

HALLIBURTON

iCem[®] Service

ANADARKO PETROLEUM CORP - EBUS

Date: Friday, June 06, 2014

Reynolds Cattle 6N-19 HZ

Case 1

Sincerely,

PRUDHOMME, JOSHUA

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Reynolds Cattle 6N-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			
On Location			
Job Started	4/26/2014	16:22:29	MT
Job Completed	4/26/2014	17:44:26	MT
Departed Location			

1.2 Cementing Job Summary

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 3367899	Quote #:	Sales Order #: 0901292831
Customer: ANADARKO PETROLEUM CORP - EBUS		Customer Rep:	
Well Name: REYNOLDS CATTLE	Well #: 6N-19 HZ	API/UWI #: 05-123-39129-00	
Field: WATTENBERG	City (SAP): MEA	County/Parish: WELD	State: COLORADO
Legal Description: SE NE-23-3N-68W-2101FNL-338FEL			
Contractor:		Rig/Platform Name/Num: Majors 29	
Job BOM: 7521			
Well Type: HORIZONTAL GAS			
Sales Person: HALAMERICA\HB47901		Srcv Supervisor: Jason Gibbs	

Job			
Formation Name			
Formation Depth (MD)	Top	Bottom	
Form Type	BHST		
Job depth MD	1359ft	Job Depth TVD	
Water Depth	CMT to Surface		10bbl
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	1349		0
Open Hole Section			13.5				0	1359		0

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	9.625			1349		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									
Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc			
Treatment Fid	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	12	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	

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Cementing Job Summary

2	Lead Cement	SWIFTCEM (TM) SYSTEM	505	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	101	bbl	8.33				
Cement Left in Pipe		Amount 42 ft	Reason		Shoe Joint				
Comment									

BB Balthus

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	1.5	10.0 bbl	10.0 bbl
1	1	Spacer	Mud Flush	8.40	1.5	12.0 bbl	12.0 bbl
1	1	Spacer	Fresh Water Spacer	8.33	3.0	10.0 bbl	10.0 bbl
1	2	Cement Slurry	SwiftCem B2	14.2	5.0	505.0 sacks	505.0 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	

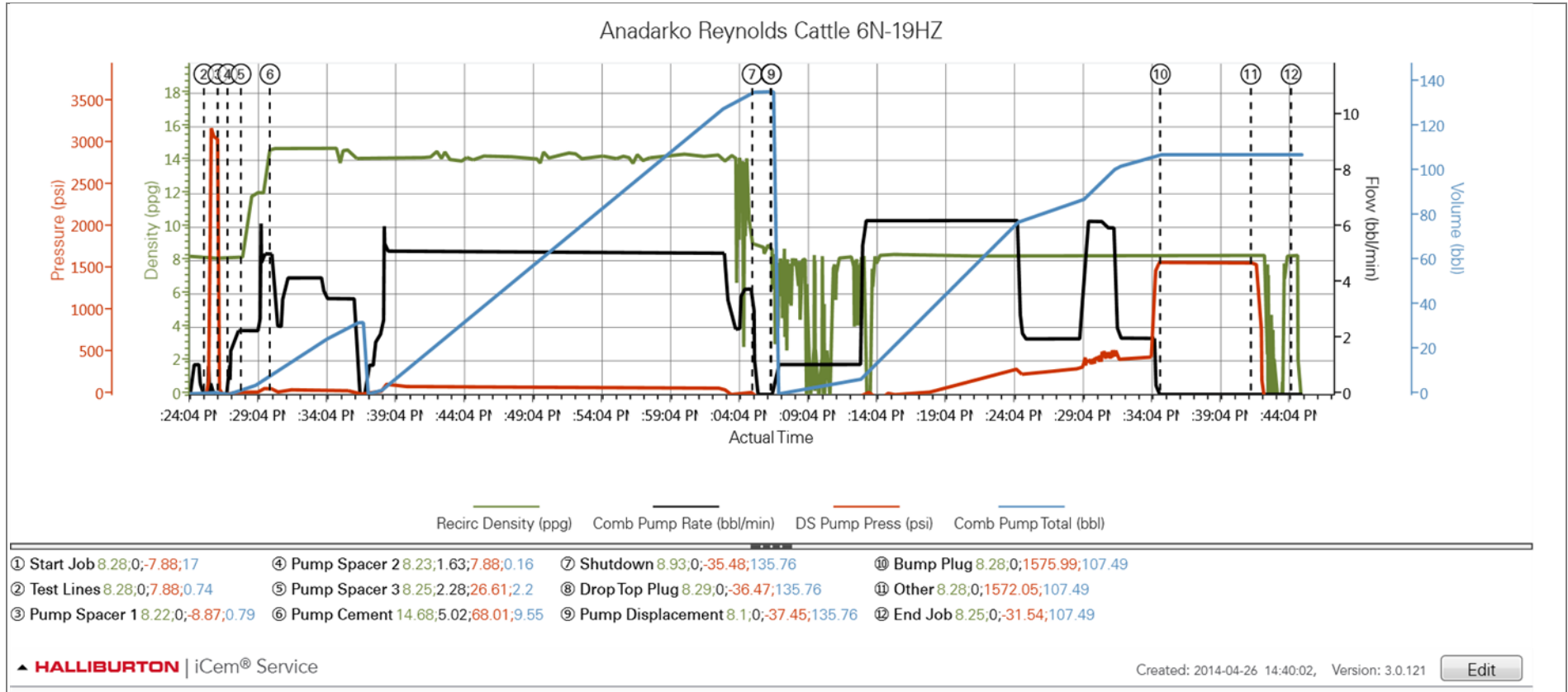
10	Pipe movement during cementing	Y/N	N
11	Calculated displacement	Bbls	101.0
12	Job displaced by	Rig/HES	HES
13	Annular before job)?	Y/N	N
14	Annular flow after job	Y/N	N
15	Length of rat hole	Ft	
16	Units of gas detected while circulating	Units	
17	Was lost circulation experienced at any time ?	Y/N	N

1.5 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Recirc Density (ppg)	Combined Pump Rate (bbl/min)	Driv-Side Pump Pressure (psi)	Combined Pump Total (bbl)	Comment
Event	1	Start Job	Start Job	4/26/2014	16:22:29	COM4	8.28	0.00	-7.88	17.0	
Event	2	Test Lines	Test Lines	4/26/2014	16:25:21	COM4	8.28	0.00	7.88	0.7	
Event	3	Pump Spacer 1	Pump Spacer 1	4/26/2014	16:26:23	COM4	8.22	1.5	-8.87	0.8	Pump 10 bbl of water
Event	4	Pump Spacer 2	Pump Spacer 2	4/26/2014	16:27:05	COM4	8.23	1.63	7.88	0.2	Pump 12 bbl of mud flush
Event	5	Pump Spacer 1	Pump Spacer 3	4/26/2014	16:28:04	USER	8.25	2.28	26.61	2.2	Pump 10 bbl of water
Event	6	Pump Cement	Pump Cement	4/26/2014	16:30:10	COM4	14.68	5.02	68.01	9.5	Pump 505 sacks of 14.2 ppg 1.54 yield
Event	7	Shutdown	Shutdown	4/26/2014	17:05:14	COM4	8.93	0.00	-35.48	135.8	
Event	8	Drop Top Plug	Drop Top Plug	4/26/2014	17:06:35	COM4	8.29	0.00	-36.47	135.8	
Event	9	Pump Displacement	Pump Displacement	4/26/2014	17:06:38	COM4	8.10	0.00	-37.45	135.8	
Event	10	Bump Plug	Bump Plug	4/26/2014	17:34:55	COM4	8.28	0.00	1575.99	107.5	Bumped plug 500 psi over final pressure
Event	11	Other	Other	4/26/2014	17:41:30	COM4	8.28	0.00	1572.05	107.5	
Event	12	End Job	End Job	4/26/2014	17:44:26	COM4	8.25	0.00	-31.54	107.5	

2.0 Attachments

2.1 Anadarko Reynolds Cattle 6N-19HZ Surface.png



3.0 Custom Graphs

4.0 Appendix

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