

**XTO ENERGY INC EBUSINESS  
DO NOT MAIL - 382 ROAD 3100  
AZTEC, New Mexico**

PCU T78X-12G10

H&P 215

## **Post Job Summary** **Cement Intermediate Casing**

Prepared for:  
Date Prepared: 04/19/2012  
Version: 1

Service Supervisor: ASHBY, ANDREW

Submitted by: M.C Dube

**HALLIBURTON**

# HALLIBURTON

## Wellbore Geometry

Job Tubulars					MD		TVD		Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft	
Casing	10 3/4" Surface Casing	10.75	9.950	45.50	0.00	4,133.00	0.00	3,862.00	40.00
Open Hole Section	9 7/8" Open Hole		9.875		4,133.00	9,495.00	3,862.00	9,176.00	
Casing	7" Intermediate Casing	7.00	6.276	26.00	0.00	9,495.00	0.00	9,176.00	98.04

## Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Surface Volume
1	Spacer	TUNED SPACER III	10.00	40.0 bbl
2	Cement Slurry	Foamed Lead Cement	14.30	1625.0 sacks
2	Cement Slurry	Foamed Lead Cement	14.30	1625.0 sacks
3	Cement Slurry	Unfoamed Shoe Cement	14.30	170.0 sacks
4	Mud	Displacement Fluid	9.50	357.3.0 bbl
5	Cement Slurry	Cap Cement	14.80	

## Fluids Pumped

# HALLIBURTON

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**Stage/Plug # 1      Fluid 1:**      TUNED SPACER III  
TUNED SPACER III - SBM (483826)  
64 lbm/bbl      Barite  
1 lbm/bbl      D-AIR 5000

Fluid Density: 10.00 lbm/gal  
Fluid Volume: 40.00 bbl  
Pump Rate: 0.00 bbl/min

**Stage/Plug # 1      Fluid 2:**      Foamed Lead Cement  
ELASTISEAL (TM) SYSTEM  
20 %      SSA-1  
0.6 %      HR-800  
1.5 %      CHEM - FOAMER 760, TOTETANK

Fluid Weight: 14.30 lbm/gal  
Slurry Yield: 1.47 ft3/sack  
Total Mixing Fluid: 6.35 Gal  
Surface Volume: 1625.0 sacks  
Sacks: 1625.0 sacks  
Calculated Fill: 8,933.00 ft  
Calculated Top of Fluid: 0.00 ft  
Estimated Top of Fluid:  
Foam Weight: 0.00 lbm/gal  
Foam Yield:  
Downhole Volume: 541.35 bbl

**Stage/Plug # 1      Fluid 3:**      Unfoamed Shoe  
Cement  
ELASTISEAL (TM) SYSTEM  
20 %      SSA-1  
0.5 %      HR-800

Fluid Weight: 14.30 lbm/gal  
Slurry Yield: 1.47 ft3/sack  
Total Mixing Fluid: 6.43 Gal  
Surface Volume: 170.0 sacks  
Sacks: 170.0 sacks  
Calculated Fill: 500.00 ft  
Calculated Top of Fluid: 8,933.00 ft  
Estimated Top of Fluid:

**Stage/Plug # 1      Fluid 4:**      Displacement Fluid

Fluid Density: 9.50 lbm/gal  
Fluid Volume: 360.00 bbl  
Pump Rate: 0.00 bbl/min  
Fluid Gels:  
Mud PV/YP:

**Stage/Plug # 1      Fluid 5:**      Cap Cement  
Cap Cement  
94 lbm      Premium Plus - Type III  
2 %      Calcium Chloride, Pellet

Fluid Weight: 14.80 lbm/gal  
Slurry Yield: 1.32 ft3/sack  
Total Mixing Fluid: 6.30 Gal  
Estimated Top of Fluid:

## Job Summary

## Job Information

<b>Job Start Date</b>	4/17/2012 4:30:00 AM
<b>Job MD</b>	9,417.0 ft
<b>Job TVD</b>	9,185.0 ft
<b>Height of Plug Container/Swage Above Rig Floor</b>	5.0 ft
<b>Surface Temperature at Time of Job</b>	65 degF
<b>Mud Type</b>	Water Based Mud
<b>Name of Mud Company</b>	BAROID
<b>Actual Mud Density</b>	9 lbm/gal
<b>Pipe Movement During Hole Circulation</b>	Rotated and Reciprocated
<b>Pipe Movement During Cementing</b>	None
<b>Calculated Displacement</b>	353.00 bbl
<b>Job Displaced by (rig/halco)</b>	Cement Unit HP Pumps

## Cementing Equipment

<b>Number of Centralizers Used</b>	47
<b>Pipe Centralization</b>	Through Entire Cement Column
<b>Did Float Equipment Hold?</b>	Yes
<b>Plug set used?</b>	Yes
<b>Brand of Plug set used?</b>	Weatherford GEMOCO
<b>Did Plugs Bump?</b>	Yes

## Service Supervisor Reports

### Job Log

Date/Time	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)	Comments
04/16/2012 02:00	Call Out						Crew Called out for Job.
04/16/2012 03:40	Pre-Job Safety Meeting						Met w/Rig Crew, Co. Rep, and our crew to discuss job procedres, contingencies, and safety measures.
04/16/2012 04:30	Pre-Convoy Safety Meeting						Met w/crew to discuss safety and hazards of travel to location, convoy order and route.
04/16/2012 05:00	Depart from Service Center or Other Site						Entered into Journey Management.
04/16/2012 08:30	Arrive At Loc						Ended Journey Management. Arrived on location where RCM is parked while the Frost Law is in effect.
04/16/2012 10:00	Arrive At Loc						Pulled onto location [Casing being ran 3000ft left]
04/16/2012 10:15	Assessment Of Location Safety Meeting						Met w/crew to discuss hazards of site, location of materials and safety precautions.
04/16/2012 10:20	Other						Spot Equipment
04/16/2012 10:45	Pre-Rig Up Safety Meeting						Met w/crew to discuss the best way to rig up, safety and hazards involved. Rig had to drill last 6 joints, ended up leaving 2 joints out. New casing depth is 9317 ft per Co. Rep.
04/16/2012 11:00	Rig-Up Equipment						Rig up Ground & Standpipe
04/17/2012 02:00	Rig-Up Equipment						Rig-up the rig floor.
04/17/2012 04:20	Drop Bottom Plug						Drop Bottom Plug & Pre-load Top Plug
04/17/2012 04:30	Prime Pumps						Prime RCM
04/17/2012 04:33	Other						Fill Lines
04/17/2012 04:47	Pump Water	3					Establish pump rate & check flow meters @ 3 bpm
04/17/2012 04:50	Pump Water	6					Establish pump rate & check flow meters @ 6 bpm

# HALLIBURTON

Date/Time	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)	Comments
04/17/2012 04:51	Test Lines					6100.0	Test RCM, good.
04/17/2012 04:58	Test Lines					8000.0	Test N2 unit, foam van not reading signals from N2 unit.
04/17/2012 05:13	Other						Swapped out Nitrogen Transducer.
04/17/2012 05:18	Test Lines						Re-Test Nitrogen Unit so Zonesal trailer could read it.
04/17/2012 05:22	Other						Take off faulty actuator.
04/17/2012 05:34	Test Lines					8000.0	Re-Test Nitrogen Unit - Test good
04/17/2012 05:36	Other						1003 sfc Nitrogen used for test.
04/17/2012 05:41	Pump Spacer	4	40			300.0	36 sks Tuned Spacer III @ 10.0 lbm/gal, 6.24 cuft/sk, 42.67 gal/sk
04/17/2012 05:44	Shutdown						Shut Down and weight up cement
04/17/2012 05:50	Pump 1st Stage Lead Slurry	4					1625 sks Elastiseal Lead @ 14.3 lbm/gal, 1.47 cuft/sk, 6.35 gal/sk
04/17/2012 05:57	Other						Shut Down to Check N2 Flow meter, Mag Pick Up not working, decided to call rates to Nitrogen
04/17/2012 06:02	Other	4	425				Resume Pumping Cement
04/17/2012 06:04	Slow Rate	3					Slow Rate to 3BPM to maintain Density @14.3PPG, Slow rate on N2
04/17/2012 06:06	Other	4					Increase rate to 4 BPM, getting bulk well
04/17/2012 06:41	Pump 1st Stage Lead Slurry	4	140			330	Start N2 Ramp @140 bbl gone ramp starting at about 290scf/m
04/17/2012 06:44	Pump 1st Stage Lead Slurry	4	155			490	Ramp up N2 @ 155 gone to 469scf/m
04/17/2012 06:49	Pump 1st Stage Lead Slurry	4	175			657	Ramp N2 @ 175 gone to 648scf/m
04/17/2012 06:54	Pump 1st Stage Lead Slurry	4	195			918	Change N2 rate to 828 scf/m
04/17/2012 07:06	Pump 1st Stage Lead Slurry	4	215			1037	Change N2 rate to 1007 scf/m
04/17/2012 07:06	Pump 1st Stage Lead Slurry	4	235			1228	Change N2 rate to 1186 scf/m
04/17/2012 07:10	Pump 1st Stage Lead Slurry	4	255			1418	Change N2 rate to 1366 scf/m

# HALLIBURTON

Date/Time	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
04/17/2012 07:15	Pump 1st Stage Lead Slurry	4	275			1583		Change N2 rate to 1545 scf/m
04/17/2012 07:21	Pump 1st Stage Lead Slurry	4	295			1811		Change N2 rate to 1724 scf/m
04/17/2012 07:26	Pump 1st Stage Lead Slurry	4	315			1647		Change N2 rate to 1903 scf/m
04/17/2012 07:32	Pump 1st Stage Lead Slurry	4	335			2111		Change N2 rate to 2083 scf/m
04/17/2012 07:36	Pump 1st Stage Lead Slurry	4	355			2310		Change N2 rate to 2262 scf/m
04/17/2012 07:41	Pump 1st Stage Lead Slurry	4	375			2547		Change N2 rate to 2441 scf/m
04/17/2012 07:46	Pump 1st Stage Lead Slurry	4	395			2678		Change N2 rate to 2621 scf/m
04/17/2012 07:47	Pump 1st Stage Lead Slurry	4	405			2085		Change N2 rate to 1966 scf/m
04/17/2012 07:48	Stop Nitrogen	4						N2 offline
04/17/2012 07:45	Pump Tail Cement	3	45					170 sks Elastiseal Tail @ 14.3 lbm/gal, 1.47 cuft/sk, 6.43 gal/sk
04/17/2012 07:59	Shutdown							Shutdown / Drop Top Plug
04/17/2012 08:05	Pump Displacement	8	353					Displacement = 20 bbls Water, 320 bbls Mud (9.3 ppg), 13 bbls Water
04/17/2012 08:10	Slow Rate	6					835.0	Slow rate to keep pressure down.
04/17/2012 08:37	Slow Rate	5					500.0	Slow rate to keep pressure down.
04/17/2012 08:58	Slow Rate	4					800.0	Slow rate to keep pressure down.
04/17/2012 09:07	Slow Rate	2					815.0	Slow rate to bump plug
04/17/2012 09:12	Bump Plug	2					1385.0	500 psi over final circulating pressure (823 psi)
04/17/2012 09:16	Check Floats						1400.0	held for 4 min, check floats, 1.25 bbls back - Floats held.
04/17/2012 09:20	Safety Meeting							Met w/Co. Rep. - we will establish an injection rate with water - 1500 max psi - pump all cement or until pressure reaches 900 psi, then go into displacment
04/17/2012 09:30	Other							Move & spot bulk trucks to pump our cap cement.
04/17/2012 09:57	Establish Rate	3					240.0	Can pump @ 3 bpm with 240 psi, Co. Rep. good with injection rate - mix cement

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Date/Time	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
04/17/2012 10:00	Shutdown							Shutdown & mix Cement
04/17/2012 10:14	Pump Cap Cement	2.5				250.0		200 sks Type III @ 14.8 lbm/gal, 1.32 cuft/sk, 6.3 gal/sk
04/17/2012 10:26	Pump Displacement	2.5	14			87.0		Fresh Water displacement (250 ft down per Co. Rep)
04/17/2012 10:31	Shutdown							Shutdown - finished w/job.
04/17/2012 10:45	End Job							Job Complete - Rig everything down per Co Rep
04/17/2012 10:50	Post-Job Safety Meeting (Pre Rig-Down)							Met w/crew to discuss rigging down safely.
04/17/2012 11:00	Rig-Down Equipment							Rig everything down.
04/17/2012 13:45	Pre-Convoy Safety Meeting							Met w/crew to discuss fit-for-duty, safety and hazards of travel back.
04/17/2012 14:00	Depart Location for Service Center or Other Site							Entered into Journey Management.
04/17/2012 14:00	Other							Thanks for using Halliburton!!!



## The Road to Excellence Starts with Safety

<b>Sold To #:</b> 353810		<b>Ship To #:</b> 2919824		<b>Quote #:</b>		<b>Sales Order #:</b> 9427604	
<b>Customer:</b> XTO ENERGY INC EBUSINESS				<b>Customer Rep:</b>			
<b>Well Name:</b> PCU			<b>Well #:</b> T78X-12G10			<b>API/UWI #:</b> 05-103-11727	
<b>Field:</b>		<b>City (SAP):</b> MEEKER		<b>County/Parish:</b> Rio Blanco		<b>State:</b> Colorado	
<b>Contractor:</b> H&P			<b>Rig/Platform Name/Num:</b> H&P 215				
<b>Job Purpose:</b> Cement Intermediate Casing							
<b>Well Type:</b> Water Supply Well			<b>Job Type:</b> Cement Intermediate Casing				
<b>Sales Person:</b> COLLINS, JAMES			<b>Srvc Supervisor:</b> ASHBY, ANDREW			<b>MBU ID Emp #:</b> 450544	

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ASHBY, ANDREW A	28.0	450544	CARPENTER, LANCE S	28.0	461737	DUBE, CRAIG	28.0	476241
FANKHAUSER, THOMAS Doughty	25.0	188282	JUTSUM, TIMOTHY	28.0	510127	MASTRANGELO, MATTHEW M	28.0	505218
PORTER, MICHAEL James	28.0	491145	RUFF, RUSTY Richard	26.5	459867	SLAUGH, CODY B	19.0	104465
WILLE, DAVID Raymond	25.0	455158						

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10616259	120 mile	10804581	120 mile	10829454	120 mile	10950592	120 mile
11019277	120 mile	11071474	120 mile	11077464	120 mile	11127525	120 mile
11172371	120 mile	11189139	120 mile	11211506	120 mile	11263210	120 mile
11263212	120 mile	11410664	120 mile	11526494	120 mile	6603	120 mile
6641	120 mile						

### Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
<b>TOTAL</b>			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
				BHST	9583. ft	9185. ft				

### Job Times

Date	Time	Time Zone
16 - Apr - 2012	02:00	MST
16 - Apr - 2012	10:00	MST
17 - Apr - 2012	04:30	MST
17 - Apr - 2012	10:30	MST
17 - Apr - 2012	14:00	MST

### Well Data

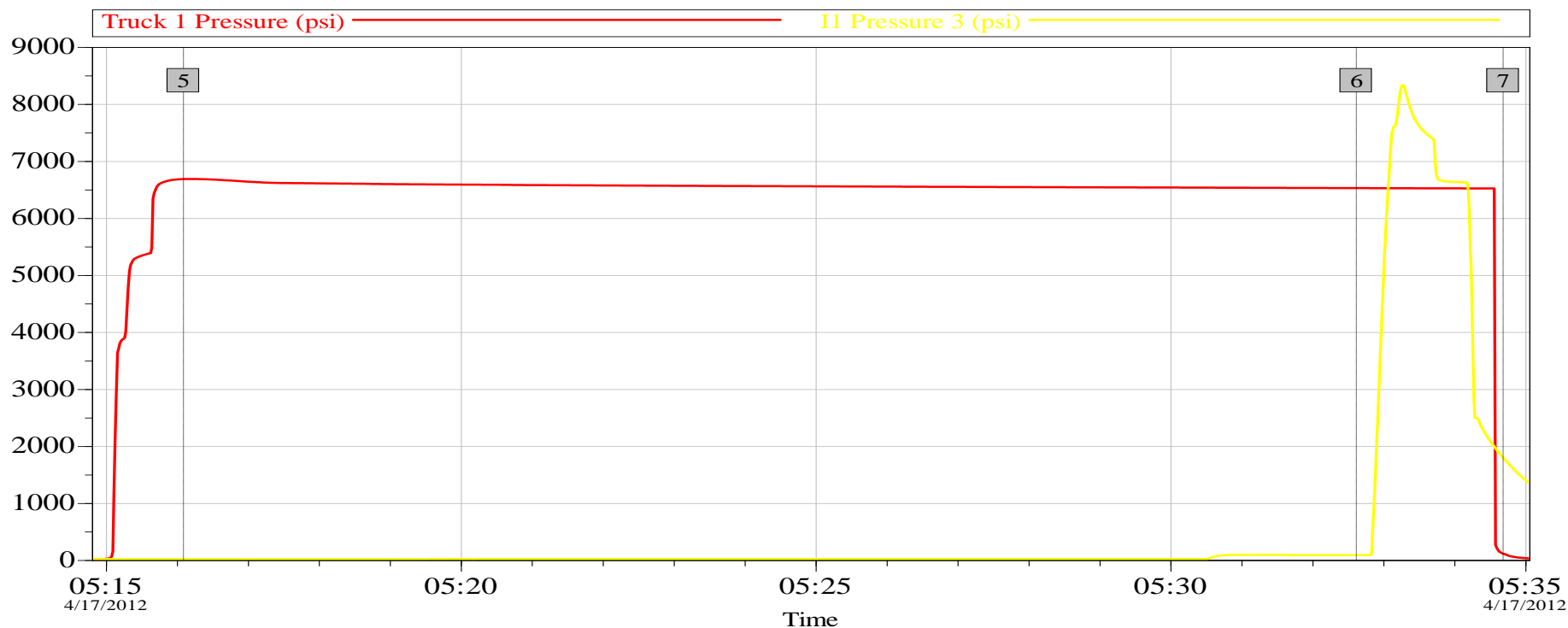
Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
9 7/8" Open Hole				9.875				4133.	9495.	3862.	9176.
10 3/4" Surface Casing	Unknown		10.75	9.95	45.5		J-55	.	4133.	.	3862.
7" Intermediate Casing	New		7.	6.276	26.		P-110	.	9495.	.	9176.

Sales/Rental/3 <sup>rd</sup> Party (HES)															
Description										Qty	Qty uom	Depth	Supplier		
PLUG,CMTG,TOP,7,HWE,5.66 MIN/6.54 MAX CS										1	EA				
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)			40.00	bbl	10.	6.24	42.67	.0					
	42.66 gal/bbl	FRESH WATER													
	64 lbm/bbl	BARITE, BULK (100003681)													
	1 lbm/bbl	D-AIR 5000, 50 LB SACK (102068797)													
2	Foamed Lead Cement	ELASTISEAL (TM) SYSTEM (450262)			1625.0	sacks	14.3	1.47	6.35		6.35				
	20 %	SAND-SSA-1 - SILICA FLOUR - 200 MESH, BULK (100003691)													
	0.6 %	HR-800, 50 LB SACK (101619742)													
	1.5 %	CHEM - FOAMER 760, TOTETANK (101664089)													
	6.35 Gal	FRESH WATER													
3	Unfoamed Shoe Cement	ELASTISEAL (TM) SYSTEM (450262)			170.0	sacks	14.3	1.47	6.43		6.43				
	20 %	SAND-SSA-1 - SILICA FLOUR - 200 MESH, BULK (100003691)													
	0.5 %	HR-800, 50 LB SACK (101619742)													
	6.43 Gal	FRESH WATER													
4	Displacement Fluid				360.00	bbl	9.5			.0					
5	Cap Cement	CMT - STANDARD TYPE III - FINE (100012229)				sacks	14.8	1.32	6.3		6.3				
	94 lbm	CMT - STANDARD TYPE III - FINE , BULK (100012229)													
	2 %	CALCIUM CHLORIDE, PELLET, 50 LB (101509387)													
	6.3 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		98.04 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

### PCU T78X-12G10 Intermediate Foam Job Pressure Test 4/17/2012

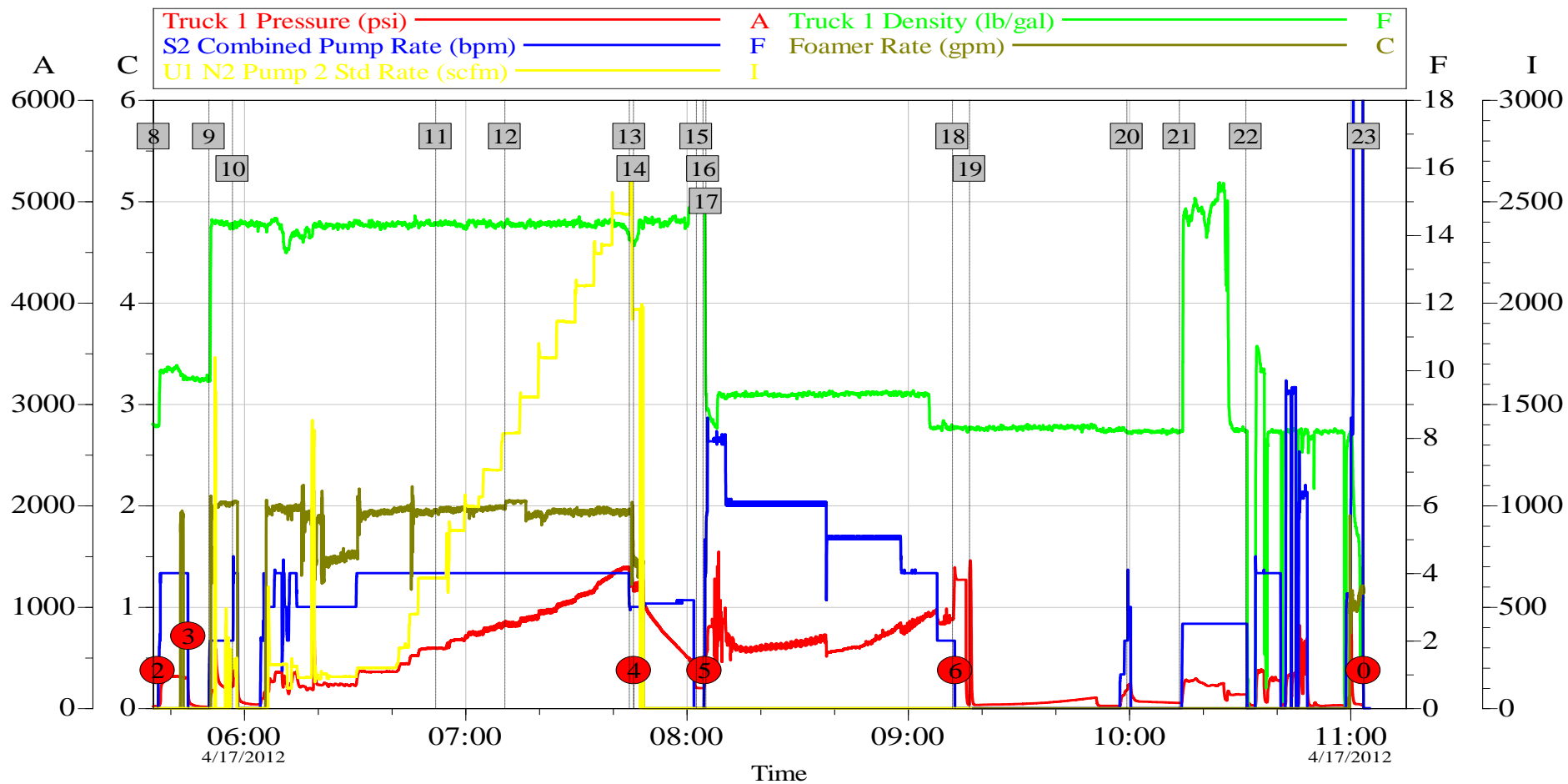


Global Event Log			
Intersection		Intersection	
5	Start Cmt Pressure Test 05:16:06	6	Pressure Test Nitrogen 05:32:37
		7	End Cmt Pressure Test 05:34:41

Customer: XTO ENERGY INC EBUSINESS	Job Date: 16-Apr-2012	Sales Order #: 9427604	OptiCem v6.4.9 19-Apr-12 11:08
Well Description: PCU T78X-12G10	UWI: 05-103-11727		

## PCU T78X-12G10 Intermediate Foam Job Job Summary Chart

4/17/2012



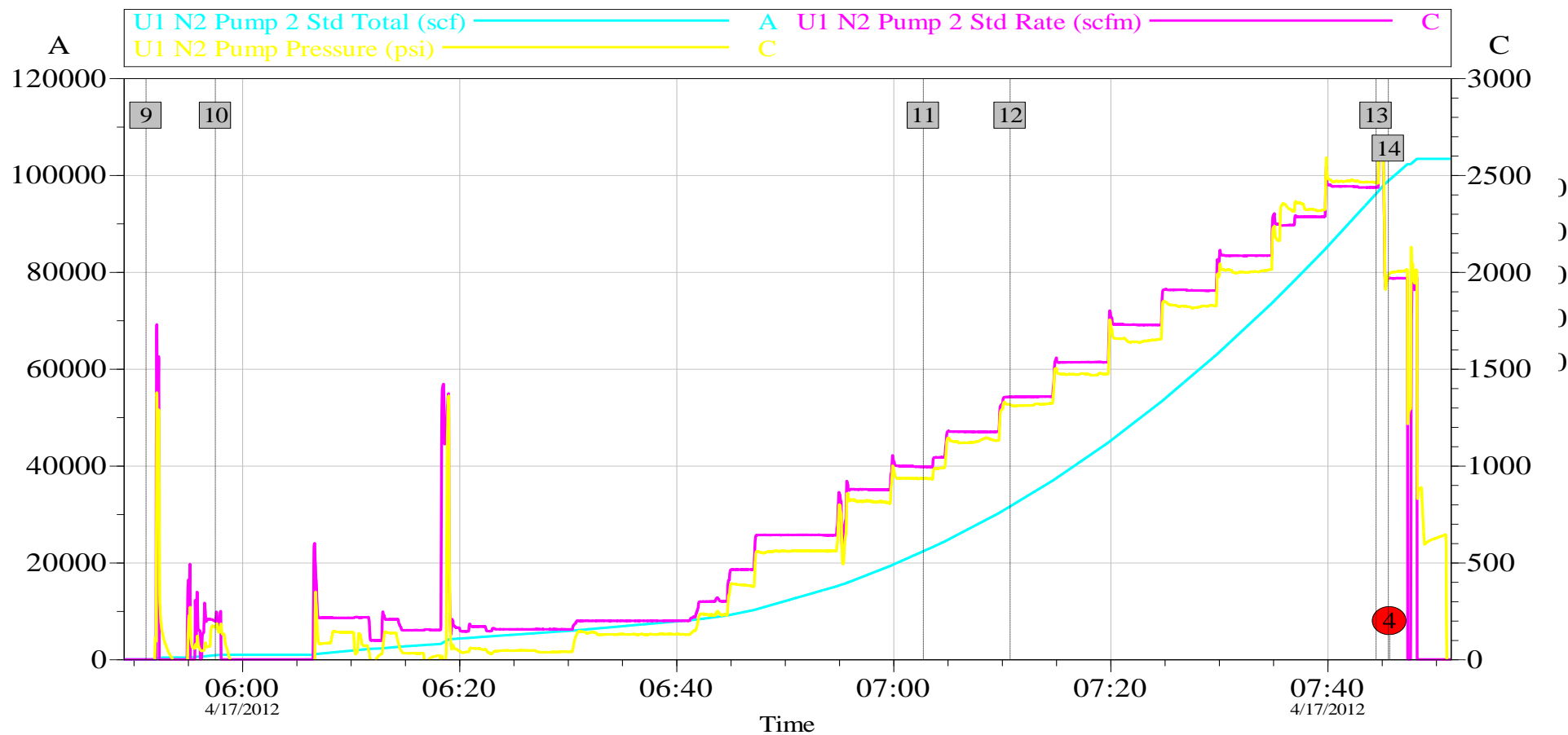
Customer: XTO ENERGY INC EBUSINESS  
Well Description: PCU T78X-12G10

Job Date: 16-Apr-2012  
UWI: 05-103-11727

Sales Order #: 9427604

OptiCem v6.4.9  
19-Apr-12 11:15

## N2 Unit



### Global Event Log

Intersection		Intersection		Intersection	
9	Pump Lead Slurry	05:51:08	10	Check N2 Flow Meter	05:57:32
11	Returns Slowing	07:02:46			
12	Re-Established Returns	07:10:46	13	Other	07:44:29
			14	Pump Tail Slurry	07:45:37

Customer: XTO ENERGY INC EBUSINESS  
Well Description: PCU T78X-12G10

Job Date: 16-Apr-2012  
UWI: 05-103-11727

Sales Order #: 9427604

OptiCem v6.4.10  
19-Apr-12 09:23

# HALLIBURTON

## Lab Data

### HALLIBURTON

Cementing Rockies, Vernal

### LAB RESULTS - Lead

#### Job Information

Request/Slurry	228973/2	Rig Name	H&P 215	Date	10/APR/2012
Submitted By	Craig Dube	Job Type	Intermediate Casing	Bulk Plant	Vernal
Customer	XTO	Location	Rio Blanco	Well	PCU T78X-12G10

#### Well Information

Casing/Liner Size	7"	Depth MD	9583 ft	BHST	217 F
Hole Size	9 7/8"	Depth TVD	9185 ft	BHCT	151 F

#### Cement Information - Lead Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties	
		ElastiSeal				Slurry Density	14.30 PPG
50	%	> Boral Craig Pozmix	Bulk	Apr 10, 2012	100003690	Slurry Yield	1.47 ft3/sk
50	%	> Mountain G	Bulk	Apr 10, 2012	100003685	Water Requirement	6.35 GPS
100.00	% BWOC	Cement Blend	Bulk	Apr 10, 2012		Foam Density	10.499 PPG
						Foam Quality	26.36 %
5.000	lb/sk	Silicalite - Compacted	Bulk	Apr 10, 2012	og180926-1	Water Source	Fresh Water
0.100	% BWOC	VERSASET (PB)	Bulk	Apr 10, 2012	12-1-4		
20.000	% BWOC	SSA-1 (Silica Flour) - PB	Bulk	Apr 10, 2012	100003691		
0.500	% BWOC	HR-800					
1.500	% BVOW	Foamer 760	Lab	Dec 08, 2011	RS additive		
6.35	gal/sack	Fresh Water	Lab	Mar 08, 2012	3/8/12		
0.100	% BWOC	HR-800	Lab	Apr 06, 2012	02081201		

#### Slurry Comments

add .10% HR-800 to blend

#### Operation Test Results Request ID 228973/2

##### Thickening Time, Request Test ID:2378636

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)
151	4,482	60	8	05:27	05:30	05:33	05:36

##### Mixability (0 - 5) - 0 is not mixable, Request Test ID:2378641

Mixability rating (0 - 5)

5

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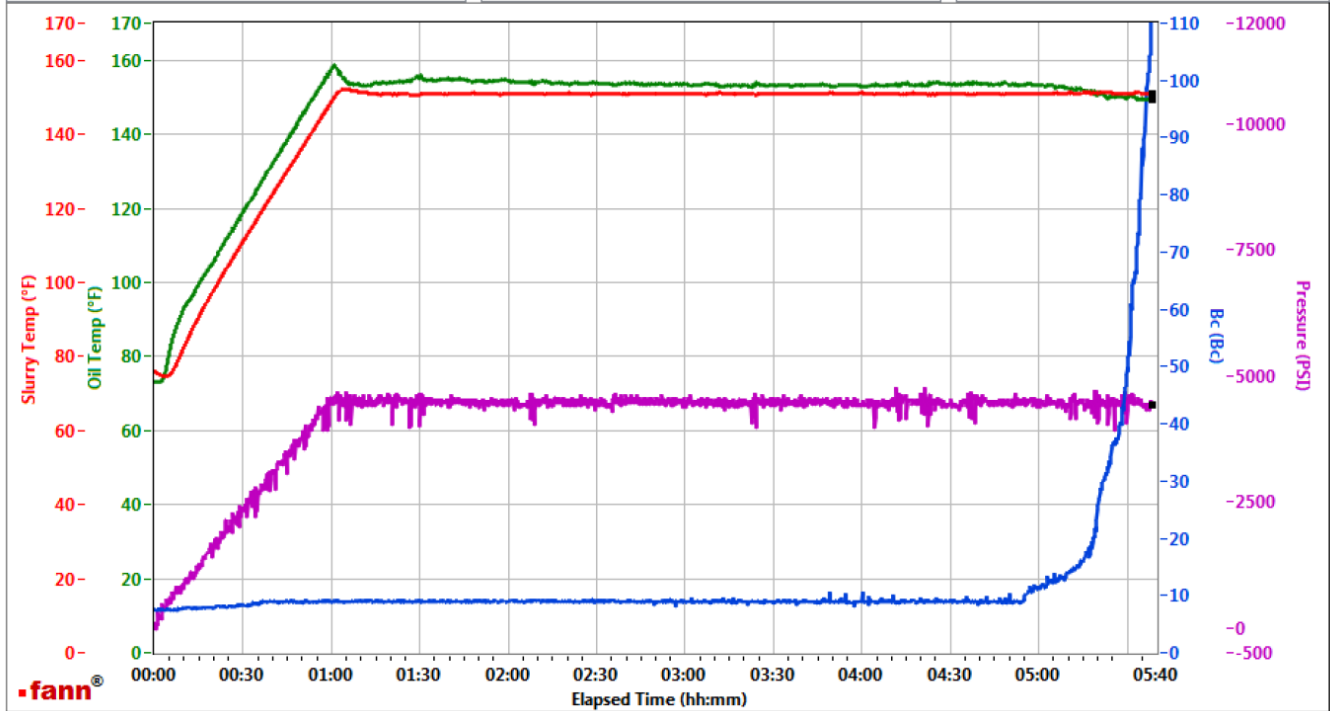
# HALLIBURTON

## Vernal

Fields	Values
Project Name	XTO
Test ID	228973-2
Request ID	HPHT 6
Tested by	ADF
Customer	XTO
Well No	PCU T78X-12G10
Rig	215

Fields	Values
Job Type	Inter Lead
Cement Type	G
Cement Weight	Standard
Test Date	04/11/12
Test Time	11:05 AM
Temp. Units	degF
Pressure Units	PSI

Events	Results
40.00 Bc	05h:27m
50.00 Bc	05h:30m
70.00 Bc	05h:33m
100.00 Bc	05h:36m
00h:30m	8.36
01h:00m	8.97
01h:30m	9.20



Data File: O:\Lab\HPHT Data Files\Vernal Consistometer #6\XTO 228973- 2 .tdms

Comments: 14.3 d, 1.47 y

# HALLIBURTON

## Job Information

Request/Slurry	229273/1	Rig Name	H&P 215	Date	11/APR/2012
Submitted By	Thomas Stumpf	Job Type	Intermediate Casing	Bulk Plant	Vernal
Customer	XTO	Location	Rio Blanco	Well	PCU T78X-12G10

## Well Information

Casing/Liner Size	7"	Depth MD	9583 ft	BHST	217 F
Hole Size	9 7/8"	Depth TVD	9185 ft	BHCT	151 F

## Cement Information - Tail Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		ElastiSeal				Slurry Density	14.30	PPG
50	%	> Boral Craig Pozmix	Bulk	Apr 10, 2012	100003690	Slurry Yield	1.47	ft3/sk
50	%	> Mountain G	Bulk	Apr 10, 2012	100003685	Water Requirement	6.35	GPS
100.00	% BWOC	Cement Blend				Water Source	Fresh Water	
5.000	lb/sk	Silicalite - Compacted	Bulk	Apr 10, 2012	og180926-1			
0.100	% BWOC	VERSASET (PB)	Bulk	Apr 10, 2012	12-1-4			
20.000	% BWOC	SSA-1 (Silica Flour) - PB	Bulk	Apr 10, 2012	100003691			
0.500	% BWOC	HR-800	Bulk	Apr 10, 2012	2081201			
6.35	gal/sack	Fresh Water	Lab	Mar 08, 2012	3/8/12			

## Operation Test Results Request ID 229273/1

### Thickening Time, Request Test ID:2378490

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)
151	4,482	60	7	03:38	03:38	03:38	03:39

no foamer added

### Mixability (0 - 5) - 0 is not mixable, Request Test ID:2378495

Mixability rating (0 - 5)

5

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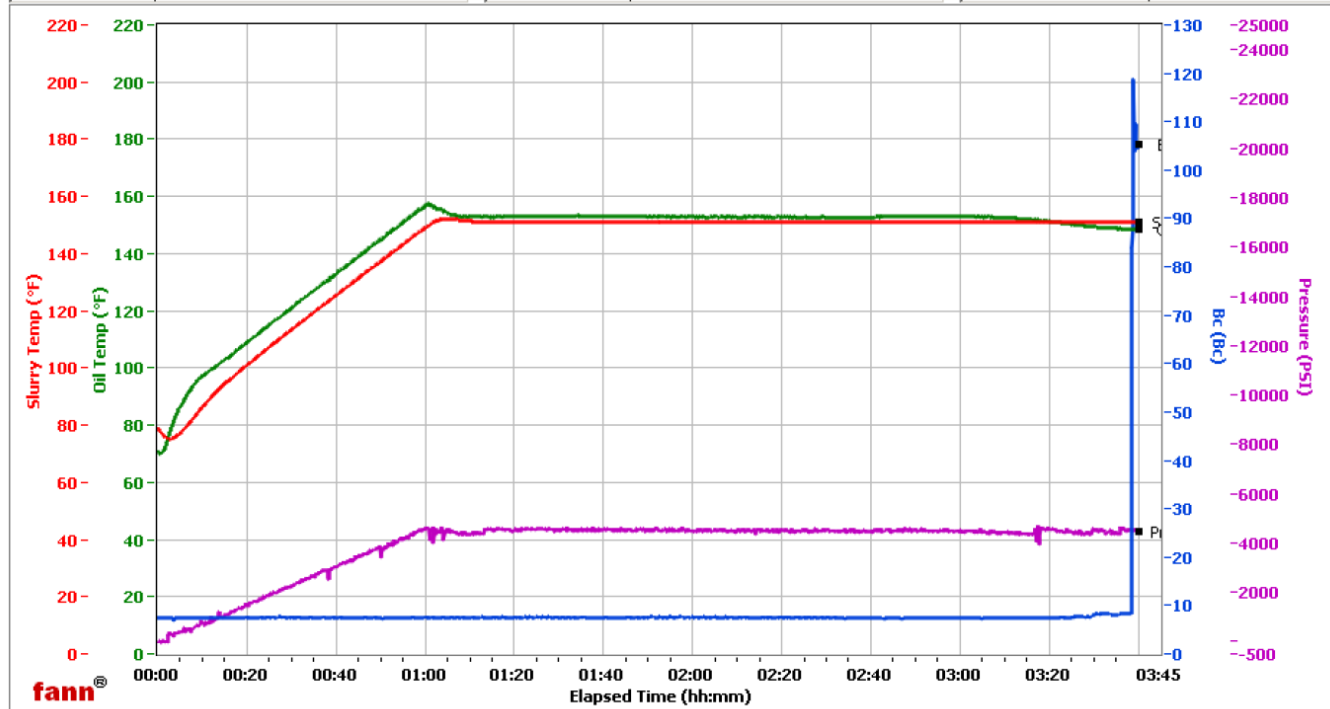
# HALLIBURTON

## Vernal

Fields	Values
Project Name	XTO
Test ID	229273
Request ID	HPHT
Tested by	ADF
Customer	XTO
Well No	PCU T78X-12G10
Rig	215
Casing/Liner Size	7

Fields	Values
Job Type	Inter Tail
Cement Type	G
Cement Weight	Standard
Test Date	04/11/12
Test Time	05:37 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.0.2.206

Events	Results
30.00 Bc	03h:38m
50.00 Bc	03h:38m
70.00 Bc	03h:38m
100.00 Bc	03h:39m
00h:30m	7.53
01h:00m	7.65
01h:30m	7.57
02h:00m	7.63



Data File Z:\HPHT Data Files\Vernal Consistometer #1\XTO 229273-1.tdms

Comments 14.3 d, 1.47 y