

Permit No: 63-11185

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

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DEPARTMENT OF
WATER RESOURCES

A. GENERAL INFORMATION

Permit No: 63-11685

Exam Date: 9/22/2004

1. Current Owner: FARGO FARMS INC
25502 UPPER PLEASANT RIDGE
WILDER ID 83676
(208)482-7407
2. Accompanied by: Jim Truesdale
Phone No: (208) 482-7407
Address: SAME AS APPLICANT
Relationship to Permit Holder: Owner

3. SOURCE
GROUND WATER

TRIBUTARY

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Wilder Irrigation District Water, 63-26601 (domestic right).
2. Other water rights with the same point of diversion: 63-26601 (Domestic right separate well)

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER SW1/4SW1/4 Sec. 27, Twp 04N, Rge 05W, B.M.
CANYON County

Method of Determination: VISUAL INSPECTION AND USE OF AERIAL PHOTOGRAPHY (GIS)

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	05W	27									29.5	30.5							60

Total Acres: 60

Method of Determination: VISUAL INSPECTION AND USE OF AERIAL PHOTOGRAPHY (GIS)

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.
4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
P/D WELL	UNKNOWN	15	UNKNOWN	UNKNOWN	4 INCH
RELIFT PUMP	VERTILINE	30	7169676	CORNELL	31361 (6 7/8" DISCHARGE)

*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:

Well was not operational at the time of the exam. No pump curve was available, so a theoretical calculation was used.

E. FLOW CALCULATIONS

YES Additional Computation Sheets Attached

Measured Method:

Theoretical calculation → 1.01 cfs

Permit Limit → 1.200 cfs

Use Theoretical calculation of 1.01 cfs for licensing.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 60 \text{ acres} \times 4.5 \text{ afa} = 270 \text{ afa}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 1.01 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 520.8 \text{ afa}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 270 \text{ afa}$$

2. Volume Calculations for Other Uses:

NONE

G. NARRATIVE/REMARKS/COMMENTS

The well for this permit is located in the SWSW T4N R5W S27. A 15 Hp pump diverts water from the well through a 4-inch mainline that immediately changes to a 8 inch mainline at the control valve. The water then travels approximately 475 ft due east to a tin culvert. The mainline open discharges into this culvert where the water mixes with water from Wilder Irrigation District. The water is then diverted from the culvert by a 30 Hp re-lift pump to a pivot and gated pipe to irrigate 60 acres.

The permit was filed to include 15 acres on the south side of Upper Pleasant Ridge Road, but the lease was lost on this property before the water could be used there. All of the water from the well has been used on the two 40-acre tracts described above.

The only overlapping water rights is the Wilder Irrigation District water rights and a domestic use owned by the applicant. This water right supplements the Wilder irrigation District rights and the domestic use is not connected into the system. Therefore, there are competing water rights.

Have conditions of permit approval been met? ☒ Yes ☐ No

This is an open discharge system and a PCC calculation could be used to monitor the well for future measurement needs.

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 11/01	1.010 CFS	270 AF
	<u>Totals:</u>	1.010 CFS	270 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 11-1-04

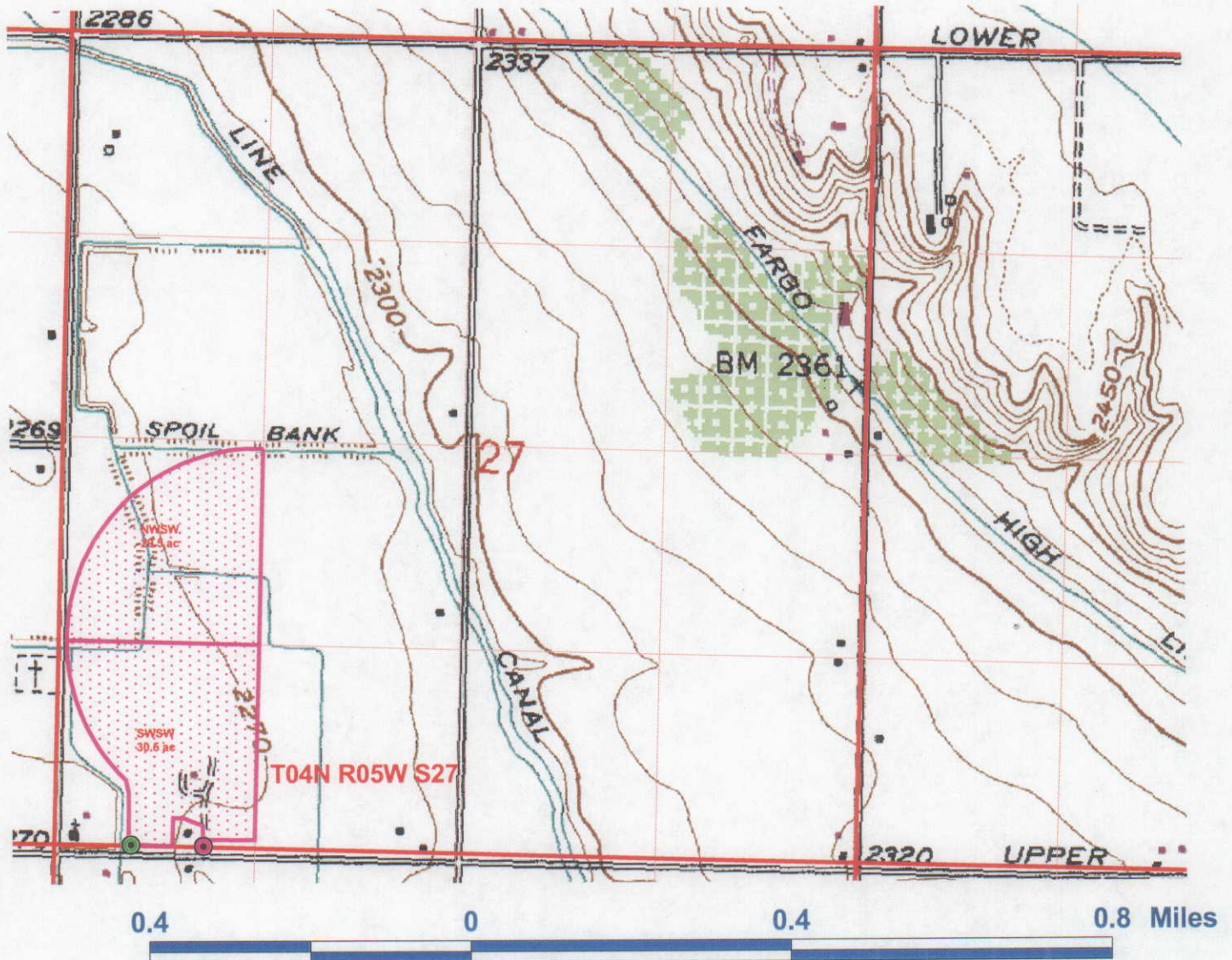
Reviewer _____ Date _____

SEAL

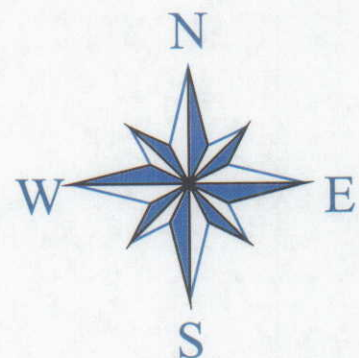
FIELD EXAM 63-11685

QUADRANGLE MAP

BY DAN NELSON



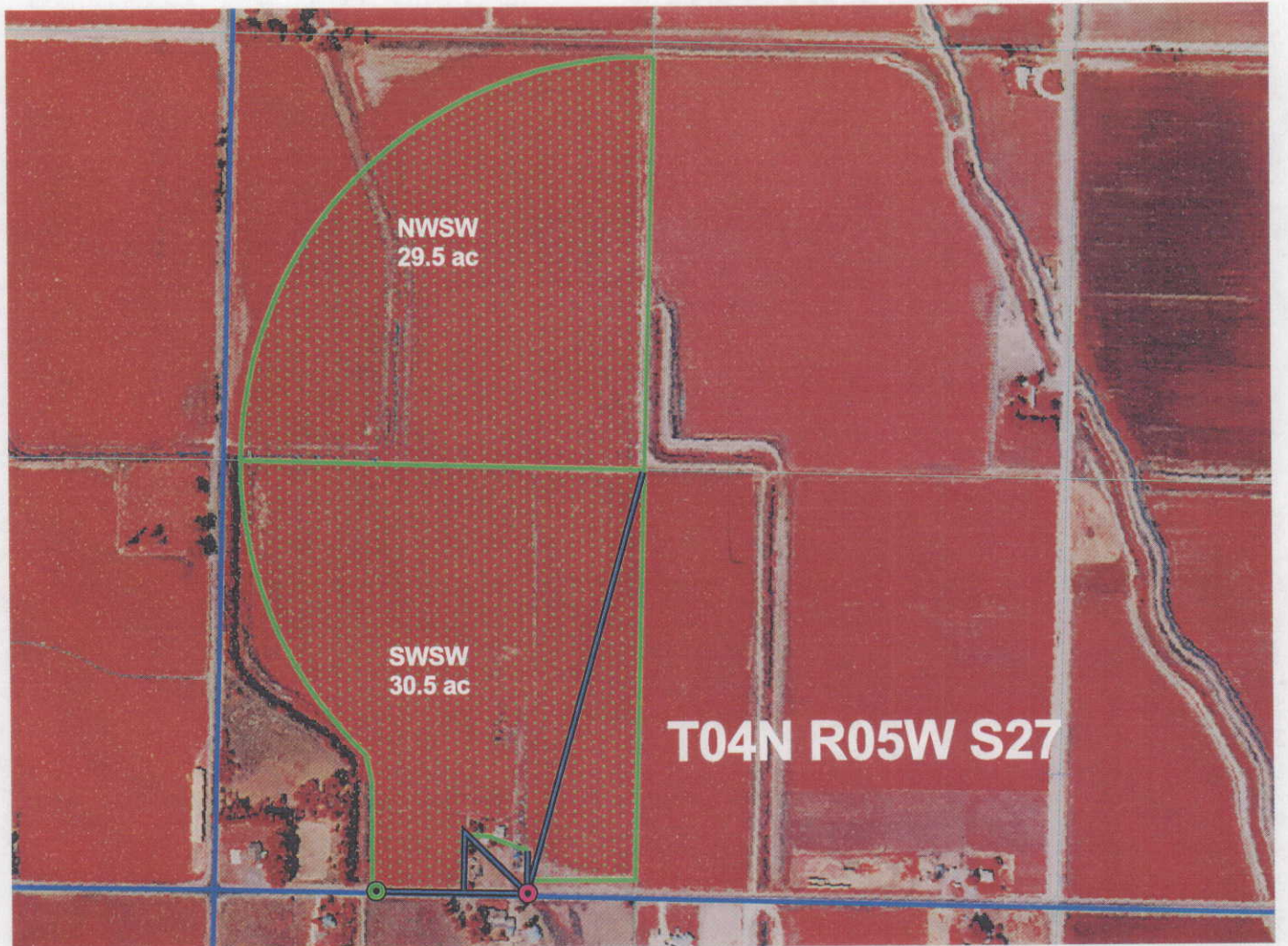
- Well
- Well and Canal Booster Pump
- Irrigated Acres (1/2 pivot and gated pipe)
- Section Lines
- 1/4 1/4 Lines



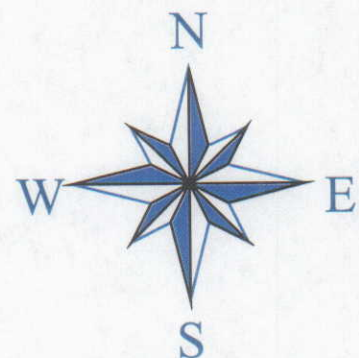
FIELD EXAM 63-11685

SYSTEM DIAGRAM

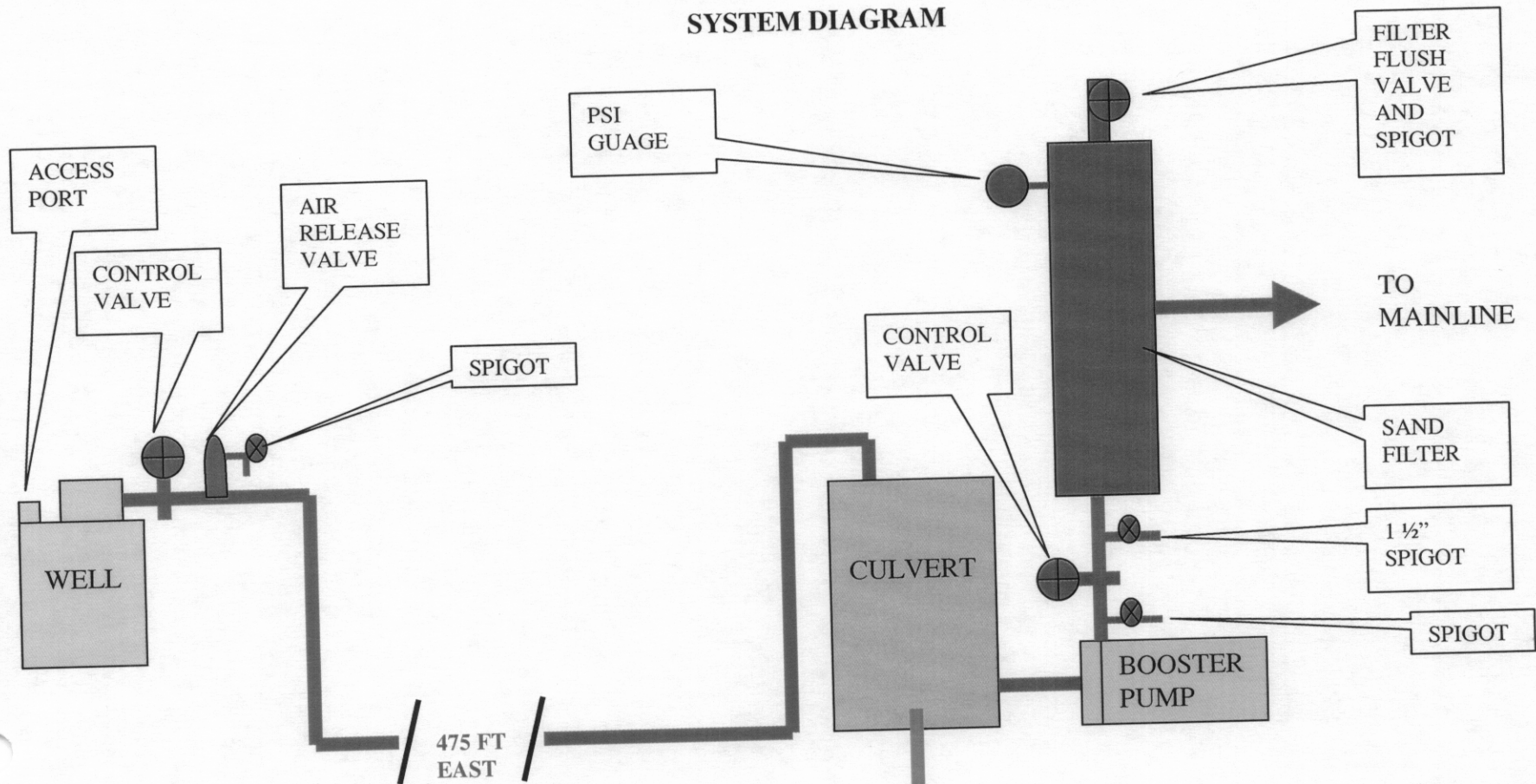
BY DAN NELSON



- Well
- Well and Canal Booster Pump
- Mainline
- Irrigated Acres (1/2 pivot and gated pipe)
- Section Lines
- 1/4 1/4 Lines



SYSTEM DIAGRAM



Water is diverted from the pump through an underground mainline approximately 475 ft east to a corrugated culvert. The water then mixes with canal water and is pumped through a 30 Hp booster through a sand filter to the mainline. There are several spigots on the system to allow for chemigation or other type uses.

GROUNDWATER THEORETICAL ANALYSIS

FILE: 63-11685

DATE: 9-22-04

BY: DAN NELSON

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 pumping water level

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

$$Q = \frac{(8.8 \times (15 \text{ HP}) \times (0.70))}{[(68 \text{ FT}) + (10 \times 2.31)]} = \frac{92.4}{91.1} = 10.1 \text{ CFS}$$

453 gpm

LIFT FROM:

Measurement ()

Owner ()

Area estimate ()

Well Logs (☒)

Booster (Y) (N)

PSI FROM:

Measurement ()

Owner ()

Estimate (☒)

Owner Gage ()

NOTES ON PUMP:

Motor Make, Serial or ID

Pump Make, Serial or ID, rating

REMARKS: Well LIFT was calculated by subtracting static water level from total well depth and dividing by 2.
 $(148 - 12) / 2 = 68 \text{ pwh}$. A ~~pwh~~ pumping level of 68 FT seems to reflect the levels shown on the well log's well test data of 59 FT to 73 FT.

PSI was estimated at 10 PSI. The well open discharges into the culvert, but also lifts the water approx. 5 FT. to the top of the culvert. 10 PSI seems reasonable.

NO pump curve was available.
 Max discharge on well log was 430 gpm.
 So the theoretical seems accurate.

IDAHO DEPARTMENT OF WATER RESOURCES

WELL INSPECTION FORM

1. DRILLING PERMIT NO: 63-92-W-264 OTHER APPLICABLE NO: 63-11685
2. OWNER: Fargo Farms Phone: 482-7407
Address: 25502 Upper Pleasant Ridge, Wilder
3. WELL LOCATION: Twp 4N, Rge. 5W, Sec. 27, SW 1/4 SW 1/4
County Canyon (Provide sketch map and photo on reverse.)
4. DRILLER: Riverside Lic. No. 333
When Drilled? 5/8/92
5. WELL CONSTRUCTION:
Casing Diameter 12 inches Water tight cap? ☒ Yes ☐ No Access Port: ☒ Yes ☐ No
Casing > 12 inches above ground? ☒ Yes ☐ No - Describe _____
Depth of Casing _____ ft. Method Drilled Reverse Rotary
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 _____ 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 12 ft. Water Temperature cold °F
Flowing Artesian ☐ Yes ☒ No Pressure: _____ (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 ☒ NoIf yes, is there a check-valve present? ☐ Yes ☐ NoIs there a possible source of contamination nearby? ☐ Yes ☒ No

If yes, what Type? _____

How far away from the well is this source? _____

9.

REMARKS:

- Meter # 50 972 674
- Power hooked up but well not in use -
columbus on control valve.
 - Owner said pump turned on once for
maintenance only.

Lon Guaver
Signature of Dept. Representative & Title

7/18/94
Inspection Date

PHOTOS, DRAWINGS, OTHER ATTACHMENTS:

PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 9/22/2004

FILE NUMBER 63-11685



The above photos are of the well. The photo on the right was taken in 1994 during a Drought Well inventory. I included the 1994 photo because it showed the well without the weed overgrowth. The well hasn't changed since the earlier photo. The water is diverted from the well by a 15 Hp pump to a mainline that travels approximately 475 ft due west to the culvert shown below.

Canal water and water from the well are discharged into the culvert shown below. The water from the culvert is then diverted out of the culvert by a 30Hp pump to a pivot and some gated pipe. The large green pipe is a sand filter used to separate sand from the system. The mainline comes out in the middle and underneath the sand filter.



PHOTOGRAPHER AND DATE OF PHOTOS DANIEL A NELSON 9/22/2004

FILE NUMBER 63-11685

Well is located over by
these trees.
Approximately 30 ft off
the road



These are photos of the place of use.
The field is in corn and it wraps around
this house, and machinery yard.



This is the culvert
with the relift pump