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# **OXY GRAND JUNCTION EBUSINESS**

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**CC 697-08-35A  
GRAND VALLEY  
Garfield County , Colorado**

## **Cement Surface Casing** **29-Oct-2011**

### **Post Job Report**

## The Road to Excellence Starts with Safety

|   |  |                         |                        |
|---|--|-------------------------|------------------------|
| Sold To #: 344034                                   | Ship To #: 8559366                                       | Quote #:                | Sales Order #: 8559366 |
| Customer: OXY GRAND JUNCTION EBUSINESS              | Customer Rep: Adams, Derick                              |                         |                        |
| Well Name: CC                                       | Well #: 697-08-35A                                       | API/UWI #: 05-045-20093 |                        |
| Field: GRAND VALLEY                                 | City (SAP):  | County/Parish: Garfield | State: Colorado        |
| Lat: N 39.534 deg. OR N 39 deg. 32 min. 2.231 secs. | Long: W 108.242 deg. OR W -109 deg. 45 min. 29.488 secs. |                         |                        |
| Contractor: H&P Drilling                            | Rig/Platform Name/Num: H&P 330                           |                         |                        |
| Job Purpose: Cement Surface Casing                  |  |                         |                        |
| Well Type: Development Well                         | Job Type: Cement Surface Casing                          |                         |                        |
| Sales Person: HIMES, JEFFREY                        | Srvc Supervisor: ARNOLD, EDWARD                          | MBU ID Emp #: 439784    |                        |

## Job Personnel

| HES Emp Name                | Exp Hrs | Emp #  | HES Emp Name        | Exp Hrs | Emp #  | HES Emp Name             | Exp Hrs | Emp #  |
|-----------------------------|---------|--------|---------------------|---------|--------|--------------------------|---------|--------|
| ANDREWS, ANTHONY Michael    | 14      | 321604 | ARNOLD, EDWARD John | 14      | 439784 | BRENNECKE, ANDREW Bailey | 14      | 486345 |
| MILLER II, MATTHEW Reginald | 14      | 425164 |                     |         |        |                          |         |        |

## Equipment

| HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way |
|------------|----------------|------------|----------------|------------|----------------|------------|----------------|
| 10565341   | 120 mile       | 10804567   | 120 mile       | 10867423   | 120 mile       | 10897887   | 120 mile       |
| 11360871   | 120 mile       | 11542767   | 120 mile       | 11583933   | 120 mile       | 6374L      | 120 mile       |

## Job Hours

| Date       | On Location Hours | Operating Hours | Date       | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours |
|------------|-------------------|-----------------|------------|-------------------|-----------------|------|-------------------|-----------------|
| 10.28.2011 | 10                | 6               | 10.29.2011 | 3.5               | 3.5             |      |                   |                 |

**TOTAL** Total is the sum of each column separately

## Job

| Formation Name         | Top      | Bottom            | Called Out    | Date            | Time  | Time Zone |
|------------------------|----------|-------------------|---------------|-----------------|-------|-----------|
| Formation Depth (MD)   |          |                   | On Location   | 28 - Oct - 2011 | 14:00 | MST       |
| Form Type              | BHST     |                   | Job Started   | 28 - Oct - 2011 | 16:31 | MST       |
| Job depth MD           | 2710. ft | Job Depth TVD     | Job Completed | 29 - Oct - 2011 | 01:25 | MST       |
| Water Depth            |          | Wk Ht Above Floor | Departed Loc  | 29 - Oct - 2011 | 04:00 | MST       |
| Perforation Depth (MD) | From     | To                |               |                 |       |           |

## 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 |
|-----------------------|------------|-------------------|---------|-------|---------------|--------|-------|-----------|--------------|------------|---------------|
| 14 3/4" Open Hole     |            |                   |         | 14.75 |               |        |       | .         | 2710.        |            |               |
| 9 5/8" Surface Casing | New        |                   | 9.625   | 8.921 | 36.           |        | J-55  | .         | 2659.        |            |               |

Sales/Rental/3<sup>rd</sup> Party (HES)

| Description                              | Qty | Qty uom | Depth | Supplier |
|--|-----|---------|-------|----------|
| PLUG,CMTG,TOP,9 5/8,HWE,8.16 MIN/9.06 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       | 9.625 | 1   | HES  |
| Float Shoe   |      |     |      |       | Bridge Plug |      |     |      |       | Bottom Plug    |       |     |      |
| Float Collar |      |     |      |       | Retainer    |      |     |      |       | SSR plug set   |       |     |      |
| Insert Float |      |     |      |       |             |      |     |      |       | Plug Container | 9.625 | 1   | HES  |
| 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 ft <sup>3</sup> /sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid Gal/sk |
|--|----------------------|-------------------------------|--------|-----------------------------------|------------------------|---------------------------|------------------|--------------|------------------------|
| 1  | Water Spacer         |                               | 20.00  | bbl                               | 8.33                   | .0                        | .0               | 4            |                        |
| 2  | Gel Spacer           |                               | 20.00  | bbl                               | .                      | .0                        | .0               | 4            |                        |
| 3  | Water Spacer         |                               | 20.00  | bbl                               | .                      | .0                        | .0               | 4            |                        |
| 4  | VersaCem Lead Cement | VERSACEM (TM) SYSTEM (452010) | 927.0  | sacks                             | 12.3                   | 2.33                      | 12.62            | 6            | 12.62                  |
|  | 12.62 Gal            | FRESH WATER                   |        |                                   |                        |                           |                  |              |                        |
| 5  | VersaCem Tail Cement | VERSACEM (TM) SYSTEM (452010) | 170.0  | sacks                             | 12.8                   | 2.07                      | 10.67            | 6            | 10.67                  |
|  | 10.67 Gal            | FRESH WATER                   |        |                                   |                        |                           |                  |              |                        |
| 6  | Displacement         |                               | 202.00 | bbl                               | .                      | .0                        | .0               | 6            |                        |
| 7  | Topout Cement        | HALCEM (TM) SYSTEM (452986)   | 47.0   | sacks                             | 12.5                   | 1.97                      | 10.96            | 2.5          | 10.96                  |
|  | 10.96 Gal            | FRESH WATER                   |        |                                   |                        |                           |                  |              |                        |
| <b>Calculated Values</b>                 |                      | <b>Pressures</b>              |        | <b>Volumes</b>                    |                        |                           |                  |              |                        |
| Displacement                             | 202                  | Shut In: Instant              |        | Lost Returns                      |                        | Cement Slurry             | 514.4            | Pad          |                        |
| Top Of Cement                            | SURFACE              | 5 Min                         |        | Cement Returns                    | 120                    | Actual Displacement       | 202              | Treatment    |                        |
| Frac Gradient                            |                      | 15 Min                        |        | Spacers                           | 72                     | Load and Breakdown        |                  | Total Job    | 788.4                  |
| <b>Rates</b>                             |                      |                               |        |                                   |                        |                           |                  |              |                        |
| Circulating                              | RIG                  | Mixing                        | 6      | Displacement                      | 6                      | Avg. Job                  | 6                |              |                        |
| Cement Left In Pipe                      | Amount               | 46.5 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*

|  |                           |   |                               |
|--|---------------------------|---|-------------------------------|
| <b>Sold To #:</b> 344034                                   | <b>Ship To #:</b> 8559366 | <b>Quote #:</b>   | <b>Sales Order #:</b> 8559366 |
| <b>Customer:</b> OXY GRAND JUNCTION EBUSINESS              |                           | <b>Customer Rep:</b> Adams, Derick                              |                               |
| <b>Well Name:</b> CC                                       | <b>Well #:</b> 697-08-35A | <b>API/UWI #:</b> 05-045-20093                                  |                               |
| <b>Field:</b> GRAND VALLEY                                 | <b>City (SAP):</b>        | <b>County/Parish:</b> Garfield                                  | <b>State:</b> Colorado        |
| <b>Legal Description:</b>                                  |                           |   |                               |
| <b>Lat:</b> N 39.534 deg. OR N 39 deg. 32 min. 2.231 secs. |                           | <b>Long:</b> W 108.242 deg. OR W -109 deg. 45 min. 29.488 secs. |                               |
| <b>Contractor:</b> H&P Drilling                            |                           | <b>Rig/Platform Name/Num:</b> H&P 330                           |                               |
| <b>Job Purpose:</b> Cement Surface Casing                  |                           |   | <b>Ticket Amount:</b>         |
| <b>Well Type:</b> Development Well                         |                           | <b>Job Type:</b> Cement Surface Casing                          |                               |
| <b>Sales Person:</b> HIMES, JEFFREY                        |                           | <b>Srvc Supervisor:</b> ARNOLD, EDWARD                          | <b>MBU ID Emp #:</b> 439784   |

| Activity Description                  | Date/Time        | Cht # | Rate bbl/min | Volume bbl |       | Pressure psig |        | Comments  |
|---------------------------------------|------------------|-------|--------------|------------|-------|---------------|--------|---|
|                                       |                  |       |              | Stage      | Total | Tubing        | Casing |   |
| Call Out                              | 10/28/2011 05:30 |       |              |            |       |               |        |   |
| Pre-Convoy Safety Meeting             | 10/28/2011 08:45 |       |              |            |       |               |        | Including entire cement crew.   |
| Crew Leave Yard                       | 10/28/2011 09:00 |       |              |            |       |               |        |   |
| Arrive At Loc                         | 10/28/2011 13:45 |       |              |            |       |               |        | Rig still Running casing.   |
| Assessment Of Location Safety Meeting | 10/28/2011 13:50 |       |              |            |       |               |        | Water; PH 7; KCL 250; So4 <200; Fe 0; Calcium 120; Chlorides 0; Temp 60; TDS 190.                                     |
| Pre-Rig Up Safety Meeting             | 10/28/2011 17:40 |       |              |            |       |               |        | Including entire cement crew.   |
| Rig-Up Equipment                      | 10/28/2011 17:45 |       |              |            |       |               |        | 1 Elite # 1; 1 Field storage silo; 2 660 bulk trucks; 1 hard line to cellar; 2 lines to uprights; 9.625 compact head. |
| Rig-Up Completed                      | 10/28/2011 18:30 |       |              |            |       |               |        |   |
| Pre-Job Safety Meeting                | 10/28/2011 18:45 |       |              |            |       |               |        | Including everyone on location.   |
| Start Job                             | 10/28/2011 19:19 |       |              |            |       |               |        | TD 2710; TP 2659; SJ 46.5; OH 14.75; Casing 9.625" 36# J-55; Mud 9.3 ppg.   |
| Pump Water                            | 10/28/2011 19:20 |       | 2            | 2          |       |               | 38.0   | Fill lines with fresh water.  |
| Test Lines                            | 10/28/2011 19:22 |       |              |            |       | 3138.0        |        | Good pressure test, no leaks.   |
| Pump Spacer 1                         | 10/28/2011 19:28 |       | 4            | 20         |       |               | 90.0   | 20 BBL fresh water spacer.  |
| Pump Spacer 2                         | 10/28/2011 19:34 |       | 4            | 20         |       |               | 88.0   | 20 BBL Gel water spacer.  |

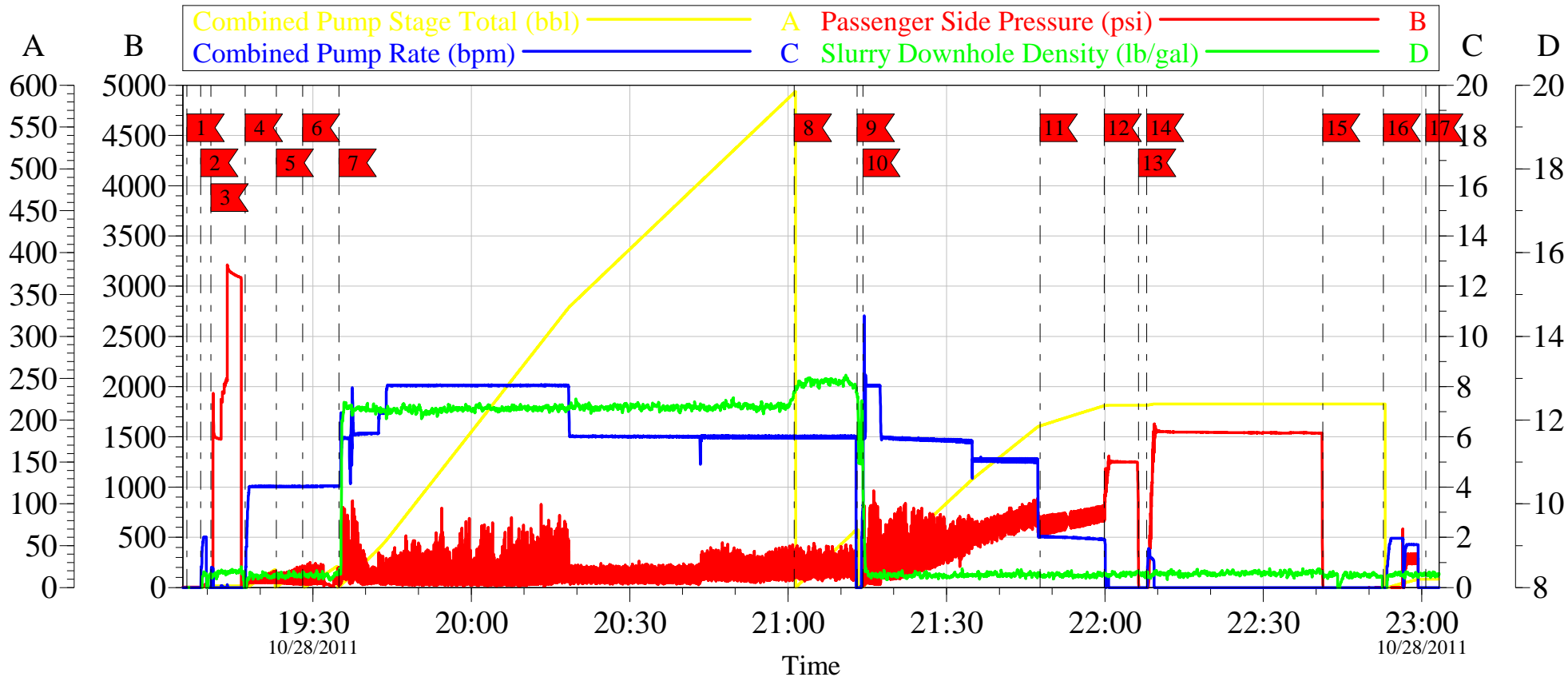
| Activity Description    | Date/Time        | Cht # | Rate bbl/min | Volume bbl |       | Pressure psig |        | Comments   |
|-------------------------|------------------|-------|--------------|------------|-------|---------------|--------|--|
|                         |                  |       |              | Stage      | Total | Tubing        | Casing |  |
| Pump Spacer 1           | 10/28/2011 19:39 |       | 4            | 20         |       |               | 70.0   | 20 BBL fresh water spacer.   |
| Pump Lead Cement        | 10/28/2011 19:45 |       | 6            | 385        |       |               | 195.0  | 927 sks Lead Cement, 12.3 ppg, 2.33 cf3, 12.62 gal/sk. Customer ordered 1050 sks and cut 50 bbl of cement off of job. Aprox 120 sks left in silo. Tuff fiber caused pump to pump inefishently, used mix water volume to calculate cement totals. |
| Pump Tail Cement        | 10/28/2011 21:11 |       | 6            | 62.7       |       |               | 125.0  | 170 sks Tail Cement, 12.8 ppg, 2.07 cf3, 10.67 gal/sk.   |
| Shutdown                | 10/28/2011 21:23 |       |              |            |       |               |        |  |
| Drop Plug               | 10/28/2011 21:23 |       |              |            |       |               |        | Plug left container.   |
| Pump Displacement       | 10/28/2011 21:24 |       | 6            | 192        |       |               | 790.0  | Fresh Water Displacement. got 120 BBL of good cement to surface.   |
| Slow Rate               | 10/28/2011 21:57 |       | 2            | 10         |       |               | 750.0  | Slow rate 10 BBL's prior to bumping the plug.  |
| Bump Plug               | 10/28/2011 22:09 |       |              |            | 202   |               | 1240.0 | Bumped plug, took 500 PSI over.  |
| Check Floats            | 10/28/2011 22:16 |       |              |            |       |               |        | Floats held, 1 BBL back  |
| Pressure Up Well        | 10/28/2011 22:17 |       |              |            |       |               | 1550.0 | Pressure Test Casing for 30 min at 1500  |
| Release Casing Pressure | 10/28/2011 22:51 |       |              |            |       |               |        |  |
| Pump Water              | 10/28/2011 23:02 |       |              |            |       |               |        | Pump out parasite line with 10 BBL water.  |
| End Job                 | 10/28/2011 23:10 |       |              |            |       |               |        | Wait on location to measure cement fall back.  |
| Start Job               | 10/29/2011 01:15 |       |              |            |       |               |        | Measured cement at 50 ft from surface.   |
| Other                   | 10/29/2011 01:16 |       | 0            | 1          |       |               | 5.0    | Boost 1 BBL ahead.   |
| Pump Cement             | 10/29/2011 01:17 |       | 2.5          | 16         |       |               | 100.0  | 47 sks Top Out Cement; 12.5 ppg; 1.97 cf3; 10.96 gal/sk.   |
| Shutdown                | 10/29/2011 01:24 |       |              |            |       |               |        |  |

## *Cementing Job Log*

| Activity Description        | Date/Time           | Cht<br># | Rate<br>bbl/<br>min | Volume<br>bbl |       | Pressure<br>psig |        | Comments  |
|-----------------------------|---------------------|----------|---------------------|---------------|-------|------------------|--------|---|
|                             |                     |          |                     | Stage         | Total | Tubing           | Casing |   |
| End Job                     | 10/29/2011<br>01:25 |          |                     |               |       |                  |        |   |
| Pre-Rig Down Safety Meeting | 10/29/2011<br>01:45 |          |                     |               |       |                  |        | Including entire cement crew.                               |
| Rig-Down Equipment          | 10/29/2011<br>02:00 |          |                     |               |       |                  |        |   |
| Rig-Down Completed          | 10/29/2011<br>03:15 |          |                     |               |       |                  |        |   |
| Pre-Convoy Safety Meeting   | 10/29/2011<br>03:20 |          |                     |               |       |                  |        | Including entire cement crew.                               |
| Crew Leave Location         | 10/29/2011<br>03:30 |          |                     |               |       |                  |        | Crew leave location for Service Center or another location. |
| Other                       | 10/29/2011<br>03:30 |          |                     |               |       |                  |        | Thank You for using Halliburton. Ed Arnold and Crew.        |

# OXY

9.625 Surface  
CC 697-08-35A



## Local Event Log

|                             |          |                                |          |                            |          |
|-----------------------------|----------|--------------------------------|----------|----------------------------|----------|
| <b>1</b> Start Job          | 19:06:09 | <b>2</b> Fill Lines            | 19:08:45 | <b>3</b> Test Lines        | 19:10:41 |
| <b>4</b> H2O Spacer         | 19:17:11 | <b>5</b> Gel Spacer            | 19:23:03 | <b>6</b> H2O Spacer        | 19:28:02 |
| <b>7</b> Lead Cement        | 19:34:56 | <b>8</b> Tail Cement           | 21:01:11 | <b>9</b> Shut Down         | 21:13:04 |
| <b>10</b> H2O Displacement  | 21:14:10 | <b>11</b> Slow Rate            | 21:47:44 | <b>12</b> Bump Plug        | 21:59:51 |
| <b>13</b> Check Floats      | 22:06:23 | <b>14</b> Pressure Test Casing | 22:07:53 | <b>15</b> Release Pressure | 22:41:15 |
| <b>16</b> Pump Out Parasite | 22:52:44 | <b>17</b> End Job              | 23:00:45 |                            |          |

Customer: OXY  
Well Description: CC 697-08035A  
Company Rep: Derick Adams

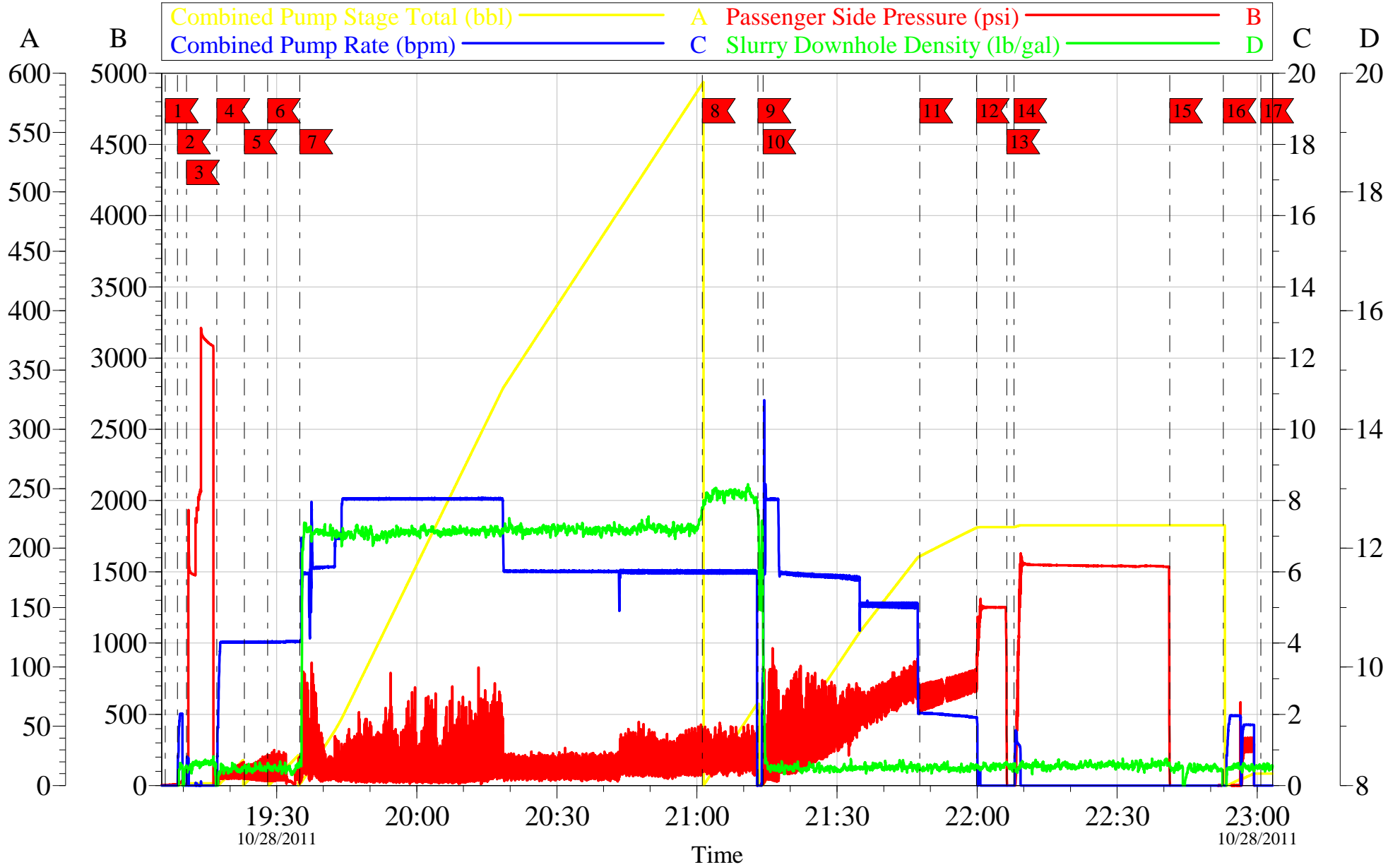
Job Date: 28-Oct-2011  
Job Type: 9.625 Surface  
Cement Super: Ed Arnold

Sales Order #: 8559366  
ADC Used: Yes  
Elite #1: Reggie Miller

OptiCem v6.4.10  
29-Oct-11 00:12

# OXY

9.625 Surface  
CC 697-08-35A



|                                 |                         |                         |
|---------------------------------|-------------------------|-------------------------|
| Customer: OXY                   | Job Date: 28-Oct-2011   | Sales Order #: 8559366  |
| Well Description: CC 697-08035A | Job Type: 9.625 Surface | ADC Used: Yes           |
| Company Rep: Derick Adams       | Cement Super: Ed Arnold | Elite #1: Reggie Miller |

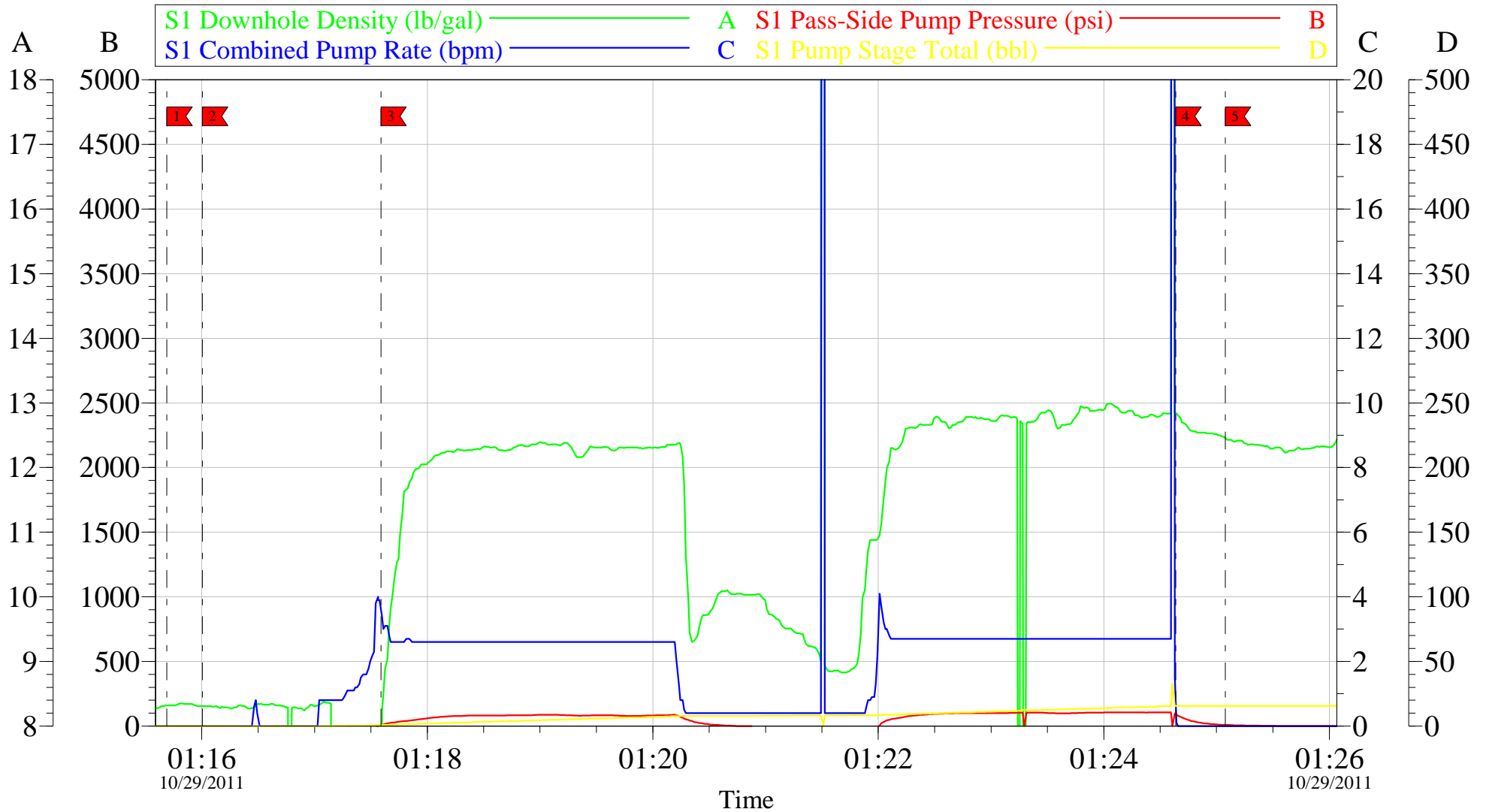
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# OXY

## Top Out

### CC 697-08-35A

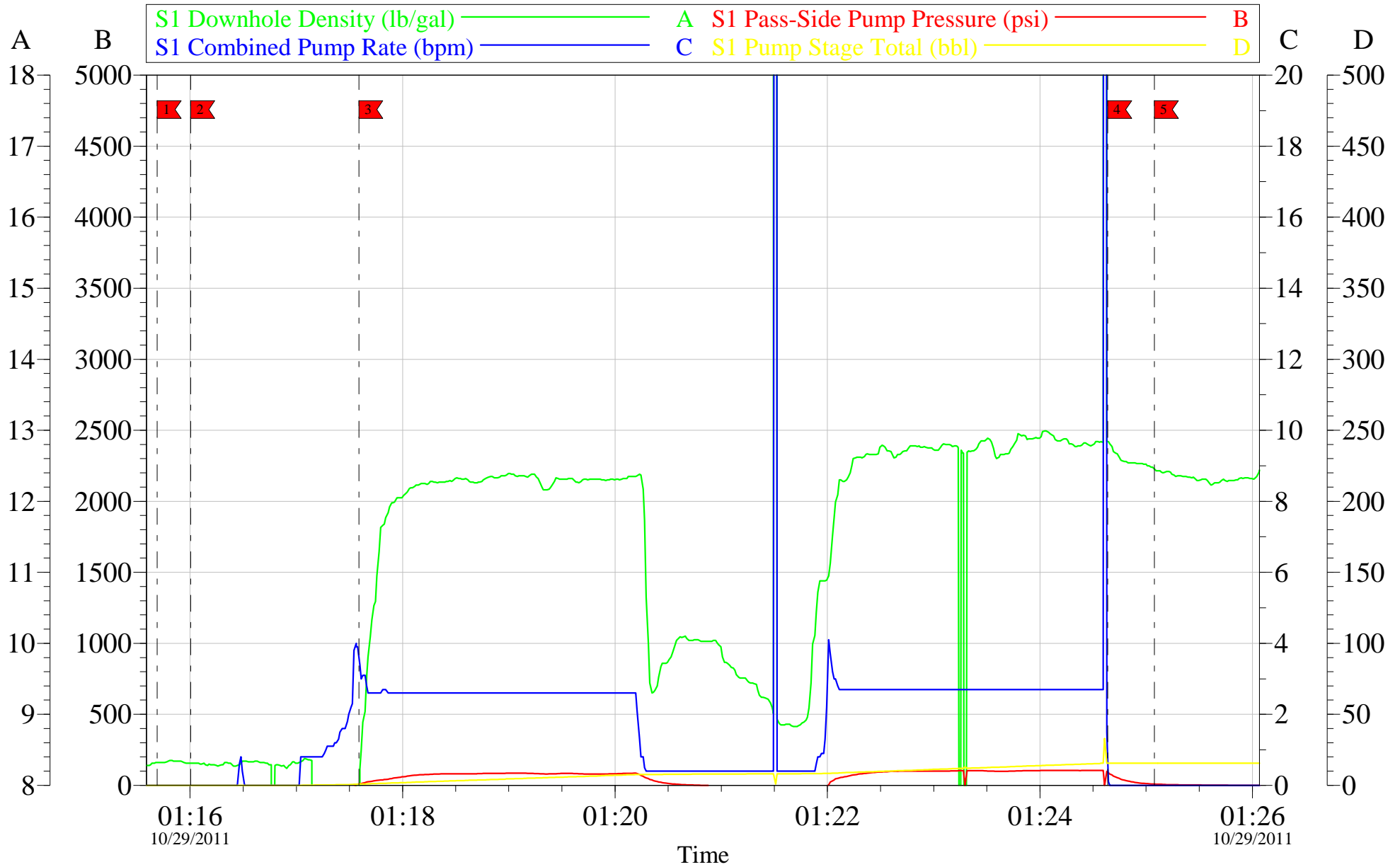


|                                 |                              |                          |
|---------------------------------|------------------------------|--------------------------|
| Customer: OXY                   | Job Date: 29-Oct-2011        | Sales Order #: 8559366   |
| Well Description: CC 697-08-35A | Job Type: Top Out            | ADC Used: Yes            |
| Company Rep: Derick Adams       | Cement Supervisor: Ed Arnold | Elite # 1: Reggie Miller |

# OXY

## Top Out

### CC 697-08-35A



|                                 |                              |                          |
|---------------------------------|------------------------------|--------------------------|
| Customer: OXY                   | Job Date: 29-Oct-2011        | Sales Order #: 8559366   |
| Well Description: CC 697-08-35A | Job Type: Top Out            | ADC Used: Yes            |
| Company Rep: Derick Adams       | Cement Supervisor: Ed Arnold | Elite # 1: Reggie Miller |

OptiCem v6.4.10  
29-Oct-11 01:44

# HALLIBURTON

## Water Analysis Report

|               |                   |            |                   |
|---------------|-------------------|------------|-------------------|
| Company:      | <u>OXY</u>        | Date:      | <u>10.28.2011</u> |
| Submitted by: | <u>ED ARNOLD</u>  | Date Rec.: | <u>10.28.2011</u> |
| Attention:    | <u>J.TROUT</u>    | S.O.#      | <u>8559366</u>    |
| Lease         | <u>CC</u>         | Job Type:  | <u>SURFACE</u>    |
| Well #        | <u>697-08-35A</u> |            |                   |

|                             |              |                       |
|-----------------------------|--------------|-----------------------|
| Specific Gravity            | <i>MAX</i>   | <i>1</i>              |
| pH                          | <i>8</i>     | <i>7</i>              |
| Potassium (K)               | <i>5000</i>  | <i>250</i> Mg / L     |
| Calcium (Ca)                | <i>500</i>   | <i>120</i> Mg / L     |
| Iron (FE2)                  | <i>300</i>   | <i>0</i> Mg / L       |
| Chlorides (Cl)              | <i>3000</i>  | <i>0</i> Mg / L       |
| Sulfates (SO <sub>4</sub> ) | <i>1500</i>  | <i>&lt;200</i> Mg / L |
| Chlorine (Cl <sub>2</sub> ) |              | <i>0</i> Mg / L       |
| Temp                        | <i>40-80</i> | <i>50</i> Deg         |
| Total Dissolved Solids      |              | <i>190</i> Mg / L     |

Respectfully: ED ARNOLD

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 its use

|  |  |  |
|--|--|--|
| <b>Sales Order #:</b><br>8559366                 | <b>Line Item:</b><br>10                          | <b>Survey Conducted Date:</b><br>10/29/2011                |
| <b>Customer:</b><br>OXY GRAND JUNCTION EBUSINESS |  | <b>Job Type (BOM):</b><br>CMT SURFACE CASING BOM           |
| <b>Customer Representative:</b><br>DERICK ADAMS  |  | <b>API / UWI: (leave blank if unknown)</b><br>05-045-20093 |
| <b>Well Name:</b><br>CC                          |  | <b>Well Number:</b><br>697-08-35A                          |
| <b>Well Type:</b><br>Development Well            | <b>Well Country:</b><br>United States of America |  |
| <b>H2S Present:</b><br>No                        | <b>Well State:</b><br>Colorado                   | <b>Well County:</b><br>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                              | 10/29/2011              |
| Survey Interviewer      | The survey interviewer is the person who initiated the survey. | EDWARD ARNOLD (HX46731) |
| Customer Participation  | Did the customer participate in this survey? (Y/N)             | Yes                     |
| Customer Representative | Enter the Customer representative name                         | DERICK ADAMS            |
| 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   | GOOD JOB                |

CUSTOMER SIGNATURE