

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

10,827

REPORT ON GEOLOGY,
GEOCHEMISTRY AND
DRILLING
on
THE MISTY I CLAIM
for
CCH MINERALS LTD.

SKEENA MINING DIVISION
LAT. $65^{\circ}45'N$, LONG. $128^{\circ}53'W$
NTS 103I/10,15

Work Carried Out By:
Campbell Resources Inc.
A-105, 355 Burrard Street
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Robert G. Wilson
November 22, 1982

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INTRODUCTION

LOCATION AND ACCESS

The Misty property is situated 32 km N.E. of Terrace, B.C. on the south facing slope of Mt. Allard, map N.T.S. #103I/10, 15 (Figures 1 & 2). The camp was located at treeline (3500' ASL) at 54°45'N latitude, 128°53'W longitude.

Access to the property is by helicopter from Terrace. A landing pad constructed near the upper camp is large enough to accommodate a Bell 206 Longranger. Other landing sites exist above treeline, and on sandbars along the Nelson River.

An overgrown and impassable logging road, circa 1968, exists along the southern boundary of the claim, approximately 8 km from driveable logging road.

PHYSIOGRAPHIC AND PHYSICAL SETTING

The Misty claim lies within the Kitimat Ranges section of the Coast Mountains physiographic subdivision, and 10 km west of the boundary with the Nass Ranges section of the Hazelton Mountains physiographic subdivision.

The region is characterized by steep valleys and rugged, glacially carved peaks. In the area of this Misty property the local reliefs are 4,000 to 4,000 feet (1220-1525m). The property itself has slopes from 25 to 35°, and cliffs are present in creek canyons and along ridge flanks.

More than half the property lies below tree level. The vegetation is Pacific coastal rain forest. Mature stands of Douglas Fir and Hemlock reach 50 to 70m in height, with butt widths of one-half to three-quarters of a metre. Slide zones along creeks are choked with slide alder, devil's club, buck brush and stinging nettle. Above treeline the vegetation is mainly blueberry, huckleberry and heather.

The weather in the area is that of wet coastal conditions, with generally wet summers and heavy winter snowfalls. Excessive 1981-82 snowloads delayed project start-up until the first of July. Helicopter access to the property was frequently prevented by fog, for up to five consecutive days.

EXPLORATION HISTORY

The Misty claim was staked by C.C.H. Resources Ltd. on June 22, 1979, in response to a British Columbia Department of Mines regional geochemical Open File Release. A preliminary prospecting program was carried out in September of that year, and a reconnaissance soil sampling and geological mapping project was done on the claim and adjacent ground during the summer of 1980.

A more detailed program in 1981 consisted of staking of the Misty I claim, grid establishment over the highest reconnaissance geochemical anomaly, geological mapping and geochemical soil sampling.

Encouraging results from the 1981 survey prompted a 1982 program of trenching, rock geochemistry and drilling. An additional claim, the Misty II was staked to cover ground to the N.E., on trend with the N.E.-S.W. striking geochemical anomaly (Figure 2).

In August, 1980, Misty claim was sold to C.C.H. Resources' parent company, Campbell Chibougamau Mines Ltd. Campbell Chibougamau subsequently underwent a reorganization and name change to Campbell Resources Inc. The claim was sold to another wholly owned subsidiary, C.C.H. Minerals Ltd. on April 6, 1981. C.C.H. Minerals Ltd. now owns the Misty, Misty I and the newly staked Misty II claims, and Campbell Resources Inc. is the current operator.

CLAIMS

The property is comprised of the following claims:

<u>Claim #</u>	<u>Date Staked</u>	<u>Date Recorded</u>	<u>Record Number</u>	<u>Number of Units</u>
Misty	June 22/79	June 27/79	1684(6)	15
Misty I	Sept.2-17/81	Sept.22/81	3235(9)	20
Misty II	Sept.16-17/82	Oct. 13/82	3562(10)	15

ECONOMIC POTENTIAL

The economic potential of the Misty Group has increased significantly this year, due to the discovery of auriferous quartz veins. This vein system has an observed maximum width of 1.1 metres, and apparent strike length of 170 metres.

Considerably more work is required on the property before any estimates of grade or tonnage can be made.

SUMMARY OF WORK DONE

Geological Survey

Geological mapping of four trenches was completed at scales of 1:50 or 1:100. The trenches are, in general 1 metre in width and have a total length of 102 metres.

Geochemical Survey

A total of 40 soil samples were taken, and a total of 113 rock-chip samples were collected during the course of the survey.

Drilling

Five NQ diamond drill holes, totalling 270.21m were drilled during the course of the project.

CLAIMS WORKED

All work, geological, geochemical and diamond drilling was completed upon the Misty I claim.

DETAILED TECHNICAL DATA AND INTERPRETATION

GEOLOGICAL SURVEY

Purpose

Geological mapping of four hand trenches was completed to describe and understand the character and relationships of quartz veins and host rocks. The trench maps are displayed in Figures 6, 7, 8 and 9 .

Results

Geological mapping on a regional scale was completed in 1980 and 1981, details of which are reported in Assessment Report numbers 09239 and 10128. For completeness sake, a brief summary is included below.

The Misty property is located on the N.E.-S.W. trending contact between the dioritic intrusions of the Cretaceous Coast Crystalline Complex, and the fine-grained sedimentary and volcanic sequence of the Upper Jurassic to Lower Cretaceous Bowser (Lake) Group.

Rocks of the Coast Crystalline Complex consist of medium-grained granodiorite, quartz diorite and hornblende granodiorite. Bowser (Lake) Group rocks on the Misty consist mainly of argillites, shale, sandstones and siltstones. Feldspar porphyry dykes of acid to intermediate composition, and thought to be Tertiary in age, cut the sediments in an E.N.E. direction.

Quartz veining within the argillite unit was found, in 1982, to be more extensive than previously recognized. The quartz is milky, limonitic, frequently vuggy and, has a yellowish stain (after arsenopyrite?). It is seen associated with a stubby, blunt ended, hexagonal cross sectioned, yellow colored mineral occurring in clusters and as encrustations. This mineral is possibly mimetite, but no firm identification has yet been given.

The quartz also contains fresh pyrite and a gossanous silica boxwork after pyrite, as well as angular fragments of the host argillite.

Gold occurs in small flakes, nuggets and occasional dendritic masses having crystal faces.

The quartz veins were traced to near bedrock by prospecting quartz float uphill from geochemically anomalous soil samples. The most continuous quartz vein zone has been traced by prospecting, blast pits, trenches and drill holes, over a strike length of 200m and a vertical range of approximately 100m.

In Trench 3(Figure 8), the uppermost trench on this vein system, six mineralized zones were exposed. These zones range from inconspicuous quartz sulphide stringer zones, generally less than 1m wide, to a 1m wide sheeted, vuggy, sugary quartz vein, containing a fair amount of limonite. These mineralized zones trend 120-130° and dip within 10° of vertical.

Trench 1(Figure 6) was designed to cross the junction of two arms of a recumbant "V"-shaped geochemical anomaly known as the "Wishbone". The trench cut two sheeted quartz veins, one of which strikes $\pm 120^\circ$, but dips 45 to 60° S.W.

Two veins have been exposed in Trench 4(Figure 9). The 7700 Vein, 1.1m wide, dips within a few degrees of vertical, and strikes with the geochem anomaly. A stubby branch vein, or splay strikes westerly and dips to the north. The branch vein and a major portion of the main vein consist of sheeted, sugary quartz and pyrite veins, with free gold.

In part, the 7700 Vein is composed of a fragile box-work of quartz, limonite and altered wallrock, which readily disintegrates into a quartz-limonite sand when disturbed. This material has been given the field term "Mung", and, unless vein walls are exposed, it is difficult to differentiate between Mung and gossanous overburden.

Trench 2 (Figure 7) was designed to cut the source of the upper or N.E. trending arm of the Wishbone Anomaly. The trench was completed in two stages, the first stage 60m of heavy going through deep overburden failed to cut any strong mineralized structures. Two porphyry dykes were exposed, one an altered muscovite feldspar porphyry, the other a pyrite rich feldspar porphyry.

When bedrock overburden interface samples from the top(north) end of the trench returned anomalous Au values, the trench was extended uphill. After 4m, trenching was abruptly halted by a deep overburden filled bedrock depression. The bedrock on the south wall of this depression is highly altered and gossanous. A sample of the gossan wallrock contained only low gold, thus, the source of the strong soil geochemistry may be further uphill still.

A narrow quartz limonite vein exposed in a small pit a few metres east of Trench 1 is believed to be an element of the upper arm of the Wishbone Anomaly. Between this point and Trench 2, outcrop is sparse, and mineralization has not been exposed to date.

All trenches were hand dug through up to 1 metre of overburden. Explosives were required to loosen the hard-packed, vegetation-bound soil.

GEOCHEMICAL SURVEY

Purpose

The 1982 soil geochemical survey was divided into two parts; 1) the 1981 soil geochemical grid was extended to the east and north-east in an attempt to define the eastern boundary of a recumbant "V"-shaped anomaly known as the "Wishbone".

2) soil samples were taken within the trenches to discover the proximity of anomalous soil samples to anomalous bed-rock sources.

The rock-chip geochemical survey was conducted to localize bedrock sources of gold mineralization indicated by anomalous soil geochemical samples. Regional samples were taken to define source areas of anomalous soil samples. Trench samples were taken to define specific anomalous horizons.

Investigations to delimit the sample repeatability and assay variability were completed to ascertain the optimum sampling and analyzing procedures required, so that meaningful results could be obtained for samples taken.

Procedure

Part 1 of the soil geochemical survey was conducted on an extension of a 1981 detail soil grid. Sample lines are spaced 50 to 100 metres, with sample points at 25 metre intervals.

Samples of B horizon soils were taken from 30 cm average depth geopick dug holes, and placed in brown kraft bags.

Part 2 of the soil geochemical survey was of soils taken within hand trenches at the soil-bedrock interface of B-C horizon material. Samples were taken by hand trowel at 2 metre intervals, and placed in kraft bags.

All samples were sent to Bondar-Clegg Laboratories in Vancouver for geochemical analysis. Appendix I is an information sheet prepared by Bondar-Clegg on their analytical techniques of analysis.

Rock chip samples were taken within hand trenches as channel samples across 1 metre intervals. Bedrock was cleared of overburden, and samples were taken by geopick and moile.

Results

In 1982, lines 106+50E and 107+00E(from 100+00N to 107+00N), and lines 108+00E and 109+00E(from 104+50N to 108+00N) were added to the 1981 detail soil geochemical grid. Figure 4 is a map showing the 1981 and 1982 results of the survey. The 1982 samples are indicated by a . In addition, the 1981 geochemical results were re-contoured using a lower threshold value after bedrock showings were discovered uphill from samples previously considered non-anomalous.

The re-contoured geochemical grid displays more continuous N.E.-S.W. trending parallel anomalies. Within the 1982 sampling area a N.E.-S.W. trending anomaly between 105N and 106+75N exists on lines 106+50E to 108+00E, but is cut off by line 109+00E south of the baseline(107+00N). The anomaly does appear to continue on line 109+00E north of the baseline.

Further sampling in this area was not completed due to the presence of cliffs. Maximum soil geochemical values achieved were 345 to 575 ppb Au. Results from trench soil samples indicate that good correlation exists between bedrock gold sources and anomalous soil samples taken in very close proximity(Figures 6 and 7). Zoning of results is absent from soils taken downhill from trench bedrock sources, with spot highs immediately adjacent the source being the norm.

Anomalous but irregular values, possibly indicative of a thin, turbulent soil cover, is the pattern of results seen in trench soil samples. Thus, only a general "uphill" source can be concluded from most anomalous regional soil samples.

Rock chip samples, taken every metre within trenches, has shown that gold occurs mainly with quartz veins(Figures 6, 7, and 9). Slightly anomalous results were also received from the margins of altered porphyry dykes, and from one metasediment unit, being mainly a buff-brown siltstone.

Regional rock-chip samples have indicated other possible gold source areas(Figure 5). Anomalous results were mainly confined to quartz vein material. Results of samples of other rock types were at, or below background values.

A collection of grab samples, representative of the S.W. 0.6m portion of the 7700 Vein, assayed 21.6 gm Au/tonne(0.63 oz Au/t). Assays for initial samples over the full 1.1m width of the vein averaged 4.9 gm Au/t. Assays for subsequent duplicate panel samples returned the following values:

<u>Sample No.</u>	<u>Assay A</u>	<u>Assay B</u>
24145	76.12 g/t	78.52 g/t
24146	3.26 g/t	3.33 g/t

Particulate "free" gold was found in crushed, panned and microscopically examined vein samples. This "free" gold is thought to be the cause of the diversity in sample assays.

The variability in sample repeatability presents a sampling challenge for the Misty. Larger sample size may be required to improve sample repeatability.

Assays on duplicate splits taken from coarse (minus 10 mesh) rejects of rock chip samples indicate a reasonable assay variability.

<u>Sample No.</u>	<u>Original Assay</u> oz Au/ton	<u>Duplicate</u>	
		A	B
24326	0.178	0.167	0.142
24327	0.175	0.160	0.160
24313	0.630	0.600	0.582
24320	0.050	0.024	0.025
24321	0.235	0.250	0.251

Discussion

Geochemical prospecting as an exploration tool for gold has had good success on the Misty property. A reasonable percentage of outcrop, together with a thin, turbulent soil covering, have aided in the localization of bedrock gold sources.

Results from soil geochemical studies must be interpreted on a general, rather than detailed scale, with geological prospecting employed to determine trench locations.

Uphill prospecting from the upper arm of the Wishbone Anomaly located quartz showings containing anomalous amounts of gold mineralization. These showings, which have not yet been trenched, are situated on ground that geochemically is non-anomalous.

Trench 2 is located across the upper arm of the Wishbone Anomaly, and extends into ground defined by surface samples to be non-anomalous. Soil samples from the bedrock-overburden interface below the non-anomalous samples were strongly anomalous. Hence, a source within "non-anomalous" ground is indicated.

The cause of the strong N.E. trending 1981 soil geochemical anomalies has not yet been fully explored. Sampling in 1982 has extended the strike length of these open-ended anomalies by 250 metres. Detailed geological prospecting, followed by regional rock geochemical sampling and trenching, appears to be the best tool for localizing bedrock sources of gold mineralization for drill testing.

DRILLING

A small Diamond Drill Program, to further evaluate the gold mineralized veins, commenced in early September.

A total of five NQ (approximately 1 7/8" diameter) holes were drilled, all testing the lower arm of the Wishbone Anomaly. Holes M-82-1 and 2 were drilled in the vicinity of Trench T-82-4, holes M-82-3 and 4 were drilled under Trench T-82-1, and hole M-82-5 was drilled approximately midway between Trenches 1 and 4.

Drilling conditions were very difficult, and a satisfactory recovery of the highly fractured vein material was never achieved. While each hole cut vein material, the assay results cannot be taken as indicative of grade. Appendix III is the geological and sampling logs of the 1982 drilling.

Diamond drill holes M-82-1, 2, were drilled from a pad 10 metres along strike and stepped out 25 metres from the 7700 Vein showing (Figure 11). Drill hole M-82-1 is located at 103+44N, 104+43E, drilled on a bearing 220° at -46° , for a length of 66.75m. Very poor core recoveries were obtained, hence, results are considered somewhat qualitative in nature.

A quartz vein was intersected from approximately 27.40 to 29.57m, for an indicated true width of 1.5m, suggesting a N.E. dip for the 7700 Vein of 68° . Assayed vein material returned values of 0.17 and 1.03 g/t, over consecutive 1.1m core lengths. The quartz vein is within a black argillite, bounded by an altered feldspar porphyry. One other minor quartz vein was intersected, but core recovery was not sufficient for sampling.

Diamond drill hole M-82-2 is located at 103+43N, 104+44E, drilled 190° at -60° , for a length of 48.31m. A quartz vein was intersected between interpolated depths of 35 and 36 metres. Though only 5% of the core was recovered, an assay of 3.81 g/t was obtained from a sample of the vein material. As in M-82-1, the vein is hosted by black argillites bounded by altered feldspar porphyry.

Diamond drill holes M-82-3, 4 (Figure 12) are located at 103+43N, 103+90E, drilled 040° at -60° and -45° respectively for 72.85 and 38.10m. Drill hole M-82-4 was collared when the drill rods in M-82-3 became stuck.

A representative of the drilling company, who was flown in to establish better core recoveries, was able to free the stuck rods in M-82-3, and M-82-4 was subsequently abandoned, drilling M-82-3 to completion.

Diamond drill hole M-82-3, drilled to 72.85m, intersected a vein zone from 16.76 to 21.33m, in which two quartz veins were recovered; one from 16.76 to 17.53m, which assayed 4.7 g/t Au, and the other from 18.00 to 20.42m, assayed .36 g/t Au. Core recovery in these two veins was 65% and 25% respectively.

Fault gouge, quartz veinlets in argillite, and quartz pebbles within rubbled core are seen over the remainder of the zone, which has a weighted average of 1.36 g/t over 3.98m. Argillites and an intermediate dyke were recovered below the zone, while argillites and an altered porphyry were found above the zone.

Diamond drill hole M-82-4 was drilled to a depth of 38.1m in the same plane, but at a more shallow angle than M-82-3. The hole intersected a less well defined vein zone from 13.72 to 15.85m.

Two quartz veins were intersected; one from approximately 13.72 to 14.48m, which assayed 0.14 g/t, and one from 15.24 to approximately 15.85m, which assayed .31 g/t. Core recovery in these two veins was 20% and 40% respectively. An altered porphyry was recovered above the zone, while a felsic to intermediate dyke and mixed argillites and siltstones were found below the zone.

Diamond drill hole M-82-5 (Figure 13) is located at 103+80N, 105+01E, and was drilled 210° at -60° for 44.20m. It intersected a vein zone from 38.40 to 39.78m, in which one quartz vein was found from 38.71 to 39.01m. The quartz vein assayed 0.07 g/t Au, and may not be the main zone intersected in holes M-82-1 and 2.

The drill hole was stopped short of its planned depth, when a drill bit broke at the bottom of the hole. A lack of drill bits in camp, together with strained budget expenditures, forced the abandonment of this hole. However, the casing was left in the ground should deepening of the hole be deemed necessary.

All core has been stored on the property at the upper camp site location.

CONCLUSIONS

The Misty property consists of three claims; the Misty, Misty I and Misty II, totalling 50 units. The property is underlain by rocks of the Upper Cretaceous or Later Coast Intrusions and Upper Jurassic and ?Lower Cretaceous Bowser(Lake) Group.

Exploration in 1982 was concentrated entirely within the Bowser(Lake) Group, which consists of argillites, shales, siltstone and granodiorite, quartz diorite and andesite dykes.

The 1982 project located two showings of quartz hosted gold mineralization lying 170 metres apart, and approximately along the strike of the contained quartz veins. The veins are within black argillites and are seen dipping steeply to the N.E. and S.W.

The vein structure has been tested to depth by five diamond drill holes. Core assay results, although encouraging, cannot be taken as indicative of grade, due to poor core recovery.

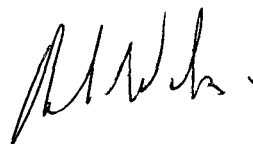
Prospecting within the gridded area discovered other quartz showings, but these have not yet been trenched. Additional soil geochemically anomalous areas exist within the 1981 detail grid, and within the 1982 detail grid extension that have been neither prospected nor trenched.

Further work on the property should consist of: the extension of detailed mapping and soil geochemistry over the target areas presently outlined by reconnaissance sampling; trenching and/or drill testing of the other anomalies in the present detail area; and by future detailed surveys. Diamond drilling on established veins should be concurrent.

AUTHOR'S QUALIFICATIONS

I, Robert G. Wilson, do hereby certify that:

1. I graduated in 1976 with a BSc Degree in Geology from the University of British Columbia.
2. I practiced my profession as a Geologist on a project basis until March, 1979.
3. I have been practicing my profession as a Geologist on a full-time basis since March, 1979.




Rob G. Wilson
Geologist

Vancouver, B.C.

APPENDIX I

BONDAR-CLEGG ANALYTICAL TECHNIQUES
OF
ANALYSIS




BONDAR-CLEGG

GEOCHEMICAL METHODS

<u>ELEMENT</u>	<u>EXTRACTION</u>	<u>METHOD OF ANALYSIS</u>
Cu, Pb, Zn, Mo, Ag, Cd, Ni, Co, Mn, Fe	Hot Lefort Aqua Regia	Atomic Absorption
U	Hot Conc HNO ₃	Fluorimetric
W	Basic oxidizing fusion	Colourimetric
F	Basic fusion	Citrate Buffer-Specific Ion
Au, Pt, Pd	Fire Assay & Hot Aqua Regia	Atomic Absorption
As	HClO ₄ -HNO ₃ Arsine	Colourimetric
Hg	Aqua Regia	Closed Cell, Flameless Atomic Absorption
Sn, Sb, Ba, Rb, Sr, Y Zr, Nb, La, Ce, Ti		Energy dispersive XRF
Th, Se, Ta, Ga, In		Discrete angle/cathode XRF
Bi	Hot Conc HNO ₃	Atomic Absorption
V, Be, Li	HClO ₄ -HNO ₃ -HF	Atomic Absorption
Cr	Sodium Peroxide Fusion	Atomic Absorption
Tl, Te	HBr-Br + Organic Extraction	Atomic Absorption
B	Basic fusion	Plasma
Re	Alkali fusion + Organic extraction	Atomic Absorption
C		Leco Induction Furnace
<u>WHOLE ROCK ANALYSIS</u>		
SiO ₂ K ₂ O Na ₂ O CaO		
MgO MnO Fe Al ₂ O ₃	HF-HNO ₃	Atomic Absorption
TiO ₂ P ₂ O ₅	HF-HNO ₃	Colourimetric
S		Leco Induction Furnace

Fraction used for analysis: Rocks -100 mesh; soils/sediments -80 unless otherwise noted.

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



BONDAR-CLEGG

GEOCHEMICAL SAMPLE FLOW

- STEP 1 Logging in - each sample submission is assigned a unique lot number
- STEP 2 Sort - according to sample type (soils, streams, rocks, etc.) and then according to alphabetic and/or numeric order.
- physical sample is checked off against sample submittal form which has been completed (?) by the client.
- STEP 3 Sample preparation - all samples are processed in numeric order with adequate drying being ensured before preparation
- a) soils-sediments - bang dry sample in the bag with rubber mallet to break loose fines from clods/mosses/etc.
- pour into 80 mesh stainless steel sieve.
- sift out all -80; if samples are for Au, sift out -20 +80 if -80 fraction less than 20 gm.
- re-bag sample and refile if retention of rejects requested otherwise - out goes the oversize
- b) rock and drill core - put in numerical order; insert made-up pulp bags into proper rock bag
- primary crush
- secondary crush (80% -10 mesh)
- split out 200 - 400 gm with a Jones riffle splitter
- pulverize via an impact (ring and puck) grinder. Final product is about 50% -150 mesh and 99% -80 mesh, and is free from pulverizer contamination.
- c) pan concentrates - sample is pulverized in its entirety to ensure homogeneity
- please no coarse metallic nuggets without prior warning
- d) pulps - spot check for proper preparation; if unacceptable we re-prepare
- e) other sample types are prepared according to client's request
- STEP 4 Weighing - using electronic balances, with a precision of $\pm 0.01\text{g.}$, we weigh 5% of the samples for duplicate analysis and 2% of our analyses are performed on accepted standards.
- STEP 5 Extraction methods - $\text{HNO}_3\text{-HCl}$ - a vicious attack that satisfactorily leaches Cu Pb Zn Mo Ag Mn Cd Ni Co etc. in "all" rocks and soils/seds. Problems would be low level values ($< 40\text{ ppm}$) in high iron oxide soils or in tight refractory lattices.

Bondar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
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Telex: 04-352667



- HNO_3 - satisfactory for almost all ore minerals of U, Bi some Ag minerals, and most sulphides.
- partial extractions - specific for specific type occurrences or for loosely bonded (e.g. hydromorphically deposited) ions.
- $\text{HNO}_3\text{-HClO}_4\text{-HF}$ - a higher temperature, vicious attack that specifically attacks some refractory silicates and oxides. More difficult to control precision, but useful for elements like V, Be, Se and certain low level metallics in rock geochem programs.
- HBr-Br - a slow, but powerful oxidative attack deigned for Te and Tl minerals.
- various fusions - for difficult to handle elements in refractory lattices (e.g. W Cr Au Pt).
- STEP 6 Analysis - (see attached sheet)
- STEP 7 Data approval and transfer - (see accompanying sheet entitled Computer services)
- STEP 8 Quality control - fifteen percent of our staff do nothing else but supervise and check procedures and techniques. The resident assayer, chemist and geochemist provide the final check.

APPENDIX II

ITEMIZED COST STATEMENT

(DIAMOND DRILLING ONLY)

WAGESGeologist

September 3 to 27, 1982
25 days @ \$160.00/day \$ 4,000.00

Field Technician

September 3 to 27, 1982
25 days @ \$125.00/day 3,125.00

Assistant

September 8 to 19, 1982
12 days @ \$100.00/day 1,200.00

FOOD AND ACCOMODATIONFood

September 3, 4, 26, 27, 1982
2 people, 4 nights @ \$25.00/day/person 200.00

Accommodation

September 3, 4, 26, 27, 1982
2 people, 4 nights @ \$36.00/night 144.00

TRANSPORTATION4X4 Truck Rental

September 3 to 27, 1982
25 days @ \$40.00/day 1,000.00

Helicopter Charter

September 3 to 27, 1982
22.6 hours @ \$553.50/hour 12,509.10

SURVEYSDiamond Drilling

September 3 to 27, 1982
270.21 metres @ \$167.06/metre 45,141.46

SAMPLE ANALYSISAssaying

34 samples @ \$9.00/sample 306.00

REPORT PREPARATION

1,200.00

TOTAL \$68,825.56

APPENDIX III
DIAMOND DRILL LOGS

CAMPBELL RESOURCES INC.
DIAMOND DRILL LOG

VENTURE
PROJECT AIYANSH
PROPERTY MISTY

LOCATION

TESTS

GRID

TROPARI

ACID

Location 103+44N
Section L104+43E
Bearing 220°
Dip -46°
Length 66.75m

Depth	Mag Brg	Corr Brg	Dip	Dip'
<u>64.6m</u>	<u> </u>	<u> </u>	<u>54°</u>	<u>45°</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

SURVEY

PHYSICAL DATA

Latitude
Departure
Elevation
Bearing
Dip

Core Size NO to 66.75m, to
Date Started September 9, 1982
Date Completed September 13, 1982
Casing Pulled Yes, 5' as marker. No shoe
Core Recovery Poor to good
Cemented No

Logged by R.G. Wilson
Contractor Drilcor Industries Ltd.

NOTES: 1) Give reference - Magnetic, Grid, True
2) Corrected dip.

From	To	Rock Name	Description	CA	From	To	Sample No.
0	2.62m	Overburden and Frac.Rock	Rubbed core of siltstone, argillite, and gossanous siltstone; intermixed rock types due to highly fractured surface bedrock.				
2.62	8.5?	Meta-Siltstone	<p>Grey to grey-brown, slightly sheared, very fine to fine-grained. Core is highly broken to rubble. Some sections of fine-grained sandstone as at 6.7m.</p> <p>Recovery $\frac{2.44}{8.53} = 29\%$</p> <p>Minor rusty fractures.</p> <p>Contact with below unknown in rubble core.</p>	40° @ 4.5?			
8.5?	10.97	Argillite	<p>Black, fine-grained, massive bedded core Rubbled. Recovery $\frac{.30}{2.43} = 12.5\%$</p> <p>10.67-10.97: Fine-grained brown siltstone</p> <p>Contact with below unknown in broken core.</p>				
10.97	11.58	Altered Porphyry	<p>Speckled brown and white, fine to medium-grained. Minor muscovite, and fine-grained pyrite.</p> <p>Recovery $.2/.61 = 33\%$</p> <p>Contact with below unknown in broken core.</p>		10.97	11.58	24350

From	To	Rock Name	Description	CA	From	To	Sample No.
11.58	27.4 ?	Argillite	Black, very fine-grained, in places slightly sheared. Occasional quartz veinlets. Core rubbled. 16.0m: Fault gouge, 10 cm recovered. 19.0m: Fault gouge, 10 cm recovered. 20.42-21.00: Fault gouge. .4m recovered Below 21.80 rock is coarser grained and displays bedding, (no tops determinations) Recovery between 20.42m and 24.69 is 80%. Contact with below unknown in broken core.	42°@ 39°@	21.90 22.50		
					26.50	27.40	24338
27.40?	29.60	Quartz Vein	White, milky, slightly gossanous, minor yellow staining. Tags @26.5, 28.04, 28.34, 29.1, 29.57 Recovery between 26.5 and 29.57 $.76/3.08=24.7\%$ Contact with below unknown between core runs.		27.40 28.50	28.50 29.60	24339 24340
29.60	29.87?	Argillite	Black, fine-grained, some fault gouge. Contact with below unknown in broken core. .15 rubbled core recovered = 55%.		29.60	29.87	24341
29.87?	34.14	Altered Feldspar Porphyry	Orange-brown, porphyritic to fine-grained, minor pyrite. Short sections of unaltered rock, which is pale green, with quartz and feldspar matrix and occasional dark green		29.87 29.87 31.87	30.48 31.87 34.14	24342 24354 24355

From	To	Rock Name	Description	CA	From	To	Sample No.
			rectangular hornblende crystals. The contact between fresh and altered rock is sharp at 60° CA @31.00m. The rock is slightly banded, also at the above angle. Fault gouges at 30.48, 31.39, 31.70-31.85, 32.21-32.92, 33.53-33.83. Recovery 60%. Contact with below unknown in broken core.	60°			
34.14	34.4 ?	Quartz Vein	Milky pebbles only recovered. Minor gossan. Argillite pebbles mixed, core high rubbled, Contact with below unknown in rubbled core. Section not sampled due to paucity of core recovered. Recovery <5%.				
34.4 ?	66.75	Argillite	Black, very fine-grained, massive bedded. Core highly broken to rubbled, recovery < 50% Minor quartz veinlets at 35.0-36.8 Minor quartz pebbles at 39.47-39.62 39.62 Fault gouge, 10 cm recovered Core recovery > 80% below 39.93. Rock foliation increases below 40.23. 44.81-45.11: Mud seam(fault gouge?). No recovery. 47.85-49.38: Mud seam(fault gouge?). (no recovery). Shear zones at 54.30 and 56.60				

From	To	Rock Name	Description	CA	From	To	Sample No.
			<p>57.30-57.95: Very fine-grained, green-grey siltstone. Contact (top) is a swirled pattern and bottom contact @50° CA</p> <p>No visible bedding in argillite or siltstone Core highly broken below 62.18 Core rubbled below 64.62</p>	50°			
66.75		END OF HOLE	<p>In M-82-1, considerable difficulty was experienced spinning the rods at various times, especially near the bottom of the hole. Hole stopped due to tight rods. Wearing of bit shanks indicate ground swelling behind the advancing bit. Recovery in the vein was very poor, and moderate to poor recovery was experienced in wallrock.</p> <p>Water circulation was lost immediately below casing. Attempts to gain circulation by advancing casing were not effective.</p> <p>CASING 64' = 19.5m</p> <p>Casing pulled, bit removed and one 5' length of casing replaced as hole marker.</p>				

CAMPBELL RESOURCES INC.

DIAMOND DRILL LOG

VENTURE
PROJECT AIYANSH
PROPERTY MISTY

LOCATION

TESTS

GRID

TROPARI

ACID

Location 103+43N
Section L104+44E
Bearing' 190°
Dip -60°
Length 48.31m

Depth	Mag Brg	Corr Brg	Dip	Dip'
<u>47.85m</u>	<u>_____</u>	<u>_____</u>	<u>64°</u>	<u>56°</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>

SURVEY

PHYSICAL DATA

Latitude _____
Departure _____
Elevation _____
Bearing _____
Dip _____

Core Size NO to 48.31m, _____ to _____
Date Started September 13, 1982
Date Completed September 14, 1982
Casing Pulled No, 15' with old shoe
Core Recovery Poor to good
Cemented No

Logged by R.G. Wilson
Contractor Drilcor Industries Ltd.

NOTES: 1) Give reference - Magnetic, Grid, True
2) Corrected dip.

From	To	Rock Name	Description	CA	From	To	Sample No.
0	1.5	Overburden	No core				
1.50	4.57	Intermixed Argillite and Siltstone	Maybe a series of float boulders, as core is rubbled. Interfingering of the two rock types seen at 3.66m.				
4.57	8.00?	Feldspar Porphyry	Dark green, very fine-grained with hazy feldspar phenocrysts. Weakly rusty fractures. Feldspar phenocrysts are present mainly at the top of the section, dying out below 5.49m, where the rock is a very siliceous, dacite? Recovery is approximately 70%, with whole and broken core. Contact with below unknown in broken core.		4.57 6.57	6.57 8.00	24356 24357
8.00?	8.83?	Argillite	Black, very fine-grained, minor fault gouge at 8.43m. Contact with below unknown in rubbled core. Recovery approximately 70%.				
8.83?	9.75	Shaly Argillite	Dark grey to black, streaked orangy-brown.				

From	To	Rock Name	Description	CA	From	To	Sample No.
			<p>Moderately to highly fissile. Recovery approximately 75%. Streaks at 68° to CA at 9.0m. Occasional quartz veinlet, 1-2mm wide. Contact with below, fault gouge at 9.75m.</p>	68°			
9.75	24.38	Argillite	<p>Black, very fine-grained, 9.75 to 12.80m rubble, 20-30 cm recovered. Fault Gouge 14.00-14.30 14.63-14.70 14.93-15.10 16.00?</p> <p>Core is moderately to highly broken. Recovery below 12.80m is 70-80%. Frequent fractures at shallow angles to CA caused frequent blocks. 22.00-22.75: Pyrite blebs, <2%. Rock is visibly grained, but still very fine- grained, green-grey colored, and is more fissile 22.75 to end of section. Contact with below gradational.</p>				

From	To	Rock Name	Description	CA	From	To	Sample No.
24.38	31.69	Shaly Argillite	<p>Grey-green, fine-grained; orientated, elongated argillite fragments with initial stage quartz-eye growth.</p> <p>Apparent bedding 49° CA @ 25.50</p> <p>Minor quartz veinlets @26.40</p> <p>Bedding?58° to CA @28.04</p> <p>Between 29.52 and 31.10 is a gradational change to argillite, which is present to the end of the unit. Contact with below unknown in broken core.</p> <p>Recovery approximately 45%.</p>	<p>49°</p> <p>58°</p>			
31.69	32.90?	Altered Porphyry	<p>Orangy-brown; fine-grained siliceous matrix with feldspar, quartz and rare muscovite phenocrysts. Pyrite to 1%. Short irregular sections of fresh rock; pale green in color with rare euhedral muscovite crystals, and green quartz crystals surrounded by cream-colored feldspar crystals.</p> <p>Contact with below in broken core.</p> <p>Recovery approximately 60%.</p>		31.69	32.90	24358

From	To	Rock Name	Description	CA	From	To	Sample No.
32.90?	36.40?	Shaly Argillite	30% Recovery. Dark grey, fine-grained, slightly foliated, highly broken core. 35.66-35.97: No recovery Tags @34.14, 35.66, 35.97				
		Quartz Vein	35.??-36.??: Quartz vein - slightly gossanous, some openspace crystal growth. Specs of a lead grey crystal, H=5, showing striations, possibly arsenopyrite. Recovery 5 cm = 5%. Contact with below unknown in broken core.		35.00	36.00	24369
36.40?	43.28	Altered Porphyry	Rock, as 31.69-32.90 Good recovery(80%) to 38.40, below which core becomes broken to rubbled, recovery 40%. 41.76-43.28: Intermixed altered porphyry and argillite. Argillite is dark grey to black, showing quartz veins. Core is rubbled, with <20% recovery. Contact with below unknown in rubbled core.		36.40	38.40	24359
					38.40	40.40	24360
					40.40	42.40	24361
					42.40	43.28	24362

From	To	Rock Name	Description	CA	From	To	Sample No.
43.28	48.31	Argillite Shaly ^{to} Argillite	Black, massive to foliated. Fractures and/or foliations at or near parallel to core axis. Core highly broken to rubbled. Recovery ~40%. 46.33-47.85: No recovery.				
48.31		END OF HOLE	Hole stopped due to pinching rods. Minimal mud was used during the drilling of this hole; probable cause of pinching rods.				

CAMPBELL RESOURCES INC.
DIAMOND DRILL LOG

VENTURE

PROJECT AIYANSH

PROPERTY MISTY

LOCATION

TESTS

GRID

TROPARI

ACID

Location 103+43N
Section L103+90E
Bearing 040°
Dip -60°
Length 72.85m

Depth	Mag Brg	Corr Brg	Dip	Dip'
<u>72.24m</u>	<u> </u>	<u> </u>	<u>66°</u>	<u>58°</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

SURVEY

PHYSICAL DATA

Latitude
Departure
Elevation
Bearing
Dip

Core Size NO to 72.85m , to
Date Started September 15, 1982; September 19, 1982
Date Completed September 16, 1982; September 22, 1982
Casing Pulled No, 20' plus shoe
Core Recovery Poor to excellent
Cemented No

Logged by R.G. Wilson
Contractor Drilcor Industries Ltd.

NOTES: 1) Give reference - Magnetic, Grid, True
2) Corrected dip.

From	To	Rock Name	Description	CA	From	To	Sample No.
0	1.5	Overburden	No core.				
1.5	2.2	Talus	Hornblende diorite core recovered.				
2.2	4.72	Argillite	Dark grey to black, very fine-grained, massive bedded, minor rusty fractures. Core highly broken to rubble. 31% core recovery. Contact with below unknown in broken core.				
4.72	16.00	Altered Porphyry	Pinkish-orange altered, pale green fresh. Matrix-orangy colored, silica rich, very fine-grained. Phenocrysts of quartz, yellowish colored feldspar, rectangular mafic(amphibole?) and rare euhedral muscovite phenocrysts. Rock has a slight banding - 35° CA @ 5.79 42° CA @ 9.50 30° CA @13.00 Irregular banding also present, but uncommon.		4.72 6.72 8.72 10.72 12.72 14.72	6.72 8.72 10.72 12.72 14.72 16.00	24363 24364 24365 24366 24367 24368

35°
42°
30°

From	To	Rock Name	Description	CA	From	To	Sample No.
			Fault gouge @ 19.5, 8.30-8.40, 12.10 Broken core @ 6.71-7.00, 9.75-10.20, 13.11-15.85 Fault gouge @ 13.41, 14.00, 14.90-15.00, 15.85-16.00 $\text{Recovery } \frac{7.8}{11.28} = 70\%$ Contact with below by fault at 16.00m.				
16.00	17.30?	Argillite	Black, very fine-grained, highly fractured, (gossanous fractures), minor quartz veinlets Core highly broken with .3m recovered. (recovery $\frac{.3}{1.3} = 23\%$) Contact with below unknown in rubbled core.				
17.30?	17.53	Quartz Vein	Milky quartz, gossanous, minor yellow stain. Core rubbled with .15m recovered. (recovery $\frac{.15}{.23} = 65\%$) Contact with below appears to be a fault contact, with fault gouge recovered.		16.76	17.53	24343
17.53	17.60	Fault Gouge	Rusty-brown, clay and clay-pebble composition.				

From	To	Rock Name	Description	CA	From	To	Sample No.
			No orientation discernible.				
17.60	18.00?	Altered Porphyry with Quartz Rubble	As altered porphyry above; rubbled core; .2m recovered. Quartz pebbles scattered in core below 17.68. Contact with below unknown in rubbled core.		17.60	18.00	24370
					17.68	18.00	24344
18.00?	20.42	Quartz Vein	Milky quartz, slight gossanous, minor yellow stain, no sulphides noted, minor argillite with quartz. Core rubbled and pebbled, .6m recovered(recovery 25%). Contact with below unknown in rubbled core.		18.00	18.90	24345
					18.90	20.42	24346
20.42	31.39	Argillite	Black, very fine-grained, massive bedded, well fractured(rusty fractures); core highly broken. Fractures at 30°, 65° CA @24.38; 20°, 75° CA @ 21.95. The argillite has frequent quartz veinlets from 20.42 to 21.33, creating a crackle breccia appearance. Argillite contains minor carbonate throughout, but no calcite veins were seen. Pyrite is generally rare, but does reach 1%		20.42	21.34	24347

From	To	Rock Name	Description	CA	From	To	Sample No.
			<p>over short sections. Clay fault gouge material at 24.90, 26.40-26.70, 28.65-28.90, 31.39. Recovery $70\% \frac{7.9}{11.4}$. Contact with</p> <p>below is a fault gouge, recovered from stuck rods. Rods initially stuck at this point - recovered after three days and after M-82-4 was started.</p>				
31.39	31.85	Quartz Vein	<p>Milky quartz, slightly rusty, minor yellow stain. Core highly broken. .3m recovered. 5 cm piece of altered porphyry at bottom of vein - origin uncertain.</p> <p>Recovery $\frac{.3}{.43} = 65\%$. Contact with below unknown in broken core.</p>		31.39	31.85	24372
31.85	54.25	Argillite	<p>Black, very fine-grained, massive bedded, fractured, limonite stain on fractures.</p> <p>Fractures 11°@32.61 40°@35.36 44°@33.38 59,15°@36.12 59°@33.83 55°@37.19 53°@34.14 53°@39.62 45°@34.75 48°@39.93 54°@43.59 37°@44.20</p>				

From	To	Rock Name	Description	CA	From	To	Sample No.
			Fault gouge at 35.51 35.66-36.88: Irregular fractures with limonite and gossan 37.03-37.49: Py, 5% @ 17° CA 37.49-39.62: Irregular fractures with limonite and gossan 41.76-43.28: Highly broken core; fault gouge @ 42.98-43.28 44.81-52.27: Core highly broken 46.27-46.48: Fault gouge 47.09-47.70: Fault gouge - minor quartz fragments, very thin Fractures 74° CA @47.85 80° @52.73 85,35 @49.07 84,55° @53.04 60° @50.60 43,26° @53.34 76° @51.21 76° @53.95 69° @51.82 52.27-54.25: Core fractured but solid. Recovery is 80-95% despite several very fractured sections with highly broken core recovered. Contact with below sharp at 43° CA				
54.25	71.30	Biotite-Hornblende Porphyry	Medium green, very fine-grained green matrix(<1mm dia.), and fine-grained, white shadowy ?feldspar or quartz. Phenocrysts	43°	54.25	54.71	24373

From	To	Rock Name	Description	CA	From	To	Sample No.
			<p>of 2 10mm diameter, anhedral to euhedral, dark green hornblende, brown-green biotite, and rarer pale green pyroxene (augite?)</p> <p>Phenocrysts comprise approximately 10-15% of the rock composition, and are most common between 54.50m-67.50, though the feldspar continues to within .3m of the top and bottom of the unit. Pyrrhotite <1% and minor pyrite are present throughout unit and specks of chalcopyrite are seen at the top contact.</p> <p>The top contact is marked by brownish zones in a fine-grained green matrix. The bottom contact is marked by white silica with green irregular shaped centres over .50m.</p> <p>The entire unit is very hard (siliceous), with solid core recovered, recovery 95-100%. Contact with below gradational over 10 cm.</p>				
71.30	72.85	Argillite	<p>Dark grey to black, very fine-grained, massive bedded.</p> <p>Fractures 40° CA @72.30 64° CA @72.40</p> <p>Recovery ~ 80% in broken core.</p>				

From	To	Rock Name	Description	CA	From	To	Sample No.
72.85		END OF HOLE	Hole abandoned due to anticipated weather (flying) problems. Blocking and binding problems were encountered in the argillite, with frequent pulling of the rods necessary.				

CAMPBELL RESOURCES INC.
DIAMOND DRILL LOG

VENTURE

PROJECT AIYANSH

PROPERTY MISTY

LOCATION

TESTS

GRID

TROPARI

ACID

Location 103+43N
Section L103+90E
Bearing 040°
Dip -45°
Length 38.1m

Depth	Mag Brg	Corr Brg	Dip	Dip'
<u>No</u>	<u>Test</u>	<u>Taken</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>

SURVEY

PHYSICAL DATA

Latitude _____
Departure _____
Elevation _____
Bearing _____
Dip _____

Core Size NO to 38.10m, _____ to _____
Date Started September 16, 1982
Date Completed September 19, 1982
Casing Pulled Yes
Core Recovery Poor to Good
Cemented Yes, 95' to 115'

Logged by R.G. Wilson
Contractor Drilcor Industries Ltd.

NOTES: 1) Give reference - Magnetic, Grid, True
2) Corrected dip.

From	To	Rock Name	Description	CA	From	To	Sample No.
0	1.0	Overburden	No core				
1.0	4.00	Talus	Blocky, fragmented core recovered - argillite and altered porphyry				
4.00	13.72?	Altered Porphyry	<p>As 4.72-16.00 in M-82-3</p> <p>Matrix white to orangy-brown, fine-grained, siliceous. Phenocrysts of quartz, yellowish feldspar, rectangular mafics (amphibole?) and rare muscovite.</p> <p>Fault gouges at 4.50 to 5.50, 6.50, 7.75, 9.90, 10.06-10.67, 10.75, 12.50-12.60,</p> <p>Recovery 7/9.72 = 72%</p> <p>Minor banding 48° CA @6.86 78° CA @9.65</p> <p>Contact with below unknown in rubbled core between runs.</p>	48° 78°			
13.72?	14.49	Quartz Vein	Milky quartz, minor limonite, some argillite with the quartz. Vein may start before 13.72, as minor quartz pebbles seen.		13.72	14.49	24348

From	To	Rock Name	Description	CA	From	To	Sample No.
			Contact with below unknown at end of core run. Recovery .15m = 20%				
14.49	15.24	Altered Porphyry	As 4.00 to 13.72 Core highly broken. Minor quartz associated near bottom contact. Contact with below unknown in rubbled core at end of run Recovery .15m = 20%				
15.24	15.85?	Quartz Vein? and Argillite	Pebbles of quartz and argillite. Contact with below unknown in pebbled core. Recovery .10 cm = 38%.		14.94	15.85	24349
15.85?	22.60	Siltstone	Light grey to buff brown, very fine-grained, massive bedded. Chlorite healed fractures common. Rock is soft ~H4. Minor pyrite along fractures as at 22.30. Core is highly broken to rubbled. Minor quartz veinlet at 16.80-16.85 Contact with below in broken core @15°CA Recovery $\frac{2.4}{7.1}$ 34%	15°			

From	To	Rock Name	Description	CA	From	To	Sample No.
22.60	25.91	Mixed Siltstone & Dacite	Irregular intermixing of above siltstone and below volcanic(dacite?). Core whole to broken. Recovery $\frac{1.2}{3.31} = 36\%$				
25.91	30.17	Dacite?	Medium to dark green, fine-grained with fuzzy quartz, feldspar and mafic(amphibole?) phenocrysts. Core is highly broken Recovery $\frac{2.9}{4.3} = 67\%$ Contact with below intermixed over .15 m.				
30.17	33.41	Siltstone	Siliceous, brownish-pink, very fine-grained, massive bedded, core highly broken to rubbled. 31.39-32.00: No Core. Contact with below unknown in broken core. Recovery ~40-50%.				
33.41	35.05	Argillite	Black, very fine-grained, massive bedded, core highly broken to rubbled. Fractures 50°, 39° CA @33.99-- 50°, 70° 46°, 73° CA @34.90				

From	To	Rock Name	Description	CA	From	To	Sample No.
			Contact? at cement ream. Recovery 80%-90%				
35.05	35.97	Siltstone	As 30.17-33.41 - Cemented and reamed out at this point. Core may be reamed material from that section.				
35.97	38.10	Argillite	As 33.41-35.05 Possible quartz vein at 36.27- very thin, 5 cm of rubbled core - limonitic Fractures 62°, 70°, 62° CA @36.58 67° @36.88 72° @37.19 68° @37.49 45° @37.80 Recovery 80-90%.				
38.10		END OF HOLE	Rods unstuck in M-82-3, and drilling continued in that hole. No dip test was taken due to weather conditions and helicopter schedules.				

CAMPBELL RESOURCES INC.
DIAMOND DRILL LOG

VENTURE
PROJECT AIYANSH
PROPERTY MISTY

LOCATION

TESTS

GRID

TROPARI

ACID

Location 103+80N
Section 105+01E
Bearing 210°
Dip -60
Length 44.20m

Depth	Mag Brg	Corr Brg	Dip	Dip'
<u>44.20</u>	<u> </u>	<u> </u>	<u>64°</u>	<u>56°</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

SURVEY

PHYSICAL DATA

Latitude
Departure
Elevation
Bearing
Dip

Core Size NQ to 44.20m, to
Date Started September 22, 1982
Date Completed September 24, 1982
Casing Pulled No
Core Recovery Poor
Cemented No

Logged by R.G. Wilson
Contractor Drilcor Industries Ltd.

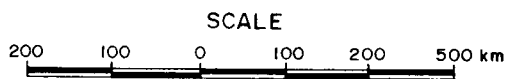
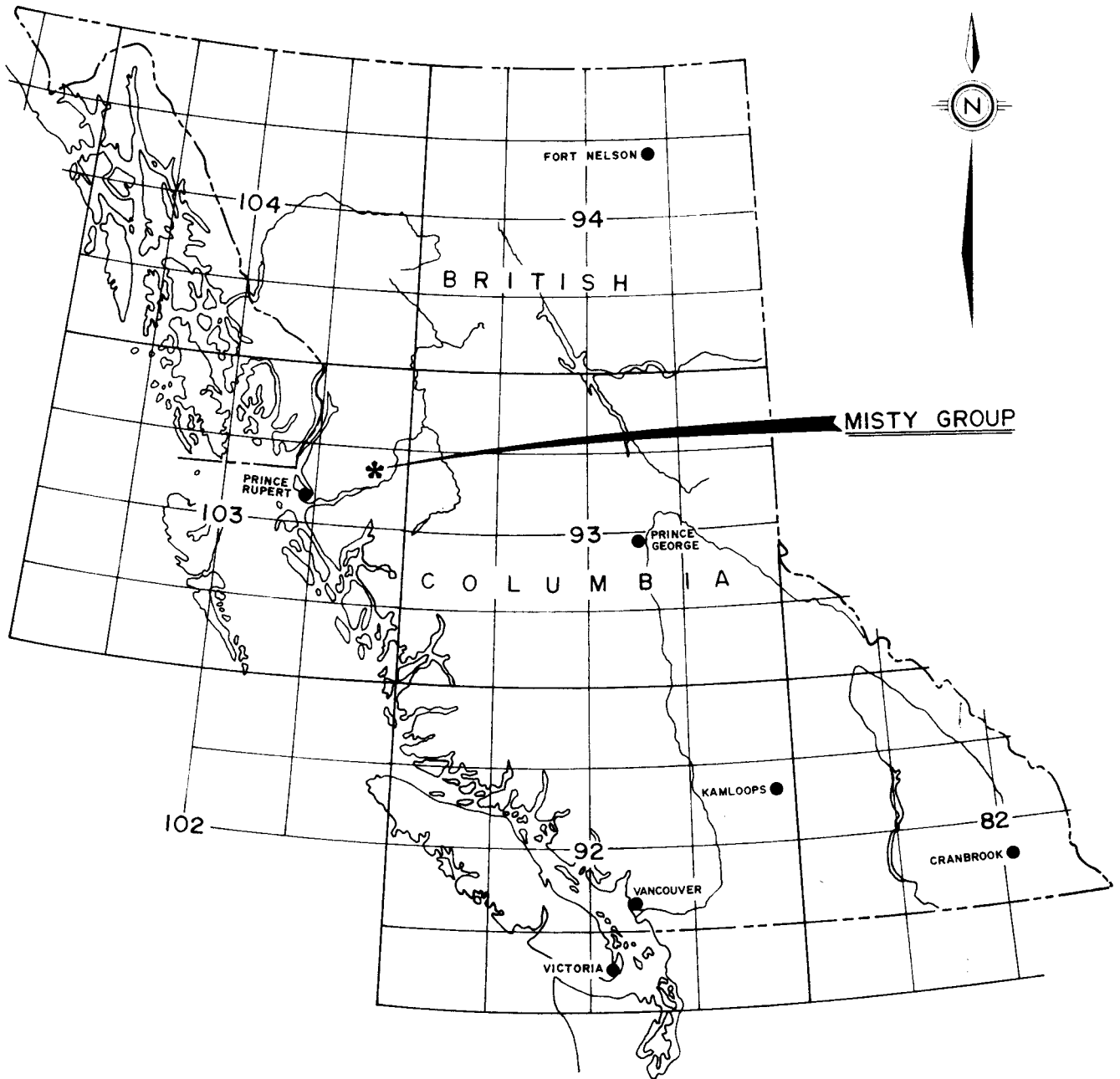
NOTES: 1) Give reference - Magnetic, Grid, True
2) Corrected dip.

From	To	Rock Name	Description	CA	From	To	Sample No.
0	1.52	Overburden	No core.				
1.52	3.51	Talus	Hornblende diorite-argillite, sandy debris.				
3.51	7.16	Argillite	Dark grey to black, very fine-grained, massive bedded. Core highly broken to rubbled. Fault gouge @3.81, 4.57-5.18, 6.40-6.71 Fracture 63° CA @3.05 Contact unknown. Recovery 30%.				
7.16	12.50	Hornblende-Feldspar Porphyry	Fine-grained, equi-granular to porphyritic, light greenish-grey. Shadowy feldspar(to 2mm) and smaller hornblende(1mm), phenocrysts in a softer green-grey, fine-grained matrix. Apparent fault gouge at 7.92-8.08, 8.23 Contact with below unknown in broken core. Recovery 60%.				
12.50	23.77	Argillite	Black to dark grey, very fine-grained, massive bedded. Highly broken to rubbled core, despite drilling with mud. Fault gouges @13.72-13.87, 15.85-16.00, 16.92-17.07, 20.30-20.42 14.02-15.55: Porphyry material				

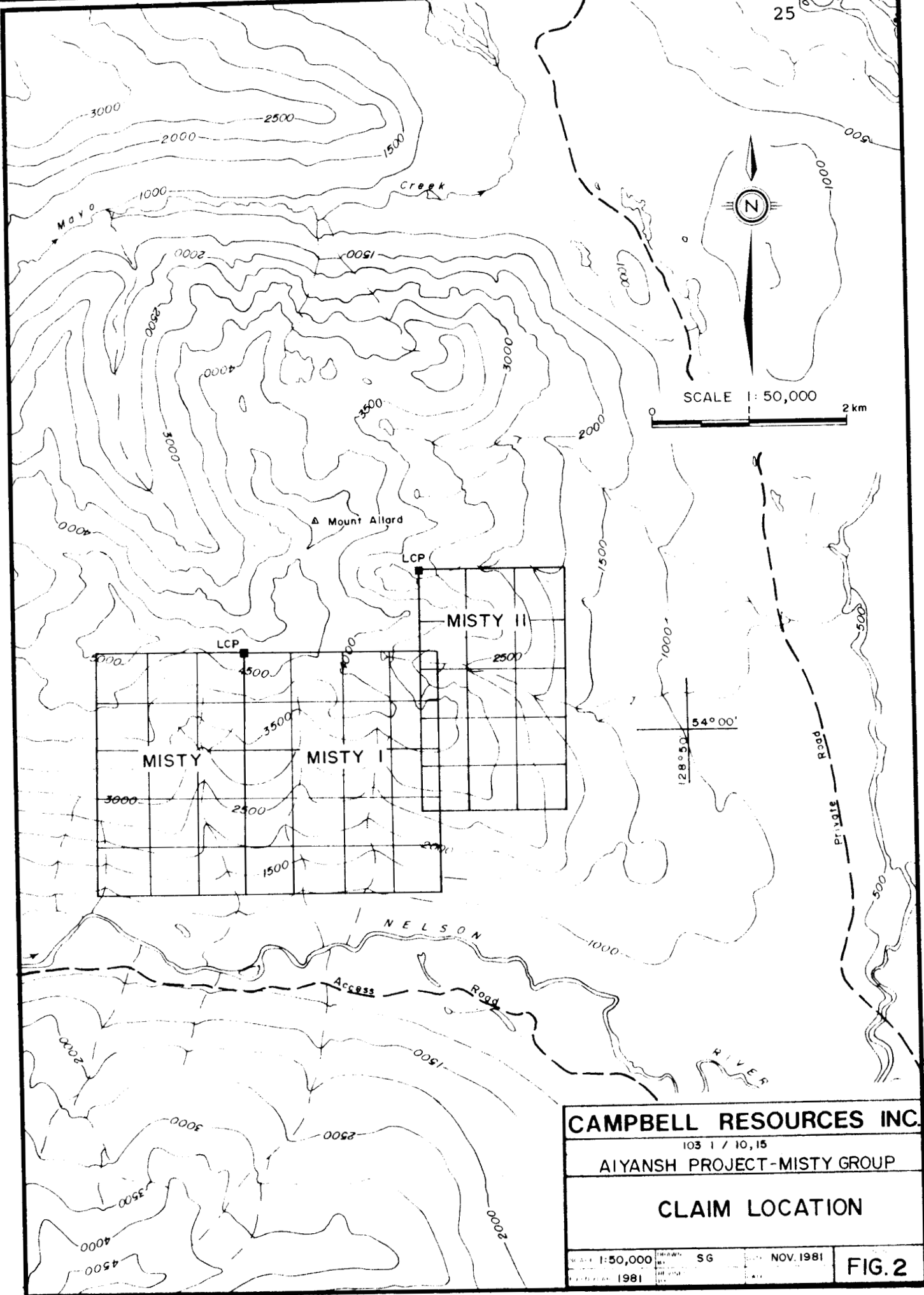
From	To	Rock Name	Description	CA	From	To	Sample No.
			Fractures 70° CA @14.02 67° CA @15.70 70° CA @16.31 55° CA @18.59 61° CA @20.88 37° CA @22.86 Contact with below unknown in broken core. Recovery 50%.				
23.77	32.46	Siltstone	Light grey-brown, very fine-grained, fractures are rusty and frequent. Minor interbeds of argillite, but no contacts seen. 27.74-28.04: Argillite 28.80-28.96: Argillite 29.26-29.87: Argillite Fractures 35° CA @24.84 68° CA @25.60 68° CA @25.76 47.5° CA @26.06 Fault Gouge @ 24.69-24.84, 27.43-27.58, 28.35-28.50 Contact with below unknown in broken core. Recovery 60%.				

From	To	Rock Name	Description	CA	From	To	Sample No.
32.46	33.68	Altered Porphyry	Orangy-brown, light green-grey, fresh (as 7.16-12.50), fine-grained with feldspar and mafic phenocrysts. Contact with below unknown. Recovery 70%		32.46	33.83	24375
33.68	35.20	Fault Gouge	Buff brown, sandy, with fragments of porphyry and quartz. Contact with below unknown at rod pull. Recovery 30%				
35.20	38.40	Hornblende? Porphyry	Light grey-green, obscure dark green phenocrysts; well fractured @62°C. Contact with below unknown at core marker. Recovery 35%.				
38.40	39.78	Vein Zone	Core highly rubbled, mainly argillite and gouge. 15 cm of quartz-argillite breccia recovered in core(sample). Contact with below in broken core. Recovery 10%.		38.71	39.01	24374

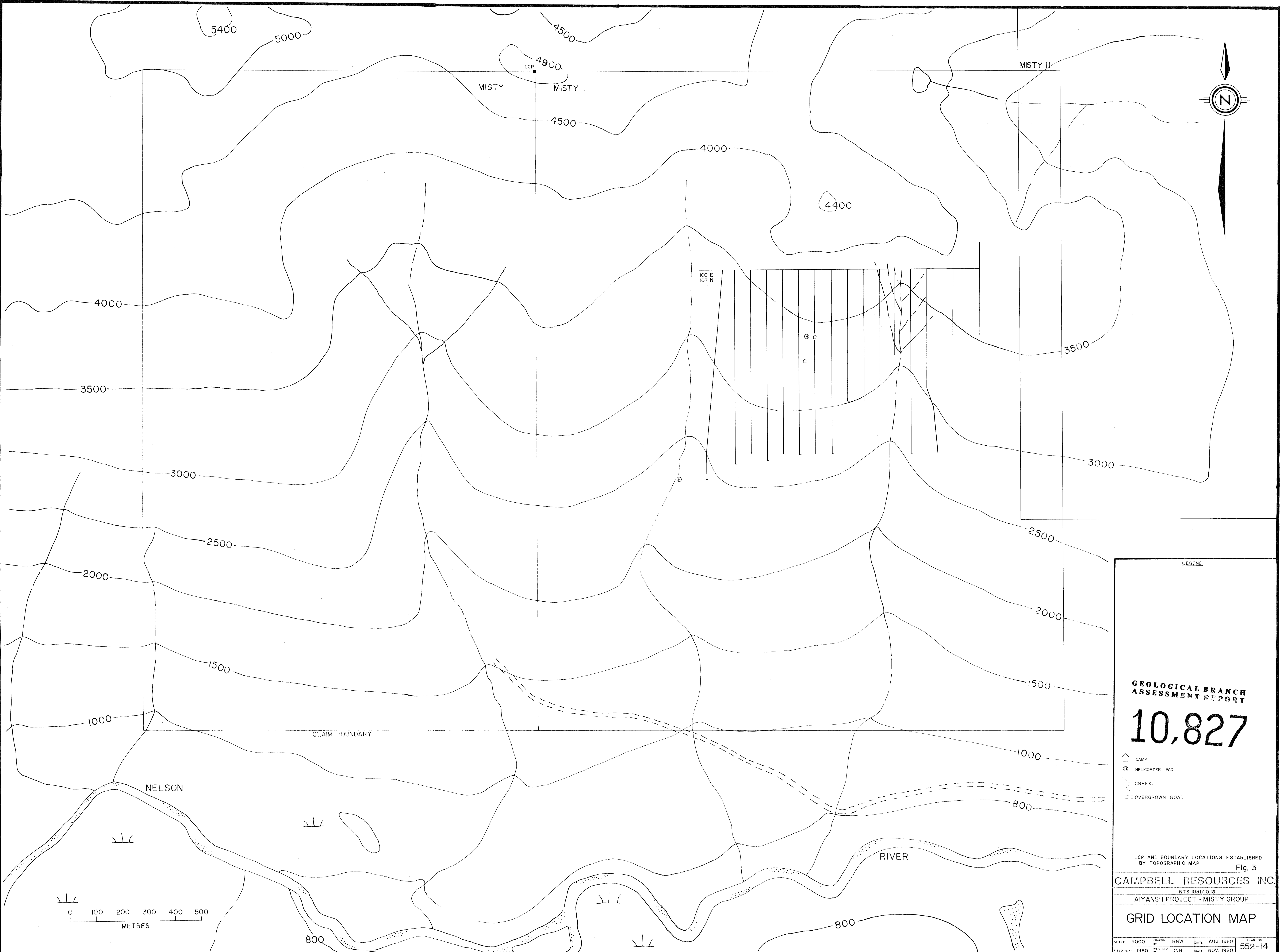
From	To	Rock Name	Description	CA	From	To	Sample No.
39.78	43.13	Biotite Hornblende Porphyry	As 54.25 to 71.30 in M-82-3. 40.69-41.45: Cavern, with a 15 cm piece of core at approximately 41.00 m. Core is highly distorted due to bit crown breakage - spun by pressure from reaming shell? Drilled in this fashion from 40.69- 44.20. Core for this unit is subsequently highly broken. Contact in broken core in the middle of a core run. Recovery 40%.				
43.13	44.20	Argillite	Black, very fine-grained, massive bedded, highly rubbled, measureable fracture angles- 43° CA @43.28 57° CA @43.43 Recovery 40%.				
44.20		END OF HOLE	Crown of bit broke off in hole and turned sideways - no bits left in <u>camp</u> to try to drill through crown. Bit estimated broken at 40.70 m.				



CAMPBELL RESOURCES INC.			
103 1 / 10, 15			
AIYANSH PROJECT-MISTY GROUP			
PROPERTY LOCATION			
SCALE: 1:894 x 10 ⁶	REVISED	SG	NOV. 1981
1981			FIG. 1



CAMPBELL RESOURCES INC.			
103 1 / 10, 15			
AIYANSH PROJECT-MISTY GROUP			
CLAIM LOCATION			
Scale: 1:50,000	Drawn: SG	Date: NOV. 1981	FIG. 2
1981			



LEGEND

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

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- CAMP
- HELICOPTER PAD
- CREEK
- OVERGROWN ROAD

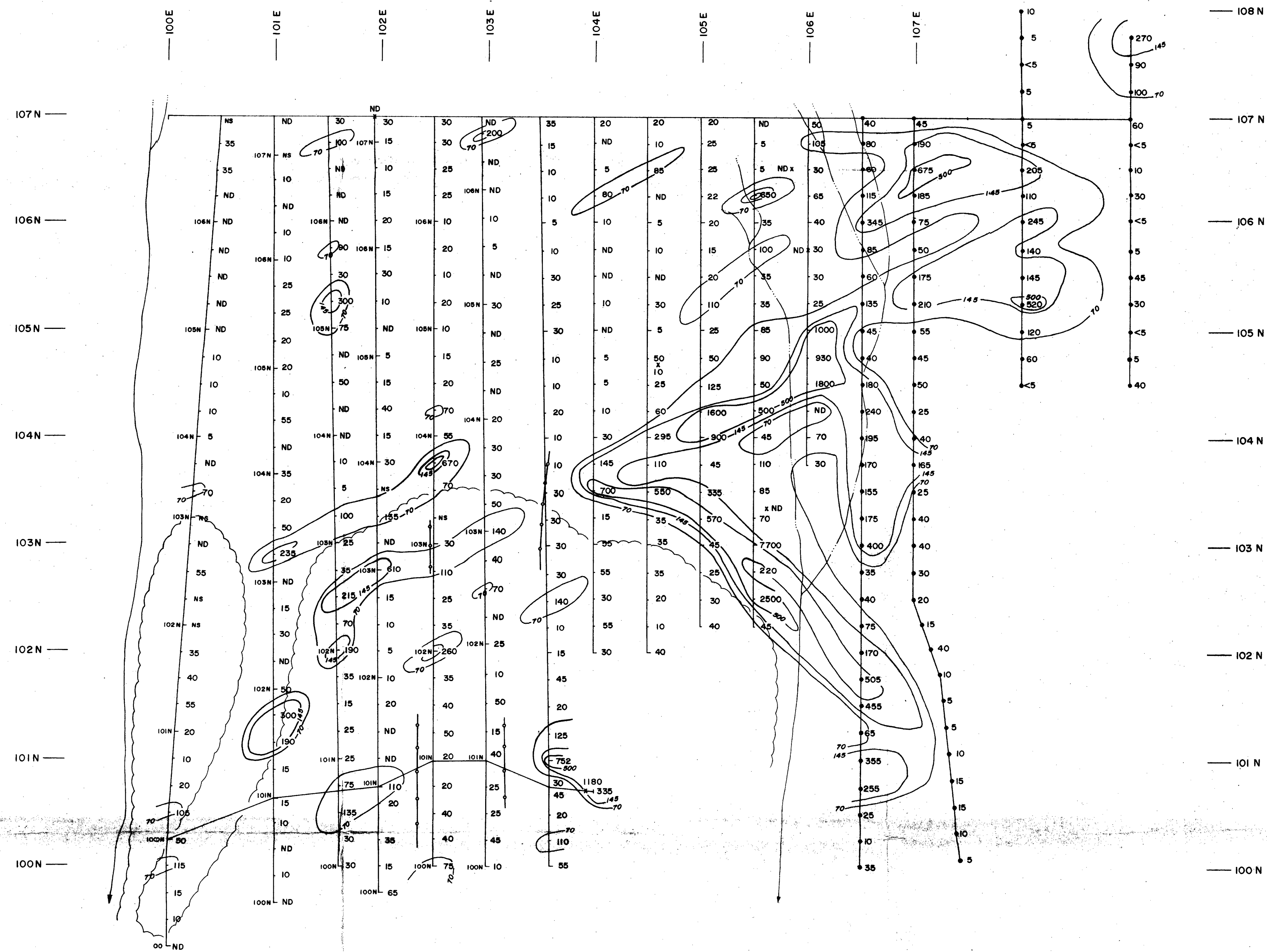
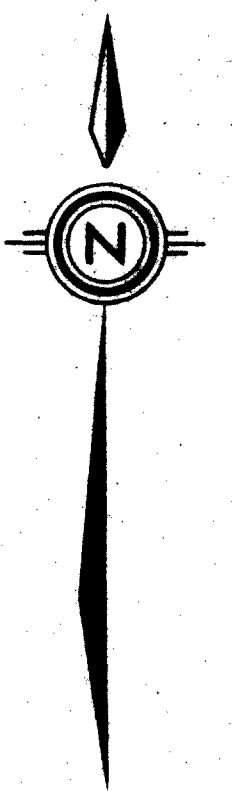
LCP AND BOUNDARY LOCATIONS ESTABLISHED
BY TOPOGRAPHIC MAP Fig. 3

CAMPBELL RESOURCES INC.
NTS 103/10/JS

AIYANSH PROJECT - MISTY GROUP

GRID LOCATION MAP

SCALE 1:5000	DRAWN RGW	DATE AUG. 1980	PLAN NO.
FIELD YEAR 1980	REVISED DNH	DATE NOV. 1980	552-14



LEGEND

- NS No sample taken
- 25 Au ppb
- ND Not detected
- 1980 reconnaissance line
- Tree line
- Dry gully
- Creek

□	≥ 500 Au ppb Very anomalous
□	145 - 499 Au ppb Anomalous
□	70 - 144 Au ppb Threshold
□	0 - 69 Au ppb Background

15 1981 soil geochemical samples
 40 1982 soil geochemical samples
 75

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

10,827

Fig. 4

CAMPBELL RESOURCES INC.
 N.T.S. 103 I / 10, 15

AIYANSH PROJECT - MISTY GROUP

Au ppb

SCALE 1:2500
 50 25 0 50 100 150 metres

SCALE 1:2500	DATE OCT. 1981	PLN NO.
FIELD YEAR 1981	DATE OCT. 1981	552-17



LEGEND

Rock chip sample

rock type
▲ sample number F(ft), G (grab)
Au g/t or g/g
metres or metres

Arg Argillite
And Andesite
Dac Dacite
Sst Siltstone
Qtz Quartz

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

10,827

○ Drill hole
⊙ Helicopter pad
⊞ Camp
⌒ Trench outline
- - - Trail

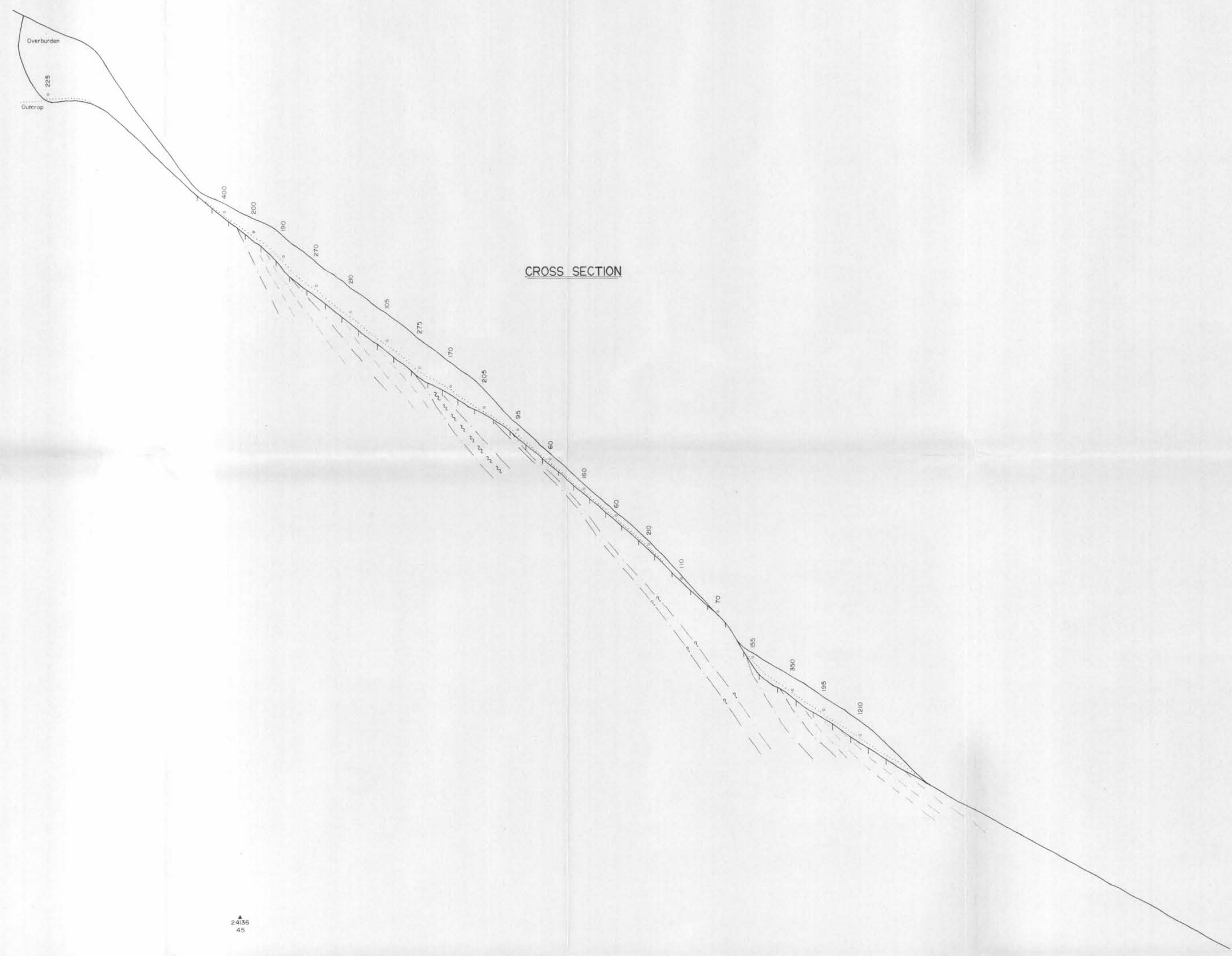
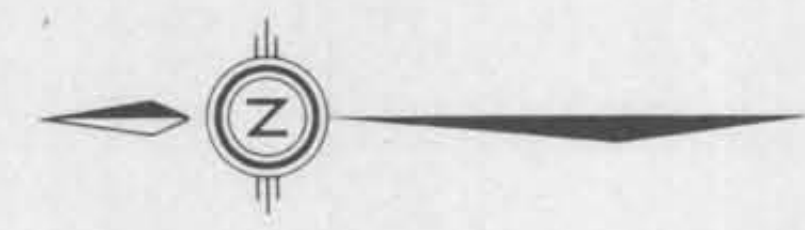
Station Location
○ Known
○ Approximate

FIGURE 5

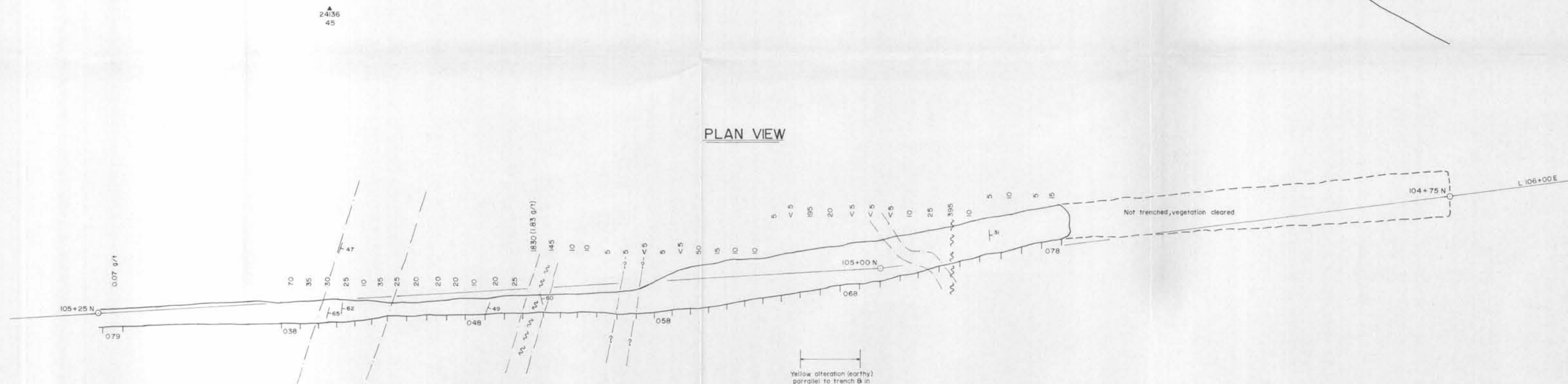
CAMPBELL RESOURCES INC.
103 1/10, 15
AIYANSH PROJECT - MISTY GROUP

**REGIONAL
ROCK SAMPLES**

SCALE 1:500	DRAWN BY	DATE 15/10/92	PLAN NO.
FIELD YEAR 82	REVISED BY	DATE	



CROSS SECTION



PLAN VIEW

Andesite-Dacite
Pale green-white to dark green, obscure feldspar & mafic phenocrysts, 1-2% Py, minor graphite

Shaley argillite
Pale to medium gray, very fine grained, finely bedded

Muscovite-feldspar porphyry
Orange brown, bonded, finely disseminated Py cubes to 2% limonite matrix

Altered volcanic related to andesite dacite below

Andesite-Dacite
Medium to dark green, sub-porphyritic texture, white (silicified) phenocrysts (feldspar 2) and medium green chloritic phenocrysts (altered hornblende 2), 1-2% Py

Shaley argillite
Pale green, finely bedded, slightly fissile, brown to rusty brown

Contact zone

Contact zone

Contact zone

Shaley argillite

LEGEND

UPPER JURASSIC AND LOWER CRETACEOUS
BOASER(LAKE) GROUP
Greywacke, conglomerate, argillite, siltstone, shale, minor tuff

Strike and Dip
15° Ven structure
125° Fractures
13° Bedding

1115 Fault zone

▲ Rock chip sample
▲ 2436 45 Sample number
▲ 45 Altitude in feet

Cross section
1000 Soil potential value 1000 Au

Plan view
100 Au in soil or g/r
10 Sample interval
1000 Form line
100 Contact, gradational, sharp

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

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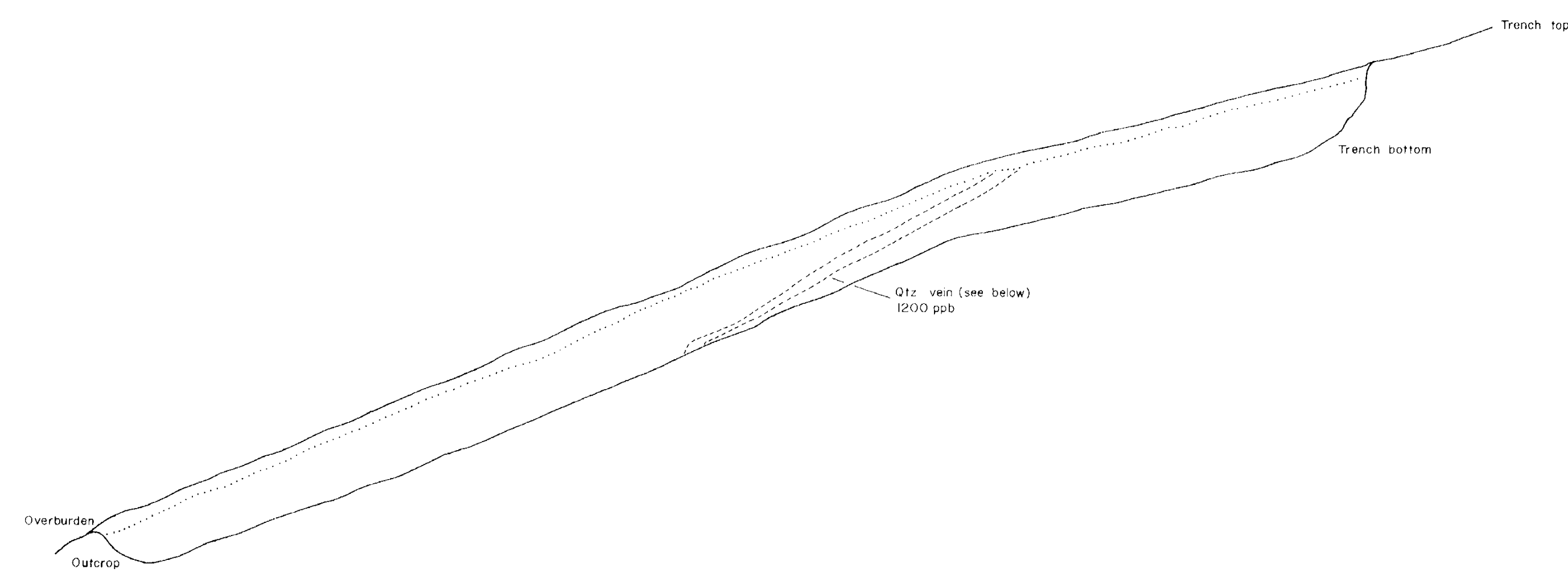
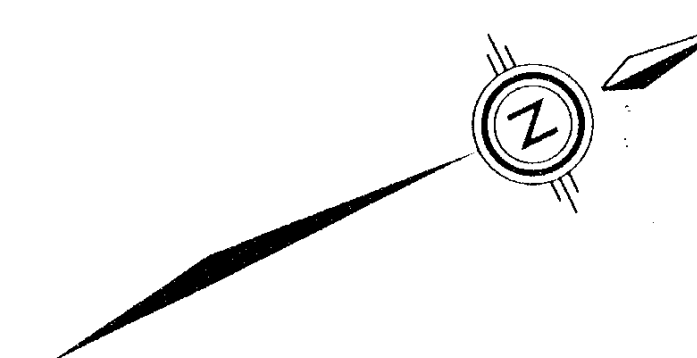
FIGURE 7

CAMPBELL RESOURCES INC.

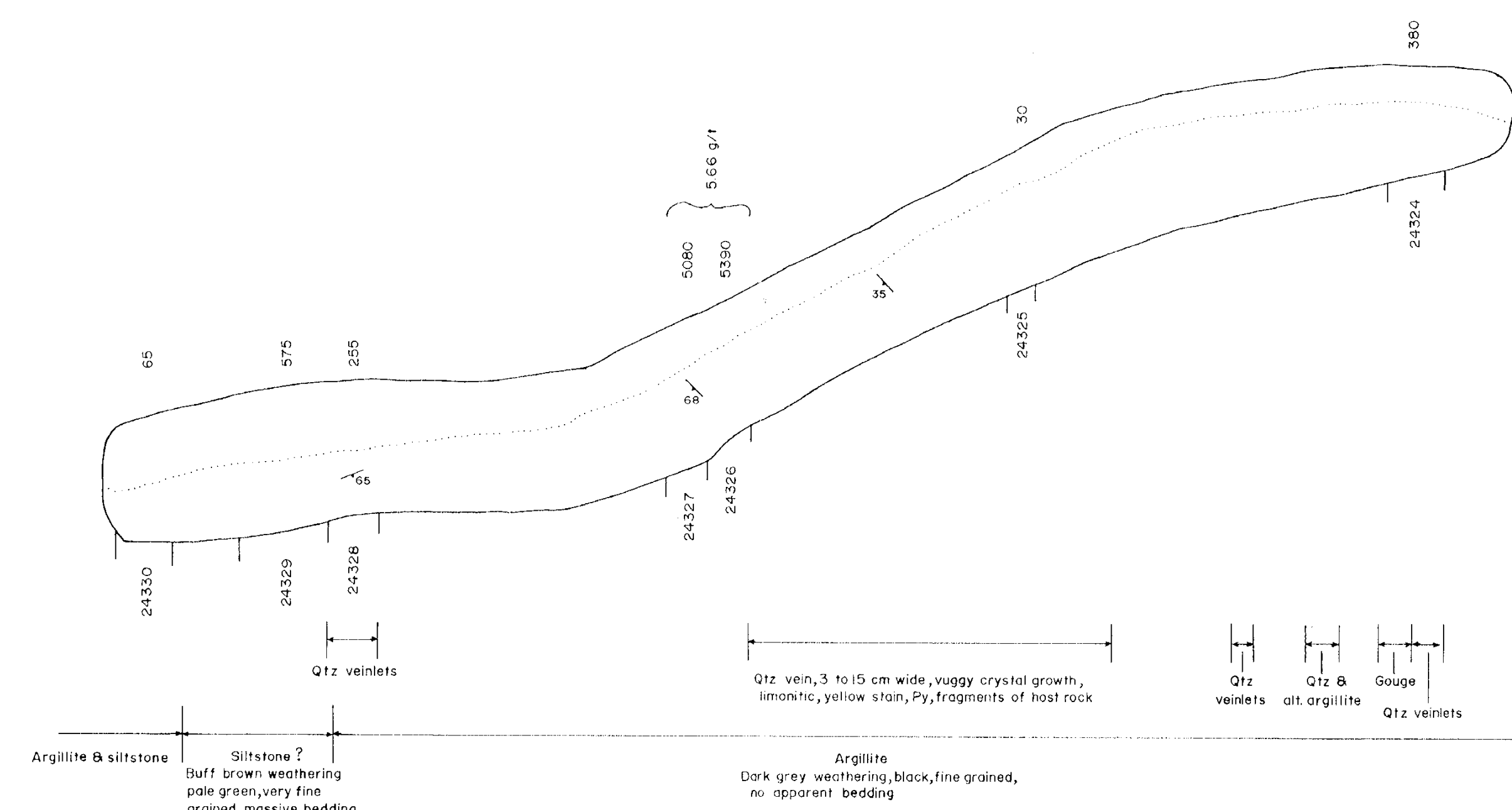
103 / 10,15
AIYANSH PROJECT - MISTY GROUP

TRENCH T-82-2

SCALE 1:100	DRAWN BY BOW/DNH	DATE 28/10/82	PLAN NO.
FIELD YEAR 1982	REVISED BY	DATE	552-22



CROSS SECTION



PLAN VIEW

LEGEND

UPPER JURASSIC AND (?) LOWER CRETACEOUS
BOWSER(LAKE) GROUP
Greywacke, conglomerate, argillite, siltstone,
shale, minor tuff

Strike and Dip
| Vein structure
| Fractures
| Bedding

{ } Fault zone

Plan View
Au in ppb or g/t
Sample interval

GEOLOGICAL BRANCH
ASSESSMENT REPORT

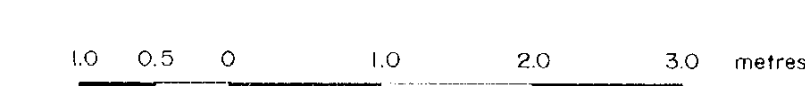
10,827

FIGURE 8

CAMPBELL RESOURCES INC.

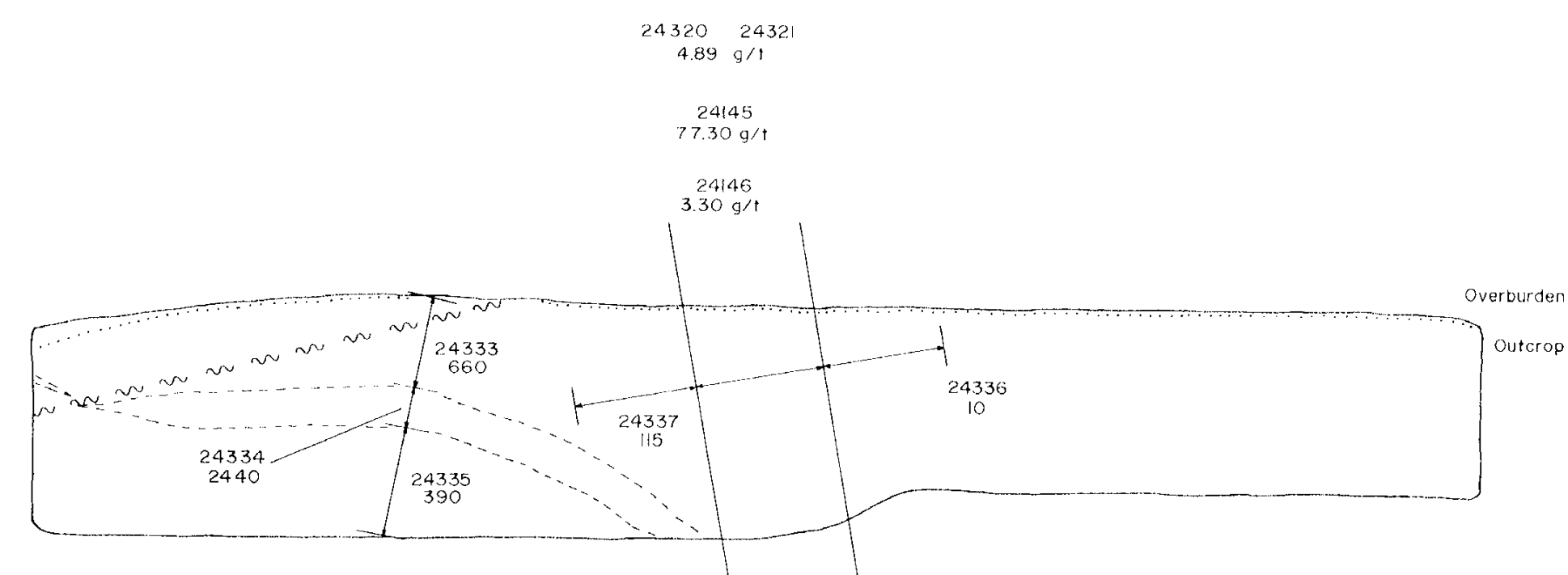
103 1/10,15
AIYANSH PROJECT - MISTY GROUP

TRENCH T-82-3

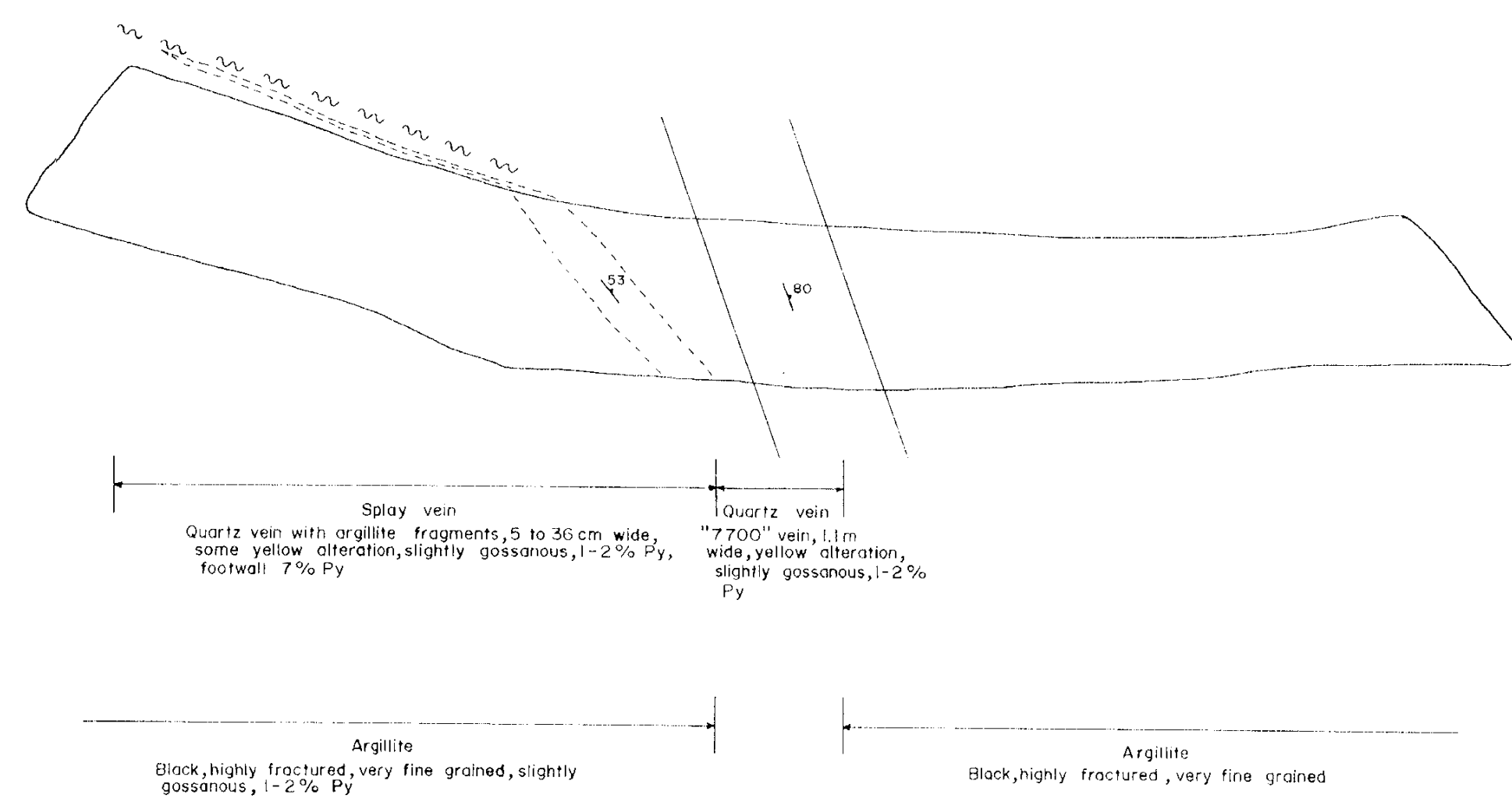
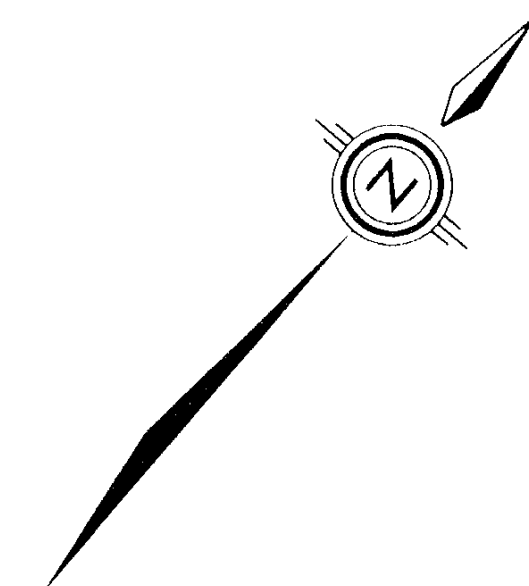


0 T-82-1
DOI

SCALE 1:50	DRAWN BY DNH/RGW	DATE 26/10/82	PLAN NO.
FIELD YEAR 1982	REVISED BY	DATE	552-23



CROSS SECTION



PLAN VIEW

LEGEND

UPPER JURASSIC AND (?) LOWER CRETACEOUS
BOWSER(LAKE) GROUP
Greywacke, conglomerate, argillite, siltstone,
stone, minor tuff

Strike and Dip
| 40 Vein structure
| 30 Fractures
| 42 Bedding
~ Fault zone
Contact, gradational, sharp
Splay vein

24146
3.30 g/t Au in g/t or ppb
Sample interval

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

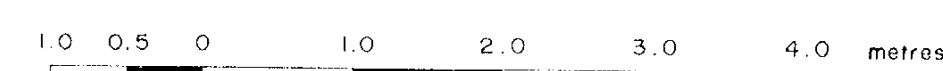
10,827

FIGURE 9

CAMPBELL RESOURCES INC.
103 1 / 10, 15
AIYANSH PROJECT - MISTY GROUP

TRENCH T-82-4

SCALE 1:50	DRAWN BY DNH	DATE 16/11/82	PLAN NO.
FIELD YEAR 1982	REVISED BY	DATE	552-27





LEGEND

—	Drill holes
—	Trenches
—	Airphoto lines
—	1982 project area
—	1981-82 soil geochemical grid boundary
—	Camp
—	Helicopter pad
—	Claim boundary

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

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- NOTES**
- 1) This is not an orthophoto, scale is not uniform over whole photo.
 - 2) Claim boundaries approximate due to extreme airphoto distortion.
 - 3) This photo was taken in 1968, most roads are impossible.

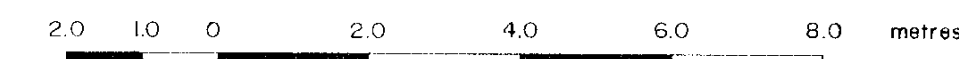
FIGURE 10

CAMPBELL RESOURCES INC.

103 1/10,15
AIYANSH PROJECT - MISTY GROUP

**AIRPHOTO
COMPILATION**

Scale: Approx 1:5000	Drawn	Date: 10/11/82	Plan No.
Photo Year: 1968	Revised	Date:	552-28



LEGEND

GEOLOGY

- 1 Argillite
- 2 Showy argillite
- 3 Metasilstone
- 4 Altered feldspar porphyry
- 5 Feldspar porphyry
- 6 Biotite hornblende porphyry
- 7 Dacite
- 8 Quartz vein
- ~ Fault zone

60% Core recovery
 Structural attitude
 Core loss
 Au assays
 metres

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

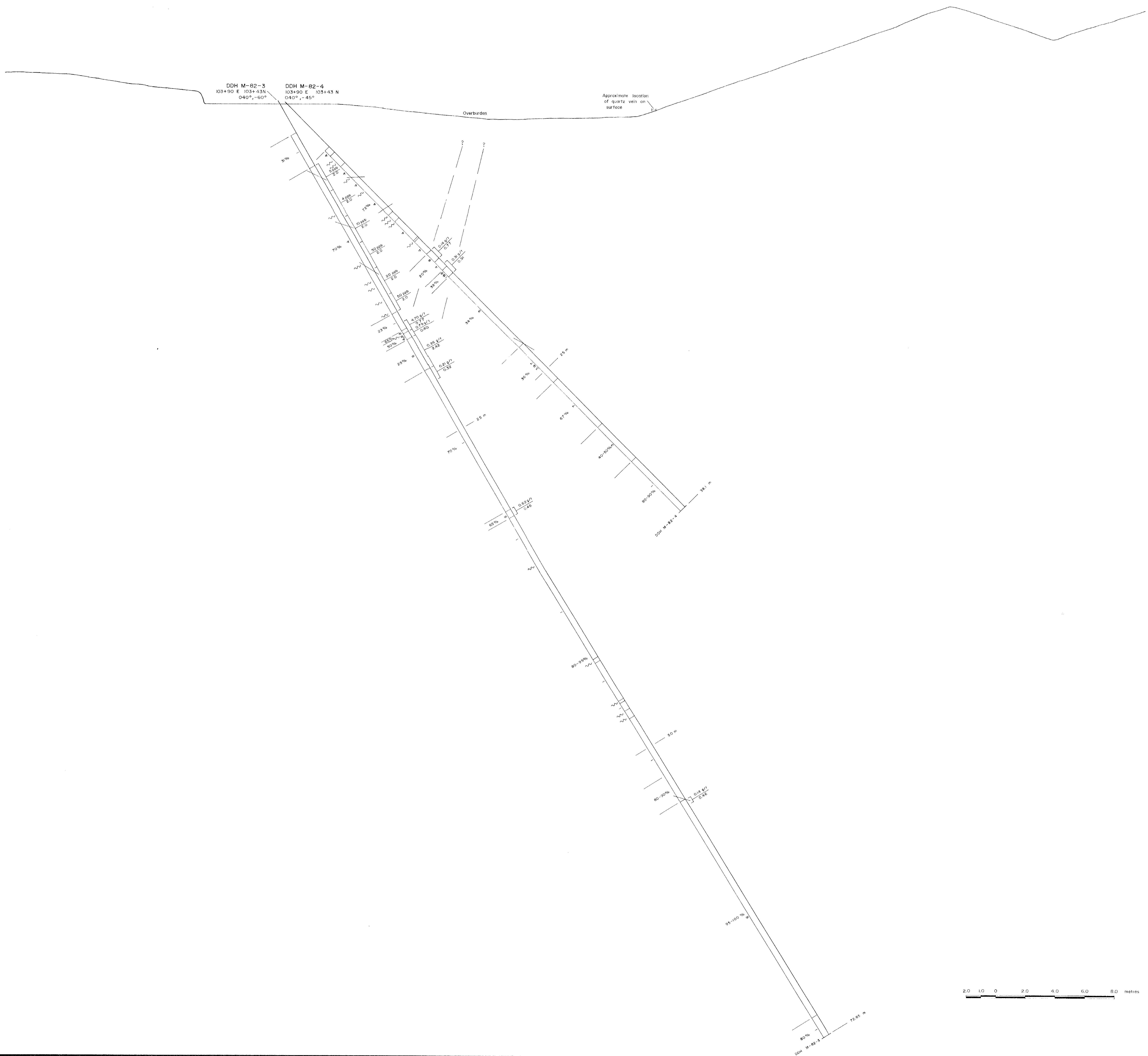
10,827

FIGURE 11

CAMPBELL RESOURCES INC.
 1031/10, 15
 AIYANSH PROJECT - MISTY GROUP

DDH M-82-1&2

SCALE 1:100	DRAWN BY DNH	DATE 3/11/82	PLAN NO. 552-24
FIELD YEAR 1982	REVISED BY	DATE	



LEGEND

GEOLOGY

- 1 Argillite
- 2 Shaley argillite
- 3 Metasilstone
- 4 Altered feldspar porphyry
- 5 Feldspar porphyry
- 6 Biotite hornblende porphyry
- 7 Dacite
- 8 Quartz vein
- ~ Fault zone

Core recovery
 Structural attitude
 Core loss
 Au assays
 metres

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

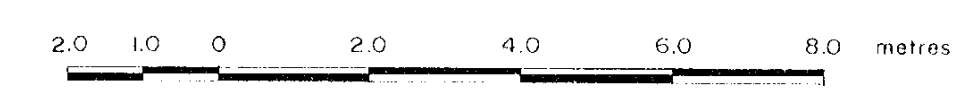
10,827

FIGURE 12

CAMPBELL RESOURCES INC.
1031/10,15
AIYANSH PROJECT - MISTY GROUP

DDH M-82-3 & 4

SCALE: 1:100	DRAWN BY:	DATE: 5/11/82	PLAN NO:
FILE YEAR: 1982	REVISED BY:	DATE:	552-25





DDH M-82-5
 105+01 E 103+80 N
 210° - 60°

DDH M-82-5
 442 m

LEGEND

GEOLOGY

- 1 Argillite
- 2 Shaley argillite
- 3 Metasiltstone
- 4 Altered feldspar porphyry
- 5 Feldspar porphyry
- 6 Biotite hornblende porphyry
- 7 Dacite
- 8 Quartz vein
- ~ Fault zone

Core recovery
 Structural attitude
 Core loss
 Au assay metres

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

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FIGURE 13

CAMPBELL RESOURCES INC.
 103 1 / 10, 15
 AIYANSH PROJECT - MISTY GROUP

DDH M-82-5

SCALE: 1:100	DRAWN BY: []	DATE: 8/11/82	PLAN NO:
PROJECT YEAR: 1982	REVISED BY: []	DATE: []	552-26

