

HALLIBURTON

iCem[®] Service

ANADARKO PETROLEUM CORP - EBUS

Date: 7/15/2014

Barefoot 31N-25HZ Surface

Sincerely,
Derek Trier

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Barefoot 31N-25HZ** 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.

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 [Brighton]

Job Times			
	Date	Time	Time Zone
Called Out	5/13	0730	MT
On Location	5/13	1130	MT
Job Started	5/13	1643	MT
Job Completed	5/13	1800	MT
Departed Location	5/13	1900	MT

1.2 Cementing Job Summary

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 3467630	Quote #:	Sales Order #: 0901345634							
Customer: ANADARKO PETROLEUM CORP - EBUS		Customer Rep: ALLEN								
Well Name: BAREFOOT	Well #: 31N-25 HZ	API/UWI #: 05-123-39229-00								
Field: WATTENBERG	City (SAP): MEA	County/Parish: WELD	State: COLORADO							
Legal Description: SE NE-25-3N-68W-2033FNL-663FEL										
Contractor:		Rig/Platform Name/Num: MAJOR 42								
Job BOM: 7521										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HB47901		Srv Supervisor: Brandon Nielson								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	1570	Job Depth TVD								
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		J-55	0	1561		0
Open Hole Section			13.5				0	1570		0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625	1		1561		Top Plug	9.625	1	HES	
Float Shoe	9.625	1				Bottom Plug	9.625	1	HES	
Float Collar	9.625	1				SSR plug set	9.625	1	HES	
Insert Float	9.625	1				Plug Container	9.625	1	HES	
Stage Tool	9.625	1				Centralizers	9.625	1	HES	
Miscellaneous Materials										
Gelling Agt		Conc		Surfactant		Conc	Acid Type		Qty	Conc
Treatment Fld		Conc		Inhibitor		Conc	Sand Type		Size	Qty
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	Mud Flush III (Powder)	Mud Flush III	12	bbl	8.4			5		
42 gal/bbl		FRESH WATER								
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	

last updated on 5/13/2014 7:02:41 PM

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Cementing Job Summary

2	Lead Cement	SWIFTCM (TM) SYSTEM	560	sack	14.2	1.54		6	7.64
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	Displacement	Displacement	117.5	bbl	8.33				
Cement Left In Pipe		Amount 41 ft		Reason			Shoe Joint		
Comment 8 BBL CEMENT TO SURFACE.									

1.3 Job Overview

		Units	Description
1	Surface temperature at time of job	°F	65
2	Mud type (OBM, WBM, SBM, Water, Brine)	-	WBM
3	Actual mud density	lb/gal	9.5
4	Time circulated before job	HH:MM	00:30
5	Mud volume circulated	Bbls	
6	Rate at which well was circulated	Bpm	
7	Pipe movement during hole circulation	Y/N	N
8	Rig pressure while circulating	Psi	
9	Time from end mud circulation to start of job	HH:MM	00:02
10	Pipe movement during cementing	Y/N	N
11	Calculated displacement	Bbls	117.5
12	Job displaced by	Rig/HES	HES
13	Annular before job)?	Y/N	N
14	Annular flow after job	Y/N	N
15	Length of rat hole	Ft	
16	Units of gas detected while circulating	Units	
17	Was lost circulation experienced at any time ?	Y/N	N

1.4 Job Event Log

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901345634

Case 1

1.6 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DS Pump Total (bbl)	Comb Pump Rate (bbl/min)	Cement Density (ppg)	Comb Pump Total (bbl)	Comment
Event	1	Call Out	Call Out	5/13/2014	07:30:00	USER						
Event	2	Crew Leave Yard	Crew Leave Yard	5/13/2014	10:30:00	USER						
Event	3	Arrive At Loc	Arrive At Loc	5/13/2014	11:30:00	USER						UPON ARRIVAL WE LOOKE OVER THE LOCATION, it was very muddy we had to use an excavator to move the trucks around location. we waited until 1400 for the operator to get here, while we waited trucks were chained up, and the containment was moved so we could remove some of the mud under it so we didnt tear holes in it.
Event	4	Rig-up Lines	Rig-up Lines	5/13/2014	13:30:00	USER						
Event	5	Rig-Up Completed	Rig-Up Completed	5/13/2014	16:30:00	USER	1.97	0.0	0.00	8.33	0.0	
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/13/2014	16:31:00	USER	0.99	0.0	0.00	8.33	0.0	JSA WITH ALL INVOLVED PERSONS
Event	7	Start Job	Start Job	5/13/2014	16:43:30	COM1	2.96	1.2	0.00	8.33	1.2	
Event	8	Test Lines	Test Lines	5/13/2014	16:43:47	COM1	0.99	1.2	0.00	8.33	1.2	TESTED LINES TO 2500 PSI NO VISIBLE LEAKS
Event	9	Pump Spacer 1	Pump Spacer 1	5/13/2014	16:45:40	COM1	4.93	1.3	0.00	8.33	1.3	10 BBL FRESH WATER PUMPED 4 BPM AND 51 PSI
Event	10	Pump Spacer 2	Pump Spacer 2	5/13/2014	16:50:08	COM1	48.29	10.4	4.37	8.33	10.4	12 BBL MUD FLUSH PUMPED AT 5 BPM AND 56 PSI
Event	11	Pump Spacer 1	Pump Spacer 1	5/13/2014	16:52:44	COM1	22.67	22.3	4.63	8.33	22.3	10 BBL FRESH WATER PUMPED AT 5 BPM AND 61 PSI
Event	12	Pump Cement	Pump Cement	5/13/2014	16:55:07	COM1	69.98	11.0	4.70	8.33	11.0	560 SKS OR 153.6 BBL SWIFCEM MIXED AT 14.2

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Case 1

												PPG. PUMPED AT 6 BPM AND 140 PSI
Event	13	Shutdown	Shutdown	5/13/2014	17:25:40	COM1	-29.57	167.5	0.00	14.20	167.5	
Event	14	Drop Top Plug	Drop Top Plug	5/13/2014	17:27:23	COM1	-29.57	0.0	0.00	14.20	0.0	PLUG PRE LOADED WITNESSED BY COMPANY REP
Event	15	Pump Displacement	Pump Displacement	5/13/2014	17:28:26	COM1	-28.58	0.0	0.00	14.20	0.0	117.5 BBL FRESH WATER PUMPED AT 6 BPM AND 250 PSI CEMENT RETURNED TO SURFACE 109.5 INTO LEAVING US WITH 8 BBL BACK
Event	16	Bump Plug	Bump Plug	5/13/2014	17:56:50	COM1	1651.88	123.4	0.00	8.30	123.4	PLUG LANDED AT 461 PSI
Event	17	End Job	End Job	5/13/2014	18:00:00	USER	1653.85	123.4	0.00	8.30	123.4	
Event	18	Check Floats	Check Floats	5/13/2014	18:03:00	USER	1065.44	123.4	0.00	8.30	123.4	FLOATS HELD WITH .5 BBL BACK TO THE TRUCK

2.0 Appendix
