

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 9029984		Quote #:		Sales Order #: 0906978539				
Customer: NOBLE ENERGY INC-EBUS					Customer Rep: John Drahota					
Well Name: REVEILLE			Well #: A34-788			API/UWI #: 05-123-50794-00				
Field: WATTENBERG		City (SAP): GARDEN CITY		County/Parish: WELD			State: COLORADO			
Legal Description: SE SW-34-6N-64W-564FSL-1508FWL										
Contractor: H & P DRLG					Rig/Platform Name/Num: H & P 517					
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Vaughn Oteri					
Job										
Job depth MD		17284ft		BHST		220 degF				
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	0	9.625	8.921	36			0	1927	0	1927
Casing	0	5.5	4.892	17			0	17266	0	6749
Open Hole Section			8.5				1927	17284	1927	6749
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	5.5			17266		Top Plug	5.5	1	HES	
Float Collar	5.5			17217		Bottom Plug	5.5	2	HES	
						Centralizers	5.5	199	Summit	

Fluid Data																																
Stage #: 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	Tuned Prime	TUNED PRIME CEMENT SPACER	120	bbl	11.5	3.7																										
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2	ElastiCem	ELASTICEM (TM) SYSTEM	140	sack	13.2	1.6	7.63	8	1068																							
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3	ElastiCem w/ SCBL	ELASTICEM (TM) SYSTEM	741	sack	13.2	1.67	8.03	8	5950																							
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	NeoCem NT1	NeoCem TM	1129	sack	13.2	2.04	9.79	8	11053																							
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	399.43	bbl	8.33																											
<table border="1"> <tr> <td>Cement Left In Pipe</td> <td>Amount</td> <td>49 ft</td> <td>Reason</td> <td>Shoe Joint</td> </tr> <tr> <td>Mix Water:</td> <td>pH 7</td> <td>Mix Water Chloride:</td> <td>0 ppm</td> <td>Mix Water Temperature:</td> <td>70 °F °C</td> </tr> <tr> <td>Plug Bumped?</td> <td>Yes</td> <td>Plug Displaced by:</td> <td>8.33 lb/gal Treated Water</td> <td>Disp. Temperature:</td> <td></td> </tr> <tr> <td>Cement Returns:</td> <td>0 bbl</td> <td>Bump Pressure:</td> <td>2297 psi</td> <td>Floats Held?</td> <td>Yes</td> </tr> </table>										Cement Left In Pipe	Amount	49 ft	Reason	Shoe Joint	Mix Water:	pH 7	Mix Water Chloride:	0 ppm	Mix Water Temperature:	70 °F °C	Plug Bumped?	Yes	Plug Displaced by:	8.33 lb/gal Treated Water	Disp. Temperature:		Cement Returns:	0 bbl	Bump Pressure:	2297 psi	Floats Held?	Yes
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Comment 50bbbls of spacer back to surface, Estimated HOT-10029 TOT-7227 TOL-1831 HOC-835' TOC-997' Centralizers= 205 from 17219 to 1575 feet.																																

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Date	Time	PS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Comments
Event	1	Call Out	2/20/2021	13:00:00				Call out from ARC hub.
Event	2	Depart from Service Center or Other Site	2/20/2021	18:00:00				Depart from Ft. Lupton co HES yard.
Event	3	Pre-Convoy Safety Meeting	2/20/2021	18:30:00				Held pre-Convoy meeting with all HES drivers to discuss driving directions and hazards.
Event	4	Arrive At Loc	2/20/2021	19:00:00				Arrived on location met with company rep to discuss job process and concerns.
Event	5	Start Job	2/21/2021	00:21:03	-10.00	8.42	0.00	Held pre-job safety meeting with all hands on location to discuss job process and hazards.
Event	6	Other	2/21/2021	00:23:19	28.00	8.64	0.00	Primed pump and lines with fresh water.
Event	7	Test Lines	2/21/2021	00:24:34	158.00	8.57	0.00	Pressure tested pumps and lines with fresh water 4164psi, no leaks were found and pressure held good.
Event	8	Test Lines	2/21/2021	00:27:46	109.00	8.51	0.00	Pressure tested IBOP to 2056psi, pressure held good.
Event	9	Drop Bottom Plug	2/21/2021	00:30:34	64.00	8.49	0.00	Released bottom plug witnessed by company rep.
Event	10	Pump Spacer 1	2/21/2021	00:30:38	62.00	8.49	0.00	Mixed and pumped 120bbl of 11.5ppg y-3.7 g/sk23.55 Tuned Prime spacer at 4.0 300psi
Event	11	Drop Bottom Plug	2/21/2021	00:59:16	115.00	11.81	0.20	Released Bottom plug witnessed by company rep.
Event	12	Check Weight	2/21/2021	01:04:43	42.00	11.75	0.00	Confirmed weight of 13.2ppg on scales
Event	13	Pump Cap Cement	2/21/2021	01:06:20	51.00	11.75	0.90	Mixed and pumped 140sks or 39bbl of 13.2ppg Y-1.6 g/sk-7.63 ElastiCem™ at 8.5bpm 570psi
Event	14	Pump Lead Cement	2/21/2021	01:12:44	567.00	13.27	8.40	Mixed and pumped 241 y-1.67 g/sk-8.03 ElastiCem™ at 8.5bpm 630psi.
Event	15	Check Weight	2/21/2021	01:25:10	571.00	13.30	8.50	Confirmed weight of 13.2ppg on scales
Event	16	Check Weight	2/21/2021	01:36:41	568.00	13.25	8.50	
Event	17	Pump Tail Cement	2/21/2021	01:40:10	553.00	13.12	8.50	Mixed and pumped 1129sks or 410bbls of 13.2ppg Y-2.04 g/sk-9.79 NeoCem™ at 8.5bpm 830psi
Event	18	Check Weight	2/21/2021	01:42:09	769.00	13.13	8.50	Confirmed weight of 13.2ppg on scales

Event	19	Check Weight	2/21/2021	01:52:05	766.00	13.18	8.50	Confirmed weight of 13.2ppg on scales
Event	20	Check Weight	2/21/2021	01:56:07	765.00	13.19	8.50	Confirmed weight of 13.2ppg on scales
Event	21	Check Weight	2/21/2021	02:06:02	778.00	13.23	8.50	Confirmed weight of 13.2ppg on scales
Event	22	Shutdown	2/21/2021	02:34:39	92.00	12.76	0.00	
Event	23	Clean Lines	2/21/2021	02:38:05	51.00	12.73	0.00	Washed pumps and lines with fresh water
Event	24	Drop Top Plug	2/21/2021	02:45:48	50.00	7.68	0.00	Released plug witnessed by company rep
Event	25	Pump Displacement	2/21/2021	02:47:15	41.00	8.28	0.00	Pumped 399bbl of treated water to displace cement
Event	26	Bump Plug	2/21/2021	03:34:08	2900.00	8.37	0.00	Bumped plug 500psi over final pump pressure 2297/2995psi
Event	27	Other	2/21/2021	03:39:03	2993.00	8.35	0.00	Released pressure back to pump truck to check floats, Floats held good 5bbls back
Event	28	End Job	2/21/2021	03:40:43	36.00	8.30	0.00	50bbls of spacer back to surface, Estimated HOT-10029 TOT-7227 TOL-1831 HOC-835' TOC-997'

3.0 Attachments

3.1 Job Chart

