

## HALLIBURTON

## Cementing Job Summary

*The Road to Excellence Starts with Safety*

Sold To #: 345242		Ship To #: 3697128		Quote #:		Sales Order #: 0903212247					
Customer: NOBLE ENERGY INC - EBUS				Customer Rep: DEREK							
Well Name: WELLS RANCH			Well #: AA22-631		API/UWI #: 05-123-42270-00						
Field: WATTENBERG		City (SAP): GILL		County/Parish: WELD			State: COLORADO				
Legal Description: SW SW-22-6N-63W-1045FSL-81FWL											
Contractor: H & P DRLG					Rig/Platform Name/Num: H & P 321						
Job BOM: 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HB61755					Srvc Supervisor: Joseph Scileppi						
Job											
Formation Name											
Formation Depth (MD)		Top 0			Bottom		1890				
Form Type											
BHST											
Job depth MD		1881ft			Job Depth TVD		1881				
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	1881	0	1881	
Open Hole Section			13.5				0	1890	0	1890	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625			1881		Top Plug	9.625	1	HES		
Float Shoe	9.625					Bottom Plug	9.625				
Float Collar	9.625					SSR plug set	9.625				
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers	9.625				
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	Fresh Water W/ Red Dye	Fresh Water W/ Red Dye			50	bbl	8.33				
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	SwiftCem	SWIFTCEM (TM) SYSTEM			560	sack	13.5	1.74			9.2
9.20 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	SWIFTCEM (TM) SYSTEM	75	sack	14.2	1.53			7.65
7.65 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	141.9	bbl	9				
<b>Cement Left in Pipe</b>	<b>Amount</b>	45 ft			<b>Reason</b>			<b>Shoe Joint</b>	
<b>Mix Water: pH ##</b>	<b>Mix Water Chloride: ## ppm</b>			<b>Mix Water Temperature: ## °F °C</b>					
<b>Cement Temperature: ## °F °C</b>	<b>Plug Displaced by: ## lb/gal kg/m3 XXXX</b>			<b>Disp. Temperature: ## °F °C</b>					
<b>Plug Bumped? Yes/No</b>	<b>Bump Pressure: ##### psi MPa</b>			<b>Floats Held? Yes/No</b>					
<b>Cement Returns: ## bbl m3</b>	<b>Returns Density: ## lb/gal kg/m3</b>			<b>Returns Temperature: ## °F °C</b>					
<b>Comment GOT 36 BBLs OF CMT BACK TO SURFACE</b>									

## 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	3/27/2016	19:30:00	USER	CALLOUT FOR ON LOCATION AT 12:00 AM
Event	2	Crew Leave Yard	Crew Leave Yard	3/27/2016	22:30:00	USER	PRE JOURNEY JSA W/ CREW
Event	3	Arrive At Loc	Arrive At Loc	3/27/2016	23:50:00	USER	UPON ARRIVAL RIG JUST STARTED RUNNING CASING, MET W/ COMPANY REP TO DISCUSS JOB PROCEDURE
Event	4	Rig-Up Equipment	Rig-Up Equipment	3/28/2016	03:00:00	USER	PRE RIG UP HAZARD HUNT JSA W/ CREW
Event	5	Other	Other	3/28/2016	03:15:00	USER	FIELD MIX WATER ANALYSIS: TEMP 67, PH-7, CHLORIDES-0, IRON-0
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	3/28/2016	04:00:00	USER	JSA W/ ALL INVOLVED PERSONNEL
Event	7	Start Job	Start Job	3/28/2016	04:15:18	COM5	
Event	8	Test Lines	Test Lines	3/28/2016	04:19:55	COM5	TESTED LINES TO 3000 PSI FOR 3 MIN, NO VISIBLE LEAKS
Event	9	Pump Spacer 1	Pump Spacer 1	3/28/2016	04:22:41	COM5	PUMPED 50 BBLS OF H2O W/ DYE AFTER FIRST 10 AT 4 BPM AND 84 PSI
Event	10	Pump Lead Cement	Pump Lead Cement	3/28/2016	04:35:28	COM5	PUMPED 560 SKS OR 173.5 BBLS OF 13.5 LEAD CMT AT 8 BPM AND 296 PSI
Event	11	Check Weight	Check weight	3/28/2016	04:38:02	COM5	WEIGHT VERIFIED BY MUD SCALES
Event	12	Pump Tail Cement	Pump Tail Cement	3/28/2016	05:00:49	COM5	PUMPED 75 SKS OR 20.4

							BBLs OF 14.2 CMT AT 8 BPM AND 276 PSI
Event	13	Shutdown	Shutdown	3/28/2016	05:10:37	COM5	SHUTDOWN AND WASHED PUMPS AND LINES
Event	14	Pump Displacement	Pump Displacement	3/28/2016	05:19:51	COM5	PUMPED 142 BBLs OF OIL BASED MUD AT 8 BPM AND 550 PSI, GOT 36 BBLs OF CMT BACK TO SURFACE
Event	15	Drop Top Plug	Drop Top Plug	3/28/2016	05:20:13	COM5	PLUG PRE LOADED AND WITNESSED BY COMPANY REP
Event	16	Bump Plug	Bump Plug	3/28/2016	05:47:08	COM5	FINAL CIRCULATING PRESSURE WAS 420 PSI AND PLUG BUMPED AT 820 PSI
Event	17	Pressure Up Well	Pressure Up Well	3/28/2016	05:48:00	USER	1000 PSI CASING TEST FOR 15 MIN
Event	18	Other	Other	3/28/2016	06:03:16	COM5	CHECKED FLOATS THEY HELD AND GOT 3/4 BBL BACK TO TRUCK
Event	19	End Job	End Job	3/28/2016	06:40:35	COM5	