HALLIBURTON

iCem® Service

KINDER MORGAN INC - EBUS

For: JERAMIE DAVIS
Date: Sunday, August 17, 2014

GOODMAN POINT #27
GOODMAN POINT #27
KINDER MORGAN

Sincerely,
LEMONT JOJOLA

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HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 320986	**Ship To #:** 3533944	**Quote #:** 0021902494	**Sales Order #:** 0901563990
Customer: KINDER MORGAN INC - EBUS		**Customer Rep:**	
Well Name: GOODMAN POINT (GP)	**Well #:** 27		**API/UWI #:** 05-083-06717-00
Field: MCELMO	**City (SAP):** CORTEZ	**County/Parish:** MONTEZUMA	**State:** COLORADO
Legal Description: SW SE-18-36N-17W-935FSL-2105FEL			
Contractor:		**Rig/Platform Name/Num:** Nabors M-13	
Job BOM: 7523			
Well Type: CO2 WELL			
Sales Person: HALAMERICA\HAM2360		**Srvc Supervisor:** Lemont Jojola	

Job

Formation Name				
Formation Depth (MD)	**Top**		**Bottom**	
Form Type			**BHST**	181 degF
Job depth MD	7803ft		**Job Depth TVD**	
Water Depth			**Wk Ht Above Floor**	
Perforation Depth (MD)	**From**		**To**	

Well Data

Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		9.625	8.921	36		J-55	0	2920		
Casing		7	6.184	29		L-80	0	5874		
Open Hole Section			8.75				2920	7803		
Casing		7	6.094	32		L-80	5874	7349		
Casing		7	6.184	29		L-80	7349	7803		

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	7			7803		Top Plug	7		HES
Float Shoe	7					Bottom Plug	7		HES
Float Collar	7					SSR plug set	7		HES
Insert Float	7					Plug Container	7		HES
Stage Tool	7					Centralizers	7		HES

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/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Water Spacer	Water Spacer	10	bbl	8.33				

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal

2	Chemical Wash	Chemical Wash	20	bbl	8.4				
1000 gal/Mgal		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Water Spacer	Water Spacer	10	bbl	8.33				

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Foamed Lead Cement	HALCEM (TM) SYSTEM	1700	sack	13	1.46		6	6.77
6.67 Gal		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
5	Tail Cement	HALCEM (TM) SYSTEM	300	sack	13.5	1.281		4	5.73
0.20 %		HALAD-766, 55 LB SACK (101477695)							
0.20 %		VERSASET, 55 LB SK (101376573)							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
6	Displacement	Displacement	275	bbl	8.33			5	

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
7	Cap Cement	Premium Cement	100	sack	15.8	1.174			5.15
2 %		CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
94 lbm		CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
5.15 Gal		FRESH WATER							

Cement Left In Pipe	Amount	ft	Reason	Shoe Joint
Comment				

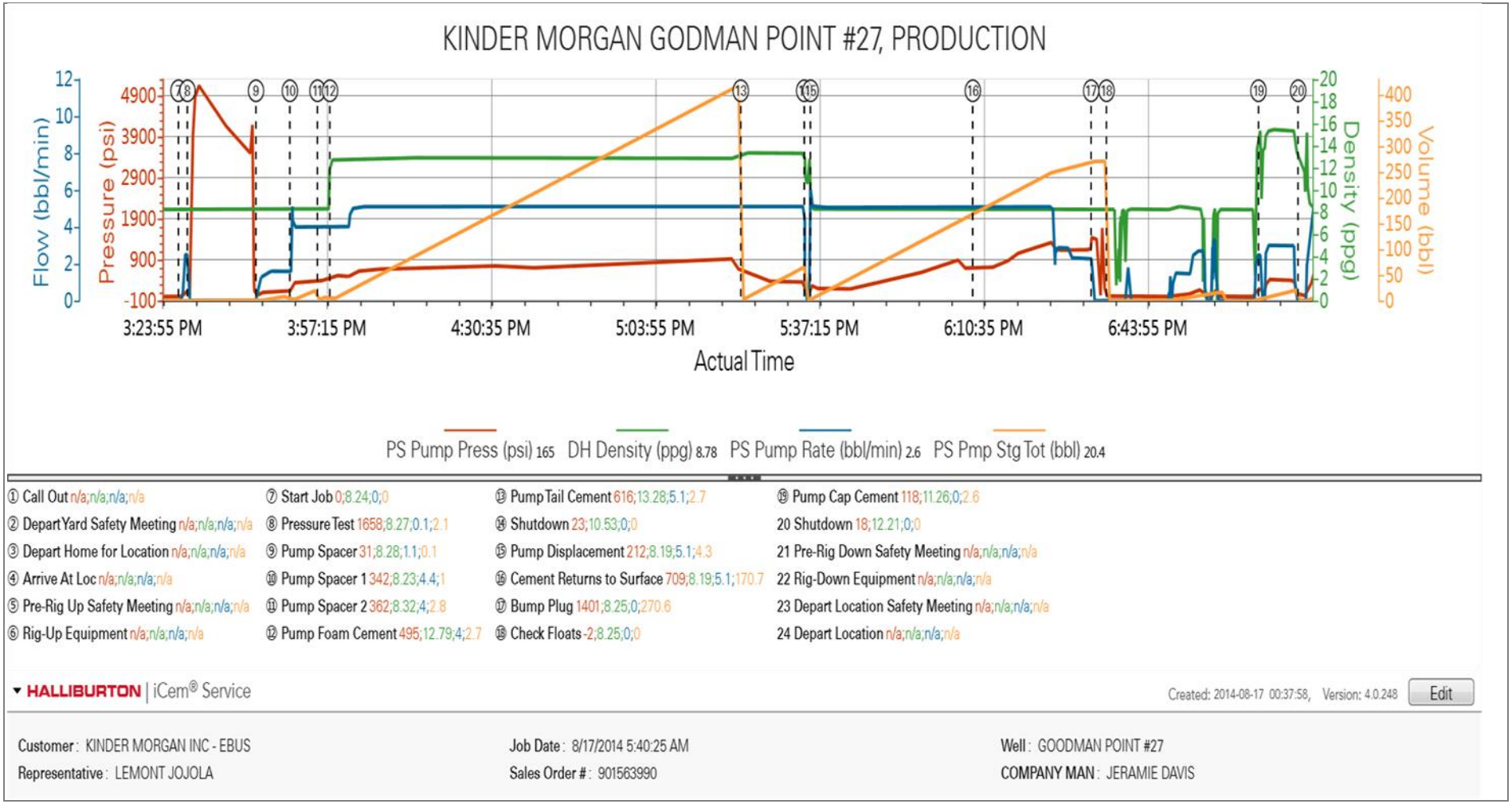
3.5 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Pass-Side Pump Rate (bbl/min)	PS Pmp Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	8/16/2014	23:00:00	USER					
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	8/17/2014	01:45:00	USER					INVOLVING CEMENT CREW
Event	3	Depart Home for Location	Depart Home for Location	8/17/2014	02:00:00	USER					
Event	4	Arrive At Loc	Arrive At Loc	8/17/2014	04:30:00	USER					1 - PICKUP 11583927, 1 - RED TIGER 11528220, 1 - ELITE , 2 BULK TRUCKS 10025024, 10793626, 1 FOAM TRAILER 11057896 / 11189312, 2 -BINS 10025061, 10856450
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	8/17/2014	12:00:00	USER					INVOLVING CEMENT CREW
Event	6	Rig-Up Equipment	Rig-Up Equipment	8/17/2014	12:30:00	USER					
Event	7	Start Job	Start Job	8/17/2014	15:27:31	COM5					
Event	8	Pressure Test	Pressure Test	8/17/2014	15:29:21	USER	1658.00	8.27	0.10	2.1	PRESSURE TEST GOOD TO 5000 PSI
Event	9	Pump Spacer	Pump Spacer	8/17/2014	15:43:16	USER	27.00	8.27	0.80	0.1	PUMPED 10 BBLS H2O
Event	10	Pump Spacer 1	Pump Spacer 1	8/17/2014	15:50:09	USER	336.00	8.23	4.50	1.0	PUMPED 20 BBLS CHEM WASH
Event	11	Pump Spacer 2	Pump Spacer 2	8/17/2014	15:55:45	USER	361.00	8.32	4.00	2.7	PUMPED 10 BBLS H20
Event	12	Pump Foam Cement	Pump Foam Cement	8/17/2014	15:58:17	USER	501.00	12.80	4.00	2.6	1700 SKS 1.46 FT3/SK 6.77 GAL/SK = 442 BBLS @ 13# 274 BBLS H20 REQ
Event	13	Pump Tail Cement	Pump Tail Cement	8/17/2014	17:21:41	USER	612.00	13.28	5.10	2.6	300 SKS 1.28 FT3/SK 5.73 GAL/SK = 68.4 BBLS @ 13.5# 40.9 BBLS H2O REQ
Event	14	Shutdown	Shutdown	8/17/2014	17:34:33	USER	23.00	10.53	0.00	0.0	SHUTDOWN DROP PLUG
Event	15	Pump Displacement	Pump Displacement	8/17/2014	17:35:50	USER	212.00	8.19	5.10	4.3	CALCULATED 274 BBLS TO

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure *(psi)*	Downhole Density *(ppg)*	Pass-Side Pump Rate *(bbl/min)*	PS Pmp Stg Tot *(bbl)*	Comments
											DISPLACE PLUG, ACTUALLY PUMPED 274 BBLS TANK TO TANK MARK TO MARK
Event	16	Cement Returns to Surface	Cement Returns to Surface	8/17/2014	18:08:47	USER	709.00	8.19	5.10	170.7	CALCULATED 300 BBLS OF CEMENT TO SURFACE, ACTUALLY CIRCULATED 105 BBLS BACK
Event	17	Bump Plug	Bump Plug	8/17/2014	18:32:48	USER	1402.00	8.26	0.00	270.6	CALCULATED 960 PSI TO LAND PLUG, PLUG BUMPED @ 1205 PSI PRESSURED UP TO 1600 PSI
Event	18	Check Floats	Check Floats	8/17/2014	18:35:56	USER	-2.00	8.27	0.00	0.0	CHECK FLOATS, FLOATS HELD 1.5 BBLS BACK
Event	19	Pump Cap Cement	Pump Cap Cement	8/17/2014	19:06:46	USER	118.00	11.26	0.00	2.6	100 SKS 1.17 FT3/SK 5.15 GAL/SK = 20.8 BBLS @ 15.8# 12.3 BBLS H2O REQ
Event	20	Shutdown	Shutdown	8/17/2014	19:14:50	USER	18.00	12.21	0.00	0.0	
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/17/2014	19:30:49	USER					INVOLVING CEMENT CREW
Event	22	Rig-Down Equipment	Rig-Down Equipment	8/17/2014	19:45:00	USER					
Event	23	Depart Location Safety Meeting	Depart Location Safety Meeting	8/17/2014	20:45:00	USER					INVOLVING CEMENT CREW
Event	24	Depart Location	Depart Location	8/17/2014	21:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, LEMONT JOJOLA AND CREW

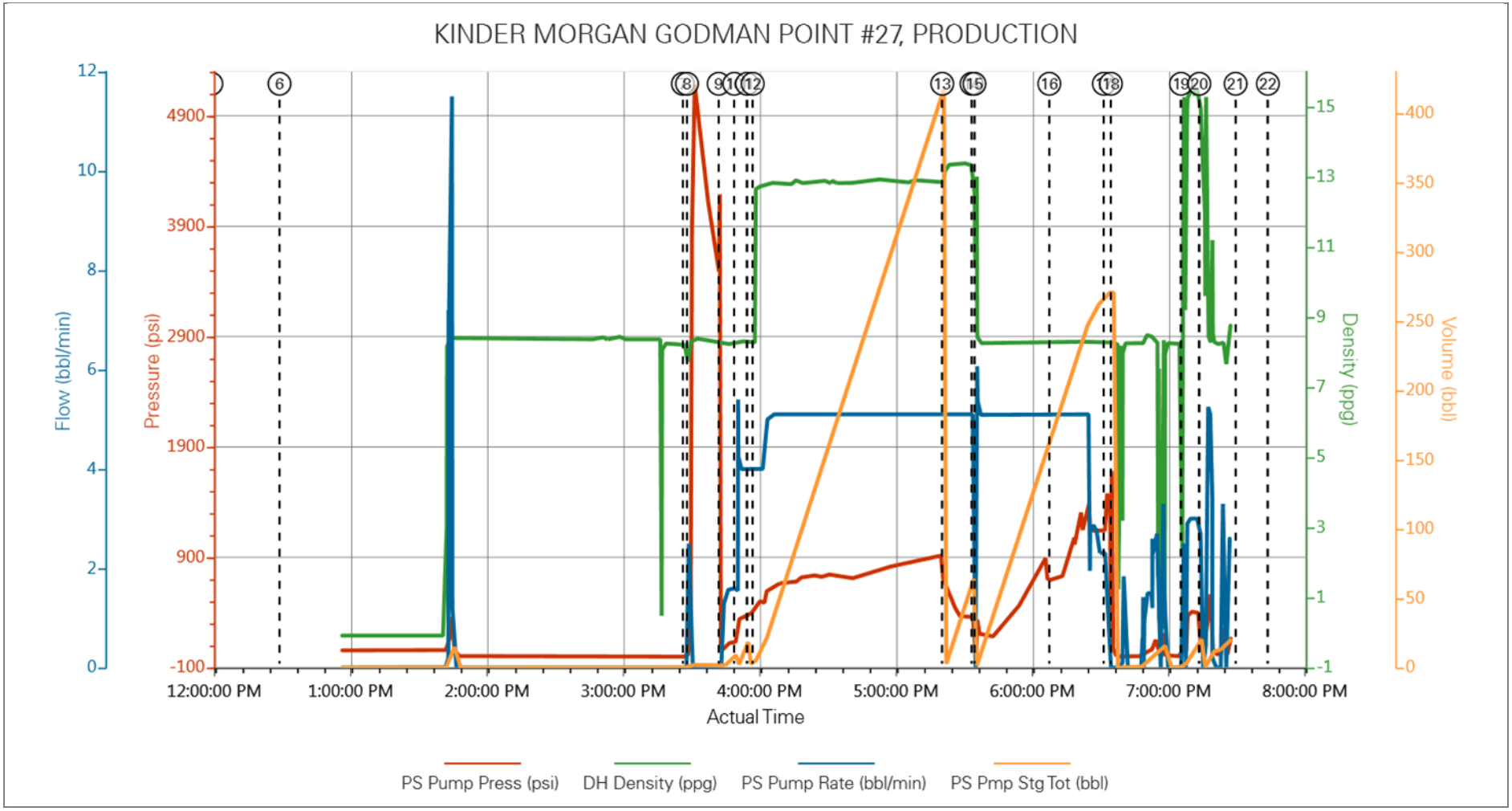
4.0 Attachments

4.1 KINDER MORGAN GOODMAN POINT #27 PRODUCTION-Custom Results.png



5.0 Custom Graphs

5.1 Custom Graph



HALLIBURTON

Cementing

Water Analysis Report

COMPANY: KINDER MORGAN

SUBMITTED BY: LEMONT JOJOLA

LEASE: GOODMAN POINT

WELL #: # 27

Date Recorded AUGUST 17, 2014

SO# 901563990

Job Type FOAM INTERMEDIATE

Camp Location 4109 E. MAIN FARMINGTON NM

CEMENT MIX WATER REQUIREMENTS

Item	Recorded Test Value (TANK 1)	Recorded Test Value (TANK 9)	Units	Max. Acceptable Limit	Potential Problems in Exceeding Limit
pH	6.5	6.5	---	6.0 - 8.0	Chemicals in the water can cause severe retardation
Chlorides	<286	<286	ppm	3000 ppm	Can shorten thickening time of cement
Sulfates	<200	<200	ppm	1500 ppm	Will greatly decrease the strength of cement
Total Hardness	50	50	ppm	500 mg/L	High concentrations will accelerate the set of the cement
Calcium			ppm	500 ppm	High concentrations will accelerate the set of the cement
Total Alkalinity			ppm	1000 ppm	Cement is greatly retarded to the point where it may not set up at all (typically occurs @ pH ≥ 8.3).
Bicarbonates			ppm	1000 ppm	Cement is greatly retarded to the point where it may not set up at all
Potassium	0	0	ppm	5000 ppm	High concentrations will shorten the pump time of cement (indicates the presence of chlorides, therefore if Potassium levels are measured as high, so should the chlorides)
Iron	0	0	ppm	300 ppm	High concentrations will accelerate the set of the cement
Tannin Lignin			ppm	100 ppm	Can greatly retard the cement.
Temperature	70.9	71.2	°F	50-80 °F	High temps will accelerate; Low temps may risk freezing in cold weather

Item	Approximate Calculated Value	Units	Max. Acceptable Limit	Potential Problems in Exceeding Limit - Calculation Method
Magnesium		ppm	300 ppm	High concentrations will accelerate the set of the cement **Calculation Method: Subtract tested "Calcium" value from "Total Hardness" value.**
Carbonates		ppm	100 ppm	Cement is greatly retarded to the point where it may not set up at all. **Calculation Method: Subtract tested "Bicarbonates" value from "Total Alkalinity" value.**

TDS 240 490 PPM

Submitted Respectfully by: DALE MEDFORD

HALLIBURTON

Rockies, Farmington

Lab Results- Lead

Job Information

Request/Slurry	2159706/1	**Rig Name**		**Date**	05/AUG/2014
Submitted By	David Lide	**Job Type**	Foam Job	**Bulk Plant**	Farmington
Customer	Kinder Morgan	**Location**	San Juan	**Well**	Goodman Point #27

Well Information

Casing/Liner Size	7 in / 177.8 mm	**Depth MD**	2378 m / 7803 ft	**BHST**	79°C / 174°F
Hole Size	6.125 in / 155.575 mm	**Depth TVD**	2378 m / 7803 ft	**BHCT**	54°C / 130°F
Pressure	328 bar / 4760 psi				

Drilling Fluid Information

Mud Supplier Name	AMC	**Mud Trade Name**		**Density**	

Cement Information - Lead Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
50	%	> GCC Type V	Bulk Blend	14.08.14	4511104864	Slurry Density	13.002	lbm/gal
50	%	> San Juan	Bulk Blend	14.08.14	4511104128	Slurry Yield	1.4566	ft3/sack
100	% BWOC	Cement Blend				Water Requirement	6.9281	gal/sack
6.93	gal/sack	Fresh Water	Lab	17.08.11	N/A	Total Mix Fluid	6.93	gal/sack
2	% BWOC	Bentonite Wyoming - PB	Bulk Blend	14.08.14	4511169832	Foam Density	10	lbm/gal
0.2	% BWOC	VERSASET (PB)	Bulk Blend	14.08.14	2014-5-2	Foam Quality	22.85	%
0.2	% BWOC	HALAD-766	Bulk Blend	14.08.14	deat197754			
1.5	% BVOW	Foamer 760	Chemicals	15.07.14	7580534	Water Source	Fresh Water	
						Water Chloride		

Slurry Comments

850 sacks total

Operation Test Results Request ID 2159706/1

Mixability (0 - 5) - 0 is not mixable — 05/Aug/2014

Mixability rating (0 - 5)	Avg rpm mixing under load (~12,000)
5	12000

Foam Mix and Stability — 06/Aug/2014

Sink [mm]	Time to Foam [Sec]	Average Mix Speed [rpm]	Conditioning time (hrs:min)
2	15	4000	0:00

Thickening Time — 07/Aug/2014

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	Termination Time	Termination BC
130	4760	40	8	14:01	14:33	14:36	34:03	55

Thickening Time — 15/Aug/2014

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	Termination Time	Termination BC
130	4760	40	9	8:43	8:44	8:49	24:55	56

Thickening Time — 15/Aug/2014

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	Termination Time	Termination BC
130	4760	40	6	4:30	3

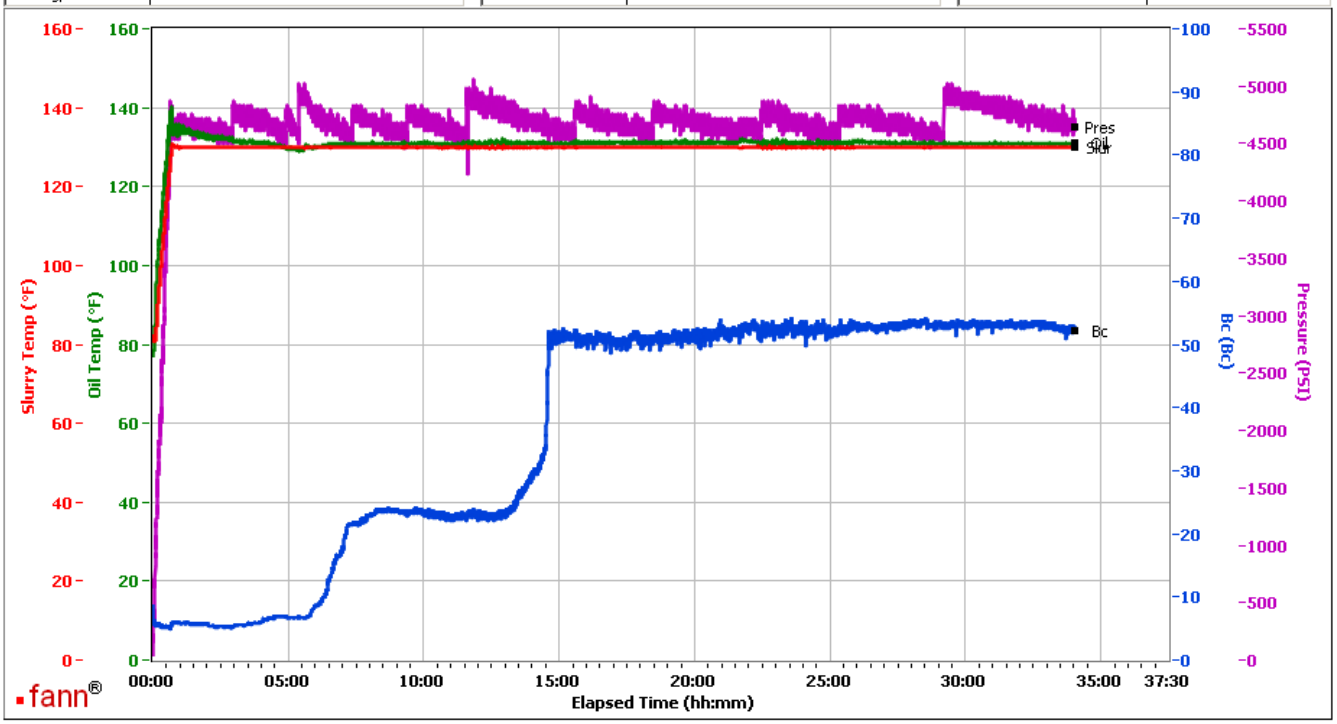
Request ID : 2159706

Farmington

Fields	Values
Project Name	FM2159706-1 KM Goodman Point #27 13.0 p
Test ID	2159706-1
Request ID	
Tested by	MJ
Customer	Kinder Morgan
Well No	Goodman Point #27
Rig	
Casing/Liner Size	

Fields	Values
Job Type	
Cement Type	V
Cement Weight	Standard
Test Date	08/05/14
Test Time	11:15 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.0.2.206

Events	Results
40.00 Bc	14h:33m
50.00 Bc	14h:36m
70.00 Bc	NaN
100.00 Bc	NaN
30.00 Bc	14h:01m
00h:30m	5.37
01h:00m	5.93
01h:30m	5.73



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Comments 13.0 ppg

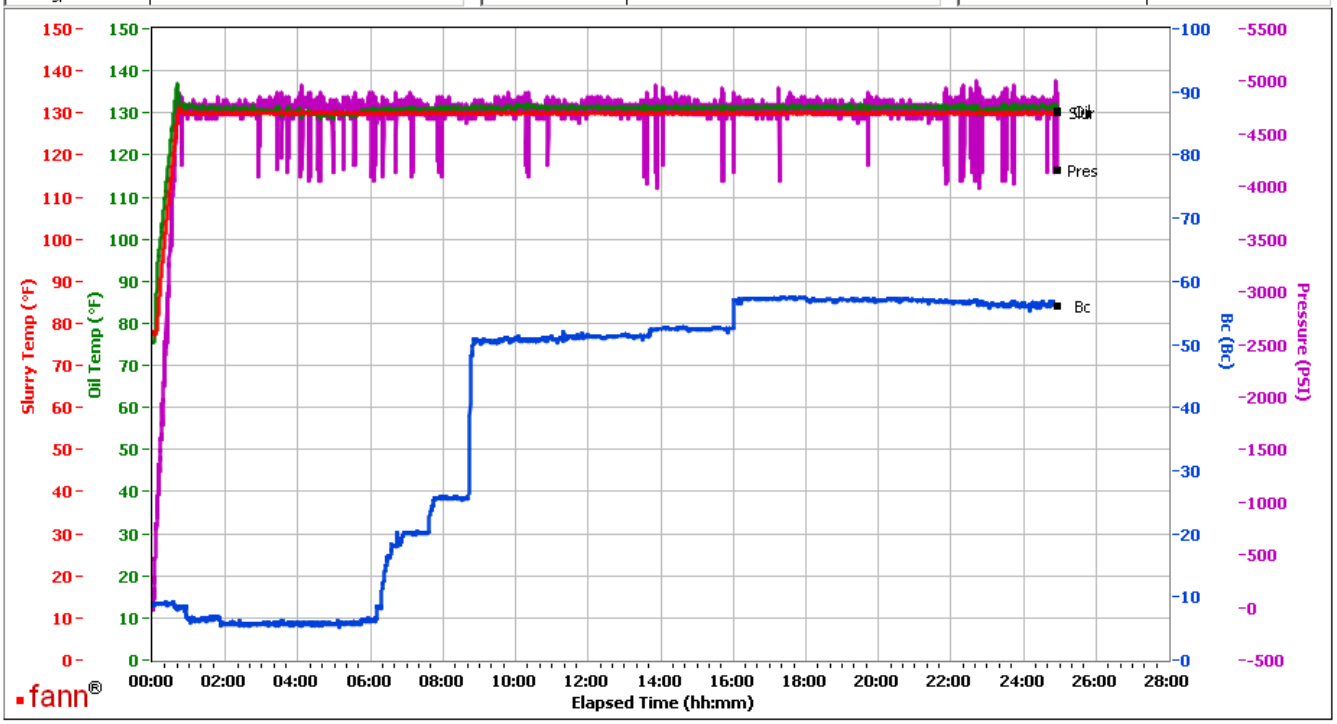
Request ID : 2159706

Farmington

Fields	Values
Project Name	FM2159706-1 Kinder Morgan Goodman point
Test ID	FM2159706-1
Request ID	
Tested by	JB
Customer	Kinder Morgan
Well No	Goodman Point #27
Rig	
Casing/Liner Size	

Fields	Values
Job Type	
Cement Type	
Cement Weight	Light Weight
Test Date	08/14/14
Test Time	11:13 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.0.2.206

Events	Results
40.00 Bc	08h:44m
50.00 Bc	08h:49m
70.00 Bc	NaN
100.00 Bc	NaN
30.00 Bc	08h:43m
00h:30m	8.61
01h:00m	6.68
01h:30m	6.33



Data File C:\Documents and Settings\M290\Desktop\TT Graphs\FM2159706-1 Kinder Morgan Goodman point #27 Foam Lead.tdms

Comments 13ppg

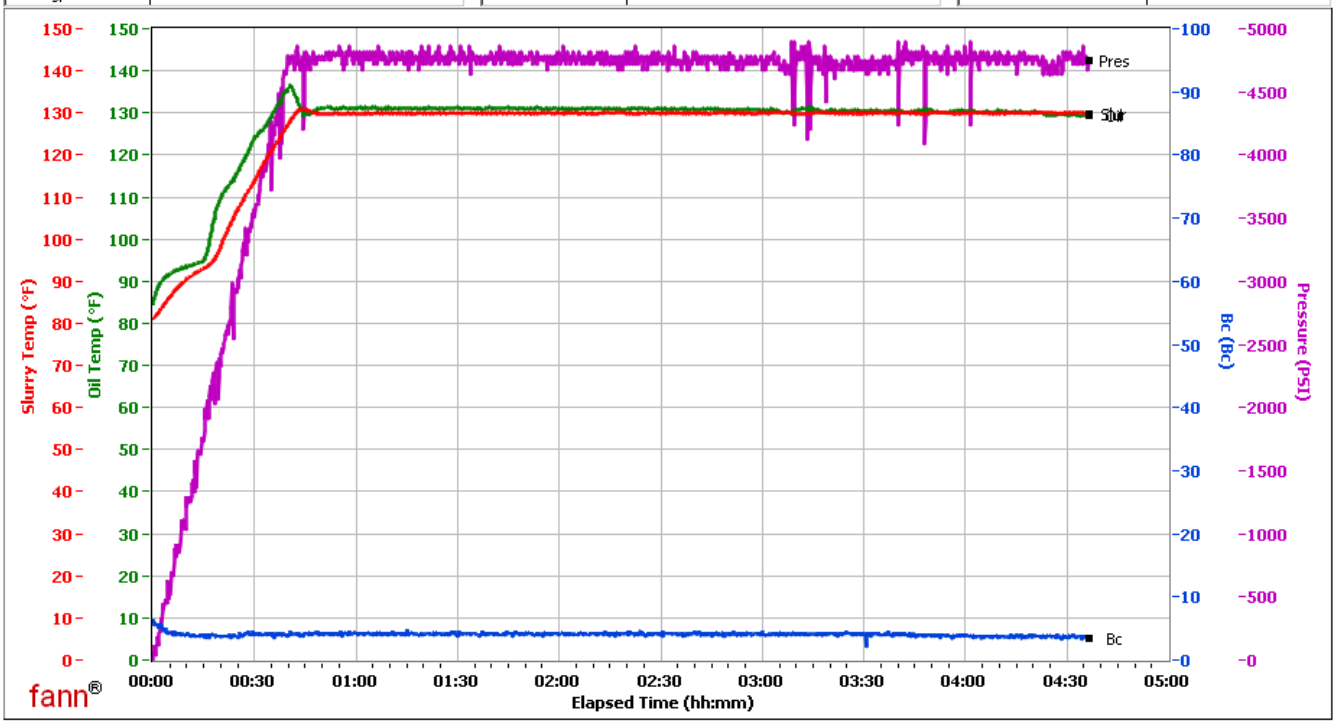
Request ID : 2159706

Farmington

Fields	Values
Project Name	FM2159706-1 Kinder Morgan Goodman point
Test ID	FM2159706-1
Request ID	
Tested by	JB
Customer	Kinder Morgan
Well No	Goodman point #27
Rig	
Casing/Liner Size	

Fields	Values
Job Type	
Cement Type	
Cement Weight	Light Weight
Test Date	08/15/14
Test Time	03:50 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.0.2.206

Events	Results
40.00 Bc	NaN
50.00 Bc	NaN
70.00 Bc	NaN
100.00 Bc	NaN
30.00 Bc	NaN
00h:30m	3.86
01h:00m	4.29
01h:30m	3.71



Data File C:\Documents and Settings\M290\Desktop\TT Graphs\FM2159706-1 Kinder Morgan Goodman point #27 Foam Lead 2.tdms

Comments 13ppg

Request ID : 2159699

HALLIBURTON

Rockies, Farmington

Lab Results- Tail

Job Information

Request/Slurry	2159699/1	**Rig Name**		**Date**	05/AUG/2014
Submitted By	David Lide	**Job Type**	Intermediate Casing	**Bulk Plant**	Farmington
Customer	Kinder Morgan	**Location**	San Juan	**Well**	Goodman Point #27

Well Information

Casing/Liner Size	7 in / 177.8 mm	**Depth MD**	2378 m / 7803 ft	**BHST**	79°C / 174°F
Hole Size	6.125 in / 155.575 mm	**Depth TVD**	2378 m / 7803 ft	**BHCT**	54°C / 130°F
Pressure	328 bar / 4760 psi				

Drilling Fluid Information

Mud Supplier Name	AMC	**Mud Trade Name**		**Density**	

Cement Information - Tail Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
50	%	> GCC Type V	Bulk Blend	16.08.14	4511104864	Slurry Density	13.503	lbm/gal
50	%	> San Juan	Bulk Blend	16.08.14	4511104128	Slurry Yield	1.3024	ft3/sack
100	% BWOC	Cement Blend				Water Requirement	5.8119	gal/sack
5.81	gal/sack	Fresh Water	Lab	17.08.11	N/A	Total Mix Fluid	5.81	gal/sack
0.2	% BWOC	VERSASET (PB)	Bulk Blend	16.08.14	2014-5-2			
0.2	% BWOC	HALAD-766	Bulk Blend	16.08.14	deat197754			
1	% BWOC	Bentonite Wyoming - PB	Bulk Blend	16.08.14	4511169832			
						Water Source	Fresh Water	
						Water Chloride		

Slurry Comments

300 total Sacks

Operation Test Results Request ID 2159699/1

Mixability (0 - 5) - 0 is not mixable — 16/Aug/2014

Mixability rating (0 - 5)
5

Avg rpm mixing under load (~12,000)
12000

Request ID : 2159699

Thickening Time — 17/Aug/2014

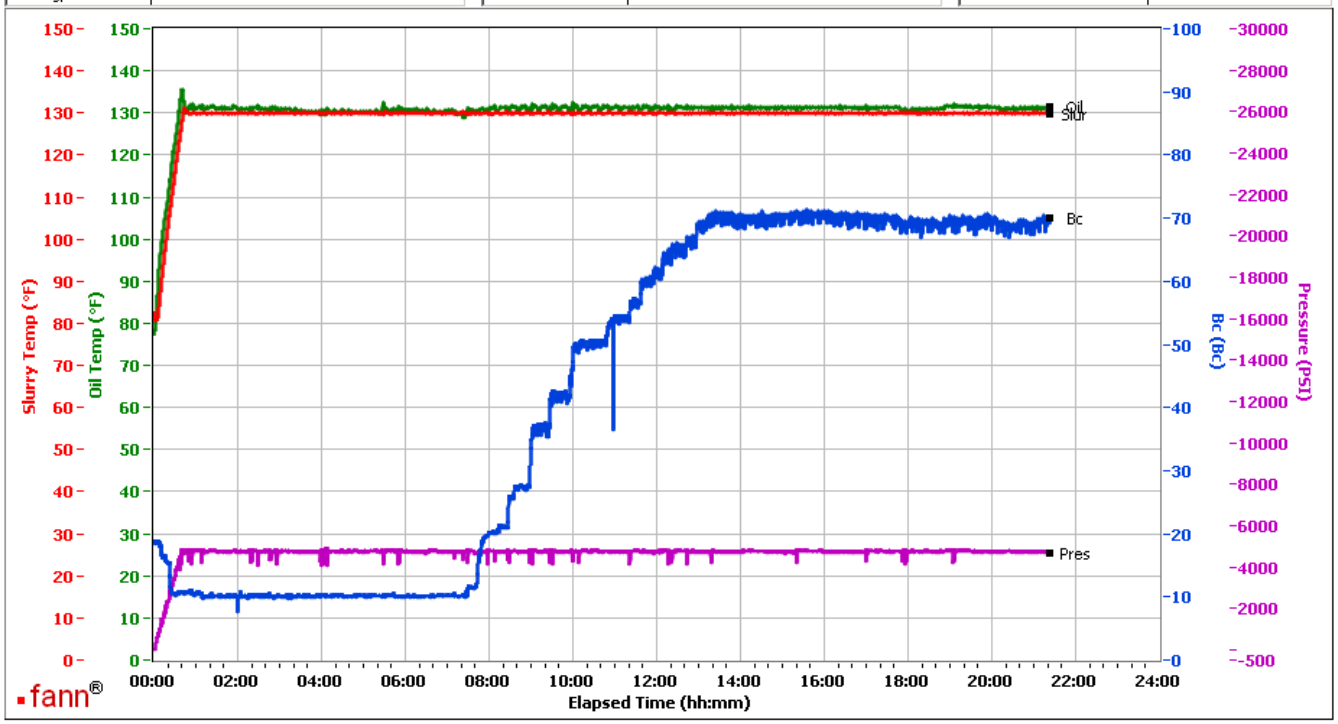
Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	Termination Time	Termination BC
130	4760	40	18	8:58	9:27	10:03	13:13	21:20	70

Farmington

Fields	Values
Project Name	FM2159699-1 Kinder Morgan Goodman point
Test ID	FM2159699-1
Request ID	
Tested by	JB
Customer	Kinder Morgan
Well No	Goodman Point #27
Rig	
Casing/Liner Size	

Fields	Values
Job Type	
Cement Type	
Cement Weight	Standard
Test Date	08/16/14
Test Time	04:57 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.0.2.206

Events	Results
40.00 Bc	09h:27m
50.00 Bc	10h:03m
70.00 Bc	13h:13m
100.00 Bc	NaN
30.00 Bc	08h:58m
00h:30m	10.59
01h:00m	10.67
01h:30m	10.30



Data File C:\Documents and Settings\M290\Desktop\TT Graphs\FM2159699-1 Kinder Morgan Goodman point #27 Tail Bulk .tdms

Comments 13.5ppg

Test stopped as per Keven N.