20P

86-643-15220

GEOLOGICAL
AND
GEOCHEMICAL REPORT
ON
RAR 1-5 MINERAL CLAIMS

58° 40.7' N. LAT., 127° 25.7' W. LONG.
N.T.S. 94-L-11 w, 12 E
LIARD MINING DIVISION, BRITISH COLUMBIA

FOR

Owner/Operator: GOLDEN RULE RESOURCES LTD.
CALGARY, ALBERTA

BY

Michael Fox, B.Sc., P.Geol.
CORDILLERAN RESOURCE MANAGEMENT LTD.
CALGARY, ALBERTA

September 1, 1986

CERTIFICATE

I, the undersigned, of the City of Calgary in the Province of Alberta do hereby certify that:

1. I am a Consulting Geologist with the firm of Cordilleran Resource Management Ltd. with offices at 120 Hawkwood Hill N.W., Calgary, Alberta;

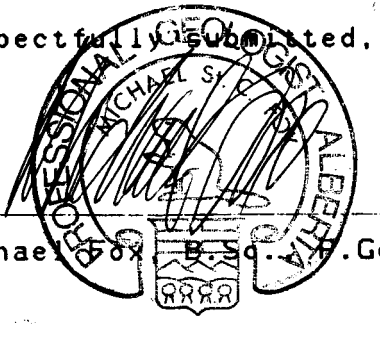
2. I am a graduate of the University of British Columbia with a B.Sc. degree in Geology (1974) and I have practised my profession continuously since graduation;

3. I have worked in the field of mineral exploration since 1965;

4. I am a member in good standing of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta;

5. I personally participated in and supervised the work described in this report;

Respectfully submitted,



Michael Fox, B.Sc., P.Geol.

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SUMMARY

During late July and early August, 1986, a helicopter supported exploration program of reconnaissance and detailed geological mapping, prospecting, stream silt sampling, and rock geochemical sampling was carried out at the RAR 1 to 5 mineral claims in Liard Mining Division, northern British Columbia. The program was designed to investigate occurrences of rare earth bearing minerals associated with mafic alkalic rocks and diatreme structures. At the time of writing this report, analytical results had not yet been received, and will be reported on in a supplementary report at a later date. Included, however, are analytical results for three grab samples collected at the property during a brief earlier property examination.

INTRODUCTION

LOCATION AND ACCESS

The RAR 1, 2, 3, 4, and 5 mineral claims form a contiguous group of 96 units in the Kechika River area of northern British Columbia. The claims are located in N.T.S. map-area 94-L-11 W and 94-L-12 E, approximately 20 km west-southwest from the "Skook Davidson" ranch airstrip, near Terminus Mt. in the Rocky Mountain Trench, and approximately 175 km by air from Watson Lake, Y.T. (Figure 1.) The geographic coordinates of the property are 58 42' N. LAT. and 127 30' W. LONG. (Figure 2).

Helicopters based in Watson Lake and Dease Lake were used to access the property.

PHYSIOGRAPHY AND GLACIATION

The property is located within the Kechika Ranges of the Cassiar Mountains physiographic subdivision. The region is characterized by well developed rectangular to angulate drainage patterns with northwesterly trending master valleys (kechika River, Dall River) connected by shorter northeasterly trending valleys (Moodie Creek, Denetiah Creek, Frog River). Tributary streams of the northeasterly trending valleys drain areas of higher elevations and trend west-northwesterly, parallel and subparallel to the regional strike.

Elevations within the claim block range from 1180m to 2373m (3870' to 7783'). Topographic relief is extreme with steep slopes at lower elevations and sheer cliff faces common at higher elevations.

Although evidence of alpine glaciation is widespread, and includes cirques, horns, occasional razorback ridges or arretes, and tarns, there is little to indicate that any extensive valley glaciation took place along the lower parts of the valleys, at least within the claims area. Stream valleys are steep sided, deeply cut, and do not display the characteristic "U" shaped cross section typically associated with valley glaciation.

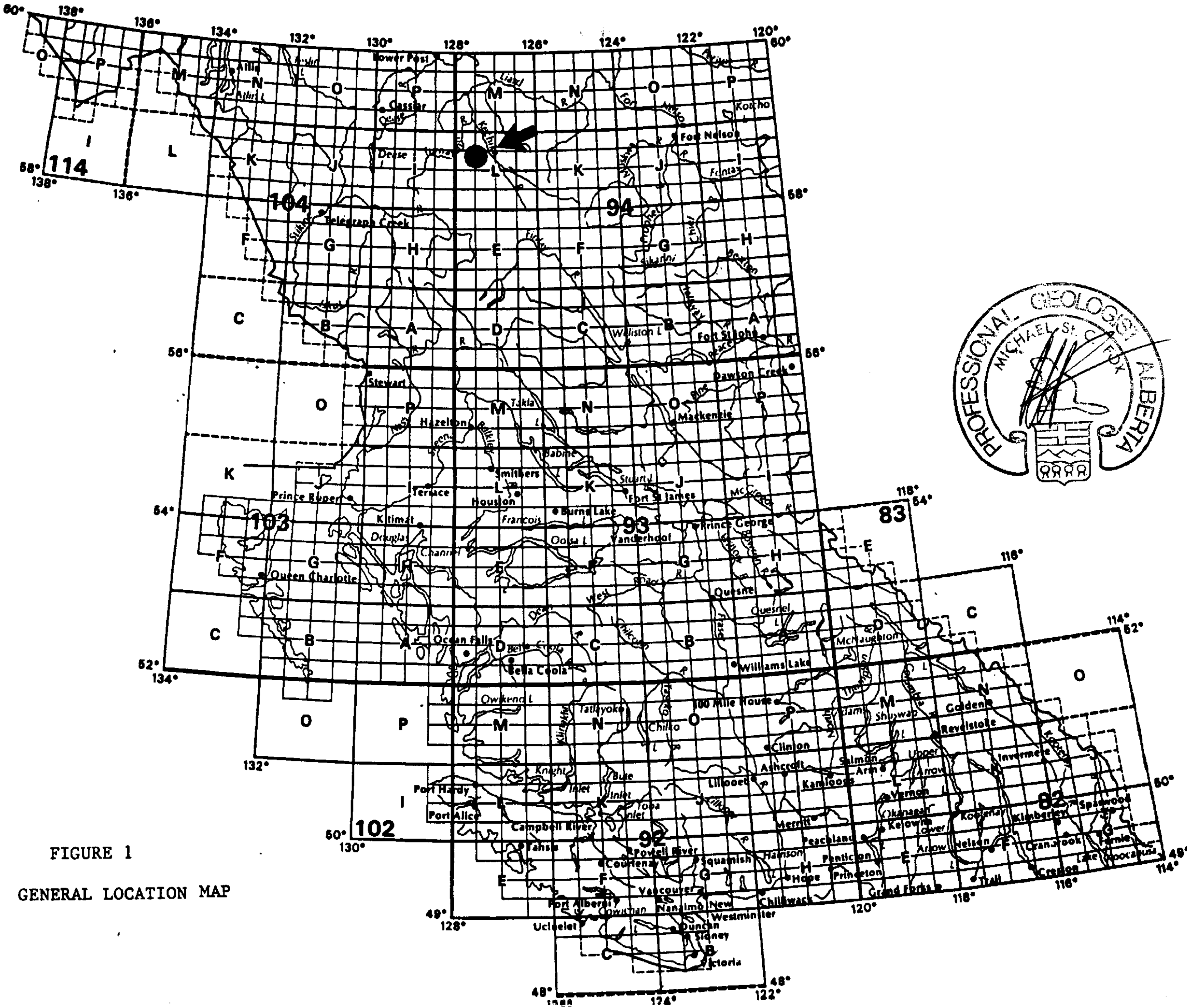


FIGURE 1

GENERAL LOCATION MAP

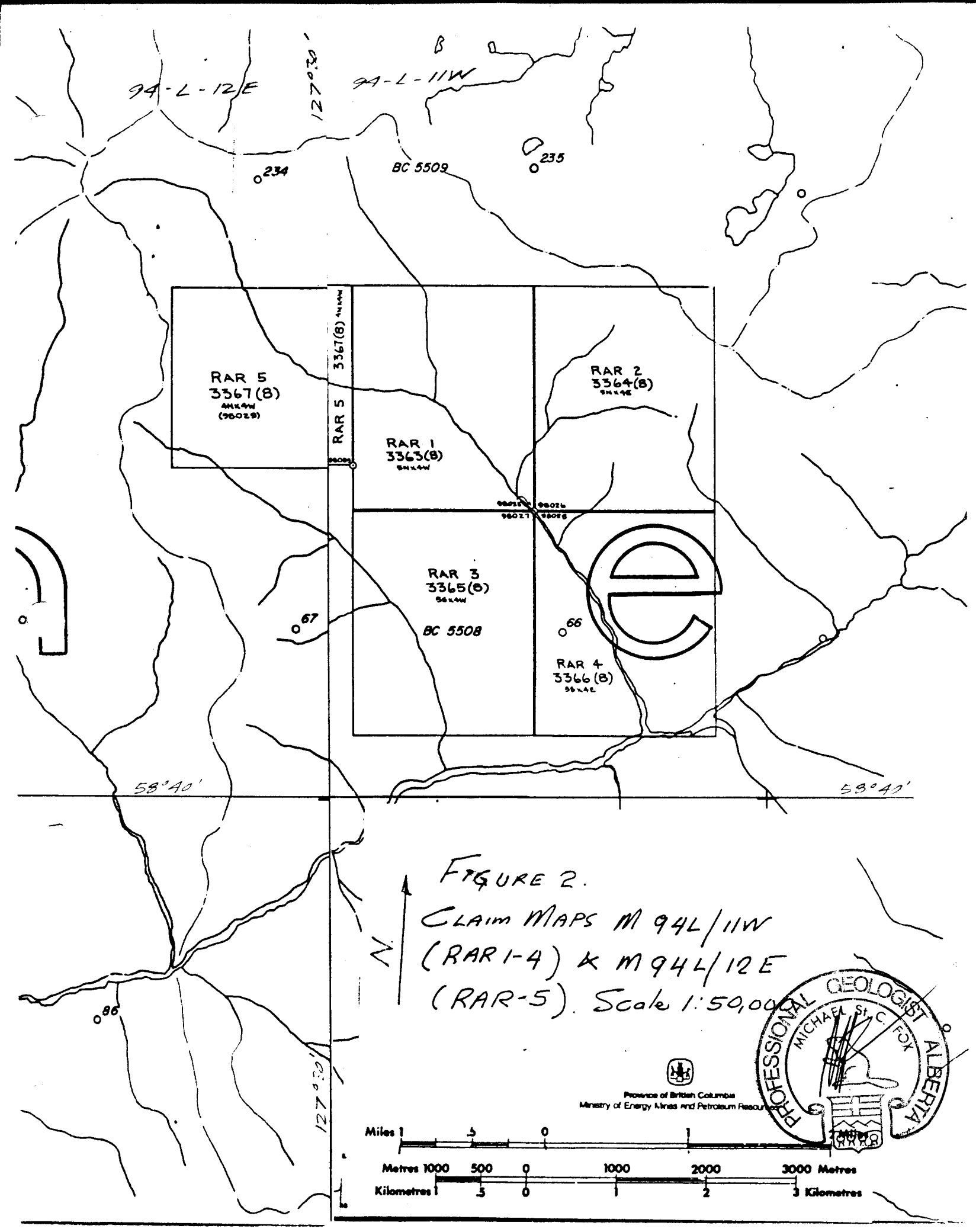


FIGURE 2.

CLAIM MAPS M 94L/11W (RAR 1-4) & M 94L/12E (RAR-5). Scale 1:50,000

CLAIMS, OWNERSHIP

The RAR 1 to 5 claims are owned by Golden Rule Resources Ltd. of Clagary, Alberta. Pertinent claims data is listed below:

Claim Name	No. of Units	Record No.	Date of Record
RAR 1	20	3363(8)	August 6, 1985
RAR 2	20	3364(8)	August 6, 1985
RAR 3	20	3365(8)	August 6, 1985
RAR 4	20	3366(8)	August 6, 1985
RAR 5	16	3367(8)	August 6, 1985

1986 EXPLORATION PROGRAM

During late July and early August, 1986, a helicopter-supported program of reconnaissance and detailed geological mapping, prospecting, stream silt sampling, and rock geochemical sampling was carried out at the claims. Detailed mapping was done in slected areas of the RAR 4 and 5 claims.

A total of 28 rock samples and 56 stream silt samples were submitted for analysis for Ce, La, and Y by X-ray fluorescence. At the time of writing this report, analytical results had not yet been returned by the lab and will be submitted in a supplementary report at a later date. Included, however, are the analyses of three grab samples collected at the property during an earlier brief property examination.

GEOLOGY

REGIONAL GEOLOGY

The area has been mapped at a scale of 1:253,440 (G.S.C. Map 42-1962, "Kechika", H. Gabrielse).

The claims are situated within a 35 - 40 km wide tectonically complex zone belt of metamorphosed Precambrian and unmetamorphosed(?) Paleozoic platformal facies sedimentary rocks bounded on the southwest by the Cassiar batholith and on the northeast by the Rocky Mountain Trench. Metamorphic grade is lower greenschist facies. Northeastwards directed compression has produced broad, open to tight, isoclinal or overturned folds within a series of overthrust panels which juxtapose lithologies of markedly different age and metamorphic grade.

PROPERTY GEOLOGY

The northeast part of the claim group is underlain by a thick bedded competent series of Lower Cambrain quartzites, which are folded into a broad, open northwesterly trending anticline. In fault contact, to the southwest, with the quartzites is a thick section of steeply southwest dipping Precambrain(?) chlorite-sericite-quartz schists. Quartz-carbonate lenses and boudins occupy the core of a myriad of 'tight', small amplitude folds and crenulations in the schists. To the southwest, these schists in turn are bounded by a northwesterly striking steeply southwesterly dipping thrust fault which juxtaposes competent, brittlely deformed, siliceous dark green tuffs and cherts (of probable Devonian-Mississippian age) against the more ductilely deformed Precambrain schists. Chloritic schists adjacent to the thrust have been altered to a tan weathering, platy, fine-grained sericite/muscovite rich limy schist. The overthrust cherty tuff unit has been drag folded into a faulted and overturned isoclinal anticline. A thinly laminated to phyllitic limestone unit of probable Upper Cambrian - Ordovician age is exposed in the core of the fold. The cherty tuff unit is over-

lain by a grey crystalline limestone unit, which in turn is in fault (thrust ?) contact to the southwest with a thick section of Graphitic sericite schists and graphitic chlorite-sericite scists which contain occasional orange weathering sandy dolomite interbeds, up to 30 or 40m in thickness.

The main feature of economic interest at the claims is a gabbroic/mafic alkalic dyke which intrudes the cherty tuff unit immediately to the southwest of the axis of the above-described overturned anticline. The dyke is slightly discordant with an attitude of 148/77SW, in contrast to the 132/52 SW attitude of the enclosing tuff and the 108/50SW attitude of the Precambrian schists lying on the norteast side of the thrust fault (see RAR 4 claim on accompanying maps).

The dyke has been fractured, brecciated, and filled with a stockwork of fluorite-calcite-biotite-epidote veins, stringers, and open space fillings. Biotite occurs in porphyritic "books" up to 2-3 cm in diameter in calcite veins of similar thickness. Epidote is present as an alteration selvage along the vein walls. The hanging wall (southwest) side of the gabbroic/mafic alkalic dyke terminates or grades into a coarse grained leucocratic syenite phase similarly veined witha fluorite-calcite stringer stockwork. Sparsely disseminated sulphides are present in the intrusive rocks. An estim,ated 8% to 10% of the dyke consists of fluorite-calcite veins, stringers, and open space fillings.

In a steep sided ravine drained by a southwesterly flowing stream in the central part of the RAR 4 claim, the cherty tuff unit is almost continuously exposed across its full thickness. A number of fluorite-bearing shear zones up to 3 metres in width crosscut the competent tuff unit and are undoubtedly related to the same episode of mineralization represented by the fluorite-calcite stockwork in the mafic dyke. The dyke-hosted stockwork contains significant values of the rare earth elements. Presumably the fluorite-bearing shears do also, but analytical results of samples collected from these zones were not available at the time of writing this report.

A second, potentially important zone of rare earth mineralization occurs along the creekbed in the central part of the RAR 5 claim. Here, a partially exposed diatreme breccia developed in a massively bedded limestone/dolomite unit hosts a stockwork of fluorite-carbonate veins and stringers. The diatreme consists of angular to subrounded fragments (averaging 5 to 8cm in diameter) of quartzite and fine grained to chilled (?) leucocratic syenite in a siliceous pale green matrix of fine grained rauhaugite. The southwestern contact of the breccia grades into a talc-carbonate schist, which in turn grades into an orange weathering dolomitized limestone. The northeastern contact of the diatreme is not exposed. Fluorite-carbonate veins and stringers form a stockwork controlled by two intersecting fracture sets, one with attitude 108/steep SW, the other with attitude 152/steep NW. Analytical results of samples collected from this zone were not available at the time of writing this report.

GEOCHEMISTRY

A total of 28 rock samples and 56 stream silt samples were collected in the claims area during the herein described exploartion program. A minor degree of preconcentration of the silt samples was achieved simply by sieving oversize material at each sample point. These samples have been submitted for Ce, La, and Y analysis by X-ray Fluorescence. The results of these analyses were not available at the time of writing this report and will be submitted in a supplementary report at a later date. Analyses are available, however for three grab samples collected from the fluorite-calcite stockwork hosted by the mafic dyke outcropping on the RAR 4 claim. These analyses have been excerpted from an earlier in-house report by W.D. Grove, P.Eng., describing the findings of a brief property examination. The results are shown in Table I (see next page) and indicate potentially economic grades of rare earth elements in the sample material.

TABLE 1

DYKE SAMPLES:	'RAR 1'	'RAR 2'	'RAR 3'
	oxide colours p.p.m.	fluorite rich p.p.m.	unaltered dyke p.p.m.
Y	480	447	54
La	9,870	5,330	485
Ce	7,010	4,060	450
Pr	628	384	44
Nd	944	667	83
Sm	89.2	127	10.9
Eu	29.4	38.9	2.63
Gd	93	103	9
Tb	13.2	11	1.4
Ho	7	6	1.5
ER	14	16	5
Tm	1.5	2	0.5
YB	11.4	13.9	6.4
Lu	1.73	2.51	1.07
	19,192.43 p.p.m.	11,208.31 p.p.m.	1,154.40 p.p.m.
	38.384 lb/T	22.42 lb/T	2.308 lb/T
	= 1.92% wt.	= 1.12% wt.	= .115% wt.

TABLE 1. Neutron Activation Analyses of three grab samples from the RAR 4 Claim.

CONCLUSIONS AND RECOMMENDATIONS

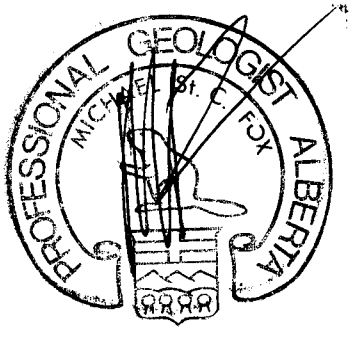
Although it is premature to comment on the economic potential of the zones sampled during this exploration program without the geochemical analyses in hand, it is clear that a rare earths-carbonatite-alkalic intrusive-diatreme breccia association is present at the claims. The thrust fault exposed on the RAR 4 claim may play some not-yet-understood role in the localization of the rare earth-bearing fluorite stockworks.

Sufficient encouragement is provided by the analytical results of the three grab samples and the identification of a fluorite bearing carbonatite/diatreme breccia to justify extending the recopnnaissance mapping and sampling program beyond the present claim boundaries. Recent property developments elsewhere in British Columbia and research by Jennifer Pell and others indicates the existence of a rare earths metallogenic province extending from southeastern British Columbia into the project area, along the environs of the Rocky Mountain Trench. The carbonatite/diatreme breccia on the RAR 5 claim represents the most northerly carbonatite occurrence known to the writer, and extends the rare earths metallogenic province some 300 km northwestwards from the Aley occurrence being explored by COMINCO near Williston Lake.

STATEMENT OF COSTS

WAGES, SALARIES, PROFESSIONAL SERVICES	$ 4,500.00
EQUIPMENT RENTALS	250.00
FUEL, DISPOSABLE SUPPLIES, MISCELLANEOUS	226.92
TRAVEL EXPENSES, FOOD AND ACCOMMODATION	1,914.20
HELICOPTER AND FIXED WING	6,482.72
TOTAL	$13,373.84*

* Does not include any report preparation costs.



REFERENCES

1. Carbonatites in British Columbia, The Aley Property (94B/5), by Jennifer Pell, Post Doctoral Fellow, The University of British Columbia: British Columbia Ministry of Energy, Mines and Petroleum Resources. Geological Field Work. 1985. Paper 1986-1. p. 275

2. Z.D. Hora and Y.T.J. Kwong. Anomalous Rare Earth Elements (REE) in the Deep Purple and Candy Claims. (82J/3E). Ibid. p. 241

3. Geology Map: Kechika, British Columbia 1" = 4 mi., Map 42-1962. Sheet 94L. Regional Geology by H. Gabrielse. 1957-61.

4. 1983 Cominco Ltd. Assessment Work Report, Aley Claims (NTS 94B/5).

5. Private communication (Table 2 REE Dollar Values). Mr. Wayne Roberts, B.C. Senior Exploration Geologist, Vancouver.

APPENDIX I

GEOCHEMICAL ANALYSES

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

PHONE 416-445-5755 TELEX 06-986947

CERTIFICATE OF ANALYSIS

TO: ANDREW HARMAN
850 HASTINGS STREET, SUITE411
VANCOUVER, BRITISH COLUMBIA
V6C 1E1

CUSTOMER NO. 1100

DATE SUBMITTED
11-MAR-86

REPORT 27627

REF. FILE 2285I-T1

2 PULPS,1 ROCK

WERE ANALYSED AS FOLLOWS:

	METHOD	DETECTION LIMIT
Y PPM	DCP	1.000
LA PPM	NA	0.100
CE PPM	NA	1.000
PR PPM	DCP	2.000
ND PPM	NA	3.000
SM PPM	NA	0.100
EU PPM	NA	0.050
GD PPM	DCP	2.000
TB PPM	NA	0.100
HO PPM	DCP	0.500
ER PPM	DCP	0.500
TM PPM	DCP	0.500
YB PPM	NA	0.050
LU PPM	NA	0.010

X-RAY ASSAY LABORATORIES, LIMITED

DATE 30-APR-86

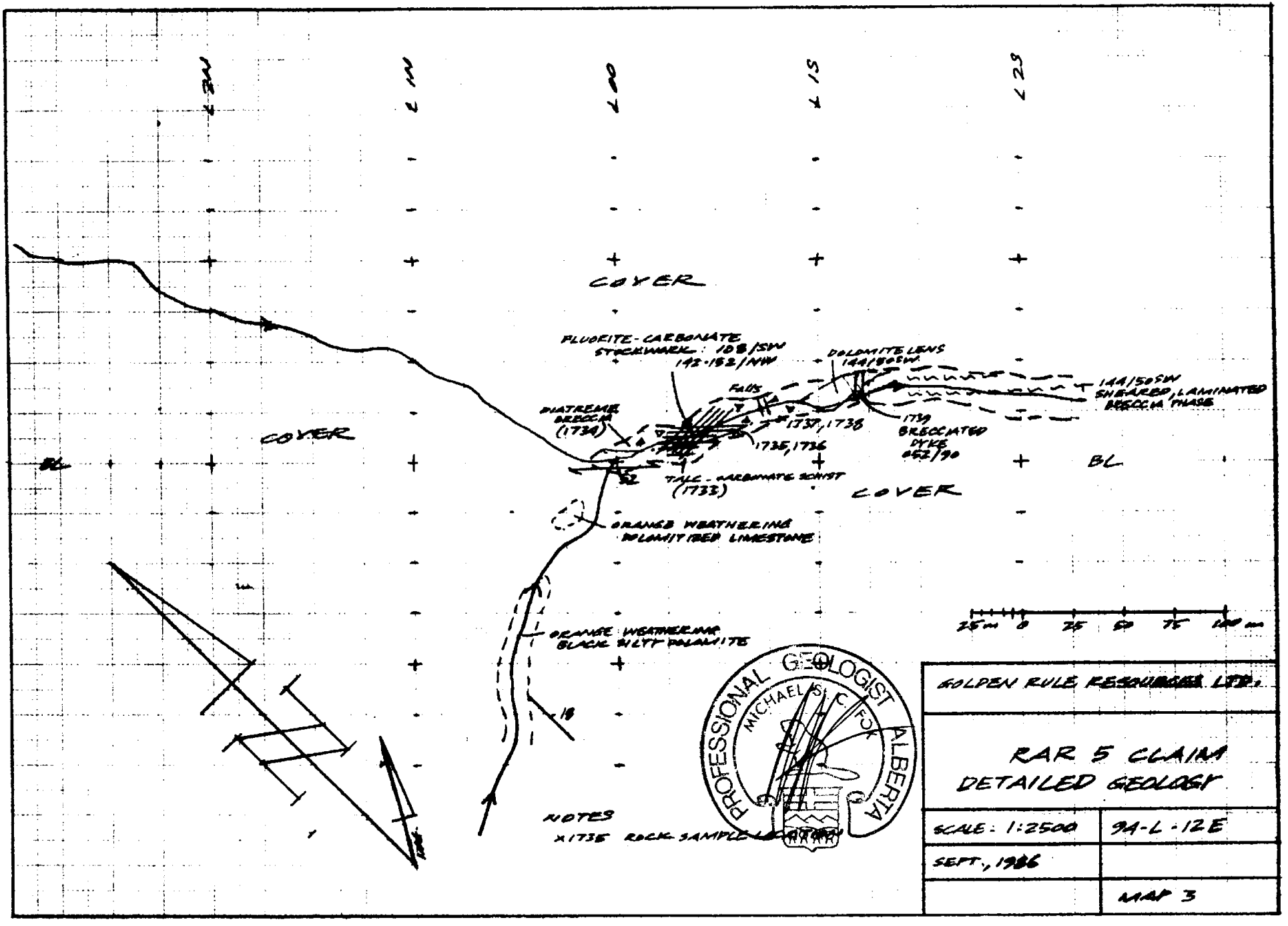
CERTIFIED BY .....

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS 180 DAYS ***
AND REJECTS 90 DAYS FROM DATE OF THIS REPORT

SAMPLE	Y PPM	LA PPM	CE PPM	PR PPM	ND PPM
RAR-1	430	9870.	7010	628	944
RAR-2	447	5330.	4060	384	667
RAR-3	54	485.	450	44	83

SAMPLE	SM PPM	EU PPM	GD PPM	TB PPM	HO PPM
RAR-1	89.2	29.4	93	13.2	7.0
RAR-2	127.	38.9	103	11.0	6.0
RAR-3	10.9	2.63	9	1.4	1.5

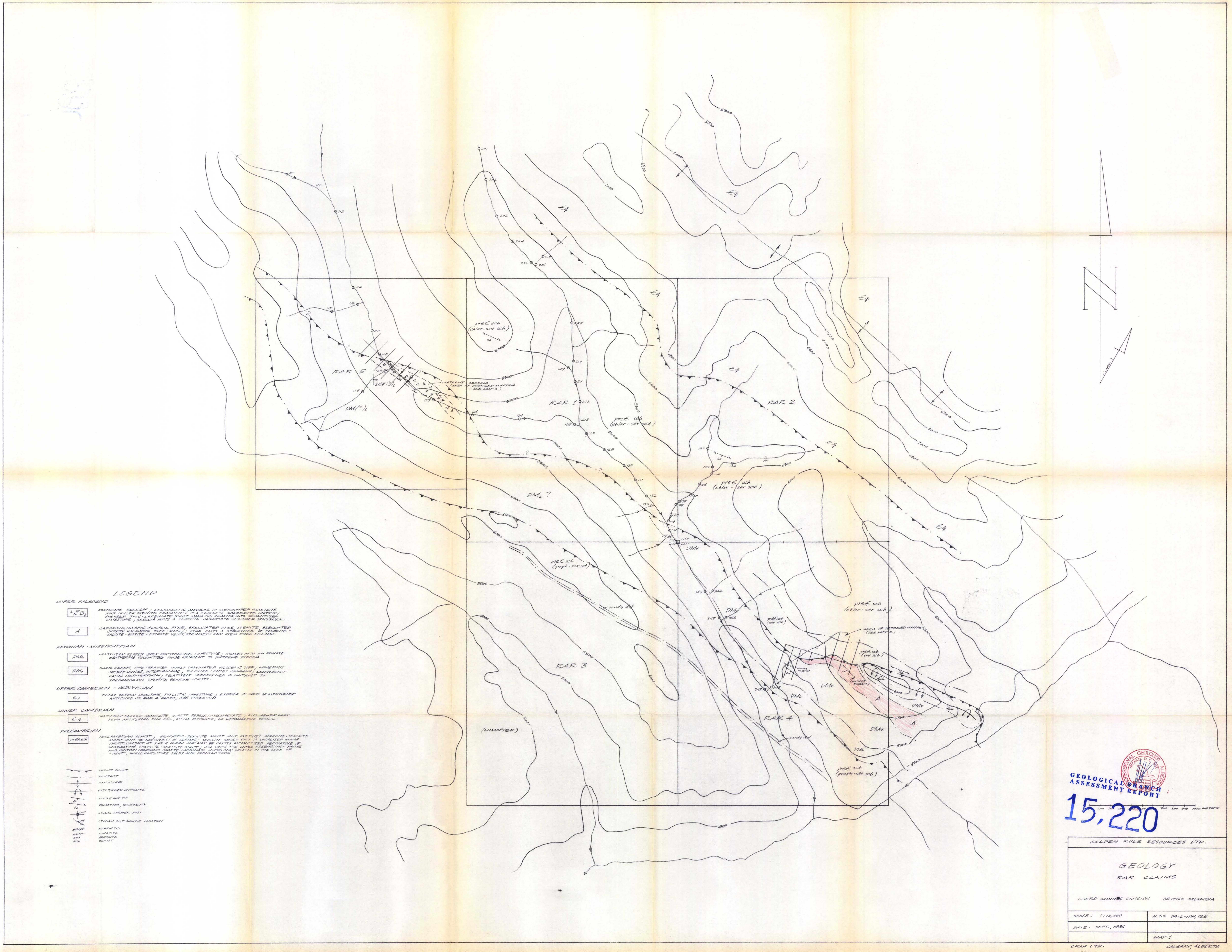
SAMPLE	ER PPM	TM PPM	YB PPM	LU PPM
RAR-1	14.0	1.5	11.4	1.73
RAR-2	16.0	2.0	13.9	2.51
RAR-3	5.0	0.5	6.40	1.07



GOLDEN RULE RESOURCES LTD.

RAR 5 CLAIM
DETAILED GEOLOGY

SCALE: 1:2500	94-L-12E
SEPT., 1986	
	MAP 3


RAR 5
RAR 1
RAR 2
RAR 3
RAR 4
(UNMAPPED)
DIATREME BRECCIA (AREA OF DETAILED MAPPING - SEE MAP 3)
AREA OF DETAILED MAPPING (SEE MAP 2)
preЄ sch (chlor-ser sch)
preЄ sch (graph-ser sch)
preЄ sch (ser sch)
DM(?)L
DML ?
DMv
DML
Єq
ЄL
A (GABBRO BRECCIA)
sandy dol
LCP
5000
5500
6000
6500
7000
7500
4500
LEGEND
UPPER PALEOZOIC
BP
DIATREME BRECCIA : LEUCOCRATIC ANGULAR TO SUBROUNDED QUARTZITE AND CHILLED SYENITE FRAGMENTS IN A SILICEOUS RAUHAUBITE MATRIX; SHEARED TALC-CARBONATE SCHIST MARGINS GRADING INTO DOLOMITIZED LIMESTONE ; BRECCIA HOSTS A FLUORITE-CARBONATE STRINGER STOCKWORK.
A
GABBROIC/MAFIC ALKALIC DYKE, BRECCIATED DYKE, SYENITE, BRECCIATED CHERTY VOLCANIC TUFF (DMv) ; DYKE HOSTS A STOCKWORK OF FLUORITE - CALCITE - BIOTITE - EPIDOTE VEINS, STRINGERS AND OPEN SPACE FILLINGS.
DEVONIAN - MISSISSIPPIAN
DML
MASSIVELY BEDDED GREY CRYSTALLINE LIMESTONE ; GRADES INTO AN ORANGE WEATHERING DOLOMITIZED PHASE ADJACENT TO DIATREME BRECCIA
DMv
DARK GREEN, FINE-GRAINED THINLY LAMINATED SILICEOUS TUFF ; NUMEROUS CHERTY LENSES, INTERLAMINAE ; SULPHIDE LENSES COMMON ; GREENSCHIST FACIES METAMORPHISM ; RELATIVELY UNDEFORMED IN CONTRAST TO PRECAMBRIAN CHLORITE BEARING SCHISTS.
UPPER CAMBRIAN - ORDOVICIAN
ЄL
THINLY BEDDED LIMESTONE, PHYLLITIC LIMESTONE ; EXPOSED IN CORE OF OVERTURNED ANTICLINE AT RAR 4 CLAIM ; AGE UNCERTAIN
LOWER CAMBRIAN
Єq
MASSIVELY BEDDED QUARTZITE, QUARTZ PEBBLE CONGLOMERATE ; DIPS GENTLY AWAY FROM ANTICLINAL FOLD AXIS, LITTLE DEFORMED, NO METAMORPHIC FABRIC.
PRECAMBRIAN
preЄsch
PRECAMBRIAN SCHIST ; GRAPHITIC-SERICITE SCHIST UNIT OVERLIES CHLORITE-SERICITE SCHIST UNIT TO NORTHWEST OF CLAIMS ; SERICITE SCHIST UNIT IS LOCALIZED ALONG THRUST CONTACT AT RAR 4 CLAIM AND MAY BE PARTLY MYLONITIZED DERIVATIVE OF UNDERLYING CHLORITE-SERICITE SCHIST ; ALL UNITS ARE LOWER GREENSCHIST FACIES AND CONTAIN NUMEROUS QUARTZ-CARBONATE LENSES AND BOUDINS IN THE CORE OF "TIGHT", SMALL AMPLITUDE FOLDS AND CRENULATIONS
THRUST FAULT
CONTACT
ANTICLINE
OVERTURNED ANTICLINE
STRIKE AND DIP
FOLIATION, SCHISTOSITY
LEGAL CORNER POST
STREAM SILT SAMPLE LOCATION
graph GRAPHITIC
chlor CHLORITE
ser SERICITE
sch SCHIST
100 200 300 ... 700 800 900 1000 METRES
GOLDEN RULE RESOURCES LTD.
GEOLOGY
RAR CLAIMS
LIARD MINING DIVISION BRITISH COLUMBIA
SCALE : 1:10,000
N.T.S. 94-L-11W, 12E
DATE : SEPT., 1986
MAP 1
CRM LTD.
CALGARY, ALBERTA
PROFESSIONAL GEOLOGIST MICHAEL St. C. ... ALBERTA
GEOLOGICAL BRANCH ASSESSMENT REPORT
15,220

SER SCH
SERICITIC SCHIST
talus
SYENITIC PHASE
BRECCIATED, FRACTURED GABBROIC/MAFIC ALKALIC DYKE
A (see Map 1)
prof sch (see Map 1)
LEUCOCRATIC TUFF
CHERTY TUFF
COVER
DARK GREEN, THINLY LAMINATED SILICEOUS TUFF, NUMEROUS CHERTY LENSES, INTERLAMINAE.
LIMESTONE
LANDSLIDE DEBRIS
DMv (see Map 1)
ASSE SHEARING CHERT BRECCIA
NOTES.
x 1653 ROCK SAMPLE LOCATION

PROFESSIONAL GEOLOGIST ALBERTA
MICHAEL ST. C. FOX

25 0 25 50 75 100 m

GOLDEN EDLE RESOURCES LTD.	
RAR 4 CLAIM DETAILED GEOLOGY	
SCALE: 1:2500	94-L-11W
SEPT., 1986	
	MAP 2