

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

Howard 10N-22HZ

**Majors 29**

## **Post Job Summary** **Cement Surface Casing**

Date Prepared: 10/24/2013  
Version: 1

Service Supervisor: VIGIL, NICHOLAS

Submitted by: TRIER, DEREK

# 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	1,244.00	42.00
Open Hole Section	13 1/2" Open Hole Section		13.500		0.00	1,244.00	0.00

# HALLIBURTON

## ***Pumping Schedule***

Stage / Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Downhole Volume
1	1	Spacer	Fresh Water Spacer	8.33	2.00	10.0 bbl
1	2	Spacer	MudFlush	8.40	2.50	12.0 bbl
1	3	Spacer	Fresh Water Spacer	8.33	3.00	10.0 bbl
1	4	Cement Slurry	SwiftCem B2	14.20	6.00	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: 2.00 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: 2.50 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

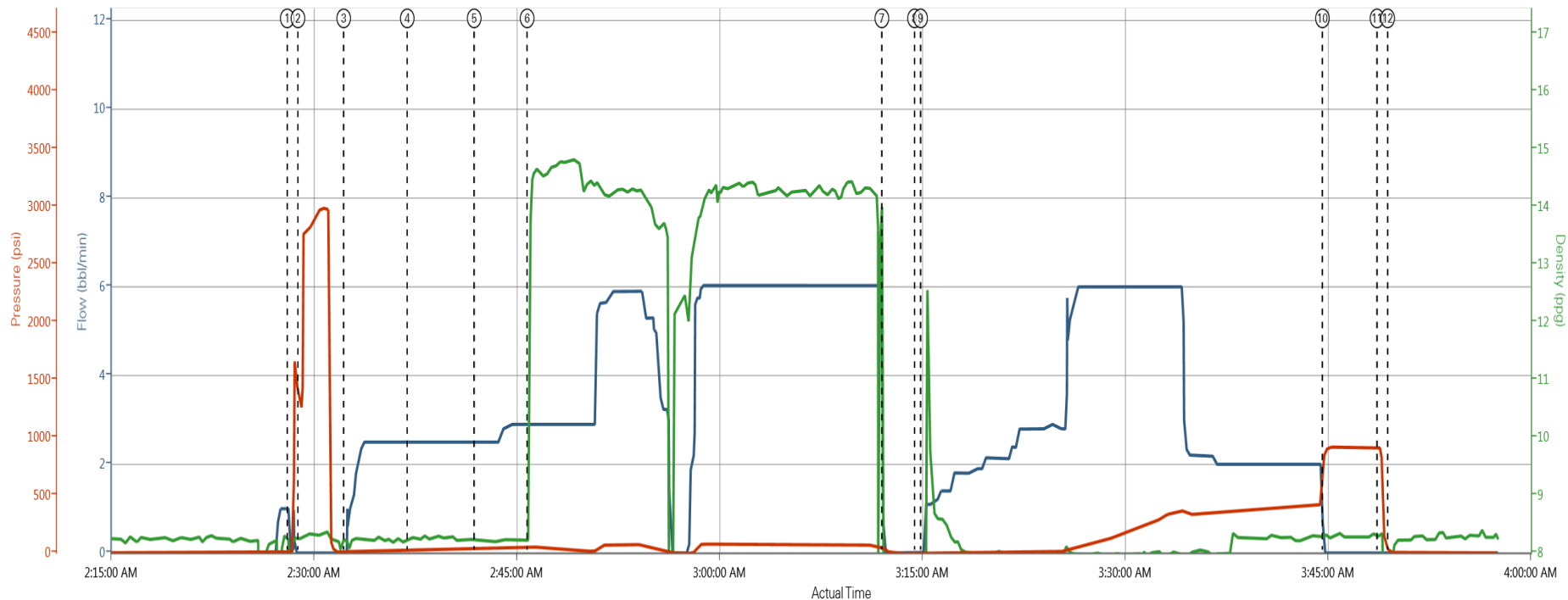
**Stage/Plug # 1      Fluid 4:**      SwiftCem B2  
SWIFTCEN (TM) SYSTEM

Fluid Weight: 14.20 lbm/gal  
Slurry Yield: 1.54 ft<sup>3</sup>/sack  
Total Mixing Fluid: 7.66 Gal  
Surface Volume: 466.0 sacks  
Sacks: 466.0 sacks

# HALLIBURTON

## Data Acquisition

Anadarko Howard 10N-22HZ



① Start Job 0,8,22,13 ② Test Lines 0,8,26,1292 ③ Water Spacer 0,8,22,7 ④ Mud Flush 2,5,8,22,28 ⑤ Water Spacer 2,5,8,22,34 ⑥ 14.2 ppg SwiftCem 2,9,9,83,41 ⑦ Shutdown 0,0,33,37 ⑧ Drop Top Plug 0,-0,24,-3 ⑨ Pump Displacement 0,-0,19,2 ⑩ Bump Plug 0,8,34,864 ⑪ Check Floats 0,8,3,916 ⑫ End Job 0,2

HALLIBURTON | iCem® Service

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Edit

Customer: ANADARKO PETROLEUM CORP -  
EBUS

Job Date: 10/20/2013 11:41:32 PM

Well: Howard 10N-22HZ

Representative: Nicholas Vigil

Sales Order #: 900834811

# HALLIBURTON

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pressure (psig)	Comments
10/20/2013 22:40		Arrive At Loc				On location time was 2300, Rig was running casing when we arrived
10/20/2013 22:50		Assessment Of Location Safety Meeting				Hazard hunt, Water test, Rig up safety meeting, Chained up 660
10/20/2013 23:00		Rig-Up Equipment				Set up containment and began rigging up trucks
10/20/2013 23:47		Rig-Up Completed				Waited for rig to finish running casing and circulate
10/21/2013 02:00		Pre-Job Safety Meeting				Held safety meeting with all personell on location
10/21/2013 02:28		Start Job				
10/21/2013 02:28		Test Lines			3000	Pressure tested lines to 3000 psi
10/21/2013 02:32		Pump Spacer 1	2.00	10.0	25	Water Spacer
10/21/2013 02:37		Pump Spacer 2	2.50	12.0	30	Mud Flush
10/21/2013 02:42		Pump Spacer 1	3.00	10.0	40	Water Spacer
10/21/2013 02:45		Pump Cement	6.00	127.8	75	14.2 ppg SwiftCem (566 sks), Weight was verified by scale. Had to shut down and weight up had some issued with bulk delivery
10/21/2013 03:12		Shutdown				
10/21/2013 03:14		Drop Top Plug				Plug was pre loaded
10/21/2013 03:15		Pump Displacement	5.0	95.3	300	Displaced using water
10/21/2013 03:44		Bump Plug	2.0	95.3	415	Bumped 500 psi over final lift. 20 bbl of cement to surface
10/21/2013 03:48		Check Floats				Floats held
10/21/2013 03:49		End Job				Rig down safety meeting
10/21/2013 04:00		Rig-Down Equipment				Rigged down and washed up pump
10/21/2013 04:50		Rig-Down Completed				

## The Road to Excellence Starts with Safety

<b>Sold To #:</b> 300466	<b>Ship To #:</b> 3120458	<b>Quote #:</b>	<b>Sales Order #:</b> 900834811
<b>Customer:</b> ANADARKO PETROLEUM CORP - EBUS		<b>Customer Rep:</b> PORTER, BOB	
<b>Well Name:</b> Howard		<b>Well #:</b> 10N-22HZ	<b>API/UWI #:</b> 05-123-38230
<b>Field:</b> WATTEBERG	<b>City (SAP):</b> DACONO	<b>County/Parish:</b> Weld	<b>State:</b> Colorado
<b>Lat:</b> N 40.016 deg. OR N 40 deg. 0 min. 57.6 secs.		<b>Long:</b> W 104.875 deg. OR W -105 deg. 7 min. 30 secs.	
<b>Contractor:</b> Majors		<b>Rig/Platform Name/Num:</b> Major 29	
<b>Job Purpose:</b> Cement Surface Casing			
<b>Well Type:</b> Development Well		<b>Job Type:</b> Cement Surface Casing	
<b>Sales Person:</b> PLIENESS, RYAN		<b>Srvc Supervisor:</b> VIGIL, NICHOLAS	<b>MBU ID Emp #:</b> 443481

## Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ACEVEDO, ROBERTO Carlos	0.0	551312	BARNES, BRIAN L	0.0	485204	MULLER, MICHEL B	0.0	529830
VIGIL, NICHOLAS Joseph	0.0	443481						

## Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10972458	6 mile	11019275C	6 mile	11398490	6 mile	12010168	6 mile

## Job

## Job Times

Formation Name				Date	Time	Time Zone
Formation Depth (MD)	Top		Bottom	Called Out	20 - Oct - 2013	19:00 MST
Form Type		BHST		On Location	20 - Oct - 2013	22:40 MST
Job depth MD	1244. ft	Job Depth TVD	1244. ft	Job Started	21 - Oct - 2013	02:28 MST
Water Depth		Wk Ht Above Floor		Job Completed	21 - Oct - 2013	03:49 MST
Perforation Depth (MD)	From		To	Departed Loc	21 - Oct - 2013	05:20 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				.	1244.		
9 5/8" Surface Casing	Unknown		9.625	8.921	36.		J-55	.	1244.		

## Fluid Data

## Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
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1	Fresh Water Spacer			bbl	8.33			2.0	
2	MudFlush		12.00	bbl	8.4			2.5	
10 lbm/Mgal		MUD FLUSH III - SBM (528788)							
10 lbm/bbl		MUD FLUSH III, 40 LB SACK (101633304)							
3	Fresh Water Spacer			bbl	8.33	.0	.0	3.0	
4	SwiftCem B2	SWIFTCem (TM) SYSTEM (452990)	466.0	sacks	14.2	1.54	7.66	6.0	7.66
7.66 Gal		FRESH WATER							
<b>Calculated Values</b>		<b>Pressures</b>		<b>Volumes</b>					
Displacement		Shut In: Instant		Lost Returns		Cement Slurry		Pad	
Top Of Cement		5 Min		Cement Returns		20		Actual Displacement 95.3	
Frac Gradient		15 Min		Spacers		32		Load and Breakdown	
<b>Rates</b>									
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					

