

8/86

85-794-14005

GEOLOGICAL AND GEOCHEMICAL REPORT  
ON THE  
CHUCK 1, 2 and MOYEZ 1, 2 and 4 CLAIMS

Located in the Toadoggone River Area  
Liard Mining Division  
NTS 94-E-6W, 11W  
British Columbia

at  
57°31' N Latitude  
127°25' W Longitude

for  
MIRAMAR ENERGY CORPORATION

by  
**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**  
D.A. Yeager, Geologist  
C.K. Ikona, P.Eng.

**14,005**

November, 1985

## TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
2.0 LIST OF CLAIMS	1
3.0 LOCATION, ACCESS AND GEOGRAPHY	2
4.0 REGIONAL GEOLOGY	3
5.0 PROPERTY GEOLOGY	3
5.1 Introduction	3
5.2 Lithology and Stratigraphy	3
5.3 Mineralization	4
6.0 GEOCHEMISTRY	5
6.1 Rock Chip Geochemical Sampling	5
6.2 Seepage Sediment Geochemical Sampling	6
6.3 Heavy Sediment Geochemical Sampling	6
7.0 RECOMMENDATIONS	7

## LIST OF FIGURES

	<u>After Page</u>
Figure 1 Property Location Map	1
Figure 2 Claim Map	1
Figure 3 Regional Geology Map	3
Figure 4 Geologic Map	Map Pocket
Figure 5 Geochemical Survey Map	Map Pocket

## LIST OF APPENDICES

Appendix I	List of References
Appendix II	Statement of Costs
Appendix III	Certificate of Qualifications
Appendix IV	Engineer's Certificate
Appendix V	Assay Certificates
Appendix VI	Map Pocket



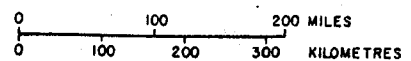
Miramar Energy Corporation

CHUCK-MOYEX CLAIMS

NTS: 94 E/6W, 11W

British Columbia

**PROPERTY LOCATION MAP**



**PAMICON DEVELOPMENTS LTD.**

DRAWN

PROJECT

DATE

FIG.

Toedoggone

Nov., 1985

1

## 1.0 INTRODUCTION

The Chuck-Moyez property was purchased by Miramar Energy Corporation from Newmont Exploration of Canada Ltd. in early 1985. The property was staked by Newmont in 1982 to cover geologic targets located adjacent to Energex Minerals Ltd.'s Alberts Hump high grade gold deposit.

Newmont carried out reconnaissance geochemical studies and preliminary geologic mapping in 1983 and 1984.

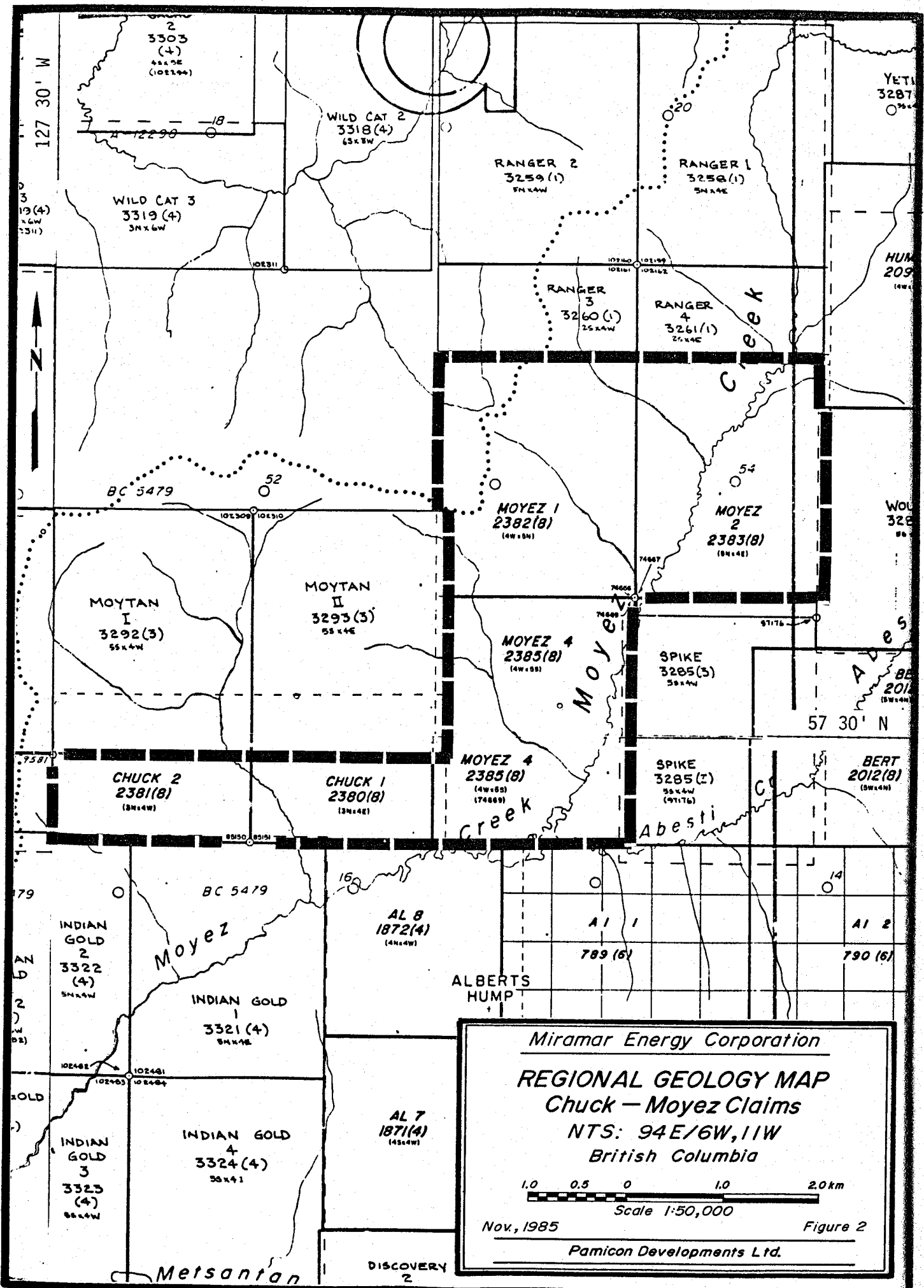
The 1985 program consisted of detailed geologic mapping, rock chip geochemical sampling, seepage sediment geochemical sampling and heavy sediment geochemical sampling from various locations on the property. This report presents the data resulting from that program and contains recommendations for follow-up work on alteration zones discovered by the 1985 program.

## 2.0 LIST OF CLAIMS

Examination of mineral titles registered with the British Columbia Ministry of Mines and Petroleum Resources shows the claims are held by Newmont Exploration of Canada Ltd. Separate documents examined indicate that Miramar Energy Corporation has agreed to purchase the claims and are presently fulfilling the requirements of purchase.

The following table summarizes the pertinent claim data.

<u>Claim Name</u>	<u>Record No.</u>	<u>Record Date</u>	<u>No. of Units</u>	<u>Tag Number</u>
Chuck 1	2380	August 13/82	12	85151
Chuck 2	2381	August 13/82	12	85150
Moyez 1	2382	August 13/82	20	74666
Moyez 2	2383	August 13/82	20	74667
Moyez 4	2384	August 13/82	20	74669



2  
3303  
(4)  
48x58  
(102294)

WILD CAT 2  
3318(4)  
63x78

RANGER 2  
3259(1)  
58x68

RANGER 1  
3258(1)  
58x68

WILD CAT 3  
3319(4)  
38x68

RANGER 3  
3260(1)  
25x48

RANGER 4  
3261(1)  
24x48

BC 5479

MOYEZ 1  
2382(8)  
(4Wx58)

MOYEZ 2  
2383(8)  
(8N14E)

MOYTAN I  
3292(3)  
55x48

MOYTAN II  
3293(3)  
55x48

MOYEZ 4  
2385(8)  
(4Wx58)

SPIKE  
3285(3)  
58x48

CHUCK 2  
2381(8)  
(8N14W)

CHUCK 1  
2380(8)  
(8N14E)

MOYEZ 4  
2385(8)  
(4Wx58)

SPIKE  
3285(2)  
58x48

BERT  
2012(8)  
(8N14W)

INDIAN GOLD 2  
3322(4)  
58x48

INDIAN GOLD 1  
3321(4)  
58x48

AL 8  
1872(4)  
(4N14W)

AI 1  
789(6)

AI 2  
790(6)

INDIAN GOLD 3  
3323(4)  
58x48

INDIAN GOLD 4  
3324(4)  
58x48

AL 7  
1871(4)  
(4S14W)

DISCOVERY 2

127 30' W



57 30' N

Metsantan

Claim posts examined in the field indicate that the claims were staked in accordance with the requirements of the B.C. Mineral Act.

### 3.0 LOCATION, ACCESS AND GEOGRAPHY

The claims lie on NTS sheets 94-E-6W and 94-E-11W at approximately 57°31' N latitude, 127°25' W longitude.

The property is located in the Toodoggone River area of northern B.C. approximately 310 km north of Smithers, B.C. It lies along Moyez Creek, which flows into the Stikine River (Pacific drainage) 8 km to the west. Access is by charter aircraft for 273 km from Smithers to the Sturdee airstrip then a further 35 km north by helicopter to the property.

The property lies at the northern extremity of the Omineca Mountains and the southern limits of the Cassiar Mountains. The area is characterized by wide U-shaped, drift-filled valleys and deeply incised V-shaped upland valleys. In the vicinity of the Chuck-Moyez property the terrain generally consists of rolling hills and broad drift-filled valleys. The valleys are typically full of scrub brush and swamp foliage while the uplands are characterized by scrub timber grading into grassy alpine plateaus. Elevations on the property range from 1380 m to 1700 m. Water is plentiful on the claims, the highest dependable year round supply occurring at the 1600 metre level.

#### **4.0 REGIONAL GEOLOGY (Forster 1981)**

The property lies in the Intermontane Geologic Belt and is underlain by Lower Jurassic pyroclastic volcanic rocks of the Toodoggone volcanics. The Toodoggone volcanics occur in a northwesterly trending belt bounded on the east by the Omineca Mountains and on the west by the Stikine Plateau. Pre-Toodoggone rocks within the region include Permian carbonates of the Asitka Group and Late Triassic Takla volcanics. Hazelton Group volcanics occur in fault contact with Toodoggone rocks and were deposited in a volcanic arc environment during the Early Jurassic. Omineca intrusions of Triassic to Jurassic age invade all pre-Cretaceous rocks within the region. Toodoggone rocks are unconformably overlain to the southwest by sediments of the Cretaceous-Tertiary Sustut Group and Middle to Late Jurassic Bowser Group.

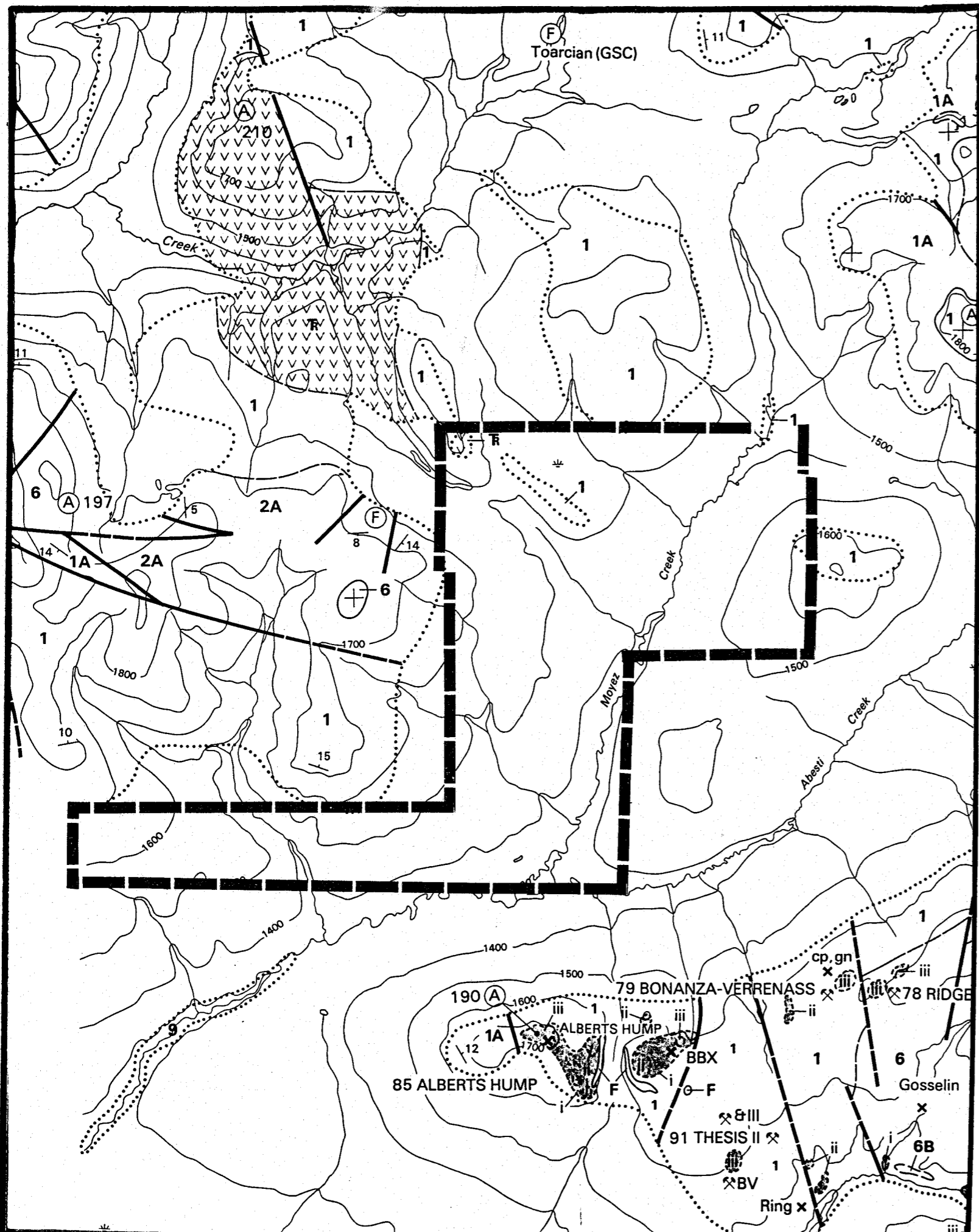
#### **5.0 PROPERTY GEOLOGY**

##### **5.1 Introduction**

Reconnaissance mapping was carried out by Newmont in previous years, mostly along creek cuts. An attempt was made during the 1985 program to investigate the more forested and overburden covered areas of the property to provide more detailed mapping. The mapping therefore consisted of a time consuming search for outcrop and by no means was all the property covered. Dips and strikes were often impossible to obtain due to the weathered nature of the outcrops.

##### **5.2 Lithology and Stratigraphy**

British Columbia Ministry of Mines mapping indicates that the property is underlain by the Adoogatcho Creek Formation described in the 1985 preliminary geologic map on the Toodoggone



# LEGEND

- QUATERNARY**
- PLEISTOCENE AND RECENT**
- UNCONSOLIDATED GLACIAL, FLUVIOGLACIAL, ALLUVIAL, AND COLLUVIAL DEPOSITS
- CRETACEOUS**
- UPPER CRETACEOUS**
- SUSTUT GROUP (TANGO CREEK FORMATION)
- POLYMITIC CONGLOMERATE, SANDSTONE, SHALE, CARBONACEOUS MUDSTONE
- JURASSIC**
- LOWER AND (?) MIDDLE JURASSIC**
- "TOODOGGONE VOLCANICS" - (?) HAZELTON GROUP
- UNDIVIDED: PREDOMINANTLY GREY, GREEN, PURPLE AND ORANGE-BROWN HORNBLЕНDE PLAGIOCLASE AND PLAGIOCLASE PHYRIC ANDESITE PORPHYRY FLOWS, TUFFS, BRECCIA, SOME LAHAR, CONGLOMERATE, GREYWACKE, SILTSTONE, RARE RHYOLITE-PERLITE, INCLUDES SOME DYKES AND SILLS
- LOWER TO MIDDLE JURASSIC**
- "TOODOGGONE VOLCANICS" (CARTER, 1972)
- "GREY DACITE"
- DARK TO PALE GREY OR GREEN QUARTZOSE BIOTITE HORNBLЕНDE PLAGIOCLASE ASH FLOWS OF ANDESITIC AND RARELY DACITIC COMPOSITION, VARIABLY WELDED WITH LOCALLY WELL-DEVELOPED COMPACTION LAYERING; CONTAINS ABUNDANT GREY DACITE AND RARE GRANITIC CLASTS; OUTCROPS ARE COMMONLY BLOCKY AND STRONGLY JOINTED
  - POLYMITIC CONGLOMERATE WITH ABUNDANT TAKLA AND GREY DACITE CLASTS IN A QUARTZOSE SANDSTONE MATRIX
  - GREYWACKE, CONGLOMERATE DERIVED ENTIRELY FROM GREY DACITE
- TOODOGGONE CRYSTAL ASH TUFFS AND FLOWS
- RECESSIVE, GREY, MAUVE, PURPLE QUARTZOSE PLAGIOCLASE CRYSTAL TUFF, LAPILLI TUFF, AND BRECCIA, WITH LESSER AGGLOMERATE, LAHAR, AND EPICLASTIC BEDS; INCLUDES SOME WELDED TUFFS AND PYROXENE HORNBLЕНDE FELDSPAR PORPHYRY FLOWS WHICH ARE LOCALLY DOMINANT; SOME MEMBERS CONTAIN NO QUARTZ, PINK WEATHERING WHERE LAUMONTITE IS ABUNDANT
  - EPICLASTIC RED BEDS - ARKOSIC SANDSTONE, SILTSTONE, CONGLOMERATE, AND SLIDE DEBRIS; CONTAINS SOME CRYSTAL TUFF
- TUFF PEAK FORMATION
- PALE PURPLE, GREY AND GREEN BIOTITE AUGITE HORNBLЕНDE PLAGIOCLASE PORPHYRY FLOWS; SOME AUTOBRECCIATED FLOWS, MINOR SILLS AND PLUGS, SOME CRYSTAL AND LAPILLI TUFF
  - CONGLOMERATE OR LAHAR DERIVED FROM UNITS 6 AND 8B, WITH GRADED AND CROSSLAMINATED MUDSTONE AND SANDSTONE INTERBEDS; DEBRIS FLOWS, LAPILLI AND CRYSTAL TUFFS
  - FLOWS SIMILAR TO UNIT 6 BUT CONTAINING SPARSE ORTHOCLASE MEGACRYSTS
- MCCLAIR CREEK FORMATION
- PURPLE, LAVENDER, GREY RARELY GREY-GREEN, "CROWDED" FINE TO MEDIUM-GRAINED PLAGIOCLASE PORPHYRIC FLOWS; INCLUDES SOME LAPILLI TUFF, BRECCIA, AND MINOR EPICLASTIC BEDS
  - INTRUSIVE DOME WITH AUTOBRECCIATED CARAPACE AND FLANKING BRECCIA
- MAFIC FLOW AND TUFF UNIT
- BASALT FLOWS - THIN BEDDED, PURPLE TO DARK GREEN, COMMONLY EPIDOTIZED, FINE-GRAINED PYROXENE BASALT FLOWS AND TUFFS; INCLUDES SOME SILLS AND DYKES
  - PURPLE TO MAUVE, MEDIUM-GRAINED PORPHYRIC BASALT; LOCALLY MAUVE TO PINK, ZEOLITIZED WITH LAUMONTITE, POSSIBLE INTRUSIVE (LAGCOLITH)
  - LAPILLI, CRYSTAL, AND ASH TUFF; WELL BEDDED, INCLUDES MINOR THINLY BEDDED SANDSTONE AND RARE CALCAREOUS SILTSTONE (MARL), TOTALLY OR IN PART EQUIVALENT TO UNIT 7
  - PYROXENE BIOTITE HORNBLЕНDE PORPHYRY FLOWS WITH TRACES OF QUARTZ AND K-FELDSPAR; INTERBEDDED MINOR BRECCIA AND LAPILLI TUFF, TOTALLY OR IN PART EQUIVALENT TO UNIT 6

- JURASSIC (CONTINUED)**
- LOWER TO MIDDLE JURASSIC (CONTINUED)**
- "TOODOGGONE VOLCANICS" (CARTER, 1972) (CONTINUED)
- LAWYERS-METSANTAN QUARTZOSE ANDESITE
- GREEN TO GREY QUARTZOSE PYROXENE (?) BIOTITE HORNBLЕНDE PLAGIOCLASE PORPHYRY FLOWS AND TUFFS, QUARTZ CONTENT RANGES FROM NEGLIGIBLE TO ABOUT 3 PER CENT IN THE NORTH FLOWS PREDOMINATE WITH LOCAL FLOW BRECCIA, LAPILLI TUFF, AND RARE WELDED TUFF UNITS; TOWARD THE SOUTH ASH FLOWS ARE COMMON, INCLUDING RARE SURGE DEPOSITS, THE UNIT CONTAINS EXTENSIVE ZONES OF EPIDOTIZED, PHYRIC ROCK WITH CHARACTERISTIC SALMON, PINK, AND ORANGE PLAGIOCLASE CRYSTALS
  - MOYEZ CREEK VOLCANICLASTICS
  - CONGLOMERATE WITH SOME GRANITIC CLASTS, GRADED, CROSS-BEDDED GREYWACKE, WELL-BEDDED CRYSTAL TUFF, EPICLASTIC SEDIMENTS; LOCAL LAMINATED CALCAREOUS SILT (MARL), RARE THIN LIMESTONE AND CHERT; LOCAL COARSE LANDSLIDE DEBRIS AND LAHAR, IN PART OR TOTALLY EQUIVALENT TO UNIT 6A
  - CRYSTAL TUFFS IN THIN, WELL-LAYERED UNITS; SOME EPICLASTIC SANDSTONE AND MUDSTONE, RARE PLANT FRAGMENTS IN SOME BEDS; MINOR LAPILLI TUFF
  - ADDOOGATCHO CREEK FORMATION
  - PALE REDDISH GREY TO DARK RED-BROWN QUARTZOSE BIOTITE HORNBLЕНDE PHYRIC ASH FLOWS; THE ROCKS CONTAIN MINOR SANDININE AND RARE AUGITE, WELDING IS WIDESPREAD AND RANGES FROM INCIPENT TO EUTAXITIC; LOCALLY ORANGE TO BROWN VITROPHYRIC CLASTS ARE COMMON, INCLUDES LAPILLI TUFF AND BRECCIA UNITS AS WELL AS MINOR LAYERED GROUND SURGE DEPOSITS
  - CRYSTAL ASH TUFF, LAPILLI TUFF AND RARE AGGLOMERATE WITH INTERSPERSED EPICLASTIC BEDS, TUFFACEOUS SEDIMENTS AND MINOR CONGLOMERATE THAT LOCALLY CONTAINS GRANITIC CLASTS; MINOR HORNBLЕНDE PLAGIOCLASE PHYRIC FLOWS FORMING SINGLE OR THIN COMPOSITE FLOW UNITS
  - QUARTZOSE PLAGIOCLASE PORPHYRY - JOINTED, DOMAL INTRUSION (?) OF HOMOGENEOUS-APPEARING GREY TO GREEN, CHLORITIZED AND EPIDOTE-ALTERED ROCK CONTAINING ABUNDANT INCLUSIONS OF TAKLA VOLCANICS AND RARE METAMORPHIC ROCK CLASTS
- TRIASSIC**
- UPPER TRIASSIC**
- TALKA GROUP
- DARK GREEN AUGITE PORPHYRY BASALT FLOWS AND BRECCIAS WITH LESSER FINE-GRAINED ANDESITE TO BASALT FLOWS AND MINOR INTERBEDDED SILTSTONE, TUFFACEOUS SEDIMENTS, AND CHERT; CONTAINS LIMESTONE LENSES THAT MAY BE PART OF THE "ASITKA GROUP"
- PALEOZOIC**
- PERMIAN**
- ASITKA GROUP?
- PREDOMINANTLY LIMESTONE (INCLUDING MARBLE AND MINOR SKARN) WITH SOME ARGILLITE, BLACK SHALE, AND CHERT UNITS COMPOSED OF LIMESTONE, CHERT, ARGILLITE, AND BASALT (P%); MAY BE, IN PART, OR TOTALLY TALKA GROUP
- INTRUSIVE ROCKS**
- JURASSIC**
- LOWER JURASSIC (DYKES, SILLS, AND SMALL PLUGS)**
- BASALT
  - AUGITE HORNBLЕНDE PORPHYRY - BASALTIC STOCK, DOMAL INTRUSION (OR TAKLA INLIER)
  - BIOTITE HORNBLЕНDE DIORITE/GABBRO
  - PYROXENE PLAGIOCLASE PORPHYRY
- LOWER TO MIDDLE JURASSIC (DYKES AND STOCKS)**
- QUARTZ MONZONITE, GRANODIORITE - MEGACRYSTIC IN PART; MINOR SYENITE OR QUARTZOSE SYENITE ALONG CONTACTS
  - GRANODIORITE, QUARTZ DIORITE - MEDIUM GRAINED, PORPHYRIC, FOLIATED IN PART
  - FELDSPAR PORPHYRY, HORNBLЕНDE FELDSPAR PORPHYRY - DYKES AND PLUGS; RARE QUARTZ FELDSPAR PORPHYRY

- SYMBOLS**
- MINERAL OCCURRENCE (MINERAL INVENTORY FILE NUMBER) x 43
  - MINERAL PROSPECT (MINERAL INVENTORY FILE NUMBER) x 34
  - EXPLORATION CAMP
  - PLACER WORKINGS
  - PARK BOUNDARY
  - ROAD
  - MAIN OUTCROP AREAS
  - FAULT (OBSERVED, INFERRED)
  - THRUST OR REVERSE FAULT (OBSERVED, INFERRED)
  - GEOLOGIC CONTACT (DEFINED, ASSUMED)
  - BEDDING, LAYERING, FOLIATION (HORIZONTAL, INCLINED, VERTICAL)
  - FOLD AXES
  - FOSSIL LOCALITY (PLANT DEBRIS)
  - RADIOMETRIC DATE SAMPLE SITE, AGE IN MA
  - VOLCANIC VENT

after: L. J. DIAKOW, A. PANTELEYEV, AND T. G. SCHROETER, 1985

**Miramar Energy Corporation**

**REGIONAL GEOLOGY MAP**

**Chuck-Moyez Claims**

**NTS: 94E/6W, 11W**

**British Columbia**

10 0.5 0 1.0 2.0  
Scale 1:50,000

Nov., 1985 Figure 3

**Pamicon Developments Ltd.**



area as "Pale reddish grey to dark red-brown quartzose biotite hornblende phyric ash flows. The rocks contain minor sanidine and rare augite. Welding is widespread and ranges from incipient to eutoxic; locally orange to brown vitrophyric clasts are common. Includes lapilli tuff and breccia units as well as minor layered ground surge deposits."

At least 200 metres of stratigraphic thickness of the Adoogatcho Creek Formation is present on the property and some attempt was made to establish a local stratigraphic sequence based primarily on colour differences between tuff units. The limited mapping carried out does not yet indicate if this approach is valid; that is, the colour differences may be due more to varying degrees of alteration rather than primary compositional layering. A postulated stratigraphic sequence appears in the legend of Figure 4 of this report.

The rock units observed dipped fairly consistently five to ten degrees to the northeast.

### 5.3 Mineralization

No ore grade precious metal occurrences were discovered on the claims. Three areas of hydrothermally altered outcrop were encountered during the mapping, and in light of the proximity of the property to the high grade gold deposit of Energex Minerals Ltd. on Alberts Hump, these altered zones are viewed to be significant exploration targets. All three zones occur near the northern boundary of the common side of the Chuck 1 and Chuck 2 claims (Figure 4). The first is situated on the east side of the south flowing creek that roughly splits the Chuck 1 and Chuck 2 claims and was first discovered by Newmont. Five assays taken from the showing in 1985 contained from trace to 0.03 ounce per ton silver and from trace to 0.003 gold. Alteration noted included silicification, hematization and alunization. The second alteration zone was discovered by following up on grid soil geochemical anomalies indicated by a re-interpretation of data contained in previous Newmont reports on the property.

The zone is located from 150 to 200 metres east and uphill from the stream splitting the Chuck 1 and Chuck 2 claims. Two rock chip geochemical samples from the zone contained 17 and 45 ppm lead, 0.2 and 0.1 ppm silver, and below detection limits gold. Alteration noted included silicification, alunization and hematization. The original rock has also been brecciated and argillically altered. The third alteration zone occurs above tree line approximately 900 metres east of the creek running through the Chuck 1 and Chuck 2 claim and closely resembles the second zone. The two best rock geochemical samples from this zone contained 450 and 475 ppm lead, 1.7 and 0.9 ppm silver, and below detection limits gold.

All three of the above alteration zones are thought to be above or peripheral to mineralized zones and warrant follow-up exploration.

## 6.0 GEOCHEMISTRY

### 6.1 Rock Chip Geochemical Sampling

Twenty rock chip geochemical samples were collected during the 1985 program. Samples were taken from outcrop and non-transported suboutcrop (if necessary). Twenty to twenty-five chips were collected at each sample site from several metre square areas and placed in consecutively numbered 6 mil poly bags. Sample sites were marked with correspondingly numbered strips of coloured plastic flagging tape and plotted on the 1:10,000 scale base map.

Samples were sent to Chemex Labs Ltd. in North Vancouver, B.C. where they were analyzed by either multi-element ICP analysis (15 samples) or fire assay (5 samples). The fire assay technique was used for mineralized occurrences due to the higher

sensitivity of the technique. Rock chip results are discussed in Section 5.3 above.

## **6.2 Seepage Sediment Geochemical Sampling**

The stream silt sampling program carried out by Newmont was felt to be fully adequate coverage of the main streams but none of the minor side streams and seepages had been sampled. This was remedied by the 1985 program.

A total of thirty-six silt samples were taken from seepages on the property. Silt samples were taken from the active part of seepages and placed in numbered Kraft envelopes. Locations were marked using correspondingly numbered strips of plastic flagging and plotted using 1:10,000 base maps. Samples were air dried in camp prior to shipment to Chemex Labs in North Vancouver, B.C.

Upon receipt at Chemex Labs, the silt samples were further dried then sieved through an ASTM 80 mesh screen. The -80 fraction was dissolved using a perchloric-nitric acid extraction (agua regia for gold) and levels of lead, silver and gold were determined using standard atomic absorption techniques. Sample locations and values are plotted on Figure 5.

None of the seepages sampled contained clearly anomalous levels of lead, silver or gold.

## **6.3 Heavy Sediment Geochemical Sampling**

A total of ten heavy sediment samples were taken from streams on the property. Samples were taken from sediments in the active part of streams, screened to -20 mesh and panned beneath the water surface, after which the heavy fraction was placed in numbered Kraft envelopes. Locations were marked using correspondingly numbered strips of plastic flagging and plotted using 1:10,000 base maps. Samples were air dried in camp prior to shipment to Chemex Labs in North Vancouver, B.C.

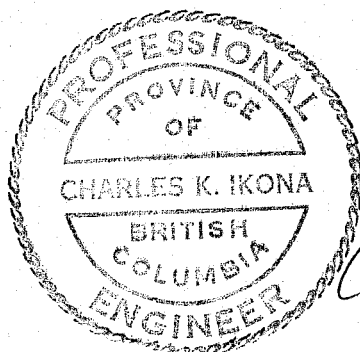
Upon receipt at Chemex Labs, the samples were further dried then further washed by flotation at 2.96 specific gravity.

Analysis for lead, silver and gold was carried out on the heavy flotation fraction using similar techniques to those described for seepage samples. Sample locations and values are plotted on Figure 5.

None of the heavy sediment samples showed clearly anomalous levels of lead, silver or gold.

#### 7.0 RECOMMENDATIONS

1. The geologic mapping and rock chip geochemical sampling program should be carried on to include the entire property to a detailed degree.
2. Grid soil sampling should be done to the south of the old Newmont grid to extend the anomalous zones indicated. In addition, grid soil sampling should be done over the alteration zone above tree line 900 metres east of the creek on Chuck 1.
3. EM and IP test lines should be run across the presently known alteration zones to test for deeper metal bearing zones.
4. Trenching should be carried out on the known alteration zones to see if there is any near surface mineralization.



Respectfully submitted,

*David A. Yeager*

David A. Yeager, Geologist

*Charles K. Ikona*

Charles K. Ikona, P.Eng.

Pamicon Developments Ltd.

LIST OF REFERENCES

Diakow, J., Panteleyev, A. and Schroeter, T.G. 1975. Preliminary Map 61, Geology of the Toodoggone River Area, NTS 94E.

Forster, D.B. 1984. Geology, Petrology and Precious Metal Mineralization, Toodoggone River Area, North-Central British Columbia.

Visagie, D. 1983. Geology and Geochemistry Report on the Adoo Claims.

Visagie, D. 1984. Geological and Geochemical Report on the Chuck-Moyez Claims.

COST STATEMENT

MOYEZ GROUP  
Liard Mining Division  
August 1st - August 13th/85

D. YEAGER (Geologist) 215 - 543 Granville St., Vancouver, B. C. 7.5 Days @ \$300.00	\$ 2,250.00	
E. DEBOCK (Prospector) 215 - 543 Granville St., Vancouver, B. C. 6.5 Days @ \$250.00	1,625.00	
B. CHARLTON (Labourer) 215 - 543 Granville St., Vancouver, B. C. 6.5 Days @ \$150.00	<u>975.00</u>	\$ 4,850.00
AIRFARE Vancouver-Smithers return	682.26	
FREIGHT - PWA	203.68	
MISC. EXPENSES Hotel, Meals, etc.	367.47	
FOOD	191.97	
CAMP RENTAL 3 Men x 5 Days x \$50.00/Day	750.00	
EQUIPMENT & SUPPLIES	129.55	
DRAFTING	80.00	
TRUCK RENTAL	37.47	
FIXED WING	859.56	
HELICOPTER	1,596.50	
ASSAYS	915.90	
REPORT	1,500.00	
SUPERVISION & MANAGEMENT	<u>1,097.08</u>	<u>8,410.96</u>
		<u>\$ 13,260.96</u>

CERTIFICATE OF QUALIFICATIONS

I, DAVID A. YEAGER, of Bowen Bay Road, Bowen Island, in the Province of British Columbia, DO HEREBY CERTIFY THAT:

1. I am a Geologist in the employ of Pamicon Developments Ltd. with offices at 215, 543 Granville Street, Vancouver, British Columbia.
2. I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology.
3. My primary employment since 1969 has been in the field of mineral exploration, mainly as a Field and Project Geologist.
4. My experience has encompassed a wide range of geologic environments and has allowed considerable familiarization with prospecting, geophysical, geochemical and exploration drilling techniques.
5. This report is based on data generated by work supervised by me on the Chuck-Moyez mineral claims during the period August 1st to August 13th, 1985

DATED at Vancouver, British Columbia, this 8<sup>th</sup> day of

November, 1985.

*David A. Yeager*  
David A. Yeager, Geologist

ENGINEER'S CERTIFICATE

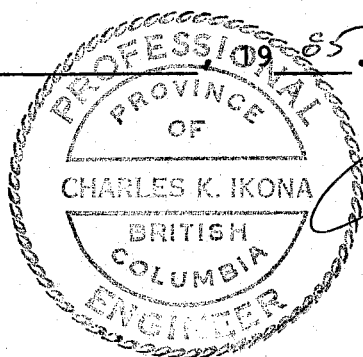
I, CHARLES K. IKONA, of 5 Cowley Court, Port Moody, in the Province of British Columbia, DO HEREBY CERTIFY THAT:

1. I am a Consulting Mining Engineer with offices at 215, 543 Granville Street, Vancouver, British Columbia.
2. I am a graduate of the University of British Columbia with a degree in Mining Engineering.
3. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
4. I have not examined the property reported on herein, however, the field work was conducted by David A. Yeager, a Geologist whom I have known and worked with for a number of years and in whom I have every confidence.

DATED at Vancouver, British Columbia, this 8<sup>th</sup> day of

Nov

1985



A handwritten signature in black ink, appearing to read "Charles K. Ikona", written over the horizontal line and partially overlapping the seal.

Charles K. Ikona, P.Eng.



**APPENDIX V**

**ASSAY CERTIFICATES**



# Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.  
North Vancouver, B.C.  
Canada V7J 2C1

Telephone: (604) 984-0221  
Telex: 043-52597

## CERTIFICATE OF ANALYSIS

TO : PAMICON DEVELOPMENTS LIMITED

CERT. # : A8514923-001-A  
INVOICE # : I8514923  
DATE : 19-AUG-85  
P.O. # : NONE  
TUDDOGGONE

215 - 543 GRANVILLE ST.,  
VANCOUVER, B.C.  
V6C 1X8

Sample description	Prep code	Pb ppm	Ag ppm	Au ppb FA+AA			
DYT 03	205	450	1.7	<5	--	--	--
DYT 04	205	45	0.2	<5	--	--	--
DYT 05	205	17	0.1	<5	--	--	--
EDT 01	205	25	0.3	<5	--	--	--
EDT 02	205	24	0.1	<5	--	--	--
EDT 03	205	5	0.1	<5	--	--	--
EDT 05	205	1450	2.3	80	--	--	--
EDT 08	205	14	0.1	<5	--	--	--
EDT 14	205	8	0.1	<5	--	--	--
EDT 20	205	7	0.1	<5	--	--	--
EDT 21	205	475	0.9	<5	--	--	--
EDT 22	205	14	0.1	<5	--	--	--
EDT 23	205	23	0.1	<5	--	--	--
EDT 24	205	19	0.1	<5	--	--	--
EDT 25	205	8	0.1	<5	--	--	--

Certified by .. *Hart Bichler* ..





# Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.  
North Vancouver, B.C.  
Canada V7J 2C1  
Telephone: (604) 984-0221  
Telex: 043-52597

## CERTIFICATE OF ANALYSIS

TO : PAMICON DEVELOPMENTS LIMITED

\*\* CERT. # : A8514921-001-A  
INVOICE # : I8514921  
DATE : 18-AUG-85  
P.O. # : NONE  
TODDGGONE

215 - 543 GRANVILLE ST.,  
VANCOUVER, B.C.  
V6C 1X8

Sample description	Prep code	Pb ppm	Ag ppm	Au ppb FA+AA			
BCT 03	201	7	0.1	<5	--	--	--
BCT 05	201	6	0.1	<5	--	--	--
BCT 06	201	6	0.3	<5	--	--	--
BCT 07	201	7	0.1	<5	--	--	--
BCT 09	201	6	0.1	<5	--	--	--
BCT 10	201	5	0.1	<5	--	--	--
BCT 12	201	8	0.4	<5	--	--	--
BCT 13	201	9	0.2	<5	--	--	--
BCT 14	201	6	0.3	<5	--	--	--
BCT 15	201	7	0.3	<5	--	--	--
BCT 18	201	5	0.2	<5	--	--	--
BCT 19	201	9	0.6	25	--	--	--
BCT 20	201	5	0.5	5	--	--	--
BCT 21	201	6	0.1	<5	--	--	--
BCT 24	217	4	0.3	<5	--	--	--
BCT 25	201	6	0.1	<5	--	--	--
BCT 26	201	6	0.1	<5	--	--	--
BCT 27	201	5	0.1	<5	--	--	--
BCT 29	201	3	0.1	<5	--	--	--
BCT 30	201	6	0.1	<5	--	--	--
BCT 31	201	4	0.1	<5	--	--	--
BCT 33	201	14	0.2	<5	--	--	--
DYT 01	201	10	0.1	<5	--	--	--
DYT 02	201	10	0.1	<5	--	--	--
EDT 04	201	9	0.8	10	--	--	--
EDT 05	201	10	0.1	5	--	--	--
EDT 06	201	8	0.1	<5	--	--	--
EDT 07	201	8	0.1	<5	--	--	--
EDT 09	201	10	0.1	<5	--	--	--
EDT 10	201	7	0.1	<5	--	--	--
EDT 11	201	8	0.1	<5	--	--	--
EDT 12	201	8	0.5	<5	--	--	--
EDT 13	201	12	0.1	<5	--	--	--
EDT 15	201	17	0.1	5	--	--	--
EDT 16	201	8	0.1	<5	--	--	--
EDT 17	201	6	0.2	<5	--	--	--
EDT 18	201	10	0.1	<5	--	--	--
EDT 19	201	8	0.4	<5	--	--	--
EDT 26	217	8	0.1	<5	--	--	--

Certified by Hart Bichler





# Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.  
North Vancouver, B.C.  
Canada V7J 2C1

Phone: (604) 984-0221  
Telex: 043-52597

## CERTIFICATE OF ANALYSIS

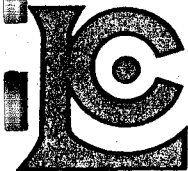
TO : PAMICON DEVELOPMENTS LIMITED

\*\* CERT. # : A8514922-001-A  
INVOICE # : 18514922  
DATE : 22-AUG-85  
P.O. # : NONE  
TOODOGGONE

215 - 543 GRANVILLE ST.,  
VANCOUVER, B.C.  
V6C 1X8

Sample description	Prep code	Pb ppm	Ag ppm	Au ppb FA+AA			
BCT 01	213	40	0.1	40	--	--	--
BCT 02	213	50	0.1	10	--	--	--
BCT 04	213	40	0.1	<10	--	--	--
BCT 08	213	54	0.1	10	--	--	--
BCT 11	213	40	0.1	20	--	--	--
BCT 16	213	58	0.1	<10	--	--	--
BCT 17	213	64	0.1	40	--	--	--
BCT 22	213	40	0.1	50	--	--	--
BCT 23	213	38	0.1	50	--	--	--
BCT 28	213	46	0.1	20	--	--	--
BCT 32	213	44	0.1	10	--	--	--

Certified by Hart Bichler



# Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.  
North Vancouver, B.C.  
Canada V7J 2C1  
Phone: (604) 984-0221  
Telex: 043-52597

## CERTIFICATE OF ASSAY

TO : PAMICON DEVELOPMENTS LIMITED

215 - 543 GRANVILLE ST.,  
VANCOUVER, B.C.  
V6C 1X8

\*\* CERT. # : A8514924-001-A  
INVOICE # : 18514924  
DATE : 20-AUG-85  
P.O. # : NONE  
TODDGGONE

Sample description	Prep code	Ag FA oz/T	Au FA oz/T				
36261	207	<0.01	<0.003	--	--	--	--
36262	207	<0.01	<0.003	--	--	--	--
36263	207	0.03	<0.003	--	--	--	--
36264	207	0.02	0.003	--	--	--	--
36265	207	0.03	0.003	--	--	--	--

VOI rev. 4/85

.....  
Registered Assayer, Province of British Columbia

**APPENDIX VI**

**MAP POCKET**