

# Where does silver occur on the planet?

Silver ore deposits, or those mined primarily for their silver content, are most abundant along geologically young mountain chains associated with alkaline volcanic activity. Large parts of western North and South America are particularly favorable environments, along with portions of southeastern Europe and Asia. Over the past 500 years, the principal sources of the world's silver have been vein and limestone replacement deposits located along the western margin of North and South America, particularly in

Mexico and Peru. Bolivia, Canada and the United States have also been premier producers for shorter periods of time.

Using history as a guide to the future, most new silver deposits of consequence will probably be found within these regions. Southeastern Europe and Asia also have a history of significant silver production. Silver also will continue to be produced from a much broader geographic and geologic spectrum as a byproduct of base metals mining.



Apex Silver's Latin American property portfolio along with regions in the Western Hemisphere where most principal silver deposits occur.

## Finding Ore Bodies

Since districts with historical silver production are likely places to find additional deposits, exploration programs often begin with thorough literature searches. Literature searches lead to physical inspection of interesting areas and geochemical surface sampling. Depending on the type of deposit targeted, either geophysical studies or drilling may follow.

### Platosa, Mexico Promising New Exploration Project

In February 1999, Apex announced completion of its first drill program on the 20,000 acre Platosa property which is located 5 kilometers northwest of the town of Bermejillo, Durango State in northern Mexico. Apex, through its Mexican subsidiary, is managing the evaluation of this property under an exploration and development agreement with Excellon Resources Inc. ("Excellon"). Under terms of the agreement, Apex has the right to earn up to a 65% direct interest in the property; upon earn-in, a joint venture with Excellon would be formed with Apex as operator.

Five diamond drill holes totaling approximately 800 meters have been completed. Four of the five holes contained mineral-

ization indicating favorable conditions for the limestone replacement ("manto") type silver-lead-zinc deposits that have been mined in northern Mexico. One hole encountered 7.45 meters of massive and sanded sulfide averaging 36.4 ounces per tonne silver, 35 percent zinc and 14 percent lead. Overall core recovery averaged 53 percent for the 7.45 meter interval, which is not unusual in these types of deposits where core material lost is frequently loose, unconsolidated or sanded massive sulfide.

To aid in determining the extent of the massive sulfide mineralization, Apex is conducting a geophysical survey. The geophysical data will help geologists in mapping the subsurface anomaly



and guide the design of a follow-up drill program. The Platosa property, located within 1.5 kilometers of a major paved highway, railroad and power line, has excellent logistics. It is also located approximately 25 kilometers from the Ojuela Mine at Mapimi where historical production totaled 5-6 million tonnes of ore grading 15.3 ounces per tonne of silver, in excess of 0.11 ounces per tonne of gold, 15 percent lead and 10 percent zinc.



**Douglas M. Smith, Jr.**  
Vice President of Exploration  
Apex Silver Mines Corporation

Prior to joining Apex as Vice President of Exploration in March 1997, Douglas M. Smith, Jr. served as Chief Geologist for ASARCO's Latin American Exploration Division where he was responsible for exploration and project evaluation in Bolivia, Peru, Chile and Mexico. With more than 30 years experience in the mining industry, Mr. Smith began his career with Minas de San Luis, S.A., where he served as District Geologist at the Taylotita mine, one of the world's largest silver-gold epithermal deposits, and also as Chief Geologist with responsibility for exploration throughout Mexico.

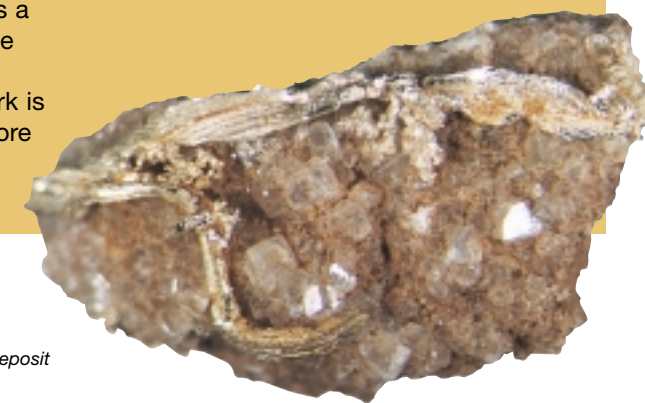
### Cobrizos, Bolivia Advanced Exploration Project

Cobrizos, located only 12 kilometers north of San Cristobal, is a red-bed or, possibly, a roll-front copper-silver deposit hosted by shale and sandstone. During 1996 and 1997, the Company drilled 19 reverse-circulation holes in the deposit. A preliminary estimate of 11 million tonnes of mineralized material grading approximately 3 to 4 ounces per tonne of silver has been calculated. Given its proximity to San Cristobal, initial thoughts were to send Cobrizos material to the San Cristobal mill to "sweeten" the feed.

During 1998, Apex completed 4 diamond drill holes at Cobrizos. Preliminary metallurgical tests on the core have indicated that it may be possible to heap leach "run of mine" ore, which could make Cobrizos a relatively simple and inexpensive property to build and operate. Additional metallurgical test work is planned and, if encouraging, more drilling will be conducted.



Apex holds the property under a 1996 joint venture agreement with COMIBOL, the Bolivian state-owned mining company. Should the property be developed, under terms of the agreement, Apex would receive 95 percent of cash flow until capital pay-back, then 85 percent of cash flow.



Native silver on salt crystals from the Cobrizos deposit 12 kilometers north of San Cristobal, Bolivia.

## How do you explore for silver?

Vein and limestone replacement districts, particularly those located in countries with important historical production like Mexico, Peru and Bolivia offer the greatest potential for the discovery of new silver-producing mineral deposits. Large disseminated silver deposits like San Cristobal, Rochester and Real de Angeles were discovered in historic vein mining districts.

Most mines operating today were discovered because they cropped out on the surface with ore grade or near-ore grade material. Given the level of exploration activity in North and South

America, it is likely that few virgin deposits remain exposed on the surface. Most future discoveries will be made by recognizing features distal to ore and correctly relating them to "blind" orebodies. Successful exploration will require the ability to identify new targets based on careful fieldwork and a thorough knowledge of types of geologic deposits.

### Massive Sulfide Ore Deposits

Massive sulfides, like those found at Platosa, replace limestone in irregular blankets, termed mantos, and chimney-shaped bodies that may be discontinuous.

Complexes of mantos and chimneys that typically make up massive sulfide deposits can range in size from a few hundred tonnes to millions of tonnes.



Drilling and core logging at Platosa, Durango, Mexico.