

EXXONMOBIL CORPORATION

HOUSTON, Texas

PCU 296-5A3

H&P 321

Post Job Summary

Cement Production Casing

Date Prepared: 1/27/10
Version: 2

Service Supervisor: Sam Carpenter

Submitted by: Isaac Whorl

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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
Casing	Intermediate Casing	7.00	6.276	26.00	0	10,186	0	9,921.00		80.00
Open Hole Section	Production Open Hole		6.125		10,186	14,069	9,921	13,800	350	
Casing	Production Casing	4.50	3.826	15.10	0	13,760	0	13,491		80.00

Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Density lbm/gal	Avg Rate bbl/min	Volume
1	Spacer	TUNED SPACER III	10.50	6.00	80 bbls
2	Cement Slurry	Lightweight Tail Cement	12.00	6.00	900 sks
3	Spacer	NaCl Displacement	8.44	6.00	191 bbls

Fluids Pumped

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

Fluid Density: 10.50 lbm/gal

Stage/Plug # 1 Fluid 2: Lightweight Tail
Cement
VARICEM (TM) CEMENT
0.25 % Fe-2

Fluid Weight: 12.00 lbm/gal
Slurry Yield: 2.18 ft³/sack
Total Mixing Fluid: 12.12 Gal
Calculated Fill: 3,799.92 ft
Calculated Top of Fluid: 10,793.08 ft

Stage/Plug # 1 Fluid 3: NaCl Displacement
DISPLACEMENT FLUID
7.15 lbm/bbl Salt

Fluid Density: 8.44 lbm/gal

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Job Summary

Job Information

Job MD	13,760.0 ft
Mud Type	Water Based Mud
Actual Mud Density	10 lbm/gal
Calculated Displacement	206.37 bbl

Sold To #: 331699		Ship To #: 2751709		Quote #:		Sales Order #: 7839449	
Customer: EXXONMOBIL CORPORATION				Customer Rep: McClain, Eric			
Well Name: PCU			Well #: 296-5A3		API/UWI #: 05103112460000		
Field:		City (SAP): MEEKER		County/Parish: Rio Blanco		State: Colorado	
Legal Description: Section 5 Township 2S Range 96W							
Lat: N 0 deg. OR N 0 deg. 0 min. 0 secs.				Long: E 0 deg. OR E 0 deg. 0 min. 0 secs.			
Contractor: H&P			Rig/Platform Name/Num: 321				
Job Purpose: Cement Production Casing						Ticket Amount:	
Well Type: Development Well			Job Type: Cement Production Casing				
Sales Person: MCNARY, GEORGE			Srvc Supervisor: CARPENTER, LANCE			MBU ID Emp #: 461737	

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	12/19/2010 08:00							Crew called out
Pre-Convoy Safety Meeting	12/19/2010 09:30							Crew has journey manangement meeting covering convoy order, directions and hazards
Crew Leave Yard	12/19/2010 10:00							Crew leaves the yard heading for location
Arrive At Loc	12/19/2010 15:30							Crew arrives at location
Waiting - Arrived Early to Location - Start Time	12/19/2010 15:35							Arrived early, waited off of location
Waiting - Arrived Early to Location - End Time	12/19/2010 19:00							Pulled on to location

Assessment Of Location Safety Meeting	12/19/2010 19:15							Crew assesses location and cover staging of vehicles
Pre-Rig Up Safety Meeting	12/19/2010 19:25							Crew has pre rig up safety meeting covering hazards
Rig-Up Equipment	12/19/2010 19:35							Crew begins rigging up
Rig-Up Completed	12/19/2010 21:15							Crew rigged up to the red zone. Rig still running casing.
Other	12/20/2010 06:00							getting gas back, trying to circulate the well. Brought mud up to 9.7# from 9.4#.
Casing on Bottom	12/20/2010 13:00							@ 13,763 ft, Rig Circulating 6.7 BPM, 1200 PSI, 600 Gas Units
Other	12/21/2010 13:30							L/D CRT
Rig-Up Equipment	12/21/2010 13:45							Rig Floor Up, stab Head
Pre-Job Safety Meeting	12/21/2010 14:00							With Company Man and Rig Crew
Prime Pumps	12/21/2010 14:10							
Start Job	12/21/2010 14:13		2	3			300.0	Fill Lines 3 bbl
Other	12/21/2010 14:23							Per Company Pressure Test Pump Truck
Pressure Test	12/21/2010 14:30	3,4						Low 250 PSI

Sold To 331699 Ship To #: 2751709 Quote # : Sales Order # 7839449
 # :
 SUMMIT 7.20.130 Friday, January 28, 2011 10:39:00
 Version:

Pressure Test	12/21/2010 14:35	5,6						High 5000 PSI
Injection Test	12/21/2010 14:40							Per Company Man, Pump @ 2 BPM, 4 BPM, 6 BPM, Monitor Returns and Gas
Pump Spacer	12/21/2010 14:56	7	4.5	76	79		2000 .0	TS III DEN 10.5# Design Volume 80 bbl, Recorded 76 bbl
Shutdown	12/21/2010 15:13							
Pump Cement	12/21/2010 15:19	8	5	370	449		900. 0	DEN 12.0#, YLD 2.17 cuft/sk, WR 11.95 gal/sk Design (Slurry Volume 348 bbl, MixWater Volume 256 bbl) Recorded (Slurry Volume 387 bbl, MixWater Volume 272 bbl)***Slurry Volume from Mix Water 370 bbl
Drop Bottom Plug	12/21/2010 15:19	9						
Shutdown	12/21/2010 16:36							
Clean Lines	12/21/2010 16:37	10						Wash Lines to Pit
Drop Top Plug	12/21/2010 16:43	11						
Pump Displacement	12/21/2010 16:43	12	7	191	640		2200 .0	Design 194 bbl Recorded 191

Sold To 331699 Ship To # :2751709 Quote # : Sales Order # 7839449
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 Version:

Displ Reached Cmnt	12/21/2010 16:44		8	10			2000 .0	Catch CMT with 10 bbl away displacement
Slow Rate	12/21/2010 16:57		6	105			2200 .0	Slow Rate to 6 BPM with 105 bbl away displacement
Slow Rate	12/21/2010 17:08		3	170			2400 .0	Slow Rate to 3 BPM with 170 away displacement
Slow Rate	12/21/2010 17:14		2	185			2300 .0	Slow Rate to 2 BPM with 185 bbl away displacement
Bump Plug	12/21/2010 17:16	13	2	191			2450 .0	Design 2033 PSI Recorded 2450 PSI
Check Floats	12/21/2010 17:22	14						Pressure up to 3100 PSI. Hold for 6 minutes. Floats Don't Hold
Other	12/21/2010 17:23							Pump 4 bbl and Check Floats again
Check Floats	12/21/2010 17:26	15						Re-Check Floats. Hold for 10 minutes. Floats Don't Hold for 2nd time
Shut In Well	12/21/2010 17:38							Pump 4 bbl and Shut Well in at CMT head
End Job	12/21/2010 17:42	16						Pumped 640 bbl Returns
Shut In Well	12/21/2010 17:45							Pressured up on truck to 4200 psi and opened well to truck to monitor pressure
Record Pressure	12/21/2010 19:00							Pressure at 5150. bled off to 4200 and shut back in
Record Pressure	12/21/2010 20:00							Pressure at 5200. bled off to 4200 and shut back in.

Sold To 331699

Ship To # :2751709

Quote # :

Sales Order # 7839449

:

SUMMIT

7.20.130

Friday, January 28, 2011 10:39:00

Version:

The Road to Excellence Starts with Safety

Sold To #: 331699	Ship To #: 2751709	Quote #:	Sales Order #: 7839449
Customer: EXXONMOBIL CORPORATION	Customer Rep: McClain, Eric		
Well Name: PCU	Well #: 296-5A3	API/UWI #: 05103112460000	
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		
Job Purpose: Cement Production Casing			
Well Type: Development Well	Job Type: Cement Production Casing		
Sales Person: MCNARY, GEORGE	Srvc Supervisor:	MBU ID Emp #:	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
Carpenter, Lance		461737	Shiflett, Jesse		469551	Allred, Jared		471751
Williams, Donald		482811	Christensen, Don		484613	Walker, Derrick		267871

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10948685	140	10804581	140	10872113	140	11338211	140
11023106	140	10829453	140				

Job

Job Times

Formation Name	Formation Depth (MD)	Top	Bottom	Called Out	Date	Time	Time Zone
Form Type			BHST	290	12/19/10	8:00	MST
Job depth MD	13,760. ft		Job Depth TVD	13,491	12/19/10	10:00	MST
Water Depth			Wk Ht Above Floor		12/21/10	15:19	MST
Perforation Depth (MD)	From		To	Job Completed	12/21/10	17:42	MST
				Departed Loc			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
Production Open Hole				6.125				10,186	14,069	9,921	13,800
Intermediate Casing	Unknown		7.	6.276	26.	HYDRIL - SERIES 500 TYPE 513	P-110	0.0	10,186.0	0.0	9,921.0
Production Casing	Unknown		4.5	3.826	15.1	LTC	P-110	0.0	13,760.0	0.0	13,491.0

Tools and Accessories

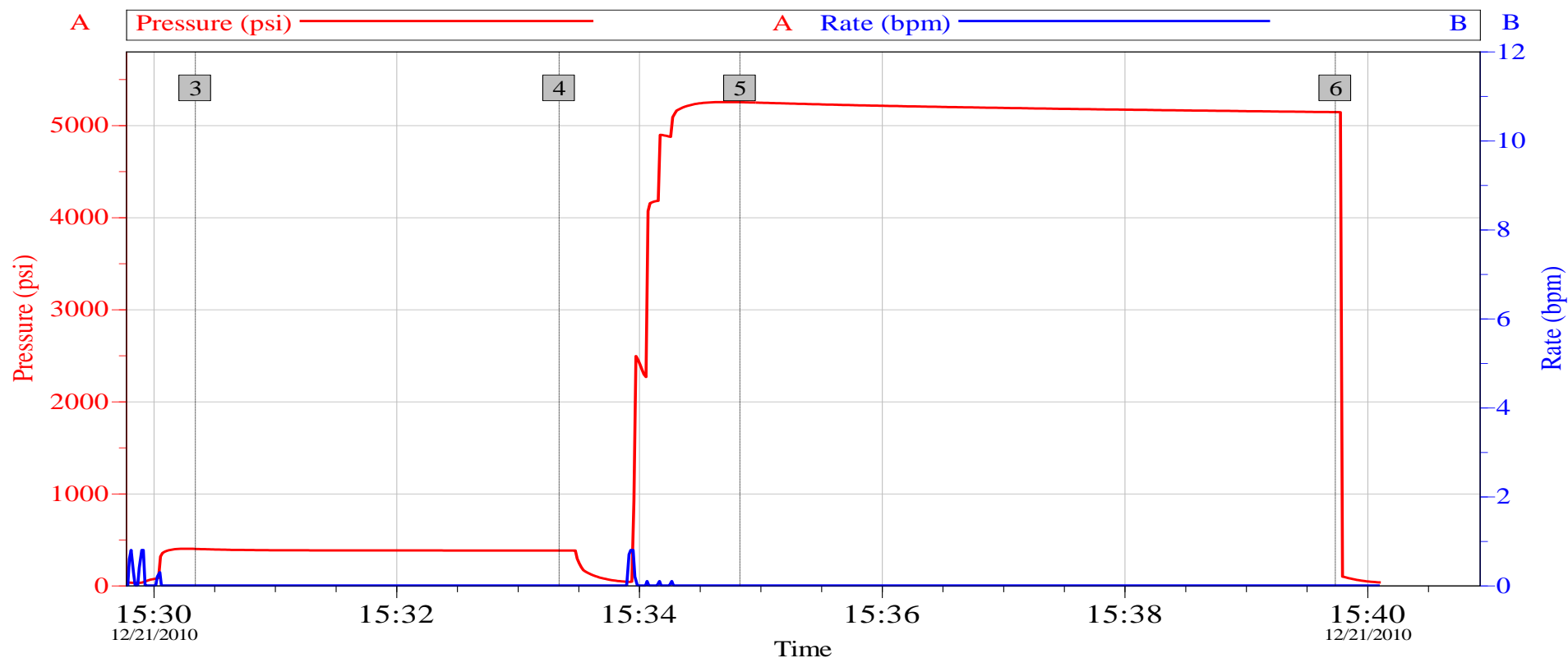
Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug	4.5"	1	
Float Shoe	4.5"	1		13,760	Bridge Plug					Bottom Plug	4.5"	1	
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			

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	TUNED SPACER III	TUNED SPACER III - SBM (483826)	80	bbl	10.5	6.239	41.738	6.0	41.738
	38.32 gal/bbl	FRESH WATER							
	59.8 lbm/bbl	BARITE, 100 LB SK (100003680)							
2	Lightweight Tail Cement	VARICEM (TM) CEMENT (452009)	900	sacks	12.	2.18	12.12	6.0	12.12
	12.124 Gal	FRESH WATER							
	0.25 %	FE-2 (100001615)							
3	NaCl Displacement		191	bbl	8.44	.0	.0	6.0	
	7.15 lbm/bbl	SALT, 100 LB BAG (100003652)							
Calculated Values		Pressures		Volumes					
Displacement	191	Shut In: Instant		Lost Returns		Cement Slurry		Pad	
Top Of Cement		5 Min		Cement Returns		Actual Displacement	191	Treatment	
Frac Gradient		15 Min		Spacers	80	Load and Breakdown		Total Job	
Rates									
Circulating		Mixing		6	Displacement	6	Avg. Job		6
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

PCU 296-5A3 Production Pressure Test

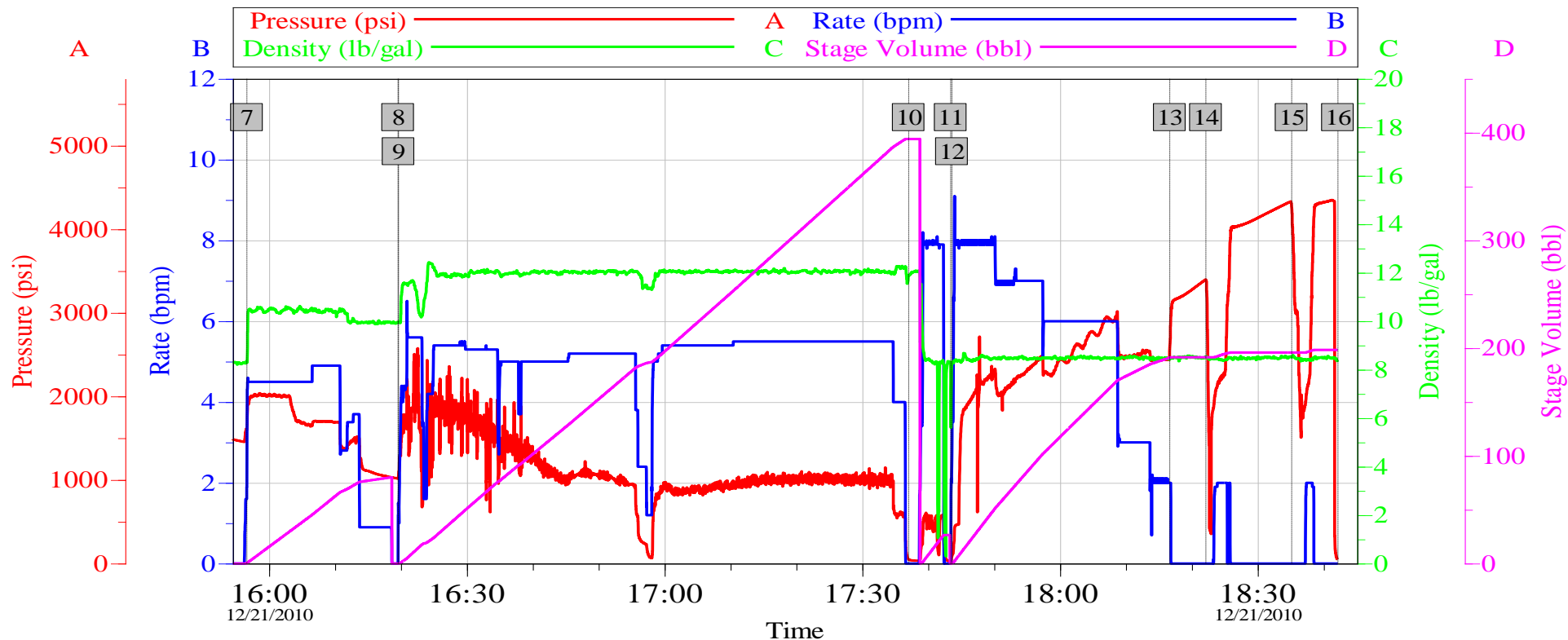


Job Log							
Intersection			PSI	Intersection			PSI
3	Start Low Pressure Test	15:30:21	397.8	4	End Low Pressure Test	15:33:21	380.0
5	Start High Pressure Test	15:34:50	5250	6	End High Pressure Test	15:39:44	5142

Customer: EXXONMOBIL	Job Date: 21-Dec-2010	Sales Order #: 7839447
Well Description: PCU 296-5A3	UWI: 0510311246	Rig: H&P 321

OptiCem v6.4.9
21-Dec-10 15:40

PCU 296-5A3 Production



Job Log

7	TS III 10.5#	15:56:38	8	Primary Cement (VariCem) 12.0#	16:19:35
9	Drop Bottom Plug	16:19:38	10	Wash Lines	17:37:02
11	Displacement 2% NaCl Water	17:43:25	12	Drop Top Plug	17:43:36
13	Bump Plug	18:16:39	14	Check Floats	18:22:08
15	Re-Check Floats	18:35:09	16	Ending Job	18:42:09

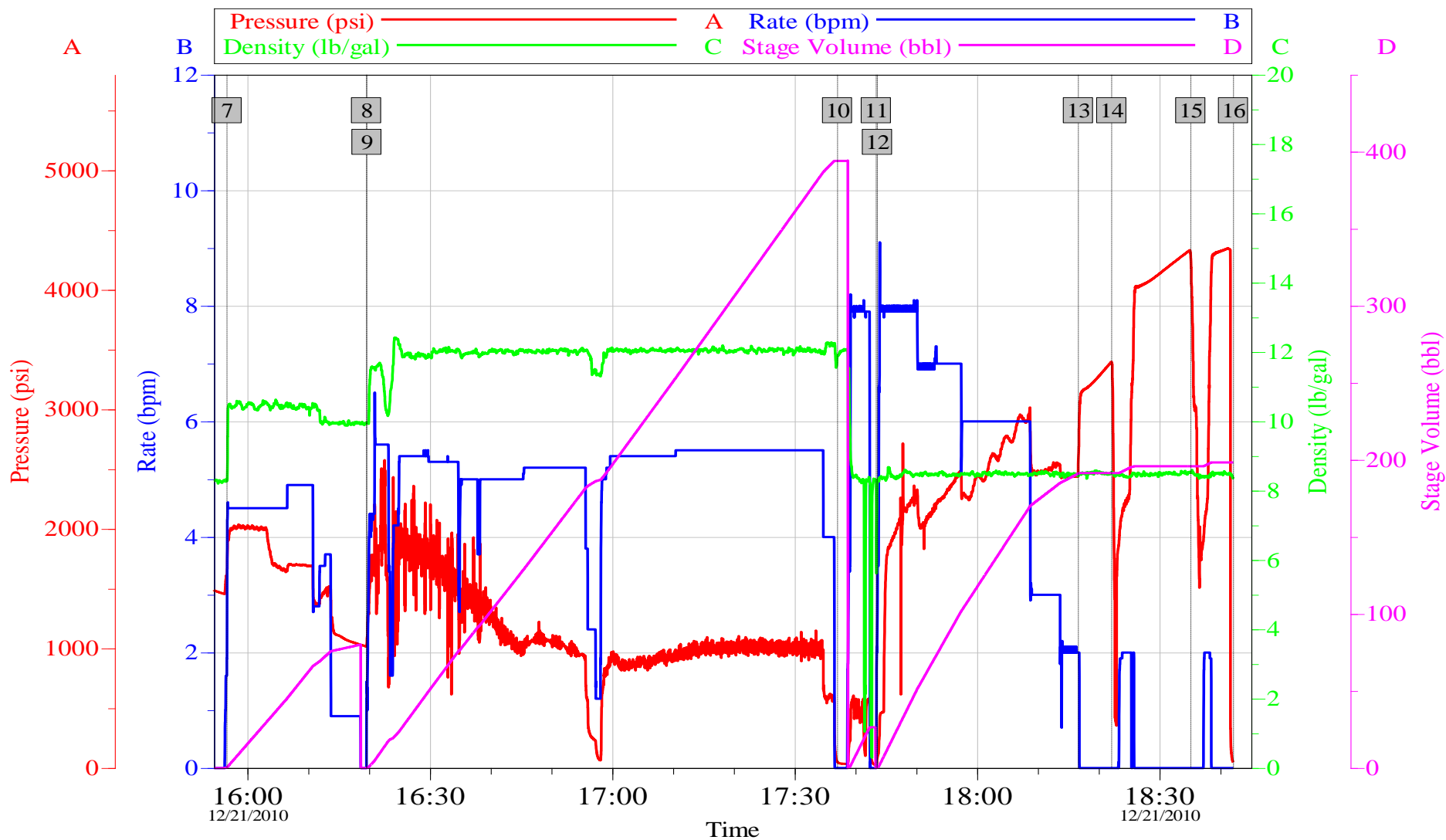
Customer: EXXONMOBIL
Well Description: PCU 296-5A3

Job Date: 21-Dec-2010
UWI: 0510311246

Sales Order #: 7839447
Rig:

OptiCem v6.4.9
21-Dec-10 18:43

PCU 296-5A3 Production



Customer: EXXONMOBIL
Well Description: PCU 296-5A3

Job Date: 21-Dec-2010
UWI: 0510311246

Sales Order #: 7839447
Rig:

OptiCem v6.4.9
21-Dec-10 18:44

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Lab Data

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Cementing Rockies, Meeker

LAB RESULTS - Primary

Job Information

Request/Slurry	116457/1	Rig Name	H&P 321	Date	December 13th 2010
Submitted By	Joshua Anglin	Job Type	Production Casing	Bulk Plant	Meeker
Customer	ExxonMobil	Location	Rio Blanco	Well	PCU 296-5A3

Well Information

Casing/Liner Size	4 1/2"	Depth MD	13965 ft	BHST	290 F
Hole Size	6 1/8"	Depth TVD	13700 ft	BHCT	230 F

Cement Information - Tail Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		VariCem				Slurry Density	12.00	PPG
						Slurry Yield	2.17	FT3
100.00	% BWOC	TXI Lightweight	Bulk	Dec 15, 2010	10-21-2010	Water Requirement	11.95	GPS
25.00	% BWOC	Silicalite - Compacted	Bulk	Dec 15, 2010	08-12-2010	Water Source	Field (Fresh)	Water
0.60	% BWOC	HALAD-344 (PB)	Bulk	Dec 15, 2010	ZM0G0051A0	Water Chloride	N/A	ppm
0.60	% BWOC	D-Air 3000	Bulk	Dec 15, 2010	2010252AC			
0.10	% BWOC	Econolite (Powder - PB)	Bulk	Dec 15, 2010	U100110			
0.25	% BWOC	Fe-2 (citric acid)	Bulk	Dec 15, 2010	CA0E032B4			
132.93	L/100kg	Field (Fresh) Water	Lab	Dec 10, 2010	12-10-10			

Operation Test Results Request ID 116457/1

UCA Comp. Strength, Request Test ID:1196992

End Temp (°F)	Pressure (psi)	50 psi (hh:mm)	500 psi (hh:mm)	12 hr CS (psi)	24 hr CS (psi)	48 hr CS (psi)	End CS (psi)	End Time (hrs)
259	3,000	03:58	04:15	1,046	1,069	729	640	72

Thickening Time, Request Test ID:1196991

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)
230	7,188	41	6	03:02	03:08	03:09	03:09	03:09

Free Water, Request Test ID:1196994

Test Temp (°F)	% FW 45 Inc
180	0
0 channeling, 0 settling, Trace FW	

API Rheology, Request Test ID:1196993

Temp (°F)	600	300	200	100	60	30	6	3	Cond Time (min)	PV/YP
80	45	27	20	14	10	8	5	4	20	22.3 / 5.4

API Fluid Loss, Request Test ID:1196995

Test Temp (°F)	Test Pressure (psi)	Test Time (min)	Meas. Vol (< 30 min, cc)	Extr. ISO FL (cc/30 min)
180	1,000	10	48	166

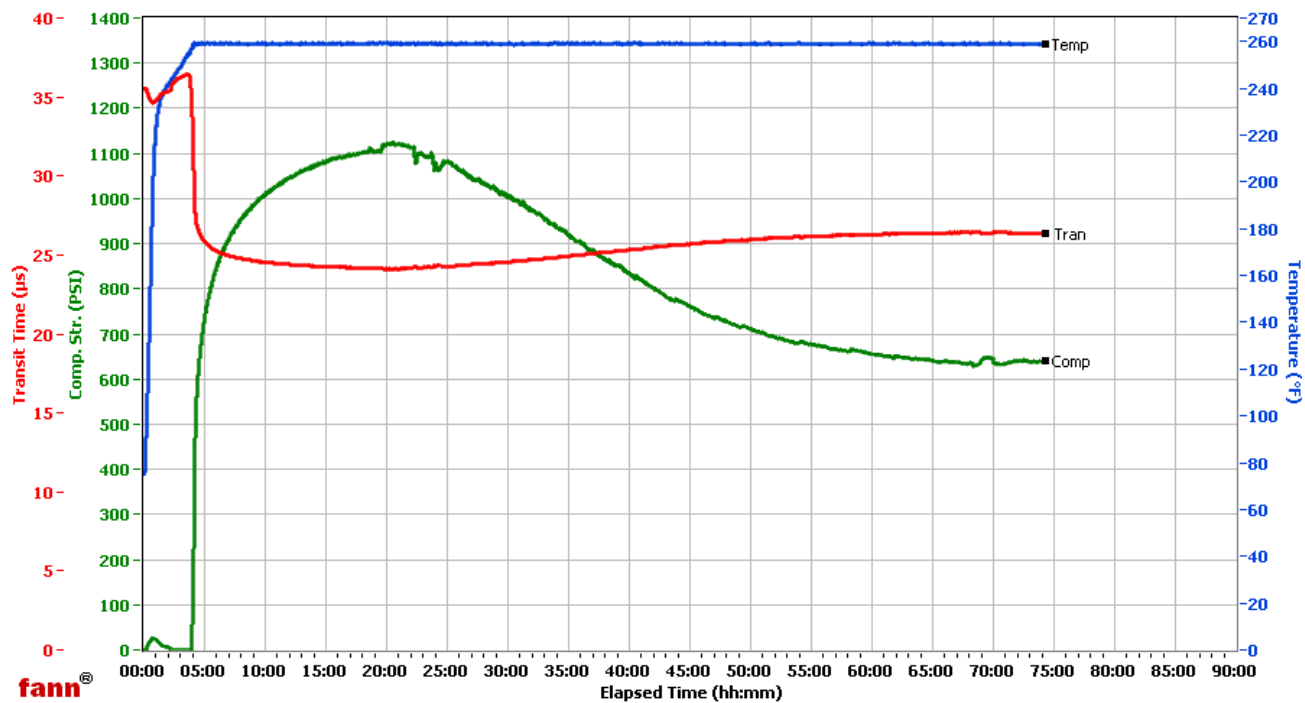
HALLIBURTON

WRCR

Fields	Values
Project Name	EXXONMOBIL 116457-1
Test ID	116457-1
Request ID	UCA 1
Tested by	AC
Customer	ExxonMobil
Well No	PCU 296-5A3
Rig	H&P 321
Casing/Liner Size	

Fields	Values
Job Type	PROD TAIL
Cement Type	TXI
Cement Weight	Light Weight
Test Date	12/15/2010
Test Time	2:15 PM
Temp. Units	degF
Pressure Units	PSI

Events	Results
50.00 PSI	03h:58m
100.00 PSI	04h:02m
500.00 PSI	04h:15m
1000.00 PSI	30h:27m
12h:00m	1045.92
24h:00m	1068.69
48h:00m	728.71
72h:00m	639.69



Data File C:\UCA Data\116457-1.tdms

Comments 100% TXI, 0.250% FE-2, 2.17 YIELD, 12.001 DEN

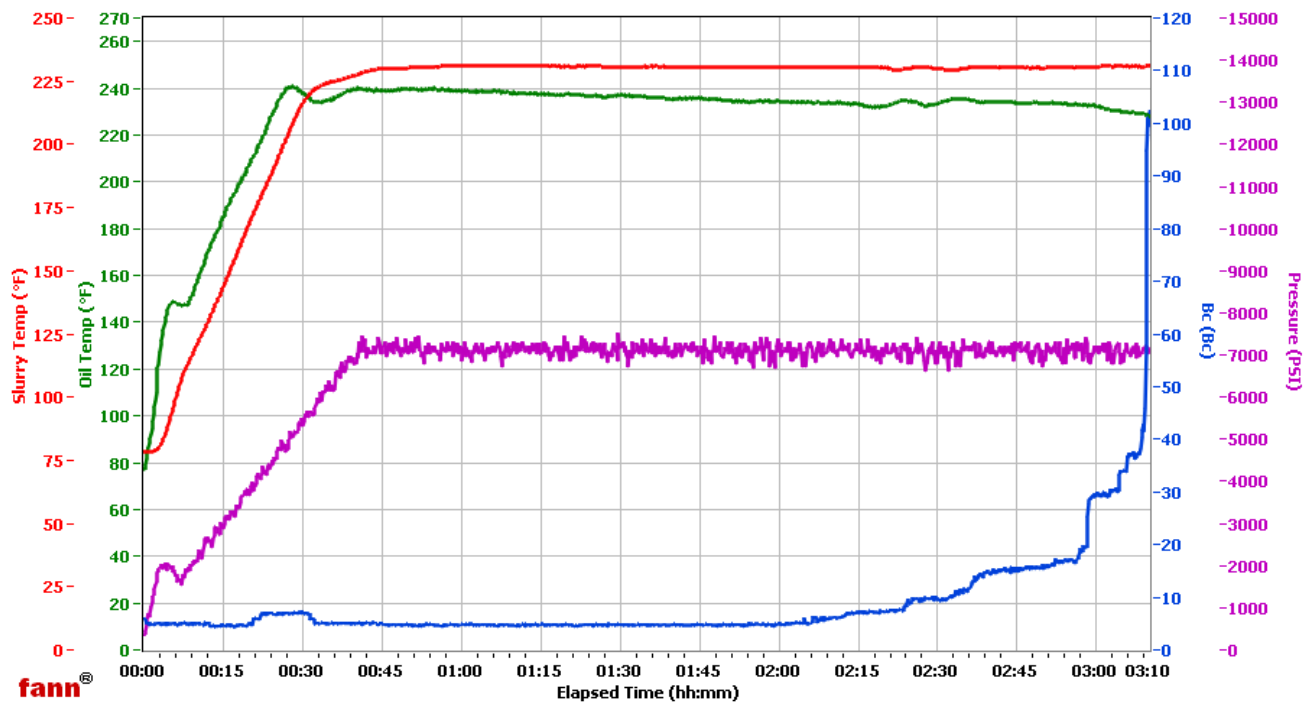
HALLIBURTON

WRCR

Fields	Values
Project Name	ExxonMobil PCU 296-5A3
Test ID	116457-1
Request ID	HPHT 1
Tested by	ac
Customer	ExxonMobil
Well No	PCU 296-5A3
Rig	H&P 321
Casing/Liner Size	

Fields	Values
Job Type	Prod Tail
Cement Type	TXI
Cement Weight	Light Weight
Test Date	12/15/10
Test Time	05:49 PM
Temp. Units	degF
Pressure Units	PSI

Events	Results
30.00 Bc	03h:02m
40.00 Bc	03h:08m
50.00 Bc	03h:09m
70.00 Bc	03h:09m
100.00 Bc	03h:09m
200.00 Bc	NaN
03h:00m	29.63
06h:00m	NaN



Data File O:\HPHT Data Files WRCR\WRCR Consistometer #1\ExxonMobil 116457-1.tdms

Comments 100% TXI, 0.250% Fe-2, 2.17 Yield, 12.001 Den