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

COPY

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

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)

$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = 73.7 acres X 4.5 = 331.65 afa

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

V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ and Mitigation = 11.7 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

BENEFICIAL USE	PERIOD OF USE	DIVERSION RATE	ANNUAL VOLUME
IRRIGATION	03/15 to 11/15	0.320 CFS	11.70 AF
	Totals:	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

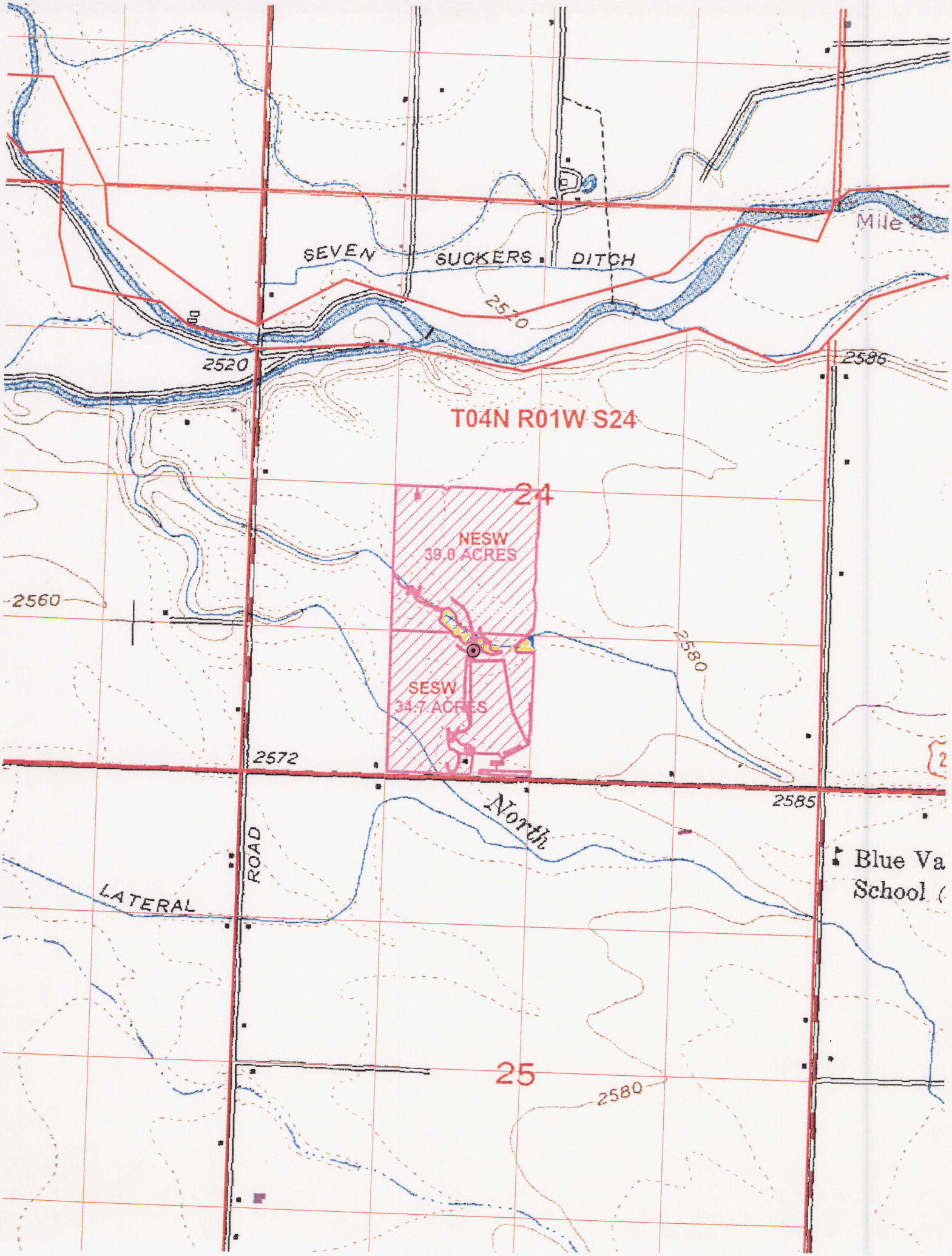
I. AUTHENTICATION

DANIEL A. NELSON – SENIOR AGENT

Field Examiner's Name Daniel A. Nelson Date 1-24-04

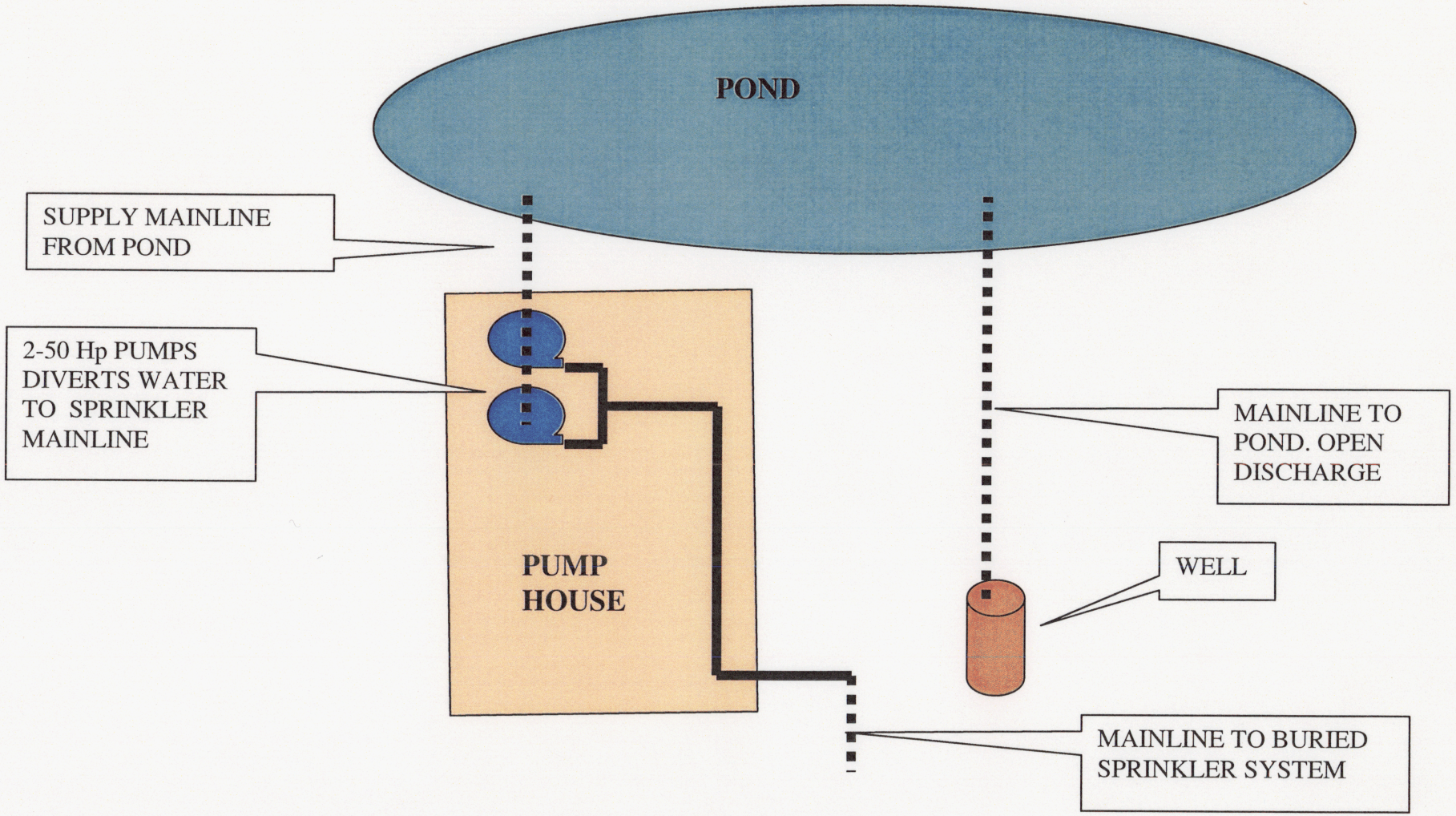
Reviewer _____ Date _____

SEAL


SEVEN SUCKERS DITCH
2520
2520
2586
T04N R01W S24
24
NESW
39.0 ACRES
SESW
34.7 ACRES
2560
2580
2572
2585
North
ROAD
LATERAL
25
2580
Blue Va
School


T04N R01W S24
NESW
39.0 ACRES
SESW
34.7 ACRES

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

~~142.5~~

Estimated Efficency using Pump curve.

$$\frac{(8.8)\ (10\ Hp)\ (?\ EFF)}{(108.5\ FT\ LIFT) + (10psi \times 2.31)} = (142.5/448.8)$$

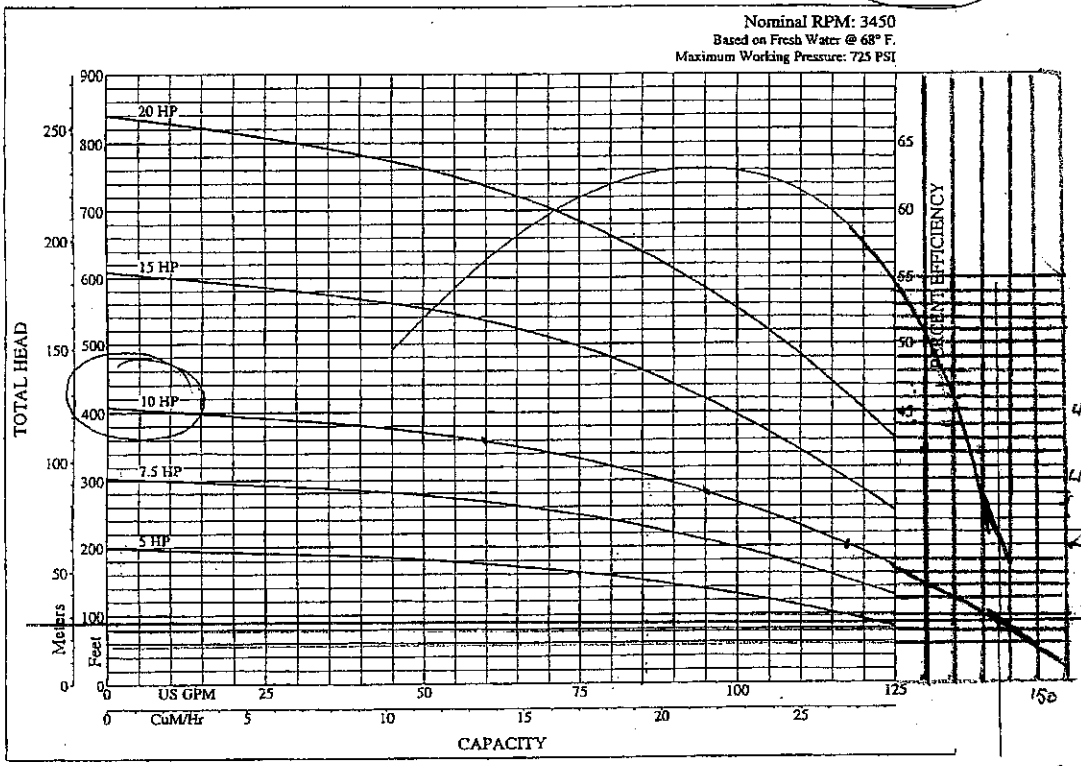
? EFFicency = 0.33% EFFicency

Please note: 0.33% EFFicency is very close TO the The Extended Graph Line! IT is Reasonable TO Assume This Pump PRoduces 142.5 gpm!

BERKELEY®

SUBMERSIBLE TURBINE

6T-90



45

40

36% EFFicency

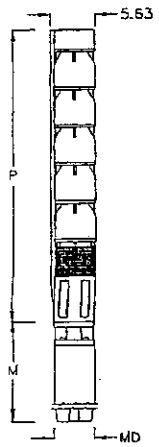
35% EFFicency

91.6 FT

150

142.5 gpm

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

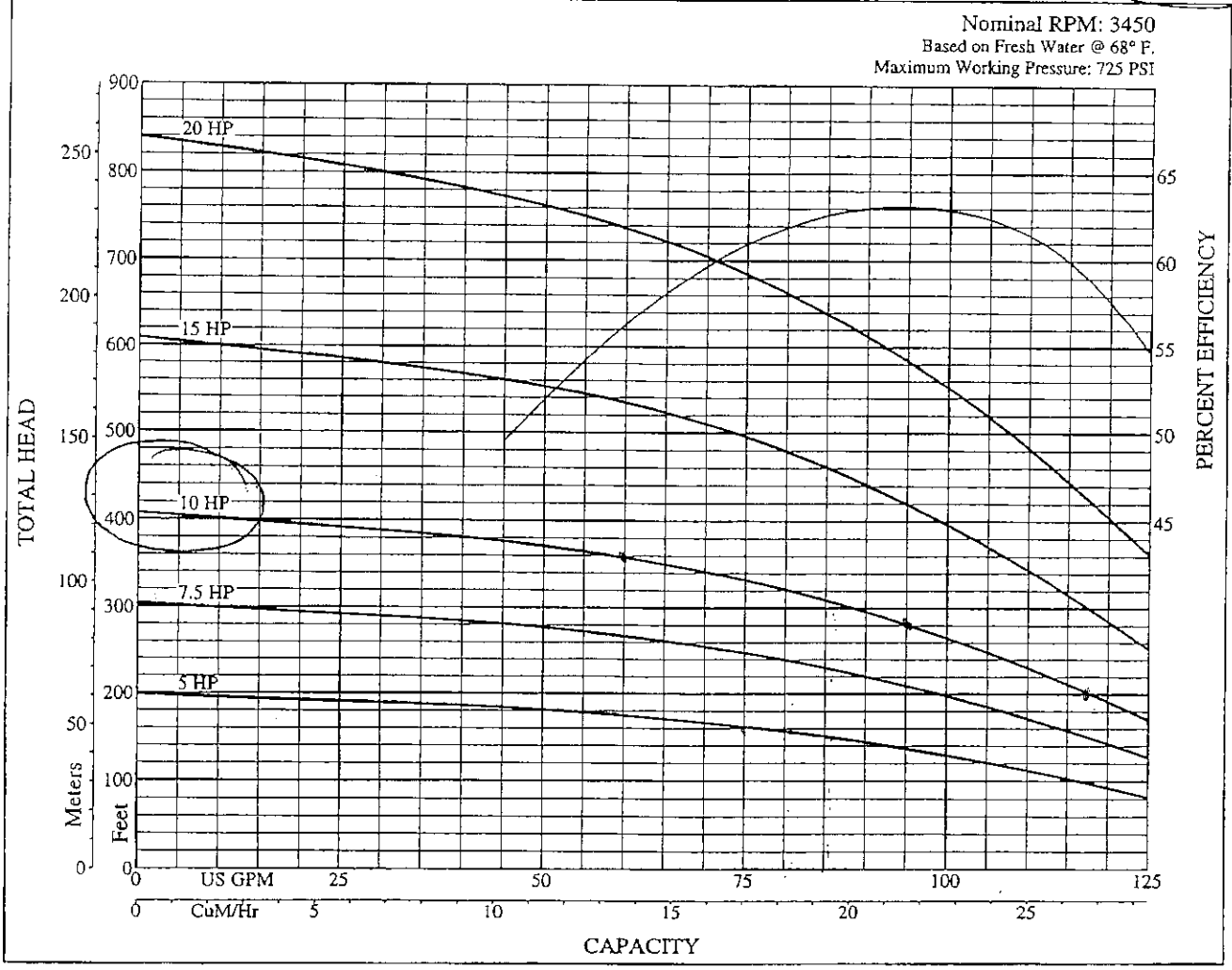
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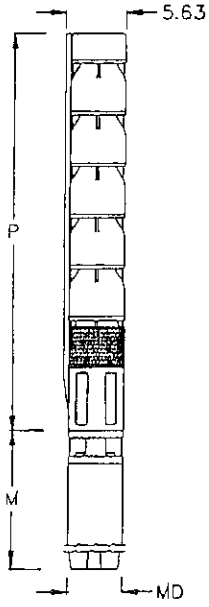
BERKELEY®

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6T-90



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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. 1W, 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 TO 3-21, 1994

5. **WELL CONSTRUCTION:**
Casing Diameter 6 inches Water tight cap? [X] Yes [ ] No Access Port: [X] Yes [ ] No
Casing ≥ 12 inches above ground? [X] Yes [ ] No - Describe
Depth of Casing UNKNOWN ft. Method Drilled UNKNOWN
Condition of Well Casing: [X] Good [ ] Fair [ ] Poor Describe
Control Valve? [X] Yes [ ] No Pressure Gauge: [ ] Yes [X] No
Condition of Piping and Valving GOOD
Auger to a depth of 0 ft. Evidence of Annular Seal [ ] Yes [X] No
Are there obvious constuction problems that may be a source for contamination or waste of water?
[ ] Yes [X] 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 [X] No Pressure: UNKNOWN (psi)
Water Sample Taken? [ ] Yes [X] No If yes, describe purpose
Water Quality Measurements/Observations (Describe)

7. **WELL USE:**
[ ] Domestic [X] Irrigation [ ] Stock
[ ] Test [ ] Municipal [ ] Industrial
[ ] Abandoned [ ] Waste Disposal/Injection [ ] Not Used
[ ] Other:

8. **POSSIBLE CONTAMINATION SOURCES:**

Is there evidence of Chemigation? [ ] Yes [X] No

If yes, is there a check-valve present? [ ] Yes [X] No

Is there a possible source of contamination nearby? [ ] Yes [X] 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

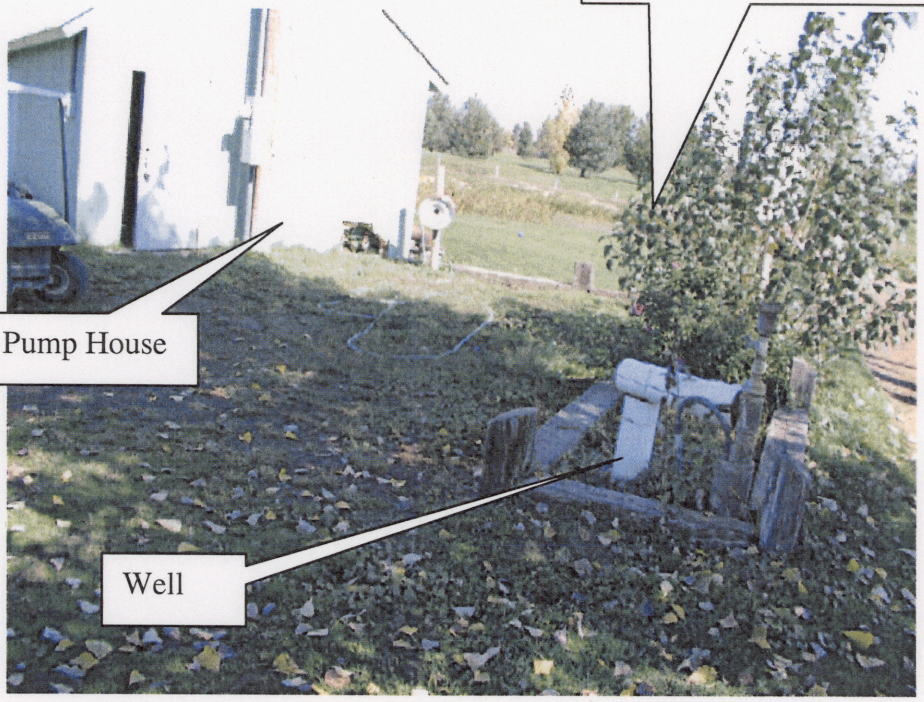
9-30-04
Inspection Date

PHOTOS, DRAWINGS, OTHER ATTACHMENTS:

See Field Exam.

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

FILE NUMBER 63-12092



This is a picture of the well. The house in the background is the main pump house for the irrigation system. The pond behind the tree is where the well open discharges.



This is a photo showing where the well open discharges into the pond. The metal standpipe by the person standing in the picture is the McCrometer flow meter.

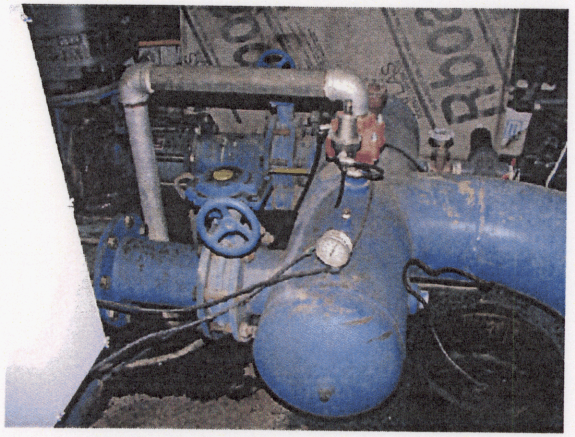
PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 9/30/2004

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.




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.

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.