State Department of Geology and Mineral Industries

1069 State Office Building
Portland 1, Oregon

ALEXANDER NATURAL GAS WELL — Polk County

Location: The Alexander well is located in the S½ Sec. 14, T. 7 S., R. 5 W., about 1-3/4 miles east of Dolph Corner. The well is about 300 feet north of the county road in a plowed field. Elevation is 175 feet, on the south flank of a fairly large group of hills.

History: The Alexander well was drilled in 1931. J. O. Bryant stated in his report on oil and gas possibilities of Polk County, 1939, that the Alexander well struck some gas and that after abandonment it bubbled up through water which filled the hole. It can be assumed the fluid is salt water. At the time of this investigation the farmer living near the Alexander hole stated he had encountered salt water at 110 feet at his place. Depth of the Alexander well is reported to be 1440 feet.

Geology: The surface in the area of the well is covered with Quaternary fluviatile silt. The Spencer Formation underlies the surficial deposits and is described as containing basaltic and arkosic sandstones, siltstone, and a middle member of micaceous sandstone probably derived from the Tyee. A thick section of predominantly siltstone composes the Yamhill and Tyee Formations below the Spencer. (E. M. Baldwin, Dallas quadrangle)

Report of investigation: R. E. Corcoran and V. C. Newton from the State Department of Geology and Mineral Industries sampled gas from the Alexander well on March 6, 1963. A 1" pipe with two valves was attached to the casing head and a 1/4" connection screwed into the end of one of the valves so that pressures could be taken. Pressure registered to maximum gauge immediately upon opening the valve (gauge 15 psi max.). Estimated pressure was between 30 and 40 psi.

After checking the well-head pressure, the 1/4" valve was opened and gas escaped with a loud hissing noise. The blow decreased to weak in one minute. This was understandable as the hole was reported to be nearly filled with water (J. O. Bryant, 1939), thus allowing very little space for gas to accumulate. Pressure build-up was checked upon closing the valve, and the gauge read 4 psi after 10 minutes. If the water head were lowered in the casing, no doubt a fair amount of gas could be obtained.

Gas analysis: (State Sanitation Laboratory - chromatograph)

Methane	97.38%
Air + N_2	2.40
Ethane	0.15
Propane	0.07
	100.00%

Reference: Bryant, J. O., Magnetometer Survey of Monmouth-Dallas Region, 1939.

Report by: V. C. Newton, Jr.
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