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CASSIAR YUKON GOLD MINES LTD. (N.P.L.)

Report by Joseph T. Mandy, M.E., Ph.D.

Consulting Mining Engineer and Geologist

The mineral claims and placer-gold leases controlled by the Cassiar Yukon Gold Mines Ltd. are located in the McDame Creek Valley, Cassiar area of the Stikine Mining Division, in the Province of British Columbia, Canada.

The ground controlled by the Company comprises lode mineral claims embraced by Quartz creek canyon, near the junction of Quartz Creek with Trout and McDame Creek, and also placer-gold leases in the same area astride the gold-bearing old-channel of McDame creek.

All the known important mineral deposits of western, north-western and north-central British Columbia are related in origin to the great Coast Range granodiorite batholith and its satellite batholiths, especially the eastern margin aureole or contact-zone of these batholiths.

The most important satellite batholith is the so-called Omineca-Cassiar batholith which parallels the Coast Range batholith about 130 miles to eastward. It strikes northwesterly through the gold-bearing area of the Cariboo mountains, the richly-mineralized area of the Babine mountains, Omineca river, Stikine mountains and Cassiar range. The eastern contact or aureole of this batholith is a richly mineralized zone over 500 miles in length. It has been generally very meagerly prospected.

In the southerly section where most of the prospecting has been done several important and productive mineral deposits, especially gold - both lode and placer - have been discovered. The belt contains the historically famous and rich placer-gold areas of the Cariboo, the Omineca river and the Cassiar. The northern area which includes the McDame Creek area has as yet been very imperfectly prospected.

The McDame Creek area, is in the Cassiar which derives its name from "Kasha" the Kaska Indian name for McDame Creek. This creek has produced about $2,000,000 (recorded) in placer gold, mainly from small individual shovelling operations in

shallow gravel. The largest gold nugget found in British Columbia was discovered at McDame creek in 1877 and at that time was valued at $1300.

The original placer-gold production was mainly from areas of the mouths of the tributaries flowing into McDame across the deeply buried old-channel of the creek, from which the gold was washed down by the cross-creeks.

* The McDame Creek valley occupies a very favourable geological location and extends easterly from the eastern contact of the Cassiar batholith, the mouth of Quartz creek being about 6 miles east of this contact. This contact can be seen near the mouth of the Cottonwood river plunging steeply eastward beneath Ordovician and Permian sedimentary and volcanic rocks of the area. The upper McDame creek area, embracing Quartz Creek is definitely within the mineralized eastern contact-aureole of the Cassiar batholith. *

A phenomenal occurrence of quartz veins and lenses of generally appreciable widths is found in andesite and augite porphyry in the headwaters section of McDame Creek. The veins appear to be mainly localized in the andesite at or near the contact of this rock with dacite and augite porphry. These veins are very probably the main source of the placer-gold occurring in the McDame Creek area. It is most indicative that up-creek from these veins, no placer-gold of any importance has ever been discovered.

The known quartz vein systems occupy three parallel fracture zones striking north-easterly, each several hundred feet wide and about 2 miles apart. The central vein system is the most extensive of the three zones. It outcrops about 3 miles up Snow creek, crosses the canyon of Quartz creek at its confluence with Trout creek and continues for about 3 miles south-west of Quartz creek canyon, a total distance of about 5 miles.

The quartz outcrops are generally excessively leached and honeycomb-structure and angular cavities suggest the original occurrence of more sulphide minerals than is indicated by the sparse occurrence of pyrite and tetrahedrite. Particles of fine and coarse native gold are sometimes seen in the honey-combed quartz generally associated with residual iron oxide, indicating a previous association of gold with pyrite. On bed-rock of the upper section of Quartz Creek canyon a wide shear-zone sparsely mineralized with fine pyrite and acicular arsenopyrite, resembling the gold-bearing mineralization at the Polaris Taku mine, assayed 0.10 oz. gold per ton across a width of 15 feet.

The quartz vein and lense network in Quartz Creek canyon, from which the creek derives its name, is truly remarkable and is embraced by Cassiar Yukon Gold Mines Ltd. In the canyon the quartz veins outcrop across a width of 700 feet along

both walls of the canyon. About one third of the total width of this exposure is quartz. About 75 per cent of the lower 200 feet is composed of quartz. Individual quartz veins are from 5 to 15 feet wide and are connected by cross-cut stringers. Fine gold can be panned from oxidized talus at the canyon bottom. Fine gold can also be panned from oxidized faces, vugs and crevices in some of the quartz veins; some of this may be trapped gold originating higher up. Selected samples of quartz containing small blebs of grey copper occurring towards the central section of the zone assayed: 0.20 oz. gold per ton and 80 oz. silver per ton.

It is recommended that this remarkable showing of quartz veins be explored by a comprehensive programme of diamond-drilling.

The placer-gold leases controlled by Cassiar Yukon Gold Mines Ltd. covers the gold-bearing old channel of McNamo Creek which can be clearly seen to cross Quartz Creek just above the canyon. In this section David Wing, with a small and quite inadequate hydraulic equipment, incapable of cleaning bed-rock, has recovered fair gold values over a period of several years. Some drifting on bed-rock in the same area by individuals in the early days is reported to have returned high gold values. Both the up-stream and down-stream extensions of the old-channel above and below Quartz Creek have never been adequately explored or tested. It is recommended that this be carried out by Keystone drilling, also by recovery, using modern drag-line equipment where the old-channel is already exposed at the point it crosses Quartz Creek.

The McNamo Creek area is now easily accessible by means of the Alaska-Yukon Highway and a recently constructed connecting road.

Respectfully submitted,

(Sgd.) "JOSEPH T. MANDY"

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