

# State Department of Geology and Mineral Industries

1069 State Office Building  
Portland 1, Oregon

## GEOLOGY OF MC MULLIN CREEK DAM SITE

JOSEPHINE COUNTY  
S. P. D. I.

Location: The proposed dam site is located 3 miles southeast of Selma in the SW $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 18, T. 38 S., R. 7 W. Elevation of the creek at the dam site is about 1,360 feet.

Purpose: The proposed dam will form a lake of about 150 acres with the water surface at 1,395 feet. It is to be stocked with spiny-ray fish and used for recreational purposes. The project is to be financed and managed by the Josephine County Park Board.

Geologic setting: The area is underlain by marine sedimentary rocks of the upper Jurassic, Galice formation (Wells and others, 1948). The bedrock is overlain by a thin cover of mantle composed of clayey soil with mixed weathered fragments of the underlying rock. There is a deposit of silty sand and gravel up to 20 feet thick overlying the bedrock in the stream channel and along its banks. A thin veneer of bench or terrace gravel is deposited on top of the bench just east of the stream along the road.

The underlying Galice formation was examined where exposed at various places along Deer Creek Road and in the vicinity of the dam site. The formation consists of a series of thin bedded slaty siltstones and slaty shales with less predominant interbeds of sandstone. Fresh cuttings of the rock from drill holes are a dark gray color, while weathered exposures are tan. The finer grained rocks are highly contorted and fractured. The sandstone appears to be somewhat less fractured. Quartz veinlets are fairly common in fractures in both the sandstone and siltstone.

Structure--In the immediate area of the dam site, rocks of the Galice formation, strike from N. 20° E. to N. 70° E. and dip from 30° SE to 80° SE.

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In general the beds strike across the stream and dip steeply upstream.

No major faults or shear zones were observed at the various outcrops.

The approximate depth of overburden progressing westward across the site from the road is as follows:

<u>Approx. distance W. of roadcut</u>	<u>Location</u>	<u>Depth</u>	<u>Description</u>
250	At road cut	5 feet	Silt, sand & gravel (bench gravel)
250 feet	Drill Hole #1	2 feet	Mantle
340 feet	Drill Hole #2	19 feet	Silty clay, sand and gravel
435 feet	Drill Hole #3	14 feet	Silty clay, sand and gravel
475 feet	Bulldozer cut	3 feet	Mantle

Report by: Len Lamp 5/3/60.

Visited: 4/26/60 (A.M.) and 5/2/60 (P.M.).

Informant: Sid Smythe - U.S.S.C.S.

Reference: Preliminary Geologic Map of the Kerby quadrangle by F. G. Wells and others, 1940.

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