

EXPLORATION

SIB Update

Canadian junior, Silver Butte Resources, has completed over 6,000 m of diamond drilling this season to date on the SIB claims situated in the Eskay Creek area of northwestern British Columbia. Significant gold values, ranging from 3.4-17.1 g/t of gold, were obtained in five holes previously reported (*MJ*, September 6, p.168). Anomalous values in the range 0.3-2.2 g/t have been obtained in a further 19 holes.

Pending receipt of the assays on the last 19 holes, and correlation of this season's drill-hole data with detailed geological mapping on the surface, drilling was suspended in early September. However, diamond drilling was scheduled to resume to test a mineralized shear-zone, hosted in the Betty Creek gold formation in the southeastern area of the claims. This was identified by surface geochemical surveying in conjunction with geological mapping. Silver Butte and partner, American Fibre Corp., anticipate receiving the joint venture's geological consultant's report on this summer's programme shortly.

Schumacher Encouragement

Surface drilling on Royal Oak Mines' wholly-owned Schumacher mine (formerly known as the McIntyre mine) near Timmins, Ontario, has led the company to examine existing mine data for new gold exploration targets. Drill testing of the crown pillar of the Schumacher copper zone, which produced 9 Mt of copper ore containing 0.62% copper, has intersected copper mineralization and confirms the existence of a gold zone south of the copper zone. Underground access can be obtained through the existing facilities at the mine-mill complex, which is currently on a stand-by basis.

Samatosum Extension?

Minnova Inc. and Rea Gold Corp., 70:30 partners in the Samatosum silver mine near Barrière in British Columbia, report high gold values for hole U1290-01. This hole intersected 14.7 m of semi-massive to massive sulphides from 47.6 m depth grading 6.6 g/t gold, 213 g/t silver, 0.62% copper, 4.55% zinc and 2.45% lead, and represents virtual true thickness.

Diamond drilling of this new gold zone, discovered in April 1991, started after development of the underground access

got underway. The new zone is about 50 m below the current development. Commercial production from the mine began from an open pit in July 1989 at 422 t/d and is currently operating at 500 t/d with ore supplied from the open pit and the underground mine. The new zone will in all probability extend the life of the mine where current reserves are due to be mined out in 1992.

Twin Hills Evaluation

Plutonic Resources Ltd reports that recent drilling on the Twin Hills property has upgraded its potential. The property is located 210 km southeast of Charters Towers in central Queensland and is the subject of a joint venture between Plutonic and Metana Minerals NL. Plutonic holds an initial interest of 30% but can increase that up to 51% by funding \$A4 million worth of exploration and evaluation work.

Since April, drilling has been conducted on two principal prospects, the Twin Hills and Lone Sister, which are located 8 km apart. Lone Sister has yielded the better results and the remainder of the drilling has been focused there. Hole LRCD 15 returned two significant intersections, an upper one of 18 m averaging 2.7 g/t gold and a lower one of 34 m averaging 10.7 g/t (high values cut to 30 g/t). The 34 m section averages 38.7 g/t uncut.

Mineralization at both prospects is of epithermal style and very preliminary metallurgical tests point to possible difficulties in extracting gold from the unoxidized primary mineralization. However, oxidized mineralization consistently yielded high gold recoveries, above 90%, at modest cyanide consumption. Substantial further drilling and metallurgical testing is required.

Ivan Feasibility Complete

Toronto-based Minera Rayrock announced recently that the feasibility study for its wholly-owned Ivan copper project in northern Chile had been completed by Kilborn Inc. (*MJ*, June 21, p.465). The project consists of three distinct oxide/sulphide copper deposits — the Ivan, Zar and Emperatriz — and combination of these will provide the opportunity to commence a heap leach operation with subsequent underground development of the high-grade Ivan sulphide and oxide zones. The development plans call for a heap leach plant to process oxide copper at a rate of 420,000 t/y with an annual capacity for cathode production of 8,000 t of copper. In years

three and four, development work is planned for underground mining and the construction of a concentrator to treat the sulphide ore at a maximum rate of 216,000 t/y producing up to 20,000 t of 45% copper concentrates. Costs for underground development and concentrator are estimated at \$9.5 million.

The study indicates total initial costs of \$20 million and operating costs of \$0.63/lb of copper including all shipping and smelter costs. Annual cash flow from operations is estimated to average \$9.4 million at current copper prices. Proven and probable mineable reserves of 4.3 Mt grading 2.5% copper were also confirmed by the study, indicating a mine life of 8.6 years. Additional proven and probable reserves, not included in the initial mining plan, are likely to extend the operating life to at least 10 years.

According to Minera Rayrock, the results of the feasibility study justify a production decision, subject to the arrangement of appropriate financing. Development of the Ivan property is expected to begin in early 1992 and take approximately 11 months to complete.

Sons Of Gwalia Extension

Sons of Gwalia has acquired a substantial group of tenements surrounding and extending along strike from its Sons of Gwalia gold mine at Leonora, Western Australia. They were acquired from City Resources (WA) Pty Ltd and encompass part of the depth extension of the mine together with about 70 km of prospective ground along the Leonora shear zone.

These tenements are largely subject to an existing joint venture with Grants Patch Mining Ltd under which each party has a 50% interest in any viable mineral deposit discovered. This joint venture has been operating for three years and to date a total resource of over 1 Mt of ore grading 2.6 g/t gold has been outlined in several deposits.

Underground Work Planned On Elk Property

Fairfield Minerals Ltd has completed the 1991 drilling programme at the Siwash North gold deposit on its wholly-owned Elk property in southern British Columbia. A total of 6,580 m in 37 holes has provided sufficient data to allow the project to proceed to underground exploration and development, currently planned for next year.

A total of 107 holes (12,500 m) have been drilled at Siwash since 1989, of which 29% (31 holes) have returned fully diluted assays over 2 m true width greater than 6.8 g/t gold and 24% (26 holes) greater than 10.3 g/t gold. Drilling to date has traced the system along a strike length of 915 m and to a depth of 300 m down dip. At least five high grade gold shoots have been indicated.

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