

HALLIBURTON

*Cementing Job Summary**The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 345242		<b>Ship To #:</b> 3688560		<b>Quote #:</b>		<b>Sales Order #:</b> 0903115202				
<b>Customer:</b> NOBLE ENERGY INC - EBUS				<b>Customer Rep:</b> .						
<b>Well Name:</b> WELLS RANCH		<b>Well #:</b> AF05-645		<b>API/UWI #:</b> 05-123-42129-00						
<b>Field:</b> WATTENBERG	<b>City (SAP):</b> KERSEY	<b>County/Parish:</b> WELD		<b>State:</b> COLORADO						
<b>Legal Description:</b> SW NW-5-5N-62W-2146FNL-604FWL										
<b>Contractor:</b> H & P DRLG				<b>Rig/Platform Name/Num:</b> H & P 321						
<b>Job BOM:</b> 7521										
<b>Well Type:</b> HORIZONTAL OIL										
<b>Sales Person:</b> HALAMERICA/HB61755				<b>Srv Supervisor:</b> Nathaniel Moore						
<b>Job</b>										
<b>Formation Name</b>										
<b>Formation Depth (MD)</b>		<b>Top</b>		<b>Bottom</b>						
<b>Form Type</b>				<b>BHST</b>						
<b>Job depth MD</b>		1889ft		<b>Job Depth TVD</b>						
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>						
<b>Perforation Depth (MD)</b>		<b>From</b>		<b>To</b>						
<b>Well Data</b>										
<b>Description</b>	<b>New / Used</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>	<b>Top MD ft</b>	<b>Bottom MD ft</b>	<b>Top TVD ft</b>	<b>Bottom TVD ft</b>
Casing		9.625	8.921	36			0	1889	0	1800
Open Hole Section			13.5				0	1889	0	1800
<b>Tools and Accessories</b>										
<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	<b>Depth ft</b>		<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	
Guide Shoe	9.625			1889		Top Plug	9.625		HES	
Float Shoe	9.625					Bottom Plug	9.625		HES	
Float Collar	9.625					SSR plug set	9.625		HES	
Insert Float	9.625					Plug Container	9.625		HES	
Stage Tool	9.625					Centralizers	9.625		HES	
<b>Fluid Data</b>										
<b>Stage/Plug #: 1</b>										
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>		<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>
1	Fresh Water W/ Red Dye	Fresh Water W/ Red Dye		50	bbl	8.33				
<b>Fluid #</b>										
<b>Stage Type</b>										
<b>Fluid Name</b>										
<b>Qty</b>										
<b>Qty UoM</b>										
<b>Mixing Density lbm/gal</b>										
<b>Yield ft3/sack</b>										
<b>Mix Fluid Gal</b>										
<b>Rate bbl/min</b>										
<b>Total Mix Fluid Gal</b>										
2	SwiftCem	SWIFTCM (TM) SYSTEM		560	sack	13.5	1.741			9.19
9.19 Gal		FRESH WATER								

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Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	SwiftCem	SWIFTCM (TM) SYSTEM	75	sack	14.2	1.533			7.63
7.63 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Oil Based Mud Displacement	Oil Based Mud Displacement	135.9	bbl	9				
Cement Left In Pipe		Amount	42 ft				Reason		Shoe Joint
Mix Water: pH ##		Mix Water: ## ppm				Mix Water Temperature: ## °F °C			
		Chloride:							
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									

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	2/11/2016	00:00:00	USER				
Event	2	Other	Verify equipment/material	2/11/2016	02:00:00	USER				
Event	3	Depart Yard Safety Meeting	Depart Yard Safety Meeting	2/11/2016	03:00:00	USER				
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/11/2016	05:00:00	USER				
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/11/2016	05:20:00	USER				
Event	6	Other	Meet with custmer rep	2/11/2016	05:30:00	USER				TD 1882' 13.5" open hole. TP 1842' 9.625" 36# J-55 casing. 42' Shoe joint. WBM 8.33 ppg. OBM 10 ppg. Water tested: PH 7 Chlorides <36 Iron 0 Sulfates <200.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/11/2016	07:45:00	USER	-46.00	0.27	0.00	
Event	8	Start Job	Start Job	2/11/2016	08:08:24	COM1	-15.00	8.79	0.00	
Event	9	Other	Fill lines	2/11/2016	08:09:02	COM1	-10.00	8.36	1.10	3 bbl water
Event	10	Test Lines	Test Lines	2/11/2016	08:11:31	COM1	5.00	8.94	0.00	
Event	11	Pump Spacer 1	Pump Spacer 50 bbl water	2/11/2016	08:15:02	COM1	-3.00	8.87	0.00	Red dye in last 10 bbl
Event	12	Check Weight	Check weight Lead	2/11/2016	08:23:36	COM1	74.00	8.41	4.20	13.5 ppg
Event	13	Pump Lead Cement	Pump Lead Cement 173 bbl	2/11/2016	08:32:46	COM1	104.00	13.00	4.20	560 sks 13.5 ppg 1.741 ft3/sk 9.19 gal/sk
Event	14	Pump Tail Cement	Pump Tail Cement 20 bbl	2/11/2016	09:09:15	COM1	117.00	13.68	5.80	75 sks 14.2 ppg 1.55 ft3/sk 7.63 gal/s
Event	15	Check Weight	Check weight Tail	2/11/2016	09:10:06	COM1	106.00	13.89	5.80	14.1 ppg

Event	16	Shutdown	Shutdown	2/11/2016	09:15:11	COM1	-52.00	13.62	0.00	
Event	17	Drop Top Plug	Drop Top Plug	2/11/2016	09:21:16	COM1	-71.00	-0.49	0.00	Witnessed by customer
Event	18	Pump Displacement	Pump Displacement	2/11/2016	09:21:27	COM1	-71.00	-0.50	0.00	141 bbl OBM
Event	19	Other	Cement to surface	2/11/2016	09:39:00	USER	445.00	10.25	6.90	110 bbl into displacement started to see cement back. 40 bbl cement to surface.
Event	20	Bump Plug	Bump Plug	2/11/2016	09:49:08	COM1	1162.00	10.13	0.00	600 psi final circulating pressure. Pressured up to 1150.
Event	21	Pressure Up Well	Pressure Up Well	2/11/2016	09:49:40	COM1	1154.00	10.12	0.00	Started pressure test at 1150 psi. Held for 15 minutes and bled off. Final pressure was 1015 psi. Lost 135 psi.
Event	22	Other	Check floats	2/11/2016	10:06:00	USER	1012.00	9.90	0.00	1 bbl back. Floats held
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/11/2016	10:10:00	USER	-58.00	9.86	0.00	
Event	24	Rig-Down Equipment	Rig-Down Equipment	2/11/2016	10:20:00	USER	-57.00	9.81	0.00	
Event	25	Depart Location Safety Meeting	Depart Location Safety Meeting	2/11/2016	12:00:00	USER				