

*The Road to Excellence Starts with Safety*

Sold To #: 345242	Ship To #: 3752243	Quote #:	Sales Order #: 0903626941
Customer: NOBLE ENERGY INC - EBUS		Customer Rep: Dave Nielson	
Well Name: RILEY	Well #: LD19-752	API/UWI #: 05-123-43480-00	
Field: WILDCAT	City (SAP): RAYMER	County/Parish: WELD	State: COLORADO
Legal Description: SW SE-19-9N-58W-380FSL-1607FEL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 524	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HB61755		Srvc Supervisor: Nathaniel Moore	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type		BHST	230 degF
Job depth MD	11064ft	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	1937	0	1937
Casing		5.5	4.778	20			0	11054	0	6587
Open Hole Section			8.5				1937	11064	0	6587

**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			11054	Bottom Plug	5.5	2	HES
Float Collar	5.5			11006	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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.78		5		
0.40 gal/bbl		<b>MUSOL A, 330 GAL TOTE - (790828)</b>								
35.10 gal/bbl		<b>FRESH WATER</b>								

0.40 gal/bbl		<b>DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)</b>							
147.42 lbm/bbl		<b>BARITE, BULK (100003681)</b>							
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	0	bbbl	11.5	3.79		5	
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 Lead w/o CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		5	7.54
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 Lead W/ CBL	ELASTICEM (TM) SYSTEM	525	sack	13.2	1.6		5	7.69
7.69 Gal		<b>FRESH WATER</b>							
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	EconoCem Tail	ECONOCEM (TM) SYSTEM	675	sack	13.5	1.68		5	7.99
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	244	bbbl	8.33				
Cement Left In Pipe	<b>Amount</b>	45 ft			<b>Reason</b>			<b>Shoe Joint</b>	

No spacer or cement to surface

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	10/30/2016	03:30:00	USER	OL 0930. Verify equipment and material
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	10/30/2016	07:00:00	USER	Journey management with crew
Event	3	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	10/30/2016	09:30:00	USER	Sign in with safety officer. Spot equipment and rig up. Had to blow 3 fruehaufs into silos before job
Event	4	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/30/2016	13:45:00	USER	Discuss job procedure with HES and rig Crew
Event	5	Start Job	Start Job	10/30/2016	14:04:53	COM1	Drop 1st bottom plug. Fill lines 3 bbl water
Event	6	Test Lines	Test Lines	10/30/2016	14:09:12	COM1	Pressure test against manual iBOP to 4500 psi with 500 psi kick-out test
Event	7	Check Weight	Check weight Spacer	10/30/2016	14:16:01	COM1	11.5 ppg
Event	8	Pump Spacer 1	Pump Spacer 1	10/30/2016	14:17:29	COM1	Pumped 40 bbl of planned 80 bbl total of tuned spacer with surfactants. 11.5 ppg 3.79 ft3/sk 24.4 gal/sk. Pod blew down early.
Event	9	Shutdown	Shutdown	10/30/2016	14:25:05	USER	Called coordinator and engineer to find out why 40 bbl spacer was missing and to decide on course of action. Noble and engineers decided to go ahead with job.
Event	10	Drop Bottom Plug	Drop Bottom Plug	10/30/2016	14:58:51	COM1	Drop 2nd bottom plug
Event	11	Check Weight	Check weight Lead	10/30/2016	15:02:38	COM1	13.2 ppg
Event	12	Pump Lead Cement	Pump Lead Cement	10/30/2016	15:04:08	COM1	675 sks/192 bbl lead cement 13.2 ppg 1.6 ft3/sk 7.69 gal/sk. No CBL in first 150 sks lead.
Event	13	Check Weight	Check weight Lead	10/30/2016	15:07:49	COM1	13.2 ppg
Event	14	Pump Tail Cement	Pump Tail Cement	10/30/2016	15:32:17	COM1	675 sks/202 bbl 13.5 ppg 1.68 ft3/sk 7.99 gal/sk
Event	15	Check Weight	Check weight Tail	10/30/2016	15:33:49	COM1	13.5 ppg
Event	16	Shutdown	Shutdown	10/30/2016	16:04:02	COM1	Wash pumps and lines. Blow down with rig air.
Event	17	Drop Top Plug	Drop Top Plug	10/30/2016	16:17:49	COM1	Witnessed by company rep
Event	18	Pump Displacement	Pump Displacement	10/30/2016	16:17:55	COM1	244 bbl water displacement. No spacer or cement to surface

Event	19	Bump Plug	Bump Plug	10/30/2016	16:51:56	COM1	1900 psi final pump pressure. Pressured up to 2400 psi. Held for 5 minutes and gained 50 psi.
Event	20	Other	Check floats	10/30/2016	16:56:48	COM1	3 bbl back. Floats held.
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/30/2016	17:00:00	USER	
Event	22	End Job	End Job	10/30/2016	17:10:30	COM1	
Event	23	Depart Location Safety Meeting	Depart Location Safety Meeting	10/31/2016	19:00:00	USER	