9-275 c
(July 1935)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES BRANCH

DISCHARGE MEASUREMENT NOTES

Meas. No. 249

Checked by

Date 7-18-44

RECORDED

Brazos River at Richmond, Tex.

Date June 2, 1944 Party Goines and Longacre

Width 437 Area 11,800 Vel. 4.39 G. H. — Disch. 52,200

Method 2 No. secs. 24 G. H. change -0.07 in 0.8 hrs. Susp. 100C1.0

Method coef. 0.93 Hor. angle coef. 1.00 Meter No. 1705 Susp. coef. 1.00

GAGE READINGS				
Time	C. W. T.	Recorder	~~Inside~~ Tape	Outside
1:40 p.m.		25.75	25.76	25.85 ±0.1
2:10	Start		(25.71)	
2:55	Finish		(25.64)	
3:20 p.m.		25.59	25.60	25.60 ±0.5
U.S	W.B. Finish	W-W	Gage	
1:35 p.m.				25.85
~~Weighted~~ M. G. H.			25.68	
G. H. correction				
Correct M. G. H.				

Date rated Apr. 9, 1942 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 58.58, changed to no at —

Correct length 58.57

Levels obtained no

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

Flow Smooth Weather Favorable

Other —

Gage ok

Record removed No Intake flushed No

Observer —

Control channel

Remarks Falling 0.10 ft/hr

Sheet No. 1 of 4 sheets. G. H. of zero flow — ft.

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1:35 pm W.W+ 25.85
ck bar 58.58 corr 58.57

1:40 pm T 25.76 P 25.75 O 25.85±0.1

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Date 6/2/44, 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
		Comp. by mid-sect. method										
LEW 491		0						0	0		10½	0
470	⊥	11.4	2.3	15	63			.55	234		20½	130
450	⊥	19.0	3.8	50	42			2.67	380		20	1010
430		28.1	5.6	50	41			2.74	562		20	1540
410		29.0	5.8	60	44			3.06	580		20	1770
390		30.5	6.1	80	52			3.45	610		20	2100
370		30.7	6.1	80	42			4.27	614		20	2620
350		30.2	6.0	100	47			4.76	604		20	2880
330	⊥	30.5	6.1	100	43			5.21	610		20	3180
310		33.0	6.6	100	46			4.87	660		20	3210
290	*	31.8 31.9	6.4	100	42			5.33	636		20	3390
270		30.3 30.4	6.1	100	41			5.46	606		20	3310

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* See sheet 4

T 25.60
P 25.59
O 25.60 ± 0.05
3:20

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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
250	±	29.8 30.1	6.0	150	58			5.79	596		20	3450
230		29.7 30.0	6.0	100	40			5.60	594		20	3330
210		29.9 30.0	6.0	150	58			5.79	598		20	3460
190		30.5 30.6	6.1	150	55			6.10	610		20	3720
170		31.6 31.7	6.3	150	58			5.79	632		20	3660
150		31.5 31.6	6.3	100	44			5.09	630		20	3270 3640
130		32.8 33.0	6.6	100	47			4.76	656		20	3120
110		31.2 31.3	6.3	100	44			5.09	468		15	2390
100		28.6	5.7	100	42			5.33	286		10	1520
90		24.5	4.9	100	44			5.09	306		12½	1560
75		17.5	3.5	80	49			3.66	315		18	1150
54		0	Eddy					0	0		10½	0
REW												56140
			OVER						11787		177	55710

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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	WL D	Water Corr		Corr D.				
290	6°	24'	31.9	.1	31.8	—		31.8				
270	6	24	30.4	.1	30.3	—		30.3				
250	8	24	30.1	.2	29.9	.1		29.8				
230	8	25	30.0	.2	29.8	.1		29.7				
210	6	25	30.0	.1	29.9	—		29.9				
190	6	26	30.6	.1	30.5	—		30.5				
170	6	26	31.7	.1	31.6	—		31.6				
150	4	27	31.6	.1	31.5	—		31.5				
130	6	28	33.0	.2	32.8	—		32.8				
110	4	29	31.3	.1	31.2	—		31.2				

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