

HALLIBURTON

iCem[®] Service

Post Job Report

ANADARKO PETROLEUM CORP - EBUS

For:

Date: Thursday, May 29, 2014

Spotted 29N-23HZ

Case 1

Sincerely,

Table of Contents

1.1	Executive Summary	3
1.2	Cementing Job Summary	4
1.3	Planned Pumping Schedule	6
1.4	Job Overview	Error! Bookmark not defined.
1.5	Water Field Test	Error! Bookmark not defined.
1.6	Job Event Log	8
2.0	Custom Graphs	10
2.1	Custom Graph	10
3.0	Appendix	Error! Bookmark not defined.

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Spotted 29N-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
Requested Time On Location	5/29/14	20:30	MST
Called Out	5/29/14	15:30	MST
On Location	5/29/14	20:30	MST
Job Started	5/29/14	21:10	MST
Job Completed	5/29/14	22:36	MST
Departed Location	5/29/14	23:00	MST

1.2 Cementing Job Summary

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 3530686	Quote #:	Sales Order #: 0901378139							
Customer: ANADARKO PETROLEUM CORP - EBUS		Customer Rep: Bob Balkubush								
Well Name: SPOTTED	Well #: 29N-23HZ	API/UWI #: 05-123-39429-00								
Field: WATTENBERG	City (SAP): IONE	County/Parish: WELD	State: COLORADO							
Legal Description: SW SW-23-2N-67W-275FSL-880FWL										
Contractor:		Rig/Platform Name/Num: MAJOR 29								
Job BOM: 7521										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX46524		Srvc Supervisor: Devin Birchell								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	1299ft	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	1299		
Open Hole Section			13.5				0	1299		
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625	1				Top Plug	9.625	1	HES	
Float Shoe	9.625	1		1299		Bottom Plug	9.625		HES	
Float Collar	9.625	1		1259		SSR plug set	9.625		HES	
Insert Float	9.625	1				Plug Container	9.625	1	HES	
Stage Tool	9.625	1				Centralizers	9.625	1	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	Mud Flush III (Powder)	Mud Flush III	12	bbl	8.4					
42 gal/bbl		FRESH WATER								
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	511	sack	14.2	1.54		6	7.64
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	97	bbl	8.33				
Cement Left In Pipe Amount 42 ft Reason Shoe Joint									
Comment									

Planned Pumping Schedule

- 1. Fill Lines with Water**
- 2. Pressure Test Lines to 2500psi**
- 3. Pump 10 Fresh Water Spacer**
 - a. Density = 8.33 lb/gal
 - b. Volume = 10 bbl
 - c. Rate = 3 bpm
- 4. Pump Mud Flush III Spacer**
 - a. Density = 8.4 lb/gal
 - b. Volume = 12 bbl
 - c. Rate = 3 bpm
- 5. Pump Fresh Water Spacer**
 - a. Density = 8.33 lb/gal
 - b. Volume = 10 bbl
 - c. Rate = 3 bpm
- 6. Pump SwiftCem**
 - a. Density = 14.2 ppg
 - b. Yield = 1.54 ft³/sk
 - c. Water Requirement = 7.63 gal/sk
 - d. Volume = 511 sks (140bbls)
 - e. Rate = 6.0 bpm
- 7. Drop Top Plug**
- 8. Start Displacement**
- 9. Pump Displacement Water**
 - a. Density = 8.33 lb/gal
 - b. Volume = 97 bbls
 - c. Rate = 6.0 bpm
- 10. Land Plug – Anticipated Final Circulation Pressure 400 psi**

Calculated Total Displacement = 97 bbls

1.3 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	Comb Pump Rate (bbl/min)	DH Density (ppg)	Comment
Event	1	Call Out	Call Out	5/29/2014	15:30:45	USER				called out for anadarko spotted 29n-23hz surface
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/29/2014	19:45:12	USER				discussed route, weather, road conditions, other traffic
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	5/29/2014	20:00:12	USER				called journey, gate checked and departed to location
Event	4	Arrive At Loc	Arrive At Loc	5/29/2014	20:30:45	USER				ended journey and talked with company rep on job protocol
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/29/2014	20:35:12	USER				discussed equipment placement team lift hand placement pinch points
Event	6	Rig-Up Equipment	Rig-Up Equipment	5/29/2014	20:40:52	USER				spot and rig up pump and ground lined and water hoses
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/29/2014	21:00:21	USER				discussed job procedures with cement and rig crews
Event	8	Start Job	Start Job	5/29/2014	21:08:57	COM1				
Event	9	Rig-Up Completed	Rig-Up Completed	5/29/2014	21:10:12	USER				loaded and conected head to casing and tied in lines to head
Event	10	Prime Pumps	Prime Pumps	5/29/2014	21:12:26	USER				primed pump and lines ready for pressure test
Event	11	Test Lines	Test Lines	5/29/2014	21:13:54	COM1			2343	tested pump and lines to 2343 psi
Event	12	Pump Spacer 1	Pump Spacer 1	5/29/2014	21:16:38	COM1	14.00	3.00	8.35	pump 10 bbls fresh water spacer
Event	13	Pump Spacer 2	Pump Spacer 2	5/29/2014	21:19:54	COM1	73.00	4.00	8.40	pump 12 bbls mud flush III spacer
Event	14	Pump Spacer 1	Pump Spacer 1	5/29/2014	21:23:30	COM1	54.00	3.00	8.37	pump 10 bbls fresh water spacer

Event	15	Pump Cement	Pump Cement	5/29/2014	21:27:30	COM1	23.00	6.00	14.2	pump 140 bbls (511 sks) 14.2 ppg lead, y:1.54 ft3/sk w: 7.64 gal/sk
Event	16	Shutdown	Shutdown	5/29/2014	21:57:45	COM1				shutdown to wash up pump and to drop plug
Event	17	Drop Top Plug	Drop Top Plug	5/29/2014	21:57:53	COM1				dropped plug with company rep witnessing, washed up on plug
Event	18	Pump Displacement	Pump Displacement	5/29/2014	21:57:58	COM1	8.33	6.00	40	pump 97 bbls fresh water displacement
Event	19	Displ Reached Cmnt	Displ Reached Cmnt	5/29/2014	22:08:45	USER	8.33	6.10	100	with 20 bbls away displacement reached cement
Event	20	Spacer Returns to Surface	Spacer Returns to Surface	5/29/2014	22:09:45	USER				mud flush to surface with 36 bbls away
Event	21	Cement Returns to Surface	Cement Returns to Surface	5/29/2014	22:14:12	USER				with 60 bbls displacement away cement returns to surface (37 bbls)
Event	22	Bump Plug	Bump Plug	5/29/2014	22:21:42	USER			419	bump plug with 419 psi and took pressure to 1464 psi
Event	23	Check Floats	Check Floats	5/29/2014	22:27:01	USER				checked floats, floats held with 1.5 bbls back to truck
Event	24	End Job	End Job	5/29/2014	22:35:02	COM1				job completed
Event	25	Post-Job Safety Meeting (Pre Rig- Down)	Post-Job Safety Meeting (Pre Rig-Down)	5/29/2014	22:37:45	USER				discussed hand placement team lifting swing path
Event	26	Rig-Down Equipment	Rig-Down Equipment	5/29/2014	22:40:12	USER				rig down all iron and water hoses
Event	27	Rig-Down Completed	Rig-Down Completed	5/29/2014	22:50:12	USER				rig down complete call in to end job and for journey
Event	28	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/29/2014	23:00:14	USER				discussed route, weather, road conditions, other traffic
Event	29	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	5/29/2014	23:10:23	USER				thank you for using halliburton energy services

2.0 Custom Graphs

2.1 Custom Graph



