

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 34-7585

Exam Date: 08/01/2001

1. Current Owner: TERRENCE V DONAHUE
5448 FISH HATCHERY RD
MACKAY ID 83251
(208)588-2298
2. Accompanied by: Shawn Donahue
Phone No: (208) 588-2380
Address: 5458 Fish Hatchery Rd.
Relationship to Permit Holder: Son

3. SOURCETRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 34-7044, 34-10562, + DECREED SURFACE WATER
2. Other water rights with the same point of diversion: SAME AS ABOVE

C. DIVERSION AND DELIVERY SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER

SW1/4SE1/4

Sec. 14, Twp 08N, Rge 22E, B.M.

CUSTER County

Method of Determination: GPS R080116A

2.

PLACE OF USE:

IRRIGATION

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
08N 22E 13											17.0						17.0
08N 22E 14														2.0	36.0		38.0
08N 22E 23	13.0																13.0
08N 22E 24					36.0	27.0	40.0	23.0	21.0	40.0							187.0

Total Acres: 255

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>Pump Serial No. or Discharge Size</u>
	GE	75	BK5213503	JOHNSTON	

*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>

2. Measurements:

SEE ATTACHED

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method:

SEE ATTACHED

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 893\text{AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 335\text{AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 893\text{AF} *$$

2. Volume Calculations for Other Uses: * Due to combined use limits under decreed rights.

G. NARRATIVE/REMARKS/COMMENTS

Well with 75 HP pump. Measured with Fuji and California pipe method. California pipe method was used to compare with Fuji reading. Computable calculations found. We used the California pipe method for recommendation.

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>
IRRIGATION	04/01 to 10/31	0.790 CFS	
<u>Totals:</u>		0.790 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 Steve Mueller

Date 08/01/2001

Reviewer Aaron Golart

Date 01/31/2007

[illegible]

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	75	BKJ213503	Johnston	

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

D. FLOW MEASUREMENTS

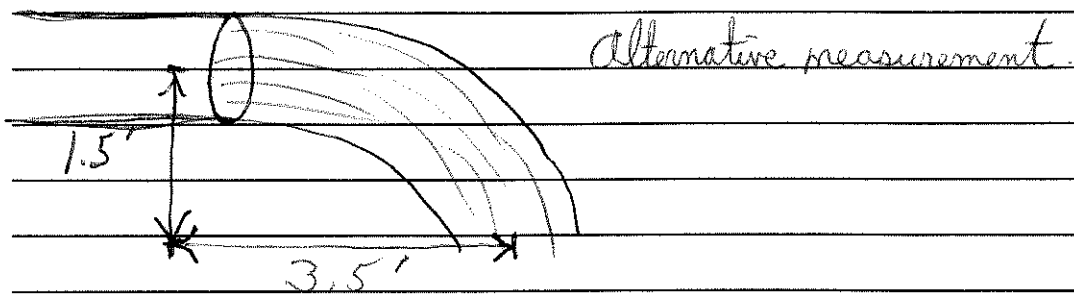
1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements:

10.03 Dia Thick .1 inch 2700 gpm observed.

E. NARRATIVE/REMARKS/COMMENTS



There is another permit on this well. There was an erroneous reading in years past (1978). They applied for the additional water to get a measurement done.

System provides water to a ditch that then feeds 2 pivots and wheel heads by way of three centrifugal pumps 40hp - 25hp + 15hp. see aerial photo for locations of these three centrifugal pumps. Depth of bowls 106" well 120"

System pumped a little air after being run a few minutes. This caused the Fuji to lose the signal after a couple minutes. We shut the well down and had the Fuji reading or recording as we restarted the pump. It started with the Fuji having a signal strength of 5, but soon the signal weakened and the Fuji lost the signal. See Fuji file to see these results.

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

F. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method: *Fuji Measurement* $Q_{max} = 2735 \text{ gpm} = 6.09 \text{ cfs}$ *ALTERNATIVE MEASUREMENT Q = 2824.4 gpm = 6.29 cfs**Q LIMITED BY PERMIT = 0.79 cfs***G. 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:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Totals:			_____	_____

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. AUTHENTICATIONField Examiner's Name *Steve Mueller* Date *8-1-01*

Reviewer _____ Date _____

SEAL

Type	WR #	Owner	Source	TRS	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total
Right	34 583C	DONAHUE	BIG LOST	08N22E24		20	33		36	27	40	23	15	40				35			269
Right	34 10562	DONAHUE	GROUND	08N22E24					36	27	40		12	40							155
Right	34 7044	DONAHUE	GROUND	08N22E24					36	27	40		12	40							155
Right	34 584F	DONAHUE	BIG LOST	08N22E24		20	33		36	27	40	23	15	40				35			269
Right	34 773	DONAHUE	BIG LOST	08N22E24		30	33		36	27	40	23	15	40				35			279
Right	34 774	DONAHUE	BIG LOST	08N22E24		20	33		36	27	40	23	15	40				35			269
Right	34 10567	DONAHUE	BIG LOST	08N22E24		20	33		36	27	40	23	15	40				35			269
Right	34 10568	DONAHUE	BIG LOST	08N22E24		20	33		36	27	40	23	15	40				35			269
Right	34 775	DONAHUE	BIG LOST	08N22E24		20	33		36	27	40	23	15	40				35			269
Right	34 7585	TERRENC	GROUND	08N22E24					36	28	40	23	21	39							187
Right	34 325A	SIMMONS	BIG LOST	08N22E24											39	38					77
Right	34 12413A	BRET L ZC	GROUND	08N22E24	20			6													26
Right	34 2310	SIMMONS	GROUND	08N22E24											39	10					49
Right	34 561	SIMMONS	BIG LOST	08N22E24											39	38					77
Right	34 562	SIMMONS	BIG LOST	08N22E24											39	38					77
Right	34 563	SIMMONS	BIG LOST	08N22E24											39	38					77
Right	34 7146A	JOLENE Z	GROUND	08N22E24	20			6													26
Right	34 801	JOLENE Z	PARSONS	08N22E24				14									38			39	91
Right	34 802	BRET L ZC	PARSONS	08N22E24				14									38			39	91
Right	34 10688	JOLENE Z	BIG LOST	08N22E24	38			26													64
Right	34 211	BRET L ZC	BIG LOST	08N22E24	38			26													64
Right	34 324A	SIMMONS	BIG LOST	08N22E24											39	38					77
Right	34 564	SIMMONS	BIG LOST	08N22E24											39	38					77
Right	34 565	SIMMONS	BIG LOST	08N22E24											39	38					77
Right	34 693	SIMMONS	BIG LOST	08N22E24											39	38					77
Right	34 694	SIMMONS	BIG LOST	08N22E24											39	38					77

[illegible]

[illegible]

Type	WR #	Owner	Source	TRS	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total
Right	34 583C	DONAHUE	BIG LOST	08N22E13						30	40	23	25		30	30					11
TClaim	34 142	MOUNTAIN	BIG LOST	08N22E13						30	40	23	25		30	30			17		195
TClaim	34 611B	MOUNTAIN	BIG LOST	08N22E13						30	40	23	25		30	30			17		195
TClaim	34 612B	MOUNTAIN	BIG LOST	08N22E13						30	40	23	25		30	30			17		195
TClaim	34 613B	MOUNTAIN	BIG LOST	08N22E13						30	40	23	25		30	30			17		195
TClaim	34 10553A	DENNIE H	BIG LOST	08N22E13					25			2									27
TClaim	34 10553B	MOUNTAIN	BIG LOST	08N22E13						30	40	23	25		30	30			17		195
Right	34 584F	DONAHUE	BIG LOST	08N22E13											17						17
Right	34 773	DONAHUE	BIG LOST	08N22E13											11						11
Right	34 774	DONAHUE	BIG LOST	08N22E13											11						11
Right	34 10567	DONAHUE	BIG LOST	08N22E13											11						11
Right	34 10568	DONAHUE	BIG LOST	08N22E13											11						11
Right	34 775	DONAHUE	BIG LOST	08N22E13											11						11
Right	34 10553A	DENNIE H	BIG LOST	08N22E13					25			2									27
Right	34 142	MOUNTAIN	BIG LOST	08N22E13						30	40	23	25		30	30			17		195
Right	34 611B	MOUNTAIN	BIG LOST	08N22E13						30	40	23	25		30	30			17		195
Right	34 612B	MOUNTAIN	BIG LOST	08N22E13						30	40	23	25		30	30			17		195
Right	34 613B	MOUNTAIN	BIG LOST	08N22E13						30	40	23	25		30	30			17		195
Right	34 10553B	MOUNTAIN	BIG LOST	08N22E13						30	40	23	25		30	30			17		195
Right	34 7585	TERRENC	GROUND	08N22E13											17						17

LOG NAME: **34-7585**

START:

08-01-2001 11:23

END:

08-01-2001 11:28

INTERVAL:00:00:01

08-01 11:23:00
ABNORMAL

08-01 11:23:10
ABNORMAL

08-01 11:23:20
ABNORMAL

08-01 11:24:21
+1.095E+1 ft/s
+2.590E+3 gal/m
+5.771E+0 ft3/s
+TOTAL 0000000 gal
-TOTAL 0000000 gal
ABNORMAL

08-01 11:24:22
+1.095E+1 ft/s
+2.590E+3 gal/m
+5.771E+0 ft3/s
+TOTAL 0000000 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:23
+1.115E+1 ft/s
+2.637E+3 gal/m
+5.876E+0 ft3/s
+TOTAL 0000000 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:24
+1.128E+1 ft/s
+2.669E+3 gal/m
+5.947E+0 ft3/s
+TOTAL 0000043 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:25
+1.140E+1 ft/s
+2.697E+3 gal/m
+6.010E+0 ft3/s
+TOTAL 0000088 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:26
+1.148E+1 ft/s
+2.716E+3 gal/m
+6.052E+0 ft3/s
+TOTAL 0000133 gal
-TOTAL 0000000 gal
ABNORMAL

08-01 11:24:27
+1.153E+1 ft/s
+2.729E+3 gal/m
+6.081E+0 ft3/s
+TOTAL 0000178 gal
-TOTAL 0000000 gal
ABNORMAL

08-01 11:24:28
+1.156E+1 ft/s
+2.735E+3 gal/m
+6.095E+0 ft3/s
+TOTAL 0000224 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:29
+1.155E+1 ft/s
+2.732E+3 gal/m
+6.088E+0 ft3/s
+TOTAL 0000224 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:30
+1.154E+1 ft/s
+2.730E+3 gal/m
+6.083E+0 ft3/s
+TOTAL 0000269 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:31
+1.151E+1 ft/s
+2.724E+3 gal/m
+6.071E+0 ft3/s
+TOTAL 0000315 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:32
+1.150E+1 ft/s
+2.721E+3 gal/m
+6.063E+0 ft3/s
+TOTAL 0000360 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:33
+1.144E+1 ft/s
+2.706E+3 gal/m
+6.029E+0 ft3/s
+TOTAL 0000406 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:34
+1.139E+1 ft/s
+2.696E+3 gal/m
+6.007E+0 ft3/s
+TOTAL 0000451 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:35
+1.131E+1 ft/s
+2.676E+3 gal/m
+5.964E+0 ft3/s
+TOTAL 0000496 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:36
+1.126E+1 ft/s
+2.663E+3 gal/m
+5.935E+0 ft3/s
+TOTAL 0000540 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:37
+1.126E+1 ft/s
+2.663E+3 gal/m
+5.934E+0 ft3/s
+TOTAL 0000585 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:38
+1.126E+1 ft/s
+2.663E+3 gal/m
+5.934E+0 ft3/s
+TOTAL 0000629 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:39
+1.127E+1 ft/s
+2.668E+3 gal/m
+5.944E+0 ft3/s
+TOTAL 0000673 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:40
+1.129E+1 ft/s
+2.671E+3 gal/m
+5.951E+0 ft3/s
+TOTAL 0000718 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:41
+1.135E+1 ft/s
+2.685E+3 gal/m
+5.983E+0 ft3/s
+TOTAL 0000762 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:42
+1.139E+1 ft/s
+2.695E+3 gal/m
+6.004E+0 ft3/s
+TOTAL 0000807 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:43
+1.131E+1 ft/s
+2.676E+3 gal/m
+5.963E+0 ft3/s
+TOTAL 0000852 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:44
+1.126E+1 ft/s
+2.664E+3 gal/m
+5.936E+0 ft3/s
+TOTAL 0000897 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:45
+1.122E+1 ft/s
+2.655E+3 gal/m
+5.916E+0 ft3/s
+TOTAL 0000941 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:46
+1.119E+1 ft/s
+2.649E+3 gal/m
+5.902E+0 ft3/s
+TOTAL 0000985 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:47
+1.116E+1 ft/s
+2.641E+3 gal/m
+5.886E+0 ft3/s
+TOTAL 0001029 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:48
+1.114E+1 ft/s
+2.637E+3 gal/m
+5.875E+0 ft3/s
+TOTAL 0001073 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:49
+1.117E+1 ft/s
+2.643E+3 gal/m
+5.890E+0 ft3/s
+TOTAL 0001117 gal
-TOTAL 0000000 gal
NORMAL

(↓ Cont to Pg 2)

(↓ Cont.
from Pg_1)

08-01 11:24:50
+1.119E+1 ft/s
+2.648E+3 gal/m
+5.900E+0 ft3/s
+TOTAL 0001162 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:51
+1.118E+1 ft/s
+2.645E+3 gal/m
+5.893E+0 ft3/s
+TOTAL 0001206 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:52
+1.117E+1 ft/s
+2.642E+3 gal/m
+5.888E+0 ft3/s
+TOTAL 0001250 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:53
+1.120E+1 ft/s
+2.649E+3 gal/m
+5.903E+0 ft3/s
+TOTAL 0001294 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:54
+1.122E+1 ft/s
+2.654E+3 gal/m
+5.914E+0 ft3/s
+TOTAL 0001338 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:55
+1.116E+1 ft/s
+2.641E+3 gal/m
+5.885E+0 ft3/s
+TOTAL 0001382 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:56
+1.113E+1 ft/s
+2.632E+3 gal/m
+5.865E+0 ft3/s
+TOTAL 0001426 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:57
+1.101E+1 ft/s
+2.605E+3 gal/m
+5.805E+0 ft3/s
+TOTAL 0001470 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:58
+1.093E+1 ft/s
+2.587E+3 gal/m
+5.764E+0 ft3/s
+TOTAL 0001514 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:24:59
+1.090E+1 ft/s
+2.579E+3 gal/m
+5.747E+0 ft3/s
+TOTAL 0001557 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:25:00
+1.088E+1 ft/s
+2.574E+3 gal/m
+5.736E+0 ft3/s
+TOTAL 0001600 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:25:01
+1.087E+1 ft/s
+2.571E+3 gal/m
+5.729E+0 ft3/s
+TOTAL 0001643 gal
-TOTAL 0000000 gal
NORMAL

08-01 11:25:02
+1.080E+1 ft/s
+2.555E+3 gal/m
+5.693E+0 ft3/s
+TOTAL 0001685 gal
-TOTAL 0000000 gal
ABNORMAL

08-01 11:25:03
ABNORMAL

08-01 11:26:03
ABNORMAL

08-01 11:27:03
ABNORMAL

08-01 11:28:00
ABNORMAL

Max Flow = 2735 gpm

= 6.09 cfs

(Pg 2 of 2)

34- 7585

OTHER METHODS OF APPROXIMATING WATER FLOW

Often an approximation of water flow is required when it is not practical to use weirs, orifices, nozzles or other means of determination. This can be done by taking the coordinates of a point in the stream flow as indicated in Fig. 75. The accuracy of this method will vary from 90-100%. The pipe must be flowing full.

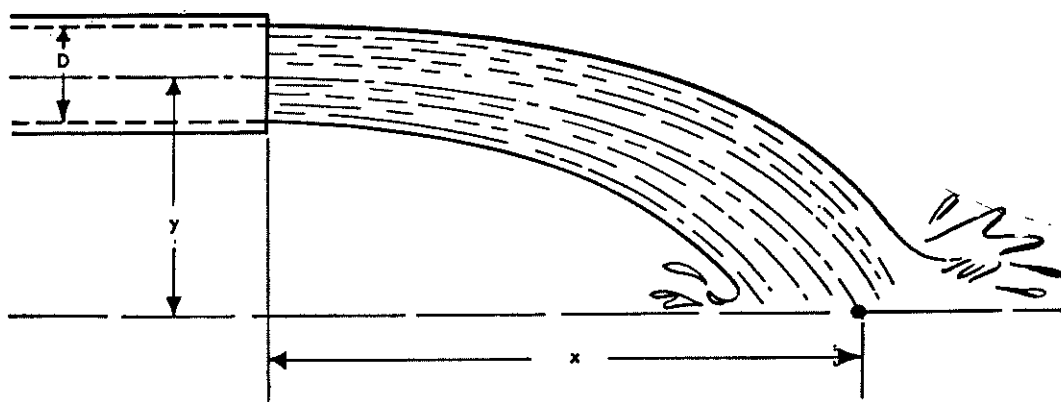


FIG. 75. Approximating flow from horizontal pipe.

$$\text{Capacity, Gpm} = \frac{2.45 D^2 x}{\sqrt{\frac{2y}{32.16}}}$$

Where $D = \text{Pipe diameter, in.} = 10.03$
 $x = \text{Horizontal distance, ft.} = 35'$
 $y = \text{Vertical distance, ft.} = 1.5'$

$$Q = \frac{2.45 (10.03)^2 35}{\sqrt{\frac{2(1.5)}{32.16}}} = \frac{862.65}{0.305} = 2824.4 \text{ gpm}$$

$$Q = 2824.4 \text{ gpm} = 6.29 \text{ cfs}$$

r080116a cor

2.0

36.0

15.0

14

13

23

24

38.5

22.0

37.5

39.5

3.0

21.0

37.0

2.5

T
8
N

R22E

34-7585



Point of Diversion
r080116a



Place of Use

POINT OF DIVERSION

14

2

NHELP

88
T-155

36

25 hp centrifugal pump to pivot

15

1413
2324

39

23

?

37

40

3

23

21

pivot
40-15 hp centrifugal pump
1372 ft lines

3

ACRES WITHIN
PLACE OF USE
OUTLINED IN
BLACK

01
T-172

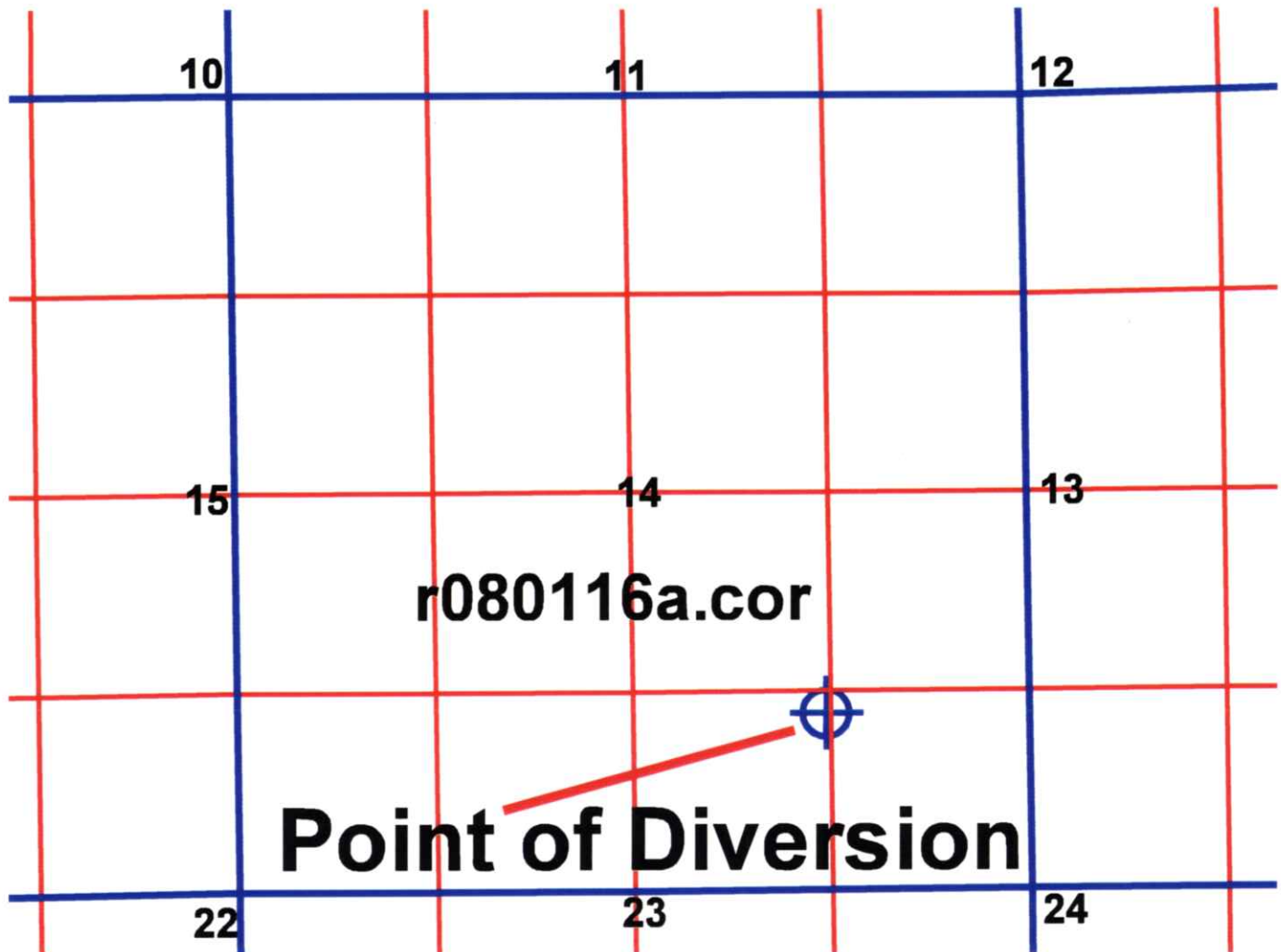
2324



34- 7585 PoD



PoD



-  08n22e.shp
-  T08n22e.shp
-  Posnpnt.shp

34-07585

14

13

NHEL 88
T-155

25hp centrifugal pump to pivot
18.3
1413
2324

R22E

T8N

23

24

pivot
40-15hp centrifugal pumps
Wheel lines

by Paxton
Mixed for
AL - Alpha
G4 - Gross Hwy

2324
2625

101
T-172

