

# HALLIBURTON

iCem<sup>®</sup> Service

**ANADARKO PETROLEUM CORP - EBUS**

Date: 7/15/2014

**Barefoot 31N-25HZ Surface**

Sincerely,  
**Derek Trier**

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**1.1 Executive Summary**

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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**

	<b>Date</b>	<b>Time</b>	<b>Time Zone</b>
<b>Called Out</b>	5/13	0730	MT
<b>On Location</b>	5/13	1130	MT
<b>Job Started</b>	5/13	1643	MT
<b>Job Completed</b>	5/13	1800	MT
<b>Departed Location</b>	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		Srvc Supervisor: Brandon Nielson	
<b>Job</b>			

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 <sup>3</sup> /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 <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	

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*Cementing Job Summary*

2	Lead Cement	SWIFTCEM (TM) SYSTEM	560	sack	14.2	1.54		6	7.64
<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 ft<sup>3</sup>/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/mi n</b>	<b>Total Mix Fluid Gal</b>
3	Displacement	Displacement	117.5	bbl	8.33				
<b>Cement Left In Pipe</b>		<b>Amount</b>	<b>Reason</b>		<b>Shoe Joint</b>				
		41 ft							
<b>Comment 8 BBL CEMENT TO SURFACE.</b>									

**1.3 Job Overview**

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

											PPG. PUMPED AT 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

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