

**ANADARKO PETROLEUM CORP - EBUS  
DO NOT MAIL - PO BOX 4995  
THE WOODLANDS, Texas**

3D 15C-21HZ

Major 41

## **Post Job Summary**

# **Cement Surface Casing**

Date Prepared: 10/31/2013  
Version: 1

Service Supervisor: VIGIL, NICHOLAS

Submitted by: TRIER, DEREK

**HALLIBURTON**

# HALLIBURTON

## Wellbore Geometry

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Job Tubulars					MD		Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	
Casing	9 5/8" Surface Casing	9.63	8.921	36.00	0.00	1,010.00	40.00
Open Hole Section	13 1/2" Open Hole Section		13.500		0.00	1,030.00	0.00

# HALLIBURTON

## 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	2.00	10.0 bbl	10.0 bbl
1	2	Spacer	Mud Flush	8.40	2.50	12.0 bbl	12.0 bbl
1	1	Spacer	Fresh Water Spacer	8.33	4.00	10.0 bbl	10.0 bbl
1	3	Cement Slurry	SwiftCem B2	14.20	6.00	393.0 sacks	393.0 sacks

## Fluids Pumped

**Stage/Plug # 1 Fluid 1:** Fresh Water Spacer  
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 8.33 lbm/gal  
Pump Rate: 2.00 bbl/min

**Stage/Plug # 1 Fluid 2:** Mud Flush  
DUMMY MUD / FLUSH / SPACER SBC MATERIAL  
3.5 lbm/bbl Mud Flush III  
42 gal/bbl Mud Flush III

Fluid Density: 8.40 lbm/gal  
Fluid Volume: 12.00 bbl  
Pump Rate: 2.50 bbl/min

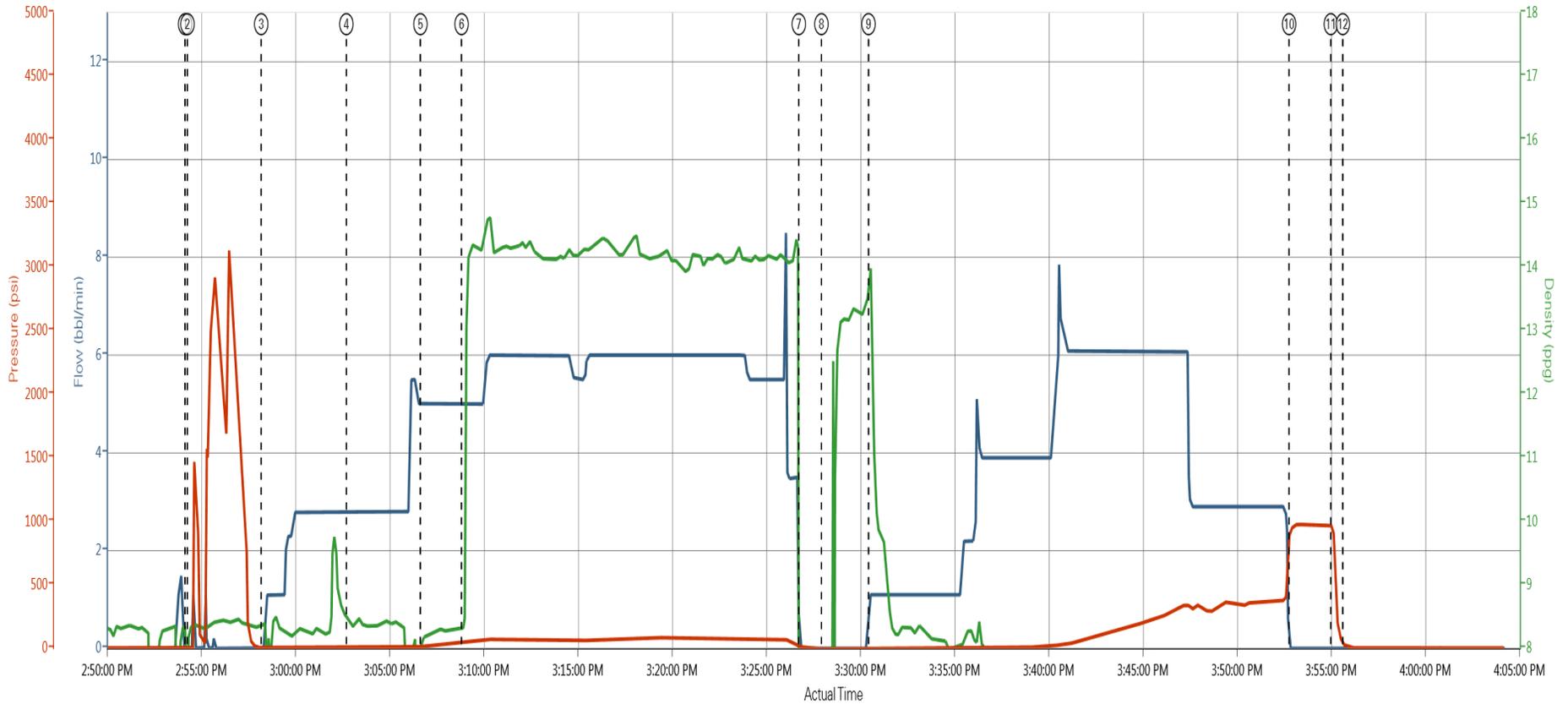
**Stage/Plug # 1 Fluid 3:** SwiftCem B2  
SWIFTCEM (TM) SYSTEM

Fluid Weight: 14.20 lbm/gal  
Slurry Yield: 1.53 ft<sup>3</sup>/sack  
Total Mixing Fluid: 7.63 Gal  
Surface Volume: 393.0 sacks  
Sacks: 393.0 sacks

# HALLIBURTON

## Data Acquisition

Anadarko 3D 15C-21HZ



Comb Pump Rate (bbl/min) DH Density (ppg) PS Pump Press (psi)

① Start Job 0;8,29;4   ② Test Lines 0;8,34;4   ③ Pump Spacer 1 0;8,37;5   ④ Pump Spacer 2 2;8,46;19   ⑤ Pump Spacer 1 5;8,24;15   ⑥ Pump Cement 5;8,33;43   ⑦ Shutdown 0;-0,02;11   ⑧ Drop Top Plug 0;-0,15;-4   ⑨ Pump Displacement 1,1;14;5   ⑩ Bump Plug 0;7,94;942   ⑪ Other 0;7,94;950   ⑫ End Job 0;-0,47;22

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Created: 2013-10-27 13:26:00, Version: 2.0.606

Edit

# HALLIBURTON

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
10/27/2013 05:26		Shutdown					
10/27/2013 12:30		Arrive At Loc					On location time was 1300, Rig had about 5 joints of casing left to run
10/27/2013 12:35		Assessment Of Location Safety Meeting					Hazard hunt, Water test, When we arrived on location I noticed there was no spill containment on location, I called Rain for Rent to get one out here ASAP,
10/27/2013 12:40		Rig-Up Equipment					We rigged up what we could with out having the containment on site.
10/27/2013 13:30		Rig-Up Completed					
10/27/2013 13:30		Wait on HES or HES Sub-Contractor Equipment - End					I called Rain for Rent @ 12:46 p.m.
10/27/2013 14:00		Wait on HES or HES Sub-Contractor Equipment - End					We got spill containment set up and finished rigging up
10/27/2013 14:40		Pre-Job Safety Meeting					Held safety meeting with all personell on location
10/27/2013 14:54		Start Job					
10/27/2013 14:54		Test Lines				3000.0	Pressure tested lines to 3000 psi
10/27/2013 14:58		Pump Spacer 1	2.0	10.0		20.0	Water Spcaer
10/27/2013 15:02		Pump Spacer 2	2.5	12.0		20.0	Mud Flush
10/27/2013 15:06		Pump Spacer 1	4.0	10.0		40.0	Water Spcaer
10/27/2013 15:08		Pump Cement	6.0	107.1		75.0	14.2 ppg SwiftCem (393 sks), weight was verified by scale
10/27/2013 15:28		Drop Top Plug					Plug was pre loaded
10/27/2013 15:30		Pump Displacement	6.0	82.0		200	Displaced using frsh water
10/27/2013 15:52		Bump Plug	3.0	82.0		450.0	Bumped plug 500 psi over final lift bringing our final pressure to 950 psi
10/27/2013 15:55		End Job					Rig down saftey meeting
10/27/2013 15:55		Check Floats					Floats held
10/27/2013 16:00		Rig-Down Equipment					Wash up pump and rig down
10/27/2013 16:30		Rig-Down Completed					

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300466		<b>Ship To #:</b> 3182342		<b>Quote #:</b>		<b>Sales Order #:</b> 900848544					
<b>Customer:</b> ANADARKO PETROLEUM CORP - EBUS				<b>Customer Rep:</b> Strong, Brett							
<b>Well Name:</b> 3D			<b>Well #:</b> 15C-21HZ			<b>API/UWI #:</b> 05-123-38101					
<b>Field:</b> WATTENBURG		<b>City (SAP):</b> FORT LUPTON		<b>County/Parish:</b> Weld			<b>State:</b> Colorado				
<b>Lat:</b> N 40.13 deg. OR N 40 deg. 7 min. 48.738 secs.				<b>Long:</b> W 104.776 deg. OR W -105 deg. 13 min. 25.23 secs.							
<b>Contractor:</b>			<b>Rig/Platform Name/Num:</b> Major 41								
<b>Job Purpose:</b> Cement Surface Casing											
<b>Well Type:</b> Development Well				<b>Job Type:</b> Cement Surface Casing							
<b>Sales Person:</b> FLING, MATTHEW			<b>Srvc Supervisor:</b> VIGIL, NICHOLAS			<b>MBU ID Emp #:</b> 443481					
<b>Job Personnel</b>											
<b>HES Emp Name</b>	<b>Exp Hrs</b>	<b>Emp #</b>	<b>HES Emp Name</b>	<b>Exp Hrs</b>	<b>Emp #</b>	<b>HES Emp Name</b>	<b>Exp Hrs</b>	<b>Emp #</b>			
HARRAH, THADDEUS Gregory	0.0	552592	ROMERO, JOSEPH M	0.0	512137	VIGIL, NICHOLAS Joseph	0.0	443481			
<b>Equipment</b>											
<b>HES Unit #</b>	<i>Distance-1 way</i>	<b>HES Unit #</b>	<i>Distance-1 way</i>	<b>HES Unit #</b>	<i>Distance-1 way</i>	<b>HES Unit #</b>	<i>Distance-1 way</i>				
10866493C	10 mile	11398490	10 mile	11645065	10 mile	12010168	10 mile				
<b>Job</b>					<b>Job Times</b>						
<b>Formation Name</b>					<b>Date</b>		<b>Time</b>	<b>Time Zone</b>			
<b>Formation Depth (MD)</b>		<b>Top</b>	<b>Bottom</b>	<b>Called Out</b>		27 - Oct - 2013	09:00	MST			
<b>Form Type</b>		BHST			<b>On Location</b>		27 - Oct - 2013	12:30	MST		
<b>Job depth MD</b>		1033. ft	<b>Job Depth TVD</b>		1033. ft	<b>Job Started</b>		27 - Oct - 2013	14:58	MST	
<b>Water Depth</b>		<b>Wk Ht Above Floor</b>			<b>Job Completed</b>		27 - Oct - 2013	15:55	MST		
<b>Perforation Depth (MD)</b>		<i>From</i>	<b>To</b>	<b>Departed Loc</b>		27 - Oct - 2013	17:30	MST			
<b>Well Data</b>											
<i>Description</i>	<b>New / Used</b>	<b>Max pressure psig</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>
13 1/2" Open Hole Section				13.5				.	1030.		
9 5/8" Surface Casing	Unknown		9.625	8.921	36.		J-55	.	1010.		
<b>Fluid Data</b>											
<b>Stage/Plug #: 1</b>											
<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>/sk</b>	<b>Mix Fluid Gal/sk</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal/sk</b>

1	Fresh Water Spacer		10.0	bbl	8.33			2.0	
2	Mud Flush		12.00	bbl	8.4			2.5	
	3.5 lbm/bbl	MUD FLUSH III, 40 LB SACK (101633304)							
	42 gal/bbl	MUD FLUSH III - SBM (528788)							
1	Fresh Water Spacer		10.0	bbl	8.33			4.0	
3	SwiftCem B2	SWIFTCEM (TM) SYSTEM (452990)	393.0	sacks	14.2	1.53	7.63	6.0	7.63
	7.63 Gal	FRESH WATER							
<b>Rates</b>									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe	Amount	40 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID	Frac ring # 2 @	ID	Frac Ring # 3 @	ID	Frac Ring # 4 @	ID		
The Information Stated Herein Is Correct				<b>Customer Representative Signature</b>					

