SCS-34,
Jan. 1958

U.S. DEPARTMENT OF AGRICULTURE

RESERVOIR SEDIMENTATION DATA SUMMARY

Chigley Sandy No. 5
NAME OF RESERVOIR

SOIL CONSERVATION SERVICE
50 - 15
DATA SHEET NO.

DAM

1. OWNER R. Lancaster	2. RIVER Trib. of Chigley Sandy Cr.	3. STATE Oklahoma
4. SEC. 13 TWP. 2N RANGE 2E	5. NEAREST TOWN Wynnewood	6. COUNTY Garvin
7. STREAM BED ELEV. 998.2 1/	8. TOP OF DAM ELEV. 1026.60	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	1021.6 1/	32.33	-	263.67	6-29-1955
b. POWER					
c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN
d. IRRIGATION					
e. CONSERVATION	1013.1 1/	11.59	-	79.62	6-29-1955
f. INACTIVE					

17. LENGTH OF RESERVOIR 0.58 2/ MILES | AV. WIDTH OF RESERVOIR 0.09 MILES

WATERSHED

18. TOTAL DRAINAGE AREA 0.81 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 37.00	INCHES
19. NET SEDIMENT CONTRIBUTING AREA 0.79 SQ. MI.		23. MEAN ANNUAL RUNOFF 4.34	INCHES
20. LENGTH 1.30 MILES	AV. WIDTH 0.62 MILES	24. MEAN ANNUAL RUNOFF 231.45	AC.-FT.
21. MAX. ELEV.	MIN. ELEV. 998.2	25. CLIMATIC CLASSIFICATION Humid	

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.
6-29-1955	-	-	-	-	32.33	263.67	333.76
8-10-1959	4.12	4.12	Det. Range	6	32.33	258.74	327.52

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	d. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR
8-10-1959	4.82 3/(4.93)	1.17 (1.20)	1.48 (1.52)	4.82 (4.93)	1.17 (1.20)	1.48 (1.52)

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
8-10-1959	60.30	1943.73 (1996.27)	1943.73 (1996.27)	01.47 (00.46)	06.05 (01.87)		

1/ Mean sea level.
2/ One arm = 0.15 miles, included.
3/ Contains 0.11 acre feet 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 LENGH 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
1021.6	32.33	263.67	1000.0	0.30	0.18			
1020.0	27.76	215.63	998.2	-	-			
1016.0	18.75	123.20						
1013.1	11.59	79.62						
1012.0	10.46	67.52						
1008.0	7.15	32.51						
1004.0	4.85	8.66						

47. REMARKS AND REFERENCES

Land Use: Pasture = 54%.
Formerly Cultivated = 46%; Survey of March 1960
CI Ratio = (98.30 = 0.42); (325.52 = 1.41)
Estimated trap efficiency = 97%.

48. AGENCY SUPPLYING DATA: Soil Conservation Service, Stillwater, Oklahoma

49. DATE: April 18, 1960

1956

RESERVOIR SEDIMENT DATA SUMMARY

SCS-34 Rev. 6-62

Chigley Sandy Site No. 5
NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

50-15a
DATA SHEET NO.

DAM

1. OWNER R. Lancaster	2. STREAM Chigley Sandy	3. STATE Oklahoma
4. SEC. 13 TWP. 2N RANGE 2E	5. NEAREST TOWN Wynnewood	6. COUNTY Garvin
7. STREAM BED ELEVATION 998.2	8. TOP OF DAM ELEVATION 1026.60	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. MULTIPLE USE					
b. FLOOD CONTROL	1021.6	32.33	184.05	263.67	6/29/55
c. POWER					
d. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN
e. IRRIGATION					
f. CONSERVATION					
g. SEDIMENT	1013.1	11.59	79.62	79.62	6/29/55
h. INACTIVE					

17. LENGTH OF RESERVOIR 0.58 1/ MILES		AV. WIDTH OF RESERVOIR 0.09 MILES	

WATERSHED

18. TOTAL DRAINAGE AREA 0.81 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 37.00 INCHES	
19. NET SEDIMENT CONTRIBUTING AREA 0.79 SQ. MI.		23. MEAN ANNUAL RUNOFF 4.34 INCHES	
20. LENGTH 1.30 MILES	AV. WIDTH 0.62 MILES	24. MEAN ANNUAL RUNOFF 187 A.-F T.	
21. MAX. ELEV.	MIN. ELEV. 998.2	25. CLIMATIC CLASSIFICATION Humid	

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.
6/29/55			Range(D)	6	11.59 (32.33)	79.62 (263.67)	98.30 (325.52)
8/10/59	4.12	4.12	"	"	11.59 (32.33)	74.80 (258.74)	92.35 (319.43)
10/4/63	4.15	8.27	"	"	11.59 (32.33)	69.65 (248.20)	85.99 (306.42)

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
8/10/59	4.82 (4.93)	1.17 (1.20)	1.48 (1.52)	4.82 (4.93)	1.17 (1.20)	1.48 (1.52)
10/4/63	5.15 (10.54)	1.24 (2.54)	1.57 (3.22)	9.97 (15.47)	1.21 (1.87)	1.53 (2.37)

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. AN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE
8/10/59	60.30 2/	1943 (1996)	1943 (1996)	.47 (0.46)	6.05 (1.87)		
10/4/63	"	2062 (4229)	2009 (3113)	1.52 (0.71)	12.52 (5.87)		

1/ One arm = 0.15 mi., included
2/ Both sediment and 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. Original Capacity ELEVATION-AREA-CAPACITY DATA

ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
1021.6	32.33	263.67	998.2	0	0			
1020.0	27.76	215.63						
1016.0	18.75	123.20						
1013.1	11.59	79.62						
1012.0	10.46	67.52						
1008.0	7.15	32.51						
1004.0	4.85	8.66						
1000.0	0.30	0.18						

47. REMARKS AND REFERENCES

Land Use - Pasture 54%, formerly cultivated 46%, Land Use Survey 1960.

Geology - Hennessey Formation.

No area capacity for 1963 available.

48. AGENCY MAKING SURVEY SCS

49. AGENCY SUPPLYING DATA Soil Conservation Service, Stillwater, Oklahoma 50. DATE 4-24-64