

ANTERO RESOURCES  
1625 17TH STREET THIRD FLOOR  
DENVER, Colorado

MCLIN  
MCLIN B5

FRONTIER 12/FRONTIER/12

## **Post Job Summary**

### **Cement Surface Casing**

Prepared for:  
Date Prepared:  
Version: 1

Service Supervisor: MILLER, KEVIN

Submitted by:

**HALLIBURTON**

### The Road to Excellence Starts with Safety

Sold To #: 337854		Ship To #: 2786928		Quote #:		Sales Order #: 7406951	
Customer: ANTERO RESOURCES				Customer Rep: HONEYCUTT, JOE			
Well Name: MCLIN			Well #: B5		API/UWI #: 05-045-19389		
Field: KOKOPELLI		City (SAP): SILT		County/Parish: Garfield		State: Colorado	
Lat: N 39.531 deg. OR N 39 deg. 31 min. 51.632 secs.				Long: W 107.608 deg. OR W -108 deg. 23 min. 31.42 secs.			
Contractor: FRONTIER 12			Rig/Platform Name/Num: FRONTIER 12				
Job Purpose: Cement Surface Casing							
Well Type: Development Well			Job Type: Cement Surface Casing				
Sales Person: METLI, MARSHALL			Srvc Supervisor: MILLER, KEVIN			MBU ID Emp #: 443040	

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
CHASTAIN, DERICK Allan	4	455848	HOEFER, BRYAN D	4	415775	MILLER, KEVIN Paul	4	443040
ROSS, CHARLES Raymond	4	453128						

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10867425	100 mile	10872429	100 mile	10897891	100 mile	11259885	100 mile
11360883	100 mile						

### Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
5/31/10	5	2						

TOTAL	Total is the sum of each column separately							
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### Job

Formation Name	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Water Depth	Perforation Depth (MD)	From	To	Job Times	Date	Time	Time Zone
				BHST	1022. ft					Called Out	31 - May - 2010	08:30	MST
										On Location	31 - May - 2010	12:30	MST
										Job Started	31 - May - 2010	13:57	MST
										Job Completed	31 - May - 2010	14:31	MST
										Departed Loc			

### 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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### Sales/Rental/3<sup>rd</sup> Party (HES)

Description	Qty	Qty uom	Depth	Supplier
PLUG,CMTG,TOP,8 5/8,HWE,7.20 MIN/8.09 MA	1	EA		
PORT. DAS W/CEMWIN;ACQUIRE W/HES, ZI	1	JOB		
ADC (AUTO DENSITY CTRL) SYS, /JOB,ZI	1	JOB		
R/A DENSOMETER W/CHART RECORDER,/JOB,ZI	1	JOB		

### 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	8.625	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 ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Freshwater Ahead		20.00	bbl	8.33	.0	.0	6.0	
2	VersaCem GJC085	VERSACEM (TM) SYSTEM (452010)	146.0	sacks	12.3	2.38	13.77	8.0	13.77
13.77 Gal		FRESH WATER							
3	SwiftCem GJC138	SWIFTCEM (TM) SYSTEM (452990)	113.0	sacks	14.2	1.43	6.85	8.0	6.85
6.85 Gal		FRESH WATER							
4	FreshWater Displacement		59.00	bbl	8.33	.0	.0	8.0	
Calculated Values		Pressures		Volumes					
Displacement	59	Shut In: Instant		Lost Returns	0	Cement Slurry	95	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	21	Actual Displacement	59	Treatment	
Frac Gradient		15 Min		Spacers		Load and Breakdown		Total Job	
Rates									
Circulating	10	Mixing	8	Displacement	10	Avg. Job	8		
Cement Left In Pipe	Amount	43.16 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*

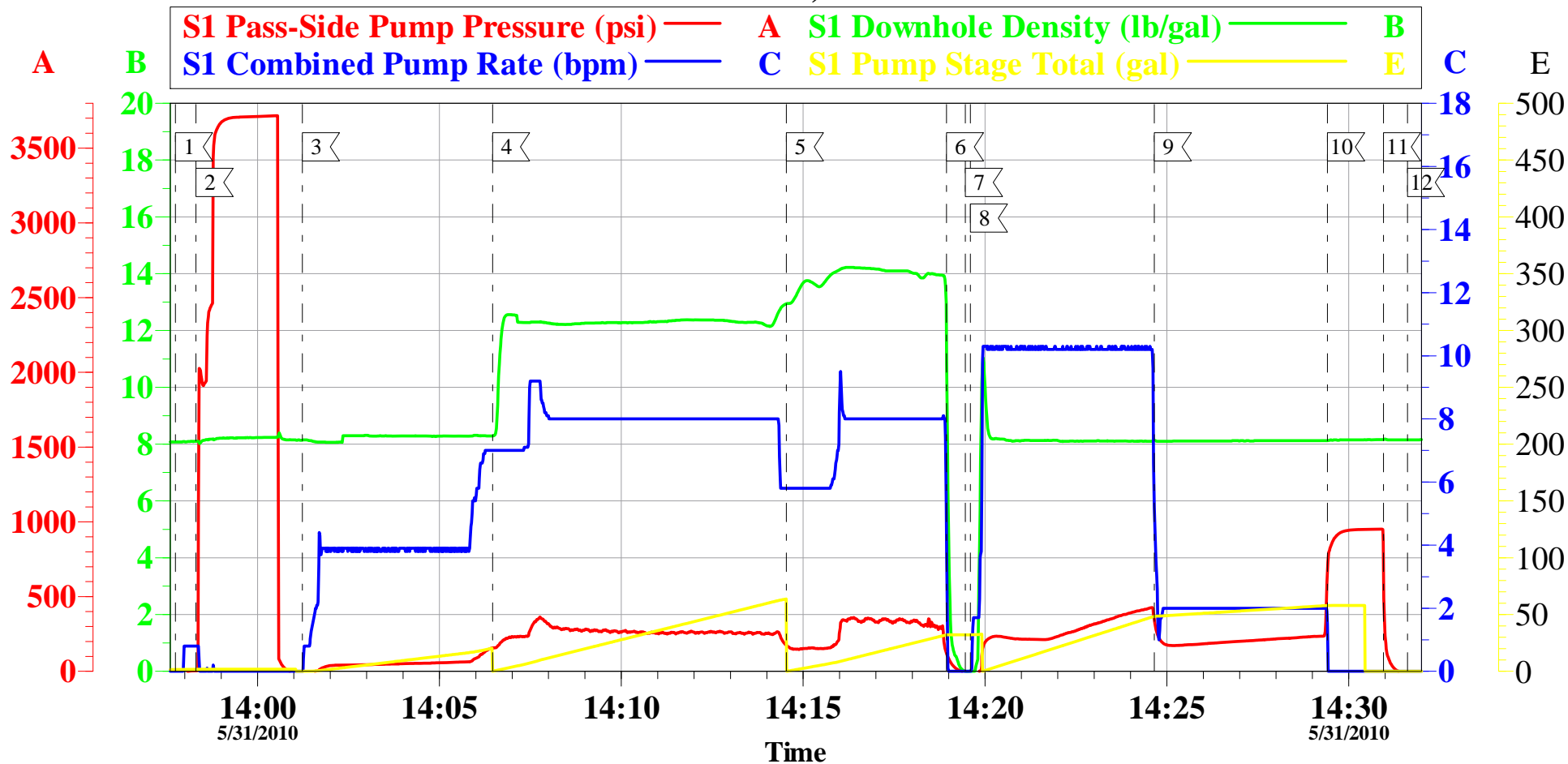
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Legal Description:							
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Contractor: FRONTIER 12			Rig/Platform Name/Num: FRONTIER 12				
Job Purpose: Cement Surface Casing						Ticket Amount:	
Well Type: Development Well			Job Type: Cement Surface Casing				
Sales Person: METLI, MARSHALL			Srvc Supervisor: MILLER, KEVIN			MBU ID Emp #: 443040	

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pre-Convoy Safety Meeting	05/31/2010 11:00							ALL HES PERSONEL
Crew Leave Yard	05/31/2010 11:15							
Arrive At Loc	05/31/2010 12:30							
Assessment Of Location Safety Meeting	05/31/2010 12:35							ALL HES PERSONEL, RIG WAS STILL RUNNING CASING UPON HES ARRIVAL
Rig-Up Equipment	05/31/2010 13:00							
Rig-Up Completed	05/31/2010 13:25							
Pre-Job Safety Meeting	05/31/2010 13:40							ALL HES PERSONEL AND RIG CREW
Start Job	05/31/2010 13:57							TD- 1020, TP-1011.46, SJ- 43.16, MUD- 9.9, OH 12.25, CSG- 8.625 32# J-55,
Pressure Test	05/31/2010 13:58							3000 PSI, ALL LINES HELD PRESSURE
Pump Spacer 1	05/31/2010 14:01		8	20			101.0	FRESH WATER
Pump Lead Cement	05/31/2010 14:06		8	61.8			290.0	146 SKS, 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK
Pump Tail Cement	05/31/2010 14:14		8	28.77			350.0	113 SKS, 14.2 PPG, 1.43 FT3/ SK, 6.85 GAL/SK, SET UP TIME 3:07 @ 70 BC
Shutdown	05/31/2010 14:18							
Drop Top Plug	05/31/2010 14:19							

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Displacement	05/31/2010 14:19		10	58.96			400.0	FRESH WATER, GOT CEMENT RETURNS 38 BBLS INTO DISPLACEMENT
Slow Rate	05/31/2010 14:24		2	48			220.0	
Bump Plug	05/31/2010 14:29		2	58.96			950.0	
Check Floats	05/31/2010 14:30							FLOATS HELD, 1/2 BBL BACK, 21 BBLS CEMENT TO SURFACE
End Job	05/31/2010 14:31							
Post-Job Safety Meeting (Pre Rig-Down)	05/31/2010 14:40							ALL HES PERSONEL
Rig-Down Completed	05/31/2010 15:20							
Depart Location Safety Meeting	05/31/2010 16:00							ALL HES PERSONEL
Crew Leave Location	05/31/2010 16:30							
Other	05/31/2010 16:31							THANK YOU FOR CHOOSING HALLIBURTON, KEVIN MILLER AND CREW

# ANTERO

## MCLIN # B-5, SURFACE



Local Event Log														
Maximum				SPPP	Maximum				SPPP	Maximum				SPPP
1	START JOB	13:57:44	4.304	2	PRESSURE TEST	13:58:18	3717	3	H2O SPACER	14:01:14	156.3			
4	LEAD CEMENT	14:06:28	363.3	5	TAIL CEMENT	14:14:32	360.3	6	SHUTDOWN	14:18:56	127.3			
7	DROP TOP PLUG	14:19:28	-3.696	8	DISPLACEMENT	14:19:36	427.3	9	SLOW RATE	14:24:39	689.5			
10	BUMP PLUG	14:29:25	951.3	11	CHECK FLOATS	14:30:57	869.3	12	END JOB	14:31:37	-13.70			

Customer: ANTERO  
 Well Description: MCLIN B-5  
 Customer Rep: JOE HONEYCUTT

Job Date: 31-May-2010  
 Job type: SURFACE  
 Service Supervisor: KEVIN MILLER

Sales Order #: 7406591  
 ADC Used: YES  
 Operator/ Pump: ROSS/11

OptiCem v6.4.6  
 31-May-10 14:51