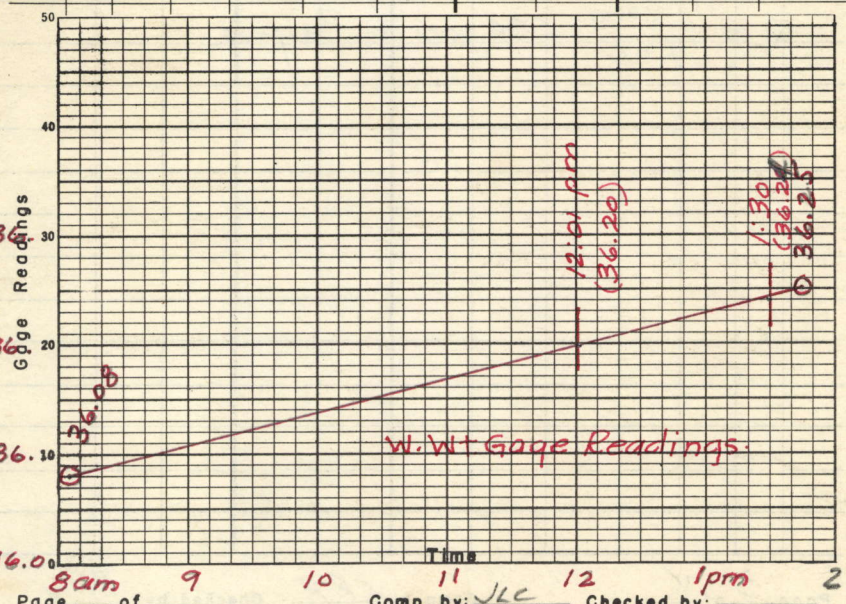
River at

Dist. from initial point	Angle Coefficient	Depth	Depth of observation	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in section	Corr. Area	Area	Width	Discharge



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RECORDED

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Water Resources Branch

DISCHARGE MEASUREMENT NOTES

Meas. No. 512

Checked by

Date 7-12-57

Water temp. °F

Air temp. °F

Time

Brazos River at Richmond, Tex.

Date May 3, 19 57 Party Sansom & Rosenquest

Width 492 Area 15,000 Vel. 6.64 G.H. Disch. 99,600 94000

Method 2.8 No. Secs. 24 G.H. Chng. +.06 ft. per hr. Time meas. 1.5 hrs.

Meter No. 3051 Date Rated 8-12-49 Susp. 100 Cl. 0 Susp. Coef. 1.00

Method Coef. 1.00 Hor. angle Coef. 1.00 Used rating for, rod Rod Susp.

GAGE READINGS					
Time	Meas	Recorder	Tape	Inside	W.W. ~~Outside~~
8:05	am				36.08
12:01	pm		(35.90)		(36.20)
1:30	pm		(35.94)		(36.24)
1:45	pm		35.95		36.25
~~Weighted~~ MGH			35.92		
GH Corr.					
Correct MGH					

Meter 1.0 ft. above bottom of weight

Spin before meas. OK after OK

Wading, cable, ice, boat, upstr., downstr., side bridge 270 feet, mile, above, below gage, and

Chain, wire, found 58.69 at G-Sta.

Changed to — at

Correct length 58.68

Levels Obtained No

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

Cross section Uniform - firm

Flow Smooth Weather Clear - hot

Other

Gage OK

Record removed No Intakes flushed No

Pencil None Wt. Adj. No. Paper Dry

Record Clear Chart time OK Clock Reg. No

Observer Not seen - USWB.

Control Channel - no flow in overflow bridges -

Remarks Right bank at cableway is eroding away - Total air and water corrections shown encircled under observed depths - areas corrected.

Page 1 of 1 G.H. of zero flow — ft.

512 Brazos River at Richmond, Tex.

Dist. from initial point	Angle Coefficient	Depth	Depth of observation	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in section	Corr. Area	Area	Width	Discharge
L.E.W. @ 12:01 p.m. 100 Cl. 0 # 3051 Cable											
520		0					0	0		15	0
490	1	8.8	1.8	15	45	.75	.94	308		35	290
			7.0	20	40	1.12					
450	1	22.0	4.4	80	41	4.27	3.70	770		35	2,850
			17.6	60	42	3.14					
420	1	23.8	4.8	80	41	4.27	4.32	714		30	3,080
			19.0	80	40	4.38					
390	1	29.0	5.8	150	56	5.85	5.59	~~870~~ 855		30	4,780
		-.5	23.2	100	41	5.33					
360	1	19 ft. to W.S. 37.6	7.5	150	50	6.55	6.55	~~1128~~ 1,098		30	7,190
		-1.0	30.1	150	50	6.55		913			
330	1	38.2	7.6	150	49	6.68	6.90	~~955~~		25	6,300
		-1.7	30.6	150	46	7.12		726			
310	1	18 ft. to W.S. 38.0	7.6	150	43	7.61	7.38	~~760~~		20	5,350
		-1.7	30.4	200	61	7.15		738			
290	1	39.0	7.8	200	54	8.08	7.25	~~780~~		20	5,350
		-2.1	31.2	150	51	6.42		744			
270	1	19 ft. to W.S. 38.5	7.7	150	40	8.18	7.50	~~770~~		20	5,580
		-1.3	30.8	150	48	6.82		748			
250	1	39.5	7.9	200	53	8.23	7.84	~~790~~		20	5,870
		-2.1	31.6	150	44	7.44		752			
230	1	40.2	8.0	150	40	8.18	7.66	~~804~~		20	5,760
		-2.6	32.2	200	61	7.15		760			
210	1	40.1	8.0	200	50	8.72	7.64	~~802~~		20	5,800
		-2.1	32.1	150	50	6.55		774			
190	1	40.8	8.2	150	41	7.98	6.92	~~816~~		20	5,360
		-2.1	32.6	150	56	5.85		776			
170	1	20 ft. to W.S. 41.4	8.3	150	40	8.18	7.43	~~828~~		20	5,760
		-2.6	33.1	150	49	6.68					

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Dist. from initial point	Angle Coefficient	Depth	Depth of observation	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in section	Corr. Area	Area	Width	Discharge
150	1	21 ft. to W.S. 41.0	8.2	150	51	6.42	7.18	~~820~~ 786		20	5,630
		-1.7	32.8	200	55	7.93		788			
130	1	22 ft. to W.S. 42.0	8.4	150	42	7.79	7.36	~~840~~		20	5,750
		-2.6	33.6	150	48	6.82		790			
110	1	23 ft. to W.S. 42.8	8.6	150	41	7.98	7.80	~~856~~		20	6,170
		-3.3	34.2	150	43	7.61		820			
90	1	25 ft. to W.S. 44.8	9.0	150	40	8.18	7.98	~~896~~		20	6,540
		-3.8	35.8	150	42	7.79		708			
70	1	26 ft. to W.S. 37.3	7.5	150	43	7.61	6.78	~~746~~		20	4,800
		-1.9	29.8	150	55	5.96					
50	1	28.4 ft. to W.S. 24.0	4.8	80	45	3.90	3.99	~~360~~ 82		15	1,440
			19.2	80	43	4.08					
40	0	10.2	point of "0" flow				0	~~71~~		8	0
34	Neg	4.0			est.		1.0	24		6	-28
28		0					0	0		3	0
R.E.W. @ 1:30 p.m.							~~14,967~~ 15,034			492	99,630

$Q_c = \frac{(99,600)}{1.06} = 94,000$ by Bayens.

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