

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

Pettinger 4C-18HZ

**Majors 42**

## **Post Job Summary**

# **Cement Surface Casing**

Date Prepared: 11/17/2013  
Version: 1

Service Supervisor: LAVALLEY, LARRY

Submitted by: TRIER, DEREK

**HALLIBURTON**

# 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	1,196.00	43.00
Open Hole Section	13 1/2" Open Hole Section		13.500		0.00	1,078.00	0.00

# HALLIBURTON

## ***Pumping Schedule***

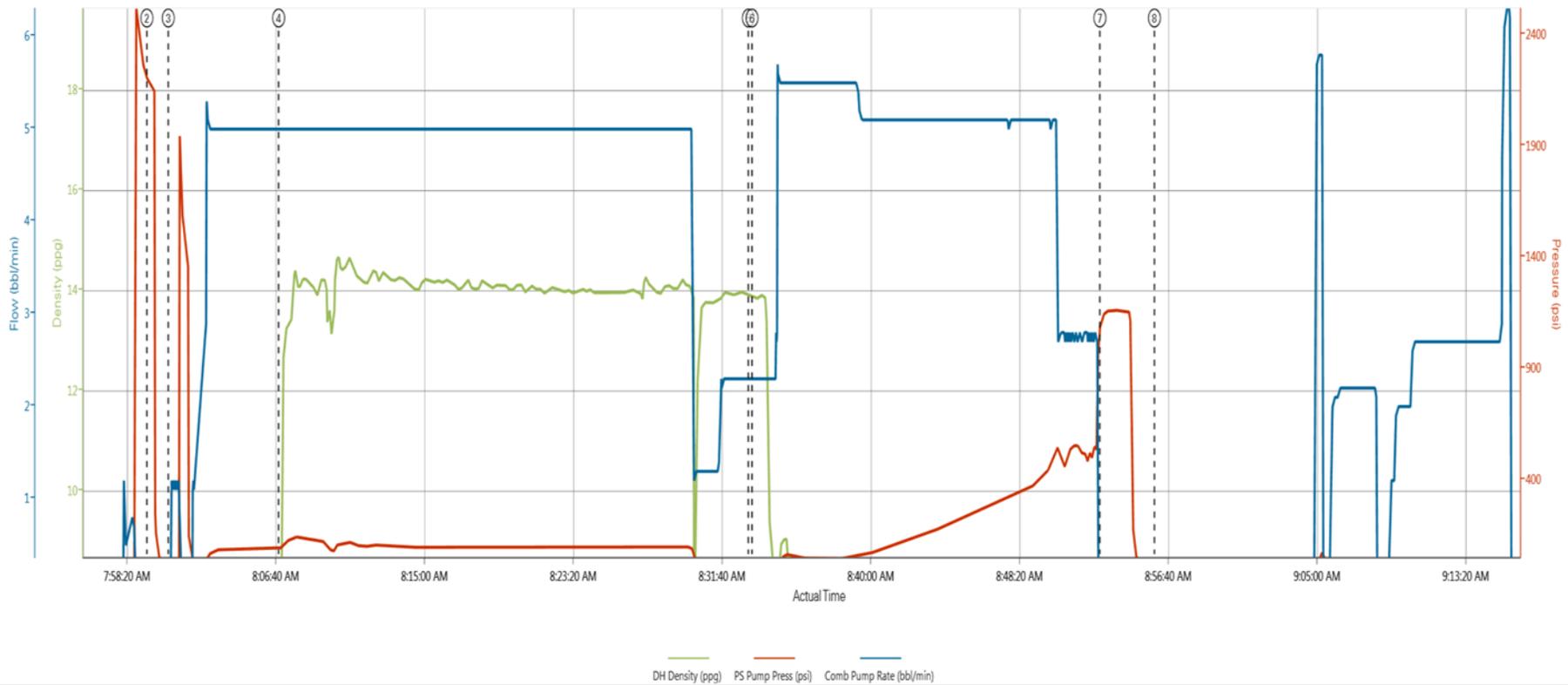
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<b>Stage /Plug #</b>	<b>Fluid #</b>	<b>Fluid Type</b>	<b>Fluid Name</b>	<b>Surface Density lbm/gal</b>	<b>Avg Rate bbl/min</b>	<b>Surface Volume</b>	<b>Downhole Volume</b>
1	1	Spacer	Fresh Water Spacer	8.33	5.00	10.0 bbl	10.0 bbl
1	2	Spacer	Mud Flush	8.40	5.00	12.0 bbl	12.0 bbl
1	1	Spacer	Fresh Water Spacer	8.33	5.00	10.0 bbl	10.0 bbl
1	3	Cement Slurry	SwiftCem B2	14.20	5.0	430.0 sacks	430.0 sacks

# HALLIBURTON

## Data Acquisition

Custom Results



- ① Start Job 8:42:37,0    ④ Pump Lead Cement 8:43:96,5    ⑦ Bump Plug 8:29:1127,0
- ② Test Lines 8:56:2185,0    ⑤ Drop Top Plug 13:87:12,2,3    ⑧ End Job 8:33,0,0
- ③ Pump Spacer 1 8:51:1,0    ⑥ Pump Displacement 13:88:11,2,3

# HALLIBURTON

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
11/12/2013 00:32		Call Out					CREW CALLED AT 02:00 AM
11/12/2013 06:30		Arrive at Location from Service Center					
11/12/2013 06:35		Assessment Of Location Safety Meeting					HAZARD HUNT ON LOCATION
11/12/2013 07:50		Safety Meeting - Pre Job					
11/12/2013 07:59		Start Job					
11/12/2013 07:59		Test Lines				2185.0	FRESH WATER WITH NO ADDITIVES
11/12/2013 08:00		Pump Spacer 2	5	20		96.0	FRESH WATER WITH NO ADDITIVES
11/12/2013 08:06		Pump Lead Cement	5	117		96.0	430 SKS SWIFTCEM B2 MIXED @ 14.2 PPG YIELD 1.53 FT3/FT AND 7.66GAL/SK. VERIFIED BY PRESSURIZED SCALES
11/12/2013 08:32		Shutdown					
11/12/2013 08:33		Drop Top Plug					PRELOADED HWE TOP PLUG
11/12/2013 08:33		Pump Displacement	5	89		590.0	FRESH WATER WITH NO ADDITIVES. CAUGHT CEMENT @ 35 BBLs AWAY AND SPACER RETURNED TO SURFACE @ 27 BBLs AWAY AND 12 BBLs CEMENT BACK TO SURFACE
11/12/2013 08:52		Bump Plug	3			1123.0	CALCULATED PRESSURE TO LAND WAS 212 AND PRESSURE TO LIFT WAS 238 PSI
11/12/2013 08:54		Other					FLOATS HELD AND GOT 1 BBLs BACK.
11/12/2013 08:55		End Job					HELD SAFETY MEETING TO RIG DOWN AND DEPART LOCATION

## The Road to Excellence Starts with Safety

<b>Sold To #:</b> 300466	<b>Ship To #:</b> 3117349	<b>Quote #:</b>	<b>Sales Order #:</b> 900879743
<b>Customer:</b> ANADARKO PETROLEUM CORP - EBUS		<b>Customer Rep:</b> PORTER, BOB	
<b>Well Name:</b> Pettinger		<b>Well #:</b> 4C-148HZ	<b>API/UWI #:</b> 05-123-38020
<b>Field:</b> WATTENBERG	<b>City (SAP):</b> BRIGHTON	<b>County/Parish:</b> Weld	<b>State:</b> Colorado
<b>Lat:</b> N 40.045 deg. OR N 40 deg. 2 min. 41.604 secs.		<b>Long:</b> W 104.712 deg. OR W -105 deg. 17 min. 15.238 secs.	
<b>Contractor:</b> Majors		<b>Rig/Platform Name/Num:</b> Majors42	
<b>Job Purpose:</b> Cement Surface Casing			
<b>Well Type:</b> Development Well		<b>Job Type:</b> Cement Surface Casing	
<b>Sales Person:</b> GREGORY, JON		<b>Srvc Supervisor:</b> LAVALLEY, LARRY	<b>MBU ID Emp #:</b> 419296

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
LANGE, TIMOTHY Paul	0.0	520811	LAVALLEY, LARRY P	0.0	419296	NESBITT, ROY Iverson	0.0	537416
SIMMONS, KEATON J	0.0	524850						

### Equipment

HES Unit #	Distance-1 way						
10246780C	5 mile	10988836	5 mile	11488570C	5 mile	11518549	5 mile

### Job

### Job Times

Formation Name	Formation Depth (MD)	Top	Bottom	Called Out	Date	Time	Time Zone
					11 - Nov - 2013	23:00	MST
<b>Form Type</b>			<b>BHST</b>	<b>On Location</b>	12 - Nov - 2013	06:30	MST
<b>Job depth MD</b>	1206. ft		<b>Job Depth TVD</b>	1206. ft	<b>Job Started</b>	12 - Nov - 2013	08:00
<b>Water Depth</b>			<b>Wk Ht Above Floor</b>	6. ft	<b>Job Completed</b>	12 - Nov - 2013	09:00
<b>Perforation Depth (MD)</b>	<i>From</i>		<i>To</i>		<b>Departed Loc</b>	12 - Nov - 2013	09:45
							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				.	1078.		
9 5/8" Surface Casing	Unknown		9.625	8.921	36.		J-55	.	1196.		

### 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		
Description	Qty	Qty uom	Depth	Supplier
KIT,HALL WELD-A	1	EA		
CNTRLZR, 9 5/8"x13 3/4',#500-0963-1375	9	EA		
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			5.0	
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)	430.0	sacks	14.2	1.53	7.63	5.0	7.63
	7.63 Gal	FRESH WATER							
Calculated Values		Pressures			Volumes				
Displacement	89	Shut In: Instant		Lost Returns	0	Cement Slurry		Pad	
Top Of Cement		5 Min		Cement Returns	12.0	Actual Displacement	89	Treatment	
Frac Gradient		15 Min		Spacers	32.0	Load and Breakdown		Total Job	
Rates									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe	Amount	43 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					

