

OXY GRAND JUNCTION EBUSINESS  
DO NOT MAIL - PO BOX 1767  
ADDISON, Texas

CC 697-16-13A2

**H&P 353**

# **Post Job Report**

## **Cement Surface Casing**

Prepared for: Henry Coombs  
Date Prepared: AUGUST 15, 2011  
Version: 1

Service Supervisor: ROSS, CHARLES

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 344034	<b>Ship To #:</b> 2872294	<b>Quote #:</b>	<b>Sales Order #:</b> 8372861
<b>Customer:</b> OXY GRAND JUNCTION EBUSINESS		<b>Customer Rep:</b> Vallegas, Alex	
<b>Well Name:</b> CC		<b>Well #:</b> 697-16-13A2	<b>API/UWI #:</b> 05-045-20584
<b>Field:</b> GRAND VALLEY	<b>City (SAP):</b> PARACHUTE	<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> H&P 353		<b>Rig/Platform Name/Num:</b> HP 353	
<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> ROYSTER, JACOB		<b>Srvc 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	08/14/2011 09:46							
Pre-Convoy Safety Meeting	08/15/2011 00:05							WITH ALL HES EE'S
Depart from Service Center or Other Site	08/15/2011 00:30							
Arrive at Location from Service Center	08/15/2011 04:20							
Assessment Of Location Safety Meeting	08/15/2011 07:25							WITH ALL HES EE'S
Pre-Rig Up Safety Meeting	08/15/2011 07:30							WITH ALL HES EE'S
Rig-Up Equipment	08/15/2011 07:35							1-F550 PICKUP, 1-ELITE PUMP TRUCK, 2-660 CEMENT BULK TRUCKS, 1-CEMENT BULK STORAGE BIN, 1-HARD LINE TO RIG AND WASH UP OUT TO THE CELLAR FROM MANIFOLD, 1- 9 5/8" PLUG CONTAINER.
Pre-Job Safety Meeting	08/15/2011 11:25							WITH ALL HES EE'S AND RIG CREW
Start Job	08/15/2011 11:42							TD 2710, 9 5/8 36# CASING SET @ 2688, SJ 44.3, FC 2643.7 MW# 9.4, RIG CIRCULATED 1 HR PRIOR TO CEMENT JOB, HEAD AND CASING CHAINED DOWN BECAUSE OF PSI TO LIFT
Activity Description	Date/Time	Cht	Rate bbl/min	Volume bbl		Pressure psig		Comments

		#		Stage	Total	Tubing	Casing	
Pump Water	08/15/2011 11:43		2	2			28.0	FILL LINES, FRESH WATER
Test Lines	08/15/2011 11:46							TEST TO 3000 PSI
Pump Spacer 1	08/15/2011 11:49		3	20			62.0	FRESH WATER
Pump Spacer 2	08/15/2011 11:57		3	20			60.0	GEL SPACER
Pump Spacer 1	08/15/2011 12:04		3	20			142.0	FRESH WATER
Pump Lead Cement	08/15/2011 12:09		6.5	435.7			360.0	1050 SKS (150 SKS FROM PREVIOUS JOB LEFT IN TIER) OF VERSACEM PUMPED @ 12.3 PPG, YIELD 2.33, WATER 12.62
Pump Tail Cement	08/15/2011 13:19		6.5	55.3			275.0	150 SKS OF VERSACEM PUMPED @ 12.8 PPG, YIELD 2.07, WATER 10.67
Shutdown	08/15/2011 13:27							
Drop Plug	08/15/2011 13:31							TOP PLUG, PLUG WENT
Pump Displacement	08/15/2011 13:31		7	204.4			1100.0	FRESH WATER
Slow Rate	08/15/2011 13:59		2	194			700.0	RATE SLOWED 10 BBL PRIOR TO CALCULATED DISPLACEMENT
Bump Plug	08/15/2011 14:01		2	204.4			750.0	PLUG LANDED. PRESSURED UP TO 1500 PSI.
Check Floats	08/15/2011 14:05							FLOATS HELD
Pressure Test	08/15/2011 14:07						1500.0	30 MIN CASING PRESSURE TEST. PRESSURE HELD STEADY / INCREASED.
Shut-In Pressure @ 30 Minutes	08/15/2011 14:08							
Release Casing Pressure	08/15/2011 14:39							
Pump Water	08/15/2011 15:09		2	10			500.0	SUGAR WATER PUMPED THROUGH PARASITE STRING
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	

Pump Cement	08/15/2011 15:45		2	12				TOP OUT PUMPED AT 12.5 PPG, YIELD 1.97, WATER 10.96
Shutdown	08/15/2011 15:53							
End Job	08/15/2011 15:54							GOOD RETURNS THROUGHOUT JOB, NO MOVEMENT OF PIPE THROUGHOUT JOB, 138 BBLS OF CEMENT CIRCULATED TO THE PIT=332.6 SKS
Post-Job Safety Meeting (Pre Rig-Down)	08/15/2011 16:05							WITH ALL HES EE'S
Rig-Down Equipment	08/15/2011 16:10							
Pre-Convoy Safety Meeting	08/15/2011 17:10							WITH ALL HES EE'S
Depart Location for Service Center or Other Site	08/15/2011 17:15							THANKS FOR USING GRAND JUNCTION HALLIBURTON CEMENT DEPARTMENT, CHUCK ROSS AND CREW

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<b>Field:</b> GRAND VALLEY		<b>City (SAP):</b> PARACHUTE		<b>County/Parish:</b> Garfield		<b>State:</b> Colorado	
<b>Contractor:</b> H&P 353			<b>Rig/Platform Name/Num:</b> HP 353				
<b>Job Purpose:</b> Cement Surface Casing							
<b>Well Type:</b> Development Well				<b>Job Type:</b> Cement Surface Casing			
<b>Sales Person:</b> ROYSTER, JACOB				<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 #
DOUT, JACOB J	13	430298	MCKAY, PATRICK Joseph	13	496671	REEVES, BRANDON W	13	287883
ROSS, CHARLES Raymond	13	453128	ZUMWALT, ORVILLE Raymond	13	398157			

**Equipment**

HES Unit #	Distance-1 way						
10616651C	120 mile	10783473	120 mile	10784080	120 mile	10804579	120 mile
10995025	120 mile	11259883	120 mile	6543	120 mile		

**Job Hours**

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
8/15/2011	11	5						
<b>TOTAL</b>			<i>Total is the sum of each column separately</i>					

**Job**

**Job Times**

Formation Name				Date	Time	Time Zone
<b>Formation Depth (MD)</b>	<b>Top</b>	<b>Bottom</b>		<b>Called Out</b>	14 - Aug - 2011	21:30 MST
<b>Form Type</b>	BHST			<b>On Location</b>	15 - Aug - 2011	04:20 MST
<b>Job depth MD</b>	2710. ft	<b>Job Depth TVD</b>	2710. ft	<b>Job Started</b>	15 - Aug - 2011	11:42 MST
<b>Water Depth</b>		<b>Wk Ht Above Floor</b>	5. ft	<b>Job Completed</b>	15 - Aug - 2011	15:53 MST
<b>Perforation Depth (MD)</b>	<b>From</b>	<b>To</b>		<b>Departed Loc</b>	15 - Aug - 2011	17:15 MST

**Well Data**

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbf/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	.	2688.		

**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			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container	9 5/8"	1	
Stage Tool										Centralizers			

**Miscellaneous Materials**

Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc	%
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size	Qty	

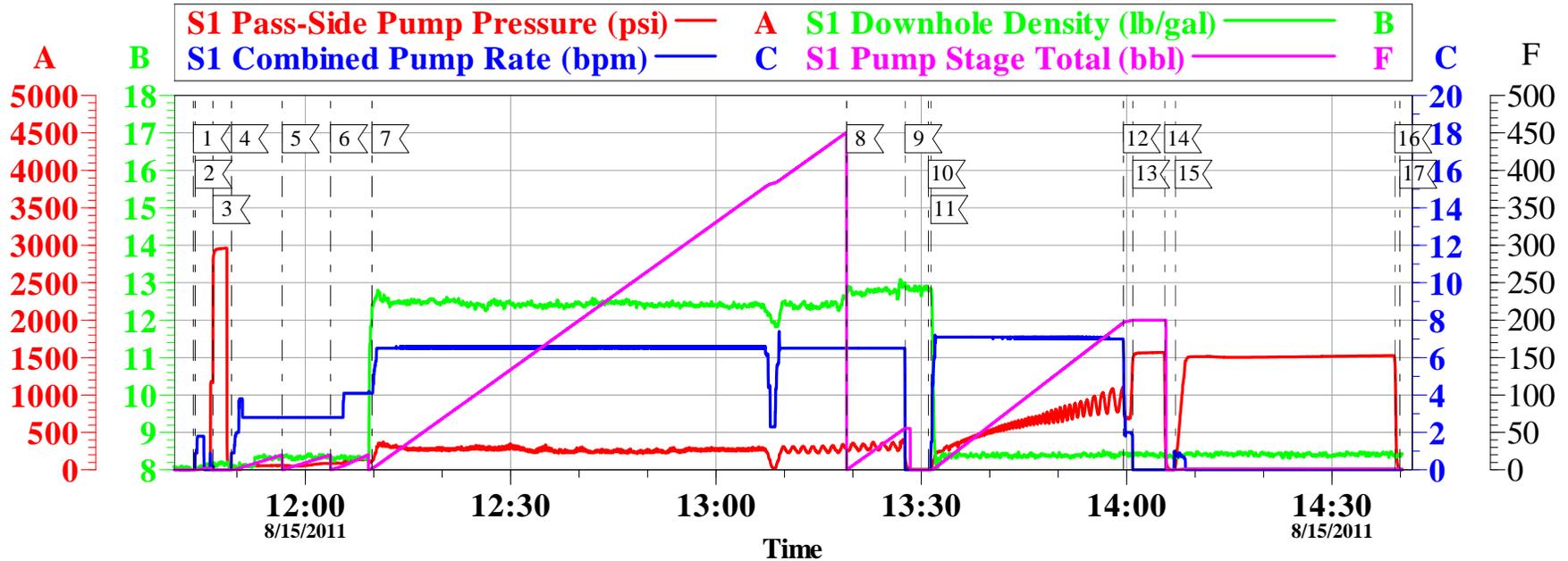
**Fluid Data**

**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	.0	
2	Gel Spacer		20.00	bbl	.	.0	.0	.0	
3	Water Spacer		20.00	bbl	.	.0	.0	.0	
4	VersaCem Lead Cement	VERSACEM (TM) SYSTEM (452010)	1050.0	sacks	12.3	2.33	12.62		12.62
	12.62 Gal	FRESH WATER							
5	VariCemTail Cement	VERSACEM (TM) SYSTEM (452010)	150.0	sacks	12.8	2.07	10.67		10.67
	10.67 Gal	FRESH WATER							
6	Displacement		205.00	bbl	.	.0	.0	.0	
7	Topout Cement	HALCEM (TM) SYSTEM (452986)	35.0	sacks	12.5	1.97	10.96		10.96
	10.96 Gal	FRESH WATER							
Calculated Values		Pressures		Volumes					
Displacement	204.4	Shut In: Instant		Lost Returns	23	Cement Slurry	490	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	138	Actual Displacement	200	Treatment	
Frac Gradient		15 Min		Spacers	60	Load and Breakdown		Total Job	755
Rates									
Circulating	6	Mixing	6.5	Displacement	7	Avg. Job	6.6		
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					

# OXY

## CEMENT 9 5/8" SURFACE CASING CC 697-16-13A2



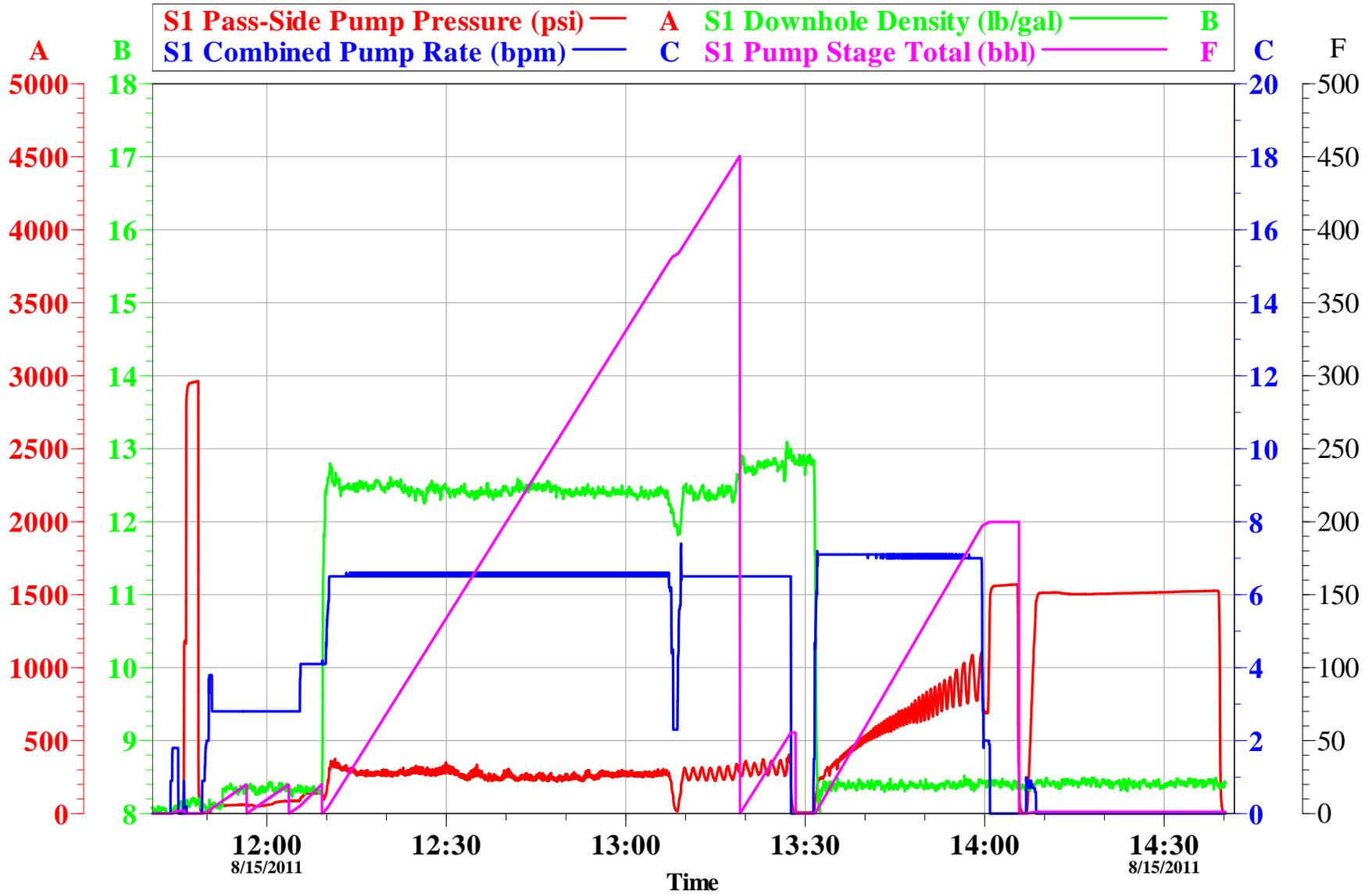
Local Event Log							
Maximum	SPPP	Maximum	SPPP				
1	START JOB	11:43:39	-4.000	2	PRIME LINES	11:43:53	2178
3	PRESSURE TEST	11:46:31	2963	4	PUMP FRESH WATER SPACER	11:49:12	64.00
5	PUMP GEL SPACER	11:56:37	86.00	6	PUMP FRESH WATER SPACER	12:03:41	144.0
7	PUMP LEAD CEMENT	12:09:43	376.0	8	PUMP TAIL CEMENT	13:19:06	404.0
9	SHUT DOWN	13:27:37	330.0	10	DROP PLUG	13:31:01	16.16
11	PUMP DISPLACEMENT	13:31:23	1108	12	SLOW RATE	13:59:32	1445
13	BUMP PLUG	14:00:53	1571	14	CHECK FLOATS	14:05:31	1504
15	PRESSURE UP CASING	14:07:05	1527	16	RELEASE CASING PRESSURE	14:39:11	1495
17	END JOB	14:39:55	7.000				

Customer: OXY	Job Date: 15-Aug-2011	Sales Order #: 8372861
Well Description: CC 697-16-13A2	Job type: SURFACE	ADC Used: YES
Customer Rep: HENRY COOMBS	Service Supervisor: CHUCK ROSS	Operator/ Pump: JACOB DOUT

OptiCem v6.4.10  
15-Aug-11 15:04

# OXY

## CEMENT 9 5/8" SURFACE CASING CC 697-16-13A2

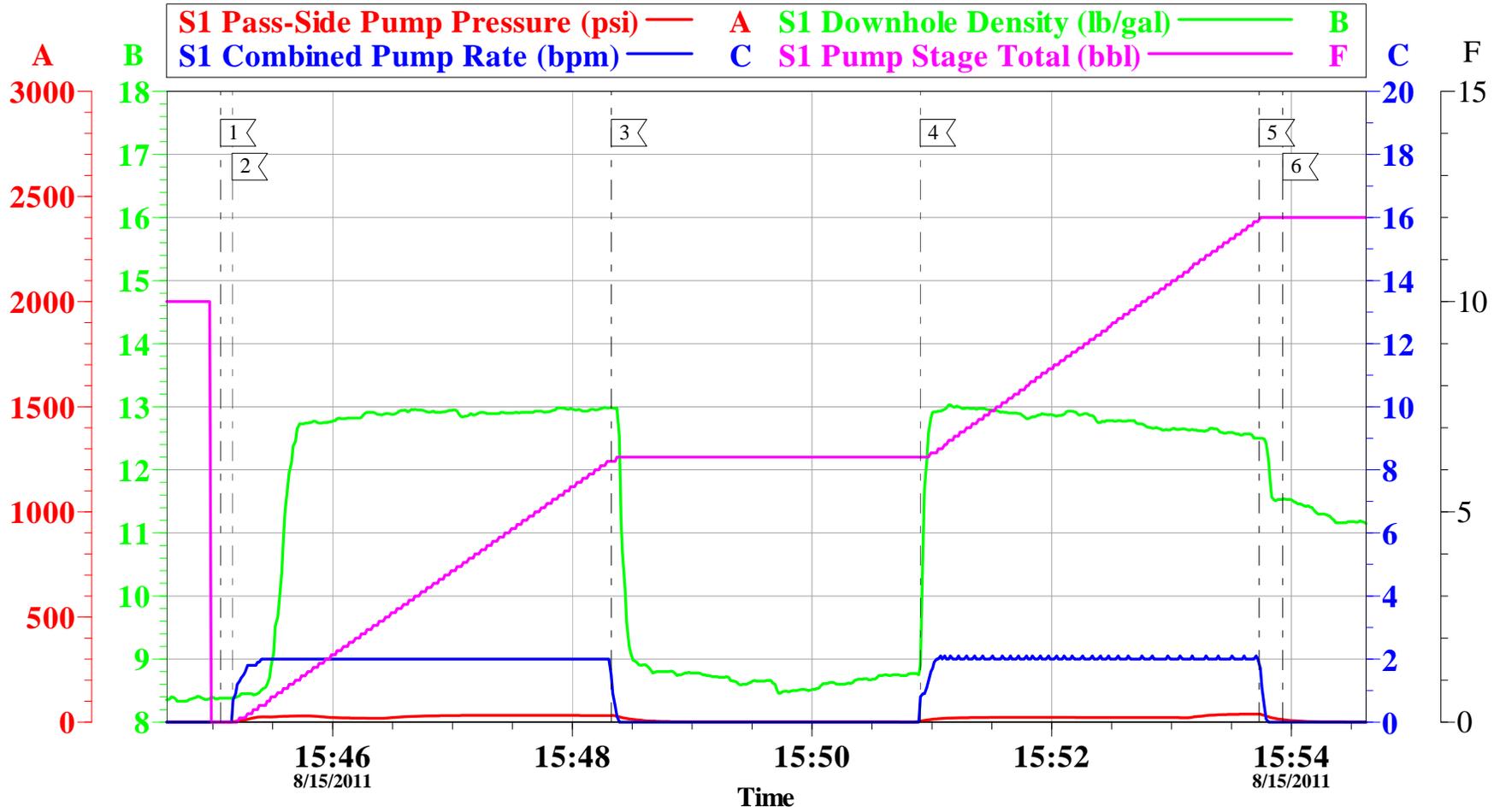


Customer: OXY	Job Date: 15-Aug-2011	Sales Order #: 8372861
Well Description: CC 697-16-13A2	Job type: SURFACE	ADC Used: YES
Customer Rep: HENRY COOMBS	Service Supervisor: CHUCK ROSS	Operator/ Pump: JACOB DOUT

OptiCem v6.4.10  
15-Aug-11 15:01

# OXY

## TOP OUT 9 5/8" SURFACE CASING CC 697-16-13A2



Local Event Log					
	Maximum	SPPP	Maximum	SPPP	Maximum
1	START JOB	15:45:04	1.395	2	PUMP TOP OUIT
					15:45:10
					32.00
3	SHUT DOWN	15:48:20	32.00		
4	RESUME	15:50:54	38.00	5	SHUT DOWN
					15:53:44
					38.00
6	END JOB	15:53:56	76.00		

Customer:	Job Date: 15-Aug-2011	Sales Order #: 8372861
Well Description:	Job type:	ADC Used:
Customer Rep:	Service Supervisor:	Operator/ Pump:

EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	Start Job					
6	Test Lines	2500.0				
	H2O Spacer	20.0				
	Gel Spacer	20.0				
9	H2O Spacer	20.0				
	Lead Cement	435.7				
15	Tail Cement	55.3	150	12.8	2.07	10.67
22	Drop Plug	0.0				
23	Displace with H2O	204.4				
26	Land Plug	555.3	500 over			
	Check Floats	0.0				
	Pressure Test Casing	1500.0	30 min			
	Release Psi / Job Over	0.0	<b>Do Not Overdisplace</b>			
DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH		FLOAT COLLAR	BBL/FT	H2O REQ.
204.36	2688	44.30		2643.70	0.0773	678
Pressure to Lift	1139	<b>*****Use Mud Scales on Each Tier*****</b>				
Total Displacement	204.36					
CALCULATED DIFFERENTIAL PSI		555		TOTAL FLUID PUMPED		755
Collapse	2020	Burst	3520		SO#	8372861

# HALLIBURTON

## Water Analysis Report

Company: OXY Date: 8/14/2011  
Submitted by: CHUCK ROSS Date Rec.: 8/14/2011  
Attention: JON TROUT S.O.# 8372861  
Lease CASCADE CREEK Job Type: 9 5/8" SURFACE  
Well # 697-16-13A2

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>7.1</b>
Potassium (K)	<i>5000</i>	<b>250 Mg / L</b>
Calcium (Ca)	<i>500</i>	<b>250 Mg / L</b>
Iron (FE2)	<i>300</i>	<b>0 Mg / L</b>
Chlorides (Cl)	<i>3000</i>	<b>1000 Mg / L</b>
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<b>&lt;200 Mg / L</b>
Chlorine (Cl <sub>2</sub> )		<b>NA Mg / L</b>
Temp	<i>40-80</i>	<b>60 Deg</b>
Total Dissolved Solids		<b>280 Mg / L</b>

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> 8372861	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 8/15/2011
<b>Customer:</b> OXY GRAND JUNCTION EBUSINESS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> HENRY COOMBS		<b>API / UWI: (leave blank if unknown)</b> 05-045-20584
<b>Well Name:</b> CC		<b>Well Number:</b> 697-16-13A2
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b> No	<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	8/15/2011
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)	Yes
Customer Representative	Enter the Customer representative name	HENRY COOMBS
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	WAS RIGGED UP & READY BEFORE EXPECTED. GREAT HANDS GREAT JOB
Job DVA	Did we provide job DVA above our normal service today? Circle Y or N	Yes
Time	Please enter hours in decimal format to nearest quarter hour.	1
Other	Enter short text for other efficiencies gained.	
Customer Initials	Customer's Initials	HC

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<b>Please provide details</b>	<b>Please describe how the job efficiencies were gained.</b>	<b>RIGGED UP AS MUCH AS POSSIBLE TO THE RED ZONE, CELLAR, AND PARASITE SLIDE BEFORE WAITING FOR THE RIG TO COMPLETE ITS OPERATIONS AND ALLOW US TO ENTER THOSE AREAS.</b>
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<b>CUSTOMER SIGNATURE</b>
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<b>H2S Present:</b> No	<b>Well State:</b> Colorado	<b>Well County:</b> Garfield

### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	8/15/2011
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>	9.67
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>	4.18
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>	Yes

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Primary Cement Job= Casing job, Liner job, or Tie-back job.	
<b>Did We Run Wiper Plugs?</b> Did We Run Top And Bottom Casing Wiper Plugs?	Top
<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