

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

Simoes 12-30

DHS 6

Post Job Summary **Cement Production Casing**

Date Prepared: June 1, 2012
Version: 1

Service Supervisor: FUCHS, BENJAMIN

Submitted by: Charli A Brown

HALLIBURTON

HALLIBURTON

Wellbore Geometry

Job Tubulars					MD		TVD		Excess	Shoe Joint Length
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft	%	ft
Casing	Intermediate Casing	7.00	6.276	26.00	0.00	6,496.00				40.00
Open Hole Section	Production Open Hole		6.125		6,700.00	8481.00	0	8479.37	15.00	0.00
Casing	Production Casing	4.50	3.920	13.50	0.00	8481.00		8479.37		47.06

Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Density lbm/gal	Avg Rate bbl/min	Volume
1	Spacer	Fresh Water	8.34	2.00	5.00bbl
2	Spacer	TUNED SPACER III	10.00	4.00	20.0 bbl
3	Spacer	Mud Recovery Spacer	10.00	4.00	75.0 bbl
4	Spacer	MUD FLUSH	8.40	3.50	10.0 bbl
5	Spacer	Fresh Water	8.34	3.50	5.00bbl
6	Cement Slurry	LifeCem	13.50	4.00	250.0 sacks
7	Spacer	KCl Displacement	8.40	6.00	126.0 bbl

HALLIBURTON

Fluids Pumped

Stage/Plug # 1 **Fluid 1:** FRESH WATER
FRESH WATER

Fluid Density: 8.34 lbm/gal
Fluid Volume: 5.00 bbl
Pump Rate: 2.00 bbl/min

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

Fluid Density: 10.00 lbm/gal
Fluid Volume: 20.00 bbl
Pump Rate: 2.00 bbl/min

Stage/Plug # 1 **Fluid 2:** Mud Recovery Spacer
MUD RECOVERY

Fluid Density: 10.00 lbm/gal
Fluid Volume: 75.00 bbl
Pump Rate: 4.00 bbl/min

Stage/Plug # 1 **Fluid 3:** MUD FLUSH
MUD FLUSH - ZI - SBM (13383)

Fluid Density: 8.40 lbm/gal
Fluid Volume: 10.00 bbl
Pump Rate: 3.50 bbl/min

Stage/Plug # 1 **Fluid 1:** FRESH WATER
FRESH WATER

Fluid Density: 8.34 lbm/gal
Fluid Volume: 5.00 bbl
Pump Rate: 3.50 bbl/min

Stage/Plug # 1 **Fluid 4:** LifeCem
LIFECEM (TM) CEMENT
7.46 Gal Fresh Water

Fluid Weight: 13.50 lbm/gal
Slurry Yield: 1.73 ft³/sack
Total Mixing Fluid: 7.46 Gal
Surface Volume: 250.0 sacks
Sacks: 250.0 sacks
Calculated Fill: 2,800.00 ft
Estimated Top of Fluid: 4,500.00ft

Stage/Plug # 1 **Fluid 5:** KCl Displacement
KCL DISPLACEMENT WATER
7.15 lbm/bbl KCL

Fluid Density: 8.40 lbm/gal
Fluid Volume: 126.00 bbl
Pump Rate: 6.00 bbl/min

HALLIBURTON

Job Summary

Job Information

Job Start Date	6/1/2012 6:00:00 AM
Job MD	8,481.0 ft
Job TVD	8,479.4 ft
Height of Plug Container/Swage Above Rig Floor	5.0 ft
Surface Temperature at Time of Job	50 degF
Mud Type	INTEGRADE
Actual Mud Density	10 lbm/gal
Time Circulated before job	2.75 hour(s)
Mud Volume Circulated	990.00 bbl
Rate at Which Well was Circulated	6.000 bbl/min
Pipe Movement During Hole Circulation	None
Time From End Mud Circ. to Job Start	15.00 minute
Pipe Movement During Cementing	None
Calculated Displacement	126.28 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Annular flow Before Job? (Water/Gas)	Unknown
Annular flow After Job? (Water/Gas)	No
Length of Rat Hole	2.00 ft

Cementing Equipment

Number of Centralizers Used	65
Pipe Centralization	Above and Below Production Intervals
Brand of Float Equipment Used	HES
Did Float Equipment Hold?	Yes
Plug set used?	Yes
Brand of Plug set used?	HES
Did Plugs Bump?	Yes
Calculated Pressure to Bump Plugs	1,800.0 psig

Service Supervisor Reports

Job Log

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
05/31/2012 22:00	Call Out				Crew called out for Quicksilver Simoes 12-30 Production
06/01/2012 00:00	Pre-Convoy Safety Meeting				Discussed convoy order, route, traffic, and construction
06/01/2012 00:30	Depart from Service Center or Other Site				Departed for Quicksilver Simoes 12-30; DHS Rig 6
06/01/2012 03:00	Arrive At Loc				Arrived at location
06/01/2012 03:45	Assessment Of Location Safety Meeting				Assessed location, casing crew still on location will need to move some of their equipment in order to spot trucks and begin rigging up.
06/01/2012 04:00	Pre-Rig Up Safety Meeting				Discussed job duties, team lifting, overhead loads, pinch points, and uneven surfaces
06/01/2012 05:45	Rig-Up Completed				Rig up completed
06/01/2012 05:58	Other				Fill Lines to Pressure Test
06/01/2012 06:00	Pressure Test			5400.0	Pressure Test to 5400PSI
06/01/2012 06:07	Pump Water	2	5	10.0	Pump Fresh Water Spacer, good returns
06/01/2012 06:09	Pump Spacer	4	20	149.0	Pump Tuned Spacer III at 10PPG with red tracer dye
06/01/2012 06:17	Pump Spacer 2	4	75	64.0	Pump Mud Recovery at 10PPG
06/01/2012 06:17	Other				Pumping with wrong pump and an open valve switching to other pump
06/01/2012 06:32	Drop Top Plug				Drop Top Plug witnessed by company man and Ben Fuchs
06/01/2012 06:32	Pump Displacement	4	126	32.0	Pump 7% KCL Displacement Water
06/01/2012 06:34	Pump Spacer	3.5	10	98.0	Pump Mud Flush at 8.4PPG
06/01/2012 06:37	Pump Water	3.5	5	73.0	Pumped 5BBL Fresh Water Spacer per Company man request
06/01/2012 06:38	Pump Cement	4	77	58.0	Pump 250sacks of LifeCem at 13.5PPG Y: 1.73 ft ³ /sk W: 7.46gal/sk
06/01/2012 07:00	Shutdown				Shutdown to wash pump and lines to the pit.
06/01/2012 07:12	Other	6		72.0	Increased to 6BPM with 20BBLS gone, still seeing good returns at surface

HALLIBURTON

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
06/01/2012 07:21	Other	6		337.0	Lift pressure with 70BBLS gone
06/01/2012 07:29	Slow Rate	3		1222.0	Reduced rate to 3BPM with 110BBLS gone
06/01/2012 07:33	Bump Plug			1397.0	Bumped plug at 1397PSI took to 1935PSI Per company man, no colored spacer to surface, fresh water at surface
06/01/2012 07:35	Check Floats				Floats held with 1BBL back to truck, maintained good returns throughout entire job
06/01/2012 07:40	Post-Job Safety Meeting (Pre Rig-Down)				Discussed rig down responsibilities and good communication
06/01/2012 07:45	Rig-Down Equipment				Began rig down procedure
06/01/2012 08:45	Rig-Down Completed				All HES iron and equipment was safely rigged down
06/01/2012 08:50	Pre-Convoy Safety Meeting				Discussed fatigue, convoy order, wildlife, traffic
06/01/2012 09:00	Depart Location for Service Center or Other Site				Depart Location Thank you for using Halliburton!

The Road to Excellence Starts with Safety

Sold To #: 346707	Ship To #: 2927520	Quote #:	Sales Order #: 9545407
Customer: QUICKSILVER RESOURCES INC-EBUSINESS		Customer Rep:	
Well Name: Simoes		Well #: 12-30	API/UWI #:
Field:	City (SAP): CRAIG	County/Parish: Moffat	State: Colorado
Contractor: DHS		Rig/Platform Name/Num: 6	
Job Purpose: Cement Production Casing			
Well Type: Exploratory / Wildcat		Job Type: Cement Production Casing	
Sales Person: SCOTT, KYLE	Srvc Supervisor: FUCHS, BENJAMIN		MBU ID Emp #: 470584

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BROWN, CHARLI Anne	6.0	490285	EDWARDS, CORY Larell	6.0	499221	FUCHS, BENJAMIN Reinhard	6.0	470584
LAWTON, CURTIS Keith	6.0	492181	VOORHIS, WALTER T	6.0	472268			

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10948687	80 mile	11019277	80 mile	11211506	80 mile	11338217	80 mile
11360879	80 mile	11410664	80 mile	11512092	80 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				Date	Time	Time Zone
Formation Depth (MD)	Top	Bottom		Called Out	31 - May - 2012	22:00 MST
Form Type	BHST			On Location	01 - Jun - 2012	03:00 MST
Job depth MD	8481. ft	Job Depth TVD	8479.4 ft	Job Started	01 - Jun - 2012	06:00 MST
Water Depth		Wk Ht Above Floor	5. ft	Job Completed	01 - Jun - 2012	07:45 MST
Perforation Depth (MD)	From	To		Departed Loc	01 - Jun - 2012	09:00 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
Production Open Hole				6.125				6496	8481		
Intermediate Casing	Unknown		7.	6.276	26.		N-80	.	6496		
Production Casing	Unknown		4.5	3.92	13.5		L-80	.	8481		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
CLR,FLT,4-1/2 8RD,9.5-13.5PPF,2-3/4	1	EA		
SHOE,FLT,4-1/2 8RD,2-3/4 SSII	1	EA		
CLAMP - LIMIT - 4-1/2 - HINGED -	1	EA		
CENTRALIZER ASSY - API - 4-1/2 CSG X	20	EA		
KIT,HALL WELD-A	1	EA		
Description	Qty	Qty uom	Depth	Supplier

MILEAGE FOR CEMENTING CREW,ZI	160	MI		
ZI FUEL SURCHG-CARS/PICKUPS<1 1/2TON	160	MI		
PLUG,CMTG,BOT,4 1/2,HWE,3.65 MIN/4.14 MA	1	EA		
PLUG,CMTG,TOP,4 1/2,HWE,3.65 MIN/4.14 MA	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)	20.00	bbl	10.	5.91	40.17	.0	
	0.125 gal/bbl	D-AIR 3000L, 5 GAL PAIL (101007444)							
	59.8 lbm/bbl	BARITE, BULK (100003681)							
	38.32 gal/bbl	FRESH WATER							
	0.125 gal/bbl	MUSOL(R) A, BULK (100003696)							
	0.125 gal/bbl	SEM-7, 55 GAL DRUM (100001626)							
2	Mud Recovery Spacer		75.00	bbl	10.	.0	.0	.0	
	47.5 lbm/bbl	BARITE, BULK (100003681)							
	12.5 lbm/bbl	HALLIBURTON GEL, 50 LB SK (100064040)							
	0.05 gal/bbl	ANHIB II (100003821)							
3	MUD FLUSH	MUD FLUSH - ZI - SBM (13383)	10.00	bbl	8.4	.0	.0	.0	
4	LifeCem	LIFECM (TM) CEMENT (532084)	250.0	sacks	13.5	1.73	7.46		7.46
5	KCl Displacement		126.00	bbl	8.4	.0	.0	5.0	
	7.15 lbm/bbl	POTASSIUM CHLORIDE 7% (100001585)							
	42 gal/bbl	WATER - FRESH - GAL (24047)							

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	

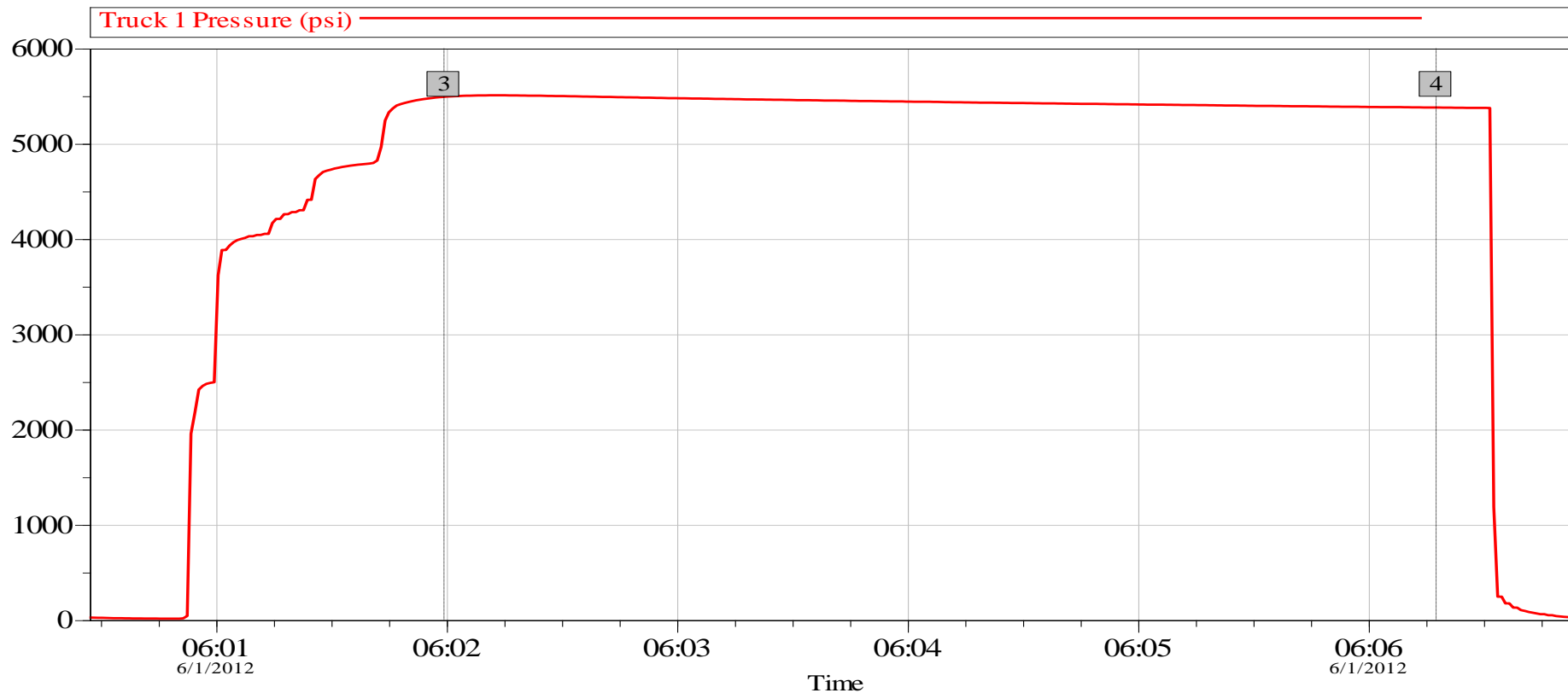
Rates

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
--	-----------------------------------

Data Acquisition

Quicksilver Simoes 12-30 Production Pressure Test



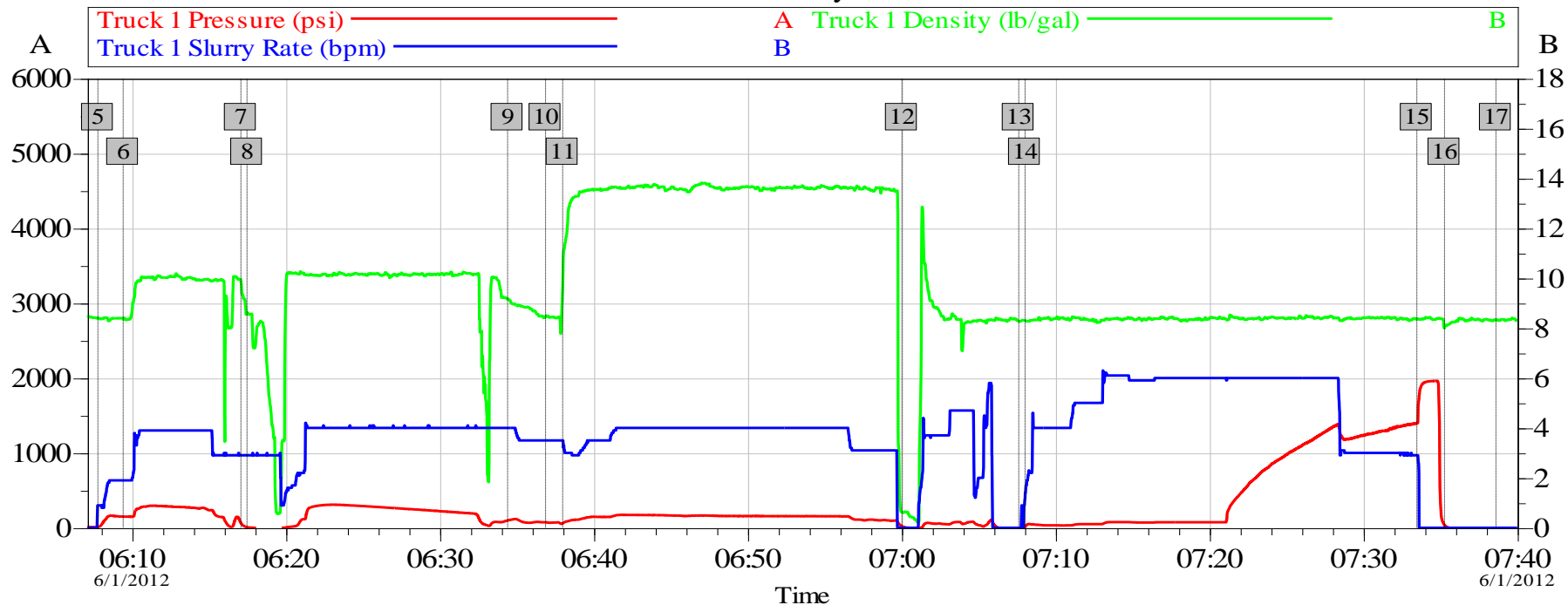
Global Event Log			
Intersection	PSI	Intersection	PSI
3 Test Lines	06:01:59 5489	4 Pressure Test	06:06:18 5377

Customer: Quicksilver	Job Date: 01-Jun-2012	Sales Order #: 9545407
Job Description: 4.5" Production	UWI: 05081077220000	Elite #: 11512092
Supervisor Ben Fuchs	Operator Walt Voorhis	Service Leader N/A

OptiCem v6.4.10
01-Jun-12 07:51

Quicksilver Simoes 12-30 Production

Job Summary Chart



Global Event Log

5	Pump Water Spacer	06:07:48	6	Pump Tuned Spacer III	06:09:26	7	Pump Mud Recovery	06:17:05
8	Switching Pumps	06:17:29	9	Pump Mud Flush	06:34:25	10	Pump Water	06:36:53
11	Pump Cement	06:38:00	12	Shutdown	07:00:02	13	Drop Top Plug	07:07:37
14	Pump Displacement	07:08:02	15	Bump Plug	07:33:29	16	Check Floats	07:35:17
17	Job Complete	07:38:37						

Customer: Quicksilver
Job Description: 4.5" Production
Supervisor: Ben Fuchs

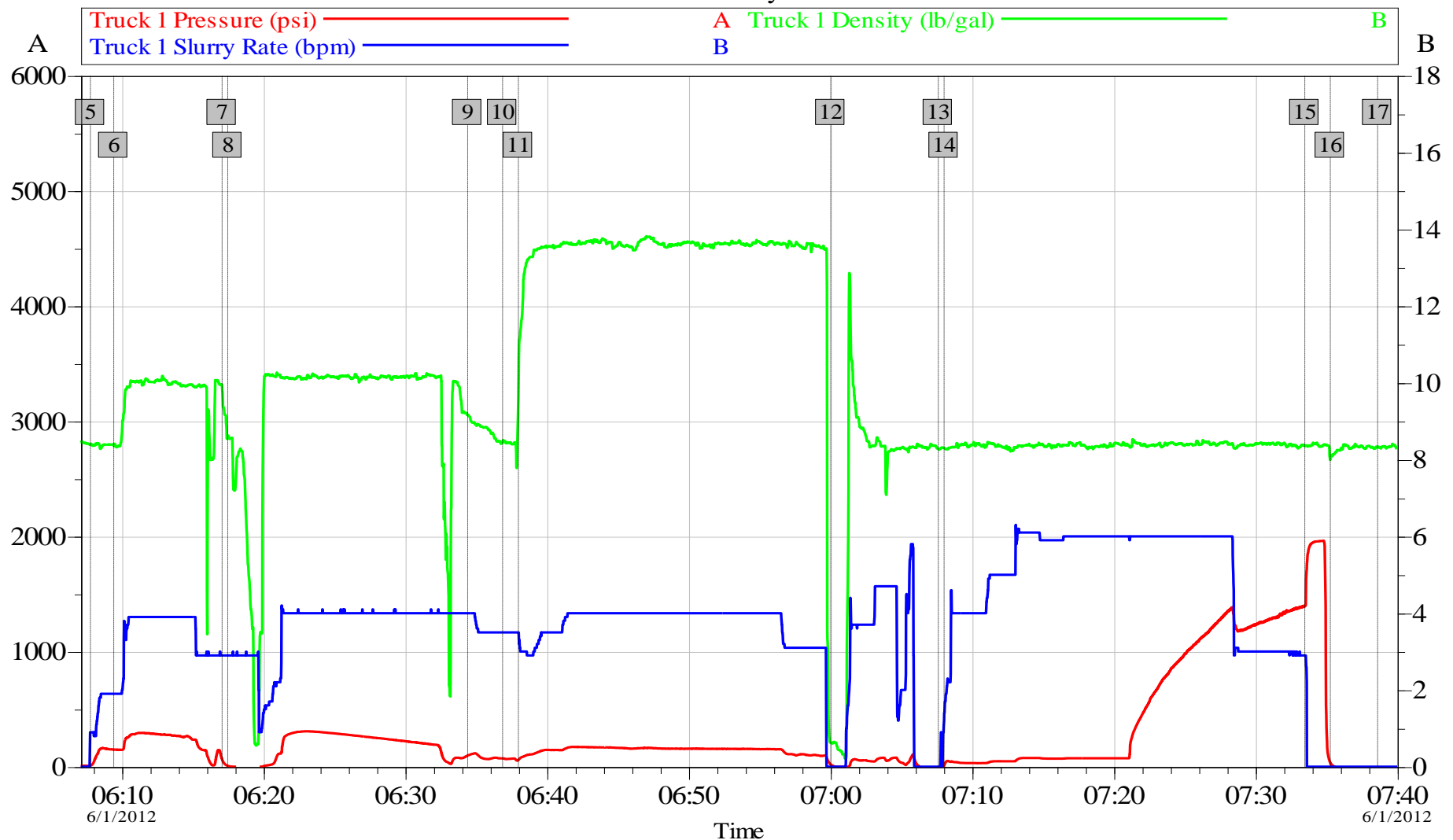
Job Date: 01-Jun-2012
UWI: 05081077220000
Operator: Walt Voorhis

Sales Order #: 9545407
Elite #: 11512092
Service Leader: N/A

OptiCem v6.4.10
01-Jun-12 07:52

Quicksilver Simoes 12-30 Production

Job Summary Chart



Customer: Quicksilver	Job Date: 01-Jun-2012	Sales Order #: 9545407
Job Description: 4.5" Production	UWI: 05081077220000	Elite #: 11512092
Supervisor: Ben Fuchs	Operator: Walt Voorhis	Service Leader: N/A

OptiCem v6.4.10
01-Jun-12 07:53

HALLIBURTON

Lab Data

Cementing Rockies, Vernal

LAB RESULTS - Primary

Job Information

Request/Slurry	242206/1	Rig Name	DHS DRILLING #6	Date	29/MAY/2012
Submitted By	Thomas Stumpf	Job Type	Production Casing	Bulk Plant	Vernal
Customer	Quicksilver Resources Inc.	Location	Rio Blanco	Well	Simoes 12-30

Well Information

Casing/Liner Size	8 5/8"	Depth MD	8500 ft	BHST	235 F
Hole Size	10 3/4"	Depth TVD	0 ft	BHCT	163 F

Cement Information - Primary Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties	
		LifeCem				Slurry Density	13.50 PPG
						Slurry Yield	1.73 ft3/sk
100.00	% BWOC	Cement Blend				Water Requirement	7.46 GPS
7.46	gal/sack	Fresh Water	Lab	Mar 08, 2012	3/8/12	Total Mix Fluid	7.46 GPS

Operation Test Results Request ID 242206/1

Thickening Time, Request Test ID:2549097

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)
163	5,250	43	7	04:44	04:46	04:47

Mixability (0 - 5) - 0 is not mixable, Request Test ID:2549098

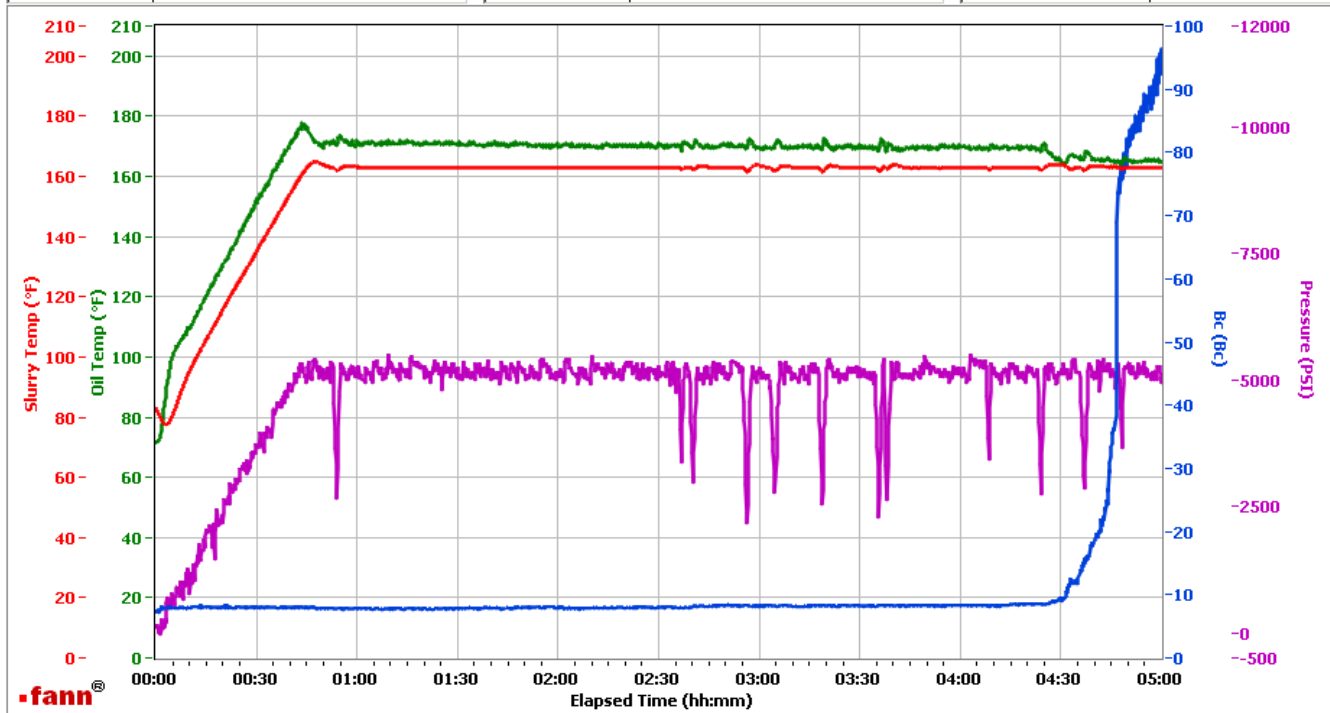
Mixability rating (0 - 5)

5

HALLIBURTON

Vernal

Fields	Values	Fields	Values	Events	Results
Project Name	Quicksilver	Job Type	prod prim	30.00 Bc	04h:44m
Test ID	242206-1	Cement Type	poz, ii/v	50.00 Bc	04h:46m
Request ID	hpht2	Cement Weight	Standard	70.00 Bc	04h:47m
Tested by	amanda	Test Date	05/30/12	100.00 Bc	NaN
Customer	Quicksilver	Test Time	02:01 AM	00h:30m	8.12
Well No	Simoes 12-30	Temp. Units	degF	01h:00m	7.89
Rig	6	Pressure Units	PSI	01h:30m	7.97
Casing/Liner Size	8.625	SW Version	2.0.2.206	02h:00m	7.99



Data File Z:\HPHT Data Files\Vernal Consistometer #2\Quicksilver 242206-1.tdms

Comments poz, ii/v, 13.503 den, 1.73 yd