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-> Bonaparte

TECK EXPLORATIONS LIMITED

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BONAPARTE GRABEN PROJECTS

TARGET: Epithermal precious metal mineralization.

LOCATION: South central B.C. West of highway 97 between Cache Creek and Clinton.

OWNERS: Teck's land holdings of 145 km² or 14,500 hectares, are divided into three projects. The Maiden Creek and Trac Projects are options, while the Bonaparte Project is 100% Teck owned.

GEOLOGY: The Projects cover about 75% of the Bonaparte Graben of the Cache Creek Terrane, and are bounded by rocks of the Cache Creek and Quesnel Terranes.

In the west is the Permian to Triassic Marble Canyon Formation (central belt of the Cache Creek Complex) of massive limestone interbedded with minor ribbon cherts, argillites, tuffs and volcanic flows (Cache Creek Terrane).

In the northeast is the Pennsylvanian to Triassic eastern belt of the Cache Creek Complex of cherts, phyllites, schists, argillites, basalts and minor carbonates (Cache Creek Terrane).

In the south and southeast is the western facies of the Triassic to Jurassic Nicola Group of pyroclastics and flows, argillites and sandstone (Quesnel Terrane).

In the southwest are Tertiary argillites and graphites (Cache Creek Terrane).

The graben contains Cretaceous alluvial fan sediments which dip to the E and W from a central core of Nicola Group volcanics. They have a proximal fan facies in the north and distal fan facies in the south indicating a northern source. The sediments are deposited as plane beds in alluvial channels by continuous sediment transport in the Upper Flow Regime.

In the SW the sediments are unconformably overlain by a Cretaceous arid cobble conglomerate.

The graben sediments were intruded by Eocene quartz latite and rhyolite domes and dykes.

MINERALIZATION: Sulphides and oxides are located in the Nicola Group volcanics.

WORK TO DATE: Heavy mineral sampling in 1987 and 1989 by Discovery Consultants (results 55-56,800 ppb gold in the -150 mesh non-magnetic fraction). In 1990 by Teck Exploration Ltd. completed mapping and fill in heavy mineral sampling (results 99-204,000 ppb gold in the -150 mesh non-magnetic fraction). Three of the heavy mineral gold anomalies were followed up by geochemical and geophysical (magnetometer and VLF-EM) surveys.