



COLLEGE of SOUTHERN UTAH

BRANCH of UTAH STATE AGRICULTURAL COLLEGE

CEDAR CITY, UTAH

ROYDEN C. BRAITHWAITE
Director, College of Southern Utah
CEDAR CITY, UTAH

July 31, 1957

DARYL CHASE
President, U. S. A. C.
LOGAN, UTAH

Mr. Donald C. Norseth
Distribution Engineer
State Engineer's Office
State Capitol Building
Salt Lake City, Utah

Dear Don:

The East Fork of Boulder Creek was flowing 18.75 c.f.s. (1.31' over a 3' Cipolletti weir) at the point it was diverted into the Lyman Canal. At a point 3 miles below this the stream splits into 3 parts. A small stream of 1.31 c.f.s. goes to the Peterson Ranch and it measured 1.27 c.f.s. at the Ranch. The Ranch is marshy and sub-irrigated and about 1.5 c.f.s. drains from the ranch back into the larger of the other two branches. (see sketch #1).

The first diversion on this larger branch is at Behunin's Ranch and this stream can be used on his ranch or on the Lyman Ranch. It measured 1.78 c.f.s. and most of it was going on down to the Lyman ditch and returning to the main stream. The next diversion was the Kirk Lyman Ranch which was taking out 0.31 c.f.s. and the remainder of the stream measured 9.95 c.f.s. Below here there were four tributaries to the stream; Deer Creek, part of Lyman's diversion from Deer Creek, 1.07 c.f.s. of the Lyman stream from Behunin Ranch, and .05 c.f.s. of tail water from Behunin Ranch.

The Bert Peterson Ranch is next to divert 1.07 c.f.s. but most of this was lost, (about $\frac{1}{2}$ of it going back into the main stream) only .25 c.f.s. reached the field 300 yds. away. Farther down the Bert P. Ranch again diverts 1.06 c.f.s.

The over flow from the city tank added 0.11 c.f.s. to the stream and two small garden streams of .12 c.f.s. each were taken out in town. The stream then splits into three parts of .24, 4.25, and 5.66 c.f.s.

The other branch of the canal has four diversions as shown on sketch #1.

The West Fork of Boulder Creek is not diverted until it gets almost into town and is used to irrigate the land south of town. It measured 12.65 c.f.s. at the diversion. This is the first diversion without a parshall flume. The 12.65 is an average of three current meter readings of 12.50, 12.79 and 12.65.

There is one diversion north of the hiway of .54 c.f.s. The next diversion is through a split of 22" and 62". The 22" diversion measured 3.29 c.f.s.

See Sketch #2

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The next flume was submerged and the ditch was badly grown up with grass and willows with a heavy loss of water resulting. I measured it about $\frac{1}{4}$ mile below the diversion and it measured 1.36 c.f.s.

The next diversion was 1.57 c.f.s. The next was through a split 18 $\frac{1}{2}$ " to 54 $\frac{1}{2}$ " and the smaller stream measured 1.75 c.f.s. One more diversion of 1.93 c.f.s. was taken out and then the remainder of the stream measured 2.81 c.f.s. and was all used on the next ranch.

The few points where water is wasted are circled in red on the charts. The waste is due to poorly cleaned ditches. What else do you want on these creeks? How many trips should I make, etc.?

It rained hard as I left Boulder but it was dry at Pleasant Creek. There was 5.62 c.f.s. going down the creek and 2.37 c.f.s. going to Bowns Reservoir. Wildcat Creek added .31 c.f.s., Spring Gulch .24 c.f.s. Tantalus .21 c.f.s., and Sulpher Creek just a drizzle. Down at the Pleasant Creek Ranch the flow was 5.9 c.f.s. and at the Notom Ranch it was 4.97 c.f.s.

There was .2 c.f.s. of tail water reaching the road on the west side of the Notom farm. I climbed the hill and it was coming out of the hillside about 10' below the top. Mr. Liston was irrigating the 7.19 acres in sec. 2 and as I was talking to him the stream stopped. We walked up the ditch and found the whole stream going down three sink holes. It was very poor pasture and I don't think that piece is worth watering. The tail water from the north side of the farm measured 1.70 c.f.s. and was likewise mostly coming from deep seepage.

I am going back tomorrow and that should finish that area.

At Pinto, as you probably know, they use the stream at Pinto one week and allow it to go into the Enterprise Reservoir the next. The entire stream was diverted at Pinto and measured 1.38 c.f.s. at the farm .85 miles below it measured 1.30 c.f.s. It was in the ditch on the east side of the creek. There is some water gathers into the creek from here down and it is diverted at 4 places. The Knell Ranch had .19 c.f.s. diverted and their dam was losing about half. The Platt farm had .5 c.f.s., the Tullis farm had .35 c.f.s., the next farm was diverting .21 c.f.s. and there was .2 c.f.s. going into the reservoir.

This week it is going into the Reservoir. It measures 1.30 c.f.s. just above the Pinto diversion and 1 $\frac{1}{2}$ " over a 2' rect. weir is diverted for culinary purposes. This measures 1 $\frac{3}{8}$ " over the same weir .85 miles below. The Knell farm is the only one using water this week and they have .30 c.f.s. There is 1.36 c.f.s. going into the reservoir. Next week it will be in the ditch on the west side of the creek and I will measure it there.

What are your suggestions? Where would you like more effort concentrated?

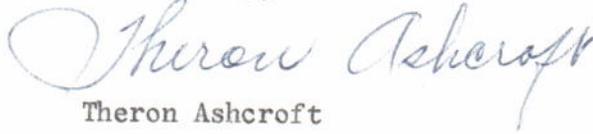
If you will send me a half dozen copies of the U.S.B.P.R. chart for seepage losses, I will plot mine on them or you may send just the blank logarithmic paper.

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I would like to get the well meter as soon as possible, also permission to replace the canvas on the weir as it is wearing out.

Yours truly,

A handwritten signature in blue ink that reads "Theron Ashcroft". The signature is written in a cursive style with a large initial "T".

Theron Ashcroft