

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 9059384		Quote #:		Sales Order #: 0907471865				
Customer: NOBLE ENERGY INC-EBUS					Customer Rep: John Drahota					
Well Name: ROTH			Well #: A31-730			API/UWI #: 05-123-51331-00				
Field: WATTENBERG		City (SAP): GARDEN CITY		County/Parish: WELD			State: COLORADO			
Legal Description: NE NE-30-6N-64W-1017FNL-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: Brandon Parker					
Job										
Job depth MD		17605ft			Job Depth TVD		6777ft			
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	1930	0	1930
Casing		5.5	4.892	17			0	17594	0	6777
Open Hole Section			8.5				1930	17605	1930	6777
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	5.5	1	HES	17594		Top Plug	5.5	1	HES	
Float Collar	5.5	1	HES	17550		Bottom Plug	5.5	2	HES	
						Centralizers	5.5	223	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	810	sack	13.2	1.67	8.03	9	6504	
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	Treated Fresh Water	407	bbl	8.33				17094	
Cement Left In Pipe										
Amount		44 ft			Reason			Shoe Joint		
Mix Water:		pH 6		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:		2619 psi		Floats Held?		Yes
Comment: Got 47bbls spacer to surface.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Date	Time	Dnwhole Density (ppg)	Cmb Pump Rate (bbl/min)	Cmb Stg Total (bbl)	Pump B Pressure (psi)	Comments
1	Call Out	11/1/2021	18:00:00					crew called out to 5.5" production casing for Chevron with an on location time of 00:30hrs
2	Pre-Convoy Safety Meeting	11/1/2021	22:15:00					meeting with all HES personnel to discuss hazards/safety issues associated with traveling to location
3	Depart from Service Center or Other Site	11/1/2021	22:30:00					
4	Arrive at Location from Service Center	11/2/2021	00:00:00					Met with Chevron company rep and went over job numbers, water sources and iron placement
5	Assessment Of Location Safety Meeting	11/2/2021	00:05:00					water temp 65, ph6, chlo 0, TD 17605, TP 17594.4, SJ 44, FC 17550.4 OH 8.5", SP 1930 9.625 INCH 36#, 5.5" 17#, TVD 6777,MW 10.1, HES FLOATS, 223 CNT, 3 BOTTOM PLUGS AND 1 TOP PLUG,
6	Safety Meeting - Pre Rig-Up	11/2/2021	00:15:00					meeting hes personnel to discuss safety/hazards associated with rigging up
7	Rig-Up Equipment	11/2/2021	00:20:00					
8	Standby - Other - see comments	11/2/2021	01:00:00					hes went into standby by mode while rig finished reaming and running casing
9	Other	11/2/2021	03:15:00					spot hes elite pump trk
10	Standby - Other - see comments	11/2/2021	04:00:00					hes went into stand by mode until rig landed casing to avoid the red zone
11	Casing on Bottom	11/2/2021	05:15:00					rig landed 5.5" casing
12	Circulate Well	11/2/2021	05:16:00					rig circulated 8000stokes, 10bpm at 900psi. 300 units of gas
13	Safety Meeting - Pre Job	11/2/2021	06:15:00	8.42	0.00	23.66	-4.42	meeting with all personnel on location to discuss safety hazards associated with job, also cover job procedures
14	Start Job	11/2/2021	06:32:34	8.39	0.00	0.00	-5.28	begin recording data
15	Break Circulation	11/2/2021	06:50:00	8.38	0.00	0.00	-2.72	kicked out mud pumps to start cmt job
16	Pressure Test	11/2/2021	07:00:25	8.41	0.00	2.93	162.02	TEST HES LINES TO 4800 PSI.

17	Begin Standby Due to HES	11/2/2021	07:45:10	8.06	0.00	0.95	-0.19	PRESSURE TEST DID NOT MEET HES REQUIREMENTS. GREASED LO TORQUES AND SAME RESULT. REMOVED FRAC VALVES AND FOUND SMALL HARD PARTICLES EMBEDDED IN FRAC VALVES. REPLACED FRAC VALVES AND 1" LO TORQUE
18	End Standby Due to HES	11/2/2021	08:45:27	8.03	0.00	21.28	-7.13	HALLIBURTON FIXED PROBLEM / HELD GOOD PRESSURE TEST AND READY TO GO. RIG SAYS THEY WANT TO DO A BOTTOMS UP AND WAIT FOR NEW FRAC VALVES
19	Other	11/2/2021	10:08:05	8.03	0.00	24.75	-1.87	HALLIBURTON READY. RIG HAS PROBLEMS RELEASING CRT FROM CASING
20	Drop Bottom Plug	11/2/2021	10:40:48	7.86	0.00	0.00	-0.14	BOTTOM PLUG BY DAVE
21	Prime Pumps	11/2/2021	10:43:05	7.93	0.00	0.00	-2.38	PRIME PUMPS
22	Test Lines	11/2/2021	10:51:42	8.33	0.00	1.98	5.61	TEST HES LINES TO 4800 PSI
23	Test Lines	11/2/2021	10:51:49	8.33	0.00	1.98	6.11	TEST RIGS VALVE TO 1700 PSI
24	Pump Spacer 1	11/2/2021	10:55:11	8.06	0.00	0.00	26.42	120 BBLS. TUNED PRIME SPACER. 11.5 PPG, 3.74 YIELD, 23.76 GAL/SACK. D-AIR ON FLY
25	Shutdown	11/2/2021	11:11:23	11.55	0.17	113.22	266.37	SHUTDOWN
26	Drop Bottom Plug	11/2/2021	11:17:43	11.40	0.00	0.00	37.87	BOTTOM PLUG BY DAVE
27	Pump Cap Cement	11/2/2021	11:18:36	11.40	0.00	0.00	37.43	140 SACKS CAP ELASTICEM CAP CEMENT, 40 BBLS. 13.2 PPG, 1.6 YIELD, 7.63 GAL/SACK
28	Pump Lead Cement	11/2/2021	11:24:20	13.04	7.97	0.07	622.67	810 SACKS ELASTICEM W/SCBL LEAD CEMENT, 241 BBLS. 13.2 PPG, 1.67 YIELD, 8.03 GAL/SACK
29	Pump Tail Cement	11/2/2021	11:54:45	13.19	8.05	0.13	621.32	1107 SACKS NEOCEM TAIL CEMENT. 402 BBLS. 13.2 PPG, 2.04 YIELD, 9.79 GAL/SACK
30	Clean Lines	11/2/2021	12:56:51	13.10	0.00	0.00	39.59	CLEAN PUMPS AND LINES
31	Drop Top Plug	11/2/2021	13:06:53	7.38	0.00	0.00	17.43	TOP PLUG BY DAVE
32	Pump Displacement	11/2/2021	13:08:41	7.37	0.00	0.00	16.68	407.2 BBLS. TOTAL DISPLACEMENT. 10 GALLONS MICRO MATRIX CEMENT RETARDER IN FIRST 20 BBLS FRESH WATER. 387.2 BBLS. TREATED WATER DISPLACEMENT. TREATMENT BY MULTICHEM
33	Shutdown	11/2/2021	13:15:16	8.35	0.00	60.32	592.88	SHUTDOWN - RIG PACKER CUP WAS LEAKING. RIG CHANGES OUT PACKER CUP.
34	Resume	11/2/2021	13:22:27	8.29	0.00	60.32	26.49	RESUME PUMPING DISPLACEMENT
35	Bump Plug	11/2/2021	14:06:52	8.62	0.00	0.00	3505.74	
36	Check Floats	11/2/2021	14:11:44	8.35	0.00	0.00	93.19	

37	End Job	11/2/2021	14:13:39	8.34	0.00	0.00	-22.70	
38	Safety Meeting - Pre Rig-Down	11/2/2021	14:16:00					meeting to discuss safety/hazards associated with rigging down equipment
39	Rig-Down Equipment	11/2/2021	14:20:00					
40	Pre-Convoy Safety Meeting	11/2/2021	15:30:00					discuss safety/hazards associated with traveling to location from job site
41	Depart Location for Service Center or Other Site	11/2/2021	15:35:00					
42	Other	11/2/2021	15:40:00					Thank You for Choosing Halliburton Cement

3.0 Attachments

3.1 Job Chart

