

RESERVOIR SEDIMENTATION
DATA SUMMARY

Calvalry Creek No. 1
NAME OF RESERVOIR

50 - 14
DATA SHEET NO.

DAM	1. OWNER Troy Orr			2. RIVER Cloud Cr.			3. STATE Oklahoma									
	4. SEC. 27 TWP. 9N RANGE 16W			5. NEAREST TOWN Cordell			6. COUNTY Washita									
	7. STREAM BED ELEV. 73.9*			8. TOP OF DAM ELEV. 110.0*			9. SPILLWAY CREST ELEV. 105.0*									
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		105.0*		48.52		-		505.44		7-28-48					
	b. POWER															
	c. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	d. IRRIGATION															
	e. CONSERVATION		97.0*		25.05		-		207.79		7-28-48					
	f. INACTIVE															
17. LENGTH OF RESERVOIR 1.34 1/				MILES				AV. WIDTH OF RESERVOIR 0.06				MILES				
WATERSHED	18. TOTAL DRAINAGE AREA 2.19				SQ. MI.				22. MEAN ANNUAL PRECIPITATION 28.00				INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA 2.15 2/				SQ. MI.				23. MEAN ANNUAL RUNOFF 1.42				INCHES			
	20. LENGTH 2.00		MILES		AV. WIDTH 1.10		MILES		24. MEAN ANNUAL RUNOFF 75.73		AC.-FT.					
	21. MAX. ELEV. -		MIN. ELEV. 73.9*		25. CLIMATIC CLASSIFICATION Sub-humid											
	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.	
7-28-48		-		-		-		-		48.52		505.44		235.1		
9-18-59		11.15		11.15		Det. Range		10		48.52		476.57		221.7		
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		d. MEAN ANNUAL		e. 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		d. TOTAL TO DATE		e. AV. ANNUAL		f. PER SQ. MI.-YEAR				
9-18-59		23.52 (28.87) 3/		2.11 (2.59)		0.98 (1.20)		23.52 (28.87) 3/		2.11 (2.59)		0.98 (1.20)				
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				
9-18-59		74.47		1589.52 (1946.35)		1589.52 (1946.35)		01.02 (00.51)		11.32 (5.71)						

* Assumed.

1/ Includes 0.57 mile of 3 side arms of lake.

2/ 4 drop inlets with combined total of 590 acres or 0.92 sq. mi. with est. T. B. of 65%.

3/ 5.35 ac.ft. of sediment in flood pool.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION													
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													

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
105.0	48.52	505.44	81.0	3.33	11.28			
101.0	37.96	332.92	77.0	1.25	2.45			
97.0	25.05	207.79	73.9	-	-			
93.0	17.98	122.11						
89.0	10.89	64.96						
85.0	6.49	30.57						

47. REMARKS AND REFERENCES
 * Assumed elevation.
 Geology - Cloud Chief formation.
 C/I Ratio: = (94.88 = 1.25); (248.26 = 3.28)
 Est. trap efficiency = 97%.

48. AGENCY SUPPLYING DATA Soil Conservation Service
 Stillwater, Oklahoma 49. DATE 10-29-59

RESERVOIR SEDIMENT
DATA SUMMARY

Cavalry Creek Site No. 1

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

50-19a

DATA SHEET NO.

DAM	1. OWNER Troy Orr			2. STREAM Washita			3. STATE Oklahoma					
	4. SEC. 27 TWP. 9N RANGE 16W			5. NEAREST P.O. Cordell			6. COUNTY Washita					
	7. LAT. ° ' " LONG. ° ' "			8. TOP OF DAM ELEVATION 110.0 1/			9. SPILLWAY CREST ELEV. 105.0 1/					
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		105.0 1/		48.52		297.65		505.44		7-28-48	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION											
	f. CONSERVATION											
g. INACTIVE		97.0 1/		25.05		207.79		207.79		7-28-48		
17. LENGTH OF RESERVOIR .77 MILES					AV. WIDTH OF RESERVOIR .06 MILES							
WATERSHED	18. TOTAL DRAINAGE AREA 2.19 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 28.00 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 2.15 SQ. MI.				23. MEAN ANNUAL RUNOFF 1.42 INCHES							
	20. LENGTH 2.00 MILES		AV. WIDTH 1.10 MILES		24. MEAN ANNUAL RUNOFF 165.9 AC.-FT.							
	21. MAX. ELEV. 1600		MIN. ELEV. 73.9 1/		25. ANNUAL TEMP.: MEAN RANGE 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/I. RATIO, AC.-FT. PER AC.-FT.			
9-18-59		-	-	Range (D)	10 (R)	25.1 (48.5)	207.8 (505.4)	1.25 (3.05)				
9-18-59		11.15	11.15	Range (D)	10 (R)	25.1 (48.5)	184.3 (476.6)	1.11 (2.87)				
8-11-64		4.89	16.04	Range (D)	10 (R)	25.1 (48.5)	183.1 (471.8)	1.10 (2.84)				
6-18-69		4.85	20.89	Range Contour (D)	10 (R) 2'C.I.	25.3 (47.7)	176.2 (458.8)	1.06 (2.77)				
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					
9-18-59		23.5 (28.8)	2.1 (2.6)	0.98 (1.20)	23.5 (28.8)	2.11 (2.59)	0.98 (1.20)					
8-11-64		1.2 (4.8)	0.3 (1.0)	0.12 (0.46)	24.7 (33.7)	1.54 (2.10)	0.72 (0.98)					
6-18-69		6.9 (13.0)	1.42 (2.68)	0.66 (1.25)	31.6 (46.6)	1.51 (2.23)	0.70 (1.04)					
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				
9-18-59		74.5	1590 (1946)	1590 (1946)	1.02 (0.51)	11.32 (5.71)						
8-11-64		74.5	195 (746)	1168 (1590)	0.74 (0.42)	11.91 (6.66)						
6-18-69		52 Sed P(3) 97 Det P(3)	747 (1993)	793 (1511)	0.73 (0.44)	15.21 (9.22)						

1/ Assumed Elevations. } weighted Avg. = 74 lbs/ft³

Note: Figures in parentheses represent sediment and flood control pools.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION													
	105-101	97-93	93-89	89-85	85-81	81-79								
101 PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
8-11-64	16.3	10.3		3.3		12.0		13.4		20.4	24.3			
6-18-69	20.1	12.2		10.8		12.0		7.8		14.9	22.2			
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
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 2/														
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY						
See attached sheet														
47. REMARKS AND REFERENCES														
<p>Geology: Cloud Chief Formation, Permian Age</p> <p>Land Use: Cultivation 57% Pasture-Range 42% Miscellaneous 1% 1969 Cultivation 58% Pasture-Range 41% Miscellaneous 1% 1960</p> <p>Land Resource Area: Central Rolling Red Prairies</p> <p>Note: Four drop inlets that control 590 acres are installed which has decreased the sediment to this site.</p>														
48. AGENCY MAKING SURVEY												Oklahoma Watershed Planning Staff		
49. AGENCY SUPPLYING DATA												S.C.S. U.S.D.A.		
												50. DATE 12-5-69		

ELEVATION-AREA-CAPACITY DATA

Elevation	Area	Capacity	Elevation	Area	Capacity
	<u>Original Capacity</u>				
105.0	48.52	505.44	85.0	5.03	15.50
101.0	37.96	332.92	83.0	2.91	7.61
97.0	25.05	207.79	81.0	1.65	3.09
93.0	17.98	122.11	79.0	0.91	0.56
89.0	10.98	64.96		<u>1969 Capacity</u>	
85.0	6.49	30.57	105.0	47.73	458.78
81.0	3.33	11.28	103.0	40.46	370.69
77.0	1.25	2.45	101.0	34.61	295.69
73.7	0.00	0.00	99.0	29.85	231.29
	<u>1964 Capacity</u>		97.0	25.28	176.23
105.0	48.52	471.78	95.0	20.19	130.85
101.0	35.56	304.71	93.0	15.18	95.60
99.0	30.30	238.59	91.0	13.12	67.32
97.0	25.05	183.05	89.0	10.23	44.03
95.0	21.47	136.34	87.0	7.69	26.17
93.0	16.31	98.49	85.0	5.28	13.28
91.0	13.00	69.10	83.0	2.91	5.21
89.0	10.63	45.39	81.0	1.43	0.95
87.0	7.13	27.66	79.0	0.00	0.00

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Cavalry Creek Site #1

SCS-34 Rev. 6-66

NAME OF RESERVOIR

50-14b

DATA SHEET NO.

DAM	1. OWNER Troy Orr			2. STREAM Washita			3. STATE Oklahoma									
	4. SEC. 27 TWP. 9N RANGE 16W			5. NEAREST P. O. Cordell			6. COUNTY Washita									
	7. LAT. 35° 20' 40" LONG. 99° 53' 30"			8. TOP OF DAM ELEVATION 110.0 1/			9. SPILLWAY CREST ELEV 105.0 1/									
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		105.0 1/		48.52		297.65		505.44		7-28-48					
	b. MULTIPLE USE															
	c. POWER										16. DATE NORMAL OPER. BEGAN					
	d. WATER SUPPLY										7-28-48					
	e. IRRIGATION															
	f. CONSERVATION															
g. INACTIVE 2/		97.0 1/		25.05		207.79		207.79								
17. LENGTH OF RESERVOIR			.77 MILES			AV. WIDTH OF RESERVOIR			.098 MILES							
WATERSHED	18. TOTAL DRAINAGE AREA			2.19 SQ. MI.			22. MEAN ANNUAL PRECIPITATION			28.00 INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA			2.11 SQ. MI.			23. MEAN ANNUAL RUNOFF			1.42 INCHES						
	20. LENGTH		2.00 MILES		AV. WIDTH		1.10 MILES		24. MEAN ANNUAL RUNOFF		165.9 AC.-FT.					
	21. MAX. ELEV.			1600			MIN. ELEV.			73.9 1/						
	25. ANNUAL TEMP: MEAN			61°			RANGE			-12° to 115°						
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.	
	9-18-59		-		-		Range (D)		10 (R)		25.1(48.5)		207.8(505.4)		1.25(3.05)	
	9-18-59		11.15		11.15		"		10 (R)		25.1(48.5)		184.3(476.6)		1.11(2.87)	
	9-11-64		4.89		16.04		"		10 (R)		25.1(48.5)		183.1(471.8)		1.10(2.84)	
	6-18-69		4.85		20.89		Range Contour(D)		10 (R)		25.3(47.7)		176.2(458.8)		1.06(2.77)	
	6-24-74		5.02		25.91		"		2' C.I.		23.6(43.2)		163.5(436.1)		0.99(2.63)	
	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			
	9-18-59		23.5(28.8)		2.1(2.6)		0.98(1.22)		23.5(28.8)		2.11 (2.58)		1.00(1.22)			
	8-11-64		1.2(4.8)		0.3(1.0)		0.11(0.46)		24.7(33.7)		1.54 (2.09)		0.73(.99)			
	6-18-69		6.9(13.0)		1.4(2.7)		0.66(1.27)		31.6(46.6)		1.51(2.23)		0.72(1.06)			
	6-24-74		12.7(22.7)		2.5(4.5)		1.18(2.14)		44.3(69.3)		1.71(2.67)		0.81(1.27)			
26. DATE OF SURVEY		39. AV. DRY WGT., LBS. PER CU. FT.		40. SED. DEP., TONS PERSQ. 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		
9-18-59		74.5		1590(1979)		1590(1979)		1.0(0.5)		11.3(5.7)						
8-11-64		74.5		185(751)		1185(1600)		0.7(0.4)		11.9(6.7)						
6-18-69		52 Sed. P(3) 97 Det. P(3)		764(2023)		815(1533)		0.7(0.4)		15.2(9.2)						
6-24-74		53 Sed. P(3) 91 Det. P(3)		1449(3135)		935(1847)		0.8(0.5)		21.3(13.7)						

1/ Assumed Elevation

2/ Sediment Pool

Note: Figures in parentheses represent sediment and flood control pools.

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26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	105-	101-97		97-93		93-89		89-85		85-81		81-79			
	101 PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
8-11-64	16.3	10.3		3.5		12.0		13.4		20.4		24.3			
6-18-69	20.1	12.2		10.8		12.0		7.8		14.9		22.2			
6-24-74	20.3	15.9		10.1		15.4		11.4		11.9		15.0			
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							
See attached sheet															
47. REMARKS AND REFERENCES															
<p>Geology: Cloud Chief Formation, Permian Age</p> <p>Land Use: Cropland 59% Pasture-Range 40 % Miscellaneous 1 % 1974</p> <p> Cropland 57% Pasture-Range 42% Miscellaneous 1% 1969</p> <p> Cropland 58% Pasture-Range 41% Miscellaneous 1% 1960</p> <p>Land Resource Area: Central Rolling Red Prairies</p> <p>Note: Four drop inlets that control 590 acres are installed which has decreased the sediment to this site.</p>															
48. AGENCY MAKING SURVEY Oklahoma Watershed & River Basin Planning Staff															
49. AGENCY SUPPLYING DATA SCS USDA 50. DATE 12-11-74															