

LEVEL NOTES

Stream FG - LOWER VON GUERARD

Locality \_\_\_\_\_

Party JDG Date Jan 1, 2003

STATION	B. S.	HT. INST.	F. S.	ELEVATION	REMARKS
RM4	0.755	6.935		6.180	bolt on red rock, 90 ft to right
RPI			4.571	2.364	top of rebar
or. face			6.210	0.725	orifice nut
PZF			6.240	0.695	overflow
unnumbered RM			0.765	6.170	
RM4	0.750	6.930		6.180	
RPI			4.568	2.362	0.002 avg = 2.363
or. face			6.214	0.716	0.009 avg = 0.720
PZF			6.241	0.689	0.006 avg = 0.692
unnumbered RM			0.762	6.168	0.002 avg = 6.169

No. \_\_\_\_\_ of \_\_\_\_\_ sheets Comp. by \_\_\_\_\_ Chk. by \_\_\_\_\_

NOTE: lowered orifice tube by 7 cm = 2.756 in ± 0.230 ft  
BEFORE levels run.

**LEVEL NOTES**

Stream FB-LOWER VON GUERARD

Locality \_\_\_\_\_

Party JDG

Date Jan 1, ~~10~~ 2003

FEEET

STATION	B. S.	HT. INST.	F. S.	ELEVATION	REMARKS
<del>RM3</del>	<del>2.148</del>	<del>8.378</del>		<del>6.230</del>	<del>bolt on split rock, left</del>
<del>RM4</del>			<del>2.180</del>	<del>6.198</del>	<del>bolt on red rock, 90' to right</del>
<del>RPI</del>			<del>5.980</del>	<del>2.398</del>	<del>top of rebar</del>
<del>orifice</del>			<del>7.635</del>	<del>0.743</del>	<del>orifice nut</del>
<del>PZF</del>			<del>7.652</del>	<del>0.726</del>	<del>overflow</del>
<del>RM3</del>					
Turning point					
RM3	0.763	6.993		6.230	bolt on split rock, left GIVEN ELEV
RM4		6.935	0.755	6.238 <sup>6.18</sup>	bolt on red rock, 90 ft. to right G=6.195
RPI			4.571	2.422 <sup>2.304</sup>	top of rebar G=2.35
orifice			6.210	0.783 <sup>7.25</sup>	orifice nut G=2.945
PZF			6.240	0.753 <sup>6.95</sup>	overflow G=6.55
RM3			.765		
Turning point					
RM3	0.762	6.992		6.230	GIVEN ELEV
RM4		6.930	0.750	6.242 <sup>6.18</sup>	0.004 avg = 6.240
RPI			4.568	2.424 <sup>2.302</sup>	0.002 avg = 2.423
orifice			6.214	0.778 <sup>7.10</sup>	0.005 avg = 0.780
PZF			6.241	0.751 <sup>6.9</sup>	0.002 avg = 0.752
RM3			0.762	6.230	0

Appears RM3 shot is not correct point... use RM4 to start

No. \_\_\_\_\_ of \_\_\_\_\_ sheets Comp. by \_\_\_\_\_ Chk. by \_\_\_\_\_

NOTE: Lowered orifice tube by 7 cm ≈ 2.756 in ≈ 0.230 ft before Levels so orig orifice elev is ab. +.23 ft

1 JAN 2003

~~LEVELS~~

~~Von Guericke~~

**FL6**

Notes on visit sheet

CR10	Value	Stage
ch 1	15.04	Stage
ch 2	0.85	AT
ch 3	10.5	WT
ch 4	3.05	
ch 5	13.99	
ch 6	0.0	
ch 7	0.27	
ch 8	24.3	
ch 14	24.3	

~~TO DO - find meanings of channels on CR10~~

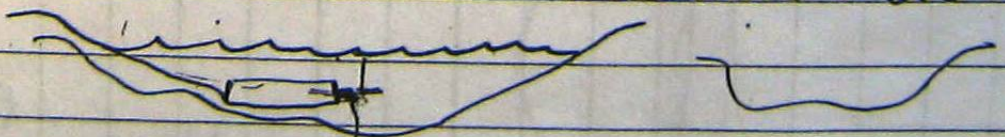
~~0.730 ft~~

Lowered orifice tube 7 cm @ 14:45

did not survey before lowered

did not change any programming

- before moved inside stage's outside stage were 0.70 ft Now inside = 0.84



## Level Notes

Station	B.S.	Ht Inst	F.S	Elev.	Remarks
RM3	2.148	8.376		6.228	Bolt on <sup>split</sup> Rock R. Left
RM4	2.180		2.180		Bolt on Red Rock 90° Right
RP1	5.980		5.980	2.396	Top of rebar
Orifice	7.635		7.635		orifice nut
PZF	7.652		7.652	0.724	@ overflow
RM3	<del>8.199</del>		2.149		
turning pt					
RM3	0.763	6.991		6.228	
RM4			0.755	6.236	
RP1			4.571	2.420	
Orifice			6.210		
PZF			6.240		
RM3			<del>6.210</del>		
	0.765				
RM3	0.762		6.990	6.228	
RM4			0.750		
RP1			4.568		
orifice			6.214		
PZF			6.241		
RM3	<del>0.767</del>		0.762		

U.S. DEPARTMENT OF THE INTERIOR  
U.S. Geological Survey  
WATER RESOURCES DIVISION  
DISCHARGE MEASUREMENT AND  
GAGE INSPECTION NOTES

Meas. No. \_\_\_\_\_  
Comp. by Portable Flume  
Checked by \_\_\_\_\_

Sta. No. \_\_\_\_\_  
Sta. Name Von Guerrard  
Date Jan 1, 2003 Party DAS, JDG, KAC  
Width \_\_\_\_\_ Area \_\_\_\_\_ Vel. \_\_\_\_\_ G.H. \_\_\_\_\_ Disch. .21 Q  
Method \_\_\_\_\_ No. secs. \_\_\_\_\_ G.H. change \_\_\_\_\_ in \_\_\_\_\_ hrs.  
Method coef. \_\_\_\_\_ Horiz. angle coef. \_\_\_\_\_ Susp. \_\_\_\_\_ Tags checked \_\_\_\_\_  
Meter Type \_\_\_\_\_ Meter No. \_\_\_\_\_ Meter \_\_\_\_\_ ft. above bottom of wt.  
Rating used \_\_\_\_\_ Spin test before meas. \_\_\_\_\_ ; after \_\_\_\_\_  
Meas. plots \_\_\_\_\_ % diff. from rating no. \_\_\_\_\_ Indicated shift \_\_\_\_\_

wrong chart

GAGE READINGS <u>26</u>				
<del>1430</del>			<del>0.70</del>	Outside
1437		TPD =		.71
1440	<u>purse</u>			
1445			0.85	
1500			0.85	
1544			0.85	
1745		TPD =	0.85	.71
	Finish			
	Weighted MGH			
	GH correction			
	Correct MGH			

Samples collected: water quality  
sediment, biological, other \_\_\_\_\_

Measurements documented on  
separate sheets: water quality,  
aux./base gage, other \_\_\_\_\_

Rain gage serviced/calibrated \_\_\_\_\_

Weather: cloudy, Breezy

Air Temp. \_\_\_\_\_ °C at \_\_\_\_\_

Water Temp. \_\_\_\_\_ °C at \_\_\_\_\_

Check bar/chain found \_\_\_\_\_

Changed to \_\_\_\_\_ at \_\_\_\_\_

Correct \_\_\_\_\_

Wading, cable, ice, boat, upstr., downstr., side bridge, \_\_\_\_\_ ft., mi. upstr., downstr. of gage.

Measurement rated excellent (2%), good (5%), fair (8%), poor (> 8%); based on following conditions: Flow: \_\_\_\_\_

Cross section: @ Flume = gravel, sand

Gage operating: yes Record Removed \_\_\_\_\_

Battery voltage: 13.8 Intake/Orifice cleaned/purged: \_\_\_\_\_

Bubble-gage pressure, psi: Tank 2000, Line 9; Bubble-rate 48 /min.

Extreme-GH indicators: max \_\_\_\_\_, min \_\_\_\_\_

CSG checked: \_\_\_\_\_ HWM height on stick \_\_\_\_\_ Ref. elev. \_\_\_\_\_ HWM elev. \_\_\_\_\_

HWM inside/outside: \_\_\_\_\_

Control: boulder, cobble weir w/ Tarp - ~~Keypan~~ filling w/ sand

Remarks: TPD = 1.42 @ 1437 orifice at surface - draped tube .27' to nr or below PZF

GH of zero flow = GH \_\_\_\_\_ - depth at control .21 = \_\_\_\_\_ ft., rated \_\_\_\_\_

\* See back

⊗ Q from flume rating @ 1600 Sheet No. \_\_\_\_\_ of \_\_\_\_\_ sheets

0 .10 .20 .30 .40 .50 .60 .70 .75

.80  
.85  
.90  
.92  
.94  
.96  
.97  
.98  
.99  
1.00  
.99  
.98  
.97  
.96  
.94  
.92  
.90  
.85

Rebar RPI = 2.13

- 1.42 TPD = .71 which = initial stage

2.13 RPI

TPD @ 1745 =  $\frac{1.42}{.71}$

DISCHARGE	AREA	ADJUSTED FOR HOR. ANGLE OR	MEAN VELOCITY	AT POINT	INVERTICAL	TIME IN SECONDS	REVOLUTIONS	OBSERVATION DEPTH	DEPTH	WIDTH	DIST. FROM INITIAL POINT	ANGLE COEFFICIENT
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.75 .70 .60 .50 .40 .30 .20 .10 0

F6 - LWD U6

1/1/03

Flow present

Surveying

Stream chem samples

Gauge:

L, Von Guemund - FC



Date	1 - Jan - 2003		
time of visit (start & finish)	14:30		
party	JG, PS, KC		
cloud cover (% type)	90% cum, stratocumulus		
wind (spd, dir)	5-10 from E		
air temp	30		
surveying?	Yes		
photo? (#, which camera)	4 #1051 - JG		
to do items? (y/n)	Yes - monitor orifice		
which field notebook?	JG		
<b>Flow measurements (times)</b>			
condition of control, probes	o.k, o.k		
method (meter, flume, visual)	portable flume		
discharge (units)	0.208 cfs prt b @ ~ 16:00 *		
outside stage (staff or <u>op down</u> )	TD - 43 cm @ 14:30		
CR10 stage reading	ch = 0.70 @ 14:30*		
<b>Inside Box</b>			
CR10 Channels (times)	14:40	15:05	15:44
ch 1? stage	0.70	0.84	0.84
ch 3? water temp	3.0	3.0	3.5
conductivity	-		
ch 4? battery voltage	13.8	13.9	14.08
ch 2 air temp		10.4	8.8
Year, Day, Time	2002, 001, 1444 @ 1444 on JG table		
settings o.k?	Yes, except s/m full *		
*0?	Y		
N2 tank pressure (psi)	1900		
N2 feed pressure (psi)	9		
purge?	Yes @ 1440		
bubble rate (per min)	~54		
<b>Stream Chemistry (times)</b>			
water temp. (units)	1.9°C (conduc. prob) 36°F (therm) @ 2:30		
sp. cond. (units)	46.1 @ 1.9°C		
pH and temp of probe	6.2 @ 2.7°C; 6.1, 3.4°C 17:42		
instrument notes (i.e. cal. time)	ph calib. @ 1450		
water samples collected?			

19:00 45.7 μS, 1.6°C  
 0.0 ppt  
 45.9 μS, 1.6°C  
 L En

- first day we saw flow
- Lyons grp reported flow on 30 Dec 2002
- module changed
- lowered orifice tube 0.22 ft (vertical)



Gauge: L. Von Geard

Date	1 - Jan - 03		
time of visit (start & finish)	afternoon		
party	JG, DS, KC		
cloud cover (% , type)	~ Sunny		
wind (spd, dir)	light from East		
air temp			
surveying?	Yes		
photo? (#, which camera)			
to do items? (y/n)			
which field notebook?	JG*		
Flow measurements (times)		17:45	
condition of control, probes	OK, OK		
method (meter, flume, visual)	prtl flume (0.19 in)		
discharge (units)		0.208 cfs	
outside stage (staff or <u>top down</u> )		1.42 TD	
CR10 stage reading		0.85	
<b>Inside Box</b>			
CR10 Channels (times)	1504		
ch 1 stage	0.85		
ch 3 water temp	3.05		
conductivity			
ch 4 battery voltage	13.99		
ch 2 air temp	10.5		
Year, Day, Time			
settings o.k?			
*0?			
N2 tank pressure (psi)	o.k		
N2 feed pressure (psi)	o.k		
purge?	o.k		
bubble rate (per min)	~60?		
<b>Stream Chemistry (times)</b>			
water temp. (units)			
sp. cond. (units)			
pH and temp of probe			
instrument notes (i.e. cal. time)			
water samples collected?			

- lowered orifice  
- D SIM

U.S. DEPARTMENT OF THE INTERIOR  
U.S. Geological Survey  
WATER RESOURCES DIVISION  
DISCHARGE MEASUREMENT AND  
GAGE INSPECTION NOTES

Meas. No. 32, 33

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

Checked by \_\_\_\_\_

Sta. No. 00000005

Sta. Name FG - LWR VAN GUERARD

Date Jan 1, 2003 Party JDG, PAS, KDC

Width \_\_\_\_\_ Area \_\_\_\_\_ Vel. \_\_\_\_\_ G.H. \_\_\_\_\_ Disch. \_\_\_\_\_

Method Portable Flume No. secs. \_\_\_\_\_ G.H. change \_\_\_\_\_ in \_\_\_\_\_ hrs.

Method coef. \_\_\_\_\_ Horiz. angle coef. \_\_\_\_\_ Susp. \_\_\_\_\_ Tags checked \_\_\_\_\_

Meter Type \_\_\_\_\_ Meter No. \_\_\_\_\_ Meter \_\_\_\_\_ ft. above bottom of wt.

Rating used \_\_\_\_\_ Spin test before meas. \_\_\_\_\_, after \_\_\_\_\_

Meas. plots \_\_\_\_\_ % diff. from rating no. \_\_\_\_\_ Indicated shift \_\_\_\_\_

GAGE READINGS (ft)						
Time	TD	Pflump	Pflump	IG	Inside	Outside
	ft	ft	CFS	REC	obsd	
14:30	1.411			0.701	0.70	0.949
14:37	<del>1.42</del>					0.940
14:40	prunge				0.70	
14:45				0.786	0.7/0.85	
15:00				0.850	0.85	
15:04					0.85	
15:05					0.84	
15:44	Field			0.85	0.85	
16:00		0.19	0.153			
Weighted MGH	1.42	0.19	0.153	0.851	0.85	0.940
GH correction						
Correct MGH						

Samples collected: water quality, sediment, biological, other \_\_\_\_\_

Measurements documented on separate sheets: water quality, aux./base gage, other \_\_\_\_\_

Rain gage serviced/calibrated \_\_\_\_\_

Weather: \_\_\_\_\_

Air Temp. \_\_\_\_\_ °C at \_\_\_\_\_

Water Temp. 1.6 °C at 19:00

Check bar/chain found \_\_\_\_\_

Changed to \_\_\_\_\_ at \_\_\_\_\_

Correct \_\_\_\_\_

@ 17:00

before and after lowered orifice line

lowered orifice line =>

32  
33

- ①
- ②
- ③
- ④
- ⑤
- ⑥
- ⑦
- ⑧
- ⑨
- ⑩ 17:45

Wading, cable, ice, boat, upstr., downstr., side bridge, \_\_\_\_\_ ft., mi. upstr., downstr. of gage.

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

conditions: Flow: \_\_\_\_\_

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

Gage operating: \_\_\_\_\_ Record Removed \_\_\_\_\_

Battery voltage: 13.8 Intake/Orifice cleaned/purged: 14:40

Bubble-gage pressure, psi: Tank \_\_\_\_\_, Line \_\_\_\_\_; Bubble-rate \_\_\_\_\_ /min.

Extreme-GH indicators: max \_\_\_\_\_, min \_\_\_\_\_

CSG checked: \_\_\_\_\_ HWM height on stick \_\_\_\_\_ Ref. elev. \_\_\_\_\_ HWM elev. \_\_\_\_\_

HWM inside/outside: \_\_\_\_\_

Control: \_\_\_\_\_

Remarks: did LEVELS; lowered orifice tube 7cm = 0.230 ft @ 14:45

GH of zero flow = GH \_\_\_\_\_ - depth at control \_\_\_\_\_ = \_\_\_\_\_ ft., rated \_\_\_\_\_

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

RPI = top of rebar = 2.36 ft in elevation as of Jan 1, 2003

① Taped down @ 14:30 = 43 cm  $\rightarrow (2.36 \text{ ft} - 43 \text{ cm} \frac{1 \text{ in}}{2.54 \text{ cm}} \frac{\text{ft}}{12 \text{ in}}) = 0.949 \text{ ft}$

② Taped down @ 14:37 = 1.42 ft  $\rightarrow (2.36 \text{ ft} - 1.42 \text{ ft}) = 0.940 \text{ ft}$

I before lowered orifice

⑩ Taped down @ 17:45

1 JAN 2003

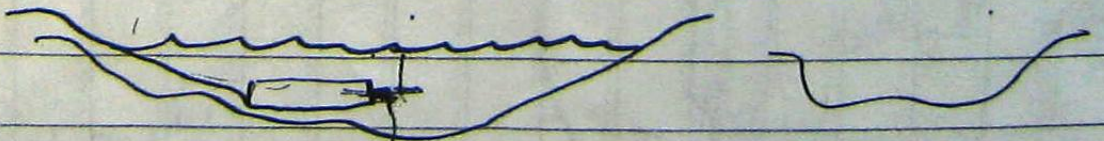
Von Guernard

Notes on visit sheet

	CR10	15.04	
	ch 1	0.85	stage
21	ch 2	10.5	AT
22	ch 3	3.05	WT
	ch 4	13.99	
	ch 5	0.0	
	6	0.27	
	7	24.3	
	8-14	24.3	

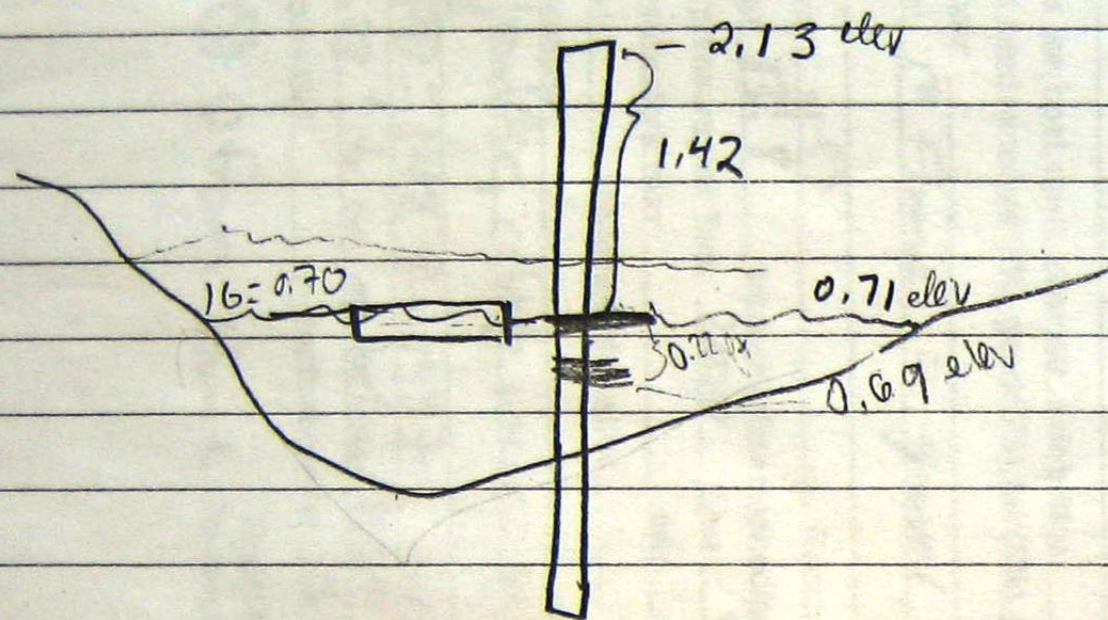
~~TO DO - find meanings of channels on CR10~~

Lowered orifice tube 0.22 ft  
7 cm @ 14° 45'  
did not survey before lowered  
did not change any programming  
- before moved inside stage 3 outside stage  
were 0.70 ft Now inside = 0.84



Took out F6B S/M, installed F6A

\* Sand was excavated to lower orifice monitor to see if it gets buried



Time	<del>6.9</del> 1745
Flume	0.19
Inside	0.85
outside	1.42 TD
	stage

Level Notes.

Station	B.S.	Ht Inst	F.S	Elev.	Remarks
RM3	2.148	8.376		6.228	Bolt on Rock <sup>split</sup> R. Left
RM4	2.180		2.180		Bolt on Red Rock 90' Right
RP1	5.980		5.980	2.396	Top of rebar
Orifice	7.635		7.635		orifice nut
PZF	7.652		7.652		@ overflow
RM3	<del>2.149</del>		2.149		
	turning pt				
RM3	0.763				
RM4			0.755		
RP1			4.571		
Orifice			6.210		
PZF			6.240		
RM3			<del>6.210</del>		
		0.765			
RM3	0.762				
RM4			0.750		
RP1			4.568		
orifice			6.214		
PZF			6.241		
RM3	<del>0.762</del>		0.762		