REPORT ON THE
McLEOD Pb/Zn OCCURRENCES
NTS 82 M 7
KAMLOOPS MINING DIVISION

REPORT ON THE

McLEOD Pb/Zn OCCURRENCES

40 MILES N OF REVELSTOKE, B.C.

NTS 82 M 7

CLAIMS: NEVADA AND VEGAS
KAMLOOPS MINING DIVISION

By: Dr. J. C. Kovacik of
Metallgesellschaft Canada Ltd.

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LIST OF ILLUSTRATIONS

1. INTRDOCUTION

A detailed geological survey has been carried out between July 19 - 25, 1977, in the area some 90 km north of Revelstoke. The party consisted of Dr. Peter Levin (Metallgesellschaft Canada Ltd.) and the author of this report.

The aim of the survey has been to provide sufficient evidence of structural relationship between the zone of Zn-Pb mineralization of the Cotton claims, studied last year, and another zone of ore showings known as McLeod Mine outcropping NE of the Cotton zone and covered by the Nevada and Vegas claims. Understanding of this structural relationship is crucial for the further exploration of both groups of claims.

Ore zone outcrops are located in the vicinity of Grace Mt. (6,500 ft). Cotton claims outcrops follow the gently sloping NW ridge while the McLeod zone extends into precipitous NE flank of the mountain which descends in a series of vertical cliffs into the Deep Creek. Difficult and dangerous sections fo the NE flank of Mt. Grace, of which many require climbing experience and rappel technique in descent, have not been previously explored. Thus an attempt has been made to scale the NE slopes of Mt. Grace in order to correlate the lithostratigraphic sequences and establish their structural relationship to the outcrops on the NW ridge.

The work consisted of lithostratigraphic and structural analysis along the foot traverses and a synthetic short helicopter survey. The effort has been concentrated on the Vegas and Nevada claims on the McLeod adit section and its SE extension, although a number of traverses had to be made outside this area to provide for a correct interpretation.

The Grace Mt. area is at present not readily accessible except by helicopter. (The closest pick-up spot is at Downie Creek 25 km to the east). The old tracks from Seymour Ann are overgrown for the most part and would have to be cleared first to allow for motorized transport.

The survey has been done on behalf of Metallgesellschaft Canada Limited (Vancouver) which, together with its partners, holds the Nevada and Vegas claims (owned by Messrs. Harold, Les and George Adams of Princeton and Kamloops, B.C.) as well as all neighbouring claims under option agreement.

2. PRESENT STATUS AND OBJECTIVES

2.1 Brief Geology

The area of Grace Mountain is built of folded sequences of Shuswap Metamorphic Complex. Dominant elements are the paragneisses and metaquartzites with subordinated carbonates, quartzmica schists, amphibolites and pegmatitic injections. Stratabound sulfide mineralization occurs within calcareous rock assemblages.

Transitional lithotypes are frequent, among para-elements in general and gneisses and quartzites in particular. The mineral assemblages are characteristic for garnetiferous amphibolite facies.

Megastructural features discussed by Fyles, J.T. (1970) are not readily observable in the Grace Mountain area which is supposed to lie on the NW flank of the Frenchman Cap techtonic dome.

The discovery of Zn-Pb sulfide mineralization in the area dates back to 1910. It has been explored at times ever since with varying intensity. The old workings include trenches, pits, short adits and boreholes, however, graphic documentation of these, except for a few assays is not available.

2.2 Results of 1976 Exploration

In 1976 a new concept has been conceived by F.-W. Wellmer of Metallgesellschaft Canada Ltd. based upon the model of the Ruddock Creek structure. Subsequent lithostratigraphic study in the field and a new structural interpretation have been made by P. Levin during the 1976 season. It has been suggested that both Cotton and McLeod zones are part of the same horizon folded into a syncline and thus favourable for ore concentration of Ruddock Creek type. The ore sequence has been identified with a carbonate-rich band of gneisses containing laterally changing facies of marble, calc-silicate layers, sulfides, biotite gneisses and clastics. A distinctive marble layer has been found to be persistent throughout the area as a leading marker horizon.

2.3 Programme 1977

Convincing evidence of the suggested Grace Mt. structure had to be found in the field in order to pursue further exploration. This

attempt was based on the premises that if there were a folded structure then:

a) The folded structure should display a certain lithological symmetry on both sides of the axial plane. A sufficient number of good marker horizons was needed to assess such a symmetry.

b) A certain rhythmicity could be expected in the deposition of such complex sedimentary sequences and this should also be symmetrical to the axial plane of the structure.

c) There should be, eventually, other evidence of symmetry of stratigraphic tops.

d) A syncline as a folded structure of a higher order should be accompanied by a related type of deformations of lower order or related microtectonic elements.

3. LITHOSTRATIGRAPHY OF THE McLEOD ZONE

In order to maintain a consistency in descriptions it will be assumed that the hypothesis of Mt. Grace syncline is correct and, therefore, the sense from the bottom to the top of the mountain will be identical with the sense of stratigraphic tops and will thus define the terms "below" or "above" as well.

3.1 Main Traverses

(Numbers are identical with those indicated on the accompanying map and graphics)

(2-3-4-5) McLeod adit
The sequence consists of finegrained metaquartzited with variable amount of small specks of biotite and coarser grained biotite gneiss. There is alternation and transitional varieties within both main units among the ratios of quartz, feldspar and biotite. The ore horizon is enclosed in the metaquartzite unit and is composed of three bands of sulfides (ZnS, PbS, FeS, Py) alternating with calc-silicate layers and rusty brown marble with phlogopite and

garnets. Biotite-rich calcareous gneiss tops the ore section. Large blocks of mixed scree obscure the lower part of the section.

(6-7-8-9)
Essentially similar to the McLeod adit except for a great reduction in sulfide and calc-silicate volume. Instead, calcareous biotite gneiss becomes dominant.

(13-14-15-16-17-18-19)
This section is dominated by metaquartzite and quartz-biotite gneiss with transitional types. The McLeod ore horizon is obscured by felsenmeer and talus. In the lower portion of the section two distinct calcareous horizons appear. The upper one is a massive slightly bedded clean marble of bluish-whitish colour. It is encased in biotite metaquartzites. About 80 m below is a more complex calcareous horizon resembling the ore zone cycle. It consists of brown rusty marble, bands of biotite gneiss and calc-silicate minerals. Disseminated sulfides are concentrated in calc-silicate bands. In the upper parts of the section the biotite gneiss becomes more frequent, if not dominant, over the metaquartzites. Several varieties of quartzite include pure white finegrained types , while other ones contain fuchsite on the bedding planes. On the top of the section are a few bands of amphibolite.

(25-26)
The lateral equivalent of the ore horizon is composed of two parts. The upper one is made of coarse grained quartz biotite gneiss with garnets. The lower portion is a soft calcareous biotite gneiss with lenses of calc-silicates and disseminated sulfides (pyrrhotite and lesser pyrite). The horizon has a distinct rusty brown colour contrasting with the overlying and underlying biotite quartzite. Below this section is a very good outcrop of massive bluish white marble. The central and lower portions are covered by felsmeer.

(31-32-33-34-35-36)
The top part of the section just below the Grace Mountain summit is predominantly of metaquartzite, however with important intercalations of amphibolite and pegmatite injections. White finegrained quartzite bands contain occasionally fuchsite. For the most part the quartzite is of laminated greyish biotite-muscovite variety. The ore horizon facies is a complex sequence of very coarse grained biotite-garnet gneiss probably with some carbonates alternating with layers of calc-silicates. The calc-silicate layers show rhythmic composition with quartz, hornblende, garnet aggregates and pyrrhotite as grains and intergranular fillings at the top,

coarse grained glassy quartz, epidote and hornblende aggregates in the middle and a predominantly garnet layer (large 25 mm garnets in biotite matrix) at the bottom of the sequence.

Below the ore equivalent appear biotite garnet gneiss and biotite quartzite in an alternating sequence. Follows a very well developed thick band of massive white bluish marble. The other calcareous horizon lies further below separated from the upper marble by a quartzite sequence. It is composed of three rusty marble layers with intercalations of calcareous biotite garnet gneiss, thin bands of calc-silicates and biotite quartzite. Sulfides appear at the bottom of the sequence in a calc-silicate layer. Immediately below alternate biotite gneisses with quartzites followed by a thick monotonous sequence of white greyish massive or laminated biotite-muscovite quartzites.

3.2 Summary

In a broad sense the McLeod ore zone in parametamorphic sequences with clastic units predominating over gneisses. Elements of different origin mainly carbonates, calc-silicate assemblages and sulfides form persistent, although relatively thin, banded and layered features. Orthometamorphics are sporadic and start to appear at the apparent top of the sequence as amphibolite intercalations and mixed injected rocks. The degree of metamorphism falls into the range of garnetiferous amphibolite facies.

Comparison of various sections would indicate a moderate lateral change in lithofacies, however, the lateral extension of the main stratigraphic units remaining fairly constant.

The most persistent of all horizons both stratigraphically and facially appears to be the massive "clean" marble horizon which is probably obscured only by talus and felsmeer and often due to its being subjected to karstic desintegration. It can,therefore, be used as an almost foolproof marker horizon to which other lithostratigraphic units can be related.

In very general terms the rock sequences can be divided into three lithostratigraphic units. In topographical sense these would be:

c) The upper mixed unit composed of alternating metaquartzite and biotite gneiss sequences, characterized by the presence of orthometamorphic elements such as amphibolites and pegmatite-injected tectonics.

b) Middle "carbonate" unit, consisting of biotite gneiss, biotite metaquartzite and marble with a variety of calc-silicate and sulfide mineral assemblages dominated by garnet and calcite hornblende, epidote, chlorite, pyrrhotite and a host of characteristic metamorphic minerals.

a) Lower unit with predominating metaquartzite with ± muscovite and biotite.

Sulfide minerals occur at various levels of the "carbonate" unit b) . However, concentrations of economically interesting minerals have been found only in one of them which appears at the "top" of the unit above the marker marble.

4. MINERALIZATION

Sulfide minerals occur at various levels of the carbonate unit b) which contains three distinct calcareous carbonate horizons.

Upper horizon: Concentrations of economically interesting sulfides have been found only in this horizon. It displays strong lateral changes in facies. Sulfide ore is limited to a section on both sides of the McLeod adit where they are accompanied by beds of calcareous carbonates. Farther SE both the sulfides and the calcareous carbonate layers disappear and the whole volume is replaced by calcite-rich coarse grained biotite gneiss with a few lenses of more massive carbonate and calc-silicates. The sulfides are reduced to disseminations of pyrrhotite and pyrite (?) of variable density. The third distinct lateral facies appears SE of the Mt. Grace summit in the section (31) and is characterized by masses of large garnets and hornblende and pyrrhotite aggregates. The amount of garnets decreases gradually towards NW to pick up again aprroaching the zone of the McLeod adit.

Middle horizon: This is the clean, bluish white massive marble - the main marker unit.

Lower horizon: With rapidly changing lateral facies the lower horizon is dominated by calcareous carbonates appearing as "rusty marble" bands (up to 5 layers) alternating with calc-silicate assemblages, calcareous biotite gneiss. The horizon carries occasionally appreciable amounts of disseminated sulfide though mostly pyrrhotite and pyrite. In spite of internal facial changes the general composition of this unit remains stable practically throughout its lateral extension.

5. STRUCTURAL FEATURES

This report is a summary of our short field work and the discussion on the first order tectonics would, therefore, be inappropriate and our structural considerations shall be based upon the assumptions of Fyles (1970). Further the structure will be related to suggestions expressed by Levin (1976) as previously mentioned to provide the floor for correlation.

There are only a few structural features that can be readily observed in the area. The dominant textural type of the metamorphic rock sequences in the studied area is stromatite with subordinated ophtalmite textures which occur with garnet-bearing rock varieties. As indicated by field observations alone most of the rocks belong to S-tectonites and fit the fairly monotonous monoclinal structure of the NE flank of the Grace Mountain. B-tectonites have been encountered in a few cases in microfolds or, perhaps, as a later stage, superimposed deformation. The lineations measured display a sharp discordance with the assumed axis of the Grace Mt. monocline (225/20).

6. INTERPRETATION OF RESULTS AND CORRELATION WITH THE COTTONBELT CLAIMS

The number and quality of field observations were not adequate to solve the problem of stratigraphic tops on the basis of lithostratigraphy. Indications are that such an attempt could be made in the more complex carbonate-bearing sequences of the middle unit where certain rhythmicity exists as well as frequent alternations between clastic and carbonate members.

Probably a better answer can be derived from the character and position of the three main rock units as a whole as described in the preceding paragraph.

Following the topography we have a clastic sequence with well sorted clean quartzites at the bottom followed by a turbulent, rapidly changing sequence in the middle and a mixed para-ortho sequence heavily injected with granitic material at the topographic top - summit of the Grace Mountain.

Correlated with the structural elements of the first order, in this case the position in relation to the Frenchman Cap dome of Fyles (1970) we come to the conclusion that the stratigraphic

position is likely to be the reverse of the topographic sequence. As a second argument in favour of this assumption is the fact that the section extended across Mt. Grace summit SW shows the same rock units in the reversed order. The lithostratigraphy of the Cottonbelt claims thus lies in the mirror image to the situation found in the McLeod zone on the Nevada and Vegas claims. At the same time the orthometamorphic members injected by granitoids appear at the core of the Grace Mountain structure topographically at the very top. It is difficult to imagine such a sequence to be in normal position.

The lithostratigraphic similarities of McLeod and Cotton zones are best expressed in the relative position of the main members of the Middle (carbonate) Unit. Considering the position of the marble marker horizon both other members - the ore zone as well as the "rusty marble" band - oppose each other in a symmetrical manner across the summit of the Grace Mountain.

Little if anything has been derived from routine observation of structural features of lower order. On the other hand, however, no contradictions could be found against the current interpretation.

7. CONCLUSIONS

The McLeod adit ore horizon on the Nevada and Vegas claims extends continuously SE beyond the area of the Grace Mountain summit.

In the same direction the sulfide mineralization continues only for about 250 m. Farther beyond it is replaced by sterile mineral assemblages.

Structural analysis of the lithostratigraphic sequences indicates that the Grace Mt. area is probably a SW plunging syncline with monoclinal limbs.

Correlation of the Nevada, Vegas claims rock sequences with those of the Cotton claims shows symmetrical arrangement with mirror image axis running roughly NW-SE along the NW ridge of Grace Mountain.

Based on the above interpretation the ore zone of the Nevada-Vegas claims lies within the same stratigraphic horizon as the ore zone of the Cotton claims and thus under favourable conditions the two may be joined together and continue through the syncline as suggested by Levin (1976).

It is recommended to pursue the further stages of exploration of the McLeod adit ore zone on the Nevada and Vegas claims.

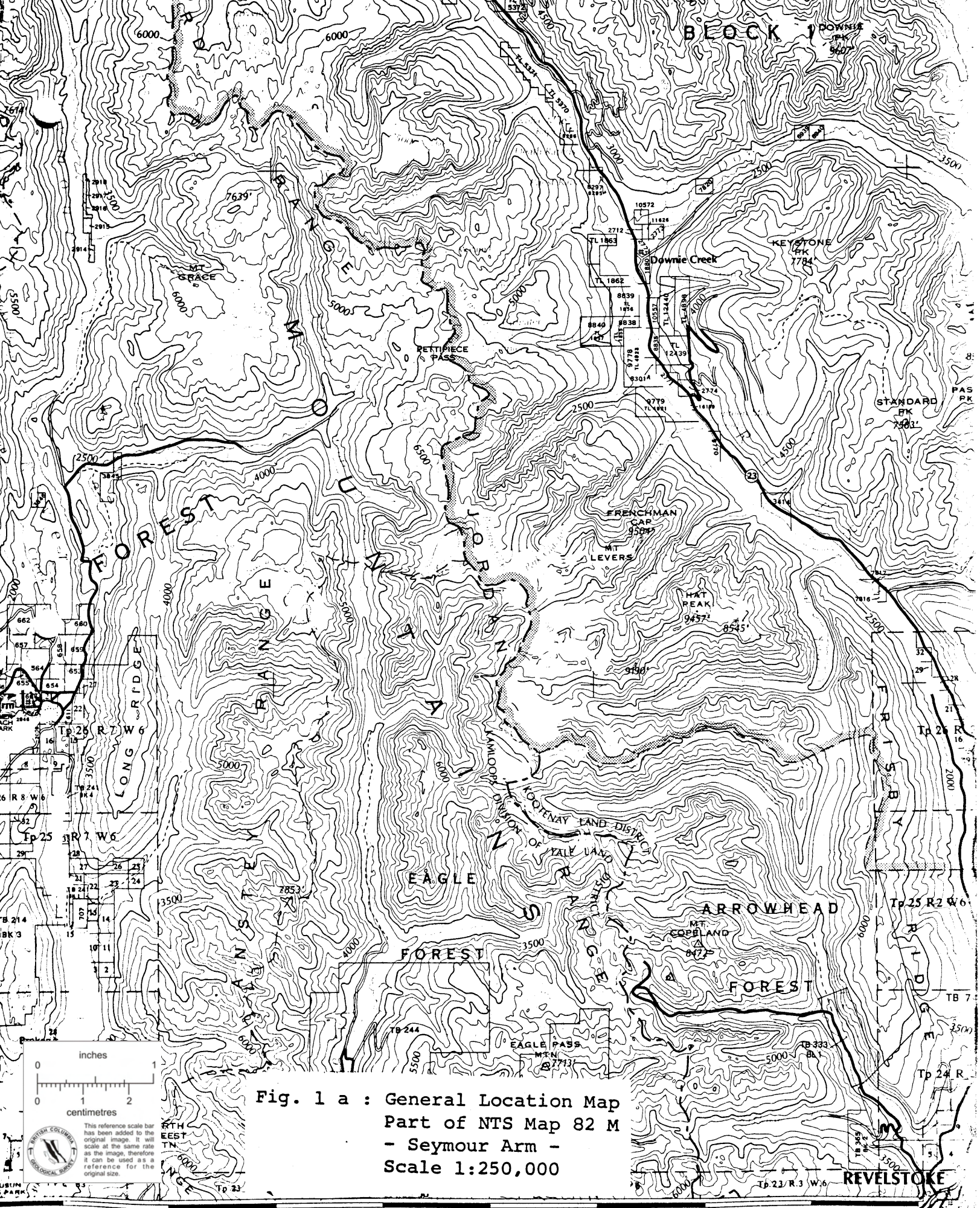


Fig. 1 a : General Location Map
Part of NTS Map 82 M
- Seymour Arm -
Scale 1:250,000

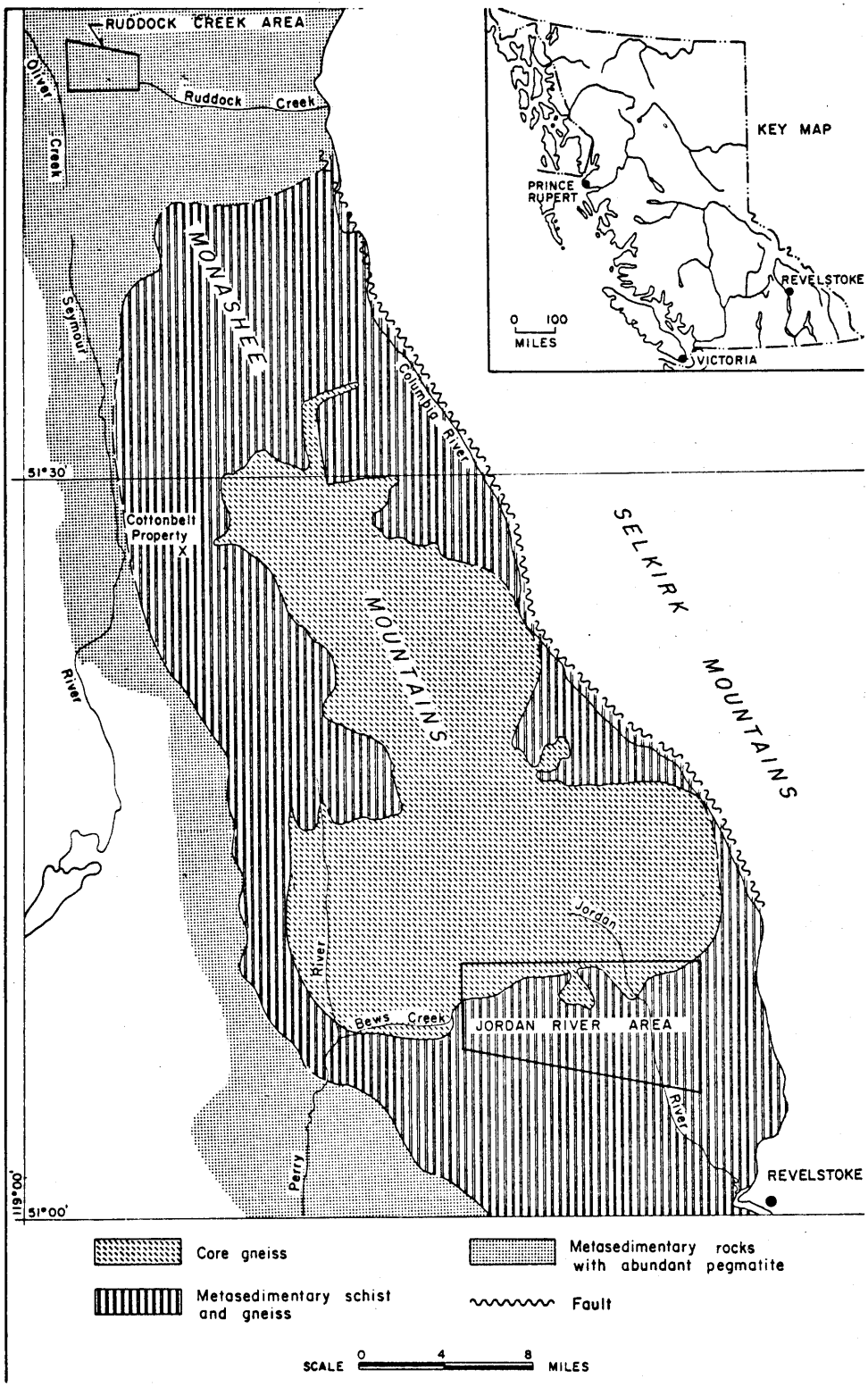


Fig. 1 b : Index Map Showing Frenchman Cap Dome and the Jordan River and Ruddock Creek Areas
From: James T. Fyles "The Jordan River Area", B.C. Dept. of Mines Bulletin No. 57

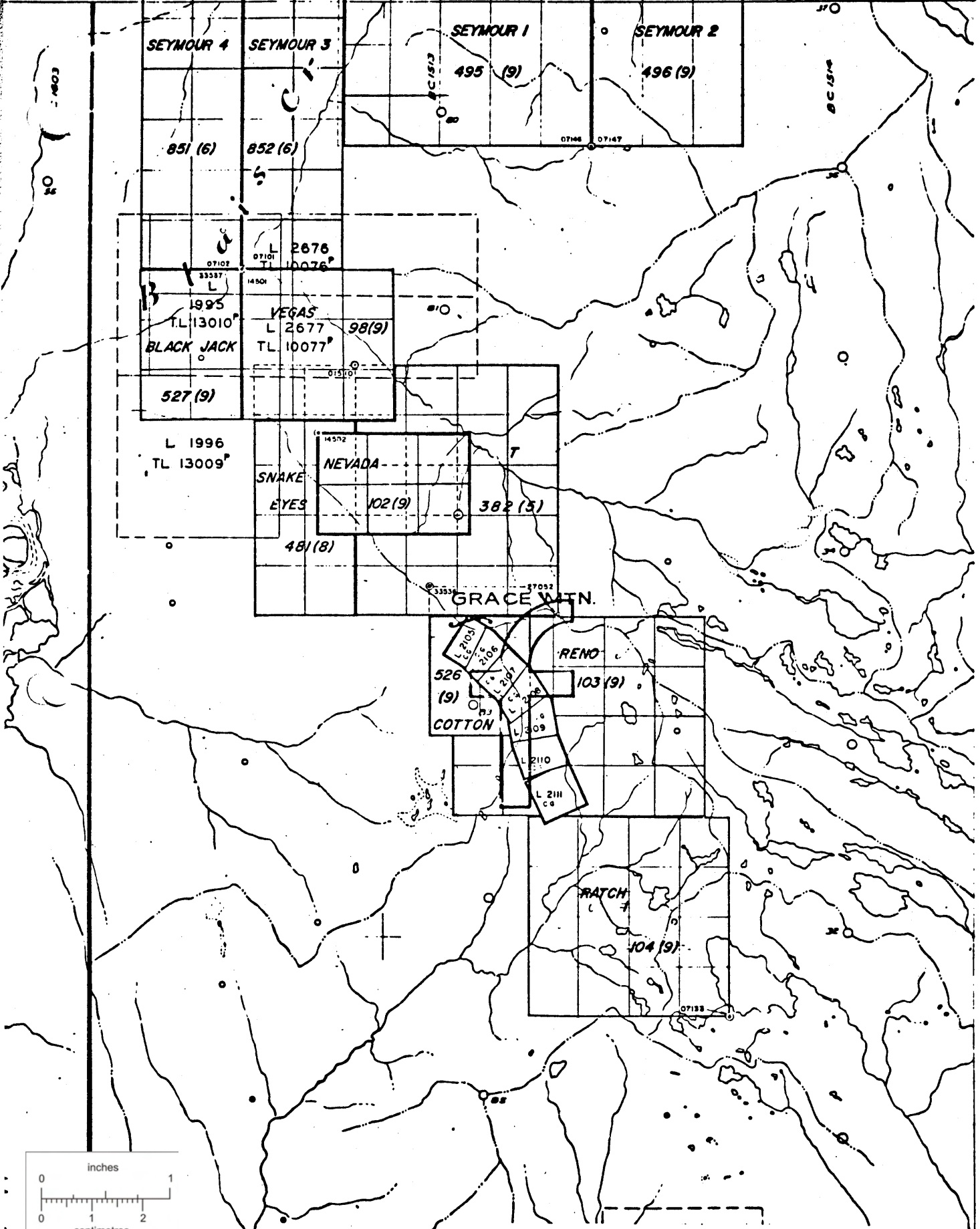


Fig. 1 c : Part of Claim Map M 82
Scale 1:50,000
of July 7, 1977

MAP 82M/7E.

APPENDIX I

STATEMENTS OF QUALIFICATION

STATEMENT OF QUALIFICATIONS

I, Joseph C. Kovacik, with residence at 1286 Premier Street, North Vancouver, B.C., declare:

1. that I graduated from the Ostrava (Czechoslovakia) School of Mines with a diploma in geology in 1954.

2. that I graduated with a Ph.D. degree in geology in 1966 from the Geological Laboratory, National Academy of Sciences, Bratislava, Czechoslovakia.

3. that since 1954 I have been employed as exploration geologist in Europe, Africa, USA, Canada.

4. that I have been trained to work in extreme mountainous terrains and took part in various expeditions to Western Himalayas and Central African Mountains.

5. that I am presently employed with Metallgesellschaft Canada Limited, 824-602 West Hastings Street, Vancouver, B.C. V6B 1P2.

6. that I have no personal interest in the Vegas and Nevada claims whatsoever.

7. That the data of this report is based on my personal work at the above property as well as investigations of my colleague Dr. P. Levin during the period July 19 - 25, 1977.

Dr. J. C. Kovacik

Vancouver, August 18, 1977

METALLGESELLSCHAFT CANADA LIMITED

WESTERN EXPLORATION OFFICE

824-602 WEST HASTINGS ST. **VANCOUVER, B.C. V6B 1P2** TELEPHONE: (604) 681-2167

STATEMENT OF QUALIFICATIONS

This is to certify

1. that Dr. Peter Levin of Metallgesellschaft AG, Frankfurt (Main), Reuterweg 14, West Germany, studied geology and mineralogy at the University of Heidelberg and graduated with a diploma in mineralogy from the University of Heidelberg in 1973.

2. that Dr. Peter Levin obtained a Ph.D. degree in mineralogy and economic geology from the University of Heidelberg in 1975.

3. that Dr. Peter Levin has worked in exploration since 1973 in Peru, Germany, Chile and Canada.

4. that Dr. Peter Levin was part of the team working on the Vegas and Nevada claims during the period July 19 - 25, 1977.

5. that Dr. Peter Levin is presently working in a Metallgesellschaft Joint Venture in the Yukon.

F. W. Wellmer

Dr. F.-W. Wellmer
Exploration Manager - Western Canada
Metallgesellschaft Canada Ltd.

August 18, 1977

APPENDIX II

STATEMENT OF COSTS

STATEMENT OF COSTS

Salaries and wages

Dr. Joe Kovacik		
- July 19 to July 25, 1977, field days, whereof 4 days on Nevada and Vegas claims	4 days	
- July 20 and July 26, 1977, travel time	2 days	
- Report writing and map preparation	2 days	
	8 days @ $ 120 =	$ 960.00
Dr. Peter Levin		
- July 19 to July 26, 1977, field days no days applied to Vegas and Nevada claims	-	
Helgard Wellmer		
- 0.5 day for typing		$ 20.00

Other

Car transportation Vancouver - Revelstoke - Downie Creek - Vancouver 880 miles @ 20 ¢/mile	$ 176.00
Helicopter service	$1,157.01
Field supplies 4 days Joe Kovacik on Vegas and Nevada claims	$ 54.24
Equipment	$ 37.63
Maps, air photos, photo mosaics, prints	$ 138.34
Total cost:	$2,543.22

F.W. Wellmer

Dr. F.-W. Wellmer
Exploration Manager - Western Canada
Metallgesellschaft Canada Ltd.

APPENDIX III

STATEMENT OF WORK

STATEMENT OF WORK

To clarify the stratigraphic position of the sulfide horizon on the Vegas and Nevada claims and the tectonic situation, investigations had to be extended outside of the claims. These observations outside of the above claims have to be considered in context with the geological results on the Vegas and Nevada claims area. The report, therefore, covers all mapping and all observations.

However, costwise only the days actually spent on the Vegas and Nevada claims respectively days technically necessary like travel days and report writing time are applied as assessment work to the Nevada and Vegas claims.

F. W. Wellmer

Dr. F.-W. Wellmer
Exploration Manager - Western Canada
Metallgesellschaft Canada Ltd.

Vancouver, August 18,1977

ATTACHMENTS

- Lithographical Sections 1 - 35
- Geological Map Vegas and Nevada Claims, scale 1:5,280

SYMBOLS & ABBREVIATIONS :


ORE HORIZON


MASSIVE MARBLE


MARBLE & CALC-SILICATE HORIZON


BANDED AMPHIBOLITE


PEGMATITE INJECTIONS


BIOTITE GNEISS


QUARTZITE


MASSIVE MARBLE


RUSTY MARBLE W. CALC-SILICATES


GARNETIFEROUS BANDS

ROCKS:

AMF	AMPHIBOLITE
GRT	GRANITE
GNS	GNEISS
PGM	PEGMATITE
MBL	MARBLE
QTZ	QUARTZITE

MINERALS:

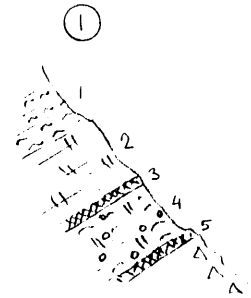
QT	QUARTZ
HB	HORNBLENDE
FS	FELDSPAR
GT	GARNET
BT	BIOTITE
PT	PHLOGOPITE
AL	ANDALUSITE
CL	CALCITE
CT	CHLORITE
DL	DOLOMITE
PX	PYROXENE
ED	EPIDOTE
SF	SULFIDE
MC	MUSCOVITE

OTHER:

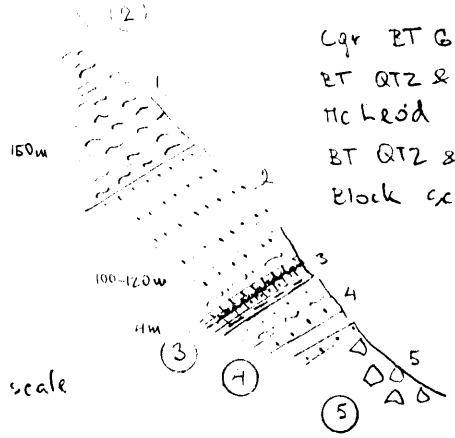
TX	TEXTURE
CX	CRYSTALL
MX	MATRIX
L	LARGE
S	SMALL
F	FREQUENT
R	RARE
Cgr	COARSE-GRAINED
Fgr	FINE-GRAINED
Dsm	DISSEMINATED
Msv	MASSIVE
Lmt	LAMINATED
W	WITH
>	LITTLE
>>	VERY LITTLE

○ REFERENCE NUMBERS TO SECTIONS

18 AUG

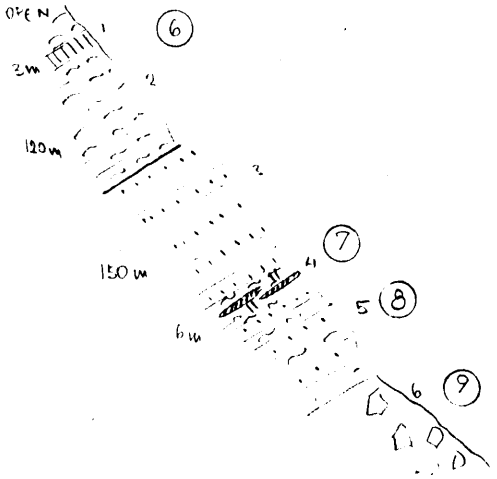


BT + FS GNS
CALC-SILICATES + SF (CL, CT, dssm PY)
SF in carbonate GNS
BT GNS + HB, GT, CL, CT
Hs SF + carbonates

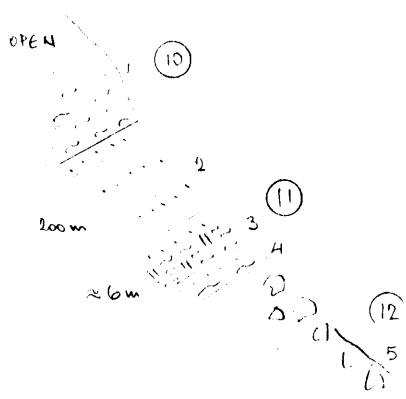


not to scale

Cgr BT GNS
BT QTZ & BT GNS intercal. at bottom
McLeod ore zone
BT QTZ & BT GNS
Block scree of mixed origin

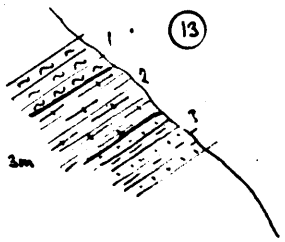


Amphibolite
BT FS QT GNS
BT QTZ
BT rich GNS + CL + thin lenses of SF (ZnS, PH) + GT
BT QTZ & BT GNS
Block scree



BT FS QT GNS
BT QTZ & intercalations of FUCHSITE QTZ
BT CL FS(?) GNS + occassional disp. SF + GT
BT QTZ
Blocks of white HBL

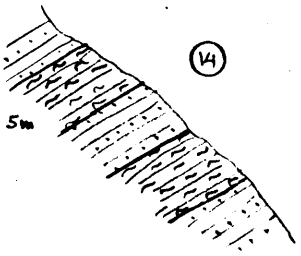
17 AUG. 77



(13)

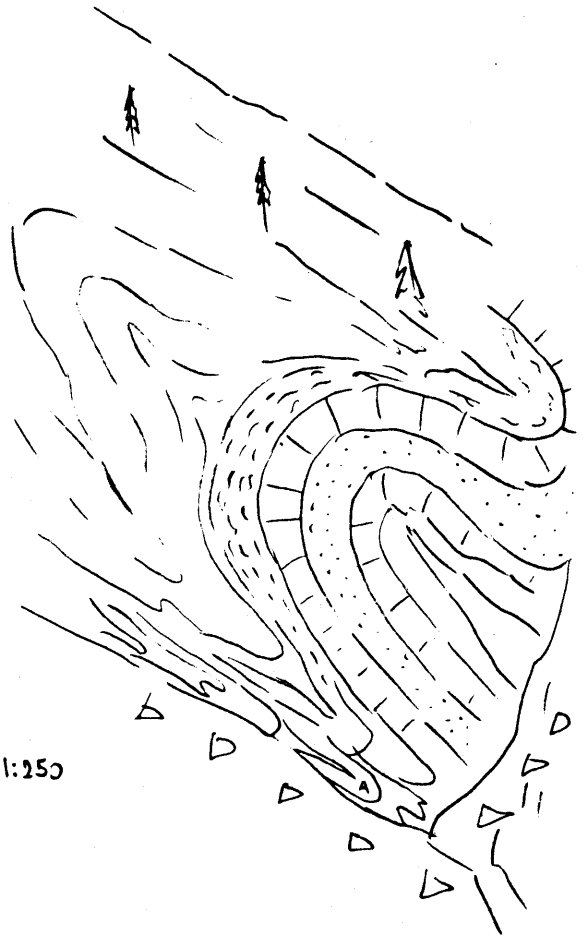
BT FS GNS
AMF
BT+ »

BT QT alternating with BT GNS



(14)

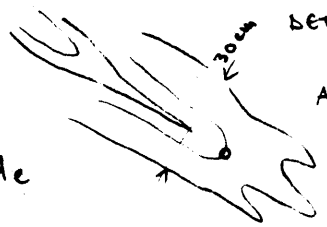
White QT2 with fuchsite bands



1:250

(15)

Mc white & gray BT QT2 with BT GNS interacations

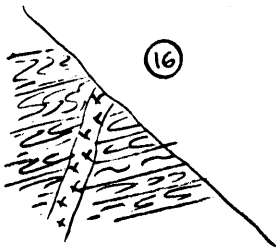


DETAIL (A)

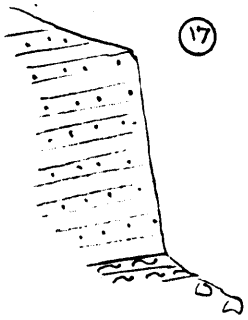
AXIS: 225°/20°SW

not to scale

17 AUG. 77

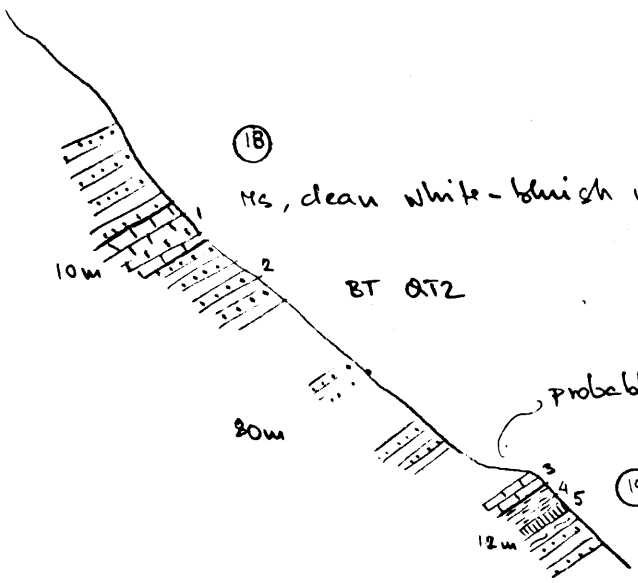


(16) QT + Albite + MC PGM injection 160/90 in microfolded BT QT2. Axes of microfolds 220/20°SW

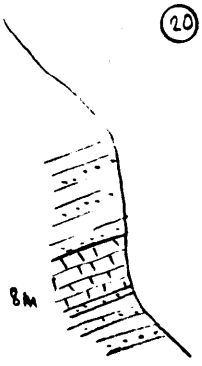


(17) Ms and laminated QT2 190/50W. Jointing 180/50E

BT with GNS – top of ore bearing Ca-GNS facies

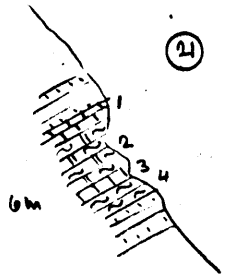


Brown, BT + BT marble
BT GNS
Ca-Si bands (CL, ED, HB) with discm SF

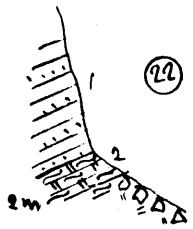


Ms, white-bluish MBL

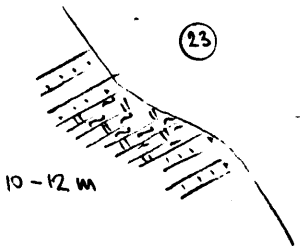
17 AUG 77 Kovach



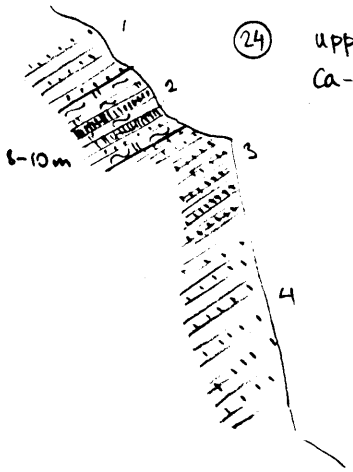
Brown BT+GT marble
BT rich, soft calcareous GNS with dcsm SF
(outcrop permeated with sulphates)
Brown BT+GT MBL
BT GNS



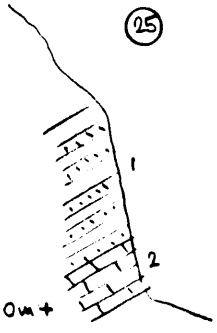
BT QT2
Calcareous BT GNS



Calcareous BT GNS with QT bands 2-5 cm thick and dscm SF. Below and above BT QT2.



upper BT QT2
Ca-Si gneiss unit. Top of Ca+BT GNS. Bottom with intercalations of Ca-Si bands (CL, GT, ED) and dscm PY, PH



BT QT2
Bluish white MS MBL

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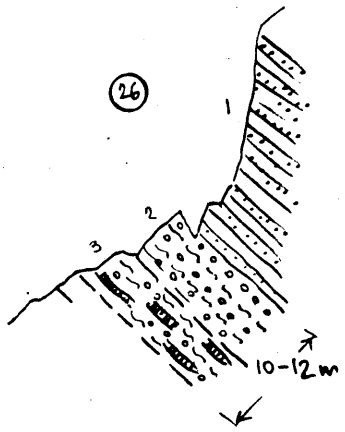
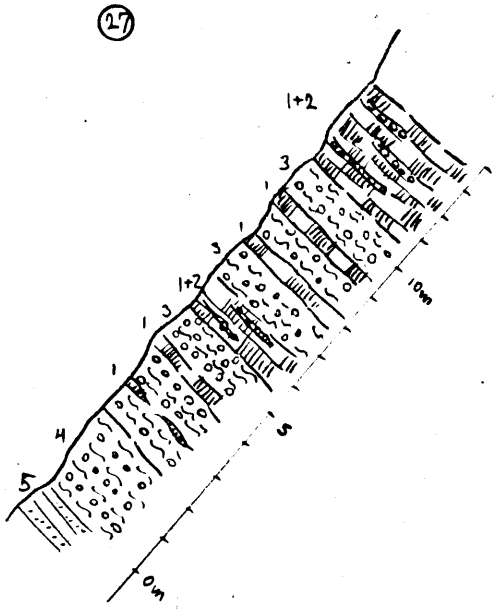


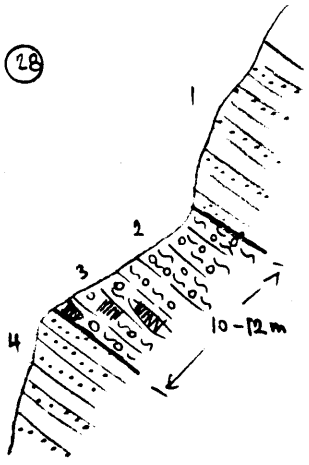
(1) BT QTZ
(2) BT GT GNS
(3) Calcareous BT GT GNS & lenses of calc-silicate minerals, (CL, ED, HB,) and dssm SF probably PY & PH



(1+2) Brown rusty MBL (1) with streaks of PT+GT (2), some dssm SF

(3) Ca-silicate layers, (CL, CD, CT, HB, GT andalusite, Sillimanite) and bands of Ca-BT GNS

(4) BT+GT GNS (4)
(5) BT QTZ (5)



(1) BT QTZ (1)

(2) Soft calcareous BT+GT GNS
(3) Ca-silicate bands in BT GNS with dssm SF - mostly PH

(4) BT QTZ

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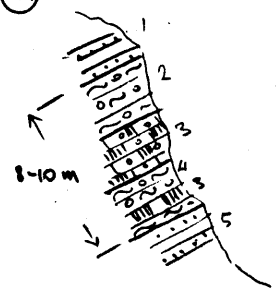
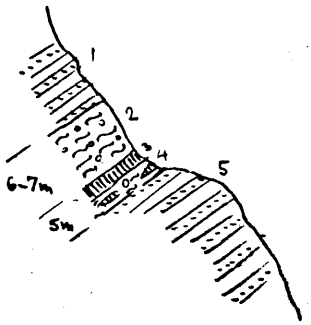
(29)



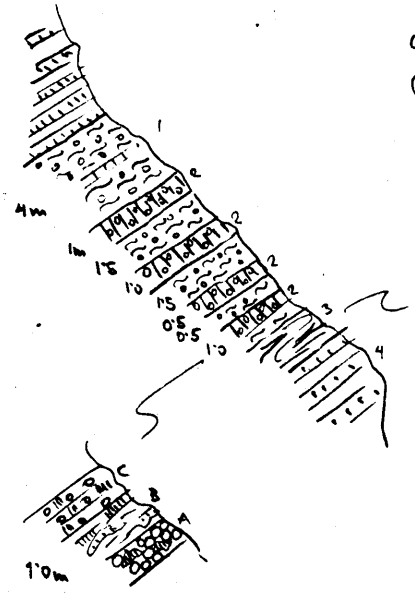
BT QTZ (1)
Calcareous BT GNS + GT (2)
Rusty brown MBL + P.T, GT, dssm SF (3)
BT GT GNS (4)
BT QTZ (5)

(30)



BT QTZ (1)
Soft, calcareous BT GT GNS (2)
Rusty brown, Ca-rich band (0·5m) with SF grains (3)
Essentially calcareous BT

(31)



Soft; calcareous BT GNS (1)
Ca-silicate bands of CL, CL, QT, GT, HB Agg of PH (2)
Microfolded BT + FS GNS (3)
BT QTZ (4)

AXES: 165/25 SE

Banded TX (5-10mm), GT (Ø 10mm) Agg. of HB, glassy QT, PH as grains and intergranular filling (C)

Cgr, glassy QT & HB Agg (B)

Large GT CX (10-25 mm Ø) in BT MX (A)

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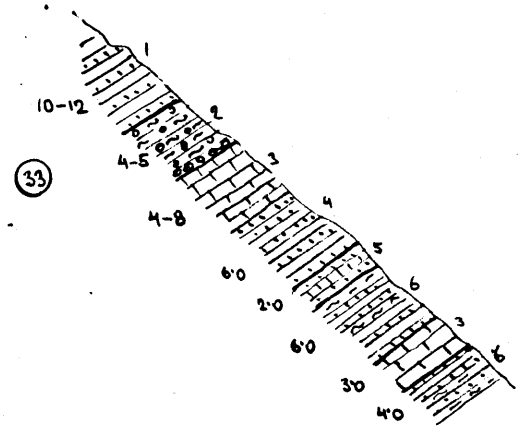
Following below (31): (1-2) About 50m alternating BT QTz w BT+GT GNS. Densely packed GT adjacent to MBL
(3) White bluish, massive MBL
(4) Laminated to Msv QTz + » BT
(5) White, Lmt QTz + MC & Fuchsite
(6) Finely Lmt QTz + » BT

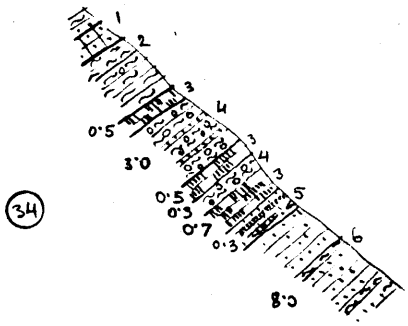


Sequence immediately above (31)

(1) BT QTz & AMF bands
(2) Laminated pale-creamy QTz & PGM injections
(3) Laminated QTz with alternating BT-rich bands

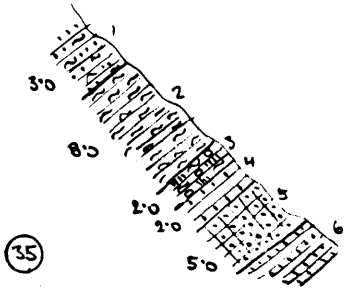
Following below (33):

(1) Fgr white QTz
(2) BT GNS
(3) Rusty MBL & mica & BT + andalusite
(4) BT+GT GNS & thin QTz intercalations
(5) Calc-silicate bands & SF in a predom. BT QTz layer
(6) BT QTz w BT+GT GNS intercalations



Sequence below (34):

(1) Dark BT QTz
(2) Fgr BT+QT+FS GNS
(3) Calc-silicate GNS
(4) BT QTz
(5) Msv white cgr QTz



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METALLGESELLSCHAFT CANADA LTD.

PROJECT: GEOLOGICAL MAP
NEVADA AND VEGAS CLAIMS
Kamloops Minining Division

DWG. NO.	**SCALE:** 1:5280 3 inch = 0.25 mile	**DRAWN BY:** KOVACIK
N.T.S. 82 M7	**DATE:** 22.8.77 **UPDATED:**	**AUTHOR:** KOV.

References:

- Ore Horizon
- Massive Marble
- Marble and Calc-Silicate Horizon
- (4) Reference Number in Sections
- Helipad
- Mc Loed Adit
- Claim Boundary
- Topographic Lineament