GEOLOGICAL & SAMPLING REPORT

COPKET GROUP

Copperkettle Creek

Greenwood M.D. NTS 82-E-10W.

2134

GEOLOGICAL AND ROCK & SOIL SAMPLING REPORT

CLAIMS : Copket Group: Copket #1-#9; David #1-#6;
Copket Frac.; Copket #2Frac.; Copket #3 Frac.;
Mining Lease # 101.

Greenwood Mining Division.

NTS: Map 92-E-10W. Coords.: N 5499000 m, E 369000m.

Lat.: 49°38' N , Long. W 118° 49'.

OWNERS: F.B. Whiting

OPERATOR : F.B. Whiting

CONSULTANTS : F.B. Whiting and G. Salazar & Associates.

AUTHOR: F.B. Whiting, P.Eng.

Date of Submission : July 11, 1991

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A. INTRODUCTION

A program of geological mapping with rock and soil sampling was carried out on the Copket Group in June, 1991. The claims are situated on Copperkettle Creek in the Greenwood M.D., at Lat. N 49°38', Long. W 118° 49'. Figure 1 is the Location Map. The center of the claim block is near the confluence of Sandrift Creek with Copperkettle Creek, a tributary of the Kettle River.

Access is by a logging road that leaves the Monashee Highway about 1 km north of Christian Valley. The logging road runs through the claims and then continues northwest along the south side of Copperkettle Creek for several kilometers.

Property, History, Owner, & Economic Assessment

Figure 2 is the Claim Map. The property consists of:

Claim Name	Rec. #	Current Expiry Date	Owner
Copket #1-6	4093-98	July 11,1993	F.B.Whiting
Copket #7-8	4128-29	Sept.11,1995	"
Copket #9	5082	Dec.15, 1993	"
Copket Fraction	4089 (7)	July 11, 1993	"
Copket #2 Frac.	4130 (9)	Sept.11, 1994	"
Copket #3 Frac.	4131 (9)	Sept.11 /1994	"
David #1-2	4090-91 (7)	July 11, 1994	Orion Res.Ltd.
David #3-6 4092 &	4125-27 (9)	Jul.11 & Sept.11/93	"
Mining Lease 101		Oct.21,1991	Optioned

These claims are shown on Map 82-E-10W. The Copket and David claims were staked by F.B. Whiting and D.M. Whiting in 1984. Previous work was done on M.L. 101 (Lottie F & Sterlingham Fraction Crown Grants) prior to 1913. In the 1960s Asarco Exploration Co.of Canada had an Induced Polarization survey done over what is now the Copket #1-6 and David #4-6 claims.

COPKET PROPERTY

LOCATION MAP

NTS: 82-E-10 W.

Copperkettle Cr. Area

Greenwood M.D.

FIG. 1 JULY '91

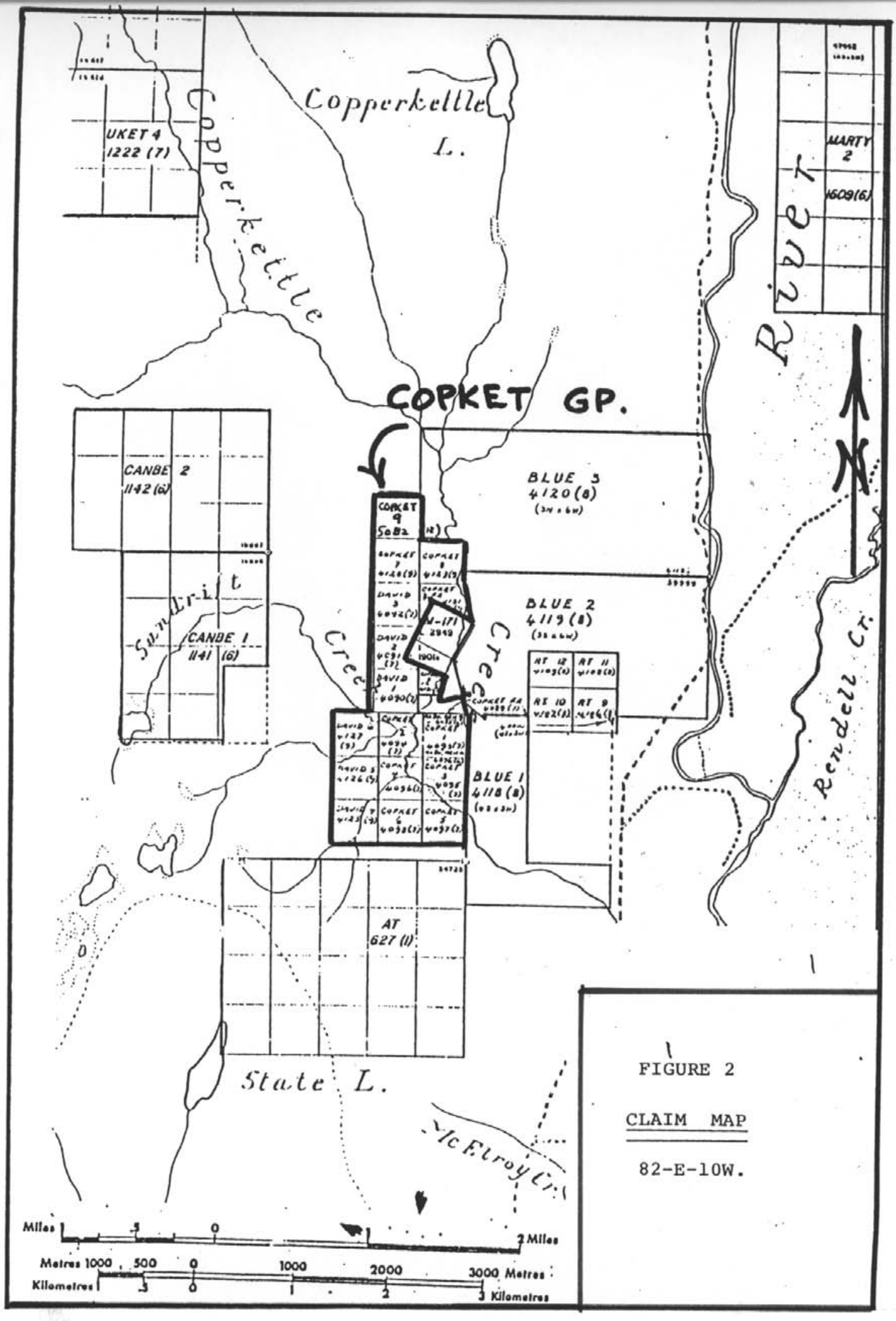


FIGURE 2

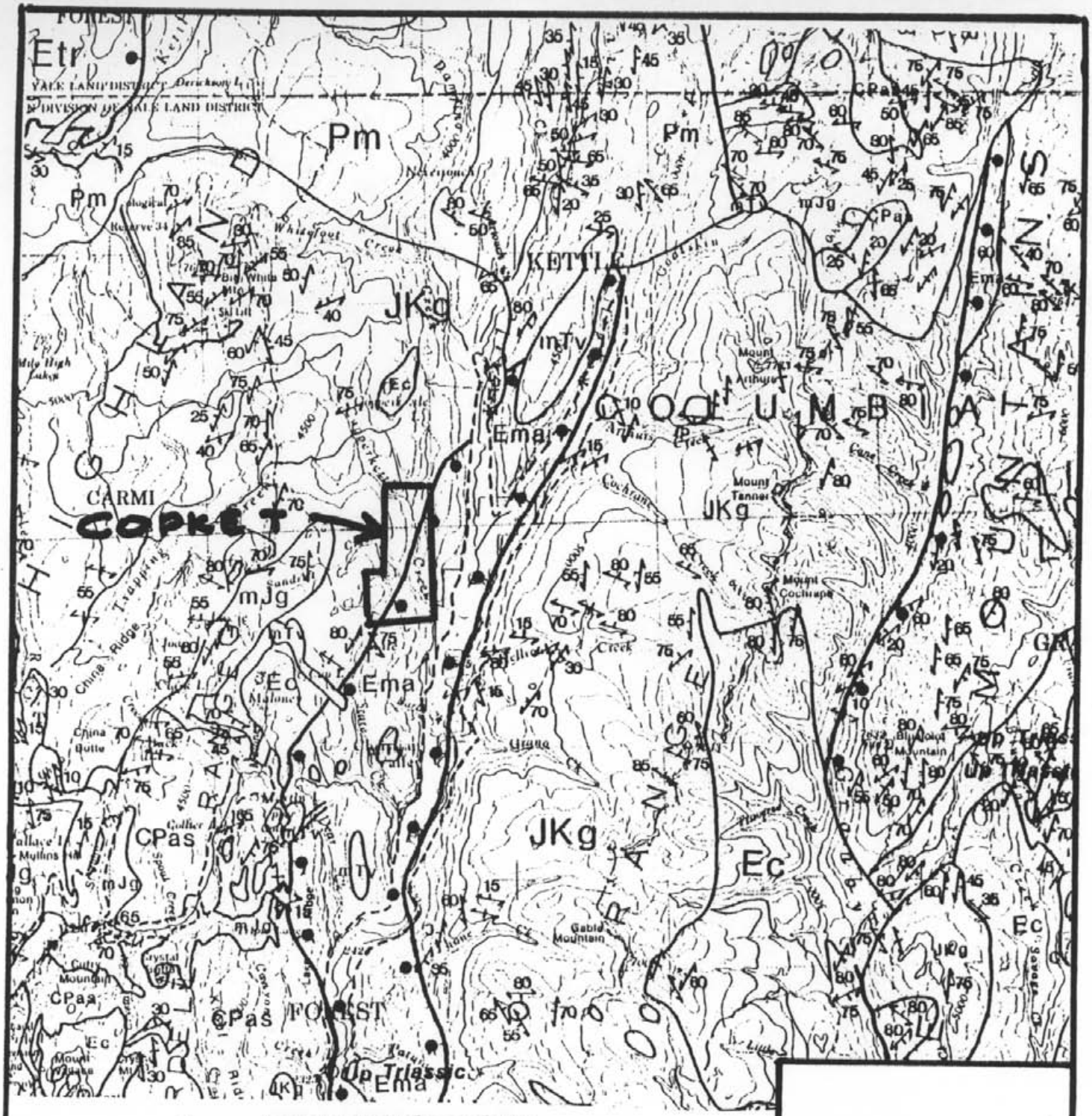
CLAIM MAP

82-E-10W.

In the 1970s Mitsui Mining Co. owned a large block of claims here and drilled three holes looking for uranium at the base of the Tertiary volcanics. One of these holes found small amounts of pyrite, chalcopyrite and galena in sheared, faulted Tertiary andesites, which led F.B. Whiting to postulate epithermal Tertiary mineralizing events having occurred. Discovery in 1988 of silica-calcite hot-spring crusts re-inforced that belief. Orion Resources Ltd. purchased the David #1-6 claims in 1985 and did mapping and sampling. In 1987 gridding and soil sampling found high copper-zinc values with spotty gold and silver over a NNE-trending zone at least 150 m wide and 500 m long. The 1991 work consists of further soil sampling , rock sampling of new road outcrops, and geological mapping .

The economic assessment of this propert must take into account the two types of mineralization found here. The older type is contact-metamorphic bornite-gold-silver in skarn caused by the intrusion of Nelson granite into Permian Anarchist sediments and volcanics. Upon parts of this is superimposed a later, Tertiary mineralization of chalcopyrite-sphalerite along a major regional fault, which is the western margin of a NNE-trending graben, similar in strike and age to the Republic-Grand Forks graben some miles to the east. The claims appear to have the potential for containing pods or lenses of rich copper-gold-silver distributed through a large mass of weakly-mineralized copper-zinc mineralization. A reasonably large tonnage could exist.

Orion Resources Ltd., now re-named Muirfield Investment Corp., have optioned the Mining Lease 101 (formerly M.L.171), in a joint venture with F.B. Whiting.



PENTICTON

WEST OF SIXTH MERIDIAN

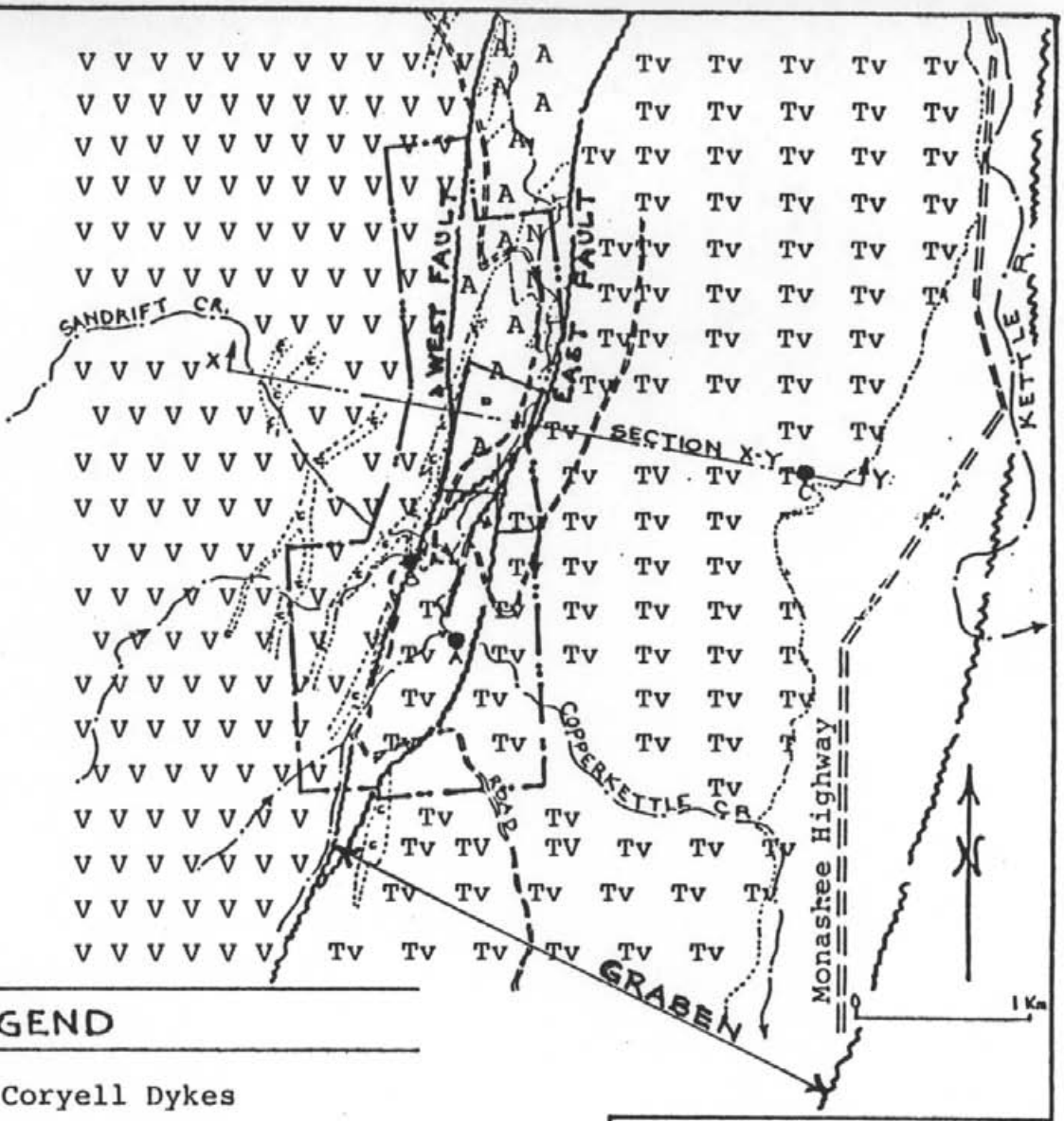
BRITISH COLUMBIA

Scale 1:250 000 - Échelle 1/250 000

COPKET GROUP

REGIONAL GEOLOGY

Fig. 3 July/91



LEGEND

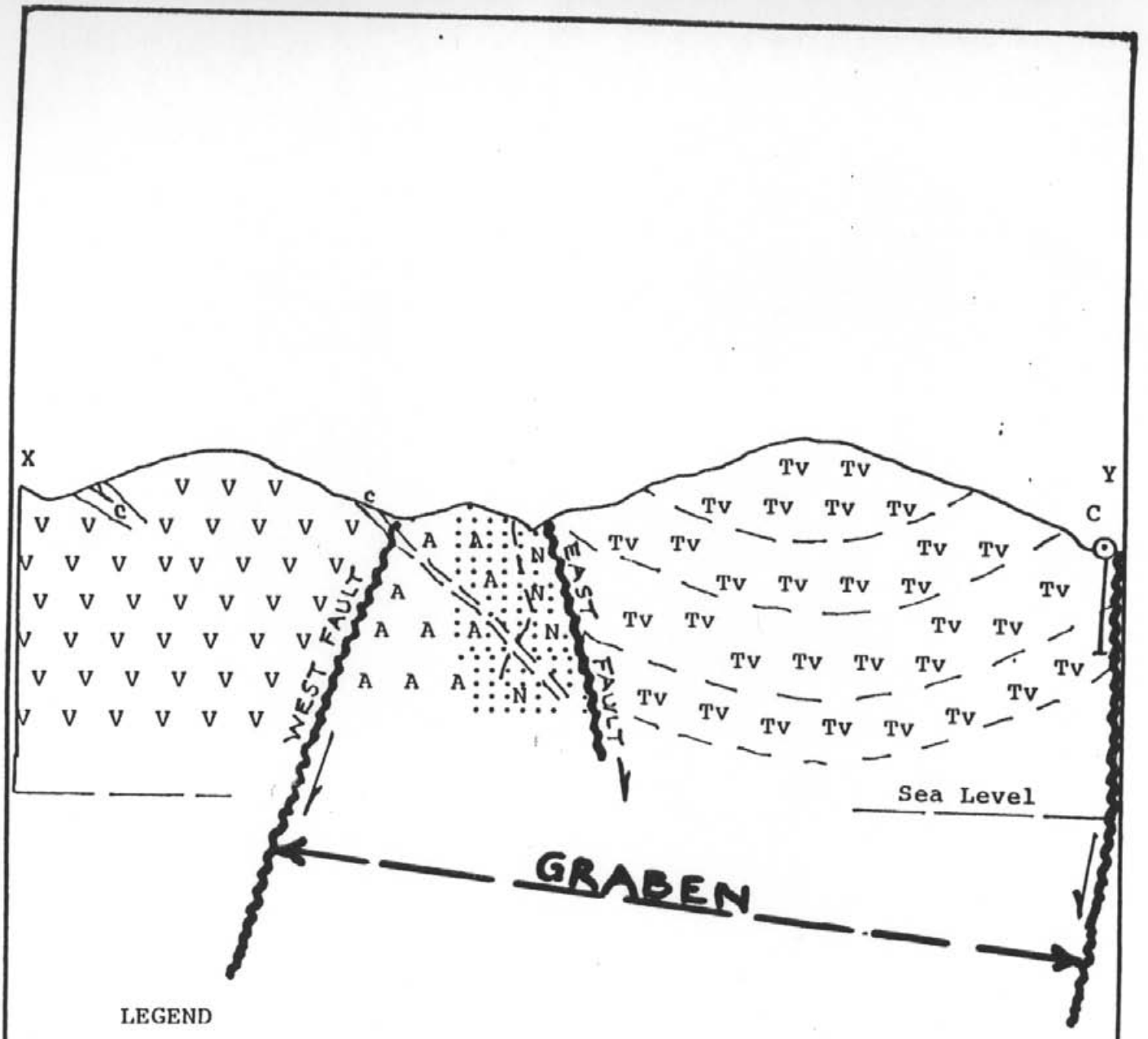
c c c c c	Coryell Dykes
Tv Tv Tv	Tertiary Phoenix Volcanics
V V V V V	Valhalla Intrusions
N N N N N	Nelson Intrusions
A A A A A	Anarchist Formstion
	Claim Boundary
	Creeks
	Roads
	Faults
A	Drillhole

COPKET PROPERTY

AREA GEOLOGY

NTS 82-E-10 West

FIG. 4 . July '91



LEGEND

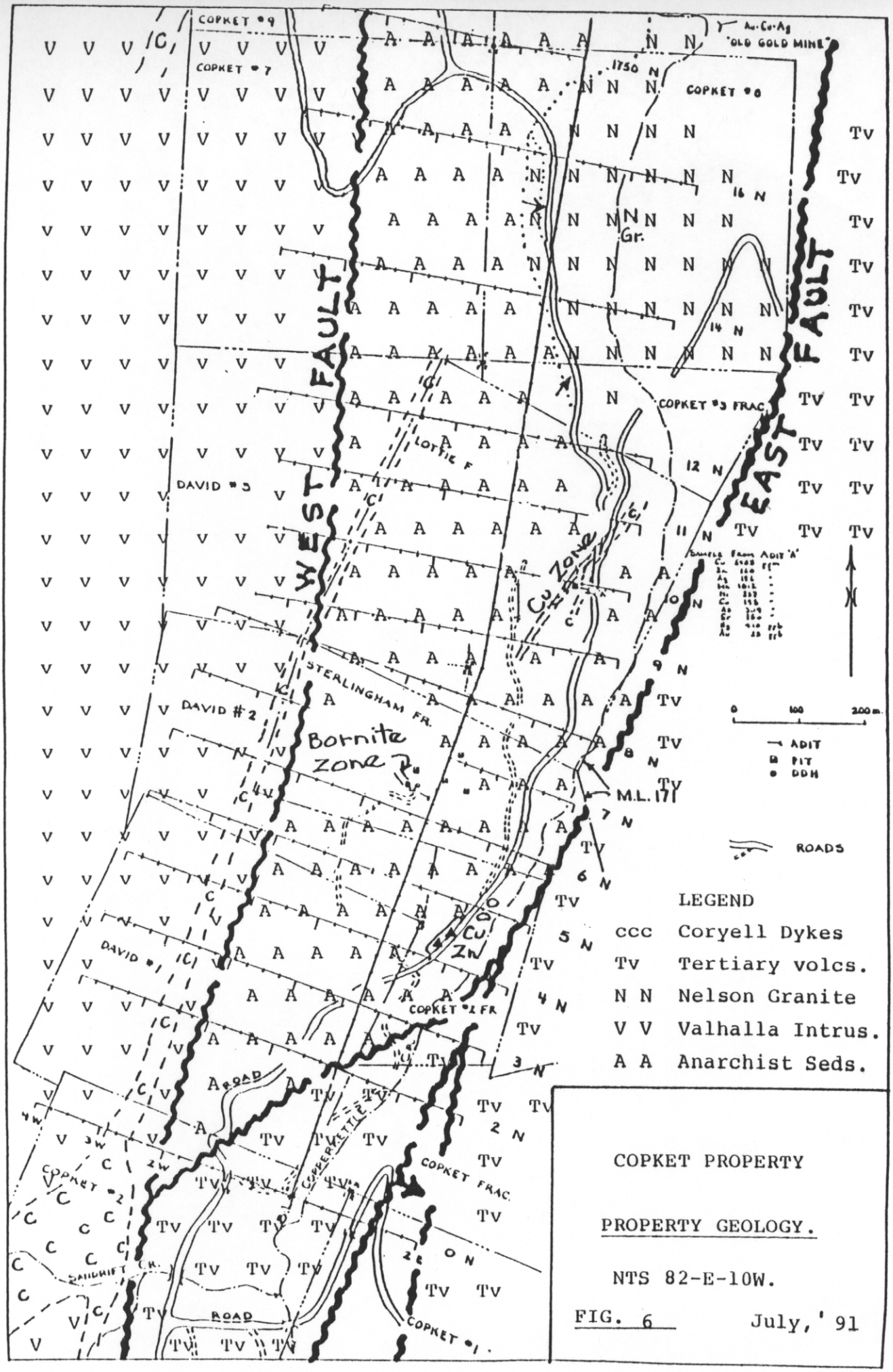
c c c c	Coryell Dykes
V V V V	Valhalla Intrusions
N N N N	Nelson Intrusions
Tv Tv Tv	Phoenix Volcanics
A A A A	Anarchist Formation
⋮⋮⋮⋮	Mineralization

COPKET PROPERTY

SECTION X - Y

FIG. 5 July '91

0 1 Km



COPKET PROPERTY

PROPERTY GEOLOGY.

NTS 82-E-10W.

FIG. 6 July, '91

Summary of Work Done

Using the survey grid put in during previous years as a base, survey lines were run along new and older roads in order to locate sample sites and rock exposures that were then mapped geologically. The surveying covered 1800m. Additional geological mapping was done over the pre-existing grid. A total of 67 soil samples were collected, using a mattock to expose the B soil layer. A total of 19 rock samples was taken from mineralized outcrops. The area mapped geologically covered 20 ha. at a scale of 1:2500. The soil samples were taken generally at 25m spacings. The area mapped and sampled occupies parts of the Copket #2 Fraction, Copket #3 Fraction, Copket #8 , and overlaps onto M.L. 101 held under option.

B. REGIONAL GEOLOGY

Figure 3 is the regional geological map, taken from the Penticton sheet, G.S.C. Open File 1969 (1989), and the three following pages are the legend for that map. The claims cover the west margin of a major NNE-trending graben in which slices of Anarchist Formation, Nelson Granite and Tertiary volcanics have been down-dropped, with the Unit JKg, Okanagan Batholith lyitg both to the east and the west.

C. LOCAL GEOLOGY

Figure 4 shows the local geology and marks the position of the graben. Figure 5 shows a cross-section . Figure 6 gives the property geology in greater detail. Figure 7 (in pocket) shows the detailed mapping done in June, 1991. The Nelson granite at the north end of the claim block is considerably altered, with chlorite and epidate, and in several places

EOCENE

Eor — *OLALLA RHYOLITE: rhyolite breccia, massive obsidian and related dykes*

Ema — MARRON GROUP
Undifferentiated andesite, dacite and trachyte of the Marron Group: may include minor epiclastic rocks equivalent to Ewl and Esb.

Es — *SKAHA FORMATION: brecciated greenstone (Old Tom Formation), brecciated chert (Shoemaker Formation, Es1), and brecciated granite (Oliver Granite, Es2) resting as fault slices hundreds of metres across, above the White Lake Formation on gently dipping faults: includes undifferentiated polymictic fanglomerate and arkose resting unconformably on these brecciated rocks: near Rock Creek includes heterogeneous epiclastic breccia (Klondike Mountain Formation)*

Ewl — *WHITE LAKE FORMATION: massive to thick bedded volcanic breccia and pyroclastic rocks with clasts of Trepanier Rhyolite and Kitley Lake and Yellow Lake formations: includes interbedded medium and thin beds of brown sandstone and clayey siltstone, minor carbonaceous seams: includes minor trachyte and andesite. Palynomorphs from Powers Creek indicate a Middle Eocene or older age*

Em — *MARAMA FORMATION: medium brownish grey, flow banded dacite with subhedral plagioclase, hornblende and biotite phenocrysts to 5 mm in an aphanitic ground: forms the top of Black Knight Mountain, Mount Boucherie, Aeneas Butte, Mount Law*

En — *MARAMA FORMATION-NIMPIT LAKE MEMBER: recessive, reddish weathering, amygdaloidal, trachyandesite with minor intercalated pyroclastic deposits: includes undifferentiated intrusive equivalents*

Ek — *KITLEY LAKE FORMATION: massive, yellowish to buff, trachyte to trachyandesite; plagioclase and biotite glomerophenocrysts to 3 cm (10 % of the rock) in a finely crystalline groundmass: includes ash flow tuff and minor mudstone: includes undifferentiated intrusive equivalents. Church determined K-Ar ages between 52.9 (biotite) and 44.2 Ma (whole-rocks)*

Eyl — *YELLOW LAKE FORMATION: massive to thick, tabular flows of buff to light tan pyroxene-rich, matic phonolite locally with rhomb anorthoclase phenocrysts and primary analcite, abundant zeolite fills cracks and amygdules: includes undifferentiated intrusive equivalents*

Etr — *TREPANIER RHYOLITE: white and locally pink, greenish or light grey, flow banded rhyolite with subhedral quartz, hornblende and biotite phenocysts to 3 mm in an aphanitic matrix. K-Ar ages of 47.7 and 46 ± 2 Ma were determined by Church (1981) west of Trepanier*

Esb — *SPRINGBROOK FORMATION: poorly sorted, massive to thick bedded, immature, coarse boulder and pebble conglomerate. Clasts to 50 cm are rounded, but of low sphericity and are locally derived (chert, greenstone, granite, and other pre-Eocene rocks with fewer Marron Group clasts, mainly Yellow Lake and Kitley formations). Near Rock Creek this unit consists of white to light grey, medium bedded, feldspathic sandstone, siltstone and shale with coaly partings, named the Kettle River Formation*

Ec — *CORYELL SYENITE: alkalic to calc-alkalic, high level, pink and buff syenite and quartz monzonite and trachytic pink feldspar porphyry dykes: plutonic equivalent of the Marron Group especially the Kitley Lake Formation: gradational to pulaskite and to Shingle Creek Porphyry: probably includes JKg undifferentiated in East half of map area: poorly dated*

Esc — *SHINGLE CREEK PORPHYRY: massive, buff and pink, fine grained porphyritic granite and felsite with euhedral phenocrysts of K-feldspar to 10 cm across: occurs as dykes under, and feeders to, the volcanic rocks of the Marron Group, especially the Kitley Lake Formation: a shallow level equivalent of the Coryell Syenite: includes rhomb porphyries and related rocks*

MIDDLE AND (?)LOWER TRIASSIC

Trb — *BROOKLYN LIMESTONE AND "SHARPSTONE CONGLOMERATE": white weathering, thick bedded, light grey limestone commonly with rounded to angular detrital "chert" grains: minor greenish siltstone and massive, resistant, breccia with angular, roughly equant, clasts to 10 cm across, of "chert" and greenstone and locally limestone in a matrix of coarse sand and grit of the same material: grades to "chert" sandstone and "chert" grit by decrease in grain size: minor green and black argillite, partly a fine grained tuff: grains and matrix strongly silicified: "chert" and andesitic greenstone fragments derived mainly from the Knob Hill Group; limestone mostly from the Brooklyn Formation, and locally from the Attwood Group: limestone contains Middle Triassic fossils*

CARBONIFEROUS OR PERMIAN

CPk — KNOB HILL GROUP: *massive "chert" (largely silicified greenstone), greenstone and amphibolite: minor limestone or marble: minor "sharpstone": age unknown*

CPat — ATTWOOD GROUP: *light grey limestone with minor interbedded chert: contains Carboniferous fossils*

CARBONIFEROUS

Cbc — *BLIND CREEK FORMATION: medium bedded grey limestone and calcareous argillite; lacks penetrative fabrics, low greenschist facies metamorphism*

Cb — *BARSLOW FORMATION: thin bedded, brown, silty slate and argillaceous siltstone: lacks penetrative fabrics, low greenschist facies metamorphism*

CARBONIFEROUS OR OLDER

CPa — ANARCHIST GROUP: *dark grey weathering, recessive, amphibolite, greenstone, quartz-chlorite schist, quartz-biotite schist, minor serpentinized peridotite: "chert" breccia that resembles* Trbc *is locally included:* CPap- *peridotite and serpentinized equivalents:* CPaa- *amphibolite: age unknown*

CPko — KOBAU GROUP: *undivided amphibolite, greenschist, quartzite, mica schist, greenstone- minor marble: strongly foliated with penetrative flaser fabrics: age unknown*

?ORDOVICIAN TO DEVONIAN?

ODs — *Schist, thin bedded argillaceous limestone, slate and limestone includes metamorphosed equivalents mostly biotite-diopside-quartz skarn and marble: age unknown*

?PROTEROZOIC AND/PALEOZOIC?
GRAND FORKS GNEISS

Pgfm — *Mylonitic biotite leucogranodiorite: Preto unit X*

Pgfo — *Medium crystalline, well foliated biotite hornblende granodiorite orthogneiss: Preto unit IX*

Pgfa — *Amphibolite, amphibolitic gneiss, minor marble: Preto unit IV*

Pgfs — *Coarsely crystalline garnet-biotite schist, interfoliated quartzite, minor marble, abundant pegmatite and leucogneiss: Preto unit III*

Pgfq — *Coarsely crystalline, thick layered quartzite, minor marble and pegmatite: Preto unit II*

Pgfg — *Sillimanite-biotite-quartz paragneiss, amphibolite and amphibolitic gneiss, marble, biotite schist and gneiss, garnet-biotite-quartz schist, micaceous quartzite: includes minor leuco-orthogneiss:Preto unit I*

Egn — *"OKANAGAN GNEISS": massive, medium grey weathering, resistant hornblende-biotite granodiorite orthogneiss: strongly foliated: grades to mylonitic gneiss, mylonite and blastomylonite: minor amphibolite and paragneiss- minor schist: minor pegmatite and aplite: strongly chloritized along Okanagan Fault: grades eastward (and up the structural succession) to JKg, mJg and Pm units of which it is presumed as to the sheared equivalent: probably also includes sheared equivalents of the Anarchist Group: presumed sheared and thermally overprinted during the Eocene:* Egn1 *- quartz chlorite microbreccia and related altered rocks close to the Okanagan Fault*

Egng — *Massive, light grey weathering, biotite granite gneiss and granodiorite gneiss with pegmatite veins and sills*

Eg — *Hornblende granodiorite: massive, resistant, grey weathering, coarse grained, equigranular mesocratic with euhedral fresh black hornblende crystals; locally weakly foliated: age poorly constrained*

CRETACEOUS AND/OR JURASSIC

JKg — *OKANAGAN BATHOLITH: massive, light grey weathering, medium- to coarse-grained, equigranular to porphyritic, unfoliated to weakly foliated, fresh biotite granodiorite and granite: includes undifferentiated granodiorite of the Nelson suite: age poorly constrained*

Jo — *OLIVER PLUTON: massive, unfoliated, medium grained porphyritic biotite granite with weakly foliated, equigranular hornblende granodiorite along the southern border: includes* Jod, *biotite-hornblende diorite agmatite and* Jog, *massive garnet-muscovite granite; age poorly constrained*

Jos — *OSOYOOS GRANODIORITE: recessive, pasty greenish, hornblende granodiorite: pervasively saussuritized, chloritized, sheared and fractured; age unknown*

MIDDLE JURASSIC

mJg — *NELSON PLUTONIC ROCKS: massive, generally moderately foliated, medium grey weathering, medium- to coarse-grained, equigranular, hornblende-biotite granodiorite, quartz diorite and granite: includes undifferentiated biotite granite of the Valhalla suite: age poorly constrained*

mJum — *OLALLA PYROXENITE: black, fresh, massive, medium- to coarse-grained pyroxenite, hornblendite, serpentinite and peridotite*

Jgd — *KRUGER SYENITE: massive, medium grained, biotite hornblende granodiorite with a marginal zone of megacrystic, mesocratic coarse grained hornblende syenite*

UPPER TRIASSIC AND/OR LOWER JURASSIC

uTrv — ROSSLAND AND/NICOLA GROUPS
Massive greenstone, andesite, latite, agglomerate and volcanic breccia of greenstone fragments locally with limestone clasts, minor greywacke: minor interbedded limestone: includes lenses of silicified equivalents: may include undifferentiated Lower Jurassic volcanics of similar lithology

uTrns — *Rusty weathering, black pyritic slate, phyllite and argillite, locally silicified or "cherty": minor quartzite:minor interbedded argillaceous limestone: includes undifferentiated greenstone lenses*

is impregnated with pyrite and chalcopyrite. The Anarchist rocks are in places converted to garnet skarn, and contain lenses of rich bornite with some gold and silver. Bedding attitudes are indistinct. Much of the formation is finely brecciated and carries weak impregnations of chalcopyrite and sphalerite. Spotty gold and silver occur. Many Eocene Coryell syenite dikes cut through the intrusives and the Anarchist rocks, both within the graben and outside of it, especially to the west. These dikes interrupt the continuity of the mineralized b4dies. They appear to cut across the west fault, so assisting in dating the sequence of events. The mapping was done by F.B.Whiting and G.Salazar, geologist.

D. SOIL AND ROCK SAMPLING

The sampling was done by Guillermo Salazar, registered geologist, assisted by Brian Thomas, and under the supervision of Dr. F.B. Whiting, P.Eng.(B.C.). Soil samples were taken from shallow pits excavated by mattock to expose the "B" layer which was generally found at a depth of about 15 cm. The soil material was placed in brown paper sample bags. The locations of the sample sites were recorded based upon tape and compass surveys controlled by Turning Points located by marked pickets of the 1987-88 grid. The rock samples were chip samples taken over measured lengths. The samples were shipped to Acme Analytical Laboratories of Vancouver, B.C. The 67 soil samples were dried and seived to -80 mesh and were analysed by the 30-element ICP + TL method : a .500 gram sample is digested with 3 ml of 3-1-2 $HCl-HNO_3-H_2O$ at 95°C for one hour, then diluted to 10 ml with water and processed by ICP. Gold was determined from a 10-gram sample. Thirteen rock samples were pulverized and assayed for ppm Cu-Zn-Ag and ppb Au. Six rock samples were analysed for % Cu-% Zn and by fire assay for Ag-Au in ounces per ton. Assay results are given on the sheets in the Appendix.

E. INTERPRETATION AND EVALUATION

The geological mapping provided better definition of the areas underlain by the various rock types. Some outcrops at the north end of the grid that had previously been thought to be altered and re-crystallized Anarchist rocks were now recognized to be altered Nelson intrusive. Copper mineralization was found in brecciated Nelson granite, which had not been seen before. The detailed mapping showed that brecciation in the Anarchist rocks is much more widespread than appreciated earlier. Other areas of pyrite-chalcopyrite mineralization or hematite alteration were found in the Nelson granite, apparently related to the " East Fault " , as seems to be the case with the breccias in the Anarchist beds.

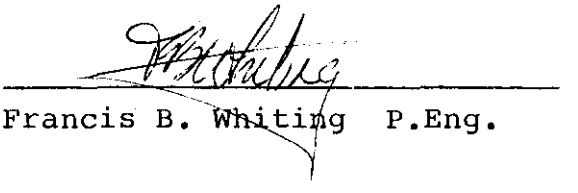
The rock sampling confirmed the presence of small amounts of copper, zinc, silver and gold in the Anarchist breccias. The soil samples extended the area of strongly-anomalous Cu-Zn over previously-un-tested areas east of the old grid and provided fill-in value points at 25-m intervals between the old 100-m grid lines.

The results of this work are considered encouraging, leading to a better appreciation of the extent of the breccias, the signs of mineralization in Nelson Granite, and the sequence of geological events. The next step in continued exploration should be extensive trenching to uncover the bedrock sources of the best concentrations of the metals.

F. ITEMIZED COST STATEMENT

	COST
Geological work :F.B.Whiting P.Eng.: June 13-16 and July 5-7, 1991: 7 days @ $ 300.....	$ 2100.00
G. Salazar, geologist: June 14-17/91: 4 days @ 4 200/day.....	$ 800.00
Vehicles (2) , gasoline.,.....	$ 537.00
Motels, meals :8 man/days @ 4 50.....	$ 400.00
Report, maps, copying, telephone, GST & sundry	$ 250.00
Sub-total.....	$ 4087.00
Sampling : G. Salazar: June 18-20 & 25: 4 days @ $ 200.....	$ 800.00
Brian Thomas : June 17-20: 4 days @ $ 100.....	$ 400.00
Vehicle & gasoline.....	$ 100.00
Meals & motel: 4 man/days @ $ 50.....	$ 200.00
Sub-total.....	$ 1500.00
Assaying: Invoice of Acme Analytical Laboratories Ltd.....	$ 1252.85
TOTAL:.....	$ 6839.85

Respectfully submitted:



Francis B. Whiting P.Eng.

AUTHOR'S QUALIFICATIONS

The undersigned, Francis B. Whiting, has the following qualifications:

a) Graduate of Univ. of B.C., 1946, in Geological Engineering.
Graduate of McGill University, 1948, as M.Sc., in Geology.
Graduate of Mass. Institute of Technology, as Ph.D. in Geology and Economics, 1951.

b) Geological work in B.C. in 1945 for International Mining Corp.
Geological work in 1946 for Placer Development Co.
Work at Hedley B.C. for Hedley Mascot Gold Mines, 1947 & 1948.
3 Years as Mine Geologist in Missouri for St. Joseph Lead Co.
6 years as Chief Geologist at Mina Aguilar, Argentina.
7 Years as Exploration Manager in Argentina for Cia. Minera Aguilar S.A. , 1960-68.
5 Years as Manager of Arrow Inter-America Corporation , Vancouver, B.C. 1968-73.
3 Years as Regional Manager for Western North America for Brascan Resources Ltd., based in Vancouver B.C. 1973-76.
15 Years as Consulting Geologist, Vancouver, B.C.

c) P.Eng., B.C.

Signed :

Dr. F.B. Whiting P.Eng.

APPENDIX

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

File # 91-1915 Page 1

P.O. Box 1239, Aldergrove BC V0X 1A0 Submitted by: G. SALAZAR

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Au** ppb
TP0+350N	1	41	5	53	.1	10	9	245	2.52	11	5	ND	6	98	.4	3	2	37	.23	.119	9	13	.47	200	.14	3	4.22	.03	.07	3	2	2
TP0+325N	1	40	11	49	.3	9	7	180	2.15	7	5	ND	5	101	.2	2	2	26	.19	.136	18	9	.24	141	.18	2	4.30	.04	.06	2	2	2
TP0+300N	1	19	7	75	.1	10	7	217	2.24	3	10	ND	5	49	.2	2	2	36	.18	.069	11	13	.37	148	.14	5	2.91	.06	.08	1	2	1
TP0+275N	1	31	11	95	.3	15	8	257	2.41	4	5	ND	6	52	.3	2	2	37	.31	.158	9	12	.44	146	.13	5	3.38	.03	.09	2	2	1
TP0+250N	3	303	2	165	.6	60	12	706	4.47	16	5	ND	6	43	.6	2	2	60	2.81	.051	16	16	.57	30	.06	2	1.96	.01	.06	2	2	1
TP0+225N	18	3235	18	366	6.2	45	42	1018	7.59	82	5	ND	8	35	2.6	4	28	62	2.71	.117	28	16	.27	40	.05	10	1.59	.02	.04	2	2	5
TP0+200N	11	1309	10	165	2.6	49	18	871	6.14	63	5	ND	6	68	1.1	2	8	61	2.59	.111	23	18	.27	54	.07	6	1.62	.02	.07	2	2	24
TP0+175N	3	460	14	234	1.0	26	11	757	4.44	22	5	ND	8	202	.3	3	5	58	2.99	.041	27	16	.31	90	.10	20	2.17	.02	.06	3	2	3
TP0+150N	1	229	15	248	.8	11	6	445	2.90	15	5	ND	6	185	.8	2	2	40	4.81	.059	22	14	.40	89	.07	20	1.96	.02	.07	1	2	8
TP0+125N	1	1139	7	1166	2.5	46	12	921	4.26	23	5	ND	8	309	5.5	2	6	71	7.77	.100	18	21	.30	58	.03	11	1.52	.01	.04	2	2	11
TP0+100N	1	1383	3	723	2.3	22	10	1947	4.49	22	5	ND	6	85	1.3	3	15	44	3.23	.037	10	16	.65	37	.09	12	1.83	.02	.06	4	2	27
TP0+75N	1	369	12	478	.6	28	9	871	1.91	14	10	ND	3	324	3.7	2	2	34	5.97	.113	9	19	.60	105	.09	16	1.48	.03	.10	2	2	4
TP0+50N	1	1327	6	500	2.6	18	14	2770	4.30	18	5	ND	4	93	1.3	4	6	44	3.54	.049	13	27	.69	19	.09	14	1.65	.01	.06	4	2	8
TP0+25N	1	258	11	274	.2	25	7	451	2.05	7	5	ND	1	119	1.5	2	2	36	1.54	.055	9	17	.31	77	.11	3	2.37	.04	.07	1	2	1
TP0+25S	1	382	14	281	.2	67	9	277	2.62	6	5	ND	4	64	.9	2	2	39	.90	.094	8	20	.32	215	.15	3	3.18	.03	.09	2	2	1
TP0+50S	1	111	10	115	.6	25	7	233	2.25	6	5	ND	6	37	.3	3	2	35	.32	.156	13	17	.28	107	.15	2	2.76	.02	.08	2	2	3
TP0+75S	1	105	13	140	.3	29	7	193	2.16	7	5	ND	4	51	.4	2	2	33	.36	.197	9	16	.28	186	.15	5	2.82	.03	.10	1	2	1
TP0+100S	1	262	5	137	.3	40	9	211	2.19	5	5	ND	5	47	.2	2	2	35	.38	.133	16	16	.27	91	.15	3	2.89	.03	.07	1	2	1
TP0+125S	1	337	8	214	.3	57	10	276	2.32	10	5	ND	5	52	.6	2	2	38	.42	.094	7	22	.37	158	.15	5	2.90	.03	.07	1	2	3
TP0+150S	1	1163	9	143	1.5	47	11	317	2.77	8	5	ND	2	62	.8	3	9	52	.51	.089	7	25	.48	101	.17	4	3.25	.03	.08	2	2	2
TP0+175S	1	283	4	143	.4	36	10	913	3.34	9	5	ND	1	70	.7	4	2	53	.98	.036	8	31	.41	88	.13	2	2.74	.02	.08	2	2	2
TP0+200S	1	292	7	94	1.5	35	10	390	3.30	10	5	ND	4	54	.2	2	2	54	.65	.091	11	27	.50	100	.21	3	4.12	.04	.07	2	2	2
TP0+225S	1	90	5	131	.6	33	12	424	2.97	5	5	ND	2	54	.5	2	2	60	.38	.220	6	22	.45	125	.15	3	3.38	.02	.11	1	2	1
TP0+250S	1	152	6	107	.1	34	9	323	2.54	6	5	ND	3	52	.5	2	2	44	.45	.113	8	23	.36	238	.15	4	3.21	.02	.11	1	2	1
TP0+300S	1	73	3	48	.1	17	4	170	1.31	7	5	ND	1	44	.2	2	2	17	.36	.243	6	10	.12	85	.12	2	2.63	.04	.05	1	2	1
TP0+325S	1	68	4	96	.2	15	3	403	1.25	3	5	ND	1	40	.2	2	2	15	.45	.159	6	7	.12	75	.11	2	2.24	.03	.07	1	2	3
TP0+350S	1	117	7	63	1.0	15	4	132	1.68	3	5	ND	4	34	.3	4	2	21	.26	.294	27	16	.16	61	.15	3	3.33	.04	.05	1	2	1
TP0+375S	1	56	2	66	.2	7	3	324	1.34	4	5	ND	2	33	.2	2	2	16	.26	.265	16	7	.12	108	.14	2	3.27	.04	.06	1	2	1
TP0+400S	1	51	11	263	.2	17	6	322	1.74	12	5	ND	3	36	.7	2	3	26	.46	.170	11	15	.19	160	.14	7	2.92	.03	.07	1	2	1
TP0+425S	1	47	12	161	.1	13	5	396	1.63	10	5	ND	2	28	.7	2	2	23	.30	.162	10	11	.15	124	.15	2	2.89	.03	.06	1	2	1
TP0+450S	2	62	15	112	.4	17	7	490	2.19	8	5	ND	6	30	1.0	4	2	33	.24	.109	16	17	.25	145	.18	3	3.59	.02	.08	2	2	3
TP0+475S	1	27	8	92	.1	7	4	521	1.77	2	5	ND	3	31	.5	2	2	24	.22	.140	15	10	.16	146	.18	3	3.88	.03	.06	1	2	21
TP6+375N	1	406	5	282	.4	60	5	289	2.00	11	5	ND	2	24	1.1	2	5	25	1.17	.106	6	15	.23	160	.16	13	2.99	.02	.06	1	2	3
TP6+350N	2	170	10	591	.3	36	7	183	2.30	15	5	ND	2	41	1.4	4	2	37	.55	.078	6	12	.26	171	.16	5	3.44	.02	.06	1	2	13
TP6+325N	1	709	16	705	1.2	16	4	309	1.64	7	5	ND	2	57	5.0	2	5	22	.93	.231	12	8	.21	80	.17	7	3.90	.04	.05	1	2	5
TP6+300N	1	116	28	1042	.1	29	8	1129	2.39	26	6	ND	2	84	2.8	3	2	57	2.44	.040	13	33	.37	84	.10	20	3.11	.02	.12	1	3	1
STANDARD C/AU-S	17	56	38	132	7.0	69	32	1027	3.92	38	17	7	37	52	17.8	14	17	56	.47	.090	38	57	.86	177	.09	31	1.87	.06	.15	11	2	51

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1 TO P2 SOIL P3 TO P4 ROCK P1 TO P3 GEO/P4 ASSA AU** ANALYSIS BY FA/ICP FROM 10 GM SAMPLE.

DATE RECEIVED: JUN 21 1991 DATE REPORT MAILED: June 27/91. SIGNED BY: .....D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Au** ppb
TP6+275N	1	670	40	1004	1.5	43	11	784	3.63	25	5	ND	4	85	2.5	2	2	75	2.02	.151	23	30	.71	26	.05	6	1.73	.01	.04	1	2	26
TP6+250N	1	912	9	242	.3	57	12	377	4.21	15	5	ND	1	135	.3	2	4	81	1.23	.101	9	31	.59	80	.10	6	3.13	.02	.06	2	2	2
TP6+225N	1	487	11	124	.1	32	10	220	2.51	14	5	ND	2	96	.3	2	2	42	.61	.069	9	19	.42	112	.14	4	3.38	.03	.06	1	2	1
TP6+200N	2	1425	4	102	.8	26	13	266	3.57	16	5	ND	6	172	.2	2	2	67	.58	.088	7	19	.72	136	.18	2	4.48	.03	.11	3	2	3
TP6+175N	1	346	6	76	2.0	35	5	103	1.45	9	5	ND	1	65	.2	2	2	21	.46	.193	9	12	.17	37	.14	2	3.08	.04	.05	1	2	6
TP6+150N	1	225	14	459	.2	61	9	313	2.30	18	5	ND	3	65	.8	2	2	36	.56	.183	7	20	.22	104	.16	5	3.31	.03	.08	2	3	4
TP6+125N	1	403	6	184	.6	30	6	636	2.86	8	5	ND	2	61	.2	2	2	34	1.68	.053	5	17	.26	101	.11	4	3.09	.02	.10	1	2	1
TP6+100N	1	402	15	87	1.2	42	10	345	2.98	14	5	ND	4	70	.2	5	2	61	.76	.143	9	28	.47	76	.19	4	4.10	.03	.07	1	2	1
TP6+75N	1	186	5	83	.6	32	5	139	1.71	6	5	ND	3	57	.4	2	2	27	.38	.092	6	16	.20	94	.15	6	2.91	.04	.07	1	2	5
TP6+50N	1	131	9	64	.3	24	6	149	1.88	10	5	ND	3	53	.2	2	2	30	.35	.164	5	17	.28	197	.16	5	3.26	.03	.08	2	2	1
TP6+25N	1	85	9	39	.6	23	4	114	1.50	9	5	ND	4	49	.2	2	2	22	.28	.188	9	17	.19	89	.15	3	3.07	.04	.06	1	2	1
TP18+150N	1	38	9	94	.1	13	6	485	2.26	10	5	ND	4	25	.4	3	2	32	.14	.239	10	13	.29	167	.15	5	3.74	.02	.06	3	3	3
TP18+125N	2	42	13	75	.2	8	12	771	3.35	2	5	ND	3	87	.2	2	2	53	.39	.057	9	14	.81	151	.08	2	3.50	.02	.08	1	2	2
TP18+100N	1	138	13	72	.3	13	12	245	3.52	10	5	ND	6	82	.2	4	2	47	.25	.083	16	15	.77	183	.12	4	4.28	.02	.10	2	2	1
TP18+75N	2	24	17	89	.1	9	11	496	3.24	4	5	ND	4	222	.2	2	2	44	.32	.061	47	14	.72	169	.08	2	2.78	.02	.06	1	2	18
TP18+50N	1	28	20	78	.1	8	9	254	2.58	6	5	ND	6	351	.2	2	2	38	.25	.103	15	15	.47	167	.14	2	3.19	.02	.08	1	2	1
TP18+25N	1	21	15	82	.1	10	7	355	2.15	7	5	ND	3	53	.2	2	2	32	.20	.091	9	12	.30	156	.14	5	3.06	.02	.08	1	2	1
TP20+25S	2	81	10	100	.1	10	18	1004	3.58	8	5	ND	3	74	.2	3	2	59	.24	.035	8	15	.89	196	.10	7	3.19	.01	.12	1	4	1
TP20+50S	1	22	15	85	.2	10	8	343	2.35	6	5	ND	6	39	.2	3	2	35	.19	.061	9	13	.40	164	.14	2	3.07	.02	.08	1	2	2
TP20+75S	1	58	15	89	.1	14	13	367	3.91	9	5	ND	5	69	.2	2	2	60	.42	.044	10	14	1.05	125	.14	5	4.00	.02	.08	1	2	7
TP20+100S	1	28	11	111	.2	12	7	266	2.12	8	5	ND	6	39	.6	4	2	30	.29	.104	13	10	.27	121	.15	6	3.50	.03	.09	2	2	1
TP20+125S	1	46	6	130	.1	33	6	474	2.66	13	5	ND	3	43	.2	2	2	36	1.60	.019	7	13	.31	79	.12	13	2.01	.02	.04	2	2	3
TP20+150S	6	1104	14	140	6.7	75	18	1327	5.10	43	10	ND	6	51	.5	4	21	60	4.03	.063	14	17	.18	18	.08	9	1.62	.01	.03	1	2	22
TP20+175S	1	27	7	139	.4	27	5	159	1.41	7	5	ND	4	28	.2	2	2	17	.44	.105	7	10	.13	69	.15	9	2.90	.05	.06	2	2	1
TP20+200S	5	34	13	357	.2	42	12	523	2.32	14	5	ND	3	32	.5	2	2	34	.41	.058	5	16	.32	142	.14	3	2.68	.02	.06	1	2	1
TP20+225S	6	52	14	72	.5	15	7	210	2.17	10	5	ND	8	48	.3	6	2	32	.32	.112	11	11	.43	140	.15	3	3.50	.04	.05	2	2	2
TP20+250S	6	110	13	90	.2	24	14	365	3.83	10	5	ND	5	67	.2	2	2	62	.30	.038	6	36	.80	141	.13	2	3.33	.02	.06	1	2	1
TP20+275S	1	231	5	115	.6	25	7	161	1.97	9	5	ND	6	38	.6	3	2	29	.27	.095	12	11	.17	130	.18	5	3.95	.03	.04	1	2	5
TP20+300S	1	247	14	219	.4	40	9	285	2.46	8	5	ND	6	37	.9	5	2	38	.59	.175	8	16	.28	164	.20	10	4.39	.03	.06	3	4	1
TP20+325S	1	398	12	141	.3	62	5	163	1.79	11	6	ND	5	29	.2	2	2	20	.55	.141	5	11	.26	160	.17	7	3.73	.04	.08	1	2	1
TPO L8N/1+50E	1	335	14	223	.5	50	8	265	2.86	9	5	ND	6	80	.5	4	2	46	.56	.145	10	23	.40	147	.19	6	4.27	.03	.07	2	3	1
STANDARD C/AU-S	18	59	39	134	7.1	72	34	1058	4.04	38	19	7	40	52	18.9	16	21	55	.49	.089	39	58	.94	178	.09	32	1.89	.06	.15	11	2	47

SAMPLE#	Cu ppm	Zn ppm	Ag ppm	Au** ppb
72076	211	67	.2	5
72077	118	56	.4	6
72078	269	48	.5	7
72079	718	44	.8	1
72080	629	53	.7	5
72081	314	54	.3	9
72082	360	62	.5	1
72083	165	70	.1	5
72084	62	32	.2	5
72085	1260	77	.5	1
72086	123	30	.2	10
72089	2209	79	2.7	25
72090	50	44	.1	35
STANDARD C/AU-R	59	134	7.5	490

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
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ASSAY CERTIFICATE

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P.O. Box 1239, Aldergrove BC V0X 1A0 Attn: G. SALAZAR

SAMPLE#	Cu %	Zn %	Ag** oz/t	Au** oz/t
72087	.01	.01	.01	.001
72088	.33	.56	.20	.002
72091	.48	.01	.13	.035
72092	12.86	.05	2.66	.227
72093	2.71	.02	.52	.020
72094	.09	.01	.02	.002

- 1 GM SAMPLE LEACHED IN 50 ML AQUA - REGIA, ANALYSIS BY ICP.
- SAMPLE TYPE: P1 TO P2 SOIL P3 TO P4 ROCK P1 TO P3 GEO/P4 ASSA AG** & AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE.

DATE RECEIVED: JUN 21 1991 DATE REPORT MAILED: June 27/91.

SIGNED BY. C. Leong .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

COPKET #9

COPKET #7

COPKET #8

ROAD

1750 N

Au-Cu-Ag
"OLD GOLD MINE"

16 N

GRAVEL

ROAD

14 N

Pyr-Cpy-Bn-Magn.-Epidote

COPKET #3 FRAC.

GOSSAN

GREY

RED

12 N

LOTTIE F

DAVID #3

11 N

10 N

9 N

STERLINGHAM FR.

DAVID #2

8 N

M.L. 101

7 N

6 N

5 N

4 N

DAVID #1

OUTCROPS

COPKET #2 FR

3 N

ROAD

COPPERKETTLE CR.

2 N

COPKET FRAC.

4W 3W 2W 1W

COPKET #2

B.L.

1 E

2 E

0 N

SANDRIFT CR.

ROAD

COPKET #1

1:2500

0 100 200 m.

ADIT
PIT
DDH
TRENCH
CLAIM POST

1 ANARCHIST GRP.
1a Siltstone
1b Limestone

2 VALHALLA MONZON.

3 NELSON GRANITE

4 TERT. VOLCANICS

5 CORYELL DYKES

6 SKARN
6a Hornfels

COPKET GROUP
GEOLOGY

GEOLOGICAL BRANCH
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FIG. 7.

COPKET #9

COPKET #7

COPKET #8

Au-Cu-Ag
"OLD GOLD MINE"

1750 N

ROAD

16 N

14 N

COPKET #3 FRAC.

12 N

11 N

10 N

9 N

8 N

7 N

6 N

5 N

4 N

3 N

2 N

2E 0 N

LOTTIE F

DAVID #3

DAVID #2

DAVID #1

STERLINGHAM FR.

COPKET #2 FR

COPKET #2

COPKET FRAC.

COPKET #1

M.L. 101

COPPERKETTLE

SANDRIFT CR.

ROAD

ROAD

4W 3W 2W 1W

TP 20
T.P 0+350 N
0+325 N
T.P. 20+25 S
20+50 S
20+75 S
TP 18
20+100 S
T.P. 20+125 S
20+150 S
20+175 S
20+200 S
20+225 S
20+250 S
20+275 S
20+300 S
20+325 S
T.P. 6+375 N
6+350 N
6+325 N
6+300 N
6+275 N
6+250 N
6+225 N
T.P. 6+200 N
6+175 N
6+150 N
6+125 N
T.P. 6+100 N
6+75 N
6+50 N
6+25 N
T.P. 6
T.P. 0+475 S
0+450 S
0+425 S
0+400 S
0+375 S
0+350 S
0+325 S
0+300 S
0+275 S
0+250 S
0+225 S
0+200 S
0+175 S
0+150 S
0+125 S
0+100 S
0+75 S
0+50 S
0+25 S
T.P. 0

TP 18+150 N
18+125 N
18+100 N
18+75 N
18+50 N
18+25 N
TP 0+300 N
0+275 N
0+250 N
0+225 N
0+200 N
0+175 N
0+150 N
0+125 N
TP 0+100 N
0+75 N
0+50 N
0+25 N

(no sample)

1:2500

0 100 200 m.

ADIT
PIT
DDH

T.P. 20+150 S : Sample Site (Soils)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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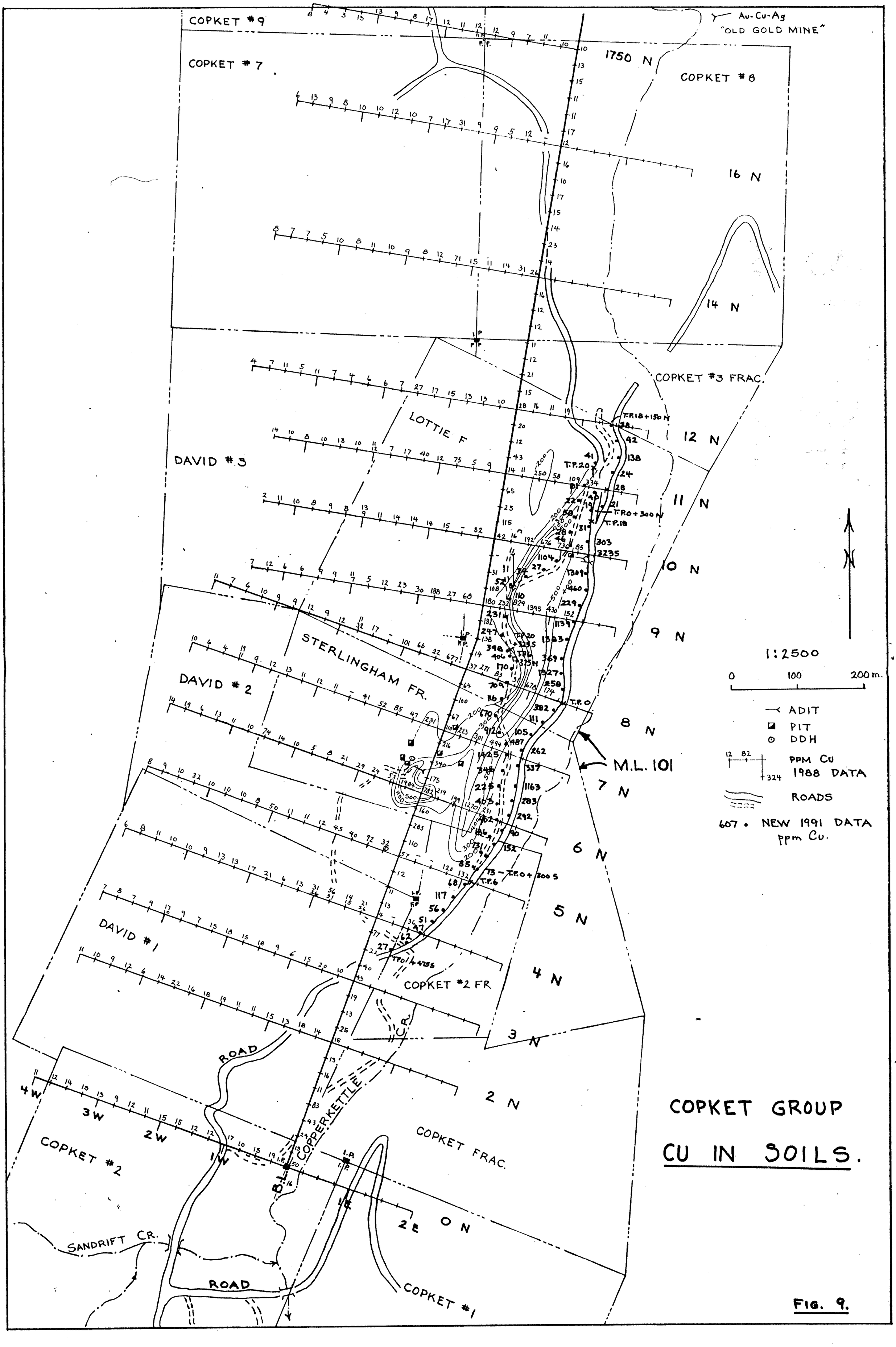
COPKET GROUP

LOCATION OF SOIL SAMPLES

FIG. 8.



COPKET GROUP

CU IN SOILS.

FIG. 9.

COPKET #9

COPKET #7

COPKET #8

Au-Cu-Ag
"OLD GOLD MINE"

1750 N

16 N

14 N

COPKET #3 FRAC.

12 N

11 N

10 N

9 N

8 N

7 N

6 N

5 N

4 N

3 N

2 N

1 N

1 E

2 E

DAVID #3

DAVID #2

DAVID #1

LOTTIE F

STERLINGHAM FR.

COPKET #2 FR

COPKET FRAC.

COPKET #2

COPKET #1

M.L. 101

T.P.18 +150 N

T.P.20 +325 S

T.P.0 +200 N

T.P.0

T.P.0 +200 S

T.P.0 +400 S

T.P.6

T.P.18

T.P.20

T.P.6 +375 N

COPPERKETTLE

ROAD

ROAD

SANDRIFT CR.

C.R.

B.L.

I.P.

F.P.

1:2500

0 100 200 m.

ADIT

PIT

DDH

69 134 674 PPM Zn 1988 DATA

ROADS

291 • NEW 1991 DATA
ppm Zn

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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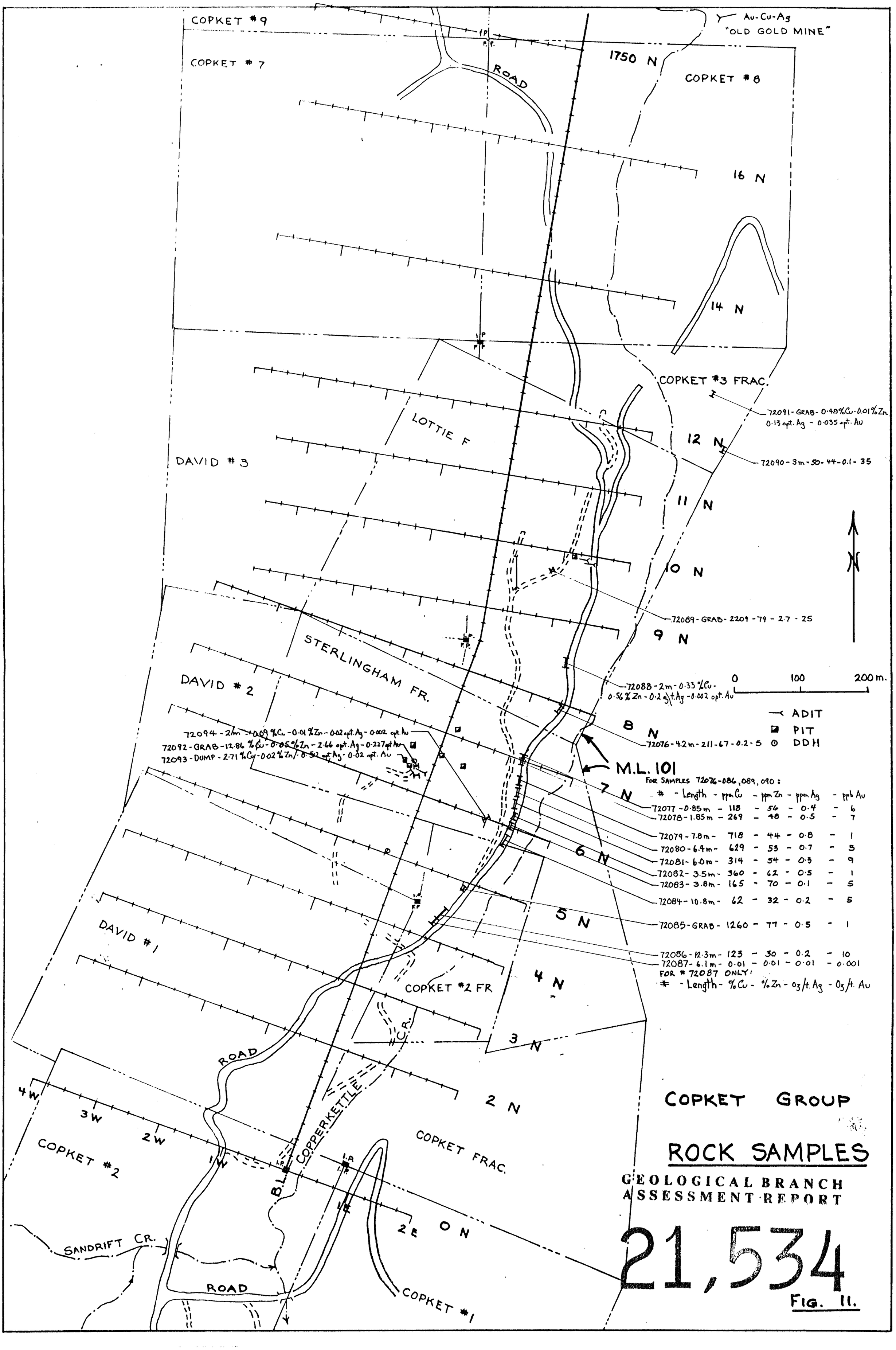
COPKET GROUP

ZN IN SOILS

FIG. 10.



COPKET GROUP

ROCK SAMPLES

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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FIG. 11.