

A24-04016 Field exam narrative 3 Aug 05

On July 23 2005 I met w/ Mr. Marty Clemo, ranch manager, and looked at the PODs and POW. Based on field inspection and aerial photos, I have prepared an amended claim (copy attached) to show additional acreage. This does not appear to be a change in historical practice but simply a reflection of newer technology.

Correspondence and a full contact log, along with an acreage summary, are found in paper file A24-04015. This WR overlaps A24-04015, which in turn overlaps two Sage Creek rights (A24-04017 and a new claim). Total irrigation is approx. 398 acres. This water right (as amended) is for 201.1 acres.

Approved transfer 5040 appears to be intended to authorize conversion of some irrigation to recreation ponds and not intended to be a final determination of irrigated acres.

Photos show approximate size of ditches. Assuming 40 acres irrigation unique to A24-04016 and  $\frac{1}{3}$  of overlapped acres are supplied by A24-04016, effective irrigated acres  $\approx$  95 acres. At 0.03 to 0.04 cfs/acre for wild flow, required capacity is 3.8 cfs.

Late in the year when flow is low, ditches appear adequate for the entire flow of the stream.

From the photo at "lower POW #1," late-season stream may be 4 ft wide and  $\frac{1}{3}$  ft deep.

Area =  $1.33 \text{ ft}^2$ , wetted perimeter  $\approx$  4.3 ft. Hydraulic Radius  $\approx$  0.3 ft. From topo, slope in this region  $\approx$  0.11.

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Using Mannings  $N = 0.030$  (natural streams, clean and straight, <http://www.lmnoeng.com/manningsn.htm>), approximate flow is

$$Q = \frac{1.486 A}{n} R^{2/3} S^{1/2}$$
$$= \frac{(1.486)(1.33)}{(0.030)} (0.3)^{2/3} (0.11)^{1/2} = 9.8 \text{ ft}^3/\text{s}$$

Because there are no intervening diversions (except claimants) between POD and point of return flow, and because irrigated lands are adjacent to Crow Creek so return flows occur almost immediately, recommending a high diversion rate for wild flood practices will not cause injury.

Dwight A. Contor 3 Aug 2005

Points in Contor\_GPS\_July05.shp

| Claim     | Sitetag  | Feature | Waypoint | Idtm83_e | Idtm83_n | Instrument      | Collected | Date     | Notes               |
|-----------|----------|---------|----------|----------|----------|-----------------|-----------|----------|---------------------|
| A24-04016 | A0013653 | POD     | 60       | 2738882  | 1272798  | Garmin Geko 201 | B.Contor  | 20050723 | One of 3 diversions |
| A24-04016 | none     | POD     | 61       | 2738860  | 1272813  | Garmin Geko 201 | B.Contor  | 20050723 | One of 3 diversions |
| A24-04016 | none     | POD     | 62       | 2739025  | 1272597  | Garmin Geko 201 | B.Contor  | 20050723 | One of 3 diversions |