TENNESSEE VALLEY AUTHORITY — HYDRAULIC DATA BRANCH

RESERVOIR SEDIMENTATION DATA SUMMARY

Hales Bar — NAME OF RESERVOIR

20-24 — DATA SHEET NO.

DAM

1. OWNER: TVA	2. RIVER: Tennessee	3. STATE: Tennessee
4. SEC. TWP. RANGE	5. NEAREST TOWN: Jasper	6. COUNTY: Marion
7. STREAM BED ELEV.: 576	8. TOP OF DAM ELEV.: 657.4	9. SPILLWAY CREST ELEV.: 1/ 635

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		2/	2/	2/	Oct. 1913
b. POWER					
c. MULTIPLE USE	635	6,680	18,900	154,200	16. DATE NORMAL OPER. BEGAN
d. INACTIVE 3/	632	5,950	84,300	135,300	
e. Lowest Outlet	611	2,600	51,000	51,000	11/13/13

17. LENGTH OF RESERVOIR: 39.9 MILES — AV. WIDTH OF RESERVOIR: 0.26 MILES

WATERSHED

18. TOTAL DRAINAGE AREA: 21,790 SQ. MI.		22. MEAN ANNUAL PRECIPITATION: 51.1 (62) INCHES	
19. NET SEDIMENT CONTRIBUTING AREA: 990 SQ. MI.		23. MEAN ANNUAL RUNOFF: 23.7 (70) INCHES	
20. LENGTH: 492 MILES	AV. WIDTH: 44 MILES	24. MEAN ANNUAL RUNOFF: 27,511,000 AC.-FT.	
21. MAX. ELEV.: 6684	MIN. ELEV.: 576	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.
Oct. 1913					-	191,800	-
Oct. 1930	17.0	17.0	Range	53	-	4/160,850	-
Oct. 1935	5.0	22.0	Range	53	6,680	154,200	-
Oct.17,1940	5.0	27.0	Range	35	6,680	154,084	-
Jul.11,1947	6.7	33.7	Range (D)	35	6,680	153,045	-

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
Oct. 1913						
Oct. 1930		27,611,594	36,441,180	469,397,098	27,611,594	469,397,098
Oct. 1935	51.9	24,090,409	31,536,262	120,452,044	26,811,325	589,849,142
Oct.17,1940	51.6	24,515,540	28,879,502	122,577,702	26,386,179	712,426,844
Jul.11,1947	50.0	22,434,459	30,092,035	150,310,872	25,600,526	862,737,716

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
Oct. 1913	0	0	0	0	0	0
Oct. 1930	30,950	1821	-	30,950	1821	-
Oct. 1935	6,650	1330	-	37,600	1709	-
Oct.17,1940	116	23	-	37,716	1397	-
Jul.11,1947	1,039	155	0.157	38,755	1150	-

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
Oct. 1913		-	-	-	-	-	-
Oct. 1930		-	-	5/0.949	5/16.137	64	64
Oct. 1935		-	-	0.891	19.604	54	62
Oct.17,1940	61(10)	-	-	0.728	19.664	0.93	52
Jul.11,1947		208.6	-	0.600	20.206	6.76	44

1/ Top of gates.
2/ From first accurate area-volume curves, 1935 conditions.
3/ Lowest elevation for flat pool navigation requirements.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
	Not Computed											

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														
	Not Computed														

45. RANGE IN RESERVOIR OPERATION

WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1941	632.63	626.20	12,583,951	1946	639.8	626.8	30,092,035
1942	633.58	626.58	13,159,765	1947	638.8	627.0	24,978,749
1943	642.64	626.30	26,593,725	1948	638.8	627.9	22,822,206
1944	638.88	626.08	23,886,049	1949	635.0	626.8	32,182,492
1945	635.5	626.2	23,047,869	1950	634.1	630.7	35,793,116
				1951	634.2	630.7	27,295,184

46. ELEVATION-AREA-CAPACITY DATA (1935)

ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
570	220	2,400	620	3,700	78,500			
580	520	5,800	630	5,500	123,800			
590	1,100	13,600	635	6,680	154,200			
600	1,690	27,800						
610	2,470	48,100						

47. REMARKS AND REFERENCES

4/ Estimated capacity at time of original survey.
5/ Items 41a and 41b are based on an original volume of 191,800 acre-feet.

48. AGENCY SUPPLYING DATA

TENNESSEE VALLEY AUTHORITY
HYDRAULIC DATA BRANCH

49. DATE March 1, 1952

TENNESSEE VALLEY AUTHORITY — HYDRAULIC DATA BRANCH

RESERVOIR SEDIMENTATION DATA SUMMARY

Hales Bar (NAME OF RESERVOIR) — 20-24.b (DATA SHEET NO.)

DAM

1. OWNER: TVA	2. RIVER: Tennessee	3. STATE: Tennessee
4. SEC. TWP. RANGE	5. NEAREST TOWN: Jasper	6. COUNTY: Marion
7. STREAM BED ELEV.: 576	8. TOP OF DAM ELEV.: 6574	9. SPILLWAY CREST ELEV.: 1/ 635

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		2/	2/	2/	Oct. 1913
b. POWER					
c. MULTIPLE USE	635	7,214	20,962	153,483	16. DATE NORMAL OPER. BEGAN
d. INACTIVE 3/	632	6,262	112,226	132,521	
e. Lowest Outlet	599	1,404	20,295	20,295	11/13/13

17. LENGTH OF RESERVOIR	39.9 MILES	AV. WIDTH OF RESERVOIR	0.26 MILES

WATERSHED

18. TOTAL DRAINAGE AREA	21,790 SQ. MI.	22. MEAN ANNUAL PRECIPITATION	51.1(73) INCHES
19. NET SEDIMENT CONTRIBUTING AREA	4/ 990 SQ. MI.	23. MEAN ANNUAL RUNOFF	23.7(70) INCHES
20. LENGTH 492 MILES	AV. WIDTH 44 MILES	24. MEAN ANNUAL RUNOFF	27,511,000 AC.-FT.
21. MAX. ELEV. 6684	MIN. ELEV. 576	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.
Oct. 1935			Range	53	7214	153,483	
Oct. 17, 1940	5.0	5.0	Range	35	7214	152,928	
Jul. 11, 1947	6.7	11.7	Range	35	7214	152,251	
Aug. 6, 1954	7.1	18.8	Range	35	7214	152,992	
May 9, 1956	1.8	20.6	Range (D)	35	7214	153,032	

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. d. MEAN ANNUAL	b. TOTAL TO DATE
Oct. 17, 1940	51.6	24,515,540	28,879,502	122,577,702	24,515,540	122,577,702
Jul. 11, 1947	50.0	22,434,459	30,092,035	150,319,872	23,323,810	272,888,574
Aug. 6, 1954	52.1	25,983,092	35,793,116	184,479,950	24,328,113	457,368,524
Mar. 9, 1956	49.8	23,188,768	23,204,371	41,739,782	24,228,550	499,108,306

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
Oct. 17, 1940	555	111	4/	555	111	4/
Jul. 11, 1947	677	101	0.102	1232	105	
Aug. 6, 1954	-741	-104	-0.105	491	26	
May 9, 1956	-40	-22	-0.022	451	22	

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
Oct. 17, 1940	61(10)			0.072	0.362	4.43	4
Jul. 11, 1947	61*	135		0.068	0.803	4.40	4
Aug. 6, 1954	61*	-139		0.017	0.320	-3.93	1
May 9, 1956	61*	-29		0.014	0.294	-0.84	0.8

1/ Top of gates.
2/ From first accurate area-volume curves, 1935 conditions.
3/ Lowest elevation for flat pool navigation requirements.
4/ Norris Dam closed March 4, 1936, and Chickamauga Dam closed January 15, 1940, reducing sediment contributing area to 990 square miles.
* Assumed.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION										
	133-105	105-80	80-70	70-60	60-50	50-40	40-30	30-20	20-10	10-Top of Gates	
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
	1/ Percentages are meaningless due to the small amount of sediment.										

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														
	Percentages are meaningless due to the small amount of sediment.														

45. RANGE IN RESERVOIR OPERATION

WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1941	632.63	626.20	12,583,951	1949	635.0	626.8	32,182,492
1942	633.58	626.58	13,159,765	1950	634.1	630.7	35,793,116
1943	642.64	626.30	26,593,725	1951	634.2	630.7	27,295,184
1944	638.88	626.08	23,886,049	1952	634.33	630.2	25,701,003
1945	635.5	626.2	23,047,869	1953	634.95	630.98	21,046,125
1946	639.8	626.8	30,092,035	1954	634.61	630.84	18,382,681
1947	638.8	627.0	24,978,749	1955	634.75	631.47	23,204,371
1948	638.8	627.9	22,822,206	1956	634.72	631.63	23,581,832

46. ELEVATION-AREA-CAPACITY DATA (1935)

ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
501	0	0	560	64	634	621	3,968	74,996
510	1	3	570	138	1,595	626	5,240	98,014
520	2	16	580	382	4,130	632	6,262	132,521
530	4	45	590	875	9,855	634	6,957	145,741
540	7	94	600	1,462	21,455	635	7,214	153,483
550	22	239	610	2,424	40,178	640	8,498	192,105

47. REMARKS AND REFERENCES

5/ Indicates scour. Considered as negative sediment.

48. AGENCY SUPPLYING DATA

TENNESSEE VALLEY AUTHORITY
HYDRAULIC DATA BRANCH

49. DATE September 1, 1966

TENNESSEE VALLEY AUTHORITY

HYDRAULIC DATA BRANCH

RESERVOIR SEDIMENTATION DATA SUMMARY

Hales Bar — NAME OF RESERVOIR

20-24 c — DATA SHEET NO.

DAM

1. OWNER: TVA	2. RIVER: Tennessee	3. STATE: Tennessee
4. SEC. TWP. RANGE	5. NEAREST TOWN: Jasper	6. COUNTY: Marion
7. STREAM BED ELEV.: 576	8. TOP OF DAM ELEV.: 6574	9. SPILLWAY CREST ELEV.: 1/ 635

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		2/	2/	2/	
b. POWER					Oct. 1913
c. MULTIPLE USE	635	7,214	20,962	153,483	16. DATE NORMAL OPER. BEGAN
d. INACTIVE	632	6,262	112,226	132,521	
e. lowest outlet	599	1,404	20,295	20,295	
					11/13/13

17. LENGTH OF RESERVOIR: 39.9 MILES — AV. WIDTH OF RESERVOIR: 0.26 MILES

WATERSHED

18. TOTAL DRAINAGE AREA: 21,790 SQ. MI.		22. MEAN ANNUAL PRECIPITATION: 51.1(73)	INCHES
19. NET SEDIMENT CONTRIBUTING AREA: 4/ 990 SQ. MI.		23. MEAN ANNUAL RUNOFF: 23.7(70)	INCHES
20. LENGTH: 492 MILES	AV. WIDTH: 44 MILES	24. MEAN ANNUAL RUNOFF: 27,511,000	AC.-FT.
21. MAX. ELEV.: 6684	MIN. ELEV.: 576	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.
Jun. 28, 1961	5.1	25.7	Range (D)	35	7,214	154,002	-

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
Jun. 28, 1961	52.1	26,851,417	32,812,644	136,942,228	24,749,048	636,050,534

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
Jun. 28, 1961	5/ -970	-970	5/ -0.192	5/ -519	-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
Jun. 28, 1961	61*	5/ -255				5/ -7	5/ -0.80

1/ Top of gates.

2/ From first accurate area-volume curves, 1935 conditions.

3/ Lowest elevation for flat pool navigation requirements.

4/ Norris Dam closed March 4, 1936, and Chickamauga Dam closed Jan. 15, 1940, reducing sediment contributing area to 990 sq. mi.

* Assumed.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION										
	133-105	105-80	80-70	70-60	60-50	50-40	40-30	30-20	20-10	10-Top of Gates	
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
Jun. 28, 1961	Percentages are meaningless due to the small amount of sediment.										

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														
Jun. 28, 1961	Percentages are meaningless due to the small amount of sediment.														

45. RANGE IN RESERVOIR OPERATION

WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1957	634.85	631.87	29,786,021				
1958	634.65	631.85	32,812,644				
1959	635.00	631.47	19,719,164				
1960	635.00	632.00	27,088,858				
1961	634.51	631.95	26,713,183				

46. ELEVATION-AREA-CAPACITY DATA (1935)

ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
501	0	0	560	64	634	621	3,968	74,996
510	1	3	570	138	1,595	626	5,240	98,014
520	2	16	580	382	4,130	632	6,262	132,521
530	4	45	590	875	9,855	634	6,957	145,741
540	7	94	600	1,462	21,455	635	7,214	153,483
550	22	239	610	2,424	40,178	640	8,498	192,105

47. REMARKS AND REFERENCES

5/ (-) Indicates scour. Treated as negative sediment.

48. AGENCY SUPPLYING DATA
TENNESSEE VALLEY AUTHORITY
HYDRAULIC DATA BRANCH

For preceding data, sheet No. 20-24a.

49. DATE September 1, 1966

RESERVOIR SEDIMENT DATA SUMMARY

Hales Bar
NAME OF RESERVOIR

20-24d
DATA SHEET NO.

DAM

1. OWNER TVA	2. STREAM Tennessee	3. STATE Tennessee
4. SEC. TWP. RANGE	5. NEAREST POST OFF. Jasper	6. COUNTY Marion
7. LAT. 35° 02' 49" LONG. 85° 32' 25"	8. TOP OF DAM ELEVATION 656.3	9. SPILLWAY CREST ELEV. 1/ 635

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		2/	2/	2/	
b. MULTIPLE USE	635	7,214	20,962	153,483	Oct. 1913
c. POWER					16. DATE NORMAL OPER. BEGAN
d. WATER SUPPLY					
e. IRRIGATION					
f. CONSERVATION	3/ 632	6,262	112,226	132,521	11/13/13
g. INACTIVE	599	1,404	20,295	20,295	

17. LENGTH OF RESERVOIR 39.9 MILES — AV. WIDTH OF RESERVOIR 0.26 MILES

WATERSHED

18. TOTAL DRAINAGE AREA	21,790 SQ. MI.	22. MEAN ANNUAL PRECIPITATION	51.2 INCHES
19. NET SEDIMENT CONTRIBUTING AREA	4/ 990 SQ. MI.	23. MEAN ANNUAL RUNOFF	23.6 INCHES
20. LENGTH 492 MILES	AV. WIDTH 44 MILES	24. MEAN ANNUAL RUNOFF	27,389,770 AC.-FT.
21. MAX. ELEV. 6,684	MIN. ELEV. 576	25. ANNUAL TEMP.: MEAN 61°	RANGE 4° to 97°

SURVEY DATA

26. DATE OF SURVEY 5/	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.
Oct. 1935	0	0	Range	53	7,214	153,483	
Dec. 15, 1967	6.5	32.2	Range	35	7,214	154,012	.0056

26. DATE OF SURVEY 5/	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
Dec. 15, 1967	53.0	27,776,407	34,692,605	179,602,246	25,330,832	815,652,780

26. DATE OF SURVEY 5/	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
Dece. 15, 1967	6/ -10			6/ -529		

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. TOTAL TO DATE	b. PERIOD	a. AV. AN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
Dec. 15, 1967 5/	Percentages are meaningless due to small amount of sediment.											

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														
Dec. 15, 1967 5/	Percentages are meaningless due to small amount of sediment.														

45. RANGE IN RESERVOIR OPERATION

WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1962	634.59	632.00	34,692,605				
1963	634.67	631.80	26,903,401				
1964	634.46	631.70	26,158,200				
1965	634.50	631.93	29,155,070				
1966	634.64	631.76	20,382,843				
1967	634.65	631.74	28,017,334				

46. ELEVATION-AREA-CAPACITY DATA

ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
		1935			1969			
501	0	0			0			
540	7	94			86			
560	65	634			590			
580	382	4130			3865			
600	1462	21455			21761			
610	2424	40178			41496			
621	3977	74996			76038			
626	5240	98014			98843			
632	6262	132521			132992			
635	7214	153483			154012			

47. REMARKS AND REFERENCES For preceding data see sheet Nos. 20-24a, b.

1/ Top of gates.
2/ From first accurate area-volume curves, 1935 survey.
3/ Lowest elevation for flat pool navigation requirements.
4/ Norris Dam closed March 4, 1936, and Chickamauga Dam closed January 15, 1940, reducing sediment contributing area to 990 square miles.
5/ Nickajack Reservoir inundated Hales Bar Dam December 16, 1967. Initial survey on Nickajack Reservoir was completed on June 20, 1969, which included surveying the old Hales Bar ranges.
6/ (-) Minus indicates scour. Treated as negative sediment.

48. AGENCY MAKING SURVEY Hydraulic Data Branch
49. AGENCY SUPPLYING DATA Tennessee Valley Authority
50. DATE June 1, 1971