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OVERSEAS TRAVEL REPORT STUDY LEAVE IN CANADA

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NEW ZEALAND GEOLOGICAL SURVEY

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were analysed for oxygen isotopes at the University of Alberta and an additional 14 have been submitted and will be analysed later this year. Several samples were submitted to the Geochronology Section of GSC in Ottawa, for separation of zircons and U-Pb dating.

Reports: A paper reporting results from the fieldwork was orally presented at the Yukon Geoscience Forum and Cordilleran Roundup, and a poster describing the deposit was displayed at the Cordilleran Roundup conference.

Future work: Follow-up petrography and analytical work, and writing of papers for publication.

CINOLA EPITHERMAL GOLD-SILVER DEPOSIT, GRAHAM ISLAND, QUEEN CHARLOTTE ISLANDS, BC

Status of deposit: Exploration, consisting of 323 DDH, totalling 39,594 metres, and 586 metres of underground workings, was completed in early 1987 and defined mineable reserves of 23.8 million tonnes at 2.45 g/t Au at a cutoff grade of 1.1 g/t Au. Application for a permit to open-pit mine the deposit was made in June 1988. During July to October 1988 a 49 hole diamond drilling programme was carried out for geotechnical investigations and the exploration of peripheral areas.

Funding: CAN$ 4,000 from the Geological Survey Branch of the British Columbia Ministry of Energy Mines and Petroleum Resources.

Logistical support: City Resources (Canada) Limited provided camp facilities and access to their technical data.

Description of Deposit:

The Cinola gold-silver deposit is located on Graham Island of the Queen Charlotte Islands, BC (Fig. 1). The mineralisation is localised near the Specogna Fault and hosted by Late Tertiary coarse clastic sediments (Skonun Formation), Late Cretaceous shale (Haida Formation), and an intrusive porphyritic rhyolite stock (Fig. 2). Rocks within the ore zone are extensively silicified (quartz, adularia and pyrite) and flanked to the east by a zone of argillic alteration (kaolinite,

quartz, and pyrite). Overprinting and leaching textures record local changes in the hydrology and hydrothermal fluid type. Stockwork, asymmetrically multibanded, symmetrically simple banded, and breccia veins occur and contain a variety of different silica types and late calcite. Hydrothermal brecciation occurs as silica cemented crackle and mosaic breccias of Haida mudstone and intrusive rhyolite, and as silica-cemented, matrix-supported, heteromictic breccias. The heteromictic breccias are concentrated in an elongate, steeply dipping zone in the hanging wall of the Specogna fault. Pyrite and marcasite are the dominant metallic minerals. Rutile, magnetite, hematite, and pyrrhotite are less common. Gold occurs as native gold and electrum which are rarely visible. No silver minerals other than gold-silver alloys (electrum) have been identified in the deposit. Rare and very rare sphalerite, chalcopyrite, galena, cinnabar, stibnite and tiemannite occur in quartz veins.

Work done: Fieldwork (33 days) consisted of relogging and sampling drillcore, and mapping and sampling the exploration adit. Samples representative of different lithologies and types of hydrothermal alteration were selected and submitted for XRD and XRF analysis to the GSC Ottawa laboratories. Some preliminary results have been received. A suite of fifty samples for oxygen isotope analysis were submitted to Bruce Taylor at GSC, Ottawa.

Reports: A paper reporting results of the fieldwork was published in tne BC Ministry of Energy Mines and Petroleum Resources publication Fieldwork 1988 (Christie 1988; Appendix 4), and a poster describing the deposit was displayed at the Cordilleran Roundup conference.

Future work: Follow-up petrography, fluid inclusion and analytical work, and writing of a paper for publication.

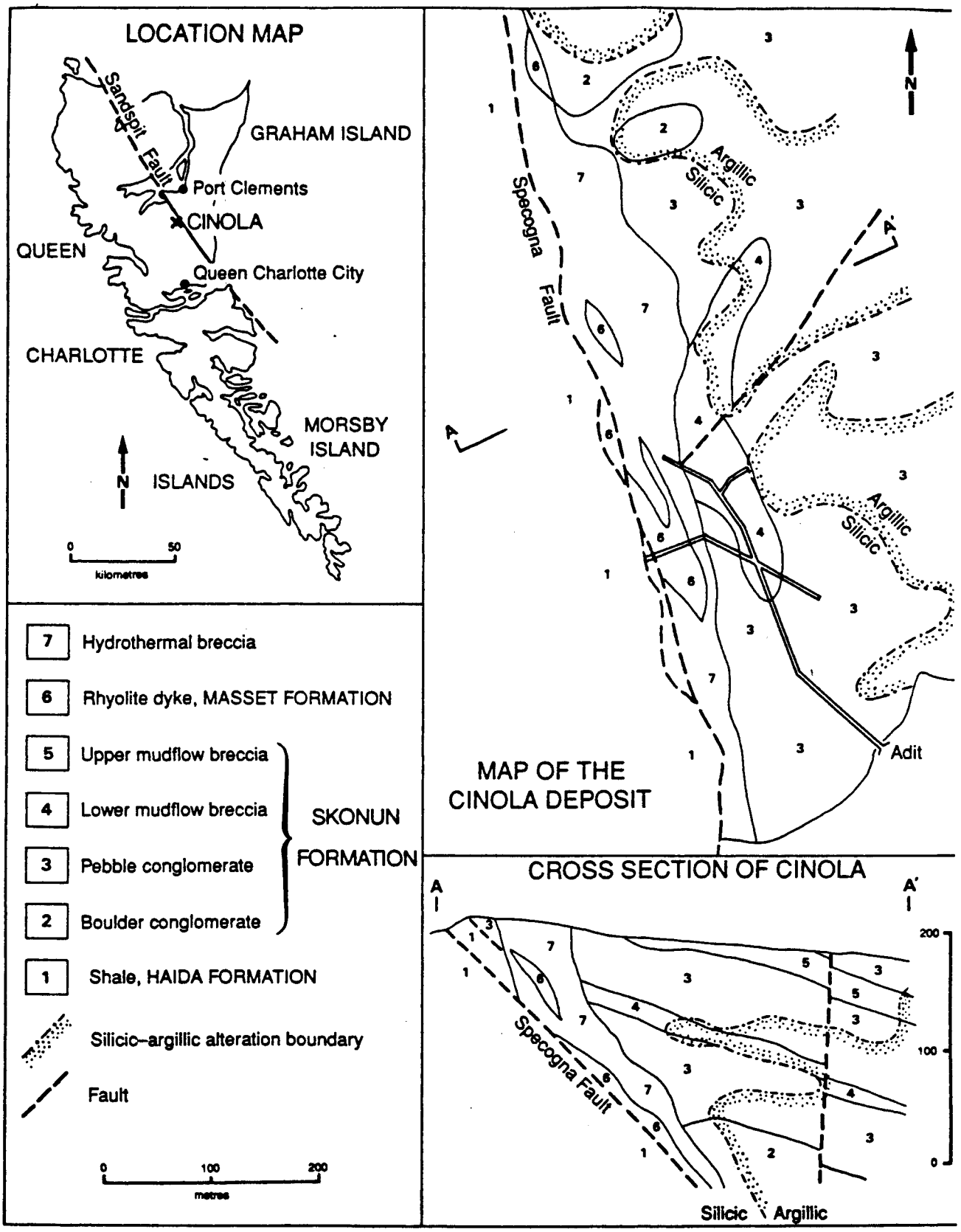

Fig. 3: Location map, and geological map and cross-section of the Cinola epithermal gold-silver deposit, Queen Charlotte Islands, BC.