

9-275-F  
(Apr. 93)

U.S. Department of the Interior  
U.S. Geological Survey

Meas. No. 51

Comp. by \_\_\_\_\_

Water Resources Division

Sta. No. \_\_\_\_\_ **DISCHARGE MEASUREMENT NOTES** Checked by \_\_\_\_\_

Santa Fe Creek

Date 1/17/99 Party AB, MG

Width \_\_\_\_\_ Area 1.593 Vel. 1.96 G.H. 1.31 Disch. 3.121

Method \_\_\_\_\_ No. Sec. \_\_\_\_\_ G.H. Change \_\_\_\_\_ in \_\_\_\_\_ hrs. Susp. \_\_\_\_\_

Method coef. \_\_\_\_\_ Hor. angle coef. \_\_\_\_\_ Susp. coef. \_\_\_\_\_ Meter No. \_\_\_\_\_

Type of meter \_\_\_\_\_ Date rated \_\_\_\_\_ Tag checked \_\_\_\_\_

Meter \_\_\_\_\_ ft. above bottom of wt. Spin before meas. \_\_\_\_\_ after \_\_\_\_\_

Meas. Plots \_\_\_\_\_ % diff from \_\_\_\_\_ rating. Levels obtained \_\_\_\_\_

**GAGE READINGS**

| Time | Inside | WT   | SC   | Outside |
|------|--------|------|------|---------|
| 1215 | 1.03   | 2.43 | 84.4 |         |
| 1226 |        |      |      | 6.20    |
| 1245 | 1.04   |      |      |         |
| 1247 |        |      |      | 0.20    |
|      |        |      |      |         |
|      |        |      |      |         |
|      |        |      |      |         |
|      |        |      |      |         |

**WATER QUALITY MEASUREMENTS**

No. ☒ Yes. \_\_\_\_\_ Time. \_\_\_\_\_

Samples Collected

No. \_\_\_\_\_ Yes. ☒ Time. 1225

Method Used

EDI. \_\_\_\_\_ EWI. \_\_\_\_\_ Other. \_\_\_\_\_

**SEDIMENT SAMPLES**

No. ☒ Yes. \_\_\_\_\_ Time. \_\_\_\_\_

Method Used

EDI. \_\_\_\_\_ EWI. \_\_\_\_\_ Other. \_\_\_\_\_

Weighted MGH \_\_\_\_\_

GH correction \_\_\_\_\_

Correct MGH \_\_\_\_\_

**BIOLOGICAL SAMPLES**

Yes. \_\_\_\_\_ Time. \_\_\_\_\_

No. ☒ Type. \_\_\_\_\_

Check bar, chain found \_\_\_\_\_ changed to \_\_\_\_\_ at \_\_\_\_\_

Wading, cable, ice, boat, upstr., downstr., side bridge \_\_\_\_\_ feet, mile, above, below, gage.

Measurement rated excellent(2%), good(5%), fair(8%), poor(over 8%); based on following cond:

Flow \_\_\_\_\_

Cross section \_\_\_\_\_

Control \_\_\_\_\_

Gage operating \_\_\_\_\_ Weather \_\_\_\_\_

Intake/Orifice cleaned \_\_\_\_\_ Air \_\_\_\_\_ °C@ \_\_\_\_\_ Water \_\_\_\_\_ °C@ \_\_\_\_\_

Record removed \_\_\_\_\_ Extreme Indicator: Max \_\_\_\_\_ Min \_\_\_\_\_

N<sub>2</sub> Pressure Tank \_\_\_\_\_ Feed \_\_\_\_\_ Bbl rate \_\_\_\_\_ per min. Batt volt \_\_\_\_\_

CSG checked \_\_\_\_\_ Stick reading \_\_\_\_\_

Observer \_\_\_\_\_

HWM \_\_\_\_\_ outside, in well \_\_\_\_\_

Remarks \_\_\_\_\_

G.H. of zero flow \_\_\_\_\_ ft.

Sheet No. \_\_\_\_\_ of \_\_\_\_\_ sheets

| Angle coef-<br>ficient | Dist.<br>from<br>initial<br>point | Width | Depth | Observa-<br>tion depth | Rev-<br>olu-tions | Time<br>in<br>seconds | VELOCITY    |                          | Adjusted<br>for hor-<br>angle or<br>— | Area  | Discharge |
|------------------------|-----------------------------------|-------|-------|------------------------|-------------------|-----------------------|-------------|--------------------------|---------------------------------------|-------|-----------|
|                        |                                   |       |       |                        |                   |                       | At<br>point | Mean<br>in ver-<br>tical |                                       |       |           |
|                        | 6.0                               | 0.50  |       |                        | REN @             | 1227                  |             |                          |                                       |       |           |
|                        | 7.0                               | 1.00  | 0.13  | .6                     | 20                | 45                    |             | 0.462                    |                                       | 0.13  | 0.06      |
|                        | 8.0                               | 0.75  | 0.13  |                        | 30                | 42                    |             | 0.726                    |                                       | 0.098 | 0.0711    |
|                        | 8.5                               | 0.50  | 0.15  |                        | 40                | 43                    |             | 0.937                    |                                       | 0.075 | 0.0703    |
|                        | 9.0                               | 0.50  | 0.20  |                        | 60                | 43                    |             | 1.39                     |                                       | 0.10  | 0.139     |
|                        | 9.5                               | 0.50  | 0.18  |                        | 80                | 46                    |             | 1.73                     |                                       | 0.09  | 0.156     |
|                        | 10.0                              | 0.50  | 0.15  |                        | 80                | 44                    |             | 1.80                     |                                       | 0.075 | 0.135     |
|                        | 10.5                              | 0.50  | 0.14  |                        | 100               | 45                    |             | 2.20                     |                                       | 0.070 | 0.154     |
|                        | 11.0                              | 0.50  | 0.18  |                        | 100               | 40                    |             | 2.47                     |                                       | 0.090 | 0.222     |
|                        | 11.5                              | 0.50  | 0.17  | ↓                      | 110               | 41                    |             | 2.649                    |                                       | 0.085 | 0.225     |
|                        | 12.0                              | 0.50  | 0.20  |                        | 110               | 42                    |             | 2.59                     |                                       | 0.100 | 0.259     |
|                        | 12.5                              | 0.50  | 0.30  |                        | 150               | 48                    |             | 3.08                     |                                       | 0.150 | 0.462     |
|                        | 13.0                              | 0.50  | 0.35  |                        | 150               | 49                    |             | 3.02                     |                                       | 0.175 | 0.529     |
| 0                      | 13.5                              | 0.50  | 0.28  |                        | 150               | 57                    |             | 2.60                     |                                       | 0.140 | 0.364     |
|                        | 14.0                              | 0.50  | 0.25  | ↓                      | 80                | 42                    |             | 1.69                     |                                       | 0.125 | 0.211     |
|                        | 14.5                              | 0.60  | 0.15  | .6                     | 30                | 43                    |             | 0.710                    |                                       | 0.09  | 0.064     |
|                        | 15.2                              | 0.35  |       |                        | LEN @ 12          | 46                    |             |                          |                                       | Q =   | 3.121     |
|                        |                                   |       |       |                        |                   |                       |             |                          | A =                                   | 1.593 |           |



NO PF

@ 1210

1am levels

CR10 timer OK

swapped SM

IG = 1.04

Stream chn taken @  
1225

WT = 2.43°C

AT = 0.29°C

SC = 84.53  $\mu$ S

Batt = 13.8 volts

- flow measured, see separate note
- most of the flow bypassing flume in  
LH channel (overflow)
- moved SC + WT probe to water (was buried)

N<sub>2</sub> tank = 1400 psi  
feed = 12 psi

Xducer = PSS-1, 2 large bottles