

HALLIBURTON

iCem[®] Service

ANADARKO PETROLEUM CORP - EBUS

For:

Date: Wednesday, June 04, 2014

Spurling 36C-34HZ

Case 1

Sincerely,

NICHOLAS VIGIL

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Spurling 36C-34HZ** 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
Called Out		
On Location	4/8/2014	09:30
Job Started	4/8/2014	11:04
Job Completed	4/8/2014	12:06

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 3367929	Quote #:	Sales Order #: 0901252834
Customer: ANADARKO PETROLEUM CORP - EBUS		Customer Rep:	
Well Name: SPURLING	Well #: 36C-34 HZ	API/UWI #: 05-123-39128-00	
Field: WATTENBERG	City (SAP): ION E	County/Parish: WELD	State: COLORADO
Legal Description: NW NW-34-2N-67W-377FNL-1178FWL			
Contractor: Bob Porter		Rig/Platform Name/Num: Majors 42	
Job BOM: 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX46524		Srvc Supervisor: Nicholas Vigil	
Job			

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST
Job depth MD	1076'		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	1066	0	0
Open Hole Section			13.5				0	1076	0	0

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		1066		Bottom Plug	9.625		HES
Float Collar	9.625	1		1023.5		SSR plug set	9.625		HES
Insert Float	9.625					Plug Container	9.625	1	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	Acid Type	Qty	Conc
				Sand Type	Size								

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					
42 gal/bbl			FRESH WATER							

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Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
2	Lead Cement	SWIFTCEM (TM) SYSTEM	402	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/mi n	Total Mix Fluid Gal
3	Displacement	Displacement	79.7	bbl	8.33				

Cement Left In Pipe	Amount 42 ft	Reason	Shoe Joint
Comment 17 bbl of Cement to surface			

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	3.0	10.0 bbl	10.0 bbl
1	1	Spacer	Mud Flush	8.40	3.0	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	6.0	402.0 sacks	402.0 sacks

1.2 Job Overview

		Units	Description
1	Surface temperature at time of job	°F	
2	Mud type (OBM, WBM, SBM, Water, Brine)	-	
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

1.3 Job Event Log

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1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Combined Pump Rate (bbf/min)	Driv-Side Pump Pressure (psi)	Density (ppg)	Comment
Event	1	Arrive At Loc	Arrive at loc	4/8/2014	09:30:00	USER				On location time was 0930, Rig had 3 joints of casing left to run.
Event	2	Rig-Up Equipment	Rig-Up	4/8/2014	09:45:00	USER				
Event	3	Rig-Up Completed	Rig-Up Completed	4/8/2014	10:04:37	USER	4.48	436.87	3.50	
Event	4	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/8/2014	10:30:00	USER	4.48	-0.98	3.29	Held safety meeting with all personnel on location.
Event	5	Start Job	Start Job	4/8/2014	11:04:54	COM1	8.13	17.67	8.26	
Event	6	Test Lines	Test Lines	4/8/2014	11:05:31	COM1	8.24	3500.00	8.33	Pressure tested lines to 3500 psi.
Event	7	Pump Spacer 1	Water Spacer	4/8/2014	11:08:09	COM1	3.00	60.00	8.42	Water Spacer
Event	8	Pump Spacer 2	Mud Flush	4/8/2014	11:11:46	COM1	3.00	72.00	8.36	Mud Flush
Event	9	Pump Spacer 1	Water Spacer	4/8/2014	11:15:51	COM1	3.00	75.00	8.26	Water Spacer
Event	10	Pump Cement	14.2 ppg SwiftCem	4/8/2014	11:19:12	COM1	6.00	145.00	14.2	14.2 ppg SwiftCem (402 sks), weight was verified by scale.
Event	11	Shutdown	Shutdown	4/8/2014	11:39:41	COM1	14.42	-4.91	-0.68	
Event	12	Drop Top Plug	Drop Top Plug	4/8/2014	11:40:42	COM1	8.78	-4.91	-0.83	Plug was pre loaded
Event	13	Pump Displacement	Pump Displacement	4/8/2014	11:41:38	COM1	6.00	231.00	8.33	Displaced with fresh water
Event	14	Bump Plug	Bump Plug	4/8/2014	12:00:58	COM1	3.00	500.00	8.34	Bumped plug 500 psi over final lift bringing our pressure to 1050 psi.
Event	15	Other	Check Floats	4/8/2014	12:03:14	COM1	8.29	1085.80	8.39	Floats Held
Event	16	Pressure Up Well	Re-Bump	4/8/2014	12:04:04	COM1	8.24	-62.83	8.26	Pressured flots back up to 550 psi.
Event	17	Other	Check Floats	4/8/2014	12:06:22	COM1	8.30	574.32	8.27	Floats held
Event	18	End Job	End Job	4/8/2014	12:06:58	COM1	8.28	-61.85	8.30	Rig down safety meeting
Event	19	Rig-Down Equipment	Rig-Down Equipment	4/8/2014	12:15:00	USER				

2.0 Attachments

2.1 Anadarko Spurling 36C-34HZ.png



