



CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

The following file is part of the Grover Heinrichs Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

NEWS LETTER

NEVADA MINING ASSOCIATION

RENO, NEVADA 89505

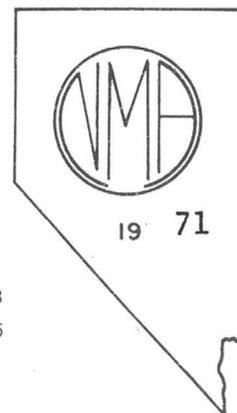
SEPTEMBER 15, 1971

ROOM 602
ONE EAST FIRST STREET

POST OFFICE BOX 2498
TELEPHONE 323-8575

NUMBER 222

PAUL GEMMILL, Executive Secretary



NEVADA MINES, COMPANY REPORTS, ETC.

THE ANACONDA COMPANY:- John B. M. Place, president and chief executive officer, on September 1, 1971, made the following statement to shareholders: "The Board of Directors of The Anaconda Company voted on August 26, 1971 to omit the Company's third quarter dividend. The Board agreed with the recommendation of management that omission of the third quarter dividend is prudent at this time and in the best interests of the Company and its shareholders. The Company's Montana copper and zinc operations have been shut down by a strike since July 1 and its Arizona operations were also shut down by a strike which extended during the month of August. The railroad and smelter strikes and the continuing longshoremen's strike on the West Coast have also adversely affected Company operations. The uncertainty as to when these various strikes will be settled coupled with the Company's major capital investment programs to develop its domestic properties, and the expropriation of the Company's interests in Chile on July 16, makes it advisable to conserve capital.

"The Company has instituted an intensive company-wide cost reduction program and capital expenditures are being carefully scrutinized. It is too early to draw any conclusion regarding dividend action in the fourth quarter until the Company's labor situation is resolved and the Company's economic outlook can be appraised within the framework of the general economy."

Compania Minera de Cananea S.A., a wholly-owned subsidiary of The Anaconda Company (which produces 60% of Mexico's copper output) in the northern state of Sonora, Mexico, will be "Mexicanized". Under the agreement with the Mexican government, Anaconda will sell 51% of its shares over a period of 4 years. All but 10% of the Mexican share will eventually fall into private hands, but administration of the company will be strictly supervised by the Government. Anaconda's president John B. M. Place said Mexicanization was as different as day and night from Chileanization. He said further that "there will be a better possibility of increasing our production and expanding our installations if we are associated with Mexican interests." Last year, Cananea produced 42,000 tons of copper and made profits of \$4.8-million. Cananea's ore reserves are estimated at 825 million tons with a 0.73% copper content.

RANCHERS EXPLORATION AND DEVELOPMENT CORPORATION:- Albuquerque, New Mexico, has suspended operations at its Tungsten Queen mine at

Townsville, North Carolina, due to the recent sharp decline in tungsten prices, but have placed the property on a standby basis.

Ranchers has increased indicated copper ore reserves at its Blue Bird Mine near Miami, Arizona, from 13 million tons to approximately 76 million tons of ore of an average grade of about .52% copper. The company has commenced engineering and metallurgical studies to evaluate alternative methods of ore treatment to increase the amount of copper recovered from each ton of ore. However, Maxie L. Anderson, president, said it will take considerable capital and at least 2 years time to expand the present plant and to increase production. Presently, all copper ore is being leached and during fiscal 1971, the Blue Bird mined about 2.9 million tons of ore and produced about 5900 tons of cathodes. Although engineering studies have not been completed on the new reserves, it appears that the deposits can be mined with a stripping ratio of approximately 1.5 to 1, compared to the present 1 to 1 ratio.

Ranchers exploration reports that ELDRIDGE NASH has been appointed manager of the Big Mike copper mine in Pershing County, Nevada, and that the precipitation plant will be completed this month and will be treating stockpile material within 2 months.

KENNECOTT COPPER CORPORATION:- has been granted a postponement until July 1, 1972 for accommodation to state visible emission air pollution regulations by the Utah Air Conservation Committee. Conditions of the variance provide that steps taken to control emissions will be reviewed before subsequent variances are granted. The goal is compliance with the standard by 1975. The visible emission standard is based on a scale from clear to completely opaque gas and it requires that existing single sources may not have emissions higher than 40% opacity. Conditions on the variance provide for submission of a plan to achieve specific degrees of control by March 1, 1972; continued development of a process to control both sulphur dioxide and sulphur trioxide in view of the necessity to control both to achieve control of visible emissions; beginning of construction of emission controls on oxides of sulphur before 1974, and placing the control facility in full operation not later than July 1. Kennecott has a smelter at Magna, Utah, about 20 miles west of Salt Lake City which has been a major target of criticism by conservation and ecology groups.

THE FLINTKOTE COMPANY:- says it plans a \$13-million expansion of its Glens Falls, New York, portland cement manufacturing plant, increasing the plant's kiln-burning capacity 80% to 3-million barrels a year from 1.7-million barrels. Flintkote said the project will involve replacement of the plant's existing quarry-crushing, raw-mill and kiln departments by converting from wet processing of raw material to dry processing. Flintkote said the contract for the work had not yet been let, but completion date is estimated to be spring 1973.

UTAH CONSTRUCTION AND MINING COMPANY:- has called a meeting of stockholders on October 7 to consider the proposed merger with Eccles Investment Company and a change in the name of the corporation. Utah International, Inc. is the new name proposed for the company, better reflecting the geographic scope of the company's business. Heavy construction activities were eliminated from Utah Construction's operations by the sale of its construction division and business in 1969, and dredging operations terminate this year with final deliveries of

dredging equipment sold in April. Under the agreement as proposed, on the merger date the assets of Eccles would consist solely of shares of Utah stock, sufficient cash to cover any remaining liabilities or obligations, and a nominal cash surplus. Shares of Eccles would be converted into Utah shares on a formula basis, with Utah receiving, as the assets of Eccles, approximately 21,764 shares of its own stock more than it would issue in the conversion of Eccles shares. There are approximately 80 holders of Eccles shares, while Utah's stockholders number approximately 6500.

Production will commence this month at Utah Construction's copper mine at Rupert Inlet on the northern end of Vancouver Island, British Columbia, Canada. The ore body has reserves of 280-million tons of copper-molybdenum ore, with an average grade of 0.52% copper and 0.025% molybdenum. The mill will have a capacity of 33,000 tons of ore per day and annual output will be 230,000 tons of copper concentrate and 1800 tons of molybdenum. Under a 10-year agreement, Mitsui Mining and Smelting Company, Ltd. is to take approximately 60% of the copper production and under a 5-year agreement, Mitsubishi Shoji Kaisha and the Dowa Mining Company will take about 30%.

MAGMA COPPER COMPANY'S:- Superior smelter, closed by a strike on July 2, has been permanently closed because concentrates from the Superior mine can now be treated at the company's San Manuel smelter. President Wesley P. Goss said Magma chose to consolidate its smelting operations at San Manuel because the cost of altering the 47-year old Superior smelter to meet air pollution regulations would be prohibitive. Built in 1924, the Superior smelter produced approximately 850,000 tons of copper blister bars of 99% purity which were shipped to electrolytic refineries. Although the smelter is closing, Magma is expanding its underground mine at Superior to reach significant new reserves in the limestone replacement beds. The program includes a new shaft nearly a mile deep, a 1½-mile long ore haulage tunnel and additions to crushers, concentrator, offices and the company hospital.

THE BUNKER HILL COMPANY:- Coeur d'Alene Mining District's largest employer cut its 400-member salaried staff by 20% as of August 20 to offset its losses over the first 7 months of 1971 and in June, said it would reduce its work force of 1500 hourly employees by 6-7% by not replacing workers who quit or retired. Robert H. Allen, president of Gulf Resources & Chemical Company, parent company of Bunker Hill, said that the company had an "extremely poor" second quarter and Frank G. Woodruff, Bunker Hill president, said the layoff of the 80 salaried employees was unavoidable. Losses of Bunker Hill were attributed to increased costs, including large expenditures for environmental control facilities, low prices for silver, lead, and zinc, and the recent drops in antimony and cadmium prices. The facility also suffered from a run of low-grade ore, a 10-week strike, and technical difficulties. Allen, however, predicted a "turnaround", stating ore grade had improved, entry into higher grade areas had been accelerated, and the technical problems were being solved.

HECLA MINING COMPANY:- in its second quarter report, ended June 30, 1971, stated: "Management is pleased with developments at the Lakeshore property. The segregation plant, formerly operated by El Paso Natural Gas Company in connection with its near surface operation, has been converted into a pilot concentrator capable of treating over 900

tons of ore per day. A pilot roast-leach-electrowinning plant is nearly completed, and will process a portion of the concentrates which will be produced from the pilot concentrator. The sulfide ore feed for the pilot concentrator will be supplied from underground development headings which are scheduled to be in ore during the third quarter of this year."

UNION CARBIDE COMPANY:- A strike of more than 2-month's duration at Union Carbide's Pine Creek, California, tungsten mine and mill was settled on August 9. The contract calls for an immediate increase in all hourly rates from 31¢ to 43¢ per hour and a 35¢ increase on all hourly rates during the second year of the contract. There was also an increase in certain fringe benefits.

CAMP PROJECT:- Coeur d'Alene Mines Corporation, Merger Mines Corporation and Plainview Mining Company jointly announced that American Smelting and Refining Company has terminated the silver exploration venture known as the Camp Project covering portions of these companies' properties in the CDA Mining District, Wallace, Idaho. By termination, Asarco forfeits all rights of reimbursement of the amount expended since 1967, approximately \$456,000. Drifting on the 1400 level of the Camp properties was nearly completed and diamond drill stations had been cut, although no diamond drilling had been done prior to termination of the exploration. The property owners are presently conducting a feasibility study to ascertain if they will conduct the recommended drilling program. The three companies feel that despite the disappointing price of silver, and depressed conditions in the mining industry, the project should be continued until a definitive evaluation of mineral values has been made. The Camp properties are adjacent to the Coeur Project to the east and the Consolidated Silver Project to the west.

INTERMOUNTAIN EXPLORATION COMPANY:- Boulder City, Nevada, announced discovery of a high-grade copper deposit at Nelson, Nevada, 40 miles south of Las Vegas in the El Dorado Mining District. Intermountain Exploration has an 86% interest in the property which is known as the Phillips Copper Property. Seven new angle holes have been drilled which reportedly indicate a significant copper silver-gold discovery.

UNION OIL COMPANY OF CALIFORNIA:- reports it has developed a process for recovery of the small amounts of sulphur in the waste gases from primary sulphur-recovery units, thus reducing pollution in refineries, and that the process had been tested in a pilot plant at its Los Angeles refinery. Recovery of about 99.9% of the available sulphur was reported in the new process as against about 95% by former methods. Union Oil said it will install the process at its Los Angeles refinery at a cost of \$6-million. Ralph M. Parsons Co., a Los Angeles-based construction concern and co-developer of the process with Union Oil, will design and build the full-scale plant.

SUNSHINE MINING COMPANY:- which has been beset by shareholder dissension and lawsuits over allegations of wrongdoing by its principal officers, and which has paid quarterly dividends since early 1943, reported it is omitting its third quarter dividend because of a sharp drop in the price of the metals it mines. Sunshine, which operates the nation's largest silver mine in Idaho, paid 13¢ a share in each of the first two quarters of the current year. M. C. Chase, Sunshine vice president and general manager, said after a board meeting in New York,

that the company would review its dividend policy at another board meeting, probably in "late November". However, neither he nor the company's lawyer, Bernard Fuerstein, could say whether the dividend could be restored under wage-price controls that may be in effect at that time. The company's ability to restore the dividend, Mr. Chase said, will depend on metals prices. The price of silver, the company's principal metal, has dropped during the past year from \$1.855 to \$1.383 per ounce.

AMERICAN METAL CLIMAX, INC:- has signed a 12-month option agreement with American Zinc Company for purchase of American Zinc's electrolytic zinc refinery at Sauget, Illinois (near East St. Louis) for a purchase price of \$3-million if the option is exercised. AMAX will conduct a study to determine feasibility of operating the plant on a profitable basis.

AMAX currently operates a horizontal retort plant at Blackwell, Oklahoma, built in 1916, with a current capacity of 90,000 tons per year. However, it is faced with serious pollution-control problems. An AMAX spokesman said the company, regardless of whether or not the Sauget smelter is purchased, will continue to operate the Blackwell plant as long as it can.

SOUTHWEST POTASH CORPORATION:- Carlsbad, New Mexico, has announced the corporate name change to AMAX CHEMICAL CORPORATION, a subsidiary of American Metal Climax, Inc.

CERRO SALES CORPORATION:- subsidiary of Cerro Corporation, and Corporacion del Cobre (Codelco), an agency of the Chilean government, have reportedly signed an agreement under the terms of which Cerro Sales will provide Codelco with purchasing and traffic services for three mining companies, recently taken from control of The Anaconda Company and now owned by the Chilean Government. According to a company statement, Cerro is already providing purchasing services for its former mine, Andina, a newly developed property that went into full production recently. Chile and Cerro have reportedly arrived at an agreement (not signed nor made public) on compensation for Andina which was expropriated July 16 along with those of Anaconda and Kennecott. It has been rumored that the purchasing accord might represent a concession by Cerro connected with the compensation for Andina. Cerro is the only American copper company that has remained on good terms with the Chilean government.

ORIGINAL KLONDYKE DIVIDE MINING COMPANY:- has reportedly acquired 5 fluorspar properties in the LaPlata Mining district east of Fallon, Nevada, totaling 21 mining claims. The company has also acquired the former Kaiser mill site at Fallon. According to president John A. Peterson of Spokane, the mill is expected to be finished and in production in 5 months.

METALS AND MINERALS

OIL IN NEVADA:- The Nevada Oil and Gas Conservation Commission reports Eagle Springs Field Production for June 1971 as 8227 barrels and total cumulative production as 2,470,147 barrels. In June, Western Oil Lands, Inc. produced 5748 barrels; North American Resources Corporation 2050 barrels, and James L. Davis (Honolulu Oil Company) 479 barrels.

ZINC:- Amax Lead and Zinc, a subsidiary of American Metal Climax, Inc., and New Jersey Zinc Company, a unit of Gulf and Western Industries, Inc., initiated a 1¢ per pound increase in the price of zinc. The new quotations are 17¢ a pound for prime western and 18¢ for special high grade. New Jersey Zinc said the boost was necessitated by "continually escalating costs of fuel, power, freight and supplies" and in addition, cited wage increases scheduled to take place in September and "substantial commitments" for environmental protection.

The Canadian government announced last week that it would subsidize two-thirds of the cost of the surcharge for all Canadian companies exporting zinc to the U.S. Canadian zinc producers had already decided to absorb the tax and there is no way of knowing whether or not they will apply for the aid.

SILVER:- An article, titled "The Silver Debacle", appearing in the September 13th issue of Metals Week, states: "If traders thought the previous week's market was bad, last week's losses were cataclysmic. After declining to 148.5¢ the previous Friday, nearby Comex prices tumbled to 138¢ during Tuesday's trading before closing at 141.1¢. As the selling fever mushroomed, the slide continued, with nearby Comex prices dropping to 140¢ by Thursday - the lowest point since May 18, 1967, when the Commodity Exchange quoted a 136.10¢ spot price. Comex prices haven't fallen below 150¢ since, although they came close on June 27, 1969, when the cash close fell to 153.5¢. Handy & Harman's week started on Tuesday at 145.2¢ - down 4.3¢ from the previous Friday. But the New York price fell to 140.5¢ on Wednesday, recovering slightly Thursday to 142.4¢. Handy's last low point was 130.5¢ on July 14, 1967, after which it shot up to 177.5¢ when the U.S. Treasury removed its 129.3¢ ceiling on government sales.

"London bullion broker spot prices took an even greater bath last week, dropping to 55.80d (137.179¢) on Tuesday from the Monday high of 59.80d (147.006¢). The U.S. equivalent is especially disconcerting, considering the strengthening of the pound in relation to the dollar.

"The market began its sharp decline two weeks ago, when it became increasingly clearer that striking copper operations - with byproduct silver - would soon be back at work. And additional impetus came from the news last Tuesday that all of Asarco's units had settled. Many experts had believed that the strikes were the only factor holding silver prices up. By the same token, those who thought investors would turn to precious metals, including silver, in a time of monetary uncertainty were disappointed. Silver had started to follow the gold market upward shortly after President Nixon's decision to turn the dollar loose from gold. But, like gold, it quickly returned downward - and kept going. By last week, the selling spree gained momentum, as margin calls went into effect and stop-loss orders were executed. Even silver coin trading was off, as coins approached their face values. With the silver price well below the break-even point to benefit holding coins - at \$1.46, or \$1.50 considering carrying costs - coins were down to \$1.092 bid, \$1.093 asked for October contracts.

"The low market also sparked considerable talk about the Treasury's pledge to buy newly-mined domestic silver at \$1.25. Worked out as part of a compromise with silver states, the Coinage Act of 1965 calls for Treasury purchase of silver mined after that date. But this could

hardly be considered a floor to the entire market, since newly-mined U.S. production is a token compared to the whole picture.

"Some observers feel that silver has at least reached the bottom, pointing out that some fresh buying is coming in at the low levels from industrial consumers. Considering additional purchases necessary to cover short sales, they maintain that the market could turn around. But others have resurrected all of their old fears about silver, maintaining that the selling will be extremely heavy once the price starts back up again."

GOLD:- London gold prices still held at the \$41-42 level last week, despite unfulfilled rumors abroad that President Nixon would announce an increase in the official price - to \$38 - during his message to Congress.

MERCURY:- quoted at \$285-295, remained quiet last week despite the rising foreign market and the threat of an East Coast dock strike. The European market, reportedly, firmed to the \$265-270 range, a level which would force slightly higher prices in the U.S. if any metal were imported and if the East Coast dock strike materializes, it would have a bullish effect on the U.S. market.

FLUX:- A substitute for fluorspar as used in steelmaking is reported to have been developed in Japan. Nippon Steel Corporation has been using a synthetic flux experimentally at the company's Yawata works and is now studying the use of the flux on a production basis. The material is said to be composed of 60% burnt lime; 25% iron oxide, 10% alumina, and 5% silica.

PERSONAL ITEMS

CHARLES STEEN, SR:- was seriously injured on September 6 while watching a mine drilling operation near Bishop, California. George Abbott, Steen's attorney, said he was struck in the head by part of a drilling rig on a property not his own.

DR. EUGENE V. ZUMWALT:- has been named assistant director of the Bureau of Land Management in charge of technical services and will oversee the divisions of engineering, cadastral survey, records systems, fire control, appraisal and access, transportation rights-of-way and will be responsible for the Bureau's automatic data processing activities. Dr. Zumwalt has been serving as assistant director in charge of the BLM's Resource Management programs since 1969.

E. R. PHELPS:- has been elected president and chief executive officer of Peabody Coal Company. Previously senior vice president of operations, he fills the vacancy created by the death of T. C. MULLINS. GORDON H. FISHER, a director of Peabody, was elected chairman of the board, a position which has been vacant for several years. The position is being filled by Fisher because of his wide, long-range planning experience. Fisher has been vice president-planning of Kennecott Copper Corporation and is a former president of General Minerals. D. C. HALL, JR. has assumed the duties of senior vice president-operations, previously performed by Phelps.

DR. VINCENT E. MCKELVEY:- has been appointed chief geologist to head

the Geologic Division of the U.S. Geological Survey, Department of the Interior, succeeding DR. HAROLD L. JAMES who will return to his research on the geology and ore deposits of ancient rocks in the northern Rocky Mountains.

OBITUARIES

MARTIN CHARLES DUFFY:- former State Senator, died August 28, 1971 at age 71. He moved to Goldfield, Nevada, with his family at age 4 and lived there during the early boom days of gold mining. He leased the Florence Mine and in 1939, received nationwide publicity when he discovered a pillar of high grade gold ore in the Florence Mine. He continued his mine working activities until his recent illness and strongly believed that Goldfield would again be a "boom town".

FREDERICK HOLROYD DAKIN, SR:- died last month in Burlingame, California at age 92. He was well-known in Nevada mining circles and at the time of his death was interested in antimony mines in Pershing County. His career commenced in 1902 at Gray Eagle Mining Company, Siskiyou County, California, after graduation from the College of Mining, University of California. In 1923, while in Mexico, he was asked to examine some silver mines in the State of Durango by the bandit Panco Villa, and completed the examination just two weeks before Villa's assassination. In 1931, he became a consultant to Texas Mining and Smelting Company as a specialist in antimony and in 1951, joined the Defense Minerals Exploration Administration, an agency of the Department of the Interior.

OF PROBABLE INTEREST

WORLD MONETARY SYSTEM:- It is anticipated that during forthcoming talks in London regarding the world monetary system that key nations will advance a simple arrangement to follow the current period of floating currency; namely, devalue the dollar against gold and make that devaluation part of a broad package of currency adjustments, mainly upward revaluations of other currencies and lift the U.S. import surcharge. However, President Nixon's economic package was partly designed to force other nations with strong currencies to revalue their currencies upward against the U.S. dollar which would have the same effect as a dollar devaluation. It is the desire of many countries in the Common Market and elsewhere to downgrade or replace the U.S. dollar as a reserve after President Nixon suspended the exchange of each ounce of gold for \$35, making the dollar "as good as gold". Mario Ferrari-Aggradi, Italian minister of the treasury, said, "The long-term solution that we desire is the creation of a new international standard not dominated by any currency, whatever the importance of the issuing country."

France and some other countries have long advocated as a solution to the problem increasing the price of gold and strengthening its role in international finance. Nations and international agencies hold about \$41-billion in gold in their reserves and many would benefit considerably from a rise in the price of gold. The U.S. has insisted, however, it will not increase the gold price.

SDR's were devised 3 years ago to supplement national reserves and thus add to the international liquidity needed for expansion of world trade. However, it took 3 years of hard bargaining before countries agreed to

accept the SDR plan in 1968. As of June 30, 1971, the SDR's outstanding amount to only \$6.4-billion of the noncommunist world's \$100-billion in international liquidity. Thus it has taken a long time to get SDR's accepted as even a supplement to other reserves. As a result, experts think it might take considerable time -- certainly well beyond the 1972 U.S. elections - to get SDR's or any other new instrument accepted as a major part of national reserves. Experts warn that until the dollar is either strengthened or replaced as a major component of international liquidity, periodic bouts of uncertainty may well plague the world's monetary system.

S.2415:- states, "Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the Federal Metal and Nonmetallic Mine Safety Act of 1966 (80 Stat. 772) is hereby amended to add a new subsection 16 (f) as follows: '(f) The Secretary is authorized to make annual grants to States to assist them in administering programs to develop and enforce health and safety standards in mine locations within each State under a plan approved by the Secretary pursuant to subsection (c) of this section. The Federal share for each State grant under this subsection may not exceed 50 per centum of the annual cost to the State of such program. In the event that the Federal share for all States under this subsection is not the same, the differences among the States will be established on the basis of objective criteria.'"

Walter Baring, Congressman for Nevada, in commenting on the bill said, "As I understand it, guidelines for the development of State Plans, a model State Plan Agreement, a copy of the Act, and copies of the Federal standards which had been duly promulgated were mailed to the Governor of Nevada in May 1970. One of the requirements for approval of a State Plan under Section 16(c) (30 U.S.C. 735(c)) is that there be a single State agency which is solely responsible for the administration of the plan and has the authority to be so responsible. In Article XIV of the model State Plan Agreement the inspections to be conducted by a State agency are listed and include those covering sand and gravel operations."

Congressman Baring also said that revision of the Nevada Mine Safety Standards during the last session of the Legislature places the State of Nevada close to qualifying for a State Plan Agreement. He said also that he was fully aware that "effective enforcement of the requirements of a State Plan Agreement will require a State to provide more than the usual monies and, in this regard, legislation has already been introduced, S.2415, which, if enacted, would provide grants to assist the States in financing the enforcement programs. I will, of course, lend my fullest support in this regard."

ASSESSMENT WORK:- The July 15, 1971 Federal Register carried the following proposed rule with regard to annual assessment work: "Effect of Failure to Perform Assessment Work. (a) Failure of a mining claimant to comply substantially with the requirement of an annual expenditure of \$100 in labor or improvements on a claim imposed by Section 2324 of the Revised Statutes (30 U.S.C. 28) will render the claim subject to cancellation. (b) Failure to make the expenditure or perform the labor required upon a location will subject a claim to relocation unless the original locator, his heirs, assigns, or legal representatives have resumed work after such failure and before relocation." Many claim

owners interpret the proposed rule as permitting the Department of the Interior to cancel mining claims without court proceedings in those instances where it determines the claimant has not substantially complied with the annual assessment work requirements.

THE SECURITIES AND EXCHANGE COMMISSION:- propose initiating a number of fees to be paid by companies filing reports and applications with the agency. If adopted, the new fees would generate about \$3-million a year in revenue, the SEC said. The agency said it was proposing the fees in response to congressional concern that the federal government is not receiving sufficient revenue for the services it renders. Among other fees, the commission proposed a charge of \$250 for the filing of annual reports that many companies must submit to the SEC. The charge for filing proxy and information statements with the agency would range from \$125 to \$1,000 and certain applications filed by public utility holding companies would cost \$2,000. The SEC asked for comment on the new fee plan by October 22. It noted that the fees would not take effect until the current freeze on wages and prices expires.

S. 921:- Chairman Henry M. Jackson of the Senate Committee on Interior and Insular Affairs will hold public hearings on September 21 and 22 on S. 921, his bill to make major revisions in public land laws. The hearings will be conducted starting at 10:00 a.m. each day in Room 3110 of the New Senate Office Building. Entitled the "Public Domain Lands Organic Act of 1971", and introduced by Jackson in February, Title I of the bill to be considered would apply to the lands administered by the Bureau of Land Management of the Department of the Interior. Title II of the bill would repeal the Mining Law of 1872, and substitute a mineral leasing system in place of the present patenting system. Other acts it would repeal are the Homestead, Desert Land Entry, townsites and parts of the Taylor Grazing Act.

BETTER MINING TECHNOLOGY:- Dr. Elburt F. Osborn, in his address before the meeting of the AIME at Vail, Colorado, said future mining technology must safeguard the environment as well as meet national demands for vast amounts of minerals and fuels. "Mining research efforts, present and future, must do more than solve problems of the mineral industry - they must also be consistent with current efforts to preserve environmental quality outside the mine." More than ever before, Dr. Osborn declared, the mining industry needs a research program "that will lead to greater flexibility in meeting new conditions, not just greater accumulations of data on specific minerals." The new conditions, according to Osborn, will arise as the science of ecology discovers more about the impact of industrial practices on the environment. To prepare for such discoveries, Dr. Osborn suggested, mineral researchers should adopt the "systems" concept successfully used in U.S. space research. "Mining Engineers must begin thinking of all the different phases of the mining operation as parts of a continuum, each closely related, each dependent on the others, each contributing equally to the success of the system as a whole," he said. A new mining technology developed in this way would have maximum flexibility in adjusting to new environmental demands, he pointed out.

He said, "Failure to share the public's concern for the environment has resulted in the President's submission of a Mined Area Protection bill to Congress. When passed, and I believe that it will be, this landmark legislation will require all mining firms to follow the lead

of the enlightened ones in controlling and repairing environmental damage....."

A NEW CYANIDE-FREE GOLD PLATING PROCESS:- has been developed by Engelhard Minerals & Chemicals. The process, "ECF-70", permits electroplating gold with stringent specifications economically and does away with problems connected with destroying cyanide effluents.

U.S. BUREAU OF LAND MANAGEMENT:- The State of Nevada has received a check for \$161,770.64 from BLM as its share of revenue from public lands managed by BLM. Nolan F. Keil, BLM state director in Nevada, said the payment is for mineral lease revenue for the 6-month period ending June 30 and from fiscal year 1971 grazing leases, timber and other sales from BLM administered lands in the state. Nevada's total revenue for FY-1971 amounted to \$345,840.78.

Sales and auctions of public land have been suspended for the duration of the President's wage-price freeze, or until further notice, Keil said. Included in the action are appraisals and reappraisals involving rights-of-way, leases, special land use permits, recreation and public purposes act leases and sales, exchanges, and other miscellaneous authorities. Appraisals must not exceed the fair market value as of the base period (July 16, 1971-August 14, 1971). Land leases and permits, except rights-of-way, will be issued subject to adjustment of rental on an annual basis.

HEALTH-SAFETY COURSE:- The U.S. Bureau of Mines has announced it will offer an education and training program for mining industry personnel, state mining regulatory agency personnel and labor union officials. The training program will be similar in content and length to the current program for new coal mine inspectors. This program features education and training in roof control, ventilation, electricity and health. Each section is designed to emphasize enforcement of the Federal Coal Mine Health and Safety Act of 1969. The duration of the course is approximately 8 weeks; there is no enrollment or tuition cost for students. The first course will start October 14 in Beckley, West Virginia. Each class will be limited to 60 students. Additional classes will be held as the need arises. Persons interested in applying for this training course should contact the office of the District Manager, Coal Mine Health and Safety, District 4, Mt. Hope, West Virginia (304 877-6405).

FEDERAL SURFACE MINING LEGISLATION:- The American Mining Congress Select Committee on Surface Mining Legislation met in Washington September 8 and reaffirmed its endorsement of federal legislation pertaining to surface mining. Also represented at the meeting were national and state mining associations with an interest in the proposed legislation. The AMC position is that federal law should propose guidelines of a general nature for the individual states. States should have the primary responsibility for passing and enforcing specific surface mining laws which take into account the diversity of terrain and other conditions which exist in each state. Also, federal legislation should provide that if the Secretary of the Interior finds that a state action is not in compliance with federal minimum standards, he could demand modification or enforce the federal minimum standards within that state. In addition, federal law should be consistent with the National Mining and Minerals Policy Act of 1970 which encourages explora-

tion for minerals and metals and recognizes the need for maintaining a strong natural resource industry. The House Interior Committee has scheduled hearings on pending surface mining legislation for September 20-24.

THE ENVIRONMENTAL PROTECTION AGENCY:- published in the August 14 Federal Register final regulations to be followed in state plans to implement air pollution control. States now have until the end of January 1972 to submit plans to meet national standards for six specific pollutants. The regulations provide for a system of selecting regions needing priority attention and will require certain information on control strategy, existing air quality emissions, and scheduled abatement. There are changes since guidelines were first proposed in April. States will not need authority over vehicle inspection, transportation, or land use; nor must states have a permit system for the construction or operation of facilities having emissions. Newly added provisions require that emission data must be publicly available and that no variances may prevent scheduled attainment of national standards. Also, emission charges or taxes would be allowed as part of the plan.

THE OTHER SIDE OF ECOLOGY:- Quoting from "Jasper", a column by Jack McCloskey, editor and publisher of the Mineral County Independent: "Good environment is an excellent goal. So is full employment. We see little future in breathing 'pure air' on an empty stomach."

DATES TO REMEMBER

SEPTEMBER 21-24, 1971:- Society of Mining Engineers-AIME Fall Meeting and Exhibit, Seattle, Washington.

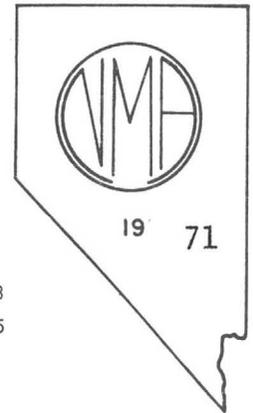
OCTOBER 11-14, 1971:- 1971 American Mining Congress Show, Las Vegas, Nevada. Advance registration - \$20.00 - by October 1, 1971. American Mining Congress, 1100 Ring Building, Washington, D.C. 20036. Hotel reservations: AMC Housing Bureau, Convention Center, Post Office Box 14006, Las Vegas, Nevada 89114.

NOVEMBER 3-6, 1971:- International Mining Days, New Mexico Mining Association, El Paso, Texas. Reservations - International Mining Days, El Paso Chamber of Commerce, Box 682, El Paso, Texas 79944.

Returned
J. K. Jones

NEWS LETTER

NEVADA MINING ASSOCIATION
RENO, NEVADA 89505



AUGUST 15, 1971

ROOM 602
ONE EAST FIRST STREET

POST OFFICE BOX 2498
TELEPHONE 323-8575

NUMBER 221

PAUL GEMMILL, Executive Secretary

NEVADA MINES, COMPANY REPORTS, ETC.

KENNECOTT COPPER CORPORATION:- reports consolidated income:

	3-Months ended June 30		6-Months ended June 30	
	1971	1970	1971	1970
Share Earnings.	\$1.06	\$1.80	\$2.08	\$3.51
Sales, etc.	305,223,388	315,446,248	569,731,176	611,001,073
Net Income.	35,110,540	59,546,688	69,011,317	116,377,285

A report to stockholders states, "Earnings were adversely affected by lower copper prices and the absence of dividends from El Teniente Mining Company, Chile, in which Kennecott had a 49% equity interest. On July 16, all the assets of El Teniente passed to the Chilean State and Kennecott's management contract was voided. Under the terms of the Chilean Constitutional Reform Bill, Kennecott would receive no compensation for its interest in mineral resources and the amount of compensation for the related facilities would be determined by the Chilean Government. Kennecott's interest in those facilities has been valued at more than \$150 million. In addition, Kennecott holds \$92.9-million in El Teniente notes, of which \$80-million is the subject of a Contract of Guaranty against expropriation by the Overseas Private Investment Corporation, an agency of the United States Government. Kennecott has officially notified OPIC that it will require full compensation from OPIC for any expropriation loss sustained in respect to this guaranteed debt.

"Despite a higher tonnage of copper sales, earnings of the Metal Mining Division's domestic operations in the second quarter of 1971 were substantially lower than in the second quarter of 1970 because of lower copper prices and higher production costs at U.S. mines. Also, as stated, the Division did not receive dividends from El Teniente during the 1971 period. In 1970, dividends received from El Teniente totaled \$7,814,000, or \$.23 per share, in the second quarter, and \$17,186,000, or \$.52 per share, in the first six months.....

"On April 30, the Environmental Protection Agency established national ambient air quality standards, including limits on sulfur dioxide. Two standards were set: a primary standard to protect public health, and a secondary standard to protect "public welfare", which is broadly defined to include vegetation and materials. The cost to Kennecott to modify its 4 smelters to meet the national primary standard and existing state requirements has been estimated to be over \$100-million.

Kennecott has petitioned for judicial review of the secondary standard under provisions of the Clean Air Act of 1970. During the coming months, the individual states are required to develop implementation plans, subject to EPA approval to meet the primary air quality standard. The resulting cost to Kennecott could be significantly higher, depending on the provisions of these state plans...."

After a strike of approximately 3 weeks, Kennecott reached a settlement with the unions similar to those reached earlier in the can and aluminum industries which includes a substantial wage increase, increased pension benefits, and a cost of living formula to apply during the last 2 years of the contract. The report to stockholders states, "The costs of the strike, the increased operating costs that will result from the new labor contract and the potentially weaker world market for copper will adversely affect Kennecott's results in the second half of 1971."

BASIC INCORPORATED:- reports on sales and earnings for the second quarter and first half of 1971:

	3-Months ended June 30		6-Months ended June 30	
	1971	1970	1971	1970
Share Earnings*	\$.10	\$.24	\$.17	\$.62
Net Sales	\$11,485,327	\$11,570,465	\$22,735,563	\$24,151,592
Net Income.	190,053	372,175	333,762	926,785

*Based on 1,294,450 shares, average number outstanding for all periods.

Max Muller, president, said, "Basic's first half earnings were adversely affected by increased manufacturing costs without compensating price adjustments in the refractories industry, by the recession which caused our electronics division to suffer a loss for the first time in several years, and by a combination of both the economic slowdown and continued heavy costs related to our developing technical ceramics business. Improvement in our earnings is not anticipated in the second half. The steel industry is still our major customer and several factors in the present period will influence performance of the refractories division; the rail stoppages, reduced steel production and the trend towards increased imports of steel. At the present time, we do not believe these factors will be outweighed by expected improvement in the performance of our electronics, ceramics and chemicals divisions."

A summary of operations in the report states: "Refractories: Linings and maintenance materials are produced for oxygen, open hearth and electric steel refining furnaces. Plants at Maple Grove, Ohio, and Gabbs, Nevada, are adjacent to dolomitic and magnesitic ore deposits, and a seawater magnesia facility is located at Port St. Joe, Florida. Chemicals: Products are marketed for specialized chemical, agricultural, industrial and air pollution applications. Magnesia chemicals are manufactured at the Ohio, Nevada and Florida plants, and high-calcium limestone products at Fredonia, Kentucky. Electronics: Power and interconnect devices are produced for communications systems. Custom-designed power sources, printed circuit cards and electronic sub-assemblies are manufactured for the computer, office equipment, communications and industrial controls markets. Plants are at Waterford and Corry in Western Pennsylvania. Technical Ceramics: Precision ceramic parts and ceramic metal assemblies are manufactured for the electronics, textile, automotive, pulp and paper processing and metallurgical industries. Plants are in Hawthorne, New Jersey and Hendersonville,

North Carolina. Mineral Exploration: Activities principally center around Maine nickel-copper deposits and Guatemalan nickelferous laterite formations."

THE ANACONDA COMPANY:- reports consolidated income:

	3-Months ended June 30		6-Months ended June 30	
	1971*	1970**	1971*	1970**
Share Earnings.	\$.43	\$1.23	\$.61	\$1.66
Sales & Other Income	268,090,000	279,382,000	501,144,000	525,719,000
Net Income.	9,382,000	27,141,000	13,363,000	36,465,000

*Subject to year-end audit.

**Restated to exclude earnings of subsidiaries having assets consisting principally of investments in Chile, except to the extent that such earnings were received in dividends from the subsidiaries.

At June 30, 1971, 21,890,834 shares of common stock were outstanding.

A joint statement to stockholders by John B. M. Place, president and chief executive officer, and C. Jay Parkinson, chairman of the board, said, "The principal reason for reduced 1971 earnings is lower income received from investments in Chile....Other factors affecting 1971 earnings were reduced prices for copper and for copper and aluminum fabricated products, plus higher unit costs of copper production attributable in part to the treatment of lower grades of ore. The outlook for profits for the remainder of the year is clouded by shutdown costs and the loss of production at the company's mines and metallurgical plants in Montana, as a result of the strike called on July 1 against the company and other major copper producers by a union coalition led by the United Steel Workers of America. Anaconda is now faced with the increased labor costs that will follow what promises to be the most costly wage settlement in the history of the copper industry. It is also "confronted" by the growing costs of compliance with environmental control standards and regulations....."

"During the second quarter, copper production from North American mines, including the initial concentrate shipment from the new Caribou mine in Canada, was 72,287 tons, up from 65,360 tons in the first quarter of 1971, and up from 66,240 tons in the second quarter of 1970....."

Anaconda's Nevada open-pit mine producing copper in the form of precipitates and sulphide concentrates, is located at Weed Heights, Lyon County, and H. R. Burch is general manager.

TITANIUM METALS CORPORATION OF AMERICA:- announced that it will close its plant at Henderson, Nevada, by August 27th and will lay off 450 workers. Carl Blake, plant manager, said the shutdown was caused by an extremely low level of orders due in part to the slowdown in the aerospace industry, the largest user of titanium. Blake said the company was working toward an orderly shutdown as work decreases and projects are completed. He added the plant will be kept in a state of readiness to resume operations when new orders come in, hopefully near the end of the year.

RAWHIDE MINING COMPANY:- has leased the Nevada Scheelite mine, near Rawhide, Mineral County, Nevada, from Kennametal Inc. Rawhide Mining Company, a Nevada corporation, was organized by H. Wendell Hobbs, pres-

ident, and William W. Scurlock, vice president, both of McAllen, Texas. Ernest M. Colwell, secretary-treasurer, is manager of operations; Donald Jung mine superintendent; Clarence Sikkenga mill superintendent; and Kenneth L. Colwell master mechanic. Work commenced on April 1, 1971; the old Nevada Scheelite mill is being rebuilt and development work is being done in the mine. Prior to closing of the Government domestic-tungsten purchase program in January 1957, Nevada mines yielded more than one-fifth of the tungsten production in the U.S. and the Nevada Scheelite mine was one of the leading producers in Nevada.

KERR-McGEE CORP:- reports income:

	3-Months ended June 30		6-Months ended June 30	
	1971	1970	1971	1970
Share Earnings	\$.54	a\$.48	\$.95	\$.83
Sales	164,805,451	137,789,302	312,933,068	251,551,894
Net Income	12,390,832	10,995,205	21,614,303	19,029,059

a. Adjusted for 3-for-1 stock split in July 1971.

Earnings per share, on a fully diluted basis, were 52¢ in the quarter and 90¢ in the 6 months of 1971, compared with 46¢ and 80¢, respectively in the like periods of 1970.

D. A. McGee, chairman and chief executive, said the sharply higher earnings and sales were due primarily to substantial improvements in the company's oil and gas production, minerals, nuclear and chemical operations. Per-share earnings in all periods have been restated to reflect a 3-for-1 stock split effective July 21, 1971.

Kerr-McGee Corp. operates a chemical plant in Henderson, Clark County, Nevada, producing sodium chlorate, potassium chlorate, potassium perchlorate, ammonium perchlorate and manganese dioxide.

BULLION MONARCH COMPANY and BEAR CREEK MINING COMPANY (exploration subsidiary of Kennecott Copper Corporation):- have entered into a lease agreement on the Ward Mountain West property in White Pine County, southwest of Ely, White Pine County, Nevada. Previous geological studies have been done by the U.S. Geologic Survey and information developed by the studies indicates the possibilities of deeply buried mineralization. Terms of the agreement require Bear Creek to meet minimum yearly work requirements and payments. The lease is for fifty years, with Bear Creek having the right of termination at any time. In the event of production, Bullion Monarch will receive a royalty based on net smelter return.

THE FLINTKOTE COMPANY:- reports consolidated income:

	3-Months ended June 30		6-Months ended June 30	
	1971	1970	1971	1970
Share Earnings (b)	\$.80	\$.49	\$.55	\$.34
Sales, etc.	114,828,000	90,008,000	188,476,000	153,804,000
Net Income (a)	4,990,000	3,279,000	4,059,000	2,878,000

(a) Earnings for the year to June 30, 1971 reflect the results of the Campanella Corporation which was acquired in June 1970 and whose results were first included in the quarter ended September 30, 1970.

(b) After provision for preferred stock dividends.

James D. Moran, president, reported to stockholders, "The improved

operating results were due primarily to an upturn in residential construction which provided higher sales volume and improved product prices. Non-residential construction has not yet rebounded, especially on the West Coast where the Company has substantial operations....."

The Flintkote Company has two operations in Clark County, Nevada; an open-pit gypsum mine and processing plants at Blue Diamond, and limestone quarries and processing plants at Arrolime, Sloan and Henderson.

COPPER RANGE EXPLORATION COMPANY:- in a joint venture with Ordrich Gold Reserves Company, Inc., has built a new pilot plant at Round Mountain, Nye County, Nevada, which handles 4 cubic yards per hour, and is under the direction of Bruce Goddard in a program of extensive drilling and sampling. Exploration is being done on the gold placer property of Nevada Porphyry Gold Mines, Inc., which was a substantial gold producer during the 30's.

POLARIS RESOURCES, INC:- Denver, Colorado, began production on April 30 at Summittville in the southwestern corner of the state and is shipping copper concentrates from its 150-ton-per-day mill to American Smelting and Refining Company at Tacoma, Washington. The mine is a joint operation of Polaris Resources, Inc.; Trebilcek Mining Company, New York, and W. S. Moore Company of Duluth, Minnesota. R. A. Hildebrand, Lakewood, Colorado, who heads Polaris Resources, said a 98-foot advance has encountered sulfide ore averaging 5.4% copper. Some Colorado mines produce ore with a trace of copper, but it is reported that this new mine is considered the first true copper mine in the state.

THE GOLDFIELD CORPORATION:- reports it has leased and acquired an option to purchase the United States Treasury and Wide Eagle Mining Claims in Sierra County, New Mexico. A Goldfield official said the claims were located near the center of the company's St. Cloud silver-copper property where exploration work continues favorably.

DUVAL CORPORATION'S:- Carlsbad Properties Mine (potash) in New Mexico established a world's record for safety in underground nonmetallic mines when the operations achieved a total of 2,695,502 man-hours as of the end of June 1971 without a lost-time accident over a 3-year period. J. Allen Overton, Jr., executive vice president of the American Mining Congress, in presenting the Sentinels of Safety award sponsored by AMC and the U.S. Bureau of Mines to Duval officials on July 12, said the U.S. Bureau of Mines reports that "this is the finest record for any underground mine in the U.S. in the nonmetallics industry, and indeed for the whole world."

FMC CORPORATION:- of San Jose, California, has been awarded a \$5.9 million contract to develop coal mining systems that guard against major underground safety hazards, especially falling rock and coal, by Interior's Bureau of Mines. The firm will undertake a 3-year effort, culminating in a year-long test of the new systems in a working underground coal mine. FMC was awarded the negotiated contract in competition with 2 other firms that submitted bids on the Bureau's proposal. Bureau Director Elbert F. Osborn called the effort "a new departure in coal mine safety research. For the first time," he said, "we are ready to move toward new mining systems with safety built in, instead of added on later." FMC will conduct the work in 3 phases: Analysis of systems requirements, leading to design of specific mining methods; the

writing of specifications for equipment and methods, followed by purchase or construction of the equipment, as necessary; and a 1-year field test of the entire system in an operating coal mine.

METALS AND MINERALS

GOLD:- The price of gold on London and European bullion markets reached the highest level since the two-tiered pricing system went into effect in April 1968. During the morning of August 10, the price went up to \$42.90 per ounce, up 34¢ from the preceding Friday's official close, and to \$43.94 at the official close, for a one-day boost of \$1.38 an ounce. The free market is expected to remain strong in coming months. A higher-than-usual demand for gold is being sparked by the pressure against the U.S. dollar, the U.S.'s extremely poor balance of payments position, a potential trade account deficit in 1971, and U.S. dwindling gold reserves. The demand for gold is also being reflected in the International Monetary Fund. Eleven nations out of 14 chose to sell their currencies in return for gold rather than Special Drawing Rights. The Fund gave these member nations a choice of taking either gold which was purchased from South Africa at \$35 an ounce under its January 1970 agreement, or SDRs. Only 3 countries opted for the SDRs, worth \$21.3-million, while the others took some \$113.7-million in gold bullion, bringing the IMF's own stocks down to about \$5-billion.

With reference to clarification of restrictions on holding or dealing in rare or unusual gold coins, the Federal Register of July 24 stated: "Under the Treasury Department's Gold Regulations, there is a general prohibition on holding or dealing in gold without a license. An exception to this prohibition is made for gold coins of recognized special value to collectors of rare and unusual coins. Such coins, if minted before 1934, may be acquired because of this recognized special value to collectors of rare and unusual coin, but not for the purpose of acquiring the gold bullion contained therein. Thus, collectors of rare and unusual gold coins and coin dealers are enabled to buy and sell these gold coins for numismatic purposes without obtaining individual licenses for specific transactions. This exception was not intended to permit nor does it permit the acquisition of gold coins for speculative rather than numismatic purposes....."

FLUORSPAR:- "World consumption of fluorspar is forecast to increase from 3.5-million metric tons valued at \$200-million in 1970 to almost 6-million metric tons valued at roughly \$400-million in 1975. This rapid rise in the demand for fluorspar is threatening the world's steel, aluminum, and chemical industries with a possible shortage of this critical raw material. The availability of fluorspar and other fluorine sources in sufficient quantities to keep up with the forecast demand is in some doubt, according to advance information from a new worldwide survey on the supply and demand for fluorspar and fluorine products now being undertaken by Charles H. Kline & Co., Fairfield, New Jersey. Although the production of fluorspar is increasing rapidly in such countries as Mexico, Spain, Italy, and Thailand, consumption is growing even more rapidly in the major consuming industries.

"The increasing demand has three main causes: (1) Rapid expansion of the basic oxygen and electric furnace processes for steel-making. Basic oxygen furnaces use as a flux over 3 times as many pounds of fluorspar per ton of steel as the open hearth furnaces they replace.

Electric furnaces use twice as much as the open hearth. U.S. consumption of fluorspar averages 3.9 pounds per ton of steel in the open hearth, 6.4 pounds in the electric furnace and 12.4 pounds in the basic oxygen furnace. (2) Continued high growth in the world aluminum production, forecast at 9% a year through the 1970's. Each ton of aluminum requires roughly 75 pounds of fluorine in the form of cryolite and aluminum fluoride electrolytes, both made largely from fluorspar. (3) A further strong increase in the production of fluorocarbon propellents, refrigerants and polymers. World production of fluorocarbons is growing at over 8% a year. One ton of hydrofluoric acid, a basic material for fluorocarbon production, requires from 3 to 5 tons of crude spar." California Geology - August 1971.

FLUORINE COMPOUNDS:- "Utilization of Waste Fluosilicic Acid," report of Investigations 7502, copies of which can be obtained free from the Distribution Section, Bureau of Mines, 4800 Forbes Avenue, Pittsburgh, Pennsylvania 15213, explores the recovery of either CaF_2 or hydrogen fluoride gas from fluosilicic acid resulting from the processing of phosphate rock. The Bureau says that cost evaluation for projected commercial-scale processing indicates intriguing profit possibilities.

SILVER:- Simon D. Strauss, executive vice president, American Smelting and Refining Company and president of the recently-formed Silver Institute, in a speech last month at the Idaho Mining Association convention, was optimistic about the long-range outlook for improved silver prices. He theorized that a change in the relationship between the London and New York markets could signal a change toward firmer prices. Strauss pointed out that London has traditionally been higher than New York due to freight and insurance costs. Strauss said he believed that European speculators bought silver during the late 1960's to hedge softening European currencies, but since January 1970, London prices have been below the market in New York, indicating the probability of a silver sell-off by European investors, due to more confidence in their own currencies than in the dollar. He added, "When London prices start to strengthen in relation to New York's, it may be an indication that the European liquidation is coming to an end, probably meaning that European consumers will again have to import from the Western Hemisphere."

ZINC:- on July 26, was raised 1¢ across the board, putting prime western up to 17¢ a pound. Although New Jersey Zinc, who took the initiative in the move, stated, "The selling price of zinc must more closely reflect production and distribution costs rather than being based primarily on temporary shortages and surpluses," a "temporary shortage" was a strong factor in the price increase. Four U.S. smelters have been, or are about to be, shut down this year and Anaconda's 160,000-ton-per-year smelter went on strike July 1. Observers predict that if auto demand continues strong, and if the economy finally gets moving this fall, the zinc market will stay firm. However, steel stockpiles were built up in anticipation of a steel strike, so that steel mills are not producing up to capacity and this may have an adverse effect on the demand for zinc.

PERSONAL ITEMS

A. E. SMITH:- has been appointed vice president-operations of Duval Corporation with offices in Tucson. He succeeds I. B. PHILLIPS who is

terminating his 33-year career with the company because of ill health. Smith, a graduate of the University of New Mexico, joined Duval at its Carlsbad potash properties in 1951.

RICHARD B. LEATHER:- has been elected secretary of Newmont Mining Corporation, succeeding JACQUES L. LEROY who is assuming duties as counsel for Newmont's International operations. WINTHROP T. PARKER III has been elected assistant treasurer.

H. JOHN KANNALEY:- has been promoted to director-employee relations and communication by Kennecott Copper Corporation. Kannaley had been director-communication since 1968, in which position he was responsible for organizational and motivational communication within the company. In his new function, he will also assume responsibility for development and implementation of corporate-wide policies and practices in the areas of management development, salary administration, benefits, personnel practices, and executive recruitment.

DR. WAYNE T. BARRETT:- president of Foote Mineral Company, has been named chief executive officer, succeeding L. G. BLISS who is retiring from active management but will continue as chairman of the board. PAGE EDWARDS, general manager for Foote's Western Operations, will head the newly-opened exploration and mining office at 207 Coffey Building, 1800 South Sheridan Boulevard, Denver, Colorado 80226. W. E. COOKE was named operations manager of Foote's Silver Peak, Nevada, operations, succeeding Page Edwards.

ANDREW FLETCHER:- has been appointed by the board of trustees of St. Joe Minerals Corporation as honorary chairman for life in gratitude for his service to the company. Fletcher, who has retired from active service with St. Joe, is a former president and chairman and was a trustee for over 50 years.

QUENTIN C. MCKENNA:- missile systems division manager for Hughes Aircraft Company, was elected a director of Kennametal Inc., a tungsten-base carbide producer, expanding the board to 8 from 7 members.

JAMES C. WILSON:- was elected president of Union Pacific Mining Corporation, a recently formed subsidiary of the railroad operating and mining company.

WILLIAM J. MALENCIK:- has been named to fill the new position of chief, planning coordination staff, at the Nevada Office of the Bureau of Land Management. He will head a group of professionals who coordinate all planning and program development activities for the Nevada BLM.

OF PROBABLE INTEREST

NEVADA STATE AIR QUALITY REGULATIONS:- Proposed air quality regulations have been issued by the State of Nevada and hearings for the purpose of receiving oral and written testimony relative thereto will be held as follows:

Friday, September 3, 1971, Washoe County Court House, Reno, Nevada
Beginning at 7:30 p.m.

Tuesday, September 7, 1971, 1515 Idaho Street, Elko, Nevada
Beginning at 7:30 p.m.

Friday, September 10, 1971, 625 Shadow Lane, Las Vegas, Nevada
Beginning at 9:00 a.m.

Persons wishing to present oral testimony should indicate their desire on or before August 30, 1971 by writing to:

Elmo J. DeRicco, Chairman
Commission on Environmental Protection
Nye Building, Room 131
201 South Fall Street
Carson City, Nevada 89701

Copies of the Proposed Air Quality Regulations may be obtained from Mr. DeRicco at the above address. Written testimony may be submitted at the hearings or may be sent to Mr. DeRicco not later than September 15, 1971. If written testimony exceeds three pages, nine copies must be submitted.

OPINION NO. 38:- re Mining Claims, dated August 2, 1971, addressed to the Recorder of Douglas County, by Julian C. Smith, Jr., Deputy Attorney General of the Office of Robert List, Attorney General of the State of Nevada states:

"This is in reply to your inquiry of July 23, 1971, requesting interpretation of the new mining law (Chapter 680 of the 1971 Statutes of Nevada - AB 766).

- "Questions: 1. Must a person pay the new fees and file two maps as required by the new law if he has filed a location notice and done location work prior to July 1, 1971, pursuant to the old Law?
2. May county recorders charge the fees provided by NRS 247.305 for recording maps required by NRS 517.230 (claim maps)?

"Analysis: The new mining law was signed by the Governor on May 7, 1971, and became effective July 1, 1971. The requirements for filing a map and paying larger filing fees therefor also became effective on July 1, 1971. (See NRS 517.040, 517.080, 517.100, 517.140 and 517.170.)

"The location certificates filed after July 1, 1971 must indicate that the location work, consisting of making the map and filing it with the fee, has been done (see NRS 517.050 and 517.080), or the maps and fees must accompany the certificates (see NRS 517.080, 517.140 and 517.170).

"The Legislature has made no provision for exempting locators from the larger fee and filing of maps where they have filed a location notice prior to July 1, 1971. The filing of a location notice is purely optional with the locator, and in no way contributes to the state's requirements for a valid mining claim location.

"The requirements for filing maps for claims located prior to July 1, 1971 are found in NRS 517.230. There is no provision in this statute for charging a fee. Where there is no specific provision for a recording fee, there is a catch-all provision in NRS 247.305. This provision would clearly apply to the claim maps required prior to September 1, 1972.

"Conclusion: All mining claim locators who need to file a certificate of location after July 1, 1971 in order to complete their mining claim location must tender the proper fees and two copies of the map as required after July 1, 1971. The fee schedule of NRS 247.305 would apply to the claim maps required to be filed by September 1, 1972.

GEOLOGY OF THE EUREKA QUADRANGLE:- in Eureka and White Pine Counties, Nevada, is featured in a new map published by the U.S. Geological Survey in cooperation with the Nevada Bureau of Mines and Geology. Map I-612, "Geology of the Eureka Quadrangle, Eureka and White Pine Counties, Nevada", by T. B. Nolan, C. W. Merriam, and D. A. Brew may be ordered for \$1.50 from the U.S. Geological Survey, Federal Center, Denver, Colorado 80200.

FEDERAL TAX ON HIGHWAY MOTOR VEHICLES:- Operators of commercial vehicles in use in July 1971 must file a Federal Use Tax return on or before August 31, 1971. Although the tax has been in effect for many years, some operators of taxable equipment are unaware of its existence, or fail to make payment and are, therefore, subjected not only to payment but to additional penalties. In general, single unit trucks operated solo and weighing 13,000 pounds or more tare are taxable. Also, single unit trucks used in combination with other vehicles and weighing 9000 pounds or more tare. Tractors weighing from 5500 pounds and up are also taxable. Forms may be obtained from any branch of the Internal Revenue Service. The tax covers the full calendar year but may be paid in quarterly installments.

POLLUTION-FREE FUEL MADE FROM HIGH-SULPHUR BITUMINOUS COAL:- Interior Department's Bureau of Mines reports high-sulphur bituminous coal, barred for use in most steam-electric generating plants by recent air-quality standards, has been experimentally converted into a pollution-free fuel. In a one-step treatment process described in a new Technical Progress Report, a bituminous coal containing 3.4% sulphur was converted to a viscous liquid fuel containing 0.3% sulphur. Virtually all clean air standards currently in effect can be met by limiting the sulphur content of fuels to 0.3%. In the Bureau process, a mixture of high-sulphur coal, coal tar, and hydrogen is heated, pressurized, and blown at high turbulence through a bed of pellets of a cobalt molybdate catalyst, which "unlocks" the sulphur from the coal. The products are (1) a desulphurized fuel that can be burned in power plants like oil; (2) an oil for carrying more coal to the process; and (3) hydrogen sulphide gas that can be converted into marketable sulphur. The process is under development at the Bureau's Pittsburgh (Pa.) Energy Research Center. Bureau plans call for additional experiments on high-sulphur coals from a number of different seams to check the general applicability of the procedure, determine catalyst life and the best operating conditions, and evaluate the economics of the process. Success of the project would enable abundant high-sulphur bituminous coal to reenter the utility fuel market and relieve the critical shortage of pollution-

free fuels. Bureau of Mines Technical Progress Report No. 35, "Low-Sulphur Fuel Oil from Coal", may be obtained at no charge from the Publications Distribution Section, Bureau of Mines, 4800 Forbes Avenue, Pittsburgh, PA 15213.

REFUSE ACT PERMIT PROGRAM:- District Offices of the Corps of Engineers have been instructed to contact companies in their areas which have not yet filed applications for discharge permits. Regional offices of the Environmental Protection Agency are to cooperate in the effort. In absence of prompt satisfactory response, enforcement procedures are to be initiated. William D. Ruckelshaus, Administrator of the Environmental Protection Agency, in his directive of August 3, 1971, states: "The broad mandate to EPA is to clean up the Nation's waters. In order to accomplish that task, we must make every effort to cooperate with the States and other Federal agencies to assure that the Permit Program reflects the highest degree of expertise available, and the requirements imposed on industry are fairly and vigorously enforced....."

WESTERN STATES GEOTHERMAL COUNCIL:- Last month, a steering committee, formed by the Washington Department of Natural Resources met to establish the Western States Geothermal Council. The purpose of this semi-technical organization will be to encourage a broad spectrum of research and development programs in the geothermal energy field. This group thus far includes representatives from the U.S. Department of the Interior, California, Washington, Oregon, New Mexico, and Mexico.

The Federal Register of Friday, July 23, 1971, sets forth detailed "Notice of Proposed Rule Making" for "Geothermal Resources Leasing and Operations on Public, Acquired, and Withdrawn Lands."

PUBLIC LANDS:- The American Mining Congress has submitted a statement to the House Interior Committee in conjunction with current hearings on H.R. 7211, a bill to establish public land-use policy and to establish guidelines for its administration. This measure, introduced by committee chairman Wayne Aspinall (Colorado), would implement many of the broad fundamental policies recommended by the Public Land Law Review Commission. The AMC statement, submitted by Howard Gray, chairman of the AMC Public Lands Committee, supported several provisions of the bill, including those that would provide "vitaly needed statutory guidelines" to the executive branch in the management of public lands. AMC also supported the bill's stipulation that "incentives be furnished for the discovery and development of additional domestic sources of mineral supply." In his statement, Gray also supported provisions that would (1) limit the authority of the Secretary of the Interior to withdraw public lands and (2) clearly place public land management under the purview of the Administrative Procedure Act. AMC objects to provisions that would establish unreasonable environmental goals and warned against a land-use policy that would not recognize the unique characteristics of mineral deposits.

Assistant Secretary of the Interior Harrison Loesch and Under Secretary of Agriculture J. Phil Campbell appeared on behalf of the Nixon Administration and opposed H.R. 7211. Instead, they supported an Administration measure to create an organic act for the Bureau of Land Management.

1872 MINING LAW:- Chairman Henry Jackson of the Senate Interior and

Insular Affairs Committee has announced public hearings would be conducted on September 21-22, 1971 on S. 921, his bill to make major revisions in public land laws. Hearings will be in Room 3110 of the New Senate Office Building. The bill would repeal the 1872 mining law and substitute a mineral leasing system.

THE WESTERN GOVERNORS' CONFERENCE:- was held at Jackson Lake Lodge, July 11-14, 1971. Governor Hathaway presided during the discussion on Mining and the Environment. A. C. "Al" Harding, chairman of the Western Governors Mining Advisory Council, presented a statement outlining the views of the mining industry on the problems faced by the industry. Comments following the presentation gave ample proof that the Governors recognize the need for preserving the economic base while environmental regulations are developed and implemented.

UNLEADED GASOLINE:- Cars using unleaded gasoline yielded 57% more particulate matter than similar cars burning leaded gasoline, according to DuPont scientist John M. Pierrard. To simulate road conditions, the test was performed in an idle tunnel on the Pennsylvania Turnpike. Filters were used to collect and compare particulate matter from 4-car fleets of 1970-1971 automobiles which were driven according to the federal automotive test cycle. Commercially available premium unleaded fuel with high aromatics content and leaded, average aromatic content gasoline, were used. Tests also showed a reduction in atmospheric visibility as measured by intensity of white light. Auto exhaust from cars burning unleaded gas decreased light intensity 85% when compared with exhaust from cars using leaded fuel.

DATES TO REMEMBER

SEPTEMBER 8, 1971: Testimonial Banquet honoring W. Howard Gray, Esq. and Jeanne, Nugget Convention Center, Sparks, Nevada. Reservations should be made before August 31, 1971.

SEPTEMBER 11, 1971:- Eastern Nevada (Ely), Northern Nevada (Reno), Southern Nevada (Las Vegas) Sections, American Institute of Mining, Metallurgical and Petroleum Engineers, will hold a field trip to the Carlin Gold Mine. Field trip will start promptly at 1:00 p.m. Stockman's Hotel, Elko, Nevada: No host cocktail hour 6:00 p.m.-7:00 p.m.; Dinner meeting 7:00 p.m. Hotel or motel reservations should be made in advance for September 11, 1971. Final announcement will be mailed latter part of August; all interested are urged to return confirmation card promptly.

SEPTEMBER 21-24, 1971:- Society of Mining Engineers-AIME Fall Meeting and Exhibit, Seattle Washington. Details for advance registration in July 15, 1971 News Letter.

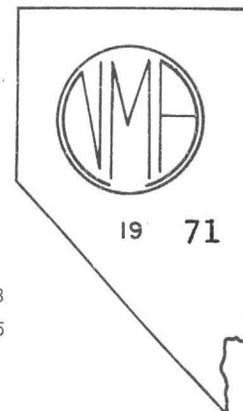
OCTOBER 11-14, 1971:- 1971 AMC Mining Show, Las Vegas, Nevada. Details for advance registration in July 15, 1971 News Letter.

NOVEMBER 3-6, 1971:- International Mining Days, New Mexico Mining Association, El Paso, Texas. Reservations: International Mining Days, El Paso Chamber of Commerce, Box 682, El Paso, Texas 79944.

NOVEMBER 1-5, 1971:- Symposium and Specialty Seminars on Stability in Open Pit Mining, Bayshore Inn, Vancouver, British Columbia, Vancouver, Canada. Registration: Engineering Programs, Center for Continuing Education, The University of British Columbia, Vancouver 8, B.C.

NEWS LETTER

NEVADA MINING ASSOCIATION
RENO, NEVADA 89505



ROOM 602
ONE EAST FIRST STREET

APRIL 15, 1971

POST OFFICE BOX 2498
TELEPHONE 323-8575

NUMBER 217

PAUL GEMMILL, Executive Secretary

NEVADA MINES, COMPANY REPORTS, ETC.

COMET COALITION MINING COMPANY:- has tentatively terminated its lease arrangement with the financially troubled Pan Am Joint Venture. Comet owns the lead-zinc-silver Pan Am Mine and several patented and 200 unpatented mining claims near Pioche, Nevada, but the property has not been operating since 1967. The Pan Am Joint Venture consists of Grand Deposit Mining Company and Combined Metals Reduction Company, both involved in problems of indebtedness under the supervision of the Federal District Court for Nevada at Las Vegas. Comet has been trying to clear the lease with the Pan Am Joint Venture in order to get another operator. A compromise petition which involves lease cancellation was recently approved by the Court.

AMERICAN SMELTING AND REFINING COMPANY:- is buying out AMERICAN ZINC COMPANY. The tentative agreement must be approved by stockholders of both companies before the purchase can become final. The price tag was more than \$27-million and Asarco, a major metal producer, will take complete control of most of American Zinc's assets, including mines, plants and properties in Tennessee and limestone and zinc-oxide facilities in Illinois and Ohio. Also included in the purchase proposal are the mine and mill properties of New Market Zinc Company, a joint venture of American Zinc and Gold Fields American Corporation, which is a subsidiary of Consolidated Gold Fields Ltd. American Zinc management said it would "apply the proceeds of the sale toward reduction of indebtedness," amounting to about \$35-million. American Zinc said it would not be possible to estimate the value of the assets still left to it. The principal remaining assets of the company include: (1) an interest in a copper-iron prospect in the Boss-Bixby area of Missouri; (2) an interest in an iron ore prospect in the Bourbon area of Missouri; (3) a mining property in the State of Washington, not profitable at present zinc prices; (4) a mill near Deming, New Mexico; (5) smelters and related inventories at Dumas, Texas, and East St. Louis, Illinois. The company previously announced that these smelters will be closed during the last half of 1971.

MAGMA COPPER COMPANY:- March 15th Metals Week reports: "Magma Copper has outlined plans to spend at least \$50-million to meet Arizona smelter emission standards by the end of 1973. The proposed program... calls for replacing one or more reverberatory furnaces at Magma's San Manuel smelter with one or, if necessary, two flash smelting furnaces, and for installing a sulfuric acid plant to recover sulfur from smelter gases. The Magma flash furnace installation for smelting copper concentrates will be the first in North America, though the

process has been in use since 1949, and there are a number of such furnaces operating or under construction throughout the world. Finnish copper producer Outokumpu Oy first used the process at its Harjavalta works. Gas produced in a flash furnace has a higher concentration of sulfur and is therefore a better raw material for conversion to sulfuric acid than the gas from a conventional reverberatory furnace."

THE BUNKER HILL COMPANY:- has been denied a request by the Idaho Air Pollution Control Commission for a 3-year delay in complying with air pollution control regulations at its Bradley lead smelter and has until July 1 to put into operation a new sulphuric acid plant which is expected to bring sulphur dioxide emissions from the lead smelter to within the present state standards. Bunker Hill advised the commission that the plant could not be kept in operation much longer than through the summer months inasmuch as they do not have a market nor enough storage space for the acid. The commission has independent authority to impose a fine of \$1000 for each day that sulphur dioxide emissions exceed state standards. Bunker Hill's lead smelter currently has an annual capacity of 130,000 tons. The company's 114,000 ton per year zinc smelter has 2 acid plants which adequately control the SO₂ emissions and most of the acid from these 2 acid plants has been contracted out.

RANCHERS EXPLORATION AND DEVELOPMENT CORPORATION:- has completed exploratory drilling at the Big Mike copper property south of Winnemucca, Nevada. The drills blocked out an ore body exceeding 400,000 tons of oxide-sulphide ore. In addition, they have 275,000 tons of ore stockpiled. During the last 2 years, Ranchers removed 3.2 million tons of overburden and 95,000 tons of high grade ore with a gross value of \$11.2-million from the property.

KERR-McGEE CORPORATION and AMERICAN CYANAMID COMPANY:- formed a partnership, called Brewster Phosphates, to mine and process phosphate rock and to produce wet-process phosphoric acid and diammonium phosphate, used in fertilizers. The companies said Cyanamid's approximate 70% share and Kerr-McGee's approximate 30% share of the production will be marketed through each partner's individual distribution channels serving the fertilizer industry. The partnership will take over Cyanamid's Haynsworth mine at Bradley, Florida, as well as the mineral rights to the Haynsworth phosphate reserves, and to adjoining reserves of Kerr-McGee. Cyanamid will continue to operate the mine. The phosphorock will be converted into wet-process phosphoric acid by Freeport Chemical Company, division of Freeport Sulphur Company, at its Uncle Sam, Louisiana, plant. Half of the plant's 600,000-ton-a-year capacity will be available to Brewster Phosphates, with Freeport continuing to use the balance. Some of the phosphoric acid will be used to produce diammonium phosphate in facilities that Brewster Phosphates purchased from Monsanto Company. Monsanto will continue to operate these facilities, which have a design capacity of 325,000 tons a year, at Luling, Louisiana.

Kerr-McGee Chemical Corp. has a chemical plant in Henderson, Nevada, producing sodium chlorate, potassium chlorate, potassium perchlorate, ammonium perchlorate and manganese dioxide. Henry S. Curtis is plant manager.

NEW PARK MINING COMPANY:- reported an operating loss of \$200,000 for 1970 compared to earnings of \$1.1-million, or 29¢ a share, in 1969. President and chief executive officer of New Park stated the company is taking a write-down of about \$575,000, principally from abandonment of its interest in the Mammoth Mine. He said the company's Great Basin Steel Company subsidiary experienced a loss of "about \$500,000" and the company's other Nevada-based steel subsidiary, Taylor Steel Company, only operated "at break-even". However, he predicted that Great Basin will operate at "break even" in 1970. He said that New Park bought a tungsten deposit in Nevada.

FREEMPORT SULPHUR COMPANY:- announced plans to change the company name to FREEMPORT MINERALS COMPANY so that it may "reflect the company's widened activities as a diversified minerals producer."

METALS AND MINERALS

OIL IN NEVADA:- The Nevada Oil and Gas Conservation Commission reports that February 1971 production at Eagle Springs Field, Nye County, Nevada, totaled 9120 barrels and that total cumulative production for the field totaled 2,429,133 through January 1971.

"Drilling permit number 150 (API No. 27-023-05217) was issued April 12, 1971 to A. Paul Sutherland, Carson City, Nevada, for the Sutherland No. 1 Well, located in center NE/4 SW/4 Sec. 7, T. 8 N., R. 57 E., Nye County, Nevada. The well is 1995 feet from the south line and 3318 feet from the east line of the section. The elevation is 4726 feet. It is proposed to drill the well to 13,000 feet."

COPPER:- Phelps Dodge initiated a price increase by advancing its cathode base price 2-3/8¢ to 52-3/8¢, effective March 29, with wirebars moving up a like amount to 52-3/4¢. Anaconda and Inspiration adopted price levels and effective dates set by Phelps Dodge. Copper Range moved its base price for Lake copper in wirebars and ingot bars up 2-3/8¢ to 52-3/8¢, effective March 31. Kennecott Copper hiked its quotes by 2-5/8¢ to 51-3/4¢ for full plate electrolytic cathodes and 53¢ for wirebars, effective March 31. The price increase is attributed to several factors, among them the advance in price of copper on the London Metal Exchange and approaching expiration of domestic union contracts on June 30. Experts believe there will be a strike of some sort, though not necessarily very long or industry wide, and buyers are protecting themselves against a possible loss of supply during the third quarter by placing substantial orders for the second.

Confusing and contradictory news reports from Chile indicate that production problems are besetting the government since their take over of the previously U.S. operated mines. For one thing, there has been a great exodus of foreign management personnel and a reported 300 mine management and supervisory personnel have left their jobs in Chile since last November. And a group of 90 supervisors at the 300,000 ton per year Chuquicamata mine have indicated they plan to leave by the end of April. In a sympathetic sum up of the Chilean situation, one U.S. mine executive said, "The Chileans are a little disorganized just now. But in the long run, they are going to learn to handle their copper production. Over the next 6 months, there may be problems, but give them 2 years, and they should have things under control." In the meantime, however, production has suffered.

Last week, Corporacion del Cobre (CODELCO), the Chilean copper sales unit, granted C. Tennant, Sons & Co. of New York the sub-agency for its copper sales in the U.S. A Tennant spokesman said Tuesday that details of the agency were still being worked out. Trade sources indicated that the agency would probably be for the copper previously sold by Anaconda Sales to U.S. consumers other than Anaconda - reportedly 20,000 to 25,000 tons per year - and that established contracts would be honored. It was still an open question as to whether Chilean blister would continue to be refined by Anaconda in the U.S., and it was not known if Anaconda would continue to use Chilean copper in its own plants.

MERCURY:- has continued to weaken and latest quotes are from \$316-325 per 76-pound flask. New Idria Mining and Chemical Company has temporarily shut down its New Almaden and Guadalupe mines near San Jose, California. The New Idria Mine, its major mercury property (also in California and the largest in the U.S.) continues to operate.

Monte Amiata, Italy's giant producer of mercury, held up exports in 1970 in a vain attempt to firm up sagging world prices. Total exports fell to a little more than 15,000 flasks from almost 35,000 in 1969, while Italian production declined by only 18%, meaning that sizable inventories were built up. Italy normally produces between 50,000 and 60,000 flasks per year. Using the low figure for 1969 and about 40,000 flasks for 1970, Italian producers have probably accumulated stocks of close to 40,000 flasks over the last 2 years.

In a memorandum, "1971 Outlook for Mercury", the American Quicksilver Institute states, "As a result of the U.S. Food & Drug Administration mercury scare, consumption within the United States has declined by 25%. Price of mercury has already declined by almost 40%. U.S. production has already declined by 50% and unless the situation changes at an early date, production in the U.S. will probably decline by 85% before the end of the year. The Food & Drug Administration admits that there are no known cases of mercury poisoning as a result of eating mercury-containing fish in the U.S., Canada or Sweden. The Food & Drug Administration refuses to recognize U.S. Geological Survey statistics that show a mercury content in the ocean of 50 million metric tons, equivalent to 5000 years total world production of mercury at the current rate of production. If the mercury content of the top 16 feet of soils and sediments is taken into account, the total amount of mercury to which man is exposed is equivalent to 50,000 years at current production rate. This is the natural distribution of mercury in the environment. Additional mercury from industry is infinitesimally small in comparison."

ZINC:- The price of Prime Western zinc was increased to 15½¢ a pound by U.S. producers. The special high grade price is still split with all producers, except Arsarco and American Zinc, quoting 16½¢ a pound. Arsarco and American Zinc opted to leave the SHG price at 16¢ because of widespread discounting in that market.

SILVER:- Luis de la Pena Porth, subsecretary of nonrenewable resources of the Ministry of National Patrimony (Mexico) has called for an alliance with Canada and Peru to control the international price of silver. He said the 3 nations "could be joining forces together to acquire much fairer prices" on the international market for producers

of silver. He said that for every decline of 10¢ an ounce in the world price of silver, the Mexican silver industry loses the equivalent of \$4-million in foreign exchange earnings. In 1970, Mexico produced 43.3 million ounces of silver and exported 16.5 million ounces. U.S. silver price reached a high of nearly \$2.60 a troy ounce in mid-1968, but, thereafter, U.S. government sales and other considerations caused prices to fluctuate and in late January, the price quoted for the metal by Handy & Harman was \$1.56 an ounce and currently is \$1.745.

GOVERNMENT STOCKPILES:- A Senate Armed Services subcommittee held hearings on legislation to release 27 stockpile bills proposed by Senator Howard Cannon (Nev). Included were 6000 tons of antimony; 78,000 tons of magnesium; 457,000 pounds of selenium; 8,233 tons of rare earth materials; 256 troy ounces of iridium; 420,000 pounds of thorium; 1200 tons of vanadium contained in ferrovanadium; 4.4-million sdt of metallurgical-grade manganese; 4.8-million sdt of synthetic battery-grade manganese, and 166,453 tons of silicon carbide.

L. G. Bliss, chairman of Foote Mineral, reiterated the company's opposition to the sale of excess chrome, including 1.3-million sdt of metallurgical-grade chromite, 324,500 sdt of chemical-grade chromite, and 4.2-million tons of chromium metal, on the grounds that such release would only delay a government change in Rhodesian policy. Producers were also known to be against the sale of 35-million pounds of moly (Mo content) and 38,876 tons of nickel (not including the 40,000-ton GSA loan to Inco after the 1969 strike), and discussion on these materials was not even introduced. Columbium producers have also fought proposals to sell over 5-million pounds of columbium (Cb content), fearing the adverse effect of such release on their market.

ANTIMONY:- National Lead cut its antimony oxide price 9¢ a pound to 91¢ and the move was followed by both Harshaw and M&T Chemicals. The reduction was effective March 9. All 3 companies said the cut reflected declining raw material costs and that any further reductions in ore costs would be passed on in lower oxide prices. Antimony ore is currently quoted at \$12.74-\$15.78 per mt.

PERSONAL ITEMS

DR. WILLIAM T. PECORA:- director of the U.S. Geological Survey, has been chosen to become next Under Secretary of the Interior. He will succeed FRED J. RUSSELL who resigned shortly after Rogers C. B. Morton was confirmed as Secretary of the Interior.

PAUL C. HENSHAW:- president of Homestake Mining Company has been named chief executive officer, succeeding JOHN K. GUSTAFSON who will remain as chairman.

DIRECTOR GEORGE C. GUENTHER:- of the Bureau of Labor Standards has been named by President Nixon to head the government's new occupational safety and health program that will become effective next month. The President also announced his intention to nominate ROBERT D. MORAN, JAMES F. VAN NAMEE and ALAN F. BURCH as members of the Occupational Safety and Health Review Commission, a quasijudicial board that will consider appeals under the new safety and health law that takes effect April 28.

RAYMOND F. ROBINSON and DONLON LOBIONDO:- mining and exploration geologists, on April 5, 1971, formed a new consulting partnership, Robinson and LoBiondo. Robinson will be in charge of the office at 1100 East Plumb Lane, Reno, Nevada, and LoBiondo of the office at 1621 Entrada Once, Tucson, Arizona. Both men were recently employed by the consulting firm of Holt, Inc., where Robinson served as district manager.

OBITUARIES

JAMES G. HULSE:- a lifetime resident of Pioche, Nevada, died suddenly of a heart attack on April 14 at age 66. Most of his life was spent in mining - from prospecting to mine supervisor. He was noted for his excellent employee relations and for his knowledge of all phases of mining.

OF PROBABLE INTEREST

GEOHERMAL STEAM ACT OF 1970:- provides for publication by the Interior Department, within 128 days of the effective date of the act, a list of lands included within any known geothermal resources area on the effective date of the act. The attached partial list appeared in the Federal Register of March 25. Additional land determinations will be published before April 23. The Geological Survey on March 9 established mineral land classification standards for determining known geothermal resources areas. These are to be published as a USGS circular for dissemination to the public. Of the partial list appearing in the Federal Register of March 25, the following lands were designated in Nevada:

BEOVAWE KNOWN GEOTHERMAL RESOURCES AREA:

T. 31 N., R. 47 E., MDM, Secs. 13 and 24.

T. 31 N., R. 48 E., Secs. 1 through 5, 7 through 12, and 15 through 20.

T. 31 N., R. 49 E., Sec. 6

The area described aggregates 12,712 acres, more or less.

BRADY HOT SPRINGS KNOWN GEOTHERMAL RESOURCES AREA:

T. 22 N., R. 26 E., MDM, Secs. 1 through 4, 9 through 16 and 21 through 27.

T. 23 N., R. 26 E., Secs. 34 through 36.

T. 22 N., R. 27 E., Secs. 6 through 8, 17 through 19, and 30.

T. 23 N., R. 27 E., Sec. 31.

The area described aggregates 19,020 acres, more or less.

DARROUGH HOT SPRINGS KNOWN GEOTHERMAL RESOURCES AREA:

T. 11 N., R. 42 E., MDM, Secs. 1, 12 and 13.

T. 11 N., R. 43 E., Secs. 5 through 9 and 16 through 20.

The area described aggregates 8,398 acres, more or less.

DOUBLE HOT SPRINGS KNOWN GEOTHERMAL RESOURCES AREA:

T. 36 N., R. 26 E., MDM, Secs. 3 through 5, 8 through 10, 15, 16, 21 through 23, 26, 27, and 34.

T. 37 N., R. 26 E., Secs. 32, and 33.

The area described aggregates 10,816 acres, more or less.

ELKO HOT SPRINGS KNOWN GEOTHERMAL RESOURCES AREA:

T. 34 N., R. 55 E., MDM, Secs. 14 through 17, 20 through 23, 26 through 29, 33, and 34.

The area described aggregates 8,960 acres, more or less.

FLY RANCH KNOWN GEOTHERMAL RESOURCES AREA:

T. 34 N., R. 23 E., MDM, Secs. 1, 2, 11 through 14, 23, and 24.

This area described aggregates 5,125 acres, more or less.

GERLACH KNOWN GEOTHERMAL RESOURCES AREA:

T. 32 N., R. 23 E., MDM, Secs. 3, 4, 8 through 11, 14 through 17, and 20 through 23.

This area described aggregates 8,972 acres, more or less.

LEACH HOT SPRINGS KNOWN GEOTHERMAL RESOURCES AREA:

T. 31 N., R. 38 E., MDM, Secs. 1, 2 and 12.

T. 32 N., R. 38 E., Secs. 25, 26, 35, and 36.

T. 31 N., R. 39 E., Secs. 5 through 7.

T. 32 N., R. 39 E., Secs. 32 and 33.

The area described aggregates 8,957 acres, more or less.

MOANA SPRINGS KNOWN GEOTHERMAL RESOURCES AREA:

T. 19 N., R. 19 E., MDM, Secs. 13, 22 through 26, 35 and 36.

The area described aggregates 5,120 acres, more or less.

MONTE NEVA KNOWN GEOTHERMAL RESOURCES AREA:

T. 21 N., R. 63 E., MDM, Secs. 13 through 15, 22 through 27, and 34 through 36.

T. 21 N., R. 64 E., Secs. 18, 19, 30, and 31.

The area described aggregates 10,302 acres, more or less.

STEAMBOAT SPRINGS KNOWN GEOTHERMAL RESOURCES AREA:

T. 17 N., R. 20 E., MDM, Secs. 4 through 6.

T. 18 N., R. 20 E., Secs. 20, 21, 27 through 29, and 31 through 34.

T. 17 N., R. 21 E., Sec. 1.

T. 18 N., R. 21 E., Sec. 36.

The area described aggregates 8,914 acres, more or less.

STILLWATER-SODA LAKE KNOWN GEOTHERMAL RESOURCES AREA:

T. 19 N., R. 27 E., MDM, Secs. 1 through 3, 10 through 15, and 22 through 27.

T. 20 N., R. 27 E., Secs. 24 through 26, and 34 through 36.

T. 19 N., R. 28 E., Secs. 1 through 30, and 32 through 36.

T. 20 N., R. 28 E., Secs. 1 through 5, and 7 through 36.

T. 21 N., R. 28 E., Secs. 13, 14, 22 through 28, and 33 through 36.

T. 19 N., R. 29 E., Secs. 1 through 36.

T. 20 N., R. 29 E., Secs. 1 through 36.

T. 21 N., R. 29 E., Secs. 13 through 36.

T. 19 N., R. 30 E., Secs. 1 through 36.

T. 20 N., R. 30 E., Secs. 1 through 36.

T. 21 N., R. 30 E., Secs. 13 through 36.

T. 19 N., R. 31 E., Secs. 3 through 10, 15 through 21, 29, and 30.

T. 20 N., R. 31 E., Secs. 3 through 10, 15 through 22, and 27 through 34.

T. 21 N., R. 31 E., Secs. 16 through 22, and 27 through 34.

The area described aggregates 225,211 acres, more or less.

WABUSKA KNOWN GEOTHERMAL RESOURCES AREA:

T. 15 N., R. 25 E., MDM, Secs. 9 through 17, 20 through 24, and 26 through 29.

The area described aggregates 11,520 acres, more or less.

The March 1971 Geotimes reports that "more than 300 persons, representing nearly 50 countries, took part Sept. 22/Oct. 1 in a United Nations Symposium on Development & Utilization of Geothermal Resources in Pisa, Italy. The location was the School of Engineering at the University of Pisa." In a tabulation by countries, the United States was shown with 1969 capacity of 83,000 kw, planned or under construction 550,000 kw and total projected 663,000 kw for The Geysers (California) and for Brady's Hot Springs (Nevada) 1969 capacity 0 kw, planned or under construction 10,000 kw and total projected 0 kw.

MINERAL LEASING BILL FOR HARD MINERALS:- On February 23, Senator Henry Jackson, chairman of the Senate Interior Committee, introduced S. 921, the "Public Domain Lands Organic Act of 1971." The bill has two titles.

Title I would establish an "organic act" for the lands under the jurisdiction of the Bureau of Land Management. These so-called "national resource lands" would be administered by the Secretary of the Interior through the BLM in a manner similar to that prescribed by the Classification and Multiple Use Act of 1965, which expired on December 31, 1970, but with emphasis being placed on retention and management. The management principles of multiple use and sustained yield "should form the permanent philosophy of those charged with responsibility of caring for this national asset," Jackson said. Under the provisions of Title I, no classification of lands for disposal would become effective until after public notification is given and public hearings are held. Any classification of public lands in effect on the date of enactment would be subject to review for possible reclassification. Other provisions of title I would impose fines of not more than \$1000 and/or imprisonment of not more than 6 months for violation of public land laws, would grant the power of arrest to authorized BLM officials and would authorize the establishment by the Secretary of ad hoc advisory boards or groups. The preservation of certain lands for wilderness areas is provided for. The Director of the BLM would be appointed by the President, subject to confirmation by the Senate, and would have a broad background and experience in public land management and natural resource management.

Title II of the bill calls for a mineral leasing system of hard rock minerals to replace the location system authorized by the Mining Law of 1872. Citing "extensive damage to our national forests" during the recent period of exploration in Montana, one of the bill's co-sponsors, Senator Lee Metcalf states that the act will enable the administrators to require, among other things: (1) advance submission of exploration and operation plans by mining companies, including proposals for the protection of the environment; (2) leasing before exploration can be pursued; (3) restoration and rehabilitation of disturbed surface areas; (4) posting of performance bonds; (5) penalties for non-compliance. Chairman Jackson stated that his Committee "will hold careful and thorough public hearings on this measure."

Numerous other, similar bills have been introduced in Congress: H.R. 4556 - would prohibit opening of new surface mines; H.R. 1126 would

repeal the mining law and substitute a mineral leasing act; H.R. 4704 would establish environmental regulations for mining operations; H.R. 6253 to establish a "Mineral Leasing Act" to give the Interior Secretary discretion "to make land available for exploration by competitive lease as he sees fit"; S. 630 a mined area protection act, similar to S. 3132 in the 90th Congress; S. 1240 to regulate prospecting and mining on public lands.

AIR POLLUTANTS:- The March 31 issue of the Federal Register contained two important lists just released by the Environmental Protection Agency. The first list, published pursuant to section 112 of the Clean Air Act, designated asbestos, beryllium and mercury as "hazardous air pollutants". This means that within 180 days, the EPA Administrator must publish proposed regulations establishing Federal emission standards for such pollutants together with notice of a public hearing to be held within 30 days after publication of the notice.

The second list covers 5 categories of stationary sources for which the EPA Administrator will propose regulations within 120 days establishing Federal standards of performance for new sources within the categories. From time to time, there will be additional lists covering perhaps 15 or so other kinds of stationary sources. The first 5 sources are: (1) contact sulfuric acid plants; (2) fossil fuel-fired steam generators of more than 250 million B.t.u. per hour heat input; (3) incinerators of more than 2,000 pounds per hour charging rate (municipal-type refuse); (4) nitric acid plants; and (5) portland cement plants.

DESALTING OCEAN WATER:- Through a new Bureau of Mine's process of "softening" the brine first, distillation plants that desalt sea water can double their output. A pilot plant of Interior's Office of Saline Water has removed from thousands of gallons of sea water per day the sulfate chemicals that otherwise would form an insoluble scale inside the pipes of distillation equipment. The scale reduces the plant's heat efficiency by wasting energy needed to convert more sea water to fresh. With sulfates removed, scale-formation is virtually eliminated and distillation temperatures, usually about 250° F, can be raised as much as 100 degrees for greater efficiency. When desulfated sea water is distilled, the fresh water output is about doubled, compared to distilling sea water that still contains sulfates. The desulfation process, an ion-exchange technique, eliminates sulfates from sea water by precipitating them in the form of barium sulfate. It uses a special ion-exchange resin, which is continuously recovered, recycled, and regenerated with barium to precipitate more sulfate. The process was originally developed as a way to desulfate the heavily concentrated brine of Utah's Great Salt Lake so that valuable minerals in the brine could be extracted economically. At the request of the Office of Saline Water, the Bureau adapted the process for ocean water desalination and last year helped OSW incorporate the process into its 75,000 gallon-per-day test facility at Wrightsville Beach, North Carolina.

SILVER COIN TRADING:- started April 1 on the New York Mercantile Exchange. Contracts contain 10 bags of silver dimes, quarters or half dollars, each bag with coins having a \$1000 face value and weighing 715-725 ounces of about 0.900 fine silver. Trading will involve silver coins containing 90% silver, minted in 1964 or earlier, which are no longer circulated and can now be melted down.

EISENHOWER SILVER DOLLARS:- Order blanks for proof and uncirculated specimens of the Eisenhower silver dollar will be available June 18 and the U.S. Mint will begin to accept official order blanks commencing July 1. The cupro-nickel dollars intended for general circulation will be available next fall. Order blanks for the silver dollars will be available at commercial banks, post offices, local congressional offices and each applicant is limited to 5 proof and 5 uncirculated coins. Dollars in proof condition will be \$10.00 each and uncirculated \$3.00 each. Only the first orders will be honored and all others will be returned.

FIELD TRIP:- for some 100 Las Vegas area high school students to Duval Corporation's Mineral Park copper operation at Chloride, Arizona, was sponsored by the Mackay School of Mines, University of Nevada, Reno; the Nevada Mining Association, and the Southern Nevada Section of AIME. The trip was designed to acquaint students with modern methods of open pit mining and the copper and molybdenum flotation and concentration processes. This was the first field trip of its kind offered to Las Vegas area high school students under a program originated by the Mackay School of Mines to acquaint young people with the increasing need for qualified personnel in the vital fields of mining and metallurgy.

NEVADA LEGISLATIVE REPORT

Only a few days of the 1971 Legislative Session remain and some bills are of special interest to the mining industry besides the customary adjustments in the Nevada Industrial Commission regulations and Employment Security measures. Popular concern over ecology and pollution have ranked high in consideration by the Legislature. It appears that the following bills may pass as amended:

S.B. 108 - "Provides for actions for declaratory and equitable relief for protection of air, water and other natural resources and the public trust therein." As amended, this bill requires a 30-day notice to prevent citizen action from being more disruptive than Federal law and giving an industry or operation time to correct the alleged violation or file counter action.

S.B. 275 and A.B. 811:- provide for enactment, respectively, of a "new air pollution control law" and "Nevada Water Pollution Control Law of 1971." Amendments are being considered to place enforcement of these companion measures under a State Board of Environmental Control to consist of persons chosen from heads of State agencies, as follows:

"The state board of environmental control, hereby created, shall consist of the following members: (a) The chief of the bureau of environmental health of the health division of the department of health, welfare and rehabilitation; (b) the director of the Nevada department of fish and game; (c) the state highway engineer; (d) the state forester firewarden; (e) the state engineer; (f) the director of the state department of conservation and natural resources; (g) the secretary-manager of the state planning board; (h) the executive director of the state department of agriculture. 2. The state engineer is the chairman of the board."

This is to be the board that adopts rules or code through the regular

procedures applicable under Nevada's Administrative Procedures Act which involves public hearings and possible recourse to courts. A 5-man Hearing Board is to be appointed by the Governor which is to include an engineer of qualified background and one person qualified in the field of equipment manufacture.

A.B. 502 - "Places deputy inspectors of mines in classified service; repeals numerous statutes relating to mining health and safety." Essentially, this bill is designed to eliminate code from Nevada statutes to prevent conflict with code adopted by the Mine Inspector; to match Federal law and provide means for changing code as needed through Nevada's Administrative Procedures Act. This measure together with action already taken in adopting code and in preparation of a contract with the U.S. Bureau of Mines should qualify Nevada to retain authority over mine inspection in the state. An early attempt to exempt the independent miner from coverage when he has no employees was rejected by the Bureau of Mines and the bill was amended to include all operations.

A.B. 703 - Authorizes certain rent as a deduction in computing Net Proceeds of Mines tax. As amended, this bill exempts rent paid the land or mine owner from application of Net Proceeds of Mines tax unless the property is in production. In effect, Net Proceeds of Mines Tax must arise from actual mine production and not from mine rentals when there is no production.

A.B. 542 - Defines "development work" on patented mines. Object of this bill is to require that only expenditures that tend to develop the property will be counted toward exclusion of patented claims from the assessment roll.

A.B. 621 - Provides for registration and licensing of geologists.

A.B. 766 - Extensively amends provisions governing mining claims, mill sites and tunnel sites. This bill originates from the "Exploration Geologists of Nevada" working with Senator Cliff Young and first appeared as S.B. 48; then corrected and introduced as intended - as S.B. 275. The same bill, with amendments, was introduced in the Assembly as A.B. 766, which is now in conference to reconcile certain differences. The bill would require filing of a map and payment of a fee (\$20 per claim proposed in the Senate bill; \$10 per claim proposed in the Assembly bill). The fee and map would be a substitute for the \$100 worth of location work (or the 240 cubic feet usually performed on large groups by a bulldozer). For placer claims, a fee of \$1.00 per acre would be required and is expected to discourage the voluminous filing of "mail-order" placer claims that clutter the county records. For those not familiar with mining claim procedures, the Federal law does not require any location work but does require that a discovery be shown to validate a claim. There is no provision, however, for the U.S. to test claim validity unless the land comes up for other authorized use that would conflict with mining. Thus, large numbers of claims are located as protection from other locators' infringing on an area being explored or held for potential exploration and development. The excavation on each claim located, usually with no benefit for mineral exposure, has caused widespread complaint from stockmen, ecologists, sportsmen and mining people who see this useless disturbance as a waste.

The bill admittedly has some shortcomings and only with the help promised by the exploration geologists will county maps begin to shape into usable information. But this effort could have a beneficial effect on our U.S. Congress to preserve the essence of the 1872 Mining Law which provides the essential incentive to explore by providing the right of ownership in a discovery.

A.B. 803 - Requires restoration of mining waste and tailings dumps and a performance bond. This bill was introduced on April 1 and there were some thoughts that it had to be an April Fool joke! Not so, say the Legislators! As the bill is written, it would require a performance bond for land surface restoration and would be required on all existing and new operations. The bill rests in committee.

DATES TO REMEMBER

MAY 5-7, 1971:- AIME Pacific Southwest Mineral Industry Conference at Harrah's Convention Center in downtown Reno, Nevada. For further information, contact: Arthur Baker III, Conference Publicity Chairman, Nevada Bureau of Mines, University of Nevada, Reno, Nevada 89507, telephone 702/784-6691.

JUNE 7-9, 1971:- AIME Environmental Quality Conference, Washington Hilton Hotel, Washington, D.C.

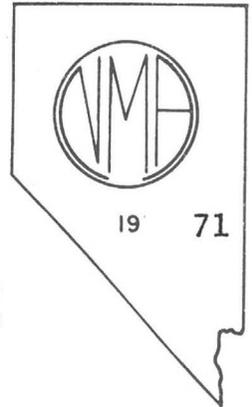
JUNE 12-25, 1971:- Third Annual Summer School on Mineral Processes: Their Analysis, Optimization and Control, jointly sponsored by the Department of Mining Engineering, Queen's University, Kingston, Ontario, Canada, and Department of Metallurgical Engineering, Colorado School of Mines, Golden, Colorado, U.S.A. For further information: Professor W. R. Bull, Department of Metallurgical Engineering, Golden, Colorado 80401.

JUNE 24-25-26, 1971:- Sixteenth Annual Convention, Wyoming Mining Association, Caspar, Wyoming. For reservations: Ramada Inn, Caspar, Wyoming 82601.

JULY 29-30-31, 1971:- Idaho Mining Association 1971 Convention at North Shore Convention Center in Coeur d'Alene, Idaho.

NEWS LETTER

NEVADA MINING ASSOCIATION
RENO, NEVADA 89505



OCTOBER 15, 1971

ROOM 602
ONE EAST FIRST STREET

POST OFFICE BOX 2498
TELEPHONE 323-8575

NUMBER 223

PAUL GEMMILL, Executive Secretary

PROPOSED LEGISLATION

"GENERAL EXPLANATION OF MINERAL DEVELOPMENT ACT OF 1971":- accompanied a copy of S. 2542, a bill introduced by Senator Bible and co-sponsored by Senators Gordon Allott and Frank Moss. Companion bill in the House, H.R. 10640, was introduced by Representatives Wayne N. Aspinall and James A. McClure. The "General Explanation" is quoted as follows:

"Enclosed is a proposed bill 'To establish a system for the development of mineral resources on public lands of the United States.' The law would be called the 'Mineral Development Act of 1971' and would provide a location-patent system for those minerals now under the Mining Law of 1872. The bill would repeal virtually all the provisions of the 1872 law and amend or repeal other later laws amending the 1872 law.

"In Chapter Seven of the Report entitled 'One third of the Nation's Land', the Public Land Law Review Commission found the public interest requires that exploration, development and production of minerals on public land be encouraged - not merely permitted - by maintaining a continuing invitation to the private sector to explore for and develop minerals on the public lands. The enclosed proposed bill does this with respect to minerals now subject to the Mining Law of 1872 and incorporates many of the recommendations contained in the Report of the Public Land Law Review Commission. Enactment of the proposed bill would simplify administration of the mining law and other public land laws, avoid abuses which are possible under the present mining laws, facilitate multiple use of public lands and accommodate the increasing use and demands for such lands.

"The 1872 mining law cannot be repealed and a new location-patent system provided for by legislation without making provision for existing unpatented mining claims. A practice of the mining industry which has been expressly sanctioned by judicial decision has been to locate mining claims and conduct exploration efforts without first making a discovery of a valuable mineral deposit. See Union Oil Co. v. Smith, 249 U.S.337,347(1919). These mining claims are recognized property rights which are transferable by deed and subject to inheritance as any other property right. Individuals and mining companies have a very large investment in unpatented mining claims, many of which have been located with the expectation that a valuable mineral deposit will be discovered after further exploration. An important consideration in proposing a repeal of the present mining law is to avoid wiping out the large investments that have been made in unpatented mining claims. When the Mineral Leasing Act was enacted in 1920, Congress provided that unpatented mining claims in existence on the effective date of the Leasing

Act on which a discovery had not been made, after the effective date of the Leasing Act, could be perfected under the mining laws, including the making of a discovery of minerals which were no longer covered by the 1872 mining law. The provisions of Title II of the bill would solve the problems of existing unpatented claims equitably and in a manner somewhat similar to that which was provided by Congress in 1920 under the Mineral Leasing Act.

"Title I of the draft of the proposed bill contains the title of the bill, states its purpose and defines terms used in the bill.

"Title II of the proposed bill provides for existing unpatented mining claims and mill sites. It provides that these claims and mill sites will become null and void unless an application for patent or a declaration of interest and a map showing their location is filed within three years from its effective date with the office to be designated by the Secretary of the Interior (local Land Office of the Bureau of Land Management). This will carry out the Public Land Review Commission's recommendation to eliminate dormant mining claims and give federal land offices a record of all mining claims. Title II further provides application for patent for the mining claims and mill sites must be made within five years from its effective date or the mining claims and mill sites will be null and void. At any time prior to the application for patent, mining claims may be perfected by the discovery of a valuable mineral deposit and mill sites may be perfected by use or occupancy for mining or processing purposes.

"Title III of the proposed bill provides for a new kind of mining claim which would be located and maintained in accordance with federal laws and regulations and not under both federal and state laws and regulations as the present law provides. This mining claim would differ from the present unpatented mining claims in the following respects:

- "1. Insofar as possible the new mining claim, which may be as large as eighty acres in size, must conform with legal subdivisions of public land and where it does not, then the Land Office must be furnished a map of the mining claim.
- "2. Location notices and other documents relating to the location of the mining claim would be filed with the Land Office of the Bureau of Land Management in addition to being recorded in the county or district recording office.
- "3. The location procedures mentioned above under items 1 and 2 would permit federal agencies and other interested parties to determine the exact position of mining claims.
- "4. The exercise of rights under a mining claim would be conditioned on the holder furnishing a bond to secure payment of damages to the surface resources and tangible improvements.
- "5. The distinction between lode and placer deposits would be eliminated and both deposits would be located by the same claim.
- "6. The new mining claim would not have extralateral rights.

- "7. The new mining claim before and after issuance of mineral patent would be subject to a reservation in the United States of a royalty of 2% of the mine value of minerals extracted but in no event would this royalty exceed 5% of the net mining income allocable to the mineral for which royalty is payable. The terms 'mine value of mineral' and 'net mining income' are both defined in the proposed bill.
- "8. Annual labor would commence at \$5.00 per acre per year and each five years would increase by \$5.00 per acre until after 15 years \$20.00 per acre must be spent each year to hold a mining claim.
- "9. The holder of a mining claim in lieu of performing annual labor could pay the United States an amount equal to the amount that must be expended for annual labor.
- "10. The present annual labor requirements would be made more stringent in other respects. For example: failure to file an affidavit of annual labor or make a payment in lieu of annual labor would cause the claim to be null and void. Material false statements in affidavits of labor or affidavits of payment in lieu of labor would cause the mining claim to be voidable by a proper proceeding instituted by the United States or by a subsequent locator.
- "11. A patent for a mining claim would be obtained (a) by proof of discovery of a valuable mineral deposit which term is defined in the proposed bill or (b) if the owner of the claim filed a plan of development with the Secretary of the Interior which the Secretary approved and thereafter equipment and facilities were acquired and installed in substantial compliance with the plan of development.
- "12. The purchase price for lands covered by a mineral patent would be increased. Under the present mining law it is \$5.00 per acre for lode claims and known lodes in placer claims and \$2.50 per acre for placer mining claims exclusive of known lodes. The proposed bill provides \$50.00 per acre for the mineral deposits in the mining claim plus the appraised fair market value of the remaining interests in the land owned by the United States.
- "13. Instead of the mineral patent granting fee title in the lands as provided by the present mining law, the proposed bill provides that the patent would state that the lands could be used only for mining, mineral exploration, development, processing or uses reasonably incident thereto, and use of the lands for other purposes without the consent of the Secretary of the Interior after notice by the Secretary to the owner of the land to discontinue the unauthorized use would result in the land under the patent reverting to the United States.

"Title IV of the proposed bill provides records with respect to unpatented mining claims which must be maintained by the Land Office of the Bureau of Land Management. For the first time the Land Office would have filed with it information concerning all unpatented mining

claims and it would be essential that the Land Office maintain public records in order that this information would be readily available to federal agencies and other interested parties.

"Title V would authorize the Secretary of the Interior to sell at the appraised fair market value to persons having an interest in mineral deposits other lands owned by the United States which were reasonably necessary for mining, processing and related operations with respect to such mineral deposits. The Secretary would be also authorized to exchange lands for these purposes for other lands of equal value or, if the value of the land was unequal, receive or pay a cash consideration for the difference. Although the United States would receive the appraised fair market value for lands sold or exchanged, provision is made in the proposed bill that patents issued under Title V for lands sold or exchanged would contain a reverter clause similar to the reverter clause to be included in mineral patents providing that the lands would revert to the United States for unauthorized use.

"Title VI would amend various laws to make their provisions conform with the philosophy of the proposed bill. The amendments would give a new definition of common varieties of certain minerals which would not be subject to location and would broaden the liability for surface damage and limit provisions of the present law permitting free use of timber on public land.

"Title VII would require that the provisions of the proposed bill be administered in conformity with the Administrative Procedure Act."

TECHNICAL DEVELOPMENTS

NEW MOLYBDENUM-RHENIUM PROCESS:- The U.S. Bureau of Mines, Reno Metallurgy Research Center, has developed an electrooxidation extraction process which could effect a substantial increase in domestic reserves of molybdenum and rhenium. The process metallurgy is simple, utilizes conventional equipment, and only salt and electric power are required for the treatment. Potential advantages of the electrolytic technique include fewer concentration steps, increased molybdenum and rhenium recovery, and elimination of SO₂ emissions to the atmosphere. The process, which is similar to oxidation procedures developed by the Bureau for treatment of gold, silver, and mercury ores, consists of grinding the ore in brine and electrolyzing the resulting ore-brine pulp to generate hypochlorite in the pulp. Molybdenum and rhenium dissolve as a result of oxidation of the molybdenite to soluble molybdate, perrhenate, and sulfate ions by the hypochlorite. The molybdenum and rhenium are then amenable to recovery and separation from solution by solvent extraction techniques. Laboratory and pilot plant tests indicate that nearly complete recovery of molybdenum and rhenium can be obtained from low-grade molybdenum-copper flotation concentrates derived from porphyry copper deposits. While the respective recovery of molybdenum and rhenium from these concentrates may be only 60 and 30 percent by conventional practice, experimental data show that 99 percent of both of these metals can be recovered from the low-grade concentrate by the electrooxidation treatment, thus affecting 85 percent recovery of both metals on an overall basis. Improved molybdenum-rhenium recovery is attributed to increased molybdenite recovery made possible by the use of rougher flotation concentrates. The ability of the electrolytic process to selectively dissolve molybdenum in the presence of copper

minerals is instrumental in rendering the use of these concentrates feasible. Molybdenum extraction directly from 0.3 percent MoS₂ ore was also shown to be feasible. Results closely parallel those obtained on low-grade concentrates containing rhenium and copper sulfides. A two-fold contribution to pollution abatement could result from the process--not only is roasting and the consequent emission of SO₂ eliminated, but the increased recovery of rhenium is significant in that the metal is finding increasing application for use as a reforming catalyst for the production of lead-free gasoline.

Inspection of the pilot plant equipment was demonstrated for this office by Dr. R. E. Lindstrom. Dr. F. E. Block is Acting Research Director of the Center.

NEVADA MINES, COMPANY REPORTS, ETC.

EAGLE-PICHER INDUSTRIES, INC:- reports for the period ending August 31, as follows:

	Quarter		9-Months	
	Ended August 31 1971	1970	Ended August 31 1971	1970
Share Earnings	\$.55	\$.50	\$1.55	\$1.75
Sales	56,559,100	55,972,197	167,699,415	174,314,233
Net Income	2,506,040	2,329,305	7,114,057	8,139,056

Fully diluted per share earnings were 53¢ in the quarter and \$1.51 in the 9 months, compared with 48¢ and \$1.69, respectively, in 1970.

William D. Atteberry, president, said, "Nine months sales and earnings continue to trail those of the same period last year due to declines encountered in the first half, but, as anticipated, sales and earnings reached a record level for the third quarter of 1971. Third quarter gains were widespread among the Company's operations and, as has been the case throughout the year, sales and earnings continue to improve. However, capital goods continue to be somewhat depressed, although in recent months we have observed increased activity, which could indicate improvement in this area. We expect to continue showing earnings gains through the fourth quarter and into next year. The economic conditions may now be more favorable and prospects for growth in sales and earnings are promising throughout our operations."

On August 3, at Bonneville Salt Flats, Utah, a battery-powered car, the Silver Eagle, designed and built by engineers at EPI's electronics division, established a land speed record of 146 miles an hour for electrically powered cars, and on July 31, on the surface of the Moon, the lunar Moon Buggy utilized a battery system developed for NASA by Eagle-Picher to propel astronauts across the lunar surface at a speed of 7 to 8 miles an hour, a record for vehicles on the Moon. In the Silver Eagle, a total of 174 rechargeable silver-zinc batteries (cells) operating at 1.2 volts per cell provided the normal electrical power. Additional cells can provide more power if desired. Silver-zinc batteries are expensive, but a small number, such as used on the "Moon Buggy", can power an automobile for several hours at expressway speeds with a weight savings. Like lead acid batteries, silver-zinc cells are rechargeable and can be plugged into a charging system operating from ordinary household current.

Eagle-Picher announced election of JEFFERSON W. HUDSON as group vice

president responsible for 3 of the company's operating divisions - Minerals, Chemicals and Fibers and Agricultural Chemicals. The company also announced appointment of MILTON STEINHEIMER as general manager of the newly formed Minerals Division which includes manufacturing plants at Clark and Colado and mining operations near Clark and Lovelock, at the Nevada locations. He is a native of Reno and resides here.

KENNECOTT COPPER CORPORATION:- in a September 29 news release, states: "Kennecott Copper Corporation will get nothing for its 49% equity interest in the expropriated El Teniente Mine," Frank R. Milliken, president, stated today. In response to the \$410-million 'excess profits' deduction from the book value of El Teniente ordered by Chilean President Allende yesterday, Milliken said: 'President Allende has somehow computed Kennecott's alleged excess profits over the last 15 years to be more than our total earnings from Chile in that period and more than the entire net worth of El Teniente.' During the 55 years the mine has been in operation, it has produced a gross income of \$3.430 billion, of which \$2.491 billion remained in Chile. Another \$430 million was expended outside Chile for imports of machinery, materials and supplies and services and \$509 million, or an average of \$9.3 million per year, was received by Kennecott. The 'excess profits' deduction would reduce Kennecott's earnings over the 55 year period to less than a 2% rate of return on investment.

"In addition to the deductions for 'excess profits', the Chilean government is also considering reducing, by \$219 million, the appraised value of El Teniente, and disallowing \$239 million spent largely in expanding El Teniente's capacity from 180,000 to 280,000 tons of copper a year. The government contends some of the expansion facilities are not now in good operating condition. All these deductions total \$868 million. Kennecott also holds \$92.9 million worth of notes representing loans made to El Teniente since 1967, when Kennecott sold a 51% interest in the property to the Chilean government. Loans by Kennecott, the Export-Import Bank of the U.S., Banca Commerciale Italiana, Mitsui & Co., Ltd., and the Chilean government financed the expansion of El Teniente's capacity. Although the loans by Kennecott and the Export-Import Bank are guaranteed by the Chilean government, the Chilean constitution, amended earlier this year, would empower President Allende unilaterally to repudiate these loans by determining that the amount involved has not been invested usefully. The \$80 million Kennecott loan is the subject of a contract of guaranty against expropriation by the Overseas Private Investment Corporation, an agency of the United States.

"It has been obvious for some time that Chile intends to evade its responsibility under established principles of international law, to make prompt, adequate and effective compensation for expropriated property," Milliken said. 'The excess profits claims are another device to achieve that purpose.'" In a later statement, Milliken said Kennecott's "determination to obtain prompt, adequate and effective compensation for its 49% interest in its El Teniente Mine remains firm," and the expropriation would be appealed to a special Chilean tribunal.

THE ANACONDA COMPANY:- announced that all of its Montana zinc operations may be closed down by mid-1972 unless contracts for purchase or tolling of concentrates can be made at a profitable level. Great Falls is the largest electrolytic zinc refinery in the U.S. with a capacity

of about 162,000 tons a year, but Anaconda has no mine production of its own as its Montana mines were closed after the 1967-68 strike and early last year its 90,000 ton-per-year Anaconda, Montana, electrolytic refinery was closed down and operations were consolidated at Great Falls. A company spokesman stated that while it is already unprofitable to operate under current purchase and toll contracts, the company faces the prospect of still higher labor, tax, power, freight, and environmental control costs next year. Anaconda says it pays the same labor rates as the copper industry - higher than most other U.S. zinc producers. If the Great Falls plant is closed down, it will drop U.S. slab zinc capacity from about 900,000 tons per year to only 740,000. In 1969, before all of the smelter closings started, the U.S. produced more than 1,045,000 tons of slab zinc.

C. JAY PARKINSON resigned as chairman of Anaconda, effective October 28, and JOHN B. M. PLACE, former Chase Manhattan Bank vice chairman who stepped in as president and chief executive officer in late May, will assume the additional title of chairman. JOHN G. HALL, former president and currently vice chairman and a director, also resigned, as did CHARLES E. SCHWAB, senior vice president and a director. Replacements for the three newly empty places on Anaconda's board have not yet been named. ROBERT B. FULTON, a vice president, who had planned to retire, has agreed to stay on to the end of the year to assist WILLIAM E. QUIGLEY, a vice chairman. Under the latest reorganization, all operating elements of the company will report to Mr. Quigley.

Chile's President Allende disclosed that Chile was deducting \$774-million in "excess profits" from compensation to be paid U.S. copper companies, which in effect was saying that Chile would pay no compensation because the net book value of the former Anaconda and Kennecott shares in the copper facilities is estimated to be somewhat less than the \$774 million. Allende is justifying his "excess profits" deductions by claiming that the companies made profits of more than 10% on book value of the copper properties since 1955 - the beginning date in Chile's nationalization legislation for determining "excess profits". Allende ordered that the Comptroller General deduct \$300-million from the amount due Anaconda for Chuquicamata and another \$64-million from the El Salvador compensation. Anaconda's Exotica mine operation was not mentioned by Allende because it is brand new and profits, excess or otherwise, have yet to be made from them. President Place charged that Allende's "accounting theory is nothing more than a thin pretext for confiscation and that Allende has now contrived to grab the world's biggest open pit copper mine, plus a second major underground mine, and not pay a dime after Anaconda has purchased and developed them at substantial risks and with a large investment in plant facilities and equipment." The U.S. government's Overseas Private Investment Corporation is apparently bound to pay the U.S. companies something for their "expropriated" properties, but how much is yet to be determined, and Allende has certainly done his best to cloud the meaning of the word "expropriation". Quigley said that his company "intends to follow any legal recourse and defend itself in every way against this arbitrary determination of indemnification by the Chilean government."

THE STANDARD SLAG COMPANY:- is starting a 2000-ton-per-day iron mining operation in Tecopa, California, known as the Beck deposit, near Beck Spring in the north-central part of the Kingston Range. It is among the larger, though more remote, of California's iron resources. Stand-

ard Slag spokesmen said the company has a contract to supply 2.5 million tons of iron ore to the Nippon Steel Corporation of Tokyo over the next 5 years. Plans are to construct a processing plant in the Kingston area and to truck ore south to Cima siding for rail shipment to the Los Angeles Harbor. The company is reported to hold leases and mining claims on large parts of a 20,000-acre area between the Nevada state line and the southern tip of Death Valley National Monument.

PHELPS DODGE CORPORATION and AMERICAN SMELTING AND REFINING COMPANY:-

A \$1.7-million plant at the El Paso, Texas, smelter of Asarco to evaluate a new process to convert sulphur dioxide in smelter gases into elemental sulphur was completed and put into operation last month. The process was laboratory tested at Asarco's Central Research Laboratories in South Plainfield, New Jersey, with both Asarco and Phelps Dodge contributing to the technology of the pilot plant and sharing costs of the joint venture. During the test, the plant will treat sulphur dioxide gases of various concentrations, ranging from 12% to 100%, higher than percentages found in stack gases. If the process is feasible, a method will have to be devised to upgrade concentrations of the smelter gases. The pilot plant is designed to produce about 20 tons of elemental sulphur per day when treating 100% sulphur dioxide and about 8.5 tons when treating 12% gas.

MAGMA COPPER COMPANY:- San Manuel Division, Arizona, (100% owned by Newmont Mining Corporation) has completed its new electrolytic refinery, part of a \$250-million expansion program of San Manuel and Superior facilities. Production will be increased by 50% at San Manuel and more than double at Superior. The new refinery, initially producing approximately 200,000 tons of copper annually, was designed and built for possible expansion to 300,000 tons annually. The expansion program, now nearing completion, includes new shafts and additional underground development work, expansion to more than double capacity of the mill and smelter, erection of a second smelter stack, construction of new homes for employes, the new electrolytic refinery and a new continuous casting rod mill at San Manuel, and sinking a new shaft nearly a mile deep to reach new ore zones in the limestone replacement beds, driving a tunnel some 9000 feet to intersect the shaft and bring ore to the surface near the mill, addition of power generating facilities, new offices and other related facilities at Superior.

GERALD METALS:- has become the first U.S.-owned company to be elected a ring dealing member of the London Metal Exchange. Although other American firms have gained LME seats, it has been through acquisition of member companies. A year ago, Germany's Metallgesellschaft became the first non-British company to gain ring dealing membership. Mitsubishi is seeking the first Japanese entry to the ring through Triland Metals, a partnership with Britain's Leigh & Silavan and America's Intramet.

GEOHERMAL RESOURCES INTERNATIONAL, INC:- Bakersfield, California, has been issued a special permit by J. R. Penny, California State Director, U.S. Bureau of Land Management, to allow drilling a test well for geothermal steam on the south shore of Mono Lake, about 5 miles east of Lee Vining, California. Penny said the permit is the first issued by BLM in connection with possible development of geothermal steam. GRI has leased several tracts in the lake bottom from the State of California and the well will be drilled diagonally from the BLM site on

shore to the state land at a point under the lake. The well will be 7100 feet long but true vertical depth will be about 5500 feet. The permit was issued by BLM for exploration only and if a commercial quantity of steam is found, the permit will have to be renegotiated or a new one issued to permit further development on BLM land. The resource could be leased at a later date, Penny said. Under terms of the permit, GRI must not cause chemical or thermal pollution and must discharge no material into the lake which may be harmful to aquatic life. No emission of contaminants into the atmosphere will be permitted, and noise levels must not exceed 60 decibels at a distance of 1000 feet from the source. The company must also post a \$10,000 performance bond.

CALAVERAS CEMENT DIVISION, THE FLINTKOTE CORPORATION:- has completed construction of a 7-inch pipeline to transport limestone slurry from the new Cataract quarry 17.5 miles northwestward to the cement plant at Kentucky House, Calaveras County, California. The pipeline uses a 30% water slurry and will carry the limestone in pulverized form and liquid suspension. The Kentucky House plant will supply cement to a 14,000-barrel bulk storage, packing and distribution plant in Union City, Alameda County, California, which is now under construction.

TENNECO, INC:- plans to open a large Tertiary-age deposit of colemanite, a hydrous calcium borate $\text{Ca}_2\text{B}_6\text{O}_{11} \cdot 5\text{H}_2\text{O}$, on patented claims near Death Valley Junction, Inyo County, California. It will constitute the only mine whose principal product is colemanite, used by fiberglass manufacturers, especially in the production of textile-grade glass fibers for reinforced plastics, fabrics, electrical insulation, and glass-belt tires. Colemanite for this purpose was imported from Turkey. The raw ore will be calcined in a plant with an annual capacity of 150,000 tons, under construction during 1970 in Nevada just north of Death Valley Junction by Stearns-Roger Engineering Company. Total investment may reach the \$8-10 million range. The pit in mid-1970 was 500 feet deep, 3000 feet long and 2500 feet wide. Ore is mined by electric shovels, crushed in the pit, and transported to the surface by a 1300 foot conveyor belt.

ROYAL APEX SILVER, INC:- announced that diamond drilling on company property recently intersected 2 feet of tetrahedrite stringers at a depth of 470-472 feet in the drill hole. Company officials feel this intercept indicates that the Silver Belt type of mineralization (silver-copper-antimony) extends further west and probably under the Carpenter Gulch fault, which is a flat dipping pre-mineral thrust fault. E. N. Pennebaker, a consulting geologist recognized as an authority on the Silver Belt, recently completed a geological report on the Royal Apex property in which he states there is a good chance the Silver Belt may continue into Royal Apex ground, having been offset by the post-mineral movement along the Osburn Fault. He said also, "High silver assays and low lead in the footwall of the Carpenter Gulch fault suggest an affinity with the Silver Belt. The presence of copper and antimony is corroborative. Therefore, there is the possibility of the extension of the Silver Belt into Royal Apex ground. The metal ratios of miscellaneous samples appear to be of the Silver Belt type. Also, the Burke-Prichard transition zone is a favorable host rock for silver-bearing base metal ores elsewhere in the district and deserve to be thoroughly tested in the Royal Apex area. To date, most of the exploration in the Burke formation has been at higher horizons in Royal Apex ground." Pennebaker's report also noted that the work done by The Bunker Hill

Company (operator of the property) to date has been well planned and executed.

ASHLAND OIL, INC:- recently completed acquisition of Union Carbide Petroleum Corporation's oil and gas interests in a transaction involving about \$88-million "plus additional future payments, including payments based upon future production from overseas properties involved," officials of both companies said. Union Carbide reiterated that the sale is consistent with the company's intention to reduce investments in operations outside its primary business area - chemicals, plastics, electronic components, metals and a wide range of consumer products. The principal properties involved include interests in leases off the coast of Louisiana, interest in two concessions off the coast of Indonesia, interests in concessions in Gabon, Ghana, Liberia, Sierra Leone, Togo, Spanish Sahara, Spain, Puerto Rico and domestic properties in the Appalachian area, the Southwest, Wyoming and Alaska.

METALS AND MINERALS

OIL IN NEVADA:- The Nevada Oil and Gas Conservation Commission reports that Eagle Springs Field Production for August 1971 was: James L. Davis (Honolulu Oil Company) 720 barrels; North American Resources Corporation 2962 barrels; Western Oil Lands, Inc. 5236 barrels; total for August 8918. Cumulative production of Eagle Springs Field 2,488,377 barrels.

Drilling permit number 152 (API No. 27-033-05211) was issued September 27, 1971 to George G. Witter, Jr., Salt Lake City, Utah, for the Jake's Wash Unit No. 1 Well, located in SW/4 SE/4 SW/4 Sec. 4, T. 14 N., R. 61 E., White Pine County, Nevada. The well is 589 feet from the south line and 1937 feet from the west line of the section. The elevation is about 6180 feet. It is proposed to drill the well to 3000 feet.

GEOTHERMAL RESOURCES:- In the year ending October 1970, 11 steam wells were completed at The Geysers, Sonoma County, California, averaging well over 100,000 pounds per hour of steam flow and added the equivalent of 80,000 kilowatts of proven capacity to the field. The 11 wells completed and the 3 holes being drilled represent a doubling of drilling effort over that of the 12 months ending September 1969. Proven steam capacity of The Geysers field was approximately 1 million pounds of steam per hour, determined by using 10 square miles as the field area, a well-spacing of 1 well per 40 acres, and an average flow rate slightly above 100,000 pounds of steam per hour.

Condensate from the turbogenerators was totally disposed of by re-injection into steam-bearing horizons of the geothermal field, utilizing non-productive steam wells for this purpose. No permanent effect had been noted on steam quality from adjacent wells and, as a matter of fact, water injection may serve as a method of secondary recovery of heat from the reservoir rocks. By December 1970, about 700 gallons of water per minute were injected into the field. Pacific Gas and Electric Company indicated that it will add generating facilities at the rate of 110,000 kw per year commencing in 1972 which means that by 1975, the generating capacity will be approximately 630,000 kw.

Geophysical exploration by the University of California, Riverside, resulted in publication of several reports describing 8 likely geothermal pools in the Salton Sea area, Imperial Valley, California. Several

more years of exploration and testing will be needed before commercial production of geothermal fluid can begin in this area. Construction of a 75,000 kw plant is underway at Cerro Prieto, Baja California, Mexico.

The October 6 Federal Register, Volume 36, Number 194, states: "Pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969 (42 USC Section 4223(2)(C), the Department of the Interior has prepared a draft environmental statement for the Geothermal Leasing Program and invites written comments within a period of 45 days after the publication of this Notice. The environmental statement considers: (1) the adoption of leasing and operating regulations for the implementation of the Geothermal Steam Act of 1970.....(2) the leasing of federally-owned geothermal resources in 3 specific areas in California..... Copies are available at the following locations: State Office, BLM, Room 3008, Federal Building, 300 Booth Street, Reno, Nevada." (Note: only Nevada location given - other locations set forth in the Federal Register)

The Federal Register, Volume 36, No. 196, October 8, states that public hearings will be held for the purpose of receiving comments, suggestions, or objections relating to the environmental impact of granting leases and the adoption of the leasing and operating regulations. Of the three hearings, one is to be held November 8, 1971 commencing at 9:30 a.m. in the Federal Building, Bankruptcy Court Room, Room 4040, 300 Booth Street, Reno, Nevada. Those interested in appearing at the hearings should contact the Director, Office of Hearings and Appeals, Department of the Interior, 4015 Wilson Boulevard, Arlington, Virginia 22203, telephone 703/557-1500, no later than November 6, 1971. Oral statements at the hearings will be limited to 10 minutes.

YTTRIA GLASS:- "A study by the United Aircraft Research Laboratories shows that glass based on the cordierite composition with beryllia and rare earth oxide additions promises improved strength and elastic properties. One of the new glasses selected for extensive processing investigations contained 30 wt.% Y_2O_3 . The new glass is readily drawn into fibers even at high rates." (Rare-Earth Information Center News, September 1, 1971)

TUNGSTEN:- Alfred C. Wu, a vice president of Wah Chang who grew up in China and lived there for a time under the Mao regime after World War II, in a speech before a New York meeting of the Metal Powder Industries Federation, said, "The West will run short of tungsten soon and will have to depend on Mainland China for supply." He said Free World supplies are being depleted; prospects of finding new ore bodies are considered slim and indicated that for these reasons, China's dominance in the tungsten market will increase. Presently, China produces about 8000 metric tons per year which accounts for 25% of world supply and makes the metal one of China's most important mineral resources. In terms of reserves, China has some 80% of the world's known tungsten deposits - about 2-million metric tons.

However, those familiar with Nevada's potential, demonstrated during World War II and during the U.S. purchase program, know that domestic producers attained production far above domestic consumption. Although consumption has increased, the same production, if re-activated, would more than supply present domestic needs. An adequate and sustained price over a few years will bring out domestic production to match con-

sumption. Nevada accounted for over 30% of U.S. production exceeding any other of the 12 producing states.

OF PROBABLE INTEREST

CORRECTION:- News Letter No. 220, Page 1, Line 5. The word "TEFLON" was used as a common word and we have been advised that TEFLON is a registered trademark of E. I. duPont de Nemours & Company for fluorocarbon resinous plastic materials in various forms. Their legal department advises that "repeated instances of this kind may lead eventually to public acceptance of TEFLON as a word of the language" which could, in turn, cause them to lose "TEFLON" as a registered trademark.

DESERT WILDERNESS PROPOSAL:- The Interior Department's Bureau of Sport Fisheries and Wildlife has proposed that 1,443,100 acres of the 1,588,000 Desert National Wildlife Range in Nevada should be designated as wilderness. A public hearing will be held in the Western Environmental Research Laboratory auditorium, U.S. Environmental Protection Agency, 944 East Harmon Avenue, Las Vegas, Nevada, on October 23, 1971, beginning at 9:00 a.m. A brochure containing a map of the preliminary boundaries and additional information concerning the proposal may be obtained from the Regional Director, Bureau of Sport Fisheries and Wildlife, Post Office Box 3737, Portland, Oregon 97208. Written statements should be sent to the above address by November 23 for inclusion in the official record.

PROPOSED WITHDRAWAL AND RESERVATION OF LANDS:- Federal Register, Vol. 36, No. 185, September 23, 1971, states: "The Bureau of Indian Affairs has filed the above application (Serial No. N-5767) for withdrawal of lands described below from all forms of appropriation, including the mining laws (30 U.S.C., ch. 2) and from leasing under the mineral leasing laws. The applicant desires the land for an addition to the Walker River Indian Reservation....Lands involved are in T. 12 N., R. 28 E.; T. 11 N., R. 29 E.; T. 12 N., R. 29 E., aggregating 2913.34 acres of surveyed land. And all unsurveyed lake bed and related lands (exposed and unexposed) adjoining the following listed surveyed sections in: T. 12 N., R. 28 E.; T. 11 N., R. 29 E.; T. 12 N., R. 29 E., aggregating approximately 18,300 acres of unsurveyed land."

in writing

Comments, suggestions or objections may be presented/within a period of 30 days to Ralph S. Dunn, Acting Chief, Division of Technical Services, Bureau of Land Management, Department of the Interior, 300 Booth Street, Reno, Nevada 89502.

SMELTER CONTROL RESEARCH ASSOCIATION, INC:- Officials from the Environmental Protection Agency, the Bureau of Mines, state environmental control agencies and advisory councils' members met at Ely, Nevada, on September 28, 1971 for a tour of SCRA-sponsored pilot plant which is testing three processes for removal of sulphur dioxide from the relatively low-concentration gases that exhaust from most smelters. The plant is located at Nevada Mines Division, Kennecott Copper Corporation near McGill, Nevada. Although more than 100 different variations of processes which might lead to recovery of sulphur dioxides from copper production have been tested in recent years, no reliable and effective process for commercial recovery has been developed. The non-profit Smelter Control Research Association, Inc. was formed in February 1971 by American Smelting and Refining Company, The Anaconda Company, Cities

Service Company, Copper Range Company, Inspiration Consolidated Copper Company, Kennecott Copper Corporation, Newmont Mining Corporation, and Phelps Dodge Corporation, the 8 major copper companies accounting for virtually all U.S. primary copper smelter production. SCRA has a broad charter to conduct research, sponsor investigations and studies and engage in pilot plant testing of processes for control of stack gas emissions at member company plants. SCRA efforts will supplement research not being done in this area by individual firms and other research organizations.

LATER - GEOTHERMAL RESOURCES INTERNATIONAL, INC:- abandoned its attempt to locate geothermal power resources beneath the bed of Mono Lake after drilling to a depth of 4100 feet. The last 300 feet were through solid granite of a type which indicated little hope of finding underground steam. The exploration had been opposed by environmental groups and the company will restore the site to its natural state. Southern California Edison Company, a private utility, and the Los Angeles Department of Water and Power were both financially involved in the project.

PERSONAL ITEMS

GEORGE L. TURCOTT:- has been appointed associate director of the Bureau of Land Management, succeeding JOHN O. CROW who was appointed deputy commissioner of the Bureau of Indian Affairs in July. Turcott has been BLM's assistant director for administration since November 1970 and prior to that, was assistant director for technical services.

DONALD P. SCHLICK:- a mining engineer, who has headed Bureau of Mines coal mine health and safety activities since last March, has been named acting deputy director of the Bureau's entire health and safety activity, replacing HENRY P. WHEELER, a petroleum engineer, who has accepted a career position as the Bureau's State liaison officer at Jackson, Mississippi.

CHARLES STEEN:- who was hospitalized in Reno after being seriously injured September 13 while watching an exploration drilling operation near Bishop, California, has been released from the hospital.

JOHN D. KERN:- has joined Basic Incorporated as assistant vice president-technology. He formerly served as patent administrator with R. T. Vanderbilt Company and prior to that, held various management posts for more than 18 years with Uniroyal, Inc. He is a chemical engineering graduate of the University of Wisconsin.

CHARLES I. WILMOT:- was named concentrator metallurgical engineer October 1 at Kennecott Copper Corporation's Nevada Mines Division near Ely, Nevada. A 1967 graduate of Michigan Technological University, he started employment with Kennecott in September 1967.

DR. JOHN E. FROST:- has been named manager of the newly-formed Minerals Department of Esso Eastern Inc. He was previously exploration manager in Humble Oil & Refining Company's Minerals Department.

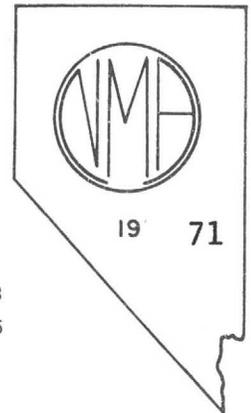
DATES TO REMEMBER

NOVEMBER 3-6, 1971:- International Mining Days, New Mexico Mining El Paso, Texas.

DECEMBER 3-4, 1971:- 77th Annual Convention, Northwest Mining Association, Davenport Hotel, Spokane, Washington.

NEWS LETTER

GJ
CKC



NEVADA MINING ASSOCIATION
RENO, NEVADA 89505

JUNE 15, 1971

ROOM 602
ONE EAST FIRST STREET

POST OFFICE BOX 2498
TELEPHONE 323-8575

NUMBER 219

PAUL GEMMILL, Executive Secretary

NEVADA MINES, COMPANY REPORTS, ETC.

THE ANACONDA COMPANY:- reports for the period ending March 31:

	<u>1971*</u>	<u>1970**</u>
Share earnings.	\$.18	\$.43
Sales and other income.	\$233,054,000	\$246,337,000
Net Income.	3,981,000	9,324,000

*Subject to year-end audit

**Restated to exclude earnings of subsidiaries having assets consisting principally of investments in Chile, except to the extent that such earnings were received in dividends from the subsidiaries.

In a report to shareholders, Chairman C. Jay Parkinson stated: "Anaconda's first-quarter copper production from its North American mines was 65,360 tons, compared with 60,225 tons in the same period in 1970. Sales agency contracts under which Anaconda for many years had sold Chilean-origin copper throughout the world were terminated early in April, as were contracts covering the domestic electrolytic refining of Chilean blister copper on a toll basis. Subsequently, arrangements were made for Anaconda to purchase 3000 tons per month of Chilean blister copper during the remainder of 1971, for refining at Anaconda's Raritan Copper Works in Perth Amboy, New Jersey. Anaconda is negotiating a proposal under which it would take a 12½% participation in a joint venture, formed by American Metal Climax, Inc., to mine bauxite and produce alumina in the Kimberley region of Western Australia..... Anaconda's share of this production, together with other alumina available to it, would be sufficient to satisfy its requirements for the initial phase of the Sebree aluminum reduction plant of Anaconda Aluminum Company, which is now under construction near Henderson, Kentucky....."

Parkinson pointed out that Anaconda's proven reserves of copper in the U.S. are sufficient to meet the company's needs for 25 years and that other properties now under development could contain enough copper to last an additional 40 years.

KENNECOTT COPPER CORPORATION:- according to President Frank R. Milliken, is considering new expenditures of \$100-million for air pollution abatement at its smelters. In addition to capital investment, smelter operating costs could increase \$30-million a year, according to Milliken, even though management and independent experts believe current air pollution standards are "not justified by considerations of public

health and welfare." Milliken said that Kennecott had spent more than \$100-million since 1945 on projects "directly or indirectly" to reduce effects on the environment. "Peabody Coal Company," he said, "has also demonstrated concern for the environment." Over the past 15 years, it has strip-mined 90,000 acres and reclaimed 100,000 acres, actually reclaiming more than it disburbed, and is now planting 4-million trees every year.

A \$4.5-million project for facilities to improve flotation copper recovery began in mid-May at the Chino Mines Division of Kennecott, according to B. B. Smith, general manager. The construction contract was awarded to Swindell-Dressler Company in the amount of \$3-million and the other \$1.5-million will be used for equipment purchase. Smith said, "This is not an expansion project for Chino, but we will be replacing our older facilities with new modern equipment to obtain better recovery of copper in milling operations."

On May 20, 1971, the government of Socialist President Salvador Allende sent supervisors to the world's largest copper mine, the El Teniente. An official announcement said the move was due to "irregularities" in production. El Teniente is owned 51% by the Chilean government and 49% by Kennecott Copper Corporation. Prior to this time, Kennecott has managed the facility with little government interference.

BASIC INCORPORATED:- Cleveland, Ohio, reports that 7.4-million tons of ore, accessible to open-pit mining, has been found at Union, Maine, as against last July estimates of 4.1-million. The new estimate shows the ore averages 0.99% nickel and 0.49% copper, with relatively low grade levels. A Basic spokesman said, "Such tonnage and grade should prove adequate to support a commercial operation provided, however, that conditions imposed by regulations being formulated pursuant to recently enacted state environmental protective legislation will not be unduly restrictive and expensive."

HUGHES TOOL COMPANY:- Global Marine, Inc. said it will build and operate a deepsea mining ship for Hughes Tool Company. The shipp will be used as a prototype for a deep ocean mining operation. The building and testing of the vessel will take about 2 years, will be about 600 feet long, displace about 35,000 tons, accommodate a crew in excess of 100, and be capable of operating in depths of more than 10,000 feet.

MID-CONTINENT MINING CORPORATION:- has expanded its exploratory operations in Nevada, according to President Roderick D. McCulloch. The company has signed an agreement with Fred Steen to explore and purchase Steen's 11 unpatented claims 16 miles west of Tonopah and 20 miles east of Silver Peak, Nevada. The silver-gold-lead claims are in Paymaster Canyon, Lone Mountain Mining District. Informal exploration agreements have been signed on properties in the National, Osceola and Winnemucca Districts of Nevada, according to McCulloch. He said Mid-Continent was basing its efforts on exploration in Nevada because of the company's approximate one-third interest in the Sixteen-to-One and Nivloc Mines near Silver Peak, Nevada, which contain large tonnages of silver ore already developed and waiting for higher silver prices to make mining operations economic.

AMERICAN SELCO INCORPORATED:- Denver, Colorado (a subsidiary of Selection Trust Limited, London, England) has entered into an option agree-

ment with Bullion Monarch Company of Reno, Nevada, on an Elko County mining property on the Roberts Mountain Thrust structure. The property is in the general vicinity of the Carlin Gold Mine. American Selco will have to spend a minimum of \$3-million within 10 years after the option is exercised to maintain its interest in the property. Bullion Monarch and Associates will retain a 15% interest in the property. R. D. Morris, general manager and chairman of Bullion Monarch, was one of the pioneers in the Lynn Mining District which includes the Carlin Gold Mine. His operations started as M.M. & S. Exploration Company and merged with Bullion Monarch about a year ago.

THE ANACONDA COMPANY-AMERICAN SMELTING AND REFINING COMPANY:- Park City, Utah, joint venture, now 9 months old, has largely put most of its effort into exploration and development, it was reported by Clark L. Wilson, chairman of the venture committee. The venture, involving a \$6.8-million expenditure over a 24-month period, is aimed at finding new mineral zones and overhauling the entire underground system of United Park City Mines Company. The Park City Mining District is a major historic producer of lead, zinc, and silver. The joint venture has been plagued with water, bad ground conditions, etc. which have impeded exploration and development in the operation.

UNITED STATES STEEL CORPORATION:- will use iron ore briquettes from its Venezuelan direct reduction plant to make steel at two U.S. facilities - Baytown, Texas, and Philadelphia, Pennsylvania. Edwin H. Gott, Chairman of the company's Venezuelan venture, said it will have the largest direct reduction plant in the world with the capability to produce 1.1-million tons per year of briquettes containing 86-92% iron.

CONTINENTAL ORE CORPORATION:- a subsidiary of International Minerals and Chemical Corporation, Skokie, Illinois, announced plans to build a \$15-million hydrofluoric acid plant near Matamoros, Mexico, opposite Brownsville, Texas. Continental Ore currently produces about 250,000 tons of fluorspar annually, the raw material for hydrofluoric, in its Mexican mining operations. The new plant, scheduled for completion in spring 1973, will have an annual capacity of 77,000 tons of hydrofluoric acid, used in making fluorocarbon refrigerants and propellants, and in the production of aluminum. Fluorspar has been in short supply during the last 2 years due to rapidly expanding demand in this country. More than half of the imported fluorspar used by U.S. producers of hydrofluoric comes from Mexico. To encourage hydrofluoric production, Mexico imposes a duty on fluorspar imports into the U.S., but lets hydrofluoric go across the border duty-free. A ton of fluorspar sells for \$70 to \$75 while a ton of hydrofluoric sells for \$400 to \$560 which not only boosts the value of the export, but creates jobs through its manufacture at the same time.

BETHLEHEM STEEL CORPORATION:- will sell its Chilean iron mines to the government of Chile which is reportedly paying about \$30-million for the mines over a period of 17 years with interest on the outstanding balance at 5.5% and the first installment to be paid in July 1973. It is an outgrowth of Chile's present policy of nationalizing all mineral resources, large industries and private banks. Iron is Chile's largest export after copper and the Bethlehem subsidiary is the second-largest private iron company in Chile.

SIERRA SILVER MINING COMPANY:- reports, "Sierra Silver Mining Company,

a Nevada based exploration company, has announced that it has suspended negotiations with a major mining company for the exploration of its British Columbia property, 100%-owned by its B.C. subsidiary, Sierra Empire Mines Ltd., and will go it alone for another season. A Vancouver securities firm will underwrite the cost of the program estimated at \$150,000. Sierra Silver's annual report states that a preliminary drilling program has indicated up to 15-million tons of 0.5% copper in one place and a possible, large tonnage, low-grade silver-lead-zinc find at another location on the same property. Exploration and mining is continuing at Sierra's Cadgie Taylor property in Philipsburg, Montana."

MAGMA COPPER COMPANY:- has selected Western Knapp Engineering Division of Arthur G. McKee as prime contractor for the engineering and design of the first copper flash smelter in North America at its San Manuel Division in Arizona. The flash smelter will implement the first major step in the company's emission control program approved by the Arizona Air Pollution Hearing Board in March. McKee will be assisted by the Finnish firm Outokumpu Oy of Helsinki, which first developed and has used the flash smelting method since 1949. In effect, the process combines roasting and melting in one quick and simple operation. Finely ground copper concentrates are blown into the top of a high shaft together with a mixture of hot air at about 932°F and fuel. Combustion of the fuel, along with the exothermic roasting reaction (oxidation of the sulphide ores) results in a rapid rise in temperatures causing the particles to smelt as they fall in the shaft and reach bottom as matte and slag. The matte grade is high, about 55%, which means considerable less time is required for processing the matte in converters. However, converting does take place in the traditional way and final blowing is in the anode furnaces. Slag grade is also higher than that from a reverberatory and at San Manuel, furnace and converter slags will be cooled, crushed and cycled through flotation to recover the copper values. Thus, all future process residues will be in the tailings and the slag dump will no longer be used. Chief advantages of flash smelting are considerable fuel savings, production of a richer sulphur gas ideal for conversion to sulphuric acid, a possible higher degree of automation and less time needed in converting.

DUVAL SIERRITA CORPORATION:- copper mine south of Tucson went into production early last year and is now operating at its rated capacity of 72,000 tons of ore per day. An expansion program, designed to bring production to 84,000 tons per day, is well under way.

METALS AND MINERALS

OIL IN NEVADA:- The Nevada Oil and Gas Conservation Commission reports Eagle Springs (Nye County) Field production as: 10,453 barrels during April 1971, and 2,451,376 barrels total cumulative production.

The Commission also released the following statement: "Drilling permit number 151 (API No. 27023-05218) was issued May 20, 1971 to the Tenneco Oil Company, Denver, Colorado, for the USA-Shingle Pass No. 1 Well, located in center SE/4 NW/4 Sec. 4, T. 8 N., R. 61 E., Nye County, Nevada. The well is 1958 feet from the North line and 1968 feet from the West line of the section. The elevation is 5301 feet. It is proposed to drill the well to 5500 feet."

LITHIUM:- Foote Mineral Company has raised its prices on selected lithium products to meet rising fuel, labor, and reagent costs, the company stated. The July 1 move increases Foote's metal prices by 6%, or 50¢ a pound, to \$8.68 on standard grade and \$9.68 on reactor grade. The company is also raising prices on certain lithium chemicals, including 2¢ increase on lithium carbonate (to 54¢), which is increasingly being used by aluminum makers to improve potline efficiency. Lithium and other mineral products account for some 18% of Foote's overall sales and about 10% of the company's profits. The firm has been steadily increasing the lithium carbonate production at its relatively new Silver Peak (Esmeralda County, Nevada) brine operation, and has been processing spodumene ores at Kings Mountain, North Carolina, at capacity.

SILVER:- The price of silver continues "sluggish" and is presently quoted at \$1.633 per ounce. A number of silver investors have brought suit against Engelhard Industries, the Silver Users Association and certain of their officials for remarks made at the May 20 silver and gold forum sponsored by the American Metal Market. The suit was in response to comments made at the forum by Engelhard Industries president Richard C. Glogau, which discounted the importance of the deficit between silver production and consumption, and by Silver Users Association executive director Walter L. Frankland, who also spoke bearishly at the AMM forum. Although silver did go down on the day of the meeting and has performed sluggishly ever since, few traders are blaming Glogau or Frankland as silver has been sloppy of late anyway and the whole meeting was filled with depressing news.

Silver coin trading was started on the new West Coast Exchange on May 17, following the lead set by the New York Mercantile Exchange, which commenced coin futures on April 1. The Los Angeles-based exchange offers "half-size" contracts, with a \$5000 face value, consisting of 5 bags of dimes, quarters, or half dollars minted before 1965.

Mexico, which has blamed the slumping silver market on speculators who dominate the commodity exchanges, has invited representatives from Canada, Peru, Australia, the U.S., and India to a meeting later this month to examine prospects for setting up a world producer silver price. It has been reported that U.S. participation will be limited to government observers. Mexico produces more than 40-million troy ounces of silver per year, most of which is as "prime" product. Canada is a larger producer, but there, as almost everywhere else, production is mostly byproduct output from base metal mining. While the upcoming meeting is preliminary and no attempt to set up a producer price in the future is expected, the possibility of a producer price somewhere down the line has stirred considerable conversation.

GOLD:- On June 9, London gold prices fell below \$40 a troy ounce for the first time since May 11 and gold is presently selling for \$39.49. Although trading and investing in gold per se has been denied to U.S. citizens since the Gold Reserve Act of 1934, they are stepping up the pressure to seek ways to buy gold, which include proposed legislation to revitalize the U.S. gold industry and to legalize bullion investment, as well as plans being formulated by major commodity exchanges to offer gold trading. California Congressmen Harold T. Johnson and Don H. Clausen maintain that U.S. output of gold falls far short of the nation's strategic needs, much less its normal industrial and consumer requirements. Domestic production totaled some 1.6-million troy ounces

in 1969 while gold use hit about 7-million, of which nearly 40% or 2.7-million ounces went to space and defense. The U.S. Bureau of Mines estimated U.S. known reserves at about 400-million ounces, but startup costs for new mines can be prohibitive.

Earlier legislation to permit U.S. citizens to hold gold bullion was introduced by Illinois Representative Philipp M. Crane who claims that interest among Americans has been substantial and that individuals should have the right to hold their wealth in tangible commodities as currency values continue to decline. Presently, Americans can hold gold only in the form of jewelry or coinage. The United Kingdom lifted restrictions on British citizens holding gold on April 1. Meanwhile, the West Coast Commodity Exchange is ready for any change in the federal rules as it has prepared complete contract specifications for trading in gold bullion as a futures contract if the current restrictions are lifted by Rep. Crane's legislation. Specifications of the contract, should it be permitted, call for trading units of 400 troy ounces in a bar of at least 99.95% pure gold. Delivery months would be in January, March, May, July, September, and December.

A strong demand for British gold sovereigns is reported by dealers. Frederick S. Bogart, manager of Republic National Bank's gold department, told a group at the recent American Metal Market silver and gold forum that these coins, which contain about $\frac{1}{4}$ ounce of gold and are worth £1 (\$2.40) face value, have risen sharply in price to about \$13 a piece.

COPPER:- Simon D. Strauss, executive vice president of American Smelting and Refining Company, told the Financial Analysts Federation at Cleveland, "If the geographical concentration of copper production becomes more diverse, the price should be less volatile." He said it is the dependence of Western European copper consumers on the CIPEC (Congo, Chile, Peru and Zambia) countries for supplies that has "accentuated the volatile fluctuations in the price of copper" in recent years. The flow of copper from CIPEC countries to Free World consumers has been well maintained, Strauss noted, "but this fails to quiet the fears of uneasy consumers who do not know what to expect next." The Asarco executive sees this situation changing however. Strauss said, "There is no shortage of known copper reserves," but it is of "considerable significance that much of the new tonnage is being developed outside the CIPEC area. Capital is, in fact, showing considerable reluctance to invest in new CIPEC projects. Five or 10 years hence, the relative importance of the CIPEC countries seems likely to be less than it is today." He noted that the U.S. and Canada will maintain their production rank in the world while production from "other countries" may show proportionately the greatest increase. Substantial new production is expected from the South Pacific basin (Indonesia, the Philippines, and Bougainville) while Australia is increasing its production by at least 50% within the next 2 years.

During a recent meeting of CIPEC mining ministers, it has been reported, other copper-exporting countries in the world were invited to join the group. Also, CIPEC issued its usual call for "price stabilization". Meanwhile, increased outputs were announced - Congo by 5%; Zambia by 4.5%, and both Chile and Peru talked about 12% increases. This would amount to 91,000 tons per year for Chile; 27,000 tons per year for Peru; and 36,000 tons per year for Zambia, and 18,000 tons per year for

the Congo.

LEAD AND ZINC:- Both lead and zinc stockpile bills were reported out of Senator Howard Cannon's (Nevada) stockpile subcommittee during May and were among 28 items passed on by that subcommittee. Some lead and zinc observers were surprised at the inclusion of lead and zinc because as recently as April, the committee voted to defer action on these two metals. The bills now face a full committee and only if passed there, will be presented to the Senate. Also, they have to go to the House. If Congress should give GSA authorization to release any of the metal, it probably will not be offered for sale until the market is capable of absorbing it. In all, 498,000 tons of lead and 515,000 tons of zinc are involved.

Representatives Wayne Aspinall (Colorado) and James McClure (Idaho) have introduced a flexible tariff bill on lead and zinc which would aid zinc smelters reliant on imported ores.

MERCURY:- is currently being quoted at \$265-270 per 76-pound flask. The U.S. Bureau of Mines states, "Domestic mine production in the first quarter of 1971 was 4480 flasks, down 20% from the preceding quarter. Eleven mines producing over 100 flasks each during the quarter accounted for 87% of the production. The three top producers were the New Idria and Mt. Jackson mines in California, and the Ruja mine in Nevada. Several mines became inactive, including the Buena Vista mine. Secondary mercury totaled 4058 flasks, which included 2700 flasks released from GSA, reducing their stock to about 10,800 flasks. GSA did not resume offerings for commercial sale during the quarter.....Consumption was 12,720 flasks, about the same as the previous quarter, but down substantially from the 19,555 flasks recorded for the first quarter of 1970. Increases were noted in agriculture, catalysts, electrical apparatus, general laboratory use, industrial and control instruments, and mildew proofing for paint. Use in electrolytic preparation of chlorine and caustic soda declined to under 3000 flasks. No mercury was consumed for amalgamation of pulp and paper.....The March 31 issue of the Federal Register contained a list, published pursuant to the Clean Air Act of 1970, in which mercury was designated one of the hazardous air pollutants."

ANTIMONY:- oxide price dropped on May 17 from 91¢ to 84¢ per pound. The reduction was initiated by M&T Chemicals, and Harshaw and NL Industries followed. The oxide price drop follows by 2 weeks an 11¢ per pound reduction in NL Industries' price of antimony metal to 68¢ per pound. Metals Weeks reports that the Chinese have been offering antimony ore for \$9 per metric ton unit which is about \$1 below current market quotes. In addition, it has been rumored that the Chinese made oxide sales at about 60¢ per pound f.o.b. China.

India has reportedly decided to build a second antimony smelter. The state-owned project would come onstream by 1974, with production tentatively set at 1500 metric tons per year. The ore would have to be imported.

TUNGSTEN:- Demand continues weak and prices quoted in the London Metal Bulletin were £23.50-24.50 per metric ton unit (\$51.56-53.34 per short ton unit). General Services Administration did not receive any bids for its monthly export tender held on May 13th. GSA still has some

5.25-million pounds left in stockpile. There was little news from the Canton Trade Fair which opened on April 15 - which has been credited with a "wait and see" attitude in purchasing tungsten.

PERSONAL ITEMS

HENRY S. CURTIS:- is retiring on July 19 as plant manager (since 1956), Kerr McGee Chemical Corp. (Formerly American Potash & Chemical Corporation) at Henderson, Nevada. A graduate of Ohio State University, Mr. Curtis has had 35 years experience in the chemical industry, progressively with Westvaco Chlorine Products Salt Division; chief of chemical operations manufacturing plants of the U.S. Army, Huntsville, Alabama; manager, Plastics Plant Division of Glenn L. Marlin Company; Monsanto Diamond Manufacturing Division. He will be available as a consultant and his address is 523 Avenue M, Boulder City, Nevada 89005.

NOLAN F. KEIL:- Nevada state director of the Bureau of Land Management, has been awarded the Distinguished Service Award, the highest honor in the Department of the Interior. Keil, an authority on efficient multiple-use management of the public lands, received the award for his record of 25 years of superior service and achievements in the BLM.

WAYNE T. BARRETT:- president of Foote Mineral Company, was named chief executive of this producer of ferro alloys, minerals and chemicals, succeeding L. G. BLISS, chairman, who is retiring after 36 years service with Foote. Mr. Bliss will retain the position of chairman and will serve as a consultant to the company. Mr. Barrett's appointment is effective July 1.

CHARLES F. BARBER:- has been elected chairman of the board and chief executive officer of American Smelting and Refining Company, succeeding EDWARD McL. TITTMAN who has retired both as an officer and director of AS&R after 42 years with the company. RALPH L. HENNEBACH was elected president succeeding Barber.

BOYD L. RASMUSSEN:- Director of Department of Interior's Bureau of Land Management since 1966, has been named an assistant to Interior Secretary Rogers C. B. Morton. Morton said Rasmussen would be one of his principal advisors on land use matters and his duties will include advising on Departmental program direction and coordination of new national programs including legislative proposals for land use policies, reorganizations, and modernization of public land laws.

CHARLES E. SCHWAB:- was elected a senior vice president of The Anaconda Company and ARCHIE J. McDONNELL and GEORGE W. WUNDER were elected vice presidents.

OBITUARIES

HERMAN D. BUDELMAN:- mining engineer and former Nevada state senator, died at age 85 at his home at St. Helena, California, on June 2, 1971. He moved to Tonopah in 1912 where he became associated with West End Consolidated Mining Company, an association which he continued for 54 years. He was general superintendent and vice president at the time of his retirement. During his mining career, he was a surveyor, geologist, mine superintendent, mine manager and consulting engineer. He graduated from the University of California in 1908 and all of his life was

spent in the West with the exception of the years 1909 to 1911 when he was assistant superintendent of Pato Mines, Ltd. in Colombia, South America.

MILTON A. PEARL:- special counsel for the House Interior Committee and former Public Land Law Review Commission director, died on April 30, 1971. Pearl served as a consultant on public lands and mining to the House Committee from 1961 until 1965, when he was appointed staff director of PLLRC. After completion of the commission's report, he returned to the House Committee last December.

OF PROBABLE INTEREST

CHINA TRADE:- The President's list of items which may now be freely exported to China contained many metals and metals products. Metals included iron and steel, lead, zinc, tin, tungsten, chrome, manganese, titanium, and ferroalloys. Aluminum scrap was also included. Chinese imports to the U.S. will carry normal communist duties.

U.S. SENATE BILL 635:- a bill to amend the Mining and Minerals Policy Act of 1970, proposes to establish a minerals research and training center in each state. With reference to S.635, a letter, dated April 23, 1971, addressed to Senator Gordon L. Allott, member of the Senate Subcommittee on Minerals, Materials and Fuels, by Dr. Vernon E. Scheid, Dean of the Mackay School of Mines, University of Nevada, is quoted as follows:

"A moments reflection is sufficient to convince a person that there are but two basic and fundamental industries and that all other human economic activity depends upon the satisfactory operation of: (1) the industry involved with living resources; that is agriculture (including forestry, fishing, etc.) and (2) the industry involved with non-living resources; that is the mineral industry. Without either of these industries; which compose the first level of human economic activity; the world, as we know it, ceases to exist and man becomes a wandering animal. Thus, it is folly to debate which is more important; agriculture or mineral industry. Other levels of human economic activity are important to the life of our nation but they cannot exist without the first level!

"Some hundred years ago, Congress recognized that a healthy agricultural industry was necessary to our nation's well-being and by means of the Morrill and other Acts created agricultural research and training institutes throughout America. The results are world famous. Regrettably, research and training institutes for the non-living (earth and mineral) resources were not established at that time. Thus, America, although well-supplied by nature with mineral materials, has paid a heavy price through lack of research and training. The nation that does not consider the economic condition of each of its two basic industries may soon lose its right of free choice in guiding its own future in the world!

"The time has come for America to think about its earth and mineral (non-living) resources. The education and research necessary for these resources to be properly extracted and used must be supported and encouraged. Then, and only then, will America know that both of its basic and fundamental industries will be healthy and will contribute

to our Nation's safety and well-being.

"As Dean of one of America's few remaining mineral industry colleges and as Director of one of our most active state bureau of mines, I sincerely urge you to support the passage of S.635; which calls for the establishment of mineral resources research and training institutes throughout America."

DIESEL ENGINES:- Mine operators who use diesel engines underground have been warned by the U.S. Bureau of Mines that interruptions in mine ventilation could result in high levels of carbon monoxide in the diesel exhaust. Bureau scientists have found that when diesels "re breathe" part of their own exhaust, they produce dangerous quantities of CO. Ways of dealing with the problem are now being studied by the Bureau. One approach involves research on an oxygen meter that would automatically shut down a diesel running on oxygen-depleted air. The need for new safety regulations also is being considered. Mine operators and others interested in more information on this problem should contact the Assistant Director, Metal and Nonmetal Mine Health and Safety, Bureau of Mines, Washington, D.C. 20240.

S. 1843:- providing for a 5% severance tax on the severance of minerals from a mineral property located in the U.S. or continental shelf area, has been introduced by Senator Lee Metcalf (Montana). The bill would also impose a duty on minerals imported into the U.S. equal to the amount of severance tax that would have been imposed if the mineral imported had been extracted and processed within the U.S. at the time of importation. The tax would be imposed on the person holding the working interest in the mineral property and, in the case of minerals located in the U.S., would provide a credit for severance taxes paid to a state or political subdivision. Nevada's tax is on net proceeds, at the property tax rate for each county.

FOREST SERVICE MINING REGULATIONS:- The American Mining Congress Public Lands Committee has completed its study of the proposed Forest Service Regulations to control prospecting and exploration on national forest lands. In a letter to Forest Service Chief Edward P. Cliff, AMC has supported in general the proposed regulations and made several suggestions of a clarifying or modifying nature. Of particular interest was a suggestion that the conflict between the regulations and state location laws be resolved by enactment of federal legislation eliminating state location or discovery work requirements. Other comments dealt with the requirement for submission of a plan of operations, environmental impact, access, and bonding provisions. All comments received by the Forest Service prior to April 30 will be considered during the final review process. The regulations will be published in final form in the Federal Register by early July according to present Forest Service estimates.

NATIONAL PRIMARY, SECONDARY AIR QUALITY STANDARDS:- On April 30, the Environmental Protection Agency issued final regulations setting national primary and secondary ambient air quality standards for sulphur oxides, particulates, carbon monoxide, photochemical oxidants, hydrocarbons and nitrogen dioxide, with few differences between the proposed rules and those now promulgated. (Proposals mentioned in February 15, 1971 News Letter on Page 9).

WATER POLLUTION:- The House Public Works Committee began water pollution hearings on May 25 on more than 100 bills on the subject now pending before the committee. The principal bills would amend the Federal Water Pollution Control Act to provide for increased financing of waste treatment facilities and to extend and amplify federal authority in the water pollution area. In addition, the committee will consider bills with respect to dumping of material into the Great Lakes, a possible ban on certain detergents, regulating the discharge of mercury and other hazardous materials, and increased support for state pollution control efforts.

INTERIOR DEPARTMENT RULEMAKING PROCEDURE:- The Department of the Interior has announced its intention to give notice of proposed rulemaking and to invite the public to participate in rulemaking in instances not required by law. The Administrative Procedure Act excepts from these requirements matters relating to public lands. In recent years, the extent to which the Secretary of the Interior has followed rulemaking procedures in issuing rules and regulations concerning public land matters has been a matter of discretion. The Secretary has now directed offices and bureaus of the department to utilize to the fullest extent possible the public participation procedures of the Administrative Procedure Act relating to public property, loans, grants, benefits or contracts. Public hearings will be conducted, whenever practicable, by the Department's Office of Hearings and Appeals.

HEALTH AND SAFETY REGULATIONS:- Violations or hazardous underground conditions can now be reported by coal miners on a special telephone that has been installed in the Washington, D.C. headquarters of the U. S. Bureau of Mines. Under the new system, a miner calls collect, his complaint is recorded, and a top bureau official acts on the information the next working day. If worthwhile messages are received during the trial period at underground coal mines, the "hot-line" system will be expanded to include all mines and quarries in the U.S., the Bureau said.

NATIONAL ATLAS OF THE UNITED STATES OF AMERICA:- published by the U.S. Geological Survey, is designed as a research and reference publication oriented toward libraries, educational institutions, commercial companies, and governmental agencies. Selling price \$100, but single orders for 25 or more copies are sold at a 25% discount. Orders should be sent to: Washington Distribution Section, U.S. Geological Survey, 1200 South Eads Street, Arlington, Virginia 22202.

RESOURCE DEVELOPMENT AND ENVIRONMENTAL QUALITY:- According to Dr. William T. Pecora, Undersecretary of the Department of the Interior, to maintain levels of resource development and environmental quality needed to satisfy our appetite for affluence we must "trade off" values rather than "turn off" troublesome operations. In a May 15 commencement address in Texas, Dr. Pecora emphasized that "our every action involves unavoidable changes in a complex ecological system beyond complete comprehension or control" and that "man must play the game of life as a wise investor, not a gambler--one who attempts to predict and weigh risk against potential gain--in short, to make the wisest possible trade-off of values on the basis of knowledge and experience." Pecora stressed the importance of facing the future realistically. "One must admit," he said, "that the past cannot be restored, nor can we even preserve the present for future generations. If we could, there is no

guarantee that either action would provide a 'good life' as we define it for our descendants. Good life depends as much on our ability to develop resources as it does upon environmental protection." He said, "We must settle for conservation with controlled preservation rather than for whole preservation, and for a system which provides the best alternatives when no solution is a perfect one. This means management of resources to achieve the greatest good for the greatest number for the longest time....We enter this decade torn between the desire to produce the goods needed for high quality of living, and the desire to avoid the bads of environmental degradation. Somewhere between the attitudes of unconcerned development and total preservation, there must be an acceptable point of balance--which reflects the cost of environmental sacrifices, as well as operations costs, and one which permits judicious alteration of the environment when there appears to be net gain. This point of balance cannot be set by legislation. It must be located and kept in focus by continuing dialogue between those concerned primarily with supplying material needs, and those concerned with maintaining pleasant surroundings."

DATES TO REMEMBER

JUNE 24-25-26, 1971:- Sixteenth Annual Convention, Wyoming Mining Association, Caspar, Wyoming. For reservations: Ramada Inn, Caspar, Wyoming 82601.

JULY 29-30-31, 1971: Idaho Mining Association 1971 Convention at North Shore Convention Center in Coeur d'Alene, Idaho.

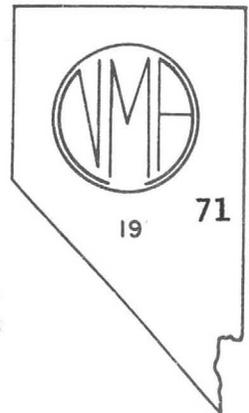
SEPTEMBER 21-24, 1971:- 1971 Fall Meeting and Exhibit sponsored by the Society of Mining Engineers of AIME, Seattle, Washington.

OCTOBER 11-14, 1971:- 1971 AMC Mining Show, Las Vegas, Nevada. Advance registration: AMC Housing Bureau, Convention Center, Post Office Box 14006, Las Vegas, Nevada 89114. (Housing) American Mining Congress, 1100 Ring Building, Washington, D.C. 20036 - \$20.00.

OCTOBER 20-23, 1971:- The International Symposium on the Transport and Handling of Minerals, Vancouver, British Columbia, Canada. Advance registration: International Symposium on the Transport and Handling of Minerals, Attention: Secretary, 1596 Esquimalt Avenue, West Vancouver, British Columbia, Canada.

NEWS LETTER

NEVADA MINING ASSOCIATION
RENO, NEVADA 89505



ROOM 602
ONE EAST FIRST STREET

MAY 15, 1971

POST OFFICE BOX 2498
TELEPHONE 323-8575

NUMBER 218

PAUL GEMMILL, Executive Secretary

NEVADA MINES, COMPANY REPORTS, ETC.

KENNECOTT COPPER COMPANY:- reports for the period ending March 31:

	1971	1970
Share earnings	\$1.02	\$1.71
Sales	261,391,752	278,962,452
Net Income	33,900,777	a56,830,597

a-Includes \$9,372,000, or 28¢ a share, in dividends from El Teniente Mining Company (Chile) in which Kennecott has a 49% interest. No dividends were received from El Teniente in the first quarter of 1971.

Kennecott reported that in addition to not receiving dividends from El Teniente, lower earnings from domestic copper operations were also a factor in the decline. The company paid a dividend of 50¢ per share in first quarter 1971, compared with 65¢ in each quarter of 1970. On March 10, 1971, Kennecott filed a registration statement with the Securities and Exchange Commission covering a proposed public offering of 30-year debentures in the principal amount of \$200,000,000. Net proceeds from the sale of the debentures will be added to the general funds of the corporation and will be available for capital expenditures and other corporate purposes. Because of lower copper prices and higher production costs, Metal Mining Division earnings were substantially less in the first quarter of 1971 than in the same period a year ago. However, demand for copper has gained some strength due to replenishing of customer inventories. There has been some hedge buying due to the uncertainty of copper supply from some foreign sources and in anticipation of a possible strike in the U.S. copper industry. These short-term demand factors were reflected in a rise in the London Metal Exchange cash wirebar quotation from a low of 46¢ a pound early in January to 57¢ at the end of March. The price of El Teniente's copper and Kennecott's copper sold abroad is based on this quotation. Kennecott's price for copper cathodes produced and sold in the U.S. was reduced on January 17 from 52¢ a pound to 49-1/8¢, but was increased on March 31 to 51-3/4¢.

Although no dividends were received from El Teniente in the first quarter, \$1,281,000 was received in interest which in accordance with prior agreements was loaned back to El Teniente.

Peabody Coal Company's first quarter earnings were higher than in the first quarter 1970 period. Higher coal prices reflected sales contract escalations and renegotiations to meet increased labor and other costs that had been reducing profit margins. The Federal Trade Com-

mission has been reviewing the hearing examiner's decision in favor of Kennecott in the contested acquisition of Peabody and late on May 11, the company's lawyers in Washington, D.C. received a 25-page type-written document signed by Charles A. Tobin, secretary of FTC, which read, in part, "As a result of its acquisition of Peabody, Kennecott removed itself as a substantial potential competitive force" in the coal industry. "Based on all the facts," it concluded, "it is found that the acquisition may substantially lessen competition in the coal industry." Although the Commission refused to comment on its decision, Kennecott decided to go ahead with its release, as they thought it necessary to make an immediate disclosure, in keeping with regulations of the Security and Exchange Commission. When the problem was explained to the New York Stock Exchange, the Big Board immediately decided to suspend trading in Kennecott stock and other markets where the stock is traded also suspended trading. Frank R. Milliken, president of Kennecott, said that "ultimately, the case may be heard by the Supreme Court." He disputed the undisclosed FTC ruling and said the Peabody acquisition was consistent "with the letter and spirit of the antitrust laws. We are hopeful that the court will rule so on appeal."

BASIC INCORPORATED:- reports for the quarter ending March 31:

	<u>1971</u>	<u>1970</u>
*Share Earnings	\$.07	\$.38
Sales	11,250,236	12,581,127
Net Income	143,709	554,610

*Based on 1,294,450 shares, average number outstanding for both quarters.

A statement issued by Basic said, "The decline in 1971 earnings contrasted with those of the previous year is attributable to a lower volume of business with correspondingly higher costs, a reduced level of activities in the electronics industry and continuing development expenses in the company's ceramic division. Basic Incorporated manufactures steelmaking refractories, chemical, electronic and technical ceramic products. Its business development activities include mineral exploration in this country and in Central America."

Basic has open pit magnesite, brucite and opaline silica mines in Gabbs, Nye County, Nevada, where it produces magnesite refractories, primarily for the steel industry, and light-burned magnesite for building material and chemical industries. Robert W. Gates, manager-magnesia products, is in charge of the operation at Gabbs.

THE ANACONDA COMPANY:- confirmed a rumor that an arrangement was made with the government-controlled Copper Corporation of Chile to buy only 3,000 tons of blister copper a month for the rest of the year. The copper reportedly would come only from the three huge Chilean mines 49%-owned by Anaconda. Until the first of April 1971, Anaconda's own sales company handled distribution of copper from the Chilean mines and the company was able to purchase as much copper as it needed for its domestic fabricating operations and sell the rest to other manufacturers. This amounted to about 100,000 tons a year, or more than 8,000 tons a month, which was refined at Anaconda's smelter in Perth Amboy, New Jersey. About 80,000 tons was used by Anaconda and the balance sold. The new arrangement will evidently apply even in the event the Chilean government takes full control of the Chilean mines.

Chile, it is rumored, is planning to sell to Communist China at least part of the copper that would have gone to Anaconda.

Production at the Chilean mines has been falling off recently and it is feared by the industry that the overall supply of copper from there will fall short of projections. The failure of the mines to meet last year's growth rate has been partly responsible for a rise in the price on foreign markets.

FOOTE MINERAL COMPANY:- experienced an increased concentration of overseas ferroalloy shipments in 1970, which partially accounted for the company's record sales. At Foote's annual meeting, president Wayne T. Barrett said, "We have also taken the steps to strengthen our position abroad through the operation of an International Division, which last year set an all-time record for export sales. At the present time, our activities are limited to international sales of goods produced by our domestic plants. However, it now appears that attractive opportunities exist for the establishment of overseas manufacturing facilities - probably with foreign partners." Foote's new International Division contributed some 10% of the company's total \$100.3-million 1970 volume - which had risen more than 6% over \$94.3-million in 1969. Higher domestic prices and first-half demand for ferroalloys resulted in a 13% increase in Foote's Metallurgical Products Division sales. The ferroalloys operation accounted for 53.5% of Foote's overall sales and 75% of its profits. The Kemco Division, which produces silicon-based alloys, sold mostly to the foundry industry, represented another 28.4% of total sales and 14% of earnings, while the company's Chemicals and Minerals Division, primarily lithium, contributed 18% to sales and 10% to income.

Three major problems affecting profits of the domestic ferroalloy industry were cited by Barrett - the mounting pressure to reduce air pollution; foreign imports, which are a threat to both ferroalloy producers and to their direct and indirect markets - steel and automobiles; and rising labor and raw material costs, particularly in chrome ore. Higher power costs and the dreaded power shutdowns at plants operating with interruptible contracts are expected to continue plaguing the industry in 1971.

Foote Mineral Company produces lithium carbonate from brines at Silver Peak, Esmeralda County, Nevada, where Page Edwards is general manager.

THE FLINTKOTE COMPANY:- reports for the quarter ended March 31:

	1971	1970
Net sales	\$73,648,853	\$63,795,788
Income (loss) before taxes	(2,258,331)	(1,147,072)
Provision for U.S. and foreign taxes	(1,327,082)	(746,133)
Net income (loss) (a)	(931,249)	(400,939)
Average common shares outstanding	5,658,700	5,653,777
Per share of common stock (b)	(\$.25)	(\$.15)

(a) Earnings for the first quarter 1971 reflect the results of the Campanella Corporation which was acquired in June 1970 on a purchase basis. Campanella is a seasonally oriented company in the heavy and highway construction business. On a pro forma basis (i.e., excluding Campanella), The Flintkote Company's unaudited net loss would be \$214,337 or 12¢ per share on sales of \$71,306,000 for the first quar-

ter of 1971.

(b) After provision for preferred stock dividends.

Shareholders at the annual meeting were told, "We are experiencing the beginning of a strong upturn in demand for Flintkote products...1971 will be a good year, but not a vintage year."

Flintkote directors elected JAMES D. MORAN president and chief executive officer, succeeding GEORGE J. PECARO who was named chairman. Flintkote said the executive change "is at the request of Mr. Pecaro and will permit his early retirement." He had been president since 1958 and acting chairman since 1964. Shareholders elected two new directors: J. L. GORDON, vice president and general manager of the Stone Products Group, and MONTE C. CARPENTER, vice president and general manager of the Building Products Group.

In Clark County, Nevada, high calcium limestone is quarried at the Apex plant at Arrolime, and dolomitic limestone is quarried at the Sloan plant at Sloan with processing plants at Sloan and Henderson; at Blue Diamond, gypsum is mined, milled and calcined to produce gypsum plaster in addition to a wallboard and lath fabricating plant. O. M. Flatberg is manager of the Sloan and Henderson operations; L. N. Grindell is manager of the Apex Plant, and Charles H. Toll is works manager of the Blue Diamond operation.

NEW IDRIA MINING AND CHEMICAL COMPANY:- a large domestic producer of quicksilver, announced it has acquired Fort Stueben Metal Products Company, Weirton, West Virginia. Fort Stueben manufactures and markets industrial and commercial shelving, houseware steel products, display store pictures and other related metal products. It also does contractual tool and die work and special steel stamping.

WHITTAKER CORPORATION:- has sold its West Coast Forge Division, Compton, California, to Titanium Metallurgical, Inc., Long Beach. The new owner produces titanium and exotic metal alloy rod and bar for a variety of commercial and aerospace fastener applications. The sale is part of a continuing divestiture program recently started by Whittaker. Included among operation for sale by Whittaker is Titanium West at Stead (near Reno), Nevada, where operations have practically ceased. Associated Metals & Minerals is reported to be among those interested in Ti-West.

PHILLIPS PETROLEUM COMPANY:- recently announced termination of negotiations with American Exploration and Mining Company (a subsidiary of Placer Development Limited) under which American Exploration would have obtained an option to purchase Phillips' 51% interest in Nevada and California mining properties. Silver King Mines, Inc. owns the remaining interest in these mining properties, a Phillips' spokesman said. A condition of the agreement was that American Exploration first be able to consummate an operating agreement with Silver King which it was unable to do, the spokesman said.

NEW PARK MINING COMPANY:- states in its 1970 annual report to shareholders: "Early in March 1971, substantial agreement was reached with Silver Star-Queens Mines, Inc., Salt Lake City, whereby New Park will continue exploration and development of a tungsten discovery near Wells, Nevada. The agreement provides that New Park can earn up to a

one-half interest in Silver Star-Queens Mines' lease.....

The Mammoth Mine, an old gold-silver-lead-copper producer, located in the Tintic District of Utah, had been under lease by New Park from December 1962 until July 1970. Prior to New Park's control, it had produced over one million tons of oxide-type ore, much of which was used as smelter flux. Previous New Park managements conducted a program of deep development in hopes of finding sulphide-type ore. During the period of this exploration, only a small quantity of oxides was discovered. In recent years, there has been no suitable market for the types of material produced by the mine. The property has remained on a shut-down basis since early 1966. By 1970, your company was faced with work requirements of considerable size to maintain the lease in good standing and markets for the ore had deteriorated even further. As previously reported, management decided to terminate the lease during the year and write off the remaining investment in the mine....."

HECLA MINING COMPANY:- (Wallace, Idaho) reports for the quarter ending March 31:

	<u>1971</u>	<u>1970</u>
Share earnings	\$.16	a\$.25
Net Income	965,112	1,528,644

a-Adjusted for 2% stock dividend in August 1970.

At a meeting followed the shareholders session, directors declared a 2% stock dividend payable August 2 to holders of record May 14. A similar dividend was paid in 1970 and, as Hecla did after declaring that dividend, it announced that it does not "intend that further dividends will be declared or paid for the remainder of the year." In 1970, the directors said the company needed to "conserve funds" needed to finance its copper mining venture with El Paso Natural Gas Company in Arizona.

W. H. LOVE, president, was elected chief executive officer, succeeding L. J. RANDALL who remains chairman. Mr. Randall told those present at the annual meeting he would reach compulsory retirement age "within the next 2 years" and "under the circumstances....felt it advisable to step down as chief executive officer." ROBERT B. FULTON (formerly of Reno, Nevada), vice president of Newmont Exploration Ltd., was elected a director.

Hecla Mining Company and Hunter Creek Mining Company announced that a supplemental agreement had recently been executed which provides that Hecla shall have the right to drive openings from its Lucky Friday Mine, Mullan, Idaho, through the westerly portion of the Hunter Creek property for the purpose of gaining access to the DIA and Abbot North properties. It is anticipated that Hecla will initially explore from the 4050-foot level of the Lucky Friday Mine. The Hunter Creek property is jointly owned by Hunter Creek and Hecla.

L. J. Randall, chairman of Hecla, and Robert B. Fulton, vice president of Newmont Exploration, Ltd., have jointly announced assignment to Newmont by Hecla of a one-half interest in Hecla's agreement involving the properties of Alice Consolidated Mines, Inc. in the Coeur d'Alene Mining District, midway between Wallace and Mullan, Idaho). Surface

geologic work and drilling in preparation for an extensive development program will be initiated during the summer of 1971.

BAKER OIL TOOLS INC:- said it agreed in principle to acquire MILCHEM INC. of Houston, Texas, in exchange for about 400,000 shares of Baker common stock. Milchem is the closely held manufacturer and marketer of drilling fluids and special chemicals for the petroleum and other industries. The company operates barite mines and a beneficiation plant in the Battle Mountain area, Lander County, Nevada.

NEW JERSEY ZINC COMPANY:- plans to close its Depue, Illinois, plant and two zinc mines. Its Elmo, Wisconsin, zinc mine would be closed in mid-May and the Gilman, Colorado, zinc mine "may be continued" but only if outlets, other than Depue, "can be found for the zinc concentrates produced there." Harold U. Zerbe, Jersey Zinc's chairman, said the company's Depue fertilizer plant would cease operations in mid-June "unless negotiations currently under way to sell the facility are successful." The company's main smelter at Palmerton, Pennsylvania, has been expanded and "arrangements are being developed which will provide additional metal from other sources." New Jersey Zinc continues to have zinc mining operations in Tennessee and four other states.

RANCHERS EXPLORATION AND DEVELOPMENT CORPORATION:- (Albuquerque, New Mexico) will start phase two at the Big Mile copper mine 30 miles south of Winnemucca, in Pershing County, Nevada. This will include leaching of some 200,000 tons of oxide ore already stockpiled and the leaching of unmined ore. Maxie L. Anderson, president of Ranchers, said a leaching operation, producing a copper precipitate for shipping, was decided upon instead of a milling process which the company had originally considered. He said about 400,000 tons of lower grade ore remain in the deposit and about 275,000 tons in stockpile.

BANNER MINING COMPANY:- states in its 1970 annual report: "1970 was the first full year of production at the Twin Buttes Mine. 8,975,192 tons of ore were processed in the mill from which 285,023,1035 tons of concentrate were produced having a copper content of 175,751,527 pounds of copper. Molybdenum concentrates containing 265,607 pounds of molybdenum were produced. Silver production totaled 1,206,310 ounces. Sales of copper as concentrates or refined copper totaled about 125,678,221 pounds with a gross sales value of \$72,279,243.85. This total includes 1969 production which was not sold until 1970. Sales of other metals were - silver \$1,352,408.23; molybdenum \$12,258.80; gold \$16,296.73, or a grand total for all metal sales of \$73,660,207.61....." Twin Buttes mine is being operated by The Anaconda Company.

The report also states: "You will recall that in 1969, the Company entered into a long term installment sale of certain mining properties in Elko County, Nevada, to Security Mining Company. This is to advise that in 1970, we received \$30,000 from Security to apply upon the purchase price....."

METALS AND MINERALS

OIL IN NEVADA:- The Nevada Oil and Gas Conservation Commission reports that total March 1971 production of Eagle Springs Field, Nye County, Nevada, was 11,790 barrels and that total cumulative production

of the Field was 2,440,923 barrels.

ZINC:- On May 10, St. Joe Minerals Corporation raised the price of zinc $\frac{1}{2}$ ¢ a pound to 16¢, St. Joe's second price boost in less than 2 months. The latest raise was attributed by industry sources to a general firming in demand, resulting from a general pickup in the economy and from heavier buying in anticipation of a steel strike. Zinc is used principally for die castings and for galvanizing steel sheet and strip. Although zinc inventories are reported to be low, stockholders of St. Joe were cautioned in an address by the president that the increase in demand would be temporary. "Strike or not," he said, "we have to expect a relatively slow third quarter in zinc." However, several zinc producers recently announced they are closing some smelters because of pressure from rising costs. Last month, New Jersey Zinc Company said it would close its Depue, Illinois, smelter by July 1; American Zinc Company, which is selling most of its assets to American Smelting and Refining Company, is phasing out two of its plants. According to industry figures, plants being closed accounted for 235,000 of total U.S. production of 970,000 tons in 1970.

GOLD:- Metals Week, May 10, 1971, states: "London gold prices broke through \$40 last week for the first time since October 1969, when on its way down, the London initial quote last hit \$40.05. The London fixing reached \$40.10 on Wednesday in the face of the most serious monetary crisis since March 1968 - which resulted in the creation of the two-tier gold market. By Thursday, the quote had climbed to \$40.30. Under the new system established by the two-tier market and finalized by the startup of Special Drawing Rights in January 1969, the free market is technically split from the \$35 rate. But despite its theoretical irrelevance to foreign exchange, the free market still reacts to monetary speculation, responding nervously, but cautiously, in the last two weeks. The growing buildup of dollars abroad, to at least some \$50-billion, and increasing speculation over a potential dollar devaluation, which would raise the official price of gold, have made gold more attractive than dollars. This, combined with improving demand, the uncertain Mid-East situation, and changes in Soviet gold sales, has resulted in a firm but steady market in the last few months, with prices in the \$38-39 range. But last Monday, European money markets were hit by the maddest rush yet to convert dollars into strong European currencies, particularly the West German mark, setting off a severe crisis that strikes at the heart of the world's monetary system. The crisis worsened as speculation by major corporations and money traders alike mounted, and \$1-billion flooded the European marts on Tuesday. Another \$1-billion was converted during one hour the following day before dollar trading was shut down in Germany, Switzerland, the Netherlands, Belgium, and Austria. Free market prices had grown firmer a week ago amid rumors of changes in Soviet selling policy, as well as the increasingly uncertain currency situation. While London final hit \$39.70 on April 30, its highest point since October, Zurich markets hit \$40 in the last week of April."

The price of gold in Europe again jumped to a new high. London dealers, in a bid to draw in sellers to meet demand, set the price on May 12 at \$40.70 per ounce, up 50¢ from May 11's final fixing and the afternoon price was lowered to \$40.25, still a gain of 25¢ on the day. Handy and Harmon in New York quoted gold at \$40.75 an ounce, also up 25¢. Senator Javits (N.Y.) declared that in the current setting, "the

sole U.S. pledge to exchange dollars presented by foreign central banks for gold is obsolete," and suggested that the Treasury might "close officially the gold window." He called for a new "World conference" that might lead to "folding in" of U.S. gold to a new international reserve currency. Senator Javits introduced a resolution calling on President Nixon to consider taking the lead for such a conference. Whatever the fate of the Javits proposal to cut off Treasury gold sales, diplomatic sources in Washington expressed concern that the statement itself is dangerous in that it could trigger a rash of gold demands from smaller nations anxious to get gold before it is too late. This, one said, could bring on the long-dreaded "gold run" among central banks that would force the Treasury to close off the gold sales with which it stabilizes the dollar's value internationally.

SILVER:- EAS Scientific of Rockville, Maryland, is exploring the feasibility of using silver to make water virus-free for mass consumption, according to the Silver Institute. Experiments, it is reported, are with systems which will maintain silver concentrates at levels effective for water purification but not toxic to human or animal life and without affecting the taste of the water. It has been reported that The Garrett Corporation of Los Angeles developed a silver ion generator for water purification on Apollo space flights. It was noted that silver is a bactericide and virucide in concentrations of less than 50 parts per billion. The Silver Producers Institute said in its first informational letter, "New silver biocides are undergoing clinical tests, while other seem about to emerge from research into the development stage." The Silver Institute newsletter also reported a "first" in silver powder metallurgy. For the first time, the newsletter stated, an electron beam has been used to prepare silver powder from solutions. Improved electrical contacts of tantalum pentoxide finely dispersed in metallic silver were said to have been developed by Russian scientists for use where high temperatures are encountered.

S.1565, which would provide for the minting of a 40% silver coin commemorating the two hundredth anniversary of American independence in 1976, was introduced by Senator Frank Church (Idaho).

MERCURY:- is currently selling from \$296-301 per 76-pound flask and the European market is reported to be \$4-5 lower than New York. Consumer demand in the U.S. is virtually nonexistent, it is reported by market observers.

ANTIMONY:- NL Industries (formerly National Lead Company) reduced its antimony metal prices another 11¢ a pound. Effective May 4, NL's new quote is 68¢ a pound for RMM (99.5%) and 69¢ for Lone Star (99.8%). Previously the company quoted 79¢ and 80¢ a pound, respectively, for the two brands. Within the past 12 months, the company has cut its metal quotes 6 times from a high last spring of \$1.76.

COPPER:- The Chilean senate approved a constitutional reform bill that will permit the government of President Salvador Allende to nationalize the copper mining industry. Under Chilean law, there will be a 60-day waiting period, after which both houses of the legislature will meet to ratify the amendment - expected to take place July 11. Members of Allende's coalition government say state control of the industry will mean greater financial resources for the administration's programs. Three U.S. companies have about \$700-million invested in

the copper industry in Chile - The Anaconda Company, Kennecott Copper Corporation, and Cerro Corporation. The bill gives Allende discretionary powers in determining what the compensation paid to each company shall be. It states the comptroller general of Chile will set the payment figure, subject to approval by the president. Under Chilean law, Allende can veto the bill after ratification by the congress. This includes what is known as an additive veto, in which he can write new provisions into the proposed law. Both the negative and additive veto would have to be sustained by a majority of the congress. Allende has promised to fairly compensate the copper companies and the bill appears to guarantee the payment of about \$220-million in notes backed by the previous government, which took over 51% control of the mines as part of its Chileanization program. If the companies do not think the compensation adequate, an appeal may be made through a 5-member tribunal especially for such cases.

PERSONAL ITEMS

THE ANACONDA COMPANY:- C. J. PARKINSON, chairman of the board of Anaconda, said he will ask the directors on May 27 to elect JOHN B. M. PLACE as president and chief executive officer. Mr. Place is presently vice chairman of the board of Chase Manhattan Bank. JOHN G. HALL, president of Anaconda, will become a vice chairman of the board. Mr. Parkinson will continue as chairman of the board and of the executive committee. WILLIAM E. QUIGLEY will also stay on as a vice chairman of the board. Mr. Parkinson said in a statement that the changes were being made to allow younger managers to guide the company through the expansion program involving "numerous major projects extending over several years....We are particularly fortunate in being able to obtain a man with Mr. Place's qualifications to spearhead our efforts in the coming years." Anaconda is under intense pressure to develop new sources of income after its three major mines in Chile are expropriated by the government of President Salvador Allende - which will cut off practically three quarters of the company's ore reserves. The company is searching out the possibilities of developing new mining properties, particularly in North America.

OBITUARIES

ARTHUR C. (BOB) HILANDER:- general manager and director of Idarado Mining Company, and general manager of Carlin Gold Mining Company and Dawn Mining Company, died on April 2, 1971 in Denver, Colorado, at age 55. He received a B.S. degree in chemistry in 1938 from Elmhurst College in Illinois and a B.S. degree in mining engineering from the University of Alaska in 1942. During World War II, he served with the U. S. Air Force for 2½ years in Europe and was discharged in 1945 with the rank of Captain. He then joined Telluride Mines, Inc., and became an employee of Idarado Mining Company when it purchased Telluride Mines in 1953. He was appointed general manager of Idarado in 1962 and elected a director in 1967. In 1965, he was also appointed as general manager of Carlin Gold Mining Company, Elko, Nevada, and in 1969 as general manager of Dawn Mining Company, Ford, Washington. He served as a director of Nevada Mining Association and Colorado Mining Association; was a member of the Mining Industrial Development Board established by Governor Love of Colorado, and a member of the Western Governors Mining Advisory Council. At the time of his death, he was a director of the Citizens State Bank of Ouray, Colorado, and also served as the mining representative on the U.S. Forest Service Advisory Council. He is survived by his wife and three daughters.

OF PROBABLE INTEREST

NEVADA ASSEMBLY BILL 766:- changing Nevada mining laws was signed into law on May 7, 1971 by Governor Mike O'Callaghan. He said, "The bill eliminates the obsolete requirement of Nevada location work which calls for either the expenditure of \$100 or the digging of a shaft 10 feet deep with a 4-foot by 6-foot mouth. It requires instead the recording of a simple map of the new claim with the county recorder and payment of a \$15 fee. The counties are called upon by the legislation to post this information to a county map showing mineral locations. The filing fee should not only restrict the activities of out-of-state locators but should more than cover the cost of development of the county master maps. I understand that one out-of-state locator filed on some 400,000 acres in one county last year. The filing fee should slow this type of location activity. I am convinced that changes in the time honored procedure of locating claims are overdue. We cannot skin and abuse our land without thought for coming generations. The unrestrained location of claims by psuedo miners and out-of-state speculators can only hinder and impede the legitimate miner...." The Governor said the bill did not affect any claim located prior to July 1, 1971 and will not divest any person of any rights under an existing validly located claim.

HEARINGS:- Senator Alan Bible (Nev) announced today that Senate Interior Committee hearings on environmental problems of power generation in the Southwest will be extended to Las Vegas. Hearings on Nevada environmental issues will be held on May 25 in the Clark County Courthouse and all interested persons (conservationists, power company officials, state and local government authorities and the public in general) are invited to participate directly or through representatives. Senator Henry M. Jackson (Wash), committee chairman, announced earlier that on-site hearings would be held in New Mexico, Utah, Arizona, and Colorado concerning existing or proposed coal-fired power plants and their contribution to air pollution and other environmental problems. Bible proposed the additional Las Vegas hearings to direct attention to the Mohave steam generating plant and other power generation facilities in Nevada. Not only air pollution but possible adverse effects of strip mining, power and pipeline construction, thermal pollution of lakes and streams and harm to other water resources will be reviewed by the Committee, Bible said.

HEARINGS, APPEALS PROCEDURES IN INTERIOR BEING MODERNIZED:- The first step in consolidating and modernizing hearings and appeals procedures in the Department of the Interior has been taken with the publication of revised regulations in the Federal Register. The new regulations consist of 7 major segments. Two of these center on the organization, functions, and general rules of procedures for the Office of Hearings and Appeals, Board of Indian Appeals, Board of Land Appeals, Board of Mines Operations Appeals, and "other appeals and hearings." Some special rules governing procedures under the Federal Coal Mine Health and Safety Act of 1969 are still being developed following earlier publication in the Federal Register for comment. The department also has plans this summer to further update and revise procedural regulations regarding public land laws. Copies of the revised procedures can be obtained from the Interior Department's Office of Hearings and Appeals, 4015 Wilson Boulevard, Arlington, Virginia 22203.

"AIR POLLUTION FROM COMBUSTION SOURCES":- by Robert H. Essenhigh, Professor of Fuel Sciences, appears in the April 1971 issue of "Earth and Mineral Sciences", an official publication of The Pennsylvania State University, College of Earth and Mineral Sciences. "Conclusions" of the article state: "Air pollution from combustion sources is a problem, and in some areas of the country, a serious one, but it has still not yet reached the uniformly catastrophic proportions that some of the self-appointed priests and policemen moralizing over the sins of industry would have us believe. However, such catastrophic proportions could well be achieved within a generation if effective uniform action is not taken very shortly. Unfortunately, what can be done is still somewhat limited as much of the needed technology is still undeveloped.

"Of the five pollutant types listed in Table 1 (transportation, stationary combustion sources, industrial processes, refuse incineration, and miscellaneous), particulates are the easiest to live with without further action, although here the removal techniques are also the most advanced; indeed, in a number of instances they depend only on payment for installation costs. The easiest to eliminate on the basis of current knowledge ought to be the combustibles (CO, hydrocarbons, and sometimes organic particulates) emanating from all sources except transportation, although extensive supplementary development research may still be necessary in some cases, particularly in incineration. Knowledge of the basis for controlling NO_x is gaining ground, although again extensive development research will probably be needed in a number of cases to apply the results. The biggest problems still seem to be: CO emissions, particularly from transportation, and SO_x emissions, particularly from power stations. Elimination of CO by catalytic after-burning outside the engine is a stopgap answer at best. The problem really stems from the nature of the reciprocating engine, which cannot really be regarded as an example of elegant engineering design. Can a better unit be produced to displace it? And will society pay the cost in view of the immense capital investment already involved in reciprocating engines? Finally, SO_x emissions still seem to be currently the most intractable. A number of promising possibilities exist, but there is still no commercial process that is simple, cheap, effective, and reliable. It is, perhaps, fortunate that the tall stack solution is available as a stopgap, as long as local ordinances are not unimaginatively rigid and as long as sufficient low-sulfur, stand-by fuel is available for periods when meteorological conditions are adverse.

"Prodded by environmentalists, the research is slowly moving toward solutions, aided by much verbal encouragement from bystanders and occasional financial assistance from appropriate funding agencies. The problem exists, of course, very largely because of too little rather than too much science, although some of the more excitable members of the community advise a return to the primitive to eliminate both science and pollution. Such suggestions, however, miss the point. Man, like all living things, generates wastes. This he must live with. It is not the waste of itself that constitutes pollution but the generation of so much waste that adversely affects the environment..... One of the most significant steps in waste control ever taken was the production of cheap steel pipe, in quantity, that enabled the separation of drinking water from sewage, and it probably did as much for the general health and reduction of mortality as medical research to

date.....Preaching and legislation are useless without the technology. If those who are so vocal in criticizing the shortcomings of science, industry, and the universities in solving "relevant" problems were to take a hand in developing the necessary technical solutions, even if it means getting their hands dirty, we should get there a good deal faster."

KNOWN GEOTHERMAL RESOURCES AREAS:- The Steamboat Springs known geothermal resources area (36 F.R. 5627, March 25, 1971), F.R. Doc. 71-4118, is corrected as follows:

- a. "T.17 N., R. 21 E., sec. 1" is changed to read
"T.17 N., R. 19 E., sec. 1"
- b. "T.18 N., R. 21 E., sec 36" is changed to read
"T.18 N., R. 19 E., sec. 36"

(Note: The original listing was carried on Page 7 of the April 15, 1971 News Letter)

DATES TO REMEMBER

JUNE 7-9, 1971:- AIME Environmental Quality Conference, Washington Hilton Hotel, Washington, D.C.

JUNE 12-25, 1971:- 3rd Annual Summer School on Mineral Processes. For further information: Professor W. R. Bull, Department of Metallurgical Engineering, Golden, Colorado 80401.

JUNE 24-25-26, 1971:- Sixteenth Annual Convention, Wyoming Mining Association, Caspar, Wyoming. For reservations: Ramada Inn, Caspar, Wyoming 82601.

JULY 29-30-31, 1971:- Idaho Mining Association 1971 Convention at North Shore Convention Center in Coeur d'Alene, Idaho.

SEPTEMBER 21-24, 1971:- 1971 Fall Meeting and Exhibit sponsored by the Society of Mining Engineers of AIME, Seattle, Washington.

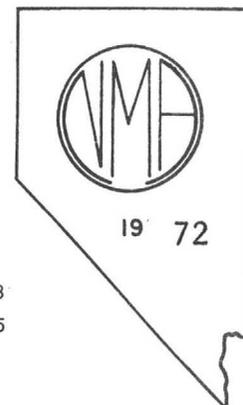
NEWS LETTER

NEVADA MINING ASSOCIATION
RENO, NEVADA 89505

FEBRUARY 15, 1972

ROOM 602
ONE EAST FIRST STREET

POST OFFICE BOX 2498
TELEPHONE 323-8575



NUMBER 227

PAUL GEMMILL, Executive Secretary

NEVADA MINING ASSOCIATION, INC. OFFICERS AND DIRECTORS - 1972:- At the Annual Meeting of Nevada Mining Association, Inc. held in Reno, Nevada, January 29, 1972, the following members were elected to serve as Directors for the ensuing term:

CARL BLAKE, Plant Manager

Titanium Metals Corporation of America, Henderson, Nevada

H. R. BURCH, General Manager

The Anaconda Company, Yerington Mines Department, Weed Heights, Nevada

WALTER E. COOKE, Operations Manager

Foote Mineral Company, Silver Peak, Nevada

D. M. DUNCAN, General Manager

Cortez Gold Mines, Cortez, Nevada

ROBERT W. GATES, Manager, Magnesia Products

Basic Incorporated, Gabbs, Nevada

J. D. McBETH, Resident Manager

Carlin Gold Mining Company, Elko, Nevada

A. E. SHIELL, Resident Manager

Duval Corporation, Battle Mountain, Nevada

CHARLES H. TOLL, Works Manager

The Flintkote Company, Building Products Group, Gypsum Products Division, Las Vegas, Nevada

W. H. WINN, General Manager

Kennecott Copper Corporation, Nevada Mines Division, McGill, Nevada

At a Special Meeting of the Board of Directors, held the same day, the following Directors were elected to serve as Officers of Nevada Mining Association, Inc. for the ensuing term:

ROBERT W. GATES, President

C. H. TOLL, First Vice President

J. D. McBETH, Second Vice President

J. C. KINNEAR, SR., Honorary President

PAUL GEMMILL was re-appointed to serve as Executive Secretary of Nevada Mining Association, Inc. for the ensuing term.

NMA Directors voted to present a \$1000-scholarship fund to the Mackay School of Mines to commemorate Governor Mike O'Callaghan's proclamation of the first week in February as NEVADA MINERAL INDUSTRY WEEK. Robert W. Gates, president of Nevada Mining Association, presented the check to Dr. Vernon E. Scheid, Dean of the Mackay School of Mines, in the Governor's office on February 4. Gates said the Association is interested "in encouraging young people to enter careers in the mineral industry. The need for qualified professional men in mining, metallurgy and related fields will continue as long as these industries exist. And the mineral industry will exist as long as there are people."

NEVADA MINES, COMPANY REPORTS, ETC.

KENNECOTT COPPER CORPORATION:- reports for the year and quarter ending December 31:

<u>YEAR ENDING DECEMBER 31</u>	<u>1971</u>	<u>1970</u>
Share earnings.	\$2.63	a\$5.58
Sales	1,053,406,835	1,133,061,369
Income.	87,218,705	185,008,588
Extraordinary charges		b34,150,000
Net income.	87,318,705	c150,858,588
<u>QUARTER ENDING DECEMBER 31:</u>		
Share earnings.34	a.79
Sales	254,188,450	256,134,423
Income.	11,169,230	26,159,818
Extraordinary charges		b34,150,000
Net income.	11,169,230	d7,990,182

a-Based on income before extraordinary charges.

b-Consists of write-down of \$22,500,000 on revaluation of assets of British Columbia Molybdenum Ltd. and \$11,650,000 loss on sale of certain coal properties.

c-Equal to \$4.55 a share.

d-Loss.

Frank R. Milliken, president, reported in a letter to stockholders that the drop in Kennecott's 1971 income was due to lower copper prices, higher production costs, the 6-week U.S. coal industry strike and the absence of dividends from the expropriated El Teniente Mining Company in Chile. He said also that Kennecott has not written down its equity interest in the Chilean property because a decision of a special tribunal in that country set up to consider payments for expropriated copper properties is not expected to make a decision before March 1972. In February 1972, Braden Copper Company, a subsidiary of Kennecott, sued Chile in a New York federal court seeking more than \$5-million claimed in losses from loans to a mining company nationalized last July by Chile. The complaint claims Chile guaranteed payment in 1967 on 111 notes Braden holds. Kennecott said the \$5.8-million semi-annual payment on the more than \$92-million lent to El Teniente Mining Corporation, a former Kennecott unit, fell due December 31, 1971.

THE ANACONDA COMPANY:- Reports for the year and the quarter ending December 31, 1971, as follows:

YEAR ENDING DECEMBER 31:

	<u>f1971</u>	<u>1970</u>
Share Earnings		a\$3.11
Sales & Revenues	\$946,327,000	977,424,000
Loss	8,752,000	b68,092,000
Extraordinary Charges	d348,520,000	e4,305,000
Net Loss	357,272,000	c63,787,000

QUARTER ENDING DECEMBER 31:

	a.05	a.71
Share Earnings		
Sales & Revenues	227,155,000	222,241,000
Income	1,103,000	15,512,000
Extraordinary Charges	d348,520,000	e4,305,000
Net Loss	347,417,000	c11,207,000

a-Based on income before extraordinary charges.

b-Income.

c-Income; equal to \$2.91 a share for the year and \$.51 a share for the quarter.

d-Primarily from the expropriation of Chilean investments.

e-Write-off of Peruvian mining investment.

f-Preliminary.

Anaconda Company absorbed the full cost of its Chilean mines expropriation in the fourth quarter with a \$302.5-million write-down plus a \$52.0-million extraordinary charge for its turn-around attempts. No tax benefits were taken - the company said "such benefits will be reflected in future years to the extent that taxable income generated in those years permits the utilization of the loss carry-forwards from 1971" which means essentially that Anaconda will not be paying U.S. income taxes for some time.

Excluded from the losses charged against earnings was a \$171.4-million insurance claim Anaconda says it has against the Overseas Private Investment Corporation, a government agency that insures against nationalization by foreign governments. However, after Anaconda filed its claim, Overseas said it does not recognize the claim as valid because Anaconda renegotiated its relationship with the Chilean government in 1969 after the insurance policy was issued. The revised arrangement nullified the policy the agency said. The issue will evidently be resolved in court.

A gain of \$7-million from the sale of a 51% interest to Mexican investors in its Cananea, Mexico, copper property reduced extraordinary charges.

Anaconda's 1971 performance was affected by lower U.S. copper prices, a 3-month strike in Montana, a 1-month walkout in its copper operations in Arizona and inability to have all its copper production smelted because of the strikes and a lack of adequate U.S. smelter capacity.

John B. M. Place, president of Anaconda, said that the write-down of the losses "in no way represents any abandonment of Anaconda's rights to full, just and prompt compensation for the Chilean properties in accordance with international law."

In addition to closure of its lead smelter at Tooele, Utah, last month, Anaconda confirmed that all zinc operations in Montana will be closed down this summer. The company said it would be forced to pay more than \$30-million if it were to comply with Montana's strict air pollution

standards.

NORANDEX INC:- CORRECTION It was erroneously reported in the January 15, 1972 New Letter that Norandex Incorporated, Exploration Division, had closed its Reno office. This office is still open, in charge of T. L. Evans, district geologist.

MAGMA COPPER COMPANY:- a subsidiary of Newmont Mining Corporation, dedicated its new electrolytic copper refinery and rod-casting plant at San Manuel, culminating a 3-year expansion and modernization program at San Manuel and Superior. The plant cost Magma \$34-million and will produce about 200,000 tons of refined copper annually from the new facility. The rod plant, employing the Southwire casting system, will produce 5/16-inch copper redraw rod. The new refinery and rod-casting plant, among the 4 largest in the U.S., makes Magma a fully integrated copper production company from mining through smelting, refining, casting, marketing, and shipping.

CYPRUS MINES CORPORATION, CONSOLIDATED GOLD FIELDS AUSTRALIA LTD., and UTAH DEVELOPMENT COMPANY (a subsidiary of Utah International Inc.): - report their Mount Goldsworthy iron ore venture in Western Australia showed a high-grade iron ore deposit with indicated and probable reserves of more than 250 million tons. Each of the companies has a one third interest in the venture. About 50,000 feet of drillings have been completed indicating an average grade of 62.8% iron and 0.059% phosphorous. The iron ore body is located about 210 miles south of Port Hedland in an area covered by existing agreement between the state of Western Australia and the Mount Goldsworthy group. The group announced it shipped 1,758,005 tons of Mount Goldsworthy ore during the quarter ended December 31, 1971, up from 1,650,005 tons a year earlier. In 1971, the group shipped 6,897,320 tons, up from 6,568,236 tons.

THE JOINT VENTURE formed by THE ANACONDA COMPANY and AMERICAN SMELTING, REFINING AND MINING COMPANY with UNITED PARK CITY MINES COMPANY:- at Park City, Utah, laid off 80 of 200 men as the result of having completed improvement and installation of certain underground facilities and the intent to concentrate on two or three exploration targets. U. S. Smelting closed its U.S. and Lark Mines and its Midvale mill which not only concentrated USSR&M's lead and zinc ores but also those of United Park City Mines Company.

IMPERIAL SMELTING CORPORATION:- a subsidiary of Rio Tinto-Zinc Corporation, closed its zinc and lead smelter at Avonmouth, England, for 2 months because of an increasing risk of lead poisoning to workers. The smelter was built in 1968 at a cost equal to \$37.7-million. It was reported that at least 100 workers at the plant were suspended from duty at one time because of high lead levels in their blood and Jack Jones, general secretary of the Transport and General Workers Union, which represents most of the workers at Avonmouth, called for a public inquiry into the situation. The plant's 1800 employes will be switched to maintenance work until pollution conditions are corrected.

METALS AND MINERALS

GOLD:- The price of gold has been on the upward move during January and February, having reached a high of \$49.25 one day in February. Speculative buying and absence of selling seem to be the factors in

advancing the price. "It's a crazy sort of market," observed one dealer in London. "Speculators are apparently figuring the price could shoot up to \$50 an ounce, and there isn't any apparent reason why it should." At the time of this remark, gold was selling for \$47.35 per ounce.

Senator Gordon Allott (Colorado) said he plans to introduce a bill which would give individuals in the U.S. the right to own gold. He said his proposal would provide individuals with a means of fighting inflation and might stimulate the gold mining activity in the West. "The government has no right to deny citizens the ability to hold gold to protect themselves against an inflation which governments start and which governments cannot cure," he said.

LEAD:- was raised last week to 14½¢ from 14¢ a pound by Asarco, followed by St. Joe, Amax, Bunker Hill and Anaconda. Canadian producers Cominco and Noranda also increased their Canadian price to 14½¢. Asarco said the increase was to enable it, a custom smelter, to compete in the world market for concentrates in light of firmer free market prices of late. In addition, the company noted discounting has been less severe recently in the U.S. market. Of concern to many lead consumers is that they cannot in turn raise their respective prices without first receiving permission from the Federal Price Commission.

ZINC:- St. Joe Minerals Corporation has taken the first official step among U.S. zinc producers in asking the Federal price commission for approval of a 5.6% increase in zinc prices. Zinc metal price was last increased on July 26, 1971 by 1¢ to 17¢ a pound, but at the time, many sources in the industry said it was not high enough to bring it in line with production and distribution costs. One industry expert commented that another price hike was needed but "achieving that increase may be a bit difficult on an industry-wide basis, because, under current government regulations, each company would have to receive individual approval, and the time lag for receiving such approval could throw the market into a mess."

OIL IN NEVADA:- The Nevada Oil and Gas Conservation Commission reports production at Eagle Springs Field for December 1971 as 8,845 barrels; total 1971 production as 112,951 barrels, and total cumulative production as 2,525,672 barrels.

PERSONAL ITEMS

EDGAR I. ROWLAND:- Colorado state director for the Department of Interior's Bureau of Land Management since 1965, was named state director for Nevada to succeed NOLAN F. KEIL who has been reassigned to Washington, D.C. as the bureau's assistant director for resources.

JOHN R. REISER:- an assistant professor of insurance at the University of Nevada, Reno, was named to head the 3-man Nevada Industrial Commission. Reiser replaces THOMAS L. HUTCHINGS whose term expired.

JACK A. JAMES:- president of Kurtz Materials Corporation, was elected a director of Copper Range Company (New York), succeeding JAMES BOYD who resigned to become executive director of the National Materials Policy Commission.

OF PROBABLE INTEREST

THE PUBLIC LANDS AND NATIONAL ENVIRONMENTAL POLICY ACT:- In a presentation on January 27-28, 1972 before the Nevada Multiple Use Advisory Board to the Bureau of Land Management, Regional Planner Kenneth F. Reinhart explained the regulations established by the Council on Environmental Quality. The instructions cover impact statements required from the involved Government Agency, such as BLM, etc., for projects and activities, including leases, permits, licenses and other activities in which Federal agencies participate in any manner. Quoting from his talk, "This would indicate that nearly all actions we take in BLM must be considered for their possible impact on the environment." Present procedure to comply with the Act is graphically illustrated on the chart which has been reproduced from Mr. Reinhart's paper and attached as the last page of this News Letter. Attention is drawn to the estimated time of 90 weeks or 1-3/4 years required to finally implement a work proposal.

The "Draft Environmental Impact Statements" as they appear in the paper follow:

- I. Description of the Proposal
 - A. Proposed Action
 - B. Purpose & Statement of the Problem
 - C. Where
 - D. When
 - E. Interrelationships
 - F. Maps, etc.
- II. Description of the Environment (without the proposal)
 - A. Physical Factors
 1. Climate
 2. Vegetation
 3. Soil
 4. Topography
 5. Geology
 6. Water
 7. Air
- III. The Environmental Impact of the Proposed Action
 - A. Natural Environment
 1. Livestock Forage
 2. Wildlife
 3. Watershed
 4. Minerals
 5. Recreation
 6. Timber
 7. Water
 8. Air
 - B. Potential for Man Caused Accidents
 - C. Potential for Natural Catastrophies
 - D. Unknown or Partially Understood Impacts
- IV. Mitigating Measures Included in the Proposed Action
- V. Any Adverse Effects which cannot be Avoided should the Proposal be Implemented
- VI. The Relationship between Local Short-term Uses of Man's Environment and the Maintenance and Enhancement of Long-term Productivity.
- VII. Any Irreversible and Irretrievable Commitments of Resources which Would be Involved in the Proposed Action Should it be Implemented.
- VIII. Alternatives.
- IX. Consultation and Coordination with Others.

PENDING WATER POLLUTION CONTROLS:- S. 2770 and H.R. 11896, bills passed by the Senate and House, have been described by one Washington lawyer as "virtually a world's fair of legislative ingenuity and legal intricacy." The legislation sets a series of goals to be achieved and deadlines to be met in order for the country to obtain pollution-free water.

Total National Costs of Successive Levels of Pollutant Removal

<u>Level of Removal</u>	<u>Total Cost</u>	<u>Cost per Incremental Percentage Point of Removal Billions</u>
85% - 90%	\$ 61.0	\$ 0.7
95% - 99%	\$119.0	\$ 6.0
100%	\$317.0	\$66.0

Estimates of the Council on Environmental Quality and the Environmental Protection Agency.

The bills set forth that by June 30, 1974, municipal sewage pollution facilities will provide the equivalent of secondary treatment. By July 1, 1974, construction grants for treatment facilities will be made on a regional, or area-wide basis, rather than on a city or town basis as in the past. By January 1, 1976, industrial sources of pollution will be required to have the best practicable control technology. By January 1, 1981, industry will cease water pollution discharges. By 1985, the discharge of all pollutants from all sources into navigable water will be eliminated.

Industry is concerned because the legislation fails to define adequately what constitutes best "practicable" control technology, opening the possibility that EPA or private parties in citizen's suits, allowed under the act, might take the position that any control technology which is "possible" or "capable of being used" (the dictionary definition of practicable) is required. Since the two bills establish a precise standard of "secondary treatment" for publicly owned plants, they argue that precise standards should be applied to industry. The citizen's suits and administrative and judicial procedure set forth in the amendments comprise the fourth major concept. Since the act will permit citizen's suits to enforce compliance, industry may find no solace in the suggestion that EPA will be reasonable in applying the act and in resisting literal compliance. (Excerpts from Barron's, January 31, 1972)

AIR POLLUTION:- Since federal controls adopted by the Environmental Protection Agency covering emissions such as sulphur dioxide (the main pollutant from copper smelters), carbon monoxide, hydrocarbons and particulates, some Western States, including Texas, Utah and Nevada, have been loosening their tougher standards to bring them closer to the federal rules. However, Arizona and Montana, the two states that have long relied most heavily on mining and smelting, have imposed shorter deadlines to meet lower levels of sulphur dioxide contamination than federal standards require - they are demanding that 90% of the sulphur dioxide be removed from all emissions before they leave the smokestack. Despite mounting pressure to change the rules, even from their own governors, the boards of health in Arizona and Montana appear to be adamant. About all the health boards are willing to do is grant the companies more time for meeting the standards. In Arizona, the rules are already in effect, but most companies have sought and received condi-

tional permits to keep operating, but must comply with the rules by the end of next year. Montana, likewise, has a procedure for issuing variances from its rules, which take effect in mid-1973.

Instead of expansions, the state regulations appear certain to force the closing of some smelters. Phelps Dodge Corporation says it will have to close the old Douglas smelter. George B. Munroe, president says, "It's clearly the wrong way. It would put the very people the law seeks to help in a condition of substantial hardship." A copper industry analyst in New York says the high cost of pollution control will force the closing of some copper mines as well as smelting operations. In Montana, he says, Anaconda Company "is sweating blood" because "it just doesn't have the money" to meet the tough pollution regulations. "The copper companies are fighting for their lives." David Swan, vice president for technology at Kennecott Copper Corporation says the company's argument against the strict rule is solely economic. "The regulatory agencies have a single mission - improving air quality. They aren't concerned if anyone loses his job, and they don't have the tools to measure these and other possibilities." Arizona's board of health agrees its emphasis is on air quality rather than economics. Elaine McFarland, chairman of the Arizona health board, says, "The industry is seriously threatened, but our entire way of life is seriously threatened, too." Arizona's health commissioner Joseph Sturtz said "If I must choose between the margin of profit on old copper installations and the health and beauty of Arizona, then I choose the health and beauty of Arizona. I know that copper contributes to the general welfare, but profit at the cost of poisoning the air we breathe is too high a price to pay." Countering this argument is the Federal air standard, established for needed protection of all persons breathing the ambient air, which standard all smelters are prepared to meet.

Arizona produces 40% of the copper consumed in the U.S. In 1970, \$1.2 billion of copper was produced by Arizona mines, 7 of the 15 copper smelters in the U.S. are in the state, and although the 7 smelters are responsible for putting a million tons of sulphur dioxide in the state's air every year, they also contribute hugely to the state's economic health. In Montana, Anaconda was planning an expansion program, but is now hinting that the strict pollution rules may force a cutback of the planned expansion. The state, floundering with a 7% unemployment rate and a stagnant tax base, could clearly use the impetus of an Anaconda expansion. An aide to Governor Forrest H. Anderson, said, "People can't live on air, mountains and trees. It takes money."

Copper companies are looking for new avenues and some producers are said to be studying the feasibility of a smelter in Mexico, just over the border from Arizona.

MINING CLAIMS:- Senator Lee Metcalf (Montana) reports that the legality of claims filed by Merle Zweifel of Shawnee, Oklahoma, on millions of acres of federal land in Montana, Nevada, Colorado and Wyoming are being challenged by the Federal Government. The Senator quoted Bureau of Land Management officials as saying Powder River County, Montana, has no known minerals subject to claims - only coal, which can be leased. Some of the Zweifel claims are over existing federal coal leases, Metcalf said.

Zweifel is charged with investigation of 16 felony counts of fraud in

Nevada, based on the fact that no one has set foot on the property claimed in more than a year. To locate a claim under Federal mining law, a substantial monument has to be erected, the corners staked out and sampling, drilling or some related activity done to prove the mineral is there.

MINERAL INDUSTRY LAND USE:- A seldom considered phase of economic land use is the amount of surface land used for a mining operation as compared to other land uses. In Nevada, this could be a very significant factor. Although, figures have not been developed in Nevada for gross output per acre for various land uses, they have been developed in Arizona and it is probable that Nevada's land use could be expected to follow the same pattern as that of Arizona. Excerpts from "Economic Importance of Mineral Industry Land Use in Arizona", by Dr. George F. Leaming, Research Specialist, Division of Economic and Business Research, University of Arizona, are quoted:

"The mineral industries use a relatively small amount of Arizona's surface land area compared to other economic activities. In 1966, the state's mineral industries occupied approximately 93,000 acres, only 0.13% of the entire area of the state. Despite the relatively small amount of land used, the industry produced mineral commodities worth almost \$622.1 million. This was equivalent to a gross annual output of approximately \$6,700 worth of minerals from each acre of ground used by the industry. By the end of the 1960's the amount of land occupied by Arizona mineral producers had increased to about 117,000 acres, and the value of the state's mineral output had risen to almost \$860-million per year, thereby increasing the yield per acre to over \$7,300. These per-acre yield figures are averages and as such are not applicable to all types of mineral industry land use. Some types of industry activity undoubtedly produce more per acre while others produce less.

"Gross output value is, of course, not the only economically significant aspect of mineral industry land use in Arizona. The land used to produce mineral commodities is also involved in the generation of jobs and personal income. In 1969, the 0.16% of the state's land area used for mineral production provided \$176-million in wages and salaries, 4.5% of the state total. This indicates an average personal income yield from the state's mining lands of \$1,500 per acre per year. This is a minimum, however, since it does not include personal income realized as rent on mining land, profits, or interest on investments in mineral industry enterprises within the state....."

The article discusses other land uses, most of which return a relatively low yield per acre on the average as compared with the mineral industry, and concludes, "Although the economic return from land utilization is not measurable for a number of activities, an analysis of comparative land use in Arizona indicates that in economic terms, mineral resource utilization is the highest use of land outside of the intensive commercial and industrial uses found in the state's urban areas. Even when some multiple use yields (e.g. grazing, recreation, and forestry), are added together, their combined yield is substantially less than the annual gross income per acre obtained from mineral industry activity."

GEOHERMAL STEAM:- The conclusion of an article titled, "Electricity from Geothermal, Nuclear, Coal Sources," by R. G. Bowen of the Oregon

Department of Geology and Mineral Industries, appearing in the November 1971 "Ore Bin", states: "The development of geothermal resources has been delayed in the U.S. for several reasons: the ready availability of low-cost fossil fuels, the general remoteness from load centers of geothermal areas, and more recently, the illusion that nuclear power plants would provide all our needed power at a low cost and with no environmental hazards. Significant, also, is the fact that until a leasing act was passed in 1970 all Federal lands, amounting to nearly half of the land in the Western States, were withdrawn from geothermal exploration."

"A major change of values within a large segment of the population has forced the electric utilities to re-evaluate their present and planned power-plant siting criteria. This re-evaluation, along with the passage of the Federal leasing law in late 1970, combined with the demonstrated success of The Geysers field, has made geothermal resources much more economically attractive. Leasing of private and state lands is now underway in many parts of the West and plans are being made for the drilling of exploratory wells. At the same time, however, stringent zoning regulations are being proposed that would effectively ban drilling and development of geothermal wells in even the very remote regions of the states. If such regulations are adopted, we will have to pay a much higher price for our electricity, both monetarily and environmentally, than if geothermal power is developed to its full potential."

The Federal Register, Vol. 36, No. 249, December 28, 1971, states: "On November 19, 1971, there appeared on Page 22078 of the Federal Register a notice of new procedures to become effective January 1, 1972, with respect to the approval of applications for permits to drill exploratory oil and gas or geothermal wells and original mining plans or major mining plan changes filed in accordance with Department of the Interior regulations applicable to Federal mineral leases on public domain and acquired lands. The effective date of the new procedures is hereby changed from January 1, 1972 to April 1, 1972."

U.S. MINERAL INDUSTRY:- faces another hurdle. The President's Council on Environmental Quality is expected to put forth a proposal for legislation that would repeal the mining provisions of the Wilderness Act as of June 30, 1972. Under the Wilderness Act, all wilderness areas are to remain open to the operation of the mining laws until December 31, 1983. CEQ is purportedly contending that the mining industry would not be upset by such a proposal inasmuch as there is very little mining activity in wilderness and primitive areas. However, this nation depends primarily on its public lands for its supply of most metals and many nonmetals and if the public lands are withdrawn from mining, we will have to depend increasingly on foreign sources for many of those minerals. If the U.S. is to maintain a strong minerals position, large areas of public domain potentially valuable for minerals should not be withdrawn.

S. Norman Kesten of Wallace, Idaho, chief geologist for American Smelting and Refining Company's Northwestern Mining Department, in a recent speech said much legislation now being proposed would have the effect of further reducing domestic mining activity, thus forcing added dependence on foreign mineral sources. "We are relying more and more on the good will and stability of other nations for many essential prod-

ucts," he said. "However, other countries are not always stable, nor do they always feel good will toward us. Kestin said it is plain more ore deposits must be found and mined in the U.S., but there is a very strong tendency among small but vocal groups to try to prevent the discovery of new deposits. 427 pieces of legislation which would adversely affect mining have been introduced at the federal level and some of the proposals are aimed at eliminating millions of acres from multiple use management - others at regulating mining to the point of destroying incentive for exploration and mineral development," he said. "Passage of many of these bills would result in a waste of mineral resources, higher prices for mineral commodities, fewer jobs, and an undue reliance on foreign sources. All of these are bad, but the latter worries me the most because any significant increase in our reliance on foreign production will cause us to lose our independence in foreign affairs and foreign trade and become, in a very real sense, a vassal country."

SILVER RECOVERY PROCESS:- The U.S. Bureau of Mines Reno Metallurgy Research Center is piloting a new process for silver recovery. The hydrometallurgical procedure is simple: Conventional equipment is utilized with only salt and sulfur required for the extraction sequence. The process was designed to extract silver from ores containing various manganese, iron and silver minerals that have resisted classical cyanidation treatment. Ore from Candelaria was used for the laboratory scale experiments. The process metallurgy involves grinding the ore in a 15 to 20 percent brine solution to form a pulp which is then treated with sulfur dioxide gas generated by burning pyrite or low grade sulfur ore. The sulfur dioxide serves to generate acid conditions in the ore-brine pulp, altering the minerals sufficiently to liberate the silver. The liberated silver reacts with the salt to form a soluble silver tetrachloride compound. Conventional liquid-solid separation techniques are used to recover the silver compound and silver is precipitated from solution by adding zinc or iron dust. Pure silver is amenable to recovery from this precipitate by standard smelting or related methods. Results of laboratory experiments indicate that approximately 85% silver recovery may be obtained from Candelaria ore used in initial experiments. Comparative tests using conventional cyanidation on this ore resulted in only 45% silver recovery. The process is non-polluting because the sulfur compounds react with gangue constituents and report to the tails.

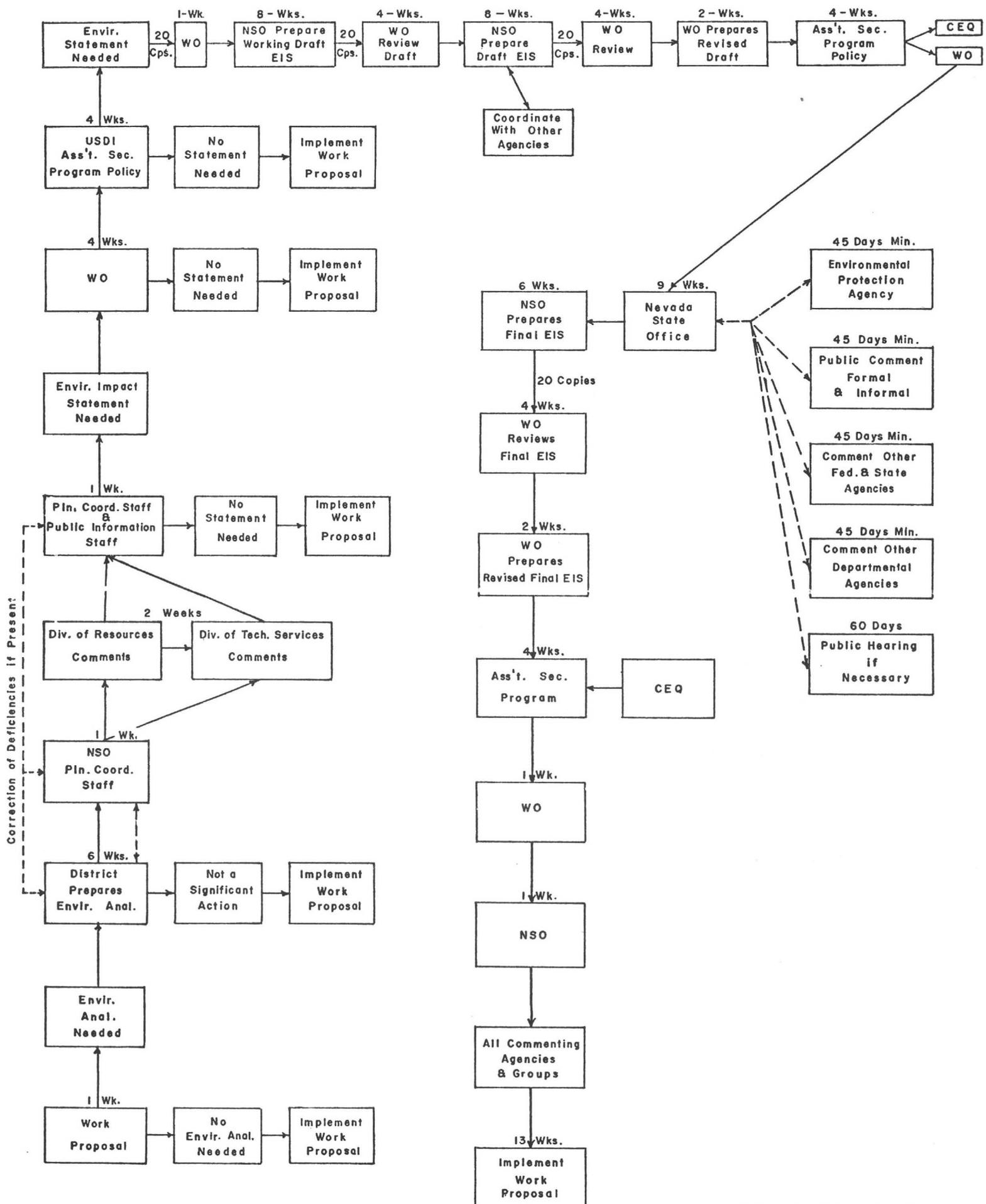
OBITUARIES

SAMUEL HATHAWAY WILLISTON:- died January 15, 1972 at age 72 after a brief illness. He joined Sun Oil Company in the 1920's as a geophysicist and pioneered the development of an oil well surveying device (Using the gyroscopic principles) which is still the foremost surveying instrument of its kind today and provided the basis for the establishment of Sperry-Sun Well Surveying Company which he headed until his retirement in 1966. After retirement, Mr. Williston, as president of the American Quicksilver Institute, devoted his time to commercial and environmental research on mercury. He will be best remembered in Nevada during the years he was vice president and general manager of Cordero Mining Company (Mcdermitt, Humboldt County), one of the foremost quicksilver producers in the U.S.

DATES TO REMEMBER:- Refer to January 15, 1972 News Letter. (NMA office Gremlin says don't be surprised if next month's News Letter is 3 pages short to accommodate a crying towel which will be enclosed.)

B.L.M.

ENVIRONMENTAL IMPACT STATEMENTS



Estimated Time Required
90 Weeks or 1 3/4 Years

NEWS LETTER

NEVADA MINING ASSOCIATION
RENO, NEVADA 89505

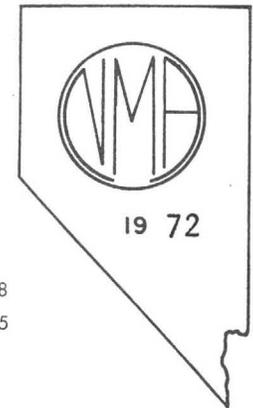
MARCH 15, 1972

ROOM 602
ONE EAST FIRST STREET

POST OFFICE BOX 2498
TELEPHONE 323-8575

NUMBER 228

PAUL GEMMILL, Executive Secretary



NEVADA MINES, COMPANY REPORTS, ETC.

KENNECOTT COPPER CORPORATION:- will build a loading station at a cost of approximately \$500,000 to classify 3-million tons of recycled and classified copper mill tailings and deliver the coarser material to the Utah State Road Commission for use in a section of interstate freeway roadbed. The 4-1/3 miles of roadbed lies near the KCC concentrator. It is believed to be the first use of classified tailings in construction of a national highway and if the project works, will no doubt be used elsewhere, according to Clem Church, chairman of the Utah Road Commission. By delivering the material, Kennecott will not have to deposit the mine waste in tailings ponds; the state will not have to remove material from hillsides or borrow pits for its highway project and the taxpayers will save \$690,000 inasmuch as fill material is estimated to cost 23¢ a ton and Kennecott has agreed to donate and load the material.

For more than 25 years, engineers at Nevada Mines Division of Kennecott, McGill, Nevada, have been working to control tailings dust. As a result of this effort and at a cost in excess of \$500,000, successful stabilization of much of an area no longer used for active deposit of tailings has been accomplished. Growth of rye grass, barley, sweet clover, alfalfa and perennial grasses on 60 acres of inactive tailings has been generally good and another acreage will be planted in 1972 with test plots. Another 240 acres of tailings has been subsoiled or ripped to a depth of nearly 3 feet, leaving the ground in fairly well-defined furrows which run perpendicular to prevailing winds. The lasting effects of furrowing as a means of curbing wind erosion have not yet been determined, but fertilizing this area has shown that native brushes develop rapidly in the protected furrows. Another 330 acres will be treated in 1972 for dry land development or planting. Spreading of granulated smelter slag on 75 acres of inactive tailings has stabilized this area during the past 4 years. Recently, fertilizer placed on the slag covered section fostered the development of vegetation. Another 110 acres will be treated with this method this year.

At hearings of the subcommittee on Air and Water Pollution, Senate Public Works Committee, Frank R. Milliken, president of the nation's number one copper producing company, said Kennecott Copper Corporation will meet the federal government's "health-related" air quality standards and "will spend more than \$100 million doing so. However, economic feasibility must be considered in setting the secondary air quality standards, and especially in the implementation plans developed by the states." Kennecott operates four smelters - in Arizona, Nevada, New

Mexico and Utah. Pointing out that the 1970 Federal Clean Air Act directed the administrator of Environmental Protection Agency to develop national primary ambient air standards to protect the public health with "an adequate margin of safety", Milliken said that the administrator had promulgated a primary standard on sulfur oxides which does protect the public health. Milliken emphasized that it "had been suggested in these hearings that economic factors are, or should be excluded from consideration in the development of the national secondary or welfare-related standards and state implementation plans. In fact, the law explicitly defines 'public welfare' to include 'economic values'. Surely that definition includes both sides of the economic equation: The costs of achieving a standard as well as the costs of the potential damage that standard is designed to protect." He told the subcommittee that estimates of the costs of removing sulfur oxides from copper smelter emissions "have varied by an order of magnitude. Three separate government studies differed widely in their findings, with the percentage of sulfur dioxide deemed removable falling from 98.8% to 90% while the estimate of capital costs to remove the sulfur increased fourfold from \$67.6 million to \$266 million. The U.S. Bureau of Mines conducted an independent study in 1971 and came up with an estimated capital cost of removing nearly 90% of the sulfur dioxide emitted by the U.S. copper smelting industry of \$594 million. That figure is about one-half of replacement cost of this nation's entire copper smelting industry. Any notion that costs of this magnitude might be passed along to the consumer is simply based on a misconception of the economics of copper. This is a competitive industry producing a commodity that is freely traded in world markets. Supply and demand set the price of copper, and properties that cannot produce at a profit within prevailing prices have no alternative: They must close down."

TITANIUM METALS CORPORATION OF AMERICA:- the largest U.S. titanium producer, was adversely affected by the aerospace industry slump in the last 2 years and operations have been deeply in the red recently. Titanium is used as a lightweight structural metal in airplane engines and fuselages and part of the titanium industry's current problem was caused by over-expansion based on predictions that the now defunct SST would lead to a bonanza for the light metal. ROBERT S. NYCUM replacing JOHN M. CIBORSKI, as president of Titanium Metals, reported that the company had restarted its Henderson, Nevada, sponge operations on February 9, but since it takes about a month "to get it all together, things are only just now beginning to really perk up." General Services Administration in order to reactivate U.S. titanium sponge production sent out solicitations about February 9 for strategic stockpile materials, allocating 6.5-million pounds over a 2-year period to Titanium Metals. However, Timet stated this is not the reason for starting the sponge facilities. "We shut down last year because our inventory was too high," explained marketing vice president Ward Minkler. "Now our inventories are largely depleted and we are making sponge in balance with incoming orders." Purchases by the government are to be made over a 2-year period and invitations were said to contain a clause which, in effect, binds producers to purchase back the material, should it be declared excess, before building any new production facilities. Representative Wright Patman's Defense Production Committee lamented that U. S. sponge makers were idled at yearend and noted that more than 30% of U.S.-consumed sponge is foreign-made. "If appropriate action is not taken, we may find ourselves dependent on Russia and Japan for this im-

portant metal," the committee said. GSA solicitations were due back in Washington February 29, but it was not clear when they would be decided upon.

Other producers who received solitations were RMI, Niles, Ohio and Oregon Metallurgical Corporation, Albany, Oregon.

THE FLINTKOTE COMPANY-CALAVERAS CEMENT DIVISION:- W. P. Fuller and John W. James gave a complete report in Reno, Nevada, on March 10 to the Northern Section of the American Institute of Mining, Metallurgical and Petroleum Engineers regarding its pipe line in California to transport limestone slurry to its cement manufacturing plant at Alturas. An 11-page script giving detailed information on raw materials, quarry operation, crushing, grinding, pumping, water supply, power, instrumentation, laboratory operation and ecological considerations was part of the presentation. A few highlights from this script: Limestone is ground to about 70% minus 200 mesh and pumped through the 17½ mile pipeline as a slurry of 70% solids consistency. The pipe is 7½-inches in diameter with ¼-inch wall thickness. Design was based on 35-year life and wear tests show only 50% of the expected wear in first inspections after several months operation. Cost of the pipeline installation is around \$1-million and quantity of limestone transported is 1-million tons per year. Line friction requires pump pressure of 900 pounds per square inch. The elevation drop is 1800 feet from input to discharge. Vertical curves, at first believed to be critical, were tested before construction of the line and sharp break-over in ridges and valleys are permissible. Temporary shut-downs are feasible without serious risk of line plugging. In fact, it has been found that the line can remain idle for a day without plugging.

Plans for this pipeline were reported on Page 4 of the June 15, 1970 News Letter.

EAGLE-PICHER INDUSTRIES, INC:- reports for the years ending November:

	1971	1970
Net Income per Share.	\$2.22	\$2.20
Fully Diluted Income per Share.	2.16	2.13
Net Sales	227,755,821	227,689,280
Income before Taxes	18,162,870	18,822,295
Net Income.	10,162,870	10,122,295

Under "Minerals", the report states: "Nondurable materials are those which are incorporated in or used with a final product which has a short life, plus those which do not become part of another product but are consumed in a manufacturing or other processing operation. In 1971, this group provided 14% of total sales and 19% of pre-tax earnings. The growth consistency of these products has been excellent and, in fact, when adjusted to a fully comparable basis, both sales and earnings have shown an uninterrupted record of year-to-year increases." Eagle-Picher has two operations in Nevada under the supervision of Milton Steinheimer, vice president-production, Fibers and Minerals Division. They mine and process diatomaceous earth at Clark, Storey County and at Colado, Pershing County.

RANCHERS EXPLORATION COMPANY:- (Albuquerque, New Mexico) stated in its annual report: "Construction of a precipitation plant to produce

Cement copper at the Big Mike Mine (35 miles south of Winnemucca, Gold-banks District, Pershing County, Nevada) was completed in the second quarter and nominal production began in December. Production, which should reach about 100,000 pounds per month, is coming from treatment of 150,000 tons of stockpiled ore."

DUVAL CORPORATION:- sold its remaining ownership (50%) of the Morton Ranch joint venture to United Nuclear Corporation. The joint venture was formed in 1968 to explore for and develop uranium ore on a 64,000-acre tract in the Southern Powder River Basin in Wyoming, known as the Morton and Boner Ranches. Uranium ore reserves on this tract have been estimated at between 8 and 13 million tons of U₃O₈ ore.

PHELPS DODGE CORPORATION:- plans to complete development of its Metcalf copper mine near Morenci, Arizona, by mid-1974 and in addition, announced plans to construct a \$100-million copper smelter in New Mexico to treat the production of its Tyrone, New Mexico, mine. The Metcalf mine has been under development since 1969 and is expected to produce more than 50,000 tons of copper annually at costs comparable to those of other Phelps Dodge major mines. The new smelter to be located in Southern Hidalgo County will be designed to treat the full output of the Tyrone mine where production capacity is being expanded from 60,000 to 100,000 tons of copper a year. Present production from Tyrone is now being shipped to company smelters in Arizona, but after the Tyrone expansion and completion of the Metcalf mine, the company said additional smelting capacity will be needed.

UNION CARBIDE CORPORATION:- has developed an air pollution-control system (called PuraSive Hg) to help chlorine producers cut mercury emissions at their plants. The new system is an adsorption process utilizing molecular sieves that trap and recover mercury in elemental form, the company reports. Union Carbide says its system can cut mercury emissions at a 300-pound-a-day chlorine plant to less than one-tenth of a pound daily. The federal government has proposed a mercury air-emission standard of 5 pounds a day per plant. Union Carbide's removal system is said to be the only one on the market that recovers mercury from the process and the value of the recovered mercury can help offset operating costs, the company said.

BANNER MINING COMPANY:- Tucson, Arizona, owner of Twin Buttes copper mine, reported unaudited 1971 income of \$1,013,000. Allan B. Bowman, president, noted that The Anaconda Company, operator of Twin Buttes Mine, suffered a net loss of \$6.5 million on the mine in 1971 and of this, some \$3.58 million, or 55% was Banner's share - to be deducted from future earnings of the lease operation, with the result that no royalty payment will be made at the end of February 1972. The loss was due to a drop in copper prices; shutdown of Twin Buttes operation in August 1971 because of a strike; shutdown of the mill for 5 weeks because of limited smelter capacity brought on by state environmental pollution regulations, and a marked increase in production costs, including additional charges by the smelters to help defray cost of anti-pollution devices.

HOMESTAKE MINING COMPANY:- Lead, South Dakota (the nation's largest gold producer) was using mercury as an amalgamizing agent at its mill, but though the mercury was recycled into the operation, minute quantities ended up in the Cheyenne River. Homestake switched to cyanidation

but sought the aid of the Salt Lake Metallurgy Research Center, U.S. Bureau of Mines, who by the end of 1971 had come up with a carbon-in-pulp process that completely eliminated the use of mercury. A pilot plant was built at Lead and Homestake announced total success. The pilot plant concept will be scaled up to a full-sized carbon-in-pulp plant at a cost of \$850,000, capable of processing 2500 tons a day of gold-bearing slimes, and will be completed in 15 months. The gold ore is first leached with a cyanide solution and then activated carbon particles are introduced into the resulting slime slurry. Activated carbon is carbon which has been steam-heat treated. After treatment, it contains a labyrinth of fine pores which absorbs the gold-cyanide complex from the slime. The gold-bearing carbon particles are then screened out of the slime and the gold is subsequently detached from the cyanide by electrolysis in which the relatively pure gold gathers about a cathode formed of stainless steel wool. The gold is recovered by melting.

HECLA MINING COMPANY:- Excerpts from the 1971 Annual Report state:
"As a responsible citizen, your Company is concerned about environmental protection and is proud of its efforts to minimize the impact of its operations on the environment. Nevertheless, we are opposed to hastily drawn environmental legislation or regulations which fail to take into account the economic impact upon the Company or the welfare of our employees, stockholders, and the communities in which we operate, especially when technological capabilities for implementation of such legislation on a competitive economic basis do not presently exist....

"During 1971, the Company devoted a major effort toward development of the Lakeshore copper property near Casa Grande, Arizona. A crosscut from the access declines entered the sulfide ore zone, with excellent correlation between the exposed ore and surface diamond drilling results. A crosscut being driven toward the oxidized portion of the deposit will reach the ore early in 1972. A pilot concentrator began milling sulfide development ore during the final quarter of the year. The pilot roast-leach-electrowinning plant, constructed for treatment of sulfide concentrates produced from the Lakeshore development ores, is in daily operation with good results. An oxide vat-leaching pilot plant is being constructed and will start operation early in 1972.....

"It is anticipated that productive operations at the Mayflower mine (near Heber City, Utah, leased from New Park Mining Company) will probably phase out late in 1972 due to depletion of ore reserves....

"The Ruby Hill project, Eureka, Nevada, has been on standby basis since the spring of 1966. The property is leased by Hecla Mining Company, Newmont Mining Corporation, Cyprus Exploration Company, Richmond-Eureka Mining Company and Silver Eureka Corporation with Hecla as the operator. Surface exploration drilling continued in 1971, including some fill-in holes in the 'ore reserve area' in the vicinity of the Fad shaft....."

KAISER STEEL CORPORATION:- will cease immediately production of iron ore and iron ore pellets at Eagle Mountain, Riverside County, California, for export to world markets. Jack J. Carlson, president and chief executive officer, said, "The move is being made to achieve a more efficient balance of operations at the mine and to strengthen the long range position of Eagle Mountain as the source of supply for the steel mill at Fontana. It also reflects the fact that high-grade iron

ore available on world markets from Australia, Brazil and other countries at lower prices, coupled with the depressed state of world steel markets, makes the export sale of Eagle Mountain iron ore and pellets uneconomic at this time....We feel that the lower volume operation to serve our own requirements will result in a substantial improvement in operating costs and will at the same time prolong the life of the remaining orebody at Eagle Mountain significantly. This close-by source of iron ore for our steel mill, only 160 miles away, continues to be one of the strong points in our integrated operation." Production levels at the mine will be cut in half and employment will accordingly be reduced substantially.

COPPER RANGE COMPANY:- has substantially reduced personnel in its New York office and is moving key corporate staff members to the company's subsidiary, White Pine Copper Company, in White Pine, Michigan. Chester O. Ensign, president, said rising costs, lower prices of copper metal and the profit squeeze affecting copper metal sales will force Copper Range into directing the greater part of its energies at White Pine, the company's largest copper operation. On January 5, many on the corporate staff, including Ensign, were on their way to White Pine to assume the additional responsibilities required to manage that operation.

METALS AND MINERALS

SILVER:- In its Annual Bullion Review-1971, Samuel Montagu & Co., Ltd. states: "The New York Commodity Exchange on 3 November traded in November 1971 silver at 127.4¢, the lowest since the exchange resumed silver trading in 1963.....In recent years, as is well known, the consumption of silver for coinage has declined sharply and we estimate that during 1971 no more than 25 million ounces was used for this purpose as compared with 370 million ounces in 1965 in which year the U. S. Treasury supplied no less than 320 million ounces from its own stocks. There appears to be, however, an extremely numerous body of collectors ready to purchase well designed, well produced medallions, singly or in sets and this trade is becoming an increasingly important source of demand in Silver Markets and we estimate that in 1971, 20/25 million ounces may have been used for this purpose. Speculative activity was very much in evidence during the year and this is likely to continue. Stocks, despite a world-wide stagnation in industry, are estimated to have declined by some 60 million ounces. They are today over 400 million ounces. Recent estimates indicate that scrap recovery data has been understated in the past. They also show, however, that the growth of consumption may have been under-estimated. Whilst the supply/offtake gap may not be as large as previously estimated, it exists, nevertheless, and is likely to increase. Greater efforts are being made to obtain more accurate statistics on the production and the consumption of silver - particularly in scrap recovery. It is to be hoped that we shall be able to obtain in the future more reliable data on the metal. The anticipated recovery in U.S. industrial consumption will probably be followed in other parts of the world, and in consequence, one can expect a gradual rise in silver prices. Owing to the large speculative positions in the market, wide fluctuations may occur, but it is doubtful if the low prices of 1971 will be touched again."

In the 1971 Annual Report of Hecla Mining Company, the following statement was made: "In view of the opportunity for substantial profits to the U.S. Treasury and the public desire for a quality silver dollar in

commemoration of our nation's 200th birthday anniversary, we urge our government to mint at least 300 million dollars (coins) containing 40% silver to be sold in 1976 at face value of \$1 through our banking system. The minting of these coins would require our government to purchase 95 million ounces of silver from private domestic sources. Consumers of silver agree there is no present shortage of silver, and at today's prices, the U.S. Treasury would realize a profit of approximately \$120 million."

The Silver Institute, Inc. reports that in France silvered glass mirrors covering the side of a 9-story building reflect the sun's rays into Professor F. Trombe's solar furnace to produce a million watts of power. The nearly perfect reflectivity of silver is fundamental to the efficiency of the operation and only about 300 troy ounces of pure silver are sufficient for this Megawatt installation. Professor A. F. Hildebrandt, University of Houston, is directing development of industrial solar power in the southwest U.S. Calculations indicate that a single square mile of mirrors will concentrate enough sunlight to operate a power installation sufficient for a community of 24,000 and the aim is to serve millions. The mirrors could be made of many substances, but the most efficient and economical, according to the Institute, will be silvered glass, requiring only about 150,000 troy ounces of pure silver for each such installation.

GOLD:- Samuel Montagu & Co., Ltd. Annual Bullion Review-1971, states: "The Washington Agreement fixing new currency parities in December, including a promise of a revaluation of the official price of gold in terms of the U.S. dollar to \$38 per ounce, was a preliminary step taken towards establishment of a new international monetary system. As such, however, it is only an interim measure to prevent further chaos that might otherwise be brought about in world trade both by protectionist trade measures and uncertainties created by floating exchange rates. Some criticism has been expressed of the Washington Agreement, particularly in view of the fact that no provisions for convertibility of the dollar has as yet been announced. The practically non-existent flow back into U.S. dollars, low U.S. interest rates and the inability of the I.M.F. to function have raised this subject to the forefront. Furthermore, the apparent lack of urgency in attempts towards the establishment of a new international monetary system have all contributed to increased awareness of the problems and doubts about their solution.

"A new international monetary system, providing for the establishment of a new acceptable reserve asset, is unlikely to be devised and agreed upon for some considerable time. It is obvious that such arrangements will have to provide for some funding of old currency liabilities and would include sterling and particularly the large dollar holdings. What form the new assets will eventually take is a matter of conjecture, but to ensure its acceptability a certain gold base or backing appears at present essential. For this reason, and particularly in view of the large holdings of gold by European countries, we have no reason to believe that the monetary role of gold is likely to be endangered although it will eventually and gradually be reduced. Prior to the creation of a new international monetary system and a new reserve asset, any change in the official gold price will obviously be dependent on the United States, but would presumably, thereafter, be decided by the members of the I.M.F. The envisaged change in the U.S. official price to \$38 will not restore convertibility of U.S. dollars into gold, and we do not be-

lieve such to be possible in the foreseeable future. Neither do we envisage a higher monetary price for gold until a new international monetary system is devised. On the other hand, if the armistice of last December were to prove too fragile to resist possible new speculative pressures in exchange markets then, after initial floating, another round of adjustment in parities could be foreseen. The major influence on the price of gold in the free market will this year again be the activity of speculators and investors. As related earlier, they increased their holdings by some 7 million ounces last year, having sold some 8 million ounces in 1970. This compares with a total offtake of some 46 million during the year, and estimated holdings accumulated by investors over the last 15 years of over 100 million ounces.

"With an industrial recovery in the U.S., to be followed in other countries, one may expect a resurgence in the growth of industrial and jewelry consumption. Hoarding demand is expected to continue, but it is, at present levels, naturally subject to political factors.

"A slight decrease in quantities offered for sale by South Africa is at present envisaged, but this may well be more than compensated by sales by speculators and investors. Apart from possible sales by U.S.S.R., we do not expect much Central Bank activity in the market. On the other hand, as the premium over the monetary price increases, minor Central Banks may be tempted to use the market in settling deficits. We expect major fluctuations in the price of gold due to considerable speculative activity, but on balance the average price for the year to be between \$45 and \$50. In the unlikely event of the U.S. public being allowed to purchase gold, the increased speculative demand may easily raise prices well above \$50."

The House Banking Committee approved without change the Nixon administration's bill to devalue the dollar. The measure, which would raise the official price of gold to \$38 an ounce from \$35, is identical to legislation the Senate passed last week. Prompt House approval is expected. The committee approved the bill 26 to 1, after rejecting, 19 to 3, an amendment to permit private trading in gold.

COPPER:- was raised $2\frac{1}{2}\text{¢}$ a pound to $52\frac{1}{2}\text{¢}$ by Phelps Dodge which was followed by other U.S. copper producers. Kennecott's price is 52.75¢ and Copper Range's price is 52.965¢ which includes minimum silver premium of 0.84¢ . Demand at the dealer level has not shown any substantial pickup and may temper further price firming. One merchant commented, "Dealer business is slow, but steady. Mainly, we are just swapping copper around the dealer market. If consumers exhaust their producer positions, then look for our market to take off." New York dealers are currently quoting about $53\frac{1}{4}\text{¢}$ a pound for spot delivery.

LEAD:- was increased 1¢ a pound to $15\frac{1}{2}\text{¢}$, the second increase in a month. The increase was precipitated by high foreign quotes and strong U.S. demand. It is by no means certain that the firmness in the U.S. market will continue as producers cannot ignore the prospect of a potential world oversupply. Lead carries a ceiling of $16\frac{1}{2}\text{¢}$ under current Federal price regulations.

After December 31, 1973, under FDA rules proposed to eliminate potential health hazards to children, household paint containing more than a trace amount of lead, 0.06% would be banned. The action, tougher than

originally proposed despite industry opposition, also bans paint with more than 0.5% lead after next December 31.

ZINC:- During the first week in March, Cominco broke from the U.S. price of 17¢ and raised its Canadian and U.S. export zinc prices by 1¢ a pound to 18¢. The move was precipitated by increasing tight supply, higher world market prices, and strong demand, Cominco said. Most Canadian producers followed Cominco's move. U.S. producers must submit price increase applications to the Federal Price Commission to raise its prices and some companies have submitted applications for price increases. One importer commented in respect to the higher foreign price, "It's about time that we got to the point where the tail stopped wagging the dog. Considering both metal and concentrates, 65% of the zinc business in the U.S. is dependent on the foreign market," he offered in explanation of why foreign producers could justify their split from the frozen U.S. price.

On March 9, Cerro Sales Corporation, acting as agent for Cerro de Pasco Corporation, announced the price basis for Peruvian special high grade zinc would be increased by 1¢ a pound and all new sales in the U.S. market would be based on a special high grade zinc price of 19¢ per pound.

The February 1972 E/MJ Engineering and Mining Journal in an article, "The Crisis in U.S. Zinc Smelting Spells Trouble for the Mining Industry", states: "U.S. zinc smelters are in deep trouble. Six have closed since 1969, and a seventh shutdown is promised by mid-1972 unless new treatment contracts 'can be made at a profitable level', according to the company's announcement. Those smelters already taken out of service accounted for about 30% of 1969 U.S. capacity. If the seventh goes out of business at mid-year, terminated capacity will grow to 40% of the 1969 level. In addition, another 20% of the 1969 smelter capacity, the old horizontal retort plants, will be caught in a tenuous position. Productivity at these plants is already marginal, and they face the added burden of new costs demanded by environmental protection. It is doubtful under present circumstances whether investment in a new smelter could be justified on the basis of any reasonable return. Most existing plants are wasteful of labor and energy, and only two of the processes appear reasonably adapted to the new environmental demands. The zinc smelting business in the U.S. is just not attractive. Nor has it been so - at least as indicated by the age of plants: The newest was built 30 years ago....."

MERCURY:- dropped to \$195-203 in the second week in March from \$200-205 per 76-pound flask and most buyers expect the price to continue declining so that the market has been very quiet. European business was in the neighborhood of \$182-184, although some sales were reported as low as \$178. Following a report that the Environmental Protection Agency was close to making a formal ban on mercury paints and pesticides, European merchants were unloading and speculation of a \$150 European price is growing. The London Metal Bulletin lowered its quote to \$178-183 on March 10. EPA's ban could be in the form of "cancellation", which would result in reviewing product registration and could lead to hearings, or total "suspension and recall", a much more serious action.

GEOTHERMAL STEAM:- The Nevada Bureau of Mines and Geology has a work-

ing file on "Geothermal Exploration and Development in Nevada" by Larry J. Garside and John H. Schilling, - open to public inspection. It is stated in the report that "many areas have not been studied in any detail; others have been studied by private groups, but the information is not readily available.....We would like to take this opportunity to solicit additional information to help fill the many gaps in our records."

Geological Survey Circular 647, "Classification of Public Lands Valuable for Geothermal Steam and Associated Geothermal Resources", may be obtained from: U.S. Geological Survey, Washington, D.C. 20242.

Senator Alan Bible (Nevada) is urging the U.S. Bureau of Mines to institute a geothermal research project at its Boulder City, Nevada, laboratory.

A circuit court of appeals recently ruled that geothermal steam is not ordinary ground steam that is fed by constant water seepage making it inexhaustible. It argued that geothermal steam is locked in closed spaces like natural gas and is not replenished by seepage. Thus, it is depletable and should be treated like gas, the judges reasoned. One tax expert predicts the decision will attract new money to geothermal steam development.

OIL IN NEVADA:- The Nevada Oil and Gas Conservation Commission reports January 1972 Eagle Springs Field Production as: North American Resources Corporation 3829 barrels; Western Oil Lands, Inc. 4552 barrels. Total January production 8381 barrels and total cumulative production 2,534,053 barrels.

"ECONOMIC EVALUATION OF CALIFORNIA-NEVADA IRON RESOURCES AND IRON ORE MARKETS":- by Lyman Moore, is available at \$2 a copy from: Superintendent of Documents, Washington, D.C. 20402. Published by the U.S. Bureau of Mines, the report provides an analysis of the California steel industry; a discussion of the California and Japanese iron ore markets, and an economic classification of the California-Nevada deposits. California-Nevada shippers, the report states, at present export between 3 and 4 million tons annually to Japan but that existing contracts will expire within 2 years and by that time the cost of the ore is expected to drop to a level which may force the American ores out of the Japanese market.

PERSONAL ITEMS

THE ANACONDA COMPANY:- R. C. Weed, president of Anaconda's primary metals division, Tucson, Arizona, announced appointment of A. J. McDONNELL as executive vice president. He was formerly a corporate vice president of Anaconda in New York and prior to that, spent 13 years in various management positions with Foote Mineral Company. Other appointments were: JOHN P. HUNT, vice president and chief geologist; C. J. HANSEN, vice president, public relations and chief counsel; R. C. CEREGHINI, comptroller; E. W. WITCOMB, assistant to the president, technology; ROBERT LAURICH, assistant to the president, planning; and W. J. VEENIS, president of Anaconda Sales Company.

JOHN G. HALL:- has been elected an executive vice president of Freeport Minerals Company. Until recently, he was president and vice

chairman of The Anaconda Company.

RICHARD MACKLIN STEWART:- has been appointed director of Ireco Chemicals' newly established Mining Services Division, said to offer the industry's first complete drilling-blasting service on a contract basis. Stewart was formerly director of mining research for The Anaconda Company.

EDWARD J. STOEHR:- has been named by Homestake Mining Company to fill the vacancy on the board of directors created by retirement of ROBERT J. MULVANY. Stoehr has been with Homestake since 1954.

GORDON D. STOTT:- Mt. Kisco, New York, director since 1969, was elected president of Park City Consolidated Mines Company, replacing FREDERICK STEHLE who remains as treasurer and a director.

OF PROBABLE INTEREST

MERLE I. ZWEIFEL:- who staked thousands of mining claims in 5 Western States (Montana, Colorado, Wyoming, Arizona and Nevada) was convicted by a Humboldt County, Nevada, jury on 16 counts of filing false mining claims. Zweifel tried to file 24,000 claims in 8 Nevada counties last May, but was stopped by a court order obtained by State Attorney General Robert List. He was indicted on charges of violating state mining laws in filing 16 claims. The laws require that a location monument be posted on each claim and that \$20 worth of development work be done at each site. During the trial, a county surveyor testified that he investigated the 16 claims in June 1971 and found no evidence of monuments or development work. Zweifel was allowed to remain free on \$32,000 bail until sentencing, on April 7, 1972. The maximum penalty on each count is 1 to 6 years in state prison.

Senator Lee Metcalf (Montana) said that federal officials are challenging the legality of claims filed by Zweifel of Shawnee, Oklahoma, in Montana, Nevada, Colorado, Arizona and Wyoming.

"SOLUTION MINING":- by David D. Rabb, metallurgist, Lawrence Radiation Laboratory, in Mining Engineering, February 1972, states that with increased emphasis on pollution and environmental engineering, mineral industries are turning more and more to chemical mining; increased availability of less expensive sulfuric acid and/or sulfur in the near future will lend impetus to leaching activity, and the year 1971 will be remembered as a turning point in metallurgy. "Some chemical processes promise to be competitive, if not better, than the old-fashioned smelting, particularly in the winning of copper from sulfide ores. The hydrometallurgical approach is becoming more attractive because the economics are more favorable and the problem of sulfur dioxide pollution must be considered. Instead of roasting sulfide concentrates and then smelting, reducing and electrorefining the metal, chemical processes feature leaching, then reduction of the metal from the resulting solutions.

"In a cooperative effort to lessen environmental pollution, the copper industry joined in the formation of a new research group, the Smelter Research Association, Inc. Members are: American Smelting and Refining Company; The Anaconda Company; Cities Service Company; Copper Range Company; Inspiration Consolidated Copper Company; Kennecott Copper

Corporation, Newmont Mining Corporation, and Phelps Dodge Corporation. These 8 companies were the source of practically all newly-mined copper produced in the U.S. in 1971. In addition, separate efforts are underway, such as the Phelps-Dodge Division of Environmental Engineering and Research.

"The adoption of leaching schemes to replace smelting generally faces the problem of high operating costs and the disposal of quantities of soluble salts. Hydrologic pollution may, in the next decade, replace atmospheric pollution as a major problem....."

GEOLOGICAL SURVEY PROFESSIONAL PAPER 779:- "The Story of the Water Supply for The Comstock", prepared by Hugh A. Shamberger in cooperation with the Nevada State Department of Conservation and Natural Resources may be obtained for 70¢ a copy from: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

ROCK BREAKING:- A new development in rock breaking is being tested in a narrow cut-fill stope by The Anaconda Company. The machine is a hydraulic impulse-breaker mounted on a modified skid jumbo and called a Mechanical Rock Pick Stoper. It delivers a 100 ft-lb blow at up to 600 blows per minute with the striking rate controlled by hydraulic flow. To date, the machine has demonstrated the capabilities of breaking up to 25 tons per hour in a narrow stope and excavating the ore-bearing ground and waste separately.

LOCKHEED MISSILES AND SPACE COMPANY:- (subsidiary of Lockheed Aircraft Corporation) scientists have developed what they described as a simple battery that, pound for pound, produces 10 to 100 times as much electricity as the common lead-acid battery. The battery is fueled with water and a light alkali metal such as sodium or lithium. Although sodium and water react explosively when mixed, Lockheed scientists say they have developed a simple way to control this reaction so usable electric power is generated. In effect, the new battery constantly feeds the alkali metal and the water together to produce electricity. Byproducts are hydrogen and alkali metal hydroxide, known, in the case of sodium, as lye. Lockheed said the new battery is potentially the answer for pollutionless electric automobiles - the electricity would propel the vehicle, the hydrogen, if burned, would power accessory devices and the hydroxides would be stored and later reduced to pure metal to power other batteries. However, the company said a more immediate application is as a compact marine power source, as the battery could be easily immersed in one of its basic fuels, water. Two laboratory models of the battery have been built by Lockheed - one produces electrical power without moving parts; the other, which has a built-in rotor, converts the electricity directly into rotating shaft power.

"RAPID TAX AMORTIZATION:- under Section 169 of the Internal Revenue Service", published by the Office of Public Affairs, U.S. Environmental Protection Agency, Washington, D.C. 20460, states: "Section 169 of the Internal Revenue Code was added by the Tax Reform Act of 1969, Public Law 91-172, effective December 30, 1969. Stated very generally, it permits 5-year straight-line depreciation of pollution abatement facilities placed in operation on or after January 1, 1969 to abate air or water pollution discharged by plants or properties that were in operation before that date. In order to utilize the depreciation method permitted under section 169, taxpayers must file an election in accordance

with regulations of the Treasury Department, published at 36 Federal Register 9010, May 18, 1971...." The Regional Office, U.S. Environmental Protection Agency for Nevada is located at 100 California Street, San Francisco, California 94111, telephone 415/556-2320; Regional Administrator Paul De Falco, Jr. The booklet was sent to this office from 100 California Street with a covering letter which stated: "Should you have any questions concerning this program, Mr. Richard Hennecke of this office (telephone number 415/556-3450) will be pleased to discuss them with you."

BUSINESS:- Stan Dayton in "Behind the By-Lines" (February 1972 E/MJ), states: "All business is suspect in the eyes of the public. Social Research, Inc. found that 28% of Americans polled in a 1966 study considered business dangerous to our way of life. In 1971, the yes vote on the same question was 68%. Social Research interpreted the results as evidence that the public will no longer rise to the defense of business against extremist or protest groups. Damning as these figures are, the natural resource firms and utilities are generally conceded to be the worst of the bad guys on the business scene."

ANTI-POLLUTION RESEARCH PROJECT:- Senator Alan Bible (Nevada), after his Interior Appropriations Subcommittee completed budget hearing for the U.S. Bureau of Mines, urged Dr. Elbert Osborn, director-USBM, to establish a research project at its Boulder City, Nevada laboratory on sulphur oxide emissions.

NATIONAL FOREST LAND IN NEVADA:- A series of hearings, "To Determine Future Management of Undeveloped National Forest Land in Nevada", commenced with an overall presentation on March 8, and on March 14, a meeting was held in Winnemucca. Future meetings are scheduled on:

- Mar. 20, 1972: Clark County Public Library, 1401 Flamingo Road, Las Vegas, Nevada
1:30 p.m. - 5:00 p.m. and 7:00 p.m. - End
- Mar. 22, 1972: Sutro Room, Ponderoso Hotel, 515 South Virginia Street, Reno, Nevada
1:30 p.m. - 5:00 p.m. and 7:00 p.m. - End
- Mar. 27, 1972: Nevada National Guard Armory, Mill Street, Ely, Nevada
1:30 p.m. - 5:00 p.m. and 7:00 p.m. - End
- Mar. 28, 1972: Banquet Room, Stockman Motor Hotel, Elko, Nevada
1:30 p.m. - 5:00 p.m. and 7:00 p.m. - End

"Undeveloped areas" in Nevada were inventoried by the Forest Service and at the first meeting, it was brought out that the term "undeveloped" could include past use, such as dirt roads, etc. It is clear that substantial areas could be classified for study as possible wilderness, thus restricting them from further development during time-consuming study, commencing by June 30, 1972. MINERS ARE URGED TO ATTEND THE MEETINGS to point out mineralized areas and request that such areas be retained in the category of multiple use.

DATES TO REMEMBER

APRIL 19-21, 1972:- Las Vegas Chapter, AIME will host 1972 Southwest Minerals Conference, Sahara Hotel, Las Vegas, Nevada. Warren N. Warhol, Publicity Chairman, Las Vegas AIME, c/o Mt. Pass Mine, Nipton, CA 92366