



WELL PLUGGING REPORT (Form 55)

DNR-744-7007 (REV 042011)

API Well Number: 34-099-2-3157-00-00 Owner: R.E. Disposal, LLC  
County: Mahoning Township: Coltsville Section: \_\_\_\_\_ Lot: \_\_\_\_\_  
Lease: Northstar Khalil Well No. #3 Permit \_\_\_\_\_  
Completion Date: 10/18/17 Total Depth: 8,774' Start Date: 10/2/2017 End Date: 12/23/15  
Plug Contractor: Team Services Cement Manufacturer: C&J Energy Services  
Cement Contractor: C&J Energy Services Clay Supplier: \_\_\_\_\_  
Log Contractor: Renegade

DNR Notified:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Clay/Cement Ticket Attached:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Reason for Plug:	<input checked="" type="checkbox"/> Incap. of production or injection <input type="checkbox"/> Lost <input type="checkbox"/> Dry hole <input type="checkbox"/> Replugging <input type="checkbox"/> Orphan <input type="checkbox"/> Plug-back	Plug-back formation:	_____
ODNR Witness:	<input checked="" type="checkbox"/> Complete <input type="checkbox"/> Partial <input type="checkbox"/> None	Plug Job Description:	<input checked="" type="checkbox"/> Cement <input type="checkbox"/> Clay <input type="checkbox"/> Clay and Cement

BOREHOLE / CASING RECORD						
Type	Hole Size (in.)	Casing Outer Diameter (in.)	Casing Top (ft.)	Casing Bottom (ft.)	Shot / Rip Depth (ft.)	Recovered During Plug (ft.)
Drive Pipe						
Conductor		16"	0	50'		
Mine String						
Surface		10-3/4"	0	1,025'		
		7-5/8"	0	8,774'		3,700'
Production		4-1/2"	0	7,950'		7,950'
Liner						
Tubing						

Plug #							
1	Plugged Interval	Interval Bottom(ft)	Interval Top (ft)	Plug Material	Plug Bottom (ft)	Plug Top (ft)	Plug Tag (ft)
	Clay (tons):		Cement Class: H	Sacks: 100	Weight lbs./gal:	16.40	
	Comments:	H2O was displacement fluid. Waited on cement for 8 hours.					
	Spacer Type:		Viscosity:	Weight (lbs/gal):		Displacement Volume (Bbls):	32.5 bbls

Plug #							
2	Plugged Interval	Interval Bottom(ft)	Interval Top (ft)	Plug Material	Plug Bottom (ft)	Plug Top (ft)	Plug Tag (ft)
	Clay (tons):		Cement Class: H	Sacks: 310	Weight lbs./gal:	16.40	
	Comments:	Waited on cement for 9 hours					
	Spacer Type:	Gel spacer	Viscosity:	Weight (lbs/gal):	294 gal	Displacement Volume (Bbls):	29 bbls

Plug #							
3	Plugged Interval	Interval Bottom(ft)	Interval Top (ft)	Plug Material	Plug Bottom (ft)	Plug Top (ft)	Plug Tag (ft)
	Clay (tons):		Cement Class: H	Sacks: 50	Weight lbs./gal:	16.4	
	Comments:						
	Spacer Type:		Viscosity:	Weight (lbs/gal):		Displacement Volume (Bbls):	28 bbls





WELL PLUGGING REPORT (Form 55)

DNR-744-7007 (REV 042011)

Plug #							
4	Plugged Interval	Interval Bottom(ft)	Interval Top (ft)	Plug Material	Plug Bottom (ft)	Plug Top (ft)	Plug Tag (ft)
	Clay (tons):		Cement Class: H	Sacks: 20	Weight lbs./gal:	16.4	
	Comments:						
	Spacer Type:		Viscosity:	Weight (lbs/gal):		Displacement Volume (Bbls):	28 bbls

Plug #							
5	Plugged Interval	Interval Bottom(ft)	Interval Top (ft)	Plug Material	Plug Bottom (ft)	Plug Top (ft)	Plug Tag (ft)
	Clay (tons):		Cement Class: H	Sacks: 37	Weight lbs./gal:	16.4	
	Comments:						
	Spacer Type:		Viscosity:	Weight (lbs/gal):		Displacement Volume (Bbls):	28 bbls

Remarks: See attached for additional plug information.

Plugging Operations Witnessed by Inspector	Inspector Name	Witness Date	Arrival Time	Departure Time	Duration
	John Flemming	10/2-18/17	10/2/17	10/18/17	16 days

Total Duration

The inspector's signature below attests that he/she accurately recorded information pertaining to the plugging operation actually witnessed, and by the information provided on the dates and times listed above. The inspector's signature does not imply that the owner/operator has successfully plugged materials for untested plug(s) actually remained across the intervals that they were intended to seal.

Signature of Inspector

Date Plugging Completed

OWNER AFFIDAVIT

By signing this affidavit, you are swearing or affirming that the information it contains is true and accurate.

I, Suzanne Reimold, after being first duly cautioned and sworn, state that I have personal knowledge of all the facts contained in this Affidavit, that I am competent to testify to the matters stated herein, and that the following are true to the best of my knowledge and belief:

1. That I am the owner or operator agent who placed plugging material in the well referenced in this plugging report;
2. That the attached clay or cement tickets, affidavits, and/or bill of lading are the actual records for such materials used to plug the well referenced in this report; and
3. That I have read this plugging report, and the plugging materials were properly placed at the depths indicated on this plugging report in accordance with Chapter 1509 of Ohio Revised Code, Section 4101:10 et seq. of the Ohio Administrative Code and/or 1501:9-11-01 et seq. of the Ohio Administrative Code;

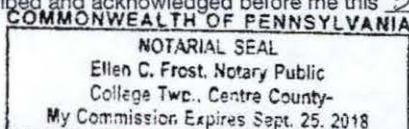
Further Affiant sayeth naught.

In testimony whereof, I have herewith subscribed my name this 31 day of Oct, 2017.

10/18/17  
Date Plugging Completed

Suzanne Reimold  
Signature of Owner or Operator Agent

The foregoing instrument was sworn to, subscribed and acknowledged before me this 31<sup>st</sup> day of October, 2017.



Ellen C Frost  
Notary Public Signature

This report shall be submitted to the ODNR Division of Oil and Gas Resources Management within 30 days after the date the surface hole is plugged

Plug #									
6	Plugged Interval		Interval Bottom(ft)		Interval Top (ft)		Plug Material	Plug Bottom (ft)	Plug Top (ft)
	Clay (tons):		Cement Class	H	Sacks :	129	Weight (lbs/gal):		16.4 ppg
	Comments: Waited on cement for 8 hours.								
	Spacer Type:		Viscosity:		Weight (lbs/gal):		Displacement Volume (Bbls): 27 bbls		

Plug #									
7	Plugged Interval		Interval Bottom(ft)		Interval Top (ft)		Plug Material	Plug Bottom (ft)	Plug Top (ft)
	Clay (tons):		Cement Class	A	Sacks :	410 sks	Weight (lbs/gal):		15.6 ppg
	Comments: Waited on cement for 37 hours.								
	Spacer Type:		Viscosity:		Weight (lbs/gal):		Displacement Volume (Bbls): 18 bbls		

Plug #									
8	Plugged Interval		Interval Bottom(ft)		Interval Top (ft)		Plug Material	Plug Bottom (ft)	Plug Top (ft)
	Clay (tons):		Cement Class	A w/ 2% Ca	Sacks :	5 bbls	Weight (lbs/gal):		15.6 ppg
	Comments: Waited on cement for 12 hours.								
	Spacer Type:		Viscosity:		Weight (lbs/gal):		Displacement Volume (Bbls): 11 bbls		

Plug #									
9	Plugged Interval		Interval Bottom(ft)		Interval Top (ft)		Plug Material	Plug Bottom (ft)	Plug Top (ft)
	Clay (tons):		Cement Class	A w/ 2% Ca	Sacks :	90 sks	Weight (lbs/gal):		15.6 ppg
	Comments: Waited on cement for 8 hours.								
	Spacer Type: Gel Spacer		Viscosity: 8.6 ppg		Weight (lbs/gal):		Displacement Volume (Bbls): 7 bbls		

Plug #									
10	Plugged Interval		Interval Bottom(ft)		Interval Top (ft)		Plug Material	Plug Bottom (ft)	Plug Top (ft)
	Clay (tons):		Cement Class	A w/ 2% Ca	Sacks :	315 sks	Weight (lbs/gal):		15.6 ppg
	Comments: Waited on cement for 6 hours.								
	Spacer Type:		Viscosity:		Weight (lbs/gal):		Displacement Volume (Bbls): 0		

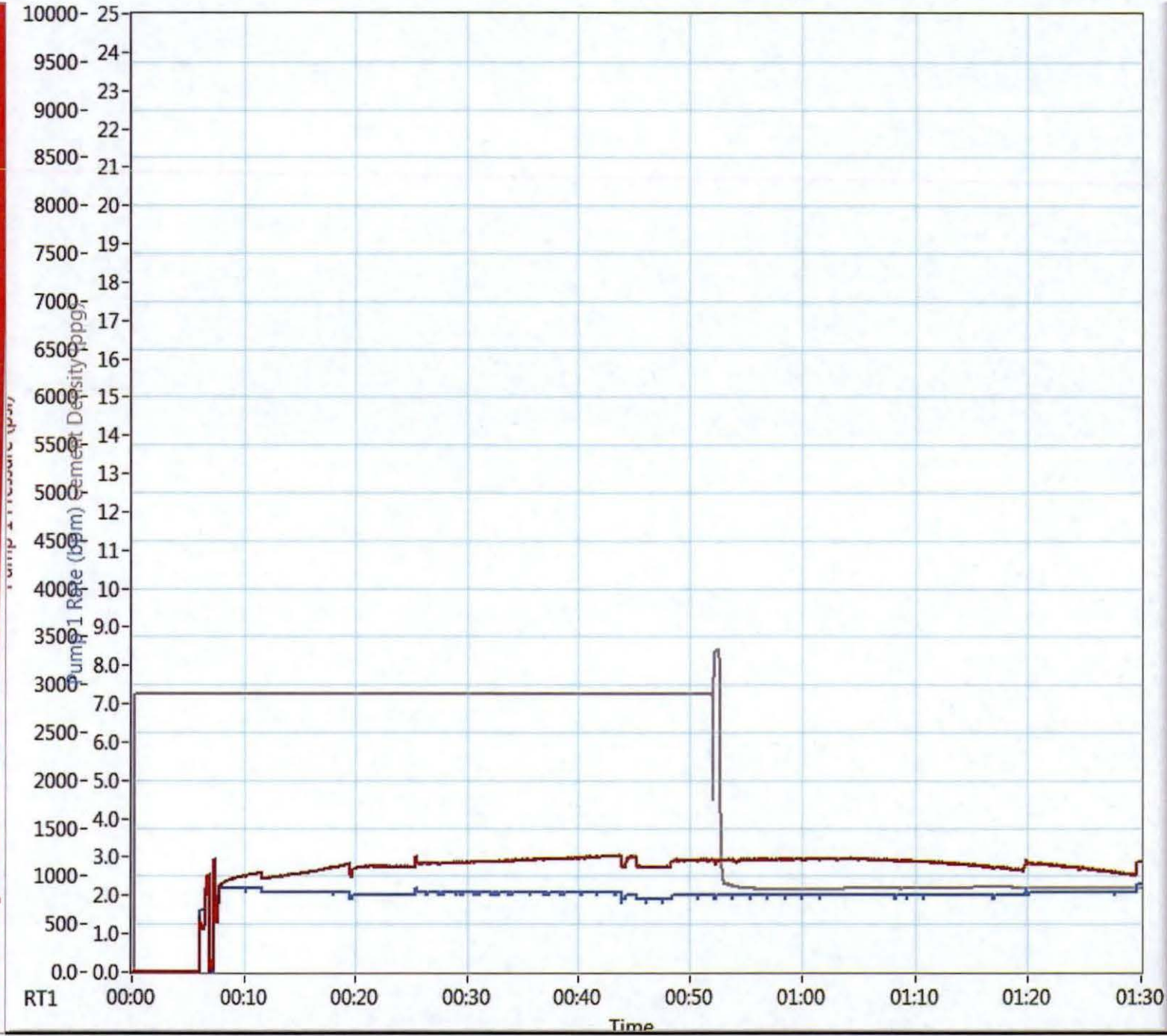


### Cement Job Log

<b>Customer:</b>	R.E. Gas Development	<b>Date:</b>	10/3/2017	<b>Serv. Supervisor:</b>	Dave Deyarmin						
<b>Cust. Rep.:</b>	Aaron Wilhite	<b>Ticket #:</b>	BPA-1710-0007	<b>Serv. Center</b>	Black Lick, PA						
<b>Lease:</b>	Northstar Khalil SWD 0	<b>API Well #:</b>		<b>County:</b>	Mahoning State: OH						
<b>Well Type:</b>		<b>Rig:</b>	O O	<b>Type of Job:</b>	Plug						
<b>Materials Furnished by C&amp;J ENERGY SERVICES</b>											
Plugs		Casing Hardware		Physical Slurry Properties							
				Sacks of Cement	Fluid Dens (lb/gal)	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Mix Water (bbls)		
Spacer 1:	Water			-	8.34						
Lead	CJ916 + 0.1% CJ210F + 0.5 LB/SK CJ600			200	16.4	1.06	4.29	38	20		
Tail:	CJ916 + 0.1% CJ210F + 0.5 LB/SK CJ600			205	16.4	1.06	4.29	39	21		
Displacement Chemicals:											
OPEN HOLE DATA				TUBULAR DATA							
SIZE (in)	EXCESS (%)	DEPTH (ft)	TYPE <small>(CSG/TSG/DSP)</small>	OD (in)	WEIGHT (lbs/ft)	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
9 7/8		8780	Casing	2 3/8	4.7		8773		1.98		
			Drill Pipe	2 3/8	4.7		8773		2.01		
PREVIOUS CASING DATA				PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
SIZE (in)	WEIGHT (lbs/ft)	ID (in)	DEPTH (ft)	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
7 5/8	24	7.03	8084					8773	8773		
WELL FLUID		DISPLACEMENT FLUID (STG 1)		DISPLACEMENT FLUID (STG 2)				WATER ON LOC (bbl)	DIFF PRESS (psi)	CSG LIFT (psi)	MAX PRESS (psi)
TYPE	DENSITY	VOLUME	TYPE	DENSITY	VOLUME	TYPE	DENSITY				
H2O	8.3 ppg	31 bbl	H2O	8.3 ppg				450			
Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press. (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Details				
4:00 AM						0	CALLED IN FOR JOB				
5:45 AM						0	PRE CONVOY SAFETY MEETING				
8:30 AM						0	ARRIVE ON LOCATION				
8:40 AM						0	PRE JOB SAFETY MEETING				
8:45 AM						0	SPOT TRUCKS,RUN LINES TO WELL,PRIME PUMPS				
9:30 AM						0	SAFETY MEETING				
10:16 AM	2	810			5	5	PUMP H2O WELL CIRCULATION				
11:15 AM	2.5	1100			211	216	PUMP H2O BOTTOMS UP				
1:20 PM	2.5	480			19	235	MIX AND PUMP CEMENT @ 16.4 PPG				
1:20 PM						235	WEIGH CEMENT WITH MUD SCALES 16.4=16.4				
1:33 PM	2.5	20			31	266	PUMP H2O DISPLACEMENT				
1:47 PM						266	PULL 5 STANDS TUBING				
2:00 AM	2-3	1100			68	334	REVERSE OUT				
							WAIT 8 HOURS TAG TOP OF PLUG				
12:30 PM							TAG CEMEMNT TOP @ 8073				
10:30 AM							CREW RELEASED				
11:00 AM							RACK UP TRUCKS				
							JOB COMPLETE				

# R E GAS DEVELOPMENT / NORTHSTAR SWD / AIR DROP PLUG

Cement Report



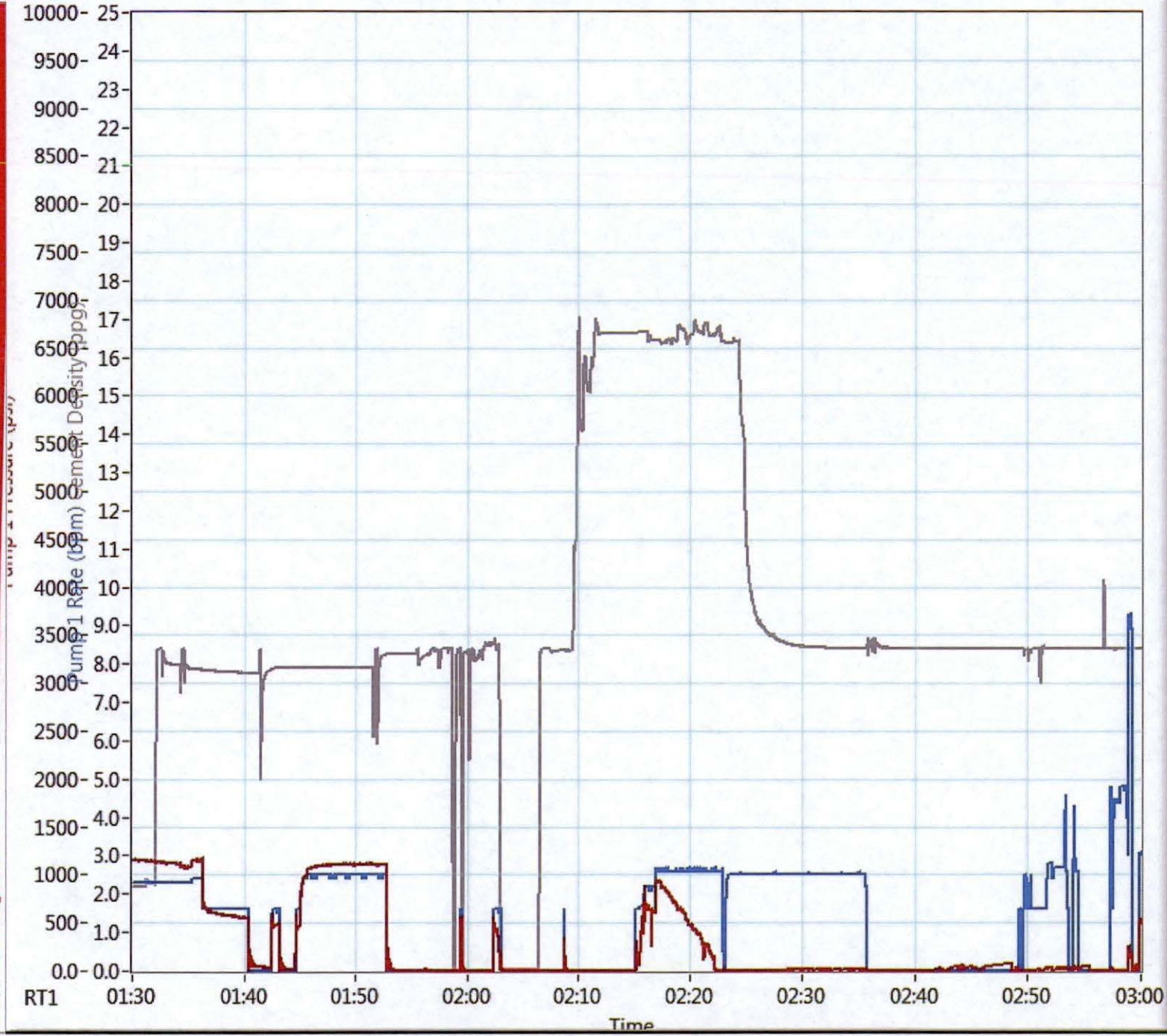
Plug - Recorded Time Plot 1 - 1 of 3

S-0000001710007-00 / Tue, Oct 03, 2017  
Page 6 of 13



# RE GAS DEVELOPMENT / NORTHSTAR SWD / AIR DROP PLUG

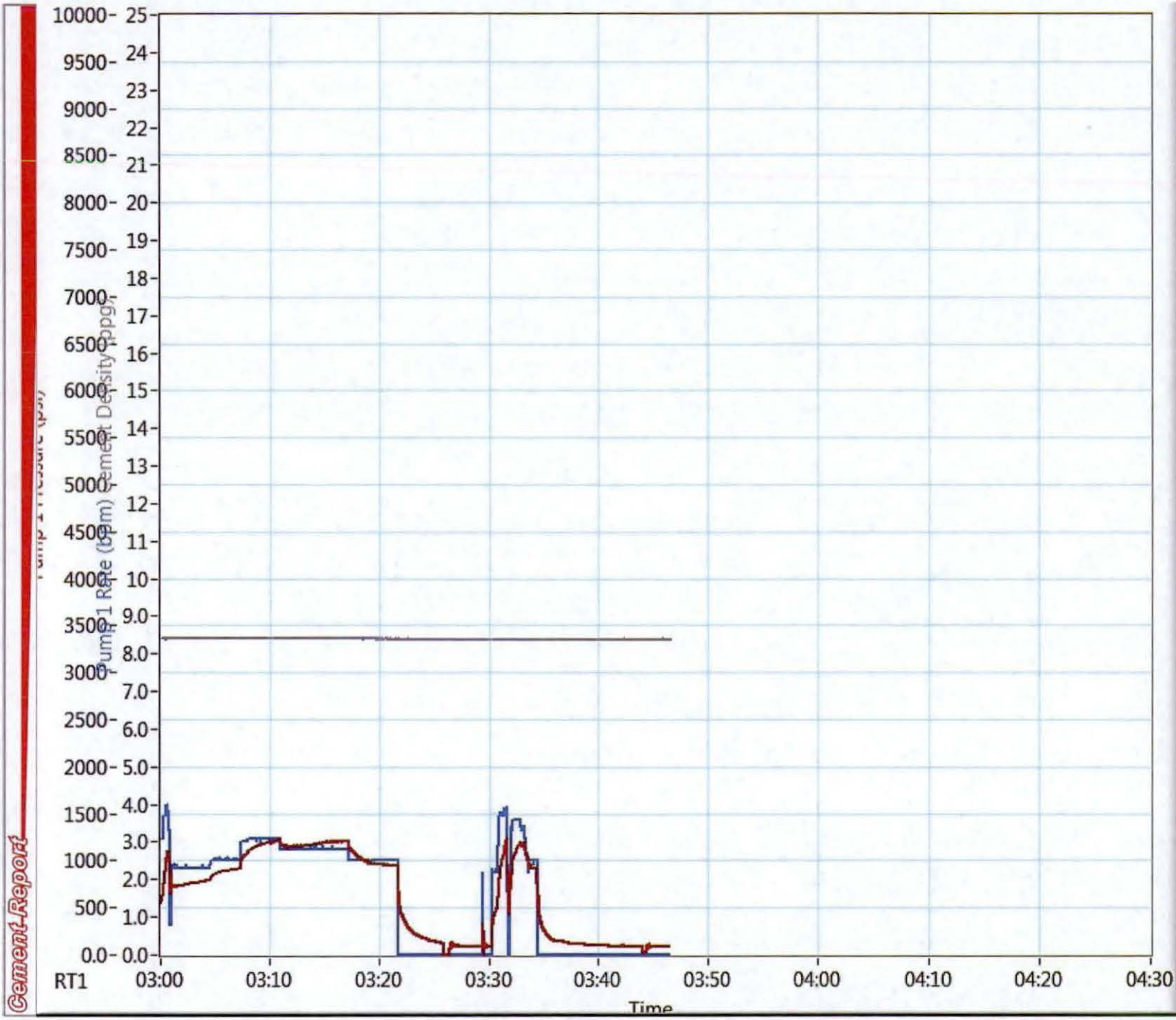
Cement Report



Plug - Recorded Time Plot 1 - 2 of 3

S-0000001710007-00 / Tue, Oct 03, 2017  
Page 8 of 13

# RE GAS DEVELOPMENT / NORTHSTAR SWD / AIR DROP PLUG



Plug - Recorded Time Plot 1 - 3 of 3

S-00000001710007-00 / Tue, Oct 03, 2017  
Page 10 of 13



Customer: R.E. Gas Development	Date: 10/5/2017	Serv. Supervisor: Dave
Cust. Rep.:	Ticket #: BPA-1710-0010	Serv. Center: Black Lick, PA
Lease: Northstar Khalil SWD 0	API Well #:	County: Mahoning State: OH
Well Type:	Rig: 0 0	Type of Job: Plug

**Materials Furnished by C&J ENERGY SERVICES**

Plugs		Casing Hardware		Physical Slurry Properties			
				Sacks of Cement	Fluid Dens (lb/gal)	Yield (cuft/sk)	Mix Water (gal/sk)
Spacer 1:	6% Gel			-	8.7		
Lead							
Tail:	CJ916 + 0.1% CJ210F + 0.5 LB/SK CJ600			376	16.4	1.06	4.29
							71
							38

Displacement Chemicals:

OPEN HOLE DATA				TUBULAR DATA							
SIZE (in)	EXCESS (%)	DEPTH (ft)	TYPE (CSG/TBG/DP)	OD (in)	WEIGHT (lbs/ft)	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
9 7/8		8668	Casing	2 3/8	4.7		8668		1.98		
			Drill Pipe	2 3/8	4.7		8168		2.01		

PREVIOUS CASING DATA				PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
SIZE (in)	WEIGHT (lbs/ft)	ID (in)	DEPTH (ft)	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
4 1/2	13.5	3.992	8084								

WELL FLUID		DISPLACEMENT FLUID (STG 1)		DISPLACEMENT FLUID (STG 2)		WATER ON LOC (bbl)	DIFF PRESS (psi)	CSG LIFT (psi)	MAX PRESS (psi)
TYPE	DENSITY	VOLUME	TYPE	DENSITY	VOLUME	TYPE	DENSITY		
H2O	8.3 ppg	29 bbl	H2O	8.3 ppg	28 bbl	H2O	8.3 ppg	450	

Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press. (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Details				
2:00 AM						0	CALLED IN FOR JOB				
5:00 AM						0	PRE CONVOY SAFETY MEETING				
7:45 AM						0	ARRIVE ON LOCATION				
7:55 AM						0	PRE JOB SAFETY MEETING				
8:05 AM						0	SPOT TRUCKS, RUN LINES TO WELL				
8:40 AM						0	SAFETY MEETING				
9:00 AM	2	1120			4.5	4.5	PUMP H2O TO BREAK CIRCULATION				
9:05 AM	2.5	1100			7	11.5	MIX AND PUMP GEL SPACER 300 LBS 25 LBS FLAKE				
9:19 AM	2.5	1200			3	14.5	PUMP H2O SPACER				
9:21 AM	2.8	1100-125			58	72.5	MIX AND PUMP CEMENT @ 16.4 PPG 8668'-8060				
9:21 AM	2.8					72.5	WEIGH CEMENT WITH MUD SCALES 16.4=16.4 PPG				
9:45 AM						72.5	PUMP H2O DISPLACEMENT				
						72.5	PULL 18 STANDS				
10:35 AM	2.8	125-1200			28	100.5	REVERSE CIRCULATE WELL 0.5 bbl back				
						100.5	WAIT 9 HOURS TAG CEMENT TOP				
						100.5	TAG CEMENT TOP @ 8169				
1:30 AM	2.5	720			4.5	105	PUMP H2O TO BREAK CIRCULATION				
1:32 AM	2.5	830			9	114	MIX AND PUMP CEMENT @ 16.4 PPG 8168'-7989				
						114	WEIGH CEMENT WITH MUD SCALES 16.4=16.4 PPG				
1:36 AM	2.5	765-900			28	142	PUMP H2O DISPLACEMENT				
						142	PULL 5 STANDS				
2:10 AM	2.5	1220			43	185	REVERSE CIRCULATE WELL 0.5 bbl back				
2:45 PM							TAG CEMENT TOP @ 8096				
4:19 PM	2	700			7		PUMP H2O TO BREAK CIRCULATION				

Left Yard	10/5/17 5:10 AM			Left Loc.				Start Pump	10/5/17 9:00 AM	
Arrived Loc.	7/10/17 7:45 AM			Returned Yd				End Pump		
Bumped Plug (psi)	Final Differential (psi)	Floater Held (Y/N)	PSI Left on Casing	Cement to Surface (bbl)	Full Circ. During Job (Y/N)	Max Pump Pressure (psi)	Standby Charged (hrs)	Dave		
	1200		80	0.5	Yes			Service Supervisor		



[illegible]





COMPANY DETAILS

Company: REX

Email:

Contact:

Phone:

JOB DETAILS

DATE October 06, 2017

START TIME 0:01:05

Operator:

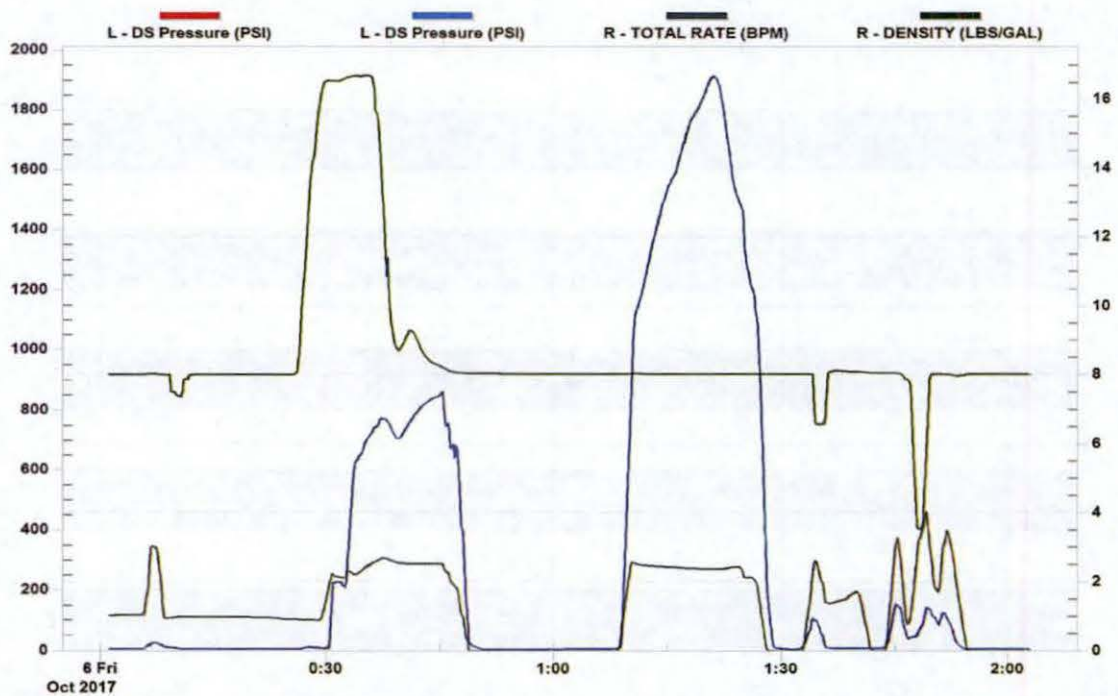
END TIME 2:02:31

LSD#:

Ticket#:

Comments:

SUMMARY GRAPH







COMPANY DETAILS

Company: REX

Email:

Contact:

Phone:

JOB DETAILS

DATE October 07, 2017

START TIME 1:35:13

Operator:

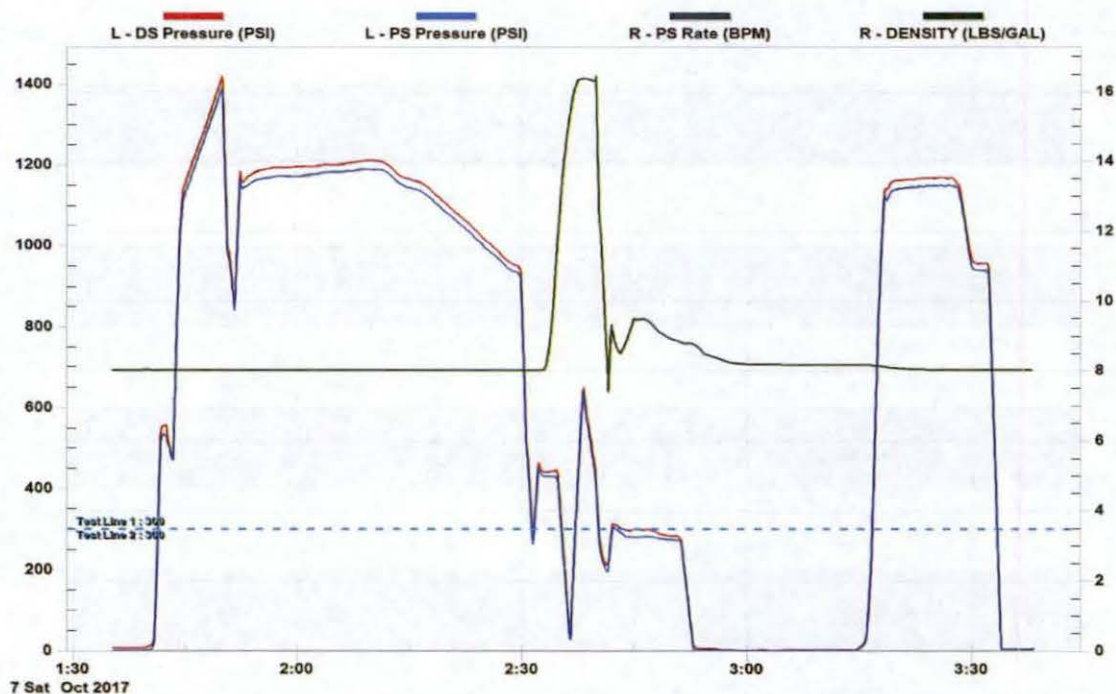
END TIME 3:38:21

LSD#:

Ticket#:

Comments:

SUMMARY GRAPH







COMPANY DETAILS

Company: REX

Email:

Contact:

Phone:

JOB DETAILS

DATE October 07, 2017

START TIME 15:44:22

Operator:

END TIME 16:32:00

LSD#:

Ticket#:

Comments:

SUMMARY GRAPH



Customer: R.E. Gas Development	Date: 10/8/2017	Serv. Supervisor: Anthony Barbara
Cust. Rep.: Aaron	Ticket #: BPA-1710-0012	Serv. Center: Black Lick, PA
Lease: Northstar Khalil SWD 0	API Well #:	County: Mahoning State: OH
Well Type:	Rig: 0 0	Type of Job: Plug

**Materials Furnished by C&J ENERGY SERVICES**

Plugs		Casing Hardware		Physical Slurry Properties					
				Sacks of Cement	Fluid Dens (lb/gal)	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Mix Water (bbls)
Spacer 1:	Water			-	8.34				
Lead									
Tail:	CJ916 + 0.1% CJ210F + 0.5 LB/SK CJ600			140	16.4	1.06	4.29	26	14

Displacement Chemicals:

OPEN HOLE DATA				TUBULAR DATA							
SIZE (in)	EXCESS (%)	DEPTH (ft)	TYPE (CSG/TBGP/DP)	OD (in)	WEIGHT (lbs/ft)	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
9 7/8			Casing	2 3/8	4.7		7482		1.98		
			Drill Pipe	2 3/8	4.7		7482		2.01		

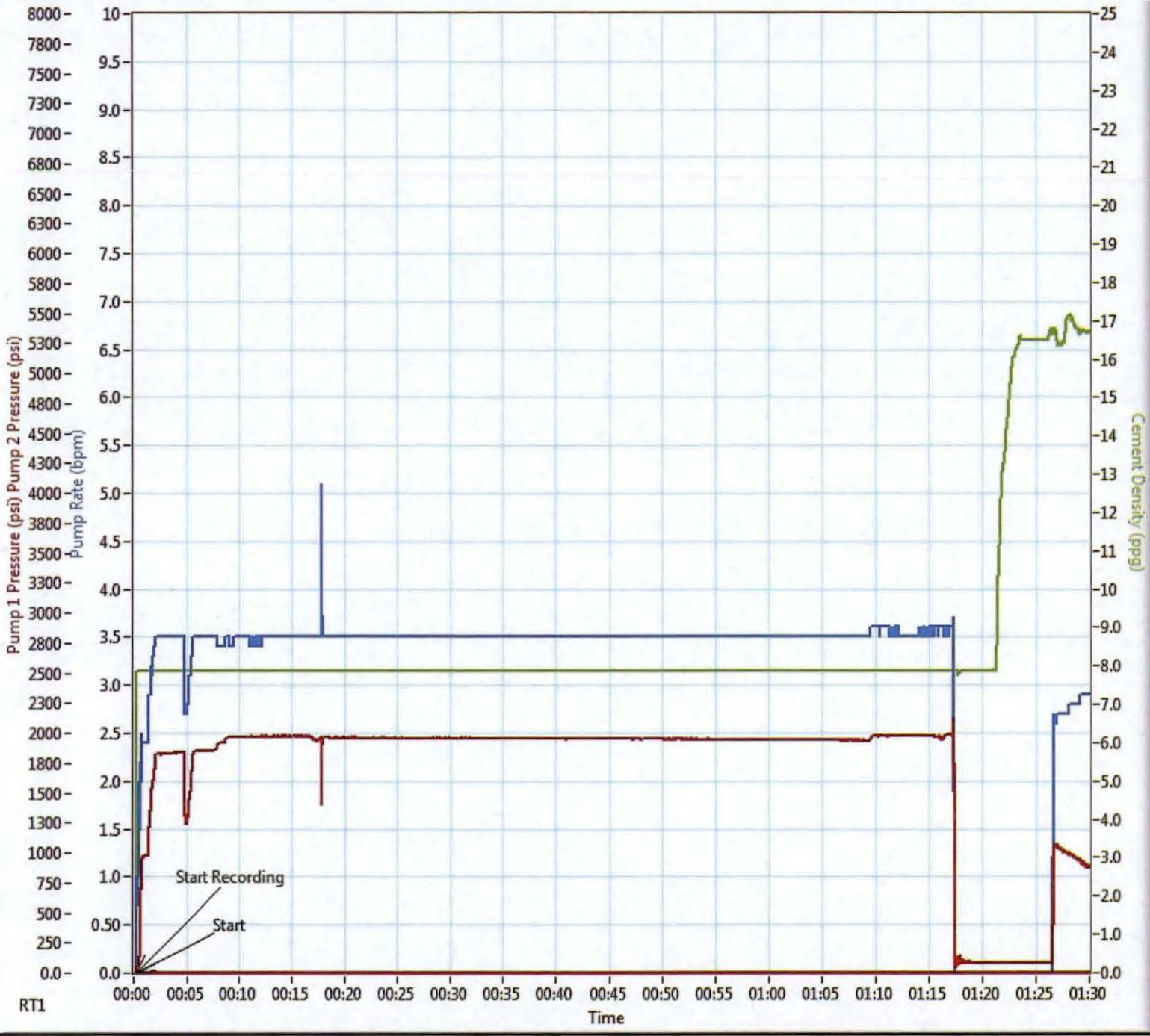
PREVIOUS CASING DATA				PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
SIZE (in)	WEIGHT (lbs/ft)	ID (in)	DEPTH (ft)	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
7 5/8	24	7.03	7482					7482	7482		

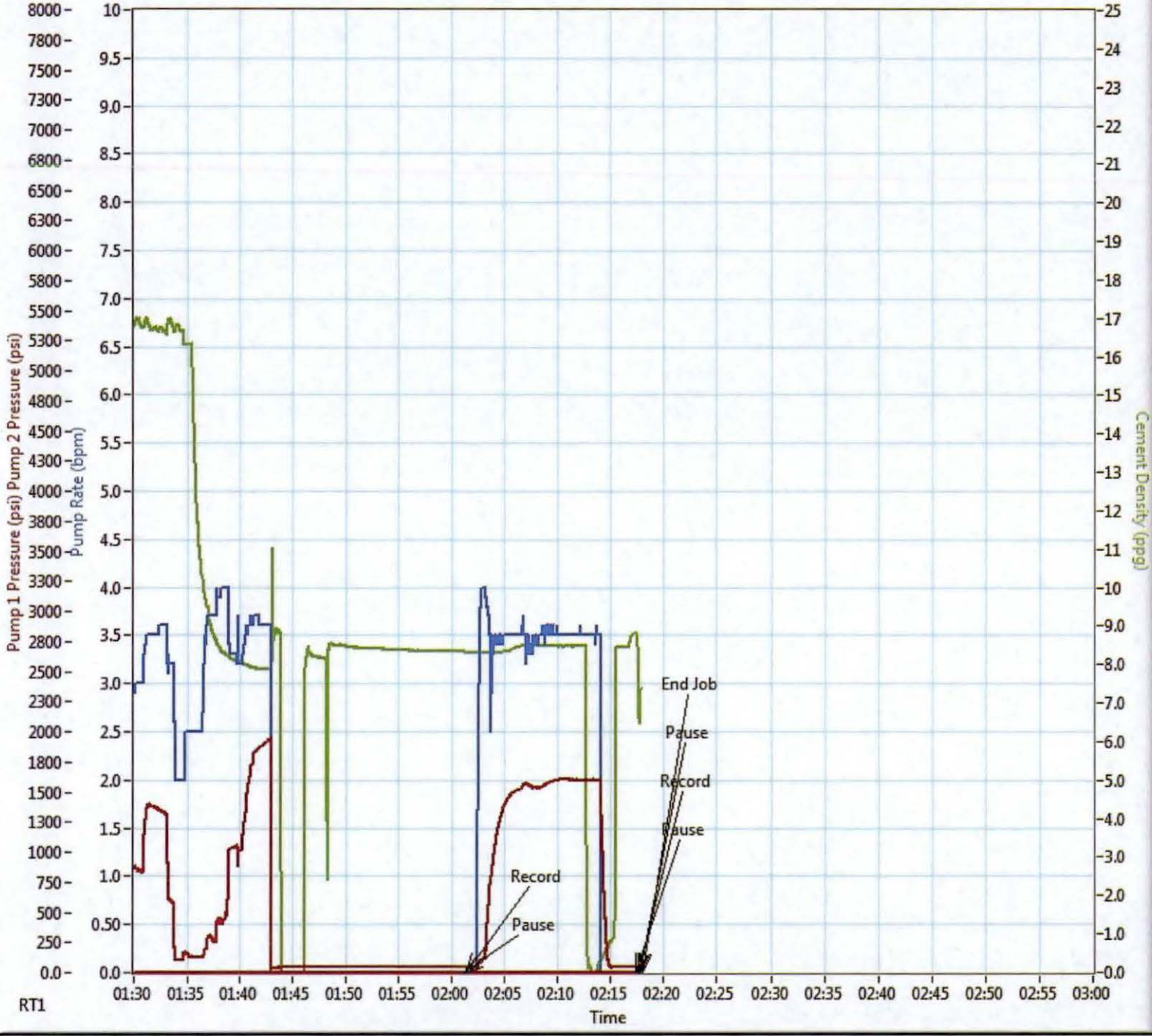
WELL FLUID		DISPLACEMENT FLUID (STG 1)		DISPLACEMENT FLUID (STG 2)		WATER ON LOC (bbl)		DIFF PRESS (psi)		CSG LIFT (psi)		MAX PRESS (psi)	
TYPE	DENSITY	VOLUME	TYPE	DENSITY	VOLUME	TYPE	DENSITY						
H2O	8.3 ppg	27 bbl	H2O	0.2 ppg				1000					

Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press. (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Details					
11:00 AM							0 Yard Call					
12:30 PM							0 Pre convoy meeting					
5:00 PM							0 Waiting off location					
8:00 PM							0 Arrive back on Location/ waiting for Crew					
1:15 AM							0 Pre Rig Up Meeting					
1:30 AM							0 Rig Up					
2:00 AM							0 Waiting of rig					
2:25 AM							0 Safety Meeting with Rig crew and Company Man					
2:40 AM	3.5	1855			330	330	Roll Hole H2O temp-67.6					
3:10 AM	3.5	1955				330	Roll Hole Check @ 200bbls					
4:02 AM	3	835			25	355	Pump Cement @ 16.4# PPG temp going down hole -80.3					
						355	Weigh with Pressurized Scales					
4:13 AM	3.5	185			27	382	Displace Cement					
4:22 AM						382	Pull 14 Stands					
4:54 AM	3.5	1280			40	422	Reverse Circulate Got back 1bbl of Cement					
5:05 AM							End. Wash up					
5:17 AM							Rig Down					

Left Yard	10/8/17 1:00 PM			Left Loc.	10/9/17 6:00 AM			Start Pump	10/9/17 2:40 AM	
Arrived Loc.	10/8/17 5:00 PM			Returned Yd	10/9/17 8:30 AM			End Pump	10/9/2017 5:00	
Bumped Plug (psi)	Final Differential (psi)	Floats Held (Y/N)	PSI Left on Casing	Cement to Surface (bbl)	Full Circ. During Job (Y/N)	Max Pump Pressure (psi)	Standby Charged (hrs)	Anthony Barbara		
			0	1	Yes	2000		Service Supervisor		









Customer: R.E. Gas Development	Date: 10/9/2017	Serv. Supervisor: Anthony Barbara
Cust. Rep.:	Ticket #: BPA-1710-0015	Serv. Center Black Lick, PA
Lease: Northstar Khalil SWD 0	API Well #:	County: Mahoning State: OH
Well Type:	Rig: 0 0	Type of Job: Squeeze

**Materials Furnished by C&J ENERGY SERVICES**

Plugs		Casing Hardware		Physical Slurry Properties					
				Sacks of Cement	Fluid Dens (lb/gal)	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Mix Water (bbls)
Spacer 1:	Water			-	8.34			20	
Lead									
Tail:	CJ910 + 0.4% CJ511 + 0.1% CJ210F			410	15.6	1.18	5.21	86	51

Displacement Chemicals:

OPEN HOLE DATA			TUBULAR DATA								
SIZE (in)	EXCESS (%)	DEPTH (ft)	TYPE (CSG/TBG/DP)	OD (in)	WEIGHT (lbs/ft)	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
			Casing	2 3/8	4.7		5485		1.98		
			Drill Pipe	2 3/8	4.7		4900		2.01		

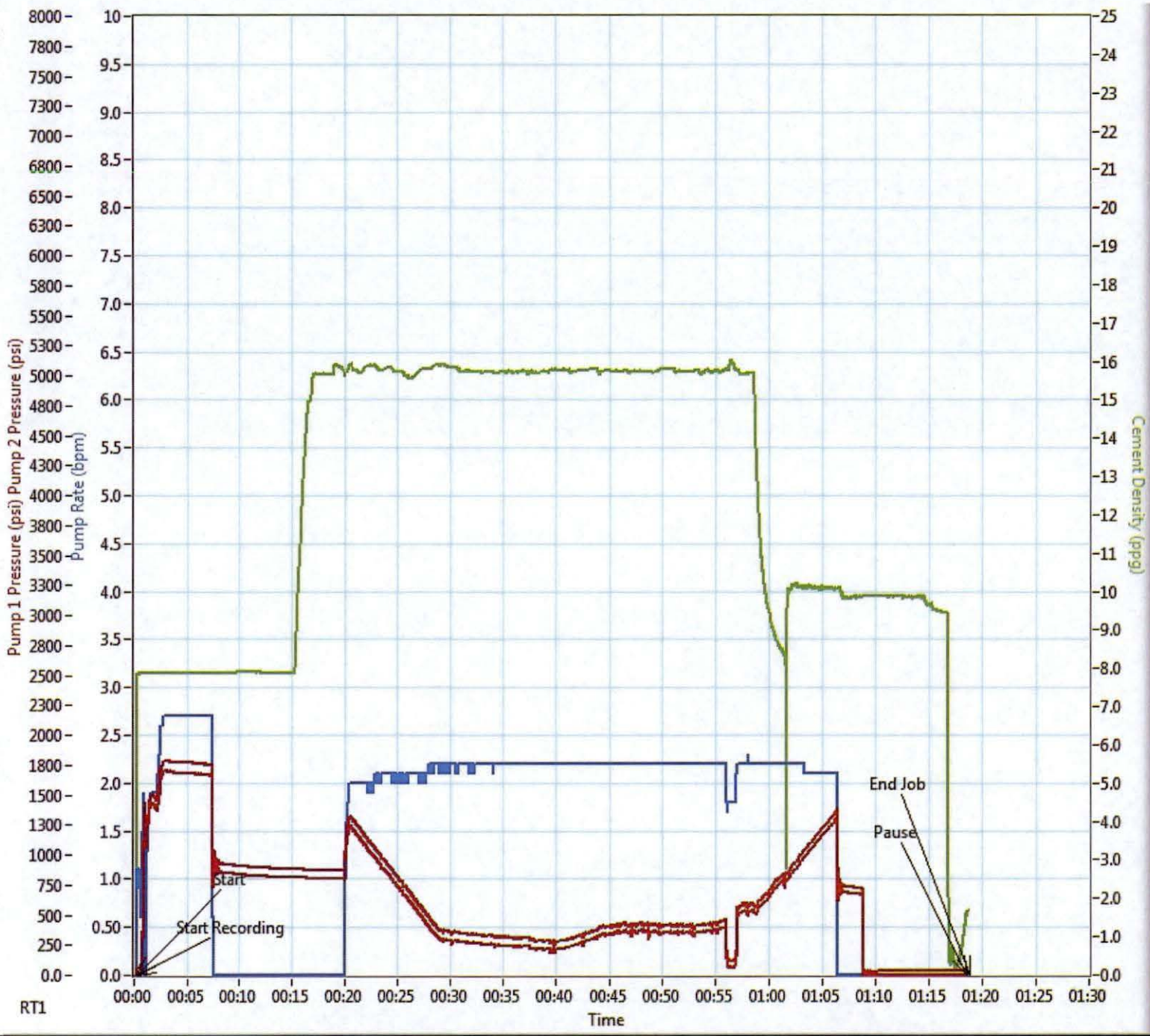
PREVIOUS CASING DATA				PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
SIZE (in)	WEIGHT (lbs/ft)	ID (in)	DEPTH (ft)	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
7 5/8	24	7.03	5485					5485	4885		

WELL FLUID		DISPLACEMENT FLUID (STG 1)		DISPLACEMENT FLUID (STG 2)		WATER ON LOC (bbl)	DIFF PRESS (psi)	CSG LIFT (psi)	MAX PRESS (psi)
TYPE	DENSITY	VOLUME	TYPE	DENSITY	VOLUME	TYPE	DENSITY		
								450	

Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Details				
6:00 PM						0	Yard Call				
6:50 PM						0	Pre Convoy Meeting				
7:15 PM						0	Leave Yard				
9:15 PM						0	Arrive on Location				
9:20 PM						0	Pre Rig up Meeting				
9:30 PM						0	Rig Up				
10:20 PM						0	Safety Meeting with Rig Crew and Company Man				
10:42 PM	1.3	1300			1	1	Establish Injection rate				
	2	1430			9	10	Injection test rate				
	2.8	1770			7	17	Injection test rate				
11:00 PM	2	1200			1	18	Mix and Pump Cement @15.6# PPG				
						18	Weighed with Pressurized Scales				
11:21 PM	2	280			44	62	Cement Pressure rate Check				
11:26 PM	2	310			10	72	Cement Pressure rate Check				
11:46 PM	2	400			31	103	End Cement				
11:40 PM	2	520			1	104	Start Displacement				
11:47 PM	2	1240			27.5	131.5	End Displacement				
11:48 PM		720					Shut Down				
11:49 PM							Sting Out				
11:54 PM							Wash up Truck				
12:10 AM							Rig Down				

Left Yard	10/9/17 7:15 PM			Left Loc.	10/10/17 12:45 AM			Start Pump	
Arrived Loc.	10/9/17 9:15 PM			Returned Yd	10/10/17 2:30 AM			End Pump	
Bumped Plug (psi)	Final Differential (psi)	Floats Held (Y/N)	PSI Left on Casing	Cement to Surface (bbl)	Full Circ. During Job (Y/N)	Max Pump Pressure (psi)	Standby Charged (hrs)	Anthony Barbara	
			750		No	1770	0	Service Supervisor	







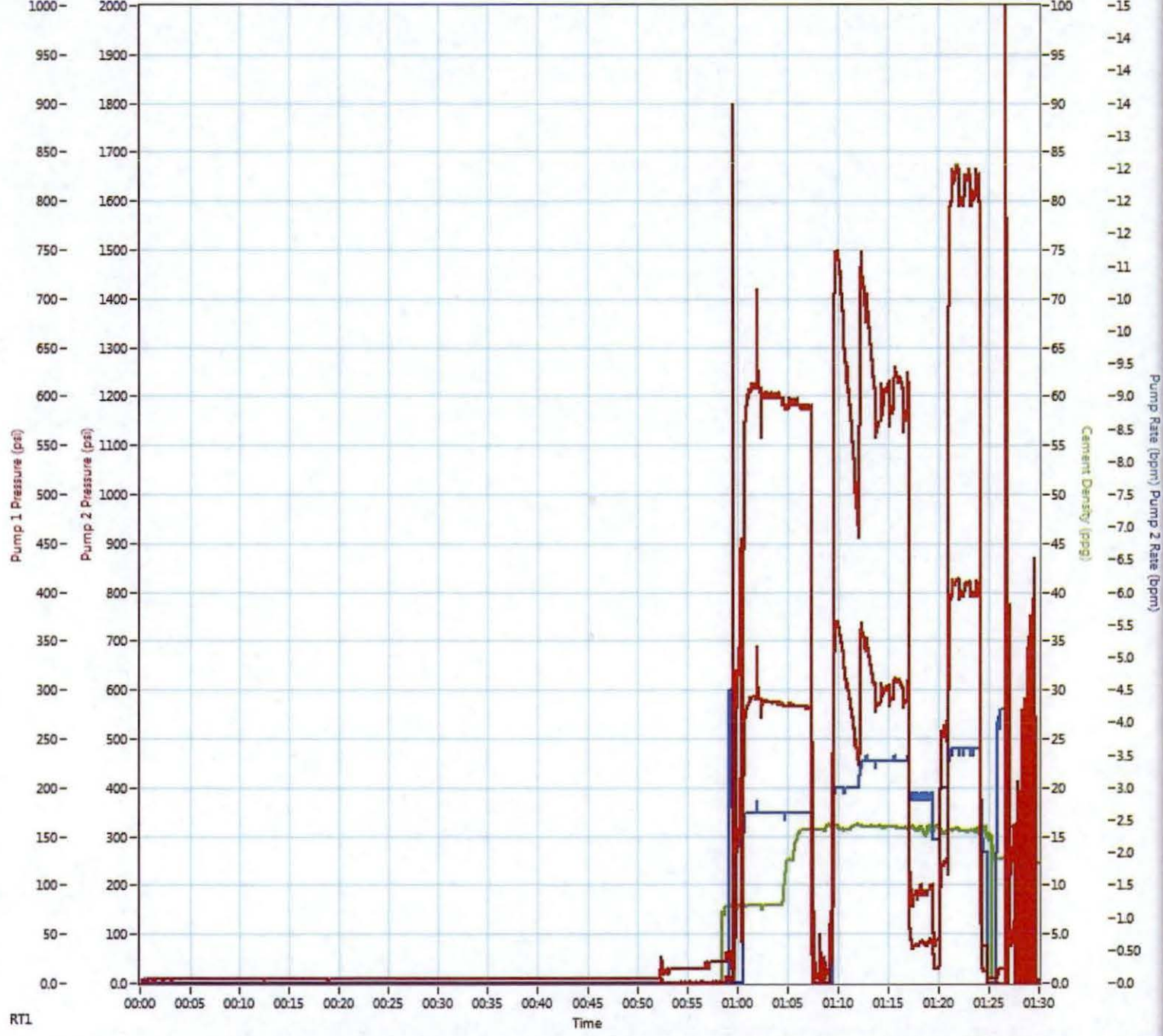
[illegible]



# REX / NORTH STAR / Balance Plug Cement Job -

**Cement Report**

## Surface Casing - Recorded Time Plot 1 - 1 of 2



Surface Casing - Recorded Time Plot 1 - 1 of 2

XXXXX-000001710-0030 / Sun, Oct 15, 2017

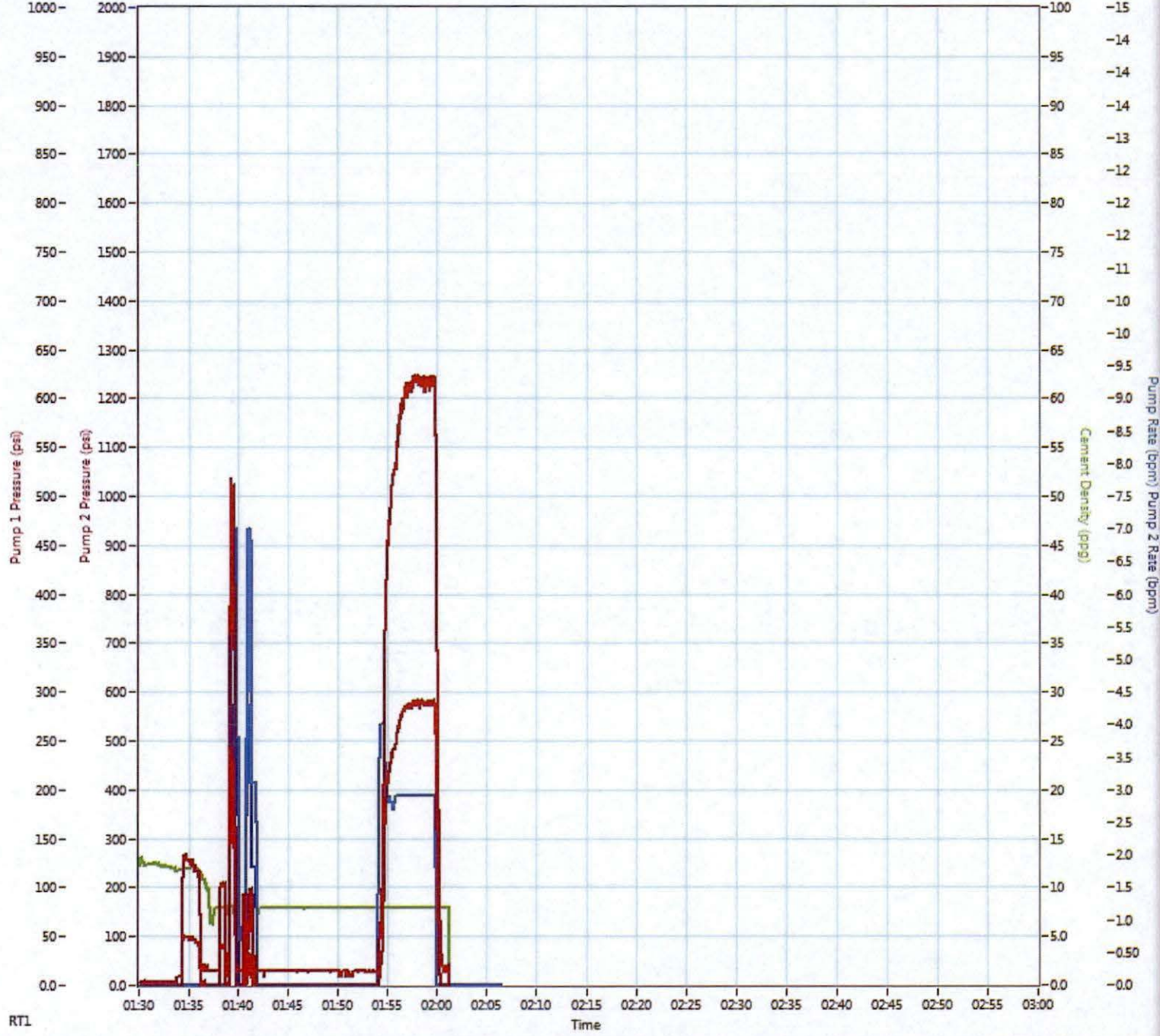
Page 7 of 11



# REX / NORTH STAR / Balance Plug Cement Job -

## *Cement Report*

### Surface Casing - Recorded Time Plot 1 - 2 of 2



#### Surface Casing - Recorded Time Plot 1 - 2 of 2

XXXXX-000001710-0030 / Sun, Oct 15, 2017

Page 8 of 11



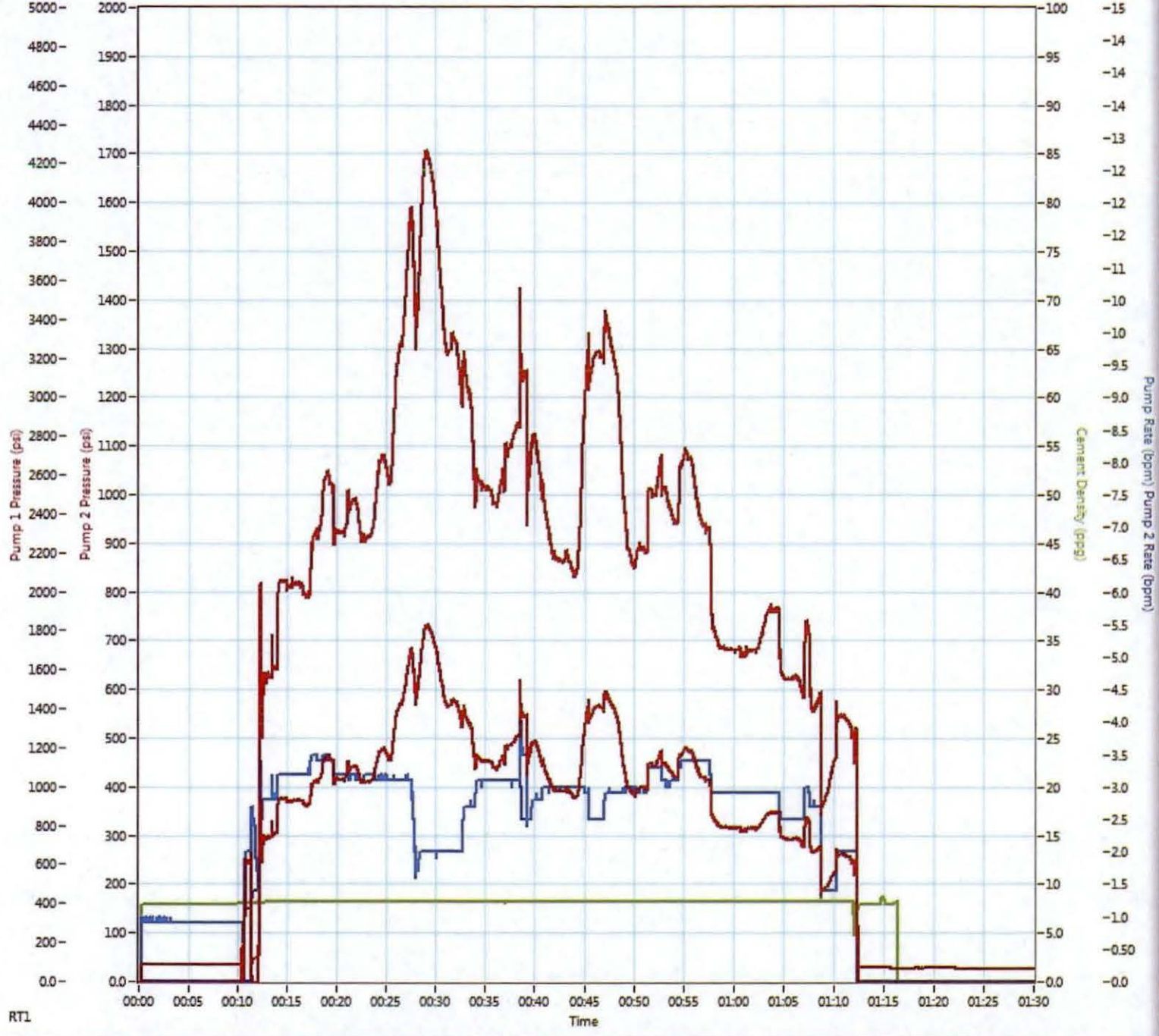
Customer: R.E. Gas Development		Date: 10/16/2017		Serv. Supervisor: KRIS COOK							
Cust. Rep.: Aaron		Ticket #: BPA-1710-0032		Serv. Center: Black Lick, PA							
Lease: Northstar Khalil SWD 0		API Well #:		County: Mahoning State: OH							
Well Type:		Rig: 0 0		Type of Job: Plug							
Materials Furnished by C&J ENERGY SERVICES											
Plugs		Casing Hardware		Physical Slurry Properties							
				Sacks of Cement	Fluid Dens (lb/gal)	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Mix Water (bbls)		
Spacer 1:	Water			-	8.34						
Lead	CJ910 + 2% CJ110			90	15.6	1.20	5.24	19	11		
Tail:	CJ910 + 2% CJ110			315	15.6	1.20	5.24	67	39		
Displacement Chemicals:											
OPEN HOLE DATA			TUBULAR DATA								
SIZE (in)	EXCESS (%)	DEPTH (ft)	TYPE (CSG/TBG/DP)	OD (in)	WEIGHT (lbs/ft)	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
9 7/8		1125'	Casing	2 3/8	4.7		1125		1.98		
			Drill Pipe	2 3/8	4.7				2.01		
PREVIOUS CASING DATA			PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS				
SIZE (in)	WEIGHT (lbs/ft)	ID (in)	DEPTH (ft)	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
10 3/4	32.75	10.18	1025					1125	1125		
WELL FLUID		DISPLACEMENT FLUID (STG 1)		DISPLACEMENT FLUID (STG 2)		WATER ON LOC (bbl)		DIFF PRESS (psi)		CSG LIFT (psi)	
TYPE	DENSITY	VOLUME	TYPE	DENSITY	VOLUME	TYPE	DENSITY				
Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press. (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Details				
						0	PLUG FROM 1,125' TO 925'				
6:00 AM						0	ARRIVED ON LOCATION				
6:15 AM						0	PRE RIG UP MEETING				
6:30 AM						0	SET TRUCKS UP				
7:15 AM						0	SAFETY MEETING				
7:41 AM	2	375			5	5	MIX AND PUMP 2000' GEL PLUG				
8:45 AM						5	SHUT DOWN/ RIG PULLED TUBING				
11:09 AM	4.5	570-830			125	130	PUMP WATER TO BALANCE WELL				
11:37 AM	3.6	360			19.3	149.3	MIX AND PUMP CEMENT @ 15.6 PPG				
						149.3	WEIGHED CEMENT WITH PRESSURIZED MUD SCALES				
11:47 AM	2	45			2.5	151.8	PUMPED WATER DISWPLACEMENT				
11:49 AM						151.8	SHUT DOWN/ RIG PULLED TUBING				
12:00 PM	3.5	325			7	158.8	PUMPED WATER TO REVERSE CIRCULATE				
						158.8	GOT .25 BBLs CEMENT BACK				
12:06 PM						158.8	SHUT DOWN AND WASHED UP				
12:06 PM	TO	23:00				158.8	WAIT ON CEMENT AND RIG				
						158.8					
						158.8	PLUG FROM 700' TO SURFACE				
11:00 PM	2	35			2.5	161.3	BREAK CIRCULATION				
11:02 PM	4	320			67.5	228.8	PUMP CEMENT				
							KNOCK OFF AND WASH UP				
12:15 PM							RACK UP				
12:30 PM							JOB COMPLETE				
Left Yard	10/16/17 5:00 AM			Left Loc.	10/17/17 12:30 PM			Start Pump	10/16/17 7:41 AM		
Arrived Loc.	10/16/17 6:00 AM			Returned Yd	10/17/17 2:30 AM			End Pump	10/17/17 11:02 AM		
Bumped Plug (psi)	Final Differential (psi)	Floats Held (Y/N)	PSI Left on Casing	Cement to Surface (bbl)	Full Circ. During Job (Y/N)	Max Pump Pressure (psi)	Standby Charged (hrs)	KRIS COOK			
	320			1	Yes	830	14	Service Supervisor			



# REX / NORTH STAR / Balance Plug Cement Job -

*Cement Report*

Balanced Plug - Recorded Time Plot 1 - 1 of 3



GEL PLUG

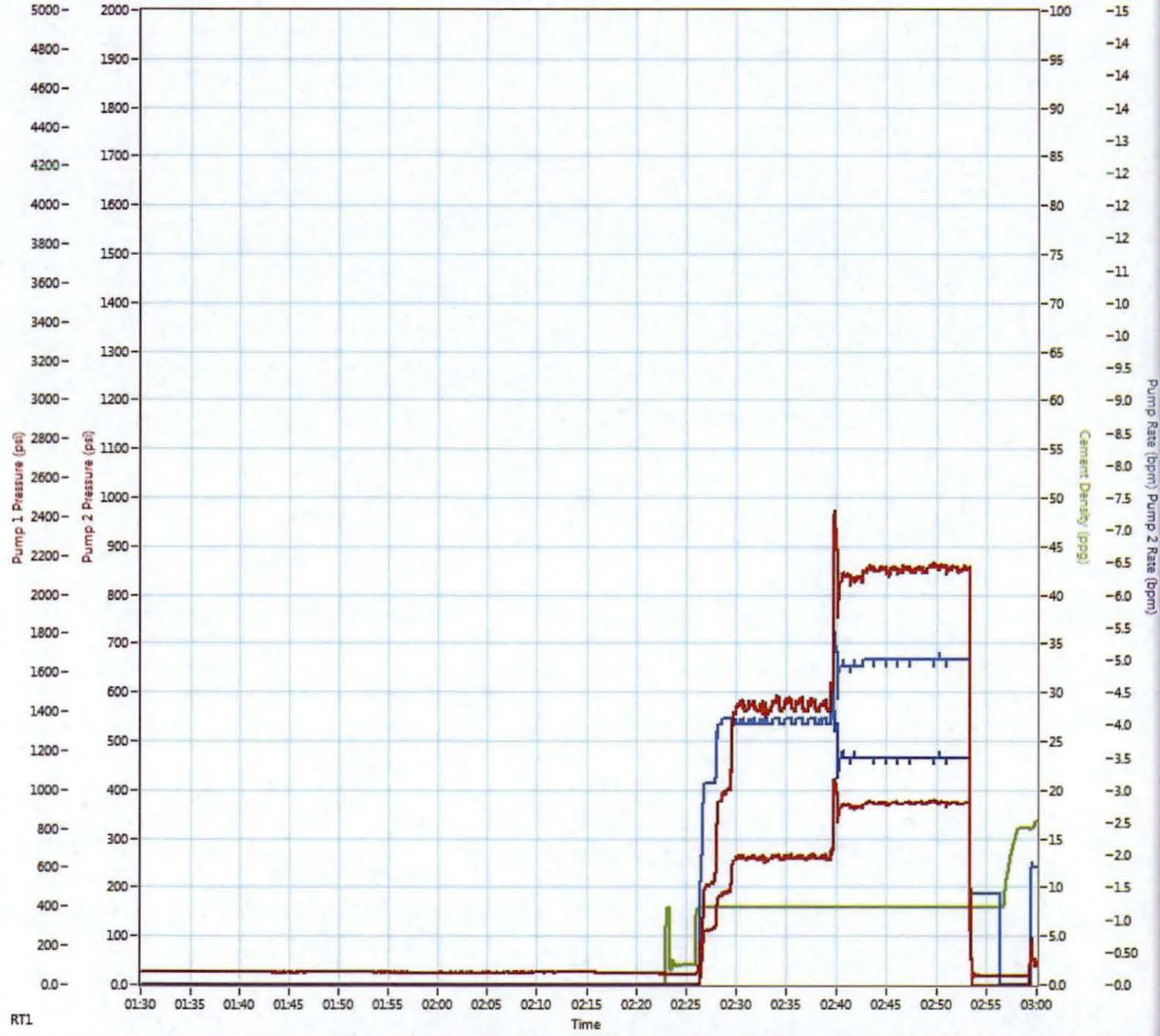
XXXXX-000001710-0031 / Mon, Oct 16, 2017

Page 7 of 12

# REX / NORTH STAR / Balance Plug Cement Job -

*Cement Report*

Balanced Plug - Recorded Time Plot 1 - 2 of 3



CEMENT PLUG FROM 1,125' TO 925'

XXXXX-000001710-0031 / Mon, Oct 16, 2017

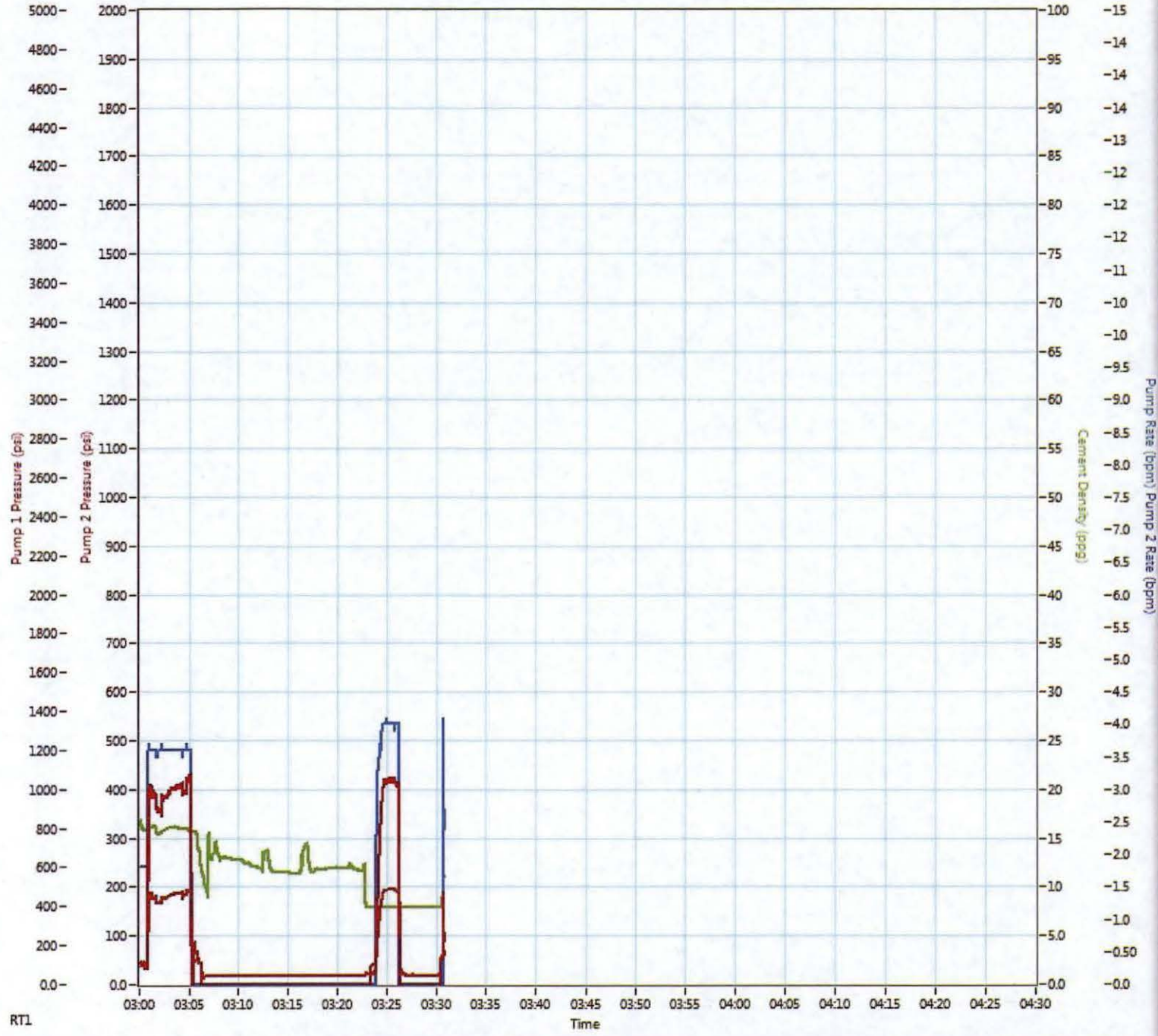
Page 8 of 12



# REX / NORTH STAR / Balance Plug Cement Job -

**Cement Report**

Balanced Plug - Recorded Time Plot 1 - 3 of 3



CEMENT PLUG FROM 1,125' TO 925'

XXXXXX-000001710-0031 / Mon, Oct 16, 2017

Page 9 of 12