

~~The ore body is similar in thickness, attitude, and composition to that at the Hendrickson farm 1 1/2 miles to the east. The ore is oplitic and pisolitic for the most part, with the lower portion of the bed somewhat less gritty and of a porous granular texture. The ore body strikes about N. 85° E. and dips approximately 10°-3° S.~~

~~References: Libbey, Lowry, and Mason, 1944~~

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YAMHILL COUNTY

Geography

The Willamette River forms most of the eastern boundary of Yamhill County which lies south of Washington County and north of Polk County.

The county comprises an area of 709 square miles. McMinnville, the county seat, is located near the junction of the North and South Yamhill rivers.

The most important physiographic features of Yamhill County are the broad plain of the Willamette Valley on the east, the Chehalem Mountains in the northeastern corner, and the Coast Range on the west. The Dundee, Amity, and Eola hills are minor structural features which stand above the low level plain of the Willamette Valley. Elevations in the county range from a low of about 75 feet along the Willamette River to slightly above 3,000 feet in the Coast Range. The drainage is principally southeastward along the North Yamhill River and northeastward along the South Yamhill River into the Willamette River. The Willamette River flows northward along the eastern edge of the county as far as Newberg where it turns abruptly eastward. Some of the area along the westward edge drains westward to the Pacific Ocean.

Agriculture is the main source of income. Fruits and nuts are the principal crops. Sand, gravel, crushed rock, and clay constitute the known mineral resources.

Geology

Published geological data pertaining to Yamhill County are rather limited. Reconnaissance and preliminary geology of parts of the county have been described by Washburne (1914), Piper (1942), Snavely and Vokes (1949), and Warren, Norbistrath, and Grivetti (1945). The geological map of a part of northwestern Oregon prepared by the last authors mentioned above covers more than the northern one-third of the county.

In general, the oldest rocks are exposed to the west in the Coast Range, and consist mainly of Eocene lavas and sediments (sandstone, siltstone, and shales). Intrusive igneous rocks of probable upper Oligocene age cut these Eocene formations. In the Willamette Valley, Oligocene sediments which overlie the Eocene sediments and underlie Miocene lava flows crop out at the base of Chehalem Mountains and the Dundee, Amity, and Eola hills. Pleistocene and Recent terrace and alluvial deposits form the fill of the Willamette Valley, and these deposits extend up the valleys of the North and South Yamhill rivers.

According to the map by Warren, Norbistrath, and Grivetti (1945), the Tillamook volcanic series (Eocene) occurs in the Coast Range in northwestern Yamhill County. East of this series north of Yamhill, middle Eocene shales are mapped as a separate unit. The authors state, however, that the lavas and shales interfinger. Farther east in the valley of Chehalem Creek, middle Tertiary sediments, mainly sandstones and shales, are exposed. These sediments as mapped include the upper Eocene Cowlitz formation and Oligocene formations. In the Chehalem Mountains and the Dundee Hills, flows of Columbia River basalt (middle Miocene) overlie the Oligocene sediments.

A small portion of the extreme southwestern corner of Yamhill County was included on the map prepared by Snavely and Vokes (1949). In this area sandstones of the Burpee formation (middle Eocene) are unconformably overlain by interbedded sediments and volcanic material of the Nestucca formation (upper Eocene). Thick sills of gabbro and diorite have intruded these Eocene formations and are exposed on Mt. Hebo and Little Hebo Mountain. The intrusives are considered as being of upper Oligocene age.

Mining Properties of Yamhill County

GRANDE RONDE CLAY

Location: SE $\frac{1}{4}$ sec. 5, T. 6 S., R. 7 W., about 3 miles east of Grande Ronde Agency at an elevation of 575 feet, below and west of an old road.

History: Several pits were worked here around 1913 and clay was shipped to Portland and used in the manufacture of firebrick. The property was visited in 1934 by Wilcox (1935) and by Wilson and Treasher (1938:38), but the pits were full of water and slumped clay so that no samples were obtainable.

References: Wilcox, 1935
Wilson and Treasher, 1938:38

YAMHILL COAL MINE

Owner: Chris Payola, Yamhill Route, Oregon.

Location: Near the north edge of sec. 36, T. 2 S., R. 4 W., ^{4 miles northeast of Yamhill.} The mine is located about 100 yards east of the road, 0.3 mile north of Woodland School junction. It is on the north side of a small creek and the portal is only a few feet above creek level at an elevation of 420 feet.

History and development: In 1903 Stafford (1904) reported that the Portland Coal and Development Company was opening a bed near North Yamhill. "The mine, which has been worked for a year, has a tunnel system 1,500 feet in extent, giving 700 feet horizontal depth and 400 feet vertical depth." According to local information this mine was worked until 1907 before closing down. The property at that time was on land owned by Peter Gosier.

The tunnel system reported by Stafford was apparently not extended further. The tunnel mouth is now completely caved for a distance of 20 or 30 feet. It apparently extended in a northeasterly direction into the hill.

Geology: The rock exposed at the tunnel mouth is a coarse-grained, angular yellow tuff. No structure could be determined. Slacked rock on the dump was platy and bony. No large lumps were seen. The thickness of the coal is unknown, but must have been several feet; it is probably of too poor grade to justify the reported large amount of development, although it might be worth while to open up the tunnel and determine its actual thickness, grade, and attitude.

Report by: J.E.A., 1945

Reference: Stafford, 1904:14

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Coal Prospects

Coal was reported to have been discovered in a road cut 9 miles west of Willamina on State Highway No. 14, in the west $\frac{1}{2}$ of Sec. 1, T. 6 S., R. 8 W. This road cut was found and its entire length prospected for coal. Only brown to gray shale was found and no indication of coal or coaly sediments. This report of coal must be placed in the category of unfounded rumor.

Other Prospects

Two other areas of commercial minerals were reported. One deposit was reported to be ochre. It is located on Kitten Creek, a tributary of the South Yamhill River, and is reached by a dirt road going two miles northwesterly from State Highway 14. The deposit was found to be not ochre but yellow clay of no value except for common brick.

The other area indicated is near the summit of the Coast Range on State Highway 14. Blue clay shale bedrock and buff clay shale float was found but no minerals of commercial value.

General Summary

A study of outcrops along State Highway 14 from Valley Junction to Dolph was made. Also trips across the adjacent country and along the country roads. The area is mainly shale of Miocene Age* surrounded by gabbroid intrusives and basalt, both intrusive and extrusive. Igneous rocks both as sills and as dykes have penetrated the shale throughout the area.

In none of the outcrops of shale, sandstone, and basalt, were oil, coal, or other commercial minerals found.

Informants:

M. Peterson, Grande Ronde
Julius Mercier, Grande Ronde

Report by:

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* Chester W. Washburne, Reconnaissance of the Geology and Oil Prospects of Northwestern Oregon, U. S. Geological Survey Bulletin 590, 1914, pp. 85.