
ANTERO RESOURCES

**DIXON FED B16
MAMM CREEK
Garfield County , Colorado**

**Cement Surface Casing
08-Jul-2011**

Job Site Documents

The Road to Excellence Starts with Safety

Sold To #: 337854	Ship To #: 2864589	Quote #:	Sales Order #: 8306895
Customer: ANTERO RESOURCES		Customer Rep: Honeycutt, Matt	
Well Name: DIXON FED		Well #: B16	API/UWI #: 05-045-20425
Field: MAMM CREEK	City (SAP): SILT	County/Parish: Garfield	State: Colorado
Lat: N 39.524 deg. OR N 39 deg. 31 min. 26.702 secs.		Long: W 107.66 deg. OR W -108 deg. 20 min. 25.472 secs.	
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: TRIPLETT, MICHEAL	MBU ID Emp #: 447908

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DANIEL, EVERETT Dean	4	337325	SINGLETON, AUSTIN W	4	487406	TRIPLETT, MICHEAL Anthony	4	447908
WEAVER, CARLTON Russell	4	457698						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10567589C	120 mile	10713212	120 mile	10897849	120 mile	10951246	120 mile
10995027	120 mile						

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
07/08/2011	4	1						

TOTAL Total is the sum of each column separately

Job

Job Times

Formation Name	Top	Bottom	Called Out	Date	Time	Time Zone
Formation Depth (MD)			On Location	08 - Jul - 2011	14:00	MST
Form Type	BHST		Job Started	08 - Jul - 2011	16:25	MST
Job depth MD	1060. ft	Job Depth TVD	1060. ft	Job Completed	08 - Jul - 2011	17:18
Water Depth		Wk Ht Above Floor	3. ft	Departed Loc	08 - Jul - 2011	18:30
Perforation Depth (MD)	<i>From</i>	<i>To</i>				

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbf/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
12 1/4" Open Hole				12.25				.	1070.		
8 5/8" Surface Casing	New		8.625	7.825	36.		J-55	.	1070.		

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)			160.0	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				61.00	bbl	8.33	.0	.0	.0			
Calculated Values			Pressures			Volumes							
Displacement	60.9	Shut In: Instant			Lost Returns		0	Cement Slurry		130	Pad		
Top Of Cement	SURFACE	5 Min			Cement Returns		17	Actual Displacement			Treatment		
Frac Gradient		15 Min			Spacers		20	Load and Breakdown			Total Job		201
Rates													
Circulating	0	Mixing		6	Displacement		6	Avg. Job		6			
Cement Left In Pipe	Amount	42.32 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: 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		Srvc Supervisor: TRIPLETT, MICHEAL	MBU ID Emp #: 447908

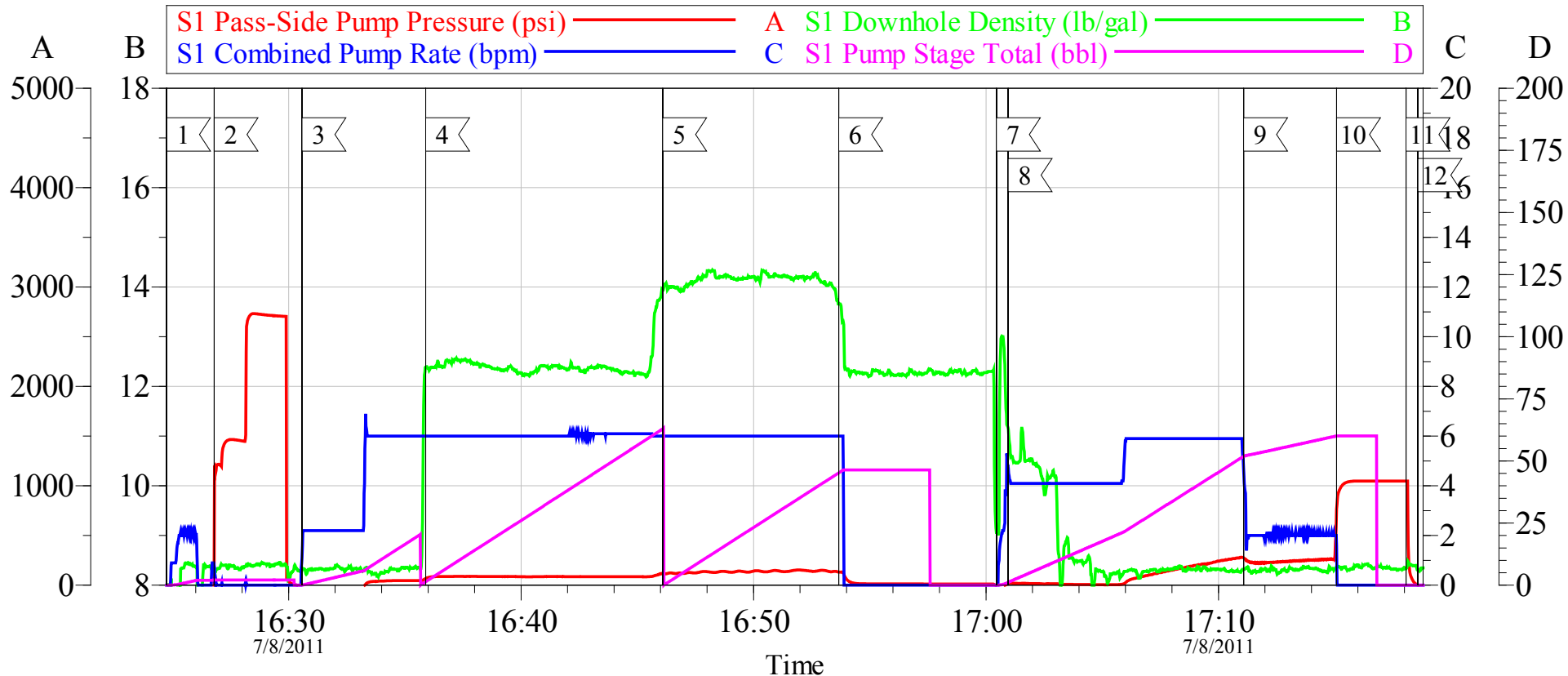
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	07/08/2011 10:00							
Pre-Convoy Safety Meeting	07/08/2011 12:00							
Crew Leave Yard	07/08/2011 12:10							
Arrive At Loc	07/08/2011 14:30							VERIFY NUMBERS AND CEMENT WITH COMPANY REP.
Assessment Of Location Safety Meeting	07/08/2011 14:40							
Other	07/08/2011 14:50							SPOT EQUIPMENT, 1 RCM PUMP TRUCK, 1 660
Pre-Rig Up Safety Meeting	07/08/2011 15:00							GO OVER JSA AND HAVE CREW SIGN
Rig-Up Equipment	07/08/2011 15:05							
Pre-Job Safety Meeting	07/08/2011 16:15							GO OVER JOB PROCEDURES AND SAFETY INFORMATION
Start Job	07/08/2011 16:25							TD:1060', TP:1043.16', SJ:42.32', MW:9.1, CASING: 8.625 32#, OH: 12.25"
Test Lines	07/08/2011 16:26						3000	PRESSURE TEST PUMPS AND LINES, STARTED AT 2748 PSI AND ENDED AT 2720 PSI, LOST 28 PSI IN 2 MINUTES.
Pump Spacer 1	07/08/2011 16:30		6	20			100.0	FRESH WATER

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Lead Cement	07/08/2011 16:35		6	67.8			138.0	160 SACKS MIXED @ 12.3, 2.38 YIELD, 13.77 GAL/SACK
Pump Tail Cement	07/08/2011 16:46		6	52.2			160.0	205 SACKS MIXED @ 14.2, 1.43 YIELD, 6.85GAL/SACK
Shutdown	07/08/2011 16:53							
Drop Top Plug	07/08/2011 17:00							REMOVE SWAGE AND DROP PLUG.
Pump Displacement	07/08/2011 17:01		6	60.9			290.0	FRESHWATER
Slow Rate	07/08/2011 17:11		2	50.9			270.0	SLOWRATE LAST 10 BBLS PRIOR TO BUMPING THE PLUG.
Bump Plug	07/08/2011 17:15						280.0	BUMP PLUG AND WENT 500PSI OVER TO 800 PSI
Check Floats	07/08/2011 17:18							FLOATS HELD
End Job	07/08/2011 17:18							GOT CIRCULATION WITH 10 BBLS OF DISPLACEMENT AWAY, GOT 17 BBLS OF CEMENT BACK TO SURFACE. USED 100#S OF SUGAR.
Post-Job Safety Meeting (Pre Rig-Down)	07/08/2011 17:20							
Rig-Down Equipment	07/08/2011 17:30							
Pre-Convoy Safety Meeting	07/08/2011 18:25							
Crew Leave Location	07/08/2011 18:30							THANKS FOR USING HALLIBURTON MIKE TRIPLETT AND CREW

EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	Start Job		2024 Max Psi			
6	Test Lines	3000.0				
9	FRESHWATER	20.0				
13	Lead Cement	67.8	160	12.3	2.38	13.77
15	Tail Cement	52.2	205	14.2	1.43	6.85
22	Drop Plug					
23	KCL DISPLACEMENT	60.9				
	SLOW RATE	50.9				
26	Land Plug	269+500				
2	Release Psi / Job Over					
			Do Not Overdisplace			
DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH	FLOAT COLLAR	BBL/FT	H2O REQ.	
60.95	1043.16	42.32	1000.84	0.0609	187	
PSI to Lift Pipe	458	*****Use Mud Scales on Each Tier*****				
Total Displacement	60.95					
CALCULATED DIFFERENTIAL PSI		269	TOTAL FLUID PUMPED		201	
Collapse	2530	Burst	3930	SO#	8306895	

ANTERO

SURFACE DIXON FED B-16



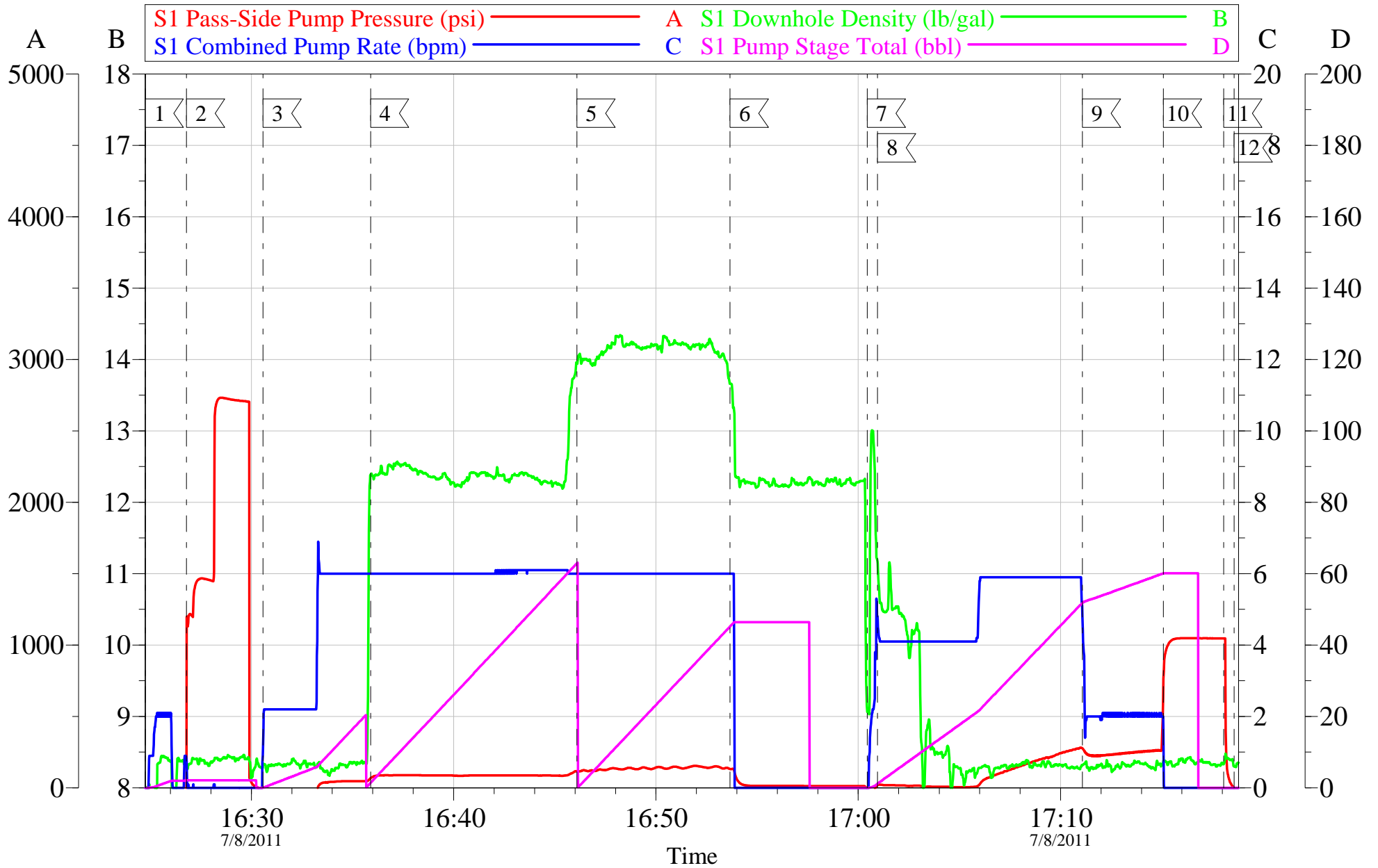
Local Event Log

1	START JOB	16:24:45	2	PRESSURE TEST	16:26:48
3	START FRESHWATER SPACER	16:30:35	4	START LEAD	16:35:54
5	START TAIL	16:46:05	6	SHURDOWN	16:53:40
7	DROP PLUG	17:00:27	8	START DISPLACEMENT	17:00:57
9	SLOWRATE	17:11:05	10	BUMP PLUG	17:15:05
11	CHECK FLOATS	17:18:04	12	END JOB	17:18:35

Customer: ANTERO	Job Date: 08-Jul-2011	Sales Order #: 8306895	
Well Description: DIXON FED B-16	JOB TYPE: SURFACE	COMPANY REP: BEAUDE OAKS	
ADC USED: YES	SERVICE SUPERVISOR: MIKE TRIPLETT	ELITE/OPERATER 3/ RUSTY WEAVER	

ANTERO

SURFACE DIXON FED B-16



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ADC USED: YES	SERVICE SUPERVISOR: MIKE TRIPLETT	ELITE/OPERATER 3/ RUSTY WEAVER

HALLIBURTON

Water Analysis Report

Company: WILLIAMS

Date: 12/21/2010

Submitted by: MIKE TRIPLETT

Date Rec.: 7/8/2011

Attention: JON TROUT

S.O.# 8306895

Lease DIXON FED

Job Type: SURFACE

Well # B-16

Specific Gravity	<i>MAX</i>	1
pH	<i>8</i>	7
Potassium (K)	<i>5000</i>	400 Mg / L
Calcium (Ca)	<i>500</i>	100 Mg / L
Iron (FE2)	<i>300</i>	0 Mg / L
Chlorides (Cl)	<i>3000</i>	500 Mg / L
Sulfates (SO ₄)	<i>1500</i>	-200 Mg / L
Chlorine (Cl ₂)		0 Mg / L
Temp	<i>40-80</i>	55 Deg
Total Dissolved Solids		35 Mg / L

Respectfully: MIKE TRIPLETT

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

Sales Order #: 8306895	Line Item: 10	Survey Conducted Date: 7/8/2011
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: BEAUDE OAKS		API / UWI: (leave blank if unknown) 05-045-20425
Well Name: DIXON FED		Well Number: B16
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	7/8/2011
Survey Interviewer	The survey interviewer is the person who initiated the survey.	MICHEAL TRIPLETT (HB15721)
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	
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

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Well Name: DIXON FED		Well Number: B16
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	7/8/2011
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)	3
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	7
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: DIXON FED		Well Number: B16
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	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	95
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