

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 89.06.24

ASSESSMENT REPORT 17768

MINING DIVISION: Atlin

PROPERTY: Heart of Gold  
LOCATION: LAT 59 33 00 LONG 133 37 00  
UTM 08 6601903 578203  
NTS 104N12E  
CLAIM(S): Anna 1-8, Millionaire, Porsche, Goldstar, Goldstar 2  
OPERATOR(S): Canova Res.  
AUTHOR(S): Collins, D.A.  
REPORT YEAR: 1988, 59 Pages  
COMMODITIES  
SEARCHED FOR: Gold, Silver  
GEOLOGICAL

SUMMARY: The underlying rocks are of the Upper Paleozoic oceanic crust, which are correlated with the Cache Creek Group. These rocks are intruded by a suite of Mississippian-Pennsylvanian serpentinitized ultramafics. Mineralized quartz-talc alteration assemblages occur where east-northeast trending faults crosscut serpentinite.

WORK  
DONE: Geological, Geochemical, Geophysical  
GEOL 400.0 ha  
Map(s) - 1; Scale(s) - 1:5000  
LINE 20.0 km  
MAGG 20.0 km  
Map(s) - 3; Scale(s) - 1:2000  
SOIL 297 sample(s) ;ME  
Map(s) - 2; Scale(s) - 1:5000  
MINFILE: 104N 019, 104N 030, 104N 101

LOG NO: 0928	RD.
ACTION:	
FILE NO:	

FILMED

GEOLOGICAL AND GEOCHEMICAL  
 REPORT ON THE  
 HEART OF GOLD CLAIM GROUP  
 ATLIN, BRITISH COLUMBIA

NTS : 104 - N / 12 E  
 Longitude: 133° 38' W    Latitude: 59° 32' N

FOR

CANOVA RESOURCES LTD.  
 Suite 1500 - 609 Granville Street  
 Vancouver, British Columbia  
 V7Y 1G5

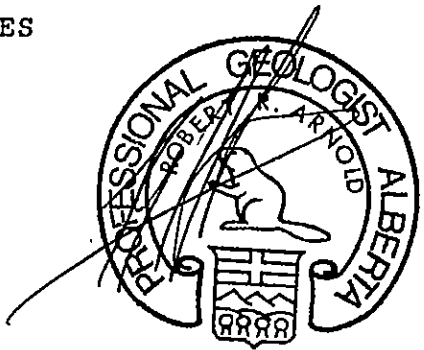
**GEOLOGICAL BRANCH  
 ASSESSMENT REPORT**

BY

DENIS A. COLLINS, B.Sc., Ph.D. and  
 ROBERT R. ARNOLD, M.Sc., B.GEOL., FGAC.

17,768

J. PAUL SORBARA & ASSOCIATES  
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 Delta, British Columbia  
 V4E 2T2



JANUARY 29, 1988

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## 1.0 SUMMARY

The Heart of Gold Claim Group Property lies approximately 4 kilometers southeast of the community of Atlin, British Columbia. The Atlin terrane is underlain by upper Paleozoic oceanic crust and correlated with Cache Creek Group rocks. A suite of Mississippian-Pennsylvanian serpentinized ultramafic intrusions also occur. Mineralized quartz-talc-alteration assemblages occur where east-northeast trending faults crosscut the serpentinite. Similar tectono-stratigraphic relationships on the adjacent Yellow Jacket property host gold mineralization.

Preliminary exploration work on the property has included geological mapping, soil sampling, minor geophysical surveys and limited rock sampling.

This work has defined several VLF-EM conductors and zones of coincident low magnetic response which are believed to be potential areas of mineralization. Soil and rock geochemical analyses have located areas of anomalous gold values. Sample values of 0.57 oz/t gold, 1700 ppm arsenic, and 10.88 oz/t silver have been recorded. Microprobe studies have shown that the gold is associated with Ag, As, Ni, Co, Bi, Sb, Te and Pb and that the fineness of the gold is the highest (843) of any sample collected from the Atlin Camp.

The claim block is favourably located, has encouraging preliminary exploration results and is believed

by the writers to have the potential to host significant precious metal mineralization.

## 2.0 INTRODUCTION

### 2.1 Objectives

This summary and evaluation of the Heart of Gold Property is done at the request of Mr. J. Hirst, on behalf of Canova Resources Ltd. The main purpose of the present report is to evaluate the precious metal potential of the property and to propose an exploration program designed to test this potential.

This report is based on a review of public and private reports pertaining to the area, recent exploration activities on the property, government geological and topographical maps and claim data from the mining recorder's office. The writers were not able to visit the property due to snow cover at the time of writing.

### 2.2 Location and Access

The Heart of Gold Claim Group is located approximately 4 kilometers southeast of the community of

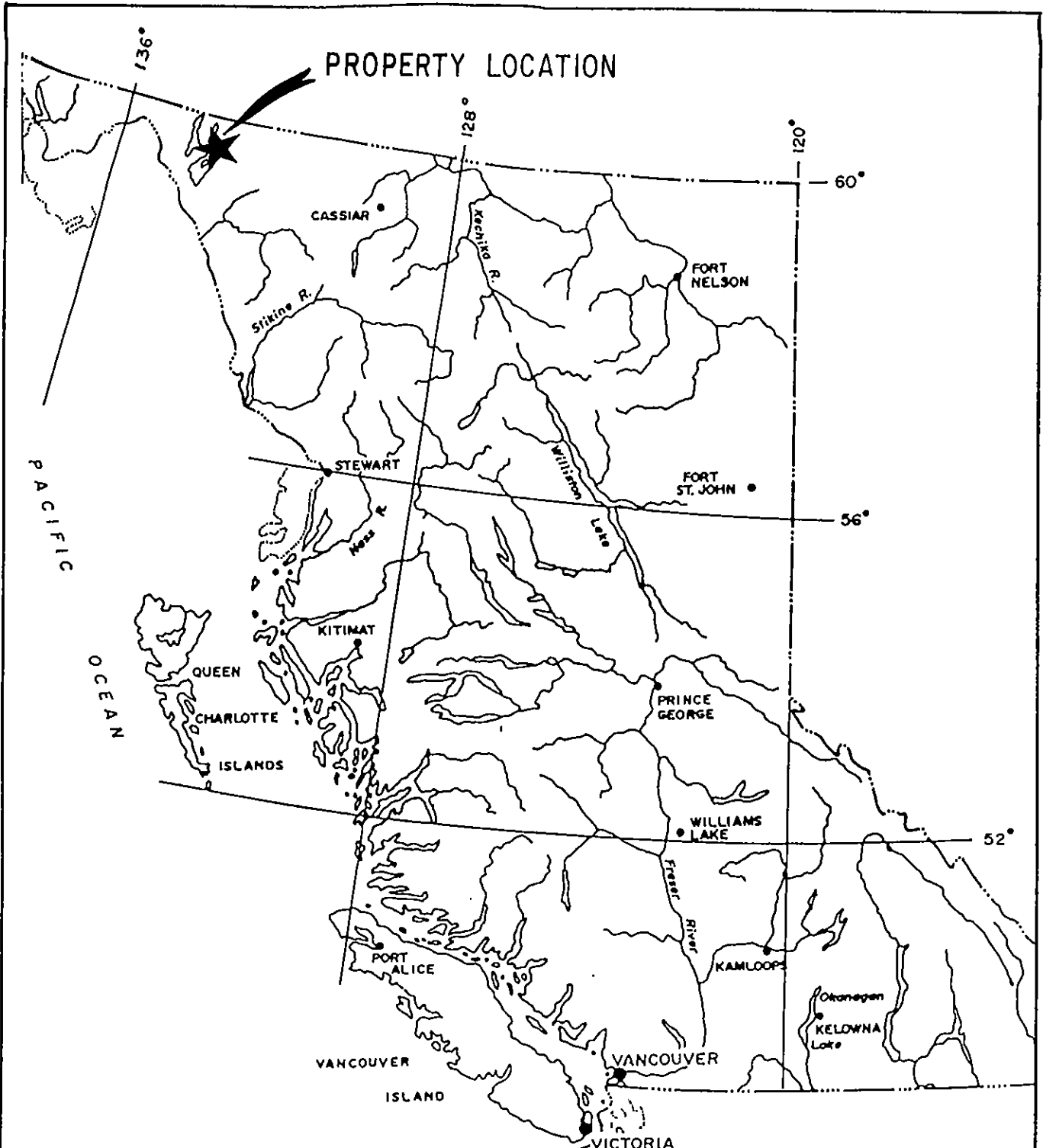
Atlin, British Columbia (Figure 1). The property lies on NTS Map Sheet 104-N/12E and is centered at latitude 59 degrees 32' North and longitude 133 degrees 38' West. Access is by 4-wheel drive vehicle from Atlin along an all weather gravel road, the Warm Bay Road, which cuts through the southwest corner of the property.

### 2.3 Physiography

Local topographic relief varies from moderate to relatively steep. Elevation within the property ranges from 660 meters (2165 feet) to 1440 meters (4725 feet) above sea level. The claims cover the west and northwest facing slopes of Monarch Mountain. The property is, in general, sparsely tree covered. However, thick forest growth, including willows, is established on the northeastern portion of the Porsche claims.

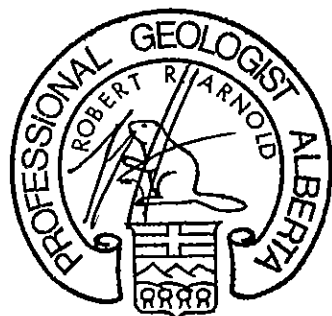
### 2.4 Property Status

The Canova Resources Ltd. property consists of 12 contiguous Located Mineral Claims (totalling 38 units) situated some 4 kilometers southeast of Atlin, B.C., within the Atlin Mining Division (Figure 2).



BRITISH COLUMBIA

Scale 1:7,500,000 approx.



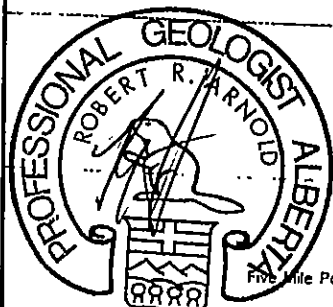
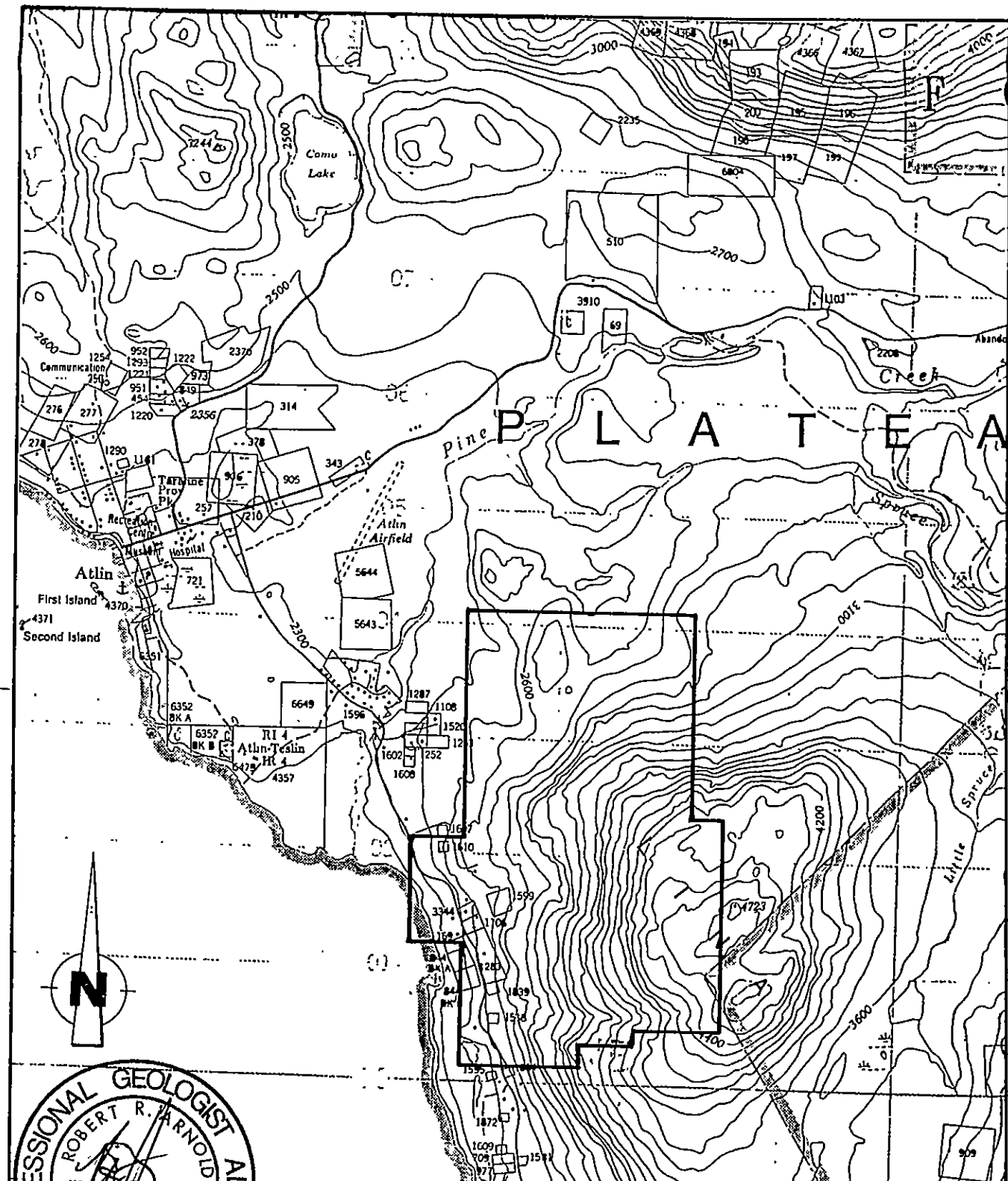
CANOVA RESOURCES LTD.

HEART OF GOLD CLAIM GROUP

LOCATION MAP

Scale: As Shown	Date: JAN 1988	N.T.S.	Figure: 1
By: J.P. SORBARÀ & Associates			





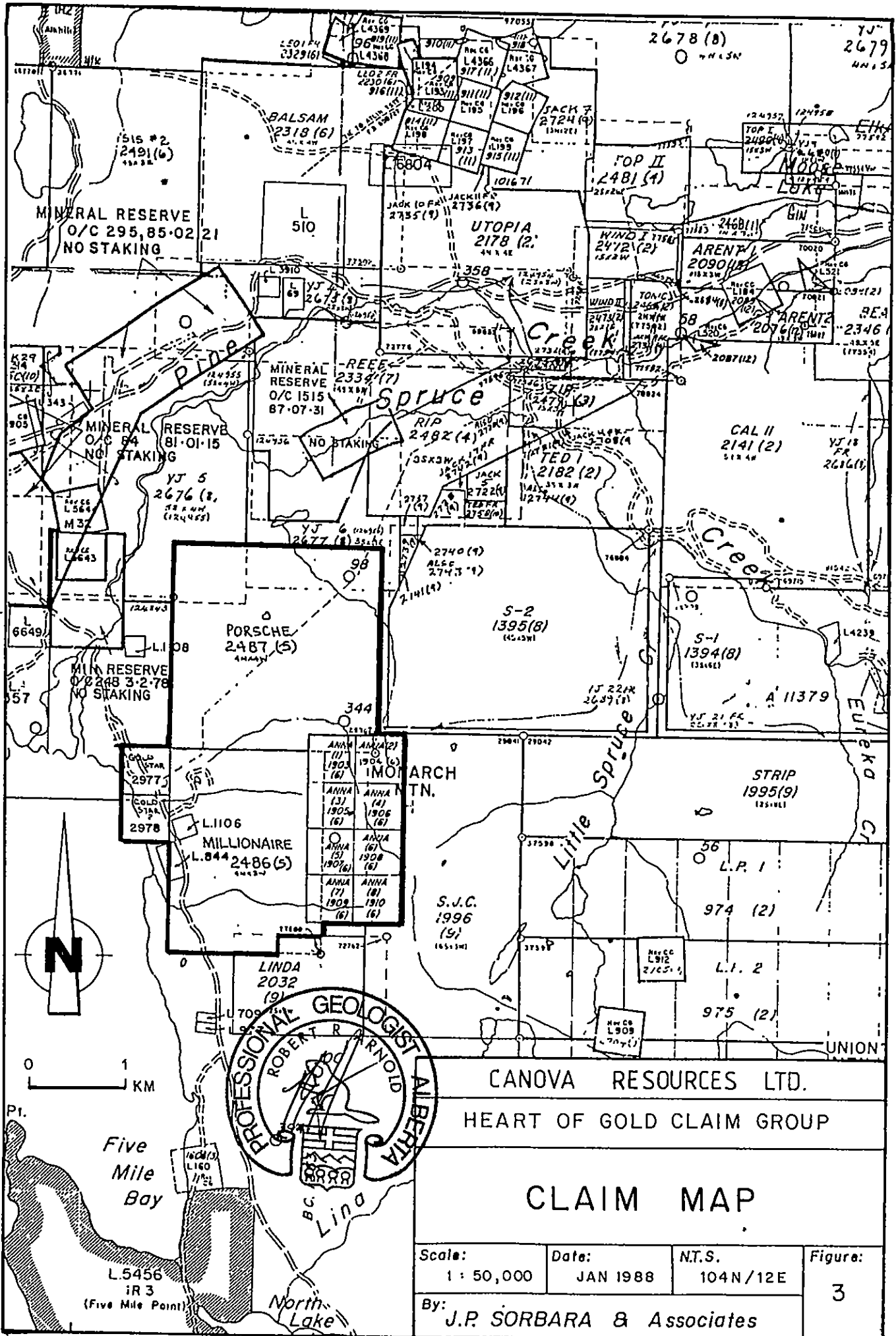
CANOVA RESOURCES LTD.			
HEART OF GOLD CLAIM GROUP			
TOPOGRAPHIC MAP			
Scale: 1 : 50,000	Date: JAN 1988	N.T.S. 104 N/12	Figure: 2
By: J.P. SORBARA & Associates			

The Anna 1 - 8 claims were staked in June 1983 and the Millionaire, Porsche and Gold Star 1 & 2 claims were staked in May 1985 by Mr. B. Lueck. In May 1987, the Gold Star 1 & 2 claims were forfeited and they were restaked in June 1987 by Mr T. Peever. The beneficial owners of the claims are Mr. B. Lueck and Mr. T. Peever. Canova Resources Ltd. has entered into an option agreement whereby, pursuant to the terms of the agreement, Canova Resources Ltd. has the right to earn up to 50% interest in the property.

A list of pertinent claims data is given below:

CLAIM	UNITS	RECORD No.	RECORD DATE
Anna 1	1	1903	June 20, 1983
Anna 2	1	1904	June 20, 1983
Anna 3	1	1905	June 20, 1983
Anna 4	1	1906	June 20, 1983
Anna 5	1	1907	June 20, 1983
Anna 6	1	1908	June 20, 1983
Anna 7	1	1909	June 20, 1983
Anna 8	1	1910	June 20, 1983
Millionaire	12	2486	May 21, 1985
Porsche	16	2487	May 24, 1985
Goldstar 1	1	297	June 24, 1987
Goldstar 2	1	2978	June 24, 1987

The entire property is shown on the Mineral Claim Map 104-N/12, and on Figure 3 of this report.



CANOVA RESOURCES LTD.			
HEART OF GOLD CLAIM GROUP			
<b>CLAIM MAP</b>			
Scale: 1 : 50,000	Date: JAN 1988	N.T.S. 104N/12E	Figure: 3
By: J.P. SORBARA & Associates			

### 3.0 HISTORY AND PREVIOUS WORK

A clear and concise history of the exploration in the Atlin region, and in the area of the subject property itself, is taken from Watkins and Crowe, 1986.

"Gold-bearing quartz veins were first discovered in the Atlin area in 1899 and by 1905 most of the known showings had been discovered. Although the original showings have been repeatedly worked and re-examined there is no record of new discoveries being made in the Atlin area [on the subject property] until geologist Brian Lueck of Atlin uncovered spectacular visible gold on the Anna 3 Mineral Claim in the spring of 1985. Additional prospecting has located gold and silver mineralization on the Porsche Claim and quartz-galena veining on the Millionaire Claim.

The lode gold potential of the Atlin area is presently undergoing a re-evaluation. Several company's properties host lode and placer gold potential (Gallant Gold Mines, Standard Gold Mines and Ezekiel Explorations Ltd.). Gold intersections have been reported by Canova Resources Ltd. and Tri-Pacific Resources Ltd. on their Yellow Jacket property which lies along the course of Pine Creek, immediately northeast of the Heart of Gold Claim Group.

The Yellow Jacket, now under option by Homestake Mineral Development Co., is currently undergoing drill testing of economic gold bearing structures developed along east-northeast trending fault zones. This fault projects onto the Heart of Gold property.

#### Previous work

Field mapping on the Anna Claims was initiated as a lode gold prospecting venture. Samples were collected in the summer of 1983 by B. Lueck (?). Follow up mapping in the summer of 1984 (Lueck, 1985a) consisted of mapping, prospecting, sampling and analytical work done on the samples collected in the summer of 1983. Petrological and metamorphic studies of specific fault zones, conducted in the winter of 1984-85, outlined several structures for follow-up work.

In the spring of 1985, a blasting program uncovered spectacular, coarse gold in one mineralogically and

structurally favourable area. The "discovery pit", located on the Anna 3 Mineral Claim (Figure 4) [Figure 5 of the present report], yielded a bulk, 10 kg random sample assaying 0.570 oz/st Au. Hand specimens contained >1% visible gold (Lueck, 1985b). Mapping and prospecting identified other areas hosting gold and silver bearing veins.

Quartz veining on the Porsche Mineral Claim outcrops in two separate areas, 300m (1000') apart. Veins contain chalcopyrite and tetrahedrite. A bulk sample of the veining (Figure 4) returned 0.12 oz/st Au with 10.88 oz/st Ag and 1.5% - 2.0% Cu.

A road outcrop on the Millionaire Mineral Claim (Figure 4) is cut by quartz-galena veining hosting gold and silver values. This veining is along strike from the "discovery pit" on the Anna 3 Claim. Veining located between the Millionaire road outcrop and the "discovery pit" have quartz, pyrite and galena. Soils across these zones are high in silver and gold (Lueck, 1985b).

Dr. D.C. Harris (Ballantyne, 1986) of the Geological Survey of Canada performed six microprobe analyses of gold bearing samples collected from the Anna Claims. S.B. Ballantyne (1986) worked out paragenetic sequences and mineralogical associations from the examination of polished thin sections (See Appendix 1).

Results from the above indicated that gold in the Atlin camp is associated with Ag, As, Ni, Co, Bi, Sb, Te and Pb in quartz veining and that these elements are locally more intimately associated with gold depositional sites within the veins. It was also concluded that the gold on the Anna Claims has the highest fineness (average of 843) and is more homogeneous in composition than anywhere else in the Atlin Camp.

Ballantyne (1986) made comparisons between the Atlin Camp and the Motherlode district of California and suggested that in the Atlin area, the source of the large placer nuggets is the local host veins."

During 1987 an exploration program, consisting of reconnaissance "A"-horizon humus sampling on the Porsche, Millionaire and Gold Star claims, plus detailed geophysical surveys on the Porsche claims, was conducted by B. Lueck, Geologist, for Canova Resources Ltd.

The geophysical data suggested that the area covered by the grids was underlain by broken and faulted serpentinite which is in contact to the northeast with basaltic greenstone. A large fault striking at approximately 110 degrees forms the contact which is intruded in places by porphyritic rhyolitic to trachytic dykes. A number of coincident, linear VLF and magnetic conductors were defined during the surveys.

#### 4.0 GEOLOGY

##### 4.1 Regional Geology and Mineralization

The Nassian Orogeny during mid-Jurassic (Bathonian) time resulted in regional uplift of the western Cordillera. Uplift of the Atlin Horst, and the resultant formation of the Bowser Basin, also occurred at this time. The Atlin terrane is underlain by upper Paleozoic oceanic crust (Monger, 1975) and correlated with Cache Creek Group rocks (Aitken, 1959). A suite of Mississippian-Pennsylvanian aged ultramafic intrusions also occur. Debris derived from the Atlin Horst infilled the northern parts of the Bowser Basin (Souther and Armstrong, 1966).

Many of the Cordilleran ultramafic intrusions are alpine-type peridotites which characteristically occur as elongate bodies, commonly faulted, sheared, and highly

serpentinized. Some of the intrusions, including the Atlin intrusions, are restricted to belts of thick greenstone (Douglas et. al, 1972). Glaucophane schist facies rocks are developed in the late Paleozoic volcanics of the Atlin Horst. However, the age of this metamorphism is uncertain but is thought to be coeval with the Permo-Triassic ultramafics.

The Nassian Orogeny is represented by emplacement of granitic plutons along the Skeena Arch transverse to the Whitehorse Trough. Southwest-directed thrusts, faults and folds bordering the Atlin Horst were also produced at this time. One of these major fault zones, the Nahlin Fault, formed along the western edge of the Atlin Terrane. This resulted in metabasalt of Mississippian and Pennsylvanian Nakina Formation being juxtaposed with Jurassic rocks to the west. Monger (1975) and Tempelman-Kluit (1979) suggest that rocks of the Atlin Terrane were underthrust from the southwest in late middle-Jurassic time, by middle Jurassic and older strata.

An assemblage of chert, greenstone, and argillite of the Kedahada Formation, and a thick sequence of upper Mississippian to upper Permian carbonates, of the Horsefeed Formation, overlies apparently conformably, a basaltic flow unit within the Atlin Terrane (Figure 4). Scattered outcrops of andesitic volcanics and olivine basalt of Cretaceous and Tertiary age are evident in the Atlin Lake area.



CANOVA RESOURCES LTD.			
HEART OF GOLD CLAIM GROUP			
REGIONAL GEOLOGY MAP			
Scale.	Date:	NT.S.	Figure:
1 : 253,440	JAN 1988	104 N/12E	4
By: J.P. SORBARA & Associates			



TABLE 1:

REGIONAL GEOLOGY LEGEND

(After Aitken, 1959)

QUATERNARY

17 glacial drift, alluvium

TERTIARY

16 olivine basalt and scoria

CRETACEOUS

12 undifferentiated granitic rocks

A andesite volcanics

11 volcanic greywacke, siltstone, Laberge Group

JURASSIC

11 Whitehorse trough sediments

MISSISSIPPIAN-PERMIAN

9 serpentized ultramafic rocks often carbonitized and/or talc bearing

8 limestone, calcarenite, dolomite, often recrystallized

7 basic volcanics, pillow lavas

6 chert, cherty argillite, argillite

## 4.2 Property Geology

The property area is predominantly underlain by ultramafic rocks, mainly serpentinite, with isolated patches of gabbro and minor basic volcanics (Figure 5). A series of faults trending approximately east-west and northeast-southwest crosscut the southern portion of the claim group. These may indicate the presence of a conjugate fracture system in the area.

The location of a 600 ppb gold soil sample in the Millionaire claim, a 10.88 oz/t silver value in the Porsche claim and that of a 0.57 oz/t gold value from a 10 kg bulk sample in the Anna 3 claim may also be noted in Figure 5.

The geology of the Heart of Gold property was described by Watkins and Crowe (1986) as follows:

"The property is underlain predominantly by a large body of serpentinite that is exposed for a distance of ten kilometers along the east shore of Atlin Lake....Near the south border of the Millionaire claim, Cache Creek Formation cherts and limestones are in fault contact with serpentinite. A body of granite porphyry occupies a portion of the easterly trending fault zone.

On the property the serpentinite is cut by several easterly and northeasterly trending faults, now forming linear topographic depressions. These faults are marked by a mineral assemblage of quartz, talc, carbonate and mariposite. Locally, quartz veining and stockworks are well developed. On the Anna 3 claim, coarse free gold was recovered from an easterly trending fault/alteration zone".

B. Lueck carried out geological mapping on the property in 1987. He noted the following:

"A large zone of altered ultramafic rock occurs within the magnetic low near the northeast corner of the claim block. Outcrop occurs only inches below the surface but exposure is poor. A small area of outcrop of rhyolite occurs within this magnetic low. Outcrop is very sparse over the entire grid area but serpentinite is the only type of outcrop seen to the southwest of this fault, except for one isolated outcrop of basaltic greenstone at (Viewline 02+175 m S) and two small outcrops of quartz-talc-carbonate altered serpentinite in gulleys near (Viewline-baseline 07+00 m W). Mapping of joint structures in outcrops shows the following preferred orientations :

- (170/90 - visible offset of original layering in ultramafics)
- (-layering at 40/55 W)
- 255-90
- mylonite fabric 50/25 W "

#### 4.3 Property Mineralization, Geochemistry and Geophysics

Preliminary work by Watkins and Crowe (1986) outlined several areas of gold and silver bearing quartz-sulphide veins in carbonate altered rocks of the Heart of Gold Property. They noted that the veining was spatially associated with east and northeast striking faults within alpine serpentinites. These faults are believed to be extensions of economic gold bearing faults present on the Yellow Jacket property of Canova Resources Ltd. and Tri-Pacific Resources Ltd. to the northeast.

A geochemical sampling program, which emphasized soil sampling of <sup>B horizon</sup> the northern portion of the Porsche claims, and to a lesser extent selected portions of the Millionaire and Goldstar claims (Figure 7), was conducted during the

1987 exploration program. A total of 297 soil samples and 6 rock grab samples were geochemically analysed by Bondar-Clegg & Company Ltd. of 130 Pemberton Ave. North Vancouver, B.C.

The geochemical results have defined a soil anomaly approximately 500 meters long within the Porsche claims (Figure 7). Here three of the soil samples returned elevated gold concentrations ranging from 67 to 490 ppb gold (samples 5052 and 5089, respectively). A fourth anomalous sample value of 70 ppb gold was recorded 500 meters to the west by sample 5152. Exposure is very poor in the soil survey area but outcrops of serpentine and carbonate alteration zones occur in the adjacent part of the claim.

In the southwest corner of the Millionaire claims two soil samples (No.'s 24-a ; 24-b) assayed at 250 ppb gold, 735 ppm arsenic and 120 ppb gold, 326 ppm arsenic respectively. A rock sample at the same location recorded a value of 624 ppb gold and 1700 ppm arsenic (Figure 7). Therefore, it appears that a correlation exists between these two elements. This portion of the claim is underlain by partly silicified limestone which is sometimes brecciated.

These results are deemed by the writer to be encouraging. They indicate that the property has a good potential for hosting auriferous mineralization over a wide area and within variable lithologies. Further ground work is

recommended to define the full extent and characteristics of the mineralization.

A decision to establish grids and conduct a geophysical survey on the Porsche claims, during the 1987 field season, was taken after viewing an airborne magnetometer survey compilation which was flown by Homestake Mineral Development Company. The airborne survey outlined a large linear structure which strikes at 110 degrees and which crosscuts the northeast corner of the Porsche claim block. Three grids, the Minto-line, Corner-line and View-line, were established in thick forest and willows on the northeastern portion of the Porsche claims (Figure 8). A total of over 20 km. of grid lines were flagged and picketed every 25m.

A proton magnetometer survey as well as a two-station (Maine and Seattle) VLF<sup>(Omni)</sup> survey were conducted over the entire overlapping grid system, by B. Lueck, in 1987. From this work he concluded the following:

"Sparse outcrop, coupled with a compilation of the geophysical data, suggested that the area covered by the grids was underlain by broken and faulted serpentinite which is in contact to the northeast with basaltic greenstone. A large fault striking at +/- 110 (degrees) forms the contact which is intruded in places by porphyritic rhyolitic to trachytic dykes. Outcrops of brecciat...occur adjacent to these dykes. Magnetic lows, interpreted to be quartz-carbonate-talc altered ultramafic rocks, splay off this main fault and penetrate the ultramafics. Linear structures oriented +/- 170 and 255 (degrees) appear to control the alteration.....Ground control magnetometer and VLF surveys confirmed the existance of these structures.....VLF conductors are often coincident with magnetic lows..".

The contoured magnetic survey results are shown in Figure 9. Readings range approximately 5500 gammas, from 56,000 to 61,500 gammas. A prominent linear feature oriented at 250 degrees separates the Minto- and View-lines from the main part of the Cornerline. The +/- 1000 gamma variance across this structure may signify a lithological change in the northwest portion of the Porsche claims.

Numerous magnetic lows and highs occur throughout the property including one prominent area of low magnetics coincident with the anomalous gold soil sample values in the northwest portion of the claim (Minto-line L 7+00 to Cornerline L 6+00). The highest magnetic readings were recorded on Minto-line L 8+00.

The results of the Fraser Filtered, VLF-EM in-phase component show several anomalous zones of varying magnitudes (Figure 10). Most notable are the conductive zones centered along the Viewline L 7+00 and Cornerline L 6+00, respectively. The linear nature of these conductors is noteworthy.

In conclusion, three zones of coincident magnetic lows and VLF-EM conductors occur within the Porsche claims. The area of magnetic low/VLF conductor overlap along the Viewline grid warrants further study and trenching, as do the similar zones along the Minto- and Corner-lines. The zone of anomalous geochemical gold values intersecting these two lines is an obvious target for investigation.

## 5.0 CONCLUSIONS

The Heart of Gold Property is underlain by ultramafic rocks which contain favourable gold mineralized zones. The 1987 exploration program has outlined a number of geochemical and geophysical anomalous zones on the Porsche claims, and an anomalous geochemical zone on the Millionaire claims. Geological mapping has outlined several areas of gold and silver bearing quartz-sulphide veins. Soil sample values of up to 490 ppb and 250 ppb gold have been recorded on the Porsche and Millionaire claims, respectively. Two bulk samples have returned values of 0.57 oz/t Au (Anna 3 claim) and 0.12 oz/t Au with 10.88 oz/t Ag (Porsche claim). A correlation between gold and arsenic values appears to exist within the property.

Results from the magnetometer and VLF surveys show that a number of coincident magnetic lows and VLF conductors are present on the Porsche claim. The area centered at Viewline L 7+00m W is a strong VLF conductor.

The property is located to the southeast of the Yellow Jacket property where known fault hosted gold mineralization exists. These structures project onto the Heart of Gold property and may continue to host precious metals.

## 6.0 RECOMMENDATIONS

In order to fully evaluate the mineral and economic potential of the Heart of Gold property further exploration work is warranted and should consist of a two phase program. The second phase would be dependant upon favourable results from the Phase I.

Phase I: A road should be constructed to facilitate access and exploration on the property. Following this a number of drill sites, on known showings, should be cleared and pads constructed. An initial exploration drilling program, of approximately 1000m, should be carried out over the best geophysical anomalies to define the source and extent of these anomalies.

Phase II: Dependant upon positive results from the Phase I exploration program, a systematic diamond drilling program should be carried out to define the geometry and grade characteristics of any identified mineralization.



An estimated cost breakdown for this work is given in Appendix I.

Respectfully submitted

J.P. SORBARA & ASSOCIATES

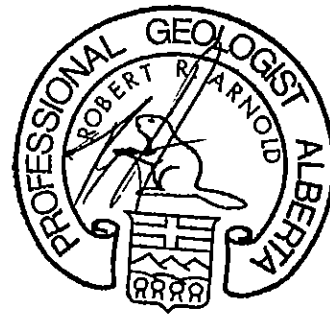
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*Robert R. Arnold*

ROBERT R. ARNOLD, B.Sc., P.Geol., F.G.A.C.

JANUARY 29, 1988.



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APPENDIX I

ESTIMATED COST OF PROPOSED PROGRAM

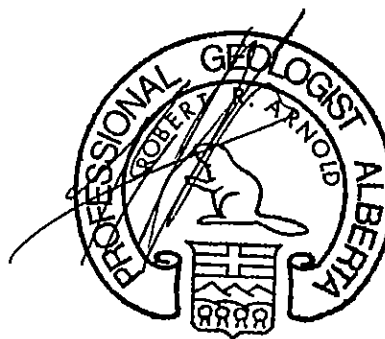
ESTIMATED COST OF PROPOSED PROGRAM

PHASE I:

Salaries and Consulting Fees	\$ 28,000.00
Diamond Drilling 1,000 meters @ \$90.00/meter	\$ 90,000.00
Cat time	\$ 4,800.00
Geochemistry (500 samples @ \$25.00)	\$ 12,500.00
Room, Board and House Rental	\$ 5,700.00
Vehicle Rental (2 months)	\$ 1,000.00
Travel and Communication	\$ 2,400.00
Contingency	\$ 5,600.00
	-----
TOTAL	\$ 150,000.00

PHASE II:

The cost of Phase II is dependent on the results of the preliminary drilling in Phase I. The number of additional targets identified will determine the correct fund allocation.



APPENDIX II

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, DENIS A. COLLINS, of the City of Vancouver, Province of British Columbia, hereby certify:

1. THAT I am a geologist residing at 122 West 12th Avenue, Vancouver, British Columbia, Canada, V5Y 1T7.
2. THAT I obtained a Bachelor of Science degree in Geology from the University College Cork, Ireland in 1980 and a Ph.D. in Structural Geology from the same university in 1985.
3. THAT I have been practising my profession as a geologist in Ireland, South Africa and Canada since 1980.
4. THAT this report is based upon a thorough review of published and printed reports and maps on the subject property and the surrounding area. However, I have not visited the property reported on herein.
5. THAT I have no interest in the property described herein, nor in securities of any company associated with the property, nor do I expect to receive any such interest.
6. THAT I consent to the use of this report in a Prospectus or Statement of Material Facts for the purpose of private or public financing.

Dated in Vancouver, British Columbia, this 29th day of January, 1987.

*Denis Collins*

Denis A. Collins, B.Sc., Ph.D.

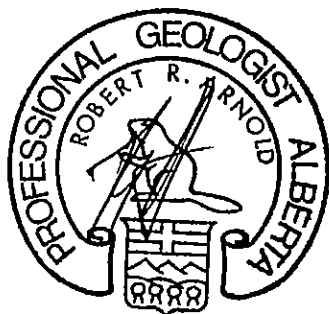
STATEMENT OF QUALIFICATIONS

I, ROBERT R. ARNOLD, of 1227 Caledonia Avenue, in the City of North Vancouver, in the Province of British Columbia, hereby certify:

1. THAT I am a geologist residing at 1227 Caledonia Avenue, in the City of North Vancouver, in the Province of British Columbia.
2. THAT I obtained a Bachelor of Science degree in Geology from the University of Geneva, in the City of Geneva, Switzerland, in 1976 and a Master of Science degree in Geological Engineering, from the same university in 1978.
3. THAT I am a Registered Professional Geologist, in good standing, of the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1981.
4. THAT I am a Fellow Member of the Geological Association of Canada, in good standing since 1985. That I am a associate member of the Mineralogical Association of Canada and of the Society of Economic Geologists.
5. THAT I have been practising my profession as a geologist in Western Europe, West Africa, Southeast Asia and North America, both permanently since 1978 and seasonally since 1971.
6. THAT I have not visited the property reported on herein.
7. THAT I have not received, nor do I expect to receive any interests, direct or indirect, or contingent in the securities or properties of Canova Resources Ltd. and that I am not an insider of any company having interest in the Mineral Claims which are the subject of this report, or any other claims within a radius of 10 kilometers.

8. THAT I consent to the use of this report in a Prospectus or Statement of Material Facts for the purpose of a private or public financing.

Dated in North Vancouver, British Columbia, this 29th day of January, 1988.



A handwritten signature in black ink, appearing to read "R. Arnold", written over a horizontal line.

Robert R. Arnold, M.Sc., P.Geol., FGAC.

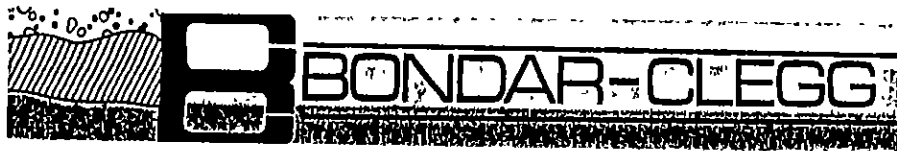
*Field supervisor B. Luuk, B.Sc. geology.  
TK*



APPENDIX III

ASSAY RESULTS FOR SAMPLES

Bondar-Clegg & Company Ltd.  
 130 Pemberton Ave.  
 North Vancouver, B.C.  
 Canada V7P 2R5  
 Phone: (604) 985 0681  
 Telex: 04-352667



Geochemical  
 Lab Report

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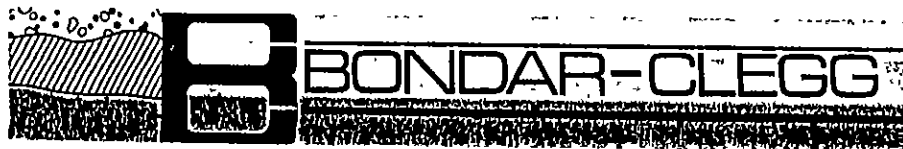
REFERENCE INFO:

CLIENT: CANOVA RESOURCES/TRI PACIFIC RESOURCES  
 PROJECT: NONE GIVEN

SUBMITTED BY: BRIAN LUECK  
 DATE PRINTED: 23-SEP-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au Gold	257	5 PPB	NOT APPLICABLE	INST. NEUTRON ACTIV.
2	Sb Antimony	257	0.2 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
3	As Arsenic	257	1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
4	Ba Barium	257	100 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
5	Br Bromine	257	1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
6	Cd Cadmium	257	10 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
7	Ce Cerium	257	10 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
8	Cs Cesium	257	1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
9	Cr Chromium	257	50 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
10	Co Cobalt	257	10 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
11	Eu Europium	257	2 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
12	Hf Hafnium	257	2 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
13	Ir Iridium	257	100 PPB	NOT APPLICABLE	INST. NEUTRON ACTIV.
14	Fe Iron	257	0.5 PCT	NOT APPLICABLE	INST. NEUTRON ACTIV.
15	La Lanthanum	257	5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
16	Lu Lutetium	257	0.5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
17	Mo Molybdenum	257	2 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
18	Ni Nickel	257	50 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
19	Rb Rubidium	257	10 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
20	Sm Samarium	257	0.1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
21	Sc Scandium	257	0.5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
22	Se Selenium	257	10 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
23	Ag Silver	257	5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
24	Na Sodium	257	0.05 PCT	NOT APPLICABLE	INST. NEUTRON ACTIV.
25	Ta Tantalum	257	1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
26	Te Tellurium	257	20 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
27	Tb Terbium	257	1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
28	Th Thorium	257	0.5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
29	Sn Tin	257	200 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
30	W Tungsten	257	2 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
31	U Uranium	257	0.5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
32	Yb Ytterbium	257	5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
33	Zn Zinc	257	200 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
34	Zr Zirconium	257	500 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.

RESULTS TO FOLLOW FOR: Au



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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Sb PPH	As PPH	Ba PPH	Br PPH	Cd PPH	Ce PPH	Cs PPH	Cr PPM	Co PPH	Eu PPH	Hf PPM
S1 5001		<5	2.1	8	970	<5	<10	56	<1	480	31	2	6
S1 5002		<5	1.2	7	540	<5	<10	32	2	400	29	<2	<2
S1 5003		9	1.0	6	570	<5	<10	35	<1	330	33	<2	<2
S1 5004		63	1.0	<6	410	<10	<20	<82	<2	<100	<20	<4	<4
S1 5005		7	0.9	6	930	<5	<10	49	3	460	35	<2	3
S1 5006		9	0.8	7	700	<5	<10	30	<1	240	43	<2	<2
S1 5007		14	1.1	3	520	7	<10	22	<1	170	<10	<2	<2
S1 5008		8	1.2	4	<100	5	<10	<22	2	130	<10	<2	<2
S1 5009		<5	1.0	12	870	<5	<10	47	5	390	37	<2	<2
S1 5010		<5	1.9	6	880	<5	<10	23	2	590	32	<2	3
S1 5011		<5	1.7	9	700	<5	<10	34	<1	440	45	<2	<2
S1 5012		<5	1.0	10	790	<5	<10	49	2	480	37	<2	<2
S1 5013		<5	1.1	10	830	<5	<10	28	3	590	50	<2	5
S1 5014		<11	1.2	<3	<100	6	<10	<35	<1	<50	<10	<2	<2
S1 5015		<5	0.8	6	700	<5	<10	52	<1	330	39	<2	<2
S1 5016		17	0.7	3	810	<5	<10	23	3	280	25	<2	2
S1 5017		74	1.0	5	750	<5	<10	26	1	460	42	<2	<2
S1 5018		<11	2.2	<4	330	7	<10	<40	<2	<50	<10	<2	<2
S1 5019		<5	1.2	8	670	<5	<10	21	4	280	29	2	2
S1 5020		<5	1.9	11	620	5	<10	<24	2	160	35	2	<2
S1 5021		6	0.9	17	730	<5	<10	21	2	560	30	<2	<2
S1 5022		<5	1.0	5	970	<5	<10	31	2	430	26	<2	3
S1 5023		<5	0.9	4	530	7	<10	28	<1	190	29	<2	<2
S1 5024		<5	0.8	3	420	7	<10	<10	<1	74	<10	<2	3
S1 5025		26	0.5	<1	340	15	<10	<10	1	<50	<10	<2	<2
S1 5026		21	1.2	8	990	<5	<10	22	2	270	19	<2	5
S1 5027		6	1.5	5	740	<5	<10	25	3	190	<10	<2	<2
S1 5028		12	1.0	3	710	<5	<10	24	<1	280	25	<2	3
S1 5029		<5	1.0	5	530	8	<10	40	2	160	14	<2	<2
S1 5030		<5	0.7	3	620	<5	<10	32	2	320	34	<2	4
S1 5031		<5	0.8	6	620	<5	<10	32	<1	350	37	<2	3
S1 5032		9	1.4	5	320	12	<10	21	<1	110	20	<2	<2
S1 5033		<5	1.0	8	700	<5	<10	31	<1	670	19	3	4
S1 5034		<5	0.6	<1	160	<5	<10	<10	<1	<50	<10	<2	<2
S1 5035		<5	0.7	5	510	<5	<10	19	2	320	60	<2	<2
S1 5036		<5	0.9	4	620	<5	<10	<10	<1	610	17	<2	3
S1 5037		<5	0.7	2	620	<5	<10	27	<1	670	30	<2	4
S1 5038		12	0.8	3	630	<5	<10	<10	2	510	33	<2	3
S1 5039		7	0.9	5	850	<5	<10	37	3	540	30	<2	4
S1 5040		<5	0.9	4	750	<5	<10	25	<1	420	<10	<2	5



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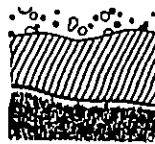
SAMPLE NUMBER	ELEMENT UNITS	Ir PPB	Fe PCT	La PPM	Lu PPM	Mo PPM	Ni PPM	Rb PPM	Sm PPM	Sc PPM	Se PPM	Ag PPM	Na PCT
5001		<100	3.0	15	<0.5	5	340	42	2.7	8.3	<10	<5	1.50
5002		<100	3.1	18	<0.5	<2	530	<23	3.6	10.0	<10	<5	1.30
S1 5003		<100	2.7	24	<0.5	<2	490	40	3.8	11.0	<10	<5	1.30
5004		<200	<1.0	<10	<1.0	<8	770	<62	<1.0	<1.0	<20	17	<0.10
5005		<100	4.2	26	<0.5	<2	640	<26	4.5	15.0	<10	10	1.70
S1 5006		<100	2.6	20	<0.5	<2	450	<21	3.0	9.1	<10	<5	1.10
5007		<100	2.3	11	<0.5	<2	210	36	1.9	6.0	<10	<5	0.76
5008		<100	1.3	9	<0.5	<2	620	<10	1.6	3.2	<10	<5	0.33
S1 5009		<100	5.3	16	<0.5	<2	530	37	3.0	14.0	<10	<5	1.30
5010		<100	3.9	13	<0.5	3	170	63	2.5	11.0	<10	<5	1.50
S1 5011		<100	4.6	12	<0.5	<2	290	48	2.4	11.0	<10	<5	1.20
5012		<100	4.0	21	<0.5	3	440	49	3.1	14.0	<10	<5	1.30
5013		<100	5.1	15	<0.5	<2	300	26	2.8	12.0	<10	<5	1.30
S1 5014		<100	<0.5	8	<0.5	<2	400	<28	1.1	1.8	<10	<5	0.19
S1 5015		<100	3.5	20	<0.5	<2	520	<20	4.0	11.0	<10	<5	1.60
5016		<100	2.7	12	<0.5	<2	130	52	2.3	6.3	<10	<5	1.30
S1 5017		<100	2.8	12	<0.5	3	190	<22	2.0	10.0	<10	<5	1.10
5018		<100	0.8	10	<0.5	<4	880	<39	1.3	1.8	<10	<11	0.21
5019		<100	2.5	15	<0.5	<2	720	23	3.7	10.0	<10	<5	1.00
S1 5020		<100	1.9	19	<0.5	<2	640	30	4.3	7.7	<10	<5	0.77
5021		<100	3.6	11	<0.5	<2	460	34	2.4	10.0	<10	<5	1.20
S1 5022		<100	3.4	18	<0.5	2	180	31	2.9	10.0	<10	<5	1.70
S1 5023		<100	2.7	21	<0.5	<2	670	<23	3.4	10.0	<10	<5	0.84
5024		<100	1.4	8	<0.5	<2	320	<22	1.2	3.5	<10	<5	0.80
5025		<100	<0.5	<5	<0.5	2	70	29	<0.5	1.0	<10	<5	0.11
5026		<100	3.6	17	<0.5	<2	250	32	3.6	12.0	<10	<5	1.10
5027		<100	2.6	14	<0.5	4	140	38	2.9	11.0	<10	6	1.00
S1 5028		<100	2.3	13	<0.5	<2	280	<23	2.6	8.7	<10	<5	1.00
5029		<100	1.6	12	<0.5	<2	380	<20	2.3	6.7	<10	<5	0.75
5030		<100	2.6	16	<0.5	2	550	28	2.5	8.0	<10	<5	1.00
S1 5031		<100	3.4	25	<0.5	<2	630	<24	3.7	13.0	<10	<5	1.40
5032		<100	0.9	7	<0.5	<2	810	<10	1.3	5.1	<10	<5	0.33
S1 5033		<100	4.2	13	<0.5	<2	200	36	2.6	15.0	<10	<5	1.90
S1 5034		<100	<0.5	<5	<0.5	<2	200	<10	<0.5	0.8	<10	<5	0.09
5035		<100	3.1	14	<0.5	<2	470	<26	2.1	9.2	<10	<5	1.00
S1 5036		<100	3.0	14	<0.5	<2	340	<22	2.5	9.5	<10	<5	1.20
5037		<100	3.6	11	<0.5	<2	200	<22	2.1	7.8	<10	<5	1.30
5038		<100	2.5	11	<0.5	<2	260	23	2.2	6.5	<10	<5	1.50
S1 5039		<100	3.2	10	<0.5	<2	170	64	2.6	8.9	<10	<5	1.40
S1 5040		<100	2.6	12	<0.5	<2	350	<22	2.4	10.0	<10	<5	1.50

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SAMPLE NUMBER	ELEMENT UNITS	Ta PPM	Te PPM	Tb PPM	Th PPM	Sn PPM	H PPM	U PPM	Yb PPM	Zn PPM	Zr PPM
S1 5001		<1	<20	<1	4.5	<200	<2	1.9	<5	<200	<500
S1 5002		<1	<20	<1	4.4	<200	<2	1.6	<5	<200	<500
S1 5003		<1	<20	<1	5.0	<200	<2	1.5	<5	<200	<500
S1 5004		<2	<88	<2	3.2	<400	<8	<1.0	<10	<400	<2100
S1 5005		<1	<20	<1	5.7	<200	<2	2.1	<5	<200	<500
S1 5006		<1	<20	<1	3.3	<200	<2	1.4	<5	<200	<500
S1 5007		<1	<20	<1	2.6	<200	4	1.0	<5	<200	<500
S1 5008		<1	<20	<1	<0.5	<200	5	<0.5	<5	<200	<500
S1 5009		<1	<20	1	4.1	<260	<2	1.7	<5	<200	<500
S1 5010		<1	<20	<1	2.6	<200	<2	1.5	<5	<200	1100
S1 5011		<1	<20	<1	3.0	<200	<2	1.9	<5	<200	<500
S1 5012		<1	<20	<1	4.0	<200	<2	2.2	<5	<200	<500
S1 5013		1	<20	<1	3.3	<200	<2	1.4	<5	<200	<500
S1 5014		<1	<49	<1	1.3	<200	<2	<0.5	<5	<200	<1000
S1 5015		<1	<20	<1	5.0	<200	5	1.7	<5	<200	<500
S1 5016		<1	<20	<1	3.7	<200	<2	1.4	<5	<200	<500
S1 5017		<1	<20	<1	2.5	<200	<2	0.9	<5	<200	<500
S1 5018		<1	<62	<1	<1.4	<200	<5	<0.5	<5	<200	<1200
S1 5019		<1	<20	<1	4.8	<200	<2	1.5	<5	<200	<500
S1 5020		<1	<20	1	4.7	<200	<2	1.5	<5	<200	<500
S1 5021		<1	<20	<1	3.0	<200	<2	1.4	<5	<200	<500
S1 5022		2	<20	<1	4.0	<200	<2	1.5	<5	<200	<500
S1 5023		1	<20	1	4.6	<200	<2	1.8	<5	<200	<500
S1 5024		<1	<20	<1	3.3	<200	<2	1.2	<5	<200	640
S1 5025		<1	<20	<1	<0.5	<200	<2	<0.5	<5	<200	<500
S1 5026		<1	<20	1	4.3	<200	<2	1.1	<5	<200	<500
S1 5027		<1	<20	1	3.6	<200	<2	1.5	<5	<200	<500
S1 5028		<1	<20	<1	3.8	<200	<2	1.0	<5	<200	<500
S1 5029		<1	<20	<1	1.9	<200	<2	0.7	<5	<200	1000
S1 5030		<1	<20	<1	3.5	<200	3	1.4	<5	<200	<500
S1 5031		<1	<20	<1	5.4	<200	<2	2.1	<5	<200	<500
S1 5032		<1	<20	<1	<0.5	<200	<2	<0.5	<5	<200	<500
S1 5033		1	<20	1	3.9	<200	<2	1.7	<5	<200	<500
S1 5034		<1	<20	<1	<0.5	<200	<2	<0.5	<5	<200	<500
S1 5035		<1	<20	<1	4.6	<200	<2	1.2	<5	<200	<500
S1 5036		<1	<20	<1	3.0	<200	<2	1.4	<5	<200	<500
S1 5037		<1	<20	<1	2.2	<200	<2	1.2	<5	<200	<500
S1 5038		<1	<20	<1	2.6	<200	<2	0.9	<5	<200	<500
S1 5039		<1	<20	<1	3.7	<200	<2	1.9	<5	<200	<500
S1 5040		1	<20	<1	2.6	<200	<2	1.8	<5	<200	<500

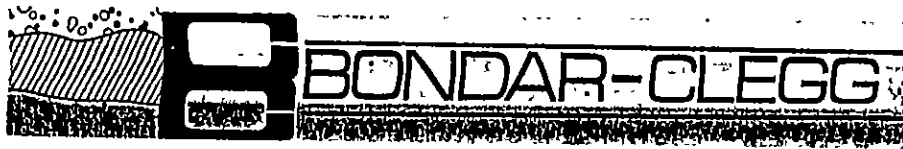


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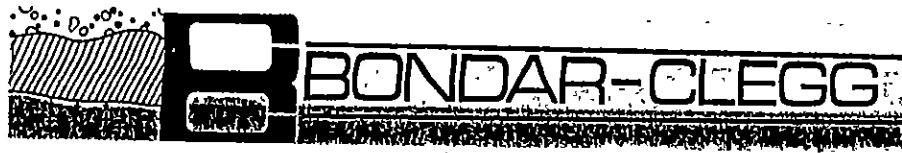
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1 5041		8	1.1	8	880	<5	<10	26	3	220	15	<2	<2
1 5042		14	1.1	7	880	<5	<10	32	2	310	21	<2	<2
S1 5043		12	1.3	7	770	<5	<10	48	2	230	27	<2	4
S1 5044		10	1.1	7	950	<5	<10	38	<1	250	22	<2	<2
1 5045		<5	0.9	4	820	<5	<10	61	<1	330	46	<2	<2
S1 5046		<5	0.9	8	820	<5	<10	38	1	420	24	<2	3
1 5047		<5	1.0	6	1000	<5	<10	17	2	260	20	<2	4
1 5048		<5	1.1	<1	360	6	<10	16	<1	<50	<10	<2	3
S1 5049		16	1.1	7	870	<5	<10	32	3	360	21	<2	5
1 5050		7	1.3	15	640	<5	<10	31	6	440	27	<2	<2
S1 5051		13	6.2	47	700	<5	<10	37	5	780	35	<2	<2
S1 5052		67	4.2	120	910	<5	<10	43	8	480	45	<2	5
1 5053		18	2.0	30	800	<5	<10	26	8	620	34	<2	<2
S1 5054		21	2.7	22	670	<5	<10	24	6	960	59	<2	5
S1 5055		12	1.2	6	820	<5	<10	25	3	890	34	<2	3
1 5056		20	0.9	4	740	<5	<10	19	5	900	45	<2	5
S1 5057		12	0.9	2	540	<5	<10	19	2	580	37	<2	3
1 5058		23	0.7	4	590	<5	<10	<10	2	190	28	<2	<2
1 5059		15	1.2	3	310	11	<10	<10	<1	<50	<10	<2	<2
S1 5060		<5	1.1	<1	230	11	<10	<10	2	<50	<10	<2	2
1 5061		6	0.8	4	910	<5	<10	46	2	230	18	<2	5
S1 5062		7	1.8	4	620	8	<10	<10	<1	140	15	<2	<2
S1 5063		10	1.7	3	560	10	<10	<10	<1	<50	<10	<2	<2
1 5064		<5	0.8	4	430	8	<10	<10	<1	150	17	<2	<2
1 5065		<5	0.6	4	690	<5	<10	35	3	390	25	<2	3
1 5066		<5	1.2	5	650	8	<10	23	2	170	20	<2	<2
1 5067		31	1.6	11	860	<5	<10	30	3	330	26	<2	2
S1 5068		7	1.3	16	490	<5	<10	16	5	330	22	<2	<2
1 5069		37	2.2	16	740	<5	<10	33	6	430	30	<2	5
1 5070		13	1.6	9	690	<5	<10	<10	16	270	22	<2	4
S1 5071		<5	2.4	17	610	<5	<10	19	4	370	27	<2	5
1 5072		17	2.9	27	620	<5	<10	<10	5	460	30	<2	<2
1 5073		35	2.9	30	770	<5	<10	20	7	460	38	<2	3
S1 5074		27	1.8	33	800	<5	<10	40	8	290	33	<2	3
1 5075		7	0.9	10	890	<5	<10	24	16	410	38	<2	2
S1 5076		24	2.1	25	660	<5	<10	21	3	600	49	<2	5
1 5077		13	0.8	4	990	<5	<10	43	5	570	20	<2	3
1 5078		15	1.0	5	1000	<5	<10	38	<1	720	35	<2	3
S1 5079		26	0.9	4	920	<5	<10	35	<1	630	39	<2	3
S1 5080		13	0.8	7	810	<5	<10	34	2	570	28	<2	3



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SAMPLE NUMBER	ELEMENT UNITS	Ir PPB	Fe PCT	La PPH	Lu PPH	Mo PPH	Ni PPH	Rb PPM	Sm PPH	Sc PPH	Se PPM	Ag PPH	Na PCT
S1 5041		<100	2.8	17	<0.5	<2	240	49	3.5	10.0	<10	<5	1.10
S1 5042		<100	3.2	16	<0.5	<2	310	36	3.6	12.0	<10	<5	1.40
S1 5043		<100	2.9	14	<0.5	4	340	32	3.0	10.0	<10	<5	1.20
S1 5044		<100	2.6	18	0.5	<2	300	<24	3.2	10.0	<10	<5	1.10
S1 5045		<100	3.3	21	<0.5	<2	530	39	3.7	11.0	<10	<5	1.20
S1 5046		<100	3.6	10	<0.5	2	260	52	2.2	13.0	<10	<5	1.30
S1 5047		<100	3.0	16	<0.5	<2	150	29	2.9	11.0	<10	8	1.10
S1 5048		<100	<0.5	16	<0.5	3	910	<10	2.8	2.9	<10	<5	0.14
S1 5049		<100	2.7	16	<0.5	<2	170	41	2.9	12.0	<10	<5	1.50
S1 5050		<100	3.8	13	<0.5	2	200	38	2.5	11.0	<10	<5	1.30
S1 5051		<100	4.6	13	<0.5	2	410	41	2.4	10.0	<10	<5	1.00
S1 5052		<100	5.1	30	<0.5	<2	140	65	4.9	12.0	<10	<5	1.10
S1 5053		<100	4.1	12	<0.5	<2	270	66	2.6	11.0	<10	<5	1.50
S1 5054		<100	5.6	14	<0.5	<2	670	<10	2.5	10.0	<10	<5	1.30
S1 5055		<100	3.1	9	<0.5	<2	390	57	2.2	8.4	<10	<5	1.40
S1 5056		<100	3.7	13	<0.5	<2	370	44	2.4	12.0	<10	<5	1.20
S1 5057		<100	2.8	8	<0.5	<2	420	<10	2.3	7.7	<10	<5	1.10
S1 5058		<100	1.8	15	<0.5	<2	670	48	2.1	5.8	<10	<5	1.00
S1 5059		<100	<0.5	<5	<0.5	<2	440	<24	0.9	3.1	<10	6	0.42
S1 5060		<100	0.5	<5	<0.5	<2	180	<10	0.7	2.0	<10	6	0.18
S1 5061		<100	2.3	17	<0.5	4	230	35	3.1	11.0	<10	<5	1.20
S1 5062		<100	1.7	10	<0.5	<2	310	<22	1.9	5.4	<10	<5	0.73
S1 5063		<100	1.0	13	<0.5	<2	250	30	1.6	3.0	<10	<5	0.87
S1 5064		<100	1.6	11	<0.5	<2	540	26	2.0	6.0	<10	<5	0.77
S1 5065		<100	3.1	19	<0.5	3	500	27	3.4	12.0	<10	<5	1.40
S1 5066		<100	2.3	12	<0.5	<2	270	42	2.4	9.0	<10	<5	0.85
S1 5067		<100	3.7	13	<0.5	<2	150	35	2.6	11.0	<10	<5	1.40
S1 5068		<100	3.7	12	<0.5	<2	170	61	2.3	11.0	<10	<5	1.20
S1 5069		<100	3.7	15	<0.5	<2	160	73	2.7	10.0	<10	<5	1.40
S1 5070		<100	3.8	15	<0.5	<2	160	60	2.9	12.0	<10	<5	1.50
S1 5071		<100	4.5	14	<0.5	2	200	36	2.7	10.0	<10	<5	1.30
S1 5072		<100	3.8	11	<0.5	<2	230	<22	2.3	13.0	<10	<5	1.10
S1 5073		<100	4.4	14	<0.5	3	250	61	2.8	13.0	<10	<5	1.20
S1 5074		<100	4.1	19	<0.5	<2	300	37	3.7	13.0	<10	<5	1.20
S1 5075		<100	3.6	19	<0.5	<2	170	55	3.4	13.0	<10	<5	1.40
S1 5076		<100	4.3	16	<0.5	<2	410	<22	2.8	11.0	<10	<5	1.30
S1 5077		<100	2.6	13	<0.5	<2	180	53	2.8	8.5	<10	<5	1.50
S1 5078		<100	3.5	10	<0.5	<2	340	<26	2.3	8.9	<10	<5	1.40
S1 5079		<100	3.9	17	<0.5	<2	340	<27	2.7	7.8	<10	<5	1.40
S1 5080		<100	3.7	14	<0.5	3	460	42	2.8	12.0	<10	<5	1.30



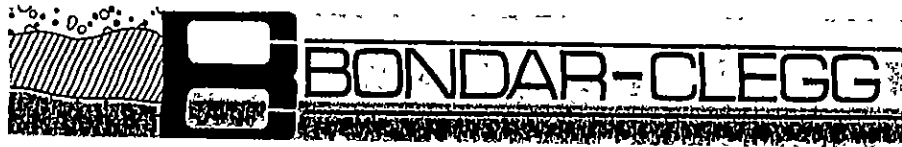
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SAMPLE NUMBER	ELEMENT UNITS	Ta PPM	Te PPM	Tb PPM	Th PPM	Sn PPM	H PPM	U PPM	Yb PPM	Zn PPM	Zr PPM
S1 5041		<1	<20	<1	3.8	<200	<2	1.5	<5	<200	<500
S1 5042		<1	<20	<1	2.8	<200	<2	1.5	<5	<200	<500
S1 5043		<1	<20	<1	2.9	<200	<2	1.4	<5	<200	<500
S1 5044		<1	<20	<1	4.2	<200	<2	1.4	<5	<200	<500
S1 5045		<1	<20	<1	5.0	<200	<2	2.2	<5	<200	<500
S1 5046		<1	<20	<1	2.9	<200	<2	1.4	<5	<200	<500
S1 5047		<1	<20	<1	3.5	<200	<2	1.7	<5	<200	<500
S1 5048		<1	<20	<1	1.0	<200	<2	<0.5	<5	<200	510
S1 5049		<1	<20	<1	3.3	<200	3	1.6	<5	<200	<500
S1 5050		<1	<20	<1	3.2	<200	3	1.2	<5	<200	<500
S1 5051		<1	<20	1	2.9	<200	5	1.8	<5	<200	<500
S1 5052		1	<20	2	6.2	<200	7	2.6	<5	<200	<500
S1 5053		<1	<20	<1	3.3	<200	4	2.0	<5	230	<500
S1 5054		<1	<20	<1	3.6	<200	<2	1.6	<5	<200	<500
S1 5055		<1	<20	<1	2.9	<200	<2	1.2	<5	<200	<500
S1 5056		<1	<20	<1	3.4	<200	<2	1.4	<5	<200	<500
S1 5057		<1	<20	<1	2.1	<200	<2	1.3	<5	<200	<500
S1 5058		<1	<20	<1	3.1	<200	<2	1.5	<5	<200	<500
S1 5059		<1	<20	<1	2.5	<200	<2	0.8	<5	<200	<500
S1 5060		<1	<20	<1	<0.5	<200	<2	<0.5	<5	<200	<500
S1 5061		1	<20	<1	3.3	<200	<2	1.4	<5	<200	<500
S1 5062		<1	<20	<1	2.5	<200	<2	1.0	<5	<200	<500
S1 5063		<1	<20	<1	2.2	<200	<2	0.7	<5	<200	<500
S1 5064		<1	<20	<1	1.8	<200	<2	0.8	<5	<200	<500
S1 5065		1	<20	<1	3.1	<200	<2	1.3	<5	<200	<500
S1 5066		<1	<20	<1	1.8	<200	<2	1.5	<5	<200	<500
S1 5067		1	<20	<1	2.9	<200	<2	1.3	<5	<200	<500
S1 5068		<1	<20	<1	3.0	<200	3	0.9	<5	<200	<500
S1 5069		<1	<20	<1	4.5	<200	<2	1.9	<5	<200	<500
S1 5070		<1	<20	<1	3.9	<200	<2	1.6	<5	<200	<500
S1 5071		<1	<20	<1	3.5	<200	<2	1.3	<5	<200	<500
S1 5072		<1	<20	1	2.6	<200	4	1.6	<5	<200	<500
S1 5073		<1	<20	<1	2.8	<200	<2	1.7	<5	<200	<500
S1 5074		1	<20	<1	5.1	<200	<2	2.0	<5	<200	<500
S1 5075		<1	<20	<1	3.1	<200	<2	2.5	<5	<200	<500
S1 5076		<1	<20	<1	3.1	<200	<2	1.3	<5	<200	<500
S1 5077		<1	<20	<1	3.5	<200	<2	1.6	<5	<200	<500
S1 5078		1	<20	<1	2.8	<200	<2	1.5	<5	<200	900
S1 5079		1	<20	<1	3.4	<200	<2	1.7	<5	<200	<500
S1 5080		<1	<20	<1	4.2	<200	<2	1.2	<5	<200	<500

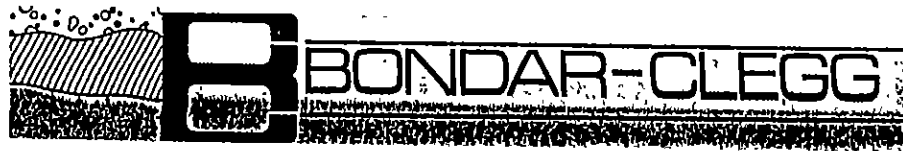




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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Sb PPM	As PPM	Ba PPM	Br PPM	Cd PPM	Ce PPM	Cs PPM	Cr PPM	Co PPM	Eu PPM	Hf PPM
S1 5081		10	0.8	12	640	<5	<10	28	3	400	38	<2	3
S1 5082		<5	1.2	7	430	10	<10	18	1	73	15	<2	<2
S1 5083		8	1.1	8	640	<5	<10	27	2	240	<10	<2	3
S1 5084		6	0.9	6	870	<5	<10	50	2	330	29	<2	<2
S1 5085		<5	0.6	3	760	<5	<10	22	1	310	<10	<2	3
S1 5086		<5	0.8	6	720	<5	<10	33	3	330	28	<2	2
S1 5087		11	0.9	4	510	9	<10	36	2	270	25	<2	<2
S1 5088		20	1.4	14	630	<5	<10	31	6	580	33	<2	4
S1 5089		490	2.1	18	680	<5	<10	19	5	760	39	<2	3
S1 5090		<5	1.2	9	840	<5	<10	40	3	810	31	<2	3
S1 5091		14	1.0	6	790	<5	<10	30	2	460	21	<2	3
S1 5092		<5	0.9	2	780	<5	<10	25	1	420	19	<2	5
S1 5093		<5	0.8	4	750	<5	<10	22	<1	320	17	<2	<2
S1 5094		6	0.9	5	660	<5	<10	20	2	440	27	<2	2
S1 5095		7	0.8	5	670	<5	<10	24	2	400	16	<2	<2
S1 5096		<5	1.0	9	700	<5	<10	<10	3	460	19	<2	3
S1 5097		14	1.7	5	470	10	<10	<21	<1	110	<10	<2	<2
S1 5098		<5	1.9	11	890	12	<10	41	2	140	21	<2	<2
S1 5099		9	1.3	4	990	5	<10	21	<1	250	<10	<2	3
S1 5100		12	1.9	6	<100	32	<10	<22	<1	190	<10	<2	4
S1 5101		22	2.8	16	800	<5	<10	24	6	450	45	<2	5
S1 5102		19	3.3	19	850	<5	<10	27	5	550	22	<2	3
S1 5103		9	1.5	9	760	<5	<10	<10	4	520	17	<2	3
S1 5104		28	1.4	15	680	<5	<10	32	4	580	38	<2	3
S1 5105		20	1.0	6	880	<5	<10	37	2	450	23	<2	3
S1 5106		<5	0.9	7	790	<5	<10	28	<1	330	26	<2	<2
S1 5107		<5	0.9	8	730	<5	<10	33	5	330	33	3	3
S1 5108		<5	0.5	<1	240	11	<10	<10	2	69	<10	<2	<2
S1 5109		<5	1.0	12	640	<5	<10	<10	3	1100	68	<2	<2
S1 5110		<5	0.6	4	470	<5	<10	<10	4	430	27	<2	<2
S1 5111		<5	1.7	8	650	9	<10	32	<1	120	21	<2	<2
S1 5112		8	1.2	9	1000	5	<10	36	2	260	29	<2	3
S1 5113		<5	1.5	10	910	<5	<10	26	2	210	21	<2	3
S1 5114		20	0.9	11	780	<5	<10	<10	1	630	37	<2	2
S1 5115		29	1.6	19	970	<5	<10	<10	4	1100	74	<2	<2
S1 5116		22	1.3	9	910	<5	<10	<10	<1	870	31	<2	4
S1 5117		12	1.2	5	700	<5	<10	28	3	690	30	<2	3
S1 5118		6	1.0	7	770	<5	<10	31	1	370	<10	<2	3
S1 5119		<5	1.1	4	260	11	<10	<10	<1	<50	<10	<2	<2
S1 5120		<5	0.4	<1	280	10	<10	<10	1	<50	<10	<2	<2



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SAMPLE NUMBER	ELEMENT UNITS	Ir PPB	Fe PCT	La PPM	Lu PPM	Mo PPM	Ni PPM	Rb PPM	Sm PPM	Sc PPM	Se PPM	Ag PPM	Na PCT
1 5081		<100	3.5	15	<0.5	<2	380	32	2.8	14.0	<10	<5	1.40
1 5082		<100	1.0	14	<0.5	<2	240	<10	2.5	3.7	<10	<5	0.69
S1 5083		<100	2.4	13	<0.5	2	240	26	2.3	8.3	<10	<5	0.88
S1 5084		<100	2.9	17	<0.5	<2	270	<20	3.3	11.0	<10	<5	1.10
1 5085		<100	2.3	10	<0.5	<2	230	<21	2.1	8.9	<10	<5	1.20
S1 5086		<100	2.8	21	<0.5	<2	490	47	3.5	10.0	<10	<5	1.40
1 5087		<100	2.2	15	<0.5	<2	560	<22	2.8	8.8	<10	7	0.90
1 5088		<100	3.9	15	<0.5	<2	200	45	2.9	12.0	<10	<5	1.40
S1 5089		<100	4.2	15	<0.5	<2	270	70	2.6	11.0	<10	<5	1.40
1 5090		<100	3.9	20	<0.5	<2	220	49	3.5	11.0	<10	<5	1.30
S1 5091		<100	3.1	16	<0.5	<2	180	57	2.5	10.0	<10	<5	1.40
S1 5092		<100	2.3	14	<0.5	<2	210	<22	2.8	9.1	<10	<5	1.60
1 5093		<100	2.4	13	<0.5	<2	200	<23	2.5	8.9	<10	<5	1.50
S1 5094		<100	3.7	12	<0.5	<2	260	32	2.7	10.0	<10	<5	1.40
S1 5095		<100	2.7	13	<0.5	<2	340	49	2.5	8.5	<10	<5	0.94
1 5096		<100	2.7	15	<0.5	<2	280	34	2.9	12.0	<10	<5	1.10
S1 5097		<100	1.5	12	<0.5	<2	160	<27	1.9	6.9	<10	<5	0.56
1 5098		<100	2.4	10	<0.5	2	340	<26	2.2	7.8	<10	<5	0.54
1 5099		<100	1.9	11	<0.5	<2	330	<28	3.2	11.0	<10	<5	1.00
S1 5100		<100	1.2	10	<0.5	<2	870	<22	2.0	5.8	<10	<5	0.29
1 5101		<100	4.2	16	<0.5	<2	210	62	2.9	12.0	<10	7	1.20
S1 5102		<100	3.9	14	<0.5	<2	240	56	2.6	12.0	<10	8	1.50
S1 5103		<100	3.2	13	<0.5	<2	210	34	2.7	11.0	<10	<5	1.50
1 5104		<100	4.0	13	<0.5	<2	250	38	2.8	12.0	<10	<5	1.30
1 5105		<100	3.2	14	<0.5	<2	180	40	2.5	9.3	<10	<5	1.50
1 5106		<100	3.9	14	<0.5	<2	210	<21	2.4	11.0	<10	<5	1.30
1 5107		<100	3.5	17	<0.5	2	250	47	2.9	11.0	<10	<5	1.30
S1 5108		<100	<0.5	<5	<0.5	<2	330	<10	0.6	1.7	<10	<5	0.20
1 5109		<100	4.7	11	<0.5	<2	730	51	2.1	14.0	<10	<5	1.00
1 5110		<100	1.8	7	<0.5	<2	450	31	1.3	6.2	<10	<5	0.59
S1 5111		<100	2.2	15	<0.5	<2	310	26	2.8	8.2	<10	<5	0.64
1 5112		<100	3.2	13	<0.5	<2	270	38	3.1	10.0	<10	<5	1.10
1 5113		<100	2.6	14	<0.5	<2	310	43	3.1	10.0	<10	<5	0.83
S1 5114		<100	3.8	12	<0.5	<2	370	<21	2.6	8.4	<10	<5	1.10
1 5115		<100	5.0	16	<0.5	<2	830	34	3.3	8.3	<10	<5	1.00
S1 5116		<100	3.8	16	<0.5	<2	440	29	2.4	10.0	<10	<5	1.40
1 5117		<100	3.1	17	<0.5	<2	200	38	2.8	6.6	<10	<5	1.60
1 5118		<100	3.9	19	<0.5	<2	240	37	3.6	12.0	<10	<5	1.40
S1 5119		<100	<0.5	<5	<0.5	<2	240	15	0.6	1.7	<10	7	0.22
S1 5120		<100	<0.5	<5	<0.5	<2	120	<21	0.6	2.3	<10	<5	0.46

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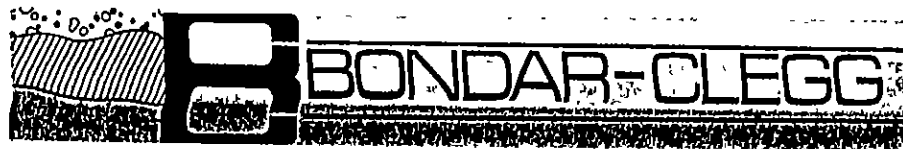
SAMPLE NUMBER	ELEMENT UNITS	Ta PPM	Te PPM	Tb PPM	Th PPM	Sn PPM	H PPM	U PPM	Yb PPM	Zn PPM	Zr PPM
1 5081		1	<20	<1	3.3	<200	<2	1.6	<5	<200	<500
1 5082		<1	<20	<1	2.8	<200	<2	0.9	<5	<200	<500
S1 5083		<1	<20	<1	2.9	<200	<2	1.0	<5	230	<500
S1 5084		<1	<20	<1	3.9	<200	<2	1.7	<5	<200	<500
1 5085		<1	<20	<1	2.1	<200	<2	1.2	<5	<200	<500
S1 5086		<1	<20	<1	4.7	<200	<2	1.6	<5	<200	<500
1 5087		<1	<20	<1	3.5	<200	<2	1.1	<5	<200	<500
1 5088		1	<20	<1	3.6	<200	<2	1.4	<5	<200	<500
S1 5089		<1	<20	<1	2.9	<200	<2	1.4	<5	370	<500
1 5090		<1	<20	<1	3.3	<200	<2	1.9	<5	<200	<500
S1 5091		<1	<20	<1	2.4	<200	<2	1.8	<5	<200	<500
S1 5092		<1	<20	<1	3.0	<200	<2	1.5	<5	<200	<500
1 5093		<1	<20	<1	3.0	<200	<2	1.6	<5	<200	<500
S1 5094		<1	<20	<1	3.7	<200	<2	1.7	<5	<200	<500
S1 5095		<1	<20	<1	3.1	<200	4	1.3	<5	<200	950
1 5096		<1	<20	<1	3.4	<200	<2	1.5	<5	<200	<500
S1 5097		<1	<20	<1	2.0	<200	<2	0.8	<5	240	<500
1 5098		<1	<20	<1	2.3	<200	<2	<0.5	<5	<200	<500
1 5099		<1	<20	<1	3.9	<200	<2	1.7	<5	<200	<500
S1 5100		<1	<20	<1	2.4	<200	<2	1.5	<5	<200	1100
1 5101		<1	<20	<1	3.8	<200	5	1.9	<5	<200	<500
S1 5102		<1	<20	<1	1.9	<200	<2	1.6	<5	210	<500
S1 5103		<1	<20	<1	3.5	<200	<2	1.5	<5	<200	<500
1 5104		<1	<20	<1	2.5	<200	<2	1.1	<5	<200	<500
1 5105		1	<20	<1	2.5	<200	<2	1.7	<5	<200	<500
1 5106		<1	<20	<1	3.5	<200	3	1.4	<5	<200	<500
1 5107		<1	<20	<1	3.7	<200	<2	1.4	<5	<200	<500
S1 5108		<1	<20	<1	<0.5	<200	<2	1.2	<5	<200	<500
1 5109		<1	<20	<1	2.8	<200	<2	1.1	<5	<200	<500
1 5110		<1	<20	<1	1.3	<200	2	0.6	<5	<200	<500
S1 5111		<1	<20	<1	3.0	<200	3	1.7	<5	<200	<500
1 5112		<1	<20	<1	3.1	<200	<2	1.8	<5	<200	<500
1 5113		<1	<20	<1	3.3	<200	<2	1.2	<5	<200	<500
S1 5114		<1	<20	<1	3.6	<200	<2	1.6	<5	<200	610
1 5115		<1	<20	<1	5.3	<300	<2	1.9	<5	<200	<500
S1 5116		2	<20	<1	2.8	<200	<2	1.7	<5	<200	<500
S1 5117		1	<20	<1	4.7	<200	<2	1.8	<5	<200	<500
1 5118		<1	<20	<1	3.5	<200	<2	2.2	<5	<200	<500
S1 5119		<1	<20	<1	<0.5	<200	<2	0.8	<5	<200	<500
S1 5120		<1	<20	<1	<0.5	<200	<2	1.4	<5	<200	<500

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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Sb PPM	As PPM	Ba PPM	Br PPM	Cd PPM	Ce PPM	Cs PPM	Cr PPM	Co PPM	Eu PPM	Hf PPM
S1 5121		<5	1.1	6	1100	<5	<10	45	3	270	13	<2	<2
S1 5122		<5	1.3	10	770	<5	<10	<10	9	410	33	<2	3
S1 5123		12	1.0	4	770	<5	<10	29	2	350	18	<2	5
S1 5124		<5	0.8	6	1200	<5	<10	31	4	240	18	<2	3
S1 5125		<5	1.2	6	1100	<5	<10	23	<1	260	19	<2	2
S1 5126		<5	1.1	7	1300	<5	<10	19	3	230	22	<2	<2
S1 5127		7	1.2	8	1300	<5	<10	33	2	180	21	<2	<2
S1 5128		19	1.2	6	1100	<5	<10	28	2	390	22	<2	4
S1 5129		<5	0.8	5	1200	<5	<10	35	2	230	<10	<2	3
S1 5130		5	1.1	8	1000	<5	<10	31	2	280	14	<2	3
S1 5131		<5	0.8	4	1300	<5	<10	36	2	270	18	<2	4
S1 5132		<5	1.2	7	1100	<5	<10	36	2	250	19	<2	3
S1 5133		11	1.0	6	960	<5	<10	28	3	190	<10	<2	<2
S1 5134		9	0.8	5	810	<5	<10	24	5	170	36	<2	4
S1 5135		<5	1.1	8	930	<5	<10	33	3	240	19	<2	<2
S1 5136		<5	1.0	6	920	<5	<10	22	2	340	21	<2	<2
S1 5137		6	0.9	7	1400	<5	<10	25	3	200	11	<2	4
S1 5138		9	0.9	5	1000	<5	<10	24	1	410	27	<2	5
S1 5139		<5	1.1	8	1200	<5	<10	35	2	230	23	<2	<2
S1 5140		16	1.3	11	1000	<5	<10	48	3	280	34	<2	3
S1 5141		24	1.2	9	800	<5	<10	29	3	320	28	<2	<2
S1 5142		11	1.3	12	860	<5	<10	25	2	440	27	<2	3
S1 5143		<5	0.8	<1	680	<5	<10	18	3	130	<10	<2	4
S1 5144		<5	2.4	7	1100	<5	<10	40	3	230	19	<2	<2
S1 5145		<5	1.9	9	1000	<5	<10	24	3	240	17	<2	2
S1 5146		<5	0.8	5	700	<5	<10	23	<1	200	<10	<2	4
S1 5147		5	0.9	8	920	<5	<10	22	3	250	15	<2	5
S1 5148		8	0.9	8	810	<5	<10	33	2	320	20	<2	<2
S1 5149		9	1.1	8	1400	<5	<10	33	2	270	19	<2	4
S1 5150		<5	0.6	5	580	<5	<10	<10	<1	100	<10	<2	3
S1 5151		14	0.9	6	860	<5	<10	21	2	410	25	2	<2
S1 5152		70	6.5	72	530	<5	<10	19	3	760	48	<2	<2
S1 5153		36	4.6	40	670	<5	<10	<22	7	660	34	<2	3
S1 5154		27	1.3	9	720	<5	<10	21	4	550	34	<2	<2
S1 5155		30	1.3	14	710	<5	<10	25	5	470	21	<2	<2
S1 5156		11	1.5	10	1400	<5	<10	27	2	210	14	<2	<2
S1 5157		<5	1.0	4	750	<5	<10	<10	<1	110	<10	<2	4
S1 5158		<5	0.3	<1	110	<5	<10	<10	<1	<50	<10	<2	<2
S1 5159		8	1.4	13	1100	<5	<10	38	3	290	28	<2	3
S1 5160		<5	1.1	8	920	<5	<10	20	<1	470	22	<2	3

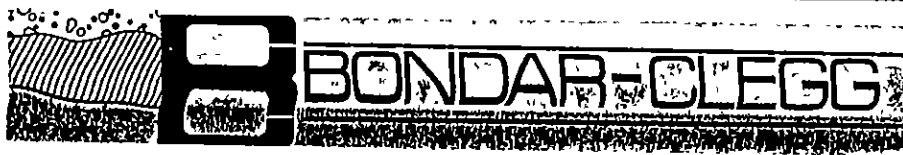


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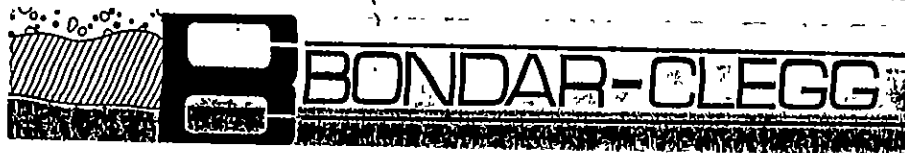
SAMPLE NUMBER	ELEMENT UNITS	Ir PPB	Fe PCT	La PPM	Lu PPM	Mo PPM	Ni PPM	Rb PPM	Sm PPM	Sc PPM	Se PPM	Ag PPM	Na PCT
1 5121		<100	3.1	16	<0.5	3	130	42	2.7	11.0	<10	<5	1.00
1 5122		<100	5.5	13	<0.5	<2	97	48	2.5	14.0	<10	<5	1.20
S1 5123		<100	2.7	15	<0.5	<2	87	44	3.0	12.0	<10	<5	1.40
S1 5124		<100	2.5	16	<0.5	3	100	37	2.8	8.8	<10	<5	1.10
1 5125		<100	2.8	15	<0.5	<2	130	<22	2.7	11.0	<10	<5	1.30
S1 5126		<100	3.3	16	<0.5	<2	130	69	2.8	10.0	<10	<5	1.20
1 5127		<100	3.0	15	<0.5	<2	110	67	2.9	11.0	<10	<5	1.00
1 5128		<100	3.8	17	<0.5	2	220	94	3.1	12.0	<10	<5	1.20
S1 5129		<100	1.9	13	<0.5	<2	130	37	3.2	9.5	<10	<5	1.20
1 5130		<100	2.9	16	<0.5	<2	150	49	3.2	11.0	<10	<5	1.00
S1 5131		<100	2.4	15	<0.5	<2	170	40	3.1	10.0	<10	<5	1.20
S1 5132		<100	2.5	11	<0.5	<2	170	31	3.1	11.0	<10	<5	1.00
1 5133		<100	2.2	11	<0.5	<2	130	42	2.6	8.2	<10	<5	1.00
S1 5134		<100	3.0	15	<0.5	<2	200	49	3.1	8.3	<10	11	1.10
S1 5135		<100	3.1	13	<0.5	3	160	<26	3.7	12.0	<10	12	0.94
1 5136		<100	3.0	17	<0.5	<2	210	28	3.4	12.0	<10	<5	1.50
S1 5137		<100	2.7	15	<0.5	<2	100	53	3.1	11.0	<10	<5	1.10
1 5138		<100	2.9	16	<0.5	3	240	<25	3.2	10.0	<10	<5	1.50
1 5139		<100	2.6	22	<0.5	<2	110	37	4.2	11.0	<10	<5	1.00
S1 5140		<100	4.0	17	<0.5	<2	160	32	3.3	13.0	<10	<5	1.00
1 5141		<100	3.2	20	<0.5	<2	170	40	3.3	11.0	<10	<5	1.00
S1 5142		<100	4.3	16	<0.5	<2	260	60	2.7	14.0	<10	<5	1.20
S1 5143		<100	2.1	11	<0.5	<2	120	49	2.4	8.5	<10	<5	0.72
1 5144		<100	2.8	16	<0.5	3	110	55	3.3	11.0	<10	<5	1.00
1 5145		<100	2.7	18	<0.5	<2	150	36	3.3	11.0	<10	<5	1.00
1 5146		<100	2.4	14	<0.5	<2	120	<22	3.0	10.0	<10	7	1.10
1 5147		<100	3.0	14	<0.5	<2	200	<10	3.1	11.0	<10	<5	1.10
S1 5148		<100	3.1	16	<0.5	<2	180	37	3.4	12.0	<10	<5	1.10
1 5149		<100	3.5	18	<0.5	<2	180	59	3.2	12.0	<10	<5	1.20
1 5150		<100	1.0	10	<0.5	3	110	26	1.4	5.8	<10	<5	0.48
S1 5151		<100	2.4	14	<0.5	<2	190	25	2.7	10.0	<10	<5	1.50
1 5152		<100	4.8	14	<0.5	<2	650	34	2.5	11.0	<10	<5	0.83
1 5153		<100	4.2	10	<0.5	<2	510	49	2.6	12.0	<10	<5	0.92
S1 5154		<100	3.3	17	<0.5	<2	210	57	2.9	11.0	<10	<5	1.50
1 5155		<100	4.0	12	<0.5	<2	180	46	2.6	9.4	<10	<5	1.40
S1 5156		<100	4.2	18	<0.5	<2	150	70	4.6	15.0	<10	<5	1.00
1 5157		<100	1.9	10	<0.5	<2	140	26	2.4	6.6	<10	<5	0.60
1 5158		<100	<0.5	<5	<0.5	<2	<50	<10	<0.5	0.7	<10	<5	0.06
S1 5159		<100	3.2	19	<0.5	2	200	<25	4.4	14.0	<10	<5	1.00
S1 5160		<100	3.9	18	<0.5	<2	300	30	3.6	13.0	<10	<5	1.70



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SAMPLE NUMBER	ELEMENT UNITS	Ta PPM	Te PPM	Tb PPM	Th PPM	Sn PPM	W PPM	U PPM	Yb PPM	Zn PPM	Zr PPM
S1 5121		<1	<20	<1	3.9	<200	3	2.1	<5	<200	<500
S1 5122		<1	<20	<1	2.9	<200	<2	1.8	<5	<200	<500
S1 5123		<1	<20	<1	4.1	<200	<2	1.5	<5	<200	<500
S1 5124		<1	<20	<1	3.9	<200	<2	1.7	<5	<200	<500
S1 5125		<1	<20	<1	3.9	<200	<2	1.5	<5	<200	<500
S1 5126		<1	<20	<1	3.8	<200	5	1.7	<5	<200	<500
S1 5127		<1	<20	<1	4.0	<200	<2	1.6	<5	<200	<500
S1 5128		<1	<20	<1	4.9	<230	<2	1.9	<5	<200	<500
S1 5129		<1	<20	<1	3.2	<200	3	1.6	<5	<200	<500
S1 5130		<1	<20	<1	3.8	<200	<2	1.7	<5	<200	<500
S1 5131		<1	<20	<1	4.1	<200	<2	1.9	<5	<200	<500
S1 5132		1	<20	<1	4.2	<200	<2	1.3	<5	<200	<500
S1 5133		<1	<20	<1	3.5	<200	4	1.6	<5	<200	<500
S1 5134		<1	<20	<1	5.1	<200	<2	2.3	<5	<200	<500
S1 5135		<1	<20	1	4.6	<200	<2	2.0	<5	<200	<500
S1 5136		<1	<20	<1	3.4	<200	<2	1.7	<5	<200	<500
S1 5137		<1	<20	<1	4.0	<200	<2	1.7	<5	<200	750
S1 5138		<1	<20	<1	2.7	<200	<2	1.2	<5	<200	<500
S1 5139		<1	<20	<1	4.6	<200	5	1.8	<5	<200	<500
S1 5140		<1	<20	<1	4.2	<200	<2	1.3	<5	<200	<500
S1 5141		<1	<20	<1	4.2	<200	<2	2.1	<5	<200	<500
S1 5142		<1	<20	<1	3.6	<200	<2	1.4	<5	<200	<500
S1 5143		<1	<20	<1	3.3	<200	<2	1.2	<5	<200	<500
S1 5144		<1	<20	<1	4.7	<200	4	2.6	<5	<200	<500
S1 5145		<1	<20	<1	4.1	<200	<2	2.2	<5	<200	<500
S1 5146		<1	<20	<1	3.9	<200	<2	2.7	<5	<200	<500
S1 5147		<1	<20	<1	3.9	<200	<2	1.7	<5	<200	<500
S1 5148		<1	<20	<1	4.0	<200	<2	2.9	<5	<200	<500
S1 5149		<1	<20	<1	5.2	<200	<2	1.6	<5	<200	<500
S1 5150		<1	<20	<1	1.9	<200	<2	<0.5	<5	<200	<500
S1 5151		<1	<20	<1	3.1	<200	<2	1.2	<5	<200	<500
S1 5152		<1	<43	<1	3.2	<200	<2	1.2	<5	<200	<500
S1 5153		<1	<20	<1	2.6	<200	<4	1.4	<5	<200	<500
S1 5154		<1	<20	1	5.1	<200	<2	2.1	<5	<200	<500
S1 5155		<1	<20	<1	3.5	<250	5	1.8	<5	<200	<500
S1 5156		<1	<20	<1	5.6	<200	<2	2.1	<5	<200	<500
S1 5157		<1	<20	<1	2.8	<200	<2	3.4	<5	<200	<500
S1 5158		<1	<20	<1	<0.5	<200	<2	0.8	<5	<200	<500
S1 5159		<1	<20	<1	4.9	<200	<2	1.3	<5	<200	<500
S1 5160		<1	<20	<1	3.3	<200	<2	1.6	<5	<200	<500

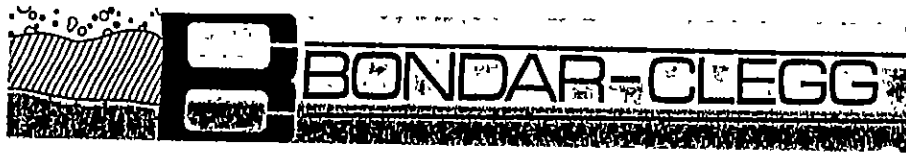


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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Sb PPM	As PPM	Ba PPM	Br PPM	Cd PPM	Ce PPM	Cs PPM	Cr PPM	Co PPM	Fu PPM	Hf PPM
S1 5161		15	1.0	6	900	<5	<10	33	1	400	31	<2	3
S1 5162		16	0.9	5	950	<5	<10	30	1	380	20	<2	<2
S1 5163		23	1.4	16	540	<5	<10	30	4	600	38	<2	<2
S1 5164		<5	1.1	5	940	<5	<10	22	3	470	21	<2	3
S1 5165		24	0.8	5	680	<5	<10	25	4	450	34	<2	6
S1 5166		14	1.5	12	590	<5	<10	17	2	790	38	<2	4
S1 5167		<5	1.5	3	510	7	<10	29	<1	180	18	<2	<2
S1 5168		<5	1.2	<2	<100	15	<10	<10	<1	<50	12	<2	<2
S1 5169		<5	2.2	8	1000	6	<10	37	3	210	18	<2	<2
S1 5170		<5	2.1	5	430	11	<10	<10	1	120	19	<2	<2
S1 5171		<5	1.2	6	610	<5	<10	<10	2	500	27	<2	4
S1 5172		<5	4.0	7	670	7	<10	<26	3	250	<10	<2	<2
S1 5173		<5	1.1	8	1000	5	<10	50	2	260	22	<2	<2
S1 5174		13	0.9	4	950	<5	<10	26	<1	310	16	<2	6
S1 5175		13	1.4	8	1400	<5	<10	50	<1	310	23	<2	<2
S1 5176		7	0.9	7	930	<5	<10	28	<1	430	27	<2	<2
S1 5177		18	1.1	9	700	<5	<10	30	3	390	23	<2	<2
S1 5178		<5	2.2	<2	<100	<5	<10	<10	<1	<50	<10	<2	3
S1 5179		<5	1.7	4	310	<5	<10	<10	<1	<50	<10	<2	<2
S1 5180		9	0.8	4	760	<5	<10	<10	2	220	27	<2	<2
S1 5181		<5	0.9	5	830	<5	<10	44	<1	210	21	<2	4
S1 5182		<5	1.0	6	930	<5	<10	44	2	180	<10	<2	3
S1 5183		<5	1.0	6	740	<5	<10	28	<1	350	20	<2	3
S1 5184		<5	0.7	5	790	<5	<10	20	<1	330	19	<2	<2
S1 5185		14	1.3	11	1200	<5	<10	46	2	300	29	<2	5
S1 5186		22	1.1	5	990	<5	<10	<10	2	660	37	<2	5
S1 5187		10	1.1	6	630	<5	<10	36	1	570	34	<2	3
S1 5188		26	0.7	5	520	<5	<10	16	<1	670	35	<2	<2
S1 5189		<5	2.0	<1	260	6	<10	<10	<1	<50	<10	<2	<2
S1 5190		<5	1.5	<1	<100	6	<10	<10	<1	<50	<10	<2	<2
S1 5191		8	1.2	5	1100	<5	<10	31	<1	330	31	<2	<2
S1 5192		<5	1.6	5	1200	6	<10	21	3	170	18	<2	<2
S1 5193		<5	0.9	<2	570	6	<10	59	<1	<50	<10	<2	5
S1 5194		12	0.9	7	890	<5	<10	<10	3	390	<10	<2	5
S1 5195		9	0.9	5	900	<5	<10	25	2	490	23	<2	4
S1 5196		8	1.2	7	960	<5	<10	<10	<1	720	49	<2	7
S1 5197		9	1.1	9	1200	<5	<10	27	2	1100	53	<2	<2
S1 5198		11	1.1	4	250	7	<10	26	2	<50	15	<2	<2
S1 5199		<5	1.3	<2	450	5	<10	28	<1	90	<10	<2	2
S1 5200		7	1.1	<1	630	8	<10	<10	<1	72	<10	<2	5



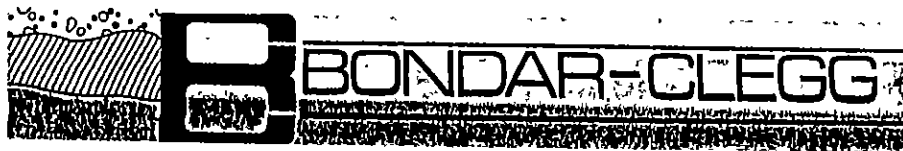
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SAMPLE NUMBER	ELEMENT UNITS	Ir PPB	Fe PCT	La PPH	Lu PPH	Ho PPM	NI PPM	Rb PPM	Sm PPM	Sc PPM	Se PPM	Ag PPM	Na PCT
S1 5161		<100	2.9	14	<0.5	<2	190	36	2.9	10.0	<10	<5	1.40
S1 5162		<100	3.3	15	<0.5	<2	200	64	2.9	10.0	<10	<5	1.40
S1 5163		<100	4.6	11	<0.5	<2	380	39	2.7	12.0	<10	<5	1.40
S1 5164		<100	2.0	15	<0.5	<2	190	67	2.9	8.7	<10	<5	1.60
S1 5165		<100	3.0	11	<0.5	<2	190	54	2.7	10.0	<10	<5	1.40
S1 5166		<100	3.9	15	<0.5	<2	480	68	2.6	11.0	<10	<5	1.30
S1 5167		<100	1.4	11	<0.5	<2	390	24	1.9	6.0	<10	<5	0.61
S1 5168		<100	<0.5	6	<0.5	5	180	23	0.6	1.6	<10	<5	0.17
S1 5169		<100	2.7	13	<0.5	5	360	<22	2.7	10.0	<10	<5	0.81
S1 5170		<100	1.6	9	<0.5	3	430	<10	1.9	4.2	<10	<5	0.20
S1 5171		<100	3.7	14	<0.5	<2	370	41	2.3	10.0	<10	<5	1.00
S1 5172		<100	1.6	15	<0.5	<2	220	<42	2.7	7.4	<10	<5	0.71
S1 5173		<100	2.7	20	<0.5	3	210	<32	3.9	12.0	<10	<5	0.89
S1 5174		<100	2.9	16	<0.5	<2	130	57	3.0	10.0	<10	<5	1.50
S1 5175		<100	3.8	17	<0.5	2	300	<27	3.8	12.0	<10	<5	1.10
S1 5176		<100	3.5	16	<0.5	<2	280	32	2.8	11.0	<10	<5	1.70
S1 5177		<100	2.8	16	<0.5	<2	240	27	3.3	13.0	<10	8	1.40
S1 5178		<100	<0.5	<5	<0.5	<2	360	<23	0.6	2.9	<10	<5	0.15
S1 5179		<100	0.7	8	<0.5	<2	370	<10	1.3	1.0	<10	<5	0.24
S1 5180		<100	2.9	13	<0.5	<2	290	48	2.6	10.0	<10	9	0.92
S1 5181		<100	2.8	12	<0.5	4	170	59	3.0	10.0	<10	<5	1.00
S1 5182		<100	2.4	13	<0.5	5	170	24	2.8	8.0	<10	<5	0.81
S1 5183		<100	2.9	15	<0.5	<2	220	25	2.8	10.0	<10	<5	1.50
S1 5184		<100	2.4	12	<0.5	3	160	25	2.7	10.0	<10	<5	1.40
S1 5185		<100	4.2	25	<0.5	<2	370	38	6.4	14.0	<10	<5	1.10
S1 5186		<100	3.3	14	<0.5	<2	220	55	2.7	10.0	<10	<5	1.50
S1 5187		<100	3.7	18	<0.5	2	280	39	3.3	12.0	<10	<5	1.60
S1 5188		<100	3.4	10	<0.5	<2	500	<21	1.9	10.0	<10	<5	1.20
S1 5189		<100	0.9	<5	<0.5	<2	520	<27	0.9	2.3	<10	<5	0.19
S1 5190		<100	<0.5	<5	<0.5	4	440	<10	0.6	1.2	<10	<5	0.19
S1 5191		<100	3.2	14	<0.5	3	260	31	2.7	9.2	<10	<5	0.78
S1 5192		<100	1.6	15	<0.5	<2	290	<28	3.2	10.0	<10	<5	0.85
S1 5193		<100	1.1	18	<0.5	5	110	<33	2.4	4.9	<10	<5	0.84
S1 5194		<100	2.4	17	<0.5	<2	260	36	3.0	11.0	<10	<5	1.20
S1 5195		<100	2.8	15	<0.5	<2	120	32	2.5	11.0	<10	<5	1.80
S1 5196		<100	4.3	12	<0.5	<2	270	45	2.5	11.0	<10	<5	1.50
S1 5197		<100	4.8	16	<0.5	<2	430	<31	2.6	12.0	<10	<5	1.60
S1 5198		<100	1.3	7	<0.5	5	130	28	1.6	3.8	<10	<5	0.37
S1 5199		<100	1.0	8	<0.5	3	280	<10	1.3	4.2	<10	<5	0.56
S1 5200		<100	1.1	9	<0.5	2	250	29	1.7	4.4	<10	<5	0.68



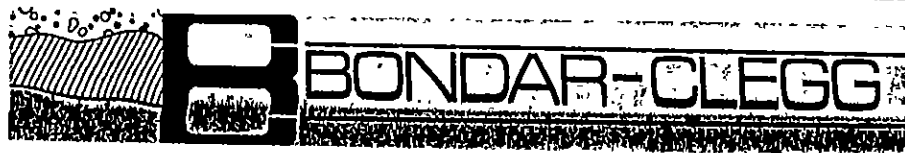


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SAMPLE NUMBER	ELEMENT UNITS	Ta PPM	Te PPM	Tb PPM	Th PPM	Sn PPM	W PPM	U PPM	Yb PPM	Zn PPM	Zr PPM
S1 5161		1	<20	<1	3.5	<200	<2	1.1	<5	<200	<500
S1 5162		<1	<20	<1	4.1	<200	<2	2.0	<5	<200	<500
S1 5163		<1	<20	<1	3.2	<200	<2	1.2	<5	<200	<500
S1 5164		<1	<20	<1	3.2	<200	<2	1.5	<5	<200	<500
S1 5165		<1	<20	<1	2.8	<200	<2	1.5	<5	<200	<500
S1 5166		<1	<20	<1	2.8	<200	<2	1.5	<5	<200	<500
S1 5167		<1	<20	<1	2.4	<200	<2	1.1	<5	<200	<500
S1 5168		<1	<20	<1	1.6	<200	<2	0.8	<5	<200	<500
S1 5169		<1	<20	<1	3.4	<200	<2	0.7	<5	<200	<500
S1 5170		<1	<20	<1	1.4	<200	<2	<0.5	<5	<200	<500
S1 5171		<1	<20	<1	2.8	<200	<2	1.8	<5	<200	<500
S1 5172		<1	<20	<1	3.7	<200	<5	1.8	<5	280	<1100
S1 5173		1	<20	1	5.5	<200	<4	4.4	<5	<200	<500
S1 5174		1	<20	<1	3.8	<200	<2	1.1	<5	<200	920
S1 5175		<1	<20	<1	3.9	<200	<2	1.7	<5	<200	<500
S1 5176		<1	<20	<1	4.2	<200	<2	1.7	<5	<200	<500
S1 5177		<1	<20	<1	4.4	<200	<2	2.0	<5	250	<500
S1 5178		<1	<20	<1	0.7	<200	<2	<0.5	<5	300	<500
S1 5179		<1	<20	<1	0.7	<200	<2	1.0	<5	<200	<500
S1 5180		<1	<20	<1	3.2	<200	<2	1.5	<5	230	<500
S1 5181		<1	<20	<1	3.4	<200	<2	1.2	<5	<200	<500
S1 5182		<1	<20	<1	2.9	<200	<2	1.7	<5	<200	<500
S1 5183		<1	<20	<1	2.8	<200	<2	2.0	<5	250	980
S1 5184		<1	<20	<1	3.4	<200	3	1.8	<5	<200	<500
S1 5185		<1	<20	<1	4.9	<200	<2	1.8	<5	<200	<500
S1 5186		<1	<20	<1	3.4	<250	<2	1.7	<5	<200	<500
S1 5187		<1	<20	1	3.7	<200	<2	1.4	<5	<200	<500
S1 5188		<1	<20	<1	2.6	<200	<2	1.0	<5	<200	<500
S1 5189		<1	<20	<1	1.2	<200	<2	<0.5	<5	<200	<500
S1 5190		<1	<20	<1	1.0	<200	<2	<0.5	<5	<200	<500
S1 5191		<1	<20	<1	2.8	<200	<2	1.8	<5	<200	<500
S1 5192		<1	<20	<1	3.7	<200	<2	1.9	<5	<200	<500
S1 5193		<1	<20	<1	2.7	<200	6	1.0	<5	<200	<1100
S1 5194		<1	<20	<1	4.0	<210	<2	1.9	<5	<200	<500
S1 5195		<1	<20	<1	4.1	<200	<2	1.6	<5	220	<500
S1 5196		1	<20	<1	3.1	<200	<2	1.6	<5	<200	<500
S1 5197		2	<20	<1	2.4	<200	<2	1.9	<5	<200	<500
S1 5198		<1	<20	<1	2.0	<200	<2	1.1	<5	<200	<500
S1 5199		<1	<20	<1	2.9	<200	<2	0.6	<5	<200	<500
S1 5200		<1	<20	<1	1.8	<200	<2	1.1	<5	210	<500



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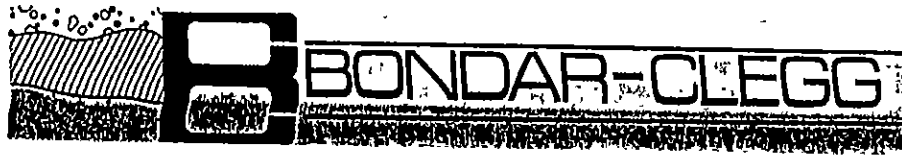
SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Sb PPM	As PPM	Ba PPM	Br PPM	Cd PPM	Ce PPM	Cs PPM	Cr PPM	Co PPM	Eu PPM	Hf PPM
S1 5201		7	0.9	4	910	<5	<10	35	2	270	<10	<2	4
S1 5202		<5	0.6	<1	390	<5	<10	27	<1	240	<10	<2	<2
S1 5203		<5	0.7	<2	350	<5	<10	24	<1	110	<10	<2	<2
S1 5204		10	0.9	5	770	<5	<10	<10	<1	720	28	2	3
S1 5205		<5	0.7	4	610	<5	<10	28	2	370	26	<2	2
S1 5206		9	0.8	4	820	<5	<10	18	3	810	48	<2	3
S1 5207		33	0.3	<1	140	<5	<10	17	<1	<50	<10	<2	<2
S1 5208		14	0.8	6	760	<5	<10	25	3	390	43	<2	4
S1 5209		15	0.7	<2	420	<5	<10	20	2	160	18	<2	3
S1 5210		<5	1.5	3	230	6	<10	<10	<1	53	<10	<2	<2
S1 5211		<5	0.9	<3	900	<5	<10	52	4	110	<10	<2	<2
S1 5212		<5	<0.2	<2	580	<5	<10	<26	4	350	<10	<2	3
S1 5213		<5	1.2	7	700	<5	<10	69	4	790	54	<2	5
S1 5214		<5	0.8	4	330	<5	<10	24	<1	270	<10	<2	4
S1 5215		<5	0.9	<2	420	<5	<10	<23	<1	340	23	<2	<2
S1 5216		<5	0.7	4	410	<5	<10	38	2	440	27	<2	3
S1 5217		<5	0.4	<1	440	<5	<10	<10	<1	75	<10	<2	2
S1 5218		11	1.2	9	960	<5	<10	56	2	800	35	<2	6
S1 5219		<5	<0.2	<1	<100	<5	<10	<10	<1	<50	<10	<2	<2
S1 5220		<5	0.6	<2	550	<5	<10	44	<1	500	38	<2	<2
S1 5221		<5	1.3	4	670	<5	<10	37	2	440	23	<2	4
S1 5222		<5	0.8	<1	480	<5	<10	34	2	210	18	3	<2
S1 5223		<5	0.6	<1	410	<5	<10	27	<1	110	15	<2	2
S1 5224		7	0.7	3	950	<5	<10	64	<1	480	48	<2	4
S1 5225		<5	0.6	<2	720	<5	<10	41	3	610	44	2	3
S1 5226		<5	0.8	3	1200	<5	<10	49	3	380	44	<2	<2
S1 5227		<5	0.7	<1	520	<5	<10	32	3	370	30	<2	5
S1 5228		<5	0.4	<1	<100	5	<10	<10	<1	<50	<10	<2	<2
S1 5229		<5	1.0	<3	790	<5	<10	<25	<1	250	38	<2	<2
S1 5230		<5	1.1	6	780	<5	<10	<23	3	550	42	<2	<2
S1 5231		<5	0.6	<1	420	<5	<10	<10	4	980	72	<2	<2
S1 5232		<5	0.6	4	310	<5	<10	<10	3	980	63	<2	<2
S1 5233		14	0.5	<3	480	<5	<10	<23	<1	110	<10	<2	<2
S1 5234		<5	0.9	<3	660	<5	<10	55	<1	130	18	<2	<2
S1 5235		11	0.7	<3	480	6	<10	<24	3	110	<10	<2	4
S1 5236		<5	0.9	<1	320	7	<10	30	<1	61	<10	<2	2
S1 5237		<5	0.9	4	280	8	<10	29	2	77	13	<2	<2
S1 5238		<5	1.0	<2	270	11	<10	<10	<1	82	<10	<2	<2
S1 5239		<5	1.6	4	590	<5	<10	<10	4	710	46	<2	4
S1 5240		<5	1.1	9	640	<5	<10	<10	2	1200	59	3	3

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SAMPLE NUMBER	ELEMENT UNITS	Ir PPB	Fe PCT	La PPM	Lu PPM	Mo PPM	Ni PPM	Rb PPM	Sm PPM	Sc PPM	Se PPM	Ag PPM	Na PCT
S1 5201		<100	2.6	14	<0.5	5	91	<21	2.7	10.0	<10	<5	1.20
S1 5202		<100	1.3	7	<0.5	8	140	<10	1.4	4.9	<10	6	0.54
S1 5203		<100	1.1	10	<0.5	6	92	25	1.5	3.7	<10	<5	0.66
S1 5204		<100	3.6	12	<0.5	<2	270	22	2.4	10.0	<10	6	1.70
S1 5205		<100	2.6	13	<0.5	<2	250	<24	2.5	9.3	<10	<5	1.30
S1 5206		<100	4.0	20	<0.5	<2	520	38	3.8	13.0	<10	<5	1.50
S1 5207		<100	<0.5	<5	<0.5	4	92	<10	<0.5	1.7	<10	<5	0.22
S1 5208		<100	2.9	22	<0.5	<2	510	<22	3.7	11.0	<10	<5	1.20
S1 5209		<100	1.3	11	<0.5	<2	630	52	2.4	6.8	<10	<5	0.57
S1 5210		<100	0.9	8	<0.5	<2	230	<10	1.6	2.8	<10	<5	0.56
S1 5211		<100	1.1	12	<0.5	3	490	<37	2.2	7.0	<10	<11	1.00
S1 5212		<100	1.9	13	<0.5	<2	100	<38	1.7	6.9	<10	<10	0.88
S1 5213		<100	5.3	37	<0.5	<2	810	62	5.5	17.0	<10	<11	1.50
S1 5214		<100	1.6	14	<0.5	<2	190	27	1.8	4.9	<10	<5	0.76
S1 5215		<100	2.3	13	<0.5	<2	230	39	2.0	7.7	<10	<5	0.58
S1 5216		<100	3.0	13	<0.5	<2	240	56	2.2	10.0	<10	14	0.85
S1 5217		<100	1.4	9	<0.5	<2	100	36	1.1	3.2	<10	<5	0.55
S1 5218		<100	4.5	23	<0.5	<2	500	<23	3.9	17.0	<10	<5	1.40
S1 5219		<100	<0.5	<5	<0.5	3	94	<10	<0.5	1.2	<10	<5	0.11
S1 5220		<100	3.5	16	<0.5	2	200	<33	2.6	9.1	<10	<5	0.94
S1 5221		<100	2.4	11	<0.5	<2	190	31	2.5	7.3	<10	<5	0.92
S1 5222		<100	1.8	9	<0.5	<2	130	33	1.7	5.5	<10	<5	0.90
S1 5223		<100	0.6	9	<0.5	3	73	39	1.4	3.6	<10	<5	0.71
S1 5224		<100	3.4	22	<0.5	<2	260	24	4.0	11.0	<10	<5	1.50
S1 5225		<100	4.8	22	<0.5	<2	400	43	4.2	15.0	<10	<5	1.60
S1 5226		<100	3.5	32	<0.5	<2	320	37	4.6	13.0	<10	<5	1.60
S1 5227		<100	1.8	15	<0.5	<2	220	51	2.6	7.0	<10	<5	1.30
S1 5228		<100	<0.5	6	<0.5	<2	170	<10	0.8	2.2	<10	<5	0.21
S1 5229		<100	2.5	19	<0.5	<2	410	69	3.3	10.0	<10	<5	1.40
S1 5230		<100	3.3	18	<0.5	<2	330	<37	3.6	10.0	13	<10	1.50
S1 5231		<100	4.6	7	<0.5	<2	900	<27	1.7	11.0	<10	<5	1.00
S1 5232		<100	5.3	13	<0.5	<2	730	<27	2.2	11.0	<10	<5	0.91
S1 5233		<100	1.4	13	<0.5	<2	180	<31	1.3	4.7	<10	<5	0.59
S1 5234		<100	2.2	18	<0.5	<2	740	44	2.6	6.3	<10	<5	1.00
S1 5235		<100	2.2	11	<0.5	<2	450	<28	1.9	7.7	<10	<5	0.76
S1 5236		<100	0.8	9	<0.5	2	570	26	1.2	4.1	<10	<5	0.39
S1 5237		<100	1.1	7	<0.5	<2	560	<21	2.0	4.5	<10	<5	0.52
S1 5238		<100	<0.5	<5	<0.5	5	630	<21	<0.5	2.4	<10	<5	<0.05
S1 5239		<100	3.8	15	<0.5	<2	240	27	2.5	8.6	<10	<5	1.50
S1 5240		<100	5.3	13	<0.5	<2	700	42	1.7	9.1	<10	<5	1.30



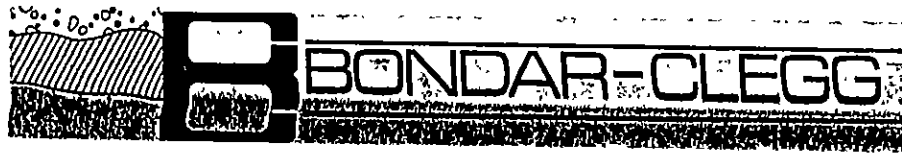
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SAMPLE NUMBER	ELEMENT UNITS	Ta PPM	Te PPM	Tb PPM	Th PPM	Sn PPM	H PPM	U PPM	Yb PPM	Zn PPM	Zr PPM
S1 5201		<1	<20	<1	4.3	<200	<2	2.1	<5	<200	<500
S1 5202		<1	<20	<1	3.2	<200	<2	0.8	<5	<200	<500
S1 5203		<1	<20	<1	2.2	<200	<2	1.0	<5	290	<500
S1 5204		<1	<20	1	2.2	<200	<2	1.4	<5	<200	<500
S1 5205		<1	<20	<1	3.6	<200	<2	1.2	<5	<200	<500
S1 5206		<1	<20	<1	5.5	<200	<2	1.5	<5	<200	<500
S1 5207		<1	<20	<1	0.6	<200	<2	<0.5	<5	230	<500
S1 5208		<1	<20	<1	5.8	<200	<2	2.2	<5	<200	<500
S1 5209		<1	<20	<1	2.3	<200	<2	1.4	<5	<200	<500
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S1 5211		1	<43	<1	3.5	<200	<5	1.6	<5	<200	<1200
S1 5212		<1	<20	<1	2.1	<200	<5	1.6	6	<200	<1300
S1 5213		<1	<20	<1	8.1	<200	<4	2.1	<5	<200	<1100
S1 5214		<1	<20	<1	1.5	<200	<2	0.9	<5	<200	<500
S1 5215		<1	<20	<1	2.8	<200	<2	0.6	<5	380	<500
S1 5216		<1	<20	<1	3.1	<200	<2	1.5	<5	<200	680
S1 5217		<1	<20	<1	2.3	<200	<2	0.9	<5	<200	<500
S1 5218		<1	<20	<1	5.0	<200	<4	1.4	<5	<200	<500
S1 5219		<1	<20	<1	<0.5	<200	<2	<0.5	<5	<200	<500
S1 5220		<1	<20	<1	3.9	<200	<4	1.7	<5	<200	<500
S1 5221		<1	<20	1	2.6	<200	<2	0.8	<5	<200	<500
S1 5222		<1	<20	<1	2.5	<200	<4	1.6	<5	<200	<500
S1 5223		<1	<20	<1	2.0	<200	<2	1.0	<5	<200	<500
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S1 5225		2	<20	<1	4.7	<200	<2	2.1	<5	<200	<500
S1 5226		<1	<20	<1	6.9	<200	5	2.5	<5	<200	<500
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S1 5230		<1	<20	<1	4.0	<200	<5	2.3	<5	<200	<1200
S1 5231		<1	<20	<1	2.5	<200	<4	1.5	<5	<200	980
S1 5232		2	<20	<1	2.9	<200	<4	1.2	<5	<200	<500
S1 5233		<1	<20	<1	2.9	<200	<5	1.4	<5	<200	<1000
S1 5234		<1	<20	<1	4.2	<200	<5	<0.5	<5	<200	<1000
S1 5235		<1	<20	<1	3.1	<200	<5	0.7	<5	<200	<1000
S1 5236		<1	<20	<1	1.6	<200	<2	0.5	<5	<200	<500
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S1 5238		<1	<20	<1	1.8	<200	<2	1.2	<5	<200	<500
S1 5239		1	<20	<1	3.6	<200	<2	1.7	<5	<200	<500
S1 5240		1	<20	1	2.4	<200	<2	1.2	<5	<200	<500

Bondar-Clegg & Company Ltd.  
 130 Pemberton Ave.  
 North Vancouver, B.C.  
 Canada V7P 2R3  
 Phone: (604) 985-0681  
 Telex: 04-352667



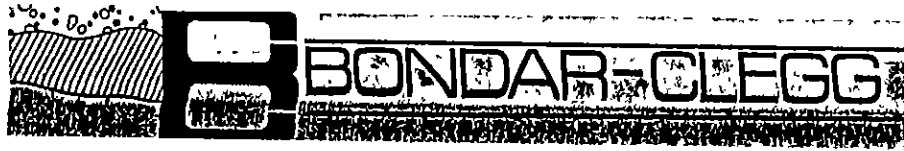
Geochemical  
 Lab Report

REPORT: 127-6707

PROJECT: NONE GIVEN

PAGE 7A

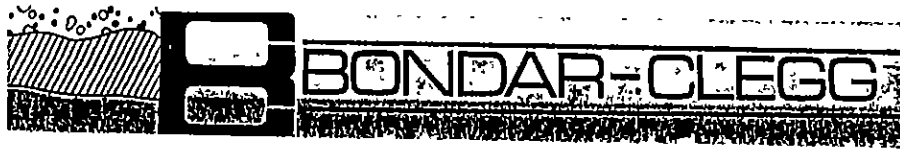
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S1 5241		8	1.1	9	570	<5	<10	<10	2	1000	64	<2	3
S1 5242		<5	0.9	3	690	<5	<10	26	2	1200	40	<2	3
S1 5243		<5	1.0	5	630	<5	<10	30	<1	880	57	<2	<2
S1 5244		25	1.0	5	520	<5	<10	35	2	1200	70	<2	<2
S1 5245		<5	0.7	3	410	<5	<10	<10	<1	950	60	<2	3
S1 5246		<5	1.9	<2	<100	<5	<10	<10	2	74	20	<2	3
S1 5247		<5	1.2	10	400	<5	<10	<10	6	250	22	<2	<2
S1 5248		<5	1.2	11	430	6	<10	30	<1	420	24	3	<2
S1 5249		<5	1.4	<2	<100	<5	<10	<10	<1	<50	<10	<2	<2
S1 5250		<5	1.7	<3	370	<5	<10	<22	2	82	<10	<2	3
S1 5251		<5	1.8	<2	430	<5	<10	<21	2	<50	13	<2	<2
S1 5252		26	1.3	<2	540	<5	<10	46	4	740	<10	<2	5
S1 5253		<5	0.9	5	650	<5	<10	29	<1	1200	58	3	3
S1 5254		<5	1.4	10	350	<5	<10	30	<1	220	<10	<2	<2
S1 5255		<5	1.8	3	330	5	<10	<10	2	130	<10	<2	<2
S1 5256		<5	0.9	<1	<100	<5	<10	<10	<1	<50	<10	<2	<2
S1 5257		<5	1.0	<3	<100	<5	<10	<23	2	<50	<10	<2	<2



REPORT: 127-6707

PROJECT: NONE GIVEN PAGE 7B

SAMPLE NUMBER	ELEMENT UNITS	Ir PPB	Fe PCT	La PPM	Lu PPM	Mo PPM	Ni PPM	Rb PPM	Sm PPM	Sc PPM	Se PPM	Ag PPM	Na PCT
1 5241		<100	4.6	9	<0.5	<2	710	<24	1.8	8.4	<10	<5	1.20
1 5242		<100	4.0	14	<0.5	<2	450	47	2.2	8.4	<10	11	1.30
S1 5243		<100	4.4	13	<0.5	<2	760	<23	2.1	12.0	<10	<5	1.20
S1 5244		<100	3.9	12	<0.5	2	810	<24	1.9	11.0	<10	<5	1.00
1 5245		<100	3.8	9	<0.5	<2	820	27	1.5	9.0	<10	<5	1.00
S1 5246		<100	1.2	7	<0.5	2	600	<10	1.3	4.6	<10	<5	0.30
1 5247		<100	2.9	13	<0.5	<2	2060	39	2.6	9.3	<10	8	0.54
1 5248		<100	2.4	9	<0.5	3	570	<25	2.0	10.0	<10	<5	0.52
S1 5249		<100	<0.5	<5	<0.5	4	98	<10	<0.5	0.7	<10	<5	0.13
1 5250		<100	0.8	12	<0.5	<2	410	<21	2.3	4.0	<10	<5	0.14
S1 5251		<100	<0.5	<5	<0.5	<2	490	<10	1.0	3.3	<10	<5	0.28
S1 5252		<100	2.8	19	<0.5	<2	220	<30	2.6	6.2	<10	<5	1.50
1 5253		<100	4.9	19	<0.5	<2	470	<24	2.5	10.0	<10	10	1.40
S1 5254		<100	1.6	13	<0.5	5	260	<22	1.8	6.0	<10	<5	0.52
S1 5255		<100	1.4	<5	<0.5	<2	310	30	1.0	5.1	<10	<5	0.23
1 5256		<100	<0.5	<5	<0.5	7	<50	<10	<0.5	1.5	<10	<5	0.16
S1 5257		<100	<0.5	<5	<0.5	10	220	<10	0.7	2.0	<10	<5	0.33



REPORT: 127-6707

PROJECT: NONE GIVEN PAGE 7C

SAMPLE NUMBER	ELEMENT UNITS	Ta PPM	Te PPM	Tb PPM	Th PPM	Sn PPM	H PPM	U PPM	Yb PPM	Zn PPM	Zr PPM
1 5241		<1	<20	<1	2.9	<200	<2	1.1	<5	<200	<500
1 5242		<1	<20	<1	2.5	<200	<2	1.4	<5	<200	<500
S1 5243		<1	<20	<1	3.0	<200	<2	1.4	<5	<200	<500
S1 5244		<1	<20	<1	2.8	<200	3	1.0	<5	<200	<500
1 5245		<1	<20	<1	1.9	<240	<2	0.9	<5	<200	<500
S1 5246		<1	<20	<1	<0.5	<200	<2	<0.5	<5	<200	<500
1 5247		<1	<20	<1	1.9	<200	6	1.1	<5	<200	<500
1 5248		<1	<20	<1	3.2	<200	4	1.2	<5	<200	<500
S1 5249		<1	<20	<1	<0.5	<200	<2	<0.5	<5	<200	<500
1 5250		<1	<20	<1	1.9	<280	<2	1.2	<5	<200	<500
S1 5251		<1	<20	<1	1.0	<200	<2	1.6	<5	<200	<500
S1 5252		<1	<20	<1	5.4	<200	<2	1.9	<5	<200	<500
1 5253		<1	<20	<1	3.2	<200	<2	1.4	<5	250	<500
S1 5254		<1	<20	<1	2.8	<200	<2	0.8	<5	<200	<500
S1 5255		<1	<20	<1	<0.5	<200	<2	1.3	<5	<200	<500
1 5256		<1	<20	<1	<0.5	<200	<2	0.6	<5	<200	<500
S1 5257		<1	<20	<1	<0.5	<200	<2	<0.5	<5	<200	<500

# CANOVA RESOURCES LTD

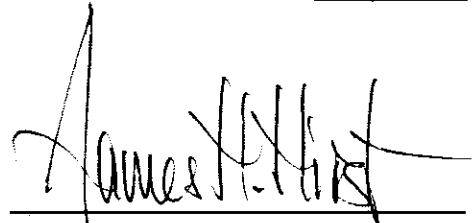
P.O. BOX 10106, IBM TOWER, 1560 - 701 W. GEORGIA STREET  
VANCOUVER, B.C. V7Y 1C6  
TELEPHONE: [604] 687-6899 \* FAX: [604] 688-2660  
(VSE-CVD)

## HEART OF GOLD GROUP

### STATEMENT OF COSTS

Mobilization, mapping, sampling, soil sampling, magnetic surveys, line cutting, prospecting, As per attached invoice	\$ 23,425.00
Assay and Geochemical analysis As per attached invoice	5,847.15
Report preparation, invoice attached	<u>4,185.05</u>
	<u>\$ 33,475.20</u>

Certified Correct:

  
\_\_\_\_\_  
James H. Hirst, President  
CANOVA RESOURCES LTD.



July 10, 1987

286

TO: CANOVA EXPLORATIONS INC.  
Vancouver, British Columbia

FROM: BRIAN LUECK, B. Geology  
Whitehorse, Yukon Territory

Re: Assessment work -- Porsche Project -- Atlin, B.C. as per contract

June 19, to  
June 21, 1987 Mobilization -- acquire mag. map :: organize line cutters.

June 22, 1987 Mapping Porsche outcrops -- sampling -- precise location of Porsche legal corner post.

June 23, 1987 Millionaire claims mapping, soil sampling.

June 25, 1987 Begin new grids on magnetic lows.

June 26, 1987 Business in Whitehorse -- expediting, etc.

June 27, to  
June 30, 1987 Liaspecting, grid establishment, prospecting, outcrop mapping.

July 2, to  
July 8, 1987 Geophysical survey -- Maine station V.L.F., Seattle station V.L.F., ground control magnetometer (proton) survey.

Total of 21 days:

Geologist	21 x \$400.00 per day	\$8,400.00
Prospector	21 x \$250.00 per day	5,250.00
Assistant	21 x \$100.00 per day	2,100.00
Camp costs	42 man days x \$50 per day	2,100.00
Vehicle gas	21 x \$75.00 per day	1,575.00
Line cutting costs		3,000.00
--3.3 km -- cut and cleaned		
18.5 km -- chained, flagged		
picketed		
--chainsaw, flagging, etc.		
Geophysical instrument rental and report writing		<u>1,000.00</u>
		\$23,425.00
Advance		<u>4,100.00</u>
Total Bill		\$19,125.00

SIGNED: Brian Lueck  
BRIAN LUECK



CANOVA RESOURCES/TRI PACIFIC RESOURCES  
#1500 - 609 GRANVILLE ST.  
VANCOUVER, B.C.  
V6C 1V2

Invoice : V039853, Page 1  
Date : 9-OCT-87  
Report No: 127-6707  
Project : NONE GIVEN  
Reference:

BCC WHSE #047-6707.

257 Analyses of GOLD+33 INAA PACKAGE at \$12.00	\$ 3084.00	\$ 3084.00
Silver	Arsenic	
Gold	Barium	
Bromine	Cadmium	
Cerium	Cobalt	
Chromium	Cesium	
Europium	Iron	
Hafnium	Iridium	
Lanthanum	Lutetium	
Molybdenum	Sodium	
Nickel	Rubidium	
Antimony	Scandium	
Selenium	Samarium	
Tin	Tantalum	
Terbium	Tellurium	
Thorium	Uranium	
Tungsten	Ytterbium	
Zinc	Zirconium	

257 Analyses of Gold-Fire Assay/N.A. at \$ 7.50	\$ 1927.50	
Subtotal	\$ 1927.50	\$ 1927.50

Sample Preparation		
257 Samples of DRY, SIEVE -80 at \$ 0.90	\$ 231.30	
Subtotal	\$ 231.30	\$ 231.30

Invoice Total: \$ 5242.80 Cdn



CANOVA RESOURCES/TRI PACIFIC RESOURCES  
 #1500 - 609 GRANVILLE ST.  
 VANCOUVER, B.C.  
 V6C 1V2

Invoice : V037674, Page 1  
 Date : 19-AUG-87  
 Report No: 127-4989  
 Project : NONE GIVEN  
 Reference:

BCC WHSE #047-4989

44 Analyses of GOLD+33 INAA PACKAGE	at \$12.00	\$ 528.00	\$ 528.00
Silver			
Gold			
Bromine			
Cerium			
Chromium			
Europium			
Hafnium			
Lanthanum			
Molybdenum			
Nickel			
Antimony			
Selenium			
Tin			
Terbium			
Thorium			
Tungsten			
Zinc			
Arsenic			
Barium			
Cadmium			
Cobalt			
Cesium			
Iron			
Iridium			
Lutetium			
Sodium			
Rubidium			
Scandium			
Samarium			
Tantalum			
Tellurium			
Uranium			
Ytterbium			
Zirconium			

1 Analyses of Palladium	at \$ 0.00	\$ 0.00	
1 Analyses of Platinum	at \$15.00	\$ 15.00	
Subtotal		\$ 15.00	\$ 15.00
1 Analyses of Gold - Fire Assay	at \$ 6.75	\$ 6.75	
Subtotal		\$ 6.75	\$ 6.75

Sample Preparation			
39 Samples of DRY, SEIVE -80	at \$ 0.90	\$ 35.10	
6 Samples of CRUSH, PULVERIZE -150	at \$ 3.25	\$ 19.50	
Subtotal		\$ 54.60	\$ 54.60

Invoice Total: \$ 604.35 Cdn

J. PAUL SORBARA, M.Sc., F.G.A.C.

Mineral Exploration Consultant

6703 Nicholson Rd.  
Delta, B.C. Canada  
V4E 2T2  
(604) 594-8798

I N V O I C E

Canova Resources Ltd.  
1500 - 609 Granville Street,  
Vancouver, B.C.  
V7Y 1C6

3 February 1988

Invoice No. 191

---

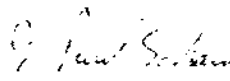
For Professional Services rendered re:

HEART OF GOLD Report

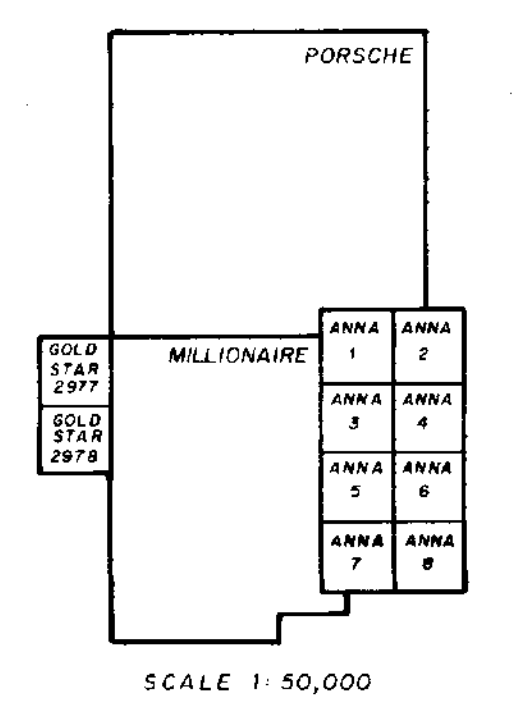
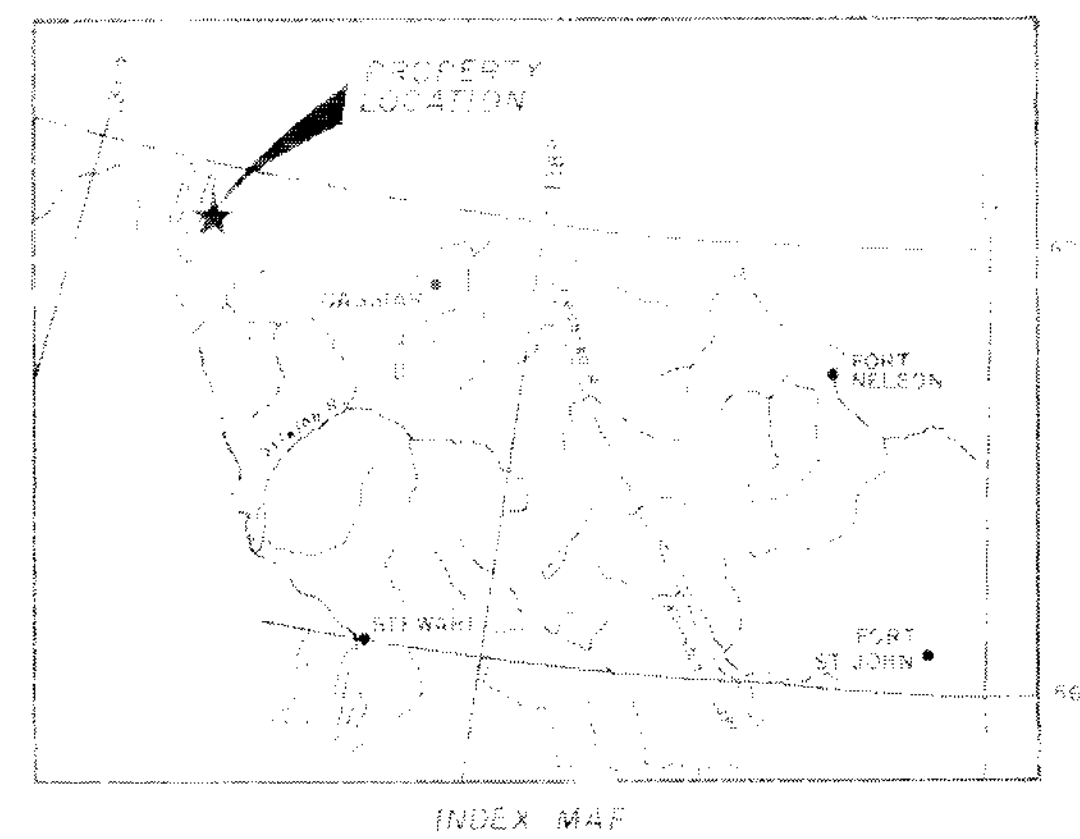
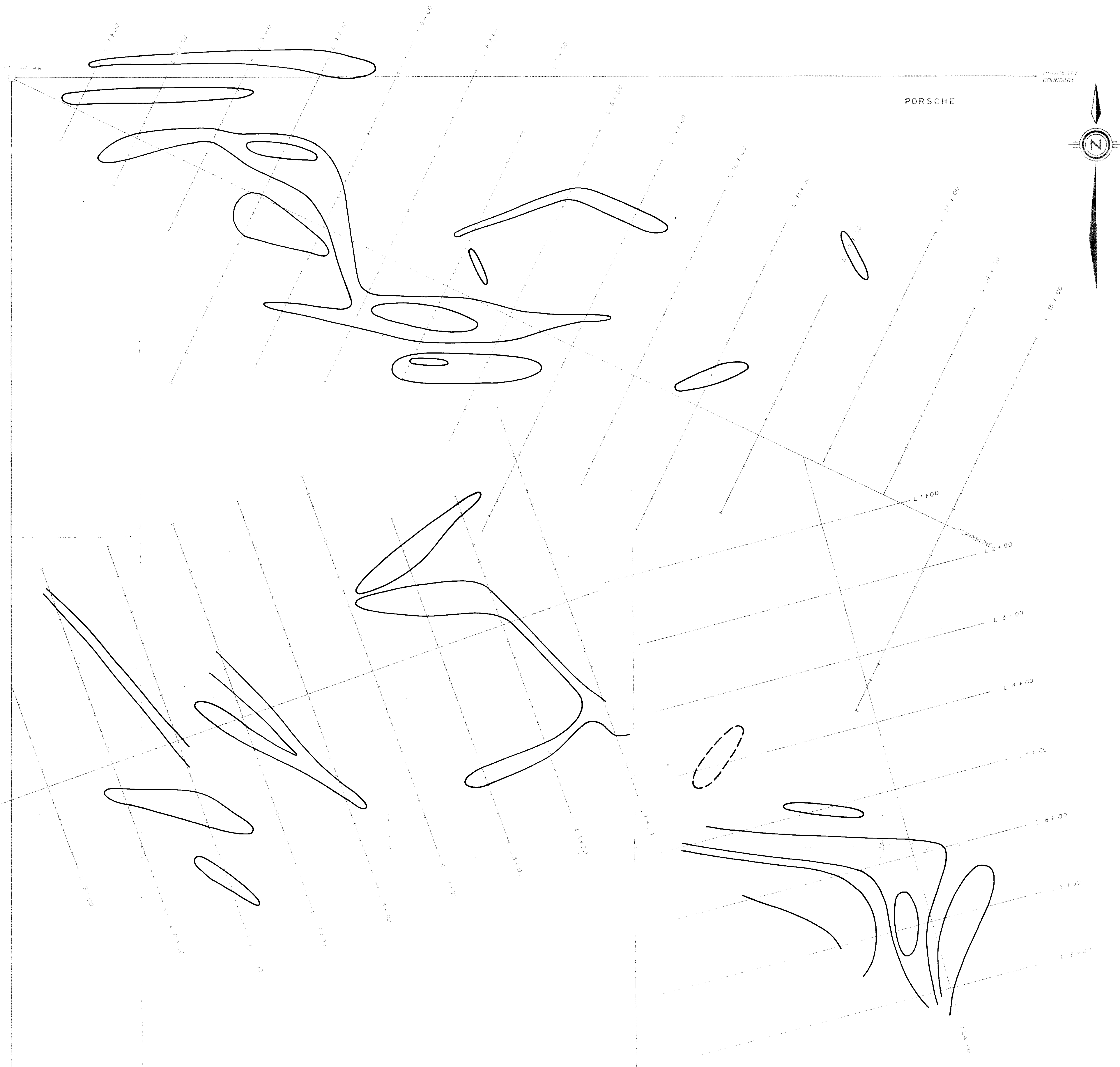
Report Compilation and writing (9 Man Days @ \$350.00)	\$3,150.00
Copying, Printing (Western Reproducers)	25.05
Typing	130.00
Drafting	800.00
Materials (8 copies @ \$10)	80.00
TOTAL DUE AND OWING:	<u>\$4,185.05</u>

Yours truly,

J.P. SORBARA & ASSOCIATES



J. Paul Sorbara



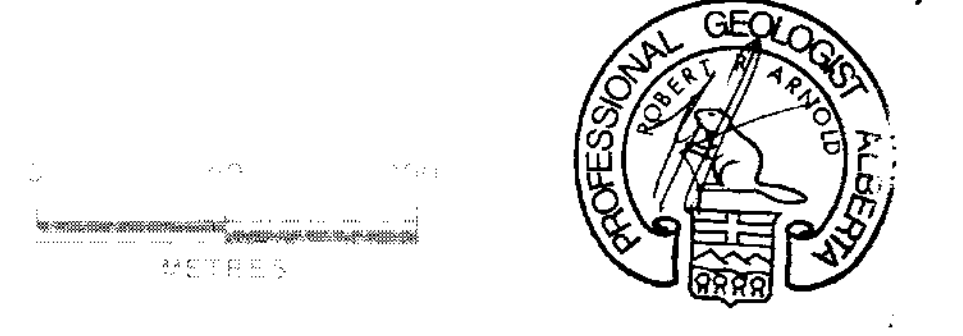
**LEGEND:**

- PROPERTY BOUNDARY
- LEGAL CORNER POST

**EKOLOGICAL BRANCH  
ASSESSMENT REPORT**

**17,768**

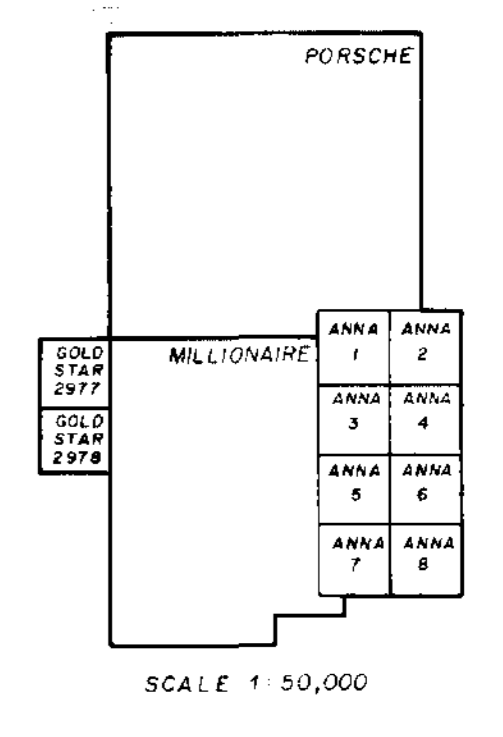
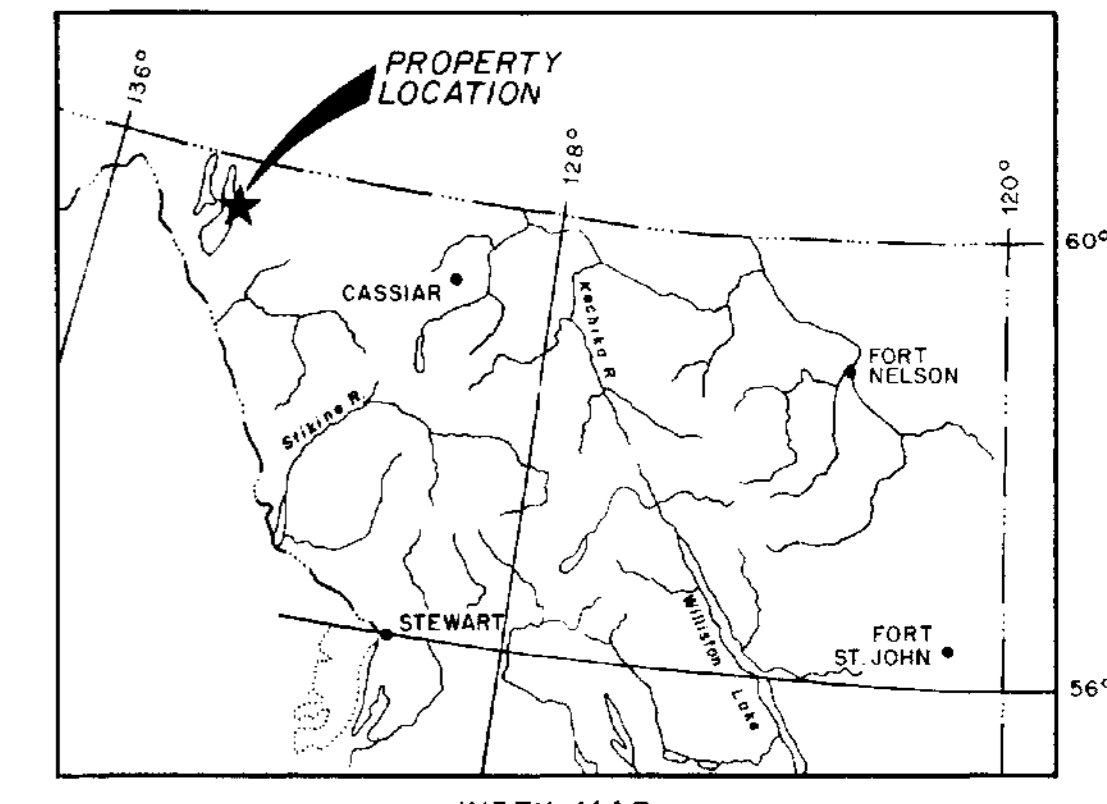
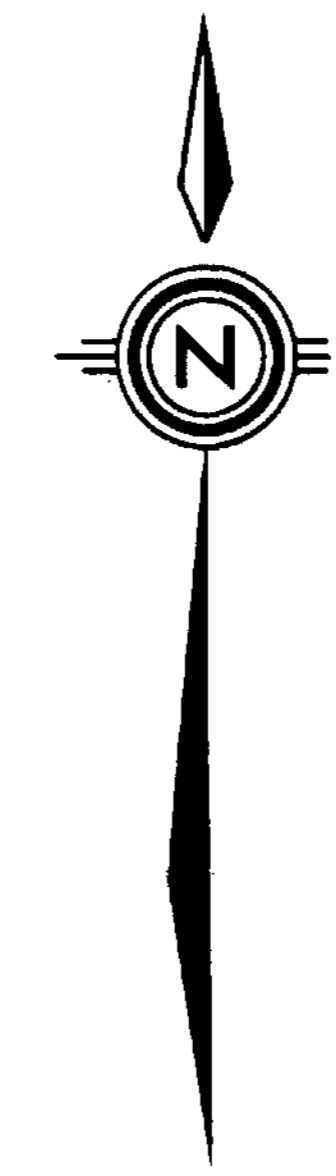
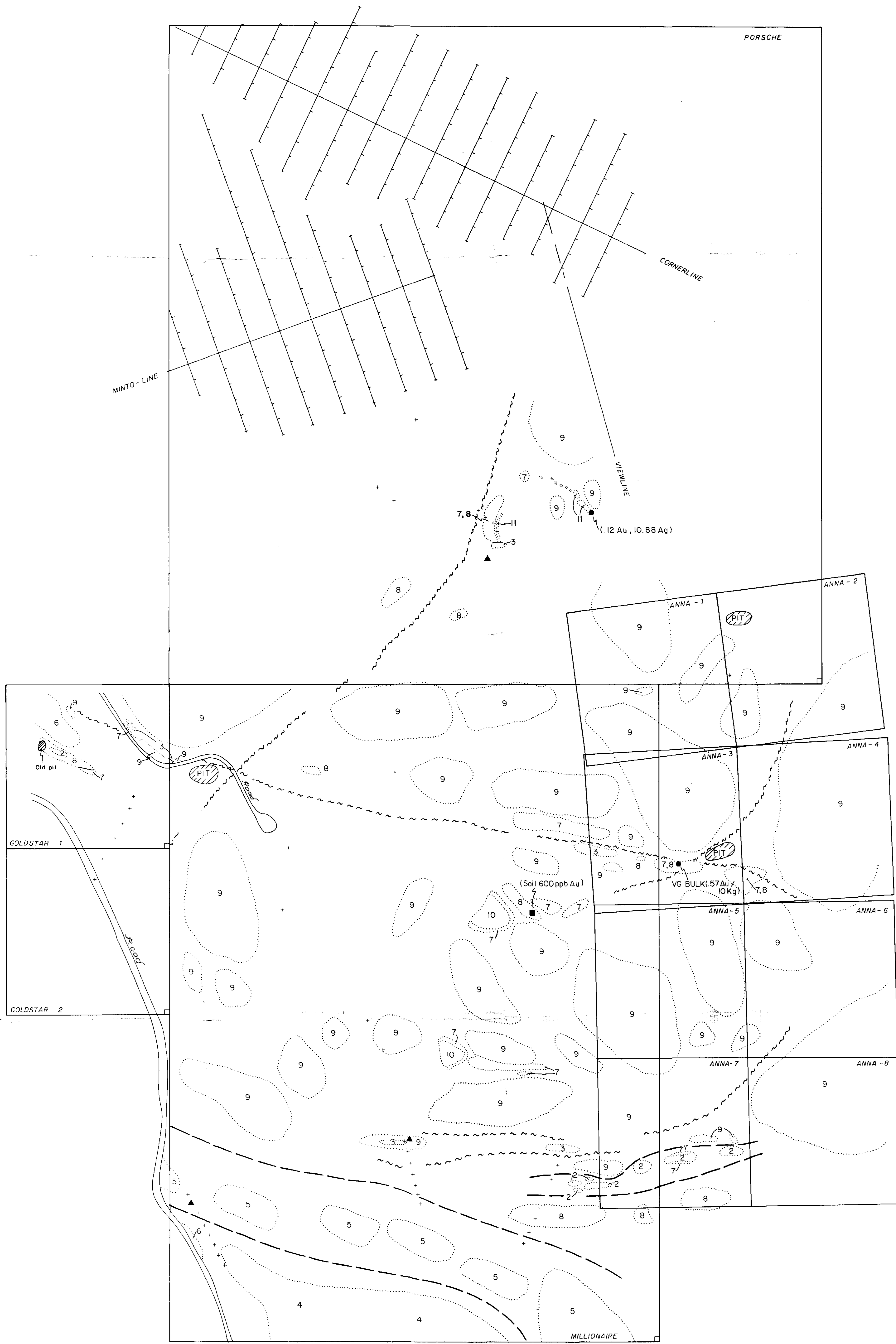
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**CANOVA RESOURCES LTD.**

HEART OF GOLD CLAIM GROUP

**VLF-EM FRASER FILTER  
CONTOUR MAP**



**LEGEND:**

- PROPERTY BOUNDARY
- └ LEGAL CORNER POST
- + SOIL SAMPLES
- ▲ ROCK SAMPLES

**GEOLOGICAL LEGEND:**

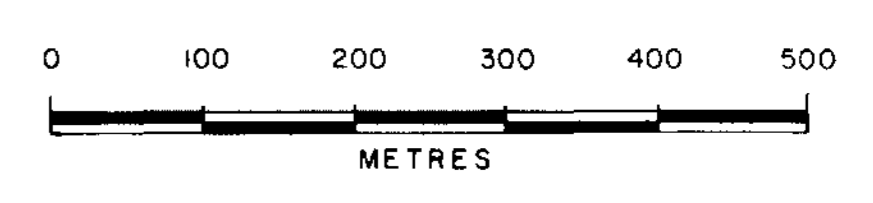
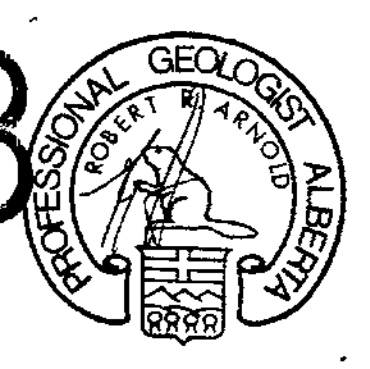
- 11 Boxwork quartz veins
- 10 Gabbro
- 9 Serpentinite
- 8 Quartz-carbonate alteration and veining (b)
- 7 Talc-carbonate alteration
- 6 Shale
- 5 Limestone, partly silicified, often brecciated
- 4 Chert
- 3 Basic volcanics, greenstone, diabase
  - 3b - biotite lamphophyre
  - 3c - greenstone breccia
- 2 Granite porphyry
- 1 Alluvium, glacial till, vegetation

**SYMBOLS:**

- Outcrop
- ↖ Strike and dip
- Road
- - - Geological contact, defined, assumed
- ~ Fault
- ▨ Pit

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**17,768**

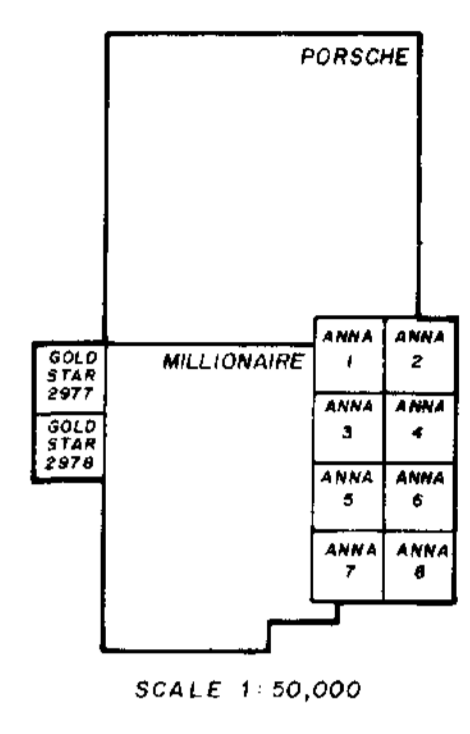
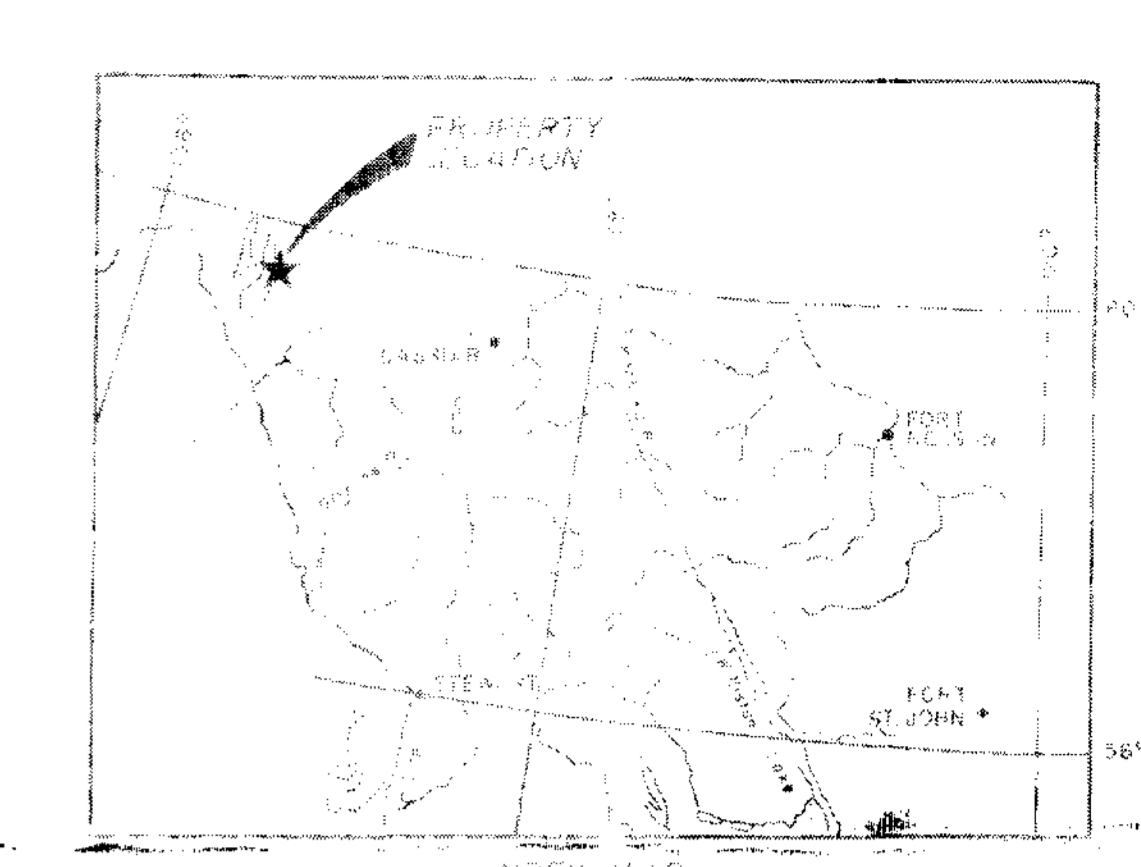
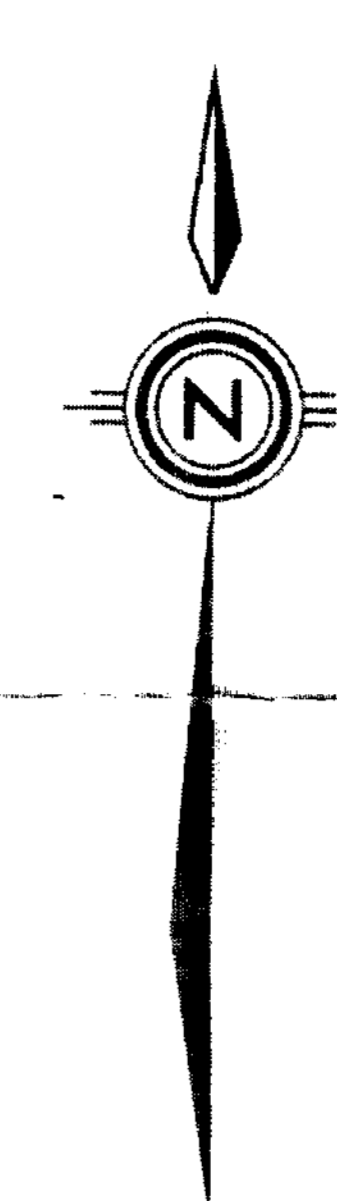
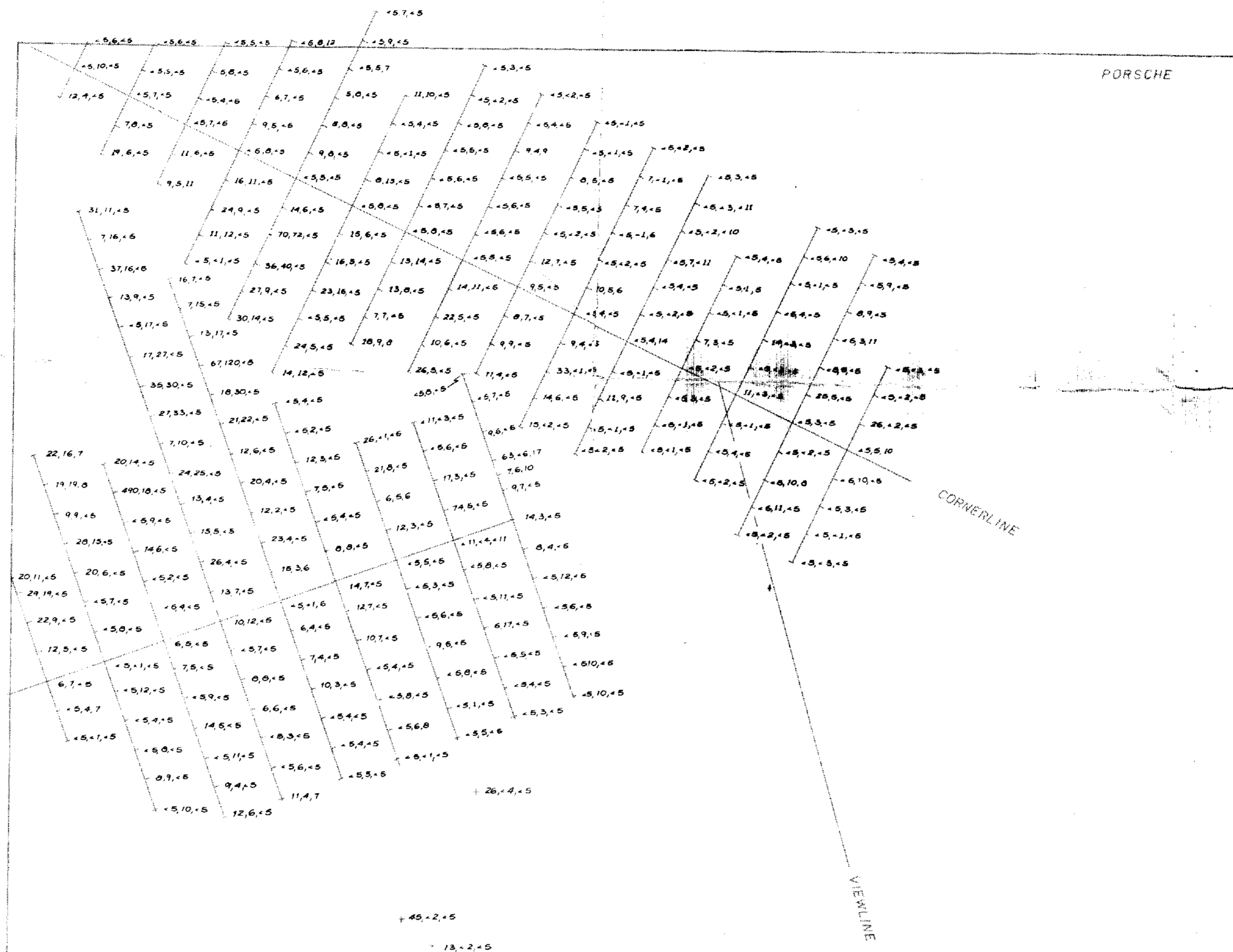


CANOVA RESOURCES LTD.

HEART OF GOLD CLAIM GROUP

PROPERTY GEOLOGY

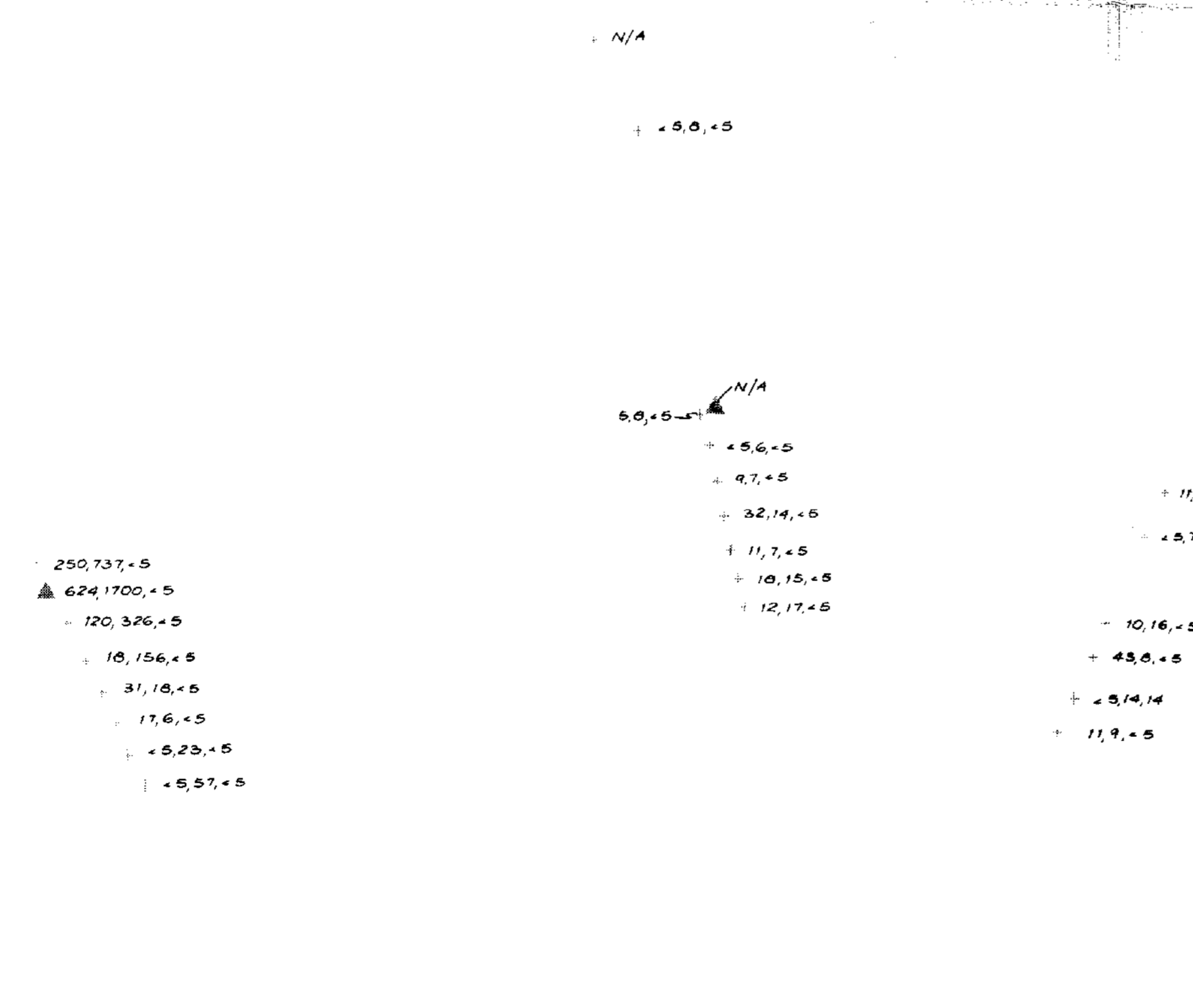
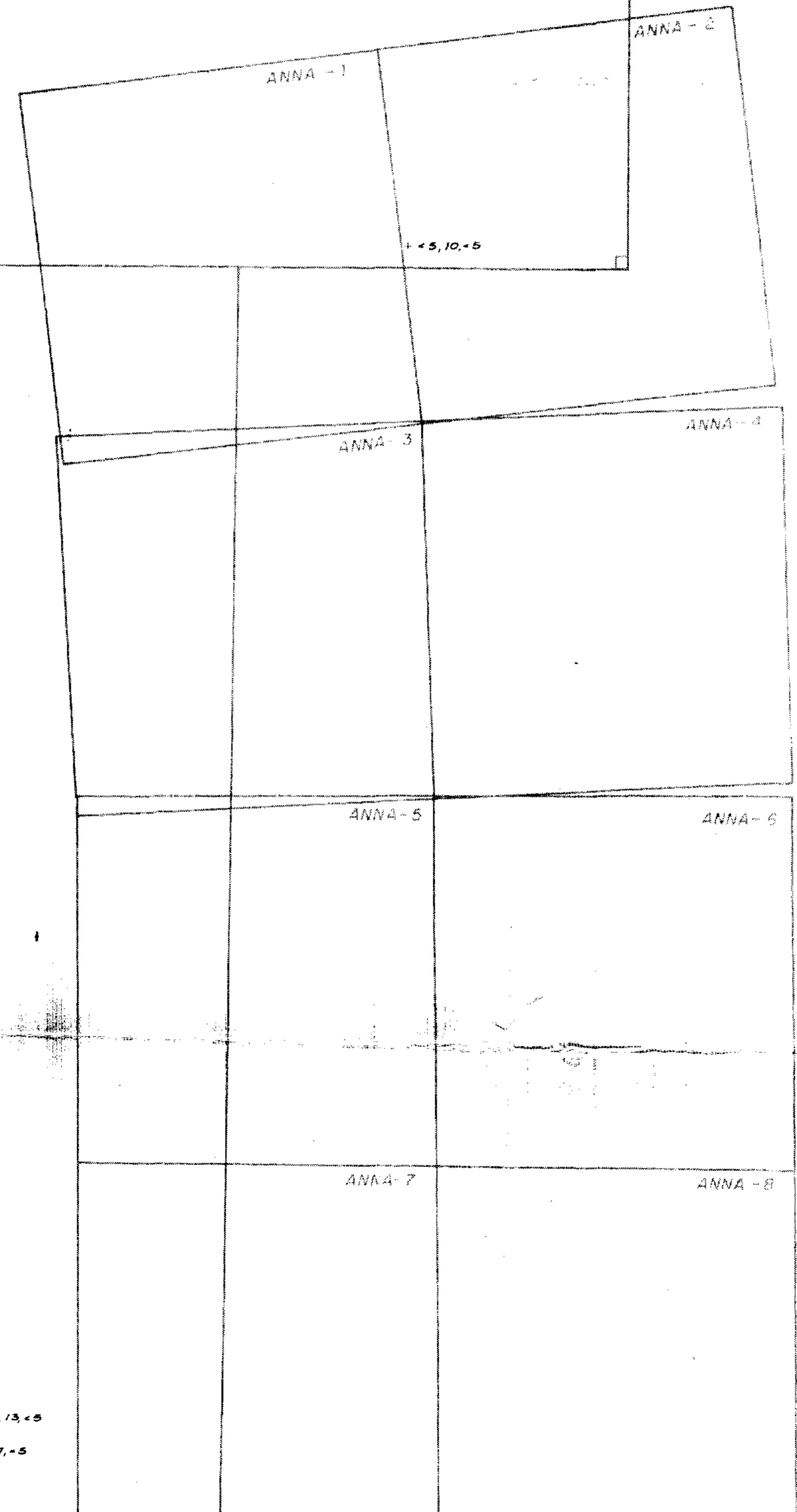
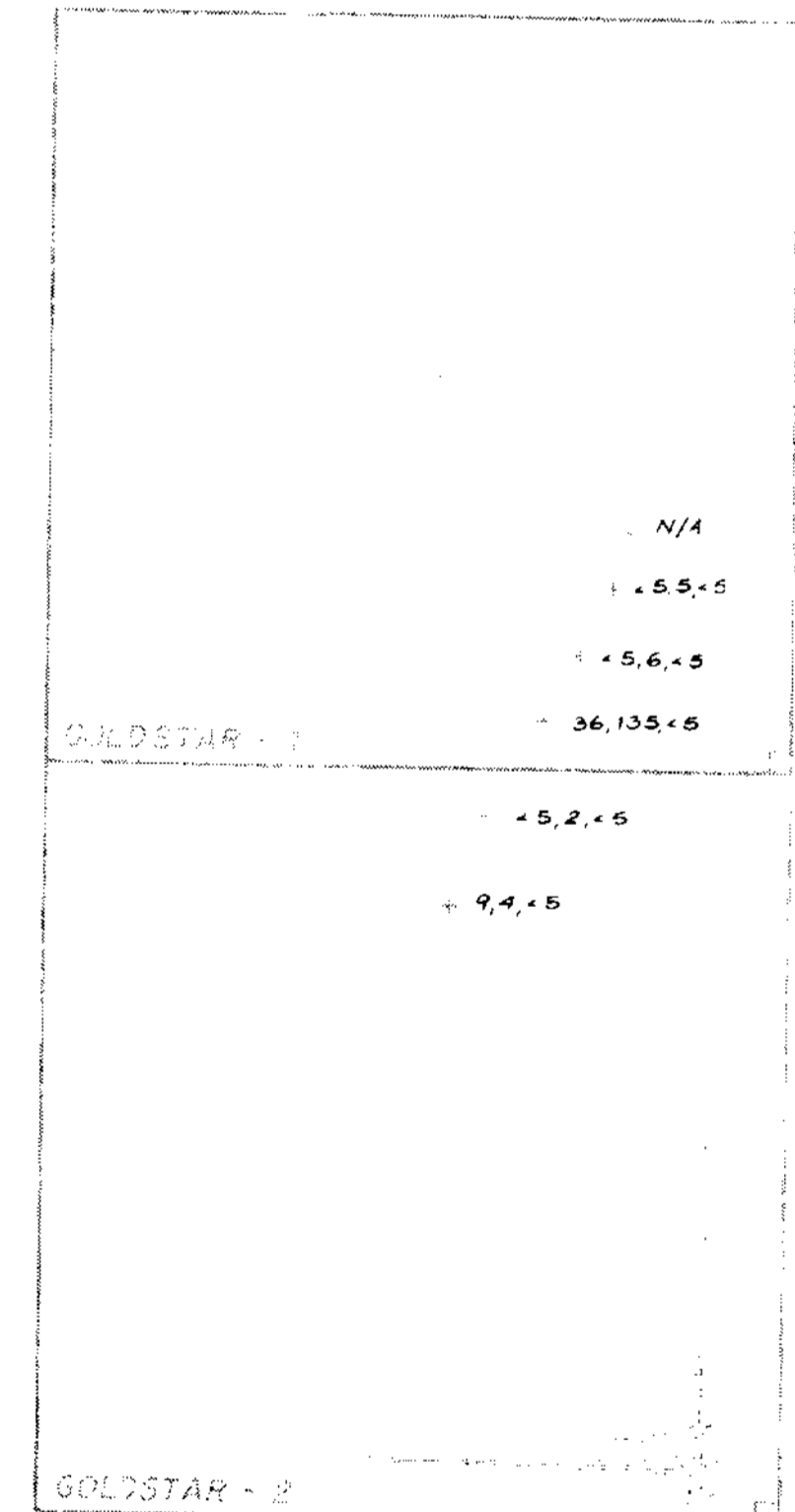
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By: J.P. SORBARA & Associates			



SCALE 1:50,000

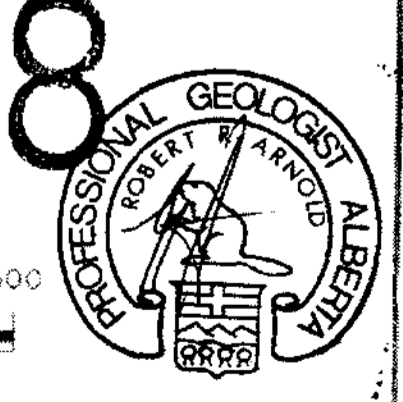
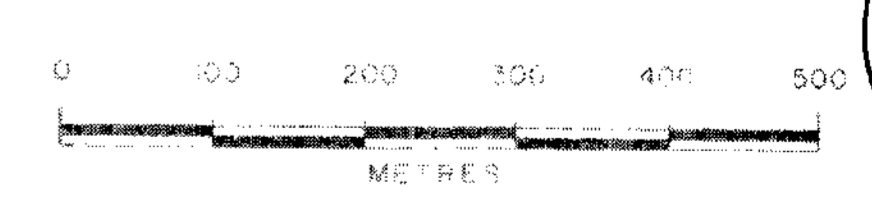
**LEGEND:**

- PROPERTY BOUNDARY
  - LEGAL CORNER POST
  - + SOIL SAMPLED +10,1,8,1,0
  - ▲ ROCK SAMPLED +25,2,2,1,4
  - N/A NOT AVAILABLE
- Au (ppb), As (ppm), Ag (ppm)



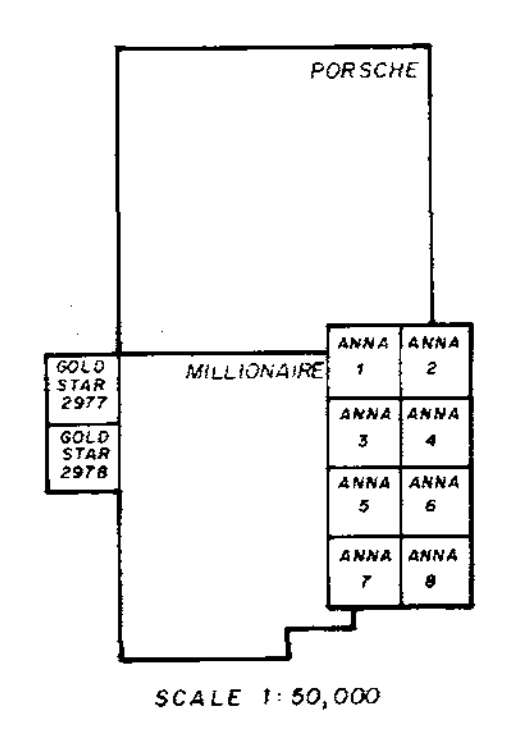
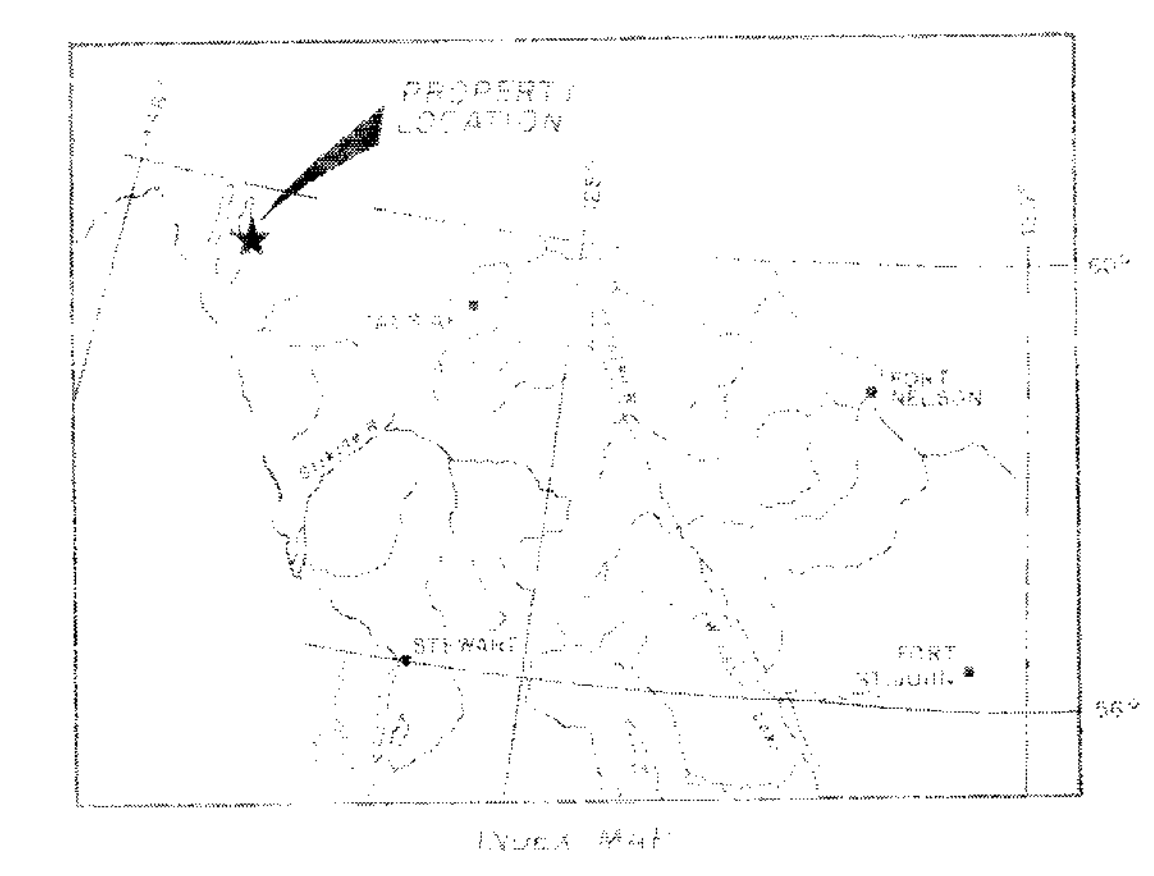
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**SOIL AND ROCK SAMPLES  
GEOCHEMISTRY - Au, Ag, As**

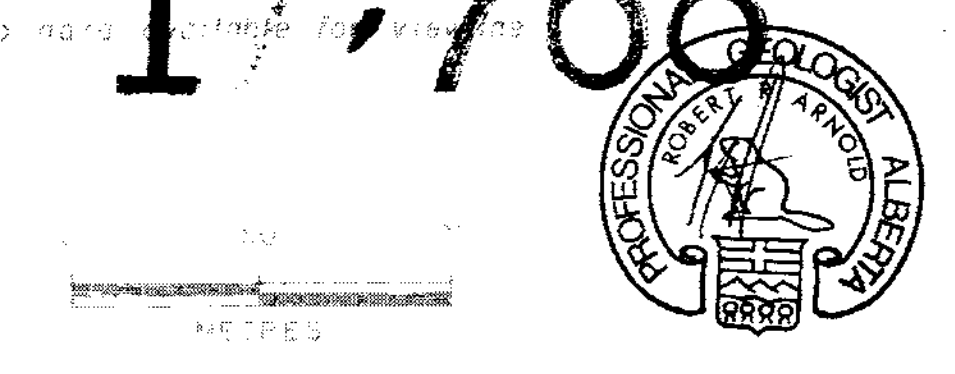


**LEGEND:**  
 ——— PROPERTY BOUNDARY  
 □ LEGAL CORNER POST

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NOTE: No magnetic intensity contours are shown.

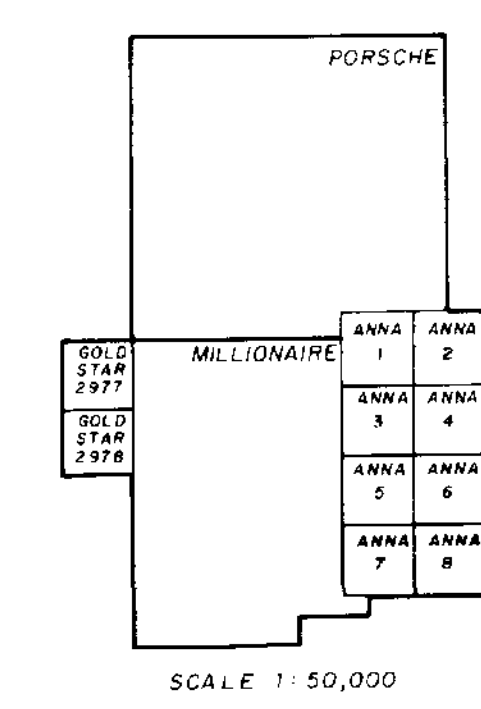
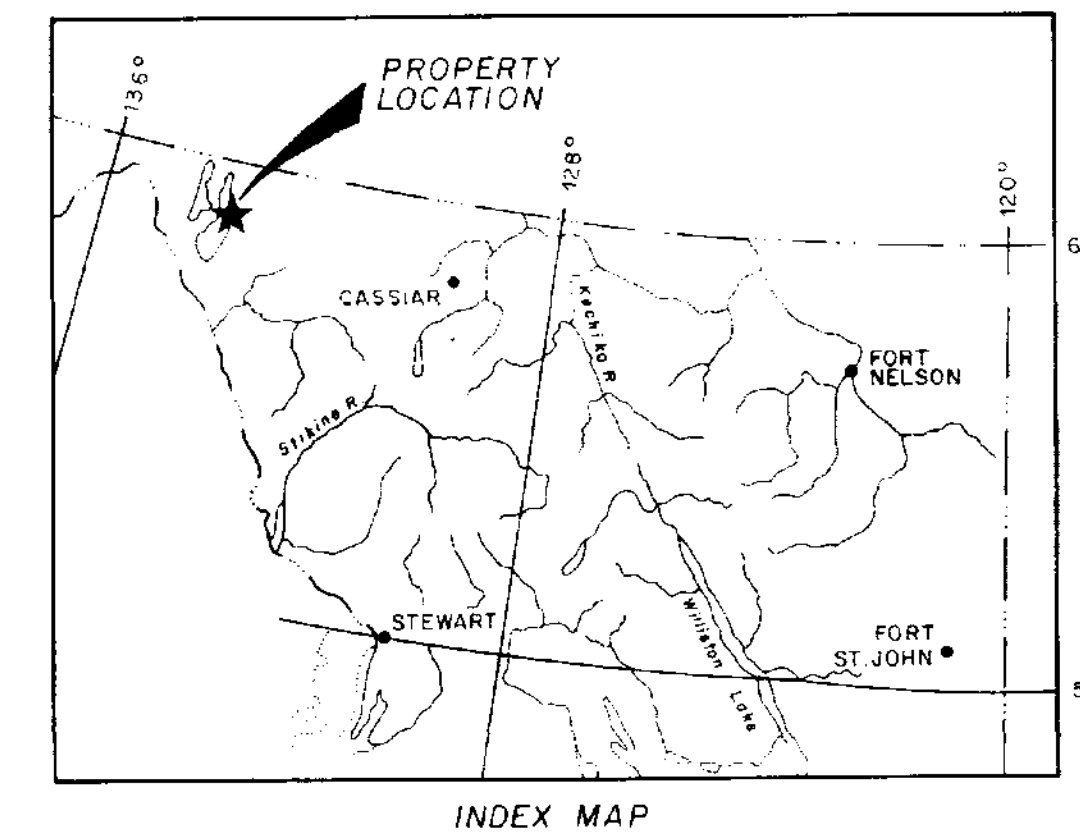
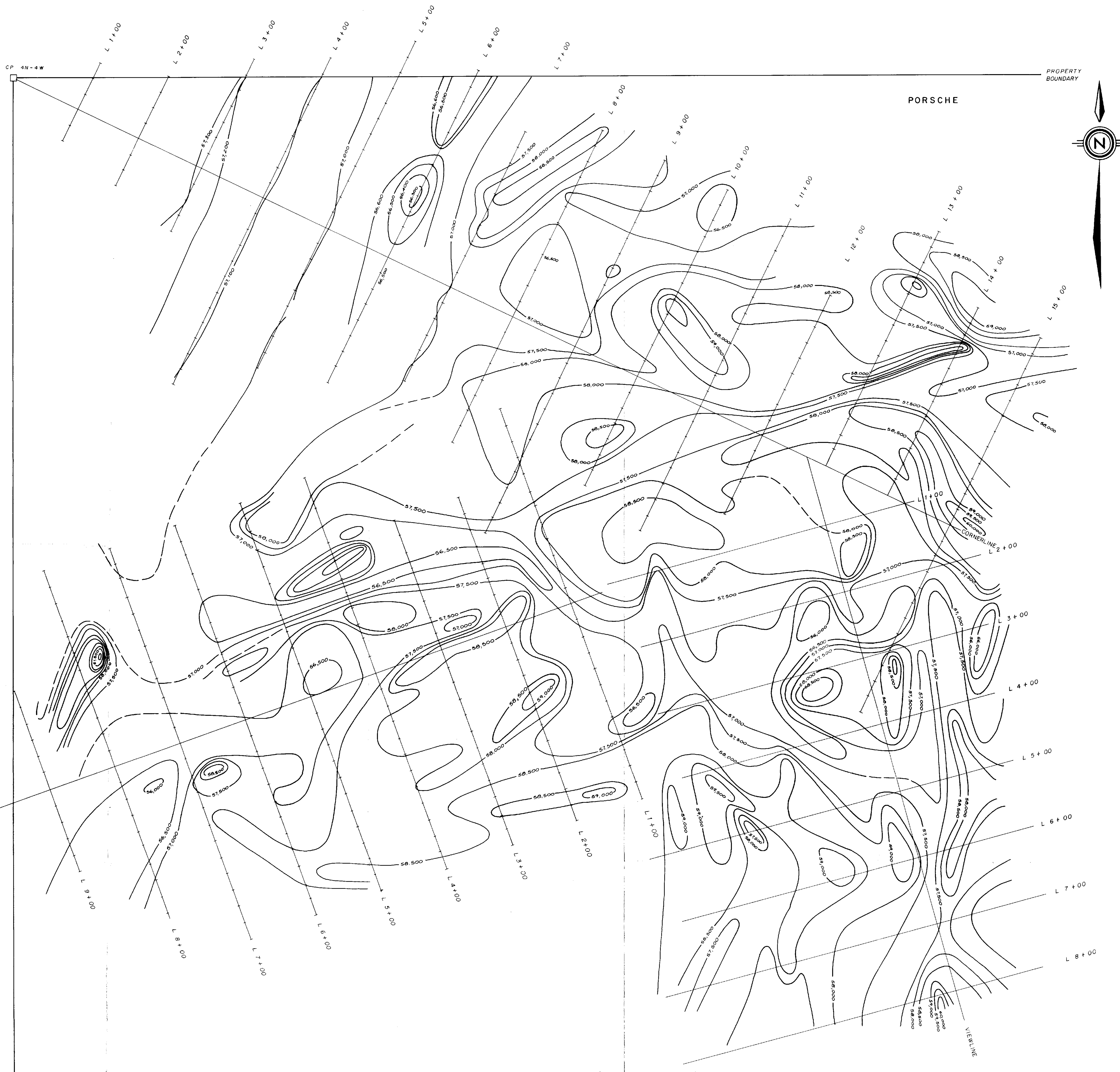


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**MAGNETOMETER TOTAL FIELD DATA**



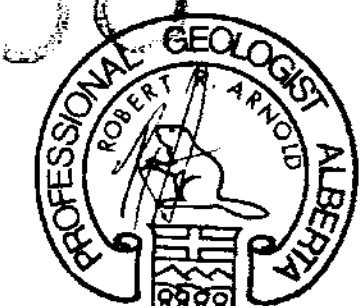
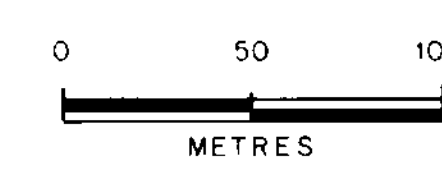


**LEGEND:**

- PROPERTY BOUNDARY
- LEGAL CORNER POST

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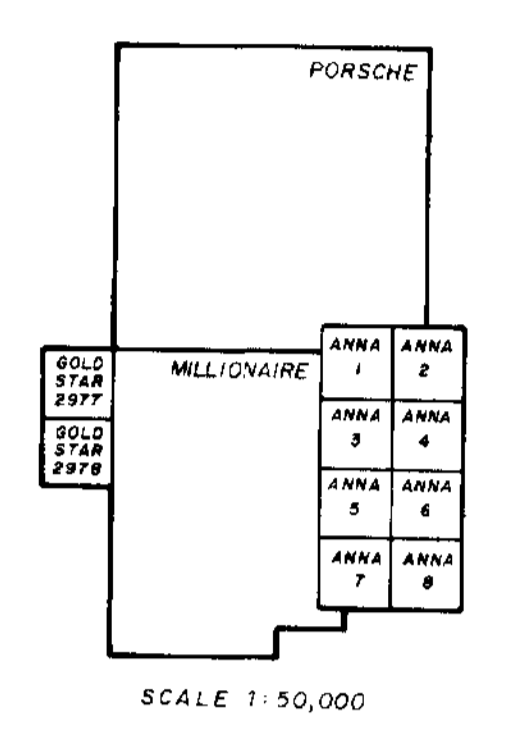
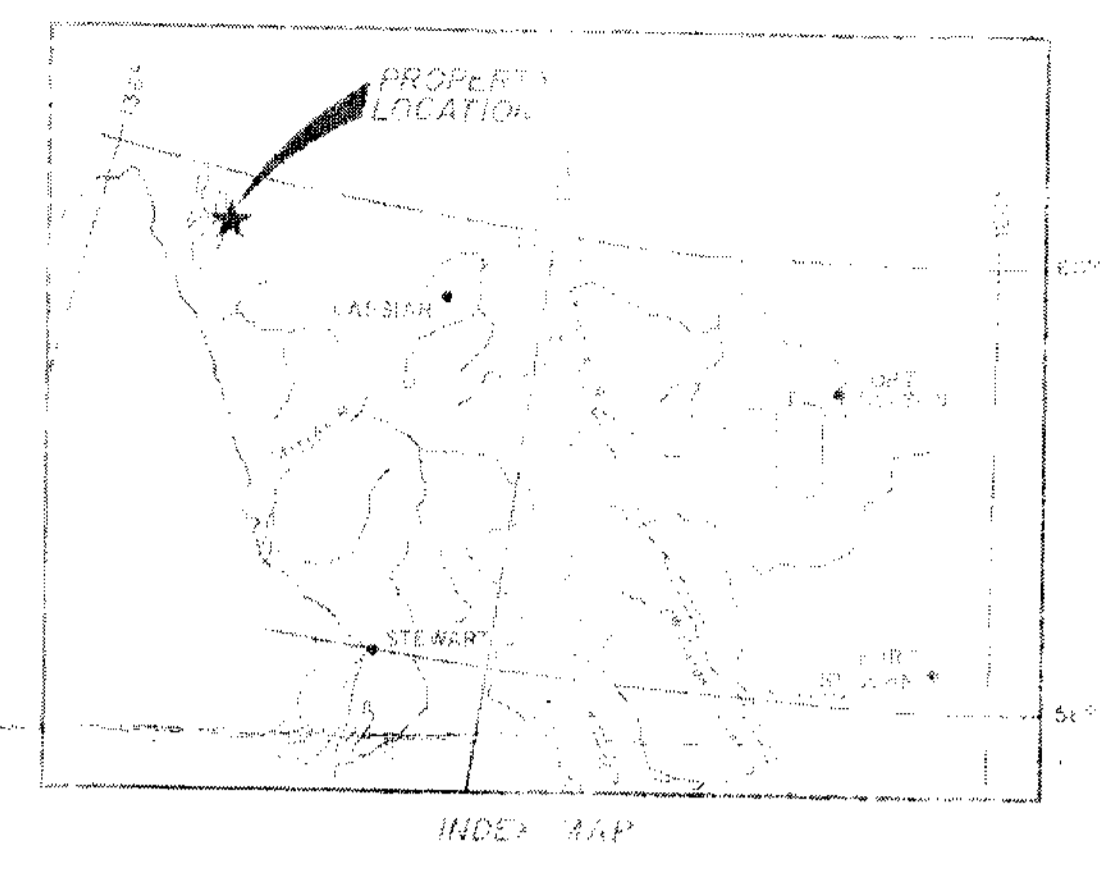
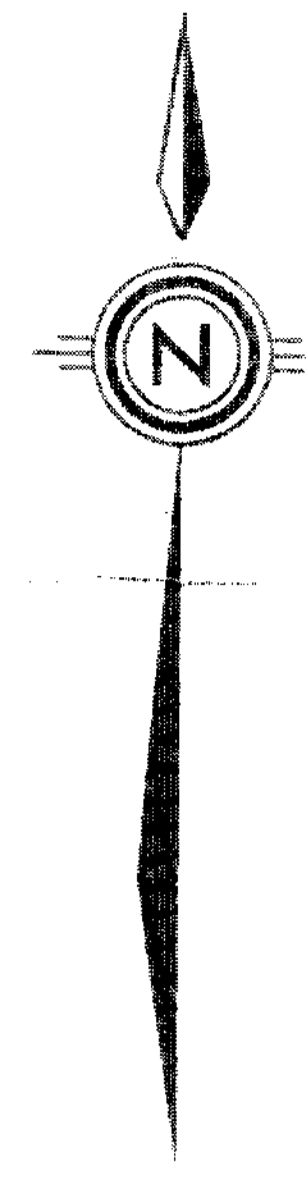
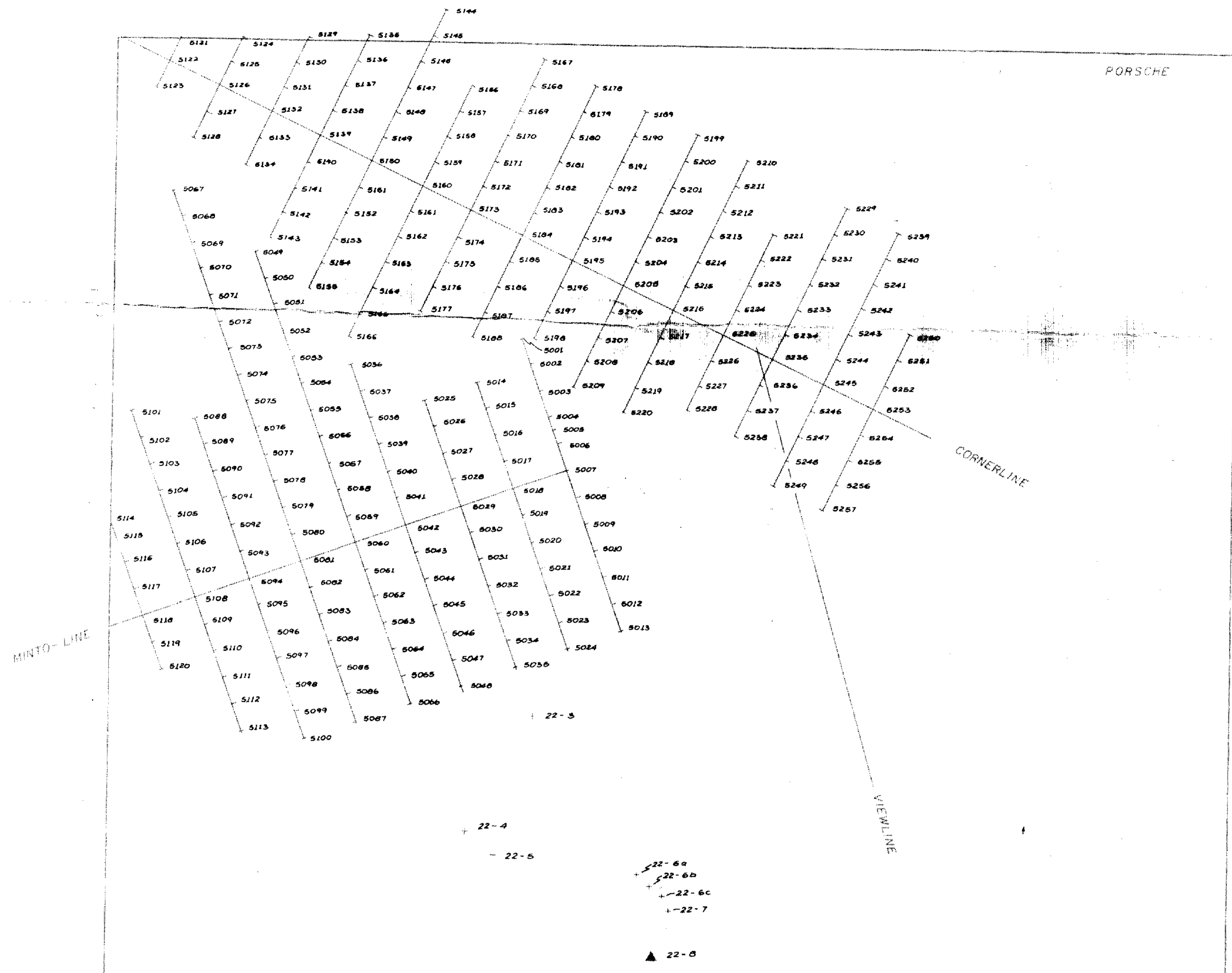


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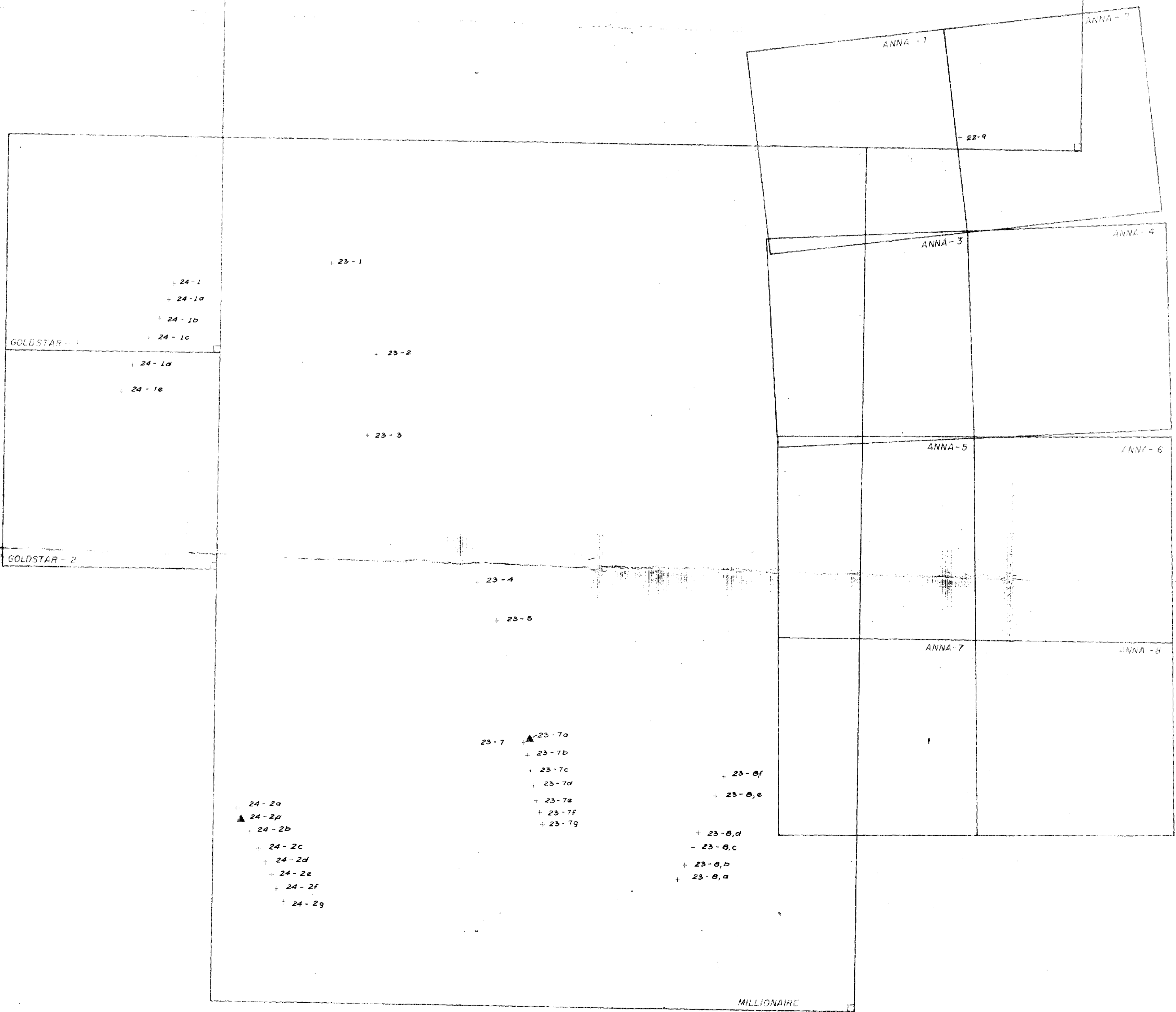
**MAGNETOMETER CONTOUR  
MAP**

Scale: 1 : 2,000	Date: JAN 1988	N.T.S. 104N/12 E	Figure: 9
By: J. P. SORBARA & Associates			



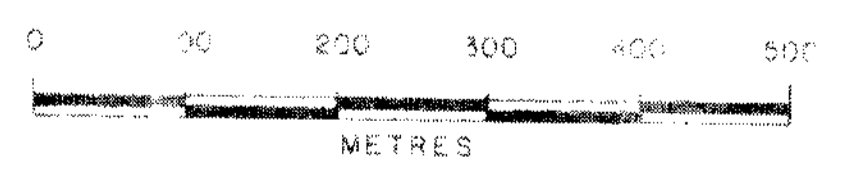
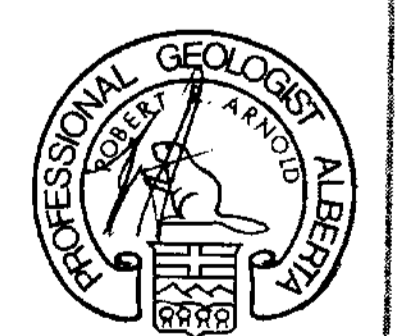
LEGEND:

- PROPERTY BOUNDARY
- LEGAL CORNER POST
- COL. SAMPLES
- ▲ ROCK SAMPLES



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SAMPLE LOCATION MAP