

appropriating \$25,000 to study the possibility of California's claiming federally managed public lands.

Nor are prospects bright for legislation introduced in Congress by Sen. Orrin Hatch (R-Utah) to establish procedures for states to obtain title to public lands within their borders. Hatch, however, told the conference: "The passage of my bill is possible. All that is necessary is that the elected representatives of the western states unite totally and completely in their commitment to its enactment."

But ranking Democrats such as Warren Magnuson and Henry Jackson of Washington, Frank Church of Idaho, and Alan Cranston of California report that they will not support the Hatch bill.

Secretary of the Interior Cecil D. Andrus has labeled the Sagebrush Rebellion "an attempt to hornswoggle all Americans out of a unique land heritage

which has been a bulwark of our society and the source of special freedom that has made the West such a great place to live." According to Andrus, few states would find it feasible to manage these large areas soundly.

New fuel was added to the fire in late October when John Connally of Texas, on his first campaign visit through the West, told Colorado audiences that there is "unrelenting injustice and hostility shown toward the West today by officials in Washington." Connally favors legislation that would limit federal control to 20% of the land in any state, including national parks, forests, and monuments. He noted that more than two-thirds of western land is controlled by federal agencies. They manage 96% of the land in Alaska, 87% in Nevada, 66% in Utah, 43% in Arizona, and 32% in Colorado, Connally pointed out. ■

## Zimbabwe Rhodesia's mineral exports await end of trade sanctions

The possibility of normalizing trade between Free World nations and Zimbabwe Rhodesia holds important implications for US natural resource companies. Lifting of trade sanctions in effect since 1966 (with temporary exclusions for chromium and nickel during the Nixon and Ford administrations) would restore free availability of a variety of important raw materials. Besides chromium and nickel, Zimbabwe Rhodesia has large reserves of coal, lead, zinc, copper, asbestos, and cement. And current high prices for precious metals have made once-uneconomic deposits commercially viable.

Both the Prime Minister of Zimbabwe Rhodesia, Bishop Abel T. Muzorewa, and Minister-Chief Duwene of the Ministry of Mines and Mining have strong hopes for a return to "rational export" of their country's mineral commodities. Exports would be controlled by federal licensing and registration, rather than being traded via third parties such as South Africa and the USSR, which did not acknowledge the international trade sanctions.

The US law imposing trade sanctions against Zimbabwe Rhodesia expires on Nov. 15. Within 30 days, President Carter may order an extension of the sanctions if he believes they are in the best interests of the US. However, such an extension can be overridden by a simple majority of both houses of Congress. In a test, the Senate voted 72 to 19 in favor of lifting sanctions; the House has not yet taken a stand. ■

## Copper complex to be designed for Pakistani government

A preliminary engineering and feasibility study for an integrated 12,500-mtpd copper project at Saindak, Pakistan, will be performed by Mountain States Mineral Enterprises Inc. for Resource Development Corp. of Karachi. The Saindak plant will be designed to process more than 5 million mtpy of ore. Cost of the project is estimated at over \$250 million.

The Saindak complex will be based on large open-pit mines to extract copper ores that also contain iron, molybdenum, magnetite, and pyrite. Ore will be moved to processing plants by conveyor systems or by 100-mt trucks.

Concentrates will be railed to shipping points and manufacturing facilities in Pakistan. Processing will include crush-

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## Carolin Mines will start production in 1980 from new B.C. gold mine

Carolin Mines Ltd. announced in late September that contracts worth more than \$2 million have been let for underground development and other initial work on the Idaho zone gold mine on the company's Ladner Creek gold property near Hope, B.C., about 70 mi east of Vancouver. When the project comes on stream at the end of 1980, it will be the first new gold mine in Canada since gold prices began spiraling upward.

According to Carolin Mines president, Orval E. Gillespie, a site on the property has been selected for a mill. The plant will use conventional flotation and cyanide recovery. Surveying, testing of the mill site, road grading, and construction of a road to the tailings pond have been completed, Gillespie said.

A CS20.4 million financing commitment received by the company from Ocelot Industries Ltd. on behalf of Carolin's joint venture partner, the Aquarius Group, will provide the entire projected capital cost, including working capital, to bring the Ladner Creek gold property into production. Carolin will be the manager and operator of the mine, with a 50% net carried interest in its production after payback.

Based on a feasibility report by Kilborn Engineering Ltd., indicated ore reserves of the Idaho zone are 1,530,000 mt grading 0.141 tr oz gold per mt, with a drill-indicated potential of additional tonnage. The Kilborn report recommended startup at a milling rate of 1,500 stpd and estimated operating costs at CS12.53 per st of ore milled.

Carolin Mines purchased the property in 1973 for \$465,000. Exploratory drilling

conducted over the next few years indicated that the mineralized zone sloped downward inside the hill. The company conducted underground drifting and cutting and drilling to fill in details of the zone.

An underground drill contract was then let to Kema Drilling, which began work in October 1977 and completed 1,500 m by March 1978. In April, Kema was awarded an additional contract for a minimum of 1,500 m, which was completed in May 1978.

In all, a total of 538 m of underground work was completed, including 470 m of a 2.5 x 2.5-m decline driven mine-northerly at -20% and a 67-m crosscut driven at +17% and -8%. A total of 3,051 lineal meters of wireline diamond drilling was completed by Kema on Carolin's behalf. Drillholes totaled 68, mainly in a "ring" pattern and along east-west sections spaced 33 m apart. Drilling proceeded northerly, and a "mine north" length of 266 lineal meters has been drilled from underground. Maximum east-west drilling coverage is close to 100 m.

Carolin has completed an access road to the tailings pond and is preparing to start the main haulage tunnel. During 1978, a sample plant was completed, and extensive testing of ore samples was done to confirm the feasibility of the project.

The Ladner Creek property is approximately 4 mi long and 2 mi wide. In addition to the Idaho zone, it includes three former gold-producing mines and a number of other good prospects, where Carolin has done only limited exploratory work so far. ■

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