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The Role of the Independent in Alaska's Mineral Development

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ABSTRACT

In 68 years of oil industry history in Alaska, the independent has already played a substantial role. Eighty-three independent oil companies or operators have participated in drilling 82 exploratory wells or stratigraphic tests. Their activities extended from the discovery of first commercial oil at Katalla in 1902, to the extension of the Prudhoe Bay field in 1970. The success ratio for wildcat wells in Alaska is considerably higher than "outside," and fields have all been major in statute, thereby reducing the cost per barrel of finding oil.

The most immediate deterrent to the success of the independent in Alaska is the land freeze resulting from the lack of settlement of the claims of Alaska natives. The hoped for lifting of the freeze will afford success to those operators prepared to take advantage of the opportunities.

INTRODUCTION

There is a popular saying in Alaska that "If you don't like the weather, stick around a few minutes, and it will change." The same might just as easily be said about the oil industry in our great state. In July of this year I celebrated the eleventh anniversary of being in Alaska with the oil industry, and during these eleven years have seen some almost unbelievable changes take place, particularly during the past two and one-half years. Speaking on the current status of the industry in Alaska and attempting to predict its future is about as dangerous as designing jet fighters. By the time one finishes a statement it could very well be obsolete.

I recall from a lecture by one of my professors in a creative writing course that the foundation of any writing is that it must have a beginning, a middle, and an end. In order to approach my topic with some degree of discipline, I will utilize that advice and briefly take you back to the beginning of the oil industry in Alaska, bring you to the present, and attempt to make some observations as to the future with particular emphasis on the role of the independent.

HISTORY OF OIL INDUSTRY IN ALASKA

Surprisingly, the history of the oil industry in Alaska goes back much further than most people realize. A geologic map of Alaska readily illustrates the early so-called petroliferous areas in Alaska. The first reported indications of oil seeps in Alaska were by the Russians in 1853. The first well in this area was drilled about 1898. The old Katalla area where early day gold prospectors reported the presence of oil seeps can readily be located. The first well was drilled in this area in about 1901, with the discovery in 1902. Altogether there were 18 producing wells in a 60-acre area that produced about 154,000 barrels of oil. The field was abandoned after 30 years when the small refinery on the Katalla Slough supplying products for local use burned. Out on the Alaska Peninsula is the old Kanatak area where the first well was drilled in 1903. Although Nome is noted for the big gold rush, there were some six wells drilled for oil in the Nome area starting about 1906. Little is known about them, however, because very poor records were kept. Oil seeps were first reported east of Point Barrow in about 1901.

During the 10-year period commencing in 1953, the industry concentrated substantial effort in the onshore portion of the Gulf of Alaska Basin in the area roughly from Katalla to Icy Cape. Some 37 wells were drilled in the area. Although some shows were encountered, no commercial production was established.

The beginning of the contemporary period of oil industry activities in Alaska could be considered to have commenced with the discovery of the Swanson River Oil Field by Richfield Oil Company in April of 1957. The Swanson River Field is estimated to have 206,759,000 barrels of recoverable reserves. It produced a cumulative 101,703 barrels from 42 wells through 1969. Although exploration and drilling took place in many basins, the primary area of concentration after the Swanson River discovery and until the Prudhoe discovery in 1968 was in the Cook Inlet Basin. Nine oil fields were discovered including in addition to Swanson River such giants as the Granite Point Field, estimated to contain 175 million barrels of recoverable reserves; the McArthur River Field, estimated to contain 303 million barrels of recoverable reserves; and the Middle Ground Shoal Field, estimated to contain

185 million barrels of recoverable reserves. In addition to the oil fields, 15 gas fields of varying sizes were discovered in the Cook Inlet Basin. Other basins in which tests were drilled during this period of time were the Bethel Basin, the Copper River Basin, the Galena Basin, and the Arctic Slope.

As mentioned earlier, in 1901 an oil seep west of Barrow was first reported. This was the beginning of the accumulation of geologic knowledge which subsequently led to the discovery of the Prudhoe Bay Field early in 1968. The geologic attractiveness of the Arctic Slope Basin was recognized early, for in 1925 the Federal Government established Naval Petroleum Reserve No. 4 covering approximately one-third of the basin. Little exploratory activity took place on the Arctic Slope between 1924 and World War II other than surface examinations by the U.S.G.S. During World War II the entire northern and western portions of Alaska were withdrawn from all forms of public entry and appropriations for the prosecution of the war. In the period 1944 to 1953, the Navy initiated a program of exploration on the Naval Petroleum Reserve and drilled 37 test wells and 45 core holes on 18 separate structures, two of which were outside the Reserve. Of these, 11 wells were drilled on surface structures. The Navy reported three oil discoveries: Umiat, with reserves of about 50 to 90 million barrels, and Simpson and Fish Creek, totaling about two and one-half million barrels. The Gubik Gas Field outside the Reserve and the very small South Barrow Field have reserves estimated from 370 to 900 billion cubic feet of gas.

In 1958 the area was returned to the public domain and made available for oil and gas leasing subject to the designation of areas to be opened for simultaneous filing. The first such drawing was held in 1958 when two areas, one immediately east of NPR 4, and the second approximately 60 miles east of the first were opened. A minimum amount of exploratory activity took place until 1960, when the combination of BP-Sinclair acquired a substantial acreage position, conducted seismic surveys, and in 1963 commenced a drilling program. Colorado Oil & Gas Corporation, an independent from Denver, also drilled and completed the Gubik Unit #1 well as a successful gas well on acreage acquired from the Federal Government as a result of a sale on the known Gubik geologic structure.

This action focused the attention of the rest of the industry on the Arctic Slope and resulted in the opening of additional lands for simultaneous filing in 1964 and 1965. During the same years the State of Alaska held two competitive sales on lands it previously selected. Drilling activities continued until eleven dry holes or non-commercial wells were drilled. As almost a last gasp effort, Atlantic Richfield and Humble drilled the Prudhoe Bay No. 1 well in early 1968. They drilled a confirmation test, the Sag River State No. 1, and in July of 1968 DeGolyer MacNaughton announced that despite limited information, the largest oil field on the North American Continent had been discovered. The Prudhoe Bay Field was estimated by them to contain between 5 and 10 billion barrels of recoverable reserves. That estimate has since been increased and unofficially ranges between 20 to 50 billion barrels, depending on who makes the estimate.

The Prudhoe Bay discovery focused worldwide attention on the oil potential of Alaska. In anticipation of a state competitive sale in the Prudhoe Bay area, a frantic drilling and seismic exploratory effort took place during the winter of 1968-69. From November, 1968 to August, 1969, about 430,000 tons of supplies and materials were airlifted to the Arctic Slope as well as an estimated 50,000 people. This tonnage is greater than the materials airlifted into Berlin during the Berlin airlift shortly after World War II. The sale was held in September of 1969, and a record $900 million was paid by the industry for the privilege of leasing these lands. It is interesting to note that 131 of the 174 parcels offered for sale in September of 1969 had previously been offered for sale in 1964 and 1965 and received no bids. During the 1964 and 1965 sales the state accepted bids as low as $1.55 per acre.

INDEPENDENT OPERATION IN ALASKA

With that above background, let us examine "Where was the independent when all this happened?"

Actually, the first commercial discovery in the State of Alaska was made by the independent Katalla Oil Corporation in 1902. Since that time 83 separate independent oil companies or operators have participated in drilling 82 exploratory wells or stratigraphic tests. The 18 wells drilled in the Katalla Field produced oil or gas in commercial quantitites. One of the tests drilled by Halbouty Alaska Oil Company discovered the shut-in West Fork Gas Field. Colorado Oil & Gas Corporation drilled a successful gas well at Gubik. Hamilton Brothers and its associates were successful in extending the north end of the Prudhoe Bay Field. The remaining wells drilled by independents were dry holes. However, all of the tests contributed greatly to the accumulation of geologic knowledge which was utilized by the industry as a whole to direct its exploratory efforts toward those other wells which have been suc-

cessful. In addition to participation in exploratory drilling, independent oil companies have also been active in the accumulation of geologic and geophysical data by participation in group projects to gather such information.

Up until two to three years ago most independents felt that operations in Alaska would be too costly for them. However, in recent years an analyzation of the situation indicates that just the opposite might be true. Despite the fact that operating costs in Alaska are high, the question presents itself as to whether or not the independent can afford *not* to explore in Alaska. There are a good many indications that the expensive exploration and drilling venture in Alaska might in the long run be the most economic investment the independent segment of the industry can make. A review of the following statistics will indicate that although exploration and drilling costs are high, the success ratio is equally high. Recoverable reserves found are substantially greater than those to be found in other areas of the United States, and the cost of finding and producing a barrel of oil in most instances is less than in other areas. The same amount of geological and exploratory effort must be expended whether one is looking for the small reserve low-risk prospect in the oil patch of the contiguous United States or whether one is looking for the higher risk but greater reserve prospect in Alaska.

From the period 1957 (the year in which Swanson River was discovered) through 1968, 221 exploratory wells were drilled, or which 52 were producers. This results in a success ratio of 23.53% compared with less than 10% on the average outside of Alaska. During the period 1957 through 1968, 230 field wells were drilled, resulting in 208 producers, or a success ratio of 90.43%, compared with the average 75% outside of Alaska. For the period 1958 through 1969, the industry produced 234,028,866 barrels of oil, 396,439,965 MCF of gas, and 81,404 barrels of natural gas liquids.

Average daily production during the year 1969 amounted to 203,598 barrels per day. The latest estimates reveal that at the end of 1969 Alaska had 432 million barrels of reserves, placing it 8th among oil states. This is *exclusive* of the Arctic Slope. By very conservative estimates, Prudhoe Bay Field is expected to contain at least 10 billion barrels of recoverable reserves and possibly more than twice that amount.

We have hardly scratched the surface in Alaska. There are 15 geologic basins in Alaska. Commercial production has been established in only two. More than four wildcat wells have been drilled in only three others. Two basins have had only one test. The remaining eight basins have never been drilled. It's one of the potentially richest, least explored hunting grounds on the continent.

ALASKA'S SIZE

Very few people fully appreciate the size of Alaska. If we were to superimpose the outline of the State of Alaska on the outline of the 48 contiguous states, Point Barrow is superimposed over International Falls, Minnesota.

Ketchikan in Southeastern Alaska falls over Jacksonville, Florida. The Aleutian Chain extends to the west across Baja, California, enters the Pacific Ocean below San Diego and ends between Los Angeles and San Francisco. The Continental Shelf area off Alaska is about 63% of the nation's total Shelf area. The onshore portion of Alaska constitutes 586,000 square miles, or about 375 million acres, approximately 1/5th the size of the contiguous 48 states.

OPERATIONAL COSTS AND TRANSPORTATION DIFFICULTIES

Most of the high costs of operating in Alaska can be attributed to the lack of an effective transportation system. There are slightly over 5,000 miles of paved roads in the state. The Alaska Railroad from Seward through Anchorage to Fairbanks is only 470 miles long. The Yukon, Porcupine, Koyukuk, Kuskokwim, and several other rivers are navigable for a portion of the distance from the sea inland. A large portion of the cost of operating in Alaska is just getting there. An all-weather road in the Cook Inlet Basin will cost from $20,000-$25,000 per mile. An onshore wildcat well in the Cook Inlet Basin or the Copper River Basin in southern Alaska would cost from $500,000 to $1.5 million, depending on road requirements and logistics. An offshore well in Cook Inlet from a floating vessel will average between $1.5 and $2.5 million. A development well from a platform will average between $800,000 to $1.3 million, depending on deviation. Wildcat wells on the Alaska Peninsula will cost from $1.2-$1.7 million. Wells on the North Slope will cost form $2.5 to $3 million. The above figures must be considered average. There have been many wells drilled at lower costs, and some——those which encountered substantial fishing problems or blowouts——have cost substantially more.

Getting the oil out of Alaska can create as much of a problem as getting into the areas initially to explore for the oil. There are several possible alternative routes of getting the oil from Prudhoe Bay to markets in the contiguous 48 states. During the two winter seasons of 1968-69

and 1969-70, Humble Oil & Refining together with other Arctic Slope operators financed the Manhattan project in an attempt to prove the feasibility of bringing the oil off the Arctic Slope to eastern and European markets via the Northwest Passage. We are informed that although substantial scientific information has been gathered as a result of this project, the utilization of surface tankers through the Northwest Passage has been suspended as an immediate means of getting North Slope crude to market.

The most immediate means being pursued by the industry is the building of a pipeline from Prudhoe Bay to the Port of Valdez in southern Alaska. Although the granting of the right-of-way is being held up until specific engineering data to insure the integrity of the ecology of the area is furnished to the U.S.G.S., a right-of-way permit is expected to be issued during this forthcoming winter season, and construction permits are expected to be issued in sufficient time to commence actual construction during the spring of 1971.

Consideration is also being given to the eventual construction of a pipeline from the Puget Sound area into the Great Lakes Region to supply the tremendous demand by refining capability in that area. The possibility also exists that the midwest area and the south-central area of the United States can be supplied by pipeline from Los Angeles as well as by tanker. The next most serious consideration is presently being given to a gas pipeline from the Prudhoe Bay area down the MacKenzie River Valley into northern Alberta to tie into the Alberta Gas Trunkline System and eventually into Trans-Canada Pipeline System for delivery of gas to the gas-hungry midwest area. If substantial discoveries of oil are made in the Canadian Arctic, an oil pipeline along this route could also be required.

The problem of high costs and transportation difficulties in Alaska are being overcome. As the industry has been gaining more and more experience with the problems unique to Alaska, methods of operation have been improved and costs are decreasing. Independents can approach their cost problems by following the pattern established by major companies in forming joint operating areas with multiple participants, or they can follow the philosophy of carrying out exploratory activities to the point of delineation of drillable structures and then farmout for the cost of drilling.

THE LAND FREEZE

Why have we not seen a greater influx of independent companies into the oil exploration activities in the State of Alaska? That question can simply be answered with two words: *Land Freeze.*

In October of 1966, in an effort to publicize the fact that the matter of the Alaska natives' aboriginal rights had not yet been settled, former Secretary of Interior Stuart Udall imposed what was called an administrative land freeze. The effect of this freeze upon the oil industry was that the terms of existing federal oil and gas leases were allowed to continue; however, applications for new leases were processed merely to the point of issuance of the lease, but the leases were not issued. Federal lands cover more than 80% of Alaska. In an effort to make the land freeze more nearly legal, Secretary Udall issued Public Land Order 4582 on January 17, 1969, which withdrew all unappropriated public federal lands in the State of Alaska from any entry under any of the public land laws including the Mineral Leasing Act of 1920. The net effect is that those lease applications which were filed during the period October, 1966 through January, 1969, are yet in a pending status and companies are reluctant to launch expensive geologic and geophysical programs on these lands until they have more assurance that the lease applications which they now hold will mature into leases. A substantial amount of such pending applications are held by independents.

Were it not for the land freeze, Alaska would presently be enjoying a healthy, steady growth in exploration activity which ultimately would lead to the discovery of additional oil and gas reserves.

The matter of the legality of the land freeze, the matter of the validity of the rights of Alaska natives, and the possible solution to the current freeze status are problems of sufficient complexity to be topics of separate presentations. Suffice it to say that the problem is a complicated one and, unfortunately, has moved out of the realm of legality and logic and into the realm of emotionalism and politics.

The earliest that the land freeze could be lifted would be June 30, 1971, the day on which Public Land Order 4962, by its own provisions, will terminate. The State of Alaska will enjoy a 90-day preference right period during which time it may select all or any part of the approximate 85 million acres to which it is yet entitled under the grants contained in the Alaska Statehood Act. The state will have the discretionary authority to either recognize the pending federal lease applications and issue noncompetitive State of Alaska leases or reclassify areas for competitive leasing only, thereby rejecting the priority established by the pending federal applications.

It appears that it is almost impossible for the present Congress to complete and pass a Native Land Claims Settlement Bill before the end of this year. The Senate has already passed such legislation. The House has yet to pass a companion bill.

If the House does not pass its version of the Native Land Claims Settlement Act and the House and Senate versions of the Act compromised and acted upon by the entire Congress before the end of this year, the bill will die and will have to be re-introduced into the new Congress commencing in January of 1971, and run the entire gamut of committees, hearings, floor debate, and passage. If a bill is not passed this year, the various native associations in the State of Alaska have indicated that it is their intention to attempt to enjoin the Secretary of Interior from making any dispositions under any of the public land laws including the Mineral Leasing Act until such time as the matter of native land claims is finally settled by the Congress. If the injunction is successful, this course of action would continue the land freeze indefinitely.

We should have some indications within the next three to six months regarding the course of action on federal lands in the State of Alaska. Either the freeze will be extended indefinitely and not only the independents but the entire oil industry will be precluded from expanding to any degree of substance their leasehold positions within the State of Alaska, or the freeze will be lifted, the Federal Government will again be able to issue leases, the State can continue its selection program, and the industry can move forward with the exploration, discovery, and eventual production of the oil and gas resources in our state.

The independent can play and will play a substantial and important role in the future development of the oil and gas resources of Alaska. It is the only area in the United States where the independent still has the opportunity to compete with the rest of the industry in finding the big reserves that can change it from an independent company to a producer of major proportions. The independent will also play its traditional role in being willing to take the greater risk and drill the more wildcat prospect than the rest of the industry. The independent will continue to be an important exploration tool of the major companies by drilling portions of major company lease blocks under farmout arrangments, thereby evaluating the entire block. Alaska is still a place where an independent can grow unbelievably in size by having a more creative geological idea; by being willing to get up a little earlier in the morning and work a little harder than the next guy. The independent will be unable to resist the lure of the excitement and potential for growth that Alaska can offer.

When one considers the history of the entire oil industry in the United States, one cannot help but recognize that each of the various segments of the total oil industry, although competing with each other, are still dependent upon each other for a healthy, effective industry to meet the needs of the nation. The independent can and will fulfill its destiny in this regard.

D. L. (Don) Simasko

D. L. (Don) Simasko is presently an oil and gas operator with offices in Anchorage, Alaska. In addition, he is President of Petroleum Land Services, Inc., a company offering contract land department services. He is also Chairman of the Board of Alaska Map Service. He spent slightly more than 15 years in the oil industry. In Jan. of 1955 he started his career in the Record and Title Section of Pan American Petroleum Corporation (then Stanolind Oil and Gas Company, now Amoco Production Company). He held various positions in their land department in Casper, Wyoming; Salt Lake City, Utah; and Farmington, New Mexico, and was transferred to Anchorage, Alaska, in 1959. In November of 1963 he left Pan American to form his own company.

Mr. Simasko received his Bachelor of Arts Degree from Denver University in 1952, and since then has attended various seminars and institutions both as student and lecturer. He has had papers published by the Southwestern Legal Foundation and Rocky Mountain Mineral Law Institute.

He is a member of the American Association of Petroleum Landmen; a charter member of the Alaska Association of Petroleum Landmen and twice its president; the Anchorage Petroleum Club, being a past president and having served five years as a director; associate member of the Alaska Geological Society and the American Institute of Mining, Metallurgical and Petroleum Engineers; and is active as a member of the Public Land Committee of the Independent Petroleum Association of America.

In his community he is an active member of both the Greater Anchorage and State of Alaska Chambers of Commerce. He is keenly active in skiing programs and is currently Vice President of Alyeska Ski Club and a National Director of United States Ski Association.

In addition to activities in Alaska, Mr. Simasko manages oil investments outside of Alaska and has established production in Texas and Canada in 1969 and in California and Wyoming in 1970.