

HALLIBURTON

iCem[®] Service

Post Job Report

ANADARKO PETROLEUM CORP - EBUS

For: TOBY YATES

Date: Sunday, June 22, 2014

HOWARD 4N-29HZ

Case 1

Sincerely,

AARON SMITH

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Howard 4N-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
On Location	6/21/2014	21:00:00	MT
Job Started	6/21/2014	23:46:21	MT
Job Completed	6/22/2014	01:11:00	MT
Departed Location	6/22/2014	02:00:00	MT

1.2 Cementing Job Summary

Sold To #: 300466		Ship To #: 3117336		Quote #:		Sales Order #: 0901432925	
Customer: ANADARKO PETROLEUM CORP - EBUS				Customer Rep: TOBY YATES			
Well Name: HOWARD			Well #: 4N-29 HZ		API/UWI #: 05-123-37910-00		
Field: WATTENBERG		City (SAP): BRIGHTON		County/Parish: WELD		State: COLORADO	
Legal Description: SW NW-32-1N-67W-2287FNL-420FWL							
Contractor:				Rig/Platform Name/Num: Majors 29			
Job BOM: 7521							
Well Type: HORIZONTAL GAS							
Sales Person: HALAMERICA\HB47901				Srvc Supervisor: Aaron Smith			

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST
Job depth MD	973ft		Job Depth TVD
Water Depth			Wk Ht Above Floor
Perforation Depth (MD)			To

Well Data

	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	973		0
Open Hole Section			13.5				0	973		0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	9.625			973		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
	9.625					Centralizers	9.625		HES

Miscellaneous Materials

Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty
Treatment Fld	Conc		Conc	Sand Type	

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	12	bbbl	8.4				
42 gal/bbl									
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	SWIFTCEM (TM) SYSTEM	305	sack	14.2	1.537		6	7.63
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
3	Displacement	Displacement	72.0	bbbl	8.33				
		Amount	42 ft						
Comment									

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	72
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

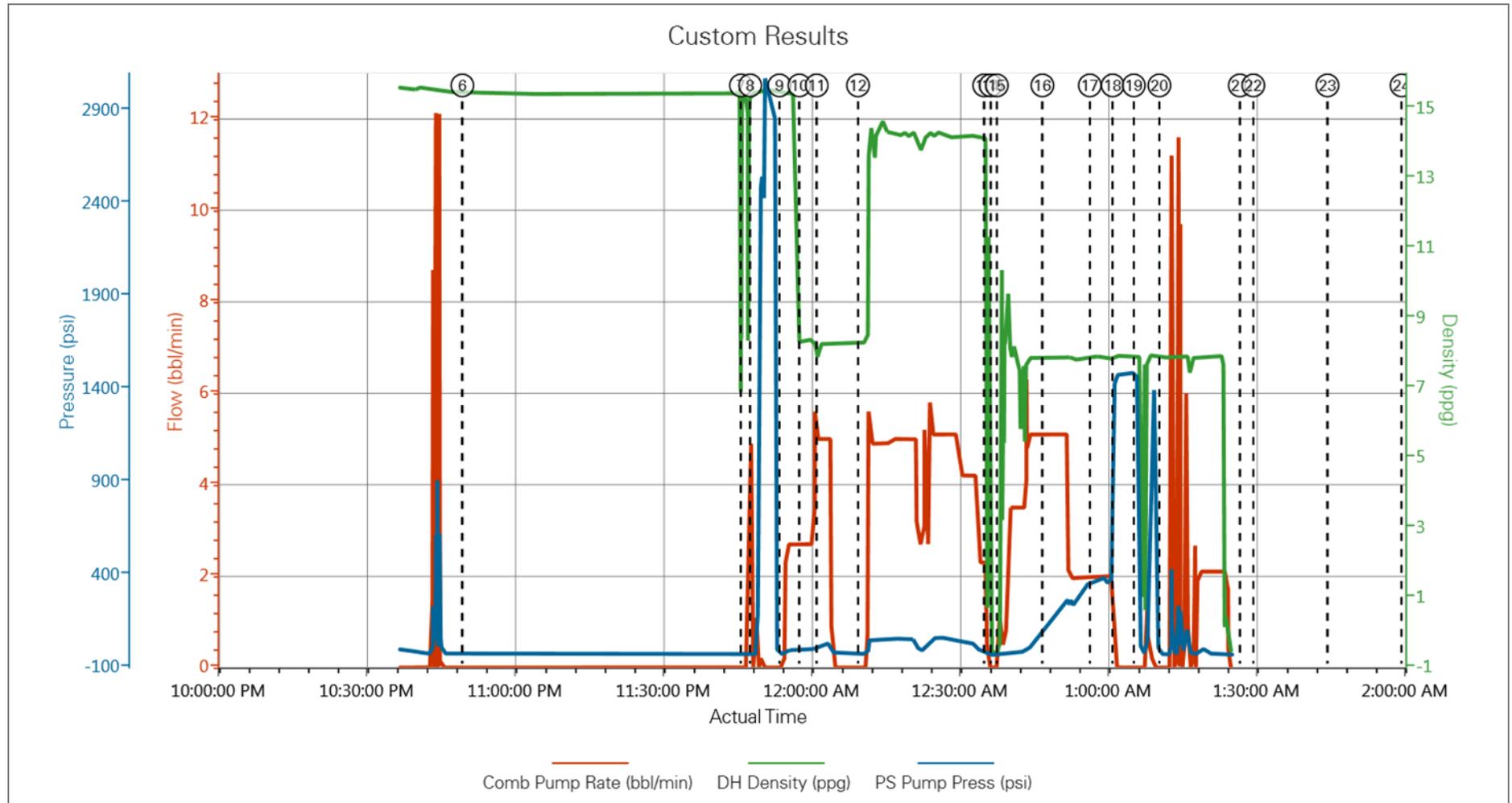
1.6 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Combined Pump Rate (bbl/min)	Downhole Density (ppg)	Pass-Side Pump Pressure (psi)	Comment
Event	1	Depart from Service Center or Other Site	Depart from Service Center or Other Site	6/21/2014	20:30:00	USER				PUMP TRUCK DROVE FROM FIRST LOCATION TO PRESENT LOCATION, ARRIVED ON LOCATION @ 1730
Event	2	Arrive at Location from Other Job or Site	Arrive at Location from Other Job or Site	6/21/2014	21:00:00	USER				BULK TRUCK ARRIVED AT 1930, SUPERVISOR ON LOCATION AT 2100
Event	3	Rig-Up Completed	Rig-Up Completed	6/21/2014	21:09:50	USER				
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/21/2014	21:30:00	USER				
Event	5	Rig-Up Equipment	Rig-Up Equipment	6/21/2014	21:35:00	USER				
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/21/2014	22:50:00	USER	0.00	15.42	-29.00	WITH CUSTOMER REP AND RIG CREW
Event	7	Start Job	Start Job	6/21/2014	23:46:21	COM2	0.00	15.40	-32.00	
Event	8	Test Lines	Test Lines	6/21/2014	23:48:13	COM2	0.00	15.44	-30.00	@2500 PSI
Event	9	Pump Spacer 1	Pump Spacer 1	6/21/2014	23:54:08	COM2	0.00	15.43	-29.00	10 BBLS FRESH WATER
Event	10	Pump Spacer 2	Pump Spacer 2	6/21/2014	23:58:10	COM2	2.70	8.24	-5.00	12 BBLS MUD FLUSH
Event	11	Pump Spacer 1	Pump Spacer 1	6/22/2014	00:01:41	COM2	5.00	8.27	25.00	10 BBLS FRESH WATER
Event	12	Pump Cement	Pump Cement	6/22/2014	00:10:02	COM2	0.00	8.28	-26.00	107 BBLS/305 SKS, @ 14.2 PPG, 1.54 YIELD, 7.66 GAL/SK
Event	13	Shutdown	Shutdown	6/22/2014	00:35:34	COM2	0.00	11.50	-28.00	
Event	14	Drop Top Plug	Drop Top Plug	6/22/2014	00:36:52	COM2	0.00	-0.61	-32.00	PRE-LOADED HWE TOP PLUG IN PLUG CONTAINER VERIFIED BY CUSTOMER REP.
Event	15	Pump Displacement	Pump Displacement	6/22/2014	00:38:06	COM2	0.50	2.16	-27.00	72 BBLS FRESH WATER
Event	16	Other	Spacer Returns to Surface	6/22/2014	00:47:20	COM2	5.10	7.85	107.00	@27 BBLS DISPLACEMENT 32 BBLS TO SURFACE

Event	17	Other	Cement Returns to Surface	6/22/2014	00:56:56	COM2	2.00	7.94	357.00	@ 59 BBLS DISPLACEMENT 13 BBLS TO SURFACE
Event	18	Bump Plug	Bump Plug	6/22/2014	01:01:33	COM2	0.00	7.89	1478.00	FINAL CIRCULATING PRESSURE 389, FINAL BUMP PRESSURE 1479
Event	19	Check Floats	Check Floats	6/22/2014	01:05:49	USER	0.00	7.78	1159.00	.5 BBLS BACK FLOATS HELD
Event	20	End Job	End Job	6/22/2014	01:11:00	COM2	0.00	7.91	-29.00	THANKS AARON SMITH AND CREW
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/22/2014	01:27:16	USER				
Event	22	Rig-Down Equipment	Rig-Down Equipment	6/22/2014	01:30:00	USER				
Event	23	Rig-Down Completed	Rig-Down Completed	6/22/2014	01:45:00	USER				
Event	24	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	6/22/2014	02:00:00	USER				JOURNEY MANAGEMENT MEETING PRIOR TO DEPARTURE

2.0 Custom Graphs

2.1 Custom Graph



3.0 Appendix

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