

LOG NO: 0920	RS
ACTION:	
FILE NO:	

REPORT OF FIELD WORK

GEOLOGICAL MAPPING AND GEOCHEMICAL SAMPLING OF ROCKS

by

DONALD B. CROSS & ASSOCIATES LIMITED

on the

FILMED

MOUNT ASSINIBOINE PROPERTY

British Columbia  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

for

ROBERT W. TERMUENDE

19,092

N.T.S. 82 J/13E

50° 49'N, 115° 41'W

August, 1989

DONALD B. CROSS & ASSOCIATES LIMITED

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## SUMMARY

Robert W. Termuende commissioned Donald B. Cross & Associates Limited to carry out geological mapping and sampling on six mineral claims located near Mount Assiniboine in southeastern British Columbia. The field work was carried out to determine the thickness, lateral extent, grade and geographic setting of magnesite mineralisation and to assess the viability of extracting ore from preferred locations.

Two areas of significant buildup of favorable coarse-grained magnesite-bearing dolomite were identified and recommended for core drilling.

The best area occurs in a cirque occupied by Eon Creek where 900 feet (274 meters) of Cathedral formation hosts a 340 foot (104 meters) thick zone of rock which contains 28.88% MgO. This zone of favorable magnesite-bearing dolomite appears to be a Cambrian-age biogenic 'reef'.

Significant barriers to production exist at Eon Creek in the forms of winter avalanche hazards and road access to the favorable area which lies some 2,000 feet (610 meters) above the valley floor of Aurora Creek.

The second area of interest outcrops in the western slopes of Assiniboine Creek valley and may represent the updip continuation of the Baymag orebody. Cathedral formation dolomite which is exposed over a distance of 1.9 miles (3 kilometers) reaches a maximum thickness of 610 feet (186 meters) and contains 330 feet (101 meters) of favorable magnesite-bearing rock. A short distance to the north of this buildup the formation contains 43.07% MgO. Road access to this second area is made easier by its occurrence at an elevation of 6,000 feet a.s.l. (1,829 meters) in the valley floor of Assiniboine Creek.

Drill testing of the two areas is recommended.

## INTRODUCTION

This report contains the results and recommendations of field work carried out on six mineral claims held by Robert W. Termuende in the Mount Assiniboine area of southeastern British Columbia.

Detailed geological mapping and sampling of Middle Cambrian age carbonate and associated rocks revealed the presence of carbonate-rich biogenic reef mounds up to 370 feet (113 meters) thick in which pods of coarse-grained magnesite mineralisation are localised. MgO values for all coarse-grained carbonate rock samples taken on the property vary from a low of 12.83% to a maximum of 43.07%.

The host rock which contains the magnesite mineralisation is a very coarse-grained, recrystallised dolomite which occurs as massive, tan coloured, resistant outcrops. Magnesite mineralisation in outcrop exposures is recognised by its extreme hardness, white colour, massive appearance and the presence of large rhombic crystals of dolomite spar with minor pyrite.

## MINERAL CLAIM OWNERSHIP

The Mount Assiniboine property consists of six mineral claims held by Robert W. Termuende of P.O. Box 7, Fort Steele, British Columbia and are described as follows;

CLAIM NAME	RECORD NUMBER	UNITS	ACRES	EXPIRY DATE
HALO	1662	18	926.3	October 6, 1989
SOLO	1663	18	926.3	October 6, 1989
RDS I	1664	18	926.3	October 6, 1989

# ALBERTA

BRITISH  
COLUMBIA

EDMONTON

RED DEER

CALGARY

CLAIM  
SITE

LETHBRIDGE

## KEY MAP

MOUNT ASSINIBOINE AREA, BRITISH COLUMBIA



RDS II	1665	18	926.3	October 6, 1989
STANO	1974	16	826.4	March 17, 1990
ZOLOL	1975	8	413.2	March 17, 1990

On October 4, 1988 the RDS I and RDS II claims were grouped to form the JOHNSON claim block. Similarly, the SOLO and HALO claims were grouped to form the BEN claim block.

#### **LOCATION AND ACCESS**

The property lies in British Columbia, 40 kilometers southwest of Canmore, Alberta. The claims adjoin Mount Assiniboine Provincial Park on its southern boundary and lie within one kilometer of the west boundary of Banff National Park in Alberta. Ten kilometers to the west lies Kootenay National Park.

Access to the mineral claims can be gained by chartered helicopter either in Canmore, Alberta or from Fairmont Hot Springs, B.C. Air travel distance from Canmore is 40 kilometers and from Fairmont Hot Springs is 55 kilometers.

Road access can be gained from Highway 93 in Kootenay National Park by turning southeast at kilometer 18 onto Settlers Road. Posted signs lead to the Baymag mine a total distance of 57 kilometers from Radium Hot Springs. The mineral claims lie to the north and east of the Baymag mine site.

The highest peak in the area is Mount Assiniboine at 11,900 feet a.s.l. (3,627 meters). The Baymag mine lies at 4,700 feet a.s.l. (1,432 meters).

## **CLIMATE AND VEGETATION**

The Mount Assiniboine area lies within the Continental Ranges of the Rocky Mountains in southeastern British Columbia within the Pacific watershed which feeds the Columbia River.

The mountains are formed of limestone, dolomite and shale of Cambrian age and present some spectacular scenery because of their ability to form towering cliffs. River valleys are generally U-shaped and flat bottomed. Active glaciers and snowfields are scattered throughout the area.

Summer weather consists of warm days with unsettled air conditions and cool, clear nights. In winter months abundant snowfall accumulates at higher elevations resulting in avalanche conditions through the winter and spring months.

Trees give way to alpine brush at 7,500 feet (2,286 meters) a.s.l. Wildlife present in the area includes grizzly and black bear, moose, elk, deer, goat, raptors and falcons, porcupine, gopher and squirrel. Good timber is present in stands of balsam, fir, spruce, tamarack and occasional stands of aspen. Abundant fresh water is present in all major water courses throughout the year.

## **LAND STATUS**

The subject lands lie within a British Columbia Government Reserve surrounded on the north, east and west by provincial or federal parks. Mining, logging and recreational activities are carried on within the reserve and coexist at the present time.

Mitchell Creek which crosses the Baymag mine property provides trail access to Mount Assiniboine Provincial Park for hikers and back country campers.

TABLE 1

TABLE OF FORMATIONS  
Mount Assiniboine area

	PIKA FM.	limestone and dolomite, thin bedded, light to dark grey, fine grained, buff weathering, shale partings, cliff former
	ELDON FM.	dolomite, buff to white, no fossils, cliff former
MIDDLE CAMBRIAN	STEPHEN FM.	upper; f.g. crystalline limestone middle; grey and green siliceous and calcareous shales lower; dark grey, f.g. argillaceous limestone
	CATHEDRAL FM.	bedded, coarse grained dolomite with thin limestone lenses, rapid and irregular facies changes, contains lenses of reef- like dolomite, magnesite
	MOUNT WHYTE FM.	oolitic limestone in upper sections, middle member is a green shale, basal member is impure limestone
LOWER CAMBRIAN	GOG GP.	quartzite



Work permits for the Golden Mining Division are issued by the Ministry of Energy, Mines and Petroleum Resources in Fernie.

## **GEOLOGY**

The Mount Assiniboine property is underlain by carbonate, shale and phyllitic rocks of Middle Cambrian age which have been metamorphosed and uplifted into an anticlinal form. The entire sequence of rocks has been transported several miles to the east along the plane of the Main Ranges thrust fault which is exposed to the east of the property north of Aurora Creek.

The Cathedral formation was deposited in a shallow marine environment in which life forms such as colonial corals, abundant algae (stromatolites) and trilobites lived. The Mount Whyte oolitic limestone served as a stable platform upon which the carbonate forming organisms lived. Evidence of the activity of such organisms can be seen in the form of fenestral porosity, or voids developed in dolomitic limestone of the Cathedral formation. As in the present day Bahamas these organisms built mounds of highly porous coral (limestone). Between the mounds calcareous mud was deposited.

The overlying Stephen formation shale represents a deepening of the marine environment to such an extent that the organisms were drowned and ceased to build reefal mounds. The Eldon and Pika formations represent another shallow phase of deposition in which limestone was formed.

On the Mount Assiniboine property this series of rocks was subjected to structural deformation resulting in the formation of an anticlinal feature whose central axis is located in the valley of Assiniboine Creek as shown on Figure 3. West of this axis the rocks dip from 5 degrees to 35 degrees to the southwest and strike northwesterly from 310 degrees to 355 degrees. East of this axis the rocks are

essentially flat-lying. The entire property is underlain at shallow depth by the Main Ranges thrust fault along which the rocks have moved eastward several miles. Fluids rich in magnesium moved up the thrust plane and invaded porous overlying rocks thereby converting limestone to 'granola' textured dolomite. Continued invasion of Mg-rich fluids converted dolomite to magnesite and introduced minor amounts of pyrite.

#### **PROGRAM RESULTS**

The Cathedral formation has been mapped and sampled in outcrop on the RDS II, SOLO and HALO mineral claims. Table 2 provides a convenient summary of all the information gathered during the field program.

Two distinct types of dolomite exist on the property. The 'granola' textured dolomite with MgO values above 21.7% is host to the magnesite mineralisation and is generally underlain and sometimes enclosed by a tight, crystalline sometimes argillaceous dolostone. The tight dolostone contains MgO values below 21.7%. Large vugs within the 'granola' dolomite are filled with dolomite 'spar', magnesite and occasional ironstone. Dolomite spar occurs as large masses of rhombohedral crystals whose MgO value does not exceed 21.7%.

The HALO mineral claim is the site of the best development of Cathedral formation. Eon Creek occupies a cirque on the HALO claim whose walls and floor are composed of coarse-grained 'granola' dolomite with characteristic interlocking, radiating crystals. Here the formation is flat-lying and is in excess of 945 feet (288 meters) thick (see Figure 2a).

To the west the formation thins toward Assiniboine Creek to a minimum of 50 to 150 feet (15 to 46 meters) in the area of traverses 8c and 9 (Figures 2c and 2b respectively). The thickest interval of Cathedral formation in the Assiniboine Creek valley occurs on traverse 15 where it develops to a thickness of 960 feet (293 meters). However, this section

GEOLOGICAL SUMMARY - TABLE 2

TRAVERSE	ELEVATION (feet a.s.l.) TOP	a.s.l.) BASE	GROSS INTERVAL	NET PAY ("GRANOLA")	SAMPLE NUMBER	ELEVATION	COMMENTS	%MgO
1	6460	<6090	370+	NIL	NONE	TAKEN		-
2	5880	<5780	100+	50+	54501 54502 54503	5900 5905 5860	TIGHT DOLOSTONE GRANOLA, PYRITE GRANOLA, TOP OF UNIT	21.99 37.59 43.07
3	6635	6255	380	25	54504	6260	PATCHY GRANOLA	20.66
4	5940	<5760	160+	120+	54505 54506 54507	5855 5900 5800	DOLOMITE RHOMBS GRANOLA GRANOLA	25.54 31.79 30.41
4A	5980	<5770	210+	170+	NONE	TAKEN		-
5	5985	<5840	145+	130+	54508 54509	5965 5860	GRANOLA, SPAR GRANOLA, STEEL-GREY	29.03 28.92
6	6065	<5880	185+	90+	54510 54511	5950 5950	TALUS, WHITE MLS GRANOLA, RHOMBS	21.81 31.10
7	6390	<5780	610+	330+	54512	6050	SPAR, PYRITE	23.43
8A	6145	<5950	195+	65+	54513 54514	6140 6140	SPAR GRANOLA, SPAR, PY	24.90 24.78
8B	6300	<5970	330+	NIL	54515	6220	SPAR	19.60
8C	6300	<6250	50+	NIL	NONE	TAKEN		-
9	6640	<6490	150+	NIL	54516	6510	TIGHT DOLOSTONE	19.27
10	6750 est.	6000	750+	NIL	54517	6250	GRANOLA	19.88
11	7370 est.	6425	945	85	54518 54519 54520	6420 6750 6720	GRANOLA, PATCHY TALUS, PINK DOLOSTONE TALUS, DOLOSTONE	19.82 19.35 18.29
12	7450	<6550	900	340	54521 54522 54523 54524 54525	7061 7200 7200 6960 6880	TALUS, WHITE DOLOSTONE GRANOLA, SPAR WHITE DOLOSTONE GRANOLA, 1% PYRITE GRANOLA, 1% PYRITE	21.53 29.89 21.12 14.14 14.33
13	>7050	<6550	500+	220+	NONE	TAKEN		-
14	>7370	<6550	820+	330+	54526 54527 54528 54529 54530	6800 6820 6960 7100 7200	SPAR, GRANOLA SPAR, GRANOLA GRANOLA, STEEL-GRAY GRANOLA GRANOLA	21.53 22.93 16.60 14.43 15.79
15	>7620	6660	960+	~50	54531 54532 54533	8040 7400 7140	SPAR CLEAN DOLOSTONE POOR GRANOLA	12.83 12.96 18.19

comprises only 50 feet (15 meters) of 'granola' textured dolomite in scattered pods enclosed in tight, argillaceous dolostone. The presence of scattered pods of 'granola' textured dolomite in a thick sequence of Cathedral formation, such as that seen on traverse 3, appears to be the precursor of another reefal buildup of 'granola' dolomite in Eon Creek. Similarly, scattered pods of 'granola' dolomite on traverse 7 foretell of the buildup at the Baymag mine to the southwest, as shown on Figure 2c.

Reefs have never been recognised to exist in Cambrian age rocks (the presence of most reef building organisms is obliterated by dolomitisation), however, the faunal succession, the presence of well developed vugular and fenestral porosity and the complete dolomitisation of large parts of the Cathedral formation lead the writer to suggest that magnesite mineralisation is localised within reef-like structures.

MgO assay values returned from the laboratory analysis of outcrop samples vary widely. Where the MgO values fall below the theoretical maximum of 21.7% for pure dolomite, the samples are called dolomitic limestone. Rock samples with MgO values above 21.7% constitute MgO-enriched dolomite. The theoretical maximum content of MgO for magnesite is 47.6%.

Table 2 shows MgO enrichment to occur on traverses 2,4,5,6, 7,8a, 12 and 14 which lie within Areas A and B as defined on Figure 3.

## CONCLUSIONS

Area A in Eon Creek is a reef-like buildup of 'granola' dolomite where the best developed section mapped to date is 945 feet (288 meters) thick with a potential magnesite-bearing zone of 340 feet (104 meters) in thickness. A maximum value of 28.88% MgO was returned on traverse 12.

Area A is bounded on the west by traverse 11 but remains open and unmapped to the east. Its base occurs at 6,500 feet a.s.l. (1,981 meters) and its top at 7,300 feet a.s.l. (2,225 meters) above the Aurora Creek road which lies at 4,500 feet a.s.l. (1,371 meters).

Area B is 1.9 miles (3 kilometers) in length and underlies the valley wall west of Assiniboine Creek. It reaches its maximum thickness of 610 feet (186 meters) at the south end in traverse 7 where the potential magnesite-bearing zone is at least 330 feet (101 meters) thick. A maximum assay value of 43.07% MgO was returned in sample 54503 from traverse 2. Area B probably represents the updip extension of the Baymag ore horizon. Whether the ore horizon is continuously mineralised between Area B and the mine site can only be determined by detailed core drilling.

Area C occurs on the STANO mineral claim where the Cathedral formation is at least 960 feet (293 meters) thick. Only 50 feet (15 meters) of this section contains potential magnesite-bearing dolomite. This interval of 'granola' dolomite may be the precursor of another reefal buildup within the cirque to the north. Snow occupies the cirque in early summer but outcrop should be exposed later in the season.

Both Area A and Area B are subject to extreme avalanche hazard during the winter months. The valley walls of Assiniboine Creek are marked by avalanche scars. The cirque above Eon Creek carried active avalanches as late as June 26.

#### **RECOMMENDATIONS**

Drilling of four core holes as shown on Figure 3 is recommended to test the Cathedral formation for thickness, grade, lateral continuity, attitude and elevation of potential magnesite-bearing zones.

## FIELD PERSONNEL

The field work which forms the basis of this report was carried out by Donald B. Cross & Associates Limited of Calgary, Alberta using the following persons;

- Donald B. Cross, P. Geol., 472 Berkley Crescent N.W.,  
Calgary, Alberta, T3K 1A8
- Robert J. Adamowicz, Senior Geologist, 18 Marlowe Place N.E.,  
Calgary, Alberta, T2E 5P8

## LABORATORY ANALYSIS

All rock samples were submitted for MgO analysis to;

- Loring Laboratories Ltd.,  
629 Beaverdam Road,  
Calgary, Alberta.

Respectfully submitted,



August, 1989

Donald B. Cross & Associates Limited  
Donald B. Cross, P. Geol.

**MOUNT ASSINIBOINE PROJECT**

Summary of Expenses

Field personnel 58.3 man-days @ \$350 per day	\$20,400.00
Food and accomodation 2 men for 30 days	4,026.00
Aircraft support Bell 206B @ \$625 per hour	5,406.00
Vehicle rental 1 month fuel and mileage	1,092.00
Equipment and supplies	580.00
Laboratory analysis 33 samples @ \$14.25 each	471.00
Report preparation	5,000.00
	<hr/>
<b>TOTAL EXPENDITURE</b>	<b>\$36,975.00</b>

**AUTHOR'S QUALIFICATIONS**

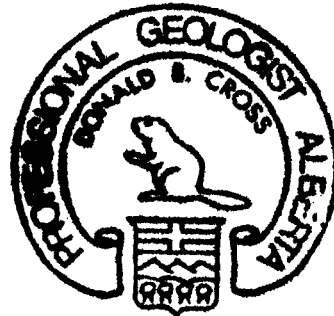
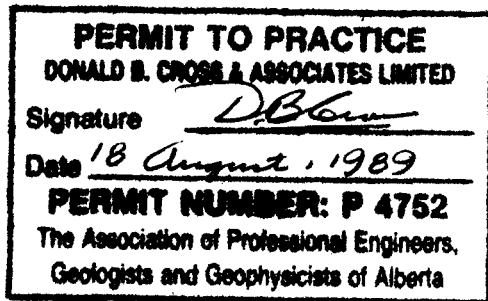
1. I, Donald Bruce Cross am a geologist holding a B. Sc.(Hons.) degree granted in 1974.
2. I have 15 years experience in geological exploration while employed by major mining and oil companies since graduation.
3. I am a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
4. I am President of Donald B. Cross & Associates Limited a firm which holds a Permit to Practice Number P 4752.
5. The field work contained in this report was carried out under my direct supervision.

Calgary, Alberta

August, 1989



Donald B. Cross, P. Geol.







# LORING LABORATORIES LTD.

629 Beaverdam Rd. N.E.  
Calgary, Alberta T2K 4W7

Tel: (403) 274-2777  
Fax: (403) 275-0541

## MAGNESIUM ASSAY PROCEDURE

1. Weigh sample.
2. Dissolve in aquaregia.
3. Take to fumes with 20 ml. perchloric acid.
4. Cool, add 50 ml. distilled H<sub>2</sub>O and warm to dissolve any salts.
5. Make basic with ammonium hydroxide to precipitate iron.
6. Add 1 - 2 grams of ammonium oxalate to precipitate the calcium.
7. Filter through a Whatman # 42 filter paper and retain the filtrate in a 600 ml beaker.
8. Wash thoroughly.
- 9 Add 20 - 30 ml of a 20% diammonium phosphate solution.
10. Stir solution vigorously.
11. Allow to precipitate over night.
12. Filter through # 42 paper and wash with 5% NH<sub>4</sub>OH.
13. Place filter paper in tared crucible and ignite at 1000°C to constant weight.
14. Cool in disiccator and weigh as Mg<sub>2</sub>P<sub>2</sub>O<sub>7</sub>.

To: DONALD B. CROSS & ASSOC. LIMITED,

472 Berkley Cres. N.W.,

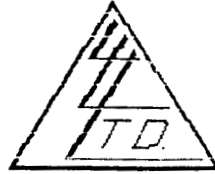
Calgary, Alberta T3K 1A8

TTN: Don Cross

File No. 32524

Date June 20, 1989

Samples Rock



## Certificate of Assay LORING LABORATORIES LTD.

SAMPLE NO.

%  
MgO

### "Assay Analysis"

54501	21.98
54502	37.58
54503	43.07
54504	20.66
54505	25.54
54506	31.78
54507	30.41
54508	29.03
54509	28.92
54510	21.81
54511	31.10
54512	23.43

I Hereby Certify that the above results are those  
assays made by me upon the herein described samples....

Samples retained one month.  
Unless specific arrangements  
are made in advance.

  
Assayer

To: Donald B. Cross & Associates

472 Berkley Cresent N.W.

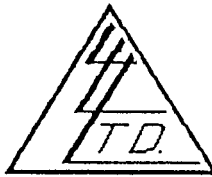
Calgary, Alberta

3K 1A8

File No. 32568

Date June 30, 1980

Samples Rock



# Certificate of Assay LORING LABORATORIES LTD.

SAMPLE NO.

MgO  
%

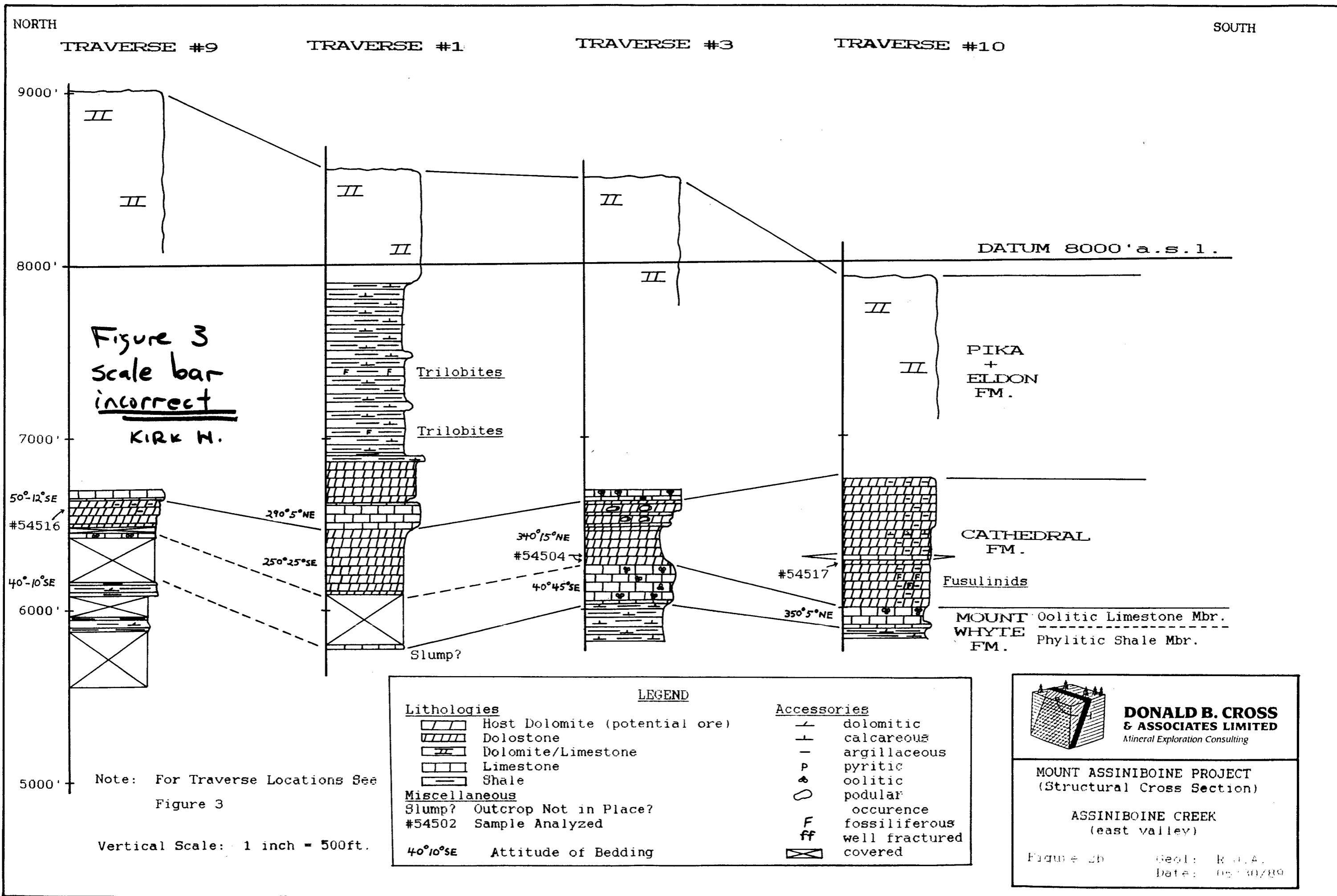
## ASSAY ANALYSIS

54513	24.90
54514	24.78
54515	19.60
54516	19.27
54517	19.88
54518	19.82
54519	19.35
54520	18.29
54521	21.53
54522	28.88
54523	21.12
54524	14.14
54525	14.33
54526	21.58
54527	22.93
54528	16.60
54529	14.43
54530	15.79
54531	12.83
54532	12.96
54533	18.19

I Hereby Certify that the above results are those  
assays made by me upon the herein described samples....

Objects retained one month.  
Dulps retained one month  
unless specific arrangements  
are made in advance.

  
Assayer



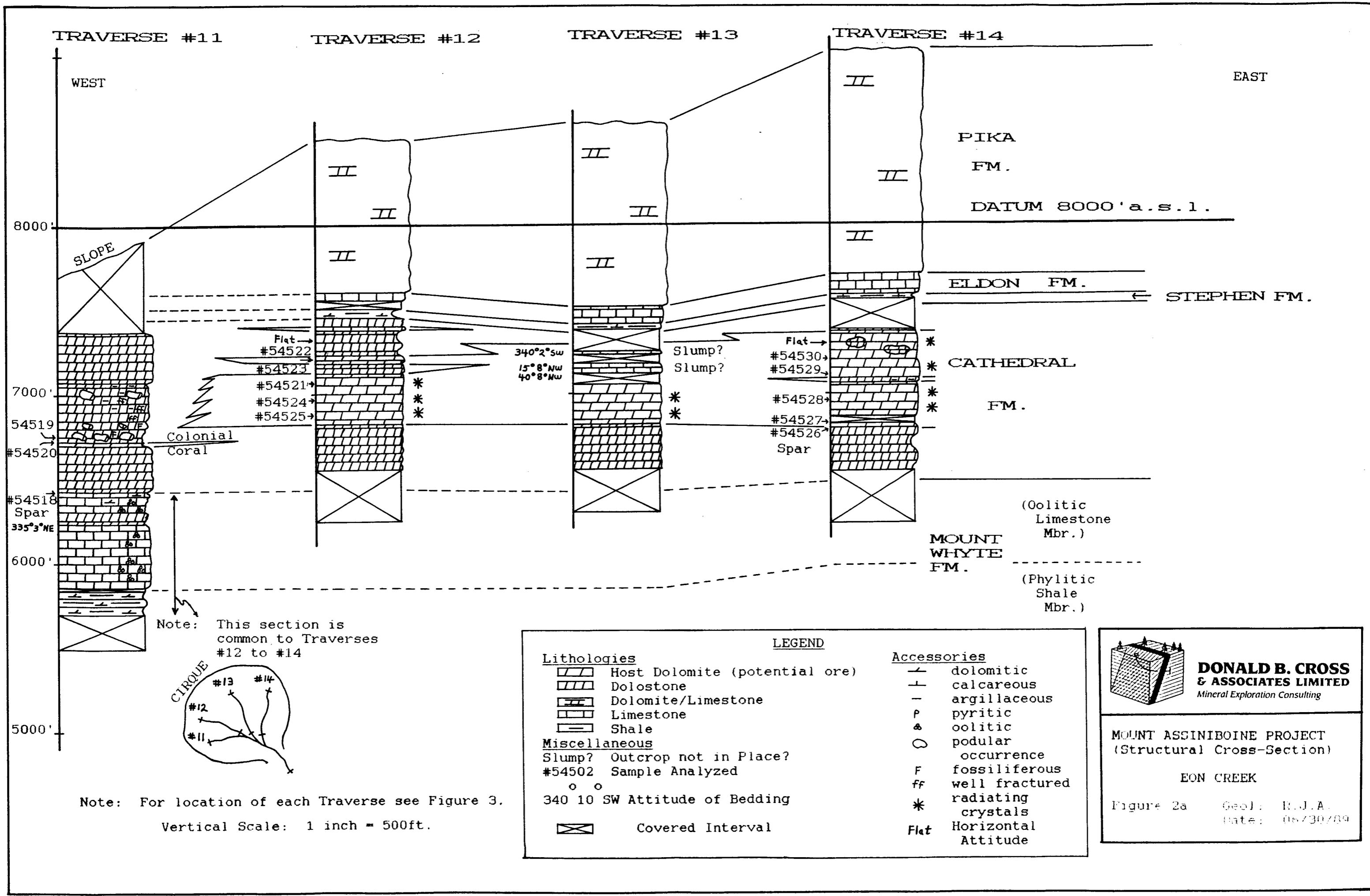
**DONALD B. CROSS & ASSOCIATES LIMITED**  
Mineral Exploration Consulting

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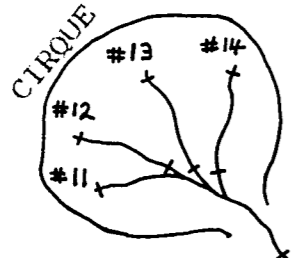
MOUNT ASSINIBOINE PROJECT  
(Structural Cross Section)

ASSINIBOINE CREEK  
(east valley)

Figure 2b      Geol: R.A.A.  
Date: 05/30/89

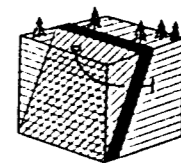


Note: This section is common to Traverses #12 to #14



Note: For location of each Traverse see Figure 3.  
Vertical Scale: 1 inch = 500ft.

Lithologies		Accessories	
[Symbol]	Host Dolomite (potential ore)	[Symbol]	dolomitic calcareous
[Symbol]	Dolostone	[Symbol]	argillaceous
[Symbol]	Dolomite/Limestone	[Symbol]	pyritic
[Symbol]	Limestone	[Symbol]	oolitic
[Symbol]	Shale	[Symbol]	podular
[Symbol]	Miscellaneous	[Symbol]	occurrence
[Symbol]	Slump? Outcrop not in Place?	[Symbol]	fossiliferous
[Symbol]	#54502 Sample Analyzed	[Symbol]	well fractured
[Symbol]	340 10 SW Attitude of Bedding	[Symbol]	radiating crystals
[Symbol]	Covered Interval	[Symbol]	Horizontal Attitude



**DONALD B. CROSS & ASSOCIATES LIMITED**  
Mineral Exploration Consulting

MOUNT ASSINIBOINE PROJECT  
(Structural Cross-Section)

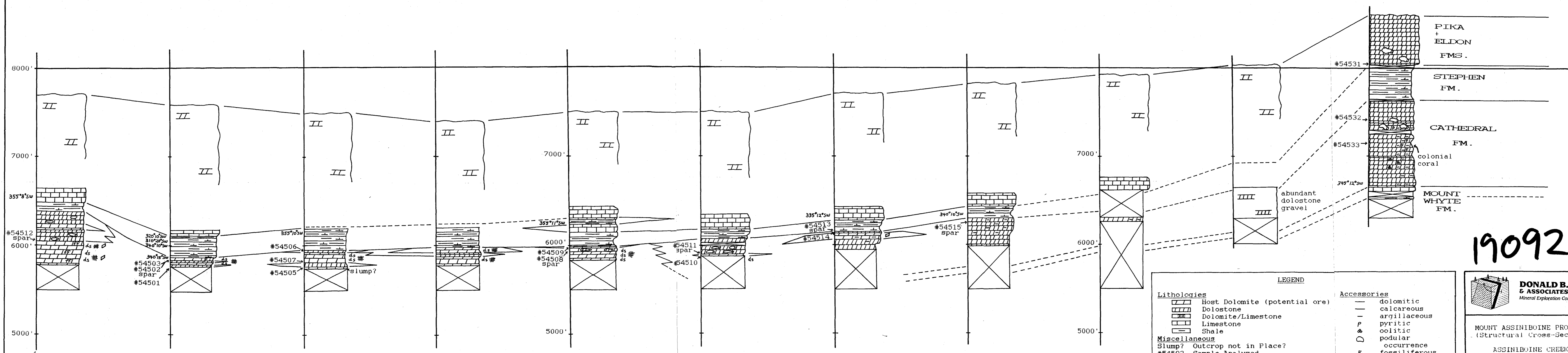
EON CREEK

Figure 2a    Geol: R.J.A.  
Date: 06/30/89

SOUTH

NORTH

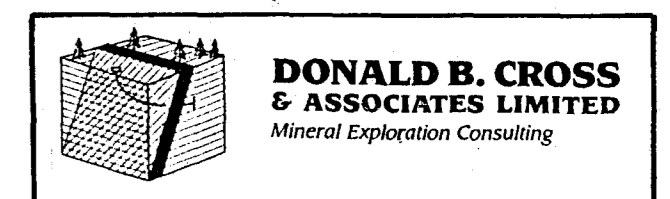
TRAVERSE #7      TRAVERSE #2      TRAVERSE #4      TRAVERSE #4A      TRAVERSE #5      TRAVERSE #6      TRAVERSE #8A      TRAVERSE #8B      TRAVERSE #8C      TRAVERSE #8D      TRAVERSE #15



Note: For Traverse Locations See Figure #3  
 Vertical Scale: 1 inch = 500ft.

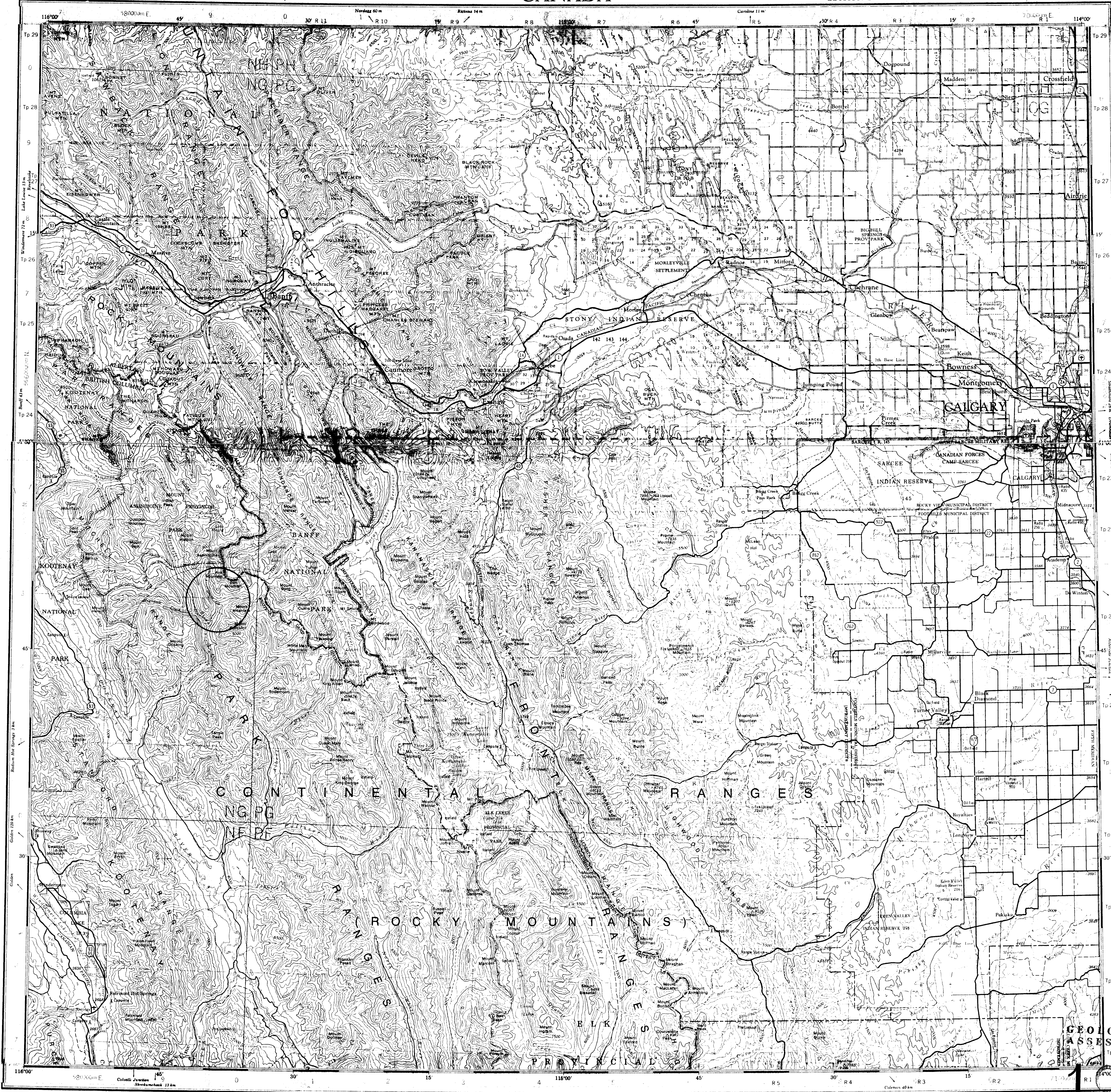
LEGEND	
<b>Lithologies</b>	<b>Accessories</b>
[Pattern] Host Dolomite (potential ore)	[Symbol] dolomitic
[Pattern] Dolostone	[Symbol] calcareous
[Pattern] Dolomite/Limestone	[Symbol] argillaceous
[Pattern] Limestone	[Symbol] pyritic
[Pattern] Shale	[Symbol] oolitic
<b>Miscellaneous</b>	[Symbol] podular
[Symbol] Slump? Outcrop not in Place?	[Symbol] occurrence
[Symbol] #54502 Sample Analyzed	[Symbol] F fossiliferous
[Symbol] 340°10'Sw Attitude of Bedding	[Symbol] ff well fractured
[Symbol] Covered Interval	[Symbol] ds dolomite sand on surface
	[Symbol] large dolomite rhombs.
	[Symbol] granola texture

19092



MOUNT ASSINIBOINE PROJECT  
 (Structural Cross-Section)  
 ASSINIBOINE CREEK  
 (west valley)  
 Figure 2c      Geol.: R.J.A.  
 Date: 06/30/89





Refer to this map as: 82-O EDITION 2 ASE SERIES A 502

GRID ZONE DESIGNATION: 11U

TO USE A REFERENCE TO NEAREST 1000 METRES (EXAMPLE: FIRE LOOKOUT TOWER)

SQUARE: East letters of 100,000 m. square: PG

EASTING: East letter on grid line immediately to left of point: 3

EASTING: East letter of a square from this line expanded to grid: 34

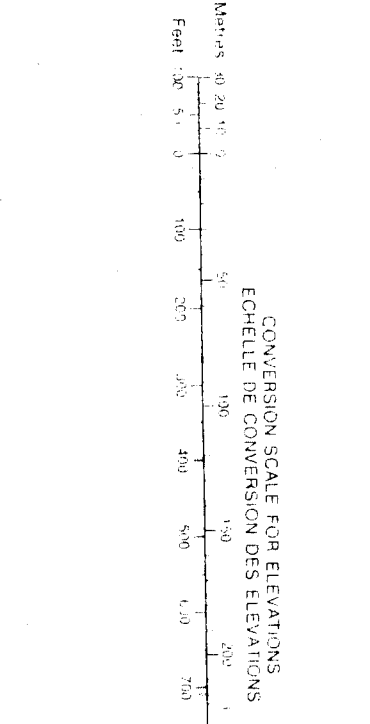
NORTHING: East letter on grid line immediately below point: 9

NORTHING: East letter of a square from this line expanded to grid: 99

MILITARY GRID REFERENCE (to nearest 1,000 metres): PG 1499

If reporting bearing 1° in area direction: Grid Zone Designation: 11UGP3499

TEN THOUSAND METRE UNIVERSAL TRANSVERSE MERCATOR GRID ZONE 11



TEN THOUSAND METRE UNIVERSAL TRANSVERSE MERCATOR GRID ZONE 11

QUADRILLAGE DE DIX MILLE MÈTRES TRANSVERSE UNIVERSELLE DE MÉRIDIEN

GRID ZONE DESIGNATION: 11U

TO USE A REFERENCE TO NEAREST 1000 METRES (EXAMPLE: FIRE LOOKOUT TOWER)

SQUARE: East letters of 100,000 m. square: PG

EASTING: East letter on grid line immediately to left of point: 3

EASTING: East letter of a square from this line expanded to grid: 34

NORTHING: East letter on grid line immediately below point: 9

NORTHING: East letter of a square from this line expanded to grid: 99

MILITARY GRID REFERENCE (to nearest 1,000 metres): PG 1499

If reporting bearing 1° in area direction: Grid Zone Designation: 11UGP3499

ÉCHELLE DE RÉFÉRENCE À 10 000 MÈTRES

TO USE A REFERENCE TO NEAREST 1000 METRES (EXAMPLE: FIRE LOOKOUT TOWER)

SQUARE: East letters of 100,000 m. square: PG

EASTING: East letter on grid line immediately to left of point: 3

EASTING: East letter of a square from this line expanded to grid: 34

NORTHING: East letter on grid line immediately below point: 9

NORTHING: East letter of a square from this line expanded to grid: 99

MILITARY GRID REFERENCE (to nearest 1,000 metres): PG 1499

If reporting bearing 1° in area direction: Grid Zone Designation: 11UGP3499

GEOLOGICAL BRANCH ASSESSMENT REPORT

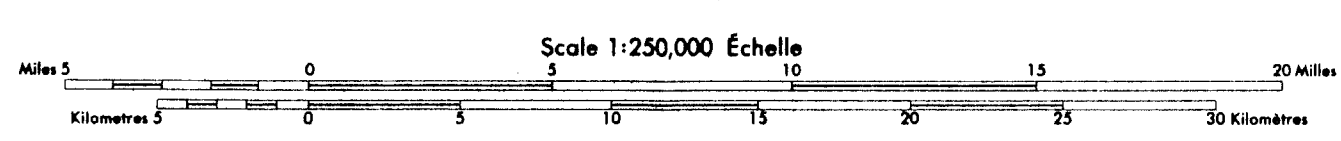
1969	1971
1954	1970
1961	1970
1973	1959

Produced by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES. Updated from 1976 data. Information correct as shown in diagram.

Cartes tirées du Bureau des Cartes du Canada, Département de l'Énergie, des Mines et des Ressources, Ottawa, ou pour nearest map dealer.

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**KANANASKIS LAKES**  
BRITISH COLUMBIA - ALBERTA



Roads:  
hard surface, all weather: 2 lanes or more  
hard surface, all weather: 2 lanes or more  
loose or stabilized surface, all weather: 2 lanes or more  
loose surface, dry weather:  
cart track

CONTOUR INTERVAL: 500 FEET  
Elevations in feet above Mean Sea Level  
North American Datum 1927  
Système de référence géodésique nord-américain, 1927  
Projection: Transverse Mercator

ÉCHANGES DE COURBES SOUS-PÈDES  
Élevations en pieds au-dessus du niveau moyen de la mer  
Système de référence géodésique nord-américain, 1927  
Projection: Transverse Mercator

Magnetic declination 1978 varies from 21°24' easterly at centre of west edge to 20°28' westerly at centre of east edge. Mean annual change decreasing 5.4'

La déclinaison magnétique pour 1978 varie de 21°24' Est au centre de la limite Ouest à 20°28' Ouest au centre de la limite Est. Variation annuelle annuelle décroissante 5.4'

FOR COMPLETE REFERENCE SEE REVERSE SIDE

POUR UNE LISTE COMPLÈTE DES SIGNES, VOIR AU VERSO

Échelle par la DIRECTION DES LÈVES ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES. Mise à jour d'après des cartes à grande échelle. Remarque: Les croquis sont indiqués au croquis.

Ces cartes sont en vente au Bureau des Cartes du Canada, ministère de l'Énergie, des Mines et des Ressources, Ottawa, ou chez le marchand le plus près.

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Roads:  
pavée, toute saison: 2 voies ou plus  
pavée, toute saison: 2 voies  
gravier aggloméré, toute saison: 2 voies ou plus  
de gravier période sèche  
de terre  
sentier, percée ou portage

ÉCHANGES DE COURBES SOUS-PÈDES  
Élevations en pieds au-dessus du niveau moyen de la mer  
Système de référence géodésique nord-américain, 1927  
Projection: Transverse Mercator

La déclinaison magnétique pour 1978 varie de 21°24' Est au centre de la limite Ouest à 20°28' Ouest au centre de la limite Est. Variation annuelle annuelle décroissante 5.4'

POUR UNE LISTE COMPLÈTE DES SIGNES, VOIR AU VERSO

19,092

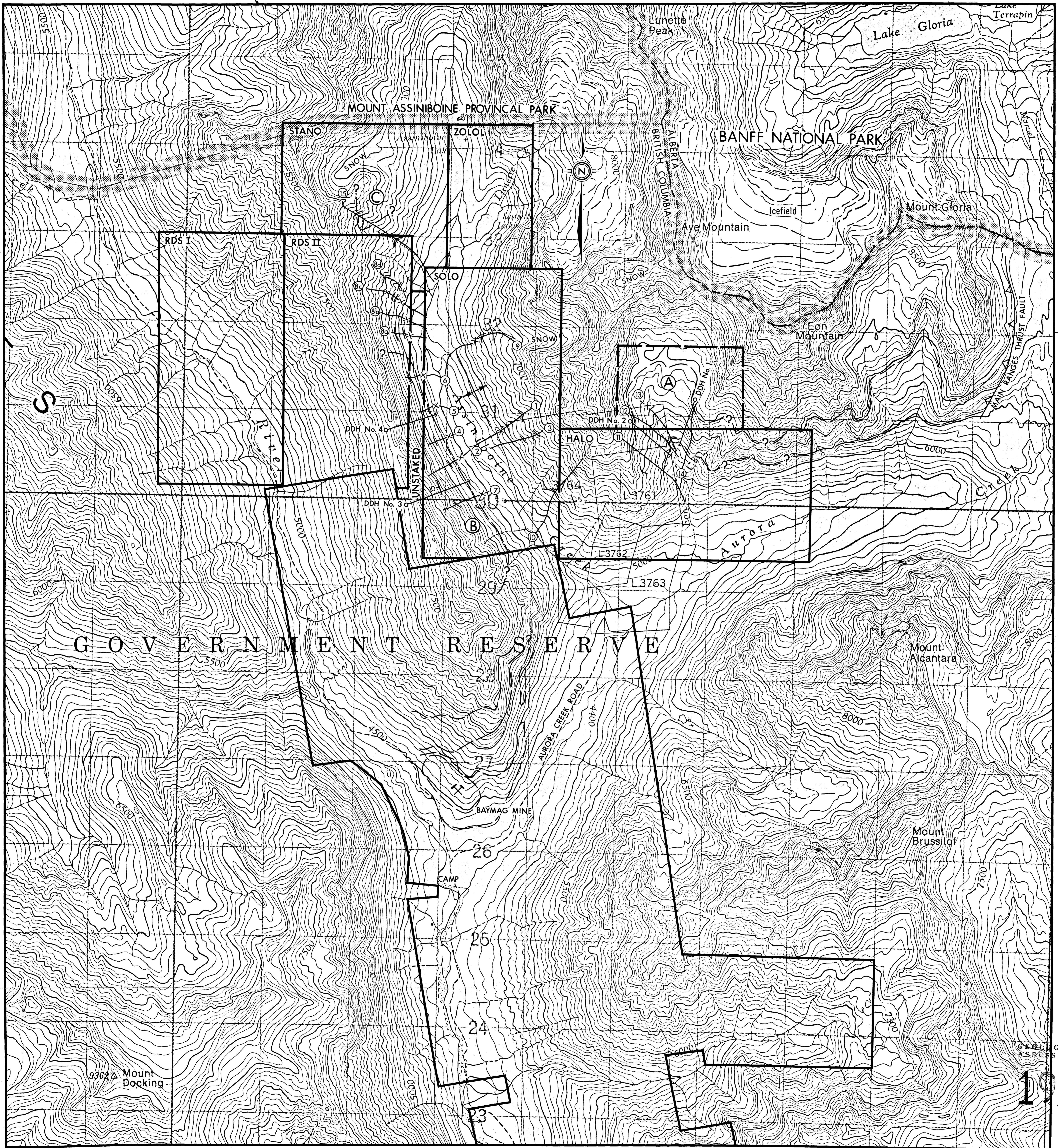
Donald B. Cross & Associates Limited  
163485 CANADA LTD.

LOCATION MAP

MOUNT ASSINIBOINE AREA, BRITISH COLUMBIA

DATE	SCALE	NTS	FIGURE 1
JULY 1, 1989	1:250,000	82 J/13	





115°45'

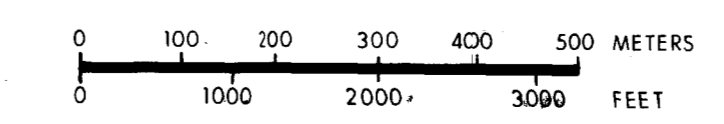
115°35'

**LEGEND**

- TRAVERSE LOCATION AND NUMBER
- ANTICLINAL STRUCTURE
- TOP AND BASE OF CATHEDRAL FORMATION DOLOMITE AND DOLOSTONE WITH COVERED INTERVAL BELOW
- STRIKE AND DIP OF ROCK FORMATION
- PROPOSED MINERAL CLAIM STAKING
- PROPOSED DRILL HOLE LOCATION
- POSSIBLE STRIKE EXTENSION OF CATHEDRAL FORMATION
- THRUST FAULT (TEETH POINT DOWN - DIP)

NOTE: BASE MAP DERIVED FROM ENERGY, MINES AND RESOURCES TOPOGRAPHIC MAP 82/113 EDITION 2.

Scale 1:15,000  
Scale bar should read 1 → 1000 meters NOT 1-500m.



Donald B. Cross & Associates Limited 163485 CANADA LTD.			
<b>GEOLOGICAL MAP</b>			
SHOWING TRAVERSE LOCATIONS MOUNT ASSINIBOINE AREA, BRITISH COLUMBIA			
JULY 1, 1989	N.T.S. 82/113	SCALE: 1:15,000	FIGURE 3

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

10,092

50°45'