9-275 c
(July 1935)

RECORDED

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES BRANCH

DISCHARGE MEASUREMENT NOTES

Meas. No. 282

Checked by Euo

Date 4/15/46

Brazos River at Richmond, Tex.

Date March 14, 1946 Party W. H. Goines

Width 429 Area 10.000 Vel. 6.15 G. H. _____ Disch. 61.500

Method 2 No. secs. 21 G. H. change +0.19 in 1.1 hrs. Susp. 100 cl. 0

Method coef. 0.93 Hor. angle coef. As Noted Meter No. 1791 Susp. coef. 1.00

GAGE READINGS

Time		Recorder	~~Inside~~ Tape	Outside
8:00 a.m.		21.91	21.93	22.0 ± 0.3
8:40	Start		(22.07)	
9:45	Finish		(22.26)	
10:30		22.38	22.37	22.5 ±
11:40	p.m.	22.50	22.50	−0.3
	~~Finish~~			
~~Weighted~~ M. G. H.			22.16	
G. H. correction				
Correct M. G. H.				

Date rated June 4, 1943 Used rating for rod Rod susp. Meter 1.0 ft. above bottom of wt. Tags checked —

Spin before meas. ok after ok

Meas. plots — % diff. from — rating

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

~~Chain~~, wire, found not read,

changed to _____ at _____

Correct length _____

Levels obtained _____

Measurement rated ~~excellent (2%)~~, good (5%), ~~fair (8%), poor (over 8%)~~, based on following conditions: Cross section Uniform

Flow Fairly smooth Weather Favorable

Other —

Gage ok

Record removed No Intake flushed No

Observer —

Control channel

Remarks Slope stakes set on left bank.

RATE OF CHANGE IN STAGE: +0.17 ft./HR.

Sheet No. 1 of 5 sheets. G. H. of zero flow _____ ft.

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80 • 75 •

O 22.0 ±0.3
T 21.93
P 21.91
8:00 am.

9-275
January 1935

85 •

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

Date 3/14/46, 19 ___ DISCHARGE MEASUREMENT NOTES

Brazos River, at Richmond, Tex.

90 •

Dist. from initial point	Angle coefficient	Depth	Depth of observation	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	VELOCITY Mean in section	Corr Area	~~Mean depth~~ Area	Width	Discharge
8:40												
				100	c1.0		1791					
LEW 485		0						0	0		7½	0
470		7.1	1.4	25	42			1.37	~~168~~ 160		22½	~~230~~ 220
440	⊥	23.0	4.6	100	46			4.96	690		30	3420
vert.* 410	99	22.4	4.5	100	45			5.07	665	672	30	3370
5° 29' to w.s. 380	⊥	22.0 * ~~22.1~~	4.4	150	52			6.58	660		30	4340
6° 28.5 350	⊥	24.0 ~~24.2~~	4.8	150	47			7.27	720		30	5230
8:55 am												
8° 28.0 320	.99	24.0 ~~24.4~~	4.9	150	48			7.12	713	720	30	5070
10° 28.0 290	.99	24.9 ~~25.4~~	5.1	150	48			7.12	61~~7~~6	62~~3~~2	25	4390
10° 28.0 270	⊥	26.0 ~~26.5~~	5.3	150	51			6.71	520		20	34~~8~~9 0
9:05 am												
10° 28.2 250	99	26.5 ~~27.0~~	5.4	150	46			7.43	525	530	20	3900
10° 28.4 230	⊥	28.0 ~~28.5~~	5.7	150	43			7.95	560		20	4450
10° 28.7 210	⊥	28.0 ~~28.5~~	5.7	150	45			7.60	560		20	4260

No. 2 of 5 Sheets. Comp. by W.H.G. Chk. by

75 • * See sheet 4

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O 22.5 ± 0.3
T 22.37 10:30 am
P 22.38

9-275
January 1935

UNITED STATES
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WATER RESOURCES BRANCH

Date 3/14/46, 19 ___ DISCHARGE MEASUREMENT NOTES

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 vertical	VELOCITY Mean in section	Area	Mean depth	Width	Discharge
190	⊥	28.4 / 28.9	5.8	150	46			7.43	568		20	4220
		9:25 am / DRIFT FLOWING										
170	⊥	27.5 / 28.1	5.6	100	30½			7.47	548 ~~550~~		20	4100
150	⊥	27.9 ~~28.0~~ / 28.6	5.9	100	33½			6.81	558 ~~560~~		20	38~~1~~0
130	⊥	28.2 / 28.4	5.7	150	55			6.22	564		20	3500
110	⊥	30.4 / 30.8	6.2	150	52			6.58	53~~3~~2		17½	3500
95	⊥	27.7 / 27.9	5.6	150	53			6.45	41~~5~~6		15	2680
80	⊥	19.7 / 19.8	4.0	150	52			6.58	296		15	1950
65		10.9	2.2	25	40			1.44	131		12	190
56		0						0	0		4½	0
REW												660~~9~~8
									10,0~~15~~03		429	x.93
												61,500

from curve (Q_2 vs Q_{2-8}) dated 1943
coeff. to convert Q_2 to Q_{2-8} is 0.93

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Date 3/14/46, 19 ___ DISCHARGE MEASUREMENT NOTES

Brazos River, at Richmond, Tex.

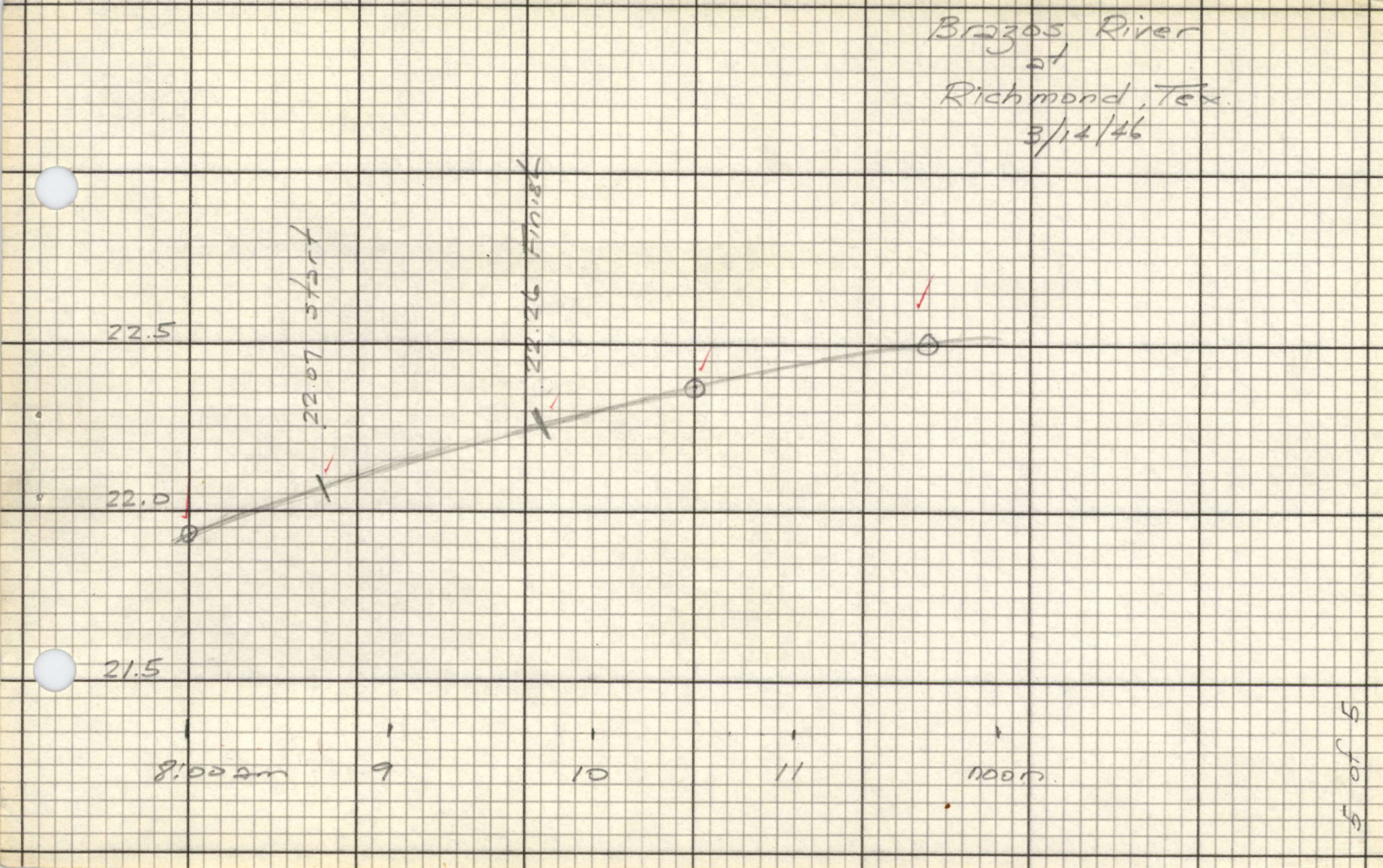
Dist. from initial point	Angle coefficient	Depth	Depth of observation	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	VELOCITY Mean in section	Area	Mean depth	Width	Discharge
			Depth Corrections									
sta	Vert ∡	Dist to WS	Obs. D	Air Corr.	W.L. D.	W.L. Corr.		Corr D				
380	5°	29	22.1	.1	22.0	–		22.0				
350	6	28	24.2	.2	24.0	–		24.0				
320	8	28	24.4	.3	24.1	.1		24.0				
290	10	28	25.4	.4	25.0	.1		24.9				
270	10	28	26.5	.4	26.1	.1		26.0				
250	10	28	27.0	.4	26.6	.1		26.5				
230	10	28	28.5	.4	28.1	.1		28.0				
210	10	29	28.5	.4	28.1	.1		28.0				
190	10	29	28.9	.4	28.5	.1		28.4				
170	10	30	28.1	.5	27.6	.X2		27.5				
150	10	31	28.6	.5	28.1	.X2		27.9 ~~28.0~~				
130	6	32	28.4	.2	28.2	–		28.2				
110	8	33	30.8	.3	30.5	.1		30.4				
95	6	34	27.9	.2	27.7	–		27.7				
80	4	35	19.8	.1	19.7	–		19.7				

Dist. to w.s determined with wading wire, corrected at each sta. by amount of depth counter setting

Vert ∡ from angle finder.

No. 4 of 5 Sheets. Comp. by W.H.G. Chk. by

Brazos River
at
Richmond, Tex.
3/14/46



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