

MEMORANDUM

Date: December 12, 2003
To: gnewton
From: jzokan
Re: Hydrology Review for Transfer 70750

The purpose of this transfer is to add a point of diversion due to temperature issues for irrigation. I reviewed the file for 43-2293, one of the water rights associated with this transfer. In the Beneficial Use Report (1950) it stated that the temperature of the water at the bottom of the well (265 ft.) was 111 degrees. The well casing was then perforated at the top to capture cooler water from a shallower aquifer. The static level after the perforations were made is approximately 80 ft. The Raft River is approximately 977 ft from the existing well and 2384 ft from the proposed well. I would think that the perforations that were made helped intercept the alluvial aquifer.

It would help to get input from the hydrology section to let us know if the deep/ hot water aquifer is definitely a separate/distinct aquifer from the colder/shallower/Raft River Alluvial aquifer, or is one possibly recharging the other.

STATE OF IDAHO
DEPARTMENT OF RECLAMATION
BOISE, IDAHO
REPORT OF ENGINEER

Permit No. 19520

This proof is for Beneficial use In Water District No. _____

1. Name of applicant William Thomas Hawkins, 751 North Overland, Burley, Idaho

2. Source of water supply: Subterranean from a well

3. Location of point of diversion: Is in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 24
T. 15 S. R. 26 E. County of Cassia

4. Describe works as they exist, giving dimensions and capacities of same: The well is 265' deep, size of hole is 16" for 225', then 12" for the balance of the distance, or 40'. Perforated at all water bearing strata, especially at the surface to let in enough cold water to lower the temperature so that water is suitable for irrigation purposes. When the top part of the casing was perforated, it drained the house well. Water stands at 6' when not pumping. The drawdown is unknown, but is believed to be at least 60' down.

5. Water is used for: Irrigation

6. State whether or not water has been turned into works of diversion: yes

7. List legal subdivisions of lands to be irrigated. If proof is for beneficial use, give exact number of acres under cultivation in each forty-acre tract. (Describe manner and place of use if other than irrigation):

NW $\frac{1}{4}$ NE $\frac{1}{4}$ and NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 24, Twp. 15 South, Range 26 East, B.M.

NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 13, Twp. 15 South, Range 26 East, B.M.

NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 18, Twp. 15 South, Range 27 East, B.M.

← See map.

(Submit map on attached plat, showing location and details of above description.)

8. What large stream would the water here appropriated finally reach? _____

Remarks: There is no pump house. There is a concrete base 14' by 9'. Pump and motor rests on casing and concrete. The motor is a U. S. 40 H.P., 3 ph, 60 cy., 220 V., 98 amps, Serial #664726. The pump is a Fairbanks Morse oil lub., #PK2434. Pump sets down 80' in the well, has a 10" column and a 14" bowl. Discharge is through a 10" i.d. pipe 65" long, into a concrete sump. Discharge faces West. The 2' cipoletti weir was used for measuring. The gage reading was .64'. Q - 172.76 inches of water. Temperature - 35° C. or 95° F. The water out of this well had a temperature of 110°F before they perforated the top portion of the well casing to let in cold water. They did scald some of the alfalfa hay before doing this. Meter is a G. E., 50 amps, 240 V., 60 cy., Kh - 24. Model A14, #27170932. The dial reading is 21 rpm. Meter sets approximately 10' upon a pole. Switches and controls are Allen Bradley.

This examination was made on the 2 day of August, 1950

(Signed) E. M. Humphrey Examiner.