9-275-F
(Rev. 10-81)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

Meas. No.. 869

Comp. by. LBG

Sta. No.. 08 114000 **DISCHARGE MEASUREMENT NOTES** Checked by VAA

Brazos River @ Richmond, Texas

Date . Dec. 27., 19 91 . . . Party Goldstein, Hutchison

Width 543 . . Area . . 15,000 Vel. 5.43 . G. H. 47.08 . Disch. 81,500.

Method 2.8 . No. secs. 30 . . G. H. change +.04 in . . 1 . . hrs. Susp. 100L .

Method coef. 1 . . . . Hor. angle coef. noted Susp. coef. 1 . . . Meter No. 226723

Type of meter AA . . . . . Date rated std . . . . Tag checked ✓ . . . . . .

Meter 1.0 . . ft. above bottom of wt. Spin before meas. > 3' . . . after . . . . . .

Meas. plots. . . . . % diff. from. . . . . rating. Levels obtained. . . . ND . . . . . .

GAGE READINGS

Time	C	Inside	ADR	Graphic	Outside
0900	46.98	46.97	46.98	46.96	47.00
					±.05
0930					47.05
					±.05
1115	(E)				
1125	47.10	47.13	47.10	47.07	47.13
					±.03
Weighted M.G.H.			0.0		
G. H. correction			0		
Correct M.G.H.					

WATER QUALITY MEASUREMENTS

No . X . . . Yes. . . . . Time . . . . .

Samples Collected

No . . . . . Yes. . . . . Time . . . . .

Method Used

EDI . . . . . EWI . . . . . Other. . . . . .

SEDIMENT SAMPLES

No . X . . . Yes. . . . . Time . . . . .

Method Used

EDI . . . . . EWI . . . . . Other. . . . . .

BIOLOGICAL SAMPLES

Yes. . . . . Time . . . . . .

No . . . X . . . . . Type . . . . . .

Check bar. chain found . . . . . 74.20 . . . . changed to . 74.19 . . . . 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 the following cond:

Flow. Swift . . . . . .

Cross section . Fair . . . . . .

Control . Bed & banks . . . . . .

Gage operating . . . Yes . . . . . Weather . Cloudy & cold . . . . . .

Intake/Orifice cleaned . . . . . Air . . . . . °C@ . . . . . Water . . . . . °C@ . . . . . .

Record removed . . No . . Extreme Indicator: Max. . . . . Min. . . . . .

Manometer N_2 Pressure Tank . . . . . Feed . . . . . Bbl rate . . . . . per min.

CSG checked . — . . . . . Stick reading . . . . . .

Observer talked to . . . . . .

HWM . — . . . . . outside, in well

Remarks . . . . . .

. . . . . .

. . . . . .

G.H. of zero flow . . . . . ft. Sheet No. . . . 1 . . . of . . . 3 . . . sheets

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

River at—

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY		Adjusted for hor. angle or --------	Area	Discharge	
							At point	Mean in vertical				.80
												.85
												.90
												.92
												.94
												.96
												.97
												.98
												.99
⊙												1.00
												.99
												.98
												.97
												.96
												.94
												.92
												.90
												.85
												.80

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

9-275-b
(July 1956)

UNITED STATES
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GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES
TWO-TABLE METHOD

Date _____ No. of Meas. _____
Meter No. _____ Reel Coefficient _____
Type of suspension C
Size of line 61 Notes by LBG

	Distance from initial point	Distance above water surface	Vertical angle	Observed depth	Air correction	Wet-line depth	Water correction	Vertical depth	Depth of observation	Revolutions	Time in seconds	VELOCITY: At point	VELOCITY: Mean in vertical	VELOCITY: Mean in section	Area	Mean depth	Width	Discharge
	450				LEW @ 0930												45.0	
⊥	540		<4°	8.5					.8	15	44	.76	1.02		808	8.5	95.0	824
									.2	25	43	1.29						
.99	640			13.8						50	40	2.74	2.98	2.95	1,104	13.8	80.0	3,257
										60	41	3.21						
⊥	700	37.0	8°	40.0	.4	39.6	.1	39.5		80	51	3.43	4.38		1,481	39.5	37.5	6,487
		↓								100	41	5.32						
	715		14°	43.2	1.2	42.0	.4	41.6		100	41	5.32	5.53		624	41.6	15.0	3,451
										150	57	5.74						
⊥	730		14°	44.0	1.2	42.8	.4	42.4		150	52	6.29	5.96		636	42.4	15.0	3,790
										150	58	5.64						
.99	745		14°	45.5	1.2	44.3	.4	43.9		150	49	6.67	6.74	6.67	658	43.9	15.0	4,389
										150	48	6.81						
.99	760		16°	47.8	1.5	46.3	.6	45.7		150	53	6.17	6.72	6.65	571	45.7	12.5	3,797
										150	45	7.26						
.99	770		16°	46.4	1.5	44.9	.6	44.3		150	51	6.41	6.24	6.18	443	44.3	10.0	2,738
										150	54	6.06						
⊥	780		16°	44.5	1.5	43.0	.6	42.4		150	50	6.54	6.54		424	42.4	10.0	2,773
										150	50	6.54						
⊥	790		16°	43.6	1.5	42.1	.5 6	41.6		150	46	7.11	7.11		413	41.6	10.0	2,958
										150	46	7.11						
.99	800		20°	44.5	2.3	42.2	.9	41.3		150	44	7.43	7.60	7.52	413	41.3	10.0	3,106
										150	42	7.78						
.99	810		16°	41.7	1.5	40.2	.5	39.7		150	45	7.26	7.43	7.36	397	39.7	10.0	2,922
										150	43	7.60						
.98	820		20°	43.0	2.3	40.7	.8 9	39.8		150	45	7.26	7.34	7.19	398	39.8	10.0	2,862
										150	44	7.43						
.99	830		16°	43.0	1.5	41.5	.5 .6	41.2 40.9		150	42	7.78	7.98	7.90	410 409	41.0 40.9	10.0	3,231
										150	40	8.17						4,660

Computed by LBG Checked by VDM No. 2 of 3 Sheets.

GPO 911781

9-275-b
(July 1956)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES
TWO-TABLE METHOD

Brazos River at Richmond

Date Dec 27, 1991 No. of Meas.

Meter No. Reel Coefficient

Type of suspension 100C 1.0

Size of line Notes by LBG

Distance from initial point	Distance above water surface	Vertical angle	Observed depth	Air correction	Wet-line depth	Water correction	Vertical depth	Depth of observation	Revolutions	Time in seconds	VELOCITY: At point	VELOCITY: Mean in vertical	VELOCITY: Mean in section	Area	Mean depth	Width	Discharge
840	37.0	16°	43.4	1.5	41.9	.6	41.3	.8	150	47	6.96	7.46	7.31	418	41.3	10.0	3,026
	↓							.2	150	41	7.97						
850		22°	45.4	2.9	42.5	1.1	41.4		150	44	7.43	7.80	7.72	414	41.4	10.0	3,196
									150	40	8.17						
860		24°	48.8	3.5	45.3	1.5	43.8		150	42	7.78	7.98	7.74	438	43.8	10.0	3,390
WWT	= 47.05 @ 1040								150	40	8.17						
870		20°	47.6	2.3	45.3	1.0	44.3		150	45	7.26	7.26	7.19	443	44.3	10.0	3,185
									150	45	7.26						
880		24°	48.7	3.5	45.2	1.4	43.8		150	47	6.96	7.37		438	43.8	10.0	3,228
									150	42	7.78						
890		24°	47.0	3.5	43.5	1.4	42.1		150	45	7.26	6.96		421	42.1	10.0	2,930
									150	49	6.67						
900		18°	45.4	1.9	43.5	.8	42.7		150	52	6.39	7.04	6.90	427	42.7	10.0	2,946
									150	42	7.78						
910		14°	43.2	1.1	42.1	.4	41.7		150	54	6.06	6.51	6.44	417	41.7	10.0	2,685
									150	47	6.96						
920		16°	43.2	1.5	41.7	.6	41.1		150	53	6.17	6.56	6.49	514	41.1	12.5	3,336
									150	47	6.96						
935		10°	38.9	.6	38.3	.2	38.1		100	47	4.65	5.06		572	38.1	15.0	2,894
									100	40	5.46						
950		10°	34.1	.6	33.5	.2	33.3		80	40	4.37	4.37		500	33.3	15.0	2,185
									80	40	4.37						
965		4°	30.4	.1	30.3	0	30.3		50	47	2.34	3.00		530	30.3	17.5	1,590
									80	48	3.65						
985		<4°	21.2						25	46	1.20	1.13		424	21.2	20.0	479
									20	42	1.06						
1,005			14.0						10	40	.56	.56	.39	266	14.0	19.0	104
									10	40	.56						
1,023			REW @		1115											9.0	
														15,008			
														~~15,070~~ 14,998			81,611 81,537

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