

87-501-16320

7/88

PRELIMINARY GEOLOGICAL REPORT

ON THE

DC-2 MINERAL CLAIMS

Lat. 50°, 42'

Long. 120°, 40'

NTS - 921/10W

Kamloops Mining District, British Columbia

by

Allan P. Juhas, Ph. D.

for

Mercator Resource Corporation

6 - 3530 11A Street N. E.

Calgary, Alberta, Canada T2E 6M7

July 8, 1987

FILMED

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

16,320

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INTRODUCTION:

General:

This assessment report comprises a preliminary geological characterization of the DC-2 mineral claim and is derived from an original report by A. P. Juhas, dated June, 1987 for Mercator Resource Corporation, concerning the Aduf property in the Kamloops Mining District, British Columbia. That report and other related data are available in the Calgary files of Mercator Resource Corporation.

The claim contains Triassic volcanic and sedimentary rocks that have been intruded and altered by younger porphyry plugs and dikes and are prospective for gold mineralization. Additional, more detailed exploration is warranted.

Location:

The DC-2 claim is located in the Kamloops Mining District, 20 kilometers west of Kamloops, British Columbia, within 4 kilometers of the south shore of Kamloops Lake and within 3 kilometers of the Trans-Canada Highway. The claims are situated on map sheet NTS-92I/10W at about 50° 42' latitude and 120° 40' longitude. The area considered in this report is outlined in Figure 1.

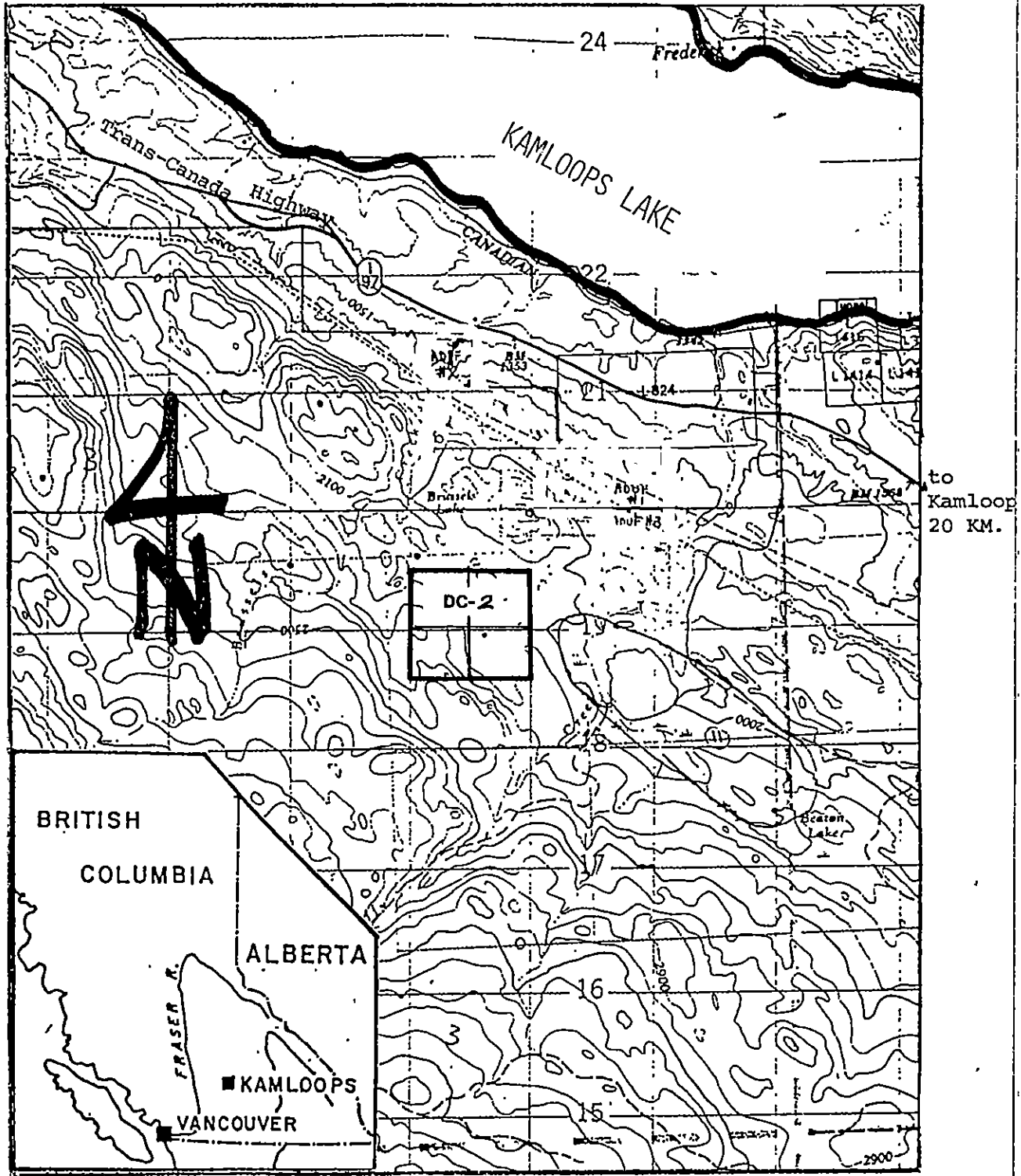


Figure 1: Location Map



Access:

The claims are accessible from the Trans-Canada Highway by taking a dirt road towards the gun club lease then turning southeast along the road leading past Brussels Lake.

Climate and Physiography:

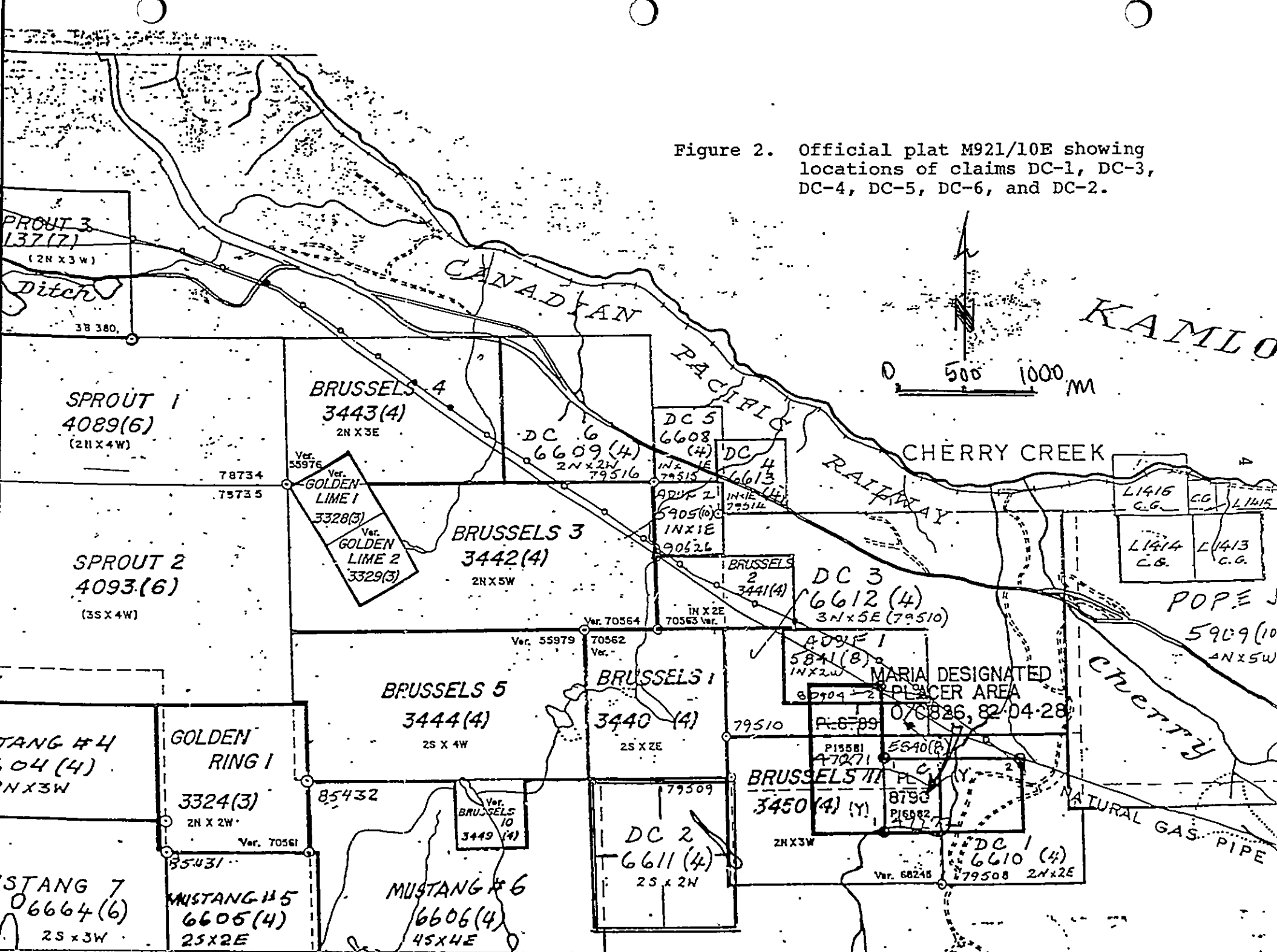
The physiography and climate are characteristic of the Interior Plateau. Outcrops are found in northwest trending ridges separated by glacial alluvium. The climate is semi-arid with hot summers and cold winters. Vegetation consists of pine forests interspersed with grassy meadows in low areas or on the south slopes of larger hills.

The Property:

The DC-2 claim is composed of 4 units comprising approximately 100 hectares. Its official location and relationship to other claims is shown in Figure 2.

The claims were staked by Albert A. Ablett in April, 1986. Mercator Resource Corporation, #6 - 3530 11A St. N.E., Calgary, Alberta T2E 6M7 is expected to exercise its rights to acquire title to the property. Mercator is a public company and intends to explore, and if warranted, to develop and operate the claims.

Figure 2. Official plat M921/10E showing locations of claims DC-1, DC-3, DC-4, DC-5, DC-6, and DC-2.



Previous Work:

The writer is unaware of any specific previous work on the DC-2 claim. It is likely that the area was examined as part of various porphyry copper exploration programs in the region in the 1960's and 1970's. However, there are no buildings or habitations on the property and there is no evidence of old diggings or old mine workings on the property. Also, there is no evidence of such modern physical exploration works as trenching or drilling on the property.

Background on Mercator's Program:

Mercator Resource Corporation has acquired the rights of AVF Minerals Ltd. in the Kamloops District as they relate to the DC-1 - 6 claim group and the Aduf 1 and 2 claims.

In the Spring of 1984, AVF crews identified favorable host rocks west of Kamloops and prospecting and reconnaissance stream sediment and lithogeochemistry demonstrated local gold-silver-arsenic-mercury anomalies. Follow-up work indicated that the potential gold mineralization was associated with silica-carbonate altered volcanic rocks. The DC-2 claim was acquired with the expectation that favorable host rocks existed thereon.

The Present Survey:

The present geological survey is the first step in what is expected to be a progressively more detailed exploration program on the DC-2 claim. This survey has involved preliminary reconnaissance mapping of the claim group at a nominal scale of 1/5376. Mapping was done on a photo enlargement of a standard British Columbia government aerial photograph series BC84023, #105 (uncorrected for distortion). The purpose of the survey was to ascertain the geological infrastructure and potential ore controls on the claim group to be used as a basis for planning follow-up exploration. The method was to pick optimal traverse routes following trails and claim lines. where the greatest number of outcrop and geological relationships could be observed. The mapping concentrated on lithological and structural relationships. Nevertheless, such topographical features as streams, lakes, swamps, etc. were also mapped as were such cultural features as claim lines and posts, roads and fences.

GEOLOGY:Regional Geology:

The DC claim group occurs on the western edge of a major zone of tectonic disturbance about 10 Km. wide and about 35 Km. long, known as the Cherry Creek Fault Complex that cuts across Nicola Group volcanic rocks in a northwesterly direction. The fault zone separates Triassic Nicola Group volcanic and sedimentary rocks from younger, Mesozoic and Tertiary (Kamloops Group) volcanic and sedimentary rocks, and has served as the locus of Triassic and Tertiary intrusive rocks. The intrusives impart a strong magnetic signature to the area, and are of direct economic importance as the host rocks of copper-gold mineralization at Afton. General relationships are shown in Figure 3.

Local Geology:

The claim lies within the drainage of Brussels Creek within a northwest trending range of hills. Maximum relief on the property is about 100 meters. Areas between outcrops are filled with glacial alluvium. Actual outcrops constitute about 10% of the area of the claims. An undrained alkali pond occurs near the east central part of the claim.

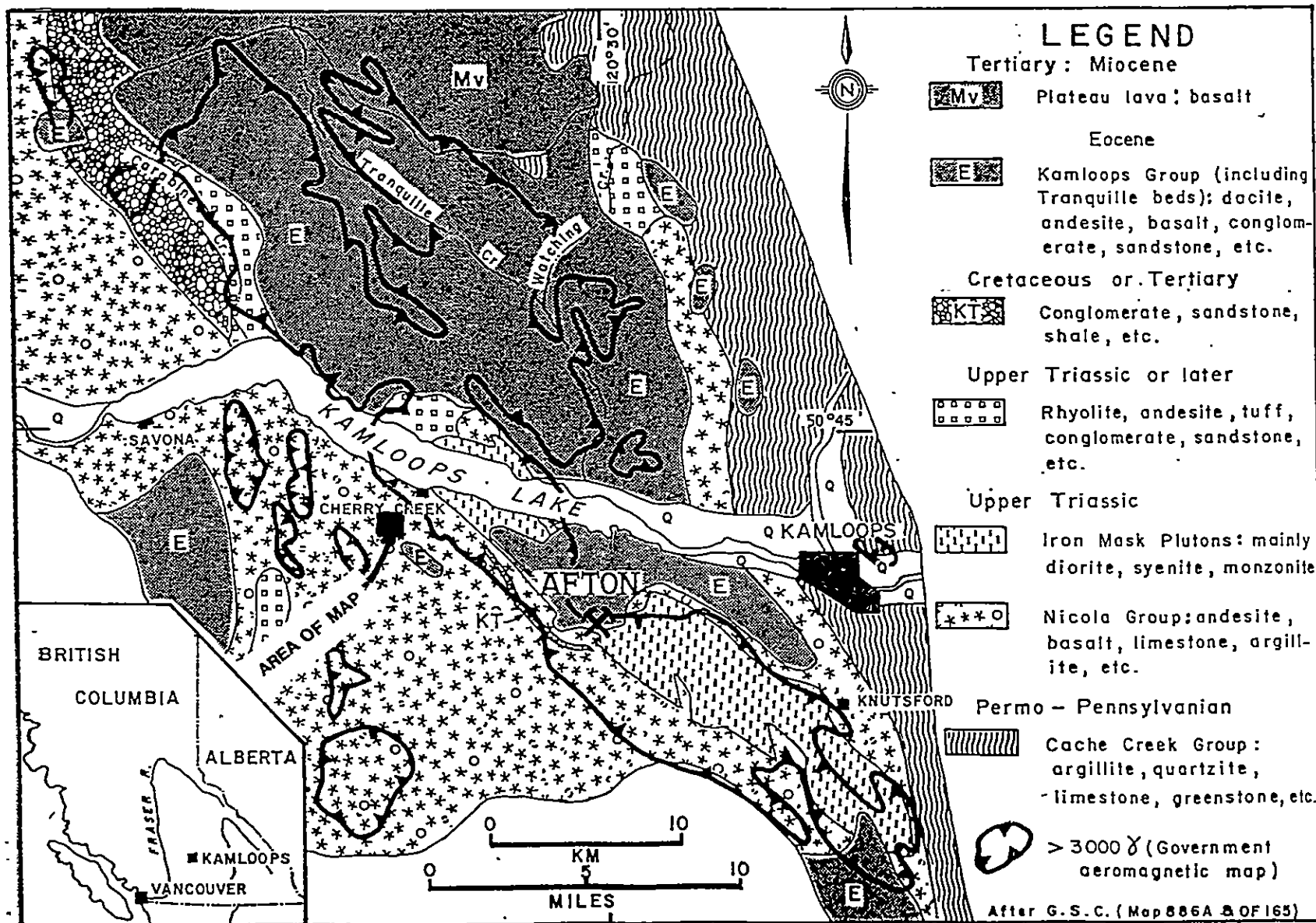


Figure 3. Regional Geology (from J. M. Carr and A. J. Reed, 1976, p. 376, CIM Spec. Vol. No. 15) also showing area of geological mapping of this report.

The DC-2 claim occurs on the west side of the Cherry Creek Fault and is largely underlain by northwest trending, mafic volcanic rocks, interpreted as belonging to the Triassic Nicola Group. These are cut by dikes of rhyolitic rocks and associated quartz-carbonate altered zones believed to be of Tertiary age and assigned herein to the Kamloops Group. All of these units, particularly in low areas are overlain by extensive blankets of glacial deposits and alluvium. Outcrops mapped in this survey plus interpreted relationships are shown on the geological map in the pocket.

Basalt, Andesite: Excepting the Quaternary deposits, the most prevalent rock types in the area are greenstones of the Nicola Group. These units, where fresh, are generally massive, and tend to form the highest and most resistant ridges that strike northwesterly. The rock is generally medium to dark green, and fine to medium grained. Where freshest and most resistant, the rocks are composed of plagioclase and pyroxene variably altered to chlorite. Depending on proximity to felsic intrusives, the mafic volcanic rocks are progressively altered to assemblages of plagioclase-chlorite-epidote, plagioclase-chlorite-K feldspar, plagioclase-K feldspar-carbonate ± quartz, carbonate-quartz ± fuschite ± malachite. The non-carbonate bearing varieties are characteristically magnetic.

The Nicola volcanic rocks are generally massive flows or sills, but locally consist of flow breccias.

Locally some of the fresh volcanics contain sparse quartz phenocrysts suggesting a dacite composition. Most, however, lack quartz and are andesite or basalt in composition.

Felsic Porphyries: Dikes of porphyritic felsic Tertiary rocks cut the above basalts. The felsic intrusives are characteristically light grey to buff and contain medium grained phenocrysts of orthoclase and subordinate finer grains of quartz in a very fine grained to aphanitic silicic matrix.

Two porphyry dikes about 10 to 50 feet wide outcrop near the western claim boundary. Contacts are not exposed, but the dikes seem to trend in east-west directions. A north northwest trending silica-carbonate zone near the eastern side of the claim may merge into a dike at depth.

Quaternary and Recent Deposits: The lower northern and central part of the claim are covered by glacial deposits. These consist largely of boulder till between outcrop and several gravel eskers separated by hummocky kame and kettle features. The kettles, like the larger lake near the center of the property are undrained and strongly alkaline.

Structural Geology: The dominant mappable structures in the area are essentially vertical, northwest trending fractures and joints, that parallel the main lithological patterns and the physiography presumably mimicking major fault directions. Conjugate, essentially vertical fractures trend northeasterly. Another conjugate set of vertical joints and fractures strikes north-northwesterly and essentially east-west. These are important in controlling the felsic dikes, and quartz-carbonate-sulphide type alteration and mineralization. Numerous other fracture and joint attitudes are present, as plotted on the geological map but do not appear to be systematically related to mineralization or alteration.

Alteration and Mineralization: Previous work in the area indicates that gold mineralization is associated with the felsic Tertiary dikes and plugs and adjacent altered wallrocks. This survey has for the first time outlined the general location and extent of these dikes and altered rocks on the DC-2 claim. The follow-up detailed geological and geochemical studies necessary to quantify and evaluate the extent and quality of mineralization has not yet been performed. It is expected that this will be done subsequently.

Mineralization on the DC-2 claim is associated with altered felsic dikes, and with a north-northwest trending quartz-carbonate altered zone, interpreted to overlie and be extensions

of a porphyry dike. The mineralized dikes are strongly silicified and impregnated with fine disseminated pyrite. Pyrite also occurs in fine quartz carbonate stockworks type veinlets cutting the silicified dike. The sulphides are variably altered to limonite and trace malachite suggesting the presence of chalcopyrite, although none was seen. The quartz-carbonate zone is associated with sheared and fractured basalt. the basalt is strongly altered to chlorite and subordinate epidote. The zone is at least 20 feet wide at the north end of the claim but "horsetails down" to a number of sheeted fractures a few inches wide near the southeast corner. The zone contains strong numerous quartz-carbonate stringers and veinlets within broader zones of buff to pink carbonate impregnations. Minor disseminated, dusty hematite and green fuschite impregnations occur near the margins of the quartz-carbonate zone.

CONCLUSIONS:

It is expected that any gold mineralization present on the DC-2 claim will be associated with the dikes and immediately adjacent altered areas. Future exploration involving detailed mapping and geochemical sampling (gold-copper-mercury-arsenic-antimony) should be concentrated in areas of dikes and quartz-carbonate alteration as indicated by this survey.

STATEMENT OF EXPENSES

Following are the expenses incurred by Mercator Resource Corporation with respect to the DC-1, 2, 3, 4, 5, and 6 claims in the Kamloops Mining District between April 17, 1987 and July 8, 1987. Claims DC-1, 3, 4, 5, and 6 form a contiguous group but DC-2 is separate. Although AC-2 represents only about 14% of the total area of the claims, it is estimated that 20% of the expenses have been incurred for the benefit of that claim and is apportioned below accordingly. Of expenses incurred to April 24, 1987, \$2500 was applied to the claims DC-1, 3, 4, 5, and 6, and \$400.00 was applied to claim DC-2. (Credits for greater dollar amounts would have been claimed when the assessment work was filed in the Kamloops Gold Commissioner's April 24th, but the writer didn't have enough cash on hand at the time.) To date, credits have been granted for \$2900.00 of expenditures. Additional credits in the amount of \$5110.22 should be applied to the claim group comprised of DC-1, 3, 4, 5, and 6 and \$1502.55 should be applied to claim DC-2.

1. Expenses incurred (\$ - Canadian) in the preliminary geological survey of claims DC-1, 2, 3, 4, 5, and 6 and between April 17 and 26th, 1987:

| | <u>Total:</u> | <u>Group Claims:</u> | <u>DC-2:</u> |
|-----------------------------|---------------|----------------------|--------------|
| 7 days consulting fees..... | \$2947.37 | \$2357.90 | \$589.47 |
| Airfare..... | 756.57 | 606.26 | 151.31 |
| Auto..... | 479.47 | 383.58 | 95.89 |
| Parking and Taxi..... | 94.74 | 75.79 | 18.95 |
| Lodging..... | 484.74 | 387.79 | 96.95 |
| Meals..... | 148.09 | 118.47 | 24.68 |
| Misc. Supplies & Fees..... | <u>241.88</u> | <u>217.20</u> | <u>24.68</u> |
| Total..... | \$5152.86 | \$4122.29 | \$1030.57 |

2. Expenses incurred between June 23rd and July 8, 1987 in preparation of project report, assessment reports, accounting and filing:

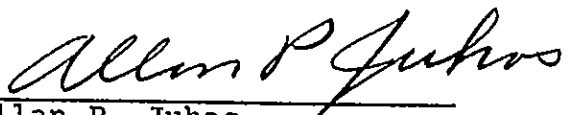
| | | | |
|-----------------------------|------------------|------------------|------------------|
| 9 days consulting fees..... | \$3789.47 | \$3031.58 | \$ 757.89 |
| Personal Vehicle..... | 42.11 | 33.69 | 8.42 |
| Blueprints..... | 48.53 | 38.82 | 9.71 |
| Xerox..... | 55.26 | 44.21 | 11.05 |
| Geochemical Analyses..... | 63.16 | 50.53 | 12.63 |
| Courier..... | 105.26 | 84.21 | 21.05 |
| Secretarial..... | <u>256.59</u> | <u>\$ 205.27</u> | <u>\$ 51.32</u> |
| Total..... | \$4359.91 | \$3487.93 | \$ 871.98 |
| <u>Grand Totals:</u> | <u>\$9512.77</u> | <u>\$7610.22</u> | <u>\$1902.55</u> |

CERTIFICATE

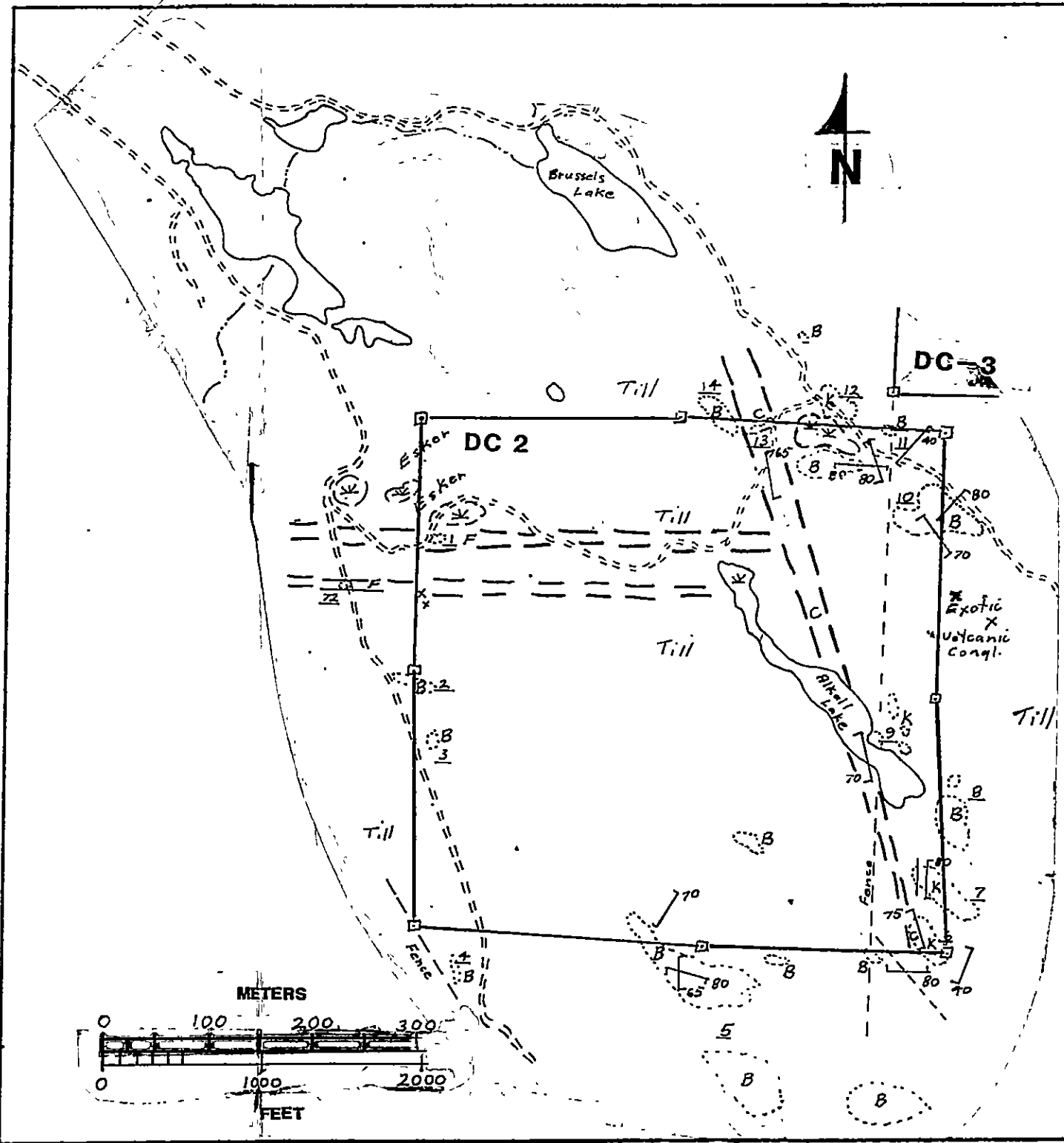
As author of this report on the DC-2 claim for Mercator Resource Corporation, I hereby make the following statements:

- 1a. My name is Allan Paul Juhas and I am a Consulting Economic Geologist. My address is 4221 S. Yukon Way, Lakewood, Colorado 80235.
- 1b. I am a Canadian citizen.
- 1c. I hold a valid British Columbia Free Miner's Certificate (#250468).
- 2a. I have received the following degrees in the geological sciences:
 - B. Sc. Hons., 1962: University of Manitoba, Winnipeg, Manitoba, Canada, and
 - Ph. D., 1973: University of Manitoba, Winnipeg, Manitoba, Canada.
- 2b. I am a Certified Professional Geologist Scientist of the American Institute of Professional Geologists. I am also a member in good standing in the following societies:
 - Geological Society of America
 - Society of Mining Engineers (AIME)
 - The Canadian Institute of Mining and Metallurgy
 - Society of Economic Geologists, and
 - Society of Geology Applied to Mineral Deposits
- 2c. I have been practicing as a Professional geologist for over 25 years in Canada, the USA, Mexico and various Latin American countries.
3. This report is based on original mapping by the author.
4. I am a Director and shareholder of Mercator Resource Corporation. However, I have neither received nor do I expect to receive a separate interest in the claims that are the subject of this report.

Lakewood, Colorado, USA
July 8, 1987


Allan P. Juhas
Ph. D., C. P. G. S.





MERCATOR RESOURCE CORPORATION

**GEOLOGY OF THE DC-2 PROPERTY
KAMLOOPS DISTRICT B.C.**

ALLAN P. JUHAS

JUNE 1987

- Tertiary Deposits: boulder clay, alluvium, till
- C Carbonate Alteration: silica, hematite, fuchsite
- K K-Feldspar Alteration of Basalt: carbonate, hematite
- F Felsic Intrusives: Feldspar, quartz porphyry
- B Basalt, Andesite, Minor Dacite: flows, flow breccias and agglomerate
- S Epiclastic Sediments: greywacke, argillite
- Joints and Fractures: vertical, inclined
- Bedding and Foliation
- Claim Boundary: with posts surveyed, not surveyed
- 1 Outcrop: station number
- Geological Contact: known, interpreted
- Road
- Stream

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16,320