

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

SIMOES 12-30

DHS 20

Post Job Summary **Cement Surface Casing**

Service Supervisor: FUCHS, BENJAMIN

Submitted by: Thomas Stumpf

HALLIBURTON

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Wellbore Geometry

Job Tubulars					MD		Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	
Open Hole Section	Surface Open Hole		12.250		0.00	1,200.00	
Casing	Surface Casing	9.63	8.921	36.00	0.00	1,200.00	40.00

Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Density lbm/gal	Avg Rate bbl/min	Volume
1	Spacer	SUPER FLUSH 101	10.00	4	20.0 bbl
2	Cement Slurry	VariCem V1	12.30	6	200.0 sacks
3	Cement Slurry	VariCem V1	13.50	5	200.0 sacks
4	Mud	Displacement	8.33	8	94.0 bbl
5	Cement Slurry	HalCem TopOut	15.80	2	115.0 sacks

Job Summary

Job Information

Job Start Date	5/19/2012 1:04:00 AM
Job MD	1,255.0 ft
Job TVD	1,255.0 ft
Height of Plug Container/Swage Above Rig Floor	4.0 ft
Surface Temperature at Time of Job	58 degF
Mud Type	Water Based Mud
Actual Mud Density	9 lbm/gal
Time Circulated before job	0.50 hour(s)
Mud Volume Circulated	240.00 bbl
Rate at Which Well was Circulated	8.000 bbl/min
Mud loss while Circulating	40.00 bbl
Pipe Movement During Hole Circulation	Reciprocated
Time From End Mud Circ. to Job Start	15.00 minute
Pipe Movement During Cementing	Reciprocated
Calculated Displacement	94.00 bbl
Amount of Cement Returns	3.00 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Annular flow Before Job? (Water/Gas)	No
Annular flow After Job? (Water/Gas)	No

Cementing Equipment

Number of Centralizers Used	15
Pipe Centralization	Through Entire Cement Column
Brand of Float Equipment Used	Weatherford
Did Float Equipment Hold?	Yes
Plug set used?	Yes
Brand of Plug set used?	HES
Did Plugs Bump?	Yes
Calculated Pressure to Bump Plugs	276.0 psig
Did Stage Cementing Tool Open Properly?	Unknown

Service Supervisor Reports

Job Log

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
05/18/2012 16:30	Call Out				
05/18/2012 17:45	Safety Meeting - Departing Location				Discuss all travel related safety issues with crew
05/18/2012 18:00	Crew Leave Yard				
05/18/2012 22:30	Arrive at Location from Service Center				1/2 hour late Pump truck had a flat tire that we had to wait on to be repaired
05/18/2012 22:45	Safety Meeting - Assessment of Location				Identify and discuss all jobsite hazards and equipment layout
05/18/2012 23:00	Other				Spot equipment using spotter(s)
05/18/2012 23:15	Safety Meeting - Pre Rig-Up				Discuss all rig up related safety issues with crew
05/18/2012 23:30	Rig-Up Equipment				
05/19/2012 00:45	Safety Meeting - Pre Job				Discuss all job related safety issues and pump schedule with crew and rig crew
05/19/2012 01:04	Start Job				
05/19/2012 01:05	Pump Water	2	3	40.0	Fill lines for pressure test
05/19/2012 01:05	Pressure Test			3498.0	
05/19/2012 01:07	Pump Water	4	10	70.0	
05/19/2012 01:10	Pump Spacer	4	20	72.0	Superflush mixed @ 10.0 ppg
05/19/2012 01:15	Pump Water	4	10	78.0	
05/19/2012 01:18	Pump Lead Cement	6	80	139.0	Lead mixed @ 12.3 ppg 2.25 yield 12.67 gal/sk (200 sks)
05/19/2012 01:27	Pump Tail Cement	6	61	216.0	Tail mixed @ 13.5 ppg 1.73 yield 8.77 gal/sk (200 sks)
05/19/2012 01:44	Shutdown			120.0	
05/19/2012 01:46	Drop Plug				

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Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
05/19/2012 01:46	Pump Displacement	8	94	157.0	
05/19/2012 01:54	Cement Returns to Surface	8			Cement to surface with 59 bbls away
05/19/2012 01:54	Other	8			Lost returns with 62 bbls away. Slowed rate to 5 bbls/min at that time
05/19/2012 01:59	Slow Rate	4		314.0	
05/19/2012 02:01	Bump Plug			245.0	
05/19/2012 02:03	Check Floats			916.0	
05/19/2012 02:05	End Job				
05/19/2012 02:10	Wait on Orders - Start Time				Company Man is deciding if we will top out or not
05/19/2012 04:02	Pump Cement	2	25	260.0	1st Top Out mixed @ 15.8 ppg 1.2 yield 5.26 gal/sk (115 sks)
05/19/2012 04:07	Cement Returns to Surface	2		272.0	Cement to surface with 10 bbls away. 10 bbls = 72' in conductor annulus
05/19/2012 04:14	Shutdown				Observed cement in annulus. It is not falling back
05/19/2012 04:15	Safety Meeting - Pre Rig-Down				Discuss all rig down related safety issues with crew
05/19/2012 04:30	Rig-Down Equipment				
05/19/2012 06:15	Safety Meeting - Departing Location				Discuss all travel related safety issues with crew
05/19/2012 06:30	Crew Leave Location				

The Road to Excellence Starts with Safety

Sold To #: 346707	Ship To #: 2927520	Quote #:	Sales Order #: 9522058
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: DHS 20	
Job Purpose: Cement Surface Casing			
Well Type: Exploratory / Wildcat		Job Type: Cement Surface 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 #
ELDER, DENNIS R	8.0	505202	FUCHS, BENJAMIN Reinhard	8.0	470584	VOORHIS, WALTER T	8.0	472268
WHITE, KAMEREON V	8.0	475856						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10948687	80 mile	10991611	80 mile	11024385	80 mile	11338213	80 mile
11360879	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	18 - May - 2012	04:30 MST
Form Type	BHST			On Location	18 - May - 2012	22:30 MST
Job depth MD	1255. ft	Job Depth TVD	1255. ft	Job Started	19 - May - 2012	01:04 MST
Water Depth		Wk Ht Above Floor	4. ft	Job Completed	19 - May - 2012	04:14 MST
Perforation Depth (MD)	From	To		Departed Loc	19 - May - 2012	06:30 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
Surface Open Hole				12.25				.	1200.		
Surface Casing	Unknown		9.625	8.921	36.		J-55	.	1200.		

Sales/Rental/3rd 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		
PLUG,CMTG,TOP,9 5/8,HWE,8.16 MIN/9.06 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	SUPER FLUSH 101	SUPER FLUSH 101 - SBM (12199)	20.00	bbl	10.	.0	.0	.0	
2	VariCem V1	VARICEM (TM) CEMENT (452009)	200.0	sacks	12.3	2.25	12.67		12.67
	0.125 lbm	POLY-E-FLAKE (101216940)							
	1 lbm	GRANULITE TR 1/4, 50 LB SK (100064073)							
	12.67 Gal	FRESH WATER							
3	VariCem V1	VARICEM (TM) CEMENT (452009)	200.0	sacks	13.5	1.73	8.77		8.77
	0.125 lbm	POLY-E-FLAKE (101216940)							
	1 lbm	GRANULITE TR 1/4, 50 LB SK (100064073)							
	8.77 Gal	FRESH WATER							
4	Displacement		94.00	bbl	.			.0	
5	HalCem TopOut	HALCEM (TM) SYSTEM (452986)	115.0	sacks	15.8	1.2	5.26		5.26
	2 %	CALCIUM CHLORIDE - HI TEST PELLET (100005053)							
	5.26 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	

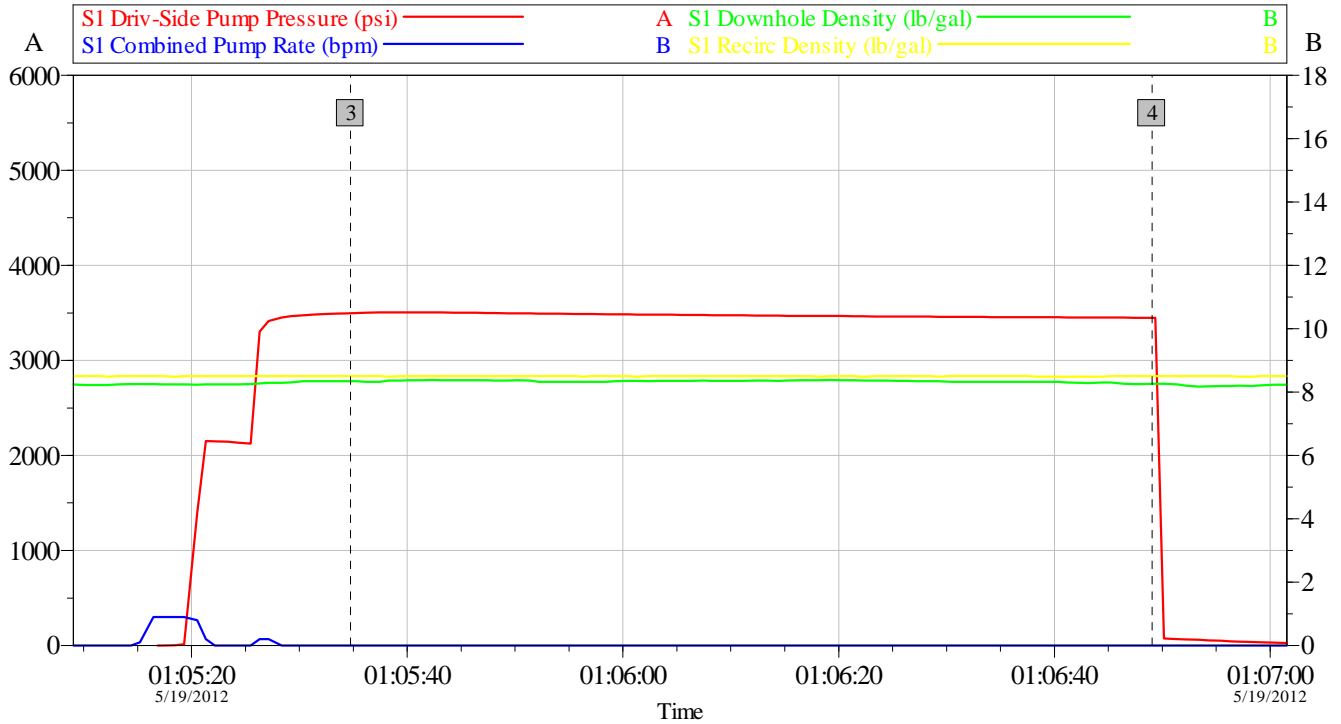
Rates

Circulating		Mixing		Displacement		Avg. Job	
Cement Left In Pipe	Amount	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
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Data Acquisition

Quicksilver Simoes 12-30 Production Pressure Test



Global Event Log					
Intersection		SDPP	SCPR	Intersection	
3	Test Lines	01:05:35	3498 0.000	4	Other
					01:06:49 3448 0.000

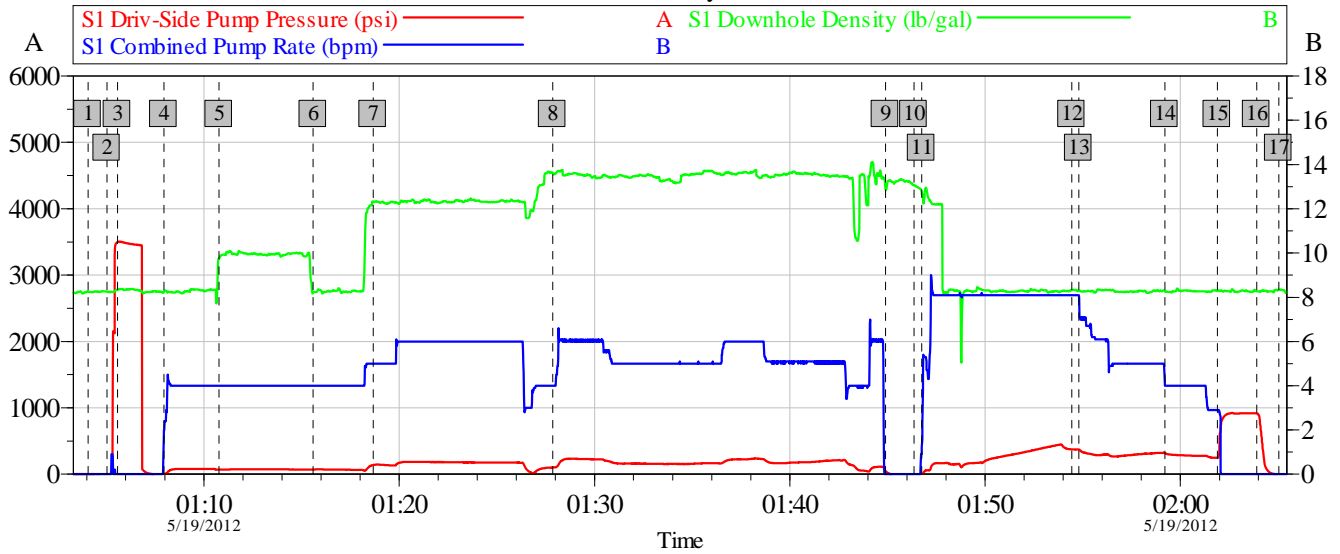
Customer: Quicksilver	Job Date: 19-May-2012	Sales Order #: 9522058
Job Description: Surface	API #: 05081077220000	Elite #: 11512092
Service Supervisor: B. Fuchs	Service Operator: K. White	

OptiCem v6.4.10
19-May-12 01:22

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Quicksilver Simoes 12-30 Production

Job Summary Chart



Global Event Log

1 Starting Job	01:04:04	2 Fill Lines	01:05:03	3 Test Lines	01:05:35
4 Pump Water	01:07:57	5 Pump Superflush	01:10:47	6 Pump Water	01:15:36
7 Pump Lead Cement	01:18:40	8 Pump Tail Cement	01:27:52	9 Shutdown	01:44:54
10 Drop Plug	01:46:21	11 Pump Displacement	01:46:45	12 Cement Returns to Surface	01:54:27
13 Lost Circulation	01:54:48	14 Slow Rate	01:59:13	15 Bump Plug	02:01:54
16 Check Floats	02:03:55	17 Ending Job	02:05:02		

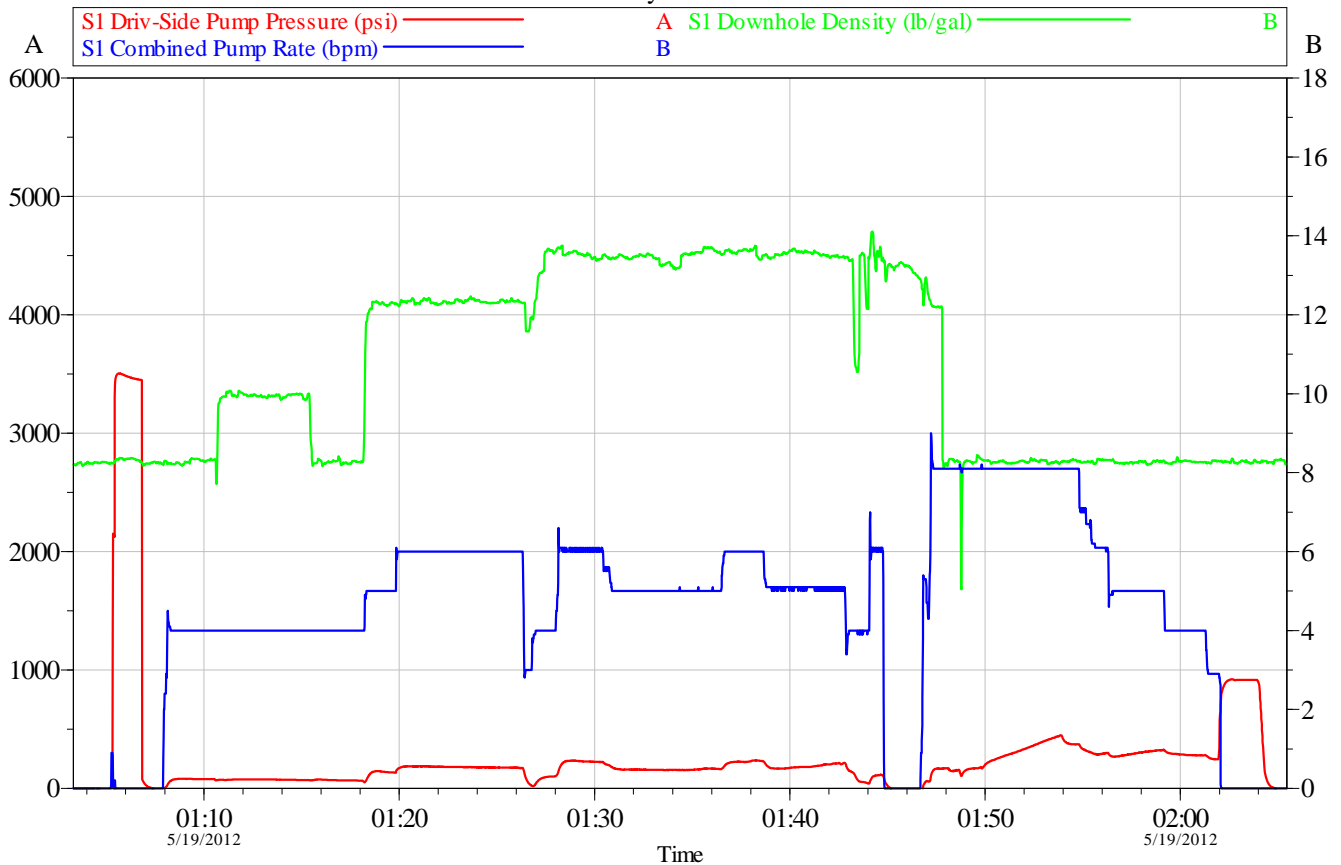
Customer: Quicksilver	Job Date: 19-May-2012	Sales Order #: 9522058
Job Description: Surface	API #: 05081077220000	Elite #: 11512092
Service Supervisor: B. Fuchs	Service Operator: K. White	

OptiCem v6.4.10
19-May-12 02:25

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Quicksilver Simoes 12-30 Production

Job Summary Chart No Events



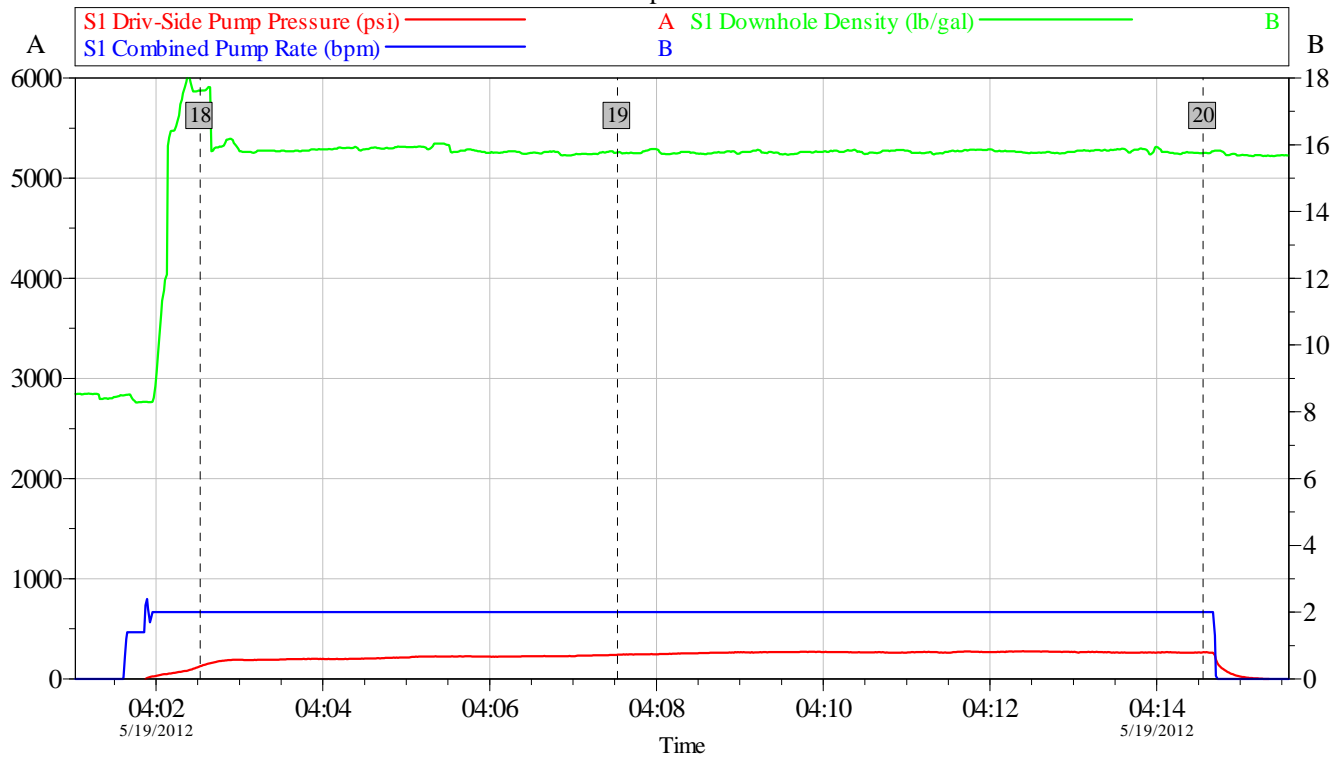
Customer: Quicksilver	Job Date: 19-May-2012	Sales Order #: 9522058
Job Description: Surface	API #: 05081077220000	Elite #: 11512092
Service Supervisor: B. Fuchs	Service Operator: K. White	

OptiCem v6.4.10
19-May-12 02:10

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Quicksilver Simoes 12-30 Production

Top Out #1



Customer: Quicksilver	Job Date: 19-May-2012	Sales Order #: 9522058
Job Description: Surface	API #: 05081077220000	Elite #: 11512092
Service Supervisor: B. Fuchs	Service Operator: K. White	

OptiCem v6.4.10
19-May-12 04:49

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Lab Data

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Cementing Rockies, Vernal

LAB RESULTS - Lead

Job Information

Request/Slurry	239377/1	Rig Name		Date	18/MAY/2012
Submitted By	Laura Burnett	Job Type	Surface Casing	Bulk Plant	Vernal
Customer	Quicksilver Resources Inc.	Location		Well	Simoes 12-30

Well Information

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

Cement Information - Lead Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
100.00	% BWOC	Cement	Bulk	May 18, 2012	1000122	Slurry Density	12.30	PPG
					29	Slurry Yield	2.26	ft3/sk
13.04	gal/sack	Field (Fresh) Water				Water Requirement	13.04	GPS

Operation Test Results Request ID 239377/1

Thickening Time, Request Test ID:2511662

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	Termination Time	Termination BC
82	800	14	11	04:08	07:00	14

Mixability (0 - 5) - 0 is not mixable, Request Test ID:2511663

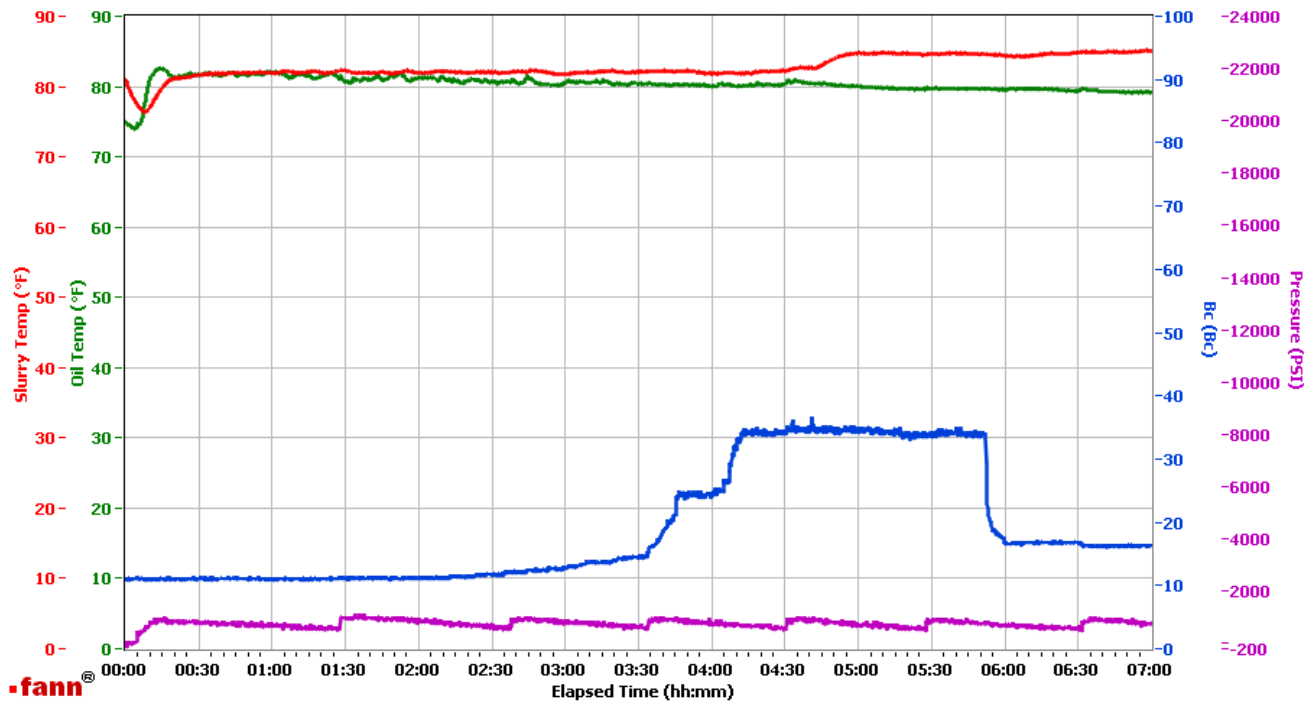
Mixability rating (0 - 5)

5

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Vernal

Fields	Values	Fields	Values	Events	Results
Project Name	QUICKSILVER	Job Type	SURFACE LEAD	30.00 Bc	04h:08m
Test ID	239377-1	Cement Type	III	50.00 Bc	NaN
Request ID	HPHT #4	Cement Weight	Light Weight	70.00 Bc	NaN
Tested by	D.O.	Test Date	05/18/12	100.00 Bc	NaN
Customer	QUICKSILVER	Test Time	10:35 PM	00h:30m	11.22
Well No	SIMOES 12-30	Temp. Units	degF	01h:00m	10.88
Rig	20	Pressure Units	PSI	01h:30m	11.17
Casing/Liner Size	9.625	SW Version	2.0.2.206	02h:00m	11.06



Data File Z:\HPHT Data Files\Vernal Consistometer #4\QUICKSILVER 239377-1.tdms

Comments 12.3 DEN, 2.26 YD

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Cementing Rockies, Vernal

LAB RESULTS - Tail

Job Information

Request/Slurry	239378/1	Rig Name		Date	18/MAY/2012
Submitted By	Laura Burnett	Job Type	Surface Casing	Bulk Plant	Vernal
Customer	Quicksilver Resources Inc.	Location		Well	Simoes 12-30

Well Information

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

Cement Information - Tail Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties	
100.00	% BWOC	Cement Blend				Slurry Density	13.50 PPG
9.12	gal/sack	Field (Fresh) Water				Slurry Yield	1.73 ft3/sk
						Water Requirement	9.12 GPS

Operation Test Results Request ID 239378/1

Thickening Time, Request Test ID:2511670

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)
82	800	14	18	01:42	01:51	01:54	01:55

Mixability (0 - 5) - 0 is not mixable, Request Test ID:2511671

Mixability rating (0 - 5)

5

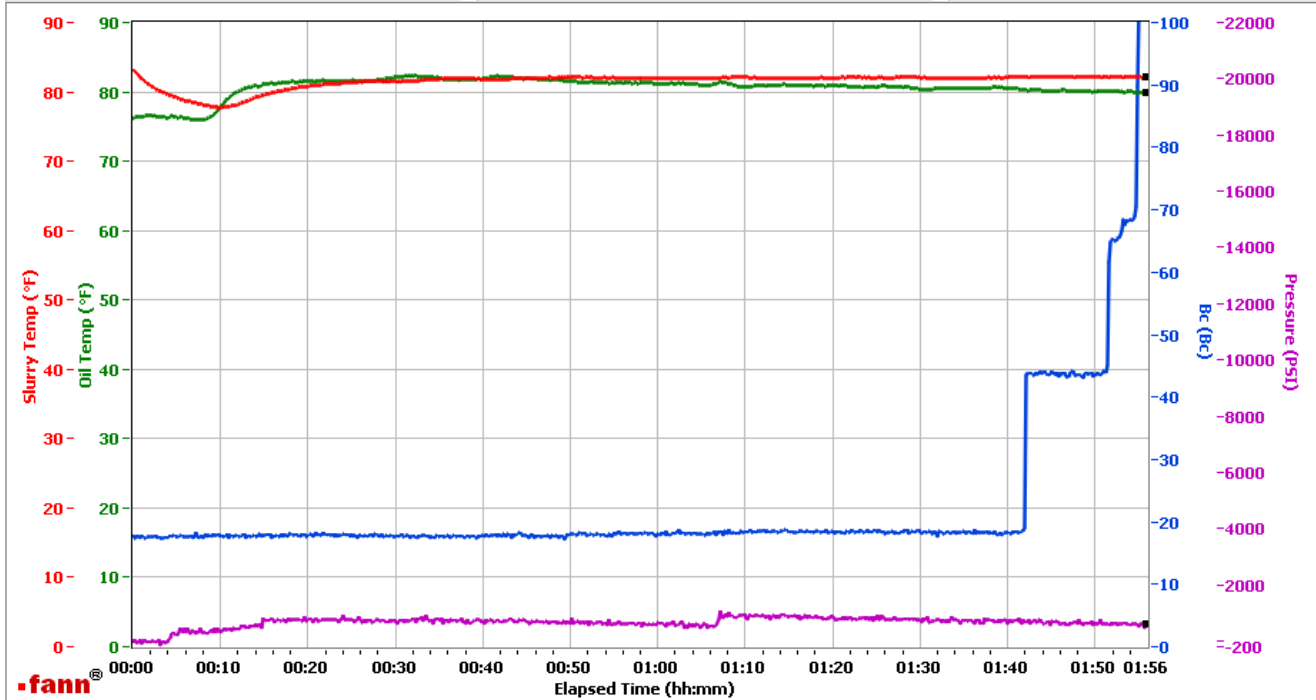
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Vernal

Fields	Values
Project Name	QUICKSILVER
Test ID	239378-1
Request ID	HPHT #5
Tested by	D.O.
Customer	QUICKSILVER
Well No	SIMOES 12-30
Rig	
Casing/Liner Size	9.625

Fields	Values
Job Type	SURFACE TAIL
Cement Type	III
Cement Weight	Light Weight
Test Date	05/19/12
Test Time	12:52 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.0.2.206

Events	Results
30.00 Bc	01h:42m
50.00 Bc	01h:51m
70.00 Bc	01h:54m
100.00 Bc	01h:55m
00h:30m	17.64
01h:00m	18.06
01h:30m	18.41
02h:00m	NaN



Data File Z:\HPHT Data Files\Vernal Consistometer #5\QUICKSILVER 239378-1.tdms

Comments 13.5 DEN, 1.73 YD