

U.S. DEPARTMENT OF AGRICULTURE  
**RESERVOIR SEDIMENTATION  
DATA SUMMARY**

Hughes No. 1  
NAME OF RESERVOIR

SOIL CONSERVATION SERVICE  
46 - 18  
DATA SHEET NO.

|                         |   |                                 |   |                                    |   |                                   |                                      |                         |                                   |  |
|-------------------------|---|---------------------------------|---|------------------------------------|---|-----------------------------------|--------------------------------------|-------------------------|-----------------------------------|--|
| <b>DAM</b>              | 1. OWNER <b>A. H. Hughes</b>              |                                 |   | 2. RIVER <b>Unnamed Tributary</b>  |   |                                   | 3. STATE <b>Kansas</b>               |                         |                                   |  |
|                         | 4. SEC. <b>SW 21 TWP. 25 S RANGE 29 W</b> |                                 |   | 5. NEAREST TOWN <b>Ingalls</b>     |   |                                   | 6. COUNTY <b>Gray</b>                |                         |                                   |  |
|                         | 7. STREAM BED ELEV. <b>1000*</b>          |                                 |   | 8. TOP OF DAM ELEV. <b>1015*</b>   |   |                                   | 9. SPILLWAY CREST ELEV. <b>1013*</b> |                         |                                   |  |
| <b>RESERVOIR</b>        | 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                          |                                 |   |                                    |   | 1942                              |                                      |                         |                                   |  |
|                         | b. POWER                                  |                                 |   |                                    |   |                                   |                                      |                         |                                   |  |
|                         | c. WATER SUPPLY                           | <b>1012*</b>                    | <b>3.74</b>                             | <b>8.5</b>                         | <b>8.5</b>                                  | 16. DATE NORMAL OPER. BEGAN       |                                      |                         |                                   |  |
|                         | d. IRRIGATION                             |                                 |   |                                    |   |                                   |                                      |                         |                                   |  |
|                         | e. CONSERVATION                           |                                 |   |                                    |   | 1942                              |                                      |                         |                                   |  |
|                         | f. INACTIVE                               |                                 |   |                                    |   |                                   |                                      |                         |                                   |  |
| 17. LENGTH OF RESERVOIR |   | <b>0.06</b>                     | MILES                                   | AV. WIDTH OF RESERVOIR             |   | <b>0.03</b>                       | MILES                                |                         |                                   |  |
| <b>WATERSHED</b>        | 18. TOTAL DRAINAGE AREA                   |                                 | <b>0.64</b>                             | SQ. MI.                            | 22. MEAN ANNUAL PRECIPITATION               |                                   | <b>23*</b>                           | INCHES                  |                                   |  |
|                         | 19. NET SEDIMENT CONTRIBUTING AREA        |                                 | <b>0.63</b>                             | SQ. MI.                            | 23. MEAN ANNUAL RUNOFF                      |                                   | INCHES                               |                         |                                   |  |
|                         | 20. LENGTH                                | <b>1.0</b>                      | MILES                                   | AV. WIDTH                          | <b>0.63</b>                                 | MILES                             | 24. MEAN ANNUAL RUNOFF               |                         | AC.-FT.                           |  |
|                         | 21. MAX. ELEV.                            |                                 | MIN. ELEV.                              |                                    | 25. CLIMATIC CLASSIFICATION                 |                                   |                                      |                         |                                   |  |
|                         | 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. |  |
| 1942                    |   | -                               | -                                       | -                                  | -   | <b>3.74</b>                       | <b>8.50</b>                          | <b>13.3</b>             |                                   |  |
| August 1955             |   | <b>13</b>                       | <b>13</b>                               | <b>Range</b>                       | <b>3</b>                                    | <b>3.71</b>                       | <b>5.44</b>                          | <b>8.5</b>              |                                   |  |
| <b>SURVEY DATA</b>      | 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     |                                   |  |
|                         | August 1955                               |                                 | <b>3.06</b>                             | <b>0.2</b>                         | <b>0.32</b>                                 | <b>3.06</b>                       | <b>0.2</b>                           | <b>0.32</b>             |                                   |  |
| 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                   |                                      |                         |                                   |  |
| August 1955             |   | <b>72.07</b>                    | <b>502</b>                              | <b>502</b>                         | <b>2.35</b>                                 | <b>36.00</b>                      |                                      |                         |                                   |  |

\* Assumed

|                    |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 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 |
|                                  |      |          |           |      |          |           |      |          |

47. REMARKS AND REFERENCES

48. AGENCY SUPPLYING DATA **SOIL CONSERVATION SERVICE** 49. DATE APR - 7, 1958