

## HALLIBURTON

## Cementing Job Summary

*The Road to Excellence Starts with Safety*

Sold To #: 345242	Ship To #: 3770118	Quote #:	Sales Order #: 0903948293
Customer: NOBLE ENERGY INC - EBUS		Customer Rep: Woodie	
Well Name: WELLS RANCH STATE	Well #: AA33-725	API/UWI #: 05-123-43917-00	
Field: WATTENBERG	City (SAP): GILL	County/Parish: WELD	State: COLORADO
Legal Description: SE SE-21-6N-63W-255FSL-1168FEL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 517	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB70026		Srv Supervisor: Jefferson Bone	
Job			

### 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	1912
Casing		5.5	4.778	20			0	16411	0	6650
Open Hole Section			8.5				1912	16421		

### 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 w/ Chems	Tuned Spacer III	40	bbl	11.5	3.78			
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)							

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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.79			
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/min	Total Mix Fluid Gal
3	ElastiCem	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		6	7.53

iCem® Service

(v. 4.3.44)

Created: Friday, April 07, 2017

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7.53 Gal		FRESH WATER							
0.90 %		SCR-100 (100003749)							
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	ElastiCem w/ SCBL	ELASTICEM (TM) SYSTEM	563	sack	13.2	1.604		6	7.69
0.50 %		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/min	Total Mix Fluid Gal
5	NeoCem NT1	NeoCem TM	1113	sack	13.2	2.04		6	9.75
9.75 Gal		FRESH WATER							
0.08 %		SCR-100 (100003749)							
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
6	Displacement	Displacement	362	bbl	8.33				
Plug Bumped?		Yes	Bump Pressure:			1900psi	Floats Held?		Yes
Comment 4bbls of spacer back to surface.									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	4/5/2017	18:00:00	USER				Call Out
Event	2	Arrive at Location from Service Center	Arrive at Location from Service Center	4/5/2017	00:30:00	USER				Arrive at Location. Held safety meeting prior to rigging up and spotting equipment.
Event	3	Start Job	Start Job	4/5/2017	02:34:44	COM4				Start Job.
Event	4	Test Lines	Test Lines	4/5/2017	02:37:45	COM4	4558.00	8.29	0.00	Test Lines to 4500psi
Event	5	Other	Other	4/5/2017	02:40:00	USER				Finished rigging up bulk equipment after Slide pulled off location.
Event	6	Drop Bottom Plug	Drop Bottom Plug	4/5/2017	02:58:00	USER				Drop Bottom Plug
Event	7	Pump Spacer 1	Pump Spacer 1	4/5/2017	02:59:34	COM4	153.00	11.36	2.00	Pumped 80bbls of 11.5ppg Tuned Spacer. First 40bbls with Surfactants.
Event	8	Drop Bottom Plug	Drop Bottom Plug	4/5/2017	03:23:00	USER				Dropped 2nd bottom plug
Event	9	Pump Lead Cement	Pump Lead Cement	4/5/2017	03:25:48	COM4	178.00	13.35	3.30	Pumped 150 sks(42bbls) of 13.2ppg 1.57y 7.53w Elasticem Cement
Event	10	Pump Lead Cement	Pump Lead Cement	4/5/2017	03:32:42	COM4	758.00	13.18	8.10	Pumped 563sks(160 bbls) of 13.2ppg 1.6y 7.69w Elasticem Cement.
Event	11	Pump Tail Cement	Pump Tail Cement	4/5/2017	03:50:28	COM4	859.00	13.12	7.90	Pumped 1113sks(404 bbls) of 13.2ppg 2.04y 9.75w of Neocem Cement.
Event	12	Clean Lines	Clean Lines	4/5/2017	04:37:37	COM4				Clean Lines
Event	13	Drop Top Plug	Drop Top Plug	4/5/2017	04:47:00	COM4				Drop Top Plug
Event	14	Pump Displacement	Pump Displacement	4/5/2017	04:47:35	COM4	26.00	7.19	0.00	Pumped 362 bbls of H2O. First 20bbls with MMCR the rest with biocide. 4bbls of Spacer back to surface.
Event	15	Bump Plug	Bump Plug	4/5/2017	05:29:44	COM4	2499.00			Bumped Plug at 1900psi pressured up to 2400psi
Event	16	Check Floats	Check Floats	4/5/2017	05:35:00	USER				Check Floats. 4.5 bbls Back

Event	17	End Job	End Job	4/5/2017	05:37:19	COM4	End Job
Event	18	Depart Location	Depart Location	4/5/2017	07:00:00	USER	Depart Location. Held Safety meeting prior to rigging down and spotting equipment.