MCLEOD PROJECT

93J/14

BY

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part 2 of 2

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SUMMARY

270 claim units were staked in october, 1986, covering several copper-nickel-chromium-gold and platinum metals showings.

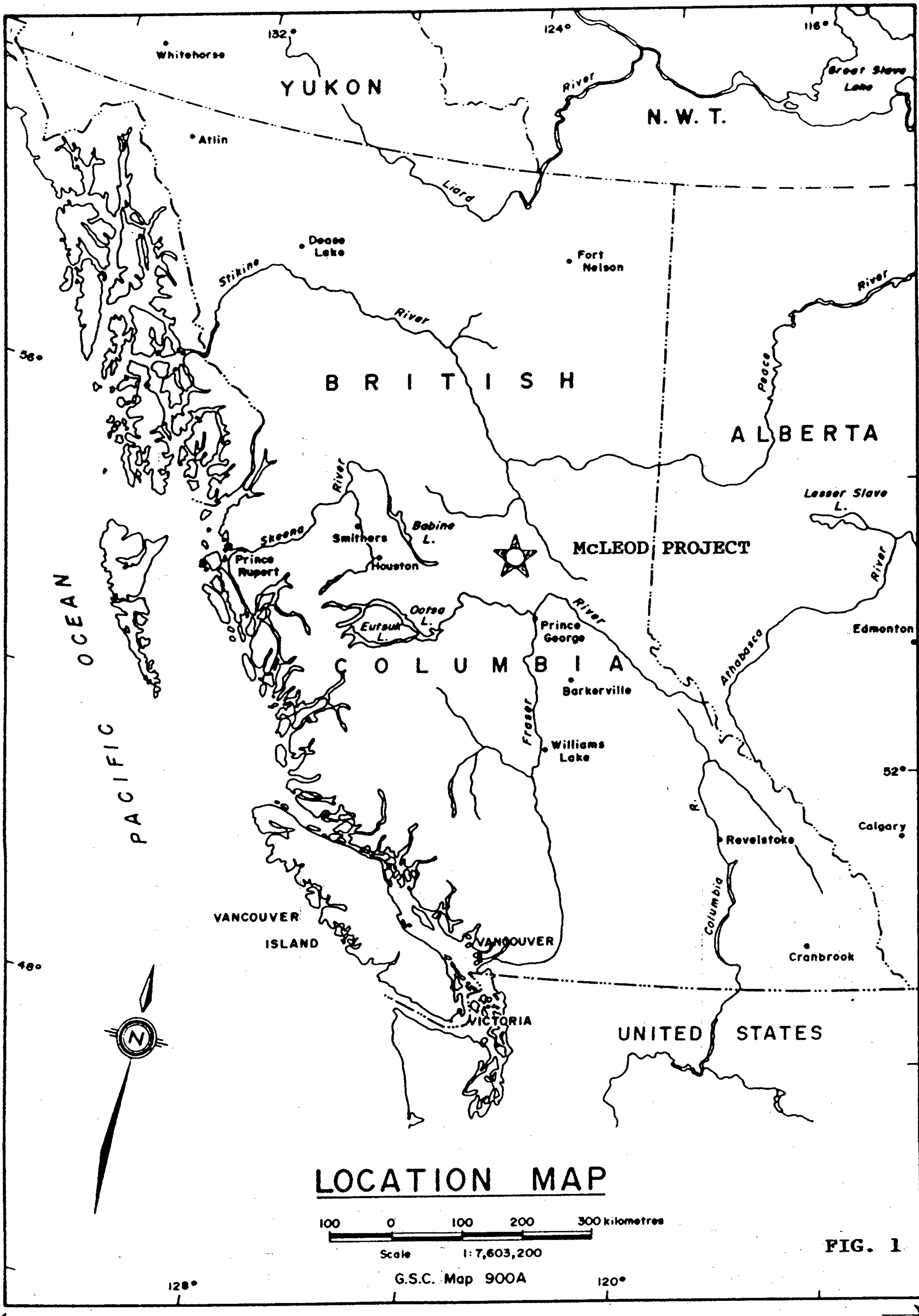
A 20 meters wide sulphide-rich pyroxenite zone with precious metals, was discovered on Sol #1 & 2. Pd/Pt grading from 1:1 to 1:2 seem to indicate enrichment and movement from a distal source.

Rock analysis for gold, platinum and palladium occuring with chromium, copper, iron and manganese are indicative of a polymetallic source.

The claim region needs to be prospected, mapped, trenched and rock sampled. We also recommend detailled tree sampling in till covered areas.

Geophysical grid lines are to follow on areas with P.G.M and gold potential

List of Appendices



LOCATION MAP

FIG. 1

I. INTRODUCTION:

The exploration area is bound by the McLeod river to the south, its tributary McDougall river to the S.W. and follows the Des creek to the N-W. The claims are located 40 to 50 km south of the town of Mackenzie, Cariboo mining division and 31 miles N-W of Prince George. Access is through a dirt road 13 to 25 miles west of McLeod lake Post, fig. 1.

The project comprises 17 claims or 270 claim units, covering approximately 6750 hectares or 16,470 acres, Table 1.* The ground was staked as a result of McDougall sydicate's placer work and the author's evaluation: geological, geophysical & stream geochemical anomalies.

Since 1930, it has been the site for sporadic gold & platinum placer testing (ref. 1) and from 1981 the site of mineral exploration by Ezekiel Exploration Ltd and others. (Ref. 2).

The exploration objectives consit of gold & PGM metals along the McDougall - McLeod - Des creek drainages and nickel-chromium-copper with PGM on the regional N-W magnetic belt area. Reconnaissance field work carried out from October 22 to November 2, 1986 consisted of geological mapping, claim staking, line cutting, blasting and trenching; it had for objectives the testing of concepts based on geophysical and geochemical anomalies. It was successful in finding a gold-platinum (Pt & Pd) enriched host rock,consisting of a 10 meter wide shear zone.

* 1 claim unit = 25 hectares = 61 acres

II GEOLOGY AND PHYSICAL APPEARANCES

The region lays within the Omineca batholith at the N-E of the Nechako plateau, west of the Rocky Mountain trench. It is covered with widespread glacial deposits, ie: drumling, eskers and melt channels all indicative of two glacial advances, the last one being in a N-25°E direction. Rivers cut deeply into the plateau basalts, andesites, argillites, cherts, etc. thereby exposing, as is the case with the McLeod river system, outcrops of ultrabasic and acid phase rocks intruding older units of the Cariboo group: Snowshoe and midas formations. Those glacial deposits vary from 5 to 100 feet, increasing in valleys' bottom. Much of the claim's area is in a region of low topographic relief varying from a high of 3400 feet' to a low of 2700' with outcrops and suboutcrops on hill tops and side slopes.

1. Geological Description

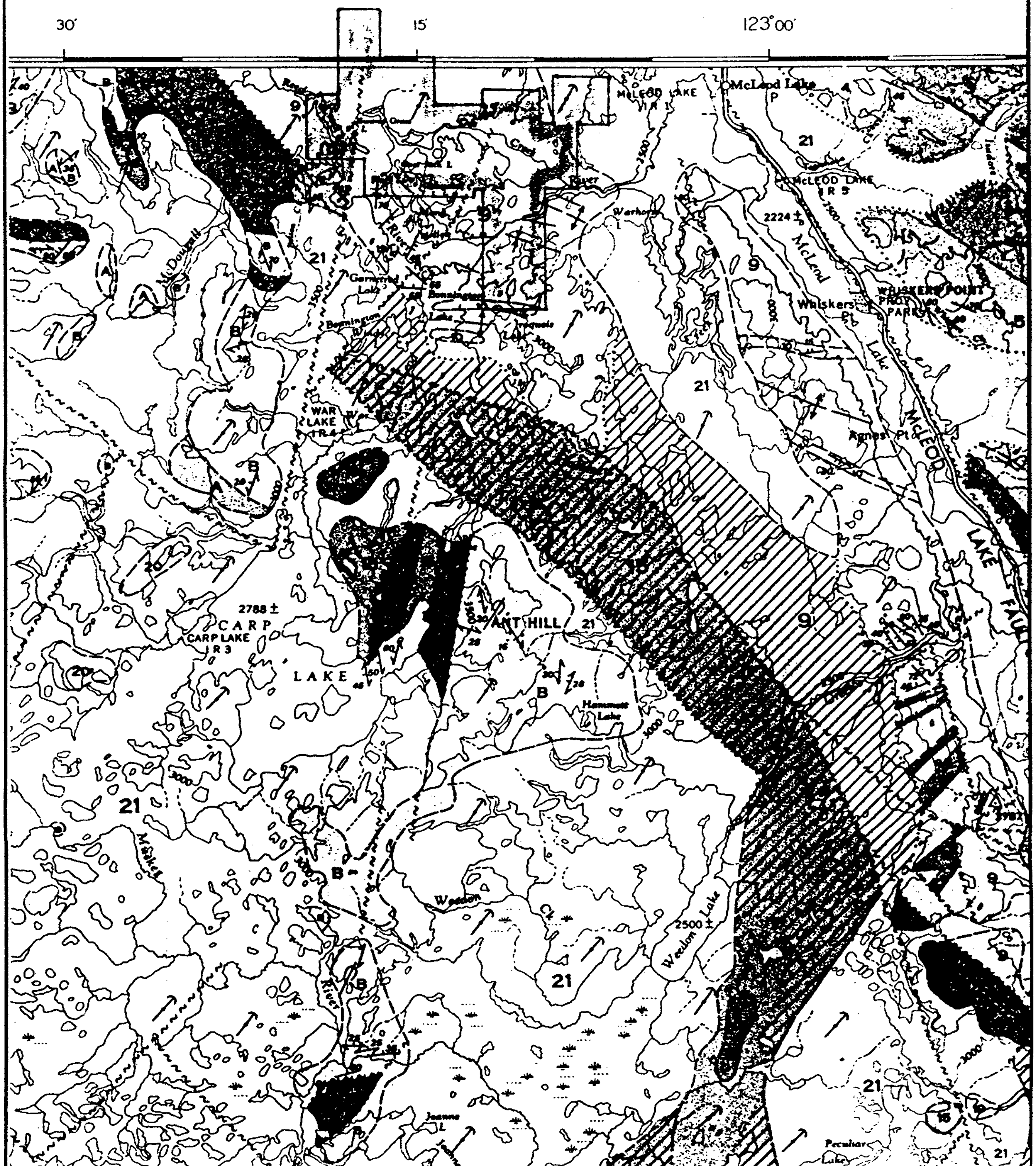
Geological mapping of this region was done in 1946 by Armstrong, Tipper and Hoadley of the Geological Survey of Canada and completed in 1961 (Fig. 2). Two third of the Eastern and North-Eastern region claims is underlain by Mississipian, Slide mountain group sediments (unit 9), the western third is represented by Cambrian and/or later, Cariboo group Snowshoe formation (unit 8)

a. Ground Prospecting & Mapping

Ground prospecting found many suboutcrops of several rock units not previously mentioned:

- Takla Volcanics (olive green andesite).
Occasionally cut by quartz & calcite veinlets.
- Wolverine Metamorphic Complex composed of gneiss, quatzite, pegmatite & micaceous & garnetiferous schists.
- Blocks of Granodiorite

McLEOD PROJECT



Regional Geology

1:253,440

Map 120 4A, 1969

FIG. 2

GEOLOGICAL LEGEND

PRE-TERTIARY FORMATIONS WEST OF McLEOD LAKE FAULT

MESOZOIC

JURASSIC OR CRETACEOUS

16 — *Gneissic quartz diorite and granodiorite*

TRIASSIC AND/OR JURASSIC
UPPER TRIASSIC AND/OR LOWER JURASSIC
TAKLA GROUP

15 — *Andesitic and basaltic flows, tuffs, breccias;*
15a, *conglomerate, greywacke, argillite, limestone*

PALEOZOIC

PENNSYLVANIAN (?) AND PERMIAN
CACHE CREEK GROUP (12, 13)

12 | **13** — 13. *Basaltic and andesitic flows, tuffs, breccias; minor chert and argillite*
12. *Limestone, ribbon chert, argillite*

MISSISSIPPIAN (?)

11 — *MOUNT MURRAY INTRUSIONS: diabase, diorite*

SLIDE MOUNTAIN GROUP (9, 10)

9 | **10** — 10. *Limestone*
9. *Basaltic pillow lavas, andesite, related pyroclastic rocks, argillite, chert, greywacke*

CAMBRIAN AND/OR LATER
LOWER CAMBRIAN AND/OR LATER
CARIBOU GROUP (7, 8)

7 | **8** — 8. *SNOWSHOE FORMATION (?): grey micaceous quartzite, phyllitic quartzite, phyllite; includes minor pegmatite of A*
7. *MIDAS FORMATION (?): black quartzose phyllite, argillite*

WOLVERINE COMPLEX

A — *Granodiorite, granite, pegmatite*

B — *Granitoid gneiss, micaceous, garnetiferous chloritic schists, pegmatite, and small bodies of granodiorite; minor feldspathized quartzite*

PRE-TERTIARY FORMATIONS EAST OF McLEOD LAKE FAULT

MESOZOIC

TRIASSIC (?) AND/OR JURASSIC (?)

14 — *Argillite, greywacke, shaly limestone; minor andesite and basalt*

PALEOZOIC

DEVONIAN AND (?) LATER
MIDDLE DEVONIAN AND (?) LATER

6 — *Limestone, silty and shaly limestone*

ORDOVICIAN AND SILURIAN
UPPER ORDOVICIAN TO MIDDLE SILURIAN
SANDPILE GROUP

5 — *Limestone, dolomite; quartzite, calcareous, and dolomitic sandstone*

CAMBRIAN
MIDDLE (?) AND UPPER CAMBRIAN TO LOWER ORDOVICIAN
KECHIKA GROUP

4 — *Limestone, silty limestone, calcareous siltstone, calcareous schist*

CAMBRIAN AND (?) EARLIER
LOWER CAMBRIAN AND (?) EARLIER

3 — *Dolomite, limestone, quartzite, sandy dolomite; black and green slate*

PROTEROZOIC

CAMBRIAN AND/OR EARLIER
LOWER CAMBRIAN AND/OR EARLIER
MISINCHINKA GROUP

2 — *Black slate, slaty greywacke; minor quartzite, conglomerate, greywacke*

1 — *Chlorite and sericite schist, phyllite, schistose grit, quartz-pebble conglomerate*

b. Property Outcrops

The Slide Mountain group of sediments is the dominant geological unit throughout the claim area. It has been identified on Sol Nos. 1, 2, 3 & 4 and few outcrops of the Horne group of claims, it is comprised of:

- Argillites which are a recessive black, pyritiferrous and often graphic rock.
- Siltone & mudstone which appears as massive grey to green laminated rocks, outcroping up, in the stratigraphy as hill tops
- The greywacke which are massive and of coarse texture (grey to green).

2. Mineralization

Since 1930, the region has seen little placer prospecting & exploration, due to its remoteness. However, due to its favorable geology, more activity is foreseen in the future. Reported mineral occurrences are sparce (fig. 3) and consists of:

- Pyrite & Pyrrhotite

  Pyrite is the most commonly found sulphide, occurring as fine disseminated and cubes up to 2 cm, mostly in the argillites units. Pyrrhotite occurs mostly in mafic rocks units, often associated to pyroxinite as found in discovery gulch Sol 1 & 2.

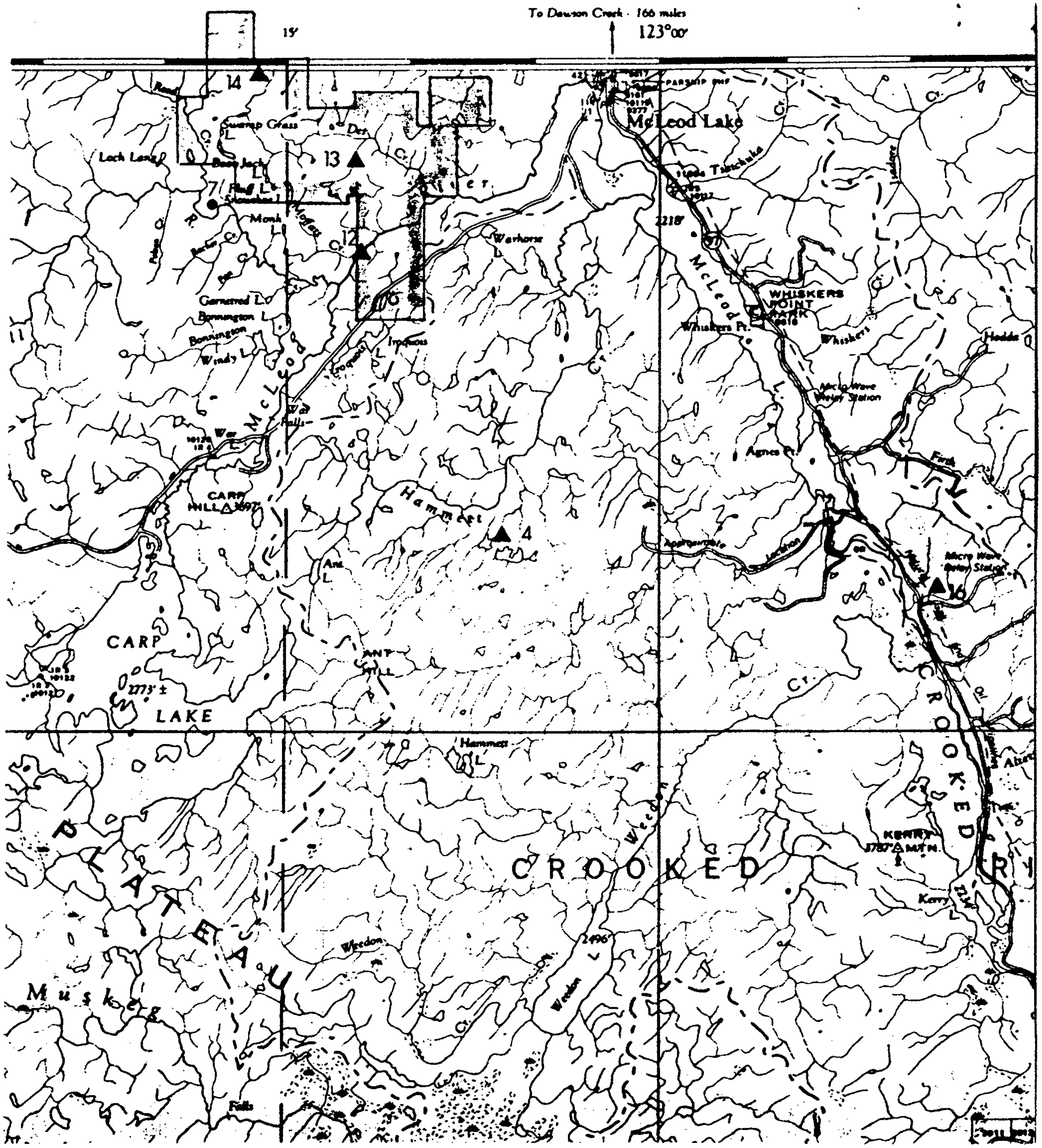
- Chalcopyrite with py and pry.

- Copper - Nickel

- Gold and PGM in placers.

MINERAL OCCURRENCES

93J



SCALE 1:250,000

FIG. 3

III REGIONAL GEOCHEMISTRY

The McLeod region's glacial cover is cut through by a network of drainages exposing many outcrops and filling the valleys with glacial till. In this environment, geochemical sampling tools are well suited to outline regional trends and mineralized bedrock. Multielement analysis with autocorrelation is essential to a successful exploration program.

1. Stream sediment evaluation

A recent regional stream sediment and water survey, G.S.C, O.F, 1216-93J, is providing a regional coverage. From this data base, 8 out of 10 samples are strongly anomalous, representing drainage basins covering most of the 270 claims.

sample #1618: drains the southend of discovery gulch Sol #1.

Zn=160, Cu=95, As=13, Mo=15, Cd=1.2, Sb=5.1
Ba, Pb, Ni & Co are anomalous.

sample #1854: Doe claim
Ag=2.6, U=13, Cd=3, Sb=1.4
Ni, Ba, Cu & Pb are anomalous.

sample #1851: Sol #2 & 3
Cu=88, Ni=68, Cd=1
Zn, Sb & Ba are anomalous.

Sample #1855: Des creek North tributary, Sol #6 & 5
Zn=220, As=25, U=5, Cd=2.2, Sb=2

Sample #1856 Horn #1&4
As=22, Cd=1, Sb=2
Zn, Cu, Pb & Ag anomalous

Sample #1872/3 south of Horn #1
Cd=1.6, Sn=2 Zn, Cu, Pb, Ag, U, Ba

2. Regional Geochemical Enrichment

The above anomalous stream sediment sites are compared to several regional trends in appendix A:

Copper, fig 1: The claim area represent a secondary enrichment in the 70 to 90 percentiles.

Arsenic, fig 2: Two significant anomalies in the 90-99 percentiles

Zinc, fig 3: Two zones of interest cover the claim area

Barium, fig 4: The area is within a regional high zoning extending westward.

Silver, fig 5: A definite zoning north of Des creek & Mcleod river & from Doe claim westward.

Cadmium, fig 6: Anomalous over Horn & Doe claims, overlapping the silver dispersion.

Uranium, fig 7: Overlap with Ag & Cd & Ba.

The claim area is well represented by a multielement enrichment indicative of polymetallic bedrock mineralization.

3. Rock Lithogeochemistry

A multitude of outcrop appears as suboutcrops or floats and need to be exposed by tranching. Multielement analysis and correlation will separate and evaluate zones of alteration possibly linked with precious metal enrichment. Lithogeochemical zoning is crucial in precious metal exploration as recently demonstrated in the discovery of P.G.M host on Sol #1 & 2: a 10 meter wide brecciated zone of pyroxenite rich volcanic rocks carring up to 15% sulphides ,as py,pry,cpy with Ni,Cr,Mg and gold and platinoid metals. Rock analysis has been centred on sulphide rich outcrops,see appendix B rock description.

a) Peripheral mineralization

Mc-7 on Sol #2,440m North, under a stump,indicates the proximity of pyroxenite with PGM; ie: Pd/Pt = 2:1 suggesting Pd remobilization from a distal source.

Cr, Cu, Ni, Al, 4.5% Mg & 4.7% Fe enrichement

Mc-8/9/10 black shales with Cr & Mo enrichment.

b) Discovery Gulch
A 20 meters wide zone extending westward, altered & brecciated is associated to Ni, Cr, Cu, Mg and precious metals.
- Shear zone within mafic volcanic rocks:

Mc-15, east bank, brecciated, iron stained
Co=242, Cr, Cu=2290, Ni=1890, Al, 10% Fe with K & Na enrichment but low precious metals.

Mc-18, west bank, iron rich fault gauge.
Co=374, Cr, Cu=3310, Ni=3150, Al, 11% Fe, 3%Mg

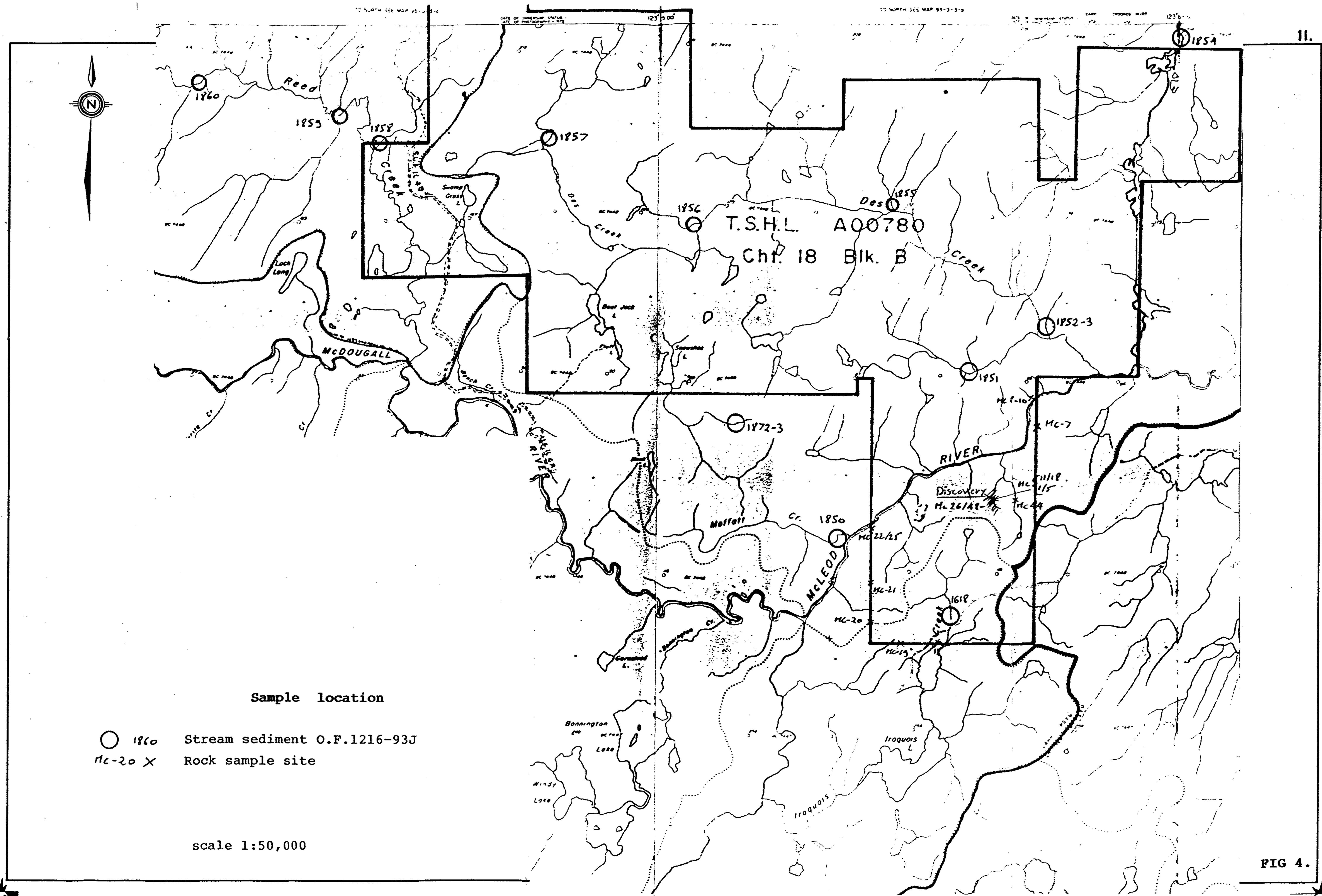
- Mafic with + 5% sulphides and Pt/Pd = 1:1

Mc-11, altered pyroxenite with K=900 & Na=1500, Co=121, Cr, Cu=1980, Ni=1360, Al, 3%Mg.

Mc-12 with Pt/Pd =1:1 as threshold anomalous Co=126, Cr, Cu=1960, Ni=1290, Al, 3.9% Mg with Na=1000.

Mc-14,increase of Pt with Na=1900 & K=1000 Co=151, Cr, Cu=2660, Ni=1280,Al& 3%Mg

Mc-17, hydothermaly leached shear zone with low precious metals Cr,Cu=1650, Ni, Al & 2.8% Mg.



Sample location

○ 1860	Stream sediment O.F.1216-93J
Mc-20 ×	Rock sample site

scale 1:50,000

FIG 4.

IV CONCLUSION & RECOMMENDATIONS

The McLeod project has been successful with the following highlights:

a) The acquisition of 270 claims units covering a wide variety of showings.

b) Discovery of a P.G.M. & gold target area on Sol #1 & 2, a 20 metre wide pyroxenite shear zone with gold and platinum metals.

c) P.G.M metals are related to a solid solution of iron, nickel & chromium to which copper, cobalt, gold and other metallics have been added through one or more phases.

1. Conclusion

Analytical results on "discovery gulch" are indicative of metal movement along a sheared and brecciated sulphide rich-zone. Gold, platinum and palladium are associated to chromium, nickel, magnesium and copper, all indicative of a polymetallic source of origine.

The aeromagnetic belt trending N.N.W. and reflecting mafic volcanic units which are block-faulted along the McLeod Mc-Dougall river junction, is also a good indicator of rock compositional changes. It represents one of the best tool as to delineate the region of interest to mineral exploration, fig 5.

2. Recommendations

The claim area, 92J/14 needs to be explored in details in the following order:

a) prospecting, mapping, lithogeochemical sampling.

b) stream concentrate every 400 meters in areas with precious metal potentiel.

c) Detailled tree sampling in till covered areas.

d) Follow-up on pyroxenite-rich rocks with ground magnetics and EM-VLF.

e) Rock trenching, mapping with multielement analysis on all samples.

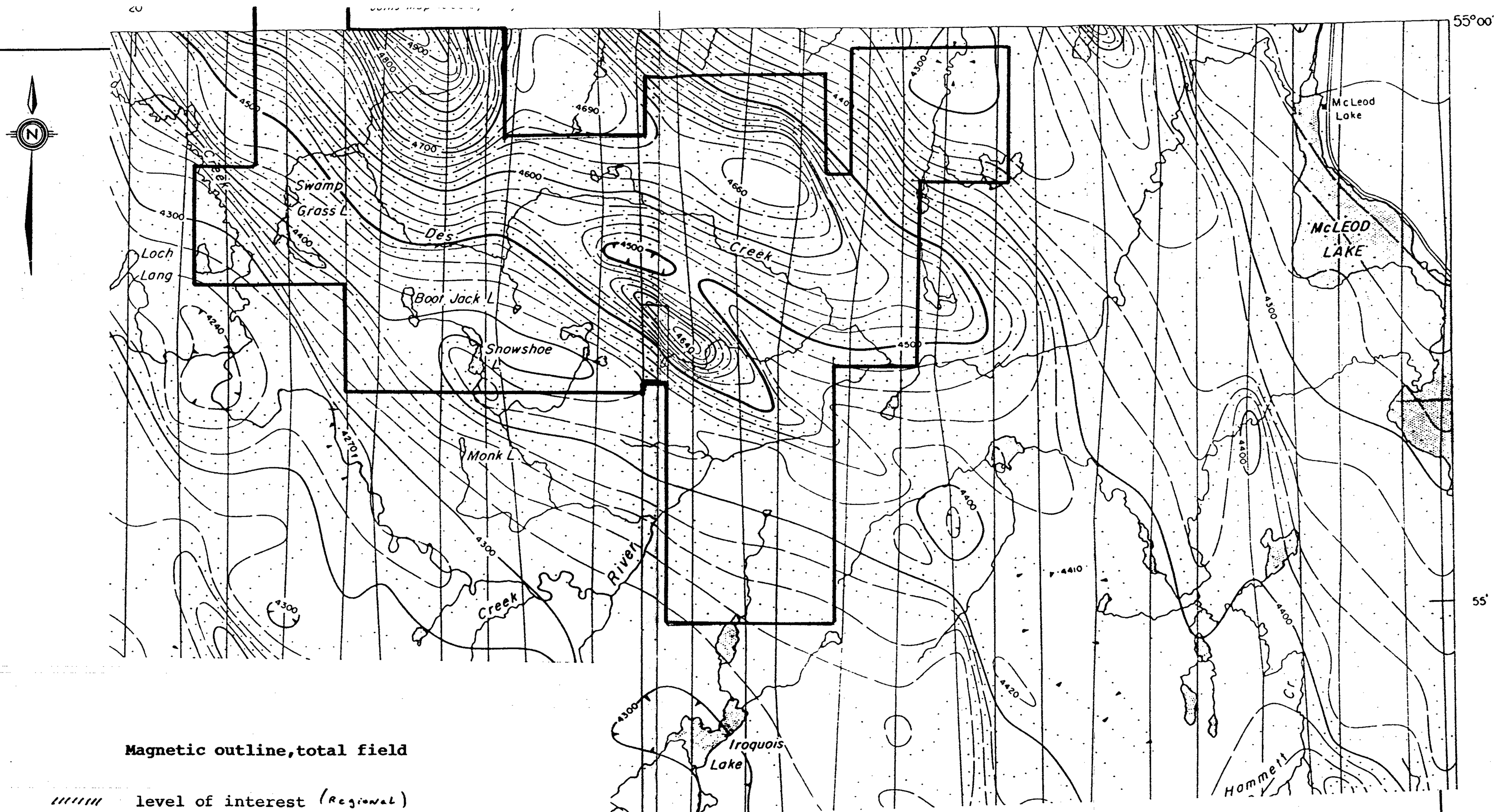
f) Lithogeochemical interpretation of the results before drilling.

In addition, we emphasize the need for high quality data collecting along with the use of suitable sampling mediums, with special attention given to areas covered by heavy overburden.

Respecfully submitted,

John H. Hajek
Mining Consultant

December 04, 1986
Zelon Chemicals Ltd.



Magnetic outline, total field

//////// level of interest (Regional)

4500 gammas, level of interest (Local)

scale 1:63,360   CARP LAKE 93 J/14

Magnetic outline, total field

level of interest

4500 gammas, level of interest

FIG 5.

List of Appendices

MCLEOD PROJECT: 93J 14

Land Holdings

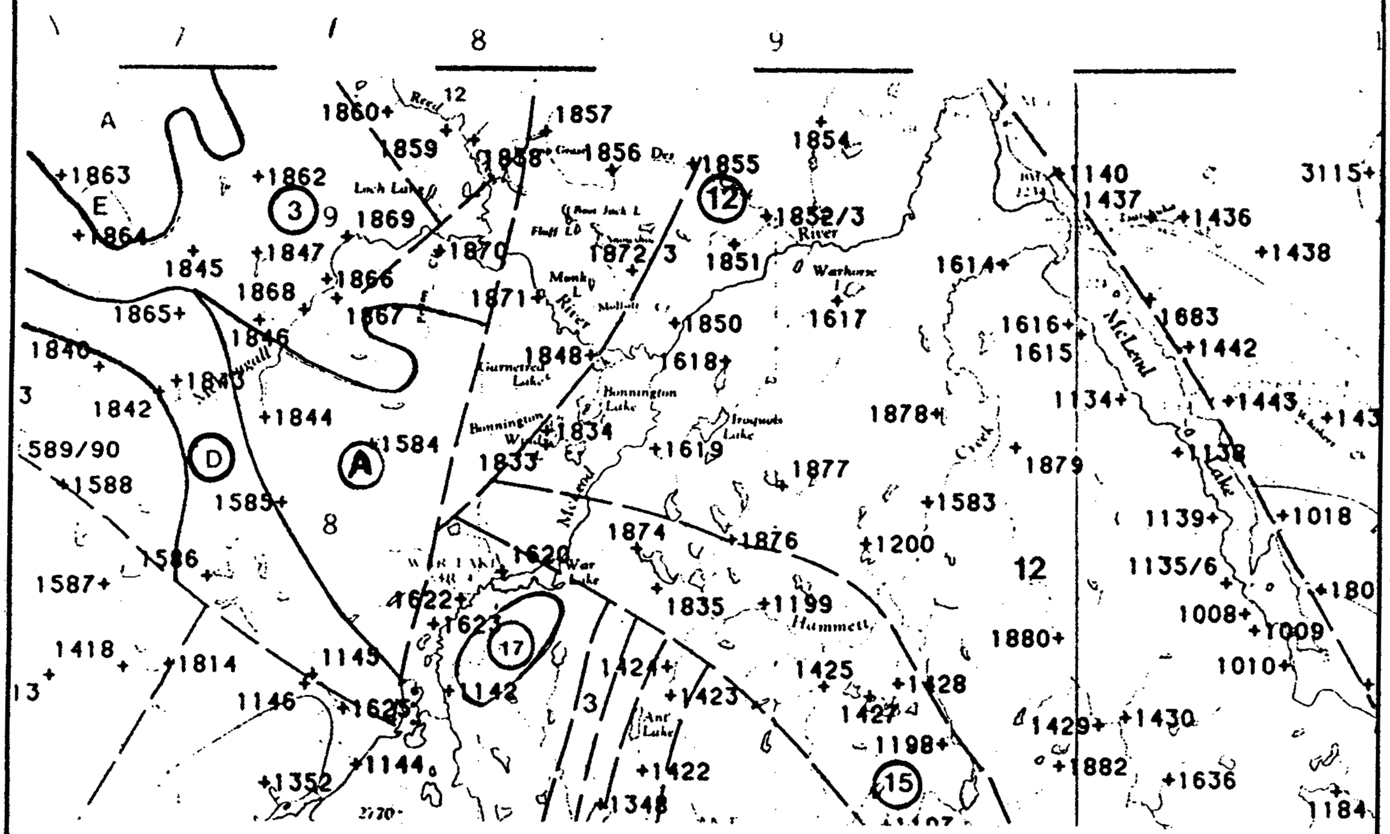
TABLE #1

Record No.	Name of Claim	Staked	Recorded	Units
	Sol #1	October 23, 1986	Nov. 21, 1986	20, 5W 4S
	Sol #2	" " "	Nov. 21, 1986	20, 5W 4N
	Sol #3	October 26, 1986	Nov. 26, 1986	18, 3N 6W
	Sol #4	October 26, 1986	Nov. 26, 1986	18, 6N 3E
	Sol #5	November 1, 1986	Nov. 1986	18 6W 3S
	Sol #6	November 1, 1986	Nov. 1986	18, 6W 3N
	Doe	November 1, 1986	Nov. 1986	20, 4N 5N
	Horn #1	November 1, 1986	Nov. 1986	20 4S 5E
	Horn #2	November 1, 1986	Nov. 1986	20 4S 5W
	Horn #3	November 1, 1986	Nov. 1986	20 4N 5W
	Horn #4	November 1, 1986	Nov. 1986	20 4N 5E
	Horn #5	November 1, 1986	Nov. 1986	20 4S 5W
	Horn #6	November 1, 1986	Nov. 1986	18 6N 3W
	Horn #7	November 1, 1986	Nov. 1986	20 5E 4N
TOTAL:	14 claims			270 Units

APPENDIX A

Sample Location 93J

GSC O.F.1216/BC RGS15

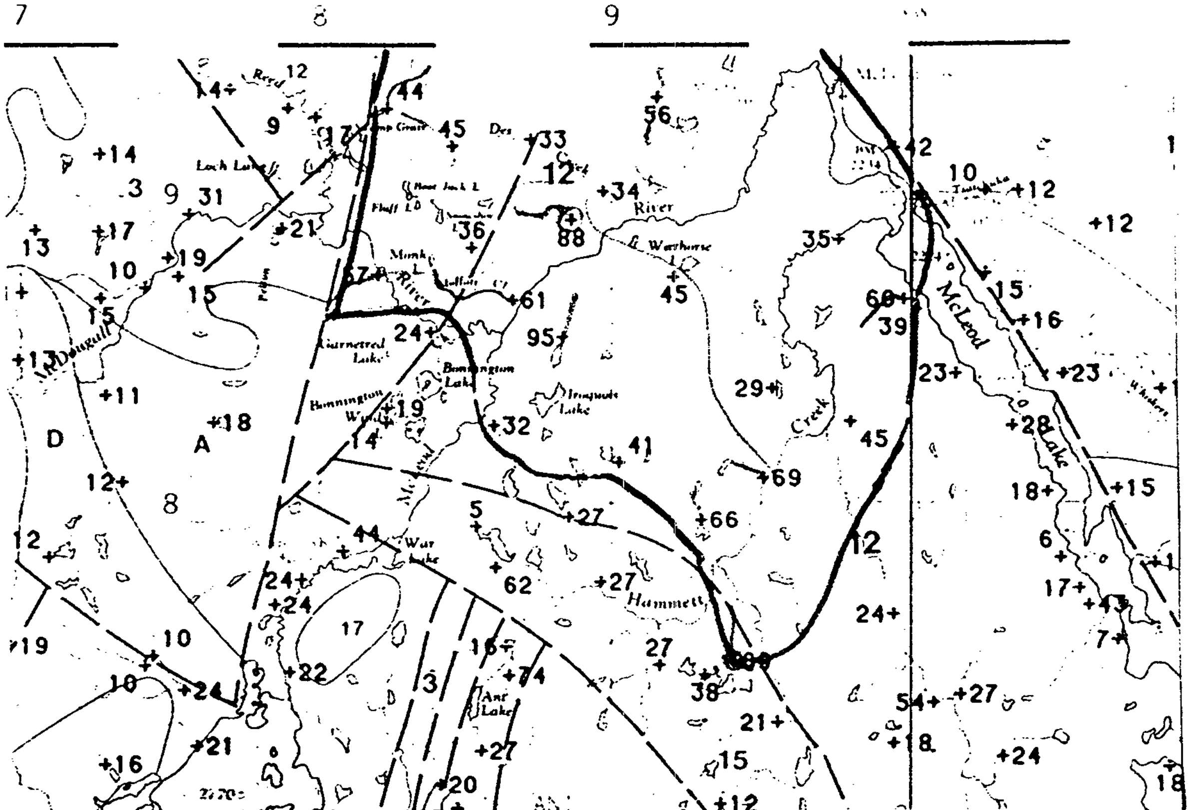


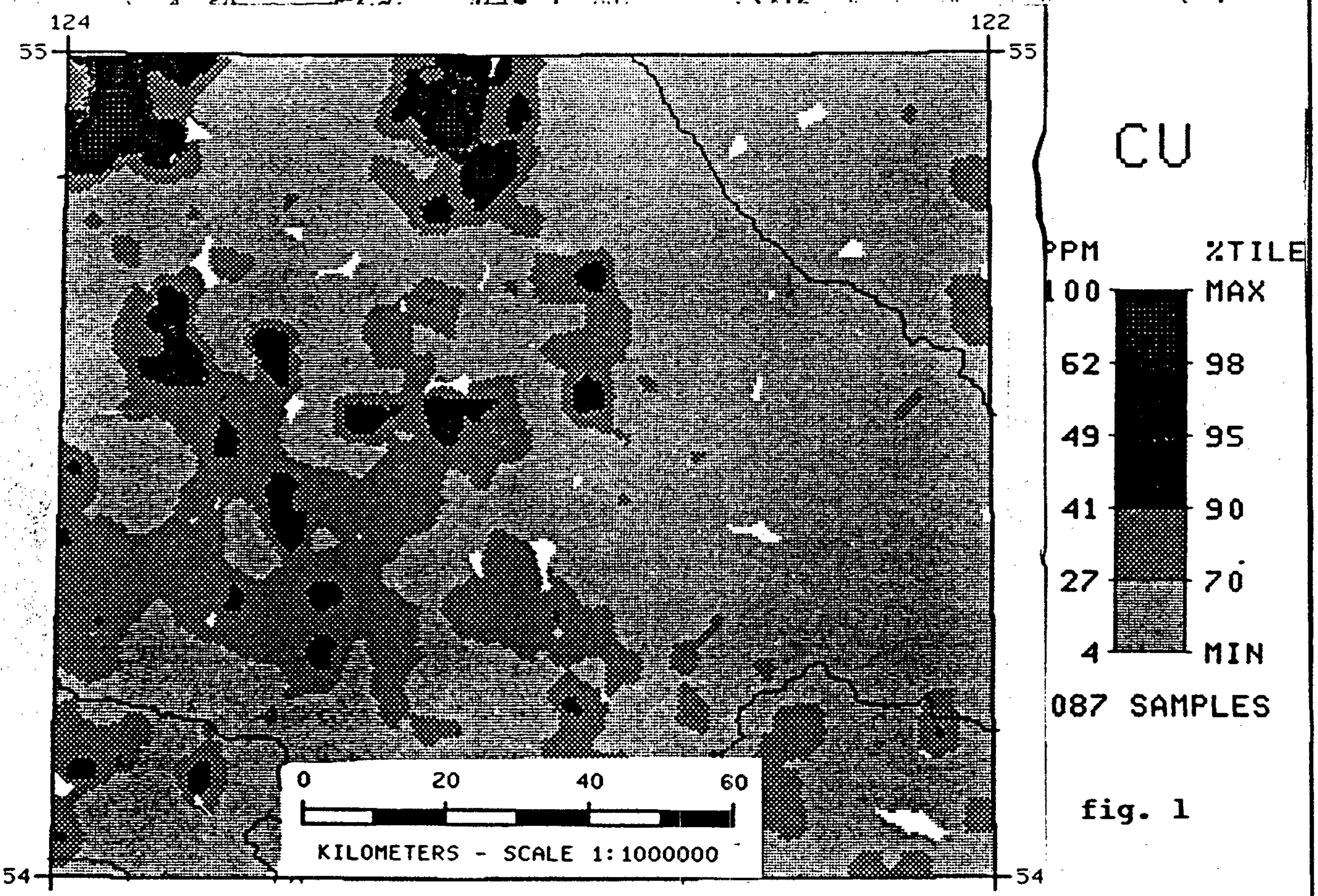
Geological Units

A	Wolverine Metamorphic Complex
D	Naver Intrusions, quartz mozonite, diorite
3	Hadrynian and lower Devonian undivided sedimentary & metasedimentary rocks
12	Slide Mountain Group
15	Talka Group
17	Ootsa Lake Group

APPENDIX A

Stream Geochemical Dispersion



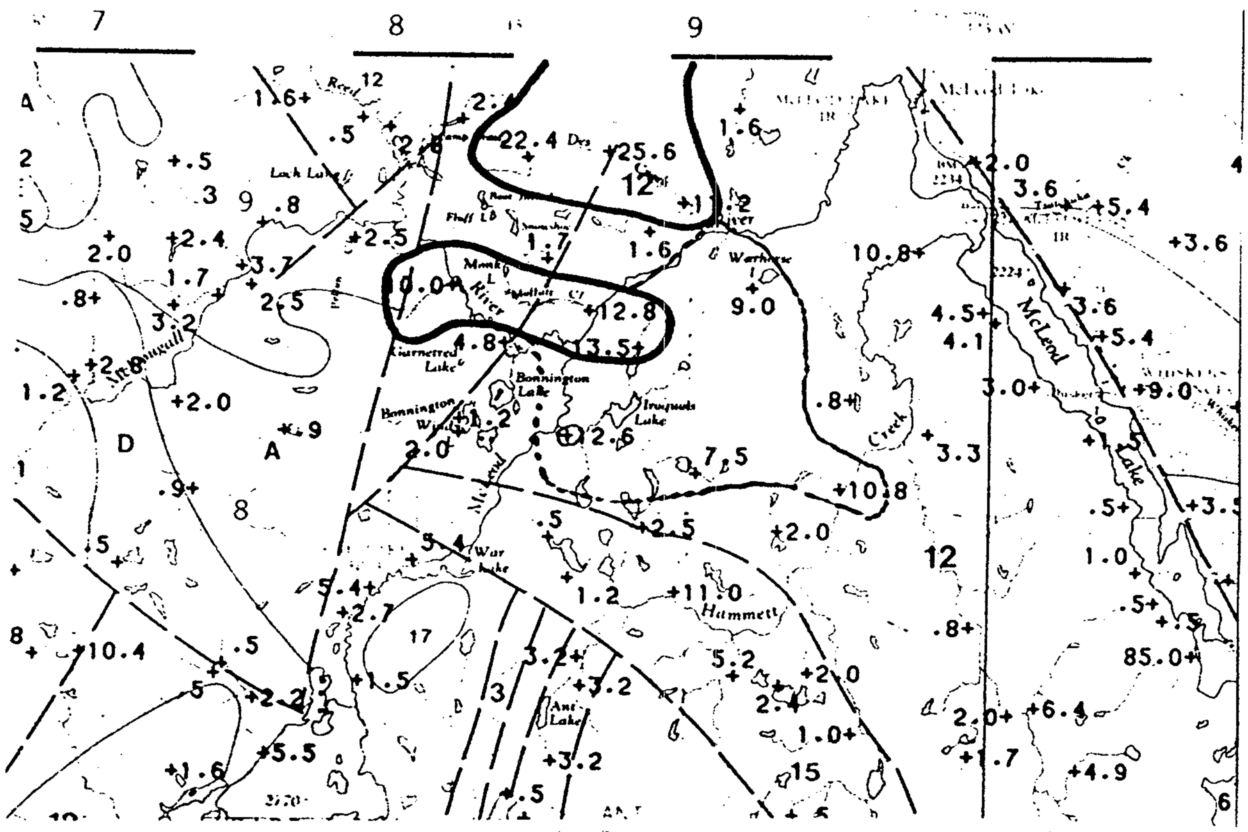


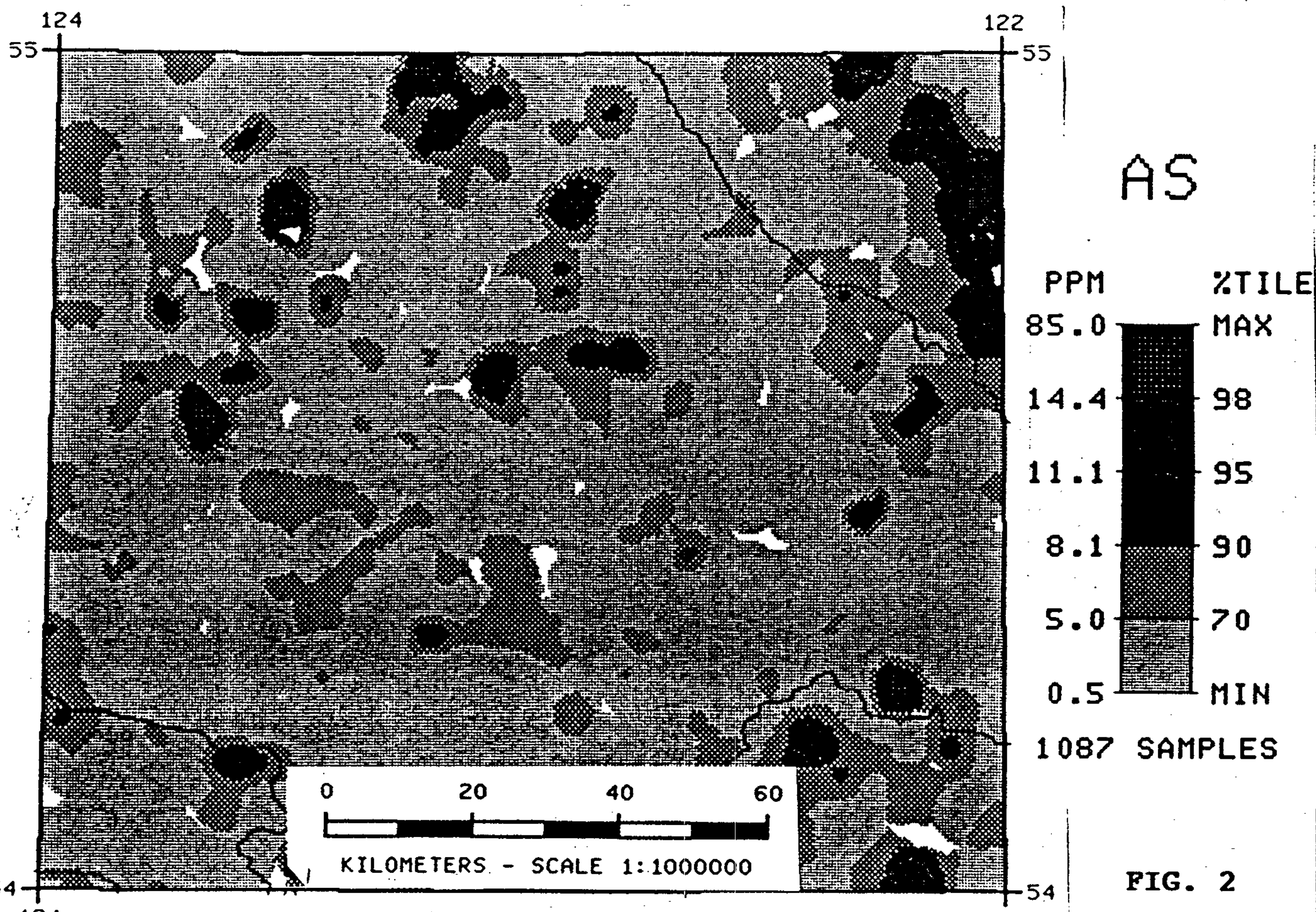
REGIONAL TREND MAP

fig. 1

APPENDIX A

Stream Geochemical Dispersion



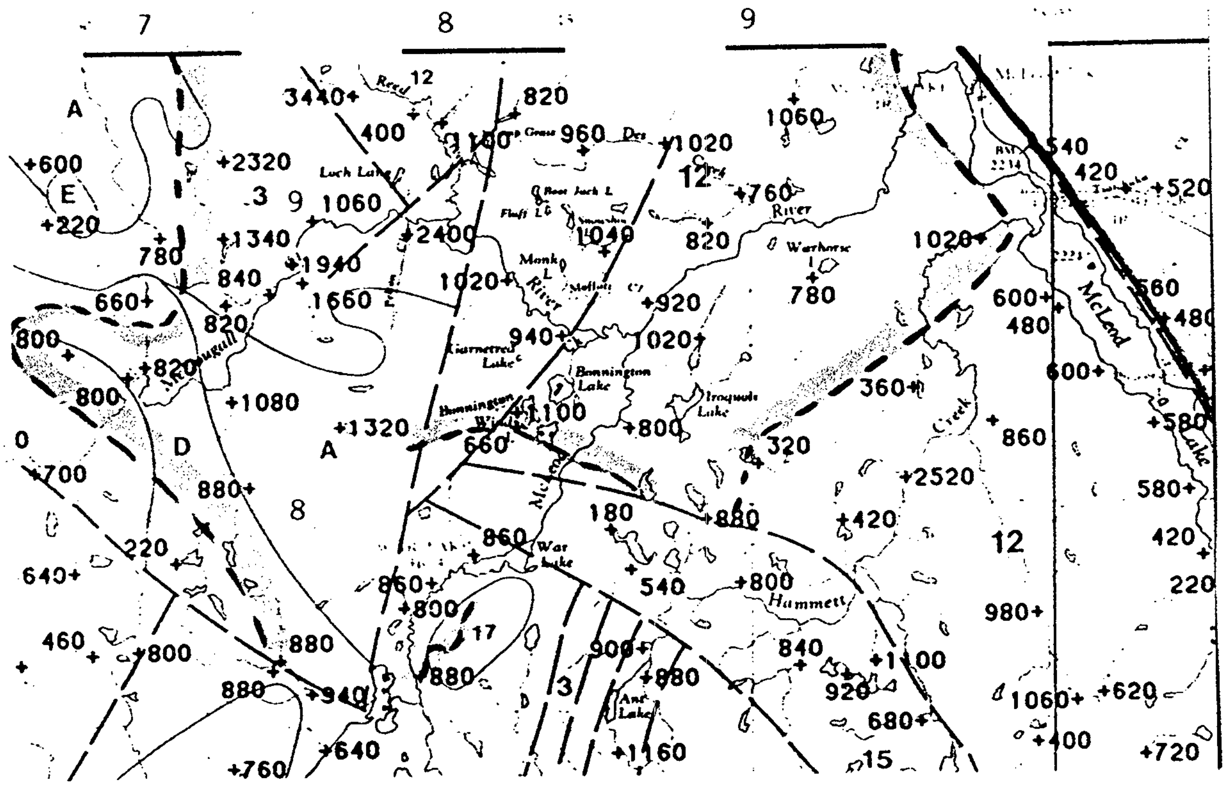


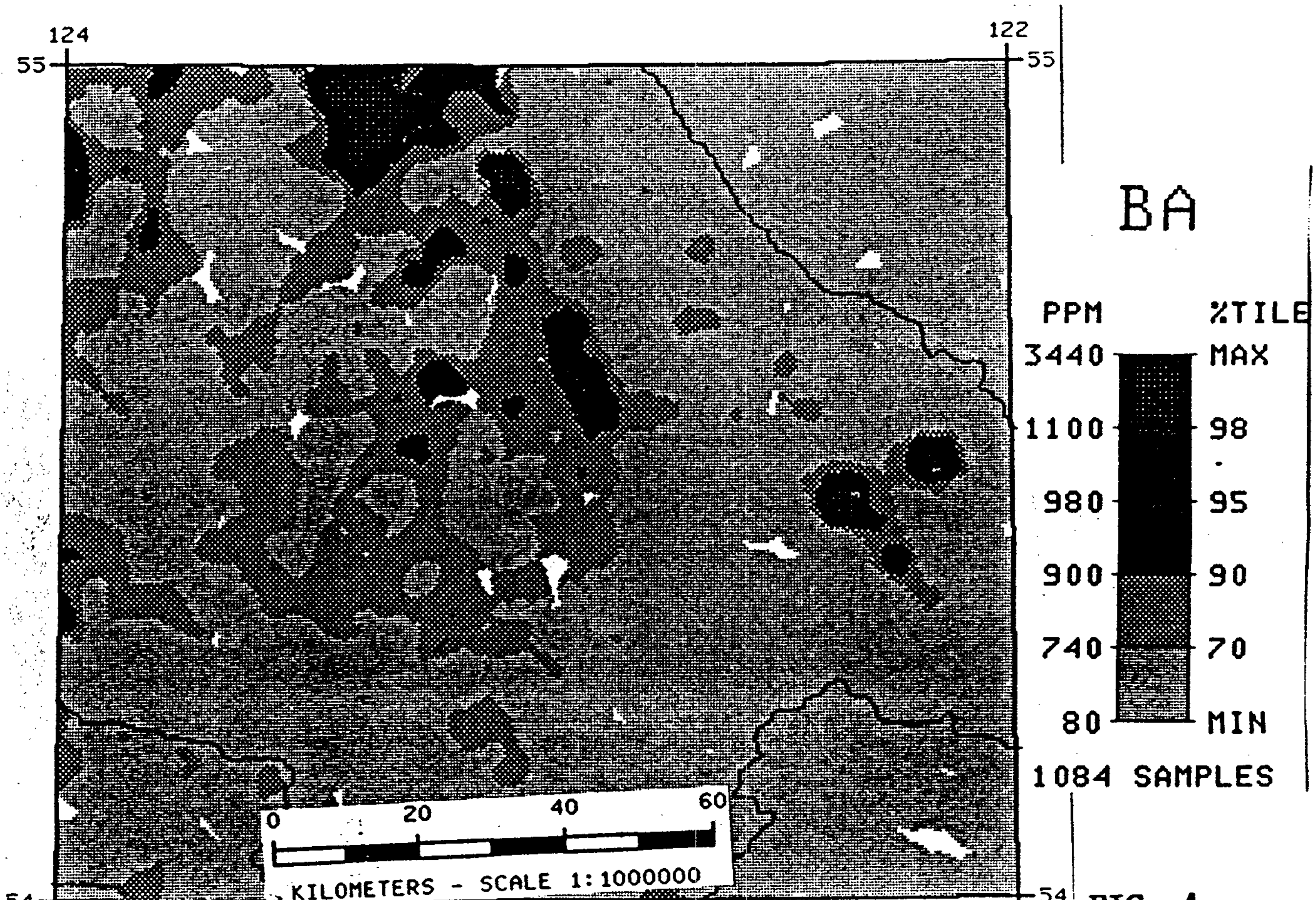
REGIONAL TREND MAP

FIG. 2

APPENDIX A

Stream Geochemical Dispersion



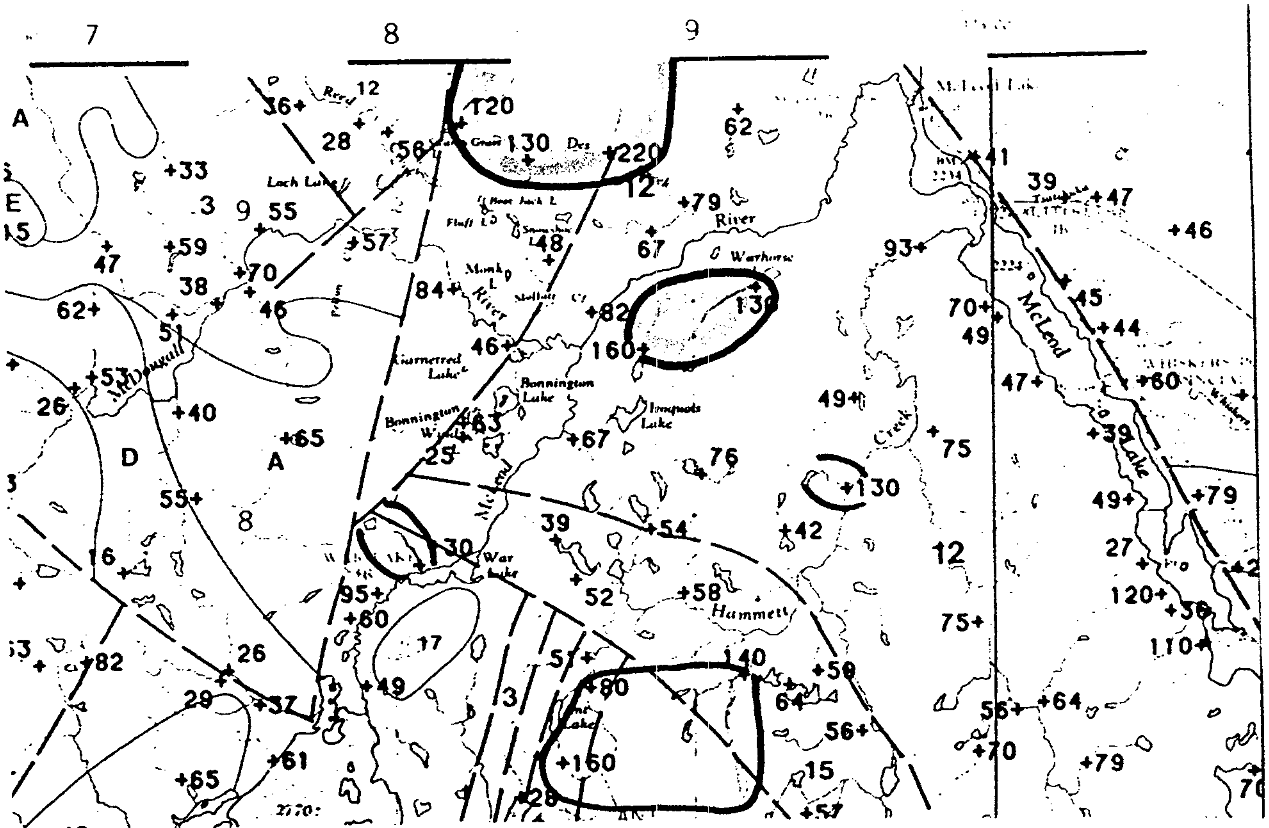


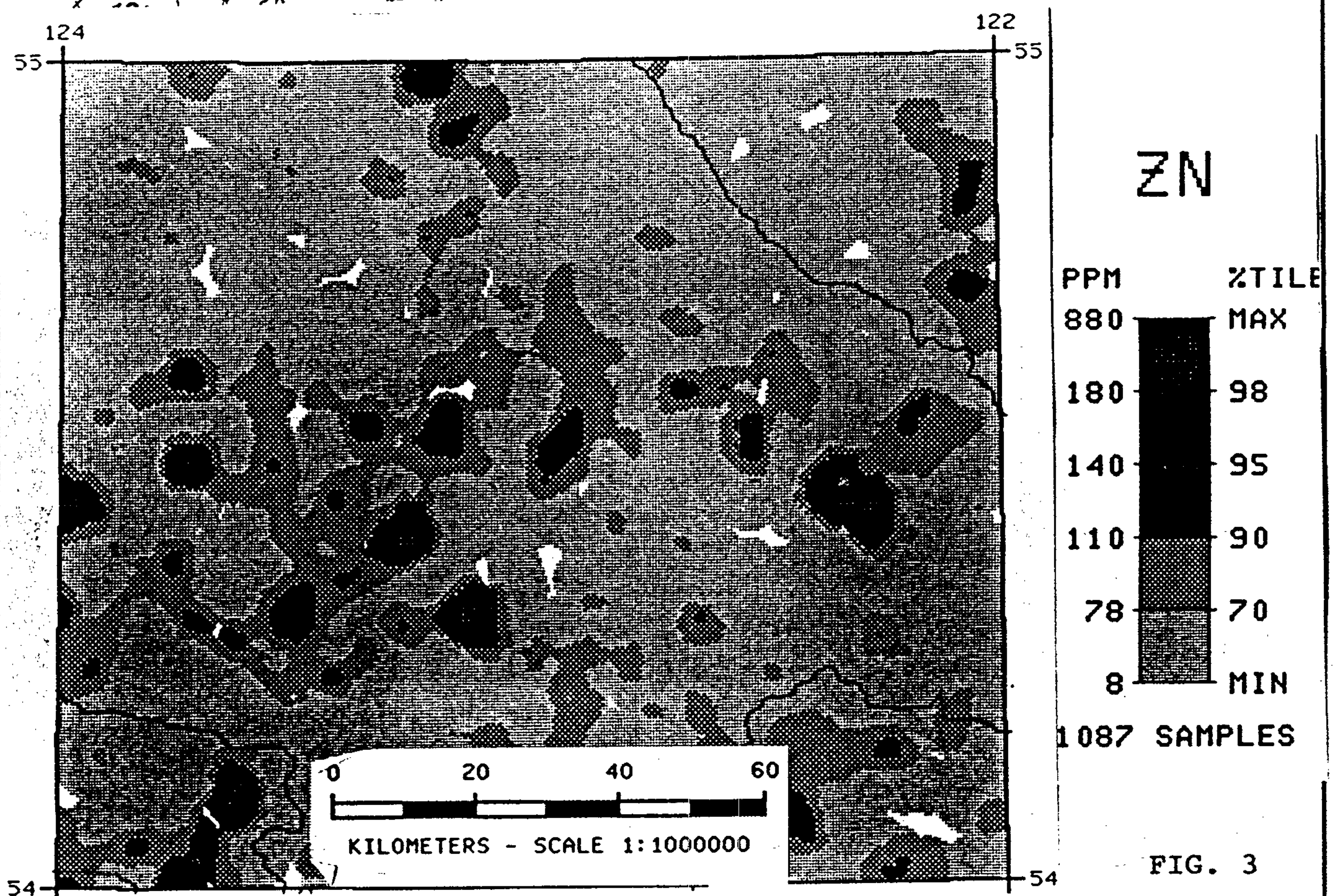
REGIONAL TREND MAP

FIG. 4

APPENDIX A

Stream Geochemical Dispersion



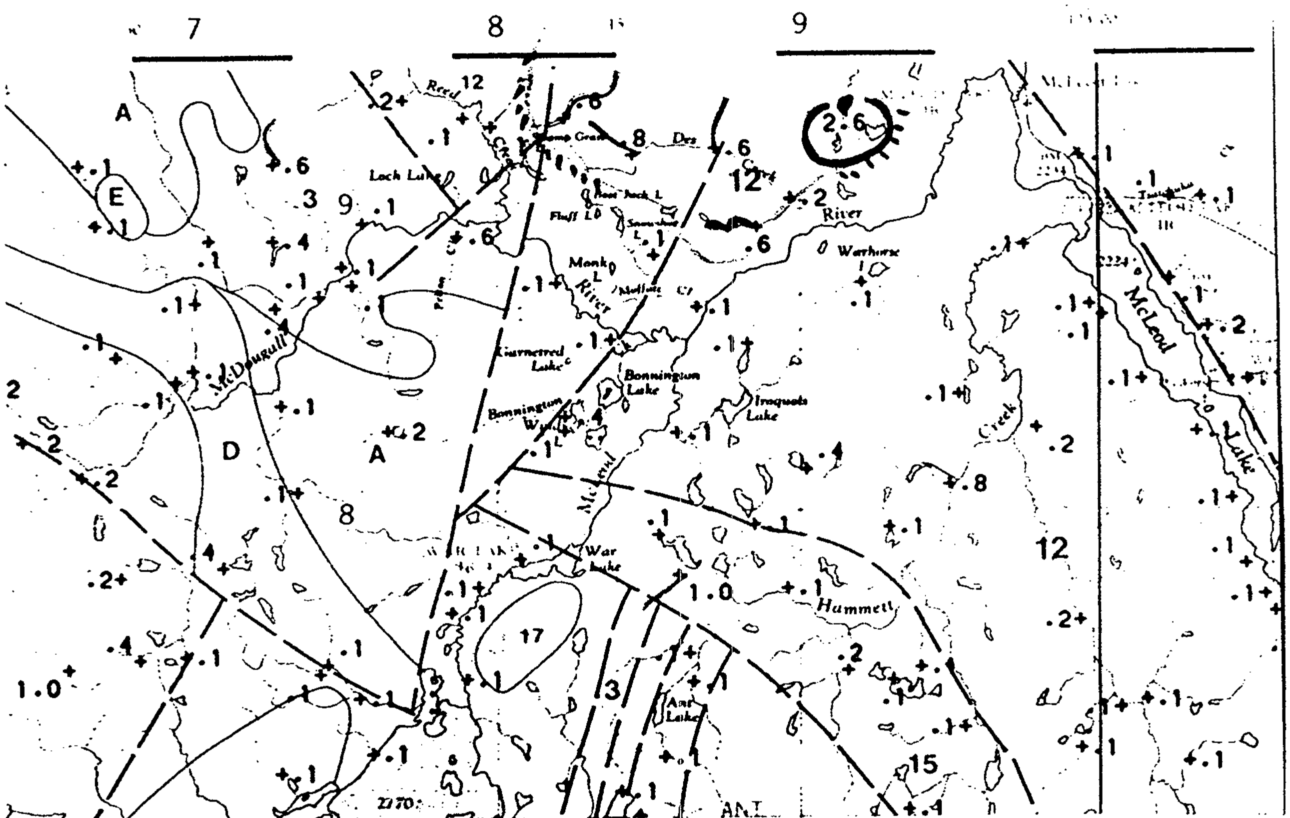


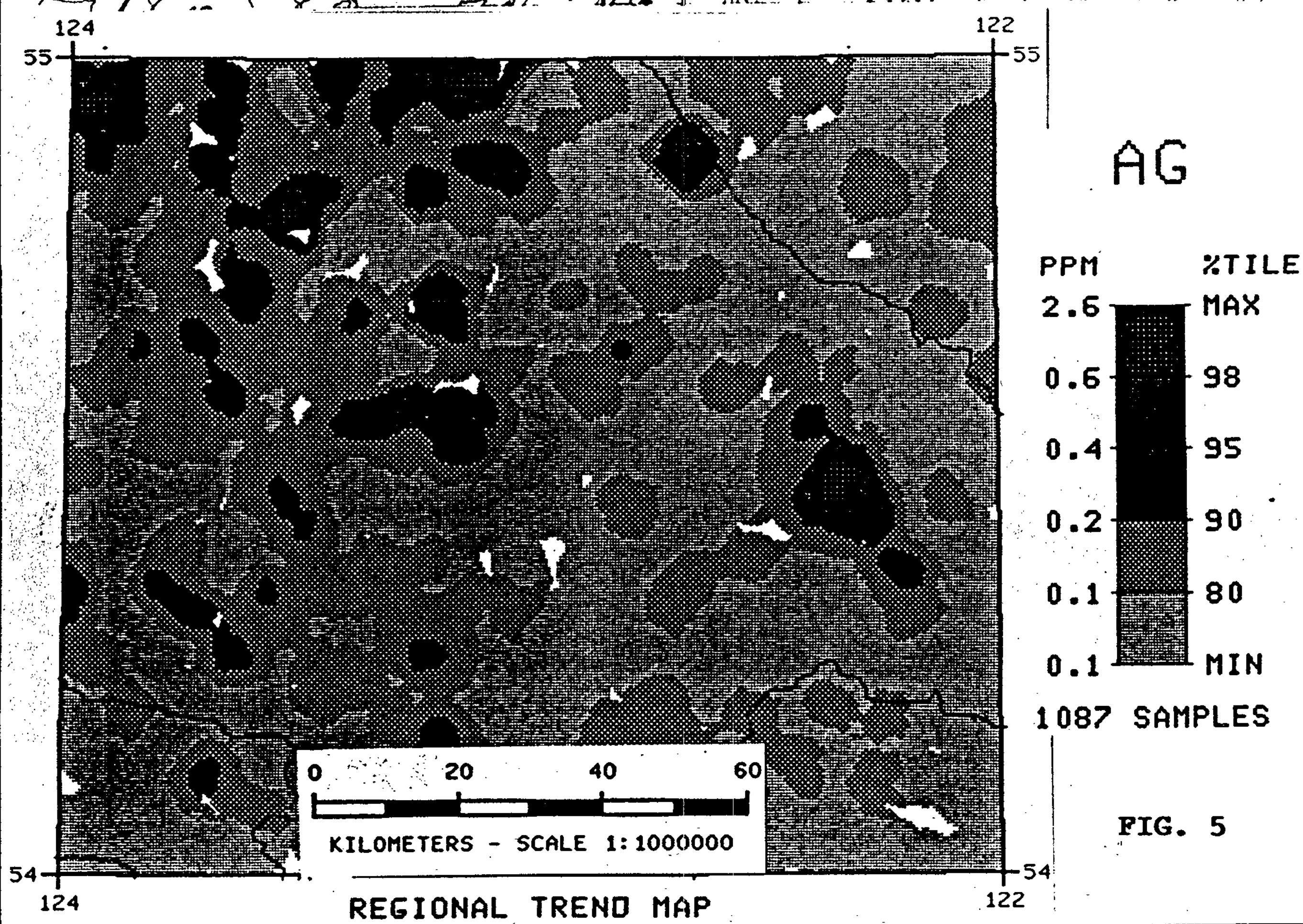
REGIONAL TREND MAP

FIG. 3

APPENDIX A

Stream Geochemical Dispersion



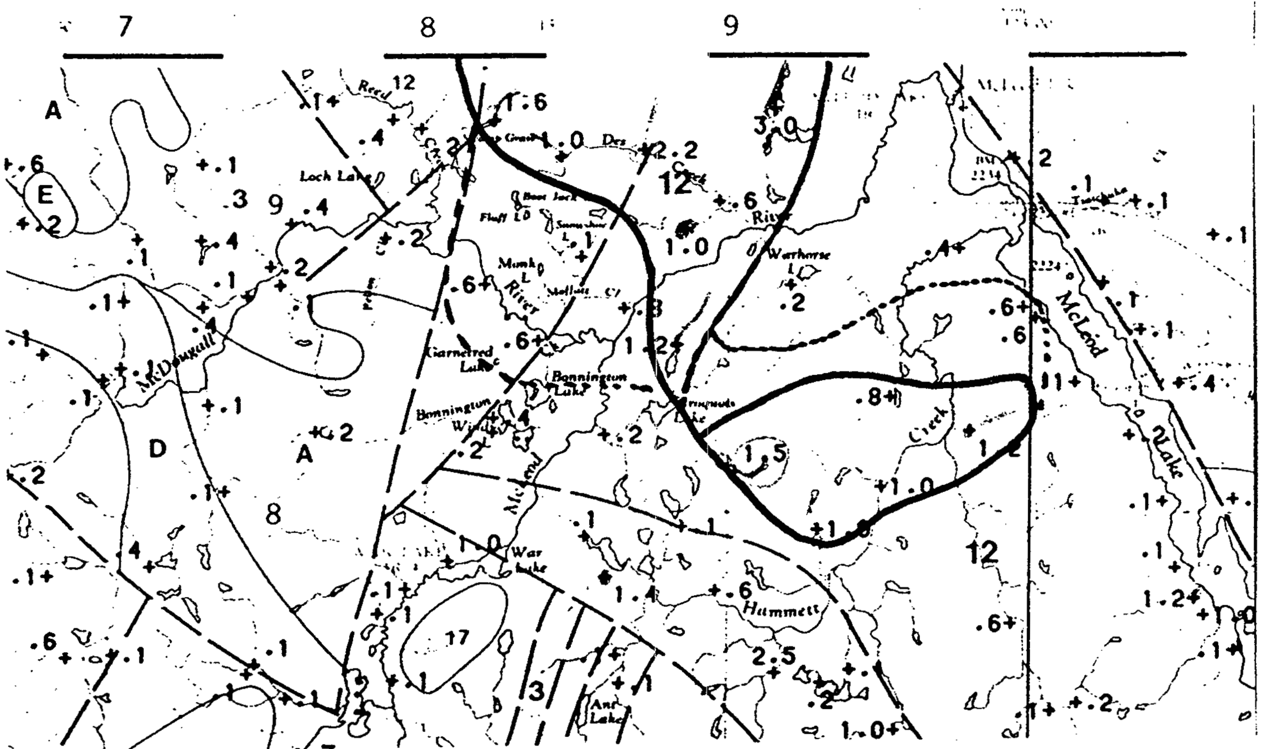


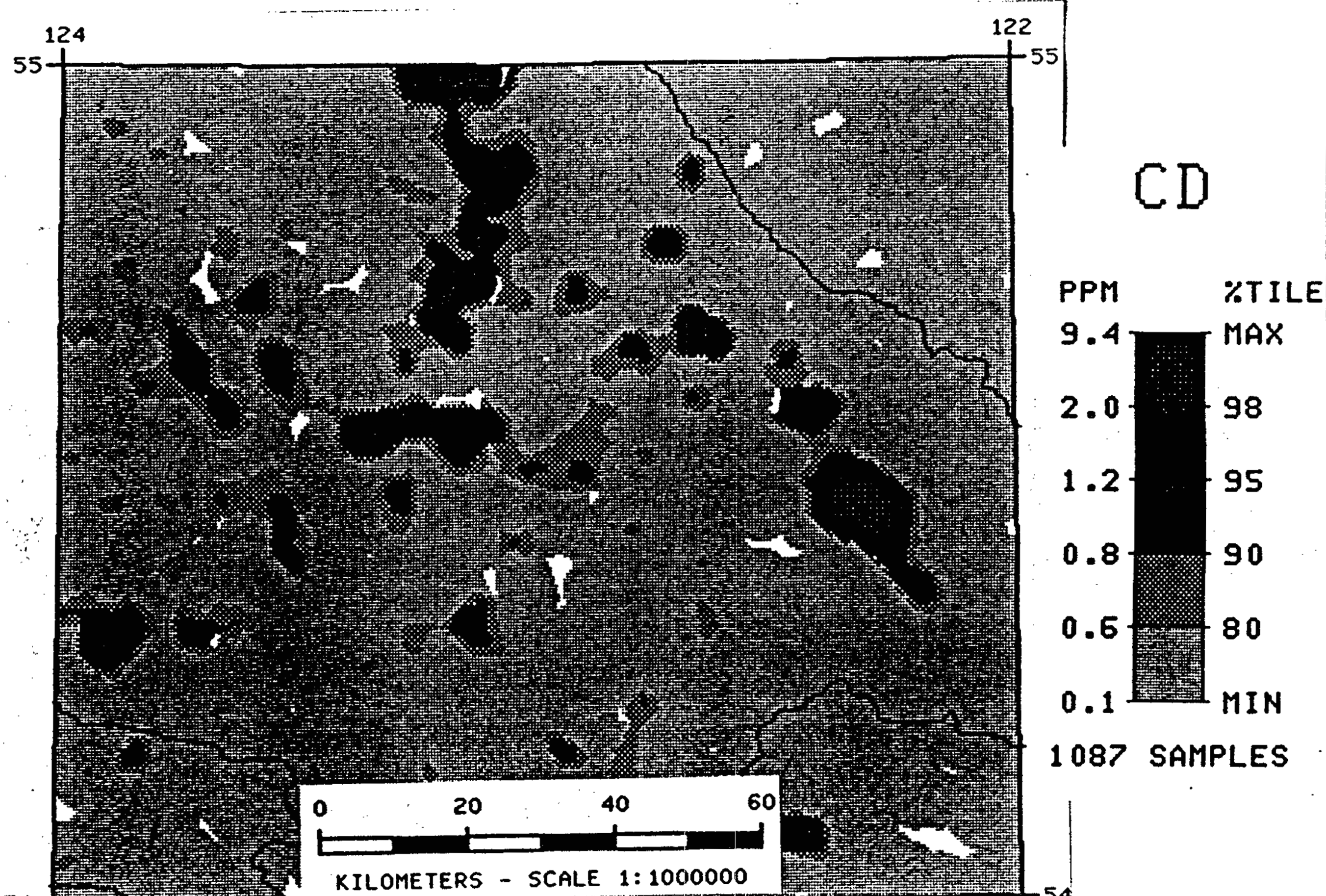
REGIONAL TREND MAP

FIG. 5

APPENDIX A

Stream Geochemical Dispersion



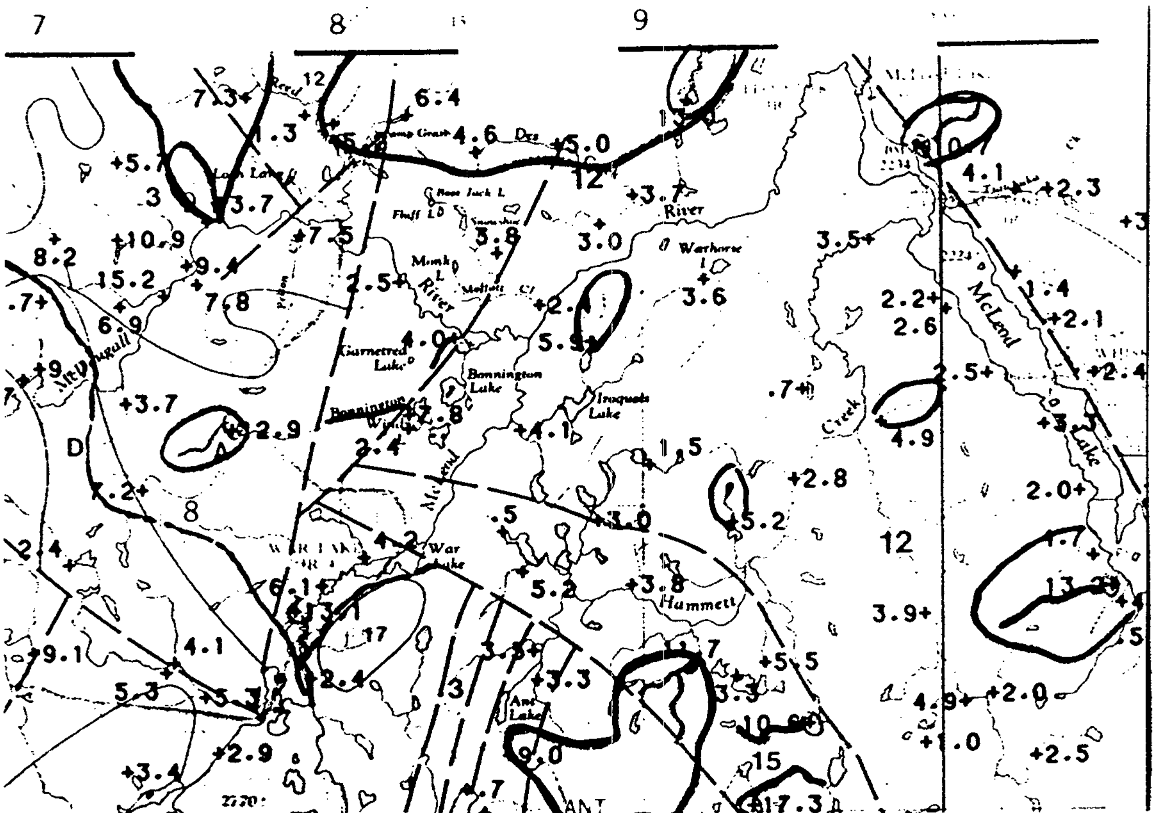


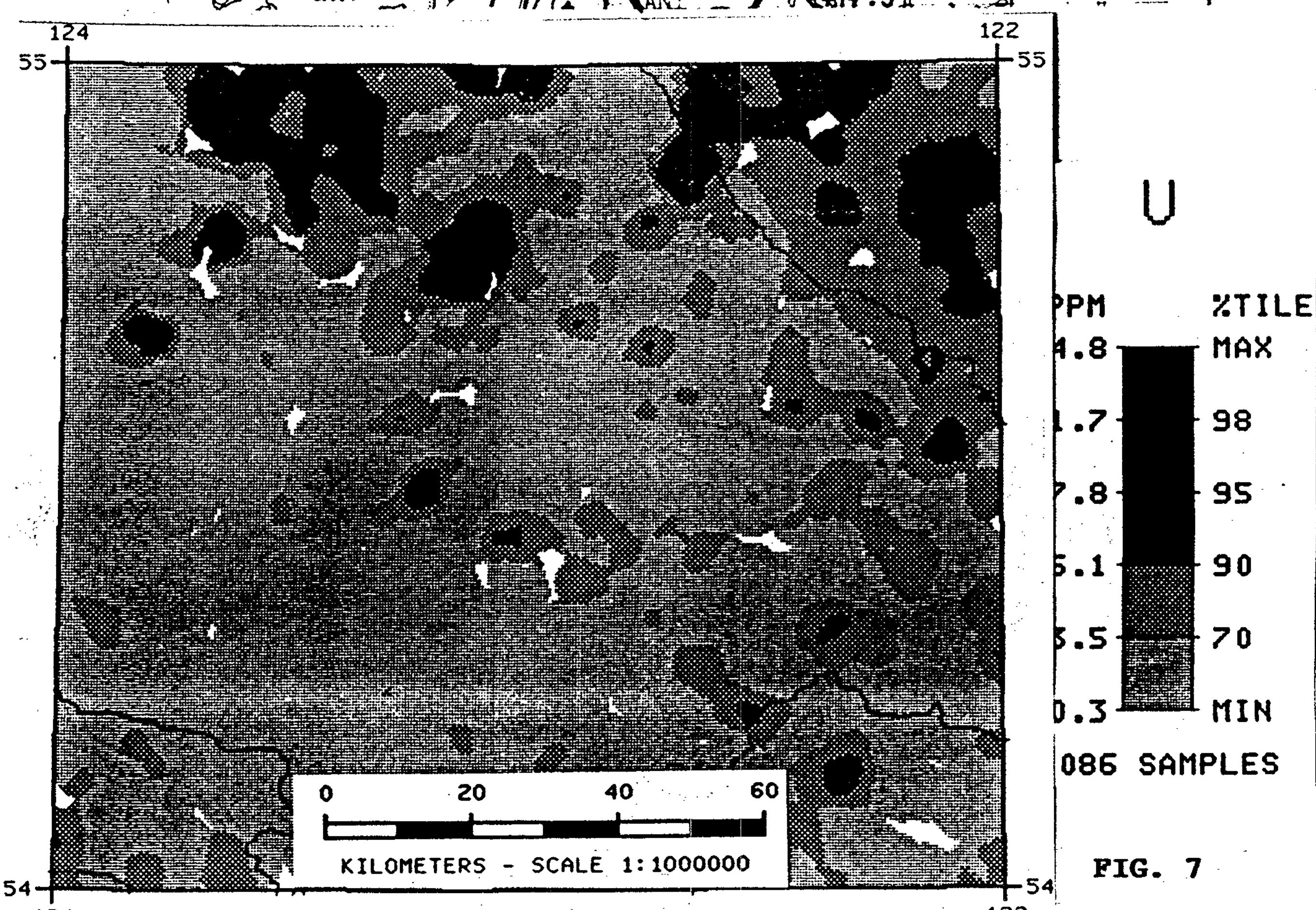
REGIONAL TREND MAP

FIG.6

APPENDIX A

Stream Geochemical Dispersion





REGIONAL TREND MAP

FIG. 7

MCLEOD PROJECT

N.T.S. 93J 14 E & W

Rock Description

Mc-1	Sol 1 & 2, 595 m west, pyroxenite-gabbro outcrop
Mc-2	Altered pyroxenite,sulphides
Mc-3	Altered,sheared pyroxenite rich gabbro
Mc-4	Fault breccia within altered pyroxenite
Mc-5	Andesite/sediment contact
Mc-6	Fine grained sediment with pyrite
Mc-7	Sol #2, 440N, stump, angular pyroxenite with minor sulphides: cpy, py on fractures
Mc-8	Sol #1, 4S-2W, black shale
Mc-9	Sol #1, 4S + 2.5 W, black shale: shistosity E.W. foliation S-E, dip 45-60°
Mc-10	Sol #2, 4 north, quartz vein within black shale with multidirectional fracturing
Mc-10B	Quartz vein,15cm with minor sulphides
Mc-11	Centre of discovery pit, Sol 1 & 2, 595 W + 15S, sheared, altered pyroxenite

Mc-12	Altered fractured pyrx with 5% sulphides
Mc-13	Weathered & altered white pyrx with cpy, py, pry
Mc-14	Second pit next to main discovery pit, white altered pyroxenite with sulphides
Mc-15	Hydrothermally altered & sheared pyrx with secondary iron on fractures
Mc-16	West bank discovery gulch , 3rd pit: pyrx
Mc-17	Altered pyrx in fault contact with iron filled shear
Mc-18	Shear zone and iron-rich fault gauge
Mc-19	Sol 1, 5 west 4 south, hillside,fine grained fractured andesite with sulphides,strike 120° dip 45-60° to S-W
Mc-20	Sol #1, 3S 5W, fine grained sheared andesitic sediment with needle pine sulphides
Mc-21	Sol #1, 2S 5W, light green altered gabbro with pyrx
Mc-22	Sol #1, 1S 5W, Mcleod river south bank, diorite intrusion
Mc-23	Hornblende - diorite cliff with sulphides
Mc-24	Fractured hornblendite with minor sulphides
Mc-25	Brecciated fractured hornblendite with minor sulphides
Mc-26	Andesite/ volcanic suite
Mc-27	Silicified, fine grained volcanic/andesites

Mc-28	Fractured silcified andesites
Mc-29	Contact zone between volcanics and pyroxenite dyke
Mc-30	Brecciated dike with calcite and pyroxenite cut by 1 cm calcite veins
Mc-31	Microbreccia within sheared andesitic volcanics and pyroxene-rich rocks.
Mc-32	Iron-rich, sheared, altered pyroxene-rich gabbro
Mc-33	Shear zone within pyroxenite & filled with secondary iron
Mc-34	Sheared contact breccia zone filled with iron
Mc-35	Altered pyroxenite-rich rocks
Mc-36	Hydrothermaly altered pyroxenite
Mc-37	Brecciated & sheared volcanics
Mc-37B	Altered and sheared pyroxenite
Mc-38	Hornblende pyroxenite rich intrusive
Mc-39	Altered pyroxenite in contact with shales and volcanics
Mc-40	Sheared, altered pyroxene rich rocks with calcite veins
Mc-41	Sheared and altered pyroxenite
Mc-42	Iron rich shear zone within calcite rich intrusive
Mc-43	Sheared diorite with calcite veining

Mc-44	Sol 2, 1N, fractured andesite with minor py & pry
Mc-46	Sheared fault zone, above discovery pits within volcanic andesite flows
Mc-47	Black and green andesite in contact with pyroxenite
Mc-48	Sheared silicified microbreccia with black shale fragments

quanta trace laboratories inc.
#401-3700 Gilmore Way, Burnaby, B.C., Canada V5G 4M1 Tel:(604)438-5226

ANALYSIS OF GEOLOGICAL SAMPLES

To: Plasway National Research Ltd.
Box 82116
North Burnaby, B.C.
V5C 5P2

Workorder: 5960
Received : 07-Nov-86
Completed: 19-Nov-86

Attn: Mr.B.Tylor

Sample type		Rock	Rock	Rock	Rock	Rock
Identification		MC 10A	MC 10	MC 34	MC 11	MC 18
Lab Reference #		5960-001	5960-002	5960-003	5960-004	5960-005
Analyzed by Plasma Emission Spectroscopy (ICAP)						
Method used		aqua regia soluble	aqua regia soluble	aqua regia soluble	aqua regia soluble	aqua regia soluble
Amount analysed		2.00 g	2.00 g	2.01 g	2.01 g	2.00 g
Trace Elements						
Arsenic	As	< 30	< 30	40	50	60
Boron	B	< 1.0	< 1.0	3.	10.	25.
Beryllium	Be	< 0.10	0.2	< 0.10	< 0.10	< 0.10
Bismuth	Bi	< 20	< 20	< 20	< 20	20
Cadmium	Cd	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Cobalt	Co	2.	2.	115.	121.	374.
Chromium	Cr	168.	181.	568.	405.	404.
Copper	Cu	8.	6.	1950	1980	3310
Mercury	Hg	< 10.	< 10.	< 10.	< 10.	< 10.
Molybdenum	Mo	12.	8.	< 3.	< 3.	< 3.
Nickel	Ni	15.	14.	819.	1360	3150
Lead	Pb	15.	16.	< 5.	< 5.	< 5.
Antimony	Sb	< 10.	< 10.	10	10	20
Selenium	Se	< 10.	< 10.	< 10.	< 10.	< 10.
Thorium	Th	< 5.	< 5.	< 5.	< 5.	< 5.
Uranium	U	< 30	< 30	< 30	< 30	< 30
Vanadium	V	5.1	2.5	73.0	84.6	80.5
Zinc	Zn	8.	5.	28.	35.	34.
Major Elements						
Aluminum	Al	630	320	7630	8010	7110
Barium	Ba	13.	9.	18.	72.	41.
Calcium	Ca	5500	2400	7700	10500	8200
Iron	Fe	8800	7600	64100	67600	110000
Potassium	K	< 500	< 500	< 500	900	< 500
Lithium	Li	< 100	< 100	< 100	< 100	< 100
Magnesium	Mg	[illegible]	700	16100	29600	30200
Manganese	Mn	327.	344.	186.	451.	453.
Sodium	Na	< 100	< 100	500	1500	1000
Phosphorus	P	< 200	< 200	< 200	300	< 200
Silicon	Si	350	240	1160	1010	850
Strontium	Sr	26.	14.	11.	28.	17.
Titanium	Ti	53.	< 5.	1230	1200	1180
Zirconium	Zr	< 10.	< 10.	< 10.	< 10.	< 10.
Results in		ppm	ppm	ppm	ppm	ppm

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quanta trace laboratories inc.
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To: Plasway National Research Ltd. W/O: 5960 Page 2

Sample type		Rock	Rock	Rock	Rock	Rock
Identification		MC 15	MC 32	MC 12	MC 14	MC 7
Lab Reference #		5960-006	5960-007	5960-008	5960-009	5960-010
Analyzed by Plasma Emission Spectroscopy (ICAP)						
Method used		aqua regia soluble	aqua regia soluble	aqua regia soluble	aqua regia soluble	aqua regia soluble
Amount analysed		2.01 g	2.01 g	2.01 g	2.00 g	2.01 g
Trace Elements						
Arsenic	As	60	60	50	40	40
Boron	B	16.	6.	16.	10.	12.
Beryllium	Be	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Bismuth	Bi	< 20	20	< 20	< 20	< 20
Cadmium	Cd	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Cobalt	Co	242.	51.	126.	151.	63.
Chromium	Cr	478	494	479	376	382.
Copper	Cu	2290	1430	1960	2660	868
Mercury	Hg	< 10.	< 10.	< 10.	< 10.	< 10.
Molybdenum	Mo	< 3.	4.	< 3.	< 3.	< 3.
Nickel	Ni	1890	865.	1290	1280	958.
Lead	Pb	< 5.	6.	6.	< 5.	< 5.
Antimony	Sb	10	20	20	20	10
Selenium	Se	< 10.	< 10.	< 10.	< 10.	< 10.
Thorium	Th	< 5.	< 5.	< 5.	< 5.	< 5.
Uranium	U	< 30	< 30	< 30	< 30	< 30
Vanadium	V	85.6	103.	83.5	93.2	91.9
Zinc	Zn	35.	32.	38.	32.	41.
Major Elements						
Aluminum	Al	7700	8780	6660	9140	9490
Barium	Ba	55.	41.	22.	55.	87.
Calcium	Ca	7600	14200	7100	13300	9500
Iron	Fe	107000	73600	63500	65800	46900
Potassium	K	500	600	< 500	1000	1100
Lithium	Li	< 100	< 100	< 100	< 100	< 100
Magnesium	Mg	21100	24200	39300	30700	44500
Manganese	Mn	312.	300.	464.	412.	521.
Sodium	Na	1000	1200	1000	1900	1600
Phosphorus	P	200	200	< 200	200	300
Silicon	Si	1250	1300	910	640	820
Strontium	Sr	19.	23.	16.	32.	38.
Titanium	Ti	1220	1360	966.	1360	1620
Zirconium	Zr	< 10.	< 10.	< 10.	< 10.	< 10.
Results in		ppm	ppm	ppm	ppm	ppm
Precious Metals by Fire Assay						
Silver	Ag	-	-	-	-	-
Gold	Au	-	0.22	0.02	0.02	0.01
Palladium	Pd	-	0.10	0.05	0.03	0.21
Platinum	Pt	-	0.12	0.05	0.05	0.11
Rhodium	Rh	-	< 0.03	< 0.03	< 0.03	< 0.03
Results in			ppm	ppm	ppm	ppm

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To: Plasway National Research Ltd. W/O: 5960 Page 3

Sample type		Rock	Rock	Rock	Rock	Rock
Identification		MC 33	MC 33	MC 25	MC 9	MC 17
Lab Reference #		5960-011	5960-012	5960-013	5960-014	5960-015
Analyzed by Plasma Emission Spectroscopy (ICAP)						
Method used		aqua regia soluble	aqua regia soluble	aqua regia soluble	aqua regia soluble	aqua regia soluble
Amount analysed		2.00 g	2.01 g	2.02 g	2.01 g	2.01 g
Trace Elements						
Arsenic	As	40	30	< 30	< 30	30
Boron	B	7.	3.	3.	2.	9.
Beryllium	Be	< 0.10	0.4	0.3	0.4	< 0.10
Bismuth	Bi	20	< 20	< 20	< 20	< 20
Cadmium	Cd	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Cobalt	Co	15.	8.	8.	7.	83.
Chromium	Cr	419.	28.4	29.4	21.6	408.
Copper	Cu	1480	94.	103.	48.	1650
Mercury	Hg	< 10.	< 10.	< 10.	< 10.	< 10.
Molybdenum	Mo	< 3.	< 3.	< 3.	17.	< 3.
Nickel	Ni	216	13.	10.	31.	840.
Lead	Pb	< 5.	5.	< 5.	33.	< 5.
Antimony	Sb	10	< 10.	< 10.	< 10.	< 10.
Selenium	Se	< 10.	< 10.	< 10.	< 10.	< 10.
Thorium	Th	< 5.	< 5.	< 5.	< 5.	< 5.
Uranium	U	< 30	< 30	< 30	< 30	< 30
Vanadium	V	99.9	144.	127.	10.7	79.7
Zinc	Zn	18.	54.	81.	132.	27.
Major Elements						
Aluminum	Al	7020	20600	21400	2490	10800
Barium	Ba	32.	54.	54.	50.	55.
Calcium	Ca	8800	21100	21800	1200	11800
Iron	Fe	110000	43400	45700	41300	89700
Potassium	K	500	1100	1200	1000	< 500
Lithium	Li	< 100	< 100	< 100	< 100	< 100
Magnesium	Mg	12300	10400	11300	[illegible]300	28500
Manganese	Mn	171.	849.	844.	229.	293.
Sodium	Na	700	1000	1000	200	700
Phosphorus	P	< 200	1600	1900	600	< 200
Silicon	Si	1010	870	1270	390	1550
Strontium	Sr	14.	107.	73.	10.	17.
Titanium	Ti	1700	3070	3160	12.	1540
Zirconium	Zr	< 10.	< 10.	< 10.	< 10.	< 10.
Results in		ppm	ppm	ppm	ppm	ppm
Precious Metals by Fire Assay						
Silver	Ag	–	–	–	–	–
Gold	Au	0.07	–	–	–	–
Palladium	Pd	0.18	–	–	–	–
Platinum	Pt	0.14	–	–	–	–
Rhodium	Rh	< 0.03	–	–	–	–
Results in		ppm				

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To: Plasway National Research Ltd. W/O: 5960 Page 4

Samole tyoe		Rock	Rock
Identification		MC 23	MC 386
Lab Reference #		5960-016	5960-017
Analyzed by Plasma Emission Soectroscooy (ICAP)			
Method used		aoua regia soluble	aoua regia soluble
Amount analysed		2.01 g	2.00 g
Trace Elements			
Arsenic	As	50	< 30
Boron	B	5.	5.
Beryllium	Be	0.4	0.4
Bismuth	Bi	< 20	< 20
Cadmium	Cd	< 0.5	< 0.5
Cobalt	Co	18.	31.
Chromium	Cr	49.4	298.
Cooper	Cu	85.	79.
Mercury	Hg	< 10.	< 10.
Molybdenum	Mo	< 3.	< 3.
Nickel	Ni	17.	208.
Lead	Pb	5.	< 5.
Antimony	Sb	< 10.	< 10.
Selenium	Se	< 10.	< 10.
Thorium	Th	< 5.	< 5.
Uranium	U	< 30	< 30
Vanadium	V	180.	207.
Zinc	Zn	64.	64.
Major Elements			
Aluminum	Al	21900	22500
Barium	Ba	86.	66.
Calcium	Ca	28900	115000
Iron	Fe	51300	54100
Potassium	K	1500	700
Lithium	Li	< 100	< 100
Magnesium	Mg	15900	16300
Manganese	Mn	809.	1110
Sodium	Na	1900	< 100
Phosohorus	P	1300	600
Silicon	Si	620	750
Strontium	Sr	102.	232.
Titanium	Ti	4070	50.
Zirconium	Zr	< 10.	< 10.
Results in		oom	oom

Remarks: The samoles were fire assayed on 0.5 AT because they were difficult to fuse (Mafic Rocks). The orecious metal results should be rechecked using larger samoles before serious economic decisions are made on these samoles. Some of the other samoles showing cooper and nickel should also be assayed for orecious metals. The total titanium, magnesium, nickel and chromium are orobably higher than the acid soluble values shown.

Assayer: [signature]

REGIONAL STREAM SEDIMENT AND WATER GEOCHEMICAL DATA, BRITISH COLUMBIA 1985, GSC-OF 1216, NGR 81-1985, NTS 93J

STREAM SEDIMENT

MAP	ID	UTM COORDINATS EAST	NORTH	ROCK TYPE	AGE	RP ST	ZN	CU	PB	NI	CO	AG	MN	AS	MO	FE	HG	LOI	U	F	V	CD	W	SN	SB	BA
93J14	851835	486009	6078032	ANDS	33	00	52	62	3	28	6	1.0	445	1.2	3	1.00	258	63.6	5.2	100	30	1.4	1	.5	.3	540
93J11	851836	476195	6059559	GRNG	50	00	58	18	2	33	8	.4	355	2.4	2	1.80	108	7.80	3.4	200	43	.1	1	.5	.3	840
93J11	851837	473382	6061123	GRNG	50	10	56	6	1	18	5	.1	290	10.4	2	1.50	48	11.4	1.1	120	30	.1	1	.5	.2	580
93J11	851838	473382	6061123	GRNG	50	20	61	7	1	18	5	.1	370	8.0	1	1.40	35	15.6	1.6	110	30	.1	1	2.0	.2	780
93J13	851839	458837	6086719	GRNG	50	00	31	7	3	10	3	.1	150	.8	1	1.30	39	10.0	12.4	270	25	.1	3	3.0	.1	760
93J13	851840	467366	6085305	GRNG	50	00	49	16	10	17	11	.1	565	3.2	1	2.20	32	9.00	5.3	220	40	.1	2	2.0	.2	800
93J14	851842	469400	6084500	QZMZ	36	00	26	7	3	9	5	.1	270	1.2	1	.95	18	1.60	5.7	220	20	.1	1	2.0	.1	800
93J14	851843	469979	6084853	QZMZ	36	00	53	13	6	15	12	.1	1090	2.8	1	1.90	35	6.20	9.1	300	40	.1	3	2.0	.1	820
93J14	851844	472889	6083657	GRNG	50	00	40	11	3	13	8	.1	445	2.0	2	1.50	18	2.40	3.7	260	35	.1	1	.5	.2	1080
93J14	851845	470533	6089061	MSDM	11	00	47	13	6	17	9	.1	435	2.0	2	2.00	28	4.60	8.2	270	40	.1	1	1.0	.2	780
93J14	851846	472711	6086825	MSDM	11	00	51	15	4	18	12	.4	935	3.2	2	1.90	35	11.0	6.9	230	35	.4	1	1.0	.2	820
93J14	851847	472639	6089015	MSDM	11	00	59	17	7	22	13	.4	720	2.4	2	2.40	49	10.4	10.9	300	40	.4	1	2.0	.2	1340
93J14	851848	483779	6085676	BSLT	21	00	46	24	3	18	7	.1	460	4.8	2	1.80	46	10.0	4.0	180	45	.6	1	1.0	.6	940
93J14	851850	486610	6086722	BSLT	21	00	82	61	3	41	15	.1	2450	12.8	3	3.80	70	11.8	2.4	200	68	.8	1	1.0	1.8	920
93J14	851851	488620	6089298	BSLT	21	00	67	88	3	68	6	.6	135	1.6	3	1.30	105	28.0	3.0	230	45	1.0	1	.5	.9	820
93J14	851852	489726	6090230	BSLT	21	10	79	34	10	35	11	.2	650	11.2	3	2.70	49	5.40	3.7	410	30	.6	1	.5	1.6	760
93J14	851853	489726	6090230	BSLT	21	20	79	34	9	33	10	.2	660	11.2	2	2.60	49	4.80	3.7	400	30	.8	1	.5	1.6	700
93J14	851854	491566	6093244	BSLT	21	00	62	56	6	62	12	2.6	540	1.6	1	1.40	245	27.6	13.0	320	38	3.0	3	.5	1.4	1060
93J14	851855	487236	6091888	BSLT	21	00	220	33	7	37	9	.6	560	25.6	6	2.20	28	5.20	5.0	580	23	2.2	1	.5	2.0	1020
93J14	851856	484527	6091680	BSLT	21	00	130	45	9	37	11	.8	375	22.4	4	2.50	63	7.00	4.6	360	38	1.0	1	1.0	2.0	960
93J14	851857	482322	6092907	BSLT	21	00	120	44	10	35	10	.6	750	2.4	3	2.00	105	31.4	6.4	240	40	1.6	1	2.0	.4	820
93J14	851858	479911	6092635	BSLT	21	00	56	17	5	18	8	.1	1000	2.8	3	1.70	42	7.80	5.2	110	35	.2	1	1.0	.2	1100
93J14	851859	478991	6092941	BSLT	21	00	28	9	1	4	4	.1	930	.5	2	1.00	175	87.2	1.3	40	5	.4	1	.5	.1	400
93J14	851860	477032	6093551	BSLT	21	00	36	14	3	13	4	.2	210	1.6	1	1.30	315	3.40	7.3	240	28	.1	3	1.0	.1	3440
93J14	851862	472689	6091497	MSDM	11	00	33	14	5	13	6	.6	155	.5	2	1.30	56	10.6	5.7	280	30	.1	1	.5	.1	2320
93J13	851863	466167	6091558	GRNG	50	00	96	22	10	26	18	.1	525	1.2	2	2.80	147	26.0	6.3	390	50	.6	1	.5	.1	600
93J13	851864	466722	6089584	MSDM	11	00	15	9	4	6	3	.1	35	.5	2	.25	77	65.4	1.9	50	5	.2	1	.5	.1	220
93J14	851865	470072	6087030	QZMZ	36	00	62	11	10	19	12	.1	260	.8	2	2.20	56	10.2	7.7	400	40	.1	1	1.0	.1	660
93J14	851866	474966	6088144	MSDM	11	00	70	19	8	22	20	.1	2350	3.7	3	2.90	70	9.40	9.4	330	50	.2	1	1.0	.2	1940
93J14	851867	475301	6087522	MSDM	11	00	46	15	4	15	11	.1	790	2.5	2	1.60	28	3.80	7.8	400	35	.1	3	1.0	.2	1660
93J14	851868	474196	6087173	MSDM	11	00	38	10	3	12	5	.1	300	1.7	1	1.40	14	2.80	15.2	360	28	.1	1	1.0	.1	840
93J14	851869	475654	6089547	MSDM	11	00	55	31	4	18	7	.1	205	.8	2	1.40	98	7.60	13.7	340	28	.4	1	1.0	.1	1060
93J14	851870	478749	6089069	MSDM	11	00	57	21	5	17	13	.6	825	2.5	2	1.90	63	10.2	7.5	360	40	.2	1	1.0	.1	2400
93J14	851871	482006	6087518	BSLT	21	00	84	57	2	41	15	.1	250	10.0	3	3.70	112	12.0	2.5	340	65	.6	1	.5	1.4	1020
93J14	851872	485199	6088411	BSLT	21	10	48	36	2	21	9	.1	265	1.7	1	1.90	74	6.40	3.8	270	50	.1	1	.5	.5	1040
93J14	851873	485199	6088411	BSLT	21	20	43	32	2	19	8	.1	245	2.5	1	1.90	98	4.40	2.9	260	45	.1	1	.5	.4	1020
93J14	851874	485333	6079340	ANDS	33	00	39	5	1	1	1	.1	100	.5	8	1.80	224	85.6	.5	80	5	.1	1	.5	.1	180
93J14	851876	488512	6079643	BSLT	21	00	54	27	2	18	6	.1	380	2.5	2	2.00	56	15.6	3.0	300	53	.1	1	.5	.4	880
93J14	851877	490241	6081432	BSLT	21	00	76	41	3	15	3	.4	5200	7.5	3	1.50	343	78.4	1.5	100	20	1.5	1	.5	.4	320

REGIONAL STREAM SEDIMENT AND WATER GEOCHEMICAL DATA, BRITISH COLUMBIA 1985, GSC-OF 1216, NGR 81-1985, NTS 93J

STREAM SEDIMENT

MAP	ID	UTM COORDINATS EAST	NORTH	ROCK TYPE	AGE	RP ST	ZN	CU	PB	NI	CO	AG	MN	AS	MO	FE	HG	LOI	U	F	V	CD	W	SN	SB	BA
93J09	851613	538942	6058995	TILL	44	00	48	10	5	20	8	.1	310	2.2	1	1.70	36	1.80	3.7	320	18	.1	1	.5	.2	520
93J14	851614	497640	6088664	BSLT	21	00	93	35	4	35	12	.1	730	10.8	2	2.60	120	5.20	3.5	340	45	.4	1	1.0	1.5	1020
93J15	851615	500186	6086390	BSLT	21	00	49	39	3	36	9	.1	625	4.1	1	2.00	60	9.60	2.6	170	38	.6	1	.5	.5	480
93J14	851616	499774	6086733	BSLT	21	00	70	60	2	80	20	.1	790	4.5	2	3.20	108	13.0	2.2	180	80	.6	1	1.0	.9	600
93J14	851617	492112	6087461	BSLT	21	00	130	45	6	29	13	.1	660	9.0	2	2.80	138	5.00	3.6	240	65	.2	1	.5	1.2	780
93J14	851618	488333	6085508	BSLT	21	00	160	95	6	54	22	.1	1100	13.5	15	4.50	264	11.4	5.9	640	63	1.2	1	1.0	5.1	1020

A PROPOSAL

PLATINUM GROUP METALS IN CANADA

EXPLORATION AND PROPERTY ACQUISITION

"The low level of western stockpiles, their critical importance to our defense, petroleum and agricultural industries, the geographic and political imbalance between producers and consumers, and the fact that for most industrial applications they cannot be readily substituted, give platinum and palladium the advantage of being the only precious metals which are strategic as well. I have to conclude that the case for investing in these two strategic metals is overwhelming."

Peter Cavelti
Gold Silver Strategic Metals
(Maximus Press Ltd., Toronto)

February, 1984

John H. Hajek
Frank J. L. Guardia

PLATINUM-GROUP METALS

8. Events, Trends, and Issues: In 1981, world production of platinum-group metals was about 6.8 million troy ounces, essentially unchanged from that of 1980. The Republic of South Africa and the U.S.S.R. accounted for 94% of the world total.

Sales of platinum-group metals to U.S. industries dropped 9% in 1981 to about 2.0 million ounces. Catalysts in automobile exhaust converters was again the largest single end use. It is estimated that in 1982 domestic mine production of platinum will be 6 thousand ounces and U.S. apparent consumption will be 2.4 million ounces. From a 1978 base, demand in the U.S. is expected to increase at an annual rate of about 1.5% through 1990.

Imports, which account for essentially all of the annual U.S. requirement for primary platinum-group metals, dropped 14%, to about 3.0 million ounces. The Republic of South Africa was the most important source, followed by the United Kingdom (which has no mine production, but is an important processor of concentrates imported from the Republic of South Africa and Canada), and the U.S.S.R.

Dealers' prices for platinum and palladium, as reported in Metals Week, declined sharply in 1981. Both metals were at their highest price levels in the first week of January (platinum $565 per ounce and palladium $142 per ounce). Starting in February, the platinum dealers' price ranged between $400 per ounce and $500 per ounce for most of the year. In March, the platinum dealers' price briefly increased to $538 per ounce, and in August, briefly decreased to $398 per ounce. The palladium dealers' price declined below $100 per ounce in June. By October, both the platinum and palladium dealers' price were well below the producers' prices. The platinum producers' price remained at $475 per ounce through the year, but the palladium producers' price decreased from $200 per ounce to $140 per ounce on February 20, and then decreased again to $110 per ounce on May 28.

Exploration and evaluation of the platinum-group metal resources in the Stillwater Complex, Montana, currently the only U.S. deposit where significant production of these metals is possible, continued. Although U.S. deposits may be developed, it is unlikely that domestic production could satisfy domestic demand. Environmental factors concerning present domestic production are those associated with copper production.

9. World Mine Production and Reserve Base:

	Mine Production 1980	Mine Production 1981 e/	Reserve Base*
United States	3	6	16,000
Canada	405	350	9,000
South Africa, Republic of	3,100	3,100	970,000
Other Market Economy Countries	72	74	NA
U.S.S.R.	3,250	3,250	200,000
World Total	6,830	6,780	1,195,000

10. World Resources: World resources of the platinum-group metals are estimated to be about 3.2 billion troy ounces, 2.7 times the estimated reserves, and more than 20 times the forecast demand for primary metal in the period 1981-2000. Total U.S. resources are estimated at about 300 million troy ounces, most of which occur in Montana and Minnesota.

11. Substitutes and Alternates: Potential substitutes are gold, silver, and tungsten in electrical and electronic uses; gold in dental uses; metals, such as the rare-earth elements, nickel, vanadium, and titanium, and molecular sieves, in catalytic uses. New and/or improved engines and fuels, and electric automobiles, could reduce the use of platinum-group metals in emission control catalysts in automobiles.

* Pending establishment of criteria for the reserve base, classification of data is based on a judgmental appraisal of current knowledge and assumptions

Zelon Chemicals Ltd.

Exploration Services

JOHN H. HAJEK – MINING EXPLORATION EXPERIENCE

I have been with the mining industry since 1965 with the aim to find and classify patterns leading to the discovery of commercial deposits.

My experience varies from Research Chemist (1961 – 1968) to Exploration Joint Venture Manager and Geochemist (1969 – 1983).

Most of my research efforts were oriented toward the formation of a bridge between the sampling techniques and the practical interpretation of data. My field of endeavour includes development of organic sampling such as in lake ooze, stream differenciation, size fraction interpretation, metal distributions, bedrock tracing of hydomorphic anomalies etc...

Over the years, I found vegetation sampling to have merits as in many instances it fills a gap between the surfacial expression and bedrock.

I conducted my research for my previous employers in conjunction with various institutions.

1968	Canex – Placer, Vancouver, B.C.
1969 – 1972	Rio-Tinto; Vancouver, Toronto, Denver
1973 – 1983	Zelon Group; Vancouver, Salt Lake City, Calgary

I am thankful and feel privileged for having been assisted by Dr. H. V. Warren of U.B.C. for ongoing collaboration. Also my thanks go to Dr. R. E. Delavault. Also, at the U.S.G.S. Centre in Denver, Colorado, Drs. R. Erickson, F. N. Ward, and H. W. Lakin introduced me to the "Basin and Range Province" and helped me formulate new concepts about mineral exploration in arid terrain.

Since 1973, I have applied my tools and concepts to the Western Cordillera as a self-employed explorationist.

JOHN H. HAJEK - WORK EXPERIENCE

PERSONAL DETAILS

Born January 18, 1941. Canadian Citizen, married with three children, excellent health - 4440 Regency Place, West Vancouver, B.C. Canada V7N 1B9 / Tel. 604 926-1401

EDUCATION

B.Sc. - University of Paris, France (1962)
Industrial Chemist (1964)

EXPERIENCE

18 years in Mining and Exploration, including 10 years as a self-employed geochemist and manager for Zelon & Valor Group of Companies.
Previous to my involvement in mining exploration, I have been a Teaching Assistant in physics and chemistry. (1961-64)
Industrial Technologist for three years. (1958-61)

EMPLOYMENT

1973 - 83 Manager for The Zelon Group of Companies. The business consists of exploration and mining consulting services with two offices, a laboratory; duties include:

- Field crews training and supervision.
- Organisation of the financial structure of the company.
- Research development applied to gold and uranium exploration.
- Management of a three years joint venture with Mobil Energy Calgary, Alberta.