

9/86

ASSESSMENT REPORT
GEOCHEMICAL SURVEY
NIE #8 CLAIM

Atlin Mining Division
Tatsamenie Lake Area, B.C.
N.T.S. 104K/Tulsequah Sheet

58°28'N
132°18'W

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,983

OWNER: CHEVRON MINERALS LTD.

OPERATOR: CHEVRON CANADA RESOURCES LIMITED

Author: Godfrey Walton

October 1985

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LOCATION AND ACCESS (Fig. 1)

The NIE #8 claim is located at 58°28'N and 132°18'N approximately 152 kilometers southeast of Atlin, B.C. Access to the property was by helicopter from a base camp at Bearskin Lake, 20 kilometers south.

CLAIMS

The NIE #8 claim was staked in September, 1981 (Figure 2).

<u>Claim</u>	<u>Record Number</u>	<u>Record Date</u>	<u>Number of Units</u>
NIE #8	1292	September 18, 1981	20

The property is owned by Chevron Minerals Ltd. with Chevron Canada Resources Limited acting as the operator. The claim covers previously unstaked ground.

REGIONAL GEOLOGY

The NIE #8 claim is underlain by Lower or Middle Triassic(?) diorite that intrudes Pre-Upper Triassic greenstone and phyllite (Souther, 1971). To the north Late Cretaceous to Early Tertiary biotite-hornblende quartz monzonite (Souther, 1971) is exposed. Five kilometers both to the east and west of the claim is a diorite gneiss and amphibolite unit of unknown age. To the south the Pre-Upper Triassic greenstones outcrop.

GEOLOGICAL SURVEY

In conjunction with the rock samples taken on the property, some geological mapping was done. The purpose of the exploration was to evaluate the high grade samples obtained in 1984 and determine the potential for the claim.

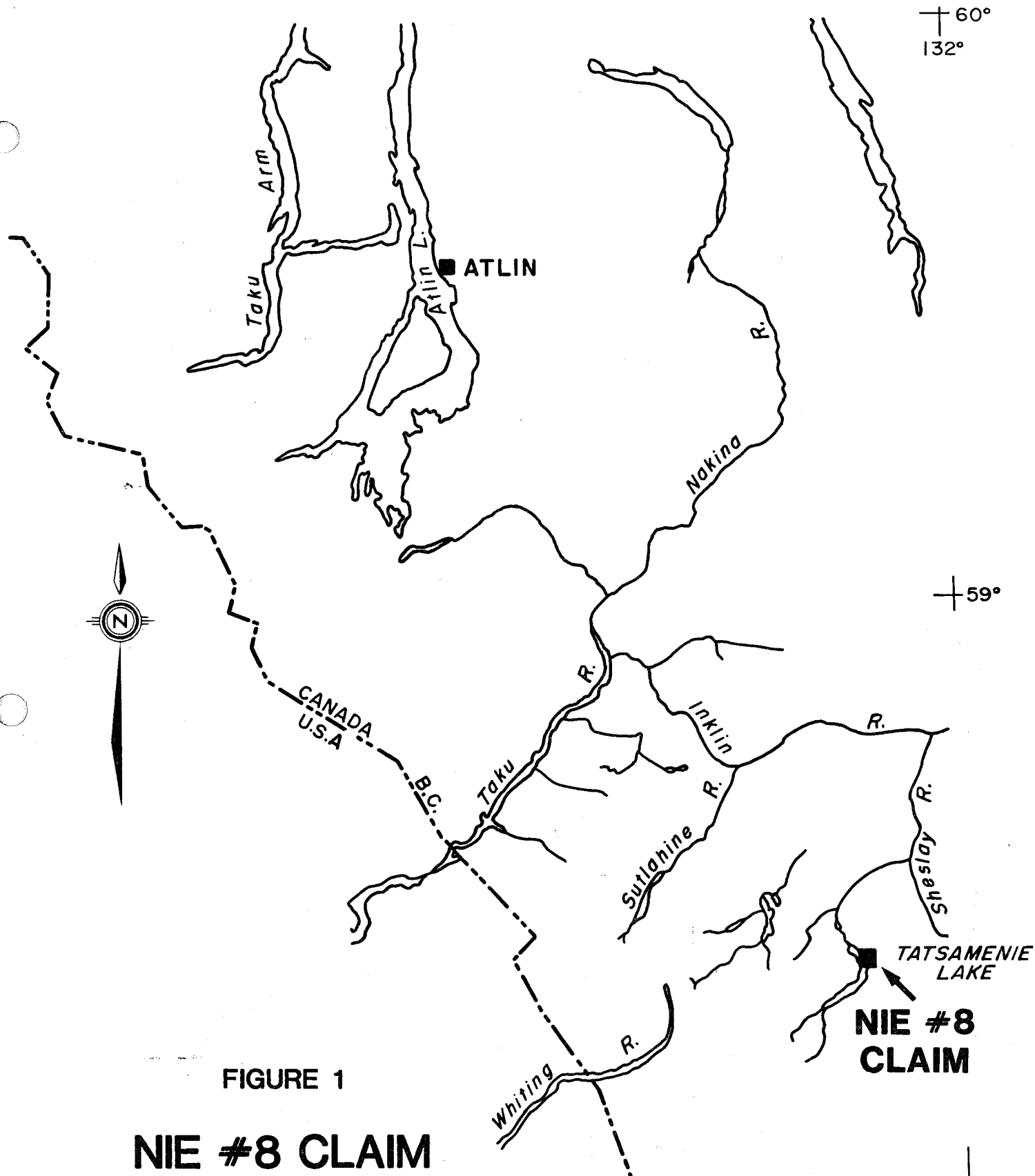


FIGURE 1

NIE #8 CLAIM

LOCATION MAP

M523



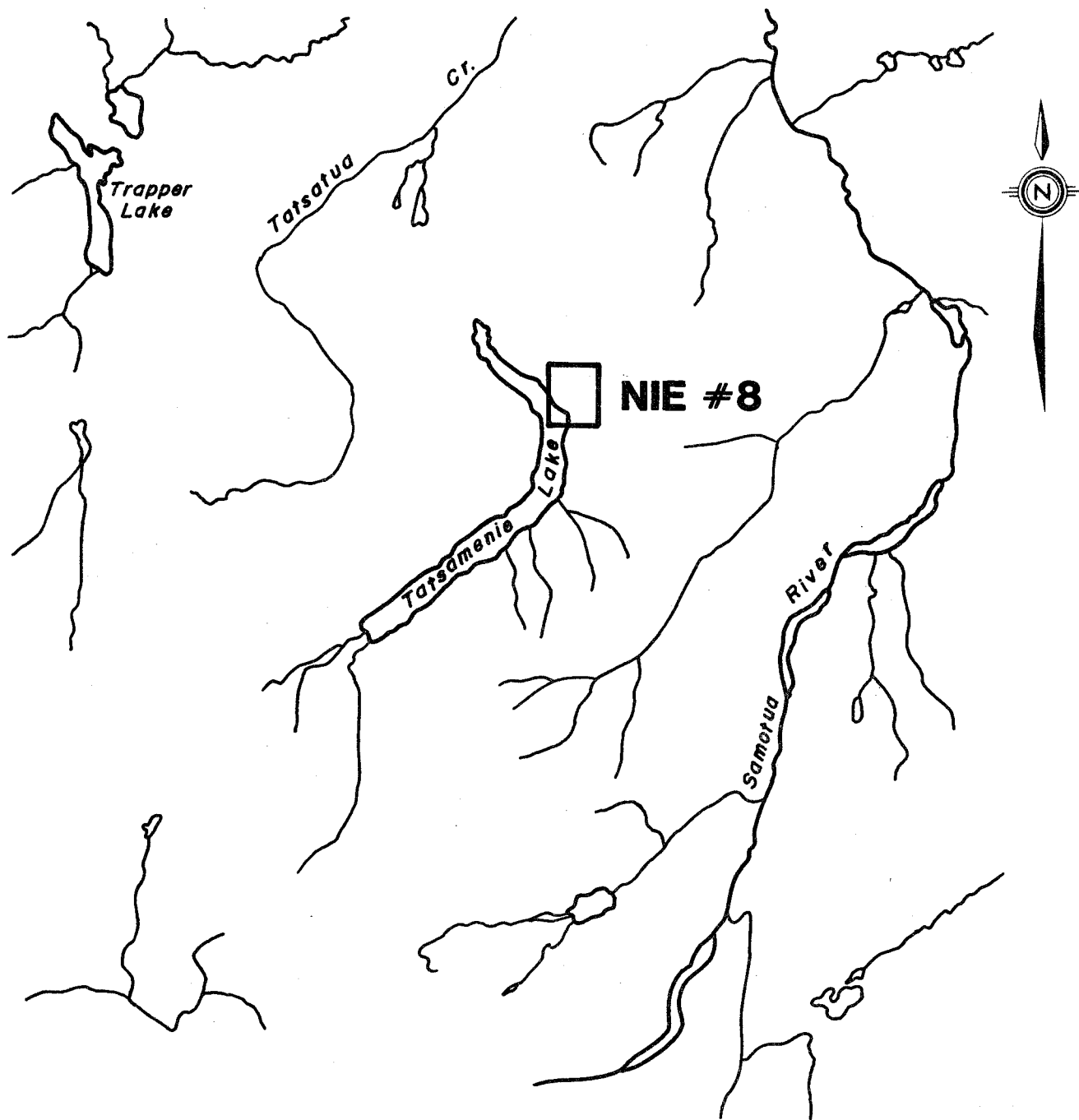


FIGURE 2

NIE #8 CLAIM MAP



M523

There is very little rock exposure on the claims since most of the claim is covered by fir and spruce forest. Two creeks dissect this forest and provide some rock exposure above the alluvial fans.

The claim is underlain by outcrops of a Triassic diorite. It varies from a weakly foliated medium grained diorite to a strongly foliated diorite. Locally the rock has a gneissic texture. Field staining the rocks for potassium feldspar indicates there is only plagioclase present confirming the dioritic composition of the rock.

Geological mapping on adjacent claims to the south suggests a major fault hosting gold mineralization trending north-south cuts across the property at the edge of the outcrop exposure. It is interesting to note that it is in this vicinity that the mineralization occurs. This structure has been traced for fifteen kilometers.

MINERALIZATION AND ALTERATION

As outlined in the previous paragraphs, some significant gold mineralization was located on the NIE #8 claim. This mineralization is associated with sulphide veins which have pyrite, chalcopyrite and quartz as their major components.

The veins are typically 10 - 20 centimeters wide and most can be traced for a couple of meters before they go beneath overburden. The gold values vary but are consistently over 1000 ppb Au. The best value is up to 0.4 oz/ton.

This area is within 4 kilometers of a porphyry copper deposit evaluated in the sixties and currently still covered by claims. The type of alteration is quite reminiscent of

porphyry style mineralization because of the large areas of argillic and silicic alteration. There is no documentation of the presence of gold in the Icy lake porphyry copper but in the sixties gold was not as keenly explored for as it is today.

GEOCHEMICAL SURVEY OF CLAIMS

Nine rock samples were collected along the creeks around and across veins located during geological mapping. The best sample had a value up to 0.4 oz/ton over 10 - 20 centimeters. A sample taken adjacent to the vein over a meter width did not have any anomalous values of gold present.

The rock samples were packed in the field in heavy duty plastic bags. These were crushed and pulverized to -100 mesh in a field preparatory laboratory at Bearskin Lake. These pulps were then shipped to Chemex laboratory in North Vancouver to be analyzed for gold, silver, arsenic and antimony. The actual procedure utilized is outlined in Appendix A.

Background values are typically <5 ppb gold, <1 ppm silver, 50 ppm arsenic and 5 ppm antimony. The veins are typically 1000 ppb gold or greater, as indicated in the samples taken in 1984 and 1985.

CONCLUSIONS AND RECOMMENDATIONS

There are a number of sulphide-quartz veins carrying gold values up to 0.4 oz/ton. They are prevalent around a large structure that strikes northerly and hosts gold mineralization to the south. The presence of a porphyry copper deposit to the east may warrant some evaluation with respect to gold content. The NIE #8 mineralization could be associated with this porphyry copper because the alteration found on the claim is largely argillic and silicic. This alteration is typically found near porphyry copper style deposits.

Further work in the form of evaluation of the surrounding ground could be very useful. At present no further work is recommended on the property.

REFERENCES

Souther, J. G. (1971). Geology and mineral deposits of Tulsequah map-area, British Columbia. Geological Survey of Canada, Memoir 362, 84p.

Thicke, M. (1983). Assessment report. Geochemical Soil Survey, NIE #8, Atlin Mining Division, 6p.

Brown, D.; Shannon, K. (1982). Assessment report. Geological and Geochemical Survey, NIE #8 claim, Atlin Mining Division, 9 p.

NIE #8 CLAIM
STATEMENT OF COSTS

Personnel

	<u>Field Days</u>	<u>Office Days</u>	
W. Hewgill	3		
T. Zanger	3		
G. Walton	-	<u>2</u>	
	6	2	
Field - 6 man days @\$110/man day			\$ 660.00
Office - 2 man days @\$250/man day			500.00

Geochemical Analysis: - Au, Ag, As, Sb

Rocks: 9 samples @\$15.50/sample 139.50

Camp Costs

6 man days @\$50/man/day 300.00

Helicopter

3.7 hrs x \$430/hr. 1,591.00

Drafting

1 man days @\$150.00/man day 150.00

Total \$ 3,340.50

STATEMENT OF QUALIFICATIONS

I, Godfrey Walton, have worked as a geologist since 1973 in Alberta, British Columbia, Yukon, Northwest Territories and Ontario. I graduated in 1974 with a B.Sc. (Hons) degree from the University of Alberta and was awarded a M.Sc degree from Queens University in January 1978. I have been employed by Chevron on a permanent basis since 1976.

I am a member in good standing with the Canadian Institute of Mining and Metallurgy, the Society of Exploration Geochemists and the Mineralogical Association of Canada.

The work done on the NIE #8 was done by me and under my supervision.

GODFREY WALTON

APPENDIX A

GEOCHEMICAL PREPARATION AND ANALYTICAL PROCEDURES

1. Geochemical samples (soils, silts) are dried at 50°C for a period of 12 to 24 hours. The dried sample is sieved to -80 mesh fraction through a nylon and stainless steel sieve. Rock geochemical materials are crushed, dried and pulverized to -100 mesh.
2. A 1.00 gram portion of the sample is weighted into a calibrated test tube. The sample is digested using hot 70% HClO₄ and concentrated HNO₃. Digestion time = 2 hours.
3. Sample volume is adjusted to 25 mls. using demineralized water. Sample solutions are homogenized and allowed to settle before being analyzed by atomic absorption procedures.
4. Detection limits using Techtron A.A.5 atomic absorption unit.

Copper	-	1 ppm
Molybdenum	-	1 ppm
Zinc	-	1 ppm
*Silver	-	0.2 ppm
*Lead	-	1 ppm
*Nickel	-	1 ppm
Chromium	-	5 ppm

*Ag, Pb & Ni are corrected for background absorption.

5. Elements present in concentrations below the detection limits are reported as one half the detection limit, i.e. Ag - 0.1 ppm.

PPM Antimony:

A 2.0 gm sample digested with conc. HCl in hot water bath. The iron is reduced to Fe⁺² state and the Sb complexed with I⁻. The complex is extracted with TOPO-MIBK and analyzed via A.A. Correcting for background absorption 0.2 ppm ± 0.2.

Detection limit: 0.2 ppm

PPM Arsenic:

A 1.0 gram sample is digested with a mixture of perchloric and nitric acid to strong fumes of perchloric acid. The digested solution is diluted to volume and mixed. An aliquot of the digest is acidified, reduced with KI and mixed. A portion of the reduced solution is converted to arsine with NaBH₄ and the arsenic content determined using flameless atomic absorption.

Detection limit: 1 ppm

PPM Tungsten:

0.50 gm sample is fused with potassium bisulfate and leached with hydrochloric acid. The reduced form of tungsten is complexed with toluene 3,4 dithiol and extracted into an organic phase. The resulting colour is visually compared to similarly prepared standards.

Detection limit: 2 ppm W

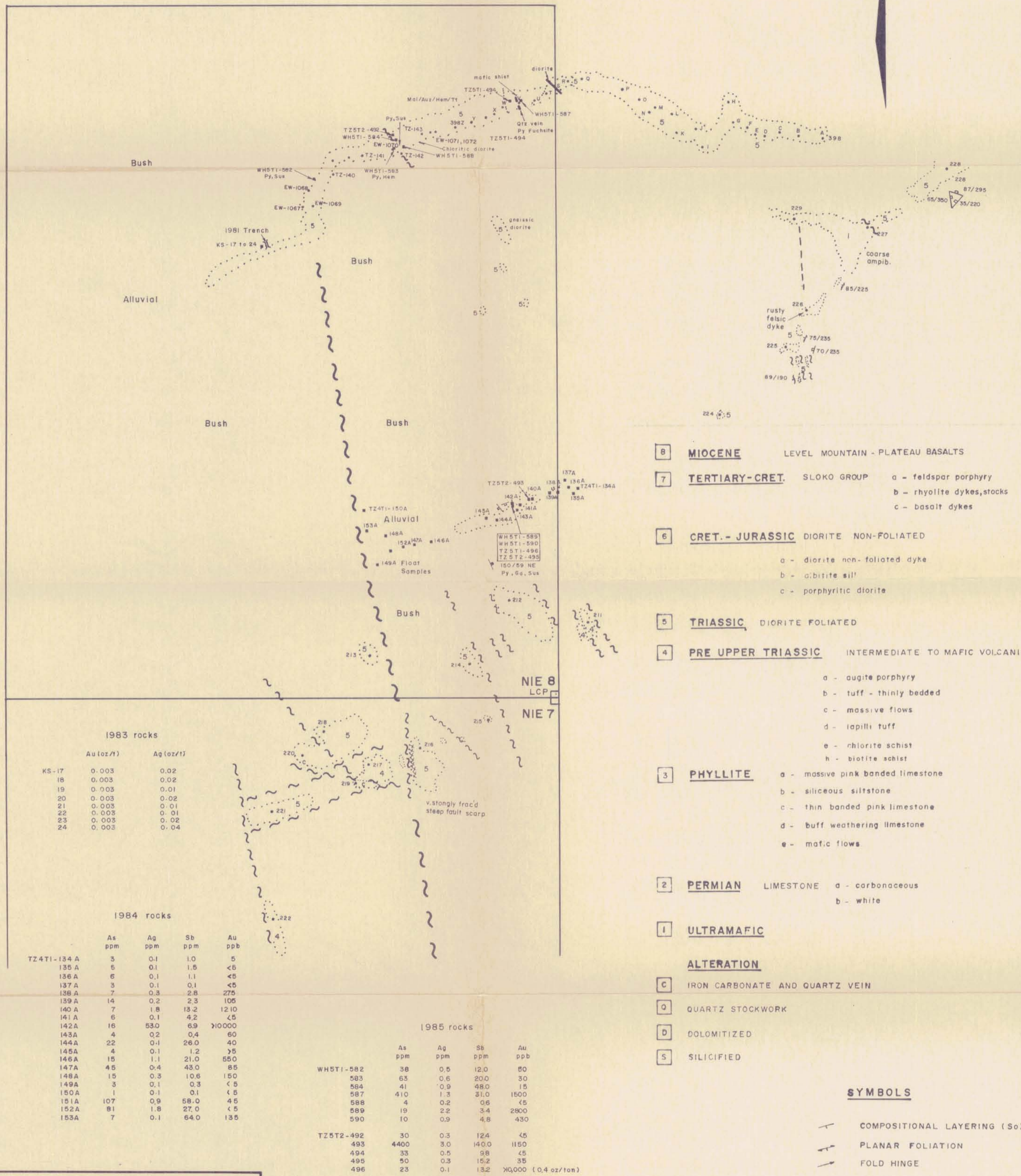
FIRE ASSAY METHOD - Silver & Gold

Silver and gold analyses are done by standard fire assay techniques. In the sample preparation stage the screens are checked for metallics which, if present, are assayed separately and calculated into the results obtained from the pulp assay.

0.5 assay ton sub samples are fused in litharge, carbonate and siliceous fluxes. The lead button containing the precious metals is cupelled in a muffle furnace. The combined Ag & Au is weighed on a microbalance, parted, annealed and again weighed as Au. The difference in the two weighings is Ag.

F.A. - A.A. GOLD COMBO METHOD

For low grade samples and geochemical materials 10 gram samples are fused with the addition of 10 mg of Au-free Ag metal and cupelled. The silver bead is parted with dilute HNO₃ and then treated with aqua regia. The salts are dissolved in dilute HCl and analyzed for Au on an atomic absorption spectrophotometer to a detection of 5 ppb.



1983 rocks

	Au (oz/t)	Ag (oz/t)
KS-17	0.003	0.02
18	0.003	0.02
19	0.003	0.01
20	0.003	0.02
21	0.003	0.01
22	0.003	0.01
23	0.003	0.02
24	0.003	0.04

1984 rocks

	As ppm	Ag ppm	Sb ppm	Au ppb
TZ4T1-134A	3	0.1	1.0	5
135A	6	0.1	1.5	<5
136A	6	0.1	1.1	<5
137A	3	0.1	0.1	<5
138A	7	0.3	2.8	275
139A	14	0.2	2.3	105
140A	7	1.8	13.2	1210
141A	6	0.1	4.2	<5
142A	16	53.0	6.9	>10000
143A	4	0.2	0.4	60
144A	22	0.1	26.0	40
145A	4	0.1	1.2	>5
146A	15	1.1	21.0	550
147A	45	0.4	43.0	85
148A	15	0.3	10.6	150
149A	3	0.1	0.3	<5
150A	1	0.1	0.1	<5
151A	107	0.9	58.0	45
152A	81	1.8	27.0	<5
153A	7	0.1	64.0	135

1985 rocks

	As ppm	Ag ppm	Sb ppm	Au ppb
WH5T1-582	38	0.5	12.0	50
583	63	0.6	20.0	30
584	41	0.9	48.0	15
587	410	1.3	31.0	1600
588	4	0.2	0.6	<5
589	19	2.2	3.4	2900
590	10	0.9	4.8	430
TZ5T2-492	30	0.3	12.4	45
493	4400	3.0	140.0	1150
494	33	0.5	9.8	45
495	50	0.3	15.2	35
496	23	0.1	13.2	>10000 (0.4 oz/ton)

- 8 MIocene** LEVEL MOUNTAIN - PLATEAU BASALTS
 - 7 TERTIARY-CRET.** SLOKO GROUP
 - a - feldspar porphyry
 - b - rhyolite dykes, stocks
 - c - basalt dykes
 - 6 CRET.-JURASSIC** DIORITE NON-FOLIATED
 - a - diorite non-foliated dyke
 - b - albite sill
 - c - porphyritic diorite
 - 5 TRIASSIC** DIORITE FOLIATED
 - 4 PRE UPPER TRIASSIC** INTERMEDIATE TO MAFIC VOLCANICS
 - a - augite porphyry
 - b - tuff - thinly bedded
 - c - massive flows
 - d - lapilli tuff
 - e - chlorite schist
 - h - biotite schist
 - 3 PHYLLITE**
 - a - massive pink banded limestone
 - b - siliceous siltstone
 - c - thin banded pink limestone
 - d - buff weathering limestone
 - e - mafic flows
 - 2 PERMIAN** LIMESTONE
 - a - carbonaceous
 - b - white
 - 1 ULTRAMAFIC**
- ALTERATION**
- C** IRON CARBONATE AND QUARTZ VEIN
 - O** QUARTZ STOCKWORK
 - D** DOLOMITIZED
 - S** SILICIFIED

- SYMBOLS**
- COMPOSITIONAL LAYERING (So)
 - PLANAR FOLIATION
 - FOLD HINGE
 - FAULT
 - GEOLOGICAL CONTACT**
 - KNOWN
 - ASSUMED
 - PROJECTED
 - JOINT
 - STATION
 - ROCK

Chevron Chevron Canada Resources Limited
Minerals Staff

NIE #8 CLAIM
GEOLOGY &
1983,84,85 ROCKS GEOCHEMISTRY

FIGURE No. 3	PROJECT No. M504
DATE 1985	REVISIONS
NTS No. 104 K	SCALE 1:10,000
COMPILED BY G.W.	FILE No.

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