



GEOLOGICAL SURVEY

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For Release to PM's, AUGUST 13, 1953

ADDITIONAL OIL SEEPAGES LOCATED IN SOUTHERN ALASKA

Discovery of oil seepages by Geological Survey field experts in the uninhabited and little-known Malaspina Glacier area of southern Alaska was announced today by Secretary of the Interior Douglas McKay.

During July geologists Darwin L. Rossman and George Plafker of the Survey found several active seepages of high-gravity oil on two streams that drain into the large unnamed ice-dammed lake on the south flank of the Samovar Hills. These hills, located about 30 miles from the Gulf of Alaska coast, midway between Icy Bay and Yakutat Bay, are surrounded by snow and ice fields of the Malaspina, Seward, and Agassiz Glaciers.

The seepages were found in the course of reconnaissance geologic mapping of the Icy Bay-Yakutat Bay foothills belt of the St. Elias Mountains, undertaken as part of the Geological Survey's program to investigate the petroleum possibilities of the Gulf of Alaska Tertiary province. This program, begun in 1944, is under the supervision of Don J. Miller. The Geological Survey party used a plane equipped with wheels and retractable skis to reach the ice-bound Samovar Hills and adjacent areas.

The Samovar Hills lie in the north-central part of a 300-mile-long-belt of Tertiary sedimentary rocks that borders the Gulf of Alaska on the northeast. Seepages of high-gravity paraffin-base oil have long been known in the northwestern or Katalla-Yakataga portion of this belt, where Phillips Petroleum Company and Kerr-McGee Company jointly are carrying out oil exploration in a large block of leases. Applications for oil and gas leases in the adjacent Malaspina area to the east have recently been filed with the Federal Government. The newly discovered oil seepages in the Samovar Hills are 45 miles northeast of the nearest previously known oil seepages of the Katalla-Yakataga area.

The Samovar oil seepages are located in rocks of Tertiary age, in a shattered zone near the contact between a marine siltstone unit and an overlying, yellow-weathering, predominantly sandy, coal-bearing unit. In the vicinity of the seepages the Tertiary rocks are cut by major faults and are in angular unconformable contact with older, more intensely deformed rocks of early Tertiary or pre-Tertiary age. The fresh oil is green in color and appears to be similar in composition to the oil found in the seepages of the Katalla-Yakataga area.

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DEPARTMENT OF THE INTERIOR
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GEOLOGIC REPORT TO AID IN SEARCH FOR OIL IN SOUTHERN ALASKA

A geologic report containing information that may aid in the search for oil in the Malaspina district and adjoining area of a known petroliferous province in southern Alaska has been released by the Geological Survey for public inspection, Acting Secretary of the Interior Ralph A. Tudor said today.

Large oil seepages were discovered at two localities in the foothills of the Malaspina district in 1953 by a Geological Survey party that utilized a light plane equipped with wheels and retractable skis to reach ice-bound bedrock areas. Geologic structures that are potentially favorable for the entrapment of oil were found in the vicinity of the seepages. This reconnaissance geologic study was carried out under the Geological Survey's program to investigate the petroleum possibilities of the Gulf of Alaska Tertiary province, a 300-mile long belt on Alaska's south coast in which sedimentary rocks of Tertiary age are exposed or are inferred to underlie coastal lowland areas covered by ice or alluvium. Federal oil and gas leases covering nearly 2 million acres of this province currently are in effect or have been applied for. The Phillips Petroleum Company and Kerr-McGee Oil Industries jointly are drilling for oil in the northwestern or Katalla-Yakataga area of the province, where many seepages of high-gravity oil have long been known.

The Malaspina district includes a coastal plain of low relief, lying between Icy Bay and Yakutat Bay, and bordering rugged foothills of the St. Elias Mountains. About two-thirds of this uninhabited district is covered by glaciers and the snow and ice fields tributary to them. Prior to the 1953 investigation the only geological observations available on much of the interior of the district were those made by expeditions attempting to climb Mount St. Elias between 1886 and 1897.

The report by George Plafker and Don J. Miller consists of a geologic map of the Malaspina district and adjoining area on a scale of 1:175,000, two structure sections, and a brief text. The bedrock exposed in the mountainous part of the mapped area is provisionally divided into three major groups as follows: (1) a crystalline complex consisting of Mesozoic and older(?) metamorphosed sedimentary and volcanic rocks, with associated intrusive igneous rocks; (2) the Yakutat group consisting of slightly metamorphosed sedimentary rocks of Mesozoic(?) age; (3) sedimentary rocks of Tertiary age, in which the oil seepages and potentially favorable structures were found. The sequence of sedimentary rocks of Tertiary age is inferred to underlie a large part of the coastal plain area of the Malaspina district, where the bedrock is concealed by the Malaspina Glacier and by unconsolidated deposits of Quaternary age.

The report is available for public inspection at the following Geological Survey offices: Room 1033 (Library), General Services Administration Building, Washington, D. C.; Alaskan Geology Branch, 4 Homewood Place, Menlo Park, California; Room 724 Appraisers Building, San Francisco, California; Federal Building, Juneau, Alaska; Room 210 Glover Building, Anchorage, Alaska; Brooks Memorial Mines Building College, Alaska. Copies of the report are available for reproduction at private expense at the Menlo Park office of the Geological Survey.

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