

# HALLIBURTON

iCem<sup>®</sup> Service

## **NOBLE ENERGY INC-EBUS**

### **RAMPART A32-751**

Production Casing

Job Date: Wednesday, September 15, 2021

Sincerely,

**Nick Roles and Crew**

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 345242		<b>Ship To #:</b> 9037087		<b>Quote #:</b>		<b>Sales Order #:</b> 0907379865				
<b>Customer:</b> NOBLE ENERGY INC-EBUS					<b>Customer Rep:</b> Jim Turner					
<b>Well Name:</b> RAMPART			<b>Well #:</b> A32-751			<b>API/UWI #:</b> 05-123-50931-00				
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> GARDEN CITY		<b>County/Parish:</b> WELD			<b>State:</b> COLORADO			
<b>Legal Description:</b> SW SE-20-6N-64W-425FSL-1414FEL										
<b>Contractor:</b> H & P DRLG					<b>Rig/Platform Name/Num:</b> H & P 517					
<b>Job BOM:</b> 7523										
<b>Well Type:</b> HORIZONTAL OIL										
<b>Sales Person:</b> HALAMERICA\HX41066					<b>Srvc Supervisor:</b> Nicholas Roles					
<b>Job</b>										
<b>Job depth MD</b>		17037ft			<b>Job Depth TVD</b>		6835ft			
<b>Well Data</b>										
<b>Description</b>	<b>New / Used</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>	<b>Top MD ft</b>	<b>Bottom MD ft</b>	<b>Top TVD ft</b>	<b>Bottom TVD ft</b>
Casing		9.625	8.921	36			0	1952	1925	1952
Casing		5.5	4.892	17			0	17037	0	6835
Open Hole Section			8.5				1952	17045	1925	6835
<b>Tools and Accessories</b>										
<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	<b>Depth ft</b>		<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	
<b>Float Shoe</b>	5.5	1	HES	17037		<b>Top Plug</b>	5.5	1	HES	
<b>Float Collar</b>	5.5	1	HES	16991		<b>Bottom Plug</b>	5.5	2	HES	
						<b>Centralizers</b>	5.5	207	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	ElastiCem™ 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	Tail Cement	NeoCem™ Cement	1103	sack	13.2	2.04	9.79	9	10798
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	394	bbl	8.33			10	16548
Cement Left In Pipe		Amount	46 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:		2521 psi		Floats Held?		Yes
Comment: Got 36bbls spacer to surface. Estimated TOCap-1001', TOL-1836', TOT-7233'. Centralizer totals-16,992.1ft-1997.6ft 207 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	9/14/2021	14:00:00					Called out by service coordinator for OL time of 2000.
2	Pre-Convoy Safety Meeting	9/14/2021	17:45:00					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	9/14/2021	18:00:00					Depart from service center or other job site.
4	Arrive at Location from Service Center	9/14/2021	19:00:00					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	9/14/2021	19:15:00					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	9/14/2021	19:30:00					Begin rig up with crew.
7	Rig-Up Completed	9/14/2021	20:15:00					Complete rig up for job to nearest point before red zone.
8	Other	9/14/2021	21:00:00	7.99	0.00	36.00	17.90	Mix water test results- PH-7, Chlo-0, Temp-65F.
9	Safety Meeting - Pre Job	9/14/2021	22:00:00	7.99	0.00	37.00	17.90	Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.
10	Start Job	9/14/2021	22:15:00	7.99	0.00	-1.00	0.00	TD-17045', TP-17037' 5.5" 17#, FC-16991', TVD-6835', SURF-1952' 9.625" 36#, OH-8.5" MUD-10.2#

11	Drop Bottom Plug	9/14/2021	22:18:33	8.01	3.90	98.00	1.90	Dropped by HES supervisor, witnessed by company man.
12	Test Lines	9/14/2021	22:19:58	8.33	0.00	183.00	5.20	Pumped 5bbls fresh water to fill lines, closed 2" lo torc, performed 500psi k/o function test, followed with 5th gear stall at 1790psi, 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	9/14/2021	22:30:26	8.33	0.00	57.00	0.00	Pumped 120bbls Tuned Prime 11.5# 3.7y 23.55g/s with 20g D-Air at 8bpm 540psi
14	Check Weight	9/14/2021	22:33:06	11.57	3.90	364.00	8.40	Weight verified with pressurized mud scales.
15	Drop Bottom Plug	9/14/2021	22:48:03	11.73	0.00	41.00	112.90	Dropped by HES supervisor, witnessed by company man.
16	Pump Cement	9/14/2021	22:48:16	11.73	0.00	40.00	0.00	Pumped 140sks or 40bbls ElastiCem w/o CBL 13.2# 1.6y 7.63g/s at 8bpm 580psi.
17	Check Weight	9/14/2021	22:49:13	12.96	3.80	183.00	2.60	Weight verified with pressurized mud scales.
18	Pump Lead Cement	9/14/2021	22:54:58	13.03	6.40	433.00	37.90	Pumped 742sks or 221bbls ElastiCem w/CBL 13.2# 1.67y 8.03g/s at 9bpm 812psi.
19	Check Weight	9/14/2021	22:58:14	13.16	6.70	481.00	21.60	Weight verified with pressurized mud scales.
20	Pump Tail Cement	9/14/2021	23:20:44	13.16	9.40	693.00	226.90	Pumped 1103sks or 401bbls 13.2# 2.04y 9.79g/s NeoCem at 9bpm 900psi.
21	Check Weight	9/14/2021	23:22:19	13.15	9.40	1045.00	14.80	Weight verified with pressurized mud scales.
22	Check Weight	9/14/2021	23:40:34	13.18	9.10	1102.00	166.90	Weight verified with pressurized mud scales.
23	Shutdown	9/15/2021	00:09:42	12.78	0.00	103.00	411.20	Shutdown, washed up through pumps and down wash up line to pits until clean water was seen. Pumped total of 15bbls to clean truck and lines
24	Drop Top Plug	9/15/2021	00:18:58	8.14	0.00	24.00	23.00	Dropped by HES supervisor, witnessed by company man.

25	Pump Displacement	9/15/2021	00:19:01	8.14	0.00	24.00	0.00	Pumped 394bbls production water with 10g MMCR in first 20bbls.
26	Bump Plug	9/15/2021	01:07:04	8.25	0.00	3045.00	398.90	Slowed down to 4bpm at 375bbls away, final circulating pressure- 2521psi, Bump pressure-3125psi.
27	Other	9/15/2021	01:11:33	8.25	0.00	3124.00	0.00	Released pressure and got 5.5bbls fresh water to truck, floats held.
28	End Job	9/15/2021	01:14:24	8.19	0.00	-2.00	0.00	Got 36bbls spacer to surface. Estimated TOCap-1001', TOL-1836', TOT-7233'. Centralizer totals-16,992.1ft-1997.6ft 207 centralizers.
29	Pre-Rig Down Safety Meeting	9/15/2021	01:20:00					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.
30	Rig Down Lines	9/15/2021	01:30:00					Begin rig down
31	Rig-Down Completed	9/15/2021	02:30:00					Rig down complete with no injuries, spills or damage to equipment.
32	Pre-Convoy Safety Meeting	9/15/2021	02:45:00					Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.
33	Depart Location for Service Center or Other Site	9/15/2021	03:00:00					Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 Job Chart

