UIC - I - ___5___

EPA FALL-OFF TEST

DATE:

2016

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, October 27, 2016 5:08 PM
To: 'pthompson@merrion.bz'
Cc: Ryan Davis (rdavis@merrion.bz); Griswold, Jim, EMNRD; Kuehling, Monica, EMNRD
Subject: Agua Moss, LLC - Sunco SWD #1 API# 30-045-28653 (UICI-5) 2016 Fall-Off Test (FOT)
Attachments: 2016-9-30 FOT Report to OCD.pdf

Philana, et al.:

The New Mexico Oil Conservation Division (OCD) is in receipt of the above subject Fall-Off Test (FOT). OCD has completed its review of the FOT, and has the following:

Observations:

1) Derivative Plot was inconsistent with standard radial flow FOT conditions.
2) Naturally Fractured Rock (Linear Flow):
    a. The fracture system will be observed first on the falloff test followed by the total system consisting of the fractures and matrix.
    b. The falloff analysis is complex. The characteristics of the semi-log derivative trough on the log-log plot indicate the level of communication between the fractures and the matrix rock.
3) Pressure differential in injection zone > 450 psi, which indicates the injection zone is infinite in aerial extent or injection zone boundaries have yet to be identified from FOT history.
4) While the injection rate appeared adequate to stress the injection zone in advance of the FOT monitoring period, the injection rate increased significantly during June 29th before valve closure and the start of FOT monitoring.

Recommendations:

1) A pseudo-steady state injection rate must be achieved before valve closure in a FOT. It is not clear why the injection rate significantly increased on 6/29 before valve closure and FOT monitoring?
2) An explanation for the "Derivative Plot" dual or parallel curves was not given in the report, but is recommended in future FOT reports by the FOT report author.
3) The report author may want to avoid comparisons or references to standard "radial flow" conditions in future FOT derivative plots.

Conclusions:

1) Non-radial flow condition, i.e., linear flow most likely due to rock fractures.
2) Figure 5: Pseudo-steady state flow rate does not appear to have been achieved before valve closure at start of FOT monitoring period.
3) Page 10 Summary estimations from various evaluation of other plots appears to be most accurate basis for injection zone characteristics:
    a. Estimated Kw (permeability)= 11.5 md
    b. Estimated skin = -5.93
    c. Extrapolated pressure= 3114 psig
    d. Fracture half-length = 594 feet (from derivative half-slope line) Radius of investigation = 1430 feet

4) The plots used in No. 3 above to derive average injection zone values also rely on a pseudo-steady state injection rate to be attained before valve closure and FOT monitoring.

Please contact me if you have questions. Thank you.

Mr. Carl J. Chavez
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us

"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD and see "Publications")

Sunco SWD #1

30-045-28653

Class I Disposal: UICI-5-0

2016 Falloff Test

Agua Moss, LLC

P.O Box 600

Farmington, NM 87499

ORGID 247130

Report Components:

1. Facility Operator Information
    a. Agua Moss, LLC
    b. PO Box 600 Farmington, NM 87499
    c. OGRID 247130
2. Well Information:
    a. UIC Permit # UICI-5-0
    b. Class I
    c. Sunco Disposal #1
    d. 30-045-28653
    e. UL E, Sec 2, T29N, R12W 1595 FNL & 1005 FWL San Juan County
3. Current Wellbore Diagram: **Attached** (page 4)
4. Copy of Electronic Log: **Previously submitted 1992** (page 5)
5. Copy of Porosity Log: **Previously submitted 1992** (page 6)
6. See attached Fall off Test analysis
    a. FOT Procedure (page 7)
    b. Analysis (page 7)
    c. Results (page 18)
    d. Summary (page 18)
7. Results Comparison attached (page 19)
8. The raw test data will be kept on file for a period of 3-year and will be made available to the NMOCD upon written request. (page 19)
9. Conclusions (page 19)
10. Any pressure or temperature anomaly: **None seen on BH readings, surface pressure fell off and rate increased: (See Figures 3, 4 & 5)** possible cause is change of injection fluid density and friction properties. Pumped Fresh water through first 2/3rds of injection period and then switched over to produced water. Decrease in tubing pressure from density change and possible friction properties allowed rate to ramp up until it stabilized, injection period was extended to ensure rate stabilization prior to fall-off period.
11. Plots attached
    a. Pressure and Rate (fig 3) (page 20)
    b. Injection Rate vs Time (fig 4) (page 21)
    c. Pressure and Rate (fig 5) (page 22)
    d. Elapsed Time (fig 6) (page 23)
    e. Derivative Plot (fig 7) (page 24)
    f. Horner Plot (fig 8) (page 25)
    g. Elapsed Gauge Time (fig 9) (page 26)
    h. Injection Volumes and Surface Pressure (fig10) (page 27)
12. NO PVT data necessary, injected fluid is fresh-to-slightly saline water. No significant hydrocarbons present that would alter the density, compressibility and/or viscosity of the fluid.

a. AOR 1 mile (page 32)
b. AOR 1 mile well data (page 33)
c. The McGrath #4 was the only offset well that was injecting into the Point Lookout formation within 1 mile. This well was plugged 7/25/2013.

16. Geological information was provided in the last Permit renewal submitted and approved in 2012.
17. Offset Wells: One offset well that was completed in the same injection interval was the McGrath #4. This well was plugged 7/2013 and therefore was not impacted.
18. Chronological listing of the daily, testing activities (operations log) attached (pages 35-50)
    a. Date of Test: **Monday June 27th 2016 through Tuesday July 25th 2016**
    b. Time of the injection period: **57.6 hours**
    c. Type of injection fluid: **Produced water**
    d. Final injection pressure & temp prior to shutting in in the well: **3763.46 psi, 83.69 °F**
    e. Total shut-in time: **130.6 hours**
    f. Final static pressure & temp at the end of the fall-off portion of the test: **3304 psi, 91.45 °F**
19. Location of the shut in valve: **A wing valve located on the well's Christmas Tree was closed to begin the FOT**
20. Pressure Gauges: (see attached)
    a. SP-2000 Memory Pressure Gauge (page 51)
    b. Pressure range: **0-5000 psig** (page 52)
    c. Last Calibration: **2/4/14** (page 53)

Wellbore Schematic:

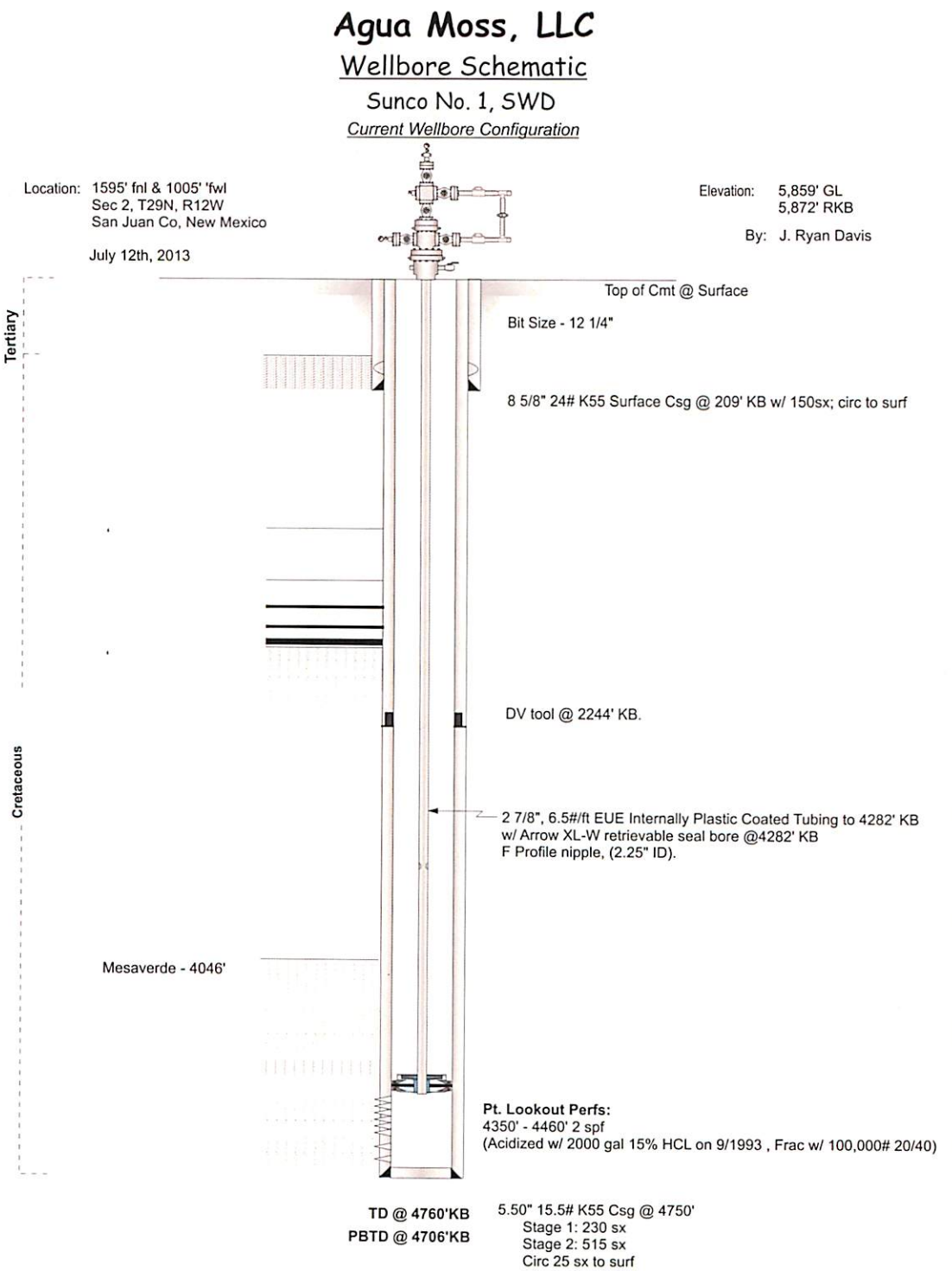
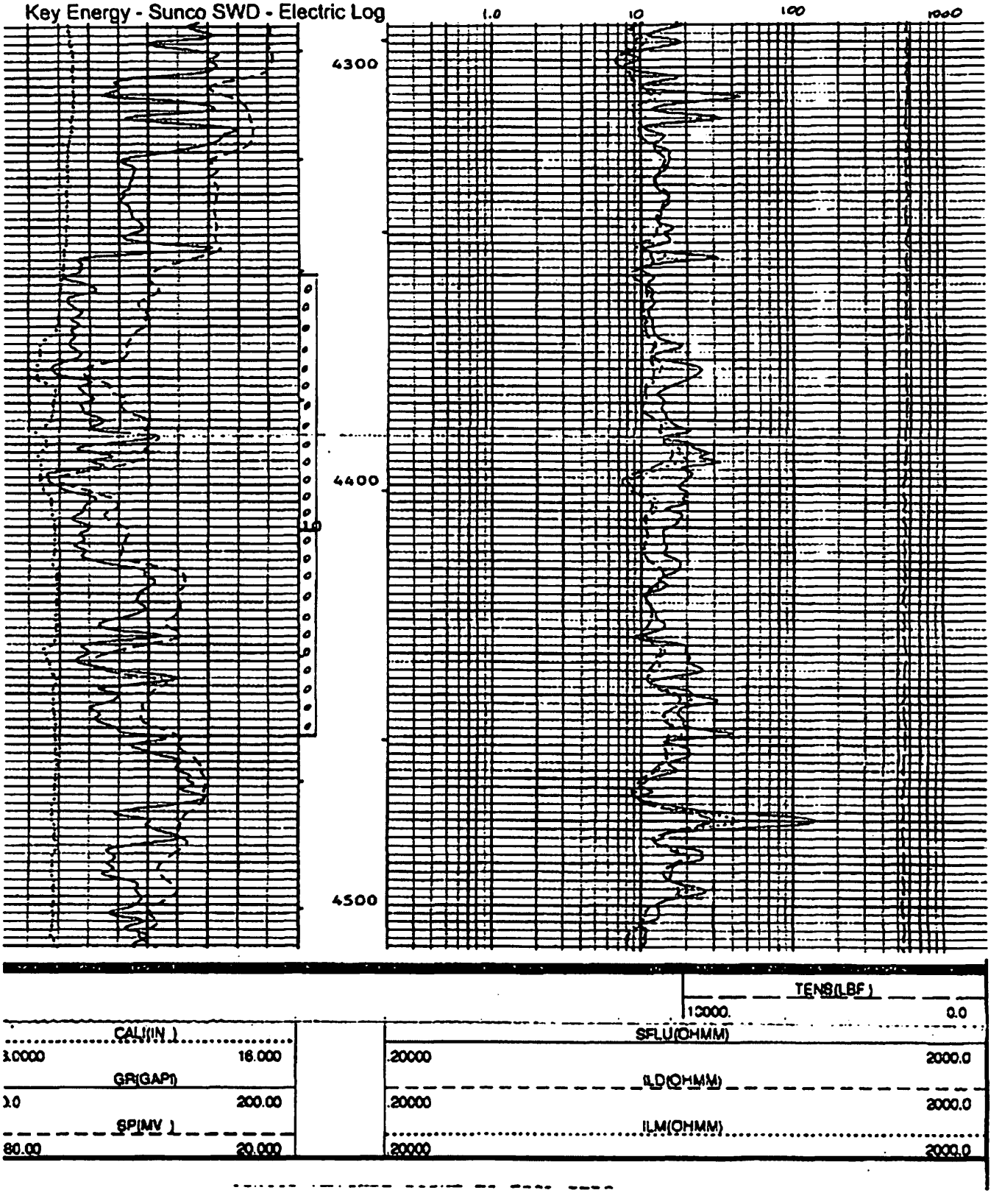
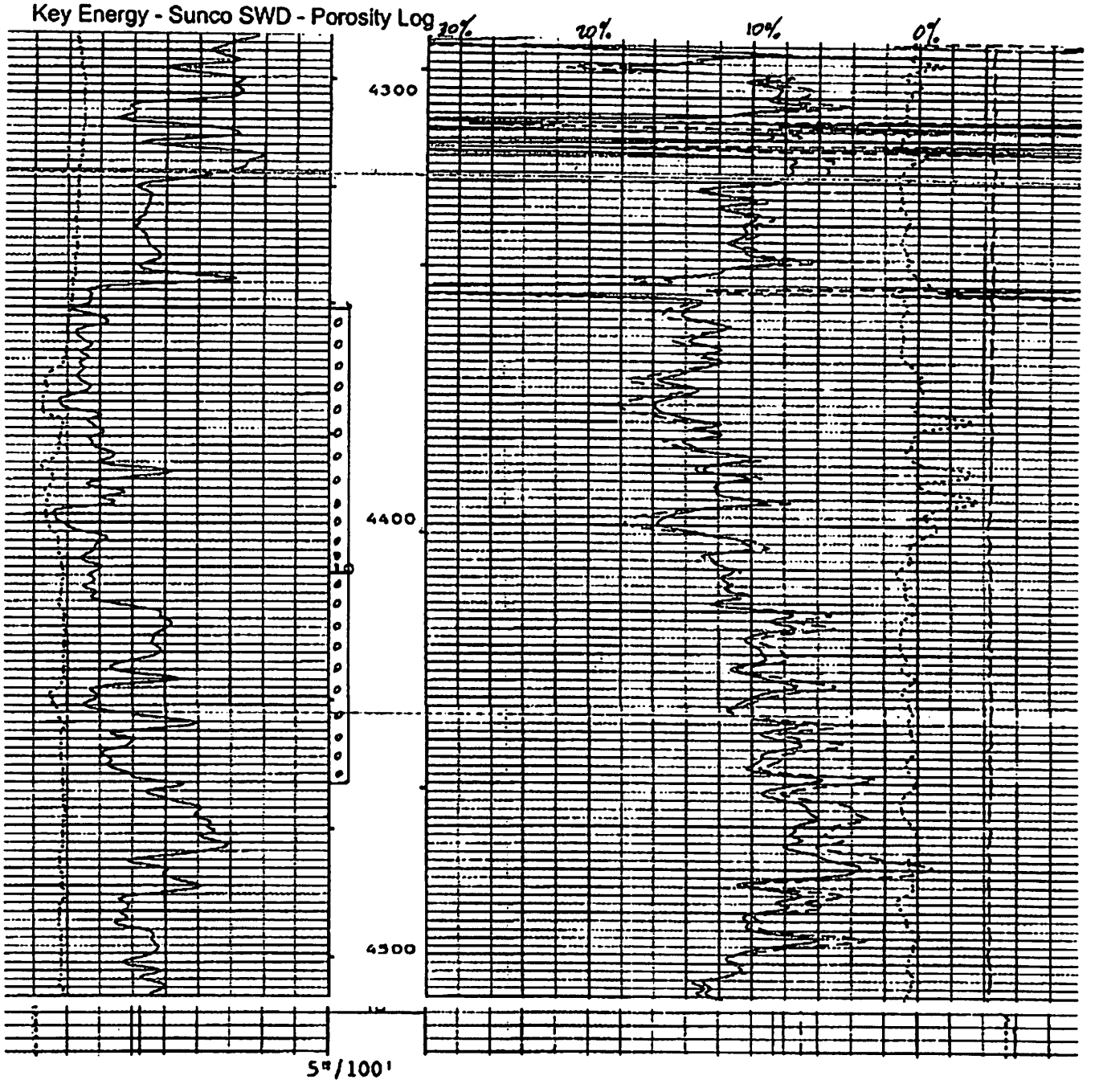
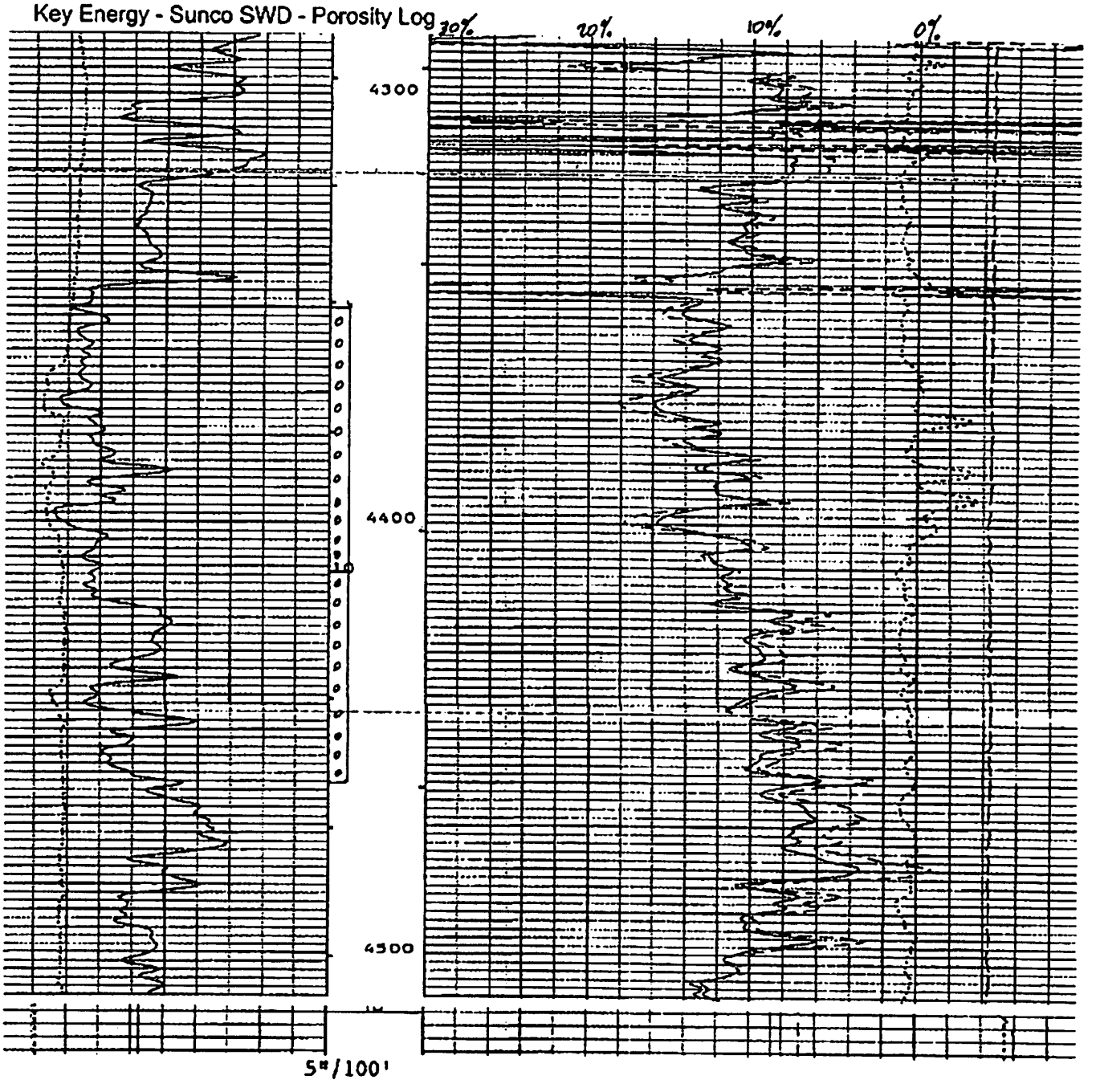


Figure 1: Wellbore Schematic


Key Energy - Sunco SWD - Electric Log
1.0
10
100
1000
4300
4400
4500
TENS(LBF)
10000.
0.0
CALI(IN)
16.000
GR(GAPI)
200.00
SP(MV)
20.000
SFLU(OHMM)
2000.0
ILD(OHMM)
2000.0
ILM(OHMM)
2000.0


Key Energy - Sunco SWD - Porosity Log
30%
20%
10%
0%
4300
4400
4500
5"/100'
CP 32.6
FILE 6
01-FEB-1992 20:21
(UP)
DRHO(G/C3)
-.2500
.25000
TENS(LBF)
10000.
0.0
CALI(IN)
8.0000
16.000
RHOB(G/C3)
2.0000
3.0000
GR(GAPI)
0.0
200.00
DPHI(V/V)
.30000
-.1000

Key Energy - Sunco SWD - Porosity Log



CP 32.6 FILE 6 01-FEB-1992 20:21 (UP)

		DRHO(G/C3)	
		-.2500	.25000
		TENS(LBF)	
		10000.	0.0
CALI(IN)		RHOB(G/C3)	
8.0000	16.000	2.0000	3.0000
GR(GAPI)		DPHI(V/V)	
0.0	200.00	.30000	-.1000

At the request of the NMOCD, a Falloff Test (FOT) was performed on the Sunco SWD #1 Class I injection well (UICI-5-0) on **06/27/2016**. Below is the summary of findings from the 2016 FOT.

Procedure:

Tandem electronic gauges were run in the subject well. The initial BHP was 3204 psi at a depth of 4405'. The injection period started at 11:00 am on 06/27/2016, with a total of 7503 bbls injected over 58 hours, and an average injection rate of 3132 bpd (91 gpm). The final bottom hole injection pressure was 3782 psi. Injection was shut down and the well was shut it at the wellhead. The bottom hole pressures were monitored for 120 hours of pressure falloff. The final BHP was 3304 psi.

Analysis:

The data was compiled in excel and analyzed. A Cartesian plot of pressure and temperature versus time was created see Figure 2 below..

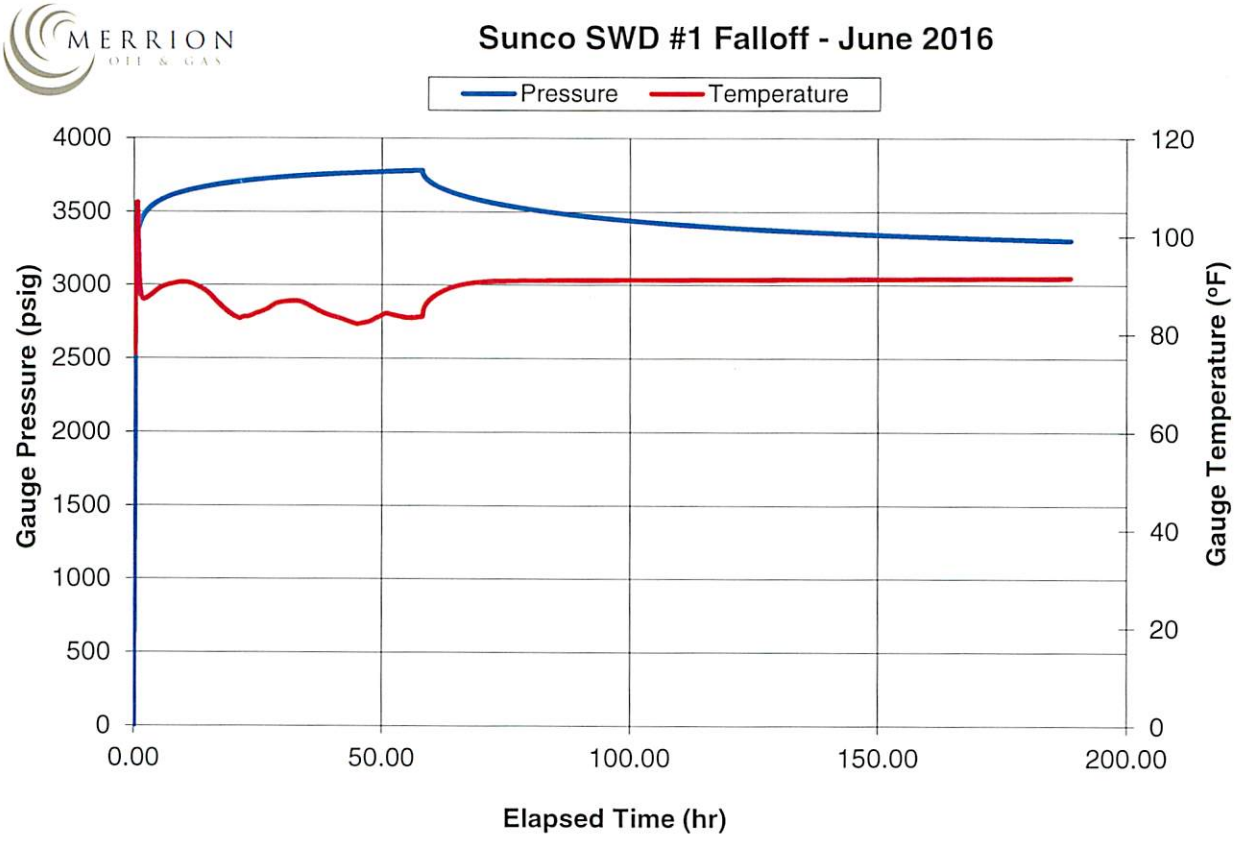


Figure 2: Cart Pressure/Temp vs. Time

The stabilization of pressure was confirmed prior to shut-in. The plot was reviewed for anomalous data, none found.

International Reservoir Technologies, Inc.

2016 Fall-off Pressure Test Analysis for the Sunco Disposal Well #1 San Juan County, New Mexico

prepared for

Merrion Oil and Gas Corporation

8 September 2016

International Reservoir Technologies, Inc.
Lakewood, Colorado, USA

Tel. (303) 279-0877
Fax (303) 279-0936

International Reservoir Technologies, Inc.

Sunco Disposal Well #1 2016 Fall-off Test Results

Summary:

The results of the 2016 fall off test (FOT) for the Sunco Disposal Well #1 indicate that the length of the shut-in test did allow the transient to reach a stabilized flow period and that the well has a significant hydraulic fracture. These results are similar to the 2015 test results. The pressure transient effect of the frac plus the wellbore storage effects do obscure to some extent the reservoir property influences; however, a reasonable and satisfactory set of reservoir properties could be calculated. The conventional straight-line analysis for extrapolated pressure and the reservoir property calculations from the Horner and MDH type plots are acceptable. The input parameters for the fluid properties (i.e. PVT data) changed slightly due to newly available fluid analysis (Report titled "2nd Quarter 2016 Sampling - Injection Well.pdf", NM1-9 INJECTION WELL ANALYTICAL RESULTS, Agua Moss Disposal Facility, Crouch Mesa Road, San Juan County, New Mexico, 6/28/16).

The results from the derivative, Horner and MDH type pressure plots are summarized in the table below. The results for the different methods were consistent and the average calculated properties were:

- Estimated Kw (permeability) = 11.5 md
- Estimated skin = -5.93
- Extrapolated pressure = 3114 psig
- Fracture half-length = 594 feet (from derivative half-slope line)
- Radius of investigation = 1430 feet

Calculated Reservoir Parameters				
	Horner Analysis	MDH Plot	Derivative Plot	Average
Estimated Kw (permeability, mD)	11.1	13.0	10.4	11.5
Estimated skin (dimensionless)	-5.96	-5.88	-5.95	-5.93
Extrapolated pressure (psig)	3098	3156	3088	3114
Fracture half-length (feet)	--	--	594	594
Radius of investigation (feet)	1660	1550	1080	1430

Larger versions of the plots appear at the end of this document.

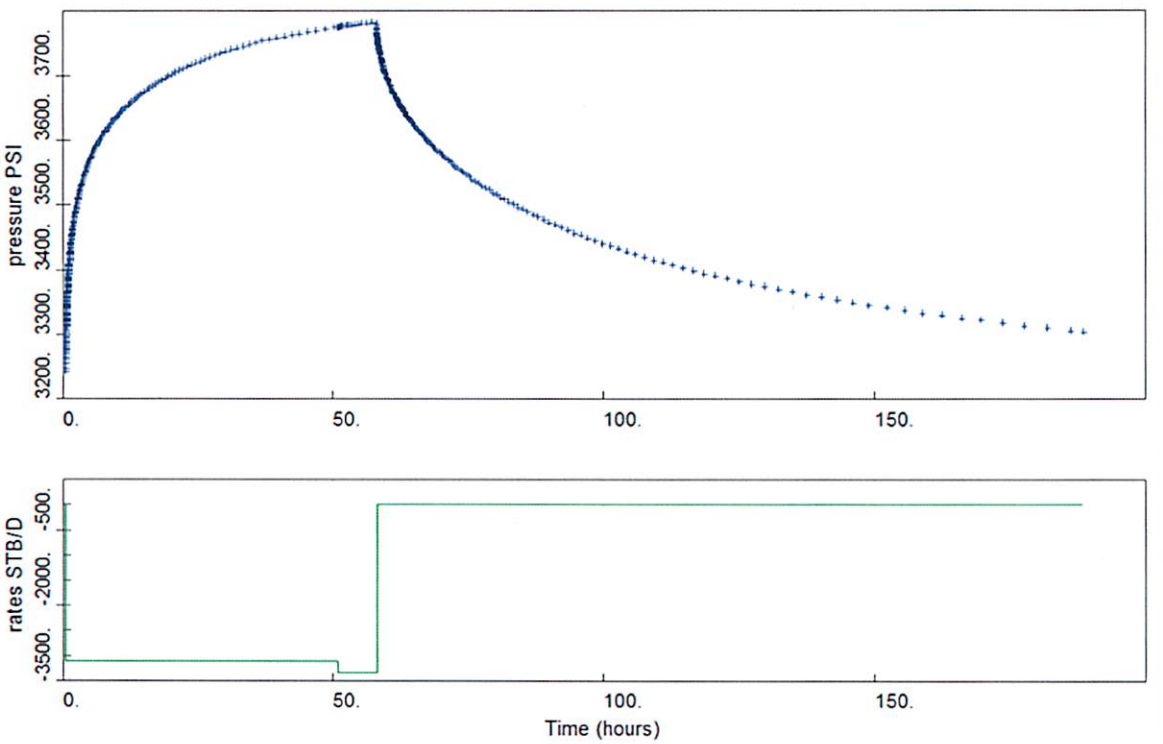
300 Union Blvd., Suite 400, Lakewood, Colorado 80228 (303) 279-0877 (303) 279-0936 Fax

Input data and assumptions:

Assumptions:

- Formation fluid properties equal injection water properties due to cumulative volume injected and miscibility of formation water and injection water
- Reservoir temperature = 91 deg F
- Porosity = 0.114 (fraction, estimated from density log)
- Net pay = 110 feet
- Rock compressibility = 4.50E-06 1/psi (correlation)
- Wellbore radius = 0.506 ft
- Wellbore volume total = 34.88 bbls (tubing = 24.79 bbls, casing = 10.09 bbls)
- Wellbore compressibility = injection water compressibility =2.64E-06 1/psi (from Osif correlation)
- Injected water specific gravity = 1.006 (pure water =1.0); density = 8.392 lb./gal, TDS = 15,500 mg/L
- Injected water FVF = 1.0023 rb/stb (McCain correlation)
- Injected water viscosity = 0.737 cp (McCain correlation)

DATA PLOT:



Sunco Disposal #1

Analysis-Data ID: GAU001
Gauge-Data ID: GAU001
Data starts at 2016-06-27 11:46:29
Data ends at 2016-07-05 07:56:00
Number of rates = 3
Cum. Production = -7500. BBLS

Static-Data and Constants

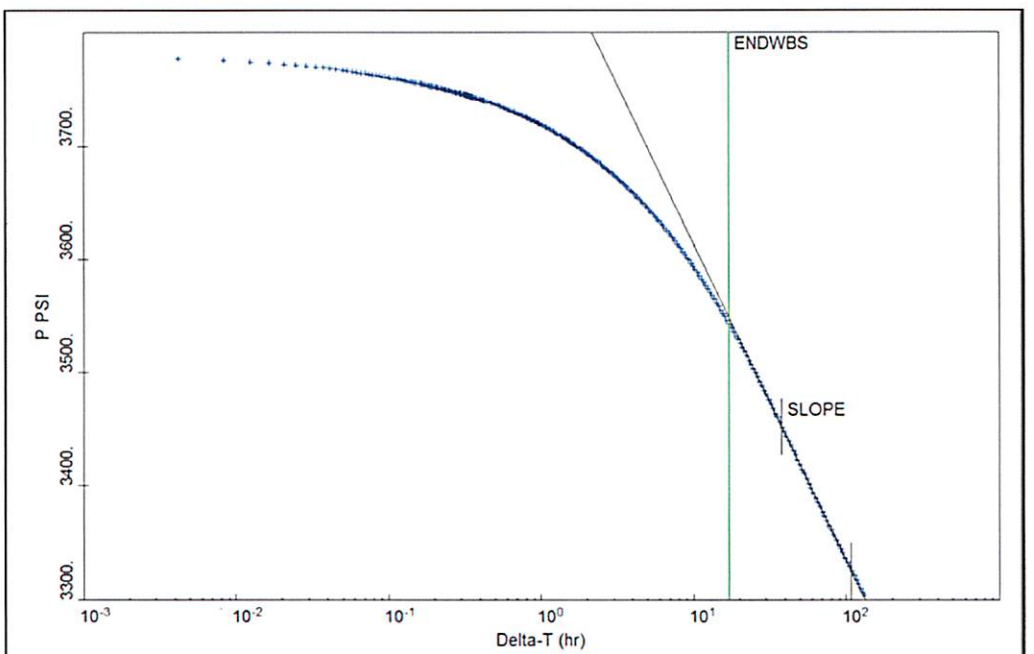
Volume-Factor	= 1.002 vol/vol
Thickness	= 110.0 FEET
Viscosity	= 0.7370 CP
Total Compress	= .7140E-05 1/PSI
Rate	= -3332. STB/D
Storivity	= .8954E-04 FEET/PSI
Diffusivity	= N/A FEET^2/HR
Gauge Depth	= 4405. FEET
Perf. Depth	= 4350. FEET
Datum Depth	= 4405. FEET

Analysis-Data ID: GAU001
Based on Gauge ID: GAU001
PFA Starts: 2016-06-27 11:46:29
PFA Ends : 2016-07-05 07:56:00

MDH PLOT:

Conclusions: The stabilized flow period was reached relatively late in the conventional straight-line extrapolation for the extrapolated pressure, however the MDH values do appear reasonable.

- Estimated extrapolated pressure = 3157. psig
- Estimated Kw (permeability) = 13.0 md
- Estimated skin = -5.88
- Radius of investigation = 1550 feet



Sunco Disposal #1

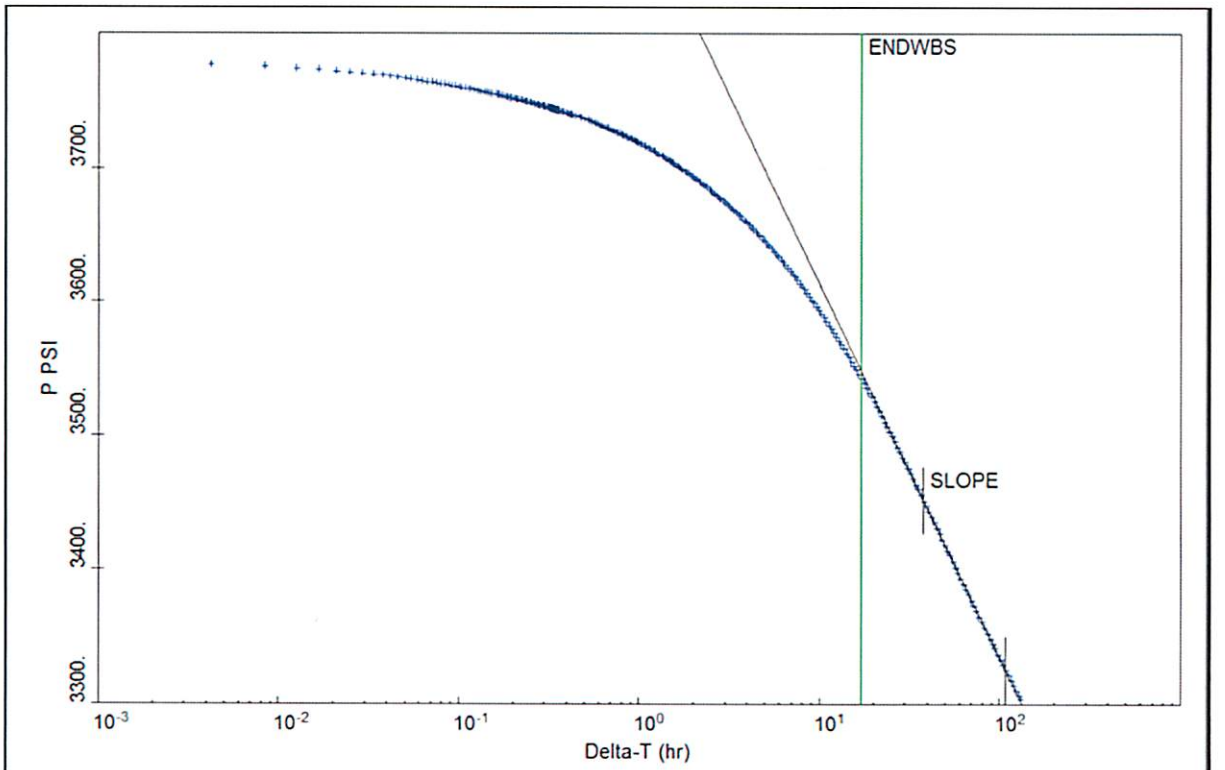
```
slope = -279.648  PSI/cycle
extrapolated pressure    = 3156.55 PSI
R(inv) at 107.5 hr = 1550. FEET
R(inv) at 37.73 hr = 915. FEET

prod. time=428.5 hr at rate=-3331.80 STB/D

   skin           = -5.8799
   permeability   = 13.009 MD
   Perm-Thickness = 1431.0 MD-FEET
```

```
Static-Data and Constants
Volume-Factor  = 1.002 vol/vol
Thickness      = 110.0 FEET
Viscosity      = 0.7370 CP
Total Compress = .7140E-05 1/PSI
Rate           = -3332. STB/D
Storivity      = .8954E-04 FEET/PSI
Diffusivity    = 5719. FEET^2/HR
Gauge Depth    = 4405. FEET
Perf. Depth    = 4350. FEET
Datum Depth    = 4405. FEET
Analysis-Data  ID: GAU001
Based on Gauge ID: GAU001
PFA Starts: 2016-06-10 17:15:00
PFA Ends  : 2016-07-05 07:56:00
```

MDH PLOT:



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Static-Data and Constants
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Thickness      = 110.0 FEET
Viscosity      = 0.7370 CP
Total Compress = .7140E-05 1/PSI
Rate           = -3332. STB/D
Storivity      = .8954E-04 FEET/PSI
Diffusivity    = 5719. FEET^2/HR
Gauge Depth    = 4405. FEET
Perf. Depth    = 4350. FEET
Datum Depth    = 4405. FEET
Analysis-Data  ID: GAU001
Based on Gauge ID: GAU001
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PFA Ends  : 2016-07-05 07:56:00
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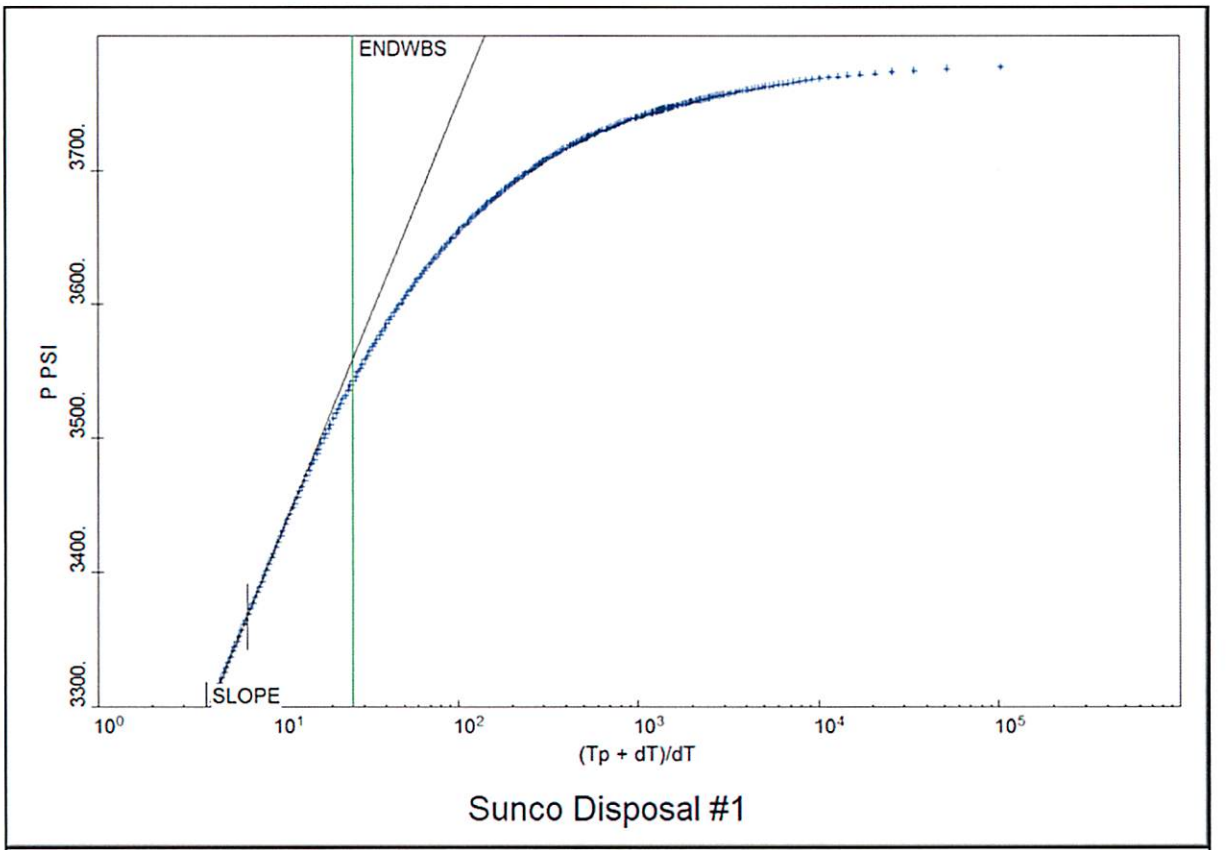
ENLARGED PLOTS:

HORNER PLOT:



Sunco Disposal #1

```
slope = 326.5131  PSI/cycle
extrapolated pressure   = 3098.14 PSI
R(inv) at 145.0 hr = 1660. FEET
R(inv) at 75.47 hr = 1200. FEET

prod. time=428.5 hr at rate=-3331.80 STB/D

   skin           = -5.9632
   permeability   = 11.142 MD
   Perm-Thickness = 1225.6 MD-FEET
```

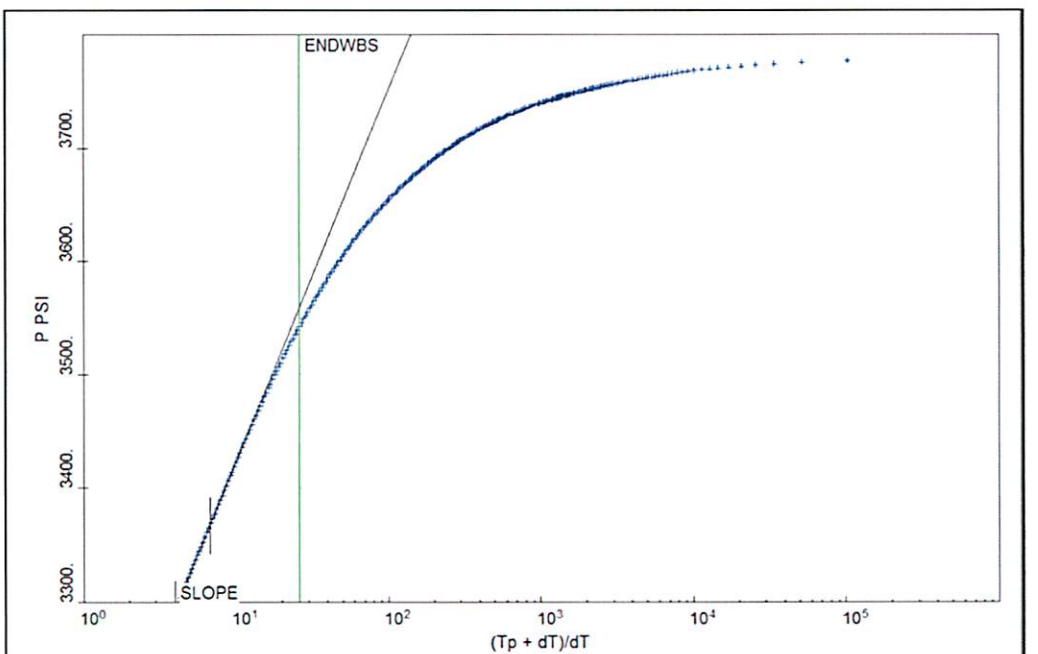
```
Static-Data and Constants
Volume-Factor  = 1.002 vol/vol
Thickness      = 110.0 FEET
Viscosity      = 0.7370 CP
Total Compress = .7140E-05 1/PSI
Rate           = -3332. STB/D
Storivity      = .8954E-04 FEET/PSI
Diffusivity    = 4898. FEET^2/HR
Gauge Depth    = 4405. FEET
Perf. Depth    = 4350. FEET
Datum Depth    = 4405. FEET
Analysis-Data  ID: GAU001
Based on Gauge ID: GAU001
PFA Starts: 2016-06-10 17:15:00
PFA Ends  : 2016-07-05 07:56:00
```

International Reservoir Technologies, Inc.

HORNER PLOT:

Conclusions: The stabilized flow period was reached relatively late in the conventional straight-line extrapolation for the extrapolated pressure, however the reservoir property calculations appear reasonable.

- Estimated extrapolated pressure = 3098. psig
- Estimated Kw (permeability) = 11.1 md
- Estimated skin = -5.96
- Radius of investigation = 1,660 feet



Sunco Disposal #1

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extrapolated pressure   = 3098.14 PSI
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prod. time=428.5 hr at rate=-3331.80 STB/D

   skin           = -5.9632
   permeability   = 11.142 MD
   Perm-Thickness = 1225.6 MD-FEET
```

```
Static-Data and Constants
Volume-Factor  = 1.002 vol/vol
Thickness      = 110.0 FEET
Viscosity      = 0.7370 CP
Total Compress = .7140E-05 1/PSI
Rate           = -3332. STB/D
Storivity      = .8954E-04 FEET/PSI
Diffusivity    = 4898. FEET^2/HR
Gauge Depth    = 4405. FEET
Perf. Depth    = 4350. FEET
Datum Depth    = 4405. FEET
Analysis-Data  ID: GAU001
Based on Gauge ID: GAU001
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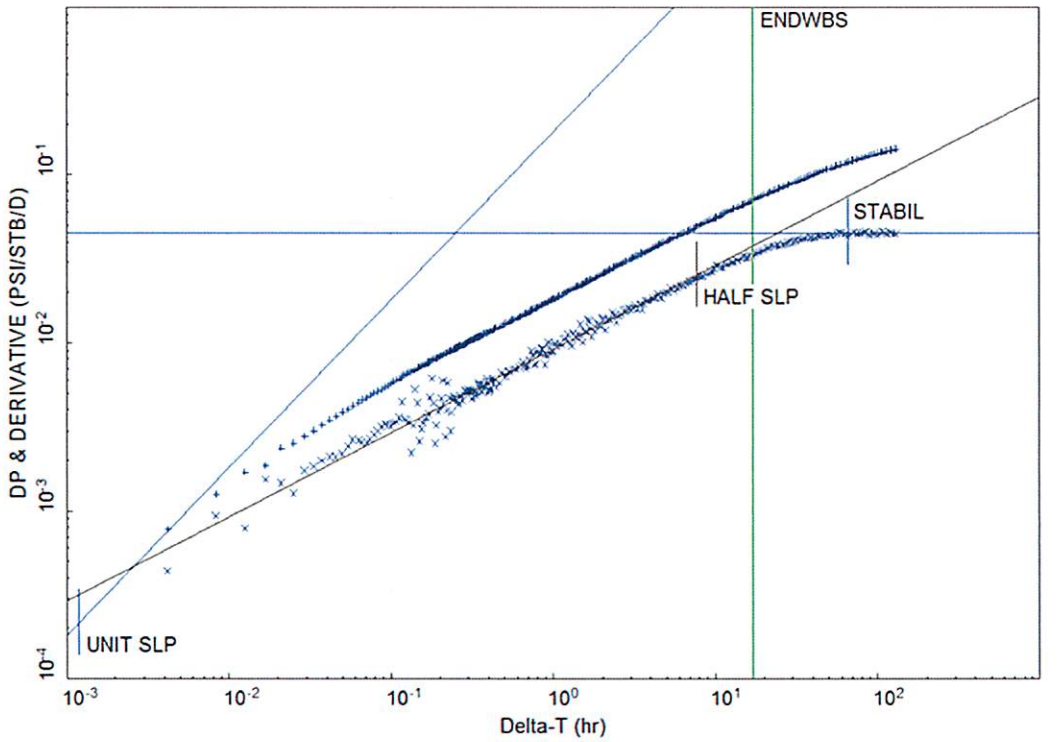
PFA Ends  : 2016-07-05 07:56:00
```


PGA

DERIVATIVE PLOT:



Sunco Disposal #1

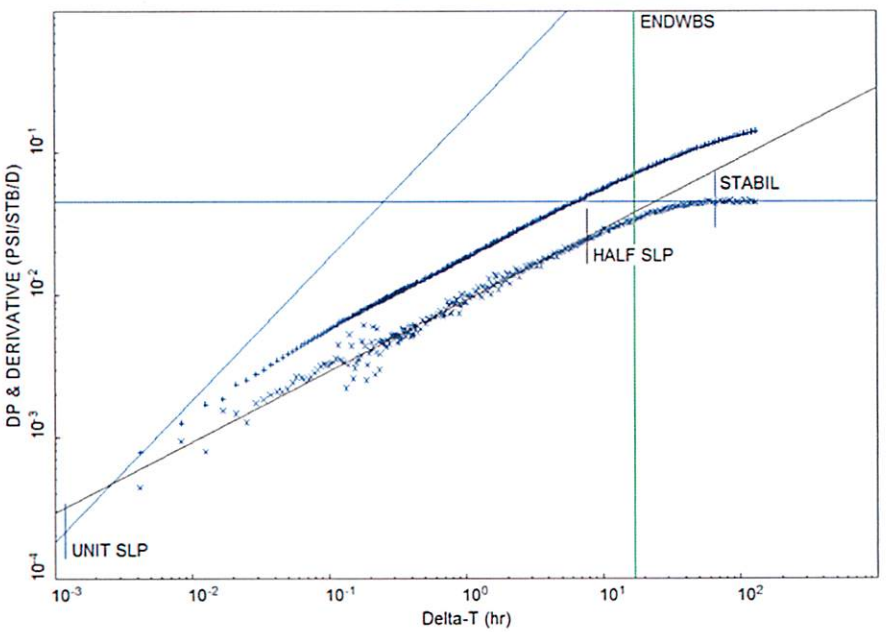
well. storage = 0.23139 BBLS/PSI
skin = -5.9537
permeability = 10.352 MD
Perm-Thickness = 1138.7 MD-FEET
Half.Length = 593.76 FEET
P-extrap. = 3087.89 PSI
R(inv) at 65.63 hr = 1080. FEET
Smoothing Coef = 0.,0.

Static-Data and Constants
Volume-Factor = 1.002 vol/vol
Thickness = 110.0 FEET
Viscosity = 0.7370 CP
Total Compress = .7140E-05 1/PSI
Rate = -3332. STB/D
Storivity = .8954E-04 FEET/PSI
Diffusivity = 4551. FEET^2/HR
Gauge Depth = 4405. FEET
Perf. Depth = 4350. FEET
Datum Depth = 4405. FEET
Analysis-Data ID: GAU001
Based on Gauge ID: GAU001
PFA Starts: 2016-06-10 17:15:00
PFA Ends : 2016-07-05 07:56:00

DERIVATIVE PLOT:

Conclusions: The behavior of the derivative curve is affected by the wellbore storage and the influence of an apparent hydraulic fracture. The data does appear valid. Also the plot indicates that the length of the shut-in test was sufficient to reach a stabilized period. A half-slope is shown in the derivative curve which is characteristic of linear-flow due to a hydraulic-fracture. The calculated half-length for the fracture was 594 feet. There is no clear indication of a boundary or fault.

- Estimated extrapolated pressure = 3088 psig
- Estimated Kw (permeability) = 10.4 md
- Estimated skin = -5.95
- Fracture half-length = 594 feet
- Radius of investigation = 1080 feet



Sunco Disposal #1

well. storage = 0.23139 BBLS/PSI	Static-Data and Constants
skin = -5.9537	Volume-Factor = 1.002 vol/vol
permeability = 10.352 MD	Thickness = 110.0 FEET
Perm-Thickness = 1138.7 MD-FEET	Viscosity = 0.7370 CP
Half.Length = 593.76 FEET	Total Compress = .7140E-05 1/PSI
P-extrap. = 3087.89 PSI	Rate = -3332. STB/D
R(inv) at 65.63 hr = 1080. FEET	Storivity = .8954E-04 FEET/PSI
Smoothing Coef = 0.,0.	Diffusivity = 4551. FEET^2/HR
	Gauge Depth = 4405. FEET
	Perf. Depth = 4350. FEET
	Datum Depth = 4405. FEET
	Analysis-Data ID: GAU001
	Based on Gauge ID: GAU001
	PFA Starts: 2016-06-10 17:15:00
	PFA Ends : 2016-07-05 07:56:00

X

Results:

The results from the derivative , Horner and MDH type pressure plots are summarized in the table below. The results for the different methods were consistent and the average calculated properties were:

1. P* = 3114 psi
2. K = 11.5 md
3. S = -5.93
4. Radius of Investigation = 1,430 feet
5. No boundary seen

Calculated Reservoir Parameters				
	Horner Analysis	MDH Plot	Derivative Plot	Average
Estimated Kw (permeability, mD)	11.1	13.0	10.4	11.5
Estimated skin (dimensionless)	-5.96	-5.88	-5.95	-5.93
Extrapolated pressure (psig)	3098	3156	3088	3114
Fracture half-length (feet)	--	--	594	594
Radius of investigation (feet)	1660	1550	1080	1430

Summary:

The results of the 2016 fall off test (FOT) for the Sunco Disposal Well #1 indicate that the length of the shut-in test did allow the transient to reach a stabilized flow period and that the well has a significant hydraulic fracture. These results are similar to the 2015 test results. The pressure transient effect of the frac plus the wellbore storage effects do obscure to some extent the reservoir property influences; however, a reasonable and satisfactory set of reservoir properties could be calculated. The conventional straight-line analysis for extrapolated pressure and the reservoir property calculations from the Horner and MDH type plots are acceptable. The input parameters for the fluid properties (i.e. PVT data) changed slightly due to newly available fluid analysis (Report titled "2nd Quarter 2016 Sampling - Injection Well.pdf", NM1-9 INJECTION WELL ANALYTICAL RESULTS, Agua Moss Disposal Facility, Crouch Mesa Road, San Juan County, New Mexico, 6/28/16).

Comparison with past Falloff Tests:

The results from the 2016 FOT were compiled with previous FOT results from the facility and are shown below in Table 1.

Table 1: Results Comparison

	2016	2015	2010	2009	2008	2007
Rate (bbl/day)	**3132**	3340	4500			
P* (psi)	**3114**	3283	3231	3242	3176	3258
K (md)	**11.5**	15.8	13.6	10.2	20.7	
S	**-5.93**	-5.97	-7.18	-7.23	-6.79	
Radius of Inv (ft)	**1430**	1,580	1450	1250	1750	1620
Frac ½ Length (ft)	**594**	467	893	926	596	688
Boundary	**none**	none	648, 1520	755	987	none

Agua Moss did not conduct the prior tests and is relying on the 2010 report submitted by Key Energy, the prior operator, for the prior results. In comparing the results, there are a number of observations to make:

1. The consistent to slightly lower P* suggests that there has been some pressure dissipation in the reservoir. That is a good sign, indicating the disposal zone has a lot of capacity to accept fluids.

2. The radius of investigation for 2016 was adequate enough to see out beyond all but one of the previously seem boundaries.
   Note: *On 2010 results seems peculiar to have a boundary beyond the Radius of Investigation.*

3. The parameters calculated compare well enough with previous FOT parameter to validate the 2016 FOT results.

The raw test data obtain during the 2016 falloff test and used for the analysis will be kept on file for a period of three (3) years and will be available upon request.

Conclusions:

Based on the above analysis and results comparison, Agua Moss believes the Sunco SWD #1 2016 FOT was successfully completed and doesn't show any indications of concern to continue the current waste injection operations.

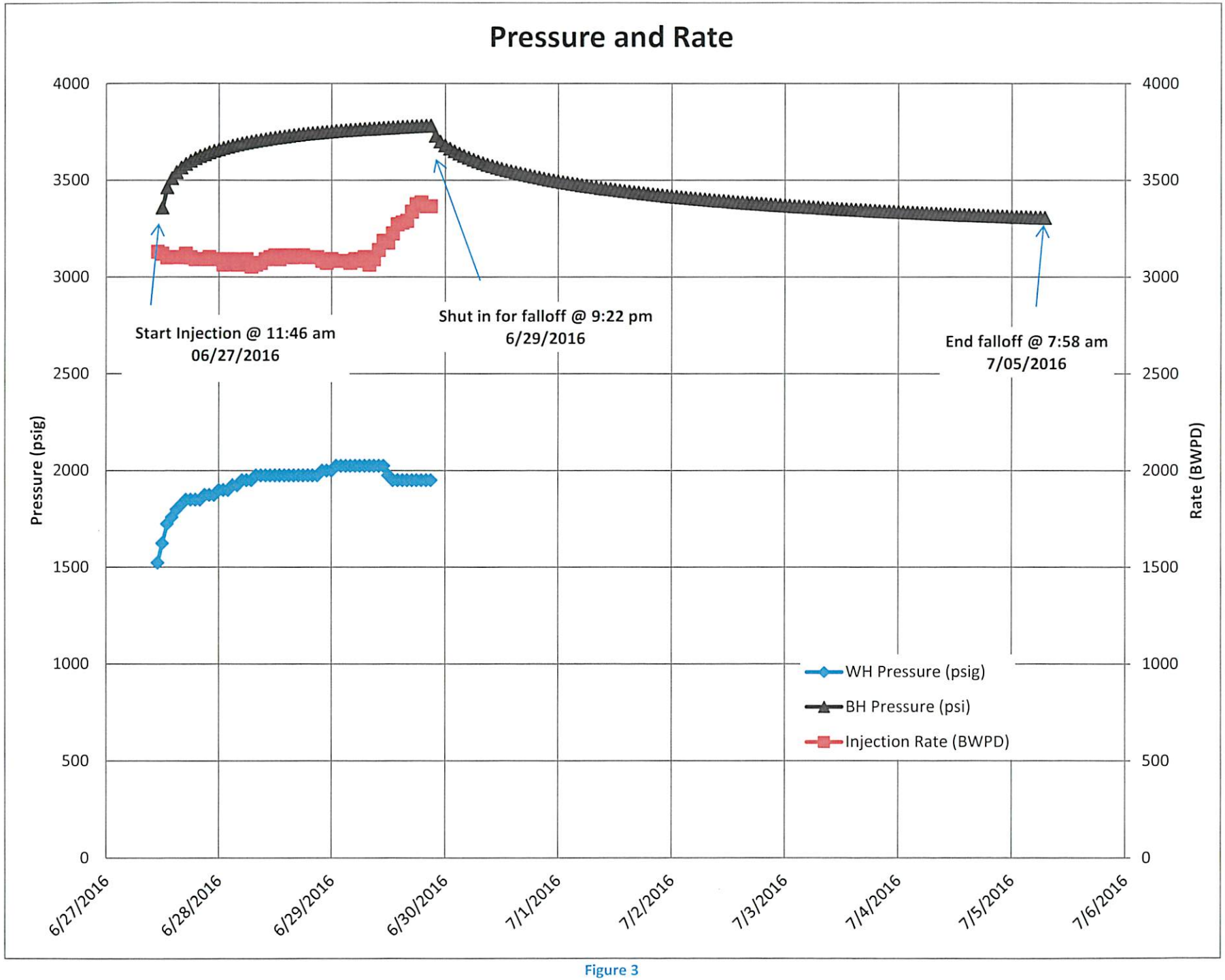

Pressure and Rate
Start Injection @ 11:46 am
06/27/2016
Shut in for falloff @ 9:22 pm
6/29/2016
End falloff @ 7:58 am
7/05/2016
Pressure (psig)
Rate (BWPD)
4000
3500
3000
2500
2000
1500
1000
500
0
6/27/2016
6/28/2016
6/29/2016
6/30/2016
7/1/2016
7/2/2016
7/3/2016
7/4/2016
7/5/2016
7/6/2016
WH Pressure (psig)
BH Pressure (psi)
Injection Rate (BWPD)

Figure 3

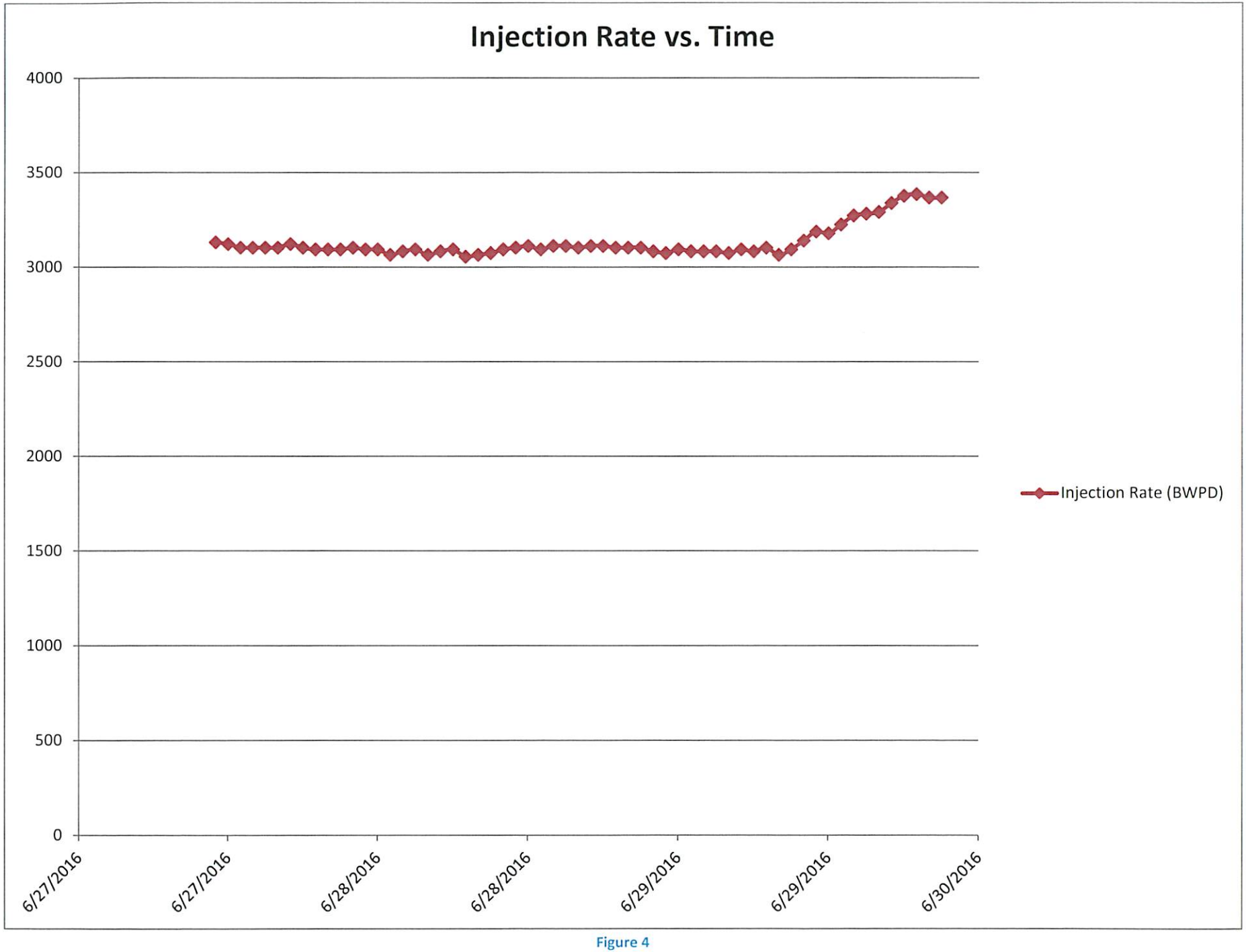

Injection Rate vs. Time
4000
3500
3000
2500
2000
1500
1000
500
0
6/27/2016
6/27/2016
6/28/2016
6/28/2016
6/29/2016
6/29/2016
6/30/2016
Injection Rate (BWPD)

Figure 4

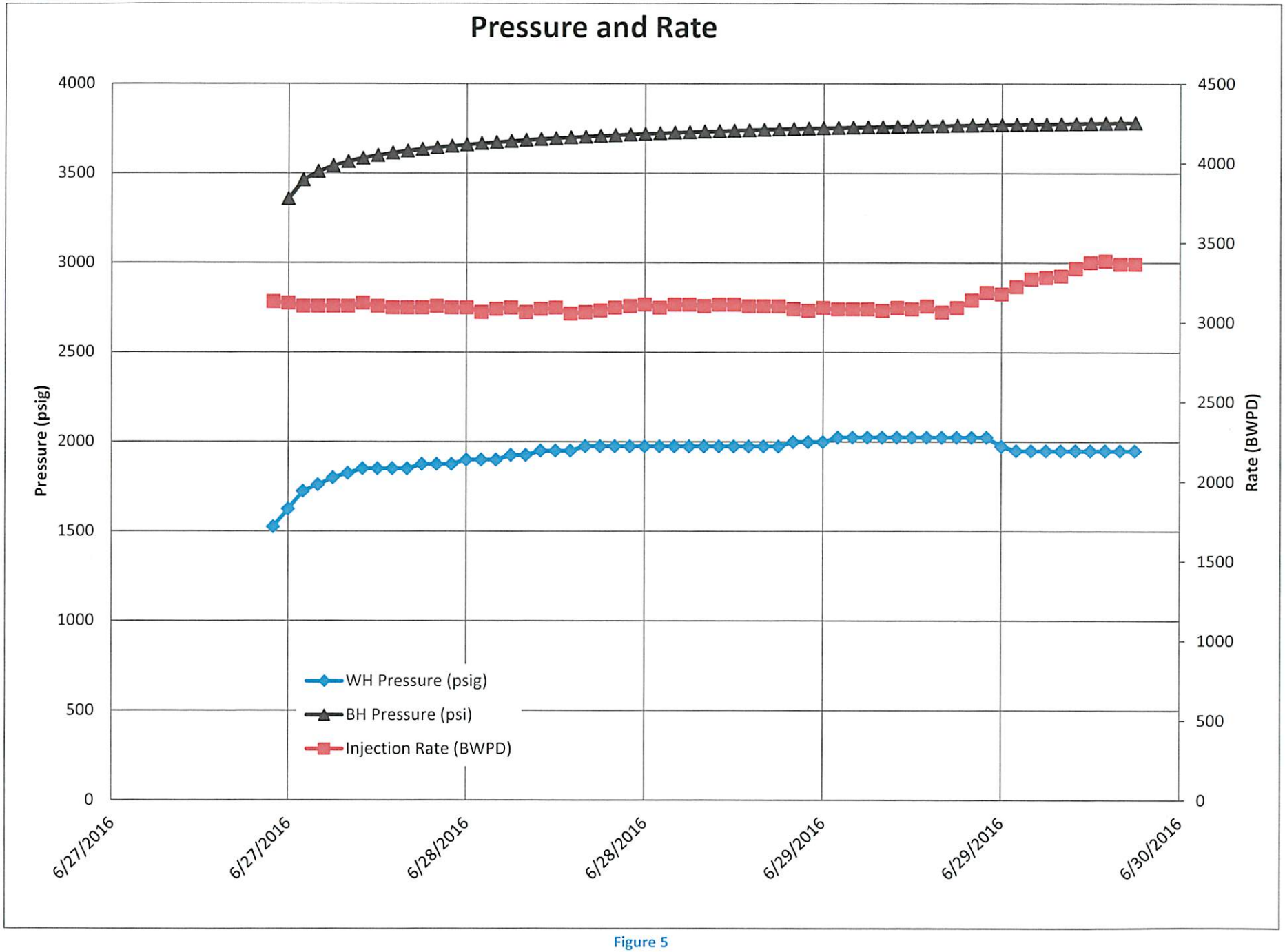

Pressure and Rate
Pressure (psig)
Rate (BWPD)
4000
3500
3000
2500
2000
1500
1000
500
0
4500
4000
3500
3000
2500
2000
1500
1000
500
0
WH Pressure (psig)
BH Pressure (psi)
Injection Rate (BWPD)
6/27/2016
6/27/2016
6/28/2016
6/28/2016
6/29/2016
6/29/2016
6/30/2016

Figure 5

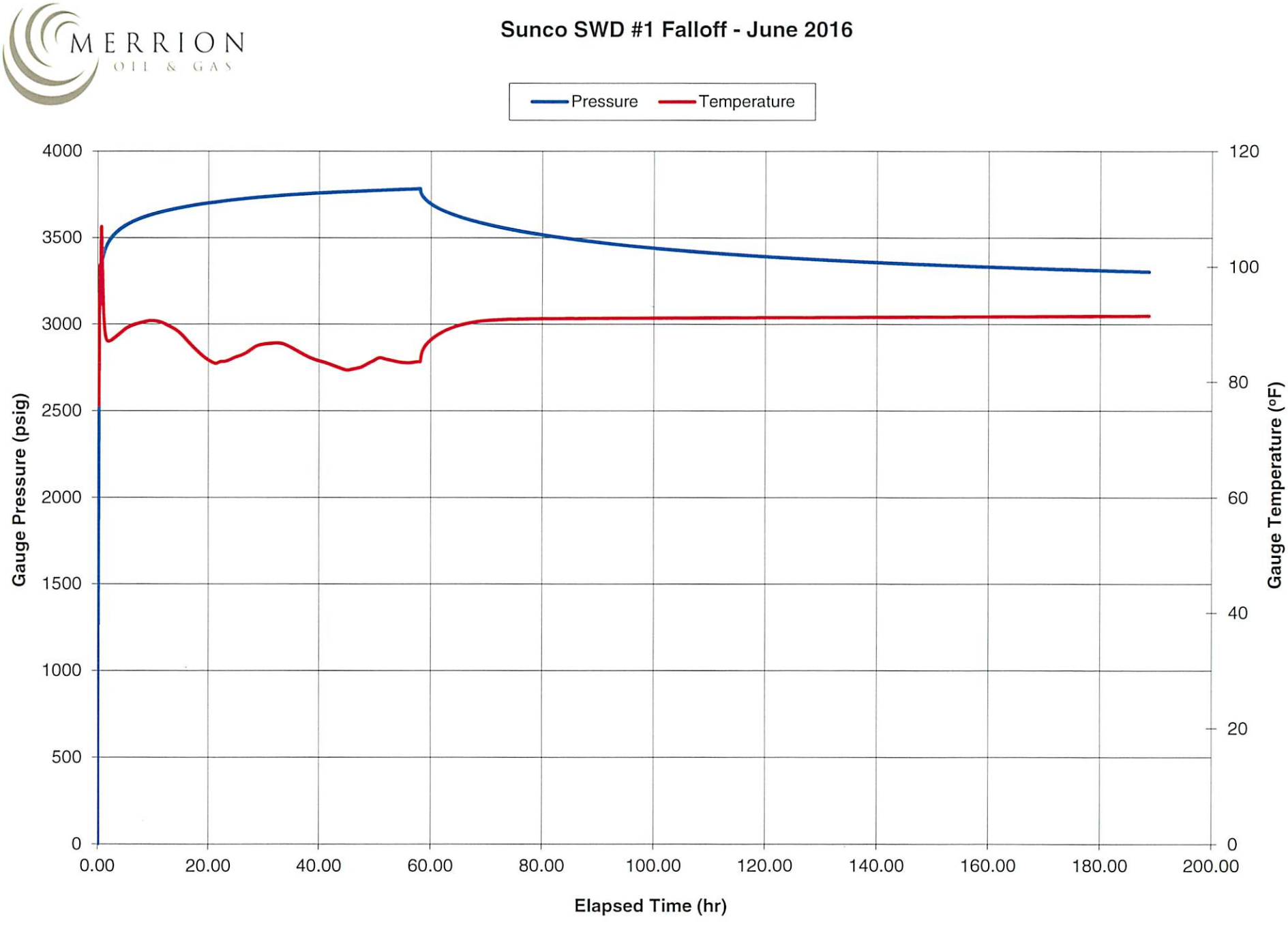

Sunco SWD #1 Falloff - June 2016
Pressure
Temperature
Gauge Pressure (psig)
Gauge Temperature (°F)
Elapsed Time (hr)
4000
3500
3000
2500
2000
1500
1000
500
0
120
100
80
60
40
20
0
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00

Figure 6

DERIVATIVE PLOT:

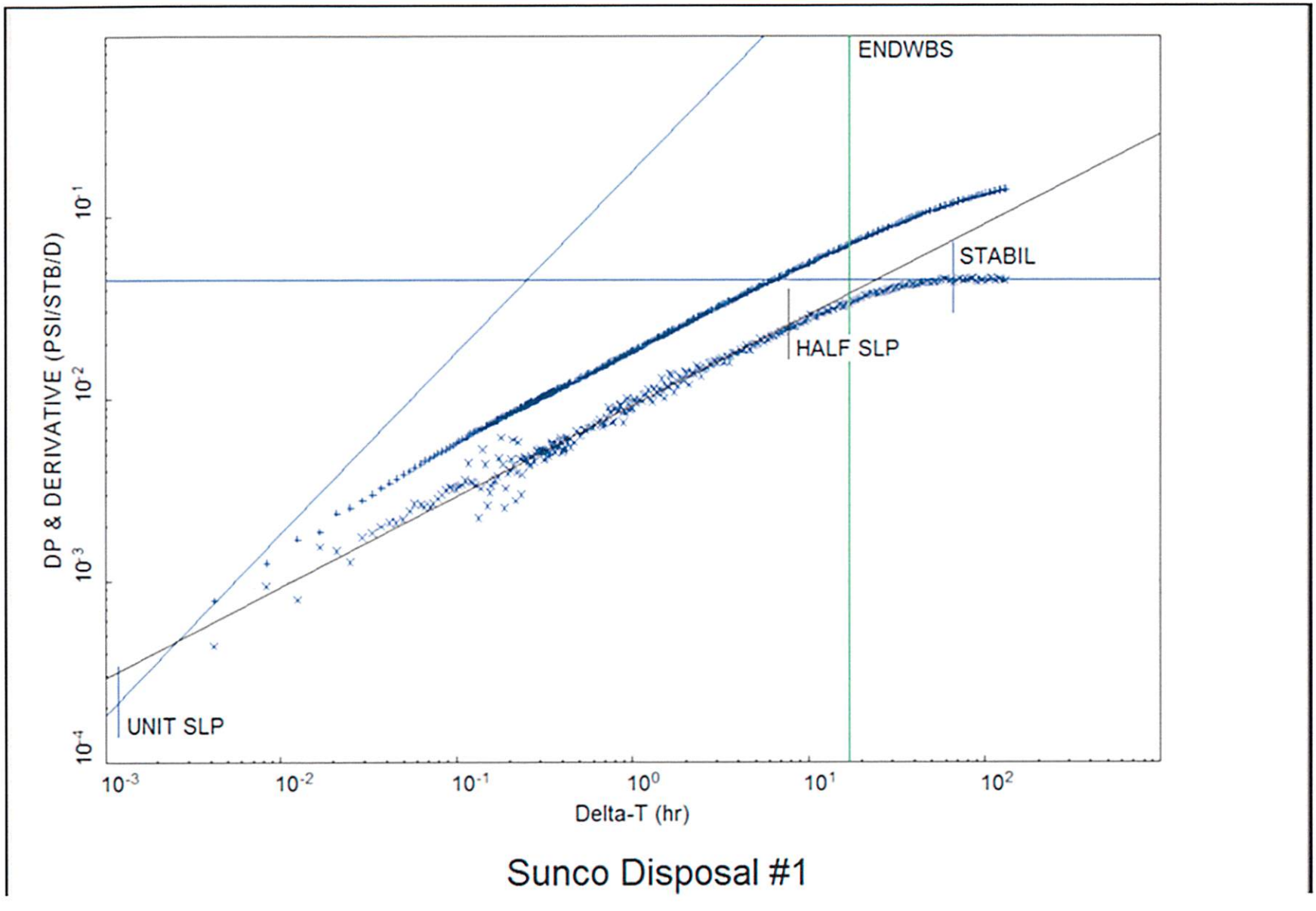


Figure 7

HORNER PLOT:

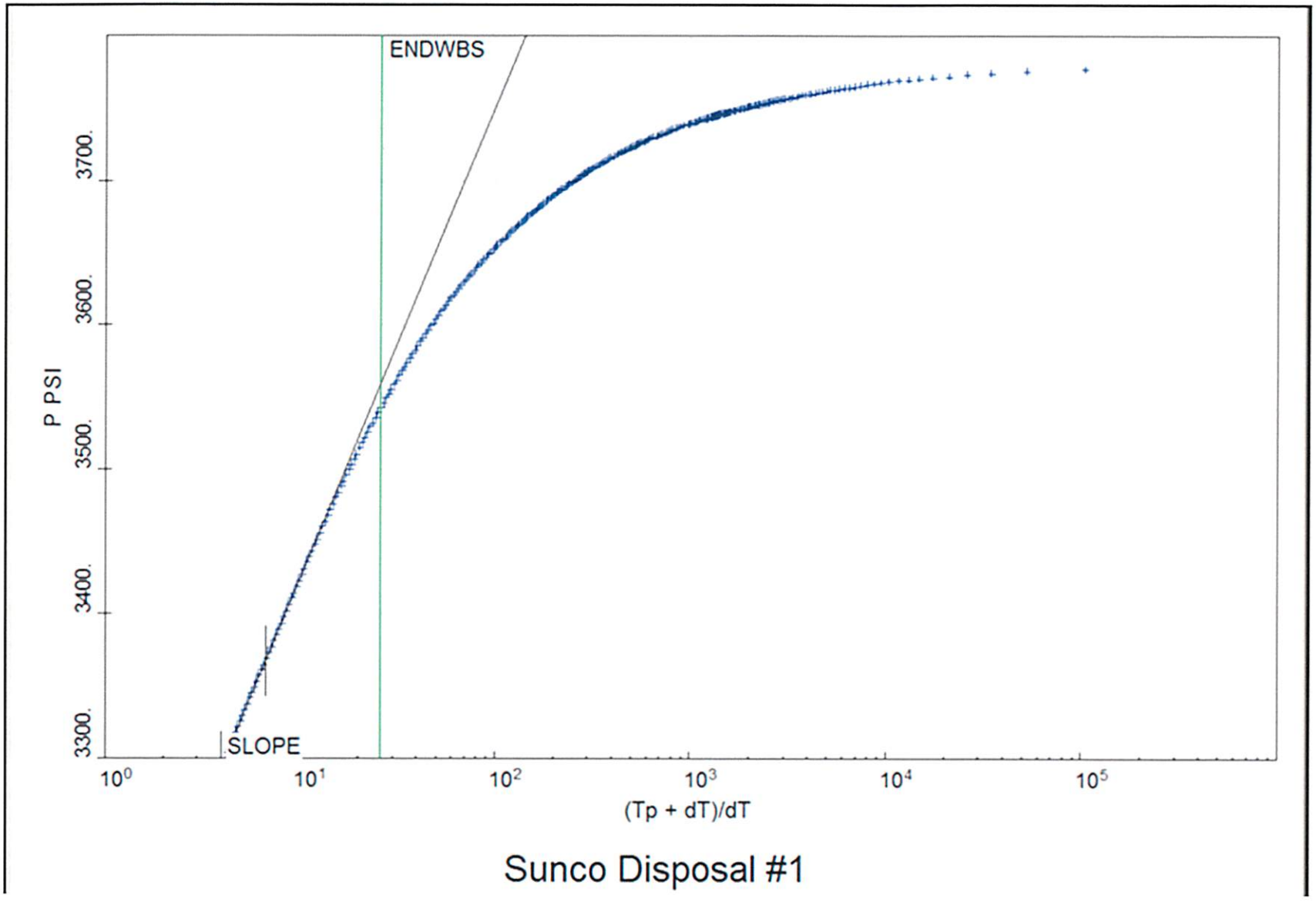


Figure 8

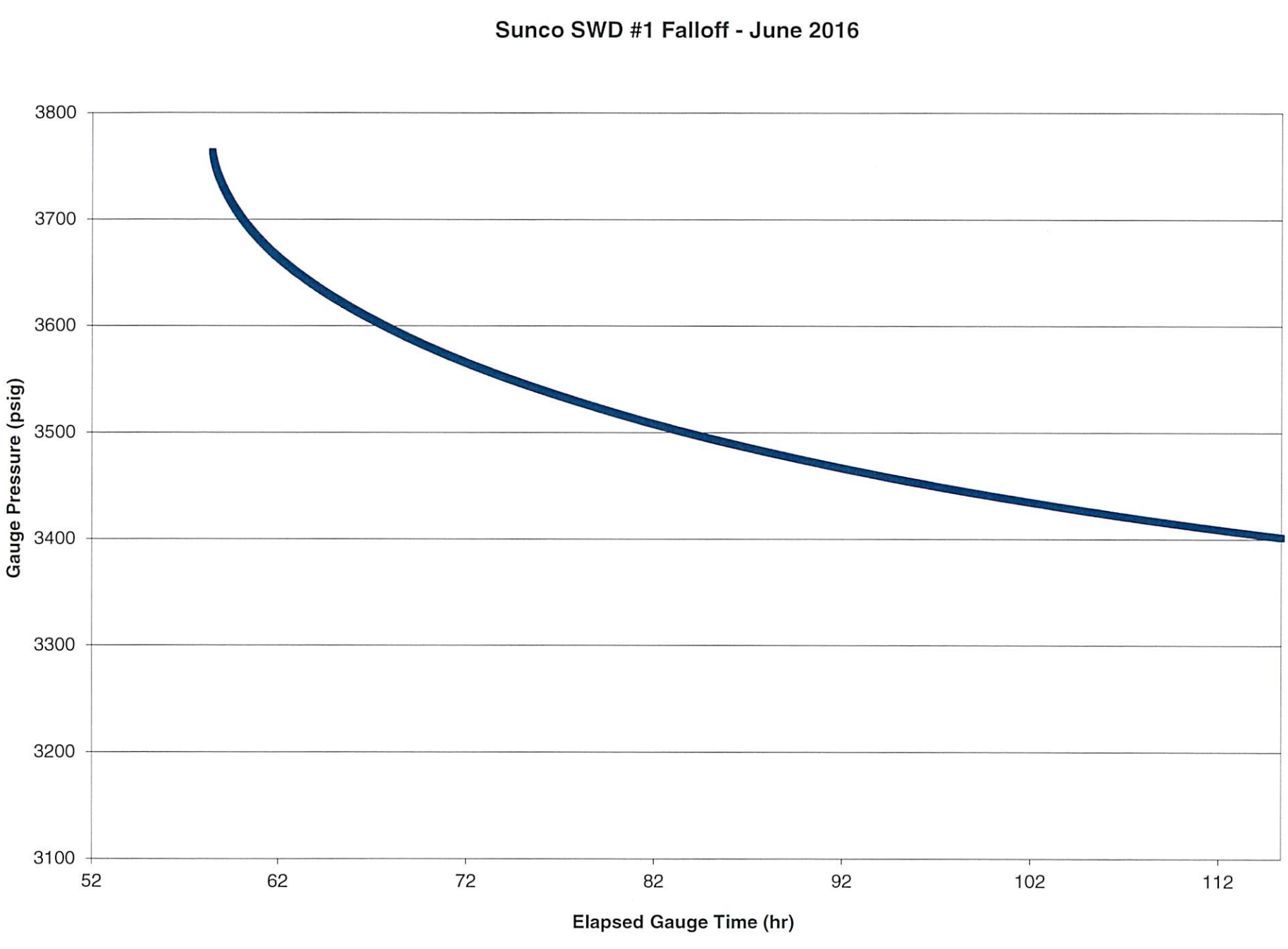

Sunco SWD #1 Falloff - June 2016
3800
3700
3600
3500
3400
3300
3200
3100
Gauge Pressure (psig)
52
62
72
82
92
102
112
Elapsed Gauge Time (hr)

Figure 9

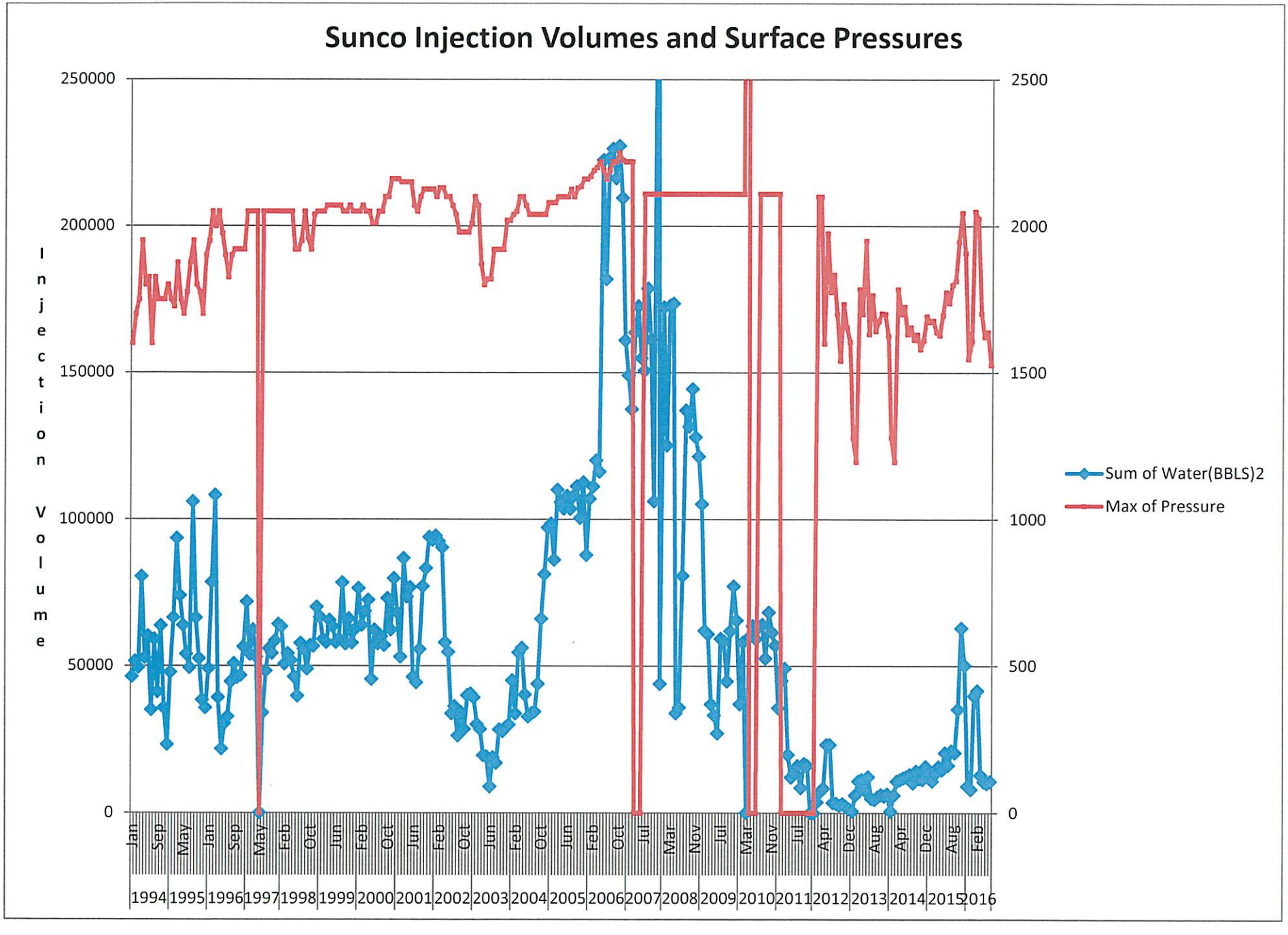


Figure 10: Injection and Pressure Plot

2016 WH Pressure

1/1/16	1900
1/2/16	
1/3/16	
1/4/16	2100
1/5/16	2100
1/6/16	2100
1/7/16	2100
1/8/16	2100
1/9/16	
1/10/16	
1/11/16	1900
1/12/16	2000
1/13/16	2100
1/14/16	2100
1/15/16	2250
1/16/16	
1/17/16	
1/18/16	2200
1/19/16	2000
1/20/16	2100
1/21/16	2100
1/22/16	1900
1/23/16	
1/24/16	
1/25/16	1900
1/26/16	2000
1/27/16	2100
1/28/16	2000
1/29/16	1900
1/30/16	
1/31/16	
	2045.238	**AVG**
	1900	**MIN**
	2250	**MAX**

2/1/16	2250
2/2/16	1900
2/3/16	1900
2/4/16	1900
2/5/16	1950
2/6/16	
2/7/16	
2/8/16	2200
2/9/16	2200
2/10/16	2200
2/11/16	2000
2/12/16	2000
2/13/16	
2/14/16	
2/15/16	2200
2/16/16	2000
2/17/16	2100
2/18/16	1950
2/19/16	2000
2/20/16	
2/21/16	
2/22/16	2000
2/23/16	1900
2/24/16	2100
2/25/16	2000
2/26/16	1900
2/27/16	
2/28/16	
2/29/16	1900
	2026.19	**AVG**
	1900	**MIN**
	2250	**MAX**

3/1/16	1900
3/2/16	1600
3/3/16	1600
3/4/16	1700
3/5/16	
3/6/16	
3/7/16	1750
3/8/16	1650
3/9/16	1750
3/10/16	1700
3/11/16	1800
3/12/16	
3/13/16	
3/14/16	1550
3/15/16	1700
3/16/16	1600
3/17/16	1500
3/18/16	1700
3/19/16	
3/20/16	
3/21/16	1600
3/22/16	1700
3/23/16	1900
3/24/16	1900
3/25/16	1900
3/26/16	
3/27/16	
3/28/16	1650
3/29/16	1550
3/30/16	1750
3/31/16	1700
	1702.174	**AVG**
	1500	**MIN**
	1900	**MAX**

2016 WH Pressure

4/1/16	1700
4/2/16	
4/3/16	
4/4/16	1600
4/5/16	2250
4/6/16	1700
4/7/16	1700
4/8/16	1700
4/9/16	
4/10/16	
4/11/16	1700
4/12/16	1700
4/13/16	1600
4/14/16	1550
4/15/16	1700
4/16/16	
4/17/16	
4/18/16	1600
4/19/16	1700
4/20/16	1600
4/21/16	1750
4/22/16	1650
4/23/16	
4/24/16	
4/25/16	1600
4/26/16	1700
4/27/16	1650
4/28/16	1600
4/29/16	1600
4/30/16	
	1683.333	**AVG**
	1550	**MIN**
	2250	**MAX**

5/1/16	
5/2/16	1650
5/3/16	1500
5/4/16	1900
5/5/16	1650
5/6/16	1500
5/7/16	
5/8/16	
5/9/16	1500
5/10/16	1450
5/11/16	1650
5/12/16	1600
5/13/16	1650
5/14/16	
5/15/16	
5/16/16	1600
5/17/16	1650
5/18/16	1600
5/19/16	1800
5/20/16	1700
5/21/16	
5/22/16	
5/23/16	1650
5/24/16	1600
5/25/16	1700
5/26/16	1600
5/27/16	1700
5/28/16	
5/29/16	
5/30/16	1650
5/31/16	1750
	1638.636	**AVG**
	1450	**MIN**
	1900	**MAX**

6/1/16	1500
6/2/16	1600
6/3/16	1700
6/4/16	
6/5/16	
6/6/16	1500
6/7/16	1600
6/8/16	1600
6/9/16	1450
6/10/16	1375
6/11/16	
6/12/16	
6/13/16	1350
6/14/16	1325
6/15/16	1325
6/16/16	1750
6/17/16	1600
6/18/16	
6/19/16	
6/20/16	1500
6/21/16	1750
6/22/16	1550
6/23/16	1450
6/24/16	1400
6/25/16	
6/26/16	
6/27/16	1750
6/28/16	1975
6/29/16	1950
6/30/16	1600
	1572.727	**AVG**
	1325	**MIN**
	1975	**MAX**

2016 Injection Volume

Total Injected

1/1/2016	1188	34.65	2/1/2016	1959		3/1/2016	1314	
1/2/2016			2/2/2016	1732		3/2/2016	0	
1/3/2016			2/3/2016	1573		3/3/2016	616	
1/4/2016	2755	80.35416667	2/4/2016	1499		3/4/2016	204	
1/5/2016	2042		2/5/2016	2440		3/5/2016		
1/6/2016	1943		2/6/2016			3/6/2016		
1/7/2016	2131	62.15416667	2/7/2016			3/7/2016	588	
1/8/2016	1743		2/8/2016	1755		3/8/2016	319	
1/9/2016			2/9/2016	1940		3/9/2016	772	
1/10/2016			2/10/2016	1967		3/10/2016	168	
1/11/2016	1336	38.96666667	2/11/2016	1968		3/11/2016	774	
1/12/2016	1482		2/12/2016	1878		3/12/2016		
1/13/2016	2053		2/13/2016			3/13/2016		
1/14/2016	1641		2/14/2016			3/14/2016	166	
1/15/2016	2813		2/15/2016	3064		3/15/2016	500	
1/16/2016			2/16/2016	1931		3/16/2016	177	
1/17/2016			2/17/2016	1982		3/17/2016	208	
1/18/2016	2471	72.07083333	2/18/2016	1728		3/18/2016	327	
1/19/2016	2012		2/19/2016	1797		3/19/2016		
1/20/2016	1831		2/20/2016			3/20/2016		
1/21/2016	1611		2/21/2016			3/21/2016	435	
1/22/2016	1932		2/22/2016	2589		3/22/2016	864	
1/23/2016		0	2/23/2016	1675		3/23/2016	1451	
1/24/2016			2/24/2016	2924		3/24/2016	858	
1/25/2016	1908		2/25/2016	1873		3/25/2016	1495	
1/26/2016	1888		2/26/2016	1397		3/26/2016		
1/27/2016	1853		2/27/2016			3/27/2016		
1/28/2016	1916		2/28/2016			3/28/2016	419	
1/29/2016	1376	40.13333333	2/29/2016	1927		3/29/2016	0	
1/30/2016		0				3/30/2016	949	
1/31/2016		0				3/31/2016	290	

AVG	1901.19	36.48101852		1980.857		560.6087
MAX	2813	80.35416667		3064		1495
MIN	1188	0.0000000		1397		0
Total for month	39925			41598		12894

2016 Injection Volume

4/1/2016	754	5/1/2016		6/1/2016	0
4/2/2016		5/2/2016	937	6/2/2016	462
4/3/2016		5/3/2016	0	6/3/2016	499
4/4/2016	236	5/4/2016	1098	6/4/2016	
4/5/2016	1481	5/5/2016	636	6/5/2016	
4/6/2016	1485	5/6/2016	0	6/6/2016	0
4/7/2016	828	5/7/2016		6/7/2016	202
4/8/2016	335	5/8/2016		6/8/2016	99
4/9/2016		5/9/2016	215	6/9/2016	0
4/10/2016		5/10/2016	0	6/10/2016	0
4/11/2016	381	5/11/2016	367	6/11/2016	
4/12/2016	746	5/12/2016	548	6/12/2016	
4/13/2016	0	5/13/2016	0	6/13/2016	0
4/14/2016	255	5/14/2016		6/14/2016	0
4/15/2016	593	5/15/2016		6/15/2016	0
4/16/2016		5/16/2016	667	6/16/2016	578
4/17/2016		5/17/2016	709	6/17/2016	239
4/18/2016	209	5/18/2016	211	6/18/2016	
4/19/2016	476	5/19/2016	791	6/19/2016	
4/20/2016	350	5/20/2016	306	6/20/2016	185
4/21/2016	338	5/21/2016		6/21/2016	897
4/22/2016	0	5/22/2016		6/22/2016	78
4/23/2016		5/23/2016	465	6/23/2016	0
4/24/2016		5/24/2016	369	6/24/2016	0
4/25/2016	628	5/25/2016	601	6/25/2016	
4/26/2016	395	5/26/2016	342	6/26/2016	
4/27/2016	970	5/27/2016	590	6/27/2016	1589
4/28/2016	210	5/28/2016		6/28/2016	3089
4/29/2016	0	5/29/2016		6/29/2016	2825
4/30/2016		5/30/2016	222	6/30/2016	0
		5/31/2016	992		

	508.0952		457.5455		488.2727
	1485		1098		3089
	0		0		0
	10670		10066		10742

UICI-5-0
Agua Moss, LLC
Sunco Disposal #1 30-045-28653

2016
Quarterly
Injection Report

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maxium Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Volume (barrels)	Total Cumulative Volume (barrels)	
													Previous year	14063784	
Jan-2016	2045.238	2250	1900	55.45138889	82.04583333	34.65	0	0	0	1901.19	2813	1188	39925	14103709	
Feb-2016	2026.19	2250	1900	57.775	89.36666667	40.745833	0	0	0	1980.857	3064	1397	41598	14145307	
Mar-2016	1702.174	1900	1500	17.90833333	43.60416667	4.8416667	0	0	0	586.0909	1495	0	12894	14158201	
													Previous Quarter	14158201	
Apr-2016	1683.333	2250	1550	17.28935185	43.3125	6.0958333	0	0	0	592.7778	1485	209	10670	14168871	
May-2016	1638.636	1900	1450	16.31064815	32.025	6.1541667	0	0	0	559.2222	1098	211	10066	14178937	
Jun-2016	1572.727	1975	1325	26.10902778	90.09583333	2.275	0	0	0	895.1667	3089	78	10742	14189679	
													Previous Quarter	14189679	
Jul-16	1572.727	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679	
Aug-16	#DIV/0!	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679	
Sep-16	#DIV/0!	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679	
													Previous Quarter	14189679	
Oct-2016	#DIV/0!	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679	
Nov-2016	#DIV/0!	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679	
Dec-2016	#DIV/0!	0	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	0	0	14189679	
												Total for year	125895	14315574	Life Of well injected

2016 AREA OF REVIEW
UNIT LETTERS ENCOMPASSED BY THE 1-MILE AOR

Sec	TWN	RNG	UL	
1	29N	12W	DELM	
2	29N	12W	ALL	
3	29N	12W	ABCFGHIJKOP	
10	29N	12W	AB	
11	29N	12W	ABCDEF	
34	30N	12W	AGHIJKNOP	
35	30N	12W	DEFGHIJKLMNOP	
36	30N	12W	LM	

All tracts within the AOR were reviewed for activity that had ensued since 2015 Annual Report.

														Surface Casing			INT Casing			Production Casing					
	API	Well Name	Well #	Current Operator	Type	Lease	Status	Sec	TWN	RNG	UL	Spud Date	TD	size	depth	Sacks TOC	size	depth	Sacks TOC	size	depth	Sacks TOC	Perfs	Packer	PLUGGED
x	30-045-08851	ALLEN A	#001	BP America	Gas	Private	Active	1	29N	12W	D	3/12/1961	6785	8.265	264	200 surf				4.5	6785	300 surf	6518-6718		
x	30-045-26214	ALLEN A	#001E	BP America	Gas	Federal	Active	1	29N	12W	L	3/22/1985	5825	8.625	318	225 surf				5.5	6622	820 surf	6425-6602		
x	30-045-32346	CORNELL	#002R	Energen Resources	Gas	Federal	Active	1	29N	12W	M	7/22/2004	2152	7	137	90 surf				4.5	2151	310 surf	1702-1926		
x	30-045-32241	BECK	#001R	Burlington	Gas	Private	Active	2	29N	12W	G	12/1/2004	2225	7	135	34 surf				4.5	2221	262 surf	1774-2077		
x	30-045-33811	BECK	#001S	Burlington	Gas	Private	Active	2	29N	12W	D	8/17/2006	2200	7	162	85 surf				4.5	2195	255 surf	1730-1951		
x	30-045-31580	CORNELL COM	#500	Burlington	Gas	Federal	Active	2	29N	12W	N	7/14/2003	2136	7	139	44 surf	6.25	2126		4.5	2126	258 surf	1658-1878		
x	30-045-08714	CORNELL SRC	#007	Burlington	Gas	Federal	Active	2	29N	12W	L	7/29/1944	2107	16	42	10 surf	5.5	1978		3.5	2106	250 surf	1976-2010		
x	30-045-08704	MCGRATH B	#001	Burlington	Gas	Private	Active	2	29N	12W	J	11/19/1961	6720	8.625	318	225 surf				4.5	1865	1065 surf	6489-6596		
	30-045-28653	SUNCO DISPOSAL	#001	Agua Moss	Salt Water Disposal	Private	Active	2	29N	12W	E	1/28/1992	4760	8.625	209	150 surf				5.5	4760	1010 surf	4350-4460	4282 10/15/07	4350-4460 TA'd
x	30-045-08839	YOUNG	#001	Burlington	Gas	Private	Active	2	29N	12W	D	8/1/1961	6740	8.625	307	275 surf				4.5	6739	700 surf	6446-6644		
x	30-045-33580	MCGRATH	#003S	Burlington	Gas	Private	Active	3	29N	12W	B	7/13/2007	2132	7	218	150 surf				4.5	2112	289 surf	1692-1904		
x	30-045-08712	MCGRATH A	#001	Burlington	Gas	Private	Active	3	29N	12W	I	3/14/1964	6689	8.625	307	250 surf				4.5	6688	500 surf	6432-6524		
x	30-045-32931	WALKER	#100S	Burlington	Gas	Private	Active	3	29N	12W	F	8/14/2005	2120	7	144	61 surf				4.5	2117	238 surf	1621-1885		NOI to PA 5/2014
x	30-045-23889	BECK A	#001E	Burlington	Gas	Federal	Active	10	29N	12W	B	1/5/1981	6514	8.625	240	150 surf				4.5	6514	765 surf	6277-6454		
x	30-045-30381	CORNELL	#100	Burlington	Gas	Federal	Active	10	29N	12W	B	1/7/2003	1968	7	147	55 surf				4.5	1959	229 surf	1543-1704 1744-1800		
x	30-045-08615	CORNELL	#006	Thompson Engr & Prod	Gas	Federal	Active	11	29N	12W	C	11/7/1955	1839	8.625	106	70 surf	5.5	1811		3.5	2022	181 surf	1811-1839		
x	30-045-31581	CORNELL	#101	Burlington	Gas	Federal	Active	11	29N	12W	D	10/7/2003	2008	7	140	35 surf				4.5	2000	270 surf	1726-1764		
x	30-045-13092	CORNELL C	#001	BP America	Gas	Federal	Active	11	29N	12W	D	12/6/1961	6604	8.625	250	150 surf				4.5	6604	300 surf	6298-6483		
x	30-045-26141	DUFF GAS COM	#001E	Burlington	Gas	Federal	TA'd	34	30N	12W	G	11/20/1984	6608	8.625	316	295 surf				4.5	6608	1000 surf	6396-6576 04'RC to FC 1492-1870		TA'd 3/5/14
x	30-045-08946	CARNAHAN COM	#001	Holcomb Oil & Gas	Gas	Private	Active	35	30N	12W	P	12/19/1960	6778	8.625	301	200 surf				4.5	6760	445 surf	6521-6708 94 RC to FC 1824-2037		
x	30-045-25844	CARNAHAN COM	#002	Merrion Oil & Gas	Gas	Private	Active	35	30N	12W	P	6/15/1984	6780	8.625	230	170 surf				4.5	6777	1425 surf	6529-6714		
x	30-045-11770	HUDSON J	#003	Burlington	Gas	Federal	Active	35	30N	12W	E	7/22/1966	6750	8.625	306	250 surf				4.5	6750	750 surf	6460-6680 01' RC to FC 1784-1994		
	30-045-28177	FC STATE COM	#024	Burlington	Gas	State	Plugged	36	30N	12W	M	10/9/1990	6608	8.625	316	250 surf				4.5	6609	6000 surf	1492-1870		3/26/2013
	30-045-08945	MCGRATH C	#001	Burlington	Gas	Federal	Plugged	34	30n	12W	p	2/7/1963	6637	8.625	323	225 surf				4.5	6637	925 surf	6367-6576		4/29/2009

30-045-08713	McGrath SRC	#001	Burlington	Gas	Private	Plugged	2	29n	12w	j	7/7/1973	2136	13 & 10.75	550 & 864	2 sx mud 4 sx mud	8.625	1526	5 sx mud	5.50 & 3.50	2020 2136	12 sx mud 140 surf	2020-2136 2012-2078		1998
30-045-08797	Pre-Ongard		Southland	Gas	Private	Plugged	2	29n	12w	g	4/14/1948	2125												2/23/1984
30-045-30486	MCGRATH SRC	#001R	Burlington	Gas	Private	Plugged, Not Released	2	29N	12W	J	3/23/2001	2235	8.625	53	12 surf				2.875	2228	425 surf	2010-2157		6/25/2010
30-045-08793	Pre-Ongard		Southern union	Gas	Private	Plugged	1	29N	12W	E	3/16/1948	2125												3/16/1948
30-045-08656	Cornell	2	Energen Resources	Gas	Federal	Plugged	1	29N	12W	M	10/2/1955	1996	8.625	97	75 surf				5.5	1950	100 surf	1711-1936		9/15/2005
30-045-08823	Walker SRC	1	Burlington	Gas	Private	Plugged	3	29N	12W	G	2/25/1943	2050	16	21	20 surf	5.5	1930		3.5	2050	175 surf	1938-1974		10/12/2009
30-045-08711	Pre-Ongard		Union Texas	Gas	Private	Plugged	3	29N	12W	K	6/25/1955	1940												11/10/1964
30-045-23758	Pre-Ongard		Southland	Gas	Federal	Plugged	10	29N	12W	A	12/19/1980	1870												2/10/1984
30-045-08950	HUDSON	2	Burlington	Gas	Federal	Plugged	34	30N	12W	P	7/17/1946	2137	15.5	38	20 surf	10 & 8.625	1217 1618	99 surf	5.5	1961	40 surf	1728-1938 1962-2008	2128	9/26/2008
30-045-08955	Pre-Ongard		Aztec O&G	Gas	Private	Plugged	34	30N	12W	N	11/1/1944	1965												10/29/1977
30-045-20140	Pre-Ongard		Southland	Gas	Federal	Plugged	35	30N	12W	L	9/7/1967	DH												6/9/1982
30-045-33573	CORNELL COM	#500S	Burlington	Gas	Private	Plugged	2	29N	12W	P	3/18/2006	2210	7	132	34 surf	6.25	2210		4.5	2198	279 surf	1754-1939 1743-1924		1/23/2013
30-045-08844	KATTLER	#001	Burlington	Gas	Private	Plugged	2	29N	12W	C	1/26/1945	2069	10	846	surf	5.5	1960		3.5	2050	205 surf	1961-2007		5/26/2012
30-045-08709	MCGRATH	#003	Burlington	Gas	Private	Plugged	3	29N	12W	J	3/4/1945	2040	13.375	675	2 surf	8.625 INT 1 5.5 INT 2	1460 1928	4 surf 58 surf	3.5	2011	110 surf	1872-1912 1922-1937	1871-1876	3/1/2013

BHP • BU • PI • DD • GWT • RFS • GOR • FL • TS

EFTELLER, INC.

reservoir engineering

FARMINGTON, NEW MEXICO/
GRAND JUNCTION, COLORADO

P. O. Box 1198
Farmington, New Mexico 87499
(505) 325-1731
Fax (505) 325-1148

2332 Interstate Ave.
Grand Junction, CO 81505
(970) 241-0403
Fax (970) 241-7634

AGUA MOSS, LLC

SUNCO SWD NO. 1

JUNE 27 – JULY 7, 2016

Customer	AGUA MOSS, LLC
Street	P.O. BOX 600
City/State	FARMINGTON, NM 87499
Country	USA
Service Company	TEFTELLER, INC.
Well Name	SUNCO SWD NO. 1
Well Location	SAN JUAN COUNTY, NEW MEXICO
Field / Pool	POINT LOOKOUT FORMATION
Status (Oil, Gas, Other)	DISPOSAL
Test Type	INJECTION AND FALL-OFF TESTS
Date of Test	6-27-16
Producing Interval	4350' - 4460'
Recorder Depth	4405'
Recorder Position	4405'
Shut In Date Start:	6-27-2016
Stop:	7-5-2016
Duration:	180 HRS. TANDEM ELEC. MEMORY INST. TIME
Bottom Hole Temperature	91 DEGREES @ 4405'

Gauge Identification

Gauge Manufacturer	MICRO-SMART SYSTEMS
Serial Number	162
Model Number	SP2000
Pressure Range	
Battery Type	
Calibration I.D.	
Last Calibration	2/ 4/14

Gauge Setup Parameters

Probe Set Up Time	6/27/16 11:15: 0
Time Delay to First Reading	
Test Type Selection	INJECTION AND FALL-OFF TESTS
Test Duration Selection	180 HRS. TANDEM ELEC. MEMORY INST. TIME

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
06/27	11:15:00	.0000	.01	95.11		
06/27	11:20:00	5.0000	.01	94.56	.00	
06/27	11:21:00	6.0000	1268.38	94.39	1268.37	PRESSURED UP LUBRICATOR
06/27	11:23:45	8.7500	1265.63	91.20	-2.75	
06/27	11:25:30	10.5000	1271.08	88.13	5.45	SURFACE STOP
06/27	11:25:45	10.7500	1322.40	87.65	51.32	
06/27	11:26:00	11.0000	1354.90	87.17	32.50	R.I.H. W/TANDEM ELEC. MEMORY INST.
06/27	11:26:15	11.2500	1408.45	86.68	53.55	
06/27	11:26:30	11.5000	1438.66	86.20	30.21	
06/27	11:26:45	11.7500	1468.62	85.72	29.96	
06/27	11:27:00	12.0000	1490.34	85.23	21.72	
06/27	11:27:15	12.2500	1512.18	84.31	21.84	
06/27	11:27:30	12.5000	1537.44	83.57	25.26	
06/27	11:27:45	12.7500	1587.78	82.82	50.34	
06/27	11:28:00	13.0000	1646.28	82.08	58.50	
06/27	11:28:15	13.2500	1710.89	81.34	64.60	
06/27	11:28:30	13.5000	1767.51	80.60	56.63	
06/27	11:28:45	13.7500	1819.63	79.87	52.12	
06/27	11:29:00	14.0000	1872.69	79.13	53.06	
06/27	11:29:15	14.2500	1927.08	78.39	54.39	
06/27	11:29:30	14.5000	1976.19	77.65	49.11	
06/27	11:29:45	14.7500	2024.56	76.91	48.36	
06/27	11:30:00	15.0000	2075.02	76.17	50.46	
06/27	11:30:15	15.2500	2127.95	75.91	52.94	
06/27	11:30:30	15.5000	2174.41	76.32	46.46	
06/27	11:30:45	15.7500	2226.30	76.73	51.89	
06/27	11:31:00	16.0000	2277.68	77.14	51.37	
06/27	11:31:15	16.2500	2328.38	77.56	50.71	
06/27	11:31:30	16.5000	2380.66	77.97	52.27	
06/27	11:31:45	16.7500	2432.42	78.37	51.76	
06/27	11:32:00	17.0000	2484.95	78.79	52.53	
06/27	11:32:15	17.2500	2538.49	79.20	53.54	
06/27	11:32:30	17.5000	2577.02	79.61	38.53	
06/27	11:32:45	17.7500	2605.57	80.02	28.55	
06/27	11:33:00	18.0000	2642.67	80.43	37.10	
06/27	11:33:15	18.2500	2674.66	81.40	32.00	
06/27	11:33:30	18.5000	2703.75	82.50	29.08	
06/27	11:33:45	18.7500	2732.55	83.61	28.80	
06/27	11:34:00	19.0000	2764.60	84.71	32.05	
06/27	11:34:15	19.2500	2796.11	85.82	31.51	
06/27	11:34:30	19.5000	2832.01	86.93	35.90	
06/27	11:34:45	19.7500	2870.38	88.04	38.37	
06/27	11:35:00	20.0000	2906.39	89.14	36.01	
06/27	11:35:15	20.2500	2943.69	90.25	37.30	
06/27	11:35:30	20.5000	2981.75	91.36	38.06	
06/27	11:35:45	20.7500	3020.71	92.47	38.96	
06/27	11:36:00	21.0000	3061.47	93.58	40.76	
06/27	11:36:15	21.2500	3103.03	94.75	41.56	
06/27	11:36:30	21.5000	3129.05	95.24	26.02	
06/27	11:36:45	21.7500	3153.62	95.75	24.57	
06/27	11:37:00	22.0000	3186.97	96.26	33.35	
06/27	11:38:15	23.2500	3205.69	98.78	18.72	TANDEM INST. @ 4405'
06/27	11:38:30	23.5000	3206.24	99.28	.55	
06/27	11:43:00	28.0000	3210.61	96.21	4.37	
06/27	11:46:15	31.2500	3208.77	93.92	-1.85	
06/27	11:46:30	31.5000	3244.12	93.85	35.35	BEGAN INJECTING WATER
06/27	11:47:15	32.2500	3261.42	93.61	17.30	
06/27	11:47:30	32.5000	3266.46	93.53	5.04	
06/27	11:49:15	34.2500	3285.21	96.58	18.75	
06/27	11:50:30	35.5000	3297.37	100.08	12.16	
06/27	11:52:00	37.0000	3312.82	103.30	15.45	
06/27	11:54:00	39.0000	3327.73	106.47	14.91	
06/27	11:57:00	42.0000	3345.56	106.88	17.83	
06/27	11:57:15	42.2500	3346.86	106.78	1.31	
06/27	12:01:30	46.5000	3364.23	103.74	17.37	

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
06/27	12:05:15	50.2500	3375.20	100.59	10.97	
06/27	12:09:30	54.5000	3385.15	97.44	9.95	
06/27	12:14:45	59.7500	3397.04	94.35	11.88	
06/27	12:22:15	67.2500	3411.34	91.35	14.31	
06/27	12:33:45	78.7500	3430.11	88.83	18.76	
06/27	12:34:00	79.0000	3430.47	88.79	.36	
06/27	12:48:00	93.0000	3448.96	87.52	18.49	
06/27	12:48:15	93.2500	3449.44	87.52	.48	
06/27	13:06:00	111.0000	3468.10	87.08	18.66	
06/27	13:06:15	111.2500	3468.46	87.08	.36	
06/27	13:27:15	132.2500	3487.24	87.10	18.78	
06/27	13:27:30	132.5000	3487.41	87.11	.17	
06/27	13:51:00	156.0000	3504.19	87.31	16.77	
06/27	14:14:00	179.0000	3518.24	87.59	14.06	
06/27	14:37:00	202.0000	3530.60	87.88	12.36	
06/27	15:00:00	225.0000	3541.50	88.18	10.91	
06/27	15:23:00	248.0000	3551.32	88.48	9.81	
06/27	15:46:00	271.0000	3560.33	88.80	9.02	
06/27	16:09:00	294.0000	3568.17	89.11	7.83	
06/27	16:32:00	317.0000	3575.60	89.37	7.43	
06/27	16:55:00	340.0000	3582.51	89.56	6.91	
06/27	17:18:00	363.0000	3588.98	89.74	6.47	
06/27	17:41:00	386.0000	3595.05	89.88	6.07	
06/27	18:04:00	409.0000	3600.54	89.99	5.49	
06/27	18:27:00	432.0000	3605.83	90.10	5.29	
06/27	18:50:00	455.0000	3610.74	90.20	4.91	
06/27	19:13:00	478.0000	3615.35	90.29	4.61	
06/27	19:36:00	501.0000	3619.81	90.37	4.46	
06/27	19:59:00	524.0000	3623.87	90.47	4.06	
06/27	20:22:00	547.0000	3627.87	90.55	4.01	
06/27	20:45:00	570.0000	3631.79	90.60	3.92	
06/27	21:08:00	593.0000	3635.34	90.59	3.55	
06/27	21:31:00	616.0000	3638.86	90.57	3.51	
06/27	21:54:00	639.0000	3642.46	90.51	3.60	
06/27	22:17:00	662.0000	3645.65	90.43	3.19	
06/27	22:40:00	685.0000	3648.84	90.32	3.20	
06/27	23:03:00	708.0000	3651.73	90.19	2.89	
06/27	23:26:00	731.0000	3654.53	90.01	2.80	
06/27	23:49:00	754.0000	3657.35	89.83	2.82	
06/28	00:12:00	777.0000	3660.07	89.64	2.71	
06/28	00:35:00	800.0000	3662.89	89.44	2.82	
06/28	00:58:00	823.0000	3665.48	89.24	2.59	
06/28	01:21:00	846.0000	3668.07	89.00	2.59	
06/28	01:44:00	869.0000	3670.53	88.74	2.47	
06/28	02:07:00	892.0000	3673.01	88.43	2.47	
06/28	02:30:00	915.0000	3675.34	88.08	2.33	
06/28	02:53:00	938.0000	3677.70	87.69	2.36	
06/28	03:16:00	961.0000	3680.08	87.28	2.38	
06/28	03:39:00	984.0000	3682.32	86.89	2.25	
06/28	04:02:00	1007.0000	3684.50	86.50	2.17	
06/28	04:25:00	1030.0000	3686.61	86.11	2.11	
06/28	04:48:00	1053.0000	3688.66	85.74	2.06	
06/28	05:11:00	1076.0000	3690.57	85.39	1.91	
06/28	05:34:00	1099.0000	3692.57	85.04	2.00	
06/28	05:57:00	1122.0000	3694.43	84.72	1.85	
06/28	06:20:00	1145.0000	3696.22	84.41	1.79	
06/28	06:43:00	1168.0000	3697.98	84.12	1.76	
06/28	07:06:00	1191.0000	3699.67	83.85	1.70	
06/28	07:29:00	1214.0000	3701.27	83.63	1.60	
06/28	07:52:00	1237.0000	3702.95	83.43	1.68	
06/28	08:15:00	1260.0000	3704.48	83.27	1.53	
06/28	08:38:00	1283.0000	3706.05	83.20	1.58	
06/28	09:01:00	1306.0000	3707.73	83.36	1.68	
06/28	09:24:00	1329.0000	3709.25	83.50	1.52	
06/28	09:47:00	1352.0000	3710.86	83.54	1.61	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
06/28	10:10:00	1375.0000	3712.41	83.55	1.55	
06/28	10:33:00	1398.0000	3713.84	83.64	1.43	
06/28	10:56:00	1421.0000	3715.33	83.78	1.49	
06/28	11:19:00	1444.0000	3716.82	83.95	1.49	
06/28	11:42:00	1467.0000	3718.22	84.13	1.40	
06/28	12:05:00	1490.0000	3719.64	84.28	1.42	
06/28	12:28:00	1513.0000	3720.96	84.41	1.32	
06/28	12:51:00	1536.0000	3722.31	84.53	1.35	
06/28	13:14:00	1559.0000	3723.64	84.67	1.33	
06/28	13:37:00	1582.0000	3724.90	84.84	1.26	
06/28	14:00:00	1605.0000	3726.18	85.02	1.28	
06/28	14:23:00	1628.0000	3727.39	85.25	1.21	
06/28	14:46:00	1651.0000	3728.59	85.51	1.21	
06/28	15:09:00	1674.0000	3729.86	85.76	1.27	
06/28	15:32:00	1697.0000	3730.98	86.02	1.12	
06/28	15:55:00	1720.0000	3732.08	86.21	1.11	
06/28	16:18:00	1743.0000	3733.21	86.35	1.12	
06/28	16:41:00	1766.0000	3734.28	86.44	1.08	
06/28	17:04:00	1789.0000	3735.32	86.53	1.04	
06/28	17:27:00	1812.0000	3736.39	86.58	1.07	
06/28	17:50:00	1835.0000	3737.35	86.62	.96	
06/28	18:13:00	1858.0000	3738.47	86.65	1.12	
06/28	18:36:00	1881.0000	3739.42	86.70	.95	
06/28	18:59:00	1904.0000	3740.42	86.72	1.00	
06/28	19:22:00	1927.0000	3741.33	86.75	.91	
06/28	19:45:00	1950.0000	3742.32	86.75	.99	
06/28	20:08:00	1973.0000	3743.24	86.73	.92	
06/28	20:31:00	1996.0000	3744.18	86.67	.94	
06/28	20:54:00	2019.0000	3745.15	86.56	.96	
06/28	21:17:00	2042.0000	3746.03	86.40	.88	
06/28	21:40:00	2065.0000	3746.94	86.22	.92	
06/28	22:03:00	2088.0000	3747.74	86.05	.79	
06/28	22:26:00	2111.0000	3748.62	85.86	.89	
06/28	22:49:00	2134.0000	3749.50	85.65	.87	
06/28	23:12:00	2157.0000	3750.22	85.44	.73	
06/28	23:35:00	2180.0000	3751.14	85.23	.92	
06/28	23:58:00	2203.0000	3751.90	85.02	.76	
06/29	00:21:00	2226.0000	3752.47	84.81	.56	
06/29	00:44:00	2249.0000	3753.35	84.61	.88	
06/29	01:07:00	2272.0000	3754.08	84.43	.73	
06/29	01:30:00	2295.0000	3754.82	84.25	.74	
06/29	01:53:00	2318.0000	3755.47	84.10	.65	
06/29	02:16:00	2341.0000	3756.20	83.95	.73	
06/29	02:39:00	2364.0000	3756.89	83.81	.69	
06/29	03:02:00	2387.0000	3757.55	83.69	.66	
06/29	03:25:00	2410.0000	3758.29	83.59	.74	
06/29	03:48:00	2433.0000	3758.98	83.49	.68	
06/29	04:11:00	2456.0000	3759.58	83.39	.60	
06/29	04:34:00	2479.0000	3760.22	83.26	.64	
06/29	04:57:00	2502.0000	3760.94	83.12	.72	
06/29	05:20:00	2525.0000	3761.50	82.99	.56	
06/29	05:43:00	2548.0000	3762.14	82.85	.64	
06/29	06:06:00	2571.0000	3762.68	82.71	.55	
06/29	06:29:00	2594.0000	3763.15	82.57	.47	
06/29	06:52:00	2617.0000	3763.67	82.43	.52	
06/29	07:15:00	2640.0000	3764.22	82.29	.55	
06/29	07:38:00	2663.0000	3764.78	82.17	.56	
06/29	08:01:00	2686.0000	3765.40	82.06	.62	
06/29	08:24:00	2709.0000	3765.98	82.05	.58	
06/29	08:47:00	2732.0000	3766.48	82.11	.50	
06/29	09:10:00	2755.0000	3767.01	82.20	.54	
06/29	09:33:00	2778.0000	3767.55	82.29	.53	
06/29	09:56:00	2801.0000	3768.01	82.35	.47	
06/29	10:19:00	2824.0000	3768.57	82.43	.56	
06/29	10:42:00	2847.0000	3769.07	82.54	.50	

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
06/29	11:05:00	2870.0000	3769.55	82.71	.48	
06/29	11:28:00	2893.0000	3770.07	82.91	.52	
06/29	11:51:00	2916.0000	3770.68	83.12	.61	
06/29	12:14:00	2939.0000	3771.20	83.32	.51	
06/29	12:37:00	2962.0000	3771.73	83.50	.54	
06/29	13:00:00	2985.0000	3772.26	83.69	.53	
06/29	13:23:00	3008.0000	3772.86	83.92	.61	
06/29	13:46:00	3031.0000	3773.45	84.11	.58	
06/29	14:09:00	3054.0000	3774.02	84.18	.57	
06/29	14:32:00	3077.0000	3774.54	84.13	.52	
06/29	14:55:00	3100.0000	3775.06	84.00	.52	
06/29	15:18:00	3123.0000	3775.54	83.90	.48	
06/29	15:41:00	3146.0000	3775.94	83.83	.40	
06/29	16:04:00	3169.0000	3776.39	83.74	.45	
06/29	16:27:00	3192.0000	3776.92	83.65	.53	
06/29	16:50:00	3215.0000	3777.34	83.57	.42	
06/29	17:13:00	3238.0000	3777.79	83.49	.45	
06/29	17:36:00	3261.0000	3778.25	83.41	.46	
06/29	17:59:00	3284.0000	3778.67	83.38	.42	
06/29	18:22:00	3307.0000	3779.06	83.35	.39	
06/29	18:45:00	3330.0000	3779.45	83.32	.39	
06/29	19:08:00	3353.0000	3779.99	83.30	.54	
06/29	19:31:00	3376.0000	3780.36	83.32	.37	
06/29	19:54:00	3399.0000	3780.80	83.36	.44	
06/29	20:17:00	3422.0000	3781.19	83.41	.39	
06/29	20:40:00	3445.0000	3781.69	83.48	.50	
06/29	21:03:00	3468.0000	3782.11	83.50	.42	
06/29	21:22:15	3487.2500	3763.46	83.69	-18.66	END WATER INJECTION TEST
06/29	21:22:30	3487.5000	3762.97	83.71	-.49	BEGAN FALL-OFF TEST
06/29	21:37:30	3502.5000	3744.21	85.10	-18.75	
06/29	21:37:45	3502.7500	3744.01	85.11	-.21	
06/29	22:01:00	3526.0000	3727.90	85.94	-16.10	
06/29	22:24:00	3549.0000	3715.47	86.47	-12.44	
06/29	22:47:00	3572.0000	3705.04	86.89	-10.43	
06/29	23:10:00	3595.0000	3696.00	87.22	-9.04	
06/29	23:33:00	3618.0000	3687.86	87.55	-8.13	
06/29	23:56:00	3641.0000	3680.44	87.82	-7.43	
06/30	00:19:00	3664.0000	3673.68	88.07	-6.75	
06/30	00:42:00	3687.0000	3667.22	88.31	-6.46	
06/30	01:05:00	3710.0000	3661.48	88.53	-5.75	
06/30	01:28:00	3733.0000	3655.91	88.72	-5.57	
06/30	01:51:00	3756.0000	3650.53	88.91	-5.38	
06/30	02:14:00	3779.0000	3645.64	89.08	-4.88	
06/30	02:37:00	3802.0000	3640.83	89.23	-4.81	
06/30	03:00:00	3825.0000	3636.13	89.37	-4.70	
06/30	03:23:00	3848.0000	3631.77	89.51	-4.36	
06/30	03:46:00	3871.0000	3627.51	89.64	-4.26	
06/30	04:09:00	3894.0000	3623.36	89.75	-4.15	
06/30	04:32:00	3917.0000	3619.32	89.86	-4.05	
06/30	04:55:00	3940.0000	3615.41	89.96	-3.90	
06/30	05:18:00	3963.0000	3611.66	90.04	-3.75	
06/30	05:41:00	3986.0000	3608.00	90.13	-3.66	
06/30	06:04:00	4009.0000	3604.39	90.19	-3.61	
06/30	06:27:00	4032.0000	3600.93	90.26	-3.46	
06/30	06:50:00	4055.0000	3597.48	90.33	-3.46	
06/30	07:13:00	4078.0000	3594.13	90.39	-3.34	
06/30	07:36:00	4101.0000	3590.83	90.45	-3.30	
06/30	07:59:00	4124.0000	3587.60	90.50	-3.23	
06/30	08:22:00	4147.0000	3584.50	90.53	-3.10	
06/30	08:45:00	4170.0000	3581.43	90.58	-3.07	
06/30	09:08:00	4193.0000	3578.45	90.61	-2.98	
06/30	09:31:00	4216.0000	3575.61	90.64	-2.84	
06/30	09:54:00	4239.0000	3572.65	90.67	-2.96	
06/30	10:17:00	4262.0000	3570.03	90.71	-2.62	
06/30	10:40:00	4285.0000	3567.28	90.72	-2.74	

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
06/30	11:03:00	4308.0000	3564.54	90.74	-2.74	
06/30	11:26:00	4331.0000	3561.86	90.77	-2.68	
06/30	11:49:00	4354.0000	3559.20	90.78	-2.67	
06/30	12:12:00	4377.0000	3556.59	90.80	-2.61	
06/30	12:35:00	4400.0000	3554.21	90.81	-2.38	
06/30	12:58:00	4423.0000	3551.60	90.84	-2.61	
06/30	13:21:00	4446.0000	3549.30	90.84	-2.30	
06/30	13:44:00	4469.0000	3546.97	90.84	-2.34	
06/30	14:07:00	4492.0000	3544.51	90.85	-2.45	
06/30	14:30:00	4515.0000	3542.28	90.85	-2.23	
06/30	14:53:00	4538.0000	3539.99	90.88	-2.29	
06/30	15:16:00	4561.0000	3537.78	90.89	-2.21	
06/30	15:39:00	4584.0000	3535.48	90.90	-2.31	
06/30	16:02:00	4607.0000	3533.35	90.89	-2.12	
06/30	16:25:00	4630.0000	3531.19	90.90	-2.16	
06/30	16:48:00	4653.0000	3529.05	90.91	-2.14	
06/30	17:11:00	4676.0000	3526.97	90.92	-2.08	
06/30	17:34:00	4699.0000	3524.86	90.93	-2.10	
06/30	17:57:00	4722.0000	3522.80	90.94	-2.06	
06/30	18:20:00	4745.0000	3520.83	90.93	-1.96	
06/30	18:43:00	4768.0000	3518.84	90.94	-2.00	
06/30	19:06:00	4791.0000	3516.84	90.95	-2.00	
06/30	19:29:00	4814.0000	3514.92	90.95	-1.93	
06/30	19:52:00	4837.0000	3512.97	90.95	-1.95	
06/30	20:15:00	4860.0000	3511.08	90.96	-1.89	
06/30	20:38:00	4883.0000	3509.21	90.97	-1.87	
06/30	21:01:00	4906.0000	3507.43	90.96	-1.78	
06/30	21:24:00	4929.0000	3505.55	90.97	-1.87	
06/30	21:47:00	4952.0000	3503.69	90.97	-1.87	
06/30	22:10:00	4975.0000	3501.94	90.97	-1.75	
06/30	22:33:00	4998.0000	3500.23	90.97	-1.71	
06/30	22:56:00	5021.0000	3498.53	90.97	-1.70	
06/30	23:19:00	5044.0000	3496.79	90.98	-1.74	
06/30	23:42:00	5067.0000	3495.11	90.97	-1.67	
07/01	00:05:00	5090.0000	3493.48	90.98	-1.64	
07/01	00:28:00	5113.0000	3491.78	90.99	-1.70	
07/01	00:51:00	5136.0000	3490.22	90.98	-1.55	
07/01	01:14:00	5159.0000	3488.59	90.98	-1.64	
07/01	01:37:00	5182.0000	3487.02	90.98	-1.57	
07/01	02:00:00	5205.0000	3485.41	90.99	-1.61	
07/01	02:23:00	5228.0000	3483.86	90.99	-1.55	
07/01	02:46:00	5251.0000	3482.34	91.00	-1.52	
07/01	03:09:00	5274.0000	3480.80	91.00	-1.54	
07/01	03:32:00	5297.0000	3479.25	91.00	-1.55	
07/01	03:55:00	5320.0000	3477.78	91.00	-1.47	
07/01	04:18:00	5343.0000	3476.28	91.01	-1.50	
07/01	04:41:00	5366.0000	3474.81	91.02	-1.47	
07/01	05:04:00	5389.0000	3473.36	91.02	-1.45	
07/01	05:27:00	5412.0000	3471.97	91.02	-1.39	
07/01	05:50:00	5435.0000	3470.50	91.02	-1.46	
07/01	06:13:00	5458.0000	3469.08	91.01	-1.42	
07/01	06:36:00	5481.0000	3467.63	91.02	-1.46	
07/01	06:59:00	5504.0000	3466.28	91.02	-1.35	
07/01	07:22:00	5527.0000	3464.83	91.02	-1.45	
07/01	07:45:00	5550.0000	3463.53	91.02	-1.30	
07/01	08:08:00	5573.0000	3462.19	91.02	-1.34	
07/01	08:31:00	5596.0000	3460.82	91.02	-1.37	
07/01	08:54:00	5619.0000	3459.49	91.03	-1.33	
07/01	09:17:00	5642.0000	3458.22	91.02	-1.27	
07/01	09:40:00	5665.0000	3456.84	91.03	-1.37	
07/01	10:03:00	5688.0000	3455.56	91.04	-1.28	
07/01	10:26:00	5711.0000	3454.32	91.04	-1.24	
07/01	10:49:00	5734.0000	3453.07	91.04	-1.25	
07/01	11:12:00	5757.0000	3451.82	91.04	-1.26	
07/01	11:35:00	5780.0000	3450.61	91.04	-1.21	

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
07/01	11:58:00	5803.0000	3449.34	91.04	-1.26	
07/01	12:21:00	5826.0000	3448.16	91.04	-1.18	
07/01	12:44:00	5849.0000	3446.98	91.04	-1.19	
07/01	13:07:00	5872.0000	3445.81	91.04	-1.17	
07/01	13:30:00	5895.0000	3444.58	91.05	-1.23	
07/01	13:53:00	5918.0000	3443.44	91.06	-1.14	
07/01	14:16:00	5941.0000	3442.31	91.05	-1.13	
07/01	14:39:00	5964.0000	3441.18	91.06	-1.14	
07/01	15:02:00	5987.0000	3440.10	91.07	-1.08	
07/01	15:25:00	6010.0000	3438.94	91.05	-1.16	
07/01	15:48:00	6033.0000	3437.80	91.07	-1.14	
07/01	16:11:00	6056.0000	3436.72	91.07	-1.09	
07/01	16:34:00	6079.0000	3435.62	91.05	-1.10	
07/01	16:57:00	6102.0000	3434.58	91.07	-1.04	
07/01	17:20:00	6125.0000	3433.43	91.07	-1.16	
07/01	17:43:00	6148.0000	3432.45	91.07	-.98	
07/01	18:06:00	6171.0000	3431.32	91.07	-1.12	
07/01	18:29:00	6194.0000	3430.27	91.07	-1.06	
07/01	18:52:00	6217.0000	3429.22	91.07	-1.04	
07/01	19:15:00	6240.0000	3428.14	91.07	-1.08	
07/01	19:38:00	6263.0000	3427.17	91.07	-.97	
07/01	20:01:00	6286.0000	3426.13	91.07	-1.04	
07/01	20:24:00	6309.0000	3425.16	91.08	-.97	
07/01	20:47:00	6332.0000	3424.09	91.08	-1.07	
07/01	21:10:00	6355.0000	3423.11	91.08	-.98	
07/01	21:33:00	6378.0000	3422.08	91.07	-1.03	
07/01	21:56:00	6401.0000	3421.11	91.08	-.98	
07/01	22:19:00	6424.0000	3420.09	91.09	-1.01	
07/01	22:42:00	6447.0000	3419.16	91.09	-.93	
07/01	23:05:00	6470.0000	3418.21	91.08	-.96	
07/01	23:28:00	6493.0000	3417.26	91.09	-.95	
07/01	23:51:00	6516.0000	3416.35	91.09	-.91	
07/02	00:14:00	6539.0000	3415.45	91.09	-.91	
07/02	00:37:00	6562.0000	3414.50	91.09	-.94	
07/02	01:00:00	6585.0000	3413.58	91.10	-.92	
07/02	01:23:00	6608.0000	3412.65	91.09	-.94	
07/02	01:46:00	6631.0000	3411.69	91.11	-.95	
07/02	02:09:00	6654.0000	3410.86	91.11	-.83	
07/02	02:32:00	6677.0000	3409.94	91.11	-.92	
07/02	02:55:00	6700.0000	3409.12	91.10	-.82	
07/02	03:18:00	6723.0000	3408.25	91.11	-.87	
07/02	03:41:00	6746.0000	3407.38	91.11	-.88	
07/02	04:04:00	6769.0000	3406.49	91.11	-.89	
07/02	04:27:00	6792.0000	3405.65	91.11	-.84	
07/02	04:50:00	6815.0000	3404.78	91.11	-.87	
07/02	05:13:00	6838.0000	3403.94	91.11	-.84	
07/02	05:36:00	6861.0000	3403.07	91.11	-.87	
07/02	05:59:00	6884.0000	3402.22	91.12	-.85	
07/02	06:22:00	6907.0000	3401.39	91.12	-.84	
07/02	06:45:00	6930.0000	3400.58	91.12	-.81	
07/02	07:08:00	6953.0000	3399.71	91.12	-.87	
07/02	07:31:00	6976.0000	3398.90	91.12	-.81	
07/02	07:54:00	6999.0000	3398.07	91.13	-.83	
07/02	08:17:00	7022.0000	3397.23	91.13	-.84	
07/02	08:40:00	7045.0000	3396.42	91.12	-.81	
07/02	09:03:00	7068.0000	3395.65	91.11	-.78	
07/02	09:26:00	7091.0000	3394.81	91.12	-.83	
07/02	09:49:00	7114.0000	3394.01	91.14	-.81	
07/02	10:12:00	7137.0000	3393.27	91.14	-.74	
07/02	10:35:00	7160.0000	3392.45	91.14	-.82	
07/02	10:58:00	7183.0000	3391.68	91.14	-.78	
07/02	11:21:00	7206.0000	3390.91	91.14	-.77	
07/02	11:44:00	7229.0000	3390.20	91.14	-.71	
07/02	12:07:00	7252.0000	3389.42	91.14	-.78	
07/02	12:30:00	7275.0000	3388.71	91.14	-.72	

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
07/02	12:53:00	7298.0000	3387.95	91.14	-.75	
07/02	13:16:00	7321.0000	3387.28	91.14	-.68	
07/02	13:39:00	7344.0000	3386.51	91.14	-.76	
07/02	14:02:00	7367.0000	3385.85	91.14	-.66	
07/02	14:25:00	7390.0000	3385.14	91.14	-.71	
07/02	14:48:00	7413.0000	3384.42	91.15	-.72	
07/02	15:11:00	7436.0000	3383.76	91.14	-.66	
07/02	15:34:00	7459.0000	3383.05	91.15	-.71	
07/02	15:57:00	7482.0000	3382.40	91.15	-.65	
07/02	16:20:00	7505.0000	3381.73	91.14	-.68	
07/02	16:43:00	7528.0000	3380.96	91.15	-.76	
07/02	17:06:00	7551.0000	3380.32	91.15	-.64	
07/02	17:29:00	7574.0000	3379.69	91.16	-.64	
07/02	17:52:00	7597.0000	3379.00	91.16	-.69	
07/02	18:15:00	7620.0000	3378.31	91.16	-.69	
07/02	18:38:00	7643.0000	3377.66	91.16	-.65	
07/02	19:01:00	7666.0000	3376.95	91.16	-.71	
07/02	19:24:00	7689.0000	3376.32	91.16	-.63	
07/02	19:47:00	7712.0000	3375.67	91.16	-.66	
07/02	20:10:00	7735.0000	3374.95	91.17	-.72	
07/02	20:33:00	7758.0000	3374.29	91.18	-.66	
07/02	20:56:00	7781.0000	3373.66	91.18	-.62	
07/02	21:19:00	7804.0000	3373.00	91.18	-.66	
07/02	21:42:00	7827.0000	3372.38	91.17	-.62	
07/02	22:05:00	7850.0000	3371.71	91.18	-.67	
07/02	22:28:00	7873.0000	3371.08	91.18	-.63	
07/02	22:51:00	7896.0000	3370.46	91.18	-.62	
07/02	23:14:00	7919.0000	3369.82	91.19	-.64	
07/02	23:37:00	7942.0000	3369.19	91.19	-.63	
07/03	00:00:00	7965.0000	3368.55	91.19	-.63	
07/03	00:23:00	7988.0000	3367.90	91.19	-.66	
07/03	00:46:00	8011.0000	3367.34	91.20	-.56	
07/03	01:09:00	8034.0000	3366.72	91.21	-.62	
07/03	01:32:00	8057.0000	3366.16	91.20	-.56	
07/03	01:55:00	8080.0000	3365.60	91.20	-.56	
07/03	02:18:00	8103.0000	3364.91	91.20	-.69	
07/03	02:41:00	8126.0000	3364.36	91.20	-.56	
07/03	03:04:00	8149.0000	3363.76	91.20	-.60	
07/03	03:27:00	8172.0000	3363.22	91.21	-.54	
07/03	03:50:00	8195.0000	3362.67	91.19	-.55	
07/03	04:13:00	8218.0000	3362.06	91.21	-.61	
07/03	04:36:00	8241.0000	3361.52	91.21	-.54	
07/03	04:59:00	8264.0000	3360.98	91.21	-.54	
07/03	05:22:00	8287.0000	3360.39	91.21	-.59	
07/03	05:45:00	8310.0000	3359.79	91.21	-.60	
07/03	06:08:00	8333.0000	3359.23	91.22	-.56	
07/03	06:31:00	8356.0000	3358.67	91.21	-.56	
07/03	06:54:00	8379.0000	3358.08	91.22	-.59	
07/03	07:17:00	8402.0000	3357.54	91.22	-.55	
07/03	07:40:00	8425.0000	3356.97	91.22	-.57	
07/03	08:03:00	8448.0000	3356.38	91.23	-.59	
07/03	08:26:00	8471.0000	3355.81	91.22	-.56	
07/03	08:49:00	8494.0000	3355.25	91.23	-.56	
07/03	09:12:00	8517.0000	3354.63	91.23	-.62	
07/03	09:35:00	8540.0000	3354.19	91.23	-.44	
07/03	09:58:00	8563.0000	3353.61	91.24	-.58	
07/03	10:21:00	8586.0000	3353.01	91.24	-.60	
07/03	10:44:00	8609.0000	3352.47	91.24	-.55	
07/03	11:07:00	8632.0000	3351.96	91.24	-.51	
07/03	11:30:00	8655.0000	3351.39	91.25	-.56	
07/03	11:53:00	8678.0000	3350.89	91.23	-.50	
07/03	12:16:00	8701.0000	3350.33	91.25	-.56	
07/03	12:39:00	8724.0000	3349.81	91.25	-.52	
07/03	13:02:00	8747.0000	3349.31	91.25	-.50	
07/03	13:25:00	8770.0000	3348.83	91.25	-.49	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
07/03	13:48:00	8793.0000	3348.32	91.26	-.51	
07/03	14:11:00	8816.0000	3347.80	91.25	-.52	
07/03	14:34:00	8839.0000	3347.32	91.26	-.48	
07/03	14:57:00	8862.0000	3346.87	91.26	-.45	
07/03	15:20:00	8885.0000	3346.38	91.26	-.49	
07/03	15:43:00	8908.0000	3345.86	91.26	-.51	
07/03	16:06:00	8931.0000	3345.41	91.27	-.46	
07/03	16:29:00	8954.0000	3344.91	91.27	-.50	
07/03	16:52:00	8977.0000	3344.42	91.27	-.50	
07/03	17:15:00	9000.0000	3343.94	91.27	-.48	
07/03	17:38:00	9023.0000	3343.50	91.26	-.44	
07/03	18:01:00	9046.0000	3343.00	91.28	-.50	
07/03	18:24:00	9069.0000	3342.53	91.28	-.47	
07/03	18:47:00	9092.0000	3342.07	91.28	-.46	
07/03	19:10:00	9115.0000	3341.64	91.27	-.43	
07/03	19:33:00	9138.0000	3341.12	91.28	-.52	
07/03	19:56:00	9161.0000	3340.67	91.28	-.46	
07/03	20:19:00	9184.0000	3340.17	91.28	-.50	
07/03	20:42:00	9207.0000	3339.68	91.28	-.49	
07/03	21:05:00	9230.0000	3339.25	91.28	-.43	
07/03	21:28:00	9253.0000	3338.78	91.28	-.47	
07/03	21:51:00	9276.0000	3338.34	91.29	-.44	
07/03	22:14:00	9299.0000	3337.79	91.29	-.55	
07/03	22:37:00	9322.0000	3337.35	91.29	-.44	
07/03	23:00:00	9345.0000	3336.89	91.30	-.47	
07/03	23:23:00	9368.0000	3336.42	91.30	-.46	
07/03	23:46:00	9391.0000	3335.98	91.30	-.44	
07/04	00:09:00	9414.0000	3335.53	91.30	-.46	
07/04	00:32:00	9437.0000	3335.09	91.30	-.43	
07/04	00:55:00	9460.0000	3334.63	91.30	-.47	
07/04	01:18:00	9483.0000	3334.22	91.30	-.40	
07/04	01:41:00	9506.0000	3333.77	91.31	-.46	
07/04	02:04:00	9529.0000	3333.39	91.30	-.37	
07/04	02:27:00	9552.0000	3332.92	91.31	-.47	
07/04	02:50:00	9575.0000	3332.50	91.31	-.43	
07/04	03:13:00	9598.0000	3332.07	91.32	-.43	
07/04	03:36:00	9621.0000	3331.73	91.32	-.34	
07/04	03:59:00	9644.0000	3331.27	91.32	-.46	
07/04	04:22:00	9667.0000	3330.87	91.32	-.40	
07/04	04:45:00	9690.0000	3330.45	91.32	-.42	
07/04	05:08:00	9713.0000	3330.03	91.32	-.42	
07/04	05:31:00	9736.0000	3329.61	91.32	-.42	
07/04	05:54:00	9759.0000	3329.28	91.33	-.33	
07/04	06:17:00	9782.0000	3328.79	91.33	-.49	
07/04	06:40:00	9805.0000	3328.37	91.33	-.42	
07/04	07:03:00	9828.0000	3328.02	91.34	-.35	
07/04	07:26:00	9851.0000	3327.53	91.33	-.49	
07/04	07:49:00	9874.0000	3327.07	91.35	-.46	
07/04	08:12:00	9897.0000	3326.70	91.34	-.37	
07/04	08:35:00	9920.0000	3326.21	91.35	-.49	
07/04	08:58:00	9943.0000	3325.84	91.34	-.36	
07/04	09:21:00	9966.0000	3325.42	91.35	-.43	
07/04	09:44:00	9989.0000	3324.99	91.35	-.43	
07/04	10:07:00	10012.0000	3324.65	91.35	-.34	
07/04	10:30:00	10035.0000	3324.15	91.35	-.49	
07/04	10:53:00	10058.0000	3323.79	91.36	-.36	
07/04	11:16:00	10081.0000	3323.31	91.36	-.48	
07/04	11:39:00	10104.0000	3322.97	91.36	-.35	
07/04	12:02:00	10127.0000	3322.54	91.37	-.42	
07/04	12:25:00	10150.0000	3322.11	91.37	-.43	
07/04	12:48:00	10173.0000	3321.79	91.37	-.32	
07/04	13:11:00	10196.0000	3321.38	91.37	-.41	
07/04	13:34:00	10219.0000	3320.93	91.37	-.45	
07/04	13:57:00	10242.0000	3320.60	91.37	-.33	
07/04	14:20:00	10265.0000	3320.23	91.38	-.38	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
07/04	14:43:00	10288.0000	3319.86	91.37	-.37	
07/04	15:06:00	10311.0000	3319.48	91.38	-.38	
07/04	15:29:00	10334.0000	3319.09	91.38	-.39	
07/04	15:52:00	10357.0000	3318.72	91.38	-.36	
07/04	16:15:00	10380.0000	3318.37	91.39	-.35	
07/04	16:38:00	10403.0000	3318.09	91.39	-.29	
07/04	17:01:00	10426.0000	3317.67	91.39	-.42	
07/04	17:24:00	10449.0000	3317.31	91.39	-.36	
07/04	17:47:00	10472.0000	3316.97	91.39	-.33	
07/04	18:10:00	10495.0000	3316.61	91.39	-.36	
07/04	18:33:00	10518.0000	3316.26	91.39	-.36	
07/04	18:56:00	10541.0000	3315.88	91.39	-.38	
07/04	19:19:00	10564.0000	3315.55	91.39	-.33	
07/04	19:42:00	10587.0000	3315.14	91.39	-.41	
07/04	20:05:00	10610.0000	3314.82	91.40	-.32	
07/04	20:28:00	10633.0000	3314.45	91.39	-.37	
07/04	20:51:00	10656.0000	3314.11	91.40	-.34	
07/04	21:14:00	10679.0000	3313.73	91.40	-.38	
07/04	21:37:00	10702.0000	3313.39	91.41	-.34	
07/04	22:00:00	10725.0000	3313.04	91.40	-.35	
07/04	22:23:00	10748.0000	3312.66	91.40	-.38	
07/04	22:46:00	10771.0000	3312.28	91.41	-.38	
07/04	23:09:00	10794.0000	3311.96	91.39	-.33	
07/04	23:32:00	10817.0000	3311.58	91.40	-.37	
07/04	23:55:00	10840.0000	3311.29	91.40	-.30	
07/05	00:18:00	10863.0000	3310.91	91.42	-.38	
07/05	00:41:00	10886.0000	3310.46	91.42	-.45	
07/05	01:04:00	10909.0000	3310.08	91.42	-.37	
07/05	01:27:00	10932.0000	3309.80	91.42	-.28	
07/05	01:50:00	10955.0000	3309.45	91.42	-.35	
07/05	02:13:00	10978.0000	3309.15	91.40	-.30	
07/05	02:36:00	11001.0000	3308.85	91.42	-.30	
07/05	02:59:00	11024.0000	3308.45	91.42	-.40	
07/05	03:22:00	11047.0000	3308.17	91.42	-.27	
07/05	03:45:00	11070.0000	3307.80	91.42	-.37	
07/05	04:08:00	11093.0000	3307.52	91.42	-.28	
07/05	04:31:00	11116.0000	3307.22	91.42	-.30	
07/05	04:54:00	11139.0000	3306.92	91.42	-.30	
07/05	05:17:00	11162.0000	3306.55	91.44	-.37	
07/05	05:40:00	11185.0000	3306.19	91.44	-.36	
07/05	06:03:00	11208.0000	3305.90	91.44	-.29	
07/05	06:26:00	11231.0000	3305.59	91.44	-.31	
07/05	06:49:00	11254.0000	3305.25	91.44	-.34	
07/05	07:12:00	11277.0000	3304.95	91.44	-.30	
07/05	07:35:00	11300.0000	3304.61	91.45	-.34	
07/05	07:58:00	11323.0000	3304.30	91.45	-.31	TANDEM INST. OFF BOTTOM
07/05	07:59:00	11324.0000	3291.02	91.44	-13.28	
07/05	07:59:15	11324.2500	3269.67	91.44	-21.35	
07/05	07:59:30	11324.5000	3240.37	92.07	-29.30	
07/05	07:59:45	11324.7500	3209.67	92.69	-30.69	
07/05	08:00:00	11325.0000	3178.36	93.31	-31.31	
07/05	08:00:15	11325.2500	3146.52	93.93	-31.84	
07/05	08:00:30	11325.5000	3127.37	94.55	-19.15	
07/05	08:01:45	11326.7500	3119.19	97.65	-8.17	
07/05	08:02:45	11327.7500	3120.27	100.69	1.08	
07/05	08:03:45	11328.7500	3121.82	103.72	1.55	
07/05	08:04:45	11329.7500	3122.89	106.76	1.06	
07/05	08:06:30	11331.5000	3125.50	110.17	2.61	
07/05	08:08:45	11333.7500	3128.19	113.20	2.69	STOP @ 4000'
07/05	08:09:00	11334.0000	3104.27	113.32	-23.92	
07/05	08:09:15	11334.2500	3071.55	113.45	-32.72	
07/05	08:09:30	11334.5000	3035.10	113.58	-36.45	
07/05	08:09:45	11334.7500	2992.37	113.70	-42.73	
07/05	08:10:00	11335.0000	2948.60	113.83	-43.77	
07/05	08:10:15	11335.2500	2903.83	113.95	-44.77	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO SWD NO. 1

DATE : 07/06/16

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F162705.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
07/05	08:10:30	11335.5000	2858.66	114.08	-45.16	
07/05	08:10:45	11335.7500	2815.82	114.21	-42.84	
07/05	08:11:00	11336.0000	2777.48	114.34	-38.34	
07/05	08:11:15	11336.2500	2740.64	114.21	-36.84	
07/05	08:11:30	11336.5000	2706.71	113.92	-33.93	
07/05	08:14:15	11339.2500	2700.25	110.75	-6.46	
07/05	08:17:30	11342.5000	2698.41	107.68	-1.84	
07/05	08:18:45	11343.7500	2697.75	106.91	-.66	STOP @ 3000'
07/05	08:19:00	11344.0000	2665.58	106.76	-32.16	
07/05	08:19:15	11344.2500	2626.79	106.60	-38.79	
07/05	08:19:30	11344.5000	2587.74	106.44	-39.06	
07/05	08:19:45	11344.7500	2548.82	106.29	-38.92	
07/05	08:20:00	11345.0000	2509.51	106.14	-39.30	
07/05	08:20:15	11345.2500	2470.66	105.92	-38.85	
07/05	08:20:30	11345.5000	2431.35	105.46	-39.31	
07/05	08:20:45	11345.7500	2392.69	104.99	-38.66	
07/05	08:21:00	11346.0000	2359.16	104.53	-33.53	
07/05	08:21:15	11346.2500	2330.27	104.06	-28.89	
07/05	08:21:30	11346.5000	2299.32	103.60	-30.95	
07/05	08:21:45	11346.7500	2268.99	103.14	-30.33	
07/05	08:23:30	11348.5000	2267.60	99.77	-1.39	
07/05	08:25:15	11350.2500	2266.06	96.48	-1.54	
07/05	08:27:30	11352.5000	2263.82	93.38	-2.24	
07/05	08:28:45	11353.7500	2262.95	92.05	-.87	STOP @ 2000'
07/05	08:29:00	11354.0000	2237.23	91.79	-25.72	
07/05	08:29:15	11354.2500	2201.63	91.58	-35.61	
07/05	08:29:30	11354.5000	2166.31	91.14	-35.32	
07/05	08:29:45	11354.7500	2130.74	90.69	-35.57	
07/05	08:30:00	11355.0000	2094.66	90.24	-36.09	
07/05	08:30:15	11355.2500	2058.18	89.79	-36.48	
07/05	08:30:30	11355.5000	2020.92	89.34	-37.26	
07/05	08:30:45	11355.7500	1983.28	88.89	-37.65	
07/05	08:31:00	11356.0000	1942.79	88.44	-40.49	
07/05	08:31:15	11356.2500	1902.04	87.99	-40.75	
07/05	08:31:30	11356.5000	1860.25	87.54	-41.79	
07/05	08:31:45	11356.7500	1830.45	87.10	-29.80	
07/05	08:33:00	11358.0000	1831.52	83.99	1.07	
07/05	08:34:15	11359.2500	1830.98	80.74	-.54	
07/05	08:35:45	11360.7500	1829.65	77.47	-1.34	
07/05	08:37:45	11362.7500	1827.88	74.29	-1.77	
07/05	08:38:45	11363.7500	1827.26	73.04	-.62	STOP @ 1000'
07/05	08:39:00	11364.0000	1798.37	72.76	-28.89	
07/05	08:39:15	11364.2500	1761.31	72.47	-37.06	
07/05	08:39:30	11364.5000	1723.98	72.18	-37.33	
07/05	08:39:45	11364.7500	1684.97	71.91	-39.02	
07/05	08:40:00	11365.0000	1644.93	71.62	-40.04	
07/05	08:40:15	11365.2500	1603.70	71.34	-41.22	
07/05	08:40:30	11365.5000	1564.56	71.06	-39.15	
07/05	08:40:45	11365.7500	1524.64	70.77	-39.92	
07/05	08:41:00	11366.0000	1486.39	70.49	-38.25	
07/05	08:41:15	11366.2500	1447.50	70.10	-38.89	
07/05	08:41:30	11366.5000	1408.24	70.01	-39.27	
07/05	08:42:00	11367.0000	1389.42	69.83	-18.82	
07/05	08:42:15	11367.2500	1389.12	69.74	-.30	
07/05	08:47:30	11372.5000	1383.11	72.95	-6.00	SURFACE STOP
07/05	08:49:45	11374.7500	1395.94	75.01	12.82	
07/05	08:50:00	11375.0000	336.44	75.23	-1059.50	
07/05	08:50:15	11375.2500	.01	75.41	-336.43	

EVENT SUMMARY

COMPANY : AGUA MOSS, LLC

WELL NAME : SUNCO SWD NO. 1

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

DATE : 07/06/16

FILE REF: F162705.RED

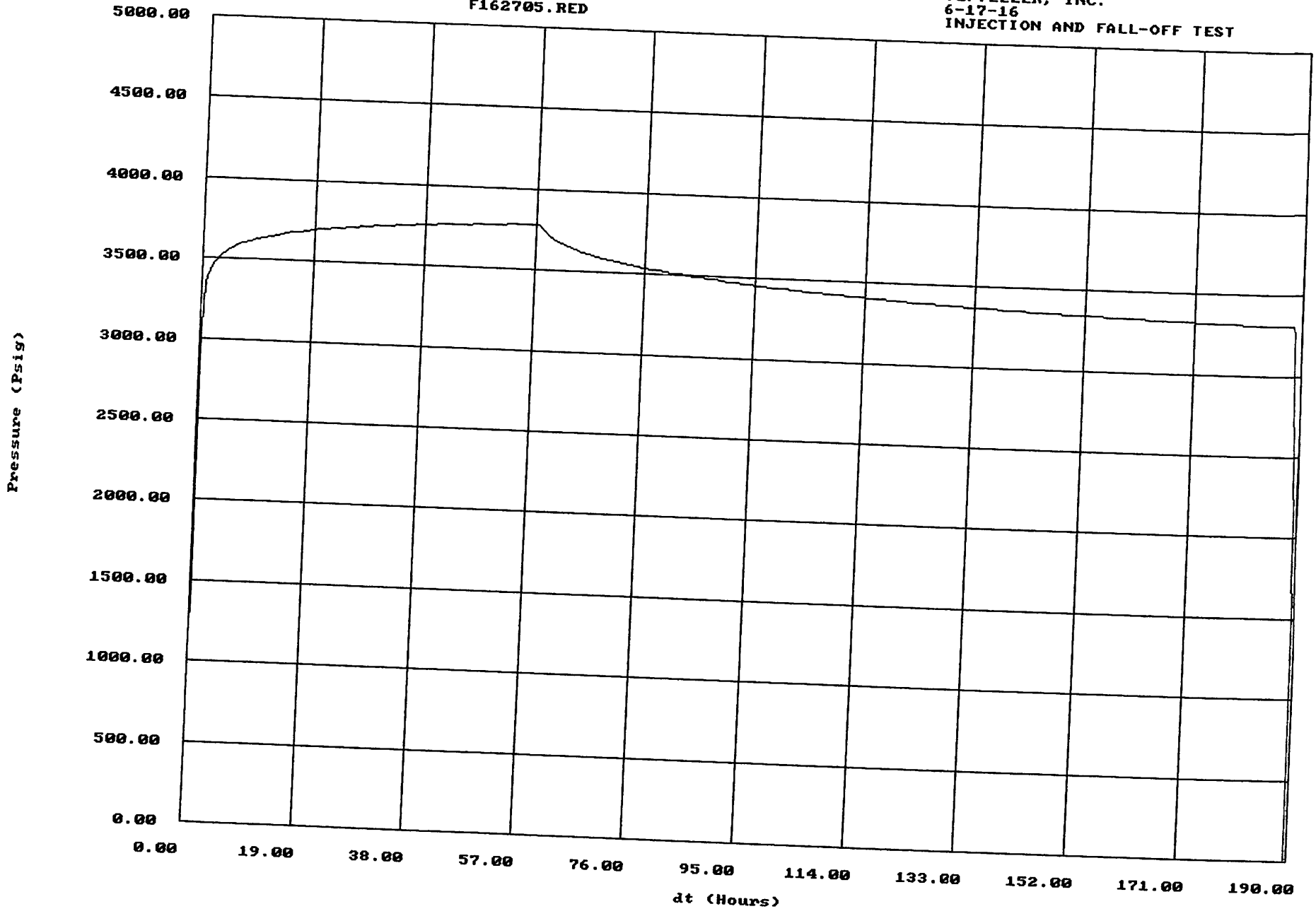
Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Key Event	Pressure Psig	Temp Deg F
06/27	11:21:00	6.0000	PRESSURED UP LUBRICATOR	1268.38	94.39
06/27	11:25:30	10.5000	SURFACE STOP	1271.08	88.13
06/27	11:26:00	11.0000	R.I.H. W/TANDEM ELEC. MEMORY INST.	1354.90	87.17
06/27	11:38:15	23.2500	TANDEM INST. @ 4405'	3205.69	98.78
06/27	11:46:30	31.5000	BEGAN INJECTING WATER	3244.12	93.85
06/29	21:22:15	3487.2500	END WATER INJECTION TEST	3763.46	83.69
06/29	21:22:30	3487.5000	BEGAN FALL-OFF TEST	3762.97	83.71
07/05	07:58:00	11323.0000	TANDEM INST. OFF BOTTOM	3304.30	91.45
07/05	08:08:45	11333.7500	STOP @ 4000'	3128.19	113.20
07/05	08:18:45	11343.7500	STOP @ 3000'	2697.75	106.91
07/05	08:28:45	11353.7500	STOP @ 2000'	2262.95	92.05
07/05	08:38:45	11363.7500	STOP @ 1000'	1827.26	73.04
07/05	08:47:30	11372.5000	SURFACE STOP	1383.11	72.95

AGUA MOSS, LLC

Pressure vs dt

SUNCO SWD NO. 1
SAN JUAN COUNTY, NM
F162705.RED

TEFTELLER, INC.
6-17-16
INJECTION AND FALL-OFF TEST



Company: AGUA MOSS, LLC
Well: SUNCO SWD NO. 1
Field: POINT LOOKOUT FORMATION
Engineer: NEIL TEFTELLER
Gauge Type: ELECTRONIC MEMORY
Gauge Range: 0 - 5000
Gauge Depth: 4405 ft
Serial No.: 162

County: SAN JUAN
State: NEW MEXICO
Date: 06/27/2016
Well Type: DISPOSAL
Test Type: GRADIENT
Status: SHUT IN
File Name: 66869

Tubing: 2-7/8" TO 4282'
Tubing: TO
Casing: TO
Perfs.: 4350' - 4460'

Packer Depth 4282 ft

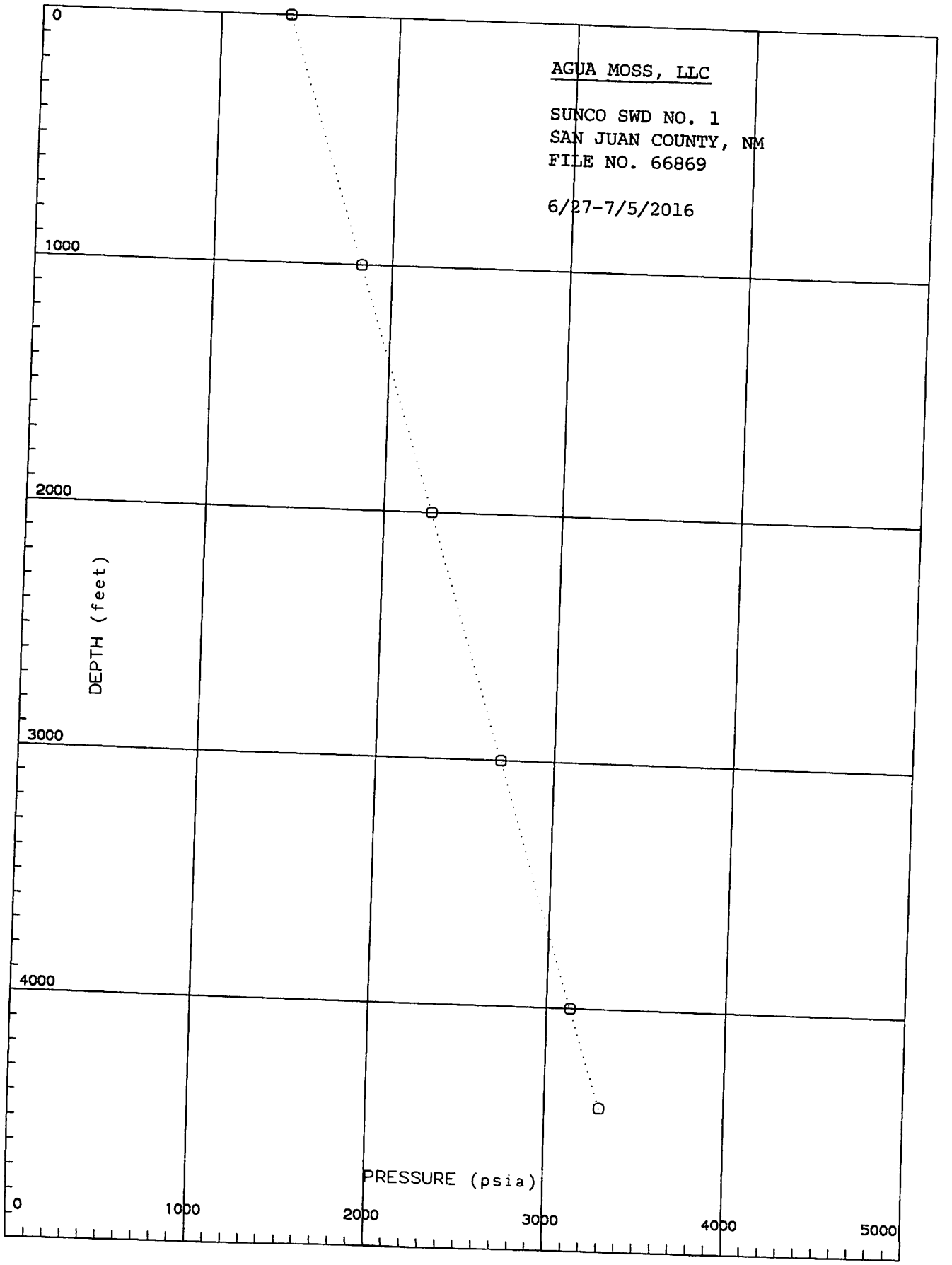
Oil Level
H2O Level

Shut-in BHP 3304 @ 4405 ft
Shut-in WHP 1389

Shut-in BHT 91 F @ 4405 ft
Shut-in WHT 0 F

[Tefteller Incorporated]

#	MD	TVD	PRESSURE	PSI/ft
1	4405	4405	3304.00	
2	4000	4000	3128.00	0.435
3	3000	3000	2698.00	0.430
4	2000	2000	2263.00	0.435
5	1000	1000	1827.00	0.436
6	0	0	1389.00	0.438


AGUA MOSS, LLC
SUNCO SWD NO. 1
SAN JUAN COUNTY, NM
FILE NO. 66869
6/27-7/5/2016
DEPTH (feet)
0
1000
2000
3000
4000
PRESSURE (psia)
0
1000
2000
3000
4000
5000

SP-2000

Downhole Memory Pressure Gauge

The SP-2000 downhole memory pressure gauge is controlled by an internal microprocessor and powerful software.

The SP-2000 can stay downhole and collect data for hours or days; depending on your application. It is slimline and operates fully from battery power.

The microprocessor is capable of detecting the correct pressure and temperature and adjust the sampling rate automatically (once programmed for the test application).

The SP-2000 is tough, dependable, simple, and intelligent. If your job requires gauges that are reliable yet rugged and simple to use, the SP-2000 memory gauge, with it's Hybrid-Quartz sensor is the one for you. It is so simple that a paper clip can be used to program it by changing the switch settings for the Type and Duration of test.

With the use of our simple, menu driven software, you can retrieve and report the gauge data (using a compatible computer and printer) from the tool once it is removed from the well.

Advanced reporting features are available such as data printouts, gradient reports, gradient plots and most of the standard time vs. pressure/temperature plot formats.

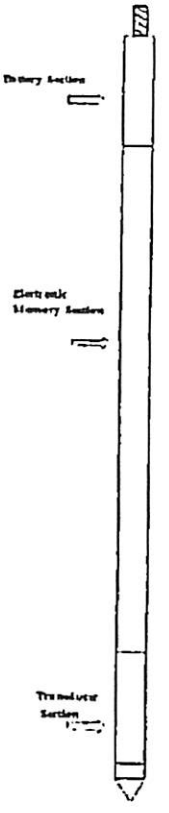
Micro-Smart Systems offers complete Well Test Interpretation, utilizing Fekete's "F.A.S.T. Well Test ™" software. This powerful state-of-the-art software includes data preparation, various analysis methods, analytical reservoir modeling and deliverability.

Micro-Smart Systems is the *SMART* choice for cutting-edge technology and superior customer support. We can save you time, money, and help you keep your customers satisfied.

SMART Features:

The technological features of the SP-2000 are:

- Dual EEPROM Memory
- Tool performs internal tests and delivers audible signal to confirm operation
- Multiple-run data storage capability
- User friendly software
- Convert from memory to SRO gauge with simple module change
- Compatible with Micro-Smart's production logging tools
- Standard ASCII data storage format
- Switch selectable programming without the use of a computer
- Selectable switches for duration in *DAYS* and *TYPE* of *TEST*
- Custom computer programming
  - up to 15 time periods
  - specify time interval, sampling rate, and Δ P switching.



"SMART AND SIMPLE"

SPECIFICATIONS:

Memory Capacity: 48,000 data sets (main memory)
2,000 data sets (backup memory)
(time, pressure, temp.)

Sampling Intervals: 1.875 seconds to 64 minutes
(in binary multiples)

Diameter: 1.25 inch (31.2 mm)

Resolution: Pressure .01 psi
Temp. .04° F

Accuracy: Pressure ± .05 % Full Scale
Temp. ± 1°F
Time ± .05%

Pressure Ranges: 2,500 psi (17,000 KPA)
5,000 psi (34,000 KPA)
10,000 psi (68,000 KPA)
15,000 psi (102,000 KPA)
20,000 psi (136,000 KPA)

Weight: 13 lbs. (5.9 Kg)

Operating Temp.: 32° F to 325° F
(0° C to 160° C)

Power: 13.5v (9 "c" cell Alkaline)
14.4v (4 "c" cell Lithium)

Length: 53 in. (1.3 m) plus battery pack
24 in. (.6 m) for 9 cell pack
16 in. (.4 m) for 4 cell pack

#9

ACCURACY VERIFICATION

5-February-2014

Gauge Model	SP-2000	Pressure Range	5 K
Gauge S/N	162	Accuracy 0.05%	Full Scale

Applied Pressure psig	Recorded Pressure psig	Difference psi	Difference Percent (%)
0.01	0.71	0.70	0.0139%
774.08	774.96	0.88	0.0177%
1498.24	1499.12	0.88	0.0176%
2222.36	2222.99	0.63	0.0126%
2946.53	2947.04	0.51	0.0102%
3670.66	3671.23	0.57	0.0113%
4394.87	4395.53	0.66	0.0133%
5119.00	5119.94	0.94	0.0187%
4394.87	4396.16	1.29	0.0258%
3670.66	3671.99	1.33	0.0265%
2946.53	2947.97	1.44	0.0287%
2222.36	2223.84	1.48	0.0296%
1498.24	1499.73	1.49	0.0299%
774.08	775.18	1.10	0.0220%
0.01	0.25	0.24	0.0049%

Oven Temperature: 144.7 °F Probe Temperature: 144.7 °F

Smart Gauge Calibration accuracy is confirmed.

Calibrated with RUSKA Pressure Standard, model # 2451-700-00
Serial #26618, Mass Set Serial #25608
Compensated to local acceleration due to gravity

Verified by: CM

Chavez, Carl J, EMNRD

From: Philana Thompson <pthompson@merrion.bz>
Sent: Thursday, June 02, 2016 11:31 AM
To: Chavez, Carl J, EMNRD
Cc: Powell, Brandon, EMNRD; Perrin, Charlie, EMNRD; Ryan Davis
Subject: FOT Plan for Sunco Disposal 30-045-28653
Attachments: 2016-05-23 Sunco SWD (FOT Plan and Procedure V1).docx

Carl,
Attached is the proposed FOT plan. This plan is very similar to last years plan, however, the hours have been modified from 72 hours to 120 hours.

Please let me know if you have any questions or concerns.

Thanks Philana

--
Philana Thompson
Regulatory Compliance
Merrion Oil & Gas Corp
cell 505-486-1171
fax 505-324-5350

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, May 12, 2016 11:59 AM
To: 'Philana Thompson'
Subject: RE: New Mexico UIC Class I (non-hazardous) Well MIT & Annual Fall-Off Test Scheduling with Completion by September 30, 2016 (San Juan and Eddy Counties)

Philana:

Hi. Follow the Test Plan you used for the last FOT.

Thanks.

Carl J. Chavez, CHMM
Environmental Engineer
Oil Conservation Division- Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Phone: (505) 476-3490
Main Phone: (505) 476-3440
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: www.emnrd.state.nm.us/ocd
Why not prevent pollution, minimize waste, reduce operation costs, and move forward with the rest of the Nation? To see how, go to “Publications” and “Pollution Prevention” on the OCD Website.

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Thursday, May 12, 2016 11:32 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Ryan Davis <RDavis@merrion.bz>
Subject: Re: New Mexico UIC Class I (non-hazardous) Well MIT & Annual Fall-Off Test Scheduling with Completion by September 30, 2016 (San Juan and Eddy Counties)

Thank you Carl,
We will be filling our procedure for the Fall Off test and MIT soon, with it to be completed by 9/30/2016.

Philana

On Thu, May 12, 2016 at 11:24 AM, Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us> wrote:

> Scott and Philana:
>
> Re: Annual Fall-Off Test for Agua Moss, LLC (San Juan County): UICl-005 (API# 30-045-28653); and HollyFrontier Navajo Refining Company (Eddy County): UICl-008-1 (WDW-1) API# 30-015-27592; UICl-008-2 (WDW-2) API# 30-015-20894 & UICl-008-3 (WDW-3) API# 30-015-26575

Good morning. It is that time of year again to remind operators about their annual Underground Injection Control (UIC) Program Fall-Off Tests (FOT) and Mechanical Integrity Tests (MIT) for this season to be completed on or before Friday, September 30, 2016. A C-103 Form with details about your well plans must be submitted to the District Office with a copy to me in Santa Fe.

The list of operator names w/ associated UIC Class I (non-hazardous) Wells affected by this notification are provided above. Operators are aware of the MIT (30 min @ => 300 psig) and Bradenhead Test requirements.

The FOT spans several days with a couple of important notes to operators from past testing, please install your bottom hole gauge(s) with recorder(s) at least 48-hours in advance of the pump shut-off during the pseudo steady-state injection period. OCD recommends that operators clean out the wellbore to eliminate erroneous well bore related FOT results. The OCD District Office would appreciate notifications for the dates and times of the bottom hole gauge installation, and pump shut-off to observe the short term fall-off in pressure in order to make arrangements to witness these actions.

Also, you are accountable for your OCD approved FOT Test Plan and the requirements in the UIC Test Guidance with Reporting Requirements at http://www.emnrd.state.nm.us/ocd/documents/UICGuidance.pdf. For access to your FOT Plan, please enter your permit information on "OCD Online" at http://ocdimage.emnrd.state.nm.us/imaging/AEOrderCriteria.aspx and enter the Order Type "UICI" along with your Order number.

For information on New Mexico's UIC Program and training information, please go to: http://www.emnrd.state.nm.us/OCD/publications.html.

Please contact me at (505) 476-3490 on or before May 31, 2016 to schedule your MIT and FOT date and time or if you have questions.

Thank you in advance for your cooperation.

Copy: UIC Class I (non-hazardous) Well Files UICI- 5; and UICI 8-1, 8-2 & 8-3

Carl J. Chavez, CHMM

Environmental Engineer

Oil Conservation Division- Environmental Bureau

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

Phone: (505) 476-3490

Main Phone: (505) 476-3440

Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: www.emnrd.state.nm.us/ocd

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--
Philana Thompson
Regulatory Compliance
Merrion Oil & Gas Corp
cell 505-486-1171
fax 505-324-5350

AGUA MOSS, LLC

TEST PLAN FOR PRESSURE FALL-OFF TEST (FOT)

Well Information			
Well:	**Sunco Disposal 1**	**Field:**	Mesaverde SWD
Location:	1595' fnl &1005' fwl S2, T29N, R12W San Juan Co. New Mexico	**Elevations:**	5859' GL 5872' RKB
		Depths:	4706' KB PBTD 4760' KB TD
		Engineer:	J. Ryan Davis (505.324.5335)
API:	30-045-28653	**Date:**	June 22, 2016~~May 24, 2016~~
Surface Casing:	8- 5/8" @ 209' KB w/ 150sx; Circ to surface	**Production Casing:**	5-1/2" @ 4750' KB w/ 230 sx stage 1, 515 sx stage 2, circ 25 sx to surf, DV tool @ 2244' KB
Tubulars:	2- 7/8" 6.5# EUE (Epoxy Coated) @ 4282' KB	**Packer:**	Arrow XL-W retrievable seal bore @ 4282' KB.
Perforations (MV)	4350-4460' KB 2 spf (2000 gals 15% HCL, Frac w/ 100,000# 20/40)		
Additional Perforations			
Perforations (MV)	None		

Version 1 : Procedure subject to change based on changing well conditions.

Proposed Test Schedule:

Date	Event	Remarks
Monday, June 27th 2016	Check conditions, Perform MIT and Begin injection (50 hrs)	TD, Fill, Restrictions and hang Gauges
Wednesday, June 29th 2016	End Injection and Begin FOT	Shut-In and monitor
Tuesday, July 5th 2016	120 hrs	Could pull gauges at this point

Test Considerations:

V.1 The triplex pump at the facility is capable of maintaining a constant rate of 3600 bpd against the anticipated injection pressures.

V.2 The injection rate of 3600 bpd (105 gpm) will be sufficient to produce valid test data. (For reference: *During normal injection at 3600 bpd (8 hrs) the surface pressure build up is approx. 200 psi with a mirrored fall off over a 8 hr period*.)

V.3 The normal waste liquid will be used during the FOT due to the cost effectiveness and availability.

V.4 The total volume of fluid needed for the FOT is 7500 bbls.

a) A total of 3600 bbls will be onsite prior to starting the injection for the FOT and water will continue to be hauled to facility in the case that more fluid is needed during the injection period.

b) Lowering the Injection rate will be considered if well conditions merit a change or storage of fluid becomes a constraint.

c) City water will be purchased for the FOT if it becomes necessary to make up the volume required for the test.

V.5 The gauges will be RIH and the injection period will be a minimum of 50 hrs to ensure radial flow and stabilization. A total of 15 hrs was calculated using the EPA Region 6 UIC Pressure Falloff Testing Guideline design calculations found on pg A-4. The fall off portion will be a minimum of 72 hrs justified by this being the time frame used on the previous FOT.

V.6 There will be adequate storage capacity for waste water for the duration of the FOT.
V.7 There is one offset well completed in the Point Lookout disposal formation. The McGrath #4 is a class II disposal operated by ConocoPhillips approx 1.25 miles to the north west of the Sunco #1. The well has been P&A'd, so there will not be any injection activity from offset wells during the FOT.
V.8 Crown valve is currently in-place on the Sunco #1 wellhead. The gauges will be RIH through a lubricator prior to the injection period.
V.9 A shut-in valve is located on the injection riser approx 3-feet from the wellhead. This valve can be shut quickly to reduce erratic pressure response and minimize the wellbore storage.
V.10 Prior to the FOT a gauge ring will be run through the tubing to ensure no restrictions in the tubing and slickline will also be used to tag up and determine wellbore fill. Test parameters will be adjusted accordingly or the needed the repairs will be made to remedy the situation.
V.11 Surface readout gauges will not be used in the FOT data collection due to cost and the fact Key performed the 2010 FOT with tandem memory down hole gauges with successful data collection. The gauges used will be latest available technology from Teftiller, Inc which will meet or exceed the pressure range, accuracy and resolution requirements. The gauges will be setup on auto resolution capture based on pressure change. Each gauge will be setup with a different auto resolution range to ensure all data in captured accurately.
V.12 A test log will be kept during the test and submitted with the FOT results. The log will include key events with date and times.

- Gauge ring run
- Tag depth
- Gauge activation
- Gauges on bottom
- Injection start
- Injection stop
- Well isolation
- Pressure stabilization
- End of Fall Off

V.13 Surface pressures will be recorded continuously using a chart recorder during the FOT. If any abnormal surface pressure change occurs the test validity will be questioned and the test will be aborted if deemed invalid.
V.14 The memory gauges being used for the FOT have auto resolution capability that changes the resolution based on rate of pressure change. First gauge will be configured to obtain data every 15 seconds and adjust to every one minute. The second gauge will be configured to obtain data every 30 seconds and adjust to every two minutes. Memory capacity is 35 day and 69 days respectfully. The minimum 15 second resolution was used during the 2010 FOT and proved to be acceptable. The length of the fall off portion is based on the 2010 FOT, 72 hours proved to be adequate.
V.15 The tri-plex injection pump at the facility that is normally used for injection will be used for the FOT. It is a positive displacement pump running at a constant RPM which will ensure constant injection rate during the FOT. A constant injection rate of 3600 bpd will be sufficient to create a minimum of 100 psi differential between final injection pressure and shut-in pressure.

Fall Off Test Procedure:

Prepare Well for Fall Off Test

1. Arrange for adequate injection fluid storage
2. Accumulate 3600 bbls of produced water
3. Perform MIT
4. MIRU wireline
5. RIH w/ Gauge ring to SN
6. POOH w/ Gauge ring and PU impression block (or something to run thru SN)
7. RIH tag and record fill depth
8. If no restrictions exist and fill is below the perfs continue on to FOT. Otherwise remediate problem or adjust FOT procedure before continuing.

Conduct Fall Off Test

9. POOH pick up pressure gauges
10. RIH and hang gauges off @ 4405' KB
11. Begin injection, (150 bph) 3600 bwpd, Record time
12. Inject for 50 hrs, total of 7500 bbls. Record start and stop time
    a. Ensure injection pressures have stabilized before proceeding
13. S/D injection pump and close valve @ wellhead, Record time
    a. Once surface pressure stabilizes record start time of fall off
14. Record pressure data for 120 hrs, Record start and stop time
15. POOH making gradient stops @ 4000', 3000', 2000', 1000' and surface
16. Secure well and bleed pressure off lubricator
17. R/D wireline
18. Put well back into service for normal operation.

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, May 12, 2016 11:24 AM
To: Denton, Scott (Scott.Denton@HollyFrontier.com); pthompson@merrion.bz
Cc: Griswold, Jim, EMNRD; Kuehling, Monica, EMNRD; Smith, Cory, EMNRD; Inge, Richard, EMNRD
Subject: New Mexico UIC Class I (non-hazardous) Well MIT & Annual Fall-Off Test Scheduling with Completion by September 30, 2016 (San Juan and Eddy Counties)

Scott and Philana:

Re: Annual Fall-Off Test for Agua Moss, LLC (San Juan County): UICl-005 (API# 30-045-28653); and HollyFrontier Navajo Refining Company (Eddy County): UICl-008-1 (WDW-1) API# 30-015-27592; UICl-008-2 (WDW-2) API# 30-015-20894 & UICl-008-3 (WDW-3) API# 30-015-26575

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Also, you are accountable for your OCD approved FOT Test Plan and the requirements in the UIC Test Guidance with Reporting Requirements at http://www.emnrd.state.nm.us/ocd/documents/UICGuidance.pdf. For access to your FOT Plan, please enter your permit information on "OCD Online" at http://ocdimage.emnrd.state.nm.us/imaging/AEOrderCriteria.aspx and enter the Order Type "UICI" along with your Order number.

For information on New Mexico's UIC Program and training information, please go to: http://www.emnrd.state.nm.us/OCD/publications.html.

Please contact me at (505) 476-3490 on or before May 31, 2016 to schedule your MIT and FOT date and time or if you have questions.

Thank you in advance for your cooperation.

Copy: UIC Class I (non-hazardous) Well Files UICI- 5; and UICI 8-1, 8-2 & 8-3

Carl J. Chavez, CHMM
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