
KINDER MORGAN INC

**Hovenweep A-4 Hovenweep A-4
MC ELMO DOME
Montezuma County , Colorado**

Cement Intermediate Casing
05-Sep-2012

Post Job Report

The Road to Excellence Starts with Safety

Sold To #: 320986	Ship To #: 2944747	Quote #:	Sales Order #: 9771199
Customer: KINDER MORGAN INC		Customer Rep: ., Marshall	
Well Name: Hovenweep A-4	Well #: Hovenweep A-4	API/UWI #:	
Field: MC ELMO DOME	City (SAP): DOVE CREEK	County/Parish: Montezuma	State: Colorado
Legal Description: Section 32 Township 37N Range 18W			
Contractor: Nabors		Rig/Platform Name/Num: NABORS 148	
Job Purpose: Cement Intermediate Casing			
Well Type: Producing Well		Job Type: Cement Intermediate Casing	
Sales Person: SNYDER, RANDALL	Srvc Supervisor: SMITH, CHRISTOPHER		MBU ID Emp #: 452619

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ACREE, EDWARD	17.0	399000	BRENNECKE, ANDREW Bailey	17.0	486345	CASTILLO, FRANCISCO P	17.0	513620
CHEE, NEWMAN Lamar	17.0	515460	FABREY, KENDALL Edward	17.0	488836	KEERAN, RYAN Matthew	17.0	476160
MESTAS, CHAD	17.0	516495	RICHEIN, ANTHONY Ray	17.0	412961	SMITH, CHRISTOPHER Scott	17.0	452619
VALDEZ, EUTIMIA	17.0	514129	WRIGHT, RUSSELL	17.0	514406	YUTZY, BRIAN Matthew	17.0	478510

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10001398C	120 mile	10296152C	120 mile	10784053	120 mile	10948692	120 mile
10998508	120 mile	11259884	120 mile	11338219	120 mile	11528220	120 mile
11808849	120 mile	54283	120 mile				

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
09.04.2012	6	0	09.05.2012	15	4			
TOTAL			Total is the sum of each column separately					

Job

Job Times

Formation Name					Date	Time	Time Zone
Formation Depth (MD)	Top		Bottom		Called Out	04 - Sep - 2012	11:00 MST
Form Type		BHST			On Location	04 - Sep - 2012	18:00 MST
Job depth MD	8255. m	Job Depth TVD	8255. m		Job Started	05 - Sep - 2012	07:24 MST
Water Depth		Wk Ht Above Floor	6. m		Job Completed	05 - Sep - 2012	12:10 GMT
Perforation Depth (MD)	From		To		Departed Loc	05 - Sep - 2012	14:30 MST

Well Data

Description	New / Used	Max pressure MPa	Size mm	ID mm	Weight kg/m	Thread	Grade	Top MD m	Bottom MD m	Top TVD m	Bottom TVD m
8 3/4" Open Hole				8.75				2847.	8255.		
7" Intermediate Casing	Unknown		7.	6.184	29.		13 Cr	.	6078.	.	5677.
7" Intermediate Casing	Unknown		7.	6.184	29.		13 Cr	8134.	8255.	8051.	8344.
7" Intermediate Casing	Unknown		7.	6.094	32.		13 Cr	6078.	8134.	6488.	8052.
9 5/8" Surface Casing	Unknown		9.625	8.921	36.		K-55	.	2847.		

Sales/Rental/3rd Party (HES)

Description	Qty	Qty uom	Depth	Supplier
CENTRALIZER-7"-CSG-8-1/2"-HINGED	65	EA		
CLAMP - LIMIT - 7 - HINGED -	1	EA		
Description	Qty	Qty uom	Depth	Supplier

KIT,HALL WELD-A										2	EA																				
PLUG,CMTG,TOP,7,HWE,5.66 MIN/6.54 MAX CS										1	EA																				
SUGAR, GRANULATED, IMPERIAL										200	LB																				
Tools and Accessories																															
Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make																		
Guide Shoe	7	1			Packer					Top Plug	7"	1	HES																		
Float Shoe					Bridge Plug					Bottom Plug																					
Float Collar	7	1			Retainer					SSR plug set																					
Insert Float										Plug Container	7"	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 kg/m3	Yield m3/sk	Mix Fluid m3/tonne	Rate m3/min	Total Mix Fluid m3/tonne																				
1	Fresh Water Spacer				10.00	bbl	8.33	.0	.0	4.0																					
2	CHEMICAL WASH	CHEMICAL WASH - SBM (21914)			20.00	bbl	8.4	.0	.0	4.0																					
3	Fresh Water Spacer				10.00	bbl	8.33	.0	.0	4.0																					
4	Lead Cement	HALSEAL (TM) SYSTEM (452987)			1830.0	sacks	13.	1.43	6.63	6	6.77																				
0.2 %		VERSASET, 55 LB SK (101376573)																													
0.15 %		HALAD-766, 55 LB SACK (101477695)																													
1.5 %		CHEM - FOAMER 760, TOTETANK (101664089)																													
6.634 Gal		FRESH WATER																													
5	Tail Cement	HALCEM (TM) SYSTEM (452986)			300.0	sacks	13.5	1.29	5.73	5.0	5.73																				
0.2 %		VERSASET, 55 LB SK (101376573)																													
0.25 %		HALAD-766, 55 LB SACK (101477695)																													
5.727 Gal		FRESH WATER																													
6	Displacement				301.00	bbl	8.33	.0	.0	8.0																					
7	Top Out Cement	HALCEM (TM) SYSTEM (452986)			100.0	sacks	15.6	1.2	5.26	3.0	5.26																				
2 %		CALCIUM CHLORIDE - HI TEST PELLET (100005053)																													
5.258 Gal		FRESH WATER																													
Calculated Values				Pressures				Volumes																							
Displacement		301		Shut In: Instant				Lost Returns		0		Cement Slurry		540		Pad															
Top Of Cement		SURFACE		5 Min				Cement Returns		0		Actual Displacement		301		Treatment															
Frac Gradient				15 Min				Spacers		40		Load and Breakdown				Total Job															
Rates																															
Circulating				RIG				Mixing				6				Displacement				8				Avg. Job				5			
Cement Left In Pipe				Amount				39.5 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

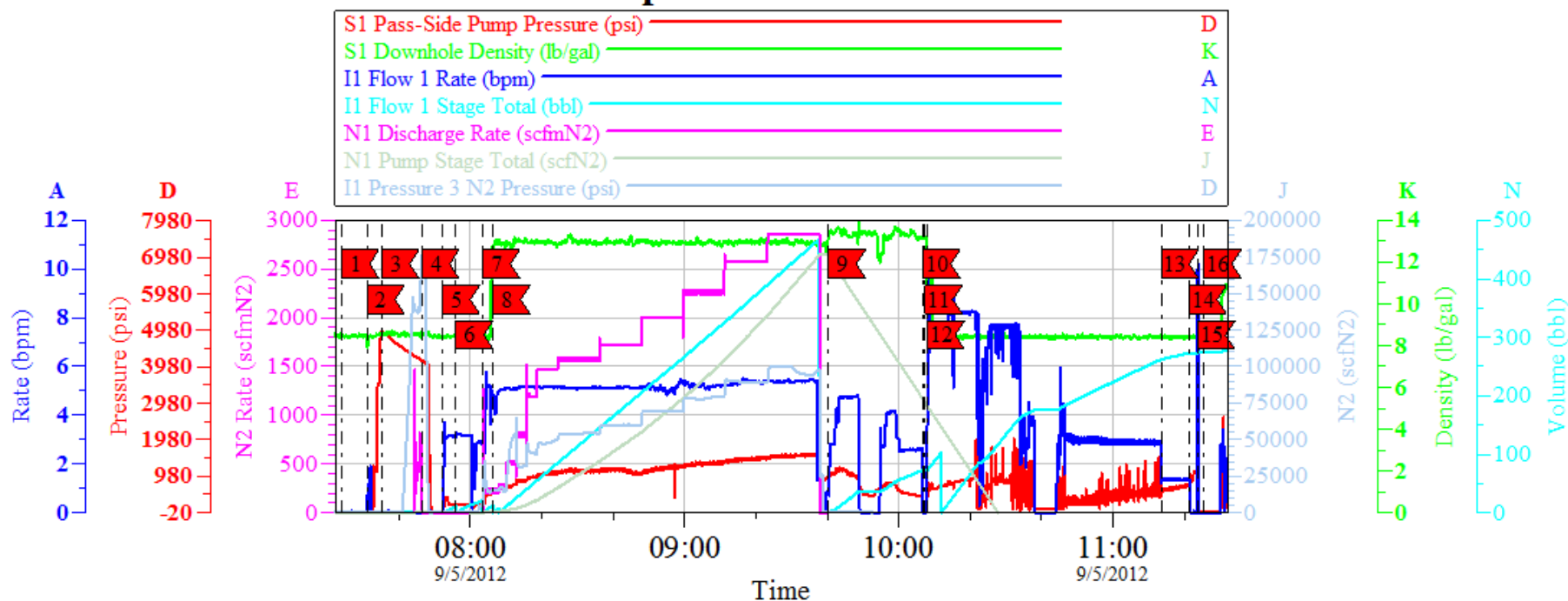
Sold To #: 320986	Ship To #: 2944747	Quote #:	Sales Order #: 9771199
Customer: KINDER MORGAN INC		Customer Rep: ., Marshall	
Well Name: Hovenweep A-4	Well #: Hovenweep A-4	API/UWI #:	
Field: MC ELMO DOME	City (SAP): DOVE CREEK	County/Parish: Montezuma	State: Colorado
Legal Description: Section 32 Township 37N Range 18W			
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: Nabors	Rig/Platform Name/Num: NABORS 148		
Job Purpose: Cement Intermediate Casing			Ticket Amount:
Well Type: Producing Well	Job Type: Cement Intermediate Casing		
Sales Person: SNYDER, RANDALL	Srvc Supervisor: SMITH, CHRISTOPHER	MBU ID Emp #: 452619	

Activity Description	Date/Time	Cht #	Rate m3/min	Volume m3		Pressure MPa		Comments
				Stage	Total	Tubing	Casing	
Pre-Convoy Safety Meeting	09/04/2012 15:00							ALL HES PERSONEL
Crew Leave Yard	09/04/2012 15:15							
Arrive At Loc	09/04/2012 18:00							RIG RUNNING CASEING.
Assessment Of Location Safety Meeting	09/04/2012 18:15							ALL HES PERSONEL
Rig-Up Equipment	09/05/2012 05:24							
Pre-Job Safety Meeting	09/05/2012 07:00							ALL HES PERSONEL AND RIG CREW
Start Job	09/05/2012 07:24							TD 8210, TP 8186', SJ 39.4', OH 8.75", CSG 7" 29# 160 joints, 32# 50 joints , MUD 10.3PPG.
Other	09/05/2012 07:31		2	2			200.0	FILL LINES
Pressure Test	09/05/2012 07:35		0.5	0.5				ALL LINES HELD PRESSURE @ 5000 PSI
Pump Spacer 1	09/05/2012 07:52		4	10			10.0	FRESH WATER
Pump Spacer 2	09/05/2012 07:55		4	20			159.0	CHEMICAL WASH-SBM
Pump Spacer 1	09/05/2012 08:03		4	10			196.0	FRESH WATER
Pump Lead Cement	09/05/2012 08:05		6	466			487.0	1830 SKS, 13 PPG, 1.43 FT3/SK, 6.63 GAL/SK, FOAMED DOWN TO 9.5 PPG.

Pump Tail Cement	09/05/2012 09:43		5	69			1062.0	146 SKS, 12.8 PPG, 2.07 FT3/SK, 11.67 GAL/SK, PUMP TRUCK HAD A HARD TIME MIXING TAIL CEMENT, RATE CHANGES AND SHUTDOWN.
Activity Description	Date/Time	Cht #	Rate m3/min	Volume m3		Pressure MPa		Comments
				Stage	Total	Tubing	Casing	
Shutdown	09/05/2012 10:06							
Drop Top Plug	09/05/2012 10:07							PLUG WENT USING POSITIVE DISPLACEMENT
Pump Displacement	09/05/2012 10:08		8	291			357.0	FRESH WATER, SLOWED RATE DUE TO HT-400 PUMP LOSING PRIME.
Slow Rate	09/05/2012 10:40		2	10			41.0	
Bump Plug	09/05/2012 10:45		2	301			210.0	PLUG BUMPED
Check Floats	09/05/2012 10:48							FLOATS HELD
Pump Cap Cement	09/05/2012 11:47		4	21			42.0	100 SKS, 15.6 PPG, 1.2 FT3/SK, 5.26 GAL/SK
End Job	09/05/2012 12:10							GOOD CIRCULATION THROUGHOUT JOB, 76 BBLS OF CEMENT TO SURFACE, PIPE WAS NOT MOVED DURING THE JOB.
Post-Job Safety Meeting (Pre Rig-Down)	09/05/2012 12:25							ALL HES PERSONEL
Rig-Down Completed	09/05/2012 14:10							
Depart Location Safety Meeting	09/05/2012 14:30							ALL HES PERSONEL
Crew Leave Location	09/05/2012 14:45							
Other	09/05/2012 14:46							THANK YOU FOR CHOOSING HALLIBURTON, CHRIS SMITH AND CREW

Kinder Morgan

Hovenweep A-4 / Foam Intermediate



Local Event Log					
Intersection			Intersection		
		SPPP			SPPP
1	Start Job	07:24:00 8.000	2	Load Lines	07:31:03 7.000
3	Pressure Test Cement	07:35:13 4957	4	Pressure Test Nitrogen	07:46:26 4152
5	Pump Fresh Water Spacer	07:52:12 16.12	6	Pump Chem Wash	07:55:58 200.0
7	Pump Fresh Water Spacer	08:03:24 218.0	8	Pump Foamed Lead Cement	08:06:17 581.1
9	Pump Tail Cement	09:40:18 947.8	10	Shutdown	10:06:47 231.0
11	Drop Plug	10:07:18 197.6	12	Pump Displacement	10:08:01 422.9
13	Slow Rate	11:13:32 446.3	14	Bump Plug	11:21:22 728.8
15	Check Floats	11:23:44 1132	16	End Job	11:25:31 10.000

Customer: Kinder Morgan
Well Description: Hovenweep A-4
Customer Rep: Marshall

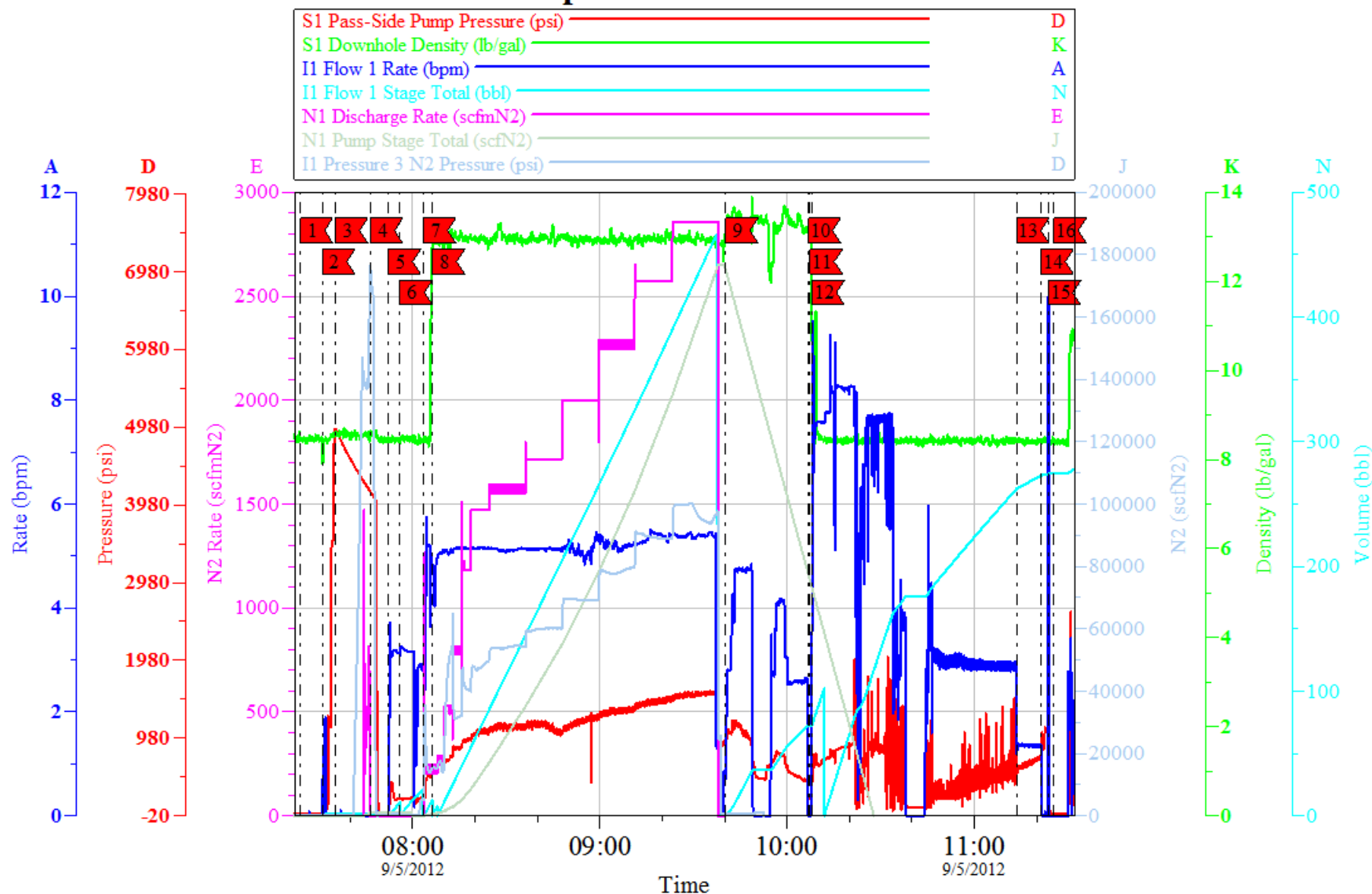
Job Date: 05-Sep-2012
Job Type: Foam Intermediate
Service Supervisor: Chris Smith

Sales Order #: 9771199
ADC Used: YES
Operator/Pump: Andrew Brennecke

OptiCem v6.4.10
05-Sep-12 12:22

Kinder Morgan

Hovenweep A-4 / Foam Intermediate



Customer: Kinder Morgan
Well Description: Hovenweep A-4
Customer Rep: Marshall

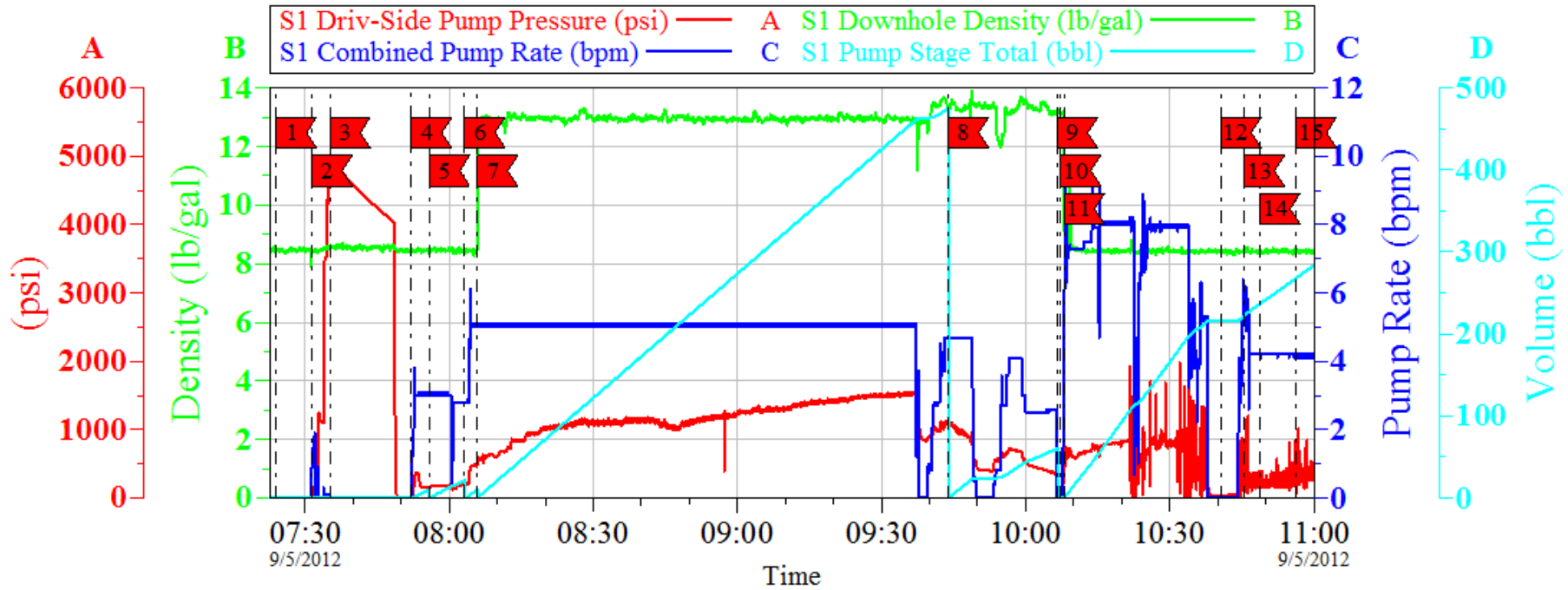
Job Date: 05-Sep-2012
Job Type: Foam Intermediate
Service Supervisor: Chris Smith

Sales Order #: 9771199
ADC Used: YES
Operator/Pump: Andrew Brennecke

OptiCem v6.4.10
05-Sep-12 12:23

Kinder Morgan

Hovenweep A-4 / Foam Intermediate



Local Event Log

Intersection	SDPP	Intersection	SDPP
1 Start Job	07:24:00 -8.000	2 Load Lines	07:31:23 4.000
3 Pressure Test	07:35:10 4973	4 Pump Fresh Water Spacer	07:52:09-10.000
5 Pump Chem Wash	07:55:53 159.6	6 Pump Fresh Water Spacer	08:03:14 196.8
7 Pump Lead Cement	08:05:53 487.1	8 Pump Tail Cement	09:43:57 1062
9 Shutdown	10:06:37 220.2	10 Drop Plug	10:07:16 139.0
11 Pump Displacement	10:08:00 357.7	12 Slow Rate	10:40:39 41.00
13 Bump Plug	10:45:31 210.0	14 Check Floats	10:48:46 213.7
15 End Job	10:56:21 153.6		

Customer: Kinder Morgan
Well Description: Hovenweep A-4
Customer Rep: Marshall

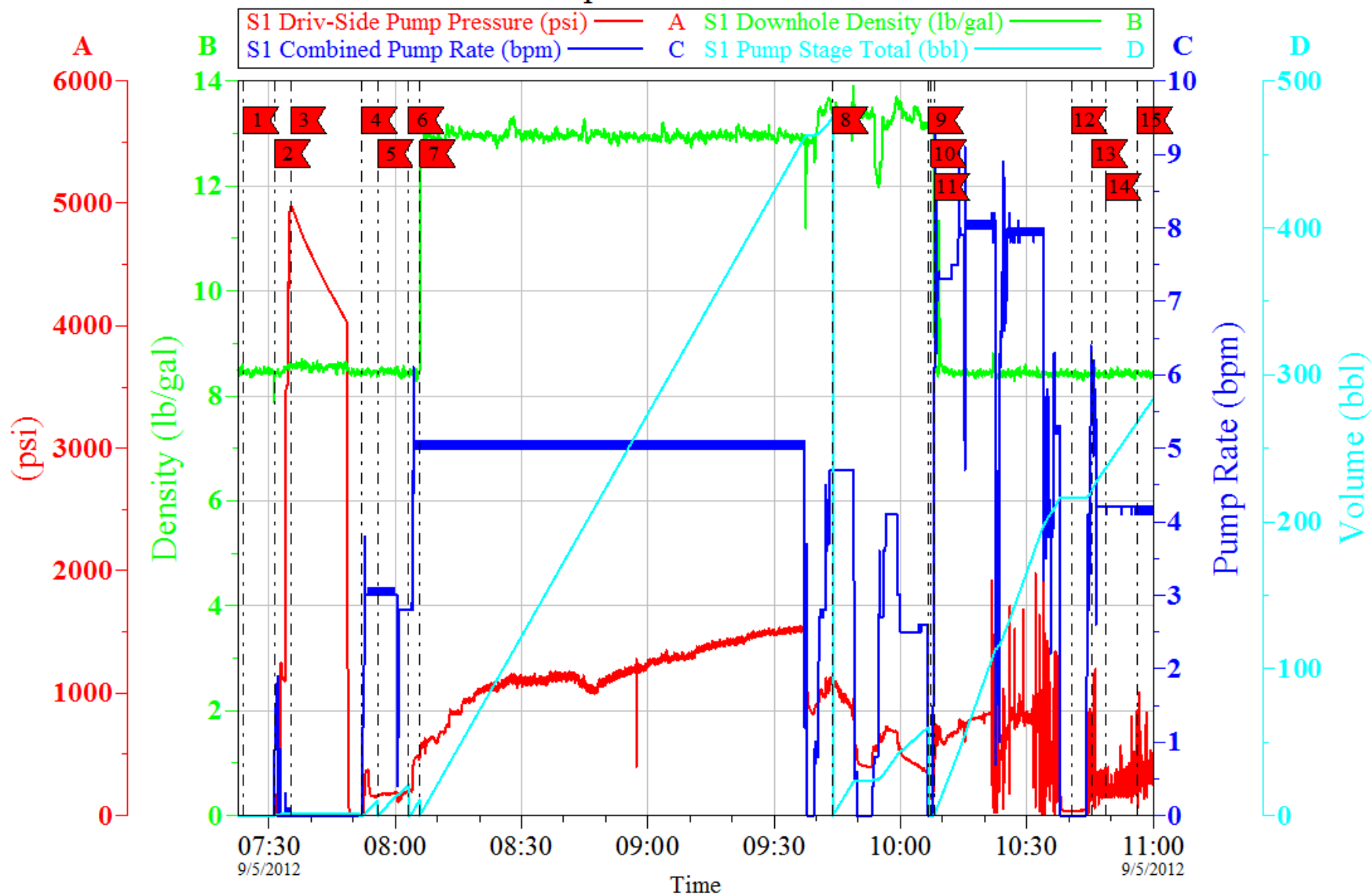
Job Date: 05-Sep-2012
Job Type: Foam Intermediate
Service Supervisor: Chris Smith

Sales Order #: 9771199
ADC Used: YES
Operator/Pump: Andrew Brennecke

OptiCem v6.4.10
05-Sep-12 12:26

Kinder Morgan

Hovenweep A-4 / Foam Intermediate



Customer: Kinder Morgan
Well Description: Hovenweep A-4
Customer Rep: Marshall

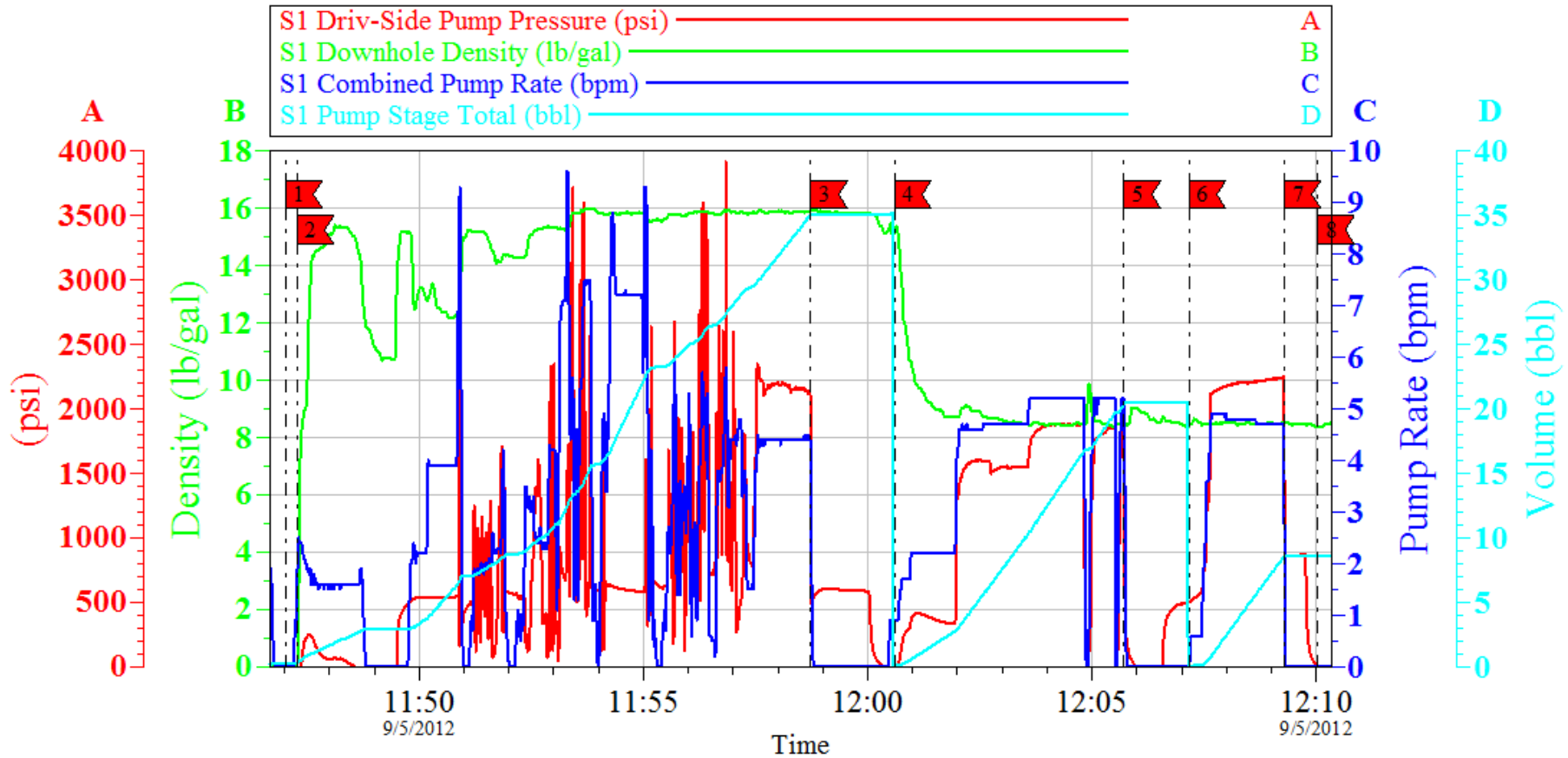
Job Date: 05-Sep-2012
Job Type: Foam Intermediate
Service Supervisor: Chris Smith

Sales Order #: 9771199
ADC Used: YES
Operator/Pump: Andrew Brennecke

OptiCem v6.4.10
05-Sep-12 12:27

Kinder Morgan

Hovenweep A-4 Foam Intermediate Cap



Local Event Log			
Intersection	SDPP	Intersection	SDPP
1 Start Job	11:47:01 -44.00	2 Pump Cap Cement	11:47:16 -42.99
3 Shutdown & Close HCR Valve	11:58:44 1998	4 Wash Lines	12:00:36 4.074
5 Shutdown & Open HCR Valve	12:05:43 1696	6 Displace HCR With Fresh Water	12:07:10 503.4
7 Shutdown & Close HCR Valve	12:09:17 2067	8 End Job	12:10:01 1.354

Customer: Kinder Morgan
Well Description: Hovenweep A-4
Customer Rep: Marshall

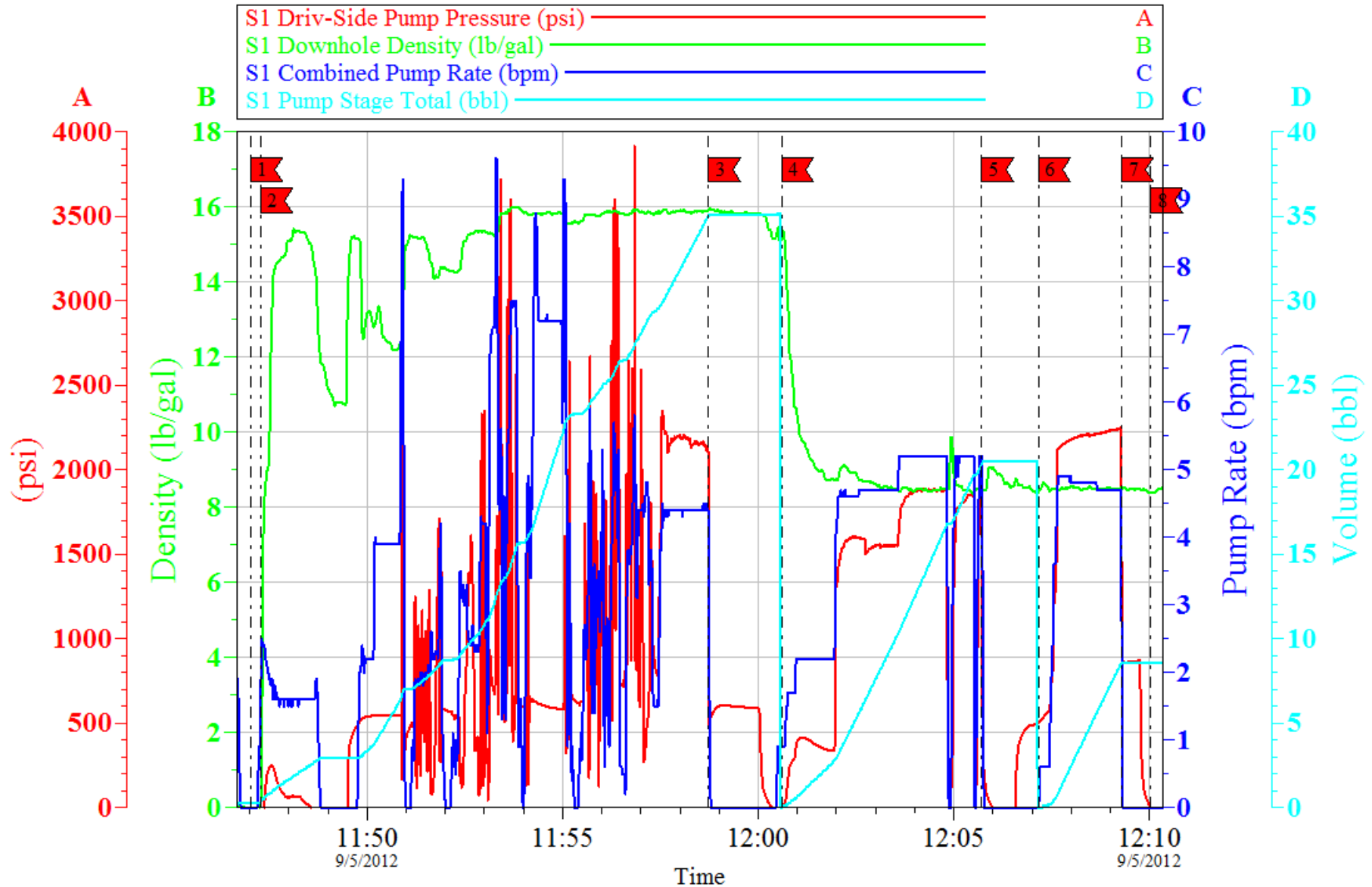
Job Date: 05-Sep-2012
Job Type: Foam Intermediate
Service Supervisor: Chris Smith

Sales Order #: 9771199
ADC Used: YES
Operator/Pump: Andrew Bernneke

OptiCem v6.4.10
05-Sep-12 13:13

Kinder Morgan

Hovenweep A-4 Foam Intermediate Cap



Customer: Kinder Morgan
Well Description: Hovenweep A-4
Customer Rep: Marshall

Job Date: 05-Sep-2012
Job Type: Foam Intermediate
Service Supervisor: Chris Smith

Sales Order #: 9771199
ADC Used: YES
Operator/Pump: Andrew Bernneke

OptiCem v6.4.10
05-Sep-12 13:14

HALLIBURTON

Water Analysis Report

Company: KINDER MORGAN
Submitted by: CHRIS SMITH
Attention: R.KEERAN
Lease: HOVENWEEP
Well #: A-4

Date: 09.04.2012
Date Rec.: 09.04.2012
S.O.#: 9771199
Job Type: PRODUCTION

Specific Gravity	<i>MAX</i>	<i>1</i>
pH	<i>8</i>	<i>6</i>
Potassium (K)	<i>5000</i>	<i>0</i> Mg / L
Calcium (Ca)	<i>500</i>	<i>120</i> Mg / L
Iron (FE2)	<i>300</i>	<i>0</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>80</i> Mg / L
Temp	<i>40-80</i>	<i>75</i> Deg
Total Dissolved Solids		<i>460</i> Mg / L

Respectfully: CHRIS SMITH

Title: CEMENTING SUPERVISOR

Location: FARMINGTON, 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 #: 9771199	Line Item: 10	Survey Conducted Date: 9/5/2012
Customer: KINDER MORGAN INC		Job Type (BOM): CMT INTERMEDIATE CASING BOM
Customer Representative: MARSHIEL		API / UWI: (leave blank if unknown) AFEYK0VVU5J0RIZUAAA
Well Name: Hovenweep A-4		Well Number: Hovenweep A-4
Well Type: Producing Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: Montezuma

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	9/5/2012
Survey Interviewer	The survey interviewer is the person who initiated the survey.	CHRISTOPHER SMITH (HB20137)
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	MARSHIEL
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	VERY PROFESIONAL, GOOD JOB, TANKS

CUSTOMER SIGNATURE

Sales Order #: 9771199	Line Item: 10	Survey Conducted Date: 9/5/2012
Customer: KINDER MORGAN INC		Job Type (BOM): CMT INTERMEDIATE CASING BOM
Customer Representative: MARSHEL		API / UWI: (leave blank if unknown) AFEYK0VVU5J0RIZUAAA
Well Name: Hovenweep A-4		Well Number: Hovenweep A-4
Well Type: Producing Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: Montezuma

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date	9/5/2012
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	Vertical
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
Total Operating Time (hours)	4
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)	3
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	7
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)	Yes

Sales Order #: 9771199	Line Item: 10	Survey Conducted Date: 9/5/2012
Customer: KINDER MORGAN INC		Job Type (BOM): CMT INTERMEDIATE CASING BOM
Customer Representative: MARSHEL		API / UWI: (leave blank if unknown) AFEYK0VVU5J0RIZUAAA
Well Name: Hovenweep A-4		Well Number: Hovenweep A-4
Well Type: Producing Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: Montezuma

Primary Cement Job= Casing job, Liner job, or Tie-back job.	
Did We Run Wiper Plugs? Did We Run Top And Bottom Casing Wiper Plugs?	Top
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	94
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	90
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