

Modern Alaska

Oil Discovery and Development in Alaska

Though the early Russians noted oil seepages on the land at Iniskin Bay and Cold Bay on the Alaska Peninsula during their 125-year occupation of Alaska they made no attempts to do anything about the finds. Nor was there any petroleum exploration or development in the years following the American purchase in 1867. The first oil claims in Alaska were filed in the 1890s, on the Iniskin Peninsula on the west shore of Cook Inlet, due west of Homer. In 1898 the first Alaska wells were drilled there, striking small amounts of oil, but also striking seawater. The oil flows were not enough to support the production of oil.

At the same time a group funded some drilling at Dry Bay. These also were unproductive, as were the wells drilled at Puale Bay, near Cold Bay at the end of the Alaska Peninsula.

Alaska's first productive oil drilling operation was at Katalla, on the Gulf of Alaska, south of the Copper River delta. Seepages had been reported around the shore of Controller Bay for many years. Around 1900 a group of investors asked an English petroleum expert to evaluate the area's potential. He was positive, and soon afterward, drilling began. While some wells found oil, conditions were rough and the investors decided not to continue. .

In 1911 several new wells in the district began to produce significant oil. But the quantities were still not large enough to justify the cost of transportation, so most of the recovered oil was processed at a refinery constructed at Katalla. the oil was then shipped by tanker-barge to Cordova. This arrangement continued for nearly 20 years. The original investors sold their claims and improvements in 1916, and those buyers then sold to still other investors in 1920. The operation was still in operation when a fire destroyed the refinery in 1933. The wells were abandoned. The properties at Katalla have changed hands since the 1930s. In the 1980s the Chugach Natives Inc, got leasing rights in the area as part of ANCSA.

The development at Katalla showed that oil production was possible in Alaska. It also demonstrated that the costs of exploration and production would be high, mostly because of the cost of transportation, and other higher costs of operating in Alaska. . Fields the size of Katalla that had been modest successes in the Lower 48 were modest failures in Alaska. When oil exploration began in Alaska, claims were filed under the Hardrock Mining Act of 1872. Around 1900 large mining and oil corporations began to file "blanket claims"

to large areas of potential oil land. Concerned about the nation's need for fuel, in 1906 President Theodore Roosevelt withdrew all coal and most oil lands in the country from development until Congress could come up with a way to control coal and oil claims. Roosevelt used authority given to him by Congress in the 1906 Antiquities Act to make the withdrawal.

Congress did not provide a resolution of the national concern until 1920 when it adopted the Mineral Leasing Act, which established a leasing plan for coal, oil and natural gas. Most states soon followed with leasing acts of their own. At the same time Congress provided for the creation of several strategic oil reserves. The largest, Petroleum Reserve No. 4 (Pet. 4), was established on Alaska's Arctic coast. In 1980, the 23 million-acre reserve was renamed National Petroleum Reserve - Alaska (NPR-A).

When the Mineral Leasing Act passed, most lands with oil potential (though not all coal lands) in the country were re-opened to entry, including Alaska. Nearly 400 exploration permits were issued for Alaska in 1921. Many were for activities at Cold Bay, and near Kanatak on the Alaska Peninsula just across Shelikof Strait from Kodiak Island. None of the permits for Alaska at this time resulted in profitable finds. Discoveries in Texas and Oklahoma flooded the market and drove down oil prices. Most oil activity in Alaska stopped. The establishment of the government reserve on the Arctic Coast was the result of several previous exploratory expeditions led by the U.S. Geological Survey. Eskimos had known of oil seepages on the north coastal plain since time immemorial. They had been reported by the English explorer Thomas Simpson in 1839, and U.S. Navy Lieutenant W.L. Howard in 1886. In 1901 W. J. Peters and F. C. Schraeder, both veteran Alaska surveyors, mapped much of the western coastal area. Between 1906 and 1914 Ernest de Koven Leffingwell undertook several trips across the area and reported optimistically on the distribution and the potential of seepages. The Navy conducted a geologic exploration in the year following the establishment of the Federal Reserve in 1923. During World War II the demand for petroleum caused much general concern. In response the U.S. and Canadian Army engineers completed an ambitious project - the construction of an oil pipeline from Norman Wells on the Mackenzie River in Canada's Northwest Territories to Whitehorse, Yukon Territory, and Skagway. By the time the 4-inch line was completed in 1944, shipments of petroleum products from Seattle up to Alaska ports and the small amounts of oil coming from the fields led the Army to abandon this project. But the construction of the pipeline showed the level of interest in developing potential oil fields in the North.

In 1946 the U.S. Geological Survey and the Navy began an eight-year exploration program. Teams drilled 36 test wells but found only two minor oil deposits.

Gas from the Barrow field would be pumped to the village of Barrow for limited distribution, but otherwise none of the oil was used. Much information about northern conditions and transportation needs resulted from this program. Kenai Oilfields Details

The discovery of the large Swanson River oil field on the Kenai Peninsula in 1957 caused even more interest from potential oil investors like the Richfield Oil Company of California... Others included Phillips, Marathon, and Unocal, as well as Shell, Sunray, Mobil, Chevron and Texaco. Richfield was the first to drill. They struck oil with their first well. The discovery, reported on July 15, 1957, tested at 900 barrels a day, the first major, commercial discovery in Alaska. Other companies quickly began drilling programs in the area, and in 1959, Unocal discovered a major natural gas field, near the Swanson River oil field.

In 1960, following the statehood of Alaska and the creation of the state natural resources agencies, oil companies bought exploration leases for work in Cook Inlet. Two years later the Middle Ground Shoal oil field was discovered off Port Nikiski, at the same latitude as the onshore Swanson River field. Production began from Middle Shoal in 1967. Since then twenty successful wells have been drilled in upper Cook Inlet. All but four are in production at this time. Nearly 1.3 billion barrels of oil have been pumped, along with 5 trillion cubic feet of natural gas. The Cook Inlet oil and gas area is classified as a moderate-sized deposit.

The impact of the Cook Inlet development on the communities on the west shore of Cook Inlet the Native village of Tyonek, and Anchorage has been significant. Kenai, the village nearest the development, was home to about 500 people in 1957. . The boom in economic development and population growth after the discovery of oil was immediate and still continues. Most of the existing work force and many new settlers went to work for the oil companies. Commercial development followed including shopping malls in Kenai and Soldotna in the late 1970s. Today, the population of Kenai is about 7,000; nearly 4,000 live in nearby Soldotna. The population of all of the Kenai Peninsula Borough, which includes Seward, Homer, and Tyonek is nearly 50,000.

The economy of the Kenai region is very dependent on petroleum and gas production. Both have declined over the past decade, and there are now predictions that they will probably continue to decline.. This is consistent with the "boom - bust" character of Alaska, dependent on one natural resource to support modern settlement and economic development.

Prudhoe Bay Details

Alaska was changed dramatically and probably permanently with the discovery of North America's largest oil field at Prudhoe Bay on the Arctic Coast in 1967. Huge amounts of money began to flow into the state with the construction of the trans-Alaska oil pipeline in 1974, and production in the field in 1977. Since that time smaller, connected fields have added to the production on the North Slope. For three decades, Alaska's North Slope has produced about 20% of the domestic oil used in the United States. In 1994 a ban on the export of Alaska oil was lifted allowing oil to be sold on the world market. To date, about 10 billion barrels of oil have been pumped from the North Slope.

The story of how the Prudhoe Bay oilfields developed is interesting. In 1966 Richfield Oil, the discoverer of the Swanson River field on the Kenai Peninsula, worked with Humble Oil, and then merged with Atlantic Oil to become ARCO. By 1967 Richfield had drilled a number of dry holes on its North Slope leases, and began to leave the Slope. Their final effort began with freeze-up in 1967. On the day after Christmas, the crew opened a rig to check the results. Natural gas burst into the air. When ignited from a two-inch pipe, it flared 50 feet in a 30-mile-per-hour wind. Richfield's second well was begun immediately to see if there was more gas and oil in the area. In March, 1968 it confirmed what the other well has produced. The early estimate for the field was 9.6 billion recoverable barrels. Today, technology has increased the estimate to 13 billion.

History of the Alaska Pipeline
<http://tapseis.anl.gov/guide/history.cfm>

Oil business men knew immediately that an oil pipeline across Alaska to the United States, either through Canada, or to a warm-water port on the Gulf of Alaska would be necessary to get the oil to markets. But difficult obstacles stood in the way of construction this pipeline. The first was the issue of

Alaska Native claims to their land, land they had lived on from time immemorial. Passage of the Alaska Native Claims Settlement Act 1971 removed that obstacle.

A second obstacle lay with environmental protests to the idea of the pipeline. Even before Congress completed its work, environmental groups filed suit to stop the project, charging that industry plans for it did not meet the requirements of the new National Environmental Policy Act. A federal judge granted an injunction to stop construction. As the oil industry scrambled to produce a good plan, national leaders debated whether or not there should be a pipeline at all. Environmental concerns included the idea that America's last wilderness, the last vast stretches of open land in the country, should be preserved for future generations. Alaska is America's last wilderness.

The outcome of this debate was very much in question. National leaders once again recognized that Congress would have to make the final decision about Alaska land. In 1973, in a dramatic vote in the Senate (following approval of the measure in the House of Representatives), Senators reached a deadlock on a vote to clear the way for the project; the vote was 49-49. Vice-president Spiro Agnew cast the deciding vote to approve the Alaska Pipeline Authorization Act on July 17, 1973.

Construction of the Alaska Pipeline began in the winter of 1973- and was completed by summer, 1977. Over 28,000 people worked on the project, which cost \$7.7 billion, way beyond the industry's \$900,000 estimate in 1970..

Money flowed easily. The industry decided to complete the project in record time, and it did, but at great cost. The separate company created by the leaseholders to build and operate the pipeline, the Alyeska Pipeline Service Company, had to pay high wages, and provide the best food, housing and other amenities to keep the labor force. The high wages resulted in boomtown conditions in Fairbanks and Anchorage. Unemployment dropped to near zero in both cities as Alaskans left their routines to take advantage of the high wages and unusual circumstances. Off-duty workers spent lavishly in Fairbanks and Anchorage, where crime rates increased dramatically. . Gang -style murders were associated with the Teamsters Union in Fairbanks, which controlled much of the labor and supplies for the project. At one point the union was banking \$1 million a week in dues. The boomtown atmosphere scared many local residents, who learned first hand what it was like to live on "the last frontier".

<http://www.valdezalaska.org/history/transAlaskaPipeline.html>

The impact of modern oil development in Alaska has been huge.. Taxation on oil production on the North Slope has generated \$50 billion for the state in nearly 25 years - \$2 billion a year on average. For over two decades about 80% of Alaska's revenue has come from oil taxation. One third of Alaska's economic base is oil production and oil related activity. The character of Alaska would change dramatically if revenue from it disappeared. The state's citizens had a taste of this when oil prices crashed in 1985-86. From a high of \$40 in 1981, and a steady rate of about \$27 a barrel in 1985, by 1986 the price of oil had fallen to less than \$15. The impact on the state's economy was devastating, with a collapse felt in every aspect of the economy, and in people's lives across the state. The value of the state general fund revenues fell from \$4.1 billion in 1984 to \$2.9 billion in 1986 and then \$2.1 billion in 1988. By 1990 they had dipped to \$143 million. State government officials acted quickly to cut spending, but it was not enough to prevent a crisis. The deep budget cuts necessary in the state budget meant a widespread loss of jobs, reduced incomes, and loss of business and property values. Nine out of fifteen banks in the state failed. Federal banking inspectors moved from one bankruptcy to another, as if they were moving through the wreckage of a natural disaster.

The state recovered from that drastic downturn. But it is a reminder today of the important role oil plays in Alaska's economy and the lives of all Alaskans. The oil industry announced in 1999 that after falling to about 850,000 barrels a day, flow in the Alaska Pipeline should maintain at that level for thirty or forty more years. The North Slope also has some of the largest deposits of natural gas in North America. Oil and gas experts hope to be able to take that gas to national and world markets in the future. Alaska's economy would benefit from North Slope gas development.

Links:

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