

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

NRC 4N-8HZ

**Majors 42**

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

Prepared for:  
Date Prepared: 1/30/2014  
Version: 1

Service Supervisor: WHIPPLE, WESLEY

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	1,245.00	45.00
Open Hole Section	13 1/2" Open Hole Section		13.500		0.00	1,245.00	0.00

# HALLIBURTON

## ***Pumping Schedule***

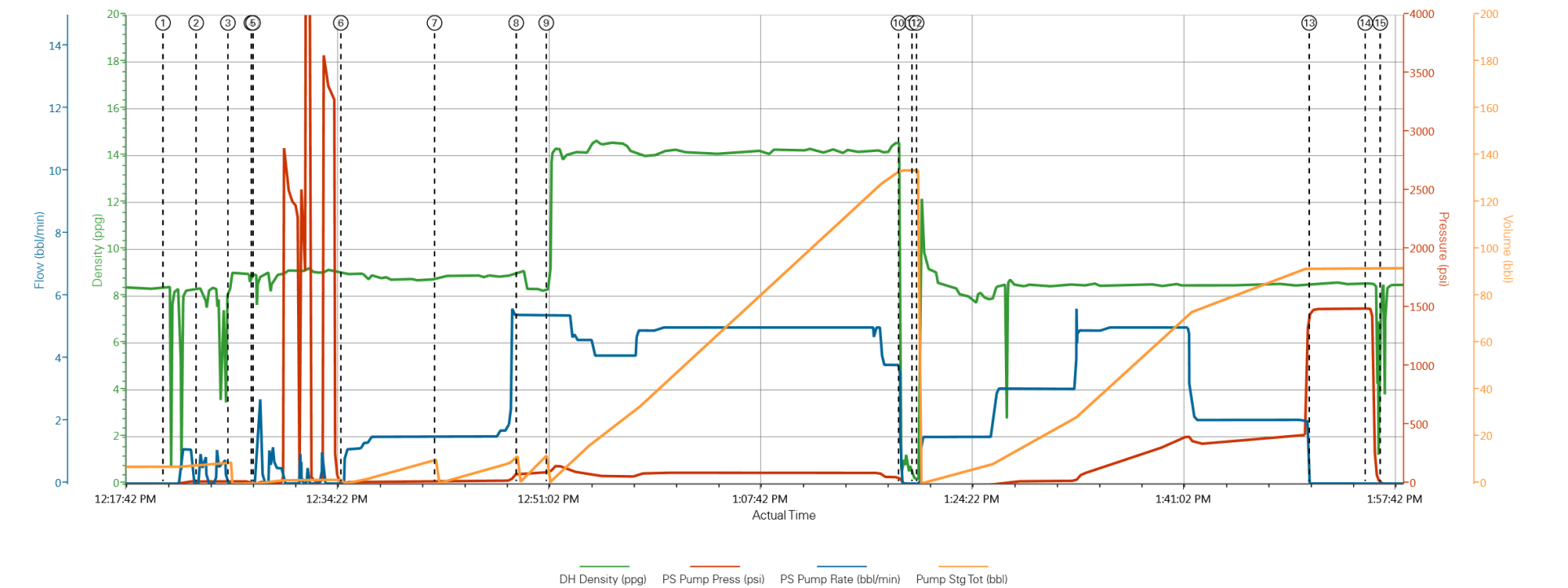
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Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	Fresh Water Spacer	8.33	1.50	10.0 bbl	10.0 bbl
1	2	Spacer	Mud Flush	8.40	1.50	12.0 bbl	12.0 bbl
1	1	Spacer	Fresh Water Spacer	8.33	5.00	10.0 bbl	10.0 bbl
1	3	Cement Slurry	SwiftCem B2	14.20	5.00	446.0 sacks	446.0 sacks

# HALLIBURTON

## Data Acquisition

ANADARKO NRC 4N-8HZ



① Start Job 8.36;0.0;7.2    ④ Start Job 8.97;-2.0;0.0    ⑦ Pump Spacer 2 8.74;20.1;5.0    ⑩ Shutdown 0.76;28.0;133.7    ⑬ Bump Plug 8.47;1476.0;92  
② Test Lines 8.37;12.0;8.2    ⑤ Test Lines 8.92;-4.0;1.0    ⑧ Pump Spacer 1 8.98;87.5;4.0.1    ⑪ Drop Top Plug 0.23;-14.0;133.7    ⑭ Other 8.56;1495.0;92  
③ End Job 8.3;12.0;9    ⑥ Pump Spacer 1 9.04;3.0;0.0    ⑨ Pump Cement 8.28;98.5;4.0.1    ⑫ Pump Displacement 0.21;-15.0;0    ⑮ End Job 8.46;-1.58;0.92

▲ HALLIBURTON | iCem® Service

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# HALLIBURTON

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
01/20/2014 06:30		Call Out							CREW CALLED OUT BY ARS OFFICE @0630 REQUESTED ON LOCATION @ 1030
01/20/2014 09:20		Crew Leave Yard							CREW PRE TRIPPED ALL EQUIPMENT, HELD PRE JOURNEY SAFETY MEETING TO DISCUSS ROUTE TRAVELED AND POTENTIAL DRIVING HAZARDS
01/20/2014 09:40		Arrive At Loc							ARRIVED ON LOCATION AND MET WITH COMPANY REP TO DISCUSS JOB DETAILS
01/20/2014 09:50		Rig-Up Equipment							HELD PRE RIG UP SAFETY MEETING AND COMMENCED RIG UP OF EQUIPMENT. DONE RIGGING UP @ 1020
01/20/2014 11:00		Casing on Bottom							RIG LANDED CASING ON BOTTOM AND CIRCULATED AN HR
01/20/2014 12:00		Safety Meeting							HELD PRE JOB SAFETY MEETING WITH ALL HANDS ON LOCATION TO DISCUSS JOB PROCESS PROCEDURES AND POTENTIAL HAZARDS THAT COULD OCCUR DURING CEMENTING
01/20/2014 12:20		Start Job							
01/20/2014 12:23		Test Lines						3000.0	PRESSURE TESTED PUMPS AND LINES TO 3000PSI, FOUND NO VISABLES LEAKS IN RIG UP AND PRESSURE HELD
01/20/2014 12:34		Pump Spacer 1	1.5	10				8.0	PUMP FRESH WATER SPACER
01/20/2014 12:42		Pump Spacer 2	1.5	12				25.0	MIX AND PUMP MUD FLUSH SPACER
01/20/2014 12:48		Pump Spacer 1	5.5	10				40.0	PUMP FRESH WATER SPACER
01/20/2014 12:51		Pump Cement	5	122				95.0	MIX AND PUMP 446SKS OF SWIFTCEM @ 14.2 PPG. DENSITY VERIFIED BY PRESSURIZED MUD SCALES
01/20/2014 13:18		Shutdown							
01/20/2014 13:19		Drop Top Plug							DROP TOP PLUG FROM HES PLUG CONTAINER. WITNESSED BY COMPANY REP
01/20/2014 13:20		Pump Displacement	5	93				290.0	PUMP FRESH WATER DISPLACEMENT, RECIEVED CEMENT BACK TO SURFACE AT 75 BBLS AWAY
01/20/2014 13:50		Bump Plug						1480.0	BUMP PLUG 1000 PSI OVER FINAL PUMPING PRESSURE.
01/20/2014 13:55		Check Floats						1490.0	RELEASE PRESSURE BACK TO PUMP TRUCK, RECIEVED 1 BBL BACK AND FLOATS HELD
01/20/2014 13:56		End Job							HELD POST JOB SAFETY MEETING AND COMMENCED RIG DOWN OF ALL EQUIPMENT. WET AND DRY CEMENT SAMPLES WERE LEFT ON LOCATION

## The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 3205593	Quote #:	Sales Order #: 901048787
Customer: ANADARKO PETROLEUM CORP - EBUS		Customer Rep: Hersh, Larry	
Well Name: NRC		Well #: 4N-8HZ	API/UWI #:
Field: WATTENBERG	City (SAP): IONE	County/Parish: Weld	State: Colorado
Contractor: Majors		Rig/Platform Name/Num: Majors 42	
Job Purpose: Cement Surface Casing			
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: GREGORY, JON		Srvc Supervisor: WHIPPLE, WESLEY	MBU ID Emp #: 518611

## Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BARNES, BRIAN L	4.8	485204	MAYFIELD, BYRON L	4.8	528751	ROBINSON, TROY	4.8	7771
WHIPPLE, WESLEY Morgan	4.8	518611						

## Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
11019824	12 mile	11542778	12 mile	11764054C	12 mile	11764737	12 mile
12010172	12 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	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Job Depth TVD	Water Depth	Perforation Depth (MD)	From	To	Called Out	Date	Time	Time Zone
				BHST	1245. ft	1245. ft	2. ft					20 - Jan - 2014	06:30	MST
											On Location	20 - Jan - 2014	09:40	MST
											Job Started	20 - Jan - 2014	12:20	MST
											Job Completed	20 - Jan - 2014	13:56	MST
											Departed Loc	20 - Jan - 2014	14:30	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				.	1245.		
9 5/8" Surface Casing	Unknown		9.625	8.921	36.		J-55	.	1245.		

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	20	MI		
ZI FUEL SURCHG-CARS/PICKUPS<1 1/2TON	20	MI		
KIT,HALL WELD-A	1	EA		
CNTRLZR, 9 5/8"x13 3/4',#500-0963-1375	7	EA		
Description	Qty	Qty uom	Depth	Supplier

BASKET - CEMENT - 9-5/8 CSG X 12-1/4					1	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			
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			1.5	
2	Mud Flush		12.00	bbl	8.4			1.5	
3.5 lbm/bbl		MUD FLUSH III, 40 LB SACK (101633304)							
42 gal/bbl		MUD FLUSH III - SBM (528788)							
1	Fresh Water Spacer		10.00	bbl	8.33			5.0	
3	SwiftCem B2	SWIFTCEN (TM) SYSTEM (452990)	446.0	sacks	14.2	1.54	7.66	5.0	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		18	Actual Displacement	93	Treatment
Frac Gradient		15 Min		Spacers		32	Load and Breakdown	Total Job	
Rates									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe		Amount	45 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					

