

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts Noble Benelli Fed LC22-760 Production with Safety

Sold To #: 345242	Ship To #: 3730116	Quote #:	Sales Order #: 0903879741
Customer: NOBLE ENERGY INC - EBUS		Customer Rep: Woody	
Well Name: BENELLI FEDERAL	Well #: LC22-760	API/UWI #: 05-123-42977-00	
Field: WILDCAT	City (SAP): RAYMER	County/Parish: WELD	State: COLORADO
Legal Description: NE NW-22-9N-59W-400FNL-1649FWL			
Contractor: NOBLE		Rig/Platform Name/Num: H&P 517	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB70026		Srv Supervisor: Nathaniel Moore	
Job			

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	11022ft		Job Depth TVD
Water Depth			Wk Ht Above Floor
Perforation Depth (MD)	From		To

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	1912	0	
Casing		5.5	4.778	20			0	11007		
Open Hole Section			8.5				2500	6409		
Open Hole Section			8.5				6409	11022		

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	HES
Float Shoe	5.5			11007	Bottom Plug	5.5	2	HES
Float Collar	5.5				SSR plug set	5.5		HES
Insert Float	5.5				Plug Container	5.5		HES
Stage Tool	5.5				Centralizers	5.5		HES

Fluid Data

Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	11.5 lb/gal Tuned Spacer III w/ Chems	Tuned Spacer III	40	bbl	11.5	3.78		5	
35.10 gal/bbl		FRESH WATER							
0.40 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)							
147.42 lbm/bbl		BARITE, BULK (100003681)							
0.40 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)							
0.50 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)							

HALLIBURTON

Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
2	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.79		5		
35.90 gal/bbl		FRESH WATER								
147.42 lbm/bbl		BARITE, BULK (100003681)								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
3	ElastiCem W/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		6	7.54	
7.54 Gal		FRESH WATER								
0.30 %		SCR-100 (100003749)								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
4	ElastiCem w/ SCBL	ELASTICEM (TM) SYSTEM	483	sack	13.2	1.6		6	7.69	
0.30 %		SCR-100 (100003749)								
7.69 Gal		FRESH WATER								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
5	NeoCem Tail	NeoCem TM	546	sack	13.2	2.04		6	9.75	
0.05 %		FE-2 (100001615)								
9.75 Gal		FRESH WATER								
0.04 %		SCR-100 (100003749)								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
6	Displacement	Displacement	242	bbl	8.33					
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint		

0 bbl spacer to surface

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	DS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	3/3/2017	00:00:00	USER				OL time 0300. Crew rolled over from 524
Event	2	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	3/3/2017	02:00:00	USER				Sign in with customer. Spot in and rig up equipment
Event	3	Start Job	Start Job	3/3/2017	04:59:59	COM1				Drop 1st bottom plug. Fill lines with 3 bbl water
Event	4	Test Lines	Test Lines	3/3/2017	05:04:27	COM1			4593.00	500 psi kickout test and 4500 psi pressure test
Event	5	Pump Spacer 1	Pump Spacer 1	3/3/2017	05:16:43	COM1	11.50	3.10	168.00	80 bbl tuned spacer 11.5 ppg. Surfactants in the first 40 bbl.
Event	6	Drop Bottom Plug	Drop Bottom Plug	3/3/2017	05:34:37	COM1				Drop 2nd bottom plug.
Event	7	Pump Lead Cement	Pump Lead Cement	3/3/2017	05:44:16	COM1	13.08	3.30	165.00	633 sks/ 177 bbl 13.2 ppg 1.6 ft3/sk 7.54 gal/sk. No CBL in 1st 42 bbl lead.
Event	8	Check Weight	Check weight	3/3/2017	05:54:36	COM1	13.16	8.00	906.00	13.2 ppg verified with pressurized scales
Event	9	Pump Tail Cement	Pump Tail Cement	3/3/2017	06:10:43	COM1	13.49	4.80	597.00	546 sks/198 bbl 13.2 ppg 2.04 ft3/sk 9.75 gal/sk
Event	10	Check Weight	Check weight	3/3/2017	06:13:37	COM1	13.22	8.00	1297.00	13.2 ppg
Event	11	Shutdown	Shutdown	3/3/2017	06:37:33	COM1				Wash pumps and lines/blow down top drive and iron with rig air.
Event	12	Drop Top Plug	Drop Top Plug	3/3/2017	06:49:24	COM1				Witnessed by customer
Event	13	Pump Displacement	Pump Displacement	3/3/2017	06:50:33	COM1	8.05	10.00	500.00	243 bbl water displacement with retarder in first 20 bbl.
Event	14	Bump Plug	Bump Plug	3/3/2017	07:21:04	COM1	8.17	0.00	2351.00	1850 psi final pump pressure. Pressured up to 2350 psi.
Event	15	Other	Other	3/3/2017	07:23:38	USER				Check floats. 3 bbl back, floats held
Event	16	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	3/3/2017	07:23:39	USER				
Event	17	Depart Location Safety Meeting	Depart Location Safety Meeting	3/3/2017	09:00:00	USER				