

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland 5, Oregon

MASCALL RANCH BENTONITE

Middle Fork

Grant County

This deposit was inspected October 26 by N. S. Wagner and R. S. Mason, after a small sample had been submitted to the Portland office by Mr. Roger De Yoe, 364 East 16th Street, Eugene, Oregon. Mr. L. E. Mascall directed the way to the deposit and indicated that the exposure shown was the only place the material was exposed.

The bentonite was inspected by Charles Jacobs in the Portland office, who identified it as a bentonite of the montmorillonite group, nonswelling, and exceptionally clean.

Location: The deposit visited lies on the Mascall ranch, which is located about 4 miles west of the town of Dayville on the John Day Highway. The deposit probably lies in sec. 27, T. 12 S., R. 26 E., at an elevation of approximately 2300 feet. The deposit may be reached by taking a fence line road which leads south from the highway through a gate approximately half a mile west of the Mascall ranch. The fence line road can be driven for approximately 1000 feet, where the cars must be left and the remaining 1000 feet must be walked.

Geology: A narrow seam of bentonite, apparently of good quality, about 6 to 10 inches in thickness, was exposed in a small hole cut into the feet of a steep mass of John Day beds. Judging from the appearance of the exposure, the thickness varies considerably, and, although it may have considerable lateral extent, the chances of any large tonnage would seem to be small. The flanks of the John Day beds adjacent to the hole containing the bentonite showed the characteristic curded surface of bentonitic soils. It is entirely probable that there is available in the John Day beds a considerable amount of this material which is likely to be quite impure. The 6-inch layer exposed in the cut apparently represents a purer horizon, since the overlying material appeared to be quite sandy.

At the present time the deposit has little or no importance and it would require extensive prospecting to determine the value and extent of the deposit.

Report by: N. S. Wagner and R. S. Mason, November 7, 1949.