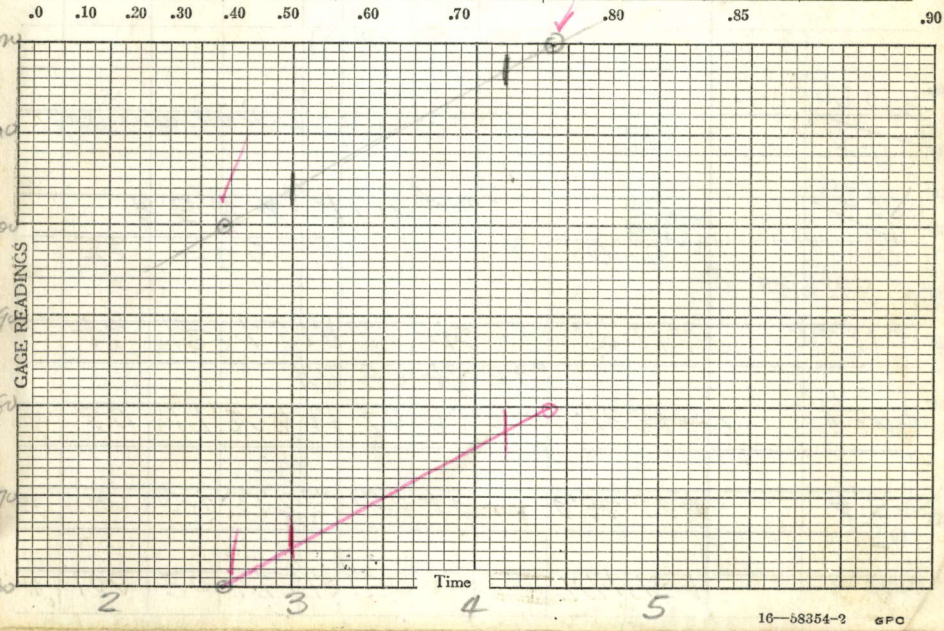
Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or --------	Area	Discharge
.0	.10	.20	.30	.40	.50	.60	.70	.80	.85	.90	
										.92	
										.94	
										.96	
										.97	
										.98	
										.99	
⊙										1.00	
										.99	
										.98	
										.97	
										.96	
										.94	
										.92	
.0	.10	.20	.30	.40	.50	.60	.70	.80	.85	.90	



16—58354-2 GPO

RECORDED

9-275-F
Jan. 1952

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. 509

Comp. by

Checked by

Brazos River at Richmond, Tex.

Date April 28, 1957 Party Sansom & Rosenquest

Width 464 Area 12,100 Vel. 6.34 G. H. Disch. 77,000

Method 2-8 No. secs. 28 G. H. change +.08 in hr. hrs. Susp. 100.0

Method coef. .93 Hor. angle coef. 1.00 Susp. coef. 1.00 Meter No. 3051

GAGE READINGS W.W.

Time		Recorder	Inside	Outside
2:37 pm		29.60	.50	30.00 +.02
3:00 pm	Start	(29.64)		
4:10 pm	End	(29.77)		
4:25 pm				30.20 +.02
Weighted M. G. H.		29.70		
G. H. correction				
Correct M. G. H.				

Date rated 8-19-49 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

Check-bar, chain found 58.70 changed to — at

Correct 58.68

Levels obtained No

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

Flow Smooth Weather Raining

Other — Air — °F@

Gage OK Water — °F@

Record removed No Intake flushed —

Observer USWB - not seen

Control Channel

Remarks 2 depth method used for entire meas. Total air & water corrections shown encircled under observed depths.

G. H. of zero flow — ft.

16—58354-2

River at— 509

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or --------	Area	Discharge
	L.E.W. @			3:00 pm							
	500	10	0		0			0	0		0
⊥	480	25	9.7	1.9	40	42	2.11		242		510
				7.8	30	42	1.58				
⊥	450	30	16.1	3.2	50	40	2.75		483		1,330
				12.9	60	43	3.07				
⊥	420	30	17.7	3.5	100	48	4.56		531		2,420
				14.2	80	45	3.90				
⊥	390	30	21.1	4.2	100	40	5.46		633		3,460
	25'			16.9	100	44	4.97				
5° ⊥	360	30	24.7	4.9	150	51		6.42	738 741		4,780
	24' to W.S.		-.1								
5° ⊥	330	30	26.7	5.3	150	47		6.97	798 801		5,580
	24' to W.S		-.1								
7° ⊥	300	30	31.5	6.3	150	48		6.82	936 945		6,380
	24' to W.S.		-.3								
6° ⊥	270	30	34.8	7.0	150	41		7.98	1038 1044		8,280
	24' to W.S		-.2								
8° ⊥	240	25	31.0	6.2	200	50		8.72	768 775		6,700
	24'		-.3								
12° ⊥	220	20	33.0	6.6	200	50		8.72	646 660		5,640
	25'		-.7								
12°	200	20	33.0	6.6	200	54		8.08	646 666		5,220
	26' to W.S.		-.7								
10°	180	20	34.0	6.8	200	59		7.40	668 674		4,980
	27'		-.8								
10°	160	20	34.4	6.9	150	41		7.98	678 688		5,400
	28'		-.5								
10°	140	20	36.0	7.2	150	44		7.44	708 722		5,260
	29'		-.6								
10°	120	20	37.0	7.4	150	45		7.27	726 740		5,280
	30' to W.S.		-.7								
10°	100	20	39.2	7.8	150	42		7.79	770 784		6,000
	31'		-.7								
6°	80	20	33.2	6.6	150	48		6.62	660 667		4,880
			-.2								
0	60	17	20.3	4.1	60	40	3.30		345		1,140
				16.2	80	48	3.66				
0	46	12	9.3	1.9	20	45	.99	.99	112		110
	36	5	0				0	0	0		0
	R.E.W. @ 4:10 pm.								12,124 12,143		82,870
	Coeff. to convert $Q_{.2}$ to $Q_{.2.8}$ = .93 (curve 10-1-43)										x .93 77,000
				Bayer Adj. Factor = 1.09							
								77,000 / 1.09 =		70,600?	