

SULPHUR CREEK RESERVOIR SITE, UINTA COUNTY

Location: - Sec. 27 and 34, T. 14 N., R. 119 W.

Date Examined: - October 8, 1956.

Storage: - A 44 foot dam will impound approximately 4,104 acre-feet of water.

Geology

The proposed reservoir occupies a shallow valley that has been eroded in the Hilliard formation of Upper Cretaceous age. Here, Sulphur Creek flows east, and meanders back and forth on the north side of the valley.

The rocks exposed on the hill north of Sulphur Creek consist of light olive gray calcareous shales, siltstones, and sandstones that appear to be relatively impermeable. Presumably the same rock types underlie the basin since they are exposed in a shallow trench just south of the road at the south abutment. For the most part, however, these beds are covered by an unknown thickness of alluvium which consists of clay, silt, and sand.

The north abutment of the damsite is a partly fractured and decomposed light olive gray calcareous siltstone that contains carbonaceous material and pelecypod fragments. No attitude can be observed here, and minor faulting may have occurred. About 100 yards upstream there is a small normal (?) fault in which the beds have been offset a few tens of feet. In general the strata on the north side of Sulphur Creek strike about N. 70° E., with dips varying from 50° SE. to 80° NW. (overturned). In addition there are other varying attitudes, and this may be due to the minor faulting that has occurred here. These faults may be small tear faults related to the

Oil Springs and Absaroka faults which are exposed approximately one-half to one mile west of this area.

The south abutment is on a grey-weathering shale that is exposed in a shallow trench just south of the road. This is overlain by approximately twelve feet of alluvial mantle consisting of gravel, sand, and silt. Several other trenches have been excavated in the alluvial deposits between both abutments, but no bedrock was observed.

Conclusion

In spite of the faulting mentioned earlier in this report, the writer believes that the area is adequate for the construction of both a reservoir and dam of the proposed size. The underlying strata are relatively impervious and are covered by an alluvial mantle that should inhibit seepage.

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