

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

SIMOES 22-30

DHS 6

## **Post Job Summary**

# **Cement Intermediate Casing**

Date Prepared: June 18, 2012  
Version: 1

Service Supervisor: DEARING, KEN

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		
Open Hole Section	Open Hole		8.750		0.00	6,415.00	15	
Casing	Casins String	7.00	6.276	26.00	0.00	6,415.00		50.00

## Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Density lbm/gal	Avg Rate bbl/min	Volume
1	Spacer	TUNED SPACER III	11.00	4.50	20.0 bbl
2	Cement Slurry	EconoCem	12.20	5.00	380.0 sacks
3	Cement Slurry	EXTENDACEM	14.20	2.50	70.0 sacks
4	Mud	Displacement	8.40	6.00	243.0 bbl

## Fluids Pumped

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

Fluid Density: 11.00 lbm/gal  
Fluid Volume: 20.00 bbl  
Pump Rate: 4.50 bbl/min

**Stage/Plug # 1 Fluid 2:** EconoCem  
ECONOCEM (TM) SYSTEM  
0.4 % Halad(R)-344  
0.125 lbm Poly-E-Flake  
3 lbm Kol-Seal  
0.9 % HR-5

Fluid Weight: 12.20 lbm/gal  
Slurry Yield: 2.23 ft<sup>3</sup>/sack  
Total Mixing Fluid: 11.84 Gal  
Surface Volume: 380.0 sacks  
Calculated Fill: 5,600.00 ft  
Calculated Top of Fluid: 800.00 ft  
Pump Rate: 5.00 bbl/min

**Stage/Plug # 1 Fluid 3:** EXTENDACEM  
EXTENDACEM (TM) SYSTEM  
0.2 % Halad(R)-344  
0.4 % HR-5  
0.125 lbm Poly-E-Flake  
3 lbm Kol-Seal

Fluid Weight: 14.20 lbm/gal  
Slurry Yield: 1.29 ft<sup>3</sup>/sack  
Total Mixing Fluid: 5.28 Gal  
Surface Volume: 70.0 sacks  
Calculated Fill: 500.00 ft  
Calculated Top of Fluid: 6,400.00 ft  
Pump Rate: 2.50 bbl/min

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

Fluid Density: 8.40 lbm/gal  
Fluid Volume: 243.00 bbl  
Pump Rate: 6.00 bbl/min

# HALLIBURTON

## Job Summary

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### Job Information

Job Start Date	6/12/2012 6:30:00 PM
Job MD	6,415.0 ft
Height of Plug Container/Swage Above Rig Floor	4.0 ft
Surface Temperature at Time of Job	78 degF
Mud Type	INTEGRADE
Actual Mud Density	9 lbm/gal
Time Circulated before job	2.75 hour(s)
Rate at Which Well was Circulated	6.000 bbl/min
Pipe Movement During Hole Circulation	None
Time From End Mud Circ. to Job Start	7.00 minute
Pipe Movement During Cementing	Reciprocated
Calculated Displacement	243.10 bbl
Amount of Cement Returns	20.00 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Annular flow Before Job? (Water/Gas)	Unknown
Annular flow After Job? (Water/Gas)	Unknown

### Cementing Equipment

Number of Centralizers Used	45
Pipe Centralization	Through Entire Cement Column
Brand of Float Equipment Used	HALLIBURTON
Did Float Equipment Hold?	Yes
Plug set used?	Yes
Brand of Plug set used?	HALLIBURTON
Did Plugs Bump?	Yes
Calculated Pressure to Bump Plugs	1,125.0 psig

## Service Supervisor Reports

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### Job Log

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
06/12/2012 08:30	Call Out				CALLED OUT TO QUICKSILVER INTERMEDIATE CASING JOB, SIMOES WELL #: 22-30
06/12/2012 09:10	Pre-Convoy Safety Meeting				DISCUSS SAFETY AND HAZARDS OF PRE-TRIP AND TRAVEL.

# HALLIBURTON

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
06/12/2012 09:20	Other				LOAD ALL EQUIPMENT AND CHEMICALS FOR JOB, WAIT FOR CEMENT TO FINISH BEING LOADED.
06/12/2012 10:50	Depart Yard Safety Meeting				DISCUSS SAFETY AND HAZARDS OF TRAVEL.
06/12/2012 11:00	Crew Leave Yard				CALL IN JOURNEY MGT.
06/12/2012 13:30	Arrive At Loc				CALL IN JOURNEY MGT.
06/12/2012 13:35	Assessment Of Location Safety Meeting				WALK LOCATION, DISCUSS SPOTTING OF EQUIPMENT AND RIG UP AND SAFETY AND HAZARDS OF EACH, RIG CREW AND CASERS RUNNING CASING.
06/12/2012 13:40	Safety Meeting				MEET WITH CO.MAN, GET WELL INFORMATION, DISCUSS WELL CONDITIONS AND SAFETY AND HAZARDS, GET WORK ORDER SIGNED.
06/12/2012 13:45	Other				CAN NOT SPOT EQUIPMENT UNTIL CASERS ARE FINISHED AND MOVED AND RACKS MOVED, DISCUSSED WITH CO.MAN.
06/12/2012 13:45	Other				WAIT ON RIG AND CASERS TO FINISH RUNNING CASING AND MOVE RACKS SO WE CAN SPOT TRUCKS AND RIG UP, TEST H2O, LET CO.MAN KNOW H2O TESTED GOOD.
06/12/2012 14:45	Safety Meeting				MEET WITH CO.MAN, GO OVER CALCULATIONS, DISCUSS JOB PROCEDURES AND PRESSURES AND CONTINGENCIES, DISCUSS SAFETY AND HAZARDS OF JOB.
06/12/2012 15:30	Casing on Bottom				
06/12/2012 15:35	Circulate Well				RIG STARTS TO CIRCULATE WELL, CASERS RIG DOWN.
06/12/2012 15:50	Safety Huddle				DISCUSS SAFETY AND HAZARDS OF SPOTTING EQUIPMENT.
06/12/2012 16:00	Other				SPOT EQUIPMENT.
06/12/2012 16:20	Safety Meeting - Pre Rig-Up				DISCUSS SAFETY AND HAZARDS OF RIG UP.
06/12/2012 16:30	Rig-Up Equipment				RIG UP IRON SUCTION AND BULK HOSES, START TO BLOW CEMENT ONTO BIN.

# HALLIBURTON

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
06/12/2012 17:20	Safety Meeting - Pre Rig-Up				DISCUSS SAFETY AND HAZARDS OF RIGGING IRON TO RIG FLOOR.
06/12/2012 17:25	Rig-Up Equipment				RIG UP IRON TO RIG FLOOR, LOAD TOP PLUG INTO PLUG CONTAINER-CO.MAN VERIFIES.
06/12/2012 17:30	Prime Pumps				GET ALL EQUIPMENT READY TO PUMP JOB.
06/12/2012 17:45	Safety Meeting - Pre Rig-Up				DISCUSS SAFETY AND HAZARDS OF RIG UP.
06/12/2012 17:50	Rig-Up Equipment				RIG UP IRON ON RIG FLOOR.
06/12/2012 18:00	Safety Meeting - Pre Job				SAFETY MEETING WITH RIG CREW AND CO.MAN, DISCUSS JOB PROCEDURES AND PRESSURES AND CONTINGENCIES, DISCUSS SAFETY AND HAZARDS OF JOB.
06/12/2012 18:20	Safety Meeting - Pre Rig-Up				DISCUSS SAFETY AND HAZARDS OF RIGGING UP ON RIG FLOOR.
06/12/2012 18:23	Rig-Up Equipment				RIG SHUTS DOWN AND BREAKS OFF OF CASING, RIG UP CEMENT HEAD AND IRON TO CASING.
06/12/2012 18:32	Pump Water	1.5	1.5	160.0	PUMP H2O TO FILL LINES.
06/12/2012 18:34	Pressure Test			5000.0	PRESSURE TEST LINES TO 5000psi.
06/12/2012 18:39	Other				MIX 11.0# TUNED SPACER.
06/12/2012 18:46	Pump Spacer	4.5	20	290.0	PUMP 20bbls OF 11.0# TUNED SPACER.
06/12/2012 18:51	Slow Rate	1		95.0	SLOW RATE TO START MIXING UP LEAD CEMENT.
06/12/2012 18:54	Shutdown				SHUT DOWN TO MIX UP LEAD CEMENT.
06/12/2012 18:55	Pump Lead Cement	6	150.9	195.0	PUMP 150.9bbls OF 12.2# ECONOCEM LEAD CEMENT, 380sks, 2.23ft3/sk, 11.84gal/sk.
06/12/2012 19:09	Slow Rate	3.5		75.0	SLOW RATE TO KEEP UP DENSITY.
06/12/2012 19:10	Other	5		130.0	INCREASE RATE.
06/12/2012 19:24	Pump Tail Cement	5	16.1	120.0	PUMP 16.1bbls OF 14.2# TAIL CEMENT, 70sks, 1.29 ft3/sk, 5.28gal/sk.
06/12/2012 19:28	Slow Rate	2.5		55.0	SLOW RATE TO KEEP UP DENSITY.
06/12/2012 19:31	Shutdown				END CEMENT-SHUT DOWN.
06/12/2012 19:32	Drop Top Plug				DROP TOP PLUG-CO.MAN VERIFIES.

# HALLIBURTON

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
06/12/2012 19:33	Pump Displacement	8		60.0	START DISPLACEMENT WASHING ON TOP OF THE PLUG, AS PER CO.MAN.
06/12/2012 19:35	Pump Displacement	8		60.0	START MUD DISPLACEMENT.
06/12/2012 19:35	Displ Reached Cmmt	8		200.0	SEE CEMENT LIFT PRESSURE.
06/12/2012 19:37	Slow Rate	7		215.0	SLOW RATE AS PER CO.MAN.
06/12/2012 19:47	Slow Rate	6		155.0	SLOW RATE AS PER CO.MAN.
06/12/2012 20:07	Spacer Returns to Surface	6		1070.0	SEE SPACER TO PIT.
06/12/2012 20:09	Cement Returns to Surface	6		1350.0	SEE CEMENT RETURNS TO PIT, 20bbls BACK TO PIT.
06/12/2012 20:09	Slow Rate	3		1085.0	SLOW RATE TO BUMP PLUG.
06/12/2012 20:11	Pump Displacement	3		1095.0	START PUMPING H2O DISPLACEMENT AS PER CO.MAN.
06/12/2012 20:14	Bump Plug			1100.0	BUMP PLUG @ 2000psi.
06/12/2012 20:14	Shutdown			1600.0	PRESSURE 600psi OVER TO 2600psi-SHUT DOWN.
06/12/2012 20:19	Check Floats				FLOATS HOLD-1bbl BACK, GOOD RETURN THROUGH OUT JOB.
06/12/2012 20:25	Post-Job Safety Meeting (Pre Rig-Down)				DISCUSS OBSERVATIONS OF JOB AND SAFETY AND HAZARDS OF RIG DOWN.
06/12/2012 20:35	Safety Meeting - Pre Rig-Down				DISCUSS SAFETY AND HAZARDS OF RIGGING IRON OFF OF RIG FLOOR.
06/12/2012 20:40	Rig-Down Equipment				RIG DOWN IRON OFF OF RIG FLOOR, LEAVING CEMENT HEAD ON CASING AND SHUT IN AS PER CO.MAN.
06/12/2012 20:45	Safety Huddle				DISCUSS SAFETY AND HAZARDS.
06/12/2012 20:50	Other				WASH RCM UP TO PIT, BLOW BIN OFF INTO BULK TRUCK.
06/12/2012 21:40	Safety Meeting - Pre Rig-Down				DISCUSS SAFETY AND HAZARDS OF RIG DOWN.
06/12/2012 21:45	Rig-Down Equipment				RIG DOWN AND RACK UP IRON AND SUCTION HOSE.
06/12/2012 21:54	Pre-Convoy Safety Meeting				DISCUSS SAFETY AND HAZARDS OF TRAVEL.
06/13/2012 00:30	Crew Leave Location				CALL IN JOURNEY MGT.
06/13/2012 00:30	Other				THANK YOU-KEN AND CREW.

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 346707	<b>Ship To #:</b> 2931551	<b>Quote #:</b>	<b>Sales Order #:</b> 9580256
<b>Customer:</b> QUICKSILVER RESOURCES INC-EBUSINESS		<b>Customer Rep:</b> POTTS, STEVE	
<b>Well Name:</b> SIMOES		<b>Well #:</b> 22-30	<b>API/UWI #:</b> 05-08107724-00
<b>Field:</b>	<b>City (SAP):</b> CRAIG	<b>County/Parish:</b> Moffat	<b>State:</b> Colorado
<b>Contractor:</b> DHS		<b>Rig/Platform Name/Num:</b> 6	
<b>Job Purpose:</b> Cement Intermediate Casing			
<b>Well Type:</b> Exploratory / Wildcat		<b>Job Type:</b> Cement Intermediate Casing	
<b>Sales Person:</b> SCOTT, KYLE		<b>Srvc Supervisor:</b> DEARING, KEN	<b>MBU ID Emp #:</b> 239372

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BROWN, CHRISTOPHER Paul	11.0	491062	DEARING, KEN A	11.0	239372	GAMBLES, BRAYDEN Kade	11.0	469413
MASTRANGELO, MATTHEW M	11.0	505218						

### Equipment

HES Unit #	Distance-1 way						
10265375	80 mile	11023106	80 mile	11061777	80 mile	11107562	80 mile
11127525	80 mile	11189139	80 mile	11288817	80 mile	11526494	80 mile

### Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
<b>TOTAL</b>			<i>Total is the sum of each column separately</i>					

### Job

### Job Times

Formation Name	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Water Depth	Perforation Depth (MD)	From	To	Called Out	On Location	Job Started	Job Completed	Departed Loc	Date	Time	Time Zone
				BHST	6415. ft										12 - Jun - 2012	08:30	MST
							Wk Ht Above Floor		4. ft						12 - Jun - 2012	13:30	MST
															12 - Jun - 2012	18:30	MST
															12 - Jun - 2012	20:30	MST
															13 - Jun - 2012	00:30	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
Open Hole				8.75				.	6415.		
Casins String	New		7.	6.276	26.		N-80	.	6415.		

### Sales/Rental/3<sup>rd</sup> Party (HES)

Description	Qty	Qty uom	Depth	Supplier
MILEAGE FOR CEMENTING CREW,ZI	160	MI		
ZI FUEL SURCHG-CARS/PICKUPS<1 1/2TON	160	MI		
SHOE,FLT,7 8RD,2-3/4 SS II VLV	1	EA		
CLAMP - LIMIT - 7 - HINGED -	1	EA		
CTRZR ASSY,API,7 CSG X 8 3/4HOLE,HNGD	45	EA		
KIT,HALL WELD-A	1	EA		
PLUG,CMTG,TOP,7,HWE,5.66 MIN/6.54 MAX CS	1	EA		
CLR,FLT,7 8RD 17-26PPF,2-3/4SSII	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 ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	TUNED SPACER III	TUNED SPACER III - SBM (483826)	20.00	bbl	11.	6.6	42.84	5.0	
	38.32 gal/bbl	FRESH WATER							
	0.25 gal/bbl	MUSOL(R) A, BULK (100003696)							
	0.25 gal/bbl	SEM-7, 55 GAL DRUM (100001626)							
	0.125 gal/bbl	D-AIR 3000L, 5 GAL PAIL (101007444)							
	120 lbm/bbl	BARITE, BULK (100003681)							
2	EconoCem	ECONOCEM (TM) SYSTEM (452992)	380.0	sacks	12.2	2.23	11.84	5.0	11.84
	0.4 %	HALAD(R)-344, 50 LB (100003670)							
	0.125 lbm	POLY-E-FLAKE (101216940)							
	3 lbm	KOL-SEAL, BULK (100064233)							
	0.9 %	HR-5, 50 LB SK (100005050)							
	11.84 Gal	FRESH WATER							
3	EXTENDACEM	EXTENDACEM (TM) SYSTEM (452981)	70.0	sacks	14.2	1.29	5.28	5.0	5.28
	0.2 %	HALAD(R)-344, 50 LB (100003670)							
	0.4 %	HR-5, 50 LB SK (100005050)							
	0.125 lbm	POLY-E-FLAKE (101216940)							
	3 lbm	KOL-SEAL, BULK (100064233)							
	5.28 Gal	FRESH WATER							
4	Displacement		243.00	bbl	8.4			5.0	

#### 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	50 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	<b>Customer Representative Signature</b>
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# HALLIBURTON

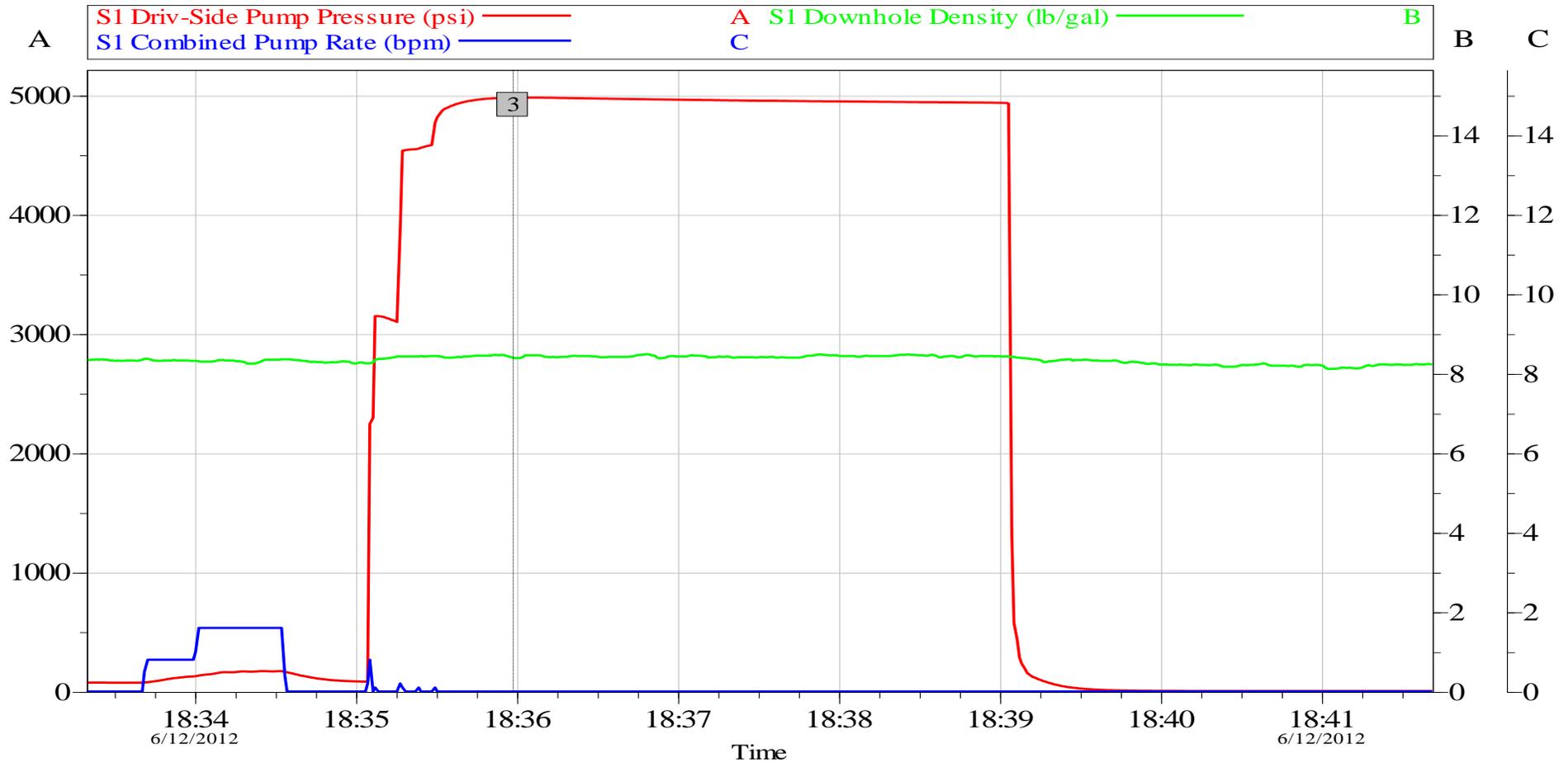
## Data Acquisition

### QUICKSILVER RESOURCES INC-EBUSINESS

SIMOES WELL #: 22-30

CEMENT INTERMEDIATE CASING, 7.0"

PRESSURE TEST



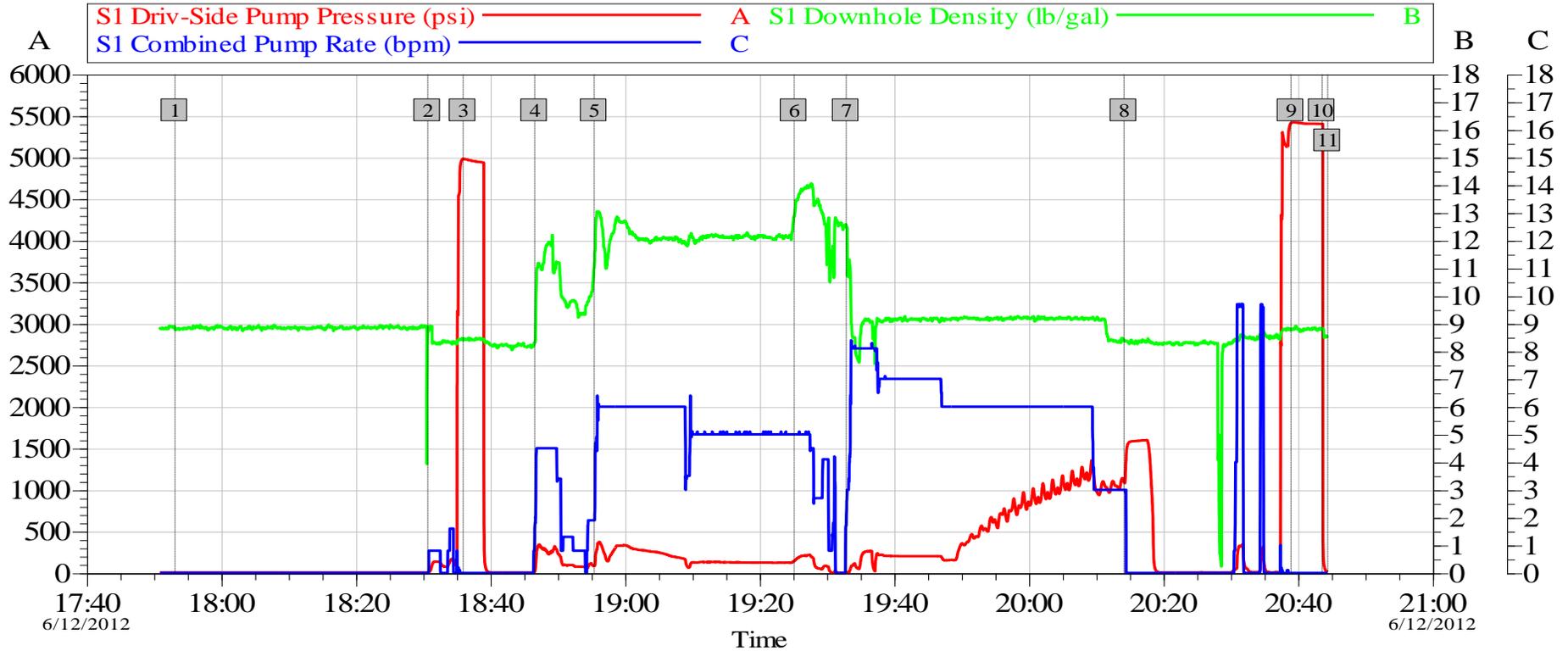
Customer: STEVE POTT	Job Date: 12-Jun-2012	Sales Order #: 9580256
Well Description: SIMOES #: 22-30	API: 05-08107724-00	Elite: 11189139
Supervisor: KEN DEARING	Operator: BRAYDEN GAMBLES	

OptiCem v6.4.10  
12-Jun-12 20:42

## QUICKSILVER RESOURCES INC-EBUSINESS

SIMOES WELL #: 22-30

CEMENT INTERMEDIATE CASING, 7.0"



Global Event Log					
Intersection	SDPP	Intersection	SDPP	Intersection	SDPP
1 Starting Job	17:53:10 5.000	2 Other	18:30:44 4.000	3 Test Lines	18:35:59 4981
4 Pump Spacer 2	18:46:37 15.78	5 Pump Lead Cement	18:55:27 83.00	6 Pump Tail Cement	19:25:10 142.8
7 Pump Displacement	19:32:54 3.000	8 Bump Plug	20:14:11 1092	9 Test Lines	20:39:01 5413
10 Other	20:43:39 5403	11 Ending Job	20:44:28 11.00		

Customer: STEVE POTT	Job Date: 12-Jun-2012	Sales Order #: 9580256
Well Description: SIMOES #: 22-30	API: 05-08107724-00	
Supervisor: KEN DEARING	Operator: BRAYDEN GAMBLES	Elite: 11189139

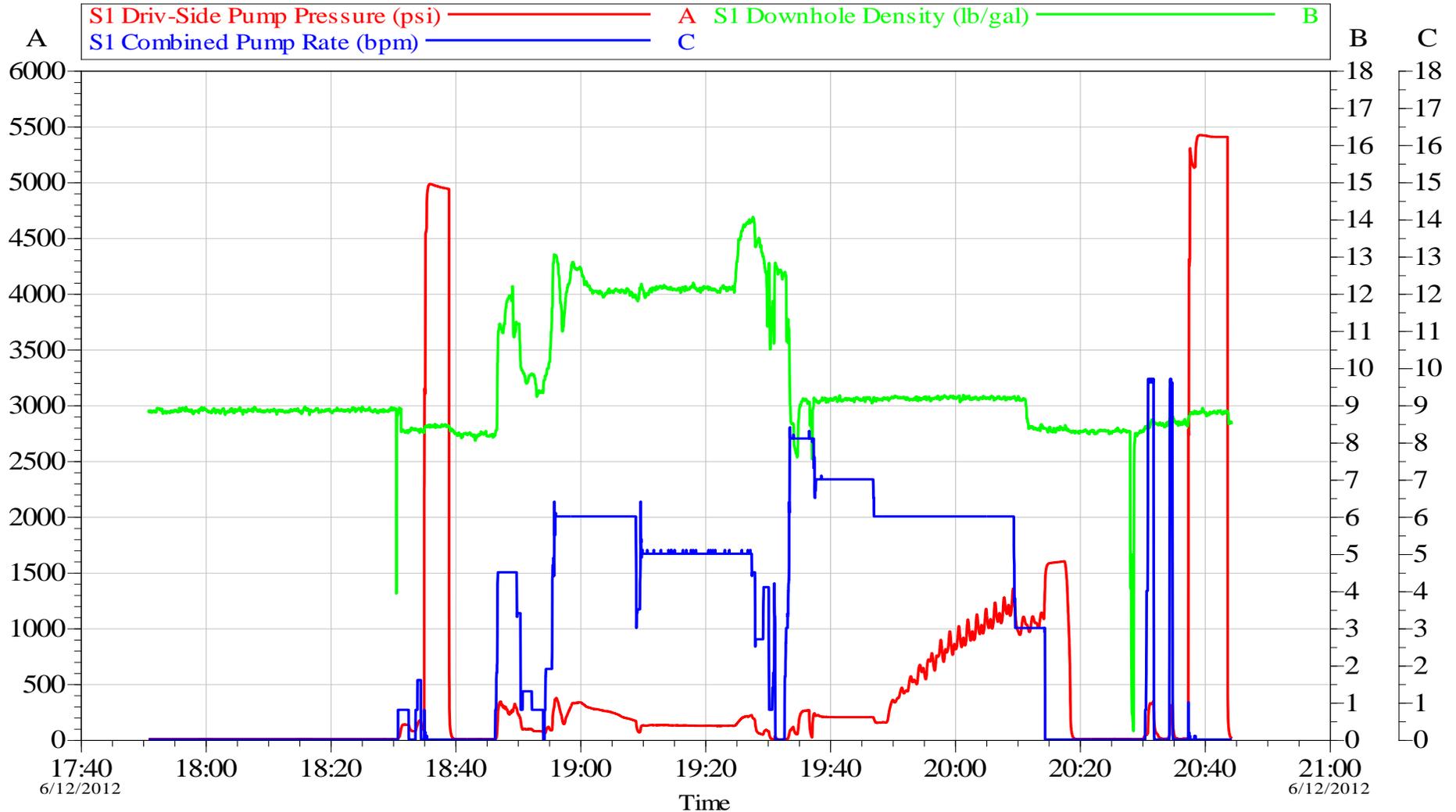
OptiCem v6.4.10  
12-Jun-12 21:03

# HALLIBURTON

## QUICKSILVER RESOURCES INC-EBUSINESS

SIMOES WELL #: 22-30

CEMENT INTERMEDIATE CASING, 7.0"



Customer: STEVE POTT	Job Date: 12-Jun-2012	Sales Order #: 9580256
Well Description: SIMOES #: 22-30	API: 05-08107724-00	
Supervisor: KEN DEARING	Operator: BRAYDEN GAMBLES	Elite: 11189139

OptiCem v6.4.10  
12-Jun-12 21:04

# HALLIBURTON

## Lab Data

### LAB RESULTS - Lead

#### Cementing Rockies, Vernal

##### Job Information

Request/Slurry	244981/2	Rig Name	DHS DRILLING #6	Date	08/JUN/2012
Submitted By	Christopher Cicirello	Job Type	Intermediate Casing	Bulk Plant	Vernal
Customer	Quicksilver Resources Inc.	Location	Moffat	Well	Simoes 22-30

##### Well Information

Casing/Liner Size	7"	Depth MD	6700 ft	BHST	167 F
Hole Size	8 3/4"	Depth TVD	6700 ft	BHCT	124 F

##### Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density	8.9 PPG
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##### Cement Information - Lead Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties	
		<b>EconoCem</b>				Slurry Density	12.20 PPG
						Slurry Yield	2.23 ft <sup>3</sup> /sk
100.00	% BWOC	Cement Blend	Bulk	Jun 12, 2012		Water Requirement	11.84 GPS
0.125	lb/sk	Pol-E-Flake	Bulk	Jun 12, 2012	4/10/2012	Total Mix Fluid	11.84 GPS
0.900	% BWOC	HR-5 (PB)	Bulk	Jun 12, 2012	SXC03B		
					-		
					2G53TH		
3.000	lb/sk	Kol-Seal	Bulk	Jun 12, 2012	4/20/2012		
					2		
11.84	gal/sack	Field (Fresh) Water	Rig	Jun 08, 2012			

##### Operation Test Results Request ID 244981/2

##### Thickening Time, Request Test ID:2596690

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)
124	3,989	36	13	04:49	05:17	05:17	05:17

##### Mixability (0 - 5) - 0 is not mixable, Request Test ID:2595826

Mixability rating (0 - 5)

5

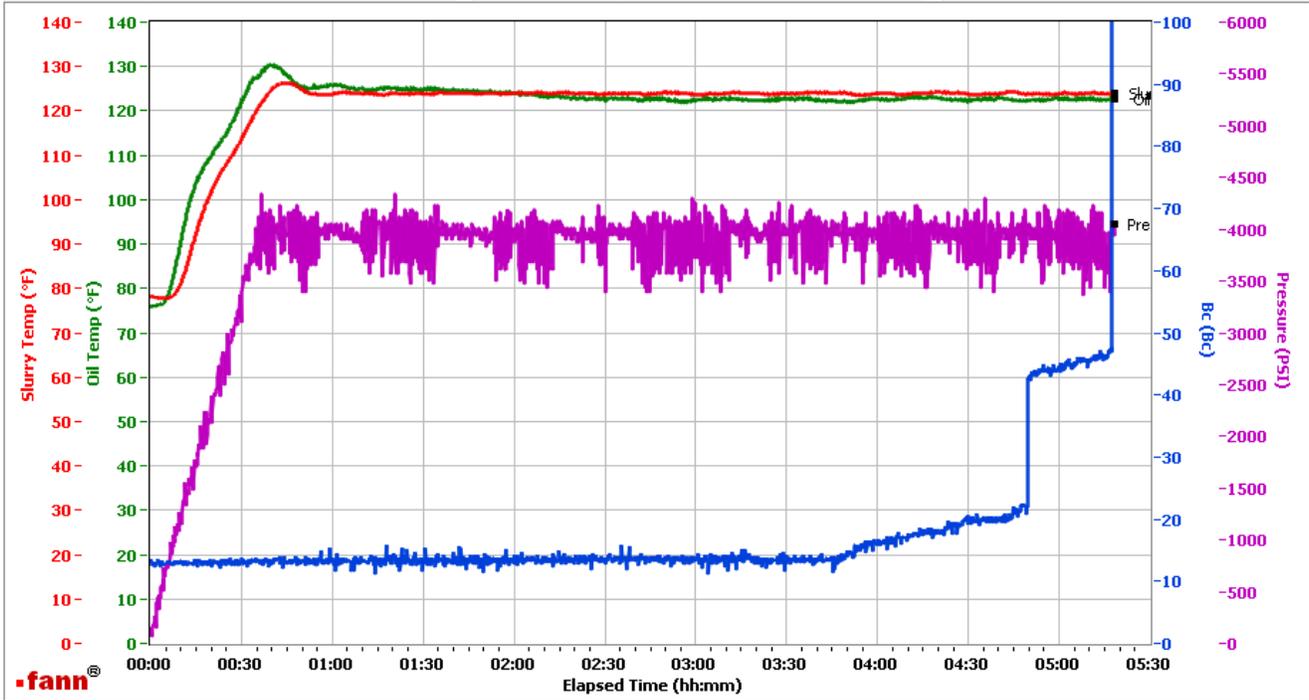
# HALLIBURTON

## Vernal

Fields	Values
Project Name	Quicksilver 244981-2a
Test ID	244981-2
Request ID	HPHT #3
Tested by	B5H
Customer	Quicksilver
Well No	Simoes 22-30
Rig	DHS #6
Casing/Liner Size	7

Fields	Values
Job Type	Intermediate Lead
Cement Type	III/G
Cement Weight	Light Weight
Test Date	06/12/12
Test Time	12:52 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.0.2.206

Events	Results
30.00 Bc	04h:49m
50.00 Bc	05h:17m
70.00 Bc	05h:17m
100.00 Bc	05h:17m
00h:30m	12.78
01h:00m	13.58
01h:30m	13.43
02h:00m	12.89



**fann®**

Data File O:\HPHT Data Files\Vernal Consistometer #3\Quicksilver 244981-2a.tdms

Comments III/G, 0.9 Hr-5, 12.2 density, 2.23 yield

### Cementing Rockies, Vernal

#### Job Information

<b>Request/Slurry</b>	244152/1	<b>Rig Name</b>	DHS DRILLING #6	<b>Date</b>	05/JUN/2012
<b>Submitted By</b>	Charli Brown	<b>Job Type</b>	Surface Casing	<b>Bulk Plant</b>	Vernal
<b>Customer</b>	Quicksilver Resources Inc.	<b>Location</b>	Moffat	<b>Well</b>	Simoes 22-30

#### Well Information

<b>Casing/Liner Size</b>	9 5/8"	<b>Depth MD</b>	1200 ft	<b>BHST</b>	96 F
<b>Hole Size</b>	12 1/4"	<b>Depth TVD</b>	1200 ft	<b>BHCT</b>	82 F

#### Drilling Fluid Information

<b>Mud Supplier Name</b>	<b>Mud Trade Name</b>	<b>Density</b>
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#### Cement Information - Tail 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>		
						Slurry Density	13.50	PPG
						Slurry Yield	1.74	ft3/sk
100.00	% BWOC	Cement Blend	Bulk	Jun 05, 2012		Water Requirement	8.68	GPS
						Total Mix Fluid	8.68	GPS
0.125	lb/sk	Pol-E-Flake	Bulk	Jun 05, 2012	4-10-2012			
5.000	lb/sk	Kol-Seal	Bulk	Jun 05, 2012	4-20-2012			
8.68	gal/sack	Field (Fresh) Water	Bulk	May 25, 2012				

#### Operation Test Results Request ID 244152/1

##### Thickening Time, Request Test ID:2572680

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	50 Bc (hh:mm)	Termination Time	Termination BC
82	800	14	18	02:14	02:24	07:43	48

##### Mixability (0 - 5) - 0 is not mixable, Request Test ID:2572681

Mixability rating (0 - 5)

5

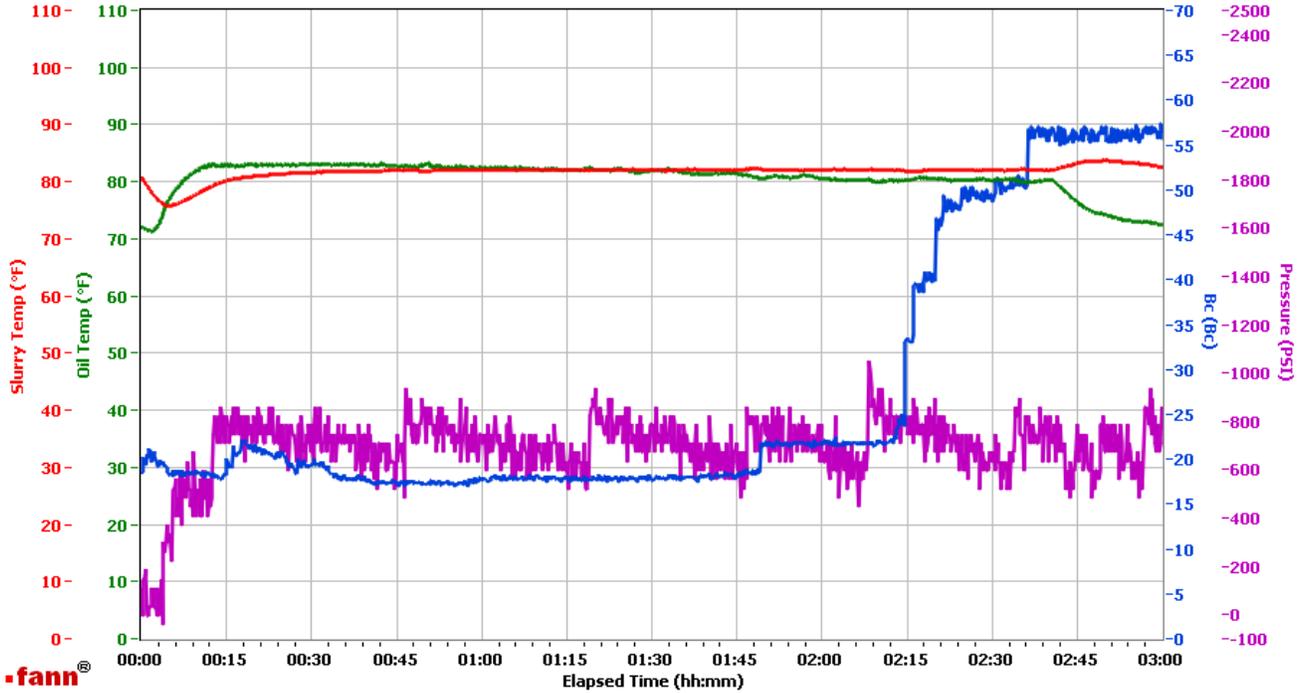
# HALLIBURTON

## Vernal

Fields	Values
Project Name	QUICKSILVER
Test ID	244152-1
Request ID	HPHT #2
Tested by	D.O.
Customer	QUICKSILVER
Well No	SIMOES 22-30
Rig	6
Casing/Liner Size	9.625

Fields	Values
Job Type	SURFACE TAIL
Cement Type	III
Cement Weight	Light Weight
Test Date	06/06/12
Test Time	06:18 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.0.2.206

Events	Results
30.00 Bc	02h:14m
50.00 Bc	02h:24m
70.00 Bc	NaN
100.00 Bc	NaN
00h:30m	19.45
01h:00m	17.57
01h:30m	17.69
02h:00m	21.56



Data File O:\HPHT Data Files\Vernal Consistometer #2\QUICKSILVER 244152-1.tdms

Comments 13.5 DEN, 1.74 YD