
ANTERO RESOURCES

**McLin B 15
KOKPELLI
Garfield County , Colorado**

Cement Surface Casing **30-Mar-2012**

Post Job Report

The Road to Excellence Starts with Safety

Sold To #: 337854		Ship To #: 2917167		Quote #:		Sales Order #: 9387100	
Customer: ANTERO RESOURCES				Customer Rep: Oaks, Beade			
Well Name: McLin			Well #: B 15		API/UWI #: 05-045-19382		
Field: KOKPELLI		City (SAP): DENVER		County/Parish: Garfield		State: Colorado	
Lat: N 39.531 deg. OR N 39 deg. 31 min. 51.704 secs.				Long: W 107.608 deg. OR W -108 deg. 23 min. 30.055 secs.			
Contractor: CRAIGS #2			Rig/Platform Name/Num: CRAIG #2				
Job Purpose: Cement Surface Casing							
Well Type: Development Well			Job Type: Cement Surface Casing				
Sales Person: METLI, MARSHALL			Srvc Supervisor: YOUNG, JEREMY			MBU ID Emp #: 418013	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BURKE, BRENDAN Patrick	9.5	487782	CASTILLO, FRANCISCO P	9.5	513620	GOWEN, WESLEY M	9.5	496205
YOUNG, JEREMY R	9.5	418013	BLUST, CHARLES	3	386662			

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10011429	120 mile	10248065	120 mile	10872429	120 mile	11259881	120 mile
11808847	120 mile	10969711	120 mile	10001431	120 mile		

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
03/29/2012	1	.5	03/30/2012	8.5	4.5			

TOTAL Total is the sum of each column separately

Job

Formation Name	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Water Depth	Perforation Depth (MD)	From	To
				BHST	1055. ft				

Job Times

Date	Time	Time Zone
29 - Mar - 2012	19:10	MST
29 - Mar - 2012	23:00	MST
30 - Mar - 2012	00:36	MST
30 - Mar - 2012	07:21	MST
30 - Mar - 2012	08:30	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
12 1/4" OPEN HOLE				12.25				.	1070.		
8 5/8" SURFACE CASING	Unknown		8.625	7.921	32.		J-55	.	1055.		

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug	8.625	1	HES
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

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

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	Water Spacer	FRESH WATER	20.00	bbl	8.33	.0	.0	4	
2	Lead Cement	VERSACEM (TM) SYSTEM (452010)	160.0	sacks	12.3	2.38	13.77	6	13.77
		13.77 Gal	FRESH WATER						
3	Tail Cement	SWIFTCEM (TM) SYSTEM (452990)	205.0	sacks	14.2	1.43	6.85	6	6.85
		6.85 Gal	FRESH WATER						
4	Fresh Water Displacement	FRESH WATER	61.60	bbl	8.33	.0	.0	6	
5	Topout Cement	TOPOUT CEMENT	175	sacks	15.8	1.15	5.01	2	
Calculated Values		Pressures		Volumes					
Displacement	61.6	Shut In: Instant		Lost Returns	YES	Cement Slurry	155.8	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	10	Actual Displacement	61.6	Treatment	
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job	238.4
Rates									
Circulating		Mixing	6	Displacement	6	Avg. Job	6		
Cement Left In Pipe	Amount	44.2 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					

The Road to Excellence Starts with Safety

Sold To #: 337854	Ship To #: 2917167	Quote #:	Sales Order #: 9387100
Customer: ANTERO RESOURCES		Customer Rep: Oaks, Beaudé	
Well Name: McLin	Well #: B 15	API/UWI #: 05-045-19382	
Field: KOKPELLI	City (SAP): DENVER	County/Parish: Garfield	State: Colorado
Legal Description:			
Lat: N 39.531 deg. OR N 39 deg. 31 min. 51.704 secs.		Long: W 107.608 deg. OR W -108 deg. 23 min. 30.055 secs.	
Contractor: CRAIGS #2		Rig/Platform Name/Num: CRAIG #2	
Job Purpose: Cement Surface Casing			Ticket Amount:
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: METLI, MARSHALL		Srv Supervisor: YOUNG, JEREMY	MBU ID Emp #: 418013

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	03/29/2012 19:10							
Pre-Convoy Safety Meeting	03/29/2012 20:50							WITH ALL HES PERSONNEL
Crew Leave Yard	03/29/2012 21:00							
Arrive At Loc	03/29/2012 23:00							RIG WAS RUNNING CASING UPON HES ARRIVAL
Assessment Of Location Safety Meeting	03/29/2012 23:20							WITH ALL HES PERSONNEL
Other	03/29/2012 23:30							SPOT EQUIPMENT
Pre-Rig Up Safety Meeting	03/29/2012 23:40							WITH ALL HES PERSONNEL
Rig-Up Equipment	03/29/2012 23:50							
Pre-Job Safety Meeting	03/30/2012 00:20							WITH ALL PERSONNEL ON LOCATION
Start Job	03/30/2012 00:36							TD 1070 FT, TP 1055 FT, SHOE 44.2 FT, HOLE 12 1/4 IN, AIR DRILLED, CSG 8 5/8 IN 32 LB/FT J-55
Other	03/30/2012 00:36		1	1			.0	FILL LINES WITH FRESH WATER
Test Lines	03/30/2012 00:38							TEST LINES TO 3200 PSI.. PRESSURE HOLDING
Pump Spacer 1	03/30/2012 00:44		4	20			20.0	FRESH WATER
Pump Lead Cement	03/30/2012 00:54		6	67.8			90.0	160 SKS AT 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK
Activity Description	Date/Time	Cht	Rate bbl/min	Volume bbl		Pressure psig		Comments

Sold To # : 337854

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Quote # :

Sales Order # : 9387100

SUMMIT Version: 7.3.0021

Wednesday, April 04, 2012 04:29:00

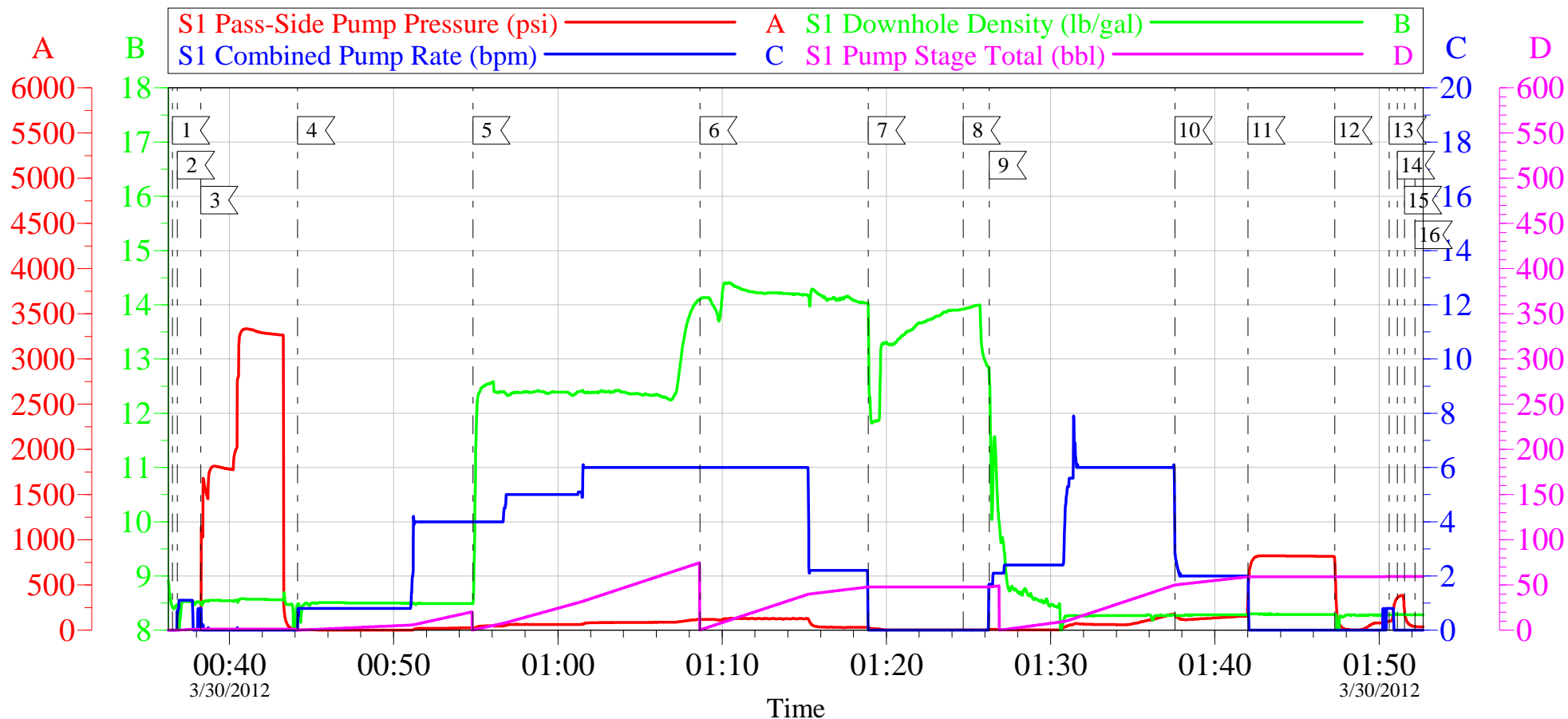
		#		Stage	Total	Tubing	Casing	
Pump Tail Cement	03/30/2012 01:08		6	52.2			125.0	205 SKS AT 14.2 PPG, 1.43 FT3/SK, 6.85 GAL/SK
Shutdown	03/30/2012 01:18							
Drop Top Plug	03/30/2012 01:24							REMOVED SWAGE TO MANUALLY DROP PLUG
Pump Displacement	03/30/2012 01:26		6	51.6			177.0	FRESH WATER
Slow Rate	03/30/2012 01:37		2	10			160.0	SLOW RATE 10 BBLS PRIOR TO CALCULATED DISPLACEMENT
Bump Plug	03/30/2012 01:42		2		61.6		820.0	PLUG BUMPED
Check Floats	03/30/2012 01:47							FLOATS NOT HOLDING. RETURNED 1 BBL H2O TO PUMP
Pressure Up Well	03/30/2012 01:50						350.0	
Shut In Well	03/30/2012 01:51						350.0	SHUT IN WELL WITH 350 PSI ON CASING AS PER COMPANY REP
Other	03/30/2012 01:51							RELEASE PRESSURE
End Job	03/30/2012 01:52							JOB WAS PUMPED OFFLINE THROUGH SWAGE. PIPE WAS STATIC DURING JOB. NO CIRCULATION THROUGHOUT JOB. HES DID NOT RETURN ANY CEMENT TO SURFACE
Comment	03/30/2012 01:53							CREW HELD ON LOCATION TO WAIT FOR TOPOUT CEMENT
Start Job	03/30/2012 06:33							TOPOUT #1. HES RAN 5 STICKS OF 1 INCH TUBING DOWN BACKSIDE TO TOPOUT THROUGH.
Pump Water	03/30/2012 06:33		1	1		20.0		PUMP WATER AHEAD TO ENSURE LINES ARE CLEAR.
Shutdown	03/30/2012 06:34							SHUTDOWN TO MIX UP CEMENT
Pump Cement	03/30/2012 06:42		2	35.8		300.0		175 SKS AT 15.8 PPG, 1,15 FT3/SK, 5.01 GAL/SK

Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Shutdown	03/30/2012 07:20							HES HESITATED 6 TIMES WHEN CEMENT WOULD COME BACK TO SURFACE TO SEE IF CEMENT WOULD FALL BACK
End Job	03/30/2012 07:21							RETURNED TOTAL OF 10 BBL CEMENT TO SURFACE
Pre-Rig Down Safety Meeting	03/30/2012 07:30							WITH ALL HES PERSONNEL
Rig-Down Equipment	03/30/2012 07:40							
Pre-Convoy Safety Meeting	03/30/2012 08:20							WITH ALL HES PERSONNEL
Crew Leave Location	03/30/2012 08:30							
Comment	03/30/2012 08:31							THANK YOU FOR USING HALLIBURTON CEMENT DEPARTMENT. JEREMY YOUNG AND CREW.

ANTERO - MCLIN B15

8 5/8 SURFACE



Local Event Log

1 START JOB	00:36:32	2 FILL LINES	00:36:50	3 TEST LINES	00:38:16
4 PUMP H2O SPACER	00:44:10	5 PUMP LEAD CEMENT	00:54:50	6 PUMP TAIL CEMENT	01:08:39
7 SHUTDOWN	01:18:53	8 DROP TOP PLUG	01:24:41	9 PUMP DISPLACEMENT	01:26:16
10 SLOW RATE	01:37:34	11 BUMP PLUG	01:42:01	12 CHECK FLOATS	01:47:18
13 PRESSURE UP WELL	01:50:36	14 SHUT IN WELL	01:51:07	15 RELEASE PRESSURE	01:51:32
16 END JOB	01:52:11				

Customer: ANTERO
Well Description: MCLIN B15
Company Rep: BEAUDE OAKS

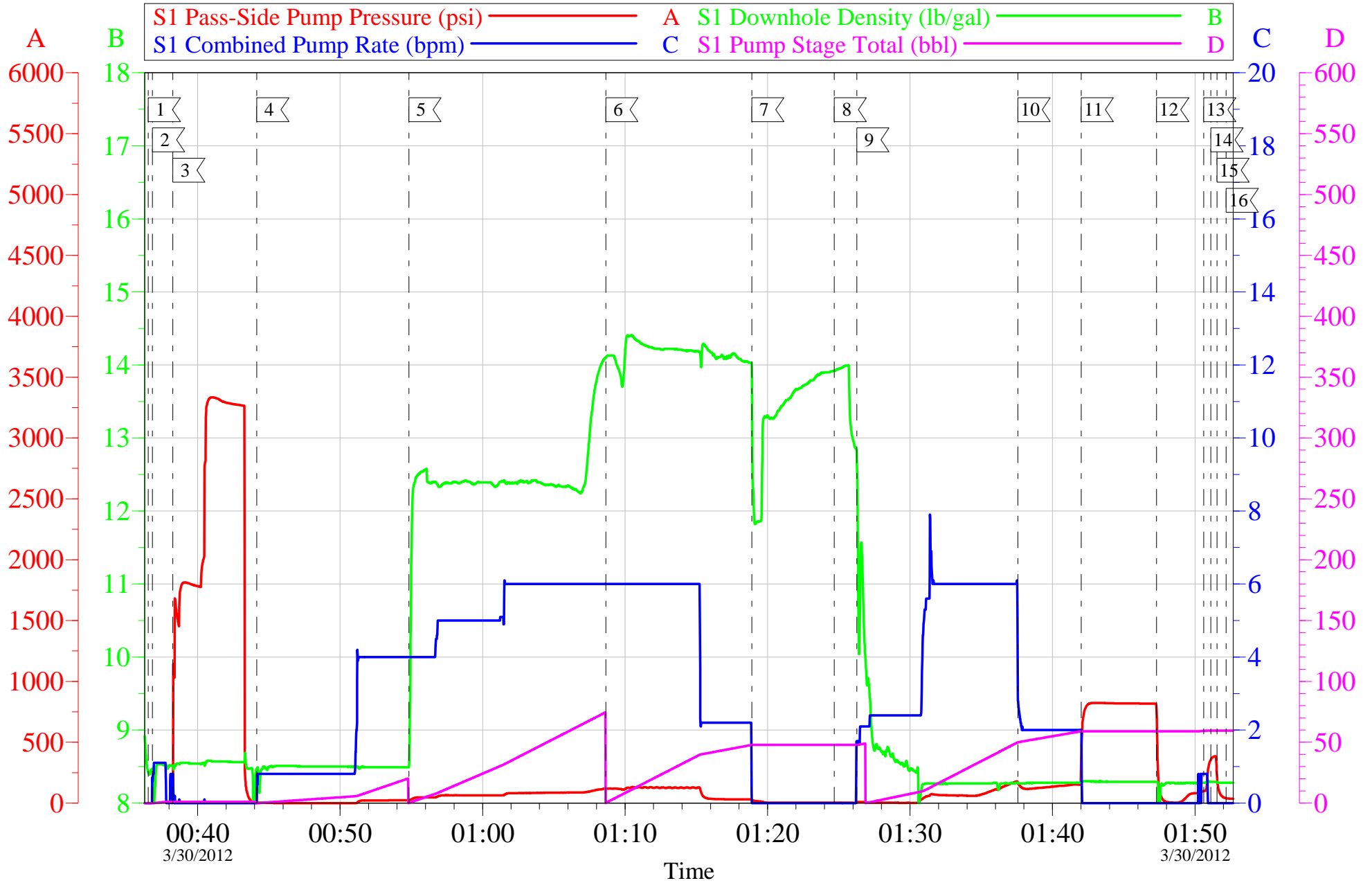
Job Date: 30-Mar-2012
Job Type: SURFACE
Cement Supervisor: JEREMY YOUNG

Sales Order #: 9387100
ADC Used: YES
Elite #7: BRENDAN BURKE

OptiCem v6.4.10
30-Mar-12 02:15

ANTERO - MCLIN B15

8 5/8 SURFACE

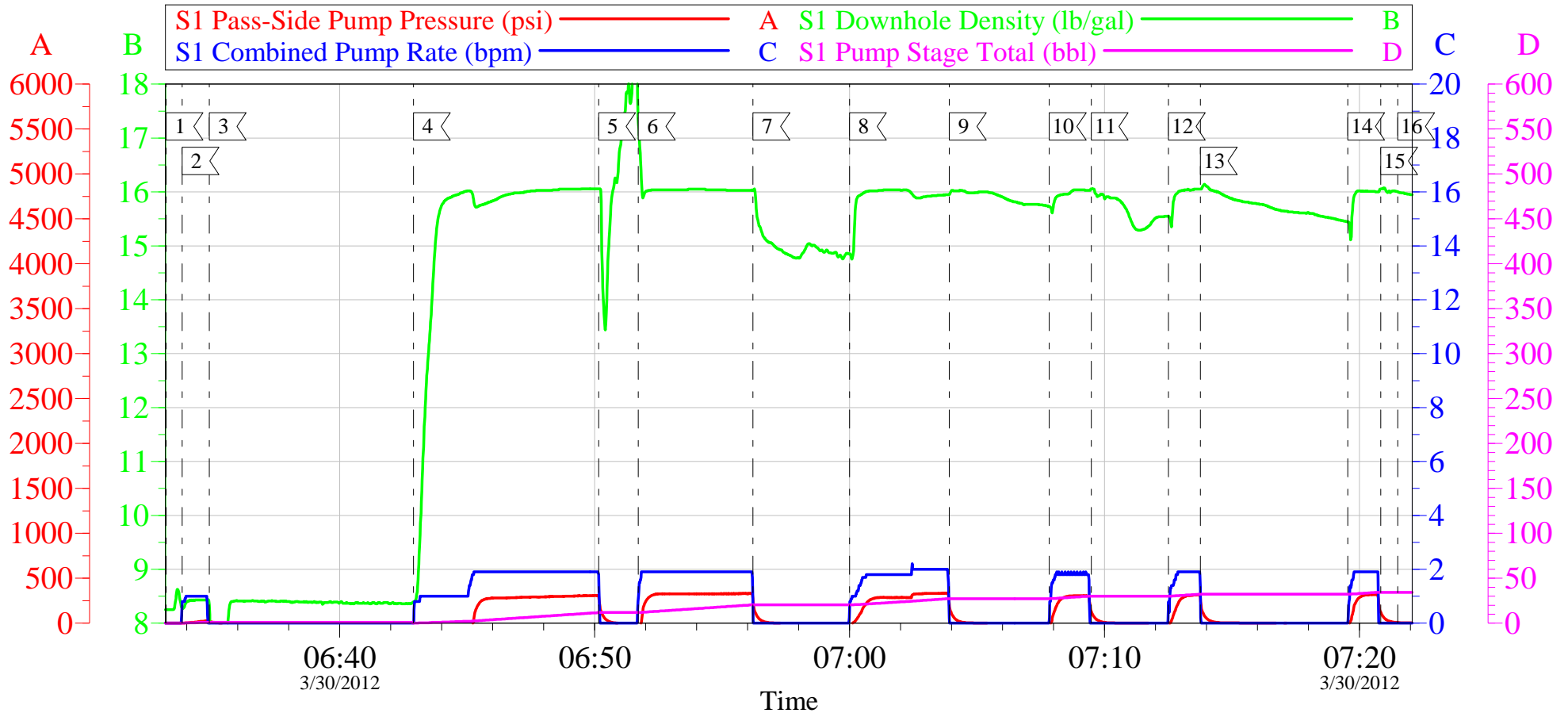


Customer: ANTERO	Job Date: 30-Mar-2012	Sales Order #: 9387100
Well Description: MCLIN B15	Job Type: SURFACE	ADC Used: YES
Company Rep: BEAUDE OAKS	Cement Supervisor: JEREMY YOUNG	Elite #7: BRENDAN BURKE

OptiCem v6.4.10
30-Mar-12 02:15

ANTERO - MCLIN B15

TOPOUT #1



Local Event Log

1 START JOB	06:33:12	2 PUMP WATER AHEAD	06:33:49	3 SHUTDOWN	06:34:53
4 PUMP CEMENT	06:42:54	5 SHUTDOWN	06:50:09	6 RESUMPE PUMPING	06:51:43
7 SHUTDOWN	06:56:13	8 RESUME PUMPING	07:00:00	9 SHUTDOWN	07:03:55
10 RESUME PUMPING	07:07:50	11 SHUTDOWN	07:09:29	12 RESUME PUMPING	07:12:30
13 SHUTDOWN	07:13:45	14 RESUME PUMPING	07:19:32	15 SHUTDOWN	07:20:50
16 END JOB	07:21:30				

Customer: ANTERO
Well Description: MCLIN B15
Company Rep: BEAUDE OAKS

Job Date: 30-Mar-2012
Job Type: TOPOUT
Cement Supervisor: JEREMY YOUNG

Sales Order #: 9387100
ADC Used: YES
Elite #7: BRENDAN BURKE

OptiCem v6.4.10
30-Mar-12 07:37

HALLIBURTON

Water Analysis Report

Company: ANTERO

Submitted by: JEREMY YOUNG

Attention: LAB

Lease MCLIN

Well # B15

Date: 3/30/2012

Date Rec.:

S.O.# 9387100

Job Type: SURFACE

Specific Gravity	<i>MAX</i>	1
pH	<i>8</i>	7
Potassium (K)	<i>5000</i>	200 Mg / L
Calcium (Ca)	<i>500</i>	300 Mg / L
Iron (FE2)	<i>300</i>	0 Mg / L
Chlorides (Cl)	<i>3000</i>	0 Mg / L
Sulfates (SO ₄)	<i>1500</i>	UNDER 200 Mg / L
Chlorine (Cl ₂)		0 Mg / L
Temp	<i>40-80</i>	62 Deg
Total Dissolved Solids		450 Mg / L

Respectfully: JEREMY YOUNG

Title: CEMENTING SUPERVISOR

Location: Grand Junction, CO

NOTICE:

This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to act or omission resulting from such report or its use.

Sales Order #: 9387100	Line Item: 10	Survey Conducted Date: 3/30/2012
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: BEAUDE OAKS		API / UWI: (leave blank if unknown) 05-045-19382
Well Name: McLin		Well Number: B 15
Well Type: Development Well	Well Country: United States of America	
H2S Present: No	Well State: Colorado	Well County: Garfield

Dear Customer,

We hope that you were satisfied with the service quality of this job performed by Halliburton. It is the aim of our management and service personnel to deliver equipment and service of a standard unmatched in the service sector of the energy industry.

Please take the time to let us know if our performance met with your satisfaction. Please be as critical as possible to ensure we constantly improve our service. Your comments are of great value to us and are intended for the exclusive use of Halliburton.

CUSTOMER SATISFACTION SURVEY

CATEGORY	CUSTOMER SATISFACTION RESPONSE	
Survey Conducted Date	The date the survey was conducted	3/30/2012
Survey Interviewer	The survey interviewer is the person who initiated the survey.	JEREMY YOUNG (HX37077)
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	BEAUDE OAKS
HSE	Was our HSE performance satisfactory? Circle Y or N	Yes
Equipment	Were you satisfied with our Equipment? Circle Y or N	Yes
Personnel	Were you satisfied with our people? Circle Y or N	Yes
Customer Comment	Customer's Comment	

CUSTOMER SIGNATURE

Sales Order #: 9387100	Line Item: 10	Survey Conducted Date: 3/30/2012
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: BEAUDE OAKS		API / UWI: (leave blank if unknown) 05-045-19382
Well Name: McLin		Well Number: B 15
Well Type: Development Well	Well Country: United States of America	
H2S Present: No	Well State: Colorado	Well County: Garfield

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date The date the survey was conducted	3/30/2012

Cementing KPI Survey	
Type of Job Select the type of job. (Cementing or Non-Cementing)	0
Select the Maximum Deviation range for this Job What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	Vertical
Total Operating Time (hours) Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	5
HSE Incident, Accident, Injury HSE Incident, Accident, Injury. This should be recordable incidents only.	No
Was the job purpose achieved? Was the job delivered correctly as per customer agreed design?	Yes
Operating Hours (Pumping Hours) Total number of hours pumping fluid on this job. Enter in decimal format.	2.5
Customer Non-Productive Rig Time (hrs) Lost time due to Halliburton in the start, execution, or completion of an ordered service or product, or delays in a follow-on service. Enter in decimal format. 0 if none.	0
Type of Rig Classification Job Was Performed Type Of Rig (classification) Job Was Performed On	Drilling Rig (Portable)
Number Of JSAs Performed Number Of Jsas Performed	8
Number of Unplanned Shutdowns Unplanned shutdown is when injection stops for any period of time.	0
Was this a Primary Cement Job (Yes / No)	Yes

Sales Order #: 9387100	Line Item: 10	Survey Conducted Date: 3/30/2012
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Customer Representative: BEAUDE OAKS		API / UWI: (leave blank if unknown) 05-045-19382
Well Name: McLin		Well Number: B 15
Well Type: Development Well	Well Country: United States of America	
H2S Present: No	Well State: Colorado	Well County: Garfield

Primary Cement Job= Casing job, Liner job, or Tie-back job.	
Did We Run Wiper Plugs? Did We Run Top And Bottom Casing Wiper Plugs?	Top
Mixing Density of Job Stayed in Designed Density Range (0-100%) Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	90
Was Automated Density Control Used? Was Automated Density Control (ADC) Used ?	Yes
Pump Rate (percent) of Job Stayed At Designed Pump Rate Pump Rate range defined as +/- 1bbl/min. Calculation: Total BBLs of fluid pumped at the designed rate divided by Total BBLs of fluid pumped, multiplied by 100	95
Nbr of Remedial Sqz Jobs Rqd - Competition Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition	0
Nbr of Remedial Plug Jobs Rqd - HES Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
Nbr of Remedial Sqz Jobs Rqd - HES Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0