

HALLIBURTON

iCem[®] Service

NOBLE ENERGY INC-EBUS

RAMPART A32-721

Production Casing

Job Date: Saturday, September 18, 2021

Sincerely,

Nick Roles and Crew

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 9037110		Quote #:		Sales Order #: 0907384408				
Customer: NOBLE ENERGY INC-EBUS					Customer Rep: Jim Turner					
Well Name: RAMPART			Well #: A32-721			API/UWI #: 05-123-50933-00				
Field: WATTENBERG		City (SAP): GARDEN CITY		County/Parish: WELD			State: COLORADO			
Legal Description: SW SE-20-6N-64W-448FSL-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: Nicholas Roles					
Job										
Job depth MD		16840ft		Job Depth TVD		6790ft				
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	1914	0	1914
Casing		5.5	4.892	17			0	16840	0	6790
Open Hole Section			8.5				1914	16848	1914	6790
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	5.5			16840		Top Plug	5.5	1	HES	
Float Collar	5.5			16794		Bottom Plug	5.5	2	HES	
						Centralizers	5.5	205	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	3.7		8	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	Cap Cement	ElastiCem™ 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	Lead Cement	ElatiCem™ Cement	717	sack	13.2	1.67	8.03	9	5758
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™ Cement	1102	sack	13.2	2.04	9.79	9	10789
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 Freshwater	390	bbl	8.33			10	16380
Cement Left In Pipe		Amount	46 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		0 ppm		Mix Water Temperature:		70 °F
Plug Bumped?		Yes	Plug Displaced by:		8.33 lb/gal		Disp. Temperature:		70 °F
Cement Returns:		0 bbl.	Bump Pressure:		2504 psi		Floats Held?		Yes
Comment: Got 43bbls spacer to surface. Estimated TOCap-995', TOL-1830', TOT-7036'. Centralizer totals-205									

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	9/18/2021	09:00:00					Called out by service coordinator for OL time of 1600.
2	Pre-Convoy Safety Meeting	9/18/2021	13:45:00					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	9/18/2021	14:00:00					Depart from service center or other job site.
4	Arrive at Location from Service Center	9/18/2021	15:00:00					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	9/18/2021	15:30:00					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	9/18/2021	15:45:00	0.00	0.00	38.00	0.50	Begin rig up with crew.
7	Rig-Up Completed	9/18/2021	16:30:00	7.96	0.00	40.00	16.50	Complete rig up for job to nearest point before red zone.
9	Other	9/18/2021	16:45:00	7.96	0.00	40.00	16.50	Mix water test results- PH-7, Chlo-0, Temp-65F.
8	Safety Meeting - Pre Job	9/18/2021	16:45:00	7.96	0.00	40.00	16.50	Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.
10	Start Job	9/18/2021	17:00:04	7.97	0.00	-1.00	0.00	TD-16848', TP-16840' 5.5" 17#, FC-16794', TVD-6790', SURF-1914' 9.625" 36#, OH-8.5" MUD-10.1#

11	Test Lines	9/18/2021	17:01:46	7.85	0.00	290.00	4.00	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.
12	Drop Bottom Plug	9/18/2021	17:07:21	7.88	0.00	27.00	5.00	Dropped by HES supervisor, witnessed by company man.
13	Pump Spacer 1	9/18/2021	17:07:54	7.88	0.00	27.00	5.00	Pumped 120bbls Tuned Prime 11.5# 3.7y 23.55g/s with 20g D-Air at 6bpm 340psi
14	Check Weight	9/18/2021	17:11:14	11.16	4.00	461.00	11.10	Weight verified with pressurized mud scales.
15	Check Weight	9/18/2021	17:12:51	11.49	4.00	448.00	17.50	Weight verified with pressurized mud scales.
16	Check Weight	9/18/2021	17:22:07	11.53	8.10	595.00	76.30	Weight verified with pressurized mud scales.
17	Drop Bottom Plug	9/18/2021	17:29:50	11.96	0.00	39.00	118.40	Dropped by HES supervisor, witnessed by company man.
18	Pump Cement	9/18/2021	17:29:54	11.96	0.00	39.00	118.40	Pumped 140sks or 40bbls ElastiCem w/o CBL 13.2# 1.6y 7.63g/s at 8bpm 580psi.
19	Check Weight	9/18/2021	17:35:46	13.37	6.40	621.00	22.80	Weight verified with pressurized mud scales.
20	Pump Lead Cement	9/18/2021	17:38:54	13.31	5.30	351.00	40.10	Pumped 717sks or 213bbls ElastiCem w/CBL 13.2# 1.67y 8.03g/s at 9bpm 612psi.
21	Check Weight	9/18/2021	17:39:18	13.25	5.30	376.00	2.00	Weight verified with pressurized mud scales.
22	Pump Tail Cement	9/18/2021	18:05:14	13.13	9.00	619.00	227.10	Pumped 1102sks or 400bbls 13.2# 2.04y 9.79g/s NeoCem at 9bpm 900psi.
23	Check Weight	9/18/2021	18:08:25	13.21	9.00	966.00	28.50	Weight verified with pressurized mud scales.
24	Check Weight	9/18/2021	18:23:33	13.14	9.00	1074.00	164.50	Weight verified with pressurized mud scales.
25	Check Weight	9/18/2021	18:25:12	12.99	9.00	1141.00	179.30	Weight verified with pressurized mud scales.

26	Shutdown	9/18/2021	18:51:27	13.37	0.00	156.00	405.80	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
27	Drop Top Plug	9/18/2021	18:59:55	8.44	0.00	20.00	23.00	Dropped by HES supervisor, witnessed by company man.
28	Pump Displacement	9/18/2021	18:59:59	8.44	0.00	20.00	23.00	Pumped 390bbls production water with 10g MMCR in first 20bbls.
29	Bump Plug	9/18/2021	19:51:02	8.52	0.00	2959.00	394.70	Slowed down to 4bpm at 370bbls away, final circulating pressure- 2504psi, Bump pressure-3066psi.
30	Other	9/18/2021	19:55:57	8.53	0.00	3066.00	394.70	Released pressure and got 5.5bbls fresh water to truck, floats held.
31	End Job	9/18/2021	19:58:36	8.46	0.00	-3.00	0.00	Got 43bbls spacer to surface. Estimated TOCap-995', TOL-1830', TOT-7036', 205 centralizers.
32	Pre-Rig Down Safety Meeting	9/18/2021	20:00:00	8.46	0.00	-4.00	0.00	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.
33	Rig Down Lines	9/18/2021	20:15:00					Begin rig down
34	Rig-Down Completed	9/18/2021	20:45:00					Rig down complete with no injuries, spills or damage to equipment.
35	Pre-Convoy Safety Meeting	9/18/2021	21:00:00					Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.
36	Depart Location for Service Center or Other Site	9/18/2021	21:15:00					Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 Job Chart

