

## Oil and Gas

It is probable that significant oil and gas resources are present in the Bristol Bay region. The planning and decision making processes for oil and gas lease sales occur under a separate section of Alaska Statutes (AS 38.05.180) and these processes are not included as part of area plans. For this reason, the Area Plan does not make development decisions related to these resources. Nonetheless, surface facilities related to oil and gas development are recognized as appropriate where oil and gas potential is present.

### Background

The area encompassed by the Bristol Bay Area Plan contains high potential for oil and gas reserves. It contains parts of, or is on the margin of, major sedimentary basins which are believed permissive of hydrocarbon formation since naturally occurring oil seeps are found in the region. The northwest side of the Alaska Peninsula is underlain by a major sedimentary basin that trends sub-parallel to the Peninsula. This basin, variously referred to as the North Aleutians basin, the Bristol Bay basin, or the Alaska Peninsula basin has an offshore axis (Figure 2.4). The extreme northern portion of the basin is sometimes referred to as the Nushagak basin. The basin thickens to the southwest and thus is shallowest in the lower Nushagak-Dillingham area. Considering the great size of the area, only a small number of exploratory or stratigraphic wells have been drilled onshore and offshore. A number of these have contained oil and gas showings.

Two other small unexplored offshore basins are on the southeast (Pacific Ocean) edge of the Bristol Bay planning area; these are known as the Shumagin basin and the Sanak basin. Little is known of the potential for these two basins and they would require offshore exploration and production facilities.

The highest potential for discoveries of economically recoverable oil and gas on state land is probably that area of the western Alaska Peninsula on the margin of the North Aleutians (Bristol Bay) basin. The potential for substantial gas reserves may be higher than the potential for oil.

The Bristol Bay Basin is comprised of sedimentary and volcaniclastic rocks that range in age from Jurassic to Holocene. However, the thickest portion of the stratigraphy, and that which will be of interest to those exploring on state lands, is the thick Tertiary section and portions of the Cretaceous. Important Cretaceous and Tertiary formations, i.e. those that have yielded oil and gas shows, include the Milky River, Bear Lake, Stepovak, Tolstoi, and Chignik formations. These rock units show the proper thermal maturity to host petroleum resources. The greatest unknown factor is the effect that clays which are derived from altered volcanic rocks may have played on limiting the large scale migration of oil to suitable traps. Approximately nineteen wells have been drilled on the uplands of the Alaska Peninsula in an area extending from Egegik to Cape Leontovitch. A number of these wells have showings of oil and gas.

The Alaska Division of Oil and Gas, has proposed an exploration licensing and exploration leasing program for the Bristol Bay onshore area that generally encompasses the Dillingham-

King Salmon and Alaska Peninsula areas of state land. The program is currently supported by a range of regional Native corporations, communities, and borough governments. This is largely part of an effort by the various entities to bring about economic diversification to an area that has been heavily dependent upon commercial salmon fishing, an industry which in recent times has struggled with low commodity prices and unpredictable returns. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

The 1984 Bristol Bay Area Plan designated or co-designated most state lands on the Alaska Peninsula as Oil and Gas Lands. Oil and gas lease planning is however, no longer part of the purview of area land plans. Changes in state statutes (AS 38.05.180) created a separate planning and permitting process for oil and gas exploration and development that is coordinated by the DNR's Division of Oil and Gas. The exploration licensing program for Bristol Bay and the leasing program for the Alaska Peninsula onshore areas will be the subject of a future Best Interest Finding by the Alaska Division of Oil and Gas.

### **Management Guidelines**

This plan defers any decisions regarding licensing or leasing of oil and gas to the DNR's existing licensing and leasing process. Oil and gas sales are not subject to the regional land planning process, but follow the planning process established under AS 38.05.180. The land use designations of the plan are multiple-use in character (primarily General Use) and do not preclude oil and gas development.

**Figure 2.4 Bristol Bay Area Plan - Oil & Gas and Coal Basins**

