

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3752082	Quote #:	Sales Order #: 0903616423							
Customer: NOBLE ENERGY INC - EBUS		Customer Rep: JUSTIN FIELDS								
Well Name: RILEY	Well #: LD19-722	API/UWI #: 05-123-43479-00								
Field: WILDCAT	City (SAP): RAYMER	County/Parish: WELD	State: COLORADO							
Legal Description: SW SE-19-9N-58W-380FSL-1495FEL										
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 524								
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB61755		Srv Supervisor: Jesse Slaughter								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST 230 degF									
Job depth MD	10650ft	Job Depth TVD	5802ft							
Water Depth		Wk Ht Above Floor	4ft							
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	1920	0	0
Casing		5.5	4.778	20			0	10650	0	0
Open Hole Section			8.5				1920	10665	0	5802
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			10650		Top Plug	5.5	1	HES	
Float Shoe	5.5					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 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				
0.40 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								
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)								

last updated on 10/22/2016 7:08:11 PM

Page 1 of 2

HALLIBURTON

Cementing Job Summary

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		5	
147.42 lbm/bbl		BARITE, BULK (100003681)							
35.90 gal/bbl		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
3	Elasticem Lead w/o CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		7	7.53
0.35 %		SCR-100 (100003749)							
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	495	sack	13.2	1.6		7	7.68
7.68 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	630	sack	13.5	1.68		7	7.99
8 Gal		FRESH WATER							
0.25 %		HR-5, 50 LB SK (100005050)							
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	234.3	bbl	8.33			10	
Cement Left In Pipe			Amount	44 ft			Reason		Shoe Joint
Comment									

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	10/22/2016	09:00:00	USER	
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/22/2016	11:50:00	USER	WITH ALL HES PERSONNEL
Event	3	Crew Leave Yard	Crew Leave Yard	10/22/2016	12:00:00	USER	
Event	4	Arrive At Loc	Arrive At Loc	10/22/2016	14:30:00	USER	RIG WAS LANDING CASING UPON HES ARRIVAL
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	10/22/2016	14:40:00	USER	WITH ALL HES PERSONNEL
Event	6	Other	Spot Equipment	10/22/2016	14:50:00	USER	2 1600 FIELD BINS, 1 660 BULK TRUCK, 1 ELITE
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	10/22/2016	15:00:00	USER	WITH ALL HES PERSONNEL
Event	8	Rig-Up Equipment	Rig-Up Equipment	10/22/2016	15:05:00	USER	
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/22/2016	15:30:00	USER	WITH ALL PERSONNEL
Event	10	Start Job	Start Job	10/22/2016	15:45:00	USER	TD 10665 FT, TP 10650 FT, SHOE 46.91 FT, CSG 5 1/5 IN 20 LB/FT, HOLE 8 1/2 IN, MUD WT 10.2 PPG, TVD 5802 FT, PREVIOUS CSG 9 5/8 IN 36 LB/FT SET AT 1920 FT.
Event	11	Prime Pumps	Prime Pumps	10/22/2016	15:47:00	USER	FRESH WATER
Event	12	Drop Bottom Plug	Drop Bottom Plug	10/22/2016	15:48:07	USER	PLUG LAUNCHED
Event	13	Test Lines	Test Lines	10/22/2016	15:50:35	USER	TESTED LINES TO 4362 PSI PRESSURE HOLDING
Event	14	Pump Spacer	Pump Tuned Spacer	10/22/2016	16:00:13	USER	WITH 16 GAL MUSOL A, 16 GAL DUAL SPACER B AND 20 GAL D-AIR. CALCULATED TOP OF SPACER AT SURFACE.
Event	15	Shutdown	Shutdown	10/22/2016	16:19:47	USER	
Event	16	Drop Bottom Plug	Drop Bottom Plug	10/22/2016	16:21:21	USER	PLUG LAUNCHED
Event	17	Pump Lead Cement	Pump Lead Cement	10/22/2016	16:22:56	USER	150 SKS AT 13.2 PPG, 1.57 FT ³ /SK, 7.53 GAL/SK. WITH OUT SUPER CBL. CALCULATED TOP OF LEAD AT 1621 FT.

Event	18	Pump Lead Cement	Pump Lead CBL Cement	10/22/2016	16:30:14	USER	495 SKS AT 13.2 PPG, 1.6 FT3/SK, 7.68 GAL/SK. WITH SUPER CBL. CALCULATED TOP OF LEAD AT 2596 FT.
Event	19	Pump Tail Cement	Pump Tail Cement	10/22/2016	16:54:05	USER	630 SKS AT 13.5 PPG, 1.68 FT3/SK, 7.99 GAL/SK. CALCULATED TOP OF TAIL AT 6054 FT.
Event	20	Shutdown	Shutdown	10/22/2016	17:22:59	USER	
Event	21	Clean Lines	Clean Lines	10/22/2016	17:27:41	USER	CLEANED PUMPS AND LINES TO RIG TANK
Event	22	Drop Top Plug	Drop Top Plug	10/22/2016	17:31:43	USER	PLUG LAUNCHED
Event	23	Pump Displacement	Pump Displacement	10/22/2016	17:32:15	USER	FRESH WATER WITH 10 GAL MMCR.
Event	24	Slow Rate	Slow Rate	10/22/2016	17:54:40	USER	SLOWED RATE 10 BBLs PRIOR TO CALCULATED DISPLACEMENT
Event	25	Bump Plug	Bump Plug	10/22/2016	17:59:11	COM4	
Event	26	Check Floats	Check Floats	10/23/2016	18:03:48	USER	FLOATS HOLDING HES RETURNED 3 BBLs H2O TO PUMP.
Event	27	End Job	End Job	10/23/2016	18:05:53	COM4	PIPE WAS ROTATED DURING JOB, GOOD CIRCULATION THOROUGHOUT JOB.
Event	28	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/23/2016	18:30:00	USER	WITH ALL HES PERSONNEL
Event	29	Rig-Down Equipment	Rig-Down Equipment	10/23/2016	18:40:00	USER	
Event	30	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/23/2016	19:50:00	USER	WITH ALL HES PERSONNEL
Event	31	Crew Leave Location	Crew Leave Location	10/23/2016	20:00:00	USER	
Event	32	Comment	Comment	10/23/2016	20:01:00	USER	THANK YOU FOR USING HALLIBURTON CEMENT DEPARTMENT. JESSE SLAUGHTER AND CREW.