

Permit No: 63-11721

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

Page 1

Permit No: 63-11721

Exam Date: 9/9/2007

RECEIVED
SEP 15 2004
DEPARTMENT OF
WATER RESOURCES

A. GENERAL INFORMATION

1. Current Owner: GREEN ACRES FARMS
14501 LOCUST LN
NAMPA ID 83686
(208)467-6195

2. Accompanied by: Galen Perkins

Phone No: (208) 250-2902 cell phone (208) 467-6195

Address: SAME AS ABOVE

Relationship to Permit Holder: OWNER

3. **SOURCE**

TRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 63-8688, 63-30993, 63-30994, and Wilder Irrigation District Rights

2. Other water rights with the same point of diversion: 63-8688 and 63-30993

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER

NE1/4NW1/4

Sec. 36, Twp 03N, Rge 04W, B.M.

CANYON County

Method of Determination:

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	
03N	04W	36			15.6		28.5			36.0									80.1

Total Acres: 80.1

Method of Determination:

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	FAIRBANKS MORRIS	60 Hp	F432348	UNKNOWN	12"
BOOSTER PUMP	US ELECTRIC	75 Hp	0601840-627 84-17984	UNCMOWN	10501550500001922 CISP02781 12" DISCHARGE

*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
THEORETICAL	N/A	N/A	N/A	N/A	N/A	N/A

2. Measurements:

A theoretical calculation was used to determine the flow rate of the system. The well was not operating at the time of the exam and may not operate for the remainder of the season. It was not necessary to require the applicant to turn on the well, and pay the demand charges for the power if the well is not going to be used.

E. FLOW CALCULATIONS**YES** Additional Computation Sheets Attached

Measured Method:

Theoretical calculation → 2.05 cfs
 Permit allows → 2.40 cfs
 Pump Curve allows → 2.09 cfs
 Acres limit = 80.1 acres X 0.02 cfs/ac → 1.60 cfs

Maximum allowable diversion rate for this water right would be limited by the rate per acre limitation of 0.02 cfs or 1.60 cfs for 80.1 acres.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 80.1 \text{ ac} \times 4.5 \text{ afa/ac} = 360.5 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 1.60 \text{ cfs} \times 260 \text{ Days} \times 1.9835 = 825.8 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 360.5 \text{ afa}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

The water for this permit is diverted from the well by a 60 Hp pump into a mainline. The mainline travels over a lateral to a cement vault. The water in the mainline can then be open discharged into the vault or diverted directly into the intake line of a 75 Hp booster pump. The booster pump picks up water from the vault or directly from the pump, and delivers it to a mainline system that supplies sprinklers irrigating the fields described in the place of use. Wilder Irrigation District water is delivered to the vault by a headgate and gravity flow.

The mainline travels southward along the edge of the west field for approximately 3/8 of a mile and cuts along the edge of the L shaped field in the SWNE tract. The section mainline intersects the first mainline approximately 1/8 of a mile from the vault. This mainline runs east and west parallel to the 1/4 1/4 line. Approximately 1/2 way through into the SWNE 1/4 1/4 the mainline turns due south and cuts through the middle of the northern field in the SWNE for approximately 350 ft to the southern edge of the field. At the southern edge of the field the mainline turns east again and follows the contour of the field to irrigate the bottom end of the field.

Wilder Irrigation District water supplies the surface water for this farm. This water right is supplemental to the canal company water. There are also 3 domestic water rights listed in the overlap for the owner's homes. These rights should not prevent the licensing of this permit.

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	03/15 to 11/15	1.600 CFS	360.50 AF
<u>Totals:</u>		1.600 CFS	360.50 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 9-13-04

Reviewer

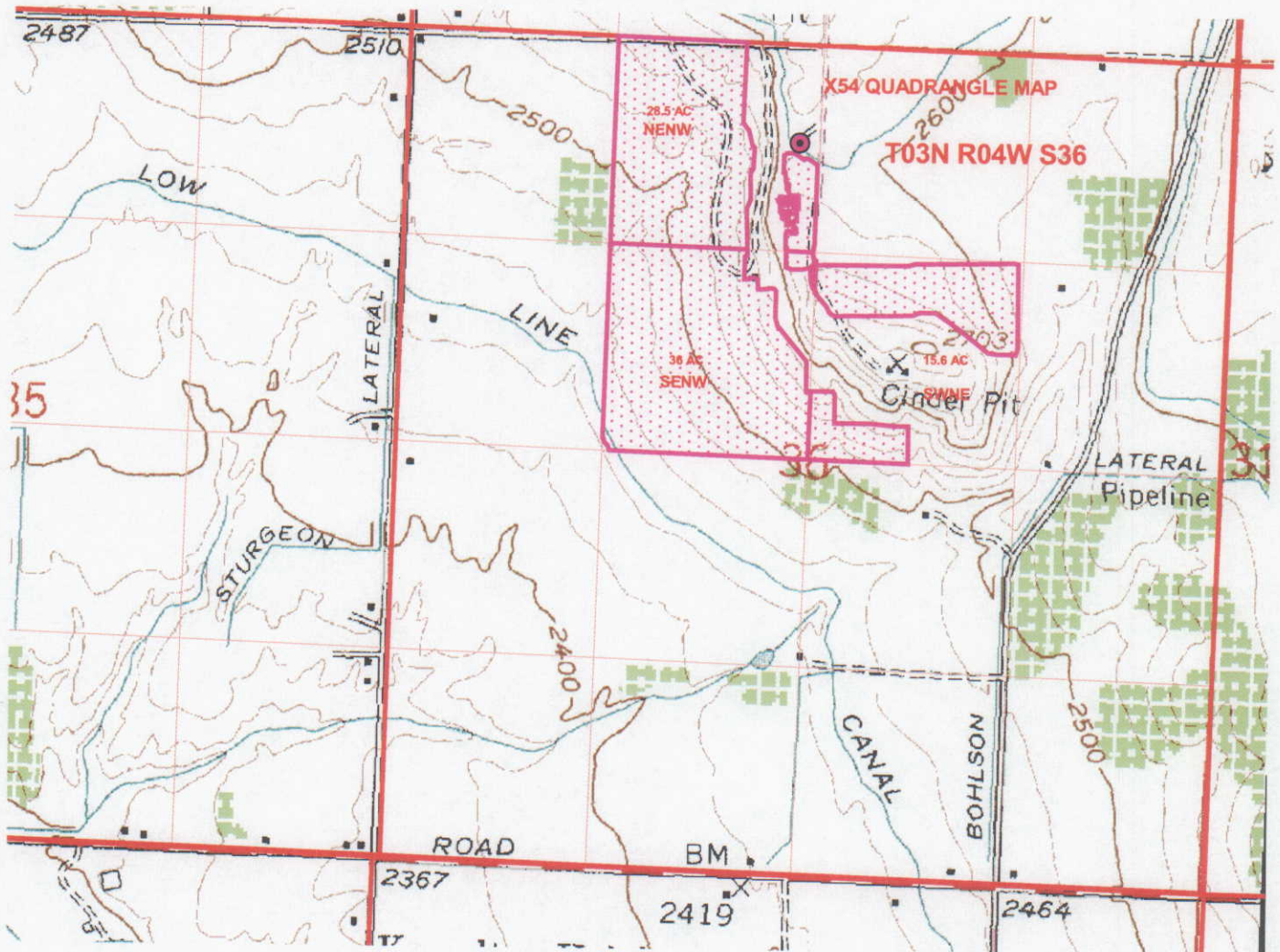
Date

SEAL

63-11721 FIELD EXAM

BY DAN NELSON & ERIN RETELLE

9/10/04



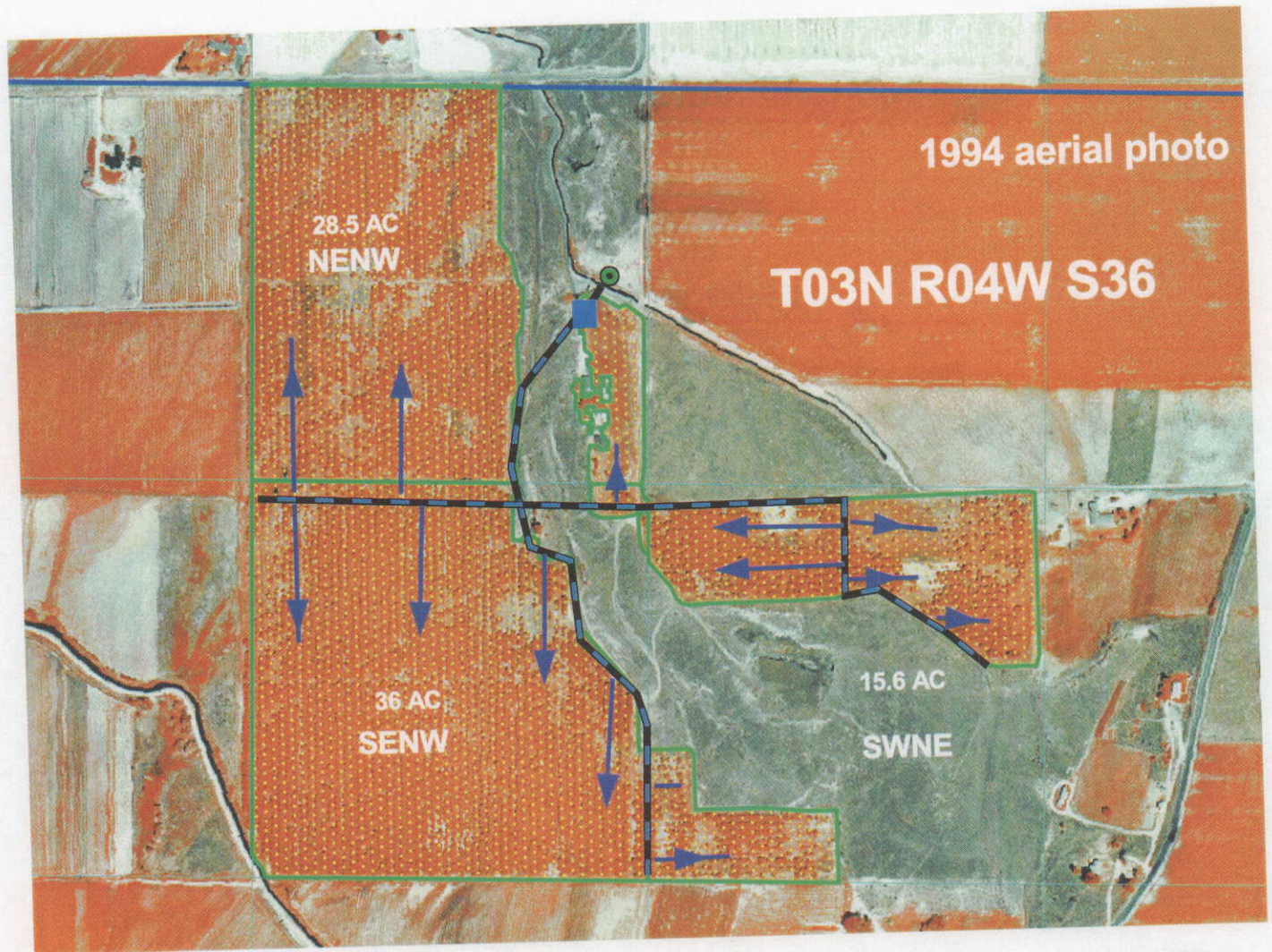
- WELL
- LANDS IRRIGATED
- SECTIONS
- 1/4 1/4 LINES



63-11721 FIELD EXAM

BY DAN NELSON & ERIN RETELLE

9/10/04

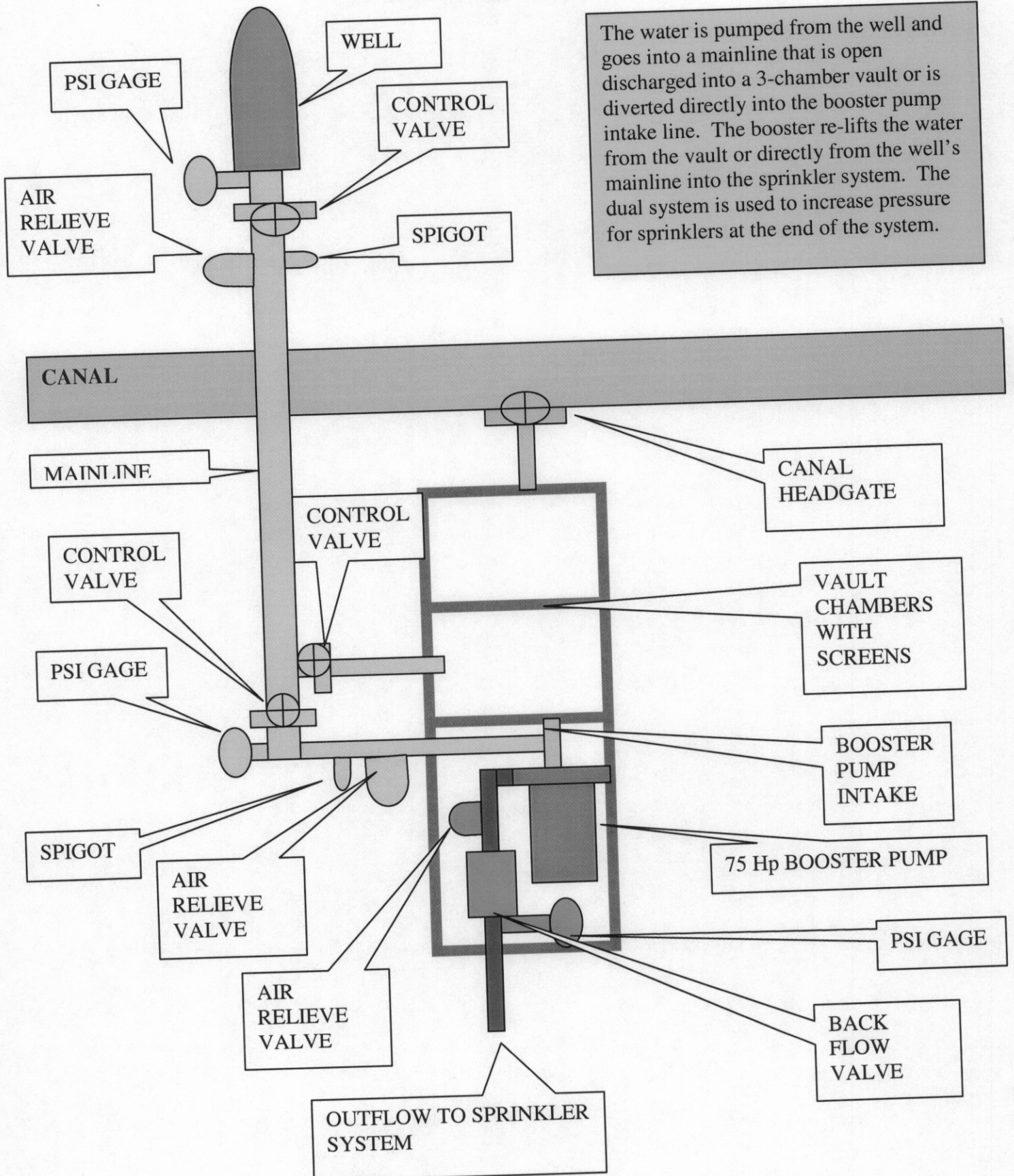


- WELL
- GROUND WATER CANAL WATER JUNCTION BOX
- ⚡ SPRINKLERS
- ⚡ MAINLINES
- LANDS IRRIGATED
- SECTIONS
- 1/4 1/4 LINES



SYSTEM DIAGRAM

The water is pumped from the well and goes into a mainline that is open discharged into a 3-chamber vault or is diverted directly into the booster pump intake line. The booster re-lifts the water from the vault or directly from the well's mainline into the sprinkler system. The dual system is used to increase pressure for sprinklers at the end of the system.



GROUNDWATER THEORETICAL ANNALYSIS

FILE: 63- 11721

DATE: 9-9-04

BY: Daniel A. Nels

THEORETICAL RATE OF FLOW: $Q = \frac{(8.8 \times (HP) \times (EFF.))}{TDH}$

Q = CFS

HP = Total Brake Horsepower of pumping plant (including booster)

Eff. = Pumping plant efficiency (assume 70% or 0.70)

TDH = Total dynamic head = [(LIFT) + (PSI X 2.31)]

LIFT = Depth to water in FEET from land surface to puijping water level

PSI = Pumping pressure measured in PSI near pump (if open discharge assume [0])

Q = $\frac{(8.8) \times (60 HP) \times (0.70)}{396.6} = 205.7 \text{ CFS}$

$[(170 \text{ FT}) + (10 \text{ PSI} \times 2.31)] 193.1$

LIFT FROM:

Measurement ()

Owner ()

Area estimate ()

Well Logs (X)

PSI FROM:

Measurement ()

Owner ()

Estimate (X)

Owner Gage ()

Booster ☒ (N)

NOTES ON PUMP:

Motor Make, Serial or ID

Pump Make, Serial or ID, rating

REMARKS:

The TDH was estimated using the practice of subtracting the well depth of 470 FT from the static water level of 130 FT and dividing that amount by 2 to get the estimated pumping level of 170 FT $(470 - 130 / 2 = 170)$. I estimated the open discharge at 10 PSI.

Date **April 1994**

Supersedes **All previous catalog materials**

Section **2110** Page **143**

CURVE data



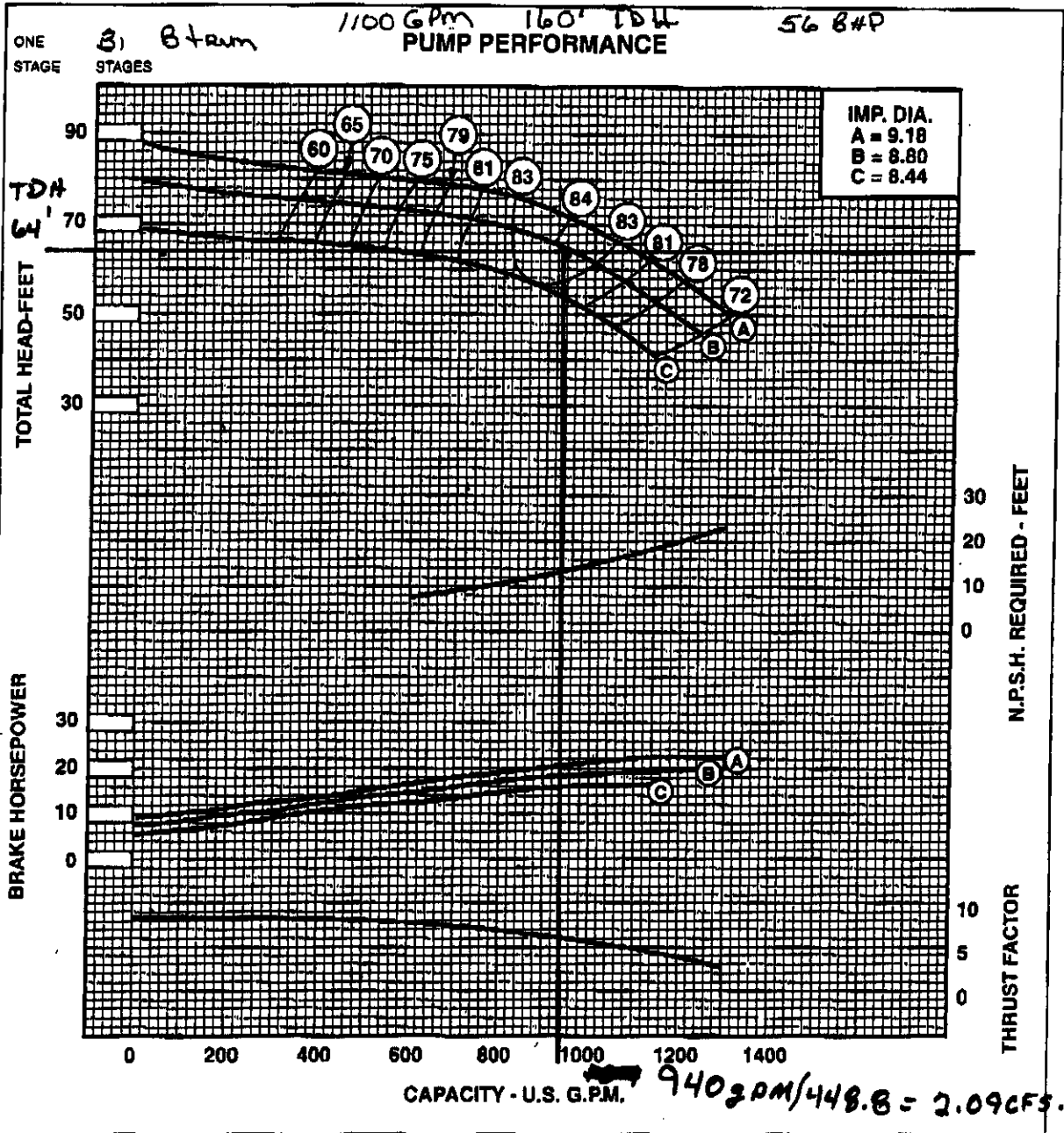
No. Stages	Eff. Change	MATERIAL	Eff. Change
1	-4	IMP. - C.I.	-2
2	-2	IMP. - N.R.	-1
3	0	BOWL - BRZ	-1
4		BOWL - N.R.	-1

12RKBH

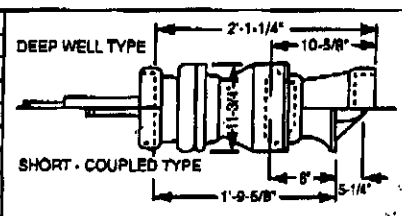
1760

R.P.M.

SINGLE STAGE LAB PERFORMANCE WITH STANDARD MATERIALS. EFFICIENCY SHOWN FOR 3 OR MORE STAGES. HORSE POWER SHOWN FOR ONE STAGE BASED ON 3 STAGE EFFICIENCY. CORRECTIONS SHOULD BE MADE FOR STAGES AND MATERIAL.



EYE AREA - SQ. IN.	= 16.4	IMPELLER WT. - LBS.	= 15.3
WPI PER IMPELLER LB.-FT.	= 1.00	ONE STAGE WT. - LBS.	= 278
MAX. SPHERE SIZE	= ----	ADD'L STAGE WT. - LBS.	= 105
MAX. NO. STD. STAGES	= 15	IMPELLER NUMBER	6 A 17 A
MAX. OPERATING - P.S.I.	= 680	DISCH. - IN.	= 8.10
STD. LATERAL - IN.	= 0.70	SUCTION - IN.	= 8
STD. SHAFT DIA. - IN.	= 1.687	MAX. LATERAL - IN.	= ----
MAX. SHAFT DIA. - IN.	= ----	BOWL CONN. FLANGED - COLLET	= ----
MIN. SUBMERGENCE - IN.	= 25	ADD 9.38" PER ADDITIONAL STAGE.	= ----



193.1 TDH / 3 stages = 64' TDH / stage.

Curves reflect typical performance. refer to factory for certification.

IDAHO DEPARTMENT OF WATER RESOURCES

WELL INSPECTION FORM

1. DRILLING PERMIT NO: 63-92-C-093 OTHER APPLICABLE NO: 63-11721
Cell # (208) 250-2902
2. OWNER: GREEN ACRES FARMS (Galen Perkins) Phone: (208) 467-6195
Address: 14501 LOCUST LN, Nampa, ID 83686
3. WELL LOCATION: Twp 3N, Rge. 4W, Sec. 36, NE 1/4 NW 1/4
County CANYON (Provide sketch map and photo on reverse.)
4. DRILLER: SERGEANT DRILLING Lic. No. 507
When Drilled? 6-16-92 TO 6-23-92
5. WELL CONSTRUCTION:
Casing Diameter 16 inches Water tight cap? ☐ Yes ☒ No Access Port: ☒ Yes ☐ No
Casing $\geq$ 12 inches above ground? ☐ Yes ☒ No - Describe TURBINE ON CEMENT PAD
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 CEMENT PAD
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: There was no check valve on well, with
the possibility of chemigation. The well is
a supplemental well and rarely used. Most of
the chemigation is done at booster pump.

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

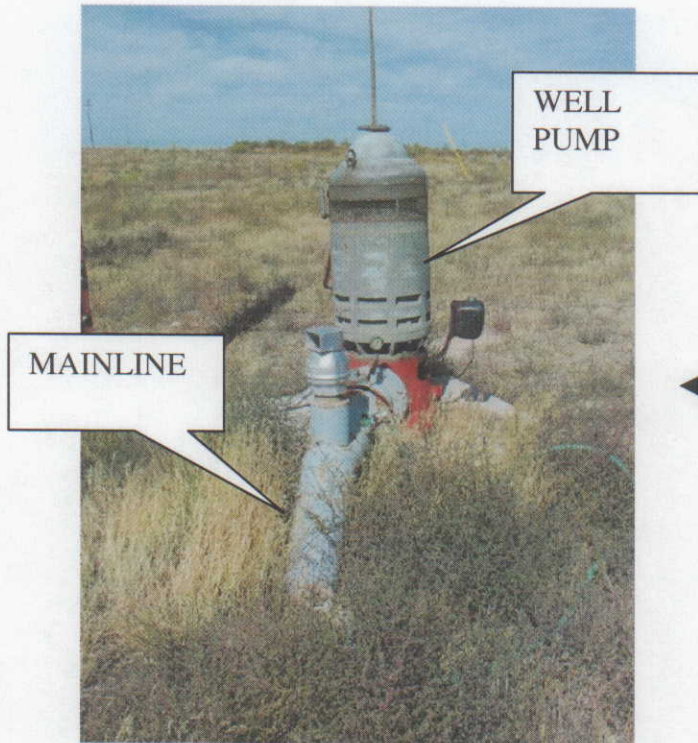
9-9-04
Inspection Date

PHOTOS, DRAWINGS, OTHER ATTACHMENTS:

Please see Field Exam.

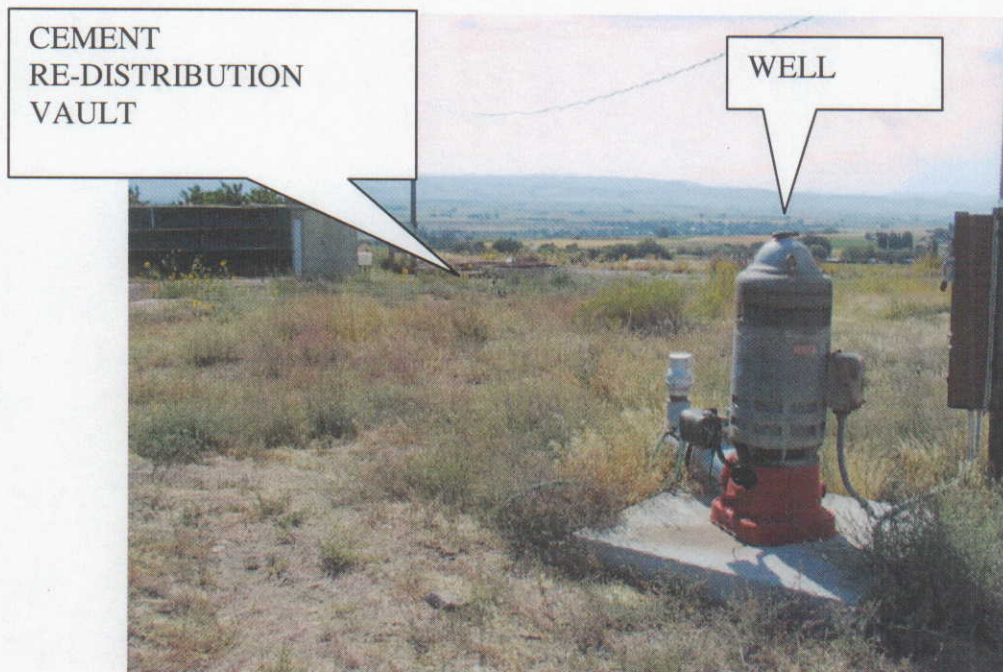
PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 9/13/2004

FILE NUMBER 63-11721



← The top photo is of the well.

The bottom photo shows the relationship of the well to the cement redistribution vault that holds the booster that pressurizes the irrigation system.



PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 9/13/2004

FILE NUMBER 63-11721

MAINLINE
FROM WELL

CANAL WATER
ENTERS HERE



This photo shows the 3-chamber vault used to distribute both well water and Wider Irrigation District water. The booster pump is in the chamber closest to camera. The canal water enters in the other side of the vault.

MAINLINE
FROM WELL

BOOSTER PUMP IN
THIS CHAMBER

MAINLINE TO SPRINKLERS
EXISTS HERE.



MAINLINE
FROM WELL



MAINLINE
FROM WELL

75 Hp BOOSTER
PUMP

PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 9/13/2004

FILE NUMBER 63-11721



← This photo shows the north field in the SWNE.



← This photo shows the field in the NENW and SENW