

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3752112	Quote #:	Sales Order #: 0903621707
Customer: NOBLE ENERGY INC - EBUS		Customer Rep: Justin Fields	
Well Name: RILEY	Well #: LD19-738	API/UWI #: 05-123-43481-00	
Field: WILDCAT	City (SAP): RAYMER	County/Parish: WELD	State: COLORADO
Legal Description: SW SE-19-9N-58W-380FSL-1532FEL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 524	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB61755		Srcv Supervisor: Vaughn Oteri	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type		BHST	230 degF
Job depth MD	10938ft	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	1945	0	1945
Casing		5.5	4.778	20			0	10938	0	5889
Open Hole Section			8.5				1945	10950	0	5889

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			10938	Bottom Plug	5.5	1	HES
Float Collar	5.5			10891	SSR plug set	5.5		
Insert Float	5.5				Plug Container	5.5		
Stage Tool	5.5				Centralizers	5.5		

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		

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	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	7.53	
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	480	sack	13.2	1.6		5	7.68	
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	240	bbbl	8.33					
Cement Left In Pipe		Amount	45 ft		Reason			Shoe Joint		
Comment 20bbbl 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	Comments
Event	1	Call Out	Call Out	10/26/2016	20:00:00	USER	Call out from ARC hub
Event	2	Arrive At Loc	Arrive At Loc	10/26/2016	00:45:00	USER	Requested on location at 0200 Arrived on location at 0045 met with company rep to discuss job process and concerns advised they would be on bottom around 0300
Event	3	Other	Other	10/26/2016	00:46:00	USER	TD-10950 TP10938 FC-10891 SURF-1945 MUD-9.1 Casing 5.5 20# OH-8.5
Event	4	Start Job	Start Job	10/26/2016	04:48:26	COM4	Held pre-job safety meeting with all hands on location to discuss job process and hazards
Event	5	Test Lines	Test Lines	10/26/2016	04:53:45	COM4	Pressure tested pumps and lines with fresh water 4680psi
Event	6	Drop Bottom Plug	Drop Bottom Plug	10/26/2016	04:55:59	COM4	Released bottom plug witnessed by company rep
Event	7	Pump Spacer 1	Pump Spacer 1	10/26/2016	04:58:10	COM4	Mixed 40bbl of 11.5ppg Tuned spacer III with surfactants at 6.0bpm 440psi - Mixed 40bbl of 11.5ppg Tuned spacer III w/o surfactants at 6.0bpm 440psi
Event	8	Drop Bottom Plug	Drop Bottom Plug	10/26/2016	05:18:42	COM4	Shut down so that rig could sting out of casing and released plug witnessed by company rep
Event	9	Pump Lead Cement	Pump Lead Cement	10/26/2016	05:21:27	COM4	Mixed 630sks or 179bbl of 13.2ppg Y-1.6 G/sk-7.68 ElastiCem at 3.5bpm 600psi
Event	10	Other	Other	10/26/2016	05:28:26	USER	Slowed rate due to poor bulk discharge
Event	11	Check Weight	Check weight	10/26/2016	05:35:55	COM4	Confirm weight on scales
Event	12	Other	Other	10/26/2016	05:38:50	USER	Slowed rate due to poor bulk discharge
Event	13	Other	Other	10/26/2016	05:43:15	USER	Slowed rate due to poor bulk discharge
Event	14	Other	Other	10/26/2016	05:46:36	USER	Slowed rate due to poor bulk discharge
Event	15	Other	Other	10/26/2016	05:49:39	USER	Slowed rate due to poor bulk discharge
Event	16	Other	Other	10/26/2016	05:57:27	USER	Slowed rate due to poor bulk discharge
Event	17	Pump Tail Cement	Pump Tail Cement	10/26/2016	06:04:56	COM4	Mixed 675sks or 202bbl of 13.5ppg Y-1.68 G/sk-7.99 EconoCem at 4.0bpm 331psi
Event	18	Other	Other	10/26/2016	06:06:32	USER	Slowed rate due to poor bulk discharge
Event	19	Other	Other	10/26/2016	06:09:10	USER	Slowed rate due to poor bulk discharge

Event	20	Shutdown	Shutdown	10/26/2016	06:57:25	COM4	Shut down so that rig could sting out of casing and blow back with air
Event	21	Clean Lines	Clean Lines	10/26/2016	06:57:30	COM4	Washed pumps and lines with fresh water
Event	22	Drop Top Plug	Drop Top Plug	10/26/2016	06:57:34	COM4	Released plug witnessed by company rep
Event	23	Pump Displacement	Pump Displacement	10/26/2016	07:09:45	COM4	Pumped 240bbl of fresh water to displace cement
Event	24	Bump Plug	Bump Plug	10/26/2016	07:37:08	COM4	Bumped plug 500psi over final pump pressure
Event	25	Check Floats	Check Floats	10/26/2016	07:42:47	USER	Released pressure back to pump truck to check floats 3.5bbl back floats held good
Event	26	End Job	End Job	10/26/2016	07:45:26	COM4	20bbl of spacer back to surface