

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 47-8389A

Exam Date: 8/19/04

1. Current Owner: CITY OF TWIN FALLS
PO BOX 1907
TWIN FALLS ID 83301-1907
(208)735-7240
2. Accompanied by: Mike Schroeder
Phone No: 736-2274 – Office, 308-7248 - cell
Address:
Relationship to Permit Holder: City of Twin Falls Water Department Supervisor

3. **SOURCE** **TRIBUTARY**
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Numerous Groundwater rights – (36-2603A, 36-2646, 47-2361, 47-2373, 47-11815, 47-11817) Permits: 47-8389A, 47-8406 and 47-8410
2. Other water rights with the same point of diversion: None at present but there is discussion about amendment of 47-8406 that may include this well or transfer of all groundwater rights to associate this well with them.

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER SE1/4SE1/4SE1/4 Sec. 29, Twp 10S, Rge 17E, B.M.
TWIN FALLS County

Method of Determination: GPS and Maps

2.

GPS coordinates of point outside of pump house 25' east of building was 2460525 easting 1257949 northing in the IDTM NAD 83 projection.

Pump is located inside a building just west of large concrete covered storage tank. Well tagged by DEQ E0007899.

2. PLACE OF USE

Place of Use is within the service area of the City of Twin Falls delivery system.

Method of Determination:

3. ☐ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☐ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☒ Photo of Diversion and System Attached

4.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Size</u>
Well #3	US Motors	350	H02346-Z07Z115R012M 1	Pump Tech Co. Inc.	16 FHM

Pump Serial No. or Discharge

7-0333

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
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Dept Polysonic Meter used (See Attached Printout)

Also used the installed Data Industrial Model 2100 flow meter

2. Measurements: (See attached Sheets)

Polysonic reading ranged from 1204 gpm to 1318 gpm during 11 minute test >>>> 2.59 cfs to 2.94 cfs
 Using the totalizer over 11 minutes found >>>> 2.80 cfs

Installed meter tested over 10 minutes yielded 2.73 cfs

On 12/1/04 Lance Bates with the city brought in a book of 2 years worth of pump data from Wells 1, 2, 3 and 4. It is noted that the capacities of the wells fluctuate during the year and is most probably dependant and associated with when water is flowing in the TFCC system. Review of the data also shows that the wells are not continuously ran and are cycled in some cases daily to meet peak demand. It is also noted that the capacities of wells 1 and 2 drop off dramatically once turned on. My estimate of the reasonably peak capacity is as follows....

Well #1 1025 gpm or 2.28 cfs
 Well #2 385 gpm or 0.86 cfs
 Well #3 1715 gpm or 3.82 cfs
 Well #4 2975 gpm or 6.69 cfs

Recommend high for well #3 >>>>>>>>>>>> 3.82 cfs

E. FLOW CALCULATIONS☐ Additional Computation Sheets Attached

Measured Method:

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$$

2. Volume Calculations for Other Uses:

None calculated for Municipal Use

G. NARRATIVE/REMARKS/COMMENTS

The field exam was conducted on 8/19/04. Corbin Knowles assisted. We met Mike Schroeder with the city water department and other city employees during the exam. We tested well no. 3 covered under permit 47-8389, well no. 4 covered under permit 47-8410 and Eastland well no. 1 and Eastland well no. 2 covered under permit 47-8406. All wells tested are tied into a common distribution system that includes other wells in Basin 47 and water diverted from the Blue Lakes Springs well pumping plant in Basin 36. The system includes covered storage tanks near well no. 3, a covered storage tank near the Eastland well no. 1, and a storage tank on Falls Avenue near the College of Southern Idaho. The diverted under the permits being examined listed above is used for municipal purposes for the City of Twin Falls and the surrounding service area.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
MUNICIPAL	01/01 to 12/31	3.82 CFS	
<u>Totals:</u>		3.82 CFS	

2. Recommended Amendments

☒ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name  Date 12/10/04

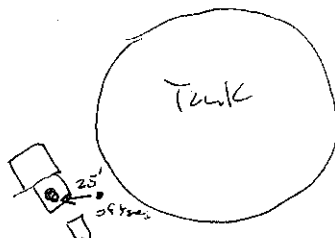
Reviewer _____ Date _____

Well #3

DEQ

E0007899

2460525 25' offset
1257949



Pump

Pump Tech Co. Inc.

Model 16 FHM

Serial 7-0333

Motor

US Motors

350 HP

1785 RPM

ID# H02346-Z07Z115R012M1

460 Volts

377 Amps

Detroit Industrial Model 2100

1200 - 1260 GPM

~~768792000~~

768792000 gal

768795000

13000

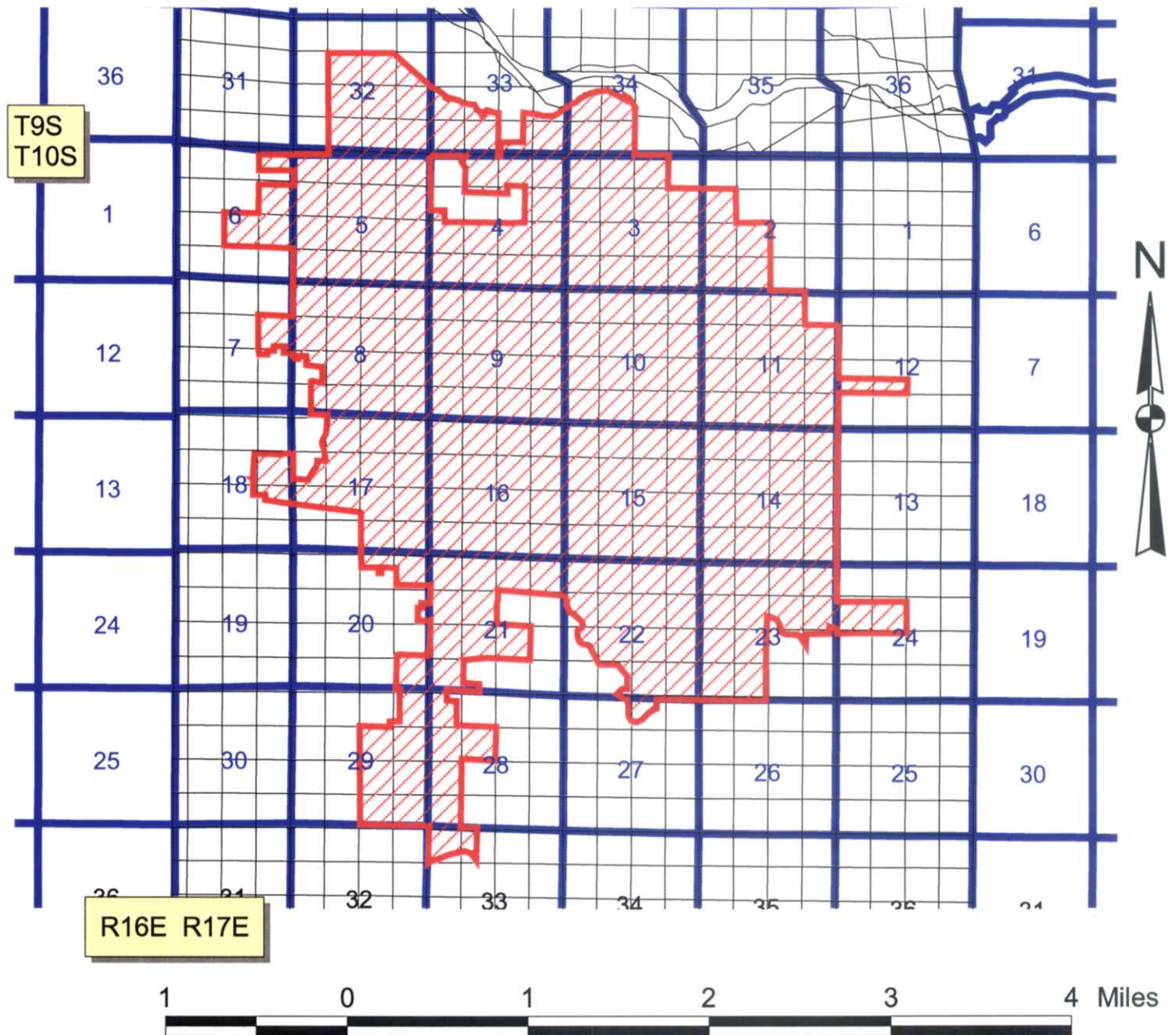
10.0 mi $\Rightarrow$ 2.73
37.5 sec cfs

SECT 529 T10S R17E

Field Exam

47-8389A, 47-8406, and 47-8410

City of Twin Falls Service Area



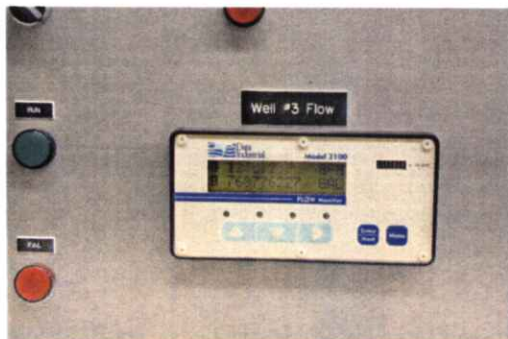
Field Exam 47-8389A
City of Twin Falls
8/19/04

Well #3 inside of building near storage tank. Polysonic was
Installed on vertical pipe flowing into tank outside of pump building.
Installed flow meter in adjacent control room next to pump room.

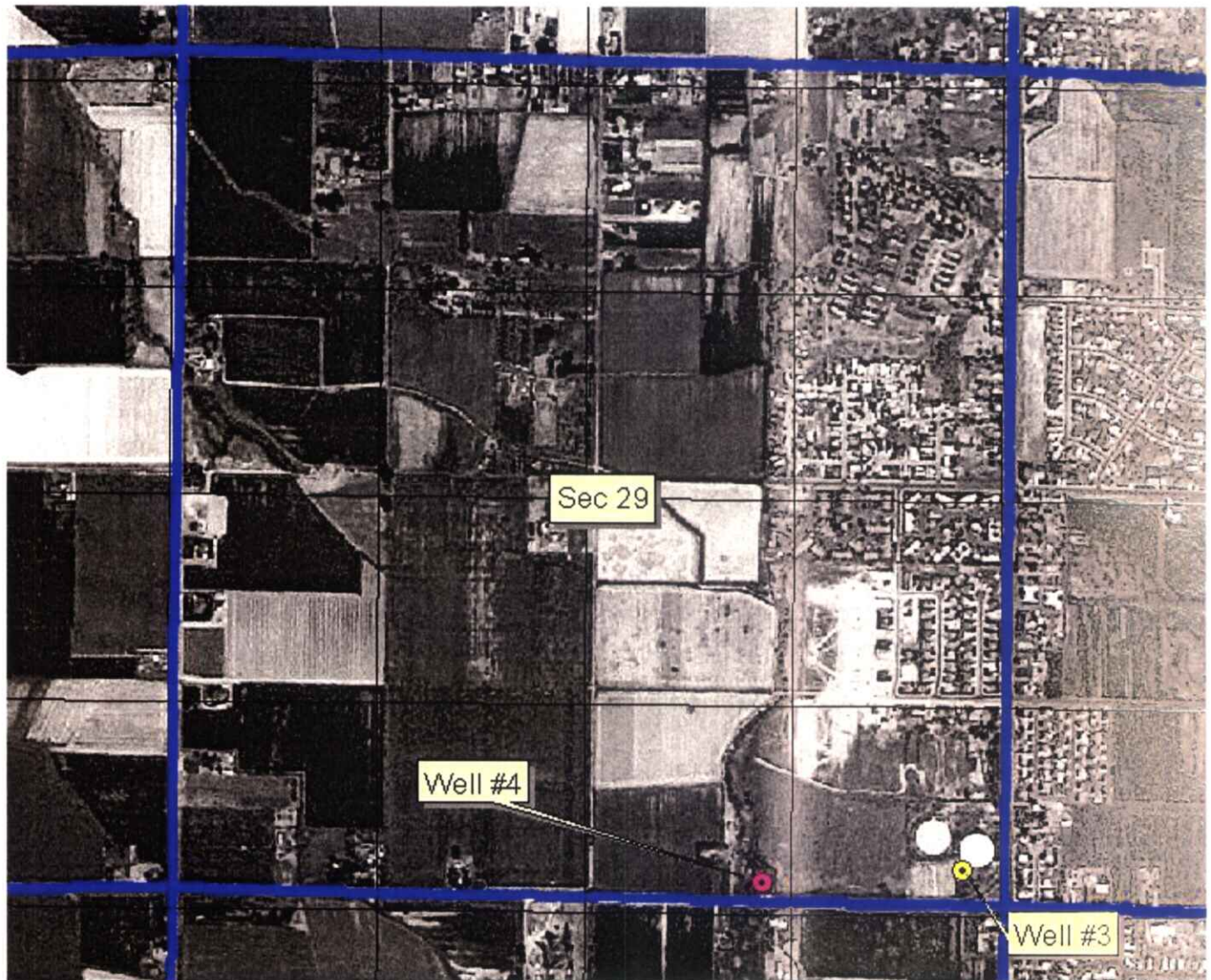
Motor US Motors
350 HP
1785 RPM
ID# H02346-z07z115Ro12M 1
460 Volt
377 Amps

Pump Tump Tech Co. Inc.
Model 16FHM
Serial 7-0333

Measuring Device
Data Industrial Model 2100



Field Exam 47-8389A 47-8410



1320 0 1320 2640

Section 29, T10S, R17E, B.M.

ADM
8/19/04

IDAHO DEPARTMENT OF WATER RESOURCES
Water Measurement Program

WATER MEASURING DEVICE CERTIFICATION

(Revised 7/2002)

District N/A

Diversion Name Well #3

Inventory Date _____

Inventory Examiner _____

PCC o.k.? ☐ Yes ☐ No

Test Date 8-19-04

Person performing test C. Kunde A. Morrill

Exam complete? ☒ Yes ☐ No

Name:	<u>City of Twin Falls</u>
Water Right No.:	_____
Legal Description:	T _____ R _____ Sec. _____ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$
Site Tag No.:	<u>EOW7099</u>
Diversion Name:	<u>Well #3</u>

Current Owner

Name _____

Phone _____

Address _____

Cell _____

City _____ St _____ Zip _____

E-mail _____

Operator (if leased or operated by person other than owner)

Name _____

Phone _____

Address _____

Cell _____

City _____ St _____ Zip _____

E-mail _____

SECTION 1 – Well Site Identification

Global Positioning System Data:

Data Collection Filename _____ Offset _____

IDWR Site Tag Identification No. _____

Site Tag Location description: _____

PLS/USGS LOCATOR _____

For Department/District Use Only

Received by _____

Date _____

Reviewed by _____

Date _____

Data Entry By _____

Date _____

SECTION II – Installed Meter Information

METER AND MOUNTING PIPE INFORMATION			
Motor HP	350	Volume units	Acre-Feet <u>Gallons</u> Other (specify) _____
Meter Install Date		Volume multiplier	X 1
Manufacturer	DATA Inert	Installation location	☒ Excel ☐ Fair ☐ Good ☐ Poor
Meter Type	Impeller	Pipe material	Ductile
Meter Model	2100	Outside diameter	15.25
Serial Number		Wall thickness	.544
Size (nominal)	1/4"	Inside diameter	
Measure Flow Rate?	☒ Yes ☐ No	Amount of straight pipe upstream from meter	<u>10+</u> Inches Pipe Lengths
Measurement Units	☐ CFS ☒ GPM Other (specify) _____	Amount of straight pipe downstream from meter	<u>10+</u> Inches Pipe Lengths
Flow Rate Multiplier	X 1	Standard Meter Type	☒ Sonic ☐ Pyg ☐ Collins ☐ Hall ☐ Anub ☐ Dye/chem ☐ Other _____
Measure Cumulative Volume?	☒ Yes ☐ No	Standard Meter Confidence	☒ Excellent 2% ☐ Good 5% ☐ Fair 10% ☐ Poor > 10%

Multiple Flowmeters

Are multiple flowmeters used to measure diversions from this well? ☐ Yes ☐ No

If yes, how many? _____

(Attach separate form for each meter checked and/or calibrated.)

Multiple Wells

If this meter measures diversions from multiple wells, list names and locations of other wells:

SECTION III – Certification for Calibration of a Water Measurement Meter

Measurement No. 1 (M_1) is the measured rate of flow from the permanently installed flow meter.

Measurement No. 2 (M_2) is the measured rate of flow from the measuring device being used to check the flow for the calibration. This method or device must be accurate to within $\pm 5\%$ error. Describe below the method and equipment used to perform this measurement.

$$\text{Percent Difference} = (M_1 - M_2) \div M_2 \times 100 = \pm \% \quad (\text{Acceptable is within } \pm 10\%) \quad (\text{equation 1})$$

$$\text{Calibration Multiplier} = M_2 \div M_1 \quad (\text{equation 2})$$

Is flowmeter installed according to manufacturer's specifications? ☐ Yes ☐ No ☒ Unsure

Describe any apparent problems with installation or operation _____

Flowmeter accuracy prior to any adjustments: _____ Totalizer reading _____

Flowmeter accuracy after final adjustment: _____ Totalizer reading _____

Flowmeter calibration multiplier: _____

FLOWMETER ACCURACY CALIBRATION TABLE							
Installed meter (totalizer reading)	Time	Total Gallons	Average Flow Rate GPM (M_1)	Standard total gallons	Average Flow Rate GPM (M_2)	% diff. ($\pm$)	Comments and adjustments
768782000		13000	1224.1	12570	1257.	-2.6%	
76879500	10.62 min						

Notes – Comments – Calculations: _____

WATER LEVEL DATA	
Does the well have access to measure water levels? ~ Yes ~ No (<i>check one</i>)	
Is this well part of USGS, IDWR, or another network of water level monitoring wells? ~ Yes ~ No (<i>check one</i>)	
Static Water Level _____ ft Date _____	Pumping Water Level _____ ft (at condition _____) Date _____

Sketch and/or photograph of installation:

I certify that the above information is true and correct to the best of my knowledge and ability and the measurements taken and recorded are in accordance with the standards and specifications of the equipment used.

Signature _____ Date _____
 (person performing measurements)

Well # 3

City
of
Twr

OUTER DIAMETER
15.2500 IN

PIPE MATERIAL
AL DI

WALL THICKNESS
0.5441 IN

SPACING
12.388 IN U

13:30+131.821E 1GPM 00R
+ 2.687E 0FPS 00R
+00000 *10 G 00R
-00000 *10 G 00R

13:31+125.481E 1GPM 00R
+ 2.559E 0FPS 00R
+00000 *10 G 00R

13:32+127.330E 1GPM 00R
+ 2.598E 0FPS 00R
+00252 *10 G 00R
-00000 *10 G 00R

13:33+129.501E 1GPM 00R
+ 2.637E 0FPS 00R
+00376 *10 G 00R
-00000 *10 G 00R

13:34+127.330E 1GPM 00R
+ 2.598E 0FPS 00R
+00507 *10 G 00R
-00000 *10 G 00R

13:35+125.481E 1GPM 00R
+ 2.559E 0FPS 00R
+00633 *10 G 00R
-00000 *10 G 00R

13:36+128.651E 1GPM 00R
+ 2.621E 0FPS 00R
+00760 *10 G 00R
-00000 *10 G 00R

13:37+128.462E 1GPM 00R
+ 2.454E 0FPS 00R
+00884 *10 G 00R
-00000 *10 G 00R

13:38+129.444E 1GPM 00R
+ 2.637E 0FPS 00R
+01010 *10 G 00R
-00000 *10 G 00R

13:39+126.010E 1GPM 00R
+ 2.568E 0FPS 00R
+01136 *10 G 00R
-00000 *10 G 00R

13:40+116.235E 1GPM 00R
+ 2.368E 0FPS 00R
+01257 *10 G 00R
-00000 *10 G 00R

13:41+131.821E 1GPM 00R
+ 2.690E 0FPS 00R
+01382 *10 G 00R
-00000 *10 G 00R

Well # 3

City
of
Twr

OUTER DIAMETER
15.2500 IN

PIPE MATERIAL
AL DI

WALL THICKNESS
0.5441 IN

SPACING
12.388 IN U

13:30+131.821E 1GPM 00R
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+01136 *10 G 00R
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-00000 *10 G 00R

13:41+131.821E 1GPM 00R
+ 2.690E 0FPS 00R
+01382 *10 G 00R
-00000 *10 G 00R

low

high

2.94