



Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3754883		Quote #:		Sales Order #: 0903637124					
Customer: NOBLE ENERGY INC - EBUS				Customer Rep: JW Irwin							
Well Name: RILEY			Well #: LD19-745			API/UWI #: 05-123-43518-00					
Field: WILDCAT		City (SAP): RAYMER		County/Parish: WELD		State: COLORADO					
Legal Description: SW SE-19-9N-58W-380FSL-1570FEL											
Contractor: H & P DRLG				Rig/Platform Name/Num: H & P 524							
Job BOM: 7523											
Well Type: DIRECTIONAL OIL											
Sales Person: HALAMERICA/HB61755				Srv Supervisor: Bradley Hinkle							
Job											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type					BHST		230 degF				
Job depth MD		10832.03ft			Job Depth TVD		5900ft				
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	1918	0	0	
Casing		5.5	4.778	20			0	10832.03	0	0	
Open Hole Section			8.5				1918	10872	0	0	
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	1	HES	10832.03	Bottom Plug	5.5	2	HES			
Float Collar	5.5	1	HES	10784.61	SSR plug set	5.5		HFS			
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	Spacer 1	Tuned Spacer III			40	bbl	11.5	3.78		5	

HALLIBURTON

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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	Spacer 2	Tuned Spacer III	40	bbl	11.5	3.79		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	
3	Elasticem Lead w/o CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		6	7.54	
7.53 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	
4	ElastiCem Lead W/ CBL	ELASTICEM (TM) SYSTEM	490	sack	13.2	1.6	7.69	8		
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	EconoCem Tail	ECONOCEM (TM) SYSTEM	675	sack	13.5	1.68	7.99	8		
7.99 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	
6	Displacement	Fresh Water	240	bbl	8.33			10		
Cement Left In Pipe		Amount	47.42 ft		Reason			Shoe Joint		
Mix Water:		pH ##	Mix Water Chloride:## ppm		Mix Water Temperature:## °F °C					
Cement Temperature:## °F °C		Plug Displaced by:## lb/gal kg/m3 XXXX			Disp. Temperature:## °F °C					
Plug Bumped? Yes/No		Bump Pressure:#### psi MPa			Floats Held? Yes/No					
Cement Returns:## bbl m3		Returns Density:## lb/gal kg/m3			Returns Temperature:## °F °C					
Comment 2 bbls of Tuned Spacer back to surface. Top of tail cement at 6014 feet. Top of lead cement at 1628 feet.										

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	11/3/2016	14:00:00	USER	Crew called for an on location of 2000. Crew was Bradley Hinkle, Luke Kosakewich, William Mix and Roger Contin.
Event	2	Depart Shop for Location	Depart Shop for Location	11/3/2016	17:00:00	USER	Pre-journey safety meeting.
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	11/4/2016	19:45:00	USER	Sign in and check-in with safety personnel. Perform a site assessment and pre rig-up safety meeting. Approximately 1500 feet of casing to run.
Event	4	Other	Check-in With Customer	11/4/2016	19:50:00	USER	Check in and get numbers. TD: 10872. TP: 10832.03. FC: 10784.61; 5.5" Casing in a 8.5" OH. 20% excess on lead and 5% excess on tail. Surface casing set at 1918; 9.625" 36#.
Event	5	Safety Meeting	Safety Meeting	11/4/2016	22:30:00	USER	Pre-job safety meeting with all personnel on location.
Event	6	Start Job	Start Job	11/4/2016	22:45:29	COM5	
Event	7	Test Lines	Test Lines	11/4/2016	22:49:29	COM5	Pressure test lines to manual valve in CRT with at 500 PSI EKO test.
Event	8	Drop Bottom Plug	Drop Bottom Plug	11/4/2016	23:00:00	USER	Bottom plug dropped directly into casing.
Event	9	Pump Spacer 1	Pump Spacer 1	11/4/2016	23:02:10	COM5	Pump 40 bbls Tuned Spacer with surfactants added mixed at 11.5 ppg. Density verified with pressurized scales.
Event	10	Pump Spacer 2	Pump Spacer 2	11/4/2016	23:11:55	COM5	Pump 40 bbls Tuned Spacer mixed at 11.5 ppg. Density verified by pressurized scales.
Event	11	Drop Bottom Plug	Drop Bottom Plug	11/4/2016	23:21:54	COM5	Bottom plug dropped directly into casing.
Event	12	Pump Lead Cement	Pump Lead Cement	11/4/2016	23:23:45	COM5	Pump 42 bbls (150 sacks) ElastiCem without Super CBL mixed at 13.2 ppg. Density verified by pressurized scales.
Event	13	Pump Lead Cement	Pump Lead Cement	11/4/2016	23:31:27	COM5	Pump 139 bbls (490 sacks) ElastiCem with Super CBL mixed at 13.2 ppg. Density verified by pressurized scales.
Event	14	Check Weight	Check weight	11/4/2016	23:35:29	COM5	Cement weighed at 13.5 ppg.
Event	15	Check Weight	Check weight	11/4/2016	23:38:53	COM5	Cement weighed at 13.55 ppg.
Event	16	Check Weight	Check weight	11/4/2016	00:12:22	COM5	Cement weighed at 13.6 ppg.

Event	17	Shutdown	Shutdown	11/4/2016	00:19:02	COM5	
Event	18	Clean Lines	Clean Lines	11/4/2016	00:21:34	COM5	Rig blew down lines. Then HES washed pumps and lines until clean.
Event	19	Drop Top Plug	Drop Top Plug	11/4/2016	00:33:36	COM5	Top plug loaded directly into casing.
Event	20	Pump Displacement	Pump Displacement	11/4/2016	00:34:06	COM5	Pump 240 bbls fresh water. MMCR added in first 20 bbls. Good returns throughout.
Event	21	Bump Plug	Bump Plug	11/4/2016	00:58:45	USER	Bump plug at 2410 PSI and truck kicked out. Pressured back up onto plug and kicked out at 3280 PSI. Held for 5 minutes.
Event	22	Check Floats	Check Floats	11/4/2016	01:07:56	USER	Floats held. 4 bbls back.
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/4/2016	01:15:00	USER	Pre rig-down safety meeting.
Event	24	End Job	End Job	11/4/2016	01:29:33	COM5	
Event	25	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	11/4/2016	03:00:00	USER	Pre-journey safety meeting.