

RESERVOIR SEDIMENTATION
DATA SUMMARY

Sandstone Creek No. 9

NAME OF RESERVOIR
Trib. E. Fk.

DATA SHEET NO.

DAM	1. OWNER			2. RIVER Sandstone Cr.			3. STATE Oklahoma							
	4. SEC. 20 TWP. 12N RANGE 22W			5. NEAREST TOWN Elk City			6. COUNTY Roger Mills							
	7. STREAM BED ELEV.			8. TOP OF DAM ELEV. 96.0			9. SPILLWAY CREST ELEV.							
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. SURFACE AREA ACRES	13. STORAGE ACRE- FEET	14. ACCUMULATED ACRE- FEET	15. DATE STORAGE BEGAN								
	a. FLOOD CONTROL	92.0	82.18		1/ 1275.09	3-3-51								
	b. POWER													
	c. WATER SUPPLY													
	d. IRRIGATION					16. DATE NORMAL OPER. BEGAN								
	e. CONSERVATION					3-3-51								
	f. INACTIVE	71.94	22.98		1/ 246.20									
17. LENGTH OF RESERVOIR		0.85 MILES		AV. WIDTH OF RESERVOIR		0.08 MILES								
WATERSHED	18. TOTAL DRAINAGE AREA			3.50 SQ. MI.			22. MEAN ANNUAL PRECIPITATION			25.00 INCHES				
	19. NET SEDIMENT CONTRIBUTING AREA			2.48 SQ. MI.			23. MEAN ANNUAL RUNOFF			1.38 INCHES				
	20. LENGTH		4.80 MILES		AV. WIDTH		0.73 MILES		24. MEAN ANNUAL RUNOFF			73.50 AC.-FT.		
	21. MAX. ELEV.		MIN. ELEV.		25. CLIMATIC CLASSIFICATION								Subhumid	
SURVEY DATA	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/W RATIO AC.-FT. PER SQ. MI.						
	3-3-51	-	-	Range & Topo.	11	22.98	1/ 246.20	70.34						
	10-9-57	6.58	6.58			(82.18)	1/ (1275.09)	(364.31)						
						22.81	191.34	54.67						
						(82.18)	(1217.59)	(347.83)						
	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 SEDIMENT DEPOSITS 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							
	10-9-57	54.83 (57.50)	8.34 (8.73)	2.41 (2.52)	54.83 (57.50)	8.34 (8.73)	2.41 (2.52)							
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. ANNUAL	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE							
10-9-57	75.78	3978 (4150)	3978 (4150)	3.39 (.68)	22.28 (.51)	-								

() Both pools.
1/ Original Capacity.

26. DATE OF SURVEY 3-3-51	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW CREST ELEVATION											
	92-88	88-84	84-80	80-76	76-71.9	71.9-68	68-64	64-60	60-56	56-52	52-48	
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
10-9-57	0	0	0	2	3	10	15	16	16	24	14	

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. Original Capacity			ELEVATION-AREA-CAPACITY DATA					
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
92.0	82.18	1275.09	56.0	5.88	26.69			
88.0	69.16	973.54	52.0	3.39	8.43			
84.0	57.15	721.93	48.0	1.06	0			
80.0	44.71	519.22	47.0	0	0			
76.0	34.03	362.61						
71.9	22.98	246.20						
68.0	17.95	166.59						
64.0	13.54	103.97						
60.0	9.79	57.63						

47. REMARKS AND REFERENCES
 Land Use: 93% pasture; 3% cultivation; 4% miscellaneous.
 Geology: 40% in the Elk City member of the Quartermaster formation;
 60% in the Elk City member of the Quartermaster formation.

48. AGENCY SUPPLYING DATA Soil Conservation Service Stillwater, Okla. 49. DATE March 26, 1962

March 26, 1962

Continuation

U. S. Department of Agriculture

Soil Conservation Service

50-31

Data Sheet No.

Sandstone Creek No. 9

46. ELEVATION - AREA - CAPACITY DATA

1957 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
92.0	82.18	1217.59	60.0	7.43	26.54
88.0	69.16	916.04	56.0	3.81	4.52
84.0	57.15	664.43	54.0	0	0
80.0	44.71	461.72			
76.0	33.47	306.30			
71.9	22.81	191.34			
68.0	15.71	117.36			
64.0	11.32	63.67			

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Sandstone - Site #9

NAME OF RESERVOIR

50- 31a

DATA SHEET NO.

SCS-34 Rev. 6-66

DAM	1. OWNER			2. STREAM Sandstone			3. STATE Oklahoma									
	4. SEC. 28 TWP. 12N RANGE 22W			5. NEAREST P. O. Elk City			6. COUNTY Roger Mills									
	7. LAT. " " " " " " " " " " " "			8. TOP OF DAM ELEVATION 96.0			9. SPILLWAY CREST ELEV. 92.0									
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		92.0		(82.18)		(1275.09)		(1275.09)		3-3-51					
	b. MULTIPLE USE															
	c. POWER															
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION															
	f. CONSERVATION										3-3-51					
g. INACTIVE		71.94		22.98		246.20		246.20								
WATERSHED	17. LENGTH OF RESERVOIR 0.85 MILES				AV. WIDTH OF RESERVOIR .08 MILES											
	18. TOTAL DRAINAGE AREA 3.50 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 25.00 INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA 3.46 SQ. MI.				23. MEAN ANNUAL RUNOFF 1.38 INCHES											
	20. LENGTH 4.80 MILES		AV. WIDTH 0.73 MILES		24. MEAN ANNUAL RUNOFF 258 AC.-F.T.											
	21. MAX. ELEV. 92.0		MIN. ELEV.		25. ANNUAL TEMP.: MEAN RANGE Subhumid											
SURVEY DATA	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.	
	3-3-51										22.98 (82.18)		246.20 (1275.09)		0.95 (4.94)	
	10-9-57		6.58		6.58		Range & Topo				22.81 (82.18)		191.34 (1217.59)		0.74 (4.72)	
	10-9-62		5.0		11.58						21.11 (82.18)		158.53 (1178.72)		0.61 (4.57)	
	9-15-67		4.93		16.51		Range Contour (D)		10 (R) 2' C.I.		22.73 (82.34)		167.44 (1175.25)		0.65 (4.56)	
	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			
10-9-57		54.86 (57.50)		8.34 (8.73)		2.41 (2.52)		54.86 (57.50)		8.34 (8.73)		2.41 (2.52)				
10-9-62		32.81 (38.87)		6.56 (7.77)		1.90 (2.20)		87.67 (96.37)		7.57 (8.32)		2.19 (2.40)				
9-15-67 1/2		- (3.47)		- (0.70)		- (0.20)		78.76 (99.84)		4.77 (6.05)		1.38 (1.75)				
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				
10-9-57		75.78		3978 (4160)		3978 (4160)		3.39 (0.68)		22.28 (4.51)						
10-9-62		79.4		3530 (4148)		3787 (4150)		3.07 (0.45)		35.61 (7.56)						
9-15-67		74 Sed P(2) 100 DetP(2)		- (436)		2224 (3812)		1.94 (.47)		31.99 (7.83)						

() Includes Both Pools. Weighted Av. 80 lbs.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	92-88	88-84	84-80	80-76	76-71	71-67	67-63	63-60	60-56	56-52	52-48	
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
10-9-57	0	0	0	2	3	10	15	16	16	24	14	
10-9-62	0	0	0	2	6	12	15	14	23	19	9	
9-15-67	3	7	0	5	0	17	5	11	22	19	11	

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 <u>2/</u>								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES
 Land Use: 93% Pasture, 5% Cultivation, 2% Miscellaneous.
 Geology: 40% Elk City, 60% Doxey Member of Quartermaster Formation Permian Age.

1/ 1967 survey showed less sediment in Sediment Pool Area than 1962 survey. 1967 survey the reservoir was almost dry, 1962 survey, lake was full.

2/ Capacity Data on Attached Sheet.

48. AGENCY MAKING SURVEY
 49. AGENCY SUPPLYING DATA S.C.S.
 50. DATE 11-3-67

ELEVATION - AREA - CAPACITY DATA

Sandstone Cr. Site 9

Data Sheet No. 50-

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	:	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
<u>Original Capacity</u>				<u>1957 (Revised) 12-14-61</u>		
92.0	81.68	1275.09		92.0	82.18	1230.40
88.0	68.74	974.24		88.0	69.16	927.72
84.0	56.74	724.76		84.0	57.15	675.10
80.0	44.51	523.18		80.0	44.71	471.38
76.0	33.95	366.26		76.0	33.47	315.02
72.0	22.98	252.40		71.9	22.81	202.46
68.0	17.95	170.54		68.0	15.71	125.42
64.0	13.54	107.56		64.0	11.32	71.36
60.0	9.79	60.90		60.0	7.43	33.86
56.0	5.88	29.56		56.0	3.81	11.38
52.0	3.39	11.02		54.0	.99	1.98
48.0	1.06	2.12				
<u>October 1962</u>				<u>September 1967</u>		
92.0	82.18	1187.12		57.0	.00	.00
88.0	69.16	884.44		58.0	2.44	.813
84.0	57.15	631.82		60.0	5.61	8.646
80.0	44.50	428.52		62.0	8.49	22.647
76.0	33.12	273.28		64.0	10.45	41.553
71.9	21.11	164.82		66.0	13.27	65.217
68.0	13.97	94.66		68.0	15.38	93.841
64.0	10.35	46.02		70.0	18.84	128.003
60.0	6.21	12.90		71.9	22.73	167.436
56.0	0.12	-		74.0	29.12	221.740
				76.0	32.66	283.487
				78.0	37.74	353.825
				80.0	44.03	435.515
				82.0	50.20	529.677
				84.0	55.87	635.697
				86.0	58.89	750.443
				88.0	68.06	877.283
				90.0	73.84	1019.143
				92.0	82.34	1175.246