

MEMORANDUM

Date: March 03, 2005
To: Water Right File 63-7431
From: Shelley Keen
Re: Water Right Elements

The elements of Water Right 63-7431 were determined as follows:

BENEFICIAL USES -- The IDWR field examiners found no evidence of the permitted domestic and stockwater uses, and the permit holder has not provided evidence of them in his quest to have the permit reinstated. Therefore, the only use that will be licensed is irrigation with the standard season of use.

DIVERSION RATE -- The pump test done when the well was drilled suggests that it is capable of producing 2513 gpm, or 5.6 cfs. On his proof of beneficial use statement the right holder stated that he used a 160 h.p. motor and pump to lift water more than 310 feet into gated pipe. Using the permit holders data, a theoretical calculation suggests a diversion capacity of 2.75 cfs, which exceeds the statutory limit of 0.02 cfs per acre. Therefore, the license will be issued for 0.02 cfs per acre, or 2.64 cfs for 132 acres.

POINT OF DIVERSION -- The permitted POD is the NWNE of Section 19. The well driller reported that the well was drilled in the NENE, but well driller reports have often proved to be inaccurate. The second IDWR field examiner said that the well is near the center of the NE quarter. The BLM field examiner also mapped the well in the center of the NE quarter. The 2000 infrared aerial photography used at IDWR appears to show a small structure, probably the "well site" described by the 1995 field examiner and depicted in the permit holders 1976 personal photographs, located in the SENWNE of Section 19, very near the center of the quarter-section. I am recommending that the POD be described in the SENWNE.

PLACE OF USE -- The aerial photography included in the exhibits for the petition is challenging to analyze and compare because they differ in scale and color schemes. Nevertheless, it is clear that all of the photographs show irrigated agriculture occurring on the lands authorized for irrigation by the permit. The aerial photographs also show that the irrigation pattern changed over time and that more land was irrigated in 1977 and 1981 than in 1976 when John E. Jorenby of the United States Government reported that 116 acres were being irrigated. Using ArcView Geographic Information System software by Environmental Research Systems Institute, Inc., I attempted to recreate the irrigation pattern shown on the 1977 aerial photograph because it is the closest in time to May 12, 1978, when the development permit for the permit ended. I used the aerial photographs from 1976 and 1981 as aids for interpreting the 1977 photography. I concluded that the permit holder irrigated 132 acres in connection with the permit during the authorized development period.

SEASON OF USE -- The season of use was changed to the standard irrigation season of use for the area, March 1 to November 15.