
OXY GRAND JUNCTION EBUSINESS

**CC 697-16-32
Parachute
Garfield County , Colorado**

Squeeze Perfs

Job Site Documents

The Road to Excellence Starts with Safety

Sold To #: 344034	Ship To #: 344034	Quote #:	Sales Order #: 9065936
Customer: OXY GRAND JUNCTION EBUSINESS	Customer Rep: DECKER, MIKE		
Well Name: CC	Well #: 697-16-32	API/UWI #:	
Field: Parachute	City (SAP): ADDISON	County/Parish: Garfield	State: Colorado
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: ROSS, CHARLES	MBU ID Emp #:	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	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	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						
TOTAL			Total is the sum of each column separately					

Job

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

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/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		

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			

HALLIBURTON

Cementing Job Summary

Stage Tool								Centralizers							
Miscellaneous Materials															
Gelling Agt				Conc				Surfactant				Conc			
Treatment Fld				Conc				Inhibitor				Conc			
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		SQUEEZECM (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

Sold To #: 344034	Ship To #: 344034	Quote #:	Sales Order #: 9065936
Customer: OXY GRAND JUNCTION EBUSINESS		Customer Rep: DECKER, MIKE	
Well Name: CC		Well #: 697-16-32	API/UWI #:
Field: Parachute	City (SAP): ADDISON	County/Parish: Garfield	State: Colorado
Legal Description:			
Lat: N 0 deg. OR N 0 deg. 0 min. 0 secs.		Long: E 0 deg. OR E 0 deg. 0 min. 0 secs.	
Contractor: WORKOVER		Rig/Platform Name/Num: WORKOVER	
Job Purpose: Squeeze Perfs			Ticket Amount:
Well Type: Development Well		Job Type: Squeeze Perfs	
Sales Person: HIMES, JEFFREY		Srv Supervisor: ROSS, CHARLES	MBU ID Emp #: 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.

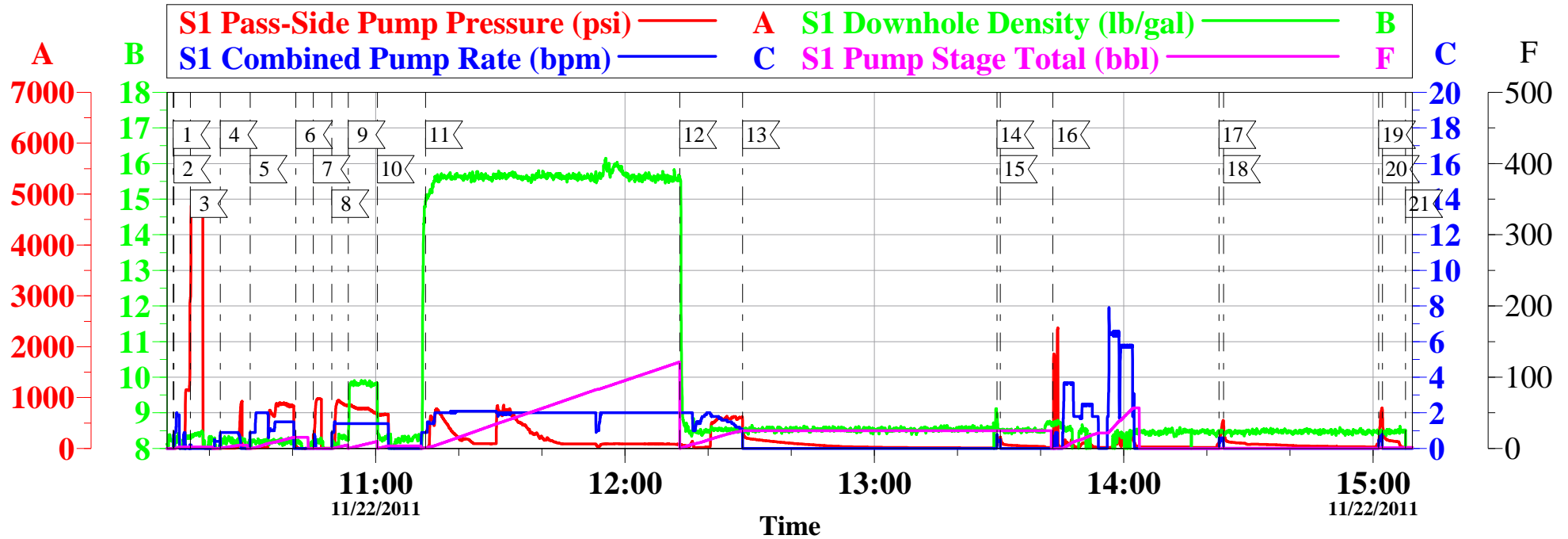
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Injection Test	11/22/2011 10:29		1.5	15			850.0	ISIP
Comment	11/22/2011 10:45						1000.0	PRESSURED UP THE BACKSIDE.
Pump Spacer 1	11/22/2011 10:49		1.5	5			850.0	FRESH WATER
Pump Spacer 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 SQUEEZECM 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.

Cementing Job Log

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

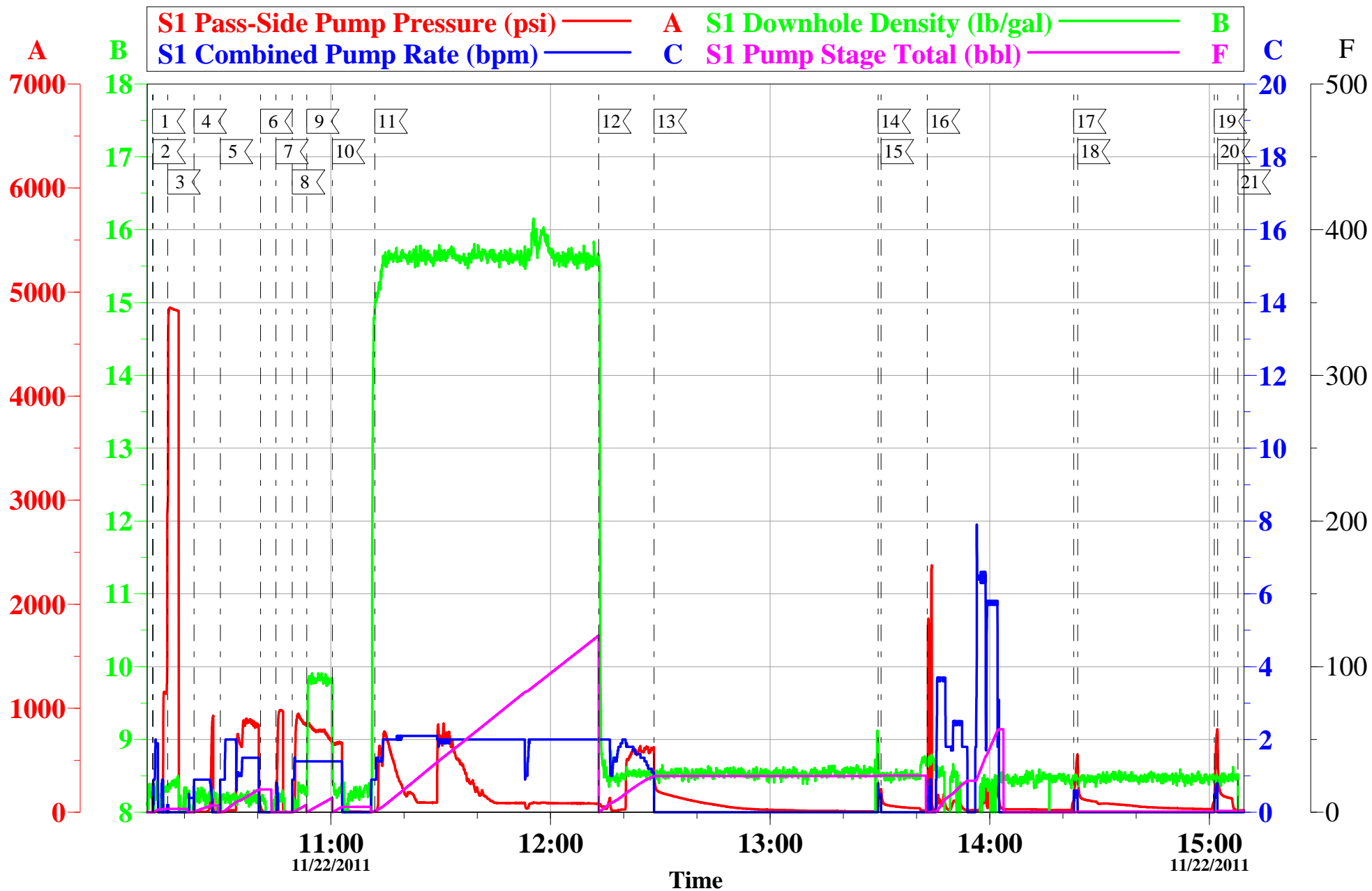


Local Event Log					
1	START JOB	10:11:17	2	FILL LINES	10:11:26
3	PRESSURE TEST	10:15:26	4	PRESSURE UP BACKSIDE	10:22:36
5	INJECTION TEST	10:29:48	6	ISIP	10:40:46
7	PRESSURE UP BACKSIDE	10:44:59	8	PUMP SPACER	10:49:28
9	PUMP FLUSH SPACER	10:53:24	10	PUMP SPACER	11:00:24
11	PUMP CEMENT	11:12:02	12	PUMP 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

OptiCem v6.4.10
22-Nov-11 15:55

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>	<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>	Mg / L
Iron (FE2)	<i>300</i>	<i>10</i> Mg / L
Chlorides (Cl)	<i>3000</i>	<i>0</i> Mg / L
Sulfates (SO ₄)	<i>1500</i>	<i><200</i> Mg / L
Chlorine (Cl ₂)		<i>NA</i> Mg / L
Temp	<i>40-80</i>	<i>71</i> Deg
Total Dissolved Solids		<i>720</i> 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

Sales Order #: 9065936	Line Item: 10	Survey Conducted Date: 11/22/2011
Customer: OXY GRAND JUNCTION EBUSINESS		Job Type (BOM): CMT SQUEEZE PERFORATIONS BOM
Customer Representative:		API / UWI: (leave blank if unknown) AFEYCMLUPZJJGZJJAAA
Well Name: CC		Well Number: 697-16-32
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	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	

CUSTOMER SIGNATURE

Sales Order #: 9065936	Line Item: 10	Survey Conducted Date: 11/22/2011
Customer: OXY GRAND JUNCTION EBUSINESS		Job Type (BOM): CMT SQUEEZE PERFORATIONS BOM
Customer Representative:		API / UWI: (leave blank if unknown) AFEYCM LUPZJJGZJJAAA
Well Name: CC		Well Number: 697-16-32
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	11/22/2011
The date the survey was conducted	

Cementing KPI Survey	
Type of Job	0
Select the type of job. (Cementing or Non-Cementing)	
Select the Maximum Deviation range for this Job	Deviated
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
Total Operating Time (hours)	7
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
HSE Incident, Accident, Injury	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
Was the job purpose achieved?	Yes
Was the job delivered correctly as per customer agreed design?	
Operating Hours (Pumping Hours)	5
Total number of hours pumping fluid on this job. Enter in decimal format.	
Customer Non-Productive Rig Time (hrs)	0
Lost time due to Halliburton in the start, execution, or completion of an ordered service or product, or delays in a follow-on service. Enter in decimal format. 0 if none.	
Type of Rig Classification Job Was Performed	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
Number Of JSAs Performed	5
Number Of Jsas Performed	
Number of Unplanned Shutdowns	0
Unplanned shutdown is when injection stops for any period of time.	
Was this a Primary Cement Job (Yes / No)	No

Sales Order #: 9065936	Line Item: 10	Survey Conducted Date: 11/22/2011
Customer: OXY GRAND JUNCTION EBUSINESS		Job Type (BOM): CMT SQUEEZE PERFORATIONS BOM
Customer Representative:		API / UWI: (leave blank if unknown) AFEYCMLUPZJJGZJJAAA
Well Name: CC		Well Number: 697-16-32
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.	
Was this a Plug or a Squeeze Job? Please select the appropriate choice	No
Was this a Primary or a Remedial Job? Kick off plug, Plug to Abandon, LCM plug or Planned Liner Top Squeeze, Squeeze of existing perforations, Squeeze of casing leak	No
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	98
Was Automated Density Control Used? Was Automated Density Control (ADC) Used ?	Yes
Pump Rate (percent) of Job Stayed At Designed Pump Rate Pump Rate range defined as +/- 1bbl/min. Calculation: Total BBLs of fluid pumped at the designed rate divided by Total BBLs of fluid pumped, multiplied by 100	98
Nbr of Remedial Sqz Jobs Rqd - Competition Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition	0
Nbr of Remedial Plug Jobs Rqd - HES Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
Nbr of Remedial Sqz Jobs Rqd - HES Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0