

EXPLORATION 1987

Exploration in Colorado Mineral Belt		
Ouray and San Juan Counties (San Juan Mountains-Silverton)		
Cornucopia Resources Ltd. (May sell operation to Chase Minerals Inc., affiliate of Minproc Holdings of Australia)	Gold, silver	Red Mountain No. 3 heap leach operation
Gerber Minerals Corp. (Gold King Corp.) venture with Echo Bay Mines Inc.	Gold, silver	Gold King mine extension Camp Bird mine, owned by Federal Resources Corp.
Royal Gold Inc. and Chipeta Mining Corp., subsidiary of Western Mining Corp., Melbourne, Australia, and Ouray Ventures	Gold, silver	
Park and Summit Counties (Alma-Fairplay-Breckenridge)		
Alma American Milling Corp.	Gold	Acreage under lease near Alma
Beaver Placers Inc., of Aurora, CO	Gold, silver	Placer near Fairplay
Blue River Mining and Milling Co. Inc.	Gold	North Star Mountain, Fairplay/Breckenridge
Cobb Resources Corp. of New Mexico, and Boulder Gold Inc., of Australia	Gold	London mine
Silver State Mining Corp.	Gold, silver	Hock Hocking mine
Pitkin County (Aspen)		
Aspen Mountain Mining Corp.	Silver	Compromise mine
Saguache County		
Duane and Rex Allen and Floyd Jaramillo	Gold, silver, copper	Two old tailings piles near Bonanza and La Garita
San Miguel County (Mount Wilson)		
J.R. Gold Mines Inc.	Gold	Mount Wilson mining district
Teller County (Cripple Creek-Victor Mining District)		
Cripple Creek & Victor Gold Mining Co. (Texas-gulf Minerals and Metals Inc.)	Gold	Ajax, Cresson, and various mine dumps on Mineral Hill and Battle Mountain
Richard Dwellley	Gold	Carbonate Hill veins

Idaho

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Exploration activity resumed in the Coeur d'Alene in 1987 after almost coming to a halt in 1986. In August, a new \$4-million exploration program began at the Calady. The initial program cost \$26.6 million, including \$21 million for the shaft and \$5.6 million for drilling and drifting.

There was good news in October from the Bunker Ltd. Partnership. Twelve miners were recalled to work on an exploration project at the Crescent mine. The men will deepen the shaft from the 5100 to 5280 level.

There was no further work on Asarco's American Silver project in 1987. The Wire Silver vein was the target of the exploration venture. It is only 105 m (345 ft) away from the end of the 1560 m (5130 ft) drift that extends from the 3400 level of the Coeur mine.

A joint venture between Hecla Mining and Coeur d'Alene Mines announced it would be aban-

doned. The \$17 million, seven year program was to explore the old Silver Summit mine area at depth.

Teck Resources finished a deep navi-drill hole at the Gem State-Rock Creek property. The 1525 m (5000 ft) deep hole probed the Blue Jay mineralized zone.

Trans Atlantic Pacific formed an agreement with Golden Chest, holder of a long-term lease on the Golden Chest mine near Murray. The company signed an agreement with Newmont in August and a drilling program was underway last winter.

Exploration elsewhere in Idaho increased substantially over 1986. There were 61 projects underway, compared to 38 in 1986. Emphasis is still on precious metals as companies move north from Nevada looking for bulk mineable epithermal deposits.

Canadian companies are still active in the state. Flow-through shares continue to free up exploration dollars for US projects.

In northern Idaho, Cominco examined three properties in the St. Joe area, including drilling programs at the Crescendo Peak-Blackdome property that was

looked at year, but the company is maintaining its claims. Cominco drilled a single hole of Lightning Creek north of Clark Fork. More work is planned for this year.

Merger Mines extended the drift at Cedar Mountain, south end of the Pend Oreille district, from 150 to 365 m (500 to 1200 ft). A vein was cross cut at 305 m (1000 ft) and some lead-silver mineralization was discovered. The vein will be explored by a drift next season.

Shoshone Silver Mining drove a 150-m (500-ft) tunnel at the Idaho Lakeview claims. It was looking for a mineralized target found by drilling.

The No. 3 crosscut at the Iron Mask mine was extended to the 2000 station. A 70-m (2000-ft) high raise had 50 m (170 ft) to go to intersect a drill target that assayed 857 g/t (25 oz per st) of silver. The work is being done by Iron Mask Mining.

The Elk City area was also active. Some companies began feasibility testing of 1986's exploration projects.

Alotta Resources, an affiliate of Tundra Gold Mines, drilled about 75 reverse circulation holes near the Colonel Sellers mine north of Elk City. Late in the year, Billiton Minerals joint ventured the Tundra holdings. Drilling continued late in the year. The Mineral Zone project has combined estimated reserves of 1.8 Mt at 1.9 g/t (2 million st at 0.055 oz per st) of gold. Billiton also has a claim block extending south from Orogrande to the headwaters of Crooked River.

Pegasus acquired a claim block in the Buffalo Hump district. Some drill holes went down last year in the vicinity of the Big Buffalo mine.

Silver Crystal Mines explored its newly acquired claims located at the Umatilla mine west of Orogrande. The property is being developed for gold and platinum that was supposedly discovered in 1980. Silver Crystal is working with Idaho Mining and Development and Idaho Platinum Resources to build a pilot wet chemical extraction plant.

E and E Exploration drilled on an extensive claim block in the Florence Basin. Plans call for a heap leach operation. Summit Silver continued work at the Kimberly mine in the Marshall Lakes district. The company plans an underground drilling program next year.

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holes in 1986 with sporadic values reportedly as high as 8.6 g/t (0.25 oz per st) gold.

The old mercury occurrences north of Weiser are of interest as low grade bulk mineable gold deposits. Ican Minerals drilled 36 holes, for a total of 540 holes at the Almaden mercury mine near Weisner. The company has about 22.6 Mt of 1 to 1.1 g/t (25 million st of 0.029 to 0.03 oz per st) gold blocked out.

Chevron Resources drilled nine holes near Haystack Peak at the Thirsty Mountain prospect, north of Weiser. This is a low grade gold-mercury show similar to the Almaden mine.

Yanke Machine extended the drift at the Grayhound mine from 355 to 430 m (1670 to 1410 ft). A three-compartment raise was started on a new ore shoot discovered at the end of the drift. The Grayhound mill will be upgraded next year and more drilling is planned.

Shama Minerals, Chemical, and Oil increased its claim block in Idaho from 1700 claims in 1986 to more 4200 last year. The company has operated a fluorspar mine and mill near Challis on and off since 1974.

An inclined shaft was being driven by J and D Lode Placer at the Competence mine in the Neal district in Elmore County. The company is looking for an extension of mineralized shear zone mined early in the century.

Yanke Machine purchased the Golden Rule mine, located south of the J and D mine on Blacks's Creek. It drilled the property last winter. The mine has a history of gold production.

Orsina Resources explored its nine claims in the Packer John Group. The company raised \$530,000 in 1986 to buy the claims and finance exploration.

Richweld Resources completed a diamond drilling program at the Blackstone mine in Elmore County. A number of mineralized zones were found outside the old open pit at the mine site. Deeper drilling was planned for this fall. The company is considering building a mill at Fairfield.

Atlanta Gold continued a drilling and feasibility study at Atlanta Hill. Tentative plans call for an open pit mine and a flotation mill at the gold property. More deep drilling is planned for this year to explore below old

mine workings. The company filed a draft environmental impact statement in March.

Galli Exploration resumed drilling at Rocky Bar. Last year, about 20 holes were drilled in a mineralized shear zone in Hard-scrabble Gulch. Gallie was spun off by Royal Apex Silver as a separate company and is now call Gexa Gold.

Precious Metals Technology completed construction of a 90-t/d (100-stpd) mill at the Princess Blue Ribbon mine. More than 900 kt (1 million st) of ore are stockpiled at the mine site. The precious metals deposit, originally mined by underground methods, will be developed by an open pit. Production is scheduled for this year.

Atlantis Mining continued development at the Atlantis mine in Colorado Gulch near Bellevue. The company completed 215 to 245 m (700 to 800 ft) of underground development, including three raises and one stope. The target is a series of veins carrying gold and other metals in the Magdalena vein system. Atlantis is considering building its own \$1.1 million mill near Bellevue.

An exploration program at the Vienna mine was successful and Rothchild's will begin mining this year. The ore from the mine be processed in Rothchild's mill on Warm Springs road near Ketchum.

Homestake Mining obtained a lease on the Barlett Point property, west of Chilly Buttes. A drilling program was underway at the end of the year.

The War Eagle Mining Co. drilled nine reverse circulation holes at a large land holding on War Eagle Mountain near Silver City in Owyhee County. Drilling followed a geochemical survey and some geophysics completed in 1986.

New rules governing the use of cyanide in mining operations were enacted by the State of Idaho in December. A task force composed of industry, state government, and environmental groups hammered out the proposed regulations. Many other states are expected to use Idaho's rules as a model for their own laws. The new regulations are tough and are designed to safeguard against accidents when using cyanide, especially in heap leach operations. ■

Illinois

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Exploration for nonfuel minerals in Illinois continued at a slow pace throughout 1987. The major fluorspar producer, Ozark-Mahoning Co., operated two diamond drill core units, primarily in connection with further development of its Annabel Lee ore body 11 km (7 miles) north of Cave in Rock, Hardin County.

Tammco and Illinois Minerals Co. continued to drill in the Southern Illinois tripoli district of Alexander County in the extreme southwestern portion of the state. Illinois Minerals Co. is seeking required permits to explore 24 km² (6000 acres) within the Shawnee National Forest.

Under a new 10-year Land and Resource Management plan being implemented in the Shawnee National Forest, mineral activities are held to be compatible for 76.9% of the forest. Special stipulations are applied to leasing, exploration, development and mining in forest lands identified as areas for special recreational or research uses; as land of unique scientific, educational or natural value; or as National Register Sites and National Historic Landmarks.

Similarly, special stipulations are applied to provide interim management of areas recommended for inclusion in the National Wild and Scenic River System or for wilderness study. The Shawnee plan is being appealed by environmental and other interest groups.

There was some exploration interest for common minerals, such as limestone and dolomite, sand and gravel, and clay, particularly for construction aggregate and high calcium limestone in central Illinois. The latter is used in flue gas desulfurization and fluidized bed combustion technologies.

The precipitous decline in explorational and developmental drilling for coal, which began in the early 1980's, continued during 1987. Ten companies filed 689 plugging affidavits with the Illinois Department of Mines and Minerals. This compared to about 1400 in 1986, 1900 in 1985, 1500 in 1984, and 3800 in 1983.