

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

Highway 160 38N-2HZ

Majors 29

Post Job Summary

Cement Surface Casing

Date Prepared: 10/26/2013
Version: 1

Service Supervisor: VIGIL, NICHOLAS

Submitted by: TRIER, DEREK

HALLIBURTON

HALLIBURTON

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	1,232.00	42.00
Open Hole Section	13 1/2" Open Hole Section		13.500		0.00	1,242.00	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	2.50	10.0 bbl	10.0 bbl
1	2	Spacer	MudFlush	8.40	3.00	12.0 bbl	12.0 bbl
1	3	Spacer	Fresh Water Spacer	8.33	3.00	10.0 bbl	10.0 bbl
1	4	Cement Slurry	SwiftCem B2	14.20	6.00	466.0 sacks	466.0 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: 2.50 bbl/min

Stage/Plug # 1 Fluid 2: MudFlush
DUMMY MUD / FLUSH / SPACER SBC MATERIAL
10 lbm/Mgal Mud Flush III
10 lbm/bbl Mud Flush III

Fluid Density: 8.40 lbm/gal
Fluid Volume: 12.00 bbl
Pump Rate: 3.00 bbl/min

Stage/Plug # 1 Fluid 3: Fresh Water Spacer
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 8.33 lbm/gal
Pump Rate: 3.00 bbl/min

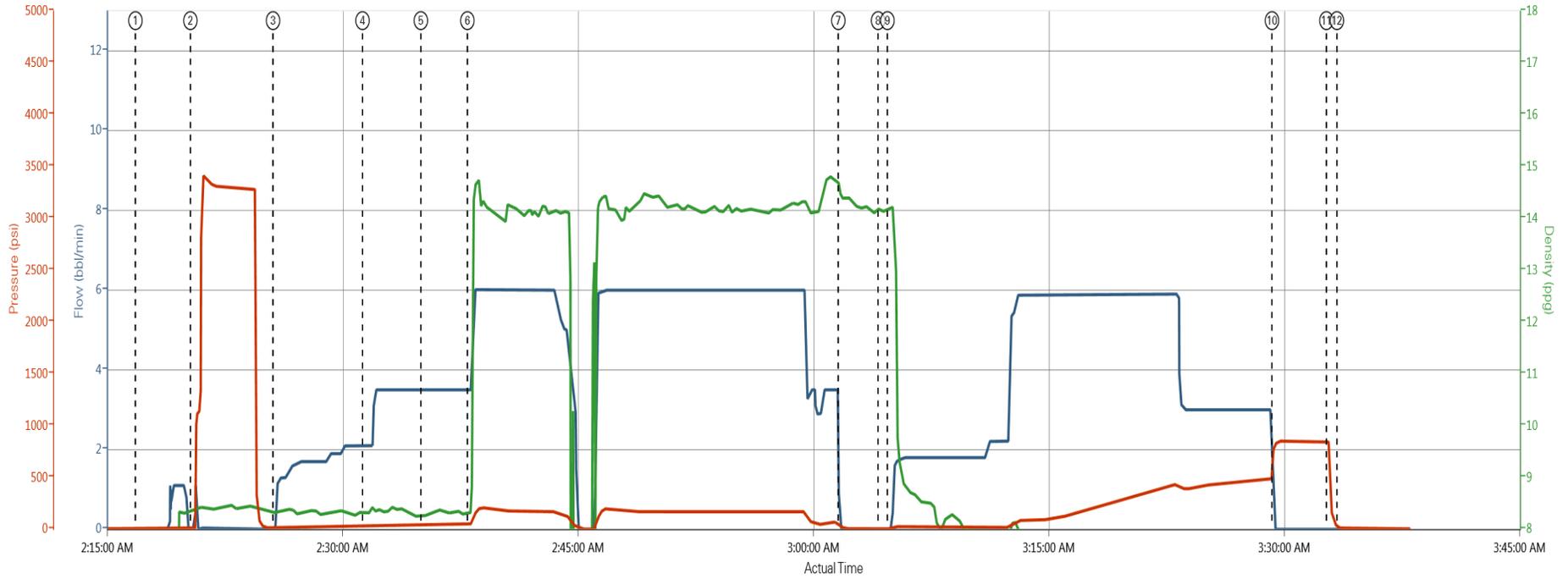
Stage/Plug # 1 Fluid 4: SwiftCem B2
SWIFTCEM (TM) SYSTEM

Fluid Weight: 14.20 lbm/gal
Slurry Yield: 1.54 ft³/sack
Total Mixing Fluid: 7.66 Gal
Surface Volume: 466.0 sacks
Sacks: 466.0 sacks

HALLIBURTON

Data Acquisition

Anadarko Highway 160 38N-2HZ



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

- ① Start Job 0,0,02,6 ③ Water Spacer 0,8,31,12 ⑤ Water Spacer 3,5,8,28,44 ⑦ Shutdown 0,14,46,32 ⑨ Pump Displacement 0,14,16,5 ⑪ Check Floats 0,7,96,845
- ② Test Lines 0,8,34,12 ④ Mud Flush 2,1,8,31,28 ⑥ 14.2 ppg SwiftCem 3,5,8,3,53 ⑧ Drop Top Plug 0,14,18,5 ⑩ Bump Plug 0,7,97,798 ⑫ End Job n/a,n/a,n/a

HALLIBURTON | iCem® Service

Created: 2013-10-22 20:22:54, Version: 2.0.606

Edit

Customer: ANADARKO PETROLEUM CORP - EBUS

Job Date: 10/22/2013 8:24:30 PM

Well: Highway 160 38N-2HZ

Representative: Nicholas Vigil

Sales Order #: 900838817

HALLIBURTON

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
10/22/2013 19:00		Arrive At Loc					On location time was 1900, Rig had 20 joint of casing left to run
10/22/2013 19:10		Assessment Of Location Safety Meeting					Hazard hunt, Water test, Rig up JSA,
10/22/2013 19:15		Wait on HES or HES Sub-Contractor Equipment - Star					Called hot shot to get containment out to location
10/22/2013 19:38		Wait on HES Materials to Arrive - End Time					Hot shots arrived and began setting up containment
10/22/2013 19:56		Rig-Up Equipment					
10/22/2013 20:30		Rig-Up Completed					
10/22/2013 20:30		Wait on Customer or Customer Sub-Contractor Equip					The rig could not circulate they were having issues with a pump
10/23/2013 02:00		Wait on Customer or Customer Sub-Contractor Equipm					Rig finally resolved pump issues
10/23/2013 02:05		Pre-Job Safety Meeting					Held safety meeting with all personnel on location
10/23/2013 02:16		Start Job					
10/23/2013 02:20		Test Lines				3000	Pressure tested lines to 3000 psi
10/23/2013 02:25		Pump Spacer 1	2.5	10.0		30.0	Water Spacer
10/23/2013 02:31		Pump Spacer 2	3.0	10.0		25.0	Mud Flush
10/23/2013 02:35		Pump Spacer 1	3.0	10.0		50.0	Water Spacer
10/23/2013 02:38		Pump Cement	6.0	127.8		200.0	14.2 ppg SwiftCem (466 sks), weight was verified by scale
10/23/2013 03:01		Shutdown					
10/23/2013 03:04		Drop Top Plug					Plug was pre-loaded
10/23/2013 03:04		Pump Displacement	6.0	92.1		300.0	Displaced using water
10/23/2013 03:29		Bump Plug	3.0	92.1		480.0	Bumped plug 500 psi over final lift brought it up to 980 psi and held for 3 minutes
10/23/2013 03:32		Check Floats					Floats Held
10/23/2013 03:33		End Job					Rig down safety meeting
10/23/2013 03:40		Rig-Down Equipment					Rig down equipment and wash up truck
10/23/2013 04:30		Rig-Down Completed					

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 3167885	Quote #:	Sales Order #: 900838817
Customer: ANADARKO PETROLEUM CORP - EBUS		Customer Rep: Case, Randy	
Well Name: Highway 160		Well #: 38N-2HZ	API/UWI #: 05-123-38027
Field: WATTEBERG	City (SAP): FORT LUPTON	County/Parish: Weld	State: Colorado
Lat: N 40.086 deg. OR N 40 deg. 5 min. 9.6 secs.		Long: W 104.74 deg. OR W -105 deg. 15 min. 36 secs.	
Contractor: Majors		Rig/Platform Name/Num: Major 29	
Job Purpose: Cement Surface Casing			
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: PLIENESS, RYAN		Srvc Supervisor: VIGIL, NICHOLAS	MBU ID Emp #: 443481

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BARNES, BRIAN L	0.0	485204	DEY, JERRY A	0.0	505015	SCILEPPI, JOSEPH Dean	0.0	555492
VIGIL, NICHOLAS Joseph	0.0	443481						

Equipment

HES Unit #	Distance-1 way						
10866497C	13 mile	11036301	13 mile	11667703C	13 mile	11764737	13 mile
12010168	13 mile						

Job

Job Times

Formation Name	Formation Depth (MD)	Top	Bottom	Called Out	Date	Time	Time Zone
					22 - Oct - 2013	14:00	MST
Form Type			BHST	On Location	22 - Oct - 2013	19:00	MST
Job depth MD	1242. ft		Job Depth TVD	1242. ft	Job Started	23 - Oct - 2013	02:16
Water Depth			Wk Ht Above Floor		Job Completed	23 - Oct - 2013	03:33
Perforation Depth (MD)	<i>From</i>		<i>To</i>		Departed Loc	23 - Oct - 2013	04:45

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				.	1242.		
9 5/8" Surface Casing	Unknown		9.625	8.921	36.		J-55	.	1232.		

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
1	Fresh Water Spacer		10.00	bbl	8.33			2.50	
2	MudFlush		12.00	bbl	8.4			3.00	
	10 lbm/Mgal	MUD FLUSH III - SBM (528788)							
	10 lbm/bbl	MUD FLUSH III, 40 LB SACK (101633304)							
3	Fresh Water Spacer		10.00	bbl	8.33			3.00	
4	SwiftCem B2	SWIFTCEM (TM) SYSTEM (452990)	466.0	sacks	14.2	1.54	7.66	6.00	7.66
	7.66 Gal	FRESH WATER							
Calculated Values		Pressures			Volumes				
Displacement		Shut In: Instant		Lost Returns		Cement Slurry		Pad	
Top Of Cement		5 Min		Cement Returns		Actual Displacement	92.1	Treatment	
Frac Gradient		15 Min		Spacers		Load and Breakdown		Total Job	
Rates									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe	Amount	42 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				Customer Representative Signature					

