

84-#251-12365

03/85

GEOLOGICAL, GEOCHEMICAL AND  
PROSPECTING REPORT

Pass 1 and 2 Mineral Claims

Latitude 49°11' North  
Longitude 118°30' West

N.T.S. 82E/1W+2E

Greenwood Mining Division  
British Columbia

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**12,365**

for

REX SILVER MINES LTD.

Calgary, Alberta

by

Gordon L. Wilson, B.Sc.

TAIGA CONSULTANTS LTD.

#100, 1300 - 8th Street S.W.  
Calgary, Alberta T2R 1B2

February 10, 1984

TABLE OF CONTENTS

Certificate

SUMMARY . . . . . 1

INTRODUCTION . . . . . 2

REGIONAL GEOLOGY . . . . . 5

PROPERTY GEOLOGY . . . . . 6

ECONOMIC GEOLOGY . . . . . 8

1983 EXPLORATION PROGRAM . . . . . 10

CONCLUSIONS AND RECOMMENDATIONS . . . . . 11

Appendix I      Analytical Techniques

Appendix II     Geochemical Results

Appendix III    Rock Descriptions

Appendix IV     Summary of Expenditures

FIGURES

1 General Location Map . . . . . 3

2 Property Location Map . . . . . 4

MAPS

1 Compilation Map

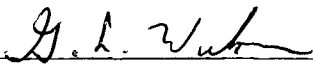
AUTHOR'S QUALIFICATIONS

I, Gordon L. Wilson, of 60 Ranchridge Road N.W. in the City of Calgary in the Province of Alberta, hereby certify that:

1. I am a Project Minerals 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 Alberta, B.Sc. in Geology (1977).
3. I have worked in the field of mineral exploration since 1973.
4. I have personally worked on the claims during the period from June 27 to July 2, 1983.
5. I have not received any interest, nor do I expect to receive any interest, directly or indirectly, in the property described herein nor in the securities of Rex Silver Mines Ltd. in respect of services rendered in the preparation of this report.

DATED at Calgary, Alberta, this 29th day of February, A.D. 1984.

Respectfully submitted,

  
\_\_\_\_\_  
Gordon L. Wilson, B.Sc.

CERTIFICATE

I, James Wilson Davis, of 116 MacEwan Drive N.W. in the City of Calgary in the Province of Alberta, hereby certify that:

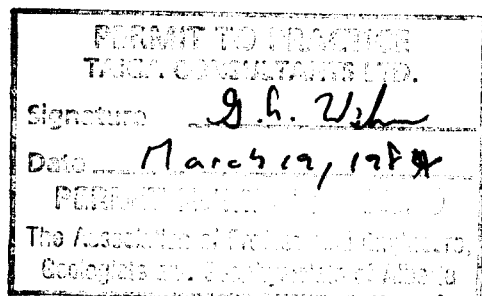
1. I am a Professional Geologist with the firm of Taiga Consultants Ltd. whose offices are located at Suite 100, 1300 - 8th St. S.W., Calgary, Alberta.
2. I am a graduate of St. Louis University, B.Sc. in Geology (1967) and M.Sc. in Geology (1969).
3. I have practised my profession continuously for fifteen years.
4. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta; and a Fellow of the Geological Association of Canada.
5. I have personally directed the exploration work carried out on the claims and described herein, during the period June 25-July 2, 1983.
6. I have not received any interest nor do I expect to receive any interest, directly or indirectly, in the property or the shares of Rex Silver Mines Ltd. in respect of services rendered in the preparation of this report.

DATED at Calgary, Alberta, this 29th day of February, A.D. 1984.

Respectfully submitted,

---

James W. Davis, M.Sc., P.Geol., F.GAC



SUMMARY

During the period from June 27 to July 2, 1983, an exploration program consisting of reconnaissance geological mapping, geochemical sampling, and prospecting was completed on the Pass 1 and 2 mineral claims in the Pass Creek area of south-central British Columbia. Some twenty rock samples were collected on traverses and submitted for analyses.

Geological mapping and prospecting located a number of zones underlain by lithologies and structures considered favourable for hosting precious metals deposits similar to other known deposits in the Grandby River / Phoenix districts. Surface exploration of these zones to date is incomplete, with several of the zones still open along strike, and only tenuous relationships between geochemical results and bedrock mineralization so far established. Recommendations for further include additional detailed surface mapping and sampling, followed by trenching.

INTRODUCTION

Location and Access

The property is located in the Greenwood Mining Division, 20 km north of Grand Forks, and 8 km east of Jewel Lake. The Pass 1 claim is situated in N.T.S. 82E/2 while the Pass 2 lies partly (8 units) in 82E/2E and partly (8 units) in 82E/1W.

Access to both claims is gained by travelling north from Grand Forks on the main Grandby River road for 16 km and then west for 6.4 km on the Rock Candy Mine road. The latter is a good-weather road only.

Property and Ownership

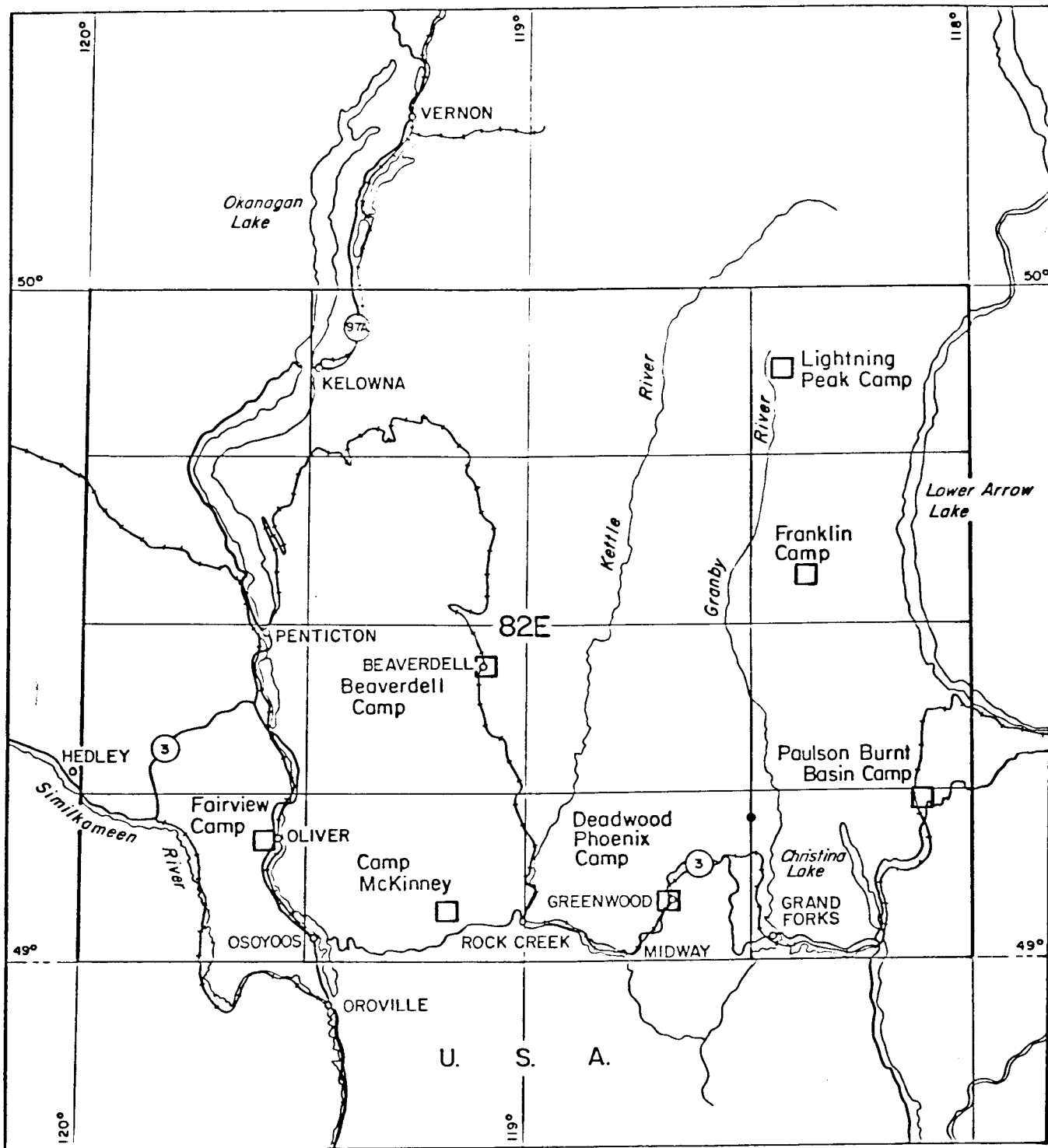
The Pass 1 and 2 mineral claims are located in the Greenwood Mining Division and are registered in the name of Rex Silver Mines Ltd., of Calgary, Alberta. The claims are described in detail below:

<u>Claim</u>	<u>Units</u>	<u>Record Number</u>	<u>Date of Record</u>
Pass 1	18	3661	} March 28, 1983
Pass 2	16	3662	
	34		
	(850 hectares)		

Physiography

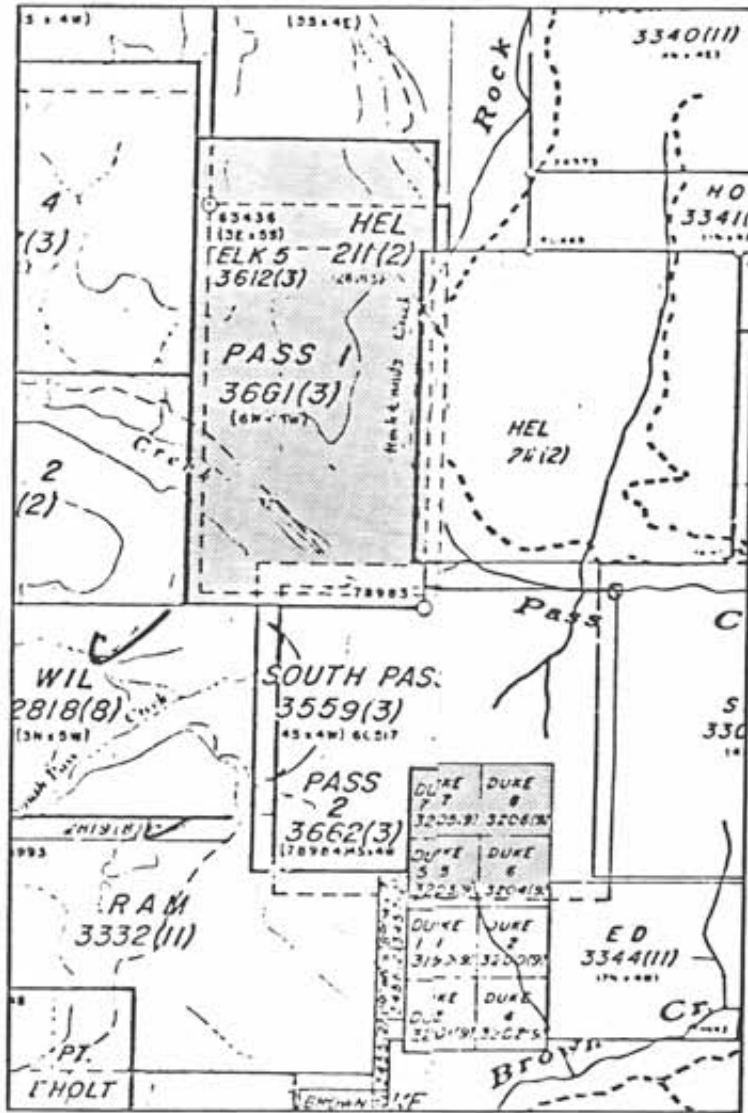
The Pass claims are situated in the Monashee Mountains subdivision of the Interior Plateau. The dominant features are the valleys of the Grandby River and Pass Creek. The topography is fairly mature, and most peaks are rounded by glacial action.

The lowest part of the claims area, about 213 metres ASL, is in the valley of Pass Creek, and the highest point is an un-named peak on Pass 1 at about 1050 metres ASL. On the claims, the topography is characterized by steep rocky hillsides and rounded ridges. Outcrop exposures are abundant.



Scale 1:1,000,000

FIGURE 1  
General Location Map



Scale 1:50,000

Area excluded from claim group due to pre-existing claims in good standing

NOTE: Pass 1 cancelled Feb. 6, 1984; void ab initio

PASS CLAIM GROUP



REGIONAL GEOLOGY

The claims area is underlain by metamorphic, sedimentary, and intrusive and extrusive igneous rock units, ranging in age from late(?) Permian to Middle Eocene. They are separated by periods of deformation and/or regional metamorphism.

The oldest rocks belong to the Anarchist Formation of late Permian / early Triassic age. Formational members include chert, cherty argillite, greenstones (lavas, breccias, tuffs), and greenschist. The rocks are moderately metamorphosed and altered, with more intense alteration evident along contacts with intrusive rocks. These margins are characterized by abundant chlorite and epidote, and finely disseminated pyrite. These rocks are cut by a series of northeasterly trending fracture or shear zones typically well silicified.

This metasedimentary and metavolcanic formation was affected by the widespread Jura-Cretaceous orogeny during which the Nelson/Okanagan intrusions were emplaced. These intrusive rocks consist of granodiorite, minor quartz-diorite, and porphyritic granite.

Resting unconformably upon the Permian rocks are the basal Kettle River and Marron Formation rocks belonging to the Penticton Group of Middle Eocene age. These consist of lithic tuffaceous sandstone, conglomerate, and trachyte. Contemporaneous intrusions include numerous plutonic bodies of syenitic to dioritic composition of the Coryell intrusive rocks, which are seen cutting all rocks in the claims area.

PROPERTY GEOLOGY

All of the described regional units were noted on the property along with their altered variations.

The Pass 1 claim is underlain primarily by Coryell intrusives in the northern and eastern parts. In the west-central and southwestern regions, an irregular belt of metavolcanics belonging to the Anarchist Formation trends roughly northwest. These rocks are intruded in two locations by Coryell rocks, and in the south-central area by a small body of Nelson granite. In the southwestern corner of the Pass 1 claim, a thin sequence of Kettle River and Marron Formation rocks occurs.

Intrusive rocks dominate the Pass 2 claim, represented by both Coryell and the less abundant Nelson intrusives. The main mass of Coryell rocks noted on the eastern half of the Pass 1 claim form a narrow belt progressing southward through the western part of the Pass 2 claim. Isolated remnants of Anarchist Formation rocks and Nelson intrusive rocks occur in the north-western and southwestern parts of the claim. One large irregular body of Nelson granodiorite extends from the southwestern through the central regions of the claim, where it is in contact with Coryell rocks which occupy the southeastern part of the claim. Several isolated remnants of the Anarchist Formation were noted within this Nelson intrusive mass. As well, it is cut by several sill-like bodies of syenite.

Silicified greenstone and greenschist occur in outcrop in the east-central and north-central areas of the block. These rocks are fairly uniform except where intruded by Coryell or Nelson rocks, where they are altered and silicified. Silicification in some cases has completely replaced the greenstone, forming an irregular body of quartz.

All of the rocks described are cut by a series of faults and shears trending roughly north-northeasterly and dipping steeply eastward. Generally, the lines of fracture are irregular and numerous, and where intense, show varying degrees of silicification, in some cases completely replacing the rock between fractures. The stratigraphic sequence is defined overpage.

Quaternary	Glacial and Recent	modified drift; clay, sand, gravel
Tertiary	Middle Eocene	Coryell syenite; Penticton Group. Marron Formation - trachyte Kettle River Formation - lithic tuffaceous sandstone, conglomerate
Juro-Cretaceous	upper Jurassic/ lower Cretaceous	Nelson Intrusives - granodiorite, quartz diorite
Permo-Triassic		Anarchist Formation - chert, cherty argillite, greenstone

## ECONOMIC GEOLOGY

The Pass claims occupy an area which is favourable for the discovery of replacement type deposits mainly. In several areas, the altered greenstones, which appear to constitute inclusions in the alkali-syenite intrusive rocks which dominate the area, have undergone intensive silicification completely replacing the original rock in places. This feature is noted where fissure or shear zones occur in the greenstone country rock, and the silicification is probably related to the adjoining intrusive rocks. It is probable that this situation is due to hot solutions, following the fissure systems in the country rock as channels, percolated through them, and upon meeting with changed conditions in temperature and pressure, deposited the load of vein matter, replacing the original rock with this material. It appears, however, that the expected metallic sulphides were lacking in the solutions, as only minor amounts of mineralization were noted in these areas.

### Maple Leaf Occurrence

The Maple Leaf precious metal occurrence, reported to be situated on the property, was found to be of only minor significance. Firstly, its location appears to be somewhat removed from that indicated by the B.C. Department of Mines information. Secondly, only one of the reported workings (Hedley, 1937) was located. It consists of a small open cut investigating an intensively fractured and silicified zone in greenstone country rock. Quartz has completely replaced the greenstone for a distance of 150 metres east-west and approximately 200 metres north-south. The zone is adjacent to the Coryell contact to the west. The greenstone has been altered to propylite in the vicinity. The quartz lens was chip sampled over 2 metre intervals along its roughly north-south strike length, returning low Au-in-rock values.

As indicated on Map 1, this showing is located in the north-central part of the Pass 2 claim. The name "Maple Leaf" is not attached due to the rather uncertain position.

Several other quartz stringers and silicified fractures on the claims were examined and sampled, returning low Au-in-rock values.

As silicification is fracture-controlled and appears to be related to the emplacement of the Nelson intrusives, further mapping will be required to elucidate this contact relationship.

1983 EXPLORATION PROGRAM

Geological Mapping, Prospecting, and Rock Sampling

Work carried out in June 1983 consisted of reconnaissance geological mapping, geochemical sampling, and prospecting. The results are presented on Map 1 at a scale of 1:5000. Included in this program was an effort to locate, map, and sample the Maple Leaf workings.

During this program, twenty rock samples were routinely collected on traverses. As well, the Maple Leaf prospect (in its scaled down form) was chip sampled. All samples were submitted to TerraMin Research Labs Ltd. in Calgary, Alberta, for analyses for gold content. Map 1 indicates the locations and results of this sampling.

Geological mapping and prospecting were successful in upgrading the area's favourability, particularly with respect to the stratigraphy. Surface mineralization was lacking, and where encountered, consisted of minor pyrite and minor malachite.

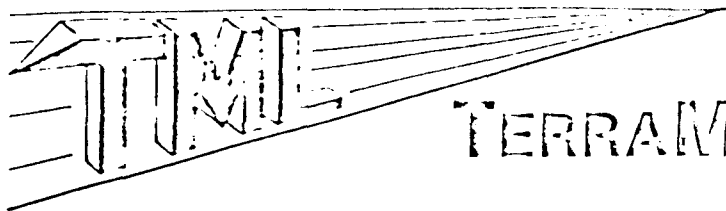
CONCLUSIONS AND RECOMMENDATIONS

Rock samples to date have failed to identify any anomalous zones in gold or silver content. Reconnaissance property mapping suggests that mineralization might be related to the fracture system where silicification is intense, and to the emplacement of the Coryell intrusion (for timing) and the Nelson intrusion. A limited amount of follow-up prospecting and sampling is recommended.

A P P E N D I X I

Analytical Techniques



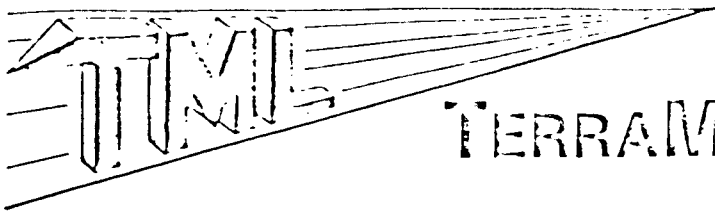


# TERRAMIN RESEARCH LABS LTD.

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

## 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).

A P P E N D I X I I

Geochemical Results



# TERRAMIN RESEARCH LABS LTD.

## ANALYTICAL REPORT

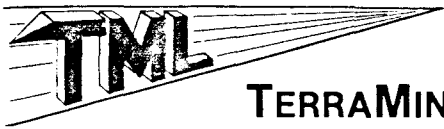
Job # 83-161

Date

Client Project

Page 6/8

<u>Rock</u>	Sample No.	Au ppb
GW	2526	-2
	2527	-2
	2528	-2
	2529	-2
	2530	-2
	2531	-2
	2532	-2
	2533	-2
	2534	2
	2535	-2
	2536	-2
	2537	-2
	2601	-2
	2602	-2
	2603	2
GW	83-09-R	194
	12-ST-R	12
	18-ST/a	4
	19-ST/a	8
	20-ST	6
	22-R	4
	24 A	-2
	24 B	-2
	24 C	4
	24 D	6



# TERRAMIN RESEARCH LABS LTD.

## ANALYTICAL REPORT

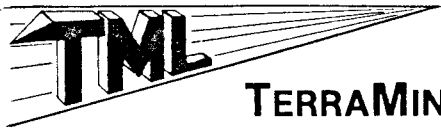
Job # 83-161

Date

Client Project

Page 7/8

Sample No. <u>Rock</u>	Au ppb
GW 24 E	4
24 F	4
24 G	2
24 H	-2
24 I	2
24 J	4
24 K	-2
GW 27-1 MO-83-105 R Hi Grade	4
27-2 MO-83-106 R (Tr)	2
JOY 1R TR2 AF-01	2
JOY 1 TR3R AF-02	6
MOD 5	4
13	2
14	2
17 6W-83-09 ST	2
18	4
24 GW-83-10-R	4
25 GW-83-11-51-R	2
26 GW-83-13-ST-R	8
27	4
30	12
Entrprse 31 GW-83-16a-STR	6
" 32 GW-83-16g-STR	4
" 33 GW-83-16c STR	4
" 35 GW-83-17 R	4



# TERRAMIN RESEARCH LABS LTD.

## ANALYTICAL REPORT

Job # 83-161

Date

Client Project

Page 8/8

Sample No. <u>Rock</u>	Au ppb
MO 8352 R	2
8354 Tr R	10
8354 R	20
8355 R	8
8358 R	8
8361 R Tr	10
8368 Tr R	566
8369 Tr R	6
8373 Tr R	4
8374 Tr	2
83-102 & 103	-2

A P P E N D I X   I I I

Rock Descriptions

Maple Leaf showing

- GW-83-24A silicified biotite schist with some vein quartz
- 24B vuggy, fine-grained quartz vein material from edge of cliff
- 24C vein quartz, vugs are lined with quartz crystals, single stage drusy white quartz
- 24D silicified and propylitically altered wallrock
- 24E vein quartz, hematite staining along fractures
- 24F very fine-grained vein quartz, no sulphides visible
- 24G wallrock, altered, fine-grained, silicified with very fine-grained disseminated pyrite
- 24H vein quartz, highly fractured
- 24I brecciated quartz
- 24J siliceous greenstone with 1% disseminated pyrite
- 24K vein quartz, 2% disseminated pyrite
- 
- MO 8354 TRR Maple Leaf open cut sample, 2 metres across well mineralized quartz breccia zone
- MO 8355 R quartz float below Maple Leaf cut
- MO 8368 RTR rusty altered, silicified, chert / cherty greenstone, with 2% disseminated pyrite exposed by trenching

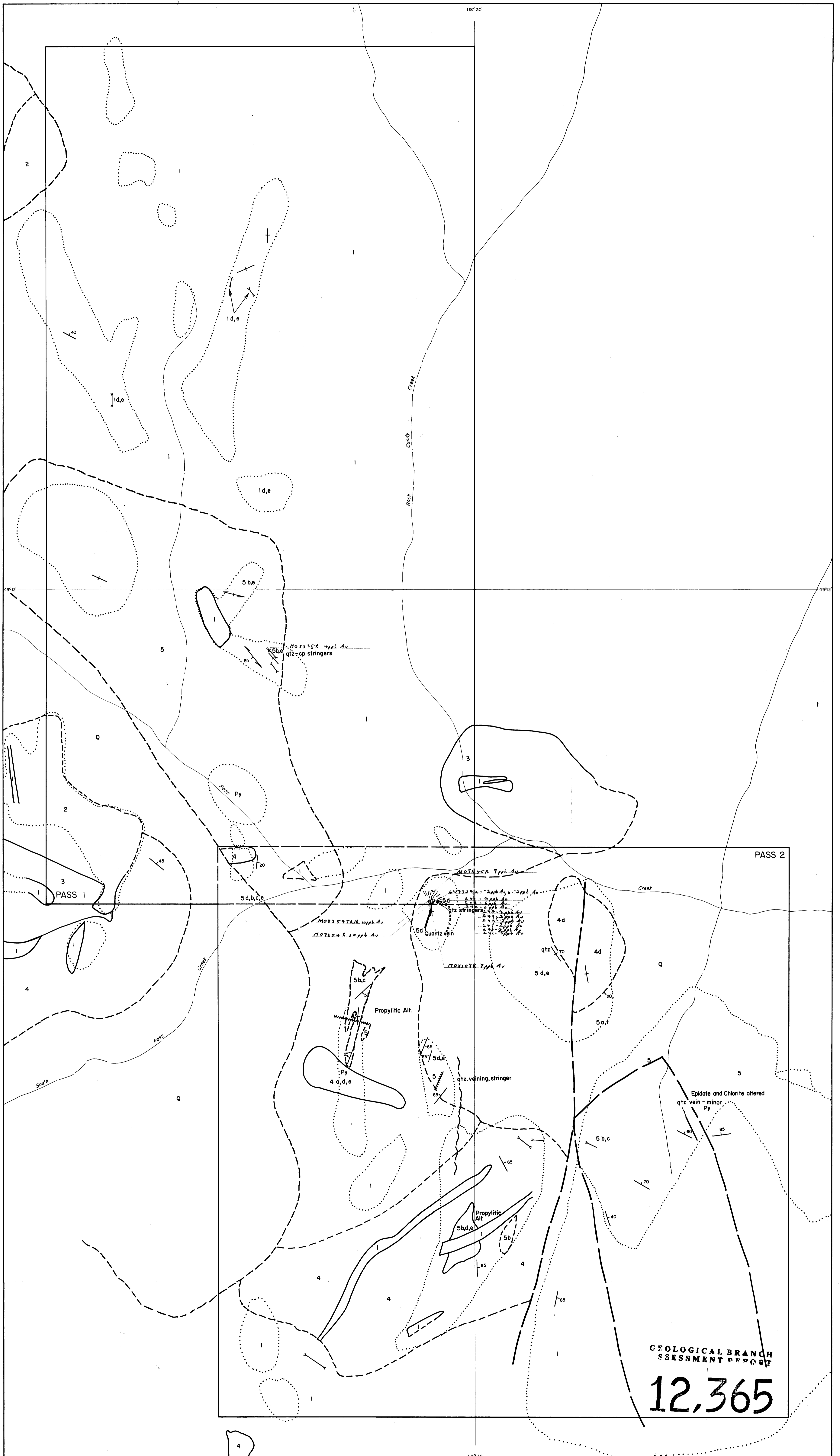


A P P E N D I X I V

Summary of Expenditures

SUMMARY OF EXPENDITURES  
 Pass 1 and 2 Mineral Claims  
 Greenwood Mining Division

<u>Pre-Field Preparation</u>		231.73
<u>Field Personnel</u>		
Project Supervisor	4 days @ \$325/diem	1,300.00
Project Geologist	5 days @ \$250/diem	1,250.00
Junior Geologist	5 days @ \$175/diem	875.00
Geological Technician	5 days @ \$150/diem	<u>750.00</u>
		4,175.00
<u>Transportation and Travel</u>		
Fuel and travel expenses		126.60 *
4x4 truck rental	5 days @ \$65/diem	<u>325.00</u>
		451.60
<u>Field Accommodation</u>		
Food and lodging	19 man days @ \$40/diem	760.00
Disposable supplies		<u>75.55 *</u>
		835.55
<u>Geochemical Analyses</u>		
Rock samples, for Au	20 @ \$8.30/each	166.00 *
<u>Equipment Rentals</u>		
Crone VLF-EM	5 days @ \$15/diem	75.00
<u>Miscellaneous</u>		
Maps, publications, reproductions, courier, etc.		60.00 *
<u>Post-Field Compilation</u>		
Report writing, data compilation		1,662.50
Drafting and secretarial		<u>200.00</u>
		1,862.50
* <u>Handling Charge</u> on all third-party expenses		
	12% of \$428.15	51.38
	TOTAL	<u>\$ 7,908.76</u>



GEOLOGICAL BRANCH  
ASSESSMENT REPORT  
**12,365**

- Q** Unconsolidated sediments, Till, Sand & Gravel
- TERTIARY**
- EOCENE**
- SORYELL INTRUSIONS**
- 1** Syenite, Quartz monzonite
- PENTICTON GROUP**
- MARRON FORMATION**
- KITLEY LAKE MEMBER**
- 2** Trachyte
- KETTLE RIVER FORMATION**
- 3** Feldspathic and lithic tuffaceous sandstone, Shale and minor conglomerate

- JURASSIC**
- NELSON INTRUSIONS**
- 4** Granodiorite
- PERMIAN**
- ANARCHIST FORMATION**
- 5** Quartz biotite schist, with minor greenstone  
Soon the Knob Hill Group.
- a With Carbonate
- b With Epidote
- c With Chlorite
- d Silicified
- e With Sulfides
- f Brecciated

- Contacts
- - - Axial trace of anticline, upright overturned
- - - Fault
- - - Shear
- - - Fracturing
- - - Bedding
- - - Trench
- - - Adit
- Shaft
- Outcrop
- × Prospect

NOTE: Pass 1 cancelled Feb. 6, 1984;  
declared void ab initio

REX SILVER MINES LTD.	
PASS 1 & 2 CLAIMS	
GEOLOGY MAP	
DATE JULY, 1983	NTS 82 E/1,2
PROJECT BC-83-2E	MAPPED/DRAWN BY G. WILSON
SCALE 1:5000	0 50 100 150 METRES
TAIGA CONSULTANTS LTD	MAP 1