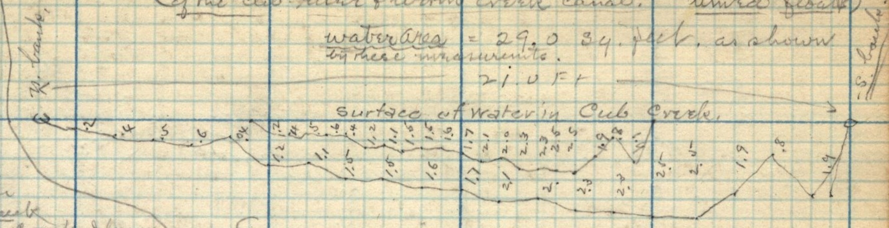
Aug. 27-190 -

{Approx. measurement of amt of water flowing in Cub-River at a point 1600 ft. S. & below head gate of the Cub river & worm Creek canal. timed floats)



meas of water in river and worm Creek flume at willow Creek flume 700 ft below their head gate. willow Creek spring having been ed out and not included, dimensions of weir

contraction width of flume = 7.72 ft
depth on weir 0.27 ft.

{observed velocity of floats passing 25 feet on a riffle = 9.7 seconds, at the above point
.8 of 9.7 = 7.76 seconds, gives 3.22 ft per sec,

{The large float 3' long & 8" diam. was 11 seconds in passing 25 ft. .8 of which is 8.8 "
by this last the velocity per sec = 2.84 ft,

{Take the velocity at .7% of 11 = 7.7 seconds in passing 25 ft, =

again: by allowing that the large float gave results nearer the truth than the smaller ones or 11 second in passing 25 ft. the velocity would be 2.3 ft. per sec, which multiplied by 29. the area = 66.7 cub. ft per sec,

Aug. 27 1902 -

Whitney Ditch {Wier measurement of water in Whitney waste gate flume
Length of weir = 5.09 ft - depth or head = 0.44 feet.
weir level - depth of water above weir = 20"
meas near residence of Frank Taylor.

Volume - 5.73 cub. ft. per Sec.

(Cub River Irrigation Canal Co.) Lewiston waste gate - main flume at waste gates is 13.7 wide - water 1.35 deep
time of float passing 30 ft = 12 seconds, makes the observed velocity 2.5 feet per second surface
Say the velocity is 1.5 ft. per sec. actually. The water area = 17.81 sq. ft, which × 1.5 = 26.7 cub. ft per sec,

Weir formula Trautwine page 559. for no contraction at the ends

Discharge in c.f. per se. = sq rt of cube of head in ft. × length of overfall in ft × 3.33

Take the above meas. of the **Cub Riv & Worm Cr. Flume weir.** 0.27^3 = .019683
and $\sqrt{.019683}$ = 0.1403 and .1403 × 7.72 × 3.3 = **3.60677 + cub. ft. per Sec.**