

2/86

GEOLOGICAL, GEOCHEMICAL, AND PROSPECTING

report on the

Mid 1 to 4 Mineral Claims

N.T.S. 82F/6

Latitude 49°19' North

Longitude 117°22' West

Nelson Mining Division

British Columbia

for

REX SILVER MINES LTD.

Calgary, Alberta

by

C. H. Aussant, P.Geol.

TAIGA CONSULTANTS LTD.

#100, 1300 - 8th Street S.W.

Calgary, Alberta T2R 1B2

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,486

OCTOBER 1984



TABLE OF CONTENTS

Certificate

INTRODUCTION.	1
Location and Access	
Property and Ownership	
Physiography and Glaciation	
REGIONAL GEOLOGY.	5
PROPERTY GEOLOGY.	9
ECONOMIC GEOLOGY.	10
1984 FIELD PROGRAM.	12
CONCLUSIONS AND RECOMMENDATIONS	13
APPENDIX	
Rock Sample Descriptions	
Analytical Techniques	
Certificates of Analysis	
Summary of Personnel	
Summary of Expenditures	

FIGURES

1 Property Location Map.	2
2 Regional Geology Map	6

TABLES

I Table of Formations.	7
--------------------------------	---

MAPS (in back pocket)

1 Geology and Sample Location Map	
-----------------------------------	--

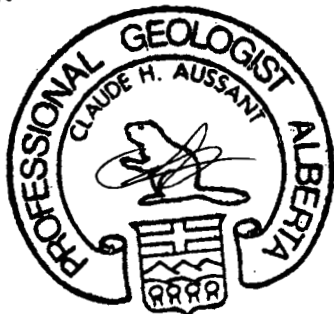
CERTIFICATE

I, Claude Henry Aussant, of 31 Templebow Way N.E. in the City of Calgary in the Province of Alberta, do hereby certify that:

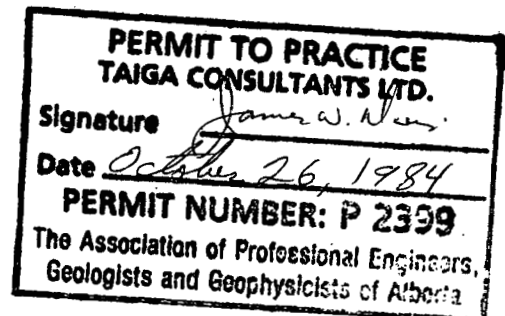
1. I am a consulting geologist with the firm of Taiga Consultants Ltd., whose offices are located at Suite 100, 1300 - 8th Street S.W., Calgary, Alberta.
2. I am a graduate of the University of Calgary, B.Sc. Geology (1976).
3. I have practised my profession continuously since graduation.
4. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
5. I personally worked on the Mid 1-4 mineral claims on September 15, 1984.
6. I did not receive and do not expect to receive any interest, directly or indirectly, in the property described herein or in the securities of Rex Silver Mines Ltd. or its affiliates, in respect of services rendered in the preparation of this report.

DATED at Calgary, Alberta, this 26th day of October, A.D. 1984.

Respectfully submitted,




Claude H. Aussant, B.Sc., P.Geol.



INTRODUCTION

At the request of Mr. S. J. Stricker, Vice-President of Exploration for Rex Silver Mines Ltd., Taiga Consultants Ltd. was contracted to carry out a minimal reconnaissance mineral exploration program on the Mid 1-4 mineral claims located 10 km west-northwest of Ymir, British Columbia.

On September 15, 1984, one geologist was mobilized by helicopter into the property to investigate the VLF-EM conductors delineated during the 1983 exploration program.

Location and Access

The claim group (Figure 1) is situated in southern British Columbia, 10 km west-northwest of Ymir, astride the headwaters of the west fork of Craigtown Creek, on the southern slopes of Dominion Mountain, at approximately 49°19' North latitude and 117°22' West longitude, in N.T.S. 82F/6, Nelson Mining Division.

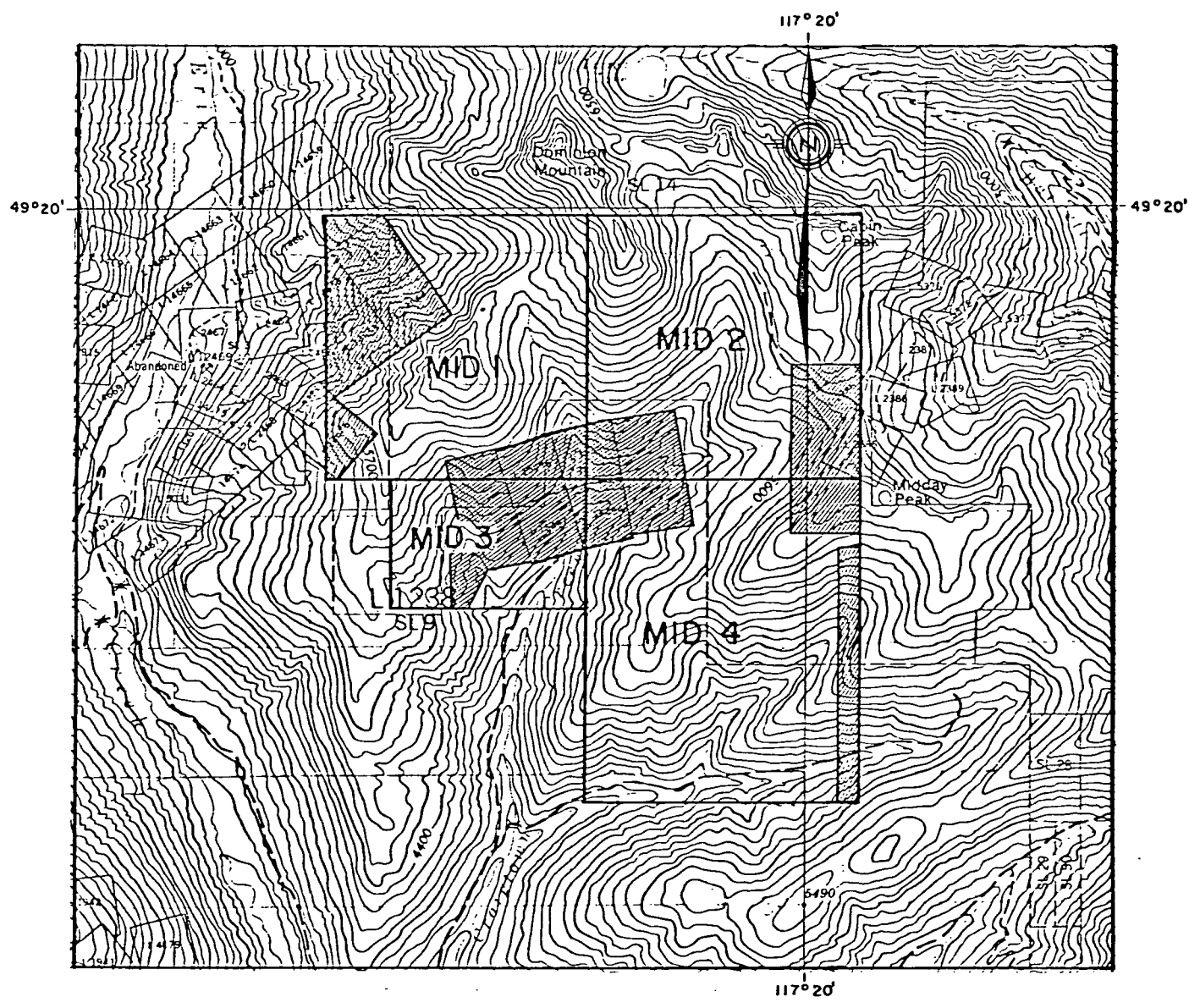
The southern portion of the property is accessible via a gravel logging road from the village of Erie, 14 km south of the claims, off B.C. Highway 3B. Four-wheel-drive vehicles are recommended. The northern portion of the claim group is accessible only by helicopter.

Property and Ownership

The property consists of four mineral claims, staked under the modified grid system, and are registered in the name of Rex Silver Mines Ltd.

<u>Claim</u>	<u>Size</u>	<u>Units</u>	<u>Record</u>	<u>Date of Record</u>
Mid 1	4 x 4	16	3126	April 11, 1983
Mid 2	4 x 4	16	3127	
Mid 3	2 x 3	6	3128	
Mid 4	5 x 4	20	3129	
		58 units		
		(1450 hectares)		

The claims encompass pre-existing mineral claims and Crown grants which are currently in good standing; these areas have been excluded from the Mid claims and are depicted on Figure 1 by hatched pattern.




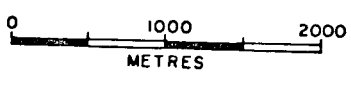
 Areas excluded from Mid Claims due to pre-existing mineral claims in good standing

Figure 1
PROPERTY LOCATION MAP
MID 1-4 CLAIMS



Physiography and Glaciation

The claim group is located within the Bonnington Range of the Selkirk Mountains which form an imposing mountain barrier in the area, breached by the Kootenay River. The range is transected by the valley of Beaver Creek which provides access to the Salmo River valley and the town of Nelson.

The southern part of the range, underlain by volcanic rocks, contains rounded wooded mountains; but the northern part, underlain predominantly by granite, contains higher more serrated peaks.

The claims themselves are situated near the northeast-central portion of the range on the southern slopes of Dominion Mountain and are underlain by sedimentary and volcanic rocks. Granitic rocks of the Nelson Batholith occur directly north, west, and south of the claim group.

The country is rugged but sub-alpine in character with modified cirque basins recognizable at the heads of north-flowing streams which rise at higher elevations. Sharply defined cirques and cirque lakes are seen in only the granodiorite terrain such as Barrett Lake on the north slope of Dominion Mountain. Here, particularly on northern exposures of granodiorite, the stream valleys are conspicuously U-shaped. Elsewhere, V-shaped valleys are the rule, particularly on southern exposures, dominantly the result of stream erosion.

The topography of the area has been considerably influenced by Cordilleran glaciation. Evidence of this in the form of transported material and erratics is found everywhere, but is not common about 1830 metres ASL. Fragmentary terraces in alluvial material are quite prominent along Erie Creek about the mouth of Craigtown Creek. A drift veneer mantles most of the area supporting a thick growth of timber and bush. The movement of the Cordilleran ice sheet has been recorded by many measurements of glacial striae and roches moutonee. In all cases, the direction of ice movement was southerly. Valley glaciation appears to have been on a small scale and confined to the headwaters of some of the streams rising in higher elevations.

Much of the claims is covered by overburden, overlying the steep south-facing slopes of Dominion Mountain. Exposures are remarkably poor considering

the relief and steepness of the slopes. Outcrop areas tend to be confined to the higher elevations along the ridges and along the trough-like creeks which drain the property. Elevations within the claim group range from 1,065 metres in the southernmost end of the property, steadily rising to 2,135 metres ASL in the northern portion.

At one time, the area was heavily forested with white pine, Douglas fir, spruce, hemlock, and cedar, but forest fires and logging operations have largely obliterated any stands of large trees. Consequently, the claims are largely covered by a dense secondary growth of small timber and bush. Much of the land along the ridges above 1675 m is open grassland, although here too there is evidence of earlier forest cover destroyed by fire.

The climate of the area is pleasant with moderate winters and fairly hot summers. Snowslides are common in seasons of heavy snowfall, especially on over-steepened north-facing rocky slopes. The snow has almost entirely disappeared by the first of June except for small areas on the higher summits, and does not interfere with prospecting until late in October.

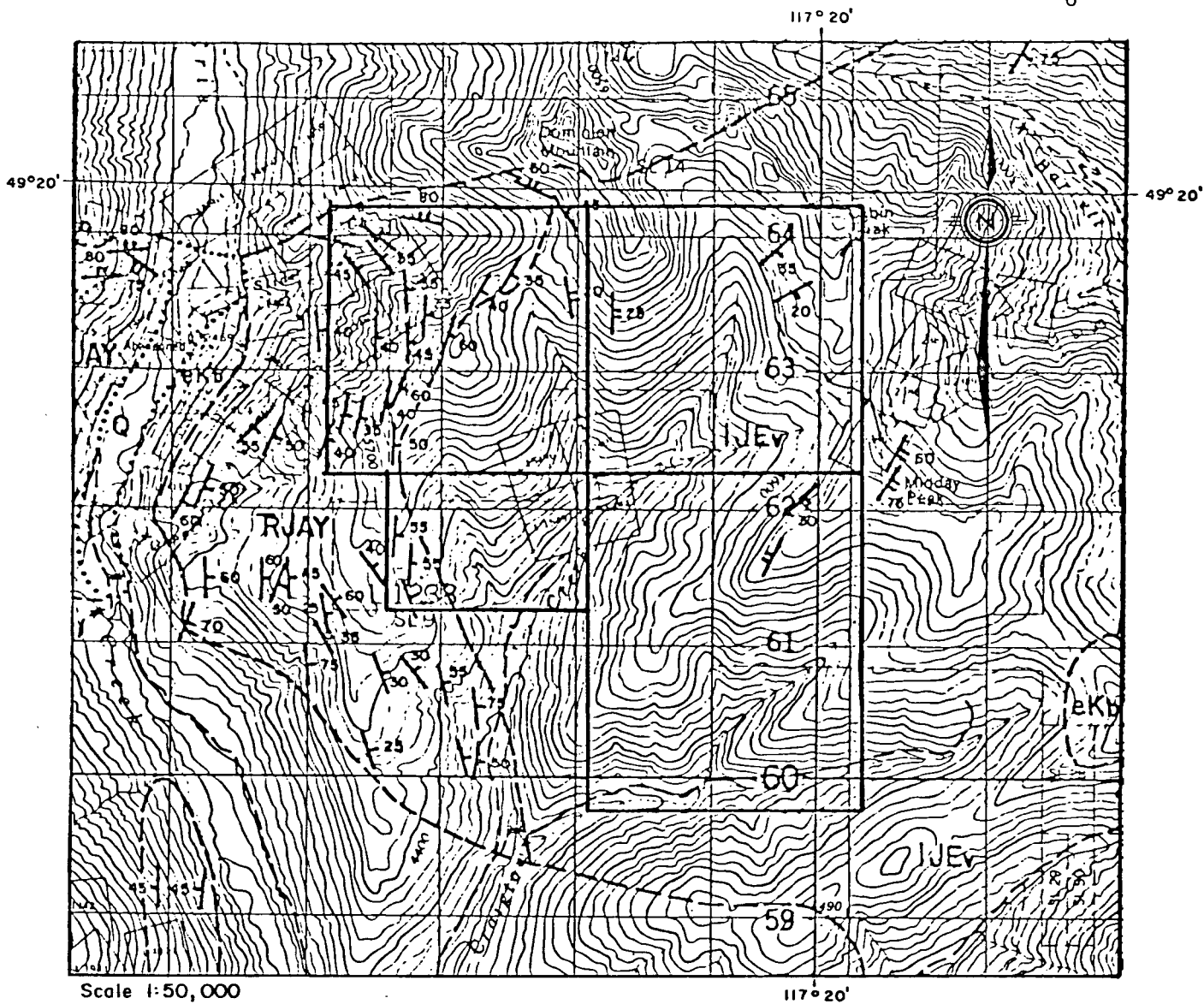
REGIONAL GEOLOGY

The oldest rocks in the area are those of the Archibald Formation - Ymir Group, a thick succession of nonfossiliferous sediments with a non-exposed base. These are overlain with apparent conformity by predominantly volcanic rocks of the Elise Formation. Towards the north, the Archibald Formation - Ymir Group displays increasing proportions of argillaceous and calcareous rocks, and resembles the Slocan Group which lies north of the Nelson Batholith. For this reason, the Archibald Formation - Ymir Group is assumed to be partly of Triassic age; and because it underlies the Elise Formation, the upper part is believed to be Early Jurassic. A narrow belt of these rocks extends southward from the Second Relief Mine, with complex subsidiary structures probably present on this western limb of the synclinorium which forms the major structural feature of the Rossland Group in the map-area (Figure 2; Table I).

A large body of granodiorite of the Nelson Intrusives is centered about Siwash and Grassy Mountains with small peripheral bodies of granodiorite to the north and east. These intrusions have sharp contacts and distinct crosscutting relationships with the folded rocks. Faulting has probably been instrumental in controlling the emplacement of this large central batholithic wedge and the other bodies.

The most common granitic type in the area is a massive coarsely jointed medium-grained grey granodiorite, but variations range all the way from a true granite to quartz diorite. The body at the head of the south fork of Barrett Creek is a dark quartz-free rock with large augite crystals and abundant inclusions around which feldspar and hornblende laths form complex fluidal patterns. These rocks are believed to be early phases of the Nelson Intrusives. Radiometric ages of the Nelson Intrusives indicate a Late Jurassic age, with possible plutonic activity extending into the Early Cretaceous.

Numerous dykes of syenite porphyry, granite porphyry, quartz porphyry, and lamprophyre of Tertiary age have invaded all of the rocks described above. Some of these cut the vein deposits and some occupy post-mineral faults.



Q	Quaternary alluvium and drift
eKb	Early Cretaceous Intrusions: non-porphyrific granite to granodiorite
IJEv	Elise Fm.; flow breccia, massive andesites and basalts, agglomerate, tuff, breccia, siltstone
RJAY	Archibald Fm. and Ymir Gp.; tuffaceous siltstone, arenaceous arg., arg. qtzite; slate, minor limestone and shale

Figure 2

REGIONAL GEOLOGY MAP



Table J. Table of Formations

ERA	PERIOD OR EPOCH	GROUP OR FORMATION	MAP SYMBOL	LITHOLOGY	THICKNESS (metres)		
CENOZOIC	QUATERNARY			Till, sand, gravel, silt			
	EOCENE Middle	Coyell Intrusions	eTc	Syenite, quartz monzonite; minor granite, palaskite, and biotite-augite monzonite			
		INTRUSIVE CONTACT					
		Marron Formation	EM	Augite and/or hornblende and/or biotite andesite; trachyandesite	900-		
		RELATIONSHIP UNKNOWN, BUT MAY BE FEEDER TO MARRON ANDESITE FLOWS					
		Map-unit Ti	Ti	Hornblende-feldspar and hornblende porphyrys			
		CONFORMABLE(?) CONTACT WITH MARRON FORMATION					
	Kettle River Formation	EKR	Tuffaceous arkose	100-			
MESOZOIC	CRETACEOUS Upper	RELATIONSHIP UNKNOWN; UNCONFORMABLE ON HALL FORMATION					
		Sophie Mountain Formation	uKsm	Coarse conglomerate with minor interbeds of siltstone and arenaceous argillite	100-		
	JURASSIC AND/OR CRETACEOUS	RELATIONSHIP UNKNOWN; UNCONFORMABLE ON ELISE FORMATION					
		Map-unit Kqp	Kqp	Quartz-feldspar porphyry			
		RELATIONSHIP UNKNOWN; INTRUSIVE INTO ULTRAMAFIC INTRUSIONS					
		Neison Intrusions	JN	Granodiorite; minor quartz diorite, and diorite			
		RELATIONSHIP CONTRADICTIONARY; SEEMS TO BE INTRUSIVE					
		Rossland Monzonite	JNmZ	Biotite-hornblende-augite monzonite; mainly medium grained			
	JURASSIC Lower and Middle	INTRUSIVE RELATIONSHIP					
		Rossland Group	Hall Formation	ImJhs	Black, soft carbonaceous shale, buff to brown argillaceous sandstone; some siltstone and minor greywacke	300-	
			CONFORMABLE(?) CONTACT				
			Elise Formation	IJev	Flow breccia, massive andesites and basalts, agglomerate, tuff, breccia; black, laminated siltstone (IJes); augite porphyry (IJei)	2,150-3,000	
			CONFORMABLE(?) AND INTERDIGITATED CONTACT; UNCONFORMABLE ON MOUNT ROBERTS FORMATION				
Archibald Formation	RJAY	Black, hard, brittle, laminated siltstone, commonly tuffaceous, and arenaceous argillite	900				
PENNSYLVANIAN(?)	INTRUSIVE RELATIONSHIP WITH ROSSLAND GROUP, BUT MAY BE COLD INTRUSION						
	Ultramafic Intrusions	MPum	Serpentinite; some dunite				
	Mount Roberts Formation	MPMR	Black siltstone and argillaceous quartzite, slate, greywacke, chert, pebble conglomerate, lava flows; limestone (Pmr1); paragneiss (Pmrgn)	1,200-1,500			
CARBONIFEROUS(?)	Map unit Cs	MPM	Black argillite, slate, phyllite, minor chert and greenstone; grey to black limestone (Csl)	2,100			
AGE UNKNOWN	RELATIONSHIP UNKNOWN						
	Gneiss in Bonnington Pluton	ATRsm	Layered granitoid gneiss and amphibolite				
	RELATIONSHIP UNKNOWN						
	Porphyritic leucogranitic rocks	ATRsm lgd	Porphyritic leucogranite				
	RELATIONSHIP UNKNOWN						
	Czstlegar Gneiss	ATRsm	Augen gneiss				
	GRADATIONAL CONTACT						
	Trail Gneiss	ATRsm	Amphibolite and grey biotite gneiss, hornblende gneiss, mica schist, aplite, and pegmatite; mylonitized gneiss (pC1gsm)	1,200			

BASE NOT EXPOSED

Considering the severity of the deformation to which the bedded rocks of the area have been subjected, remarkably few faults on a mappable scale have been recognized. Small-scale faults have been observed in many places, and the abundance of mineralized fissure veins testifies to the presence of others. Both pre- and post-ore faults have been described in many of the mines in the area. It can only be concluded that post-intrusive faulting has been limited to small-scale local movements.

PROPERTY GEOLOGY

The Mid 1 - 4 mineral claims are underlain mainly by andesite, basalt flows, flow breccias, tuffs, and augite porphyry of the Elise Formation with the beds striking northeast and dipping generally southeast. A number of north to northeast trending feldspar porphyry diorite dykes were found to cut across these volcanics.

The western portion of the claims is underlain by argillite and hornfels of the Archibald Formation - Ymir Group. Complex subsidiary structures are probably present on this western limb of the synclinerium which forms the major structural feature of the Rossland Group in the Bonnington and Ymir map-areas.

The property geology is illustrated on Figure 2 and on the accompanying geology map which depicts the work completed on the property.

ECONOMIC GEOLOGY

The claim group is located directly along strike from the Second Relief Mine, a former gold producer situated approximately 500 m to the west of the western side of the Mid group. On the east, the Mid group butts against claims covering the old Porto (Puerto) Rico Mine, which was also a significant gold producer. Brief descriptions of these mines follow.

Second Relief

Northeast striking, steeply northwest dipping veins at the Second Relief Mine are hosted in greenstone intercalated with sediments of the Archibald Formation - Ymir Group. Pyrite, pyrrhotite, chalcopyrite, and minor molybdenite occur in a gangue of country rock and quartz occasionally carrying magnetite, garnet, and epidote. The veins average about 12 grams/tonne (0.4 oz/ton) Au and lose both values and continuity where they pass from the competent greenstones into less competent sediments. Most of the Mid group to the east is underlain by massive competent rocks of the Elise Formation. Recorded production from the Second Relief Mine to 1959 was:

Mined and Milled:	224,398 tonnes/228,000 tons
Gold:	3,117,309 grams/100,235 ounces
Silver:	866,322 grams/27,856 ounces
Copper:	20,206 kg/44,555 pounds
Lead:	1,060 kg/2,338 pounds
Zinc:	147 kg/324 pounds

Porto Rico

The principal vein at the Porto Rico strikes northeast and dips approximately 45°NW. The vein averages some 0.6 metres in width and is hosted by augite porphyry and augite-feldspar porphyry of the Elise Formation. The vein evidently follows the footwall of an augite-kersantite (lamprophyre) dyke. Total production to 1969 was:

Mined:	6,260 tonnes/6,320 tons
Milled:	5,905 tonnes/6,000 tons
Gold:	178,452 grams/5,738 ounces
Silver:	46,370 grams/1,491 ounces
Copper:	322 kg/709 pounds
Lead:	138 kg/304 pounds
Zinc:	51 kg/112 pounds

Four Crown grants located in the centre of the claim group cover old workings which consist of at least six adits, none of which was accessible. Old mine cars and a large tailings pile attest to the extent of the workings; however, no literature describing them has yet been found.



1984 FIELD PROGRAM

In order to keep the claims in good standing for one more year, one geologist was mobilized by helicopter into the property (Mid 1 claim) to investigate the VLF-EM conductors which were delineated during the 1983 exploration program, and also to conduct reconnaissance prospecting and mapping of the Elise / Archibald Formation contact.

The strong VLF-EM conductors delineated in 1983 were found to be caused by very carbonaceous shales occurring at the Elise / Archibald Formation contact. Grab samples were collected from these shales, but returned negligible gold results.

Analytical results and sample descriptions are presented in the Appendix. Map 1 depicts the work completed on the property along with the geology delineated by the prospecting traverses.

CONCLUSIONS AND RECOMMENDATIONS

One man day was spent in prospecting and mapping the Elise / Archibald Formation contact in the vicinity of the VLF-EM conductors which were delineated by the 1983 exploration program.

The VLF-EM conductors were found to be related to carbonaceous shales occurring at the Elise / Archibald Formation contact. Samples collected from the shales returned negligible gold results. This greatly downgrades the importance of the VLF-EM conductors.

Further work on the property should consist of reconnaissance mapping and prospecting, concentrating on the areas of "epidote" alteration which were outlined by the 1983 exploration program.

A P P E N D I X

Rock Sample Descriptions

Analytical Techniques

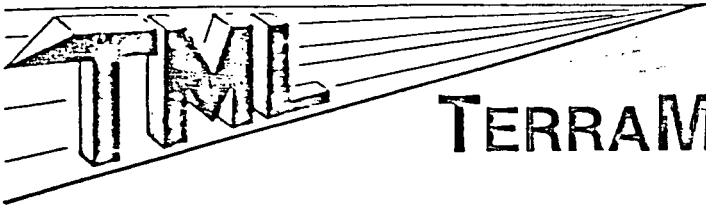
Certificates of Analysis

Summary of Personnel

Summary of Expenditures

ROCK SAMPLE DESCRIPTIONS

- C-1. grey quartz veining, 2 cm wide in rusty weathering massive argillite, strike 220°/dip 34°NW.
- C-2 grey tuffaceous andesite, rusty weathering, disseminated pyrite.
- C-3 narrow bed of black carbonaceous argillite in contact with augite porphyry. Total argillite thickness 25 metres, very carbonaceous band a couple of metres thick at L.4+00S,0+37E. The VLF-EM conductor at this location caused by the carbonaceous argillite.
- C-4 grey meta-argillite, disseminated pyrite.



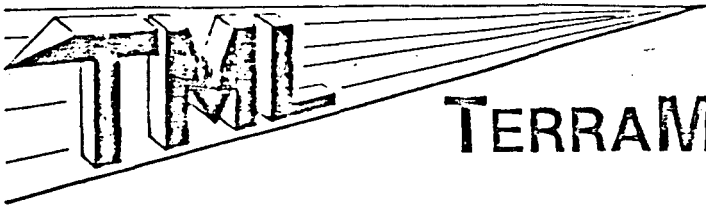
TERRAMIN RESEARCH LABS LTD.

14-2235 - 30th Avenue N.E. Calgary, Alberta T2E 7C7
(403) 276-8668

SAMPLE PREPARATION

Soil and sediment samples are dried and sieved through 80 mesh nylon screen (maximum particle size 200 microns).

Rock or drill core samples are crushed to approximately 1/8" in a jaw crusher, riffled to obtain a representative sample, and pulverized to 100 mesh (180 micron particle size).

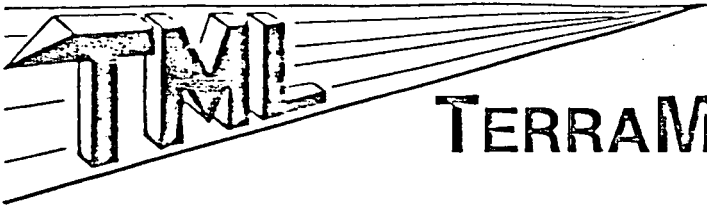


TERRAMIN RESEARCH LABS LTD.

14-2235 - 30th Avenue N.E. Calgary, Alberta T2E 7C7
(403) 276-8668

FIRE ASSAY/AA METHOD FOR GOLD AND SILVER PLATINUM AND PALLADIUM

Approximately 1 assay ton of prepared sample is fused with a litharge flux charge to obtain a lead button. The button is cupelled down to a precious metal prill which is then dissolved in aqua regia. The resulting solution is analysed by atomic absorption spectrophotometry to determine the precious metals.



TERRAMIN RESEARCH LABS LTD.

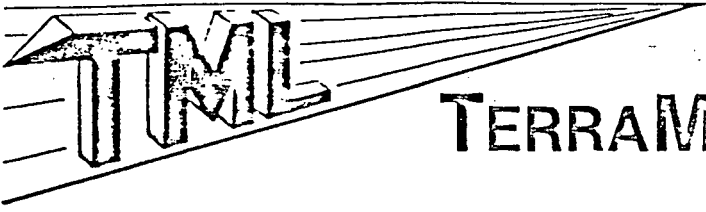
14-2235 - 30th Avenue N.E. Calgary, Alberta T2E 7C7
(403) 276-8668

ANALYTICAL METHODS FOR BASE METALS

Cd, Cr, Co, Cu, Fe (soluble), Pb, Mn (soluble), Mo, Ni, Ag, Zn

A portion of the prepared sample is digested in hot nitric/perchloric acid mixture, or hot aqua regia (nitric/hydrochloric acids).

Elements are determined by atomic absorption spectrophotometry.

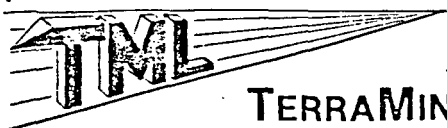


TERRAMIN RESEARCH LABS LTD.

14-2235 · 30th Avenue N.E. Calgary, Alberta T2E 7C7
(403) 276-8688

ANALYTICAL METHOD FOR ARSENIC AND ANTIMONY

A portion of the prepared sample is digested in acid at low temperature. As and Sb are determined with a vapour generation accessory with atomic absorption.



TERRAMIN RESEARCH LABS LTD.

ANALYTICAL REPORT

Job # 84-262-A

Taiga Consultants

Date Oct.19, 1984

Client Project BC-83-5

Page 1/8

Sample No. <u>Rock</u>	Au ppb	Ag ppb	As ppm	Sb ppm	Cu ppm
C-1 Mid	24	70	2	3.2	24
2	10	150	3	1.3	50
3	2	230	3	2.0	34
4	8	140	2	4.2	74
5 Bird	12200	10200	1	0.3	9800
6	6	50	1	-0.1	25
7	-2	20	-1	0.3	6
8	2	40	5	0.8	5
9	-2	50	3	0.5	9
10	4	50	10	1.1	7
11	-2	100	3	0.2	13
12	8	1720	3	0.9	2
13	2	110	-1	0.7	50
14	8	80	3	14.3	68
15	2	120	6	1.7	50
25 CA	4	50	-1	1.5	5
29	2	10	-1	1.7	5
29	-2	20	2	0.7	4
34 Waneta	6	130	14	0.8	34
36	-2	50	4	1.7	51
40	2	140	15	1.8	4
42	2	180	-1	0.3	23
43	2	300	16	1.6	40
44	16	1470	26	1.6	118
45	6	140	9	0.4	56

SUMMARY OF PERSONNEL

Field

C. H. Aussant, P.Geol.
31 Templebow Way N.E.
Calgary, Alta. T1Y 5B5

Time

September 15, 1984

Office

C. H. Aussant, P.Geol.

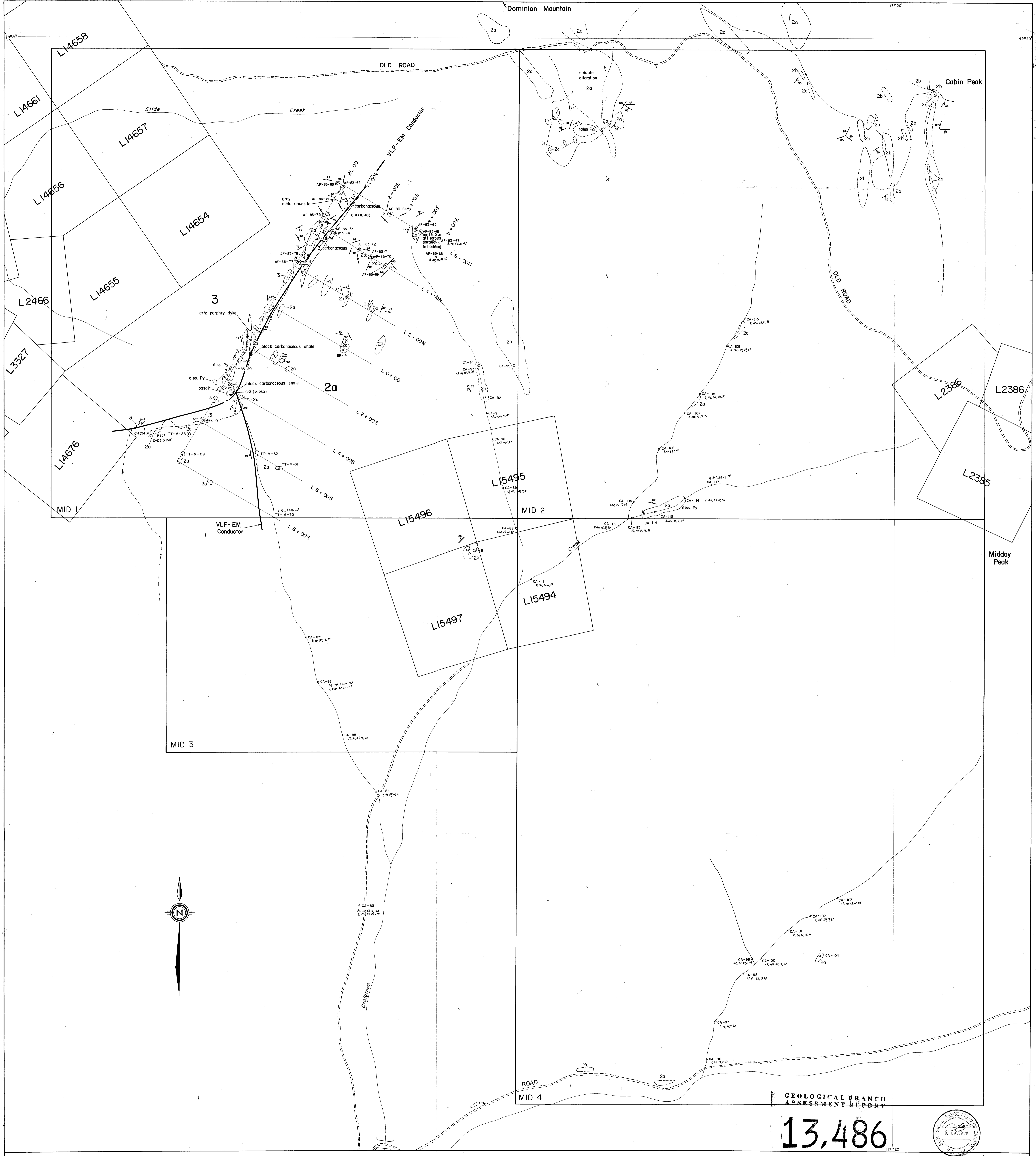
J. W. Davis, P.Geol.
116 MacEwan Drive N.W.
Calgary, Alta. T3K 2P7

E. J. Barnett (secretarial)
#103, 324 - 2nd Ave. N.E.
Calgary, Alta. T2E 0E4

SUMMARY OF EXPENDITURES

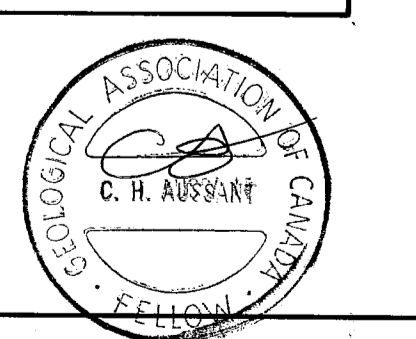
Mid 1 - 4 Mineral Claims
Nelson Mining Division
British Columbia

Pre-Field Preparation		\$ 184.22
Field Personnel		
Project Geologist	1 man day @ \$250/diem	250.00
Transportation (travel expenses, fuel, truck rental, disposable supplies, equipment rentals, mob & demob)		287.96
Charter Transportation (Okanagan Helicopter)		327.60
Field Accommodation	1 man day @ \$40/diem	40.00
Geochemical Analyses		
rock samples (Au/Ag/As/Sb/Cu) 4 @ \$17.80/ea		71.20
Miscellaneous (maps, reproductions, courier, telephone)		45.17
Post-Field Compilation (drafting, report writing, secretarial)		325.00
		<u>325.00</u>
	TOTAL	<u>\$ 1,531.15</u>



GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,486



- | | | | |
|---|--|-------|---|
| 1 | Quartz - feldspar porphyry dykes | - - - | Geological contact |
| 2 | Elise Fm. | □ | Adit |
| a | Hornblende - augite porphyry, andesite | o | Silt sample location |
| b | Tuff | x | Sample description location or Rock sample location |
| c | Andesite breccia | - - - | Bedding |
| 3 | Archibald Fm: Argillites and hornfels | - - - | Joining |
| | | - - - | Shear vein |
- Rock/silt sample results: Au(ppb), Ag(ppb), Cu(ppm), Pb(ppm), Zn(ppm)

REX SILVER MINES LTD.	
MID 1-4 CLAIMS	
GEOLOGY MAP	
DATE AUGUST, 1983	NTS 82 F/6
PROJECT BC-83-2	MAPPED/DRAWN BY C. AUSSANT
SCALE 1:5000	0 50 100 200 METRES
TAIGA CONSULTANTS LTD	MAP 1