

EXXONMOBIL CORPORATION

HOUSTON, Texas

PCU 197-34A6

H&P 325

Post Job Summary

Cement Production Casing

Date Prepared: 10/15/10
Version: 2

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		
Casing	Intermediate Casing	7.00	6.276	26.00	0	8,653	0	8,380		80
Open Hole Section	Production Open Hole		6.125		8,653	12,625	8,380	12,356	350	
Casing	Production Casing	4.50	3.826	15.10	0	12,610	0	12,341		80

Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Density lbm/gal	Avg Rate bbl/min	Volume
1	Spacer	TUNED SPACER III	11.00	4.00	40.0 bbl
2	Cement Slurry	Lightweight Tail Cement	12.00	6.00	914.0 sacks
3	Spacer	NaCl Displacement	8.44	4.00	177.0 bbl

Fluids Pumped

Stage/Plug # 1 Fluid 1: TUNED SPACER III
TUNED SPACER III - SBM (483826)
3 lbm/bbl Fe-2
59.8 lbm/bbl Barite

Fluid Density: 11.00 lbm/gal
Fluid Volume: 40.00 bbl

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
Volume: 914.0 sacks
Calculated Fill: 3,544.00 ft
Calculated Top of Fluid: 9,185.00 ft

Stage/Plug # 1 Fluid 3: NaCl Displacement
DUMMY MUD / FLUSH / SPACER SBC MATERIAL
7.15 lbm/bbl Salt

Fluid Density: 8.44 lbm/gal
Fluid Volume: 177.00 bbl

HALLIBURTON

Job Summary

Job Information

Job Start Date	10/10/2010 7:00:00 AM
Job MD	12,610.0 ft
Job TVD	12,341.0 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	10 lbm/gal
Time Circulated before job	4.00 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	179.87 bbl
Recorded Slurry Volume (barrel counter)	383 bbls
Calculated Slurry Volume (based on mix water used)	326 bbls
Amount of Mix Water Used	240 bbls
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?	Yes
Brand of Plug set used?	Weatherford
Did Plugs Bump?	Yes
Calculated Pressure to Bump Plugs	2,300.0 psig

Service Supervisor Reports

Job Log

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
10/09/2010 12:00	Call Out				
10/09/2010 15:30	Depart Yard Safety Meeting				JOURNEY MANAGMENT
10/09/2010 16:00	Crew Leave Yard				
10/09/2010 19:30	Arrive at Location from Service Center				RIG RUNNING CASING
10/09/2010 19:35	Safety Meeting - Assessment of Location				OVER HEAD LINES RED ZONES
10/09/2010 19:40	Other				MEET W/ CO MAN AND GO OVERNUMBERS
10/09/2010 19:50	Other				SPOT TRUCKS USING TWO SPOTTERS
10/09/2010 20:00	Safety Meeting - Pre Rig-Up				PINCH POINTS RED ZONES LINE OF FIRE
10/09/2010 20:05	Rig-Up Equipment				RIG UP TO RE ZONE
10/09/2010 21:30	Other				WAIT ON RIG TO RUN CASING
10/10/2010 05:30	Safety Meeting - Pre Rig-Up				PINCH POINTS RED ZONE LINE OF FIRE
10/10/2010 05:55	Rig-Up Equipment				RIG UP RIG FLOOR
10/10/2010 06:00	Rig-Up Completed				
10/10/2010 06:05	Safety Meeting - Pre Job				GO OVER JOB PROCESS
10/10/2010 07:12	Pump Water				2BBLS TO FILL LINES
10/10/2010 07:14	Pressure Test			250.0	PRESSURE TEST TO 250PSI
10/10/2010 07:17	Pressure Test			5000.0	PRESSURE TEST TO 5000PSI
10/10/2010 07:25	Pump Spacer	4		800.0	40BBLS TUNE SPACER 11#
10/10/2010 07:33	Shutdown				

HALLIBURTON

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
10/10/2010 07:35	Drop Bottom Plug				
10/10/2010 07:38	Pump Cement	6		700.0	Design: 354.9BBLS 12# 2.18YIELD 12.12GAL/SK 914SKS Recorded Volume: 383 bbls via the barrel counter Calculated Volume: 326 bbls based on mix water used
10/10/2010 08:38	Shutdown				
10/10/2010 08:39	Clean Lines				CLEAN PUMPS AND LINES TO PIT
10/10/2010 08:44	Drop Top Plug				
10/10/2010 08:45	Pump Displacement - Start	8		319.0	PUMP H2O DISPLACEMENT W/ 2% SALT
10/10/2010 08:48	Displ Reached Cmnt	5		655.0	20BBLS GONE
10/10/2010 08:57	Slow Rate	4		867.0	60BBLS GONE
10/10/2010 09:24	Slow Rate	3		2160.0	160BBLS GONE
10/10/2010 09:28	Bump Plug	3		2300.0	TOTAL DISPLACEMENT 177BBLS PRESSURE OVER 500PSI TO 2800PSI
10/10/2010 09:37	Check Floats				FLOATS HELD 2.25BBLS BACK
10/10/2010 09:45	Safety Meeting - Pre Rig-Down				PINCH POINTS RED ZONES LINE OF FIRE
10/10/2010 09:55	Rig-Down Equipment				
10/10/2010 11:45	Rig-Down Completed				
10/10/2010 11:50	Safety Meeting - Departing Location				JOURNEY MANAGMENT
10/10/2010 12:00	Crew Leave Location				THANKS FOR USING HALLIBURTON

The Road to Excellence Starts with Safety

Sold To #: 331699	Ship To #: 2773295	Quote #:	Sales Order #: 7671857
Customer: EXXONMOBIL CORPORATION	Customer Rep: Willson, John		
Well Name: PCU	Well #: 197-34A6	API/UWI #: 05-103-11539	
Field: PICEANCE CREEK	City (SAP): MEEKER	County/Parish: Rio Blanco	State: Colorado

Legal Description: Section 34 Township 1S Range 97W

Contractor: H&P **Rig/Platform Name/Num:** H&P325

Job Purpose: Cement Production Casing

Well Type: Development Well **Job Type:** Cement Production Casing

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 #
MEDINA, ERNESTO	14	470422	BURROWS, DARREN Michael	14	475039	DAVIS, CODY R	14	446891
GAMBLES, BRAYDEN Kade	14	469413	SPENCER, WESTON Chad	14	391271	WILLIAMS, CAMERON Kent	14	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
10-9-10	4	0	10-10-10	10	2.5			
TOTAL	Total is the sum of each column separately							

Job

Formation Name	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Job Depth TVD	Water Depth	Perforation Depth (MD)	From	To	Job Times	Date	Time	Time Zone
				BHST	12610. ft	12610. ft	3. ft				Called Out	09 - Oct - 2010	12:00	MST
											On Location	09 - Oct - 2010	19:00	MST
											Job Started	10 - Oct - 2010	07:00	MST
											Job Completed	10 - Oct - 2010	09:30	MST
											Departed Loc	10 - Oct - 2010	11:30	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
Production Open Hole				6.125				8653.	12625.	8380.	12356.
Intermediate Casing	Unknown		7.	6.276	26.	HYDRIL - SERIES 500 TYPE 513	P-110		8653.		8380.
Production Casing	Unknown		4.5	3.826	15.1	LTC	P-110		12610.		12341.

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

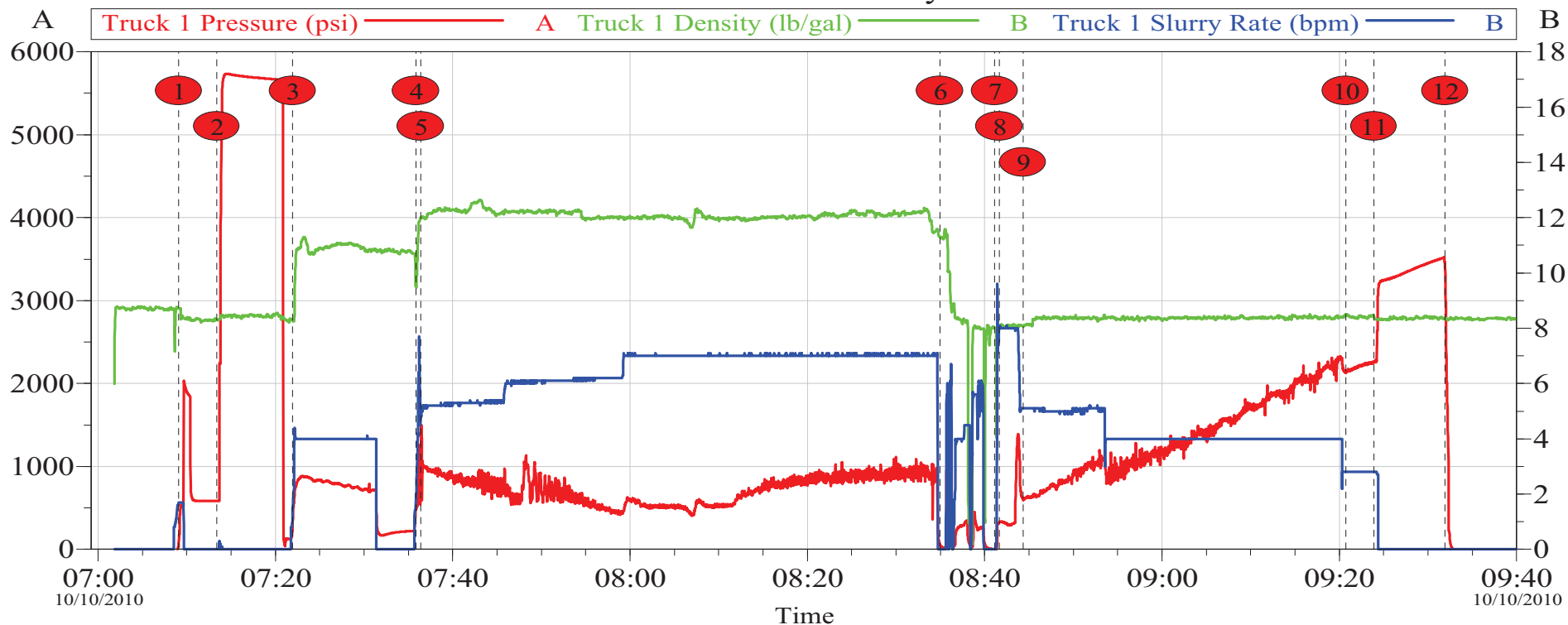
Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc	%
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size	Qty	

Fluid Data									
Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft ³ /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	TUNED SPACER III	TUNED SPACER III - SBM (483826)	40.00	bbl	11.	.0	.0	6.0	
	38.32 gal/bbl	FRESH WATER							
	3 lbm/bbl	FE-2 (100001615)							
	59.8 lbm/bbl	BARITE, 100 LB SK (100003680)							
2	Lightweight Tail Cement	VARICEM (TM) CEMENT (452009)	914.0	sacks	12.	2.18	12.12	6.0	12.12
	12.124 Gal	FRESH WATER							
	0.25 %	FE-2 (100001615)							
3	NaCl Displacement		177.00	bbl	8.44	.0	.0	6.0	
	7.15 lbm/bbl	SALT, 100 LB BAG (100003652)							
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 PCU 197-34A6 4.5" Production Summary Chart



Local Event Log

1 Low Pressure Test	07:09:07	2 High Pressure Test	07:13:24	3 Pump 11 ppg Spacer	07:21:57
4 Drop Bottom Plug	07:35:52	5 Pump 12 ppg Cement	07:36:25	6 Shutdown and Clean Lines	08:34:59
7 Drop Top Plug	08:41:08	8 Pump Displacement	08:41:40	9 Displcement Caught Cement	08:44:20
10 Slowed Rate To Land Plug	09:20:43	11 Bump Plug	09:23:55	12 Check Floats	09:31:56

Customer: EXXONMOBIL CORPORATION
Well Description: PCU 197-34A6
Svc Supervisor Cody Davis

Job Date: 10-Oct-2010
UWI: 05-103-11539
Svc. Operator Cameron Williams

Sales Order #: 7671857
Elite # 10872435
Svc. Leader Wes Spencer

OptiCem v6.4.9
15-Oct-10 12:26

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Lab Data

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Cementing Rockies, Meeker

LAB RESULTS - Primary

Job Information

Request/Slurry	102246/1	Rig Name	H&P 325	Date	September 29th 2010
Submitted By	Joshua Anglin	Job Type	Production Casing	Bulk Plant	Meeker
Customer	ExxonMobil	Location	Rio Blanco	Well	PCU 197-34A6

Well Information

Casing/Liner Size	4 1/2"	Depth MD	12610 ft	BHST	270 F
Hole Size	6 1/8"	Depth TVD	12341 ft	BHCT	210 F

Cement Information - Primary Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		VariCem				Slurry Density	12.001	PPG
100.00	% BWOC	TXI Lightweight	Bulk	Sep 29, 2010		Slurry Yield	2.17	FT3
25.00	% BWOC	Silicalite - Compacted	Bulk	Sep 29, 2010		Water Requirement	11.95	GPS
0.60	% BWOC	HALAD-344 (PB)	Bulk	Sep 29, 2010	BO-239	Water Source	Field (Fresh) Water	
0.60	% BWOC	D-Air 3000	Bulk	Sep 29, 2010	2010217AC			
0.10	% BWOC	Econolite (Powder - PB)	Bulk	Sep 29, 2010	U020610			
0.25	% BWOC	Fe-2 (citric acid)	Bulk	Sep 29, 2010	CAOE032B4			
132.93	L/100kg	Field (Fresh) Water	Lab	Aug 29, 2010	8/29/10			

Operation Test Results Request ID 102246/1

UCA Comp. Strength, Request Test ID:1071824

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)
242	3,000	05:36	06:07	795	867	903	733

Thickening Time, Request Test ID:1071823

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)
210	6,480	36	1	04:41	04:45	04:46	04:48	04:51

Free Water, Request Test ID:1071826

Test Temp (°F)	% FW 45 Inc
180	0
trace no settling no streaking	

API Rheology, Request Test ID:1071825

Temp (°F)	600	300	200	100	60	30	6	3	Cond Time (min)	PV/YP
180	51	30	22	14	11	8	6	4	0	24.9 / 5.7

API Fluid Loss, Request Test ID:1071827

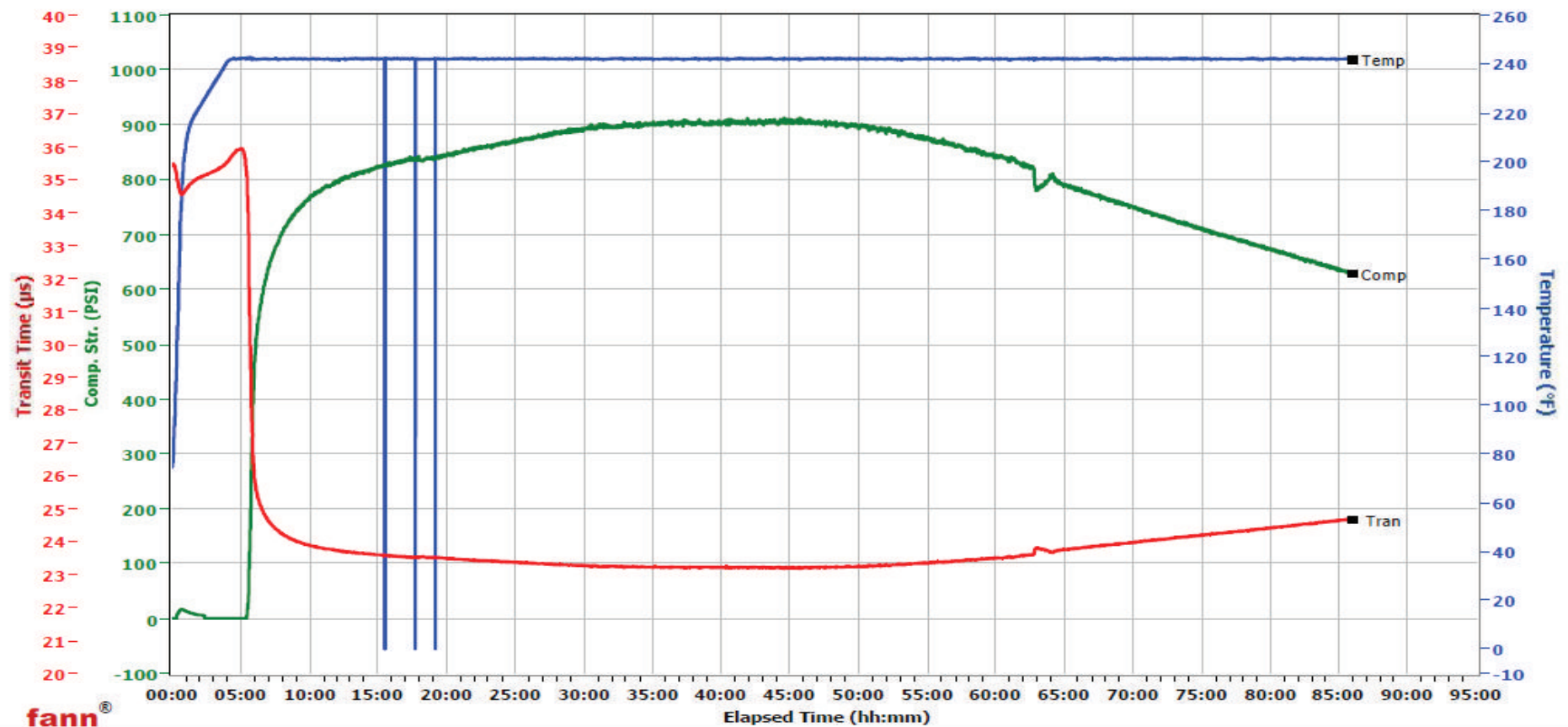
Test Temp (°F)	Test Pressure (psi)	Test Time (min)	Meas. Vol (< 30 min, cc)	Extr. ISO FL (cc/30 min)
180	1,000	12.05	49	155

White River City Ranch

Fields	Values
Project Name	ExxonMobil 102246-1
Test ID	102246-1
Request ID	UCA #1
Tested by	JRP
Customer	ExxonMobil
Well No	PCU 197-34A6
Rig	H&P 325
Casing/Liner Size	4.5
Job Type	Production Primary

Fields	Values
Cement Type	TXI
Cement Weight	Standard
Comments	TXI, Fe-2 0.25%, 12.001 Den, 2.17 Yld
Test Date	9/29/2010
Test Time	8:25 PM
Temp. Units	degF
Pressure Units	PSI

Events	Results
50.00 PSI	05h:36m
100.00 PSI	05h:39m
500.00 PSI	06h:07m
1000.00 PSI	NaN
12h:00m	794.84
24h:00m	866.82
48h:00m	903.21
72h:00m	732.56



Data File C:\UCA Data\102246-1.tdms

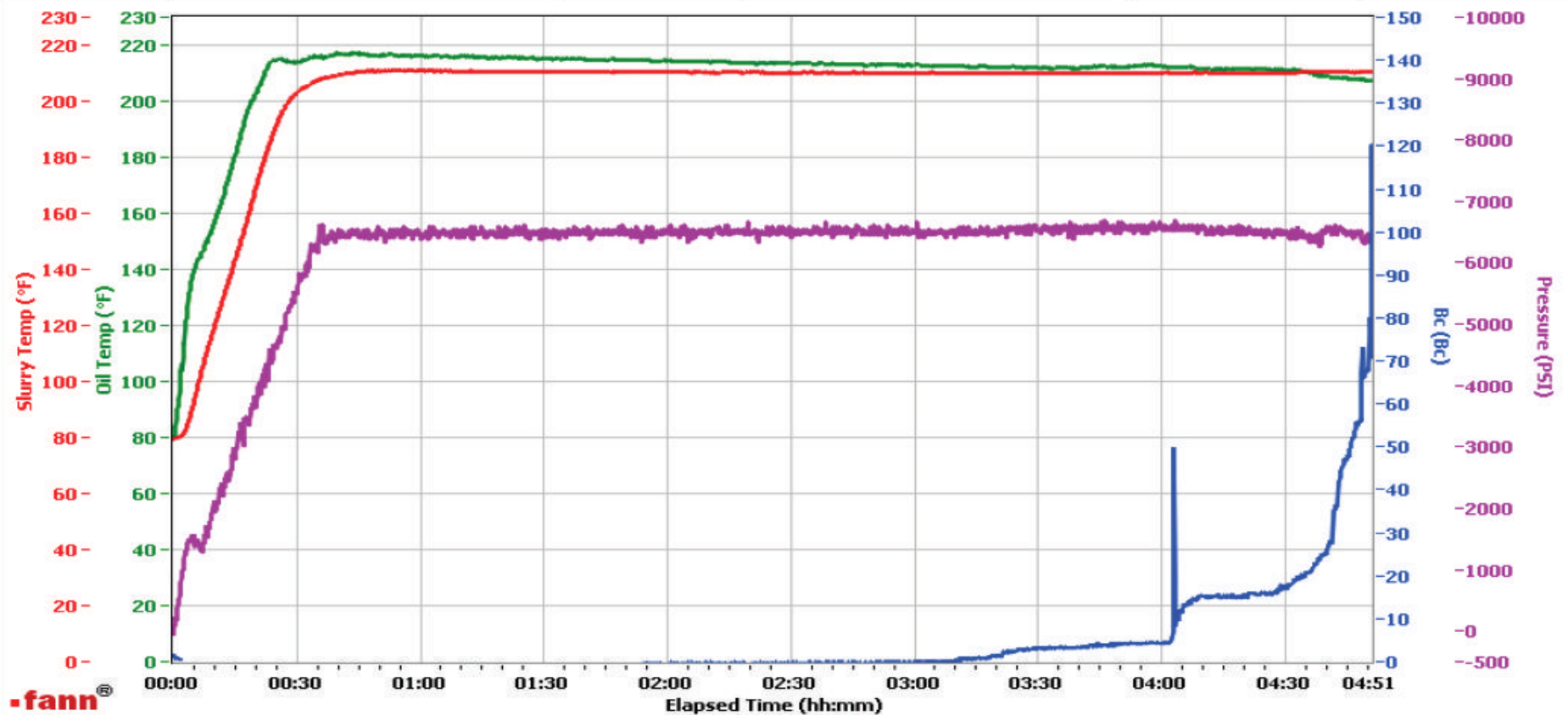
HALLIBURTON

WRCR

Fields	Values
Project Name	ExxonMobil 102246-1
Test ID	102246-1
Request ID	HPHT #3
Tested by	JRP
Customer	ExxonMobil
Well No	PCU 197-34A6
Rig	H&P 325
Casing/Liner Size	

Fields	Values
Job Type	Production Primary
Cement Type	TXI
Cement Weight	Light Weight
Test Date	09/30/10
Test Time	03:25 AM
Temp. Units	degF
Pressure Units	PSI

Events	Results
30.00 Bc	04h:41m
40.00 Bc	04h:45m
50.00 Bc	04h:46m
70.00 Bc	04h:48m
100.00 Bc	04h:51m
200.00 Bc	NaN
03h:00m	-0.21
06h:00m	137.63



Data File O:\HPHT Data Files WRCR\WRCR Consistometer #3\ExxonMobil 102246-1.tdms

Comments TXI, Fe-2 0.25%, 12.001 Den, 2.17 Yld