

HALLIBURTON

iCem[®] Service

Post Job Report

ANADARKO PETROLEUM CORP - EBUS

Date: Sunday, June 23, 2014

Black Tiger 36N-27HZ
Case 1

Sincerely,
Nicholas Vigil

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Black Tiger 36N-27HZ** 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	6/23/2014	17:30	MT
Called Out	6/23/2014	11:00	MT
On Location	6/23/2014	16:40	MT
Job Started	6/23/2014	18:04	MT
Job Completed	6/23/2014	19:35	MT
Departed Location	6/23/2014	20:30	MT

1.2 Cementing Job Summary

Sold To #: 300466		Ship To #: 3476048		Quote #:		Sales Order #: 0901451093					
Customer: ANADARKO PETROLEUM CORP - EBUS				Customer Rep: Bob Porter							
Well Name: BLACK TIGER			Well #: 36N-27HZ			API/UWI #: 05-123-39402-00					
Field: WATTENBERG		City (SAP): IONE		County/Parish: WELD		State: COLORADO					
Legal Description: SW SE-22-2N-67W-300FSL-1502FEL											
Contractor:				Rig/Platform Name/Num: Majors 42							
Job BOM: 7521											
Well Type: HORIZONTAL GAS											
Sales Person: HALAMERICA\HX23209				Srcv Supervisor: Nicholas Vigil							
Job											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type											
BHST											
Job depth MD		1704ft			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	1754		
Open Hole Section				13.5				0	1764		
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		1753.5'		Bottom Plug	9.625		HES		
Float Collar	9.625			1711.7'		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	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

2	Lead Cement	SWIFTCEM (TM) SYSTEM	670	sack	14.2	1.54		6	7.64
	0.20 %	VERSASET, 55 LB SK (101376573)							
	0.1250 lbm	POLY-E-FLAKE (101216940)							
	2 lbm	ENHANCER 923, BULK (101894003)							
	1.60 %	ECONOLITE (100001580)							
	2 %	CAL-SEAL 60, 50 LB BAG (101217146)							
	7.64 Gal	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
3	Displacement	Displacement	133	bbl	8.33				
Cement Left In Pipe		Amount 42 ft	Reason			Shoe Joint			
Comment 19 BBL OF CEMENT TO SURFACE									

1.4 Job Overview

		Units	Description
1	Surface temperature at time of job	°F	70
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	132.8
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	9.5
19	Units of gas detected while circulating	Units	
20	Was lost circulation experienced at any time?	Y/N	N

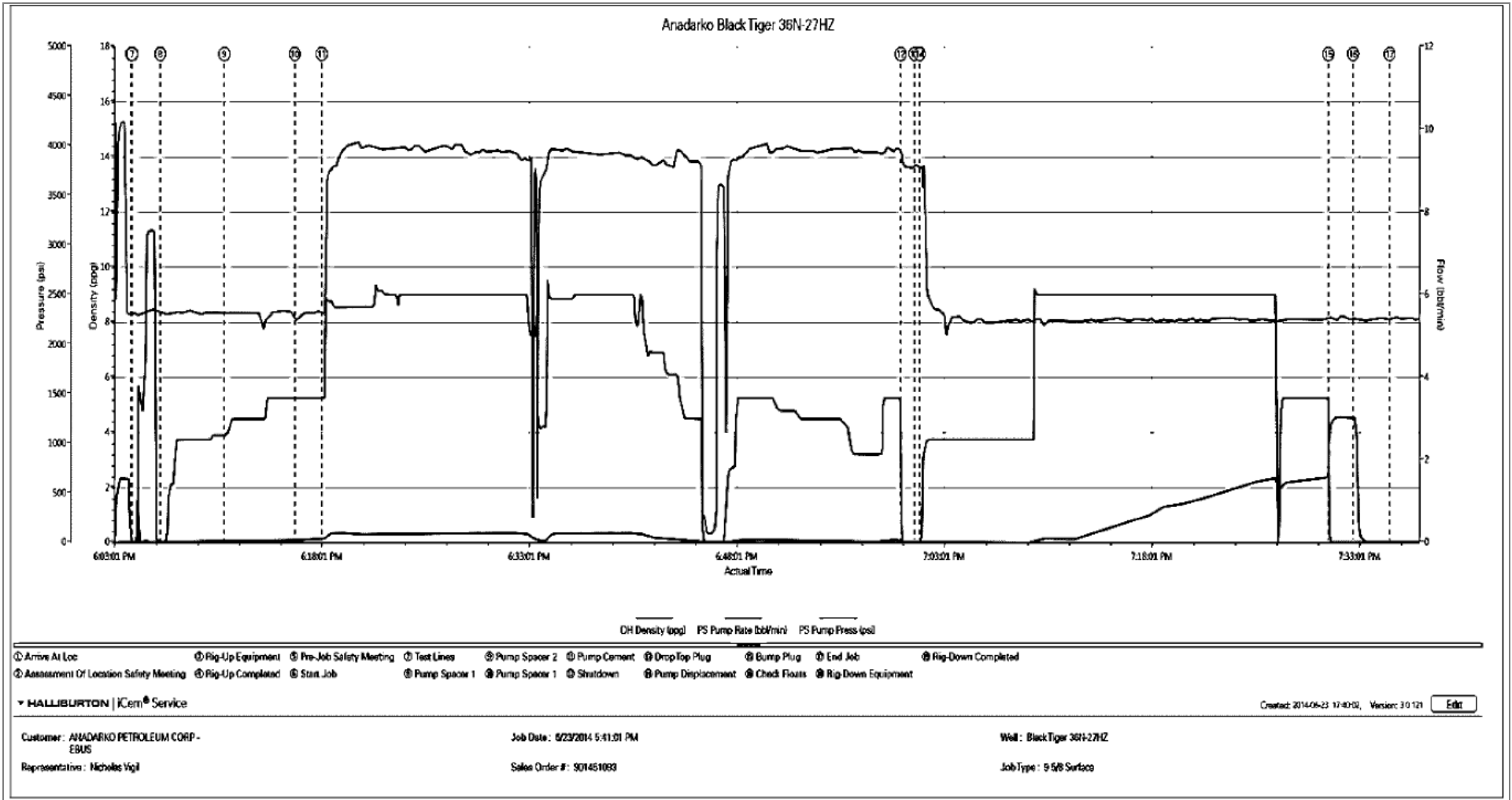
1.5 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	PS Pump Rate (bbl/min)	PS Pump Press (psi)	Comment
Event	1	Arrive At Loc	Arrive At Loc	6/23/2014	16:45:00	USER				On location time was 1730, Rig had around 10 joints of casing left to run.
Event	2	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	6/23/2014	16:50:00	USER				Hazard hunt, Rig up safety meeting, Water test
Event	3	Rig-Up Equipment	Rig-Up Equipment	6/23/2014	17:00:00	USER				
Event	4	Rig-Up Completed	Rig-Up Completed	6/23/2014	17:30:00	USER				
Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/23/2014	17:45:00	USER	15.23	0.10	-2.00	Held safety meeting with all personnel on location.
Event	6	Start Job	Start Job	6/23/2014	18:04:21	COM1	8.31	0.00	0.00	
Event	7	Test Lines	Test Lines	6/23/2014	18:04:26	COM1	8.32	0.00	-1.00	Pressure tested lines to 3000 psi.
Event	8	Pump Spacer 1	Pump Spacer 1	6/23/2014	18:06:27	COM1	8.36	2.50	13.00	10 bbl Water
Event	9	Pump Spacer 2	Pump Spacer 2	6/23/2014	18:11:05	COM1	8.31	3.00	20.00	12 bbl MudFlush
Event	10	Pump Spacer 1	Pump Spacer 1	6/23/2014	18:16:10	COM1	8.08	3.50	30.00	10 bbl Water
Event	11	Pump Cement	Pump Cement	6/23/2014	18:18:09	COM1	14.2	6.00	90.00	183.7 bbl SwiftCem (670 sks), weight was verified by scale
Event	12	Shutdown	Shutdown	6/23/2014	19:00:00	COM1	13.68	0.00	7.00	
Event	13	Drop Top Plug	Drop Top Plug	6/23/2014	19:01:00	COM1	13.71	0.00	-7.00	Plug was pre loaded.
Event	14	Pump Displacement	Pump Displacement	6/23/2014	19:01:22	COM1	8.34	6.00	300.00	133 bbl Water
Event	15	Bump Plug	Bump Plug	6/23/2014	19:30:53	COM1	8.17	3.50	650.00	Bumped plug 600 psi over final ift bringing our pressure to 1250 psi.
Event	16	Other	Check Floats	6/23/2014	19:32:40	COM1	8.15	0.00	1264.00	Floats held, we flowed back 1.5 bbl
Event	17	End Job	End Job	6/23/2014	19:35:19	COM1	8.10	0.00	-1.00	Rig down safety meeting
Event	18	Rig-Down Equipment	Rig-Down Equipment	6/23/2014	19:40:00	USER				

Event	19	Rig-Down Completed	Rig-Down Completed	6/23/2014	20:20:00	USER
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2.0 Custom Graphs

2.1 Custom Graph



3.0 Appendix

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