
ANTERO RESOURCES

**McLin B17
KOKOPELLI
Garfield County , Colorado**

Cement Surface Casing **26-Mar-2012**

Post Job Report

The Road to Excellence Starts with Safety

Sold To #: 337854	Ship To #: 2917166	Quote #:	Sales Order #: 9386911
Customer: ANTERO RESOURCES		Customer Rep: Oaks, Beade	
Well Name: McLin		Well #: B17	API/UWI #: 05-045-19381
Field: KOKOPELLI	City (SAP): SILT	County/Parish: Garfield	State: Colorado
Lat: N 39.531 deg. OR N 39 deg. 31 min. 51.665 secs.		Long: W 107.608 deg. OR W -108 deg. 23 min. 30.239 secs.	
Contractor:		Rig/Platform Name/Num: CRAIG #2	
Job Purpose: Cement Surface Casing			
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: METLI, MARSHALL		Srv Supervisor: ARNOLD, EDWARD	MBU ID Emp #: 439784

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ARNOLD, EDWARD John	5	439784	BRENNECKE, ANDREW Bailey	5	486345	JENSEN, JESSE Robert	5	478774
VANALSTYNE, TROY L	5	420256						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10248057	120 mile	10248065	120 mile	10616651C	120 mile	11583931	120 mile
11808827	120 mile						

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
3-26-2012	5	2.5						

TOTAL	Total is the sum of each column separately							
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Job

Formation Name	Top	Bottom	Called Out	Date	Time	Time Zone
Formation Depth (MD)			On Location	26 - Mar - 2012	10:00	MST
Form Type	BHST		Job Started	26 - Mar - 2012	12:57	MST
Job depth MD	1070. ft	Job Depth TVD	Job Completed	26 - Mar - 2012	14:03	MST
Water Depth		Wk Ht Above Floor	Departed Loc	26 - Mar - 2012	15:00	MST
Perforation Depth (MD)	From	To				

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
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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

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 ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk	

Stage/Plug #: 1									
1	Water Spacer		20.00	bbl	8.33	.0	.0	4	
2	Lead Cement	VERSACEM (TM) SYSTEM (452010)	160.0	sacks	12.3	2.38	13.77	5	13.77
	13.77 Gal	FRESH WATER							
3	Tail Cement	SWIFTCEM (TM) SYSTEM (452990)	205.0	sacks	14.2	1.43	6.85	5	6.85
	0.25 lbm	POLY-E-FLAKE (101216940)							
	4 %	SALT, BULK (100003695)							
	6.85 Gal	FRESH WATER							
4	Fresh Water Displacement		61.00	bbl	8.33	.0	.0	5	
Calculated Values		Pressures		Volumes					
Displacement	61.6	Shut In: Instant		Lost Returns		Cement Slurry	120	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	7	Actual Displacement	61.6	Treatment	
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job	201.6
Rates									
Circulating		Mixing	5	Displacement	5	Avg. Job		5	
Cement Left In Pipe	Amount	43.3 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

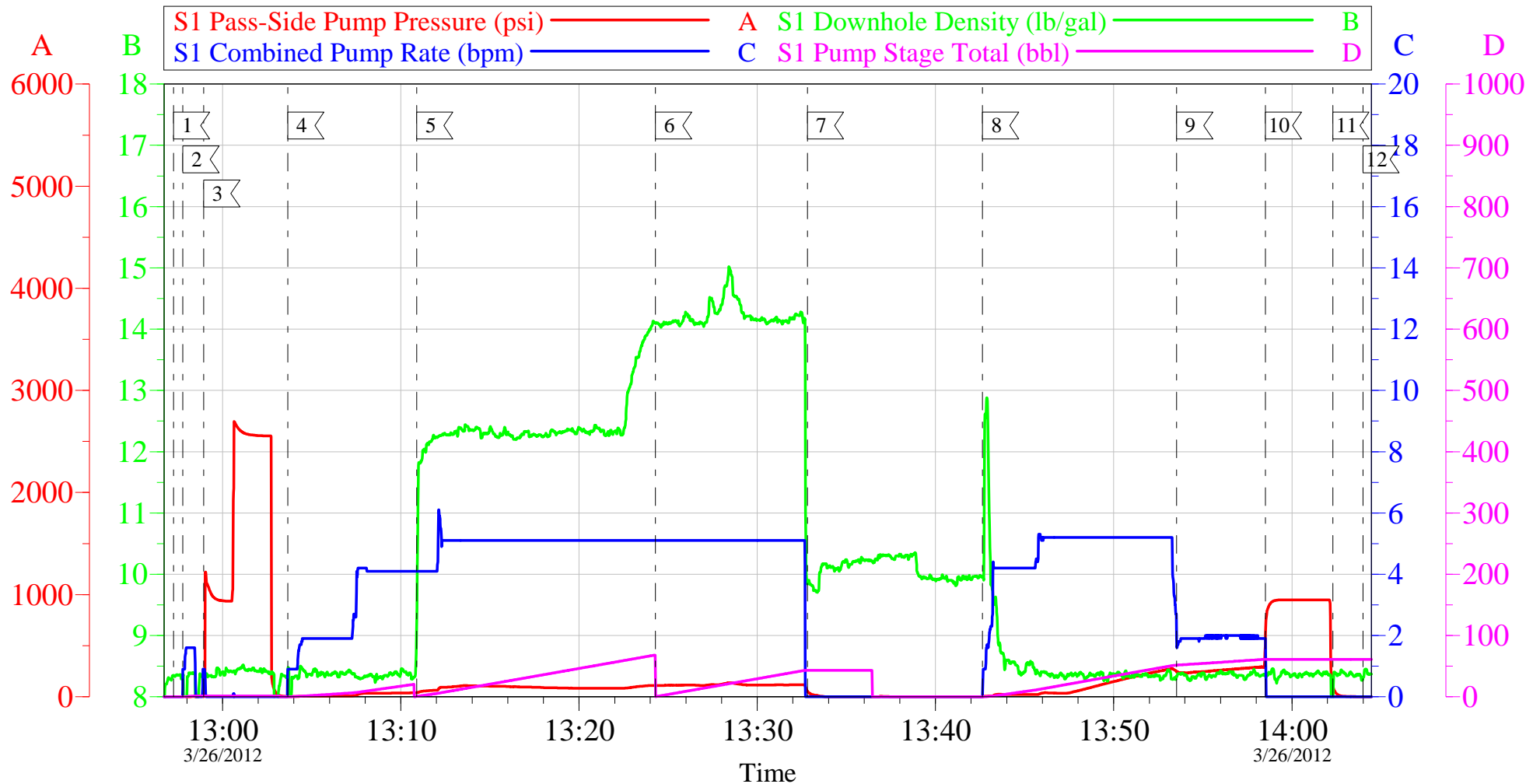
Sold To #: 337854	Ship To #: 2917166	Quote #:	Sales Order #: 9386911
Customer: ANTERO RESOURCES		Customer Rep: Oaks, Beaudé	
Well Name: McLin	Well #: B17	API/UWI #: 05-045-19381	
Field: KOKOPELLI	City (SAP): SILT	County/Parish: Garfield	State: Colorado
Legal Description:			
Lat: N 39.531 deg. OR N 39 deg. 31 min. 51.665 secs.		Long: W 107.608 deg. OR W -108 deg. 23 min. 30.239 secs.	
Contractor:		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: ARNOLD, EDWARD	MBU ID Emp #: 439784

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	03/26/2012 05:00							Swedge and 2" lo-torc left on location. Crew waiting in field.
Pre-Convoy Safety Meeting	03/26/2012 07:45							Including entire cement crew.
Crew Leave Yard	03/26/2012 08:00							
Arrive At Loc	03/26/2012 10:00							Rig crew moving rig.
Assessment Of Location Safety Meeting	03/26/2012 10:05							Water; PH 7; KCL 0; So4 <200; Fe 0; Calcuim 50; Chlorides 0; Temp 55; TDS 170.
Pre-Rig Up Safety Meeting	03/26/2012 11:45							Including entire cement crew.
Rig-Up Equipment	03/26/2012 12:00							1 Elite # 4; 2 400 bulk truck; 1 hard line to well; 2 line to upright. 8.625" swedge.
Rig-Up Completed	03/26/2012 12:25							
Pre-Job Safety Meeting	03/26/2012 12:30							Including everyone on location.
Start Job	03/26/2012 12:56							TD 1070; TP 1055; SJ 43.3; OH 12.25; Casing 8.625" 32#; air drilled hole. Hit water at 150ft.
Pump Water	03/26/2012 12:57		2	2			15.0	Fill lines with fresh water.
Test Lines	03/26/2012 12:58					2570.0		Good pressure test, no leaks.
Pump Spacer 1	03/26/2012 13:03		4	20			37.0	20 BBL fresh water spacer.
Pump Lead Cement	03/26/2012 13:10		5	67.8			115.0	160 sks Lead Cement, 12.3 ppg, 2.38 cf3, 13.77 gal/sk.

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Tail Cement	03/26/2012 13:24		5	52.2			111.0	205 sks Tail Cement, 14.2 ppg, 1.43 cf3, 6.85 gal/sk.
Shutdown	03/26/2012 13:32							
Drop Plug	03/26/2012 13:41							Placed pplug in pipe.
Pump Displacement	03/26/2012 13:42		5	51.6			275.0	Fresh water displacement.
Slow Rate	03/26/2012 13:53		2	10			300.0	Slow rate 10 BBL's prior to bumping the plug.
Bump Plug	03/26/2012 13:58				61.6		940.0	Bumped plug, took 500 PSI over.
Check Floats	03/26/2012 14:02							Floats held, .5 BBL back. Shut in well till cement sets.
End Job	03/26/2012 14:03							7 BBL good cement to surface.
Pre-Rig Down Safety Meeting	03/26/2012 14:10							Including entire cement crew.
Rig-Down Equipment	03/26/2012 14:20							
Rig-Down Completed	03/26/2012 14:50							
Pre-Convoy Safety Meeting	03/26/2012 14:55							Including entire cement crew.
Crew Leave Location	03/26/2012 15:00							Crew leave location for Service Center or another location.
Other	03/26/2012 15:00							Thank You for using Halliburton. Ed Arnold and Crew.

ANTERO - MCLIN B17

8 5/8" SURFACE



Local Event Log

1 START JOB	12:57:14	2 FILL LINES	12:57:46	3 TEST LINES	12:58:56
4 H2O SPACER	13:03:40	5 LEAD CEMENT	13:10:53	6 TAIL CEMENT	13:24:18
7 SHUT DOWN	13:32:49	8 H2O DISPLACEMENT	13:42:39	9 SLOW RATE	13:53:32
10 BUMP PLUG	13:58:31	11 CHECK FLOATS	14:02:18	12 END JOB	14:03:59

Customer: ANTERO
Well Description: MCLIN B 17
Company Rep: BEAUDE OAKS

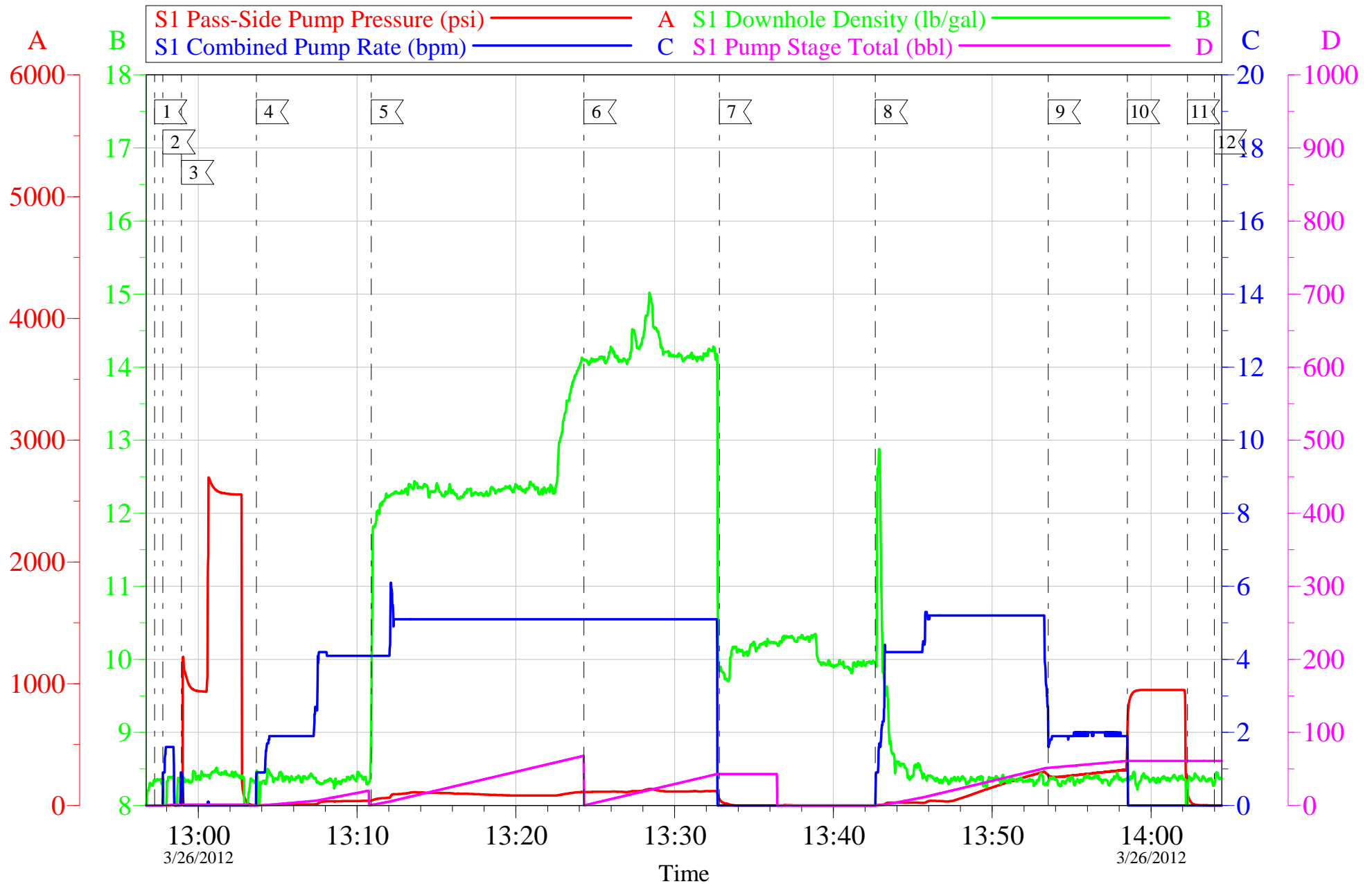
Job Date: 26-Mar-2012
Job Type: SURFACE
Cement Supervisor: ED ARNOLD

Sales Order #: 9386911
ADC Used: YES
Elite #4: JESSE JENSEN

OptiCem v6.4.10
26-Mar-12 14:25

ANTERO - MCLIN B17

8 5/8" SURFACE



Customer: ANTERO	Job Date: 26-Mar-2012	Sales Order #: 9386911
Well Description: MCLIN B 17	Job Type: SURFACE	ADC Used: YES
Company Rep: BEAUDE OAKS	Cement Supervisor: ED ARNOLD	Elite #4: JESSE JENSEN

OptiCem v6.4.10
26-Mar-12 14:25

HALLIBURTON

Water Analysis Report

Company:	ANTERO	Date:	MARCH 26,2012
Submitted by:	ED ARNOLD	Date Rec.:	MARCH 26,2012
Attention:	J.TROUT	S.O.#	9386911
Lease	MCLIN	Job Type:	SURFACE
Well #	B17		

Specific Gravity	MAX	1
pH	8	7
Potassium (K)	5000	0 Mg / L
Calcium (Ca)	500	50 Mg / L
Iron (FE2)	300	0 Mg / L
Chlorides (Cl)	3000	0 Mg / L
Sulfates (SO ₄)	1500	<200 Mg / L
Chlorine (Cl ₂)		0 Mg / L
Temp	40-80	55 Deg
Total Dissolved Solids		170 Mg / L

Respectfully: ED ARNOLD

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 #: 9386911	Line Item: 10	Survey Conducted Date: 3/26/2012
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: B. OAKS		API / UWI: (leave blank if unknown) 05-045-19381
Well Name: McLin		Well Number: B17
Well Type: Development Well	Well Country: United States of America	
H2S Present:	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	3/26/2012
Survey Interviewer	The survey interviewer is the person who initiated the survey.	EDWARD ARNOLD (HX46731)
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	B. 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 #: 9386911	Line Item: 10	Survey Conducted Date: 3/26/2012
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: B. OAKS		API / UWI: (leave blank if unknown) 05-045-19381
Well Name: McLin		Well Number: B17
Well Type: Development Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: Garfield

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date	3/26/2012
The date the survey was conducted	

Cementing KPI Survey	
Type of Job	0
Select the type of job. (Cementing or Non-Cementing)	
Select the Maximum Deviation range for this Job	Vertical
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
Total Operating Time (hours)	2.5
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
HSE Incident, Accident, Injury	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
Was the job purpose achieved?	Yes
Was the job delivered correctly as per customer agreed design?	
Operating Hours (Pumping Hours)	1
Total number of hours pumping fluid on this job. Enter in decimal format.	
Customer Non-Productive Rig Time (hrs)	0
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.	
Type of Rig Classification Job Was Performed	Workover
Type Of Rig (classification) Job Was Performed On	
Number Of JSAs Performed	5
Number Of Jsas Performed	
Number of Unplanned Shutdowns	0
Unplanned shutdown is when injection stops for any period of time.	
Was this a Primary Cement Job (Yes / No)	Yes

Sales Order #: 9386911	Line Item: 10	Survey Conducted Date: 3/26/2012
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: B. OAKS		API / UWI: (leave blank if unknown) 05-045-19381
Well Name: McLin		Well Number: B17
Well Type: Development Well	Well Country: United States of America	
H2S Present:	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	95
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	98
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