

MEMO

From: Sandy Hemenway

To: File 63-11273

Date: 12/7/2009

shares, POU w/ 63-11934
irrigated

Proof of Beneficial Use

Due on or before 8/1/1992. Proof Received 6/22/1992.

Beneficial Use Field Report

Both 63-11934 and 63-11273 were conducted at the same time on 5/1/1997, by Lori Graves, but there is no signature on the last page of 63-11273 for the field examiner.

Acreage

The 1987 Imagery indicates irrigation, but the 1992 DOQQ Imagery was utilized to draw the shapefile for calculating the acreage irrigated since the fields and ditches were more easily defined. AdHoc POU calculated 139.1 acres, but when it is printed out on a Water Right Report it shows 130.2 acres as the total, and 139.1 Total Acres. This is due to the additional acreage either has a govt lot number or does not, and Workflow will only take one amount from each QQ. For this reason, the Acreage Total on the water right report does not match the Total Acres, unless manually altered to include all acreage in each QQ. **NWNE 0.9 acres Lot 11, and SWNE 8.0 acres were added to the water report to match acres in POU shown in AdHoc.** Previously acreage calculations were conducted with the use of a radar acre counter by Landview Fertilizer Company in 1995, and planimetered by CFSA in 1987 showing 135.2 acres irrigated, prior to the pond developments and additional development of approximately >12 acres of wetland area.

Recommend 139.1 acres irrigation in accordance to ArcMap, instead of 137.3 acres, as calculated during the field inspection. Changes in acres shown on ArcMap required an Amendment to be issued.

System Description

8 inch casing, 190 ft deep artesian well, drilled 5/31/1991 (450 gpm or 1.0 cfs); open discharges to Hart Davis Ditch (146 shares owned), then to the a 325 ft X 320 ft X 25 ft = 60 af pond with a 15 Hp pump that only allows 9.5 ft drawdown in the total pond, lifts water from the pond to culvert, goes under a dirt road to a concrete ditch and dirt ditches, and then gravity flow irrigation (a diagram of ditches and gravity flow is in the file). The South Pond is supplied by 3 sources, the Hart Davis Ditch, the artesian well, and natural seepage water hydraulically connected to the Boise River. The South Pond minimizes water fluctuations, by preventing siphon tubes from losing their prime or at other times prevents flooding of applicant's property as has occurred in the past. The South Pond provides a more reliable irrigation system. The North Pond contains only Boise River seepage water, and is not physically connected to the South Pond. The North Pond is not utilized in any means with this irrigation system. 63-11934 comes into play at the storage pond and 15 Hp pump (storage, and irrigation to storage).

→ I will use the same POU Sandy recommended for overlapping right 63-11273.

CFS

Field Exam notes indicated that the discharge pipe from the well was not full, so a polysonic was not conducted. Chuck Davis made an orifice measurement flow when the well was drilled in 5/31/1991, calculating flow at **450 gpm X 0.00223 = 1.00 cfs.**

Recommend capacity of system: 1.00 cfs. (groundwater supplemental to surface water).

Season of Use

Permit was approved for 3/15 – 11/15. Administrative Memo No. 9 Licensing approves changing the season to meet current IDWR standard, which is 3/1 – 11/15 (260 days).

Volume Calculation

$\text{Vir} = 139.1 \text{ acres} \times 4.5 = 625.95 \text{ af}$

$\text{Vdr} = 1.0 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 515.71 \text{ af}$

$V = 515.7 \text{ af}$

Recommend 515.7 af (acceptable, since ground water is used as a supplemental source to surface water).

Conditions:

R65: Combined Limit with all other water rights of 0.02 cfs and 4.5 af per acre for irrigation of lands listed in POU.

065 & 104: Groundwater supplemental to surface water.