

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-12092

Exam Date: 9/30/2004

1. Current Owner: WILSON PROPERTIES LP
1101 W RIVER ST STE 150
BOISE ID 83702
(208)424-9322
2. Accompanied by: Todd Crockett
Phone No: (208) 887-4653
Address: 990 W Chinden Blvd., Meridian, ID 83642
Relationship to Permit Holder: General Manager/Superintendent

RECEIVED
JAN 26 2005
DEPARTMENT OF WATER RESOURCES

3. SOURCE**TRIBUTARY**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Settlers Irrigation District Rights, United Water Inc Rights,
63-170A, 63-4440, 63-4975, 63-17563
2. Other water rights with the same point of diversion: 63-17563

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER

SE1/4SW1/4

Sec. 24, Twp 04N, Rge 01W, B.M.

ADA County

Method of Determination: Visual inspection of use of aerial photography.

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	
04N 01W 24									39.0			34.7					73.7

Total Acres: 73.7

Method of Determination: Visual inspection of use of aerial photography.

3. YES Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

YES Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

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

YES 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
WELL P/D	BERKLEY 6T90	10 Hp	UNKNOWN	BERKLEY 6T90	4 INCH DISCHARGE
SOUTH RELIFT PUMP	US MOTORS	50 Hp	53324 BO4 4499M	TEC	A0218P MODEL M10NG
NORTH RELIFT PUMP	US MOTORS	50 Hp	33324 BO4 4339M	TEC	BO218B MODEL M10NG

*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
N/A						

2. Measurements: The pump was not operating at the time of the exam. The pump is generally only used during the shoulder months of the irrigation, so it didn't seem reasonable to ask the owner to turn on the pump and pay the demand charges. A pump curve was used, and a theoretical was calculated to verify the pump efficiency. Due to the low total dynamic head on this pump, the efficiency is very low.

E. FLOW CALCULATIONS

YES Additional Computation Sheets Attached

Measured Method:

PUMP CURVE → 0.32 CFS
 PERMIT ALLOWS → 1.60 CFS
 ACRE LIMIT ALLOWS → 1.47 CFS (0.02 CFS X 73.7 ACRES = 1.47 CFS)

This permit needs to be limited to the pump capacity or 0.32 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

MITIGATION LIMITATION = 11.7 afa (see calculations in narrative)

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 73.7 \text{ acres} \times 4.5 = 331.65 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.32 \times 260 \times 1.9835 = 165 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} \text{ and Mitigation} = \underline{11.7 \text{ afa}}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

The water for this permit is diverted from a well in the SESW of Section 24, Township 4N, Range 1W, Ada County. The water diverted from the well travels due north through a 3 inch mainline to one of three connected ponds and open discharges into the middle pond. The water in the pond is delivered by a mainline to 2 – 50 Hp pumps. The two relift pumps divert the water into a mainline that serves an under ground sprinkler system. The well is not connected directly into the mainline.

The ponds filling and maintenance and the general irrigation of the golf course is accomplished by the use of Settlers Irrigation District water and wastewater from upstream irrigators. All of the water rights are delivered by and through the Settlers Irrigation District system.

This permit was issued subject to the amount of water that could be supplied under a proposed mitigation plan. According to the plan the amount volume that can be allowed is designated by the volume of water that can seep back into the aquifer from a series of three ponds. Whereas the ponds existed prior to the application for permit the mitigation could only be considered on new seepage being created or increasing the size of the ponds (see Shelley Keen's 10/18/1999 letter).

Terry Scanlan performed a seepage test for the ponds and discussed his findings in his 12/10/1999 letter. The amount seepage found is 28 acre-feet per acre-feet of seepage per acre of pond surface area. The surface area of the ponds before the proposed mitigation was 1.09 acre-feet. The ponds were then enlarged to 1.49 acre-feet in surface area for the mitigation increasing the surface area by 0.4 acre-feet. When the seepage rate of 28 acre feet per acre of pond surface area is multiplied by the additional surface area of 0.4 acre feet, the maximum allowable volume for this permit is 11.7 acre feet.

Questions have arisen on whether or not we should limit the volume of this water right to the 11.7 acre-feet. The mitigation plan is a part of the beneficial use of this water right, and once proof of beneficial use was filed the maximum amount of the mitigation was established. Therefore, the mitigation and volume should be limited to what was developed at the time proof was filed or 11.7 acre-feet. The owner has filed a new transfer with the Western Region to increase the amount of volume for this supplemental water right. It would be best for the processing of the new transfer to designate a specific volume with this right, so it can be determined if the volume being applied for under the transfer will be adequate to suit their needs.

Have conditions of permit approval been met? XXX 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	03/15 to 11/15	0.320 CFS	11.70 AF
<u>Totals:</u>		0.320 CFS	11.70 AF

2. Recommended Amendments

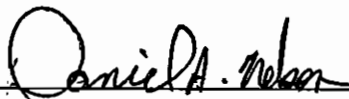
___Change P.D. as reflected above ___Add P.D. as reflected above ___None

___Change P.U. as reflected above ___Add P.U. as reflected above ___Other

I. AUTHENTICATION

DANIEL A. NELSON – SENIOR AGENT

Field Examiner's Name



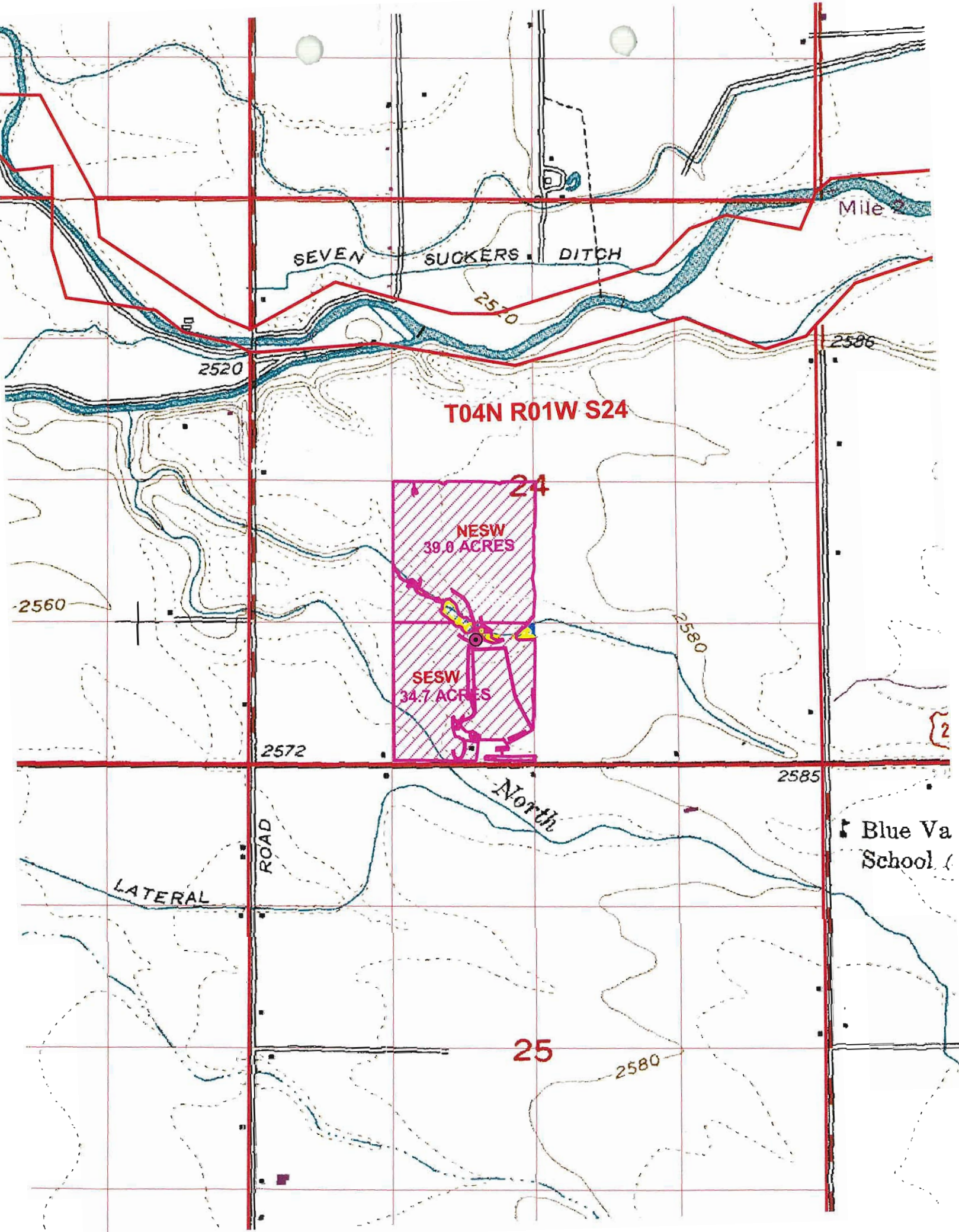
Date

1-24-04

Reviewer

Date

SEAL





T04N R01W S24

NESW
39.8 ACRES

SESW
34.7 ACRES

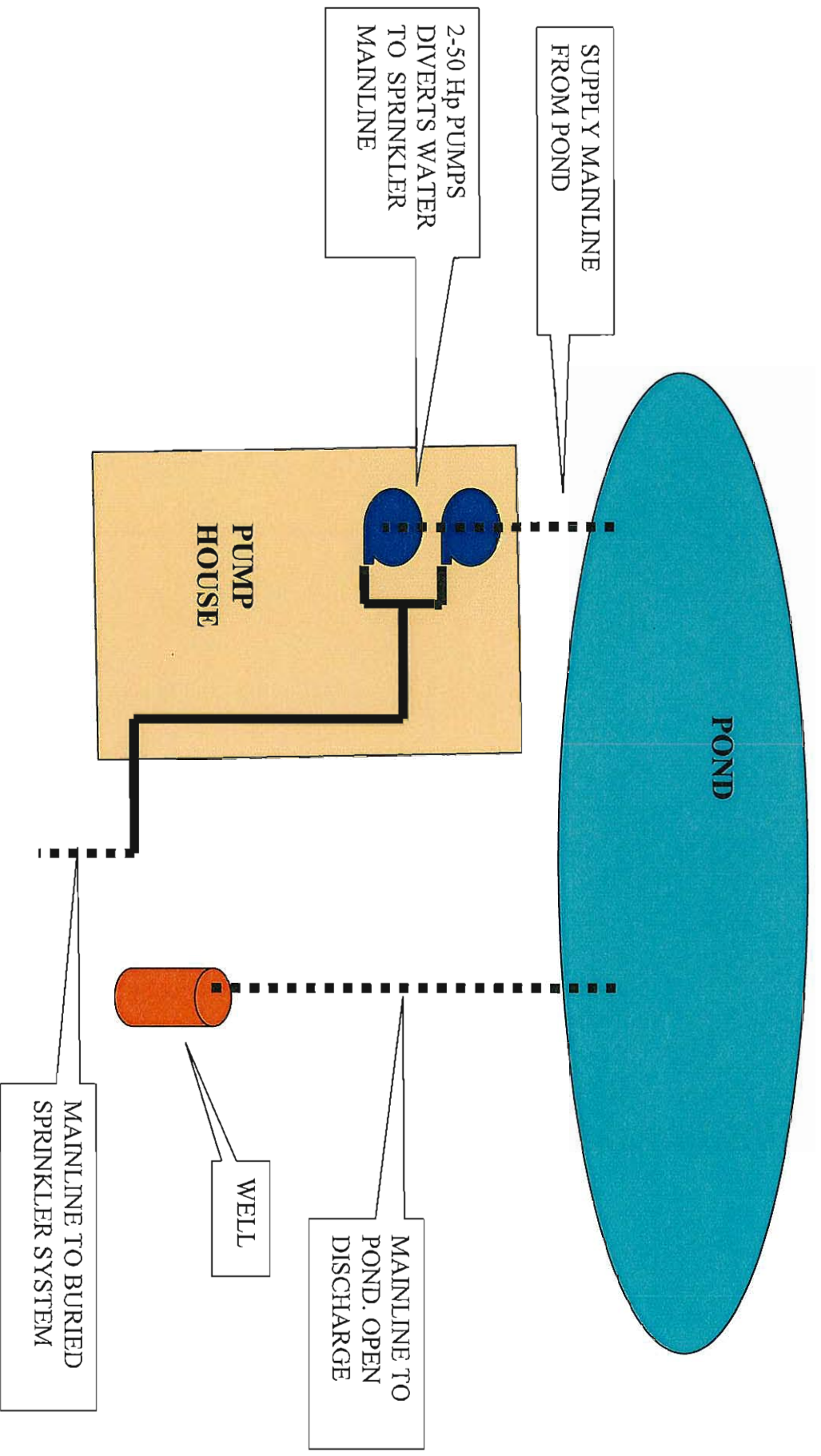


**YELLOW OUTLINE ->
PONDS BEFORE MITIGATION
BLUE OUTLINE ->
PONDS AFTER MITIGATION**

Before mitigation the ponds had approximately 1.09 acres of surface area. After the mitigation the ponds had 1.49 acres of surface area. The new surface area added to the ponds was 0.4 acres.

ESW

SYSTEM DIAGRAM



Water from the well is open discharged into the pond through a 3 inch mainline. The water in the pond is delivered by a mainline to 2 – 50 Hp pumps. The two relift pumps divert the water into a mainline that serves an under ground sprinkler system

ESTIMATED EFFICIENCY using PUMP CURVE.

$$\frac{(8.8) (10 \text{ HP}) (? \text{ EFF})}{(68.5 \text{ FT} \times 1.17) + (10 \text{ PSI} \times 2.31)} = (142.5 / 448.8)$$

$$? \text{ EFFICIENCY} = 0.33\% \text{ EFFICIENCY}$$

Oct 05 04 10:12a

Caron Pump Co

208 939 0257

P. 2

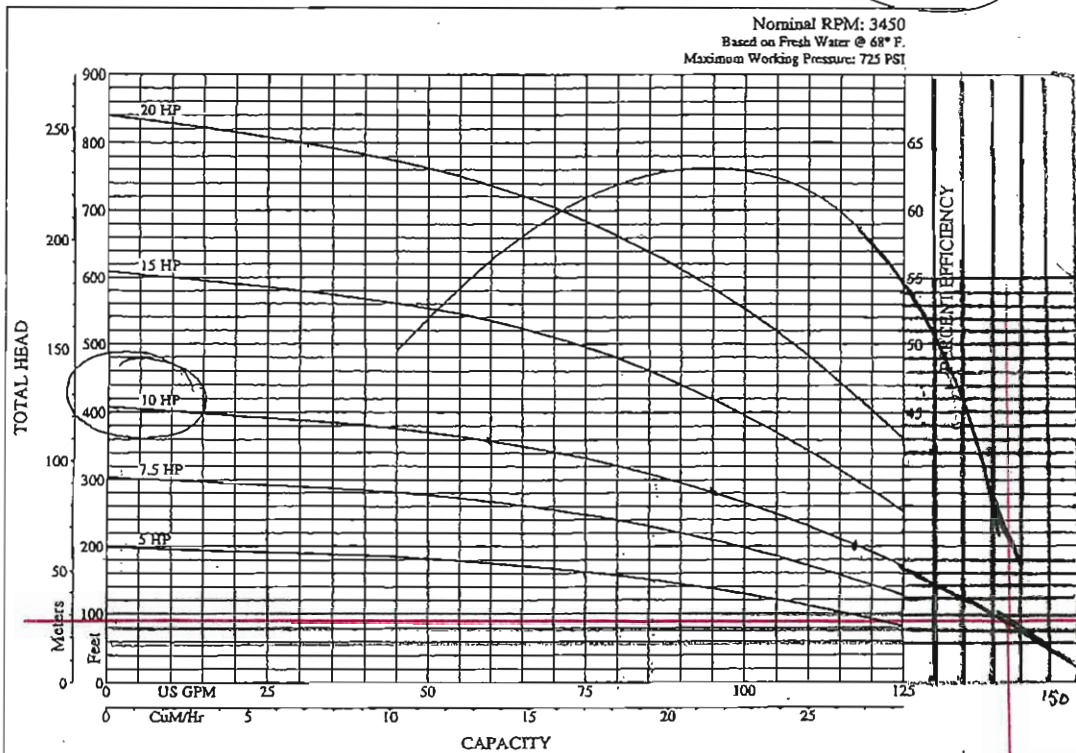
PLEASE NOTE:

0.33% EFFICIENCY IS VERY CLOSE TO THE THE EXTENDED GRAPH LINE! IT IS REASONABLE TO ASSUME THIS PUMP PRODUCES 142.5 GPM!



SUBMERSIBLE TURBINE

6T-90



36% EFFICIENCY
95% EFFICIENCY

OUTLINE DIMENSIONS / WEIGHTS

HP	stages	Motor size	P length	M* length	MD* dia.	Mtr. wt.	Pump wt.
5	4	6"	29.73	25.44	5.38	105	79
7.5	6	6"	37.60	28.00	5.38	120	103
10	8	6"	45.48	30.56	5.38	135	127
15	12	6"	61.22	33.13	5.38	146	175
20	16	6"	76.97	30.56	5.38	135	222

Note: dimensions = inches; weight = U.S. lbs.

M* Maximum length (Franklin Electric Motor)

MD* Motor diameter (Franklin Electric Motor)

SPECIFICATIONS

Minimum Well I.D.	6.0 Inches
Minimum Submergence @ BEP (above inlet)	10.0 Feet
Capacity Range	45 - 125 GPM
Discharge	3" F NPT
See manufacturer's data for motor cooling requirements	

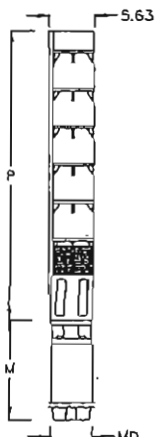
SUPERSEDES

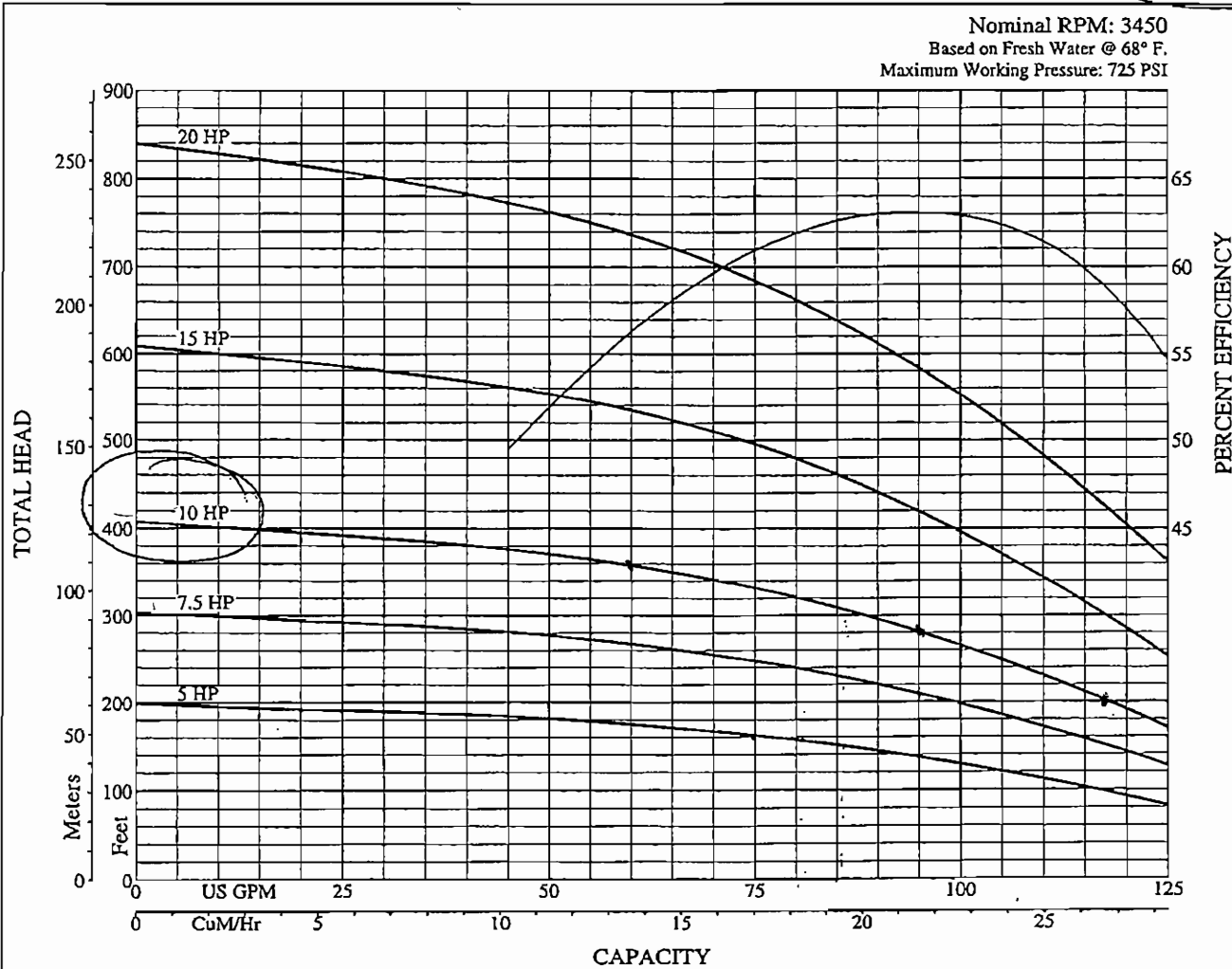
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BERKELEY**SUBMERSIBLE
TURBINE****6T-90****OUTLINE DIMENSIONS / WEIGHTS**

HP	stages	Motor size	P length	M* length	MD* dia.	Mtr. wt.	Pump wt.
5	4	6"	29.73	25.44	5.38	105	79
7.5	6	6"	37.60	28.00	5.38	120	103
10	8	6"	45.48	30.56	5.38	135	127
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Capacity Range	45 - 125 GPM
Discharge	3" F NPT
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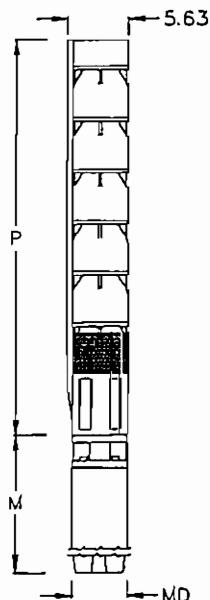
SUPERSEDES

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IDAHO DEPARTMENT OF WATER RESOURCES

WELL INSPECTION FORM

1. DRILLING PERMIT NO: 63-94-W-0034-000 OTHER APPLICABLE NO: 63-12092

2. OWNER: Wilson Properties LP Phone: 887-4653
Address: 1101 W River ST STE. 150, Boise, ID 83707

3. WELL LOCATION: Twp 4N, Rge. 14W, Sec. 24, SE 1/4 SW 1/4
County ADA (Provide sketch map and photo on reverse.)

4. DRILLER: Phipps Drilling Lic. No. 311
When Drilled? ~~3-15~~ 3-15 TO 3-21, 1994

5. WELL CONSTRUCTION:

Casing Diameter 6 inches Water tight cap? ☒ Yes ☐ No Access Port: ☒ Yes ☐ No
Casing $\geq$ 12 inches above ground? ☒ Yes ☐ No - Describe _____
Depth of Casing UNKNOWN ft. Method Drilled UNKNOWN
Condition of Well Casing: ☒ Good ☐ Fair ☐ Poor Describe _____
Control Valve? ☒ Yes ☐ No Pressure Gauge: ☐ Yes ☒ No
Condition of Piping and Valving GOOD
Auger to a depth of 0 ft. Evidence of Annular Seal ☐ Yes ☒ No
Are there obvious construction problems that may be a source for contamination or waste of water?
☐ Yes ☒ No (Describe in Remarks and Attach Photo - On Reverse)

6. HYDROLOGIC INFORMATION:

Depth to Static Water UNKNOWN ft. Water Temperature UNKNOWN °F
Flowing Artesian ☐ Yes ☒ No Pressure: UNKNOWN (psi)
Water Sample Taken? ☐ Yes ☒ No If yes, describe purpose _____
Water Quality Measurements/Observations (Describe) _____

7. WELL USE:

☐ Domestic	☒ Irrigation	☐ Stock
☐ Test	☐ Municipal	☐ Industrial
☐ Abandoned	☐ Waste Disposal/Injection	☐ Not Used
☐ Other: _____		

8. POSSIBLE CONTAMINATION SOURCES:

Is there evidence of Chemigation? ☐ Yes ☒ No

If yes, is there a check-valve present? ☐ Yes ☒ No

Is there a possible source of contamination nearby? ☐ Yes ☒ No

If yes, what Type? _____

How far away from the well is this source? _____

9. REMARKS: This well looks to be in fairly good
condition.

Daniel A. Nelson - Senior Agent
Signature of Dept. Representative & Title

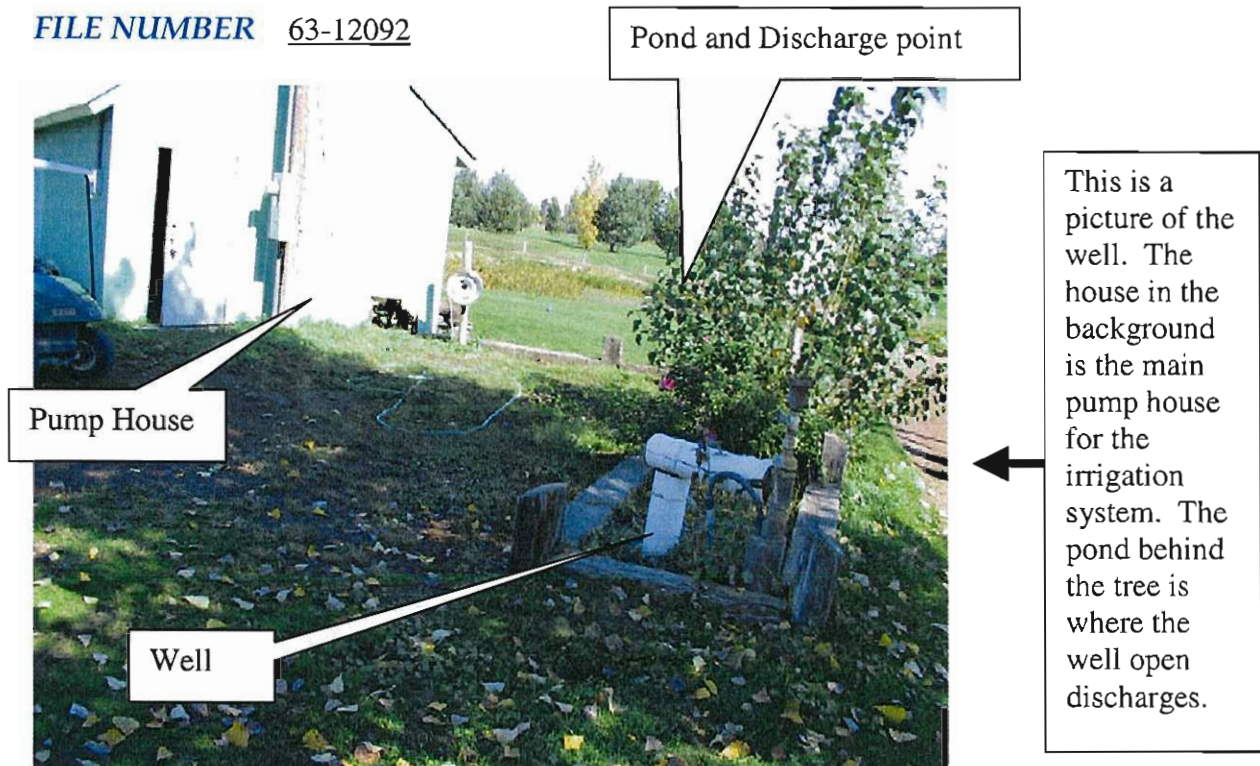
9-30-04
Inspection Date

PHOTOS, DRAWINGS, OTHER ATTACHMENTS:

See Field Exam.

PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 9/30/2004

FILE NUMBER 63-12092



PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 9/30/2004

FILE NUMBER 63-12092



These are the two 50Hp pumps that are used to pump water from the ponds into the buried irrigation system. They can only pull the water from the ponds, and are not directly plumbed to the well.



This photo is the piping from the irrigation pumps to the irrigation system.

PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 9/30/2004

FILE NUMBER 63-12092



These are photos of the pond and the golf course. The pond on the right is the east pond and the you can see the two other ponds over by the pump house.

FIELD NOTES

PERMIT NUMBER 63-12092

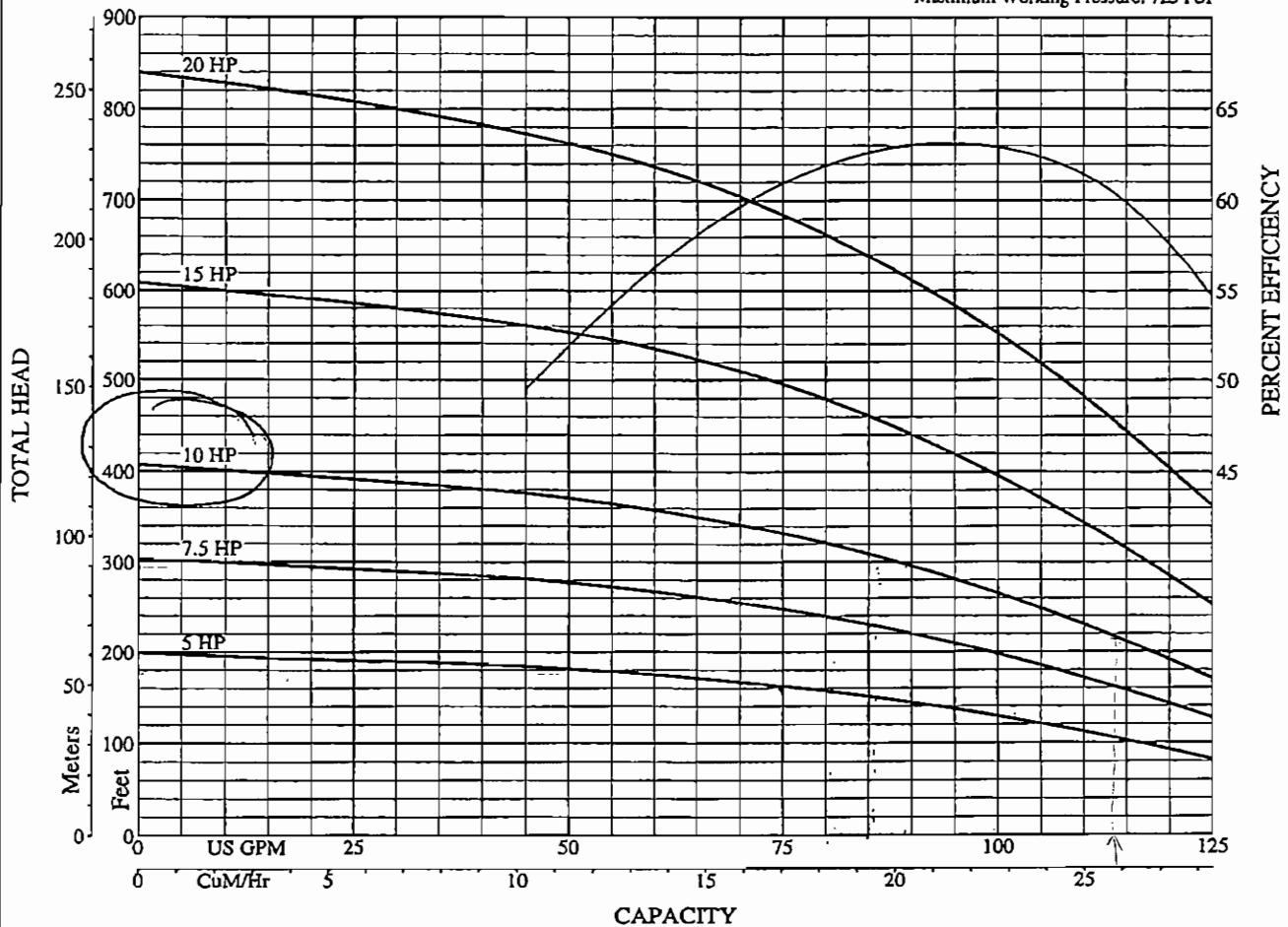
PLEASE NOTE: These documents are for backup purposes only and are not apart of actual Beneficial Use Field Report.

BERKELEY**SUBMERSIBLE
TURBINE****6T-90**

Nominal RPM: 3450

Based on Fresh Water @ 68° F.

Maximum Working Pressure: 725 PSI

**OUTLINE DIMENSIONS / WEIGHTS**

HP	stages	Motor size	P length	M* length	MD* dia.	Mtr. wt.	Pump wt.
5	4	6"	29.73	25.44	5.38	105	79
7.5	6	6"	37.60	28.00	5.38	120	103
10	8	6"	45.48	30.56	5.38	135	127
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See manufacturer's data for motor cooling requirements	

SUPERSEDES

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CARON PUMP WATER SYSTEMS INC.
11026 CULDESAC WAY
BOISE, IDAHO 83703
OFFICE (208) 939-9198 * (208) 939-0257 FAX

FAX COVER LETTER

DATE: Oct. 5th, 2004 ATTN: Don Nelson

COMPANY: Dept. of Water Resources

FAX NO.: 334-2348

FROM: Steve Caron

SUBJECT: Foxtail G.C.

NOTES: Please see attached pump curve -

PLEASE NOTIFY US AT 208-939-9198 IF TRANSMITTLE IS INCOMPLETE

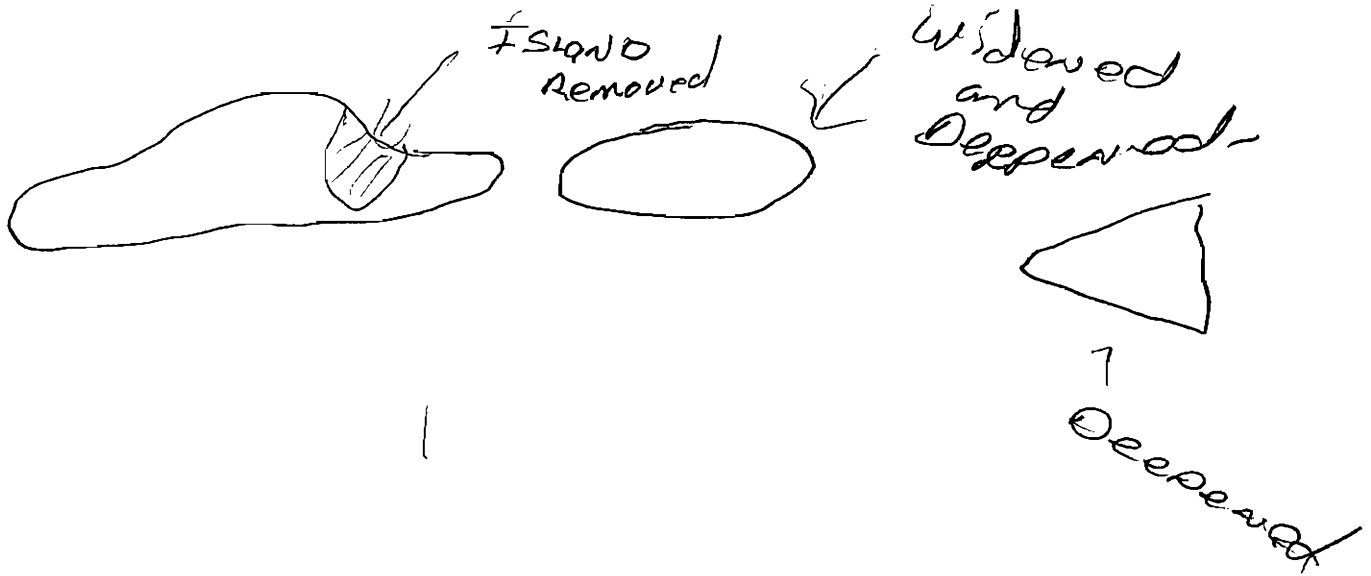
FOX Tyle.

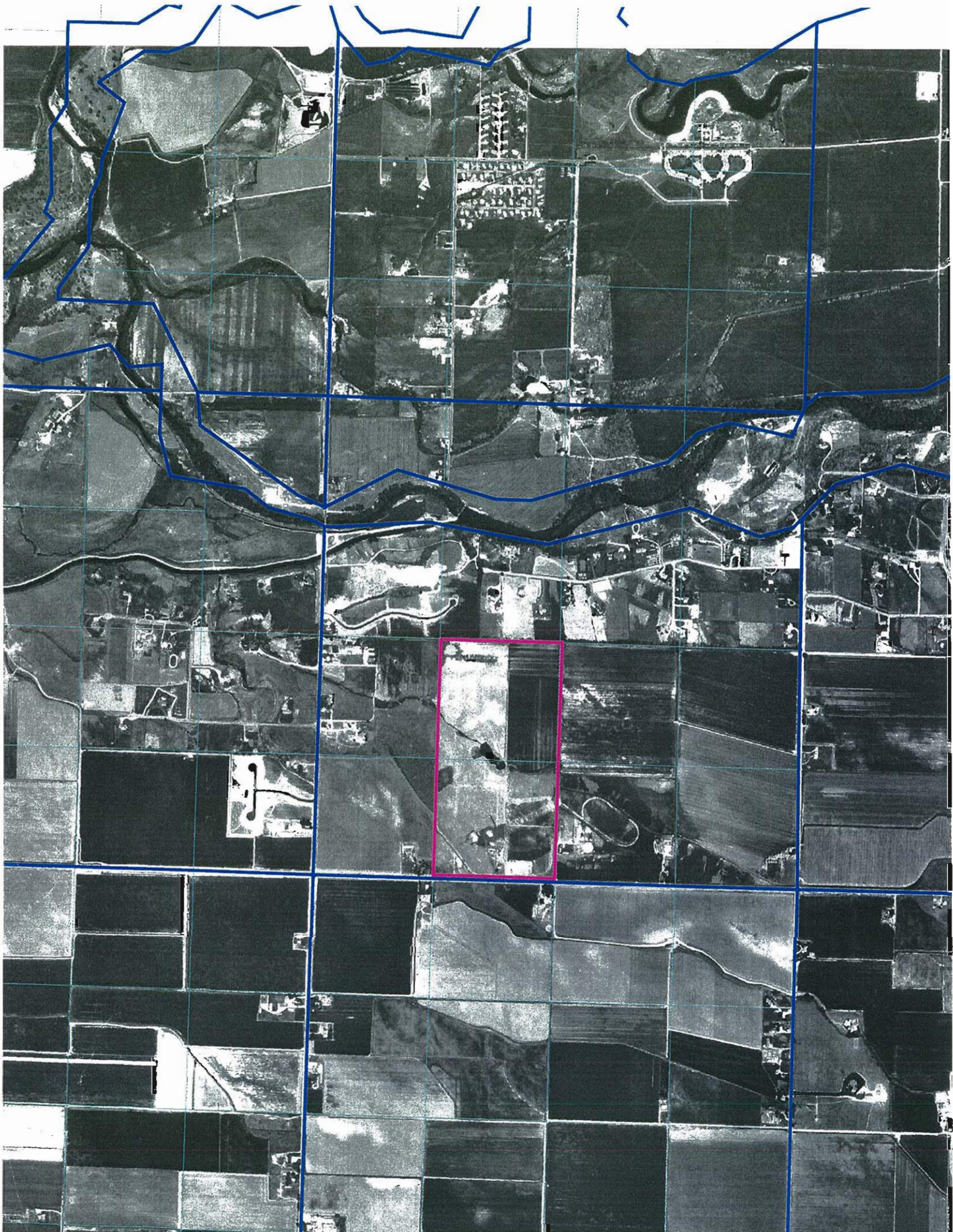
BERKLEY
6T 10 HP -90

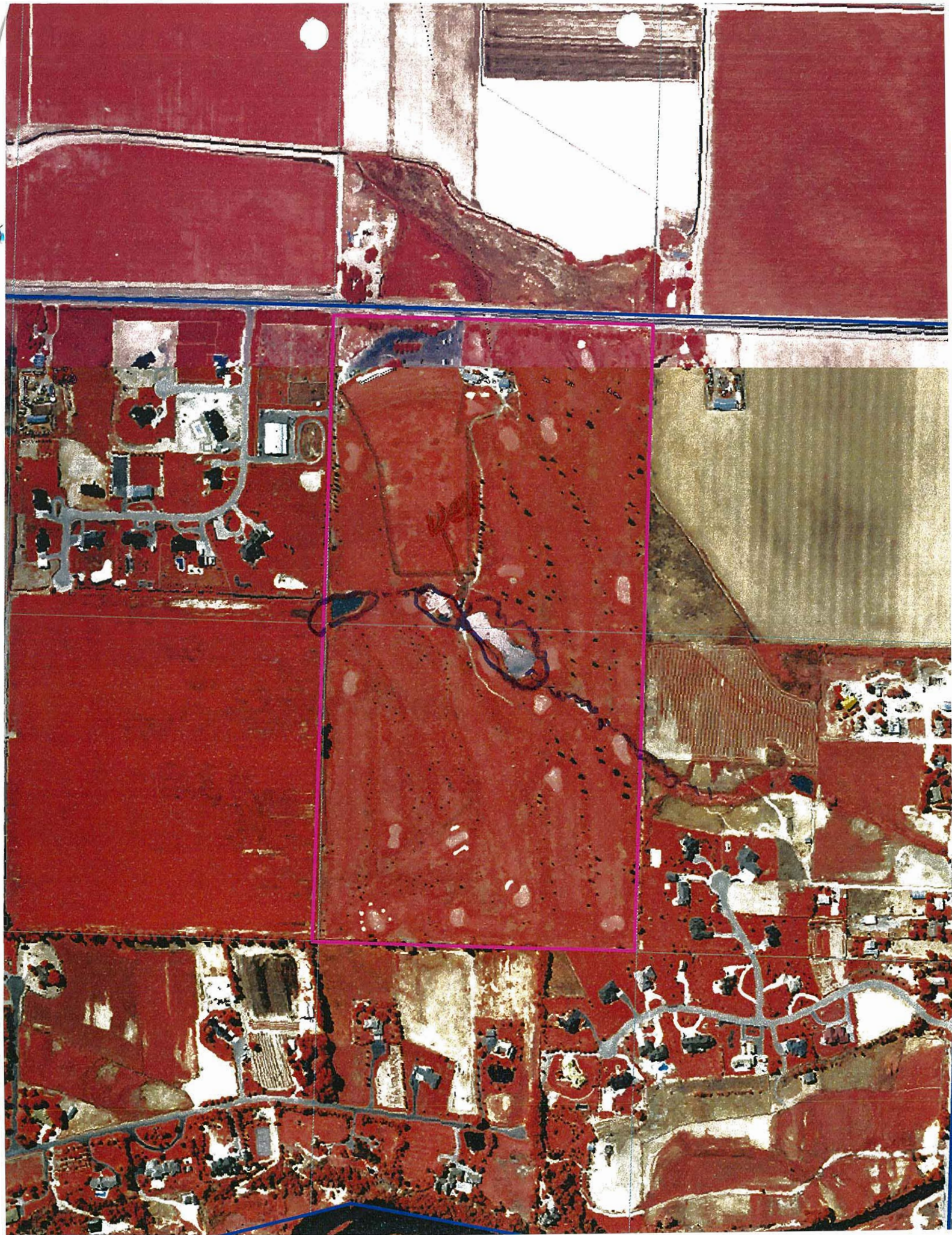
Pump set@126 FT →

150

↓







Flow meter
Hersey
9909301

Measures
IN Gallons
w TOTALIZER

BOOSTER

100 PSI

① w w 9940

US MOTORS

South Pump
50 HP
US FRICT
53304
4499M
Pump
4499M
4499M

no pump
50 HP US FRICT
33304 - 804 - 4330M
080218
4499M