Diamond Drilling and Soil Geochemical Assessment Report

Pie Claims

NTS 94F/6E, 7W

Omineca Mining Division

Latitude: 57° 28' N, Longitude 125° 00' W

Owner: Ecstall Mining Corporation

Operator: Metall Mining Corporation

94 PIE SOUTH GROUP	94 PIE NORTH GROUP
PIE 1	*PIE 1*
PIE 2	*PIE 11*
PIE 5	*PIE 3*
PIE 6	*PIE 4*
PIE 7	*PIE 8*
PIE 10	*PIE 9*
PIE 99	
PIE 100	

Paul Baxter
Metall Mining Corporation

October, 1994
Vancouver, B.C.

Table of Contents

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

Diamond Drilling and Soil Geochemical Assessment Report

PIE NORTH and PIE SOUTH claim groups

1. INTRODUCTION

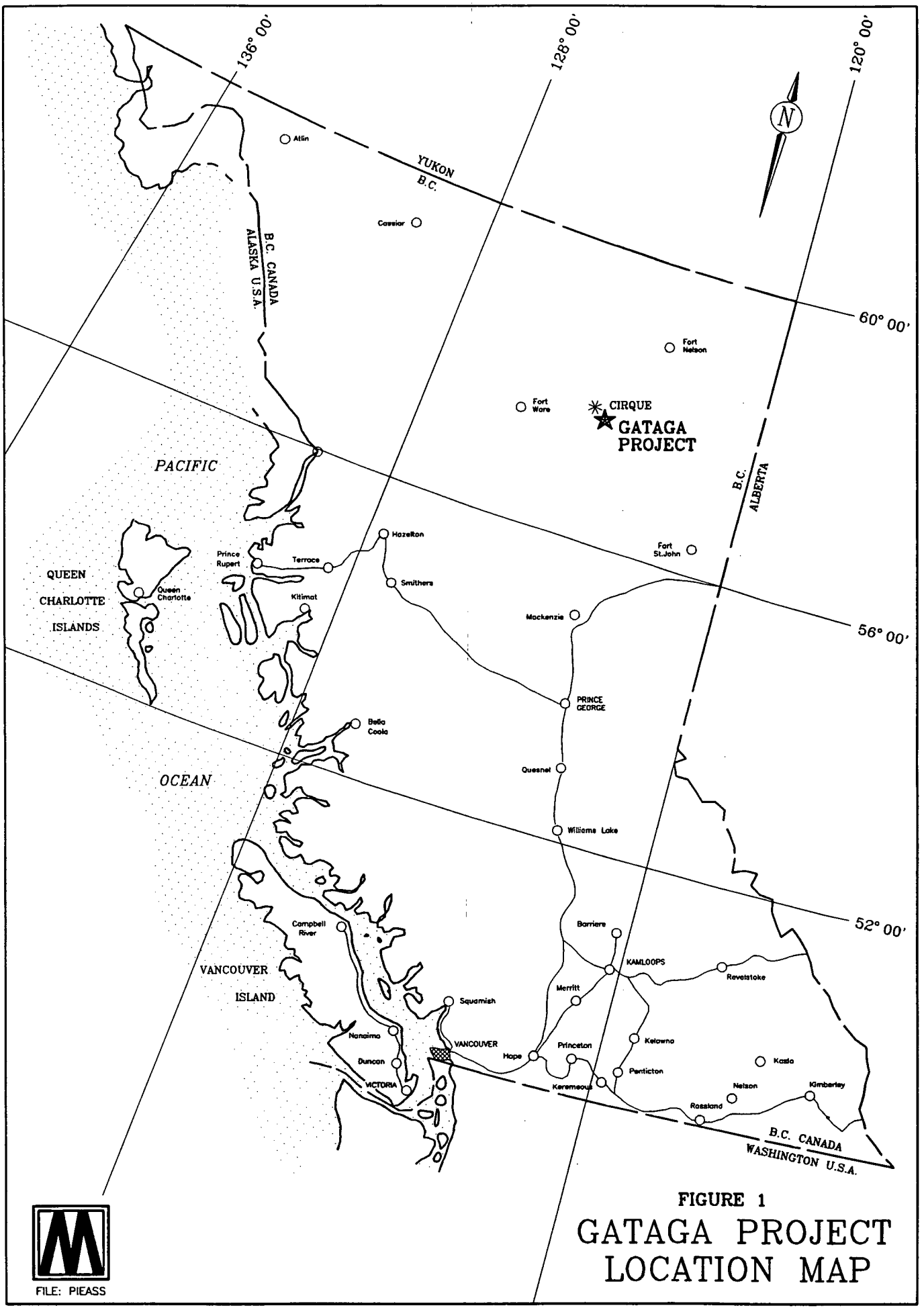
Metall Mining Corporation (formerly Minnova Inc.) acquired an option on the PIE claims from Ecstall Mining Corporation in June, 1992. The claim group, which is located immediately southeast of the Stronsay Pb-Zn deposit, was acquired to assess its potential for hosting a SEDEX-style Ba-Pb-Zn massive sulphide deposit. This report describes the results of a soil geochemical survey and a one hole, 520 m diamond drilling program carried out on the 94 PIE NORTH and 94 PIE SOUTH claim groups during the period of July 5 through July 24, 1994.

a. Location, Access and Physiography

The Pie claims are located in the western ranges of the Rocky Mountains, 250 km northwest of MacKenzie, B.C. (Figure 1). Fort Ware, a small native community and Fletcher Challenge's Finbow logging camp are located on the Finlay River, 40 km west and 35 km southwest of the claims respectively.

Access to the area is improving due to logging and mining activity. The Stronsay mine road is located in the Paul River valley just west of the north end of the Pie claims. During the 1994 exploration program, the property was accessed using a Pacific Western Bell 206B helicopter based at the Finbow logging camp.

Topographic relief on the Pie claims is moderate to steep with elevations ranging between 1200 and 2100 meters ASL. Most of the area is above tree line which occurs at an elevation of approximately 1600 m. Creek valleys are covered with a dense forest of mature spruce, balsam and pine.



FILE: PIEASS

FIGURE 1

GATAGA PROJECT LOCATION MAP

b. Mineral Rights

The Pie claims have been divided into two groups - 94PIE NORTH and 94PIE SOUTH (Figure 2). The status of the claims is as follows:

94 PIE SOUTH

Claim	Record No.	Units	Month of Record
PIE 1	238030	18	July
PIE 2	238031	18	July
PIE 5	238034	12	July
PIE 6	238035	12	July
PIE 7	238036	6	July
PIE 10	238047	6	Sept.
PIE 99	241335	10	Oct.
PIE 100	309109	12	May

94 PIE NORTH

Claims	Record No.	Units	Month of Record
PIE 1	238030	18	July
PIE 11	238048	6	Sept.
PIE 3	238032	6	July
PIE 4	238033	8	July
PIE 8	238037	8	July
PIE 9	238038	15	July

c. Previous Work

The Pie claims were staked by Riocanex in 1978 following the discovery of the Cirque deposit (30 M tonnes @ 8.1% Zn, 2.2% Pb) by Cyprus Anvil and Hudson Bay Oil and Gas in 1977. Exploration work during the period of 1978 to 1982 consisted of soil geochemical surveys, limited VLF and HEM surveys, geological mapping, hand trenching and nine diamond drill holes (2365 m). This work discovered several barite and galena showings that occur near the contact between mid-Devonian Kwadacha limestones and upper Devonian Gunsteel shales (Figure 3). In addition, three areas of sphalerite mineralization were discovered in the limestones. The soil geochemical

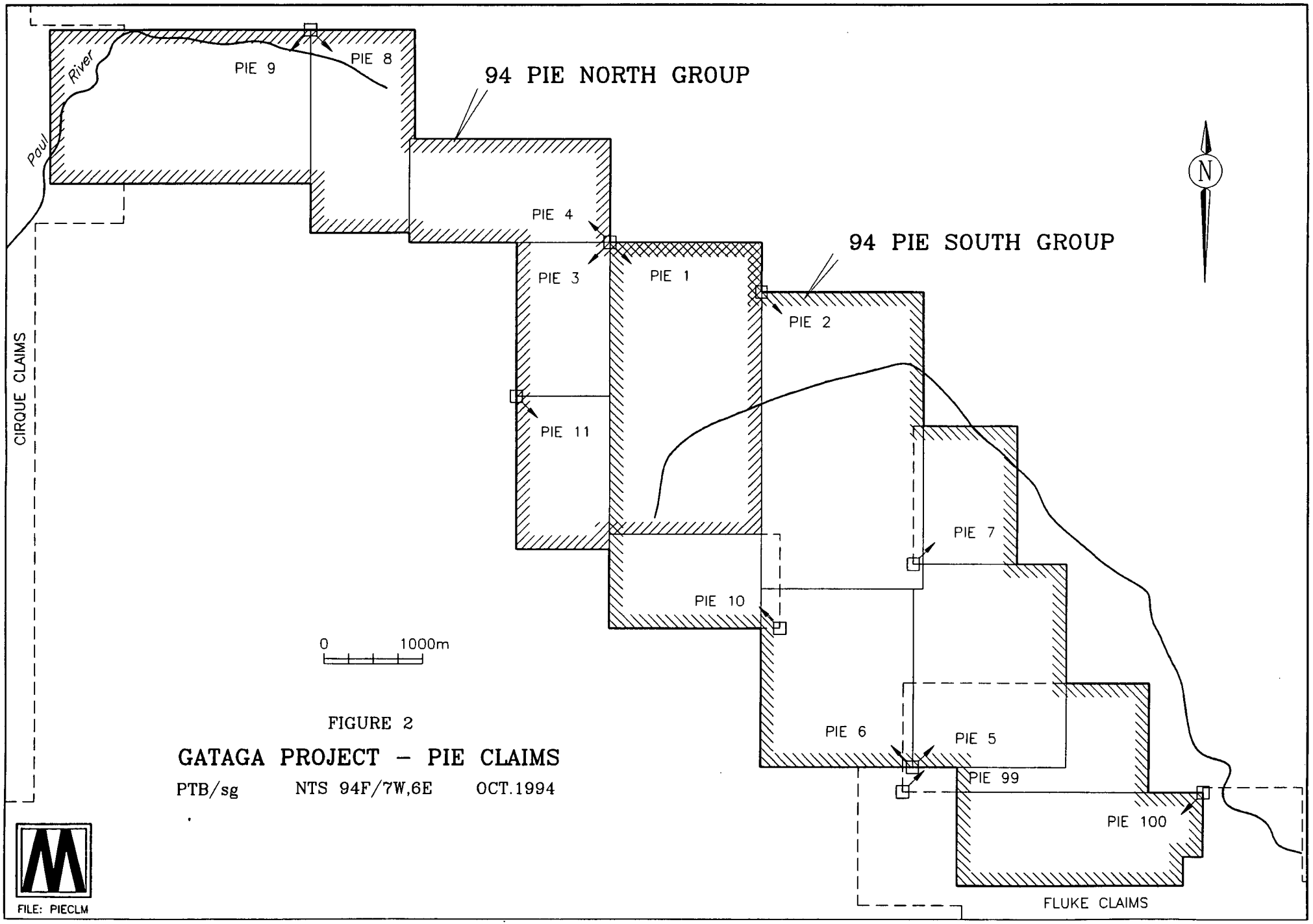


FIGURE 2

GATAGA PROJECT – PIE CLAIMS

PTB/sg NTS 94F/7W,6E OCT.1994

FILE: PIECLM

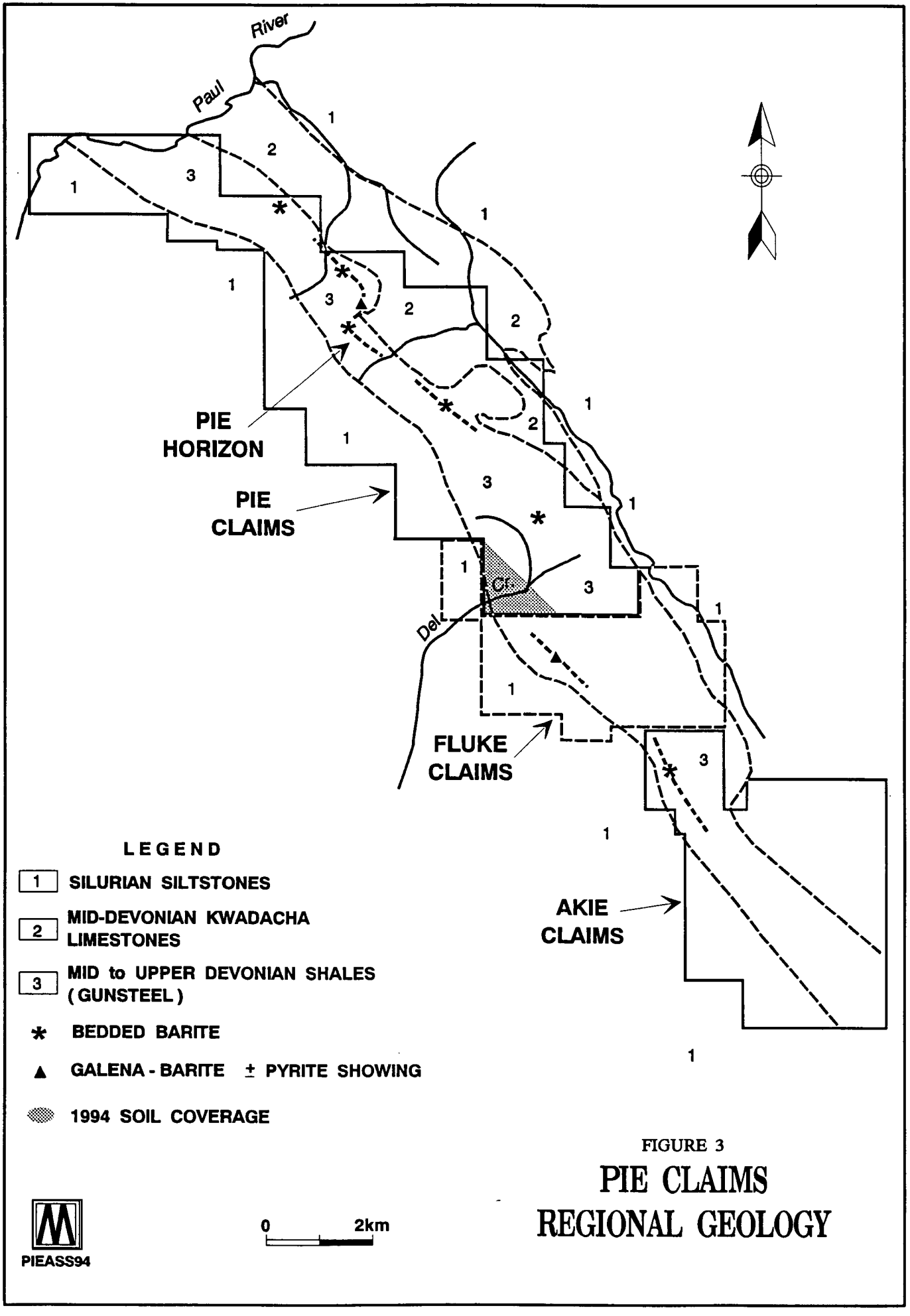


FIGURE 3

PIE CLAIMS REGIONAL GEOLOGY

surveys outlined several large Pb-Zn anomalies which straddle the limestone-shale contact in the vicinity of the galena and barite showings.

Since 1982, the property has been controlled by Ecstall Mining Corporation and has remained dormant except for an airborne VLF-Mag survey which Ecstall did in 1991. In 1992 and 1993 Metall Mining carried out soil geochemical surveys in the vicinity of the PIE galena showing, isolated airborne EM anomalies and along the trend of known barite occurrences (Wells, 1992, 1993).

2. GEOLOGY

a. Regional

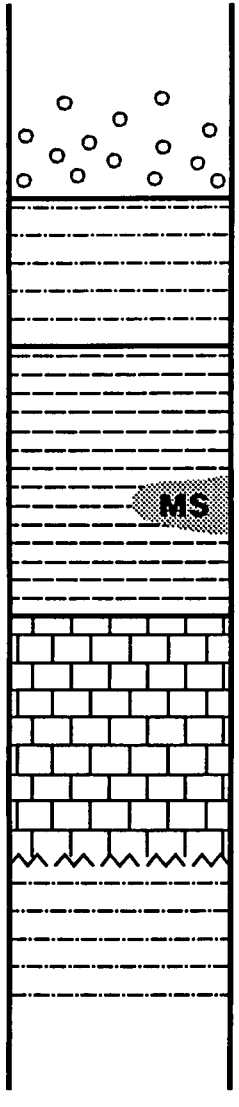
The Pie claims occur on the northeastern margin of the Kechika Trough which is the southeastern extension of the Selwyn Basin - a 1200 km belt of sediments which formed off the western edge of ancestral North America. The Kechika Trough is a 180 km long, northwesterly trending belt of Early Cambrian to Triassic sediments which occur in a number of southwest dipping thrust fault slices. A detailed review of the stratigraphy and descriptions of the various formations is given by MacIntyre (1992).

Exploration activity in the area has concentrated on stratiform barite - sulphide showings which are hosted in Devonian shales. Notable occurrences in the belt include Driftpile, Mt. Alcock, Elf and Cirque. The most developed prospect is the Cirque deposit which contains an estimated 30 m Tonnes of 8.1% Zn and 2.2% Pb.

b. Local

The generalized stratigraphy of the Pie claims is presented in Figure 4. The claim group is underlain by three northwesterly trending zones of sediments (Figure 3). The most western belt consists of brown to orange weathering Silurian siltstones. The middle unit consists of recessive, steel grey to black weathering upper Devonian shales and siltstones (Gunsteel formation). The most eastern belt of rocks consists of grey

FIGURE 4 : GENERALIZED STRATIGRAPHY - SOUTH GATAGA AREA (after MacIntyre 1992)



AGE	GROUP	FORMATION	ROCK TYPE
UPPER DEVONIAN MISSISSIPPIAN	EARN	WARNEFORD	CHERT PEBBLE CONGLOMERATE
		AKIE	SILTSTONE
MIDDLE - UPPER DEVONIAN	EARN	GUNSTEEL	SHALE, BEDDED NODULAR BARITE MASSIVE SULPHIDES
LOWER - MIDDLE DEVONIAN	ROAD RIVER	KWADACHA	FOSSILIFEROUS LIMESTONES
SILURIAN	ROAD RIVER		SHALES, SILTSTONES, CHERTS

weathering, fossiliferous limestones of the mid-Devonian Kwadacha formation. More detailed descriptions of these units are given in a paper prepared by MacIntyre (1992).

The area is structurally complex due to a combination of folding and thrust faulting. The Kwadacha limestone is folded in a gentle anticlinal structure and the overlying Akie and Gunsteel shales and siltstones are folded into a slightly overturned syncline. The Silurian siltstones are in thrust fault contact with the Devonian shales and overly these younger rocks.

Mineralization on the Pie claims consists of two types. Disseminated sphalerite showings occur in the Kwadacha limestones. The second type of minerlaization consist of stratiform bedded barite +/- galena which occurs at or near the contact between the limestones and shales.

3. SOIL GEOCHEMISTRY

a. Survey Objectives

A multi-element ICP soil survey was carried out on the PIE 100 claim to:

i. trace a possible barite horizon found as float material below the Silurian thrust contact and postulated to be the extension of mineralization on the Fluke claims, and

ii. Identify areas of anomalous metal content associated with this horizon.

b. Sampling Procedures

The 1994 PIE soil survey was conducted on 200 m spaced northeast trending flagged and picketed lines. Samples of the B soil horizon were taken at 25 meter intervals along these lines. The B horizon is poorly developed, rocky, grey to brown in colour and occurs at depths ranging between 5 and 20 m below the surface. Samples varying in size between 300 and 500 grams were placed in Kraft paper bags. Samples

were dried in the field and sent to IPL Labs in Vancouver for analysis. Each sample was analyzed for Cu, Pb, Zn, Ag, Cd, Fe, Mn and Ba using an ICP technique. Laboratory procedures for sample preparation and analysis are included in Appendix I.

Analytical certificates are included in Appendix II and the data is plotted at 1:5000 scale on Figures 5a to d. Statistical data for soil sampling on the Pie claims is presented in Table 1. Frequency histograms were generated for each element to determine the type of population distribution (normal or log normal). Anomalous values are those greater than mean plus two standard deviations for normal populations or geometric mean plus two standard deviations for log normal populations.

c. Results

On the east end of lines 2600S and 2800S a coincidental Zn-Ag-Cd-Mn-Cu anomaly with highly anomalous Cd, Mn and Cu values has been defined. Although the anomaly is lacking in anomalous Ba-Pb, which are better indicators of SEDEX mineralization, this anomaly still requires further development. As this area of the property has very poor rock exposure, further soil sampling is required to outline the lateral extent of the anomaly and look for areas of Ba-Pb-Zn enrichment.

On the remainder of the grid there are isolated one and two sample Cd, Mn, Fe and Pb anomalies but there are no widespread zones of metal enrichment.

With respect to Ag, there are several widespread areas of anomalous Ag values. This may reflect increased Ag enrichment in the underlying shales or considering the lack of other elemental anomalies, the threshold value for anomalous Ag may be too low.

With respect to Ba, the soil geochemistry failed to trace the targeted barite horizon downslope through vegetation cover.

Table 1: 1993 PIE SOIL SAMPLES - STATISTICAL DATA

ELEMENT	UNITS	N	MINIMUM	MAXIMUM	DISTRIBUTION	MEAN	STANDARD DEVIATION	ANOMALOUS VALUES
Ag	ppm	283	0.05	2.2	normal	0.4	0.3	0.93
Ba	ppm	291	485	10789	log normal	3132	1726	9141
Cd	ppm	288	0.05	46.1	normal	0.41	1	2.4
Cu	ppm	291	6	125	log normal	24.9	14.5	60
Fe	wt.%	287	0.74	12.89	normal	2.35	1.07	4.49
Mn	ppm	287	17	1503	log normal	106	103	328
Pb	ppm	287	17	113	log normal	35.5	9.6	58
Zn	ppm	286	46	1916	log normal	202	107	494

4. DIAMOND DRILLING

The 1992 and 1993 soil and lithogeochemical surveys defined a zone of Ba-Pb-Zn enrichment within Devonian shales and limestones in the vicinity of the PIE galena showing. Previous shallow drilling in this area has intersected sphalerite veining, bedded barite and pyritic and baritic shales with up to 0.4% zinc. The 1994 drill hole was designed to be a deep downdip test of the bedded barite horizon and then extend the hole to the shale-limestone contact.

a. Results

P-94-1, a 520.0 m NQ diamond drill hole, tested a bedded barite horizon 400 m downdip of previous drilling but was unable to reach the shale-limestone contact. The drill hole intersected a thick sequence of nonsiliceous, poorly bedded to massive shales of the Gunsteel Formation. Within the shale sequence a 99.1 m interval of pyritic shales with nodular barite was intersected which is the downdip expression of bedded barite intersected in previous drilling. Barite occurs as 1-3 mm rounded nodules forming cm scale beds and locally concentrated in 2-10 cm beds with up to 40% barite. This same interval also contains 3-10% pyrite as common ultra fine grained <1 cm wide laminations. Geochemical sampling within this unit shows negligible Pb-Zn enrichment.

The footwall to the baritic zone is a diagnostic triple sandstone-siltstone-shale sequence which was intersected in other drill holes in the area.

The complete diamond drill log for hole P-94-1 is included in Appendix III. Drill hole location and core storage locations are shown on Figure 6.

b. Assays and Lithogeochemistry

Lithogeochemical samples were collected regularly every 20-30 m down the hole to detect wide zones of metal enrichment. Samples were analyzed for Al_2O_3, Ba, CaO, Fe_2O_3, K_2O, MgO, MnO, Na_2O, P_2O_5, SiO_2, Sr, TiO_2, LOI, S, Cu, Pb, Zn, Ag, Au, As and Sb by standard ICP techniques. Geochemical samples were taken from mineralized zones and analyzed for Cu, Pb, Zn, Ag, Ba and Cd. All ICP and geochemical samples were analyzed at Min-En Labs, North Vancouver. Sample preparation procedures and analytical techniques are described in Appendix I and analytical certificates are included in Appendix II.

Lithogeochemical sampling did not detect any areas of widespread metal enrichment. There were two widely spaced single samples which did show zinc enrichment up to 1391 ppm Zn and one sample with 234 ppm Pb.

Geochemical sampling of baritic shales and other isolated narrow mineralized zones did not return any significant results except for one sample of 1210 ppm Zn due to a 3 cm band of semi-massive pyrite.

5. CONCLUSIONS AND RECOMMENDATIONS

A single diamond drill hole tested the downdip extent of bedded barite, pyritic shale and sphalerite veining in the vicinity of the PIE galena showing. The transition with increasing depth from bedded barite to nodular barite indicates a move towards a more distal massive sulphide environment. 1994 and previous drilling indicates that if a massive sulphide body was associated with this barite horizon it would exist up-dip and is now eroded. No further work is warranted on this target.

A 92 sample soil geochemical survey on the PIE 100 claim failed to trace a barite horizon through an area of vegetation cover. However, it did define a 200 m long Zn-Ag-Cd-Mn-Cu anomaly which requires further soil sampling and prospecting to assess its extent and significance.

6. ITEMIZED COST STATEMENT

DRILLING

a. Contractor Costs (Britton Bros. Diamond Drilling Ltd.)

Mobilization		$2740.00
Overburden	12.2 m @ $72/m	$878.40
Coring	507.8 m @ $82.5/m	$41,893.50
Acid Tests	7 @ $45/test	$315.00

b. Helicopter Support (Pacific Western Helicopters)

	40.9 hr @ $800/hr	$32,720.00

c. Accommodations (including Pilot) (Finbow logging camp)

	30 man days @ $85/man day	$2550.00

d. Salaries

Paul Baxter	8 days @ $300/day	$2400.00
Devin Denboer	8 days @ $150/day	$1200.00

e. Metall Mobilization

Truck Rental (prorated)		$500.00
Pacific Western Helicopters	1 hr @ $800/hr	$800.00
NT Air, freight charges		$413.00

f. Analyses (Min-En Labs)

Lithogeochemical	17 samples @ $28.50/sample	$484.50
Geochemical	11 samples @ $12.25/sample	$134.75

g. Report Preparation

Paul Baxter	4 days @ $300/day	$1200.00
Sel Gokool	1 day @ $150/day	$150.00
Typing & computer time		$250.00
	Total Drilling	**$88,629.15**

Cost Allocation

94 PIE NORTH	$39,883.15
94 PIE SOUTH	$48,746.00

GEOCHEMISTRY 94 PIE SOUTH GROUP

a. Salaries

Paul Baxter	2 days @ $300/day	$600.00
Devin Denboer	2 days @ $150/day	$300.00

b. Helicopter Support (Pacific Western Helicopters)

	2.4 hr @ $800/hr	$1920.00

c. Accommodations

	4 man days @ $85/man day	$340.00

d. Analysis

	92 samples @ $7/sample	$644.00
	Total Geochemistry	**$3804.00**

7. REFERENCES

MacIntyre, D.G. 1992: Geological Setting and Genesis of Sedimentary Exhalative Barite and Barite-Sulfide Deposits, Gataga District, Northeastern British Columbia. Exploration and Mining Geology Vol. 1, No. 1, pp 1-20.

Wells, G.S., 1992: Soil Geochemical Assessment Report, Pie claims (NTS 94F/6E, 7W).

Wells, G.S., 1993: Soil Geochemical Assessment Report, Pie claims (NTS 94F/6E, 7W).

8. STATEMENT OF QUALIFICATIONS

I, Paul Baxter, certify that:

1. I hold a Bachelor of Science degree, Honours Geology (1985) from the University of Alberta, Edmonton, Alberta.

2. I am a registered Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta.

3. I have practiced my profession in exploration since 1986.

4. I have been a contract employee with Metall Mining Corporation (Minnova Inc.) since 1988 and a full-time employee since 1994.

5. I personally carried out or supervised the work described in this report.

Date: October 20, 1994

Paul Baxter

Vancouver, B.C.

Appendix I

Sample Preparation and Analytical Procedures

iPL
INTERNATIONAL PLASMA LABORATORY LTD.

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Method of sample preparation for Soil or Silt

(a) Water content in sample is removed by convection in a low temperature dryer (T < 60 Degrees C.).

(b) Driad samples are passed through an 80 mesh sieve. The minus 80 mesh fraction is transferred to a new bag for subsequent analyses. The plus 80 mesh fraction is discarded unless otherwise instructed.

(c) If an insufficient amount of sample is less than 80 Mesh, the entire sample is passed through a 35 Mesh screen. The -35 Fraction is then pulverized and used as the portion for analyses.

QUALITY CONTROL

Cross contamination is minimized by constant cleaning of preparation equipment with high velocity compressed air. Ring pulverizers are cleaned with a quartz sand charge.

iPL
INTERNATIONAL PLASMA LABORATORY LTD.

2038 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Method of ICP Multi-element Analyses

(a) 0.50 grams of sample is digested with diluted aqua regia solution by heating in a hot water bath for 90 minutes, then cooled, bulked up to a fixed volume with demineralized water, and thoroughly mixed.

(b) The specific elements are determined using an Inductively Coupled Argon Plasma spectrophotometer. All elements are corrected for inter-element interference. All data are subsequently stored onto computer diskette.

* Aqua regia leaching is partial for Al, Ba, Ca, Cr, K, La, Mg, Na, Sc, Sn, Sr, Th, Ti, W and Zr.

QUALITY CONTROL

The machine is first calibrated using six known standards and a blank. The test samples are then run in batches.

A sample batch consists of 38 or less samples. Two tubes are placed before a set. These are an Inhouse standard and an acid blank, which are both digested with the samples. A known standard with characteristics best matching the samples is chosen and placed after every fifteenth sample. After every 38th sample (not including standards), two samples, chosen at random, are reweighed and analysed. At the end of a batch, the standard and blank used at the beginning is rerun. The readings for these knowns are compared with the pre-rack knowns to detect any calibration drift.

MINERAL ENVIRONMENT LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
706 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK:

PROCEDURE FOR WHOLE ROCK ANALYSIS

SiO_2, TiO_2, Al_2O_3, MnO_2, MgO, Fe_2O_3, CaO, Na_2O, K_2O, P_2O_5, Ba, & Sr

Samples are dried @ 95°C and when dry are crushed on a jaw crusher. The 1/4 inch output of the jaw crusher is put through a secondary roll crusher to reduce it to - 15 mesh. The whole samples is then riffled on a Jones Riffle down to a statistically representative 300 gram sub-sample (in accordance with Gy's statistical rules.) This sub-sample is then pulverized on a ring pulverizer to 95% - 120 mesh, rolled and bagged for analysis. The remaining reject from the Jones Riffle is bagged and stored.

Samples are weighed and fused at 1000°C with lithium metaborate prior to being dissolved in nitric acid. The resulting solutions are analyzed by ICP. The CANMET standards are employed as check standards with each set of 24 samples. Reports are formatted and printed using a laser printer.

MINERAL
• ENVIRONMENTS
LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK:

PROCEDURE FOR 31 ELEMENT TRACE ICP

Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cu,
Fe, K, Li, Mg, Mn, Mo, Na, Ni P, Pb, Sb,
Sr, Th, Ti, V, Zn Ga, Sn, W, Cr

Samples are processed by Min-En Laboratories, at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized by ceramic plated pulverizer or ring mill pulverizer.

0.5 gram of the sample is digested for 2 hours with an aqua regia mixture.

After cooling samples are diluted to standard volume. The solutions are analysed by computer operated Jarrell Ash 9000 ICAP or Jobin Yvon 70 Type II Inductively Coupled Plasma Spectrometers. Reports are formatted and printed using a laser printer.

MINERAL
• ENVIRONMENTS
LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
706 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK: PROCEDURE FOR GEOCHEM Ag, Cu, Pb, Zn

Samples are processed by Min-En Laboratories, at 705 West 15th Street, North Vancouver, using the following procedures.

After drying the samples at 65 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized by ceramic plated pulverizer or ring mill pulverizer.

0.5 gram of the sample is digested for 2 hours with an aqua regia mixture.

After cooling samples are diluted to standard volume. The solutions are analyzed by AA.

MINERAL
• ENVIRONMENTS
LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK:

PROCEDURE FOR BARIUM GEOCHEM

Ba PPM

Samples are dried @ 95°C and when dry are crushed on a jaw crusher. The 1/4 inch output of the jaw crusher is put through a secondary roll crusher to reduce it to - 15 mesh. The whole samples is then riffled on a Jones Riffle down to a statistically representative 300 gram sub-sample (in accordance with Gy's statistical rules.) This sub-sample is then pulverized on a ring pulverizer to 95% - 120 mesh, rolled and bagged for analysis. The remaining reject from the Jones Riffle is bagged and stored.

Samples are weighed into nickel crucibles and fused with NaOH and Na_2CO_3 at 650°C. After leaching overnight the samples are filtered, washed and the residues are dissolved with hydrochloric acid. The resulting solutions are analyzed by ICP. The CANMET standards are employed as check standards with each set of 24 samples. Reports are formatted and printed using a laser printer.

Appendix II

Analytical Certificates

MINERAL
• ENVIRONMENTS
LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Geochemical Analysis Certificate

4V-0710-RG2

Company: METALL MINING
Project: 677
Attn: Paul Baxter

Date: AUG-02-94
Copy 1. Metall Mining, Vancouver, B.C.

We hereby certify the following Geochemical Analysis of 3 core samples submitted JUL-26-94 by P. Baxter.

Sample Number	Ag PPM	Ba PPM	Cd PPM	Cu PPM	Pb PPM	Zn PPM
33501	2.4	.12	.6	33	134	118
33502	1.8	.17	.5	78	52	195
33503	1.6	.54	2.7	34	24	241

RECEIVED AUG 17 1994

Certified by _____

MIN-EN LABORATORIES

MINERAL • ENVIRONMENTS LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Geochemical Analysis Certificate

4V-0828-RG2

Company: **METALL MINING**
Project: 677
Attn: Paul Baxter

Date: OCT-17-94
Copy 1. Metall Mining, Vancouver, B.C.

We hereby certify the following Geochemical Analysis of 8 core samples submitted AUG-12-94 by Paul Baxter.

Sample Number	Ag PPM	Ba PPM	Ba %	Cd PPM	Pb PPM	Zn PPM
33504	2.2	6840		10.8	26	1210
33505	2.4	>10000	2.02	7.4	26	738
33506	1.9	>10000	1.87	1.6	19	169
33507	1.5	>10000	6.49	6.8	21	526
33508	1.5	>10000	13.30	8.2	18	675
33509	2.0	>10000	3.36	8.3	20	620
33510	2.0	>10000	3.64	.7	17	59
33511	1.3	>10000	5.58	4.6	18	430

Certified by _____

MIN-EN LABORATORIES

WITH MNO

COMP: METALL MINING
PROJ: 677
ATTN: Paul Baxter

MIN-EN LABS — WHOLE ROCK ANALYSIS

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
TEL:(604)980-5814 FAX:(604)980-9621

FILE NO: 4V-0710-RL1
DATE: 94/09/20
* core * (ACT:F26)

SAMPLE NUMBER	AL203 %	BA %	CAO %	FE203 %	K20 %	MGO %	MNO %	NA20 %	P205 %	SIO2 %	SR %	TIO2 %	LOI %
46976	8.84	.600	.80	3.13	1.75	.52	.01	.36	.37	76.02	.015	.48	6.00
46977	9.42	.665	1.13	2.58	1.86	.67	.01	.37	.33	75.53	.015	.53	5.80
46978	10.71	.815	2.55	3.55	2.37	1.14	.02	.35	.36	69.41	.030	.55	7.40
46979	17.05	.455	.71	3.75	3.48	1.29	.02	.07	.01	64.08	.015	.87	7.20
46980	13.41	.440	2.23	4.00	2.64	1.30	.02	.34	.04	66.37	.025	.68	7.50
46981	14.39	.480	5.09	4.48	2.78	2.19	.04	.26	.01	58.53	.025	.68	10.30
46982	13.10	.660	3.82	5.13	2.66	1.68	.03	.41	.01	61.97	.025	.67	8.90
46983	12.72	.345	6.28	5.89	2.46	2.45	.06	.25	.05	56.34	.025	.61	11.50
46984	11.19	.600	2.55	2.86	2.55	1.22	.01	.14	.01	69.59	.020	.52	7.80
46985	11.35	.620	3.04	2.95	2.80	1.40	.01	.13	.02	68.29	.020	.54	7.90
46986	12.06	.785	3.04	3.19	2.91	1.45	.01	.15	.04	67.28	.015	.57	7.40
46987	10.63	1.855	3.58	3.72	2.64	1.35	.02	.19	.10	66.89	.025	.51	7.60
46988	11.33	1.005	2.61	3.39	2.91	1.17	.01	.09	.01	68.80	.025	.54	7.00
46989	10.97	.245	6.26	2.00	2.68	.91	.06	.21	.06	68.74	.030	.24	6.90
46990	10.84	.190	2.24	1.98	3.71	.74	.02	.28	.09	74.22	.020	.20	4.40
46991	8.93	.185	1.56	2.22	2.67	.79	.01	.19	.05	74.08	.015	.29	8.00

COMP: METALL MINING
PROJ: 677
ATTN: Paul Baxter

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
TEL:(604)980-5814 FAX:(604)980-9621

FILE NO: 4V-0710-RJ1
DATE: 94/08/02
* core * (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	BA PPM	CU PPM	PB PPM	SB PPM	ZN PPM	*Au-Wet PPB
46976	.8	1	945	55	35	9	301	5
46977	1.1	1	1316	55	43	11	399	5
46978	1.2	1	820	45	234	12	1391	5
46979	.1	1	1378	45	42	9	237	5
46980	1.4	1	1082	64	39	12	431	5
46981	.5	1	1157	36	36	9	252	5
46982	.9	1	745	53	39	9	296	5
46983	.3	1	1053	38	33	9	158	5
46984	1.3	1	1452	35	26	16	325	5
46985	1.3	1	1634	39	29	16	379	5
46986	1.6	1	946	34	25	12	256	5
46987	1.3	1	329	35	32	17	193	5
46988	1.1	1	437	36	29	15	579	5
46989	.7	1	898	15	26	11	652	5
46990	.6	1	519	11	31	9	550	5
46991	1.3	1	793	34	33	14	1337	5

MINERAL • ENVIRONMENTS LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Assay Certificate

4V-0710-RA1

Company: METALL MINING
Project: 677
Attn: Paul Baxter

Date: AUG-03-94
Copy 1. Metall Mining, Vancouver, B.C.

We hereby certify the following Assay of 16 core samples submitted JUL-26-94 by P. Baxter.

Sample Number	S %
46976	1.40
46977	1.52
46978	1.70
46979	.67
46980	1.57
46981	1.02
46982	2.01
46983	9.45
46984	1.17
46985	1.16
46986	1.12
46987	1.58
46988	1.59
46989	.73
46990	.39
46991	.97

RECEIVED AUG 17 1994

Certified by _____

MIN-EN LABORATORIES

WITH MNO

COMP: METALL MINING
PROJ: 677
ATTN: Paul Baxter

MIN-EN LABS — WHOLE ROCK ANALYSIS

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
TEL:(604)980-5814 FAX:(604)980-9621

FILE NO: 4V-0734-RL1
DATE: 94/09/20
• core * (ACT:F26)

SAMPLE NUMBER	AL203 %	BA %	CAO %	FE203 %	K20 %	MGO %	MNO %	NA20 %	P205 %	SIO2 %	SR %	TIO2 %	LOI %	S %
46992	12.97	.130	2.80	1.98	3.78	.89	.01	.04	.06	70.67	.015	.27	5.30	.31

COMP: METALL MINING
PROJ: 677
ATTN: Paul Baxter

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
TEL:(604)980-5814 FAX:(604)980-9621

FILE NO: 4V-0734-RJ1
DATE: 94/08/05
* core • (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	BA PPM	CU PPM	PB PPM	SB PPM	ZN PPM	*Au-Wet PPB
46992	1.1	1	452	49	30	10	179	5

INTERNATIONAL PLASMA LABORATORY LTD.

2036 Columbia Street
Vancouver
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

CERTIFICATE OF ANALYSIS
iPL 94G2602

Client: Metall Mining Corporation iPL: 94G2602 M Out: Aug 08, 1994 Page 1 of 3 Section 1 of 1
Project: 677 104 Soil In: Jul 26, 1994 [035014:59:0] 94] Certified BC Assayer: David Chiu

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mn ppm	Fe %
L26+00S 03+50WS	0.6	26	26	203	<0.1	3179	59	2.82
L26+00S 03+75WS	0.6	30	20	303	3.4	4567	60	1.87
L26+00S 04+00WS	0.7	18	24	167	<0.1	4219	36	1.83
L26+00S 04+25WS	0.5	21	29	133	0.5	3182	63	2.04
L26+00S 04+50WS	0.9	10	38	71	<0.1	2288	35	1.44
L26+00S 04+75WS	1.4	21	24	195	0.5	5079	42	2.27
L26+00S 05+00WS	0.7	22	22	112	<0.1	3762	51	1.57
L26+00S 05+25WS	1.1	34	23	149	<0.1	3783	102	3.19
L26+00S 05+50WS	1.1	19	52	89	<0.1	1878	43	2.88
L26+00S 05+75WS	2.5	24	12	124	<0.1	894	35	5.61
L26+00S 06+00WS	0.7	38	29	182	<0.1	3807	54	4.20
L26+00S 06+25WS	0.6	18	32	127	<0.1	3940	64	3.44
L26+00S 06+50WS	0.7	11	12	63	<0.1	3113	30	1.12
L26+00S 06+75WS	0.5	24	23	153	<0.1	5805	49	2.63
L26+00S 07+00ES	0.9	42	26	365	<0.1	3361	195	6.16
L26+00S 07+25WS	0.4	30	31	204	<0.1	2991	57	2.56
L26+00S 07+50WS	0.8	14	27	68	<0.1	2848	24	1.54
L26+00S 07+75WS	0.8	11	14	62	<0.1	4060	30	1.46
L26+00S 08+00WS	0.6	27	35	157	<0.1	2200	65	2.56
L26+00S 08+25WS	0.5	30	28	291	<0.1	3772	79	3.66
L26+00S 08+50WS	0.7	28	26	169	<0.1	4910	105	3.04
L26+00S 08+75WS	0.5	11	20	87	<0.1	3347	46	1.34
L26+00S 09+00WS	1.3	42	28	330	0.3	3345	243	4.69
L26+00S 09+25WS	0.5	25	27	291	2.8	3843	920	3.36
L26+00S 09+50WS	0.9	17	11	212	0.3	7362	100	1.85
L26+00S 09+75WS	1.5	29	21	371	1.3	6074	223	2.43
L26+00S 10+00WS	0.7	23	27	141	<0.1	4659	212	2.10
L26+00S 10+25WS	0.7	20	22	177	<0.1	3196	142	3.37
L26+00S 10+50WS	1.1	37	29	247	0.4	4787	182	3.56
L26+00S 10+75WS	0.6	14	20	93	<0.1	2866	64	1.31
L26+00S 11+00WS	0.7	13	16	92	<0.1	1743	86	1.66
L28+00S 03+25WS	1.2	36	20	279	1.7	4588	102	3.10
L28+00S 03+50WS	1.4	111	25	853	10.5	3320	3663	3.54
L28+00S 03+75WS	1.5	113	29	878	10.8	3426	3673	3.65
L28+00S 04+00WS	0.7	30	19	137	<0.1	2639	51	1.50
L28+00S 04+25WS	0.8	30	25	136	<0.1	3038	48	1.91
L28+00S 04+50WS	1.1	33	30	141	<0.1	2422	103	2.11
L28+00S 04+75WS	1.5	24	18	119	<0.1	2943	41	1.47
L28+00S 05+00WS	1.1	39	40	184	<0.1	1191	37	4.18

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mn ppm	Fe %
L28+00S 05+25WS	1.0	21	45	159	<0.1	5189	25	2.55
L28+00S 05+50WS	1.2	24	18	563	4.7	3866	137	2.56
L28+00S 05+75WS	0.5	16	18	129	0.2	1947	40	1.75
L28+00S 06+00WS	0.6	16	24	211	<0.1	5096	23	1.75
L28+00S 06+25WS	2.8	42	53	290	1.3	4509	103	3.93
L28+00S 06+50WS	1.4	40	20	314	<0.1	4193	119	4.37
L28+00S 06+75WS	0.4	6	15	54	<0.1	5635	33	1.03
L28+00S 07+00WS	1.4	10	75	265	<0.1	3594	139	4.35
L28+00S 07+25WS	2.3	31	38	138	<0.1	1446	47	7.22
L28+00S 07+50WS	1.6	24	41	173	<0.1	2380	86	3.62
L28+00S 07+75WS	1.1	17	12	231	0.2	5413	63	1.67
L28+00S 08+00WS	1.5	8	9	104	<0.1	3812	41	1.25
L28+00S 08+25WS	5.4	46	56	267	4.0	2383	547	4.00
L28+00S 08+50WS	1.1	11	26	113	<0.1	3632	29	1.41
L28+00S 08+75WS	0.5	13	17	88	<0.1	3118	33	1.34
L28+00S 09+00WS	0.6	22	35	148	<0.1	4340	97	3.47
L28+00S 09+25WS	0.5	15	23	129	0.2	3822	69	1.82
L28+00S 09+50WS	0.5	22	25	112	<0.1	3136	57	2.09
L28+00S 09+75WS	0.8	21	32	154	<0.1	5225	329	3.13
L28+00S 10+00WS	0.4	21	22	260	0.4	2021	194	3.77
L28+00S 10+25WS	0.9	28	19	116	<0.1	4919	34	3.44
L28+00S 10+50WS	0.8	39	26	199	<0.1	6123	51	3.86
L28+00S 10+75WS	0.5	19	37	150	<0.1	6105	26	2.03
L28+00S 11+00WS	0.9	22	26	315	1.2	5933	319	2.55
L28+00S 11+25WS	0.5	11	14	79	<0.1	2287	41	1.13
L28+00S 11+50WS	0.6	24	36	145	<0.1	3521	80	2.13
L28+00S 11+75WS	1.4	32	51	214	<0.1	4926	201	3.66
L28+00S 12+00WS	1.1	24	31	258	1.1	5909	286	3.02
L28+00S 12+25WS	0.4	11	28	106	<0.1	4351	40	1.45
L28+00S 12+50WS	0.6	23	30	249	0.2	2663	110	1.97
L28+00S 12+75WS	1.8	11	24	246	0.3	2135	391	1.86
L28+00S 13+00WS	0.5	18	25	104	<0.1	2225	48	1.71
L30+00S 09+00WS	0.6	17	33	233	0.1	7248	78	4.19
L30+00S 09+25WS	0.3	14	27	133	<0.1	3039	63	1.96
L30+00S 09+50WS	0.6	15	36	182	0.9	3615	65	2.22
L30+00S 09+75WS	0.6	19	25	149	<0.1	2820	53	1.94
L30+00S 10+00WS	0.3	25	15	310	<0.1	3669	37	2.08
L30+00S 10+25WS	0.4	29	19	299	0.7	2204	98	2.07
L30+00S 10+50WS	0.1	5	7	38	<0.1	1815	21	0.46

	Ag	Cu	Pb	Zn	Cd	Ba	Mn	Fe
Min Limit	0.1	1	2	1	0.1	2	1	0.01
Max Reported*	99.9	20000	20000	20000	99.9	9999	9999	9.99
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

INTERNATIONAL PLASMA LABORATORY LTD.

2036 Columbia Street
Vancouver, B
Canada V5Y 3L
Phone (604) 879-7878
Fax . (604) 879-7898

CERTIFICATE OF ANALYSIS
iPL 94G2602

Client: Metall Mining Corporation
Project: 677 104 Soil

iPL: 94G2602 M
Out: Aug 08, 1994
In: Jul 26, 1994 [035014:59:1] 94]

Certified BC Assayer: David Chiu

Sample Name		Ag ppm	Cu ppm	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mn ppm	Fe %
L30+00S	10+75WS	0.4	9	13	68	<0.1	2637	22	0.94
L30+00S	11+00WS	1.1	20	29	269	<0.1	5335	59	2.61
L30+00S	11+25WS	0.7	13	25	120	0.1	4015	41	1.40
L30+00S	11+50WS	0.8	18	22	161	1.6	5003	50	1.55
L30+00S	11+75WS	0.5	4	6	38	<0.1	2119	41	0.59
L30+00S	12+00WS	0.8	25	22	226	<0.1	3658	34	4.04
L30+00S	12+25WS	0.9	26	27	410	1.8	7204	102	2.80
L30+00S	12+50WS	0.7	18	33	218	<0.1	6694	62	2.58
L30+00S	12+75WS	0.8	17	39	168	0.1	5284	38	2.07
L30+00S	13+00WS	0.9	35	27	370	0.8	3513	315	3.85
L30+00S	13+25WS	0.5	22	21	185	<0.1	4390	36	3.34
L30+00S	13+50WS	0.6	65	27	267	0.1	4420	38	5.62
L30+00S	13+75WS	0.4	13	15	127	<0.1	5061	26	1.50
L30+00S	14+00WS	0.5	16	22	169	0.3	2355	143	2.33

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mn ppm	Fe %

	Ag	Cu	Pb	Zn	Cd	Ba	Mn	Fe
Min Limit	0.1	1	2	1	0.1	2	1	0.01
Max Reported*	99.9	20000	20000	20000	99.9	9999	9999	9.99
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

	Ag	Cu	Pb	Zn	Cd	Ba	Mn	Fe
Min Limit	0.1	1	2	1	0.1	2	1	0.01
Max Reported*	99.9	20000	20000	20000	99.9	9999	9999	9.99
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

Appendix III

Diamond Drill Log

HOLE NUMBER: P-94-01

MINNOVA INC.
DRILL HOLE RECORD

DATE: 19-October-1994
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: GATAGA
PROJECT NUMBER: 677
CLAIM NUMBER: PIE 1
LOCATION: PIE CLAIMS

PLOTTING COORDS GRID: PIE
NORTH: 7100.00N
EAST: 2910.00E
ELEV: 1795.00

ALTERNATE COORDS GRID:
NORTH: 0+ 0
EAST: 0+ 0
ELEV: 0.00

COLLAR DIP: -70° 0' 0"
LENGTH OF THE HOLE: 520.00m
START DEPTH: 0.00m
FINAL DEPTH: 520.00m

COLLAR GRID AZIMUTH : ° ' "

COLLAR ASTRO. AZIMUTH : 45° 0' 0"

DATE STARTED: July 11, 1994
DATE COMPLETED: July 20, 1994
DATE LOGGED: 0, 0

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: NO

PULSE EM SURVEY: NO
CAPPED: NO
HOLE SIZE: NQ

CONTRACTOR: BRITTON BROS.
CASING: 12.2 M
CORE STORAGE: ON SITE

PURPOSE: TEST DOWNDIP EXTENSION OF BEDDED BA, PYRITIC SHALES & SPH VEINING IN THE VICINITY OF PIE PbS SHOWING

COMMENTS :

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
61.00	-	-69° 0'	ACID	OK	
121.90	-	-69° 0'	ACID	OK	
182.80	-	-68° 0'	ACID	OK	
243.80	-	-67° 0'	ACID	OK	
304.80	-	0° 0'	ACID		WATER IN TUBE
365.80	-	-66° 0'	ACID	OK	
426.70	-	-65° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

Paul Baxter

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 12.20	CASING «CASING»					
12.20 TO 149.00	NONSILICEOUS SHALE «NS SHALE»	Black, f.gr. shales with occasional speckled silicified cm scale silty beds. Locally coarse sand to pebble conglomerate generally <10cm Bedding defined by weakly pyritic beds and coarser grained beds. Thin beds possibly transposed? 29.0 bedding @ Minor chert pebble conglomerate beds with fine pyrite fragments more concentrated (10%) at base of beds 38.9 -graded bedding indicates tops uphole 38.2-39.1 -cherty interval, fine sandy texture, limestone beds, fine pyrite fragments common 56.8 -bedding defined by pyrite bands @ 72.5 bedding @ ⟨73.0-74.9⟩ «FLT@45» -Fault zone, sheared gougy graphitic shales 83.6 bedding @ 91.3 Bedding @ 106.2 Bedding @ ⟨106.8-107.3⟩ «FLT@40»	40 35 45 50 60 54		3-5% disseminated py within <1cm siliceous white speckled silty beds 38.2 -up to 10% pyrite diss. and fine fragments -pyritic beds decreasing below 42 m but where pyrite occurs it is concentrated within 2-3 cm bands of up to 20-30% py 63.8 -5 cm 20% finely diss. pyrite 72.3-72.7 -7-10% v.f.gr. laminated pyrite 74.9 -1 cm massive, f.gr. pyrite bed 91.1-91.3 -5% diss py 91.3 -8 cm massive, f.gr. laminated py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-Fault zone, gougy sheared pyritic fault zone 107.3 Bedding @ 107.3-121.0 -foliation shallow 25-35 deg to c.a. 121.5 Bedding @ 144.7-149.0 «FLT» -fault zone, black clay fault gouge	45 40	127.0-143.8 -weak quartz dolomite veining		
149.00 TO 163.50	MASSIVE SHALE «SHALE»	Black, f.gr., moderately foliated graphitic along foliation planes, massive			149.0-151.6 -1-3% pyrite as 2-3 mm aggregates of ultrafine py some with botryoidal outlines	
163.50 TO 241.80	NON SILICEOUS SHALE «NS SHALE»	Black, f.gr. shales with occasional cm scale light grey (dry color) silty beds/laminations 167.8 Bedding @ 178.6 Bedding within pyrite rich band @ 229.0 -thin, lighter grey silty beds becoming calcareous 234.9 -bedding within silty beds @	55 65 45		Rare, pyrite rich laminations which are generally white speckled, baritic? 168.0 -15 cm 70% ultrafine bedded pyrite -bedding @ 30 deg 178.6 2 cm of 70% py 191.5 -10 cm 20% finely diss pyrite and mm scale massive py laminations -bedding @ 40 deg to c.a. 200.6 -5 cm, 30-40% finely diss. py, weakly laminated at 50 deg to c.a. 215 - 241.8 -patchy 1-3% diss pyrite with occasional pyrite laminations	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
241.80 TO 252.50	PYRITIC SHALE «PY SHALE»	Black, f.gr., mod foliated thinly bedded defined by pyritic laminations and lighter grey silty laminations 244.1-248.6 -<1% possible barite nodules containing diss pyrite -bedding angle fairly consistent @	65		Patchy 3-4% finely diss pyrite and 2-5 mm wide pyrite laminations	
252.50 TO 300.20	NONSILICEOUS SHALE SILTSTONE INTERBEDS «SHALE/SLT»	Black, nonsiliceous shale with common lighter grey fine silty calcareous siliceous beds varying from <1 to 30-40 cm thick (general 5-15 cm). Downhole silty beds becoming less siliceous and less calcareous 267.5 Bedding @ 275.0 Bedding @ 280.0 Bedding @ - x-bedding indicates right way up 295.1 Bedding @ 296.5-300.2 -gradational lower contact -silty interbeds becomining less abundant, increasing occurrence of ultrafine py laminations	60 60 60 60		252.5-271.2 -overall 1-3% pyrite as v.f. dissem. occasional lamination and wispy discontinous laminae 296.5 -begin to see 1-2 m very dark ultrafine py laminations	
300.20 TO 399.30	BARITIC PYRITIC SHALES «BA-PY SHALES»	Black, soft shale with minor light grey, calcareous fine silty interbeds <1% barite? as 1-2 mm round siliceous nodules occurring as a single layer of nodules, rarely do nodules persist over any width Unit characterized by common 1-3 mm thick dark u.f.gr. pyrite laminations 311.1 Bedding @ 313.6 Bedding @ 322.5 Bedding @	65 60 60		Common, 1-3 mm wide dark u.f.gr. pyrite laminations overall pyrite content 5% 326.15 -3 cm of semi-massive to massive	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		335.3 Bedding @	63		pyrite laminations	
		340.3-357.7 -increasing barite content; 5% 2-3 mm rounded barite nodules forming single layer beds and occasionally concentrated over 2-10 cm widths (10%)			-increasing pyrite content 7-10% pyrite laminations	
		361.2 Bedding @	65			
		357.7-375.9 -gradually decreasing nodular barite and laminated pyrite content				
		375.9-385.8 -massive, barren of barite, 1-2% ultrafine diss pyrite				
		⌈385.8-388.5⌋ «Bdd Ba» -bedded and nodular barite; generally 1 cm wide beds of 60-90% barite and 2-3% nodular barite mixed with pyritic soft black shale			-3-5% pyrite mainly as very fine dissemination; lesser pyrite as larger aggregates within barite nodules	
		388.5-396.4 -2-5% blebby, nodular barite in 2-3 cm beds			-5-7% pyrite, finely diss, thin laminations and within barite nodules	
		⌈396.4-399.3⌋ «blebby bdd Ba» -blebby barite concentrated in 2-10 cm thick beds within beds up to 40% barite blebs -Bedding @	65		-higher barite content but much less pyrite, 2-3%, intergrown within barite nodules	
399.30 TO 449.90	SHALE, SILT STONE, SAND STONE «SH-SLT-SS»	Predominantly black, massive shale with occasional cm scale tan silty interbeds. Thicker lighter grey silt to fine sand interbeds from 406.6-407.2 and 407.6-408.6 Thick, silicified sand/silt interval grading up to shale and chert from 419.3-423.7; 436.6-446.4; 449.3-449.9 Crossbedding and scour marks indicate tops up hole (right way up)			1-2% diss pyrite	Same sequence of three sand-silt-shale intervals intersected in RioCanex holes 80-1 and 80-2

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		406 Bedding @	70			
449.90 TO 520.00	MASSIVE SHALE «MASS SHALE » E.O.H.	Black, f.gr. massive shale. Rare calcareous round concretions 491.8-493.0 «FAULT» -black clay fault gouge, fault breccia, -faulting possibly at 15-20 deg to c.a.		Very weak quartz carbonate veining, weakly silicified	3-5% pyrite associated with calcareous concretions; rare pyritic laminations 464.6-473.4 -2-3% very finely disseminated pyrite throughout Below 473.4 -<1 to 1% fine. diss pyrite	

HOLE NUMBER: P-94-01 LITHOGEOCHEM. SHEET DATE: 19-October-1994

Sample	From (m)	To (m)	Length (m)	AL203 %	BA %	CAO %	FE203 %	K20 %	MGO %	MNO2 %	NA20 %	P205 %	SIO2 %	SR %	TIO2 %	S %	LOI %	AG PPM	AS PPM	XBA PPM	CD PPM	CU PPM	PB PPM	SB PPM	ZN PPM	AU PPB	MNO %
46976	14.30	17.30	3.00	8.84	.600	.80	3.13	1.75	.52		.36	.37	76.02	.015	.48	1.40	6.00	.8	1	945		55	35	9	301	5	.01
46977	29.60	32.60	3.00	9.42	.665	1.13	2.58	1.86	.67		.37	.33	75.53	.015	.53	1.52	5.80	1.1	1	1316		55	43	11	399	5	.01
46978	60.00	63.10	3.10	10.71	.815	2.55	3.55	2.37	1.14		.35	.36	69.41	.030	.55	1.70	7.40	1.2	1	820		45	234	12	1391	5	.02
46979	87.50	90.50	3.00	17.05	.455	.71	3.75	3.48	1.29		.07	.01	64.08	.015	.87	.67	7.20	.1	1	1378		45	42	9	237	5	.02
46980	120.00	122.50	2.50	13.41	.440	2.23	4.00	2.64	1.30		.34	.04	66.37	.025	.68	1.57	7.50	1.4	1	1082		64	39	12	431	5	.02
46981	154.50	157.60	3.10	14.39	.480	5.09	4.48	2.78	2.19		.26	.01	58.53	.025	.68	1.02	10.30	.5	1	1157		36	36	9	252	5	.04
46982	184.70	186.80	2.10	13.10	.660	3.82	5.13	2.66	1.68		.41	.01	61.97	.025	.67	2.01	8.90	.9	1	745		53	39	9	296	5	.03
46983	215.50	218.50	3.00	12.72	.345	6.28	5.89	2.46	2.45		.25	.05	56.34	.025	.61	9.45	11.50	.3	1	1053		38	33	9	158	5	.06
46984	244.60	247.80	3.20	11.19	.600	2.55	2.86	2.55	1.22		.14	.01	69.59	.020	.52	1.17	7.80	1.3	1	1452		35	26	16	325	5	.01
46985	277.00	280.00	3.00	11.35	.620	3.04	2.95	2.80	1.40		.13	.02	68.29	.020	.54	1.16	7.90	1.3	1	1634		39	29	16	379	5	.01
46986	316.00	319.00	3.00	12.06	.785	3.04	3.19	2.91	1.45		.15	.04	67.28	.015	.57	1.12	7.40	1.6	1	946		34	25	12	256	5	.01
46987	343.30	346.30	3.00	10.63	1.855	3.58	3.72	2.64	1.35		.19	.10	66.89	.025	.51	1.58	7.60	1.3	1	329		35	32	17	193	5	.02
46988	370.90	374.00	3.10	11.33	1.005	2.61	3.39	2.91	1.17		.09	.01	68.80	.025	.54	1.59	7.00	1.1	1	437		36	29	15	579	5	.01
46989	404.50	407.50	3.00	10.97	.245	6.26	2.00	2.68	.91		.21	.06	68.74	.030	.24	.73	6.90	.7	1	898		15	26	11	652	5	.06
46990	421.60	434.90	13.30	10.84	.190	2.24	1.98	3.71	.74		.28	.09	74.22	.020	.20	.39	4.40	.6	1	519		11	31	9	550	5	.02
46991	465.40	468.20	2.80	8.93	.185	1.56	2.22	2.67	.79		.19	.05	74.08	.015	.29	.97	8.00	1.3	1	793		34	33	14	1337	5	.01
46992	468.20	471.00	2.80	12.97	.130	2.80	1.98	3.78	.89		.04	.06	70.67	.015	.27	.31	5.30	1.1	1	452		49	30	10	179	5	.01

Total amount of samples= 17
Total length sampled = 60.0M

Sample	From (m)	To (m)	Length (m)	ASSAYS aZn %	aPb %	aAg g/t	aBa %	aCd %	aS %	GEOCHEMICAL Zn ppm	Pb ppm	Ag ppm	Ba ppm	Cd ppm	Cu ppm	S.G.	COMMENTS
33501	91.20	91.35	0.15							118	134	2.4	.12	.6	33		
33502	168.00	168.15	0.15							195	52	1.8	.17	.5	78		
33503	301.50	302.80	1.30							241	24	1.6	.54	2.7	34		
33504	326.00	326.30	0.30							1210	26	2.2	6840	10.8			
33505	347.30	347.90	0.60				2.02			738	26	2.4		7.4			
33506	355.70	357.70	2.00				1.87			169	19	1.9		1.6			
33507	385.80	387.10	1.30				6.49			526	21	1.5		6.8			
33508	387.10	388.50	1.40				13.30			675	18	1.5		8.2			
33509	388.50	390.10	1.60				3.36			620	20	2.0		8.3			
33510	390.10	391.10	1.00				3.64			59	17	2.0		.7			
33511	396.40	399.30	2.90				5.58			430	18	1.3		4.6			

Total amount of samples= 11
Total length sampled = 12.7M

PIE 10

PIE 6

PIE 5

PIE 99

PIE 100

2100

2000

1900

1800

1700

1600

1500

1400

1300

1200

1000

N

94 PIE F GRID

ANOMALOUS VALUES

Cd ppm Mn ppm

Cd > 2.4 ppm

Mn > 328 ppm

METALL MINING CORPORATION	MAP No. 5d
GATAGA PROJECT PIE CLAIMS SOIL GEOCHEMISTRY Cd ppm Mn ppm	Paul Byth
DATE : OCTOBER 1994	FILE : PIEAS25
DRAWN BY : PTB/sg	SCALE : 1:5,000
REVISED :	0 50 100 150 200 250m

PIE 10

PIE 6

PIE 5

PIE 99

PIE 100

2100

2000

1900

1800

1700

1600

1500

1400

1300

1200

1000

94 PIE F GRID

2600 S

2800 S

3000 S

500V

900V

N

ANOMALOUS VALUES

Ag ppm Ba ppm

—— Ag > 0.93 ppm

– – – – Ba > 9141 ppm

METALL MINING CORPORATION

MAP No. 5c

GATAGA PROJECT
PIE CLAIMS
SOIL GEOCHEMISTRY
Ag ppm Ba ppm

DATE : OCTOBER 1994

FILE : PIEAS25

DRAWN BY : PTB/sg

REVISED :

SCALE : 1:5,000

0 50 100 150 200 250m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,563

PIE 10

PIE 6

PIE 5

PIE 99

PIE 100

2100

2000

1900

1800

1700

1600

1500

1400

1300

1200

1000

1800

1700

1600

1500

1400

1300

1200

1000

94 PIE F GRID

2400 S

2800 S

3000 S

300W

N

ANOMALOUS VALUES
Cu ppm Fe %
Cu > 60 ppm
Fe > 4.49 %

METALL MINING CORPORATION	MAP No. 5b
GATAGA PROJECT PIE CLAIMS SOIL GEOCHEMISTRY Cu ppm Fe %	
DATE : OCTOBER 1994	FILE : PIEAS25
DRAWN BY : PTB/sg	SCALE : 1:5,000
REVISED :	0 50 100 150 200 250m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,563

PIE 10

PIE 6

PIE 5

PIE 99

PIE 100

2100

2000

1900

1800

1700

1600

1500

1400

1300

1200

1000

94 PIE F GRID

2600 S

2800 S

3000 S

300W

900W

N

ANOMALOUS VALUES

Pb ppm Zn ppm

Pb > 58 ppm

Zn > 494 ppm

METALL MINING CORPORATION	MAP No. 5a
GATAGA PROJECT PIE CLAIMS SOIL GEOCHEMISTRY Pb ppm Zn ppm	Paul Batista
DATE : OCTOBER 1994	FILE : PIEAS25
DRAWN BY : PTB/sg	SCALE : 1:5,000 0 50 100 150 200 250m
REVISED :	

PIE 8

PIE 4

PIE 3

PIE 1

PIE 2

PIE 11

KWADACHA LIMESTONES

SILURIAN SILTSTONES

DEVONIAN SHALES

1500
1600
1700
1800
1900
2000
2100

PIE GALENA SHOWING

CORE STORAGE

P-94-1

N

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,563

METALL MINING CORPORATION

MAP No. 6

GATAGA PROJECT
PIE CLAIMS
1994 DIAMOND DRILL HOLE
LOCATION MAP

Paul Bayliss

DATE : OCTOBER 1994
DRAWN BY : PTB/sg
REVISED :

FILE : PIEASDDH

SCALE : 1:5,000
0 50 100 150 200 250m