
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 |
| DANIEL, EVERETT Dean | 5.5 | 337325 | HARDRICK, RAYMOND Frank | 5.5 | 391324 | LESTER, LEVI William | 5.5 |
| SIMINEO, JEROD M | 5.5 | 479954 | | | | | |
| Equipment | | | | | | | |
| HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way |
| 10011429 | 120 mile | 10025118 | 120 mile | 10741259 | 120 mile | 10951247 | 120 mile |
| 11560046 | 120 mile | 11562538 | 120 mile | | | | |
| Job Hours | | | | | | | |
| Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours | Date | On Location 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 | | | Job Completed | 14 - Jul - 2011 | 01:56 | MST |
| Perforation Depth (MD) | From | To | | Departed Loc | 14 - Jul - 2011 | 03:00 | MST |
| Well Data | | | | | | | |
| Description | 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 |
| Guide Shoe | | | | | Packer | | |
| Float Shoe | | | | | Bridge Plug | | |
| Float Collar | | | | | Retainer | | |
| Insert Float | | | | | | | |
| Stage Tool | | | | | | | |
| Miscellaneous Materials | | | | | | | |
| Gelling Agt | | Conc | | Surfactant | | Conc | |
| Treatment Fld | | Conc | | Inhibitor | | Conc | |
| | | | | | | Acid Type | |
| | | | | | | Sand Type | |
| | | | | | | Qty | |
| | | | | | | Conc | % |
| | | | | | | 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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| 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

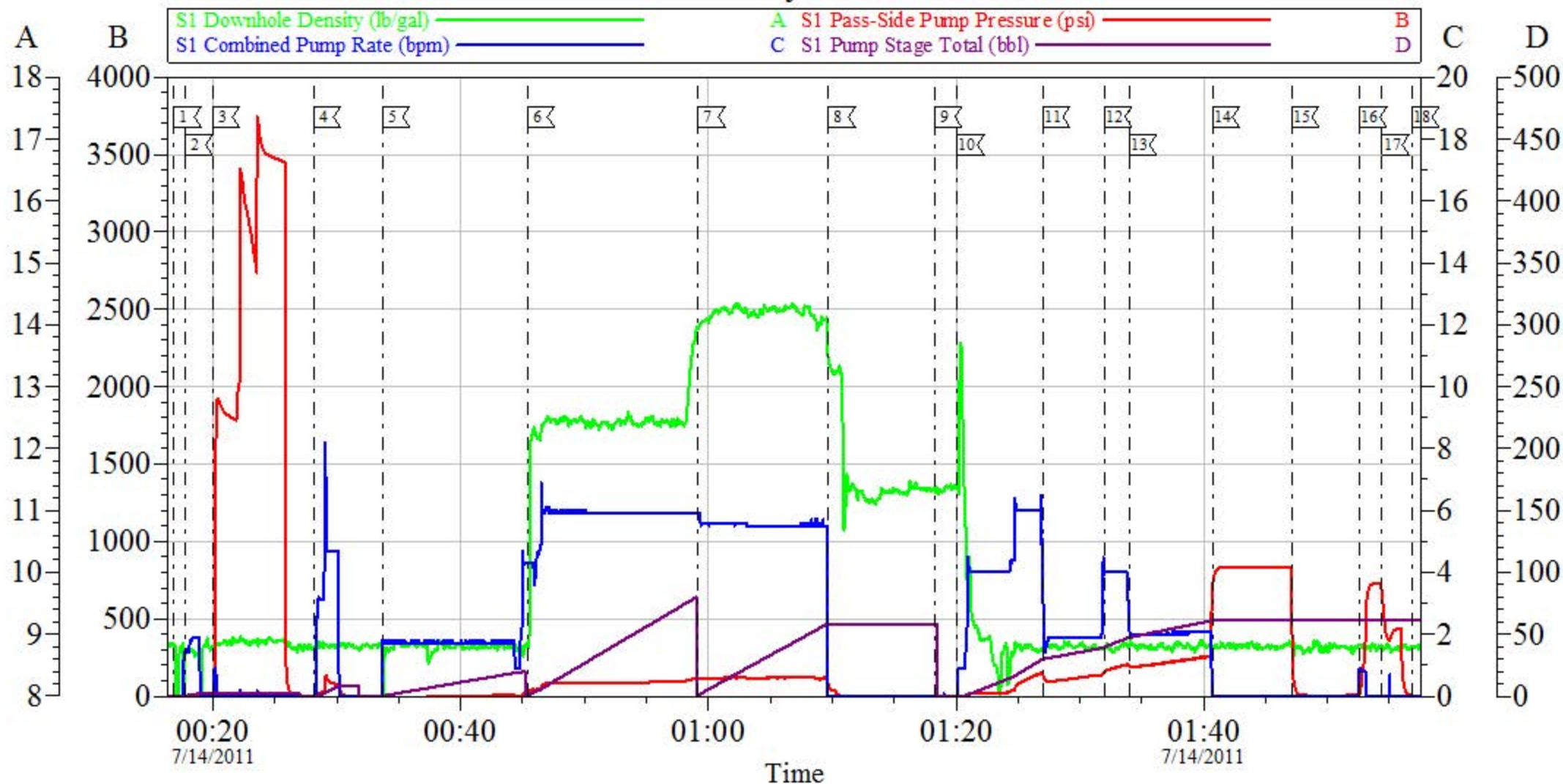
CRAIGS 2

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 | *****Use Mud Scales on Each Tier***** | | | | |
| 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
Well Description: Dixon Fed-B6
Company Rep: Beaude Oaks

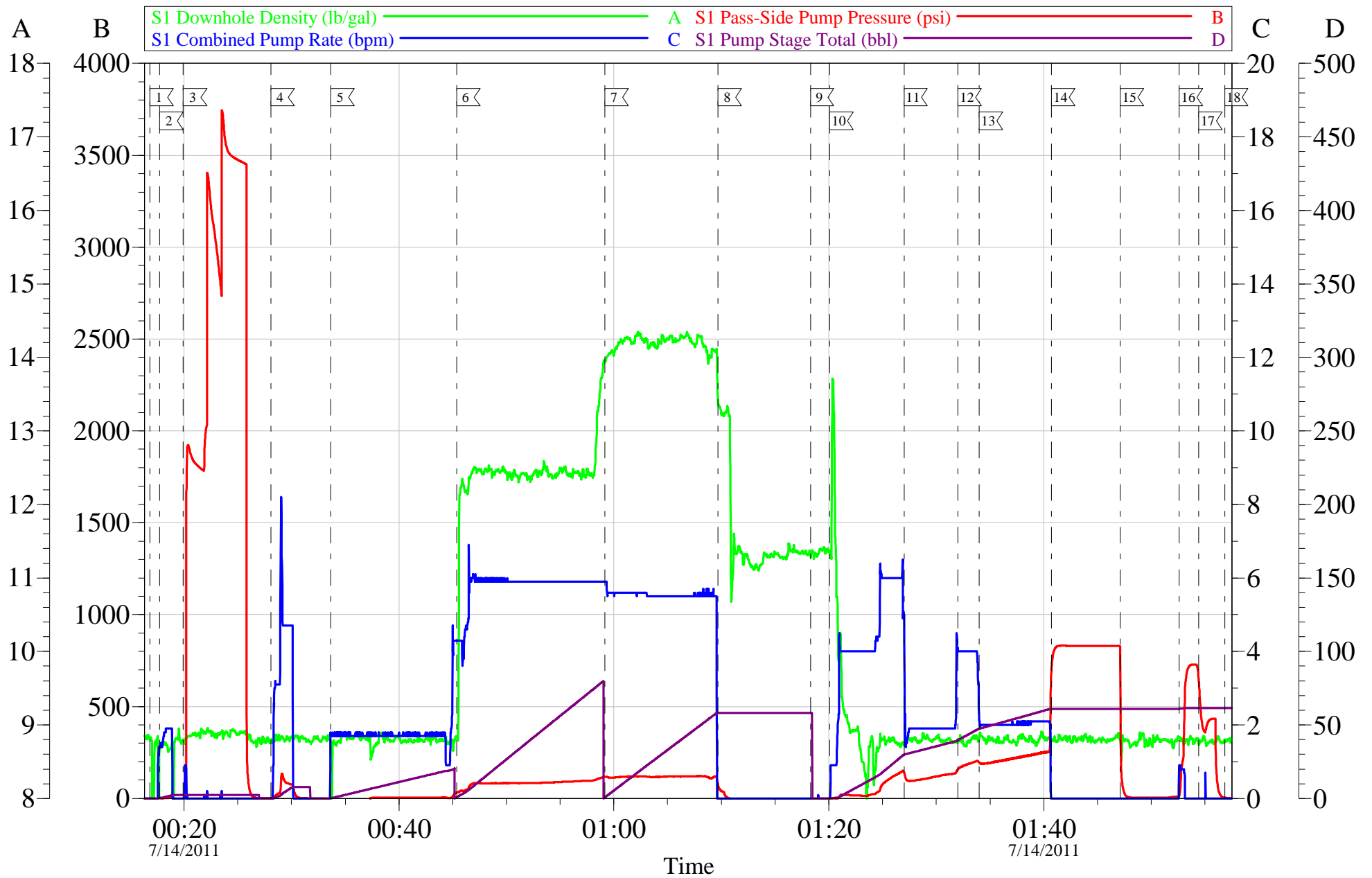
Job Date: 13-Jul-2011
Job Type: Surface
Cement Supervisor: Dean Daniel

Sales Order #: 8313839
ADC Used: Yes
Elite #/Operator: 5/Jerod Simineo

OptiCem v6.4.10
14-Jul-11 02:09

ANTERO

Surface



Customer: Antero
Well Description: Dixon Fed-B6
Company Rep: Beaudé Oaks

Job Date: 13-Jul-2011
Job Type: Surface
Cement Supervisor: Dean Daniel

Sales Order #: 8313839
ADC Used: Yes
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 The date the survey was conducted | 7/14/2011 |

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Cementing KPI Survey | |
| Type of Job Select the type of job. (Cementing or Non-Cementing) | 0 |
| Select the Maximum Deviation range for this Job What is the highest deviation for the job you just completed? This may not be the maximum well deviation. | Vertical |
| Total Operating Time (hours) Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format. | 3 |
| HSE Incident, Accident, Injury HSE Incident, Accident, Injury. This should be recordable incidents only. | No |
| Was the job purpose achieved? Was the job delivered correctly as per customer agreed design? | Yes |
| Operating Hours (Pumping Hours) Total number of hours pumping fluid on this job. Enter in decimal format. | 2 |
| Customer Non-Productive Rig Time (hrs) 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. | 0 |
| Type of Rig Classification Job Was Performed Type Of Rig (classification) Job Was Performed On | Drilling Rig (Portable) |
| Number Of JSAs Performed Number Of Jsas Performed | 7 |
| Number of Unplanned Shutdowns Unplanned shutdown is when injection stops for any period of time. | 0 |
| Was this a Primary Cement Job (Yes / No) | Yes |

| | | |
|------------------------------------------------|--------------------------------------------------|------------------------------------------------------------|
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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 |