

HALLIBURTON

iCem[®] Service

ANADARKO PETROLEUM CORP - EBUS

Date: Thursday, June 19, 2014

Reynolds Cattle 6C-19HZ

Case 1

Sincerely,

Joshua Prudhomme

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Reynolds Cattle 6C-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	4/22/2014	17:30:00	MT
On Location	4/22/2014	20:02:17	MT
Job Started	4/22/2014	22:37:30	MT
Job Completed	4/23/2014	00:14:43	MT

1.2 Cementing Job Summary

<i>The Road to Excellence Starts with Safety</i>			
Sold To #: 300466	Ship To #: 3367894	Primary Sales Order #: 0901290637	
Customer: ANADARKO PETROLEUM CORP - EBUS		Job Purpose: 7521 CMT SURFACE CASING BOM	
Well Name: REYNOLDS CATTLE		Well #: 6C-19 HZ	API/UWI #: 05-123-39139-00
Field: WATTENBERG	City: MEA	Country/Parish: WELD	State/Prov: COLORADO
Legal Description:			
Rig Name & Number / Phone Number: MAJORS 29 /			Location: LAND
myCem id# :	Job Criticality Status: GREEN	iFacts Request id #:	
Contacts			
Type	Name	Email	Phone
Account Rep	Ryan Wyckoff	Ryan.Wyckoff@halliburton.com	+17205386044
Company Man			
Service Coordinator	Jared Whipple	Jared.Whipple@Halliburton.com	+13036554782
<i>PPE, Safety Huddles, JSA's, HOC & Near Miss Reporting, BBP Observations</i>			
Distance/Mileage(1 way) Srvc:	30 mile	Distance/Mileage(1 way) Mtls:	30 mile
		Rqstd Job Start Date/Time:	04/26/2014
HSE Information			
H2S Present:	Unknown	CO2 Present:	Unknown
<i>Drive Safely. Lights On for Safety. Wear Seat Belts. Observe all HES / Customer Safety Policies.</i>			
Directions: WCR 32 & WCR 9 ½, S .5, W .5', N INTO			
Instruction			

Job Info / Well Data											
Job Depth (MD) ft		Job Depth (TVD) ft		Well Fluid Type		Well Fluid Weight lbm/gal		Displacement Fluid		Displ Fluid Weight lbm/gal	
850								Displacement		8.33	
BHST degF		BHCT degF		Log Temp degF				Time Since Circ Stopped HH:MM:SS			
Job Tubulars/Tools											
Description	Size in	Weight lbm/ft	ID in	Thread	Grade	Top MD ft	Btm MD ft	Top TVD ft	Btm TVD ft	Shoe Jnt ft	% Excess
13.5" Open Hole			13.5			0	850				0
9.625" Surface Casing	9.625	36	8.921		J-55	0	850			42	
Mud conditioning plan											
The condition of the drilling fluid is one of the most important variables in achieving a cement barrier. Prior to cementing, circulate the mud at the planned highest displacement rate for the cement job for at least 2 bottoms-up until the well is clean, mud is free of gas and pump pressures have stabilized.											
Materials											
Stage/Plug #: 1											
Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft³/sack	Water Req Gal/sack	Rate bbbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time	
1	Mud		12	bbbl	8.4						

	Flush III (Powder)										
iFacts Test id #											

Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft ³ /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time hr	
2	Lead Cement	SWIFTCEM (TM) SYSTEM	518	sack	14.2	1.54	7.64	6	7.63		
iFacts Test id #											

Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft ³ /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time	
3	Displacement		62.5	bbl	8.33						
iFacts Test id #											

Caution: Displacement quantities and densities are estimates ONLY! Do not use them for the actual job.

Packaged Materials

SAP #	Material	Qty	UOM	Comments
	FRESH WATER	3952.5	Gal	

1.3 Planned Pumping Schedule

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Surface Volume	Downhole Volume
1	1	Spacer	Fresh Water Spacer	8.33	10.0 bbl	10.0 bbl
1	1	Spacer	Mud Flush	8.40	12.0 bbl	12.0 bbl
1	1	Spacer	Fresh Water Spacer	8.33	10.0 bbl	10.0 bbl
1	2	Cement Slurry	SwiftCem B2	14.2	518.0 sacks	518.0 sacks

1.4 Job Overview

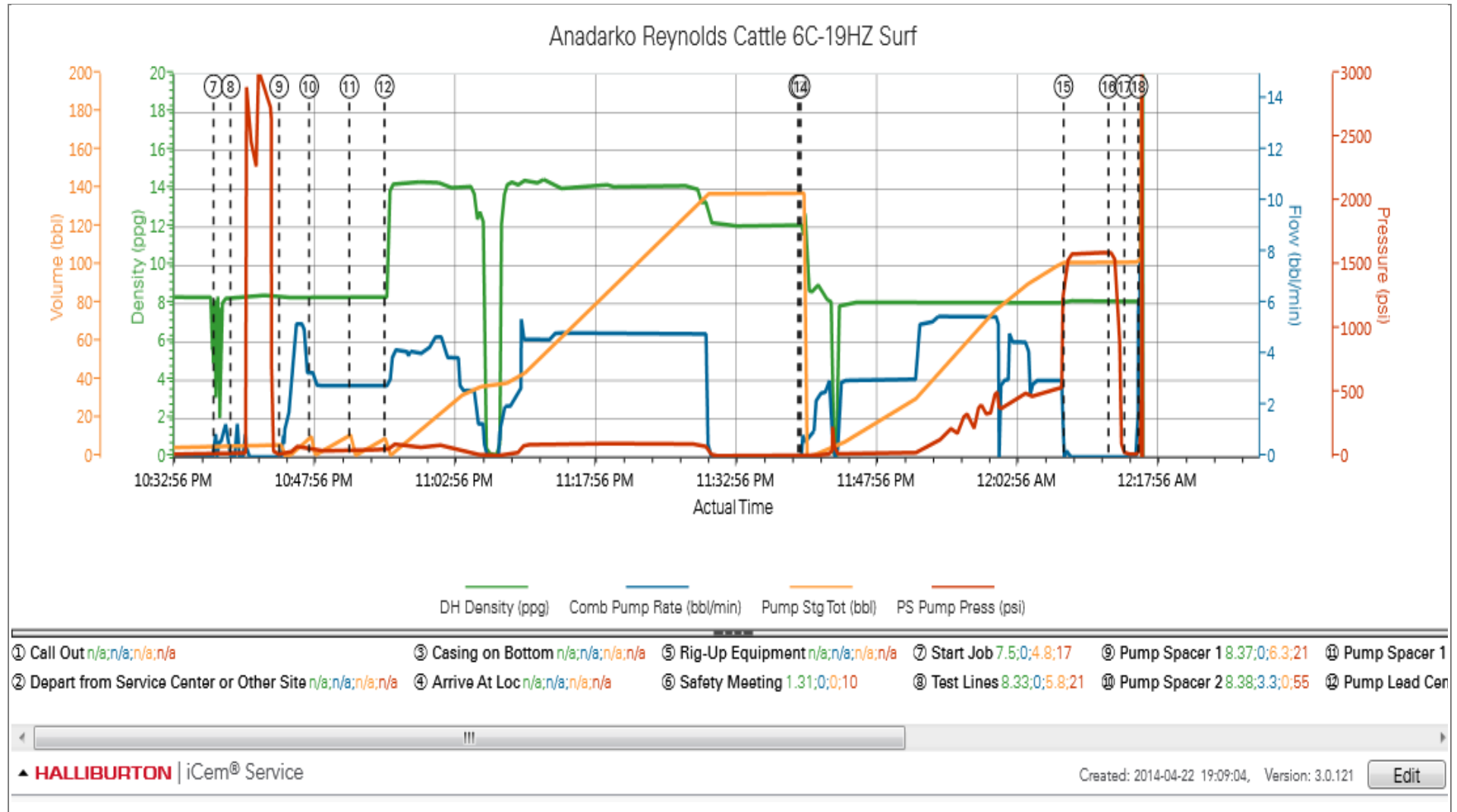
		Units	Description
1	Surface temperature at time of job	°F	
2	Mud type (OBM, WBM, SBM, Water, Brine)	-	WBM
3	Actual mud density	lb/gal	
4	Time circulated before job	HH:MM	
5	Mud volume circulated	Bbls	
6	Rate at which well was circulated	Bpm	
7	Pipe movement during hole circulation	Y/N	N
8	Rig pressure 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	
12	Job displaced by	Rig/HES	HES
13	Annular before job)?	Y/N	Y
14	Annular flow after job	Y/N	Y
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

Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	PS Pump Press (psi)	Comment
Event	1	Call Out	Call Out	4/22/2014	17:30:00	USER					
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	4/22/2014	19:30:00	USER					
Event	3	Casing on Bottom	Casing on Bottom	4/22/2014	20:00:00	USER					
Event	4	Arrive At Loc	Arrive At Loc	4/22/2014	20:02:17	USER					
Event	5	Rig-Up Equipment	Rig-Up Equipment	4/22/2014	20:15:00	USER					
Event	6	Safety Meeting	Safety Meeting	4/22/2014	21:00:00	USER	1.31	0.00	0.0	10.00	
Event	7	Start Job	Start Job	4/22/2014	22:37:30	COM5	7.50	0.00	4.8	17.00	
Event	8	Test Lines	Test Lines	4/22/2014	22:39:19	COM5	8.33	0.00	5.8	21.00	
Event	9	Pump Spacer 1	Pump Spacer 1	4/22/2014	22:44:30	COM5	8.37	0.00	6.3	21.00	
Event	10	Pump Spacer 2	Pump Spacer 2	4/22/2014	22:47:42	COM5	8.38	3.30	0.0	55.00	
Event	11	Pump Spacer 1	Pump Spacer 1	4/22/2014	22:52:00	COM5	8.30	2.80	12.2	54.00	
Event	12	Pump Lead Cement	Pump Lead Cement	4/22/2014	22:55:45	COM5	8.32	2.80	0.0	59.00	
Event	13	Drop Top Plug	Drop Top Plug	4/22/2014	23:39:54	COM5	12.09	0.00	137.7	10.00	
Event	14	Pump Displacement	Pump Displacement	4/22/2014	23:40:09	COM5					
Event	15	Bump Plug	Bump Plug	4/23/2014	00:08:13	COM5					
Event	16	Other	Other	4/23/2014	00:13:01	COM5					
Event	17	End Job	End Job	4/23/2014	00:14:43	COM5					
Event	18	Drop Ball	Drop Ball	4/23/2014	00:16:12	COM5	0.00	0.00	0.0	0.00	

2.0 Custom Graphs



2.1 Custom Graph

3.0 Appendix

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