HALLIBURTON

ANTERO RESOURCES

McLin C24
KOKPELLI
Garfield County , Colorado

Cement Surface Casing

08-Apr-2012

Post Job Report

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 337854	**Ship To #:** 2919487	**Quote #:**	**Sales Order #:** 9414897
Customer: ANTERO RESOURCES		**Customer Rep:** Oaks, Beaude	
Well Name: McLin	**Well #:** C24		**API/UWI #:** 05-045-20133
Field: KOKPELLI	**City (SAP):** SILT	**County/Parish:** Garfield	**State:** Colorado
Lat: N 39.525 deg. OR N 39 deg. 31 min. 30.875 secs.		**Long:** W 107.607 deg. OR W -108 deg. 23 min. 34.627 secs.	
Contractor: CRAIGS #2	**Rig/Platform Name/Num:** Pro Petro		
Job Purpose: Cement Surface Casing			
Well Type: Development Well	**Job Type:** Cement Surface Casing		
Sales Person: METLI, MARSHALL	**Srvc Supervisor:** MAGERS, MICHAEL	**MBU ID Emp #:** 339439	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DEUSSEN, EDWARD Eric	4.0	485182	EICKHOFF, ROBERT Edward	4.0	495311	MAGERS, MICHAEL Gerard	4.0	339439
SALAZAR, PAUL Omar	4.0	445614						

Equipment

HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*
10248065	120 mile	10867094	120 mile	10871245	120 mile	10897925	120 mile
11259885	120 mile	11808831	120 mile				

Job Hours

Date	*On Location Hours*	Operating Hours	Date	*On Location Hours*	Operating Hours	Date	*On Location Hours*	Operating Hours
04/08/2012	4	1 .2						
TOTAL		*Total is the sum of each column separately*						

Job

Formation Name			
Formation Depth (MD)	**Top**	**Bottom**	
Form Type		**BHST**	
Job depth MD	1070. ft	**Job Depth TVD**	1070. ft
Water Depth		**Wk Ht Above Floor**	2. ft
Perforation Depth (MD)	*From*	**To**	

Job Times

	Date	Time	Time Zone
Called Out	08 - Apr - 2012	10:00	MST
On Location	08 - Apr - 2012	14:00	MST
Job Started	08 - Apr - 2012	16:08	MST
Job Completed	08 - Apr - 2012	17:25	MST
Departed Loc	08 - Apr - 2012	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

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					**Packer**					**Top Plug**	8 5/8	1	HES
Float Shoe					**Bridge Plug**					**Bottom Plug**			
Float Collar					**Retainer**					**SSR plug set**			
Insert Float										**SWEDGE**	8 5/8	1	HES
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

HALLIBURTON

Cementing Job Summary

Stage/Plug #: 1										
1	**Water Spacer**		**20.00**	**bbl**	**8.33**	**.0**	**.0**	**.0**		
2	**VersaCem Lead Cement**	**VERSACEM (TM) SYSTEM (452010)**	**160.0**	**sacks**	**12.3**	**2.38**	**13.77**		**13.77**	
	13.77 Gal	WATER - FRESH - GAL (24047)								
3	**SwiftCem Tail Cement**	**SWIFTCEM (TM) SYSTEM (452990)**	**205.0**	**sacks**	**14.2**	**1.43**	**6.85**		**6.85**	
	6.85 Gal	FRESH WATER								
4	**Fresh Water Displacement**		**62.00**	**bbl**	**8.33**	**.0**	**.0**	**.0**		

Calculated Values		Pressures		Volumes					
Displacement	62	**Shut In: Instant**		**Lost Returns**	0	*Cement Slurry*	115	**Pad**	
Top Of Cement	SURFACE	**5 Min**		**Cement Returns**	25	**Actual Displacement**	62	**Treatment**	
Frac Gradient		**15 Min**		**Spacers**	20	**Load and Breakdown**		**Total Job**	**197**

Rates							
Circulating		*Mixing*		*Displacement*		**Avg. Job**	
Cement Left In Pipe	**Amount**	***44 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***

HALLIBURTON

Cementing Job Log

The Road to Excellence Starts with Safety

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Well Name: McLin	**Well #:** C24		**API/UWI #:** 05-045-20133
Field: KOKPELLI	**City (SAP):** SILT	**County/Parish:** Garfield	**State:** Colorado
Legal Description:			
Lat: N 39.525 deg. OR N 39 deg. 31 min. 30.875 secs.		**Long:** W 107.607 deg. OR W -108 deg. 23 min. 34.627 secs.	
Contractor: CRAIGS #2	**Rig/Platform Name/Num:** Pro Petro		
Job Purpose: Cement Surface Casing			**Ticket Amount:**
Well Type: Development Well	**Job Type:** Cement Surface Casing		
Sales Person: METLI, MARSHALL	**Srvc Supervisor:** MAGERS, MICHAEL		**MBU ID Emp #:** 339439

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	04/08/2012 10:00							
Pre-Convoy Safety Meeting	04/08/2012 11:50							HES ALL PRESENT
Crew Leave Yard	04/08/2012 12:00							HES ALL PRESENT
Arrive At Loc	04/08/2012 14:00							HES ARRIVED ON LOCATION
Assessment Of Location Safety Meeting	04/08/2012 14:10							LOCATION IN GOOD CONDITION
Pre-Rig Up Safety Meeting	04/08/2012 15:25							JSA ON RIGGING UP
Rig-Up Equipment	04/08/2012 15:30							1 PICKUP 1 ELITE 1 BULK TRUCK 1 BODY LOAD
Safety Huddle	04/08/2012 16:00							RIG CREW AND HES ALL PRESENT
Start Job	04/08/2012 16:08							TD-1070 TP 1055.4 SJ-44 CSG- 8 5/8 32# J-55 OH-12 1/4" MW-8.33
Other	04/08/2012 16:09		2	2			11.0	FILL LINES
Pressure Test	04/08/2012 16:10		0.5	0.5			3460.0	PSI TEST OK
Pump Spacer 1	04/08/2012 16:13		4	20			16.0	FRESH WATER
Pump Lead Cement	04/08/2012 16:24		5	67.8			89.0	VERSACEM 160 SKS 12.3 PPG 2.38 FT3/SK 13.77 GAL/SK
Pump Tail Cement	04/08/2012 16:39		5	52.2			90.0	SWIFTCEM 205 SKS 14.2 PPG 1.43 FT3/SK 6.85 GAL/SK
Shutdown	04/08/2012 16:51							
Activity Description	**Date/Time**	**Cht**	**Rate bbl/ min**	**Volume bbl**		**Pressure psig**		**Comments**

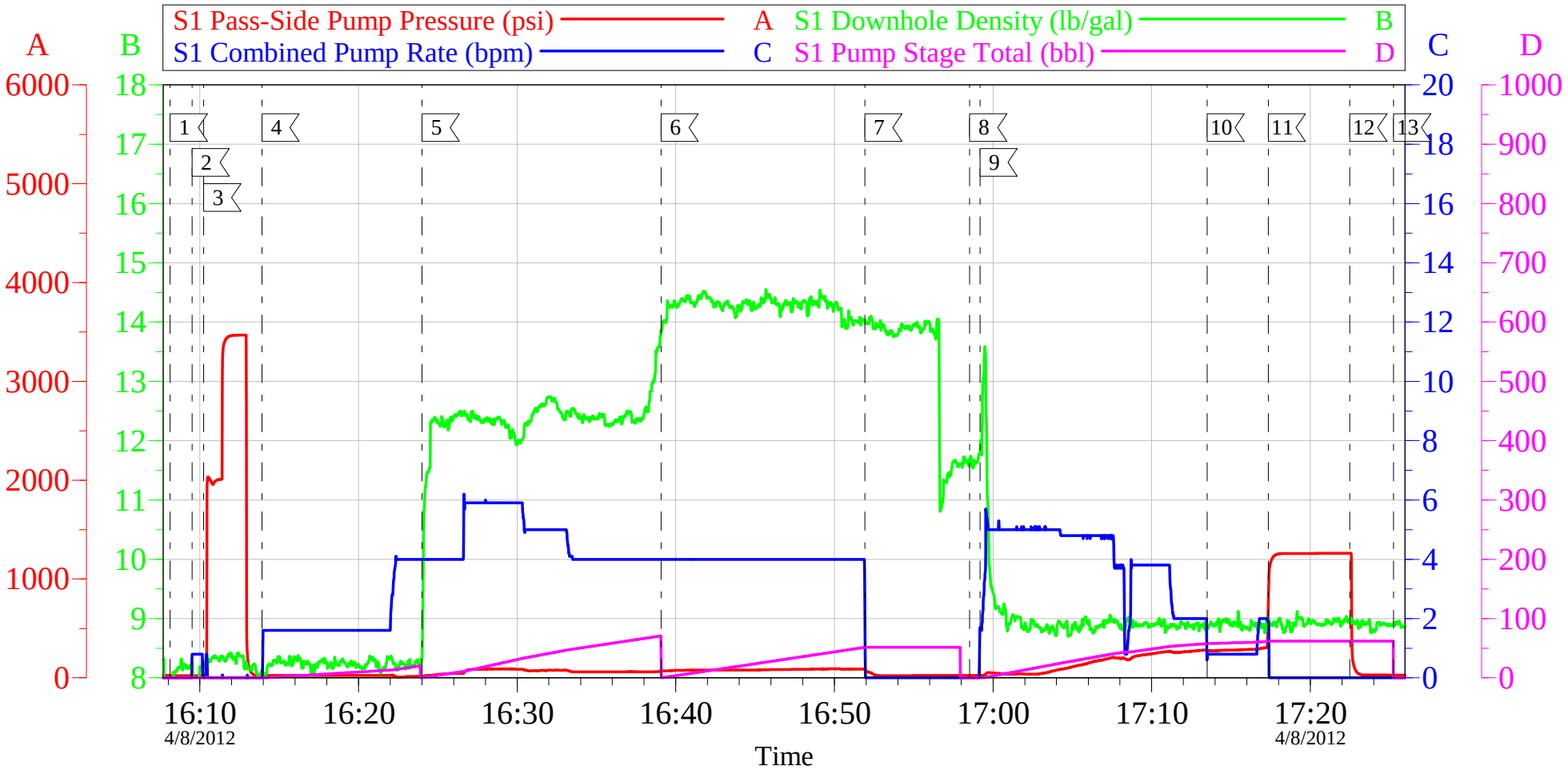
HALLIBURTON

Cementing Job Log

		#		Stage	Total	Tubing	Casing	
Drop Top Plug	04/08/2012 16:58							PLUG AWAY NO PROBLEMS/USED 8 5/8" SWAGE
Pump Displacement	04/08/2012 16:59		6	52			268.0	FRESH WATER
Slow Rate	04/08/2012 17:13		2	10			257.0	GOT 25 BBLS CEMENT TO SURFACE/USED 60 LBS SUGAR
Bump Plug	04/08/2012 17:17		2	62			310.0	BUMPED PLUG
Check Floats	04/08/2012 17:22			62			1256.0	FLOATS HELD/GOT 1/2 BBL BACK
End Job	04/08/2012 17:25							THANK YOU FOR USING HES AND ED DEUSSEN AND CREW

ANTERO McLIN C24

8.625 SURFACE



Local Event Log

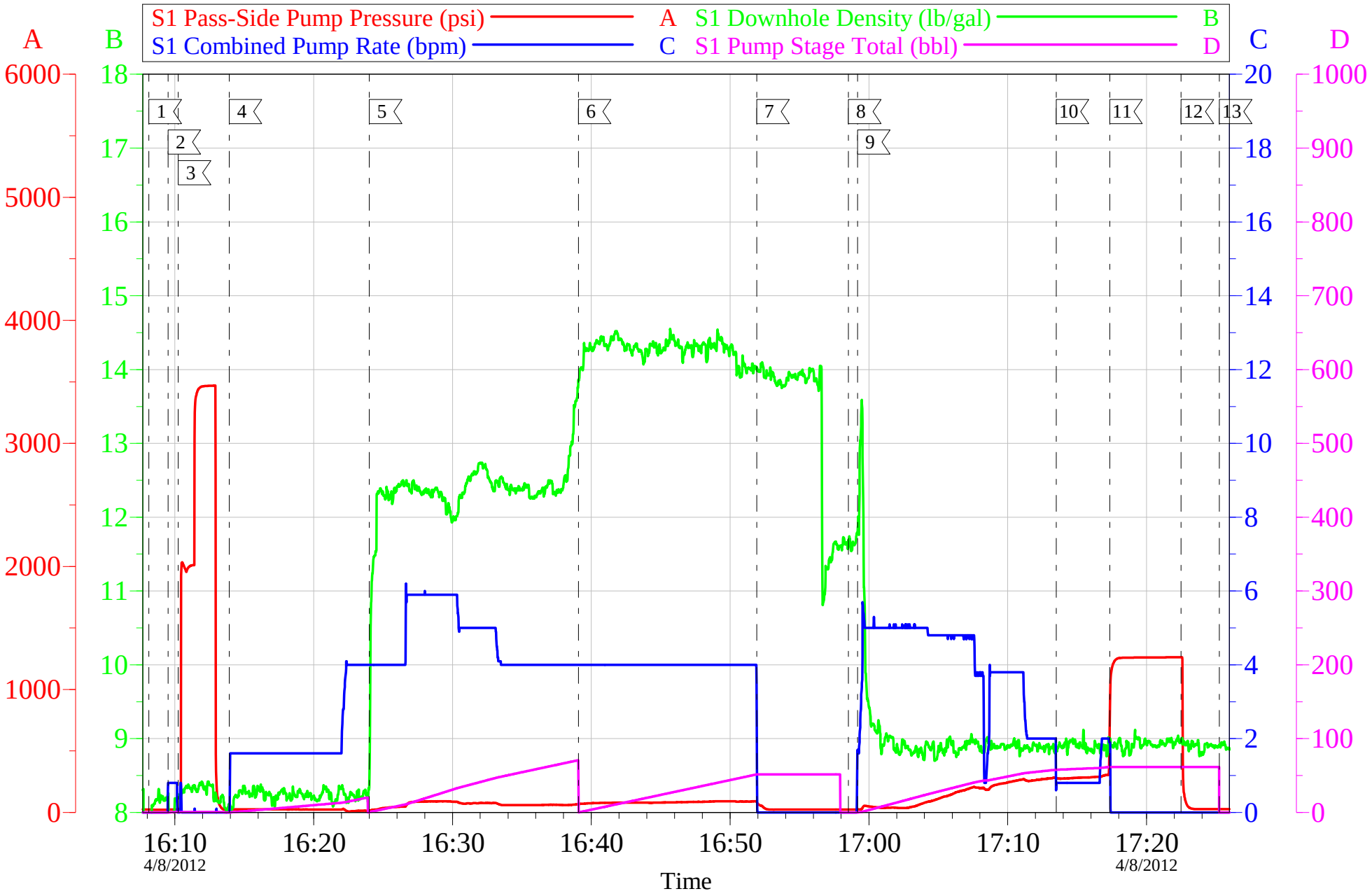
1	START JOB	16:08:08	2	FILL LINES	16:09:30	3	PRESSURE TEST	16:10:15
4	PUMP H20 SPACER	16:13:55	5	PUMP LEAD CEMENT	16:24:01	6	PUMP TAIL CEMENT	16:39:04
7	SHUT DOWN	16:51:55	8	DROP PLUG	16:58:32	9	PUMP H20 DISPLACEMENT	16:59:11
10	SLOW RATE	17:13:30	11	BUMP PLUG	17:17:21	12	CHECK FLOATS	17:22:29
13	END JOB	17:25:15						

Customer:	ANTERO PRO PETRO	Job Date:	08-Apr-2012	Sales Order #:	9414897
Well Description:	McLIN C24	Job Type:	SURFACE	ADC Used:	YES
Company Rep:	BEAUDE OAKS	Cement Supervisor:	ED DEUSSEN	Elite # 8	ROB EICKHOFF

OptiCem v6.4.10
08-Apr-12 17:36

ANTERO McLIN C24

8.625 SURFACE



Customer:	ANTERO PRO PETRO	Job Date:	08-Apr-2012	Sales Order #:	9414897
Well Description:	McLIN C24	Job Type:	SURFACE	ADC Used:	YES
Company Rep:	BEAUDE OAKS	Cement Supervisor:	ED DEUSSEN	Elite # 8	ROB EICKHOFF

OptiCem v6.4.10
08-Apr-12 17:36

HALLIBURTON

Water Analysis Report

Company:	**ANTERO**	**Date:**	**4/8/2012**
Submitted by:	**MIKE MAGERS**	**Date Rec.:**	**4/8/2012**
Attention:	**C.Martinez/ J.Trout**	**S.O.#**	**9414897**
Lease	**McLin**	**Job Type:**	**SURFACE**
Well #	**C 24**		

Specific Gravity	***MAX***	**1**	
pH	***8***	**7**	
Potassium (K)	***5000***	**0**	**Mg / L**
Calcium (Ca)	***500***	**120**	**Mg / L**
Iron (FE2)	***300***	**0**	**Mg / L**
Chlorides (Cl)	***3000***	**0**	**Mg / L**
Sulfates (SO_4)	***1500***	**UNDER 200**	**Mg / L**
Chlorine (Cl_2)		**0**	**Mg / L**
Temp	***40-80***	**50**	**Deg**
Total Dissolved Solids		**120**	**Mg / L**

Respectfully: **MIKE MAGERS**

Title: **CEMENTING SUPERVISOR**

Location: **Grand Junction, CO**

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
9414897	10	4/8/2012
Customer:		**Job Type (BOM):**
ANTERO RESOURCES		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
BEAUDE OAKS		05-045-20133
Well Name:		**Well Number:**
McLin		C24
Well Type:	**Well Country:**	
Development Well	United States of America	
H2S Present:	**Well State:**	**Well County:**
No	Colorado	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**	**4/8/2012**
Survey Interviewer	**The survey interviewer is the person who initiated the survey.**	**EDWARD DEUSSEN (HB57194)**
Customer Participation	**Did the customer partipcipate 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

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
9414897	10	4/8/2012
Customer:		**Job Type (BOM):**
ANTERO RESOURCES		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
BEAUDE OAKS		05-045-20133
Well Name:		**Well Number:**
McLin		C24
Well Type:	**Well Country:**	
Development Well	United States of America	
H2S Present:	**Well State:**	**Well County:**
No	Colorado	Garfield

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date The date the survey was conducted	4/8/2012

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.	2
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.	1.2
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	4
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

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
9414897	10	4/8/2012
Customer:		**Job Type (BOM):**
ANTERO RESOURCES		CMT SURFACE CASING BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
BEAUDE OAKS		05-045-20133
Well Name:		**Well Number:**
McLin		C24
Well Type:	**Well Country:**	
Development Well	United States of America	
H2S Present:	**Well State:**	**Well County:**
No	Colorado	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 cment mixed at designed density divided by total BBLs of cement multiplied by 100	94
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	93
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