

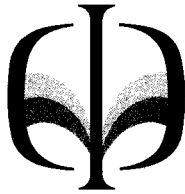
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GEOLOGICAL
ASSESSMENT REPORT
STIRRUP MINERAL CLAIMS
CAMELSFOOT RANGE, CENTRAL B.C.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,786

Mineral Claim:	Number 1453
Mining District:	Clinton Mining Division
NTS:	920/1E
Latitude:	51°05'55"N
Longitude:	122°11'32"E
Owner:	E. Horne
Consultant:	Terracon Geotechnique Ltd.
Authors:	L. Nichols, P.Eng. D. Watson, E.I.T.
Date of Field Work:	June 30 to July 3, 1984
Submission Date:	August 13, 1984
Assessment Period:	July 14, 1983 to July 13, 1984



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August 16, 1984

Mr. E. Horne
6 - 1114 Rockland Ave.
Victoria,
British Columbia

Dear Mr. Horne:

**Re: Assessment Report for Mineral Claim #1453 - Clinton Mining District
for the Period July, 1983 to July 1, 1984**

We are pleased to submit the attached report on Stirrup Claim #1453.
Further work is recommended. We trust that you will find the report to
your satisfaction.

Yours sincerely,

L. Nichols, P.Eng., P.Geol.
Principal

LCGN/smc

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1.0 INTRODUCTION

1.1 Terms of Reference

Terracon Geotechnique was commissioned by E. Horne, the owner of the Stirrup Mineral Claim to assess the mineral potential (particularly gold) of the claim by collecting Pleistocene and bedrock samples and examining and mapping outcrop. Additionally, current placer operations by others on the property were examined. The field work was completed in late June - early July and assay and compilation work carried out in early July. The assessment period extends from July 14, 1983 to July 13, 1984.

1.2 Program Objectives

- o To initiate the compilation of a detailed geological map at a scale of 1:5,000,
- o To characterize the gold as found in the placers,
- o To assess the gold potential of the major bedrock lithologies,
- o To evaluate the relationship of mineralization to major and minor geological structures,
- o To recommend a subsequent or follow-up investigative program.

1.3 Historical Background

Placer gold was discovered on Stirrup Creek during World War I. In a span of 25 years, 3000 to 5000 ounces of gold were recovered from the creek bed. Post World War II testing, which involved panning, trenching, pitting and soil geochemistry, have uncovered the existence of anomalous gold and arsenic in the soil forming along the banks of Stirrup Creek. Twenty percent of the gold occurs as crystals (Warren, 1982). Rio Tinto Exploration Ltd. discovered high grade float (0.6 ounces Au to the ton), near the source of Stirrup Creek in 1969. A subsequent drilling and sampling program (rock and soil) was unsuccessful in locating an ore body.

Biogeochemical studies have revealed the existence of an indicator plant, 'Phacelia sericea', in the area (Warren, 1982). This biogeochemical work was done to the north of the Stirrup claim in the upper portion of the Stirrup Creek basin.

Four 2-post claims (Motnek 1-4), located in the central east portion of the existing Stirrup claim, were staked in February of 1980, and subsequently forfeited. Currently, two placer operators are testing and recovering visible gold from the creek bed of Stirrup Creek. Their names are Mr. Pat Rabbitt of Vernon, B.C. (PL 2018) and Mr. David Bell of Lillooet, B.C. (PL 792). Both properties cover a portion of the Stirrup mineral claim. A list of placer and adjacent mineral claim owners is found in Appendix A (Figure 5).

The current Stirrup Mineral Claim (1453) consists of one (20 unit) claim staked 4 units north and 5 units west of the Legal Corner Post. The staking was conducted on the 12th and 13th of July, 1983 by E.J. Horne, assisted by R.H. Dean. The mineral claim was recorded in the Clinton Mining Division on July 14, 1983.

To date, we have been unable to locate any geological reports which pertain specifically to this claim area.

1.4 Location and Access

The Stirrup claim is located at latitude 51°05'55" North and longitude 122°11'32" East, NTS 920/IE. The claim occurs approximately midway between the headwaters of Stirrup Creek and Watson Bar Creek. Stirrup Creek bisects the claim in a northwesterly - southeasterly fashion. See Figures 1 and 2 in Appendix A.

The area is accessed by road from the Big Bar ferry to the northeast, and less readily by the Lillooet - Big Bar Road to the south. The turn-off to Stirrup Creek occurs 10.0 road kilometres south of Big Bar ferry landing (1.0 kilometres south of the Big Bar - Lillooet - Poison Mountain junction). Access to the Lead Claim Post (LCP) is located 8.2 kilometres from the Stirrup Creek turn-off along the south fork of Stirrup Creek Road. The LCP is located 100 metres south of that point on the road where the first major switchback descending to Stirrup Creek occurs.

The topography is moderate with exception of the eastern section of the south claim boundary which traverses the northern limit of Stirrup Creek canyon. Elevations range from 1372 metres (4500 feet) to 1890 metres (6200 feet). The area is mostly wooded with the exception of an area of rangeland in the northeast portion of the claim and a section of outcrop bluffs along the western claim boundary. A number of secondary creeks drain into Stirrup Creek in a uniform pattern.

1.5 Status of Mineral Claim

A notice of work was filed prior to completing this season's field program, (see Appendix C). At the conclusion of the field program the statement of work completed was filed and maintenance fees paid to the mining recorder, (see Appendix D).

2.0 FIELD PROGRAM

2.1 Geological Mapping

The main access road onto the property which transects the property on a southeast to northwest bearing, was traversed and outcrops examined, mapped and sampled, where appropriate. Most of the outcrops were road cuts.

A second traverse was completed parallel to and along the full length of Stirrup Creek from the south to the north boundary. Outcrops were examined, mapped and sampled at selected locations along Stirrup Creek. Outcrops, lithologies, sample numbers and geological structural data have been recorded on the base geological plan of the claim at a scale of 1:5,000, (Figure 6, Appendix A).

The total number of bedrock samples collected for geochemical analyses was eleven.

2.2 Geochemical Stream Sediment Sampling

Geochemical samples were collected at 200 m intervals from the centre of the channel of Stirrup Creek. The sampling traverse extended from the south boundary to the north boundary of the claim. In addition, samples were selected from certain tributary streams, just above the juncture with Stirrup Creek. One paleo-stream channel sample (#1900) was taken from a road cut at elevation 4810'. The total number of stream sediment samples collected was eighteen. All geochemical sampling followed the techniques in Levinson (1980).

3.0 GEOLOGY

3.1 Regional Geology

The regional geology was described by Tipper (1978) and is reproduced on Figure 3 in Appendix A. The Stirrup Creek Mineral Claim lies a short distance west of the Fraser-Yalakom Fault system. The claim is located on the eastern margin of the Coast Crystalline Belt, one of the major tectonic belts of the Canadian Cordillera. The predominant rock types are described by Tipper as, "buff to green greywacke, grey shale, pebble conglomerate and massive boulder conglomerate". The main Fraser-Yalakom fault lies 10 km to the east, while a major splay fault from this system lies 4 km to the east of the claim, (Tipper, 1978). Tipper also interprets a normal faulting structural style across the Camelsfoot Range and one of these normal faults transects the upper Stirrup Creek basin (see Figure 3, Appendix A).

The regional structure appears to be a moderately dipping monocline striking ENE and dipping NNW. All lithologies have been identified by Tipper as members of the Jackass Mountain Group.

East of the Fraser River Fault system lies the Intermontane Tectonic Belt, composed of Tertiary and Mesozoic Groups.

3.2 Local Geology

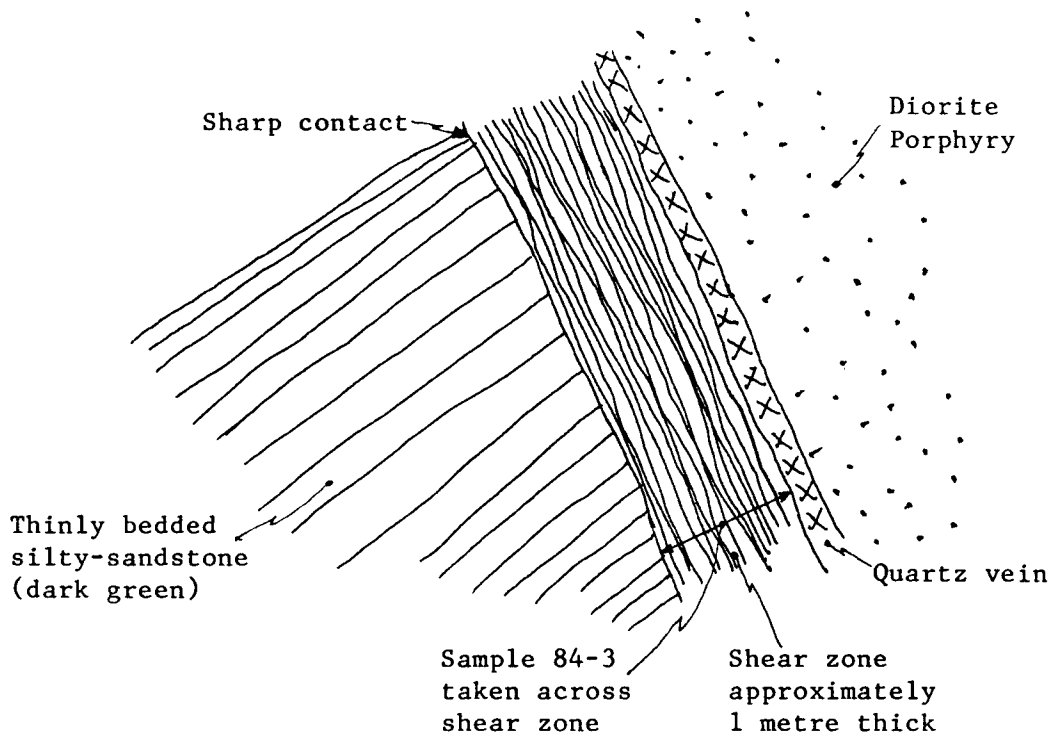
Two lithologies have been identified on the claim. The most extensive has been referred to as a silty sandstone or fine grained sandstone. This unit is thinly bedded (4-10 cm) and is generally green, grey-green or buff coloured. It strikes NE and has a moderate northwesterly dip. In some places it is highly fractured and is cut by thin shear zones which also strike northeast but dip both northwesterly and southeasterly. It is likely that this unit corresponds to Tipper's greywacke unit.

Visible mineralization was not noted in any of the samples or outcrops of silty-sandstone. Rusty staining was, however, relatively common.

Quartz veining with very thin veins ($\frac{1}{2}$ cm) or boxwork type structures were noted in one or two locations in the silty-sandstone unit.

The second major lithology is a dark green structureless unit consisting of quartz, feldspar and hornblende. In most outcrops, it is porphyritic with large crystals of white feldspar. This unit has been identified as a diorite or dioritic porphyry. Adjacent to contacts with the greywacke, the material does not exhibit chilled textures as one might expect from an intrusive rock. Conversely, the greywacke did not exhibit a "baked" texture near the contacts with the diorite. These observations would lead to the conclusion that some of these diorites have been emplaced by faulting rather than by intrusion.

Mineralization in the diorite porphyry was not identified in the southeast exposures. However, some pyrite was seen in this rock type in the north central part of the claim along Stirrup Creek. In the southeast quadrant of the claim along the access road, a road cut exposure shows a typical contact relationship between the silty-sandstone (greywacke) and the diorite porphyry. This relationship is shown in the sketch below:



3.2.1 Summary of Structural Features

The claim geology appears to be a simple monocline striking northeasterly and dipping to the northwest between 25 and 35°. Diorite or quartz diorite bodies of unknown size have been emplaced, primarily by faults which generally strike parallel to the monocline.

3.2.2 Summary of Geochemical Data From Outcrop Samples

Ten samples were analyzed for antimony, arsenic, mercury and gold. These data are listed in Table 3 of Appendix B and plotted on the overlay of Figure 6 in Appendix A. Tentative conclusions from these data are drawn as follows:

- a) All samples are enriched in antimony 10 to 15 times the average composition of the earth's crust (0.2 ppm, Levinson) but there is no correlation between antimony and gold.
- b) While arsenic levels in the outcrop samples are 5 to 10 times the average composition of the earth's crust (1.8 ppm, Levinson), there is no correlation between gold levels and arsenic values.
- c) In contrast, mercury does appear to provide a good correlation with the gold values. The average Hg value is 102.5 ppb which contrasts to the average value of 80 for the earth's crust, (Levinson).
- d) The three outcrop samples which returned measurable gold values were taken from the silty-sandstone (greywacke unit). The highest value 70 ppb was from a shear zone (sheared silty-sandstone) and the second highest value was from a gossan area in the silty sandstone. These outcrops are approximately 1500 m apart on the claim.
- e) There appears to be no relationship between gold and the diorite porphyry. Gold does seem to have an affinity for the silty-sandstone (greywacke unit), especially the shear zones.
- f) The gold and mercury may have been mobilized or introduced during the period of faulting.

3.2.3 Summary of Geochemical Data From the Stream Sediment Samples

A plot of the gold data on the stream pattern (see overlay of Figure 6 in Appendix A) does not reveal a systematic pattern of gold concentrations other than the observation that the settlement ponds for the placer operations returned the highest gold values. Three of the tributary creeks were sampled, each at one point just above their juncture with Stirrup Creek. These gold values were not encouraging. Three other tributaries of Stirrup Creek remain to be sampled.

The small size of the stream bed and the very wide range in stream bed particle sizes added to the difficulty in obtaining representative samples. In spite of this difficulty and even though there is not yet a discernible gold pattern, the remainder of the streams should be sampled at the 200 m sample frequency interval.

White quartz cobbles were found amongst the stream debris only on three or four occasions.

There is no correlation between the indicator elements (As, Sb and Hg) and the gold values and consequently these elements are **not** recommended for assays of stream sediment samples in future analyses.

3.2.4 Characteristics of the Placer Gold

The following information was provided by the placer operator, Mr. V. Rabbitt of Vernon, B.C. in direct conversation with the author at the Stirrup Claim.

- a) The placer gold is relatively coarse grained with the median size in the 2 to 4 mm range. This corresponds to cube shaped grains in the order of 0.4 to 0.6 cm to a side (i.e. pea size).
- b) There is relatively little flour gold (at least it is not being trapped in the placer operator's sluice boxes).
- c) The fineness of the gold is high (>92), i.e. the silver content is low.
- d) Generally the nuggets do not show much rounding and are usually angular to sub-angular.
- e) There has never been a "good" gold assay from the bedrock on their placer claims.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

- o The relative coarseness and large size of the placer gold nuggets would lead one to believe that the potential for locating a lode gold zone on the claim still exists.
- o The coarseness of the placer gold also indicates that the host rocks or veins are also likely to be coarse grained.
- o For bedrock samples, the best indicator element of the three which were tested appears to be mercury.
- o Outcrop assay data tend to indicate the gold is associated with the shearing and faulting and therefore is probably of Tertiary age.
- o The angularity of the gold indicates that the gold has not travelled very far in the streams. However, the gold may have travelled some distance by mass wasting processes, (i.e. movement of slope colluvium where the colluvial particles do not move much relative to one another).
- o Future assay work should be done only for gold on stream sediment samples and gold and mercury only on bedrock samples. Gold assays should be based on AA rather than fire assay because of the relatively low concentrations.

4.2 Recommendations

In order of activity, the following work is recommended:

1. Complete 200 meter spacing of samples on tributary streams entering Stirrup Creek on the claim assay for Au only.
2. Map all outcrop on the claim but prioritize the shaded area on the overlay on Figure 6. The shaded area has been delineated only on the basis of the stream sediment data.

3. Sample and assay all exposed shear zones on the outcrop at the 1:5,000 scale. Assay bedrock samples for Au and Hg only.
4. Carefully locate all quartz float and quartz veins on the 1:5,000 scale map.
5. Collect colluvial samples on a systematic grid on the shaded area and analyze for Hg and Au only. Contour these data and layout a new sampling program/areas, depending upon results.
6. Trenching at right angles to the shear zone trends and the monocline (i.e. parallel to the slope), in the shaded area of the overlay of Figure 6 may be a suitable step after steps 1 through 5 are completed.

5.0 REFERENCES

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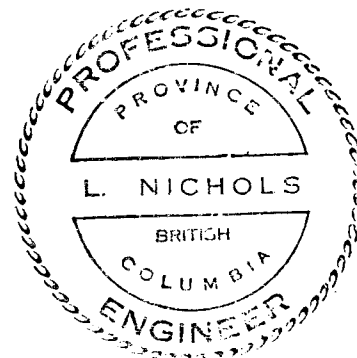
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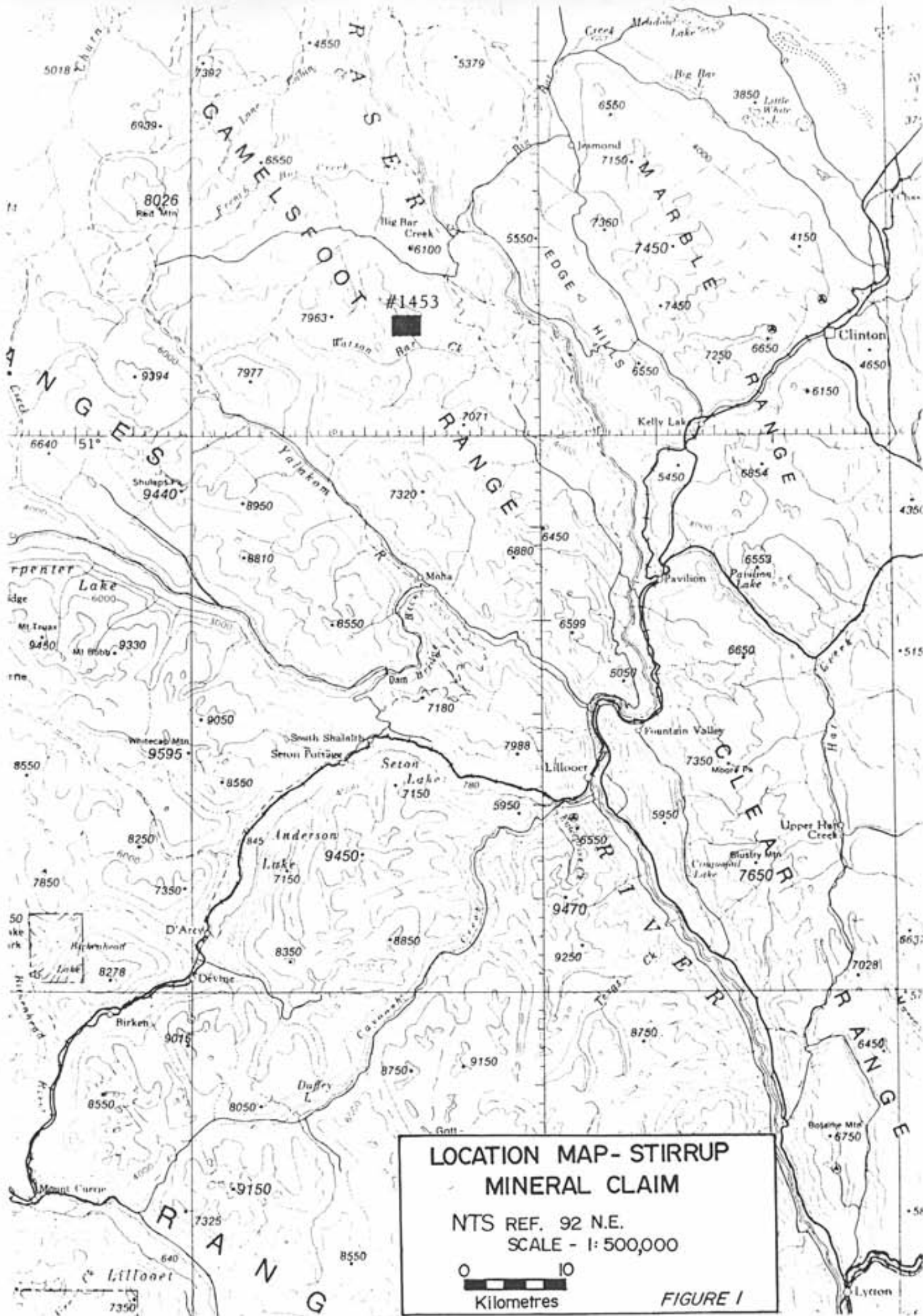
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Expiry Date May 5, 1985

APPENDIX A
FIGURES 1 TO 6
LOCATION AND GEOLOGY MAPS

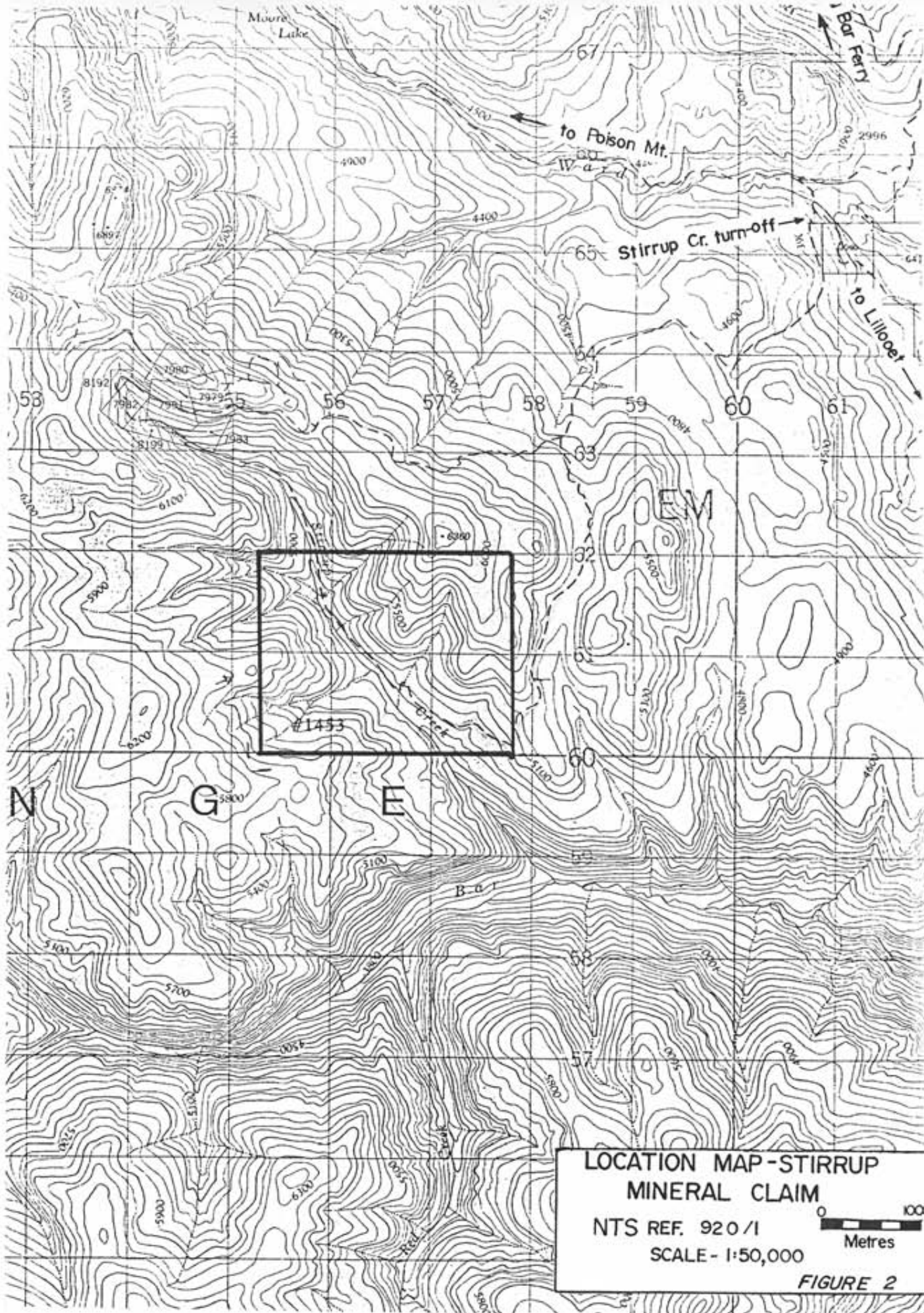


**LOCATION MAP- STIRRUP
MINERAL CLAIM**

NTS REF. 92 N.E.
SCALE - 1: 500,000

0 10
Kilometres

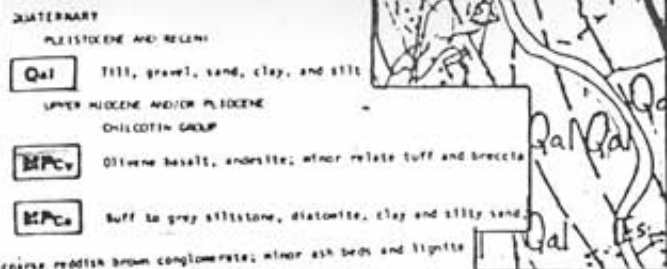
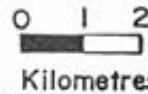
FIGURE 1



GEOLOGY - STIRRUP CLAIM AREA

AFTER TIPPER, 1978, GEOLOGY OF TASEKO LAKES, G.S.C. open file 534

SCALE 1 inch = 2 miles



- QUATERNARY**
PLISTOCENE AND RECENT
Qal Till, gravel, sand, clay, and silt
UPPER MIOCENE AND/OR PLIOCENE
CHILCOTIN GROUP
MPCv Olivine basalt, andesite; minor rhyolite tuff and breccia
MPCs Buff to grey siltstone, diatomite, clay and silty sand;
 coarse reddish brown conglomerates; minor ash beds and lignite

Eocene and younger (?), Older (?)

- Ev** Rhyolitic and dacitic tuff, breccia, and flows; minor andesite to basaltic rocks

CRETACEOUS

- UPPER CRETACEOUS (CENOMANIAN)**
uKkv Varicoloured andesitic, dacitic basaltic pyroclastics; minor flows and volcanic sediments

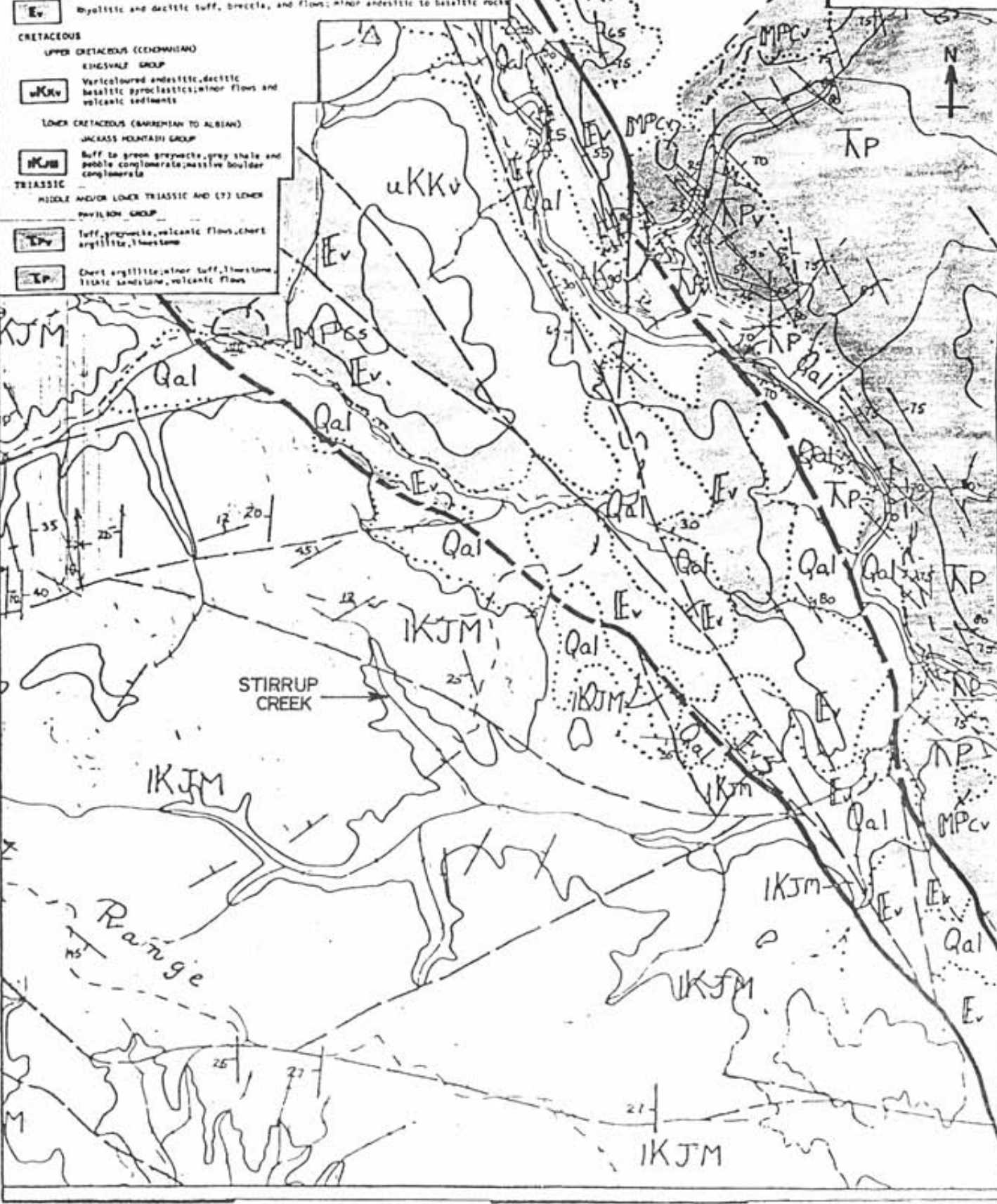
- LOWER CRETACEOUS (BARREMIAN TO ALBIAN)**
IKJM Buff to green greywacke, grey shale and pebble conglomerate; massive boulder conglomerate

TRIASSIC

- MIDDLE AND/OR LOWER TRIASSIC AND (?) LOWER PAULSON GROUP**

- TPv** Tuff, greywacke, volcanic flows, chert argillite, limestone
TP Chert argillite; minor tuff, limestone, siliceous sandstone, volcanic flows

FIGURE 3



TASEKO LAKES (92 O) MAP - AREA

SEDIMENTARY AND VOLCANIC ROCKS

C E N O Z O I C

- QUATERNARY**
 PLEISTOCENE AND HOLOCENE
Qal Fill, gravel, sand, clay, and silt
- TERTIARY**
 MIOCENE MIDDLE MANGER
M Greywacke, siltstone, pebble conglomerate
- UPPER MIOCENE MIDDLE MIOCENE
 CHILCOTIN GROUP
MPCu Olivine basalt, andesite, minor rhyolite tuff and breccia
MPCs Buff to grey siltstone, diatomite, clay and silty sand, coarse reddish brown conglomerate; minor ash beds and lignite
- OLIGOCENE AND (?) LOWER MIOCENE
OMu Grey to brown, fine-grained to porphyritic and amygdaloidal andesite and basalt tuff, breccia, and flows; includes minor **Ev**
OMs Friable buff greywacke and siltstone
- Eocene?, OLIGOCENE?
 WEMA GROUP
EOs Buff, heavy, brown dacitic and rhyolitic tuffs, breccias and flows.
- Eocene and younger (?), OLDER (?)
Ev Rhyolitic and dacitic tuff, breccia, and flows; minor andesitic to basaltic rocks; may include minor **OMu**; includes small areas of **Es** along Fraser River
Es Conglomerate, volcanic arenite, minor siltstone, plant stems

E S O Z O I C

S.W. of YALAKOM FAULT	N.E. of YALAKOM FAULT	EAST of FRASER FAULT
CRETACEOUS		
UPPER CRETACEOUS (CENOMANIAN)		
KINGSVALE GROUP		
wKku	wKku	wKka
Verticoloured andesitic, dacitic and basaltic pyroclastics; minor flows and volcanic sediments	Verticoloured andesitic, dacitic basaltic pyroclastics, minor flows and volcanic sediments	CRETACEOUS (?) KINGSVALE GROUP (?) Grey to dark grey siltstone and greywacke
wKks	wKks	
Interbedded siltstone, greywacke and conglomerate	Interbedded siltstone, greywacke, conglomerate	
LOWER CRETACEOUS (APTIAN AND ALBIAN)		
TAYLOR CREEK GROUP		
wKTC		
Dark grey to black shale and siltstone, chert pebble conglomerate, minor quartzose sandstone		
wKTCv		
Dark green to grey andesitic to basaltic flows, tuff and breccia		
LOWER CRETACEOUS (APTIAN AND ALBIAN)		
JACKASS MOUNTAIN GROUP		
wKJM	wKJM	
Buff to green greywacke, light grey shale and pebble conglomerate, massive boulder conglomerate	Buff to green greywacke, grey shale and pebble conglomerate, massive boulder conglomerate	
LOWER CRETACEOUS (HAUTERIVIAN)		
wKv		
Reddish to purplish andesitic breccia and tuff		
JURASSIC AND CRETACEOUS		
MIDDLE JURASSIC TO LOWER CRETACEOUS		
NEPAL MOUNTAIN GROUP		
wKJM		
(BERGASIAN TO SHARPSIAN) Interbedded grey to greenish grey siltstone, shale, greywacke, minor pebble conglomerate and limestone		
wJms		
(U. OXFORDIAN TO U. TITHONIAN) Dark grey to green greywacke, siltstone, shale and minor conglomerate		
wJms		
(CALLOVIAN AND L. OXFORDIAN) Dark grey shale argillite, greywacke; grey-brown pebble conglomerate		
JURASSIC		
MIDDLE (BAJOCIAN) AND (?) LOWER JURASSIC		
wJv	wJv	
Green porphyritic andesite breccia, tuff and flows, minor argillaceous tuff	Green porphyritic andesite breccia, tuff and flows, minor argillaceous tuff	
TRIASSIC AND JURASSIC		
UPPER TRIASSIC TO MIDDLE JURASSIC		
FRASER GROUP		
FRASER GROUP (FRASER RIVER TO MOUNTAIN RANGE)		

M E S O

PALEOZOIC

JURASSIC
 Dark grey shale, argillite, greywacke, grey-brown sandstone, conglomerate

TRIASSIC AND JURASSIC
 UPPER TRIASSIC TO MIDDLE JURASSIC
TYAUGHTON GROUP
 (SHEWANIAN TO MIDDLE BLACKIAN)
 Dark grey to black shale and argillite, grey greywacke

uT (NORMAN TO HETTANIAN)
 Massive limestone, red conglomerate, clay greywacke, grit and shale

TRIASSIC
 UPPER TRIASSIC (CANNIAN AND (?) NORMAN)
CADWALLADER GROUP
uTm **PEMBLY FORMATION**
 Grey to black argillite, minor conglomerate, limestone and volcanic rocks

uTp **PIONEER FORMATION**
 Massive fine grained to porphyritic dark-green basalt flows, minor gneissites and argillite, mainly argillite and siltstone

MIDDLE TRIASSIC AND (?) OLDER
BRIDGE RIVER GROUP
uTbr Interbedded chert and argillite, andesitic to basaltic flows and gneissites, and lenses of grey limestone

JURASSIC
 HERRY (BLACKIAN) AND (?) LOWER JURASSIC
uJb Green porphyritic andesite breccia, tuff and flows, minor argillaceous tuff

TRIASSIC
 UPPER TRIASSIC
uTc (NORMAN)
 Massive grey limestone, minor basalt conglomerate, shale

uTav (CANNIAN AND/OR NORMAN)
 Interbedded shale, greywacke, andesitic to basaltic volcanics

uTv (CANNIAN AND/OR NORMAN)
 Dark grey andesitic to basaltic tuff and breccia, felsidacitic flows, greywacke

TRIASSIC
 MIDDLE AND/OR LOWER TRIASSIC AND (?) LOWER PERMIAN GROUP
Tpv Tuff, greywacke, volcanic flows, chert, argillite, limestone

Tp Chert, argillite, minor tuff, limestone, tuffaceous sandstone, volcanic flows

PERMIAN AND (?) OLDER
CACHE CREEK GROUP
Pcc? Chert, argillite, shale, greywacke, minor limestone lenses

UPPER PERMIAN (?)
uPcc **MOBILE CANYON FORMATION**
 Massive grey limestone, minor shale

LOWER PERMIAN (?)
lPcc Interbedded chert and argillite, basic volcanic flows and tuff, limestone

PLUTONIC ROCKS

CEN.

MESOZOIC

PAL.

TERTIARY
EOCENE
Ef Felstone, feldspar porphyry, biotite feldspar porphyry

Egd Granodiorite, minor quartz diorite

CRETACEOUS
LATE CRETACEOUS
LKgd Granodiorite, lesser quartz diorite and diorite

LKqd Quartz diorite, lesser diorite

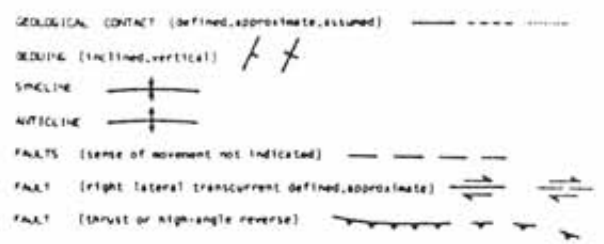
Kqm Quartz monzonite, minor granodiorite

JURASSIC
MIDDLE (?) JURASSIC
MJgd Gneissic granodiorite, diorite and quartz diorite

JURASSIC AND/OR OLDER
Jgd Granodiorite, diorite, inclusions of basic volcanic rocks

TRIASSIC (?)
Tsb Peridotite, harzburgite, dunite, serpentinitized peridotite

PERMIAN (?)
Pub Peridotite



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 1953: Geology and Mineral Deposits of the Shulaps Range, British Columbia Dept. of Mines, Bull. No. 32

Tipper, H. W.
 1963: Geology Tesako Lakes, British Columbia, Geol. Surv. Can., Map 29-1963

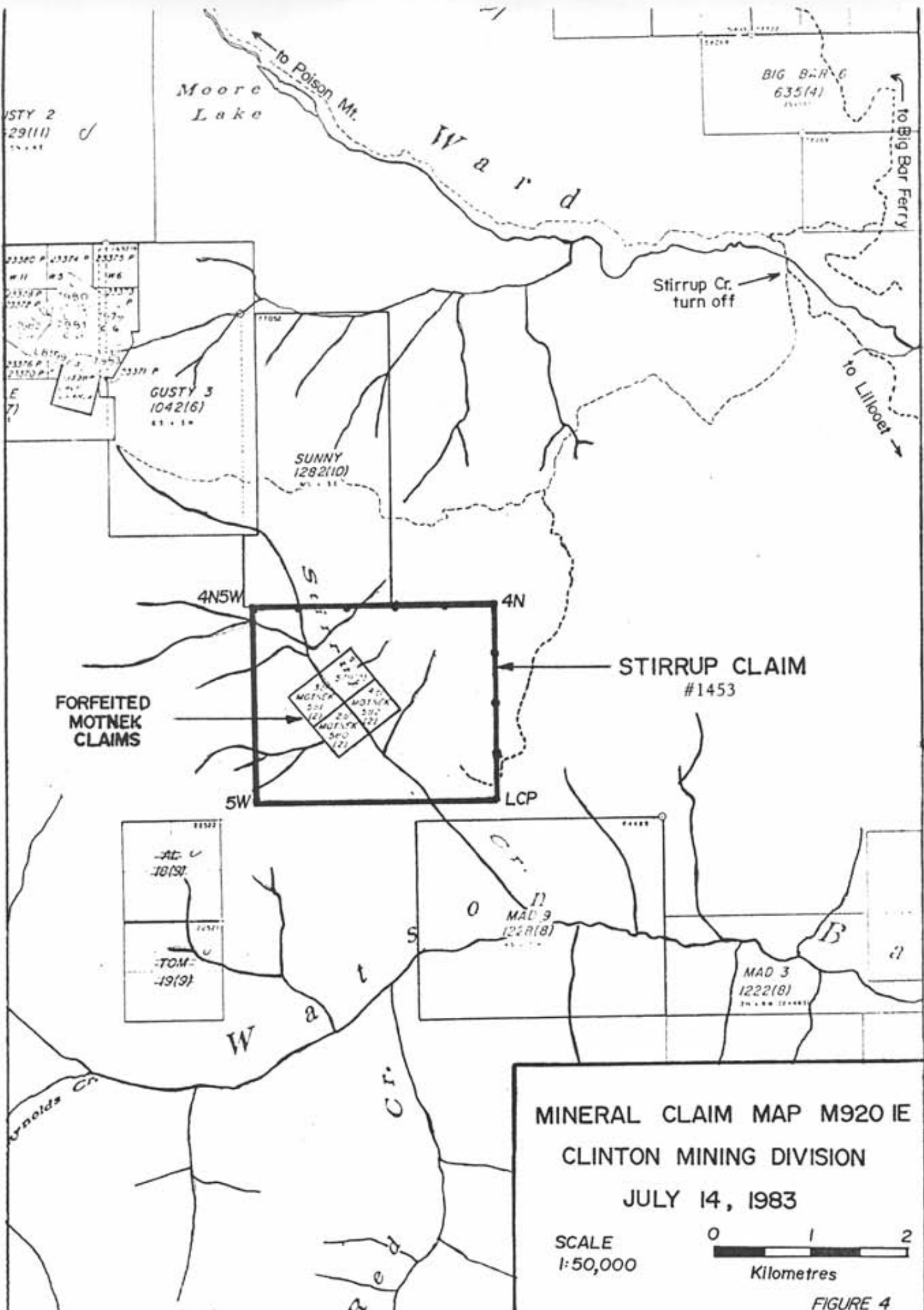
Tipper, H. W.
 1969: Mesozoic and Cenozoic geology of the northeast part of Mt. Washington Coast District, British Columbia, Geol. Surv. Can., Map-area 192 N, Paper 69-13

Trethick, S. P.
 1961: Geology of the Fraser River Valley between Littleton and Big Bar Creeks; Brit. Columbia Dept. of Mines and Petroleum Resources, Bull. No. 44

Compilation by H. W. Tipper 1978

Sources of information: Field work by H. W. Tipper 1961-65, 1974, 1976, by C. E. Calmes, 1937 and C. H. Crickmay, 1939 in Tyaughton Creek area, by G. B. Leach in Shulaps Range, 1947-48, by Hans Trethick along Fraser River, 1957-58, and by G. J. Woodsworth in the Coast Mountains, 1976





MINERAL CLAIM MAP M920 IE
CLINTON MINING DIVISION
JULY 14, 1983

SCALE
 1:50,000

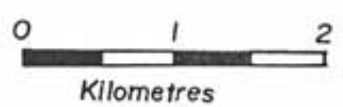


FIGURE 4

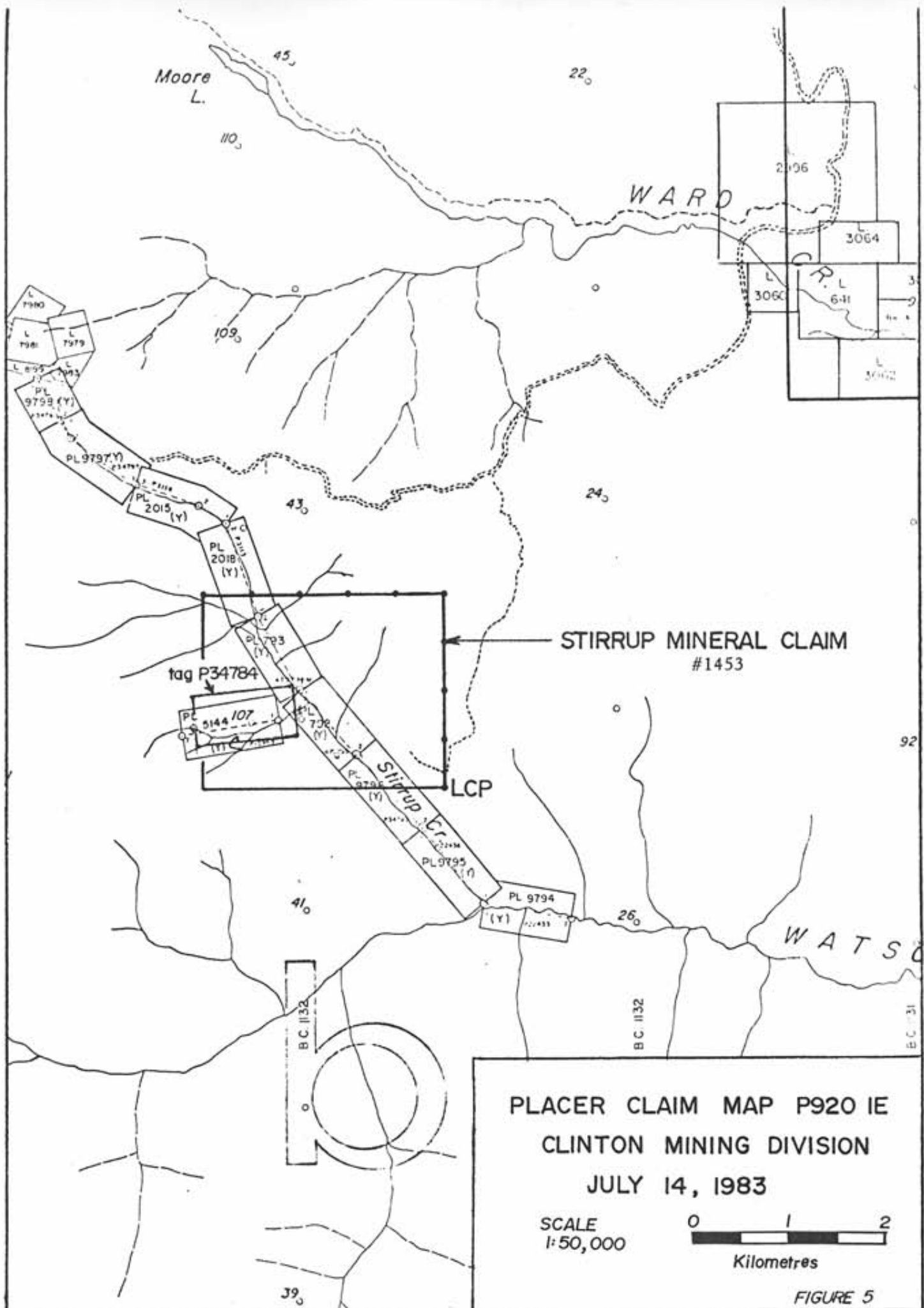
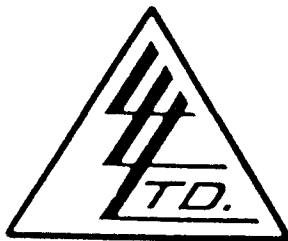


FIGURE 5

APPENDIX B
TABLES 1 TO 3
GEOCHEMICAL DATA

TABLE 1
ASSAY DATA FOR SAMPLES
COLLECTED IN 1983

Emmett J. Horne,
 10 Bow Valley Sq. 1,
 6th Avenue S.W.,
 Calgary, Alberta T2P 2R9



File No. 25081
 Date August 18, 1983
 Samples Rock Chip

Certificate of
 ASSAY of
 LORING LABORATORIES LTD.

SAMPLE No.	PPB Au	PPM Ag	PPB Hg	PPM As
Chemical Analysis				
Surrup # 1	137	0.1	315	13

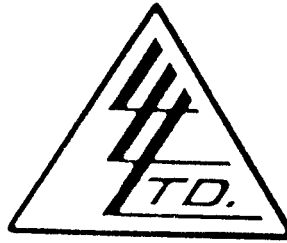
I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

retained one month.
 retained one month
 specific arrangements
 advance.

D. [Signature]

Assayer

Emmett J. Horne,
30 Bow Valley Sq. 1,
2 - 6th Avenue S.W.,
Edmonton, Alberta T2P 2R9



File No. 25081
Date August 18, 1983
Samples Rock Chip

Certificate of
ASSAY of
LORING LABORATORIES LTD.

Page # 2

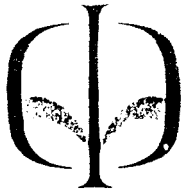
SAMPLE No.	OZ./TON GOLD	OZ./TON SILVER
Assay Analysis Sample # 2	Trace	Trace

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE
ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Retained one month.
Retained one month
Specific arrangements
in advance.

Assayer

TABLE 2
1984 STREAM SEDIMENT
SAMPLE ASSAY RESULTS



TERRACON GEOTECHNIQUE LTD.

5909 45 Street, P.O. Box 1048, Leduc, Alberta T9E 2Y6, Canada
Phone (403) 986 2874 Telex 037 43265

July 12, 1984

Loring Laboratories Ltd.
629 Beaver Dam Road N.E.
Calgary, Alberta

ATTENTION: Mr. D. Anders

Dear Mr. Anders:

Re: Geochemical Analyses - Stirrup Project

Please complete geochemical analysis for four elements; gold (by AA), arsenic, mercury and antimony for the following stream sediment and outcrop rock samples.

The outcrop samples are tagged as follows:

Stirrup #1, #3, #4, #5, #6, #7, #8, #9, #10 and #11
(Total of 10 samples)

The stream sediment samples are as follows:

Stirrup #100, #200, #300, #400, #500, #600, #700, #800, #900,
#1000, #1100, #1200, #1300, #1600, #1700, #1800, #1900 and
#2000
(Total of 18 samples)

Please retain saves in all samples.

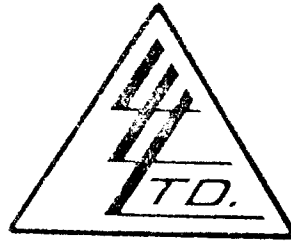
Thank you.

Yours sincerely,

L. Nichols, P.Eng., P.Geol.
Principal

LCGN/smc

To: TERRACON GEOTECHNIQUE LTD.,
 5909 - 45th Street,
 P.O. Box 1048,
 Leduc, Alberta T9E 2Y6
 ATTN: L. Nichols



File No. 26498
 Date July 23, 1984
 Samples Stream
 Stirrup Project

Certificate of
 ASSAY of
LORING LABORATORIES LTD.

Page # 2

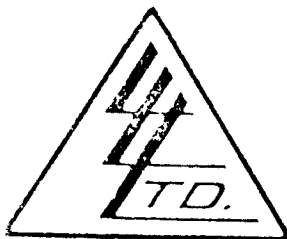
SAMPLE No.	PPM Sb	PPM As	PPB Hg	PPB Au
<u>Geochemical Analysis</u>				
<u>"Stream Samples"</u>				
Stirrup- 100	21	10	105	15
200	24	25	145	5
300	28	27	160	55
400	31	22	90	5
500	34	32	130	30
600	23	22	115	330
700	31	22	125	250
800	56	80	55	5
900	75	30	160	35
1000	72	34	160	10
1100	69	29	160	40
1200	68	16	105	5
1300	82	8	105	50
1600	72	46	170	15
1700	65	25	310	70
1800	68	14	135	NIL
1900	61	11	70	NIL
2000	52	10	80	10

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Rejects Retained one month.
 Pulps Retained one month
 unless specific arrangements
 made in advance.


 Assayer

To TERRACON GEOTECHNIQUE LTD.,
 5909 - 45th Street,
 P.O. Box 1048,
 Leduc, Alberta T9E 2Y6
 ATTN: L. Nichols



File No. 26498
 Date July 23, 1984
 Samples Stream
 Stirrup Project

Certificate of
ASSAY of
LORING LABORATORIES LTD.

Page # 2

SAMPLE No.	PPM Sb	PPM As	PPB Hg	PPB Au
Normal Clarke Values added by Terracon	0.2	1.8	80	4
Geochemical Analysis				
<u>"Stream Samples"</u>				
Stirrup- 100	21	10	105	15
200	24	25	145	5
300	28	27	160	55
400	31	22	90	5
500	34	32	130	30
600	23	22	115	330
700	31	22	125	250
800	56	80	55	5
900	75	30	160	35
1000	72	34	160	10
1100	69	29	160	40
1200	68	16	105	5
1300	82	8	105	50
1600	72	46	170	15
1700	65	25	310	70
1800	68	14	135	NIL
1900	61	11	70	NIL
2000	52	10	80	10
Calculated \bar{x}	51.8	25.7	132.2	58.1
by σ_n	20.6	16.3	54.4	90.9
Terracon σ_{n-1}	21.2	16.8	55.9	93.9
				Paleo-Stream Sample

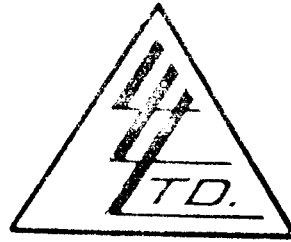
I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Rejects Retained one month.
 Pulps Retained one month
 unless specific arrangements
 made in advance.


 Assayer

TABLE 3
1984 OUTCROP SAMPLES
ASSAY RESULTS

To: TERRACON GEOTECHNIQUE LTD.,
 5909 - 45th Street,
 P.O. Box 1048,
 Leduc, Alberta T9E 2Y6
 ATTN: L. Nichols




File No. 26498
 Date July 23, 1984
 Samples Rock
 Stirrup Project

Certificate of
 ASSAY of
 LORING LABORATORIES LTD.

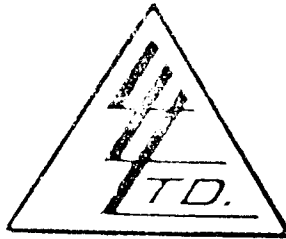
Page # 1

SAMPLE No.	PPM Sb	PPM As	PPB Hg	PPB Au
<u>Geochemical Analysis</u>				
<u>"Rock Samples"</u>				
Stirrup- 1	32	3	25	5
3	48	24	35	NIL
4	25	10	15	NIL
5	20	2	90	NIL
6	53	67	680	25
7	19	2	20	NIL
8	36	6	20	NIL
9	38	26	115	70
10	35	11	15	NIL
11	21	2	10	NIL
<p>I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES</p>				

Rejects Retained one month.
 Pulps Retained one month
 unless specific arrangements
 made in advance.


 P. [Signature]
 Assayer

To: TERRACON GEOTECHNIQUE LTD.,
 5909 - 45th Street,
 P.O. Box 1048,
 Leduc, Alberta T9E 2Y6
 ATTN: L. Nichols



File No. 26498
 Date July 23, 1984
 Sample: Rock
 Stirrup Project

Certificate of
 ASSAY of
LORING LABORATORIES LTD.

Page # 1

SAMPLE No.	PPM Sb	PPM As	PPB Hg	Lithology	PPB Au
Normal Clarke Values added by Terracon	0.2	1.8	80		4
<u>Geochemical Analysis</u>					
<u>"Rock Samples"</u>					
Stirrup- 1	32	3	25	Slt-Ss	5
3	48	24	35	Porphyry Shear	NIL
4	25	10	15	Porphyry	NIL
5	20	2	90	Porphyry	NIL
6	53	67	680	Gossan	25
7	19	2	20	Porphyry	NIL
8	36	6	20	Slt-Ss	NIL
9	38	26	115	Slt-Ss Shear	70
10	35	11	15	Porphyry Shear	NIL
11	21	2	10	Diorite with Pyrite	NIL
Calculated \bar{x}	32.7	15.3	102.5	Note: Lithology added by Terracon	
by σ_n	11.1	19.2	198.4		
Terracon σ_{n-1}	11.7	20.2	206.0		
I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES					

Rejects Retained one month.
 Pulps Retained one month
 unless specific arrangements
 made in advance.

Assayer

APPENDIX C

**NOTICE OF WORK AND RECLAMATION
PROGRAM ON A MINERAL PROPERTY**



MINERAL RESOURCES DIVISION
INSPECTION AND ENGINEERING BRANCH

NOTICE OF WORK AND RECLAMATION PROGRAM
ON A MINERAL PROPERTY

1. NAME OF PROPERTY: Stirrup Record Number 1453
Number of claims: One (20 unit)
Principal Claim Group: Stirrup
2. LOCATION: Mining Division: Clinton
NTS Map Sheet (e.g., 82E/9E): 920/1E
Lat: 51 05' 55" Long: 122 11' 32"
Access via: Big Bar Road and Ferry to Stirrup Creek Road
3. OWNER: Name: Emmett J. Horne
FMC No.: 266468
Address: 6 - 1114 Rockland Ave.
City: Victoria
Province: British Columbia
Postal Code:
Telephone No.:
4. OPERATOR: Name: N/A
FMC No.:
Address:
City:
Province:
Postal Code:
Telephone No.:
5. EXPLORATION WORK: Indicate PROPOSED [X] or COMPLETED []
Duration of Exploration Work: From June 30, 1984 to July 3, 1984
Name of Field Manager: L.C. Nichols
No. of men employed: 2
Geophysical:
Geochemical: Soil, Silt and Rock Sampling
Linecutting (distance, width, method): None
and Geological Mapping (2500 m²)
6. SURFACE DISTURBANCE OFF MINERAL CLAIMS
Road Access Construction: Total length: N/A m
Approximate width: m
Area: m²
Campsites: No. of men:
Size: m²
Other (specify): No Surface Disturbance m²
7. SURFACE DISTURBANCE ON MINERAL CLAIMS
(a) Road Construction: Total length: None m
Approximate width: m
Area: m²
(b) Drilling: No. of sites: Nil
Maximum dimensions: Width: m
Length: m
Depth: m
Total disturbed area of drill sites: m²
Water source:
Method of drill mud disposal:
(c) Trenches: No.: Nil
Maximum dimensions: Width: m
Length: m
Depth: m
Total disturbed area of trenches: m²
(d) Test Pits: No.: Nil
Maximum dimensions: Width: m
Length: m
Depth: m
Total disturbed area of test pits: m²

7. SURFACE DISTURBANCE ON MINERAL CLAIMS (CONTINUED)

(e) Camp Area No. of men Nil Width m Length m Area m²

(f) Underground Exploration Area of surface facilities m²

(g) Other (specify) m²

TOTAL OF SURFACE DISTURBANCE ON MINERAL CLAIMS m²

(1 ha = 10 000 m²) ha

8. EQUIPMENT TO BE USED IN EXPLORATION PROGRAM (List size, capacity, and number.) None

(a) (d)

(b) (e)

(c) (f)

9. PRESENT STATE OF THE LAND ON WHICH EXPLORATION IS PROPOSED

Present land use (agriculture, forestry, ranching, recreation, etc.) Forestry and Ranching

Type of vegetation Fir, Spruce & minor high grasslands

Access roads (present use and condition) Access to Stirrup Creek; Dirt Road

Campsites, old workings (location, condition)

10. RECLAMATION PROGRAM (Prescribed reclamation treatments are outlined in *Guidelines for Mineral Exploration*.)

Camp sites N/A

Trenches, drill sites, and major excavations

Roads

Seeding: Mixture

Rate of application kg/ha Date

Area seeded ha Quantity of seed kg

Fertilizer: Type Rate of application kg/ha

Area fertilized ha Quantity of fertilizer kg

11. SUMMARY OF AREAS DISTURBED AND RECLAIMED

Area disturbed current year .. N/A Previous years Total to date

Area reclaimed current year Previous years (final) Total to date

12. DATE FOREST SERVICE ADVISED BY OPERATOR N/A

Name and Title of Forest Official

Address

E. Horne
Signature of Applicant

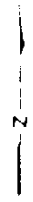
..... Owner
Title

Emmett J. Horne
Print Name

June 21, 1984
Date

See two attached plans

No surface disturbance will result from the 1984 geological mapping and stream sediment sampling program.

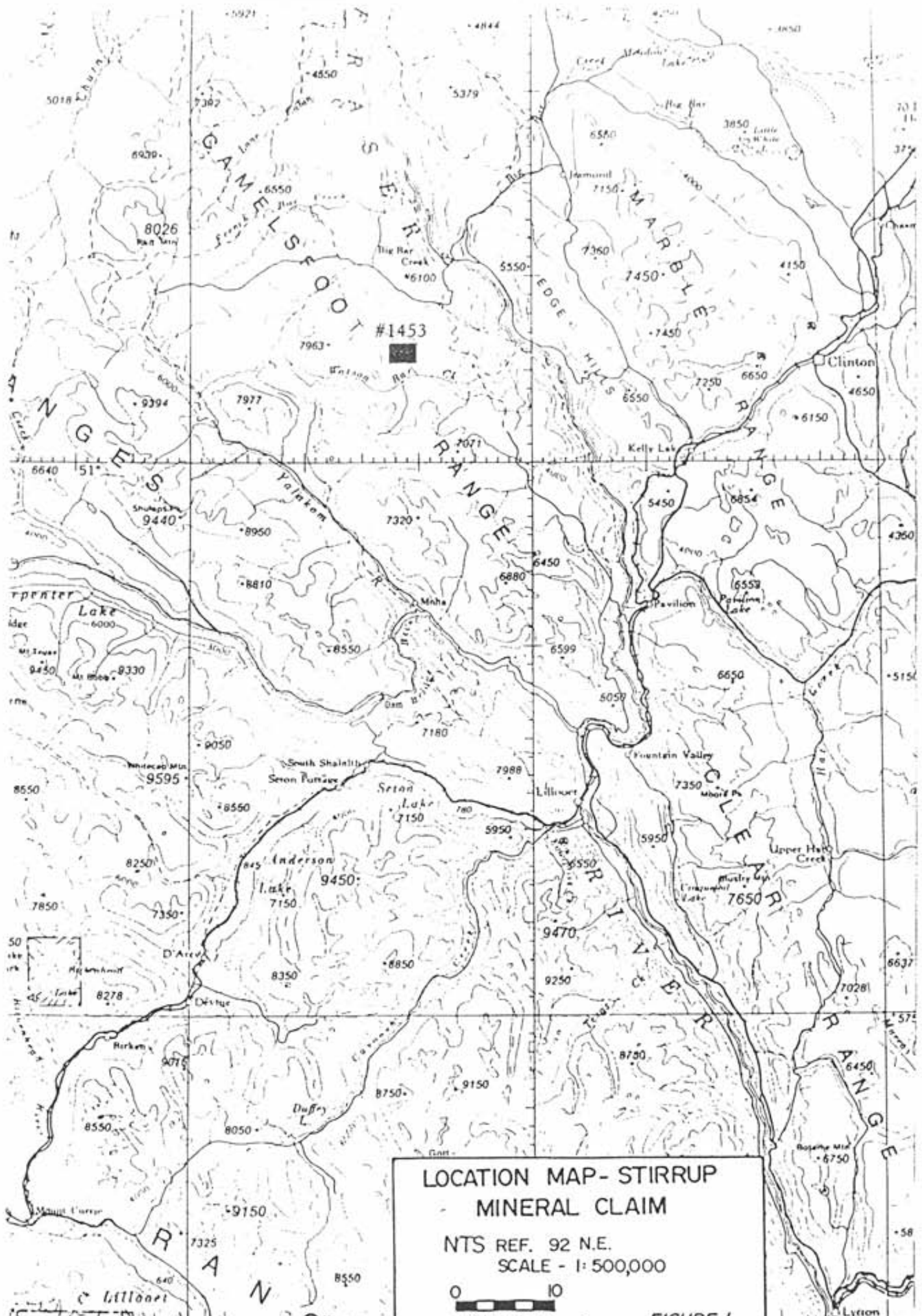


PLAN

Indicate claim boundaries, permanent watercourses, access road and distance to nearest town, proposed surface disturbances including roads, test pits, trenches, portals, drill sites, and camp sites.

LOCATION MAP

Show nearest town and access road.



**LOCATION MAP- STIRRUP
MINERAL CLAIM**

NTS REF. 92 N.E.
SCALE - 1: 500,000

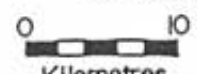
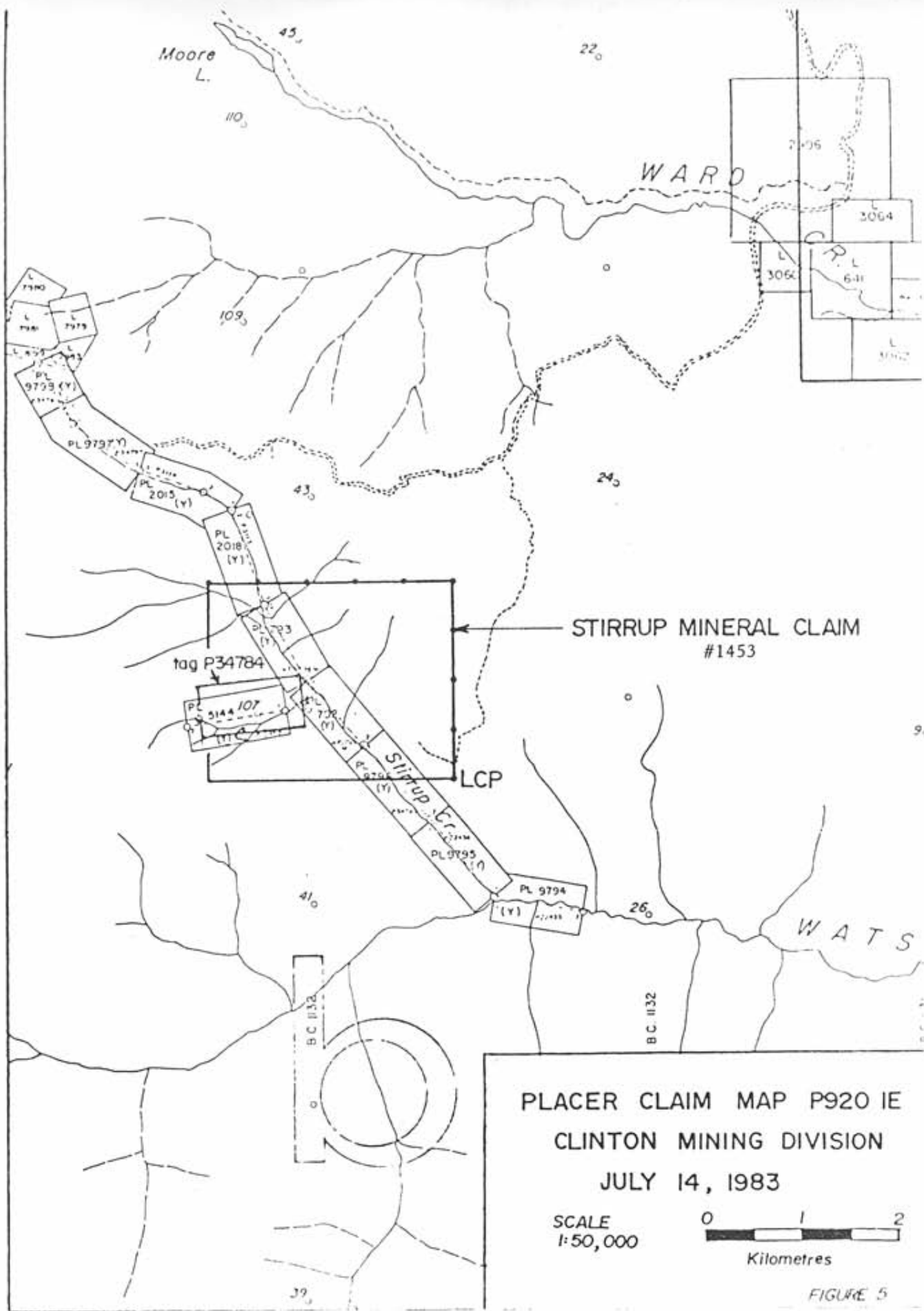


FIGURE 1



PLACER CLAIM MAP P920 IE
 CLINTON MINING DIVISION
 JULY 14, 1983

SCALE 1:50,000

0 1 2 Kilometres

FIGURE 5

APPENDIX D

STATEMENT OF EXPLORATION AND DEVELOPMENT

STIRRUP MINERAL CLAIM #1453

Summary of Assessment Costs (Estimated Only)

Travel

From Smithers to Stirrup Mileage 1,080 km x 0.20/km:	\$216.00
Vehicle Rental 3 days x \$50.00/day	150.00
Travel from Stirrup to Smithers 1,080 km x 0.20/km	216.00
Gas to and from Stirrup and on property	65.00

Supplies

Maps 1:5,000 scale photo enlargements	60.00
Food 3 people 3 days	150.00
Sampling equipment, bags, tags, shovels, etc.	<u>65.00</u>
Sub-Total	\$922.00

Prof. Fees

L. Nichols \$570/day x 3 days 2 days field and 1 day travel	\$1,710.00
D. Watson \$300/day x 3 days 2 days field and 1 day travel	900.00
J. Beger \$200/day x 3 days	<u>600.00</u>
Sub-Total	\$3210.00

Assays (Loring Laboratories Ltd.)	\$700.00
-----------------------------------	----------

Report Compilation

L. Nichols 1 day	\$570.00
Report supplies (covers, binding, printing, copies, etc. for 3 copies)	50.00
Drafting 8 hours x \$20.00/hour	<u>160.00</u>
Sub-Total	\$780.00

Total Assessment Costs	\$5,612.00
------------------------	------------

Maintenance fees to government (\$10.00 x 20 units)	200.00
---	--------

Grand Total Paid Out on Behalf of Client	\$5,812.00
--	------------

INVOICE

TERRACON GEOTECHNIQUE LTD.
5909 - 45th Street, P.O. Box 1048
Leduc, Alberta T9E 2Y6 Canada
Phone: (403)986-7874
Telex: 037-43265

Mr. E. Horne
6 - 1114 Rockland Ave.
Victoria, British Columbia

Date August 15, 1984
Invoice 83-19-02

Re: Stirrup Claim

Professional Services for: Field, laboratory and office time and expenses incurred to conduct a geological mapping and geochemical sampling and interpretation program to evaluate the mineral potential of gold claim (1453) at Stirrup Creek (Clinton Mining Division).

PROFESSIONAL FEES:

L. Nichols	37 hours @ \$71.00/hour	\$2627.00
D. Watson	44.5 hours @ \$30.00/hour	1335.00
J. Beger	3 days @ \$200.00/day	600.00

TECHNICAL SERVICES:

S. Crowe (Word Processing)	2 hours @ \$20.00/hour	40.00
M. Dawson (Drafting)	5 hours @ \$20.00/hour	100.00

DISBURSEMENTS:

L. Nichols (Expenses)	402.53
D. Watson (Expenses)	12.90
Reproductions	39.64
Geochemical Analyses by Loring Laboratories	433.30

TOTAL DUE AND PAYABLE \$5,590.37

TERMS: NET 30 DAYS

C. DRILLING (Details in report submitted as per section 8 of regulations.)
 (The itemized cost statement must be part of the report.)

COST
Nil

D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL
 (Details in report submitted as per section 5, 6, or 7 of regulations.)
 (The itemized cost statement must be part of the report.)
 (State type of work in space below.)

o Base Map Preparation and detailed Geological Mapping at a scale of 1:5,000	2711.00
o Stream Sediment Sampling	3711.00
TOTAL OF C AND D	5622.00

Assessment Report follows

Who was the operator (provided the financing)? Name E. HORNE
 Address 6-1144 Rockland Ave
Victoria B.C.

Portable Assessment Credits (PAC) Withdrawal Request		AMOUNT
Amount to be withdrawn from owner(s) account(s):		
Name of Owner		
(May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.)	1. <u>E. HORNE</u>	<u>1824.00</u>
	2. ....	.....
	3. ....	.....
	4. ....	.....
TOTAL WITHDRAWAL		<u>1824.00</u>
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL		<u>7446.00</u>

I wish to apply \$ 4000.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

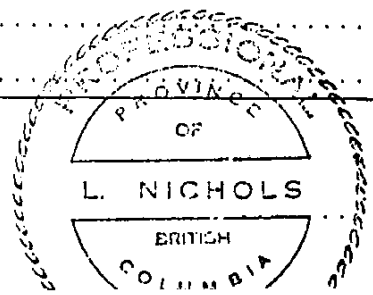
Stirrup Claims Record No. 1453; Month of Record July 2/13

$2 \times 20 \times 100 = \4000

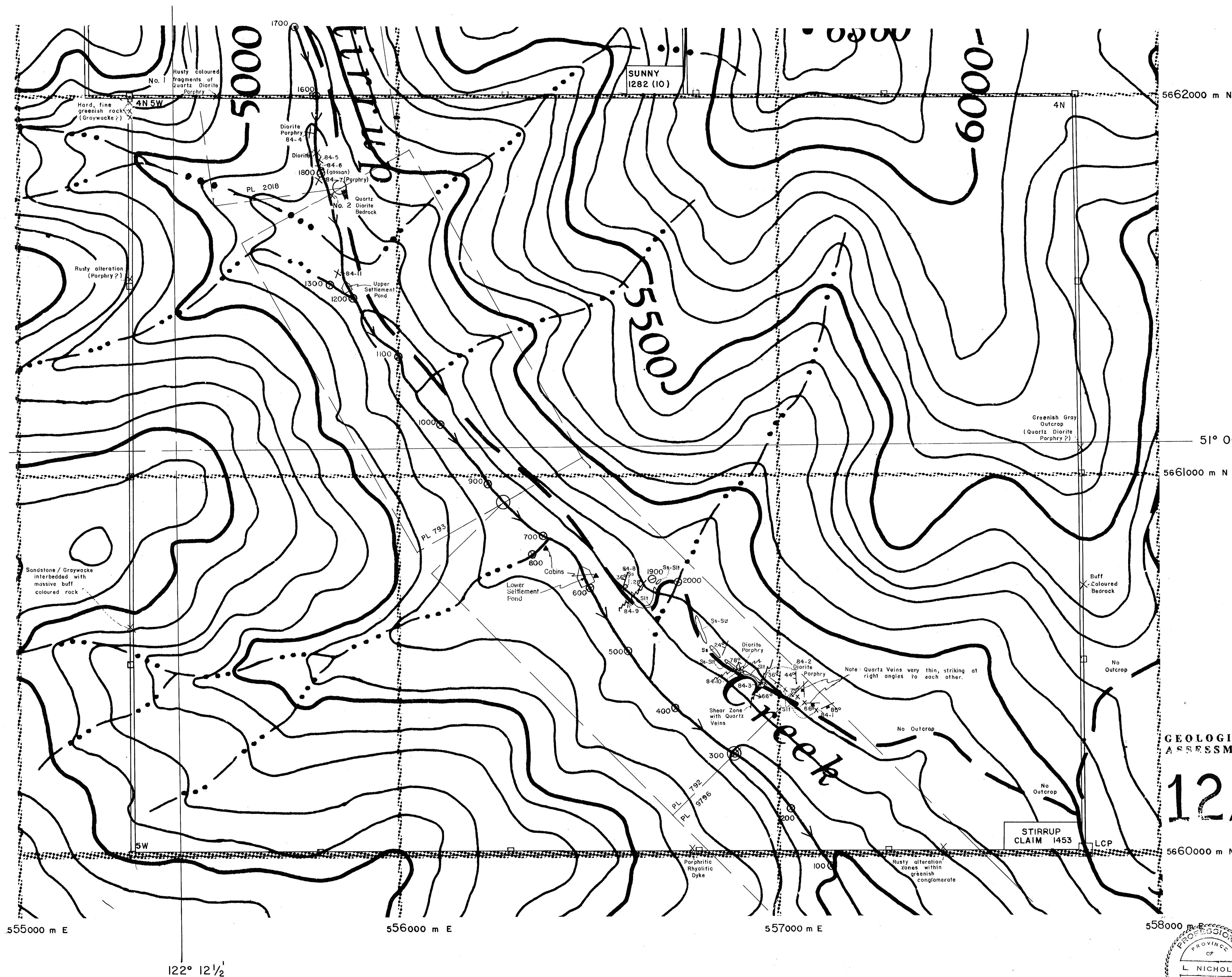
Value of work to be credited to portable assessment credit (PAC) account(s).

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

		Name	AMOUNT
In owner(s) name.	1.	<u>Nil</u>	
	2.	.....	.....
	3.	.....	.....
In operator(s) name (party providing the financing).	1.	.....	.....
	2.	.....	.....
	3.	.....	.....

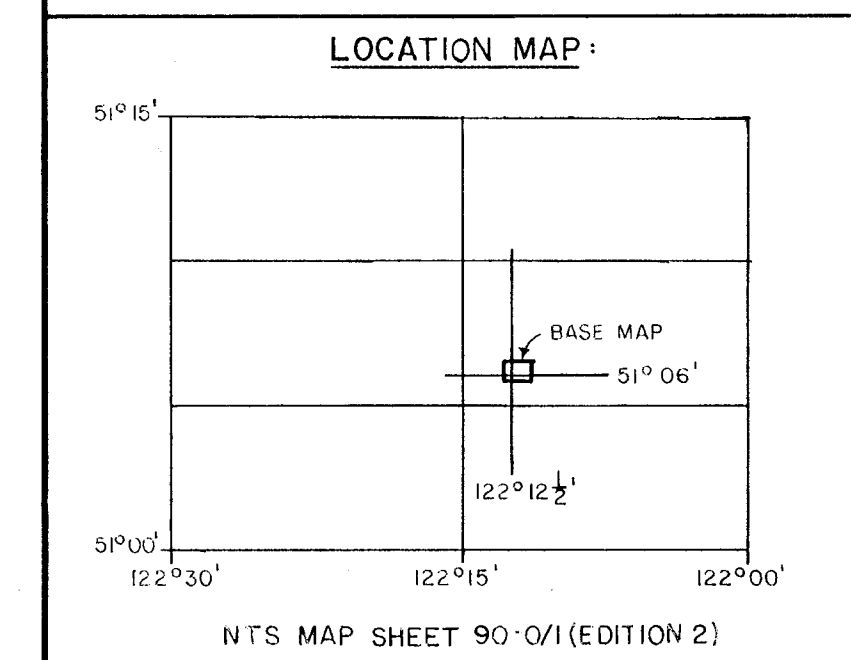


L. Nichols
 (Signature of XXXXX)
 Agent



LEGEND

- 1. TOPOGRAPHIC FEATURES**
- Roadway
 - Stirrup Creek
 - Contour (ft)
- Contour Interval: 100 ft
- 2. CLAIM FEATURES**
- LCP Lead corner post of Stirrup Claim
 - 4N Corner post of Stirrup Claim
 - Intermediate post of Stirrup Claim
 - Mineral claim boundary
 - Placer claim post
 - Placer claim boundary
- 3. GEOLOGICAL / GEOCHEMICAL FEATURES**
- 20° Strike and Dip
 - Joint vertical
 - Joint horizontal
 - 10° Joint with dip
 - 700 Stream sediment sample and number
 - × 84-7 Small outcrop and sample number
 - Extensive outcrop
 - Shear zone with attitude
 - Ss Sandstone
 - Silt Siltstone



BASE MAP:

This map has been photographically enlarged from the NTS map sheet 92-01 (Edition 2) ten fold.

Coordinates shown are of Universal Transverse Mercator Grid.

SCALE 1:5 000 (of enlargement)

GEOLOGICAL BRANCH ASSESSMENT REPORT

12,786

APPROXIMATE MEAN DECLINATION 1973 FOR CENTRE OF MAP

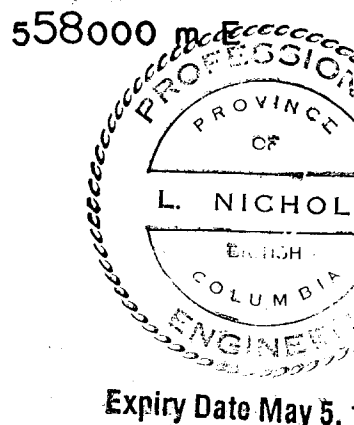
STIRRUP MINERAL CLAIM No. 1453
CLINTON MINING DIVISION

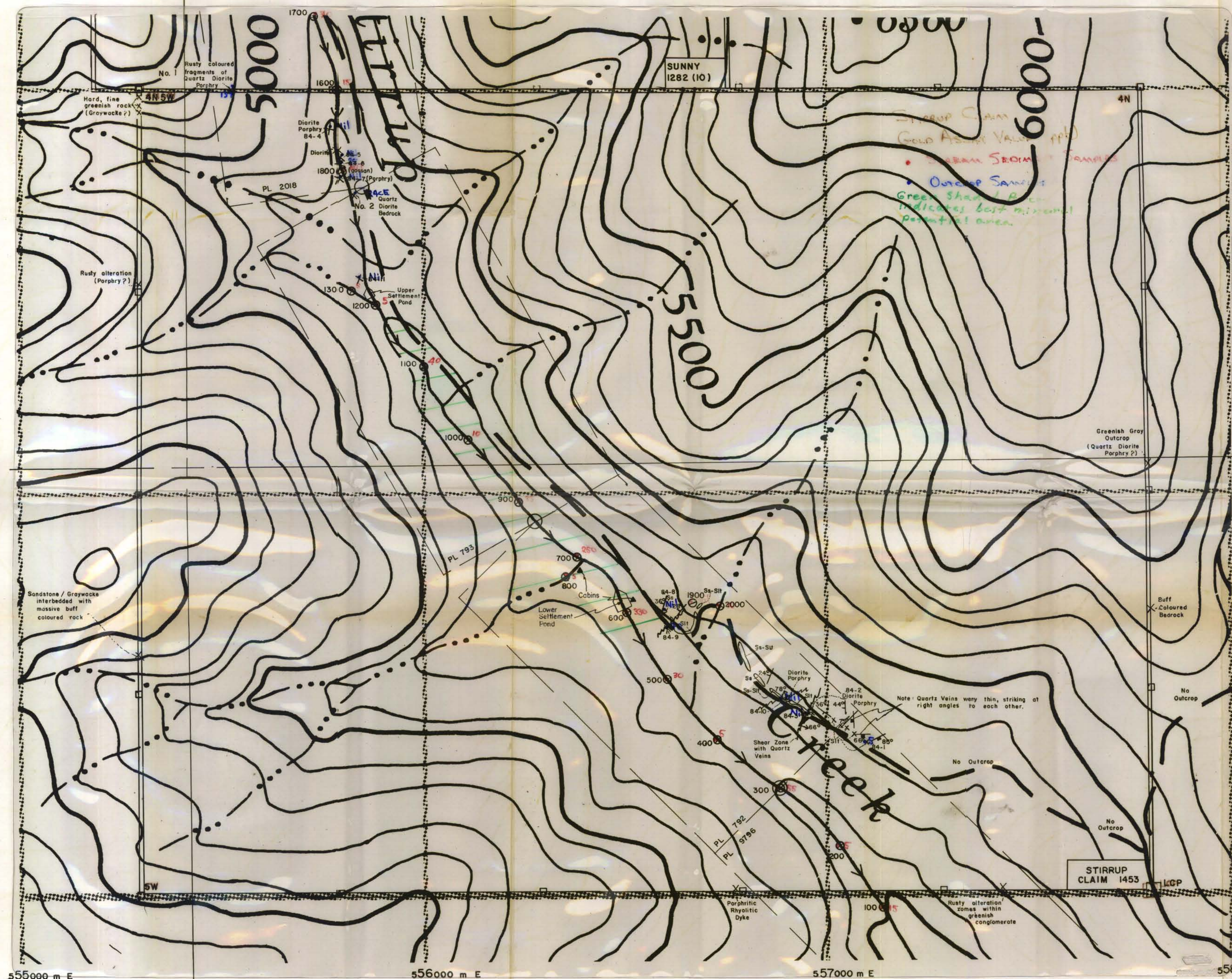
1984 GEOLOGICAL MAPPING and GEOCHEMICAL SAMPLING PROGRAM

Date: JULY / 84 Project: 84-19 Figure No. 6

TERRACON GEOTECHNIQUE LTD.

Expiry Date May 5, 1988





LEGEND

1. TOPOGRAPHIC FEATURES

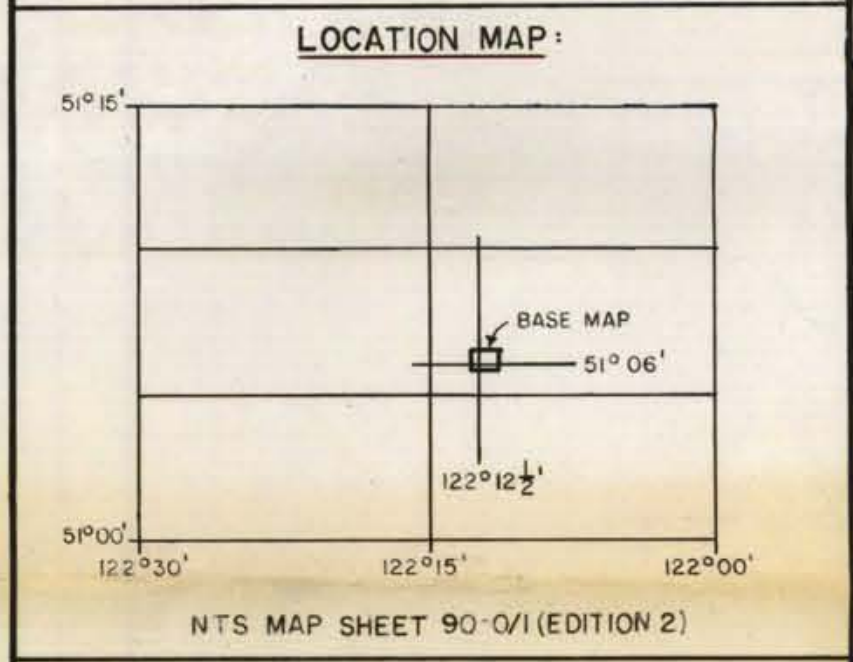
- Roadway
- Stirrup Creek
- 5500 Contour (ft)
- Contour Interval: 100 ft

2. CLAIM FEATURES

- LCP Lead corner post of Stirrup Claim
- 4N Corner post of Stirrup Claim
- Intermediate post of Stirrup Claim
- Mineral claim boundary
- Placer claim post
- Placer claim boundary

3. GEOLOGICAL / GEOCHEMICAL FEATURES

- 20° Strike and Dip
- Joint vertical
- Joint horizontal
- 10° Joint with dip
- ⊙ 700 Stream sediment sample and number
- × 84-7 Small outcrop and sample number
- Extensive outcrop
- Shear zone with attitude
- Ss Sandstone
- Silt Siltstone



BASE MAP:

This map has been photographically enlarged from the NTS map sheet 92-O/1 (Edition 2) ten fold.

Co-ordinates shown are of Universal Transverse Mercator Grid.

0 50 100 200 300 m

SCALE 1:5 000 (of enlargement)

GEOLOGICAL BRANCH ASSESSMENT REPORT

12,786

APPROXIMATE MEAN DECLINATION 1973 FOR CENTRE OF MAP

00° 35' GRID NORTH
23° 00' MAGNETIC NORTH
23° 00' at 415 MILS

STIRRUP MINERAL CLAIM No. 1453
CLINTON MINING DIVISION

1984 GEOLOGICAL MAPPING and GEOCHEMICAL SAMPLING PROGRAM

Date: JULY/84 Project: 84-19 Figure No. 6

TERRACON GEOTECHNIQUE LTD.

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