

HALLIBURTON

iCem[®] Service

NOBLE ENERGY INC-EBUS

RAMPART A33-780

Production Casing

Job Date: Monday, September 27, 2021

Sincerely,

Brad Hinkle and Crew

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 9037138		Quote #:		Sales Order #: 0907404080				
Customer: NOBLE ENERGY INC-EBUS					Customer Rep: John Drahota					
Well Name: RAMPART			Well #: A33-780			API/UWI #: 05-123-50934-00				
Field: WATTENBERG		City (SAP): GILL		County/Parish: WELD			State: COLORADO			
Legal Description: SW SE-20-6N-64W-493FSL-1414FEL										
Contractor: H & P DRLG					Rig/Platform Name/Num: H & P 517					
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Bradley Hinkle					
Job										
Job depth MD		17267ft			Job Depth TVD		6811ft			
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	1948	0	1948
Casing		5.5	4.892	17			0	17267	0	0
Open Hole Section			8.5				1948	17282	1948	6811
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	5.5	1	HES	17267		Top Plug	5.5	1	HES	
Float Collar	5.5	1	HES	17221		Bottom Plug	5.5	2	HES	

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	3.7	23.53		4234	
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	775	sack	13.2	1.67	8.03	8.5	6223	
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	1104	sack	13.2	2.04	9.79	8.5	10808	
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	399.5	bbl	8.33			10	16779	
Cement Left In Pipe										
Amount		46 ft			Reason			Shoe Joint		
Mix Water:		pH 6.5		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
Spacer Returns:		60 bbl.		Bump Pressure:		2374 psi		Floats Held?		Yes
Comment: 60 bbl. spacer to surface. Estimated top of cement at 1253 feet. Estimated top of tail cement at 7463 feet.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Date	Time	Pump A Pressure (psi)	Dnwhole Density (ppg)	Cmb Pump Rate (bbl/min)	Cmb Stg Total (bbl)	Comments
1	Call Out	9/26/2021	13:30:00					Crew called for an on location time of 1930. Crew was Bradley Hinkle, William Mix and Robert Blakeley.
2	Depart Shop for Location	9/26/2021	18:00:00					Pre-journey safety meeting. Discussed evening traffic hazards and wildlife at dusk.
3	Arrive at Location from Service Center	9/26/2021	19:00:00					Sign in and check in with customer. Approximately 2,000 feet of casing to run.
4	Other	9/26/2021	19:30:00					TD: 17282 TP: 17267 FC: 17221 - 5.5" 17# casing inside a 8.5" OH. TVD: 6811 SC: 1948 - 9.625" 36# Mud Weight at 10.1 ppg. Water Test: Temp 65 in both tanks. Chlorides - 0, pH: 6.5.
5	Safety Meeting - Pre Job	9/26/2021	22:30:00	-10.71	8.66	0.00	16.90	Pre-job safety meeting with rig personnel.
6	Start Job	9/26/2021	22:52:31	-2.09	8.58	0.00	16.90	Fill lines with 4 bbl. of water.
7	Test Lines	9/26/2021	22:54:45	118.75	8.33	0.00	21.79	Pressure test lines to 4500 psi with a 500 psi electronic kick-out test. Pressure held well. Bleed off pressure and proceed with a 2000 psi pressure test against rig kelley hose.
8	Drop Bottom Plug	9/26/2021	22:59:34	71.43	8.33	0.00	21.98	Bottom plug loaded directly into casing. Witnessed by customer.
9	Pump Spacer 1	9/26/2021	22:59:41	66.44	8.33	0.00	0.00	Pump 120 bbl. spacer. Valve on bulk truck appeared to be restricted to only open halfway. Pump rate of spacer was reduced while ground personnel tried to troubleshoot.

10	Drop Bottom Plug	9/26/2021	23:24:23	37.03	12.28	0.00	116.98	Drop bottom plug directly into casing. Witnessed by customer.
11	Pump Lead Cement	9/26/2021	23:25:09	39.52	12.24	0.00	0.00	Pump 39.8 bbl. (140 sacks, 1.6 yield, 7.63 gal/sk) ElastiCem with no CBL mixed at 13.2 ppg. Density verified by pressurized scales.
12	Pump Lead Cement	9/26/2021	23:32:33	411.37	13.16	6.78	0.06	Pump 230 bbl. (775 sacks, 1.67 yield, 8.03 gal/sk) ElastiCem with CBL mixed at 13.2 ppg. Density verified by pressurized scales.
13	Check Weight	9/26/2021	23:40:44	517.33	13.13	8.41	61.53	Cement weighed at 13.3 ppg.
14	Check Weight	9/26/2021	23:45:06	481.17	13.23	8.43	98.41	Cement weighed at 13.2 ppg.
15	Pump Tail Cement	9/27/2021	00:02:41	293.83	12.98	5.96	0.10	Pump 401 bbl. (1104 sacks, 2.04 yield, 9.79 gal/sk) NeoCem mixed at 13.2 ppg. Density verified by pressurized scales.
16	Check Weight	9/27/2021	00:07:55	670.11	13.19	8.56	42.57	Cement weighed at 13.2 ppg.
17	Shutdown	9/27/2021	00:53:09	139.62	13.28	0.00	409.56	Shutdown and line up for wash-up from the floor.
18	Clean Lines	9/27/2021	00:57:04	48.44	13.33	0.00	0.00	Wash pumps and lines to wash-up tank until clean.
19	Drop Top Plug	9/27/2021	01:04:02	26.00	8.22	0.00	17.79	Top plug dropped directly into casing. Witnessed by customer.
20	Pump Displacement	9/27/2021	01:04:06	25.95	8.22	0.00	0.00	Pump 399.5 bbl. of produced water, first 20 bbl. with 10 gallons of MMCR added. Good returns through out. 60 bbl. spacer to surface. Estimated top of cement at 1253 feet. Estimated top of tail cement at 7463 feet.
21	Bump Plug	9/27/2021	01:54:38	2533.44	8.39	4.02	392.57	Bump plug at 2374 psi and increase pressure to 2900 psi. Held for 5 minutes with a steady increase in pressure throughout.
22	Other	9/27/2021	02:00:35	2994.05	8.42	0.00	392.98	Floats held, 5.5 bbl. back.
23	End Job	9/27/2021	02:02:23	4.01	8.20	0.00	392.98	Thank you for choosing Halliburton.

24	Pre-Rig Down Safety Meeting	9/27/2021	02:05:00	0.75	8.20	0.00	392.98	Pre-rig down safety meeting.
25	Depart Location for Service Center or Other Site	9/27/2021	03:00:00					Pre-journey safety meeting. Discussed drowsy driving and wildlife.

3.0 Attachments

3.1 Job Chart

