

GEOLOGICAL REPORT

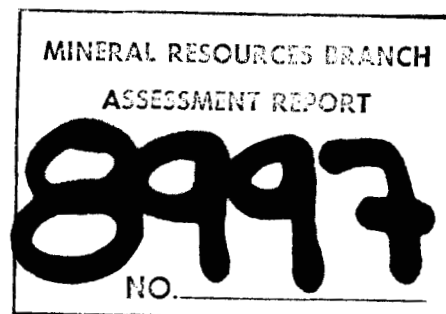
INEL MINERAL CLAIMS

Situated sixty miles northwest of Stewart

in the

Liard Mining Division

Latitude  $56^{\circ} 36'$  N, Longitude  $130^{\circ} 57'$  W  
N.T.S. 104B/10



Owned by: Skyline Explorations Ltd.  
Operator: Skyline Explorations Ltd.,  
Vancouver, B.C.  
Field Work: July 14th to September 4th, 1980  
Report by: R. G. Gifford, P. Eng.

November 21st, 1980

Vancouver, B.C.

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## INTRODUCTION

The Inel Mineral Claims cover a gold-copper-zinc prospect situated in the Coast Mountains of northwestern British Columbia (Fig. 1). Chalcopyrite and sphalerite enriched in gold form the principal ore minerals present. Mineralization is developed within a sequence of volcanic and sedimentary rocks which are peripheral to intrusions of the Coast Plutonic complex.

The program of geological mapping, surface sampling and trenching described in this report was undertaken on behalf of Skyline Explorations Ltd. and was carried out to further assess the economic potential of the Inel Property. The work was performed from July 14th to September 4th, 1980. The writer was ably assisted in the field by C. Davis and S. Gifford.

The development work of 1980 was mapped using tape, altimeter and compass for local control. Reconnaissance sampling of the property and planimetric control of the detail mapping utilized base maps of Birkeland 1973.

## PROPERTY

The Inel Property consists of a block of ten 2-post claims, and an overlapping block of four mineral claims (modified

grid system) which contain 42 mineral claim units. The 2-post claims are named Inel 43, 45 to 47, 57 to 60, 62, and 64. The mineral claims are named Inel 1 to 4.

All the claims are held by Skyline Explorations Ltd., Vancouver, B.C.

#### HISTORY AND DEVELOPMENT

Forrest A. Kerr (1929) noted that the glacier at the head of Bronson Creek carried considerable quantities of float containing pyrite, sphalerite and galena. The discovery of showings on the present Inel claims was recorded in 1965 by Cominco prospectors who had traced the float to its source area. The prospect remained dormant until 1969 when it was staked as the Inel Group by R. G. Gifford and vended to Skyline Explorations Ltd.

The claims were held under option by Texasgulf Inc. during the period of 1973 to 1974. In subsequent years the property was maintained by Skyline Explorations Ltd.

In 1980 a program of sampling and trenching to further develop the property was carried out by Skyline Explorations Ltd.

### LOCATION AND ACCESS

The Inel Claim Group is in the Liard Mining Division, British Columbia at Latitude 56° 37' N, Longitude 130° 57' W, and N.T.S. 104/B10. The claims are above timberline and the elevation of the property ranges from 3500 to 6500 feet.

The prospect is 7 miles (11 km) southeast of the confluence of Bronson Creek and the Iskut River on the east side of Bronson Glacier. The region is mountainous with numerous glaciers.

The nearest road is the Stewart-Cassiar Highway, 38 miles (60 km) to the northeast. A gravel airstrip in present disuse is situated 8 miles (13 km) to the southeast. Access for the 1980 work was by helicopter from both the town of Stewart, B.C. and the airstrip at Bob Quinn Lake.

Optimum conditions for surface work occur in late summer centred around the period July 15th to September 15th.

### GEOLOGY

The Inel Property lies within an extensive region of volcanic and sedimentary rocks of Upper Triassic age. The prospect is in a south-directed wedge of these rocks and is generally bounded on the southwest by granitic intrusions

of Cretaceous/Tertiary age of the Coast Plutonic complex and on the southeast by clastic sedimentary rocks of Jurassic/Cretaceous age of the Bowser Basin (Monger 1975, Souther 1979).

Tuffaceous and andesitic volcanic rocks and argillaceous sedimentary rocks predominate in the vicinity of the prospect.

This sequence is considered to be Upper Triassic in age in this report and to rest unconformably on a basement of metamorphosed sedimentary rocks of pre-Permian age (Kerr 1948, Souther 1979).

#### Rock Types

The main areas of interest in this report are the Discovery and Inel zones which take in a layered sequence of rocks that strike to the north and dip approximately 30° to the east (Fig. 2). The stratigraphy of this area is not established with certainty but evidence suggests the succession is normal with bedding tops facing up.

The main sequence as presently considered consists of four members as described below, from west at the inferred base to east at the eroded top. All thicknesses given are measured at section 223,000 north (Fig. 5).

Top of Section Unexposed

Unit 4. Andesitic volcanic rocks; massive. Forms the upper member of section, top is eroded. Measured thickness is approximately 180 feet (55 m).

Unit 3. Argillite; thinly bedded. Total thickness approximately 710 feet (215 m).

Unit 2. Tuff; pyritic. Forms a principal host to mineralization. Total thickness is approximately 960 feet (290 m).

Unit 1. Argillite; laminated to thinly bedded. Forms the lower member of section, basal part is in contact with a feldspar-porphyry intrusion which slightly transgresses bedding. Measured thickness is approximately 280 feet (85 m).

Base of Section Unexposed

For this report the Discovery and Inel zones denote the portion of the Inel Claim Group in which surface mineralization is conspicuous and take in the main showings of the property. The Discovery zone is taken as the broad region of mineralization which is generally concordant to bedding

cleavage and which lies to the north of the Inel Break. The Inel zone is the region of mineralization which generally cross-cuts the bedding and which is associated with massive sulfide veins, major breccia bodies and quartz veins. It generally conforms to the area of the Inel Break.

### MINERALIZATION

The main host to mineralization on the property is an assemblage of volcanic and sedimentary rocks in which gold, copper and zinc are the metals of main interest. Intrusive into this sequence is a feldspar porphyry which sustains a minor amount of copper and molybdenum mineralization. Alteration of wall rock is associated with the mineralized region and includes extensive sections which are feldspathized, chloritized or dolomitized.

The mineralization is localized along each of two intersecting structural zones which trend approximately normal to each other. One is a cleavage zone which is concordant with the bedding of tuffaceous rocks, Unit 2, and which strikes northerly with moderate east dip. It is host to pyrite-sphalerite-chalcopyrite mineralization which occurs in massive lenses and thin sheets that are enriched in gold. The cleavage zone is approximately 500 feet (150 m) in thickness and 1200 feet (365 m) in extent.



The other controlling structure is a fissure zone, termed the Inel Break, which cross-cuts the volcanic and sedimentary rocks of Units 1, 2, 3 and 4. The fissure zone strikes easterly with sub-vertical dip and is host to pyrite-sphalerite-chalcopyrite mineralization which is enriched in gold and which occurs in veins, local stockworks, and local bedded replacements. The fissure zone is observed through 1000 feet (300 m) of vertical relief, 1000 feet (300 m) of width and approximately 2000 feet (600 m) of length.

Pyrite is the most abundant sulfide present on the property. Other major sulfides in general order of abundance are sphalerite, chalcopyrite and galena with small amounts of molybdenite, arsenopyrite, chalcocite and bornite as well as gold and silver from assays. Rust coloured iron staining is conspicuous over a large portion of the mineralized area.

#### SURFACE SAMPLING

The recent program of surface sampling was designed to further explore the extent and distribution of gold values. Pyrite was taken to be a close associate with the gold and hence the bulk of material sampled was of pyrite-rich rock. Assay data tended to confirm this association and established the presence of gold in an encouraging amount. The possibility remains that gold values may be also associated with inter-

vening sections of pyrite-lean host rock such as those which are more siliceous in character.

A description of the samples and the results of analysis is given in Appendix A, and their location is given in Figures 2, 3 and 4.

Within the Discovery zone an average of .40 oz/T Au, 1.20 oz/T Ag and 7.50% Zn was obtained for 7 samples in a length of about 600 feet (180 m) and width of 3.5 feet (1.1 m). Further study of a 60 foot (18 m) length of accessible section in this zone assayed 0.35 oz/T Au, 1.23 oz/T Ag and 2.20% Zn across 11 feet (3.5 m).

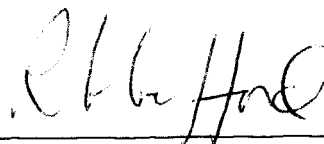
#### TRENCHING

In 1980 nine trenches and pits were excavated with the removal of approximately 100 cu. yds. of rock and talus. Location of these trenches is shown in Figures 3 and 4.

#### CONCLUSION

The Inel Property offers a considerable scope for development as evidenced by the extensive sulfide mineralization, the potential for major tonnage and the existence of ore

grades in gold, zinc and copper. A detailed investigation of the prospect is warranted.

A handwritten signature in cursive script, appearing to read "R. G. Gifford", written above a horizontal line.

R. G. Gifford, P. Eng.  
November 21, 1980

RGG:sg

REFERENCES

- Birkeland, A. O., 1973, Geological and Geophysical Report, Inel and Hiho Mineral Claims: unpublished report for Texasgulf Inc.
- Gifford, R. G., 1972, Geological Survey, Inel Claim Group: unpublished report for Texasgulf Inc.
- Kerr, F. A., 1948, Lower Stikine and Western Iskut River Areas, British Columbia: Geological Survey, Canada, Memoir 246.
- Kerr, F. A., 1930, Preliminary Report on Iskut River Area, British Columbia: Geological Survey, Canada, Summary Report, 1929, Part A, p. 30A - 61a.
- Monger, J. W. H., 1975, Correlation of Eugeosynclinal Tectonostratigraphic Belts in the North American Cordillera; Geoscience Canada, Volume 2, No. 1.
- Souther, J. G., Brew, D.A., & Okulitch, A. V., 1979, Iskut River, map 1418A: Geological Survey, Canada.

APPENDIX A: SAMPLE RESULTS

Number	Description	oz/T		Assay			
		Au	Ag	Pb	Zn	Cu	Mo
1903	6" Float; highgrade sphalerite and galena. Ref R3.	0.105	0.73	0.58	7.05	0.06	0.001
1904	Continuous chip across vein structure. Ref R4.	0.003	0.04	0.01	0.03	0.01	0.001
1905	Same as 1904. Ref R4.	0.053	0.18	0.01	0.05	0.01	0.001
1906	Same as 1904. Ref R4.	0.016	0.10	0.01	0.02	0.01	0.001
1907	Random chip across 3 m; sulfide vein. Ref R7/1.	0.006	0.19	0.01	0.03	0.03	0.001
1908	North Basin; random chip across 1.2 m of pyrite-rich rock. Ref R8/5.	0.054	0.19	0.09	0.20	0.01	0.001
1909	Continuous chip in trench across sulfide stringers. Ref R11/1 + 5 m.	0.192	0.73	0.07	0.43	0.17	0.001
1910	Same as 1909. Ref R11/1 + 5 m.	0.002	0.08	0.01	0.38	0.01	0.001
1911	Same as 1909. Ref R11/1 + 5 m.	1.040	3.64	0.04	1.68	0.40	0.001
1912	Same as 1909. Ref R11/1 + 9 m.	0.572	0.91	0.05	2.94	0.18	0.001
1913	Same as 1909. Ref R11/1 + 9 m.	0.029	0.16	0.02	0.22	0.02	0.001
1914	Same as 1909. Ref R11/1 + 16 m.	0.102	0.70	0.02	1.12	0.13	0.001
1915	Continuous chip of sulfide band; 1 m. Ref R11/2.	0.018	0.38	0.01	0.10	0.12	0.001
1916	Continuous chip of sulfide vein; 1 m. Ref R11/3(1).	0.502	2.10	0.37	4.52	0.45	0.001
1917	Same as 1916. Ref R11/3(2).	0.106	0.19	0.03	0.34	0.02	0.001
1918	Continuous chip of vein material, 1 m. Ref R11/3 + 72 m.	0.076	0.16	0.01	1.46	0.06	0.001
1919	Chip sample, sulfide vein, 0.2 m. Ref R5/2.	0.052	0.12	0.01	0.17	0.02	0.001

continued...

APPENDIX A: SAMPLE RESULTS - continued

<u>Number</u>	<u>Description</u>	<u>oz/T</u>		<u>Assay</u>			
		<u>Au</u>	<u>Ag</u>	<u>Pb</u>	<u>Zn</u>	<u>Cu</u>	<u>Mo</u>
1944	Grab from outcrop. Ref R41.0.	0.004	0.01	0.01	0.07	0.07	
1945	Debris from outcrop. Ref R41.3. (same unit as R41.0)	0.001	0.47	0.01	11.70	0.03	
1946	Grabs from outcrop. Ref R43.0.	0.001	0.01	0.01	0.08	0.12	0.002
1947	Float-rock chips; well-mineralized with chalcopyrite (sphalerite). Ref R44.0.	0.016	1.67	0.21	1.18	1.09	
1948	Grabs of sulfide-rich material in fracture zone; fair galena, sphalerite. Ref R45/47.	0.007	3.58	3.98	8.65	0.05	
1949	Grabs of sulfide-rich area from outcrop; altered; fair galena, sphalerite. Ref R46.0.	0.009	1.03	0.94	2.62	0.03	
1950	Grabs from sulfide-rich outcrop (galena, sphalerite) within fracture zone, upslope from 1948. Ref R48.0.	0.003	0.96	0.98	3.04	0.08	
1951	Debris; from area of sulfide-stringered volcanics; local chalcopyrite-galena associated with pyrite veins. Ref R49.0.	0.088	3.12	0.04	0.24	0.19	

NOTE: All Au and Ag analysis by Fire Assay.

APPENDIX B

STATEMENT OF EXPENDITURES, July 14th to September 4th, 1980

Inel Claim Group, Liard Mining Division

PERSONNEL:

R. G. Gifford, P. Eng.:	18 days @ \$275/day	\$4,950
C. Davis, assistant:	10 days @ \$100/day	1,000
S. Gifford, assistant:	8 days @ \$ 85/day	680

SUPPORT:

Room & board:	36 man-days @ \$30/day	1,080
Travel - R. Gifford, C. Davis, P. H. Sevensma, S. Gifford, R. Davis		1,748
Helicopter		1,075
Hotel		423

ANALYSIS:

Rock assays, Au Ag Cu Pb Zn Mo; 25 samples	400
--------------------------------------------	-----

Total Expenditures, Inel Claims  
for this period - \$11,356

Declared before me at the \_\_\_\_\_  
of \_\_\_\_\_, in the  
Province of British Columbia, this \_\_\_\_\_  
day of \_\_\_\_\_, A.D.

\_\_\_\_\_  
R. G. Gifford, P. Eng.

\_\_\_\_\_  
A Commissioner for taking Affidavits within British Columbia

APPENDIX C

DISTRIBUTION OF WORK FOR PERIOD JULY 14th to SEPTEMBER 4th, 1980

Work was done on the Inel 2, 3 and 4 mineral claims and on Inel 47 2-post claim.

Costs are pro-rated as follows:

Inel 47 \$6,873 of which \$2,268 is physical  
and \$4,605 is geological.

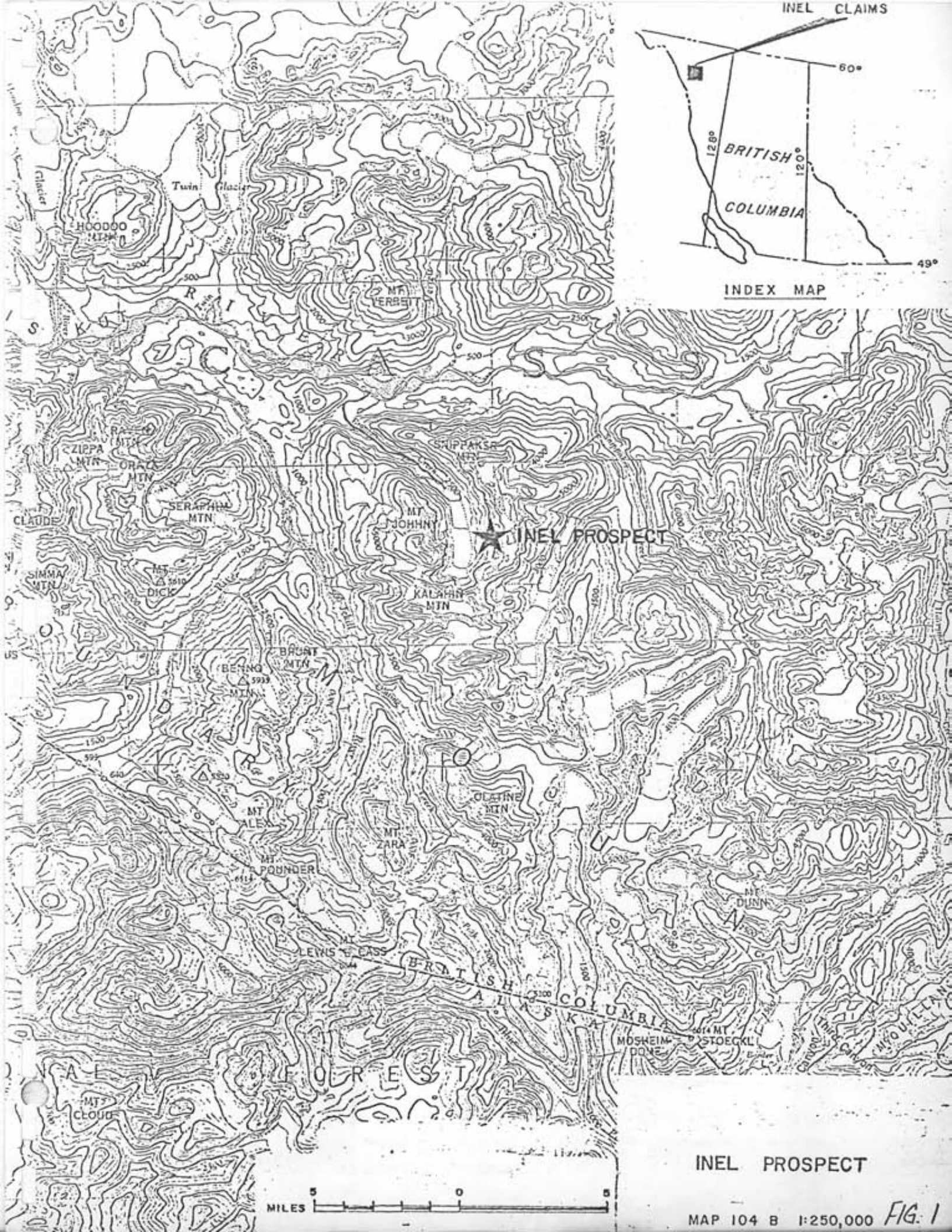
Inel 3 \$1,963 of which \$504 is physical  
and \$1,459 is geological.

Inel 2 and 4  
\$2,520 of which \$1,008 is physical  
and \$1,512 is geological.

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\$11,356 Total Costs





INEL CLAIMS

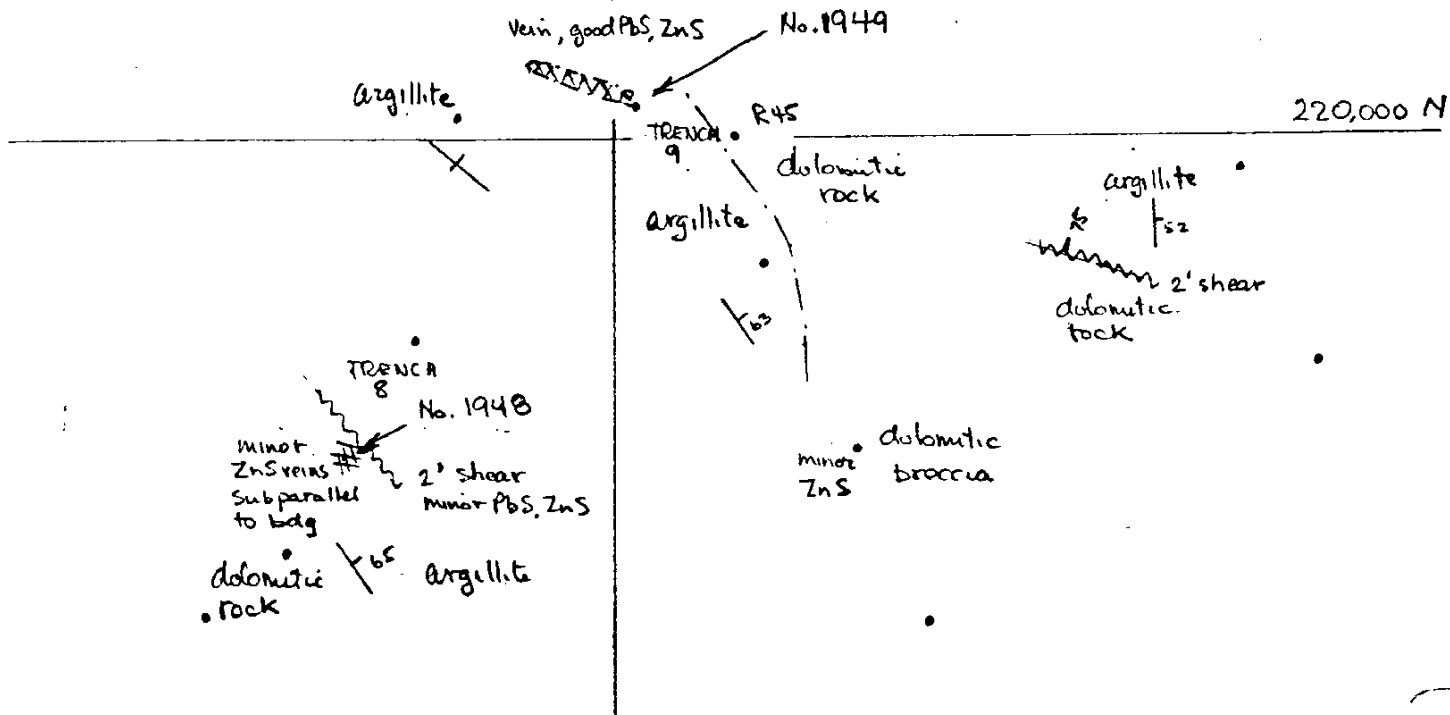
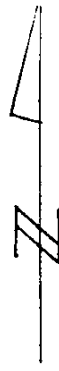
INDEX MAP

INEL PROSPECT

MAP 104 B 1:250,000 FIG. 1

TRENCH NO.	DIMENSION
8	3' x 3' x 20'
9	3' x 3' x 20'

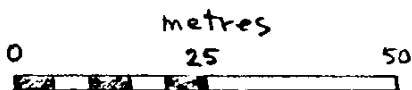
6,000 E



Area is rugged, and rock exposures are poor

SAMPLE No.	Au oz/t	Ag oz/t	%Pb	%Zn	%Cu
1948	.007	3.58	3.98	8.65	.05
1949	.009	1.03	.94	2.62	.03

*R. Gifford*  
Nov 21/80

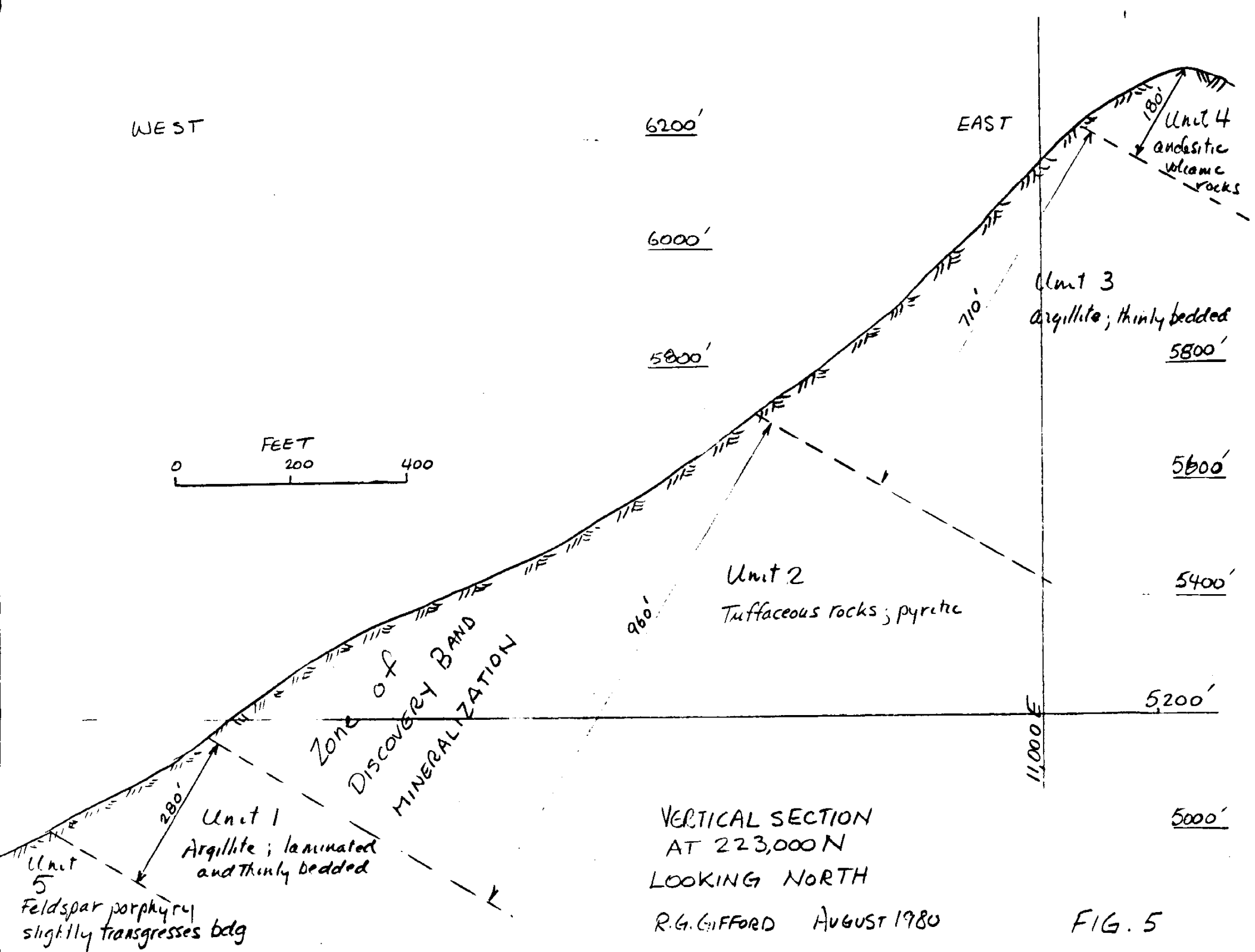


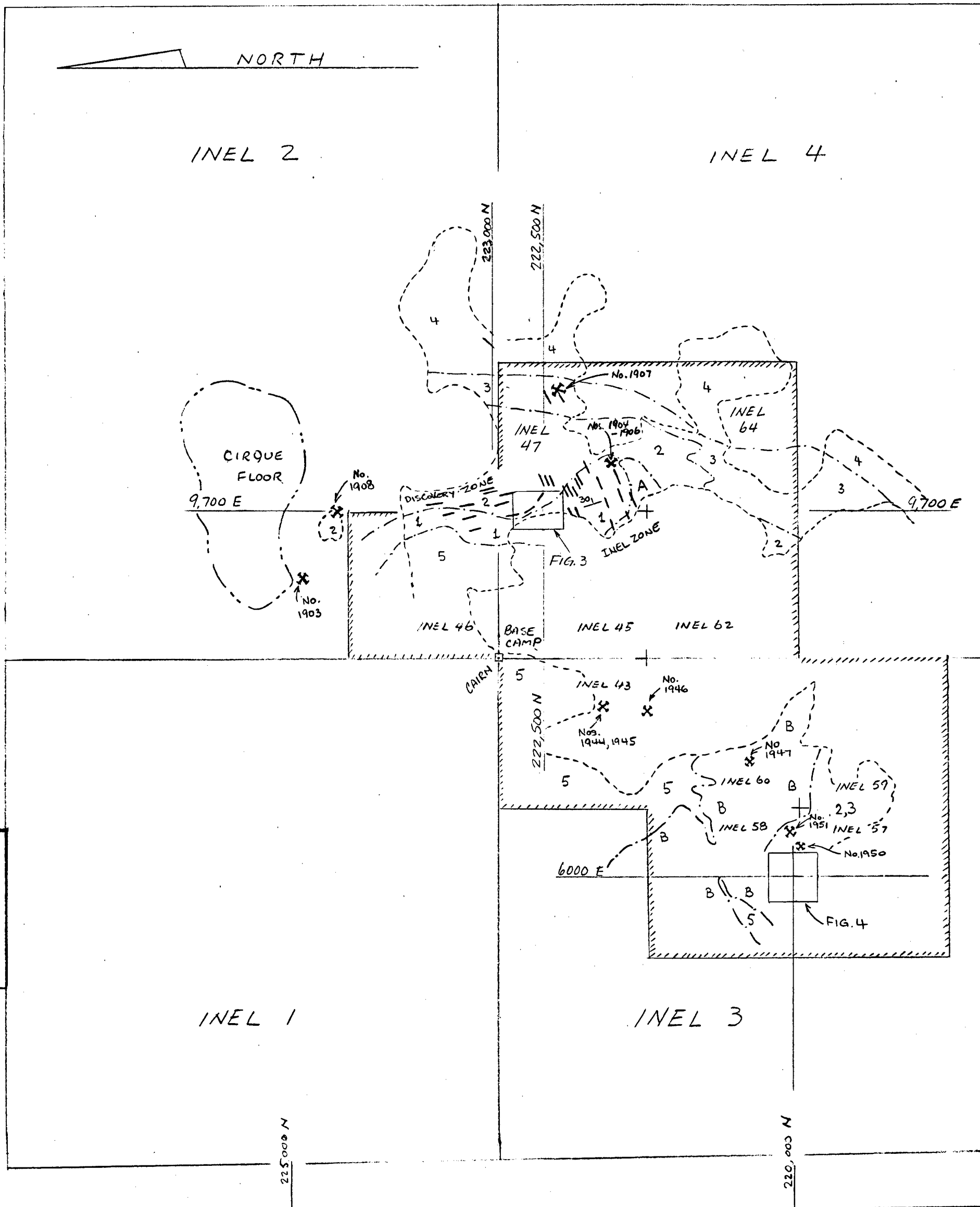
SCALE 1:1000

ASSAY SKETCH PLAN  
GLACIER SHOWING

R G GIFFORD AUGUST, 1980.

FIG. 4



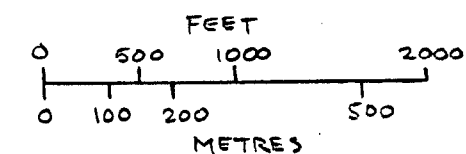


LEGEND

- A Brecciated and altered rocks; strongly pyritized.
- B Dolomitic altered rocks; brecciated in part.
- 5 Feldspar porphyry; pyritic.
- 4 Andesitic volcanic rocks.
- 3 Argillite
- 2 Tuff; locally pyritized, host to important sulfide mineralization
- 1 Argillite, graywacke

/// Sulfide veins and stringer zones

Sample No.	oz/T Au	oz/T Ag	% Pb	% Zn	% Cu
1903	.105	.73	.58	7.05	.06
1904	.003	.04	.01	.03	.01
1905	.053	.18	.01	.05	.01
1906	.016	.10	.01	.02	.01
1907	.006	.19	.01	.03	.03
1908	.054	.19	.09	.20	.01
1944	.004	.01	.01	.07	.07
1945	.001	.47	.01	11.70	.03
1946	.001	.01	.01	.08	.12
1947	.016	1.67	.21	1.18	1.09
1950	.003	.96	.98	3.04	.08
1951	.088	3.12	.04	.24	.19



GEOLOGY AND INDEX PLAN  
INEL CLAIMS

R.G. GIFFORD AUG 1980

R. Gifford  
Nov 1/80

FIG. 2

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

8997

NO.

**LEGEND**

SAMPLED SECTION  
 [Symbol] sample no. (width in metres) Au Ag Cu Zn  
 Au Ag values oz/ton  
 Cu Zn values %

[Symbol] pyrite-rich band; intervening wall rock contains 1/2" to 1" pyrite stringers.

NOTE 'A': Pyrite-bearing section, rock exposure is patchy.

..... inferred contact

Host rock to mineralization is pyritic tuff, bedding cleavage is strong and well mineralized with sulfide

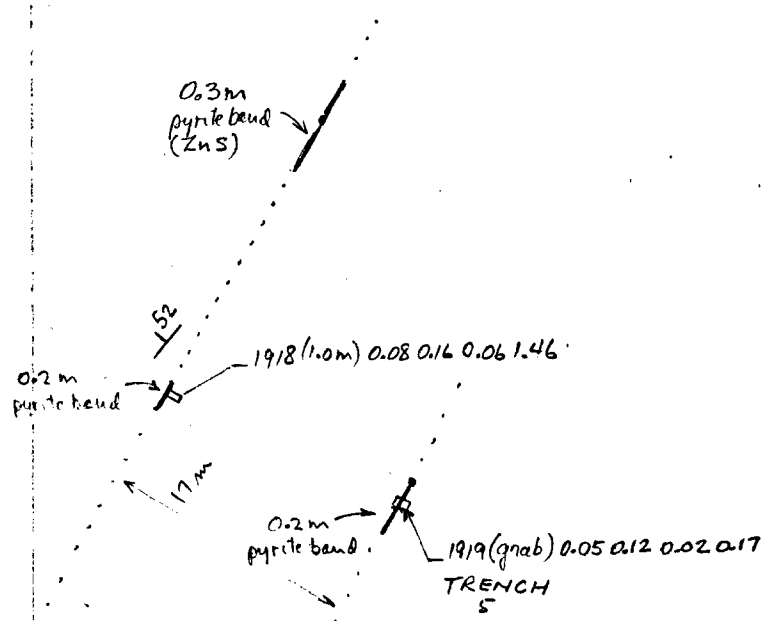
9,700 E



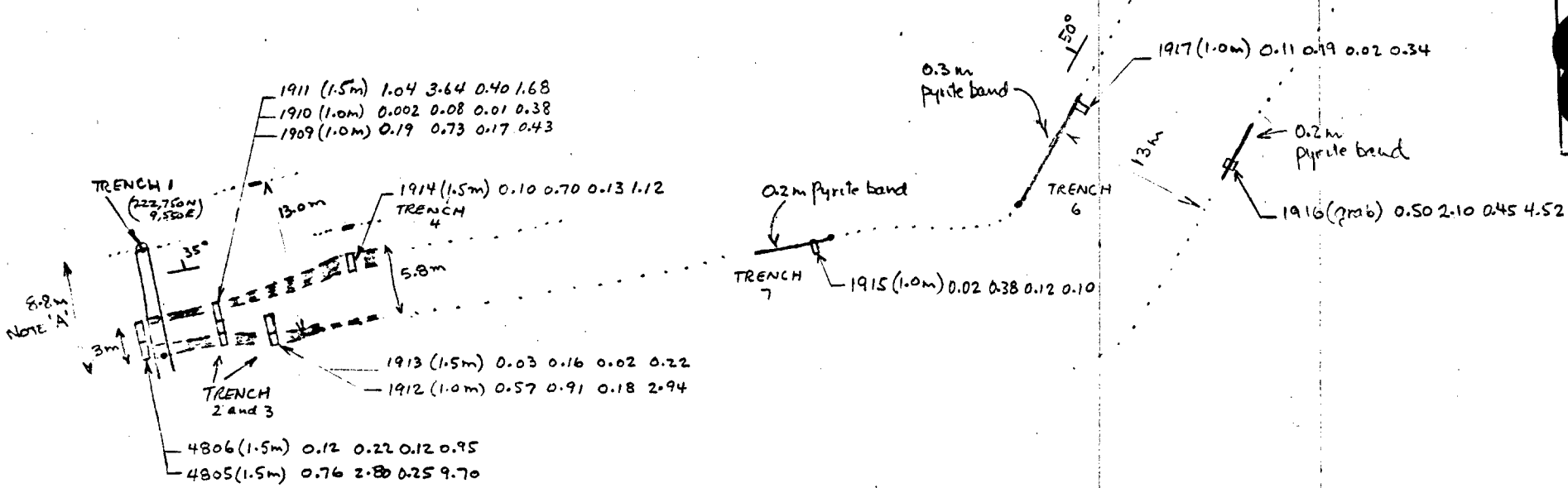
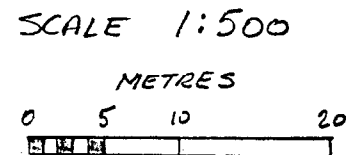
TRENCH No.	DIMENSION
1	25' x 6' x 3'
2	15' x 6' x 3'
3	15' x 3' x 3'
4	20' x 3' x 3'
5	20' x 3' x 3'
6	50' x 6' x 3'
7	25' x 3' x 3'

222,500 N

AREA OF POOR EXPOSURE



MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**8997**  
 NO.



INEL PROPERTY  
 ASSAY SKETCH PLAN  
 DISCOVERY BAND

REGGIFORD JULY 1980

R. H. H. Nov 21/80

FIG. 3