

# HALLIBURTON

iCem<sup>®</sup> Service

## Post Job Report

**ANADARKO PETROLEUM CORP - EBUS**

Date: Wednesday, June 18, 2014

**Spurling 35C-34HZ Surface**

Sincerely,  
**Derek Trier**

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2.0 Custom Graphs **Error! Bookmark not defined.**

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2.1	Custom Graph	<b>Error! Bookmark not defined.</b>
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3.0 Appendix **Error! Bookmark not defined.**

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**1.1 Executive Summary**

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Halliburton appreciates the opportunity to perform the cementing services on the **Spurling 35C-34HZ** 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>Requested Time On Location</b>	4/10	0730	MST
<b>Called Out</b>	4/10	0330	
<b>On Location</b>	4/10	0730	
<b>Job Started</b>	4/10	0828	
<b>Job Completed</b>	4/10	0951	
<b>Departed Location</b>	4/10	1100	

**1.2 Cementing Job Summary**

<b>Sold To #:</b> 300466		<b>Ship To #:</b> 3367888		<b>Quote #:</b>		<b>Sales Order #:</b> 0901248678	
<b>Customer:</b> ANADARKO PETROLEUM CORP - EBUS				<b>Customer Rep:</b> LARRY HERSH			
<b>Well Name:</b> SPURLING			<b>Well #:</b> 35C-34 HZ		<b>API/UWI #:</b> 05-123-39126-00		
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> ION		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO	
<b>Legal Description:</b> NW NW-34-2N-67W-377FNL-1118FWL							
<b>Contractor:</b> Bob Porter				<b>Rig/Platform Name/Num:</b> Majors 42			
<b>Job BOM:</b> 7521							
<b>Well Type:</b> HORIZONTAL GAS							
<b>Sales Person:</b> HALAMERICA\HX46524				<b>Srvc Supervisor:</b> Aaron Smith			

**Job**

<b>Formation Name</b>			
<b>Formation Depth (MD)</b>	<b>Top</b>		<b>Bottom</b>
<b>Form Type</b>			BHST
<b>Job depth MD</b>	1082ft		<b>Job Depth TVD</b>
<b>Water Depth</b>			<b>Wk Ht Above Floor</b>
<b>Perforation Depth (MD)</b>			<b>To</b>

**Well Data**

	<b>New / Used</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>	<b>Top MD ft</b>	<b>Bottom MD ft</b>	<b>Top TVD ft</b>	<b>Bottom TVD ft</b>
Casing		9.625	8.921	36		J-55	0	1082		
Open Hole Section			13.5				0	1082		

**Tools and Accessories**

<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	<b>Depth ft</b>		<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>
Guide Shoe	9.625	1		1082		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
	9.625	1				Centralizers	9.625	1	HES

**Miscellaneous Materials**

<b>Gelling Agt</b>	<b>Conc</b>	<b>Surfactant</b>	<b>Conc</b>	<b>Acid Type</b>	<b>Qty</b>
<b>Treatment Fld</b>	<b>Conc</b>		<b>Conc</b>	<b>Sand Type</b>	

**Fluid Data**

<b>Stage/Plug #:</b> 1
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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	10	bbl	8.4				
42 gal/bbl									

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	SWIFTCEM (TM) SYSTEM	389	Sack	14.2	1.54		6	7.64
7.64 Gal									

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
3	Displacement	Displacement	62.5	bbl	8.33				

		Amount	42 ft							

**Comment**

**1.4 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	8.33	5.00	10.0 bbl	10.0 bbl
1	2	Spacer	Mud Flush III	8.40	5.00	12.0 bbl	12.0 bbl
1	3	Spacer	Fresh Water	8.33	5.00	10.0 bbl	10.0 bbl
1	4	Cement Slurry	SwiftCem	14.20	5.00	389.0 sacks	389.0 sacks

**1.5 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	Actual mud Plastic Viscosity (PV)	cP	
5	Actual mud Yield Point (YP)	lb <sub>f</sub> /100ft <sup>2</sup>	
6	Actual mud 30 min Gel Strength	lb <sub>f</sub> /100ft <sup>2</sup>	
7	Time circulated before job	HH:MM	
8	Mud volume circulated	Bbls	
9	Rate at which well was circulated	Bpm	
10	Pipe movement during hole circulation	Y/N	N
11	Rig pressure while circulating	Psi	
12	Time from end mud circulation to start of job	HH:MM	
13	Pipe movement during cementing	Y/N	N
14	Calculated displacement	Bbls	62.5
15	Job displaced by	Rig/HES	HES
16	Annular flow before job	Y/N	N
17	Annular flow after job	Y/N	N
18	Length of rat hole	Ft	
19	Units of gas detected while circulating	Units	
20	Was lost circulation experienced at any time?	Y/N	N

1.6 Job Event Log

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ANADARKO PETROLEUM CORP - EBUS  
 ANADARKO PETROLEUM SPURLING 35C-34HZ SURFACE  
 Case 2

1.1 Job Event Log

Type	Seq No.	Activity	Graph Label	Date	Time	Source	Combined Pump Rate (bbbl/min)	Pass-Side Pump Pressure (psi)	Downhole Density (spg)	Comment
Event	1	Arrive at Location from Service Center	Arrive at Location from Service Center	4/10/2014	07:30:00	USER	0.00	7.72	8.42	WITH ALL EQUIPMENT AND MATERIALS
Event	2	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	4/10/2014	07:35:00	USER	0.00	-0.72	8.37	
Event	3	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/10/2014	07:40:00	USER	1.99	25.53	8.33	
Event	4	Rig-Down Equipment	Rig-Down Equipment	4/10/2014	07:45:00	USER	1.99	26.47	8.28	
Event	5	Rig-Up Completed	Rig-Up Completed	4/10/2014	08:00:00	USER	6.02	71.47	14.06	
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/10/2014	08:15:00	USER	0.00	-24.16	0.37	WITH CUSTOMER REP AND RIG CREW
Event	7	Start Job	Start Job	4/10/2014	08:28:48	USER	5.03	216.78	8.63	
Event	8	Test Lines	Test Lines	4/10/2014	08:30:03	USER	5.03	246.78	8.67	@ 2500 PSI
Event	9	Pump Spacer 1	Pump Spacer 1	4/10/2014	08:35:55	USER	2.01	283.35	8.75	10 BBLS FRESH WATER WITH NO ADDITIVES
Event	10	Pump Spacer 2	Pump Spacer 2	4/10/2014	08:40:54	USER	2.01	371.47	8.76	12 BBLS MUD FLUSH
Event	11	Pump Spacer 1	Pump Spacer 1	4/10/2014	08:47:02	USER	0.00	1467.43	8.71	10 BBLS FRESH WATER
Event	12	Pump Cement	Pump Cement	4/10/2014	08:53:20	USER				106 BBLS/ 389 SKS @ 14.2PPG, 1.54 YIELD, 7.62 GAL/SK
Event	13	Shutdown	Shutdown	4/10/2014	09:13:39	USER				
Event	14	Drop Top Plug	Drop Top Plug	4/10/2014	09:14:53	USER				PRE-LOADED HWY TOP PLUG, VERIFIED BY CUSTOMER REP
Event	15	Pump Displacement	Pump Displacement	4/10/2014	09:16:06	USER				80 BBLS FRESH WATER
Event	16	Bump Plug	Bump Plug	4/10/2014	09:40:00	USER				FINAL CIRCULATING PRESSURE 346 PSI, 1504 FINAL PRESSURE
Event	17	Check Floats	Check Floats	4/10/2014	09:44:46	USER				FLOATS HELD, .5 BBLS BACK
Event	18	End Job	End Job	4/10/2014	09:51:18	USER				

iCem<sup>®</sup> Service  
 Created: Thursday, April 10, 2014