
ANTERO RESOURCES

**Mclin B 16
PICEANCE
Garfield County , Colorado**

Cement Surface Casing

Post Job Summary

The Road to Excellence Starts with Safety

Sold To #: 337854	Ship To #: 2917168	Quote #:	Sales Order #: 9387117
Customer: ANTERO RESOURCES		Customer Rep: Oaks, Beade	
Well Name: Mclin	Well #: B 16	API/UWI #: 05-045-19384	
Field: PICEANCE	City (SAP): DENVER	County/Parish: Garfield	State: Colorado
Lat: N 39.531 deg. OR N 39 deg. 31 min. 51.622 secs.		Long: W 107.608 deg. OR W -108 deg. 23 min. 30.422 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: NELSON, RYAN	MBU ID Emp #: 386514	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BLACKMORE, JASON A	0.0	287012	BROWN, TRAVIS A	0.0	396848	NELSON, RYAN Cody	0.0	386514
WEAVER, CARLTON Russell	0.0	457698						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10533645	120 mile	10565341	120 mile	10804567	120 mile	11139328	120 mile
11360871	120 mile	11542767	120 mile	11583915	120 mile		

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours

TOTAL Total is the sum of each column separately

Job				Job Times			
Formation Name				Date	Time	Time Zone	
Formation Depth (MD)	Top	Bottom		Called Out	28 - Mar - 2012	10:30	MST
Form Type	BHST			On Location	28 - Mar - 2012	14:00	MST
Job depth MD	1075. ft			Job Started			
Water Depth	Wk Ht Above Floor			Job Completed			
Perforation Depth (MD)	From	To		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
Open Hole				12.25				.	1075.		
Surface Casing	New		8.625	7.921	32.		J-55	.	1054.6		

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		

Stage/Plug #: 1

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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		20.00	bbl	8.33	.0	.0	.0		
2	Lead Cement	VERSACEM (TM) SYSTEM (452010)	160.0	sacks	12.3	2.38	13.77	.0	13.77	
		13.77 Gal	FRESH WATER							
3	Tail Cement	SWIFTCES (TM) SYSTEM (452990)	205.0	sacks	14.2	1.43	6.85	.0	6.85	
		6.85 Gal	FRESH WATER							
4	Fresh Water Displacement		62.00	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	44.1 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						

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Field: PICEANCE	City (SAP): DENVER	County/Parish: Garfield	State: Colorado
Legal Description:			
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Job Purpose: Cement Surface Casing			Ticket Amount:
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: METLI, MARSHALL		Srvc Supervisor: NELSON, RYAN	MBU ID Emp #: 386514

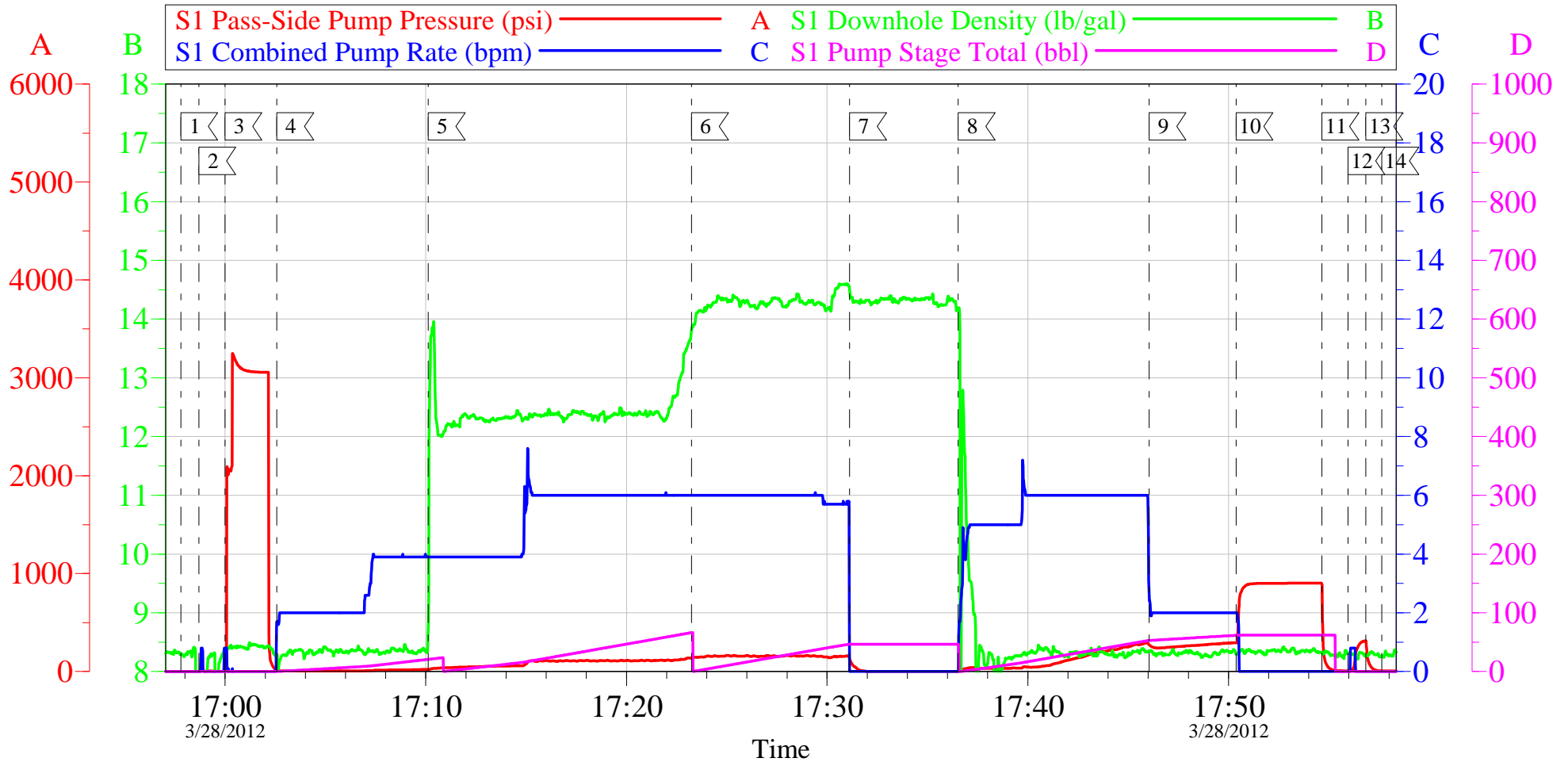
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	03/28/2012 10:30							
Arrive at Location from Service Center	03/28/2012 14:00							Arrived on location 2 hours early. Rig starting casing.
Assessment Of Location Safety Meeting	03/28/2012 14:25							
Pre-Rig Up Safety Meeting	03/28/2012 16:00							
Rig-Up Equipment	03/28/2012 16:05							
Pre-Job Safety Meeting	03/28/2012 16:50							
Start Job	03/28/2012 16:58							TD-1075' TP-1054.6' SJ-44.15' CASING 8 5/8" 32# HOLE 12.25"
Other	03/28/2012 16:59			1				Fill lines
Test Lines	03/28/2012 16:59						3000.0	
Pump Spacer 1	03/28/2012 17:03		4	20			12.0	Fresh water
Pump Lead Cement	03/28/2012 17:10		6	67.8			150.0	160 sks 12.3 ppg 2.38 yield 13.77 gal/sk
Pump Tail Cement	03/28/2012 17:24		6	52.2			165.0	205 sks 14.2 ppg 1.43 yield 6.85 gal/sk
Shutdown	03/28/2012 17:31							
Drop Top Plug	03/28/2012 17:33							Removed swadge and dropped plug
Pump Displacement	03/28/2012 17:36		6	61.5			290.0	Fresh water, washed up on top of plug
Cement Returns to Surface	03/28/2012 17:45							Well circulated 15bbbls of cement to surface
Slow Rate	03/28/2012 17:46		2	50			290.0	

Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Bump Plug	03/28/2012 17:50		2	61.5			870.0	
Check Floats	03/28/2012 17:55							Floats holding
Pressure Up Well	03/28/2012 17:56						310.0	
Shut In Well	03/28/2012 17:57						310.0	
End Job	03/28/2012 17:58							Pipe was static during job. Well began to circulate 78 bbls into pumping.
Post-Job Safety Meeting (Pre Rig-Down)	03/28/2012 18:00							
Rig-Down Equipment	03/28/2012 18:10							
Pre-Convoy Safety Meeting	03/28/2012 18:30							
Depart Location for Service Center or Other Site	03/28/2012 18:35							Thank you for using Halliburton-Ryan Nelson & Crew

Antero- Mclin B 16

Surface



Local Event Log

1 Start Job	16:57:47	2 Fill Lines	16:58:42	3 Pressure Test	16:59:59
4 Pump Spacer	17:02:35	5 Pump Lead Cement	17:10:07	6 Pump Tail Cement	17:23:14
7 Shut Down/Drop Plug	17:31:07	8 Pump Displacement	17:36:32	9 Slow Rate	17:46:03
10 Bump Plug	17:50:23	11 Check Floats	17:54:39	12 Pressure Up Well	17:55:57
13 Shut In Well	17:56:51	14 End Job	17:57:38		

Customer: Antero
Well Description: Mclin B 16
Company Rep: Beaude Oaks

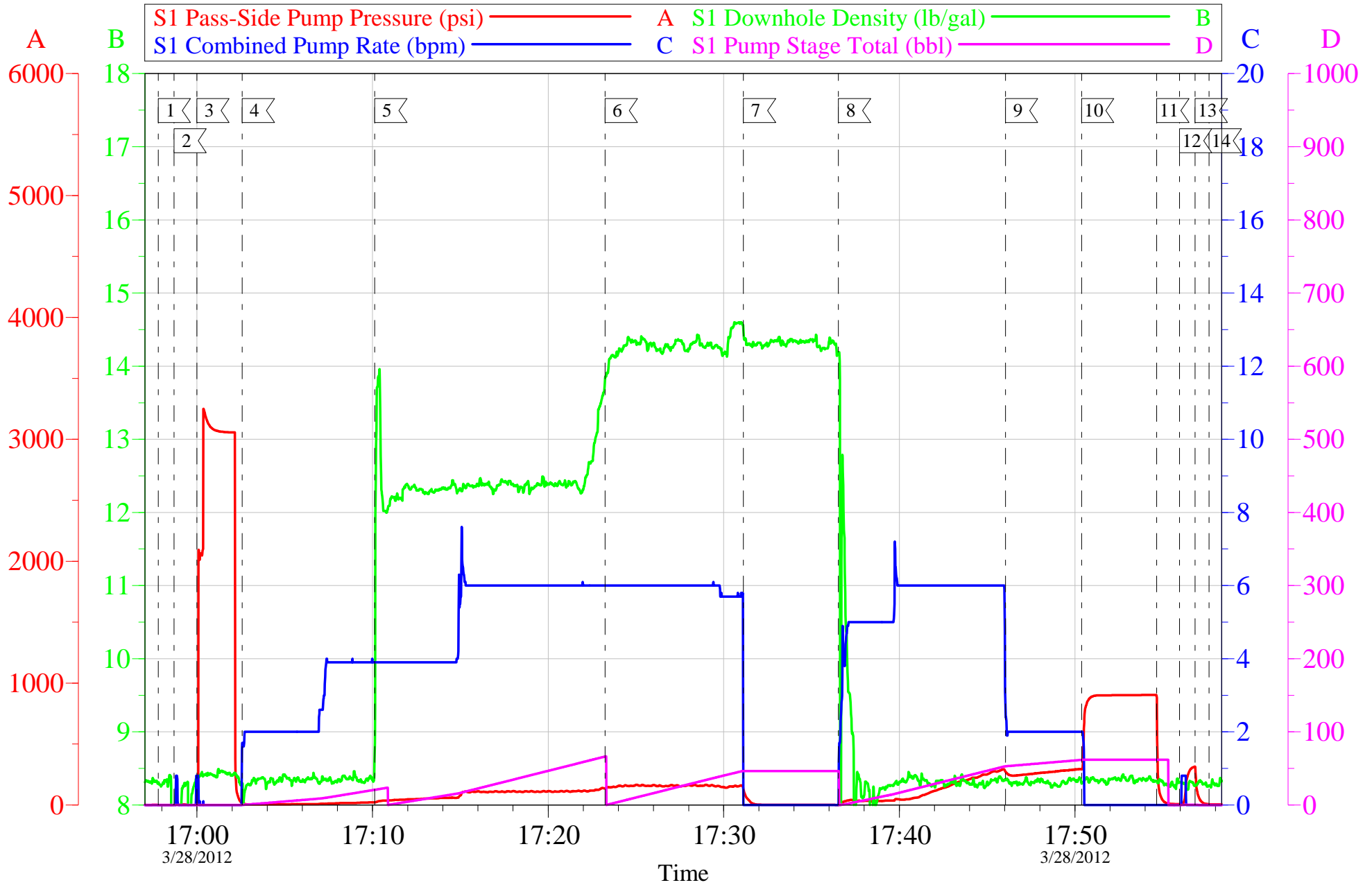
Job Date: 28-Mar-2012
Job Type: Surface
Cement Supervisor: Ryan Nelson

Sales Order #: 9387117
ADC Used: Yes
Elite #1: Travis Brown

OptiCem v6.4.10
28-Mar-12 18:06

Antero- Mclin B 16

Surface



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Job Date: 28-Mar-2012
Job Type: Surface
Cement Supervisor: Ryan Nelson

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ADC Used: Yes
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28-Mar-12 18:06

Sales Order #: 9387117	Line Item: 10	Survey Conducted Date: 3/28/2012
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: BEAUDE OAKS		API / UWI: (leave blank if unknown) 05-045-19384
Well Name: Mclin		Well Number: B 16
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	3/28/2012
Survey Interviewer	The survey interviewer is the person who initiated the survey.	RYAN NELSON (HX23901)
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 #: 9387117	Line Item: 10	Survey Conducted Date: 3/28/2012
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Well Name: Mclin		Well Number: B 16
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	3/28/2012
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)	1.5
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	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
Number Of JSAs Performed	1
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

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Well Name: Mclin		Well Number: B 16
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	96
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	99
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