

The Road to Excellence Starts with Safety

Sold To #: 345242	Ship To #: 3684188	Quote #:	Sales Order #: 0903199002
Customer: NOBLE ENERGY INC - EBUS		Customer Rep: Justin Fields	
Well Name: WELLS RANCH		Well #: BB01-675	API/UWI #: 05-123-41989-00
Field: WATTENBERG	City (SAP): KERSEY	County/Parish: WELD	State: COLORADO
Legal Description: NW NW-5-5N-62W-826FNL-517FWL			
Contractor: H & P DRLG		Rig/Platform Name/Num: H & P 321	
Job BOM: 392189			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HB61755		Srvc Supervisor: Vaughn Oteri	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST 230 degF
Job depth MD	7000ft		Job Depth TVD
Water Depth			Wk Ht Above Floor 4'
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	1877	0	1877
Casing		5.5	4.778	20			0	16358	0	6551
Open Hole Section			8.5				1877	16379	1877	6551

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	Pkrs +
Float Shoe	5.5			16358'	Bottom Plug	5.5		HES
Float Collar	5.5				SSR plug set	5.5		HES
Insert Float	5.5				Plug Container	5.5	1	HES
Stage Tool	5.5		Pkrs +	7000'	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	12.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	12.5	3.21				
34.60 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	
2	12.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	12.5	3.22				
34.60 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 B1	ELASTICEM (TM) SYSTEM	610	sack	13.6	1.88		5	8.57	
8.57 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	Displacement	Displacement	154.7	bbl	8.33					
Cement Left In Pipe		Amount	0'		Reason			Shoe Joint		
Comment: Returned 1 bbl Spacer to Surface										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	PS Pump Rate (bbl/min)	Comments
Event	1	Depart Yard Safety Meeting	Depart Yard Safety Meeting	3/24/2016	21:00:00	USER				Journey Management meeting with HES Crew Prior to Departing Yard.
Event	2	Arrive At Loc	Arrive At Loc	3/24/2016	23:00:00	USER				Arrive on Location @ 2300 HRS 3-24-16 (Requested O/L @ 0100 3-25-16.) Rig Running Casing.
Event	3	Other	Other	3/24/2016	23:00:01	USER				9 5/8" Surface Casing Set @ 1877', 8 1/2" Open Hole - TD 16379', 5 1/2" 23 ppg Csg. Set @ 16358'. Packers Plus DV Tool Set @ 7000'.
Event	4	Other	Other	3/25/2016	02:00:00	USER				Casing on Bottom, Rig begins process of setting packers, and opening DV Tool.
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	3/25/2016	02:05:00	USER				Safety Meeting with HES Crew, Prior to Spotting Trucks and Rigging-Up
Event	6	Safety Meeting - Pre Job	Safety Meeting - Pre Job	3/25/2016	06:20:00	USER				Safety Meeting with HES Crew and All 3rd Party Employees
Event	7	Start Job	Start Job	3/25/2016	06:42:51	COM4				Water Provided by Rig, Tested as Follows: PH - 8, Chlorides - 0, Sulfates <200. Temp. - 65 deg.
Event	8	Load Top Plug	Load Top Plug	3/25/2016	06:42:52	USER	-1.00	8.55	0.00	Top Plug Provided by Packers Plus. Pre-Loaded in Plug Container (Witnessed by Customer Rep. and Packers Plus Rep.)
Event	9	Test Lines	Test Lines	3/25/2016	06:50:58	COM4	4642.00	8.43	0.00	Pressure Test Lines to 4642 PSI, Monitor for Leaks
Event	10	Pump Spacer 1	Pump Tuned Spacer	3/25/2016	07:09:36	COM4	193.00	11.47	3.40	Pump 80 bbls Tuned Spacer for @ 12.5 lb/gal (First 40 with Surfactant for OBM)
Event	11	Pump Cement	Pump Cement	3/25/2016	07:33:44	COM4	46.00	12.89	2.70	Mix and Pump 610 sks (204 bbls) ElastiCem Cement @ 13.6 lb/gal (Density Verified by Pressurized Scales)
Event	12	Shutdown	Shutdown	3/25/2016	08:05:20	COM4	35.00	10.14	0.00	Shutdown, Prepare to Drop Plug and Clean Lines
Event	13	Clean Lines	Clean Lines	3/25/2016	08:06:47	COM4	14.00	0.25	0.00	Use Rig-Air to Clear Standpipe of any residual cement. Wash Pumps and lines, to rig-provided tank.

Event	14	Drop Top Plug	Drop Top Plug	3/25/2016	08:10:57	USER	12.00	10.53	2.30	Drop Closing Plug (Witnessed by Customer Rep. and Packers Plus Rep.)
Event	15	Pump Displacement	Pump Displacement	3/25/2016	08:15:14	COM4	47.00	8.46	2.70	Pump 154.7 bbls Fresh Water Displacement (5 Gals. MMCR in first 10 bbls)
Event	16	Spacer Returns to Surface	Spacer Returns to Surface	3/25/2016	08:46:00	USER	1782.00	8.34	4.60	Approx. 1 BBL Spacer Returns to Surface
Event	17	Bump Plug	Bump Plug	3/25/2016	08:48:58	COM4	2414.00	8.36	0.00	Bump Plug @ 2414 PSI (Final Lift Pressure 1820 PSI)
Event	18	Pressure Up Well	Pressure Up Well	3/25/2016	08:51:01	COM4	4141.00	8.39	0.00	Pressure-Up Well to 4143 PSI, Hold for 5 Mins.
Event	19	Other	Other	3/25/2016	08:56:17	COM4	4218.00	8.35	0.00	End 5 Min. Test (4219 PSI)
Event	20	Release Casing Pressure	Release Casing Pressure	3/25/2016	08:57:27	USER	4061.00	8.33	0.00	Bleed Pressure Back to Truck (2.5 bbls returned to truck. Returns stop to truck, indicating DV Tool is closed)
Event	21	Pressure Up Well	Casing Test (Start)	3/25/2016	09:01:34	COM4	3074.00	8.38	0.00	Start Casing Test (3080 PSI)
Event	22	Other	Casing Test (End)	3/25/2016	09:06:55	COM4				End Casing Test (3134 PSI)
Event	23	Release Casing Pressure	Release Casing Pressure	3/25/2016	09:07:50	USER	113.00	8.29	0.00	Bleed Pressure Back to Truck. Returned 2 bbls to truck.
Event	24	End Job	End Job	3/25/2016	09:08:26	COM4				Top of Spacer - Surface, Top of Cement - +/- 1671'
Event	25	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	3/25/2016	09:30:00	USER				Safety Meeting with HES Crew to discuss Hazards Associated with Rigging-Down.
Event	26	Safety Meeting - Departing Location	Safety Meeting - Departing Location	3/25/2016	10:30:00	USER				Journey Management Meeting with HES Crew Prior to Departing Location.