

DULL KNIFE (SMITH) RESERVOIR SITE, JOHNSON COUNTY

Location: - SW 1/4 NW 1/4 Sec. 26, T. 47 N., R. 85 W., on the North Fork of the Powder River.

Date Examined: - May 26, 1956.

Storage: - Approximately 29,000 acre-feet of water will be impounded by a dam 150 feet high.

Geology

The rocks cropping out at the damsite are pre-Cambrian in age and consist of several types of granite and lenses (?) of hornblende schist. The dominant rock type is a light gray medium-grained biotite granite that varies texturally from gneissic to occasionally graphic. This is intruded (?) by a pinkish fine- to medium-grained granitic rock that contains epidote-coated fracture surfaces. Both rock types are intruded by a random network of light gray to pink lenticular quartz veinlets. Major joint sets noted trend as follows: N. 62° W. strike, and 55° NE. dip; and N. 56° E. strike, and 86° NW. to vertical dip.

In some cases the outcrops reflect a partly fractured to almost brecciated appearance which may reflect high altitude weathering or minor faulting or both. In general, however, the bedrock is fairly sound and should be suitable as a foundation for the dam.

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