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# **OXY GRAND JUNCTION EBUSINESS**

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**CC 697-16-15A  
Parachute  
Garfield County , Colorado**

**Squeeze Perfs**  
**21-Nov-2011**

**Post Job Report**

## The Road to Excellence Starts with Safety

|  |  |                         |                        |
|--|--|-------------------------|------------------------|
| Sold To #: 344034                                  | Ship To #: 2578468                                     | Quote #:                | Sales Order #: 9065943 |
| Customer: OXY GRAND JUNCTION EBUSINESS             | Customer Rep: DECKER, MIKE                             |                         |                        |
| Well Name: CC                                      | Well #: 697-16-15A                                     | API/UWI #:              |                        |
| Field: Parachute                                   | City (SAP):  | County/Parish: Garfield | State: Colorado        |
| Lat: N 39.527 deg. OR N 39 deg. 31 min. 37.2 secs. | Long: W 108.217 deg. OR W -109 deg. 46 min. 58.8 secs. |                         |                        |
| Contractor: WORKOVER                               | Rig/Platform Name/Num: WORKOVER                        |                         |                        |
| Job Purpose: Squeeze Perfs                         |  |                         |                        |
| Well Type: Development Well                        | Job Type: Squeeze Perfs                                |                         |                        |
| Sales Person: HIMES, JEFFREY                       | Srv Supervisor: JAMISON, PRICE                         | MBU ID Emp #:           | 229155                 |

### Job Personnel

| HES Emp Name      | Exp Hrs | Emp #  | HES Emp Name       | Exp Hrs | Emp #  | HES Emp Name       | Exp Hrs | Emp #  |
|-------------------|---------|--------|--------------------|---------|--------|--------------------|---------|--------|
| JAMISON, PRICE W  | 13      | 229155 | JENSEN, SHANE Lynn | 13      | 441759 | MILLER, KEVIN Paul | 13      | 443040 |
| PRUETT, BRADLEY A | 13      | 475748 | VANALSTYNE, TROY L | 13      | 420256 | WOLFE, JON P       | 13      | 485217 |

### Equipment

| HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way |
|------------|----------------|------------|----------------|------------|----------------|------------|----------------|
| 10297346   | 120 mile       | 10744648C  | 120 mile       | 10783493   | 120 mile       | 10822007   | 120 mile       |
| 10998508   | 120 mile       | 11057895   | 120 mile       | 11071559   | 120 mile       | 11583916   | 120 mile       |
| 11583934   | 120 mile       |            |                |            |                |            |                |

### Job Hours

| Date     | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours |
|----------|-------------------|-----------------|------|-------------------|-----------------|------|-------------------|-----------------|
| 11/21/11 | 13                | 4               |      |                   |                 |      |                   |                 |

|       |  |  |  |  |  |  |  |  |
|-------|--|--|--|--|--|--|--|--|
| 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   | 21 - Nov - 2011 | 01:00 | MST       |
| Form Type              |                  | BHST              | Job Started   | 21 - Nov - 2011 | 06:45 | MST       |
| Job depth MD           | 6750. ft         | Job Depth TVD     | Job Completed | 21 - Nov - 2011 | 14:34 | MST       |
| Water Depth            |                  | Wk Ht Above Floor | Departed Loc  | 21 - Nov - 2011 | 00:00 | MST       |
| Perforation Depth (MD) | From 7,139.00 ft | To 7,140.00 ft    |               |                 |       |           |

### 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 |
|----------------------|------------|-------------------|---------|-------|---------------|--------|-------|-----------|--------------|------------|---------------|
| Perforation Interval |            |                   |         |       |               |        |       | 7139.     | 7140.        | .          | .             |
| PRODUCTION CASING    | Unknown    |                   | 4.5     | 4.    | 11.6          |        | P-110 | 6500.     | 6750.        | 6500.      | 6750.         |
| TUBING               | Unknown    |                   | 2.375   | 1.995 | 4.6           |        | J-55  | .         | 6500.        | .          | 6500.         |

### Sales/Rental/3<sup>rd</sup> 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     |       |          |

### 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  | Fresh Water    |                                 |           |                 | 30.00                             | bbl            | 8.4                    | .0                  | .0               | 2.0          |                        |                 |      |    |
| 2  | Squeeze Cement | SQUEEZECEM (TM) SYSTEM (452971) |           |                 | 500.0                             | sacks          | 15.5                   | 1.2                 | 5.32             | 2.0          | 5.32                   |                 |      |    |
| 5.32 Gal                                 |                | FRESH WATER                     |           |                 |                                   |                |                        |                     |                  |              |                        |                 |      |    |
| 3  | Fresh Water    |                                 |           |                 | 26.00                             | bbl            | 8.4                    |                     |                  | 2.0          |                        |                 |      |    |
| Calculated Values                        |                |                                 | Pressures |                 |                                   | Volumes        |                        |                     |                  |              |                        |                 |      |    |
| Displacement                             | 26             | Shut In: Instant                |           |                 |                                   | Lost Returns   | YES                    | Cement Slurry       |                  | 106.9        | Pad                    |                 |      |    |
| Top Of Cement                            | ????           | 5 Min                           |           |                 |                                   | Cement Returns | NO                     | Actual Displacement |                  | 26           | Treatment              |                 |      |    |
| Frac Gradient                            |                | 15 Min                          |           |                 |                                   | Spacers        | 15                     | Load and Breakdown  |                  |              | Total Job              | 147             |      |    |
| Rates                                    |                |                                 |           |                 |                                   |                |                        |                     |                  |              |                        |                 |      |    |
| Circulating                              | NO             | Mixing                          |           |                 | 2                                 | Displacement   |                        | 2                   | Avg. Job         |              | 2                      |                 |      |    |
| Cement Left In Pipe                      |                | Amount                          | 0 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> 2578468 | <b>Quote #:</b>   | <b>Sales Order #:</b> 9065943 |
| <b>Customer:</b> OXY GRAND JUNCTION EBUSINESS             |                           | <b>Customer Rep:</b> DECKER, MIKE                             |                               |
| <b>Well Name:</b> CC                                      | <b>Well #:</b> 697-16-15A | <b>API/UWI #:</b>   |                               |
| <b>Field:</b> Parachute                                   | <b>City (SAP):</b>        | <b>County/Parish:</b> Garfield                                | <b>State:</b> Colorado        |
| <b>Legal Description:</b>                                 |                           |   |                               |
| <b>Lat:</b> N 39.527 deg. OR N 39 deg. 31 min. 37.2 secs. |                           | <b>Long:</b> W 108.217 deg. OR W -109 deg. 46 min. 58.8 secs. |                               |
| <b>Contractor:</b> WORKOVER                               |                           | <b>Rig/Platform Name/Num:</b> WORKOVER                        |                               |
| <b>Job Purpose:</b> Squeeze Perfs                         |                           |   | <b>Ticket Amount:</b>         |
| <b>Well Type:</b> Development Well                        |                           | <b>Job Type:</b> Squeeze Perfs                                |                               |
| <b>Sales Person:</b> HIMES, JEFFREY                       |                           | <b>Srv Supervisor:</b> JAMISON, PRICE                         | <b>MBU ID Emp #:</b> 229155   |

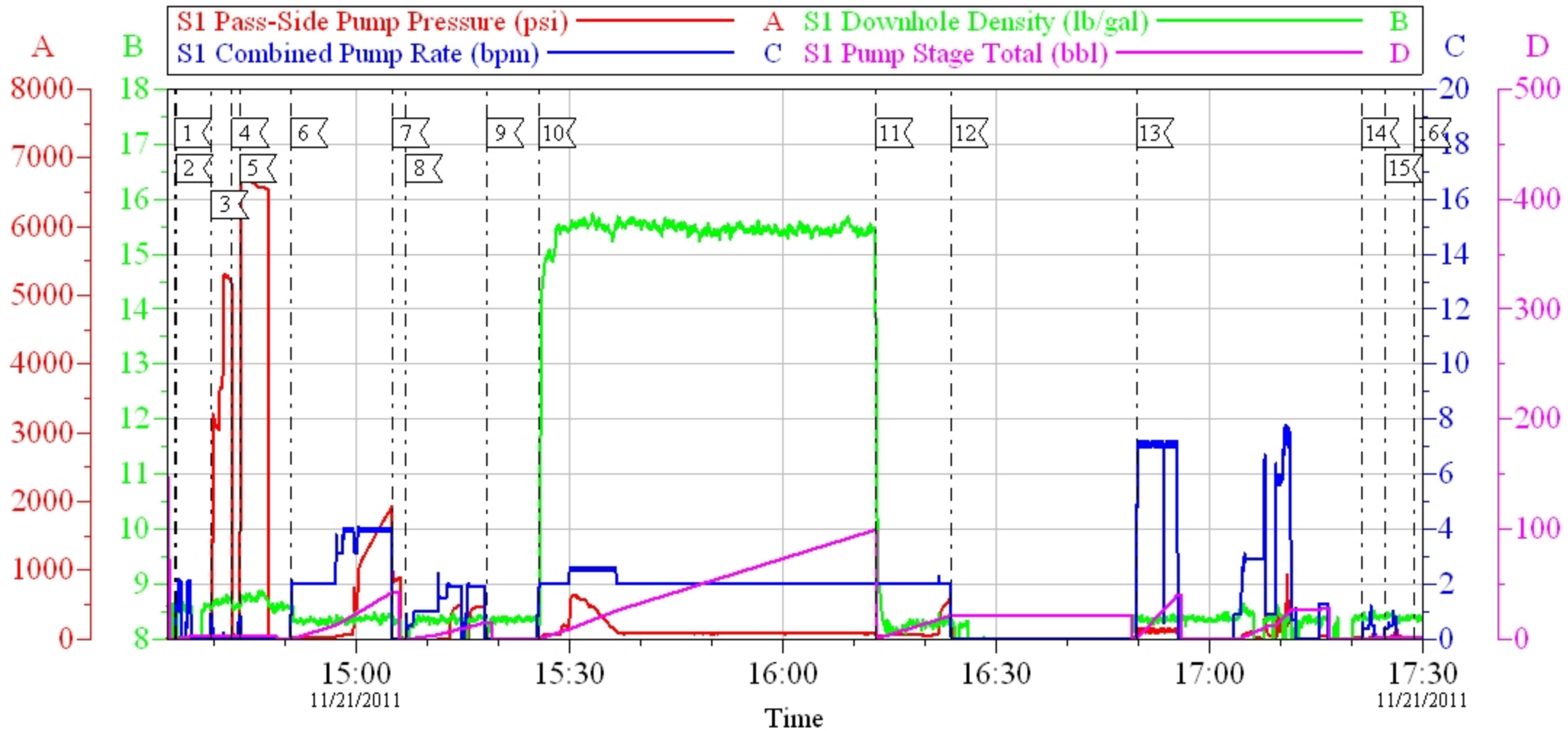
| Activity Description                                     | Date/Time           | Cht<br># | Rate<br>bbl/<br>min | Volume<br>bbl |       | Pressure<br>psig |            | Comments  |
|--|---------------------|----------|---------------------|---------------|-------|------------------|------------|---|
|  |                     |          |                     | Stage         | Total | Tubing           | Casing     |   |
| Call Out   | 11/21/2011<br>01:00 |          |                     |               |       |                  |            | TUBING 2 3/8 4.6 SET<br>@ 6500 PERFS @ 6750<br>CASING 4.5 11.6 P110 |
| Depart Yard Safety Meeting                               | 11/21/2011<br>02:50 |          |                     |               |       |                  |            |   |
| Crew Leave Yard  | 11/21/2011<br>03:00 |          |                     |               |       |                  |            |   |
| Arrive At Loc  | 11/21/2011<br>06:45 |          |                     |               |       |                  |            |   |
| Assessment Of Location<br>Safety Meeting                 | 11/21/2011<br>07:00 |          |                     |               |       |                  |            |   |
| Pre-Rig Up Safety Meeting                                | 11/21/2011<br>07:30 |          |                     |               |       |                  |            |   |
| Wait on Customer or<br>Customer Sub-Contractor<br>Equip  | 11/21/2011<br>09:30 |          |                     |               |       |                  |            | WIRE LINE RIG TO<br>RUN TUBING                                      |
| Wait on Customer or<br>Customer Sub-Contractor<br>Equipm | 11/21/2011<br>14:10 |          |                     |               |       |                  |            |   |
| Pre-Job Safety Meeting                                   | 11/21/2011<br>14:20 |          |                     |               |       |                  |            |   |
| Start Job  | 11/21/2011<br>14:34 |          |                     |               |       |                  |            |   |
| Prime Pumps  | 11/21/2011<br>14:35 |          | 2                   | 2             |       |                  | 23.0       | FRESH WATER   |
| Test Lines   | 11/21/2011<br>14:39 |          |                     |               |       |                  | 5000.<br>0 |   |
| Load Backside  | 11/21/2011<br>14:50 |          | 4                   | 42            |       |                  | 1925.<br>0 | PRODUCED WATER  |
| Injection Test   | 11/21/2011<br>15:06 |          | 2                   | 15            |       |                  | 484.0      | FRESH WATER   |
| ISIP   | 11/21/2011<br>15:18 |          |                     |               |       |                  | .0         | WELL ON A SUCK  |
| Activity Description                                     | Date/Time           | Cht      | Rate<br>bbl/<br>min | Volume<br>bbl |       | Pressure<br>psig |            | Comments  |

## *Cementing Job Log*

|   |                     | # |     | Stage | Total | Tubing | Casing |  |
|---|---------------------|---|-----|-------|-------|--------|--------|--|
| Pump Cement                               | 11/21/2011<br>15:25 |   | 2   | 106.9 |       |        | 80.0   | MIXED @ 15.5 PPG<br>YIELD 1.2 WAT/REQ<br>5.32 500 SKS  |
| Pump Displacement                         | 11/21/2011<br>16:13 |   | 2   | 26    |       |        | 596.0  | PRODUCED WATER<br>FOR DISPLACEMENT                     |
| Shutdown                                  | 11/21/2011<br>16:23 |   |     |       |       |        |        | WELL ON A SUCK   |
| Stage Cement                              | 11/21/2011<br>17:21 |   | 0.5 | 0.25  |       |        | 85.0   |  |
| Stage Cement                              | 11/21/2011<br>17:24 |   | 0.5 | 0.25  |       |        | 180.0  |  |
| End Job                                   | 11/21/2011<br>17:28 |   |     |       |       |        |        | NO RETURNS<br>THROUGHOUT JOB                           |
| Post-Job Safety Meeting (Pre<br>Rig-Down) | 11/21/2011<br>19:00 |   |     |       |       |        |        |  |
| Depart Location Safety<br>Meeting         | 11/21/2011<br>19:50 |   |     |       |       |        |        |  |
| Crew Leave Location                       | 11/21/2011<br>20:00 |   |     |       |       |        |        | THANKS FOR USING<br>HALLIBURTON BILL<br>JAMISON & CREW |

# OXY CC 697-16-15A

## SQUEEZE



Customer: OXY  
Well Description: CC 697-16-15A  
Company Rep: MIKE DECKER

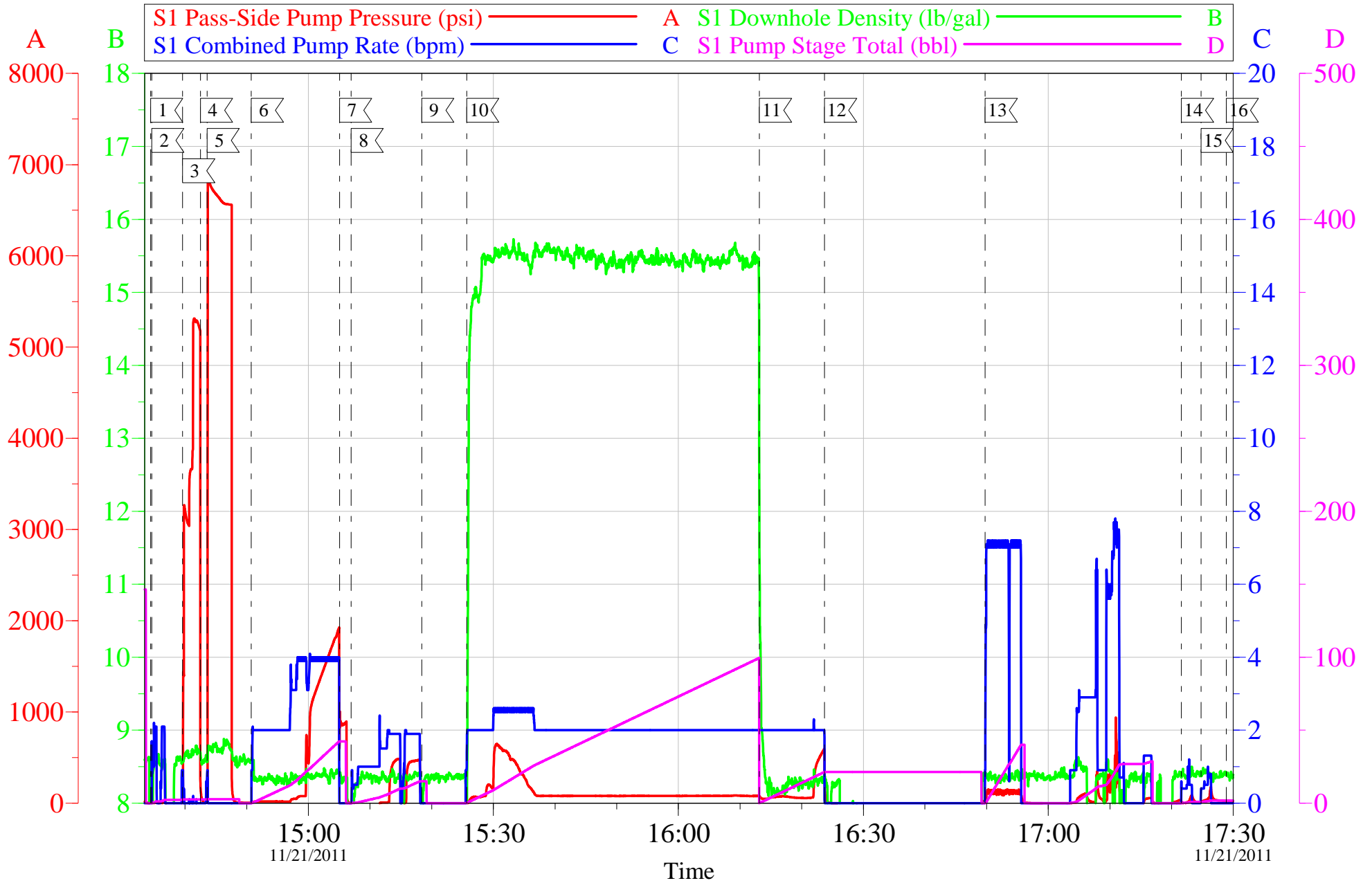
Job Date: 21-Nov-2011  
Job Type: CEMENT  
Cement Supervisor: BILL JAMISON

Sales Order #: 9065943  
ADC Used: YES  
Elite # 6 SHANE JENSEN

OptiCem v6.4.10  
21-Nov-11 19:05

# OXY CC 697-16-15A

## SQUEEZE



|                                 |                                 |                        |
|---------------------------------|---------------------------------|------------------------|
| Customer: OXY                   | Job Date: 21-Nov-2011           | Sales Order #: 9065943 |
| Well Description: CC 697-16-15A | Job Type: CEMENT                | ADC Used: YES          |
| Company Rep: MIKE DECKER        | Cement Supervisor: BILL JAMISON | Elite # 6 SHANE JENSEN |

OptiCem v6.4.10  
21-Nov-11 19:10

# HALLIBURTON

## Water Analysis Report

Company: OXY  
Submitted by: BILL JAMISON  
Attention: J.Trout  
Lease: C.C.  
Well #: 697-16-15A

Date: 11/21/2011  
Date Rec.: 11/21/2011  
S.O.#: 9065943  
Job Type: SQUEEZE

|                             |       |             |
|-----------------------------|-------|-------------|
| Specific Gravity            | MAX   | 1           |
| pH                          | 8     | 7           |
| Potassium (K)               | 5000  | 400 Mg / L  |
| Calcium (Ca)                | 500   | 120 Mg / L  |
| Iron (FE2)                  | 300   | 0 Mg / L    |
| Chlorides (Cl)              | 3000  | 0 Mg / L    |
| Sulfates (SO <sub>4</sub> ) | 1500  | -200 Mg / L |
| Chlorine (Cl <sub>2</sub> ) |       | 0 Mg / L    |
| Temp                        | 40-80 | 85 Deg      |
| Total Dissolved Solids      |       | 400 Mg / L  |

Respectfully: BILL JAMISON

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>9065943                 | <b>Line Item:</b><br>10                          | <b>Survey Conducted Date:</b><br>11/21/2011                       |
| <b>Customer:</b><br>OXY GRAND JUNCTION EBUSINESS |  | <b>Job Type (BOM):</b><br>CMT SQUEEZE PERFORATIONS BOM            |
| <b>Customer Representative:</b>                  |  | <b>API / UWI: (leave blank if unknown)</b><br>AFEYSGY330JJ4STKAAA |
| <b>Well Name:</b><br>CC                          |  | <b>Well Number:</b><br>697-16-15A                                 |
| <b>Well Type:</b><br>Development Well            | <b>Well Country:</b><br>United States of America |   |
| <b>H2S Present:</b>                              | <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                              | 11/21/2011              |
| Survey Interviewer      | The survey interviewer is the person who initiated the survey. | PRICE JAMISON (HAL9235) |
| Customer Participation  | Did the customer participate in this survey? (Y/N)             | No                      |
| Customer Representative | Enter the Customer representative name                         |                         |
| HSE                     | Was our HSE performance satisfactory? Circle Y or N            |                         |
| Equipment               | Were you satisfied with our Equipment? Circle Y or N           |                         |
| Personnel               | Were you satisfied with our people? Circle Y or N              |                         |
| Customer Comment        | Customer's Comment   |                         |

|                           |
|---------------------------|
| <b>CUSTOMER SIGNATURE</b> |
|---------------------------|

|  |  |   |
|--|--|---|
| <b>Sales Order #:</b><br>9065943                 | <b>Line Item:</b><br>10                          | <b>Survey Conducted Date:</b><br>11/21/2011                       |
| <b>Customer:</b><br>OXY GRAND JUNCTION EBUSINESS |  | <b>Job Type (BOM):</b><br>CMT SQUEEZE PERFORATIONS BOM            |
| <b>Customer Representative:</b>                  |  | <b>API / UWI: (leave blank if unknown)</b><br>AFEYSGY330JJ4STKAAA |
| <b>Well Name:</b><br>CC                          |  | <b>Well Number:</b><br>697-16-15A                                 |
| <b>Well Type:</b><br>Development Well            | <b>Well Country:</b><br>United States of America |   |
| <b>H2S Present:</b>                              | <b>Well State:</b><br>Colorado                   | <b>Well County:</b><br>Garfield                                   |

*KEY PERFORMANCE INDICATORS*

| General                           |            |
|-----------------------------------|------------|
| <b>Survey Conducted Date</b>      | 11/21/2011 |
| The date the survey was conducted |            |

| Cementing KPI Survey  |          |
|---|----------|
| <b>Type of Job</b>  | 0        |
| Select the type of job. (Cementing or Non-Cementing)  |          |
| <b>Select the Maximum Deviation range for this Job</b>  | Deviated |
| What is the highest deviation for the job you just completed? This may not be the maximum well deviation.   |          |
| <b>Total Operating Time (hours)</b>   | 4        |
| Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.   |          |
| <b>HSE Incident, Accident, Injury</b>   | No       |
| HSE Incident, Accident, Injury. This should be recordable incidents only.   |          |
| <b>Was the job purpose achieved?</b>  | Yes      |
| Was the job delivered correctly as per customer agreed design?  |          |
| <b>Operating Hours (Pumping Hours)</b>  | 3        |
| Total number of hours pumping fluid on this job. Enter in decimal format.   |          |
| <b>Customer Non-Productive Rig Time (hrs)</b>   | 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. |          |
| <b>Type of Rig Classification Job Was Performed</b>   | Workover |
| Type Of Rig (classification) Job Was Performed On   |          |
| <b>Number Of JSAs Performed</b>   | 5        |
| Number Of Jsas Performed  |          |
| <b>Number of Unplanned Shutdowns</b>  | 0        |
| Unplanned shutdown is when injection stops for any period of time.  |          |
| <b>Was this a Primary Cement Job (Yes / No)</b>   | No       |

|  |  |   |
|--|--|---|
| <b>Sales Order #:</b><br>9065943                 | <b>Line Item:</b><br>10                          | <b>Survey Conducted Date:</b><br>11/21/2011                       |
| <b>Customer:</b><br>OXY GRAND JUNCTION EBUSINESS |  | <b>Job Type (BOM):</b><br>CMT SQUEEZE PERFORATIONS BOM            |
| <b>Customer Representative:</b>                  |  | <b>API / UWI: (leave blank if unknown)</b><br>AFEYSGY330JJ4STKAAA |
| <b>Well Name:</b><br>CC                          |  | <b>Well Number:</b><br>697-16-15A                                 |
| <b>Well Type:</b><br>Development Well            | <b>Well Country:</b><br>United States of America |   |
| <b>H2S Present:</b>                              | <b>Well State:</b><br>Colorado                   | <b>Well County:</b><br>Garfield                                   |

|  |     |
|--|-----|
| Primary Cement Job= Casing job, Liner job, or Tie-back job.  |     |
| <b>Was this a Plug or a Squeeze Job?</b><br>Please select the appropriate choice   | No  |
| <b>Was this a Primary or a Remedial Job?</b><br>Kick off plug, Plug to Abandon, LCM plug or Planned Liner Top Squeeze, Squeeze of existing perforations, Squeeze of casing leak  | No  |
| <b>Mixing Density of Job Stayed in Designed Density Range (0-100%)</b><br>Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100       | 98  |
| <b>Was Automated Density Control Used?</b><br>Was Automated Density Control (ADC) Used ?   | Yes |
| <b>Pump Rate (percent) of Job Stayed At Designed Pump Rate</b><br>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  |
| <b>Nbr of Remedial Sqz Jobs Rqd - Competition</b><br>Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition   | 0   |
| <b>Nbr of Remedial Plug Jobs Rqd - HES</b><br>Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES   | 0   |
| <b>Nbr of Remedial Sqz Jobs Rqd - HES</b><br>Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES   | 0   |