

EXXONMOBIL CORPORATION

HOUSTON, Texas

PCU B F13-1G

Workover

Post Job Summary

Casing Squeeze

Prepared for: Tim Greene
Date Prepared: July 29, 2011
Version: 1

Service Supervisor: DEARING, KEN

Submitted by: Joshua Anglin

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		
Casing	Production Casing	4.50	4.090	9.50	0.00	2,717.00	0.00	2,717.00		0.00
Tubing	Tubing	2.38	1.995	4.70	0.00	1,460.00	0.00	1,460.00		0.00
Retainer	Retainer		.000		1,460.00	1,465.00				0.00

Pumping Schedule

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	FRESH WATER	8.33	3.00	5.0 bbl	5.0 bbl
1	2	Cement Slurry	Squeeze Cement	15.80	3.00	120.0 sacks	120.0 sacks
1	3	Spacer	FRESH WATER	8.33	3.00	4.0 bbl	4.0 bbl

HALLIBURTON

Fluids Pumped

Stage/Plug # 1 Fluid 1: FRESH WATER
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 8.33 lbm/gal
Fluid Volume: 5.00 bbl
Pump Rate: 3.00 bbl/min

Stage/Plug # 1 Fluid 2: Squeeze Cement
SQUEEZECEM (TM) SYSTEM

Fluid Weight: 15.80 lbm/gal
Slurry Yield: 1.15 ft³/sack
Total Mixing Fluid: 4.99 Gal
Surface Volume: 120.0 sacks
Sacks: 120.0 sacks
Calculated Fill: 339.00 ft
Calculated Top of Fluid: 0.00 ft
Estimated Top of Fluid:
Pump Rate: 3.00 bbl/min

Stage/Plug # 1 Fluid 3: FRESH WATER
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 8.33 lbm/gal
Fluid Volume: 4.00 bbl
Pump Rate: 3.00 bbl/min

HALLIBURTON

Job Summary

Job Information

Job Start Date	9/27/2010 6:00:00 PM
Job MD	2,252.0 ft
Job TVD	1,695.0 ft
Height of Plug Container/Swage Above Rig Floor	5.0 ft
Mud Type	Water Based Mud
Actual Mud Density	8 lbm/gal
Pipe Movement During Hole Circulation	None
Pipe Movement During Cementing	None
Did Pipe Pull Dry?	Pipe Pulled Dry
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Annular flow Before Job? (Water/Gas)	Unknown
Annular flow After Job? (Water/Gas)	Unknown

HALLIBURTON

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
09/27/2010 07:30		Call Out					
09/27/2010 08:15		Pre-Convoy Safety Meeting					DISCUSS SAFETY AND HAZARDS OF TRAVEL.
09/27/2010 08:30		Other					LOAD EQUIPMENT FOR JOB.
09/27/2010 08:50		Depart Yard Safety Meeting					DISCUSS SAFETY AND HAZARDS OF TRAVEL.
09/27/2010 09:00		Crew Leave Yard					
09/27/2010 14:00		Arrive At Loc					
09/27/2010 14:05		Safety Meeting - Assessment of Location					WALK LOCATION, DISCUSS SPOTTING OF EQUIPMENT, DISCUSS SAFETY AND HAZARDS.
09/27/2010 14:10		Safety Meeting					MEET WITH CO.MAN, DISCUSS WELL CONDITIONS, GET WELL INFORMATION, DISCUSS PRESSURE TEST AND MAX PRESSURE, DISCUSS SAFETY AND HAZARDS.
09/27/2010 14:15		Safety Huddle					DISCUSS SAFETY AND HAZARDS.
09/27/2010 14:20		Other					SPOT EQUIPMENT.
09/27/2010 14:25		Safety Meeting - Pre Rig-Up					DISCUSS SAFETY AND HAZARDS.
09/27/2010 14:30		Rig-Up Equipment					RIG UP IRON AND SUCTION HOSE TO RED ZONE, TEST H2O.
09/27/2010 15:30		Other					WAIT ON RIG TO RUN TUBING.

HALLIBURTON

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
09/27/2010 17:10		Safety Meeting - Pre Job					SAFETY MEETING WITH RIG CREW AND CO.MAN, GO OVER JOB PROCEDURES, DISCUSS SAFETY AND HAZARDS OF JOB.
09/27/2010 17:30		Safety Meeting - Pre Rig-Up					DISCUSS SAFETY AND HAZARDS.
09/27/2010 17:40		Rig-Up Equipment					RIG UP IRON TO RIG FLOOR.
09/27/2010 17:55		Pressure Up Annulus				500.0	PRESSURE UP BACK SIDE WITH 500psi.
09/27/2010 17:58		Pressure Test				3350.0	PRESSURE TEST LINES.
09/27/2010 18:03		Injection Test	0.7			650.0	START INJECTION RATE TEST PUMPING H2O.
09/27/2010 18:08		Other	1			1355.0	INJECTION RATE, START MIXING 15.8# CEMENT, 11.5bbls TOTAL H2O AHEAD.
09/27/2010 18:16		Pump Cement	1	12.3		1355.0	START PUMPING 15.8# CEMENT, 12.3bbls, 60sks, 1.15cf/ft, 4.99gal/sk.
09/27/2010 18:28		Pump Displacement	1			500.0	START H2O DISPLACEMENT.
09/27/2010 18:30		Shutdown				650.0	
09/27/2010 18:45		Other	1			35.0	PUMP H2O TO SQUEEZE.
09/27/2010 18:46		Shutdown				300.0	
09/27/2010 19:04		Other	1			35.0	PUMP H2O TO SQUEEZE.
09/27/2010 19:05		Shutdown				520.0	6bbls TOTAL DISPLACEMENT.
09/27/2010 19:06		Other	1	13		925.0	SQUEEZE DID NOT TAKE AS PER CO.MAN, PUMP H2O TO PUMP CEMENT AWAY.
09/27/2010 19:20		Shutdown				600.0	
09/27/2010 19:25		Safety Huddle					DISCUSS SAFETY AND HAZARDS.
09/27/2010 19:30		Other					WASH UP RCM TO PIT.

HALLIBURTON

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)	Comments
09/27/2010 20:45		Other						CHECK ALL EQUIPMENT FOR LEAVING FOR THE NIGHT.
09/27/2010 21:10		Pre-Convoy Safety Meeting						DISCUSS SAFETY AND HAZARDS OF TRAVEL.
09/27/2010 22:00		Crew Leave Location						
09/28/2010 09:00		Arrive At Loc						
09/28/2010 09:05		Assessment Of Location Safety Meeting						WALK LOCATION, DISCUSS SPOTTING OF EQUIPMENT, DISCUSS SAFETY AND HAZARDS, TEST H2O.
09/28/2010 09:30		Safety Meeting						SAFETY MEETING WITH RIG CREW AND CO.MAN, DISCUSS SAFETY AND HAZARDS OF JOB.
09/28/2010 09:45		Prime Pumps						GET EQUIPMENT READY FOR JOB.
09/28/2010 09:55		Safety Meeting - Pre Job						SAFETY MEETING WITH RIG CREW AND CO.MAN, GO OVER JOB PROCEDURES, DISCUSS SAFETY AND HAZARDS OF JOB.
09/28/2010 10:04		Pressure Up Annulus					500.0	PRESSURE UP BACK SIDE WITH 500psi.
09/28/2010 10:07		Pressure Test					3100.0	PRESSURE TEST LINES.
09/28/2010 10:11		Injection Test	0.7				50.0	START INJECTION RATE TEST PUMPING H2O.
09/28/2010 10:15		Other	0.7				635.0	INJECTION RATE, START MIXING 15.8# CEMENT, 5.8bbls TOTAL H2O AHEAD.
09/28/2010 10:20		Pump Cement	0.7	12.6			685.0	START PUMPING 15.8# CEMENT, 12.6bbls, 60sks, 1.18cf/ft, 5.25gal/sk.
09/28/2010 10:37		Pump Displacement	0.7				655.0	START PUMPING H2O DISPLACEMENT.
09/28/2010 10:40		Shutdown					660.0	
09/28/2010 10:55		Other	0.4				40.0	PUMP H2O TO SQUEEZE.

HALLIBURTON

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
09/28/2010 10:58		Shutdown				560.0	
09/28/2010 11:08		Other	0.4			80.0	PUMP H2O TO SQUEEZE.
09/28/2010 11:12		Shutdown				800.0	4bbls TOTAL H2O DISPLACEMENT.
09/28/2010 11:24		Other				220.0	SQUEEZE GOOD AS PER CO.MAN, RIG STINGS OUT OF RETAINER, 220psi WHEN RIG STINGS OUT.
09/28/2010 11:25		Other	1.5			25.0	PUMP .5bbl H2O TO LEAVE .5bbl CEMENT ON TOP OF RETAINER.
09/28/2010 11:25		Shutdown					
09/28/2010 11:25		Safety Huddle					DISCUSS SAFETY AND HAZARDS.
09/28/2010 11:26		Other					RIG IRON OFF OF TUBING, RIG PULLS 2 STANDS, RIG BACK UP TO TUBING.
09/28/2010 11:36		Reverse Circ Well	1			100.0	START PUMPING H2O TO REVERSE OUT TUBING.
09/28/2010 11:39		Other	2			235.0	SEE CEMENT BACK TO PIT.
09/28/2010 11:40		Other	2			180.0	SEE CLEAN WATER BACK TO PIT.
09/28/2010 11:42		Shutdown					REVERSING GOOD, TUBING CLEAN AS PER CO.MAN, SHUT DOWN.
09/28/2010 11:45		Safety Meeting - Pre Rig-Down					DISCUSS SAFETY AND HAZARDS.
09/28/2010 11:50		Rig-Down Equipment					RIG DOWN IRON OFF OF RIG FLOOR.
09/28/2010 12:05		Other					RIG STARTS PULLING TUBING OUT OF HOLE.
09/28/2010 12:05		Post-Job Safety Meeting (Pre Rig-Down)					DISCUSS JOB, DISCUSS BBP AND HOC OBSERVATIONS, DISCUSS SAFETY AND HAZARDS.

HALLIBURTON

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
09/28/2010 12:20		Rig-Down Equipment							RIG DOWN AND RACK UP IRON AND SUCTION HOSE.
09/28/2010 14:45		Pre-Convoy Safety Meeting							DISCUSS SAFETY AND HAZARDS OF TRAVEL.
09/28/2010 15:00		Crew Leave Location							
09/28/2010 15:00		Other							THANK YOU-KEN AND CREW.

The Road to Excellence Starts with Safety

Sold To #: 331699	Ship To #: 2808189	Quote #:	Sales Order #: 7664252
Customer: EXXONMOBIL CORPORATION		Customer Rep: NOWELL, STEVE	
Well Name: PCU		Well #: BF13-1G	API/UWI #: 05-103-07478
Field:	City (SAP): MEEKER	County/Parish: Harris	State: Texas
Lat: N 39.904 deg. OR N 39 deg. 54 min. 13.543 secs.		Long: E 108.235 deg. OR E 108 deg. 14 min. 5.168 secs.	
Contractor: WORKOVER		Rig/Platform Name/Num: Workover	
Job Purpose: Plug to Abandon Service			
Well Type: Development Well		Job Type: Casing Squeeze	
Sales Person: ANGLIN, JOSHUA		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 #
DE OLIVEIRA, GABRIEL Antonio		466988	DEAN, MARK Christophe		454214	DEARING, KEN A		239372

Equipment

HES Unit #	Distance-1 way						
10872435	45 mile	10897817	45 mile	11263211	45 mile	11287531	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	Top	Bottom	Called Out	Date	Time	Time Zone
Form Type		BHST	135 degF	27 - Sep - 2010	07:30	MST
Job depth MD	2252. ft	Job Depth TVD	1695. ft	On Location	27 - Sep - 2010	14:00
Water Depth		Wk Ht Above Floor	5. ft	Job Started	27 - Sep - 2010	18:00
Perforation Depth (MD)	From 2,286.00 ft	To 2,294.00 ft	Job Completed	28 - Sep - 2010	12:00	MST
			Departed Loc	28 - Sep - 2010	15:00	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
Perforation Interval								2286.	2294.	.	.
Perforation Interval								2314.	2319.	.	.
Perforation Interval								2715.	2717.	.	.
Perforation Interval								2486.	2494.	.	.
Perforation Interval								2534.	2538.	.	.
Retainer	Unknown			.				1460.	1465.		
Production Casing	Unknown		4.5	4.09	9.5			.	2717.	.	2717.
Tubing	Unknown		2.375	1.995	4.7		J-55	.	1460.	.	1460.

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	FRESH WATER		5.00	bbl	8.33	.0	.0	3.0	
2	Squeeze Cement	SQUEEZECEM (TM) SYSTEM (452971)	120.0	sacks	15.8	1.15	4.99	3.0	4.99
	4.989 Gal	FRESH WATER							
3	FRESH WATER		4.00	bbl	8.33	.0	.0	3.0	

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

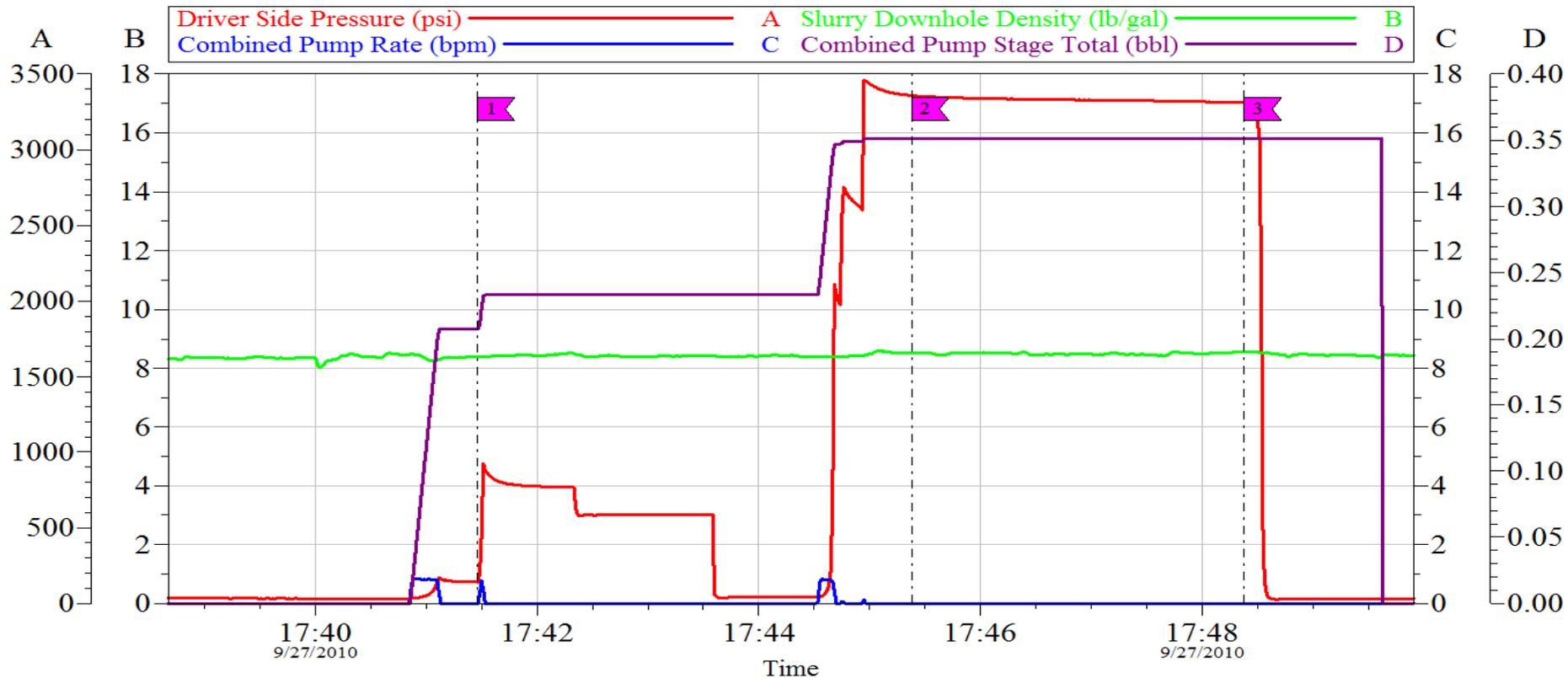
Customer Representative Signature

HALLIBURTON

Data Acquisition

EXXONMOBIL CORPORATION

PCU WELL #: BF13-1G
CEMENT SQUEEZE SERVICE
PRESSURE TEST



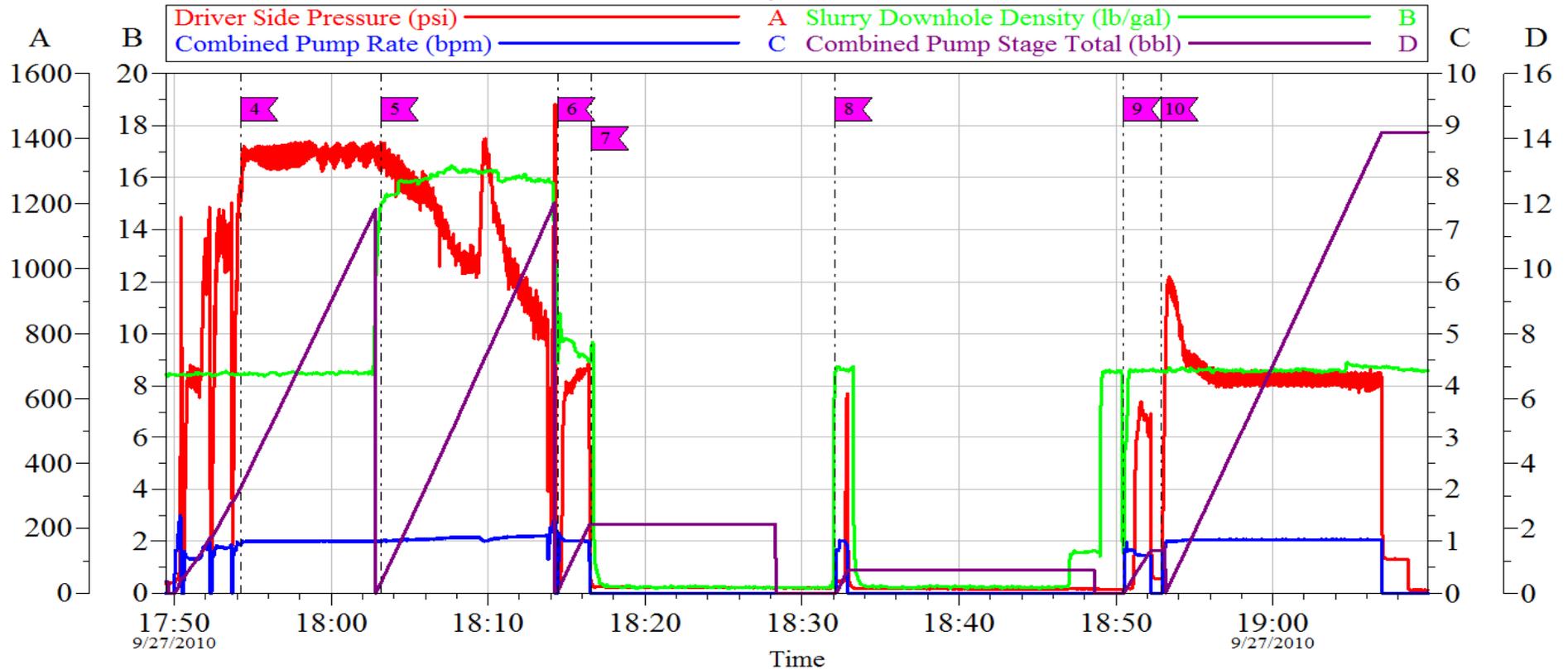
Intersection	DSP	Intersection	DSP
1 PRESSURE OP BACK SIDE	17:41:28 141.5	2 PRESSURE TEST START	17:45:23 3357
3 PRESSURE TEST END	17:48:23 3312		

Customer: STEVE NOWELL	Job Date: 27-Sep-2010	Sales Order #: 7664252
Well Description: PCU WELL #: BF13-1G	UWI:	RIG: KEY WORKOVER

OptiCem v6.4.8
29-Sep-10 10:40

EXXONMOBIL CORPORATION

PCU WELL #: BF13-1G
CEMENT SQUEEZE SERVICE



4	INJECTION RATE-H2O	17:54:15	5	START 15.8# CEMENT	18:03:13
6	START H2O DISPLACEMENT-2.5bbl	18:14:27	7	SHUT DOWN-WATCH PRESSURE	18:16:35
8	SQUEEZE-H2O-2bbls	18:32:06	9	SQUEEZE-H201.5bbls	18:50:30
10	PUMP CEMENT AWAY-13bbls	18:52:53			

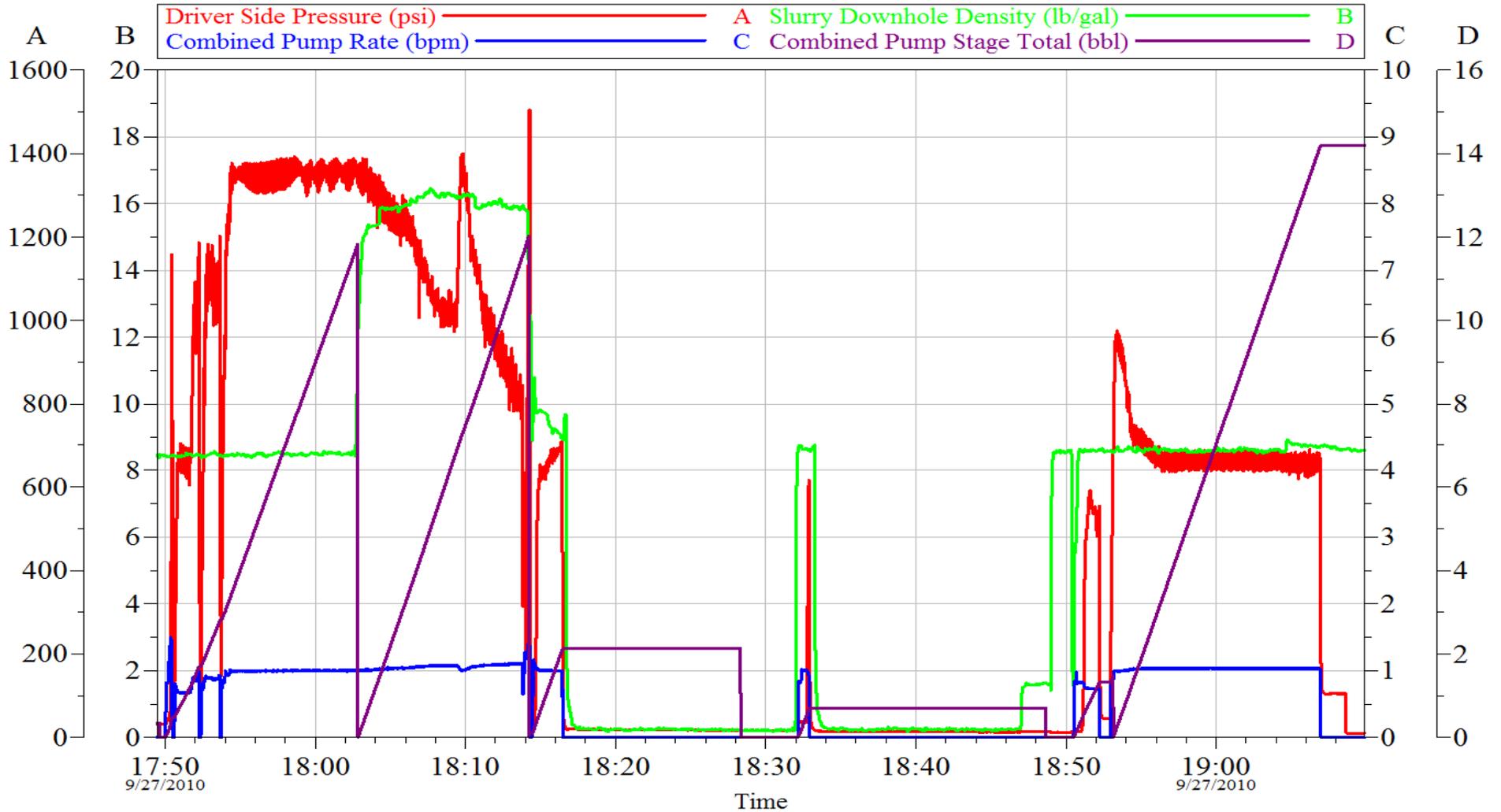
Customer:	STEVE NOWELL	Job Date:	27-Sep-2010	Sales Order #:	7664252
Well Description:	PCU WELL #: BF13-1G	UWI:		RIG:	KEY WORKOVER

OptiCem v6.4.8
29-Sep-10 10:48

EXXONMOBIL CORPORATION

PCU WELL #: BF13-1G

CEMENT SQUEEZE SERVICE

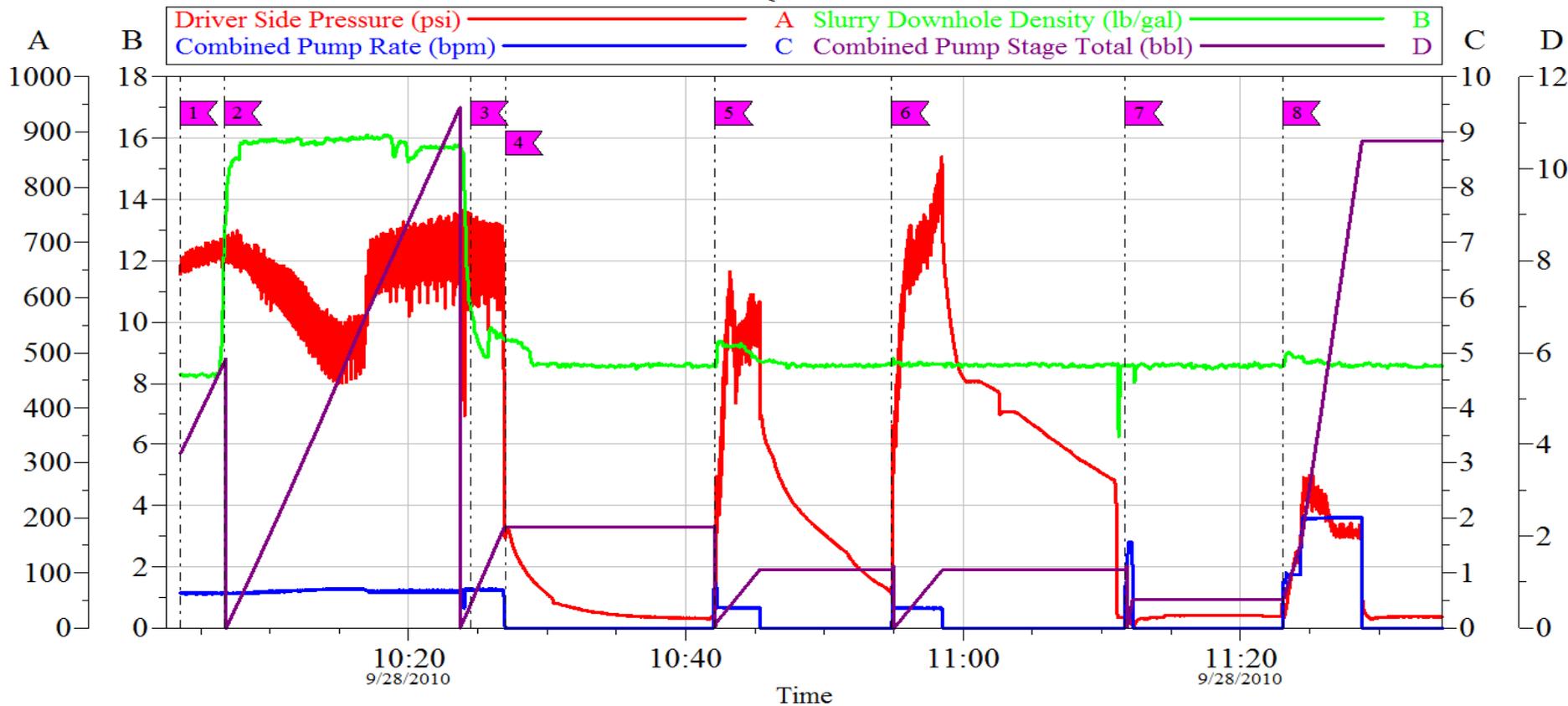


Customer: STEVE NOWELL	Job Date: 27-Sep-2010	Sales Order #: 7664252
Well Description: PCU WELL #: BF13-1G	UWI:	RIG: KEY WORKOVER

OptiCem v6.4.8
29-Sep-10 10:49

EXXONMOBIL CORPORATION

PCU WELL #: BF13-1G
CEMENT SQUEEZE SURFACE



1	INJECTION RATE-H2O	10:03:30	2	START 15.8# CEMENT	10:06:41
3	START H2O DISPLACEMENT-2.5bbbls	10:24:29	4	SHUT DOWN --WATCH PRESSURE	10:26:58
5	SQUEEZE-1bbl	10:42:07	6	SQUEEZE-1bbl	10:54:52
7	PUMP .5bbl CEMENT ON TOP OF RETAINER	11:11:43	8	START REVERSING OUT-H2O	11:23:04

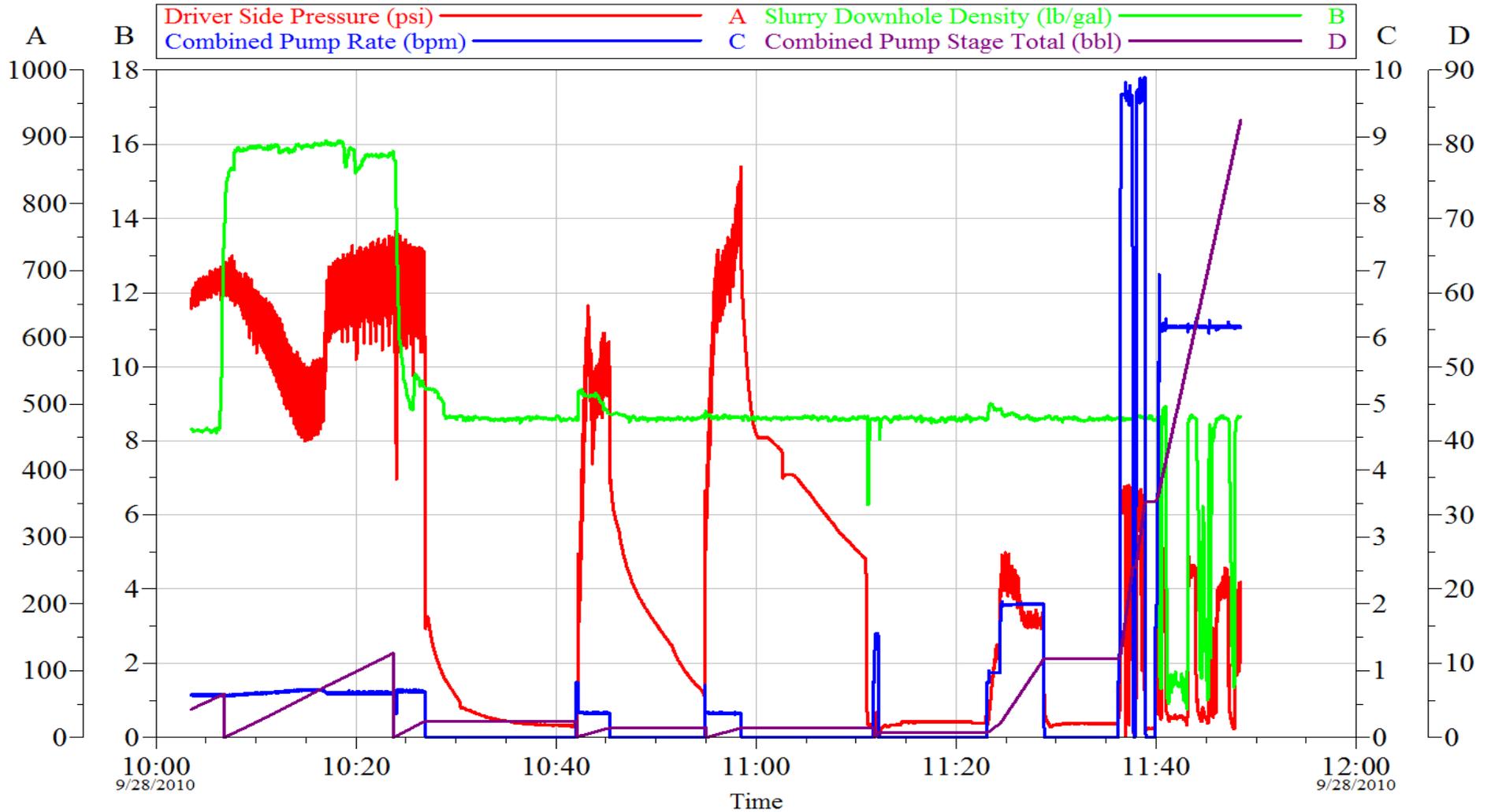
Customer:	STEVE NOWELL	Job Date:	28-Sep-2010	Sales Order #:	7664252
Well Description:	PCU BF13-1G	UWI:		RIG:	KEY WORKOVER

OptiCem v6.4.8
29-Sep-10 10:26

EXXONMOBIL CORPORATION

PCU WELL #: BF13-1G

CEMENT SQUEEZE SURFACE



Customer: STEVE NOWELL	Job Date: 28-Sep-2010	Sales Order #: 7664252
Well Description: PCU BF13-1G	UWI:	RIG: KEY WORKOVER

OptiCem v6.4.8
29-Sep-10 10:26