

ATHLONE RESOURCES LTD.

Phase I Summary Report

July 1989 Diamond Drilling Program

on the

SOUP CLAIMS

OMINECA MINING DIVISION

N.T.S. 94D/8

by

Rebagliati Geological Consulting Ltd.

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SUMMARY

The SOUP property, comprising the equivalent of approximately 25 units, is located in North Central British Columbia about 200 km north-northeast of Smithers. Access to the property is by helicopter from Johanson Lake, a distance of 15 km. The road distance from Johanson Lake to Mackenzie is about 300 km. The zones of gold mineralization lie above timberline at an elevation of 1960 m on a 30° southwest-facing slope.

Triassic-Jurassic Takla Group submarine volcanic units of the Quesnel Trough underlie the claims. The Takla stratigraphy is intruded by diorite and quartz monzonite dykes, sills and plutons. Magnetite-rich, gold- and copper-bearing skarns occur in the volcanic assemblage.

The first mineral exploration in the region took place in the 1930's with the discovery of placer gold at McConnell Creek. Gold was first discovered in the SOUP claim area in 1947. Since 1947, several individuals and companies have conducted reconnaissance prospecting and soil geochemical surveys. Oxidized outcrops of mineralized skarn were not systematically sampled until the author conducted a preliminary examination of the property for BP Resources Canada Ltd. in 1984. This work demonstrated that two types of gold mineralization associated with magnetite were present.

In 1986 and 1987, the author conducted detailed magnetometer surveys to trace the auriferous magnetite-bearing skarn and vein occurrences. These magnetometer surveys successfully traced the main skarn zone for 1,300 m and located a southern extension to give the skarn horizon a potential strike length of over 2,000 m. Skarn outcrops and rubble trains were systematically chip-

sampled. Samples in the skarn grade up to 0.252 oz/ton gold and 1.15% copper.

Cross-cutting fault/shear structures hosting quartz-magnetite-sulphide veins and replacement bodies contain appreciably higher gold concentrations, with samples grading up to 1.68 oz/ton gold. The proximity of the better mineralized skarn intervals to the cross-structure suggest that the points of intersection between the cross-structures and the skarn offer the greatest potential for the development of medium- to high-grade ore shoots.

In July 1989, Athlone Resources Ltd. undertook a Phase I diamond drilling program on the gold-bearing skarns. Seven holes comprising 338.94 m (1112 feet) were drilled. Significant results are tabulated below:

ASSAY SUMMARY

HOLE 89-1

<u>From - To</u> (metres)	<u>Length</u> (metres)	<u>Gold</u> (gr/tonne)	<u>Copper</u> (%)	<u>Gold</u> (oz/ton)	<u>From - To</u> (Feet)	<u>Length</u> (Feet)
12.8 -14.8	2.0	9.67	0.18	0.282	41.99 - 48.56	6.57
12.8 -16.46	3.66	8.86	0.33	0.258	41.99 - 54.00	12.01
12.8 -17.37	4.57	7.84	0.40	0.229	41.99 - 56.99	15.00
27.13-27.48	0.30	3.81	0.38	0.111	89.01 - 89.99	0.98
44.62-45.72	1.10	6.45	0.08	0.188	146.39 -150.0	3.61
47.60-47.85	0.25	13.03	0.04	0.380	156.17 -156.99	0.82
44.62-47.85	2.93	4.06	0.09	0.107	146.39 -156.99	10.60

HOLE 89-2

7.40- 8.23	0.83	2.50	0.16	0.073	24.28 - 27.0	2.72
14.33-15.18	0.85	26.55	0.12	0.774	47.01 - 49.80	2.79
15.18-15.54	0.36	2.95	0.20	0.086	49.80 - 50.98	1.18
15.54-16.66	1.12	104.00	0.18	3.033	50.98 - 54.66	3.68
16.66-17.53	0.87	18.98	0.18	0.554	54.66 - 57.51	2.85
14.33-17.53	3.20	48.94	0.17	1.427	47.01 - 57.51	10.50

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HOLE 89-2 (Cont'd)

<u>From - To</u> (metres)	<u>Length</u> (metres)	<u>Gold</u> (gr/tonne)	<u>Copper</u> (%)	<u>Gold</u> (oz/ton)	<u>From - To</u> (Feet)	<u>Length</u> (Feet)
20.53-21.53	1.00	2.54	0.33	0.074	67.36 - 70.64	3.28
31.70-32.61	0.91	39.13	0.10	1.141	104.0 - 106.99	2.99
33.43-33.83	0.40	3.76	0.12	0.110	109.68 - 110.99	1.31
40.39-41.83	1.44	9.38	0.08	0.274	132.51 - 137.24	4.70

HOLE 89-3

26.36-27.36	1.0	1.61	0.22	0.047	86.48 - 89.76	3.28
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HOLE 89-4

24.77-27.89	3.12	1.31	0.13	0.038	81.27 - 91.50	10.23
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HOLE 89-5\*

No significant assays

HOLE 89-6

No significant assays

HOLE 89-7\*

9.44-10.44	1.0	1.04	0.04	0.030	30.97 - 34.25	3.28
12.44-12.80	0.36	1.12	0.13	0.033	40.81 - 41.99	1.18

\* Hole lost before target depth

The diamond drill results from Holes 89-1 and 89-2 appear to indicate that higher gold concentrations occur at the intersection of cross-structures with the skarn units. Additional drilling is required to trace the intersected gold mineralization along strike and to depth below the extent of surface oxidation. Holes 89-3 through 89-7 did not adequately explore their targeted zones of gold mineralization, thus more drilling is required to complete their assessment.

The results from the Phase I program are favourable and a significantly larger drilling program is warranted.

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A two-phase diamond drilling program is proposed. Phase I, budgeted at \$250,000 will test the strike and dip extensions of the gold mineralization encountered in Holes 89-1 and 89-2 and continue the preliminary assessment of the other gold-bearing zones.

Contingent upon favourable results, Phase III will follow with a program of delineation drilling and metallurgical testing tentatively budgeted at \$510,000.

## INTRODUCTION

In May 1989, Rebagliati Geological Consulting Ltd. was commissioned by the President of Athlone Resources Ltd. to implement the Phase I program recommended in the February 29, 1988 Summary Report on the SOUP property (Rebagliati, 1988) situated at Kliyul Creek, in the Johanson Lake region of north central British Columbia.

Work in the district dates back to the 1930's with the discovery of placer gold at McConnal Creek. The subsequent surge of gold exploration in the district resulted in the discovery of numerous lode gold deposits in the Goldway Peak-Kliyul Creek region. In the 1960's and 1970's, the area was actively explored for porphyry copper and molybdenum deposits. Recently the area has been subjected to renewed gold exploration.

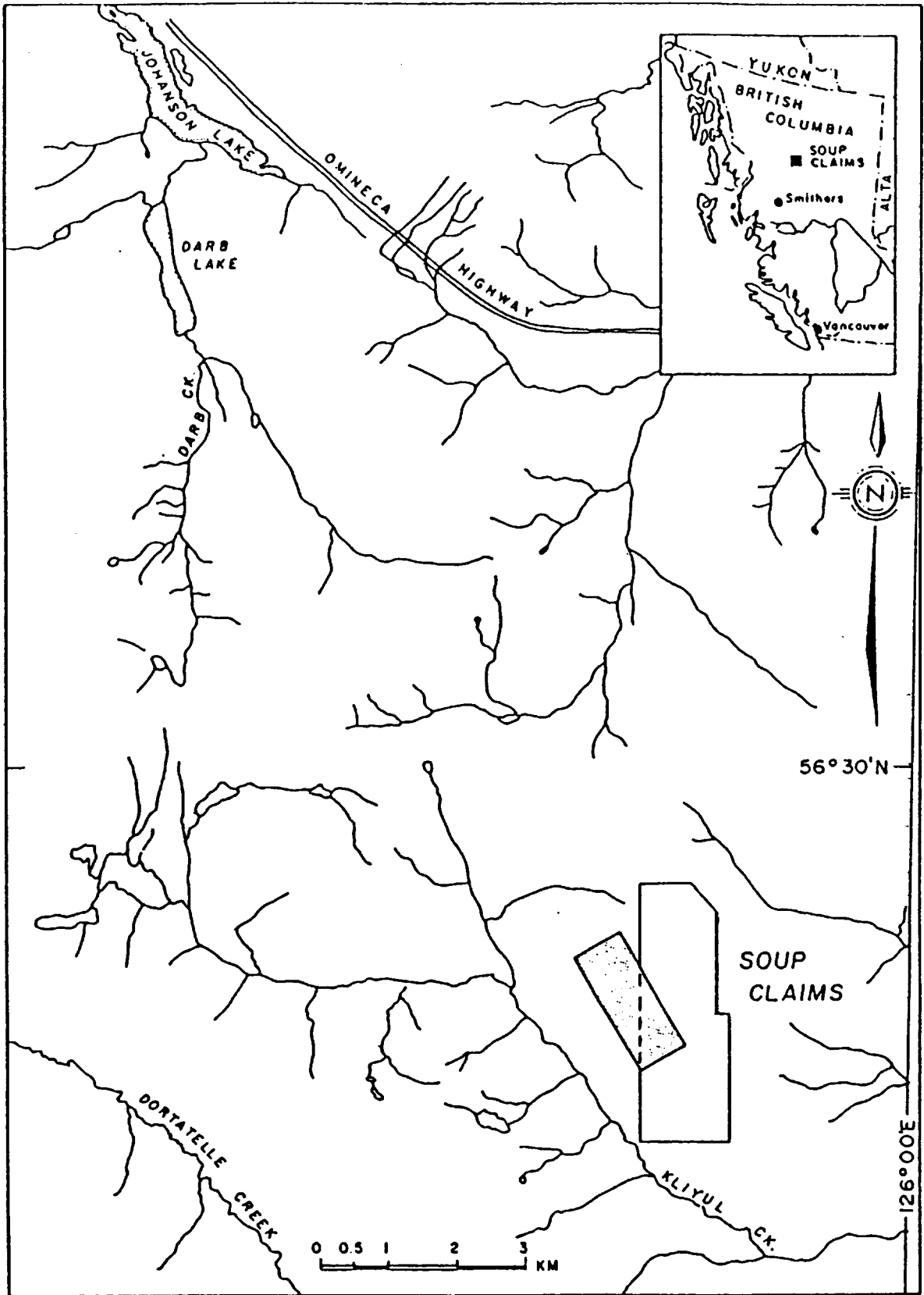
Multiple gold-bearing magnetite-rich skarn zones occur on the SOUP claims.

This report is based upon a study of all available data, including government publications; BP Minerals Limited, BP Resources Canada Limited and Lemming Resources Ltd. reports; and field examinations of the SOUP claims in July and August, 1984, July 19 to 22, 1986, and August 23, 1987, during the supervision of the BP and Lemming exploration programs. The writer implemented and supervised the 1989 drilling program, including drill site selection and the examination of mineralized core.

## LOCATION AND ACCESS

The claims are located at 56°28' north latitude and 126°03' west longitude in the Omineca Mining Division approximately 200 km north-northeast of Smithers and 15 km southeast of Johanson Lake (NTS 94D/8, Figure 1).





<b>REBAGLIATI GEOLOGICAL CONSULTING LTD.</b>		
CLIENT: <b>ATHLONE RESOURCES LTD.</b>		
PROJECT: <b>SOUP PROJECT</b>		
TITLE: <b>LOCATION MAP</b>		
WORK BY: <b>C.M.R.</b>	DRAWN BY:	N.T.S. 94 D/8
DATE:	REVISION:	PROJECT:

Access to the property is by helicopter from Johanson Lake, a distance of 15 km. Johanson Lake can be reached by wheel- or float-equipped aircraft, or by road from Fort St. James (400 km), or via Highway 97 from Prince George (500 km). The Dease Lake extension of the British Columbia Railway is operational between Prince George and Driftwood, 65 km southwest of Johanson Lake. Road access could readily be constructed along the Kliyul Creek Valley to the base of the SOUP claims from the Omineca Highway.

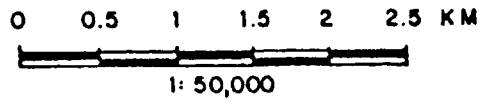
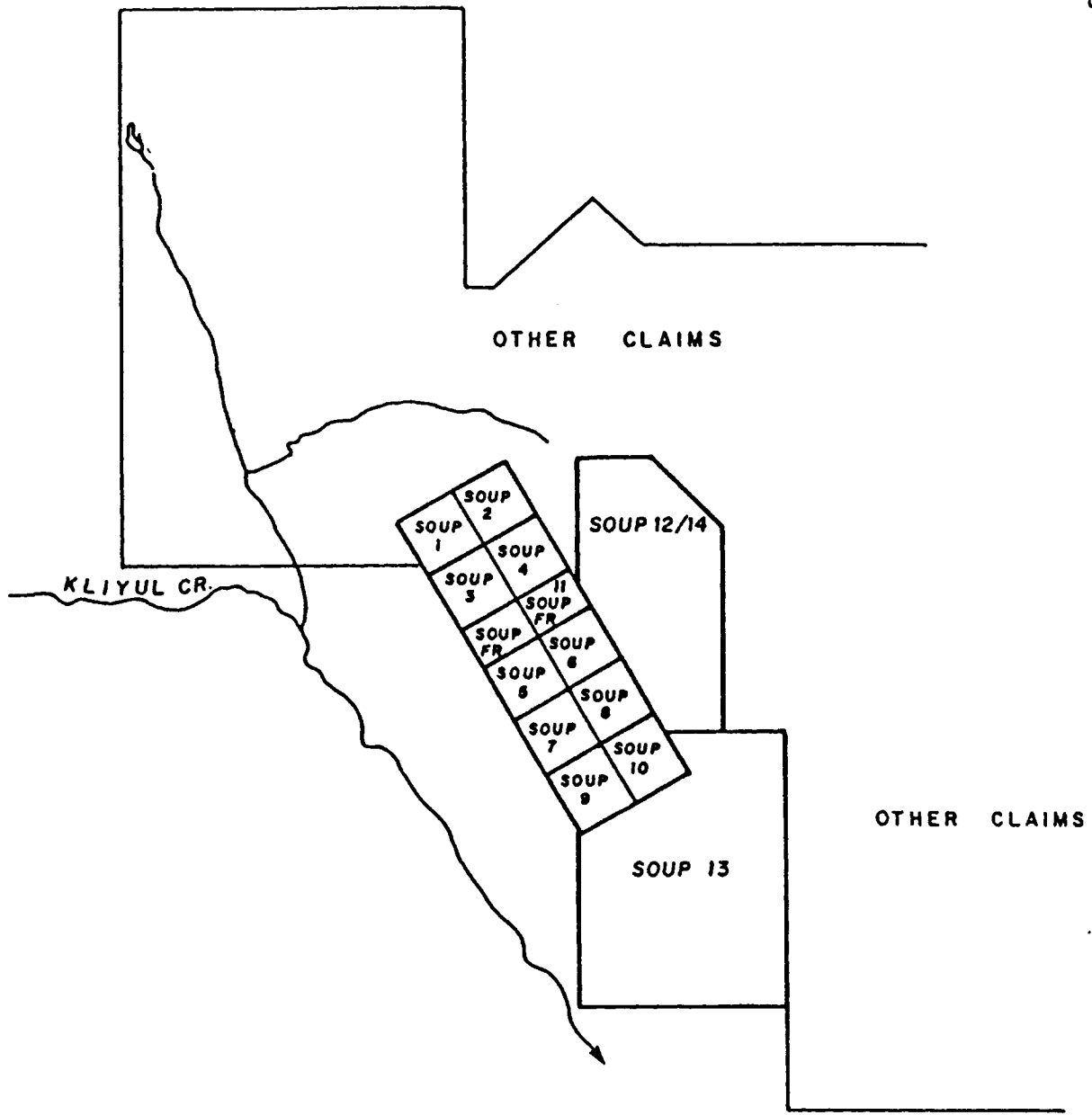
The SOUP claim group is situated east of Kliyul Creek above treeline on a 30° southwest-facing slope on which elevations range from 1,300 to 2,300 metres. Ubiquitous talus, partially covered by alpine grasses and shrubs, obscures much of the bedrock. A talus glacier bisects the SOUP claim block.

CLAIMS

The SOUP claims are held under option by the Company.

The following information for the SOUP claims was obtained from government and company records. The writer has not made a field examination of the claim posts and can pass no opinion on the manner of staking, nor can he verify the position of the claims as depicted on Figure 2. Essential claim data is listed below and on following page:

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Recording Date</u>	<u>Expiry Date</u>
SOUP 1	26941	1	August 7, 1964	August 7, 1995
SOUP 2	26942	1	August 7, 1964	August 7, 1995
SOUP 3	26943	1	August 7, 1964	August 7, 1995
SOUP 4	26944	1	August 7, 1964	August 7, 1995
SOUP 5	26945	1	August 7, 1964	August 7, 1995
SOUP 6	26946	1	August 7, 1964	August 7, 1995
SOUP 7	26947	1	August 7, 1964	August 7, 1995
SOUP 8	26948	1	August 7, 1964	August 7, 1995
SOUP 9	26949	1	August 7, 1964	August 7, 1995
SOUP 10	26950	1	August 7, 1964	August 7, 1995
SOUP 11FR	4206	1	August 15, 1981	August 15, 1995



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CLIENT: <b>ATHLONE RESOURCES LTD.</b>		
PROJECT: <b>SOUP PROJECT</b>		
TITLE: <b>CLAIM MAP</b>		
WORK BY: <b>C.M.R.</b>	DRAWN BY:	<b>N.T.S. 94 D/B</b>
DATE: <b>FEB, 88</b>	REVISED:	FIGURE: <b>2</b>

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Recording Date</u>	<u>Expiry Date</u>
SOUP 12*	5805	12	October 5, 1983	October 5, 1994
SOUP 13	5806	12	October 5, 1983	October 5, 1994
SOUP 14	6491	12	August 13, 1984	August 13, 1995
SOUPFR	7735	1	August 1, 1986	August 1, 1996

\*SOUP 12 is over-staked by SOUP 14.

### EXPLORATION HISTORY

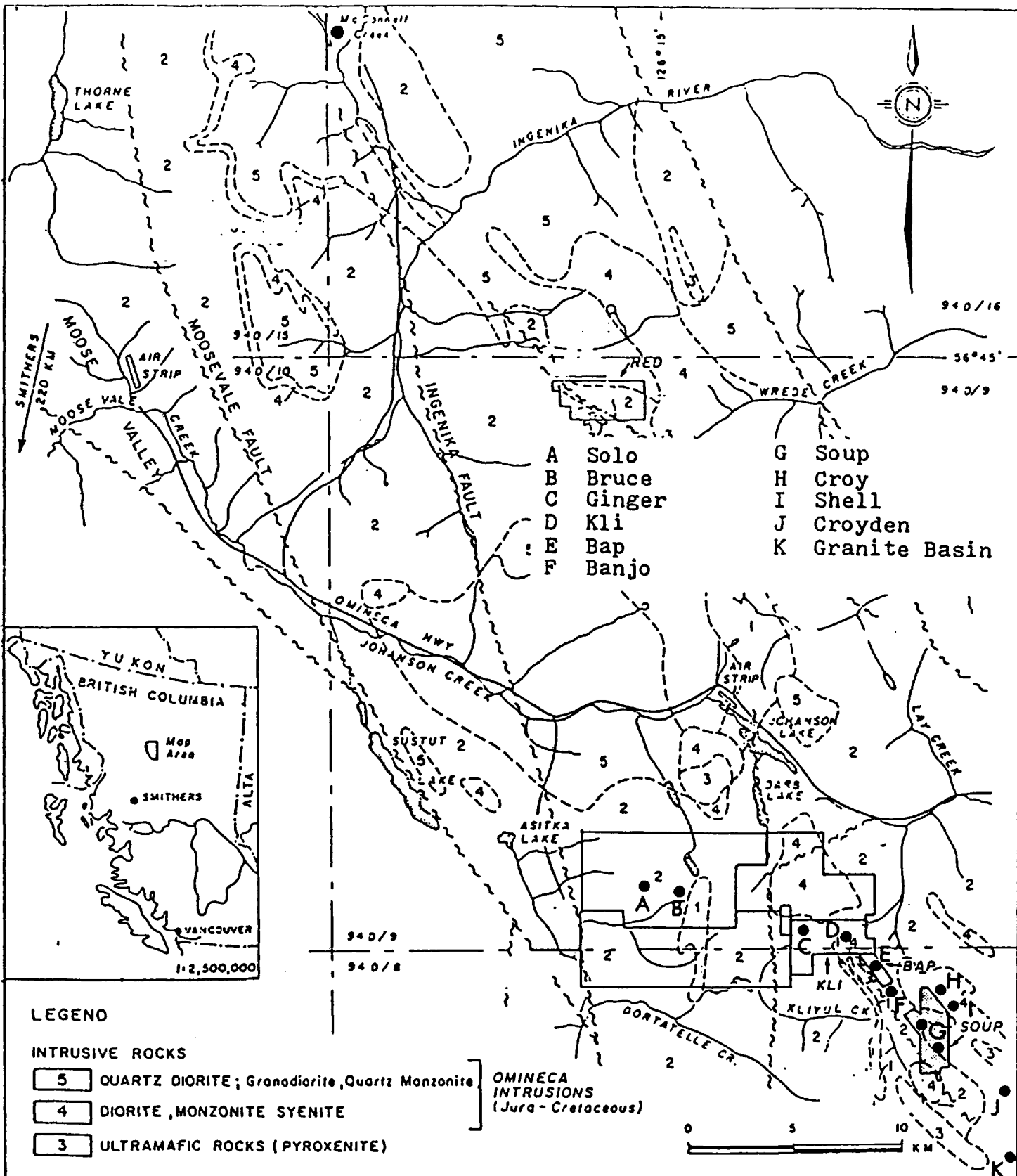
After placer gold was discovered at McConal Creek, approximately 50 km to the northwest, the Kliyul Creek region was actively prospected by Cominco in the 1930's. Cominco located a number of gold occurrences, including Granite Basin, Croydon, Porphyry Creek and, elsewhere in the belt, the Red, Osilinka and Vega copper showings. During the period 1946-1948, Springer Sturgeon Gold Mines actively explored gold-quartz veins at the Solo, Bruce and Ginger prospects in the Goldway Peak area (Fig.3).

In 1947, P.E. Olsen staked the Shell group of claims for Leitch Gold Mines Ltd. to cover a gossanous copper-gold prospect.

The area was actively explored during the 1960's and 1970's for porphyry copper-molybdenum deposits. The most impressive copper find was the Sustut Copper deposit discovered by Falconbridge Nickel Ltd., 40 km west of Johanson Lake.

The Kli property was first explored by Kennco for porphyry deposits. Sumac Mines and Vital Resources later discovered and explored an auriferous skarn deposit. Reserves in the order of 500,000 tons @ 0.05 oz/t Au and 0.4% Cu are drill-indicated (Sullivan 1984).

The SOUP claims were located on July 13, 1964 by W.H. White, P. Eng., and are thought to cover part of the Shell skarn pros-



- A Solo
- B Bruce
- C Ginger
- D Kli
- E Bap
- F Banjo
- G Soup
- H Croy
- I Shell
- J Croyden
- K Granite Basin



**LEGEND**

**INTRUSIVE ROCKS**

- 5 QUARTZ DIORITE; Granodiorite, Quartz Monzonite
  - 4 DIORITE, MONZONITE SYENITE
  - 3 ULTRAMAFIC ROCKS (PYROXENITE)
- OMINECA INTRUSIONS (Jura - Cretaceous)

**VOLCANIC ROCKS**

- TAKLA - UPPER TRIASSIC
- 2 ANDESITES, BASALTS, FLOWS, BRECCIAS, TUFFS
  - 1 SEDIMENTS (Volcanic Sandstone, Argillite, Turbidite, minor Limestone)

A GOLD PROSPECTS

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DATE: FEB. 88	REVISED:	FIGURE: 1

pect staked by Olsen in 1947. Exploration has been conducted intermittently on the SOUP claims over the past 24 years.

In 1964, G. Mannard of Southwest Potash Corp. undertook chip sampling of relatively unoxidized skarn at 6 inch intervals. These samples returned 20 ft @ 0.09 oz/t Au, 0.91% Cu; 35 feet @ 0.06 oz/t Au, 0.46% Cu; and 30 ft. @ 0.10 oz/t Au, 0.44% Cu.

In 1965, K.C. McTaggart, P. Eng., provided an excellent geological map of the property. Notably he was able to trace the intermittently-exposed mineralized skarn horizons for a horizontal distance of 8,000 feet.

In 1971, Falconbridge Nickel Mines Ltd. drilled three short x-ray diamond drill holes totalling 65 feet near the southeast end of the skarn. This drilling did not penetrate the zone of surface oxidation and recoveries in the highly-oxidized skarn were poor, ranging from 10% to 70%. As a result of the poor core recovery and the degree of oxidation, assays were inconclusive.

In 1975, A.J. Sinclair, P.Eng., undertook a mineralographic study. He concluded that good liberation of chalcopyrite could be expected and that most of the assays indicated a correlation of gold with copper which would likely be recovered in a copper concentrate.

In 1976, A. J. Sinclair, P. Eng., ran test magnetic profiles over the magnetite-rich mineralization and determined that magnetometer surveying would be an effective exploration technique for tracing the skarn horizon.

BP Minerals Limited examined the property in 1977. Generally low but anomalous gold values were returned from continuous rock chip samples. One 3 m sample ran greater than 10,000 ppb gold.

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The property was acquired by Vital Mines Ltd., who, in 1981, conducted magnetometer and soil (talus fines) geochemical surveys. Several outstanding high-contrast gold anomalies were identified with values frequently in the 500 ppb to 3,000 ppb range. The magnetometer survey was not of sufficient detail to adequately trace the skarn; however, local zones of high magnetic intensity correlated with highly-anomalous soil values.

Cumulative expenditures for the period 1964 to 1982 are estimated to have been \$92,000.00.

Results from Vital's surveys led BP Resources Canada Limited to further investigate the gold-copper-magnetite prospect in 1984. The \$70,000 work program conducted under the supervision of the writer, who at the time was employed as Senior Geologist for the Seleco Division of BP Resources Canada Limited, substantiated McTaggart's geological work and earlier reports of significant gold mineralization. Seventeen samples collected by the writer's crew returned values in the 1.0 to 3.0 g/tonne range (0.029 to 0.088 oz/t Au) and 14 samples exceeded 3.0 g/tonne. The highest sample ran 62.30 g/tonne (1.82 oz/t) across 1.5 metres.

In 1986, Lemming Resources Ltd. optioned the claims; and, in 1986 and 1987, engaged Rebagliati Geological Consulting Ltd. to conduct detailed prospecting and magnetometer surveys to trace the gold-bearing magnetite-rich skarns across areas with overburden cover. Expenditures by Lemming totalled \$54,000.00.

The surveys outlined a minimum strike length for the main skarn zone of 1,300 m, and identified a possible repetition of the zone 750 m farther south. A new, discordant skarn was discovered by the magnetic survey. A composite chip sample

across 50 m of rubble from this auriferous skarn graded 0.28 oz/ton gold and 0.43% copper. During the 1986 program, the writer relocated and resampled the mineralized zones located by BP's crew. BP's results were substantiated.

The preceding work programs by BP and Lemming identified several gold-bearing outcrops which warrant testing by diamond drilling.

In 1988, Athlone Resources Ltd. optioned the SOUP property from Lemming Resources Ltd.

From July 5 to 18, 1989 Athlone Resources Ltd. conducted a seven-hole, 338.94 m (1112 ft) diamond drilling program on the SOUP claims. Exploration management services were provided by Rebagliati Geological Consulting Ltd.

#### REGIONAL GEOLOGICAL SETTING

The Kliyul Creek area lies in the northern extension of the Quesnel Trough, within the Intermontane Belt of the Canadian Cordillera. The Quesnel Trough forms a 30 km to 60 km wide northwesterly-trending assemblage of volcanic and sedimentary rocks of Upper Triassic to Lower Jurassic age Takla Group rocks whose equivalents extend from the U.S. border to north of the Stikine River (Richards 1976, Monger 1977).

The Takla Group is bordered on the east by late Paleozoic (Penn.-Perm.) metasedimentary and metavolcanic rocks of the Lay Range Assemblage (Omineca Geanticline) and on the west by Lower to Middle Jurassic rocks of the Hazelton Group (Pinchi Geanticline). The Takla volcanic rocks are an association of island-arc type calc-alkaline to alkaline flows and volcanoclastic rocks of predominantly submarine origin. The extrusive rocks are interlayered with volcanogenic sandstone, siltstone, conglomer-



ate, argillite, laminated limestone and limestone breccia. (Figure 3).

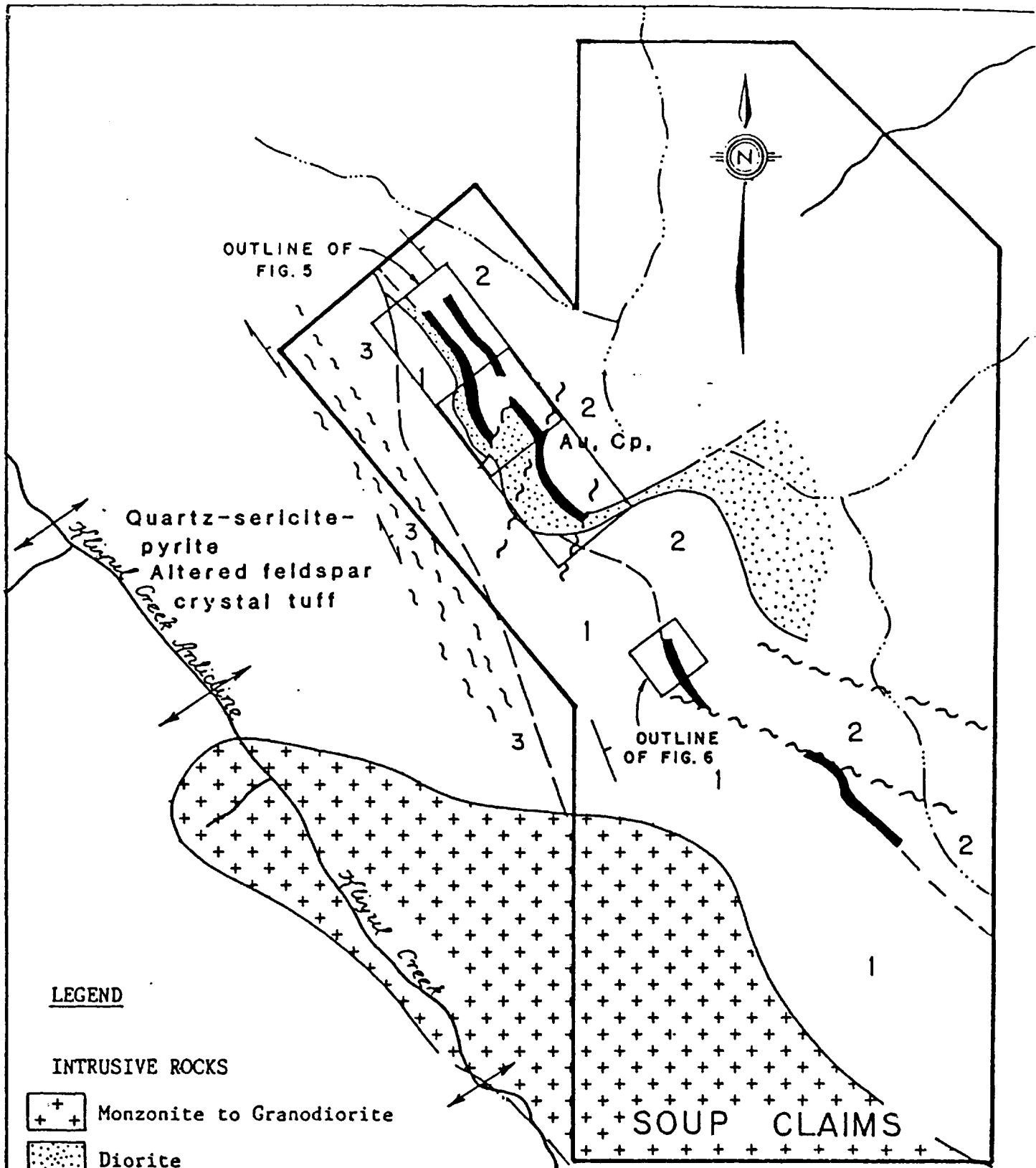
The Takla stratigraphy is intruded by granitic to intermediate plutons of Jura-Cretaceous age which are satellitic to the Hogen Batholith. Small ultramafic bodies present in the region may be related to deep-seated faulting, while some high level subvolcanic intrusions are part of the Takla sequence.

Much of the region is dissected by north and northwest-trending branches of the Ingenika-Pinchi, Dortatelle and Lay Range fault systems. The northwest-trending Kliyul Fault is marked by a broad zone of shearing and schistose rocks which are exposed along the southwest side of the SOUP claims.

#### PROPERTY GEOLOGY

The SOUP claims are underlain largely by volcanic rocks of the Upper Triassic Takla Group. These have been intruded by diorite stocks, sills and dykes; microdiorite and feldspar porphyry dykes; and by quartz monzonitic batholithic rocks (Figure 4). A few narrow dykes of augite porphyry and mica lamprophyre also occur. Volcanic units strike north-northwesterly and dip moderately eastward and are offset by northwesterly and north to northeasterly-striking faults. Magnetite-rich, gold-copper-bearing skarn beds appear to lie parallel to the volcanic layering and are traceable for over 2,000 metres.

The stratigraphically lowest exposed rocks are grey to greenish feldspar-rich andesitic lavas. These andesites grade upward into, and at first interfinger with, beds of andesitic to basaltic augite porphyry flows and flow breccias. Both the andesite and the augite porphyry flows are intruded by augite porphyry feeder dykes. Recessive, thin calcareous andesitic tuff units, indicative of a period of sedimentation, lie at the base



**LEGEND**

**INTRUSIVE ROCKS**

- + + Monzonite to Granodiorite
- Diorite

**TAKLA GROUP**

- 3 Altered Andesite
- 2 Augite Andesite
- 1 Feldspar - Rich Andesite

— Skarn gold & copper-bearing

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#### PROPERTY GEOLOGY

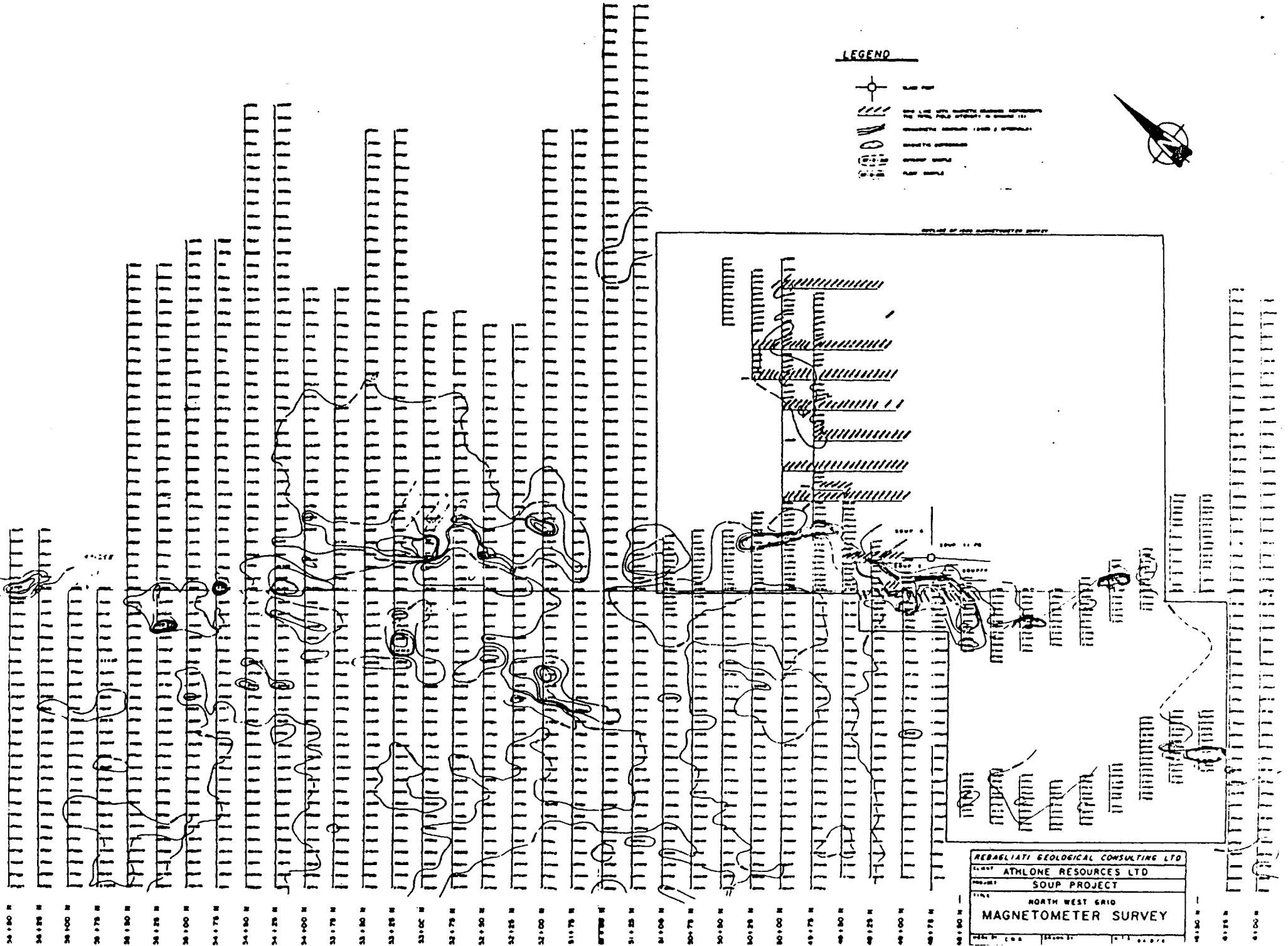
The SOUP claims are underlain largely by volcanic rocks of the Upper Triassic Takla Group. These have been intruded by diorite stocks, sills and dykes; microdiorite and feldspar porphyry dykes; and by quartz monzonitic batholithic rocks (Figure 4). A few narrow dykes of augite porphyry and mica lamprophyre also occur. Volcanic units strike north-northwesterly and dip moderately eastward and are offset by northwesterly and north to northeasterly-striking faults. Magnetite-rich, gold-copper-bearing skarn beds appear to lie parallel to the volcanic layering and are traceable for over 2,000 metres.

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of the augite-bearing units. On the west side of Kliyul Creek, these units correlate with west-dipping, thick beds of pyritic ash tuff, interlayered calcareous tuffs, gritty limestone and argillite which occupy the same stratigraphic position between the feldspathic andesite and the augite porphyries. The opposing dips suggest that Kliyul Creek occupies an anticlinal valley.

#### GOLD-COPPER-MAGNETITE OCCURRENCES

Massive conformable lenses (or beds) of magnetite-rich skarn occurring near the base of the augite porphyry contain appreciable gold and copper. At least three parallel skarn horizons are recognized, possibly replacing calcareous tuffs. Similar-looking mineralization is present in quartz-magnetite veins occurring along cross-cutting faults which offset the skarn units. The skarn occurs in a series of intermittently exposed concordant lenses 1 to 5 metres thick, each up to several hundred metres long. Magnetite, ranging from 60 to 100%, is concentrated near the top of the horizon. Peripheral zones of disseminated magnetite 5 to 20 metres thick underlie most massive horizons and contain minor pyrite and chalcopyrite. Lenses of massive pyrite also occur within or adjacent to the zones of disseminated magnetite. Outcrops of skarn tend to be highly oxidized, forming orange-brown stain zones, and are characterized by epidote, actinolite and fine-grained garnet. Only minor calc-silicate alteration, typical of many skarn deposits, is present on the SOUP claims. The quartz-magnetite veins and replacement bodies occupy subsidiary faults and shear zones branching from or parallel to the main Saddle Gully Fault. These auriferous veins have only been observed to occur near the magnetite-bearing skarn units.



**LEGEND**

- MAGNETIC DECLINATION
- MAGNETIC INTENSITY



MAGNETOMETER SURVEYS

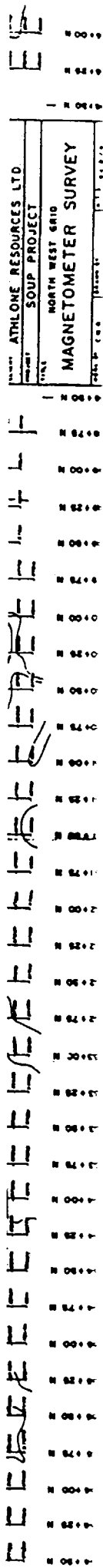
Talus obscures much of the outcrop in the vicinity of the auriferous skarn and vein occurrences. To overcome this problem, Lemming Resources Ltd. conducted magnetometer surveys to trace the magnetite-bearing skarn units and veins.

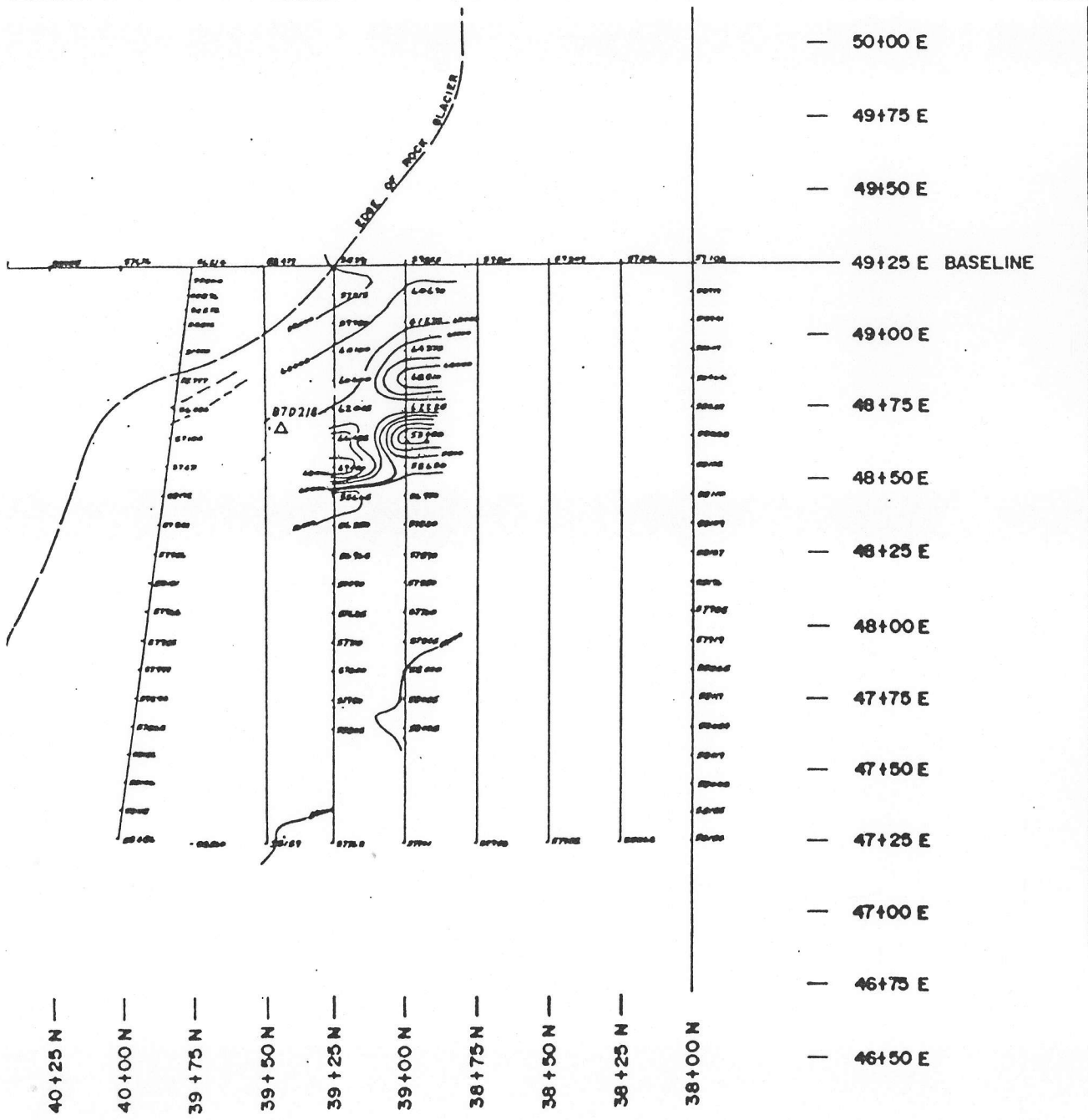
Three skarn horizons were identified. (Figure 5). Each is marked by a series of deep linear magnetic troughs and/or peaks. The upper, or main, skarn horizon is also marked by a discontinuous series of magnetic highs. The folded appearance of the magnetic trends is attributed to topographic effects on the surface trace of the gently to moderately east-dipping skarn and is further accentuated by faulting.

The main magnetite skarn zone is traced for 950 m along the 49+25E base line from 47+00N to 56+50N by a discontinuous series of sinuous magnetic highs and lows. The zone is open along strike to the northwest, but terminates to the southeast at 46+75N. Southeast of the rock glacier, which extends from 44+50N to 40+00N, the main zone reappears at 39+25N and is open for extension to the southeast. (Figure 6).


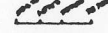

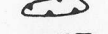
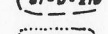
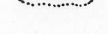
At 51+50N, a discordant magnetic feature trends northerly, merging with the main zone at 54+50N. Skarn outcrop and rubble is mapped along the trace of this 300 m long zone.

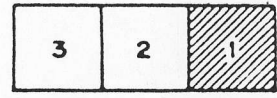
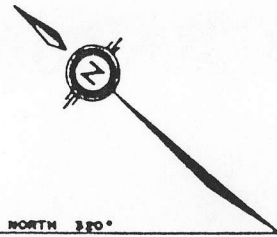
The skarn at 48+00N on line 46+50E was not traced to the north or south by the survey even though, by prospecting, it can be traced by its boulder train. Apparently this lower skarn horizon is only occasionally magnetite-bearing.





**LEGEND**

-  CLAM POST
-  GRID LINE WITH MAGNETIC READINGS REPRESENTS THE TOTAL FIELD INTENSITY IN GAMMAS (G)
-  ISOMAGNETIC CONTOURS (2000 G INTERVALS)
-  MAGNETIC DEPRESSION
-  OUTCROP SAMPLE
-  PLANT SAMPLE



REBAGLIATI GEOLOGICAL CONSULTING LTD.		
CLIENT: ATHLONE RESOURCES LTD.		
PROJECT: SOUP PROJECT		
TITLE: SOUTH EAST GRID MAGNETOMETER SURVEY		
WORK BY: C.M.R.	DRAWN BY:	R.T.S. 940/8

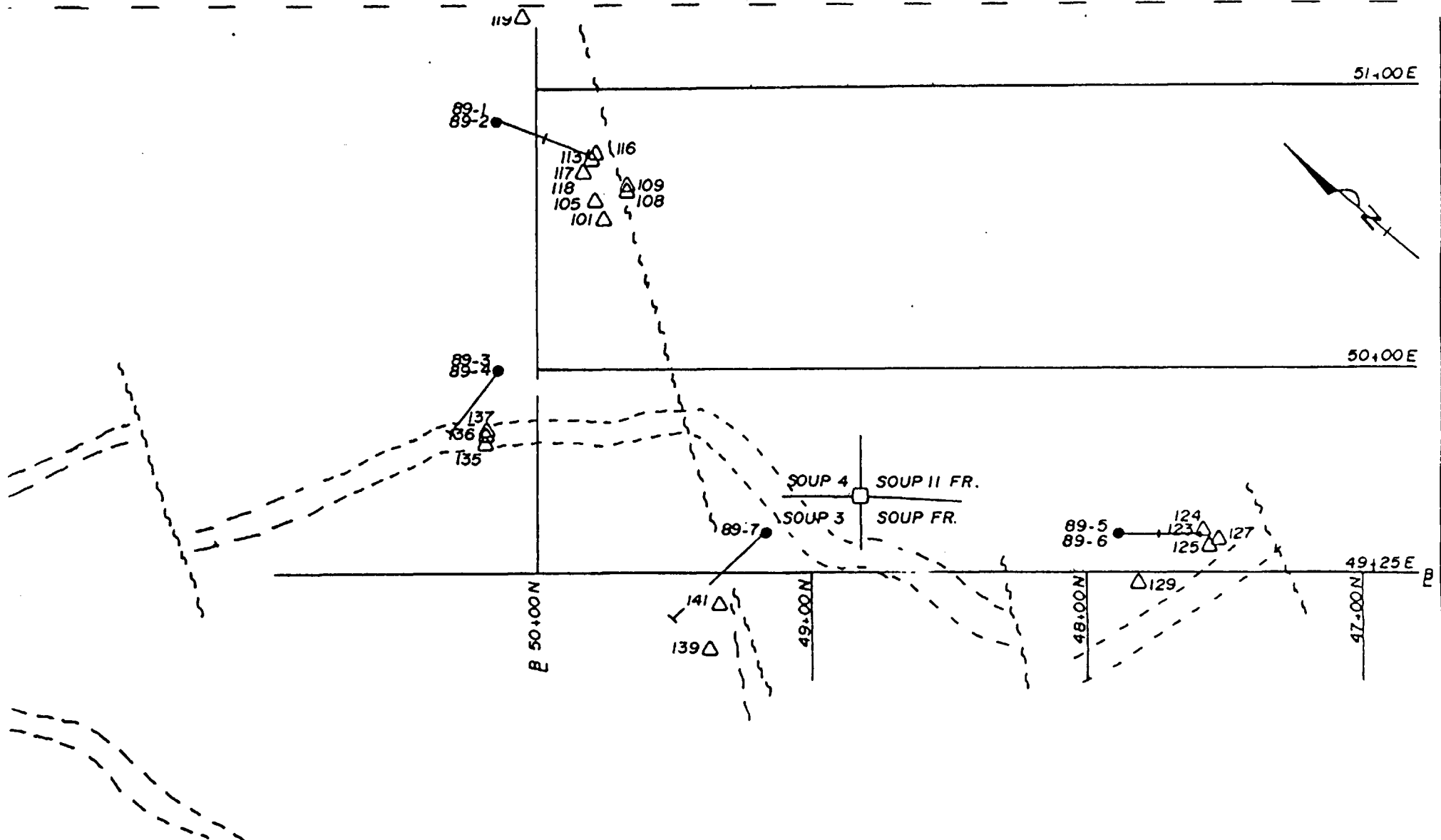
ROCK SAMPLING

In 1986, the writer collected 45 continuous rock chip samples from skarn, vein occurrences and wall rocks to relocate previously reported auriferous zones and to determine their tenor and characteristics. Approximately 1 kg of rock was cut per metre of sample length.





Sample descriptions and assay results from samples grading 0.05 oz/ton gold or higher are tabulated below and are plotted on Figure 7.

<u>Sample Number</u>	<u>Length Metres</u>	<u>Gold Oz/t</u>	<u>Copper %</u>	<u>Description</u>
✓101	0.3	2.010	0.17	Quartz magnetite vein - highly oxidized.
✓105	1.0	0.250	0.12	Highly oxidized quartz-magnetite band in chloritic andesite.
✓108	1.0	0.790	0.41	Spongy limonite and oxidized magnetite.
✓109	1.0	0.292	0.09	Highly oxidized quartz magnetite.
✓113	1.0	0.295	0.05	Sheared quartz magnetite. Strike 150° - 75°E.
116	1.0	0.087	0.07	Hanging wall to 115 - 50% quartz + magnetite 50% chloritic hornfelsed andesite.
✓117	1.0	1.010	0.07	Quartz with 15% magnetite + some chloritic andesite.
✓118	1.0	0.141	0.18	Hanging wall to 117 - chloritic andesite some qtz + mt.
119	1.0	0.130	0.05	Quartz and oxidized magnetite - minor pyrite - shear zone.
✓122	2.0	0.730	0.25	Highly oxidized - quartz + magnetite in shear zone.
✓123	1.0	0.165	0.34	Highly oxidized magnetite skarn.
✓124	1.0	0.058	0.30	Highly oxidized magnetite skarn.
✓125	1.0	0.060	0.18	Highly oxidized magnetite-epidote-garnet skarn.
✓127	1.0	0.081	0.13	Highly oxidized magnetite-epidote-garnet skarn.
✓129	3.0	0.032	1.15	Highly oxidized magnetite-epidote-garnet skarn - some chalcopryrite.
✓132	1.0	0.252	0.21	50% oxidized magnetite skarn with f-g andesite tuff.
135	1.0	0.069	0.08	Fairly fresh magnetite skarn.

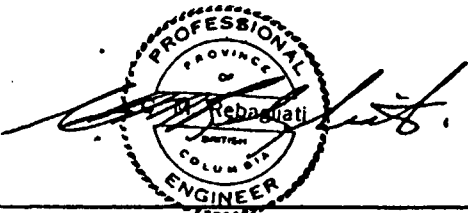




△ 187 M 108

-  DIAMOND DRILL HOLE
-  SHEARING / VEINING
-  SKARN ZONE
-  ROCK CHIP SAMPLE LOCATIONS

0 ——— 50m  
SCALE  
1:2000



REBAGLIATI GEOLOGICAL CONSULTING LTD.		
client:	ATHLONE RESOURCES LTD.	
project:	SOUP PROJECT	
title: DRILL HOLE PLAN / ROCK CHIP SAMPLES SAMPLES ≥ 0.05 oz/ton GOLD		
work by:	C. M. R.	drawn by: L. D. S.
date:	AUG. 31/89	figure: 7
	revised:	n.Y.S. 94D/B

<u>Sample Number</u>	<u>Length Metres</u>	<u>Gold Oz/t</u>	<u>Copper %</u>	<u>Description</u>
136	1.0	0.117	0.14	Fairly fresh, banded, green calcsilicate - magnetite skarn.
137	1.0	0.141	0.26	Highly oxidized magnetite skarn.
139	1.0	1.680	0.17	Sulphide impregnated, silicified, sheared chloritic andesite.
141	1.0	0.193	0.06	Sheared chloritic andesite - minor quartz and seams of magnetite.
87M108*	compo-site	0.28	0.43	Oxidized magnetite skarn rubble 50 m wide.*Sampled by Milton Mankowske
87D218**	compo-site	0.05	0.91	Massive magnetite rubble.**Sampled by Denis Delisle.

The presence of skarn rubble near 60+00N, 51+25E, a distance of 350 m grid north of the limit of the magnetometer survey, indicates that the auriferous skarn extends well beyond the surveyed area. Samples from this skarn locality are geochemically enriched in copper and gold.

The main skarn zone reappears from under the rock glacier at the south end of the magnetometer grid.(Figure 6.) Sample 87-D-218 from this mineralized skarn graded 0.05 oz/t gold and 0.91% copper, further substantiating that the mineralized skarns on the SOUP claims are extensive.

The area of skarn on the SOUP 10 claim, sampled by Mannard in 1964 and x-ray diamond drilled by Falconbridge in 1971, was not re-examined nor covered by the Lemming surveys.

#### DIAMOND DRILLING

The 1989 diamond drilling program on the SOUP claims was contracted to Falcon Drilling Ltd. of Prince George, B.C., who utilized an F-1000, helicopter portable, hydraulic diamond drill with BQ rods. A total of 338.94 m (1112 ft.) of drilling were completed in seven holes sunk from four drill sites.

The purpose of the 1989 program was to test magnetite-gold-copper skarn occurrences and cross-cutting quartz-magnetite veins. The four drill sites were selected to evaluate locations where previous outcrop sampling returned significant gold assays. Due to the steep terrain, the drill sites were located on knolls or ridges to facilitate helicopter access. As a result, not all intersections were perpendicular to the target structures.

Holes 89-1 and 89-2 were drilled from the same drill site on an azimuth of 160° at an inclination of -50° and -70° respectively to test two auriferous quartz-magnetite zones where surface samples 101, 108 and 117 assayed 2.01, 0.79 and 1.01 oz/ton gold respectively (Figure 7).

The upper skarn in Hole 89-1 graded 0.258 oz/ton gold over 12.01 feet, from 41.99 to 54.0 ft; followed by 10.60 ft from 146.39 to 156.99 ft in the lower skarn grading 0.107 oz/ton gold (Figure 8).

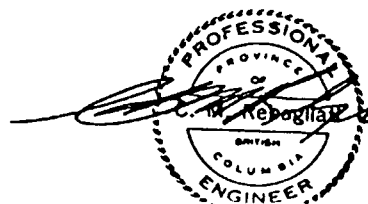
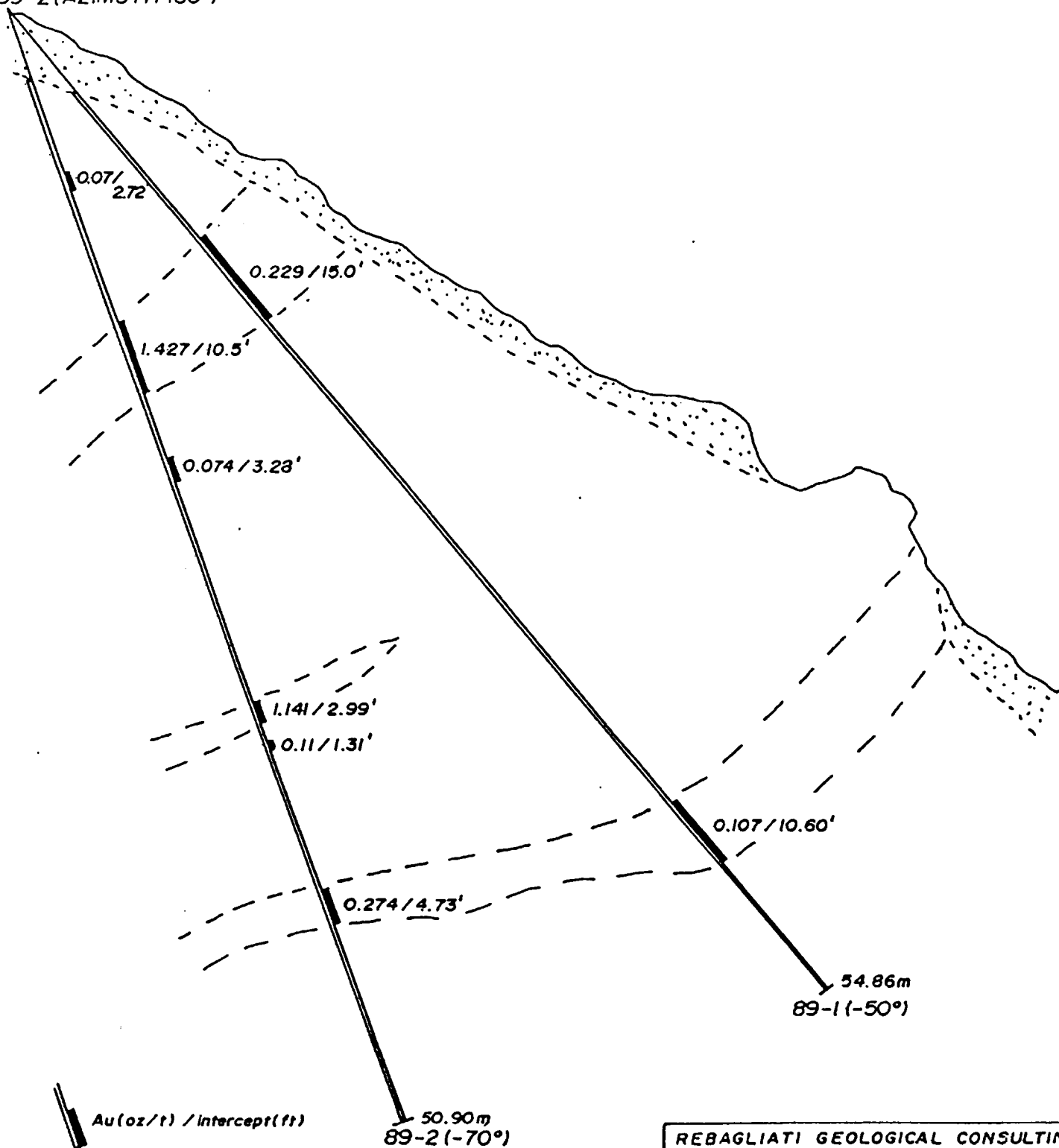
In Hole 89-2, the upper skarn returned 1.427 oz/ton gold over a length of 10.50 ft from 47.01 to 57.51 ft. In the lower skarn, the following mineralized intervals were intersected:

From	To (Ft)	Length (Ft)	Oz/ton Gold	%Copper
104.0	106.99	2.99	1.141	0.10
109.68	110.99	1.31	0.110	0.12
132.51	137.24	4.73	0.274	0.08

In Holes 89-1 and 89-2, core from both the upper and lower skarn units was highly oxidized and friable. As a result, core recoveries from the mineralized intervals were poor.

Holes 89-3 and 89-4 were drilled on an azimuth of 267° at -50° and -90° respectively, to test beneath a skarn outcrop where

89-1 (AZIMUTH 160°)  
 89-2 (AZIMUTH 160°)



REBAGLIATI GEOLOGICAL CONSULTING LTD.		
client:	ATHLONE RESOURCES LTD.	
project:	SOUP PROJECT	
title:	DRILL HOLE SECTION (LOOKING 070°)	
work by: C.M.R.	drawn by: L.D.S.	n.f.s: 940/8
date: AUG. 31/89	revised:	figure: 8

surface samples 135, 136 and 137 assayed 0.069, 0.117 and 0.141 oz/ton gold respectively.

The skarn was intersected in Hole 89-3 from 79.99 to 100.49 feet. A 3.28 ft. interval from 86.48 ft. to 89.76 ft. assayed 0.047 oz/ton gold and 0.22% copper (Figure 9).

Hole 89-4 cut 13.52 ft. of skarn with a 10.23 ft. interval from 81.27 to 91.50 ft. assaying 0.038 oz/ton gold and 0.13% copper.

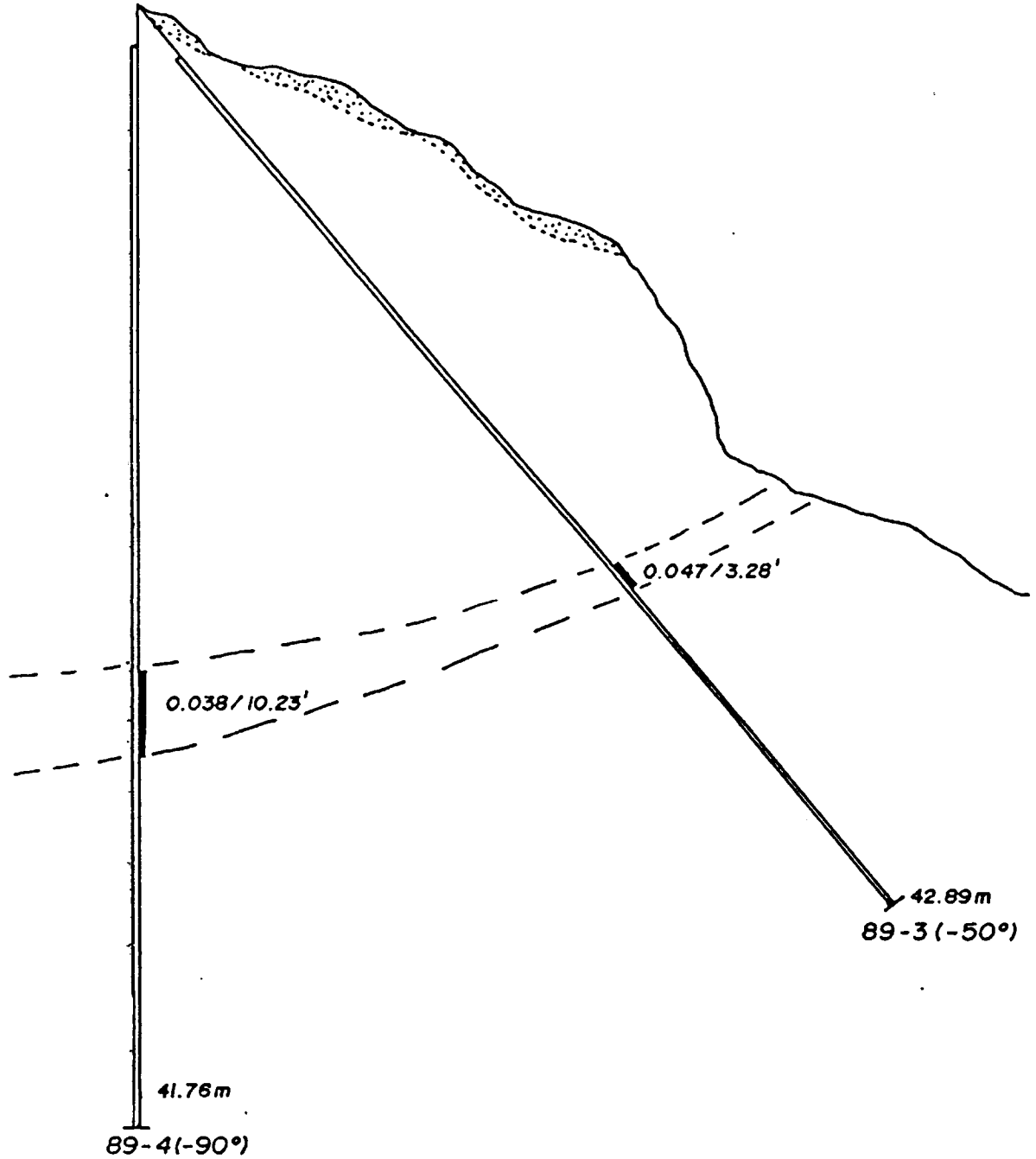
Once again, the highly oxidized nature of the skarn encountered in Holes 89-3 and 89-4 resulted in poor core recoveries.

Holes 89-5 and 89-6 were drilled at -50° and -70°, respectively, on an azimuth of 141° to investigate the area around surface sample 123, which assayed 0.165 oz/ton gold. In Hole 89-5, at the depth where the auriferous skarn was expected to be intersected (85 to 100 ft.), a caved zone was encountered and no core was recovered (Figure 10). Hole 89-6 did not cut any significant skarn mineralization. It is possible that the targeted zone may have been offset by a fault.

Hole 89-7 was drilled at -50° on an azimuth of 277° to intersect a shear-hosted vein where surface sample 139 returned 1.68 oz/ton gold. At a depth of 231 ft. the drill platform shifted from its footings and the hole had to be abandoned short of its target depth. However, an intervening skarn unit returned the following low, but significant, values:

<u>From</u>	<u>To (Ft)</u>	<u>Length (Ft)</u>	<u>Oz/ton gold</u>
30.97	34.25	3.28	0.030
40.81	41.99	1.18	0.033

89-3 (AZIMUTH 267°)  
89-4 (AZIMUTH 267°)



AU(oz/t) / intercept(ft)

0 5 10m

SCALE  
1: 250

PROFESSIONAL  
GEOLOGICAL  
CONSULTANT  
C. M. Rebagliati  
BRITISH COLUMBIA

REBAGLIATI GEOLOGICAL CONSULTING LTD.

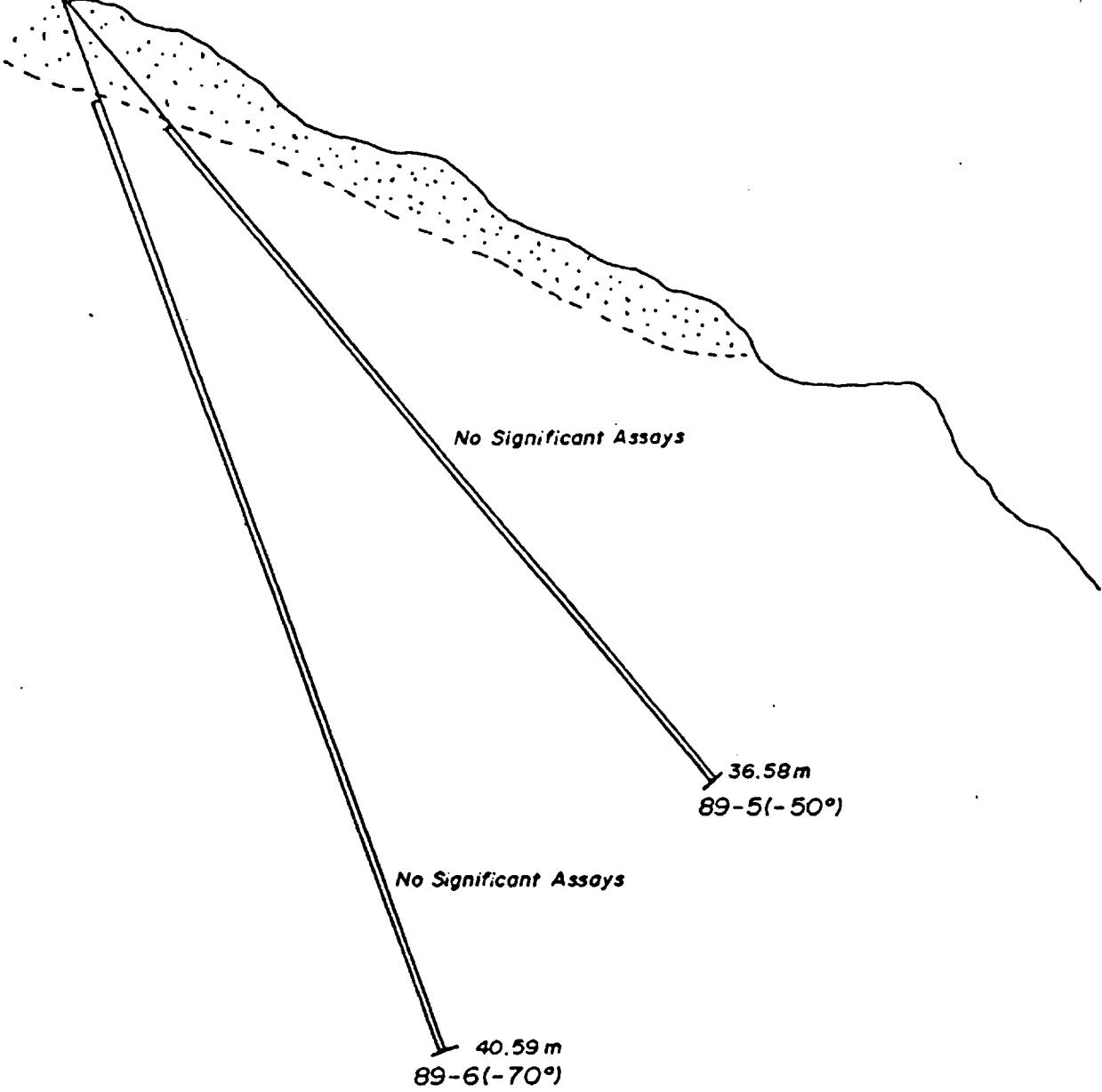
CLIENT: ATHLONE RESOURCES LTD.

PROJECT: SOUP PROJECT

TITLE:  
DRILL HOLE SECTION  
(LOOKING 157°)

WORK BY: C.M.P. DRAWN BY: I.N.S. IN.T.S: 94018

89-5 (AZIMUTH 141°)  
89-6 (AZIMUTH 141°)



SCALE  
1: 250

PROFESSIONAL  
PROVINCE  
OF  
M. Rebagliati

REBAGLIATI GEOLOGICAL CONSULTING LTD.

client: ATHLONE RESOURCES LTD.

project: SOUP PROJECT

title:

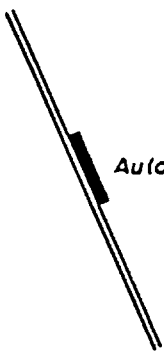
DRILL HOLE SECTION  
(LOOKING 051°)

work by: C.M.P. | drawn by: I.N.S. | in. f. s. | 02.02.00

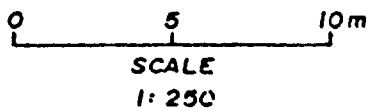
89-7 (AZIMUTH 277°)

0.03/3.28'

0.033/1.18'



70.41m  
89-7 (-50°)



REBAGLIATI GEOLOGICAL CONSULTING LTD.
client: ATHLONE RESOURCES LTD.
project: SOUP PROJECT
title: DRILL HOLE SECTION (LOOKING 007°)



ASSAYING

All samples of split core were Fire Assayed using a 1 assay ton charge (Appendix I).

Eleven samples, ranging in grade from 2.22 to 105.90 grams per tonne gold, were re-assayed using sample rejects.

A comparative plot of the two sets of assays indicate a relatively good correlation of gold concentrations (Figure 12). Simple arithmetic averages of the two sample sets are:

	<u>Total</u> <u>GPT</u>	<u>Average</u> <u>GPT</u>	<u>% Difference</u>
Sample Pulps	227.92	20.72	-
Sample Rejects	233.77	21.25	+2.56%

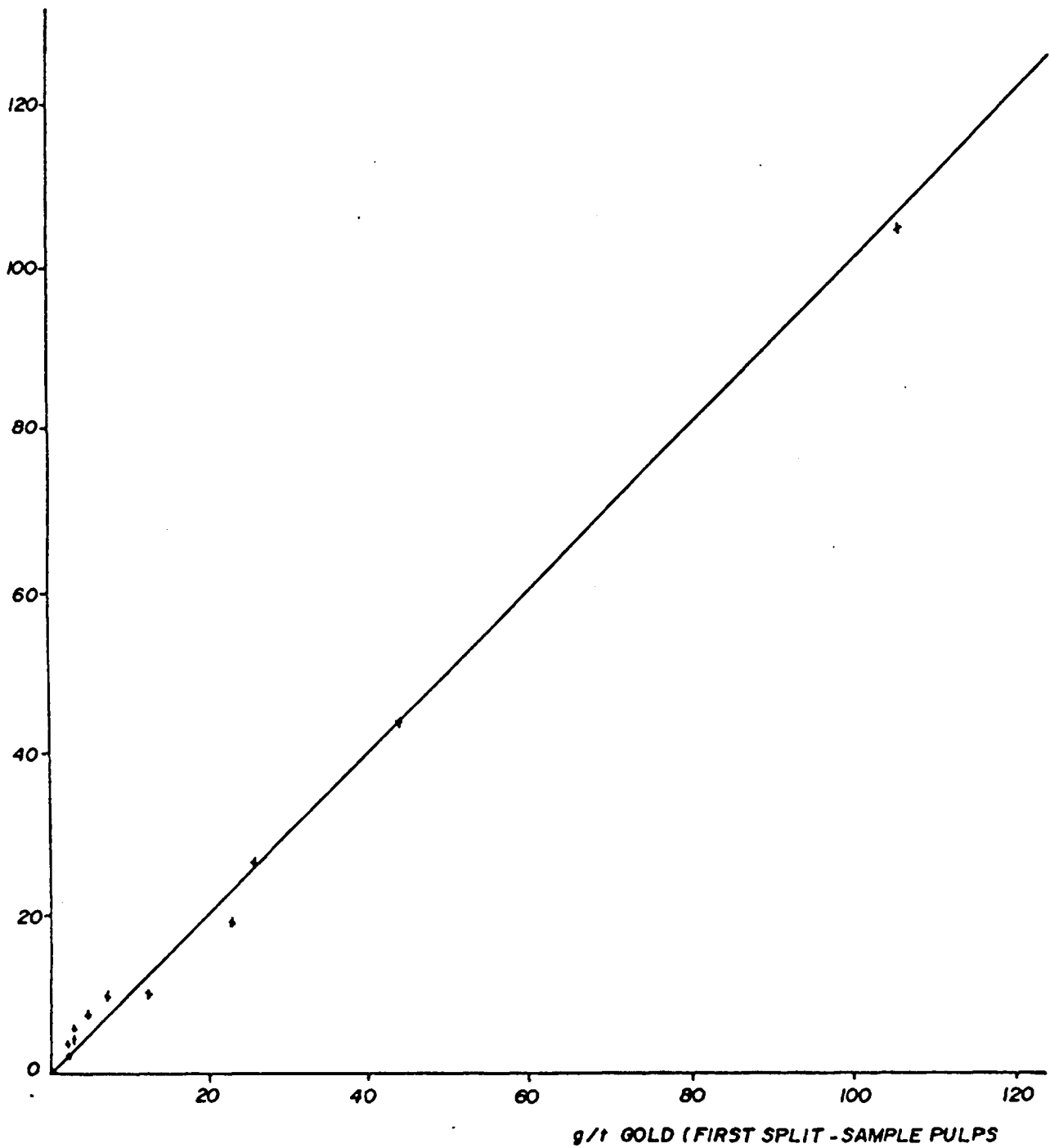
The 2.56% variance indicates that there were no serious assaying or sampling problems associated with the gold mineralization.

ICP analyses of the 11 check samples did not indicate any significant concentrations of deleterious elements such as arsenic or antimony.

CONCLUSIONS

The Phase I diamond drilling program on the SOUP Claims has substantiated that strong gold concentrations in the magnetite-rich skarns have continuity and persist to depth.

The highest gold grades were intersected by Holes 89-1 and 89-2 where two skarn units are cross-cut by auriferous magnetite-quartz veins.



REBAGLIATI GEOLOGICAL CONSULTING LTD.		
client: ATHLONE RESOURCES LTD.		
project: SOUP PROJECT		
title:  CHECK ASSAYS		
work by: C.M.R.	drawn by: L.D.S.	n.t.s: 94 D/8
date: AUG 31/90	revised:	figure: 12

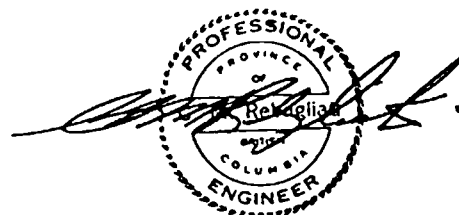
Rebagliati Geological Consulting Ltd.

In comparing results from Holes 89-1 and 89-2 with values from the skarns intersected in Holes 89-3, 89-4 and 89-7, it appears that gold concentrations are substantially upgraded in the skarns near where they are cut by a cross-structure. Several other structural offsets along the skarn horizons are indicated by surface mapping and by the magnetometer surveys.

Deep surface weathering has oxidized the skarn well below surface. The depth of the oxidation and its impact on grades are not known.

Preliminary check sampling and trace element analyses indicate that there are no assaying or sampling problems associated with the type of gold mineralization encountered on the SOUP claims.

Even though the grades encountered in Holes 89-3 and 89-4 and the upper portion of Hole 89-7 are low, they indicate that gold is widely distributed in the skarn units. Similarly, the failure of Holes 89-5, 89-6, and 89-7 to reach their intended targets means that more drilling is required to adequately assess their potential.



## RECOMMENDATIONS

A two-phase success-contingent exploration program is recommended.

### Phase II

1. Diamond drill to trace the gold mineralization encountered in diamond drill Holes 89-1 and 89-2 along strike and down dip.
2. Drill to test the shear-hosted gold mineralization situated at surface chip sample sites 119 and 122.
3. Drill deeper holes to adequately test the zones at drill sites 89-5, 89-6 and 89-7.
4. Drill to test other skarn/cross-structure intersections.

A lightweight, helicopter-portable diamond drill should be utilized. The steep terrain will necessitate the drilling of a fan of two or more holes at each drill site. Some drilling and blasting will be required to prepare the drill sites.

The drilling program should be scheduled for late June or early July to utilize snow melt waters for drilling.

### Phase III

Phase III is contingent upon favourable results being obtained from the Phase II program.

Diamond drill to delineate zones of gold mineralization encountered in Phase II and initiate preliminary metallurgical tests.

PROPOSED BUDGET

Phase II: Diamond Drilling

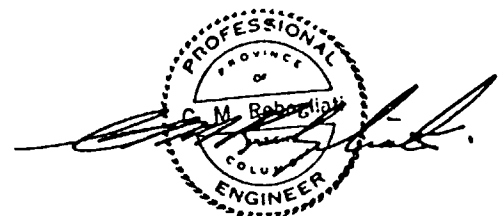
Salaries	\$ 38,000
Accommodation, meals and camp supplies	10,500
Travel	6,000
Communications	1,000
Equipment Rental	2,500
Vehicle Expenses	6,000
Helicopter	21,000
Fixed Wing Aircraft	13,500
Diamond Drilling 2,600 feet @ \$55/foot	143,000
Assays	3,500
Report Preparation	<u>5,000</u>

PHASE II TOTAL \$ 250,000

PHASE III

Diamond drilling 5,000 feet @ \$100/ft all inclusive	\$ 500,000
Metallurgical Testing	<u>10,000</u>

PHASE III TOTAL \$ 510,000



REFERENCES

- Bates, C.D.S., Mustard, D.K., P. Eng., 1975: Geochemical-physical work report on the BAP mineral claims; B.C. Assess't Report 5600.  
1977: Geochemical Report on the Soup property; B.C. Assess't Report 6410.
- Betz, J., 1976: Report on the Maxmin EM Survey BAP claim group; B.C. Assess't Report 5976.
- Hoffman, S.J., 1982: Geochemical report on the BAP mineral claims, Kliyul Creek Area.
- McTaggart, K.C., P. Eng., 1965: Geology of the Soup claims; B.C. Assess't Report 675.
- Meyers, R.E., Smit, H.Q., 1984: Assessment report on the 1984 geological and geochemical exploration program, SOUP 8-84 claim group.
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- Mustard, D.K., P. Eng., 1974: Geological, geochemical, geo-physical report on the BAP claims; B.C. Assess't Report 5135.
- Rebagliati, C.M., July 1986: Report on the KLIYUL Creek Gold Project, BAP and SOUP Claims, Johanson Lake Area, B.C. Lemming Resources Ltd. Rebagliati Geological Consulting Ltd.  
- - September, 1986: Assessment Report, Magnetometer Survey-Rock Sampling, SOUP Claims, Omineca Mining Division, Lemming Resources Ltd. Rebagliati Geological Consulting Ltd.  
- - October, 1986: Phase I Summary Report, 1986 Kliyul Creek Gold Project, BAP and SOUP Claims, Johanson Lake Area, B.C. Lemming Resources Ltd. Rebagliati Geological Consulting Ltd.  
- - November, 1987: Phase II Summary Report, 1987 Kliyul Creek Gold Project, SOUP Claims, Johanson Lake Area, B.C. Lemming Resources Ltd. Rebagliati Geological Consulting Ltd.  
- - February, 1988: Summary Report on the SOUP Claims, Omineca Mining Division, Athlone Resources Ltd. Rebagliati Geological Consulting Ltd.

REFERENCES (CONT'D)

Rodgers, T., P. Eng., 1981: Report on the geochemical survey on the SOUP group; B.C. Assess't Report 9485.

Roots, 1954: G.S.C. Memoir 274, p.212.

Sullivan, J., 1984: Private Report.

Tipper, H.W., Richards, T.A., 1976: Jurassic stratigraphy and history of North Central British Columbia, G.S.C. Bulletin 270.

CERTIFICATE OF QUALIFICATIONS

I, Clarence Mark Rebagliati, of 3536 West 15th Avenue, Vancouver, B. C., hereby certify that:

1. I am a consulting Geological Engineer with offices at 3536 West 15th Avenue, Vancouver, B. C.
2. I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario ( Mining Technology, 1966).
3. I am a graduate of the Michigan Technological University, Houghton, Michigan, U.S.A., (B.Sc., Geological Engineering, 1969).
4. I have practiced my profession continuously since graduation.
5. I am a member in good standing of the Association of Professional Engineers of British Columbia.
6. The foregoing report is based on:
  - a) A study of all available company and government reports.
  - b) My examinations of the property made in 1984, 1986 and 1987.
7. I have not directly or indirectly received nor do I expect to receive any interest, direct or indirect, in the property of Athlone Resources Ltd. or any affiliate, or beneficially own, directly or indirectly, any securities of Athlone Resources Ltd. or any affiliate.
8. I wrote a report dated July 10, 1986, on the SOUP mineral claims, which was used in the Prospectus of Lemming Resources Ltd. Other reports pertaining to the SOUP claims which I wrote later in 1986, in 1987 and in 1988 are listed in the References section of this report.



C. M. Rebagliati, P. Eng.  
August 31, 1989



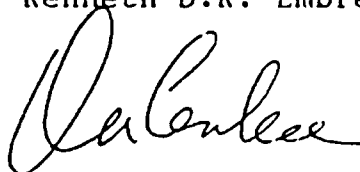
CERTIFICATE

I, Kenneth D.K. Embree, of 1602 - 7321 Halifax Street,  
Burnaby, B.C. V5A 4R5, do hereby certify that:

1. I am a graduate (1986) of the University of Saskatchewan, Saskatoon, Saskatchewan with a Bachelor of Applied Science degree in Geological Engineering.
2. I have worked in mining exploration for 2 1/2 years in the province of British Columbia.
3. I am a geological engineer. I am registered as an Engineer-in-Training with the Association of Professional Engineers of the Province of British Columbia.
4. I have not received, nor do I expect to receive, any interest, direct or indirect, in the properties or securities of Athlone Resources Ltd. or in those of its associated companies.
5. I have no interest in any other property or company or company within 10 kilometres of the Soup Claims.

Vancouver, B.C.  
July, 1989

Kenneth D.K. Embree, BASc.



APPENDIX I

ASSAY CERTIFICATES

JUL 25 '89 15:54

MIN-EN LABS VANC.

055 P02



**MIN  
EN  
LABORATORIES**

SPECIALISTS IN MINERAL ENVIRONMENTS  
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

**VANCOUVER OFFICE:**  
705 WEST 15TH STREET  
NORTH VANCOUVER, B.C. CANADA V7M 1T2  
TELEPHONE (604) 980-5814 OR (604) 980-4524  
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-2821

**TIMMINS OFFICE:**  
33 EAST PROUCIS ROAD  
P.O. BOX 887  
TIMMINS, ONTARIO CANADA P4N 7G7  
TELEPHONE: (705) 264-9998

*Assay Certificate*

9V-0734-RA1

Company: ATHLONE RESOURCES LTD.  
Project: SOUP  
Attn: M. REBAGLIATI

Date: JUL-25-89  
Copy 1. ATHLONE RESOURCES LTD., VANCOUVER, B.C.

We hereby certify the following Assay of 30 ROCK samples submitted JUL-21-89 by KEN EMBREE.

Sample Number	metres	%AU G/TONNE	%AU OZ/TON	CU %
56251	From - To	.19	.006	.020
56252	12.80-13.80 m	10.43	.304	.097
56253	13.80-14.80	8.91	.260	.270
56254	14.80-15.32	4.76	.139	.291
56255	15.32-15.92	10.42	.304	.186
56256	15.92-16.46	8.10	.236	1.040
56257	16.46-17.37	3.72	.109	.710
56258	27.13-27.43	3.81	.111	.375
56259	33.74-34.44	.59	.017	.127
56260	39.17-40.17	.06	.002	.107
56261	40.17-41.15	.38	.011	.052
56262	41.15-42.31	1.13	.033	.100
56263	42.31-43.31	.02	.001	.061
56264	43.31-44.62	.38	.011	.116
56265	44.62-45.72	6.45	.188	.075
56266	45.72-46.33	.77	.022	.061
56267	46.63-47.60	1.10	.032	.118
56268	47.60-47.85	13.03	.380	.040
56269	47.85-48.85	1.03	.030	.093
56270	48.85-49.85	.84	.025	.151
56271	49.85-50.85	.09	.003	.178
56272	50.85-51.85	.95	.028	.215 89-1
56273	7.40-8.23	2.50	.073	.162 89-2
56274	8.23-9.14	.82	.024	.513
56275	9.14-10.14	.12	.004	.096
56276	10.14-11.14	.44	.013	.080
56277	11.14-12.14	.21	.006	.172
56278	12.14-13.14	.32	.009	.141
56279	13.14-14.33	.02	.001	.140
56280	14.33-15.18	26.55	.774	.115

\* 1 ASSAY TON

Certified by *[Signature]*



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**TIMMINS OFFICE:**  
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P.O. BOX 967  
TIMMINS, ONTARIO CANADA P4N 7G7  
TELEPHONE: (705) 264-3096

Assay Certificate

9V-0734-RA2

Company: **ATHLONE RESOURCES LTD.**  
Project: **SOUP**  
Attn: **M. REBAGLIATI**

Date: **JUL-25-89**  
Copy 1. **ATHLONE RESOURCES LTD., VANCOUVER, B.C.**

We hereby certify the following Assay of 30 ROCK samples submitted JUL-21-89 by **KEN EMBREE**.

Sample Number	%AU G/TONNE	%AU OZ/TON	CU %
56281 15.18 - 15.54	2.95	.086	.201
56282 15.54 - 16.66	104.00	3.033	.181
56283 16.66 - 17.53	18.98	.554	.182
56284 17.53 - 18.53	2.23	.065	.150
56285 18.53 - 19.53	.19	.006	.170
-----			
56286 19.53 - 20.53	1.28	.037	.393
56287 20.53 - 21.53	2.54	.074	.325
56288 25.50 - 26.37	1.70	.050	.144
56289 30.48 - 31.70	.24	.007	.178
56290 31.70 - 32.61	39.13	1.141	.102
-----			
56291 33.43 - 33.83	3.76	.110	.120
56292 36.88 - 37.88	1.87	.055	.071
56293 37.88 - 38.56	.20	.006	.037
56294 38.56 - 40.39	1.32	.039	.035
56295 40.39 - 41.83	9.38	.274	.081
-----			
56296 41.83 - 42.83	.18	.005	.178
56297 42.83 - 43.83	.38	.011	.084
56298 45.83 - 46.13	4.81	.140	.070
56299 49.07 - 49.37	2.51	.073	.450
56300	.21	.006	.011
-----			
56301	.30	.009	.014
56302	.05	.001	.040
56303	.18	.005	.082
56304	.20	.006	.070
56305 26.36 - 27.36	1.61	.047	.220
-----			
56306 27.36 - 28.36	.36	.011	.108
56307 28.36 - 29.36	.59	.017	.224
56308 29.36 - 30.15	.76	.022	.400
56309 30.15 - 30.63	.46	.013	.203
56310 30.63 - 31.63	.15	.004	.070

\* 1 ASSAY TON

Certified by *Embree*



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 P.O. BOX 887  
 TIMMINS, ONTARIO CANADA P4N 7G7  
 TELEPHONE: (705) 264-9298

Assay Certificate

9V-0734-RA3

Company: **ATHLONE RESOURCES LTD.**  
 Project: **SOUP**  
 Attn: **M. REBAGLIATI**

Date: **JUL-25-89**  
 Copy 1. **ATHLONE RESOURCES LTD., VANCOUVER, B.C.**

**We hereby certify the following Assay of 30 ROCK samples submitted JUL-21-89 by KEN EMBREE.**

Sample Number		gAU G/TONNE	gAU OZ/TON	CU %	
56311	31.63 - 32.63	.50	.015	.061	89-3
56312	32.63 - 33.63	.71	.021	.044	
56313	33.63 - 34.63	.39	.011	.050	
56314	34.63 - 35.63	.55	.016	.042	
56315	35.63 - 36.63	.34	.010	.027	
-----					
56316	36.63 - 37.63	.46	.013	.046	
56317	37.63 - 38.63	.19	.006	.021	
56318	38.63 - 39.63	.41	.012	.040	
56319	39.63 - 40.99	.20	.006	.032	89-3
56320		.02	.001	.010	89-4
-----					
56321		.03	.001	.016	
56322		.03	.001	.020	
56323		.04	.001	.088	
56324		.20	.006	.040	
56325	24.77 - 25.77	1.01	.029	.037	
-----					
56326	25.77 - 26.52	1.80	.053	.253	
56327	26.52 - 26.82	.10	.003	.022	
56328	26.82 - 27.89	1.59	.046	.170	
56329	27.89 - 28.89	.09	.003	.234	
56330	28.89 - 30.33	.03	.001	.376	
-----					
56331		.10	.003	.086	
56332		.29	.008	.081	
56333		.14	.004	.030	
56334		.06	.002	.054	89-4
56335		.03	.001	.012	89-5
-----					
56336		.58	.017	.055	
56337		.08	.002	.040	
56338		.20	.006	.078	
56339	31.57 - 32.57	.04	.001	.562	
56340	32.57 - 33.57	.69	.020	.157	

\* 1 ASSAY TON

Certified by *[Signature]*

JUL 25 '89 15:56

MIN-EN LABS VANC.

055 P05



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TELEX: VIA U.S.A. 7801667 • FAX (604) 980-9821

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33 EAST BROUQUO'S ROAD  
P.O. BOX 987  
TIMMINS, ONTARIO CANADA P4N 7G7  
TELEPHONE: (705) 264-9098A

## Assay Certificate

9V-0734-RA4

Company: **ATHLONE RESOURCES LTD.**  
Project: **SOUP**  
Attn: **M. REBAGLIATI**

Date: **JUL-25-89**  
Copy 1. **ATHLONE RESOURCES LTD., VANCOUVER, B.C.**

We hereby certify the following Assay of 21 ROCK samples submitted JUL-21-89 by **KEN EMBREE**.

Sample Number	*AU G/TONNE	*AU OZ/TON	CU %	
56341	.43	.013	.173	89-5
56342	.07	.002	.162	
56343	.03	.001	.151	
56344	.02	.001	.014	89-6
56345	.01	.001	.013	
56346	.01	.001	.010	
56347	.08	.002	.011	
56348	.19	.006	.050	
56349	.08	.002	.020	89-7
56350	.07	.002	.019	
56351 8.44-9.44	.42	.012	.021	
56352 9.44-10.44	1.04	.030	.044	
56353 10.44-11.44	.38	.011	.033	
56354 11.44-12.44	.21	.006	.047	
56355 12.44-12.80	1.12	.033	.130	
56356	.25	.007	.051	
56357	.22	.006	.037	
56358	.13	.004	.021	
56359 15.80-16.80	.03	.001	.121	
56360 16.80-18.59	.09	.003	.400	
56361	.02	.001	.014	

\* 1 ASSAY TON

Certified by *M. Rebagliati*

MP: ATHLONE RESOURCES LTD.  
 SOJ: SOUP  
 ITM: M.REBAGLIATI

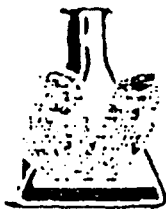
**MIN-EN LABS — ICP REPORT**  
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
 (604)980-5814 OR (604)988-4524

FILE NO: 9V-0734-RJ5

DATE: AUG-01-89

\* TYPE ROCK GEOCHEM \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SH PPM	W PPM	CR PPM
56252SPLITB	NO SAMPLE																														
56253SPLITB	2.7	20060	82	1	115	2.4	4	980	5.9	83	2414	173360	2880	6	16730	345	22	130	15	770	42	2	5	1	1	169.7	64	3	1	5	474
56254SPLITB	NO SAMPLE																														
56255SPLITB	NO SAMPLE																														
56256SPLITB	NO SAMPLE																														
56257SPLITB	3.9	46230	36	1	111	2.1	7	3780	10.2	177	5527	94750	2920	19	39520	1582	40	320	72	1060	60	9	6	1	1	239.7	98	3	2	4	316
56258SPLITB	NO SAMPLE																														
56265SPLITB	.8	14180	26	14	394	1.6	7	780	4.4	31	732	85290	8590	5	9960	251	15	570	1	790	35	1	20	1	1	92.0	38	2	2	1	59
56268SPLITB	NO SAMPLE																														
56280SPLITB	4.8	17510	75	23	76	2.7	5	1260	4.0	36	1100	214400	2200	7	12420	276	48	150	1	390	31	1	4	1	1	188.2	63	2	2	5	490
56281SPLITB	NO SAMPLE																														
56282SPLITB	15.3	3360	51	11	58	2.5	1	270	.1	67	1802	289970	1240	1	910	64	170	110	1	670	13	1	1	1	1	187.5	47	1	1	3	311
56283SPLITB	4.3	26740	60	1	74	2.3	9	2960	7.6	59	1850	135140	2780	12	26910	816	93	120	17	660	58	6	7	1	1	203.4	77	3	2	4	305
56284SPLITB	1.4	23880	49	11	28	1.4	9	6330	7.9	50	1494	51970	1400	10	32170	525	27	240	89	660	55	6	2	1	1	98.8	47	3	1	5	559
56290SPLITB	2.8	23110	40	1	417	2.3	10	1990	5.8	40	1006	168380	12570	10	17220	472	6	320	1	780	40	1	26	1	1	166.5	65	3	2	2	63
56291SPLITB	2.0	30370	35	1	301	1.8	13	4470	6.5	45	1091	114120	11830	13	23220	956	14	270	5	790	49	4	15	2	1	195.2	76	3	2	2	87
56295SPLITB	1.5	4300	26	14	70	1.5	1	440	.1	52	795	416330	2640	1	1910	209	1	210	1	300	12	1	4	1	1	99.0	61	1	1	1	1
56298SPLITB	1.4	22420	20	1	159	1.9	10	6210	6.3	55	658	126810	7700	9	19600	836	4	230	3	780	43	4	12	1	1	138.7	77	2	2	2	39



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Assay Certificate

9V-0734-RAS

Company: ATHLONE RESOURCES LTD.  
Project: SOUP  
Attn: M. REBAGLIATI

Date: AUG-01-89  
Copy 1, ATHLONE RESOURCES LTD., VANCOUVER, B.C.

We hereby certify the following Assay of <sup>11</sup>~~12~~ REJECTS samples submitted JUL-21-89 by KEN EMBREE.

Sample Number	SAMPLE REJECTS		SAMPLE PULPS	
	\$AU G/TONNE	\$AU OZ/TON	GPT	OPT
56252 SPLIT B	NES			
56253 SPLIT B	12.20	.856	8.91	.260
56254 SPLIT B	NES			
56255 SPLIT B	NES			
56256 SPLIT B	NES			
-----				
56257 SPLIT B	2.22	.065	3.72	.109
56258 SPLIT B	NES			
56265 SPLIT B	4.30	.125	6.45	.188
56268 SPLIT B	NES			
56280 SPLIT B	26.55	.774	26.55	.774
-----				
56281 SPLIT B	NES			
56282 SPLIT B	115.90	3.089	104.00	3.033
56283 SPLIT B	22.48	.656	18.98	.554
56284 SPLIT B	2.60	.076	2.23	.065
56290 SPLIT B	1.05	1.285	39.13	1.141
-----				
56291 SPLIT B	2.93	.086	3.76	.110
56295 SPLIT B	7.61	.222	9.38	.274
56298 SPLIT B	2.91	.085	4.81	.140

NES = NO REJECT REMAINING FOR SPLIT B

Certified by *[Signature]*



APPENDIX II

DIAMOND DRILL LOGS

# DIAMOND DRILL RECORD

PROPERTY SOUP CLAIMS

HOLE No. 89-1

DIP TEST		
Footage	Angle	
	Reading	Corrected
	-50°	

Hole No. 89-1 Sheet No. 01  
 Section \_\_\_\_\_  
 Date Begun July 7/89  
 Date Finished July 8/89  
 Date Logged July 9/89

Lat. \_\_\_\_\_  
 Dep. \_\_\_\_\_  
 Bearing 160°  
 Elev. Collar \_\_\_\_\_

Total Depth 54.86m (180')  
 Logged By Ken Embree  
 Claim Soup  
 Core Size 56

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu	
FROM	TO										
0	4.57		Casing and Broken Rock								
	(15')										
4.57	12.80	50%	Andesite - ashenish grey fine to medium grained rock with feldspar phenocrysts, maybe some augite. Fractures have magnetite smears. Very minor malachite inclusions. Core very broken, recovery is low. From 10.97m								
(15')	(42')										
			From 10.97m (36')	56251	10.88	11.28	0.4m	0.19	0.006	0.020	
			to 11.20m (36.75') there is a small quartz veinlet with blebs and disseminations of fine to medium gr. pyrite. Veinlet is approx 10cm wide and at 15° to C.A.		(35.75')	(37')					
			0 1/2-calcite stringers crosscut veinlet. 1-3% disseminated magnetite 0.5mm grains.								
12.80	17.37	50±%	Very broken and gouged section of quartz - magnetite veining. From 12.80m (42') to 13.64m (44.75')	56252	12.80	13.80	1.0m	10.43	0.304	0.097	
(42')	(57')		rock is probably andesite, but very broken and slightly altered (chloritic). From 13.64m (44.75')	56253	13.80	14.80	1.0m	8.91	0.260	0.270	
			to 15.32m (50.25') very rusty and broken "veins" with	56254	14.80	15.32	0.52m	4.76	0.139	0.291	
			a 50cm qtz-magnetite "core" (from 13.64m (44.75')	56255	15.32	15.92	0.60m	10.42	0.304	0.186	
			to 14.11m (46.4'). From 15.32 (50.25') to 15.92 (52.25')	56256	15.92	16.46	0.62m	8.10	0.236	1.040	
			quartz veining is broken & in a dark unrusted section	56257	16.46	17.37	0.91m	3.72	0.109	0.710	
					(12.80 - 17.37)		Highly oxidized				

# DIAMOND DRILL RECORD

PROPERTY Soup Claims

HOLE No. 89-1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 02 Lot. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu
FROM	TO									
			from 15.92 (52.25') to 17.37 (57'), very rusty gouged and sheared rock fragments (andesite?) with a 20cm mudram from 16.26m (53.34') to 16.46m (54')							
17.37 (57')	34.44 (113')	95%	Augite Porphyry Andesite - greenish grey medium grained rock with augite phenocrysts, also feldspar (less than augite), blocky and rusty on fractured surfaces. Very minor malachite in sections. From 17.37 (57') to 17.68 (58'), more basic section on contact with previous rusty zone. At 27.28 (89.5'). There is a small (5cm) rusty quartz veinlet with malachite, at 35° loc. A. Rusty contact from 33.74 (110.7') to 34.44 (113'), minor mal.	56258	27.13	27.43	0.30m	3.81	.111	.375
				56259	33.74	34.44	0.70m	.59	.017	.127
34.44 (113')	40.54 (133')	100%	Feldspar Porphyry Diorite - greyish green medium to fine grained matrix with large feldspar phenocrysts (zoned, slight fizz). Also, occasional qtz phenocryst or qtz "eyes" At 39.17 (128.5') fractures are becoming very rusty. At 39.62 (130'), there are blebs of a fine grained brown-black mineral (Sph?) with malachite.	56260	39.17	40.17	1.0m	.06	.002	.107

# DIAMOND DRILL RECORD

PROPERTY SOUTH CLAYTON

HOLE No. 89-1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 03 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu
FROM	TO									
40.54 (133')	41.15 (135')	95%	Andesite - as above (457-12.80), but verry broken with chloritic alteration	59261	40.17	41.15	0.98m	.38	.011	.052
41.15 (135')	42.31 (138.8')	50%	Quartz - Magnetite veining in altered andesite Buff to grey altered rock with small quartz veinlets (to 2cm) at 20-30° to C.A. Some magnetite smears on fractures. 40% oxidized	59262	41.15	42.31	1.16m	1.13	.033	.100
42.31 (138.8')	44.67 (146.4')	95-100%	Andesite - as above, broken with rusty fractures and chloritic alteration. Quartz veinlets (to 1cm) at 35-45° to C.A.	59263 59264	42.31	43.31 44.67	1.0m 1.31m	0.02 .38	.001 .011	.061 .116
44.67 (146.4')	45.72 (150')	50%	Quartz - Magnetite veining in highly altered andesite(?) Buff to grey rock with quartz veinlets and magnetite. Very rusty. Some sections are fragmental. 50% oxidized.	59265	44.67	45.72	1.10m	6.45	.188	.075
45.72 (150')	46.63 (153')	95%	Andesite - as above (457-12.80), verry broken and darker green color	59266	45.72	46.63	0.61m	.77	.022	.061

# DIAMOND DRILL RECORD

PROPERTY Soup Claims

HOLE No. 89-1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 04 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	%Cu
FROM	TO									
46.63	47.85	60%	Quartz Magnetite Veining - altered	59267	46.63	47.60	0.97m	1.10	.032	.118
(157)	(157')		andesite (chloritic) has random veining of quartz and magnetite at all angles to c.A.	59268	47.60	47.85	0.25m	13.03	.380	.040
			There is a 25cm wide band of massive magnetite at the bottom of this section (47.60-47.85m).							
47.85	54.86		Andesite - chloritic alteration, oxidized	59269	47.85	48.85	1.0m	1.03	.030	.093
(157)	(180')		from 47.85(157') to 50.29(165') Minor malachite	59270	48.85	49.85	1.0m	.84	.025	.151
			in sections. From 50.29(165') to 54.86(180')	59271	49.85	50.85	1.0m	.09	.003	.178
			andesite has slight chloritic alteration	59272	50.85	51.85	1.0m	.95	.028	.215
			and is very broken (nearby faultingully)							
			End of hole 54.86m (180')							

# DIAMOND DRILL RECORD

PROPERTY Soup Claims

HOLE No. 89-2

DIP TEST		
	Angle	
Footage	Reading	Corrected
	-71°	

Hole No. 89-2 Sheet No. 01  
 Section \_\_\_\_\_  
 Date Begun July 8/89  
 Date Finished July 9/89  
 Date Logged July 9-10/89

Lat. \_\_\_\_\_ Total Depth 50.90m (167')  
 Dep. \_\_\_\_\_ Logged By Kra Embree  
 Bearing 160° Claim Soup  
 Elev. Collar \_\_\_\_\_ Core Size BG

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au G-PT	Au OPT	%Cu
FROM	TO									
0	3.05		Casing and Broken Rock							
	(10')									
3.05	14.33	75%	Andesite - Small porphyritic section (from 3.05 (10') to 4.11 (13.5'). Small darker section (more mafic) from 4.11 (13.5') to 4.34 (14.75') with quartz-calcite stringers at random angles to c.a., some Epidote. Core very broken from 5.18 (17') to 6.71 (22'). There are vuggy quartz-calcite stringers, with fine grained magnetite from 6.71 (22') to 7.62 (25'). From 7.62 (25') to 7.72 there is a 10cm massive magnetite vein, followed by a 20cm mud seam to 7.92 (26'). From 7.92 (26') to 8.23 (27') rock is very broken and is quartz rich. From 8.23 (27') to 9.14 (30'), andesite is altered, with rusty fractures and veinlets of magnetite with blebs of cpy in abundant quartz stringers. A 15cm mud seam from 9.14 (30') to 9.29 followed by a more mafic section of andesite to 14.33 (47'), some augite. A 15cm mud seam is at 12.50 (41')							
	(10')									
				56273	7.40	8.23	0.83m	2.50	.073	.162
				56274	8.23	9.14	0.91m	.82	.024	.513
				56275	9.14	10.14	1.0m	.12	.004	.096
				56276	10.14	11.14	1.0m	.44	.013	.080
				56277	11.14	12.14	1.0m	.21	.006	.172
				56278	12.14	13.14	1.0m	.32	.009	.141
				56279	13.14	14.33	1.19m	.02	.001	.140

# DIAMOND DRILL RECORD

PROPERTY Southern Cross

HOLE No. 89-2

DIP TEST		
		Angle
Footage	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 02 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu	
FROM	TO										
14.33	17.53	50%	Very oxidized, sparse Qtz-magnetite veining								
(47')	57.5'		A 5cm mud seam at 14.33 (47') is followed by	56280	14.33	15.18	0.85m	26.55	.774	.115	
			15cm (to 14.48) of altered, vuggy andesite with	56281	15.18	15.54	0.36m	2.95	.086	.201	
			fine-medium grained "blbs" of pyrite - Qtz-rich	56282	15.54	16.66	1.12m	104.00	3.033	.181	
			"veining" with magnetite continues, but is broken								
			by a band of chloritic altered andesite from 15.18 (49.8')								
			to 15.54 (51') From 15.54 (51') to 16.66 there is a								
			very rusty section of quartz magnetite veining. Some								
			magnetite is leached out (spongy limonite), but some is								
			massive, in quartz. Because rock is very broken, veining								
			appears irregular, at all angles to C.A. - Peacock								
			lustre of cpy oxidizing (like barnite) is on some broken								
			surfaces. At 16.66 (54.7'), there is a 10cm band of chloritic	56283	16.66	17.53	0.87m	18.98	.554	.182	
			andesite. This is followed by a 30cm mud seam								
			and then another section of highly oxidized								
			quartz and magnetite veining. (ore very broken, but								
			vuggy sections have fine to medium grained "blbs"								
			and disseminations of pyrite. This section ends at								
			17.53 (57.5')								

# DIAMOND DRILL RECORD

PROPERTY 241 Camp

HOLE No. 89-2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 03 Lot. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu
FROM	TO									
17.53	34.59	70%	Augite Porphyry, Andesite - as before, greenish-grey fine-medium grained rock with augite phenocrysts. From 17.53 (57.5') to	56284	17.53	18.53	1.0m	2.23	.065	.150
(57.5')	(113.5')		rock is quite coarse grained and has abundant augite (approx. 77). At 20.27 (66.5') there is a	56285	18.53	19.53	1.0m	.19	.006	.170
			traced out 3cm wide qtz-magnetite vein at 75° to c.A. Stringers in surrounding rock have magnetite, malachite. At 20.52 (67.33'), there is another	56286	19.53	20.53	1.0m	1.28	.037	.393
			traced out qtz-magnetite vein approx 10cm wide and again approx 75° to c.A. Augite andesite very broken and rusty on fractures. From 20.73 (68')	56287	20.53	21.53	1.0m	2.54	.074	.325
			traced out qtz-magnetite vein at 40-50° to c.A. At 25.60 (80') there is a 10cm rusty qtz-magnetite vein at 40-50° to c.A.							
			The augite porphyry andesite grades into a more andesitic unit (finer grained, less augite), from the area of 20.73 (68') to 31.70 (104')	56288	25.50	26.37	0.87m	1.70	.050	.144
			From 31.77 (104.25') to 31.97 (104.88') there							



# DIAMOND DRILL RECORD

PROPERTY Southern CLAIMS

HOLE No. 29-2

DIP TEST		
Angle		
Footage	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 04 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu
			is another gtz-magnetite veinlet approx 45° to r.a.	56289	30.48	31.70	1.22 m	.24	.007	.178
			From 32.31 (106') to 32.61 (107') Now is another	56290	31.70	32.61	0.91 m	39.13	1.141	.102
			oxidized gtz-vesicular vein at 50-60° to r.a. Augite							
			andesite plus iron-chile on gtz-calcite stringers and							
			fractures. Another 20-30cm rusty, gtz-magnetite							
			veinlet at 33.53 (110'). This rock unit grades	56291	33.43	33.83	0.40 m	3.76	.110	.120
			into the next at 34.59m (113.5') Highly oxidized							
			50% core recovery							
34.59	37.03	95%	Feldspar Porphyry Diorite - as before (84-1),							
(113.5')	(121.5')		broken core with rusty fractures, occasional gtz							
			stringer.							
37.03	38.56	90-1/2%	Altered Andesite Andesite - probably altered	56292	36.88	37.88	1.0 m	1.87	.055	.071
(113.5')	(126.5')		feldspar porphyry andesite (ie no feldspar left)	56293	37.88	38.56	0.68 m	.20	.006	.037
			green-grey medium-fine grained altered rock,	56294	38.56	40.39	1.83 m	1.32	.039	.035
			lots of gtz stringers. Stringers at all orientations	56295	40.39	41.83	1.44 m	9.38	.274	.081
			to c.a. magnetite and occasionally vuggy. Secondary							
			biotite & f. biotite							
38.56	41.83	70%	Quartz-Magnetite veining - highly altered ande-							
(126.5')	(132.5')		silica-bearing rock with numerous gtz-magnetite veinlets							
			from 38.56 (126.5') to 40.39 (132.5'). From 40.39 (132.5')							

# DIAMOND DRILL RECORD

PROPERTY Sour Claims

HOLE No. 89-5

DIP TEST		
	Angle	
Footage	Reading	Corrected
	50°	

Hole No. 89-5 Sheet No. 01  
 Section \_\_\_\_\_  
 Date Begun July 11/89  
 Date Finished July 11/89  
 Date Logged July 12/89

Lat. \_\_\_\_\_  
 Dep. \_\_\_\_\_  
 Bearing 141°  
 Elev. Collar \_\_\_\_\_

Total Depth 36.58m (120')  
 Logged By Krn Embree  
 Claim Sour  
 Core Size 80

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu
FROM	TO									
0	6.10		Casing and broken rock							
	(20')									
(10	2637	95-100%	Augite Porphyry, Andesite - as in previous holes - grey-green medium grained rock with phenocrysts of augite (1-5mm) and feldspar. Some sections are finer grained than others (andesitic), but the unit will be called augite porphyry diorite. Minor fine grained disseminated pyrite (<<1%) and occasional pyrite stringer. Qtz-calcite stringers at all orientations to C.A.							
	(120')	(865')								
26.37	29.57	10%	Altered augite porphyry andesite and occasional (fragment of microdiorite. At 26.37 (865') to 26.57 (87') there is a 20cm zone of swirling quartz veining at approx. 30° to C.A. From 26.57 (87') to 29.57 (97') core recovery is only 10%. This is where the skarn magnetite horizon was projected to be. Core is very broken. It is rounded fragments (gravel-like) with maximum size approx. 2cm dia. Included in this section are oxidized and	56335	25.91	26.52	0.61m	.03	.001	.012
	(865')	(97')		56336	26.52	29.57	3.05m	.58	.017	.055
				56337	29.57	30.57	1.0m	.08	.002	.040
				56338	30.57	31.57	1.0m	.20	.006	.078
				56339	31.57	32.57	1.0m	.04	.001	.562
				56340	32.57	33.57	1.0m	.69	.020	.157
				56341	33.57	34.57	1.0m	.43	.013	.173
				56342	34.57	35.57	1.0m	.07	.002	.162
				56343	35.57	36.58	1.01m	.03	.001	.151

# DIAMOND DRILL RECORD

PROPERTY SOUP CLAIMS

HOLE No. 89-3

DIP TEST		
Footage	Angle	
	Reading	Corrected
	-50°	

Hole No. 89-3 Sheet No. 01 Lat. \_\_\_\_\_ Total Depth 43.89 m (144')  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By Ken Embree  
 Date Begun July 9/89 Bearing 267° Claim Soup  
 Date Finished July 10/89 Elev. Collar \_\_\_\_\_ Core Size BQ  
 Date Logged July 11/89

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	%Cu
FROM	TO									
0	274		Casing and broken Rock							
	(19')									
274	1570	95%	Andesite Porphyry: Andesite-composition is more andesitic than previous holes, but remains andesite porphyry. Andesite phenocrysts small (1-2mm) with some feldspar, epidote. Fractured, with rusty glauconitic stringers at all orientations. Rock is oxidized to approx 10.67m (35').							
(19')	(515')									
1570	1829	95%	Andesite: - grey green medium grained rock, porphyritic with phenocrysts of andesite (hbl.?) and feldspar. Probably an andesite-feldspar porphyry andesite.							
(51.5')	(60')									
1829	2438	50-60%	Andesite grades into an altered andesitic unit. Rock is silicified in sections and exhibits chloritic alteration in sections. Qtz-calcite stringers at all orientations b.c.a. At 1890(62'), core becomes very broken and recovery ≈ 50-60%. At 210	56300	210	2225	1.25m	.21	.006	.011
(60')	(180')		At 210 (60') a small 3-5cm vuggy glauconitic basomagnetic.	56301	2225	2325	1.0m	.30	.009	.014
			At 2225(70') there is a very vuggy 15-20cm	56302	2325	2438	1.13m	.05	.001	.040

# DIAMOND DRILL RECORD

PROPERTY SOUP CLAIMS

HOLE No. 89-3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 07 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu
FROM	TO									
			qtz-magnetite vein st. illite silicified andesitic rock. At approx. 24.23 (79.5') there is a small 5-10cm band of microdiarite. Altered andesitic rock continues to 24.38 (80').							
24.38	30.63	45-60%	Skarn - Magnetite Zone - very oxidized magnetite veining from 24.38 to 24.58 (20cm) at 80-85% to C.A. Veining has minor oxidized cpv. From 24.58 (80.6') to 25.07 (82.5') "skarnified" rock is buff colored to grey to green altered rock with rusty fractures and magnetite veining	56303	24.38	25.38	1.0m	.18	.005	.082
(80')	(100.5')		At 25.07 (82.5') there is a 6-7cm leached out (spongy limonite) magnetite vein at 70-75° to C.A. From 25.15 to 25.75 (84.5'), altered rock (skarn) as above, buff colored from 25.75 (84.5') to 25.95 there is a 20cm massive magnetite section at 80-90° to C.A. From 25.95 (85.1') to 26.67 (87.5'), highly oxidized "skarnified" rock (andesite?) as above. At 26.67 (87.5'), a large somewhat luggy section of massive magnetite begins. This section is oxidized, with a yellow stain (cpv?) and occasional	56304	25.38	26.36	0.98m	.20	.006	.070
				56305	26.36	27.36	1.0m	1.61	.047	.220
				56306	27.36	28.36	1.0m	.36	.011	.108
				56307	28.36	29.36	1.0m	.59	.017	.224
				56308	29.36	30.15	0.79	.76	.022	.400
				56309	30.15	30.63	0.48m	.46	.013	.203

# DIAMOND DRILL RECORD

PROPERTY SOIL CLAIMS

HOLE No. 89-2

DIP TEST		
		Angle
Footage	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 05 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

5/6

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	%Cu	
FROM	TO										
			to 41.83 (137.25'); massive magnetite with occasional small gtz section. Some magnetite is leached out (sporadic limonite) (45° to c.a. approx.?)								
41.83	42.15	100%	Altered andesite - as above 37.03-38.56, some feldspars evident, occasional gtz-magnetite stringer	56296	41.83	42.83	1.0m	.18	.005	.178	
1137.25	1138.25										
42.15	43.28	100%	Feldspar Porphyry Diorite as above 34.59-37.03 - veining cut through diorite dyke. Rusty, fractures, minor gtz stringers	56297	42.83	43.83	1.0m	.38	.011	.084	
1137.25	1142										
43.28	50.90	70%	Andesite - as before (89-1). Slightly more mafic section from 43.28 (142') to 44.35 (145.5') with 15-20cm rusty gtz-magnetite vein from 44.15' to 44.35. From 44.35 (145.5') to 50.90 (167') andesite is uniform with abundant gtz-calcite stringers at all orientations. A 10cm gtz veinlet with malachite at 60° to c.a. from 45.93 (150.7') to 46.03 (151'). A vuggy gtz magnetite vein is from 49.07 (161') to 49.37 (162').	56298	45.83	46.13	0.30m	4.81	.140	.070	
				56297	49.07	49.37	0.30m	2.51	.073	.450	
			After this, core is very broken, with minor								

# DIAMOND DRILL RECORD

PROPERTY Sour Claims

HOLE No. 89-2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 06 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE					
FROM	TO											
			malachite. Hole ended in a fault (gully)									
			End of hole 50.90m (167')									

# DIAMOND DRILL RECORD

PROPERTY Soup Claims

HOLE No. 89-3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 03 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu
FROM	TO									
			"blks" of fine-medium grained pyrite. Also has section with a greenish mineral (epidote?). Massive magnetite continues with occasional sections of altered rock (skarn), i.e. 26.06 (85.5') to 26.36 (86.5') and from 29.95 (98.25') to 30.15 (98.92'). From 30.15 (98.9') to 30.63 (100.5'); massive magnetite, oxidized and slightly vuggy							
30.63	42.21	95-100%	Andesite - as above 15.70-18.29	56310	30.63	31.63	1.0m	.15	.004	.070
(100.5')	(138.5')		Rock is buff colored, chloritic alteration through entire unit. Fine to medium grained "blks" and disseminations of pyrite, glz-calcite	56311	31.63	32.63	1.0m	.50	.015	.061
			and stringers of random orientations with occasional vuggy section of brecciated magnetite (spongy limonite)	56312	32.63	33.63	1.0m	.71	.021	.044
			There is a 35cm band of epidote and magnetite	56313	33.63	34.63	1.0m	.39	.011	.050
			at 36.88 (121') to 37.23 (122.15'). There is a 10cm massive magnetite section at 38.71 (127').	56314	34.63	35.63	1.0m	.55	.016	.042
			Also, there is another epidote-magnetite section at 40.69 (133.5'). It is 25-30cm wide. Andesite is chloritic to end of section at 42.21 (138.5')	56315	35.63	36.63	1.0m	.34	.010	.027
				56316	36.63	37.63	1.0m	.46	.013	.046
				56317	37.63	38.63	1.0m	.19	.006	.021
				56318	38.63	39.63	1.0m	.41	.012	.040
				56319	39.63	40.99	1.36m	.20	.006	.032

# DIAMOND DRILL RECORD

PROPERTY SOUP CLAIMS

HOLE No. 89-3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 04 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE				
FROM	TO										
4721	4389	90-95%	Augite porphyry Andesite - as above								
(1385')	(144')		2.74 - 1570 (ore is very broken and rusty on fractures, appears to have rusty gte. calcite veins)								
			End of hole 43.89m (144')								



# DIAMOND DRILL RECORD

PROPERTY Soup Claims

HOLE No. 89-4

DIP TEST		
Footage	Angle	
	Reading	Corrected
	-90°	

Hole No. 89-4 Sheet No. 01 Lat. \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_  
 Date Begun July 10/89 Bearing 267°  
 Date Finished July 11/89 Elev. Collar \_\_\_\_\_  
 Date Logged July 11/89 Total Depth 41.76m (137')  
 Logged By Ken Embree  
 Claim Soup  
 Core Size BQ

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE							
FROM	TO													
0	1.52		Casing and Broken Rocks											
	(5')													
1.52	14.33	95-100%	Augite Porphyry Andesite - composition is quite andesitic from 1.67 (5.5') to 5.33 (17.5'), but has some augite phenocrysts from 5.33 (17.5') to approx 7.32 (24'), augite porphyry andesite is more of a true diorite, with abundant augite phenocrysts and some feldspar. There is another "andesitic" section of this rock unit from 7.32 (24') to 8.61 (28.25'). Rock is broken with oxidized fractures to approx. 9.14 (30'). Entire unit has tiny Qtz-calcite stringers (1-5mm) at all orientations hor. and has very minor fine grained disseminated py following this is a porphyritic section from 8.61 (28.25') to approx. 9.75 (32'). This is followed by another andesitic section to 11.28 (37') and another porphyritic section to 14.33 (47'). This unit grades into the next at approx 14.33m (47').											
	(15')													

# DIAMOND DRILL RECORD

PROPERTY SOUP CLAIMS

HOLE No. 89-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 02 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	%Cu
FROM	TO									
14.33	17.37	95-100%	Augite feldspar - <sup>porphyritic andesite</sup> <u>asin 89-3 (grey-green medium</u> <u>grained porphyritic rock, phenocrysts of augite, (ANX)</u> <u>and feldspar</u>							
(14')	(5')									
17.77	27.77	85%	Andesite - <u>girdas into altered</u> <u>andesite. It is silicified, light grey green (bleached)</u> <u>with fine grained disseminated pyrite and</u> <u>pyrite stringers (1mm). Qtz-calcite stringers at</u> <u>random orientations. From 20.42 (67') to 21.13 (69.5'),</u> <u>rock is highly altered (silicified) and bleached. At</u> <u>21.13 (69.5') there is a 15-20cm vein of rusty,</u> <u>vuggy qtz and altered rock with yellow stain, at</u> <u>90° to C.A. There is also another small veinlet</u> <u>(3-4cm) at 20.60 (67.6') at 80° to C.A. A small</u> <u>porphyritic section is at 21.43 (70.25') to 21.95</u> <u>(72'). It looks like a small andesite band. After</u> <u>this is the very silicious, altered andesitic unit.</u> <u>Near the end, it is blocky, broken with abundant</u> <u>rusty fractures and qtz-calcite stringers at all</u> <u>orientations.</u>							
(5')	(78')									
				56320	19.42	20.42	1.0m	.02	.001	.010
				56321	20.42	21.42	1.0m	.03	.001	.016
				56322	21.42	22.42	1.0m	.03	.001	.020
				56323	22.42	23.77	1.35m	.04	.001	.088

# DIAMOND DRILL RECORD

PROPERTY Southern Claims

HOLE No. 89-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 03 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu
FROM	TO									
23.77	27.89	80%	Skarn - Magnetite Zone - slightly oxidized	56324	23.77	24.77	1.0m	.20	.006	.040
(78')	(91.5')		massive magnetite with "blebs" and dissemination	56325	24.77	25.77	1.0m	1.01	.029	.037
			of fine to medium grained pyrite. In magnetite	56326	25.77	26.52	0.75m	1.80	.053	.253
			all fragments and bands of altered country rock	56327	26.52	26.82	0.30m	.10	.003	.022
			(stain) which is a pale grey green. On slightly	56328	26.82	27.89	1.07m	1.59	.046	.170
			oxidized surfaces is a yellow stain (cp?) or							
			(arsenic?). The skarn-magnetite horizon has							
			a small 30cm band of andesite from 26.52							
			(87') to 26.82(88'). After this, magnetite continues							
			to 27.89 (91.5'), as before.							
27.89	30.33	95%	Andesite - from 27.89 (91.5') to 29.41 (96.5'), andesite	56329	27.89	28.89	1.0m	.09	.003	.234
(91.5')	(99.5')		is extremely altered. It is very silicious,	56330	28.89	30.33	1.44m	.03	.001	.376
			almost like chydite. It has abundant malachite							
			on fractures and is extremely hard. From 29.41							
			(96.5') to 30.33 (99.5'), andesitic unit becomes							
			less altered, but is still silicious. On fractures							
			there are black fine grained "isettes" of mineralization.							
30.33	41.76	95-100%	A.F.P. Andesite as above 14.33-17.37, fine grained	56331	30.33	32.33	2.0m	.10	.003	.086
(99.5')	(137')		disseminated pyrite, abundant magnetite. Rusty	56332	32.33	34.33	2.0m	.29	.008	.081
			fractures, occasional quartz veinlet of random	56333	34.33	36.33	2.0m	.14	.004	.030



# DIAMOND DRILL RECORD

PROPERTY SOUP CLAIMS

HOLE No. 89-5

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 02 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE						
FROM	TO												
			some unoxidized pieces of massive magnetite. The zone was definitely here, but something has happened below surface. Driller reports say it was like a cave.										
29.57	36.58	50-80%	A.F.P. Andesite - from 29.57 (97') to approx. 33.22 (109'), altered and with buff colored, chloritic alteration, oxidized with fine grained disseminated pyrite, some minor malachite. Rock has a greenish yellow stain (epidote?) and core is very broken. Recovery from 29.57 (97') to 32.61 (107') is only 50%. From 32.61 (107') to 36.58 (120'), recovery is 80%. From 32.61 (107') to 33.02 (108.33') core is oxidized and has greenish yellow stain. Micro-diorite seems to have fine grained magnetite in matrix. From 33.02 (108.33') to 36.58 (120'), micro-diorite is slightly altered (silicified), with rusty fractures (magnetite) and minor malachite. Also, there are black, fine grained 'rustles' of mineralization on fractured surfaces.										
197'	120'		End of hole 36.58m (120')										

# DIAMOND DRILL RECORD

PROPERTY Soup Claims

HOLE No. 89-6

DIP TEST		
Footage	Reading	Angle Corrected
	-10°	

Hole No. 59-6 Sheet No. 01  
 Section \_\_\_\_\_  
 Date Begun July 11/89  
 Date Finished July 12/89  
 Date Logged July 12/89

Lat. \_\_\_\_\_  
 Dep. \_\_\_\_\_  
 Bearing 141°  
 Elev. Collar \_\_\_\_\_

Total Depth 4054 (1133')  
 Logged By Ken Embree  
 Claim Soup  
 Core Size BQ

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	%Cu
FROM	TO									
0	3.96		Casing and broken rock							
	(13')									
3.96	34.44	95-100%	Augite Porphyry Andesite - as in 89-5							
(115')	(115')		green medium grained rock with phenocrysts of augite and feldspar. Some sections are quite andesitic, but will be called augite porphyry Andesite because of augite content. Minor fine grained disseminated pyrite (<1%) and occasional pyrite stringers. Occasional qtz-calcite stringers of random orientations to C.A. At 17.68 (58') there is a 5cm qtz veinlet at 85-90° to C.A. Veinlet has "blebs" and disseminations of fine to medium grained pyrite, some magnetite and epidote. There is a section of layered andesite (all from 22.40 (73.5') to 22.56 (74')). Finer grained more andesitic sections are present from 25.45 (83.5') to approx 26.57 (87') and from approx 28.65 (94') to 31.09 (102').							
			At approx 32.92 (108') there is a 5-10cm band of altered, fragmental rock at 80° to C.A.	59344	17.55	17.85	0.30m	.02	.001	.014
				59345	32.82	33.12	0.30m	.01	.001	.013
				59346	33.12	33.83	0.71m	.01	.001	.010

# DIAMOND DRILL RECORD

PROPERTY Sour Camp

HOLE No. 89-1

DIP TEST		
		Angle
Footage	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 07 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	%Cu
FROM	TO									
			This small unit consists of a chloritic, epidot rich altered augite porphyry diorite with occasional minor fine grt. veinlets. From 33.83 (111') to 34.44 (113'), there is a zone of quartz veining. Swirling grt. veinlets surround a 10-15 cm core of quartz at approx 75-85° to C.A. Quartz has fragments of altered country rock with minor magnetite. Mineralization is very low (< 1%).	59347	33.83	34.44	0.61m	.08	.002	.011
34.44 (113')	40.54 (131')	35-40%	A.F.P. Andesite From 34.44 (113') to 37.49 (123') rock is highly altered - buff colored with occasional vugs due to oxidized disseminated pyrite. Ore is very broken and rusty, recovery low (35%). From 37.49 (123') to 40.54 (133'), recovery is approx. 40%. Microdiorite is still highly altered (chloritic) with minor fine grained disseminated pyrite, but is no longer oxidized.	59348	34.44	37.49	3.05m	.19	.006	.050
			End of hole 40.54m (133')							

# DIAMOND DRILL RECORD

PROPERTY Southern Claims

HOLE No. 89-7

DIP TEST		
Footage	Angle	
	Reading	Corrected
	-50	

Hole No. 897 Sheet No. 01  
 Section \_\_\_\_\_  
 Date Begun July 15/89  
 Date Finished July 14/89  
 Date Logged July 14/89

Lat. \_\_\_\_\_ Total Depth 70.40 m (231')  
 Dep. \_\_\_\_\_ Logged By K. Embree  
 Bearing 277° Claim Southern  
 Elev. Collar \_\_\_\_\_ Core Size 80

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	%Cu
FROM	TO									
0	6.40		Casing and broken rock							
	(21')									
6.40	19.91	75%	Augite Por. Andesite as before, medium grained							
(21')	(65.25')		green-grey rock with phenocrysts of augite, hbl.?, feldspar. From 6.40(21') to approx. 7.32(24')							
			rock is highly altered, buff colored and oxidized. There is an epidote-rich section from 7.32(24') to 7.62(25'), followed by a less altered section to 9.45(31')							
			Occasional qtz stringer and magnetite veinlet (1-2cm) at 7.62(25') at 90° to c.a., fine grained disseminated pyrite. From 9.45(31') to approx 11.58(38'), andesite is altered, with vuggy section (oxidized, abundant epidote and disseminated magnetite in andesitic matrix. From 11.58(38') to approx. 12.04(39.5'), rock is less altered. At 12.04(39.5'), rock becomes highly altered and oxidized. Qtz veining is present from 12.44(40.8') to 12.80(42')							
			Highly altered rock (oxidized, epidote and magnetite enriched, andesite, minor malachite) continues to approx 18.59(61')	56349	6.40	7.44	1.04m	.08	.002	.020
				56350	7.44	8.44	1.0m	.07	.002	.019
				56351	8.44	9.44	1.0m	.42	.012	.021
				56352	9.44	10.44	1.0m	1.04	.030	.044
				56353	10.44	11.44	1.0m	.38	.011	.033
				56354	11.44	12.44	1.0m	.21	.006	.047
				56355	12.44	12.80	0.36m	1.12	.033	.130
				56356	12.80	13.80	1.0m	.25	.007	.051
				56357	13.80	14.80	1.0m	.22	.006	.037
				56358	14.80	15.80	1.0m	.13	.004	.021



# DIAMOND DRILL RECORD

PROPERTY Sov. Claims

HOLE No. 89-7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 89-7 Sheet No. 02 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	% Cu
FROM	TO									
1990	2147	95-100%	Augite Porphyry Andesite - as before, medium	56359	1580	1600	10m	.03	.001	.121
(6528)	(77')		grained greenish rock with phenocrysts of	56360	1680	1959	1.79m	.09	.003	.400
			augite (Quite mafic from 19.90(6528') to approx 2103							
			(69') (if no feldspar). From 21.03(69') to approx 22.25							
			(73'), there is a section with more feldspar, occasional							
			qtz stringers at random angles to c.p. and occasional							
			silicious bands from 22.25(73') to approx 23.47							
			(77') there is a contact at approx. 60° to c.p.							
2347	3368	95-100%	Andesite as above, medium grain of volcanic,							
(77')	(110.5')		green-greengray with phenocrysts of fsp, augite,							
			hbbl(?) This section has more fsp. than previous							
			and is somewhat finer grained. Occasional qtz-							
			epidote stringers at all orientations. Abundant qtz-							
			calcic stringers. This is an andesitic section							
33.68	36.27	95-100%	from 33.68(110.5') to approx. 36.27(119'). Random							
			qtz-calcite stringers with some epidote							
36.27	3888	70%	Augite Porphyry Andesite At 36.27(119') there							
(119')	(121')		is a 5-10cm mudstone. The augite porphyry							
			diorite follows, but is sheared and folcy.							

# DIAMOND DRILL RECORD

PROPERTY Sour Creek

HOLE No. 89-7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 89-7 Sheet No. 03 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au GPT	Au OPT	%Cu
FROM	TO									
			Recovery is only 70% and drilled reported a core (or big hole) just prior to 36.88 (121').							
36.88 (121)	41.15 (135)	90-95%	Andesite - fine-medium grained green-grey volcanic with feldspar phenocrysts etc - calcite stringers at all orientations							
41.15 (135)	67.97 (227)	85-90%	At approx 41.15 (135') the andesitic unit grades into a more coarse unit; Andesite. Andesite has large phenocrysts with feldspar. Andesite is slightly chloritic from 41.15 (135') to 44.81 (147') with occasional Qtz-calcite stringers at random angles to A. Core is very blocky from 50.29 (165') to 50.90 (167'), with rusty fractures, very minor malachite. A more andesitic section from 54.86 (180') to approx. 56.08 (184') has abundant Qtz-calcite and epidote veinlets at 0-5° to C.A. Andesite continues, with chloritic alteration and epidote rich sections. Qtz-calcite stringers are at random orientations, some are rusty or fractured. Andesite.	56361	54.86	56.08	1.22 m	.02	.001	.014

# DIAMOND DRILL RECORD

PROPERTY SOUP CLAIMS

HOLE No. 89-7

DIP TEST		
		Angle
Footage	Reading	Corrected

Hole No. 89-7 Sheet No. 04 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE						
FROM	TO												
			is fine grained (from other section or holes and is very porphyritic. Bottom of section 67.67(222') to 67.97(223') is epidote rich.										
67.97 (223')	69.19 (227')	100%	Andesite - fine grained greenish volcanic with minor augite. Occasional gte-calcite stringers at random angles to CA.										
69.19 (227')	69.65 (228.5')	100%	Andesite - as above										
69.65 (228.5')	69.95 (229.5')	100%	Andesite - as above 67.97-69.19 (contact at 69.69 is approx 60-70° to C.A.)										
69.95 (229.5')	70.40 (231')	100%	Andesite as above 69.19-69.65. (contact with gte stringer) at 69.95 is 75-80% CA. Pad shifted at 231', had to abandon hole. End of hole 70.40m 231'										