

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

OCT 17 2001

Department of Water Resources

A. GENERAL INFORMATIONPermit No. 29-077701. Owner: City of PocatelloPhone No. 208 234-6254Current Address: P.O. Box 4169 Pocatello Id 832052. Accompanied by: Arden HansenEXAM DATE: 6-10-98Address: 12741 N Hawthorne Rd Chubbuck 83202

237-2754

Phone No. 6-12-986-24-98Relationship to Permit Holder: Operator9-18-984-20-993. Source: GROUNDWATER tributary to6-21-997-23-99**B. OVERLAP REVIEW**1. Other water rights with the same place of use: NONE2. Other water rights with the same point of diversion: NONE8-2-994-25-20005-17-006-13-006-19-20016-28-2001**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

Ident No.	Gov't Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
		NE	SE	NE	12	6S	33E	Power	ON SITE USGS AERIAL

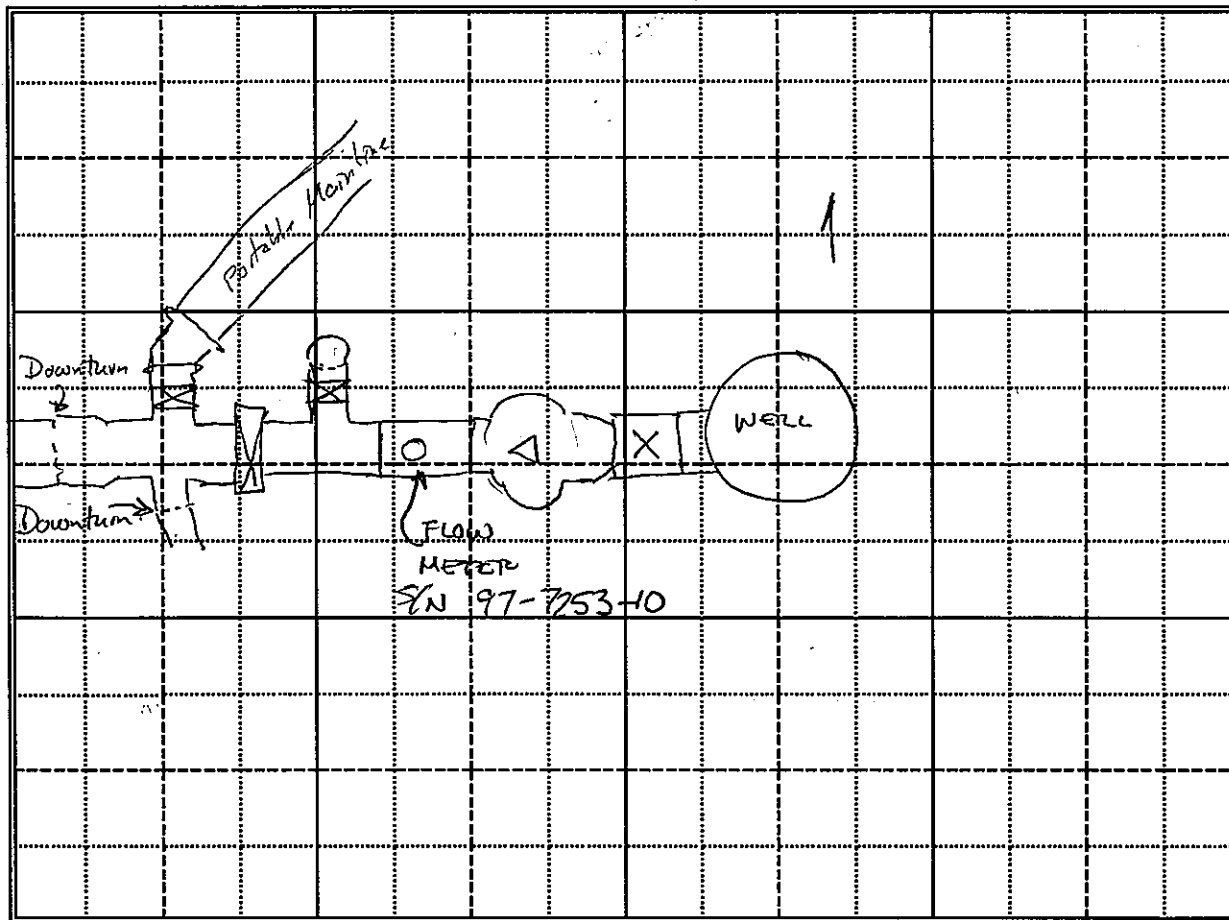
2. Place(s) of Use:

Indicate Method of Determination

TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
6S	33E	1															5		5
		12	27	40	40	40	40			40	26				7	15			275
																			280

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3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable.



Scale: 1" = _____

____ Copy of USGS Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

____ Aerial Photo Attached (required for irrigation of 10+ acres)

____ Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
	GE	200	XFC434025	Vertiline	386 70747

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Totalizing Meter		McCromb		97-7253-10		

2. Measurements: 0.01 af in 1.58.29 @ 110 PSI = 3.68 af (1652.7 gpm)

6-12-98 Flow meter = 1850 gpm

6-24-1998 Measured Q = 4.46 cfs

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E. NARRATIVE/REMARKS/COMMENTS See ATTACHED MEMO

6/10/1998 @ Time of Exam Reading 1650 gpm (0.01 af in 118.29 sec = 3.68 cfs = 1652.7 gpm)

110 PSI

6/12/98 Reading 1850 gpm = 4.12 cfs

6/24/98 Polysonic measured

① Line from pivot toward West handlines $Q = 36.75 \text{ gpm}$

② Center Pivot $Q = 1196.95 \text{ gpm}$ 1270.1 gpm

③ Handlines North of Well $Q = 168.16 \text{ gpm}$

④ Handlines South of Well $Q = 201.13 \text{ gpm}$

$Q_{TOTAL} = 1927.99 \text{ gpm} = 4.295 \text{ cfs}$
4.30 cfs

$Q_{MAX} = 2001.14 \text{ gpm} = 4.458 \text{ cfs}$
= 4.46 cfs

6/13/2000 90 PSI

Flowmeter 1850 gpm $\left[\begin{array}{l} (37.315 \text{ cf} - 37.303 \text{ cf}) 120 \text{ sec } Q = 4.356 \text{ cfs} = 4.36 \text{ cfs} \\ Q = 1954.97 \text{ gpm} = 4.36 \text{ cfs} \end{array} \right]$

Center Pivot w/end gun on

Handlines on 3 corners (SW corner is off)

Some corners on short settings. To have everything one ≈ 80 additional sprinkler would be on system

Operator Arden Hansen believes 2200-2300 is the maximum flowrate he has seen on McCrometer

6-13-2000 Arden Hansen was asked to have system operating @ capacity during the exam when examiner arrived there were a few handlines not on, pivot not at maximum capacity (corner catcher not fully extended) Mr. Hansen said he would get in touch with department when at maximum.

Have conditions of permit approval been met? ☒ yes ☐ no

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F. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

$$Q = 2001.14 \text{ gpm} = 4.46 \text{ cfs}$$

$$Q_{\text{LIMITED BY CAPACITY}} = 4.46 \text{ cfs}$$

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 280 \text{ ac} (4) = 1120.0 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 4.46 (214) 1.9835 = 1893.1 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 1120.0 \text{ af}$$

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
IRRIGATION	4/1	10/31	4.46 cfs	1120.0 af
Totals:			4.46 cfs	1120.0 af

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 KETH C WILSON Date 6/10/1998

Reviewer _____ Date _____

SEAL

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6-24-1998

LINE FROM

①

Pipe Material = CARBON
 OD = 8.050 inches
 WT = 0.125 inches
 ID = 7.800 inches
 Sound Vel. = 10597 FPS
 Roughness = 0 Ft

Liner Material = NONE
 Thickness = 0.000 inches
 Sound Vel. = 0 FPS
 Roughness = 0 Ft

Fluid Type = WATER
 Sound Vel. = 4863 FPS
 Viscosity = 1.13

Transducer Type = S
 Mounting = U

Flow Scale Fact = 0.9700
 Offset = 0.00 GPM
 Damping = 30 secs
 Max Range = 4765.95 GPM
 Min Range = -4765.95 GPM

Cutoff Low Flow = 0.00
 Low Signal = 0.00 %

Flow = 355.94 GPM
 Vel = 2.39 FPS

Flow = 358.23 GPM
 Vel = 2.41 FPS

Flow = 361.75 GPM
 Vel = 2.43 FPS

Flow = 359.63 GPM
 Vel = 2.41 FPS
 Net 1571 x16Gal
 Pos 1671 x16Gal
 Neg 0 x16Gal
 SigStr = 37.5%
 Cutoff = 0.0%
 Reynolds = 122965
 Factor = 0.933962
 SigStr = 37.5%
 Margin = 196%
 Delta = 135.70 ns
 SSpeed = 4753.70 FPS
 4-20mA = 9.78 mA

SigStr = 38.1%
 Margin = 200%

6-24-1998

29-07770

CENTER
 PIVOT ONLY

Flow = 0.22 Ft3/s
 Flow = 0.26 Ft3/s
 Flow = 0.28 Ft3/s
 Flow = 0.26 Ft3/s
 Flow = 0.28 Ft3/s
 Flow = 0.28 Ft3/s
 Flow = 0.26 Ft3/s
 Flow = 1.77 Ft3/s
 Flow = 2.83 Ft3/s
 Flow = 2.83 Ft3/s

Flow = 2.83 Ft3/s
 Vel = 7.47 FPS
 Net 348 x16Gal
 Pos 348 x16Gal
 Neg 0 x16Gal
 SigStr = 9.0%
 Cutoff = 0.0%
 Reynolds = 400846
 Factor = 0.946108
 SigStr = 9.0%
 Margin = 113%
 Delta = 448.45 ns
 SSpeed = 4733.39 FPS
 4-20mA = 4.04 mA

Flow = 2.78 Ft3/s

Pipe Material = CARBON
 OD = 8.625 inches
 WT = 0.148 inches
 ID = 8.329 inches
 Sound Vel. = 10597 FPS
 Roughness = 0 Ft

Liner Material = NONE
 Thickness = 0.000 inches
 Sound Vel. = 0 FPS
 Roughness = 0 Ft

Fluid Type = WATER
 Sound Vel. = 4863 FPS
 Viscosity = 1.13

Transducer Type = S
 Mounting = U

Flow Scale Fact = 0.9700
 Offset = 0.00 Ft3/s
 Damping = 30 secs
 Max Range = 12.11 Ft3/s
 Min Range = -12.11 Ft3/s

Cutoff Low Flow = 0.00
 Low Signal = 0.00 %

Flow = 2.66 Ft3/s
 Flow = 2.52 Ft3/s

6-24-1998

②

Flow = 1152.59 GPM
 Vel = 7.74 FPS
 Flow = 1158.10 GPM
 Vel = 7.78 FPS

CENTER
 PIVOT

Pipe Material = CARBON
 OD = 8.050 inches
 WT = 0.125 inches
 ID = 7.800 inches
 Sound Vel. = 10597 FPS
 Roughness = 0 Ft

Liner Material = NONE
 Thickness = 0.000 inches
 Sound Vel. = 0 FPS
 Roughness = 0 Ft

Fluid Type = WATER
 Sound Vel. = 4863 FPS
 Viscosity = 1.13

Transducer Type = S
 Mounting = U

Flow Scale Fact = 0.9700
 Offset = 0.00 GPM
 Damping = 30 secs
 Max Range = 1500.00 GPM
 Min Range = -10.00 GPM

Cutoff Low Flow = 0.00
 Low Signal = 0.00 %

SigStr = 100.0%
 Margin = 173%

Flow = 1165.00 GPM
 Net 0 x16Gal

Flow = 1183.38 GPM
 Net 0 x16Gal

SigStr = 100.0%
 Margin = 200%

Flow = 1181.31 GPM
 Net 0 x16Gal

Flow = 1196.95 GPM
 Net 0 x16Gal

SigStr = 100.0%
 Margin = 200%

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(3) NORTH
6-24-98

Pipe
Material = ALUMINU
OD = 8.050 inches
WT = 0.049 inches
ID = 7.952 inches
Sound Vel. = 10171 FPS
Roughness = 0 Ft

Liner
Material = NONE
Thickness = 0.000 inches
Sound Vel. = 0 FPS
Roughness = 0 Ft

Fluid
Type = WATER
Sound Vel. = 4863 FPS
Viscosity = 1.13

Transducer
Type = S
Mounting = U

Flow
Scale Fact = 0.9700
Offset = 0.00 GPM
Damping = 30 secs
Max Range = 4953.51 GPM
Min Range = -4953.51 GPM

Cutoff
Low Flow = 0.00
Low Signal = 0.00 %

Flow = 163.94 GPM
Vel = 1.06 FPS
Net 23 x1Ft3
Pos 19 x1Ft3
Neg 0 x1Ft3
SigStr = 100.0%
Cutoff = 0.0%
Reynolds = 55860
Factor = 0.918730
SigStr = 100.0%
Margin = 99%
DeltaT = 58.12 ns
SSpeed = 4788.61 FPS
4-20mA = 6.63 mA

Flow = 166.44 GPM
Vel = 1.08 FPS
Flow = 168.16 GPM
Vel = 1.09 FPS

6-24-98
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(4) SOUTH
6-24-98

Flow = 198.84 GPM
Vel = 1.28 FPS
SigStr = 100.0%
Margin = 99%
Flow = 201.13 GPM
Vel = 1.30 FPS

Pipe
Material = ALUMINU
OD = 8.050 inches
WT = 0.049 inches
ID = 7.952 inches
Sound Vel. = 10171 FPS
Roughness = 0 Ft

Liner
Material = NONE
Thickness = 0.000 inches
Sound Vel. = 0 FPS
Roughness = 0 Ft

Fluid
Type = WATER
Sound Vel. = 4863 FPS
Viscosity = 1.13

Transducer
Type = S
Mounting = U

Flow
Scale Fact = 0.9700
Offset = 0.00 GPM
Damping = 30 secs
Max Range = 1000.00 GPM
Min Range = -5.00 GPM

Cutoff
Low Flow = 0.00
Low Signal = 0.00 %

Flow = 191.05 GPM
Vel = 1.23 FPS
Net 0 x16al
Pos 0 x16al
Neg 0 x16al
SigStr = 100.0%
Cutoff = 0.0%
Reynolds = 64904
Factor = 0.922051
SigStr = 100.0%
Margin = 99%
DeltaT = 69.90 ns
SSpeed = 4755.43 FPS
4-20mA = 7.07 mA

6-24-98
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TO: **29-07770**

October 11, 2001

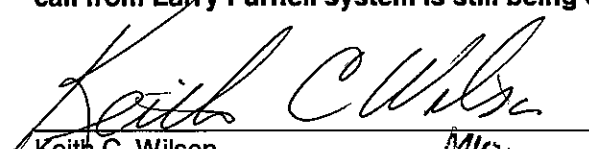
FROM: Keith C. Wilson

RE: Completing field examination for 29-07770

The following are recorded calls and attempts to complete the field examination. In addition to these recorded items I know that I have talked on more than one occasion with the City of Pocatello and/or the operator in reference to completing this field examination.

Date	Time	Action	Results
06/10/1998	0942	Phone Call On site	- Busy signal – Operator Jay Ulrich - System not at capacity - Flow Meter 1650 gpm (0.01 af/118.29 sec = 1653 gpm)
06/10/1998	0955	On site	- System not at capacity (<1650 gpm)
06/12/1998	0830	On site	- System not at capacity - Flow Meter 1850 gpm
06/17/1998	1038	Phone Call	- New system operator - Brent Hokanson
	1049	Phone Call	- Message w/wife about exam, Brent not carrying his cell phone
06/24/1998	1340	On site	- Flow Meter does not appear to be operating accurately. - Measured 2001.14 gpm (4.46 cfs) with Sonic Meter
07/09/1998	-	Phone Call	- Larry Furnell called to talk about requirements for field exam
09/18/1998	0900	On site	- Flow Meter Not Working
04/20/1999	1815	On site	- System not on
06/21/1999	1750	On site	- System not on
xx/xx/1999	-	Phone Call to Larry Furnell (City of Pocatello)	to let him know flow meter was not working.
06/26/1999	1510	Phone call from Larry Furnell (City of Pocatello)	out until July 7, Total = 309 ac, 207 irrigated, 39 under development to be irrigated, Capacity = 2800 gpm @ 85 psi, When all 309 ac irrigated additional capacity of 360 gpm, Total capacity will = 3200 gpm. Flow meter works it's in its first season. (See attached phone call message)
xx/xx/1999	-	Phone Calls	- Requested Arden Hansen (operator) to call office when on @max - No record of Operator calling about exam.
07/23/1999	1555	On site	- System not on
08/02/1999	1600	On site	- System not on – Appears to have been on earlier
04/25/2000	1625	On site	- System not on
05/17/2000	1700	On site	- System not on
06/13/2000	1520	Phone Call	- Arden Hansen (237-2754 h, 251-4590 cell) operator will call when system is on at maximum.
		On Site	- Flow Meter 1850 gpm [0.012 af/120 sec = 4.36 cfs (1955 gpm)]
xx/xx/2000	-	Phone Call	- No record of operator calling about exam
06/19/2001	-	On site	- Flow Meter 1850 gpm [0.01 af/107.36 sec = 4.06 cfs (1821 gpm)]
06/28/2001	1145	On site	- [0.053 af/600 sec = 3.85 cfs (1727 gpm)]

As far as I am concerned this office has made sufficient attempts to have the system measured at maximum capacity. There has been a lot of talk but very little action on behalf of the permit holder or the operator. Therefore, I recommend that the permit be licensed on the maximum diversion rate measured as of this date. **Note: Phone call from Larry Furnell system is still being developed [(See attached copy of Phone Call Message (6/26/99))]**


Keith C. Wilson
Senior Resource Agent

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29-07770

To Keith

Date 6/26/99 Time 3:10 ☐ AM ☒ PM

WHILE YOU WERE OUT

M. Larry ~~Smith~~ ^{waste processor} Farnell
of City of Pocatello WPC Plant

Phone Numbers

Office 234-6256

Voicemail _____

FAX _____

Pager _____

Mobile _____

e-mail _____

☒ Telephoned

☐ Please call

☐ Returned your call

☐ Called to see you

☐ Wants to see you

☐ Will call again

☐ URGENT

Message

Will be back on July 7th.

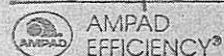
- Total of 309 acres

- 207 irrigated

- 39 under development to be irrigated

They run at 2800 gallons per minute

85 psi at pump

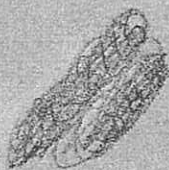


Operator

Reorder
#23-000

- When they get all 309 acres irrigated they will have an additional 360 gallons per minute for a total of 3200 gallons per minute.

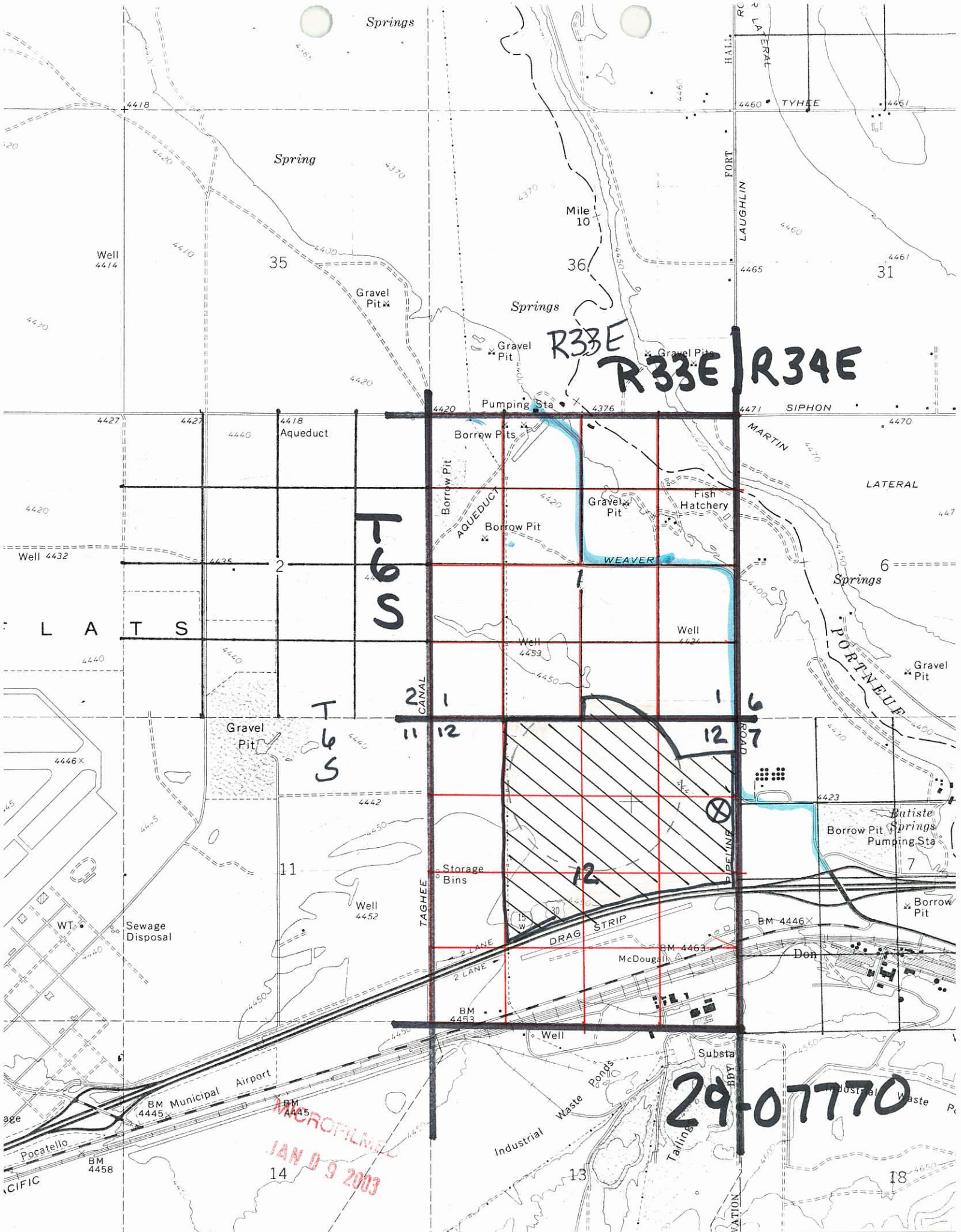
The flow meter works
It's in it's 1st season



NOTE: SYSTEM NOT COMPLETELY
Developed

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29-07770



Springs

Spring

Springs

R33E
R33E | R34E

T
6
S

T
6
S

29-07770

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-822

#1448

Schroeder

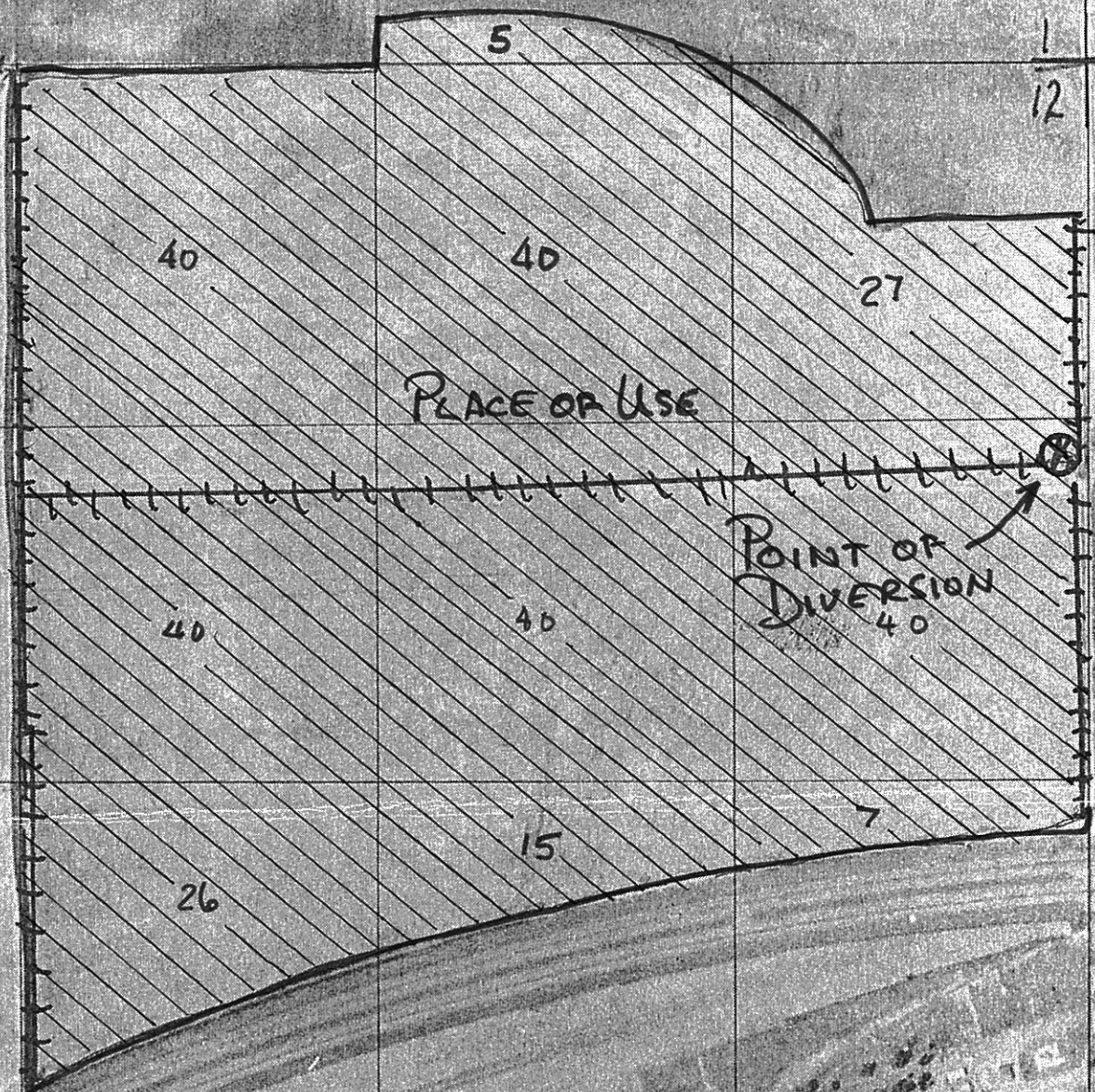
T
6
S

R 33E

29-07770

1	6
12	7

12	7
13	18





To Handlines



TO HANDLINES

To pivot
handlines

To Handlines

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29-07770