



## MINFILE NTS 104B – ISKUT RIVER

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**The Iskut River map area is situated in the northwest part of the province and contains 391 documented mineral occurrences.** The map sheet straddles the northwest trending boundary between the Coast and Intermontane tectonic belts and is within the Boundary Ranges physiographic region. The map area is one of the most intensely explored in the province.

The map area is underlain by the Paleozoic Stikine assemblage, the Triassic Stuhini Group and the Upper Triassic-Lower Jurassic Hazelton Group. These have been intruded by the Late Triassic-Early Jurassic Texas Creek Plutonic Suite, Eocene Hyder Plutonic Suite and younger Miocene? lamprophyre dikes. Mineralization appears to be associated with Hazelton Group volcanic rocks and related coeval intrusions. Exploration has focused on gold-enriched porphyry copper deposits, polymetallic massive sulphide deposits (volcanogenic and seafloor hydrothermal) and epithermal precious metal veins.

The Stewart gold camp has a long history of production and exploration. Grassroots programs were carried out for porphyry-related Red Mountain-type and Snip-type gold deposits. The **Premier** (104B 054) gold mine operated as an underground mine in 1993, also treating about 50,000 tonnes of stockpiled ore from the earlier open pit. Mining was from two main areas, the **Northern Lights** (104B 053) and the Glory Hole zones. Production in 1994 of 4-level and 450-sublevel ore through the 6-level portal at approximately 180 tonnes per day is expected to continue at least through 1995. An additional 450 tonnes of mill feed per day is from other areas of the mine. Proven and probable reserves as of January 1, 1997 were estimated at 350,140 tonnes grading 7.19 grams per tonne gold, 37.7 grams per tonne silver and 1.6 per cent zinc. During the period between early May and early November 1991, 102,502 tonnes of ore were shipped from the **Silver Butte** (104B 150) mine to the mill at the Premier mine. In 1993, an aggregate 2647 dry tonnes from underground development ore was milled in two batches through the Premier mill. In 1994, 168 metres of sub-drifting and 3507 metres of underground drilling were completed on the Kansas/West Kansas zone; a total of 1481 tonnes of development material from the sub-drifting was processed through the Premier mill. The in situ undiluted geological reserves for the Kansas/West Kansas zone over 295 metres of strike length are estimated at 1,774,000 tonnes grading 2.2 grams per tonne gold. A significant past producer in the camp was the **Granduc** (104B 021) mine.

In the Sulphurets area, drilling continued at the epithermal gold-silver **Sulphurets (Bruceside)** (104B 193) project. Deep drilling tested the **Gossan Hill/Tommyknocker** (104B 190) zones; areas with open intersections of mineralization in the **West and Shore** (104B 189) zones; and the up-dip extension of the R8 structure of the West zone at its eastern end. Exploration to date has identified over forty zones of gold-silver mineralization including the West zone, where geological reserves are estimated at 750,000 tonnes grading 15.4 grams per tonne gold and 647.8 grams per tonne silver. A Mine Development Certificate renewal was issued for the Sulphurets (Bruceside) project in August 1994. Another important deposit is the porphyry copper-gold **Kerr** (104B 191) with 135 million tonnes grading 0.76 per cent copper and 0.34 gram per tonne gold.

In the Iskut River gold camp, underground drilling at the **Snip** (104B 250) gold mine continues to add tonnage to reserves. Mining is currently being conducted between the 180 and 470-metre levels; extensions are planned upwards to the 580 and 600-metre levels over the next two years. Exploration is currently focused on the east part of the vein system, above and below the 180-metre level. The mine continues to be an extremely profitable, low-cost operation and is the largest producer of gold in the province. Proven and probable reserves are estimated at 334,720 tonnes grading 24.7 grams per tonne gold as of January 1, 1997. The **Johnny Mountain** (104B 107) gold mine was engaged in pre-production from January through to November of 1988. The mill began operation in August and commercial production was achieved on November 1, 1988. The mine closed in mid-August of 1990 and milling operations ceased in early September. High operating costs and low gold prices were significant factors in the closure. In the last half of 1993, the mine was re-opened and produced 247 kilograms of gold and 482 kilograms of silver from 21,850 tonnes of ore at an average daily throughput of 350 tonnes. The mine did not re-open in 1994. Estimated reserves as of January 1, 1994 were 24,000 tonnes grading 11.3 grams per tonne gold, 22 grams per tonne silver and 0.23 per cent copper. Exploration continued at the **Bronson Slope** (104B 077) property where there is a mineral inventory of 76 million tonnes grading 0.44 gram per tonne gold, 0.162 per cent copper, 2.747 grams per tonne silver and 0.007 per cent molybdenum. A drill-indicated probable and possible mineral

resource of 22 million tonnes grading 0.207 per cent copper, 0.504 gram per tonne gold, 2.953 grams per tonne silver and 0.005 per cent molybdenum is contained within the larger resource. Another deposit of interest is the **Rock and Roll** (104B 377) massive sulphide deposit with preliminary reserves within a 700 metre portion of the Black Dog horizon amounting to 580,544 tonnes grading 2.4 grams per tonne gold, 335.9 grams per tonne silver, 0.64 per cent copper, 0.79 per cent lead and 3.08 per cent zinc.

On the eastern fringe of the Iskut River gold camp lies the new **Eskay Creek** (104B 008) high-grade gold-silver mine. During 1994 the access road to the mine area and construction of minesite facilities was completed by fall. Pre-production work started in October and underground mining began in November. Ore will be moved to load-outs in December and the first shipment of ore is scheduled for January 1995. The direct shipping ore will be crushed and blended at the mine and then moved by rail from Kitwanga to Noranda's Horne smelter in Quebec, and by sea from Stewart to Dowa Mining's smelter in Japan. As of January 1, 1998, proven and probable reserves were 1,356,240 tonnes grading 58.05 grams per tonne gold and 2684.57 grams per tonne silver, with zinc and copper values. Eskay Creek will become the fourth largest silver producer in the world and will be the first new metal mine to open in western Canada in several years.

### **SELECTED REGIONAL REFERENCES (NTS 104B – ISKUT RIVER)**

Edwards, B.R.; Anderson, R.G.; Russell, J.K. et al (2000): Quaternary Hoodoo Mountain Volcanic Complex and Paleozoic and Mesozoic basement rocks, parts of Hoodoo Mountain Craig River map areas, northwestern British Columbia. Geological Survey of Canada, Open File 3721.