

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

3D 16N-21HZ

Major 41

Post Job Summary **Cement Surface Casing**

Date Prepared: 1/22/2014
Version: 1

Service Supervisor: SMITH, AARON

Submitted by: TRIER, DEREK

HALLIBURTON

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Wellbore Geometry

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

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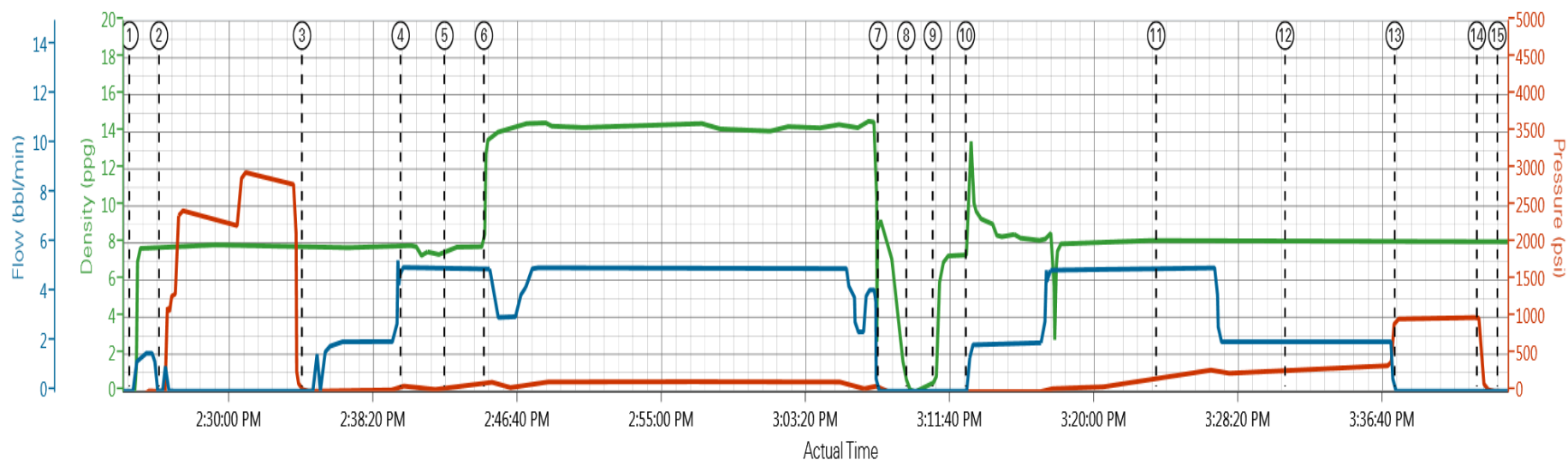
Pumping Schedule

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	5.00	12.0 bbl	12.0 bbl
1	1	Spacer	Fresh Water Spacer	8.33	5.00	10.0 bbl	10.0 bbl
1	3	Cement Slurry	SwiftCem B2	14.20	5.00	384.0 sacks	384.0 sacks

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Data Acquisition

ANADARKO PETROLEUM 3D 16N-21HZ SURFACE



DH Density (ppg) 8.07 PS Pump Press (psi) -5 Comb Pump Rate (bbl/min) 0

① Start Job -0.6;-120;0	④ Pump Spacer 2 7.87;71;5	⑦ Shutdown 9.19;9;0	⑩ Pump Displacement 7.42;-3;1.1	⑬ Bump Plug 8.16;973;0
② Test Lines 7.8;-3;0	⑤ Pump Spacer 1 7.61;48;5	⑧ Drop Top Plug 0.18;-6;0	⑪ Spacer Returns to Surface 8.09;180;5	⑭ Check Floats 8.07;946;0
③ Pump Spacer 1 7.78;6;0	⑥ Pump Cement 13.58;98;5	⑨ Clean Lines 0.53;-7;0	⑫ Cement Returns to Surface 8.15;294;2	⑮ End Job 8.08;-4;0

▼ **HALLIBURTON** | iCem® Service

Created: 2013-10-24 13:20:35, Version: 2.0.606

Edit

Customer: ANADARKO PETROLEUM CORP -
EBUS

Job Date: 10/24/2013 1:27:01 PM

Well: 3D 16N-21HZ

Representative: AARON SMITH

Sales Order #: 900844134

Thanks : Aaron Smith and Crew

HALLIBURTON

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
10/24/2013 12:30		Arrive at Location from Service Center							WITH ALL EQUIPMENT AND MATERIALS,
10/24/2013 12:35		Assessment Of Location Safety Meeting							
10/24/2013 12:55		Pre-Rig Up Safety Meeting							RIG-UP JSA
10/24/2013 13:00		Casing on Bottom							
10/24/2013 13:00		Circulate Well							
10/24/2013 13:00		Rig-Up Equipment							
10/24/2013 13:20		Rig-Up Completed							
10/24/2013 14:00		Pre-Job Safety Meeting							WITH CUSTOMER REP AND RIG CREW
10/24/2013 14:24		Start Job							
10/24/2013 14:26		Test Lines							FRESH WATER WITH NO ADDITIVES
10/24/2013 14:34		Pump Spacer 1	2	10			25.0		FRESH WATER WITH NO ADDITIVES
10/24/2013 14:40		Pump Spacer 2	5	12			71.0		FRESH WATER WITH MUD FLUSH
10/24/2013 14:42		Pump Spacer 1	5	10			48.0		FRESH WATER WITH NO ADDITIVES
10/24/2013 14:44		Pump Cement	5	105			125.0		SKS SWIFCEM B1 @ 14.2 PPG 1.55 YIELD, 7.68 GAL/SK
10/24/2013 15:07		Shutdown							
10/24/2013 15:09		Drop Top Plug							PRE-LOADED HWE TOP PLUG IN PLUG CONTAINER VERIFIED BY CUSTOMER REP
10/24/2013 15:10		Clean Lines	2						WASHED UP ON TOP OF THE PLUG FIRST 10 OF DISPLACEMENT
10/24/2013 15:12		Pump Displacement	5	75.5			350.0		FRESH WATER WITH NO ADDITIVES
10/24/2013 15:23		Spacer Returns to Surface							@31.5 BBLS DISPLACEMENT, 32 BBLS TO THE PIT
10/24/2013 15:31		Cement Returns to Surface							@63 BBLS DISPLACEMENT, 12 BBLS TO THE PIT
10/24/2013 15:37		Bump Plug	2	75.5			996.0		FINAL CIRCULATING PRESSURE 331, 293 PSI TO LAND, 440 PSI TO LIFT,
10/24/2013 15:42		Check Floats							FLOATS HELD, .5 BBLS BACK
10/24/2013 15:43		End Job							RIG DOWN JSA, JOURNEY MANAGMENT MEETING, THANKS AARON SMITH AND CREW

The Road to Excellence Starts with Safety

Sold To #: 300466		Ship To #: 3182380		Quote #:		Sales Order #: 900844134	
Customer: ANADARKO PETROLEUM CORP - EBUS				Customer Rep: Strong, Brett			
Well Name: 3D			Well #: 16N-21HZ		API/UWI #:		
Field: WATTENBURG		City (SAP): FORT LUPTON		County/Parish: Weld		State: Colorado	
Contractor:			Rig/Platform Name/Num: Major 41				
Job Purpose: Cement Surface Casing							
Well Type: Development Well				Job Type: Cement Surface Casing			
Sales Person: FLING, MATTHEW			Srvc Supervisor: SMITH, AARON			MBU ID Emp #: 518187	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DODSON, RICHARD Bryan	4.0	518192	SIMMONS, KEATON J	4.0	524850	SMITH, AARON David	4.0	518187
TOWNSON, JUSTIN T	4.0	555407						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10866497C	10 mile	11398490	10 mile	11562570C	10 mile	12010173	10 mile

Job

Job Times

Formation Name							Date	Time	Time Zone	
Formation Depth (MD)		Top			Bottom		Called Out	24 - Oct - 2013	09:00	MST
Form Type				BHST			On Location	24 - Oct - 2013	12:30	MST
Job depth MD		1030. ft		Job Depth TVD		1030. ft	Job Started	24 - Oct - 2013	14:24	MST
Water Depth				Wk Ht Above Floor		5. ft	Job Completed	24 - Oct - 2013	15:43	MST
Perforation Depth (MD)		From			To		Departed Loc	24 - Oct - 2013	16:30	MST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
13 1/2" Open Hole Section				13.5				.	1030.		
9 5/8" Surface Casing	Unknown		9.625	8.921	36.		J-55	.	1010.		

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft ³ /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
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1	Fresh Water Spacer		10.00	bbl	8.33			2.0	
2	Mud Flush		12.00	bbl	8.4			5.0	
3.5 lbm/bbl		MUD FLUSH III, 40 LB SACK (101633304)							
42 gal/bbl		MUD FLUSH III - SBM (528788)							
1	Fresh Water Spacer		10.00	bbl	8.33			5.0	
3	SwiftCem B2	SWIFTCEM (TM) SYSTEM (452990)	384.0	sacks	14.2	1.53	7.63	5.0	7.63
7.63 Gal		FRESH WATER							
Calculated Values		Pressures		Volumes					
Displacement		Shut In: Instant		Lost Returns		Cement Slurry		Pad	
Top Of Cement		5 Min		Cement Returns		12		Actual Displacement 75.5	
Frac Gradient		15 Min		Spacers		32		Load and Breakdown	
Total Job									
Rates									
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 # 4 @	
The Information Stated Herein Is Correct				Customer Representative Signature					

