

**EXXONMOBIL CORPORATION**  
**HOUSTON, Texas**

PCU 197-36A3 Surface

H&P 326

## **Post Job Summary**

### **Cement Multiple Stages**

Date Prepared: October 1, 2010  
Version: 1

Service Supervisor: Ken Dearing  
Submitted by: Simukayi Mutasa

**HALLIBURTON**

# HALLIBURTON

## 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	1,498.55	0.00	1,474.55	75.00	
Open Hole Section	Surface Open Hole		14.750		1,498.55	4,107.00	1,474.55	4,007.00	25.00	
Casing	Surface Casing	10.75	9.950	45.50	0.00	4,107.00	0.00	4,007.00		92.28
Cement Stage Tool	Multiple Stage Cement		.000		1,498.55	1,498.55	1,474.55	1,474.55		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	770.0 sacks
1	3	Cement Slurry	First Stage Tail Cement	15.80	355.0 sacks
1	4	Spacer	Drilling Fluid / Mud	8.90	
2	1	Spacer	Freshwater Ahead	8.33	50.0 bbl
2	2	Cement Slurry	Second Stage Lead Cement	12.70	795.0 sacks
2	3	Spacer	Drilling Fluid / Mud	8.90	144.0 bbl
2	4	Cement Slurry	Top Out	15.80	35.0 sacks

# HALLIBURTON

## 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: 1.88 ft<sup>3</sup>/sack  
Total Mixing Fluid: 9.96 Gal  
Surface Volume: 770.0 sacks  
Sacks: 770.0 sacks  
Calculated Fill: 2,065.82 ft  
Calculated Top of Fluid: 1,588.00 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 ft<sup>3</sup>/sack  
Total Mixing Fluid: 4.95 Gal  
Surface Volume: 355.0 sacks  
Sacks: 355.0 sacks  
Calculated Fill: 516.18 ft  
Calculated Top of Fluid: 3,653.82 ft  
Pump Rate: 6.00 bbl/min

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

Fluid Density: 8.90 lbm/gal  
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 ft<sup>3</sup>/sack  
Total Mixing Fluid: 9.98 Gal  
Surface Volume: 795.0 sacks  
Sacks: 795.0 sacks  
Calculated Fill: 1,588.00 ft  
Calculated Top of Fluid: 0.00 ft  
Pump Rate: 6.00 bbl/min

# HALLIBURTON

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

Fluid Density: 8.90 lbm/gal  
Fluid Volume: 144.00 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 ft<sup>3</sup>/sack  
Total Mixing Fluid: 5.01 Gal  
Surface Volume: 35.0 sacks  
Sacks: 35.0 sacks  
Pump Rate: 2.00 bbl/min

# HALLIBURTON

## Job Summary

---

### Job Information

Job Start Date	9/14/2010 4:00:00 PM
Job MD	4,107.0 ft
Job TVD	4,007.0 ft
Height of Plug Container/Swage Above Rig Floor	4.9 ft
Mud Type	Water Based Mud
Name of Mud Company	BAROID
Actual Mud Density	9.10 lbm/gal
Time Circulated before job	1.50 hour(s)
Rate at Which Well was Circulated	8.000 bbl/min
Pipe Movement During Hole Circulation	Reciprocated
Time From End Mud Circ. to Job Start	5.00 minute
Pipe Movement During Cementing	Reciprocated
Calculated Displacement	144.00 bbl
Amount of Cement Returns	154.00 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Annular flow Before Job? (Water/Gas)	No
Annular flow After Job? (Water/Gas)	No
Length of Rat Hole	15.00 ft

### Cementing Equipment

Number of Centralizers Used	47
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	260.0 psig
Brand of Stage Cementing Tools Used	Weatherford
Did Stage Cementing Tool Open Properly?	Yes

# HALLIBURTON

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pressure (psig)	Comments
09/14/2010 03:30		Call Out				
09/14/2010 04:45		Pre-Convoy Safety Meeting				DISCUSS SAFETY AND HAZARDS OF TRAVEL.
09/14/2010 05:00		Crew Leave Yard				
09/14/2010 06:30		Other				ARRIVE AT WHITE RIVER YARD-CHECK OUT TRUCKS AND LOADS, LOAD CHEMICAL FOR JOB.
09/14/2010 07:15		Pre-Convoy Safety Meeting				DISCUSS SAFETY AND HAZARDS OF TRAVEL.
09/14/2010 09:00		Arrive At Loc				
09/14/2010 09:05		Assessment Of Location Safety Meeting				SIGN IN AT SAFETY SHACK, GET WORK PERMIT SIGNED, WALK LOCATION, DISCUSS SPOTTING OF VEHICLES AND SAFETY AND HAZARDS.
09/14/2010 09:15		Safety Meeting				MEET WITH CO.MAN, DISCUSS WELL CONDITIONS, GET WELL INFORMATION, DISCUSS PRESSURE TEST AND MAX PRESSURE, DISCUSS SAFETY AND HAZARDS.
09/14/2010 09:20		Other				RIG RUNS DV-TOOL, CASING @ 2590.0'.
09/14/2010 09:25		Safety Huddle				DISCUSS SAFETY AND HAZARDS.
09/14/2010 09:30		Other				SPOT EQUIPMENT.
09/14/2010 09:40		Safety Meeting - Pre Rig-Up				DISCUSS SAFETY AND HAZARDS.
09/14/2010 09:45		Rig-Up Equipment				RIG UP IRON AND SUCTION HOSE TO RED ZONE, TEST H2O.
09/14/2010 11:15		Prime Pumps				GET RCM AND BULK READY FOR JOB.
09/14/2010 11:30		Other				WAIT ON RIG TO FINISH RUNNING CASING.
09/14/2010 11:45		Casing on Bottom				CASING ON BOTTOM-RIG CIRCULATES.
09/14/2010 12:15		Other				RIG RIGS DOWN CRT.
09/14/2010 12:30		Safety Meeting - Pre Rig-Up				DISCUSS SAFETY AND HAZARDS.
09/14/2010 12:45		Rig-Up Equipment				RIG UP IRON TO CAT WALK.
09/14/2010 13:00		Safety Meeting - Pre Rig-Up				DISCUSS SAFETY AND HAZARDS.
09/14/2010 13:05		Rig-Up Equipment				RIG IRON TO RIG FLOOR.
09/14/2010 13:25		Safety Meeting - Pre Rig-Up				SAFETY MEETING WITH RIG CREW-DISCUSS SAFETY AND HAZARDS OF RIG FLOOR.
09/14/2010 13:30		Rig-Up Equipment				RIG UP IRON ON RIG FLOOR, AND CEMENT HEAD ONTO CASING.
09/14/2010 13:45		Circulate Well				RIG CIRCULATES THROUGH HES IRON.
09/14/2010 14:00		Safety Meeting - Pre Job				SAFETY MEETING WITH RIG CREW AND CO.MAN-GO OVER JOB PROCEDURE, DISCUSS SAFETY AND HAZARDS OF JOB, CHECK EQUIPMENT AND WAIT WHILE RIG CIRCULATES TO CONDITION MUD.
09/14/2010 15:53		Other				SAFETY HUDDLE-SWAP LINES TO HES IRON.
09/14/2010 15:55		Pump Water	4	5	240.0	PUMP H2O TO FILL LINES.
09/14/2010 15:57		Pressure Test			500.0	LOW PRESSURE TEST.

# HALLIBURTON

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pressure (psig)	Comments
09/14/2010 16:01		Pressure Test			5000.0	HIGH PRESSURE TEST.
09/14/2010 16:07		Pump Spacer	7	35	360.0	START H2O SPACER AHEAD.
09/14/2010 16:14		Pump 1st Stage Lead Slurry	7	257.8	485.0	START 12.7# 1st STAGE LEAD CEMENT, 257.8bbls, 770sks, 1.88cf/ft, 9.98gal/sk.
09/14/2010 16:54		Pump 1st Stage Tail Slurry	5	72.7	460.0	START 15.8# 1st STAGE TAIL CEMENT, 72.7bbls, 355sks, 1.15cf/ft, 4.95gal/sk.
09/14/2010 17:09		Shutdown				END CEMENT-SHUT DOWN.
09/14/2010 17:12		Drop Top Plug				SAFETY HUDDLE, TAKE CAP OFF OF CEMENT HEAD, WEATHERFORD TOOL HAND DROPS PLUG.
09/14/2010 17:15		Pump Displacement	8		345.0	START H2O DISPLACEMENT-WASHING ON TOP OF PLUG AS PER CO.MAN.
09/14/2010 17:18		Pump Displacement	8		360.0	START MUD DISPLACEMENT.
09/14/2010 17:32		Slow Rate	4		230.0	SLOW RATE TO LET PLUG PASS THROUGH TOOL AS PER TOOL HAND.
09/14/2010 17:37		Other	8		360.0	INCREASE RATE, AS PER TOOL HAND.
09/14/2010 17:48		Pump Displacement	8		415.0	START H2O DISPLACEMENT TO LEAVE WATER ON TOP OF TOOL AS PER CO.MAN.
09/14/2010 17:50		Pump Displacement	8		375.0	RESUME MUD DISPLACEMENT.
09/14/2010 17:51		Displ Reached Cmnt	8		550.0	SEE CEMENT LIFT PRESSURE.
09/14/2010 18:04		Slow Rate	4		665.0	SLOW RATE AS PER TOOL HAND.
09/14/2010 18:07		Bump Plug	4		800.0	BUMP PLUG AT 800psi, 4bpm AS PER TOOL HAND.
09/14/2010 18:07		Shutdown			1400.0	PRESSURE 600psi OVER TO 1400psi-SHUT DOWN.
09/14/2010 18:12		Check Floats				FLOATS HOLD, 2bbls BACK, GOOD CIRCULATION THROUGH OUT 1st STAGE.
09/14/2010 18:17		Other				SAFETY HUDDLE, TAKE CAP OFF OF CEMENT HEAD, TOOL HAND DROPS OPENING TOOL.
09/14/2010 18:28		Other	2		90.0	START PUMPING MUD TO OPEN TOOL.
09/14/2010 18:29		Other	2		620.0	TOOL OPENS AT 620psi.
09/14/2010 18:29		Other	4		130.0	INCREASE RATE, PUMP 20bbls MUD TO ESTABLISH CIRCULATION AS PER CO.MAN.
09/14/2010 18:31		Other	6		230.0	INCREASE RATE AS PER CO.MAN.
09/14/2010 18:32		Other	6		240.0	WELL STARTS TO CIRCULATE.
09/14/2010 18:33		Shutdown				END 20bbl MUD, SHUT DOWN.
09/14/2010 18:34		Other				SAFETY HUDDLE-SWAP LINES TO RIG.
09/14/2010 18:36		Circulate Well				RIG CIRCULATES THROUGH HES IRON.
09/14/2010 18:45		Other				SAFETY HUDDLE, WASH UP RCM TO PIT.
09/14/2010 19:15		Other				WAIT ON CEMENT TO GEL FOR 2nd STAGE AS PER CO.MAN.
09/14/2010 20:45		Safety Meeting - Pre Job				SAFETY MEETING WITH RIG CREW AND CO.MAN-GO OVER JOB PROCEDURE, DISCUSS SAFETY AND HAZARDS OF JOB.
09/14/2010 21:10		Prime Pumps				GET RCM AND BULK READY FOR 2nd STAGE.
09/14/2010 21:28		Other				SAFETY HUDDLE-SWAP LINES TO HES IRON.
09/14/2010 21:30		Pump Spacer	4	50	90.0	START H2O SPACER AHEAD.
09/14/2010 21:34		Other	6		240.0	INCREASE RATE, AS PER CO.MAN.
09/14/2010 21:39		Pump 2nd Stage Lead Slurry	6	264.8	375.0	START 12.7# 2nd STAGE LEAD CEMENT, 264.8bbls, 795sks, 1.87cf/ft, 10.0gal/sk.

# HALLIBURTON

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pressure (psig)	Comments
09/14/2010 22:23		Cement Returns to Surface	6		425.0	SEE CEMENT RETURNS TO PIT, 155bbls CEMENT TO PIT.
09/14/2010 22:25		Shutdown				END CEMENT-SHUT DOWN.
09/14/2010 22:26		Other				SAFETY HUDDLE, TAKE CAP OFF OF CEMENT HEAD, TOOL HAND DROPS CLOSING TOOL.
09/14/2010 22:30		Clean Lines				WASH RCM TO PIT, AS PER CO.MAN.
09/14/2010 22:34		Pump Displacement	4		160.0	START MUD DISPLACEMENT.
09/14/2010 22:36		Other	6		300.0	INCREASE RATE, AS PER CO.MAN & TOOL HAND.
09/14/2010 22:38		Other	8		490.0	INCREASE RATE, AS PER CO.MAN & TOOL HAND.
09/14/2010 22:52		Slow Rate	4.5		380.0	SLOW RATE AS PER CO.MAN & TOOL HAND.
09/14/2010 22:58		Bump Plug	4.5		450.0	BUMP PLUG AT 450psi, 4.5bpm AS PER WEATHERFORD HAND.
09/14/2010 22:58		Shutdown			1850.0	PRESSURE 1400psi OVER TO 1850psi-SHUT DOWN.
09/14/2010 22:59		Other				CHECK TOOL-TOOL CLOSED, 1.5bbls BACK, GOOD CIRCULATION THROUGH OUT 2nd STAGE.
09/14/2010 23:00		Other	3		2000.0	PRESSURE BACK UP AS PER CO.MAN.
09/14/2010 23:03		Other				CHECK TOOL-TOOL CLOSED, 1.25bbls BACK.
09/14/2010 23:10		Safety Meeting - Pre Rig-Down				DISCUSS SAFETY AND HAZARDS OF RIGGING DOWN RIG FLOOR.
09/14/2010 23:30		Rig-Down Equipment				RIG IRON OFF OF RIG FLOOR.
09/14/2010 23:30		Other				SAFETY HUDDLE, WASH RCM TO PIT.
09/15/2010 00:30		Other				WAIT ON CEMENT TO SEE IF IT FALLS, AS PER CO.MAN.
09/15/2010 02:15		Safety Meeting - Pre Rig-Up				NEED TO TOPOUT AS PER CO.MAN, DISCUSS SAFETY AND HAZARDS.
09/15/2010 02:25		Rig-Up Equipment				RIG UP IRON UNDER RIG FOR TOPOUT.
09/15/2010 02:50		Prime Pumps				GET RCM AND BULK READY FOR TOPOUT, MIX UP 2% CALCIUM CHLORIDE.
09/15/2010 03:05		Safety Meeting - Pre Job				SAFETY MEETING WITH RIG CREW AND CO.MAN-GO OVER JOB PROCEDURE, DISCUSS SAFETY AND HAZARDS OF JOB.
09/15/2010 03:32		Other				START MIXING 15.8# TOPOUT CEMENT, 1.17f/ft, 5.02al/sk, WITH 2% CALCIUM CHLORIDE ADDED ON THE SIDE.
09/15/2010 03:34		Pump Cement	1		85.0	START PUMPING 15.8# TOPOUT CEMENT, 1.17f/ft, 5.02al/sk, WITH 2% CALCIUM CHLORIDE ADDED ON THE SIDE.
09/15/2010 03:39		Shutdown				CEMENT TO SURFACE-SHUT DOWN, 3bbl CEMENT PUMPED.
09/15/2010 03:45		Safety Meeting				TOPOUT GOOD AS PER CO.MAN, DISCUSS SAFETY AND HAZARDS OF WASHING UP INTO THE CELLAR.
09/15/2010 03:47		Other				WASH UP RCM INTO CELLAR AS PER CO.MAN.
09/15/2010 04:15		Post-Job Safety Meeting (Pre Rig-Down)				DISCUSS JOB, GO OVER BBP AND HOC OBSERVATIONS, DISCUSS SAFETY AND HAZARDS OF RIGGING DOWN.
09/15/2010 04:30		Rig-Down Equipment				RIG DOWN AND RACK UP IRON AND SUCTION HOSE, BLOW OFF SILOS INTO BULK TRUCK.
09/15/2010 07:45		Pre-Convoy Safety Meeting				DISCUSS SAFETY AND HAZARDS OF TRAVEL.
09/15/2010 08:00		Crew Leave Location				
09/15/2010 08:00		Other				THANK YOU-KEN, AND CREW.



## The Road to Excellence Starts with Safety

Sold To #: 331699		Ship To #: 331699		Quote #:		Sales Order #: 7632920	
Customer: EXXONMOBIL CORPORATION				Customer Rep: WOOD, JOHN			
Well Name: PCU			Well #: 197-36A3			API/UWI #: 05103111820000	
Field: PICEANCE CREEK		City (SAP): HOUSTON		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: DEARING, KEN			MBU ID Emp #: 239372	

## Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DEAN, MARK Christophe		454214	DEARING, KEN A		239372	FUCHS, ALEXANDER Arndt		479705
JOHNSON, KURT D		470766	MCKEE, SCOTT Burt		470316	OMACHEL, KEVIN J		477957

## Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10572545	45 mile	10872435	45 mile	10897817	45 mile	11062234	45 mile
11139326	45 mile	11263211	45 mile	11410662	45 mile	11410664	45 mile

## 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	04 - Sep - 2010	03:30	MST
Form Type			BHST		On Location	14 - Sep - 2010	09:00	MST
Job depth MD	4107. ft		Job Depth TVD	4007. ft	Job Started	14 - Sep - 2010	16:00	MST
Water Depth			Wk Ht Above Floor	4.9 ft	Job Completed	15 - Sep - 2010	04:00	MST
Perforation Depth (MD)	From		To		Departed Loc	15 - Sep - 2010	08:00	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			.				1498.6	1498.6	1474.6	1474.6
Surface Open Hole				14.75				.	1498.6	.	1474.6
Surface Open Hole				14.75				1498.6	4107.	1474.6	4007.
Surface Casing	New		10.75	9.95	45.5	BTC	J-55	.	4107.	.	4007.

## 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			

Summit  
Version:

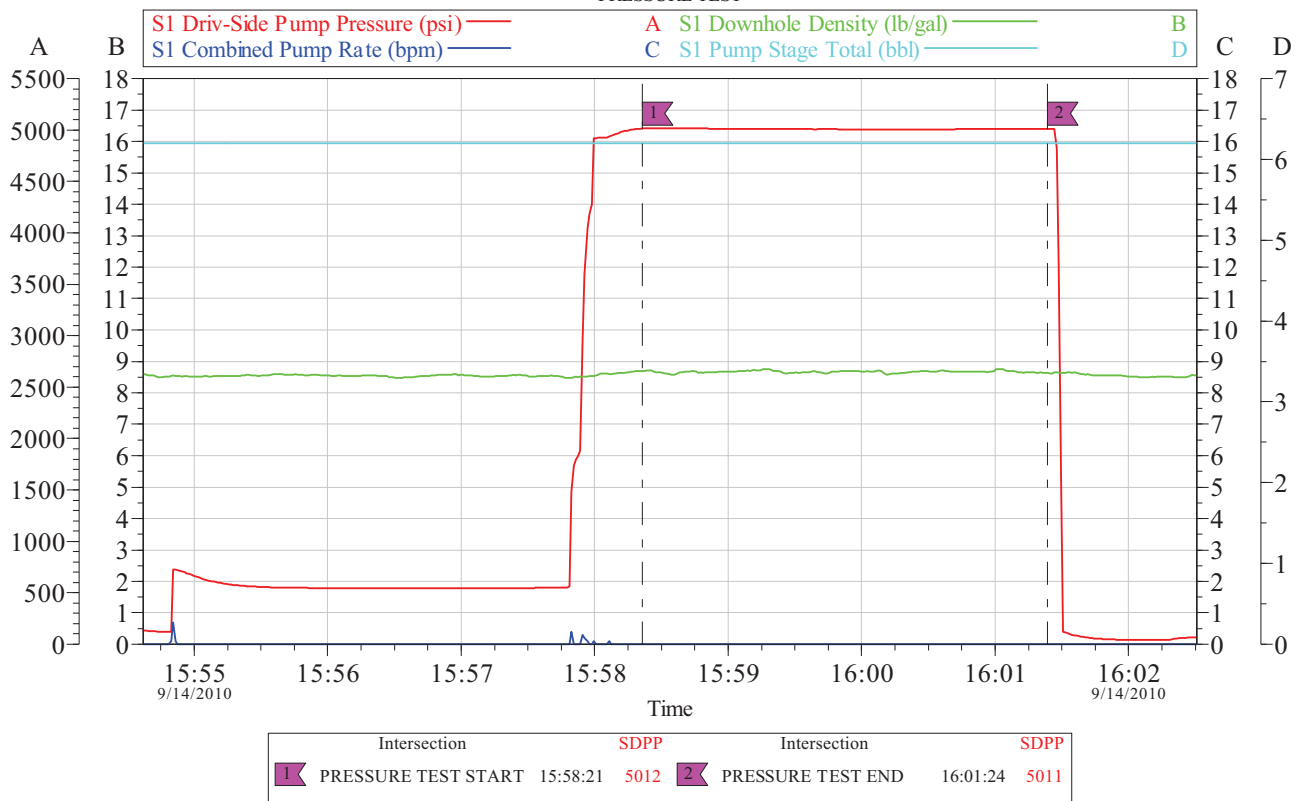
Friday, October 01, 2010 10:01:00

Fluid Data									
Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft <sup>3</sup> /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	1.88	9.96	6.0	9.96
0.6 %		HR-7 (100005055)							
0.25 lbm		POLY-E-FLAKE (101216940)							
9.957 Gal		FRESH WATER							
3	First Stage Tail Cement	HALCEM (TM) SYSTEM (452986)	355.0	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			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)	795.0	sacks	12.7	1.87	9.98	6.0	9.98
0.25 lbm		POLY-E-FLAKE (101216940)							
9.982 Gal		FRESH WATER							
3	Drilling Fluid / Mud		144.00	bbl	8.9	.0	.0	6.0	
4	Top Out	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)	35.0	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	92.28 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					

# HALLIBURTON

## Data Acquisition

EXXONMOBIL CORPORATION  
10.75" CEMENT MULTIPLE STAGES  
PCU WELL #: 197-36A3  
PRESSURE TEST



Customer: JOHN WOOD  
Well Description: PCU WELL #: 197-36A3

Job Date: 14-Sep-2010  
UWI:

Sales Order #: 7632920  
RIG #: H&P 326

OptiCem v6.3.4  
14-Sep-10 19:36

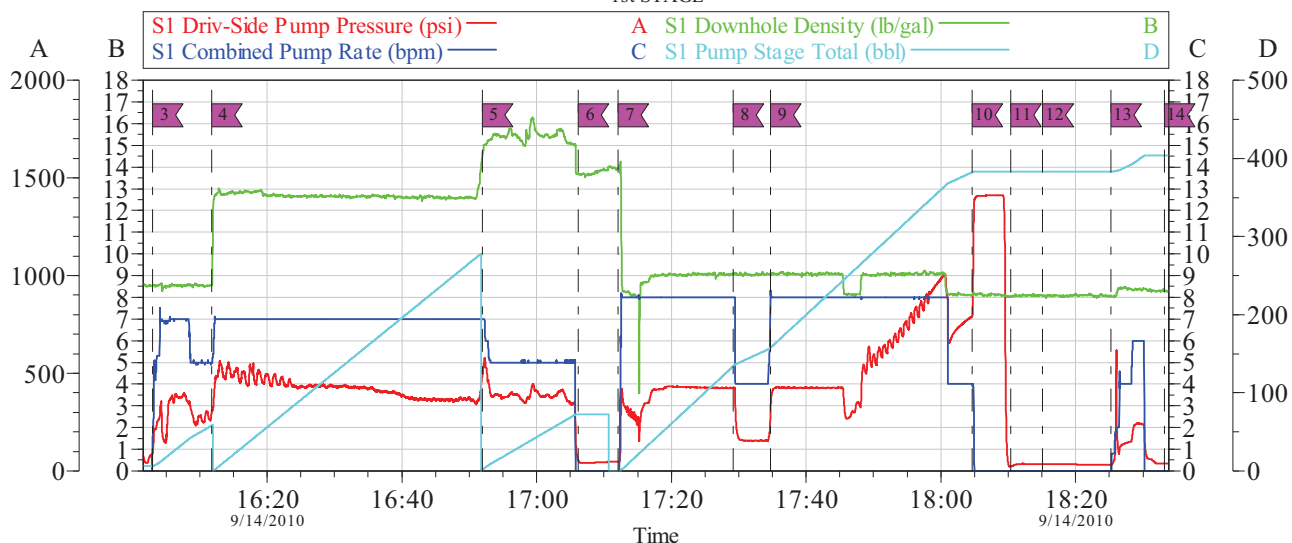
# HALLIBURTON

## EXXONMOBIL CORPORATION

10.75" CEMENT MULTIPLE STAGES

PCU WELL #: 197-36A3

1st STAGE



Intersection	SDPP	Intersection	SDPP
3 START H2O SPACER	16:02:59 96.32	4 START 12.7# LEAD CEMENT	16:11:45 305.2
5 START 15.8# TAIL CEMENT	16:51:55 478.9	6 SHUT DOWN-DROP PLUG	17:06:12 50.82
7 START DISPLACEMENT	17:12:06 46.00	8 SLOW TO PASS THROUGH TOOL	17:29:12 425.0
9 RESUME RATE	17:34:45 339.8	10 BUMP PLUG-SHUT DOWN	18:04:40 793.3
11 CHECK FLOATS/FLOATS HOLD	18:10:22 21.94	12 DROP OPENING TOOL	18:15:08 35.00
13 PUMP MUD TO OPEN TOOL/TOOL OPENS	18:25:15 30.00	14 SWAP TO RIG-RIG CIRCULATES	18:33:11 37.00

Customer: JOHN WOOD  
Well Description: PCU WELL #: 197-36A3

Job Date: 14-Sep-2010  
UWI:

Sales Order #: 7632920  
RIG #: H&P 326

OptiCem v6.3.4  
14-Sep-10 19:50

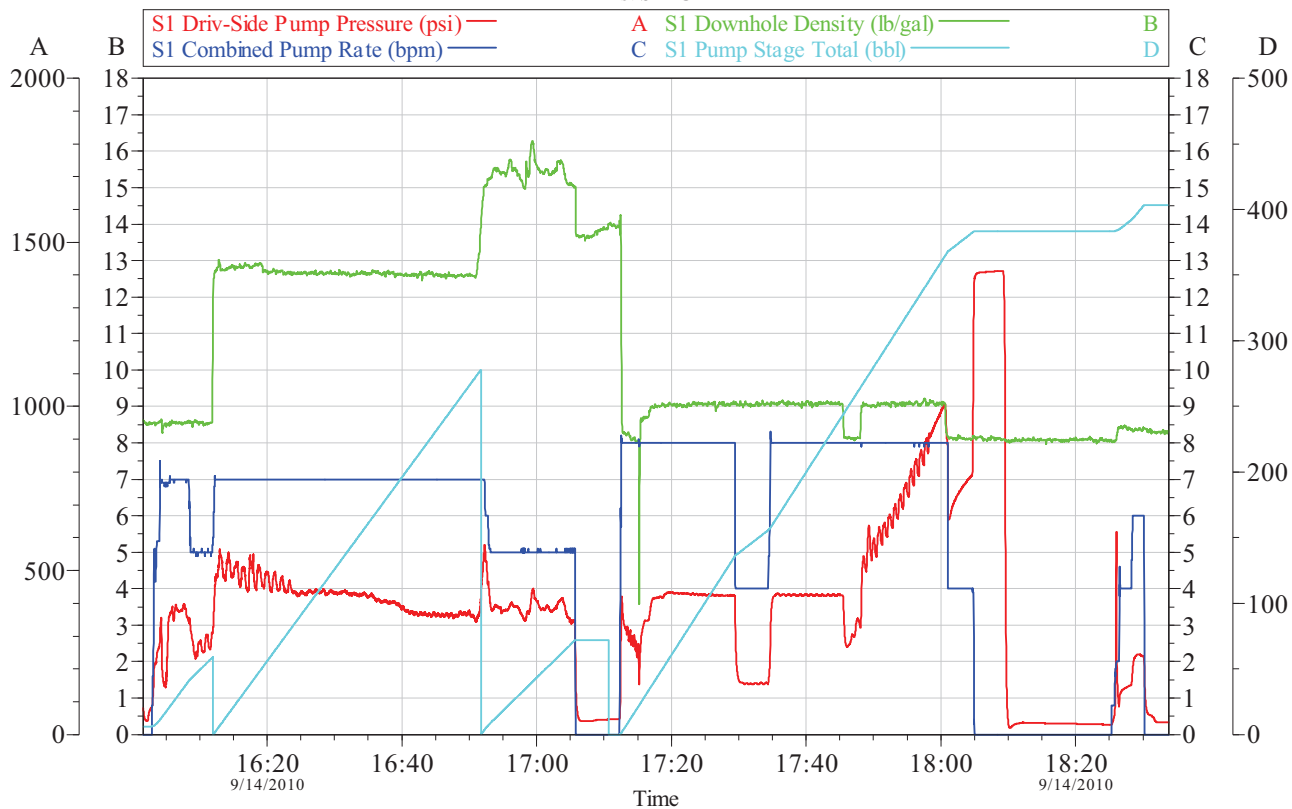
# HALLIBURTON

## EXXONMOBIL CORPORATION

10.75" CEMENT MULTIPLE STAGES

PCU WELL #: 197-36A3

1st STAGE



Customer: JOHN WOOD  
Well Description: PCU WELL #: 197-36A3

Job Date: 14-Sep-2010  
UWI:

Sales Order #: 7632920  
RIG #: H&P 326

OptiCem v6.3.4  
14-Sep-10 19:51

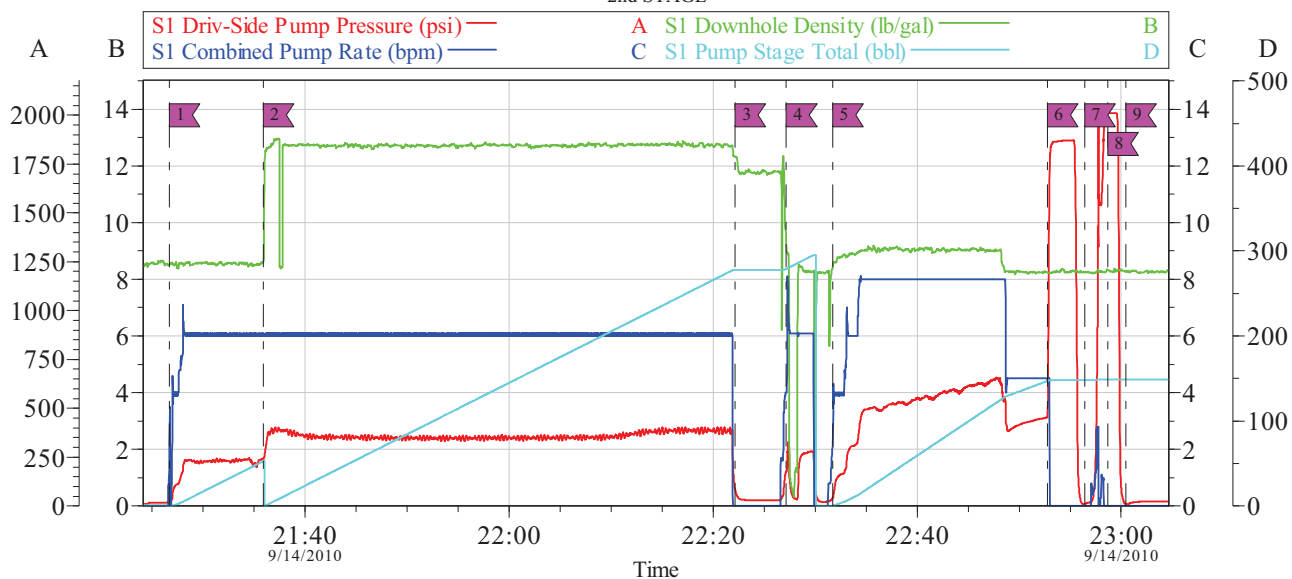
# HALLIBURTON

## EXXONMOBIL CORPORATION

10.75" CEMENT MULTIPLE STAGES

PCU WELL #: 197-36A3

2nd STAGE



Intersection	SDPP	Intersection	SDPP
1 START H2O AHEAD	21:26:43 27.90	2 START 12.7# 2nd STAGE LRAD CEMENT	21:35:55 242.0
3 SHUT DOWN-DROP CLOSING TOOL	22:22:09 89.94	4 WASH PUMPS & LINES-DROP	22:27:11 178.3
5 START DISPLACEMENT	22:31:43 40.10	6 BUMP PLUG	22:52:45 454.0
7 CHECK TOOL-TOOL CLOSED	22:56:25 11.00	8 PRESSURE BACK UP	22:58:40 2010
9 CHECK TOOL-TOOL CLOSED	23:00:26 11.00		

Customer: JOHN WOOD  
Well Description: PCU WELL #: 197-36A3

Job Date: 14-Sep-2010  
UWI:

Sales Order #: 7632920  
RIG #: H&P 326

OptiCem v6.3.4  
15-Sep-10 00:49

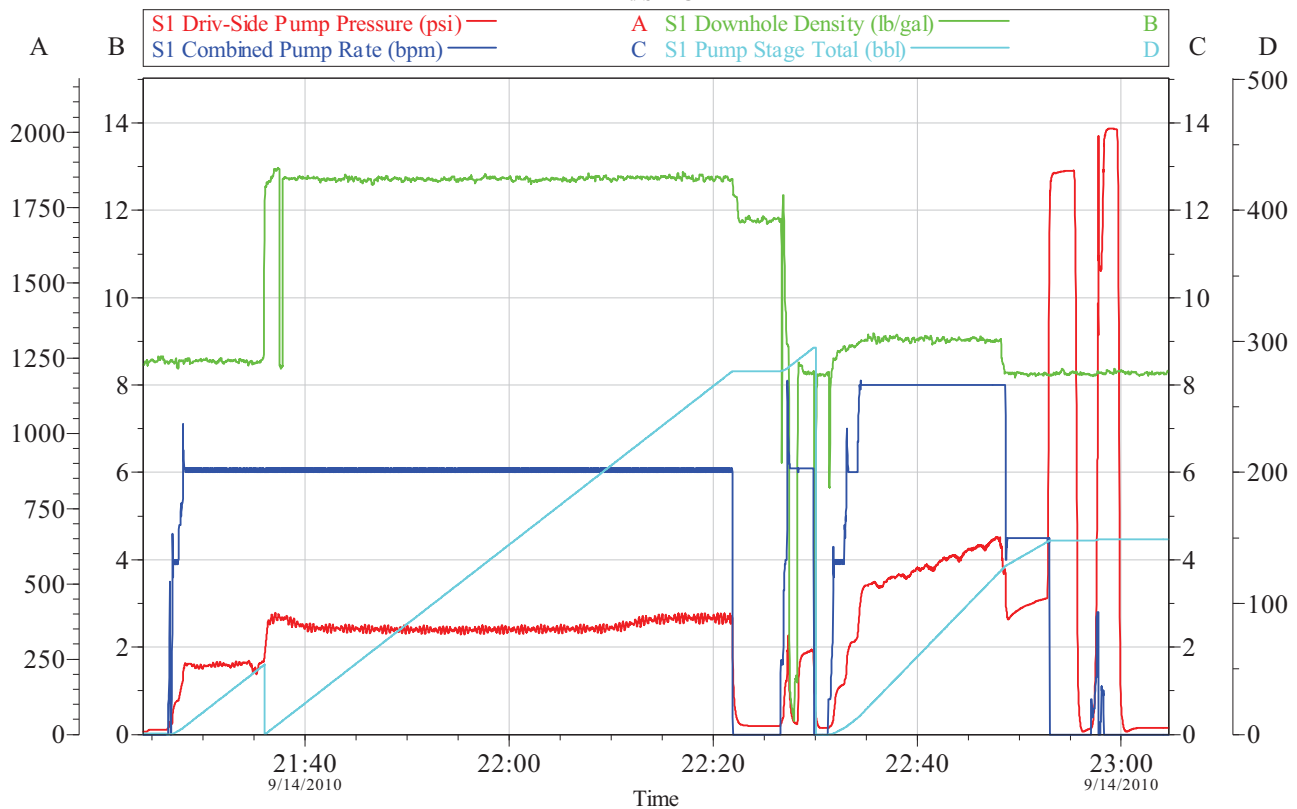
# HALLIBURTON

## EXXONMOBIL CORPORATION

10.75" CEMENT MULTIPLE STAGES

PCU WELL #: 197-36A3

2nd STAGE



Customer: JOHN WOOD  
Well Description: PCU WELL #: 197-36A3

Job Date: 14-Sep-2010  
UWI:

Sales Order #: 7632920  
RIG #: H&P 326

OptiCem v6.3.4  
15-Sep-10 00:21

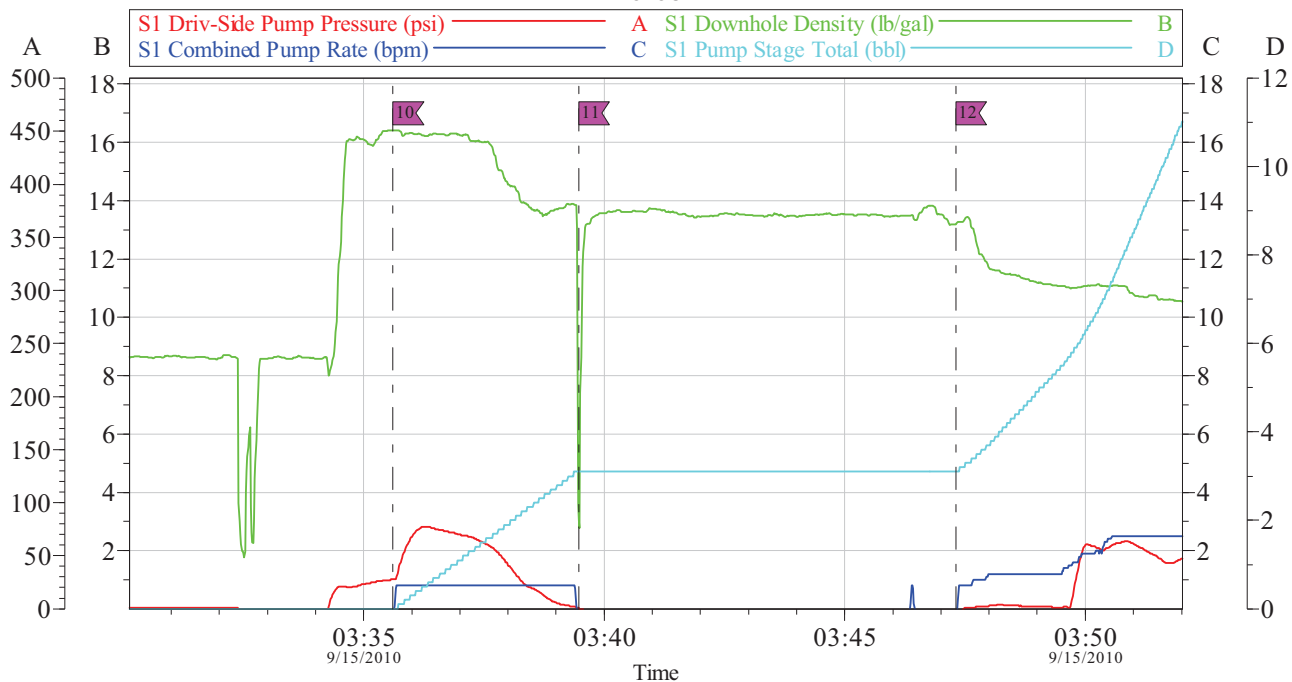
# HALLIBURTON

## EXXONMOBIL CORPORATION

10.75" CEMENT MULTIPLE STAGES

PCU WELL #: 197-36A3

TOPOUT



Intersection	SDPP	Intersection	SDPP
10 START 15.8# TOPOUT CEMENT	03:35:37 28.00	11 TOPOUT GOOD-SHUT DOWN	03:39:29 0.572
12 START WASHING TO CELLAR	03:47:19 -2.000		

Customer: JOHN WOOD	Job Date: 14-Sep-2010	Sales Order #: 7632920
Well Description: PCU WELL #: 197-36A3	UWI:	RIG #: H&P 326

OptiCem v6.3.4  
15-Sep-10 04:48



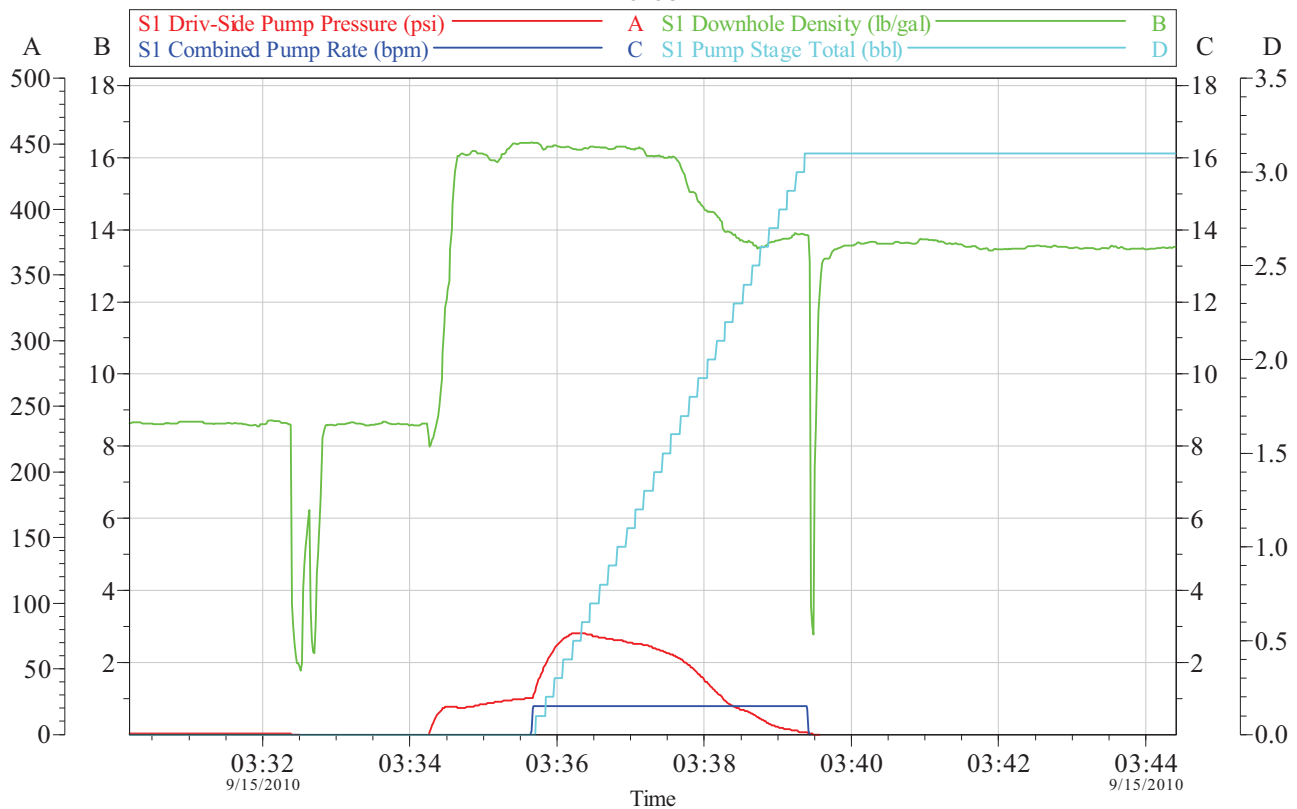
# HALLIBURTON

## EXXONMOBIL CORPORATION

10.75" CEMENT MULTIPLE STAGES

PCU WELL #: 197-36A3

TOPOUT



Customer: JOHN WOOD  
Well Description: PCU WELL #: 197-36A3

Job Date: 14-Sep-2010  
UWI:

Sales Order #: 7632920  
RIG #: H&P 326

OptiCem v6.3.4  
15-Sep-10 04:49