

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 9059363		Quote #:		Sales Order #: 0907465300				
Customer: NOBLE ENERGY INC-EBUS					Customer Rep: John Drahota					
Well Name: ROTH			Well #: A32-770			API/UWI #: 05-123-51333-00				
Field: WATTENBERG		City (SAP): GARDEN CITY		County/Parish: WELD			State: COLORADO			
Legal Description: NE NE-30-6N-64W-994FNL-270FEL										
Contractor: H & P DRLG					Rig/Platform Name/Num: H & P 517					
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Nicholas Roles					
Job										
Job depth MD		17362ft		Job Depth TVD		6876ft				
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	1954	0	1954
Casing		5.5	4.892	17			0	17362	0	6876
Open Hole Section			8.5				1954	17374	1954	6876
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	5.5			17362		Top Plug	5.5	1	HES	
Float Collar	5.5			17318		Bottom Plug	5.5	2	HES	
						Centralizers	5.5	220	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	Spacer	Tuned Prime Cement Spacer	120	bbl	11.5	3.74		6	4284
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	Cap Cement	ElastiCem™	140	sack	13.2	1.6	7.63	6	1068
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	Lead Cement	ElastiCem™	786	sack	13.2	1.67	8.03	8	6312
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	Tail Cement	NeoCem™	1107	sack	13.2	2.04	9.79	8	10838
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	402	bbl	8.33			10	16884
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		0 ppm		Mix Water Temperature:		65 °F
Plug Bumped?		Yes	Plug Displaced by:		8.33 lb/gal		Disp. Temperature:		65 °F
Cement Returns:		0 bbl.	Bump Pressure:		2563 psi		Floats Held?		Yes
Comment: Got 50bbls spacer to surface. Estimated TOCap-986', TOL-1821', TOT-7533'. Centralizer totals-17,319ft-937.8ft 220 centralizers.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Date	Time	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/min)	Pump A Pressure (psi)	Cmb Stg Total (bbl)	Comments
1	Call Out	10/27/2021	11:00:00					Called out by service coordinator for OL time of 1700.
2	Pre-Convoy Safety Meeting	10/27/2021	14:45:00					Discuss all hazards associated with journey, directions to destination, complete journey management if needed, and ensure all convoy is fit for duty.
3	Depart from Service Center or Other Site	10/27/2021	15:00:00					Depart from service center or other job site.
4	Arrive at Location from Service Center	10/27/2021	16:00:00					Upon arrival to location, signed in with onsite safety personnel. Met with company man and discussed job specific requirements and specifications.
5	Pre-Rig Up Safety Meeting	10/27/2021	19:45:00					Held pre rig up JSA for hazards, hazard hunt with crew, and discussed plan for spotting equipment and rigging up lines for job. Discussed muster points and closest emergency location as well as coordinates.
6	Rig-Up Equipment	10/27/2021	20:00:00					Begin rig up with crew.
7	Rig-Up Completed	10/27/2021	21:00:00	0.00	0.00	68.73	0.00	Complete rig up for job to nearest point before red zone.
8	Other	10/27/2021	21:15:00	7.79	0.00	69.00	12.47	Mix water test results- PH-7, Chlo-0, Temp-65F.
9	Safety Meeting - Pre Job	10/27/2021	22:00:00	7.77	0.00	67.59	12.47	Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.

10	Start Job	10/27/2021	22:30:09	7.76	0.00	0.22	0.00	TD-17374', TP-17362' 5.5" 17#, FC-17318', TVD-6876', SURF-1954' 9.625" 36#, OH-8.5" MUD-10.1#
11	Test Lines	10/27/2021	22:32:48	8.33	0.00	125.02	3.02	Pumped 5bbls fresh water to fill lines, closed 2" lo torc, performed 500psi k/o function test, followed with 5th gear stall at 1290psi, perform 4500psi test online. Held pressure, no leaks. Bled off pressure, pumped 1bbl to ensure lines still full and closed valve. Proceeded to bring pressure to 2000psi on Kelly line, pressure stabilized and held with no leaks.
12	Drop Bottom Plug	10/27/2021	22:40:30	8.32	0.00	12.21	4.98	Dropped by HES supervisor, witnessed by company man.
13	Pump Spacer 1	10/27/2021	22:40:37	8.32	0.00	12.41	0.00	Pumped 120bbls Tuned Prime 11.5# 3.7y 23.55g/s with 20g D-Air at 6bpm 340psi
14	Check Weight	10/27/2021	22:47:39	11.36	3.04	283.00	17.49	Weight verified with pressurized mud scales.
15	Drop Bottom Plug	10/27/2021	23:07:17	11.98	0.00	39.71	114.78	Dropped by HES supervisor, witnessed by company man.
16	Pump Cap Cement	10/27/2021	23:07:21	11.97	0.00	39.77	0.00	Pumped 140sks or 40bbls Elasticem w/o CBL 13.2# 1.6y 7.63g/s at 6bpm 580psi.
17	Check Weight	10/27/2021	23:18:06	13.55	3.11	258.76	24.38	Weight verified with pressurized mud scales.
18	Pump Lead Cement	10/27/2021	23:21:16	13.09	4.13	289.52	0.03	Pumped 786sks or 234bbls Elasticem w/CBL 13.2# 1.67y 8.03g/s at 8bpm 612psi.
19	Check Weight	10/27/2021	23:30:20	13.27	7.72	608.56	65.56	Weight verified with pressurized mud scales.
20	Pump Tail Cement	10/27/2021	23:53:21	13.15	7.70	548.68	0.13	Pumped 1107sks or 402bbls 13.2# 2.04y 9.79g/s Neocem at 9bpm 900psi.
21	Check Weight	10/27/2021	23:56:38	13.47	7.76	772.10	25.52	Weight verified with pressurized mud scales.
22	Shutdown	10/28/2021	00:43:07	13.11	0.00	125.45	412.02	Shutdown, washed up through pumps and down wash up line to pits until clean water was seen. Pumped total of 20bbls to clean truck and lines

23	Drop Top Plug	10/28/2021	00:52:33	7.84	0.00	21.14	18.65	Dropped by HES supervisor, witnessed by company man.
24	Pump Displacement	10/28/2021	00:52:36	7.85	0.00	21.28	0.00	Pumped 402bbls production water with 10g MMCR in first 20bbls.
25	Bump Plug	10/28/2021	01:41:43	8.19	0.00	3097.40	399.99	Slowed down to 4bpm at 375bbls away, final circulating pressure- 2563psi, Bump pressure-3270psi.
26	Other	10/28/2021	01:47:35	8.18	0.00	3269.33	399.99	Released pressure and got 5.5bbls fresh water to truck, floats held.
27	End Job	10/28/2021	01:55:11	-0.17	0.00	-8.11	399.99	Got 50bbls spacer to surface. Estimated TOCap-986', TOL-1821', TOT-7533'. Centralizer totals-17,319ft-937.8ft 220 centralizers.
28	Pre-Rig Down Safety Meeting	10/28/2021	02:00:00	-0.17	0.00	-7.70	399.99	Held safety meeting with crew prior to rig down, discussed possibility of trapped pressure, swing radius, slips trips and falls, pinch points and risks associated with rig down.
29	Rig Down Lines	10/28/2021	02:15:00					Begin rig down
30	Rig-Down Completed	10/28/2021	03:00:00					Rig down complete with no injuries, spills or damage to equipment.
31	Pre-Convoy Safety Meeting	10/28/2021	03:15:00					Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.
32	Depart Location for Service Center or Other Site	10/28/2021	03:30:00					Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 Job Chart

