HALLIBURTON

iCem® Service

ANADARKO PETROLEUM CORP - EBUS

Date: Wednesday, July 16, 2014

Reynolds Cattle 30N-23HZ
REYNOLDS CATTLE 30N-23HZ

Sincerely,
Derek Trier

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Reynolds Cattle 30N-23HZ** 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	04/14	1500	
On Location		1930	
Job Started		2128	
Job Completed		2256	
Departed Location	04/15	0000	

1.2 Cementing Job Summary

HALLIBURTON *Cementing Job Summary*

The Road to Excellence Starts with Safety

Sold To #: 300466	**Ship To #:** 3367853	**Quote #:**	**Sales Order #:** 0901268824
Customer: ANADARKO PETROLEUM CORP - EBUS		**Customer Rep:**	
Well Name: REYNOLDS CATTLE	**Well #:** 30N-23 HZ		**API/UWI #:** 05-123-39135-00
Field: WATTENBERG	**City (SAP):** LON	**County/Parish:** WELD	**State:** COLORADO
Legal Description: NE NE-23-3N-68W-560FNL-155FEL			
Contractor: Bob Balkenbush		**Rig/Platform Name/Num:** Majors 29	
Job BOM: 7521			
Well Type: HORIZONTAL GAS			
Sales Person: HALAMERICA\HB47901		**Srvc Supervisor:** Jason Gibbs	

Job

Formation Name				
Formation Depth (MD)	**Top**		**Bottom**	
Form Type			**BHST**	
Job depth MD	1341ft		**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	1332		0
Open Hole Section			13.5				0	1341		0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	9.625			1332		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 Fld		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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Fresh Water Spacer	Fresh Water Spacer	32	bbl	8.33				

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

HALLIBURTON *Cementing Job Summary*

2	Lead Cement	SWIFTCEM (TM) SYSTEM	480	sack	14.2	1.537		6	7.63

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	100	bbl	8.33				

Cement Left In Pipe	Amount	41 ft	Reason	Shoe Joint

- Comment

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
4	Top Off	G Neat	50	bbl	15.8	1.15	5		

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1.3 Job Overview

		Units	Description
1	Surface temperature at time of job	^{o}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	100
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

1.4 Job Event Log

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ANADARKO PETROLEUM CORP - EBUS
Reynolds Cattle 30N-23 HZ
Case 1

1.1 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	4/19/2014	19:56:42	COM4	8.34	0.00	24.64	6.6	
Event	2	Test Lines	Test Lines	4/19/2014	20:03:23	COM4	8.31	0.00	26.61	7.6	
Event	3	Pump Spacer 1	Pump Spacer 1	4/19/2014	20:05:07	COM4	8.32	0.00	23.65	7.7	
Event	4	Pump Spacer 2	Pump Spacer 2	4/19/2014	20:09:57	COM4	14.42	2.41	58.15	0.2	
Event	5	Pump Spacer 1	Pump Spacer 1	4/19/2014	20:13:53	COM4	14.26	5.02	128.13	0.3	
Event	6	Pump Cement	Pump Cement	4/19/2014	20:15:52	COM4	14.56	5.09	145.87	10.3	
Event	7	Shutdown	Shutdown	4/19/2014	20:42:10	COM4	8.82	0.00	5.91	128.9	
Event	8	Drop Top Plug	Drop Top Plug	4/19/2014	20:42:58	COM4	7.04	0.00	5.91	128.9	
Event	9	Pump Displacement	Pump Displacement	4/19/2014	20:43:04	COM4	7.63	0.00	5.91	128.9	
Event	10	Bump Plug	Bump Plug	4/19/2014	21:13:45	COM4	-0.13	0.00	1742.56	93.7	
Event	11	Other	Other	4/19/2014	21:22:26	COM4	-0.21	0.00	1752.42	93.7	
Event	12	Shutdown	Shutdown	4/19/2014	21:24:11	COM4	-0.19	0.00	1.97	93.7	
Event	13	Pump Cement	Pump Cement	4/19/2014	23:48:07	COM4	15.98	0.00	55.19	0.0	
Event	14	Other	Other	4/20/2014	00:02:17	COM4	0.15	1.70	75.89	11.9	
Event	15	End Job	End Job	4/20/2014	00:12:49	COM4	8.46	0.00	45.34	21.0	

2.0 Appendix