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**OXY GRAND JUNCTION EBUSINESS**

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CC 697-16-32  
Parachute  
Garfield County , Colorado

**Squeeze Perfs**

**Job Site Documents**

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 344034		<b>Ship To #:</b> 344034		<b>Quote #:</b>		<b>Sales Order #:</b> 9065936	
<b>Customer:</b> OXY GRAND JUNCTION EBUSINESS				<b>Customer Rep:</b> DECKER, MIKE			
<b>Well Name:</b> CC			<b>Well #:</b> 697-16-32			<b>API/UWI #:</b>	
<b>Field:</b> Parachute		<b>City (SAP):</b> ADDISON		<b>County/Parish:</b> Garfield		<b>State:</b> Colorado	
<b>Contractor:</b> WORKOVER			<b>Rig/Platform Name/Num:</b> WORKOVER				
<b>Job Purpose:</b> Squeeze Perfs							
<b>Well Type:</b> Development Well				<b>Job Type:</b> Squeeze Perfs			
<b>Sales Person:</b> HIMES, JEFFREY			<b>Srvc Supervisor:</b> ROSS, CHARLES			<b>MBU ID Emp #:</b> 453128	

**Job Personnel**

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BATH, KYLE Thomas	10	477632	BECK, MICHAEL George	10	489151	KUKUS, CARLTON Dean	10	458577
MILLER, KEVIN Paul	10	443040	ROSS, CHARLES Raymond	10	453128			

**Equipment**

HES Unit #	Distance-1 way						
10744549	120 mile	10744648C	120 mile	10784080	120 mile	10804579	120 mile
10998508	120 mile	11018454	120 mile	11057893	120 mile	11259881	120 mile
11710582	120 mile						

**Job Hours**

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
Nov 22, 2011	8	5						
<b>TOTAL</b>	<i>Total is the sum of each column separately</i>							

**Job**

**Job Times**

Formation Name	Formation Depth (MD)	Top	Bottom	Called Out	Date	Time	Time Zone
					22 - Nov - 2011	02:00	MST
<b>Form Type</b>			BHST	<b>On Location</b>	22 - Nov - 2011	07:00	MST
<b>Job depth MD</b>	7200. ft		<b>Job Depth TVD</b>	7200. ft	<b>Job Started</b>	22 - Nov - 2011	10:10
<b>Water Depth</b>			<b>Wk Ht Above Floor</b>	7. ft	<b>Job Completed</b>	22 - Nov - 2011	15:02
<b>Perforation Depth (MD)</b>	<b>From</b>	7,200.00 ft	<b>To</b>	7,200.00 ft	<b>Departed Loc</b>	22 - Nov - 2011	16:30

**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								7200.	7200	.	.
4 1/2" PRODUCTION CASING	Unknown		4.5	4.	11.6			.	7250.		
2 3/8" TUBING	Unknown		2.375	1.995	4.7			.	6900.		

**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	9 BBL FW, 10 BBL SUPERFLUSH								19.00	bbl	8.33	.0	.0	5.0																								
2	Squeeze Cement	SQUEEZECEM (TM) SYSTEM (452971)								600.0	sacks	15.5	1.2	5.31	5.0	5.31																							
5.31 Gal		FRESH WATER																																					
3	Displacement									26.00	bbl	.	.0	.0	.0																								
Calculated Values					Pressures					Volumes																													
Displacement		26.7			Shut In: Instant					Lost Returns					Cement Slurry					128.2					Pad														
Top Of Cement					5 Min					Cement Returns					Actual Displacement					28.15					Treatment														
Frac Gradient					15 Min					Spacers					19					Load and Breakdown					Total Job					175									
Rates																																							
Circulating					Mixing					2					Displacement					1.5					Avg. Job					1.4									
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> 344034	<b>Quote #:</b>	<b>Sales Order #:</b> 9065936
<b>Customer:</b> OXY GRAND JUNCTION EBUSINESS		<b>Customer Rep:</b> DECKER, MIKE	
<b>Well Name:</b> CC		<b>Well #:</b> 697-16-32	<b>API/UWI #:</b>
<b>Field:</b> Parachute	<b>City (SAP):</b> ADDISON	<b>County/Parish:</b> Garfield	<b>State:</b> Colorado
<b>Legal Description:</b>			
<b>Lat:</b> N 0 deg. OR N 0 deg. 0 min. 0 secs.		<b>Long:</b> E 0 deg. OR E 0 deg. 0 min. 0 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> ROSS, CHARLES	<b>MBU ID Emp #:</b> 453128

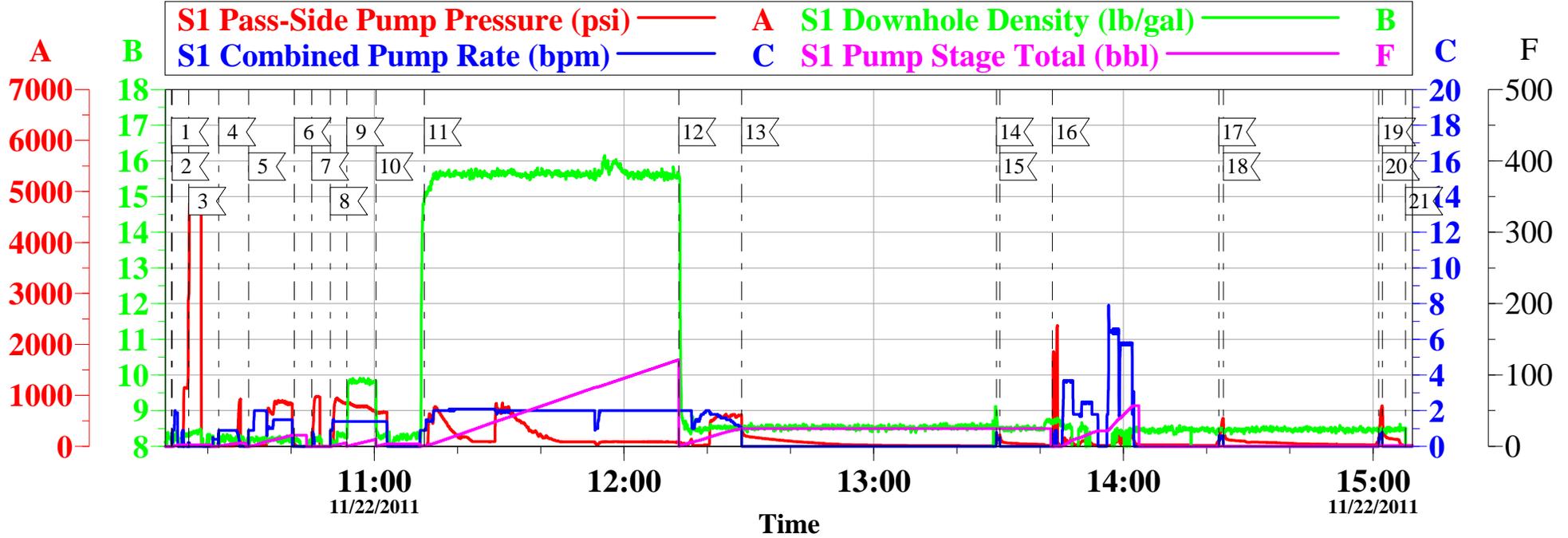
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	11/22/2011 02:03							
Pre-Convoy Safety Meeting	11/22/2011 03:50							WITH ALL HES EE'S
Depart from Service Center or Other Site	11/22/2011 04:00							
Arrive at Location from Service Center	11/22/2011 07:00							
Assessment Of Location Safety Meeting	11/22/2011 07:20							WITH ALL HES EE'S
Pre-Rig Up Safety Meeting	11/22/2011 09:05							WITH ALL HES EE'S
Rig-Up Equipment	11/22/2011 09:10							1-F550 PICKUP, 1-ELITE PUMP TRUCK, 2-660 CEMENT BULK TRUCKS, 1-HARD LINE TO RIG, 1-HARD LINE TO THE BACKSIDE CASING, AND WASH UP OUT TO THE PIT FROM SQUEEZE MANIFOLD.
Pre-Job Safety Meeting	11/22/2011 10:00							WITH ALL HES EE'S AND RIG CREW
Start Job	11/22/2011 10:10							CIBP 7250, MW# 8.4, RETAINER @ 6900, PERFS @ 7200, PRODUCTION CASING , 4 1/2" 11.6#
Pump Water	11/22/2011 10:10		2	2			15.0	FILL LINES, FRESH WATER
Test Lines	11/22/2011 10:13							TEST TO 5000 PSI
Comment	11/22/2011 10:22						1000.0	FILLED CASING AND PRESSURED UP THE BACKSIDE.

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Injection Test	11/22/2011 10:29		1.5	15			850.0	ISIP
Comment	11/22/2011 10:45						1000.0	PRESSURED UP THE BACKSIDE.
Pump Spacer 1	11/22/2011 10:49		1.5	5			850.0	FRESH WATER
Pump Spacer 2	11/22/2011 10:53		1.5	10			810.0	SUPER FLUSH SPACER.
Pump Spacer 1	11/22/2011 11:00		1.5	4			660.0	FRESH WATER
Pump Tail Cement	11/22/2011 11:10		2	128.2			720.0	600 SKS OF SQUEEZECEM PUMPED @ 15.5. PPG, YIELD 1.2, WATER 5.31
Pump Displacement	11/22/2011 12:13		1.8	26.7			580.0	FRESH WATER
Shutdown	11/22/2011 12:27							HESITATE
Stage Cement	11/22/2011 13:29		0.4	0.2	26.9		230.0	
Shutdown	11/22/2011 13:30							HESITATE
Clean Lines	11/22/2011 13:42							SHUT IN TUBING. CLEANED TRUCK TO THE PIT.
Stage Cement	11/22/2011 14:22		0.4	0.5	27.4		552.0	
Shutdown	11/22/2011 14:24							HESITATE
Stage Cement	11/22/2011 15:01		0.5	0.75	28.15		818.0	
Shutdown	11/22/2011 15:02							
End Job	11/22/2011 15:03							40# SUGAR, NO ROTARY SUB CHARGE, NO DERRICK CHARGE, 1 EXTRA DOT CHARGE FOR SERVICE LEADER PICK UP. USED SQUEEZE MANIFOLD. OTHER 10 BBL SUPER FLUSH SPACER FOR 697-16-15A NOT USED AND RETURNED TO THE YARD. 2 HOURS ON LOCATION WERE USED FOR 697-16-15A, NOT CHARGED TO THIS TICKET.

Comment	11/22/2011 15:04							RIG REVERSED OUT.
Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Post-Job Safety Meeting (Pre Rig-Down)	11/22/2011 15:07							
Rig-Down Equipment	11/22/2011 15:10							
Pre-Convoy Safety Meeting	11/22/2011 16:10							
Depart Location for Service Center or Other Site	11/22/2011 16:15							THANKS FOR USING GRAND JUNCTION HALLIBURTON CEMENT DEPARTMENT, CHUCK ROSS AND CREW

# OXY - CC 697-16-32

Squeeze

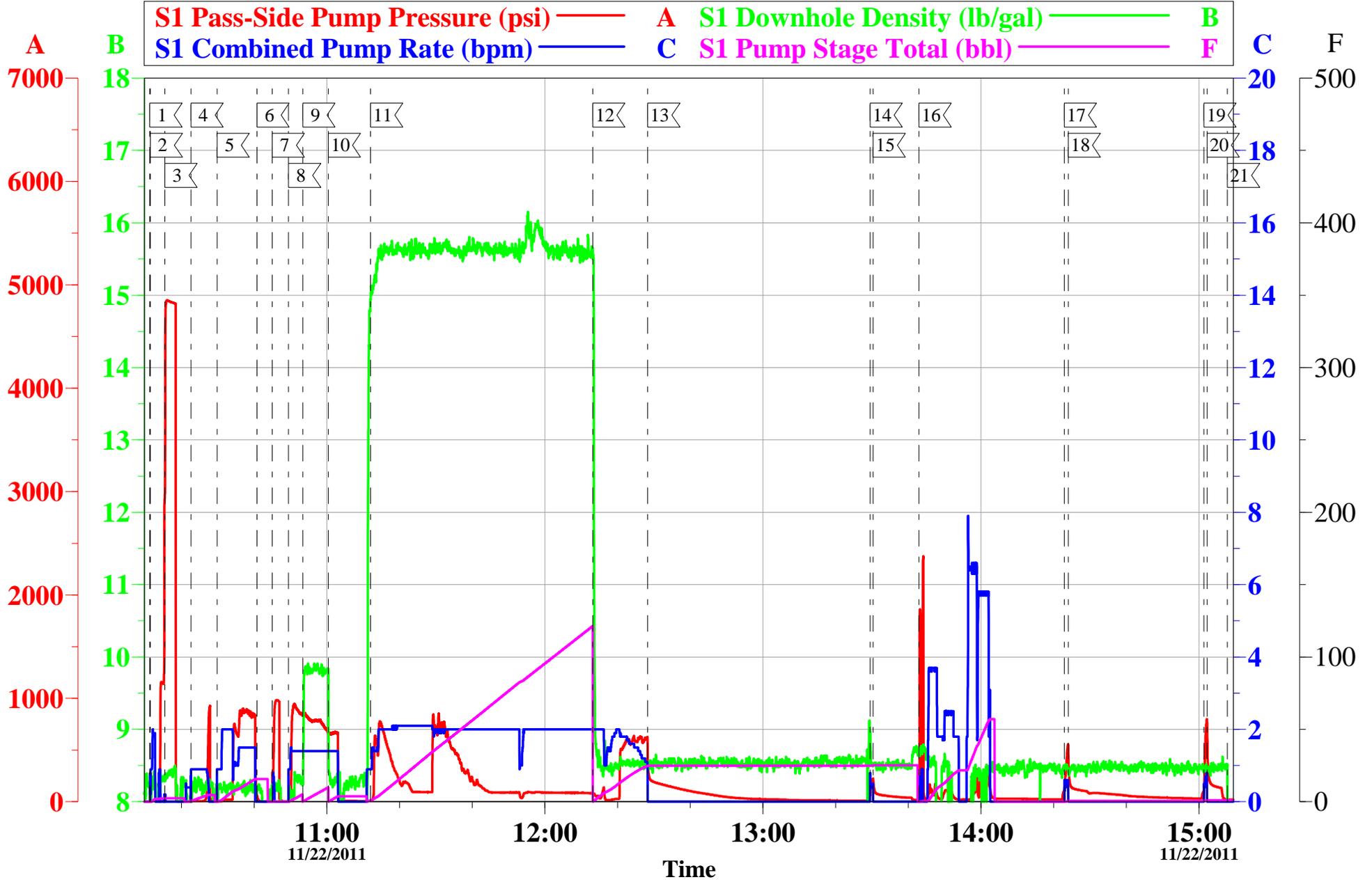


Local Event Log		
1	START JOB	10:11:17
2	FILL LINES	10:11:26
3	PRESSURE TEST	10:15:26
4	PRESSURE UP BACKSIDE	10:22:36
5	INJECTION TEST	10:29:48
6	ISIP	10:40:46
7	PRESSURE UP BACKSIDE	10:44:59
8	PUMP SPACER	10:49:28
9	PUMP FLUSH SPACER	10:53:24
10	PUMP SPACER	11:00:24
11	PUMP CEMENT	11:12:02
12	PUMP DISPLACEMENT	12:13:09
13	SHUT DOWN	12:28:16
14	RESUME	13:29:27
15	SHUT DOWN	13:30:19
16	SHUT IN TUBING, CLEAN TRUCK TO PIT	13:42:56
17	RESUME	14:22:53
18	SHUT DOWN	14:24:00
19	RESUME	15:01:20
20	SHUT DOWN	15:02:14
21	END JOB	15:07:48

Customer: Oxy	Job Date: 22-Nov-2011	Sales Order #: 9065936
Well Description: CC 697-16-32	Job type: Squeeze	ADC Used: Yes
Customer Rep: Mike Decker	Service Supervisor: Chuck Ross	Operator/ Pump: Kyle Bath

# OXY - CC 697-16-32

Squeeze



Customer: Oxy	Job Date: 22-Nov-2011	Sales Order #: 9065936
Well Description: CC 697-16-32	Job type: Squeeze	ADC Used: Yes
Customer Rep: Mike Decker	Service Supervisor: Chuck Ross	Operator/ Pump: Kyle Bath

# HALLIBURTON

## Water Analysis Report

Company: OXY  
Submitted by: CHUCK ROSS  
Attention: JON TROUT  
Lease: CASCADE CREEK  
Well #: 697-16-32

Date: 11/22/2011  
Date Rec.: 11/22/2011  
S.O.#: 9065936  
Job Type: Squeeze

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>7</b>
Potassium (K)	<i>5000</i>	<b>250</b> Mg / L
Calcium (Ca)	<i>500</i>	Mg / L
Iron (FE2)	<i>300</i>	<b>10</b> Mg / L
Chlorides (Cl)	<i>3000</i>	<b>0</b> Mg / L
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<b>&lt;200</b> Mg / L
Chlorine (Cl <sub>2</sub> )		<b>NA</b> Mg / L
Temp	<i>40-80</i>	<b>71</b> Deg
Total Dissolved Solids		<b>720</b> Mg / L

Respectfully: CHUCK ROSS

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

<b>Sales Order #:</b> 9065936	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 11/22/2011
<b>Customer:</b> OXY GRAND JUNCTION EBUSINESS		<b>Job Type (BOM):</b> CMT SQUEEZE PERFORATIONS BOM
<b>Customer Representative:</b>		<b>API / UWI: (leave blank if unknown)</b> AFEYCMLUPZJJGZJJAAA
<b>Well Name:</b> CC		<b>Well Number:</b> 697-16-32
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b>	<b>Well State:</b> Colorado	<b>Well County:</b> 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	11/22/2011
Survey Interviewer	The survey interviewer is the person who initiated the survey.	CHARLES ROSS (HB20648)
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>
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<b>Sales Order #:</b> 9065936	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 11/22/2011
<b>Customer:</b> OXY GRAND JUNCTION EBUSINESS		<b>Job Type (BOM):</b> CMT SQUEEZE PERFORATIONS BOM
<b>Customer Representative:</b>		<b>API / UWI: (leave blank if unknown)</b> AFEYCMLUPZJJGZJJAAA
<b>Well Name:</b> CC		<b>Well Number:</b> 697-16-32
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b>	<b>Well State:</b> Colorado	<b>Well County:</b> Garfield

### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	11/22/2011
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>	7
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>	5
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>	Drilling Rig (Portable)
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> 9065936	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 11/22/2011
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<b>Customer Representative:</b>		<b>API / UWI: (leave blank if unknown)</b> AFEYCMLUPZJJGZJJAAA
<b>Well Name:</b> CC		<b>Well Number:</b> 697-16-32
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b>	<b>Well State:</b> Colorado	<b>Well County:</b> Garfield

Primary Cement Job= Casing job, Liner job, or Tie-back job.	
<b>Was this a Plug or a Squeeze Job?</b> Please select the appropriate choice	No
<b>Was this a Primary or a Remedial Job?</b> 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> 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> Was Automated Density Control (ADC) Used ?	Yes
<b>Pump Rate (percent) of Job Stayed At Designed Pump Rate</b> 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> Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition	0
<b>Nbr of Remedial Plug Jobs Rqd - HES</b> Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
<b>Nbr of Remedial Sqz Jobs Rqd - HES</b> Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0