

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 9059383		Quote #:		Sales Order #: 0907436821				
Customer: NOBLE ENERGY INC-EBUS					Customer Rep: Dave Nielsen					
Well Name: ROTH			Well #: A31-720			API/UWI #: 05-123-51329-00				
Field: WATTENBERG		City (SAP): GARDEN CITY		County/Parish: WELD		State: COLORADO				
Legal Description: NE NE-30-6N-64W-927FNL-270FEL										
Contractor: H & P DRLG					Rig/Platform Name/Num: H & P 517					
Job BOM: 7523										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Nicholas Roles					
Job										
Job depth MD		17068ft			Job Depth TVD		6794ft			
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	1927	0	1927
Casing		5.5	4.892	17			0	17068	0	6794
Open Hole Section			8.5				1927	17078	1927	6794
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	5.5			17067.7		Top Plug	5.5	1	HES	
Float Collar	5.5			17023.7		Bottom Plug	5.5	2	HES	
						Centralizers	5.5	217	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	Cement	ElastiCem™ Cap Cement	140	sack	13.2	1.6	7.63	8	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	Cement	ElastiCem™ Lead Cement	742	sack	13.2	1.67	8.03	9	5958
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	Cement	NeoCem™ Tail Cement	1107	sack	13.2	2.04	9.79	9	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	395	bbl	8.33			10	16590
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 Treated Water			Disp. Temperature: 65 °F			
Cement Returns:	0 bbl.		Bump Pressure: 2597 psi			Floats Held? Yes			
Comment: Got 45 bbl. spacer to surface. Calculated TOCap-987', TOL-1822', TOT-7239'. Centralizer totals-17,024ft-1974ft 217 centralizers.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Date	Time	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
1	Call Out	10/13/2021	22:00:00					Called out by service coordinator for OL time of 0400.
2	Pre-Convoy Safety Meeting	10/14/2021	01:00:00					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	10/14/2021	01:15:00					Depart from service center or other job site.
4	Arrive at Location from Service Center	10/14/2021	02:00:00					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	10/14/2021	06:00:00					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	10/14/2021	06:15:00					Begin rig up with crew.
7	Rig-Up Completed	10/14/2021	07:30:00					Complete rig up for job to nearest point before red zone.
8	Other	10/14/2021	08:00:00					Mix water test results- PH-7, Chlo-0, Temp-65F.
9	Safety Meeting - Pre Job	10/14/2021	09:00:00	8.02	0.00	0.00	0.00	Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.
10	Start Job	10/14/2021	09:08:39	8.01	0.00	1.00	0.00	TD-17078', TP-17067.7' 5.5" 17#, FC-17023.7', TVD-6794', SURF-1927' 9.625" 36#, OH-8.5" MUD-10.1#

11	Drop Bottom Plug	10/14/2021	09:26:15	0.51	0.90	1.00	0.10	Dropped by HES supervisor, witnessed by company man.
12	Test Lines	10/14/2021	09:27:41	8.20	0.00	206.00	4.30	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 on line. 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.
13	Pump Spacer 1	10/14/2021	09:34:17	8.14	0.00	58.00	6.70	Pumped 120bbls Tuned Prime 11.5# 3.7y 23.55g/s with 20g D-Air at 6bpm 340psi
14	Drop Bottom Plug	10/14/2021	10:00:34	10.36	0.00	59.00	111.20	Dropped by HES supervisor, witnessed by company man.
15	Pump Cap Cement	10/14/2021	10:02:37	10.45	0.00	49.00	0.00	Pumped 140skts or 40bbls ElastiCem w/o CBL 13.2# 1.6y 7.63g/s at 8bpm 580psi.
16	Pump Lead Cement	10/14/2021	10:08:50	12.56	6.80	528.00	37.80	Pumped 742skts or 221bbls ElastiCem w/CBL 13.2# 1.67y 8.03g/s at 9bpm 612psi.
17	Check Weight	10/14/2021	10:31:01	13.33	9.00	825.00	190.70	Weight verified with pressurized mud scales.
18	Pump Tail Cement	10/14/2021	10:35:52	10.79	9.10	84.00	234.50	Pumped 1102skts or 402bbls 13.2# 2.04y 9.79g/s NeoCem at 9bpm 900psi.
19	Check Weight	10/14/2021	10:37:43	13.36	9.30	1099.00	16.70	Weight verified with pressurized mud scales.
20	Check Weight	10/14/2021	11:01:23	13.25	9.30	1357.00	236.10	Weight verified with pressurized mud scales.
21	Shutdown	10/14/2021	11:23:30	1.89	0.00	133.00	425.40	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
22	Drop Top Plug	10/14/2021	11:32:51	8.28	0.00	34.00	450.90	Dropped by HES supervisor, witnessed by company man.
23	Pump Displacement	10/14/2021	11:32:55	8.28	0.00	35.00	0.00	Pumped 395bbls production water with 10g MMCR in first 20bbls.

24	Bump Plug	10/14/2021	12:24:19	8.35	0.00	3060.00	403.70	Slowed down to 4bpm at 375bbbls away, final circulating pressure- 2597psi, Bump pressure-3157psi.
25	Other	10/14/2021	12:29:42	8.31	0.00	2536.00	403.70	Released pressure and got 5.5bbbls fresh water to truck, floats held.
26	End Job	10/14/2021	12:30:00	8.27	0.00	1504.00	403.70	Got 45bbbls spacer to surface. Calculated TOCap-987', TOL-1822', TOT-7239'. Centralizer totals-17,024ft-1974ft 217 centralizers.
27	Pre-Rig Down Safety Meeting	10/14/2021	12:35:00	8.27	0.00	6.00	403.70	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.
28	Rig Down Lines	10/14/2021	12:45:00	6.58	0.00	-1.00	403.70	Begin rig down
29	Pre-Convoy Safety Meeting	10/14/2021	13:45:00					Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.
30	Rig-Down Completed	10/14/2021	13:45:00					Rig down complete with no injuries, spills or damage to equipment.
31	Depart Location for Service Center or Other Site	10/14/2021	14:00:00					Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 Job Chart

