

SHOSHONE LAKE DAMSITE, FREMONT COUNTY

Location:- NW 1/4 NW 1/4 Sec. 35, T. 33 N., R. 102 W.

Date Examined:- October 23, 1956.

Storage Data:- The present dam is constructed of logs and is 21 feet high. A proposal calls for the construction of an earth-filled dam 37 feet high which would raise the maximum level of the water surface in the lake from 9,475 to 9,501 feet in elevation. The maximum storage would be increased to 9,740 acre-feet.

Geology

The present lake occupies a broad, flat-bottomed valley of glacial origin.

The north abutment of the damsite adjoins part of a lateral moraine which consists of fragments of hornblende schist and granitic rocks of varying texture and composition. All of the fragments are of pre-Cambrian origin and vary in size from several inches to large boulders.

The south abutment also has a moraine-like appearance, but a trench 2 to 6 feet wide, 8 feet deep, and approximately 35 feet long has been excavated here exposing bedrock of pre-Cambrian age. The principal rock type is a gray coarse-grained biotite granite with traces of epidote and garnet (?). In places, the rock shows almost a rude gneissic texture with streaks of biotite and/or hornblende and lenticular pods of the same minerals. The rock has been intruded by a random network of very coarse-grained quartz-feldspar dikes which vary from 1/2 to 6 inches in width. Two prominent joint sets are exposed with the following attitude, N. 17° W. strike, 70° NE dip, and N. 77° W. strike, vertical dip.

Conclusion

From a geological viewpoint, the area is adequate to increase the storage of the lake by constructing a larger dam. If the area were accessible by jeep, the writer might recommend one drill hole in the morainal debris at the north abutment to determine the amount of clay or silt present, since this would have a bearing on the permeability of the moraine. In view of the writer's observations, however, it appears that any seepage losses here would not be excessive.

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