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COMMENTS PLEASE

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NORTHERN AFFAIRS PROGRAM

Geological Report on the

KELLI claims

T.J. Bremner (DIAND)

July, 1987

KELLI Gold vein/porphyry
L. Tremblay, D. Duensing, 115 6 12 (68,76)
R. Holway, R. Staley, 61 33'N, 139 37'W
D. Makkonen, G. Geiger
1987

Claims: KELLI 1-26, JOSIE 1-2, ROSE 1-6, BUY 1-12,
SELL 1-18, RENO 1-2

Reference: Read & Monger (1976)

Source: Mapping by T. Bremner based on a visit to the
property with L. Tremblay 26-29 June, 1987.

History:

in the canyon
from Coarse gold was mined on this tributary of Reed
Creek during the years 1934^{to} 1939. Hand mining in ~~the~~ canyon *on the creek*
was carried out by two miners and up to four helpers.
Another placer claim downstream of the canyon was worked at
the same time. Intermittent *sniping* followed the
establishment of the 1118 pumping station in 1952 *after the*
discovery *in 1952* that coarse nuggets were frequently found in the
canyon following heavy rain. L. Tremblay staked the KELLY
placer claims in 1982. L. Tremblay, D. Duensing and R.
Holway systematically mined the creek gravel upstream from
the canyon mouth to the first pup between 1982 and 1987.
The KELLI, JOSIE, ROSE and RENO quartz claims were added by
L. Tremblay and partners in 1986 and 1987. Associates
fringe-staked the property with the BUY and SELL claims,
also in 1986.

from
Extensive excavations *done* in the 1930's closely
follow the soft altered margins of large porphyry dykes
aligned parallel and perpendicular to the creek. The
present owners discovered pits, hand trenches and coyote
holes following the east bank upstream to the limit of
outcrop (attached map). Where they outcropped along the
creek, dyke margins had been mined away, exposing fresh
bedrock. At the canyon mouth, access trails and a wooden
staircase were constructed up the canyon wall following the
contact between a large dyke and limestone wall-rock which
trends southeast. Mixing of the volcanic ash and soil
layers on the canyon wall indicates the soil was thoroughly
worked. Two wheelbarrows discovered on site and stumps from
log-boom cranes show *at* that all of the excavating was done by
hand.

The present owners have successfully mined the
creek gravels for five years using three bulldozers, two
excavators and *shovel*. Three years of remaining placer
reserves are estimated. Depth to bedrock averages about 2.5
metres. So far the best gold values have been obtained
close to the large dykes, the highest reaching \$24.00/cubic

*What does the
pumping station
have to do with
gold?*

metre in the bowl within the first canyon. The ^{recovered} placer gold retrieved is coarse, with nuggets commonly 34 to 103g. The gold is highly angular with a wiry texture or ^{forms} as a foil partially wrapped around quartz or quartz-feldspar granules. An 85g nugget owned by D. Duensing is concave with clay-altered monzonite porphyry adhering to the inside. Nuggets of platinum and native copper are also fairly common in the sluice box, along with unusually high concentrations of magnetite and pyrrhotite.

The property was previously visited by R. Rogers (Noranda) in 1983 and by G. Bidwell (Hudson Bay) and J. Morin (DIAND) in 1986.

Description:

The probable source of the placer gold is a swarm of feldspar-porphyry ^{dykes} which may be correlative with a large copper and molybdenum-bearing porphyry intrusion exposed at the head of Burwash Creek (#12, CORK). This intrusion is Oligocene in age, yielding a K-Ar age of 26 m.y. (Read & Monger, 1974).

^{Most are} The dykes are mostly vertical, up to 6 metres thick and generally intruded along one of three main regional fracture trends, striking approximately 030, 110 or 150 deg. The thicker dykes commonly show chilled, flow-banded margins and evidence of multiple injection. On the west wall of the lower canyon, two diverging dykes are visibly linked by a ladder of cross-cutting thinner dykes and quartz-calcite veins. Most of the dykes are white to pink in colour with 2 mm clay-altered feldspar phenocrysts. Roughly equal quantities of white and pink feldspar in some of the coarser dykes suggest a quartz monzonite bulk composition. A few of the dykes contain randomly-oriented tourmaline needles about 15 mm long.

The wall rock consists of massive greenstone tuff and minor thin-bedded limestone and greenschist of the Pennsylvanian Station Creek Formation. Along the margins, the dykes are intensely altered to muscovite and clay, especially where ^{plus} intruded into limestone as at the canyon mouth. The marginal rock is a soft white schist made of a crudely-foliated matrix of muscovite and kaolinite surrounding a mass of round quartz or quartz-feldspar granules about 0.5 cm across. Within the altered rock occasional flakes of gold up to 2 mm long can be seen bent around the granules. L. Tremblay confirmed the presence of gold by crushing some of the rock in a mortar and panning several flakes of gold from the residue.

^{Gold assays have so far been low, however,} Previously, only green metavolcanic wall rock and hard quartz-carbonate vein material was ^{assayed}. The metavolcanic rocks are reported to contain up to 300 ppb

You might say something more about the general occurrence of these ^{not missing?} Are there many? Are they widespread? Or, there were them one age?

gold, i.e., are anomalous but not ore-grade. R. Carne and F. Gish (Ancher, Cathro & Associates (1981) Ltd) visited the property with T. Bremner on 30 June 1987, taking a suite of samples across the dyke at the canyon mouth and from the alteration zone along the dyke-limestone contact. These were sent for assay.

? Take out

Recommendations:

Assuming good assay results from the altered dyke margins, the consistency of the gold mineralization will have to be checked by bulk sampling and assaying, and the strike extent of the deposit will have to be established by trenching or soil geochemistry. The downdip extent could then be established by drilling.

Further sampling of the unaltered porphyry dykes should be undertaken to establish if there is any high-tonnage low-grade potential and to help identify any alteration zones not yet discovered.

Because of the good exposure, the softness of the ore material and the ease of distinguishing white ore material from green wall-rock, this property lends itself to development by the owners, who have a lot of the necessary equipment and manpower on site. A joint venture may be possible, with the owners performing the physical work and a mining company providing expertise and funding.

Because similar porphyry dykes underlie the GELL claims on the ridge to the east, and a prominent pink dyke crosscuts limestone at the head of the valley, the placer potential of the other Reed Creek tributary should be investigated. Additional placer reserves should be explored upstream of the existing KELLY placer claims, especially on the east fork.

^{or} Porphyry dykes probably also underlie the BUY claims and should be mapped and sampled.

Recommendations not appropriate for publication in this form.
Perhaps rephrase some parts.

LEGEND

OLIGOCENE

Of Quartz-feldspar porphyry dykes

up to 6 m thick, generally vertical. White or pink, monzonite composition. Larger dykes show chilled or flow-banded margins, multiple injection. Feldspar phenocrysts commonly altered to clay. Muscovite-clay alteration zones up to 2 m wide along margins of dykes exposed in creek canyon. Some dykes contain 15 mm x 1 mm tourmaline needles.

x Quartz-calcite-muscovite veins

associated with porphyry dykes

// 1930's excavations (dyke margins)

PERMIAN

Ps Hasen Creek Formation

Conglomerate, rounded pebbles up to 2 cm
Slate, dark grey

Pc Limestone

Thin-bedded to massive, 1 mm sand laminae. Limestone beds occur within both Ps and Pv units.

PENNSYLVANIAN

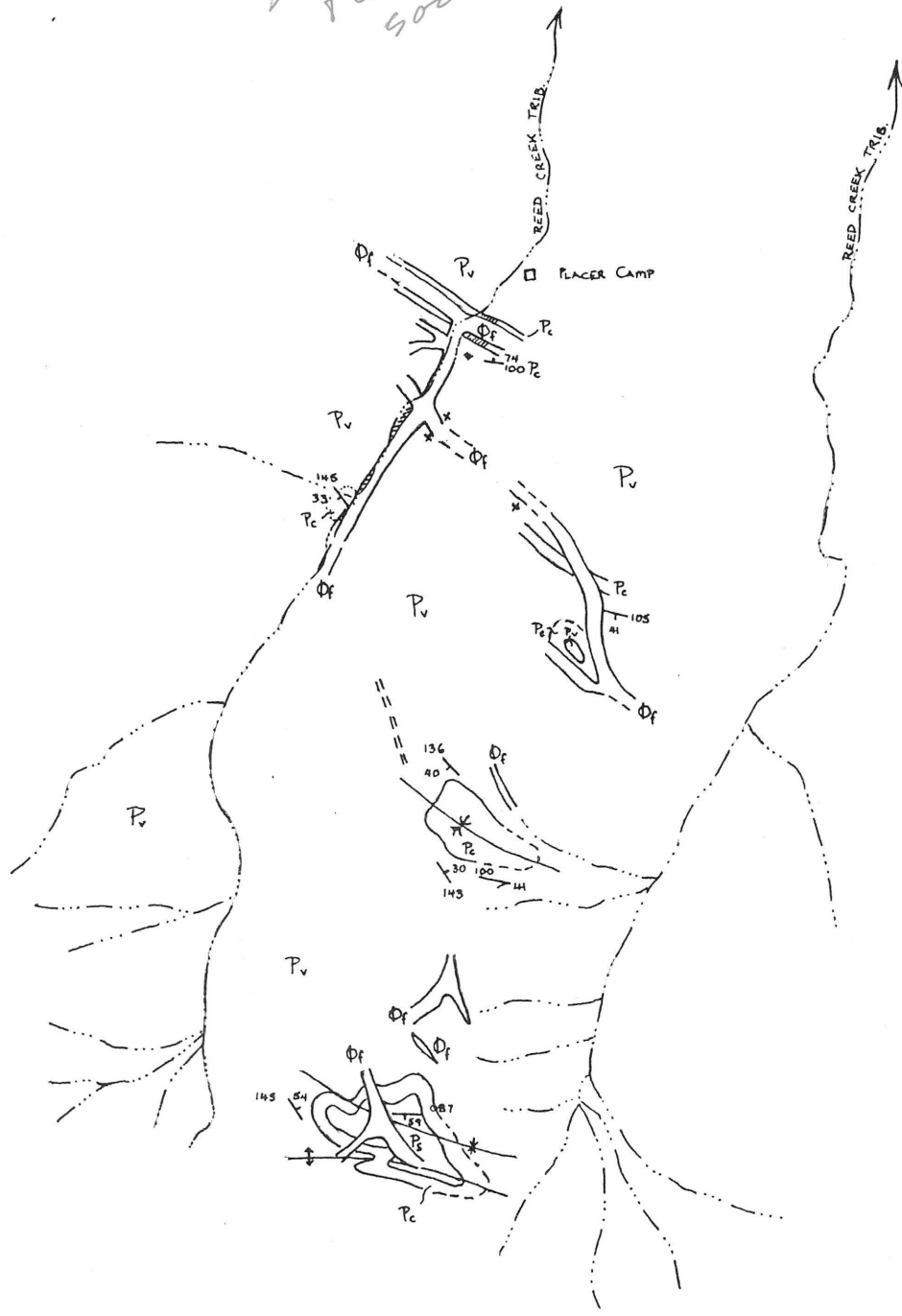
Pv Station Creek Formation

Greenschist, massive greenstone, light green siliceous tuff. Consists of metamorphosed lithic-crystal tuff and lapilli tuff.

You do not want see these rocks in the field.



show canyon
the somewhat



KELLI CLAIMS: GEOLOGY

Scale: 1:30 000

July 1987

+ 61 30' N
139 37' W

ROED CREEK: PLACER GOLD: PLATINUM RATIO

100 OZ PLACER GOLD: 8 OZ PLATINUM