

EXXONMOBIL CORPORATION

HOUSTON, Texas

PCU 197-36A9

H&P 326

Post Job Summary

Cement Multiple Stages

Date Prepared: 11/16/10
Version: 1

Service Supervisor: DAVIS, CODY

Submitted by: Isaac Whorl

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	1,593	0	1,564	75	
Open Hole Section	Surface Open Hole		14.750		1,593	4,199	1,564	4,069	25	
Casing	Surface Casing	10.75	9.950	45.50	0	4,199	0	4,069		80.00
Cement Stage Tool	Multiple Stage Cementer		.000		1,593	1,593				0.00

Pumping Schedule

Stage/Plug #	Fluid #	Fluid Type	Fluid Name	Density lbm/gal	Avg Rate bbl/min	Volume
1	1	Spacer	FreshWater Ahead	8.33	6.00	50.0 bbl
1	2	Cement Slurry	First Stage Lead Cement	12.70	6.00	780.0 sacks
1	3	Cement Slurry	First Stage Tail Cement	15.80	6.00	350.0 sacks
1	4	Spacer	Drilling Fluid / Mud	8.90	6.00	367.0 bbl
2	1	Spacer	Freshwater Ahead	8.33	6.00	50.0 bbl
2	2	Cement Slurry	Second Stage Lead Cement	12.70	6.00	800.0 sacks
2	3	Spacer	Drilling Fluid / Mud	8.90	6.00	153.0 bbl
2	4	Cement Slurry	Top Out	15.80	2.00	40.0 sacks

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Fluids Pumped

Stage/Plug # 1 WATER	Fluid 1: FreshWater Ahead	Fluid Density: 8.33 lbm/gal Fluid Volume: 50.00 bbl
Stage/Plug # 1 0.6 % 0.25 lbm	Fluid 2: First Stage Lead Cement ECONOCEM (TM) SYSTEM HR-7 Poly-E-Flake	Fluid Weight: 12.70 lbm/gal Slurry Yield: 1.87 ft3/sack Total Mixing Fluid: 9.89 Gal Volume: 780.0 sacks Calculated Fill: 2,089.82 ft Calculated Top of Fluid: 1,593.00 ft
Stage/Plug # 1 0.25 % 0.25 lbm	Fluid 3: First Stage Tail Cement HALCEM (TM) SYSTEM HR-800 Poly-E-Flake	Fluid Weight: 15.80 lbm/gal Slurry Yield: 1.15 ft3/sack Total Mixing Fluid: 4.95 Gal Volume: 350.0 sacks Calculated Fill: 516.18 ft Calculated Top of Fluid: 3,682.82 ft
Stage/Plug # 1 DRILLING MUD	Fluid 4: Drilling Fluid / Mud	Fluid Density: 8.90 lbm/gal Fluid Volume: 367.00 bbl
Stage/Plug # 2 WATER	Fluid 1: Freshwater Ahead	Fluid Density: 8.33 lbm/gal Fluid Volume: 50.00 bbl
Stage/Plug # 2 0.25 lbm	Fluid 2: Second Stage Lead Cement ECONOCEM (TM) SYSTEM Poly-E-Flake	Fluid Weight: 12.70 lbm/gal Slurry Yield: 1.87 ft3/sack Total Mixing Fluid: 9.92 Gal Volume: 800.0 sacks Calculated Fill: 1,593.00 ft Calculated Top of Fluid: 0.00 ft
Stage/Plug # 2 DRILLING MUD	Fluid 3: Drilling Fluid / Mud	Fluid Density: 8.90 lbm/gal Fluid Volume: 153.00 bbl
Stage/Plug # 2 Top Out 94 lbm 2 %	Fluid 4: Top Out Premium Cement Calcium Chloride	Fluid Weight: 15.80 lbm/gal Slurry Yield: 1.16 ft3/sack Total Mixing Fluid: 5.01 Gal Volume: 40.0 sacks

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Job Summary

Job Information

Job Start Date	10/10/2010 4:30:00 PM
Job MD	3,917.0 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	2.00 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	153.20 bbl
Amount of Cement Returns	104.00 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps

Cementing Equipment

Pipe Centralization	Through Entire Cement Column
Brand of Float Equipment Used	Weatherford
Did Float Equipment Hold?	Yes
Plug set used?	No
Brand of Plug set used?	Weatherford
Did Plugs Bump?	Yes
Calculated Pressure to Bump Plugs	450.0 psig
Brand of Stage Cementing Tools Used	Weatherford
Did Stage Cementing Tool Open Properly?	Yes

Service Supervisor Reports

Job Log

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
10/10/2010 03:00	Call Out				
10/10/2010 06:00	Depart Yard Safety Meeting				JOURNEY MANAGMENT
10/10/2010 06:30	Crew Leave Yard				
10/10/2010 11:00	Arrive at Location from Service Center				RIG RUNNING CASING
10/10/2010 11:15	Safety Meeting - Assessment of Location				OVER HEAD LINES RES ZONES
10/10/2010 11:30	Safety Meeting - Pre Rig-Up				PINCH POINTS RED ZONES LINE OF FIRE
10/10/2010 11:35	Rig-Up Equipment				
10/10/2010 14:30	Rig-Up Completed				WAIT ON RIG TO CIRCULATE
10/10/2010 16:30	Safety Meeting - Pre Job				GO OVER JOB PROCESS
10/10/2010 17:04	Pump Water				2BBLS TO FILL LINES
10/10/2010 17:05	Pressure Test			250.0	TO 250PSI
10/10/2010 17:10	Pressure Test			5000.0	TO 5000PSI
10/10/2010 17:17	Pump Water	6		187.0	50BBLS H2O
10/10/2010 17:29	Pump Lead Cement	6		400.0	259.8BBLS 12.7# 1.87YIELD 9.89GAL/SK 780SKS
10/10/2010 18:11	Pump Tail Cement	6		400.0	71.7BBLS 15.8# 1.15YIELD 4.95GAL/SK 350SKS
10/10/2010 18:25	Shutdown				
10/10/2010 18:34	Drop Top Plug				
10/10/2010 18:36	Pump Displacement - Start	8		381.0	DISPLACE W/ MUD
10/10/2010 18:55	Slow Rate	3		138.0	SLOW TO GO THROUGH TOOL 140BBLS TO 160BBLS

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Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
10/10/2010 19:02	Other	6		285.0	UP RATE 160BBLS GONE
10/10/2010 19:09	Pump Water	6		160.0	200BBLS GONE
10/10/2010 19:20	Other	6		300.0	PUMP MUD 260BBLS GONE
10/10/2010 19:35	Slow Rate	3		730.0	150BBLS GONE
10/10/2010 19:38	Bump Plug	3		700.0	TOTAL DISPLACEMENT 167BBLS PRESSURE OVER 500PSI TO 1200PSI
10/10/2010 19:43	Check Floats				2BBLS BACK
10/10/2010 19:49	Other				DROP BOMB AND WAIT 25MINS
10/10/2010 20:15	Other				OPEN TOOL AT 540PSI AND CIRCULATE 20BBLS MUD AND TURN OVER TO RIG FOR 3 HOURS
10/10/2010 23:00	Safety Meeting - Pre Job				
10/10/2010 23:26	Pump Water	5		166.0	50BBLS H2O
10/10/2010 23:36	Pump Cement	6		400.0	266.4BBLS 12.7# 1.87YIELD 9.89GAL/SK 800SKS
10/11/2010 00:20	Shutdown				
10/11/2010 00:21	Clean Lines				CLEAN PUMPS AND LINE TO PIT
10/11/2010 00:29	Drop Top Plug				
10/11/2010 00:30	Pump Displacement - Start	5		270.0	PUMP MUD DISPLACEMENT
10/11/2010 00:39	Cement Returns to Surface	5		280.0	50BBLS GONE
10/11/2010 00:48	Slow Rate	2.5		318.0	90BBLS GONE
10/11/2010 01:09	Other	4		430.0	UP RATE 145BBLS GONE
10/11/2010 01:11	Bump Plug	4		450.0	TOTAL DISPLACEMENT 153BBLS TOTAL CMT TO SURFACE WAS 104BBLS PRESSURE OVER TO 1650PSI
10/11/2010 01:16	Check Floats				1BBLS BACK
10/11/2010 01:18	Pressure Up	2			PRESSURE UP AND CLOSE DV TOOL AT 2000PSI

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Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
10/11/2010 01:24	Check Floats				2.25BBLS BACK
10/11/2010 01:30	Other				
10/11/2010 03:02	Pump Cap Cement	1		30.0	8BBLS 15.8# 1.15YIELD 4.95GAL/SK 40SKS 2%CC
10/11/2010 03:10	Shutdown				
10/11/2010 03:15	Safety Meeting - Pre Rig-Down				PINCH POINTS RED ZONES LINE OF FIRE
10/11/2010 03:25	Rig-Down Equipment				
10/11/2010 05:00	Rig-Down Completed				
10/11/2010 05:15	Safety Meeting - Departing Location				JOURNEY MANAGMENT
10/11/2010 05:30	Depart Location for Service Center or Other Site				

The Road to Excellence Starts with Safety

Sold To #: 331699	Ship To #: 2807232	Quote #:	Sales Order #: 7688116
Customer: EXXONMOBIL CORPORATION	Customer Rep: Kelly, Whitnee		
Well Name: PCU	Well #: 197-36A9	API/UWI #: 05-103-11188-00	
Field: PICEANCE CREEK	City (SAP): MEEKER	County/Parish: Rio Blanco	State: Colorado

Legal Description: Section 36 Township 1S Range 97W

Contractor: H&P Rig/Platform Name/Num: H&P326

Job Purpose: Cement Multiple Stages

Well Type: Development Well Job Type: Cement Multiple Stages

Sales Person: TURNER, JAMIE Srvc 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 #
BURROWS, DARREN Michael	16	475039	DAVIS, CODY R	16	446891	GAMBLES, BRAYDEN Kade	16	469413
SPENCER, WESTON Chad	16	391271	WILLIAMS, CAMERON Kent	16	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
10-10-10	13	4.5	10-11-10	3.5	1.5			
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	10 - Oct - 2010	03:00 MST
Form Type		BHST			On Location	10 - Oct - 2010	11:00 MST
Job depth MD	3917. ft	Job Depth TVD	3917. ft		Job Started	10 - Oct - 2010	16:30 MST
Water Depth		Wk Ht Above Floor	3. ft		Job Completed	11 - Oct - 2010	00:00 MST
Perforation Depth (MD)	From		To		Departed Loc	11 - Oct - 2010	00:00 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			.				1593.	1593.		
Surface Open Hole				14.75				.	1593.	.	1564.
Surface Open Hole				14.75				1593.	4199.	1564.	4069.
Surface Casing	Unknown		10.75	9.95	45.5	BTC	J-55	.	4199.	.	4069.

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	%
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Summit

Tuesday, November 16, 2010 11:14:00

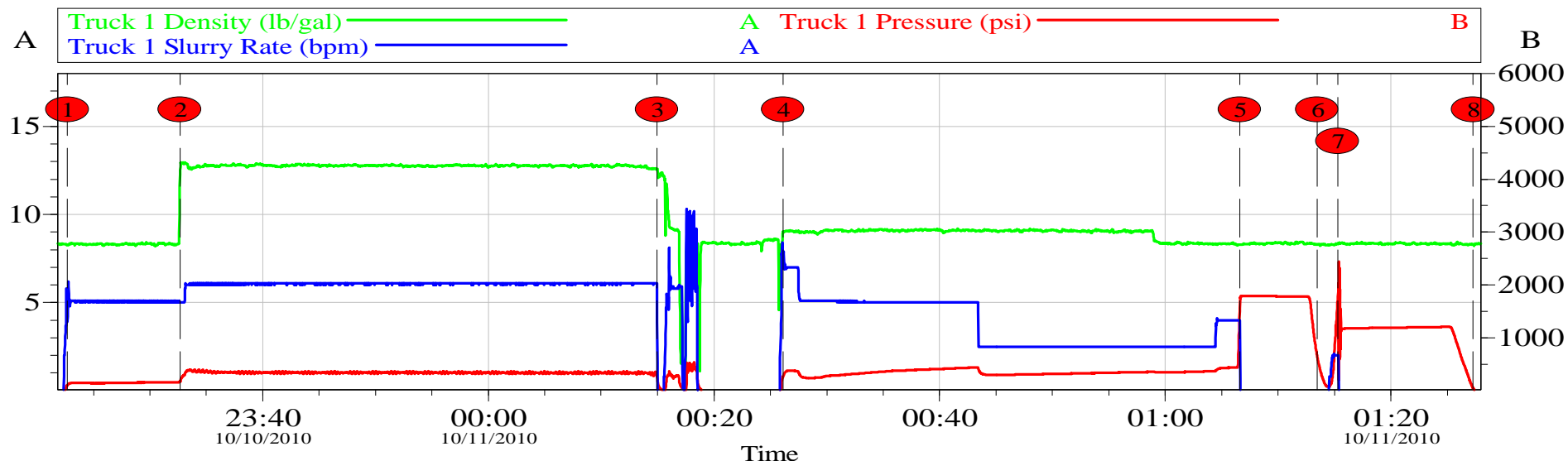
Version:

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/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)			780.0	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				367.00	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				153.00	bbl	8.9	.0	.0	6.0			
4	Top Out	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)			40.0	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

EXXONMOBIL 10.75 SURFACE STAGE 2 WELL PCU 197-36A9



Local Event Log		
	Intersection	T1P
①	50BBLS H2O	10/10/2010 23:22:41 102.3
②	266.4BBLS CMT 12.7# 1.87YIELD 9.89GAL/SK 800SKS	10/10/2010 23:32:41 179.1
③	SHUT DOWN CLEAN LINES TO PIT DROP PLUG	10/11/2010 00:14:57 297.5
④	PUMP DISPLACMENT	10/11/2010 00:26:08 269.7
⑤	BUMP PLUG	10/11/2010 01:06:37 1600
⑥	CHECK FLOATS	10/11/2010 01:13:28 656.6
⑦	PRESSURE UP AND CLOSE TOOL	10/11/2010 01:15:18 1775
⑧	CHECK FLOATS TOTAL CMT TO SURFACE 104BBLS	10/11/2010 01:27:17 47.97

Customer:	EXXONMOBIL CORPORATION	Job Date: 10-Oct-2010	Sales Order #: 7688116
Well Description:	PCU 197-36A9	UWI: 05-103-11188-00	

OptiCem v6.4.8
11-Oct-10 01:37

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Lab Data

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Cementing Rockies, Meeker

LAB RESULTS - Lead

Job Information

Request/Slurry	103619	Rig Name	H&P 326	Date	October 6th 2010
Submitted By	Simukayi Mutasa	Job Type	Surface Casing	Bulk Plant	Meeker
Customer	ExxonMobil	Location	Rio Blanco	Well	PCU 197-36A9

Well Information

Casing/Liner Size	10 3/4"	Depth MD	4214 ft	BHST	137 F
Hole Size	14 3/4"	Depth TVD	4083 ft	BHCT	103 F

Cement Information - Lead Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
						Slurry Density	12.70	PPG
						Slurry Yield	1.88	FT3
						Water Requirement	10.02	GPS
100.00	% BWOC	EconoCem						
		Cement Blend						
35	%	> Boral Craig Pozmix	Bulk	Oct 07, 2010	09-20-10			
65	%	> Holcim Type V	Bulk	Oct 07, 2010	09-13-10			
5.00	lb/sk	Cal-Seal 60	Bulk	Oct 07, 2010				
3.00	lb/sk	Silicalite - Compacted	Bulk	Oct 07, 2010				
0.80	% BWOC	Econolite (Powder - PB)	Bulk	Oct 07, 2010		Water Source	Field (Fresh) Water	
0.60	% BWOC	HR-7	Bulk	Oct 07, 2010		Water Chloride	N/A	ppm
0.25	lb/sk	Pol-E-Flake	Bulk	Oct 07, 2010				
97.49	L/100kg	Field (Fresh) Water	Lab	Oct 06, 2010				

Operation Test Results Request ID 103619

Thickening Time

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)
103	2,341	25	0	03:32	03:49	04:07	04:49

Bc's went from 2 to 38 and dropped to 6 after first shutdown. Pin sheared upon exiting second shutdown

Mixability (0 - 5) - 0 is not mixable

Mixability rating (0 - 5)

5

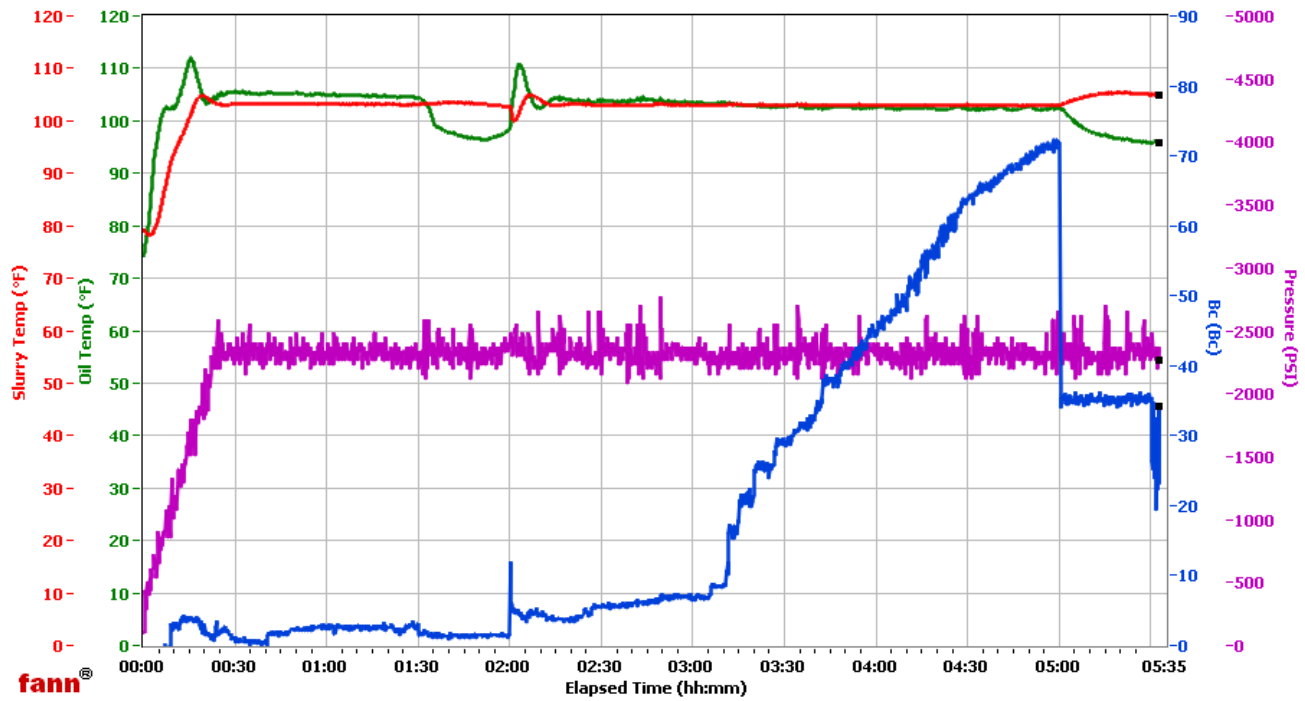
API Rheology

Temp (°F)	600	300	200	100	60	30	6	3	Cond Time (min)	PV/YP
80	48	34	30	25	24	22	20	16	20	15.3 / 20.5

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WRCR

Fields	Values	Fields	Values	Events	Results
Project Name	EXXONMOBIL 103619-1	Job Type	SURF LEAD (1ST)	30.00 Bc	03h:32m
Test ID	103619-1	Cement Type	TYPE V	40.00 Bc	03h:49m
Request ID	HPHT 5	Cement Weight	Light Weight	50.00 Bc	04h:07m
Tested by	AC	Test Date	10/07/10	70.00 Bc	04h:49m
Customer	EXXONMOBIL	Test Time	04:22 PM	100.00 Bc	NaN
Well No	PCU 197-36A9	Temp. Units	degF	200.00 Bc	NaN
Rig	H&P 326	Pressure Units	PSI	03h:00m	6.78
Casing/Liner Size				06h:00m	NaN



Data File O:\HPHT Data Files WRCR\WRCR Consistometer #5\EXXONMOBIL 103619-1.tdms

Comments 65/35 TYPE V/POZ, 0.600 HR-7, 1.88 YIELD, 12.702 DEN

Job Information

Request/Slurry	103618	Rig Name	H&P 326	Date	October 6th 2010
Submitted By	Simukayi Mutasa	Job Type	Surface Casing	Bulk Plant	Meeker
Customer	ExxonMobil	Location	Rio Blanco	Well	PCU 197-36A9

Well Information

Casing/Liner Size	10 3/4"	Depth MD	4214 ft	BHST	137 F
Hole Size	14 3/4"	Depth TVD	4083 ft	BHCT	103 F

Cement Information - Tail Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		HalCem				Slurry Density	15.80	PPG
100.00	% BWOC	Mountain G	Bulk	Oct 07, 2010	09-30-10	Slurry Yield	1.15	FT3
0.25	% BWOC	HR-800	Bulk	Oct 07, 2010	02241001	Water Requirement	5	GPS
44.37	L/100kg	Field (Fresh) Water	Lab	Oct 06, 2010	10-06-10			
						Water Source	Field (Fresh) Water	
						Water Chloride	N/A	ppm

Operation Test Results Request ID 103618

Thickening Time

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
103	2,341	25	4	03:18	03:26	03:38	03:52	04:16

Mixability (0 - 5) - 0 is not mixable

Mixability rating (0 - 5)
5

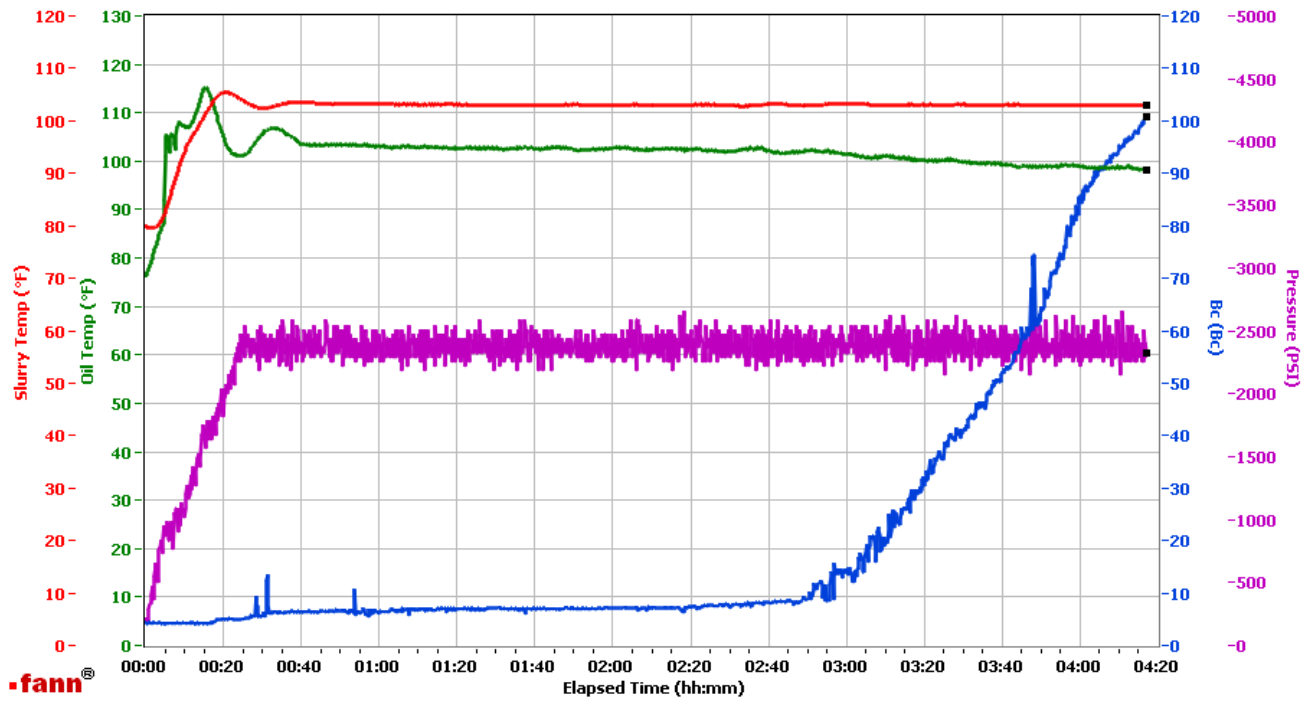
API Rheology

Temp (°F)	600	300	200	100	60	30	6	3	Cond Time (min)	PV/YP
80	93	58	49	39	34	29	20	14	20	40 / 22.6

HALLIBURTON

WRCR

Fields	Values	Fields	Values	Events	Results
Project Name	EXXONMOBIL 103618-1	Job Type	PROD TAIL	30.00 Bc	03h:18m
Test ID	103618-1	Cement Type	MOUNTAIN G	40.00 Bc	03h:26m
Request ID	4	Cement Weight	Standard	50.00 Bc	03h:38m
Tested by	RR	Test Date	01/01/70	70.00 Bc	03h:52m
Customer	EXXONMOBIL	Test Time	01:08 AM	100.00 Bc	04h:16m
Well No	PCU 197-36A9	Temp. Units	degF	200.00 Bc	NaN
Rig	H&P 326	Pressure Units	PSI	03h:00m	13.61
Casing/Liner Size				06h:00m	NaN



Data File O:\HPHT Data Files WRCR\WRCR Consistometer #4\EXXONMOBIL 103618-1.tdms

Comments MOOUNTAIN G, HR-800 .250%, DENSITY 15.7, YIELD 1.15 YARD

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Cementing Rockies, Meeker

LAB RESULTS - Lead

Job Information

Request/Slurry	103622	Rig Name	H&P 326	Date	October 6th 2010
Submitted By	Simukayi Mutasa	Job Type	Surface Casing	Bulk Plant	Meeker
Customer	ExxonMobil	Location	Rio Blanco	Well	PCU 197-36A9

Well Information

Casing/Liner Size	10 3/4"	Depth MD	1593 ft	BHST	102 F
Hole Size	14 3/4"	Depth TVD	1564 ft	BHCT	86 F

Cement Information - Lead Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
						EconoCem	Slurry Density	12.70 PPG
100.00	% BWOC	Cement Blend					Slurry Yield	1.88 FT3
35	%	> Boral Craig Pozmix	Bulk	Oct 07, 2010	09-20-10		Water Requirement	10.05 GPS
65	%	> Holcim Type V	Bulk	Oct 07, 2010	09-13-10			
5.00	lb/sk	Cal-Seal 60	Bulk	Oct 07, 2010	09-23-10			
3.00	lb/sk	Silicalite - Compacted	Bulk	Oct 07, 2010	OG1707122	Water Source	Field (Fresh) Water	
0.80	% BWOC	Econolite (Powder - PB)	Bulk	Oct 07, 2010	UO20610	Water Chloride	N/A	ppm
97.82	L/100kg	Field (Fresh) Water	Lab	Oct 06, 2010	10-06-10			

Operation Test Results Request ID 103622

Thickening Time

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
86	982	15	0	05:00	05:00	05:00	05:00	05:00

Shutdown 30 min after 4.5 hours 6bc to 122bc sheared pin

Mixability (0 - 5) - 0 is not mixable

Mixability rating (0 - 5)

5

API Rheology

Temp (°F)	600	300	200	100	60	30	6	3	Cond Time (min)	PV/YP
80	65	45	40	35	33	32	24	17	20	22.8 / 26.2

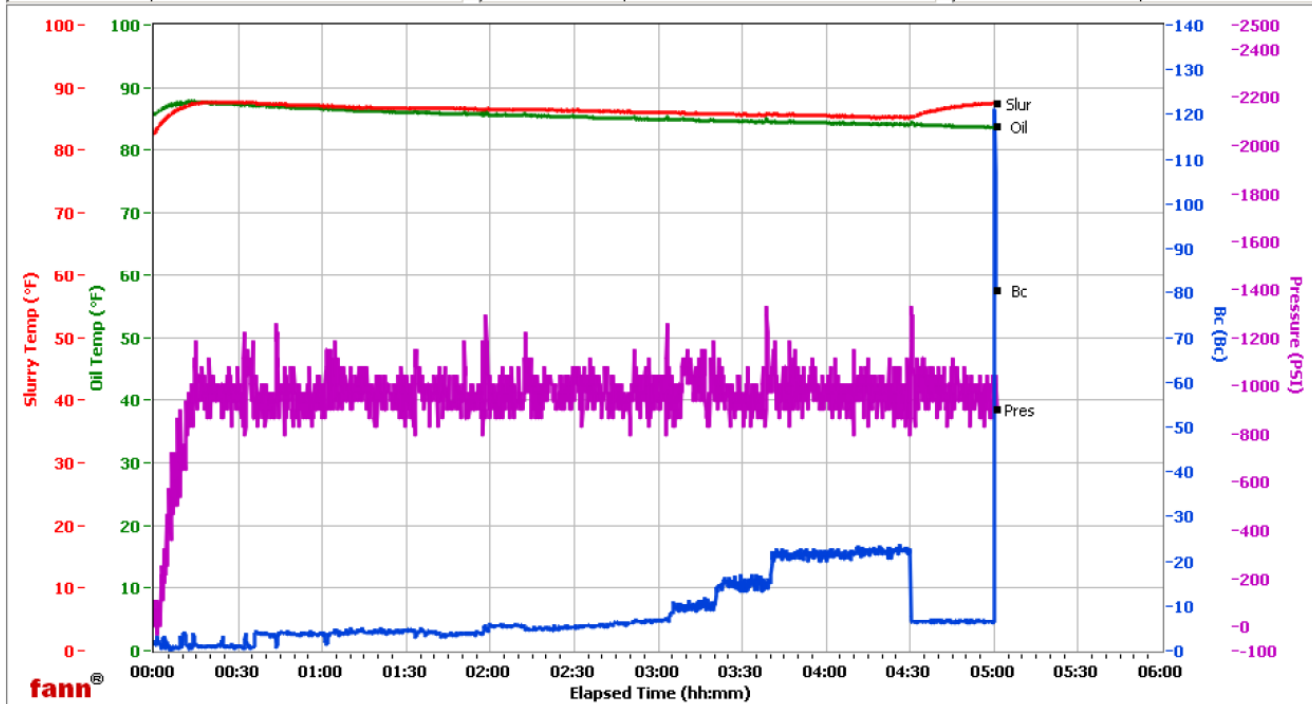
HALLIBURTON

WRCR

Fields	Values
Project Name	ExxonMobil 103622-1B
Test ID	103622-1B
Request ID	HPHT 5
Tested by	ac
Customer	ExxonMobil
Well No	PCU 197-36A9
Rig	H&P 326
Casing/Liner Size	

Fields	Values
Job Type	Surf Lead 2nd
Cement Type	Type V
Cement Weight	Light Weight
Test Date	10/08/10
Test Time	06:30 PM
Temp. Units	degF
Pressure Units	PSI

Events	Results
30.00 Bc	05h:00m
40.00 Bc	05h:00m
50.00 Bc	05h:00m
70.00 Bc	05h:00m
100.00 Bc	05h:00m
200.00 Bc	NaN
03h:00m	6.78
06h:00m	NaN



Data File O:\HPHT Data Files WRCR\WRCR Consistometer #5\ExxonMobil 103622-1B.tdms

Comments 65/35 Type V/Poz, 0.800 Econolite, 1.88 yield, 12.702 Den