

MINES AND PETROLEUM BULLETIN

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No. 11MINING ACTIVITIES

International Nuclear Corporation has announced that it has entered the hardrock exploration field in Alaska. Phil R. Holdsworth has been named Alaska office manager for the company; his address is 1009 Mendenhall Apartments, Juneau, Alaska. Mr. Holdsworth, a mining engineer, was formerly the Commissioner of the Department of Natural Resources. He stated that International Nuclear is an "across the board" natural resources company. Its home office is in Denver, Colorado; other offices are at Casper, Wyoming and Calgary, Ontario, Canada. The organization holds sizeable oil lease acreages on Alaska's north slope and in Yukon Territory.

Cortella coal corporation of Cordova announced that nearly four tons of coal samples had been shipped to Japan for testing by five of Japan's leading coal importers. Cortella has leases in the Bering River coal field; some of the coal there is of coking quality. In a recent news release Victor H. Rhine, president of Cortella Coal announced that this summer's exploration disclosed eight million tons of recoverable coal. The company hopes to begin production soon with an ultimate goal of one million tons per year. The operation could provide jobs for 150 to 220 Alaskans.

A release by the American Geological Institute stated that Ocean Science Ships Inc., a subsidiary of Ocean Science and Engineering has been engaged by Rowan Drilling Co. of Houston, Texas to perform offshore exploration for gold in the Norton Sound area, off Nome. A motor vessel, the Wendo River will be used to perform shallow seismic work and coring on prospecting permits totaling 85,000 acres.

MINING INCENTIVES IN NORTHERN CANADA

One of the talks given to the recent meeting of the Alaska State Chamber of Commerce at Fairbanks was on the development of minerals in Northern Canada and how this development is being facilitated and fostered by the Canadian federal government. The speaker was Edmond E. Price, Consul and Trade Commissioner for Canada, Canadian Consulate, Seattle. In listing the incentive programs, Mr. Price did not include the extensive geological and aerial geophysical surveys initiated and wholly financed by the Canadian federal government. Excerpts from his written text follow:

"The development of Canada's north will follow the historic pattern of development which formed Canada as a nation. It will depend upon:

- 1) the discovery of desirable minerals in economic quantity,
- 2) the provision of economic transportation to markets,
- 3) development of technology to enable economic extraction under conditions of severe climate and high transit costs."

"To stimulate development in the North.....the Government of Canada has over recent years introduced a number of resource development assistance programs.

"Before outlining these programmes -- which are -- additional to the various tax concessions, benefits and write-offs that mining companies enjoy under the Income Tax Act -- I should point out that these programmes apply to Crown land in Northern Canada, which is administered by the federal Department of Indian Affairs and Northern Development."

"The programmes include:

- 1) The Northern Mineral Exploration Assistance Programme
Up to 40% of an approved exploration programme (including geological, geophysical and geochemical examinations, aerial mapping, surveying, surface examination and drilling) in search of minerals or oil can be provided by the government. If the program is successful, the grant is repayable over a 10 year period commencing when production starts. If unsuccessful, the grant is not repayable.
- 2) The Prospectors Assistance Program
Provides grants on a first-come first-served basis of up to \$900 per year to stake an individual prospector. It provides \$30,000 in each territory to assist prospectors.
- 3) Northern Roads Program
Provides for assistance on resurface projects up to:
 - a) 50% of the construction cost for a tote trail but not to exceed \$20,000;
 - b) 50% of actual road cost for initial access roads to a yearly limit of \$100,000 if the project is exploratory in nature, and \$500,000 if the project is primarily development;
 - c) 2/3 of the cost of construction of permanent access roads, but not exceeding 15% of actual capital invested by the company prior to commencement of commercial production or exploitation;
 - d) 100% of the construction and maintenance costs for resource development and network roads, to link resource-potential areas with established road networks.
- 4) Northern Resource Airports Program
Provides for financial assistance up to 50% of the cost of airports in support of exploration operations to a maximum contribution of \$20,000, and pre-production operations, to a maximum federal contribution of \$100,000.
- 5) Economic Feasibility Studies
In some cases, the Federal Government will finance economic feasibility studies of proposed northern primary production operations.
- 6) Northern Canada Power Commission
A Crown corporation which plans (and in some cases operates) power operation facilities in Northern Canada. It provides power to mining operations in Pine Point and Yellowknife.
- 7) Canadian National Railroad
This Crown corporation may also become involved, as it did through the \$80 million extension of its line from Gringshaw, Alberta, 432 miles north to the Pine Point lead-zinc deposits.
- 8) Other Assists
These include: financial support for Chambers of Mines; subsidized assay services; strategically located Mining Recorders offices; the provision of serviced lots for sale in "open" tour-site developments, etc."

"In the mining field, industry has spent \$260 million on new mine development in the past 4 - 5 years, supported by \$140 million in Federal Government expenditure.

In addition to actual development of new mines -- such as Anvil, Cassiar, New Imperial and Pine Point -- exploration activity is at a \$12 million annual level, with 36,000 claims recorded in the Yukon and Northwest Territory in 1967 -- up from 5,800 in 1963."

"Value of production should reach \$150 million this year."

NEW DIRECTOR FOR U.S. BUREAU OF MINES

A Department of the Interior news release stated that John F. O'Leary will be sworn in as Director of the U.S. Bureau of Mines on October 23. Mr. O'Leary succeeds Dr. Walter R. Hibbard. Mr. O'Leary has served the Department of Interior for more than 16 years. At the time of his appointment he was Chief of the Federal Power Commission's Bureau of Natural Gas.

TIN SMELTER PURCHASE

Of interest to Alaska's tin producers is a news item that appeared in the News Letter of the Nevada Mining Association. The item notes that Fred H. Lenway and Company, Inc. has purchased the only tin smelter in the U.S. at Texas City, Texas from Teledyne, Inc. The smelter will operate as a wholly owned subsidiary known as Lenway Chemical Metallurgical Company. According to Fred H. Lenway, president, the Company will take advantage of the smelter's flexibility in producing many products besides tin. The plant was originally built in 1942 by Wah Chang Corporation. Recently only low-grade Bolivian concentrates have been processed. The capacity of the plant is about 6,000 tons per year.

HOMESTAKE BONUS BASED ON GOLD PRICE

The Homestake Mining Company and the Union representing 1500 miners at Lead, South Dakota reached an agreement for a wage bonus based on the Engelhard buying price of gold. The company agreed to pay a bonus in lieu of a cost-of-living allowance. The bonus is on a sliding scale and ranges from 7¢ to 85¢ per hour, depending on fluctuations of the gold price. At the current price, the bonus is about 30¢ hourly.

NEW USGS PUBLICATIONS

The following open file report has been released by the USGS and is available for consultation in the Alaskan USGS and State Division of Mines and Geology offices. Material from which copies of open file reports can be made at private expense is available in the Alaska Geology Branch, USGS, 345 Middlefield Road, Menlo Park, California 94025.

Geological interpretation of reconnaissance aeromagnetic survey of northeastern Alaska, by W.P. Brosge, Earl E. Brabb and Elizabeth R. King.

Also released is USGS Bulletin 1249, "Geology of the Johnson River area, Alaska" by G. William Holmes and Helen L. Foster. The report is based on studies of surficial deposits and reconnaissance mapping of bedrock in the Johnson River area about 150 miles southeast of Fairbanks. The Quaternary history of the area is emphasized with brief discussions on the igneous and metamorphic rocks that underlie the area. Bulletin 1249 may be purchased over the counter only from the USGS at 508 Second Avenue, Anchorage or by mail from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 for a price of 75¢.

U.S. BUREAU OF MINES OPEN FILE REPORT

The U.S. Bureau of Mines has released an open file report: "Soil Sampling at the Egnaty Creek mercury prospect, Kuskokwim River Basin, Alaska," by R.P. Maloney. This report is available for consultation at U.S. Bureau of Mines and Division of Mines and Geology offices. The Division of Mines and Geology does not have copies for distribution.

E. AND M.J. METAL MARKET PRICES

| | <u>September 30</u> | <u>Month Ago</u> | <u>Year Ago</u> |
|----------------------------|---------------------|------------------|-----------------|
| Copper, per lb. | 41.7¢ | 41.7¢ | Suspended |
| Lead, per lb. | 12.8¢ | 12.5¢ | 14¢ |
| Zinc, per lb. | 13.5¢ | 13.5¢ | 14¢ |
| Tin, per lb. | 148.7¢ | 152.0¢ | 151.1¢ |
| Nickel, per lb. | 94.0¢ | 94.0¢ | 85.25¢ |
| Platinum, per oz. | \$120-125 | \$120-125 | \$109-112 |
| Mercury, per flask | \$537-543 | \$550-555 | \$498-512 |
| Antimony ore, per unit | \$5.80 | \$5.80 | \$5.26-6.20 |
| Beryllium powder, 98% (lb) | \$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. | 190.0¢ | 218.0¢ | 169.9¢ |
| Gold, Engelhard, per oz. | \$39.35 | \$40.20 | ---- |

OIL AND GAS NEWS

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

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

Permit No. 68-85. Union Oil Company of California #G-15 Trading Bay Unit, A.P.I. No. 50-133-20149. Surface location: 1835' FSL and 1,491' FEL, Sec. 29, T9N, R13W, S.M. Bottom hole location: 900' FSL and 2,250' FEL, Sec. 19, T9N, R13W, S.M. The development location is in the McArthur River Field.

Permit No. 68-86. Pan American Petroleum Corporation #1 Kavik, A.P.I. No. 50-179-20001. 1,817' FNL and 1,581' FEL, Sec. 7, T3N, R23E, U.M. This exploratory location is in the Arctic Slope Province about 65 miles southeast of the Prudhoe Bay discovery well.

Permit No. 68-87. Union Oil Company of California #D-13 Trading Bay Unit, A.P.I. No. 50-133-20150. Surface location: 753' FSL and 1,134' FWL, Sec. 6, T8N, R13W, S.M. Bottom hole location: 2,181' FNL and 1,914' FWL, Sec. 7, T8N, R13W, S.M. This development location is in the McArthur River Field.

Permit No. 68-88. Union Oil Company of California #A-19 Trading Bay State, A.P.I. No. 50-133-20151. Surface location: 1,625' FSL and 562' FEL, Sec. 4, T9N, R13W, S.M. Bottom hole location: 1,625' FSL and 865' FEL, Sec. 5, T9N, R13W, S.M. This development location is in the Trading Bay Field.

Permit No. 68-89. Union Oil Company of California #A-20 Trading Bay State, A.P.I. No. 50-133-20152. Surface location: 1621' FSL and 554' FEL, Sec. 4, T9N, R13W, S.M. Bottom hole location: 1,370' FNL and 500' FWL, Sec. 3, T9N, R13W, S.M. This development location is in the Trading Bay Field.

Permit No. 68-90. Texaco Inc. #TS-6 Trading Bay, A.P.I. No. 50-133-20153. Surface location: 664' FNL and 2,000' FEL, Sec. 34, T10N, R13W, S.M. Bottom hole location: 1,980' FSL and 660' FEL, Sec. 34, T10N, R13W, S.M. This development location is in the Trading Bay Field.

Permit No. 68-91. Phillips Petroleum Company #A-2 North Cook Inlet Unit, A.P.I. No. 50-283-20018. Surface location: 1,256' FNL and 1,089' FWL, Sec. 6, T11N, R9W, S.M. Bottom hole location: 493' FNL and 264' FEL, Sec. 6, T11N, R9W, S.M. This development location is in the Cook Inlet Field.

Permit No. 68-92. Shell Oil Company #1 Kustatan River, A.P.I. No. 50-133-20154. 1053' FSL and 1,924' FEL, Sec. 4, T8N, R15W, S.M. This exploratory location is about 10 miles west of the McArthur River Field.

Permit No. 68-93. Texaco Inc. #TS-5 Trading Bay, A.P.I. No. 50-133-20155. Surface location: 660' FNL and 2,000' FEL, Sec. 34, T10N, R13W, S.M. Bottom hole location: 1,000' FSL and 700' FWL, Sec. 27, T10N, R13W, S.M. This development location is in the Trading Bay Field.

DRILLING ACTIVITY (as of October 25, 1968)

| <u>Operator</u> | <u>Well Names & Numbers</u> | <u>Type</u> | <u>Status</u> |
|-------------------------------|---------------------------------|-------------|---------------------|
| Atlantic Richfield Co. | Sag River State #1 | E | Testing |
| B.P. Exploration U.S.A., Inc. | Sag Delta #1 | E | Location |
| Marathon Oil Corp. | Clam Gulch #1 | E | Drilling |
| Mesa Petroleum Co. | Kasilof Unit #2 | E | Drilled & Abandoned |
| Mobil Oil Corp. | Granite Point State #44-11 | D | Comp. Oil Well |
| Mobil Oil Corp. | Granite Point State #42-23 | D | Testing |
| Mobil Oil Corp. | Moquawkie #2 | E | Drilling |
| Pan American Petroleum Corp. | Big Lake #1 | E | Drilled & Abandoned |
| Pan American Petroleum Corp. | David River #1 | E | Location |
| Pan American Petroleum Corp. | Granite Point State 17586 #5 | D | Completing |
| Pan American Petroleum Corp. | Granite Point State 18742 #14 | D | Temp. Susp. |
| Pan American Petroleum Corp. | Granite Point State 18742 #21 | D | Location |
| Pan American Petroleum Corp. | Granite Point State 18742 #22 | D | Suspended |
| Pan American Petroleum Corp. | MGS State 17595 #12 | D | Completing |
| Pan American Petroleum Corp. | Kavik #1 | E | Location |
| Pan American Petroleum Corp. | Redoubt Shoal Unit | E | Suspended |
| Pan American Petroleum Corp. | South MGS Unit #10 | D | Abandoned |
| Pan American Petroleum Corp. | South MGS Unit #12 | D | Drilling |
| Phillips Petroleum Co. | North Cook Inlet Unit A-1 | D | Drilling |
| Phillips Petroleum Co. | North Cook Inlet Unit A-2 | D | Location |
| Shell Oil Company | Kustatan River #1 | E | Location |
| Shell Oil Company | MGS C-11-26 | D | Drilling |

| <u>Operator</u> | <u>Well Names & Numbers</u> | <u>Type</u> | <u>Status</u> |
|----------------------------|---------------------------------|-------------|----------------|
| Standard Oil Co. of Calif. | Moquawkie 44-8 | E | Location |
| Texaco, Inc. | Trading Bay TS #3 | D | Drilling |
| Texaco, Inc. | Trading Bay TS #4 | D | Comp. Oil Well |
| Texaco, Inc. | Trading Bay TS #5 | D | Drilling |
| Texaco, Inc. | Trading Bay TS #6 | D | Location |
| Union Oil Co. of Calif. | Trading Bay State A-18 | D | Drilling |
| Union Oil Co. of Calif. | Trading Bay State A-19 | D | Location |
| Union Oil Co. of Calif. | Trading Bay State A-20 | D | Location |
| Union Oil Co. of Calif. | Trading Bay Unit D-6 | D | Drilling |
| Union Oil Co. of Calif. | Trading Bay Unit D-11 | D | Comp. Oil Well |
| Union Oil Co. of Calif. | Trading Bay Unit D-12 | D | Comp. Oil Well |
| Union Oil Co. of Calif. | Trading Bay Unit D-13 | D | Drilling |
| Union Oil Co. of Calif. | Trading Bay Unit G-12 | D | Comp. Oil Well |
| Union Oil Co. of Calif. | Trading Bay Unit G-13 | D | Comp. Oil Well |
| Union Oil Co. of Calif. | Trading Bay Unit G-14 | D | Drilling |
| Union Oil Co. of Calif. | Trading Bay Unit G-15 | D | Drilling |
| Union Oil Co. of Calif. | Trading Bay Unit K-3 | D | Drilling |
| Union Oil Co. of Calif. | Trading Bay Unit K-7 | D | Comp. Oil Well |
| Union Oil Co. of Calif. | Trading Bay Unit K-11 | D | Drilling |

"E" indicates an exploratory well, and "D" a development well.

PRODUCTION - September 1968 (Gas pressure 14.65 psi)

| <u>Field</u> | <u>Oil-Bbls</u> | <u>Water-Bbls</u> | <u>Gas-MCF</u> | <u>*No. of Wells Prod.</u> | <u>Cum. Oil</u> | <u>Cum. Gas</u> |
|---------------------|-----------------|-------------------|----------------|----------------------------|-----------------|-----------------|
| Granite Point | 890,961 | 13,981 | 684,853 | 31 (4) | 17,791,342 | 12,764,507 |
| McArthur River | 2,028,104 | 35,961 | 554,032 | 25 (2) | 15,630,420 | 4,324,224 |
| Middle Ground Shoal | 1,128,047 | 43,694 | 513,566 | 49 (3) | 20,929,124 | 9,521,682 |
| Swanson River | 1,105,805 | 181,263 | 1,893,344 | 39 (10) | 85,108,503 | 50,492,899 |
| Trading Bay | 281,223 | 6,205 | 207,890 | 20 (4) | 2,862,256 | 2,549,969 |
| Total | 5,434,140 | 281,104 | 3,853,685 | 164 (23) | 142,321,645 | 79,653,281 |
| Beluga River | | | 256,185 | 2 (2) | | 1,335,784 |
| Kenai | | | 3,653,203 | 17 (3) | | 118,689,678 |
| Kenai Deep | | | 43,112 | 1 (1) | | 1,543,735 |
| Moquawkie | | | 49,247 | 1 | | 163,116 |
| Sterling | | | 12,942 | 1 (1) | | 729,679 |
| South Barrow | | | 30,149 | 3 | | 3,752,928 |
| Trading Bay | 251 | | 18,290 | 1 | 1,740 | 184,973 |
| Inactive Gas Fields | | | | | | 12,028,262 |
| Total Dry Gas | | | 4,063,128 | 26 (7) | | 138,428,155 |
| STATE GRAND TOTAL | 5,434,391 | 281,104 | 7,916,813 | 190 (30) | 142,323,385 | 218,081,436 |

Average per day: Oil, 181,146 bbls; Csg. Head, 128,456 MCF; Dry Gas, 135,438 MCF; Total Gas, 263,894 MCF

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

Note: Cumulative totals revised to adjust for corrected reports filed late.