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BAYMAG MT. BRUSILOF MAGNESITE PROJECT
STAGE 1 DEVELOPMENT PROPOSAL

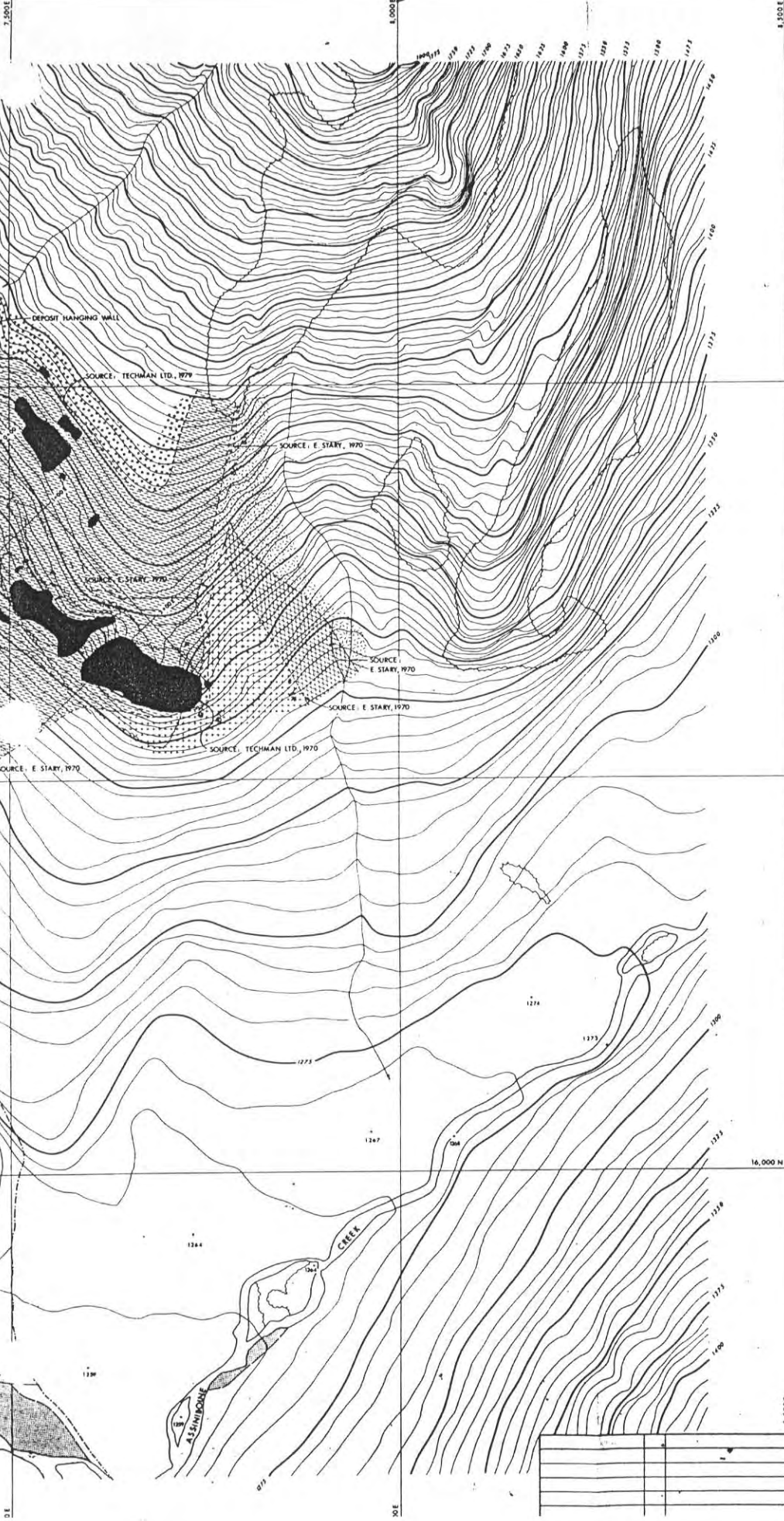
Prepared in Accordance with
Procedures for Obtaining Approval
of Metal Mine Development

(Ministry of Energy, Mines, and
Petroleum Resources, April, 1979)

by

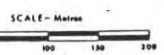
BAYMAG MINES CO. LIMITED

1980



LEGEND

- MACHESITE
- DOLOMITE
- LIMESTONE
- ARGILLITE
- QUARTZITE
- JOINTING (VERTICAL, INCLINED)
- BEDDING (VERTICAL, INCLINED)
- BEDROCK OUTCROP
- GEOLOGICAL CONTACT (DEFINED, ASSUMED)
- ROAD



MAP 3.4-1

Baymag Mines Co. Limited

BEDROCK GEOLOGY - MINESITE

TECHMAN
 SCALE: 1:2,500
 DRAWN BY: [Signature]
 PROJECT NO.: TM-331

DATE	1979
BY	TECHMAN
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DATE	
BY	
CHECKED	
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17,500 N

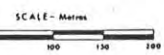


17,000 N

16,500 N

LEGEND

- MAGNETITE
- DOLOMITE
- LIMESTONE
- ARGILLITE
- QUARTZITE
- JOINTING (VERTICAL, INCLINED)
- BEDDING (VERTICAL, INCLINED)
- BEDROCK OUTCROP
- GEOLOGICAL CONTACT (DEFINED, ASSUMED)
- ROAD

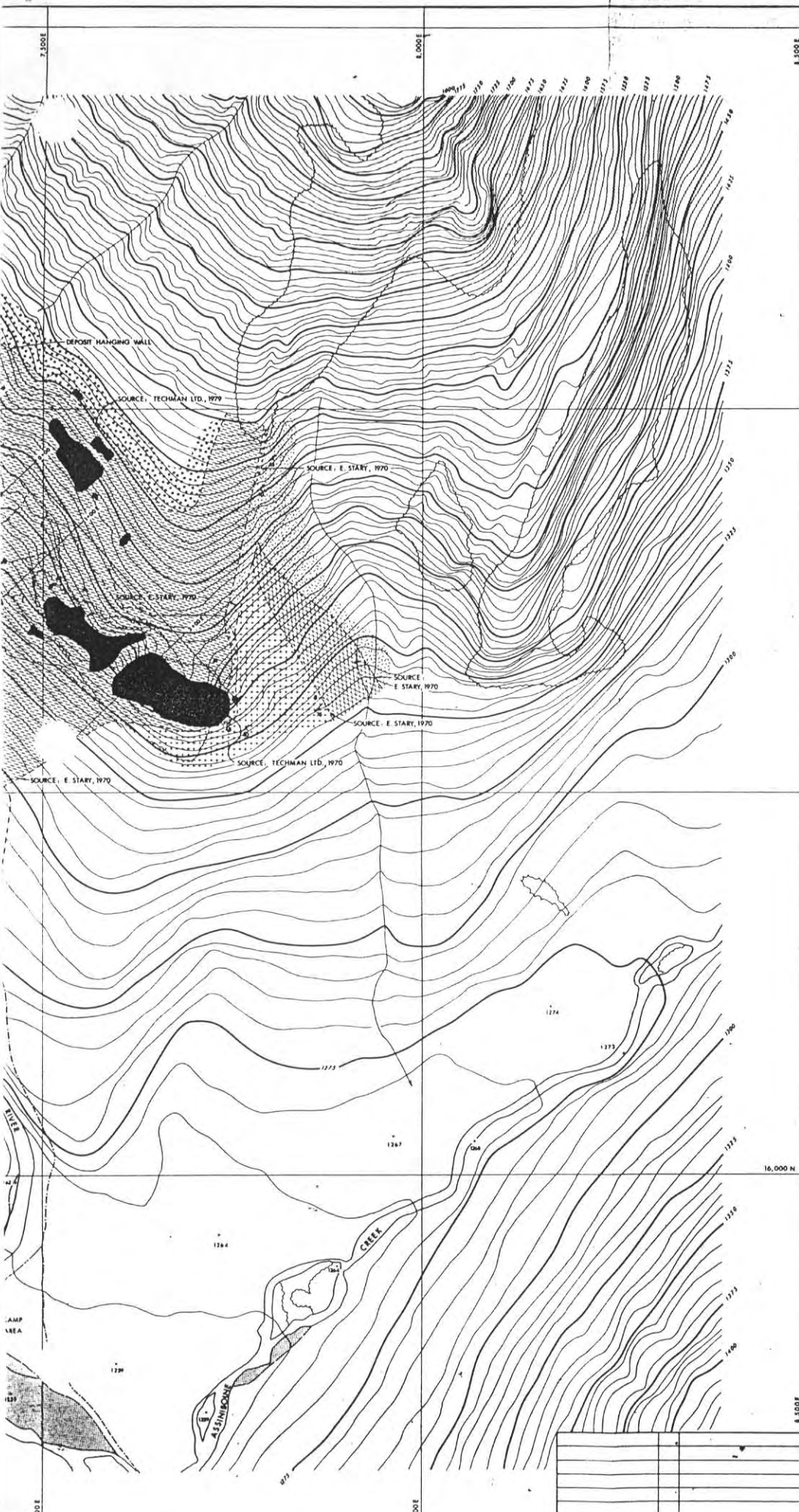


MAP 3.4 - 1

Baymag Mines Co. Limited

BEDROCK GEOLOGY - MINESITE

TECHMAN
 SCALE: 1:2,500
 DRAWN BY: [Signature]
 PROJECT NO.: TM - 331



3.0 PROJECT DESCRIPTION

3.1 Previous Exploration

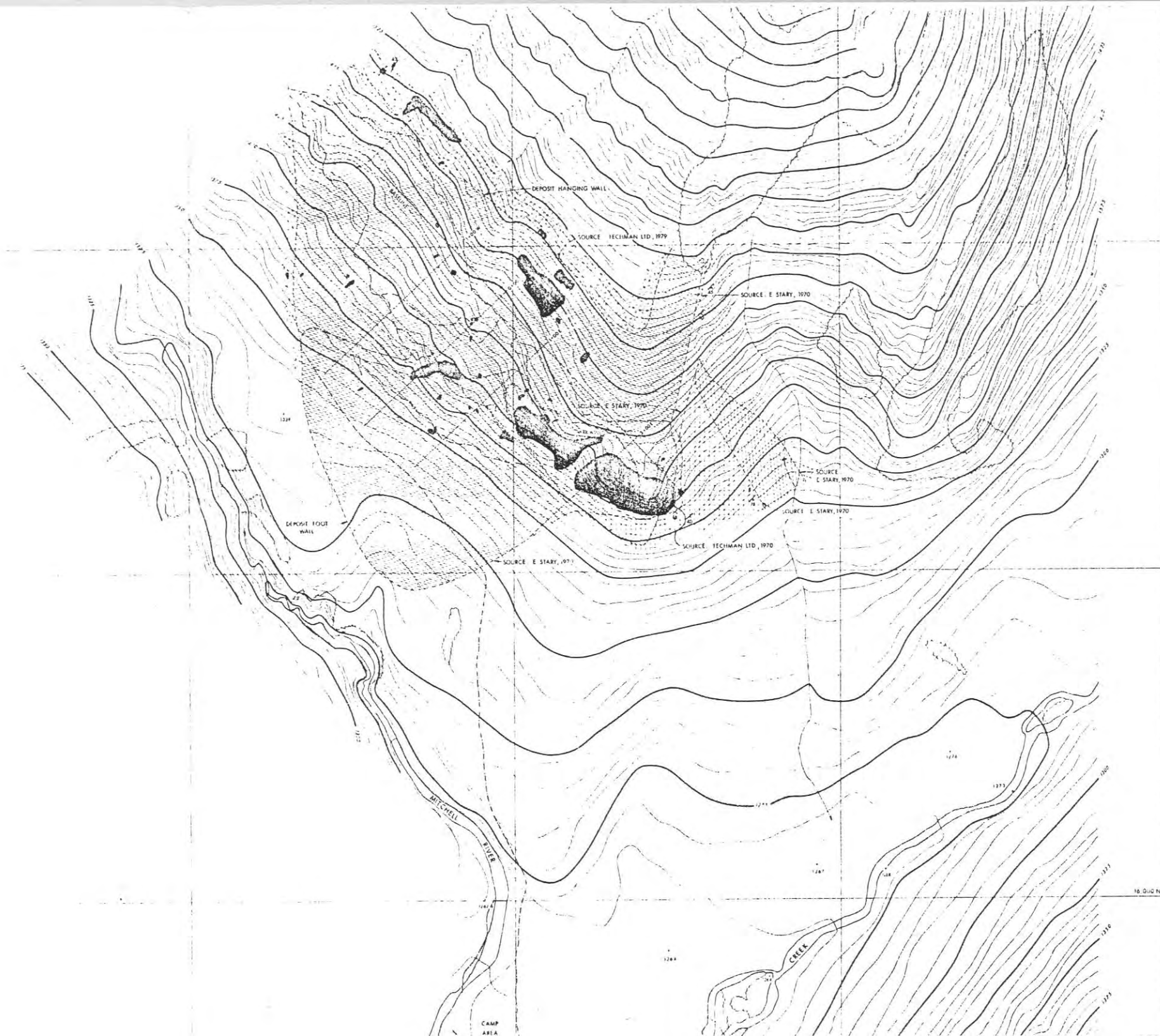
The Baymag Mines/Mount Brussilof Magnesite Deposit was originally discovered in 1966 by G.B. Leech of the Geological Survey of Canada (GSC). Leech indicated that magnesite occurs within the Cathedral Formation of Middle Cambrian Age along the west flank of Mount Brussilof near the confluence of the Cross and Mitchell Rivers. Magnesite was also noted to occur at the south end of the ridge between Mitchell River and Assiniboine Creek (proposed minesite), within the same formation. Grab samples were collected and analyzed by the GSC and found to contain up to 97% product magnesite.

Map 3.1-1 presents locations of exploration drill holes. Previous exploration programs contributing to present mine plans were undertaken by New Jersey Zinc Exploration Canada Ltd. and by Baykal Minerals Ltd.










Mr. Orhan Baykal of Baykal Minerals Ltd. mapped the geology of the area, sampled the magnesite outcrop (in June 1969), and prepared a preliminary geological report on the Mag 1 to 36 Mineral Claims. Subsequent geological work and staking was arranged by Baykal Minerals Ltd. By October 1969 a total of 278 claims were staked along the west flank of Mount Brussilof and Mount Eon.

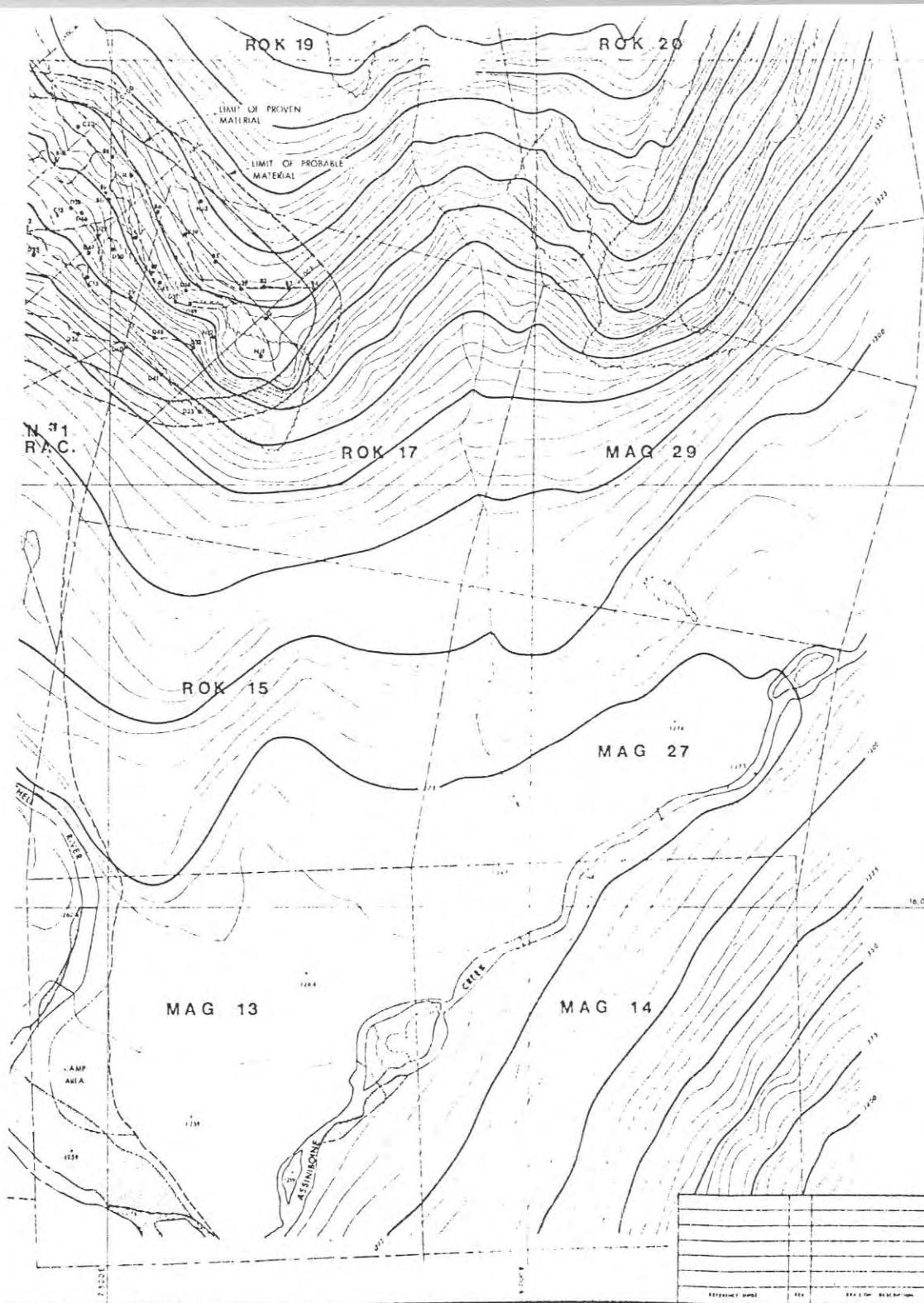
In late 1969 a preliminary geological report on the Mount Brussilof Magnesite Project was prepared by Dr. John D. Godfrey, P. Geol., of Edmonton (for Baykal Minerals Ltd.) based on field work carried out in September 1969. The objectives of the geological investigation were to obtain a general knowledge of the magnesite occurrence, its possible regional extent and to establish minimum reserves of high-grade magnesite by chip sampling and analyses of exposed magnesite sections.

The encouraging results of the 1969 exploration resulted in Baykal Minerals Ltd. carrying out field work in 1970 to determine the extent of magnesite mineralization between Assiniboine Creek and Mitchell River.



LEGEND

-  MAGNESITE
-  DOLOMITE
-  LIMESTONE
-  ARGILLITE
-  QUARTZITE
-  JOINTING (VERTICAL, INCLINED)
-  BEDDING (VERTICAL, INCLINED)
-  BEDROCK OUTCROP
-  GEOLOGICAL CONTACT (DEFINED, ASSUMED)



LEGEND

- DECK HOLE
- ROAD



MAP 31-1

		BAYMAG MINES CO. LTD.	
		EXPLORATION	
TECHMAN	SCALE 1:2,500	DATE	NOV 74
BY		APPROVED BY	

The work involved construction of an access road, establishing a grid for ground control, geological and topographic mapping and drilling of 11-AX wireline holes (B series) for a total footage of 1014.7 meters (3329 feet). Drill core was split and forwarded to Bondar Clegg & Company Ltd. for assaying. A report on the 1970 field work was prepared by E. Stary, P.Eng for Baykal Minerals Ltd. The report indicated that the drilling outlined considerable reserves of high grade magnesite and it was determined that the ore body was amenable to open pit mining.

The initial results of exploration and sampling programs carried out in 1969 and 1970 were sufficiently encouraging to prompt Baykal Minerals, in July 1970, to contract Acres Western Limited of Vancouver to prepare a production feasibility report. Acres Western Limited concluded that the Mount Brussilof Magnesite Project was, at that time, technically and economically feasible for open pit mining. In 1971, Brussilof Resources Limited and Baykal Minerals Ltd. amalgamated to form Baymag Mines Co. Limited which would assume majority control of the acquired 344 mineral claims.

In September 1971, additional drilling was carried out by Acres Western Limited on behalf of Baymag Mines Co. Limited. The program involved drilling of 12-BQ size (C series) holes varying in depth from 62.8 meters to 146.6 meters and totalling 1186.3 meters (3892 feet). The core was assayed by Bondar Clegg & Company Ltd. of North Vancouver. An approximate 300 ton bulk sample was mined from two open cuts. A transit survey of the proposed mining area was also undertaken. The results of the program confirmed the reserve quantities assumed in the previous feasibility report and located a lower more readily accessible high-quality magnesite zone. The drilling also demonstrated that the grade of the proven reserves was higher than previously indicated.

Acres Western Limited also contracted Gordon P.E. White and Associates Ltd. to carry out a preliminary mineralogical study of selected specimens of drill core in 1972. The study provided background information for the projected beneficiation tests and determined the mineralogical occurrences of contaminant elements.

WESTERN FACIES

EASTERN FACIES

UPPER CAMBRIAN

UPPER CAMBRIAN

MIDDLE CAMBRIAN

MIDDLE CAMBRIAN

LOWER CAMBRIAN

Top not exposed. few hundred feet of greenish grey soft calcareous slates at least one thick-bedded limestone unit.

1 500-2 000 feet, thick-bedded limestone. Beds are laminated grey and brown. 350 feet shale and dolomite at base.

slate

interbedded slate and limestone

Slate with silty beds at base

about 2 000 feet southern part slates and orange-weathering dolomite at base overlain by heavier argillaceous limestone. Northern part alternating 50-100 foot units of thin-bedded grey limestone and rusty slate.

about 3 500 feet irregularly interbedded grey, argillaceous limestone, brown and greenish brown shale and thin-bedded brown argillaceous dolomite.

not exposed

Top not exposed. 800 feet, pale green shales with silty beds at base. limestone nodules toward top.

500 feet thin-bedded grey weathering limestone with brown weathering dolomite partings.

400 feet, brown and grey shale with rusty weathering limestone interbeds.

1000 feet, thick-bedded limestone and dolomite.

300 feet shale.

700 feet, limestone and dolomite.

500 feet, shale with minor limestone, silty at base.

500-700 feet, thick-bedded dolomite, some limestone.

200-500 FEET varicoloured shale siltstone and dolomite. Purple beds near base.

800 feet, limestone and dolomite, largely flaggy limestone with shaly partings.

1 200-1 500 feet, massive dolomite and limestone.

90-350 feet, greenish siliceous argillaceous shales and thin-bedded limestone.

800-1 900 feet, massive dolomite and large limestone.

0-600 feet, alternating greenish silty shales and dark grey limestone, some sandstone.

2 000-3 000 feet, thick-bedded, clean quartz sandstone with some shale interbeds. Up to 20 feet rusty limestone at top. (Payto limestone member).

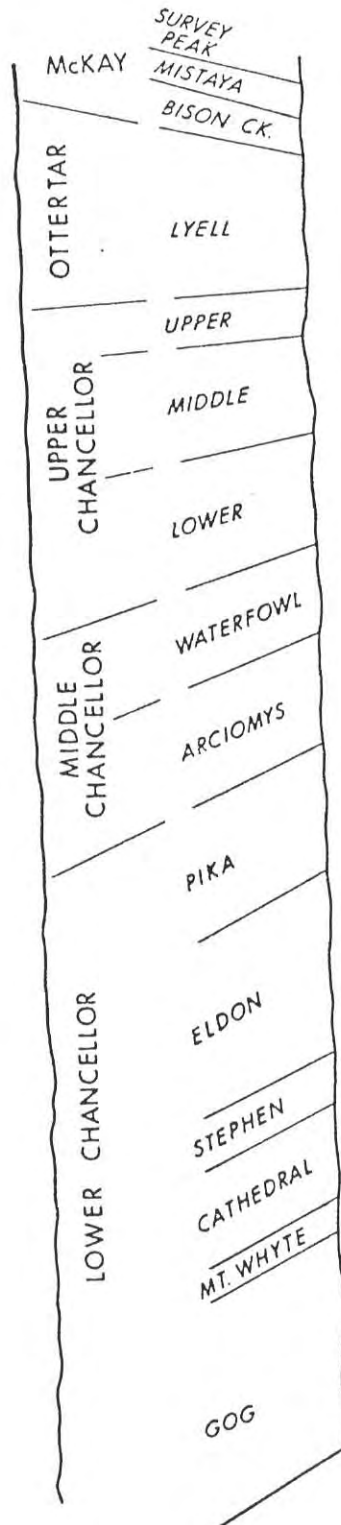


FIGURE 3.3-1

STRATIGRAPHIC CORRELATION CHART

MODIFIED AFTER COOK (1970)

TECHMAN KILBORN

In 1973, an arrangement was made by Baymag Mines Co. Limited with Canadian Exploration Limited (CANEX), giving CANEX responsibility for exploration and development of the magnesite prospect. A general summary of the findings of the CANEX's geological staff was prepared by Mr. D.M. Jenkins in February 1973. The study was based on diamond drill core samples involving 33 holes drilled for a total footage of 548.6 meters (1800 feet). Geological mapping of a portion of the claim area and chip sampling of promising stratigraphic horizons were also carried out. Laboratory investigations were directed toward completing the mineral inventory for the deposit and towards solving specific geological problems. Some metallurgical investigations were also carried out.

3.2 Current Exploration

In 1979, Baymag Mines Co. Limited, a wholly owned subsidiary of Refra-technik GmbH of West Germany, contracted Techman Ltd, Kilborn Engineering (B.C.) Ltd. and Nichols Engineering and Research to evaluate the feasibility of bringing the Mount Brussilof Magnesite deposit into production. During the execution of this evaluation, various field exploration investigations were carried out including surveying, percussion drilling, shallow diamond drilling and bulk sample extraction.

A second bulk sample was extracted and tested in 1979 to allow better evaluation of processing requirements. Bulk sample location was based on the assay results of 37 percussion holes drilled for a total footage of 130.35 m (427.5 ft). The bulk sample was forwarded to Nichols Engineering and Research, Belle Mead, New Jersey where it was processed, tested and briquetted.

A shallow diamond drilling program was also carried out during 1979 on a closely spaced pattern. Five holes were drilled, each to approximately 5 m (50 ft) depth, in the centre of the explored area. The core was split and assayed in 1.5 m (5 ft) intervals by Kamloops Research and Assay Ltd.

Additional exploration drilling will be conducted in 1980. Baymag Mines Co. Limited will also proceed with a geostatistical evaluation of the ore reserves based on the findings of the exploration program.

3.3 Regional Geology

Middle and Upper Cambrian rocks in the vicinity of Mount Brussilof can be subdivided stratigraphically and structurally into two facies (Figure 3.3-1). The boundary between the eastern and western facies is sharp with structural shortening accentuating the differentiation (Jenkins, 1973).

The Mount Brussilof-Mount Eon magnesite deposit evaluated in this report is contained within the Cathedral Formation (Eastern Facies) of Middle Cambrian age. The deposit lies in the west dipping limits of a broad anticline. The beds strike north 30° west and dip southwest at 20 to 40 degrees. Major faulting has not been recognized (Jenkins, 1973).

3.4 Detailed Site Geology

3.4.1 Geometry

Exploration to date indicates that the deposit, as mapped by Techman Ltd. personnel, is approximately 790 m in length (along a NW - SE axis) and about 500 m wide (along a NE - SW axis). A summary of the bedrock geology of the site is presented in Map 3.4-1. Jenkins (1973) has speculated the maximum thickness of the ore body to be at least 120 metres.

The ore body does not appear to have been affected by the deformation that has taken place, although some minor folding has been noted (Stary, 1970). It is thought that the deposit lies on a limb of a broad anticline. The general strike is 150° dipping at 35 to 45° to the southwest. There is no significant faulting apparent within the drilled area; however, some slight fracturing is apparent.



7500
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6500
6000
5500
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2500
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2000
1500
1000
500
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17 532 N

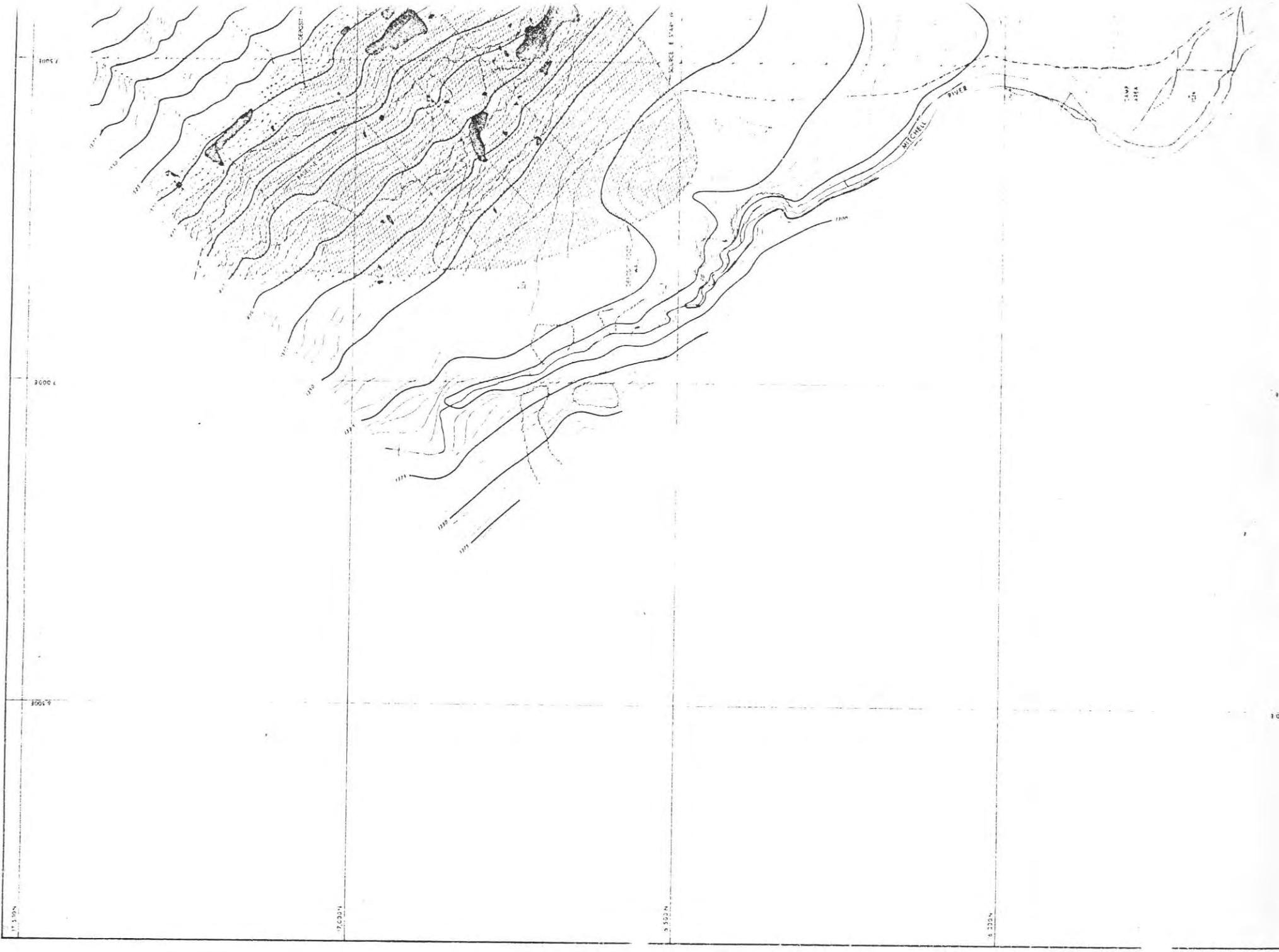
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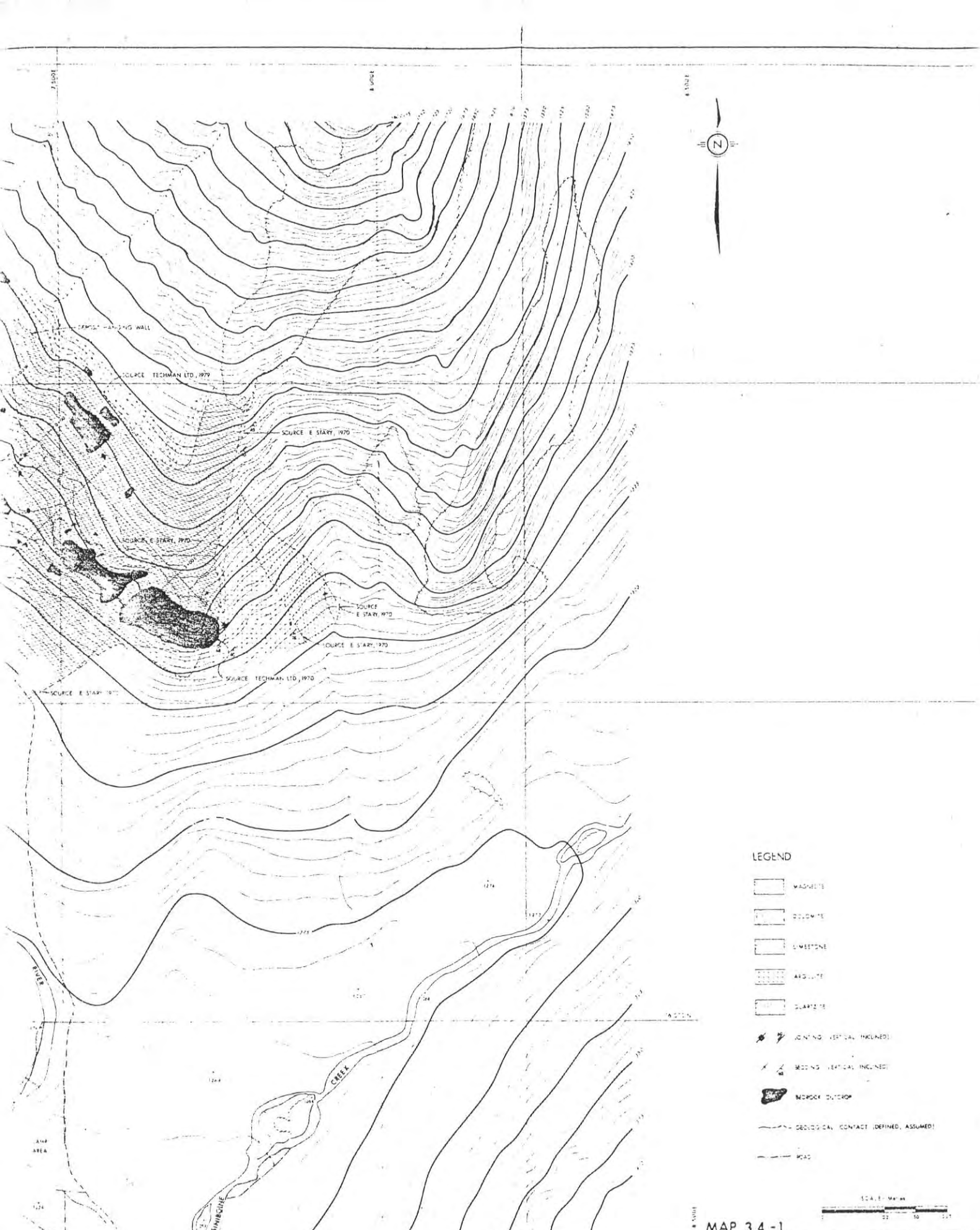
17 472 N

MICHIGAN RIVER


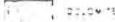
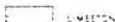






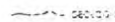
PAVED AREA

RIVER





LEGEND

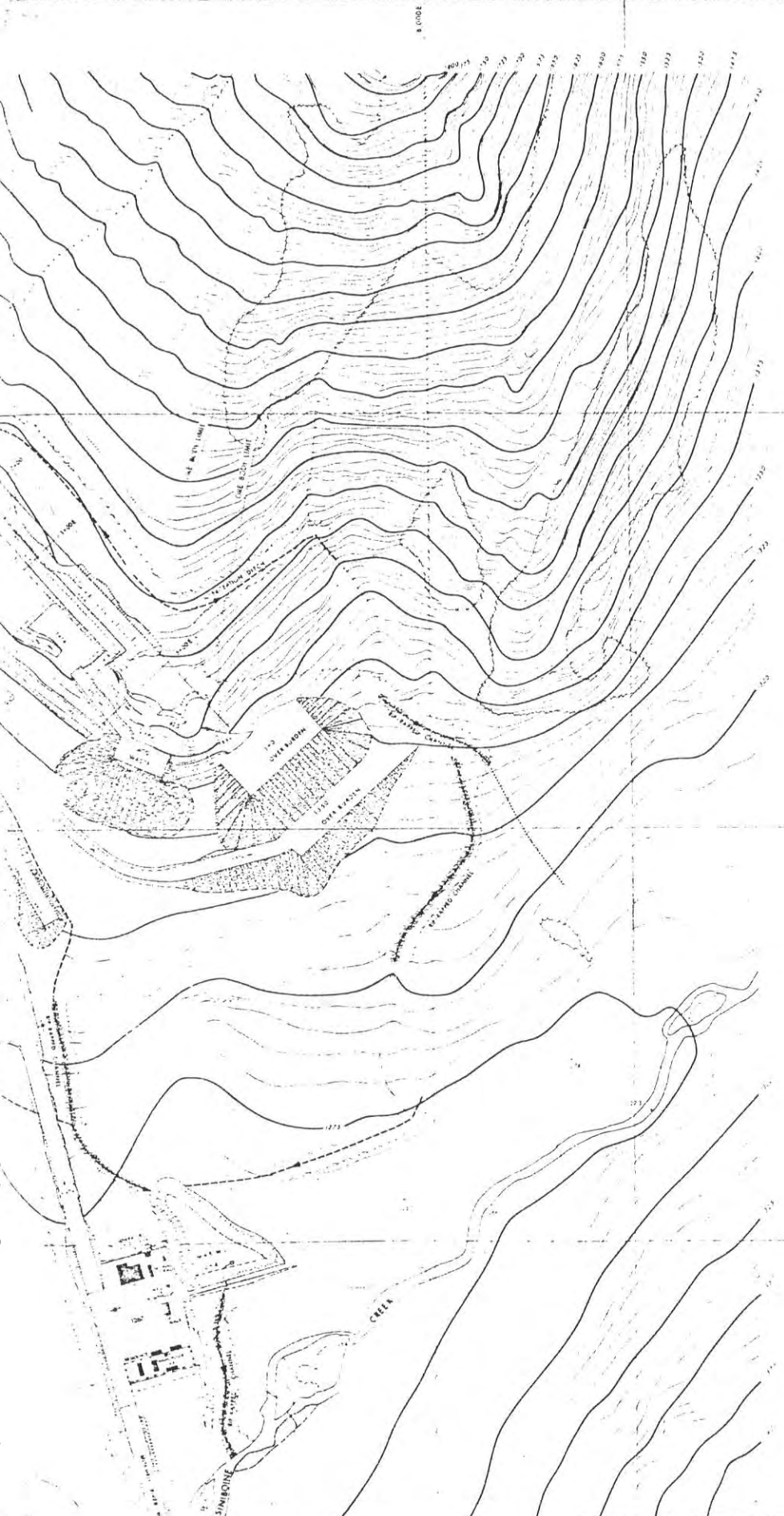
-  MAGNETITE
-  DOLOMITE
-  LIMESTONE
-  ARGILLITE
-  SLATE
-  JOINTS (VERTICAL INCLINED)
-  BEDDINGS (VERTICAL INCLINED)
-  BEDROCK OUTCROP
-  GEOLOGICAL CONTACT (DEFINED, ASSUMED)
-  ROAD

MAP 3.4-1



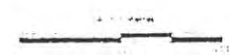
Baymag Mines Co. Limited
BEDROCK GEOLOGY - MINESITE

TECHMAN		1:2,000	
DATE	BY	SCALE	PROJECT



LEGEND

- CUT SLOPE
- FULL SLOPE OR DRE STOCKPILE
- WATER DAM SLOPE
- DRAINAGE STOCKPILE SLOPE



MAP 3.7-1

Baymag Mines Co. Limited

CONCEPTUAL MINE PLAN

TECHMAN

DATE	REVISION	BY	APP'D

Shale: Stary (1970) reports that shale was encountered in one drill hole. Techman Ltd. personnel examined a similar shale cropping out northwest of the map area. It is well banded, fine grained, slightly calcareous rock, and dark grey in colour. Stary (1970) indicated that this may be an impure phase of the limestone.

Argillite: The argillite is a very fine grained greenish-grey rock that weathers to a light brown color. It is well banded and some argillite has high carbonate content. Diamond drill hole logs indicate several occurrences below the magnesite. These may be lenses that grade vertically and/or laterally into limestone and shale.

3.5 Ore Reserve Estimate

The prime mining area of approximately 16 hectares is situated along the lower slopes of a south westerly trending ridge immediately north of the Mitchell River-Assiniboine Creek confluence. Table 3.5-1 summarizes the proven and probable reserves of high and low grade ore. Based on geological interpretation, the total possible reserves are estimated at approximately 18,000,000 tonnes of high grade magnesite.

Reserve calculations were based on MgO and Fe₂O₃ content. Plots of these two constituents versus drill hole footage were prepared for assays from 59 drill holes. Quantities satisfying the following criteria were determined:

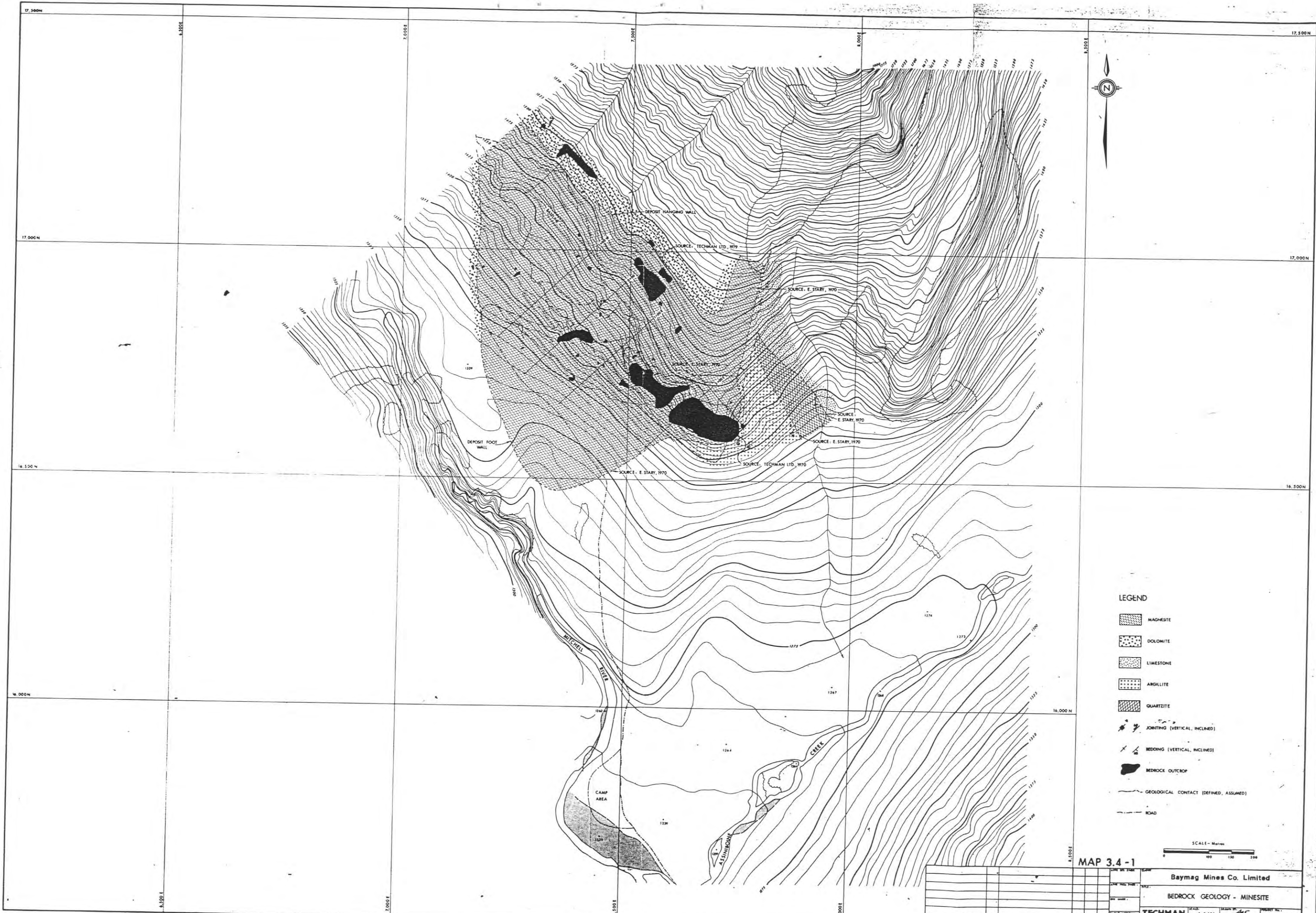
<u>Designation</u>	<u>Criteria</u>
High Grade	% MgO \geq 97 and % Fe ₂ O ₃ \leq 0.75
Low Grade #1	% MgO \geq 93 and % Fe ₂ O ₃ \leq 0.75
Low Grade #2	% MgO \geq 85 but $<$ 93, and % Fe ₂ O ₃ \leq 0.75
	% MgO $<$ 85 and/or % Fe ₂ O ₃ $>$ 0.75











Table 3.5-1 GEOLOGICAL RESERVES
 Prime Mining Area, Brussilof Magnesite Project

	HIGH GRADE MgO% +93% Fe ₂ O ₃ < 0.75%	LOW GRADE MgO < 93% or greater than 0.75% Fe ₂ O ₃
Proven	18,780,000	8,480,000
Probable	5,750,000	6,810,000
Total	24,530,000	15,290,000

Possible Reserves:

1. PROPOSED MINING AREA: There are approximately 18,000,000 tonnes of additional high grade magnesite (+ 93%) (at similar grades to that indicated in the proven and probable categories) beyond the limits of the drilling. Further possible ore exists where the deposit extends under the surface rock cover around the 1500 metre elevation.
2. MOUNT BRUSSILOF DEPOSIT: This deposit was examined by J. Godfrey in 1969 and he reported 14,100,000 tonnes (15,600,000 tons) of high grade magnesite.
3. CROSS RIVER DEPOSIT: Placer Development drilled 65 holes within the Cross River deposit, Vano Claims in 1972 and found the grade non-commercial.



- LEGEND**
-  MAGNESITE
 -  DOLOMITE
 -  LIMESTONE
 -  ARGILLITE
 -  QUARTZITE
 -  JOINTING (VERTICAL, INCLINED)
 -  BEDDING (VERTICAL, INCLINED)
 -  BEDROCK OUTCROP
 -  GEOLOGICAL CONTACT (DEFINED, ASSUMED)
 -  ROAD



MAP 3.4-1

Baymag Mines Co. Limited	
BEDROCK GEOLOGY - MINESITE	
TECHMAN	1:2,500
PROJECT NO. TM-231	

These designations and associated cut off criteria are based on initial indications of plant feed requirements for obtaining desired product specifications. They are considered to reasonably represent the distribution of material within the deposit.

3.6 Mining Reserves

A number of pit layouts have been evaluated. These pits represent the possible mining limits which allow recovery of the maximum amount of ore (as interpreted from geologic sections).

Available data indicates sufficient reserves within the pit boundaries for an annual production rate of approximately 220 000 tonnes per year of +93% MgO magnesite ore for approximately 20 years. The criteria used in the evaluation of mineable reserves were based on preliminary product specifications received from Refratechnik, Kilborn Engineering and Baymag Mines Co. Limited. For pit planning only magnesite grading at +93% MgO and containing less than 0.75% Fe₂O₃ would be mined and shipped to the plant. The remaining material would be either stockpiled as low grade magnesite or deposited in waste dumps. The low grade stockpiles would eventually be reclaimed and processed as they became economic.

3.7 Mine Development

3.7.1 Introduction

General

The magnesite deposit is located one kilometre north of the confluence of, and between, the Mitchell River and Assiniboine Creek, on the lower southwest slopes of a 2450 metre high unnamed mountain near Mt. Eon. Surface exposures of magnesite exist in many places; however, the deposit is generally covered by a mantle of unconsolidated overburden varying in thickness from zero to ten meters. The location of the deposit, with its side hill

position, only minor overburden cover and essentially no waste rock cover, is ideal for an open pit mine. The proposed initial pit and minesite layout are illustrated on Map 3.7-1.

The high grade ore ($\geq 93\%$ MgO and $< 0.75\%$ Fe₂O₃) would be mined, trucked from the pit to the minesite crusher, dumped into a hopper feeding the jaw crusher, crushed to minus 100 millimeters and stockpiled over a reclaim tunnel for trucking to the plant at Canal Flats.

Low grade ore would be trucked to one of two stockpiles, depending upon its grade. Waste (that is, magnesite below 85% MgO or magnesite contaminated with greater than 0.75% Fe₂O₃) would be trucked to the waste dump. Overburden would be trucked to separate overburden stockpiles.

Ore-Characteristics

The ore is crystalline magnesite, white to grey in colour, with a specific gravity of three, and a Moh hardness number of four. There are no apparent bedding planes; fractures exist near the surface but no distinct pattern has been identified. When blasted or when crushed the ore breaks into roughly cubic lumps.

Pit-Design-Criteria

The pit has been designed with a low bench height to maximize high grade ore recovery, and provide safe, acceptable working conditions for the front end loader. A typical cross section of the pit highwall is illustrated in Figure 3.7-1, and is:

Bench height:	6 meters
Safety berms:	18 meters vertically apart 12 meters wide (one every 3 mining benches)
Wall slope	Toe to crest between berms 70°
Overall wall slope	43°
Nominal daily production rate: overburden and rock	Year 1 - 3150 Tonnes Year 2 - 1446 Tonnes Year 3 - 1433 Tonnes Year 4 - 2424 Tonnes Year 5 - 5281 Tonnes Year 6 - 3311 Tonnes

WASTE
FILL S
ONE ST
CUT SLOPE
LEG

16,000 N



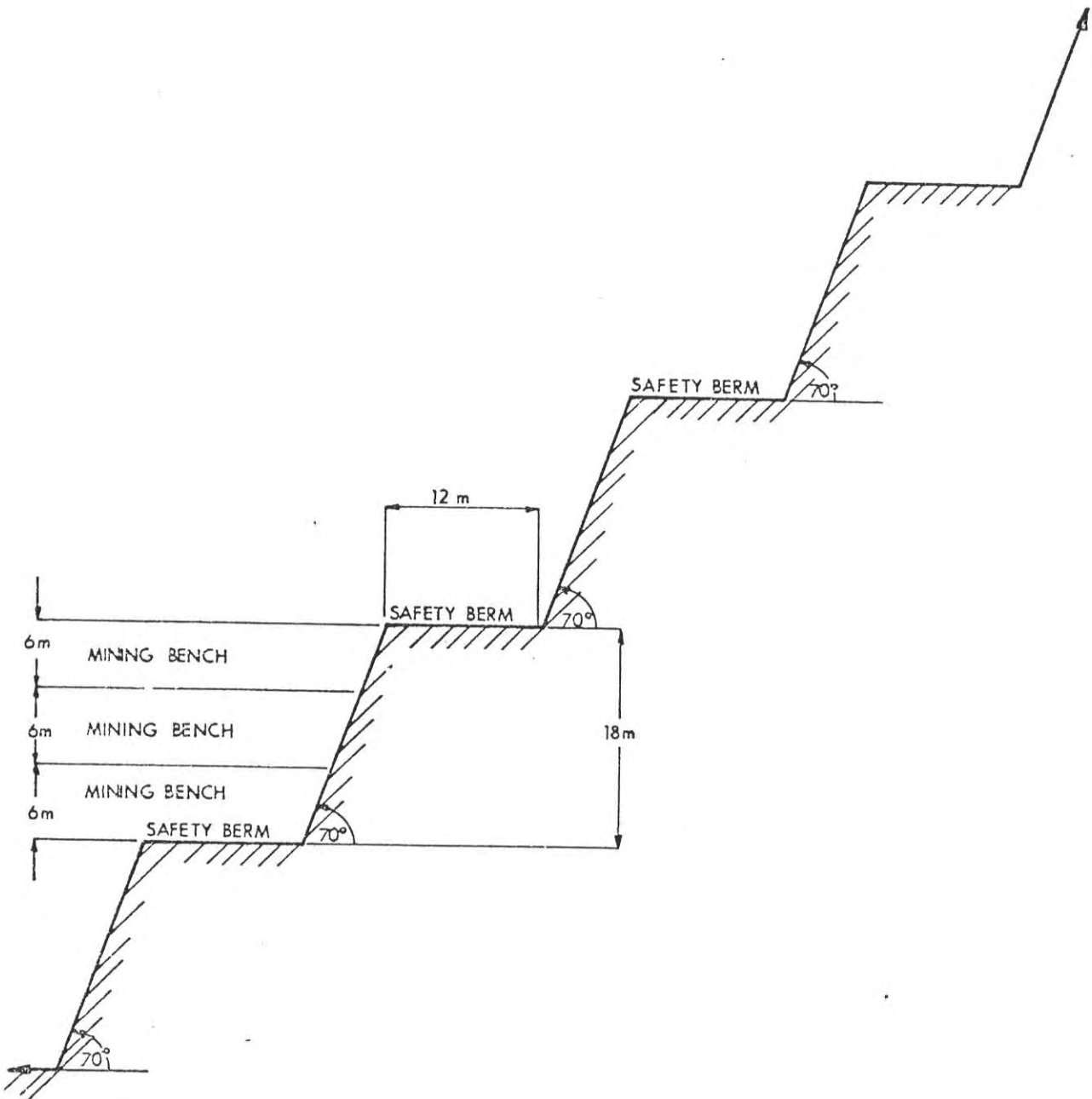


FIGURE 3.7-1
TYPICAL CROSS SECTION OF
PIT HIGHWALL

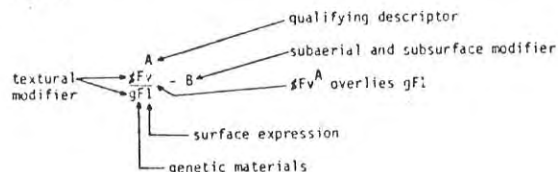
The mine operates on a one shift per day basis, five days per week for a total of 250 or fewer operating days per year. Crushed ore will be trucked to the processing plant at Canal Flats in 90.7 tonne (100 ton) payload trucks operating 180 to 185 days per year, on a two shift per day, 5 days per week basis. A trucking shutdown of approximately ten weeks between March and May due to road limitations is expected, during which time stockpiles at the plant should provide plant feed. Crushed ore will be stockpiled at the mine site awaiting the resumption of trucking. The normal trucking rate to the plant will be about 900 tonnes average per day.

Brussilof Magnesite Project

GENERALIZED SURFICIAL GEOLOGY - CANAL FLATS PLANTSITE ALTERNATIVE

The designation of surficial geology map units based on Geological Survey of Canada as amended by the B.C. ELUC Secretariat.

Example:



- Textures:**
- r rubbly (angular particles: no size implication)
 - b bouldery (greater than 64 mm)
 - g gravelly (2 mm - 64 mm)
 - s sandy (2 mm - 0.062 mm)
 - sl silty (0.62 mm - 0.004 mm)
 - c clayey (less than 0.004 mm)
 - d diamicton (a heterogenous mixture of above)
 - r indicates angular particles of cobble and pebble size
 - sr indicates angular particles of cobble and pebble size with much silty matrix

Surface Expression, Morphology or Landform:

- a apron (used chiefly for coalescing fans and talus)
- b blanket (>2 m thick and draped over underlying unit, from which it derives its surface form)
- f fan (includes alluvial fans and cones, avalanche cones and some deltas)
- h hummocky (small hillocks and hollows; gradients generally 10^0)
- i inclined ($2^0 - 30^0$ slope)
- l level (generally $<2^0$, chiefly used for floodplains and outwash plains, but includes some deltas and lake bottoms)
- m rolling (undulations with parallel alignment, includes drumlins and fluted topography)
- p pitted (kettles)
- r ridges (slopes $>10^0$ but topography generally with parallel alignment; includes small morainic ridges and eskers that are too small to symbolize individually)
- s steep (erosional slopes on unconsolidated materials or bedrock, $>30-35^0$)
- t terraced (level surfaces bounded by scarps)
- u undulating (slopes generally $2 - 10^0$)
- v veneer (<2 m thick, no constructional form of its own; similar to blanket)

Escarpment

--- Flood limits of 1929, 1948 or 1974 floods - approx.

Genetic Origin:

- F Fluvial deposition
- O Organic deposition
- C Colluvial deposition
- L Lacustrine (lake or pond) deposition
- E Eolian deposition or deflation
- L^G Glacio-lacustrine deposition
- F^G Glacio-fluvial deposition
- M Morainal deposition
- R Bedrock - undifferentiated
- U Undifferentiated (unconsolidated deposition)

Subaerial and Subsurface Modifiers:

- D Deflated
- E Eroded or Channelled
- F Failing
- P Piping
- R Ravelling
- V Gullied
- W Washed
- Δ Deltaic

Qualifying Descriptors:

- G glacial
- B bog
- F fen
- I inactive
- A active

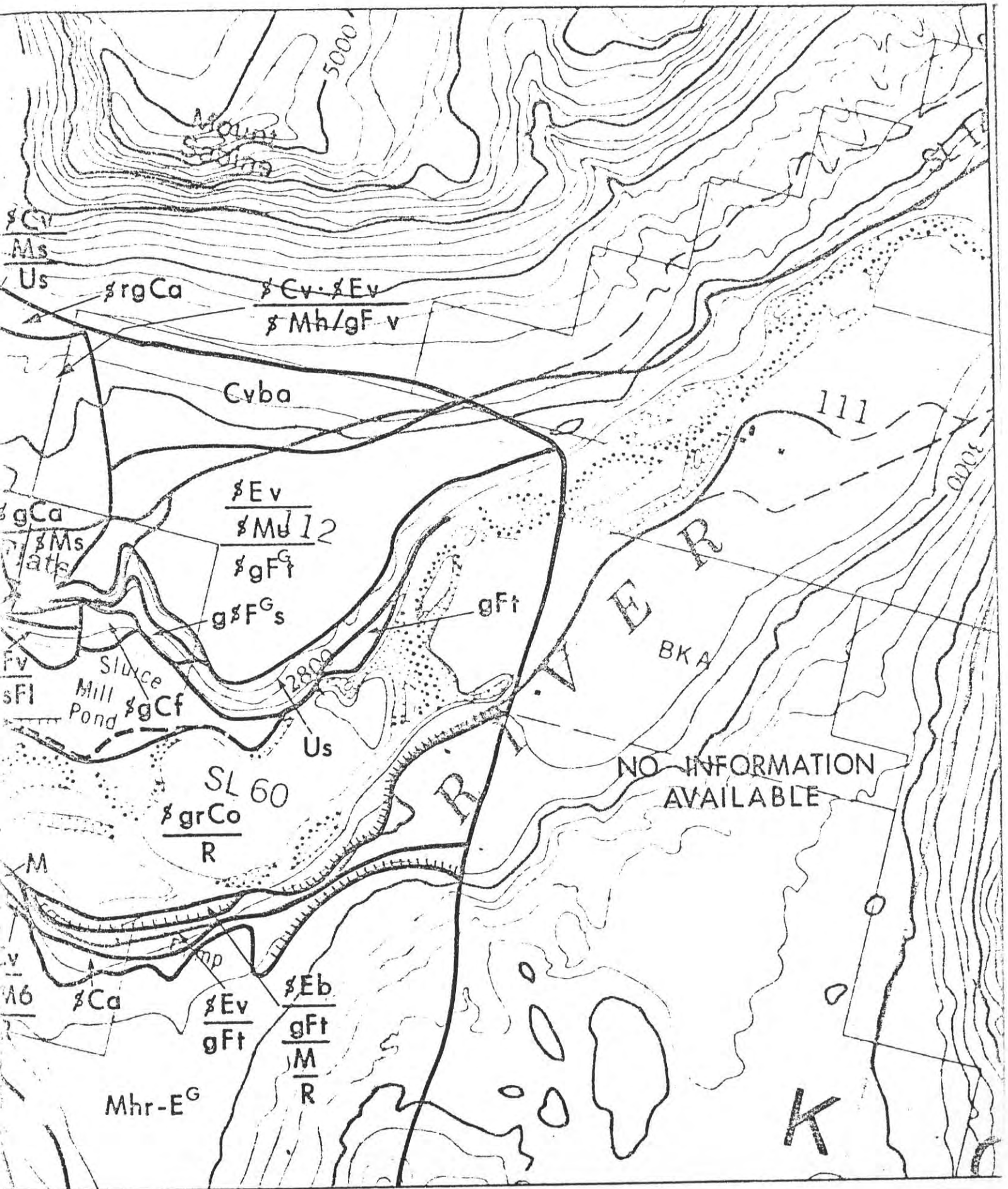
PREPARED FOR:
Baymag Mines Co. Limited

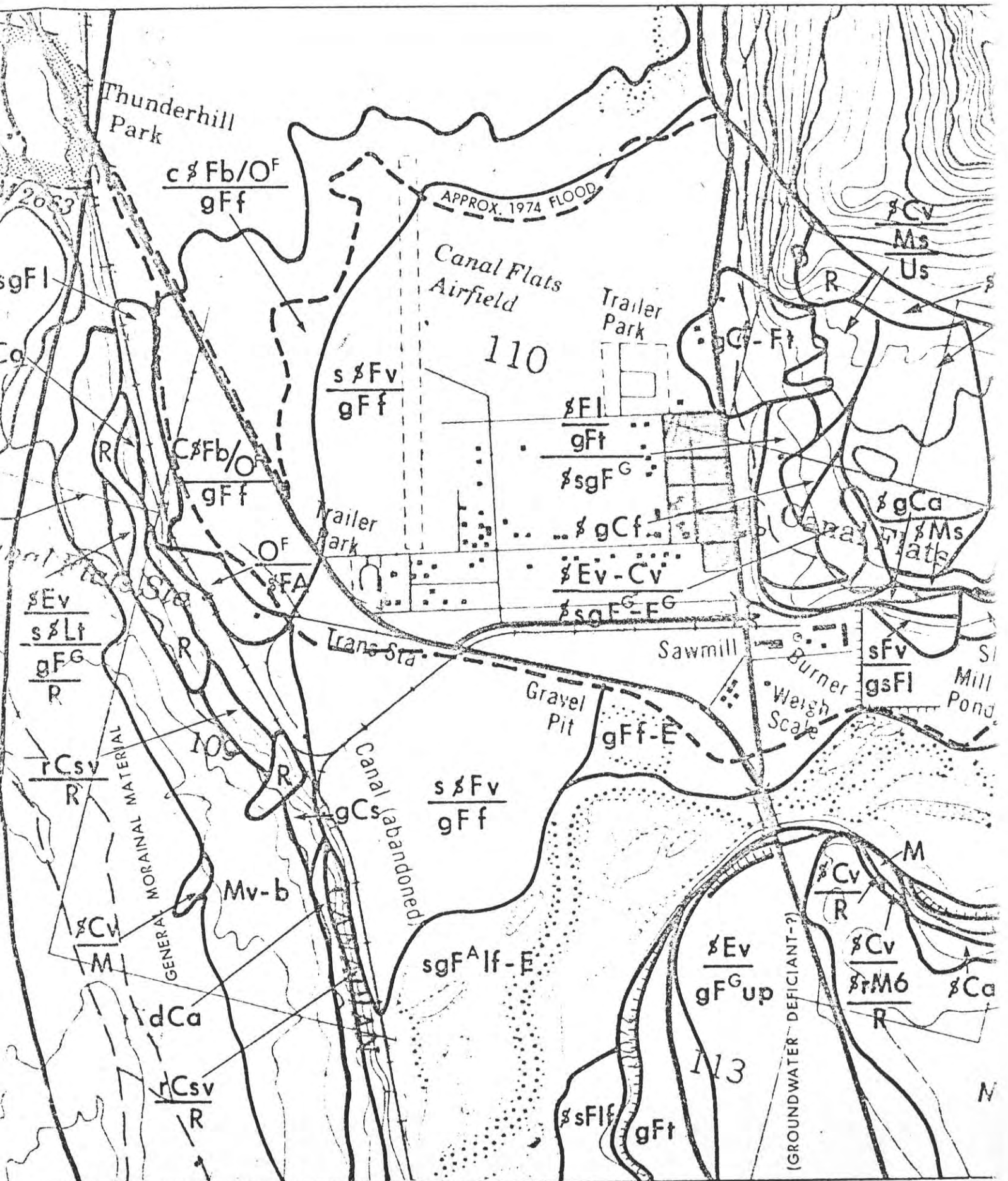
SCALE: 1: 20,000



TECHMAN
KILBORN

map
2.6-3





SL 30 B

Thunderhill Park

c & Fb/C
gff

BAY 2633

sgf l

r & Co

scv

Canal

βEV
s & Lt
gFG
R

C & Fb/O
gff

3300

GENERAL MORAINAL MATERIAL

rCsv
R

Mv

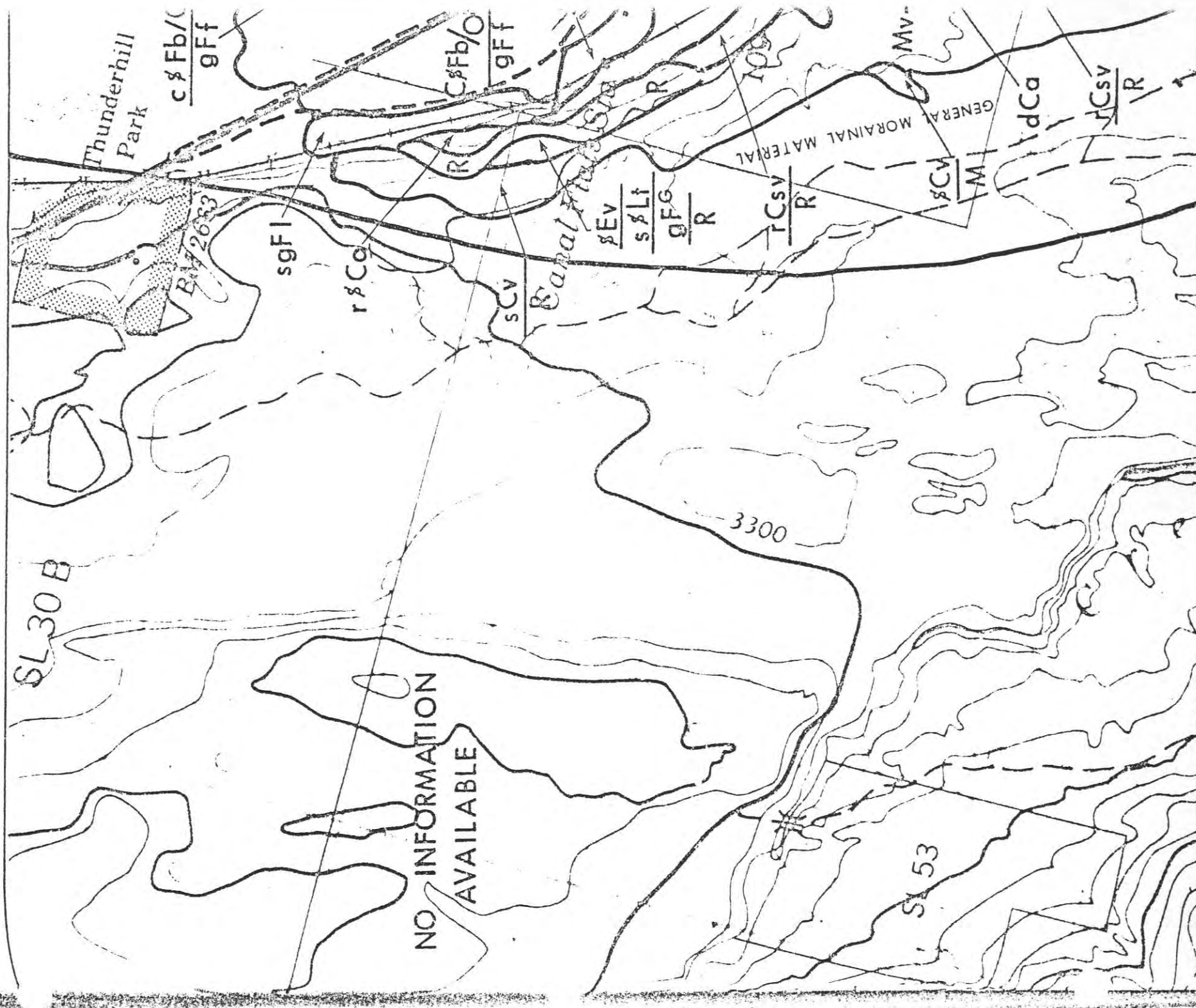
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VR

NO INFORMATION
AVAILABLE

SL 53

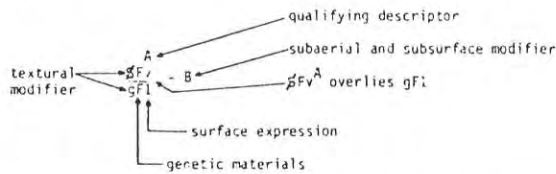


Brussilof Magnesite Project

GENERALIZED SURFICIAL GEOLOGY - RADIUM PLANTSITE ALTERNATIVE

The designation of surficial geology map units based on Geological Survey of Canada as amended by the B.C. ELUC Secretariat.

Example:



- Textures:
- r rubbly (angular particles; no size implication)
 - b bouldery (greater than 64 mm)
 - g gravelly (2 mm - 64 mm)
 - s sandy (2 mm - 0.062 mm)
 - sl silty (0.62 mm - 0.004 mm)
 - c clayey (less than 0.004 mm)
 - d diamicton (a heterogeneous mixture of above)
 - r indicates angular particles of cobble and pebble size
 - sr indicates angular particles of cobble and pebble size with much silty matrix

Surface Expression, Morphology or Landform:

- a apron (used chiefly for coalescing fans and talus)
- b blanket (>2 m thick and draped over underlying unit, from which it derives its surface form)
- f fan (includes alluvial fans and cones, avalanche cones and some deltas)
- h hummocky (small hillocks and hollows; gradients generally 10^0)
- i inclined (2^0 - 30^0 slope)
- l level (generally $<2^0$, chiefly used for floodplains and outwash plains, but includes some deltas and lake bottoms)
- m rolling (undulations with parallel alignment, includes drumlins and fluted topography)
- p pitted (kettles)
- r ridges (slopes $>10^0$ but topography generally with parallel alignment; includes small morainic ridges and eskers that are too small to symbolize individually)
- s steep (erosional) slopes on unconsolidated materials or bedrock, >35 - 35^0)
- t terraced (level surfaces bounded by scarps)
- u undulating (slopes generally 2 - 10^0)
- v veneer (<2 m thick, no constructional form of its own; similar to blanket)

Escarpment

--- Flood limits of 1929, 1948 or 1974 floods - approx.

Genetic Origin:

- F Fluvial deposition
- O Organic deposition
- C Colluvial deposition
- L Lacustrine (lake or pond) deposition
- E Eolian deposition or deflation
- L^G Glacio-lacustrine deposition
- F^G Glacio-fluvial deposition
- M Morainal deposition
- R Bedrock - undifferentiated
- U Undifferentiated (unconsolidated deposition)

Subaerial and Subsurface Modifiers:

- D Deflated
- E Eroded or Channelled
- F Failing
- P Piping
- R Ravelling
- V Gullied
- W Washed
- Δ Deltaic

Qualifying Descriptors:

- G glacial
- B bog
- F fen
- I inactive
- A active

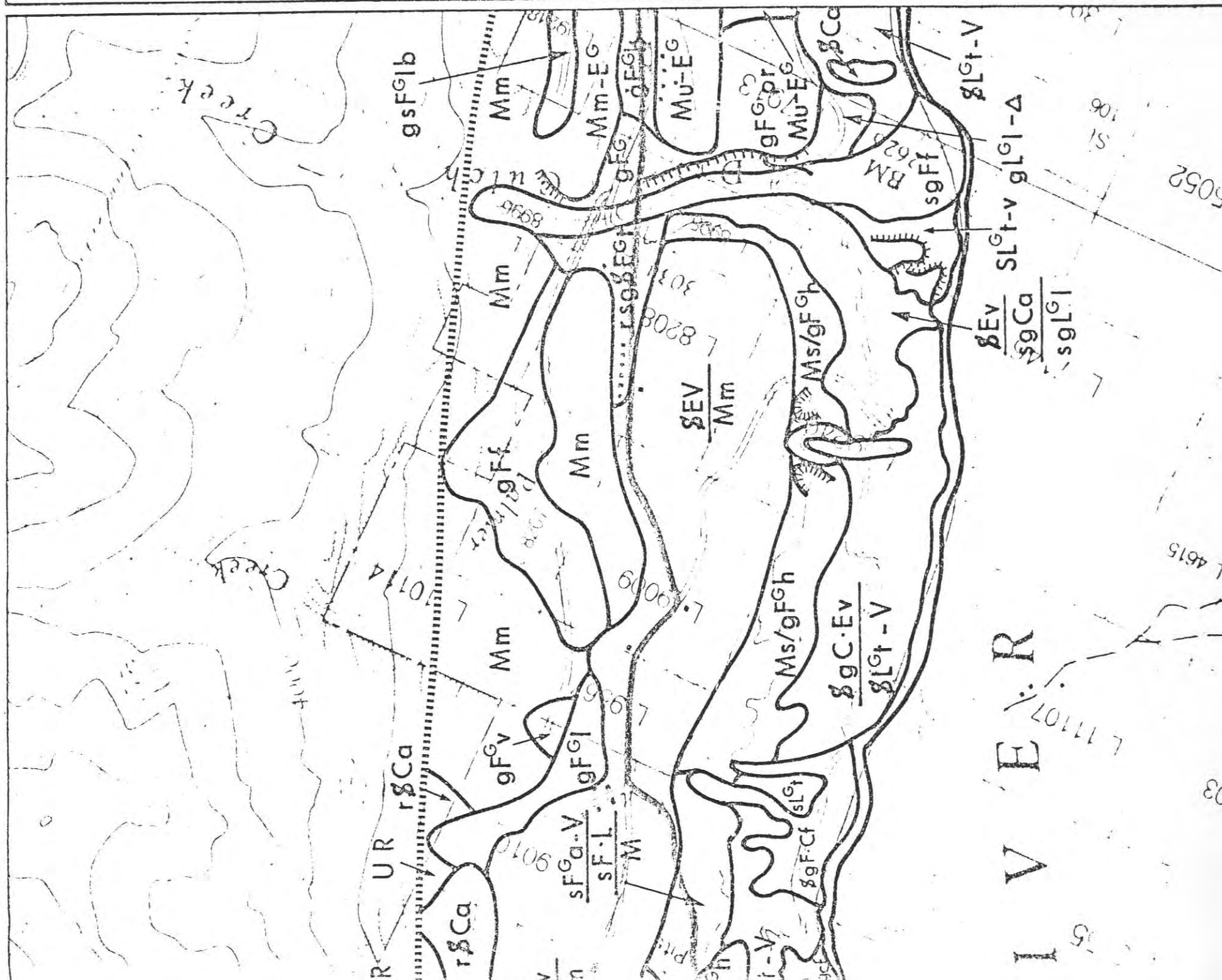
PREPARED FOR:
Baymag Mines Co. Limited

SCALE: 1:20,000



TECHMAN
KILBORN

map
2.6-4



Creek

Creek

UR

rβCa

gsF^Glb

gF^GV

Mm

sF^Ga-V
SF.L

gF^GI

Mm-Eg

gF^GI

βEV
Mm

Mu-Eg

βgF-Cf
sl^G

gF^Gpr
Mu-Eg

βgC-Ev
sl^G-V

βCc

sl^G-V

βEV
sl^G-v
sl^GI-Δ
βgCa
sl^GI

LIVER

5

03

L 4615

5052

L 30

L 106

L 1107

L 8208

L 9039

L 0714

BM 162

sgFf

sgFf

sl^GβGf

Ms/gF^Gh

gFf

Mm

Mm

Ms/gF^Gh

βgC-Ev
sl^G-V

R

V

P

t-v

g

5

NO INFORMATION AVAILABLE

L 9044

L 9043

Creek

sgFff
βL⁹

L 9042

sgCa gcf 1562

Mrh/gFh
β9Ca

sgCa

βL⁹t-VP

β9Ca

Ms

Mvh/g⁹F⁹th

sg

βCF

βCa

βCh

βCa

β9Ca

sgFfv
βL⁹

βL⁹t

βL⁹t

βL⁹t

gF⁹vb
βL⁹th

βCF B

βCa

βCh

βCa

βL⁹t

βL⁹t

βL⁹t

βL⁹t

βL⁹t

βCv

βCa

βCh

βCa

β9Ca

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L 794

NO INFORMATION AVAILABLE

L 12868

M B I A

L 11036

L 77108

L 17109

L 701

REFERENCES CITED

- Acres Consulting Services Ltd. 1972. 1971 Exploration and Bulk Sampling Program - Report prepared for Baymag Mines Co. Limited. Vancouver.
- Acres Western Limited. 1971. Brussilof Magnesite Project - Feasibility Study. Report prepared for Baykal Minerals Ltd. Vancouver.
- Agricultural and Rehabilitation Development Act (ARDA). 1966. Present Land Use Project Maps for 82J/12, 82J/13, 82J/4, and 82K/9. Provided by Resource Analysis Branch. Victoria.
- Atmospheric Environment Service. 1971. Temperature and Precipitation. British Columbia 1941-1970. Environment Canada.
- Banfield, A.W.F. 1974. The Mammals of Canada. University of Toronto Press. Toronto.
- Barnes, R. 1976. Hydrogeology of the Mount Robson-Wapiti Area. Alberta Research Council, Report 76/5.
- Barthauer, G.L., Z.V. Kosowski, and J.P. Ramsey. 1971. Control of Mine Drainage from Coal Mine Mineral Wastes, Phase I - Hydrology and Related Experiments. Water Pollut. Control Res. Ser., Rep. 10. 14010 DDH, Water Quality Office, EPA.
- Bell, M. 1971. Forest Ecology. In: Forestry Handbook for British Columbia. The Forest Club, University of British Columbia, Vancouver.
- Bowden, G. and P.H. Pearse. 1968. Nonresident Big Game Hunting and the Guiding Industry in British Columbia. Report No. 2. Report prepared for the British Columbia Fish and Wildlife Branch. Victoria.

REFERENCES CITED (Continued)

- British Columbia Forest Service. 1965. Forest Cover Maps. Forest Inventory Division. Victoria.
- British Columbia Land Commission Agricultural Land Reserve-Plan Maps for 82J/4 and 82K/9, amended to 1976 and 1979, respectively. East Kootenay Regional District, Cranbrook.
- British Columbia Land Inventory. Undated. Soil Capability for Agriculture, Manuscript Maps 82J/NW and NE. Provided by Resource Analysis Branch, Victoria.
- Brown, I.C. 1967. Groundwater in Canada. Geological Survey of Canada. Economic Geology Report No. 24.
- Canada Land Inventory. Undated. Land Capability for Wildlife-Ungulates. Manuscript Map 82J, Kananaskis Lakes. Provided by Resource Analysis Branch. Victoria.
- Chaklader, A.C.D. 1973. Production of Dead-burned MgO Pellets from "Baymag" by Reactive Hot Pressing and Sintering. Canex-Placer Limited, Report No. 2.
- Cook, D.G. 1970. A Cambrian Facies Change and Its Effect on Structure, Mount Stephen, Mount Dennis Area, Alberta-British Columbia; The Geological Association of Canada; Species Paper No. 6.
- Demarchi, D.A. 1974. Mountain Sheep Distribution. Environment and Land Use Committee Secretariat. Map No. 1J. Victoria.
- Department of Economic Development. 1976. The Kootenay Report 76. Government of British Columbia. Prepared by I.P.A. Staff (Interim Planning Agreement).

REFERENCES CITED (Continued)

Department of Environment. 1976a. Kootenay Air and Water Quality Study, Phase I, Water Resources Service, Province of British Columbia. Victoria.

Department of Environment. 1976b. Kootenay Air and Water Quality Study, Phase I Air Quality in Region B, The Kimberley-Skookumchuck-Cranbrook Area. Water Resource Service, Government of British Columbia. Victoria.

Department of Regional Economic Expansion. 1970a. Land Capability Analysis, East Kootenay Area. Canada Land Inventory map. Queen's Printer. Ottawa.

Department of Regional Economic Expansion. 1970b. Land Capability for Wildlife-Waterfowl. Canada Land Inventory map, Kananaskis Lakes, 82J. Queen's Printer. Ottawa.

Department of Regional Economic Expansion. 1972. Soil Capability for Agriculture. Canada Land Inventory Map, Mount Assiniboine, 82J/NW, NE Information Canada. Ottawa.

Entech Environmental Consultants Ltd. 1978a. Kootenay River Diversion Project. Initial Environmental Evaluation. Summary Report Vol. I. British Columbia Hydro and Power Authority. Vancouver.

Entech Environmental Consultants Ltd. 1978b. Kootenay River Diversion Project. Initial Environmental Evaluation. Physical Environment Vol. II. British Columbia Hydro and Power Authority. Vancouver.

Entech Environmental Consultants Ltd. 1978c. Kootenay River Diversion Project. Initial Environmental Evaluation. Biological Environment Vol. III. British Columbia Hydro and Power Authority. Vancouver.

REFERENCES CITED (Continued)

- Entech Environmental Consultants Ltd. 1978d. Kootenay River Diversion Project. Initial Environmental Evaluation. Economic Environment Vol. IV. British Columbia Hydro and Power Authority. Vancouver.
- Environment Canada. 1977. Summary of Water Quality Data From the Rocky Mountain National Parks (for the period 1975 to 1976). Water Quality Branch.
- Environmental and Land Use Committee Secretariat. 1978. Columbia-Windermere Lakes Area - An Overview Study. Province of British Columbia. Victoria.
- Fyles, J.W. 1965. Vegetation of Gravel Bars on the Western Slope of the Rocky Mountains. B.Sc. Thesis, University of Victoria. Victoria.
- EPEC Consulting Western Ltd. 1978. Personal Communication.
- EPEC Consulting Western Ltd. 1979. Conceptual Land Use Plan for the Southwest Area of Kootenay National Park. Planning Section, Parks Canada - Western Region. Calgary.
- Geiger, R. 1965. The Climate Near the Ground. (English Translation). Harvard University Press, Cambridge, Mass.
- Godfrey, J.D. 1969. Mount Brussilof Magnesite Project, British Columbia. Preliminary Geological Field Investigation. Private report.
- Hare, K.F. and M.K. Thomas. 1974. Climate Canada. Wiley Publishers of Canada Limited, Toronto.
- Holland, S.S. 1964. Landforms of British Columbia. A Physiographic Outline. British Columbia Department of Mines and Petroleum Resources. Bulletin No. 48. Queen's Printer, Victoria.

REFERENCES CITED (Continued)

- Jenkins, D.M. 1973. Baymag Property, 1972. Summary Report of Geology. Canadian Exporation Limited. Report prepared for Baymag Mines Co. Limited. Vancouver.
- Kelley, C.C. and P.N. Sprout. 1956. Soil Survey of the Upper Kootenay and Elk River Valley in the East Kootenay District of British Columbia. British Columbia Soil Survey, Report No. 5. Queen's Printer, Ottawa.
- Kelley, C.C. and P.N. Sprout. 1961. Soil Survey of the Upper Columbia River Valley in the East Kootenay District of British Columbia. British Columbia Soil Survey Repot No. 5. British Columbia Department of Agriuculture. Kelowna.
- Kendrew, W.B. and D. Kerry. 1965. The Climate of British Columbia and the Yukon Territory. Queen's Printer. Ottawa.
- Krajina, V.J. 1965. The Biogeoclimatic Zones and Classification of British Columbia. Department of Biology and Botany, University of British Columbia. Vancouver.
- Krajina, V.J., J.B. Foster, J. Pojard, and T. Carson. 1978. Ecological Reserves in British Columbia. Ecological Reserves Unit, Ministry of Environment. Victoria.
- Leech, G.B. 1965. Kananaskis Lakes, W 1/2 Area In: Report of Activities, May to October 1965 Geological Survey of Canada, Paper 66-1.
- Macgregor, W.G. 1977. Status of Mountainn Goats in British Columbia. In: Samuel, W. and W.G. Macgregor (eds.), Proceedings of the First International Mountain Goat Symposium. Kalispell, Montana, pp. 24-28. Ministry of Recreation and Conservation. Victoria.

REFERENCES CITED (Continued)

- Marshall, J.R. 1969. The Climate of the East Kootenay Region. Land of the East Kootenay: Their Characteristics and Capability for Agriculture and Forestry Soils Division, British Columbia Department of Agriculture. Victoria.
- Ministry of Economic Development. 1978a. Invermere Area. The 1978 British Columbia Regional Index. Province of British Columbia. Victoria.
- Ministry of Economic Development. 1978b. East Kootenay Region. The 1978 British Columbia Regional Index. Province of British Columbia. Victoria.
- Ministry of the Environment. 1978. Snow Survey Bulletin, May 1, 1978. Water Investigations Branch. Province of British Columbia. Victoria.
- Ministry of Environment. 1979. Proposed Wildlife Management Plan for British Columbia. Fish and Wildlife Branch, Department of Conservation. Victoria.
- Ministry of Environment. 1979b. Water Quality Data. Water Investigations Branch, Province of British Columbia. Victoria.
- Osborn, G. and L.E. Jackson. 1974. The Mountain Environment and Urban Society - Kananaskis Pilot Study. Prepared for the University of Calgary Committee for Man and the Biosphere.
- Palliser Wilderness Society. 1977. A Brief to the Government of British Columbia Concerning the Proposed Palliser Wilderness Area. Cranbrook.

REFERENCES CITED (Continued)

Valentine, K.W.G., P.N. Sprout, T.E. Baker and L.M. Lavkulich. 1978. The Soil Landscapes of British Columbia. Resources Analysis Branch, Victoria.

Ward, E.N. 1976. Land Use Programs in Canada, British Columbia. Land Use Planning Branch, Environment Canada. Supply and Services Canada. Ottawa.

Water Survey of Canada. 1977. Historical Streamflow Summary, British Columbia, to 1976. Inland Waters Directorate, Water Resources Branch. Ottawa.