

STATE OF ALASKA
Department of Natural Resources



Division of Geological & Geophysical Surveys

MINES BULLETIN



VOL. XXII

FEBRUARY 1973

NO. 2

P. O. Box 80007

College, Alaska 99701

Published to Accelerate the Development of the Mining Industry in Alaska

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GOLD OWNERSHIP BAN TO BE LIFTED

Western Mining News
January 5, 1973

The National Committee to Legalize Gold announced in a recent report it has learned that the Treasury Department will lift the ban on gold ownership in early 1973 (perhaps as early as January). Citizens and residents of the United States will be allowed to buy, hold, and sell gold bullion for the first time since 1934.

However, the report said, in an attempt to lessen the dramatic effect this move is sure to have on international gold markets, the administration plans to impose a 33 1/3 per cent tax on gold transactions.

Apparently, the report continued, the administration was convinced the pressure for a free gold market was such that it was only a matter of time until gold ownership had to be legalized. The Treasury Department, which views high gold prices as a threat to the dollar and is known to view gold legalization with some displeasure, convinced the White House the 33 1/3 per cent tax is needed to dampen speculative buying which might have pushed the gold price over \$100 within a short time.

Even with the 33 1/3 per cent tax, the report added, there will certainly be enough new demand to put new pressure in the already heated gold markets. Respected authorities on gold have generally agreed that gold legalization in the United States would cause much higher world gold "prices". A 20 per cent increase in the free market price has been mentioned as a reasonable expectation. However, that figure did not take into account the effects of 33 1/3 per cent tax on gold transactions. This, according to the report, would certainly lessen potential new gold demand.

It is not known at this time if the gold tax will apply to gold purchases by jewelers and individual users. It is likely the Treasury Department will continue

to grant licences, and license holders will be exempt from the new tax.

In the past, the report continued, the Treasury Department has presented contradictory attitudes on gold. On the one hand, officials maintain that gold is a barbarous relic with no monetary significance. Since the world is on a dollar standard and gold is only a commodity, the world free market gold price has no effect on the world's money system. At the same time, the Treasury Department has steadfastly refused to put their theories to the test. They have refused to allow Americans the choice between a continually depreciating dollar and history's oldest and most stable form of money -- gold.

GASIFICATION PROJECT

Mining Magazine
November, 1972

The Office of Coal Research (OCR) of the U. S. Department of the Interior has authorized a team headed by Westinghouse Electric Corp. to develop a process for converting high-sulphur coal into clean, synthetic gas for electric generating stations.

This will ultimately result in a commercial size gasification plant to be built near Terre Haute, Indiana. The team also includes Public Service Indiana, Bechtel Inc., and Amax Coal Co.

Westinghouse will be the overall project manager. PSI will own and operate the plant, Amax Coal will provide coal and coal technology, and Bechtel will carry out engineering. A number of electric utilities are also involved, on a non-participating basis.

The gasification system proposed by Westinghouse would generate electric power without pollution from sulphur or nitrogen oxides and particulates, at costs well below those of conventional fossil power plants. The program is expected to cost \$80 million. Development of the system, which is expected to be commercially available by 1980, will make it economical to use the large reserves of high-sulphur coal in the U. S. and still satisfy Federal and State air pollution standards.

MINERAL PRODUCTION IN ALASKA IN 1972 Preliminary Annual Figures

The value of mineral production in Alaska totaled \$321.9 million compared with \$332.8 million in 1971 according to the Bureau of Mines, U. S. Department of the Interior. Crude petroleum and natural gas from the Cook Inlet and Kenai Peninsula fields continued to be the leading mineral commodities, accounting for \$268.4 million or 83 percent of total mineral production. Other mineral commodities, in order of value, included sand and gravel, coal, stone, LP gases, uranium, barite, gold, and platinum-group metals.

The Alaska Native Claims Settlement Act, signed into law on December 18, 1971, inhibited mining and exploration activities throughout the State in 1972 because of the resulting land freeze and uncertainties about rights of selection and ownership of several million acres of land.

Mining claims reported through November 1972 by the Alaska Division of Geological Survey decreased to 4,342 or 13 percent below that of the same period in 1971. Gains were reported in the Yukon River Region, where 47 percent of all claims

were posted, the Northwestern Alaska Region and the Kenai Peninsula Region. Other regions reported losses. Leading regions were the Yukon River Region, having 2,045 claims, the Seward Peninsula Region with 901 claims, the Copper River Region with 638 claims, and the Northwestern Region with 439 claims reported through November 1972.

In the eastern Alaska Range near the Richardson Highway and southeast of the Nabesna mine, several major companies drilled porphyry copper and porphyry copper-molybdenum deposits. New exploration work was done on the old Kennecott properties in the Wrangell Mountains near McCarthy. Exploration of copper prospects continued at and east of Bornite in the Brooks Range.

Major exploration in southeastern Alaska included continued investigation of a copper-nickel prospect on and around Brady Glacier in Glacier Bay National Monument. The Mitsubishi Corp., a Japanese firm, acquired the right to develop a deposit in the Klukwan area where an alluvial fan is reported to contain an estimated 800 million tons of iron ore.

An oil and gas lease sale on State tracts located mostly offshore in the Cook Inlet resulted in the sale of 181 thousand acres for oil and gas prospecting. The sale produced \$1.3 million in bonuses for the State. A second lease sale was held on December 4, 1972, and a third was scheduled for early 1973.

The State Legislature approved a new development city at the site of the Lost River fluorite-tin-tungsten prospect on Seward Peninsula northwest of Nome. Planned port facilities will stimulate exploration for the entire region.

(See table on page 4).

PERSONNEL CHANGES Alaskan Geological Survey

Mr. William C. Fackler, State Geologist for the Alaskan Geological Survey, recently assumed the job of Deputy Commissioner of the Department of Natural Resources. Fackler's new position moved him to Juneau where he will also continue to function as acting State Geologist.

Mr. Thomas E. Smith, mining geologist with the Fairbanks office of the Alaskan Geological Survey, has been promoted to Mining Geologist IV, and will assume the administrative duties for the Fairbanks office.

Mr. Patrick L. Dobey has joined the Anchorage office of the Alaskan Geological Survey. Dobey, formerly Mobil Oil's Exploration Supervisor for central Alaska, has seven years of work experience in Alaska. In his new position of Chief Petroleum Geologist, Dobey will supervise the Anchorage office.

THAT 'OLD' FEELING...

The doctor asked the old prospector how he was feeling. "It's like this, Doc. I'm still kicking but I ain't raising any dust!"

Mineral production of Alaska ①

Mineral	1971		1972 p	
	Quantity	Value (thousands)	Quantity	Value (thousands)
Antimony ore and concentrate--short tons, antimony content--	② 102	\$1,075	100	1,055
Barite-----thousand short tons--	698	5,710	710	6,000
Coal (bituminous)-----do-----	13,012	537	12,500	728
Gold (recoverable content of ores, etc.)-----troy ounces--	121,618	28,945	129,500	31,080
Natural gas-----million cubic feet--	79,498	257,562	73,480	237,340
Petroleum (crude)-----thousand 42-gallon barrels--	23,494	32,806	25,506	35,102
Sand and gravel-----thousand short tons--	③ 2,658	① 5,066	1,516	5,291
Silver (recoverable content of ores etc.)-----troy ounces--	17	47	W	W
Stone-----thousand short tons--				
Tin-----long tons--				
Value of items that cannot be disclosed:				
Gem stones, LP gases, mercury, platinum-group metals, uranium, and values indicated by symbol W	XX	1,099	XX	5,316
Total-----	XX	332,848	XX	321,915

p Preliminary / W Withheld to avoid disclosing individual company confidential data / XX Not applicable.

① Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

② None reported to Bureau of Mines. Alaska Department of Natural Resources reported production of 34 tons valued at \$34,000.

③ Less than 1/2 unit.

ANACONDA WINS TWO JUDGEMENTS

Western Mining News

January 5, 1973

A federal judge in Denver, Colorado, has issued a ruling in a court case brought by Anaconda Co. against EPA that required the federal antipollution agency to report on the potential impact, both environmental and economic, of regulations it imposes.

Anaconda was asking the court to stop the EPA from issuing pollution standards covering its Montana copper smelter unless the company had a chance to cross-examine witnesses in a full judicial hearing on the rules. The copper company also asked, in the suit filed last September, for an impact statement from the EPA. On both scores, Judge Fred M. Winner found in Anaconda's favor.

EPA would not comment officially on the meaning of the decision, though one observer said the agency viewed it with "disgust".

Leonard Campbell, who represented the government in the two days of hearings, said in an interview that "this is an appealable order and I have recommended an appeal."

Judge Winner said his decision was based on evidence during the EPA court hearings that Anaconda had been prevented from presenting a full case against the proposed EPA rules in hearings conducted in Montana. He said the company was afforded "virtually no due process of law whatsoever" in the legislative-type hearings. In addition, he said he thought EPA ought to be required to file an environmental impact statement "just like everybody else."

The judge argued EPA denies any importance of the possible economic consequences of its rules. "I didn't agree with them," he said. "As I read the case, economics surely wasn't controlling, but you can't just brush it aside. You can't say that you can put thousands of men out of work and destroy thousands of investors assets simply without any consideration at all."

Anaconda has indicated in the long struggle over the Montana regulations that it might be forced to curtail operations at the copper smelter if the strict rules were imposed. Judge Winner also said he "suggested" in his argument that, if the smelter is forced to close, the government "could be held liable for the value of the Anaconda property in an inverse condemnation suit."

Despite the consequences of the decision enjoining EPA from imposing its rules without a full judicial hearing or the filing of an impact statement, Anaconda may nevertheless find itself in a pinch over meeting pollution standards in Montana.

NO COLD WEATHER SNAPS WITH SPECIAL STEELS

Canadian Mining Journal

December, 1972

When temperatures drop -40 or -50°, metals become brittle and sometimes break. Until recently, work was either continued under that risk or production halted to avoid the double penalty of having to make repairs under difficult conditions. Later, manufacturers started using special steels which remained ductile at low temperatures, and today users insist on such steel wherever a cold climate is faced.

Marion Power Shovel Co. claims that a normalized high strength, low alloy manganese vanadium steel is standard on their excavators; even those for use in Florida. This steel, rated for -40°F., is used for critical parts because of crack-arresting properties. The same type of steel can also be good for -50°F., but that classification calls for each piece being tested and guaranteed by the mill. Marion uses this product on all its excavators operating in cold climates for booms, tension members like gantry back legs, the mast and mast links. In certain applica-

tions the boom lacing, normally of structural tubing quality, is modified to special heat treated material to approach the cold weather properties of the chords - likewise with the pins holding these components. Because the shoe is exposed, top and bottom plates are constructed of the -50° steel, as are the propel linkage, lug and other high stress areas of the upper frame.

The connection parts around the shoe call for -40° steel while less critical parts can be built of steel with less stringent ratings. Shoe webs and the upper frame not subjected to high stresses are in this category.

Radiant heaters provide protection in certain other critical areas such as in the 4330 and 4340 castings used in the propel machinery. Heaters keep these casting, gears, propel shafts, electrical equipment, motors, and boom suspensions to a minimum of 0°F. In addition to special steels and heaters goes know-how and practical experience in cold weather starts and warmup. Once the excavator is started, enough strain energy is created to warm the steel.

Special cold weather steel is expensive - two to three times that of conventional structural steel - and its use results in increased costs of manufacturing, erection, and maintenance. Besides offering greater protection it may make it possible to reduce the weight of the machine. This does not necessarily follow however since their fatigue strength, unlike their yield strength, is not that much greater. Fatigue properties vary considerably and critical parts must be designed for the low side of a variability rather than for average values.

Investigation is underway on commercially available steels rated for temperatures as low as -60°F. A new steel, as yet unavailable in quantity and variety of size but which shows promise is a nickel-copper-columbium alloy. It is weldable, acceptable for fabrication, has good cold weather properties and is reasonably priced. Another possibility is a high strength low alloy plate showing good fatigue strength at low temperatures and requiring no special care in welding.

JAPAN TO RESEARCH DEEP SUBMERSIBLE VEHICLE
Engineering and Mining Journal
December, 1972

The Japanese Government's Science and Technology Agency (STA) intends to start basic research required for eventual building of a submersible vessel capable of surveys some 6 km (3.7 miles) below sea level. As a first step, STA is seeking small funding (about \$286,000) from the Finance Ministry in order to launch studies in the next fiscal year, beginning in April.

The agency estimates that, once the Government money men approve the project, it can design and build the submersible in six or seven years. Though not even a rough sketch or cost estimation is available for the plan, merits of such a craft are significant.

First, STA says, the submarine will be able to look into the potentially rich mineral resources of the ocean floor, including the manganese nodules. Officials add that 98% of the total sea area is 6 km or less in depth, thus making it possible for the projected vessel to try to pinpoint deposits of minerals, gas, and petroleum practically everywhere in the oceans. Also, the ship can be helpful in research for handling radioactive wastes. The Japanese Atomic Energy Commission has yet to adopt a formal policy on how to deal with solid waste from nuclear power plants, but dumping the radioactive substances into land-wells is ruled out as utterly impossible.

In the field of deep-sea natural resources, Yoshio Masuda of the Japan Maritime Self-Defense Force (the navy) has already developed what he calls a Continuous Line Bucket system (CLB) - a technique already tested to obtain small quantities of man-

ganese nodules. Such a technique may turn out to be useful in future efforts to mine deep-sea minerals, STA officials say. But they maintain that a way to accurately pin-point mineral deposits must first be developed to make use of CLB, and that observation by men, as from a deep-sea submarine, is the best and most reliable method. There seems to be the concensus that marine mineral deposits are located in the sea floors from 4,000 to 6,000 meters below the surface.

STA will not predict whether or not the Finance Ministry will grant the money required for the basic research it wants to launch next fiscal year, admitting that the Ministry is reluctant to allocate money for a long-range project with no strong proof of successful commercial applications. Even if the Finance Minister rejects the idea, STA hopes that it can continue to carry out preliminary research to probe shallow sea - about 100 meters.

ABRASION-RESISTANT LINED PIPES

Mining Magazine

November, 1972

Polyurethane lined steel pipes, designed to carry large quantities of abrasive solids over long distances, are now being produced by English China Clays Ltd. and marketed by Simon-Warman Ltd., U. K., manufacturers of abrasive solids handling pumps. Where abrasion is the main consideration, the price of the pipe is claimed to give substantial cost savings compared with other plain or lined pipes.

Twelve miles of this pipeline is being used by English China Clays in its environmental program to pump some 2 million tons of highly abrasive micaceous residues each year into dams and disused pits on its own land, rather than discharging the slurry into local rivers.

Research showed that unlined steel pipes failed after approximately eight months use, due to a combination of erosion and corrosion. Even with pH correction of the slurry it became apparent that without the adoption of extremely thick steel piping, the life of the unlined steel pipes would be extremely limited. The combination of steel and polyurethane enables the piping system to withstand high working pressures and, depending on the working conditions, a life of between 8 and 20 times that of mild steel can be exposed to result.

The patented techniques give an even thickness along the length of the pipe. This thickness can be varied according to the abrasiveness of the slurry and on the designed life of the system. The pipes are available from 3 in to 16 in diameter and the plant is capable of producing 4,000 ft-6,000 ft of pipe/week, depending on the required diameter.

MINE ACCIDENTS

Engineering and Mining Journal

December, 1972

New procedures for reporting mine accidents have been promulgated by the Department of Interior, effective Jan. 1, 1973. The Bureau of Mines was to have some 20,000 packages of the rules, forms, and instructions in the mail by early December, addressed to all operators covered by the Federal Metal and Nonmetallic Mine Safety Act. The new regulations cover notification, investigation, reporting, and record-keeping procedures for accidents, injuries, and occupational illnesses in mines. The new rules define a number of accidents requiring immediate notification of the

Bureau of Mines by the fastest means possible, and investigation procedures for both the mine operator and USBM are outlined.

SAFETY REGULATIONS

Engineering and Mining Journal
December, 1972

Tougher mine safety regulations may grow out of the Sunshine mine disaster of May, 1972. In an interim report, James M. Day, director of the Interior Department's Office of Hearings and Appeals, suggests that some safety standards now classified as advisory standards should be redesignated as mandatory. The report states that while Sunshine was in compliance with both Federal and state mandatory standards at the time of the fire, several of the less stringent advisory standards were not being followed. The report criticizes "industry practices and a narrow interpretation" of the mandatory standard requiring two means of escape, which at Sunshine permits manways requiring a vertical climb of as much as 2,100 ft to be classified as a secondary escape. The report also states that failure to require that self-rescuers be carried by all men working underground resulted in the death of a large number of men. The report praises Sunshine for steps taken to provide safer working conditions since the fire. Among them: mandatory fire drills, self-rescuers required to be carried at all times and employees trained in their use, refuge chambers provided on the 5,600 level, emergency air supply provided in the hoistroom, bulkheading of old workings constructed of cement and sand filled, and self-contained breathing apparatus stored underground.

NEW PATENTS

Engineering and Mining Journal
December, 1972

Solution mining of an underground sodium chloride salt bed. A bore hole cased to the depth to be mined is further sunk to the bottom of the salt formation but not cased, and a solvent feed pipe and a brine output pipe are positioned in the bore hole. A well cavity is formed around the bottom of the bore hole while a water-immiscible oil "pad" is formed above the aqueous brine in the cavity. The flow of solvent continues, expanding the cavity laterally to desired final diameter, and the salt is mined upwardly in increments. Assigned to Allied Chemical Corp. Sept. 6, 1972. British 1,288,178.

Electrical method of geophysical prospecting for underground orebodies or other anomalies. An ac current is fed into the ground from a current source via two or more electrodes, and the compensating voltage generating means is synchronized with the input alternating current, using a quartz oscillator. Pre-synchronized with the ac current, the quartz oscillator operates with a known phase difference, preferably 0°, in relation to the ac current. Improved accuracy of the subsequent evaluation and geological interpretation is realized. B. Y. Nilsson, assigned to Boliden AB, Oct. 3, 1972. Canadian 911,527.

To Buy A Patent: Canadian - The Commissioner of Patents, Ottawa, Canada, \$1 ea. British - Patent Office, 26 Southhampton Bldg. London, W. C. 2, England 25 d ea. (25c)

NUMBER OF CLAIMS	CREEK OR AREA	QUADRANGLE	DATE NOTICE POSTED
8	Caribou Creek	Anchorage	September 1972
3	Henry Creek	Bendeleben	June 1972
6	Alice Creek	Blying Sound	December 1972
20	Quartz Creek	Candle	August 1972
30	Thru Creek	Chandalar	September 1972
1	Harrison Creek	Circle	August 1972
247	Noyes Island	Craig	September 1972
18	Eva & My Creek	Eagle	August 1972
1	Canyon Creek	Eagle	November 1972
6	Wattamuse & McDowell Creeks	Goodnews	September 1972
3	Susitna River	Healy	August 1972
56	Ohio Creek	Healy	July 1972
5	Punch Hill	Ketchikan	August 1972
1	Elliot Highway	Livengood	November 1972
31	McCarthy Creek	McCarthy	September 1972
22	Steamer Bay	Petersburg	Aug. & Sept. 1972
272	Yakobi Island	Sitka	Oct. & Nov. 1972
11	Boulder Creek	Talkeetna	October 1972
1	Boothby Creek	Tanana	August 1972

NEW REPORTS ON ALASKAN GEOLOGY

U. S. Geological Survey open-file reports concerning Alaskan Geology are listed here in a form suitable for inclusion in the next volume of the Bibliography of Alaskan Geology published by the Alaska Geological Survey. The numbers assigned to these reports are informal ones used by the Alaskan Mineral Resources Branch of the USGS at Menlo Park, California. New reports are as follows:

Grantz, Arthur; Holmes, M. L.; Riley, D. C.; Wallace, S. L., 1972, Seismic, magnetic and gravity profiles--Chukchi Sea and adjacent Arctic Ocean, 1972: Part 1, Seismic reflection profiles: U. S. Geol. Surv., Alaskan open-file rept. #551, 19 sheets seismic reflection profiles, one 1972 profile location map, 1 index map of seismic profiles

Reimnitz, Erk; Wolf, S. C.; Rodeick, C. A., 1972, Preliminary interpretation of seismic profiles in the Prudhoe Bay area, Beaufort Sea, Alaska: U. S. Geol. Surv., Alaskan open-file rept. #548, 11 p., 4 pl., scale 1:80,000

Tailleur, I. L.; Mamet, B. L.; Dutro, J. T. Jr., 1972, Revised age and structural interpretations of the Nuka Formation at Nuka Ridge, Northwestern Alaska: U. S. Geol. Surv., Alaskan open-file rept. #547, 10 p., including 2 figs.

Yehle, L. A.; Lemke, R. W., 1972, Reconnaissance engineering geology of the Skagway area, Alaska, with emphasis on evaluation of earthquake and other geologic hazards: U. S. Geol. Surv., Alaskan open-file rept. #550, 108 p., 2 pl., 18 figs., 5 tables (scale 1:9,600)

METAL MARKET

<u>Metals</u>	<u>Jan. 29, 1973</u>	<u>Month Ago</u>	<u>Year Ago</u>
Antimony ore, stu equivalent, European ore	\$7.60-8.60	\$7.60-8.60	\$8.54-9.92
Barite (drilling mud grade per ton)	\$18-22	\$18-22	\$18-22
Beryllium powder, 98%, per lb.	\$54-66	\$54-66	\$54-66
Chrome ore per long ton	\$24-27	\$24-27	\$25-27
Copper per lb.	53.08¢	50.6¢	52.3¢
Gold per oz.	\$65.59	\$65.01	\$46.25
Lead per lb.	15.0¢	14.5¢	14.0¢
Mercury per 76# flask	\$294	\$288	\$215-225
Molybdenum conc. per lb.	\$1.72	\$1.72	\$1.72
Nickel per lb.	\$1.53	\$1.53	\$1.33
Platinum per oz.	\$135.78	\$141.75	\$110-120
Silver, New York, per oz.	197.88¢	204¢	149.9¢
Tin per lb.	179.6¢	177.75¢	171.6¢
Titanium ore per ton (Ilmenite)	\$22-24	\$22-24	\$30-35
Tungsten per unit	\$55.00	\$55.00	\$55.00
Zinc per lb.	19.12¢	18.32¢	17.0¢

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