HALLIBURTON

EXXONMOBIL CORPORATION

HOUSTON, Texas

PCU 197-36A10

H&P 326

Post Job Summary
Cement Multiple Stages

Date Prepared: 11/16/10
Version: 1

Service Supervisor: ANDERSON, BENJAMIN

Submitted by: Isaac Whorl

HALLIBURTON

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Wellbore Geometry

Job Tubulars					MD		TVD		Excess	Shoe Joint Length
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft	%	ft
Open Hole Section	Surface Open Hole		14.750		0	1,588	0	1,564	75	
Open Hole Section	Surface Open Hole		14.750		1,588	4,185	1,564	4,084	25	
Casing	Surface Casing	10.75	9.950	45.50	0	4,185	0	4,084		80.0
Cement Stage Tool	Multiple Stage Cementer		.000		1,588	1,588				0

Pumping Schedule

Stage #	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	770.0 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	393.0 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 sacks
2	3	Spacer	Drilling Fluid / Mud	8.90	6.00	156.0 bbl
2	4	Cement Slurry	Top Out	15.80	2.00	400.0 sacks

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Fluids Pumped

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

WATER

Fluid Density:	8.33 lbm/gal
Fluid Volume:	50.00 bbl

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
Volume:	770.0 sacks
Calculated Fill:	2,065.82 ft
Calculated Top of Fluid:	1,588.00 ft

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
Volume:	350.0 sacks
Calculated Fill:	516.18 ft
Calculated Top of Fluid:	3,653.82 ft

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

DRILLING MUD

Fluid Density:	8.90 lbm/gal
Fluid Volume:	393.00 bbl

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

WATER

Fluid Density:	8.33 lbm/gal
Fluid Volume:	50.00 bbl

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
Calculated Fill:	1,588.00 ft
Calculated Top of Fluid:	0.00 ft

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

DRILLING MUD

Fluid Density:	8.90 lbm/gal
Fluid Volume:	156.00 bbl

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
Volume:	400.0 sacks

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Job Summary

Job Information

Job Start Date	10/15/2010 6:30:00 AM
Job MD	4,185.0 ft
Height of Plug Container/Swage Above Rig Floor	4.0 ft
Surface Temperature at Time of Job	45 degF
Mud Type	Water Based Mud
Actual Mud Density	9 lbm/gal
Pipe Movement During Cementing	Reciprocated
Calculated Displacement	156.00 bbl
Amount of Cement Returns	10.00 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Length of Rat Hole	15.00 ft

Cementing Equipment

Did Float Equipment Hold?	Yes
Plug set used?	Yes
Brand of Plug set used?	Weatherford
Did Plugs Bump?	Yes
Calculated Pressure to Bump Plugs	625.0 psig
Did Stage Cementing Tool Open Properly?	Yes

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Service Supervisor Reports

Job Log

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
10/14/2010 17:30	Call Out				CREW CALLED OUT, GOT TRUCKS PREPPED FOR CONVOY AND JOB
10/14/2010 19:00	Pre-Convoy Safety Meeting				DISCUSSED CONVOY PROCEDURE, ROUTE. STOPS, TRAFFIC, WILDLIFE, ROAD HAZARDS, EMERGENCY, AND BREAKDOWN PROCEDURE
10/14/2010 23:00	Arrive at Location from Service Center				RIG CIRCULATING A BOTTOMS UP, HAVE APPROX. 1000 FT OF CASING TO RUN STILL
10/14/2010 23:20	Pre-Rig Up Safety Meeting				DISCUSSED RIG UP PROCEDURES, PINCH POINTS, LIFTING, HAMMERING, RED ZONES, SAFETY ISSUES, SLIPS/TRIPS/FALLS
10/14/2010 23:30	Rig-Up Equipment				RIGGED UP SAFELY AND TO BOTH HALLIBURTON AND EXXON STANDARDS
10/15/2010 02:30	Other				CASING IS ON BOTTOM AND RIG IS CIRCULATING A BOTTOMS UP
10/15/2010 04:20	Other				RIG IS RIGGING DOWN CRT
10/15/2010 06:00	Rig-Up Equipment				RIG IS HELPING TO RIG UP IRON ON THE FLOOR FOR THE JOB
10/15/2010 06:30	Pre-Job Safety Meeting				DISCUSSED JOB PROCEDURES, HAZARDS WITH PRESSURE, RIG ISSUES, SAFETY ISSUES, LIFTING IRON, EMEGENCY, AND EVACUATION TO THE ENTRANCE OF THE LOCATION
10/15/2010 07:04	Test Lines			250.0	LOW PRESSURE TEST IS GOOD
10/15/2010 07:12	Test Lines			5000.0	HIGH PRESSURE TEST IS GOOD
10/15/2010 07:17	Pump Spacer	5		300.0	PUMPED FRESH WATER @ 8.33 PPG
10/15/2010 07:28	Pump Lead Cement	5		440.0	MIXED @ 12.7, 770 SKS, YLD 1.88, WTR 9.98, WITH 0.6% HR-7, 0.25 LBM POLY-E-FLAKE ADDITIVES
10/15/2010 08:28	Pump Tail Cement	5		430.0	MIXED @ 15.8 PPG, 350 SKS, YLD 1.15, WTR 4.95, 0.25% HR-800, 0.25 LBM POLY-E-FLAKE ADDITIVES

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Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
10/15/2010 08:44	Drop Top Plug				PLUG DROPPED BY WEATHERFORD TOOL HAND
10/15/2010 08:49	Pump Displacement	8		520.0	PUMPED WATER BASED MUD @ 9.3 PPG, FIRST 20 BBLS WAS WATER, THEN 200 BBLS MUD, THEN 60 BBLS WATER ACROSS DV TOOL, THEN 90 BBLS MUD, AND LAST 23 BBLS WAS WATER
10/15/2010 09:09	Slow Rate	2		49.0	SLOWED RATE @ 147 BBLS GONE TO GO THRU THE DV TOOL
10/15/2010 09:20	Resume	8		525.0	PICKED RATE UP @ 167 BBLS GONE
10/15/2010 09:54	Bump Plug	2		1380.0	BUMPED PLUG @ 715 PSI AND TOOK PRESSURE 500 PSI OVER AS PER COMPANY MAN AND WEATHERFORD TOOL HAND
10/15/2010 10:00	Check Floats				FLOATS HELD, GOT 2.5 BBLS BACK
10/15/2010 10:05	Other				WEATHERFORD TOOL HAND DROPPED BOM
10/15/2010 10:15	Pressure Up	1		1513.0	PRESSURED UP TO OPEN THE TOOL, DV TOOL OPENED UP @ 1513 PSI
10/15/2010 10:20	Circulate Well	6		330.0	CIRCULATED WELL TO GET RETURNS BEFORE SWAPPING OVER TO THE RIG
10/15/2010 10:30	Other				RIG IS CIRCULATING FOR 2 HOURS BEFORE STARTING 2ND STAGE
10/15/2010 12:00	Pre-Job Safety Meeting				DISCUSSED JOB PROCEDURES, HAZARDS WITH PRESSURE, RIG ISSUES, SAFETY ISSUES, LIFTING IRON, EMEGENCY, AND EVACUATION TO THE ENTRANCE OF THE LOCATION
10/15/2010 12:22	Pump Spacer	5		182.0	PUMPED FRESH WATER @ 8.33 PPG
10/15/2010 12:32	Pump Cement	8		660.0	MIXED @ 12.7 PPG, 800 SKS, YLD 1.87, WTR 10, O.25 LBM POLY-E-FLAKE ADDITIVE
10/15/2010 13:12	Drop Top Plug				WEATHERFORD HAND DROPPED PLUG
10/15/2010 13:18	Pump Displacement	8		655.0	PUMPED WATER BASED MUD @ 9.3 PPG
10/15/2010 13:40	Bump Plug	2.5		1811.0	BUMPED PLUG @ 375 PSI AND TOOK PRESSURE 1500 PSI OVER AS PER COMPANY MAN AND WEATHERFORD TOOL HAND
10/15/2010 13:46	Check Floats				FLOATS HELD, GOT 1.5 BBLS BACK

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Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
10/15/2010 13:50	Other				WAITING FOR CEMENT TO SET UP BEFORE DOING TOPOUT
10/15/2010 16:00	Other				RIG TAGGED CEMENT @ 13 FT. DOWN, SO NO TOPOUT DONE
10/15/2010 16:10	Post-Job Safety Meeting (Pre Rig-Down)				DISCUSSED JOB OUTCOME AND DISCUSSED RIG DOWN PROCEDURES, PINCH POINTS, LIFTING, HAMMERING, RED ZONES, SAFETY ISSUES, SLIPS/TRIPS/FALLS
10/15/2010 16:30	Rig-Down Equipment				RIGGED DOWN SAFELY AND TO BOTH HALLIBURTON AND EXXON STANDARDS
10/15/2010 17:20	Pre-Convoy Safety Meeting				DISCUSSED CONVOY PROCEDURE, ROUTE. STOPS, TRAFFIC, WILDLIFE, ROAD HAZARDS, EMERGENCY, AND BREAKDOWN PROCEDURE
10/15/2010 17:30	Depart Location for Service Center or Other Site				THANKS FOR USING HALLIBURTON!!!

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 331699	**Ship To #:** 2807233	**Quote #:**	**Sales Order #:** 7698128
Customer: EXXONMOBIL CORPORATION		**Customer Rep:** Kelly, Whitnee	
Well Name: PCU	**Well #:** 197-36A10		**API/UWI #:** 05103111890000
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:** 326		
Job Purpose: Cement Multiple Stages			
Well Type: Development Well	**Job Type:** Cement Multiple Stages		
Sales Person: TURNER, JAMIE	**Srvc Supervisor:** ANDERSON, BENJAMIN	**MBU ID Emp #:** 342843	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ANDERSON, BENJAMIN L	17	342843	BURKE, RYAN A	17	480688	MCCONKIE, TRAVIS Terry	17	471264
SPENCER, WESTON Chad	12	391271	WALKER, DERRICK W	17	267871	WHITE, KAMEREON V	17	475856

Equipment

HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*
10741125	45 mile	10784082	45 mile	10948690	45 mile	11062230	45 mile
11076824	45 mile	11338211	45 mile	11410662	45 mile		

Job Hours

Date	*On Location Hours*	Operating Hours	Date	*On Location Hours*	Operating Hours	Date	*On Location Hours*	Operating Hours
15-OCT-2010	17	5						
TOTAL		*Total is the sum of each column separately*						

Job

Formation Name			
Formation Depth (MD)	**Top**		**Bottom**
Form Type		**BHST**	
Job depth MD	4183. ft	**Job Depth TVD**	4183. ft
Water Depth		**Wk Ht Above Floor**	4. ft
Perforation Depth (MD)	*From*		**To**

Job Times

	Date	Time	Time Zone
Called Out	14 - Oct - 2010	17:30	MST
On Location	15 - Oct - 2010	23:00	MST
Job Started	15 - Oct - 2010	06:30	MST
Job Completed	15 - Oct - 2010	16:00	MST
Departed Loc	15 - Oct - 2010	17:30	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			.				1588.	1588.		
Surface Open Hole				14.75				.	1588.	.	1564.
Surface Open Hole				14.75				1588.	4185.	1564.	4084.
Surface Casing	Unknown		10.75	9.95	45.5	BTC	J-55	.	4185.	.	4084.

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**			

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Cementing Job Summary

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 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)**	**770.0**	**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**		**393.00**	**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**	**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**		**156.00**	**bbl**	**8.9**	**.0**	**.0**	**6.0**	
4	**Top Out**	**CMT - PREMIUM - CLASS G, 94 LB SK (100003685)**	**400.0**	**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	157	**Shut In: Instant**		**Lost Returns**	0	*Cement Slurry*	596	**Pad**	
Top Of Cement		**5 Min**		**Cement Returns**		**Actual Displacement**	157	**Treatment**	
Frac Gradient		**15 Min**		**Spacers**	100	**Load and Breakdown**		**Total Job**	**1246**

Rates							
Circulating	*5*	*Mixing*	6	*Displacement*	8	**Avg. Job**	6.3

Cement Left In Pipe	**Amount**	***92 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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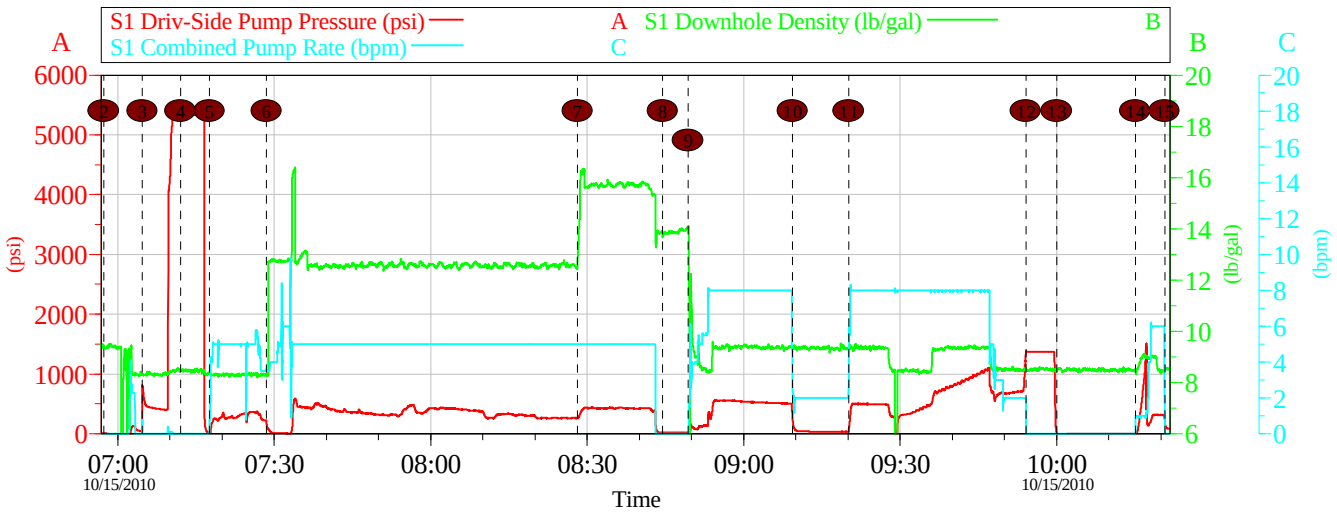
Data Acquisition

EXXON - PCU

WELL 197-36A10 - 1ST STAGE SURFACE

15-OCT-2010



Global Event Log

	Intersection		SDPP		Intersection		SDPP
2	Start Job	06:57:21	12.00	3	Test Lines, Low Pressure	07:04:44	333.0
4	Test Lines, High Pressure	07:12:05	5426	5	Pump Fresh Water Spacer	07:17:37	12.21
6	Pump Lead Cement, 770 sks, yld 1.88, wtr 9.98	07:28:32	178.0	7	Pump Tail Cement, 350 sks, yld 1.15, wtr 4.95	08:28:09	260.0
8	Drop Top Plug	08:44:30	20.00	9	Pump Displacement	08:49:20	22.00
10	Slowed Rate To Go Thru DV Tool	09:09:22	256.3	11	Increased Rate Back To Previous Rate	09:20:09	49.71
12	Bump Plug	09:54:06	1380	13	Check Floats	10:00:00	6.471
14	Pressured Up To Open DV Tool	10:15:05	3.000	15	Shutdown And Swapped To The Rig	10:20:43	191.3

Customer: EXXON	Job Date: 15-Oct-2010	Sales Order #: 7698128
Well Description: PCU	WELL 197-36A10	PUMP TRK 11076824
SVC LDR WESTON SPENCER	SVC SPR STARBUCKS	SVC OPR TRAVIS MCCONKIE

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OptiCem v6.2.3
15-Oct-10 10:56

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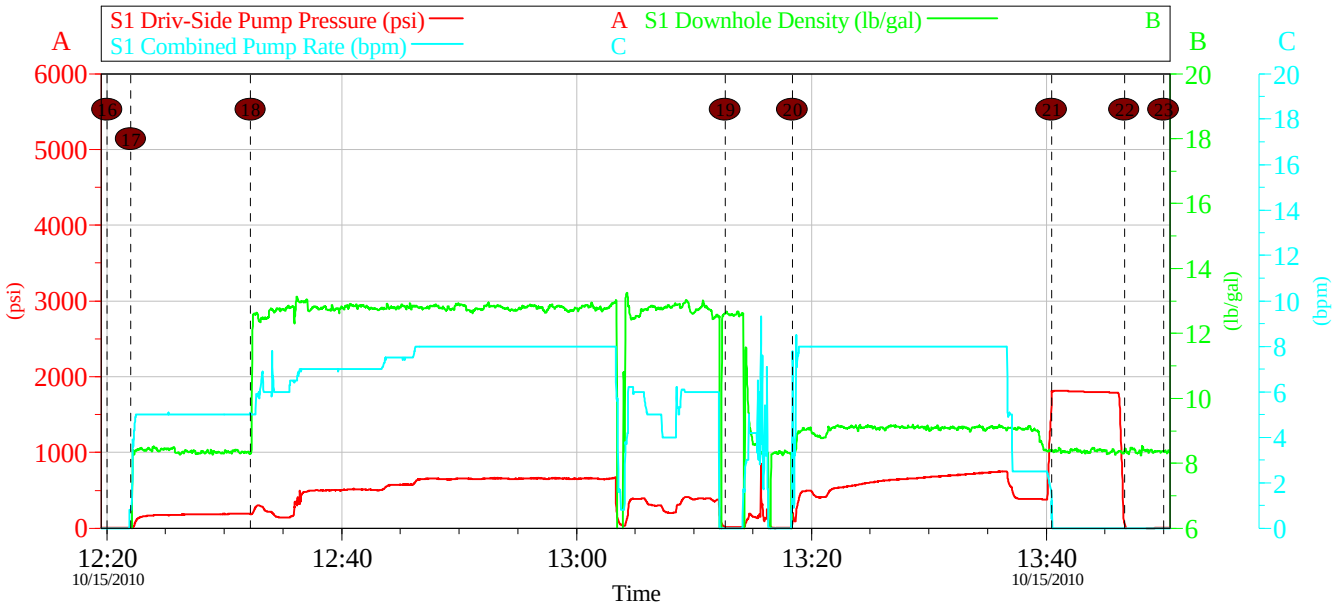
EXXON - PCU

WELL 197-36A10 - 2nd STAGE SURFACE

15-OCT-2010



Global Event Log

Intersection		SDPP	Intersection		SDPP
16 Start Job	12:20:02	8.000	17 Pump Fresh Water Spacer	12:22:02	7.000
18 Pump Cement, 800 sks, yld 1.87, wtr 10	12:32:15	186.0	19 Drop Top Plug	13:12:40	17.62
20 Pump Displacement	13:18:23	93.13	21 Bump Plug	13:40:27	1811
22 Check Floats	13:46:40	60.64	23 Shutdown / Waiting for cement to set up	13:50:00	2.000

Customer:	EXXON	Job Date:	15-Oct-2010	Sales Order #:	7698128
Well Description:	PCU	WELL	197-36A10	PUMP TRK	11076824
SVC LDR	WESTON SPENCER	SVC SPR	STARBUCKS	SVC OPR	TRAVIS MCCONKIE

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OptiCem v6.2.3
15-Oct-10 15:22

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Lab Data

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Cementing Rockies, Meeker

LAB RESULTS – 1st Stage Lead

Job Information

Request/Slurry	104501	Rig Name	H&P 326	Date	October 11th 2010
Submitted By	Simukayi Mutasa	Job Type	Surface Casing	Bulk Plant	Meeker
Customer	ExxonMobil	Location	Rio Blanco	Well	PCU 197-36A10

Well Information

Casing/Liner Size	10 3/4"	Depth MD	4185 ft	BHST	135 F
Hole Size	14 3/4"	Depth TVD	4084 ft	BHCT	102 F

Cement Information - Lead Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.
		EconoCem			
100.00	% BWOC	Cement Blend			
35	%	> Boral Craig Pozmix	Bulk	Oct 11, 2010	
65	%	> Holcim Type V	Bulk	Oct 11, 2010	
5.00	lb/sk	Cal-Seal 60	Bulk	Oct 11, 2010	
3.00	lb/sk	Silicalite - Compacted	Bulk	Oct 11, 2010	
0.80	% BWOC	Econolite (Powder - PB)	Bulk	Oct 11, 2010	
0.60	% BWOC	HR-7	Bulk	Oct 11, 2010	
0.25	lb/sk	Pol-E-Flake	Bulk	Oct 11, 2010	
97.49	L/100kg	Field (Fresh) Water	Lab	Oct 06, 2010	

Cement Properties

Slurry Density	12.70	PPG
Slurry Yield	1.88	FT3
Water Requirement	10.02	GPS
Water Source	Field (Fresh) Water	
Water Chloride	N/A	ppm

Operation Test Results Request ID 104501

Thickening Time

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	Termination Time
102	2,341	25	3	04:03	04:04	04:52	05:30

shutdown 30 min after 90 8bc to 22bc Shutdown again @ 5:00 for 30 min 32bc to 106bc 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	40	29	26	22	21	18	16	15	0	13.1 / 17.6

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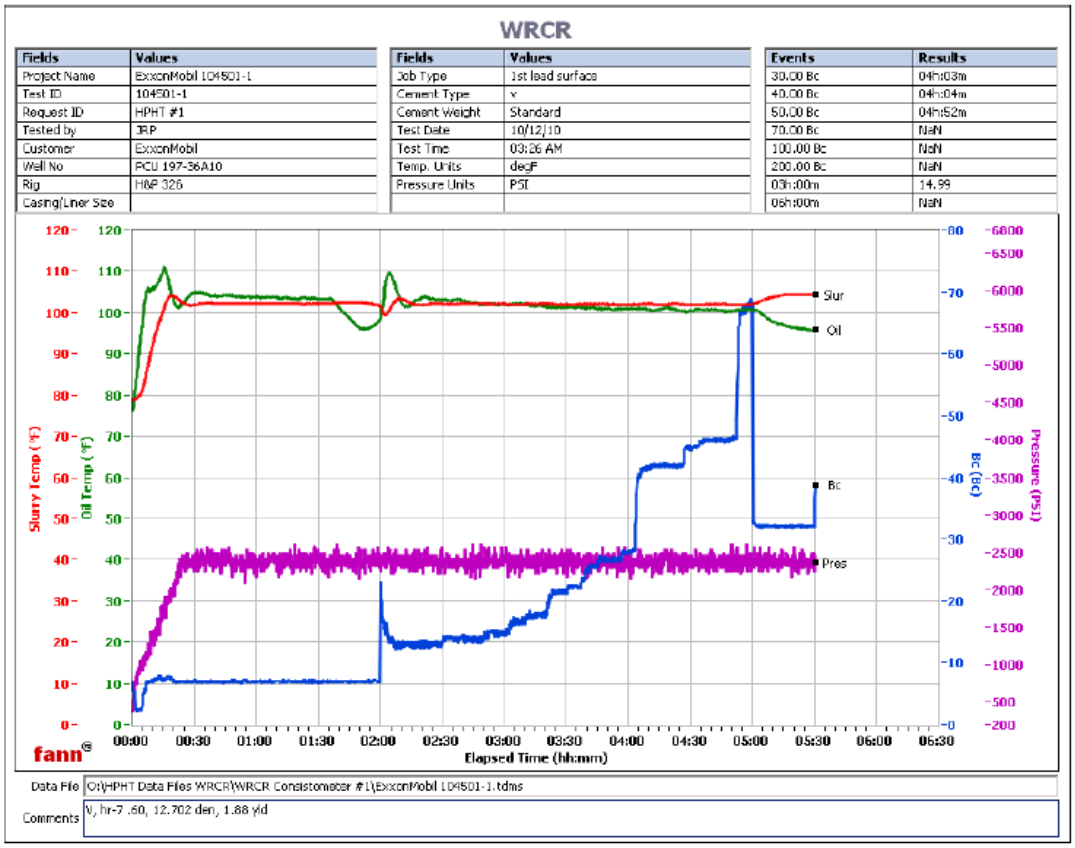

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HALLIBURTON
Cementing Rockies, Meeker

LAB RESULTS – 1st Stage Tail

Job Information

Request/Slurry	104394	Rig Name	H&P 326	Date	October 11th 2010
Submitted By	Simukayi Mutasa	Job Type	Surface Casing	Bulk Plant	Meeker
Customer	ExxonMobil	Location	Rio Blanco	Well	PCU 197-36A10

Well Information

Casing/Liner Size	10 3/4"	Depth MD	4185 ft	BHST	135 F
Hole Size	14 3/4"	Depth TVD	4084 ft	BHCT	102 F

Cement Information - Tail Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.
		HalCem			
100.00	% BWOC	Mountain G	Bulk	Oct 11, 2010	
0.25	% BWOC	HR-800	Bulk	Oct 11, 2010	02241001
44.37	L/100kg	Field (Fresh) Water	Lab	Oct 06, 2010	10-06-10

Cement Properties		
Slurry Density	15.80	PPG
Slurry Yield	1.15	FT3
Water Requirement	5	GPS
Water Source	Field (Fresh) Water	
Water Chloride	N/A	ppm

Operation Test Results Request ID 104394

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)
102	2,341	25	5	02:55	03:04	03:15	03:26	03:48

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	94	64	52	41	36	31	18	13	0	46 / 22.4

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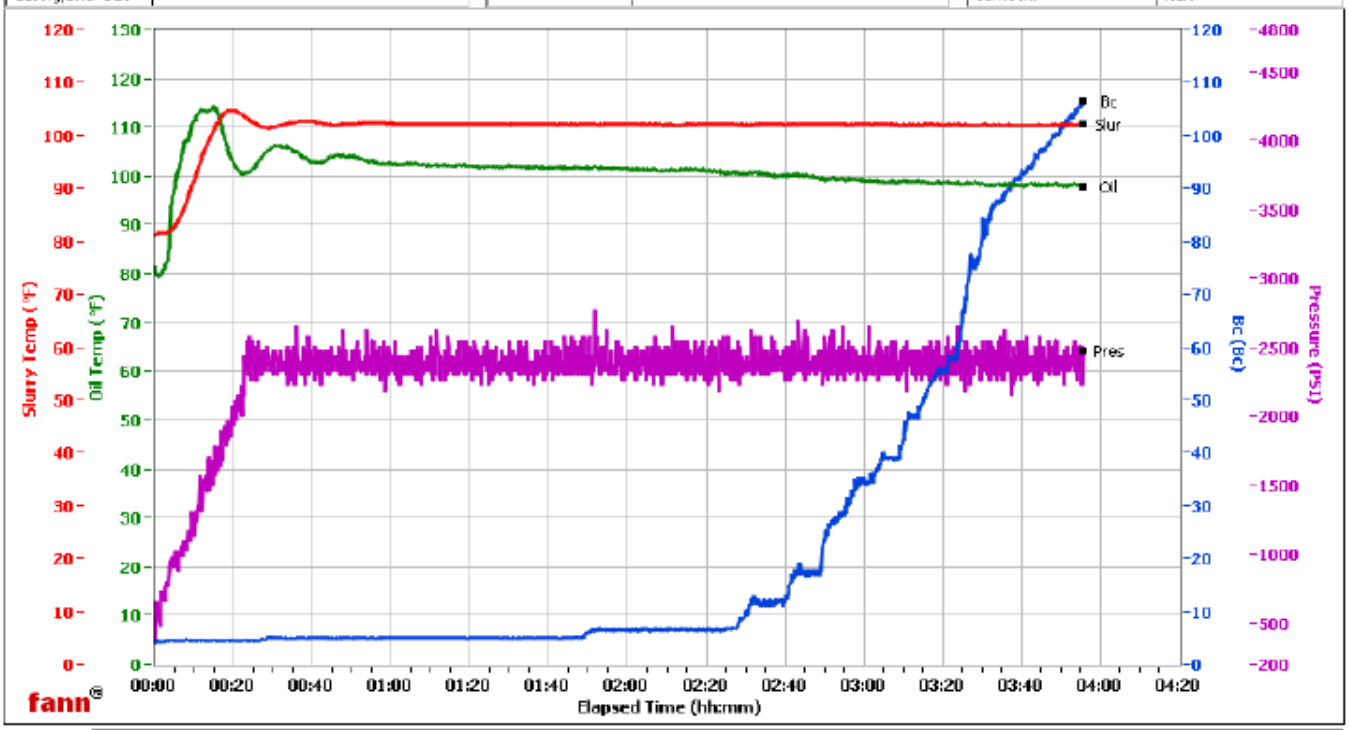
WRCR

Fields	Values
Project Name	ExxonMobil 104394-1
Test ID	104394-1a
Request ID	HPHT #4
Tested by	JRP
Customer	ExxonMobil
Well No	PCU 197-36A10
Rig	H&P 326
Casing/Liner Size	

Fields	Values
Job Type	Surface Tal
Cement Type	G
Cement Weight	Standard
Test Date	01/01/70
Test Time	12:36 AM
Temp. Units	degF
Pressure Units	PSI

Events	Results
30.00 Bc	02h:55m
40.00 Bc	03h:04m
50.00 Bc	03h:15m
70.00 Bc	03h:26m
100.00 Bc	03h:48m
200.00 Bc	NaN
03h:00m	34.56
06h:00m	NaN



Data File: O:\HPHT Data Files WRCR\WRCR Consistometer #4\ExxonMobil 104394-1A.tdms

Comments: G, HR-800 0.25%, 15.798 Den, 1.15 Yld

HALLIBURTON

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Cementing Rockies, Meeker

LAB RESULTS – 2nd Stage Lead

Job Information

Request/Slurry	104500	Rig Name	H&P 326	Date	October 11th 2010
Submitted By	Simukayi Mutasa	Job Type	Surface Casing	Bulk Plant	Meeker
Customer	ExxonMobil	Location	Rio Blanco	Well	PCU 197-36A10

Well Information

Casing/Liner Size	10 3/4"	Depth MD	1588 ft	BHST	101 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
						Water Requirement	10.05	GPS
35	%	> Boral Craig Pozmix	Bulk	Oct 11, 2010				
65	%	> Holcim Type V	Bulk	Oct 11, 2010				
5.00	lb/sk	Cal-Seal 60	Bulk	Oct 11, 2010	9-30-10			
3.00	lb/sk	Silicalite - Compacted	Bulk	Oct 11, 2010	0G1707 12-2			
0.80	% BWOC	Econolite (Powder - PB)	Bulk	Oct 11, 2010	U020610	Water Source	Field (Fresh) Water	
97.82	L/100kg	Field (Fresh) Water	Lab	Oct 06, 2010	10-06-10	Water Chloride	N/A	ppm

Operation Test Results Request ID 104500

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	2	05:00	05:00	05:00	05:00	05:00

shut down 30min after 4.5 hours 7bc to 125bc 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	61	47	43	37	30	33	25	16	0	25.2 / 26.2

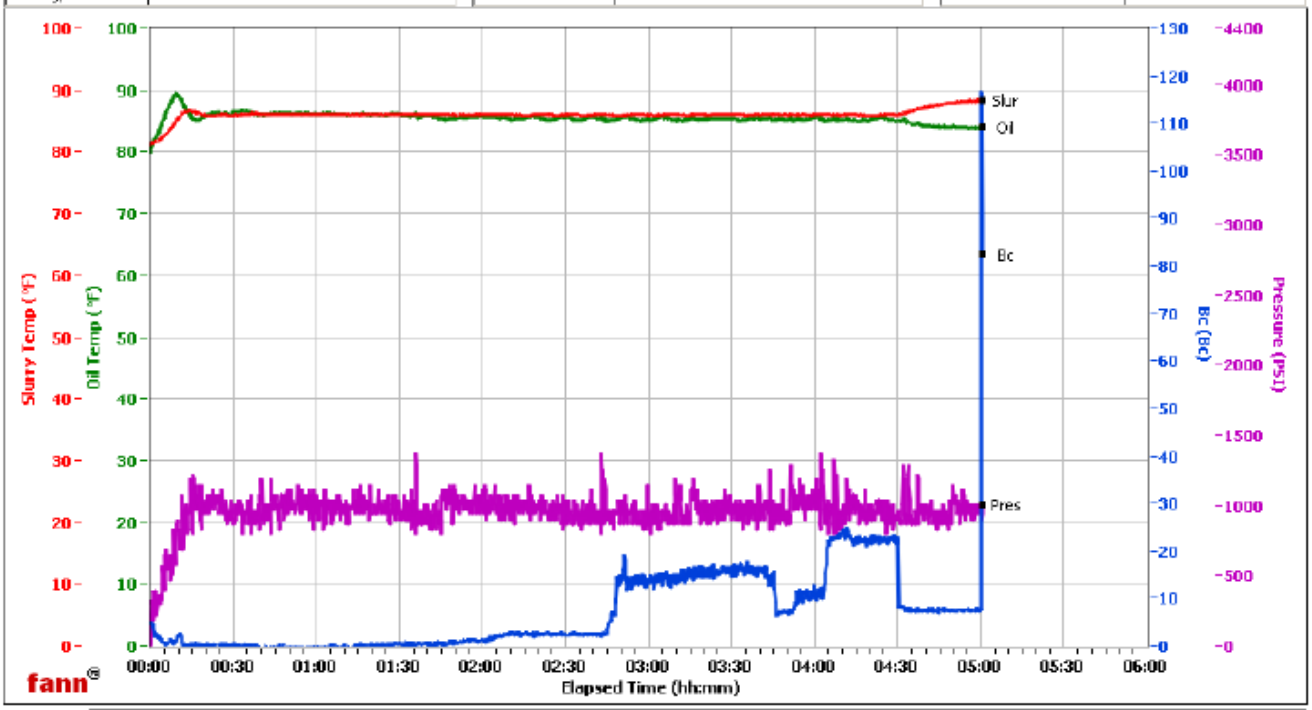
HALLIBURTON

WRCR

Fields	Values
Project Name	ExxonMobil 104500-1
Test ID	104500-1
Request ID	HPHT #5
Tested by	JRP
Customer	ExxonMobil
Well No	PCU 197-36A10
Rig	H&P 326
Casing/Liner Size	

Fields	Values
Job Type	2nd Lead Surface
Cement Type	V
Cement Weight	Standard
Test Date	10/12/10
Test Time	03:57 AM
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	13.16
05h:00m	NaN



Data File: O:\HPHT Data Files WRCR\WRCR Consistometer #5\ExxonMobil 104500-1.tdms

Comments: V, 12.702 Den, 1.88 Yld