STATE OF ALASKA
Department of Natural Resources
DIVISION OF MINES AND GEOLOGY

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MINES AND PETROLEUM BULLETIN

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MINING NEWS

Staking in Rampart Withdrawal -- Questions have been raised about the staking for non-metallics in the Rampart power withdrawal, an area of nearly 9,000,000 acres.

When Secretary Udall signed Power Site Classification #445 on January 5, 1965, the Rampart Dam withdrawal became classified as a powersite. Powersites are open to staking. Such a classification is not affected by the "Land Freeze" (Public Land Order 4582) and thus, by statute 30 USC 621, locatable minerals, metallic and nonmetallic, may be staked within the Rampart withdrawal.

Coal Contracts -- In mid-June, Alaska Senator Ted Steven's office announced that the defense supply agency had contracted to purchase 417,000 net tons subbituminous Alaska coal for a total cost of $2.7 million dollars. This coal will provide heat and power for the coming fiscal year at Clear and Eielson Air Force Bases and Fort Wainwright.

Usibelli Coal Mines, Inc., at Suntrana will receive $1,171,700 for 176,000 net tons or $6.65/ton, while Vitro Minerals Corp., at Suntrana will receive $1,564,380 for 241,000 net tons or $6.51/ton.

The Vitro Mines have also been awarded the University of Alaska contract and estimates its total production for the coming fiscal year to be 303,000 tons of coal.

Usibelli Coal Mines, Inc., estimates its total production will be 325,000 tons. Besides the defense contract, it has been awarded the City of Fairbanks and GVEA contracts.

THE ROLE OF GEOLOGY IN LAND PLANNING

The need for a thorough knowledge of the geology of an area before intelligent land-use planning can be pursued is obvious in most cases. This becomes more and more important as the population grows and the competition for land becomes more intense.

In his speech as retiring president of the Geological Society of America, California State Geologist Dr. Ian Campbell had this to say: "....the challenge is nothing less than to assure....that geology is brought into the decision-making process....at every step in determining the manifold use of this our land--land which, as population "explodes", grows ever more valuable and thereby deserves more thoughtful nurture".

FURTHER NOTES ON MINERAL EXPLORATION

The following material is the second installment of information from J. D. Bateman's article "Exploration Programs for Small Mining Companies" which appeared in the December 1963 issue of Mining Congress Journal. The first installment appeared in the April Bulletin.

Mr. Bateman's second point in small company mining is the high cost of finding the mine. If a company plans to use airborne geophysical surveys, the normal procedure is to undertake a geological and photogeological study of a district in order to select the most desirable area for airborne surveys. Experience has shown that in order to discover a mine by this method, a total of 100,000 line miles of flying usually will be required which will cost about $15 a line mile or a total of $1,500,000. The costs have just begun.

For every dollar spent in the air $4 in additional costs will be needed for ground follow up such as diamond drilling and geophysical work. Thus an additional expenditure of $7,500,000 will be needed before the mine is even found. These expenditures are far greater than most small companies can afford.

Syndication may well be the solution to the small company's financial problems. If the small company plans to send out a prospecting team, there must be a specific objective to insure a reasonable chance of success, and the geological justification for the expenditure must be unassailable. If the company wants to utilize airborne geophysics it must be prepared to dilute its interest and expenditure. Syndicating with other small companies interested in the same area is the best way to dilute these expenses. The large mining companies have been trending towards joint exploration and development projects in recent years; and the place of small mining companies in such cooperative endeavors is only one of magnitude.

To enable a sound geological program various tools are available and within the financial means of a prudent small company. Tools such as geochemical soil sampling, photogeology and geophysics are never an end in themselves but used with digression and forethought they can save many needless hours and valuable dollars.

The application of geophysical methods to the discovery of ore has been widely successful in recent years; but large scale geophysical surveys are beyond the financial scope of the small mining company. There should be a specific target for the justification of a geophysical survey, which may be more appropriate for the delineation rather than the discovery of mineralized bodies.

SCIENCE CONFERENCE

The 20th Alaska State Conference will be held August 24-27, 1969 at the University of Alaska, College, Alaska. The theme of the conference is "Change in the North: People, Resources, and Environment." The main topics to be covered are: what kind of development versus how much conservation; the economic and political basis for decisions about resources development; settlement of Native land claims; and the integration of Alaska Natives into the socio-economic structure of the State. For further information contact: Victor Fischer, Conference Chairman, 20th Alaska State Science Conference, University of Alaska, College, Alaska, 99701.

NEW PUBLICATIONS

The following open file reports have been released by the U. S. Geological Survey and are available for consultation in the Alaska USGS 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, USGS, 345 Middlefield Road, Menlo Park, California, 94025.

Results of stream sediment sampling in the northern Melozitna, the Hughes, and the southern Shungnak quadrangles, west-central Alaska, by Thomas P. Miller, 53 p., incl. 1 table; 1 pl., scale 1:250,000

Results of stream sediment sampling in western Candle and southern Selawik quadrangles, Alaska, by Raymond L. Elliott and Thomas P. Miller, 8 p., plus 53 p. tabular material, 1 pl., scale 1:250,000

Aeromagnetic maps of part of the southern Alaska Range, by Bruce L. Reed and Lennart A. Anderson, 6 p., 3 figs

Metallic mineral resources map of the Anchorage quadrangle, Alaska, compiled by Edward H. Cobb and Neal A. Matson, Jr., 11 p.; 1 index map; 1 map, scale 1:250,000

Metallic mineral resources map of the Gulkana quadrangle, Alaska, compiled by Neal A. Matson, Jr., 4 p.; 1 index map; 1 map, scale 1:250,000

Metallic mineral resources map of the Nabesna quadrangle, Alaska, compiled by Neal A. Matson, Jr., 6 p.; 1 index map; 1 map, scale 1:250,000

Metallic mineral resources map of the Valdez quadrangle, Alaska, compiled by Neal A. Matson, Jr., 11 p.; 1 index map; 1 map, scale 1:250,000

Preliminary report on the Paleozoic and Mesozoic sedimentary sequences on St. Lawrence Island, Alaska, by William W. Patton, Jr., and J. Thomas Dutro, Jr., 15 p., 5 figs

Minor element content of stream-sediment and bedrock samples from southeastern Douglas Island, southeastern Alaska, by David A. Brew and Arthur B. Ford, 4 p., 3 figs, 2 tables

Availability of palynological material from Naval Petroleum Reserve No. 4, XVI: Fish Creek Test Well No. 1, by Richard A. Scott, 1 p

Semiquantitative spectrographic analyses of nine specimens from the Mount Edgecumbe volcanic field, Kruzof Island, southeastern Alaska, by Chris Heropoulos and Robert E. Mays, 3 p., including 1 p. table

Isopach maps of upper Paleozoic and Mesozoic rocks, northern Alaska, by William P. Brosge and Irvin L. Tailleur, 13 p., text, 10 figs (11 sheets), scale 1:2,500,000

Geochemical data from the Nabesna A-3 quadrangle, Alaska, by D. H. Richter and N. A. Matson, Jr., 1 sheet; 5 p., explanation and tabular material

Geochemical data from the Nabesna B-4 quadrangle, Alaska, by D. H. Richter and N. A. Matson, Jr., 1 sheet; 8 p., explanation and tabular material

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

Metallic mineral resources map of the Iliamna quadrangle, Alaska, compiled by Robert L. Detterman and Edward H. Cobb, 3 p., 1 map (scale 1:250,000), 1 index map

Sedimentary processes and distribution of particulate gold in northern Bering Sea, by Hans Nelson and D. M. Hopkins, 59 p., plus 18 p. tabular material, 14 figs

The USGS has released the following Circular which may be obtained free from the various USGS and Division of Mines and Geology offices:

Circular 617, "Results of Geological and Geochemical Investigations in an area northwest of the Chulitna River, central Alaska Range". This circular briefly describes some small concentrations of gold and other metals.

The U. S. Bureau of Mines has released the following open file report which is available for use in the Division of Mines and Geology offices:

Microfilming of mining records in the Kuskokwim and Yukon River Basins, Alaska

The Alaska Division of Mines and Geology has released the following publications. These are available for distribution upon request in the Division offices in College, Anchorage and Juneau:

Information Circular #15 - "A Prospectors Guide to the Sale and Lease of Mineral Properties"

Lab Report #2 - "Analysis of copper, lead, and zinc by atomic absorption spectrophotometry by Paul Anderson and Namok Cho (Xeroxed copies only). This paper is intended for internal use by the Division of Mines and Geology but may be useful outside of the Division to people doing similar work.

Bulletin news release correction: In the June issue, the USGS bulletin release, "The coal bearing group in the Nenana Coal Field" was listed as bulletin 1247-D For $1.25, this should have read as 1274-D, for 25¢.

E. AND M.J. METAL MARKET PRICES

	June 26	Month Ago	Year Ago
Copper, per lb.	45.946¢	44.105¢	42¢
Lead, per lb.	15.0¢	14.3¢	13¢
Zinc, per lb.	15.0¢	14.0¢	14¢
Tin, per lb.	159.7¢	157.3¢	143.1¢
Nickel, per lb.	$1.03	$1.03	94¢
Platinum, per oz.	$120-125	$120-125	$109-114
Mercury, per flask	$485-495	$497-510	$538-550
Antimony ore, per unit	$8.21-8.39	$7.54-7.72	$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.	$1.72	$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.	156.2¢	175.6¢	240.8¢
Gold, per oz.	$41.40	$43.45	-----
Barite (drilling mud grade from E/MJ May)	$12-16	$12-16	-----

OIL AND GAS NEWS

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

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

Permit No. 69-56. Shell Oil Company #1 Lake 79 Federal, API No. 50-029-20031. 1,436' FNL and 1,120' FEL, Sec. 1, T8N, R17E, U.M. This exploratory location is about 25 miles southeast of the Prudhoe Bay discovery well.

Permit No. 69-57. Mobil Oil Corporation #26-12-12 North Kuparuk State, API No. 50-029-20032. 2,409' FSL and 1,359' FWL, Sec. 26, T12N, R12E, U.M. This exploratory location is about 12 miles west of the Prudhoe Bay discovery well.

Permit No. 69-58. Phillips Petroleum Company #A-7 North Cook Inlet Unit, API No. 50-283-20027. Surface location: 1,249' FNL and 1,084' FWL, Sec. 6, T11N, R9W, S.M. Bottom hole location: 60' FSL and 1,500' FWL, Sec. 6, T11N, R9W, S.M. This development location is in the North Cook Inlet Field.

Permit No. 69-59. BP Oil Corporation #13-10-14 Put River, API No. 50-029-20033. Surface location: 650' FSL and 555' FWL, Sec. 13, T10N, R14E, U.M. Bottom hole location: 1,980' FSL and 1,980' FWL, Sec. 13, T10N, R14E, U.M. This exploratory location is about 7 1/2 miles south of the Prudhoe Bay discovery well.

Permit No. 69-60. Standard Oil Company of California #31-16 Soldotna Creek Unit, API No. 50-133-20190. Surface location: 756' FSL and 2,093' FEL, Sec. 9, T7N, R9W, S.M. Bottom hole location: 300' FNL and 1,600' FEL, Sec. 16, T7N, R9W, S.M. This development location is in the Swanson River Field.

Permit No. 69-61. Shell Oil Company #A-13-12 Middle Ground Shoal, API No. 50-133-20191. Surface location: 1,561' FSL and 381' FEL, Sec. 11, T8N, R13W, S.M. Bottom hole location: 2,300' FSL and 550' FWL, Sec. 12, T8N, R13W, S.M. This development location is in the Middle Ground Shoal Field.

Permit No. 69-62. BP Oil Corporation #14-10-14 Put River, API No. 50-029-20034. Surface location: 430' FNL and 555' FWL, Sec. 13, T10N, R14E, U.M. Bottom hole location: 1,980' FNL and 1,980' FEL, Sec. 14, T10N, R14E, U.M. This exploratory location is about seven miles south of the Prudhoe Bay discovery well.

Permit No. 69-63. Phillips Petroleum Company #A-8 North Cook Inlet Unit, API No. 50-283-20028. Surface location: 1,256' FNL and 1,080' FWL, Sec. 6, T11N, R9W, S.M. Bottom hole location: 1,700' FSL and 1,350' FWL, Sec. 36, T12N, R10W, S.M. This development well is in the North Cook Inlet Field.

Permit No. 69-64. BP Oil Corporation #19-10-15 Put River, API No. 50-029-20035. 755' FNL and 820' FEL, Sec. 19, T10N, R15E, U.M. This exploratory location is about 8 1/2 miles southeast of the Prudhoe Bay discovery well.

Permit No. 69-65. Texaco Inc. #TS 5-R.D. Trading Bay State, API No. 50-133-20155-01. Surface location: 660' FNL and 2,000' FEL, Sec. 34, T10N, R13W, S.M. Bottom hole location, 660' FNL and 1,720' FWL, Sec. 34, T10N, R13W, S.M. This development location is in the Trading Bay Field.

Note: Union Oil Company of California has changed the name of the Trading Bay Unit #G-21 well to Trading Bay Unit #G-30. The surface location was changed to 1,876' FSL and 1,378' FEL, Sec. 29, T9N, R13W, S.M. This well is identified as Permit No. 69-47 and API No. 50-133-20187.

DRILLING ACTIVITY (as of June 25, 1969)

Operator	Well Names & Numbers	Type	Status
Southern			
Atlantic Richfield Company	N. Trading Bay State #S-4	D	Drilling
Gulf Oil Corporation	Middle Lake Unit #1	E	Suspended
Halbouty Alaska Oil Company	Theodore River #1	E	Drilling
Mobil Oil Corporation	Granite Point #32-23	D	Comp. Oil Well
Mobil Oil Corporation	Granite Point #12-24	D	Drilling
Mobil Oil Corporation	Granite Point MUC #1-1	D	Drilling
Pan American Petroleum Corp.	David River #1-A	E	Drilling
Phillips Petroleum Co.	N. Cook Inlet Unit A-6	D	Comp. Gas Well
Phillips Petroleum Co.	N. Cook Inlet Unit A-7	D	Completing
Phillips Petroleum Co.	N. Cook Inlet Unit A-8	D	Drilling
Shell Oil Company	MGS 13-12	D	Drilling
Shell Oil Company	MGS A-22-1	D	Comp. Oil Well
Shell Oil Company	MGS "C" Line #1	D	Idle
Standard Oil Company of Calif.	SCU 31-16	D	R.U.
Tenneco Oil Company et al	Middleton Island State #1	E	Drilling
Texaco Inc.	Trading Bay State TS-5	D	Abandoned
Texaco Inc.	Trading Bay State TS-5 R.D.	D	Drilling
Texaco Inc.	Trading Bay State TS-6	D	Drilling
Texaco Inc.	Trading Bay State TS-7	D	Comp. Oil Well
Texaco Inc.	Trading Bay State TS-8	D	Completing
Union Oil Company of Calif.	Kenai Deep Unit #3	D	R.U.
Union Oil Company of Calif.	Kenai Deep Unit #4	D	Comp. Gas Well
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-16	D	Drilling
Union Oil Company of Calif.	Trading Bay Unit D-19	D	Drilling
Union Oil Company of Calif.	Trading Bay Unit G-14-A	D	Drilling
Union Oil Company of Calif.	Trading Bay Unit G-30	D	Drilling
Union Oil Company of Calif.	Trading Bay Unit S-5	D	Comp. Oil Well
Northern			
Atlantic Richfield Company	Delta State #1	E	Temp. Susp.
Atlantic Richfield Company	Kup River State #1	E	Drilling
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	Drilling
BP Oil Corporation	Put River #1	E	Testing
BP Oil Corporation	Put River BP 3-11-13	E	Location

DRILLING ACTIVITY (cont'd)

Operator	Well Names & Numbers	Type	Status
Northern (cont'd)			
BP Oil Corporation	Put River BP 4-11-13	E	Location
BP Oil Corporation	Put River BP 9-11-13	E	Drilling
BP Oil Corporation	Put River BP 10-11-13	E	Drilling
BP Oil Corporation	Put River BP 33-11-13	E	Drilling
BP Oil Corporation	Put River BP 13-10-14	E	Location
BP Oil Corporation	Put River BP 14-10-14	E	Location
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	Put River BP 19-10-15	E	Location
BP Oil Corporation	Sag Delta #1	E	Location
BP Oil Corporation	Sag Delta 31-10-16	E	Drilling
BP Oil Corporation	Sag Delta 31-11-16	E	Suspended
Colorado Oil and Gas Corp.	Shaviovik #1	E	Drilling
Hamilton Bros. Oil Company	Point Storkersen #1	E	Drilling
McCulloch Oil Corp.	E. Umiat Unit #2	E	Suspended
Mobil Oil Corp.	Mobil-Phillips Hemi State 3-9-11	E	Temp. Susp.
Mobil Oil Corp.	Hurl State 5-10-13	E	Drilling
Mobil Oil Corp.	Mobil-Phillips Kadler State 15-9-16	E	Drilling
Mobil Oil Corp.	Mobil-Phillips Kuparuk State #1	E	Temp. Susp.
Mobil Oil Corp.	Mobil-Phillips W. Kuparuk Unit #1	E	Drilling
Mobil Oil Corp.	Mobil-Phillips N. Kuparuk State #1	E	Drilling
Newmont Oil Corp.	E. Kuparuk Unit #1	E	Drilling
Pan American Petroleum Corp.	Kavik #1	E	Drilling
Shell Oil Company	Lake 79 Federal #1	E	Location
Sinclair Oil Corp.	BP Ugnu #1	E	Comp. Oil Well
Standard Oil Co. of Calif.	Kavearak Point 32-25	E	Drilling
Standard Oil Co. of Calif.	Simpson Lagoon 32-14	E	Drilling
Standard Oil Co. of Calif.	SOCAL 31-25	E	Temp. Susp.
Texaco Inc.	Kad River #1	E	Drilling
Texaco Inc.	West Kavik Unit #1	E	Drilling

PRODUCTION - May 1969 (Pressure base 14.65 psi)

Field	Oil Bbls	Water-Bbls	Gas-MCF	*No. of Wells Prod.	Cum. Oil	Cum. Gas
OIL FIELDS						
Granite Point	769,043	17,734	531,538	34 (2)	23,939,356	17,763,236
McArthur River	2,834,225	48,023	895,179	37 (10)	34,014,507	9,942,773
Middle Ground Shoal	840,233	35,631	507,525	50 (9)	28,734,520	13,943,973
Prudhoe Bay					1,930	4,950
Redoubt Shoal					1,596	456
Swanson River	1,160,507	191,257	3,302,769	40 (9)	94,111,972	74,188,048
Trading Bay	920,511	27,039	540,661	26 (6)	7,940,920	5,861,609
Total	6,524,519	319,684	5,777,672	187 (36)	188,744,801	119,853,237

PRODUCTION (cont'd)

Field	Oil Bbls	Water-Bbls	Gas-MCF	*No. of Wells Prod.	Cum. Oil	Cum. Gas
L.P.G.						
Swanson River (Propane)	6,279				30,434	
GAS FIELDS						
Beluga River			**261,333	2 (2)		3,545,331
Kenai			4,245,380	20 (2)		153,076,853
Kenai Deep	130		956,466	1 (1)	1,540	7,448,459
McArthur River			285,449	2		811,866
Moquawkie			39,014	1		628,320
Nicolai Creek			47,933	1 (2)		246,748
North Cook Inlet			401,125	4 (2)		450,306
Sterling			20,280	1 (1)		905,255
South Barrow			41,902	4 (1)		4,152,144
Trading Bay	163	1	52,079	2	3,543	350,167
Inactive Fields						12,028,261
Total	293	1	6,350,961	38 (11)	5,089	183,643,710
STATE GRAND TOTAL	6,531,091	319,685	12,128,633	225 (47)	188,778,324	303,496,947

Average per day: Oil, 210,680 bbls; Csg. Head, 186,376 MCF; Dry Gas, 204,870 MCF; Total Gas, 391,246 MCF.

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

** Error in April production corrected from 22,903 to 223,903 changed total dry gas to 5,698,243 and Grand Total to 10,870,109. Also changes av./day dry gas to 189,941 and total to 362,336. Cumulatives were correct. Revisions in previous two months have changed the cumulative figures substantially.

NO MORE OIL AND GAS NEWS IN THIS BULLETIN

As announced in our March 1969 issue, the Division of Oil and Gas will start its own bulletin of oil and gas news. It will be called the Oil and Gas Bulletin. This will be started with the next issue. The Oil and Gas mailing list is made up of those who sent them notices at our request, and no gap in the oil and gas information will occur. Those who have indicated no interest in continuing the Mines Bulletin will now be dropped from the mailing list for this bulletin.