HALLIBURTON

OXY GRAND JUNCTION EBUSINESS

CC 697-16-32
GRAND VALLEY
Garfield County , Colorado

Squeeze Perfs

16-Nov-2011

Post Job Report

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 344034	**Ship To #:** 2601445	**Quote #:**	**Sales Order #:** 9065917
Customer: OXY GRAND JUNCTION EBUSINESS		**Customer Rep:** McKinney, Ken	
Well Name: CC	**Well #:** 697-16-32		**API/UWI #:** 05-045-13180
Field: GRAND VALLEY	**City (SAP):** PARACHUTE	**County/Parish:** Garfield	**State:** Colorado
Lat: N 39.527 deg. OR N 39 deg. 31 min. 36.804 secs.		**Long:** W 108.217 deg. OR W -109 deg. 47 min. 0.348 secs.	
Contractor: WORKOVER	**Rig/Platform Name/Num:** WORKOVER		
Job Purpose: Squeeze Perfs			
Well Type: Development Well	**Job Type:** Squeeze Perfs		
Sales Person: HIMES, JEFFREY	**Srvc Supervisor:** **ERIC CARTER**	**MBU ID Emp #:** **345598**	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BANKS, BRENT A	6.5	371353	CARTER, ERIC Earl	6.5	345598	MILLER, KEVIN Paul	6.5	443040
ROSE, BENJAMIN Keith	6.5	487022						

Equipment

HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*
10784064	120 mile	10872429	120 mile	11006314	120 mile	11259885	120 mile
11360883	120 mile	11583915	120 mile				

Job Hours

Date	*On Location Hours*	Operating Hours	Date	*On Location Hours*	Operating Hours	Date	*On Location Hours*	Operating Hours
11/16/2011	6.5	3						
TOTAL		*Total is the sum of each column separately*						

Job

Formation Name					
Formation Depth (MD)	**Top**		**Bottom**		
Form Type		**BHST**			
Job depth MD	7370. ft	**Job Depth TVD**	7370. ft		
Water Depth		**Wk Ht Above Floor**	6. ft		
Perforation Depth (MD)	*From*	***7,139.00 ft***	**To**	7,140.00 ft	

Job Times

	Date	Time	Time Zone
Called Out	16 - Nov - 2011	02:00	MST
On Location	16 - Nov - 2011	06:00	MST
Job Started	16 - Nov - 2011	14:13	MST
Job Completed	16 - Nov - 2011	17:01	MST
Departed Loc	16 - Nov - 2011	18:30	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								7139.	7140.	.	.
CASING	Unknown		4.5	4.	11.6		N-80	7370.	7370.		
TUBING	Unknown		2.375	1.995	4.7			7170.	7170.		

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**	4.5	1	HES	7170	**SSR plug set**			
Insert Float										**Plug Container**			
Stage Tool										**Centralizers**			

HALLIBURTON

Cementing Job Summary

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	Injection Test		15.00	bbl	8.33	.0	.0	1.8	
2	Squeeze Cement	SQUEEZECEM (TM) SYSTEM (452971)	161.0	sacks	15.5	1.2	5.32	1.5	5.32
	5.32 Gal	FRESH WATER							
3	Fresh Water			bbl	8.33			5.0	
4	Displacement		28.45	bbl	.	.0	.0	2	

Calculated Values		Pressures		Volumes					
Displacement	27.7	**Shut In: Instant**		**Lost Returns**		*Cement Slurry*	34.4	**Pad**	
Top Of Cement		**5 Min**		**Cement Returns**		**Actual Displacement**	28.45	**Treatment**	
Frac Gradient		**15 Min**		**Spacers**		**Load and Breakdown**		**Total Job**	

Rates							
Circulating		*Mixing*	1.5	*Displacement*	2	**Avg. Job**	1.75
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***

HALLIBURTON

Cementing Job Log

The Road to Excellence Starts with Safety

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Field: GRAND VALLEY	**City (SAP):** PARACHUTE	**County/Parish:** Garfield	**State:** Colorado
Legal Description:			
Lat: N 39.527 deg. OR N 39 deg. 31 min. 36.804 secs.		**Long:** W 108.217 deg. OR W -109 deg. 47 min. 0.348 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	**Srvc Supervisor:** **ERIC CARTER**		**MBU ID Emp #:** **345598**

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Arrive at Location from Other Job or Site	11/16/2011 12:20							
Assessment Of Location Safety Meeting	11/16/2011 12:30							ATTENDED BY ALL HES CREW
Other	11/16/2011 12:40							SPOT EQUIPMENT
Pre-Rig Up Safety Meeting	11/16/2011 12:50							ATTENDED BY ALL HES CREW
Rig-Up Equipment	11/16/2011 13:00							
Pre-Job Safety Meeting	11/16/2011 13:40							ATTENDED BY ALL HES CREW,RIG CREW AND COMPANY REP
Start Job	11/16/2011 14:13							CASING 4.5", 11.6#, N-80, TUBING 2.375", 4.7#, ESVB RETAINER SET AT 7170', PERFS 7370', OH 7"
Other	11/16/2011 14:13		1	2		16.0		FILL LINES
Test Lines	11/16/2011 14:16							PRESSURED UP TO 4186 PSI, PRESSURE HELD
Comment	11/16/2011 14:16							HES WAITING FOR SECOND WATER TRUCK
Injection Test	11/16/2011 14:33		1.8	15		976.0		PRODUCTION WATER
ISIP	11/16/2011 14:43					4.0		PRESSURE FELL TO 4 PSI
Pump Cement	11/16/2011 14:56		1.5	34.4		750.0		161 SKS MIXED AT 15.5 PPG, 1.2 YIELD , 5.32 GL/SK, WIGHED UP VIA MUD SCALES

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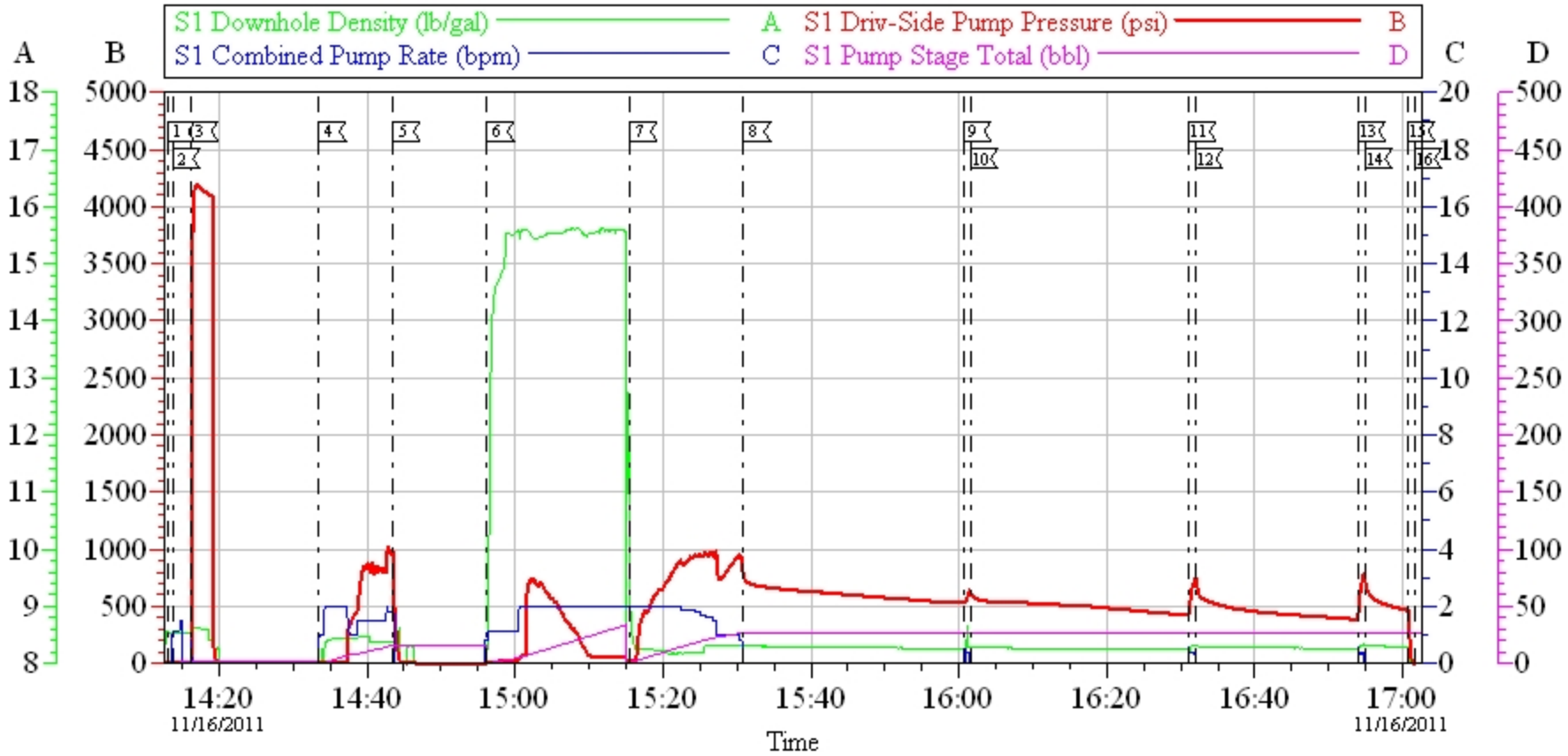
Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Displacement	11/16/2011 15:15		2	27.7		990.0		PRODUCTION WATER, VOLUME MEASURED BY DISPLACEMENT TANK MARKS, FINAL RATE .8 BBL/MIN, PRESSURE 919 PSI
Shutdown	11/16/2011 15:30							HESITATE AT COMPANY REP'S REQUEST, PRESSURE DROPPED TO 538 PSI
Resume Squeeze	11/16/2011 16:00		0.5	0.25		643.0		
Shutdown	11/16/2011 16:01							PRESSURE DROPPED TO 423 PSI
Resume Squeeze	11/16/2011 16:31		0.5	0.25		735.0		
Shutdown	11/16/2011 16:32							PRESSURE DROPPED TO 384 PSI
Resume Squeeze	11/16/2011 16:53		0.4	0.25		780.0		
Shutdown	11/16/2011 16:54							PRESSURE DROPPED TO 453 PSI
Other	11/16/2011 17:00							RIG STING OUT AT COMPANY REP'S REQUEST
End Job	11/16/2011 17:01							
Post-Job Safety Meeting (Pre Rig-Down)	11/16/2011 17:05							ATTENDED BY ALL HES CREW
Rig-Down Equipment	11/16/2011 17:10							
Depart Location Safety Meeting	11/16/2011 18:20							ATTENDED BY ALL HES CREW
Crew Leave Location	11/16/2011 18:30							THANK YOU FOR USING HALLIBURTON CEMENT, ERIC CARTER AND CREW.

OXY/CC 697-16-32

SQUEEZE



Local Event Log

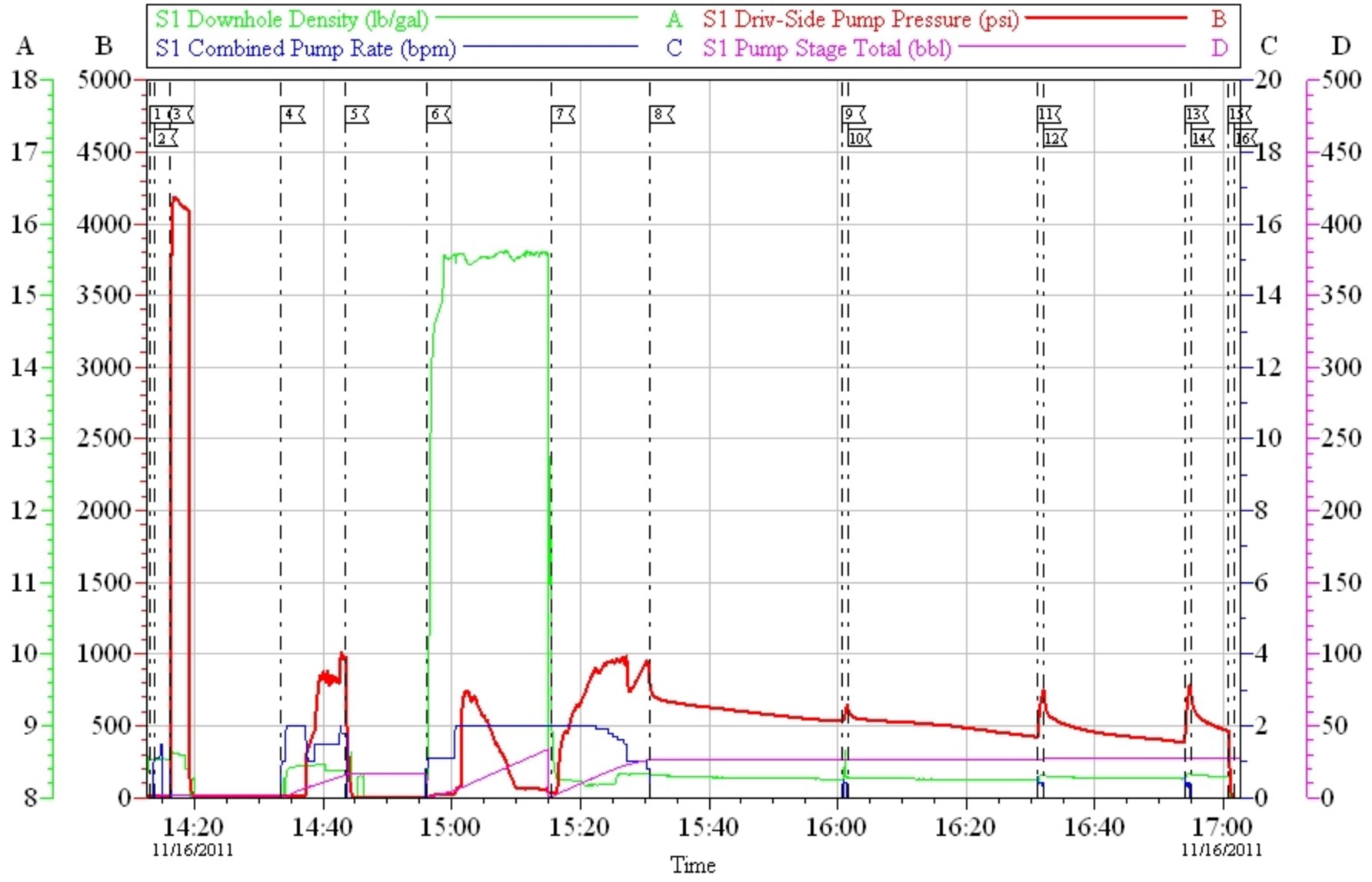
1	START JOB	14:13:03	2	FILL LINES	14:13:44	3	TEST LINES	14:16:10
4	INJECTIN TEST	14:33:30	5	ISIP	14:43:31	6	PUMP CEMENT	14:56:11
7	PUMP DISPLACEMENT	15:15:32	8	SHUTDOWN	15:30:55	9	RESUME SQUEEZE	16:00:40
10	SHUTDOWN	16:01:33	11	RESUME SQUEEZE	16:31:06	12	SHUTDOWN	16:32:00
13	RESUME SQUEEZE	16:53:59	14	SHUTDOWN	16:54:54	15	RIG STUNG OUT	17:00:41
16	END JOB	17:01:34						

Customer:	OXY GRAND JUNCTION EBUSINESS	Job Date:	16-Nov-2011	Sales Order #:	9065917
Well Description:	CC 697-16-32	Job Type:	SQUEEZE	ADC Used:	YES
Company Rep:	MIKE DECKER	Cement Supervisor:	ERIC CARTER	Elite #/Operator:	7/BRENT BANKS

OptiCem v6.4.0
17-Nov-11 11:53

OXY/CC 697-16-32

SQUEEZE



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Company Rep:	MIKE DECKER	Cement Supervisor:	ERIC CARTER	Elite #/Operator:	7/BRENT BANKS

OptiCem v6.4.0
17-Nov-11 11:54

HALLIBURTON

Water Analysis Report

Company:	OXY	Date:	11/16/2011
Submitted by:	ERIC CARTER	Date Rec.:	11/16/2011
Attention:	J.Trout	S.O.#	9065917
Lease	WORKOVER	Job Type:	SQUEEZE
Well #	CC 697-16-32		

Specific Gravity	*MAX*	1	
pH	*8*	7	
Potassium (K)	*5000*	100	Mg / L
Hrdness	*500*	310	Mg / L
Iron (FE2)	*300*	0	Mg / L
Chlorides (Cl)	*3000*	0	Mg / L
Sulfates (SO_4)	*1500*	<200	Mg / L
Temp	*40-80*	85	Deg
Total Dissolved Solids		500	Mg / L

Respectfully: ERIC CARTER

Title: CEMENTING SUPERVISOR

Location: Grand Junction, CO

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CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
9065917	10	11/16/2011
Customer:		**Job Type (BOM):**
OXY GRAND JUNCTION EBUSINESS		CMT SQUEEZE PERFORATIONS BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
		05-045-13180
Well Name:		**Well Number:**
CC		697-16-32
Well Type:	**Well Country:**	
Development Well	United States of America	
H2S Present:	**Well State:**	**Well County:**
	Colorado	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**	**11/16/2011**
Survey Interviewer	**The survey interviewer is the person who initiated the survey.**	**ERIC CARTER (HX15491)**
Customer Participation	**Did the customer partipcipate 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

HALLIBURTON

CUSTOMER SURVEY

Sales Order #:	**Line Item:**	**Survey Conducted Date:**
9065917	10	11/16/2011
Customer:		**Job Type (BOM):**
OXY GRAND JUNCTION EBUSINESS		CMT SQUEEZE PERFORATIONS BOM
Customer Representative:		**API / UWI: (leave blank if unknown)**
		05-045-13180
Well Name:		**Well Number:**
CC		697-16-32
Well Type:	**Well Country:**	
Development Well	United States of America	
H2S Present:	**Well State:**	**Well County:**
	Colorado	Garfield

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date The date the survey was conducted	11/16/2011

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.	4.5
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.	3
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	5
Number of Unplanned Shutdowns Unplanned shutdown is when injection stops for any period of time.	0
Was this a Primary Cement Job (Yes / No)	No

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Customer Representative:		**API / UWI: (leave blank if unknown)**
		05-045-13180
Well Name:		**Well Number:**
CC		697-16-32
Well Type:	**Well Country:**	
Development Well	United States of America	
H2S Present:	**Well State:**	**Well County:**
	Colorado	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 Abadon, LCM plug or Planed 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 cment mixed at designed density divided by total BBLs of cement multiplied by 100	92
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	92
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