

ORTHOPHOTO MAPPING

ON THE

CIRQUE CLAIMS

Paul River Area

Omineca Mining Division

N.T.S.

94-F-6, 11

Latitude:

57° 30' N

Longitude:

125° 09' W

by

W. J. ROBERTS

B. Sc.

J. G. SIMPSON

Ph.D., P. Eng.

CYPRUS ANVIL MINING CORPORATION

August 5, 1980

Orthophoto prepared: April - May, 1980

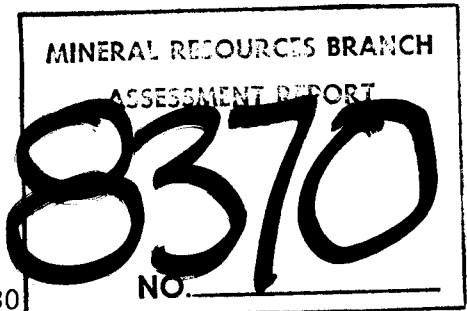


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LIST OF CLAIMS

CIRQUE GROUP

<u>Claim Number</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Recording Date</u>
1	685	20	July 20, 1977
2	679	20	July 25, 1977
3	680	20	July 25, 1977
4	686	18	July 20, 1977
5	681	12	July 25, 1977
6	682	18	July 25, 1977
7	683	12	July 25, 1977
8	684	20	July 25, 1977
11	791	4	Sept. 19, 1977
12	1246	9	July 18, 1978
13	1316	9	Aug. 10, 1978
14	1317	8	Aug. 10, 1978
15	2201	9	Oct. 24, 1979
16	2202	16	Oct. 24, 1979
17	2203	12	Oct. 24, 1979

ORTHOPHOTO MAPPING
ON THE
CIRQUE GROUP

INTRODUCTION

The CIRQUE GROUP, totalling 170 units, was staked to cover two gossans containing stratiform barite-pyrite-galena-sphalerite float mineralization near the headwaters of the Paul River. Preliminary soil and silt sampling, prospecting and geological mapping during the 1977 field season indicated that the two showings were connected by over two kilometres of anomalous lead-zinc soil values.

Work in 1978 included:

- (1) 1:5,000 scale geological mapping;
- (2) additional soil sampling;
- (3) 41 kilometres of horizontal-loop EM surveys; and
- (4) 882 metres of diamond drilling in six holes.

Geological mapping and soil sampling successfully delineated subcropping mineralization and the hanging wall "pregnant shale". Horizontal-loop EM survey proved to be a successful tool to distinguish major lithological units on the basis of electromagnetic signature. Electromagnetic conductors were so common in the highly graphitic Road River and Gunstell shales that it was impossible to distinguish conductors related to mineralization from those caused by graphite. Three drill holes, 78-C-01, 02 and 03, designed to locate the source of the geochemical anomaly and associated stratiform barite-lead-zinc float at the "R" showing failed to intersect any mineralization. The geochemical anomaly appears to be related to mineralized boulders in the overburden rather than bedrock mineralization. The ultimate

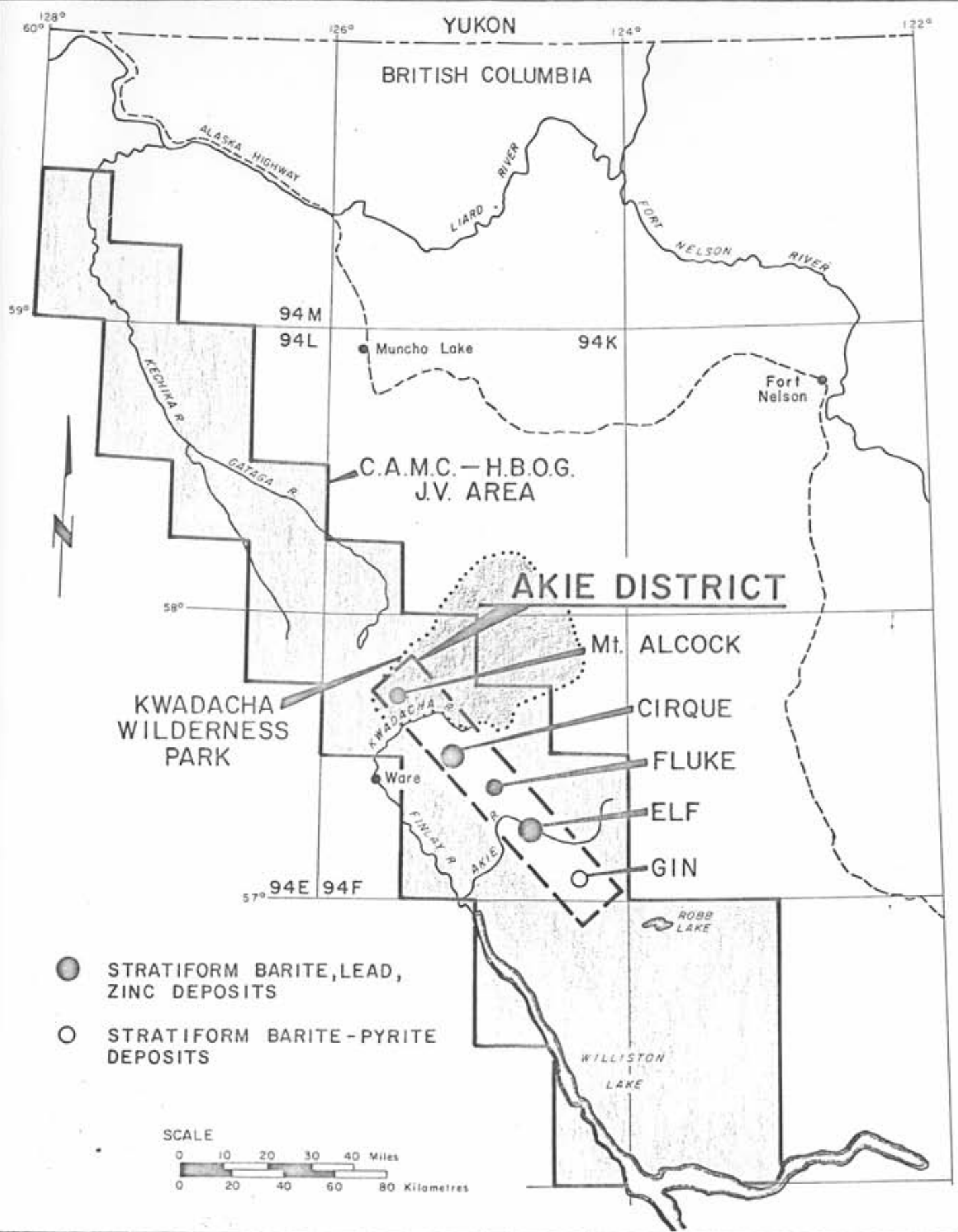
source of the float remains uncertain. Drill holes 78-C-04, 05 and 06 intersected the mineralized barite horizon that outcrops at the "K" showing. Intersections varied from 3.6 to 5.1 metres thick with grades ranging from 6.0 to 8.7 percent combined lead and zinc, with 25 to 37 grams per tonne silver.

During the period June 1 to October 23, 1979 some geological mapping and 24 diamond drill holes totalling 8,063 metres of diamond drilling were completed on the CIRQUE property that outlined a conservative drill indicated reserve of 18 million metric tons of 2.3 percent lead, 7.9 percent zinc and 49 grams per metric ton silver, with an additional geological reserve of approximately 15 million metric tons. An additional 37 units were staked in three blocks, CIRQUE 15, 16 and 17, on the southwest corner of the property to cover possible extensions of the mineralization.

LOCATION AND ACCESS

The CIRQUE GROUP is located near the headwaters of the Paul River in north-eastern British Columbia. The claims cover a northwest-trending ridge between the Paul River on the southeast and an unnamed creek, informally called Cirque Creek, on the northwest. The property is centred 30 km. east of Ware, 27 km. south of Chesterfield Lake and 27 km. northeast of Grave Mountain, at latitude $57^{\circ}30'$ N. and $125^{\circ}09'$ W.

Field work and diamond drilling were supported by a helicopter based at Pretzel Lake 18 km. to the southeast. Regular logistical support was provided by float-equipped fixed-wing aircraft based at Mackenzie, 250 km. to the southeast. Fuel and bulk cargo was moved from Mackenzie to the north end of Williston Lake by barge and shuttled the remaining 60 km. to Pretzel Lake by aircraft.



C.A.M.C. - H.B.O.G.
JOINT VENTURE

GATAGA PROJECT

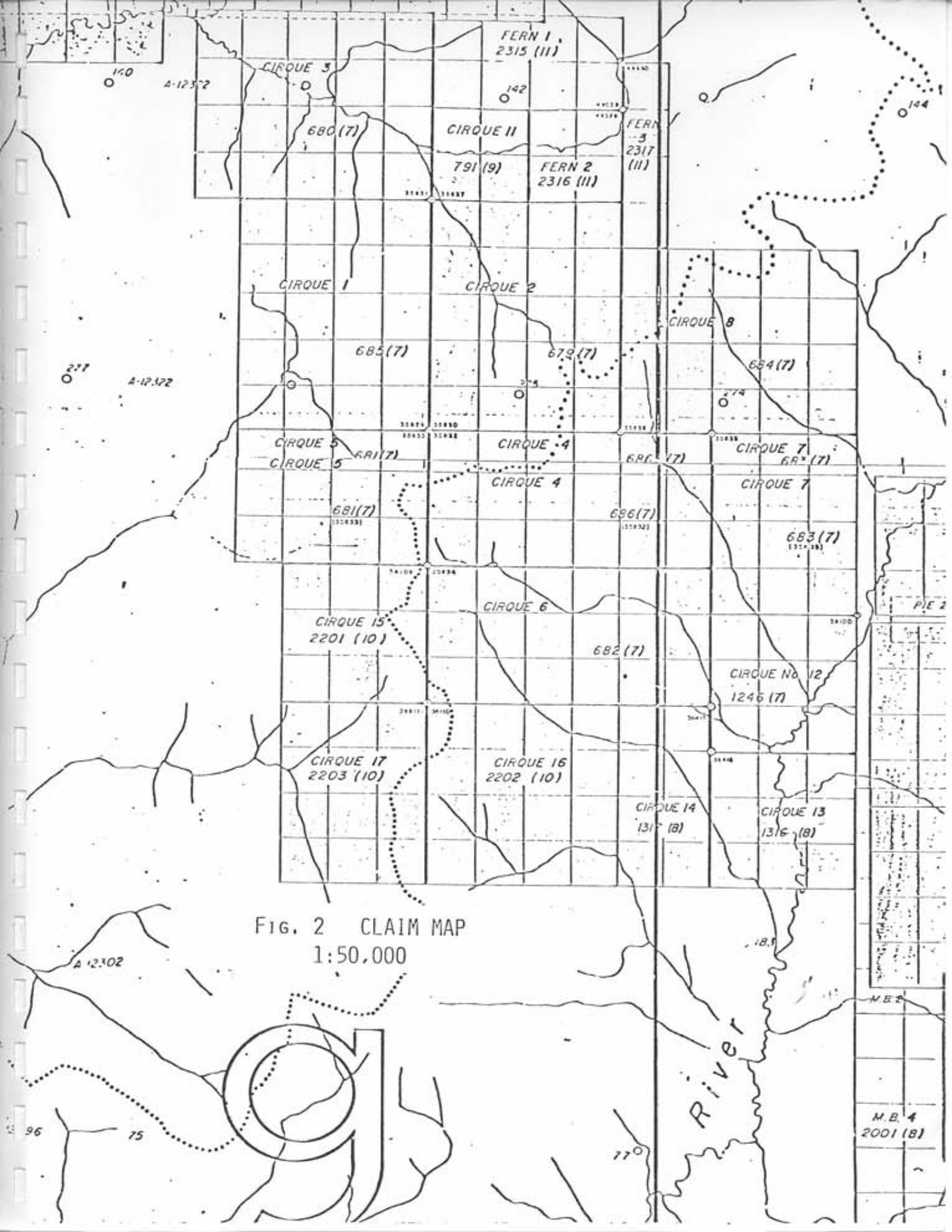


FIG. 2 CLAIM MAP
1:50,000

O

River

M.B. 4
2001 (B)

P/E 2

M.B. 2

FERN 1,
2315 (II)

CIRQUE II

FERN 2
2316 (II)

FERN
3
2317
(II)

CIRQUE 3

680 (7)

791 (9)

CIRQUE I

CIRQUE 2

CIRQUE 8

685 (7)

679 (7)

654 (7)

CIRQUE 5
CIRQUE 5

CIRQUE 4

686 (7)

CIRQUE 7
687 (7)

CIRQUE 4

CIRQUE 7

681 (7)

686 (7)

653 (7)

CIRQUE 6

CIRQUE 15
2201 (10)

682 (7)

CIRQUE No 12
1246 (7)

CIRQUE 17
2203 (10)

CIRQUE 16
2202 (10)

CIRQUE 14
1317 (B)

CIRQUE 13
1316 (B)

A-12102

160

A-12372

142

144

277

A-12372

96

75

770

18.5

ORTHOPHOTO BASE MAPS

Requirements for detailed accurate base maps and orthophotos for improved ground control for evaluation of the CIRQUE GROUP dictated new aerial photographs, targetting and surveying, as well as precise orthophoto mapping. New 1:20,000 and 1: 10,000 aerial photography was flown in late August, after several targets were established throughout the mapping area. All targets were surveyed for the required ground control for map compilation. All photography was flown with the precise cartographic camera in black and white. Roughly 30 ground control stations were targetted for the aerotriangulation of the entire district. Approximately 10 targets are in the CIRQUE area, within or adjacent to the claim group. All surveyed and photogrammetric control was in the UTM co-ordinate system and on a geodetic datum.

An orthophoto at a scale of 1:5,000 covering 8,960 acres and consisting of two map sheets (A and B) was constructed using a contour compilation done directly to the mapping scale of 1:5,000 with a 10 metre contour interval. In addition to the contours, sufficient spot elevations were plotted. The contour compilation was scribed by the scribing technique and a clear contour overlay was produced directly from the 1:20,000 aerial photography. The orthophoto negative was photomechanically enlarged to the scale of 1:5,000 and a controlled orthophoto mosaic was prepared.

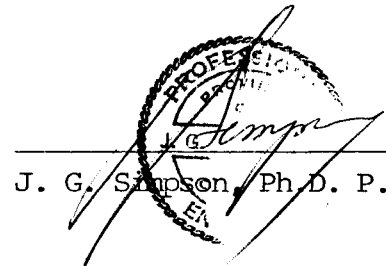
An orthophoto comprising three sheets, A2, A3 and B6, at a scale of 1:2,000 with a 5 metre contour interval was constructed to give improved accuracy in the area of the CIRQUE stratiform lead-zinc-silver deposit. The contour compilation was done directly from the 1:20,000 photography and the orthophoto negative was obtained from the low level 1:10,000 photography. In addition to the contours, several spot elevations have been plotted. The contours were also scribed by the scribing technique and a clear contour overlay for each of the three sheets was reproduced. In the aerotriangulation procedure, control points were selected from the 1:10,000 aerial

STATEMENT OF QUALIFICATIONS

I, JOHN GLENN SIMPSON, Geologist, with business address in Vancouver, British Columbia, and residential address in West Vancouver, British Columbia, hereby certify that:

- (1) I graduated from the University of London in 1958 with a B.Sc. majoring in Geology and a Ph.D. (Faculty of Science) obtained in 1968.
- (2) From 1958 to the present I have been actively engaged as a geologist in mineral exploration in Africa and North America.
- (3) I am a Fellow of the Geological Association of Canada and a Professional Engineer (Geol.) of the Province of British Columbia (1969).
- (4) I am personally responsible for the supervision of all work on the CIRQUE CLAIMS and have actively participated in the field work on these claims.

J. G. Simpson, Ph. D. P. Eng.



APPENDIX II

SUMMARY OF COSTS


CIRQUE CLAIMS
(Orthophoto Mapping)

August 15, 1979 - May 15, 1980

1:5,000 Orthophoto with 10 m. contour of 8,960 acres	\$ 6,750.00
1:2,000 Orthophoto with 5 m. contours of 2,247 acres	9,185.00
Aerotriangulation	1,675.00
Field Survey Work	2,537.50
Aerial Photography	<u>1,887.50</u>
TOTAL COST	\$22,035.00

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

I, J. G. SIMPSON, Vice President Exploration, Cyprus Anvil Mining Corporation, of Vancouver, British Columbia, do hereby state that, to the best of my knowledge and belief, the Statement of Costs in this report (ORTHOPHOTO MAPPING ON THE CIRQUE CLAIMS) is a true account of expenditures incurred from exploration on the CIRQUE property.


A circular professional seal for J.G. Simpson, a Professional Engineer in the Province of British Columbia. The seal contains the text "PROFESSIONAL ENGINEER OF BRITISH COLUMBIA" around the perimeter and "J.G. SIMPSON" in the center. A signature is written across the seal.

J. G. SIMPSON

29 AUG 80
Date

photography that were used for the orthophoto image. The orthophoto negatives were photomechanically enlarged to the scale of 1:2,000 to produce the controlled orthophoto mosaic. The contour overlay and final negative of all orthophotos has been registered.

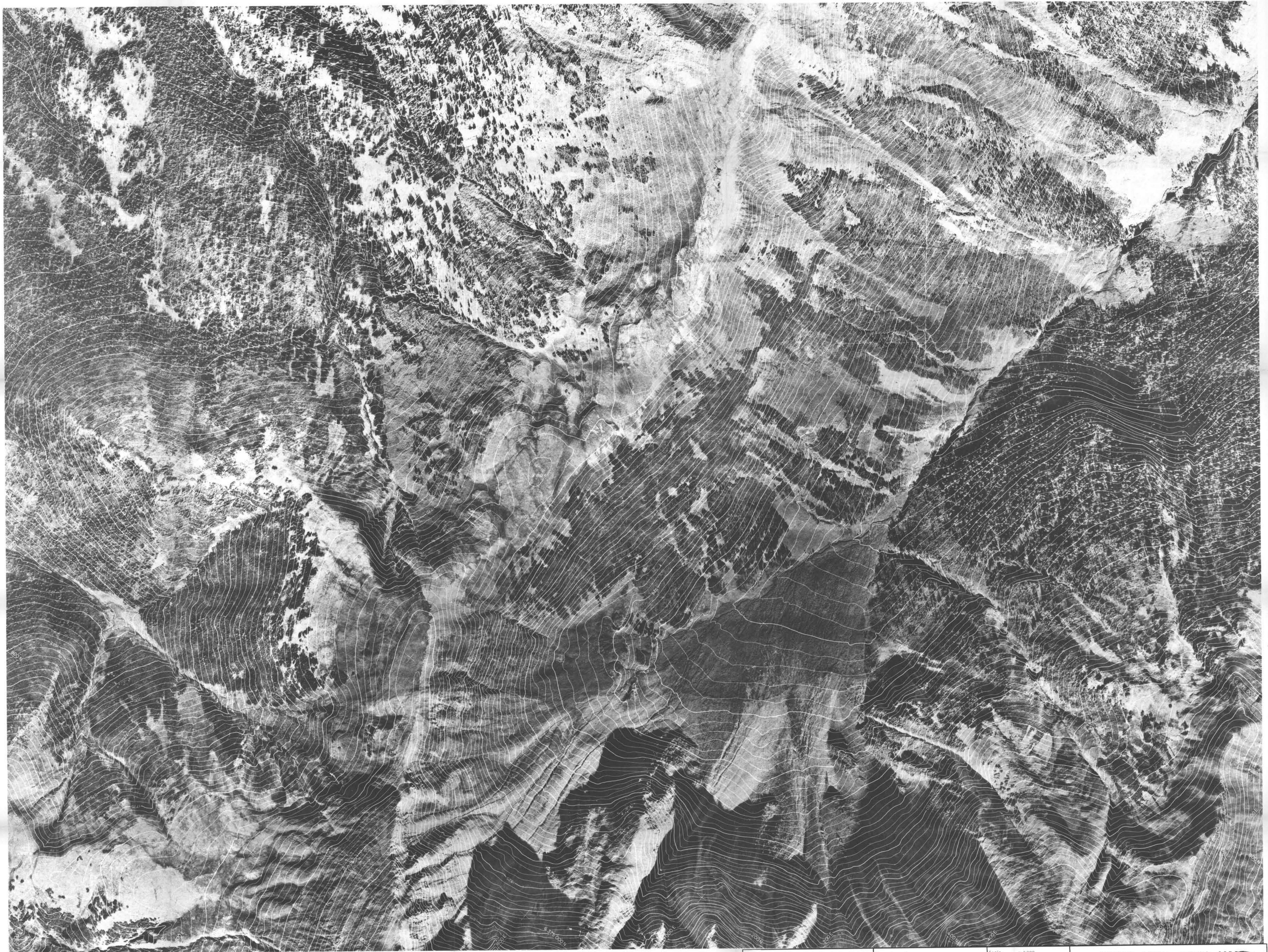
CONCLUSIONS AND RECOMMENDATIONS




The new accurate orthophoto base maps will provide the required ground control for detailed geological mapping and diamond drilling programs to be undertaken in the 1980 field season.

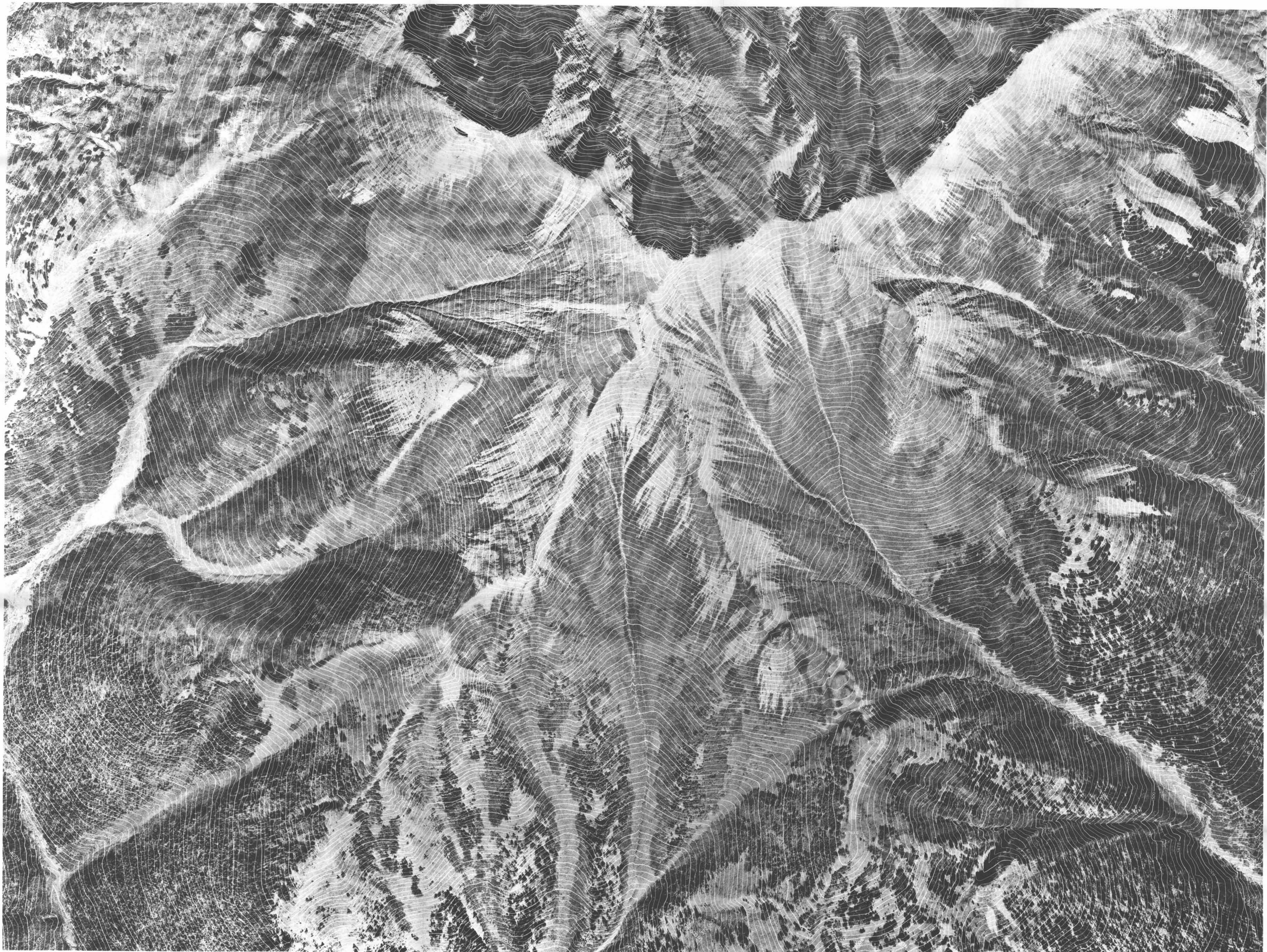
Respectfully submitted,



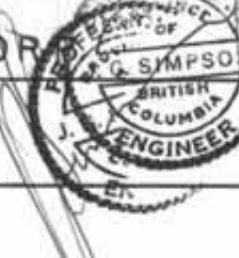


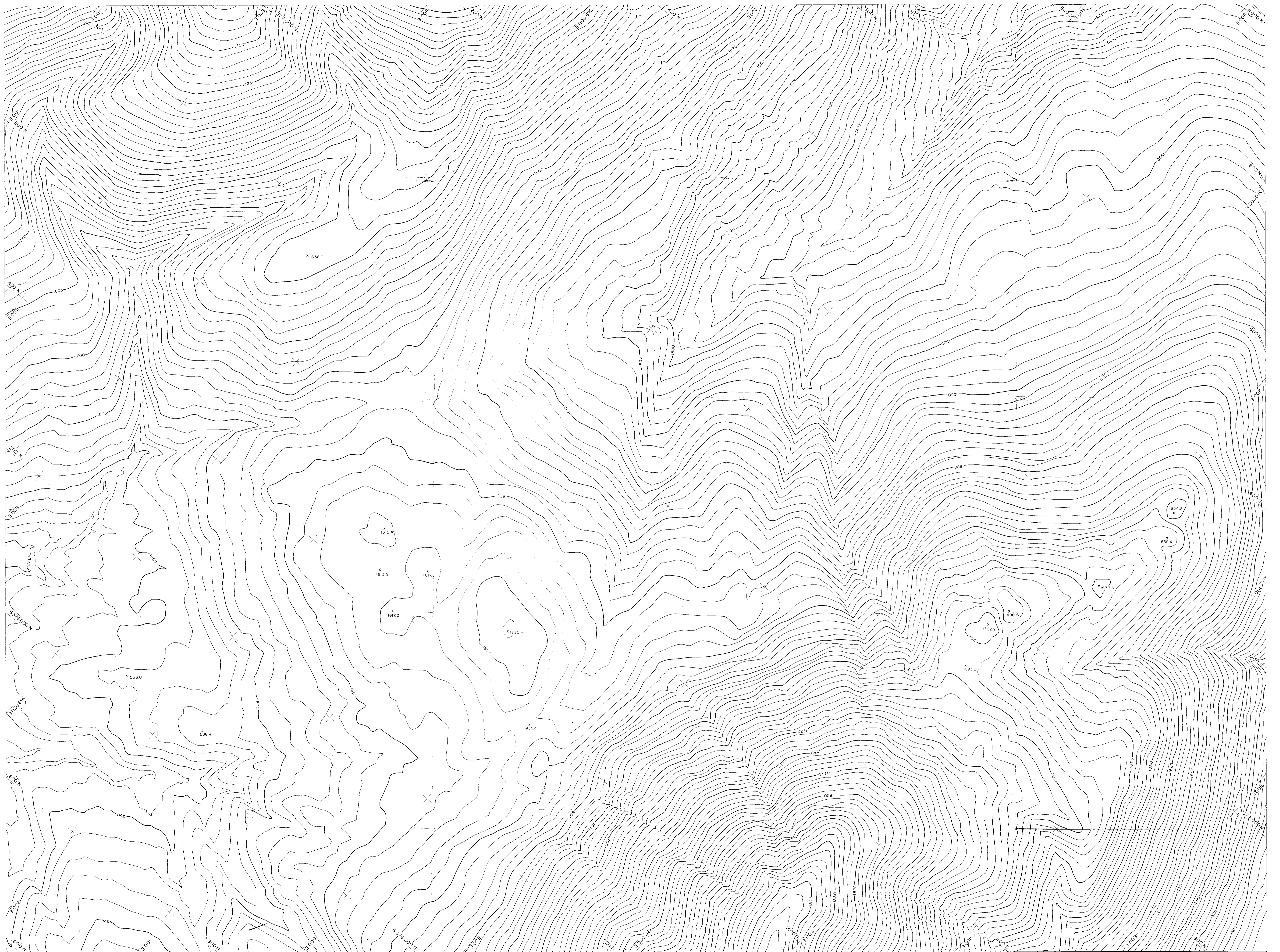
J. G. Simon, Ph.D., P. Eng.
W. J. Robert, B.Sc.





 <p>Compiled from aerial photography at an approximate scale of 1:20,000 from 1973</p>	 <p>McElhanney McElhanney Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver B.C., Canada</p>	Scale - 1:2000	<p>CYPRUS ANVIL MINING CORP CIRQUE CLAIM</p> 
		Contour Interval - 5 Metres	
		Date - MARCH 1980	
		Job No. - G6973-5	
		Sheet No. - 22	<p>MINERAL RESOURCES BRANCH</p> <p>8370</p>

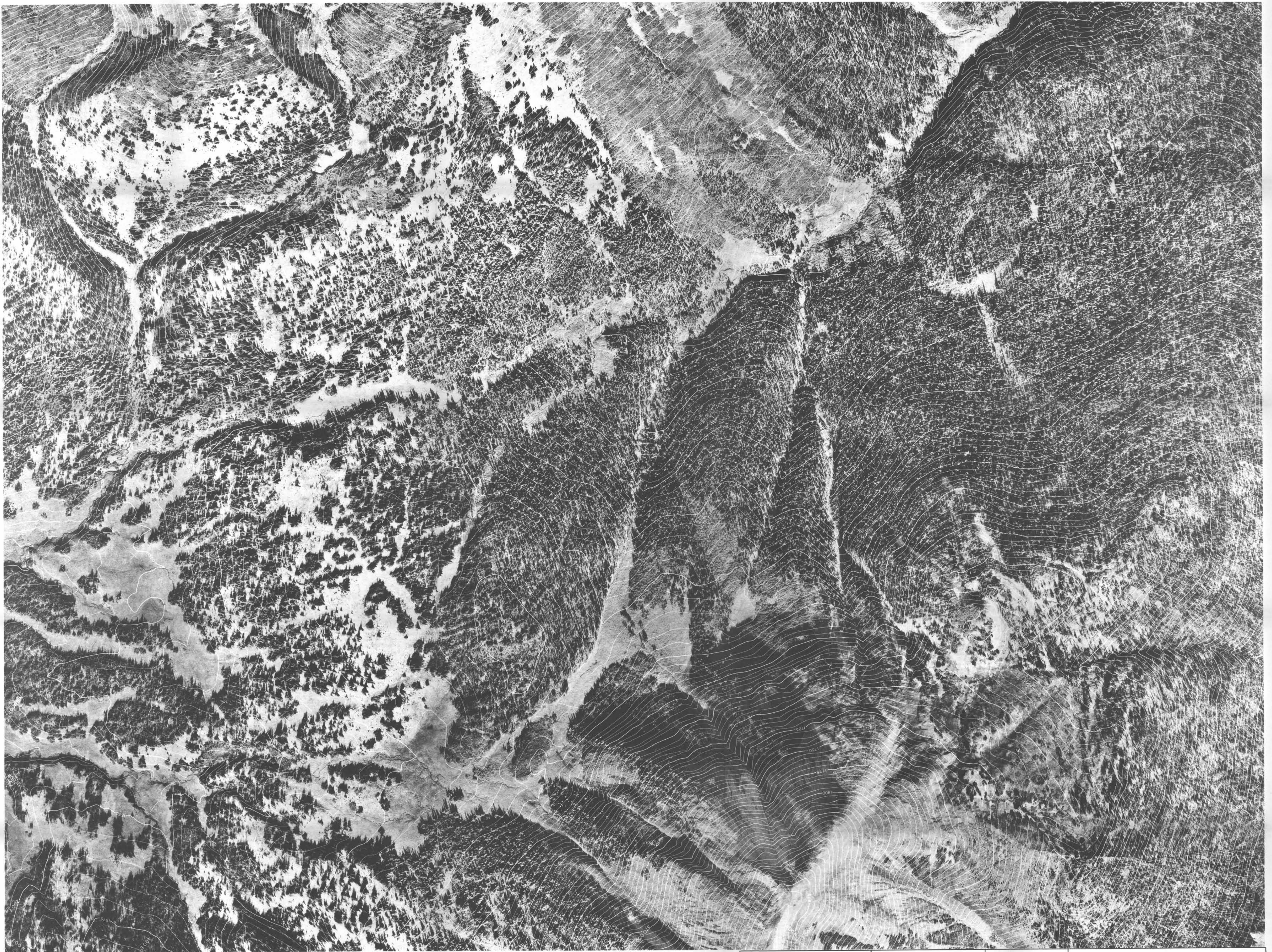





 <p>Compiled from aerial photography at an approximate scale of 1 : 20000. Run in 1979.</p>	 <p>McElharvey McElharvey Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver B.C., Canada</p>	Scale - 1 : 2000 Contour Interval - 5 Metres Date - MARCH 1980 Job No. - 06573-5 Sheet No. - 86	CYPRUS ANVIL MINING CORP. CIRQUE CLAIM 
		MINERAL RESOURCES BRANCH REGISTRATION NO. 8370 NO.	



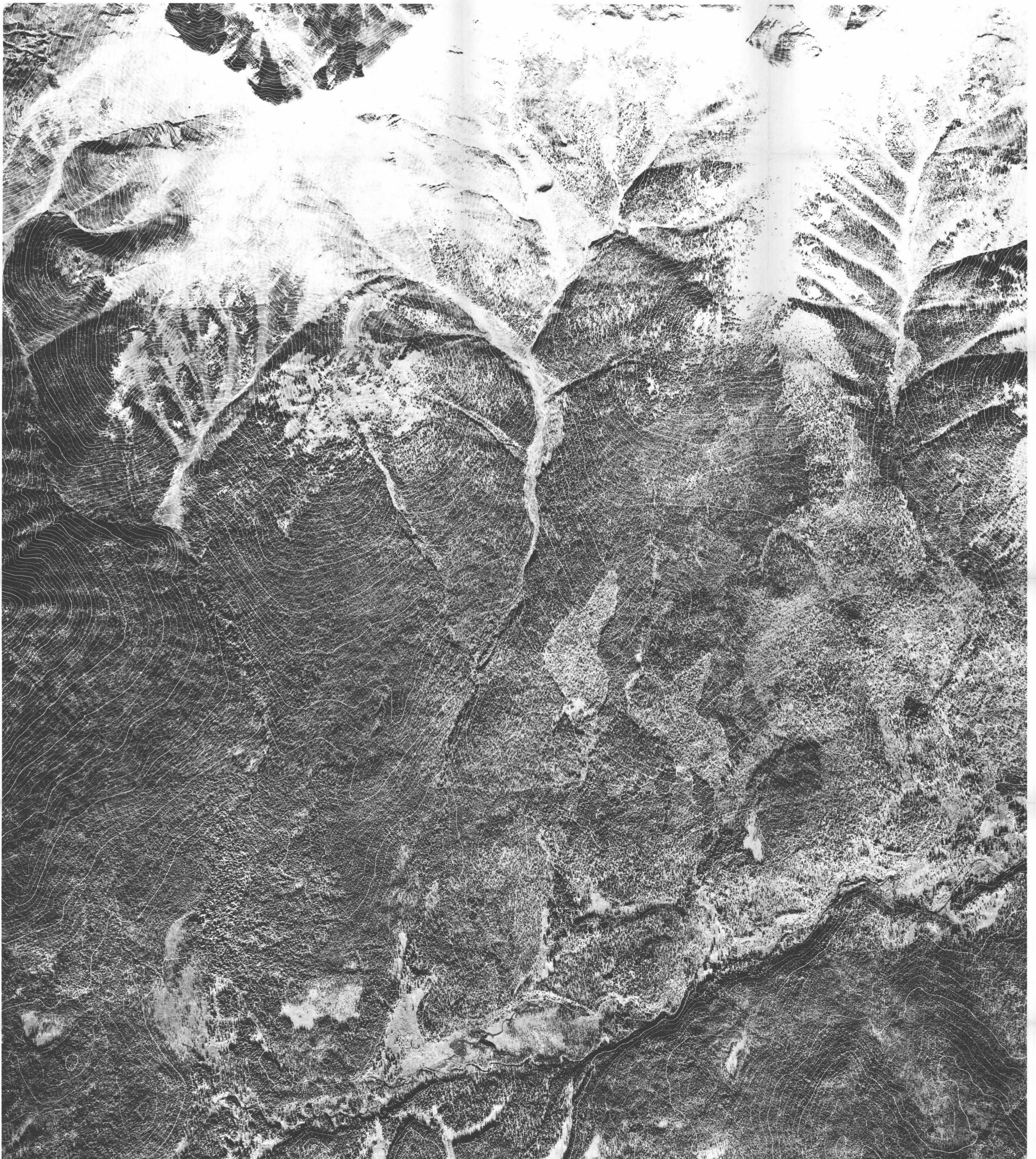
 <p>Compiled from aerial photography at an approximate scale of 1:20000 flown in 1979</p>	 <p>McElhanney McElhanney Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver, B.C., Canada</p>	Scale - 1:2000	<p>CYPRUS ANVIL MINING CORP</p> <p>MINERAL RESOURCES BRANCH</p> <p>ASSESSMENT REPORT</p> <p>TRQUE CLAIM</p>
		Contour Interval - 5 Metres	
		Date - MARCH 1980	
		Job No. - 08573-5	
		Sheet No. - 4 3	




8570






 <p>Compiled from aerial photography at an approximate scale of 1:20,000 flown in 1979.</p>	 <p>McElhanney McElhanney Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver B.C., Canada</p>	Scale - 1:2000	<p>CYPRUS ANVIL MINING CORP</p> <p>CIRQUE CLAIM</p> <p>MINERAL RESOURCES BRANCH</p> <p>ASSISTANT GEOLOGIST</p>	
		Contour Interval - 5 Metres		
		Date - MARCH 1980		
		Job No. - 06573-5		
		Sheet No. - 6.3		

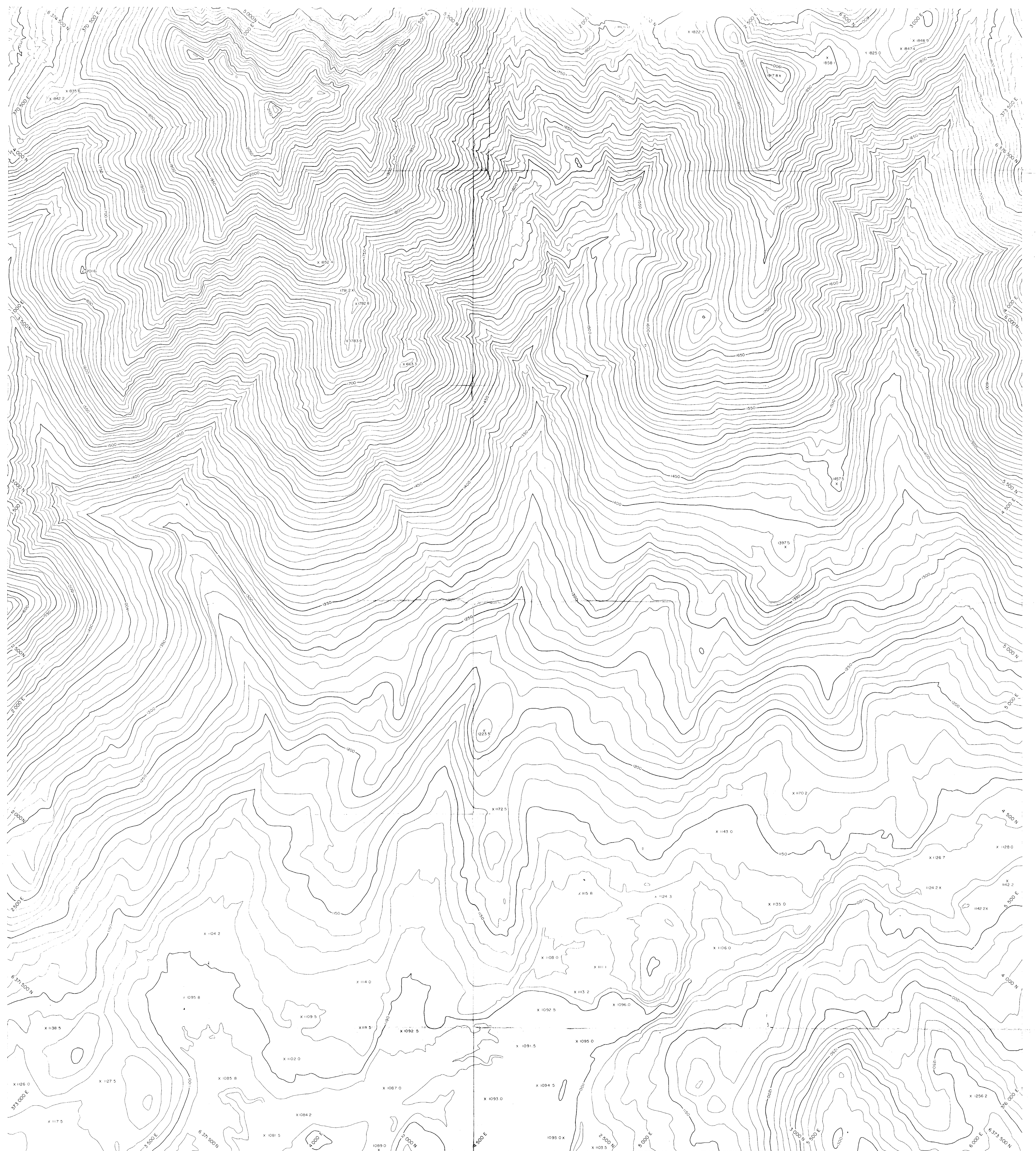
8370



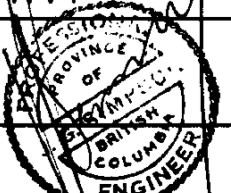


 <p>Compiled from aerial photography at an approx. more scale of 1:20,000 from 1979.</p>	 <p>McElhanney McElhanney Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver B.C., Canada</p>	Scale - 1:5000	 <p>MINERAL RESOURCES SURVEY OF CANADA RUS ANVIL MINING CORP CIRQUE CLAIM</p>
		Contour Interval - 10 METRES	
		Date - May 1980	
		Job No. - 06573-5	
Sheet No. - 8	<p>8370</p>	NO.	



 <p>Compiled from aerial photography of the region <small>meter scale of 1:250,000</small> Based on 1979</p>	 <p>McElhenny McElhenny Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver, B.C., Canada</p>	Scale: 1:5,000 Contour Interval: 10 Metres Date: May 1980 Job No.: 06573-5 Sheet No.: A	CYPRUS ANVIL MINING CORP. MINERAL RESOURCES BRANCH ASSESSMENT REPORT CIRQUE CLAIM	
		<p>8370</p>		



 Compiled from aerial photography at an approximate scale of 1:20 000 from 1979	 McElhanney McElhanney Surveying & Engineering Ltd. 1200 West Pender Street, Vancouver, B.C., Canada	Scale: 1:5000 Contour Interval: 10 Metres Date: May 1980 Job No. 06573-5 Sheet No.: B	CYPRUS ANVIL MINING CORP. RESOURCES BRANCH CIRQUE CLAIM 
		8370	