

HALLIBURTON

iCem[®] Service

NOBLE ENERGY INC-EBUS

Date: Thursday, November 01, 2018

Independence D30-758 Production

Job Date: Monday, October 29, 2018

Sincerely,

Adam McKay

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3901736	Quote #:	Sales Order #: 0905235858
Customer: NOBLE ENERGY INC-EBUS		Customer Rep: Tommy Charvat	
Well Name: INDEPENDENCE		Well #: D30-758	API/UWI #: 05-123-47690-00
Field: WATTENBERG	City (SAP): LA SALLE	County/Parish: WELD	State: COLORADO
Legal Description: NE NW-19-3N-64W-330FNL-1638FWL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 517	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB70026		Srvc Supervisor: Luke Kosakewich	

Job

Formation Name	
Formation Depth (MD)	Top <input type="text"/> Bottom <input type="text"/>
Form Type	BHST 230 degF
Job depth MD	17863ft Job Depth TVD 6925ft
Water Depth	Wk Ht Above Floor <input type="text"/>
Perforation Depth (MD)	From <input type="text"/> To <input type="text"/>

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	1954	0	1954
Casing		5.5	4.778	20			0	17841	0	6925
Open Hole Section			8.5				2474	6566	2474	6566
Open Hole Section			8.5				6566	17863	6566	6925

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe					Top Plug	5.5	1	HES
Float Shoe	5.5	1	HES	17841	Bottom Plug	5.5	2	HES
Float Collar	5.5	1	HES	17794	SSR plug set			
Insert Float					Plug Container			
Stage Tool					Centralizers			

Fluid Data

Stage/Plug #: 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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	120	bbl	11.5	3.78		6		

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	ElastiCem	ELASTICEM (TM) SYSTEM	140	sack	13.2	1.68		6	8.04
3	ElastiCem w/ SCBL	ELASTICEM (TM) SYSTEM	418	sack	13.2	1.68		8	8.06
4	NeoCem NT1	NeoCem TM	1269	sack	13.2	2.04		8	9.75
5	Displacement	Fresh water W MMCR in the first 20 bbls. and Biocide through.	394.7	bbl	8.33			9	
Cement Left In Pipe		Amount 47 ft				Reason	Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride: 0 ppm		Mix Water Temperature: 68 °F				
Plug Bumped?		Yes	Bump Pressure: 2,200 psi		Floats Held? Yes				
<p>Comment There were full returns throughout the job. Bumped the plug 500 psi. over 1,800 psi. at 3 bpm and held for 5 minutes. Finale pressure was 2,500 psi. Circulated 5 bbls. of spacer and no cement to surface. Bled off pressure to check floats. Floats held. Got 4.5 bbls. back to the truck. Estimated Tops are, TOT 6,566', TOL 3,500', and TOC 2,474'.</p>									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press <i>(psi)</i>	Comb Pump Rate <i>(bbl/min)</i>	DH Density <i>(ppg)</i>	Comments
Event	1	Call Out	Call Out	10/28/2018	14:00:00	USER				Crew was called out at 14:00 for an on location time of 20:00.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	10/28/2018	19:40:00	USER				Crew held a pre journey safety meeting and JSA.
Event	3	Depart Shop for Location	Depart Shop for Location	10/28/2018	19:50:00	USER				Started journey management with dispatch and left location.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	10/28/2018	20:00:00	USER				Crew performed a site assessment, safety meeting and hazard hunt on location. Checked in with the customer and discussed the job procedures, rig up and well bore schematics. The rig was running casing.
Event	5	Other	Other	10/28/2018	20:40:00	USER				Well bore: MD: 17,863', TP: 5.5" 20# set at 17,841', FC: 17,794', TVD: 6,925', SC: 9.625" 36 # set at 1,954'. OH: 8.5". Mud #9.8 ppg. Water test: PH: 7, Chlorides: 0, Temp: 68 Degrees.
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	10/29/2018	00:00:00	USER				The crew held a pre rig up safety meeting and JSA.
Event	7	Rig-Up Equipment	Rig-Up Equipment	10/29/2018	00:10:00	USER				The crew rigged up all lines, hoses and equipment for the job.
Event	8	Safety Meeting	Safety Meeting	10/29/2018	02:30:00	USER				Halliburton cement crew held a pre cement job safety meeting and JSA with third party personnel and rig crew.
Event	9	Start Job	Start Job	10/29/2018	02:58:44	COM5				Pumped 6 bbls. of fresh water at 3 bpm. to fill lines and establish circulation.
Event	10	Test Lines	Test Lines	10/29/2018	03:08:40	COM5	2979.00		8.87	Pressure tested lbop to 3,000 psi. with a 500 psi. electronic kick out test.
Event	11	Test Lines	Test Lines	10/29/2018	03:12:54	COM5	4925.00		8.88	Pressure tested lines to 4,900 psi. with a 500 psi. electronic kick out test.
Event	12	Drop Bottom Plug	Drop Bottom Plug	10/29/2018	03:18:18	COM5				Loaded and dropped the bottom plug, which was witnessed by the customer.

Event	13	Pump Spacer 1	Pump Spacer 1	10/29/2018	03:18:27	COM5	327.00	4.10	12.07	Pumped 120 bbls. of Tuned Spacer III with surfactants mixed at 11.5 ppg., Yield: 3.78 ft3/sks, 23.5 gal/sks. Density was verified by pressurized scales.
Event	14	Shutdown	Shutdown	10/29/2018	03:41:10	USER				Loaded and dropped the bottom plug, which was witnessed by the customer.
Event	15	Pump Cap Cement	Pump Cap Cement	10/29/2018	03:47:09	COM5	324.00	4.00	13.14	Pumped 42 bbls. (140 sks.) of Elasticem W/O Super CBL mixed at 13.2 ppg., Yield: 1.68 ft3/sks, 8.04 gal/sks. Density was verified by pressurized scales.
Event	16	Pump Lead Cement	Pump Lead Cement	10/29/2018	03:55:20	USER	590.00	6.00	13.29	Pumped 125 bbls. (418 sks.) of Elasticem mixed at 13.2 ppg., Yield: 1.68 ft3/sks, 8.06 gal/sks. Density was verified by pressurized scales.
Event	17	Pump Tail Cement	Pump Tail Cement	10/29/2018	04:13:50	COM5	829.00	8.00	13.00	Pumped 461 bbls. (1269 sks.) of Neocem mixed at 13.2 ppg. Yield: 2.04 ft3/sks, 9.75 gal/sks. Density was verified by pressurized scales.
Event	18	Shutdown	Shutdown	10/29/2018	05:16:14	COM5				Pumped all cement away and shutdown.
Event	19	Clean Lines	Clean Lines	10/29/2018	05:16:51	COM5				Washed pumps and lines until clean.
Event	20	Drop Top Plug	Drop Top Plug	10/29/2018	05:30:19	COM5				Dropped the top plug which was witnessed by the customer.
Event	21	Pump Displacement	Pump Displacement	10/29/2018	05:30:23	COM5	582.00	10.10	7.94	Pumped 394.7 bbls. of fresh water with MMCR in the first 20 bbls. Biocide was added throughout the rest of displacement.
Event	22	Bump Plug	Bump Plug	10/29/2018	06:11:19	COM5	1841.00	3.00	8.06	Bumped the plug 500 psi. over 1,800 psi. at 3 bpm. Final pressure was 2,500 psi. Held for 5 minutes. Pressure held. Circulated 5 bbls. of spacer to surface. Estimated TOT is 6,566', TOL 3,500', TOC 2,474'.
Event	23	Check Floats	Check Floats	10/29/2018	06:19:41	USER				Bled off pressure to check floats. Floats Held. Got 4.5 bbls. of fluid back to the truck.
Event	24	End Job	End Job	10/29/2018	06:21:56	COM5				Washed and blew down all pumps and lines until clean and dry.
Event	25	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/29/2018	06:25:00	USER				Halliburton cement crew held a pre rig down safety meeting and JSA.
Event	26	Rig-Down Equipment	Rig-Down Equipment	10/29/2018	06:30:00	USER				Rigged down all lines, hoses and equipment.
Event	27	Safety Meeting - Departing Location	Safety Meeting - Departing Location	10/29/2018	07:50:00	USER				Held a pre journey safety meeting with the crew.
Event	28	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	10/29/2018	08:00:00	USER				Started journey management with dispatch and left location.

3.0 Attachments

3.1 Case 1-Custom Results.png

