

HALLIBURTON

iCem[®] Service

ANADARKO PETROLEUM CORP - EBUS

For:

Date: Saturday, November 22, 2014

Summit 34C-32HZ

Production Liner

Sincerely,

Rayland Thompson

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Summit 34C-32HZ** cement **Production Liner** 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 [Fort Lupton]

1.2 Cementing Job Summary

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 3590237	Quote #:	Sales Order #: 0901740629							
Customer: ANADARKO PETROLEUM CORP - EBUS		Customer Rep:								
Well Name: SUMMIT	Well #: 34C-32HZ	API/UWI #: 05-123-40167-00								
Field: WATTENBERG	City (SAP): IONE	County/Parish: WELD	State: COLORADO							
Legal Description: SW SW-29-2N-65W-395FSL-881FWL										
Contractor: XTREME DRLG		Rig/Platform Name/Num: XTREME 6								
Job BOM: 7525										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\H117930		Srvc Supervisor:								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	13005ft	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
Drill Pipe		4	3.34	14			0	6771		0
Casing		7	6.276	26		HCP110	0	7752		
Casing		4.5	4	11.6		HCP110	6771	13005	0	0
Open Hole Section			6.125				7752	13020		0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	4.5	1		13005	Top Plug	4.5	1	HES		
Float Shoe	4.5	1			Bottom Plug	4.5	1	HES		
Float Collar	4.5	1		12956	SSR plug set	4.5	1	HES		
Insert Float	4.5	1			Plug Container	4.5	1	HES		
Stage Tool	4.5	1			Centralizers	4.5	1	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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	40	bbl	11.5	3.73				
36 gal/bbl		FRESH WATER								
148.73 lbm/bbl		BARITE, 100 LB SK (100003680)								

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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	EXPANDACEM (TM) SYSTEM	430 128 bbls	sack	13.8	1.67		6	7.7

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		153	bbl	10.5					
Cement Left In Pipe		Amount	49 ft		Reason			Shoe Joint		
Comment										

1.3 Planned Pumping Schedule

1.3 Pump Schedule

Description	Stage No.	Density (ppg)	Rate (bbl/min)	Yield (ft ³ /sack)	Water Req. (gal/sack)	Volume (bbl)	Bulk Cement (sacks)	Duration (min)
Anadarko Production Liner	1	9.40	4.00			0.00		0.00
Water - Pure	2	8.33	4.00			10.00		2.50
11.5ppg Tuned Spacer III	3	11.50	4.00			32.00		8.00
13.8ppg ExpandaCem 2160707	4	13.80	4.00	1.6753	7.710	128.31	430.00	32.08
Top Plug/Start Displacement								
Water - Pure	5-1	8.33	4.00			50.00		12.50
Water - Pure	5-2	8.33	3.00			43.00		14.33
11.5ppg Tuned Spacer III	6	11.50	4.00			8.00		2.00
Water - Pure	7	8.33	3.00			69.44		23.15
Total:						340.75		94.56

**Pump schedule may include additional rows for displacement if "Automatic Rate Adjustment" was enabled and ECDs approached the fracture gradient.*

1.4 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	Comb Pump Rate (bbl/min)	DH Density (ppg)	Comment
Event	1	Call Out	Call Out	10/12/2014	00:00:00	USER				Called out for Anadarko Summit Production Liner On loc. @ 05:00
Event	2	Arrive at Shop	Arrive at Shop	10/12/2014	01:00:00	USER				Arrive @ yard load equipment ,chemicals,check pump truck and download job
Event	3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/12/2014	03:00:00	USER				Pretrip/gatecheck discussed route and hazards on roadway use of journey management
Event	4	Crew Leave Yard	Crew Leave Yard	10/12/2014	03:15:00	USER				Crew convoy to location
Event	5	Arrive At Loc	Arrive At Loc	10/12/2014	04:00:00	USER				Arrive @ location talk with Joe (company man) Get numbers test water talk with weatherford tool hand go over procedures of the job and check numbers & make sure they match close journey
Event	6	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	10/12/2014	04:30:00	USER				Discussed spotting of equipment and hazards. Use spotters when moving trucks Make sure the spill liner is properly placed and sides are up on all sides
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	10/12/2014	04:45:00	USER				Talked with crew members about hazards involved with rig-up watch foot & hand placement
Event	8	Rig-Up Equipment	Rig-Up Equipment	10/12/2014	04:55:00	USER				Rig-up Halliburton hoses & lines to rig
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/12/2014	09:29:51	USER	-5.00	0.00	8.91	Discussed with all parties involved the hazards of the job stay away from all Hal.

										equipment Do Not Cross Lines
Event	10	Start Job	Start Job	10/12/2014	12:18:20	COM7	-2.00	0.00	10.12	Start Job
Event	11	Test Lines	Test Lines	10/12/2014	12:28:22	COM7	-2.00	0.00	8.78	Test kickouts to 500 psi Test lines to 5000 no leaks
Event	12	Pump Spacer 1	Pump Tuned Spacer III	10/12/2014	12:35:01	COM7	603.00	1.40	9.17	Pump 40 bbls Tuned Spacer III @ 11.5 #
Event	13	Pump Cement	Pump Cement	10/12/2014	12:48:33	COM7	1542.00	4.90	13.74	Pump 128 bbls Cement @ 13.8# 430 sks
Event	14	Pump Displacement	Pump Displacement	10/12/2014	13:30:27	COM7	160.00	5.00	8.44	Pump Fresh water Displacement 153 bbls slowed to 2 bpm @ 47 bbls gone to pick up plug . slowed to 2 bpm @ 140 bbls gone to bump plug
Event	15	Bump Plug	Bump Plug	10/12/2014	14:07:53	COM7	2514.00	0.00	8.49	Bump plug check floats floats held got back 2 bbls
Event	16	Pump Well Fluid	Fill Backside	10/12/2014	14:21:07	COM7	-4.00	0.00	8.40	pump fresh water until rig got returns back shut down pumped 4 bbls
Event	17	Test Lines	Test Liner	10/12/2014	14:24:44	COM7	-2.00	0.00	8.37	Tested liner to 2500 psi hold 5 mins pressured held
Event	18	Clean Hole	Circulate Hole Clean	10/12/2014	14:41:50	COM7	805.00	0.00	8.41	Circulated 40 bbls spacer & trace cmt back to surface had to shut down several times the rig tank had trash in it & clogged up the lines and the water pump finished the last 50 bbls through the recirc pump
Event	19	End Job	End Job	10/12/2014	15:36:48	COM7	13.00	0.00	8.41	End Job
Event	20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/12/2014	15:50:00	USER	-3.00	0.00	0.04	Discussed with members the hazards of rigging down
Event	21	Rig-Down Equipment	Rig-Down Equipment	10/12/2014	16:05:00	USER	-4.00	0.00	0.00	Rig-down Halliburton iron & hoses
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/12/2014	18:00:00	USER				Dicuss route and hazards use of journey

							management
Event	23	Crew Return Yard	Crew Return Yard	10/12/2014	18:15:00	USER	Thank you for choosing Halliburton

2.0 Custom Graphs

2.1 Custom Graph



