

**QUICKSILVER RESOURCES INC-EBUSINESS  
DO NOT MAIL-801 CHERRY ST  
FORT WORTH, Texas**

Bret Grandbouche 24-02H

DHS 6

## **Post Job Summary** **Plug Service - Whipstock**

Date Prepared: November 28, 2011  
Version: 1

Service Supervisor: PAUU, SEMISI

Submitted by: Charli A Brown

**HALLIBURTON**

# HALLIBURTON

## Wellbore Geometry

Job Tubulars					MD		Excess %	Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft		
Casing	Intermediate Casing	7.00	6.276	26.00	0.00	6,400.00		40.00
Open Hole Section	Pilot Hole Plug Back		6.125		6,400.00	8,250.00	20.00	0.00
Tubing	Stinger	2.38	1.995	4.70	7,400.00	8,250.00		
Drill Pipe	Drill Pipe	4.00	3.340	14.00	0.00	7,400.00		
Cement Plug	Cement Plug		.000		7,450.00	8,250.00		0.00
Cement Plug	Cement Plug				6,650.00	7,450.00		

## Pumping Schedule

Stage #	Fluid #	Fluid Type	Fluid Name	Density lbm/gal	Avg Rate bbl/min	Volume
1	1	Spacer	TUNED SPACER III	12.00	4.00	13.2
1	2	Cement Slurry	PlugCem	15.80	4.00	35.8
1	3	Spacer	TUNED SPACER III	12.00	4.00	6.8
1	4	Mud	Mud Displacment	9.00	4.00	73.2
2	1	Spacer	TUNED SPACER III	12.00	4.00	13.2
2	2	Cement Slurry	DenseCem	17.50	4.00	35.2
2	3	Spacer	TUNED SPACER III	12.00	4.00	6.8
2	4	Mud	Mud Displacmeent	9.00	4.00	63.3

# HALLIBURTON

## Fluids Pumped

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**Stage/Plug # 1      Fluid 2:**      TUNED SPACER III  
TUNED SPACER III - SBM (483826)

Fluid Density: 12.00 lbm/gal  
Pump Rate: 4.00 bbl/min

**Stage/Plug # 1      Fluid 3:**      PlugCem  
                                 PLUGCEM (TM) SYSTEM  
0.2 %    HR-5  
0.2 %    CFR-3

Fluid Weight: 15.80 lbm/gal  
Slurry Yield: 1.15 ft<sup>3</sup>/sack  
Total Mixing Fluid: 4.97 Gal  
Calculated Fill: 800.00 ft  
Calculated Top of Fluid: 7,450.00 ft

**Stage/Plug # 1      Fluid 4:**      TUNED SPACER III  
TUNED SPACER III - SBM (483826)  
0.3 lbm/bbl    Fe-2

Fluid Density: 12.00 lbm/gal  
Pump Rate: 4.00 bbl/min

**Stage/Plug # 1      Fluid 5:**      Mud Displacement

Fluid Density: 9.00 lbm/gal  
Pump Rate: 4.00 bbl/min

**Stage/Plug # 2      Fluid 2:**      TUNED SPACER III  
TUNED SPACER III - SBM (483826)  
0.3 lbm/bbl    Fe-2

Fluid Density: 12.00 lbm/gal  
Pump Rate: 4.00 bbl/min

**Stage/Plug # 2      Fluid 3:**      DenseCem  
                                 DENSECEM (TM) SYSTEM  
0.3 %    CFR-3  
0.3 %    HR-5

Fluid Weight: 17.50 lbm/gal  
Slurry Yield: 0.94 ft<sup>3</sup>/sack  
Total Mixing Fluid: 3.36 Gal  
Calculated Fill: 800.00 ft  
Calculated Top of Fluid: 7,450.00 ft

**Stage/Plug # 2      Fluid 4:**      TUNED SPACER III  
TUNED SPACER III - SBM (483826)  
0.3 lbm/bbl    Fe-2

Fluid Density: 12.00 lbm/gal  
Pump Rate: 4.00 bbl/min

**Stage/Plug # 2      Fluid 5:**      Mud Displacement

Fluid Density: 9.00 lbm/gal  
Pump Rate: 4.00 bbl/min

# HALLIBURTON

## Job Summary

### Job Information

Job MD	8,250.0 ft
Mud Type	INTEGRADE
Actual Mud Density	9 lbm/gal

## Service Supervisor Reports

## Cementing Job Log

*The Road to Excellence Starts with Safety*

Sold To #: 346707	Ship To #: 2881011	Quote #:	Sales Order #: 8525629
Customer: QUICKSILVER RESOURCES INC-EBUSINESS	Customer Rep:		
Well Name: Bret Grandbouche	Well #: 24-02H	API/UWI #:	
Field:	City (SAP): CRAIG	County/Parish: Moffat	State: Colorado
Legal Description: Section 12 Township 6N Range 93W			
Lat:	Long:		
Contractor: DHS	Rig/Platform Name/Num: 6		
Job Purpose: Plug Service - Whipstock	Ticket Amount:		
Well Type: Exploratory / Wildcat	Job Type: Plug Service - Whipstock		
Sales Person: SCOTT, KYLE	Srv Supervisor: PAUU, SEMISI	MBU ID Emp #: 445202	

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	10/08/2011 02:00							
Pre-Convoy Safety Meeting	10/08/2011 03:30							
Depart from Service Center or Other Site	10/08/2011 04:00							
Arrive At Loc	10/08/2011 09:00							
Assessment Of Location Safety Meeting	10/08/2011 09:05							
Pre-Rig Up Safety Meeting	10/08/2011 09:15							
Rig-Up Equipment	10/08/2011 09:30							
Rig-Up Completed	10/08/2011 10:30							
Pre-Job Safety Meeting	10/08/2011 12:45							
Test Lines	10/08/2011 13:00		0.5		2		5000.0	PRESSURE TESTED LINES TO 5000 PSI, NO LEAKS
Pump Spacer	10/08/2011 13:05		4		13.2		520.0	PUMPED 13.2 BBL TSIII
Pump Cement	10/08/2011 13:15		4		35.8		140.0	PUMPED 35.8 BBL CEMENT (175 SKS) AT 15.8#/GAL 1.15 YIELD 4.97 GAL/SKS
Pump Spacer	10/08/2011 13:25		4		6.8		67.0	PUMPED 6.8 BBL TSIII
Pump Displacement	10/08/2011 13:28		4		73.2		85.0	PUMPED 73.2 BBL MUD DISPLACEMENT
Shutdown	10/08/2011 13:44						180.0	FINISHED FIRST PLUG
Other	10/08/2011 13:45							TURNED WELL OVER TO RIG CREW TO CIRCULATE WELL

## Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Other	10/08/2011 13:46							RIG CREW PULLED 10 STANDS DRY AT 40 FPM AND CIRCULATED WELL/SHUTDOWN FOR 5 HOURS
Pre-Job Safety Meeting	10/08/2011 18:15							
Test Lines	10/08/2011 18:20		0.5		2		5000.0	TESTED LINES TO 5000 PSI. NO LEAKS
Pump Spacer	10/08/2011 18:30		4		13.2			PUMPED 13.2 BBL TSIII
Pump Cement	10/08/2011 18:31		4		35.2			PUMPED 35.2 BBL CEMENT (210 SKS) AT 17.5#/GAL 0.94 YIELD 3.36 GAL/SKS
Pump Spacer	10/08/2011 18:44		4		6.8			PUMPED 6.8 BBL MUDFLUSH SPACER
Pump Displacement	10/08/2011 18:50		4		63.3			PUMPED 63.3 BBL MUD DISPLACEMENT
Shutdown	10/08/2011 19:05							RIG CREW PULLED 12 STANDS DRY. TOP OF CEMENT CALCULATED AT 6545'(DP OUT)
Pre-Rig Down Safety Meeting	10/08/2011 19:15							
Rig-Down Equipment	10/08/2011 19:20							
Rig-Down Completed	10/08/2011 20:20							
Safety Meeting - Departing Location	10/08/2011 20:25							
Depart Location for Service Center or Other Site	10/08/2011 20:30							THIS JOB WAS COMPLETED SAFELY BY SEMISI PAUU AND CREW. THANK YOU FOR CHOOSING HALLIBURTON CEMENTING.

# HALLIBURTON

## The Road to Excellence Starts with Safety

<b>Sold To #:</b> 346707		<b>Ship To #:</b> 2881011		<b>Quote #:</b>		<b>Sales Order #:</b> 8525629	
<b>Customer:</b> QUICKSILVER RESOURCES INC-EBUSINESS				<b>Customer Rep:</b>			
<b>Well Name:</b> Bret Grandbouche		<b>Well #:</b> 24-02H		<b>API/UWI #:</b>			
<b>Field:</b>		<b>City (SAP):</b> CRAIG		<b>County/Parish:</b> Moffat		<b>State:</b> Colorado	
<b>Legal Description:</b> Section 12 Township 6N Range 93W							
<b>Contractor:</b> DHS		<b>Rig/Platform Name/Num:</b> 6					
<b>Job Purpose:</b> Plug Service - Whipstock							
<b>Well Type:</b> Exploratory / Wildcat				<b>Job Type:</b> Plug Service - Whipstock			
<b>Sales Person:</b> SCOTT, KYLE		<b>Srvc Supervisor:</b>		<b>MBU ID Emp #:</b>			
<b>Job Personnel</b>							
<b>HES Emp Name</b>		<b>Exp Hrs</b>	<b>Emp #</b>	<b>HES Emp Name</b>		<b>Exp Hrs</b>	<b>Emp #</b>
<b>Equipment</b>							
<b>HES Unit #</b>	<i>Distance-1 way</i>	<b>HES Unit #</b>	<i>Distance-1 way</i>	<b>HES Unit #</b>	<i>Distance-1 way</i>	<b>HES Unit #</b>	<i>Distance-1 way</i>
<b>Job Hours</b>							
<b>Date</b>	<i>On Location Hours</i>	<b>Operating Hours</b>	<b>Date</b>	<i>On Location Hours</i>	<b>Operating Hours</b>	<b>Date</b>	<i>On Location Hours</i>
<b>TOTAL</b>		<i>Total is the sum of each column separately</i>					
<b>Job</b>				<b>Job Times</b>			
<b>Formation Name</b>						<b>Date</b>	<b>Time</b>
<b>Formation Depth (MD) Top</b>		<b>Bottom</b>		<b>Called Out</b>			
<b>Form Type</b>		<b>BHST</b>		<b>On Location</b>			
<b>Job depth MD</b>		8250. ft		<b>Job Depth TVD</b>			
<b>Water Depth</b>		<b>Wk Ht Above Floor</b>		<b>Job Completed</b>		08 - Oct - 2011	02:00
<b>Perforation Depth (MD)</b>		<i>From</i>		<i>To</i>		<b>Departed Loc</b>	
<b>Well Data</b>							
<i>Description</i>	<b>New / Used</b>	<b>Max pressure psig</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>
Cement Plug	Unknown						6650.
Cement Plug	Unknown			.			7450.
Pilot Hole Plug Back				6.125			8250.
Intermediate Casing	Unknown		7.	6.276	26.		6400.
Drill Pipe	Unknown		4.	3.34	14.		7400.
Stinger	Unknown		2.375	1.995	4.7		8250.
<b>Tools and Accessories</b>							
<b>Type</b>	<b>Size</b>	<b>Qty</b>	<b>Make</b>	<b>Depth</b>	<b>Type</b>	<b>Size</b>	<b>Qty</b>
<b>Guide Shoe</b>					<b>Packer</b>		
<b>Float Shoe</b>					<b>Bridge Plug</b>		
<b>Float Collar</b>					<b>Retainer</b>		
					<b>Top Plug</b>		
					<b>Bottom Plug</b>		
					<b>SSR plug set</b>		

# HALLIBURTON

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	Mud			bbl	9.			.0	
2	TUNED SPACER III	TUNED SPACER III - SBM (483826)		bbl	12.	.0	.0	.0	
	35.35 gal/bbl	FRESH WATER							
	0.3 lbm/bbl	FE-2 (100001615)							
	175.4 lbm/bbl	BARITE, BULK (100003681)							
	0.1 gal/bbl	MUSOL(R) A, BULK (100003696)							
	0.2 gal/bbl	SEM-7, 55 GAL DRUM (100001626)							
3	PlugCem	PLUGCEM (TM) SYSTEM (452969)		sacks	15.8	1.15	4.97		4.97
	0.2 %	HR-5, 50 LB SK (100005050)							
	0.2 %	CFR-3, W/O DEFOAMER, 50 LB SK (100003653)							
	4.97 Gal	FRESH WATER							
4	TUNED SPACER III	TUNED SPACER III - SBM (483826)		bbl	12.	.0	.0	.0	
	35.35 gal/bbl	FRESH WATER							
	0.3 lbm/bbl	FE-2 (100001615)							
	175.4 lbm/bbl	BARITE, BULK (100003681)							
	0.1 gal/bbl	MUSOL(R) A, BULK (100003696)							
	0.2 gal/bbl	SEM-7, 55 GAL DRUM (100001626)							
5	Mud Displacment			bbl	9.			.0	

### Stage/Plug #:

2

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density uom	Yield uom	Mix Fluid uom	Rate uom	Total Mix Fluid uom
1	Mud			bbl	9.			.0	
2	TUNED SPACER III	TUNED SPACER III - SBM (483826)		bbl	12.	.0	.0	.0	
	35.35 gal/bbl	FRESH WATER							
	0.3 lbm/bbl	FE-2 (100001615)							
	175.4 lbm/bbl	BARITE, BULK (100003681)							
	0.1 gal/bbl	MUSOL(R) A, BULK (100003696)							
	0.2 gal/bbl	SEM-7, 55 GAL DRUM (100001626)							
3	DenseCem	DENSECEM (TM) SYSTEM (452870)		sacks	17.5	.94	3.36		3.36
	0.3 %	CFR-3, W/O DEFOAMER, 50 LB SK (100003653)							
	0.3 %	HR-5, 50 LB SK (100005050)							
	3.359 Gal	FRESH WATER							

### Stage/Plug #: 2

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density uom	Yield uom	Mix Fluid uom	Rate uom	Total Mix Fluid uom
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# HALLIBURTON

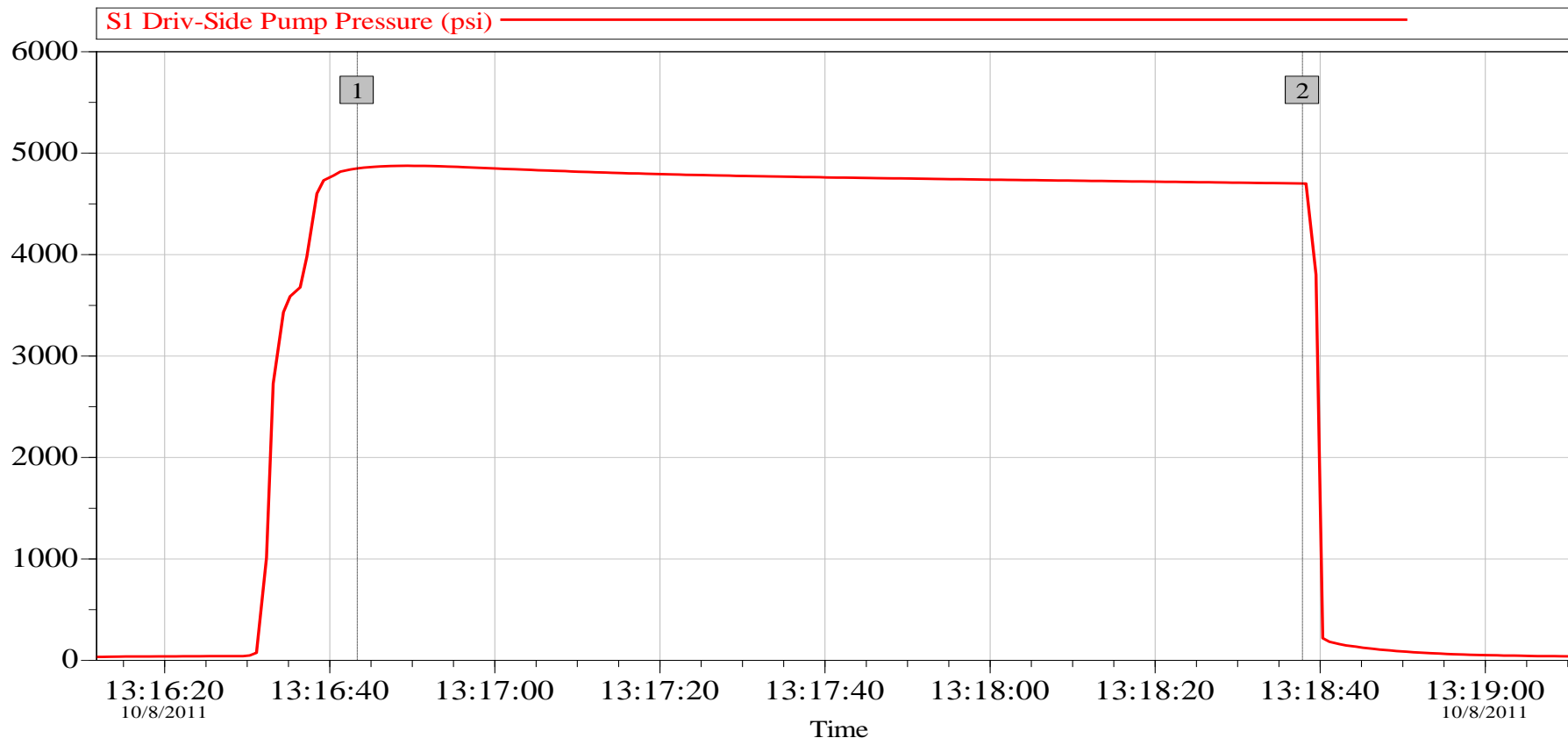
Stage/Plug #: 2										
4	TUNED SPACER III	TUNED SPACER III - SBM (483826)		bbl	12.	.0	.0	.0		
35.35 gal/bbl		FRESH WATER								
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk	
	0.3 lbm/bbl	FE-2 (100001615)								
	175.4 lbm/bbl	BARITE, BULK (100003681)								
	0.1 gal/bbl	MUSOL(R) A, BULK (100003696)								
	0.2 gal/bbl	SEM-7, 55 GAL DRUM (100001626)								
5	Mud Displacmeent			bbl	9.			.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	40 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

### Quicksilver Bret Grandbouche 24-02H KOP Pressure Test



Global Event Log							
Intersection			PSI	Intersection			PSI
1	Start Pressure Test	13:16:43	4845	2	End Pressure Test	13:18:38	4696

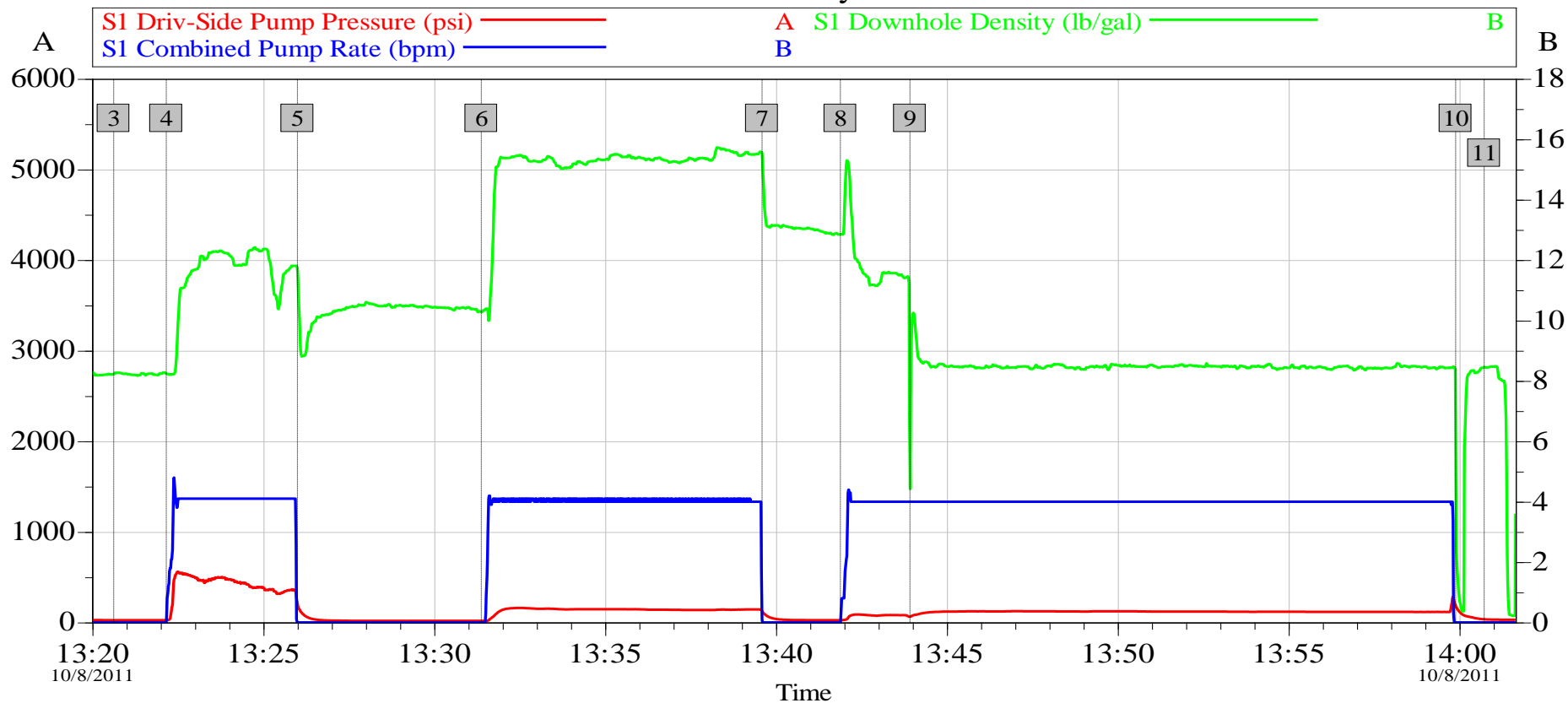
Customer: Quicksilver  
Job Description: Pressure Test  
Service Supervisor: Semisi Pauu

Job Date: 28-Nov-2011  
UWI:  
Service Operator: Sam Carpenter

Sales Order #: 8425629  
Elite #: 10872113  
Service Leader: Mike Still

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

## Quicksilver Bret Grandbouche 24-02H KOP Job Summary Chart



### Global Event Log

3	Start Job	13:20:37	4	Pump 13.2 bbl Tune Spacer	13:22:10	5	Shutdown	13:26:00
6	Pump 35.8 bbl Cement	13:31:23	7	Shutdown	13:39:35	8	Pump 6.8 bbl Tune Spacer	13:41:53
9	Pump Mud Displacement	13:43:55	10	Shutdown	13:59:53	11	Turn Well Over to Rig	14:00:43

Customer: Quicksilver  
Job Description: Stage 1  
Service Supervisor: Semisi Pauu

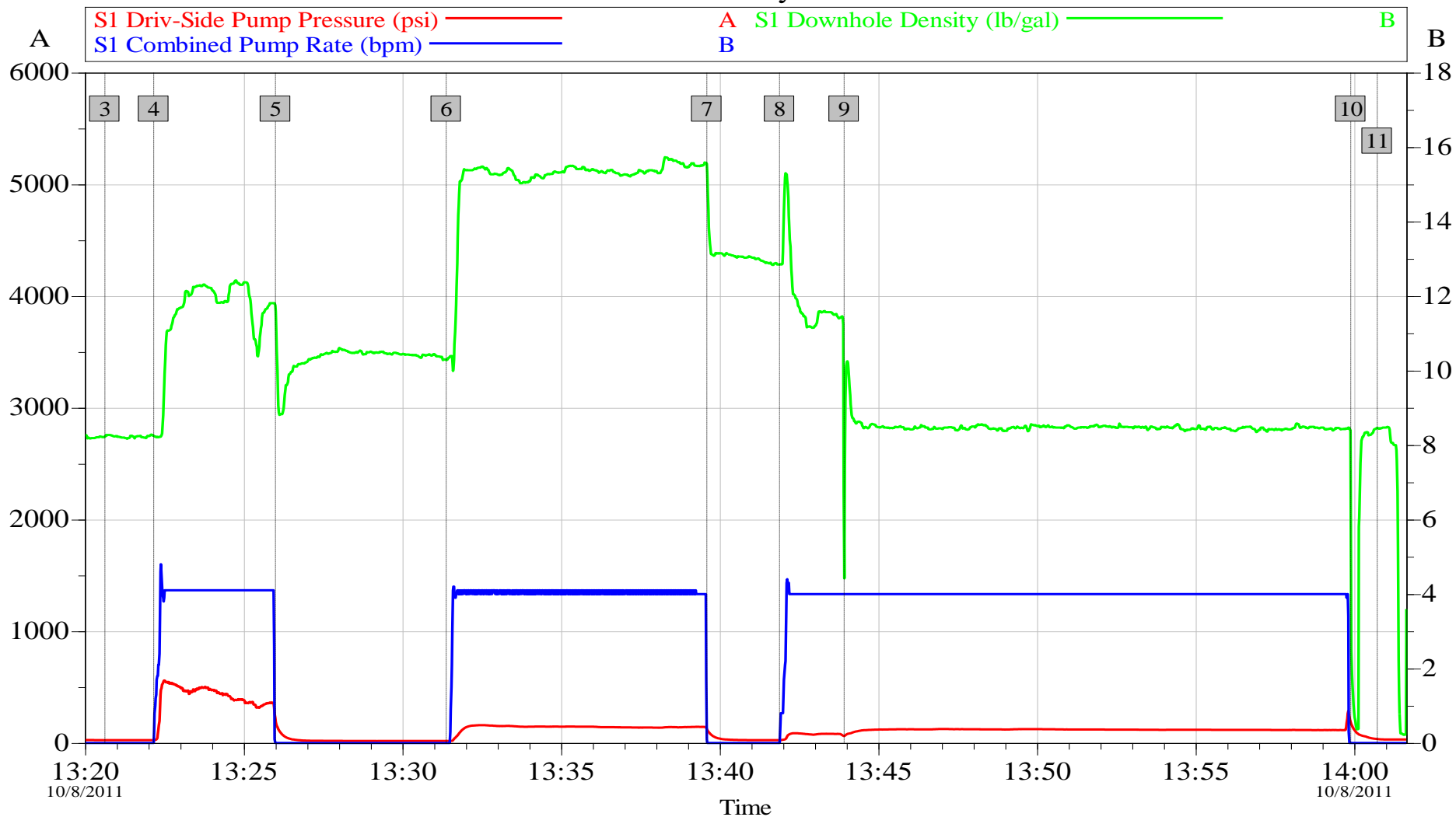
Job Date: 28-Nov-2011  
UWI:  
Service Operator: Sam Carpenter

Sales Order #: 8425629  
Elite #: 10872113  
Service Leader: Mike Still

OptiCem v6.4.9  
28-Nov-11 17:30

## Quicksilver Bret Grandbouche 24-02H KOP

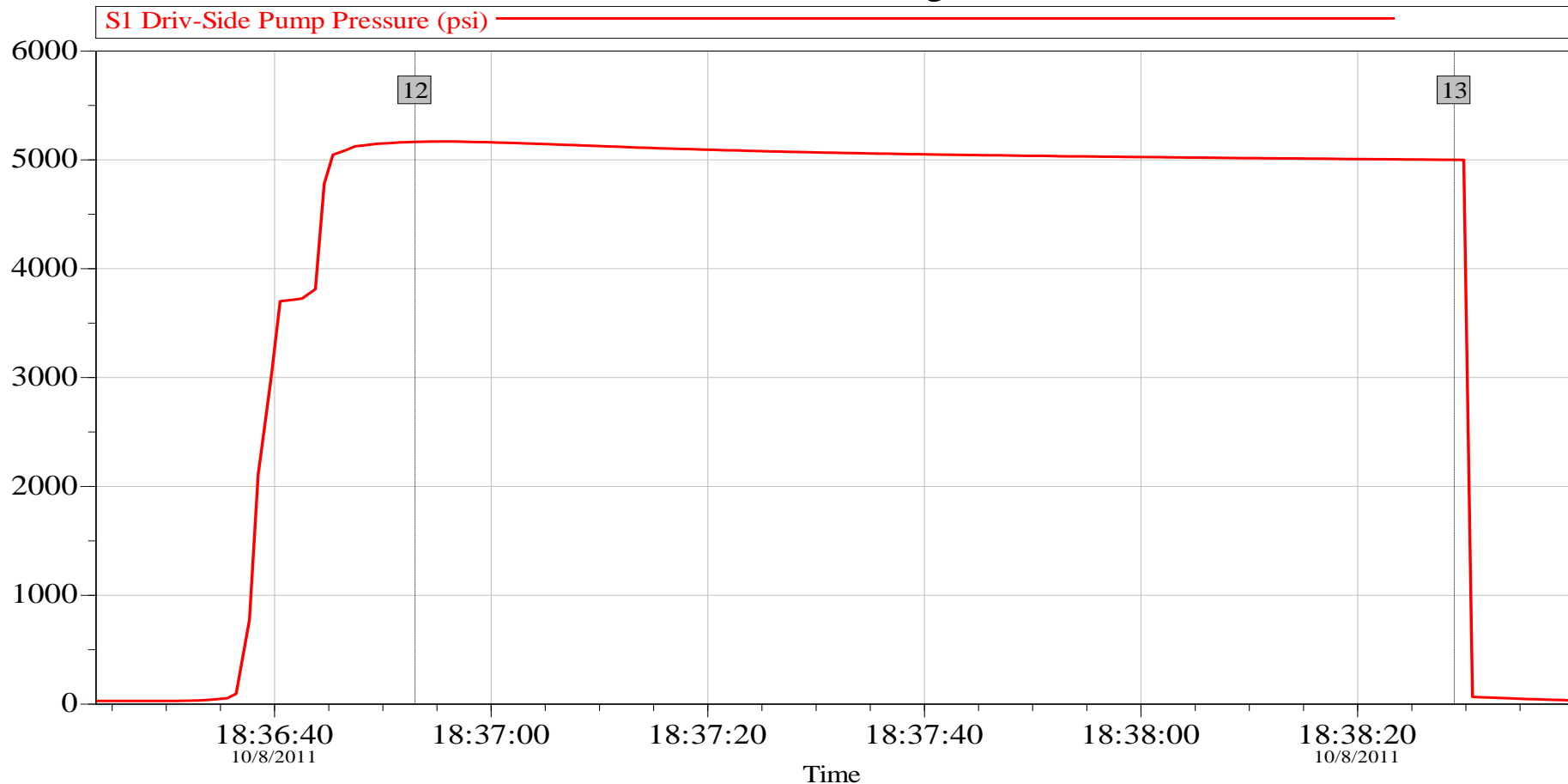
### Job Summary Chart



Customer: Quicksilver	Job Date: 28-Nov-2011	Sales Order #: 8425629
Job Description: Stage 1	UWI:	Elite #: 10872113
Service Supervisor: Semisi Pauu	Service Operator: Sam Carpenter	Service Leader: Mike Still

OptiCem v6.4.9  
28-Nov-11 17:30

## Quicksilver Bret Grandbouche 24-02H KOP Pressure Test Stage 2



### Global Event Log

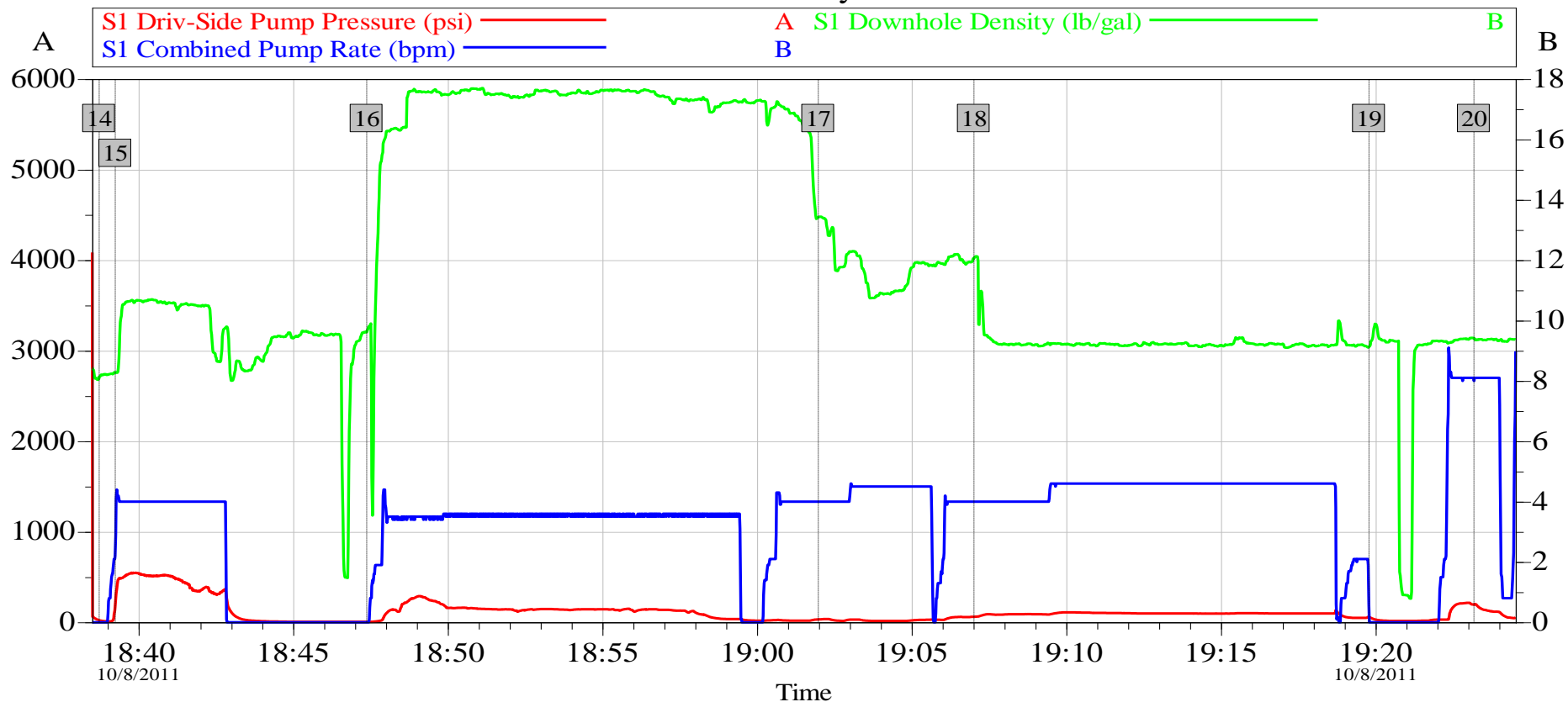
12 Start Pressure Test 2 18:36:53 13 End Pressure Test 2 18:38:29

Customer: Quicksilver	Job Date: 28-Nov-2011	Sales Order #: 8425629
Job Description: Pressure Test Stage 2	UWI:	Elite #: 10872113
Service Supervisor: Semisi Pauu	Service Operator: Sam Carpenter	Service Leader: Mike Still

OptiCem v6.4.9  
28-Nov-11 17:32

## Quicksilver Bret Grandbouche 24-02H KOP

### Job Summary Chart



### Global Event Log

14	Start Stage 2	18:38:44	15	Pump 13.2 bbl TSIII	18:39:15	16	Pump 35.2 bbl Cement	18:47:23
17	Pump 6.8 bbl TSIII	19:01:59	18	Pump Mud Displacement	19:07:01	19	Shutdown	19:19:47
20	End Job	19:23:11						

Customer: Quicksilver  
Job Description: Stage 2  
Service Supervisor: Semisi Pauu

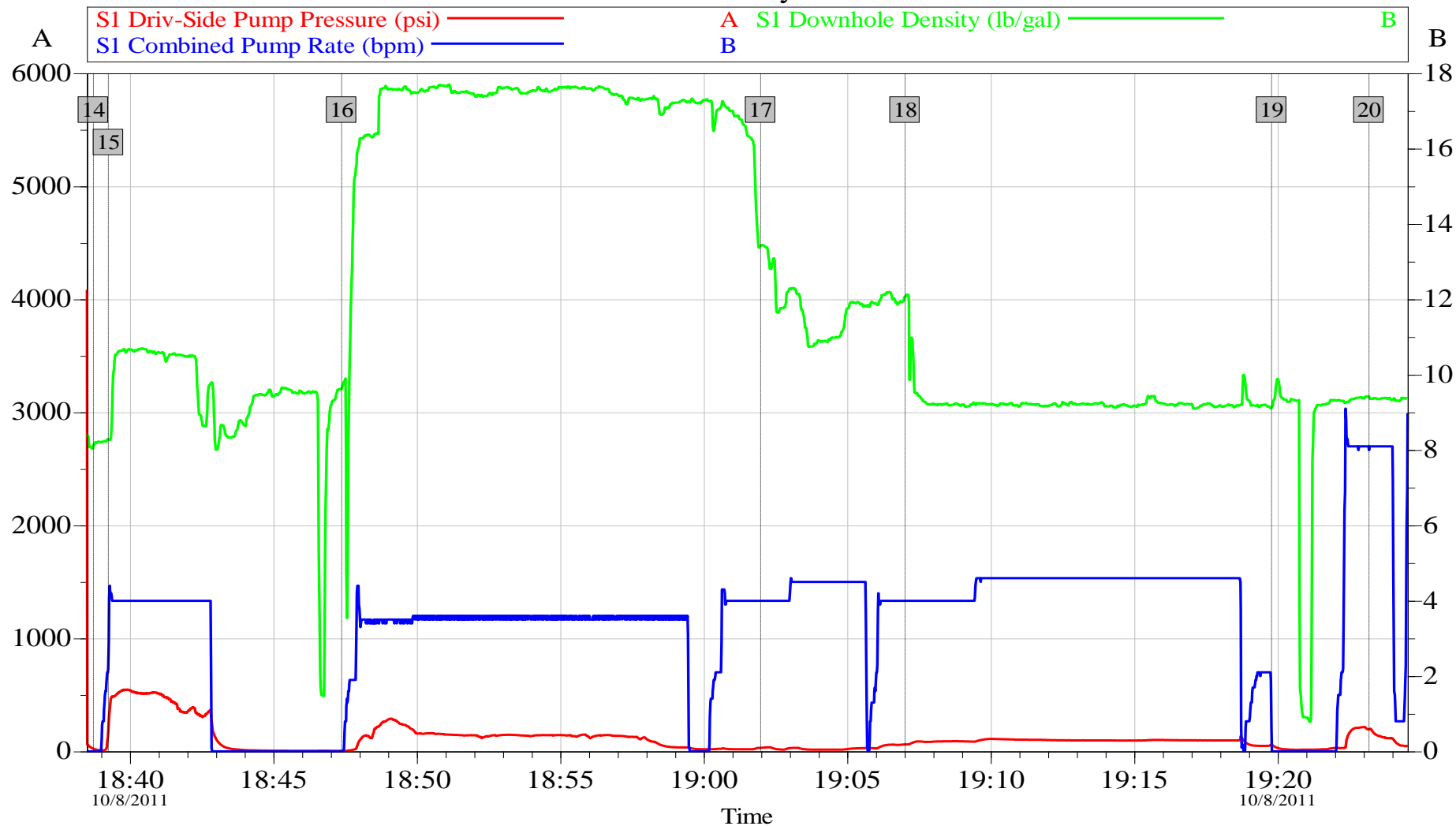
Job Date: 28-Nov-2011  
UWI:  
Service Operator: Sam Carpenter

Sales Order #: 8425629  
Elite #: 10872113  
Service Leader: Mike Still

OptiCem v6.4.9  
28-Nov-11 17:38

## Quicksilver Bret Grandbouche 24-02H KOP

### Job Summary Chart



Customer: Quicksilver	Job Date: 28-Nov-2011	Sales Order #: 8425629
Job Description: Stage 2	UWI:	Elite #: 10872113
Service Supervisor: Semisi Pauu	Service Operator: Sam Carpenter	Service Leader: Mike Still

OptiCem v6.4.9  
28-Nov-11 17:38

### Cementing Rockies, Vernal

### LAB RESULTS - Plug

#### Job Information

<b>Request/Slurry</b>	181316/1	<b>Rig Name</b>	DHS DRILLING #6	<b>Date</b>	05/OCT/2011
<b>Submitted By</b>	Isaac Whorl	<b>Job Type</b>	Open Hole Plug	<b>Bulk Plant</b>	Vernal
<b>Customer</b>	Quicksilver Resources Inc.	<b>Location</b>		<b>Well</b>	Bret Grandbouche 24-02H

#### Well Information

<b>Casing/Liner Size</b>	7"	<b>Depth MD</b>	8250 ft	<b>BHST</b>	187 F
<b>Hole Size</b>	8 1/2"	<b>Depth TVD</b>	0 ft	<b>BHCT</b>	159 F

#### Cement Information - Plug Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
100.00	% BWOC	Mountain G	Bulk	Oct 05, 2011		Slurry Density	15.80	PPG
0.200	% BWOC	HR-5	Bulk	Oct 05, 2011	SXC09Y-01S3SM	Slurry Yield	1.15	ft3/sk
0.200	% BWOC	CFR-3	Bulk	Oct 05, 2011	112610-7-79	Water Requirement	4.97	GPS
4.97	gal/sack	Fresh Water	Lab	May 29, 2011	5-29-2011	Water Source	Fresh Water	

#### Operation Test Results Request ID 181316/1

##### Thickening Time - ON-OFF-ON, Request Test ID:1803952

Test Temp (°F)	Reached in (min)	Pressure (psi)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
159	20	6,524	01:50	01:58	02:01	02:01	8	60	30	23

##### Mixability (0 - 5) - 0 is not mixable, Request Test ID:1803951

Mixability rating (0 - 5)

5

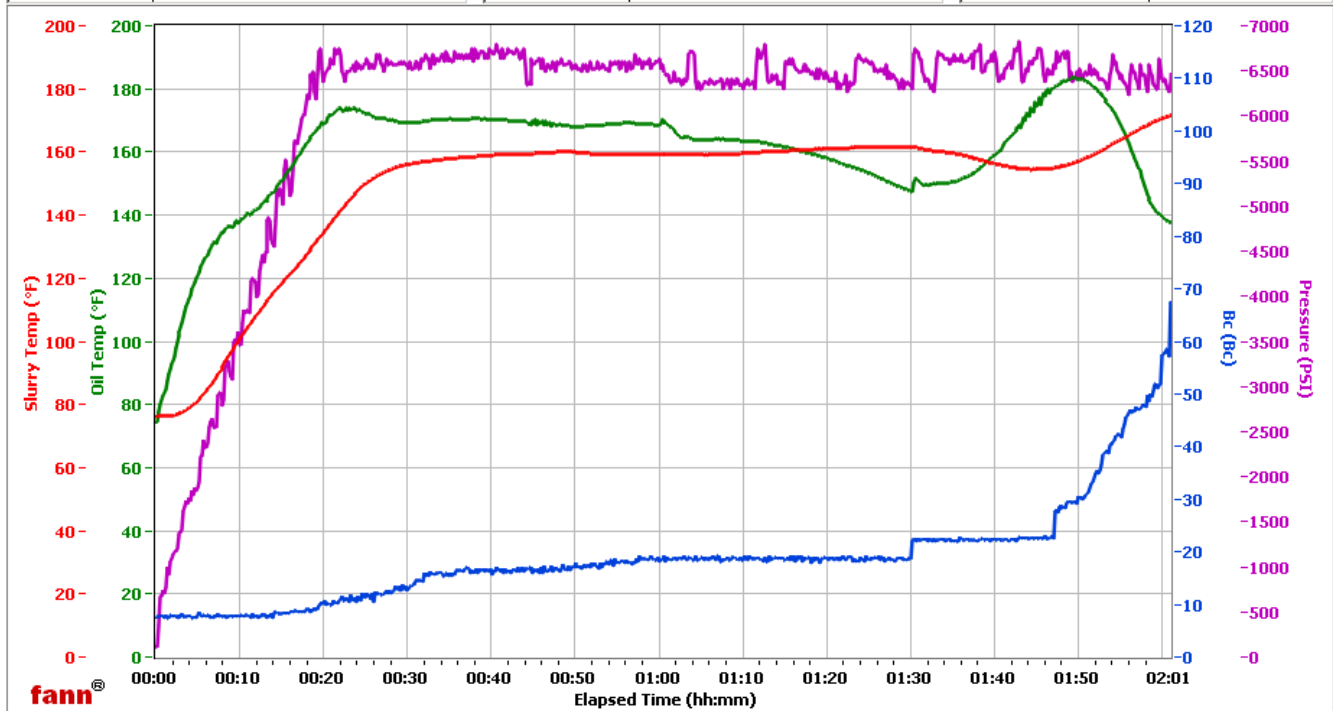
# HALLIBURTON

## Vernal

Fields	Values
Project Name	Quicksilver 181316-1
Test ID	181316-1
Request ID	HPHT 4
Tested by	ADF
Customer	Quicksilver
Well No	BG 24-2H
Rig	6
Casing/Liner Size	7

Fields	Values
Job Type	Plug
Cement Type	G
Cement Weight	Standard
Test Date	10/05/11
Test Time	11:57 PM
Temp. Units	degF
Pressure Units	PSI

Events	Results
30.00 Bc	01h:50m
50.00 Bc	01h:58m
60.00 Bc	02h:01m
70.00 Bc	02h:01m
100.00 Bc	02h:01m
200.00 Bc	NaN
01h:29m	18.94
06h:00m	NaN



Data File O:\HPHT Data Files\Vernal Consistometer #4\Quicksilver 181316- 1.tdms

Comments 15.8 D,



## Cementing Rockies, Vernal

## LAB RESULTS - Plug

### Job Information

<b>Request/Slurry</b>	181315/1	<b>Rig Name</b>	DHS DRILLING #6	<b>Date</b>	05/OCT/2011
<b>Submitted By</b>	Isaac Whorl	<b>Job Type</b>	KOP	<b>Bulk Plant</b>	Vernal
<b>Customer</b>	Quicksilver Resources Inc.	<b>Location</b>		<b>Well</b>	Bret Grandbouche 24-02H

### Well Information

<b>Casing/Liner Size</b>	7"	<b>Depth MD</b>	7450 ft	<b>BHST</b>	177 F
<b>Hole Size</b>	8 1/2"	<b>Depth TVD</b>	0 ft	<b>BHCT</b>	150 F

### Cement Information - Plug Design

<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<u>Cement Properties</u>		
100.00	% BWOC	Mountain G	Bulk	Oct 05, 2011		Slurry Density	17.50	PPG
0.300	% BWOC	HR-5	Bulk	Oct 05, 2011	SXC09Y-01S3SM	Slurry Yield	.94	ft3/sk
0.300	% BWOC	CFR-3	Bulk	Oct 05, 2011	112610-7-79	Water Requirement	3.36	GPS
3.36	gal/sack	Fresh Water	Lab	May 29, 2011	5-29-2011	Water Source	Fresh Water	

### Operation Test Results Request ID 181315/1

#### Thickening Time - ON-OFF-ON, Request Test ID:1803948

Test Temp (°F)	Reached in (min)	Pressure (psi)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
150	18	5,846	03:26	03:27	03:27	03:27	16	60	30	15

#### Mixability (0 - 5) - 0 is not mixable, Request Test ID:1803947

Mixability rating (0 - 5)

5

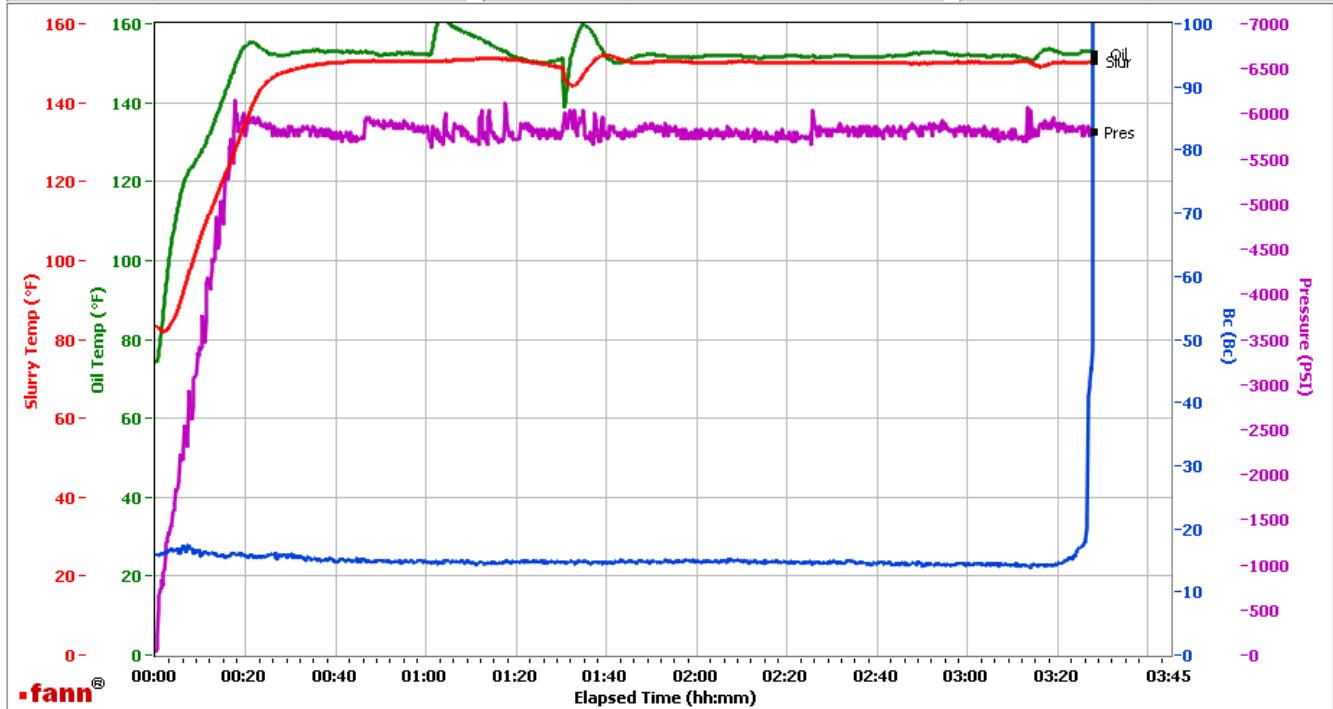
# HALLIBURTON

## VERNAL

Fields	Values
Project Name	QUICKSILVER 181315-1
Test ID	181315-1
Request ID	HPHT #3
Tested by	PBL
Customer	QUICKSILVER RESOURCES
Well No	BRET GRANDBOUCHE 24-02H
Rig	DHS #6
Casing/Liner Size	7

Fields	Values
Job Type	KOP
Cement Type	G
Cement Weight	Standard
Test Date	10/05/11
Test Time	04:10 PM
Temp. Units	degF
Pressure Units	PSI

Events	Results
30.00 Bc	03h:26m
50.00 Bc	03h:27m
60.00 Bc	03h:27m
70.00 Bc	03h:27m
100.00 Bc	03h:27m
200.00 Bc	NaN
03h:00m	14.50
06h:00m	NaN



Data File O:\HPHT Data Files\Vernal Consistometer #3\QUICKSILVER 181315-1.tdms

Comments MTN G 100%, HR-5 0.30%