ASSESSMENT REPORT
on
GEOLOGICAL MAPPING

GOLDYLOT PROPERTY

Lewis Creek Area
Fort Steele Mining Division

NTS 82G13/E

Latitude 49° 47' N
Longitude 115° 40' W

by

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April, 1998

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LIST OF ILLUSTRATIONS

1.00 INTRODUCTION

1.10 Location and Access

The Goldylot claims are located in southeastern British Columbia in the Fort Steele Mining Division, centered approximately at 49° 47' N latitude and 115° 40' W longitude, on reference map NTS 82G/13E (Fig. 1). Access to the claims is provided by the Lewis Creek road which crosses the claim block about 4 km west of Wasa Lake.

1.20 Property

The Goldylot property consists of four 2 post mineral claims, Goldylot 1 - 4 (tenure numbers 354031 - 34) staked and owned 100% by M.C. Kennedy of Kimberley, B.C. (Fig.2). The claims were staked to cover old workings which are developed within a strong silicic altered zone with gold and copper mineralization.

1.30 Physiography

The Goldylot property is situated at an elevation of 900 m on the immediate east side of the Rocky Mountain Trench, on the westernmost flank of the Hughes Range of the Rocky Mountains. The claims cover an area of relatively low local relief along the Lewis Creek valley, which cuts the northwest corner of the claims. Generally hummocky terrain is common in the claim area with abundant local bedrock exposure.

1.40 History

The Goldylot claims cover a number of old workings that include small trenches, shallow shafts and one adit. No recorded information on these workings was located by the author. In 1970 Texas Gulf Sulfur staked a 32 unit claim block in the area and conducted geological mapping and took 75 soil samples (Gifford, 1971, AR 3092). In 1992 INCO Exploration staked a larger claim block called the 'Lewis Creek Property', including the area of the present Goldylot claims. INCO was interested in copper mineralization, particularly low sulfur copper mineralization such as chalcocite and bornite, and their work included geological mapping and a large soil sampling grid. They apparently did not analyze the soil samples for gold. INCO's work is reported on by Rawick and Rush, 1994 (Assessment Report 23,115).

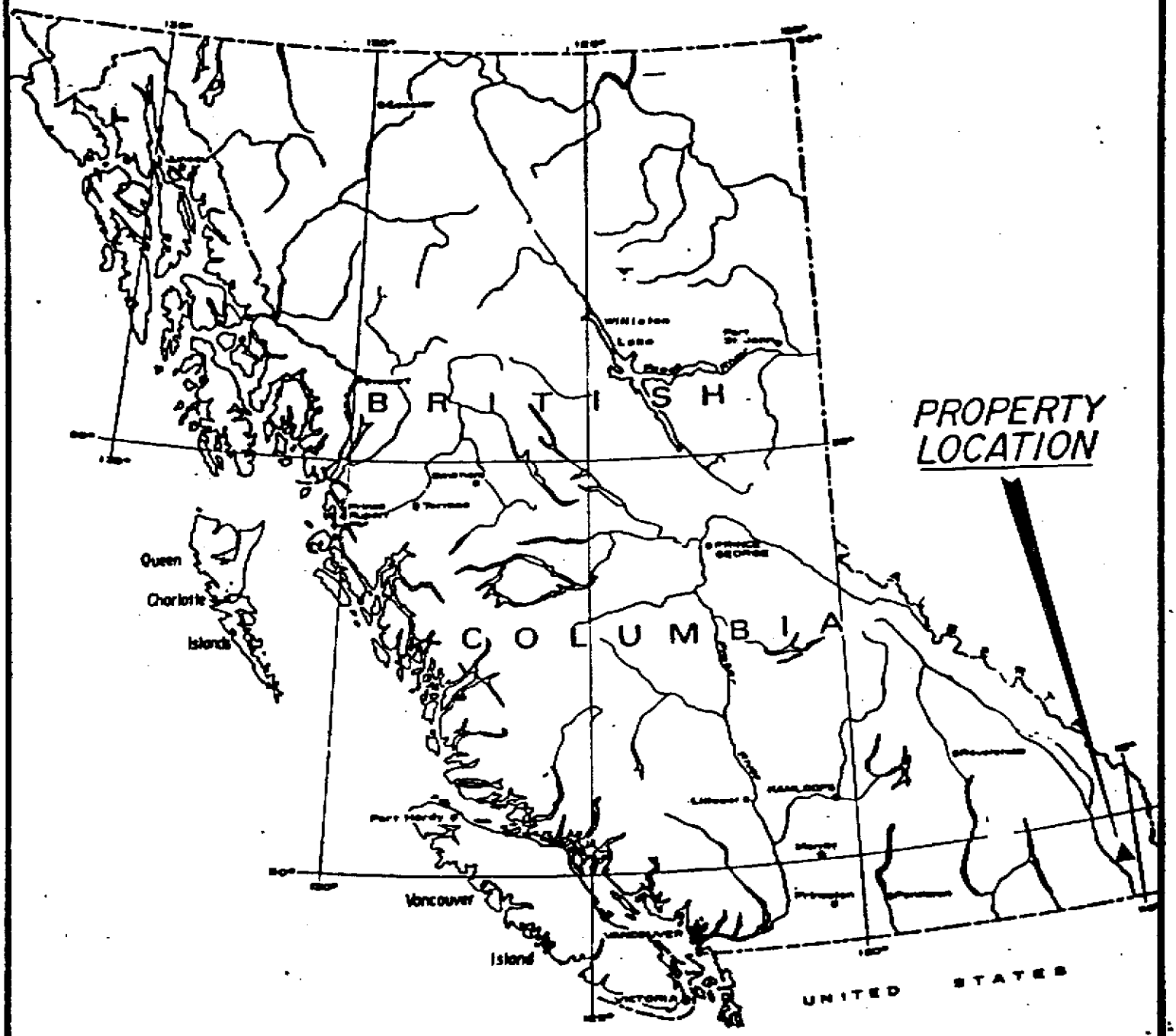

Figure 1. GOLDYLOT PROPERTY LOCATION MAP

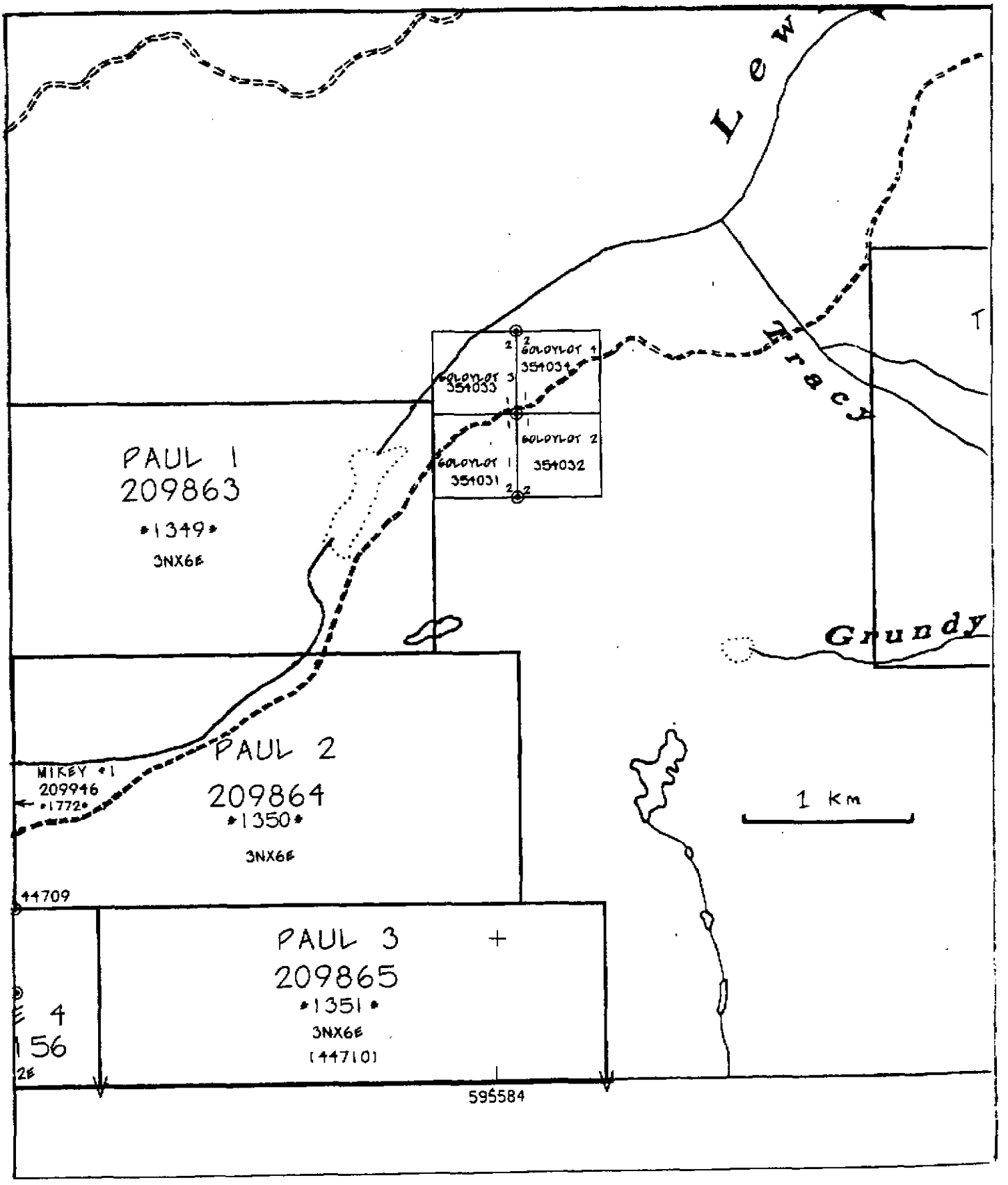

Figure 2. GOLDYLOT PROPERTY
CLAIM MAP
NTS 82 G/13 E
Scale: As shown

1.50 Scope of Present Program

Geologic mapping of the Goldylot 1 - 4 mineral claims at a scale of 1:2500 was undertaken to provide a framework of reference for a cluster of old workings which are developed on a zone of silicification on the Goldylot 1-3 boundary. Grab samples from the workings, taken prior to staking the claims, indicate the presence of anomalous gold and copper mineralization. Mapping was undertaken to evaluate the surrounding geology to identify controls for the alteration and mineralization. Recognition of the controls of the mineralization could in turn help to identify a significant exploration target, either in association with the surface alteration and mineralization or possibly distal but with the same controls.

2.00 GEOLOGY

2.10 Regional Geology

The Goldylot property occurs on the east side of the Rocky Mountain Trench, within the Fernie (West Half) map sheet (Leech, 1960) and is also included in BCMEMPR Preliminary Map 36 by Trygve Hoy: Geology of the Estella - Kootenay King Area, Hughes Range, Southeastern British Columbia (1979). A portion of this map which covers the area of the Goldylot claims is reproduced here as Figure 3.

The property is underlain by the Fort Steele Formation which is the oldest unit of the Purcell Supergroup exposed in Canada. According to Hoy (1979):

> The total thickness of the exposed section is in excess of 2000m; the base is not exposed. The formation comprises at least three upward-fining sequences, several hundred metres thick, that grade from coarse, massive to crossbedded quartzites at the base to thinly laminated siltstones at the top. Within each of these megacycles are numerous smaller scale upward-fining sequences, and some coarsening upward sequences.
>
> Orthoquartzites at the base of the megacycles are generally medium to coarse grained. They commonly form discontinuous beds up to a meter thick which may thin and die out laterally. They are commonly structureless or only crudely layered and they scour the underlying unit producing broad troughs. Trough, tangential, and planar/tabular crossbedded quartzite layers are common near the base of the megacycles. These layers are generally more laterally persistent than the massive quartzite beds and their thickness is less variable.
>
> Up-section within each of the megacycles, quartzites are finer grained, less pure, thinner bedded, and more persistent laterally. The relative proportion of the siltstone/argillite component at the top of smaller, upward-fining sequences increases. Beds consisting dominantly of planar/tabular crossbedded quartzite are also common within the central portion of the megacycles, and thick tangentially crossbedded planar beds with high

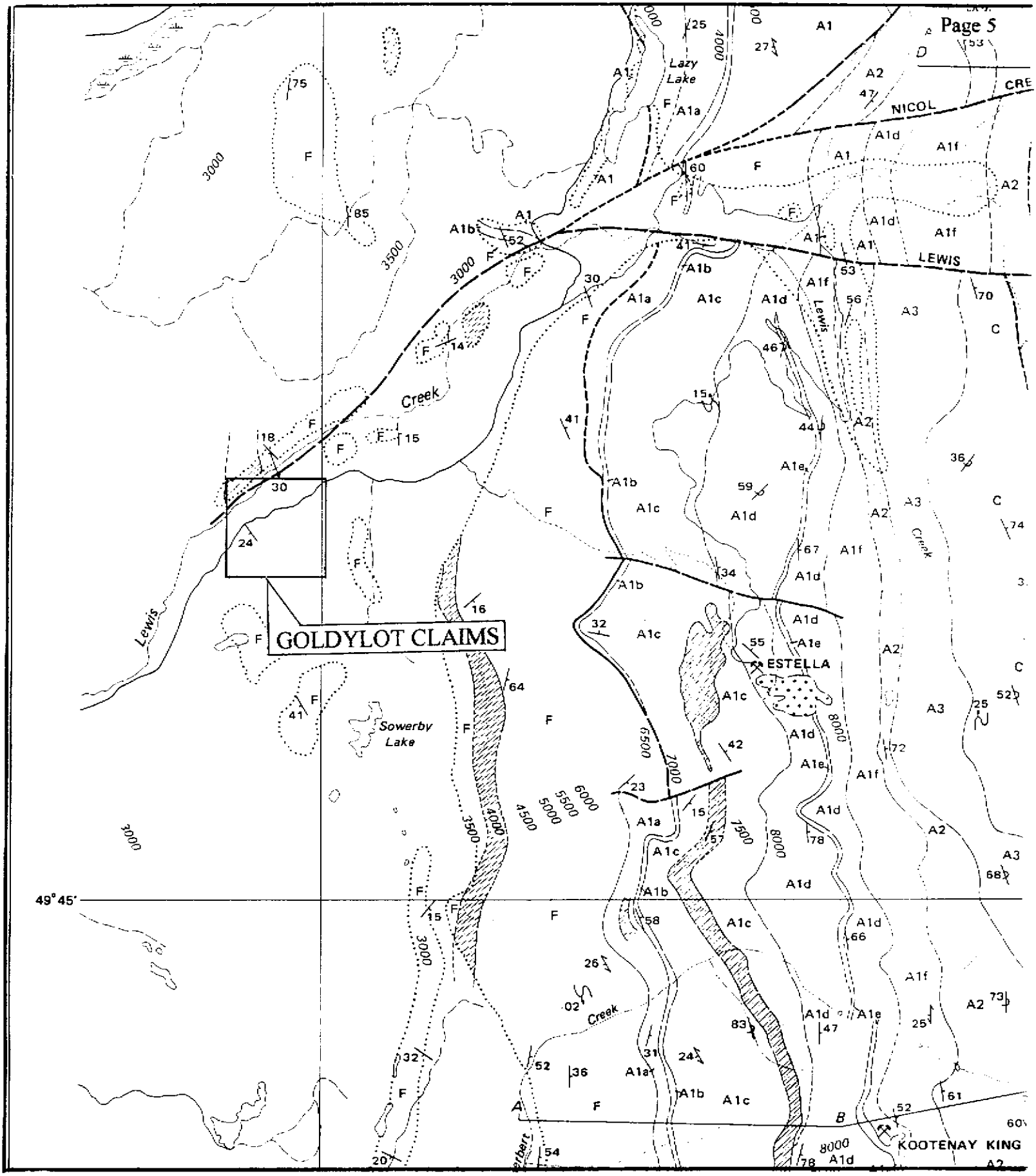

Figure 3. Part of BCMEMPR Preliminary Map 36
Geology of the Estella-Kootenay King area, T. Hoy, 1979

For legend see page 5a.

Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

PRELIMINARY MAP 36

GEOLOGY OF THE ESTELLA–KOOTENAY KING AREA HUGHES RANGE SOUTHEASTERN BRITISH COLUMBIA

(NTS 82G/11, 12, 13, 14)

GEOLOGY BY TRYGVE HÖY, 1976–1978

LEGEND

CRETACEOUS

QUARTZ MONZONITE, SYENITE

HADRYNIAN/HELIKIAN

PURCELL SUPERGROUP

PURCELL SILLS AND DYKES

C — **CRESTON FORMATION**: GREEN AND PURPLE ARGILLITE AND SILTSTONE, WHITE AND GREEN QUARTZITE; MINOR DARK ARGILLITE

ALDRIDGE FORMATION

A3 — DARK GREY FINELY LAMINATED ARGILLITE; MINOR SILTSTONE

A3i — DARK GREY ARGILLITE WITH LENTICULAR BEDDING

A2 — QUARTZITE, SILTSTONE; INTERLAYERED WITH DARK ARGILLITE

A1 — FINELY LAMINATED ARGILLITE, SILTSTONE; MINOR DOLOMITE, QUARTZITE

- f MEDIUM TO DARK GREY SILTSTONE, ARGILLITE
- e THICK–BEDDED QUARTZITE; MINOR CONGLOMERATE
- d BUFF–COLOURED DOLOMITIC SILTSTONE, DOLOMITIC ARGILLITE; ABUNDANT LENTICULAR BEDDING AND RIPPLE CROSSBEDDING
- c GREY SILTSTONE, ARGILLITE; TAN SILTSTONE, BLACK GRAPHITIC ARGILLITE
- b SILTY DOLOMITE, DOLOMITIC SILTSTONE; MINOR LIMESTONE
- a GREY TO BLACK SILTSTONE AND ARGILLITE

F — **FORT STEELE FORMATION**: WHITE CROSSBEDDED QUARTZITE, MUD–CRACKED SILTSTONE, ARGILLITE

SYMBOLS

GEOLOGICAL CONTACT: DEFINED, APPROXIMATE, ASSUMED

FAULT: DEFINED, APPROXIMATE, ASSUMED

ANTICLINE – AXIAL SURFACE

BEDDING (S_0): VERTICAL, INCLINED, OVERTURNED

FOLIATION, CLEAVAGE (S_1)

LINEATION ($S_0 - S_1$ INTERSECTION)

FOLD AXIS

MINERAL DEPOSIT

LIMITS OF OUTCROP (OR MAPPING)

Legend for Figure 3

angled (to 35 degrees) foreset laminae occur occassionally.

The top of the megacycles consists of interlayered siltstone and argillite. The siltstone layers are thin (generally less than 5 centimetres thick) and horizontally laminated or ripple cross-laminated. Individual beds grade up to dark, laminated argillite that contains abundant dessication cracks. Lenticular bedding and silt scours are common. Near the top of the Fort Steele Formation the quartzite/siltstone component gradually decreases and medium to dark grey, finely laminated siltstone and argillite begin to predominate. Within this transition zone bedding is commonly defined by siltstone/argillite couplets up to several centimetres thick. Quartzites are uncommon, and dessication cracks are extremely rare. The Fort Steele/Aldridge boundary is gradational. On the map it is placed above the last occurrences of crossbedded quartzite or observed dessication cracks in argillite.

The Fort Steele Formation is overlain by the middle Aldridge Formation which is a dominantly fine grained, thick succession of wackes and siltstones of turbidite affinity.

Both the Fort Steele and Aldridge Formations are intruded by gabbroic sills and dikes of the Moyie Intrusions. They consist mainly of medium grained amphibole and plagioclase.

Hoy interprets the Fort Steele Formation at the base of the exposed Purcell sequence to predominantly be braided fluvial deposits derived from a source area to the south.

The structure of the Estella - Kootenay King area is dominated by a large, open, recumbent anticline (Hoy, 1979). Its axial plane dips to the west and bedding in its upper limb, in the western part of the area (i.e. including the Goldylot claim group), dips to the west.

Hoy (1979) shows an unnamed northeast oriented fault paralleling the lower portion of Lewis Creek and extending past Mt. Stevens to the northeast (Fig. 3). Two splay faults trending to the east from the central portion of the unnamed northeast fault are the northern Nicol Creek Fault and the southern Lewis Creek Fault. In this report, the northeast fault crossing the Goldylot property is also referred to as the Lewis Creek Fault.

The Goldylot claims are 5 km northwest of the Estella Zn-Pb-Ag vein deposit and 9 km northwest of the stratiform Zn-Pb-Ag Kootenay King deposit. Both are hosted by middle Aldridge Formation.

2.20 Property Geology

2.21 Geologic Mapping

An initial reconnaissance geological evaluation of the Goldylot claims established the presence of numerous gabbro sills as well as a series of younger porphyritic mafic dikes. A program of detailed geological mapping (scale 1:2500) was decided on to provide an accurate picture of the surface geology, to develop a better understanding of the alteration and mineralization at the old workings and help to identify further targets for exploration.

A detailed grid with station spacings as close as 25 meters was established with compass and hip chain, using the central claim post as a starting reference. A northeast trending central zone on the property, occurring immediately southeast of the Lewis Creek Fault, provides generally very good rock exposure and allows accurate detailed mapping of the surface geology which is provided as Figure 4.

To date no detailed mapping has been conducted on the northwest side of the Lewis Creek Fault so a comparison of the geology on each side of the fault is not possible, but, as the fault may be an important structure in the deposition of mineralization, this work should be conducted.

2.22 Rock Units

Bedrock consists of quartzites, siltstones and argillites of the Fort Steele Formation, intruded by gabbroic sills of the Moyie Intrusions and a younger set of porphyritic mafic dikes. Bedding generally strikes northwest with shallow to moderate southwest dips.

2.221 Fort Steele Formation

Lithologies include thick, medium and thin bedded quartzites, and medium and thin bedded siltstones and argillites, typical of the Fort Steele Formation. Quartzite and siltstone are the dominant lithologies although a more argillaceous section is present just west of the old workings and at mid-slope above the Lewis Creek valley bottom.

2.222 Moyie Intrusions

At least 5 sill-like gabbro bodies are present on the claims southeast of the Lewis Creek Fault. The contacts of these gabbros with their host stratigraphy is unusually complex, with local apparent pinch and swell features and lobes and dike-like features extending into the adjacent sediments. The two narrower central sills show more uniform thickness although the southern one displays an abrupt termination within sediments and the northern one is displaced slightly along two east-northeast trending faults with minor left lateral displacement.

A gabbro exposure near the northeast limit of detailed mapping shows apparent further complexity. A narrow covered gap between two distinct gabbro bodies appears in the field to be immediately underlain by sedimentary rocks, providing an unusual relationship between the two gabbros. This local apparent gap between the two gabbros is on strike with a series of 'en echelon' north-northeast striking younger mafic dikes. The western gabbro here contains an apparent inclusion of sedimentary rock; bedding within this inclusion is northwest striking, indicating a structural rotation of the rafted block.

2.223 Young Mafic Dikes

A suite of younger, narrow, fine-grained, dark green mafic dikes occurs on the Goldylot claims. They are quite similar in general character to the gabbro sills, although they tend to be porphyritic with small gray feldspar phenocrysts, and are calcareous and locally pyritic.

These mafic dikes crosscut both sedimentary rocks and the gabbro sills and they do not show any regional cleavage. They must be younger than the Laramide fold structure which regional cleavage is related to and could thus be affiliated with Cretaceous felsic intrusives. Lamprophyre dikes of known Cretaceous age are present through parts of the Aldridge (-Fort Steele) basin.

Locally, individual dikes can be prominently fractured, resulting in a blocky weathering character.

A northwest trending mafic dike at 950 E 900 N has associated with it parallel trending quartz veins up to 50 cm. thick. This mafic dike and quartz vein swarm is on strike with the old workings at 1000 N 750 E where parallel trending quartz veins are present along with strong shearing and multiple quartz veining in an orthogonal, northeast direction.

2.23 Structure

2.231 Bedding

Bedding generally strikes northwesterly (azimuths of 110° to 140°) with shallow to moderate southwest dips (typically 15° to 30°). Bedding varies from this general trend only where local minor folding is evident.

2.232 Folding

The area of the Goldylot claims is located on the western limb of a large open recumbent anticline which dominates the structure of the Estella - Kootenay King area (Hoy, 1979, Fig. 3). The axis of this large fold occurs immediately east of the claim group; most of the beds on the Goldylot claims dip to the southwest but according to Hoy's map (Fig.3) east dipping beds occur just a short distance east of the claim boundary. Cleavage which is apparently related to the large

anticlinal structure is common in bedrock on the property, generally striking northwesterly at typical azimuths of 135° to 160° and dipping southwest at 30° to 55° (Fig. 4), slightly steeper than bedding. This axial plane cleavage occurs in Fort Steele Formation metasedimentary rocks and the intruded gabbro sills and dikes but is not evident in the younger mafic dikes.

Slight variations in mapped bedding attitudes attest to the presence of minor gentle folding being present. Many of these bedding variations occur adjacent to irregular gabbro contacts, suggesting that minor folding was developed during emplacement of the irregular thickness sills or, minor folding occurred later during tectonic pinch and swell deformation of the gabbros.

Drag folding is locally evident adjacent to the east northeast striking Goldylot Fault which cuts a narrow gabbro sill near 1100N 850E. Both the gabbro sill and host sedimentary rocks show folding adjacent to the fault.

2.233 Faulting

The northeast striking Lewis Creek Fault cuts the northwest corner of the Goldylot claims. This is a composite of three splay faults which coalesce about 2 km northeast of the property. Hoy's geologic map (Fig.3) shows only minor lateral displacement across these faults. In the area of the Goldylot claims, Fort Steele Formation rocks are present on both sides of the fault and the current mapping program has not identified the sense of movement.

According to Hoy (1979) the Boulder Creek Fault, which bounds the Estella - Kootenay King area to the south, was an active fault during Aldridge sedimentation. As the Lewis Creek Fault on the Goldylot claims is a parallel trending structure, it may be similar in origin to the Boulder Creek Fault and thus may also have been active during Proterozoic sedimentation. Faults which are active during sedimentation may influence the deposition of base metal mineralization. It seems plausible that the Lewis Creek Fault is a controlling structure for copper mineralization seen in the general Goldylot claim area - it may not be fortuitous that the old workings on the Goldylot claims are located just a short distance southwest of the Lewis Creek Fault.

A northeast trending fault (called the Goldylot Fault) was defined by detailed mapping on the claim block; it offsets a narrow gabbro sill in a left lateral manner at 1100N 850E on the Goldylot grid (Fig.4). Drag folding on the gabbro and host sediments is the reverse of that expected from the surface sense of movement. This may be explained by a more complex dip-slip movement on the fault. Evidence for this fault was not seen further to the northeast although it would cross an area of virtually no exposure. The southeast exposed portion of a gabbro near 1250N 1200E may be folded into this fault; adjacent sediments are more north striking, in the same manner as the drag folded sediments at 1100N 850E.

The fault trace crosses two north trending young mafic dikes with no offset. If the fault actually crosses this area then the dikes must be younger than the fault. The western mafic dike is

splayed right at the fault trace, as though the fault zone influenced the emplacement of the dike and caused the splaying to develop.

To the west of the drag folded gabbro, the Goldylot Fault passes immediately north of the old workings and may well have had an influence in the development of the alteration and mineralization present there.

A zone of apparent structural weakness has been identified by the detailed mapping, trending northeasterly from the southwest corner of the claims to 1300N 1100E Although not a discrete fault zone, a number of features occur along this trend. The southernmost 2 gabbros are pinched where the trend crosses them. A north northeast striking mafic dike occurs on the immediate north side of the southern gabbro at the point of thinning and minor copper mineralization occurs in the sediments immediately to the south of the point of thinning. The next gabbro north is pinched down to less than a 2 meter width along this structural weakness trend. An intermediate gabbro which terminates in Fort Steele sediments just southwest of 600N 700E may be terminated because of the structural weakness. Two mafic dikes occur at and near the termination point of the gabbro. Further north, the next gabbro is terminated at its east end, at 850N 900E, just east of the structural weakness trend. Furthermore, a string of mafic dikes extends from 800N 800E to 1200N 1000E along the zone. Another gabbro is offset along this zone at the road, at 1000N 950E. Then at 1300N 1100E a north trending and an east trending gabbro are separated by a narrow zone of mostly covered sediments, at the northern end of mapping of the zone of structural weakness. Minor copper mineralization and rusty weathering carbonate alteration are associated with the gabbros here.

This northeast trending zone of structural weakness is sub-parallel to the Lewis Creek Fault, and may be a splay feature related to that structure. If so, then the data supports a relatively late reactivation of the Lewis Creek Fault zone, because of the young mafic dikes within the zone of structural weakness.

2.234 Brecciation

Siliceous brecciated zones, commonly with quartz veining, occur locally on and near the claim block. Two noted occurrences are at 950N 650E and 800N 1550E. Quartz vein breccia float is present at 900N 1450E. The two bedrock occurrences are near gabbro contacts and their development may be related to the competency contrast between gabbro and sediments during tectonism.

Siliceous breccias are also present along cliff faces above the Lewis Creek valley bottom. These may be related to the Lewis Creek Fault.

2.24 Alteration and Mineralization

2.241 Carbonate Alteration

There is a broad iron carbonate alteration evident in quartzites a short distance north and east of the old workings. This may be a peripheral alteration to the central zone of silification (at the old workings) or may be related to the Lewis Creek Fault. There is some possibility it is related to gabbro emplacement or mafic dike emplacement. Both types of mafic intrusives are or can be calcareous.

There may be some relationship between the carbonate alteration and copper mineralization.

2.242 Chlorite Alteration

Chlorite alteration on the property is quite widespread and much of it is likely a product of regional metamorphism. Localities with increased chlorite alteration are present; these may be due to rock composition or to local alteration effects. These details were not specifically recorded during the course of geologic mapping.

2.243 Silicification

Quartz veining and pervasive silicification of Fort Steele sediments is present at a number of localities on the property. The most intense silicification seen is at the old workings, within a northwest oriented zone adjacent to the Lewis Creek Fault. Two sets of quartz veins are present, approximately parallel and perpendicular to the Lewis Creek Fault. There is also an intense pervasive silicification of the host Fort Steele sediments. Minor fine grained pyrite occurs with the quartz veins and with the silicified sediments.

Quartz veins are developed locally adjacent to some of the gabbro intrusives on the property and were probably derived from the siliceous host sedimentary rocks during deformation.

2.244 Pyrite Mineralization

Pyrite is common with quartz veins at the old workings and is present with quartz vein float within the area of silicic alteration surrounding the workings.

2.245 Copper Mineralization

Scattered occurrences of copper mineralization were noted during the course of detailed mapping. Copper is present in the Fort Steele Formation sedimentary rocks, within the gabbroic intrusives, and at gabbro-sediment contacts. Chalcopyrite and malachite are both present.

Prospecting should be undertaken to define the extent of copper mineralization and evaluate its relative concentration; is it spatially related to the Lewis Creek Fault, to some other structure, or to the zone of silicic alteration.

2.246 Gold Mineralization

Although anomalous gold has been identified in samples taken from the old workings prior to the Goldylot claims being staked, no further analyses have been undertaken.

3.00 CONCLUSIONS

Detailed geologic mapping of part of the 4 unit Goldylot claim block in Lewis Creek has identified a number of interesting features:

1. Gabbros are abundant adjacent to the Lewis Creek Fault. Their emplacement may have been controlled by this structure, suggesting it was an active fault during sedimentation, and enhancing its importance as a structure along which copper and other base metal mineralization were developed during active sedimentation.

2. A zone of apparent structural weakness is developed parallel to the Lewis Creek Fault a short distance southeast of the fault. This zone has influenced the intrusion of older gabbro sills and dikes and younger mafic dikes, indicating that it has been active over a long geologic time interval. The presence of this zone of structural weakness furthermore supports the probability that the Lewis Creek Fault was reactivated as recently as Cretaceous time. The Lewis Creek Fault may therefor have influenced deposition of copper and gold mineralization known to be related to Cretaceous felsic intrusives, which occur in the general vicinity of the Goldylot claims.

3. Future work on the claims should include a completion of the mapping, a more detailed evaluation of the old workings and prospecting.

4.00 STATEMENT OF COSTS

7 days field mapping @ $225/day	$1575.00
7 days vehicle @ $50/day	350.00
Report and drafting 2 days @ 225/day	450.00
Materials	35.00
TOTAL COST	**$2410.00**

5.00 AUTHOR'S QUALIFICATIONS

As author of this report I, Peter Klewchuk, certify that:

1. I am an independent consulting geologist with offices at 246 Moyie Street, Kimberley, B.C.
2. I am a graduate geologist with a B.Sc. Degree (1969) from the University of British Columbia and an M.Sc. Degree (1972) from the University of Calgary.
3. I am a Fellow of the Geological Association of Canada and a member of the Association of Professional Engineers and Geoscientists of British Columbia.
4. I have been actively involved in mining and exploration geology, primarily in the province of British Columbia, for the past 23 years.
5. I have been employed by major mining companies and provincial government geological departments.

Dated this 28th day of April, 1998

Peter Klewchuk, M.Sc., FGAC, P.Geo.

6.00 REFERENCES

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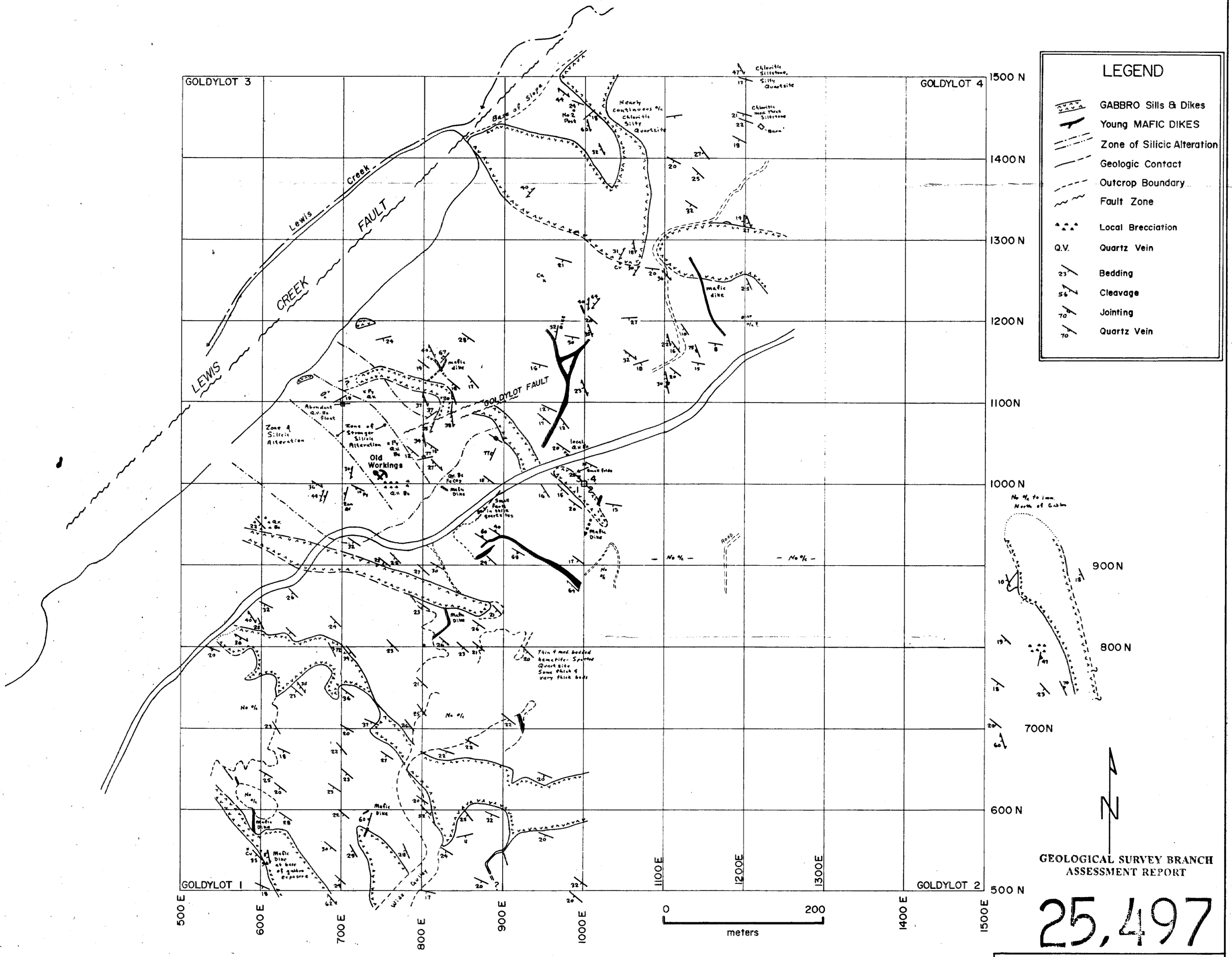

LEGEND

- GABBRO Sills & Dikes
- Young MAFIC DIKES
- Zone of Silicic Alteration
- Geologic Contact
- Outcrop Boundary
- Fault Zone
- Local Brecciation
- Q.V. Quartz Vein
- 23 Bedding
- 56 Cleavage
- 70 Jointing
- 70 Quartz Vein

GOLDYLOT CLAIMS

DETAILED GEOLOGY

Scale: 1: 2500 | NTS 82 G/13E | Figure 4