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Geochemical Assessment Report

AKIE Claims

NTS 94F/7W

Omineca Mining Division

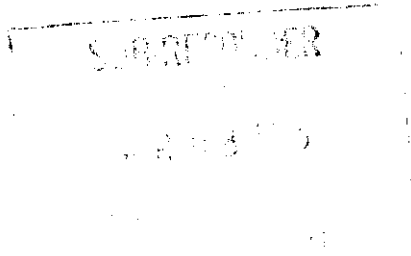
Latitude: 57° 24' N Longitude 124° 53' W

Owner: Ecstall Mining Corporation

Operator: Minnova Inc.

AKIE GROUP

AKIE 1
AKIE 2
AKIE 3



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

22,822

G. S. Wells
Minnova Inc.

December, 1992
Vancouver, B.C.

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Soil Geochemical Assessment Report
AKIE Claim Group

1. INTRODUCTION

Minnova acquired an option on the AKIE claims from Ecstall Mining Corporation in June, 1992 to assess their potential for hosting a SEDEX-style Ba-Pb-Zn massive sulphide deposit. This report describes the results of soil and rock geochemical surveys carried out on the AKIE claim group during the period of July 28th to 30th, 1992 inclusive.

a. Location, Access and Physiography

The AKIE 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, 45 km west and 35 km west southwest of the claims respectively.

Access to the area is improving and logging roads should be present in the Del Creek and Akie River watersheds by 1994. During the current exploration program, the property was accessed using a Pacific Western Bell 206B helicopter based at the Finbow logging camp.

Topographic relief on the AKIE claims is moderate to steep with elevations ranging between 1500 and 1900 metres ASL. Over half of the area is above tree line which occurs at an elevation of approximately 1700 m ASL. The alpine area is covered with grassy slopes or talus debris. Creek valleys and treed slopes are covered with a dense forest of pine, balsam and spruce.

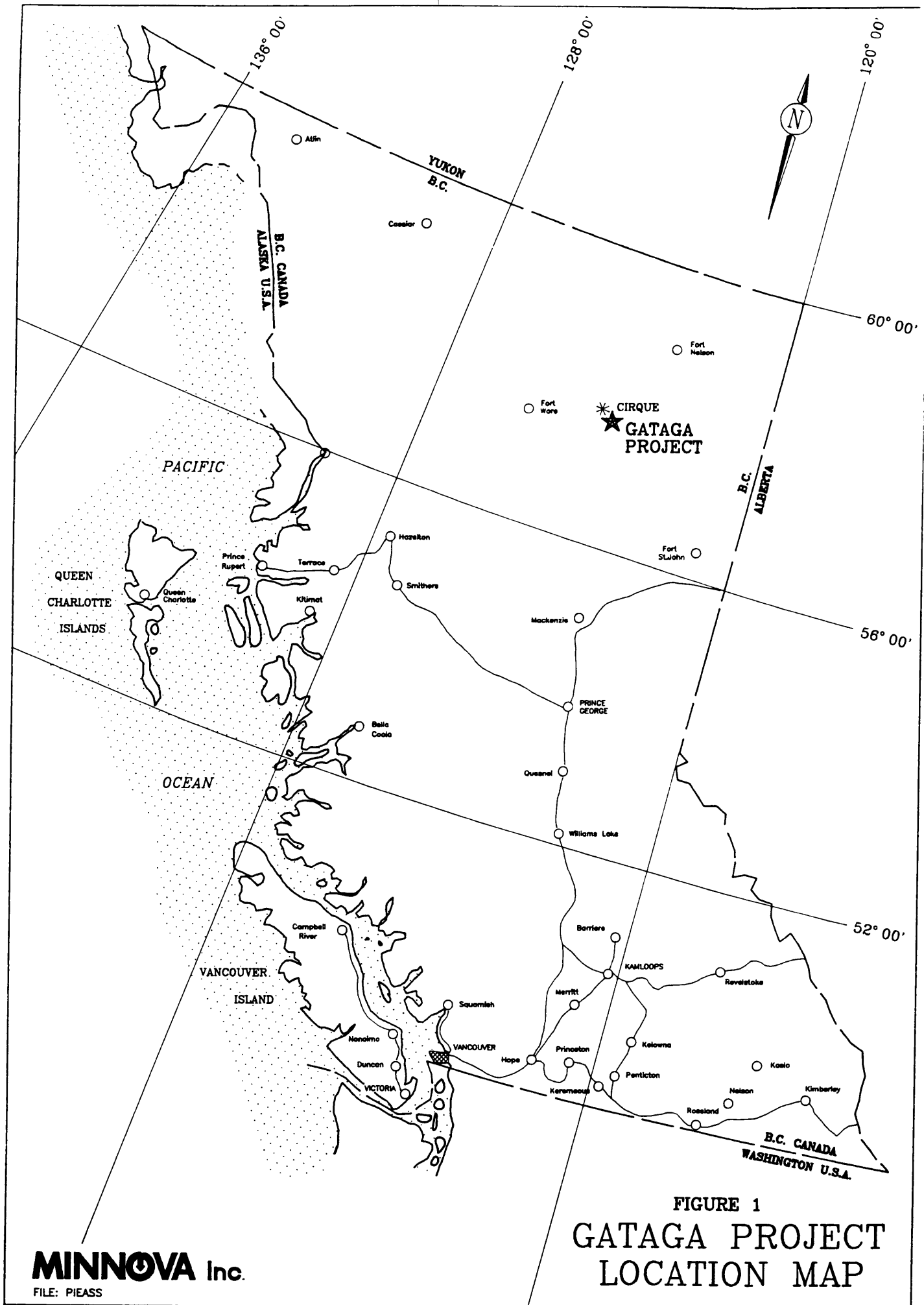


FIGURE 1
**GATAGA PROJECT
 LOCATION MAP**

b. Mineral Rights

The soil sampling was carried out on the Akie 1, 2 and 3 claims which form the AKIE group (Figure 2). The status of these claims is as follows:

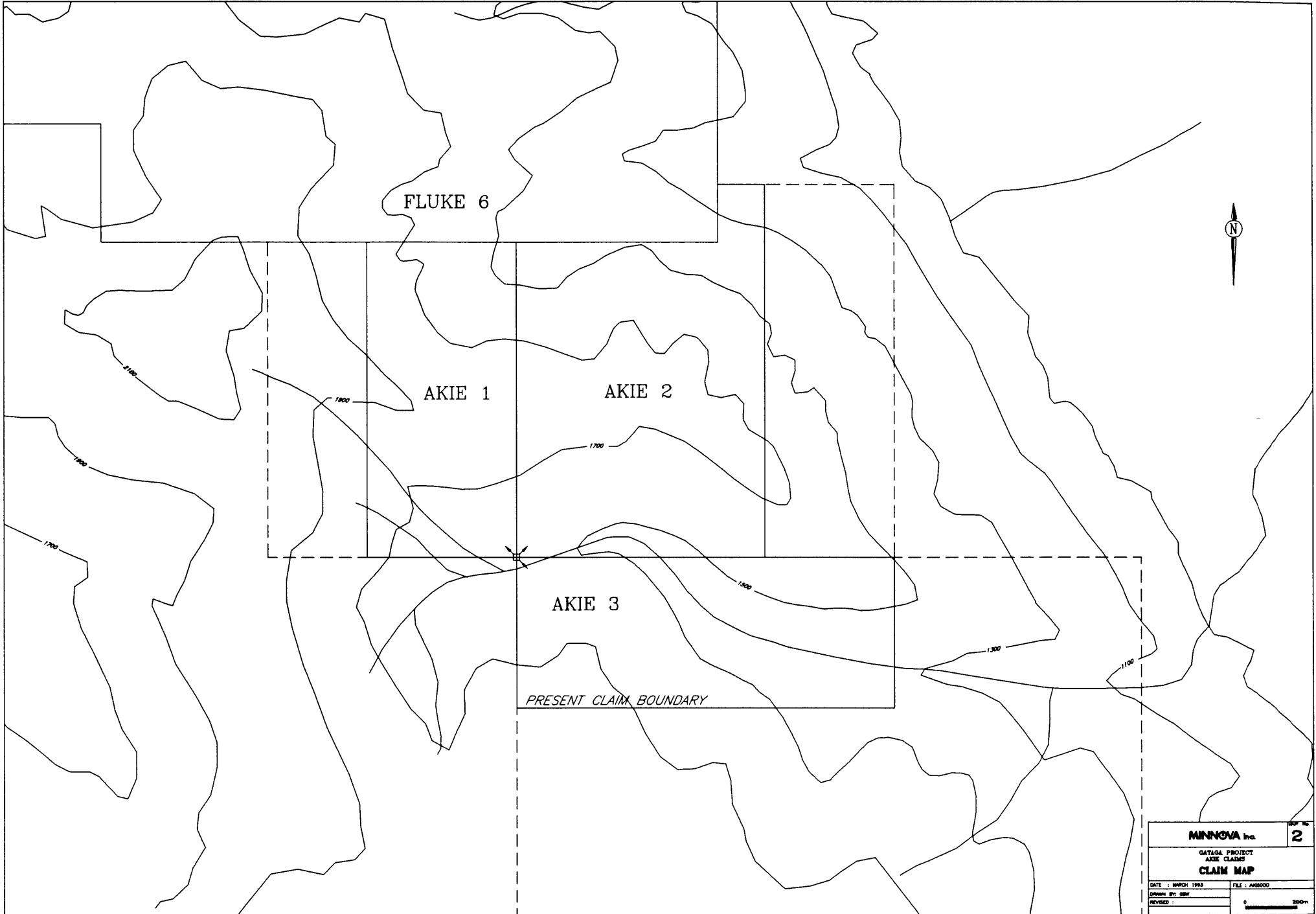
AKIE GROUP

<u>Claim</u>	<u>Title Number</u>	<u># of Units</u>	<u>Month of Record</u>
AKIE 1	240791	3	June
AKIE 2	240792	6	June
AKIE 3	240793	3	June

c. Previous Work

The AKIE claims were originally staked as part of the Dog claim group by Rio Canex in 1978 to cover an area of anomalous Pb in stream sediment silt samples. During the period 1979 to 1981 geological, soil geochemical and VLF surveys were completed. Broad, ill-defined zones of anomalous Pb, Zn, Ag and Ba in soils were outlined in areas underlain by Gunsteel shales. No mineralization was discovered and no followup evaluation of the soil anomalies was done. The Dog claims were eventually allowed to lapse. In 1989 Ecstall Mining restaked three claims adjacent to the southern edge of the Fluke claims. No work was done and the property has been gradually reduced to its current size of 12 units.

The most recent government mapping in the area is D. A. MacIntyre's (1980) 1:125,000 scale map which covers the area between Driftpile Creek and the Akie River.



MINNOVA Inc.		MAP NO.
GATAGA PROJECT AKIE CLAIMS		2
CLAIM MAP		
DATE : MARCH 1983	FILE : A88000	
DRAWN BY : JSM		
REVISED :		200'

2. GEOLOGY

a. Regional

The AKIE 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 @ 8.1% Zn and 2.2% Pb.

b. Local

The AKIE claims have been mapped at a 1:10,000 scale by J. Thompson (1980). This work is supplemented by observations taken during the current sampling program. A generalized view of the geology and stratigraphy is presented in Figures 3 and 4 respectively. The claim block is underlain by a northwesterly trending panel of recessive weathering, Devonian shales which are overlain by brownish orange weathering Silurian to Ordovician siltstones and shales. Two parallel, bedded and blebby barite

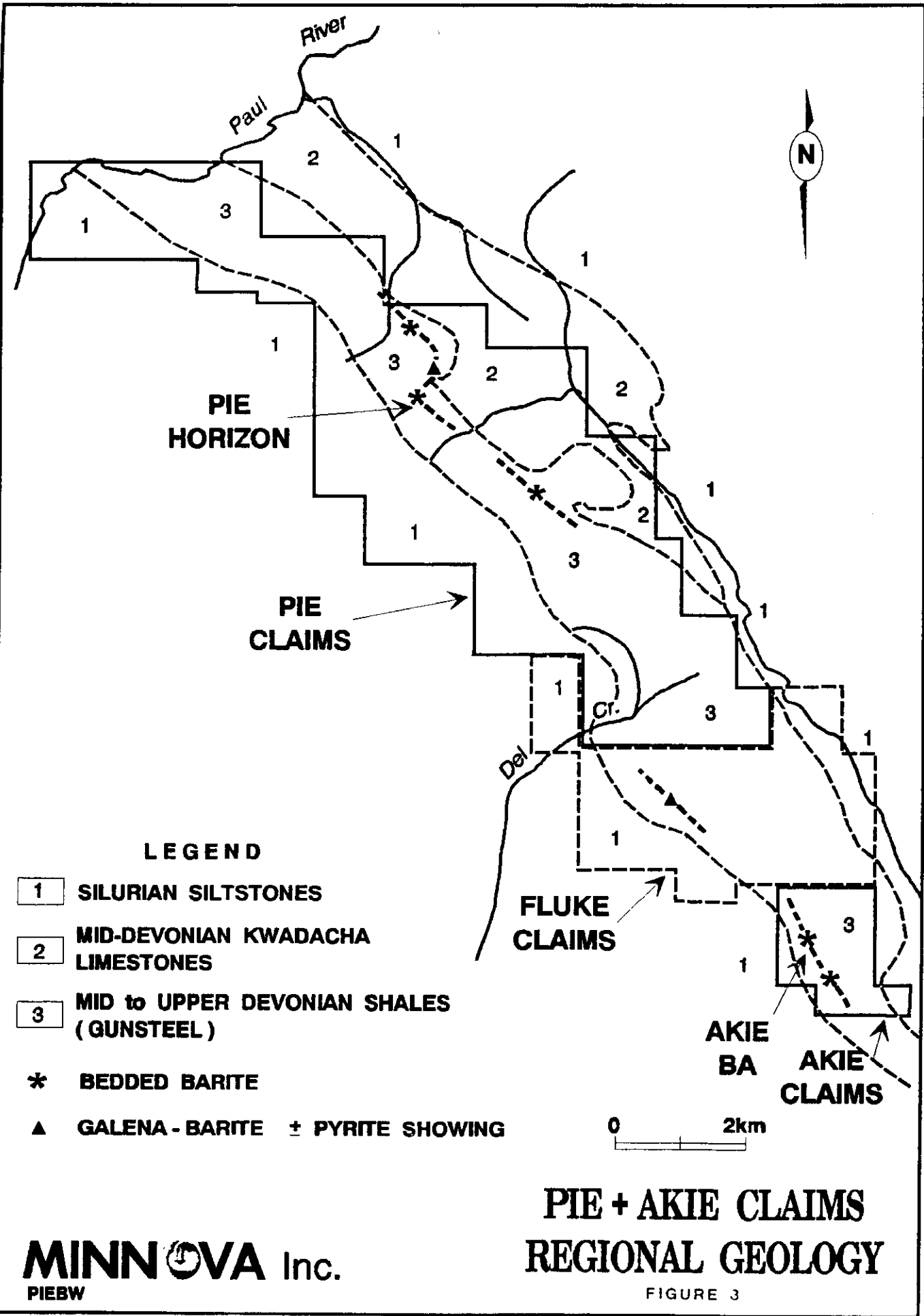
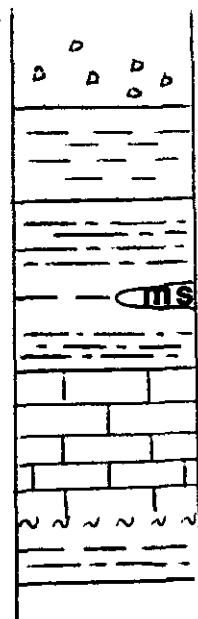


FIGURE 4 : GENERALIZED STRATIGRAPHY – SOUTH GATAGA AREA
 (after MacIntyre 1992)



AGE	GROUP	FORMATION	ROCK TYPES
U Devonian, Mississippian	Earn	Warneford	chert pebble conglomerate
		Akie	siltstone
Mid - Upper Devonian	Earn	Gunsteel	shale, bedded - nodular barite, mass sulphides
Lower - Mid Devonian	Road River	Kwadacha	fossiliferous limestones
Silurian	Road River		shales, siltstones, cherts

horizons occur in the Devonian shales (Gunsteel Fm) and have been traced across the AKIE claim group. These units are interpreted to be equivalent to the Fluke and Elf Pb-Zn horizons.

3. SOIL GEOCHEMISTRY

a. Survey Objectives

A multi-element ICP soil survey was carried out over the northern part of the AKIE claim group:

- i. to evaluate the strike extent of previously defined Pb anomalies

and

- ii. to trace and define areas of anomalous metal content along barite horizons identified on the property.

b. Sampling Procedures

Soil samples were collected at 25 metre intervals on widely spaced (200 m+) flagged lines. The B soil horizon was sampled. It is usually well developed and varies in colour from grey to brownish grey. Sample depths ranged between 5 and 20 cm below the surface. Samples varying in size between 300 and 500 grams were placed in Kraft paper bags, labelled with sample locations. The filled bags were dried in the field and then 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 a 1:5000 scale on Figure 5. Statistical data for soil sampling on the AKIE and YN claim groups 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

Soils with anomalous Pb, Ba and Ag values occur near the baseline and extend over a 400 to 600 meter strike length. This anomaly is the extension of the previously defined Pb anomaly located south of the current work. It also occurs immediately downslope of one of the barite horizons defined during the 1992 field work.

A second Ba anomaly occurs near the southwestern edge of lines 2S and 0. This may be associated with another barite horizon.

Other metal values for the AKIE soils are low except of the odd, spotty iron or manganese high.

4. LITHOGEOCHEMISTRY

Lithogeochemical samples were collected during traverses on the Akie claims to establish if there are any zones of metal enrichment or alteration in the Gunsteel shales. Rock samples ranging in size from 0.5 to 0.8 kg were collected in plastic bags and shipped to Min-En Labs in Vancouver for analysis. Fifteen samples were analysed for Al_2O_3 , Ba, CaO, Fe_2O_3 , K_2O , MgO, Na_2O , P_2O_5 , SiO_2 , Sr, TiO_2 . LOI, S, Ag, As, Ba, Cu, Pb, Sb, Zn and Au using an ICP technique. Five samples were analysed for Cu, Pb, Zn, Ag and

Table 1 : YN and AKIE SOIL SAMPLES – STATISTICAL DATA

ELEMENT	UNITS	N	MINIMUM	MAXIMUM	DISTRIBUTION	MEAN	STANDARD DEVIATION	ANOMALOUS VALUES
Ag	ppm	681	0.05	4.2	normal	0.41	0.38	1.17
Ba	ppm	686	296	23406	log normal	2270	1.78	7211
Cd	ppm	687	0.05	38	normal	0.39	0.78	1.95
Cu	ppm	694	3	217	log normal	19.5	1.82	65
Fe	%	692	0.26	30.08	normal	2.21	1.25	4.71
Mn	ppm	689	6	8193	log normal	119	3	1071
Pb	ppm	690	1	382	log normal	24.7	2.12	110.6
Zn	ppm	686	14	16101	log normal	135.2	2.04	561

Ba using a wet chemical technique. Sample preparation procedures and analytical techniques are described in Appendix I and analytical certificates are included in Appendix II.

a. Results

Sample descriptions and Pb, Zn, Ba results are compiled in Table 2. and locations are plotted in Figure 6. In general, metal contents of the Gunsteel shales are low. Only three samples have greater than 100 ppm Pb or Zn. Two of the samples with anomalous Pb also have anomalous Ba, but in general, the barite-rich samples have low metal values. A review of the whole rock data indicates that there is no obvious alteration patterns. Na₂O values are less than 1% but this is characteristic of the host rock.

5. CONCLUSIONS AND RECOMMENDATIONS

The soil survey on the northwestern part of the AKIE claims outlined a Pb-Ba±Ag anomaly which is the extension of a previously defined Pb soil anomaly. This zone is located downslope of a barite horizon. A second Ba soil anomaly is located to the SW of the first zone.

The lithogeochemical work did not locate any significant alteration zones or zones of metal enrichment. Baritic shales with anomalous Pb values occur downslope of both soil anomalies.

Future work on the property should include detailed prospecting, mapping and lithogeochemical sampling in the vicinity of the soil anomalies. Outcrop exposure in the area may be poor due to talus debris and consequently diamond drill testing of the best soil anomalies may be necessary.

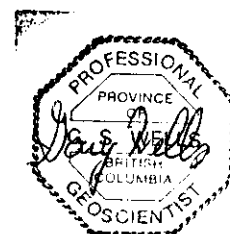


TABLE 2 : LITHOGEOCHEMICAL SAMPLES - AKIE CLAIMS

SAMPLE	CLAIM	ROCK TYPE	PB ppm	ZN ppm	BA %
11510	AKIE	shale	36	34	1.33
11600	AKIE	shale	18	10	0.845
11762	AKIE	shale	17	161	0.59
11764	AKIE	shale	38	28	0.58
11509	AKIE	shale	29	20	0.635
11754	AKIE	shale	13	1	0.345
11599	AKIE	shale	122	1	0.78
11524	AKIE	shale	28	5340	0.16
11525	AKIE	shale	86	1810	0.81
11755	AKIE	shale	143	15	2.045
11753	AKIE	siliceous shales	14	1	0.245
11751	AKIE	siliceous shales	9	1	0.27
11763	AKIE	blebby barite in shale	99	50	3.575
11514	AKIE	blebby barite in shale	149	19	1.285
11523	AKIE	blebby barite in shale	83	93	5.46
11752	AKIE	baritic mud	23	15	14.62
11511	AKIE	siltstone	1	36	0.13
11515	AKIE	siltstone	28	11	0.48
11512	AKIE	qtz vein	2	4	0.38
11513	AKIE	qtz vein	10	11	0.165

6. COST STATEMENTClaim Group: AKIE

filed for \$ 7,200

-work done on AKIE 1, 2 and 3

1. Salaries

M. Lorimer	2 days @ \$125/day	\$250
S. McCallum	2 days @ \$125/day	\$250
S. Blower	2 days @ \$300/day	\$600
P. Baxter	2 days @ \$250/day	\$500
G. S. Wells	2 days @ \$350/day	\$700

2. Transportation

Truck rental and gas	\$200
Helicopter charter 4 hrs @ \$800/hr	\$3200
Air Service - McKenzie-Finbow (pro-rated crew mob-demob + sample shipments)	\$200

3. Accommodation/food at Finbow Camp

10 man days @ \$75/day (includes helicopter pilot)	\$750
---	-------

4. Analyses

60 soils @ \$6.00/sample	\$360
15 lithos @ \$29.25/sample	438.75
5 Cu, Pb, Zn, Ag, Ba @ \$10.75/sample	53.75

5. Drafting

S. Gokool 1 day @ \$150/day	\$150
computer + plotting time	\$100

TOTAL

\$ 7,752.50

7. REFERENCES

MacIntyre, D.G. 1992; Geological setting and genesis of sedimentary exhalative barite and barite-sulphide deposits, Gataga district, northeastern British Columbia. Exploration and Mining Geology Vol. 1 pp. 1-20.

MacIntyre, D.G. 1980: Driftpile Creek - Akie River Project, B.C.M.E.M.P.R. Geological Fieldwork, 1979, Paper 1980-1 pp 55-67.

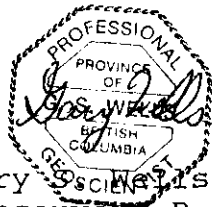
Thompson, J. 1980: Geology map - Dog Claims 1:10,000. Riocanex report by G.D. Hodgson.

8. STATEMENT OF QUALIFICATIONS

I, Gary S. Wells, hereby certify that:

1. I hold an Honours Bachelor of Science degree in combined geology and chemistry (1975) from Carleton University, Ottawa, Ontario and a Ph.D degree in geology (1980) from Queen's University, Kingston, Ontario.
2. I am an associate member of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.
3. I have practised by profession in exploration continuously since graduation in 1980.
4. I am registered as a professional geoscientist by the Association of Professional Engineers and Geoscientists of British Columbia.

Date: *March 5/93*


Gary S. Wells P. Geo
Vancouver, B. C.

Appendix I

Sample Preparation and Analytical Procedures



2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7888

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) Dried 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.



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.



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SMITHERS LAB:

3178 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3006

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK:**-----
PROCEDURE FOR WHOLE ROCK ANALYSIS
=====**

SiO₂, TiO₂, Al₂O₃, MnO₂, MgO, Fe₂O₃, CaO, Na₂O, K₂O, P₂O₅,
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 sample 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.



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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. Ltd.

ANALYTICAL PRECEDURE REPORT FOR ASSESSMENT WORK:

PROCEDURE FOR WET GOLD GEOCHEMICAL ANALYSIS

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 on a ring mill pulverizer.

5.00 grams of sample is weighed into porcelain crucibles and cindered @ 800 C for 3 hours. Samples are then transferred to beakers and digested using aqua regia, diluted to volume and mixed.

Further oxidation and treatment of 75% of the above solution is then extracted for gold by Methyl Iso-butyl Ketone.

The MIBK solutions are analyzed on an atomic absorption spectrometer using a suitable standard set.

OFFICE AND LABORATORIES:
5 WEST FIFTEENTH STREET, NORTH VANCOUVER, B.C.
CANADA V7M 1T2

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TELEX: VIA USA 7601067
FAX: (604) 980-9621

Appendix II

Analytical Certificates



INTERNATIONAL PLASMA LABORATORY LTD.

2036 Columbia Street
Vancouver, P
Canada V5Y
Phone (604) 879-7878
Fax (604) 879-7898

iPL Report: 9200591 M Minnova Canada
Project: 677

In: Aug 05, 1992
Out: Aug 10, 1992

255 Soil

Page 1 of 4

Section 1 of 1
Certified BC Assayer

David Chiu

Sample Name	Ag	Cu	Pb	Zn	Cd	Ba	Mn	Fe	Sample Name	Ag	Cu	Pb	Zn	Cd	Ba	Mn	Fe		
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%		ppm	ppm	ppm	ppm	ppm	ppm	ppm	%		
L 0+00N 0+25E	S	0.5	21	15	84	<0.1	1027	41	1.29	L 2+00N 4+25E	S	1.7	55	21	308	0.2	976	106	5.08
L 0+00N 0+50E	S	0.8	34	23	238	<0.1	1155	63	2.77	L 2+00N 4+50E	S	2.2	81	44	327	0.8	1062	175	7.65
L 0+00N 0+75E	S	0.5	26	18	138	<0.1	1122	53	1.85	L 2+00N 5+00E	S	2.2	75	38	323	0.7	979	152	6.91
L 0+00N 1+25E	S	0.5	31	27	143	<0.1	1773	36	2.05	L 2+00S 0+00	S	0.8	27	206	23	<0.1	1.0%	18	0.91
L 0+00N 1+75E	S	0.4	23	17	76	<0.1	693	53	2.01	L 2+00S 0+25E	S	0.2	8	27	29	<0.1	2387	43	0.78
L 0+00N 2+00E	S	1.4	39	26	195	<0.1	1005	51	2.41	L 2+00S 0+50E	S	0.6	7	57	20	<0.1	4149	25	0.63
L 0+00N 2+50E	S	0.2	47	24	193	<0.1	1382	39	3.20	L 2+00S 0+75E	S	1.1	18	202	34	<0.1	3019	23	2.81
L 0+00N 2+75E	S	0.3	42	17	140	<0.1	1129	68	2.43	L 2+00S 1+00E	S	2.7	30	166	117	<0.1	7380	33	1.85
L 0+00N 3+00E	S	0.4	23	21	119	<0.1	1018	41	1.46	L 2+00S 1+25E	S	1.5	26	164	149	<0.1	8357	40	2.45
L 0+00N 3+50E	S	3.3	94	26	1087	4.1	754	220	7.75	L 2+00S 1+50E	S	0.5	17	115	50	<0.1	6865	33	1.24
L 0+00N 0+25W	S	0.2	16	34	67	<0.1	4388	59	2.25	L 2+00S 2+00E	S	0.7	8	44	36	<0.1	2387	36	0.93
L 0+00N 0+50W	S	0.5	39	28	220	<0.1	3284	101	4.42	L 2+00S 2+25E	S	0.4	8	34	33	<0.1	4130	35	0.82
L 0+00N 0+75W	S	0.3	19	53	123	<0.1	4231	73	4.73	L 2+00S 2+75E	S	0.2	11	52	73	<0.1	4211	48	1.32
L 0+00N 1+00W	S	0.3	21	17	143	<0.1	3564	144	2.07	L 2+00S 3+00E	S	0.3	8	47	35	<0.1	2848	83	1.17
L 0+00N 1+50W	S	0.5	28	25	225	<0.1	4193	79	3.64	L 2+00S 3+25E	S	0.2	10	26	30	<0.1	4053	25	0.72
L 0+00N 2+25W	S	0.9	36	26	227	<0.1	2977	110	3.58	L 2+00S 3+50E	S	0.1	10	21	24	<0.1	3155	35	0.62
L 0+00N 2+50W	S	0.4	33	19	211	<0.1	2876	152	3.24	L 2+00S 3+75E	S	0.2	9	28	38	<0.1	3644	44	1.00
L 0+00N 2+75W	S	0.4	31	15	218	<0.1	2824	318	2.61	L 2+00S 4+00E	S	<0.1	8	15	37	<0.1	3478	38	1.24
L 0+00N 3+00W	S	0.6	37	10	122	<0.1	2.3%	310	3.31	L 2+00S 0+50W	S	1.4	10	44	19	<0.1	3525	30	0.58
L 0+00N 3+25W	S	0.4	18	22	113	<0.1	8071	51	1.77	L 2+00S 0+75W	S	1.0	17	161	29	<0.1	6997	43	1.78
L 0+00N 3+50W	S	0.4	10	11	50	<0.1	3639	110	1.09	L 2+00S 1+00W	S	0.5	17	24	53	<0.1	4763	32	1.21
L 0+00N 4+00W	S	1.2	25	22	89	<0.1	5562	36	3.09	L 2+00S 1+25W	S	0.5	20	32	102	<0.1	3971	33	1.50
L 0+00N 4+25W	S	2.0	77	6	289	<0.1	2549	282	7.63	L 2+00S 1+50W	S	0.7	18	28	128	<0.1	3895	77	1.88
L 0+00N 4+75W	S	0.2	8	5	39	<0.1	2045	174	0.67	L 2+00S 1+75W	S	0.3	18	31	80	<0.1	2888	39	1.38
L 0+00N 5+00W	S	0.1	19	8	144	<0.1	1594	128	1.96	L 2+00S 2+50W	S	0.4	23	69	193	<0.1	4035	37	2.17
L 2+00N 0+25E	S	0.6	20	353	82	<0.1	5960	36	2.94	L 2+00S 2+75W	S	0.4	30	32	225	<0.1	3294	113	2.30
L 2+00N 0+50E	S	0.8	15	382	62	<0.1	1979	62	3.84	L 2+00S 3+00W	S	0.2	27	14	112	<0.1	2374	47	1.33
L 2+00N 0+75E AC	S	0.7	12	109	56	<0.1	5212	29	2.27	L 2+00S 3+25W	S	0.9	27	17	137	<0.1	2.3%	224	2.63
L 2+00N 0+75E PC	S	0.3	26	21	145	<0.1	1425	46	1.99	L 2+00S 3+75W	S	0.1	13	16	68	<0.1	3137	64	1.22
L 2+00N 1+00E	S	0.7	18	29	89	<0.1	1090	102	2.03	L 2+00S 4+00W	S	0.3	21	42	84	<0.1	2759	48	1.78
L 2+00N 1+25E	S	0.7	23	28	80	<0.1	916	41	1.76	L 4+00N 0+00E BL	S	0.4	42	38	272	<0.1	6124	245	3.00
L 2+00N 1+50E	S	1.4	36	31	113	<0.1	1076	38	2.44	L 4+00N 0+25E AC	S	0.2	33	42	204	<0.1	7735	185	2.69
L 2+00N 1+75E	S	1.3	26	22	125	<0.1	1049	63	2.23	L 4+00N 0+25E PC	S	<0.1	25	31	69	<0.1	1621	41	1.72
L 2+00N 2+00E	S	0.4	31	19	135	<0.1	918	49	1.99	L 4+00N 0+50E	S	0.9	23	45	70	<0.1	1566	27	1.47
L 2+00N 2+25E	S	0.4	31	16	179	<0.1	712	32	1.85	L 4+00N 0+75E	S	0.9	56	67	318	<0.1	1240	97	4.04
L 2+00N 2+75E	S	0.5	29	34	108	<0.1	1568	25	2.85	L 4+00N 1+00E	S	1.0	31	69	211	<0.1	1471	36	2.69
L 2+00N 3+00E	S	0.7	31	53	265	0.3	1148	40	2.32	L 4+00N 1+25E	S	0.3	22	44	95	<0.1	1269	44	1.76
L 2+00N 3+75E	S	5.1	114	46	1148	13.3	732	2341	10.79	L 4+00N 2+50E	S	0.6	13	32	85	<0.1	1056	44	1.31
L 2+00N 4+00E	S	2.3	76	43	345	1.1	966	237	6.89	L 4+00N 3+00E	S	1.3	11	28	71	<0.1	917	66	0.99

Min Limit 0.1 1 2 1 0.1 2 1 0.01 0.1 1 2 1 0.1 2 1 0.01
 Max Reported* 99.9 9999 9999 9999 99.9 9999 9999 99.99 99.9 9999 9999 9999 99.9 9999 9999 99.99
 Method ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP 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 Lab Ltd. 2036 Columbia St. Vancouver BC V5Y 3E1 Ph:604/879-7878 Fax:604/879-7898

iPL Report: 9200591 M Minnova Canada
 Project: 677

In: Aug 05, 1992
 Out: Aug 10, 1992

255 Soil Page 2 of 4

Section 1 of 1
 Certified BC Assayer

[Signature]
 David Chiu

Sample Name	Ag	Cu	Pb	Zn	Cd	Ba	Mn	Fe	Sample Name	Ag	Cu	Pb	Zn	Cd	Ba	Mn	Fe
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%		ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
L 4+00N 3+25E	S 1.5	35	59	88	<0.1	1907	40	2.35	L17+00N 17+75W	S <0.1	11	28	33	<0.1	1977	43	0.62
L 4+00N 3+50E	S 1.3	16	31	78	<0.1	1115	44	1.37	L17+00N 18+00W	S 0.3	24	37	111	<0.1	3945	95	1.67
L 4+00N 3+75E	S 0.4	13	32	103	<0.1	1190	41	1.21	L17+00N 18+25W	S 0.1	24	31	99	<0.1	4286	44	1.36
L 4+00N 0+25W <i>Act</i>	S 0.8	77	46	407	2.1	4988	1275	5.91	L17+00N 18+50W	S 0.2	21	43	80	<0.1	5431	49	1.59
L 4+00N 0+25W <i>PC</i>	S 0.4	18	26	79	<0.1	1111	57	1.47	L17+00N 19+00W	S 0.7	81	46	356	0.5	5045	226	4.75
L 4+00N 0+50W	S <0.1	13	17	75	<0.1	1260	54	1.22	L17+00N 19+25W	S 0.5	31	44	147	<0.1	5836	60	2.23
L 4+00N 0+75W	S 0.5	19	37	137	<0.1	1729	115	2.56	L17+00N 19+50W	S 0.8	31	45	108	<0.1	5461	57	2.55
L 4+00N 1+25W	S 0.2	27	23	165	<0.1	1639	57	1.98	L17+00N 19+75W	S 1.2	58	37	115	<0.1	919	46	4.50
L 4+00N 1+50W	S 0.2	29	19	192	<0.1	1436	64	1.82	L18+00N 0+25W	S 1.4	66	58	397	0.2	875	457	7.33
L 4+00N 1+75W	S 0.2	10	14	72	<0.1	2010	39	0.93	L18+00N 0+50W	S 1.0	113	52	1639	15.3	4571	407	4.16
L 4+00N 2+00W <i>Act</i>	S 0.1	11	17	53	<0.1	2922	16	0.73	L18+00N 1+00W	S <0.1	113	41	1441	1.2	1288	1664	9.25
L 4+00N 2+25W	S 2.5	61	34	2394	27.0	2779	681	6.76	L18+00N 1+25W	S <0.1	11	45	44	<0.1	2452	25	3.01
L 4+00N 2+50W	S <0.1	11	30	280	2.5	1972	1097	1.79	L18+00N 1+75W	S <0.1	6	59	47	<0.1	1975	26	0.56
L 4+00N 2+75W	S 0.1	9	33	369	0.8	1765	604	2.39	L18+00N 2+25W	S 0.1	28	46	187	0.1	3004	76	2.86
L 4+00N 3+00W	S <0.1	21	29	251	0.1	5592	57	3.11	L18+00N 2+50W	S 1.0	217	74	1946	27.5	3349	741	5.44
L 4+00N 3+25W	S <0.1	10	25	322	0.5	2255	434	2.39	L18+00N 2+75W <i>YN</i>	S 0.9	68	23	861	5.6	1110	620	2.25
L 4+00N 3+50W	S 0.2	10	21	71	<0.1	2762	24	1.05	L18+00N 3+00W	S 0.1	39	25	366	1.6	1168	297	1.91
L 4+00N 4+00W	S 0.3	12	23	72	<0.1	2588	29	1.10	L18+00N 3+25W	S <0.1	19	25	82	<0.1	1033	449	1.81
L 6+00N 0+00E <i>BL</i>	S 0.9	18	38	131	0.6	1782	1292	1.69	L18+00N 3+50W	S <0.1	46	25	209	0.7	1098	242	2.76
L 6+00N 0+25E	S 0.3	17	22	125	1.5	1224	603	1.56	L18+00N 4+00W	S 0.2	32	26	191	0.9	1311	269	2.06
L 6+00N 0+50E	S 0.1	18	16	174	1.8	1070	346	1.07	L18+00N 4+25W	S <0.1	24	23	161	0.5	1325	184	2.26
L 6+00N 0+75E	S 0.1	25	25	153	0.8	1496	203	1.77	L18+00N 5+75W	S 0.1	16	28	137	0.3	978	203	1.90
L 6+00N 1+00E	S 0.1	19	20	178	1.5	907	283	1.14	L18+00N 6+25W	S <0.1	16	22	113	<0.1	1074	71	1.82
L 6+00N 0+25W <i>Act</i>	S 0.1	31	26	186	1.1	1730	400	2.28	L18+00N 6+50W	S <0.1	21	28	148	<0.1	1282	392	2.45
L 6+00N 0+50W	S 0.1	27	22	162	1.3	1444	372	1.90	L18+00N 7+25W	S <0.1	22	23	109	<0.1	1128	492	2.06
L 6+00N 0+75W	S 0.2	30	25	159	1.3	1504	382	2.03	L18+00N 7+75W	S 0.2	27	25	149	<0.1	1130	128	3.07
L 6+00N 1+00W	S 0.2	27	26	155	0.9	1539	326	2.04	L18+00N 8+25W	S 0.2	16	29	165	0.5	1378	918	1.75
L 6+00N 1+25W	S 0.1	20	23	130	0.2	1402	370	1.90	L18+00N 8+50W	S <0.1	13	26	118	<0.1	1346	572	1.69
L 6+00N 1+50W	S <0.1	22	25	130	<0.1	1642	462	2.13	L18+00N 8+75W	S 0.1	16	28	157	0.6	1233	1157	1.76
L 6+00N 1+75W	S <0.1	23	19	139	0.9	1509	338	1.83	L18+00N 9+25W	S <0.1	23	24	203	0.1	1093	165	1.77
L17+00N 15+00W	S 0.2	20	25	124	<0.1	2261	101	2.87	L18+00N 9+75W	S 0.1	18	25	159	<0.1	925	80	1.75
L17+00N 15+25W	S 0.1	20	29	121	<0.1	2259	486	1.81	L18+00N 10+00W	S 0.1	14	25	142	0.2	1141	181	1.66
L17+00N 15+50W	S 0.1	25	23	154	<0.1	2240	229	1.96	L18+00N 10+25W	S <0.1	22	25	174	0.9	1302	682	2.08
L17+00N 15+75W	S 0.1	16	30	95	<0.1	2241	52	1.59	L18+00N 10+50W	S <0.1	27	25	219	2.1	1315	284	2.22
L17+00N 16+00W	S 0.8	15	17	73	<0.1	1964	55	1.21	L18+00N 10+75W	S 0.3	30	26	80	0.5	1186	377	3.31
L17+00N 16+25W <i>YN</i>	S 0.2	19	26	171	0.9	2600	62	1.86	L18+00N 11+00W	S <0.1	30	32	212	<0.1	1060	104	2.29
L17+00N 17+00W	S 0.1	23	30	85	<0.1	3192	141	1.52	L18+00N 11+25W	S 0.6	37	34	265	1.3	1250	204	2.08
L17+00N 17+25W	S 0.4	21	40	74	<0.1	3343	68	2.15	L18+00N 12+00W	S <0.1	20	28	192	0.2	1264	367	1.92
L17+00N 17+50W	S 0.3	17	33	47	<0.1	2460	37	1.43	L18+00N 13+00W	S <0.1	18	24	133	0.1	1177	97	1.57



MIN-EN LABORATORIES
 (DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL TESTING
 CHEMISTS • ASSAYERS • ANALYSTS

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


2V-0763-RG3

Company: **MINNOVA INC.**
 Project: **677**
 Attn: **GARY WELLS/PAUL BAXTER**

Date: **AUG-24-92**
 Copy 1. MINNOVA INC., VANCOUVER, B.C.

We hereby certify the following Geochemical Analysis of 11 ROCK samples submitted AUG-04-92 by P. BAXTER.

Sample Number	AG PPM	CU PPM	PB PPM	ZN PPM	BA %
11505A	.4	21	8	99	26.86
11506A	.2	20	6	79	42.52
11512A AKIE	.2	8	2	4	0.38
11595	.2	2	1	5	41.24
11752A AKIE	.2	9	23	15	14.62
11760A	.6	22	46	134	26.95
11519A	.6	22	3	720	1.10
11522A	.5	23	314	38	0.78
11523A AKIE	1.3	22	83	93	5.46
11524A AKIE	2.6	74	28	5340	0.16
11525A AKIE	2.0	31	86	1810	0.81

Certified by 

MIN-EN LABORATORIES

AKIE ROCK SAMPLES : MAJOR ELEMENTS

SAMPLE	CLAIM	ROCK TYPE	AL2O3 %	BA %	CAO %	FE2O3 %	K2O %	MGO %
11600	AKIE	shale	13.14	0.845	1.72	1.29	2.76	0.98
11762	AKIE	shale	15.16	0.59	0.07	4.4	3.33	1.48
11764	AKIE	shale	10.74	0.58	0.12	1.47	2.6	0.91
11509	AKIE	shale	13.81	0.635	0.37	1.45	3.32	0.95
11510	AKIE	shale	11.26	1.33	1.64	0.78	2.96	0.93
11754	AKIE	shale	9	0.345	0.17	0.95	2.34	0.85
11599	AKIE	shale	8.62	0.78	1.3	1.17	1.74	0.73
11755	AKIE	shale	9.31	2.045	0.03	1.54	1.96	0.73
11753	AKIE	siliceous shales	6.17	0.245	0.11	0.64	1.5	0.53
11751	AKIE	siliceous shales	3.87	0.27	1.23	0.88	0.91	0.3
11763	AKIE	blebby barite in shale	7.62	3.575	0.2	1.76	1.7	0.69
11514	AKIE	blebby barite in shale	7.01	1.285	0.15	1.1	1.52	0.55
11511	AKIE	siltstone	7.32	0.13	14.92	1.6	2.19	11.4
11515	AKIE	siltstone	12.84	0.48	0.3	1.61	4.51	0.53
11513	AKIE	qtz vein	1.47	0.165	0.15	0.56	0.3	0.2

AKIE ROCK SAMPLES : MAJOR ELEMENTS

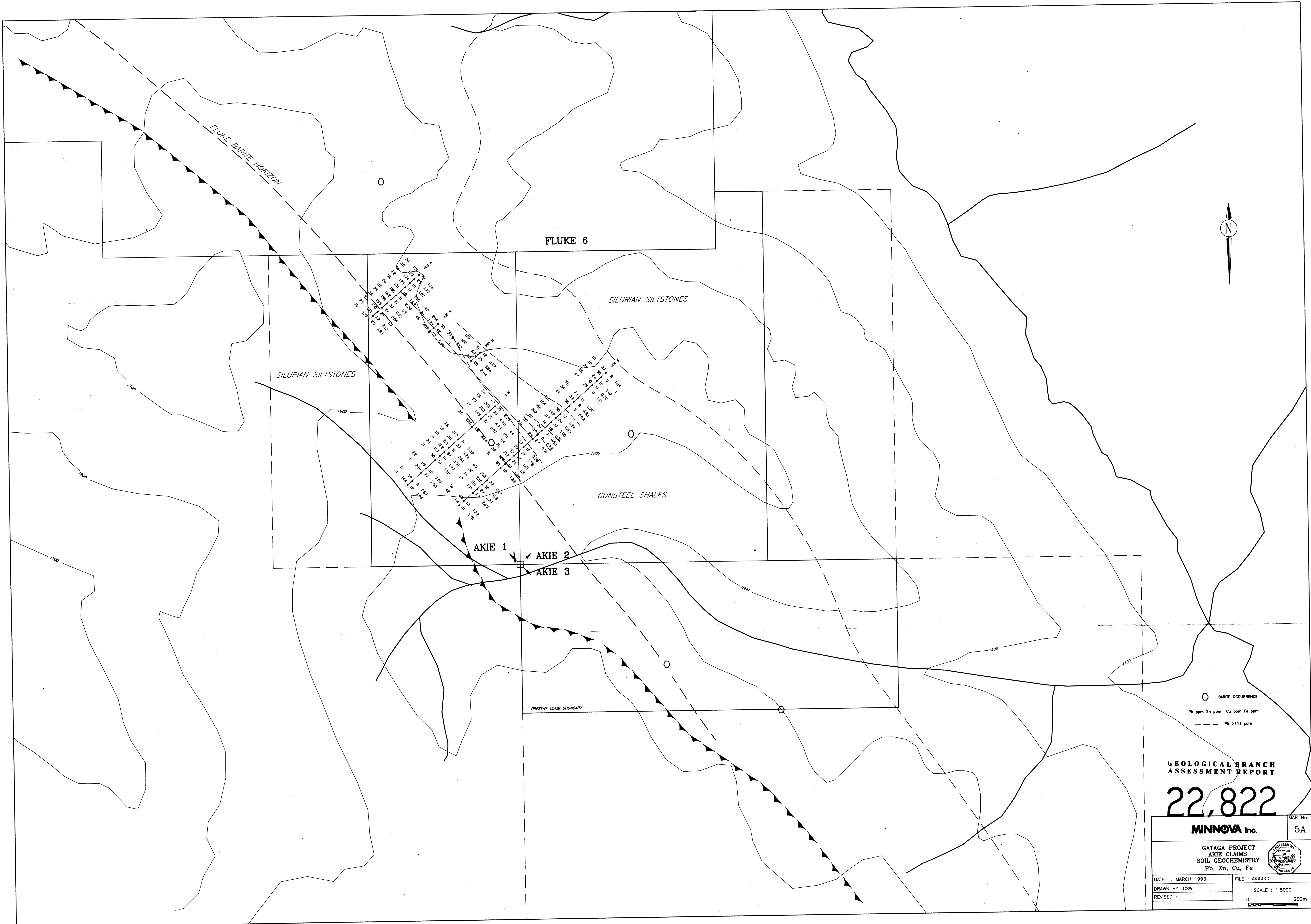
SAMPLE	MNO2 %	NA2O %	P2O5 %	SIO2 %	SR %	TIO2 %	LOI %	S %
11600	0.01	0.94	0.03	72.17	0.005	0.3	4.9	0.03
11762	0.01	0.69	0.12	65.88	0.005	0.65	6.9	0.08
11764	0.01	0.02	0.09	74.94	0.005	0.42	7.2	0.08
11509	0.01	0.15	0.03	72.59	0.005	0.6	5.1	0.1
11510	0.01	0.24	0.03	74.83	0.005	0.5	4.5	0.15
11754	0.01	0.03	0.06	79.25	0.005	0.32	5.7	0.04
11599	0.01	0.02	0.04	77.21	0.005	0.32	6.9	0.01
11755	0.01	0.03	0.07	75.65	0.01	0.35	7.5	0.18
11753	0.01	0.02	0.04	85.67	0.005	0.24	4	0.01
11751	0.01	0.06	0.06	88.84	0.005	0.15	2.5	0.06
11763	0.01	0.39	0.12	76.36	0.015	0.37	6.5	0.24
11514	0.01	0.01	0.11	82.21	0.005	0.28	4.9	0.18
11511	0.04	0.54	0.11	59.95	0.005	0.28	0.7	3
11515	0.01	0.55	0.23	74.81	0.005	0.19	2.9	0.06
11513	0.01	0.01	0.03	94.52	0.005	0.03	1.5	0.04

AKIE ROCK SAMPLES : TRACE ELEMENTS

SAMPLE	CLAIM	ROCK TYPE	AG ppm	AS ppm	BA ppm	CU ppm	PB ppm	SB ppm	ZN ppm	AU ppb
11510	AKIE	shale	0.4	1	6293	7	36	1	34	8
11600	AKIE	shale	0.9	4	2855	8	18	1	10	8
11762	AKIE	shale	0.1	13	1524	28	17	1	161	5
11764	AKIE	shale	0.1	1	3455	14	38	3	28	7
11509	AKIE	shale	0.1	1	2589	7	29	1	20	11
11754	AKIE	shale	0.4	1	907	4	13	2	1	12
11599	AKIE	shale	0.1	1	6317	15	122	17	1	10
11755	AKIE	shale	1.3	1	7580	10	143	13	15	3
11753	AKIE	siliceous shales	0.4	3	886	7	14	2	1	6
11751	AKIE	siliceous shales	0.1	3	1235	10	9	1	1	4
11763	AKIE	blebby barite in shale	0.1	1	10000	17	99	6	50	11
11514	AKIE	blebby barite in shale	0.1	1	10000	21	149	11	19	5
11511	AKIE	siltstone	1.6	1	522	9	1	1	36	4
11515	AKIE	siltstone	0.4	12	1847	6	28	1	11	3
11513	AKIE	qtz vein	0.1	1	1920	7	10	1	11	3

AKIE CLAIMS GEOCHEM SAMPLES

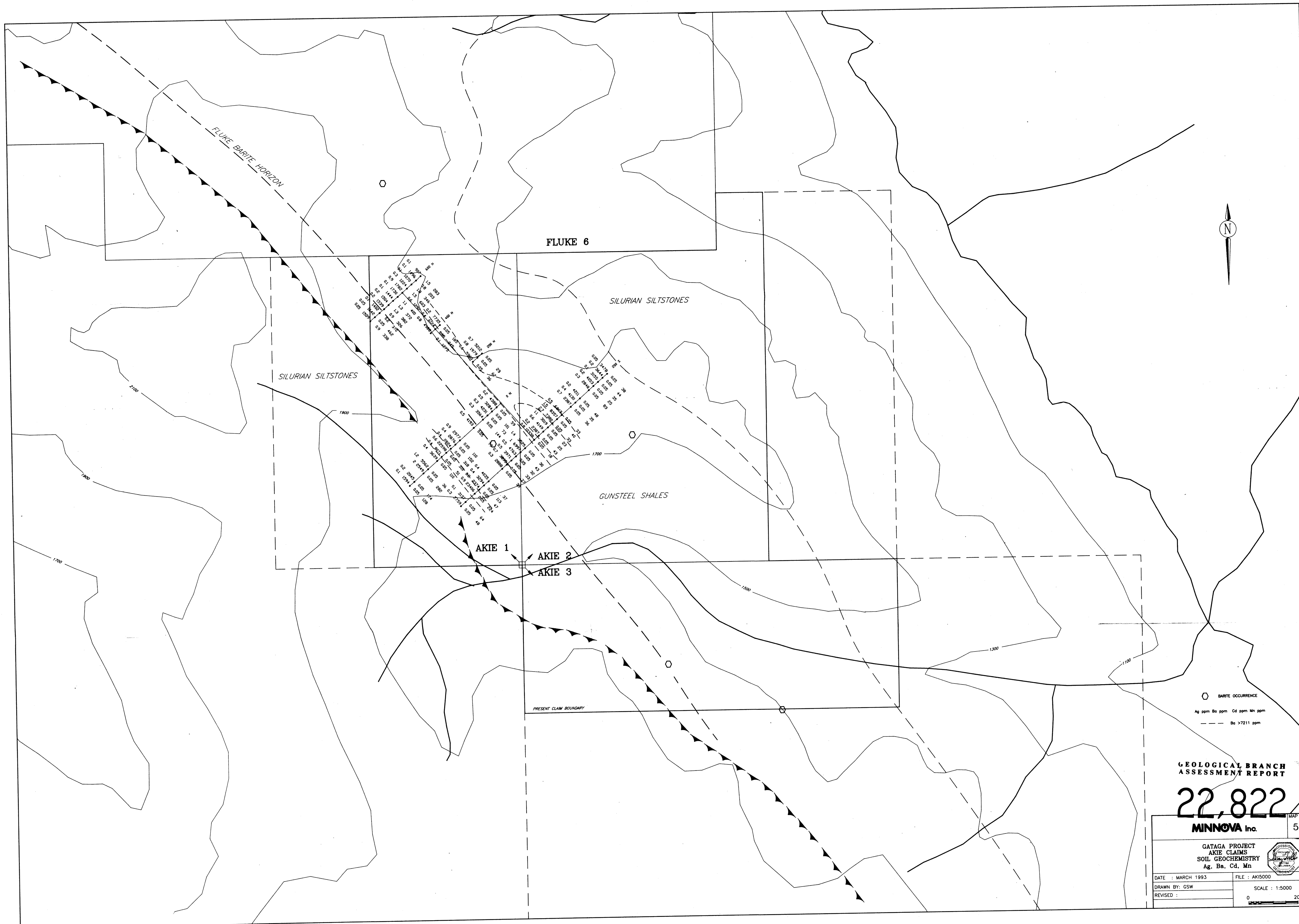
SAMPLE	CLAIMS	ROCK TYPE	AG ppm	CU ppm	PB ppm	ZN ppm	BA %
11512	AKIE	qtz vein	0.2	8	2	4	0.38
11752	AKIE	baritic mud	0.2	9	23	15	14.62
11523	AKIE	blebby baritic shales	1.3	22	83	93	5.46
11524	AKIE	shales	2.6	74	28	5340	0.16
11525	AKIE	shales	2	31	86	1810	0.81

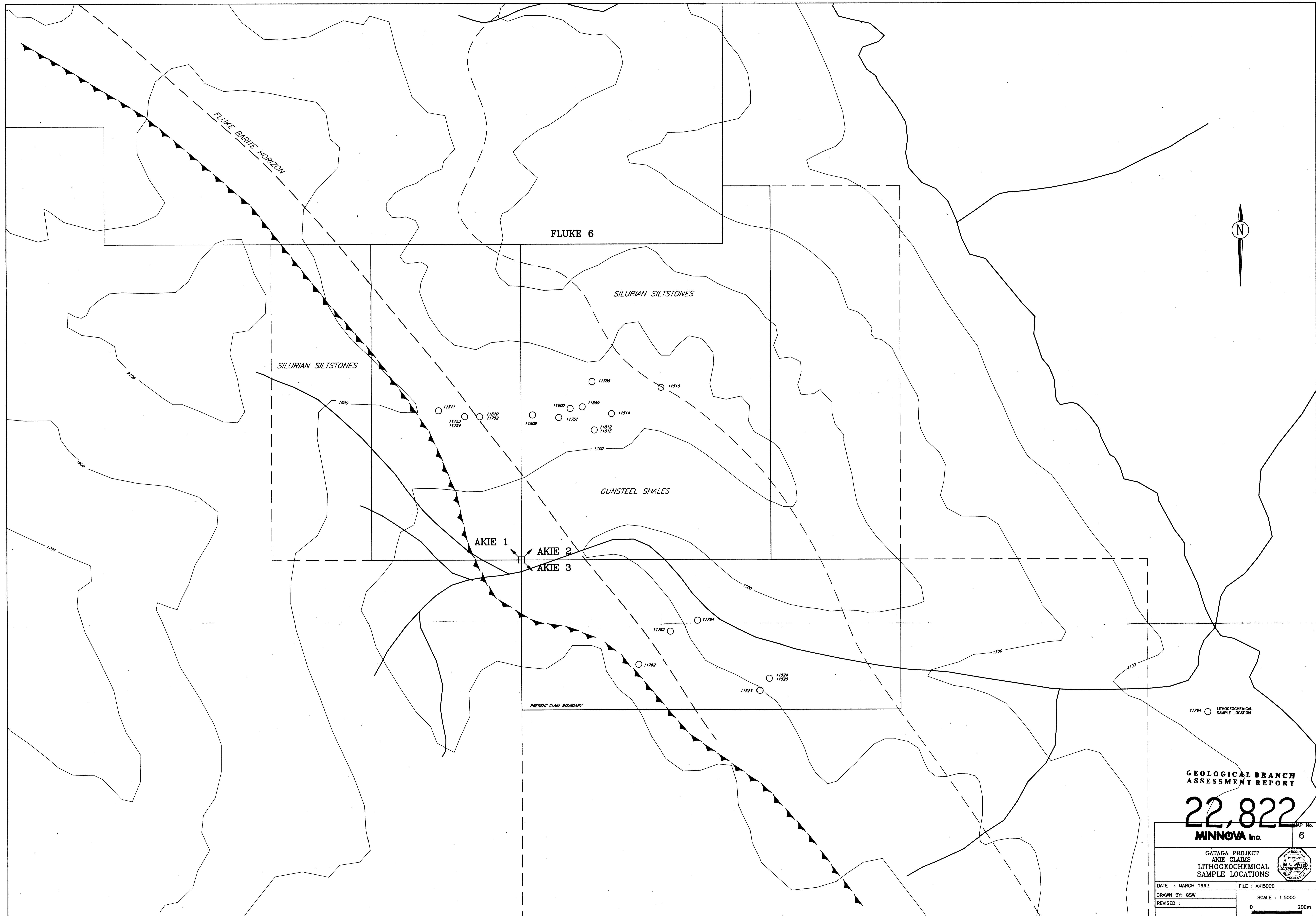


GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,822

MINNOVA Inc.		MAP No. 5A
GATAGA PROJECT AKIE CLAIMS SOIL GEOCHEMISTRY Pb, Zn, Cu, Fe		
DATE : MARCH 1993	FILE : AKI5000	
DRAWN BY: GSW	SCALE : 1:5000	
REVISED :		





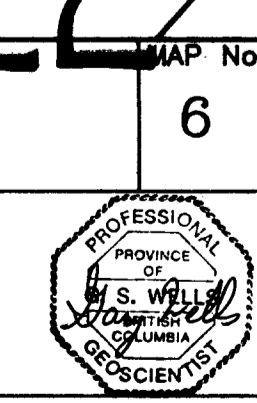
**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

22,822

MINNOVA Inc.

GATAGA PROJECT
AKIE CLAIMS
LITHOGEOCHEMICAL
SAMPLE LOCATIONS

DATE : MARCH 1993
DRAWN BY: GSW
REVISED :
FILE : AKI5000
SCALE : 1:5000
0 200m



MAP No.
6