

RESERVOIR SEDIMENT
DATA SUMMARY

SCS-34 Rev. 6-66

Lower Bayou Site No. 13

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

50-56
DATA SHEET NO.

DAM	1. OWNER Thomas M. Culwell		2. STREAM Lower Bayou		3. STATE Oklahoma			
	4. SEC. 22 TWP. 65 RANGE 2W		5. NEAREST P.O. Wilson, OK		6. COUNTY Love			
	7. LAT. 34° 01' 40" LONG. 97° 21' 40"		8. TOP OF DAM ELEVATION 832.2		9. SPILLWAY CREST ELEV. 826.8			
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. ORIGINAL SURFACE AREA, ACRES	13. ORIGINAL CAPACITY, ACRE-FEET	14. GROSS STORAGE, ACRE-FEET	15. DATE STORAGE BEGAN		
	a. FLOOD CONTROL	826.8	112.94	1251.55	1404.01	1-6-72		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY							
	e. IRRIGATION					16. DATE NORMAL OPER. BEGAN		
	f. CONSERVATION							
	g. INACTIVE 1/	803.5	19.06	152.46	152.46	1-6-72		
17. LENGTH OF RESERVOIR			1.30 MILES	AV. WIDTH OF RESERVOIR		0.15 MILES		
WATERSHED	18. TOTAL DRAINAGE AREA		4.64 SQ. MI.	22. MEAN ANNUAL PRECIPITATION		34.00 INCHES		
	19. NET SEDIMENT CONTRIBUTING AREA		4.46 SQ. MI.	23. MEAN ANNUAL RUNOFF		4.20 INCHES		
	20. LENGTH	2.33 MILES	AV. WIDTH	2.00 MILES	24. MEAN ANNUAL RUNOFF		1039 AC.-FT.	
	21. MAX. ELEV. 985.0		MIN. ELEV. 786.7		25. ANNUAL TEMP.: MEAN 63°F RANGE -5° to 108°F			
	26. DATE OF SURVEY	27. PERIOD YEARS	28. ACCL. YEARS	29. TYPE OF SURVEY	30. NO. OF RANGES OR CONTOUR INT.	31. SURFACE AREA, ACRES	32. CAPACITY, ACRE-FEET	33. C/I. RATIO, AC.-FT. PER AC.-FT.
1-6-72	-	-	Range-Contour (D)	25 R 2' CI	19.06 (112.94)	152.46 (1404.01)	0.15 (1.35)	
5-8-78	6.34	6.34	Range-Contour (D)	25 R 2' CI	18.75 (112.94)	135.30 (1383.72)	0.13 (1.33)	
SURVEY DATA	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW, ACRE-FEET			36. WATER INFL. TO DATE, AC.-FT.		
			a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE	
	26. DATE OF SURVEY	37. PERIOD CAPACITY LOSS, ACRE-FEET			38. TOTAL SED. DEPOSITS TO DATE, ACRE-FEET			
		a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	
	5-8-78	17.16 (20.29)	2.71 (3.20)	0.59 (0.72)	17.16 (20.29)	2.71 (3.20)	0.59 (0.72)	
	26. DATE OF SURVEY	39. AV. DRY WGT., LBS. PER CU. FT.	40. SED. DEP., TONS PER SQ. MI.-YR.		41. STORAGE LOSS, PCT.		42. SED. INFLOW, PPM	
			a. PERIOD	b. TOTAL TO DATE	a. AV. ANN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE
	5-8-78	64 Sed. P (3) 91 Det. P (3)	818 (1080)	818 (1080)	1.78 0.23	11.26 1.45		

CREST 9.8 15.8 19.8 23.3 25.8 27.8 29.8 31.8 33.8 35.8 37.8

26. DATE OF SURVEY	43. to DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION to														
	9.8	15.8	19.8	23.3	25.8	27.8	29.8	31.8	33.8	35.8	37.8	40.1			
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
5-8-78	2	9	5	0	5	20	17	16	11	8	5	2			
26. DATE OF SURVEY	44. REACH DESIGNATION PERCENT OF TOTAL ORIGINAL LENGTH OF RESERVOIR														
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	-105	-110	-115	-120	-125
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
45. RANGE IN RESERVOIR OPERATION															
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.								
46. ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
47. REMARKS AND REFERENCES															
<p><u>1/</u> Sediment pool.</p> <p>Land Use: 1% cropland, 12% grassland, 85% woodland, 2% miscellaneous (1972). 2% cropland, 33% range, 1% pasture, 63% forest, 1% miscellaneous (1978).</p> <p>Geology: 100% Washita Group, Cretaceous Age.</p> <p>Land Resource Area: Cross Timbers.</p> <p>Figures in parentheses include sediment and flood pools.</p>															
48. AGENCY MAKING SURVEY Oklahoma Watershed Planning Staff															
49. AGENCY SUPPLYING DATA SCS, USDA															
50. DATE 10-4-78															

ELEVATION-AREA-CAPACITY DATA

<u>Original Survey (1972)</u>			<u>1978 Survey</u>		
Elevation	Area	Capacity	Elevation	Area	Capacity
786.7	0	0	787.0	0	0
789.0	0.63	0.72	789.0	0.50	0.33
791.0	3.18	4.53	791.0	2.62	3.17
793.0	7.33	15.04	793.0	6.47	11.99
795.0	9.88	32.25	795.0	8.50	26.92
797.0	11.65	53.78	797.0	9.84	45.26
799.0	13.30	78.73	799.0	11.61	66.69
801.0	16.27	108.30	801.0	14.99	93.23
<u>2/ 803.5</u>	<u>19.06</u>	<u>152.46</u>	<u>2/ 803.5</u>	<u>18.75</u>	<u>135.30</u>
805.0	21.22	182.67	805.0	21.46	165.43
807.0	24.32	228.21	807.0	24.73	211.61
809.0	28.25	280.78	809.0	28.00	264.33
811.0	33.29	342.32	811.0	31.87	324.18
813.0	38.82	414.43	813.0	38.82	394.79
815.0	46.54	499.79	815.0	46.54	480.08
817.0	54.93	601.26	817.0	54.93	581.35
819.0	65.57	721.76	819.0	65.57	701.75
821.0	76.48	863.81	821.0	76.48	843.74
823.0	86.88	1027.17	823.0	86.88	1007.06
825.0	99.11	1213.16	825.0	99.11	1193.01
<u>3/ 826.8</u>	<u>112.94</u>	<u>1404.01</u>	<u>3/ 826.8</u>	<u>112.94</u>	<u>1383.72</u>

2/ Principal spillway elevation.

3/ Emergency spillway elevation.