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BIG BRUSH CREEK & LITTLE BRUSH CREEK

DYE TESTS CONDUCTED BY S. C. S.

and

BUREAU OF RECLAMATION

I. Little Brush Creek Test

A. Rodamine (Red) dye placed in Little Brush Creek Sinks on June 22, 1968.  
1. Flow into sinks measured at 10.3 c.f.s.

B. Samples

1. Big Brush Creek Springs
2. Spring on Phosphate
3. Well on Phosphate
4. Little Brush Creek Spring (Above Taylor Ranch)
5. Jones Hole

C. Results

1. Spring on Phosphate - No dye show
2. Well on Phosphate - No dye show
3. Little Brush Creek Spring - No dye show
4. Jones Hole No dye show
5. Big Brush Creek Spring
  - a. Dye showed
  - b. Travel time 66 hrs.
  - c. 12% dye recovery
    1. Loss dye to dye deterioration
    2. Dye particles clinging to walls of limestone

II. Big Brush Creek Test

A. Flourosene dye placed in channel above the Big Brush Creek Sinks on August 7, 1967.

1. Flow into sinks - 13 c.f.s.

B. Samples same as Little Brush Creek

C. Results

1. Dye showed only in Big Brush Creek Springs
2. Travel time - 72 Hrs. Started to peak at 82 hrs.
3. Recovery 15%

CONCLUSION

1. There is apparently a direct passage-way between the Big Brush Creek Sinks and Big Brush Creek Spring. Also, between Little Brush Creek Sinks and Big Brush Creek Spring.
2. The Annual volume at Little Brush Creek Sinks plus volume at Big Brush Creek Sinks plus compensation for the inflow from drainage inbetween, equals the flow at the tysak gage.

Possible Problems - There are established rights for 1,005 ac.ft. of storage and 32 sec.ft. of flow above the sinks on Little Brush Creek. This water is flumed around the sinks and into Little Brush Creek.