

MINES AND PETROLEUM BULLETIN

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EXPLORATION

Strauss Exploration, Incorporated has announced plans to engage in a worldwide exploration program. It is likely that the firm will participate in several exploration projects in Alaska this year according to the resident manager, Gavin Dirom of Vancouver, B.C.

Strauss Exploration, Incorporated will handle future exploration activities for the recently deactivated Guggenheim Exploration Company. Strauss Exploration will be working in conjunction with Martin Marietta, a diversified firm in aerospace, basic construction materials and specialty chemicals.

MINING

Division Director James A. Williams attended the Northern Resources Conference in Whitehorse, Y.T. in April. It was learned that a new cargo type aircraft, the C-5-A Galaxie, may soon be available for non-military use. The Galaxie has a capacity of 150 tons. An airlines official at the meeting predicted that copper concentrates could be flown from a mine in Canada to Osaka, Japan, a distance of 5,100 miles, for 4-1/2 cents per ton mile. Commercial use of this type of aircraft could improve the economic setting of Alaskan ore deposits in remote areas.

EFFECT OF SANTA BARBARA OIL SPILL ON SEA LIFE

According to a news item in the Western Oil and Gas Association weekly -- "The Week in Review", April 25, 1969, p. 39, the damage to sea life and beaches as a result of the Santa Barbara oil spill was not as widespread as mass news media reported.

Nowhere on San Miguel Island were there any known dead marine animals due to oil contamination. National Park Service and Navy scientists found only two sea elephant carcasses; one died from injuries received in a fight, the other of pneumonia. Some seals were found bearing traces of oil, but none were sick.

Samples of tissues taken from three of six dead whales found on the beach recently contained no evidence of crude oil or dispersants according to the U.S. Fish and Wildlife Service. The other three whales died from causes known not to be related to the oil spill.

The State Department of Fish and Game reports that fish are spawning normally in the Santa Barbara channel. Sport fisherman catches in February averaged only three fish less than in February, 1968.



Beaches are in good condition. A force of 300 men is being maintained at industry expense to keep them that way until the oil disperses.

## MINERAL POTENTIAL NEAR THE PROPOSED NORTHERN EXTENSION OF THE ALASKA RAILROAD AND IN THE ARCTIC

The mineral potential of Arctic Alaska should be comparable to that of parts of Montana, Wyoming, Colorado, and New Mexico, which constitute its geological counterpart. The Brooks Range, for example, occupies a tectonic position comparable to that of the highly mineralized Front Range of Colorado. However, Arctic Alaska continues to be one of the least developed parts of the State, largely because of lack of information about the region due, in part, to a lack of ground transportation facilities.

With regard to exploration and development of mineral deposits, the role of transportation facilities is obvious. Mineral exploration tends to be concentrated where materials of fixed value can be shipped cheaply enough to make mining, smelting, refining, or other processing profitable. The more remote the region, the higher must be the value of the mineral deposit mined or the lower the cost of transportation. A railroad from Fairbanks or Nenana to the North Slope via Anaktuvuk Pass would be centrally located within the Brooks Range. With spurs, it could service a large part of the State, including areas of current and future interest to the mining and oil industries.

Mineral potential in the vicinity of the proposed railroad route is summarized in this paper. Attention is focused mainly on a corridor about 100 miles wide along the route north of the Yukon River and on the entire north flank of the Brooks Range. Data on mines and prospects are taken from Heiner and Wolff (1968), who compiled them from records and files of the Alaska Division of Mines and Geology.

### General Geologic Considerations

Mineral potential anywhere depends largely upon certain fundamental geological factors. Some of the more important ones are as follows:

- (1) Igneous rocks can constitute sources, of, or traps for, mineralizing hydrothermal solutions. In certain cases, the rocks themselves can be of economic value.
- (2) Stratigraphic units can constitute or contain materials of economic value. If porous and permeable, these rocks can act as channelways for migration of mineralizing solutions. If impermeable, they can act as traps.
- (3) Metamorphic rocks can indicate proximity to large bodies of igneous rock, and commonly are cut by numerous quartz veins. (In Alaska, there is a close association between gold-bearing placer deposits and low-grade metamorphic rocks cut by gold-bearing quartz veins.) In certain cases, metamorphic rocks themselves can be of economic value.
- (4) Faults, especially those of large magnitude, can tap deep sources of mineralizing solutions, act as channelways for migration of such solutions, and form traps along or near which minerals of economic value may be deposited.

The Brooks Range and adjacent foothills have the above features. The mineral potential of Arctic Alaska, therefore, is considered high in spite of a lack of detailed geological information about the region.



Former geosynclinal (depressed) belts which have become involved in subsequent orogenies (episodes of granite emplacement and mountain building) are especially attractive for exploration, because they are characterized by complex lithology, structure, and geologic history, with ample opportunity for mineralization of various kinds. Boundaries between major geologic structures such as geosynclines and geanticlines also are favorable. These boundaries frequently are the sites of faults that extend laterally for tens or hundreds of miles and vertically for thousands of feet.

The proposed railroad route is attractive, because it crosses parts of the following major geological structures:

- (1) Tanana geanticline
- (2) Tofty segment of the Kuskokwim geosyncline
- (3) Rampart trench
- (4) Ruby geanticline
- (5) Koyuk geosyncline
- (6) Kobuk trough
- (7) Brooks Range geanticline
- (8) Colville geosyncline

#### Other Factors

Other factors which must be considered in evaluating the mineral potential of a given region include the following:

- (1) Presence of known lode or other bedrock mineral deposits
- (2) Presence of known placer gold deposits

New mineral deposits frequently are found in the vicinity of previously known mineral deposits or mining districts. The proposed railroad route passes between the Shungnak District (Cosmos Hills) and the Wiseman-Chandalar mineral belt, both of which have produced gold in the past.

#### Evaluation

In evaluating any region for mineral potential, all of the above factors must be considered. Since there is a scarcity of information on mineral deposits in Arctic Alaska, the geological factors become more important.

#### Known Lode Deposits

Four lode deposits have been found within the outlined region. Two are gold deposits and two are antimony showings. All are little known deposits with no known production records. Lode deposits farther from the proposed railroad route include copper at Bornite in the Cosmos Hills and gold at Chandalar.

#### Known Placer Gold Deposits

Placer gold has been produced from four main districts within or close to the area of interest. They are as follows:

- (1) Manley Hot Springs district
- (2) Melozitna district
- (3) Hughes district
- (4) Kobuk trough (Wiseman district)



All are in areas where lode deposits are either present today or were present before erosion. It seems inevitable that there are undiscovered lode deposits in at least some of these districts. The most interesting area is the Kobuk trough. This is a major geologic structure and is directly in line with the Wiseman-Chandalar mineral belt.

### Major Stratigraphic and Structural Elements

North of the Yukon, the proposed route crosses east-trending, highly deformed strata of Paleozoic to Mesozoic age characteristic of the Brooks Range and foothills of Arctic Alaska. The stratigraphic section there includes volcanic and sedimentary rocks similar to those found near the Bornite copper deposit. It is probable, therefore, that other copper deposits will be found along the southern flank of the Brooks Range, perhaps near the proposed railroad route.

Faults can have major regional significance in mineral exploration in the Brooks Range. Recent work by the Division of Mines and Geology in the Cosmos Hills near Bornite, for example, shows that the major regional structure there is a window bounded by overthrust faults, rather than a breached anticline or dome bounded by unconformities as previously supposed. The copper-bearing strata now appear to have been offset by faults rather than partly removed by erosion. This discovery has broad regional implications, because offset portions of such strata also might contain mineral deposits. Furthermore, the overthrust rocks may merely cover copper-bearing strata in some places. The belt of overthrust rocks trends toward the route of the proposed railroad.

### Intrusive Igneous Rocks

Intrusive rocks such as granite mark areas where deep structural breaks in the earth's crust have allowed magma, heat, and possibly mineralizing solutions to rise from deeper levels. In some areas, such rocks are an obvious guide to known mineralization. In Interior Alaska, for example, gold, copper, tin, and tungsten are associated with intrusive granite. Beryllium, fluorite, lead, and zinc also may be found near such rock. South of the Brooks Range, intrusive granite crops out near gold and (or) copper deposits at Bornite, Wiseman, Chandalar, Hughes, and Hogatza. About 60 miles south of Bettles, granite carries significant amounts of tin and beryllium. A forthcoming Division of Mines and Geology report points out that a belt along the southeast margin of the Koyukuk basin contains interesting amounts of nickel, tin, and beryllium. The presence of numerous bodies of granite in the proposed railroad corridor, therefore, is encouraging.

Throughout the world, nickel, chromium, and platinum are found in and near intrusive ultrabasic rock. Such rock is known to be present along the margins of the Koyukuk basin. No commercial nickel deposits have been found there to date, but interesting amounts do occur in ultrabasic rocks about 60 miles south of Bettles. The proposed railroad corridor, therefore, is a possible favorable zone for nickel deposits.

Metals also should be associated with igneous rocks north of the Brooks Range. Concentrations of intrusive rock are present in both the east and west. The presently known metallic minerals in the region are a little cinnabar and some gold in the vicinity of Mt. Michelson.

### Coal

The largest coal deposits in Alaska are north of the Brooks Range and west of the Itkillik River. The coal-bearing Cretaceous rocks which are known or inferred cover about 50,000 square miles in this area and are estimated to contain 100 billion short tons of coal in beds thicker than 2-1/2 feet. The indicated and inferred coal resources are all less than 3000 feet deep.



To view this tonnage in perspective, consider that the total domestic consumption in the United States during 1968 was 500 million short tons. At this rate of consumption, Alaska's North Slope could furnish coal to the entire United States for 100 years.

### Phosphate

Phosphate deposits are scattered along the Brooks Range and Arctic Foothills. They are mainly in Mississippian limestone at the head of the Anaktuvuk River and in Triassic rocks in the eastern Brooks Range. Mapping of the Anaktuvuk deposits by the U.S.G.S. indicates that they would not be of ore grade even if located in the western conterminous U.S.A. The phosphate in the eastern part of the region is unmapped, but is reported to be thicker and of higher grade. This phosphate contains some uranium, which might be valuable as a byproduct.

### Uranium

An area some 200 miles west of the proposed railroad may contain uranium deposits. A report soon to be released by the Division states:

"Several radioactive anomalies have been detected on the ground and from the air over a large area which includes the north side of the Kobuk River Valley, the hills south of Selawik Lake, and the Zane Hills. These anomalies suggest that this region could contain ore-grade uranium. Granitic rocks, tuffs, and vein type sulfide ores known in the region could be sources for either lode or sedimentary uranium."

### Conclusions

The presence of placers, intrusive rocks, and linear structures in the region of the proposed railroad to the Arctic indicates a mineral potential greater than the few known lode showings would suggest. The almost complete lack of known lode deposits in this region is due to; (1) the small amount of known or reported serious prospecting done, (2) the difficulty of finding deposits in areas covered with moss and tundra, and (3) the absence of ground transportation.

### E. AND M.J. METAL MARKET PRICES

	<u>April 28</u>	<u>Month Ago</u>	<u>Year Ago</u>
Copper, per lb.	44.105¢	44.3¢	42¢
Lead, per lb.	14.3¢	14.0¢	14¢
Zinc, per lb.	14.0¢	14.0¢	14¢
Tin, per lb.	157.3¢	153.25¢	145.750¢
Nickel, per lb.	\$1.03	\$1.03	94¢
Platinum, per oz.	\$120-125	\$120-125	\$226-228
Mercury, per flask	\$497-510	\$517-520	\$558-565
Antimony ore, per unit	\$7.54-7.72	\$7.00-7.14	\$5.00-5.95
Beryllium powder, 98%	\$54-66	\$54-66	\$54-66
Chrome ore, long ton	\$31-35	\$31-35	\$31-35
Molybdenum conc, per lb.	\$1.62	\$1.62	\$1.62
Titanium ore, per ton	\$20-21	\$20-21	\$21-24
Tungsten, per unit	\$43.00	\$43.00	\$43.00
Silver, New York, per oz.	175.6¢	184.0¢	218.0¢
Gold, per oz.	\$43.45	\$43.40	----
Barite (drilling mud grade from	\$12-16	\$12-16	----

E/MJ March)



## NEW PUBLICATIONS

The U.S. Bureau of Mines has released the two following open-file manuscripts. These may be consulted at the Alaska Bureau of Mines offices in Anchorage, Fairbanks, and Juneau, U.S. Geological Survey office in Anchorage and Fairbanks and the State Division of Mines and Geology offices in Fairbanks. The reports are as follows:

Reconnaissance of Tatonduk River Red Beds by A.L. Kimball

Reconnaissance Sampling of Decomposed Monzonite for Gold near Flat, Alaska by A.L. Kimball

The following open file reports have been released by the U.S.G.S. and are available for consultation in the Alaskan U.S.G.S. and State Division of Mines and Geology offices. Material from which copies of these open file reports can be made at private expense is available at the Alaskan Geology Branch, U.S.G.S., 345 Middlefield Road, Menlo Park, California, 94025:

Geochemical analyses of stream-sediment and rock samples, Tanacross quadrangle, Alaska, by Sandra H.B. Clark and Helen L. Foster. 12 p.

Metallic mineral resources map of the Cordova quadrangle, Alaska, compiled by Edward H. Cobb. 4 p.

Metallic mineral resources map of the McCarthy quadrangle, Alaska, compiled by E.M. MacKevett, Jr., and Edward H. Cobb. 8 p.

Metallic mineral resources map of the Seldovia quadrangle, Alaska, compiled by Edward H. Cobb. 4 p.

Metallic mineral resources map of the Talkeetna Mountains quadrangle, Alaska, compiled by Edward H. Cobb. 4 p.

Miscellaneous Geologic Investigations Map I-524, Engineering Geologic map of the South-eastern Copper River Basin, Alaska, by Donald R. Nichols and Lynn A. Yehle, has been released and is available from the U.S. Geological Survey, 310 First Avenue, Fairbanks, Alaska 99701 at a price of \$1.00.

The Alaska Division of Mines and Geology announces completion of Open File report PE-135-2, Sitkinak Island Coal. The report is available for consultation at Division offices in College, Anchorage, and Juneau.

## OIL AND GAS NEWS

(prepared by the Division of Oil and Gas, 3001 Porcupine Drive, Anchorage, Alaska 99504)

Twenty-two applications for drilling permits were approved by the Division of Oil and Gas as follows:

Permit No. 69-24. Newmont Oil Company #1 East Kuparuk Unit, API No. 50-287-20001. 1,015' FNL and 1,002' FEL, Section 10, T2S, R0E, U.M. The exploration location is about 85 miles southwest of the Prudhoe Bay discovery well.



Permit No. 69-25. Mobil Oil Corporation #3-11-11 West Kuparuk State, API No. 50-029-20014. 2,191' FSL and 1,531' FEL, Section 3, T11N, R11E, U.M. This exploratory location is about 18 miles west of the Prudhoe Bay discovery well.

Permit No. 69-26. Texaco, Inc. #TS-7 Trading Bay, API No. 50-133-20181. Surface location: 622' FNL and 2,068' FEL, Section 34, T10N, R13W, S.M. Bottom hole location: 2,280' FNL and 1,900' FWL, Section 34, T10N, R13W, S.M. This development location is in the Trading Bay Field.

Permit No. 69-27. Texaco Inc. #TS-8 Trading Bay, API No. 50-133-20182. Surface location 664' FNL and 2,000' FEL, Section 34, T10N, R13W, S.M. Bottom hole location: 1,980' FNL and 550' FEL Section 34, T10N, R13W, S.M. This development location is in the Trading Bay Field.

Permit No. 69-28. Union Oil Company of California #D-16 Trading Bay Unit, API No. 50-133-20183. Surface location: 676' FSL and 1,209' FWL, Section 6, T8N, R13W, S.M. Bottom hole location: 2,588' FNL and 397' FWL, Section 17, T8N, R13W, S.M. This development location is in the McArthur River Field. Note: Permit No. 68-116 was issued to Union Oil Company of California for the #D-16 Trading Bay Unit well. This well number was subsequently changed to #D-19 with the same surface and bottom hole locations shown on Permit No. 68-116. The API number for the #D-19 Trading Bay Unit well is 50-133-20165.

Permit No. 69-29. Hill Production Company #1 Fishhook, API No. 50-009-20002. 1,049' FSL and 681' FWL, Section 3, T18N, R1E, S.M. This exploratory location is eight miles northeast of Wasilla.

Permit No. 69-30. BP Oil Corporation #24-10-14 Put River, API No. 50-029-20015. 945' FSL and 2,412' FEL, Section 24, T10N, R14E, U.M. This exploratory location is about 12 miles south of the Prudhoe Bay discovery well.

Permit No. 69-31. McCulloch Oil Corporation of California #2 East Umiat Unit, API No. 50-287-20002. 1,320' FNL and 2,640' FWL, Section 15, T1S, R1E, U.M. This exploratory location is about three miles east of the #1 East Umiat, a gas discovery well.

Permit N. 69-32. Phillips Petroleum Company #A-5 North Cook Inlet Unit, API No. 50-283-20025. Surface location: 1,253' FNL and 1,091' FWL, Section 6, T11N, R9W, S.M. Bottom hole location: 2,550' FSL and 2,330' FWL, Section 31, T12N, R9W, S.M. This development location is in the North Cook Inlet Field.

Permit No. 69-33. Hamilton Brothers Oil Company #1 Point Storkersen, API No. 50-029-20016. 500' FSL and 500' FWL, Section 7, T12N, R14E, U.M. This exploration location is about six miles northwest of the Prudhoe Bay discovery well and is subject to Conservation Order No. 72.

Permit No. 69-34. Atlantic Richfield Company #S-4 Trading Bay Field, API No. 50-133-20184. Surface location: 2,615' FSL and 2,492' FEL, Section 26, T10N, R13W, S.M. Bottom hole location: 2,450' FNL and 1,620' FWL, Section 26, T10N, R13W, S.M. The development location is in the Trading Bay Field.



Permit No. 69-35. Union Oil Company of California #3 Kenai Deep Unit, A. No. 50-133-20185. Surface location: 1,952' FSL and 1,151' FEL, Section 32, T5N, R11W, S.M. Bottom hole location: 1,200' FNL and 1,800' FWL, Section 5, T4N, R11W, S.M. This development location is in the Kenai Field.

Permit No. 69-36. Atlantic Richfield Company #1 Put River State 7-10-14, API No. 50-029-20017. 2,343' FNL and 2,436' FEL, Section 7, T10N, R14E, U.M. This exploratory location is about seven miles southwest of the Prudhoe Bay discovery well.

Permit No. 69-38. Mobil Oil Corporation #15-9-16 Kadler State, API No. 50-029-20019. 2,023' FSL and 1,815' FEL, Section 15, T9N, R16E, U.M. This exploratory location is about 18 miles southeast of the Prudhoe Bay discovery well.

Permit No. 69-39. Union Oil Company of California #S-5 Trading Bay Unit, API No. 50-133-20186. Surface location: 2,608' FSL and 2,488' FEL, Section 26, T10N, R13W, S.M. Bottom hole location: 1,600' FNL and 660' FWL, Section 35, T10N, R13W, S.M. This development location is in the Trading Bay Field.

Permit No. 69-40. BP Oil Corporation #09-11-13 Put River, API No. 50-029-20020. 1,080' FNL and 1,245' FEL, Section 9, T11N, R13E, U.M. This exploratory location is seven miles west of the Prudhoe Bay discovery well.

Permit No. 69-42. Atlantic Richfield Company #1 Kup River State, API No. 50-029-20022. 2,640' FNL and 1,640' FEL, Section 21, T12N, R13E, U.M. This exploratory location is about eight miles northwest of the Prudhoe Bay discovery well.

Permit No. 69-43. BP Oil Corporation #10-11-13 Put River, API No. 50-029-20023. Surface location: 970' FNL and 1,245' FEL, Section 9, T11N, R13E, U.M. Bottom hole location: 2,640' FNL and 2,640' FEL, Section 10, T11N, R13E, U.M. This exploratory location is 6 miles west of the Prudhoe Bay discovery well.

Permit No. 69-44. BP Oil Corporation #23-10-14 Put River, API No. 50-029-20024. Surface location: 320' FSL and 555' FWL, Section 13, T10N, R14E, U.M. Bottom hole location: 2,640' FNL and 2,640' FEL, Section 23, T10N, R14E, U.M. This exploratory location is eight miles south of the Prudhoe Bay discovery well.

Permit No. 69-45. BP Oil Corporation #04-11-13 Put River, API No. 50-029-20025. Surface location: 860' FNL and 1,245' FEL, Section 9, T11N, R13E, U.M. Bottom hole location: 2,640' FNL and 2,640' FEL, Section 4, T11N, R13E, U.M. This exploratory location is six miles west of the Prudhoe Bay discovery well.

Permit No. 69-46. BP Oil Corporation #03-11-13 Put River, API No. 50-029-20026. Surface location: 750' FNL and 1,245' FEL, Section 9, T11N, R13E, U.M. Bottom hole location: 2,640' FNL and 2,640' FEL, Section 3, T11N, R13E, U.M. This exploratory location is seven miles west of the Prudhoe Bay discovery well.

DRILLING ACTIVITY (as of April 25, 1969)

<u>Operator</u>	<u>Well Names &amp; Numbers</u>	<u>Type</u>	<u>Status</u>
<u>Southern</u>			
Atlantic Richfield Company	N. Trading Bay State #S-3	D	Comp. Oil Well
Atlantic Richfield Company	N. Trading Bay State #S-4	D	Location



<u>Operator</u>	<u>Well Names &amp; Numbers</u>	<u>Type</u>	<u>Status</u>
Gulf Oil Corporation	Middle Lake Unit #1	E	Suspended
Halbouty Alaska Oil Company	Theodore River #1	E	Drilling
Hill Production Company	Fishhook #1	E	Drilling
Inlet Oil Corporation	Fish Creek #1	E	Abandoned
Mobil Oil Corporation	Granite Point #32-23	D	Drilling
Mobil Oil Corporation	Granite Point MUC #1-1	D	Drilling
Pan American Petroleum Corp.	Bachatna Creek State #1	E	Abandoned
Pan American Petroleum Corp.	David River #1	E	Drilling
Pan American Petroleum Corp.	MGS State #12	D	Comp. Oil Well
Phillips Petroleum Co.	N. Cook Inlet Unit A-4	D	Comp. Gas Well
Phillips Petroleum Co.	N. Cook Inlet Unit A-5	D	Drilling
Shell Oil Company	MGS A-22-1	D	Drilling
Shell Oil Company	MGS "C" Line #1	D	Idle
Texaco Inc.	Trading Bay State TS-5	D	Temp. Susp.
Texaco Inc.	Trading Bay State TS-6	D	Location
Texaco Inc.	Trading Bay State TS-7	D	Drilling
Texaco Inc.	Trading Bay State TS-8	D	Drilling
Union Oil Company of Calif.	Kenai Deep Unit #3	D	Location
Union Oil Company of Calif.	Kenai Deep Unit #4	D	Drilling
Union Oil Company of Calif.	Trading Bay State A-19	D	Location
Union Oil Company of Calif.	Trading Bay State A-20	D	Location
Union Oil Company of Calif.	Trading Bay Unit D-14	D	Drilling
Union Oil Company of Calif.	Trading Bay Unit D-16	D	Location
Union Oil Company of Calif.	Trading Bay Unit D-18	D	Comp. Gas Well
Union Oil Company of Calif.	Trading Bay Unit D-19	D	Drilling
Union Oil Company of Calif.	Trading Bay Unit G-16	D	Temp. Susp.
Union Oil Company of Calif.	Trading Bay Unit G-19	D	Comp. Oil Well
Union Oil Company of Calif.	Trading Bay Unit K-15	D	Comp. Oil Well
Union Oil Company of Calif.	Trading Bay Unit K-16	D	Drilling
Union Oil Company of Calif.	Trading Bay Unit S-2	D	Comp. Oil Well
Union Oil Company of Calif.	Trading Bay Unit S-5	D	Drilling

#### Northern

Atlantic Richfield Company	Delta State #1	E	Temp. Susp.
Atlantic Richfield Company	Kup River State #1	E	Location
Atlantic Richfield Company	Lake State #1	E	Drilling
Atlantic Richfield Company	Nora Federal #1	E	Drilling
Atlantic Richfield Company	N. W. Eileen State #1	E	Drilling
Atlantic Richfield Company	Put River State #1	E	Location
Atlantic Richfield Company	Toolik Federal #1	E	Abandoned
BP Oil Corporation	Put River #1	E	Temp. Susp.
BP Oil Corporation	Put River BP 3-11-13	E	Location
BP Oil Corporation	Put River BP 4-11-13	E	Location
BP Oil Corporation	Put River BP 9-11-13	E	Location
BP Oil Corporation	Put River BP 10-11-13	E	Location
BP Oil Corporation	Put River BP 33-11-13	E	Drilling
BP Oil Corporation	Put River BP 23-10-14	E	Location
BP Oil Corporation	Put River BP 24-10-14	E	Drilling
BP Oil Corporation	Sag Delta #1	E	Location
BP Oil Corporation	Sag Delta 31-11-16	E	Drilling



Operator	Well Names & Numbers	Type	Status
Colorado Oil and Gas Corp.	Shavlovik #1	E	Drilling
Hamilton Bros. Oil Company	Point Storkersen #1	E	Location
McCulloch Oil Corp.	E. Umiat Unit #2	E	Drilling
Mobil Oil Corp.	Mobil-Phillips Hemi State 3-9-11	E	R.U.
Mobil Oil Corp.	Mobil-Phillips Kadler State 15-9-16	E	R.U.
Mobil Oil Corp.	Mobil-Phillips Kuparuk State #1	E	Temp Susp.
Mobil Oil Corp.	Mobil-Phillips W. Kuparuk Unit #1	E	R.U.
Newmont Oil Corp.	E. Kuparuk Unit #1	E	Drilling
Pan American Petroleum Corp.	Kavik #1	E	Drilling
Sinclair Oil Corp.	BP Ugnu #1	E	Drilling
Standard Oil Co. of Calif.	SOCAL 31-25	E	Temp. Susp.
Texaco Inc.	West Kavik Unit #1	E	Drilling

PRODUCTION - March, 1969 (Pressure base 14.65 psi)

Field	Oil Bbls	Water-Bbls	Gas-MCF	*No. of Wells Prod.	Cum. Oil	Cum. Gas
<u>OIL FIELDS</u>						
Granite Point	768,217	24,509	630,736	33 (3)	22,423,347	16,731,579
McArthur River	2,240,534	43,942	683,517	35 (10)	28,600,587	8,182,236
Redoubt Shoal					1,596	456
Middle Ground Shoal	926,802	45,053	741,378	49 (7)	27,078,610	13,181,851
Swanson River	1,156,714	188,357	2,909,164	33 (16)	91,967,648	66,320,105
Trading Bay	795,136	15,446	507,835	23 (7)	6,176,914	4,757,848
Total	5,887,403	317,307	5,472,630	173 (43)	176,248,702	109,174,075
<u>L.P.G.</u>						
Swanson River (Propane)	5,149				20,481	
<u>GAS FIELDS</u>						
Beluga River			293,515	2 (2)		3,060,096
Kenai			4,605,797	20 (2)		144,742,094
Kenai Deep	** 71		560,263	2	** 1,108	5,544,427
McArthur River			121,719	2		275,313
Moquawkie			59,946	1		549,028
Nicolai Creek			27,795	1 (2)		157,444
Sterling			24,991	1 (1)		866,569
South Barrow			59,923	3 (1)		4,060,459
Trading Bay	263	6	17,178	1	3,203	282,519
Inactive Fields						12,028,261
Total	334	6	5,771,127	33 (8)	4,311	171,565,210
STATE GRAND TOTAL	5,892,886	317,313	11,243,757	206 (51)	176,273,494	280,740,285

Average per day: Oil, 190,093 bbls; Csg. Head, 176,536 MCF; Dry Gas, 186,165 MCF;  
Total Gas, 362,701 MCF

\* Dual completions are included as two wells; triple, as three. ( ) Number of wells not producing in March.

\*\* Kenai Deep started making condensate in December 1968. First reported January 1969 with 789 bbls; February, 248 bbls.