

September 1968

Vol. XVI
No. 9

MINING ACTIVITIES

A great deal of staking and prospecting activity is evident in the Alaska Range southwest of Mt. McKinley National Park. This has been largely brought on by USGS reports as noted elsewhere in this Bulletin. Parties have been staking the prospects as fast as the reports are issued and expanding their exploration work from there. Particularly active in the region are Home Oil Co. of Calgary, Granby Mining Co., and Falconbridge.

Offshore prospecting permits in the Nome region formerly controlled by Alaska Exploration Corp. of Anchorage are now being investigated by Rowan Drilling Co. The acreage is reported to aggregate some 100,000 acres. As reported earlier, Shell Oil and American Smelting and Refining together are planning work this winter on leases held by Shell. Ocean Sciences is reported to be planning to put a ship back in the area. Two other organizations holding permits and planning work are Amerada Oil and Occidental Oil. Global Marine did some seismic work and bottom sampling earlier in the summer in Gastineau Channel near Juneau.

The Kennecott Copper Corp. has turned its Bornite copper property back to Bear Creek Mining Co. for further evaluation. It is understood that Bear Creek will continue the drilling.

OIL AND GAS NEWS

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

Permit No. 68-69. Shell Oil Company #C-31-23 Middle Ground Shoal, A.P.I. No. 50-133-20137. Surface location: 510' FSL and 1,527' FEL, Sec. 23, T8N, R13W, S.M. Bottom hole location: 320' FNL and 2,530' FEL, Sec. 23, T8N, R13W, S.M. This is a development location in the Middle Ground Shoal Field.

Permit No. 68-70. The Cherryville Corporation #2 Middle River State Unit, A.P.I. No. 50-133-20138. Surface location: 1,507' FSL and 1,604' FEL, Sec. 10, T9N, R14W, S.M. Bottom hole location: 660' FSL and 330' FWL, Sec. 11, T9N, R14W, S.M. This is an exploratory location about 5 miles southwest of the Trading Bay Field.

Permit No. 68-71. Union Oil Company of California #44-30 Kenai Unit, A.P.I. No. 50-133-20139. Surface location: 1,750' FSL and 1,625' FEL, Sec. 30, T5N, R11W, S.M. Bottom hole location: 50' FSL and 50' FEL, Sec. 30, T5N, R11W, S.M. This is a development location in the Kenai Gas Field.

Permit No. 68-72. Phillips Petroleum Company #A-1 North Cook Inlet State 37831, A.P.I. No. 50-283-20016. Surface location: 1,252' FNL and 1,081' FWL, Sec. 6, T11N, R9W, S.M. Bottom hole location: 2,573' FSL and 89' FEL, Sec. 36, T12N, R10W, S.M. This is the first development location from the platform in the North Cook Inlet Gas Field.

Permit No. 68-73. Union Oil Company of California #D-11 Trading Bay Unit, A.P.I. No. 50-133-20140. Surface location: 761' FSL and 1,132' FWL, Sec. 6, T8N, R13W, S.M. Bottom hole location: 989' FSL and 687' FWL, Sec. 32, T9N, R13W, S.M. This is a development location in the McArthur River Field.

Permit No. 68-74. Mesa Petroleum Co. #2 Kasilof Unit, A.P.I. No. 50-133-20141. 1980' FEL and 660' FNL, Sec. 19, T3N, R12W, S.M. This exploration location is about 10 miles southwest of the Kenai Gas Field.

Permit No. 68-75. Union Oil Company of California #D-12 Trading Bay Unit, A.P.I. No. 50-133-20142. Surface location: 678' FSL and 1,217" FWL, Sec. 6, T8N, R13W, S.M. Bottom hole location: 2,180' FNL and 2,440' FWL, Sec. 8, T8N, R13W, S.M. This development location is in the McArthur River Field.

Note: The location of the B. P. Exploration U.S.A., Inc. #1 Sag Delta has been changed to 2,640' FNL and 2,437' FWL, Sec. 5, T11N, R16E, U.M. This is about five-eighths of a mile southeast of the originally reported location.

DRILLING ACTIVITY (as of August 26, 1968)

<u>Operator</u>	<u>Well Names & Numbers</u>	<u>Type</u>	<u>Status</u>
Atlantic Richfield Co.	Sag River State #1	E	Drilling
Marathon Oil Corp.	Beaver Creek Unit #3	D	Comp. Gas Well
Mobil Oil Corp.	Granite Point State #33-14	D	Comp. Oil Well
Mobil Oil Corp.	Granite Point State #44-11	D	Drilling
Mobil Oil Corp.	Granite Point State #42-23	D	Drilling
Mobil Oil Corp.	Moquawkie #2	E	Drilling
Pan American Petroleum Corp.	Granite Point State 17586 #5	D	Drilling
Pan American Petroleum Corp.	Granite Point State 17587 #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.	Granite Point State 18742 #25	D	Comp. Oil Well
Pan American Petroleum Corp.	MGS State 17595 #12	D	Drilling
Pan American Petroleum Corp.	Redoubt Shoal Unit	E	Drilling
Pan American Petroleum Corp.	South MGS Unit #10	D	Temp. Susp.
Pan American Petroleum Corp.	South MGS Unit #11	D	Completing
Pan American Petroleum Corp.	South MGS Unit #12	D	Location
Phillips Petroleum Co.	North Cook Infer State 37831	D	Location
Shell Oil Company	Bachatna Creek #1	E	Location
Shell Oil Company	MGS C-31-23	D	Drilling
Shell Oil Company	MGS C-43-23	D	Comp. Oil Well
Shell Oil Company	MGS C-33-26	D	Comp. Oil Well
Standard Oil Co. of Calif.	Kustatan Unit 43-30	E	Abandoned
Standard Oil Co. of Calif.	North Trading Bay A-23-27	E	Drilling
Texaco, Inc.	Trading Bay TS #1	D	Comp. Oil Well
Texaco, Inc.	Trading Bay TS #2	D	Drilling
Texaco, Inc.	Trading Bay TS #3	D	Drilling
Texaco, Inc.	Trading Bay TS #4	D	Location

<u>Operator</u>	<u>Well Names & Numbers</u>	<u>Type</u>	<u>Status</u>
The Cherryville Corp.	Middle River State Unit	E	Location
Union Oil Co. of Calif.	Kenai Unit 43-6A	D	Drilling
Union Oil Co. of Calif.	Kenai Unit 44-30	D	Location
Union Oil Co. of Calif.	Kenai Deep Unit #2	D	Comp. Gas Well
Union Oil Co. of Calif.	Trading Bay State A-17	D	Drilling
Union Oil Co. of Calif.	Trading Bay Unit D-7	D	Comp. Oil Well
Union Oil Co. of Calif.	Trading Bay Unit D-9	D	Drilling
Union Oil Co. of Calif.	Trading Bay Unit D-10	D	Comp. Oil Well
Union Oil Co. of Calif.	Trading Bay Unit D-12	D	Drilling
Union Oil Co. of Calif.	Trading Bay Unit G-7	D	Comp. Oil Well
Union Oil Co. of Calif.	Trading Bay Unit G-9	D	Comp. Oil Well
Union Oil Co. of Calif.	Trading Bay Unit G-12	D	Drilling
Union Oil Co. of Calif.	Trading Bay Unit G-13	D	Drilling
Union Oil Co. of Calif.	Trading Bay Unit K-3	D	Location
Union Oil Co. of Calif.	Trading Bay Unit K-7	D	Drilling
Union Oil Co. of Calif.	Trading Bay Unit K-8	D	Drilling
Yukon Services, Inc.	Campbell Point #1	E	Abandoned
B. P. Exploration U.S.A., Inc.	Sag Delta #1	E	Location
Mesa Petroleum Co.	Kasilof Unit #2	E	Location
Union Oil Co. of Calif.	Trading Bay Unit D-11	D	Location

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

PRODUCTION - July 1968 (Gas pressure base 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	1,039,266	22,947	933,974	30 (2)	15,910,853	11,440,352
McArthur River	2,287,433	633,488	19,990	21 (1)	11,235,538	3,118,034
Middle Ground Shoal	1,281,017	34,019	613,191	46 (2)	18,537,360	8,450,880
Swanson River	1,154,034	183,670	2,398,655	40 (10)	82,942,659	45,484,678
Trading Bay	288,630	3,168	240,156	15 (4)	2,253,561	2,069,268
Total	6,050,380	877,292	4,356,331	152 (19)	130,879,971	71,203,076
Beluga River			162,907	2 (2)		915,068
Kenai			3,443,606	17 (1)		111,523,164
Kenai Deep			211,380	1		1,204,849
Mioquawkie			9,493	1		88,713
Sterling			13,020	1 (1)		706,603
South Barrow			30,925	3 (1)		3,692,483
Trading Bay	286		23,622	1	1,220	143,061
Inactive Gas Fields						12,028,262
Total Dry Gas			3,894,953	26 (5)		130,302,203
STATE GRAND TOTAL	6,050,666	877,292	8,251,284	178 (24)	130,881,191	201,505,279

Average per day: Oil, 195,183; Csg. Head, 140,527; Dry Gas, 125,643; Total Gas, 266,170.

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

SIBERIAN DEVELOPMENT

An interesting article on the remarkable industrial and social development of Siberia is contained in the August Fortune magazine. The author, Max Ways, points out that in a region where both the gifts and obstacles of nature abound, there is a special need for science and technology for development. This means that industries must be emphasized which are capital-intensive, highly mechanized, and automated. This sort of regional economy calls for many scientists, engineers, and well trained workers. Maintenance of such a working force in this environment requires much education, research, attention to the "amenities of life", and an opportunity for those in the region to foresee careers of increasing interest and importance.

Power, transportation, mining, oil, timber, cellulose, metallurgy, fabricating, cities, and other developments are progressing on an almost unbelievable scale. Interestingly, the Russians are also concerned with water quality and scenery conservation. They are taking extensive steps, for example, to prevent the famous Lake Baikal from being polluted.

The Russians have recognized that a new country must be developed by production of its raw materials. They have realized that geologists play the key role in finding the raw materials, and have employed them on a mass scale. This importance has created a hero image of the geologist second only to the astronaut in Russian esteem. The Ministry of Geology has 500,000 employees. Of 11,000 geological parties in the field, 4,000 are in Siberia. The article states, "In the last two decades Soviet geologists, using increasingly sophisticated techniques, have found more mineral deposits than the Soviet economy--or any other economy--could bring into full production for a generation." Yet, realizing that a planned economy needs an accurate inventory of its mineral resources, the pace of the geological search is not slowing.

RAILROAD TO THE ARCTIC

At the conclusion of the recent meeting of the NORTH Commission at College, Alaska, it recommended that (1) the proposed railroad route from Fairbanks to the Arctic be immediately surveyed, (2) a "tote road" be constructed during the course of the survey, and (3) the work of planning the railroad be done in cooperation with the oil industry pipe line people.

Governor Walter J. Hickel announced that survey personnel will be on the job this fall and that the project will be pushed to the utmost. Correspondence was read promising cooperation from the Federal Department of Transportation in requesting funds. Oil industry representatives predicted a pipeline from the Prudhoe Bay area south by 1971, and it is thought by the Commission and Governor Hickel that the railroad can be built during the same time. The cost is estimated at \$210 million. The length of track from Fairbanks to Prudhoe Bay will be more than 500 miles.

The railroad to the Arctic will help accelerate mining development as well as oil. This was pointed out by Natural Resources Commissioner Thomas E. Kelly in his address to the NORTH Commission. A long tectonic boundary between the Brooks Range geanticline and the Colville geosyncline is an excellent possibility for hardrock exploration. Several major faults have been mapped along it, more are probably hidden, and a number of granitic intrusives are known to exist along its general route.

A radioactive anomaly exists in the Mt. Michelson granitic intrusive. Similar granitic intrusives

exist along the north side of the Brooks Range which may be regarded as possible source rocks for uranium deposits which may exist in the north slope sediments.

Oil shale is contained in the Triassic rocks which mostly make up the southern section of the Arctic Foothills Province. This feature runs from the coast to the vicinity of Mt. Michelson. The USGS reports that "oil shale is common in an almost continuous belt of Triassic rocks exposed along the north slope of the Brooks Range".

Six phosphate locations are known, some in the region from the headwaters of the Colville River to Anaktuvuk Pass and some in the Mt. Michelson area. Additional phosphate deposits may exist in any of the limey metamorphosed sediments north of the Brooks Range.

Large areas of the North Slope are underlain by coal. Any of the Cretaceous rocks are likely to be coal-bearing. Coal reserves of northern Alaska total 19 billion tons of bituminous and 100 billion tons of lower grade coals. Some of the bituminous has been found by the USBM to have coking qualities when mixed with as little as 15% Utah coal.

MINING EXTENSION COURSES

The tentative schedule for the University of Alaska Mining Extension Courses for the school year 1968-69 is as follows:

Instructor Leo Mark Anthony

<u>Location</u>	<u>Date</u>	<u>Course</u>
Anchorage	Sept. 16 - Oct. 18	Prospecting
Anchorage	Oct. 21 - Nov. 1	Rocks
Ft. Richardson	Nov. 4 - Dec. 6	Prospecting
Elmendorf	Dec. 9 - Jan. 24	Prospecting
Ketchikan	Jan. 27 - Feb. 7	Geophysical
Juneau	Feb. 10 - Feb. 21	Geophysical
Anchorage	Feb. 24 - Apr. 4	Prospecting
Anchorage	Apr. 7 - Apr. 18	Rocks
Anchorage	Apr. 21 - May 2	Geophysical
Anchorage	May 5 - May 16	Geochemical
College	May 19 - May 30	Geochemical

Instructor Willow M. Burand

<u>Location</u>	<u>Date</u>	<u>Course</u>
Shaktolik	Sept. 16 - Oct. 11	Prospecting
Koyuk	Oct. 14 - Nov. 8	Prospecting
Juneau	Nov. 18 - Dec. 13	Prospecting
Seward	Jan. 6 - Jan. 31	Prospecting
Cordova	Feb. 3 - Feb. 28	Prospecting
Eielson	Mar. 3 - Mar. 28	Prospecting
College	Mar. 31 - Apr. 25	Prospecting
Willow	Apr. 28 - May 23	Prospecting

NEW USGS PUBLICATIONS

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

1. Geochemical reconnaissance maps of granitic rocks, Coleen and Table Mountain quadrangles, Alaska, by W.R. Brosge and H.N. Reiser. 4 sheets, scale 1:250,000.
2. Gold gradients and anomalies in the Pedro-Cleary Summit area, Fairbanks district, Alaska, by R.B. Forbes, H.D. Pilkington, and Daniel B. Hawkings. 49 p., 1 pl., 12 figs.
3. Description of the Ruth Creek, Lillian Creek, Griffin, Old Smoky, Sunshine No. 2, and Olive Creek lode prospects, Livengood district, Alaska, by R.L. Foster. 21 p., 7 figs., 7 tables.

Also released is USGS Circular 590, "Potential for lode deposits in the Livengood gold placer district, east-central Alaska," by R.L. Foster. The report briefly describes a number of small gold deposits in a geologically complex area cut by many thrust faults. At least two anomalous areas are considered worthy of further investigation. This circular may be obtained free from the various offices of the USGS and Division of Mines and Minerals.

A USGS report in the form of a news release with attached maps and sampling results has created the most recent staking and prospecting flurry near Farewell. It describes copper-silver-zinc deposits in the form of "massive, fine-grained sulfide bodies" at 4,300 feet in elevation about 37 miles east of Farewell and two miles north of Shellabarger Pass. This and other reports in the form of circulars are resulting from the Department of Interior's Heavy Minerals Program. They have caused considerable interest and staking activity as fast as they have been released.

E. AND M.J. METAL MARKET PRICES

	<u>August 26</u>	<u>Month Ago</u>	<u>Year Ago</u>
Copper, per lb.	41.7¢	41.7¢	39.1¢
Lead, per lb.	12.5¢	12.5¢	14¢
Zinc, per lb.	13.5¢	13.5¢	14¢
Tin, per lb.	142.0¢	141.1¢	151.9¢
Nickel, per lb.	94.0¢	94.0¢	85.25¢
Platinum, per oz.	\$120-125	\$120-125	\$109-112
Mercury, per flask	\$523-528	\$500-510	\$490-495
Antimony ore, per unit	\$5.00*	\$5.00-5.10	\$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.	219.5¢	228.0¢	169.5¢
Gold, Engelhard, per oz.	\$39.25	\$39.02	----

* Price quoted for August 26 is for New York, lump, stu, 60%; prices quoted for month ago and year ago are for New York, lump, stu, 50%. Apparently 50% antimony is no longer being quoted by E. and M.J.