7.53
7.53 Gal		FRESH WATER							
0.90 %		SCR-100 (100003749)							
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	ElastiCem w/ SCBL	ELASTICEM (TM) SYSTEM	536	sack	13.2	1.6		7	7.69
0.50 %		SCR-100 (100003749)							
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/mi n	Total Mix Fluid Gal
5	NeoCem NT1	NeoCem TM	1170	sack	13.2	2.04		7	9.75
9.75 Gal		FRESH WATER							
0.08 %		SCR-100 (100003749)							
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
6	Displacement	Displacement	368	bbl	8.33			8	
Cement Left In Pipe		Amount	Reason				Shoe Joint		
Mix Water: pH 7		Mix Water Chloride: 0 ppm	Mix Water Temperature: 50 °F						
Comment 4 bbls Tuned spacer to surface									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate <i>(bbl/min)</i>	DH Density <i>(ppg)</i>	DS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	3/21/2017	16:00:00	USER				Callout for on loc. time 2200 Hrs
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/22/2017	18:30:00	USER				Discuss route, Safe driving, start JM
Event	3	Crew Leave Yard	Crew Leave Yard	3/22/2017	18:45:00	USER				
Event	4	Arrive At Loc	Arrive At Loc	3/22/2017	20:24:00	USER				Meet with customer to discuss job. Rig running casing
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	3/22/2017	20:30:00	USER				hazard hunt, discuss where to spot trucks
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	3/22/2017	20:40:00	USER				JSA safe rig up
Event	7	Rig-Up Equipment	Rig-Up Equipment	3/22/2017	20:45:00	USER				rig up all surface lines and iron to buffer zone
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	3/22/2017	22:15:00	USER				With all associated personnel. Discuss hazards of our equipment, iron, pressure
Event	9	Start Job	Start Job	3/22/2017	22:29:47	COM1				Start recording data
Event	10	Test Lines	Test Lines	3/22/2017	22:36:05	COM1		8.43	4450.00	HMS pressure test to 4500 psi.
Event	11	Prime Pumps	Prime Pumps	3/22/2017	23:17:25	COM1				Fill lines
Event	12	Pump Spacer 1	Pump Spacer 1	3/22/2017	23:49:03	COM1	3.80	111.50	322.00	80 bbls Tuned Spacer III with Musol, Dual Spacer B, D-Air
Event	13	Pump Lead Cement	Pump Lead Cement	3/22/2017	00:13:29	COM1	4.50	13.15	263.00	150 Sacks ElastiCem, 41.94 bbls, 13.2 ppg, 1.57 Yield, 7.53 gal/sack
Event	14	Pump Lead Cement	Pump Lead Cement	3/22/2017	00:21:43	COM1	5.70	13.21	419.00	536 Sacks ElastiCem wist Super CBL, 152.74 Bbls, 13.2 ppg, 1.6 Yield, 7.69 Gal/sack
Event	15	Pump Tail Cement	Pump Tail Cement	3/22/2017	00:40:54	COM1	7.30	13.24	797.00	1170 Sacks NeoCem, 425.08 Bbls, 13.2 ppg, 2.04 Yield, 9.75 Gal/sack
Event	16	Shutdown	Shutdown	3/22/2017	01:34:53	COM1				

Event	17	Drop Top Plug	Drop Top Plug	3/22/2017	01:38:32	COM1					
Event	18	Clean Lines	Clean Lines	3/22/2017	01:44:41	COM1					
Event	19	Pump Displacement	Pump Displacement	3/22/2017	01:54:23	COM1	8.20	8.34	310.00	Pump 368 bbls Fresh water, See spacer at 364 bbls into displacement.	
Event	20	Bump Plug	Bump Plug	3/22/2017	02:46:17	COM1	0.00	8.40	2368.00	500 psi over final circulating pressure of 1800 psi, 4 bbls Tuned Spacer to surface	
Event	21	Check Floats	Check Floats	3/22/2017	02:51:30	USER				Release pressure, 4 bbls fresh water back to pump truck, floats hold	
Event	22	End Job	End Job	3/22/2017	02:55:06	COM1				Stop recording data	
Event	23	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	3/22/2017	03:00:00	USER				JSA safe rig down	
Event	24	Rig Down Lines	Rig Down Lines	3/22/2017	03:10:00	USER					
Event	25	Crew Leave Location	Crew Leave Location	3/22/2017	04:00:00	USER				Start JM. Thanks for choosing Halliburton!	