
ANTERO RESOURCES

**DIXON FED B6
MAMM CREEK
Garfield County , Colorado**

**Cement Surface Casing
14-Jul-2011**

Job Site Documents

The Road to Excellence Starts with Safety

Sold To #: 337854		Ship To #: 2865053		Quote #:		Sales Order #: 8313839							
Customer: ANTERO RESOURCES				Customer Rep: OAKS, BEAUDE									
Well Name: DIXON FED			Well #: B6		API/UWI #: 05-045-14372								
Field: MAMM CREEK		City (SAP): SILT		County/Parish: Garfield		State: Colorado							
Lat: N 39.524 deg. OR N 39 deg. 31 min. 26.818 secs.				Long: W 107.66 deg. OR W -108 deg. 20 min. 24.85 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: DANIEL, EVERETT		MBU ID Emp #: 337325								
Job Personnel													
HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #					
DANIEL, EVERETT Dean	5.5	337325	HARDRICK, RAYMOND Frank	5.5	391324	LESTER, LEVI William	5.5	474117					
SIMINEO, JEROD M	5.5	479954											
Equipment													
HES Unit #	<i>Distance-1 way</i>	HES Unit #	<i>Distance-1 way</i>	HES Unit #	<i>Distance-1 way</i>	HES Unit #	<i>Distance-1 way</i>						
10011429	120 mile	10025118	120 mile	10741259	120 mile	10951247	120 mile						
11560046	120 mile	11562538	120 mile										
Job Hours													
Date	<i>On Location Hours</i>	Operating Hours	Date	<i>On Location Hours</i>	Operating Hours	Date	<i>On Location Hours</i>	Operating Hours					
7/13/11	2.5	.5	7/14/11	3	2.5								
TOTAL	5.5	3	<i>Total is the sum of each column separately</i>										
Job				Job Times									
Formation Name						Date	Time	Time Zone					
Formation Depth (MD)		Top	Bottom			Called Out	13 - Jul - 2011	17:15	MST				
Form Type		BHST				On Location	13 - Jul - 2011	21:00	MST				
Job depth MD		1006. m		Job Depth TVD		1006. m		Job Started	14 - Jul - 2011	00:16	MST		
Water Depth				Wk Ht Above Floor		3. m		Job Completed	14 - Jul - 2011	01:56	MST		
Perforation Depth (MD)		From	To			Departed Loc	14 - Jul - 2011	03:00	MST				
Well Data													
<i>Description</i>	New / Used	Max pressure MPa	Size mm	ID mm	Weight kg/m	Thread	Grade	Top MD m	Bottom MD m	Top TVD m	Bottom TVD m		
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 kg/m3	Yield m3/sk	Mix Fluid m3/tonne	Rate m3/min	Total Mix Fluid m3/tonne	
1	Water Spacer		20	bbl	8.33	.0	.0	.0		
2	Lead Cement	VERSACEM (TM) SYSTEM (452010)	160	sacks	12.3	2.38	13.77		13.77	
	13.77 Gal	FRESH WATER								
3	Tail Cement	SWIFTCEM (TM) SYSTEM (452990)	205	sacks	14.2	1.43	6.85		6.85	
	6.85 Gal	FRESH WATER								
4	Displacement		58.4	bbl	8.33	.0	.0	.0		
Calculated Values			Pressures			Volumes				
Displacement	58.4	Shut In: Instant		Lost Returns		Cement Slurry	120	Pad		
Top Of Cement	Surface	5 Min		Cement Returns	30	Actual Displacement	58.4	Treatment		
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job		
Rates										
Circulating	6	Mixing	6	Displacement	6	Avg. Job	6			
Cement Left In Pipe	Amount	41.90 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: OAKS, BEAUDE	
Well Name: DIXON FED		Well #: B6	API/UWI #: 05-045-14372
Field: MAMM CREEK	City (SAP): SILT	County/Parish: Garfield	State: Colorado
Legal Description:			
Lat: N 39.524 deg. OR N 39 deg. 31 min. 26.818 secs.		Long: W 107.66 deg. OR W -108 deg. 20 min. 24.85 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: DANIEL, EVERETT	MBU ID Emp #: 337325

Activity Description	Date/Time	Cht #	Rate m3/min	Volume m3		Pressure MPa		Comments
				Stage	Total	Tubing	Casing	
Call Out	07/13/2011 17:15							
Depart Yard Safety Meeting	07/13/2011 18:30							
Depart from Service Center or Other Site	07/13/2011 19:00							Checked out HES pump (Elite 5), Body load, 660
Arrive at Location from Service Center	07/13/2011 20:30							Arrived 1 hr. early. Did not start charging time until 2130
Assessment Of Location Safety Meeting	07/13/2011 20:31							
Consult with Co. Rep.	07/13/2011 20:35							Verified calculations and materials on location including H2O and Cement totals
Safety Meeting - Pre Rig-Up	07/13/2011 23:20							Discussed job procedures and safety issues
Rig-Up Equipment	07/13/2011 23:30							
Rig-Up Completed	07/14/2011 00:00							
Safety Meeting - Pre Job	07/14/2011 00:05							Discussed job procedures and safety issues
Start Job	07/14/2011 00:16							
Prime Pumps	07/14/2011 00:17		2	2			18.0	Fresh Water
Test Lines	07/14/2011 00:19		0.5	0.1			3000.0	Fresh Water
Pump Spacer 1	07/14/2011 00:33		4	20			18.0	Fresh Water

Activity Description	Date/Time	Cht #	Rate m3/min	Volume m3		Pressure MPa		Comments
				Stage	Total	Tubing	Casing	
Pump Lead Cement	07/14/2011 00:45		6	67.8			117.0	160 sks of VersaCem @ 12.3# - 2.38 yield - 13.77 H2O requirement
Pump Tail Cement	07/14/2011 00:59		5.5	52.2			126.0	205 sks of SwiftCem @ 14.2#-1.43 Yield-6.85 H2O Requirement
Shutdown	07/14/2011 01:09							
Clean Lines	07/14/2011 01:10							
Drop Top Plug	07/14/2011 01:18							
Pump Displacement	07/14/2011 01:20		6	58.4			254.0	Fresh Water
Slow Rate	07/14/2011 01:34		2	48			254.0	Slowed to 2 bpm
Bump Plug	07/14/2011 01:40		2	58.4			789.0	Bumped Plug @ calculated displacement and 500 psi over
Check Floats	07/14/2011 01:47							Floats Not Holding
Pressure Up Well	07/14/2011 01:52						450	Pressured Up to 450 psi
Shut-In Pressure	07/14/2011 01:54						450	
End Job	07/14/2011 01:56							
Post-Job Safety Meeting (Pre Rig-Down)	07/14/2011 01:58							Discussed job procedures and safety issues
Rig-Down Equipment	07/14/2011 02:00							
Rig-Down Completed	07/14/2011 02:30							
Pre-Convoy Safety Meeting	07/14/2011 02:45							
Depart Location for Service Center or Other Site	07/14/2011 03:00							

Total Depth = 1006, Total Casing = 1001.64, Shoe Joint =41.90,. Casing remained stationary throughout job and was chained down. 30 bbls of cement returned to surface. 164 bbls of H2O were used for the job and 10 bbls were used for clean up (after the job) The plug landed at calculated displacement and the floats did not hold.

Thank you for using Grand Junction Halliburton Dean Daniel & Crew

JOB PROCEDURE

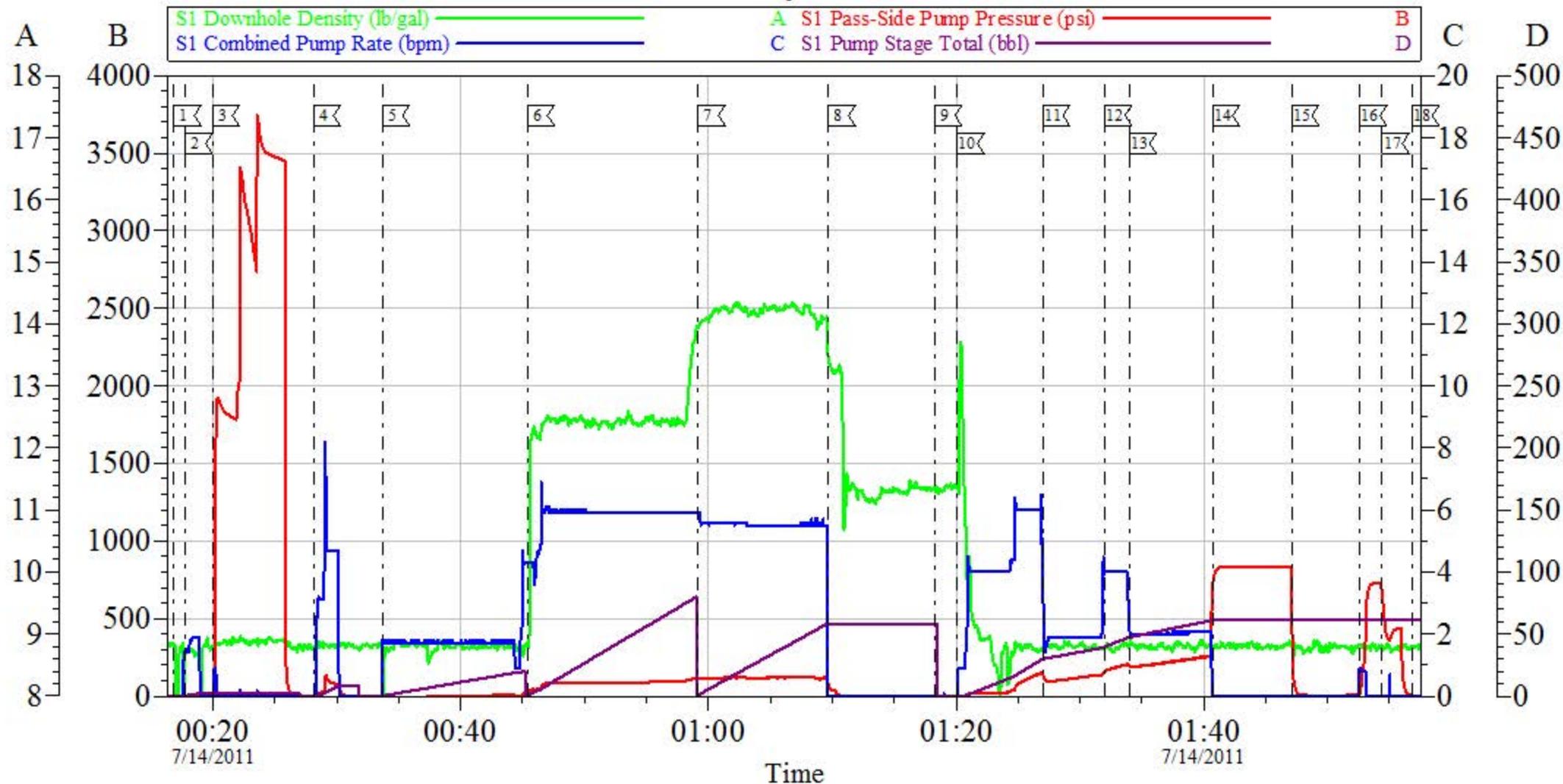
CRAIGS 2

Pre-Planned Job Procedure Single Stage

EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	Start Job					
6	Test Lines	2000.0				
9	H2O Spacer	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	Displacement	58.4		Mud Wt.		
1085	Slow Rate	48.4		Casing	8.625	32
26	Land Plug	263		Open Hole	12.25	
	Release Psi / Job Over	763				
	Check Floats					
22	END JOB					
				Disp Fluid	8.33	
			Do Not Overdisplace			
DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH		ANN FACTOR	BBL/FT	H2O REQ.
58.45	1001.64	41.90		0.0705	0.0609	164
PSI to Lift Pipe	548.6	***** <u>Use Mud Scales on Each Tier</u> *****				
Total Displacement	58.45					
CALCULATED DIFFERENTIAL PSI		263		TOTAL FLUID PUMPED		198
Collapse		Burst		S.O.#	8313839	
HOT	704.4	TOT	297.3	Company Rep: BEAUDE OAKS		
Bbls to Pit	46.9					

ANTERO

Surface

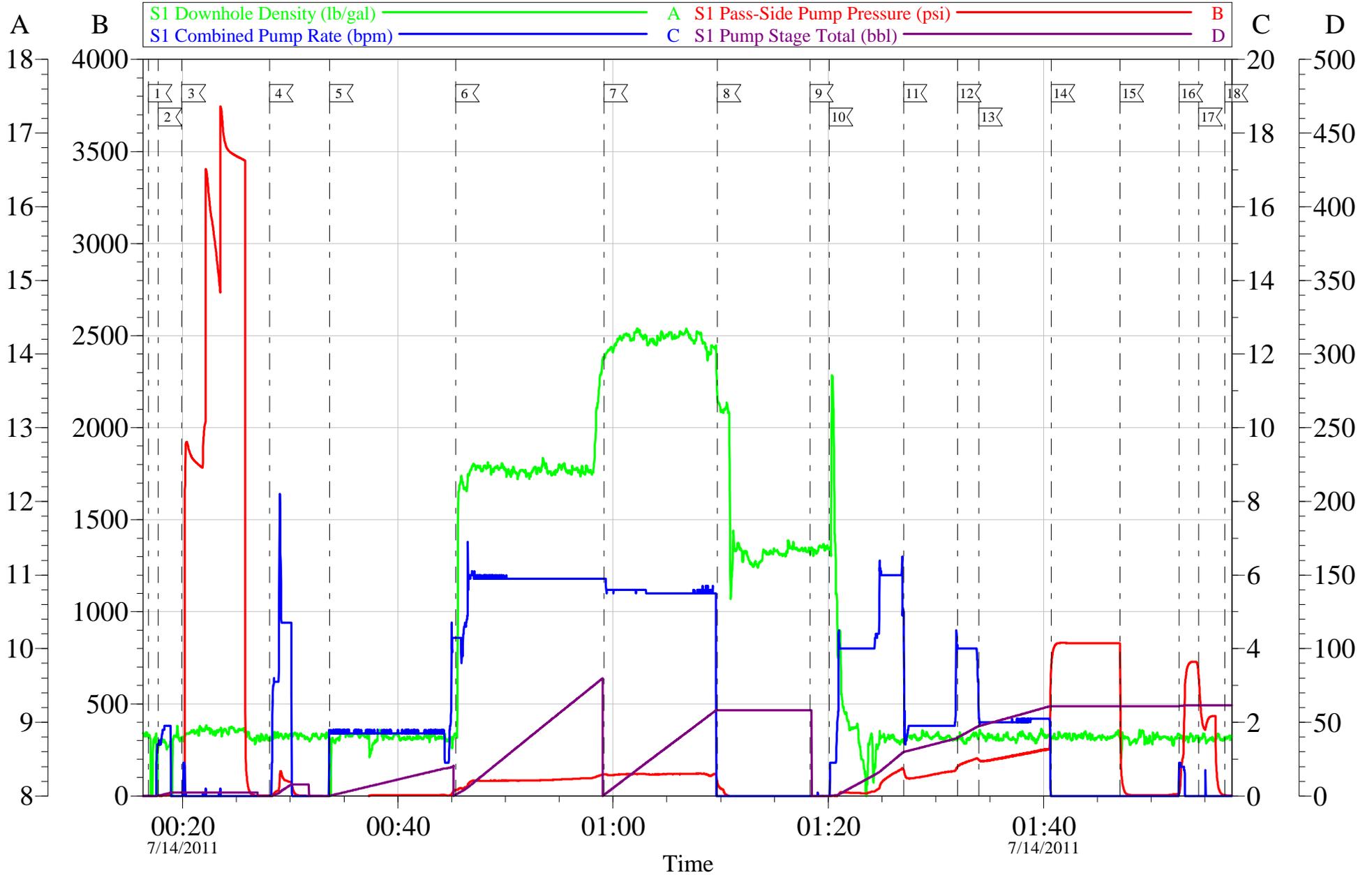


Local Event Log					
1	Start Job	00:16:51	2	Prime Lines	00:17:45
3	Test Lines	00:19:57	4	Pump excess H2O from Tub	00:28:05
5	Pump H2O Spacer	00:33:40	6	Pump Lead Cement	00:45:22
7	Pump Tail Cement	00:59:10	8	Shut Down	01:09:41
9	Drop Top Plug	01:18:17	10	Pump H2O Displacement	01:20:05
11	Slow Rate/Cement to Surface	01:26:59	12	Resume Rate	01:32:00
13	Slow Rate	01:34:00	14	Bump Plug	01:40:42
15	Check Floats	01:47:06	16	Pressure Up Casing	01:52:36
17	Shut In	01:54:24	18	End Job	01:56:49

Customer: Antero	Job Date: 13-Jul-2011	Sales Order #: 8313839
Well Description: Dixon Fed-B6	Job Type: Surface	ADC Used: Yes
Company Rep: Beaudé Oaks	Cement Supervisor: Dean Daniel	Elite #/Operator: 5/Jerod Simineo

ANTERO

Surface



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Company Rep: Bealde Oaks	Cement Supervisor: Dean Daniel	Elite #/Operator: 5/Jerod Simineo

OptiCem v6.4.10
14-Jul-11 02:10

Sales Order #: 8313839	Line Item: 10	Survey Conducted Date: 7/14/2011
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: BEAUDE OAKS		API / UWI: (leave blank if unknown) 05-045-14372
Well Name: DIXON FED		Well Number: B6
Well Type: Development Well	Well Country: United States of America	
H2S Present:	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	7/14/2011
Survey Interviewer	The survey interviewer is the person who initiated the survey.	EVERETT DANIEL (HX13055)
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

Sales Order #: 8313839	Line Item: 10	Survey Conducted Date: 7/14/2011
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: BEAUDE OAKS		API / UWI: (leave blank if unknown) 05-045-14372
Well Name: DIXON FED		Well Number: B6
Well Type: Development Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: Garfield

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date	7/14/2011
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)	2
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

Sales Order #: 8313839	Line Item: 10	Survey Conducted Date: 7/14/2011
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Customer Representative: BEAUDE OAKS		API / UWI: (leave blank if unknown) 05-045-14372
Well Name: DIXON FED		Well Number: B6
Well Type: Development Well	Well Country: United States of America	
H2S Present:	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	90
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