U.S. DEPARTMENT OF AGRICULTURE — SOIL CONSERVATION SERVICE

RESERVOIR SEDIMENTATION DATA SUMMARY

Theobold Lateral D — NAME OF RESERVOIR

36-11 — DATA SHEET NO.

DAM

1. OWNER Theobold	2. RIVER	3. STATE Iowa
4. SEC. 34 TWP. 88N RANGE 44W	5. NEAREST TOWN Anthon	6. COUNTY Woodbury
7. STREAM BED ELEV.	8. TOP OF DAM ELEV.	9. SPILLWAY CREST ELEV 1,295.2

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	1,295.2	3.38	19.5	19.5	Aug. 1948
b. POWER					
c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN
d. IRRIGATION					
e. CONSERVATION					
f. INACTIVE	1,280.0	-	-	-	Aug. 1948

17. LENGTH OF RESERVOIR — MILES — AV. WIDTH OF RESERVOIR — MILES

WATERSHED

18. TOTAL DRAINAGE AREA 0.098 SQ. MI.		22. MEAN ANNUAL PRECIPITATION	29.67 (40yr) INCHES
19. NET SEDIMENT CONTRIBUTING AREA 0.089 SQ. MI.		23. MEAN ANNUAL RUNOFF	3.8 estimate INCHES
20. LENGTH MILES	AV. WIDTH MILES	24. MEAN ANNUAL RUNOFF	AC.-FT.
21. MAX. ELEV.	MIN. ELEV.	25. CLIMATIC CLASSIFICATION	Sub-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.
Nov. 15, 1948	-	-	Detailed	Contour (2ft)	3.38	19.5	199
Jul. 28, 1950	1.71	1.71	"	"	3.38	18.9	193
May 24, 1951	0.82	2.53	"	"	3.38	18.7	191
Oct. 24, 1952	1.42	3.95	"	"	3.38	18.6	190

26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE-FEET a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	36. WATER INFL. TO DATE AC-FT. a. MEAN ANNUAL	b. TOTAL TO DATE

26. DATE OF SURVEY	37. PERIOD SEDIMENT DEPOSITS ACRE-FEET a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	38. TOTAL SED. DEPOSITS TO DATE ACRE-FEET. a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR
Jul. 28, 1950	0.553	0.323	3.63	0.553	0.323	3.63
May 24, 1951	0.208	0.254	2.86	0.761	0.300	3.37
Oct. 24, 1952	0.091	0.064	0.72	0.852	0.216	2.42

26. DATE OF SURVEY	39. AV. DRY WGT. LBS. PER CU. FT.	40. SED. DEP. TONS PER SQ. MI.-YR. a. PERIOD	b. TOTAL TO DATE	41. STORAGE LOSS PCT. a. AV. ANNUAL	b. TOT. TO DATE	42. SED. INFLOW PPM a. PERIOD	b. TOT. TO DATE
Jul. 28, 1950	73.1 assumed	5,780	5,780	1.71	2.84	-	-
May 24, 1951	73.1 "	4,560	5,370	1.54	3.91	-	-
Oct. 24, 1952	73.1 (3)	1,146	3,860	1.11	4.37	-	-

C/I ratio is estimated to be 0.98 in 1948; 0.95 in 1950; 0.94 in 1951 and 1952.

Trap efficiency is estimated to be 95% up to 1952.

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

47. REMARKS AND REFERENCES

"Dry reservoir in Little Sioux Watershed.
Total load adjusted for trap efficiency 4,070 tons/sq.mi./yr.
12.8% of capacity to top of lower trash rack (el. 1,290.0) lost up to Oct. 24, 1952 (3,24% annually).

48. AGENCY SUPPLYING DATA SCS, Milwaukee, Wis.

49. DATE June 10, 1953