

HALLIBURTON

iCem[®] Service

ANADARKO PETROLEUM CORP - EBUS

For: BOB PORTER

Date: Tuesday, August 12, 2014

Benson Farms 25C-19HZ

Case 1

Sincerely,

AARON SMITH

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Benson Farms 25C-19HZ 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
Called Out	6/3/14	06:30	MTN
On Location	6/3/14	12:20	MTN
Job Started	6/3/14	13:30	MTN
Job Completed	6/3/14	15:35	MTN
Departed Location	6/3/14	16:00	MTN

1.2 Cementing Job Summary

Sold To #: 300466	Ship To #: 3475280	Quote #:	Sales Order #: 0901401751
Customer: ANADARKO PETROLEUM CORP - EBUS		Customer Rep: BOB PORTER	
Well Name: BENSON FARMS	Well #: 25C-19HZ	API/UWI #: 05-123-39396-00	
Field: WATTENBERG	City (SAP): MEAD	County/Parish: WELD	State: COLORADO
Legal Description: NW SW-24-3N-68W-2165FSL-51FWL			
Contractor:		Rig/Platform Name/Num: Majors 42	
Job BOM: 7521			
Well Type: HORIZONTAL GAS			
Sales Person: HALAMERICA\HX46524		Srcv Supervisor: Aaron Smith	
Job			

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST
Job depth MD	1236ft		Job Depth TVD
Water Depth			Wk Ht Above Floor 6
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	3	9.625	8.921	36		J-55	0	1226	0	1226
Open Hole Section			13.5				0	1236	0	1236

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	SSII	1226	Bottom Plug	9.625		HES
Float Collar	9.625	1	SSII	1186	SSR plug set	9.625		HES
Insert Float	9.625				Plug Container	9.625	1	HES
Stage Tool	9.625				Centralizers	9.625	10	HES

Miscellaneous Materials

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

Fluid Data

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				
42 gal/bbl		FRESH WATER							
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		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/mi n	Total Mix Fluid Gal
3	Displacement	Displacement	0	bbl	8.33				
Cement Left In Pipe		Amount 40 ft	Reason			Shoe Joint			
Comment									

1.3 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 Spacer	8.33	5.0	10.0 bbl	10.0 bbl
1	1	Spacer	Mud Flush	8.40	5.0	12.0 bbl	12.0 bbl
1	1	Spacer	Fresh Water Spacer	8.33	5.0	10.0 bbl	10.0 bbl
1	2	Cement Slurry	SwiftCem B2	14.2	5.5	460.0 sacks	460.0 sacks

1.4 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	Time circulated before job	HH:MM	
5	Mud volume circulated	Bbls	
6	Rate at which well was circulated	Bpm	
7	Pipe movement during hole circulation	Y/N	N
8	Rig pressure while circulating	Psi	
9	Time from end mud circulation to start of job	HH:MM	
10	Pipe movement during cementing	Y/N	N
11	Calculated displacement	Bbls	91
12	Job displaced by	Rig/HES	HES
13	Annular before job)?	Y/N	N
14	Annular flow after job	Y/N	N
15	Length of rat hole	Ft	
16	Units of gas detected while circulating	Units	
17	Was lost circulation experienced at any time ?	Y/N	N

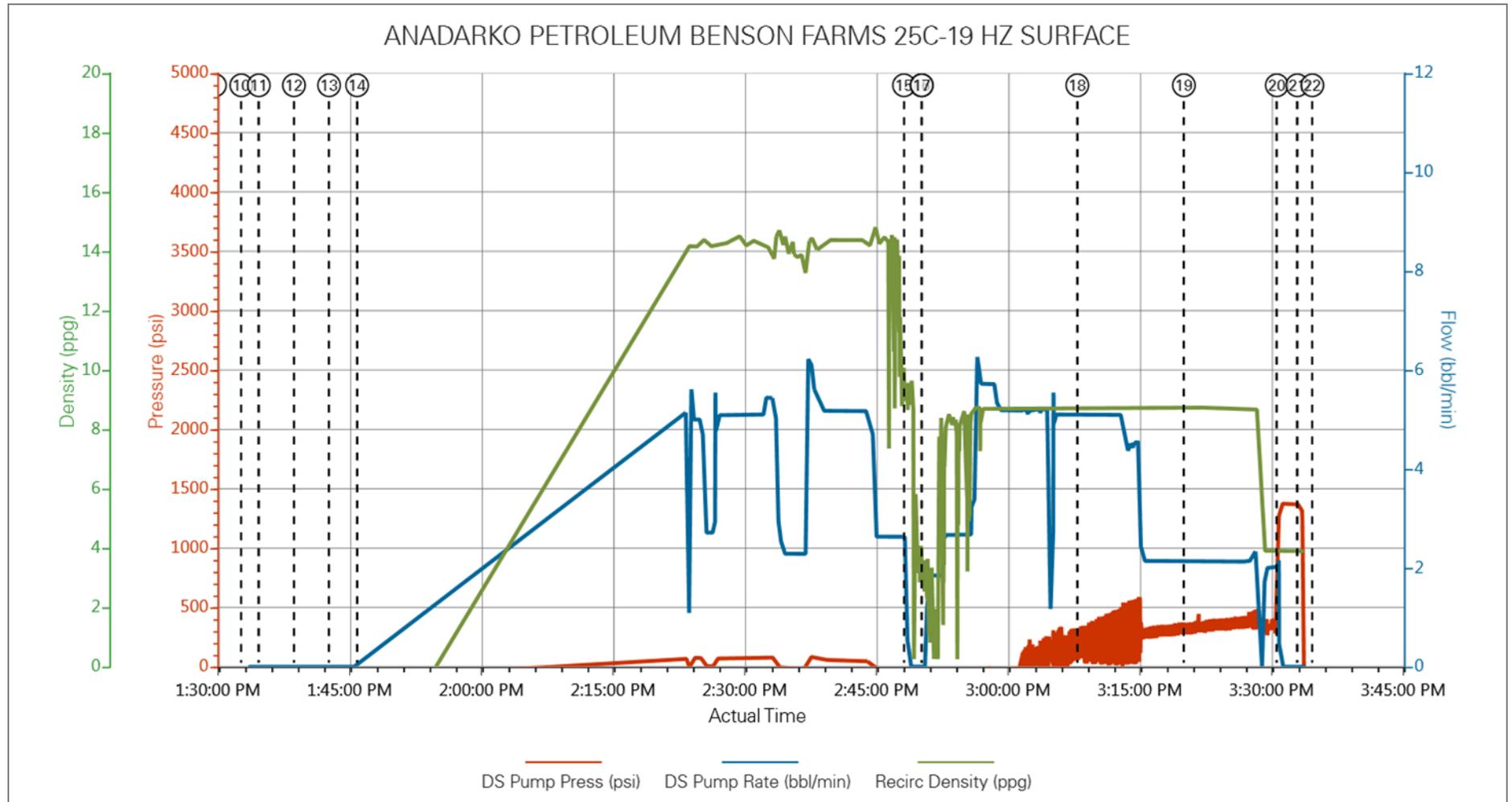
1.5 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Driv-Side Pump Pressure (psi)	Driv-Side Pump Rate (bbl/min)	Recirc Density (ppg)	Comment
Event	1	Call Out	Call Out	6/3/2014	06:30:00	USER				CALLED OUT BY COORDINATORS FOR ON LOCATION AT 1100
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	6/3/2014	10:30:00	USER				JOURNEY MANAGEMENT MEETIND PRIOR TO DEPARTURE
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	6/3/2014	11:45:00	USER				
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	6/3/2014	12:20:00	USER				SERVICE SUPERVISOR ARRIVED BEFORE HES CREW DUE TO EQUIPMENT BREAKDOWN.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/3/2014	13:00:00	USER				WHEN CREW ARRIVED ON LOCATION
Event	6	Rig-Up Equipment	Rig-Up Equipment	6/3/2014	13:05:00	USER				
Event	7	Rig-Up Completed	Rig-Up Completed	6/3/2014	13:13:00	USER				
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/3/2014	13:20:00	USER				WITH CUSTOMER REP AND RIG CREW
Event	9	Start Job	Start Job	6/3/2014	13:30:00	USER				
Event	10	Test Lines	Test Lines	6/3/2014	13:33:00	USER				2500 PSI
Event	11	Pump Spacer 1	Pump Spacer 1	6/3/2014	13:35:00	USER	-94.62	0.00	-4.56	10 BBLS FRESH WATER
Event	12	Pump Spacer 2	Pump Spacer 2	6/3/2014	13:39:00	USER	-96.59	0.00	-4.62	12 BBLS MUD FLUSH
Event	13	Pump Spacer 1	Pump Spacer 1	6/3/2014	13:43:00	USER	-98.56	0.00	-4.56	10 BBLS FRESH WATER
Event	14	Pump Cement	Pump Cement	6/3/2014	13:46:11	COM7				124 BBLS/ 460 SKS @ 14.2 PPG, 1.54 YIELD, 7.64 GAL/SK
Event	15	Shutdown	Shutdown	6/3/2014	14:48:29	COM7	-58.15	0.00	8.66	
Event	16	Drop Top Plug	Drop Top Plug	6/3/2014	14:50:28	COM7	-61.11	0.00	3.10	PRE-LOADED HWE TOP PLUG IN PLUG CONTAINER
Event	17	Pump Displacement	Pump Displacement	6/3/2014	14:50:31	COM7	-62.09	0.00	3.40	91 BBLS FRESH WATER

										DISPLECEMENT
Event	18	Other	Spacer Returns to Surface	6/3/2014	15:08:13	COM7	55.19	5.15	8.67	@45 BBLS DISPLACEMENT 32 BBLS TO SURFACE
Event	19	Other	Cement Returns to Surface	6/3/2014	15:20:22	COM7	350.88	2.15	8.68	@ 77 BBLS DISPLACEMENT 14 BBLS TO SURFACE
Event	20	Bump Plug	Bump Plug	6/3/2014	15:30:57	COM7	1380.84	0.00	3.91	FINAL CIRCULATING PRESSURE 361 FINAL BUMP 1370
Event	21	Check Floats	Check Floats	6/3/2014	15:33:17	USER	1368.03	0.00	3.89	FLOATS HELD .5 BBLS BACK
Event	22	End Job	End Job	6/3/2014	15:35:00	USER				THANKS AARON SMITH AND CREW
Event	23	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	6/3/2014	16:00:00	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