9-275 c
(July 1935)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES BRANCH

RECORDED

DISCHARGE MEASUREMENT NOTES

Meas. No. 241

Checked by MGM

Date 7-31-44

Brazos River at Richmond, Tex.

Date May 3, 1944 Party Goines and Longacre

Width 428 Area 10.100 Vel. 6.64 G. H. _____ Disch. 66,500

Method 2 No. secs. 23 G. H. change +0.27 in 1.0 hrs. Susp. 50c.9

Method coef. .93 Hor. angle coef. 1.00 Meter No. 1705 Susp. coef. 1.00

GAGE READINGS				Tape
Time	G. W. T.	Recorder	~~Inside~~	Outside
5:30p	m.	21.95	21.95	22.15± 0.4
6:00	Start		(22.05)	
7:00	Finish		(22.35)	
7:20	p.m.	22.45	22.45	22.5 ±0.4
	Finish			
Weighted M. G. H.			22.22	
G. H. correction				
Correct M. G. H.				

Date rated Apr. 9, 1942 Used rating for rod Rod susp. Meter 0.9 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 —, changed to — at — Correct length — Levels obtained no

Measurement rated ~~excellent (2%), good (5%)~~, fair (8%), ~~poor (over 8%)~~, based on following conditions: Cross section See attached x-sect.

Flow Smooth Weather Favorable

Other Considerable drift

Gage ok

Record removed No Intake flushed No

Observer

Control Channel

Remarks Rising 0.27 ft/hr.

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

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80 • 75 •

add (2.4)

$T_p > 21.95$
O 22.15 ± 4 •
5:30p

UNITED STATES
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WATER RESOURCES BRANCH

9-275
January 1935

85 •

Date 5/3/44, 19__ **DISCHARGE MEASUREMENT NOTES**

Brazos River, at Richmond, Tex.

90 •

6:00

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 486		0						0	0		8	0
470		6.9	1.4	25	41			1.38	124		18	170
450		9.6	1.9	80	42			4.27	216		22½	920
425		21.1	4.2	150	59			5.69	527		25	3010
400	⊥	21.1	4.2	100	45			4.3.98	474		22½	2360 ~~1880~~
	6:15 pm											
380	⊥	* 23.0	3.9	200	69			6.48	460		20	2980
360		24.7	3.9	150	46			7.29	494		20	3600
340		26.5	4.2	150	47			7.14	430		20	3070
320		28.0	4.5	150	44			7.62	560		20	4260
300		28.9	4.6	100	28½			7.84	578		20	4530
	6:30 pm											
280		29.5	4.7	150	44			7.62	590		20	4500
260		29.5	4.9	150	45			7.45	590		20	4400

No. 2 of 4 Sheets. Comp. by WHG JKL Chk. by

75 • * See attached X-Sect.

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T = P = 22.45
0 22.5
+0.4 7:20 pm

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9-275
January 1935

Date 5/3/44, 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
240		29.7	5.0	75	21½			7.80	594		20	4630
220		29.3	5.0	75	21½			7.80	586		20	4580
200		29.8	5.1	50	13½			8.28	596		20	4940
	6:40											
180		31.4	5.2	100	27½			8.13	628		20	5100
160		29.8	5.3	150	47			7.14	596		20	4250
140		29.6	5.2	100	28			7.98	592		20	4730
120		30.2	5.3	40	12½			7.14	529		17½	~~3750~~ 3770
	6:50											
105		28.6	5.0	50	15¼			7.29	358		12½	2600
95		24.2	4.1	40	12			7.45	303		12½	2160
80		15.8	3.2	50	22			5.09	292		18½	1490
58		0	0					0	0		11	0
REW									10117		72150	~~71,550~~
	From discharge relation curve											x .93
	Coeff. to convert Q_2 to $Q_{.2-.8}$ = 0.93											~~66,541~~ 67099

7:00

No. 3 of 4 Sheets. Comp. by WHG JKL Chk. by [signature]

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Comparison of vel. at 0.2 depth, show that vel dropped appreciably after peak.

Assuming that some relation exists between velocity and score, use est. x-sect, as noted below.

Soundings at Hempstead indicate that max. score occured near beginning of rise and held until peak.

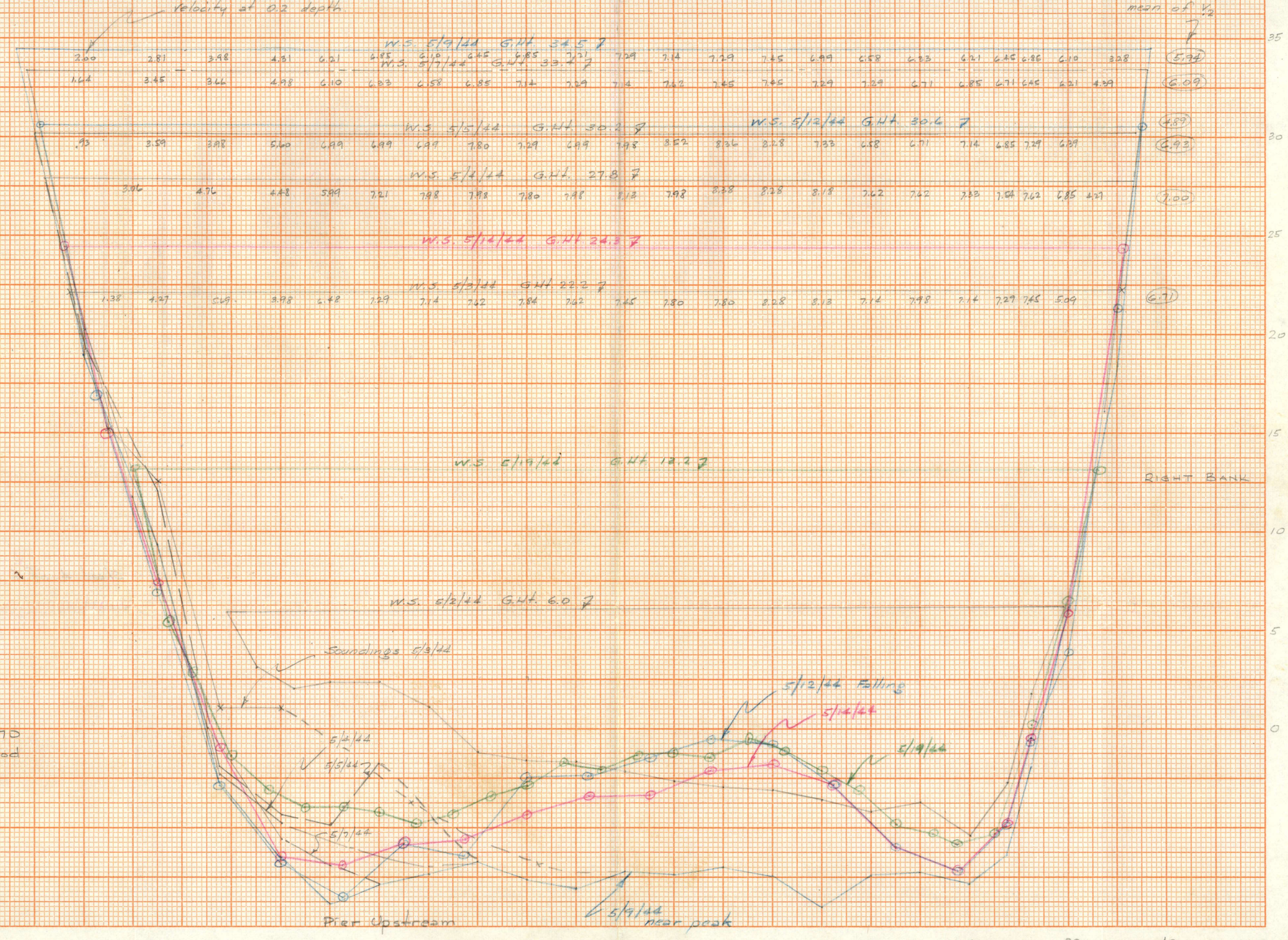
Meas. 5/3/44
use available soundings
est. x-sect *— — —* and soundings of 5/9/44

Meas. 5/4/44
use available soundings
est. x-sect ——— ———
and soundings 5/9/44

Meas. 5/5/44
use available soundings
est. x-sect — — — —
and soundings of 5/9/44

Meas. 5/7/44
use available soundings
and soundings of 5/9/44

W.H.G.
6/12/44



BRAZOS RIVER
AT
RICHMOND, TEX.

X-Sect. at Gateway, 270 ft. below Recorder, Flood of May 1944

Plotted by W.H.G.

Checked by

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