

EXXONMOBIL CORPORATION

HOUSTON, Texas

PCU 296-5A7

H&P 321 970-422-4867

Post Job Summary

Cement Intermediate Casing

Prepared for: Todd Teren
Date Prepared: March 9, 2011
Version: 1

Service Supervisor: ASHBY, ANDREW

Submitted by: Joshua Anglin

HALLIBURTON

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
Casing	10 3/4" Surface Casing	10.75	9.950	45.50	0.00	4,666.00	0.00	4,580.00		
Open Hole Section	9 7/8" Intermediate Open Hole		9.950		4,666.00	10,288.00	4,580.00	10,189.00	100.00	0.00
Casing	7" Intermediate Casing	7.00	6.276	26.00	0.00	10,288.00	0.00	10,189.00		

Pumping Schedule

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	TUNED SPACER III	10.00	6.00	80.0 bbl	80.0 bbl
1	2	Cement Slurry	New Vernal Tuned Light	11.00	6.00	1460.0 sacks	1460.0 sacks
1	3	Spacer	Drilling Mud	0.00	0.00	374.0 bbl	374.0 bbl

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Fluids Pumped

Stage/Plug # 1 Fluid 1: TUNED SPACER III
TUNED SPACER III - SBM (483826)
59.8 lbm/bbl Barite

Fluid Density: 10.00 lbm/gal
Fluid Volume: 80.00 bbl
Pump Rate: 6.00 bbl/min

Stage/Plug # 1 Fluid 2: New Vernal Tuned
Light
TUNED LIGHT (TM) SYSTEM
0.2 lbm WG-17
0.5 lbm D-AIR 3000
0.35 lbm HR-601

Fluid Weight: 11.00 lbm/gal
Slurry Yield: 2.21 ft³/sack
Total Mixing Fluid: 9.70 Gal
Surface Volume: 1460.0 sacks
Sacks: 1460.0 sacks
Calculated Fill: 6,132.00 ft
Calculated Top of Fluid: 4,156.00 ft
Estimated Top of Fluid:
Pump Rate: 6.00 bbl/min

Stage/Plug # 1 Fluid 3: Drilling Mud
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 0.00 lbm/gal
Fluid Volume: 374.00 bbl
Pump Rate: 0.00 bbl/min

Job Summary

Job Information

Job Start Date	2/27/2011 12:10:00 PM
Job MD	10,288.0 ft
Job TVD	10,288.0 ft
Height of Plug Container/Swage Above Rig Floor	5.0 ft
Mud Type	Water Based Mud
Name of Mud Company	BAROID
Actual Mud Density	9 lbm/gal
Time Circulated before job	2.50 hour(s)
Rate at Which Well was Circulated	6.000 bbl/min
Pipe Movement During Hole Circulation	Reciprocated
Pipe Movement During Cementing	Reciprocated
Calculated Displacement	393.65 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Annular flow Before Job? (Water/Gas)	Unknown
Annular flow After Job? (Water/Gas)	Unknown
Length of Rat Hole	16.00 ft

Cementing Equipment

Number of Centralizers Used	41
Pipe Centralization	Bottom Joints (1 TO 10) and Through Production Int
Did Float Equipment Hold?	Yes
Plug set used?	Unknown
Brand of Plug set used?	Weatherford GEMOCO
Did Plugs Bump?	Unknown
Calculated Pressure to Bump Plugs	1,097.6 psig
Did Stage Cementing Tool Open Properly?	Unknown

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)	Comments
02/26/2011 19:30		Call Out						Crew Called out for Job. Plug Container#1426
02/26/2011 22:00		Pre-Convoy Safety Meeting						Met w/crew to discuss safety and hazards of travel to location
02/26/2011 22:30		Depart from Service Center or Other Site						Entered into Journey Management.
02/27/2011 02:00		Arrive At Loc						Ended Journey Management. Sign in @ Safety Shack. [Casing being ran - 2100 ft to go]
02/27/2011 02:10		Assessment Of Location Safety Meeting						Met w/crew to discuss hazards of site, location of materials and safety precautions.
02/27/2011 02:25		Other						Spot Equipment on location.
02/27/2011 02:50		Pre-Rig Up Safety Meeting						Met w/crew to discuss the best way to rig up, safety and hazards involved.
02/27/2011 03:00		Rig-Up Equipment						Rig up Bulk hoses, buddy lines, water lines and iron as far as safe.
02/27/2011 08:45		Other	6				330.0	On bottom, Circulating @ 6 bpm, 330 psi
02/27/2011 09:00		Rig-Up Equipment						Rig-up the rig floor.
02/27/2011 10:00		Pre-Job Safety Meeting						Met w/Rig Crew, Co. Rep, and our crew to discuss job procedres, contingencies, and safety measures.
02/27/2011 12:14		Other						Fill Lines
02/27/2011 12:17		Test Lines					257.0	Low Pressure Test (250 psi)
02/27/2011 12:21		Test Lines					5242.0	High Pressure Test (5000 psi)
02/27/2011 12:26		Pump Spacer	4	80			345.0	82 sks Tuned Spacer @ 10.0 ppg, 5.41 cuft/sk, 36.82 gps

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Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
02/27/2011 12:43		Slow Rate	1.5					120.0	Slow Rate to swap product lines and drop the bottom plug on the fly.
02/27/2011 12:48		Drop Bottom Plug	1.5					122.0	Drop Bottom Plug on the fly.
02/27/2011 12:50		Other	4					468.0	Increase Rate per Co. Rep.
02/27/2011 12:50		Pump Cement	1.5	575				125.0	1460 sks Tuned Light Cement @ 11.0 ppg, 2.21 cuft/sk, 9.7 gps
02/27/2011 12:53		Slow Rate	3					548.0	Increase Rate
02/27/2011 12:54		Slow Rate	1.5					322.0	Slow Rate
02/27/2011 12:55		Other	4					540.0	Increase Rate
02/27/2011 12:57		Other	6					758.0	Increase Rate
02/27/2011 13:05		Slow Rate	1.5					312.0	Slow Rate
02/27/2011 13:06		Other	5.5					520.0	Increase Rate
02/27/2011 14:49		Shutdown							Shutdown / Drop Top Plug
02/27/2011 14:51		Pump Displacement							Displacement = Fresh water w/BaraCor 700 & Aldacide
02/27/2011 15:10		Slow Rate	5.5					811.0	Slow Rate per Co. Rep.
02/27/2011 15:17		Other	8					1215.0	Increase Rate per Co. Rep.
02/27/2011 15:34		Slow Rate	5					1291.0	Slow Rate per Co. Rep.
02/27/2011 15:39		Other	7.2					1625.0	Increase Rate per Co. Rep.
02/27/2011 15:43		Slow Rate	5					1467.0	Slow rate to keep pressure down.
02/27/2011 15:45		Slow Rate	2					1222.0	Slow rate to bump plug.
02/27/2011 15:49		Bump Plug						1853.0	500 psi over final circulating pressure (1210 psi)
02/27/2011 15:52		Check Floats							held for 2 min, check floats, 2.5 bbls back - Floats held, but Co. Rep wanted to bump plug again.

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Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)	Comments
02/27/2011 16:03		Bump Plug					1767.0	Bump Plug again
02/27/2011 16:04		Check Floats						Check floats, 2.5 bbls back - floats held.
02/27/2011 16:10		End Job						Job Complete
02/27/2011 16:15		Post-Job Safety Meeting (Pre Rig-Down)						Met w/crew to discuss rigging down safely.
02/27/2011 16:30		Rig-Down Equipment						Rig everything down.
02/27/2011 18:50		Pre-Convoy Safety Meeting						Met w/crew to discuss fit-for-duty, safety and hazards of travel back.
02/27/2011 19:00		Depart Location for Service Center or Other Site						Entered into Journey Management.
02/27/2011 19:00		Other						Thanks for using Halliburton!!!

The Road to Excellence Starts with Safety

Sold To #: 331699	Ship To #: 2753383	Quote #:	Sales Order #: 7978549
Customer: EXXONMOBIL CORPORATION		Customer Rep: Murawski, Victoria	
Well Name: PCU	Well #: 296-5A7	API/UWI #: 05103112430000	
Field:	City (SAP): MEEKER	County/Parish: Rio Blanco	State: Colorado
Legal Description: Section 5 Township 2S Range 96W			
Contractor: H&P	Rig/Platform Name/Num: 321	970-422-4867	
Job Purpose: Cement Intermediate Casing			
Well Type: Development Well	Job Type: Cement Intermediate Casing		
Sales Person: MCNARY, GEORGE	Srvc Supervisor: ASHBY, ANDREW	MBU ID Emp #: 450544	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ASHBY, ANDREW A		450544	BEREECE, TERRY Lee		222819	ESTEP, KENNETH		214387
HUNTER, SAMUEL David		479669	LAWTON, SCOTT O		482816	TEICHERT, RONDO Chad		476071

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10248059	45 mile	10973575	45 mile	11061777	45 mile	11127525	45 mile
11189139	45 mile	11211506	45 mile	11263213	45 mile	11410666	45 mile
11526494	45 mile	6325	45 mile	6573	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					Called Out	Date	Time	Time Zone
Formation Depth (MD)	Top		Bottom		On Location	26 - Feb - 2011	19:30	MST
Form Type		BHST			Job Started	27 - Feb - 2011	02:00	MST
Job depth MD	10288. ft	Job Depth TVD	10288. ft		Job Completed	27 - Feb - 2011	12:10	MST
Water Depth		Wk Ht Above Floor	5. ft		Deparated Loc	27 - Feb - 2011	16:10	MST
Perforation Depth (MD)	From		To			27 - Feb - 2011	19:00	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
9 7/8" Intermediate Open Hole				9.95				4666.	10288.	4580.	10189.
10 3/4" Surface Casing	Unknown		10.75	9.95	45.5		J-55	.	4666.	.	4580.
7" Intermediate Casing	Unknown		7.	6.276	26.		P-110	.	10288.	.	10189.

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 ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk	
1	TUNED SPACER III	TUNED SPACER III - SBM (483826)			80.00	bbl	10.	.0	.0	6.0		
	38.32 gal/bbl	FRESH WATER										
	59.8 lbm/bbl	BARITE, 100 LB SK (100003680)										
2	New Vernal Tuned Light	TUNED LIGHT (TM) SYSTEM (452984)			1460.0	sacks	11.	2.21	9.7	6.0	9.7	
	0.2 lbm	WG-17, 50 LB SK (100003623)										
	0.5 lbm	D-AIR 3000 (101007446)										
	0.35 lbm	HR-601, 50 LB BAG (101328348)										
	9.7 Gal	FRESH WATER										
3	Drilling Mud				374.00	bbl	.	.0	.0	.0		
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	0 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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Lab Data

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Cementing Rockies, Vernal

LAB RESULTS - Primary

Job Information

Request/Slurry	130123/2	Rig Name	H&P 321	Date	21/FEB/2011
Submitted By	Craig Dube	Job Type	Intermediate Casing	Bulk Plant	Vernal
Customer	ExxonMobil	Location	Rio Blanco	Well	PCU 296-5A7

Well Information

Casing/Liner Size	7"	Depth MD	10288 ft	BHST	233 F
Hole Size	9 7/8"	Depth TVD	10189 ft	BHCT	175 F

Cement Information - Primary Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		Tuned Light				Slurry Density	11.00	PPG
						Slurry Yield	2.21	ft3/sk
36.88	%	> Boral Craig Pozmix	Bulk	Feb 20, 2011		Water Requirement	9.7	GPS
11	%	> HGS 6000 (PB)	Bulk	Feb 20, 2011		Water Source	Field (Fresh) Water	
53.19	%	> Holcim Type V	Bulk	Feb 20, 2011				
13	%	> Silicalite - Compacted	Bulk	Feb 20, 2011				
100.00	% BWOC	Cement Blend						
0.350	% BWOC	HR-601	Bulk	Feb 20, 2011	23HR07X-08S3JP			
0.500	% BWOC	D-Air 3000	Bulk	Feb 20, 2011	2011007AC			
0.200	% BWOC	FWCA	Bulk	Feb 20, 2011	37965			
9.70	gal/sack	Field (Fresh) Water	Lab	Jan 13, 2011	1-13-2011			

Operation Test Results Request ID 130123/2

Thickening Time, Request Test ID:1319101

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
175	4,923	51	18	03:44	05:01	05:21	05:56

Marsh Funnel, Request Test ID:1319107

Volume [ml]	Time [Sec]	Foam Quality
35	40	0

Free Water, Request Test ID:1319104

Test Temp (°F)	% FW 45 Inc
180	0

API Rheology, Request Test ID:1319103

Temp (°F)	600	300	200	100	60	30	6	3	Cond Time (min)	PV/YP
80	178	99	76	52	41	34	26	26	20	74.6 / 27.2

API Fluid Loss, Request Test ID:1319105

Test Temp (°F)	Test Pressure (psi)	Test Time (min)	Meas. Vol (< 30 min, cc)	Extr. ISO FL (cc/30 min)
180	1,000	1.01	26	283

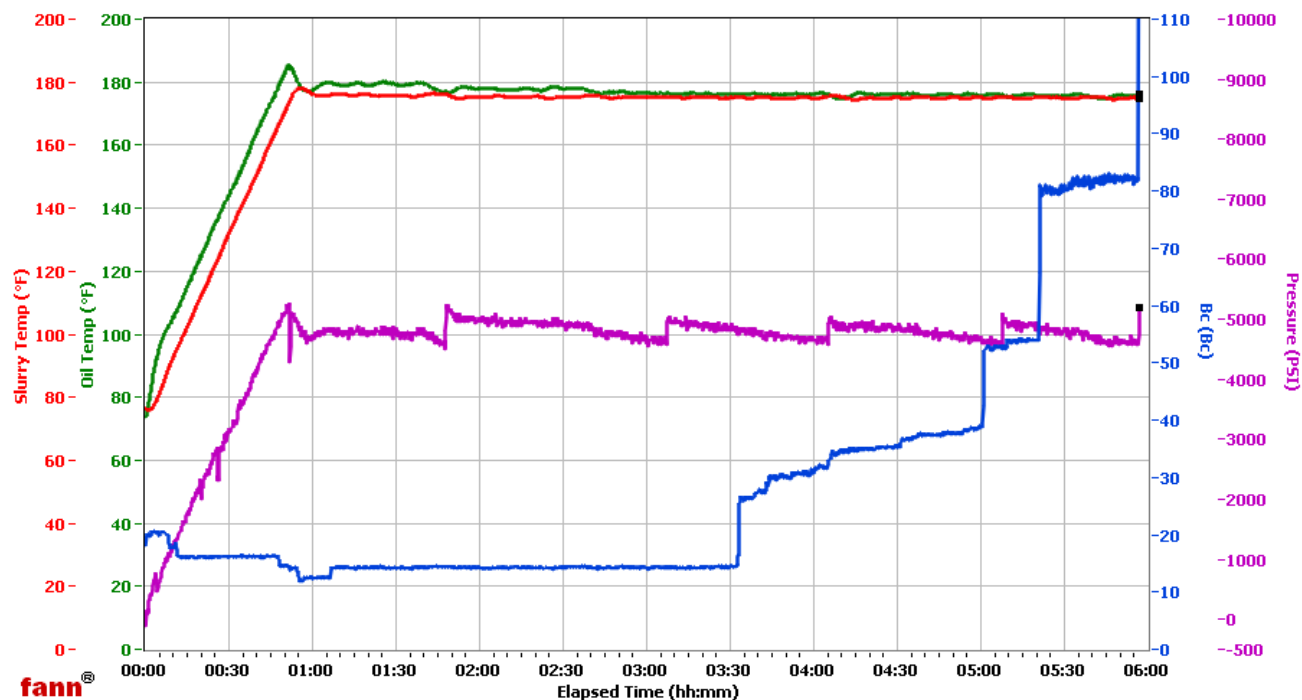
HALLIBURTON

Vernal

Fields	Values
Project Name	ExxonMobil 130123-2
Test ID	130123-2
Request ID	HPHT#2
Tested by	SMR
Customer	ExxonMobil
Well No	PCU 296-5A7
Rig	H&P 321
Casing/Liner Size	7

Fields	Values
Job Type	Intermediate Primary
Cement Type	V
Cement Weight	Light Weight
Test Date	02/21/11
Test Time	04:33 AM
Temp. Units	degF
Pressure Units	PSI

Events	Results
30.00 Bc	03h:44m
50.00 Bc	05h:01m
60.00 Bc	05h:21m
70.00 Bc	05h:21m
100.00 Bc	05h:56m
200.00 Bc	NaN
03h:00m	14.11
06h:00m	NaN



Data File F:\HPHT Data Files\Vernal Consistometer #2\ExxonMobil 130123-2.tdms

Comments Tuned Light, 0.35% HR-601, 11.0 Density, 2.21 Yield

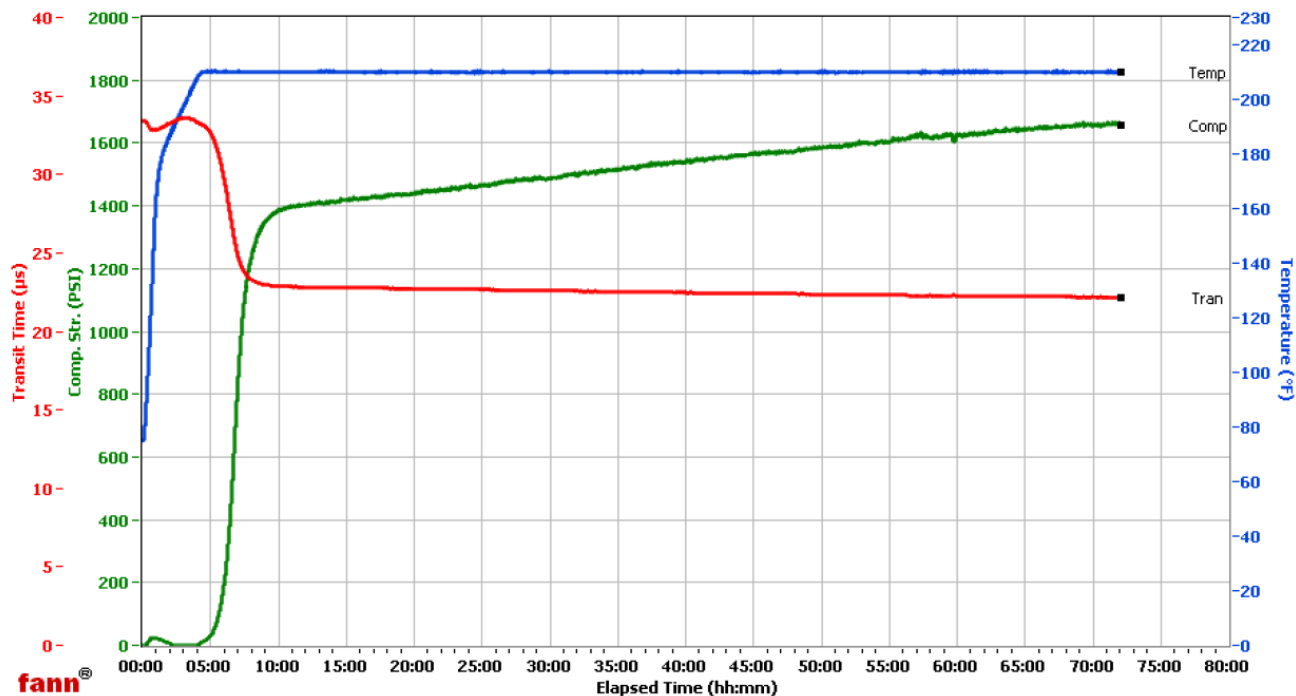
HALLIBURTON

Vernal

Fields	Values
Project Name	Exxonmobil 130123-1
Test ID	130123-1
Request ID	UCA #1
Tested by	D.O.
Customer	ExxonMobil
Well No	PCU 296-5A7
Rig	H8P 321
Casing/Liner Size	7

Fields	Values
Job Type	Primary
Cement Type	V
Cement Weight	Light Weight
Test Date	2/21/2011
Test Time	9:21 AM
Temp. Units	degF
Pressure Units	PSI

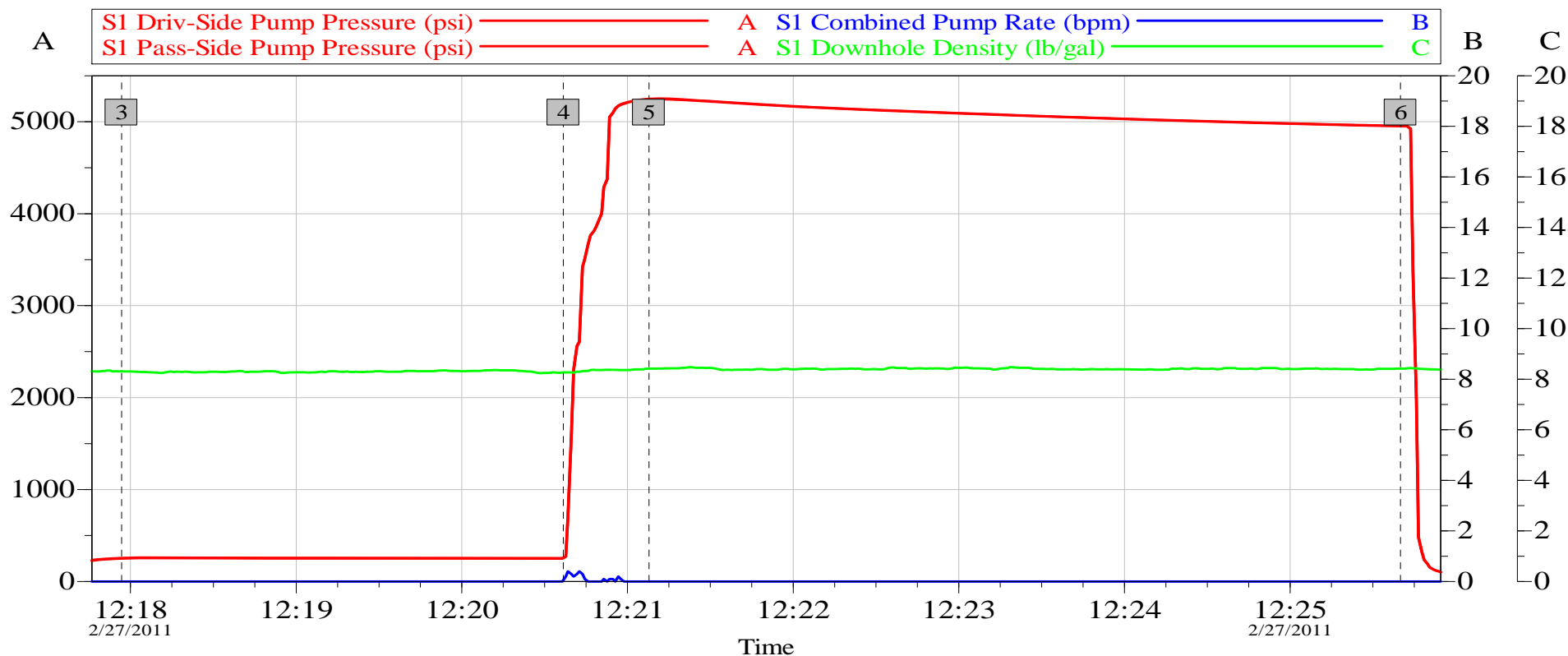
Events	Results
50.00 PSI	05h:15m
100.00 PSI	05h:36m
500.00 PSI	06h:34m
1000.00 PSI	07h:16m
12h:00m	1403.64
24h:00m	1463.31
48h:00m	1570.65
72h:00m	1660.94



Data File C:\Data Files\130123-1.tdms

Comments 53.19 V, .35 HR-601, 11 DEN, 2.21 YD.

ExxonMobil - PCU# 296-5A7 7 " Intermediate - Pressure Test



Global Event Log

Intersection					PSI	RATE	Intersection					PSI	RATE
3	Start Low Test	12:17:57	257.0	0.000	4	End Low Test	12:20:37	260.7	0.060				
5	Start High Test	12:21:08	5242	0.000	6	End High Test	12:25:40	4951	0.000				

Customer:
Well Description:

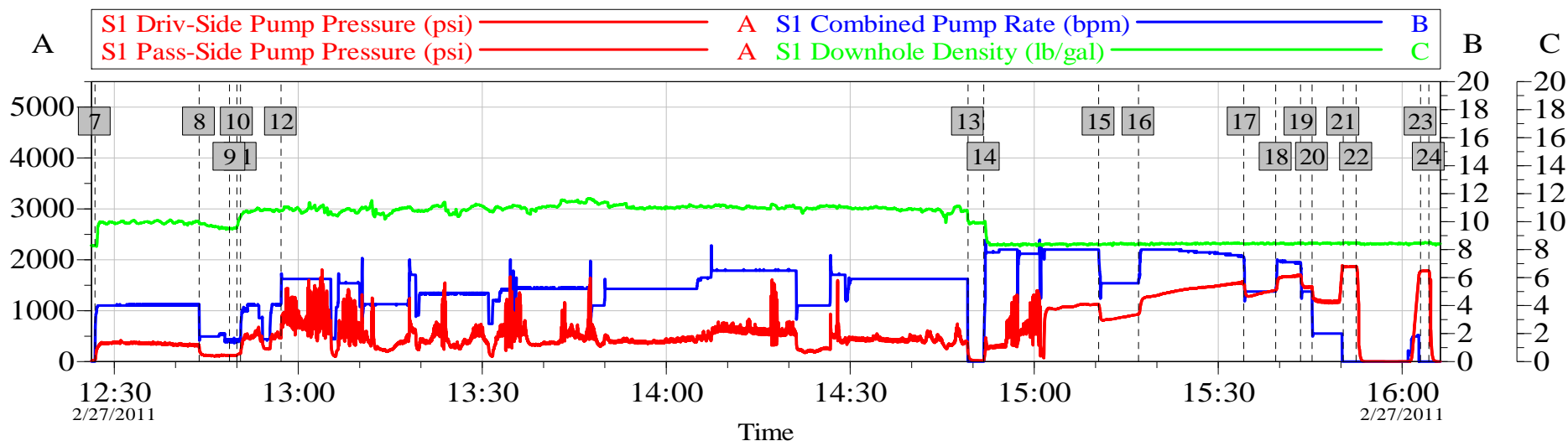
Job Date: 27-Feb-2011
UWI:

Sales Order #: 7977978549

OptiCem v6.4.9
27-Feb-11 17:28

ExxonMobil - PCU# 296-5A7

7 " Intermediate



Global Event Log

Intersection			PSI	RATE	Intersection			PSI	RATE
7	Pump Tune Spacer III	12:26:51	31.00	0.000	8	Slow Rate	12:43:50	303.3	4.100
9	Drop Bottom Plug	12:48:48	122.0	1.500	10	Pump Lead Cement	12:50:00	125.4	1.487
11	Increase Rate	12:50:36	158.3	1.600	12	Increase Rate	12:57:12	514.5	4.100
13	Shutdown / Drop Top Plug	14:49:12	161.8	0.000	14	Pump Displacement	14:51:47	16.86	0.000
15	Slow Rate	15:10:30	1126	8.000	16	Increase Rate	15:17:00	928.0	5.600
17	Slow Rate	15:34:10	1518	7.499	18	Increase Rate	15:39:22	1399	5.000
19	Slow Rate	15:43:26	1679	7.100	20	Slow Rate	15:45:18	1447	5.000
21	Bump Plug	15:50:23	1853	0.000	22	Check Floats	15:52:29	1867	0.000
23	Re-Bump Plug	16:03:00	1767	0.000	24	Check Floats	16:04:20	1784	0.000

Customer:
Well Description:

Job Date: 27-Feb-2011
UWI:

Sales Order #: 7977978549

OptiCem v6.4.9
27-Feb-11 19:21