

HALLIBURTON

iCem[®] Service

Post Job Report

ANADARKO PETROLEUM CORP - EBUS

Date: Saturday, August 13, 2014

Dugite 34N-35HZ Surface

Sincerely,
Derek Trier

Table of Contents

1.1	Executive Summary	3
1.2	Cementing Job Summary	4
1.3	Planned Pumping Schedule	6
1.4	Job Overview	7
1.5	Job Event Log	8
2.0	Attachments	10

2.1	Custom Results.png	10
-----	--------------------	----

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Dugite 34N-35HZ** 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	5/15	1400	MT
On Location	5/15	1830	MT
Job Started	5/15	2213	MT
Job Completed	5/15	2342	MT
Departed Location	5/16	0100	MT

1.2 Cementing Job Summary

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300488		Ship To #: 3472319		Quote #:		Sales Order #: 0901350751					
Customer: ANADARKO PETROLEUM CORP - EBUS				Customer Rep: ALAN SEACREST							
Well Name: DUGITE			Well #: 34N-35HZ			API/UWI #: 05-123-39328-00					
Field: WATTENBERG		City (SAP): ION		County/Parish: WELD			State: COLORADO				
Legal Description: SW SW-23-2N-87W-1020FSL-530FWL											
Contractor:					Rig/Platform Name/Num: Majors 42						
Job BOM: 7521											
Well Type: HORIZONTAL GAS											
Sales Person: HALAMERICA\HX48524					Srvc Supervisor: Christopher Pickell						
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		1329ft		Job Depth TVD							
Water Depth				Wk Ht Above Floor		4 ft					
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	1319			
Open Hole Section			13.5				0	1329			
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		1319		Bottom Plug	9.625		HES		
Float Collar	9.625	1		1277		SSR plug set	9.625		HES		
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers	9.625	11	HES		
Miscellaneous Materials											
Gelling Agt		Conc		Surfactant		Conc		Acid Type		Qty	
Treatment Fld		Conc		Inhibitor		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									
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

HALLIBURTON

Cementing Job Summary

2	Lead Cement	SWIFTCEM (TM) SYSTEM	476	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/mi n	Total Mix Fluid Gal
3	Displacement	Displacement	99.3	bbl	8.33				
Cement Left In Pipe	Amount	42 ft		Reason	Shoe Joint				
Comment									

1.3 Planned Pumping Schedule

- 1. Fill Lines with Water**
 - a. Density = 8.33
 - b. Volume = 2.0 bbl
- 2. Pressure Test Lines to 2500psi**
- 3. Pump Fresh Water Spacer**
 - a. Density = 8.33 lb/gal
 - b. Volume = 10.0 bbl
 - c. Rate = 5.0 bpm
- 4. Pump Mud Flush Spacer**
 - a. Density = 8.4 lb/gal
 - b. Volume = 12.0 bbl
 - c. Rate = 5.0 bpm
- 5. Pump Fresh Water Spacer**
 - a. Density = 8.33 lb/gal
 - b. Volume = 10.0 bbl
 - c. Rate = 5.0 bpm
- 6. Drop Bottom Plug**
- 7. Pump SwiftCem (Lead)**
 - a. Density = 14.2
 - b. Yield = 1.54
 - c. Water Requirement = 7.66
 - d. Volume = 476 sks (130.6 bbls)
 - e. Rate = 5.0 bpm
- 8. Start Displacement**
- 9. Pump Displacement Water**
 - a. Density = 8.33 lb/gal
 - b. Volume = 99.3 bbls
 - c. Rate = 5.0 bpm
10. Land Plug – Anticipated Final Circulation Pressure 462 psi

Calculated Total Displacement = 99.3 bbls

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	9.2
4	Actual mud Plastic Viscosity (PV)	cP	
5	Actual mud Yield Point (YP)	lb _f /100ft ²	
6	Actual mud 30 min Gel Strength	lb _f /100ft ²	
7	Time circulated before job	HH:MM	
8	Mud volume circulated	Bbls	
9	Rate at which well was circulated	Bpm	
10	Pipe movement during hole circulation	Y/N	N
11	Rig pressure while circulating	Psi	
12	Time from end mud circulation to start of job	HH:MM	
13	Pipe movement during cementing	Y/N	N
14	Calculated displacement	Bbls	99.3
15	Job displaced by	Rig/HES	HES
16	Annular flow before job	Y/N	N
17	Annular flow after job	Y/N	N
18	Length of rat hole	Ft	
19	Units of gas detected while circulating	Units	
20	Was lost circulation experienced at any time?	Y/N	N

1.5 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	PS Pump Press (psi)	Comb Pump Rate (bbl/min)	Comb Pump Total	Comment
Event	1	Call Out	Call out	5/15/2014	14:00:00	USER					Crew called out at 1400 to be on location at 1900. Crew was Chris Pickell, Ken Broom, Keaton Simmons, Jay Gleeson, James Myre
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	5/15/2014	18:00:00	USER					Safety meeting held for journey. Left location for Majors 42.
Event	3	Arrive At Loc	Arrive At Loc	5/15/2014	18:30:00	USER					Arrived at location 30 mins. early. Rig setting up to run casing.
Event	4	Rig-up Lines	Rig-up Lines	5/15/2014	18:45:00	USER					Hazard hunt performed. Rig up planned and executed.
Event	5	Safety Meeting	Safety Meeting	5/15/2014	21:00:00	USER					Safety meeting held with rig crew to discuss job safety and procedure.
Event	6	Start Job	Start Job	5/15/2014	22:13:03	COM5					Quick latch container used on job.
Event	7	Test Lines	Test Lines	5/15/2014	22:15:23	COM5	8.33	2500	1.00	2	Pressure test lines to 2500. check for visible leaks and pressure loss.
Event	8	Pump Spacer 1	Pump Spacer 1	5/15/2014	22:19:31	COM5	8.33	14.00	1.90	12	Pumped 10 bbl water
Event	9	Pump Spacer 2	Pump Spacer 2	5/15/2014	22:24:50	COM5	8.33	34.00	1.90	24	Pumped 12 bbl mud flush.
Event	10	Pump Spacer 1	Pump Spacer 1	5/15/2014	22:31:09	COM5	8.33	39.00	5.00	34	Pumped 10 bbl water.
Event	11	Pump Cement	Pump Cement	5/15/2014	22:33:33	COM5	14.2	91.00	5.00	164.6	Pumped 130.6 bbl swiftcem cement 476 sks 14.2 ppg, 1.54 cuft/sk 7.76 gals per sk
Event	12	Shutdown	Shutdown	5/15/2014	23:06:17	COM5					Washed pumps and lines on top of the plug.
Event	13	Drop Top Plug	Drop Top Plug	5/15/2014	23:06:26	COM5					Plug preloaded witnessed by driller.
Event	14	Pump Displacement	Pump Displacement	5/15/2014	23:09:06	COM5	8.33	480	5.00	263.9	Pumped 99.3 bbl water displacement.

Event	15	Bump Plug	Bump Plug	5/15/2014	23:38:14	COM5	8.33	462.00	2.50	calculated pressure to land was 389. Plug landed with 462 psi.500 over.
Event	16	Other	Other	5/15/2014	23:41:24	COM5		1131.00		Pressure was held for 5 mins. and released. Floats held. 1/2 bbl back to tanks
Event	17	End Job	End Job	5/15/2014	23:42:41	COM5				All preflush and 11 bbl cement back to surface.
Event	18	Rig Down Lines	Rig-down Lines	5/15/2014	23:44:38	USER				Safety meeeting held for rig down. rigged down all equipment.
Event	19	Depart Location	Depart Location	5/16/2014	01:00:00	USER				Held meeting for journey and left for yard.

2.0 Attachments

2.1 Custom Results.png



