

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

Kunzman 3C-5HZ

Ensign 132

Post Job Summary

Cement Surface Casing

Prepared for:
Date Prepared: 10/12/2013
Version: 1

Service Supervisor: SMITH, AARON

Submitted by: FINNEY, SEAN

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	855.00	40.51
Open Hole Section	13 1/2" Open Hole Section		13.500		0.00	865.00	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	3.00	10.0 bbl	10.0 bbl
1	2	Spacer	MUD FLUSH III	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	5.00	350.0 sacks	350.0 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: 3.00 bbl/min

Stage/Plug # 1 Fluid 2: MUD FLUSH III
MUD FLUSH III - SBM (528788)

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

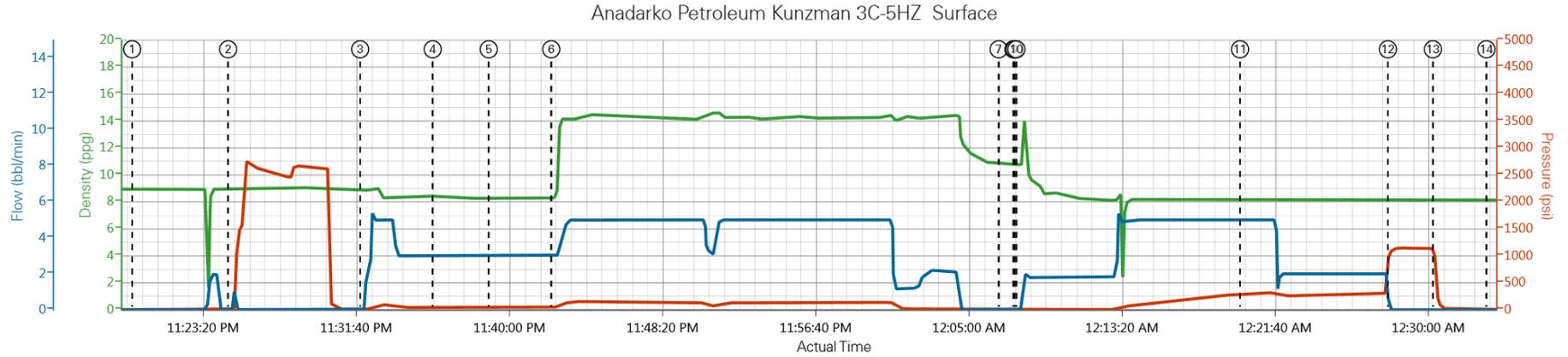
Fluid Density: 8.33 lbm/gal
Fluid Volume: 10.00 bbl
Pump Rate: 3.00 bbl/min

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: 7.63 Gal
Surface Volume: 350.0 sacks
Sacks: 350.0 sacks
Calculated Fill: 900.00 ft
Calculated Top of Fluid: 0.00 ft

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Data Acquisition



DH Density (ppg) -0.2 PS Pump Press (psi) 1 Comb Pump Rate (bbl/min) 0

- ① Start Job 8.97;0,0 ③ Pump Spacer 1 8.92;4,0 ⑤ Pump Spacer 1 8.36;47,3 ⑦ Shutdown 10.82;2,0 ⑨ Clean Lines 10.78;2,0 ⑪ Spacer Returns to Surface 8.09;287,5 ⑬ Check Floats 8.12;677,0
- ② Test Lines 8.98;6,0 ④ Pump Spacer 2 8.4;42,3 ⑥ Pump Cement 8.29;50,3 ⑧ Drop Top Plug 10.77;2,0 ⑩ Pump Displacement 10.77;2,0 ⑫ Bump Plug 8.16;1082,0 ⑭ End Job 8.11;4,0

▼ HALLIBURTON | iCem® Service

Created: 2013-10-04 21:32:25, Version: 2.0.606

Edit

Customer : ANADARKO PETROLEUM CORP -
EBUS

Job Date : 10/4/2013 10:04:58 PM

Well : Kunzman 3C-5HZ

Representative : Aaron Smith

Sales Order # : 900801503

Thanks : Aaron Smith and Crew

HALLIBURTON

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
10/04/2013 20:20		Arrive at Location from Service Center					WITH ALL EQUIPMENT AND MATERIALS,
10/04/2013 20:30		Assessment Of Location Safety Meeting					
10/04/2013 21:00		Pre-Rig Up Safety Meeting					RIG-UP JSA
10/04/2013 21:05		Rig-Up Equipment					COULD NOT FINISH RIGGING UP UNTILL DUE TO CASING BEING RAN, AND RIG CREW RIGGING DOWN CASING CREW.
10/04/2013 22:15		Casing on Bottom					
10/04/2013 22:15		Circulate Well					
10/04/2013 22:30		Rig-Up Completed					
10/04/2013 22:45		Pre-Job Safety Meeting					WITH CUSTOMER REP AND RIG CREW
10/04/2013 23:19		Start Job					
10/04/2013 23:24		Test Lines				2500.0	FRESH WATER WITH NO ADDITIVES
10/04/2013 23:32		Pump Spacer 1	3	10		85.0	FRESH WATER WITH NO ADDITIVES
10/04/2013 23:35		Pump Spacer 2	3	12		85.0	FRESH WATER WITH MUD FLUSH
10/04/2013 23:39		Pump Spacer 1	3	10		90.0	FRESH WATER WITH NO ADDITIVES
10/04/2013 23:42		Pump Cement	5	97		130.0	350 SKS SWIFTCEM B1 @ 14.2 PPG 1.55 YIELD, 7.68 GAL/SK
10/05/2013 00:04		Shutdown					
10/05/2013 00:06		Drop Top Plug					PRE-LOADED HWE TOP PLUG IN PLUG CONTAINER VERIFIED BY CUSTOMER REP
10/05/2013 00:07		Clean Lines	2	10		25.0	WASH UP ON TOP OF PLUG, FIRST TEN OF DISPLACEMENT.
10/05/2013 00:08		Pump Displacement	5	53		304.0	FRESH WATER WITH NO ADDITIVES
10/05/2013 00:19		Cement Returns to Surface					@40 BBLs DISPLACEMENT, 23 BBLs TO THE PIT
10/05/2013 00:27		Bump Plug	2	63		1145.0	FINAL CIRCULATING PRESSURE 304, 248 PSI TO LAND, 371 PSI TO LIFT,
10/05/2013 00:30		Check Floats					FLOATS HELD, BBLs BACK
10/05/2013 00:33		End Job					RIG DOWN JSA, JOURNEY MANAGMENT MEETING, THANKS AARON SMITH AND CREW

The Road to Excellence Starts with Safety

Sold To #: 300466		Ship To #: 3110213		Quote #:		Sales Order #: 900801503	
Customer: ANADARKO PETROLEUM CORP - EBUS				Customer Rep: Taylor, Sam			
Well Name: Kunzman			Well #: 3C-5HZ		API/UWI #: 05-123-37677		
Field: WATTENBERG		City (SAP): FORT LUPTON		County/Parish: Weld		State: Colorado	
Lat: N 40.016 deg. OR N 40 deg. 0 min. 57.6 secs.				Long: W 104.898 deg. OR W -105 deg. 6 min. 7.2 secs.			
Contractor: Ensign			Rig/Platform Name/Num: Ensign 132				
Job Purpose: Cement Surface Casing							
Well Type: Development Well				Job Type: Cement Surface Casing			
Sales Person: FLING, MATTHEW			Srvc Supervisor: SMITH, AARON			MBU ID Emp #: 518187	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DODSON, RICHARD Bryan	5.0	518192	MULLER, MICHEL B	5.0	529830	SMITH, AARON David	5.0	518187

Equipment

HES Unit #	Distance-1 way						
11542778	15 mile						

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
TOTAL								
<i>Total is the sum of each column separately</i>								

Job

Job Times

Formation Name	Formation Depth (MD) Top	Bottom	Form Type	Job depth MD	865. ft	Job Depth TVD	865. ft	Water Depth	Wk Ht Above Floor	3. ft	Perforation Depth (MD) From	To	Called Out	Date	Time	Time Zone
			BHST											04 - Oct - 2013	16:30	MST
														04 - Oct - 2013	20:30	MST
														04 - Oct - 2013	23:19	MST
														05 - Oct - 2013	00:33	MST
														05 - Oct - 2013	01:30	MST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbf/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
13 1/2" Open Hole Section				13.5				.	865.		
9 5/8" Surface Casing	New		9.625	8.921	36.		J-55	.	855.		

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbf/gal	Yield ft ³ /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
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1	Fresh Water Spacer		10.00	bbl	8.33	.0	.0	3.0	
2	MUD FLUSH III	MUD FLUSH III - SBM (528788)	12.00	bbl	8.4	.0	.0	3.0	
3	Fresh water Spacer		10.00	bbl	8.33	.0	.0	3.0	
4	SwiftCem B2	SWIFTCEM (TM) SYSTEM (452990)	350.0	sacks	14.2	1.54	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	40.51 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					

