

84-#253-12366

03/85

GEOLOGICAL, GEOCHEMICAL, AND
GEOPHYSICAL REPORT

Marsel 1-6 Mineral Claims
Hyway Fraction

Latitude 49°18' North
Longitude 119°47' West

N.T.S. 82E/5E+W

Osoyoos Mining Division
British Columbia

for

GEOLOGICAL BRANCH PEX SILVER MINES LTD.
ASSESSMENT REPORT Calgary, Alberta

12,366

by

Gordon L. Wilson, B.Sc.
TAIGA CONSULTANTS LTD.
#100, 1300 - 8th Street S.W.
Calgary, Alberta T2R 1B2

February 10, 1984

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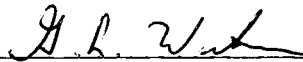
AUTHOR'S QUALIFICATIONS

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 July 12 to July 21, 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 July 12 - 21, 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

PERMIT TO PRACTICE TAIGA CONSULTANTS LTD.	
Signature	<u>G.L. Davis</u>
Date	<u>March 29, 1984</u>
PERMIT NUMBER	
The Association of Professional Geologists and Geophysicists of Alberta	

SUMMARY

During July 1983, ground VLF-EM surveying (7.25 km) was completed on the Marsel 5 claim. Semi-reconnaissance geological mapping, prospecting, and rock sampling were carried out over the property as a whole, utilizing a 1:5000 scale topographic base. A total of 21 rock samples were collected, eight of which were submitted for analyses. Six soil samples were routinely collected during mapping and prospecting traverses, and were also submitted for analyses.

The results of this work have identified several zones of interest on the Marsel 2, 3, and 6 claims. These zones are underlain by lithologies and structures considered favourable for hosting precious metals deposits similar to known deposits in the southern Okanagan district. Surface exploration of these zones to date is incomplete, with several zones open along strike. Recommendations for further work include additional detailed surface mapping and sampling.

INTRODUCTION

The Marsel 1-6 mineral claims and the Hyway fractional claim form a contiguous block located in N.T.S. 82E/5E+W. The property lies within the Osoyoos Mining Division, 15 km north of Keremeos, extending in all directions from Marsel Creek, approximately 2.4 km north of its confluence with Keremeos Creek.

Access to the property is gained by ground vehicle utilizing any of the all-weather road from Osoyoos, Penticton, Keremeos, or Ollalla. There are numerous four-wheel-drive roads throughout, which were built originally for hauling drillings and other exploration equipment.

Property and Ownership

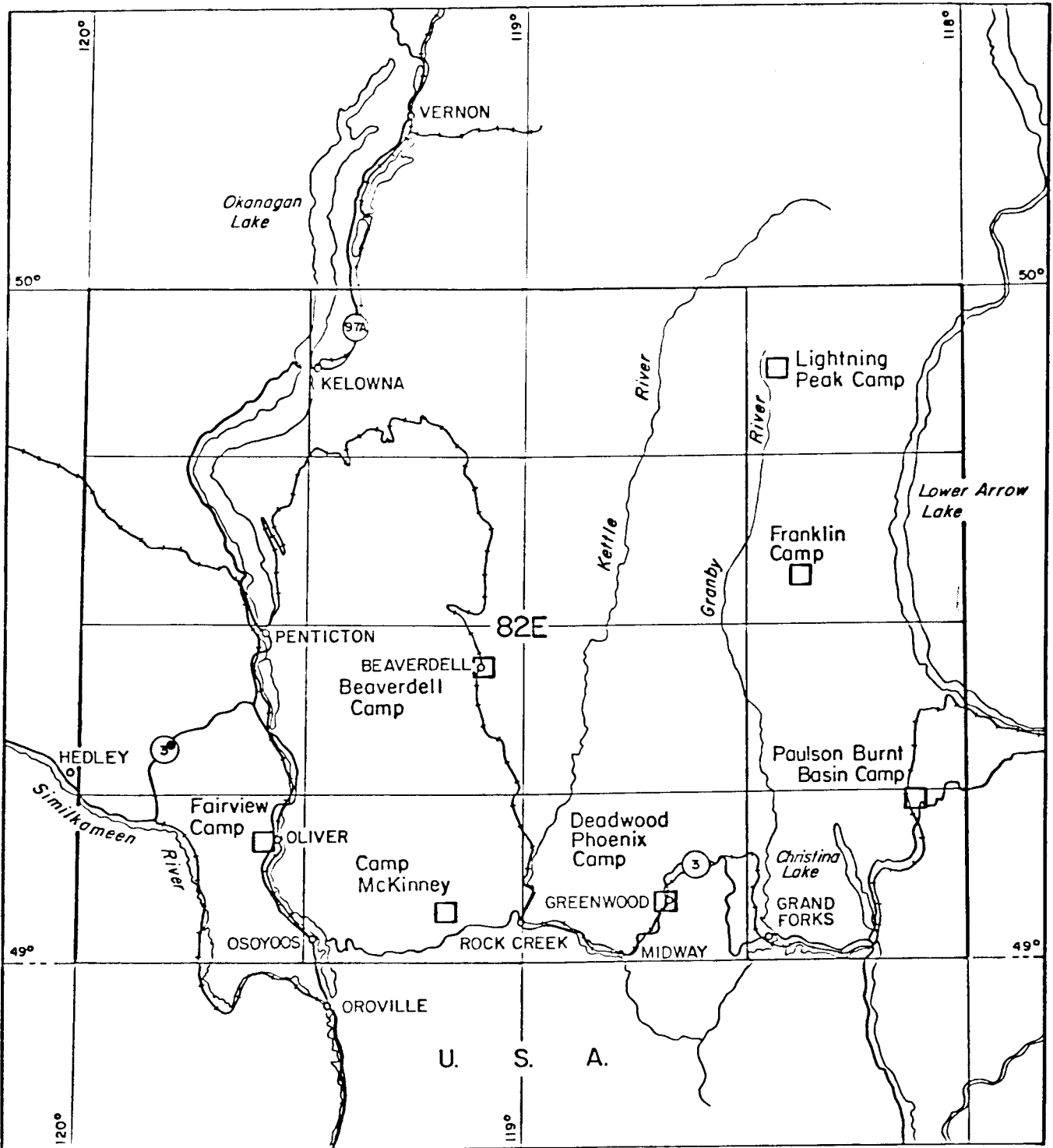
The property consists of six mineral claims and one fractional claim. Legal corner posts are placed strategically to allow for easy and effective unit reduction if necessary. The claims are registered in the name of Rex Silver Mines Ltd. of Calgary, Alberta.

<u>Claim</u>	<u>Size</u>	<u>Units</u>	<u>Record No.</u>	<u>Date of Record</u>
Marsel 1	2x5	10	1701	
Marsel 2	2x5	10	1702	
Marsel 3	2x2	4	1703	
Marsel 4	4x5	20	1704	March 31, 1983
Marsel 5	4x5	20	1705	
Marsel 6	3x2	6	1706	
Hyway Fr.	-	-	-	
		70		

(1750 hectares)

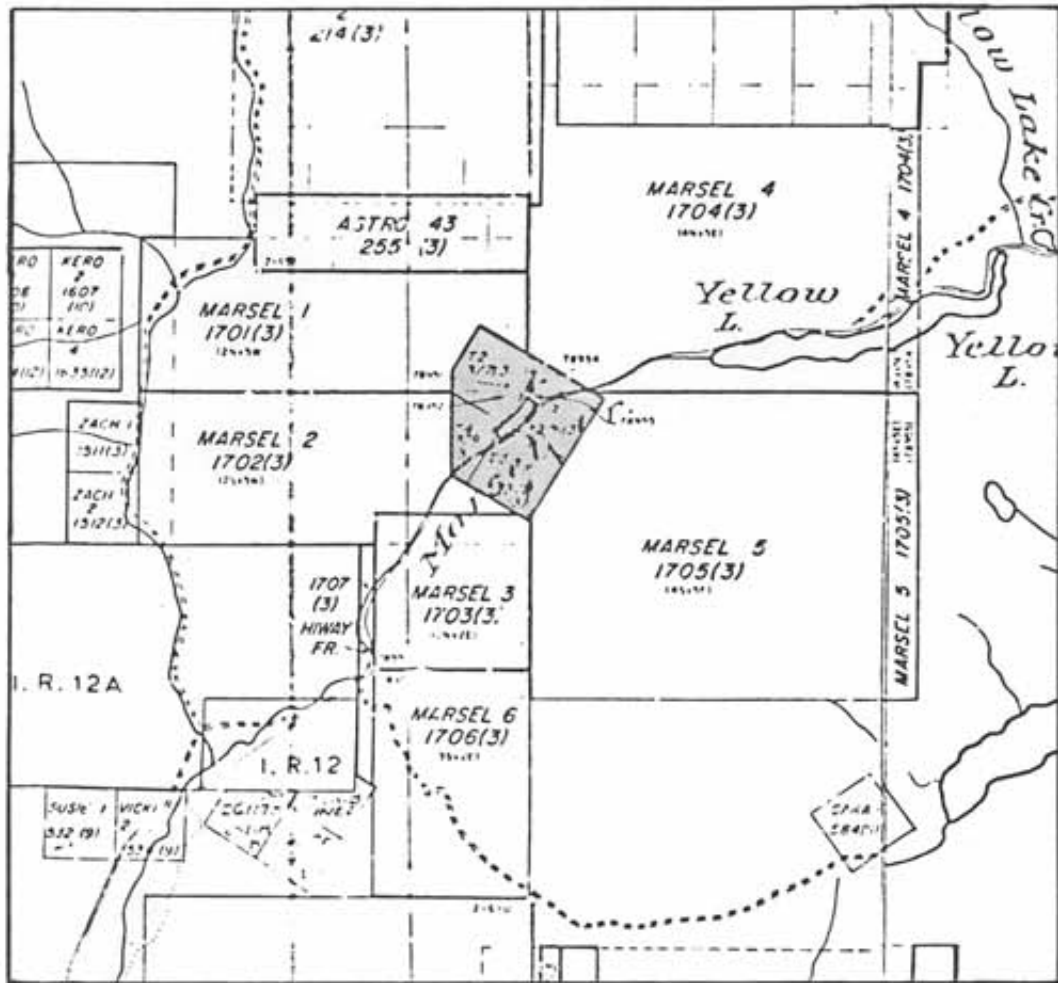
Physiography

The claims lie within the Interior Plateau of British Columbia, a region characterized by broad rolling uplands, deeply and steeply dissected by the main valleys and their tributaries. Within the claims area are the Okanagan Highlands, characterized by gently sloping hillsides. Topography is minutely rough, as the slopes are intersected by a number of draws which in general trend northwest. Outcrop exposures are abundant in draws and along creeks, and are lacking in other areas where overburden is heavy.



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

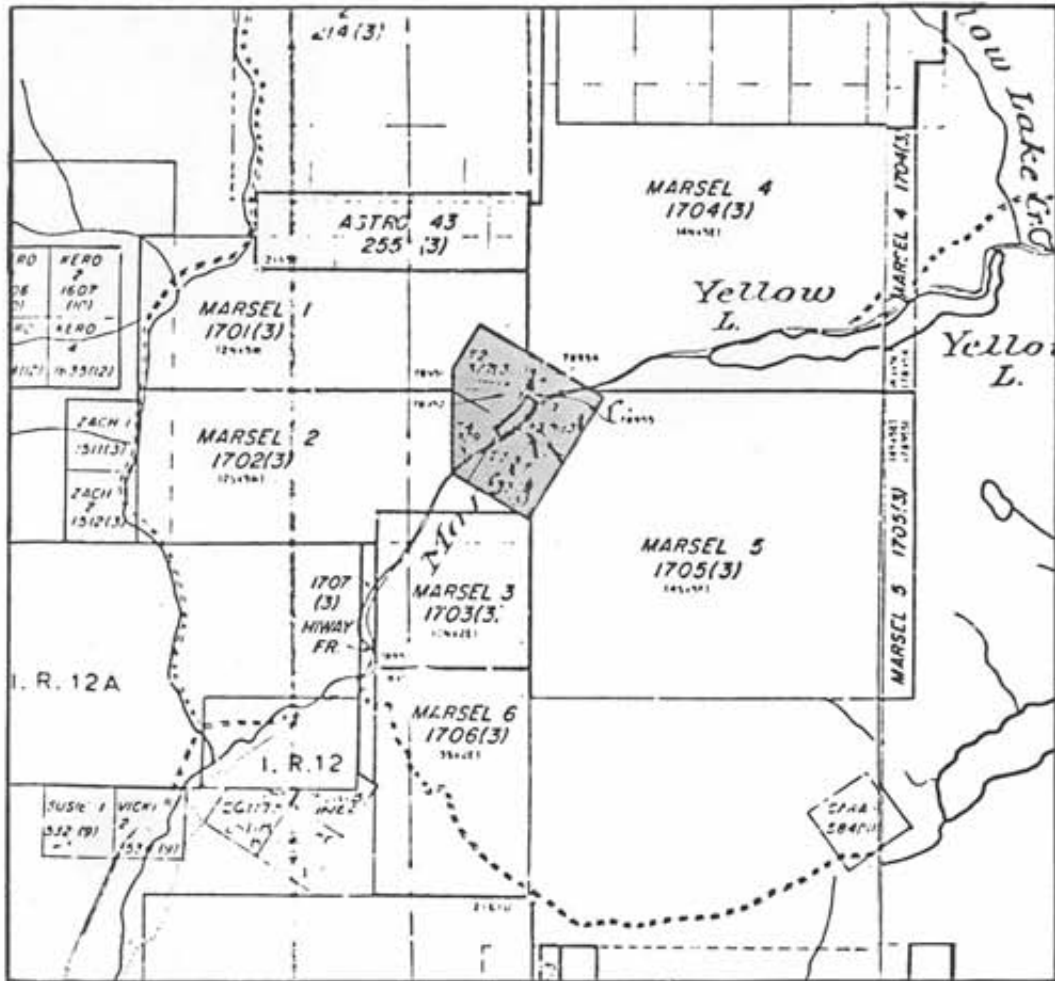
MARSEL CLAIM GROUP

REGIONAL GEOLOGY

Geological formations within the claims area range from Permian to Middle Eocene and comprise a great variety of sedimentary, igneous, and metamorphic rocks. Sediments are in the minority, and volcanic formations and related intrusives are corelated with the sediments according to the associations and structural relationships. The following table presents a brief outline of the stratigraphy:

Quaternary		till, sand, gravel, silt
Middle Eocene	Coryell Intrusions	syenite, quartz monzonite
	intrusive contact	
	Ollalla Formation	rhyolite breccia
	Penticton Group:	
	Marron Formation	Nimpet Lake member: trachyte, trachyandesite
		Kitley Lake member: trachyandesite with glomerophenocrystic feldspar
		Yellow Lake member: mafic phonolite
Kettle River Formation	tuffaceous arkose	
Springbok Formation	basal conglomerate	
Triassic	Shoemaker Formation	chert, tuff, greenstone
Permian	Anarchist Formation	greenstone, quartzite, tuff, limestone

The oldest rocks in the area belong to the Anarchist Formation and consist principally of greenstones and siliceous tuffs. They form a narrow southerly trending belt in the southern part of the Marsel 6 claim. Resting conformably on these are the Triassic metasediments and metavolcanics of the Shoemaker Formation consisting mainly of chert and minor greenstone, while the Old Tom members are mainly greenstone and basalt. These rocks occupy the western half of the Marsel 3 and 6 claims and most of the Marsel 1 and 2 claims. They form wide southwesterly trending belts extending from the base of Marsel Mountain, south into the Ollall area. They are intruded by the Jurassic and Similkameen batholithic rocks to the west of the property.



Scale 1:50,000

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

MARSEL CLAIM GROUP

The eastern side of the property, covered by the Marsel 4 and 5 claims, is characterized by a fault-bounded Tertiary basin filled with felsic lavas and associated fluvial and lacustrine sedimentary rocks. This area constitutes the western rim of the Penticton Tertiary Outlier. The basal units are shoestring in plan, whereas the upper formations are sheet-like lavas and breccia deposits from fissure eruptions.

Structural control of the Tertiary outlier is related to a herring-bone pattern of conjugate shears at northeast and northwest orientations.

Rock units noted within the outlier belong to the Penticton Group, consisting of six well-defined formations having one aggregate thickness of about 2500 metres. The base is characterized by a basal conglomerate referred to as the Springbok Formation, and coeval beds of Kettle River Formation consist mainly of tuffaceous sedimentary rocks. Above this is the Marron Formation composed mainly of andesite, trachyte, and phonolitic lavas, succeeded upwards by dacitic domes of Marama Formation. On the eastern side of the outlier, this is followed by volcanic breccias and fluvial sedimentary rocks of the White Lake Formation.

Penticton Group rocks rest unconformably on pre-Tertiary metamorphosed Mesozoic sedimentary and volcanic rocks, as noted and described on the western half of the property. The principal resources of this group are coal, precious metals, uranium and geothermal energy.

PROPERTY GEOLOGY

Geological mapping of the Marsel claims and the Hyway fraction was carried out utilizing a 1:5000 topographic base. The results of this work are presented on Map 1. Mapping was restricted to major bedrock exposures.

Permian and Triassic rocks (Anarchist and Shoemaker equivalents) underlie the Marsel 1, 2, 3, and 6 claims. These are unconformably in contact with the Eocene basal conglomerate and felsic lavas of the Penticton Tertiary Outlier which are exposed on the Marsel 4 and 5 claims. Numerous north-south fracture zones transect the older metasediments and metavolcanics as well as the unaltered volcanics of the Penticton Group.

The Marsel 1 and 2 claims are underlain primarily by blue-grey chert and minor white to grey limestone. The western region of the Marsel 3 and 6 claims is underlain primarily by dark grey greenstone and blue-grey chert with several isolated exposures of white limestone.

To the east, underlying most of the Marsel 4 and 5 claims and parts of the Marsel 1, 2, 3, and 6 claims, are the members of the Penticton Group. Here the Nimpet Lake and the Kitley Lake volcanic members are well developed as is the Yellow Lake phonolite member. The basal member (Springbok Formation) is well exposed on bluffs east of Keremeos and Marsel Creeks. The unit, roughly 230 metres thick here, consists of well layered polymictic pebble and boulder conglomerates. The clasts are derived from pre-Tertiary beds of feldspathic andesite, grey chert, and chlorite schist similar to those noted to the west. These rocks are down-faulted and tilted to the east. These rocks are overlain by the pyroxene-rich mafic phonolite lavas of the Yellow Lake member and are well exposed along Yellow Lake. Resting on top of this member are the Kitley Lake trachyandesite lavas characterized by large glomerophenocrystic clots of pinkish feldspar. This member is well displayed on both the Marsel 4 and 5 claims.

Overlying the Kitley Lake lavas is the Nimpet Lake member consisting of tan trachyte and trachyandesite lava. These rocks are exposed on the Marsel 5 claim only. In the southeastern corner of the Marsel 5 claim is an irregular body of Ollalla Formation consisting mostly of rhyolite breccia.

ECONOMIC GEOLOGY

Preliminary examination of the property has indicated several zones of interest, all within the older metasedimentary and metavolcanic units underlying the western half of the property. These zones are underlain by the favourable chert, greenstone, and to a lesser extent, limestone lithologies.

On the Marsel 1 claim in the southeastern corner, an extensive gossan was located. Here, three open cuts have exposed an irregular silicified body of interbedded greenstone and chert within a north-northwesterly trending shear zone. The zone is traceable for approximately 200 metres northerly through the altered greenstone.

The Reno occurrence, situated on a southeasterly trending ridge on the Marsel 1 claim, was located and examined. Workings consist of two small open cuts exposing the interbedded chert and greenstone members of the Shoemaker Formation. A narrow northwesterly trending silicified fracture cuts the country rock and is weakly mineralized with pyrite and very minor malachite.

On the Marsel 3 and 6 claims, the greenstone is cut by several strong and persistent fracture zones. Silicification is intense through the zones, in places completely replacing the country rock, forming irregular quartz lenses between fractures. Quartz stringers and silicified fractures cut the zones at various orientations. Malachite and pyrite mineralization was noted along fractured surfaces and disseminated through the silicified greenstone.

1983 EXPLORATION PROGRAM

Work carried out on the Marsel claims and the Hyway fraction consisted of reconnaissance VLF-EM surveying, followed by geological mapping and sampling. A total of ten days were required to complete the program.

VLF-EM Survey

Approximately 7.25 line km of ground VLF-EM surveying was carried out over a portion of the property, primarily on the ridge just south of Yellow Lake. A Crone Radem VLF-EM unit was used with the Seattle, Washington transmitting station (18.6 KHz). The survey was selected to evaluate a magnetic anomaly extending some distance through the area. Several weak and two moderately strong conductors were defined, all having east-west orientations. Prospecting and mapping in the vicinity of the conductors identified a strong westerly trending fissure zone, a feature commonly seen throughout the basin. No visible mineralization was encountered.

Geochemical Sampling

A total of 20 rock samples were routinely collected during mapping and prospecting traverses, all submitted to TerraMin Research Labs Ltd. in Calgary, Alberta for analyses. Au-in-rock values were generally very weak. Samples were collected from interesting bedrock at irregular intervals.

Geological Mapping and Prospecting

Reconnaissance geological mapping and prospecting were carried out over the property as a whole, with more detailed examination directed to existing occurrences. Results are presented at a scale of 1:5000 on Map 1, and detailed descriptions are provided in sections "Property Geology" and "Economic Geology".

CONCLUSIONS AND RECOMMENDATIONS

Limited geological investigations, rock geochemical sampling, and geophysical surveying have identified several zones of interest, largely restricted to the western half of the property, in the older sediments and volcanics. The eastern half of the property (Marsel 4 and 5, and parts of Marsel 1, 2, 3, and 6) is underlain by the less favourable, relatively unaltered Tertiary felsic volcanics.

Thus, better quality targets and the proximity to the "basin rim" argue in favour of concentrating efforts in the western region. The most favourable area for stratabound type deposits is adjacent to the interbedded limestone-chert sequence noted on the Marsel 6 claim.

Fissure vein type deposit favourability increases with the identification of several intensively silicified fissure zones transecting the Marsel 1, 2, 3, and 6 claims. These zones appear to be related to the extensive and repeated block faulting noted to the east. Irregular branching, silicified fissures cut these zones.

1. Detailed magnetic and VLF-EM coverage of the western parts of the Marsel 1, 2, 3, and 6 claims with extended covering over the basin rim.
2. Detailed soil sampling over established grid lines, using 25-metre station intervals.

A P P E N D I X I

Analytical Techniques

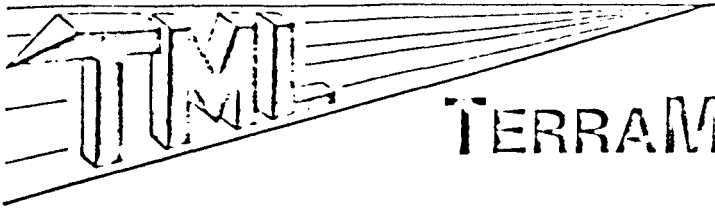
The logo for Terramin Research Labs Ltd. features the word "TERRAMIN" in a stylized, blocky font. The letters are white with black outlines and are set against a background of horizontal lines that converge towards a point on the right, creating a sense of depth and perspective.

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.



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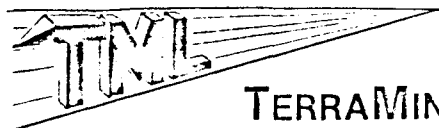
SAMPLE PREPARATION

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 # 83-344

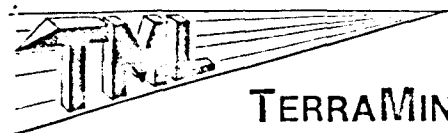
Taiga Consultants

Date Nov.21, 1983

Client Project BC-83-2

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Sample No.	Au ppb	Ag ppb	Cu ppm	Pb ppm	Zn ppm
AF - 83 - 01	18	1580	340	1	53
02	142	760	230	1	32
03	26	1640	2600	4	87
04	26	170	210	-1	19
05	152	970	680	1	27
06	70	1040	1930	-1	75
MOD 112 R	-2	210	27	-1	147
MO 83 121	760	6100	2700	1	53
MOD 124	38	270	19	-1	14
125	12	200	24	1	11
136	-2	150	14	-1	78
137	2	580	28	7	73
MO 83 138	-2	160	9	220	111
139	-2	380	51	2	60
140	-2	140	60	-1	125
MOD 141	-2	130	4	-1	107
MO 83 142	2	250	29	-1	270
MOD 143	12	560	22	11	18



TERRAMIN RESEARCH LABS LTD.

ANALYTICAL REPORT

Job # 83-238

Taiga Consultants

Date Sept. 1, 1983

Mike Fox

Client Project Marsel Claims

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Sample No.	Au ppb	Ag ppb	Cu ppm
MO 83 13 b So	2	240	61
14 So	4	230	33
16 So	2	300	27
17 SH/So	2	140	18
18 So	6	210	51
GW 41 So	6	100	79

A P P E N D I X I I I

Rock Descriptions

Gossan Sampling

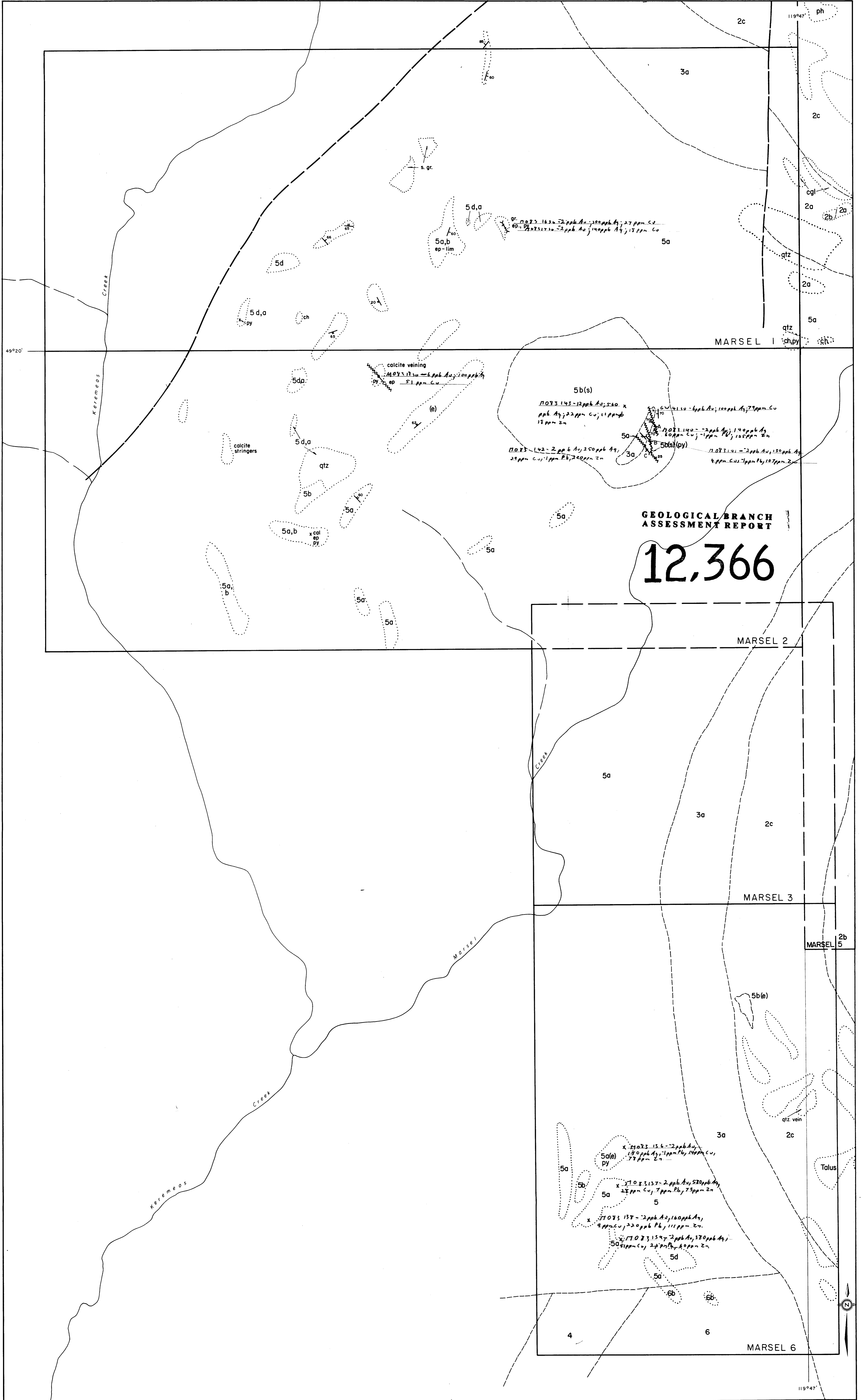
- MO-83-136 Silicified rust altered greenstone; hematite staining on fracture surfaces.
- MO-83-137 Graphitic, siliceous greenstone sample from open cut.
- MO-83-138 Rust altered blue chert with hematite and pyrite mineralization.
- MO-83-139 Siliceous, cherty greenstone with moderately disseminated pyrite.
- MO-83-140 Sample collected over shear zone. Silicified greenstone with abundant rust alteration.
- MO-83-141 Sample section of shear zone cutting blue chert. Contains vein quartz and strong hematite staining along fracture surfaces.

A P P E N D I X I V

Summary of Expenditures

SUMMARY OF EXPENDITURES
Marsel 1 - 6 Claims, Hyway Fractional Claim
Osoyoos Mining Division

<u>Pre-Field Preparation</u>			230.00
<u>Field Personnel</u>			
Project Geologist	9 days @ \$250/diem	2,250.00	
Junior Geologist	9 days @ \$175/diem	1,575.00	
Geological Technician	9 days @ \$150/diem	<u>1,350.00</u>	5,175.00
<u>Transportation and Travel</u>			
Fuel and travel expenses		299.60 *	
4x4 truck rental	9 days @ \$65/diem	585.00	
Replacement vehicle	1 day	<u>88.39</u>	972.99
<u>Field Accommodation</u>			
Food and Lodging	27 man days @ \$40/diem	1,080.00	
Disposable supplies		<u>60.40</u> *	1,140.40
<u>Geochemical Analyses</u>			
Rock samples for Au	27 @ \$8.30/each		224.10 *
<u>Equipment Rentals</u>			
Crone VLF-EM	9 days @ \$15/diem	135.00	
Geonics EM-16	9 days @ \$18/diem	<u>162.00</u>	297.00
<u>Miscellaneous</u>			
Reproductions, courier, etc.			3.50 *
<u>Post-Field Compilation</u>			
Report writing, data compilation		2,067.50	
Drafting and secretarial		<u>312.00</u>	2,379.50
* <u>Handling Charge</u> on all third-party expenses			
12% of \$587.60			<u>70.51</u>
		TOTAL	<u>\$ 10,493.00</u>



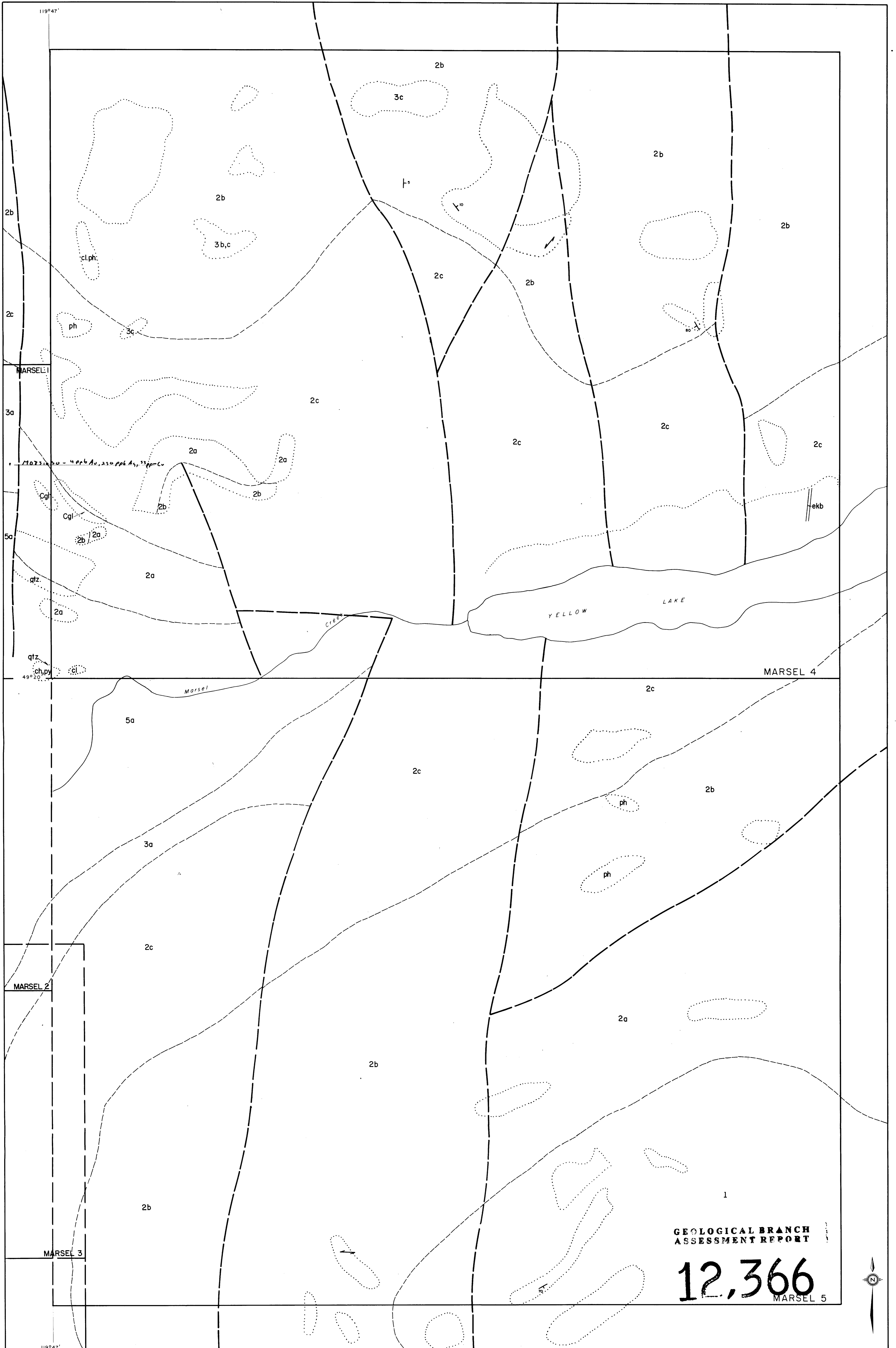
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12,366

Q	Quaternary:	till, sand, gravel, silt
1	Middle Eocene:	Ollalla Formation rhyolite breccia Penticton Group
2		Marron Formation Nipet Lake member: a. trachyte, trachyandesite Kitley Lake member: b. trachyandesite with glomerophenocrystic feldspar Yellow Lake member: c. mafic phonolite
3	Jurassic	Springbok Formation basal conglomerate
4		Similkameen Intrusions qtz monzonite, granite
5	Triassic	Shoemaker Formation a. chert b. greenstone c. tuff d. limestone
6	Permian	Anarchist Formation a. greenstone b. limestone

---	Geologic contact
○	Outcrop
---	Fault
+	Fracture
~~~~~	Shear
---	Trench
x	Rock Sample
.	Soil Sample
qtz	quartz
py	pyrite
lim	limonite
gr	granitized
ph	phonolite
ep	epidote
lim	limonite
cal	calcite
cgl	conglomerate
cl	chlorite
(s)	silicified
(e)	epidote
(py)	pyrite, disseminated sulphides

REX SILVER MINES LTD	
MARSEL 1, 2, 3 & 6 CLAIMS	
GEOLOGY MAP	
DATE JULY, 1983	NTS 82 E 5W
PROJECT BC-83-2E	MAPPED/DRAWN BY G. WILSON
SCALE 1:5000	0 50 100 150 200 METRES
TAIGA CONSULTANTS LTD	MAP 1



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**12,366**  
MARSEL 5

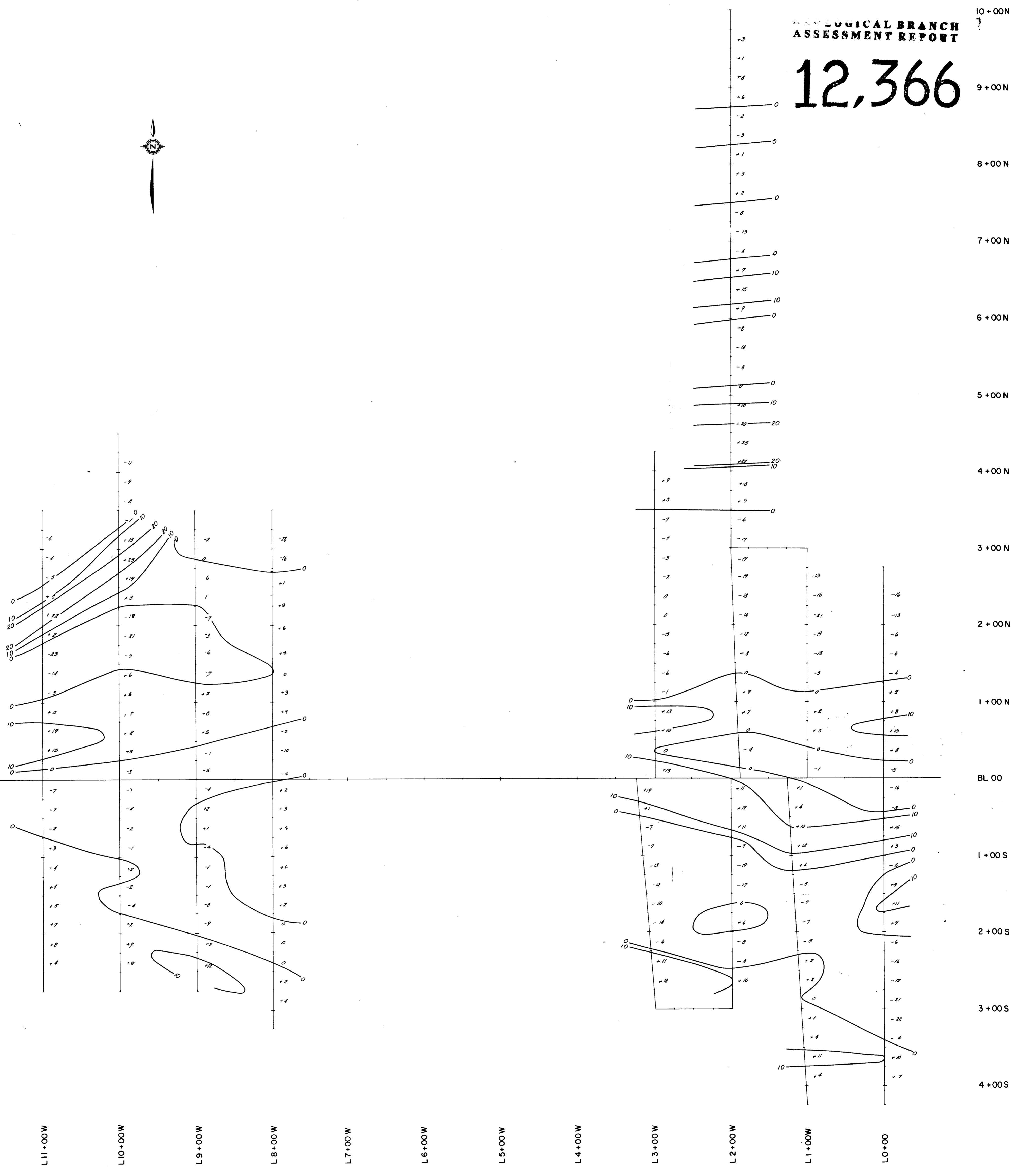


0	Quaternary: till, sand, gravel, silt
1	Middle Eocene: Ollalla Formation rhyolite breccia
2	Pentiction Group:
	Marron Formation Nipet Lake member: a. trachyle, trachyandesite
	Kitley Lake member: b. trachyandesite with glomerophenocrystic feldspar
	Yellow Lake member: c. mafic phonolite
3	Jurassic Springbok Formation basal conglomerate
	Simikameen Intrusions qtz monzonite, granite
5	Triassic Shoemaker Formation a. chert b. greenstone c. tuff d. limestone
	Permian Anarchist Formation a. greenstone b. limestone
(s)	silicified
(e)	epidote
(py)	pyrite, disseminated sulphides

---	Geologic contact
○	Outcrop
—	Fault
+	Fracture
~~~~~	Shear
—>	Trench

qtz	quartz	ep	epidote
py	pyrite	lim	limonite
ch	chalcopyrite	cal	calcite
gr	granitized	cgl	conglomerate
ph	phonolite	cl	chlorite

REX SILVER MINES LTD.	
MARSEL 4 & 5 CLAIMS	
GEOLOGY MAP	
DATE JULY, 1983	NTS 82 E 5W
PROJECT BC-83-2E	MAPPED/DRAWN BY G. WILSON
SCALE 1:5000	0 50 100 150 200 METRES
TAIGA CONSULTANTS LTD	MAP 1b



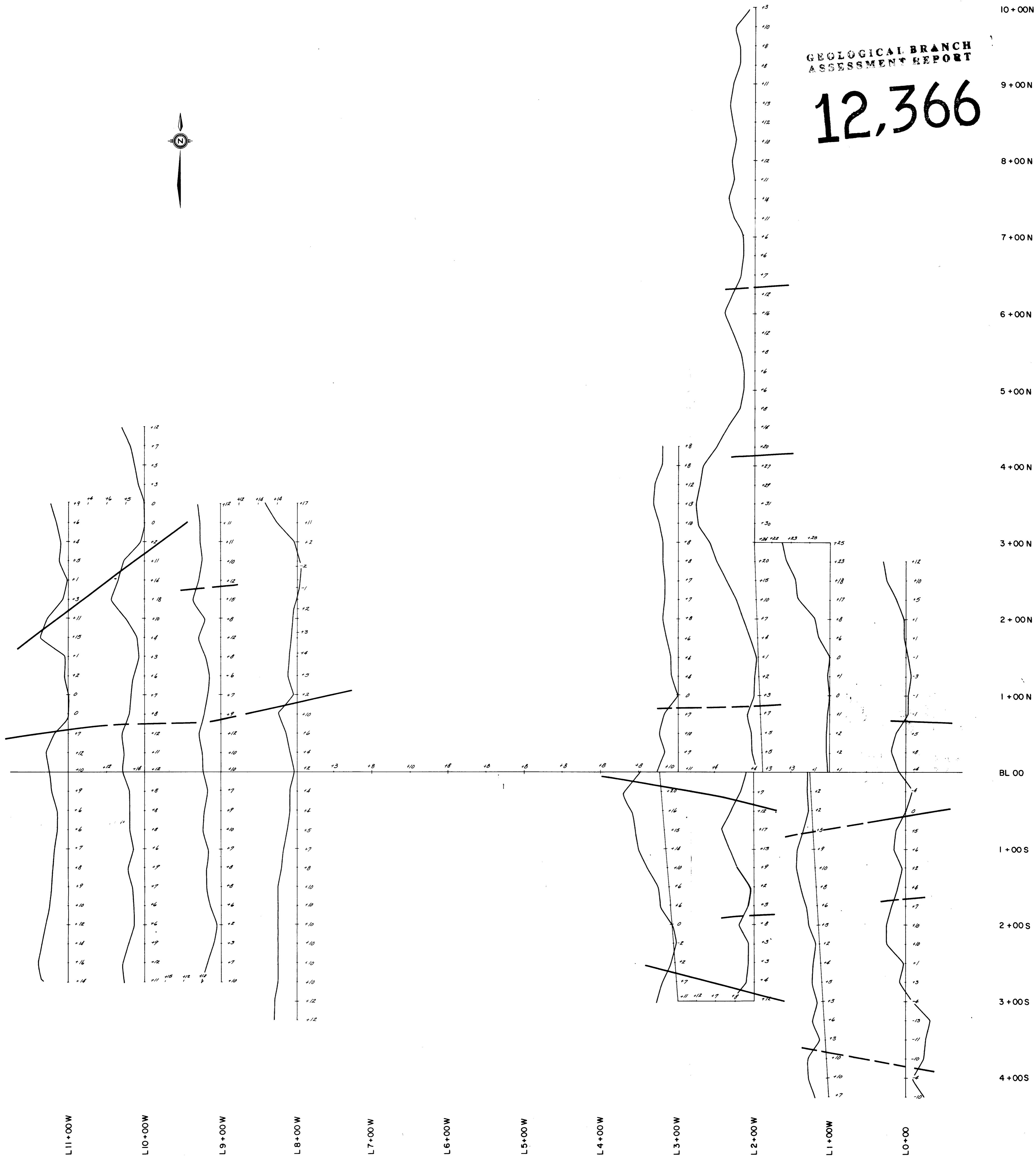
Instrument: Crone Rodem VLF-EM
 Operator: A. Francoeur
 Plotter: A. Francoeur
 Station: Seattle, Wash.
 Contour interval: 10

REX SILVER MINES LTD.	
MARSEL 5 CLAIM	
FRASER FILTERED VLF-EM	
DATE JULY, 1983	NTS 82 E/4
PROJECT BC-83-2E	MAPPED/ DRAWN BY G. WILSON
SCALE 1: 2500	0 25 50 75 100 METRES
TAIGA CONSULTANTS LTD	MAP 2



GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,366



Instrument: Crone Radem VLF-EM
Operator: A. Francoeur
Plotter: A. Francoeur
Station: Seattle, Wash.
Northwest dip: positive
Southeast dip: negative
Profile interval: 1cm = 10°
Conductor axis: moderate
weak



REX SILVER MINES LTD.	
MARSEL 5 CLAIM	
VLF - EM PROFILES	
DATE JULY, 1983	NTS 82 E/4
PROJECT BC-83-2E	MAPPED/ DRAWN BY G. WILSON
SCALE 1:2500	0 25 50 75 100 METRES
TAIGA CONSULTANTS LTD	MAP 3