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DIVISION OF MINES AND MINERALS

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Juneau, Alaska 99801

MINES AND PETROLEUM BULLETIN

October 1967

MINING ACTIVITIES

Yukon Territory - An Ap news release from Whitehorse, Y.T., reports that Cyprus Mining Company has disclosed plans to ship its lead-zinc concentrates from its property to Haines by truck rather than by railroad to Skagway. The property is still in the development stage. It is located at Vangorda Creek, 120 miles northeast of Whitehorse. The all-road route will be a distance of about 371 miles as compared to 325 miles by road and railroad combined. If the concentrates were to be changed from trucks to the railroad at Whitehorse, an extra handling cost at Whitehorse would be added. The trucks are planned to be 95,000-pound tractor-trailer rigs. The concentrates will be loaded into ships at Haines for shipment to Japanese smelters. Whitehorse businessmen are drafting a protest to the Canadian government over this planned bypassing of their city.

Further information on the Cyprus plans is contained in the following quote from the September 15, 1967 issue of the Nevada Mining Association News Letter:

"CYRPUS MINES CORPORATION: announced Anvil Mining Corporation (60% owned by Cyprus and 40% by Dynasty Explorations, Ltd., Vancouver) will begin a \$56-million development program to produce lead and zinc from its mines in the Yukon Territory in Canada. Henry T. Mudd, president of Cyprus, said Anvil has signed sales contracts for delivery of an estimated \$250-million of lead and zinc concentrates over an 8-year period with two Japanese firms, the Mitsui Mining & Smelting Company and Toho Zinc Company. The contracts call for annual delivery of 130,000 dry short tons of lead concentrates containing approximately 69% lead and 20 ounces of silver a ton and 240,000 dry short tons of zinc concentrates containing approximately 54% zinc. Mr. Mudd said the lead-zinc ore will be mined by open-pit method; processed into concentrates at a mill to be built in the Vangorda district of the Central Yukon, about 125 miles north of Whitehorse, and the concentrates would be transported overland to the Haines-Skagway area in Alaska and then shipped to Japan. Delivery of concentrates is scheduled to commence in late 1969. He said Anvil holds approximately 2600 mineral claims in the Vangorda area, covering about 130,000 acres. Reserves of 50-million tons of ore, averaging more than 10% lead and zinc and with somewhat more than one ounce of silver a ton of ore, have been proven to date. Mr. Mudd said the government has agreed to provide roads, power facilities and assistance in construction of a townsite to accommodate an initial population of 1000 to 1500 persons. Initial employment is expected to total 250 persons."

(DM&M note re above quote: The percentage of Canadian government participation in providing roads and power facilities for Cyprus is undoubtedly quite substantial but probably not 100 percent as might be inferred from the wording of the article.)

OIL AND GAS NEWS

Nine applications for drilling permits were approved by the Division's Petroleum Branch as follows:

Permit No. 67-49. Pan American Petroleum Corp. #13 MGS. State 17595, API No. 50-133-20039, Surface location: 1989' FNL and 588' FWL, Sec. 31, T9N, R12W, S.M. Bottom hole location: -660' FNL and 1650' FWL, Sec. 31, T9N, R12W, S.M. This development well is in the Middle Ground Shoal Field.

Permit No. 67-50. Pan American Petroleum Corp. #1 Redoubt Shoal State 29690, API No. 50-133-20040, Surface location: 990' FNL and 1600' FWL, Sec. 13, T7N, R14W, S.M. Bottom hole location: -660' FNL and 660' FWL, Sec. 19, T7N, R13W, S.M. This exploratory location is five miles southwest of Pan American's Dillion platform in the southern part of the Middle Ground Shoal Field.

Permit No. 67-51. Shell Oil Company #C-34-23 Middle Ground Shoal. API No. 50-133-20041. 536' FSL and 1597' FEL, Sec. 23, T8N, R13W, S.M. This is the first development well from Shell's "C" platform in the Middle Ground Shoal Field.

Permit No. 67-52. Pan American Petroleum Corp. #6 South Middle Ground Shoal Unit, API No. 50-133-20042. 899' FSL and 1872' FWL, Sec. 35, T8N, R13W, S.M. This development well is in the southern part of the Middle Ground Shoal Field.

Permit No. 67-53. Union Oil Company of California #A-8 Trading Bay State, API No. 50-133-20043. Surface location: -1612' FSL and 577' FEL, Sec. 4, T9N, R13W, S.M. Bottom hole location: -2100' FSL and 2155' FWL, Sec. 4, T9N, R13W, S.M. This is a development location in the Trading Bay Field.

Permit No. 67-54. Pan American Petroleum Corp. #4 Granite Point State 17586. API No. 50-283-20009. Surface location: -2009' FSL and 1948' FWL, Sec. 31, T11N, R11W, S.M. Bottom hole location: -1980' FNL and 660' FEL, Sec. 36, T11N, R12W, S.M. This is a location for a development well in the Granite Point Field.

Permit No. 67-55. Shell Oil Company #A-12-12 Middle Ground Field API No. 50-133-20044. Surface location: 1563' FSL and 378' FEL, Sec. 11, T8W, R13W, S.M. Bottom hole location: -2100' FNL and 970' FWL, Sec. 12, T8N, R13W, S.M. This is a location for a development well in the Middle Ground Shoal Field.

Permit No. 67-56. Union Oil Company of California #1 Kasilof Unit, API No. 50-133-20045. 1980' FNL and 2310' FEL, Sec. 30, T3N, R12W, This offshore exploratory location is about ten miles southwest of the Kenai gas field.

Permit No. 67-57. Mobil Oil Corporation #11-24 Granite Point State, API No. 50-133-20046. Surface location: 2383' FNL and 1368' FWL, Sec. 13, T10N, R12W, S.M. Bottom hole locations: -2112' FNL and 623' FWL, Sec. 24, T10N, R12W, S.M. This is a platform development location at the south end of the Granite Point Field.

Drilling Activity

<u>Operator</u>	<u>Well Names & Numbers</u>	<u>Type</u>	<u>Status</u>
Atlantic Richfield Co.	Middle River State Unit #1	E	Drilling
Atlantic Richfield Co.	Prudhoe Bay #1	E	Temp. Susp.

Operator	Well Names & Numbers	Type	Status
Atlantic Richfield Co.	Trading Bay State #2	E	Abandoned
Humble Oil & Refining Co.	Tyonek Reserve "B" #1	E	Drilling
Marathon Oil Company	Beaver Creek #2	E	Drilling
Mobil Oil Corp.	Granite Point State #11-13	D	Completing
Mobil Oil Corp.	Granite Point State #11-24	D	Location
Mobil Oil Corp.	Granite Point State #13-13	D	Drilling
Mobil Oil Corp.	Granite Point State #31-14	D	Comp. oil well
Mobil Oil Corp.	Tower #2	E	Drilling
Pan American Petroleum Corp.	Albert Kaloa #1	E	Drilling
Pan American Petroleum Corp.	Granite Point State 17586 #4	D	Drilling
Pan American Petroleum Corp.	Granite Point State 18742 #5	D	Comp oil well
Pan American Petroleum Corp.	Granite Point State 18742 #7	D	Testing
Pan American Petroleum Corp.	Granite Point State 18742 #8	D	Prod. oil well
Pan American Petroleum Corp.	Granite Point State 18742 #9	D	Drilling
Pan American Petroleum Corp.	Granite Point State 18742 #10	D	Drilling
Pan American Petroleum Corp.	MGS State 17595 #10	D	Completing
Pan American Petroleum Corp.	MGS State 17595 #11	D	Testing
Pan American Petroleum Corp.	MGS State 17595 #13	D	Drilling
Pan American Petroleum Corp.	Redoubt Shoal State 29690 #1	E	Drilling
Pan American Petroleum Corp.	South MGS Unit #2	D	Testing
Pan American Petroleum Corp.	South MGS Unit #3	D	Drilling
Pan American Petroleum Corp.	South MGS Unit #6	D	Drilling
Pennzoil Company	Starichkof Unit #1	E	Abandoned
Shell Oil Company	Kustatan Ridge #1	E	Abandoned
Shell Oil Company	A-12-12	D	Location
Shell Oil Company	MGS #A-42-14	D	Drilling
Shell Oil Company	MGS #A-44-11	D	Comp. oil well
Shell Oil Company	MGS #C-34-23	D	Drilling
Standard Oil Co. of Calif.	Beluga River Unit #14-3	D	Abandoned
Superior Oil Company	Three Mile Creek State #1	E	Drilling
Tenneco Oil Company	State 36465 #1	E	Drilling
Union Oil Co. of Calif.	Kasilof Unit #1	E	Location
Union Oil Co. of Calif.	Kenai Deep Unit #41-2	D	Drilling
Union Oil Co. of Calif.	Trading Bay State #A-7	D	Drilling
Union Oil Co. of Calif.	Trading Bay State #A-8	D	Location
Union Oil Co. of Calif.	State G-1 (32-28)	D	Drilling
Union Oil Co. of Calif.	State G-2 (34-29)	D	Drilling

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

Production - August 1967 (Gas now all at pressure base of 14.65 psi)

Field	Zone	Prod. Wells	Oil, Bbls.	Gas, MCF
Swanson River Field	Hemlock	138	2,034,760	1,093,471
			70,374,092*	26,376,967*
	Injection	8 (inj)		3,991,258
	Hemlock			70,290,099*
Middle Ground Shoal	Hemlock	20	534,751	245,323
		(incl. 4 duals as 8 wells)	6,622,795*(1)	2,953,036*

Field	Zone	Prod. Wells	Oil, Bbls.	Gas, MCF
Kenai	Kenai	17 (Incl 6 duals as 12 wells)		3,636,678
				73,668,592*
Sterling	Kenai	1		9,999
				522,158*
Trading Bay	Hemlock	4	83,031	55,493 (2)
			303,697*	171,695*(2)
Trading Bay (gas well)	Kenai	1 (dual: lower- oil, upper-gas)		5,595
				25,997*
Granite Point	Kenai	4	724,718	548,815
			2,069,623*	1,489,349*
State Total			2,377,260	9,586,632
Average per day			76,686	309,246

* Cumulative to September 1, 1967

- (1) Correction of error in April reduces cumulative by 180 bbls.
- (2) Corrected to casing head gas only.

COMMISSIONER HOLDSWORTH LEAVING

Governor Walter J. Hickel has announced Commissioner Phil R. Holdsworth's resignation effective October 15. Mr. Dale Wallington, Deputy Commissioner, will be in charge of the Department (after this date) until a successor is named. Mr. Holdsworth has no immediate plans, but indicates he will probably stay in Alaska.

DIVISION MOVE NEWS

Our last month's guess that the end of October would see us moved to College is proving a little early. November 15 now looks quite firm. Construction on the lab and office facilities is proceeding rapidly, and it is estimated that we can be moved in by the latter date. We will probably not be able to get out another Bulletin before the move. The Division's address after the move will be College, Alaska, 99701. As a personal note, friends will be interested to know that the Director's wife is practically moved up there now.

STATE PARK REGULATIONS PROPOSED

Verbal information has just been received from the State Division of Lands that proposed State Park Regulations will soon be subject to public hearings around the State. Mining people should acquaint themselves with these proposals and be ready to testify at the hearings if they have suggestions or objections. Watch for announcements from the Division of Lands or contact them at 344 Sixth Avenue, Anchorage for schedules of hearings and advance copies of the proposed regulations.

MINING EXTENSION COURSE SCHEDULE

The 1967-68 schedule of University of Alaska Mining Extension courses is shown below. These courses are tuition-free and are taught to stimulate interest in prospecting. Major emphasis in the general prospecting course is on rapid identification of the important ore minerals. The geochemical course does not require any previous knowledge of chemistry. For further information, write to:

Summer Sessions, Conferences & Short Courses
University of Alaska
College, Alaska 99701

<u>Location</u>	<u>Date</u>	<u>Course</u>
Savoonga	Sept. 18 - Oct. 13	Prospecting
Tanana	Oct. 30 - Nov. 24	Prospecting
Delta Junction	Nov. 27 - Dec. 22	Prospecting
Ketchikan	Jan. 8 - Feb. 2	Prospecting
Sitka	Feb. 5 - March 1	Prospecting
Port Lions	March 4 - March 29	Prospecting
Kenai	April 1 - April 26	Prospecting
Clear	April 29 - May 24	Prospecting
Palmer	Sept. 18 - Sept. 29	Geochemical
Ft. Richardson	Oct. 2 - Nov. 10	Prospecting
Anchorage	Nov. 13 - Dec. 15	Prospecting
Elmendorf	Dec. 18 - Feb. 2	Prospecting
Ketchikan	Feb. 5 - Feb. 16	Geochemical
Seward	Feb. 19 - March 1	Geochemical
Anchorage	March 4 - April 5	Prospecting
Anchorage	April 8 - April 19	Geochemical
Chugiak	April 22 - May 3	Geochemical
College	May 6 - May 17	Geochemical
College	October - November	Prospecting

MORE ON THE KARDEX MINERAL INVENTORY

Following the publication of our rather lengthy article describing the features and workings of our Kardex file of mineral deposits and mining claims of the State last month, we received a letter from Arthur E. Gloyer reminding us of something we had forgotten. Art was Assayer for the old Territorial Department of Mines from about 1937 to about 1955. He started compiling a card file of mineral occurrences about 1943 and worked on it until the present Kardex system was set up in 1953. He mentions that George Gates and Edward Cobb of the Alaskan Geology Branch of the USGS used to drop in and make use of this file occasionally. Art's file may have been the inspiration for the USGS card file on which our Kardex file was based, for it was Ed Cobb who was the chief architect of that very useful item. Incidentally, we also forgot to mention last month that the USGS mineral occurrence card file was later printed as USGS Bulletin 1139 Index of metallic and nonmetallic mineral deposits of Alaska compiled from published reports of Federal and State Agencies through 1959 by E.H. Cobb and R. Kachadoorian. This bulletin can be purchased from the Superintendent of Documents (not the Division of Mines and Minerals), Washington, D.C., 20402 for \$1.50. It is a valuable reference item for locating published information on prospects and determining what prospects may be in certain areas. Ed Cobb is still turning out useful mineral information items as will be noted under the following articles,

NEW PUBLICATIONS.

NEW PUBLICATIONS

The U.S. Geological Survey has released on open file the reports listed below. These reports can be seen in the various USGS and DM&M offices in Alaska. Copies will be made at private expense at the Alaskan Branch, U.S. Geological Survey, 345 Middlefield Road, Menlo Park, California, 94025. Please do not order these reports from the Division of Mines and Minerals.

Subsurface stratigraphic, structural and economic geology, northern Alaska, by Florence R. Collins and Florence M. Robinson. 259 p., 19 pl., 16 figs. 2 tables.

Metallic mineral resources map of the Big Delta quadrangle, Alaska, compiled by Edward H. Cobb. 4 p., 1 map (scale 1:250,000).

Metallic mineral resources map of the Charley River quadrangle, Alaska, compiled by Edward H. Cobb. 3 p., 1 map (scale 1:250,000).

Metallic mineral resources map of the Circle quadrangle, Alaska, compiled by Edward H. Cobb. 6 p., 1 map (scale 1:250,000).

Metallic mineral resources map of the Eagle quadrangle, Alaska, compiled by Edward H. Cobb. 8 p., 1 map (scale 1:250,000).

Metallic mineral resources map of the Livengood quadrangle, Alaska, compiled by Edward H. Cobb. 11 p., 1 map (scale 1:250,000).

Metallic mineral resources map of the Tanana quadrangle, Alaska, compiled by Edward H. Cobb. 8 p., 1 map (scale 1:250,000).

FEDERAL AID FOR MINERAL EXPLORATION INCREASED

The U.S. Geological Survey's Office of Mineral Exploration (OME) will now put up a maximum of 75 percent of the cost of exploration for eight metals which formerly drew only 50 percent participation by the government. It is interesting to note that gold is one of the newly-raised metals. Silver was raised to the 75-percent category sometime ago.

To qualify for a loan, an applicant must have a valid interest in the property to be explored; the expectable ores must be valuable principally for minerals that are on the support list; good possibilities for making a significant discovery must exist; and the property must be accessible. Also, it must be shown that the applicant could not do the work at his own expense, and that funds for exploration are not available to him on reasonable terms from commercial sources. The applicant must also show that he has funds to meet his share of the costs and to support the operation until government reimbursement is obtained.

The following minerals and mineral products are eligible for assistance under the OME program with the maximum amount of government participation as indicated:

Antimony 75%
Asbestos 50%
Bauxite 50%
Beryllium 50%
Bismuth 75%
Cadmium 50%

Chromite 50%
Cobalt 50%
Columbium 50%
Copper 50%
Corundum 50%
Diamond (industrial) 50%

Fluorspar 50%
 Gold 75%
 Graphite (crucible flake) 50%
 Iron Ore 50%
 Kyanite (strategic) 50%
 Manganese 50%
 Mercury 75%
 Mica (strategic) 50%
 Molybdenum 50%
 Monazite 50%
 Nickel 50%
 Platinum Group Metals 75%

Quartz Crystal (piezoelectric) 50%
 Rare Earths 50%
 Rutile 75%
 Selenium 50%
 Silver 75%
 Sulphur 50%
 Talc (block steatite) 50%
 Tantalum 75%
 Tellurium 50%
 Thorium 50%
 Tin 75%
 Uranium 50%

Administration of the OME program in Alaska is headquartered at the following address: Field Office, Region II, OME, Geological Survey Building 2, 345 Middlefield Road, Menlo Park, California 94025. Applications and further information may be obtained from that office.

E. AND M.J. METAL MARKET PRICES

	<u>September 25 1967</u>	<u>Month Ago</u>	<u>Year Ago</u>
Copper, per lb.	Suspended*	39.1¢	31.1¢
Lead, per lb.	14¢	14¢	15¢
Zinc, per lb.	14¢	14¢	15¢
Tin, per lb.	151.1¢	151.9¢	154.65¢
Nickel, per lb.	85.25¢-94¢	85.25¢	77.75¢
Platinum, per oz.	\$109-112	\$109-112	\$100
Mercury, per flask	\$495-512	\$490-495	\$470-490
Antimony ore, per unit	\$5.20-6.20	\$5.20-6.20	\$4.55-5.55
Beryllium powder, 98¢ per lb.	\$54-66	\$54-66	\$54-66
Chrome ore, per long ton	\$31-35	\$31-35	\$31-35
Molybdenum Conc., per lb.	\$1.62	\$1.62	\$1.55
Titanium ore, per ton	\$21-24	\$21-24	\$21-24
Tungsten, per unit	\$43.00	\$43.00	\$43.00
Silver, New York, per oz.	169.98¢	169.50¢	129.3¢

* E. & M.J. Metals Week says the following: "With virtually all domestic copper production struck and with the pipelines now about empty, Metals Week feels that there is not a sufficient tonnage of producer copper being sold in the U.S. to calculate a meaningful weighted average. Foreign-produced-and higher-priced-copper would take on too great a weighting in the calculation, and consumers would be hit with an expected and unfair increase in their copper costs. Consequently, the E. & M.J. domestic average will be suspended until a representative tonnage of U.S.-produced copper is again being sold."