

MEMORANDUM

Date: August 20, 2009
To: Water Right File 47-7861
From: jstanton
Re: Field Report Narrative

Licensing exam was completed 8/17/09 by Jim Stanton & Jana Reeder. I spoke with Jeff Nunes, son of permittee and farm operator (870 S 2030 W, Murtaugh, ID, 83344, 539-2229) to determine how system operates and to verify address of parents. John Nunes was ill with cancer, but has since recovered. The exam was conducted to support reinstatement of the permit and issuance of the license based on pre-1987 development. File documents indicate that the well was drilled in 1965, and has been used to supplement 72 shares of canal water ever since. Mr. Nunes told me that they have used the well in order to protect it from forfeiture, even though there is a full supply of canal water available for the property. I explained the forfeiture rules to Mr. Nunes, as he appeared to be misinformed on this issue. There does not appear to be an actual need to use this well except for possibly early and late in the season when canal water is not available. Mr. Nunes told me that he has enough canal water to operate this system, even though 72 shares at 3/4" per share would be about 1.08 cfs.

The current irrigation system consists of the well with the original 40 hp motor and pump, about 10 feet of pipe running into a ditch, and a relift pump in the ditch to pressurize one 1/4-mile pivot. The NW pivot corner is still irrigated with gated pipe under gravity flow. Canal water enters the ditch a few feet below the discharge point of the well. There had been some talk of problems with the current system, but I found no such problems; the well pumps over 2 cfs, which is apparently what it has always pumped. The ditch feed into a gravity system until 2001, when the current sprinkler system was installed. I was not able to get the details from the relift pump due to a metal cover being welded over it. A 3-minute measurement with a Fuji meter on the discharge pipe showed an average flow of 2.14 cfs.

Per instructions from Shelley Keen, I am recommending the place of use based on the 1987 ArcMap photo. I looked at both the original pou under gravity irrigation, and the current pou under sprinklers, and found 1/2 acre of new land to be irrigated under the sprinklers. An irrigation canal originally cut of the NE corner of the property, but that was rerouted when the pivot was installed. The south boundary of the irrigated land changed somewhat when the sprinklers were installed, but the overall acreage in the south 40 has changed very little. The ArcMap rectification appears to be off in both directions, so I believe that the recommended pou is all within the W1/2SE Sec. 6 as originally permitted. The well is located at the highest point of the property, so water flows naturally downhill to the relift pump (same as the canal water).

[illegible]

✓ Photo of Diversion and System Attached

Well or Diversion Identification No. *	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
	U.S. Motors	40	3952596	Lynne + Bowler	44200

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Fuji Meter	Polysonic	Fuji	S1011	7K0085TB		

2. Measurements: Meds used 984-970 gpm over $\frac{3}{5}$ minutes. Average ≈ 962 gpm ± 2.14 cfs.

E. NARRATIVE/REMARKS/COMMENTS

File data indicates well was drilled in 1965, and originally pumped 2.0 cfs for gravity irrigation. An irrigation canal historically cut off about 2 acres on the NE corner of the property, but appears to have been buried when a pivot sprinkler was installed in 2001 (according to Jeff Nunes). There has been a ~~change~~^{reduction} of the south end of this 80 since at least 1987 per ArcMap photos, and the shape of it has changed somewhat since the pivot was installed. But it appears that about the same amount of land is still irrigated as before. Arcmap shows sprinklers added 1/2 acre. System Description - Well, motor, pump, open discharge into ditch & buried pipe to small re-lift pump to pressurize sprinklers. Has 1/4-mile pivot, handlines in 1 corner. Canal shares come into ditch just below where well water enters. Farm has full canal shares. Sprinklers can use either source. Well has been used so as to avoid forfeiture. I explained the forfeiture situation to Jeff Nunes. He said he wanted to move the canal shares off to other land they own, and just use the well here, but TFCC would not allow this. License should be conditioned to make it supplemental to surface rights. Arcmap rectification appears to be a little off in both directions, so I believe that the recommended land is all within the W 1/2 Sec. 6 as permitted.

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

Additional Computation Sheets Attached

F. FLOW CALCULATIONS

Measured Method:

Measured 2.14 cfs. Allow $62.4 \text{ ft} \times 0.02 \text{ cfs/ft} = 1.25 \text{ cfs}$

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$\begin{aligned} V_{IR} &= (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 62.4 \times 4 = 249.6 \\ V_{DR} &= [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = 1.25 \times 246 \times 1.9835 = 607.9 \\ V &= \text{Smaller of } V_{IR} \text{ and } V_{DR} = 249.6 \text{ AFA} \end{aligned}$$

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use

Irrigation

Period of Use
From 3-15
To 11-15

Rate of Diversion
Q (cfs)
1.25

Annual Volume
V (afa)
249.6

2. Recommended Amendments

☐ Change P.D. as reflected above
☐ Change P.U. as reflected above

☐ Add P.D. as reflected above
☒ None
☐ Add P.U. as reflected above
☐ Other

I. AUTHENTICATION

Field Examiner's Name

J E Martin

Date

8-18-09

Reviewer

Date

SEAL

LOG NAME:NUNES
START :08-17 15:20
END :08-17 15:25
INTERVAL:00:01:00

8/17/2009 15:20

+6.980E+0 ft/s
+1.121E+3 gal/m
+TOTAL 0000048 gal
-TOTAL 0000000 gal
ABNORMAL

8/17/2009 15:21

+7.016E+0 ft/s
+1.126E+3 gal/m
+TOTAL 0000082 gal
-TOTAL 0000000 gal
ABNORMAL

8/17/2009 15:22

+5.953E+0 ft/s
+9.561E+2 gal/m
+TOTAL 0000134 gal
-TOTAL 0000000 gal
ABNORMAL

8/17/2009 15:23

+5.942E+0 ft/s
+9.545E+2 gal/m
+TOTAL 0000536 gal
-TOTAL 0000000 gal
NORMAL

8/17/2009 15:24

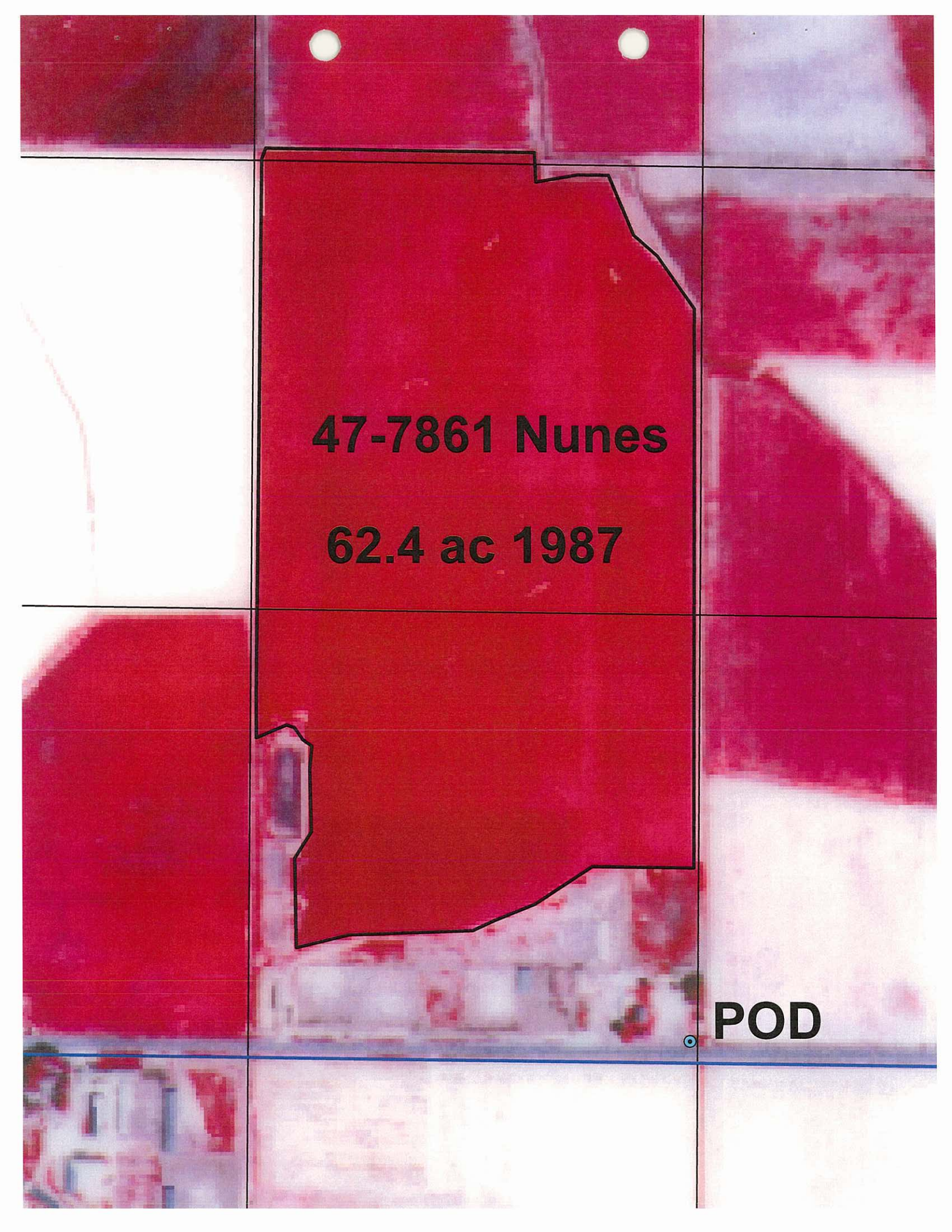
+5.961E+0 ft/s
+9.575E+2 gal/m
+TOTAL 0001477 gal
-TOTAL 0000000 gal
NORMAL

8/17/2009 15:25

+5.821E+0 ft/s
+9.350E+2 gal/m
+TOTAL 0002345 gal
-TOTAL 0000000 gal
NORMAL

FUJI= 954-970 GPM

Instantaneous flows to much air and turbulence in pipe for good diagnostics.

An aerial photograph of a coastal area with a red-shaded polygon and a black outline. The polygon is irregular, with a jagged right edge and a small protrusion on the left. The background shows a mix of land and water, with some buildings visible in the bottom left. Two punch holes are visible at the top of the page.

47-7861 Nunes

62.4 ac 1987

 **POD**



47-7861 Nunes Diversion Works Looking NE 8-17-09 By J Stanton



47-7861 Nunes Well Discharge Into Ditch (Looking East) 8-17-09 By J Stanton



47-7861 Nanes Point Where Canal Water Enters Delivery Ditch (Looking NE) 8-17-09 J Stanton



47-7861 Naves Water cleaner In Ditch Looking East 8-17-09 By J Stanton



47-7861 Nunes POU Looking North 8-17-09 By J Stanton



47-7861 Nunes POH Looking NW 8-17-08 By J Stanton

