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HOUSE REJECTS PRIVATE GOLD OWNERSHIP
(Mining Record - June 1973)

WASHINGTON - The House, on a tie vote, rejected a move to allow U.S. citizens to own gold next year, but the narrowness of the defeat makes some sort of gold-ownership legislation more probable.

As part of the bill formally devaluing the dollar, Rep. Phillip Crane (R., Ill.) offered an amendment to permit all U.S. citizens to own gold after Dec. 31, but it failed by a 162-to-162 vote. A move to immediately permit private holdings of gold was beaten soundly.

Instead, the House accepted a provision that would permit the President to allow private gold holdings when it's determined this won't harm the U.S. international monetary position. The Nixon administration has said it favors eventually allowing citizens to own gold but has insisted major international monetary accords must be reached first.

U.S. citizens have been barred from owning gold since 1934, except for industrial artistic, jewelry and similar purposes.

The Senate previously voted overwhelmingly to allow gold ownership automatically starting next year. A House-Senate conference committee will have to resolve the differences in the two bills, but insiders said the close House vote enhanced the prospect for some type of automatic gold ownership.

The House decisively approved the basic bill officially ratifying February's 10% dollar devaluation which is achieved by raising the official price of gold to \$42.22 an ounce from \$38.00

The Senate-approved devaluation bill contains several other provisions besides gold ownership. They include establishment of a \$268 billion ceiling on federal spending in the fiscal year beginning July 1, a curb on the President's power to withhold appropriated funds and an outright ban on the use of any existing appropriated funds and an outright ban on the use of any existing appropriations to aid North Vietnam. The conference committee is expected to delete most of these provisions.

SILVER IS STRONGER THAN '68 BOOM
(The Mining Record - June 6, 1973)

Silver is in a much stronger position statistically than it was during the 1968 silver boom, according to a situation report just issued by Merrill Lynch, Pierce, Fenner and Smith, Inc.

The 12-page report, prepared by the metals department of the national brokerage firm's commodity division, concludes that the silver market "has the ability to approach the \$2.75 to \$3 an ounce price range within the next 12 months."

A graph shows Free World industrial consumption of silver reaching a record high of 382 million ounces last year and mine production declining to 243 million ounces for a production deficit of about 139 million ounces. It also shows U.S. government stocks of silver dropping to less than 150 million ounces from a record 2.3 billion ounces in 1958.

The most significant difference between the present silver situation and that which prevailed in the 1967-68 boom when silver reached an all-time high of \$2.57 an ounce, the report says, is in the size of the silver supplies.

"Silver flowing from secondary sources totaled almost 1 billion ounces cumulatively from 1967 through 1969," the report states. "During the last three years, this flow has dropped nearly 70 percent to 340 million ounces."

"This reduction can be partially attributed to lower price levels. However, there are several other reasons for this change. The principal one is simply that 14 consecutive years of inadequate mine production and the resultant cumulative deficit of 1.3 billion ounces has greatly depleted many former sources of silver."

The amount of silver recovered from melting silver coins totaled only 17.3 million ounces last year, compared to the 1968 peak of 87 million ounces, the report notes. And it doesn't look for the heavy 1968 rate to ever be attained again.

Most nations ceased minting high silver content coins several years ago, it points out, and this has raised the numismatic value of many still unmelted coins to levels that could prevent or limit melting.

"The present silver situation finds once-adequate silver supplies diminished considerably because of prolonged production deficits," the report says. "Meanwhile demand continues to outpace mine output with no change foreseen in the next few years."

New mine production has remained stagnant, growing at an annual pace of less than 2 percent during the last five years despite sharply higher overall silver prices, the report notes.

"There is little hope for a major increase in silver mine output unless prices rise to levels that might permit the opening of high-cost mines," it continues.

"Consequently, annual mine production deficits of 125-150 million ounces can be expected. This will continue to erode the greatly reduced remaining supplies of silver."

The report also considers significant the fact that licensed Exchange stocks of silver have experienced a sharp draw-down during the last 12 months.

MORE PROSPECTORS IN N.W.T. BUT NO BIG GOLD RUSH EXPECTED

Yellowknife, N.W.T.: (AP)

Rocketing gold prices may bring prospecting back into its own right, but experts here say the prospects are dim for another gold rush.

The bush-wise prospectors who find the gold and the miners and engineers who blast it out of the rocks are taking a wait-and-see attitude to news that prices have cracked the \$100-an-ounce mark on Europe's free bullion markets.

"Well, there's not really much difference between \$95 gold and \$100 gold," shrugs Resident Geologist Bob Hornal.

However, Hornal predicts there will be a slow growth of interest in the gold prospecting which once drew thousands of people to the North and led to the creation of the two major gold mines which started this city.

Bob Spence, superintendent of exploration at Giant Yellowknife Mines, says the real hope of area prospectors is a deposit of base metals "sweetened" with enough gold to pay for the mining and milling of other ore. The rise in gold prices has been impressive, but the price itself hasn't kept pace with worldwide inflationary trends, Spence said.

"You must remember that the price of gold is still only three times what it was 30 years ago."

"It was fixed at \$35 for years while the cost of everything else was going up three times at least and generally more."

REPLACING GOLD IN DENTISTRY

(Metals Week - June 25, 1973)

With the soaring gold prices, consumers in the dental industry are seeking non-precious metal substitutes, according to Codesco, Inc., a Philadelphia-based firm which is described as the largest independent dental supply and laboratory firm in the US.

Codesco has developed a new ferrous-base chrome alloy-called Dentillium CB-which is expected to give gold alloys strong competition. The alloy is sold to dental laboratories at \$22 an oz. "We expect the use of gold alloys to go down precipitously in the next five years," according to Codesco president Herbert L. Meyers. "And it isn't just because of the fluctuating price of gold. We feel that in Dentillium CB we have a replacement that is as good as gold, even though it costs less than a fourth as much."

MINES BUREAU AWARDS RESEARCH FUNDS TO ALASKA, SOUTH DAKOTA SCHOOLS

(Bureau of Mines - June 21, 1973)

Information to help prevent pollution from certain mineral-processing wastes will be sought by the University of Alaska, and the South Dakota School of Mines and Technology, with research funds from the Interior Department's Bureau of Mines.

A \$15,000, 26-month research contract will enable the Alaska school to study disposal of mine tailings--finely ground waste material--in Arctic and subarctic regions. A \$15,000, one-year research grant addition will allow the South Dakota school to continue work on establishing fish tolerance levels for organic flotation reagents--chemicals used in up-grading ores.

Tailings are commonly disposed of in ponds, which, if improperly maintained, can be a source of pollution and a threat to public safety. Control of tailings has been the subject of much recent research, the Bureau said, but these studies have not provided information on special problems encountered in cold climates. These problems--behavior of tailings in the presence of permafrost, and under repeated freeze-thaw conditions--will be studied in the University of Alaska Project, the Bureau explained.

The South Dakota work is based on the awareness that seepage into drainage systems of toxic chemical wastes from flotation processes must be kept below concentrations that will cause ecological damage. Safe concentrations are currently considered to be those that can be tolerated by fingerling fish, and the South Dakota school has for two years been determining fish tolerance limits for organic flotation reagents. The one-year extension will allow more reagents to be tested, the Bureau said.

SENATE COMMITTEE APPROVES SILVER AND GOLD COINS

(Metals Week - June 25, 1973)

The Senate Banking Committee last week supported legislation to mint commemorative coins of both silver and gold for the US Bicentennial.

Bypassing both measures proposed by Sen. James A. McClure (R-Id.) - which had called for minting \$150-million each in silver half dollars and dollars, as well as a new design for all US coins--the committee approved a bill directing the Treasury Secretary to issue at least 60-million silver alloy coins, giving him the discretionary power over size, denomination, and design. The coins would be sold at face value. Senate Banking also green-lighted Sen. Mark O. Hatfield's (R-Ore.) legislation calling for up to 60-million \$25 commemorative pieces also for the Bicentennial--although the committee dropped Hatfield's proposal that the coins be used for legal tender from the bill. Similar legislation introduced in the House by Rep. Steven Symms (R-Id.) has not come up yet, and congressional insiders expect the House to await Senate action on silver and gold coinage.

GENERAL MOTORS' "LIFE-OF-CAR" CATALYST

(Metals Week - June 25, 1973)

General Motors has apparently hit upon the winning combination of platinum-palladium catalysts and engine modifications to meet 1975 interim standards.

During a series of environmental seminars being held by the company, GM president Edward N. Cole predicted that GM's pelletized-support, platinum-palladium catalytic converter would last at least 50,000 miles in cars equipped with electronic ignitions and new carburetor systems. Cole based his comments upon short-run laboratory tests, however, and acknowledged that GM hasn't yet proved its system can last 50,000 miles--let alone the life of the cars as he suggested might be possible. The Environmental Protection Agency had conceded last fall to an auto industry bid for cutting the durability standards, and the agency recommended a reduction from 50,000 to 25,000 miles (MW, Nov. 13, 1972, p6). But, even though the new maintenance requirements were scheduled to be finalized this spring, the old 1975 durability standards have tacitly remained unchanged.

While Cole claimed the GM system would require at least one catalyst change if required to meet the original 1975 or 1976 emissions standards, GM declined to comment on specifics of the device itself, stating that it has not yet decided on an exact specification. Cole stated that the solid state ignition system included in GM's emissions control package allows a leaner carburetor setting and about three times the energy to spark plugs as conventional systems. This in turn will permit somewhat better fuel economy and noticeably improved engine performance.

GM is field-testing the emissions control package in 225 full-size Chevrolets distributed among taxi and state agency fleets in Phoenix, Ariz.; Los Angeles, Calif.; Denver, Colo.; Pontiac, Mich.; New York City; and a few locations in Ohio. The vehicles-assembled in South Gate, Calif. - are still being distributed.

Meanwhile, the Big Three were cautious in their comments about a study reported in the July 15 issue of SCIENCE magazine which discussed possible harmful particles produced in automotive catalysts. Detroit sources noted that research has been sketchy at best and was not conducted with catalysts actually mounted on automobiles. In a similar development, scientists at New York State's Dept. of Environmental Conservation claimed that high exhaust temperatures resulted in slight decomposition of catalytic materials which can yield metallic oxides and fine dust that might be inhaled.

POSTPONE ATLANTIC MARGIN PROBES: OK GULF OF ALASKA STUDIES
(Department of the Interior News Release - July 1, 1973)

Decisions to postpone the initiation of proposed geologic and geophysical investigations in the Atlantic Continental Shelf off New England while allowing the continuation of similar work in the Gulf of Alaska and adjacent Lower Cook Inlet were announced today by the Department of the Interior.

Stephen Wakefield, Interior's Assistant Secretary for Energy and Minerals, said that the tentative plans of the U.S. Geological Survey to drill shallow core holes around the margin of Georges Bank off New England this summer have been postponed pending the outcome of an environmental assessment of the Atlantic Outer Continental Shelf by the Council on Environmental Quality.

Meanwhile, Wakefield reported that work in the Gulf of Alaska will continue as an extension of an on-going program. "There has been shallow core drilling by a commercial firm in the Gulf since 1971," he explained, "with no significant environmental impact, and this work will be allowed to continue under existing permit procedures." The original permit was issued to Exploration Services Company, Inc., in February 1971.

"The work in no way involves drilling for oil," he emphasized. "Rather, it involves 'sparker' and acoustical profiling and the taking of shallow core samples needed for studies of the environmental geology, bottom sediments, rock outcrops, stratigraphy, and shallow geologic structure. The work will be conducted under rigid controls, and monitored by a Federal inspector."

Wakefield said that "approval of continued work in the Gulf of Alaska is being given because of the experience and data gathered since 1971. We can say with more certainty that this shallow coring activity will pose no environmental threat. It will also contribute information valuable to further environmental assessment of the area."

An additional phase of the U.S. Geological Survey's proposed work program requested by the Suffolk County Department of Environmental Control in State waters off Long Island, New York--is also being postponed, Wakefield announced. He explained:

"This part of the program under consideration was aimed at investigating the position of the fresh-salt water interface south of Long Island in the seaward extension of the Magothy aquifer, a formation of subsurface, water-bearing rocks that is the principal source of public water supply for the eastern three-fourths of Long Island. The work would have involved the drilling of several test borings to the bottom of the Magothy aquifer to provide data on salt-water intrusion for water management decision."

COPPER CHEMICALLY EXTRACTED FROM ORE IN MINES BUREAU EXPERIMENT

(Bureau of Mines - June 29, 1973)

A way to extend the use of "chemical mining" to copper deposits that cannot now be mined at all is being developed by the Bureau of Mines, the Department of the Interior said today.

In chemical mining, acid solutions are pumped underground to leach copper from ore-bodies too deep or too low-grade for conventional mining. The Bureau's development is a solution that works on ores in which the principal copper mineral is chalcopyrite, a variety that dissolves too slowly in conventional leaching solutions for even chemical mining to be practical.

Deep, low-grade deposits of such ore could be fractured by nuclear explosions, the Bureau suggested, and the leach solution introduced and withdrawn through wells. In laboratory experiments, dilute sulfuric acid containing sodium chloride or nitric acid additives extracted 80 percent of the copper from crushed ore samples of only 1.1 percent copper content. The experiments were conducted in an oxygen atmosphere, at varied temperatures and pressures.

Carefully planned and carried out, chemical mining circumvents some environmental problems--such as disposal of mine and mill wastes--inherent in today's copper extraction technology.

Air-polluting emissions of sulfur dioxide would also be avoided, the Bureau said, because smelting would be unnecessary. Instead, copper would be produced directly from the chemical solution by electrolysis.

Safeguards have to be taken against the possibility of exchanging one pollution problem for another, the Bureau acknowledged. For example, before a copper deposit is scheduled for underground leaching, complete geologic and hydrologic surveys have to be taken to make sure there is no danger of contaminating the underground waters.

The laboratory experiments are described in Bureau of Mines Technical Progress Report 69, "Simulated In Situ Leaching of Copper From a Porphyry Ore." A single copy can be obtained without charge from the Bureau of Mines, Publications Distribution Section, 4800 Forbes Avenue, Pittsburgh, Pa. 15213. Requests should specify the publication by both title and number.

DIVISION OPEN-FILE REPORTS AVAILABLE

The following open-file reports are available for public examination at Alaska Division of Geological and Geophysical Surveys offices at: Maintenance Building, University of Alaska; 323 East Fourth Avenue, Anchorage; Room 509 Goldstein Building, Juneau and Room 312, 306 Main Street, Ketchikan, Alaska.

Copies may be obtained by sending prepayment directly as follows: AOF 28 and AOF 36 are available from McCauleys Reprographics Inc., 721 Gaffney Road, Fairbanks, Alaska 99701, telephone 456-4400.

<u>Open-File No.</u>	<u>Title</u>
AOF-28	Preliminary Geologic Map of SE Ambler River and Part of Survey Pass Quadrangle, Alaska (by G. H. Pessel, R. E. Garland, I. L. Tailleir, G. R. Eakins) 2 sheets (map-scale 1:63,360, and explanation) (\$2.00)
AOF-36	Geologic Map of the Craig A-2 Quadrangle, Alaska, (by Gordon Herreid) 1 sheet scale 1:400,000, (\$1.50)

METAL MARKET

<u>Metals</u>	<u>June 29, 1973</u>	<u>Month Ago</u>	<u>Year Ago</u>
Antimony ore, stu equivalent, European ore	\$13.40-14.40	\$12.20-13.20	\$7.35-8.35
Barite (drilling mud grade per ton)	\$18-22	\$18-22	\$18-22
Beryllium powder, 98%, per lb.	\$54-56	\$54-56	\$54-66
Chrome ore per long ton	\$24-27	\$24-27	\$25-27
Copper per lb.	60c	60c	50.6c
Gold per oz.	\$123.55	\$118.05	\$64.17
Lead per lb.	16.5c	16.5c	15.5c
Mercury per 76# Flask	\$260.00	\$300	\$197
Molybdenum conc. per lb.	\$1.72	\$1.72	\$1.72
Nickel per lb. (cathode)	\$1.53	\$1.53	\$1.33
Platinum per oz.	\$150.00	\$150	\$137.25
Silver, New York, per oz.	269.5c	267.5c	156.4c
Tin per lb., New York	218.75c	209c	174.6c
Titanium ore per ton (Ilmenite)	\$22-24	\$22-24	\$30-35
Tungsten per unit	\$55.00	\$55.00	\$55.00
Zinc per lb.	20.25c	20.25c	18c

