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**OXY GRAND JUNCTION EBUSINESS**

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**CC 697-05-47B  
GRAND VALLEY  
Garfield County , Colorado**

**Cement Surface Casing  
07-Nov-2011**

**Job Site Documents**

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 344034	<b>Ship To #:</b> UNKNOWN	<b>Quote #:</b>	<b>Sales Order #:</b> 8559375
<b>Customer:</b> OXY GRAND JUNCTION EBUSINESS		<b>Customer Rep:</b> Rosser, Terry	
<b>Well Name:</b> CC		<b>Well #:</b> 697-05-47B	<b>API/UWI #:</b> 05-045-20380
<b>Field:</b> GRAND VALLEY	<b>City (SAP):</b> Parachute	<b>County/Parish:</b> Garfield	<b>State:</b> Colorado
<b>Lat:</b> N 39.555 deg. OR N 39 deg. 33 min. 16.272 secs.		<b>Long:</b> W 108.242 deg. OR W -109 deg. 45 min. 27.612 secs.	
<b>Contractor:</b> H&P Drilling		<b>Rig/Platform Name/Num:</b> H&P 330	
<b>Job Purpose:</b> Cement Surface Casing			
<b>Well Type:</b> Development Well		<b>Job Type:</b> Cement Surface Casing	
<b>Sales Person:</b> HIMES, JEFFREY		<b>Srvc Supervisor:</b> ARNOLD, EDWARD	<b>MBU ID Emp #:</b> 439784

**Job Personnel**

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ARNOLD, EDWARD John	18	439784	BRENNECKE, ANDREW Bailey	18	486345	MILLER II, MATTHEW Reginald	18	425164
WYCKOFF, RYAN Scott	18	476117						

**Equipment**

HES Unit #	Distance-1 way						
	120 mile	10741259	120 mile	11360871	120 mile	11542767	120 mile
11583933	120 mile						

**Job Hours**

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
11.6.2011	10	2	11.7.2011	8	6.5			

**TOTAL** Total is the sum of each column separately

**Job**

**Job Times**

Formation Name	Job			Date	Time	Time Zone	
Formation Depth (MD)	Top	Bottom	Called Out	06 - Nov - 2011	08:00	MST	
Form Type	BHST			On Location	06 - Nov - 2011	14:00	MST
Job depth MD	2710. ft	Job Depth TVD	2710. ft	Job Started	06 - Nov - 2011	23:15	MST
Water Depth		Wk Ht Above Floor	3. ft	Job Completed	07 - Nov - 2011	05:24	MST
Perforation Depth (MD)	From	To	Departed Loc	31 - Oct - 2011	08:30	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	.	2654.		

**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	9.625	1	HES
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container	9.625	1	HES
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	4	
2	Gel Spacer		20.00	bbl	.	.0	.0	4	
3	Water Spacer		20.00	bbl	.	.0	.0	4	
4	VersaCem Lead Cement	VERSACEM (TM) SYSTEM (452010)	1050.0	sacks	12.3	2.33	12.62	7	12.62
	12.62 Gal	FRESH WATER							
5	VersaCem Tail Cement	VERSACEM (TM) SYSTEM (452010)	160.0	sacks	12.8	2.07	10.67	7	10.67
	10.67 Gal	FRESH WATER							
6	Displacement		201.00	bbl	.	.0	.0	6	
7	Topout Cement	HALCEM (TM) SYSTEM (452986)	121.0	sacks	12.5	1.97	10.96	4	10.96
	10.96 Gal	FRESH WATER							
Calculated Values		Pressures			Volumes				
Displacement	201.6	Shut In: Instant		Lost Returns		Cement Slurry	536.7	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	12	Actual Displacement	201.6	Treatment	
Frac Gradient		15 Min		Spacers	74	Load and Breakdown		Total Job	821.3
Rates									
Circulating	RIG	Mixing	7	Displacement	6	Avg. Job	6.5		
Cement Left In Pipe	Amount	45.29 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					

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<b>Customer:</b> OXY GRAND JUNCTION EBUSINESS		<b>Customer Rep:</b> Rosser, Terry	
<b>Well Name:</b> CC	<b>Well #:</b> 697-05-47B	<b>API/UWI #:</b> 05-045-20380	
<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 39.555 deg. OR N 39 deg. 33 min. 16.272 secs.		<b>Long:</b> W 108.242 deg. OR W -109 deg. 45 min. 27.612 secs.	
<b>Contractor:</b> H&P Drilling		<b>Rig/Platform Name/Num:</b> H&P 330	
<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> HIMES, JEFFREY		<b>Srvc Supervisor:</b> ARNOLD, EDWARD	<b>MBU ID Emp #:</b> 439784

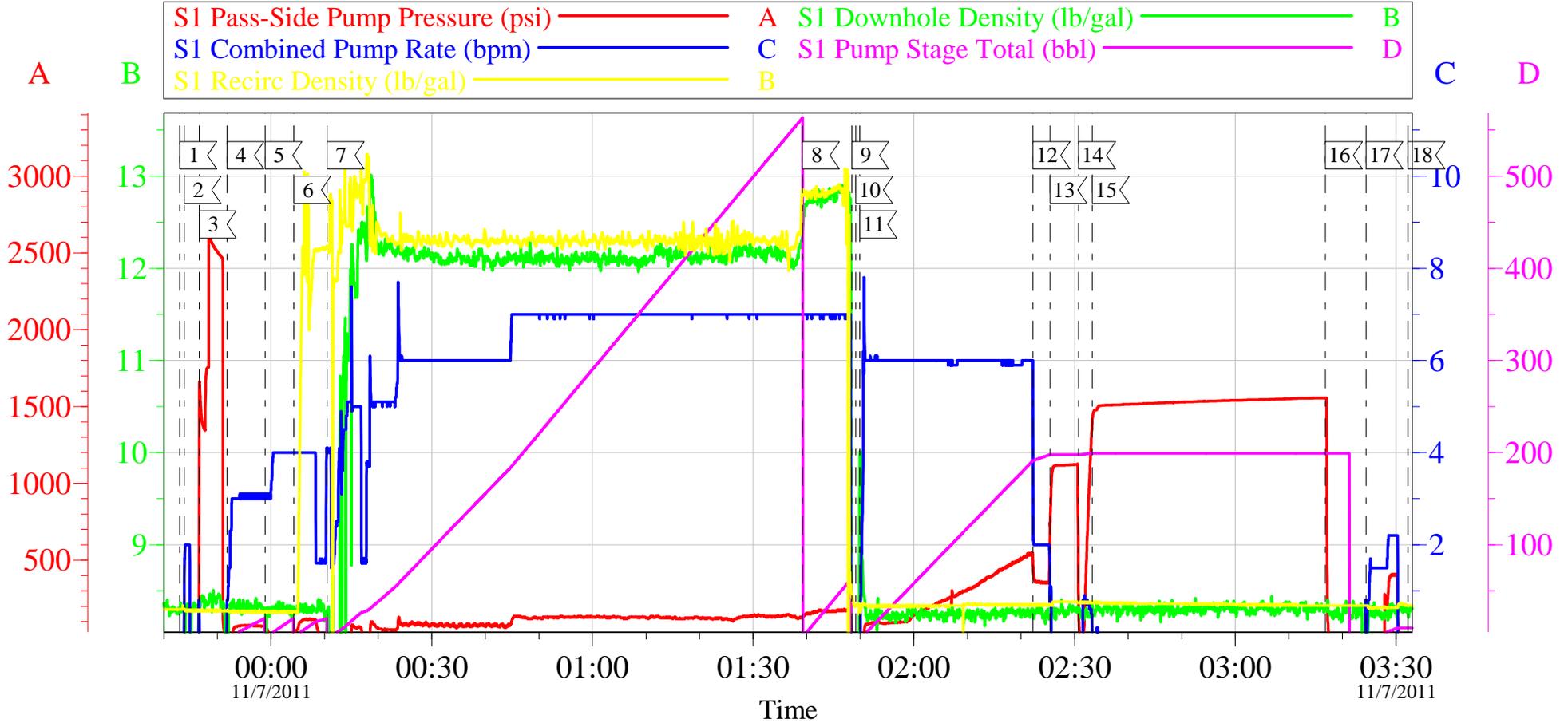
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	11/06/2011 08:00							
Pre-Convoy Safety Meeting	11/06/2011 10:15							Including entire cement crew.
Crew Leave Yard	11/06/2011 10:30							
Arrive At Loc	11/06/2011 14:00							Rig still Running casing.
Assessment Of Location Safety Meeting	11/06/2011 14:15							Water; PH 7; KCL 250; So4 <200; Fe 0; Calcium 120; Chlorides 0; Temp 60; TDS 170.
Pre-Rig Up Safety Meeting	11/06/2011 22:30							Including entire cement crew.
Rig-Up Equipment	11/06/2011 22:35							1 Elite # 1; 1 Field storage silo; 1 660 bulk truck; 1 hard line to cellar; 2 lines to uprights; 9.625" compact head.
Rig-Up Completed	11/06/2011 23:05							
Pre-Job Safety Meeting	11/06/2011 23:15							Including everyone on location.
Start Job	11/06/2011 23:42							TD 2710; TP 2654; SJ 45.29; OH 14.75; Casing 9.625" 36#; Mud 8.6 ppg.
Pump Water	11/06/2011 23:43		2	2			16.0	Fill lines with fresh water.
Test Lines	11/06/2011 23:46						2598.0	Good pressure test, no leaks.
Pump Spacer 1	11/06/2011 23:51		4	20			70.0	10 BBL fresh water spacer.
Pump Spacer 2	11/06/2011 23:58		4	20			34.0	20 BBL Gel Water spacer.

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Spacer 1	11/07/2011 00:04		4	20			100.0	10 BBL fresh water spacer.
Pump Lead Cement	11/07/2011 00:10		7	435.7			127.0	1050 sks Lead Cement, 12.3 ppg, 2.33 cf3, 12.62 gal/sk. Lost prime on pumps going to lead cement picked rate up and boosted cement to pumps, got pumps primed. Got returns back with 350 bbl gone on lead.
Pump Tail Cement	11/07/2011 01:39		7	59			170.0	160 sks Tail Cement, 12.8 ppg, 2.07 cf3, 10.67 gal/sk.
Shutdown	11/07/2011 01:48							
Drop Plug	11/07/2011 01:49							Plug left container.
Pump Displacement	11/07/2011 01:50		6	191.6			540.0	Fresh Water Displacement. Lost returns while dropping plug. Did not get them back.
Slow Rate	11/07/2011 02:22		2	10			350.0	Slow rate 10 BBL's prior to bumping the plug.
Bump Plug	11/07/2011 02:25				201.6		1116.0	Bumped plug, took to 1000 PSI.
Check Floats	11/07/2011 02:30							Floats held, BBL back
Pressure Up Well	11/07/2011 02:33		0.5				1535.0	Pressure test casing for 30 min at 1500 PSI.
Release Casing Pressure	11/07/2011 03:16							
Pump Water	11/07/2011 03:24		2	10			260.0	Pump out parasite Line with 10 BBL sugar water.
End Job	11/07/2011 03:32							Wait on location to Top Out Well.
Start Job	11/07/2011 04:57							Start Top Out Job. Tkpp Out Cement was on location and paid for on another SO#.
Other	11/07/2011 04:58		0	2		10.0		Boost 2 BBL water ahead to clear lines.
Pump Cement	11/07/2011 05:00		4	42.8		200.0		121 sks Top Out Cement, 12.5 ppg, 1.97 cf3, 10.96 gal/sk.

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Other	11/07/2011 05:23		2	2		50.0		2 BBL water behind to clear lines.
End Job	11/07/2011 05:24							Got 12 BBL good cement to surface.
Pre-Rig Down Safety Meeting	11/07/2011 07:10							Including entire cement crew.
Rig-Down Equipment	11/07/2011 07:15							
Rig-Down Completed	11/07/2011 08:15							
Pre-Convoy Safety Meeting	11/07/2011 08:20							Including entire cement crew.
Crew Leave Location	11/07/2011 08:30							Crew leave location for Service Center or another location.
Other	11/07/2011 08:31							Thank You for using Halliburton. Ed Arnold and Crew.

# OXY CC 697-05-47B

9.625 Surface

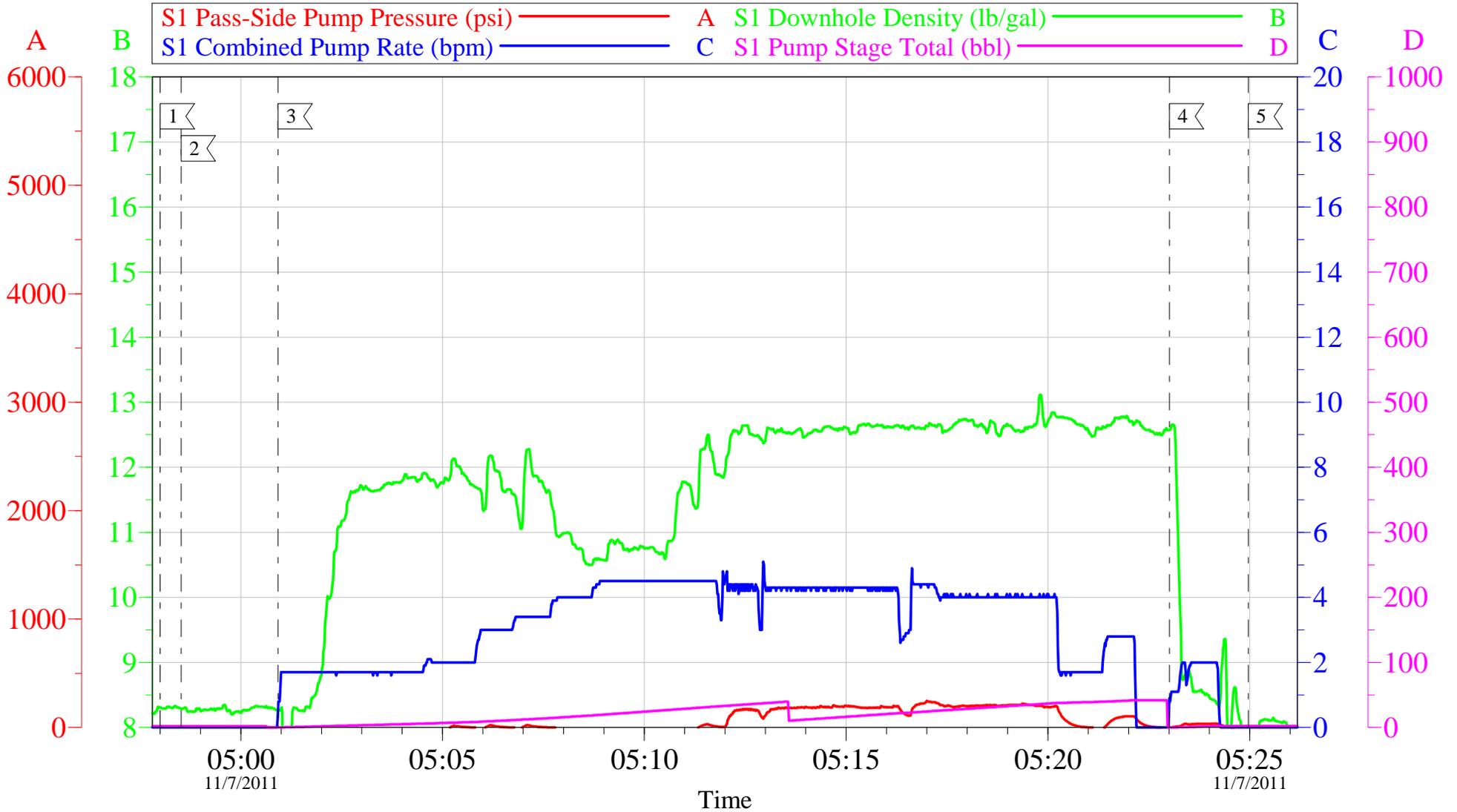


1	Start Job	11/6/2011 23:42:59	2	Fill Lines	11/6/2011 23:43:47	3	Test Lines	11/6/2011 23:46:36
4	H2O Spacer	11/6/2011 23:51:45	5	Gel Spacer	11/6/2011 23:58:53	6	H2O Spacer	11/7/2011 00:04:15
7	Lead Cement	11/7/2011 00:10:29	8	Tail Cement	11/7/2011 01:39:12	9	Shut Down	11/7/2011 01:48:25
10	Drop Plug	11/7/2011 01:49:10	11	H2O Displacement	11/7/2011 01:49:55	12	Slow Rate	11/7/2011 02:22:15
13	Bump Plug	11/7/2011 02:25:26	14	Check Floats	11/7/2011 02:30:45	15	Test Casing	11/7/2011 02:33:17
16	Release Pressure	11/7/2011 03:16:51	17	Pump Out Parasite	11/7/2011 03:24:24	18	End Job	11/7/2011 03:32:14

Customer: OXY	Job Date: 06-Nov-2011	Sales Order #: 8559375
Well Description: CC 697-05-47B	Job Type: Surface	ADC Used: Yes
Company Rep: Terry	Cement Supervisor: Ed Arnold	Elite #1: Reggie Miller

# OXY CC 697-05-47B

Top Out



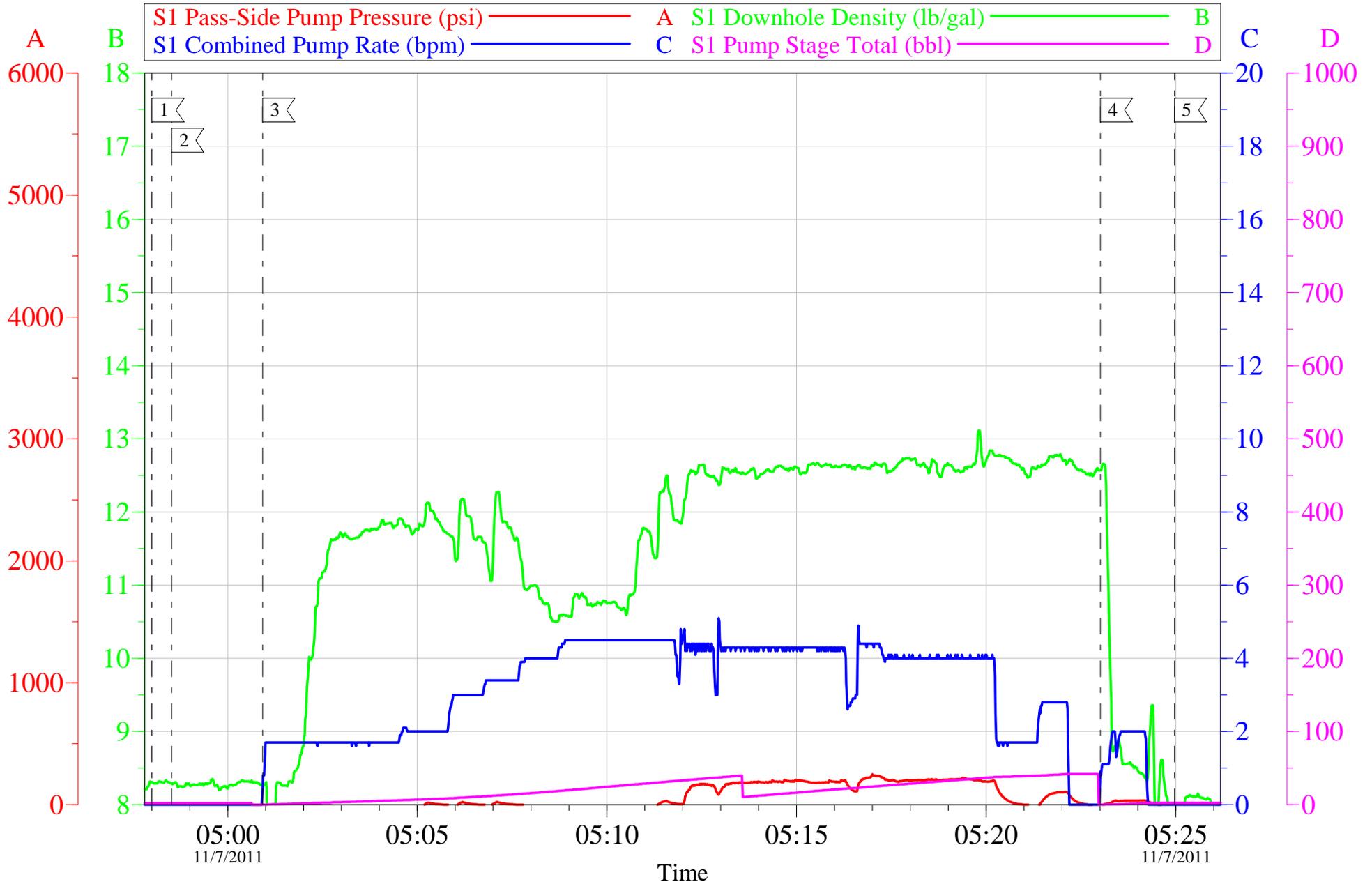
Local Event Log					
1	Start Job	04:58:00	2	Boost Water	04:58:31
3	Pump Cement	05:00:55	4	Water Behind	05:23:01
5	End Job	05:24:58			

Customer: OXY	Job Date: 07-Nov-2011	Sales Order #: 8559375
Well Description: CC 697-05-47B	Job Type: Top Out	ADC Used: Yes
Company Rep: Terry Rosser	Cement Supervisor: Ed Arnold	Elite #1: Reggie Miller

OptiCem v6.4.10  
07-Nov-11 05:51

# OXY CC 697-05-47B

Top Out



Customer: OXY	Job Date: 07-Nov-2011	Sales Order #: 8559375
Well Description: CC 697-05-47B	Job Type: Top Out	ADC Used: Yes
Company Rep: Terry Rosser	Cement Supervisor: Ed Arnold	Elite #1: Reggie Miller

OptiCem v6.4.10  
07-Nov-11 05:52

<b>Sales Order #:</b> 8559375	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 11/7/2011
<b>Customer:</b> OXY GRAND JUNCTION EBUSINESS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b>		<b>API / UWI: (leave blank if unknown)</b> 05-045-20380
<b>Well Name:</b> CC		<b>Well Number:</b> 697-05-47B
<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	11/7/2011
Survey Interviewer	The survey interviewer is the person who initiated the survey.	EDWARD ARNOLD (HX46731)
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> 8559375	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 11/7/2011
<b>Customer:</b> OXY GRAND JUNCTION EBUSINESS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b>		<b>API / UWI: (leave blank if unknown)</b> 05-045-20380
<b>Well Name:</b> CC		<b>Well Number:</b> 697-05-47B
<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

### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	11/7/2011
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>	Vertical
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>	6
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>	Yes

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<b>Customer Representative:</b>		<b>API / UWI: (leave blank if unknown)</b> 05-045-20380
<b>Well Name:</b> CC		<b>Well Number:</b> 697-05-47B
<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

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	90
<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	90
<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