RECORDED

9-275 c
(July 1935)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

DISCHARGE MEASUREMENT NOTES

Meas. No. 387

Checked by RHD

Date 6-2-52

Water temp. 73 °F

Air temp. 80 °F

Time 3 p.m.

Brazos River at Richmond, Tex

Date May 28, 1952 Party Smith - Hall

Width 409 Area 6540 Vel. 5.20 G. H. ____ Disch. 34000 Z

Method 2-8 No. secs. 28 G. H. change -0.02 in 1.9 hrs. Susp. 100C1.0

Method coef. 1.00 Hor. angle coef. As noted Meter No. 1785 Susp. coef. 1.00

GAGE READINGS				
Time		Recorder	Inside	Outside
		Tape	W-wt	
1:25pm	Start	15.75±	15.98	15.75±
1:40pm		15.75±		
2:15	Start	(15.74)		
4:10	Finish	(15.72)		
4:30pm		15.72±	15.97	15.72±
Weighted M. G. H.		15.73		
G. H. correction				
Correct M. G. H.				

Date rated 9/8/50 Used rating for 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 58.69, changed to ____ at ____

Correct length 58.68

Levels obtained ____

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

Flow Turbulent - boils Weather Favorable

Other Falling 0.01 ft/hr.

Gage Tape off spines. Pen tore paper. Set time ahead 2 days Record removed No Intake flushed No

Observer None

Control Bed & banks

Remarks PK stage indicator at 15.93. Reset 15.8 ft. Cable car needs bolts. Sample brought in.

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

Z - Meas. recomputed by .2 depth method to check Q relation curve for .2 depth method. See pp 4 & 5

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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

DISCHARGE MEASUREMENT NOTES

TWO-TABLE METHOD

U. S. GOVERNMENT PRINTING OFFICE 6—8166

Air 80
Water 73
3:00pm

Brazos River at Richmond, Tex.

Date May 28, 1952 No. of Meas.

Meter No. 1785 Reel Coefficient

Type of suspension 100 C-1.0

Size of line 1/10 in. Notes by HKH

Hor. ∠	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	Corr. Area	Mean depth Area	Width	Discharge
	LEW	2:15pm																
–	465	42	0°	0										0	0		5	0
∠	455	42	0°	4.3				4.3	2.6	0	70			0	43	–	10	0
∠	445	42	0°	6.0				6.0	1.2	7	43	.38		.28	7~~8~~5	–	12½	20
									4.8	3	40	.19						
∠	430	41	0°	9.0				9.0	1.8	30	47	1.43		1.11	157	–	17½	170
									7.2	15	43	.79						
∠	410	41	0°	11.0				11.0	2.2	60	43	3.09		2.84	220	220	20	620
									8.8	50	43	2.58						
∠	390	40	0°	11.1				11.1	2.2	80	40	4.41		3.72	222	–	20	830
									8.9	60	44	3.02						
∠	370	40	1°	12.0				12.0	2.4	100	40	5.50		4.76	240	–	20	1,140
									9.6	80	44	4.01						
.99	350	39	2°	14.4				14.4	2.9	150	50	6.59		5.86	285	288	20	1,670
									11.5	100	43	5.12						
.98	330	39	5°	15.0	.1	14.9	0	14.9	3.0	150	50	6.59		5.98	292	298	20	1,750
									12.0	100	41	5.37						
.98	310	39	6°	15.9	.2	15.7	0	15.7	3.2	150	50	6.59		6.04	26~~9~~70	27~~8~~6	17½	1,6~~8~~3 0
									12.7	100	40	5.50						
.99	295	39	7°	18.3	.3	18.0	0	18.0	3.7	150	50	6.59		5.86	26~~7~~9	27~~8~~2	15	1,570
									14.6	100	43	5.12						
.99	280	39	7°	20.0	.3	19.7	0	19.7	4.0	150	49	6.72		5.80	29~~8~~4	29~~8~~7	15	1,700
									16.0	100	45	4.89						
∠	265	39	7°	20.9	.3	20.6	.1	20.5	4.2	150	49	6.72		4.80	30~~8~~9	30~~8~~9	15	1,480
									16.7	60	46	2.89						
∠	250	39	7°	20.6	.3	20.3	.1	20.2	4.1	150	45	7.32		6.41	30~~8~~4	–	15	1,9~~4~~5 0
									16.5	100	40	5.50						
∠	235	39	7°	21.0	.3	20.7	.1	20.6	4.2	150	40	8.23		7.17	30~~9~~10	–	15	2,2~~0~~2 0
	3:20pm								16.8	150	54	6.11						

Computed by HKH Checked by RHD No. 2 of ~~3~~5 Sheets.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

DISCHARGE MEASUREMENT NOTES

TWO-TABLE METHOD

U. S. GOVERNMENT PRINTING OFFICE 6—8166

Brazos River at Richmond Tex

Date May 28, 1952 No. of Meas.

Meter No. 1785 Reel Coefficient

Type of suspension 100 C-1.0

Size of line 1/10 in. Notes by HKH

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	Corr. Area	Mean depth Area	Width	Discharge
3:20 pm																	
220	39	6°	21.0	.1 ~~.2~~	20.9 ~~.8~~	0	20.9 ~~.8~~	4.2	150	49	6.72		5.80	31.4 ~~2~~	–	15	1,820
								16.8	100	45	4.89						
205	40	6°	19.6	.1 ~~.2~~	19.5 ~~.4~~	0	19.5 ~~.4~~	3.9	150	47	7.01		6.12	29.2 ~~4~~	–	15	1,780
								15.7	100	42	5.24						
190	40	6°	20.0	.1 ~~.2~~	19.9 ~~.8~~	0	19.9 ~~.8~~	4.0	150	46	7.16		6.33	29.8 ~~7~~	–	15	1,880
								16.0	150	60	5.50						
175	40	10°	20.9	.3 ~~.2~~	20.6 ~~.3~~	.1	20.5 ~~.2~~	4.2	150	52	6.34		5.73	30.8 ~~8~~	–	15	1,760
								16.7	100	43	5.12						
160	40	7°	21.0	.2 ~~.3~~	20.8 ~~.7~~	0	20.8 ~~.7~~	4.2	150	54	6.11		5.68	31.2 ~~8~~	–	15	1,760
								16.8	100	42	5.24						
145	41	6°	20.4	.1 ~~.2~~	20.3 ~~.2~~	0	20.3 ~~.2~~	4.1	100	42	5.24		5.12	30.4 ~~6~~	–	15	1,560
								16.3	100	44	5.00						
130	41	5°	22.0	.1 ~~.2~~	21.9 ~~.8~~	0	21.9 ~~.8~~	4.4	100	48	4.59		4.50	32.8 ~~7~~	–	15	1,480
								17.6	80	40	4.41						
115	42	5°	22.1	.1 ~~.2~~	22.0 ~~21.9~~	0	22.0 ~~21.9~~	4.4	150	61	5.41		5.05	33.0 ~~28~~	–	15	1,670
								17.7	100	47	4.69						
100	43	5°	22.2	.1 ~~.2~~	22.1 ~~.0~~	0	22.1 ~~22.0~~	4.4	100	40	5.50		5.14	33.2 ~~4~~	–	15	1,700
								17.8	100	46	4.79						
85	44	4°	19.5	.1	19.4	0	19.4	3.9	150	56	5.89		5.10	29.1	–	15	1,480
								15.6	80	41	4.30						
70	–	1°	11.0				11.0	2.2	80	43	4.11		3.54	12.6	–	11½	450
								8.8	60	45	2.96						
62	–	0°	6.0				6.0	1.2	30	44	1.53		1.02	42	–	7	40
REW								4.8	10	45	.51						
56	–	–	0				0						0	0		3	0
F in 4:10 pm														C5 ~~41~~ 67		409	34,0~~40~~ 150
465																	
56																	
409																	

Computed by HKH Checked by RHD No. 3 of ~~3~~ 5 Sheets.

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September 1943

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

Date ~~June 2~~ May 28, 1952, 19~~52~~

DISCHARGE MEASUREMENT NOTES

Brazos River at Richmond, Tex.

Dist. from initial point	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	VELOCITY Mean in section	Area	Mean depth	Width	Discharge
Meas. computed by .2 depth method to check Q relation by .2 depth method curve dated Oct 43											
LEW											
465		0			0			0			0
455		.2			0			43			0
445					.38			75			30
430					1.43			157			220
410					3.09			220			680
390					4.41			222			980
370					5.50			240			1,320
350					6.59			285			1,880
330					6.59			292			1,920
310					6.59			270			1,780
295					6.59			269			1,770
280					6.72			294			1,980
265					6.72			309			2,080
250					7.32			304			2,220
235					8.23			310			2,580
220					6.72			314			2,110
205					7.01			292			2,050
190					7.16			298			2,140
175					6.34			308			1,950
160					6.11			312			1,910
145		.2			5.24			304			1,590

No. 4 of 5 Sheets. Comp. by HKH Chk. by RHD

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September 1943

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

Date ~~June 2, 1952~~ May 28, 1952 **DISCHARGE MEASUREMENT NOTES**

Brazos River at Richmond, Tex

Angle coefficient

Dist. from initial point	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	VELOCITY Mean in section	Area	Mean depth	Width	Discharge
130		.2			4.59			328			1,500
115					5.41			330			1,790
100					5.50			332			1,830
85					5.89			291			1,710
70					4.11			126			520
62		.2			1.53			42			60
REW 56		0			0			0			0
											38,600 570

.2 depth method Coeff = $\frac{P_{.2 \cdot .8}}{P_{.2}}$

Coeff = $\frac{34,200}{38,600}$ = 0.886

No. 5 of 5 Sheets. Comp. by HKH Chk. by RHD