

RESERVOIR SEDIMENTATION
DATA SUMMARY

Sandstone Creek No. 5
NAME OF RESERVOIR
Trib. of E. Br. of

50-29

DATA SHEET NO.

DAM	1. OWNER			2. RIVER Sandstone Cr.			3. STATE Oklahoma					
	4. SEC. 26 TWP. 12N RANGE 22W			5. NEAREST TOWN Elk City			6. COUNTY Beckham					
	7. STREAM BED ELEV. 41.5			8. TOP OF DAM ELEV. 89.0			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		84.0		(87.15)				(1273.21)		3-3-51	
	b. POWER											
	c. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	d. IRRIGATION											
	e. CONSERVATION											
	f. INACTIVE		68.0		32.05				360.02		3-3-51	
17. LENGTH OF RESERVOIR 1.87 MILES						AV. WIDTH OF RESERVOIR 0.07 MILES						
WATERSHED	18. TOTAL DRAINAGE AREA 3.89 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 25.00 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 3.84 SQ. MI.				23. MEAN ANNUAL RUNOFF 1.38 INCHES							
	20. LENGTH 2.67 MILES		AV. WIDTH 1.46 MILES		24. MEAN ANNUAL RUNOFF 73.60 AC.-FT.							
	21. MAX. ELEV.		MIN. ELEV. 41.5		25. CLIMATIC CLASSIFICATION Subhumid							
	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		-	-	Detail	-	-	360.02 (1273.21)	92.55 327.30				
7-20-57		6.39	6.39	Range and Contour	12	32.05 (87.15)	304.39 (1217.58)	78.25 (313.00)				
9-27-61		4.19	10.58			30.18 (87.15)	242.95 (1152.23)	62.46 (296.20)				
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					
3-3-51		-	-	-	-	-	-					
7-20-57		55.63 (55.63)	8.71 (8.71)	2.27 (2.27)	55.63 (55.63)	8.71 (8.71)	2.27 (2.27)					
9-27-61		61.44 (65.35)	14.66 (15.60)	3.82 (4.06)	117.07 (120.98)	11.07 (11.43)	2.88 (2.98)					
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			
7-20-57		95.70		4731 (4731)	4731 (4731)	2.42 (.68)	15.45 (4.37)					
9-27-61		77.60		6456 (6862)	4868 (5037)	3.07 (.90)	32.52 (9.50)					
(-) Includes sed. and flood pool. 1/ Original Capacity												

25. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	84-80	80-76	76-72	72-68	68-64	64-60	60-56	56-52	52-48	48-44	44-43	
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
3-3-51 9-27-61	0	0	0	3	10	17	23	17	17	12	1	

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
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. 1961 capacity			ELEVATION-AREA-CAPACITY DATA					
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
84.0	87.15	1152.23	60.0	13.91	69.97			
80.0	71.44	836.37	56.0	7.34	28.27			
76.0	57.41	579.83	52.0	4.32	5.28			
72.0	41.00	384.41	49.0	.15	0			
68.0	30.18	242.95						
64.0	21.57	140.19						

47. REMARKS AND REFERENCES Land Use: Native Pasture 87%; Cultivation 12%; Misc. 1%.
 Geology: 10% Ogallala formation.
 58% Doxey Member Quartermasture formation.
 31% Elk City member Quartermasture formation.

48. AGENCY SUPPLYING DATA Soil Conservation Service Stillwater, Okla. 49. DATE March 26, 1961

Continuation

U. S. Department of Agriculture

Soil Conservation Service

50-29

Data Sheet No.

Sandstone Creek No. 5

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>
84.0	87.15	1212.58	60.0	17.88	109.75
80.0	71.44	901.72	56.0	11.46	51.70
76.0	57.41	645.18	52.0	5.81	17.88
72.0	41.00	449.76	48.0	2.31	2.21
68.0	32.05	304.39	47.0	.08	0
64.0	23.99	192.98			

Original Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>	<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
84.0	87.15	1273.21	60.0	20.33	154.65
80.0	71.44	957.35	56.0	14.67	85.13
76.0	57.41	700.81	52.0	7.60	41.47
72.0	41.00	505.39	48.0	5.61	15.22
68.0	32.05	360.02	44.0	1.93	.82
64.0	25.39	245.68	43.0	.10	0

RESERVOIR SEDIMENT
DATA SUMMARY

Sandstone Site No. 5

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

50- 29a

DATA SHEET NO.

DAM	1. OWNER				2. STREAM Washita				3. STATE Oklahoma			
	4. SEC. 26 TWP. 12-N RANGE 22-W				5. NEAREST P.O. Elk City				6. COUNTY Beckham			
	7. LAT. " LONG. "				8. TOP OF DAM ELEVATION 89.0				9. SPILLWAY CREST ELEV.			
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		84.0		(87.15)				(1273.21)		3-3-51	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION											
	f. CONSERVATION											
g. INACTIVE		68.0		32.05				360.02		3-3-51		
WATERSHED	17. LENGTH OF RESERVOIR 1.87 MILES				AV. WIDTH OF RESERVOIR 0.07 MILES							
	18. TOTAL DRAINAGE AREA 3.89 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 25.00 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 3.84 SQ. MI.				23. MEAN ANNUAL RUNOFF 1.38 INCHES							
	20. LENGTH 2.67 MILES		AV. WIDTH 1.46 MILES		24. MEAN ANNUAL RUNOFF 286 AC.-F.T.							
	21. MAX. ELEV.		MIN. ELEV. 41.5		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/R RATIO, AC.-FT. PER ACRES SQ. MI.			
	3-3-51		-	-	Detail	-	-	360.02 (1273.21)	327.30			
	7-20-57		6.39	6.39	Range and		32.05 (87.15)	304.39 (1217.58)	313.00			
	9-27-61		4.19	10.58	Contour		30.18 (87.15)	242.95 (1152.23)	296.20			
	7-20-66		4.81	15.38	Range	12 (R)	27.74	225.22	289.7			
					Contour (D)	2 C.I.	(87.15)	(1127.06)				
	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					
3-3-51		-	-	-	-	-	-					
7-20-57		55.63 (55.63)	8.71 (8.71)	2.27 (2.27)	55.63 (55.63)	8.71 (8.71)	2.27 (2.27)					
9-27-61		61.44 (65.35)	14.66 (15.60)	3.82 (4.06)	117.07 (120.98)	11.07 (11.43)	2.88 (2.98)					
7-20-66		17.7 (25.1)	3.67 (5.21)	.96 (1.36)	134.8 (146.1)	8.76 (10.15)	2.28 (2.64)					
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					
7-20-57		95.7	4731 (4731)	4731 (4731)	2.42 (.68)	15.45 (4.37)						
9-27-61			5090 (5501)	4868 (5037)	3.07 (.90)	32.52 (9.50)						
7-20-66		58 Sed P(2) 88 DetP (2)	1213 (1980)	2880 (3750)	2.43 (.80)	37.4 (11.5)						

() Includes Both Pools.

Aug = 80 135/113

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	84-80	80-76	76-72	72-68	68-64	64-60	60-56	56-52	52-48	48-44	44-43	
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
3-3-51												
7-20-57	0	0	0	0	5	14	21	18	19	22	1	
9-27-61	0	0	0	3	10	17	23	17	17	12	1	
7-20-66	0	0	0	9	14	16	18	16	16	10	1	

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 1/								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES
 1/ Elevation-Area-Capacity Data on separate sheet.
 Land Use: 18% Cultivation, 80% Native Pasture, 2% Miscellaneous
 Geology: 10% Ogalalla Formation, Tertiary Age; 58% Doxey Member and
 32% Elk City Member of Quartermaster Formation.

48. AGENCY MAKING SURVEY _____
 49. AGENCY SUPPLYING DATA SCS - Stillwater, Oklahoma
 50. DATE _____

ELEVATION - AREA - CAPACITY DATA

Sandstone Site No. 5

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>1961 Capacity</u>		
84.0	87.15	1273.21		84.0	87.15	1152.23
80.0	71.44	957.35		80.0	71.44	836.37
76.0	57.41	700.81		76.0	57.41	579.83
72.0	41.00	505.39		72.0	41.00	384.41
68.0	32.05	360.02		68.0	30.18	242.95
64.0	25.39	245.68		64.0	21.57	140.19
60.0	20.33	154.65		60.0	13.91	69.97
56.0	14.67	85.13		56.0	7.34	28.27
52.0	7.60	41.47		52.0	4.32	5.28
48.0	5.61	15.22		49.0	0.15	0
44.0	1.93	0.82				
43.0	0.10	0				
<u>1957 Capacity</u>				<u>1966 Capacity</u>		
84.0	87.15	1217.58		84.0	87.15	1127.06
80.0	71.44	901.72		80.0	71.44	810.49
76.0	57.41	645.18		76.0	57.41	553.37
72.0	41.00	449.76		72.0	41.00	357.54
68.0	32.05	304.39		70.0	31.88	284.82
64.0	23.99	192.98		68.0	27.74	225.22
60.0	17.88	109.75		66.0	23.14	174.38
56.0	11.46	51.70		64.0	19.73	131.53
52.0	5.81	17.88		62.0	16.67	95.15
48.0	2.31	2.21		60.0	13.60	64.92
47.0	0.08	0		58.0	11.20	40.16
				56.0	7.12	21.98
				54.0	4.75	10.18
				52.0	2.89	2.61
				50.0	0.22	0