
ANTERO RESOURCES

**LEFT HAND FED A9
MAMM CREEK
Garfield County , Colorado**

Cement Surface Casing **06-May-2011**

Post Job Reports

The Road to Excellence Starts with Safety

Sold To #: 337854	Ship To #: 2852325	Quote #:	Sales Order #: 8150175
Customer: ANTERO RESOURCES		Customer Rep: Honeycutt, Matt	
Well Name: LEFT HAND FED		Well #: A9	API/UWI #: 05-045-20571
Field: MAMM CREEK	City (SAP): SILT	County/Parish: Garfield	State: Colorado
Contractor: Craigs Roustabout Service, Inc.		Rig/Platform Name/Num: Craigs #2	
Job Purpose: Cement Surface Casing			
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: METLI, MARSHALL		Srvc Supervisor: MUHLESTEIN, RYAN MBU ID Emp #: 453609	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BROWN, TRAVIS A	3	396848	CRUPPER, JOSHUA	3	488926	JENKINS, DEMON Lashaun	3	457892
MUHLESTEIN, RYAN Herrick	3	453609						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10025118	60 mile	10551730C	60 mile	10741259	60 mile	10829463	60 mile
10973571	60 mile						

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
5/6/11	3	3						

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	06 - May - 2011	11:00	MST
Form Type		BHST	Job Started	06 - May - 2011	15:00	MST
Job depth MD	1100. ft	Job Depth TVD	Job Completed	06 - May - 2011	16:04	MST
Water Depth		Wk Ht Above Floor	Departed Loc	06 - May - 2011	17:02	MST
Perforation Depth (MD)	From	To		06 - May - 2011	18:00	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
12 1/4" Open Hole				12.25				.	1100.		
8 5/8" Surface Casing	New		8.625	7.825	36.		J-55	.	1100.		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
ADC (AUTO DENSITY CTRL) SYS, /JOB,ZI	1	JOB		
PORT. DATA ACQUIS. W/OPTICEM RT W/HES	1	EA		
R/A DENSOMETER W/CHART RECORDER,/JOB,ZI	1	JOB		
PLUG,CMTG,TOP,8 5/8,HWE,7.20 MIN/8.09 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	Water Spacer				20.00	bbl	8.33	.0	.0	.0			
2	Lead Cement	VERSACEM (TM) SYSTEM (452010)			150.0	sacks	12.3	2.38	13.77		13.77		
		13.77 Gal FRESH WATER											
3	Tail Cement	SWIFTCEM (TM) SYSTEM (452990)			205.0	sacks	14.2	1.43	6.85		6.85		
		6.85 Gal FRESH WATER											
4	Displacement				60.00	bbl	8.33	.0	.0	.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	0 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

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Customer: ANTERO RESOURCES		Customer Rep: Honeycutt, Matt	
Well Name: LEFT HAND FED		Well #: A9	API/UWI #: 05-045-20571
Field: MAMM CREEK	City (SAP): SILT	County/Parish: Garfield	State: Colorado
Legal Description:			
Lat: N 0 deg. OR N 0 deg. 0 min. 0 secs.		Long: E 0 deg. OR E 0 deg. 0 min. 0 secs.	
Contractor: Craigs Roustabout Service, Inc.		Rig/Platform Name/Num: Craigs #2	
Job Purpose: Cement Surface Casing			Ticket Amount:
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: METLI, MARSHALL		Srv Supervisor: MUHLESTEIN, RYAN	MBU ID Emp #: 453609

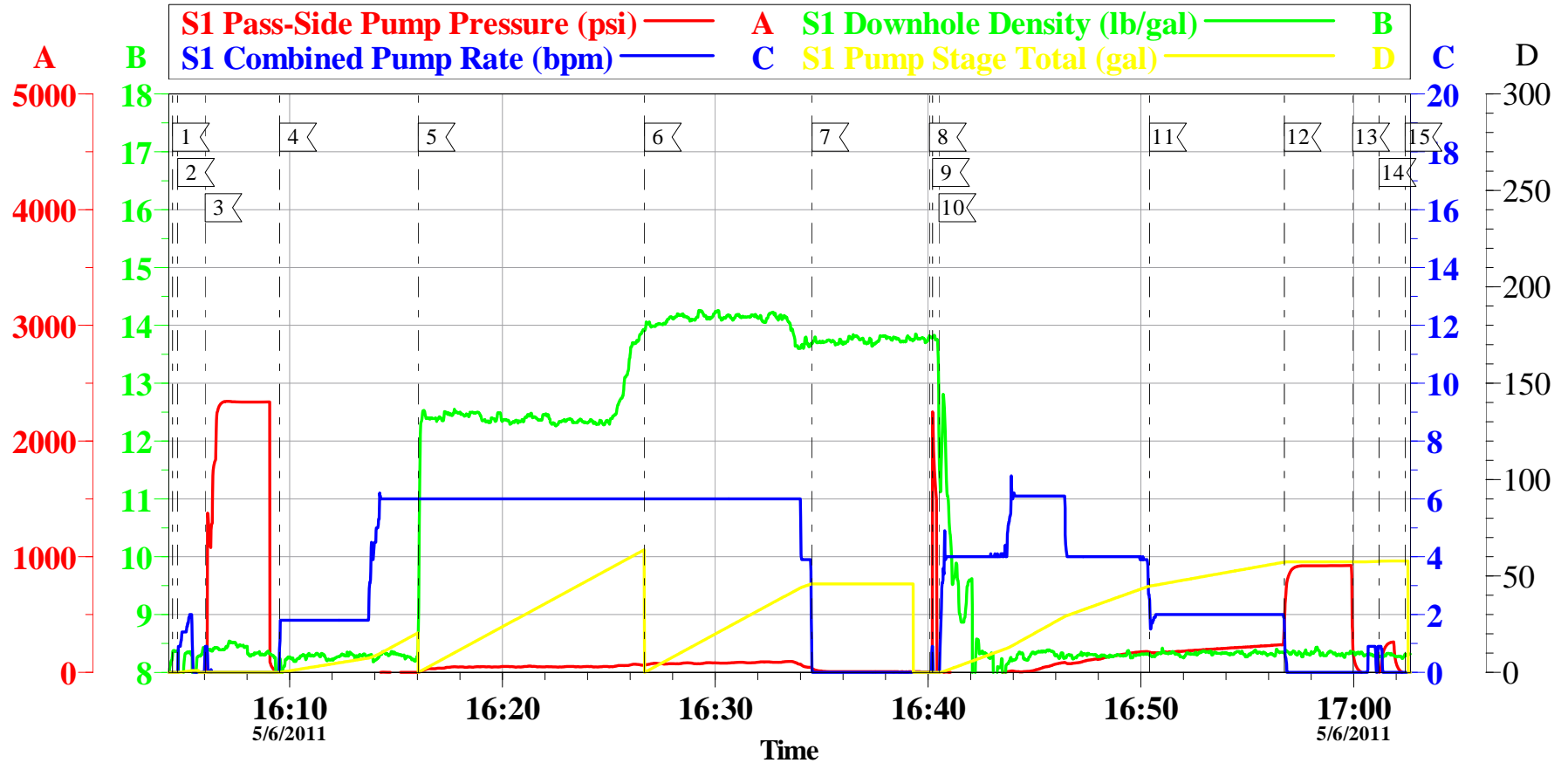
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	05/06/2011 11:00							
Pre-Convoy Safety Meeting	05/06/2011 13:00							WITH ALL HES PERSONNEL SAFE DRIVING PRACTICES AND TRAVEL ROUTE REVIEWED
Arrive at Location from Service Center	05/06/2011 15:00							RIG STILL RUNNING CASING
Assessment Of Location Safety Meeting	05/06/2011 15:05							WITH ALL HES PERSONNEL
Other	05/06/2011 15:10							SPOT EQUIPMENT
Pre-Rig Up Safety Meeting	05/06/2011 15:15							WITH ALL HES PERSONNEL
Rig-Up Equipment	05/06/2011 15:20							1 HT 400 PUMP, 1 660 BULK TRUCK, 1 F-450 PICK-UP, 1 PLUG CONTAINER, 2" IRON TO CASING, PUMP JOB THRU CRIC SWAGE
Pre-Job Safety Meeting	05/06/2011 15:50							WITH ALL HES PERSONNEL, RIG CREW AND CO REP
Start Job	05/06/2011 16:04							TD 1050', TP 1022', FC 982', SJ 40', CASING 8.625" 32# J-55, 12.25" HOLE
Pump Water	05/06/2011 16:04		2	1			.0	FRESH H2O, TO PRIME LINES
Test Lines	05/06/2011 16:06							HELD 2390 PSI 2 MIN NO LEAKS
Pump Spacer 1	05/06/2011 16:09		4	20			19.0	FRESH H2O

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Lead Cement	05/06/2011 16:16		6	63.6			61.0	150 SKS 12.3 PPG 2.38 FT3/SK 13.77 GAL/SK WEIGHED VERIFIED VIA MUD SCALES WET AND DRY SAMPLES SUBMITTED
Pump Tail Cement	05/06/2011 16:26		6	52.2			100.0	205 SKS 14.2 PPG 1.43 FT3/SK 6.85 GAL/SK WEIGHED VERIFIED VIA MUD SCALES WET AND DRY SAMPLES SUBMITTED
Shutdown	05/06/2011 16:34							WASH UP ON TOP OF PLUG
Drop Top Plug	05/06/2011 16:40							REMOVE SWAGE TO DROP PLUG
Shutdown	05/06/2011 16:40							PRESSURE UP ON HES IRON, 2" ON WELL WAS SHUT
Pump Displacement	05/06/2011 16:40		4	59.8			230.0	CMT RETURNS 39 BBLS INTO DIS, 21 BBLS TO SURFACE
Slow Rate	05/06/2011 16:50		2	42			175.0	SLOW RATE 18 BBLS PRIOR TO CALCULATED DISPLACEMENT, TO ALLOW VAC TRUCK TO KEEP UP
Bump Plug	05/06/2011 16:56		2	59.8			900.0	BUMP PLUG HOLD 3 MINS
Check Floats	05/06/2011 16:59							FLOATS HOLDING, GOOD RETURNS THROUGHOUT JOB
Other	05/06/2011 17:01							PRESSURE UP ON CASING AND SHUT IN WITH 260 PSI
End Job	05/06/2011 17:02							NO ADD HOURS, 40 LBS SUGAR USED
Pre-Rig Down Safety Meeting	05/06/2011 17:05							WITH ALL HES PERSONNEL
Rig-Down Equipment	05/06/2011 17:15							
Pre-Convoy Safety Meeting	05/06/2011 17:45							WITH ALL HES PERSONNEL

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Crew Leave Location	05/06/2011 18:00							THANK YOU FOR USING HALLIBURTON CEMENT DEPARTMENT. RYAN MUHLESTEIN AND CREW

ANTERO

LEFT HAND FED A-9 8 5/8" SURFACE CASING



Local Event Log

1 START JOB	16:04:30	2 FILL LINES	16:04:44	3 TEST LINES	16:06:01
4 PUMP H2O SPACER	16:09:32	5 PUMP LEAD CMT	16:16:02	6 PUMP TAIL CMT	16:26:40
7 SHUT DOWN	16:34:33	8 DROP PLUG	16:40:04	9 SHUT DOWN	16:40:13
10 PUMP DISPLACEMENT	16:40:31	11 SLOW RATE	16:50:24	12 BUMP PLUG	16:56:44
13 CHECK FLOATS	16:59:57	14 PRESSURE UP ON CASING	17:01:12	15 END JOB	17:02:25

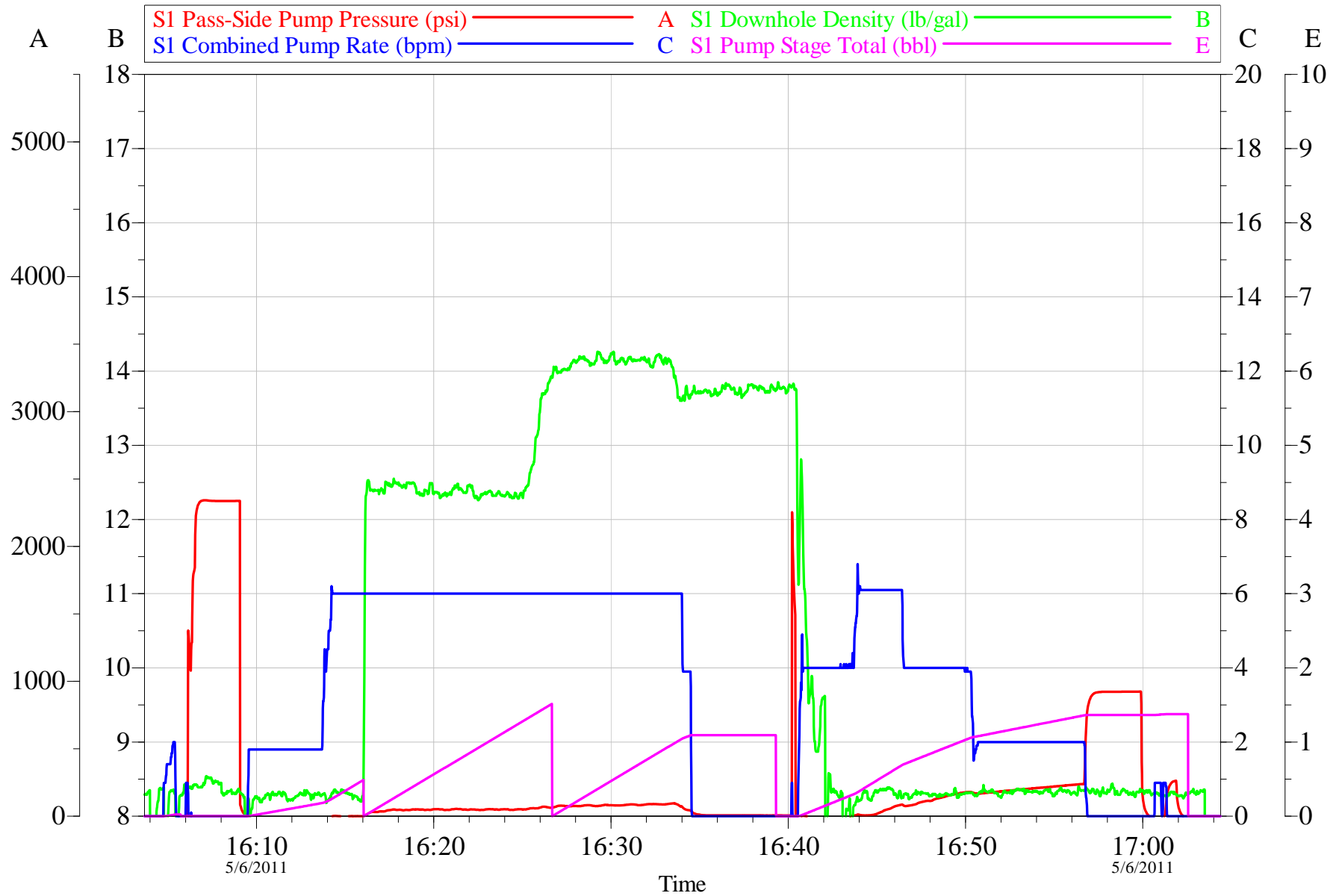
Customer: ANTERO
 Well Description: LEFT HAND FED A-9
 Customer Rep: MATT HONEYCUTT

Job Date: 06-May-2011
 Job type: SURFACE
 Service Supervisor: RYAN MUHLESTEIN

Sales Order #: 8150175
 ADC Used: YES
 Operator/ Pump: TRAVIS BROWN/ ELITE 2

OptiCem v6.4.6
 06-May-11 17:09

Antero Left Hand Fed A-9 Surface



JOB PROCEDURE

CRAIGS ROUSTA BOUT #2

Pre-Planned Job Procedure Surface						
EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	START JOB		DENSITY OVER RATE			
	FILL LINES	2				
6	TEST LINES	2500 PSI				
9	H2O SPACER	20				
14	LEAD CEMENT	63.6	150	12.3	2.38	13.77
15	TAIL CEMENT	52.2	205	14.2	1.43	6.85
	SHUTDOWN			MUD WT.	0	
22	DROP PLUG			CASING	8.625	32
23	DISPLACE WITH H2O	59.8		OPEN HOLE	12.25	
	SLOW RATE	50				
26	BUMP PLUG	265	+500	DISP FLUID	8.33	
	CHECK FLOATS	765				
2	END JOB					
			Do Not Overdisplace			
DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH	ANN FACTOR	BBL/FT	H2O REQ.	
59.81	1022	39.90	0.0735	0.0609	194	
PSI TO LIFT	560	*****Use Mud Scales on Each Tier*****				
PSI TO LAND	265					
CEMENT TO SURFACE		38.2		TOTAL FLUID PUMPED		196
Collapse	1400	Burst	2270		SO#	8150175
HOT	677	TOT	345	CO REP	MATT HONEYCUTT	

Sales Order #: 8150175	Line Item: 10	Survey Conducted Date: 5/6/2011
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: MATT HONEYCUTT		API / UWI: (leave blank if unknown) 05-045-20571
Well Name: LEFT HAND FED		Well Number: A9
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	5/6/2011
Survey Interviewer	The survey interviewer is the person who initiated the survey.	RYAN MUHLESTEIN (HB21105)
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	MATT HONEYCUTT
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	GOOD WORK
Job DVA	Did we provide job DVA above our normal service today? Circle Y or N	No
Time	Please enter hours in decimal format to nearest quarter hour.	
Other	Enter short text for other efficiencies gained.	
Customer Initials	Customer's Initials	
Please provide details	Please describe how the job efficiencies were gained.	

CUSTOMER SIGNATURE

Sales Order #: 8150175	Line Item: 10	Survey Conducted Date: 5/6/2011
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: MATT HONEYCUTT		API / UWI: (leave blank if unknown) 05-045-20571
Well Name: LEFT HAND FED		Well Number: A9
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	5/6/2011

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.	3
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.	1
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	6
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 #: 8150175	Line Item: 10	Survey Conducted Date: 5/6/2011
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: MATT HONEYCUTT		API / UWI: (leave blank if unknown) 05-045-20571
Well Name: LEFT HAND FED		Well Number: A9
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	98
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