

HALLIBURTON

iCem[®] Service

NOBLE ENERGY INC

Date: Friday, February 19, 2016

NOBLE WELLS RANCH AF05-665 Surface

Job Date: Thursday, January 28, 2016

Sincerely,

Julia Nichols

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Wells Ranch AF05-655** cement **Surface** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

37 barrels of cement returned to surface.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton [Ft. Lupton]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242		Ship To #: 3688612		Quote #:		Sales Order #: 0903081609				
Customer: NOBLE ENERGY INC E-BUSINESS				Customer Rep:						
Well Name: WELLS RANCH			Well #: AF05-665			API/UWI #: 05-123-42134-00				
Field: WATTENBERG		City (SAP): KERSEY		County/Parish: WELD		State: COLORADO				
Legal Description: SW NW-5-5N-62W-2108FNL-605FWL										
Contractor: H & P DRLG				Rig/Platform Name/Num: H & P 321						
Job BOM: 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB45834					Srcv Supervisor: Joseph Fantasia					
Job										
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	0	9.625	8.921	36	LTC	J-55	0	1855	0	1855
Open Hole Section			13.5				110	1865	110	1865
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Water	Water	50	bbl	8.34			5		
9.20 Gal FRESH WATER										
2	SwiftCem B1	SWIFTCEM (TM) SYSTEM	550	sack	13.5	1.74		7	9.2	
9.20 Gal FRESH WATER										
3	SwiftCem B1	SWIFTCEM (TM) SYSTEM	75	sack	14.2	1.53		7	7.65	
7.65 Gal FRESH WATER										
4	OIL Based Mud-9.8 #/gal	DISPLACEMENT	137	bbl	9.8			7		

last updated on 1/28/2016 7:55:11 PM

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Cementing Job Summary

Cement Left In Pipe	Amount	Reason	Shoe Joint
	42 ft		
Comment APPROX 37 BBLS CEMENT TO SURFACE.			

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Comments
Event	1	Arrive at Location from Service Center	Arrive at Location from Service Center	1/28/2016	14:30:00	USER				ARRIVE AT LOCATION. INFORMED CUSTOMER THAT WE BROUGHT SWEDGE AND IT WAS APPROVED. HELD SITE ASSESSMENT AND PRE RIG UP SAFETY MEETING WITH CREW. RIG RUNNING CASING. COLLECTED WATER SAMPLE. PH7. TEMP 60. CHLORIDES 0.
Event	2	Start Job	Start Job	1/28/2016	17:12:54	COM5				AFTER RIG HAD CIRCULATED 9 PPG MUD WE HELD PRE JOB SAFETY MEETING WITH ALL PRESENT PERSONNEL PRIOR TO STARTING JOB.
Event	3	Test Lines	Test Lines	1/28/2016	17:16:40	COM5	0.00	8.34	2967.00	PRESSURE TEST LINES TO 3000 PSI.
Event	4	Pump Spacer 1	Pump Spacer 1	1/28/2016	17:19:33	COM5	0.00	8.28	36.00	PUMP 50 BBLS WATER WITH 2 LBS RED DYE ADDED TO LAST 10 BBLS.
Event	5	Pump Cement	Pump Cement	1/28/2016	17:34:05	COM5	2.30	13.68	103.00	PUMP 170 BBLS (550 SKS) SWIFTCEM MIXED AT 13.5 PPG. DENSITY VERIFIED BY SCALE.
Event	6	Check Weight	Check weight	1/28/2016	17:38:10	COM5	5.50	13.39	153.00	DENSITY VERIFIED BY SCALE.
Event	7	Pump Tail Cement	Pump Tail Cement	1/28/2016	18:02:18	COM5	6.00	14.13	194.00	PUMP 20 BBLS (75 SKS) SWIFTCEM MIXED AT 14.2 PPG. DENSITY VERIFIED BY SCALE.
Event	8	Shutdown	Shutdown	1/28/2016	18:07:55	COM5				
Event	9	Drop Top Plug	Drop Top Plug	1/28/2016	18:11:46	COM5				TOP PLUG DROPPED DURING SHUTDOWN. CUSTOMER WITNESSED.
Event	10	Pump Displacement	Pump Displacement	1/28/2016	18:11:51	COM5	0.00	14.21	36.00	DISPLACE USING 137 BBLS OIL BASE MUD. GOOD RETURNS THROUGHOUT. APPROX 37 BBLS CEMENT TO SURFACE.
Event	11	Bump Plug	Bump Plug	1/28/2016	18:41:14	COM5	2.00	9.41	534.00	PLUG LANDED AT 534 PSI. PRESSURE BROUGHT TO 800 PSI AND HELD 2 MIN. PRESSURE BROUGHT TO 1000 PSI AND HELD 4 MIN FOR CASING PRESSURE TEST.
Event	12	Check Floats	Check Floats	1/28/2016	18:45:12	USER	0.00	9.40	1048.00	FLOATS HELD. 1 BBL BACK TO TRUCK.
Event	13	End Job	End Job	1/28/2016	19:00:00	USER				HELD PRE RIG DOWN SAFETY MEETING WITH CREW

PRIOR TO RIGGING DOWN EQUIPMENT.

Event	14	Depart Location	Depart Location	1/28/2016	20:00:00	USER	DEPART LOCATION.
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3.0 Attachments

3.1 NOBLE WELLS RANCH AF05-665-Custom Results.png



