

Lane July 96

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deposit on the property. Potential problems are northerly trending block faults that may have significantly disrupted the continuity of the deposit.

KEMESS SOUTH

Owner/Operator: Royal Oak Mines
Project Geologist: Jacques Houle

Visited: Tuesday, July 30, 1996
Accompanied by: Larry Diakow
and Paul Metcalfe

The Kemess South porphyry Au-Cu deposit does not crop out. Fortunately, two bulk test pits excavated last year, allowed us to procure samples from both the hypogene and supergene zones. The deposit is hosted by the Maple Leaf intrusion, a flat-lying sheet of quartz monzodiorite, ranging in thickness from 75 metres to over 290 metres. The deposit is 1700 metres long by 650 metres wide and is oriented in an east-west direction. Hypogene mineralization is largely fracture controlled. Pyrite, chalcopyrite and local traces of molybdenite occur with quartz in veinlets, many of them sub-horizontal, and stockworks that typically have narrow k-feldspar envelopes. The host rock is propylitically and argillically altered resulting in a favourable, low work index for the ore. Fractures, less than 1 mm wide, with pyrite and traces of chalcopyrite, cut the quartz-bearing veinlets and the alteration.

Supergene ore constitutes approx. 20 % of the geological gold and copper resource. Its mineralogy consists of native copper, rare chalcocite and bornite, set in hematite, clay, sericite and carbonate-altered rock. Quartz stockworks are also evident. The zone has a conspicuous red colour due to an abundance of fine-grained carthy hematite.

We flew up to the Kemess North zone and looked at the rocks that host the deposit. Most of the ridges surrounding the gossanous area are underlain by grey dacite, part of the Toodoggone volcanics (193-195 Ma) that are more typical to the north. They are cut by numerous QFP dikes oriented ~140°, some of which are very pyritic and strongly Fe-oxidized, and one of which occurs along the Toodoggone-Takla Group contact. A small, coarse-grained quartz porphyry intrusion also cuts the Takla and Toodoggone volcanic packages on the back of cirque that hosts the deposit. It exhibits quartz veins and drusy cavities and traces of pyrite mineralization. Its relationship to the main mineralizing event at Kemess North is not known.

JD

Owner/Operator: AGC Americas Gold Corp.
Project Geologists: Paul Hawkins, John Pukas

Visited: Wed., July 24, 1996
Accompanied by: Larry Diakow

The company is currently conducting an aggressive diamond drill program on its wholly owned epithermal Au-Ag vein prospect in the northern Toodoggone. The purpose of the drilling program is to expand the dimensions of the Finn zone and determine its relationship to other nearby zones (i.e. Gumbo and Gasp!). At the time of our visit, 38 holes had been drilled, bringing the total on the property to 170. The Finn zone has been traced, by drilling, over a strike length of more than 350 metres in an easterly direction, and averages approx. 9 metres in thickness. It has been interpreted to have a shallow to moderate north-northeast dip. Host rocks are green to maroon flows, breccias, tuffs and epiclastic rocks belonging to the Metsantan Member of the Toodoggone Volcanics. Mineralization is of two types: typical epithermal mineralization consisting of weakly banded chalcedonic quartz veins with traces of sulphides, including pyrite, galena (and fribergite), sphalerite and chalcopyrite, as well as native gold and wire silver, and; semi-massive to massive sulphide veins, up to 5 metres wide, grading 8.8 gpt Au, 89.5 gpt Ag, 0.25% Cu, 1.7% Pb and 4.47% Zn. Pyrite is typically finely disseminated throughout the wallrocks. Footwall rocks have