

MEMORANDUM REPORT

August 26, 1949

Subject: Trip to tuff locality near Pine Grove

Miscellaneous information: Saturday, August 20, I accompanied Messrs. J. A. Wiley, Robert Sheehy, and Erick W. Therkildsen to a tuff locality on the east side of the Cascades. Mr. Therkildsen, a stone mason, had excavated a small test pit and had exposed a grey tuff with irregular lines of tan limonite. He was interested in using the stone for exterior walls and in patios and walks.

Owner: A Mr. Cunningham (initials unknown at the present time).

Location: The tuff is exposed on a very small rounded knob situated about five miles south of Pine Grove in the NW $\frac{1}{4}$ sec. 11, T. 6 S., R. 11 E., in Wasco County (see Dufur topo quadrangle). This knob is at the north end of a narrow ridge trending north to south, occupying the W $\frac{1}{2}$, sec. 11, T. 6 S., R. 11 E., and lying west of Bald Peter Butte and immediately east of a fork of Coyote Creek.

Pine Grove is situated on Wapinitia Highway about 85 miles southeast of Portland. Mileage and directions from Pine Grove to tuff locality are:

1. Along road leading south from Pine Grove school house - .6 mile
2. Turn right where road dead ends and travel - .5 mile
3. Then turn left and follow road leading generally south- 3.7 miles

General geology: Greenish platy tuff outcrops on the west edge of the small knob in the NW $\frac{1}{4}$ sec. 11, T. 6 S., R. 11 E., and the grey tuff with the irregular seams of tan limonite is exposed in a pit a short distance to the east. Loose boulders of tuff ranging in color from the green, to buff, to pink, to the grey variety occur as float in the thin soil cover on the knob. South of the exposed tuffs and only a short distance away black basalt outcrops and appears to cap the remainder of the ridge to the south.

The platy or laminated green tuff appears to be striking to the north and dipping to the east. Exact measurements of attitude were not made. The grey tuff with limonite seams is massive and the irregular tan limonite seams show no relationship to bedding and evidently are due to surface weathering.

The tuffs may be a part of the John Day formation mapped in this area by Hodge (42). The black basalt capping the ridge to the south may be Columbia River basalt.

The extent of the tuffs was not determined. Mr. Wiley may option or lease the area and complete exploration work to determine its extent.

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