

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

Howard 28C-33HZ

Major 29

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

Prepared for:  
Date Prepared: 9/28/2013  
Version: 1

Service Supervisor: MCBRIDE, NATHAN

Submitted by: FINNEY, SEAN

**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	900.00	42.00
Open Hole Section	13 1/2" Open Hole Section		13.500		0.00	900.00	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	5.00	10.0 bbl	10.0 bbl
1	2	Spacer	Mud Flush	8.40	5.00	12.0 bbl	12.0 bbl
1	3	Cement Slurry	SwiftCem B2	14.20	5.00	385.0 sacks	385.0 sacks

## ***Fluids Pumped***

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

Fluid Density: 8.33 lbm/gal  
Fluid Volume: 10.00 bbl  
Pump Rate: 5.00 bbl/min

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

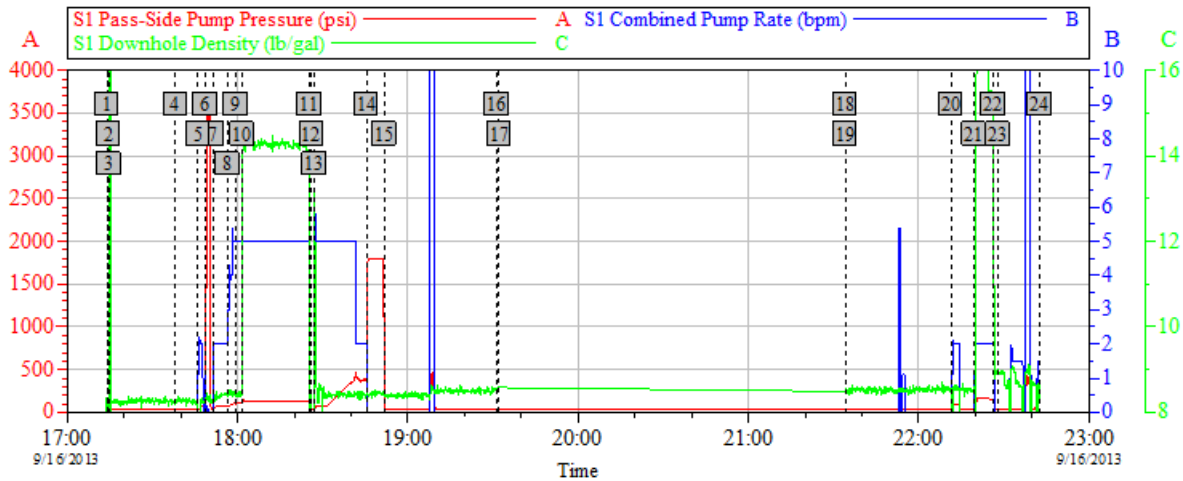
Fluid Density: 8.40 lbm/gal  
Fluid Volume: 12.00 bbl  
Pump Rate: 5.00 bbl/min

**Stage/Plug # 1      Fluid 3:**      SwiftCem B2  
SWIFTCM (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: 385.0 sacks  
Sacks: 385.0 sacks  
Calculated Fill: 900.00 ft  
Calculated Top of Fluid: 0.00 ft

# HALLIBURTON

## Data Acquisition



### Global Event Log

1 Starting Job	17:14:00	2 Establish Rate	17:14:30	3 Establish Rate	17:14:43
4 Start Job	17:38:04	5 Fill Lines	17:46:00	6 Test Lines	17:48:31
7 Fresh Water	17:51:16	8 Mud Flush	17:56:26	9 Fresh Water	17:59:26
10 Pump Lead Cement	18:01:38	11 Shutdown	18:25:21	12 Drop Top Plug	18:26:04
13 Pump Displacement	18:27:03	14 Bump Plug	18:45:21	15 Check Floats	18:51:42
16 Suspending Job	19:31:28	17 Ending Job	19:32:08	18 Starting Job	21:34:06
19 Resuming Job	21:34:07	20 Fresh Water Ahead	22:11:23	21 Pump Cement	22:19:34
22 Fresh Water Displacement	22:26:22	23 End Job	22:27:55	24 Ending Job	22:42:42

Customer:

WellDescription:

Job Date: 16-Sep-2013

UWI:

Sales Order #: 900735831

OptiCem v6.4.10  
05-Oct-13 14:57

# HALLIBURTON

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
09/15/2013 10:30		Arrive at Location from Service Center					All equipment and materials on location Rig Running Casing
09/15/2013 10:35		Assessment Of Location Safety Meeting					Hazard Hunt and review fluid location, wash up and truck layout
09/15/2013 17:00		Casing on Bottom					River Rising
09/15/2013 17:10		Circulate Well					
09/15/2013 17:15		Pre-Rig Up Safety Meeting					
09/15/2013 17:20		Rig-Up Equipment					
09/15/2013 18:00		Comment					Couldn't get truck turned around on location. Due to muddy location. Had to pull out bulk truck twice with back hoe. Sent Bulk truck off location to turn around.
09/15/2013 18:15		Comment					River coming up onto location. Bulk Truck Stuck off location at turn around point.
09/15/2013 21:00		Comment					River over took location and customer evacuated/released all personnel from location. 2100
09/16/2013 15:30		Pre-Job Safety Meeting					
09/16/2013 16:20		Arrive At Loc					
09/16/2013 16:25		Assessment Of Location Safety Meeting					Review revised cement volume requested by customer 336sks. Chain up Equipment
09/16/2013 16:30		Rig-Up Equipment					
09/16/2013 17:00		Rig-Up Completed					
09/16/2013 17:45		Start Job					
09/16/2013 17:46		Pump Water	2	2		60.0	Fill Lines
09/16/2013 17:48		Test Lines				3671.0	
09/16/2013 17:51		Pump Spacer	5	10		70.0	Fresh Water
09/16/2013 17:56		Pump Spacer	5	12		104.0	Mud Flush
09/16/2013 17:59		Pump Spacer	5	10		104.0	Fresh Water
09/16/2013 18:01		Pump Lead Cement	5	105		145.0	385sks @ 14.2ppg, 1.54yield, 7.66gal/sk
09/16/2013 18:26		Drop Top Plug					
09/16/2013 18:27		Pump Displacement	5	75.4		250.0	Fresh Water
09/16/2013 18:33		Spacer Returns to Surface					Mud Flush to Surface 31bbls into Displacement
09/16/2013 18:45		Bump Plug				1800.0	500psi Over 1450 Final bump Pressure
09/16/2013 18:51		Check Floats					Floats Good
09/16/2013 19:00		Comment					Customer Requested wait 2hrs and perform top out. Customer requested 50sks. Ordered out 200sks
09/16/2013 21:20		Comment					Bulk Truck with Top Out on Location 2100 Chained up and Rigged in 2120
09/16/2013 22:11		Pump Water	2	5			Fresh Water Ahead
09/16/2013 22:19		Pump Cement	2	10.2			50sks @ 15.8ppg, 1.15yield, 5.0gal/sk
09/16/2013 22:26		Pump Displacement	2	1			Fresh Water Displacement 5bbls Cement to Surface
09/16/2013 22:28		End Job					Thanks McBride and Crew

*The Road to Excellence Starts with Safety*

Sold To #: 300466	Ship To #: 3005224	Quote #:	Sales Order #: 900735831
Customer: ANADARKO PETROLEUM CORP - EBUS		Customer Rep: Balkenbush, Bob	
Well Name: Howard		Well #: 28C-33HZ	API/UWI #: 05-123-36929
Field: WATTENBURG	City (SAP): DACONO	County/Parish: Weld	State: Colorado
Job Purpose: Cement Surface Casing			
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: PLIENESS, RYAN		Srvs Supervisor: MCBRIDE, NATHAN	MBU ID Emp #: 313810

## Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
CHISLUM, DENNIS	17.3	512130	MARKOVICH, STEVEN Michael	17.3	502964	MCBRIDE, NATHAN Charles	17.3	313810

## Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
11360865C	15 mile	11362287C	15 mile	11764054C	15 mile		

## Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
TOTAL	Total is the sum of each column separately							

Job				Job Times			
Formation Name				Date	Time	Time Zone	
Formation Depth (MD)	Top	Bottom		Called Out	15 - Sep - 2013	07:00	MST
Form Type	BHST			On Location	15 - Sep - 2013	10:30	MST
Job depth MD	1011. ft		Job Depth TVD	1011. ft	Job Started	16 - Sep - 2013	17:45
Water Depth			Wk Ht Above Floor	5. ft	Job Completed	16 - Sep - 2013	22:28
Perforation Depth (MD)	From	To		Departed Loc	16 - Sep - 2013	23:40	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				.	900.		
9 5/8" Surface Casing	Unknown		9.625	8.921	36.		J-55	.	900.		

Sales/Rental/3<sup>rd</sup> Party (HES)

Description	Qty	Qty uom	Depth	Supplier
CMT CASING EQUIPMENT BOM	1	JOB		
MILEAGE FOR CEMENTING CREW,ZI	30	MI		
ZI FUEL SURCHG-CARS/PICKUPS<1 1/2TON	30	MI		
KIT,HALL WELD-A	1	EA		
CNTRLZR, 9 5/8x13 3/4,#500-0963-1375	7	EA		
PLUG,CMTG,TOP,9 5/8,HWE,8.16 MIN/9.06 MA	1	EA		
COLLAR-STOP-9 5/8"-FRICTION-HINGED	2	EA		
BASKET - CEMENT - 9-5/8 CSG X 12-1/4	1	EA		

Fluid Data									
Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Fresh Water Spacer		10.00	bbl	8.33	.0	.0	5.0	
2	Mud Flush		12.00	bbl	8.4	.0	.0	5.0	
3.33 lbm/bbl		MUD FLUSH III, 40 LB SACK (101633304)							
42 gal/bbl		MUD FLUSH III - SBM (528788)							
3	SwiftCem B2	SWIFTCM (TM) SYSTEM (452990)	385.0	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		Actual Displacement		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					

