

HALLIBURTON

iCem® Service

Post Job Report

ANADARKO PETROLEUM CORP - EBUS

For:

Date: Friday, May 23, 2014

NRC 1C-5HZ

ANADARKO NRC 1C-5-HZ SURFACE

Sincerely,

DEREK TRIER

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **NRC 1C-5HZ** cement **Surface** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton [Brighton]

Job Times

	Date	Time	Time Zone
Requested Time On Location	04/29	2200	MST
Called Out	04/29	1800	
On Location	04/29	2200	
Job Started	04/30	0143	
Job Completed	04/30	0257	
Departed Location	04/30	0430	

1.2 Cementing Job Summary

HALLIBURTON*Cementing Job Summary**The Road to Excellence Starts with Safety*

Sold To #: 300466	Ship To #: 3458891	Quote #:	Sales Order #: 0901301553
Customer: ANADARKO PETROLEUM CORP - EBUS		Customer Rep: BOB PORTER	
Well Name: NRC		Well #: 1C-5 HZ	API/UWI #: 05-123-39192-00
Field: WATTENBERG	City (SAP): ION	County/Parish: WELD	State: COLORADO
Legal Description: NE NE-8-1N-87W-500FNL-1280FEL			
Contractor:		Rig/Platform Name/Num: Majors 29	
Job BOM: 7521			
Well Type: HORIZONTAL GAS			
Sales Person: HALAMERICA/HB47901		Srvc Supervisor: Joseph Barras	
Job			

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST
Job depth MD	1308ft		Job Depth TVD
Water Depth			Wk Ht Above Floor
Perforation Depth (MD)	From		To

Well Data

Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		9.625	8.921	36		J-55	0	1298		0
Open Hole Section			13.5				0	1308		0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	9.625			1298		Top Plug	9.625		HES
Float Shoe	9.625					Bottom Plug	9.625		HES
Float Collar	9.625					SSR plug set	9.625		HES
Insert Float	9.625					Plug Container	9.625		HES
Stage Tool	9.625					Centralizers	9.625		HES

Miscellaneous Materials

Selling Agt		Conc		Surfactant		Conc		Acid Type		Qty		Conc	
Treatment Fld		Conc		Inhibitor		Conc		Sand Type		Size		Qty	

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Mud Flush III (Powder)	Mud Flush III	0	bbl	8.4				

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	Lead Cement	SWIFCEM (TM) SYSTEM		sack	14.2	1.54		6	7.64

Last updated on 4/30/2014 4:32:12 AM

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HALLIBURTON

Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Displacement	Displacement	0	bbl	8.33				
Cement Left In Pipe		Amount	42 ft		Reason		Shoe Joint		
Comment									

1.4

Planned 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	8.33	4.00	10.0 bbl	10.0 bbl
1	2	Spacer	Mud Flush III	8.40	4.00	12.0 bbl	12.0 bbl
1	3	Spacer	Fresh Water	8.33	4.00	10.0 bbl	10.0 bbl
1	4	Cement Slurry	SwiftCem	14.20	5.00	570.0 sacks	570.0 sacks

1.5 Job Overview

		Units	Description
1	Surface temperature at time of job	°F	
2	Mud type (OBM, WBM, SBM, Water, Brine)	-	WBM
3	Actual mud density	lb/gal	
4	Actual mud Plastic Viscosity (PV)	cP	
5	Actual mud Yield Point (YP)	lb _f /100ft ²	
6	Actual mud 30 min Gel Strength	lb _f /100ft ²	
7	Time circulated before job	HH:MM	
8	Mud volume circulated	Bbls	
9	Rate at which well was circulated	Bpm	
10	Pipe movement during hole circulation	Y/N	N
11	Rig pressure while circulating	Psi	
12	Time from end mud circulation to start of job	HH:MM	
13	Pipe movement during cementing	Y/N	N
14	Calculated displacement	Bbls	128.1
15	Job displaced by	Rig/HES	HES
16	Annular flow before job	Y/N	N
17	Annular flow after job	Y/N	N
18	Length of rat hole	Ft	
19	Units of gas detected while circulating	Units	
20	Was lost circulation experienced at any time?	Y/N	N

1.6 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	PS Pmp Stg Tot (bbl)	Comment
Event	1	Arrive at Location from Service Center	Arrive at Location from Service Center	4/29/2014	22:00:00	USER					
Event	2	Rig-Up Equipment	Rig-Up Equipment	4/29/2014	22:20:00	USER					
Event	3	Rig-Up Completed	Rig-Up Completed	4/29/2014	23:23:03	USER	11.50	0.00	28.00	0.0	
Event	4	Safety Meeting - Pre Job	Safety Meeting - Pre Job	4/30/2014	01:10:00	USER	11.53	0.00	32.00	0.0	HES AND RIG CREW
Event	5	Start Job	Start Job	4/30/2014	01:43:28	COM4	11.58	0.00	31.00	10.6	
Event	6	Test Lines	Test Lines	4/30/2014	01:46:48	COM4	8.35	0.00	1359.00	12.4	TO2500 PSI NO VISIBLE LEAKS
Event	7	Pump Spacer 1	Pump Spacer 1	4/30/2014	01:50:09	COM4	8.30	0.00	-20.00	0.0	WATER
Event	8	Pump Spacer 1	Pump Spacer 1	4/30/2014	01:54:53	COM4	8.35	3.80	66.00	14.8	WATER WITH MUD FLUSH
Event	9	Pump Spacer 1	Pump Spacer 1	4/30/2014	01:58:09	COM4	8.26	3.80	64.00	12.3	WATER
Event	10	Pump Cement	Pump Cement	4/30/2014	02:01:09	COM4	13.52	3.80	83.00	0.0	127 BBL OF SWIFTCEM @ 14.2 PPG 1.54 YIELD /7.64 GAL/SK
Event	11	Drop Top Plug	Drop Top Plug	4/30/2014	02:28:48	COM4	9.65	0.00	-17.00	128.1	PRELOADED
Event	12	Pump Displacement	Pump Displacement	4/30/2014	02:29:03	COM4	8.71	0.00	-20.00	128.1	WATER
Event	13	Bump Plug	Bump Plug	4/30/2014	02:50:48	COM4	8.31	0.00	790.00	96.1	WITH 11 BBL OF CEMENT TO SURFACE @ 419 PSI
Event	14	Other	Other	4/30/2014	02:53:39	COM4	8.39	0.00	-18.00	96.1	BUMP PLUG 2ND TIME /500 PSI
Event	15	End Job	End Job	4/30/2014	02:57:01	COM4	8.39	0.00	-7.00	96.6	
Event	16	Rig-Down Equipment	Rig-Down Equipment	4/30/2014	03:12:19	USER	0.80	2.00	1.00	17.1	
Event	17	Return to Service Center from Job	Return to Service Center from Job	4/30/2014	04:30:00	USER					

2.0 Attachments

2.1 ANADARKO NRC 1C-5-HZ SURFACE-Custom Results.png



