

86-577-15246

07/87

GEOCHEMICAL REPORT

SKILOKIS PROPERTY

55° 14' N 127° 13.8' W

OMINECA MINING DIVISION

BRITISH COLUMBIA

93M/6E, 6W ; 93M/3E, 3W

FOR

Operator: ATNA RESOURCES LTD.

AND

NORANDA EXPLORATION LTD.

FILMED

Owner: Tom Richards

BY

ROBERT E. REID, F.G.A.C.

DECEMBER 10, 1985

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,246

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APPENDICES

APPENDIX 1: ANALYTICAL RESULTS

1.0 SUMMARY

The Skilokis Property is located along the north flank of Blunt Mountain in the Hazelton map area (93M), Omineca Mining Division. The property is underlain by sedimentary rocks of the Upper Jurassic Bowser Lake Group and intruded by diorite and quartz diorite of the Upper Cretaceous Bulkley Intrusives. Gold-silver mineralization has been discovered associated with a northeast trending 4.5 kilometres sheeted fracture and shear zone system with widths up to 150 metres. The precious metals are associated with arsenopyrite, pyrite, galena, sulphosalts, sphalerite, pyrrhotite and chalcopyrite. Precious metal values range up to 0.856 oz/ton gold and 87 oz/ton silver with numerous values in excess of 1 ppm gold and 34 ppm silver.

2.0 LOCATION AND ACCESS

The Skilokis Property is located in the Hazelton map area (93M/6), south of the Suskwa River, about 12 kilometres east of the Bulkley River, in the Omineca Mining Division (Figure 1). Its geographic center is approximately 55°14' north latitude and 127°15' west longitude.

It can be reached by helicopter, 50 kilometres due north from Smithers, B.C. Logging roads south of the Suskwa River reach the northwest and northeast corner of the property, about two kilometres from the main showings.

3.0 PHYSIOGRAPHY

The claims lie along the north slopes of Blunt Mountain, in the central part of the Babine Ranges, at the southern extremity of the Skeena Mountains (Holland, 1964). Elevations range between 1,000 and 2,000 metres above sea level. A prominent north trending ridge is central to the property, flanked to the west by Skilokis Creek and to the east by north flowing, incised tributaries to the Suskwa River. The terrain is moderately rugged, but readily traversable.

The tree line is approximately 1,500 metres above sea level. Timber below the tree line is comprised primarily of mature spruce, hemlock and balsam fir.

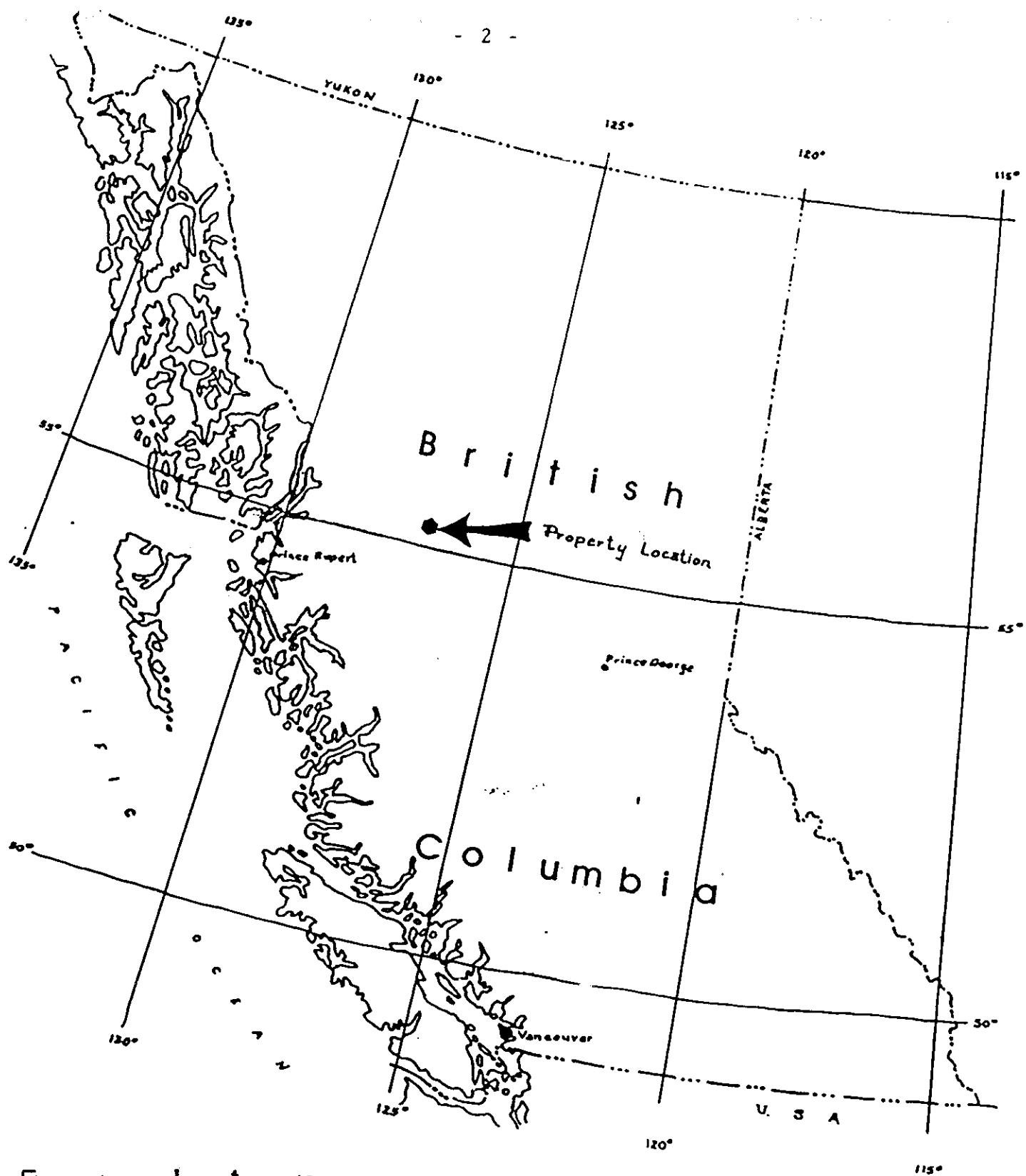


Figure 1 Location Map

4.0 CLAIMS AND OWNERSHIP

The Skilokis property comprises four contiguous claim blocks (Figure 2) as follows:

<u>Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Record Date</u>
Beta 3	6439	20	July 20, 1984
Lokis 1	7349	20	Oct. 15, 1985
Lokis 2	7350	20	Oct. 15, 1985
Lokis 3	7351	20	Oct. 15, 1985

The Beta 3 Claim was staked on June 27, 1984 by Thomas A. Richards for Atna Resources Ltd. The Lokis 1 to 3 claims were staked on September 21, 1985 by Colin P. Harivel for Atna Resources. All the claims comprise the Skilokis property presently held in trust by Noranda Exploration Company, Limited ("Noranda") for the Skilokis Joint Venture comprised of the Issuer and Noranda.

5.0 PREVIOUS WORK

No record of previous work is apparent on the claims. The British Columbia Department of Mines mineral inventory map (93M) indicates no former known showings. An old claim post was noted near the present location of the legal corner post for the Lokis Claims.

In 1983, Skilokis Creek was silt sampled as part of the regional silt-sampling program run jointly by the Provincial and Federal Governments. Analysis of the sample (831455), at elevation 3,300 feet, gave anomalous values in 3.6 ppm silver, 85 ppm lead, 225 ppm arsenic, and 7 ppm antimony.

6.0 PRESENT WORK

In 1985, work on the Skilokis property consisted of helicopter supported explorations in July and September.

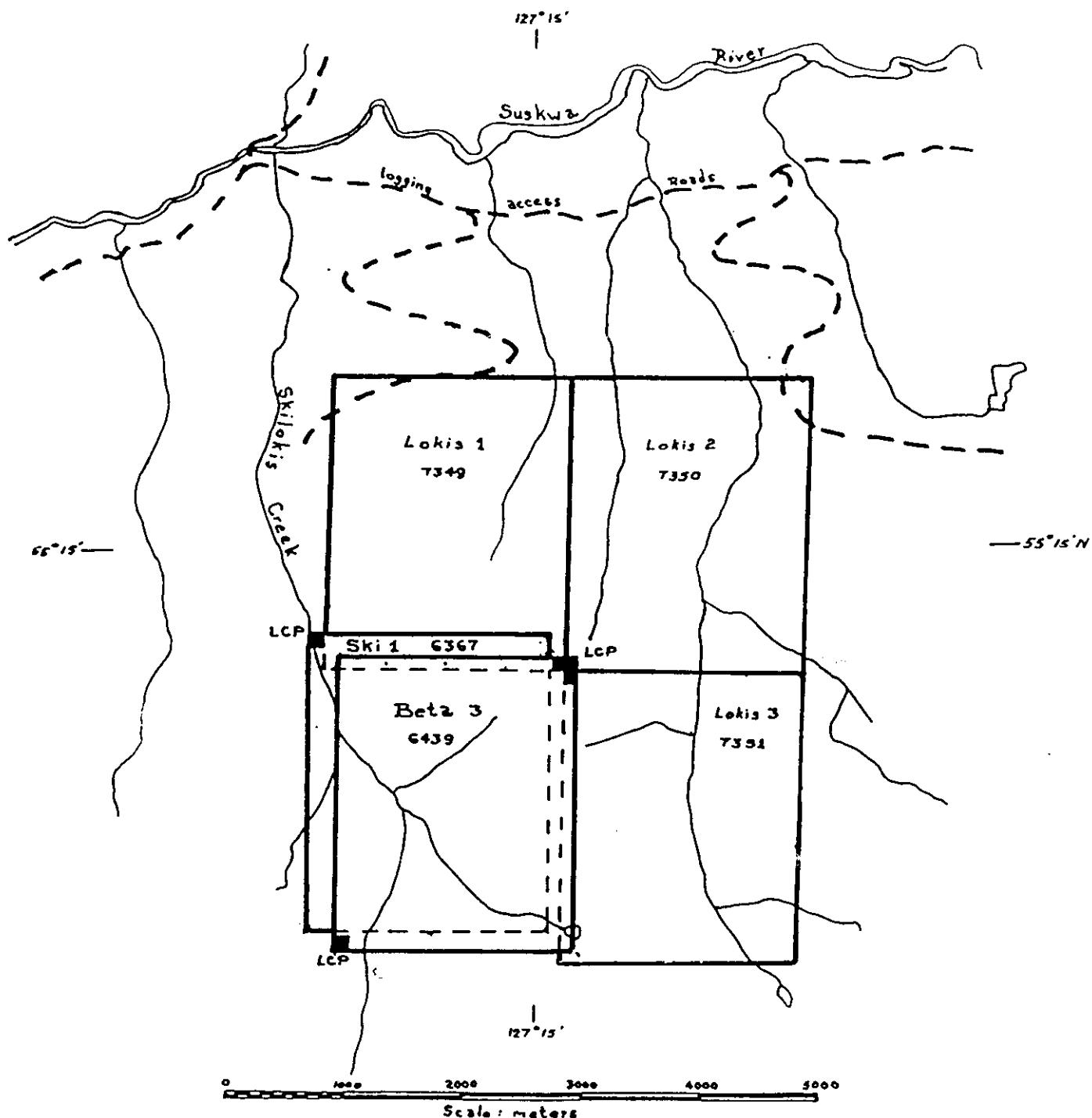
In July, two men prospected the area above the original anomalous sample collected during the Government survey. Mineralized samples were collected by Colin P. Harivel and Patrick Suratt of Atna Resources Ltd. This work was applied to assessment work on the Beta 3 claim.

In September, follow-up prospecting by Atna Resources discovered new mineralized zones. As a result, detailed soil samples and rock chip samples were collected on what was termed the "Pat" showing, and further prospecting continued.

Sample locations and results of analysis for gold, silver, lead and arsenic are shown on Figures 5 to 9.

Figure 2

Location and Claims
Skilokis Property,
Omineca Mining Division



Atna Resources Ltd.

7.0 REGIONAL GEOLOGIC SETTING

The regional geologic setting is outlined on Geological Survey of Canada, Open File Map 720, Hazelton map area, 93M (Richards, 1981) (Figure 3). The property is situated in the central part of the Intermontane Belt of the Canadian Cordillera. It is located along the Skeena Arch, an ancient, northeast trending tectonic element that has been the axis of volcanism, sedimentation and mineralization since the Jurassic.

Basement stratigraphy of the area is the Lower and Middle Jurassic Hazelton Group volcanic rocks, exposed to the east of the claimed area. These rocks comprise an assemblage of marine and non-marine calc-alkaline, island arc volcanics that extend throughout much of the length of central British Columbia (Tipper and Richards, 1976).

Deltaic and fluviatile sedimentary assemblages of the Upper Jurassic and Lower Cretaceous Bowser Lake Group underlie much of the area in the immediate vicinity of the properties. These strata occupy a vast area of west central British Columbia, known as the Bowser Basin (50,000 square kilometres). The Skeena Arch defines the southern margin of the Bowser Basin and marks the locus of the inwardly prograding, east-west trending, strandlines of the Bowser Lake Group. The Bowser Lake strata are a varied suite of light to dark greyish sandstone, siltstone, conglomerate, shale and coal whose detritus was derived from the south, off the Hazelton volcanics.

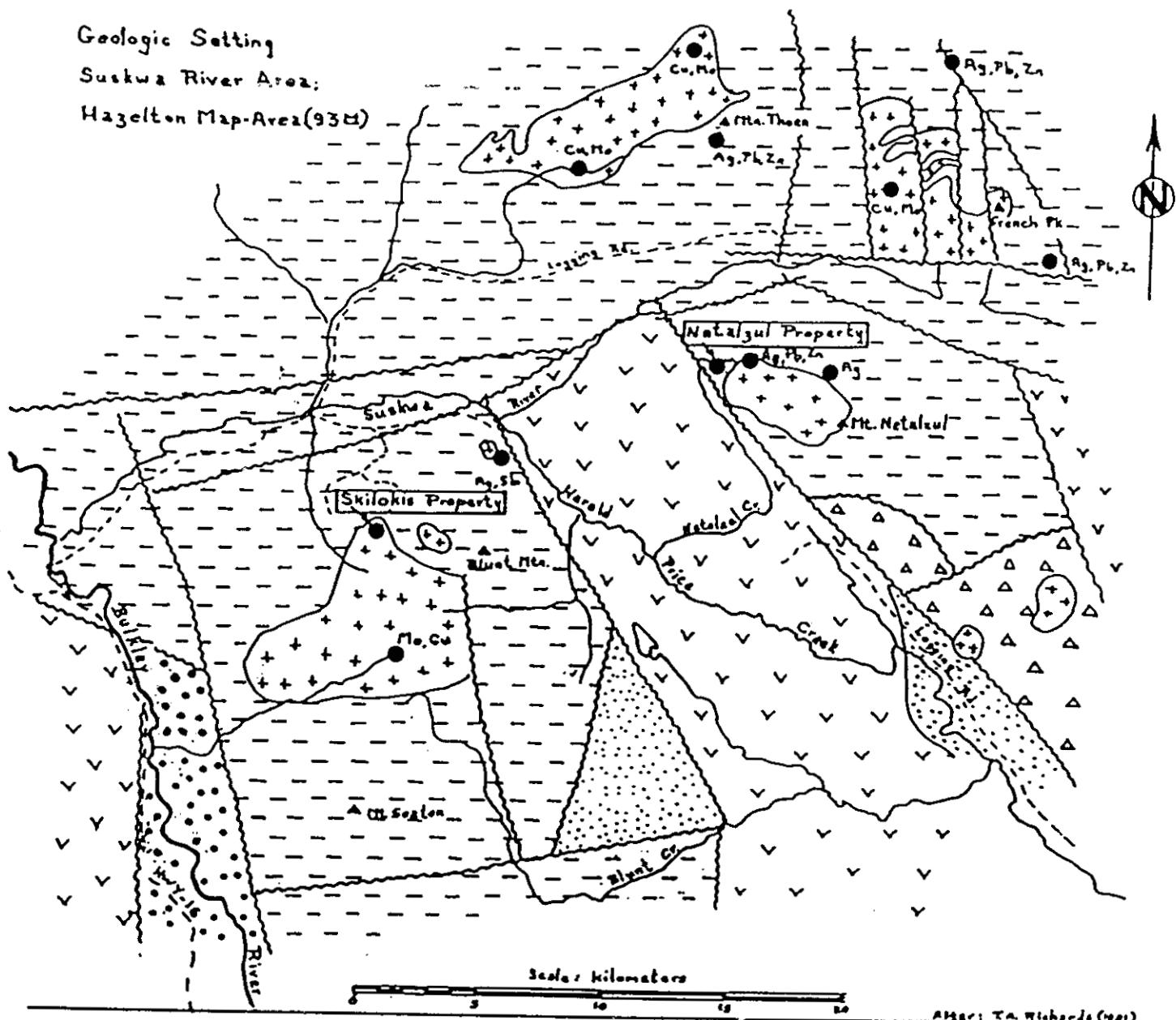
Middle Cretaceous lithologies are represented by sedimentary rocks of the Skeena Group, a suite of mainly sandstones derived from a easterly source.

Upper Cretaceous and Lower Tertiary rocks are defined by isolated accumulations of calc-alkaline continental volcanics, known locally as the Brian Boru volcanics, and regionally as the Kasalka Volcanics. These volcanics were deposited across the northern and southern margins of the Skeena Arch in an array of fault bounded, rectilinear to circular down-drop volcanic basins, some of which are calderas. Related to these volcanics are small batholiths, stocks and plugs of granitic rocks of the Bulkley Intrusions. Genetically related to this volcanic-intrusive association are numerous mineral deposits that include the Equity Mine, the Silver Standard Mine, the Duthie Mine and Granisle amongst others.

The area in the vicinity of the property is underlain by sedimentary rocks of the Bowser Lake Group intruded by rocks of the Bulkley Intrusions. The Brian Boru volcanics are located in a fault bounded basin, in the Harold Price Creek drainage, measuring some 8 kilometres east-west and 20 kilometres north-south dimension. The stocks of the Bulkley Intrusions, which underlie the cores of the mountain blocks surrounding the volcanic basin are unroofed feeders to the volcanics. Numerous mineral showings are located in the Suskwa River basin. These are copper-molybdenum porphyry type showings associated with the intrusives and precious metal-lead-zinc showings peripheral to the intrusions and the volcanic basin (Figure 3).

Figure 3

- 6 -



LEGEND

- TERTIARY
Sandstone
- UPPER CRETACEOUS
Bulkley Intrusions: quartz monzonite to diorite
- V V Brian Boru (Kassalka) Volcanics:
- Y Y LOWER CRETACEOUS
Skeena Group: sandstone, conglomerate
- UPPER JURASSIC
Bowser Lake Group: sandstone, shale, cong.
- △ △ Middle & Lower Jurassic
Hazelton Group: calc-alkaline volcanics
- ~~~~ Fault
- Mineral showing

8.0 PROPERTY GEOLOGY

The Skilokis Claims are underlain by quartz diorite and diorite of the Upper Cretaceous Bulkley Intrusions which are intrusive into deltaic clastic sedimentary rocks of the Upper Jurassic Bowser Lake Group (Figure 4). The intrusion is part of a large stock underlying the central parts of the Blunt Mountain massif. The mineralization occurs in a northerly trending bulge off the main stock. The stock is mainly fresh, blocky fractured hornblende quartz diorite with local leucocratic aplitic dykes.

Bowser Lake siltstones and sandstones are hornfelsed to biotite-garnet assemblages in excess of 300 metres from the contact with quartz diorite. Central to the intrusive is a large screen of hornfelsed sedimentary rocks.

Diagonally across the intrusive, trending 030° dipping steeply, is a sheeted-fracture and shear zone up to 100 metres wide. Much of the presently known mineralization is located within or adjacent to this fracture zone.

9.0 MINERALIZATION

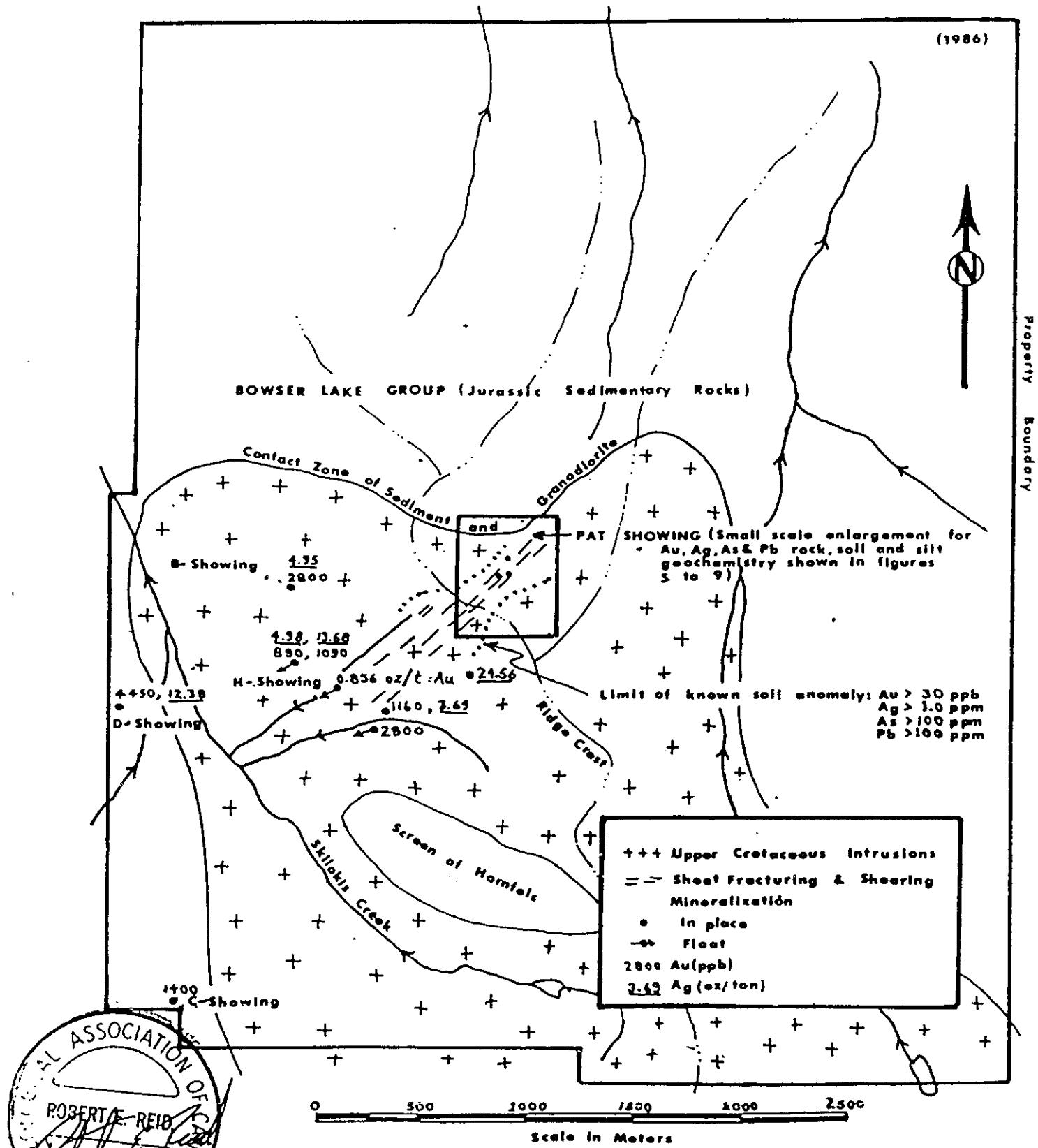
Mineralization on the Skilokis Property comprises veins, lenses, pods, massive replacements and disseminations of arsenopyrite, pyrite, galena, sphalerite, fibrous sulphosalt and magnetite hosted mainly in altered quartz diorite. Mineralization is closely associated with a northeast-trending sheeted fracture and shear zone that is traceable for some 4-1/2 kilometres, trending diagonally across the property. At the southern extension of the fracture zone, mineralization is in the hornfels as veins and stringers. Mineralization was noted in the northwest portion of the intrusion. All mineralized showings contain significant gold and silver values with gold up to 0.856 oz/ton and silver up to 87.93 oz/ton silver. Gangue assemblages include chloritic altered quartz diorite, fibrous black amphibole (grunerite), quartz, calcite, ankerite, tourmaline, apatite and fault gouge.

Five mineralized zones are noted in Figure 4. The Pat, H Showing and C Showing are related to the fracture zone. Showings B and D occur off this main structure.

9.1 PAT SHOWING

In the extreme northeast corner of the Beta 3 claim, a number of northeast trending, steeply dipping, quartz-grunerite-sulphide veins, lenses and masses were discovered by prospector Pat Suratt (Figure 5 - Pocket). The mineralized zones vary in width from one to 50 centimetres. Arsenopyrite, galena, sphalerite and pyrite have been identified.

FIGURE 4 GEOLOGICAL SETTING & GOLD-SILVER MINERALIZATION
SKILOKIS PROPERTY, Omineca M.D., NTS(93M)



Weathering is significant, with the abundant presence of scorodite, such that accurate sampling was not possible. All rock samples are grab-samples. Values from rock range up to 10,350 ppb gold (fire assay-atomic absorption), with 11 samples in excess of 1000 ppb Gold. Silver ranges up to 87 oz/ton, with 8 values in the 1 to 20 ounce range.

A contour soil grid was sampled within the basin occupying the Pat Showing, above the main areas of proximal float and outcrop. The mineralized zone is outlined by gold, silver, and arsenic anomalies with 20 ppb gold, 1.0 ppm silver, 100 ppm lead and 100 ppm arsenic defined as anomalous. The width of this anomalous zone is up to 150 metres width. All vein exposures are vertical in attitude. Samples from the central part of this grid gave results including 220, 300, 400, 2100 and 3000 ppb gold, and up to 18 oz/ton of silver in the soil. The portion of the soil grid to the immediate east of the main showing (samples DE 100 - 147) show less spectacular results than those to the west. However, some individual samples in this area are anomalous and hence require follow-up.

9.2 H SHOWING

The H Showing represents the initial discovery zone located in July, 1985. It comprises float in two prominent side gullies into Skilokis Creek, and mineralized fracture and shears. It is likely a continuation of the Pat Showing.

Mineralization comprises proximal float composed of quartz-arsenopyrite-pyrrhotite-pyrite and fibrous sulphosalt. Gold values range up to 0.856 oz/ton with few values in excess of 1000 ppb. Silver ranges up to 18.82 oz/ton.

Values from this Showing are shown on Figures 6 to 9 in the Pocket. Part of the data is extracted from the assessment report on the Beta 3 claim (Harivel 1985).

9.3 B SHOWING

This little investigated showing comprises quartz stringers containing up to 2800 ppb gold and 4.95 oz/ton silver. Pyrite and arsenopyrite are present. The vein system trends north easterly and is possibly associated with the main fracture system.

9.4 C SHOWING

This zone comprises stringers to 20 centimetres and float boulders containing pyrite, chalcopyrite, arsenopyrite in quartz hosted in hornfelsed sedimentary rocks. Gold in an arsenopyrite-pyrite-quartz proximal float sample gave 1400 ppb gold and 38.5 ppm silver. Tourmaline is an accessory mineral. This zone is at the southwest extremity of the main northeast trending fracture zone.

9.5 D SHOWING

Mineralization comprises 3 to 30 centimetres quartz veins containing up to 4,450 ppb gold and 12.38 oz/ton silver, striking east-west dipping moderately to the south. Mineralization includes pyrite, arsenopyrite, galena, sphalerite and chalcopyrite. The veins are in hornfels, adjacent fine-grained, leucocratic dykes or plugs. Samples include PS 176 - 182 series.

10.0 CONCLUSION AND RECOMMENDATION

Prospecting and sampling on the Skilokis property in 1985 has delineated a strong northeast trending mineralized structure which passes diagonally through the Beta 3 mineral claim. Gold and silver values obtained at various locations on this structure indicate the presence of a mineralized zone of potential economic significance. The structure strikes consistently at bearing 030, and dips vertically. The northern portion of this structure (Pat Showing) has been sampled in some detail. Its continuity to the south is confirmed by values and style of mineralization of the H Showing, and is extrapolated to extend to the southwest to the C Showing. Other areas of mineralization, similar to that found in the fracture zone are known to occur on the property.

This northeast fracture zone is to be the major focus for further exploration on the Skilokis property. To evaluate the presently known mineralized zones, subsequent programs should include:

- detailed geologic mapping;
- continuation of contour soil-grid survey, extending along strike the grid completed in 1985, with 25 metre stations across the inferred extension of structure and 50 metre stations lateral to the structure;
- detailed rock-chip sampling in conjunction with blast-pit trenching across the structure;
- continued detailed prospecting on and peripheral to the claims.

Contingent upon the results of this program, a diamond drill program is recommended.

FIGURE 5

SAMPLE LOCATIONS, ROCK, SOIL & SILT
SKILOKIS PROPERTY

OMINECA AND HAZELTON MAP AREA (931)

BETA 3 M.C.

BD 119 O BD 120 O

118 O 121 O

117 O 122 O

116 O 123 O

115 O 124 O

114 O 125 O PS 150-158

△ 162

126 O

127 O 411

113 O 128 O 412 △ 410

112 O 129 O 413 O △ 409

111 O 130 O 414 O PS 163-167

110 O 131 O 415 O 408

109 O 132 O 416 O 407

108 O 133 O 417 O 406

107 O 134 O 418 O 405

106 O 135 O 419 O

105 O 136 O 420 △ 403

104 O 137 O 421 △ 422

103 O 138 O 423

102 O 139 O

BD 100

BD 101

102 O

103 O

104 O

105 O

106 O

107 O

108 O

109 O

110 O

111 O

112 O

113 O

114 O

115 O

116 O

117 O

PS 159 △ Q30-S

PS 160 △

LOKIS 1
M.C.

LOKIS 2 M.C.

LOKIS 3
M.C.

O 137 O 125

O 131 O 128

O 132 O 127

O 133 O 126

O 134 O 126

O 135 O 126

O 136 O 126

O 137 O 124

O 138 O 123

O 139 O 122

O 140 O 121

O 141 O 120

O 142 O 119

O 143 O 118

O 144 O 117

O 145 O 116

O 146 O 115

O 147 O 114

O 148 O 113

O 149 O 112

O 150 O 111

O 151 O 110

O 152 O 109

O 153 O 108

O 154 O 107

O 155 O 106

O 156 O 105

O 157 O 104

O 158 O 103

O 159 O 102

O 160 O 101

O 161 O 100

General trend
of joints, fractures,
shear zones
Fracture-shear zones

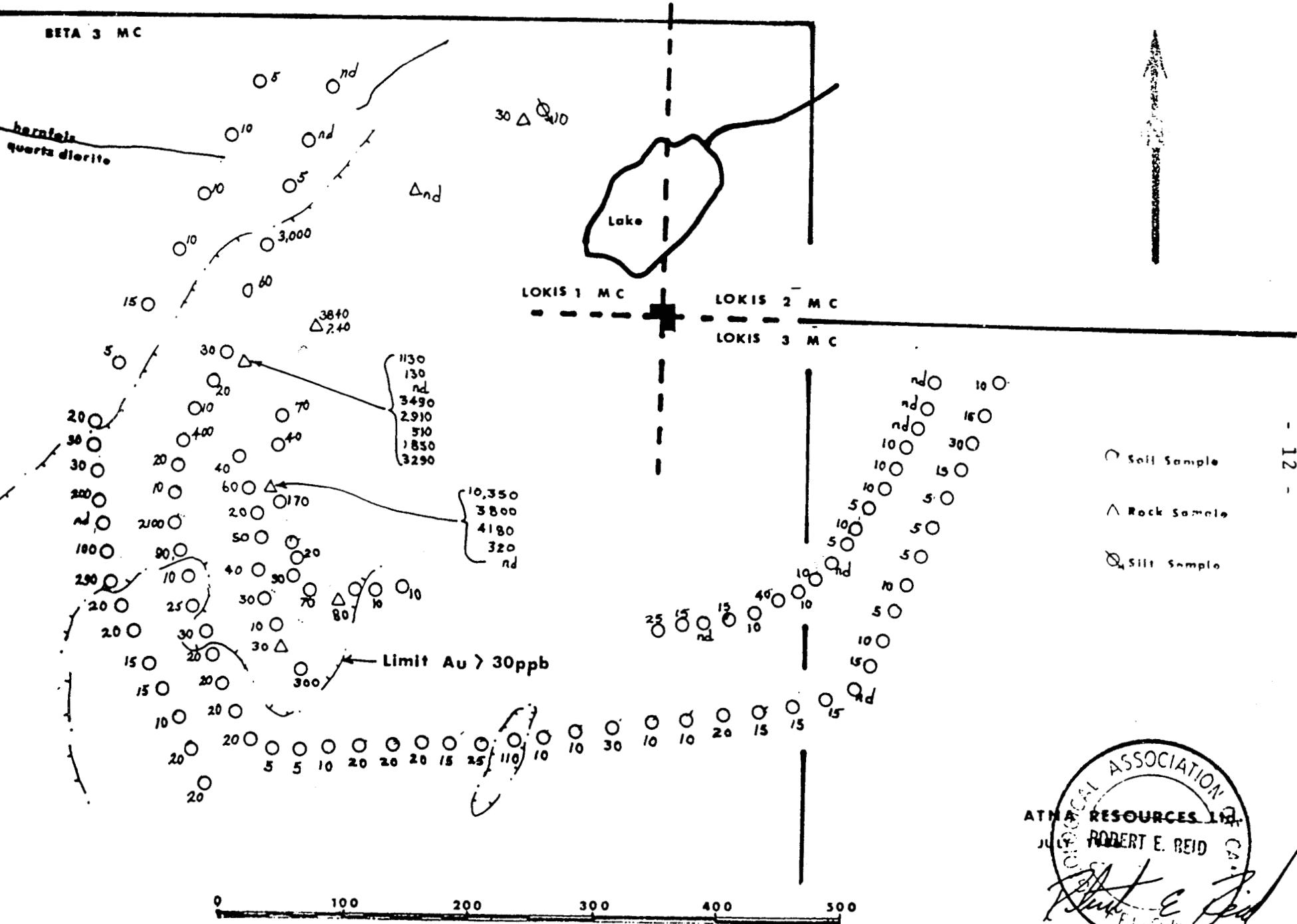
horizon
Quartzite

DE 147 148 149 144 143

CAL ASSOC. MEMBER
ROBERT E. REID
Robert E. Reid
ROBERT E. REID, B.Sc., F.G.A.C.

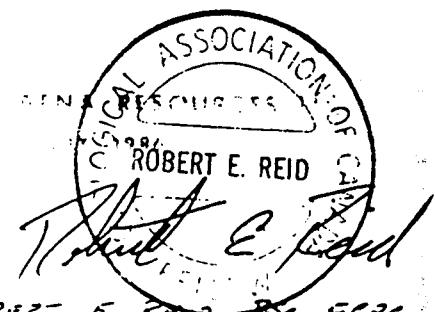
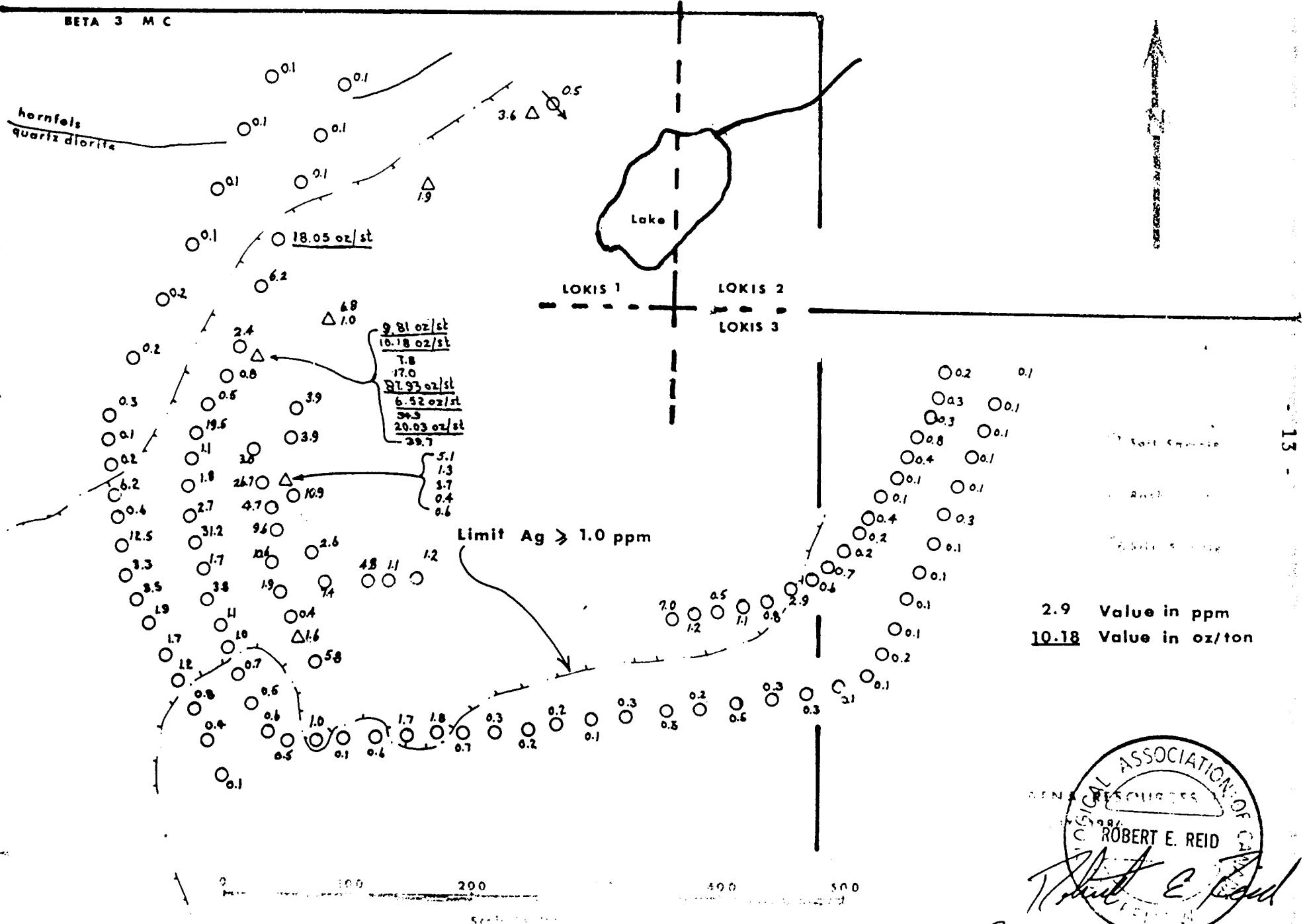
FIGURE 6

GOLD (Au) GEOCHEMISTRY
SKILOKIS PROPERTY
OMINECA M.D., HAZELTON MAP-AREA (93M)

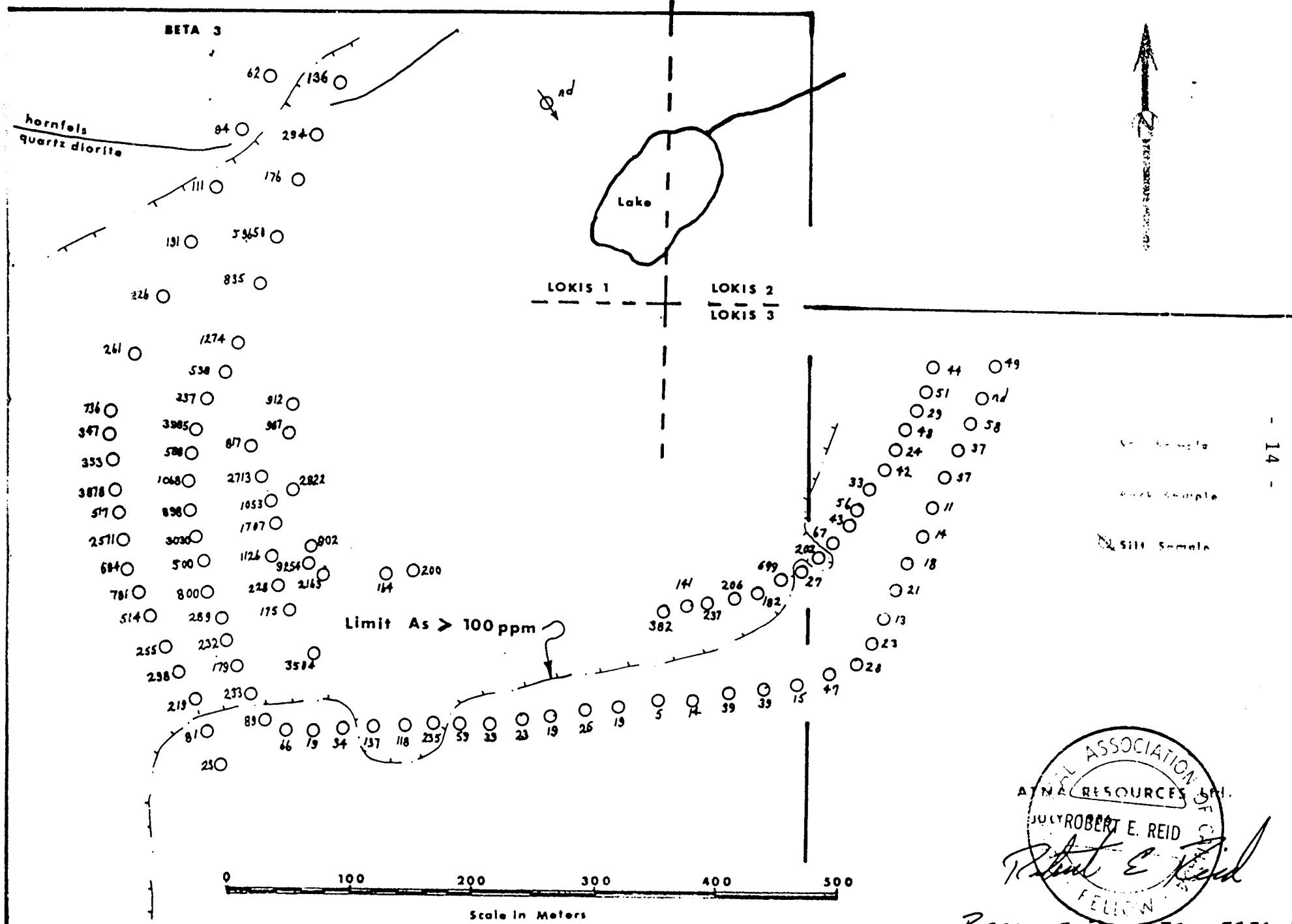


OMINICCA M.D. HAZELTON MAP-AREA (CONT.)

BETA 3 MC

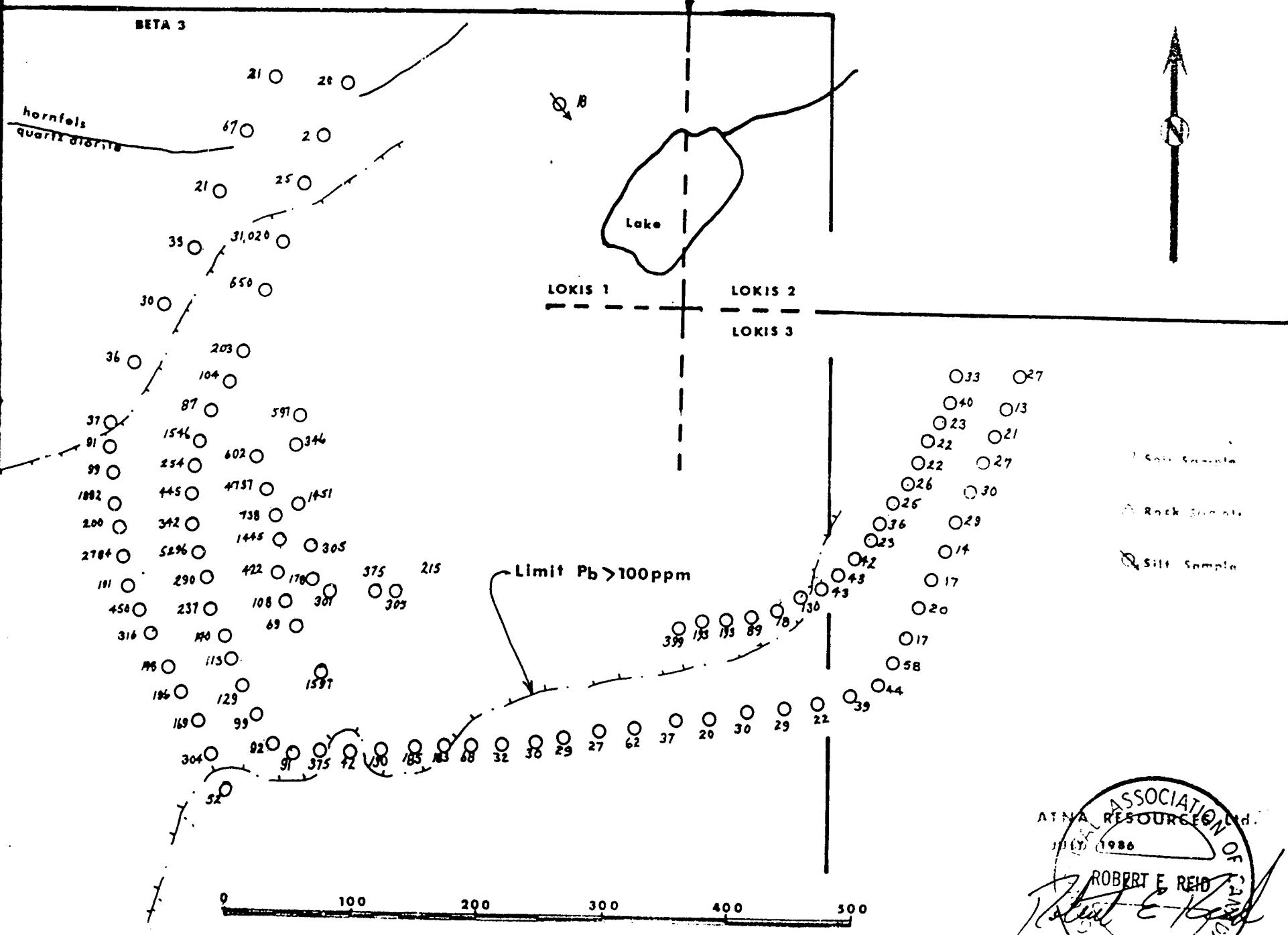


**FIGURE 8 ARSENIC (As) GEOCHEMISTRY
SKILOKIS PROPERTY
OMINECA M.D., HAZELTON MAP-AREA (93M)**



SKIDDAKS PROPERTY
OMINECA M.D., HAZELTON MAP-AREA (21M)

BETA 3



ATNA RESOURCE LTD.
JULY 1986

ROBERT E. REID
Robert E. Reid, P.Geo.
ROBERT E. REID, P.Geo.

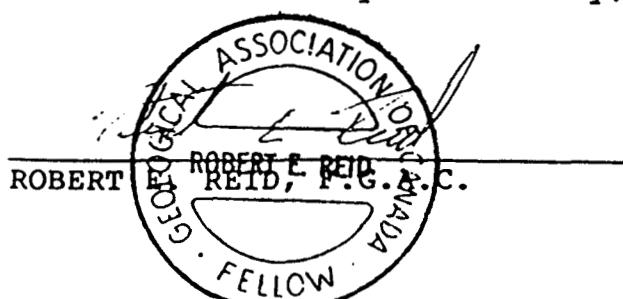
11.0

BUDGET ESTIMATE - 1986

(FOR THE ISSUER'S 50% JOINT VENTURE INTEREST)

<u>SKILOKIS CREEK</u>	<u>PHASE #1</u>	<u>PHASE #2</u>
Geologic mapping and supervision	\$ 1,500	\$ 1,000
Prospecting and labour	3,500	2,500
Trenching costs	2,500	3,500
Drilling costs (400 m @ \$50/m)	-	20,000
Soil and Rock Geochemistry	3,000	-
Assay	2,000	4,000
Field supplies	1,000	500
Equipment costs and rentals	1,500	1,000
Camp costs	1,500	3,000
Mobilization and expediting	500	1,500
Transportation (helicopter and truck)	2,500	5,000
Travel and accommodation	500	1,000
Engineering	1,000	1,000
Report preparation	1,000	1,000
Management costs (10%)	4,500	9,000
Contingencies	<u>3,000</u>	<u>6,000</u>
TOTAL	<u>\$ 30,000</u>	<u>\$ 60,000</u>

DATED this 27th day of February, 1986



12.0 REFERENCES

British Columbia Ministry of Energy, Mines and Petroleum Resources, National Geochemical Reconnaissance; 1:250,000 Map Series; Hazelton (NTS 93M); GSC Open File 1000; 1984.

Holland, J.S., 1964. Land Forms of British Columbia, A Physiographic Outline, British Columbia Dept. of Mines and Petroleum Resources; Bull 48, 138 pp.

Harivel, C., 1985, Assessment Report; Prospecting, Beta 3 Mineral Claim, Omineca Mining Division, Atna Resources Ltd.

Richards, T.A., 1981 Hazelton Map area (93M), Geological Survey of Canada, Open File Map No. 720.

Richards, T.A., 1983, Cretaceous Tertiary Mineralization across the Skeena Arch, West Central British Columbia, in 8th Annual Meeting of CIM District 6, Abstract; p. 20.

Tipper H. W., and Richards, T. A. Jurassic Stratigraphy and History of North-Central British Columbia, Geological Survey of Canada, Bulletin 270.

CERTIFICATE

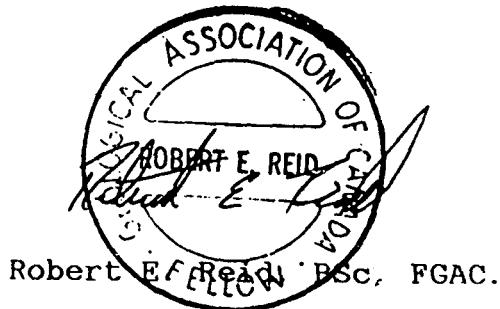
I, Robert E. Reid of Box 3669, Elgin Avenue, Smithers, British Columbia, do hereby certify that:

1. I am a graduate of the University of British Columbia (BSc 1971).
2. I have been practising my profession as an exploration and mine geologist since graduation.
3. I am a Fellow of the Geological Association of Canada and a Member of the C.I.M.M.
4. I hold a British Columbia Underground Shiftboss Certificate (Number UG 1008).
5. I am the author of the report on the Skilokis Property, titled "Geochemical Report - Skilokis Property", dated December 10, 1985.
6. I have read the Prospectus of Atna Resources Ltd. and, in particular, I have read the summary report on the Skilokis Property contained in the Prospectus.
7. I agree that the summary report on the Skilokis Property is a true and fair summary.
8. I consent to the use of the Skilokis Report, dated December 10, 1985, and to the use of the summary of this report contained in the Prospectus, to satisfy the requirements of the Vancouver Stock Exchange and the British Columbia Securities Commission and for any additional means of obtaining financing that may be deemed appropriate by Atna Resources Ltd.

Dated at Smithers, B.C.

July 19, 1986.

Signed:



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SKILOKIS PROPERTY

STATEMENT OF COSTS

Phase 1:

Wages:

Brian Dahl, assistant; 19, 20 July; 2 x \$150	\$300
Dan Ethier, assistant; 16, 17, $\frac{1}{2}$ 18, 19; 3.5 x \$150	\$525
Bruce Holden, prospector; $\frac{1}{2}$ 18, 19 July; 1.5 x \$150	\$225
Pat Suratt, prospector; $\frac{1}{2}$ 14, $\frac{1}{2}$ 15, 16, 17, $\frac{1}{2}$ 18; 4.5 x \$200	\$900
Colin Harivel, geologist; 19 July; 1x \$300	\$300

Helicopter: 1.7 x \$500	\$850
Trucks: 6 days x \$50/day	\$300
Expended Supplies	\$156
Motel: 1 night, 2 men	\$98
Office: phone calls, prep. of photocopies etc.	\$57
Report: apportioned costs; 2 days @ \$300/day	\$600

TOTAL OF PHASE 1 COSTS	<u>\$4311</u>
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Phase 2:

Wages:

Pat Suratt, prospector; July 21, 22, 23; 3 x \$200	\$600
Dan Ethier, assistant; July 21, 22, $\frac{1}{2}$ 23; 2.5 x \$150	\$375
Colin Harivel, geologist; July 21, 22, 23; 3 x \$300	\$300
Tom Richards, geologist; July 21, 22; 2 x \$350	\$700

Geochem Costs: Vangeochem Invoices	\$2995
Helicopter: 3.75 hrs @ \$500	\$1874
Trucks: 3 x 2 x \$50/day	\$300
Expended Supplies:	\$129
Maps:	\$100
Regional Exploration Costs Apportioned:	\$2115
Office:	\$293
Report: 3 days @ \$300	\$1200

TOTAL OF PHASE 1 AND PHASE 2	<u>\$15292</u>
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APPENDIX 1

Table 1: Gold Geochemistry:

Skilokis Rocks



VANGEOCHEM LAB LIMITED

MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

GEOCHEMICAL ANALYTICAL REPORT

CLIENT: ATNA RESOURCES
ADDRESS: 720 - 800 W Pender St
: Vancouver, B.C.
: V6C 2V6

DATE: Oct 8 1985

PROJECT#: NONE GIVEN
SAMPLES ARRIVED: Sept 30 1985
REPORT COMPLETED: Oct 8 1985
ANALYSED FOR: Au (FA/AAS) REJECTS: SAVED

SAMPLES FROM: MR. TOM RICHARDS
COPY SENT TO: MR. TOM RICHARDS

PREPARED FOR: ATNA RESOURCES

ANALYSED BY: VGC Staff

SIGNED:

A handwritten signature in black ink, appearing to read "VGC Staff", is placed over the line for signatures.

GENERAL REMARK: COPIES SENT TO C HARIVEL, P SURRAT & R McARTHUR



VANGEOCHEM LAB LIMITED

MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 85-75-017

JOB NUMBER: 85447

ATNA RESOURCES

PAGE 1 OF 2

SAMPLE #	Au
PS/ 305/85	ppb
PS/ 315/85	10
PS/ 335/85	10
PS/ 345/85	15
PS/ 355/85	110
PS/ 365/85	50
PS/147R/85	nd
PS/148R/85	1230
PS/149R/85	200
PS/150R/85	1090
PS/151R/85	1130
PS/152R/85	130
PS/153R/85	nd
PS/154R/85	nd
PS/155R/85	3490
PS/156R/85	2910
PS/157R/85	510
PS/158R/85	1850
PS/159R/85	3290
PS/160R/85	30
PS/161R/85	nd
PS/162R/85	510
PS/163R/85	10350
PS/164R/85	3800
PS/165R/85	4180
PS/166R/85	320
PS/167R/85	nd
PS/168R/85	10
PS/169R/85	270
PS/170R/85	15
PS/171R/85	20
PS/172R/85	1400
PS/173R/85	nd
PS/174R/85	1090
PS/175R/85	890
PS/176R/85	nd
PS/177R/85	3490
PS/178R/85	1330
PS/180R/85	3680

DETECTION LIMIT 5

nd = none detected --- = not analysed is = insufficient sample



VANGEOCHEM LAB LIMITED

MAIN OFFICE

1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE

1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 85-75-017

JOB NUMBER: 85447

ATNA RESOURCES

PAGE 2 OF 2

SAMPLE #	Au
	nd
PS/181R/85	4450
PS/182R/85	210
PS/183R/85	5
PS/184R/85	440
PS/185R/85	nd
PS/186R/85	nd
PS/187R/85	nd
PS/188R/85	60
DE/ 3R/85	50
DE/ 4R/85	nd
DE/ 5R/85	nd
DE/ 8R/85	45
DE/10R/85	nd
DE/12R/85	nd
DE/13R/85	40
DE/14R/85	nd
DE/15R/85	nd
DE/17R/85	10
DE/21R/85	20
DE/22R/85	nd

DETECTION LIMIT

5

nd = none detected

-- = not analysed

is = insufficient sample



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(604) 251-5656

REPORT NUMBER: 85-75-014

JOB NUMBER: 85464

MR. TOM RICHARDS

PAGE 1 OF 1

SAMPLE #

Au

nd

SKIL BH 85 1R

nd

SKIL BH 85 2R

nd

DETECTION LIMIT

5

nd = none detected

-- = not analysed

is = insufficient sample



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(604) 251-5656

REPORT NUMBER: 85-75-016

JOB NUMBER: 85449

ATNA RESOURCES

PAGE 1 OF 2

SAMPLE #	Au
	ppb
SKIL 85 DE 100	5
SKIL 85 DE 101	5
SKIL 85 DE 102	10
SKIL 85 DE 103	20
SKIL 85 DE 104	20
SKIL 85 DE 105	20
SKIL 85 DE 106	15
SKIL 85 DE 107	25
SKIL 85 DE 108	10
SKIL 85 DE 109	10
SKIL 85 DE 110	10
SKIL 85 DE 111	30
SKIL 85 DE 112	10
SKIL 85 DE 113	10
SKIL 85 DE 114	20
SKIL 85 DE 115	15
SKIL 85 DE 116	15
SKIL 85 DE 117	15
SKIL 85 DE 118	nd
SKIL 85 DE 119	15
SKIL 85 DE 120	10
SKIL 85 DE 121	5
SKIL 85 DE 122	10
SKIL 85 DE 123	5
SKIL 85 DE 124	5
SKIL 85 DE 125	5
SKIL 85 DE 126	15
SKIL 85 DE 127	30
SKIL 85 DE 128	15
SKIL 85 DE 129	10
SKIL 85 DE 130	nd
SKIL 85 DE 131	nd
SKIL 85 DE 132	nd
SKIL 85 DE 133	10
SKIL 85 DE 134	10
SKIL 85 DE 135	10
SKIL 85 DE 136	5
SKIL 85 DE 137	10
SKIL 85 DE 138	5

DETECTION LIMIT

5

nd = none detected

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REPORT NUMBER: 85-75-016

JOB NUMBER: 85449

ATNA RESOURCES

PAGE 2 OF 2

SAMPLE #	Au
	ppb
SKIL 85 DE 139	nd
SKIL 85 DE 140	10
SKIL 85 DE 141	10
SKIL 85 DE 142	40
SKIL 85 DE 143	10
SKIL 85 DE 144	15
SKIL 85 DE 145	nd
SKIL 85 DE 146	15
SKIL 85 DE 147	25

DETECTION LIMIT

5

nd = none detected

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(604) 251-5656

REPORT NUMBER: 85-75-021

JOB NUMBER: 85463

TOM RICHARDS

PAGE 1 OF 2

SAMPLE #	Au
	ppb
DE 25	5
DE 30	20
DE 31	30
DE 32	10
DE 33	20
DE 34	60
SKIL BD 85 100	20
SKIL BD 85 101	20
SKIL BD 85 102	10
SKIL BD 85 103	15
SKIL BD 85 104	15
SKIL BD 85 105	20
SKIL BD 85 106	20
SKIL BD 85 107	290
SKIL BD 85 108	100
SKIL BD 85 109	nd
SKIL BD 85 110	220
SKIL BD 85 111	30
SKIL BD 85 112	30
SKIL BD 85 113	20
SKIL BD 85 114	5
SKIL BD 85 115	15
SKIL BD 85 116	10
SKIL BD 85 117	10
SKIL BD 85 118	10
SKIL BD 85 119	5
SKIL BD 85 120	nd
SKIL BD 85 121	nd
SKIL BD 85 122	5
SKIL BD 85 123	3000
SKIL BD 85 124	60
SKIL BD 85 125	30
SKIL BD 85 126	20
SKIL BD 85 127	10
SKIL BD 85 128	400
SKIL BD 85 129	20
SKIL BD 85 130	10
SKIL BD 85 131	2100
SKIL BD 85 132	90

DETECTION LIMIT

5

nd = none detected

-- = not analysed

is = insufficient sample



VANGEOCHEM LAB LIMITED

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(604) 251-5656

REPORT NUMBER: 85-75-021

JOB NUMBER: 85463

TOM RICHARDS

PAGE 2 OF 2

SAMPLE #	Au
	nd
SKIL BD 85 133	10
SKIL BD 85 134	25
SKIL BD 85 135	30
SKIL BD 85 136	20
SKIL BD 85 137	20
SKIL BD 85 138	20
SKIL BD 85 139	20
SKIL BH 85 1S	40
SKIL H 85 393	nd
SKIL H 85 394	2800
SKIL H 85 396	30
SKIL H 85 397	10
SKIL H 85 398	10
SKIL H 85 399	60
SKIL H 85 400	80
SKIL H 85 402	70
SKIL H 85 403	90
SKIL H 85 405	20
SKIL H 85 408	170
SKIL H 85 410	40
SKIL H 85 411	70
SKIL H 85 413	40
SKIL H 85 414	60
SKIL H 85 415	20
SKIL H 85 416	50
SKIL H 85 417	40
SKIL H 85 418	30
SKIL H 85 419	10
SKIL H 85 420	20
SKIL H 85 421	30
SKIL H 85 423	300

DETECTION LIMIT

5

nd = none detected

-- = not analysed

is = insufficient sample

Table 2: ICP - Geochemistry

- Nitoks.



VANGEOCHEM LAB LIMITED

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BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

GEOCHEMICAL ANALYTICAL REPORT

CLIENT: TOM RICHARDS
ADDRESS: R R #1
: Hazelton BC
: V0J 1Y0

DATE: Oct 10 1985

PROJECT#: SKIL
SAMPLES ARRIVED: Oct 2 1985
REPORT COMPLETED: Oct 10 1985
ANALYSED FOR: ICP

SAMPLE TYPE: SOIL & SILT
REJECTS: DISCARDED

SAMPLES FROM: TOM RICHARDS
COPY SENT TO: SEE REMARKS

PREPARED FOR: TOM RICHARDS

ANALYSED BY: VGC Staff

SIGNED:

A handwritten signature in black ink, appearing to read "VGC Staff", is placed over a horizontal line next to the "SIGNED:" label.

GENERAL REMARK: COPIES TO B COULTER, C HARIVEL & R McARTHUR

VANGEOCHEM LAB LIMITED

Kilometres . Rocks .

MAIN OFFICE: 1521 PEMBERTON AVE. N. VANCOUVER B.C. V7P 2S3 PH: (604) 986-5211 TELEX: 04-352578
 BRANCH OFFICE: 1630 PANDORA ST. VANCOUVER B.C. V6L 1L6 PH: (604) 251-5656

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR SN, Mn, Fe, Ca, P, Cr, Mg, Ba, Pb, Al, Na, K, W, Pt AND Sr. AU AND PD DETECTION IS 3 PPM.
 IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, - = NOT ANALYZED

COMPANY: ATNA RESOURCES
 ATTENTION: MR. BILL COULTER
 PROJECT: NONE GIVEN

REPORT #: 85-75-017
 JOB #: 85447
 INVOICE # 9035

DATE RECEIVED: 85/09/30
 DATE COMPLETED: 85/10/08
 COPY SENT TO: T. RICHARDS, C. HARIVEL,
 P. SUPRATT, R. McARTHUR

ANALYST W. Reaves

PAGE 1 OF 2

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA PPM	CD PPM	CO PPM	CR PPM	CU PPM	FE PPM	K %	Mg %	Mn PPM	Mo PPM	Na PPM	Ni PPM	P PPM	PB PPM	PD PPM	PT PPM	SB PPM	SM PPM	SR PPM	U PPM	W PPM	Zn PPM
PS/85/147R	21.2	.30	>101	ND	63	26	.03	270.6	194	37	303	12.76	.19	.02	52	8	.01	4	.02	1982	ND	ND	1059	ND	4	ND	ND	61
PS/85/148R	>100	.01	BB68	ND	18	3	.02	557.9	2	179	495	1.20	.01	.01	55	31	.01	12	.01	<101	ND	ND	50711	5	3	ND	ND	2676
PS/85/149R	43.7	1.41	60120	ND	32	155	.46	101.7	173	62	129	9.15	.18	.69	781	16	.01	16	.14	2203	ND	ND	1013	ND	11	ND	ND	116
PS/85/150R	>100	.12	74418	ND	10	5	.02	571.8	214	21	5576	7.05	.07	.01	32	23	.01	18	.01	96418	ND	ND	63104	ND	23	35	ND	312
PS/85/151R	>100	.60	>101	ND	12	ND	.02	293.2	9	22	710	16.65	.27	.02	24	68	.01	3	.13	85587	ND	ND	35202	ND	10	77	ND	858
PS/85/152R	7.8	2.76	1953	ND	257	ND	.64	6.1	16	109	64	3.26	.11	.59	349	2	.01	21	.07	2674	ND	ND	934	2	44	ND	ND	70
PS/85/153R	17.0	5.61	435	ND	559	ND	2.65	10.1	24	70	97	2.03	.14	.61	284	ND	.01	17	.05	1255	ND	ND	290	ND	303	ND	ND	416
PS/85/154R	>100	.10	29048	3	10	260	.01	212.3	5	50	3615	2.97	.01	.01	16	14	.01	3	.01	<101	ND	ND	16813	ND	85	ND	ND	648
PS/85/155R	>100	.12	>101	ND	3	11	.01	541.7	1	86	1364	13.29	.17	.01	20	7	.01	4	.01	37346	ND	ND	10907	ND	20	ND	ND	375
PS/85/156R	34.9	1.74	21875	ND	142	37	.06	58.2	194	62	397	4.59	.13	.56	125	25	.01	11	.03	3507	ND	ND	1242	ND	42	48	ND	184
PS/85/157R	>100	.90	47774	ND	8	12	.03	267.2	16	30	874	5.26	.10	.02	46	74	.01	8	.04	88970	ND	ND	61126	ND	28	145	ND	608
PS/85/158R	39.7	.10	>101	ND	8	60	.01	425.7	506	88	407	20.56	.48	.02	36	182	.01	2	.02	4432	ND	ND	881	ND	7	ND	ND	151
PS/85/159R	3.6	.22	3938	ND	111	ND	.01	7.9	3	241	33	2.30	.02	.02	76	56	.01	5	.01	857	ND	ND	272	ND	5	ND	ND	22
PS/85/160R	1.9	.12	1707	ND	10	ND	.14	2.4	2	154	15	1.02	.01	.06	26	255	.01	6	.08	394	ND	ND	136	1	10	ND	ND	22
PS/85/161R	6.8	.01	93287	3	2	8	.01	139.3	2	120	18	9.73	.11	.01	24	6	.01	2	.01	143	ND	ND	363	ND	1	ND	ND	9
PS/85/162R	1.0	.30	35742	ND	10	ND	.01	44.3	26	124	7	7.26	.11	.02	54	4	.01	6	.01	204	ND	ND	100	ND	3	ND	ND	8
PS/85/163R	5.1	.01	>101	8	6	ND	.01	441.1	18	14	21	26.57	.37	.03	14	10	.01	ND	.03	548	ND	ND	893	ND	2	ND	ND	ND
PS/85/164R	1.3	.01	>101	6	3	ND	.01	229.4	3	75	13	13.67	.18	.02	15	125	.01	2	.13	89	ND	ND	420	ND	2	ND	ND	4
PS/85/165R	3.7	.26	59008	4	22	ND	.04	79.5	6	152	36	7.02	.11	.02	74	8	.01	3	.03	242	ND	ND	186	ND	1	ND	ND	71
PS/85/166R	.4	.24	10525	ND	29	ND	.01	15.1	1	282	7	1.50	.03	.01	249	3	.01	16	.01	190	ND	ND	61	ND	1	ND	ND	62
PS/85/167R	.6	.35	436	ND	102	ND	.34	.2	11	98	40	2.44	.22	.03	363	2	4.16	3	.02	33	ND	ND	13	ND	16	ND	ND	12
PS/85/168R	.7	4.15	487	ND	376	ND	1.66	.9	17	125	1124	9.90	.24	1.18	960	ND	.01	18	.09	32	ND	ND	11	ND	24	ND	10	71
PS/85/169R	1.6	.15	16083	ND	20	ND	.05	21.3	6	36	150	2.52	.03	.03	81	1	.01	6	.01	316	ND	ND	132	ND	2	ND	ND	19
PS/85/170R	1.5	4.89	317	ND	50	ND	2.59	3.1	139	20	7468	12.28	.26	.55	2144	ND	.01	36	.07	55	ND	ND	9	ND	102	ND	16	534
PS/85/171R	.5	.18	2622	ND	10	ND	.10	3.6	6	340	45	1.09	.01	.11	90	10	.01	16	.01	123	ND	ND	43	1	3	ND	ND	8
PS/85/172R	38.3	.27	77435	ND	31	82	.03	114.1	11	99	1150	12.68	.20	.03	38	3	.01	6	.01	822	ND	ND	297	ND	27	ND	ND	23
PS/85/173R	3.8	4.38	834	ND	27	ND	2.10	3.1	53	84	2535	14.67	.29	.18	210	1	.01	22	.03	1490	ND	ND	442	ND	113	ND	ND	70
PS/85/174R	>100	.59	31787	ND	57	10	.10	119.7	1	29	515	6.85	.08	.05	103	34	.01	5	.19	94212	ND	ND	28838	ND	80	ND	ND	462
PS/85/175R	>100	.46	52296	ND	34	7	.12	20.6	6	145	1631	11.01	.16	.03	177	52	.01	11	.20	98282	ND	ND	36758	ND	149	ND	ND	1372
PS/85/176R	5.8	4.67	2328	ND	370	ND	1.32	29.4	25	86	159	4.62	.12	1.05	424	ND	.01	20	.06	1384	ND	ND	158	ND	143	ND	ND	1369
PS/85/177R	>100	.20	>101	7	19	66	.06	>1000	843	100	3298	22.34	.31	.05	226	12	.01	17	.01	45218	ND	ND	266	ND	5	ND	111	47430
PS/85/178R	>100	.36	>102	7	20	210	.05	>1000	67	84	1585	15.97	.23	.06	175	12	.01	11	.01	56522	ND	ND	280	ND	8	ND	66	40551
PS/85/179R	>100	.19	>101	5	13	61	.03	568.1	273	25	1732	20.10	.29	.04	317	5	.01	11	.01	50142	ND	ND	593	ND	6	ND	ND	9327
PS/85/180R	26.8	.22	>101	4	25	ND	.13	198.3	11	215	257	12.15	.19	.03	236	5	.01	15	.03	7790	ND	ND	153	ND	7	ND	ND	231
PS/85/181R	1.8	.02	1672	ND	16	11	3.94	5.6	25	18	2892	21.29	.42	.04	2282	3	.01	10	1.76	555	ND	ND	103	ND	55	ND	ND	211
PS/85/182R	34.8	.39	1541	ND	63	ND	1.15	133.5	3	154	86	3.22	.12	.03	2546	6	.01	8	.05	23537	ND	ND	7043	2	27	ND	ND	5197
PS/85/183R	26.6	.12	11183	ND	7	3	.03	21.3	1	204	189	5.20	.08	.03	2861	9	.01	9	.01	14803	ND	ND	226	ND	5	ND	ND	222
PS/85/184R	.1	1.40	79	ND	30	ND	5.60	.1	8	49	26	8.73	.23	.32	1194	272	.01	3	.01	75	ND	ND	12	ND	231	ND	43	49
PS/85/185R	3.5	.27	835	ND	21	ND	.27	1.4	9	162	326	8.31	.15	.02	130	10	.01	17	.01	113	ND	ND	18	1	13	ND	ND	49

SAMPLE NAME	A6 PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA PPM	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	Mg %	Mn PPM	Mo PPM	Na PPM	Ni PPM	P PPM	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	Zn PPM
PS/187R/85	.1	.76	148	ND	60	ND	.06	1.5	10	181	27	4.39	.16	.29	69	8	.01	14	.05	317	ND	ND	73	4	19	ND	6	59
PS/188R/85	>100	.01	3990	ND	4	ND	.02	326.6	2	41	733	1.10	.02	.01	85	6	.01	6	.01	20394	ND	ND	38854	5	3	ND	ND	3866
DE/3R/85	20.5	.27	846	ND	30	ND	.01	5.3	4	94	66	12.27	.22	.03	61	56	.01	3	.09	3705	ND	ND	784	1	10	ND	ND	442
DE/4R/85	1.5	2.36	28	ND	14	ND	.10	.1	9	64	8	35.77	.60	1.46	371	ND	.01	15	.33	194	ND	ND	133	ND	68	4	ND	56
DE/5R/85	.2	.36	15	ND	22	ND	.08	.1	7	30	16	26.90	.44	.17	190	11	.01	ND	.24	98	ND	ND	58	ND	11	7	ND	35
DE/6R/85	.1	.07	ND	ND	28	ND	.15	.1	ND	32	ND	58.00	.94	.08	1570	3	.01	ND	.01	3	ND	ND	15	ND	7	15	ND	45
DE/10R/85	.6	7.24	4925	ND	11	87	3.11	8.0	33	75	455	9.83	.28	.19	154	ND	.01	19	.06	33	ND	ND	36	ND	138	17	ND	88
DE/12R/85	.8	3.17	121	ND	41	4	1.68	.1	13	110	210	9.72	.28	1.38	699	ND	.01	16	.12	37	ND	ND	27	5	18	10	8	34
DE/13R/85	15.3	1.34	1978	ND	35	ND	.11	8.1	21	29	215	6.25	.14	.72	194	ND	.01	6	.08	2719	ND	ND	980	3	4	ND	ND	71
DE/14R/85	.5	4.57	158	ND	26	ND	2.53	.6	40	43	381	11.42	.30	1.18	582	ND	.01	15	.53	61	ND	ND	25	ND	110	11	ND	44
DE/15R/85	.3	4.59	230	ND	24	ND	1.64	.8	48	68	378	11.92	.29	.82	358	ND	.01	20	.32	38	ND	ND	19	ND	83	8	ND	33
DE/17R/85	.5	3.12	119	ND	25	ND	1.47	.3	16	89	371	11.22	.26	.83	488	ND	.01	22	.08	25	ND	ND	59	ND	48	6	ND	38
DE/21R/85	7.6	.45	172	ND	198	ND	.03	2.4	1	45	21	1.56	.06	.06	63	19	.01	4	.01	1278	ND	ND	416	3	6	ND	ND	30
DE/22R/85	.6	.01	38	ND	163	ND	.02	.1	1	244	8	1.00	.03	.01	75	19	.01	6	.01	39	ND	ND	13	2	4	ND	ND	17

Skilokis

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1521 PEMBERTON AVE. N.VANCOUVER B.C. V7P 2S3 PH: (604) 986-5211 TELEX: 04-352578
BRANCH OFFICE: 1630 PANDORA ST. VANCOUVER B.C. V8L 1L6 PH: (604) 251-5656

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO KMNO4 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SM,MN,FE,CA,P,CR,MG,BA,PD,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -- NOT ANALYZED

COMPANY: TOM RICHARDS
ATTENTION: T. RICHARDS
PROJECT: SKIL

REPORT#: 85-75-014
JOB#: 85464
INVOICE#: 9032

DATE RECEIVED: 85/10/03
DATE COMPLETED: 85/10/08
COPY SENT TO: MR. RICHARDS

ANALYST W. Reeves

PAGE 1 OF 1

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
SKIL BH 85 1R	3.7	6.87	9	ND	145	ND	3.75	5.5	22	26	786	7.12	.21	.84	848	1	.01	13	.08	342	ND	ND	5	2	113	5	ND	621
SKIL BH 85 2R	4.8	7.38	9	ND	121	ND	4.05	11.2	25	90	709	6.95	.24	.76	743	1	.01	18	.07	463	ND	ND	6	1	173	7	ND	1427

VANGEOCHEM LAB LIMITED

Sklohis - Soils *pd*

MAIN OFFICE: 1521 PEMBERTON AVE. N.VANCOUVER B.C. V7P 2S3 PH: (604) 986-5211 TELEX: 04-352578
 BRANCH OFFICE: 1630 PANDORA ST. VANCOUVER B.C. V5L 1L6 PH: (604) 251-5656

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO₃ TO H₂O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR SN,MN,FE,CA,P,CR,MG,BA,PD,AL,NA,K,N,PT AND SR. AU AND PB DETECTION IS 3 PPM.
 IS=INSUFFICIENT SAMPL, ND= NOT DETECTED, -- NOT ANALYZED

COMPANY: ATNA RESOURCES
 ATTENTION: MR. BILL COULTER
 PROJECT: NONE GIVEN

REPORT #: 85-75-013
 JOB #: 85449
 INVOICE #: 9031

DATE RECEIVED: 85/09/30
 DATE COMPLETED: 85/09/03
 COPY SENT TO: COLIN HARIVEL, TOM RICHARDS

ANALYST W. Peacock

PAGE 1 OF 2

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA PPM	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MD PPM	NA PPM	NI %	P PPM	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
SKIL85DE 100	.5	2.15	66	ND	222	ND	.22	1.2	22	7	39	4.18	.12	.58	1095	9	.01	6	.11	91	ND	ND	10	ND	201	5	3	77
SKIL85DE 101	1.0	2.18	19	ND	423	ND	.36	3.0	33	8	48	4.49	.14	.76	805	14	.01	7	.12	375	ND	ND	14	1	371	8	5	161
SKIL85DE 102	.1	1.63	34	ND	185	4	.06	.2	13	6	9	11.69	.19	.81	300	6	.01	9	.21	42	ND	ND	6	2	74	ND	6	35
SKIL85DE 103	.6	2.49	137	ND	227	ND	.17	1.0	19	10	27	6.03	.13	.69	538	13	.01	8	.17	130	ND	ND	7	1	127	13	ND	86
SKIL85DE 104	1.7	2.33	118	ND	425	ND	.18	.5	10	9	40	4.02	.11	.71	236	9	.01	6	.13	185	ND	ND	6	ND	254	ND	ND	83
SKIL85DE 105	1.8	2.11	235	ND	296	ND	.15	1.0	25	10	30	6.65	.18	.92	510	5	.01	7	.15	183	ND	ND	6	2	182	ND	6	74
SKIL85DE 106	.7	2.85	59	ND	447	3	.27	.9	20	12	58	5.59	.16	.93	574	10	.01	8	.15	68	ND	ND	4	2	888	4	6	73
SKIL85DE 107	.3	2.03	39	ND	335	ND	.16	.2	18	8	24	6.08	.16	.75	655	7	.01	6	.13	32	ND	ND	2	2	190	ND	11	36
SKIL85DE 108	.2	2.35	23	ND	341	ND	.18	.3	19	12	67	4.45	.11	.78	470	8	.01	7	.11	30	ND	ND	ND	ND	434	ND	6	37
SKIL85DE 109	.2	2.25	19	ND	206	ND	.22	.2	11	9	49	3.77	.10	.77	366	4	.01	4	.12	29	ND	ND	1	347	ND	ND	39	
SKIL85DE 110	.1	1.84	25	ND	161	ND	.13	.4	7	9	22	3.16	.07	.64	236	4	.01	4	.08	27	ND	ND	ND	ND	178	ND	ND	34
SKIL85DE 111	.3	3.03	19	ND	173	ND	.51	1.3	63	9	82	6.43	.17	.78	979	10	.01	9	.14	62	ND	ND	3	ND	589	8	4	55
SKIL85DE 112	.5	2.45	5	ND	259	6	.33	.8	22	13	37	5.59	.15	1.01	558	4	.01	7	.17	37	ND	ND	ND	1	434	ND	4	56
SKIL85DE 113	.2	2.76	14	ND	300	ND	.64	.7	29	15	60	4.52	.16	.89	783	6	.01	8	.15	20	ND	ND	ND	ND	819	12	ND	37
SKIL85DE 114	.5	3.04	39	ND	314	7	.37	.7	44	16	-215	6.53	.18	.96	793	32	.01	10	.17	30	ND	ND	4	2	693	14	ND	64
SKIL85DE 115	.3	2.97	39	ND	245	5	.40	.5	39	15	100	3.90	.13	.80	1002	6	.01	9	.14	29	ND	ND	ND	ND	303	7	ND	52
SKIL85DE 116	.3	2.44	15	ND	239	ND	.53	.8	37	18	99	4.82	.15	.86	972	4	.01	7	.15	22	ND	ND	1	340	7	ND	41	
SKIL85DE 117	.1	2.66	47	ND	183	4	.16	.9	20	12	79	3.94	.10	.64	801	5	.01	6	.16	39	ND	ND	ND	ND	227	ND	ND	60
SKIL85DE 118	.1	2.69	28	ND	173	5	.14	.7	20	14	33	5.08	.11	.83	622	6	.01	9	.12	44	ND	ND	ND	1	106	ND	ND	50
SKIL85DE 119	.2	1.06	23	ND	54	ND	.08	.6	8	8	13	2.45	.04	.16	326	3	.01	9	.08	58	ND	ND	ND	ND	42	ND	ND	46
SKIL85DE 120	.1	2.16	13	ND	123	4	.19	.6	15	9	27	3.96	.10	.74	855	3	.01	6	.11	17	ND	ND	ND	2	110	ND	ND	48
SKIL85DE 121	.1	1.34	21	ND	90	ND	.05	.1	6	6	11	2.48	.05	.29	178	4	.01	2	.09	20	ND	ND	ND	ND	40	ND	ND	29
SKIL85DE 122	.1	1.88	18	ND	67	ND	.07	.2	23	28	7	5.56	.09	.58	469	5	.01	15	.12	17	ND	ND	ND	1	24	ND	ND	30
SKIL85DE 123	.1	1.98	14	ND	237	ND	.07	.5	12	15	ND	4.83	.12	.73	201	8	.01	7	.11	14	ND	ND	ND	ND	46	ND	ND	41
SKIL85DE 124	.3	2.18	11	ND	312	ND	.05	.4	6	9	3	5.36	.12	.48	198	14	.01	2	.10	29	ND	ND	1	66	ND	ND	22	
SKIL85DE 125	.1	2.59	37	ND	167	ND	.11	.5	11	9	17	4.50	.10	.51	285	10	.01	3	.10	30	ND	ND	ND	1	76	ND	ND	48
SKIL85DE 126	.1	2.02	37	ND	152	ND	.04	.8	8	9	10	4.98	.09	.37	264	11	.01	3	.09	27	ND	ND	1	42	ND	ND	31	
SKIL85DE 127	.1	2.77	58	ND	346	10	.07	.1	11	8	11	12.38	.25	.59	199	18	.01	3	.13	21	ND	ND	5	5	54	ND	15	26
SKIL85DE 128	.1	3.92	ND	ND	715	4	.05	.2	8	10	18	6.28	.14	.62	136	6	.01	5	.14	13	ND	ND	ND	1	244	ND	ND	19
SKIL85DE 129	.1	1.35	49	ND	109	ND	.04	.4	11	6	17	3.86	.06	.23	208	12	.01	3	.08	27	ND	ND	ND	ND	119	ND	ND	30
SKIL85DE 130	.2	1.75	44	ND	235	ND	.05	.1	8	10	19	4.85	.09	.41	171	15	.01	4	.10	33	ND	ND	3	2	126	ND	ND	32
SKIL85DE 131	.3	1.07	51	ND	97	ND	.05	.3	4	6	8	2.57	.05	.19	135	6	.01	3	.09	40	ND	ND	3	ND	56	ND	ND	22
SKIL85DE 132	.3	2.36	29	ND	336	ND	.12	.5	23	14	21	7.09	.17	.72	411	10	.01	8	.12	23	ND	ND	4	3	132	ND	ND	44
SKIL85DE 133	.8	2.71	48	ND	244	10	.12	.3	14	19	33	8.01	.26	1.50	359	19	.01	8	.15	22	ND	ND	6	100	ND	5	36	
SKIL85DE 134	.4	2.80	24	ND	166	3	.37	.8	43	33	7	6.19	.19	1.54	863	7	.01	19	.13	22	ND	ND	2	78	ND	3	41	
SKIL85DE 135	.1	2.96	42	ND	243	6	.23	.7	44	17	45	5.56	.15	1.02	1632	5	.01	12	.11	26	ND	ND	2	170	ND	6	52	
SKIL85DE 136	.1	2.59	33	ND	145	ND	.13	.4	26	9	40	4.27	.10	.57	665	7	.01	5	.11	25	ND	ND	ND	ND	194	ND	ND	42
SKIL85DE 137	.4	2.52	56	ND	150	ND	.32	.7	26	15	62	4.61	.13	.93	802	5	.01	10	.15	36	ND	ND	1	152	ND	ND	63	
SKIL85DE 138	.2	.99	43	ND	83	ND	.12	.4	6	8	22	1.02	.04	.22	129	6	.01	5	.08	23	ND	ND	ND	ND	76	ND	ND	22

CLIENT: ATNA RESOURCES JOB# 85449 PROJECT: REPORT: 85-75-013

PAGE 2 OF 2

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA PPM	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	Mg %	Mn PPM	Mo PPM	Na %	Mi PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	Zn PPM
SK1LB50E 139	.2	2.07	67	ND	126	ND	.08	.3	6	11	28	3.35	.07	.45	176	5	.01	5	.10	.42	ND	ND	9	3	128	ND	ND	31
SK1LB50E 140	.7	3.26	202	ND	193	5	.28	1.2	104	12	50	5.93	.16	.66	1064	12	.01	13	.14	.43	ND	ND	9	2	224	26	ND	82
SK1LB50E 141	.6	3.31	276	ND	257	ND	.27	.7	61	14	105	7.72	.20	.76	710	12	.01	11	.15	.43	ND	ND	12	2	377	24	4	73
SK1LB50E 142	2.9	2.00	699	ND	179	11	.13	.1	18	12	86	10.01	.21	.79	411	12	.01	3	.17	.130	ND	ND	26	7	158	5	ND	42
SK1LB50E 143	.8	2.48	182	ND	237	ND	.42	.8	18	11	119	4.10	.14	.72	830	15	.01	8	.10	.78	ND	ND	13	4	561	23	5	99
SK1LB50E 144	1.1	2.46	206	ND	236	ND	.65	1.2	21	10	74	4.13	.14	.78	664	6	.01	9	.10	.128	ND	ND	10	2	328	30	ND	123
SK1LB50E 145	.5	1.83	237	ND	160	ND	.15	.7	11	7	30	3.16	.09	.45	634	3	.01	5	.10	.89	ND	ND	13	2	77	ND	ND	61
SK1LB50E 146	1.2	1.76	141	ND	136	3	.12	.6	10	8	18	3.72	.09	.58	609	10	.01	4	.10	.193	ND	ND	16	2	116	ND	6	51
SK1LB50E 147	7.0	2.80	382	ND	181	3	.16	1.3	23	7	66	5.69	.16	.61	353	10	.01	10	.13	.399	ND	ND	23	2	75	61	4	334

VANGEOCHEM LAB LIMITED

KILOKIS - Soils

MAIN OFFICE: 1521 PEMBERTON AVE. N. VANCOUVER B.C. V7P 2S3 PH: (604) 986-5211 TELEX: 04-352578
 BRANCH OFFICE: 1630 PANDORA ST. VANCOUVER B.C. V6L 1L6 PH: (604) 251-5656

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO₃ TO H₂O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR SN, Mn, Fe, Ca, P, Cr, Mg, Ba, Pb, Al, Na, K, W, Pt AND Sr. Au AND PD DETECTION IS 3 PPM.
 IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, - = NOT ANALYZED

COMPANY: TOM RICHARDS
 ATTENTION: Mr. Tom Richards
 PROJECT: SKIL

REPORT #: 85-75-021
 JOB #: 85463
 INVOICE #: 9042

DATE RECEIVED: 85/10/02
 DATE COMPLETED: 85/10/10
 COPY SENT TO: Mr. Bill Coulter
 Mr. Ron McArthur
 Mr. Colin Haruvel PAGE 1 OF 2

ANALYST D. Rees

SAMPLE NAME	AS PPM	AL I	AS PPM	AU PPM	BA PPM	BI PPM	Ca I	CD PPM	CO PPM	CR PPM	Cu PPM	Fe I	K I	Mg I	Mn PPM	Mo PPM	Na I	Ni PPM	P I	PB PPM	Pd PPM	Pt PPM	SB PPM	Sn PPM	SR PPM	U PPM	M PPM	Zn PPM
DE 25	.1	4.04	218	ND	268	ND	.32	.7	22	18	124	4.52	.10	.94	877	7	.01	17	.09	6	ND	ND	3	ND	59	ND	6	111
DE 30	.1	2.55	73	ND	99	ND	.37	5.2	9	10	38	6.13	.10	.34	469	1	.01	9	.10	27	ND	ND	114	ND	167	ND	ND	49
DE 31	.1	4.81	821	ND	204	ND	.37	3.8	63	4	132	13.50	.22	.28	1406	24	.01	25	.08	94	ND	ND	158	ND	573	ND	ND	141
DE 32	.1	5.90	1532	ND	259	ND	.46	2.9	37	10	147	12.22	.23	.48	961	11	.01	28	.10	161	ND	ND	132	ND	803	ND	ND	160
DE 33	2.2	3.67	1803	ND	161	ND	.16	6.1	45	12	112	5.92	.12	.82	2926	4	.01	21	.09	650	ND	ND	116	ND	211	ND	ND	412
DE 34	.9	.89	193	ND	18	ND	.12	.2	24	3	72	9.89	.20	.45	487	3	.01	7	.06	28	ND	ND	42	ND	14	13	ND	71
SKIL BD85 100	.1	2.82	23	ND	132	ND	.33	1.5	64	7	19	5.21	.12	.83	1871	16	.01	14	.13	52	ND	ND	5	ND	98	ND	ND	81
SKIL BD85 101	.4	2.53	81	ND	133	ND	.15	.7	24	10	60	4.43	.09	.76	710	12	.01	10	.10	304	ND	ND	46	ND	124	ND	7	120
SKIL BD85 102	.8	2.45	219	ND	130	ND	.11	.6	22	16	180	4.58	.10	.84	1034	33	.01	13	.12	169	ND	ND	24	ND	76	ND	ND	137
SKIL BD85 103	1.2	2.46	298	ND	172	ND	.20	1.0	24	20	538	4.63	.11	.89	915	27	.01	18	.11	196	ND	ND	19	ND	100	ND	4	146
SKIL BD85 104	1.7	2.00	255	ND	141	ND	.15	.9	27	13	489	4.58	.12	.70	921	52	.01	18	.10	148	ND	ND	24	ND	83	3	ND	96
SKIL BD85 105	1.9	2.07	514	ND	122	4	.21	1.5	16	12	209	4.65	.12	.68	1425	54	.01	12	.11	316	ND	ND	29	ND	48	4	ND	181
SKIL BD85 106	3.5	2.64	781	ND	146	ND	.19	1.4	21	12	354	7.57	.24	.74	1983	228	.01	14	.14	450	ND	ND	125	ND	65	34	ND	193
SKIL BD85 107	3.3	2.07	684	ND	130	22	.66	1.4	15	7	58	4.06	.20	.67	1944	37	.01	8	.14	191	ND	ND	34	ND	39	22	6	128
SKIL BD85 108	12.5	2.16	2571	ND	237	3	.35	9.8	13	7	168	5.72	.17	.56	1723	122	.01	7	.13	2784	ND	ND	887	ND	68	26	ND	623
SKIL BD85 109	.6	1.60	517	ND	102	5	.17	1.7	11	13	67	3.33	.09	.52	883	17	.01	7	.10	200	ND	ND	51	ND	46	ND	ND	144
SKIL BD85 110	6.2	2.10	3874	ND	167	15	.24	41.4	14	10	120	5.48	.14	.64	1969	51	.01	6	.11	1882	ND	ND	419	ND	66	20	ND	1364
SKIL BD85 111	.2	1.72	353	ND	105	4	.12	1.3	11	10	47	2.81	.06	.51	912	7	.01	7	.08	99	ND	ND	16	ND	71	ND	5	106
SKIL BD85 112	.1	1.56	347	ND	77	3	.09	.4	8	10	38	2.83	.05	.43	810	8	.01	5	.08	91	ND	ND	13	ND	51	ND	73	73
SKIL BD85 113	.3	1.71	736	ND	143	3	.21	.3	16	14	27	3.03	.09	.59	735	1	.01	7	.09	37	ND	ND	7	1	70	ND	5	62
SKIL BD85 114	.2	1.38	261	ND	92	ND	.12	.4	10	15	27	2.51	.05	.50	555	1	.01	13	.06	36	ND	ND	2	ND	29	ND	ND	47
SKIL BD85 115	.2	1.65	226	ND	140	3	.17	.6	10	13	57	2.94	.08	.67	647	ND	.01	7	.07	30	ND	ND	4	2	37	ND	7	68
SKIL BD85 116	.1	2.16	191	ND	126	ND	.13	.3	11	15	41	3.38	.07	.65	535	ND	.01	9	.07	33	ND	ND	4	ND	77	ND	4	70
SKIL BD85 117	.1	2.41	111	ND	111	ND	.12	.3	19	19	66	2.99	.05	.68	731	ND	.01	11	.08	21	ND	ND	ND	ND	106	ND	4	60
SKIL BD85 118	.1	2.80	94	ND	160	ND	.36	1.2	44	12	152	3.59	.09	.69	1719	ND	.01	19	.10	67	ND	ND	6	ND	225	ND	3	220
SKIL BD85 119	.1	3.01	62	ND	160	ND	.11	.4	16	18	55	3.60	.06	.84	735	ND	.01	15	.07	21	ND	ND	ND	ND	148	ND	3	88
SKIL BD85 120	.1	3.76	136	ND	241	ND	.18	3.6	37	14	99	3.97	.08	1.01	1217	ND	.01	20	.08	20	ND	ND	5	ND	205	ND	4	181
SKIL BD85 121	.1	2.94	294	ND	317	ND	.30	.2	20	19	44	3.94	.12	1.05	682	ND	.01	15	.04	2	ND	ND	10	ND	44	ND	3	89
SKIL BD85 122	.1	2.39	176	ND	148	ND	.22	.4	28	16	72	3.61	.09	.74	1197	ND	.01	16	.07	25	ND	ND	4	ND	66	ND	4	98
SKIL BD85 123	>100	.76	59650	4	54	57	.08	218.9	13	14	815	10.04	.17	.07	90	32	.01	2	.03	31020	ND	ND	9906	ND	292	ND	ND	1257
SKIL BD85 124	6.2	2.27	835	ND	129	ND	.17	3.5	11	15	65	3.26	.07	.67	593	1	.01	10	.08	650	ND	ND	128	ND	63	ND	ND	107
SKIL BD85 125	2.4	2.22	1274	ND	283	4	.22	1.0	19	17	45	4.11	.10	.85	649	1	.01	13	.10	203	ND	ND	38	1	150	ND	ND	76
SKIL BD85 126	.8	2.69	538	ND	164	ND	.15	.4	17	13	37	4.06	.09	.83	746	1	.01	8	.08	104	ND	ND	14	ND	123	ND	4	80
SKIL BD85 127	.5	2.56	337	ND	189	ND	.22	.8	18	12	35	3.72	.12	.84	956	2	.01	10	.13	87	ND	ND	8	2	135	ND	ND	89
SKIL BD85 128	19.5	2.97	3985	ND	276	ND	.24	20.4	25	13	163	5.09	.16	.90	867	19	.01	11	.14	1546	ND	ND	213	ND	64	7	ND	1184
SKIL BD85 129	1.1	2.46	588	ND	120	3	.14	2.2	13	11	57	3.57	.07	.69	664	8	.01	9	.12	259	ND	ND	38	ND	115	ND	ND	215
SKIL BD85 130	1.8	2.74	1068	ND	171	8	.14	2.7	10	11	97	4.74	.11	.72	1065	26	.01	8	.13	455	ND	ND	94	ND	121	ND	ND	221
SKIL BD85 131	2.7	2.21	898	ND	189	195	.55	4.5	21	7	36	3.72	.13	.74	1666	13	.01	7	.14	342	ND	ND	63	ND	66	11	3	251
SKIL BD85 132	31.2	2.12	3030	ND	157	5	.42	47.0	11	11	220	5.73	.16	.76	1771	63	.01	12	.16	5296	ND	ND	1520	ND	44	7	ND	1557

CLIENT: TOM RICHARDS JOB# 85463 PROJECT: SKIL REPORT: 85-75-021

PAGE 2 OF 2

SAMPLE NAME	AG PPM	AL I	AS PPM	AU PPM	BA PPM	BI PPM	CA I	CD PPM	CO PPM	CR PPM	CU PPM	FE I	K I	Mg I	Mn PPM	Mo PPM	Na I	Ni PPM	P I	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	Zn PPM
SKIL BD85 133	1.7	2.41	500	ND	168	4	.55	2.2	14	12	132	4.44	.15	.81	1034	37	.01	14	.12	290	ND	ND	35	ND	148	7	ND	172
SKIL BD85 134	3.8	2.70	800	ND	170	8	.36	3.1	19	18	280	4.77	.12	.86	1724	41	.01	18	.11	237	ND	ND	17	ND	230	11	ND	226
SKIL BD85 135	1.1	2.59	289	ND	171	4	.21	.9	31	13	299	4.94	.11	.72	1055	47	.01	13	.11	140	ND	ND	10	ND	207	4	ND	122
SKIL BD85 136	1.0	2.47	232	ND	172	5	.25	1.1	26	14	340	4.44	.12	.79	950	31	.01	16	.14	113	ND	ND	9	ND	156	4	ND	128
SKIL BD85 137	.7	3.05	179	ND	219	ND	.18	1.2	29	12	142	4.14	.10	.78	1327	19	.01	11	.17	129	ND	ND	11	ND	217	7	ND	102
SKIL BD85 138	.5	3.13	233	ND	275	6	.18	.9	33	11	54	4.97	.10	.90	1036	12	.01	12	.17	99	ND	ND	7	ND	188	ND	ND	139
SKIL BD85 139	.6	2.41	89	ND	238	ND	.29	1.2	22	5	55	3.78	.10	.65	1192	8	.01	8	.12	92	ND	ND	ND	ND	199	3	ND	82
SKIL BD85 15	2.3	.92	1928	ND	81	9	.05	.1	5	6	252	9.55	.16	.14	176	19	.01	3	.04	62	ND	ND	8	ND	73	20	ND	25
SKIL H85 397	1.2	2.00	200	ND	231	ND	.16	1.2	24	7	22	7.78	.15	.69	700	9	.01	8	.20	215	ND	ND	7	ND	93	MD	ND	83
SKIL H85 398	1.1	2.47	164	ND	341	ND	.51	3.2	19	7	36	5.13	.13	.74	687	13	.01	8	.14	305	ND	ND	10	ND	266	5	ND	146
SKIL H85 399	4.8	2.21	1534	ND	183	10	.10	.1	17	7	53	8.51	.13	.54	560	31	.01	5	.18	375	ND	ND	21	ND	83	MD	ND	84
SKIL H85 402	7.4	2.20	2163	ND	463	28	.14	.2	17	7	48	7.93	.12	.51	499	39	.01	7	.15	301	ND	ND	34	ND	173	MD	ND	75
SKIL H85 403	1.6	1.44	9254	ND	97	ND	.08	.1	15	7	94	11.04	.15	.37	1077	39	.01	5	.18	178	ND	ND	26	MD	85	MD	ND	66
SKIL H85 405	2.6	2.37	902	ND	158	4	.39	2.3	41	9	111	6.51	.16	.59	2454	44	.01	11	.13	305	ND	ND	45	MD	109	18	ND	148
SKIL H85 408	10.9	2.17	2822	ND	129	24	.22	4.6	63	6	75	8.05	.16	.43	2307	109	.01	7	.15	1451	ND	ND	44	MD	65	29	ND	351
SKIL H85 410	3.9	3.04	987	ND	297	6	.14	1.1	30	10	150	8.20	.14	.57	406	39	.01	8	.13	346	ND	ND	45	MD	280	6	ND	125
SKIL H85 411	3.9	2.26	912	ND	163	28	.52	3.7	11	8	48	3.86	.12	.77	1224	18	.01	18	.15	597	ND	ND	67	MD	51	3	ND	301
SKIL H85 413	3.0	2.37	817	ND	113	13	.15	3.0	8	10	66	3.78	.07	.62	951	29	.01	9	.14	602	ND	ND	80	MD	62	MD	ND	239
SKIL H85 414	26.7	2.41	2713	ND	163	6	.44	41.5	13	11	232	5.93	.17	.83	2047	67	.01	13	.17	4734	ND	ND	541	MD	53	8	ND	1595
SKIL H85 415	4.7	2.65	1053	ND	136	5	.13	3.1	10	11	139	4.56	.09	.60	860	34	.01	10	.11	738	ND	ND	72	MD	168	ND	MD	374
SKIL H85 416	9.6	2.59	1707	ND	169	8	.29	10.4	15	12	187	5.15	.13	.72	1378	54	.01	13	.12	1445	ND	ND	235	MD	132	9	ND	562
SKIL H85 417	10.6	2.65	1126	ND	175	89	.20	3.5	16	18	258	5.10	.13	.84	1605	40	.01	14	.11	422	ND	ND	29	MD	179	5	ND	254
SKIL H85 418	1.9	3.06	228	ND	188	5	.16	.9	29	13	384	5.40	.15	.92	920	40	.01	12	.14	108	ND	ND	16	MD	189	13	ND	121
SKIL H85 419	.4	2.03	175	ND	136	ND	.25	.8	13	8	86	4.76	.10	.54	3060	17	.01	7	.15	69	ND	ND	8	MD	105	10	ND	83
SKIL H85 420	2.3	2.13	525	ND	147	ND	.14	.4	11	8	37	7.31	.11	.44	466	34	.01	6	.15	367	ND	ND	15	MD	116	ND	MD	86
SKIL H85 423	5.8	2.01	3504	ND	117	ND	.10	.2	16	6	24	8.22	.12	.40	987	8	.01	5	.18	1597	ND	ND	78	MD	43	MD	ND	192
SKIL H85 393	1.3	1.74	331	ND	76	ND	.10	.7	1	115	239	4.75	.10	.70	163	7	.01	13	.02	112	ND	ND	21	MD	9	4	ND	110
SKIL H85 394	>100	.24	31255	3	30	ND	.05	89.4	2	93	149	4.66	.10	.03	2498	27	.01	4	.03	34317	ND	ND	6541	MD	30	17	ND	1692
SKIL H85 396	9.0	.10	171	ND	81	886	.01	.4	1	190	78	3.11	.07	.02	56	7	.01	10	.02	409	ND	ND	36	MD	6	ND	ND	14
SKIL H85 400	.8	.07	425	ND	9	ND	.10	.1	ND	25	92	47.78	.61	.07	1049	ND	.01	ND	.01	41	ND	ND	10	MD	2	ND	ND	10
SKIL H85 421	1.6	1.45	140	ND	115	5	.90	1.3	6	93	9	3.39	.13	.94	296	2	.01	8	.11	218	3	MD	30	6	25	6	7	47

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VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1521 PEMBERTON AVE. N. VANCOUVER B.C. V7P 2S3 PH: (604) 986-5211 TELEX: 04-352578
BRANCH OFFICE: 1630 PANDORA ST. VANCOUVER B.C. V5L 1L6 PH: (604) 251-5656

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SM,MN,FE,CA,P,CR,MG,BA,PB,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE ND= NOT DETECTED. --= NOT ANALYZED

COMPANY: ATNA RESOURCES
ATTENTION: MR. BILL COULTER
PROJECT: NONE GIVEN

REPORT #: 85-75-017(A)
JOB #: 85447
INVOICE #: 9035

DATE RECEIVED: 85/09/30
DATE COMPLETED: 85/10/08
COPY SENT TO: T. RICHARDS, C. HARIVEL
P. SURRATT, R. McARTHUR
PAGE 1 OF 1

ANALYST W. Reeves

SAMPLE NAME	AG PPM	AL I	AS PPM	AU PPM	BA PPM	BI PPM	CA I	CO PPM	CO PPM	CR PPM	CU PPM	FE I	K I	Mg I	Mn PPM	Mo PPM	Na I	Ni PPM	P I	Pb PPM	Pd PPM	Pt PPM	SB PPM	Sn PPM	SR PPM	U PPM	W PPM	Zn PPM
PS/30-S/85	.5	.27	ND	ND	39	ND	.04	.1	ND	6	29	40.26	.52	.12	54	ND	.01	ND	.05	18	ND	ND	ND	13	ND	ND	10	
PS/31-S/85	2.0	3.51	4	ND	144	4	1.42	.9	15	19	42	3.97	.20	1.35	803	4	.01	13	.18	34	ND	ND	ND	2	137	121	5	69
PS/33-S/85	3.6	2.72	851	ND	252	9	.66	3.8	24	14	44	4.45	.22	1.12	1315	6	.01	9	.16	213	ND	ND	58	3	62	13	ND	229
PS/34-S/85	39.5	1.38	29126	ND	166	ND	.29	.1	134	7	1959	29.64	.54	.50	1784	111	.01	9	.11	249	ND	ND	388	ND	80	424	ND	549
PS/35-S/85	4.2	2.90	1565	ND	144	3	.62	1.2	16	11	442	4.86	.18	.86	1174	8	.01	14	.11	190	ND	ND	112	ND	110	23	ND	200
PS/36-S/85	1.7	1.96	149	ND	162	ND	.13	.5	10	14	31	6.92	.18	.51	249	5	.01	12	.14	44	ND	ND	ND	1	63	ND	ND	48

Table 3: Silver Assay



VANGEOCHEM LAB LIMITED

MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

=====

CLIENT: MR. TOM RICHARDS
ADDRESS: R R #1
: Hazelton BC
: V0J 1Y0

DATE: Oct 23 1985

REPORT#: 85-75-021 (A)
JOB#: 85463 (A)

PROJECT#: SKIL
SAMPLES ARRIVED: Oct 18 1985
REPORT COMPLETED: Oct 23 1985
ANALYSED FOR: Ag

SAMPLES FROM: MR. TOM RICHARDS
COPY SENT TO: SEE REMARKS

PREPARED FOR: MR. TOM RICHARDS

ANALYSED BY: David Chiu

SIGNED:

Registered Provincial Assayer

GENERAL REMARK: COPIES TO B COULTER, C HARIVEL & R McARTHUR



VANGEOCHEM LAB LIMITED

MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1LC
(604) 251-5656

REPORT NUMBER: 85-75-017(A) JOB NUMBER: 85447(A)

ATNA RESOURCES

PAGE 1 OF 1

SAMPLE #

Ag
oz/st

PS/148R/85	24.56
PS/150R/85	9.81
PS/151R/85	10.18
PS/154R/85	87.93
PS/155R/85	6.52
PS/157R/85	20.03
PS/174R/85	4.58
PS/175R/85	13.68
PS/177R/85	6.20
PS/178R/85	9.37
PS/179R/85	12.38
PS/188R/85	4.49

DETECTION LIMIT

1 Troy oz/short ton = 34.28 ppm

.01

1 ppm = 0.0001%

ppm = parts per million

(= less than

signed:

A handwritten signature is written over a horizontal line. The signature appears to begin with a stylized "J" or "S" and ends with a flourish.



VANGEOCHEM LAB LIMITED

MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5856

REPORT NUMBER: 85-75-021(A) JOB NUMBER: 85463(A)

MR. TOM RICHARDS

PAGE 1 OF 1

SAMPLE #

Ag
oz/st

SKIL BD 85 123	18.05
SKIL H 85 394	4.95

DETECTION LIMIT

1 Troy oz/short ton = 34.28 ppm

.01

1 ppm = 0.0001% ppm = parts per million (< = less than)

signed:

A handwritten signature in black ink, appearing to read "Tom Richards". It is placed over a horizontal line.