

80-830-# 8408

Assessment Report  
 on a  
 Prospecting and Geochemical Orientation Survey  
 on parts of the  
 Royal, Excelsior, New Victor  
 M.S. and Fourth of July , Bywater and Wendy # 1 to #4 claims  
 (Fourth of July Group)

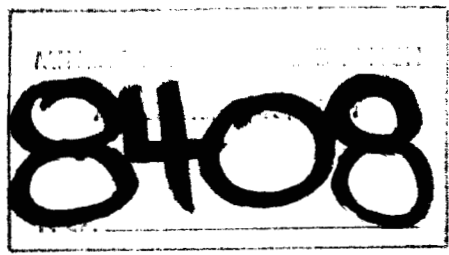
Ymir Gold Camp

Nelson Mining Division  
British Columbia

N.T.S. 82F/6E  
Latitude 49°22'N Longitude 117°07'W

Field Work August 28,29,1980

by



D. R. Cochrane, P.Eng.  
Oct. 22, 1980,  
Delta, B.C.



**Cochrane Consultants Limited**  
4882 Delta St., Delta, B.C. V4K 2T8 946-9221  
Geotechnical Consulting / Exploration Services

geology  
geophysics  
geochemistry

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**A. INTRODUCTION**

On August 28 and 29, 1980, the author and three prospectors conducted work on the Fourth of July Group of mineral claims situated some 8 air kilometres north-east of Ymir, in the South Central Kootenay area of British Columbia. Work included conventional prospecting and a geochemical orientation survey.

This report has been prepared for assessment work submission and assessment details are contained in Appendix II at the end of the report.

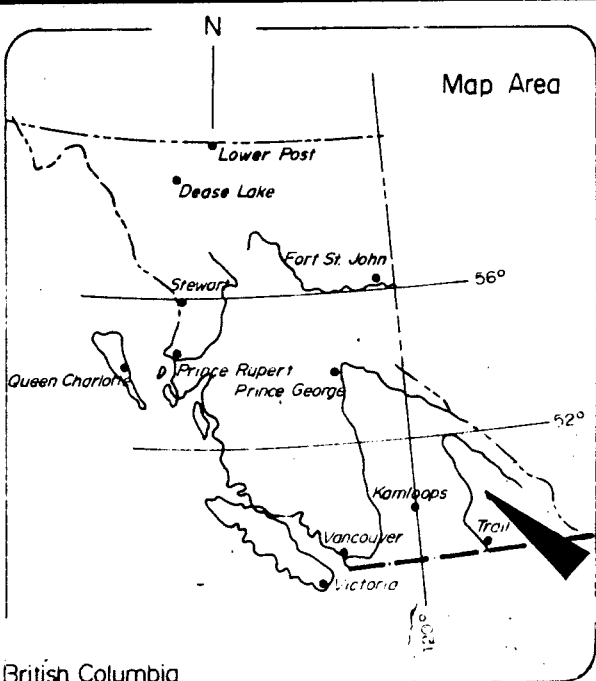
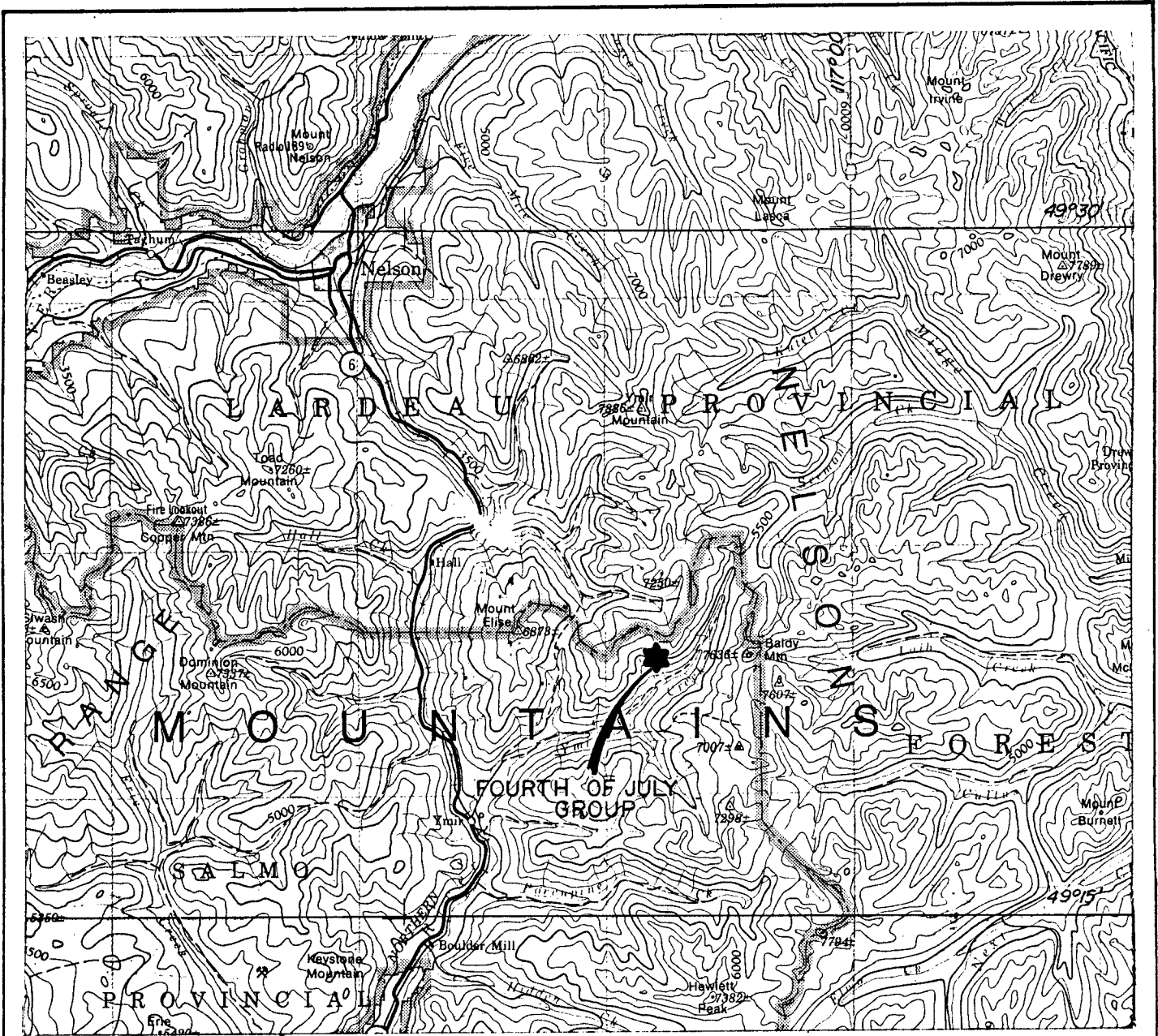


**B. LOCATION AND ACCESS**

The Fourth of July Group of mineral claims is situated on the north side of Ymir (Wildhorse) Creek, some 10 road kilometres north-east of the town of Ymir. Normal access is by the Ymir Creek road, past Huckleberry Creek, to the old Wilcox mill and dump. Access to the claims from this point is up hill by foot from an elevation of about 4,000 ft. (1200 m) to close to 6,000 ft. A.M.S.L. (1800 m). The claims lie on a relatively steep southeast facing hillside drained by Rapid and Avalanche Creeks, southeasterly flowing tributaries of Ymir Creek.

The N.T.S. code for the area is 82F/6E.  
(see location map).

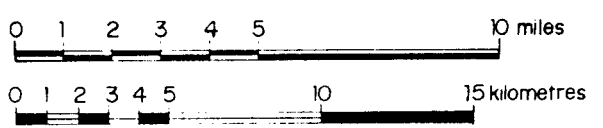




**YMIR GOLD MINES LTD.**  
**FOURTH OF JULY GROUP 82F/6E**  
**YMIR, B.C. NELSON M.D.**

Figure 1  
 Location Map

Scale : 1 to 250,000 or 1 inch equals approx. 4 miles.



C. CLAIMS AND OWNERSHIP

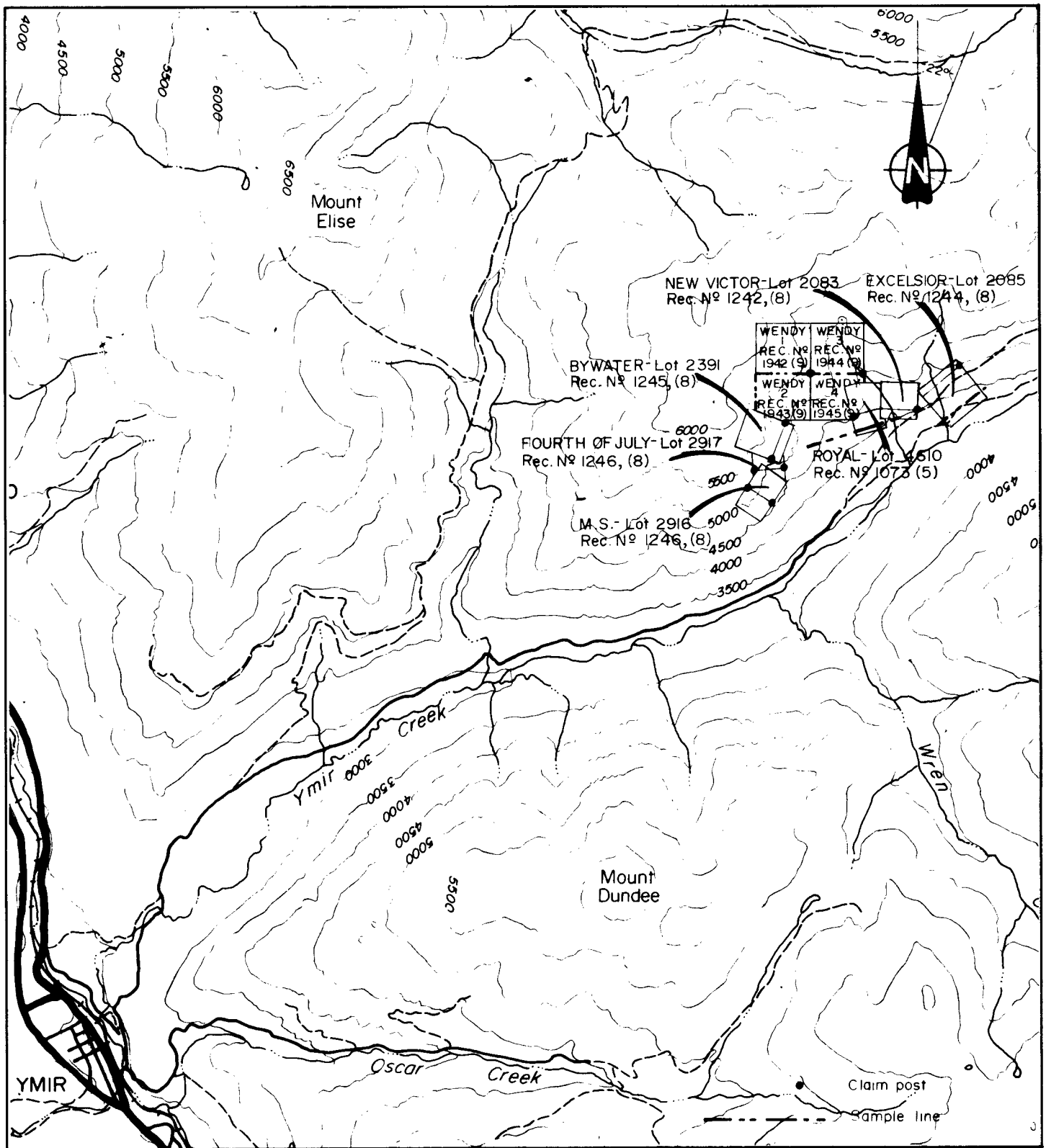
The Fourth of July Group consists of a total of six (6) reverted crown granted claims and four (4) located mineral claims. Two of the reverted claims are considered as one (M.S. and Fourth of July). The following table lists pertinent claims information, and claims are shown on Mineral Titles Map 82F/6E., Nelson Mining Division.

CLAIM	RECORD NO.	OWNER*	ANNIVERSARY	EXPIRY DATE**
M.S. and Fourth of July	1246	P.R.W.	August 29	1982
Bywater	1245	P.R.W.	August 29	1982
Royal	1243	P.R.W.	August 29	1982
New Victor	1242	P.R.W.	August 29	1982
Excelsior	1244	P.R.W.	August 29	1982
Wendy No. 1	pending	D.R.C.	September	1983
Wendy No. 2	pending	D.R.C.	September	1983
Wendy No. 3	pending	D.R.C.	September	1983
Wendy No. 4	pending	D.R.C.	September	1983

\* P.R.W. = Paul Reeves Willson  
D.R.C. = Donald R. Cochrane

\*\* After credits applied for in this assessment report



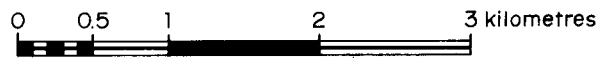


**YMIR GOLD MINES LTD.**

FOURTH OF JULY GROUP 82F/6E  
 YMIR, B.C. NELSON M.D.

Figure 2  
 Claims Map

Scale 1:50,000



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**D. SETTING AND HISTORY**

Ymir is an historic and important western gold mining camp, and at one time the Ymir Gold Mine was the largest gold mine in Canada. (Drysdale, G.S.C. Mem. 94, 1917). The camp is well situated, being close to a major highway (# 6 between Nelson and Salmo), adequate power (West Kootenay Power) and rail (Burlington Northern). Ymir lies 34 road miles northeast of Cominco's smelter at Trail, and 50 odd miles south of a custom mill at Ainsworth, B.C. There is adequate power, timber and water for mining purposes, and historically the region has a mining economic base.

The Fourth of July group of mineral claims lies a few miles east of the Ymir Mine, and adjacent to the Wilcox Mine. According to Drysdale, the claims were originally located in July and August 1896 by Messers. White and Bywater, and work commenced on the Fourth of July vein where rich ore was "rawhided" down the valley





and transported to the Northport smelter. In 1898-99, a four stamp mill was installed, and in 1901 the average smelter value was \$53.00 per ton with 70% recovery (gold at \$20.00 per ounce). The Wilcox Mine produced intermittently from 1901 to 1943 and to the author's knowledge little work has been done on the property since the 1940's.

The host rock for the gold bearing quartz veins are a north trending porphyritic granite, which lies immediately east of the Pend d' Oreille schists. The granite is, in part, schistose and contains "pendants" of Pend d' Oreille rocks, and is, presumably, a granitized zone.

According to Drysdale, there are three main veins on the property, the Fourth of July, Willock and Little Willock. The gangue is principally quartz and silicified country rock with irregular patches of pyrite, galena, sphalerite and free gold.

Total production at the Wilcox is recorded as 16,041 tons from which 7,780 troy ounces of gold and 16,932 ounces of silver were recovered.



**E. WORK DONE**

The author and three prospectors arrived on the property on August 28, 1980 and much of that day was spent in prospecting and orientation; locating old workings and examining the dumps. On August 29, 1980, the crew was split, with the "lower" crew prospecting and collecting soil samples from near the M.S. claim to the Royal New Victor and Excelsior. The "upper" crew completed a traverse from the Fourth of July claims, across the centre of the Wendy claims to just north of the Royal. (see map for sample locations) Traversing was done with a Brunton compass and hip chain, and soil samples collected from the upper B soil horizon. The samples, normally collected at depths varying from 6 " to 1' deep (0.15 m to 0.30 m), were placed in standard pre-numbered kraft paper soil bags, boxed, and then shipped by 4 x 4 to Min En Labs of North Vancouver, where they were seived to -80 mesh and then analyzed for gold(Au) and silver(Ag) content by standard A.A. methods.

A total of 35 samples were collected.



**F. DISCUSSION**

Gold in the upper B horizon soil on the Fourth of July group of mineral claims ranged from a low of 5 parts per billion (ppb) to a high of 110 parts per billion (ppb). The arithmetic mean of the 35 samples was 25.79 ppb gold and standard deviation 25.67 ppb gold.

The silver content of the soils ranged in value from a low of 0.6 to a high of 1.9 parts per million (ppm); the arithmetic mean 1.187 and standard deviation 0.30 ppm silver.

The coefficient of correlation between the gold and silver values in the upper B horizon soil samples is + 0.0901. (Note a coefficient of correlation of +1.00 indicates perfect positive correlation; that of 0.00 complete randomness; and that of -1.00 of perfect inverse correlation) Therefore there is a slight geochemical tendency for silver values to correlate with gold.



A composite sample from mineralization on the Wilcox Mill dump area assayed as follows.

Pb	2.12%
Zn	1.62%
Au	1.900 oz/ton
Ag	4.80 oz/ton

It was anticipated that this grade of mineralization could be picked up by geochemical recon work, and that anomalous gold and silver geochemical values would be obvious.

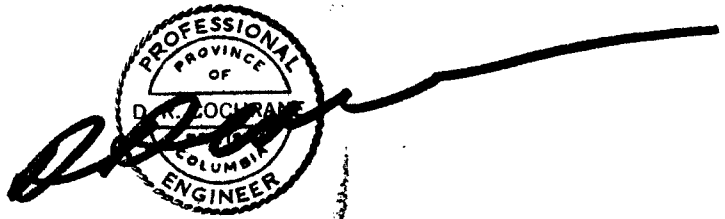
Only two significant anomalous gold values were encountered, and no significant silver values. The highest gold value (110 ppb) was located close to Rapid Creek in an area where Drysdale (1917) reports an "old prospect" on the Arizona claim. The second anomalous value is some 400 metres (approx. 1/4 miles) east of this position and on the Royal claim in an area that to the author's knowledge, no work has been reported.



The remaining values may basically be described as background except that background in this particular area is quite high (average gold 25.8 ppb).

A detailed prospecting and additional geochemical work is warranted on the 100 ppb gold anomaly at position Royal 6 on the Royal claim. The soil sample should be analyzed for additional trace elements .

Respectfully submitted,



A handwritten signature in black ink, appearing to read 'D. R. Cochrane', is written over a circular professional seal. The seal is for a Professional Engineer in the Province of Columbia. The signature is written in a cursive style and extends to the right of the seal.

D. R. Cochrane, P. Eng.

October 22, 1980,

Delta, B.C.



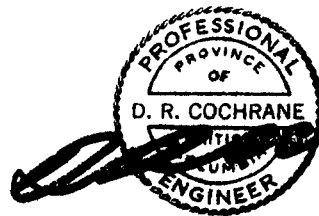
APPENDIX I

CERTIFICATE

CERTIFICATE

I, Donald Robert Cochrane of the Municipality of Delta, British Columbia, do hereby certify that:

1. I am a consulting geological engineer with an office at 4882 Delta Street, Delta, B. C.
2. I am a graduate of the University of Toronto (1962) with a degree in Applied Geology (B.A.Sc.) and a graduate of Queen's University (1965) with a Master of Science Degree in Geological Sciences (Engineering).
3. I have practiced my profession continuously since graduation while being employed by such companies as Noranda Exploration Co. Ltd., Quebec Cartier Mines, and Meridian Explorations Syndicate. I have been in private independent practice since 1969.
4. I am a member in good standing of the Association of Professional Engineers (A.P.E.) of the Province of British Columbia, and also a member of the A.P.E. in the provinces of Ontario, Saskatchewan, Alberta and the Yukon Territories.



D. R. Cochrane, P. Eng.,  
October 22, 1980.,  
Delta, B. C.



APPENDIX II  
Assessment Work Details

Costs: Assessment Work Program,  
Fourth of July Group, Ymir, B.C.

1. Wages:

- (a) D.R. Cochrane, P. Eng., Aug.28,29, 1980  
2 days field, 1 day office  
total 3 days at \$250/day ..... \$ 750.00
  
- (b) Three (3) prospectors, Aug.28,29, 1980,  
2 days, total 6 man days at \$100/man/day \$ 600.00

2. Field Expenses:

- (a) D.R. Cochrane, P. Eng.  
Travel, meals, food/lodging for crew .... \$ 259.68
  
- (b) Expenses, prospectors 1 and 2, truck,  
lodging, meals etc. .... \$ 309.27
  
- (c) Expenses, prospector 3, 4 x 4 rental,  
plus mileage ..... \$ 98.75
  
- (d) Consumed field supplies:(sample bags,  
flagging, etc.) ..... (approx.)..... \$ 10.00

3. Analytical Expenses:

- (a) Min En Labs: 35 geochem samples at  
\$6.60/sample ..... \$ 231.00
  
- (b) One (1) Pb, Zn, Au, Ag, assay at \$28.00 ... \$ 28.00

Cont'd....



4. Data Reduction, Report Preparation

(a) Typing, 5 hours at \$12.00/hour ..... \$ 60.00

(b) Drafting, 12 hours at \$19.00/hour ..... \$ 228.00

(c) Reproduction, binding, collating ..... \$ 120.00

Total.....\$2,694.70





APPENDIX III

GEOCHEMICAL DATA ANALYSIS SHEETS  
and  
CERTIFICATE OF ASSAY



# MIN-EN Laboratories Ltd.

705 WEST 15th STREET,  
NORTH VANCOUVER, B.C., CANADA V7M 1T2  
TELEPHONE (604) 980-5814

## ANALYTICAL REPORT

Project Ymir Date of report Oct. 14/80.

File No. 0-834 Date samples received Sept. 17/80.

Samples submitted by: .....

Company: Cochrane Consultants

Report on: 35 soils Geochem samples

..... Assay samples

### Copies sent to:

1. Cochrane Consultants, Delta, B.C.

2. ....

3. ....

Samples: Sieved to mesh -80 Ground to mesh .....

Prepared samples stored  discarded

rejects stored  discarded

Methods of analysis: Au-Aqua Regia.A.A. Analysis.

Ag-nitric, perchloric digestion.A.A. Analysis.

Remarks: .....

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No.: Ymir

MIN - EN Laboratories Ltd.

DATE: Oct. 1

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2  
PHONE (604) 980-5814

1980.

ATTENTION:

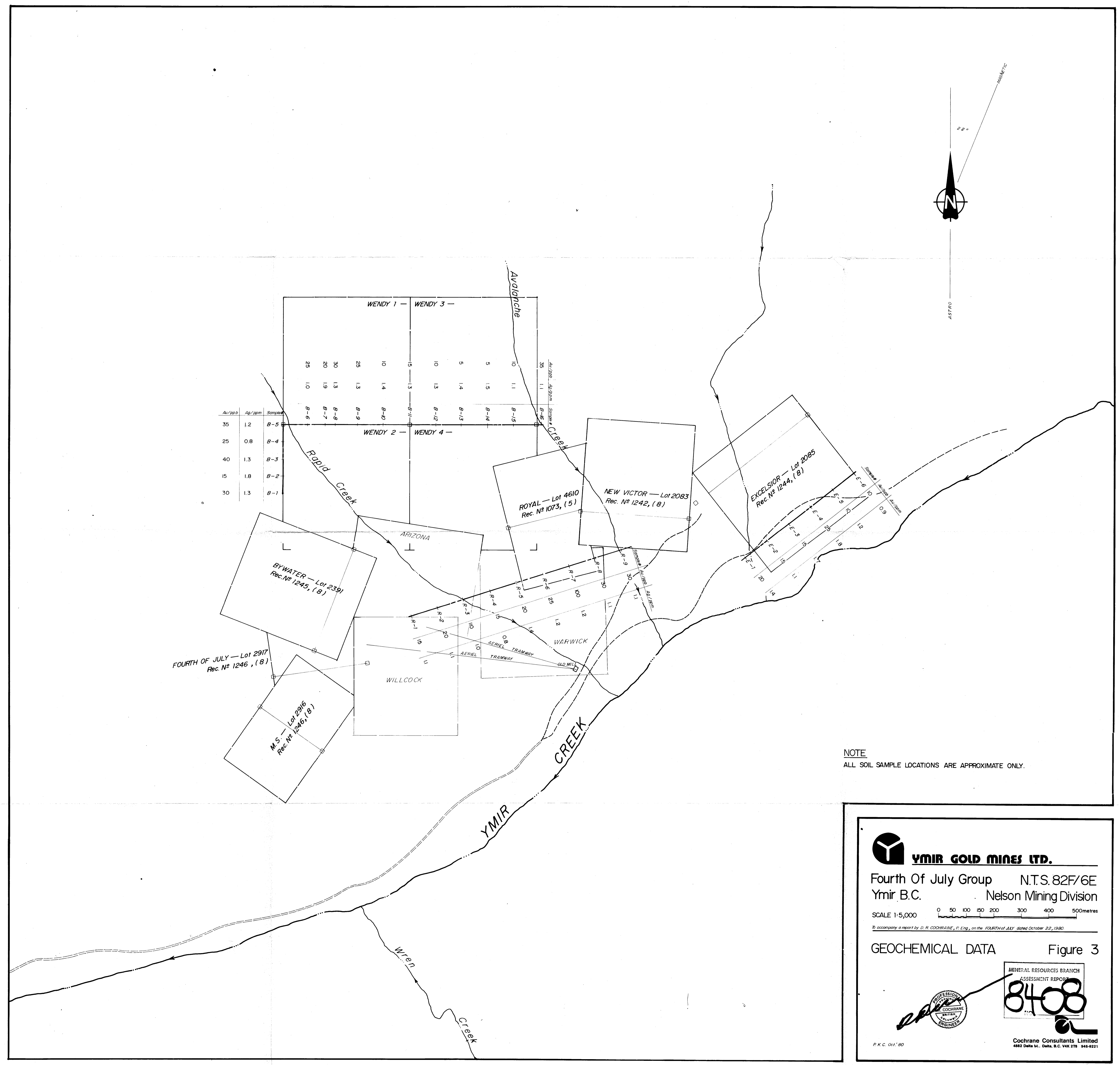
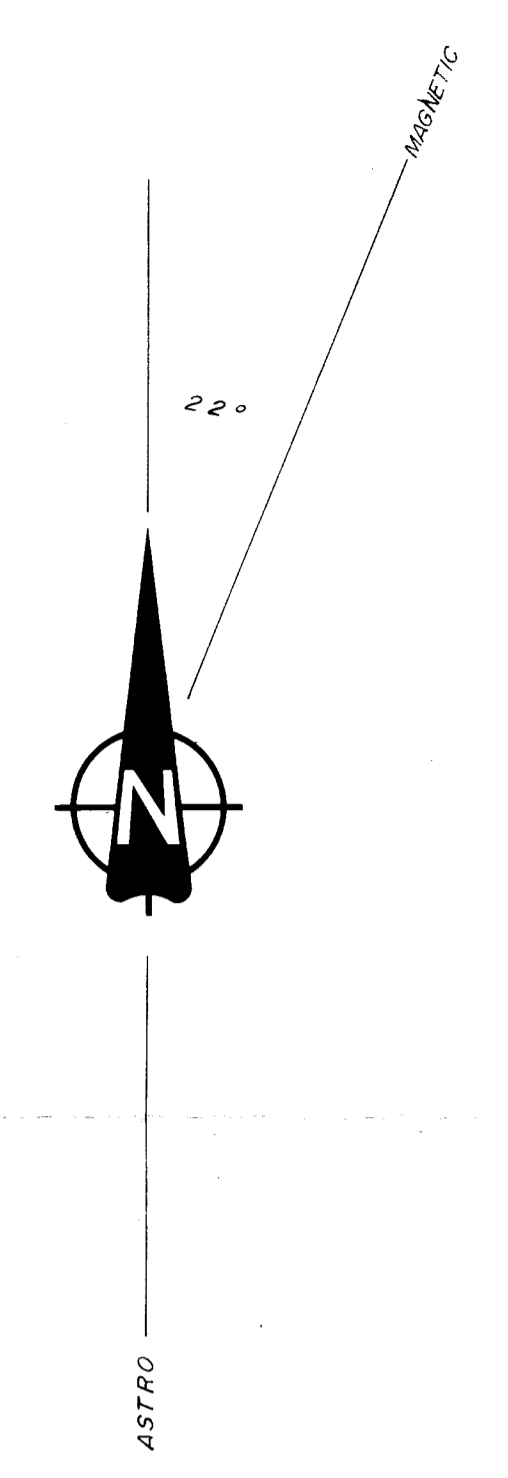
Sample Number	6 86	10 90	15 95	20 100	25 105	30 110	35 115	40 120	45 125	50 130	55 135	60 140	65 145	70 150	75 155	80 160
	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb				
Royal	1							1.1					1.5			
	2							1.1					2.0			
	3							1.0					1.10			
	4							0.8					1.5			
	5							1.4					2.0			
	6							1.2					2.5			
	7							1.2					1.00			
	8							1.1					3.0			
Royal	9							1.1					3.0			
B	1							1.3					3.0			
	2							1.8					1.5			
	3							1.3					4.0			
	4							0.8					2.5			
	5							1.2					3.5			
	6							1.0					2.5			
	7							1.9					2.0			
	8							1.3					3.0			
	9							1.3					2.5			
	10							1.4					1.0			
	11							1.3					1.5			
	12							1.3					1.0			
	13							1.4					5			
	14							1.5					5			
	15							1.1					1.0			
B	16							1.1					3.5			
Excelsior	1							1.4					2.0			
	2							1.1					1.5			
	3							1.7					1.5			
	4							1.8					2.5			
Excelsior	5							1.2					1.0			

*[Handwritten signature and notes]*



2.10	
20.	$\Sigma+$
29.00	
1.1	X:T
2.40	
15.	$\Sigma+$
30.00	
1.7	X:T
2.10	
15.	$\Sigma+$
31.00	
1.8	X:T
2.70	
25.	$\Sigma+$
32.00	
1.2	X:T
2.80	
10.	$\Sigma+$
33.00	
0.9	X:T
2.20	
10.	$\Sigma+$
34.00	
0.6	X:T
1.90	
5.	$\Sigma+$
35.00	
0.8	X:T
1.60	
5.	$\Sigma+$
36.00	
0.6	X:T
1.80	
10.	$\Sigma+$
37.00	
0.8	X:T
1.60	
20.	$\Sigma+$
38.00	
38.	<i>gold.</i> (X)
25.79	
25.78947368	X:T
1.19	
1.186842105	<i>silber</i> (X)
25.67	<i>gold.</i>
25.66747642	X:T
0.30	<i>Ag.</i>
.3041790481	OP
641.48	<i>van. once</i> 11
641.4819945	X:T
0.09	
.0900900277	OP
32.76	<i>co. off. set:</i> (12)
32.75962795	X:T
-5.87	





NOTE  
ALL SOIL SAMPLE LOCATIONS ARE APPROXIMATE ONLY.

**Ymir Gold Mines Ltd.**  
Fourth of July Group N.T.S. 82F/6E  
Ymir B.C. Nelson Mining Division

SCALE 1:5,000  
0 50 100 150 200 300 400 500metres

To accompany a report by D. R. COCHRANE, P. Eng., on the FOURTH OF JULY dated October 22, 1980.

GEOCHEMICAL DATA Figure 3

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

8408

PROFESSIONAL ENGINEER  
D. R. COCHRANE  
BRITISH COLUMBIA

Cochrane Consultants Limited  
4882 Delta St., Delta, B.C. V4K 2T8 946-9221

R.K.C. Oct '80