

State Department of Geology and Mineral Industries

1069 State Office Building
Portland 1, Oregon

REPORTED OIL SEEP (IRON OXIDE !)
NORTH PLAINS AREA

Multnomah County

Nerheim

Location: The reported oil seepage was on the Gordon Nerheim property, Route 2, Box 367, Portland 10; approximately in the SW $\frac{1}{4}$ sec. 26, T. 2 N., R. 2 W., Multnomah County.

Report on investigation: I drove to the Nerheim property, which was located about $1\frac{1}{2}$ miles north on Rock Creek Road after turning off the highway half a mile west of Plainview store. Mrs. Nerheim showed me a water tap near the house which was supplied by a spring uphill. An iridescent film could be seen on the water standing near the tap. When stirred with a stick, this film broke into many separate pieces indicating it was iron oxide and not oil. We walked up the slope behind the Nerheim house to a small dam into which the spring water drained. At the outlet below the dam a great deal of iron-oxide scum could be seen floating on water in the drainage way. The ditch contained a considerable amount of organic material.

Origin of the iron oxide: Iron scums are commonly found floating on the surface of water standing in ditches or marshy areas in western Oregon. A rust-colored scum collects on branches and debris in water ways as does black organic slime to a lesser degree. Iron is provided by weathering of iron-bearing rocks (lavas) and by reaction of the rock with organic acids supplied by vegetal remains. Surface water and ground water also contain iron from contact with these iron rich rocks.

Geology of the area: Miocene basalt outcrops over most of the area where the Nerheim property is situated, as shown on the geologic map of western Oregon by D. L. Peck, 1960. At the location of the Nerheim farm a fairly thick cover of light yellowish-brown silty sandstone covered the basalt. Across the valley from the house a layer of about 60 feet of this silty sandstone can be seen overlying weathered basalt in a quarry cut.

Summary: The oily appearing scum found on the spring water at the Nerheim place is iron oxide and hydroxide. No evidence of petroleum was found.

Reported by: V. C. Newton, Jr.
Petroleum Engineer
November 5, 1962

Date of examination: November 2, 1962