

83-#662 - #11612

REPORT ON  
PAUL AND MIKE CLAIMS  
LEWIS CREEK 82G/12E & 82G/13E  
FORT STEELE MINING DIVISION  
Latitude 49°46'N Longitude 115°41.5'W

for  
DIA MET MINERALS LTD.  
KILOWNA B.C.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**11,612**

K.E. NORTHCOTE AND ASSOCIATES LTD.  
AGASSIZ B.C.  
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NEW WESTMINSTER B.C.

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## SUMMARY

The PAUL and MIKE claims are located between Wasa and Sowerby Lakes, 29 kilometres northeast of Cranbrook at Latitude  $49^{\circ}46'N$ , Longitude  $115^{\circ}41.5'W$ , NTS 82G/12 and 13E in the Fort Steele Mining Division.

The claims consist of the Paul 1 and 2, MIKE 2 to 6 and MIKEY fraction totalling 112 units and fractions.

The PAUL and MIKE claims are believed to be underlain by clastic rocks of the Purcell Supergroup which exhibit marked regional changes of facies from east to west reflecting different environments of deposition. The Sullivan Pb,Zn,Ag,Cd deposit, one of the larger massive sulphide stratiform deposits in the world, is located approximately 25 kilometres to the west in turbidite facies of the Aldridge Formation. The Fort Steele Formation crops out on the east margin of the PAUL and MIKE claims with most of the claim-area covered by overburden. Structural complexities, including possible projection of the Kootenay River Fault with unknown sense and magnitude of movement, result in speculation regarding what formation underlies the west half of the PAUL and MIKE claims. This area could be underlain by formations younger than Fort Steele Formation and which could provide a suitable environment for stratiform sulphide deposits.

The PAUL and MIKE claims have potential for stratiform Pb, Zn, Ag, (Cu) deposits because of their proximity to the Lewis Creek and Boulder Creek synsedimentary transverse faults thought to be genetically related to such mineral deposits. The presence of the Kootenay King deposit 9 kilometres to the southeast demonstrates the probability of locating additional stratiform deposits of

unknown size in this environment. Similarly, close proximity of the deep seated Lewis Creek synsedimentary transverse fault and possible projection of the Kootenay River fault, of unknown range of age, through the claim provides potential for Pb, Zn, Ag (Cu,Au) replacement deposits of unknown size in shear zone-vein systems. Attractiveness of the mineral potential of the PAUL and MIKE claims is dependant upon depth of overburden above possible mineralized beds or structures.

Near coincident magnetic, conductivity and heavy media soil lead anomalies provide a primary exploration target in the south-east part of the claims. Heavy media soil samples give other anomalous areas for Pb, Zn, Cu, (Au) within the claim group. Significance of these values requires an understanding of thickness and nature of overburden.

A two stage program is recommended to assess the potential of the PAUL and MIKE claims. Stage 1 is designed to determine the depth of overburden and indicate mineral potential of near coincident geophysical and geochemical anomalies in the southeast part of the claim group. Estimated cost of the Stage 1 is \$90,000.00 Stage 2 is contingent upon favourable results of Stage 1 indicating depth of overburden sufficiently shallow to put mineralized targets within reach and showing some evidence of mineralization. Stage 2 should measure potential of the primary target in the southeast part of the claim block at an additional estimated cost of \$210,000.00 making a grand total for stages 1 and 2 of \$300,000.00



PROPOSED EXPLORATION PROGRAM  
 PAUL AND MIKE CLAIMS  
 Estimated Cost

## STAGE 1

1] Geological mapping, groundwater data compilation 5 days Geologist and assistant \$350.00/day	\$ 1,750.00
2] Geophysical survey (depth of overburden) Expanding Wenner Array Resistivity Survey 6 days @ \$1,000.00	6,000.00
3] Overburden drilling (reverse circulating system) Mobilization and demobilization - \$4,000.00 5 holes totalling 400 m @\$50.00/m 20,000.00 2 geologists & 2 helpers 10 days @\$700.00/day \$7,000.00	31,000.00
4] Caterpillar and operator, allow	10,000.00
5] Sample processing and assays 200 @ \$100.00	20,000.00
6] Accommodation and food.	5,600.00
7] Transportation 3 trucks, 3 weeks + gasoline	3,000.00
8] Geological supervision and report	5,000.00
Contingencies , miscellaneous, freight	7,650.00
	<hr/>
Total Stage 1	\$90,000.00
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## PAUL AND MIKE CLAIMS

## PROGRAM

## Estimated Cost

## STAGE 2

Initiation of Stage 2 is dependent upon favourable results from Stage 1; overburden depth placing targets within reach and evidence of mineralization in bedrock.

1] Geophysical surveys	\$ 10,000.00
(a) Crone EM-16	
5 days @ \$1,000.00/day	
(b) McFarr Proton Magnetometre	
5 days @ \$1,000.00/day	
2] Overburden drilling (reverse circulating system)	92,500.00
Mobilization and demobilization accounted for Stg.1	
20 holes totalling 1500 metres	
at \$50.00/metre	\$75,000.00
2 geologists and 2 helpers	
(4men) 25 days @ \$700.00/day	17,500.00
3] Caterpillar and moves, allow	15,000.00
4] Geochemical fill-in sampling, heavy media soils	2,500.00
2 men 10 days @ \$250.00/day	
5] Assays	
(a) Overburden 400 @ \$100.00 - \$40,000.00	50,000.00
(b) Soil heavy media 100 @ \$100 10,000.00	
6] Accommodation and food	12,000.00
7] Transportation	6,000.00
8] Geological supervision and report	5,000.00
9] Contingencies, shipping etc.	17,000.00

Total Stage 2 \$210,000.00

Grand Total Stage 1 & 2 \$300,000.00



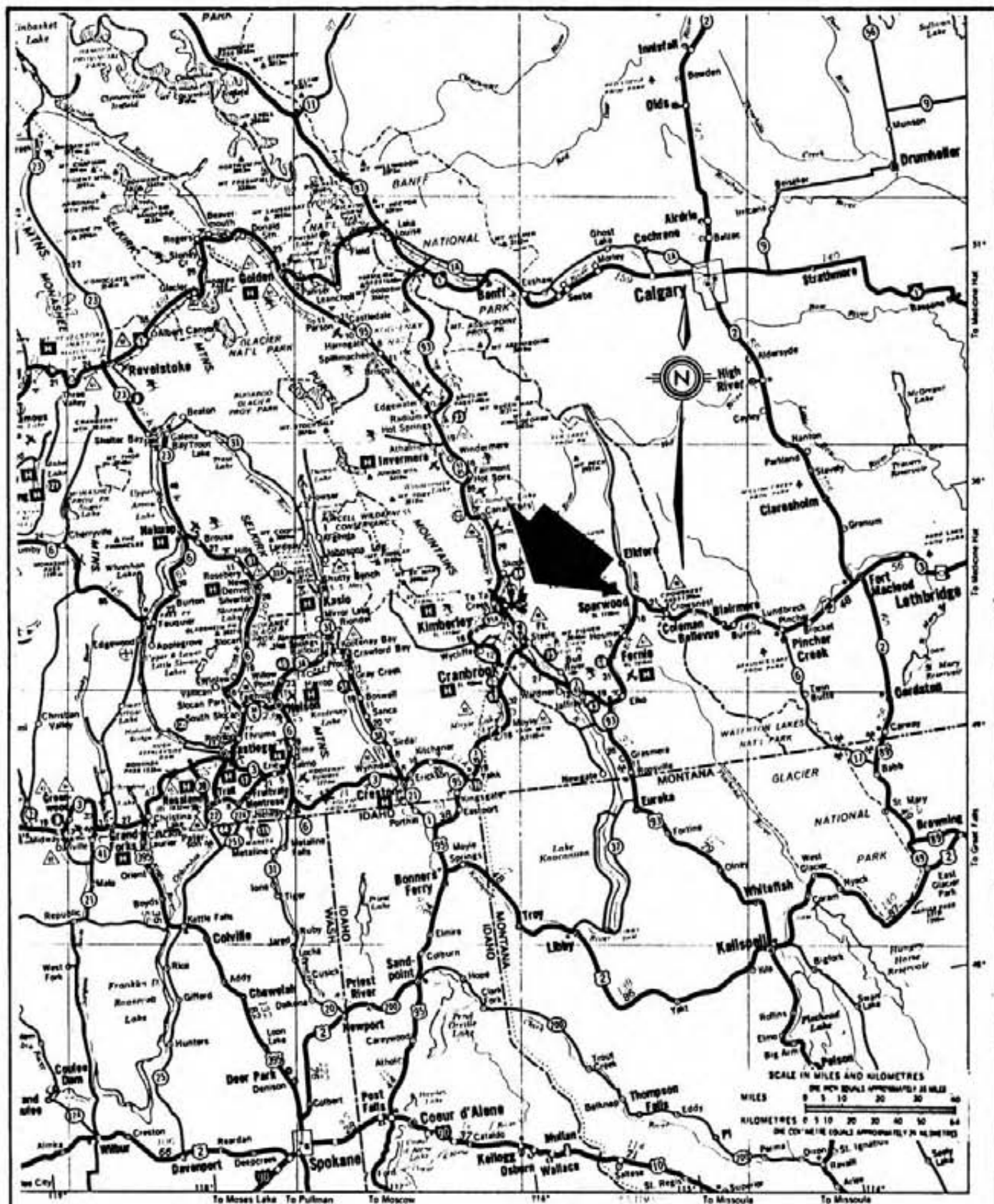
A REPORT ON  
GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL  
SURVEYS ON PAUL AND MIKE CLAIMS FORT STEELE M.D.B.C.

INTRODUCTION

TERMS OF REFERENCE

Gower, Thompson and Associates and K.E.Northcote and Associates were contracted by Dia Met Minerals to examine the PAUL and MIKE claim group, review and substantiate available data, and prepare a geological-geochemical-geophysical report assessing these data. This work was done during the period January 15th to April 30th, 1983. Gower and Thompson spent two days and Northcote one day examining the property.

The PAUL and MIKE claims were staked to cover a Dighem geophysical anomaly resulting from a survey flown between Wasa Lake and Fort Steele. Approximately 180 heavy mineral soil samples were collected on a grid by C.F.Minerals Research Ltd, to test mineral concentrations in glacial drift. As a procedural and quantitative check five additional soil samples were collected by Gower and Northcote for heavy mineral analyses and these data form part of this report. Recent geological maps and papers available from Trygve Hoy who mapped the Estella-Kootenay King area for the Ministry of Energy, Mines and Petroleum Resources, and data from other sources were utilized. All geophysical and geochemical data known to us were reexamined and reinterpreted during preparation of this report. A two stage program is recommended in order to test the potential of this property.



**DIA MET MINERALS LTD  
INDEX MAP  
PAUL AND MIKE CLAIMS**

82G/12E & 82G/13E

49° 46' N 115° 41.5' W

GOWER, THOMPSON & ASSOCIATES  
Drawn J. F. B.

K. E. NORTHCOTE AND ASSOCIATES LTD  
April 30 1983

Figure 1



#### LOCATION, ACCESS, TOPOGRAPHY

The PAUL and MIKE claims are located Latitude 49°46'N Longitude 115°41.5'W, NTS 82G/12 and 13E in the Fort Steele Mining District, approximately 29 kilometres northeast of Cranbrook. The claims lie between Wasa Lake and Sowerby Lakes on the east margin of the Rocky Mountain Trench at the foot of the west facing slope of the Hughes Range. Elevations on the property range from 800 to 1100 metres. See Figures 1 and 2.

The claims are partly on cultivated land and crown land with light deciduous and coniferous growth. The property is underlain by Pleistocene glacial deposits which may be deep on the western and central two thirds of the claim block, becoming shallower near its eastern margin where outcrops occur.

The PAUL-MIKE claims are accessible by the excellent all weather road leading up Lewis Creek from Wasa. A bond must be posted with the Gold Commissioner at Cranbrook in order to assure surface access to claims on private land prior to conducting exploration programs on these claims.

#### CLAIMS

The PAUL-MIKE claims include the PAUL 1,2, & 3 and MIKE 2, 3, 4,5 & 6 four post claims and MIKEY #1 fractional claim. The claims are contiguous and have considerable overlap which substantially reduces the claim area.

Because of privately held surface rights access problems the claim posts were not examined in order to confirm accordance with

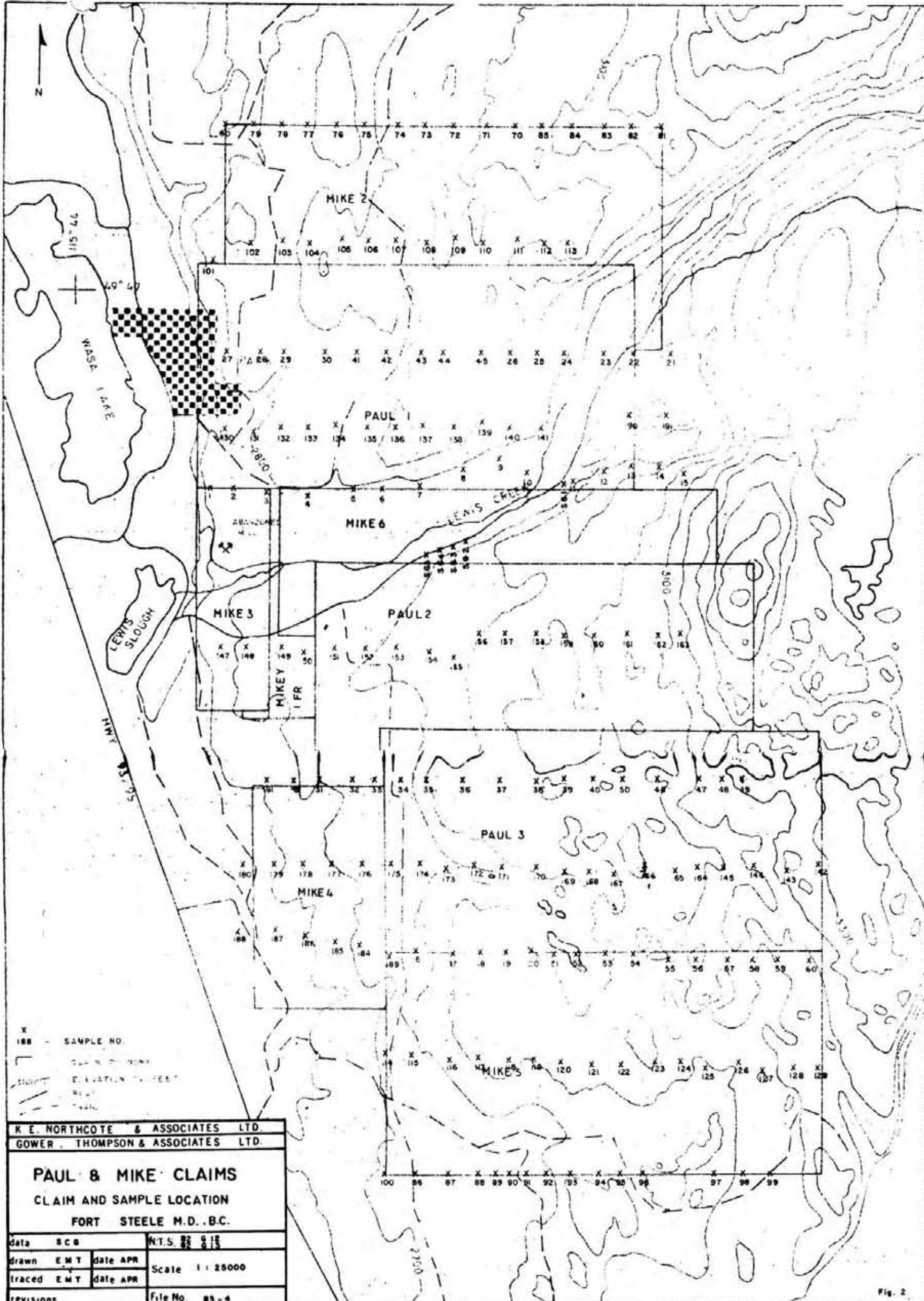


Fig. 2

the Mineral Act. Those claim posts which were observed were legally placed, but it is understood that a few posts have been removed since staking.

TABLE I  
PAUL MIKE MIKEY CLAIM DATA

CLAIM NAME	UNITS	RECORD NO.	RECORD DATE	EXPIRY DATE
PAUL 1	18	1349	Feb.17/81	1984
PAUL 2	18	1350	Feb.17/81	1984
PAUL 3	18	1351	Feb.17/81	1984
MIKE 2	18	1647	Aug. 9/82	1983
MIKE 3	3	1648	Aug. 9/82	1983
MIKE 4	6	1649	Aug. 9/82	1983
MIKE 5	18	1650	Aug. 9/82	1983
MIKE 6	12	1651	Aug. 9/82	1983
MIKEY FR.	1		Apr.26/83	1984

It is noted that, with exception of MIKEY fraction, the 6 month contestation period has lapsed for all claims. The legality of the claims is the responsibility of Dia Met Minerals Ltd.

## GEOLOGY

### REGIONAL GEOLOGY

The PAUL and MIKE claims area is underlain by clastic rocks of the Purcell Supergroup and lie within the Fernie (West Half) map sheet (Leech, 1966) and on the west margin of the Estella-Kootenay

King area ( Hoy, 1979). It is from these maps, and papers by T.Hoy, 1982; M.E.McMechan, 1981; M.E.McMechan, T.Hoy and R.A.Price, 1980, that the following account of the regional geology is summarized.

The Purcell clastic rocks exhibit marked changes of facies from east to west reflecting different environments of deposition. In general these rocks form a series of sedimentary wedges that thicken and become more argillaceous westwards. To the east, in the Clark Range, most of the Purcell rocks of the Waterton, Altyn Formations are shallow-water shelf, tidal flat flood-plain or deltaic deposits. This thin platform thickens to the west and in the Purcell Mountains becomes more argillaceous having the same stratigraphic position as the thick succession of dark laminated argillite, siltstone, sandstone, turbidite deposits of the Aldridge Formation. With continued subsidence the basin of turbidite deposition expanded. In the Clarke Range overlying clastic facies of Appekunny and Grinnell Formations thicken westwards correlative with the Creston Formation. Similarly the overlying Kitchener-Siyeh Formation thickens and becomes more argillaceous to the west. Purcell sedimentary rocks, overlying the Purcell Lava on the east, form thin lithologically distinct formations of tidal flat or flood-plain deposits while correlative rocks in the Purcell Mountains to the west are thicker, contacts are more gradational and dark argillaceous facies are more prominent.

Hoy postulates that syndepositional transverse faults, the Moyie-Dibble Creek and St. Mary-Boulder Creek faults, originating in Purcell time locally modified the depositional pattern of Purcell rocks. These faults cross the Rocky Mountain Trench south of the Kootenay King area and affected deposition of Purcell rocks in this area. Fort Steele coarse fluvial quartzites at the base of the

succession may record an initial arching of the crust prior to development of a cross cutting fault controlled structural basin to the south. Thick deposits of turbidite and wacke beds were deposited in the basin in Aldridge time while generally more shallow-water sediments accumulated in the Kootenay King area to the north. The Boulder Creek fault, a right lateral reverse fault, is located along the approximate site of the Lower to Middle Aldridge growth fault with its associated dramatic thickness and facies changes. North of the Kootenay King area in the direction of current transport and deepwater environment the quartzite and surrounding strata thin appreciably and become finer grained, suggesting deposition in a small fault bounded structural depression. Overlying the Fort Steele Formations are coarse grained channel deposits in the inner part of a submarine fan consisting of quartzite and locally conglomerate in calcareous siltstone and argillite which were probably a source of turbidite deposits in correlative Middle Aldridge rocks to the north, south and west.

#### THE GEOLOGY OF THE PAUL AND MIKE CLAIMS AREA

The PAUL and MIKE claims are largely underlain by unconsolidated material which covers the probable position of the Kootenay River fault which follows much of the eastern side of the Rocky Mountain Trench in the Fernie (West Half) map sheet. See Figure 3.

The Fort Steele Formation crops out on the east edge of the claims area and has moderate westerly dip towards the centre of the claims. Here, the Fort Steele Formation represents the upper limb of a recumbent fold whose axial plane strikes north-northwesterly and dips westerly. See Figure 3. The Fort Steele Formation begins dipping easterly at about 1050 metres elevation east of

Sowerby Lake and from there proceeds upwards in section to 2000 metres elevation where Aldridge Formation overlies Fort Steele conformably in the south part of the map area and along a fault which transects bedding at a low angle from a point east of Sowerby Lake northerly to Lewis Creek. Successively younger members of the Aldridge Formation are exposed eastwards to the Aldridge-Creston contact two kilometres east of Estella mine.

Fort Steele Formation (from Hoy, 1979,1982)

The total thickness of the exposed Fort Steele section is greater than 2000 metres with the base not exposed. The formation comprises at least three generally upward fining sequences, or megacycles, several hundred metres thick. The megacycles grade, with some reversals, from coarse massive or cross bedded quartzites at the base to laterally more persistent thinly laminated siltstone and argillites at the top.

Quartzites at the base of the megacycles are medium to coarse grained forming discontinuous beds up to a metre thick which thin and die out laterally. They are commonly structureless or crudely layered and scour the underlying unit producing broad troughs. Up section, within each of the megacycles, quartzites are finer grained, more argillaceous, thinner bedded and more persistent laterally. The relative proportion of the siltstone/argillite component increases at the top of upward fining sequences. Siltstones at the top of the megacycles are thin and horizontally laminated or ripple cross laminated. Individual beds grade up to dark laminated argillite that contains abundant desiccation cracks. Lenticular bedding and silt scours are common. At the top of the Fort Steele Formation the quartzite/siltstone component gradually decreases grading into Aldridge Formation; which boundary is placed above the last occurrences of cross bedded quartzite or observed desiccation cracks in argillite.

### Aldridge Formation

Rusty weathering argillite, siltstone and shale of the Aldridge Formation conformably overlie the Fort Steele Formation and is divided into three main divisions. The lowest division, A 1, is dominantly laminated and ripple cross-laminated siltstone, finely laminated dark argillite, quartzite and, near the base, a dolomite member containing intercalated chert. Quartzite beds that contain basal rip-up clasts and occasional northerly trending flute casts are interlayered with a buff-weathering, commonly graded and lenticular-bedded siltstone near the middle of A 1.

The middle division of the Aldridge Formation, A 2, is approximately 500 metres in thickness and consists of interlayered siltstone, quartzite beds separated by dark rusty weathering argillite. The quartzite beds are generally massive, although the top few centimetres may be crudely layered and finer grained than the base. Flute casts on the base of some quartzite beds indicate northward transport.

The upper division, A 3, comprises 500 to 800 metres of finely laminated, dark argillite and siltstone. It is transitional into green quartzite and siltstone at the base of the overlying Creston Formation.

### Depositional Environment of Purcell Rocks, Kootenay Range

The following account of depositional environment of Purcell rocks in the Kootenay King-Estella area is taken from Hoy, 1979.

" As in the Clarke Range, the bulk of the Purcell rocks in the Kootenay Range record deposition in a shallow water tidal flat or flood plain environment. However the lithology of the Aldridge Formation indicates that it was deposited in deep water."

The Fort Steel Formation at the base of the Purcell Super-group is unique. It consists predominantly of braided fluvial deposits derived from a source area to the south (Hoy, 1978). A marine transgression is apparent in lower Aldridge time, and the alluvial fan deposits of the Fort Steele are overlapped by intertidal and subtidal mud flat deposits, which gave way upward to slightly crenulated and laminated carbonates that are similar to subtidal algal mat deposits. Overlying laminated siltstone and argillite represent continuing transgression. In the Kootenay King area, the lower division of the Aldridge Formation, (A1), thins from approximately 2500 metres thickness in the south to less than 1500 metres only 15 kilometres to the north. In addition, the character of lower division rocks also changes northward. Thick sections of quartz-rich siltstone in the south give way to finer grained and more dolomitic siltstone to the north and finally grade laminated black argillite. As well, thick coarse grained quartzites that contain zones of small angular clasts near their base become thinner and finer grained northward. The thinning and fining of sediments to the north, reinforced by a northerly current transport direction that is indicated by sedimentary structures, suggests that a local fault-bounded basin, with south side up may have developed in lower Aldridge time. The Boulder Creek fault, an eastern extension of the St. Mary Fault which Lis and Price (1976) have shown to be active in Hadrynian time, appears to have been the locus of an Helikian fault that defined the southern limit of the basin. The coarse grained quartzite layers are interpreted to be channel deposits that cut silty levee or back-levee beds in the inner part of a submarine fan. Movements on the fault might have triggered deposition of the channel sand deposits. The Kootenay King, a stratiform Pb-Zn deposit, is in the upper part of the thickest and coarsest of these quartzite sequences. Quartzite interlayered with conglomerate just north of the transverse Lewis Creek-Nicol Creek fault zone... also thins, becomes finer grained and dies out to the north suggesting that this zone also was active in lower Aldridge time and locally controlled sedimentation."

"The middle division of the Aldridge Formation (A2) consists of proximal turbidite deposits, transported in a



northerly direction. The first evidence of a marine regression appears near the top of the Aldridge Formation (Hoy, 1978) and green siltstone and shale near the base of the overlying Creston Formation were deposited in a subtidal environment. Overlying purple siltstones that contain numerous mud cracks, rip-up clasts and ripple marks are tidal flat or flood plain deposits similar to those described in the Clark Range. The carbonate rocks of the Kitchener-Siyeh, and the mud-cracked siltstone and shale of the Gateway, Phillips and Roosevelt Formations, were also formed on extensive tidal flats or flood plains."

### Structure

The structure of the Purcell rocks in the Estella-Kootenay King map area is dominated by a large, open, recumbent anticline. Its axial plane dips to the west and, throughout most of the western part of the map area, bedding in its upper limb dips to the east. It is noted, however, on field work sheets provided by Hoy, that outcrops on the east margin of the PAUL and MIKE claims have consistent gentle to moderate westerly dips to a point of flexure east of Sowerby Lake. See Figure 3. Because of this westward dip of the upper limb of the recumbent fold in this local area it is possible that Aldridge Formation higher on this limb could subcrop in the claims area. See Figure 3. If the projection of the Kootenay River fault passes through the claims area it would transect and displace the upper limb of the recumbent fold. Because the direction and magnitude of movement of opposite sides of the Kootenay River Fault are not known it is not possible to predict with certainty what formation underlies the overburden on the west half of the PAUL-MIKE claims.

### ECONOMIC GEOLOGY

Mineral deposits in rocks of the Purcell Supergroup are of two major types:

- (a) the stratiform type represented by Sullivan, North Star, Stemwinder, Vulcan and Kootenay King and
- (b) vein or fissure filling or replacement type represented by St. Eugene, Society Girl, Aurora and Estella deposits.

#### STRATIFORM DEPOSITS

Stratified Pb, Zn, Ag (Cu,Au)

##### Sullivan

The Sullivan mine, at Kimberly B.C., one of the largest base metal deposits in the world, is a stratiform Pb, Zn, Ag, Cd, Sn, Fe deposit within rocks of the Purcell Supergroup at the Lower-Middle Aldridge boundary. The deposit is considered to be a hydrothermal, syngedimentary deposit that formed in a small submarine basin. The Sullivan mine has produced more than 100 million tonnes of ore and has reserves of approximately an additional 50 million tonnes grading 4.9% Pb, 6.1% Zn and 37 g/tonne Ag.

The ore deposit is zoned laterally and vertically. The western part is massive pyrrhotite with wispy layers of galena overlain by layered pyrrhotite, sphalerite, galena and pyrite intercalated with clastic beds. The eastern part has several distinct conformable layers of generally well-laminated sulphides separated by clastic rock. At the outer limits of the deposit are iron sulphide bands.

The footwall of the massive western section has north trending brecciated conduit zones and is altered to dark chert-like tourmaline-rich rock. Albite-chlorite-pyrite alteration is also restricted to the western part of the orebody. The deposit is zoned with Pb, Zn and Ag values decreasing towards the eastern margin. Tin is con-

centrated in the western part. Higher absolute metal values and higher Pb/Zn and Ag/Pb ratios overlie breccia zones.

### Kootenay King

The Kootenay King mine is located on the north side of the Wildhorse River, 10 miles by road from Fort Steele. This is a small lead-zinc stratiform deposit of less than 100,000 tonnes in Middle Aldridge clastic sedimentary rocks.

Mineralization occurs near the hinge of a large anticlinal fold that is thrust eastward onto younger Paleozoic strata. It consists of a layer of finely laminated sphalerite, galena and pyrite intercalated with dolomitic to argillaceous siltstone in Kootenay King quartzite. Near its base the quartzite contains coarse angular lithic clasts interpreted as a channel sandstone deposit similar to both overlying and underlying siltstone.

Over a two year period, 1952 and 1953, the mine produced 14,610 tonnes of ore yielding 0.715 kg of Au, 0.90 tonnes of Ag, 710 tonnes of Pb and 881 tonnes of Zn.

### Possible Controls For Stratiform Mineralization

A number of stratiform lead-zinc deposits are preferentially located in the vicinity of synsedimentary transverse fault zones coincident with the St. Mary-Boulder Creek and Moyie-Dibble Creek transverse faults south of Kimberly and the Hall Lake fault to the north. These deposits are related to areas of tourmalinization and intraformational conglomerates and breccias which are associated with synsedimentary faults. This suggests a genetic link between mineral deposits, small basins and related fault systems. Local

thickening of host succession suggests further that third-order basins cross cutting a regional north-east trending second order rift structure may have been an important local control. (Hoy, 1982)

#### Stratiform Copper Potential

There are numerous widespread occurrences of stratiform copper in Purcell rocks in Southeastern B.C. These occurrences are in fluvial or shallow water deposits most notably in the Grinnell-Creston Formations and to a lesser extent in the Kitchener-Siyeh, Gateway, Phillips, Kintla and Roosevelt Formations in the Clarke Range and on the east side of the Rocky Mountain Trench. There is evidence of some enrichment or remobilization and redeposition of copper in association with Purcell sills and dykes. There has not, however, been any stratiform copper occurrences found to date with production potential in southeastern B.C.

Similar deposits with production capability are located in Grinnell-Creston equivalent rocks in Glacier Park Montana and a notable deposit reported to be producing at a rate of 2.72 million tonnes per year with reserves greater than 55 million tonnes 0.74% Cu and 48 grams Ag per tonne in Rivette quartzite at Troy, Montana, (Hoy, personal comm.)

In the Estella-Kootenay King area there are a number of stratiform copper occurrences in Fort Steele and Aldridge quartzite, none of which have indicated significant reserve potential. See Figure 3 and Table II.

#### Fissure Zone and Vein Deposits

There are a number of Pb, Zn, Ag fissure zone replacement and

vein deposits within rocks of the Purcell Supergroup. These include the St. Eugene-Society Girl and Aurora deposits on the east and west sides respectively of Moyie Lake 25 km southwest of Cranbrook. The Estella mine is also included in this group and is located 5 km east of the PAUL and MIKE claims. See Figure 3.

#### St. Eugene-Society Girl

The St. Eugene mine is in Upper Aldridge Formation and occurs between two main fissure zones striking east west and dipping 70°S. The ore forms replacement deposits in quartzite and is restricted to the fractured area between 2 main fissures. The veins are narrow with mineralization consisting of galena, sphalerite, magnetite and minor chalcopyrite. This mine has produced a total of 1,475,266 tonnes of ore yielding 78.8 kg gold; 182,690 kg Ag; 113, 035 tonnes Pb and 14,483 tonnes Zn. This mine ceased operations in 1929.

The Society Girl is at the Upper Aldridge-Creston Formation contact and is in a narrow vein cutting thin bedded argillaceous quartzites. The vein is oxidized containing cerrusite, pyromorphite, galena and sphalerite with little or no gangue. The Society Girl produced 2,984 tonnes of ore yielding 432 kg Ag, 580 tonnes of lead and 24 tonnes zinc. The Society Girl mine ceased operations in 1952.

#### Estella Mine

The Estella mine is located in the headwaters of Tracy Creek about 8 kilometres in a straight line from Wasa or 26 kilometres by road. The mill was located at Wasa and the ore was hauled by truck to the mill. This possible source of contaminants should be borne in mind when interpreting geochemical results in the area adjacent to the haulage road.

The mineralized rocks at the Estella mine are northwest striking, southwest dipping argillites and quartzites of the Aldridge Formation. Small intrusive bodies are also present; a syenite exposed near the portal and a sill-like diorite which also contains mineralization.

The lode is a zone of fracturing and light shearing and is semi-bedded in the sedimentary rocks and penetrates the diorite. The ore is a replacement by sphalerite, galena and pyrite, accompanied by more or less silica. Vein quartz is not abundant except in diagonal veins which in general contain little if any sulphides.

Intermittent production from 1951 to 1967 from the Estella mine totalled 109,518 tonnes and yielded 2.05 kg Au, 6.3 tonnes Ag, 5,181 tonnes Pb, 9,834 tonnes Zn and 1.2 tonnes Cu.

Table II summarizes the mineral properties, located on Figure 3, in the general area of the PAUL and MIKE claims.

TABLE II

BC MINFILE NO.	NAME	COMMODITIES	FORMATION	TYPE OF DEPOSIT	PRODUC- TION
82GNW008	Estella Mine	Zn, Pb, Ag, Au, Cd, Cu	Aldridge & Intrusive	Shear Vein Replacement	Yes
82GNW009	Kootenay King	Ag, Pb, Zn Cd, Au, Cu	Aldridge	Stratiform	Yes
82GNW016	Kootenay Selkirk	Cu, Pb, Ag	Aldridge Purcell Sill	Purcell Sill Fractures, Replacement	-
82GNW017	Try Again	Cu	Fort Steele	Fault Replacement	-

82GNW035	Golden Fleece	Cu	Fort Steele	Vein	-
82GNW045	Emily Tiger	Au,Ag,Pb	Fort Steele	Vein	-
82GNW046	Wanda B	Au,Ag,Pb	Ft.Steele Aldridge ?	Vein	-
82GNW059	Lazy 19	Cu	Ft.Steele	Vein Strata-bound	-
82GNW061	Lazy 32	Cu	Ft.Steele Intrusive	Vein Fault	-
82GNW062	Cher	Cu	Ft.Steele	Strata-bound	-

Of the above properties the Estella and the Kootenay King are the most significant.

#### MINERAL POTENTIAL OF PAUL AND MIKE CLAIMS

##### Stratiform Deposits

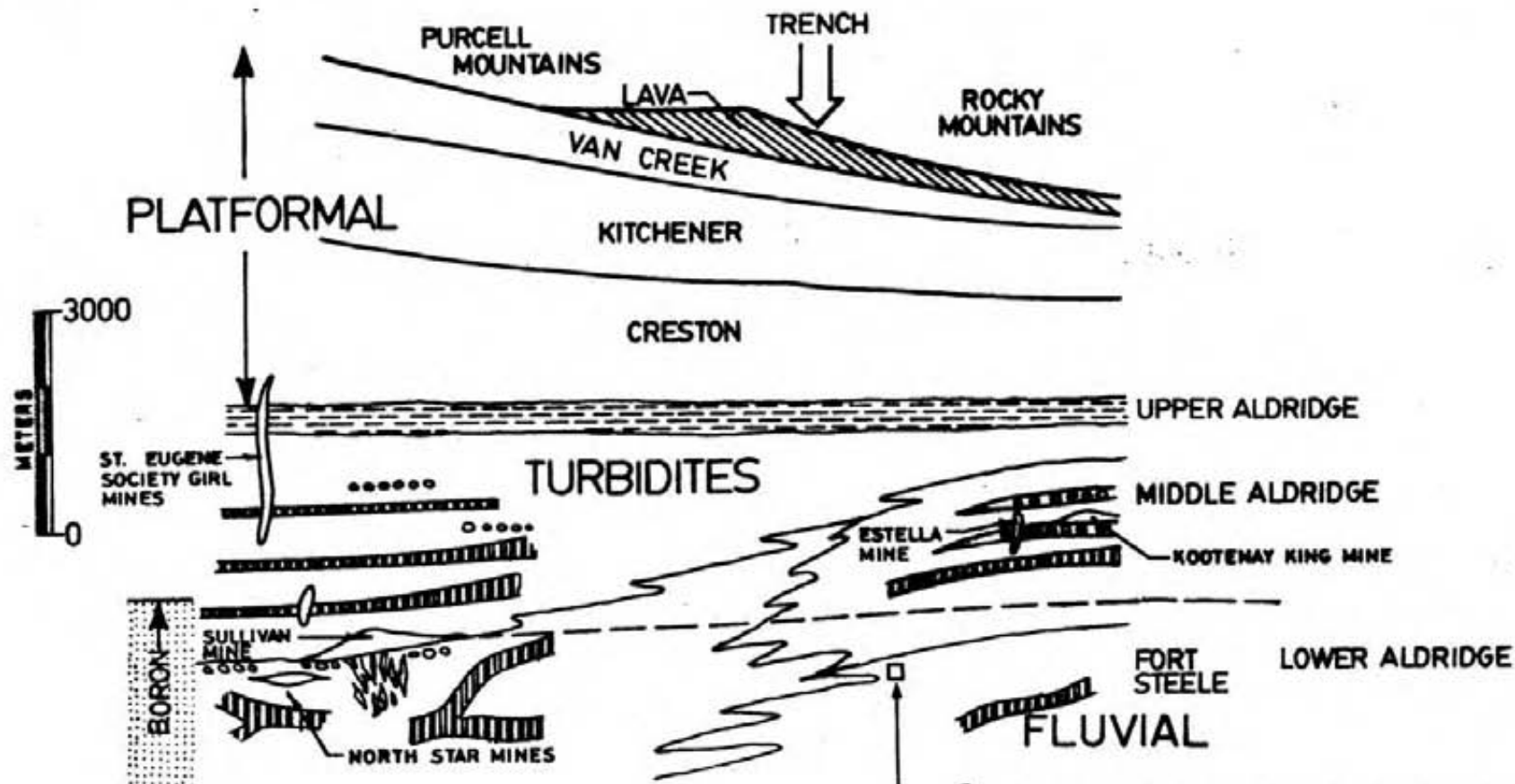
For comparative purposes, diagram Figure 11 summarizes Purcell Supergroup stratigraphy, environments of deposition and indicates the position of significant deposits within the sequence. This diagram indicates that the environment of the PAUL and MIKE claims-Estella-Kootenay King area with its fluvial to fan conglomerate sediments differs from the deep basinal and turbidite environment of the North Star and Sullivan deposits. Clastic hosted stratiform Pb, Zn deposits have, so far, been found in Lower and Middle Aldridge sediments. The Vulcan and Sullivan deposits occur at the Lower-Middle Aldridge boundary. North Star and Stemwinder deposits just south of Sullivan are in Lower Aldridge siltstone. The Kootenay King mine, east of the PAUL-MIKE claims, is in Middle Aldridge siltstone.

# DIAGRAMMATIC SECTION PURCELL SUPERGROUP

FIGURE II.

WEST

EAST



Approximate position of east edge of Paul and Mike Claims. Remainder of the claims are covered by overburden with the possible displacement of formations by extension of the Kootenay River Fault.



The PAUL and MIKE claims are in a favourable position relative to the Lewis Creek and Boulder-Dibble Creek synsedimentary transverse faults which appear to be related to stratiform Pb, Zn, Ag, deposits. The presence of the Kootenay King stratiform deposit supports the contention that additional stratiform Pb, Zn, Ag deposits of unknown size may be found in similar environments in this area. There is uncertainty regarding presence, sense of movement and age of earliest displacement on the Kootenay River Fault. Suggestions of what formations may underlie the overburden on the west side of the PAUL and MIKE claims and their environment of deposition are speculative. It is possible that formations younger than Fort Steele underlie the overburden there and that these rocks may be favourable hosts for stratiform Pb, Zn, Ag stratiform deposits of unknown size.

#### Replacement Deposits

Deep seated structures other than synsedimentary, structure and environment of deposition have produced significant Pb, Zn, Ag (Au) replacement deposits in rocks of the Purcell Supergroup. For example, fissure-vein replacement deposits of Moyie Lake area, and in particular the St. Eugene mine which produced 1,475,266 tonnes of ore, were dependent upon deep seated fracture systems to provide permeability for metal-bearing hydrothermal solutions and for localization of mineralization.

The PAUL and MIKE claims are crossed by the synsedimentary Lewis Creek Fault and probably by the extension of the Kootenay River Fault, of uncertain age span, along the east margin of the Rocky Mountain Trench. The junction of these two, deep, major fault systems and subsidiary fractures provides optimum potential for circulation of metal charged hydrothermal solutions and deposition of fissure-vein replacement deposits. The Estella mine is in this structural environment

and proves potential for hydrothermal fissure-vein replacement deposits in this area.

## GEOPHYSICAL SURVEYS

### DIGHEM SURVEY

DigheM resistivity, electromagnetic and magnetic surveys were flown over the PAUL and MIKE claims area.

#### Resistivity Survey

There is a major north-northwesterly trending break in resistivity from approximately 133-177 ohm metres to greater than 1000. This break in resistivity swings northeasterly in the vicinity of Lewis Creek. See Figure 10. The high resistivity values occur along the eastern edge of the survey block just to the west of outcrops of Fort Steele and Aldridge exposures to the east. The western half of the claim block is characterized by low resistivity (conductive) values 75 to 150 ohm metres.

#### Magnetic Survey

A magnetic anomaly trends north-northwesterly roughly following the boundary between the highly resistive and conductive zones at the eastern side of the PAUL and MIKE claims. A second smaller northerly trending magnetic anomaly lies on the west side of the Sowerby lake east of the claim block. See Figure 10.

### Electromagnetic Survey

A weakly conductive electromagnetic anomaly trends north-north westerly in a resistivity trough in the southeast corner of the claim block. See Figure 10.

### Results

The marked break in resistivity corresponds to the projection of the Kootenay River fault through the PAUL and MIKE claims. See Figure 3. A change in trend of the break in resistivity in the vicinity of Lewis Creek may be a result of the Lewis Creek fault.

Geophysical interpretive information supplied by C. Fipke of Dia Met Minerals Ltd. attributed to Z. Dvorak of Dighem, Falconbridge and Superior Oil geophysicists is as follows:

"The only magnetic fracture of possible significance is an elongated enhanced magnetic anomaly of north-northwest direction in the northeastern part of the survey block. It roughly follows the boundary between the highly resistive and highly conductive zones mentioned above." (C. Fipke personal communication)

It should be noted that the presence of Purcell sills and dykes, which are more magnetic than surrounding sediments, may result in magnetic anomalies. It is to be expected that detailed ground magnetic surveys would detect more of these sills and dykes as well as anomalies resulting from mineralization.

The conductive material underlying the main part of the valley under Kootenay River is attributed to conductive river sediments. The highly resistive material east of the PAUL-

MIKE claims is attributed to bedrock. In the claims area, " the rest of the conductive material away from the river valley occurs definitely at depth, It is speculated that the resistive and conductive zones reflect different rock formations....." (C.Fipke personal communication)

"Dr. Z. Dvorak, Dighem Ltd. geophysicist, calculated the maximum depth to the highly conductive rock formation adjacent to the enhanced magnetic anomaly to be 100 to 110 metres" (C.Fipke, personal communication)

Fipke suggest that the weakly conductive electromagnetic anomaly trending north-northwesterly in a resistivity trough in the southeast corner of the claim block is compatible with Sullivan type stratiform mineralization because galena and sphalerite are poor electromagnetic conductors ( C.Fipke, personal communication).

The possible effects of high concentrations of pyrite and pyrrhotite on electromagnetic conductivity at Sullivan were not discussed.

The northern extension of the conductor at the southeast corner of the claim block approximately coincides with anomalous lead geochemistry and the south end of an elongated northwest trending magnetic high feature (See Figure 10) These near coincident anomalies may represent sulphide mineralization at a depth from near surface down to Dvorak's calculated maximum depth of 100 to 110 metres.

## GEOCHEMICAL SURVEYS

## HEAVY MEDIA SURVEYS

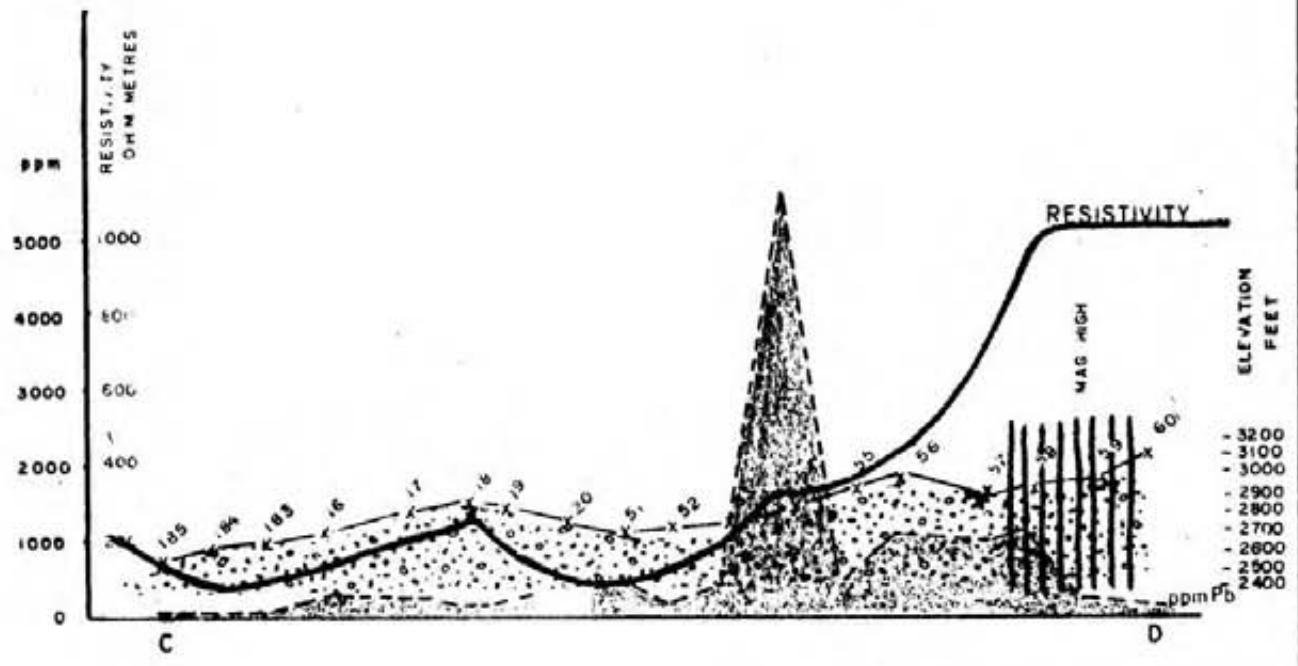
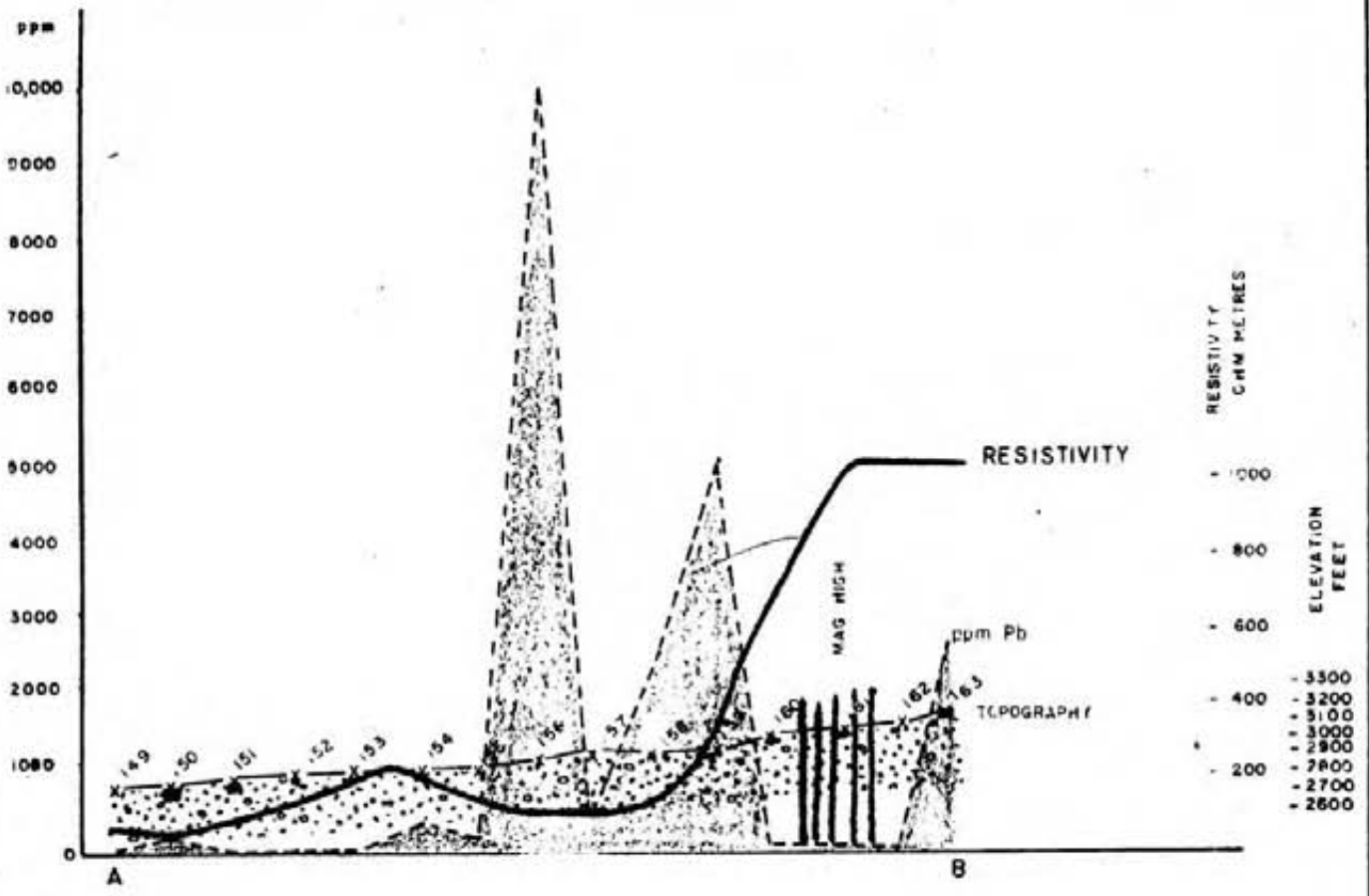
Significant anomalous concentrations of copper, zinc and lead occur in heavy media soil samples taken from glacial drift within PAUL and MIKE claims. See Figure 2. Methodology for collection and concentration of samples is outlined in Appendix A. Concentrates of appropriate size, specific gravity and magnetic susceptibility to give optimum analytical results were analyzed for Cu, Zn, Ag, Cd, As and some for Mo, Mn and Co.

Gower and Northcote collected five samples as a procedural check near the Lewis Creek road. Care was taken to prevent any possible heavy mineral contamination resulting from spillage from trucks hauling ore from Estella mine to the mill at Wasa. Heavy media concentrates were made of these samples at C.F.Minerals Research Ltd., Kelowna, in the same manner as outlined in Appendix A and were shipped to Bondar Clegg, North Vancouver, for Cu, Pb, Zn, Au and Ba analyses.

Results

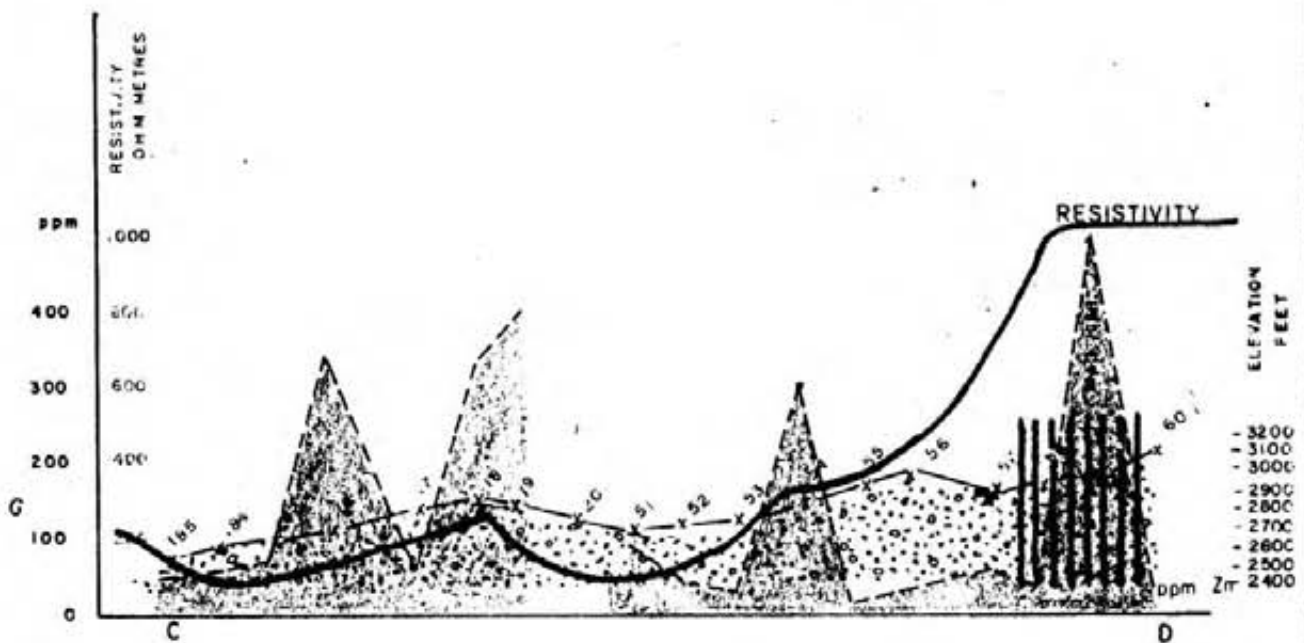
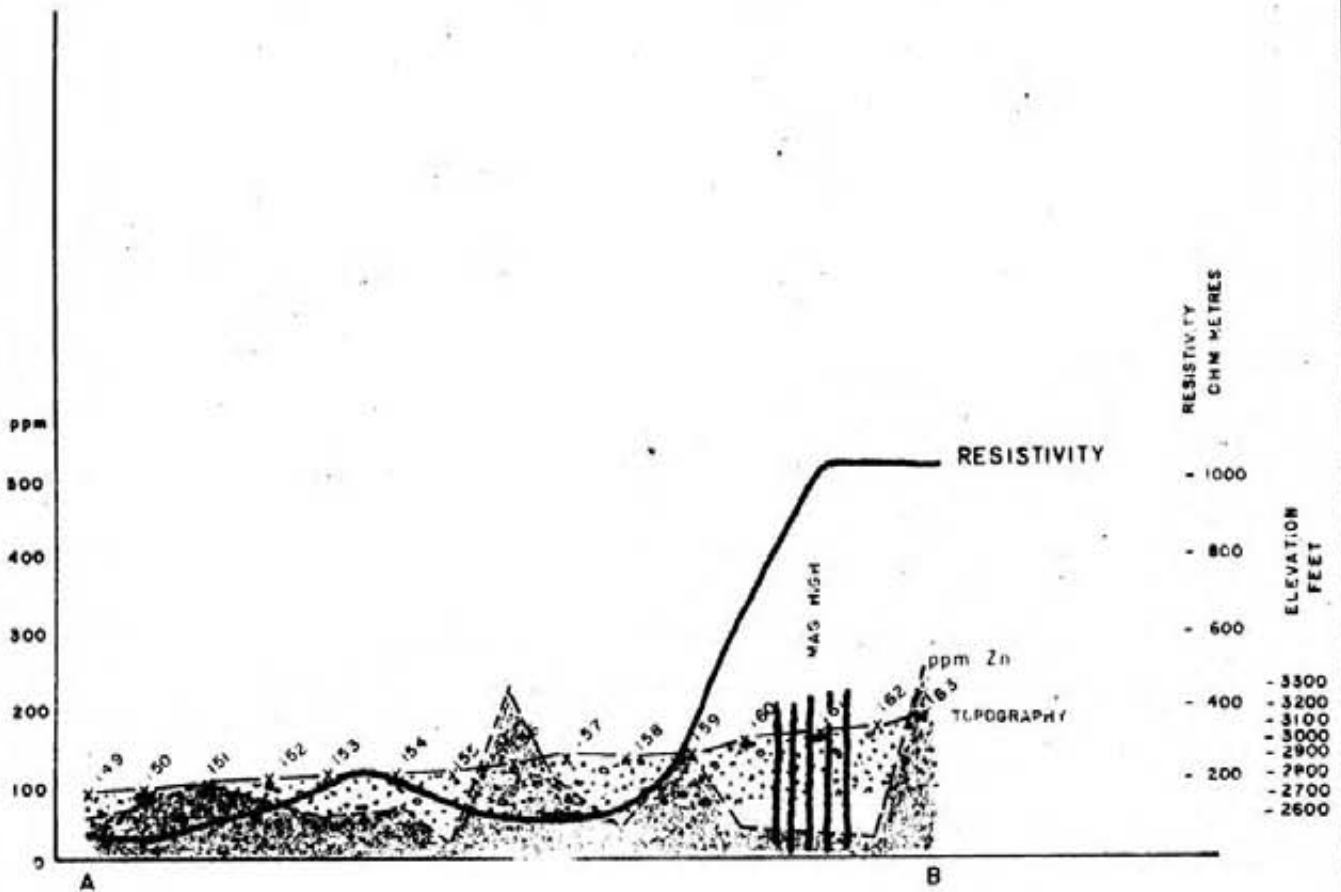
Lead values in the -20HP fraction range from 30 to more than 10,000 ppm with disrupted northwesterly trending highs roughly paralleling resistivity and magnetic trends. See Figures 7 and 10. Two profiles were prepared relating lead values to topography, resistivity and magnetics. See Figure 4.

Zinc values in the -20HN fraction range from 17 to 4925 ppm with higher values tending to occur as isolated or clusters of two or three samples. The strongest zinc occurs in the vicinity of the



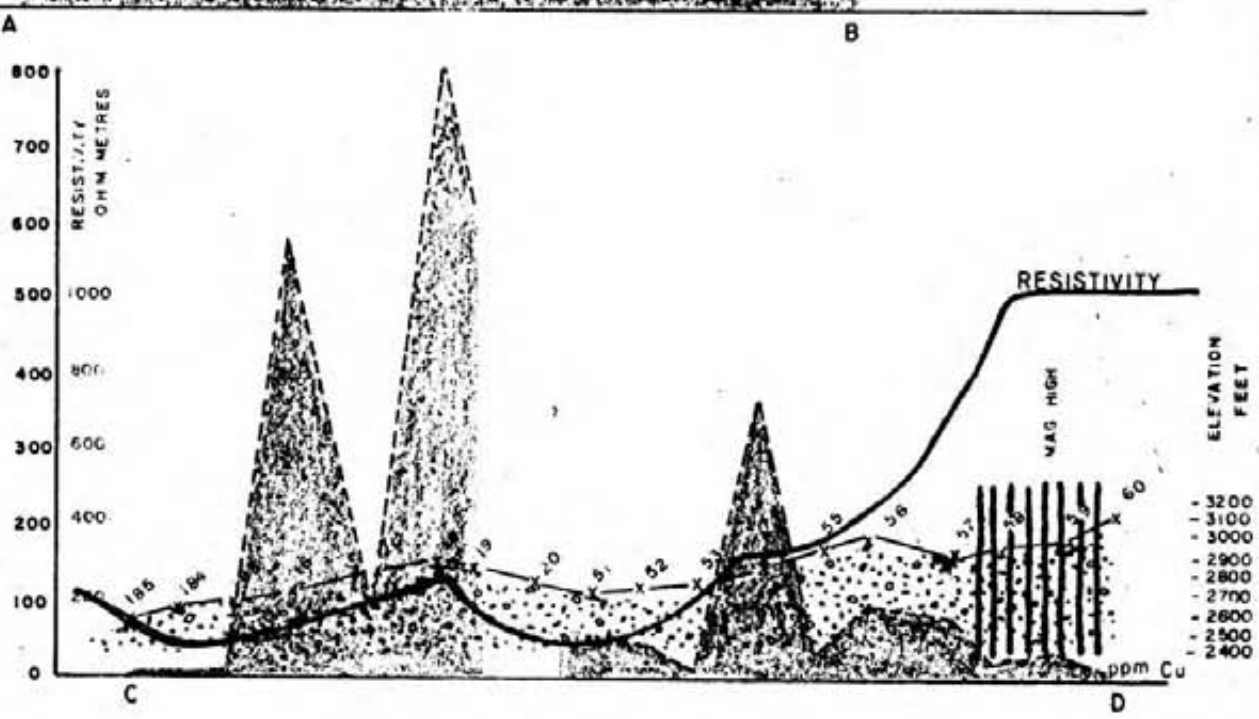
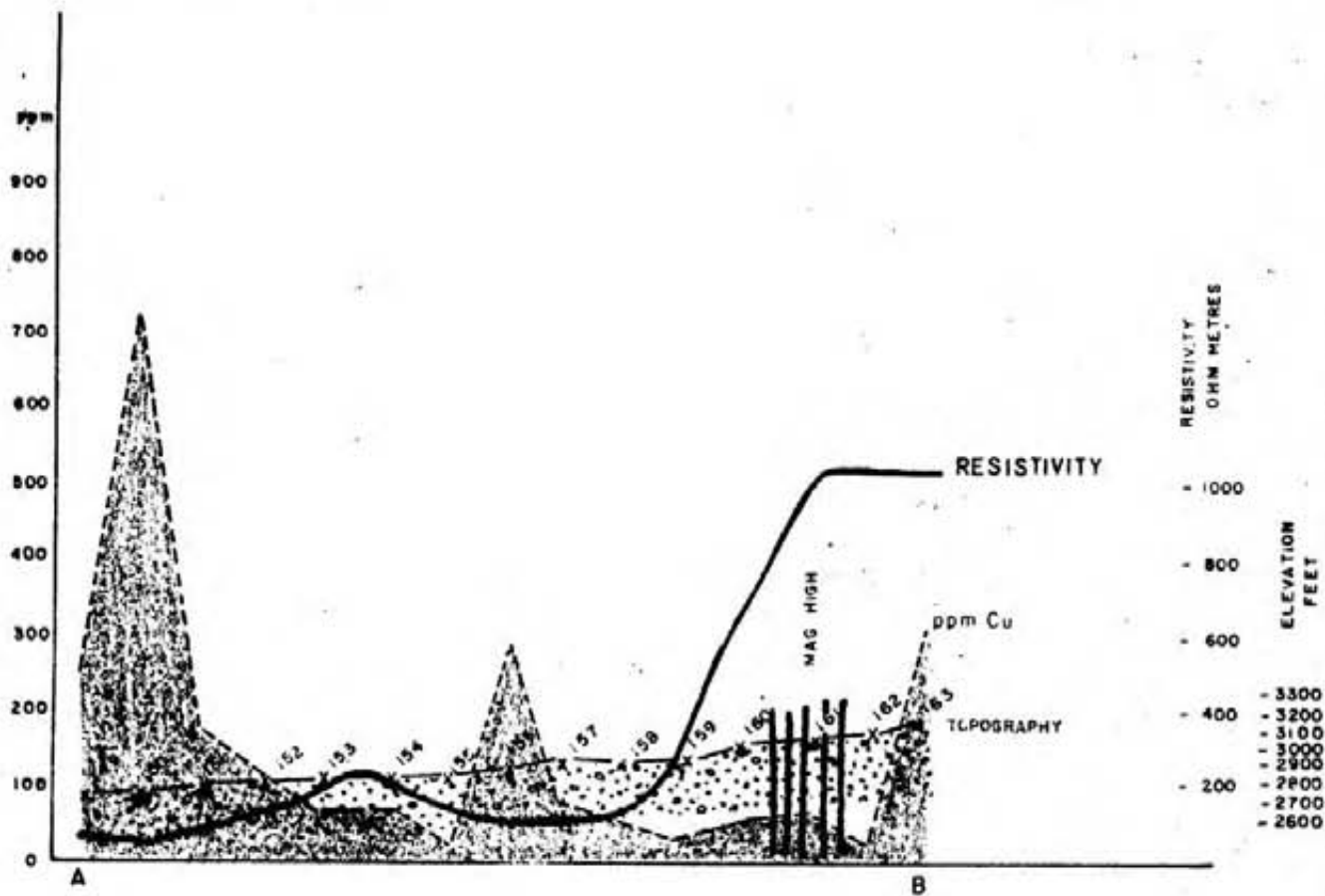
K F NORTHCOLE & ASSOCIATES LTD		
GOWER THOMPSON & ASSOCIATES LTD		
<b>PAUL &amp; MIKE CLAIMS</b>		
GEOCHEMICAL, GEOPHYSICAL & TOPOGRAPHICAL PROFILES		
LEAD IN SOIL		
DIPPED BY	Scale	date
S. C. G.	1:25000	MARCH, 83

Fig. 4  
X - SAMPLE NUMBER



K. E. NORTHCOTE & ASSOCIATES LTD		
GEOFF. THOMPSON & ASSOCIATES LTD		
<b>PAUL &amp; MIKE CLAIMS</b>		
GEOCHEMICAL, GEOPHYSICAL &		
TOPOGRAPHICAL PROFILES		
ZINC IN SOIL		
PREPARED BY	SCALE	DATE
S. C. G.	1:25000	MARCH, 83

Fig. 5  
X - SAMPLE NUMBER

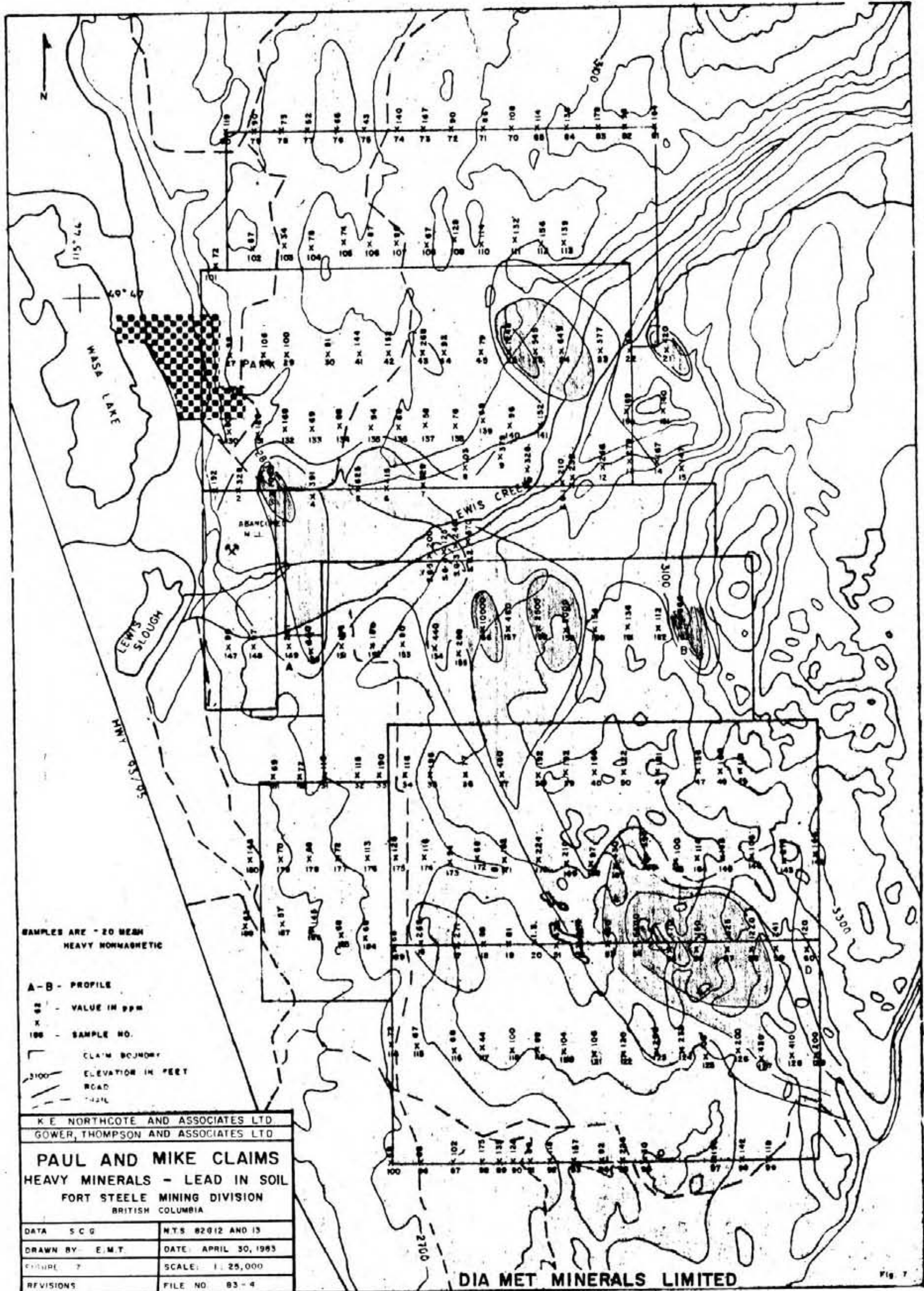


K E NORTHCOTE & ASSOCIATES LTD  
 GOWER THOMPSON & ASSOCIATES LTD  
**PAUL & MIKE CLAIMS**  
 GEOLHEMICAL, GEOPHYSICAL &  
 TOPOGRAPHICAL PROFILES  
 COPPER IN SOIL

DEPARTED BY	SCALE	DATE
S. C. G.	1:25000	MARCH, 83

Fig. 6  
 x - SAMPLE NUMBER





SAMPLES ARE - 20 MESH  
HEAVY NONMAGNETIC

A-B - PROFILE

X 62 - VALUE IN PPM

188 - SAMPLE NO.

--- CLAIM BOUNDARY

3100 - ELEVATION IN FEET

--- ROAD

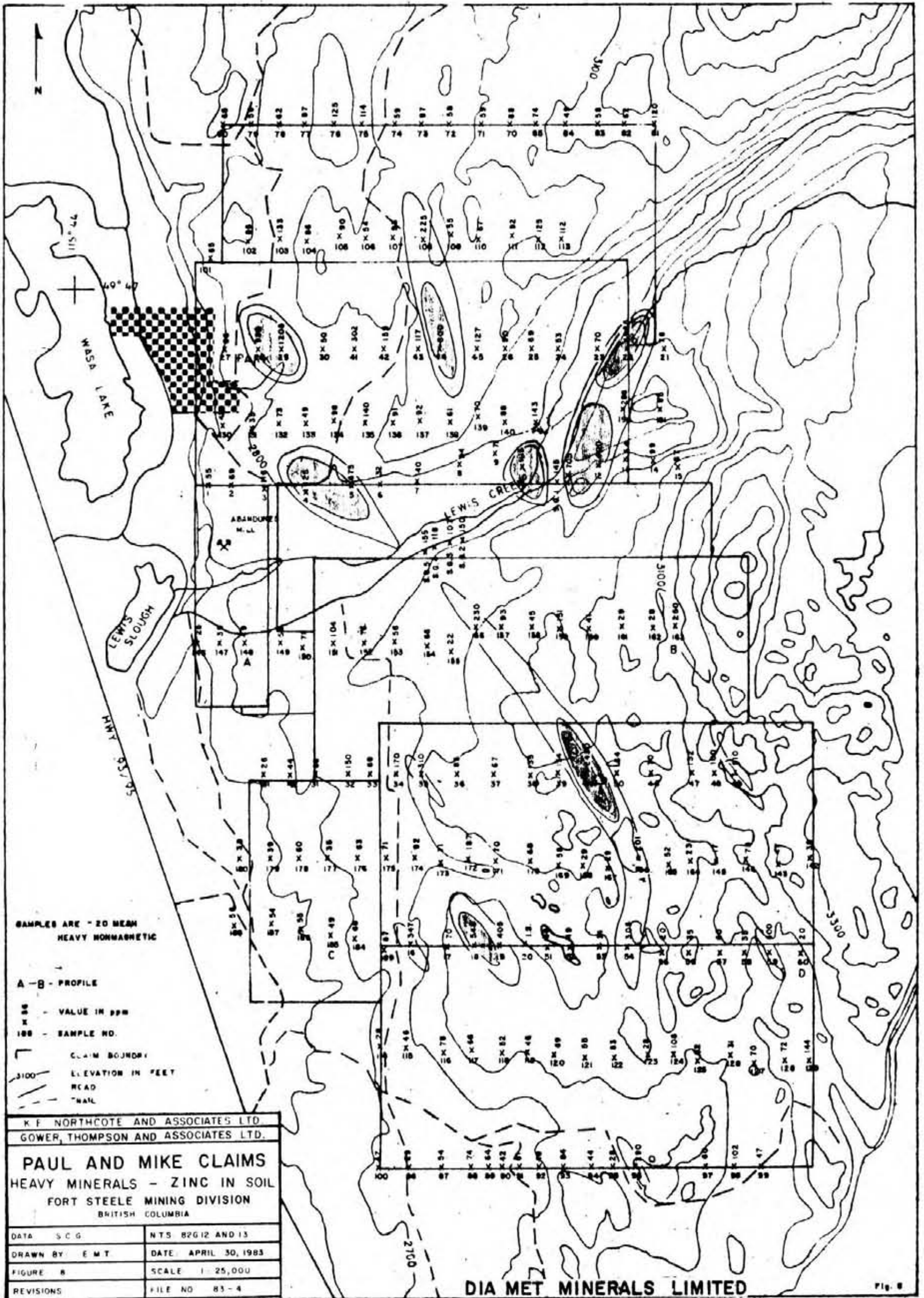
K E NORTHCOTE AND ASSOCIATES LTD.  
GOWER, THOMPSON AND ASSOCIATES LTD

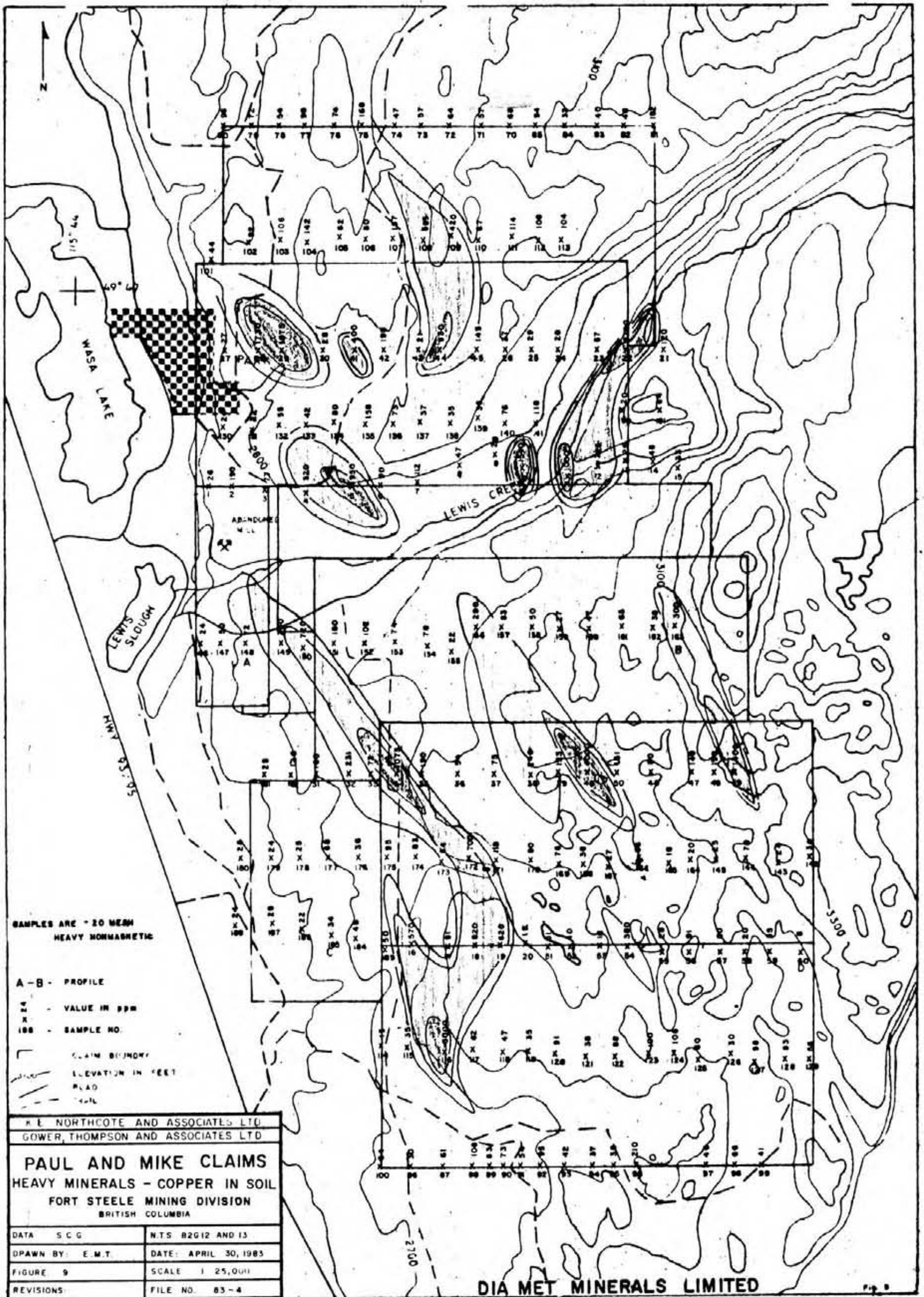
**PAUL AND MIKE CLAIMS**  
HEAVY MINERALS - LEAD IN SOIL  
FORT STEELE MINING DIVISION  
BRITISH COLUMBIA

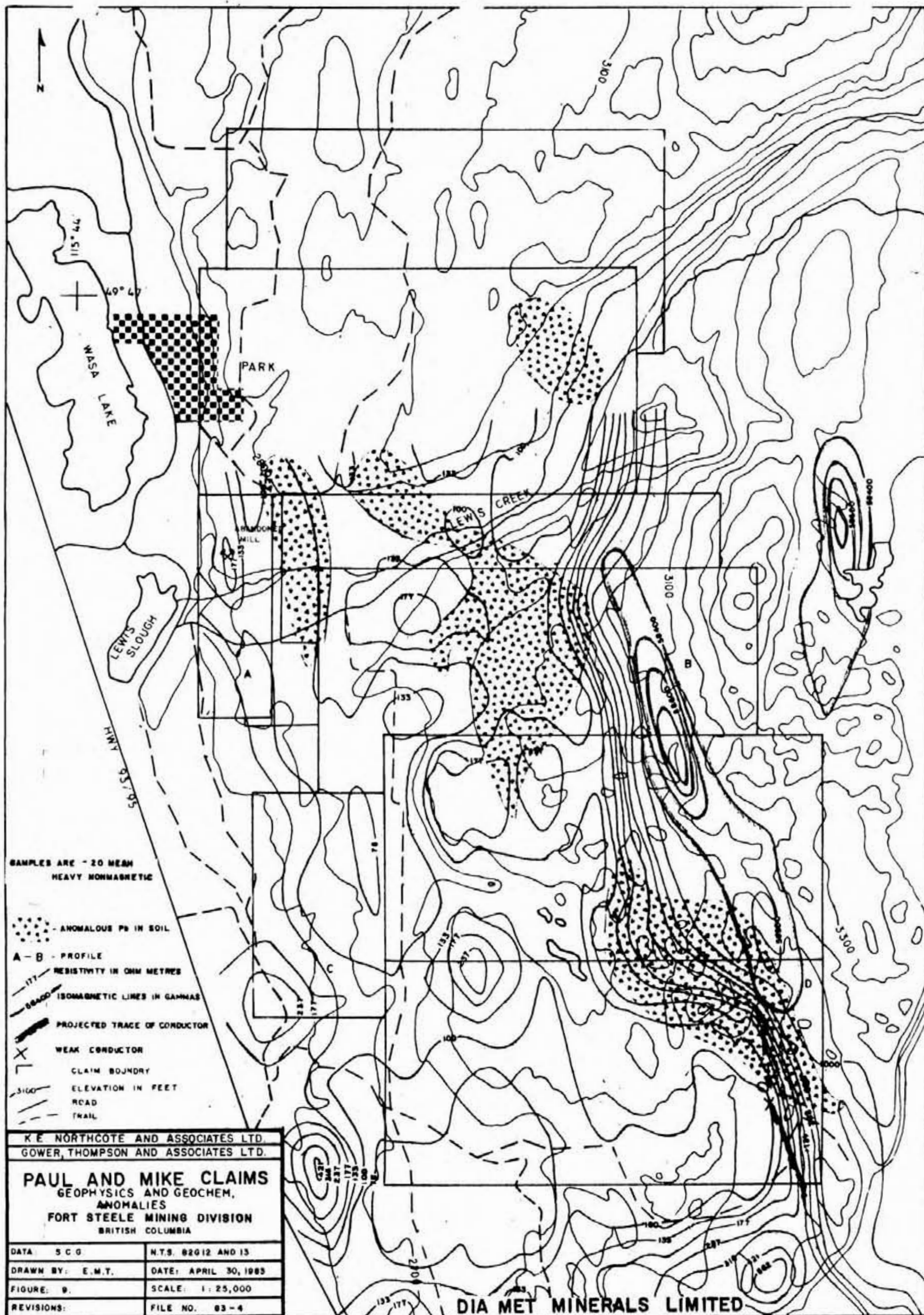
DATA	SCG	NTS 82612 AND 13
DRAWN BY	E.M.T.	DATE: APRIL 30, 1963
FIGURE	7	SCALE: 1: 25,000
REVISIONS		FILE NO 83-4

**DIA MET MINERALS LIMITED**

Fig 7







Lewis Creek road near outcrops of Fort Steele Formation. Because these samples were collected from depths of one to two feet and at some distance from the road, contamination by spillage from ore trucks seems unlikely. Sample SG-1 collected by Gower and Northcote, gives a value of 145 ppm Zn which separates two areas of anomalous Zn. See Figure 8. Two profiles were prepared relating zinc values to topography, resistivity and magnetics. See Figure 5.

Copper values in the -20 HN fraction range from 8 to 8700 ppm occurring as isolated single or double sample highs showing some tendency for northwesterly elongate trends. Two profiles were prepared relating copper values to topography, resistivity and magnetics. See Figure 6.

Values for other elements have not been plotted. The samples collected by Gower and Northcote were analyzed for gold and barium at Fipke's request. The background for gold in heavy media samples from this general area is 20 to 50 ppb. Values ranging from 445 to 5855 ppb, with insufficient sample for analysis of S.G.3, indicates anomalous gold concentrations. Barium values are low, ranging from 0.06 to 0.3 percent. High barium values could interfere with values obtained for lead in heavy media samples. (Fipke, personal communication)

#### Significance of Metal Values in Heavy Media Soil Samples

Discussion between C.Fipke and Northcote centres around significance of metal values in heavy media surface soil samples from areas of overburden of unknown depth and stratigraphy. Fipke suggests that anomalous metal values of heavy media samples on the PAUL and MIKE claims could well be reflecting sulphide mineralization from directly beneath. In particular he cites the coincident geophysical and geochemical anomalies in the southeast part of the

claim block. Northcote agrees that this is a first priority target area but the suggestion that heavy media metal values from surface soils is reflecting bedrock mineralization might be more acceptable if depth of overburden and its stratigraphy were known. It is difficult to perceive a situation whereby bedrock mineralization can be reflected in surface soil samples through an intervening maximum of 100 metres of interbedded glacial materials including possible intervening protective tills above a basal till overlying and protecting bedrock. Even in basal tills the usual exploration procedure is to follow the metals trail in a up-ice direction. This discussion merely points out the necessity of determining thickness of overburden and its nature prior to final interpretation of metal values from existing surveys and prior to conducting fill-in surveys in present indicated anomalies.

#### CONCLUSIONS

Uncertainties because of overburden, structural complexities including possible projection, sense and magnitude of movement of the Kootenay River Fault result in speculation regarding what formation underlies the west half of the PAUL and MIKE claims. This area could be underlain by formations younger than Fort Steele and could provide a suitable environment for stratiform sulphide deposits.

The PAUL and MIKE claims have potential for stratiform Pb, Zn, Ag (Cu) deposits because of their proximity to the Lewis, and Boulder Creeks synsedimentary faults which are thought to be genetically related to such stratiform mineral deposits. The presence of the Kootenay King stratiform deposit 9 kilometres to the southeast demonstrates the probability of locating additional stratiform

deposits of unknown size in this environment,

Similarly, close proximity of the Lewis Creek synsedimentary transverse fault and possible projection of the Kootenay River Fault, of unknown range of age of movement, through the claims provides potential for Pb, Zn, Ag (Cu, Au) replacement deposits of unknown size in shear zone-vein systems.

Attractiveness of the mineral potential of the PAUL and MIKE claims is dependent upon the depth of overburden above possible mineralized beds or structures.

Heavy media soil samples give anomalous areas for Pb, Zn, Cu (Au) within the claim group. Significance of these values requires an understanding of thickness and nature of overburden.

Near coincident magnetic, conductivity and heavy media soil lead anomalies provide a primary exploration target in the south-east part of the claims.

#### RECOMMENDATIONS

A two stage program is recommended to assess the mineral potential of the PAUL and MIKE claims. There should be continuous review and revision of the program with addition of new information from each part of the program. In this way, if feasible, parts of stage 2 can be carried out with the final part of stage 1

##### Stage 1

Stage 1 is designed to determine the depth of overburden and potential in areas of geophysical and geochemical anomalies. The

APPENDIX A

METHODOLOGY FOR SOIL HEAVY MEDIA

GEOCHEMISTRY



#### REFERENCES

- Hoy, Trygve; 1979, Geology of the Estella-Kootenay King Area Hughes Range Southeastern British Columbia. MEMPR Preliminary Map 36
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- Hoy, Trygve; 1983, Geology in the Vicinity of the Sullivan Deposit Kimberly, British Columbia MEMPR Geological Fieldwork, 1982, Paper 1983-1 p 9 to 17.
- McMechan, Margaret E.; 1981, The Middle Proterozoic Purcell Supergroup in the Southwestern Rocky and Southeastern Purcell Mountains, British Columbia and the Initiation of the Cordilleran Miogeosyncline, Southern Canada and Adjacent United States. Bull Can Petroleum Geology, Vol. 29, No. 4 p 583 - 621
- McMechan, Margaret E; Hoy, T. and Price, R.A.; 1980, Van Creek and Nicol Creek Formations (New): A Revision of the Stratigraphic Nomenclature of the Middle Proterozoic Purcell Supergroup, Southeastern British Columbia. Bull Can Petroleum Geology, Vol. 28, No. 4, p 542-558.
- McMechan, Margaret E; 1979, Geology of the Mount Fisher-Sand Creek Area Southeastern British Columbia, MEMPR Preliminary Map No. 34
- Hoy, Trygve; Daikow, L; 1982, Geology of the Moyie Lake Area, MEMPR Preliminary Map No. 49.

CERTIFICATE

I, STEPHEN C. GOWER, of Gower, Thompson and Associates Ltd., New Westminster, B. C., hereby certify that:

1. I am the President of Gower, Thompson and Associates Ltd.;
2. I am currently residing at 985 Gatensbury Street, Coquitlam, B. C.
3. I am a graduate of the University of British Columbia and hold a Bachelor of Science Degree (1970) in Geology. Subsequent to receiving my degree, I have practiced my profession for the last 13 years.
4. I have no interest, direct or indirect, in the properties discussed in the report, nor do I anticipate any such interest in DIA MET MINERALS LTD.
5. This report is based on a knowledge of the properties gained from a review of government-published data and material submitted by DIA MET.

Signed: Stephen C Gower

DATED at New Westminster, B. C., this 14 day of June, 1983.

CERTIFICATE

I, Kenneth E. Northcote of 2346 Ashton Road R.R.#1 , Agassiz B.C.  
do hereby certify that:

- 1] I have been practising as a professional geologist for a period of approximately 25 years for petroleum exploration companies, mining exploration and consulting companies, federal and provincial agencies.
- 2] I obtained a Ph.D. in geology from U.B.C. in 1968 and qualified for registration with the B.C. Association of Professional Engineers in 1967.
- 3] One day was spent examining the PAUL and MIKE claims in company with C. Fipke and S.C.Gower. I am familiar with the Purcell Supergroup and many of the mineral properties within these rocks as a result of two field seasons, 1966 and 1967, as project geologist in this area. This personal background experience together with all available recent publications form the basis for this report and the conclusions and recommendations stated therein.
- 4] I do not have nor expect to have any monetary interest in the PAUL and MIKE claims nor in DIA MET MINERALS LTD.
- 5] I consent to use of this report in, or in connection with, a prospectus relating to the raising of funds.

Dated at Agassiz B.C. this 15 day of June 1983



least for Pb, Zn, Cu, Ag (and Au). Bedrock should be penetrated for several feet, sampled, concentrated and analyzed.

#### Stage 2

Stage 2 would be contingent upon results of Stage 1 with the indicated depth of overburden sufficiently shallow to put possible mineralized targets within reach, say 50 metres. There should be some evidence of mineralization.

- (1) Fifteen reverse circulating overburden drill holes totalling 1200 metres in three lines across the southeast anomaly of coincident geophysical and geochemical anomalies should be an adequate test.
- (2) Carry out on the ground geophysical surveys across geochemical and airborne geophysical anomalies
  - (a) McFarr Proton Magnetometer survey
  - (b) Crone EM-16 survey
- (3) If overburden stratigraphy indicates heavy media soil samples are interpretable throughout the area, fill-in soil sampling should be carried out on a 25 metre grid in areas of existing geochemical anomalies.

At the end of Stage 2 the program and all available data should be evaluated and specific targets outlined for follow-up by overburden drilling and analyses of basal tills and/or diamond drilling. This would only be considered if Stage 2 produces evidence of mineralized horizons or structure.



first priority is to test the near coincident conductivity, magnetic and lead anomalies at the southeast side of the claim block.

Sources of depth of overburden data include:

- (a) \* geological mapping
- (b) groundwater data
  - \* (i) water wells on nearby farms
  - \* (ii) Ministry of Environment, Water Resources Branch
- (c) Pleistocene glacial geology data
  - (i) Geological Survey of Canada
- (d) geophysical surveys
  - \* (i) Expanding Wenner Array Resistivity survey to be run across target areas on existing lines.
  - (ii) seismic survey, alternate method with higher anticipated cost.
- (e) overburden drilling orientation survey.

Suggest a test survey of five holes, totalling 400 metres, in one line across primary target. This should be adequate to establish thickness of overburden, sampling procedure and stratigraphic section.

The overburden drilling could be done by reverse circulating\* or conventional percussion or rotary drilling to and a few feet into bedrock or to a depth of 75 to 100 metres. Better control of sampling and stratigraphy would be achieved by a reverse circulating system. However, mobilization, road preparation and footage costs would probably be greater.

A portion of each stratigraphic unit penetrated down to basal till should be sampled and stored for possible assay, The basal till should be continuously sampled in 1 metre intervals to bedrock, processed to produce heavy mineral concentrates and analyzed at

\* indicates preferred method

## METHODOLOGY FOR SOIL HEAVY MEDIA GEOCHEMISTRY

Approximately 30 lbs of unsorted soil is collected in marked plastic sample bags from below the red or black horizons or about one to two feet deep. This material is transported to C.F. Minerals Research Ltd. laboratory in Kelowna where it is washed to remove clay, wet screened and jigged to produce a concentrate. Up to 3000 grams of each of -20 +35 mesh and -35 +60 mesh and all of -60 mesh are combined, dried and rescreened dry to -20 mesh. The -20 mesh material is then treated by heavy liquids to produce concentrates according to specific gravity first by tetrabromoethane and then by methylene iodide. This treatment produces a light fraction (reject) an intermediate heavy and heavy liquid residues at each stage by washing in solvent and filtering through 0.5 to 1.0 micron hole-size filters. For purposes of analyses of metallic minerals the heavy fraction from methylene iodide separation is put through a magnetic separator and is split into magnetic HM-20, para magnetic HP-20 and nonmagnetic HN-20 fractions. The HP-20 and HN-20 concentrates fractions were sent to Bondar Clegg Laboratories North Vancouver for conventional assays for Pb, Zn, Cu, Ag, As, Mo, [Cd, Co (Au, Ba)]. For heavy media soil geochemistry the HP-20 fraction was utilized for Pb analyses and the HN-20 fraction for Pb, Zn, Cu, Ag, As, Mo, Cd, Co (Au, Ba)

**APPENDIX B**

**SOIL GEOCHEMISTRY HEAVY MEDIA**

**ANALYSES**



REPORT: 223-0527

FROM: DIAMET MINERALS LTD.

SUBMITTED BY: C. FIPKE

DATE: 04-MAY-83 PROJECT: NONE GIVEN

ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
Cu	1 PPM	HNO <sub>3</sub> -HCL HOT EXTR	Atomic Absorption	-20	HEAVY MINERAL CONC.	PULVERIZING
Pb	2 PPM	HNO <sub>3</sub> -HCL HOT EXTR	Atomic Absorption	-20		
Zn	1 PPM	HNO <sub>3</sub> -HCL HOT EXTR	Atomic Absorption	-20		
As	.1 PPM	HNO <sub>3</sub> -HCL HOT EXTR	Atomic Absorption	-20		
Au	5 PPB	AQUA REGIA	Fire Assay AA	-20		
Sn	5 PPM		X-RAY Fluorescence	-20		
Ba	.01 PCT			-20		

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MR. STEPHEN GOWER

INVOICE TO: C/O C.F. MINERALS LTD.

REMARKS: 2. Sn - DETECTED ON A SMALL SAMPLE





REPORT: 223-0527 PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	As PPM	Au PPB	Sn PPM	Ba PCT	NOTES
C-20HN SG1		50	55	40	0.4	1095	30	0.20	2*
C-20HN SG2		56	58	86	0.3	445	15	0.30	2*
C-20HN SG3		122	368	172	0.6		120	0.10	2*
C-20HN SG4		51	40	52	0.4	5855	40	0.10	2*
C-20HN SG5		60	23	61	<0.2	495	15	0.06	2*



REPORT: 123-0528

FROM: DIAMET MINERALS LTD.

SUBMITTED BY: C. FIPKE

DATE: 25-APR-83 PROJECT: NONE GIVEN

ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
Pb	2 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-20	HEAVY MINERAL CONC.	PULVERIZING
Zn	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-20		
Mo	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-20		
As	.1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-20		
Cd	.2 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-20		
As	2 PPM	NITRIC PERCHLOR DIS	Colourimetric	-20		

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MR. STEPHEN GOWER



REPORT: 123-0528 PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Pb PPM	Zn PPM	Mo PPM	As PPM	Cd PPM	As PPM	NOTES
C -20HP S61		210	145	9	0.3	0.2	220	
C -20HP S62		570	150	11	0.6	0.2	190	
C -20HP S63		240	107	7	<0.2	0.2	160	
C -20HP S64		125	118	6	0.3	0.2	170	
C -20HP S65		200	155	8	0.2	0.2	170	

APPENDIX C

CLAIM RECORDS

MAP NO 160219E

Cranbrook

17 February

51

DO NOT WRITE IN SHADED AREAS

Fort Steele

GOLD COMMISSIONER

PAUL DERKSON

AGENT FOR

SELF

#9 3360 Rosemont Dr.

Van, B.C. V5S-2C9

VALID SUBSISTING F.M.C. NO 207452

VALID SUBSISTING F.M.C. NO

Affidavit for Mineral Claim

MAKE OATH AND SAY I COMMENCED LOCATING THE

PAUL Z

MINERAL CLAIM

ON THE 15<sup>th</sup> DAY OF January 1981 AT 9:00 A.M. AND COMPLETED THE LOCATION

ON THE 18<sup>th</sup> DAY OF January 1981 AT 5:00 P.M. CONSISTING OF

3 UNIT LENGTHS N AND 6 UNIT LENGTHS E AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION

ON METAL TAGS NO. 44709 WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS

IDENTIFICATION POSTS NOT PLACED WERE all placed

CHECK APPLICABLE SQUARE



THE LEGAL CORNER POST



THE WITNESS POST FOR THE LEGAL CORNER POST

IS SITUATED ON OE

On the Shuswap Creek map E2 (2/13 scale) 150m west 2 meters south of Lewis Creek road opposite the 1st bridge (the road is about 300m west of the 1st bridge) south from Lewis Creek road 1/4 mile (1/4 km) east of Lewis Creek road

BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST

BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN ACCEPTABLE TO THE MINING RECORDER OF THE LOCATION

SWORN AND SUBSCRIBED TO AT

THIS DAY OF 19 BEFORE ME

Paul Derkson

160219E 270

MR OR SMR STAMP

NO OF UNITS 18 WORK REQUIREMENT \$ RENTAL REQUIREMENT \$10.00 PER \$200.00 WORK \$20.00 PER \$200.00 C/W

WORK UNIT NO.	C.L.N.	WARRANT RECEIVED AND DATE RECORDED	DATE OF WORK	YEAR OF EXP. PAY.	CREDIT		TRANSFER TO ASSIGNEE'S CONVEYANCES
					INVESTMENTS	RENTALS	
SURVEY PENDING-4/1					1015/87		Dec 23/81 B/S #1345 all int. to CHARLIE E. H.P.E.
							or 20/02 B/S #1353 all int. fr. Charlie E. H.P.E. to C.F. H.P.E. and CH. L.T.

Record of Mineral Claim  
FORM G

MAP NO. 82G/1386 & G/12EP RECORDED AT Cranbrook REC'D NO. 1351  
 MINING DIST. 160219E B.C. THIS 17 DAY OF February 1981  
 DO NOT WRITE IN  
 Hatched Areas  
Fort Steele  
GOLD COMPLEX

Affidavit for Mineral Claim  
 PAUL DERKSON AGENT FOR SELF  
 #9 3350 Rosemount Dr. Van, B.C. V5S-2C9  
 VALID SUBSISTING F.M.C. NO. 207452 VALID SUBSISTING F.M.C. NO. \_\_\_\_\_

TAKE OATH AND SAY: I COMMENCED LOCATING THE PAUL 3 MINERAL CLAIM  
 ON THE 15<sup>th</sup> DAY OF January 1981 AT 9:00 AM AND COMPLETED THE LOCATION  
 ON THE 18<sup>th</sup> DAY OF January 1981 AT 5:00 PM CONSISTING OF  
3 UNIT LENGTHS N AND 6 UNIT LENGTHS E AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION  
 ON METAL TAG NO. 44710 WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS.

IDENTIFICATION POST(S) NOT PLACED WERE all placed

CHECK THE APPROPRIATE SQUARE  
 THE LEGAL CORNER POST IS SITUATED ON/OFF  
 THE WITNESS POST FOR THE LEGAL CORNER POST  
On the staking map E2 G/13 scale 1:50,000  
50 meters east of the stake and 11 meters north  
of the 1/4 section line. The point is 1/4 mile  
20 meters from the gateway to the Ranch #27AM, the 1/4 section  
 BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST N 45° 30' W 1/4 mile  
 BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST \_\_\_\_\_

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN, ACCEPTABLE TO THE MINING RECORDER, OF THE LOCATION.  
 SWORN AND SUBSCRIBED TO AT \_\_\_\_\_  
 THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 19 \_\_\_\_\_ BEFORE ME } Paul Derkson  
 \* THIS AFFIDAVIT MAY BE TAKEN BY A PERSON EMPLOYED TO TAKE DEPOSITIONS BY THE EVIDENCE ACT OF BRITISH COLUMBIA.  
 MR OR SMR STAMP

NO. OF UNITS 15 WORK REQUIREMENTS \_\_\_\_\_ RENTAL REQUIREMENT \$10.00 PER \$200.00 WORK \$20.00 PER \$200.00 C/L

WOP NO.	CLINE	WITNESS RECEIPT NO. DATE RECORDED	TYPE OF WORK	YEAR OF EXPIRY	CPED WOP UNITS RENTAL LINES	TRANSFEE IN S'S AND DISTRICTS CONVEYANCES
<b>SURVEY PENDING</b>				<u>4/1</u>	<u>10/15/82</u>	<u>Dec 23/81 B/S #1345 All int. to CHARLES E. FIPPE</u>

MINERAL ACT - PROVINCE OF BRITISH COLUMBIA

Record of Mineral Claim  
FORM G

MAP NO. 82G/132  
MINING RECORD NO. 1602192 Cranbrook B.C. THIS 17 DAY OF February 1981  
NOT WRITE IN ADDED AREAS  
~~GOLD COMMISSIONER~~ Fort Steele

Affidavit for Mineral Claim

PAUL DERKSON AGENT FOR SELF  
#4 3350 Rosemont Dr. Vin, B.C. V5S-2C9  
VALID SUBSISTING F.M.C. NO. 207452

MAKE OATH AND SAY: I COMMENCED LOCATING THE PAUL I MINERAL CLAIM  
ON THE 15<sup>th</sup> DAY OF January 1981 AT 9:00 A.M. AND COMPLETED THE LOCATION  
ON THE 18<sup>th</sup> DAY OF January 1981 AT 5:00 P.M. CONSISTING OF  
3 UNIT LENGTHS N AND 6 UNIT LENGTHS E AND HAVE IMPRESSED ALL THE REQUIRED INFORMATION  
ON METAL TAGS NO 44708 WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS

IDENTIFICATION POST(S) NOT PLACED WERE all placed

CHECK APPLICABLE SQUARE  THE LEGAL CORNER POST  
 THE WITNESS POST FOR THE LEGAL CORNER POST } IS SITUATED ON ONE  
On the Strathcona check map 82 G/13 sub 122 it is about 500 meters south of the millstream 1/2 mile past park and 500 meters east of Wawa Lake Road post 1 near Lake.

BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST 9  
BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST 9

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN ACCEPTABLE TO THE MINING RECORDER OF THE LOCATION

SWORN AND SUBSCRIBED TO AT \_\_\_\_\_  
THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 19 \_\_\_\_\_ BEFORE ME } Paul Derkson  
\* THIS AFFIDAVIT MAY BE TAKEN BY A PERSON EMPOWERED TO TAKE AFFIDAVITS BY THE EVIDENCE ACT OF BRITISH COLUMBIA. 1602192-277  
AIR OR SEA STAMP

NO. OF UNITS 18 WORK REQUIREMENTS 5 RENTAL REQUIREMENT - \$10.00 PER 8200.00 WORK \$25.00 PER 5200.00 C/L

WORK NUMBERS	C/L IN \$	MINING RECEIPT AND DATE RECEIVED	TYPE OF UNIT	YEAR OF EXP. BY	CREDIT		TRANSPERS TO BE ASSIGNED TO (IF APPLICABLE)
					WORK UNITS	RENTAL IN \$	
SURVEY PENDING - 4/1					1015/82		Dec 23/81 B/S #1345 All int. to CHARLES E. FIPKE.
							Mar 26/82 B/S #1353 All int. fr. Charles E. Fipke to C.K. HENRICH RESEARCH LTD.

**ADP**

MINERAL ACT - PROVINCE OF BRITISH COLUMBIA  
Record of Mineral Claim  
FORM G

MAP NO. 82G/13E RECORD NO. 1647  
 MINERAL CLAIM NO. 195267E RECORDED AT Cranbrook ON THIS 09 DAY OF August 1982  
 NOT WRITE IN SHADED AREAS Fort Steele

Affidavit for Mineral Claim

I, PAUL DERKSON AGENT FOR CHARLES FIPKE  
#9-3350 ROSE MONT DR. (VAN.) 263 LAKE AVE. KELOWNA  
 VALID SUBSISTING F.M.C. NO. 241253 VALID SUBSISTING F.M.C. NO. 241570

MAKE OATH AND SAY: I COMMENCED LOCATING THE MIKE 2 MINERAL CLAIM

ON THE 24 DAY OF July 1982 AT 8:30 A.M. AND COMPLETED THE LOCATION

ON THE 25 DAY OF July 1982 AT 12:00 A.M. CONSISTING OF

3 UNIT LENGTHS NORTH AND 6 UNIT LENGTHS EAST AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION

ON METAL TAGS NO. 44713 WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS

IDENTIFICATION POSTS NOT PLACED WERE ALL CORNER AND INTERMEDIATE POSTS IN POSITION EXCEPT IN6E AND 2N6E (WITNESSED FROM SE CORNER POST (W.F.) HAY FIELDS)

CHECK  THE LEGAL CORNER POST  THE WITNESS POST FOR THE LEGAL CORNER POST } IS SITUATED 100 METERS EAST OF District Lot 3000 (WASA PROVINCIAL PARK) AND 100 METERS SOUTH OF THE AMPHITHEATRE.

BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST 91

BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST 91

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN ACCEPTABLE TO THE MINING RECORDER OF THE LOCATION.

SWORN AND SUBSCRIBED TO AT \_\_\_\_\_

THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 19\_\_\_\_ BEFORE ME

Paul Derkson  
NATURE

MR 195267E  
285.  
MR OR SMR STAMP

NO. OF UNITS 18 WORK REQUIREMENTS \_\_\_\_\_ RENTAL REQUIREMENT - \$10.00 PER \$200.00 AOR \$20.00 PER \$200.00 C.I.

WORK NUMBERS	CLIN	MINING METHOD AND IS IT REQUIRED	TYPE OF WORK	YEARS EST. FOR	CREDIT		TRANSFERS
					ACCOUNTS	RENTALS	

COPY



Record of Mineral Claim  
FORM C

82G/13E

RECORD NO. 1648

195267E

Cranbrook

29

August

82

*Paul Derkson*

Fort Steele

DO NOT WRITE IN  
SHED AREAS

Affidavit  
for  
Mineral  
Claim

PAUL DERKSON

AGENT FOR

CHARLES FIPKE

# 9-3350 ROSEMONT DR. (VAN.)

263 LAKE AVE., KELOWNA

VALID SUBSISTING F.M.C. NO. 291253

VALID SUBSISTING F.M.C. NO. 291570

MAKE OATH AND SAY: I COMMENCED LOCATING THE MIKE 3 MINERAL CLAIM

ON THE 29 DAY OF JULY 1982 AT 9:00 A.M. AND COMPLETED THE LOCATION

ON THE 29 DAY OF JULY 1982 AT 6:00 P.M. CONSISTING OF

1 SECTION EAST AND 3 MOUNT LENGTH SOUTH AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION

99718

WHICH HAS BEEN IMPRESSED AND ATTACHED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS

ALL POSTS IN POSITION ; HOWEVER, POST  
IE 25 WAS CUT OFF BY SOMEONE WITH A CHAINSAW (STUMP STILL  
VISIBLE.)

THE LEGAL CORNER POST  
 THE WITNESS POST

IS LOCATED 125 METERS

EAST AND 30 METERS SOUTH OF THE WASA LAKE RESORT  
NESA LAKE, B.C. THIS POST IS ALSO THE LEGAL  
CORNER POST FOR PAUL 1

NOTE: IN DISTRICT LOT 2069

I BEAR WIT AND TESTIFY THAT THE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST  
BEARS THE DISTANCE FROM IDENTIFICATION POST TO A WITNESS POST

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE MAKING  
OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN ACCEPTABLE TO THE MINING RECORDS OF THE LOCATION

SIGNED AND SUBSCRIBED TO AT \_\_\_\_\_

THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 19\_\_\_\_ BEFORE ME

*Paul Derkson*

MR 195267E  
215  
  
MR OR SVR STAMP

THE AFFIDAVIT MAY BE TAKEN BY A PERSON EMPLOYED TO TAKE AFFIDAVITS BY THE MINING ACT OF BRITISH COLUMBIA

DATE	REVENUE	RENTAL	PERSONNEL	WORK	EXPENSES	TOTAL

*0071*



MINING DISTRICT 82/123 RECEIVED AT Cranbrook B.C. THIS 09 DAY OF August 19 82

DO NOT WRITE IN SHADED AREAS

FORT STEELE

Affidavit for Mineral Claim

NAME: [blank] AGENT FOR: CHARLES FIPKE. ADDRESS: 263 LAKE AVE. KELLOWNA

VALID SUBSISTING F.M.C. NO. 91150 VALID SUBSISTING F.M.C. NO. 141576

MAKE OATH AND SAY: I COMMENCED LOCATING THE MIKE 5 MINERAL CLAIM

ON THE 11 DAY OF May 19 AT 11:00 AND COMPLETED THE LOCATION

ON THE 11 DAY OF May 19 AT 11:00 CONSISTING OF

UNIT LENGTHS AND UNIT LENGTHS AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION

ON METERS AND 44715 WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS

IDENTIFICATION POSTS: NOT PLACED WERE

CHECK: [X] THE LEGAL CORNER POST [ ] THE WITNESS POST FOR THE LEGAL CORNER POST IS SITUATED

BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST

BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN ACCEPTABLE TO THE MINING RECORDER OF THE LOCATION

SWORN AND SUBSCRIBED TO AT THIS DAY OF 19 BEFORE ME

MR OR SMR STAMP

18 WORK REQUIREMENTS RENTAL REQUIREMENT - \$10.00 PER \$200.00 WORK. \$20.00 PER \$200.00 C/L

Table with columns: WORKING YEAR, CREDIT, TRANSFERRED TO S.S. ASSIGNMENT OF INTERESTS

COPY

820/13E

1651

195267E

Cranbrook

9

August

82

*Paul Derkson*

Fort Steele

Affidavit  
for  
Mineral  
Claim

PAUL DERKSON

AGENT FOR

CHARLES FIRKE

# 9 - 3350 ROSEMONT DR. VAN.

263 LAKE AVE. KELOWNA

VALID SUBSISTING F.M.C. NO. 241253

VALID SUBSISTING F.M.C. NO. 241570

MAKE OATH AND SAY: I COMMENCED LOCATING THE

MIKE 6

MINERAL CLAIM

ON THE 26 DAY OF JULY 1982 AT 1:10 P.M. AND COMPLETED THE LOCATION

ON THE 26 DAY OF JULY 1982 AT 5:45 P.M. CONSISTING OF

2 SOUTH AND 6 EAST AND HAVE VERIFIED ALL THE REQUIRED INFORMATION

44699

WHICH HAS BEEN SET OUT AS FOLLOWS TO THE PLAN AS REQUIRED UNDER THE REGULATIONS

THE POINTS OF THE CLAIM WERE: 15 NE, 05 NE, 02 NE, 02 SE, 05 SE, 05 SE, 05 SE, 05 SE, 25 SE, 25 SE, 25 SE

LOT 6618

JUST OFF ROADWAY.

ON DISTRICT

BEARING AND DISTANCE TO THE POSITION OF LEGAL CORNER FROM THE WITNESS POST 340° 440 meters.

BEARING AND DISTANCE FROM IDENTIFICATION POINT TO WITNESS POST 290° 18.2 meters

I HAVE REVIEWED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE MAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN AS REFERRED TO IN THE RECORD OF THE LOCATION

SWORN AND SUBSCRIBED TO AT

THIS DAY OF 1982 BEFORE ME

*Paul Derkson*

MR 195267E  
285  
MR CHAMP STAMP

12

MINERAL CLAIM NO. 5... 6... 2000... 2000...

COPY



APPENDIX D

PAUL-MIKE CLAIMS

STATEMENT OF EXPENDITURES

Consulting Fees (prorated) of Gower and Northcote 35 pages/99 pages x \$10,000.00	\$2,000.00
Drafting & report compilation expenses of Gower & Northcote	\$ 531.18
Field expenses of Gower & Northcote	\$ 706.64
3 stage electromagnetic separation -20 mesh heavy concentrates (Samples W1-60) @ \$12.50 each including weighing & agate mortar pestle crushing of HP & HN concentrates	\$ 750.00
Cu-Pb-Zn-Cd geochem analysis of resultant heavy non magnetic concentrates of W1-60	\$ 271.40
Cu-Pb-Zn-Mo-Ag-Cd-Co-Mn-As geochem analysis of resultant heavy paramagnetic concentrates (W1-60)	\$ 778.80
Au-Ba-Cu-Pb-Zn-Ag-Mo-Cd-As analysis (SG 1-5)	\$ 167.50
Field collection 15 Kg samples (W70-192, C954, 955, 982):	
- Salaries and benefits paid to Paul Derkson, Brent Carr and Hans Echterbecker	\$4,411.40
- Total food and accomodation allowance	\$1,860.00
- Travel (ticket H. Echterbecker bus Cranbrook-Kelowna)	\$ 31.55
- One month vehicle rental including mileage and repair	\$ 923.00
- Total gas and oil receipts	\$ 529.16
- Total supplies, plastic bags, etc.	\$ 142.06
Transport 1900 Kg samples Cranbrook - Kelowna	\$ 297.50
Sub total	\$13,400.19

Processing 128 ±15 Kg samples (w70-192, SG 1-5) through multistage washing, sizing, semigravity concentration; processing to 3000 gms -20+35, 3000 gms -35+60 and all -60 mesh concentrates through a tetrabromoethane and methylene iodide heavy liquid separation; processing the resultant heaviest fraction through 3 electromagnetic separations including weighing 396 resultant concentrates @ \$90.00 each	\$11,520.00
Hand agate mortar pestle grinding 264 resultant -20 HN and -20 HP to -80 mesh	\$ 462.00
Bondar Clegg geochem analysis of HP and HN concentrates (W70-192, SG 1-5)	\$ 1,561.65
- 5 days consulting geologist C.E. Fipke planning and supervising field crews, assembling data for Gower and Northcote engineering report, field trip to Paul-Mike Claims with Gower & Northcote, compiling expenses, report and supervising sample processing, interpretation of results @ \$300.00/day	\$ 1,500.00
- Drafting & typing of R. Capell	\$ 80.00
- Expenses of C.E. Fipke including long distance calls to Gower & Northcote and field crews	\$ 176.89
	<u>\$28,700.73</u>

Please apply any excess credits approved to the P.A.C. account of C.F. Mineral Research Ltd.

I wish to apply \$ All of this work to the claims listed below.

(State number of years to be applied to each claim and its month of record.)

Paul 1 - Feb/81 2 yrs 18 units 5700.00  
Paul 2 - Feb/81 2 yrs 18 units 5700.00  
Paul 3 - Feb/81 2 yrs 18 units 5700.00  
Mike 2 - Aug/82 2 yrs 18 units 3600.00  
Mike 3 - Aug/82 2 yrs 3 units 600.00  
Mike 4 - Aug/82 2 yrs 6 units 1200.00

Mike 5 - 2 yrs 18 units 3600.00  
Mike 6 - 2 yrs 12 units 2400.00  
Mikey Fr. 2 yrs 1 units 200.00

#37

Value of work to be credited to portable assessment credit (PAC) account(s).

(May only be credited from the approved value of C and (or) D not applied to claims.)

Name		AMOUNT
In owner(s) name.	1. ....	.....
	2. ....	.....
	3. ....	.....
In operator(s) name (person paying for the work).	1. ....	.....
	2. ....	.....
	3. ....	.....

1390

  
(Signature of Applicant)



APPENDIX E

**BRITISH COLUMBIA MINING RECEIPT**

Mining Division For Steele

Issued at Vancouver

No 207573 E

Date August 9 19 83

RECEIVED from DIA MET Minerals Ltd

the sum of Thirties hundred & ninety Dollars.

in payment of W. Odigwaok \$27,800

apply 2 years to PAUL 1-3,

MIKE 2-6, MIKEY FR.

Signature G. Phillips

Office sub recorder

\$ 1390<sup>00</sup>



Province of  
British Columbia

Ministry of  
Energy, Mines and  
Petroleum Resources

Robson Square  
800 Hornby Street  
Vancouver  
British Columbia  
V6Z 2C5

August 9th, 1983

C F Mineral Research Ltd.  
263 Lake Avenue  
Kelowna, B C  
V1Y 5W6

Re: FORT STEELE Mining Division

Enclosed is Province of British Columbia Mining Receipt  
No. 207570 & 573E in the amount of \$10.00 & ~~\$1396.00~~ recording  
fees for Notice to Group & Work on PAUL 1-3, MIKE 2-6  
and MIKEY Fr.

Yours truly

*G. Phillips*  
G. Phillips  
Sub-recorder

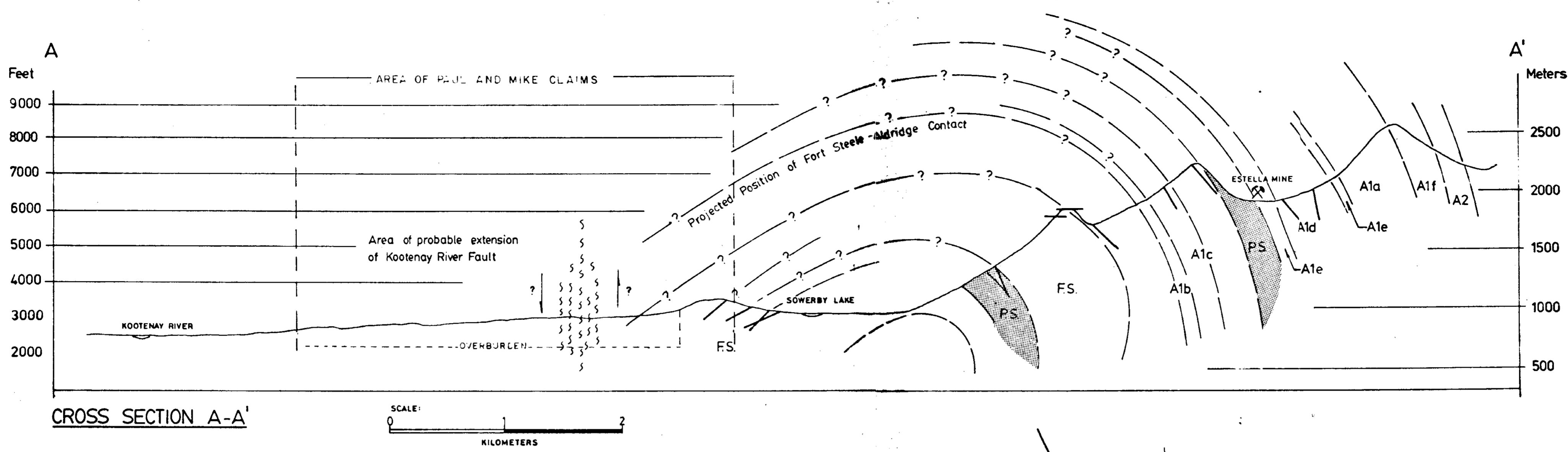
encls.

APPENDIX F

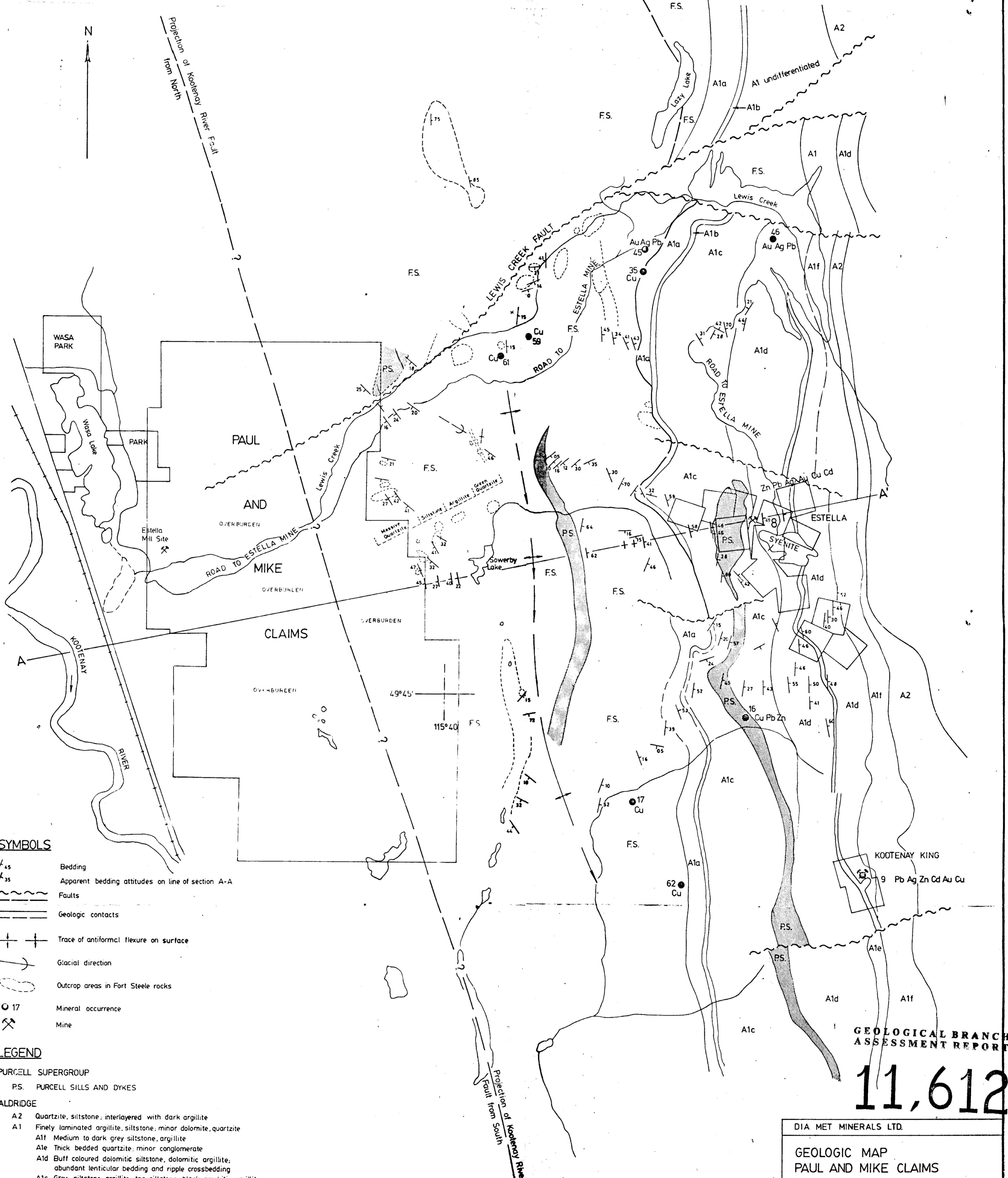
STATEMENT OF QUALIFICATIONS:

C. Fipke is a BSc Honors Geology graduate of the University of British Columbia. Between 1970 and 1977, C. Fipke worked as a geologist involved to a large extent in heavy mineral exploration and research for Kennecott Copper in New Guinea, Samedan Oil in Australia, Johannesburg Consolidated Investments in Southern Africa and Cominco Ltd. in Brazil and British Columbia. C. Fipke and L.M. Fipke organized C. F. Mineral Research Ltd. in 1977. Currently the C.F. Mineral Research heavy mineral laboratory which employes 25 to 35 people is involved in heavy mineral exploration and processing on behalf of many international companies.

Mrs Rosemary Capell is a 1965 BSc graduate of University College of Rhodesia. Between 1966 and 1975 Mrs Capell worked for Anglo American in Rhodesia chiefly on base metal geo-chemistry.



CROSS SECTION A-A'



**SYMBOLS**

- Bedding
- Apparent bedding attitudes on line of section A-A'
- Faults
- Geologic contacts
- Trace of antiformal flexure on surface
- Glacial direction
- Outcrop areas in Fort Steele rocks
- Mineral occurrence
- Mine

**LEGEND**

- PURCELL SUPERGROUP**  
 PS. PURCELL SILLS AND DYKES
- ALDRIDGE**  
 A2 Quartzite, siltstone, interlayered with dark argillite  
 A1 Finely laminated argillite, siltstone, minor dolomite, quartzite  
 A1f Medium to dark grey siltstone, argillite  
 A1e Thick bedded quartzite, minor conglomerate  
 A1d Buff coloured dolomitic siltstone, dolomitic argillite, abundant lenticular bedding and ripple crossbedding  
 A1c Grey siltstone, argillite, tan siltstone, black graphitic argillite  
 A1b Silty dolomite, dolomitic siltstone, minor limestone  
 A1a Grey to black siltstone and argillite
- FORT STEELE FORMATION**  
 FS. White crossbedded quartzite, mud-cracked siltstone, argillite

GEOLOGICAL BRANCH ASSESSMENT REPORT

**11,612**

DIA MET MINERALS LTD.	
GEOLOGIC MAP PAUL AND MIKE CLAIMS FORT STEEL M.D., B.C.	
SCALE: 0 1 2 KILOMETERS	
FIGURE NO. 3	NTS 82 G 12 8/13
DRAWN BY: [blank]	DATE: [blank]
TRACED BY: TRICIA THOMSON	DATE: APRIL 22, 1983
K E NORTHCOTE AND ASSOCIATES LTD. GOWER THOMPSON AND ASSOCIATES LTD.	

From T. Hoy 1979 and unpublished data

