

SUMMARY REPORT
ON
RED DOG CLAIMS
KINASKAN LAKE AREA B.C.

March 22, 1978

by G. A. Noel

CONSOLIDATED SILVER RIDGE MINES (RED DOG PROSPECT) 104-G-9
Kinaskan Lake Area Llard Mining Division. G. Noel B.C.
March 22, 1978.

FALCONBRIDGE NICKEL MINES LIMITED

INTER-OFFICE MEMORANDUM

DATE: October 4, 1978

TO: W. D. Harrison *W.D.H.*

COPIES TO:

FROM: S. N. Charteris

SUBJECT: RE: CONSOLIDATED SILVER RIDGE MINES LTD.
RED DOG PROSPECT - 104-G-9W B,C

Attached is a copy of G. Noel's preliminary report on the above prospect on the flanks of Mount Edziza near Kakiddi Lake. I tried to see the occurrences on September 22nd, 1978 but the crew had left and 4 inches of early snow covered the claims.

I received this report from Noel in Vancouver and discussed the 1978 program with him. He privately considers the mineralization to be related to the porphyritic granodiorite dyke and sees no obvious comparison to the Carlin-type of deposit. A detailed geological mapping was carried out together with a soil sampling program. Only every other sample will be analyzed - and only for gold. I doubt that they will be able to generate much further interest from the results of such a limited program - unless they get some spectacular results.

S. N. Charteris
S. N. Charteris

SNC:ols

SUMMARY REPORT

ON

RED DOG CLAIMS
KINASKAN LAKE AREA

LIARD MINING DIVISION
British Columbia

BY

G. A. Noel, P.Eng.

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SUMMARY

The Red Dog property, located 25 km. WNW of Kinaskan Lake in the Liard Mining Division, B. C., consists of two claim blocks comprising 17 units in total. The claims are owned by the Racicot Syndicate and are currently under option to Consolidated Silver Ridge Mines Ltd.

The property covers a section of Upper Triassic sedimentary and volcanic rocks which have been intruded by a granodiorite porphyry dike of Lower Jurassic age. The porphyry has been mineralized with disseminated pyrite and chalcopyrite. It was drilled in 1973 by Imperial Oil Ltd, but showed only very low copper values. Sections of the drill core were re-assayed in 1975 by the Racicot Syndicate and showed interesting gold values with the gold occurring as both disseminations and veinlets. The best section occurred in silicified siltstone and assayed 0.587 oz/ton over 9 meters.

Further investigation of the gold potential of the property has been recommended in a two-stage exploration program. The initial stage involves geological and geochemical surveys with a total expenditure of \$30,000.00. Contingent on encouraging results from the initial program a follow-up program of drilling at an estimated cost of \$110,000.00 is proposed.

INTRODUCTION

This report on the Red Dog claims in the Kinaskan Lake area, Liard Mining Division of British Columbia has been prepared at the request of Mr. D. McLeod, president of Consolidated Silver Ridge Mines Ltd.

The report is based on a brief examination of the property which took place on September 13, 1975, when the writer accompanied Dr. D. Drummond of Canex Placer Ltd. and Mr. Arnold Recicot, who secured the property for a prospecting syndicate (Recicot Syndicate) comprised of Canex Placer, El Paso Mining and Milling Company and himself.

The purpose of this report is to review the data in order to determine if further exploration work is warranted and, if so, to recommend a program for testing the potential of the property and to present a realistic cost estimate.

LOCATION

Map Location: 57°41.3' North; 130°29.5' West; NTS 104 G9W

The Red Dog claims are located about five kilometers southwest of Nuttlude Lake and 25 kilometers west-northwest of Kinaskan Lake on an eastern spur of Mt. Edziza. The property is about 35 kilometers west-southwest of Eddontenajon the nearest settlement on the Stewart-Cassiar road.

The property can be reached from Eddontenajon, Telegraph Creek, or Dease Lake either by float aircraft to Nuttlude Lake, or by helicopter directly to the claims. A good trail extends from the west end of Nuttlude Lake to the property.

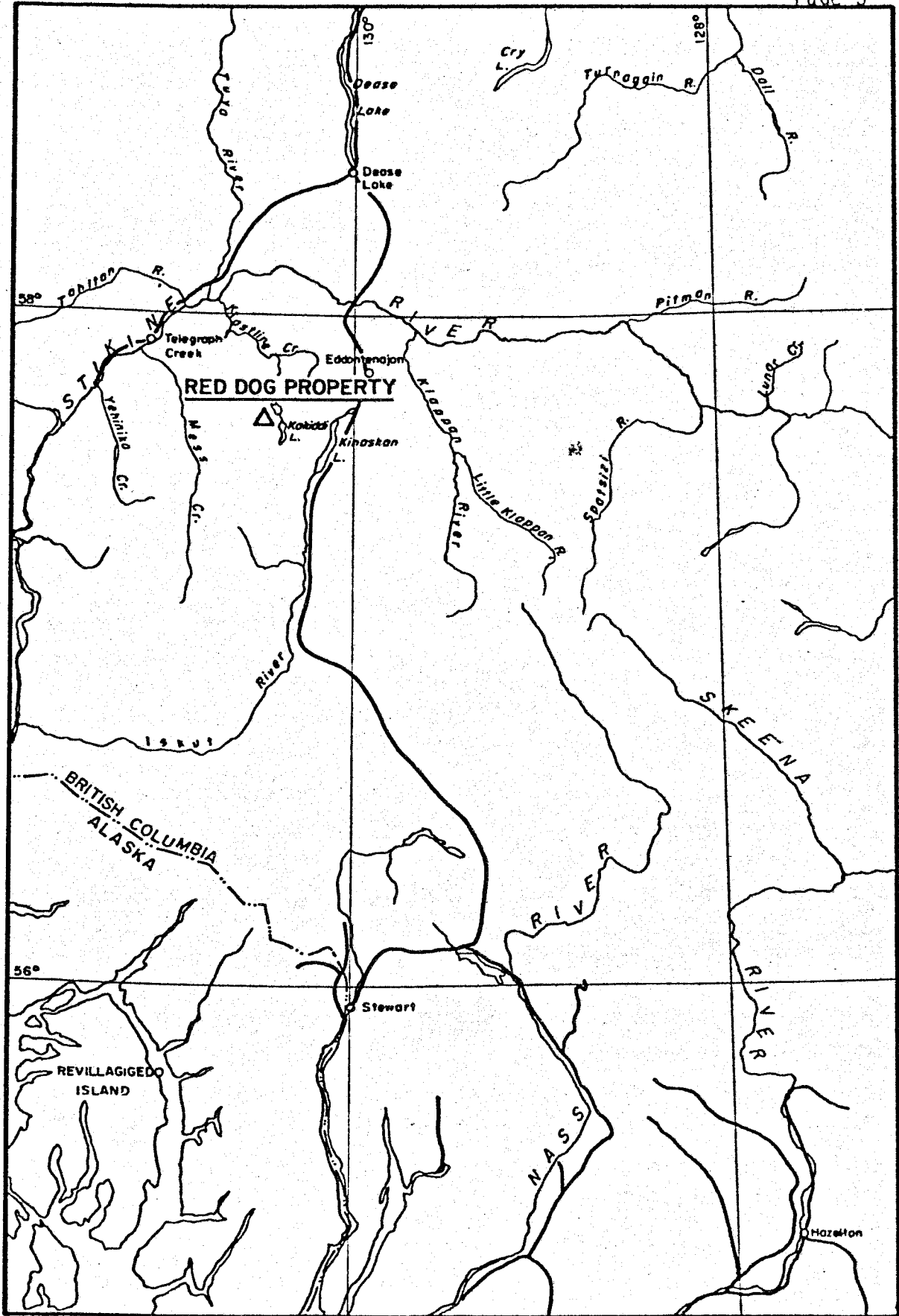


FIGURE 1
LOCATION MAP
RED DOG PROPERTY
KINASKAN LAKE AREA - LIARD M.D., B.C.

0 20 40 60 80 100KM.

SCALE 1:100,000

TOPOGRAPHY

Nuttlude Lake and Kakiddi Lake, immediately to the south, lie along a broad glaciated valley between Tahltan Highland on the west and Klastine Plateau on the east. Tahltan Highland in this area consists of the Spectrum Range which is dominated by young volcanic domes, the most impressive being Mt. Edziza which reaches 2,787 meters elevation. Klastine Plateau is a moderately dissected rolling upland showing remnants of a Tertiary erosion surface.

The terrain in the vicinity of Nuttlude Lake, therefore, rises rapidly to the west from the valley bottom at 780 meters to the north-trending ridge line of the Spectrum Range at about 2,000 meters elevation. To the east, the gradient is more moderate to the plateau summit at 1,500-1,600 meters elevation. Timberline in the area is about 1,400 meters above sea level.

The area is part of the drainage basin of the Stikine River. The streams show a rectilinear pattern reflecting geological structure (Souther, 1972) with north-south major valleys and east-west to northeast-southwest tributaries.

PROPERTY AND TITLE

The property consists of two Red Dog claims, Red Dog #1 consisting of two units, recorded on September 30, 1975; and Red Dog #2 consisting of 15 units, recorded on April 9, 1976. The Red Dog #2 claim overlies Red Dog #1 claim.

The Hawk #1 claim consisting of 18 units and the Hawk #2 claim consisting of 20 units were staked on February 17 and 18, 1978 to the north and east respectively of the Red Dog #2 claim by M. Bratlein and H. TysseLand for High Hawk Mines Ltd. These claims, which are located in the Liard Mining Division, B. C., are shown on Figure 2 and are more particularly described below.

<u>Claim</u>	<u>Number of Units</u>	<u>Record No.</u>	<u>Renewal Date</u>
Red Dog #1	2	53	Sept. 30, 1978
Red Dog #2	15	116	April 9, 1978
Hawk #1	18	Tag #37304	Feb., 1979
Hawk #2	20	Tag #37305	Feb., 1979

HISTORY

In 1957 Torbrit Silver Mines Ltd. staked 17 mineral claims (Kakiddi, Klastline and Skyline Groups) on a gold-silver discovery 2-1/2 kilometers west of Nuttlude Lake. Torbrit completed a geological mapping and sampling program on the property in 1957 and retained the claims for several years. The property was held as the Kona claims in the 1960's and it is reported that some drilling was done. However, there is no published record of the claims or of work done since 1957. From claim maps of the area (104 G9W), the ground has apparently been held intermittently to the present.

The Spectrum claims were staked in 1970 by Spartan Explorations Ltd. to cover a porphyry-type copper discovery about five kilometers northwest of Kakiddi Lake. Mitsui Mining and Smelting Company Ltd. undertook geological mapping and geophysical and geochemical surveys in 1970, but

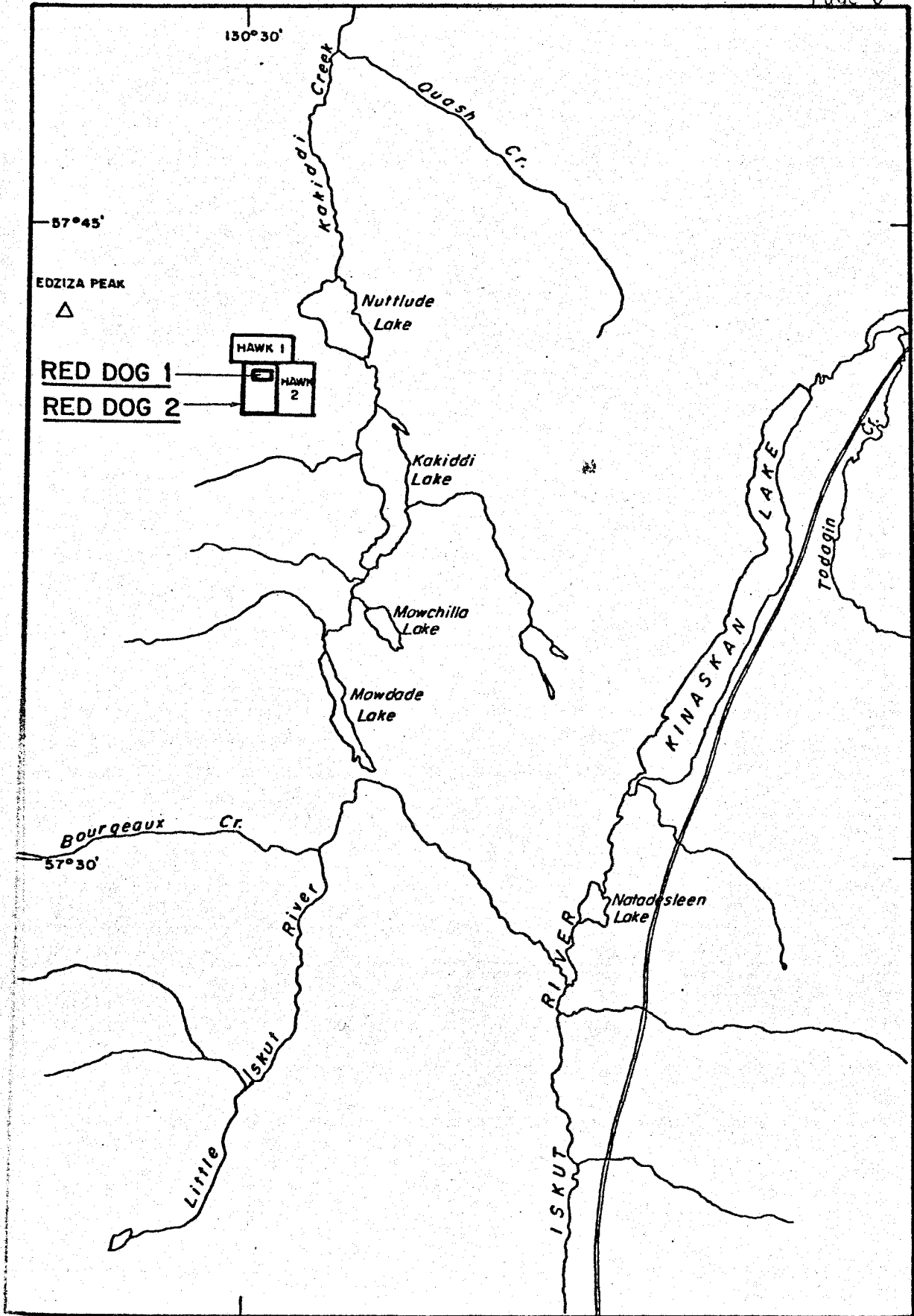


FIGURE 2
CLAIM MAP

RED DOG PROPERTY
KINASKAN LAKE AREA - LIARD M.D., B.C.

0 5 10 15 KM.

SCALE 1:250,000

did not proceed further. Imperial Oil Limited then optioned the property in 1971 and completed additional geological, geochemical and geophysical surveys followed by 450 meters of BQ drilling in four holes in 1973. Imperial Oil relinquished their option at the end of 1973.

The Red Dog claim was staked by D. Drummond for the Racicot Syndicate (Canex Placer Ltd, El Paso Mining and Milling Company and Arnold Racicot) on September 13, 1975.

GEOLOGY

General

The area west of Nuttlude Lake is underlain by Upper Triassic strata comprising sedimentary and volcanic rocks. The sedimentary section consists of thick-bedded volcanic agglomerate, greywacke, grit and chert breccia interbedded with massive tuffaceous siltstone. It attains a thickness of at least 900 meters in places.

The volcanic section consists of at least 1,200 meters of green, purple and grey andesite and derived volcanoclastic rocks, with the flows showing pillow structures in places. The volcanoclastic rocks include greywacke, siltstone and minor conglomerate. The entire volcanic section is cut by andesite dikes and sills and irregular intrusions which are probably part of the subvolcanic feeder system.

The Triassic assemblage is cut by east-west and northeast trending faults as well as by a number of small diorite and granodiorite intrusives.

All of the older rocks are covered, particularly above the 1,600 meter elevation, by late Tertiary basalt, derived from eruptions of Mt. Edziza.

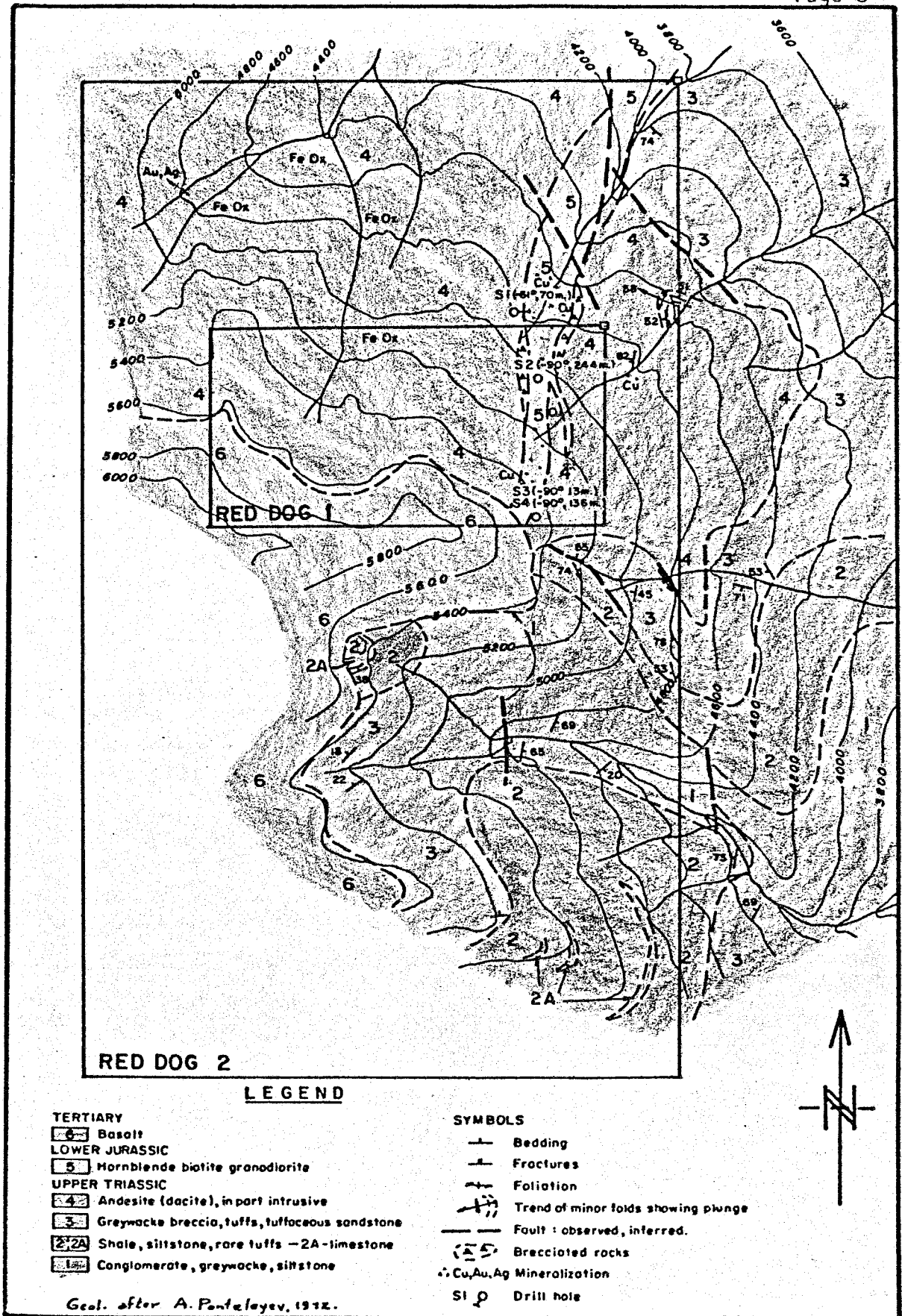


FIGURE 3
GEOLOGY MAP
RED DOG PROPERTY
KINASKAN LAKE AREA - LIARD M.D., B.C.



Detailed

On the Red Dog property, a thick assemblage of Upper Triassic sedimentary and volcanic rocks is well exposed between 1,200 and 1,700 meters in elevation. The basal unit, which is at least 150 meters thick, consists of conglomerate and greywacke with minor siltstone. These sediments are conformably overlain by at least 300 meters of shale and siltstone, interspersed with thin beds and lenses of limestone, chert and greywacke. The limestone includes fairly thick white to brown crinoidal as well as thin, dark shaly beds. The shale member is overlain by about 200 meters of clastic sediments, which include greywacke, breccia, tuffs and tuffaceous sandstone.

The sediments are unconformably overlain by rusty-weathering, grey, porphyritic andesite and dacite. This volcanic unit includes many sills, dikes and small, irregular intrusions, which are generally indistinguishable from the host rocks and which probably represent sub-volcanic feeders. The widely pervasive iron oxide gossan on the volcanics consists of thin coatings of limonite, jarosite, sericite and clay.

The Upper Triassic strata are intruded by a north-trending porphyritic granodiorite dike of Lower Jurassic age which has been traced for at least 1,000 meters and which is up to 150 meters wide. This dike is steep-walled with generally sharp contacts and some brecciation of the wall rocks. It is obscured at its south end by overlying Tertiary basalt. The dike consists of grey to pink hornblende-biotite granodiorite porphyry with feldspar phenocrysts in a weakly oriented texture. It is weakly mineralized and exhibits the following characteristic alteration aureoles: potassic; biotite-hornfels; and propylitic.

The sediments have been compressed into fairly open folds which plunge northwesterly. They have also been cut into blocks by northwest-striking faults. The dominant fracture cleavage in the area is N80°E and N40°W with southerly dips.

Mineralization

Three types of mineralization are present on the property:

- 1) pyrite and chalcopryite as disseminations and fracture fillings in the intrusive and in the wall-rocks along the intrusive contacts.
- 2) pyrite, arsenopyrite, sphalerite, galena and chalcopryite in thin veins in the sediments and volcanics.
- 3) pyrite, pyrrhotite, chalcopryite and magnetite in irregular pyrometasomatic replacement masses in the carbonates.

The porphyry-type mineralization is generally associated with sericite and secondary biotite alteration. The sulfide content of the mineralized porphyry varies from 1 to 5%, and consists mainly of pyrite with minor chalcopryite. The best intersections in the Imperial Oil drilling (4 holes totalling 460 meters) were as follows:

<u>Drill Hole</u>	<u>Interval (m)</u>	<u>Length (m)</u>	<u>% Cu</u>
S-2	79-94	15	0.30
S-4	7-31	24	0.23

The second form of mineralization consists of quartz veinlets 1-2 cm. wide in sediments, volcanics and intrusive rocks. The veins contain sphalerite, pyrite, arsenopyrite and chalcopryite in quartz and calcite gangue and generally show appreciable gold and silver values.

A. Panteleyev (1972) reports one specimen that assayed 15 oz/ton in

gold in a semi-quantitative spectroscopic analysis. The Imperial Oil drilling intersected siltstone and chert with minor shale, limestone and conglomerate, and fine quartz-calcite veining. The sulfide content averages 1-3%, mainly from pyrite with very minor chalcopyrite, galena and sphalerite. A 9 meter section in drill hole S-4 from 92-101 meters showed an average assay of 0.587 oz/ton in gold. This mineralized section consists of silicified siltstone showing considerable pyrite with some arsenopyrite.

The better gold assays from the 1973 drill core are as follows:

<u>Hole</u>	<u>Interval (meters)</u>	<u>Length (meters)</u>	<u>oz/ton Au</u>	<u>oz/ton Ag</u>	<u>Description</u>
S-2	99-101.5	2.5	0.234		monzonite; considerable sericite and biotite; 2-3% pyrite; 0.5% chalcopyrite.
S-2	208-210.6	2.6	0.102		monzonite; considerable sericite and biotite, quartz and calcite veinlets 1-3% pyrite; sparse chalcopyrite.
S-4	23-26	3.0	0.402	0.56	andesite; silicified with veinlets. 5% pyrite; little arsenopyrite.
S-4	26-28	2.0	0.094		sulfides as disseminations and fracture fillings.
S-4	92-95	3.0	1.482		{ silicified siltstone with { minor chert; 1-5% pyrite; { sparse chalcopyrite; little { arsenopyrite. The sulfides { occur as both fracture { fillings and disseminations.
S-4	95.0-97.5	2.5	0.148		
S-4	97.5-99.5	2.0	0.218		
S-4	99.5-101	1.5	0.050		

The overall average of 151 core samples (each roughly 3 meters in length) from drill holes S-1, S-2 and S-4 is 0.036 oz/ton in gold.

From Imperial Oil's assays, the overall silver values are very low, but the better gold sections may average 0.5 oz/ton in silver.

Grab samples of several small veins cutting Upper Triassic volcanics in the northwest corner of Red Dog #2 claim gave the following assays:

<u>Sample</u>	<u>Description</u>	<u>oz/ton Ag</u>	<u>oz/ton Au</u>	<u>% Zn</u>
Grab 1	7.5 cm carbonate veinlet with lead and zinc sulfides	7.5	0.48	4.3
Grab 2	2.5 cm quartz veinlet with arsenopyrite	0.18	0.21	

The mineralization, in part pyrometasomatic, in limy horizons is restricted to the southern half of Red Dog #2 claim. Samples taken by A. Panteleyev (1972) showed only very low lead, zinc, silver and gold values.

Similar small high grade gold veins have been mapped on the Hawk #1 claim about 1,000 meters north of the north end of Red Dog #2 claim. At least 8 veins 15 cm to 0.75 m wide generally trend N20°-40°W and dip steeply west in Upper Triassic sediments. Gold values are reported from 0.2-2.3 oz/ton (Kent, 1958).

CONCLUSIONS

The Red Dog property has been fairly well explored as a porphyry copper deposit and further investigation of its copper potential is probably not warranted. However, a significant gold content is found in most of the rocks over the entire property. The silicified Upper Triassic sediments in particular show good gold values over appreciable widths with the gold occurring as both vein and disseminated mineralization. Further definition of the gold potential of the property is definitely warranted.

RECOMMENDATIONS

It is recommended that further exploration of the Red Dog property be conducted in two stages. The initial stage should include geological mapping and prospecting, a geochemical soil survey, and some surface hand-trenching and sampling.

The property is quite well located with respect to access, servicing and facilities, so the initial stage should be completed at a relatively modest cost. It is recommended that \$30,000 be provided for this first stage which should be completed in one month. It should be possible to start the program before the end of June.

The second stage would be contingent on the results of Stage 1 and would involve 3,000 feet of BQ drilling. An overall figure of \$30/foot has been used and this includes: mobilization, demobilization, drilling, moving and camp costs. It is anticipated that the Stage 2 drilling will require at least one month to complete.

The attached cost estimate shows in detail the anticipated costs of the recommended programs.

Respectfully submitted,

Vancouver, B. C.
March 22, 1978

G. A. NOEL, P.Eng.

REFERENCES

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