

HALLIBURTON

iCem[®] Service

Post Job Report

ANADARKO PETROLEUM CORP - EBUS

Date: Sunday, June 22, 2014

HOWARD 30C-29HZ

Case 1

Sincerely,
Nicholas Vigil

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Howard 30C-29HZ** 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	6/22/2014	21:00	MT
Called Out	6/22/2014	16:30	MT
On Location	6/22/2014	20:00	MT
Job Started	6/22/2014	22:41	MT
Job Completed	6/22/2014	23:48	MT
Departed Location	6/23/2014	00:45	MT

1.2 Cementing Job Summary

Sold To #: 300466		Ship To #: 3117337		Quote #:		Sales Order #: 0901434310					
Customer: ANADARKO PETROLEUM CORP - EBUS				Customer Rep: TOBY YATES							
Well Name: HOWARD		Well #: 30C-29 HZ		API/UWI #: 05-123-37911-00							
Field: WATTENBERG		City (SAP): BRIGHTON		County/Parish: WELD		State: COLORADO					
Legal Description: SW NW-32-1N-67W-2287FNL-390FWL											
Contractor:				Rig/Platform Name/Num: Majors 29							
Job BOM: 7521											
Well Type: HORIZONTAL GAS											
Sales Person: HALAMERICA\HB47901				Srvc Supervisor: Nicholas Vigil							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		992ft		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	982.2			
Open Hole Section			13.5				0	992			
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625					Top Plug	9.625	1	HES		
Float Shoe	9.625	1		982.2		Bottom Plug	9.625		HES		
Float Collar	9.625	1		940.8		SSR plug set	9.625		HES		
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers	9.625		HES		
Miscellaneous Materials											
Gelling Agt		Conc		Surfactant		Conc		Acid Type		Qty	
Treatment Fld		Conc		Inhibitor		Conc		Sand Type		Size	
Fluid Data											
Stage/Plug #: 1											
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
1	Mud Flush III (Powder)	Mud Flush III			12	bbl	8.4				
42 gal/bbl		FRESH WATER									

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
2	Lead Cement	SWIFTCEM (TM) SYSTEM	390	sack	14.2	1.54		6	7.64
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	73.3	bbl	8.33				
Cement Left In Pipe		Amount	42 ft		Reason		Shoe Joint		
Comment 6 bbl of cement to surface									

1.4 Job Overview

		Units	Description
1	Surface temperature at time of job	°F	56
2	Mud type (OBM, WBM, SBM, Water, Brine)	-	WBM
3	Actual mud density	lb/gal	8.8
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	01:00
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	73.3
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	10
19	Units of gas detected while circulating	Units	
20	Was lost circulation experienced at any time?	Y/N	N

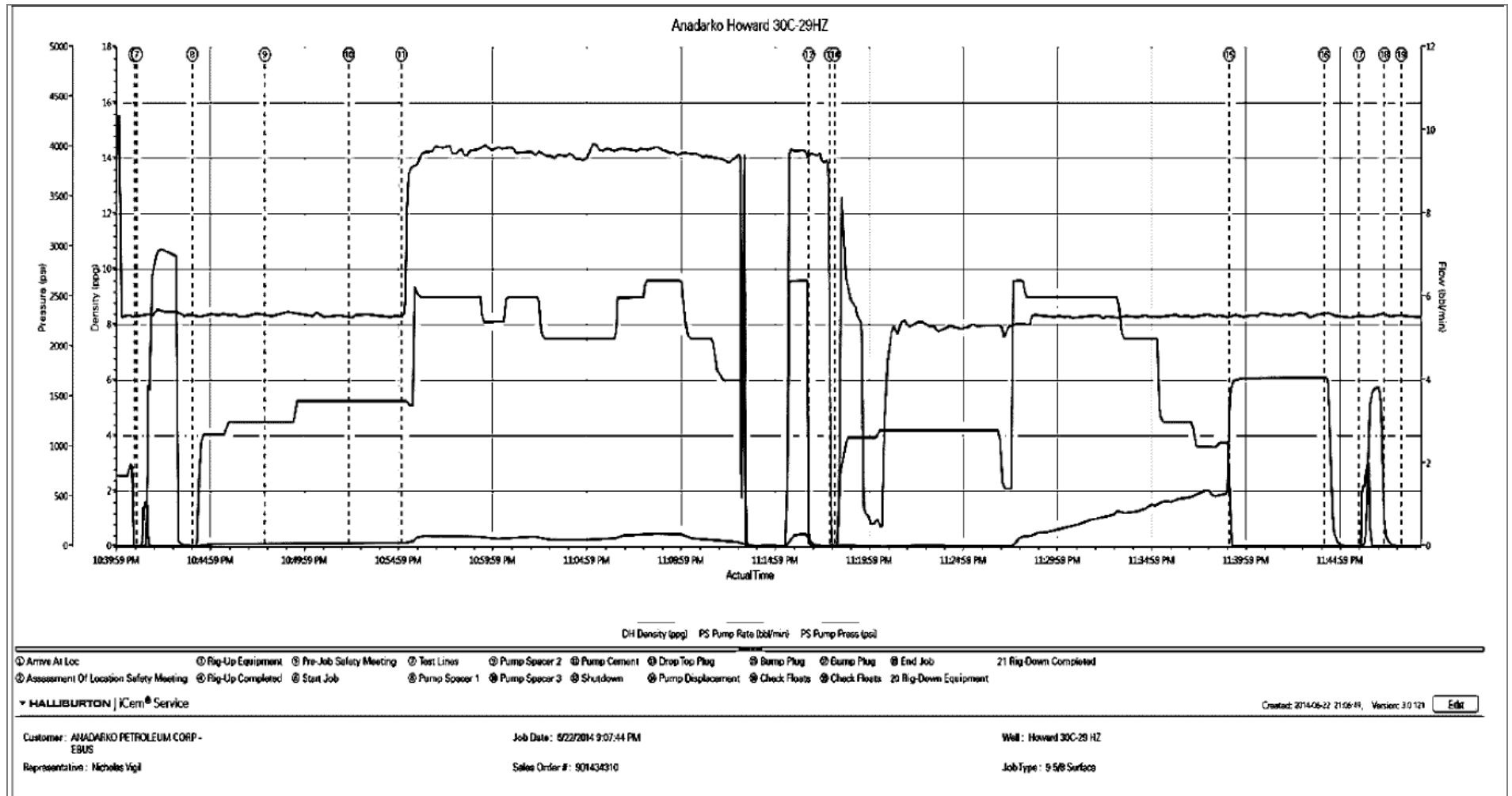
1.5 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	PS Pump Rate (bbl/min)	PS Pump Press (psi)	Comment
Event	1	Arrive At Loc	Arrive At Loc	6/22/2014	20:00:00	USER				On location time was 2100, Rig was just getting ready to run casing.
Event	2	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	6/22/2014	20:05:00	USER				Hazard hunt, Rig up safety meeting, Water test
Event	3	Rig-Up Equipment	Rig-Up Equipment	6/22/2014	22:00:00	USER	15.49	0.00	1.00	
Event	4	Rig-Up Completed	Rig-Up Completed	6/22/2014	22:30:00	USER	15.40	0.00	1.00	
Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/22/2014	22:35:00	USER	15.51	0.00	1.00	Held safety meeting with all personnel on location.
Event	6	Start Job	Start Job	6/22/2014	22:41:02	COM1	8.32	0.00	4.00	
Event	7	Test Lines	Test Lines	6/22/2014	22:41:10	COM1	8.33	0.00	3.00	Pressure tested lines to 3000 psi.
Event	8	Pump Spacer 1	Pump Spacer 1	6/22/2014	22:44:07	COM1	8.32	3.00	25.00	10 bbl Water
Event	9	Pump Spacer 2	Pump Spacer 2	6/22/2014	22:47:58	COM1	8.36	3.50	30.00	12 bbl Mud Flush
Event	10	Pump Spacer 1	Pump Spacer 3	6/22/2014	22:52:27	COM1	8.27	3.50	35.00	10 bbl Water
Event	11	Pump Cement	Pump Cement	6/22/2014	22:55:14	COM1	14.2	6.00	107.00	107 bbl SwiftCem (390 sks), weight was verified by scale
Event	12	Shutdown	Shutdown	6/22/2014	23:16:52	COM1	14.18	0.00	48.00	
Event	13	Drop Top Plug	Drop Top Plug	6/22/2014	23:17:59	COM1	-0.24	0.00	2.00	Plug was pre loaded.
Event	14	Pump Displacement	Pump Displacement	6/22/2014	23:18:14	COM1	8.33	6.00	150.00	73.5 bbl Water
Event	15	Bump Plug	Bump Plug	6/22/2014	23:39:12	COM1	8.32	2.50	600.00	Bumped plug 1000 psi over final lift bringing our pressure up to 1600 psi.
Event	16	Other	Check Floats	6/22/2014	23:44:15	COM1	8.44	0.00	1605.00	Floats held, we flowed back 0.5 bbl to truck.
Event	17	Bump Plug	Bump Plug	6/22/2014	23:46:05	COM1	8.32	2.00	1500.00	Bumped plug again at 1500 psi.
Event	18	Other	Check Floats	6/22/2014	23:47:26	COM1	8.37	0.00	1500.00	Floats held.

Event	19	End Job	End Job	6/22/2014	23:48:20	COM1	8.33	0.00	2.00	Rig down safety meeting.
Event	20	Rig-Down Equipment	Rig-Down Equipment	6/23/2014	00:00:00	USER				
Event	21	Rig-Down Completed	Rig-Down Completed	6/23/2014	00:40:00	USER				

2.0 Custom Graphs

2.1 Custom Graph



3.0 Appendix

Insert Planned Pump Schedule from Proposal or actual Job Procedure built for job