
ANTERO RESOURCES

**Dixon Federal B13
MAMMCREEK
Garfield County , Colorado**

Cement Surface Casing
15-Jul-2011

Job Site Documents

The Road to Excellence Starts with Safety

Sold To #: 337854		Ship To #: 2865145		Quote #:		Sales Order #: 8313840							
Customer: ANTERO RESOURCES				Customer Rep: OAKS, BEAUDE									
Well Name: Dixon Federal			Well #: B13			API/UWI #: 05-045-20424							
Field: MAMMCREEK		City (SAP): UNKNOWN		County/Parish: Garfield		State: Colorado							
Lat: N 39.524 deg. OR N 39 deg. 31 min. 26.796 secs.				Long: W 107.66 deg. OR W -108 deg. 20 min. 24.976 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 #					
BANKS, BRENT A	4.5	371353	DANIEL, EVERETT Dean	4.5	337325	SIMINEO, JEROD M	4.5	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>						
10025118	120 mile	10741259	120 mile	10872429	120 mile	10951247	120 mile						
11360883	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					
7/15/11	4.5	3											
TOTAL	4.5	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	15 - Jul - 2011	01:00	MST				
Form Type		BHST			On Location		15 - Jul - 2011	04:30	MST				
Job depth MD		1006. m	Job Depth TVD		1006. m	Job Started		15 - Jul - 2011	06:38	MST			
Water Depth		Wk Ht Above Floor			3. m	Job Completed		15 - Jul - 2011	07:51	MST			
Perforation Depth (MD)		<i>From</i>	<i>To</i>			Departed Loc		15 - Jul - 2011	09:00	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		58.6	bbl	8.33	.0	.0	.0		
Calculated Values		Pressures			Volumes					
Displacement	58.6	Shut In: Instant		Lost Returns		Cement Slurry	120	Pad		
Top Of Cement	SURFACE	5 Min		Cement Returns	28	Actual Displacement	58.6	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	41.9 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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Well Name: Dixon Federal		Well #: B13	API/UWI #: 05-045-20424
Field: MAMMCREEK	City (SAP): UNKNOWN	County/Parish: Garfield	State: Colorado
Legal Description:			
Lat: N 39.524 deg. OR N 39 deg. 31 min. 26.796 secs.		Long: W 107.66 deg. OR W -108 deg. 20 min. 24.976 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		Srvc 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	07/15/2011 01:00							
Depart Yard Safety Meeting	07/15/2011 03:00							
Depart from Service Center or Other Site	07/15/2011 03:30							Checked out HES pump (Elite 7), 660
Arrive at Location from Service Center	07/15/2011 04:30							Arrived 1.5 hr. early. Did not start charging time until 0600
Assessment Of Location Safety Meeting	07/15/2011 04:31							
Consult with Co. Rep.	07/15/2011 04:35							Verified calculations and materials on location including H2O and Cement totals
Safety Meeting - Pre Rig-Up	07/15/2011 05:45							Discussed job procedures and safety issues
Rig-Up Equipment	07/15/2011 06:00							
Rig-Up Completed	07/15/2011 06:30							
Safety Meeting - Pre Job	07/15/2011 06:35							Discussed job procedures and safety issues
Start Job	07/15/2011 06:38							
Prime Pumps	07/15/2011 06:40		2	2			38.0	Fresh Water
Test Lines	07/15/2011 06:51		0.5	0.1			3000.0	Fresh Water
Pump Spacer 1	07/15/2011 06:56		6	20			84.0	Fresh Water

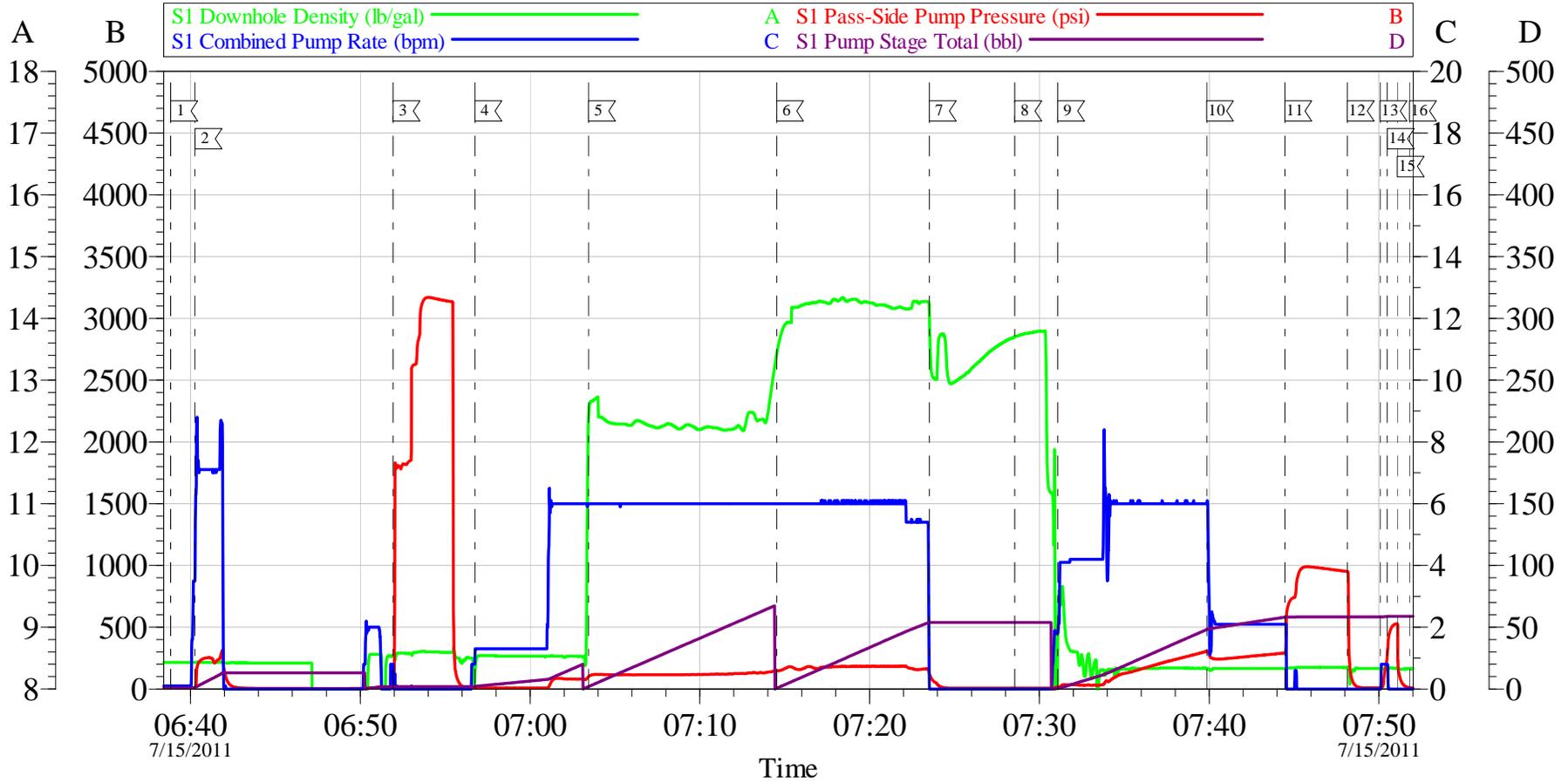
Activity Description	Date/Time	Cht #	Rate m3/min	Volume m3		Pressure MPa		Comments
				Stage	Total	Tubing	Casing	
Pump Lead Cement	07/15/2011 07:03		6	67.8			164.0	160 sks of VersaCem @ 12.3# - 2.38 yield - 13.77 H2O requirement
Pump Tail Cement	07/15/2011 07:14		6	52.2			190.0	205 sks of SwiftCem @ 14.2#-1.43 Yield-6.85 H2O requirement
Shutdown	07/15/2011 07:23							
Drop Top Plug	07/15/2011 07:28							
Pump Displacement	07/15/2011 07:31		6	58.6			313.0	Fresh Water Displacement
Slow Rate	07/15/2011 07:39		2	48			313.0	Slowed to 2 bpm
Bump Plug	07/15/2011 07:44		2	58.6			526.0	Bumped Plug @ calculated displacement and 500 psi over
Check Floats	07/15/2011 07:48							Floats not holding
Pressure Up Casing	07/15/2011 07:50						500.0	Pressure up casing to 500 psi
Shut In Well	07/15/2011 07:50						500.0	
Release Casing Pressure	07/15/2011 07:51							Release Pressure to Pump
End Job	07/15/2011 07:51							
Safety Meeting - Pre Rig-Down	07/15/2011 07:55							Discussed job procedures and safety issues
Rig-Down Equipment	07/15/2011 08:00							
Rig-Down Completed	07/15/2011 08:30							
Pre-Convoy Safety Meeting	07/15/2011 08:45							
Depart Location for Service Center or Other Site	07/15/2011 09:00							

Total Depth = 1006, Total Casing = 1003.84, Shoe Joint =41.90, Job was pumped off line. Casing remained stationary throughout job and was chained down. 28 bbls of cement returned to surface. 165 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. 500 psi left on casing and shut in.

Thank you for using Grand Junction Halliburton Dean Daniel & Crew

ANTERO

Surface



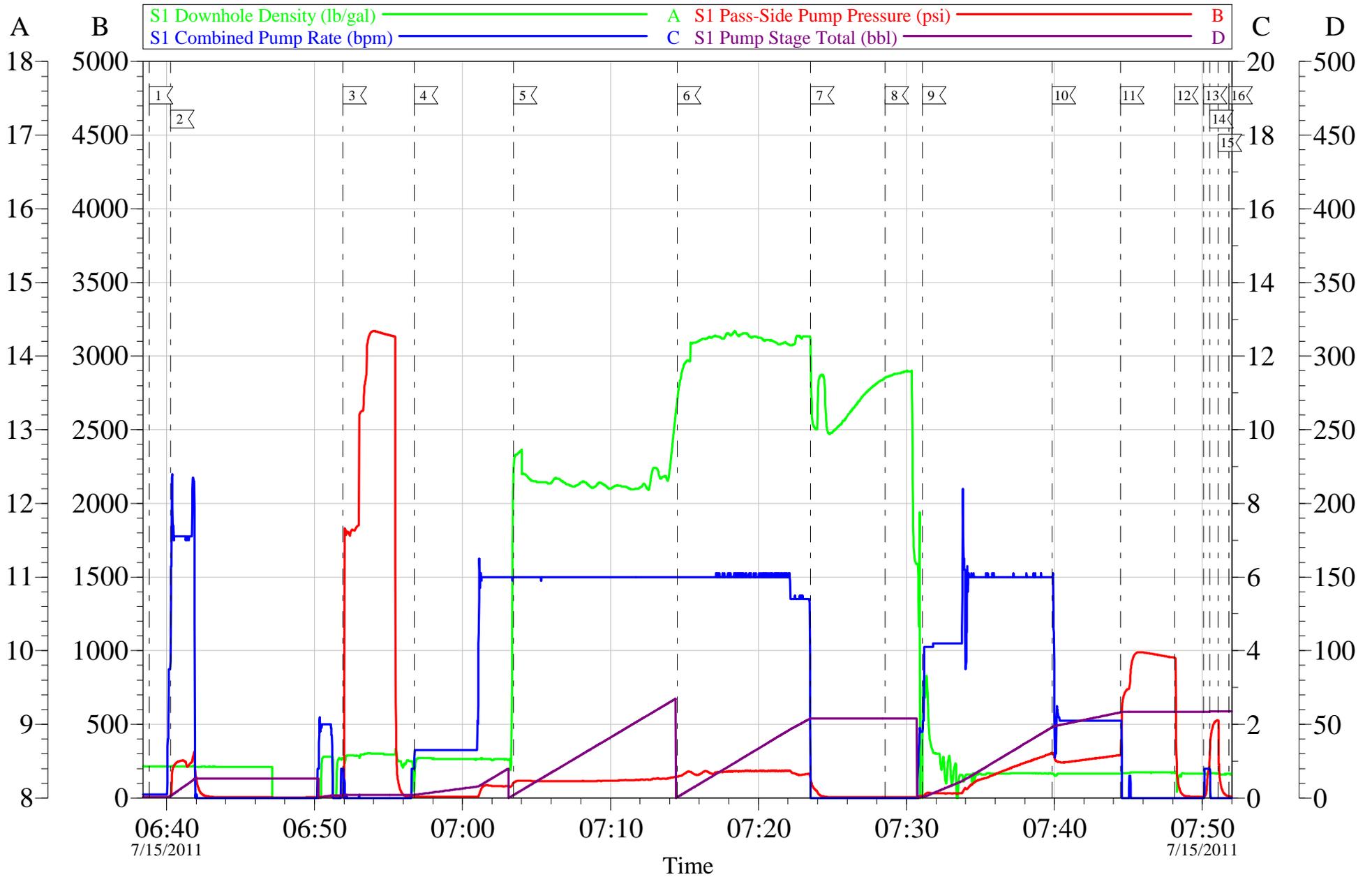
Local Event Log			
1 Start Job	06:38:50	2 Prime Lines	06:40:16
3 Test Lines	06:51:56	4 Pump H2O Spacer	06:56:45
5 Pump Lead Cement	07:03:27	6 Pump Tail Cement	07:14:31
7 Shut Down	07:23:31	8 Drop Top Plug	07:28:33
9 Pump H2O Displacement	07:31:04	10 Slow Rate	07:39:51
11 Bump Plug	07:44:27	12 Check Floats	07:48:08
13 Pressure Up Casing	07:50:04	14 Shut In	07:50:30
15 Release Pressure To Truck	07:51:05	16 End Job	07:51:48

Customer: Antero	Job Date: 15-Jul-2011	Sales Order #: 8313840
Well Description: DixonFedB7	Job Type: Surface	ADC Used: Yes
Company Rep: Beaudé Oaks	Cement Supervisor: Dean Daniel	Elite #/Operator: 7/Brent Banks

OptiCem v6.4.10
15-Jul-11 08:01

ANTERO

Surface



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Well Description: DixonFedB7	Job Type: Surface	ADC Used: Yes
Company Rep: Beaudé Oaks	Cement Supervisor: Dean Daniel	Elite #/Operator: 7/Brent Banks

Sales Order #: 8313840	Line Item: 10	Survey Conducted Date: 7/15/2011
Customer: ANTERO RESOURCES		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative: BEAUDE OAKS		API / UWI: (leave blank if unknown) 05-045-20424
Well Name: Dixon Federal		Well Number: B13
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	7/15/2011
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

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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	7/15/2011
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)	1.5
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 #: 8313840	Line Item: 10	Survey Conducted Date: 7/15/2011
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Customer Representative: BEAUDE OAKS		API / UWI: (leave blank if unknown) 05-045-20424
Well Name: Dixon Federal		Well Number: B13
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	98
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