

# HALLIBURTON

iCem<sup>®</sup> Service

**ANADARKO PETROLEUM CORP - EBUS**

**For: Ellis Lorimor**

Date: Friday, July 04, 2014

**Vogl 34N-35HZ**

Case 1

Sincerely,

**Mark Dean & Crew**

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## 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the **Vogl 34N-35HZ** 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
<b>Called Out</b>	7/4/2014	08:00:27	MT
<b>On Location</b>	7/4/2014	11:30:59	MT
<b>Job Started</b>	7/4/2014	12:59:02	MT
<b>Job Completed</b>	7/4/2014	14:43:15	MT
<b>Departed Location</b>	7/4/2014	16:30:18	MT

## 1.2 Cementing Job Summary

Sold To #: 300466		Ship To #: 3541210		Quote #:		Sales Order #: 0901479820					
Customer: ANADARKO PETROLEUM CORP - EBUS				Customer Rep: Ellis Lorimor							
Well Name: VOGL		Well #: 34N-35HZ		API/UWI #: 05-123-39683-00							
Field: WATTENBERG		City (SAP): MEAD		County/Parish: WELD		State: COLORADO					
Legal Description: SW SW-36-3N-68W-526FSL-711FWL											
Contractor:				Rig/Platform Name/Num: MAJOR 29							
Job BOM: 7521											
Well Type: HORIZONTAL GAS											
Sales Person: HALAMERICA\HX46524				Srcv Supervisor: Mark Dean							
<b>Job</b>											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type					BHST						
Job depth MD		1138ft			Job Depth TVD						
Water Depth					Wk Ht Above Floor		3 ft				
Perforation Depth (MD)		From			To						
<b>Well Data</b>											
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	850			
Open Hole Section			13.5				0	850			
<b>Tools and Accessories</b>											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625	1		1138		Top Plug	9.625	1	HES		
Float Shoe	9.625	1				Bottom Plug	9.625		HES		
Float Collar	9.625	1		1098		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		
<b>Miscellaneous Materials</b>											
Gelling Agt		Conc		Surfactant		Conc	Acid Type		Qty	Conc	
Treatment Fld		Conc		Inhibitor		Conc	Sand Type		Size	Qty	
<b>Fluid Data</b>											
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				
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

2	Lead Cement	SWIFCEM (TM) SYSTEM	445	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 ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>
3	Displacement	Displacement	85	bbl	8.33				
<b>Cement Left in Pipe</b>		<b>Amount</b> 40 ft	<b>Reason</b>			Shoe Joint			
<b>Comment</b>									

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**Summary Report**

**Crew:** \_\_\_\_\_  
**Job Start Date:** 7/4/2014

**Sales Order #:** 0901479820  
**WO #:** 0901479820  
**PO/AFE #:** NA

<b>Customer:</b> ANADARKO PETROLEUM CORP - EBUS	<b>Field:</b> WATTENBERG	<b>Job Type:</b> CMT SURFACE CASING BOM
<b>UWI / API Number:</b> 05-123-39683-00	<b>County/Parish:</b> WELD	<b>Service Supervisor:</b> Mark Dean
<b>Well Name:</b> VOGL	<b>State:</b> COLORADO	
<b>Well No:</b> 34N-35HZ	<b>Latitude:</b> 40.176566	<b>Cust Rep Name:</b> Ellis Lorimor
	<b>Longitude:</b> -104.958342	<b>Cust Rep Phone #:</b>
	<b>Sect / Twn / Rng:</b> 36/3/68	

<b>Remarks:</b>		
The Information Stated Herein Is Correct	Customer Representative Signature <i>Ellis Lorimor</i>	Date
	Customer Representative Printed Name Ellis Lorimor	

## 1.3 Planned Pumping Schedule

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	Fresh Water Spacer	8.33	5.0	10.0 bbl	10.0 bbl
1	1	Spacer	Mud Flush	8.40	5.0	12.0 bbl	12.0 bbl
1	1	Spacer	Fresh Water Spacer	8.33	5.0	10.0 bbl	10.0 bbl
1	2	Cement Slurry	SwiftCem B2	14.2	5.5	445.0 sacks	445.0 sacks

## 1.4 Job Overview

		Units	Description
1	Surface temperature at time of job	°F	
2	Mud type (OBM, WBM, SBM, Water, Brine)	-	WBM
3	Actual mud density	lb/gal	
4	Time circulated before job	HH:MM	
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	
10	Pipe movement during cementing	Y/N	
11	Calculated displacement	Bbls	85
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



## 1.5 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)	Comment
Event	1	Call Out	Call Out	7/4/2014	08:00:27	USER				Crew called out @ 08:00
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/4/2014	10:45:41	USER				Discussed load checks, planned route and safe driving
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	7/4/2014	11:00:50	USER				Delayed departure due to windshield being replaced on 660
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	7/4/2014	11:30:59	USER				Rig on bottom. Requested on location @ 11:00
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	7/4/2014	11:45:11	USER				Discussed spotting, layout and red zones
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/4/2014	11:55:21	USER				Discussed PPE, layout and hazards
Event	7	Rig-Up Equipment	Rig-Up Equipment	7/4/2014	12:00:09	USER				Rigged up safely
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/4/2014	12:45:15	USER	20.00	8.25	0.00	Discussed job procedure with Customer & Crew
Event	9	Start Job	Start Job	7/4/2014	12:59:02	COM1	1.00	8.19	0.00	Primed pumps and lines
Event	10	Test Lines	Test Lines	7/4/2014	13:11:02	COM1	33.00	8.33	0.00	Tested lines to 2000 psi (Pressure Held)
Event	11	Pump Spacer 1	Pump Water	7/4/2014	13:11:26	COM1	23.00	8.27	0.00	Pumped 10 bbl of water ahead
Event	12	Pump Spacer 2	Pump Mud Flush III	7/4/2014	13:14:54	COM1	82.00	8.38	4.50	Pumped 12 bbl of mud flush III
Event	13	Pump Spacer 1	Pump Water	7/4/2014	13:17:44	COM1	84.00	8.26	4.50	Pumped 10 bbl of water behind
Event	14	Pump Lead Cement	Pump Cement	7/4/2014	13:20:06	COM1	95.00	8.26	4.50	Pumped 122 bbl of CMT @ 14.2# (445 sks)
Event	15	Drop Top Plug	Drop Top Plug	7/4/2014	13:48:58	COM1	12.00	11.00	0.00	Dropped top Plug
Event	16	Pump Displacement	Pump Displacement	7/4/2014	13:49:03	COM1	12.00	10.98	0.00	Pumped 84.9 bbl of fresh water displacement (first 10 bbl wash up)

Event	17	Bump Plug	Bump Plug	7/4/2014	14:30:54	COM1	1488.00	8.43	0.00	Pumped plug @ 400 psi (1000 psi over) Held 5 minutes
Event	18	Other	Other	7/4/2014	14:31:19	USER	1495.00	8.43	0.00	No Cement returned to Surface. Rig tagged cement 15 ft down
Event	19	Other	Check Floats	7/4/2014	14:41:56	COM1	1234.00	7.87	0.00	.5 bbl returned to truck (Floats Held)
Event	20	Pressure Up Well	Pressure Up Well	7/4/2014	14:43:15	COM1	505.00	8.41	0.90	Pressured well back to 1400 psi per Customer request. (Held 1 minute)
Event	21	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	7/4/2014	14:50:16	USER	15.00	-11.75	0.00	Discussed trapped pressure and other hazards
Event	22	Rig-Down Equipment	Rig-Down Equipment	7/4/2014	15:00:17	USER				Rigged down safely
Event	23	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	7/4/2014	16:30:18	USER				Job completed successfully by M Dean & Crew

## 2.0 Custom Graphs

### 2.1 Custom Graph



