

EXXONMOBIL CORPORATION
HOUSTON, Texas

PCU 296-6A3 Surface

H&P 239

Post Job Summary

Cement Multiple Stages

Date Prepared: October 1, 2010
Version: 1

Service Supervisor: Cody Davis
Submitted by: Simukayi Mutasa

HALLIBURTON

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Wellbore Geometry

Job Tubulars					MD		TVD		Excess %	Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft		
Open Hole Section	Surface Open Hole		14.750		0.00	1,591.00	0.00	1,571.00	75.00	
Open Hole Section	Surface Open Hole		14.750		1,591.00	4,403.00	1,571.00	4,329.00	25.00	
Casing	Surface Casing	10.75	9.950	45.50	0.00	4,403.00	0.00	4,329.00		80.00
Cement Stage Tool	Multiple Stage Cementer		.000		0.00	1,591.00				0.00

Pumping Schedule

Stage #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Surface Volume
1	1	Spacer	FreshWater Ahead	8.33	50.0 bbl
1	2	Cement Slurry	First Stage Lead Cement	12.70	850.0 sacks
1	3	Cement Slurry	First Stage Tail Cement	15.80	350.0 sacks
1	4	Spacer	Drilling Fluid / Mud	8.90	405.0 bbl
2	1	Spacer	Freshwater Ahead	8.33	50.0 bbl
2	2	Cement Slurry	Second Stage Lead Cement	12.70	800.0 sacks
2	3	Spacer	Drilling Fluid / Mud	8.90	149.0 bbl

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Fluids Pumped

Stage/Plug # 1 **Fluid 1:** FreshWater Ahead
SPACER

Fluid Density: 8.33 lbm/gal
Fluid Volume: 50.00 bbl
Pump Rate: 6.00 bbl/min

Stage/Plug # 1 **Fluid 2:** First Stage Lead
Cement
ECONOCEM (TM) SYSTEM
0.6 % HR-7
0.25 lbm Poly-E-Flake

Fluid Weight: 12.70 lbm/gal
Slurry Yield: 1.87 ft3/sack
Total Mixing Fluid: 9.89 Gal
Surface Volume: 850.0 sacks
Sacks: 850.0 sacks
Calculated Fill: 2,425.00 ft
Calculated Top of Fluid: 1,591.00 ft
Pump Rate: 6.00 bbl/min

Stage/Plug # 1 **Fluid 3:** First Stage Tail Cement
HALCEM (TM) SYSTEM
0.25 % HR-800
0.25 lbm Poly-E-Flake

Fluid Weight: 15.80 lbm/gal
Slurry Yield: 1.15 ft3/sack
Total Mixing Fluid: 4.95 Gal
Surface Volume: 350.0 sacks
Sacks: 350.0 sacks
Calculated Fill: 516.00 ft
Calculated Top of Fluid: 4,016.00 ft
Pump Rate: 6.00 bbl/min

Stage/Plug # 1 **Fluid 4:** Drilling Fluid / Mud
DRILLING MUD

Fluid Density: 8.90 lbm/gal
Fluid Volume: 405.00 bbl
Pump Rate: 6.00 bbl/min

Stage/Plug # 2 **Fluid 1:** Freshwater Ahead
SPACER

Fluid Density: 8.33 lbm/gal
Fluid Volume: 50.00 bbl
Pump Rate: 6.00 bbl/min

Stage/Plug # 2 **Fluid 2:** Second Stage Lead
Cement
ECONOCEM (TM) SYSTEM
0.25 lbm Poly-E-Flake

Fluid Weight: 12.70 lbm/gal
Slurry Yield: 1.87 ft3/sack
Total Mixing Fluid: 9.92 Gal
Surface Volume: 800.0 sacks
Sacks: 800.0 sacks
Calculated Fill: 1,591.00 ft
Calculated Top of Fluid: 0.00 ft
Pump Rate: 6.00 bbl/min

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Stage/Plug # 2 **Fluid 3:** Drilling Fluid / Mud
DRILLING MUD

Fluid Density: 8.90 lbm/gal
Fluid Volume: 149.00 bbl
Pump Rate: 6.00 bbl/min

Stage/Plug # 2 **Fluid 4:** Top Out
Top Out
94 lbm Premium Cement
2 % Calcium Chloride

Fluid Weight: 15.80 lbm/gal
Slurry Yield: 1.16 ft³/sack
Total Mixing Fluid: 5.01 Gal
Pump Rate: 2.00 bbl/min

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Job Summary

Job Information

Job Start Date	9/25/2010 6:00:00 AM
Job MD	4,403.0 ft
Job TVD	4,329.0 ft
Height of Plug Container/Swage Above Rig Floor	3.0 ft
Surface Temperature at Time of Job	55 degF
Mud Type	Water Based Mud
Actual Mud Density	9 lbm/gal
Time Circulated before job	4.00 hour(s)
Pipe Movement During Hole Circulation	Reciprocated
Time From End Mud Circ. to Job Start	15.00 minute
Pipe Movement During Cementing	Reciprocated
Calculated Displacement	148.80 bbl
Amount of Cement Returns	85.00 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Annular flow Before Job? (Water/Gas)	Unknown
Annular flow After Job? (Water/Gas)	Unknown

Cementing Equipment

Pipe Centralization	Through Entire Cement Column
Brand of Float Equipment Used	Weatherford
Did Float Equipment Hold?	Yes
Plug set used?	Yes
Brand of Plug set used?	Weatherford
Did Plugs Bump?	Yes
Calculated Pressure to Bump Plugs	400.0 psig
Brand of Stage Cementing Tools Used	Weatherford
Did Stage Cementing Tool Open Properly?	Yes

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Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pressure (psig)	Comments
09/24/2010 04:35		Safety Meeting - Pre Rig-Up				PICH POINTS RED ZONES LINE OF FIRE
09/24/2010 04:45		Rig-Up Equipment				
09/24/2010 05:15		Rig-Up Completed				
09/24/2010 14:00		Call Out				
09/24/2010 17:00		Depart Yard Safety Meeting				JOURNEY MANAGMENT
09/24/2010 17:30		Crew Leave Yard				
09/24/2010 20:30		Arrive at Location from Service Center				RIG RUNNING CASING
09/24/2010 20:35		Safety Meeting - Assessment of Location				OVER HEAD LINES RED ZONES
09/24/2010 20:45		Other				MEET W/ CO MAN AND GO OVER NUMBERS
09/24/2010 20:55		Other				SPOT TRUCKS USING TWO SPOTTERS
09/24/2010 21:00		Safety Meeting - Pre Rig-Up				PINCH POINTS RED ZONES LINE OF FIRE
09/24/2010 21:05		Rig-Up Equipment				
09/24/2010 22:30		Rig-Up Completed				
09/24/2010 22:45		Other				WAIT ON RIG TO RUN CASING
09/25/2010 06:00		Safety Meeting - Pre Job				GO OVER JOG PROCESS
09/25/2010 06:20		Pump Water				2BBLS TO FILL LINES
09/25/2010 06:25		Pressure Test			5000.0	250PSI AND TO 5000PSI
09/25/2010 06:30		Pump Water	5		246.0	50BBLS
09/25/2010 06:49		Pump Lead Cement	7		460.0	PUMP 283.1BBLS 12.7# 1.87YIELD 9.89GAL/SK 850SKS
09/25/2010 07:30		Pump Tail Cement	5		300.0	PUMP 71.1BBLS 15.8# 1.15YIELD 4.95GA/SK 350SKS
09/25/2010 07:43		Shutdown				
09/25/2010 07:49		Drop Top Plug				
09/25/2010 07:51		Pump Displacement - Start	7		370.0	PUMP 413.4BBLS MUD DISPLACEMENT
09/25/2010 08:12		Slow Rate	3		124.0	SLOW TO GO THROUGH TOOL 140-160BBLS GONE
09/25/2010 08:19		Other	6		255.0	UP RATE 160BBLS GONE
09/25/2010 08:56		Slow Rate	4		694.0	380BBLS GONE
09/25/2010 09:00		Slow Rate	2		700.0	400BBLS GONE
09/25/2010 09:02		Bump Plug	2		740.0	TOTAL DISPLACEMENT 405BBLS PRESSURE OVER 500 TO 1200PSI
09/25/2010 09:11		Check Floats				2.5BBLS BACK
09/25/2010 09:18		Other				DROP BOMB AND WAIT 10MINS

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Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pressure (psig)	Comments
09/25/2010 09:29		Other	2		640.0	OPEN TOOL AT 640PSI CIRCULATE 20BBLS MUD AND TURN OVER TO RIG AND WAIT 4-6HOURS
09/25/2010 13:00		Safety Meeting - Pre Job				GO OVER JOB PROCESS
09/25/2010 13:08		Pump Water	5		160.0	50BBLS H2O
09/25/2010 13:18		Pump Cement	6		368.0	266.4BBLS 12.7# 1.87YIELD 9.89GAL/SK 800SKS
09/25/2010 13:55		Shutdown				
09/25/2010 13:56		Clean Lines				
09/25/2010 14:01		Drop Top Plug				
09/25/2010 14:03		Pump Displacement - Start	7		222.0	PUMP MUD DISPLACEMENT
09/25/2010 14:13		Slow Rate	5		370.0	60BBLS GONE
09/25/2010 14:15		Cement Returns to Surface	5		365.0	70BBLS GONE
09/25/2010 14:27		Slow Rate	4.5		560.0	130BBLS GONE
09/25/2010 14:31		Bump Plug	4.5		400.0	PRESSURE OVER TO 1900PSI
09/25/2010 14:31		Other				TOOL CLOSES
09/25/2010 14:35		Check Floats				2BBLS BACK
09/25/2010 14:45		Safety Meeting - Pre Rig-Down				PINCH POINTS RED ZONES LINE OF FIRE
09/25/2010 14:55		Rig-Down Equipment				
09/25/2010 16:30		Rig-Down Completed				
09/25/2010 16:40		Safety Meeting - Departing Location				JOURNEY MANAGMENT
09/25/2010 16:45		Depart Location for Service Center or Other Site				

The Road to Excellence Starts with Safety

Sold To #: 331699	Ship To #: 2791690	Quote #:	Sales Order #: 7652659
Customer: EXXONMOBIL CORPORATION		Customer Rep: Naranjo, German	
Well Name: PCU		Well #: 296-6A3	API/UWI #: 05-103-11481
Field: PICEANCE CREEK	City (SAP): MEEKER	County/Parish: Rio Blanco	State: Colorado
Legal Description: Section 6 Township 2S Range 96W			
Contractor: H&P		Rig/Platform Name/Num: H&P239	
Job Purpose: Cement Multiple Stages			
Well Type: Development Well		Job Type: Cement Multiple Stages	
Sales Person: TURNER, JAMIE		Srvs Supervisor: DAVIS, CODY	MBU ID Emp #: 446891

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DAVIS, CODY R		446891	MCKEE, SCOTT Burt		470316	SHIFLETT, JESSE Amos		469551
SPENCER, WESTON Chad		391271	WILLIAMS, CAMERON Kent		438405			

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
TOTAL			Total is the sum of each column separately					

Job

Job Times

Formation Name							Date	Time	Time Zone
Formation Depth (MD)	Top			Bottom		Called Out	24 - Sep - 2010	14:00	MST
Form Type			BHST			On Location	24 - Sep - 2010	20:30	MST
Job depth MD	4403. ft		Job Depth TVD	4329. ft		Job Started	25 - Sep - 2010	06:00	MST
Water Depth			Wk Ht Above Floor		3. ft	Job Completed	25 - Sep - 2010	14:35	MST
Perforation Depth (MD)	From			To		Departed Loc	25 - Sep - 2010	16:45	MST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Multiple Stage Cementer	Used			.				.	1591.		
Surface Open Hole				14.75				.	1591.	.	1571.
Surface Open Hole				14.75				1591.	4403.	1571.	4329.
Surface Casing	Unknown		10.75	9.95	45.5	BTC	J-55	.	4403.	.	4329.

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			

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 ft ³ /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk								
1	FreshWater Ahead				50.00	bbl	8.33	.0	.0	6.0									
2	First Stage Lead Cement	ECONOCEM (TM) SYSTEM (452992)			850.0	sacks	12.7	1.87	9.89	6.0	9.89								
0.6 %		HR-7 (100005055)																	
0.25 lbm		POLY-E-FLAKE (101216940)																	
9.889 Gal		FRESH WATER																	
3	First Stage Tail Cement	HALCEM (TM) SYSTEM (452986)			350.0	sacks	15.8	1.15	4.95	6.0	4.95								
0.25 %		HR-800, 50 LB SACK (101619742)																	
0.25 lbm		POLY-E-FLAKE (101216940)																	
4.948 Gal		FRESH WATER																	
4	Drilling Fluid / Mud				405.00	bbl	8.9	.0	.0	6.0									
Stage/Plug #: 2																			
Fluid #	Stage Type	Fluid Name			Qty	Qty uom	Mixing Density uom	Yield uom	Mix Fluid uom	Rate uom	Total Mix Fluid uom								
1	Freshwater Ahead				50.00	bbl	8.33	.0	.0	6.0									
2	Second Stage Lead Cement	ECONOCEM (TM) SYSTEM (452992)			800.0	sacks	12.7	1.87	9.92	6.0	9.92								
0.25 lbm		POLY-E-FLAKE (101216940)																	
9.915 Gal		FRESH WATER																	
3	Drilling Fluid / Mud				149.00	bbl	8.9	.0	.0	6.0									
4	Top Out	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)				sacks	15.8	1.16	5.01	2.0	5.01								
94 lbm		CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)																	
2 %		CALCIUM CHLORIDE - HI TEST PELLET (100005053)																	
5.019 Gal		FRESH WATER																	
Calculated Values				Pressures				Volumes											
Displacement				Shut In: Instant				Lost Returns				Cement Slurry				Pad			
Top Of Cement				5 Min				Cement Returns				Actual Displacement				Treatment			
Frac Gradient				15 Min				Spacers				Load and Breakdown				Total Job			
Rates																			
Circulating				Mixing				Displacement				Avg. Job							
Cement Left In Pipe				Amount 80 ft		Reason		Shoe Joint											
Frac Ring # 1 @		ID		Frac ring # 2 @		ID		Frac Ring # 3 @		ID		Frac Ring # 4 @		ID					
The Information Stated Herein Is Correct								Customer Representative Signature											

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Data Acquisition

EXXON 239 10.75 SUREFACE WELL PCU 296-6A3



Customer: EXXONMOBIL CORPORATION
Well Description: PCU 296-6A3

Job Date: 24-Sep-2010
UWI: 05-103-11481

Sales Order #: 7652651

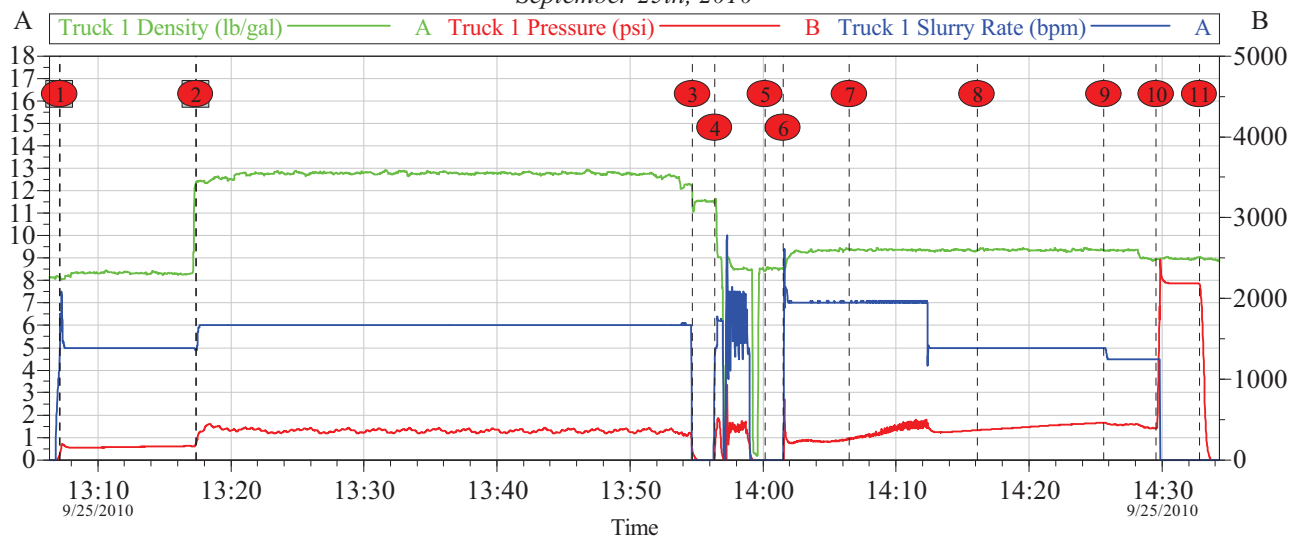
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25-Sep-10 09:54

HALLIBURTON

ExxonMobil PCU 296-6A3

10.75 Two Stage Surface

September 25th, 2010



Local Event Log

1 Pump 50 bbls of Fresh Water Spacer	13:07:08	2 Pump 246 bbls of Cement @ 12.7 ppg	13:17:21
3 Shutdown	13:54:41	4 Clean Lines	13:56:22
5 Drop Top Plug	14:00:09	6 Pump 148 bbls of Displacement	14:01:31
7 Displacement Reached Cement	14:06:30	8 Cement Returns to Surface	14:16:06
9 Slow Rate to Land Closing Plug	14:25:38	10 Land Plug and Close Tool	14:29:33
11 Bleed Pressure off to Check that Tool is Closed	14:32:48		

Customer: EXXONMOBIL CORPORATION
Well Description: PCU 296-6A3

Job Date: 25-Sep-2010
UWI: 05-103-11481

Sales Order #: 7652651

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