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FINAL REPORT

FINLAYSON JOINT VENTURE

1973

November 30,1973

R.J. Cathro, P. Eng.

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SUMMARY AND RECOMMENDATIONS

During 1973, Finlayson Joint Venture (FJV) conducted reconnaissance prospecting and geochemical sampling in an area of 2500 square miles roughly centred on the Hoo property staked by South Yukon Joint Venture (SYJV) in 1972. Two claim groups were staked on newly discovered mineral showings, Fetish and Myda, and,in addition, some 39 minor mineral occurrences were examined, of which 20 were discovered by FJV in 1973.

The project area covers a sequence of metasediments of unknown age (Units A, B and C) which form a wedge between 8 and 24 miles wide between the Tintina Trench on the southwest and a Devonian-Mississippian assemblage of volcanics and sediments on the northeast. Small ultrabasic and granitic plutons of Mesozoic age and a minor amount of Tertiary basalt and sediments are the youngest rocks in the project area.

The FJV area is well mineralized although most occurrences are of a small erratic nature usually associated with quartz veins. No occurrences of stratiform zinc resembling the Hoo deposit were found. Other types of deposits investiaged include a tungsten skarn (Myda), stockwork-type porphyry (Catsup), fault-controlled replacement (Fyre), and stratiform copper-lead-zinc (Fetish). Sufficient work was completed to evaluate all showings except Fetish and Catsup and they are the only areas in which further exploration is recommended in 1974.

The Catsup porphyry showing is the first of its type to be found in this district and was not discovered until late in the season. The potential of this showing does not appear high from preliminary work but since low priority was given to intrusive rocks before its discovery, thorough exploration of all nearby plutons is warranted. Some additional work on

the adjacent Denim copper - molybdenum - lead - zinc anomaly, which appears to be caused by mineralization in a thin capping of metasediments over an intrusion, should be done at the same time. This further reconnaissance exploration is budgeted at $12,000.

On the Fetish claims, mineralization is poorly exposed at surface but grid soil sampling and hand pitting have shown that a leached copper zone is present which has a length of at least 3500 feet and appears to be conformable with the enclosing Unit A chloritic schists. Geochemical response suggests that galena and sphalerite are probably associated with the copper horizon in lesser amounts. The significance of this showing depends on its thickness and grade and a modest program of shallow drilling is recommended to get this information . A series of four 250 foot holes , estimated to cost $30,000 is budgeted.

No further work is recommended on the Myda showing and these claims should be allowed to lapse.

The recommended budget for 1974 is as follows:

Regional exploration - Catsup & Denim Areas	$ 12,000.00
Diamond Drilling - Fetish, 1000 ft. @ $30	30,000.00
Management	4,800.00
Filing assessment and claim staking	3,200.00
Total ----------	$50,000.00

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES LTD.

R.J. Cathro

Association of Professional Engineers of the Yukon Territory
J. CATHRO
GEOLOGICAL
ENGINEER

INTRODUCTION

Finlayson Joint Venture (FJV) was formed in 1973 by Standard Oil Company of British Columbia Ltd., Union Oil Co. of Canada Ltd., Marietta Resources International Ltd., and Messrs, L.T. & Harris Clay to explore an area in south central Yukon, as illustrated on Figure 1 on the following page. The project was planned and managed by Archer, Cathro & Assoc. Ltd. with the purpose of continuing regional exploration started in the same area in 1972 by South Yukon Joint Venture (SYJV) which led to the discovery of the Hoo zinc showings. Drilling and trenching were performed at the Hoo property during 1973 by a successor to SYJV, Hoo Joint Vneture, also under the management of Archer, Cathro.

SELECTION OF PROJECT AREA

The project area was selected because of its regional geology and known mineral showings following the discovery of the Hoo zinc showing by SYJV in 1972. The SYJV work in 1972 showed for the first time that stratabound mineralization occurs in limestone and quartzite of metamorphic Units A and B and indicated that the FJV area had been mapped in only a cursory fashion by the G.S.C. About twenty mineral occurrences had been documented within the project area in the Northern Cordillera Mineral Inventory, most of which had been explored by the same techniques which had been unsuccessful in recognizing or pinpointing the Hoo mineralization. The project boundary was drawn around the area thought to contain favourable Unit A and B metamorphic rocks but excluded an area of about 250 square miles surrounding the Hoo showing that had been explored by SYJV in 1972.

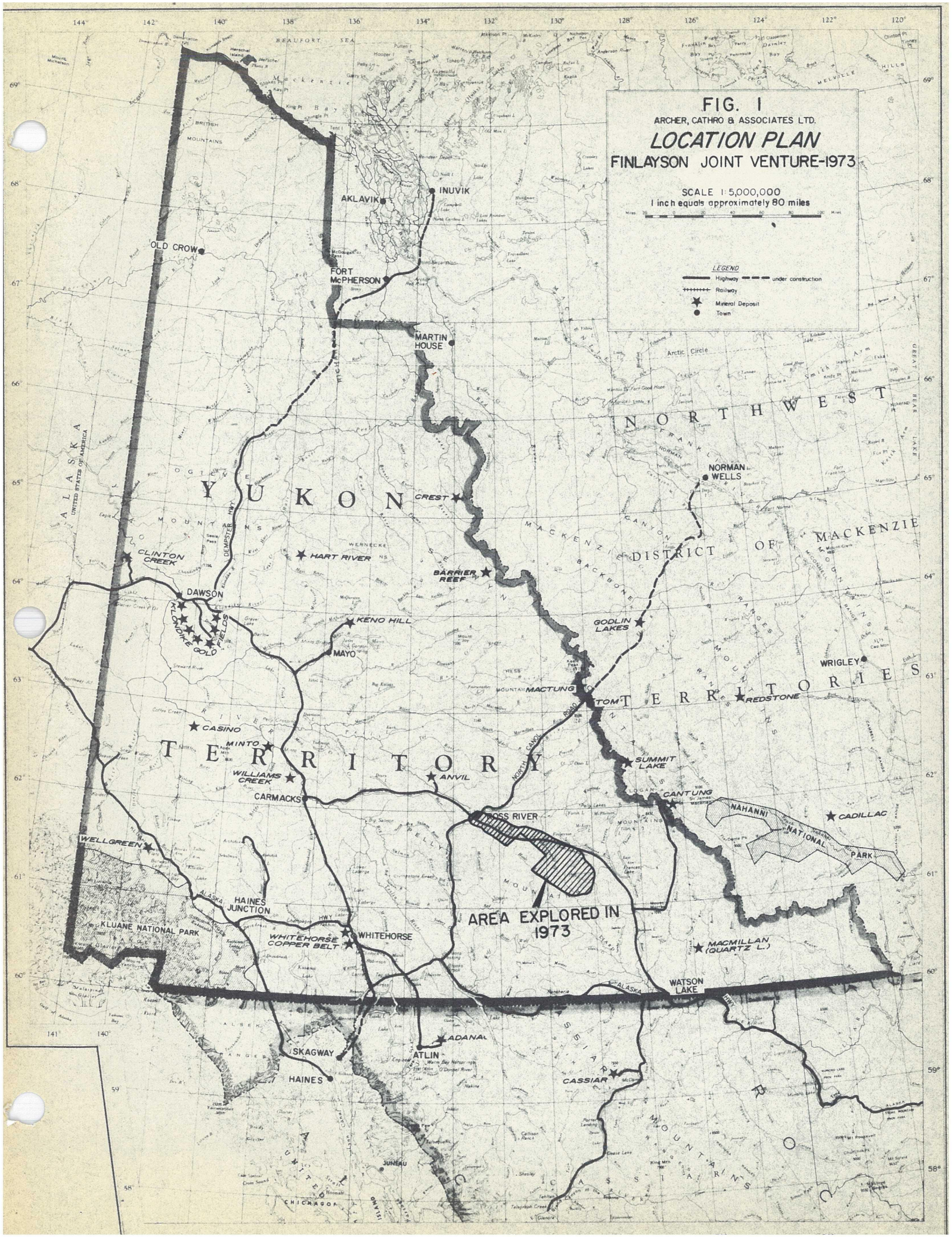


FIG. 1
ARCHER, CATHRO & ASSOCIATES LTD.
LOCATION PLAN
FINLAYSON JOINT VENTURE-1973
SCALE 1:5,000,000
1 inch equals approximately 80 miles
LEGEND
Highway
under construction
Railway
Mineral Deposit
Town
BEAUFORT SEA
MELVILLE HILLS
BRITISH MOUNTAINS
INUVIK
AKLAVIK
OLD CROW
FORT McPHERSON
MARTIN HOUSE
Arctic Circle
NORTHWEST TERRITORIES
NORMAN WELLS
YUKON TERRITORY
CREST
MACKENZIE MOUNTAINS
MACKENZIE DISTRICT OF MACKENZIE
ALASKA
UNITED STATES OF AMERICA
CLINTON CREEK
HART RIVER
BARRIER REEF
DAWSON
KLONDIKE GOLD FIELDS
KENO HILL
MAYO
GODLIN LAKES
WRIGLEY
MACTUNG
TOM
REDSTONE
CASINO
MINTO
WILLIAMS CREEK
ANVIL
CARMACKS
SUMMIT LAKE
CANTUNG
NAHANNI NATIONAL PARK
CADILLAC
WELLGREEN
ROSS RIVER
HAINES JUNCTION
KLUANE NATIONAL PARK
WHITEHORSE COPPER BELT
WHITEHORSE
AREA EXPLORED IN 1973
MACMILLAN (QUARTZ L.)
WATSON LAKE
ADANAC
ATLIN
SKAGWAY
HAINES
CASSIAR
JUNEAU
CHICHAGOF ISLAND
CASSIAR MOUNTAINS

LOCATION AND ACCESS

The project area lies immediately southeast of Ross River, Yukon and consists of a rectangular block about 100 miles long and 35 miles wide. The area explored in 1973 consisted of all but the north corner and the Hoo Joint Venture agreement area and totalled about 2500 square miles, as outlined on Figure 2 on the following page. The Tintina Fault froms the southwest boundary.

The project area has good road access, except in the south end, where a number of large lakes provide access for fixed wing aircraft. The Campbell Highway between Ross River and Watson Lake angles through the long axis of the area and the Canol Road crosses the northwest end.

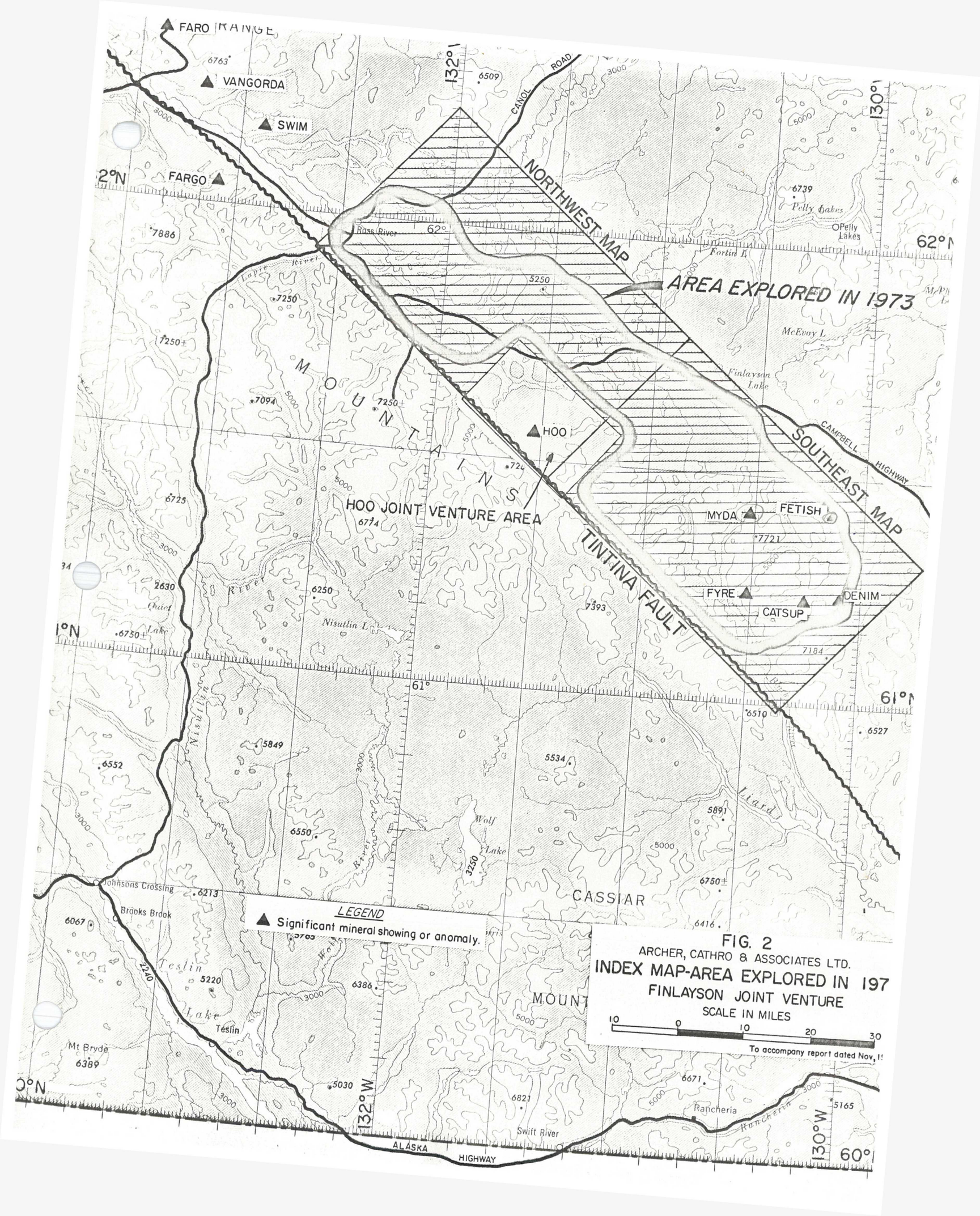
LOGISTICS

The crew was led by senior geologist Uwe Schmidt, who was assisted by geologist Earl Jensen and students Dave Hendry and Steve Fisher. They were supplemented for short periods by Mike Richards, Don Bruce, Bill Styan, Drummond Cavers, Ian Gibson, and cook Dan Miller.

Aircraft were chartered both on a daily casual and short term basis - helicopters from Trans North Turbo Air Ltd., Whitehorse,and Frontier Helicopters, Watson Lake; and fixed wing from Trans North, Whitehorse; B.C.-Yukon Air Service Ltd. and Watson Lake Flying Service, Watson Lake.

The following is a summary of crew activity during 1973:

May 2-3	- two crew members arrived in Whitehorse to organize field equipment.
May 4-14	- two men set up base camp at Surprise Lake and worked along Campbell Highway.
May 15-17	- crew in Whitehorse for planning and office work.
May 18 - June 9	- work continued along Campbell Highway from Surprise Lake basecamp.
June 1-10	- regional traverses with helicopter from Surprise Lake basecamp.


FARO RANGE
VANGORDA
SWIM
FARGO
NORTHWEST MAP
AREA EXPLORED IN 1973
SOUTHEAST MAP
HOO
HOO JOINT VENTURE AREA
MOUNTAINS
TINTINA FAULT
MYDA
FETISH
FYRE
CATSUP
DENIM
CAMPBELL HIGHWAY
CANOL ROAD
Ross River
Polly Lakes
OPelly Lakes
McEvoy L.
Finlayson Lake
Fortin L.
Nisutlin L.
Wolf Lake
Liard
CASSIAR
MOUNTAINS
Johnsons Crossing
Brooks Brook
Teslin
Teslin Lake
Mt Bryde
Swift River
Rancheria
ALASKA HIGHWAY
LEGEND
Significant mineral showing or anomaly.
FIG. 2
ARCHER, CATHRO & ASSOCIATES LTD.
INDEX MAP-AREA EXPLORED IN 197
FINLAYSON JOINT VENTURE
SCALE IN MILES
10 0 10 20 30
To accompany report dated Nov, 1

June 10 - July 5	- flycamps in eight locations.
July 6-16	- regional work with helicopter from Grass Lakes basecamp ; 3 additional men on crew .
July 15	- Fetish 1-4 claims staked.
July 17 - August 9	- fly camps in nine locations, including Fetish sampling.
August 10-24	- regional traverses with helicopter from Fyre Lake basecamp ; Myda 1-32 claims staked.
August 25-28	- flycamps in two locations.
August 29-31	- regional traverses with helicopter from Hoo basecamp.
September 1-12	-detailed mapping and sampling of Myda claims.
September 13-19	- data compiled in Whitehorse.
September 20-24	- regional traverses with helicopter from Ross River.

Weather during 1973 was wetter and cooler than normal and spring breakup was slightly delayed. Because of the field technique used, there was very little delay due to weather. Earl Jensen suffered two minor accidents, a bear attack and a superficial facial burn caused by a stove accident.

A total of 5705 soil, silt and rock samples were analyzed geochemically from 338 reconnaissance traverses and small sample grids on the Fetish and Myda claim groups. Helicopter usage totalled 147.85 hours of Bell 47 Series and 29.45 hours of Bell 206 flying.

The exploration work was performed under a land use permit issued by the Regional Director, Forest and Lands Division, Dept. of Indian Affairs and Northern Development. A total of 4 basecamps and 19 flycamps were occupied during the summer and each was left in a clean condition. In addition, all fuel containers were returned to source.

CLAIM DATA

A total of 52 claims were staked by Archer, Cathro & Associates Ltd.

on behalf of FJV , during the 1973 field season. Sufficient work was performed on the Fetish claims to extend their expiry dates to 1975 and 1976. The assessment credit will be filed early in 1974. Although enough work was completed on the Myda claims to extend their expiry to 1975, they will be allowed to expire. The claims are registered in the Watson Lake Recording Office as follows:

Claim Name	Number	Record(Tag) Number	Expiry Date
Fetish 1-4	4	Y73634-Y73637	15 July, 1974
5-20	16	Y73694-Y73709	15 July, 1974
	20		
Myda 1-32	32	Y74102-Y74133	29 Aug., 1974
Total --	52		

FIELD AND ASSAY PROCEDURES

Because of low stream sediment (silt) geochemical response from the pyrite-deficient Hoo sphalerite showing, emphasis was placed on reconnaissance soil sampling in conjunction with prospecting. First priority was given to areas thought to be underlain by Units A and B and prospecting and sampling were concentrated in areas of heaviest overburden and vegetation cover. This was based on the assumption that such areas had been explored less thoroughly in the past than areas with outcrop or easier helicopter access.

The relatively good road access and abundance of large lakes suitable for aircraft allowed supply costs to be minimized. Exploration costs were further reduced and more detailed coverage of favourable areas was achieved by the successful adoption of a flycamp exploration technique. Under this system, two men explored on foot within an area of 10 to 25 square miles which extended up to 4 miles from a light camp. Flycamps were moved and supplied by turbine helicopter [Bell 206(Jet Ranger)] every 4 to 7 days and were positioned centrally within the immediate target area. Periodically, both

for morale and to permit data compilation and improved planning, both crews were assembled into a larger, more confortable basecamp from which daily traverses were prospected during periods of 5 to 15 days in areas which could not be efficiently covered from flycamps. Basecamps were positioned on lakes or roads for easiest supply and were supported by a smaller piston helicopter (usually a Bell 47 series) which stayed with the crew for several days at a time.

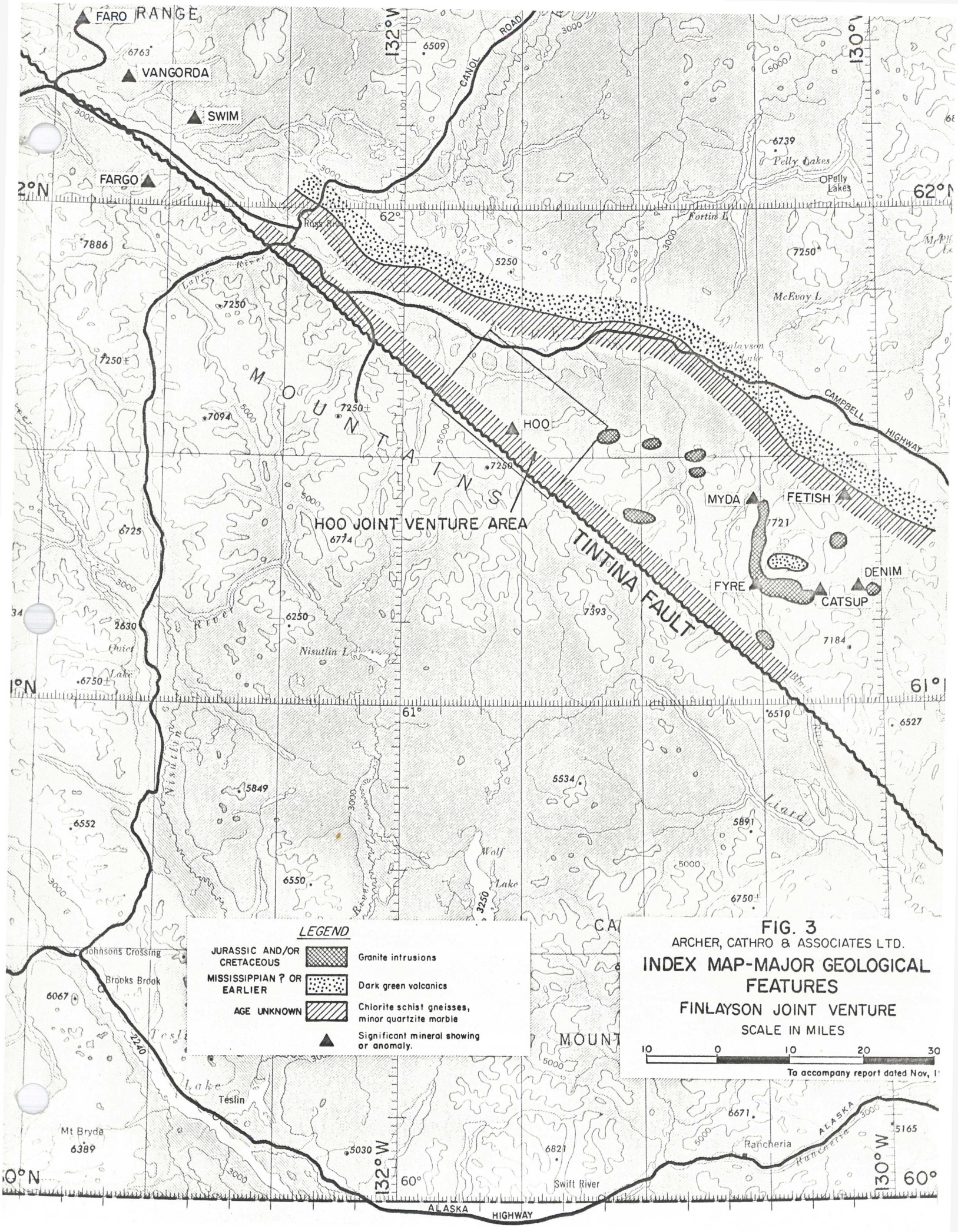
Members of the crew normally worked individually on day-long prospecting traverse. These were planned by the crew chief after studying published geology, drainage patterns, airphotos and the Northern Cordillera Mineral Inventory. Several reconnaissance trips were flown through the area looking for gossans and structural features not shown on government maps. Airphotos were carried in the field for navigation purposes and for plotting data. All drainages were silt sampled and soil samples were collected at intervals of 1500 to 2000 feet between drainages. About half the traverses were designed to gather geological information as well as samples and were therefore located in higher country with more outcrop. Representative rock specimens from outcrops, residual overburden and stream gravels were brought back to camp for examination by the senior geologist and for routine testing with an ultraviolet lamp. A sketch of the route followed, together with prospecting notes, sample locations and geological description, was prepared for each traverse in the evening. A typical traverse sheet is shown on the following page. These sheets are invaluable for directing follow-up work and compiling reports, and form the basic information file for the project area. Traverse sheets were sent to Whitehorse on a regular basis so that copies could be made, thus ensuring that the field data, particularly sample locations, could not be completely lost in case of fire or accident. The copies were returned to the

field along with the geochemical results. Follow-up traverses were based on geochemical, assay and prospecting results.

Geochemical samples were collected in individual prenumbered kraft paper bags which were sent to Watson Lake or Whitehorse on returning supply aircraft for shipment by air freight to Chemex Labs Ltd., North Vancouver, B.C. All samples were dried, screened to a minus 80 mesh fraction and digested in nitric-perchloric acid. They were then routinely analyzed for copper, molybdenum, lead and zinc using atomic absorption spectrometry. A few selected samples were later reassayed colorimetrically for tungsten.

REGIONAL GEOLOGY

The major features of the regional geology and the significant mineral showings and anomalies in or near the project area are simplified on Figure 3 on the following page. The main structural feature is the Tintina Fault, which forms the southwest border of the project area and has a measured transverse movement of over 200 miles in Mesozoic time. This fault, which is thought to be a northerly extension of the Rocky Mountain Trench, trends 50° west of north, separating Cambrian phyllites and carbonates on the southwest side from a wedge of more metamorphosed schists, gneisses and minor carbonate horizons of unknown age on the northeastern side. The southeastern end of the wedge consists primarily of gneisses of Unit C and has a width of 24 miles. The northwestern end narrows to a width of about eight miles and consists primarily of Unit A chlorite schist and phyllite. Mississippian or younger volcanic rocks form an abrupt geological boundary to the northeast. Small stocks of granitic rocks of Jurassic and/or Cretaceous age have intruded schists and gneisses of Unit A and C in the southeast part of the project area.


FARO RANGE
VANGORDA
SWIM
FARGO
CANOL ROAD
Ross River
Pelly Lakes
Fortin L.
McEvoy L.
Finlayson Lake
CAMPBELL HIGHWAY
MOUNTAINS
HOO
HOO JOINT VENTURE AREA
TINTINA FAULT
MYDA
FETISH
FYRE
DENIM
CATSUP
Quiet Lake
Nisutlin L.
Wolf Lake
Liard
Johnsons Crossing
Brooks Brook
Teslin Lake
Teslin
Mt Bryda
Swift River
Rancheria
ALASKA HIGHWAY
LEGEND
JURASSIC AND/OR CRETACEOUS
Granite intrusions
MISSISSIPPIAN ? OR EARLIER
Dark green volcanics
AGE UNKNOWN
Chlorite schist gneisses, minor quartzite marble
Significant mineral showing or anomaly.
FIG. 3
ARCHER, CATHRO & ASSOCIATES LTD.
INDEX MAP-MAJOR GEOLOGICAL FEATURES
FINLAYSON JOINT VENTURE
SCALE IN MILES
10 0 10 20 30
To accompany report dated Nov, 1

Geological mapping by FJV is plotted on Figures 4 and 5 at a scale of one mile to the inch. The topographic base on these maps has been photo-enlarged from existing government 1:250,000 maps (approx. 4 miles to the inch). For mapping purposes, the project area has been divided into two map areas, northwest and southeast, as shown on Figure 2.

Stratigraphy

A short description follows of each of the rock units found within the project area (adopting the same unit numbers used on G.S.C. Map 8-1960):

Unit A consists predominately of chlorite schist with minor phyllite and phyllitic quartzite. It is more abundant towards the northwest end of the project area,where the foliation generally strikes east and dips steeply south. To the southeast the foliation strikes approximately east and has a moderate northerly dip but exceptions to this trend occur frequently. Strikes sometimes vary to northwest and dips occasionally show reversals, especially where they are steep.

Unit B comprises minor limestone horizons in either Unit A or C and should probably not be a separate unit at all. The limy bands are often altered to marble and skarn near intrusive contacts. In the Myda skarn zone, for example, Unit B carbonates were altered to scapolite-feldspar-calcite skarn and garneti-ferous marble and were investigated for tungsten potential.

Unit C rocks consistprimarily of thinly laminated biotite-quartz-feldspar gneisses with minor feldspar augen gneiss. Gneisses are more abundant towards the southeast where foliations dip gently to moderately toward the northeast and strike northwesterly. They become increasingly scarce towards the northwest, where foliation is variable but generally strikes north. South

of Pelly River, dips are both east and west at moderate to steep angles. Exceptions occur north of Pelly River where foliation strikes easterly and dips gently north or south.

Units A, B, and C have been assigned an unknown age by the G.S.C. They are of primary interest for exploration due to the presence of stratabound zinc-lead mineralization in Units A and B at the Hoo property. The age and composition of these rocks and the structural setting relative to the Tintina Fault is somewhat similar to conditions in the Anvil District, about seventy miles northwest. At Hoo, zinc-lead mineralization occurs in quartzites associated with chlorite schists, magnetite-rich greenstones and carbonate horizons of Unit A. Early field work showed that Unit A rocks were not always clearly defined by original G.S.C. mapping and, as a result, all areas mapped by the G.S.C. as metasedimentary units became interesting for exploration. Field work by FJV in 1973 showed that narrow bands of Unit C often occur in Unit A, and vice versa, but that they are usually too small to map.

The main criteria for distinguishing Unit A from Unit C is texture and mica content. As a rule, areas predominantly underlain by gneisses are biotite rich and areas predominantly underlain by Unit A schist are chloritic. Chlorite schists are often associated with black phyllites and minor micaceous quartzites. Gneissic areas, on the other hand, are predominantly grey and leucocratic and often contain minor bands of feldspar augen gneisses.

Unit D consists of ultramafic rocks of two types : (a) those which were intruded and show contact alteration (b) those which have no altered contact and were tectonically emplaced by thrust faulting. An example of the first type occurs near the southeast end of Hoo Project Area, where Unit A phyllites have been

altered to pale green and brown colour and contain minor magnetite and mariposite. Ultramafic rocks near the contact are light green in colour, strongly serpentinized, weakly fractured and contain traces of asbestos fibre. Another occurrence of ultramafic rocks of this type is located ten miles further east, where a prominent red brown gossan marks a narrow contact zone with magnetite and mariposite between an unaltered, fine grained ultramafic and Unit A chlorite schists.

A major outcrop of the second type of ultramafic caps mountain peaks three miles east of North Lakes. The western outcrops show a flat lying ultramafic body overlying gently northerly dipping beds of Unit C with no alteration halo. Minor asbestos fibre was noted occasionally in float and, in rare occasions, in outcrop. This ultramafic body is believed to be tectonically emplaced by thrust faulting. Elsewhere in Yukon, most ultrabasics have been dated as Permian in age and it is reasonable to assume a similar age for those in the project area.

Unit 2-this unit is found at only one place within the project area, along the Tintina Trench south of Ross River, and was only investigated because streams draining it are anomalous in zinc and have above threshold molybdenum values. It comprises black limy phyllites and shales and has been assigned a Cambrian age, although recent G.S.C. mapping shows that several ages have probably been lumped together due to structural complexity.

Unit 6 is a sequence of volcanics and metasediments of Mississippian or earlier age that have been subdivided into four groups by the G.S.C. These are:

6(a) partly altered green volcanic rocks (greenstone) with minor serpentine and amphilobite;

6(b) green and maroon breccias, tuffs and flows, with minor metadiorite, slate, chert and greywacke;

6(c) buff, rusty and pale green felsic breccias and tuffs, with minor chert and brown crinoidal limestone; and

6(d) massive grey and cream limestone.

Of these, only dark green massive to foliated volcanics of Unit 6(a) and white, crystalline limestone of Unit 6(d) are present in the project area. Both occur along the northeast side and form prominent , resistant hills. The contact between Unit 6 and Units A and C is not exposed and it is not known whether it is a fault or an unconformity. The volcanics have similar foliation to the metamorphics, striking northwest and dipping about 40° northeast, which suggests that they are older than the orogeny or tectonism which produced the foliation. A smaller area of volcanics occurs northeast of Fyre Lake.

Unit 9 - small quartz-rich stocks of Unit 9 intruded the metasediments in the southeast part of the project area in the Jurassic or Cretaceous and may be related in origin to the foliation of the older units. Included in this unit are biotite quartz monzonite, coarse grained biotite granite, hornblende diorite , quartz and feldspar porphyry. The first type is most common and is associated with the Myda skarn. Hornblende diorite is associated with stockwork copper mineralization at the Catsup Showing.

Unit 10 includes shale, sandstone and conglomerate of Paleocene age. It was only encountered in the extreme northwest end of the project area, between Ross River village and Lapie River. Outcrops along Lapie River consist of southerly dipping beds of conglomerate, sandstone and minor coal seams. Between the village and the Campbell Highway, mudstone, conglomerate sandstone and minor coal have a moderate southeasterly dip.

Unit 11 is mapped as dark brown and black basalt flows of Tertiary age by the G.S.C. and was seen only in the Northwest Map Area . Outcrops between Ketza River and the Campbell Highway consist of medium to coarse grained gabbro which is brown and well rounded on weathered surfaces.

Structural Geology

A simple structural model cannot be constructed on the basis of FJV field work. Where good outcrop was encountered, complex structures such as overturned recumbent folds associated with small scale faults were observed. It is also likely that foliation has no relationship to original bedding. The strongest structural feature is the Tintina Fault Zone, along the southwest edge of the project area. Within the project area, valleys which branch off the Tintina Trench likely follow subsidiary fault structures.

The alpine-type ultramafic body a few miles east of North Lakes is further evidence of a complex structural history, suggesting a period of low-angle thrust faulting. Evidence of post-intrusive faulting is present just north of Fyre Lake and at the Catsup Showing, where granitic rocks are in fault contact with grey limestone with no evidence of chilled texture in the intrusive or alteration in the carbonate.

GEOMORPHOLOGY AND REGIONAL GEOCHEMISTRY

Glaciation

All of the FJV area has undergone continental glaciation in the Pleistocene except the highest ridges and peaks, which have been affected only by alpine glaciation and local cirquing . About twenty lakes over one mile long were formed during deglaciation in the rugged southeast area, which is characterized by broad U-shaped valleys, steep slopes with relatively good exposure and

occasional gently rolling uplands. The lower slopes of the main valleys are covered with glacial and glaciofluvial drift but features such as eskers, kame terraces or kettles are uncommon. The northwest end of the project area consists of gentle, rolling hills and , near Pelly River, thick drift and river silt.

Soils

Thin horizons of recent volcanic ash are present in parts of the project area northwest of the Hoo property but these presented no sampling problems. Most soil samples were colelcted from mixed residual, fluvial and glacial material above the level of thick drift. Poor samples due to high organic content, high glacial content or other factors were noted as such on the daily traverse report.

Vegetation

Forest cover is extensive but not thick in the lower parts of the project area, particularly the northwestern portion. In the more rugged portion at the southeast end, treeline is often below 4500 feet and many of the main valleys near the lakes are almost barren. Alpine vegetation such as buckbrush is relatively thick in this area.

Regional Geochemistry

The assays of all samples collected during 1973 are plotted on Figures 6 to 9 at a scale of one mile to the inch, or on more detailed inset maps in the body of the text. Two maps have been prepared for each half of the project area, with copper and molybdenum plotted on one and lead and zinc on the other.

With the exception of Unit 2, which occurs on the edge of project area at the northwest end, all rock units in the project area have a low background in all metals. Consequently, even minor mineral occurrences produce strongly contrasting anomalies, particularly in the Southeastern Map Area with its greater

relief and more rapid erosion. The large number of anomalies obtained during the season were investigated routinely as they were located, with the result that only four geochemical anomalies remain unexplored. The following are a few notes on the geochemistry of each rock unit:

Units A, B and C - have a background of 40 ppm copper, less than 1 ppm molybdenum, 30 ppm lead, and 100 ppm zinc. Zinc is the only metal which produces erratic highs (up to 1000 ppm) and these were generally ignored unless they were accompanied by copper or lead. Black shales near the Fetish Showing have a slightly higher molybdenum response (5 to 10 ppm).

Unit 2 shales have a high background in zinc (500 ppm) and molybdenum (10 to 20 ppm) with low lead values (20 to 30 ppm) and slightly higher copper values (40 to 60 ppm). These rocks are strongly contorted and contain a trace of a copper bearing sulfosalt.

Unit 6(a) has a variable background between 20 and 50 ppm copper except for the Fetish area where background reaches 100 ppm. Molybdenum is always less than 1 ppm lead,is about 25 ppm and zinc is about 100 ppm. The slightly variable copper background may reflect background differences between volcanic horizons.

Unit 6(d)-few samples were taken over this unit but they showed a low response in all metals.

Unit 9 - response was generally quite low over intrusions with values of 20 ppm copper, less than 1 ppm molybdenun, 25 ppm lead and 75 ppm zinc. Copper and lead anomalies are common at contacts between intrusions and Units A and C and detailed prospecting of these usually found minor amounts of sulfides in veins or disseminated in a hornfels aureole.

Units 10 and 11 - the few samples collected from these rocks had very low values.

As mentioned earlier, numerous anomalous assays were obtained, mainly from the more rugged and better mineralized southeast area. Because of the strong emphasis placed on follow-up prospecting, only four low-priority anomalies remain unexplained which justify investigation. These are labelled on Figures to and are summariezed as follows:

Anomaly A

Location: 61°32'N, 130°36'W ; NTS: 105G/10

The anomalous area is underlain by a Unit A chlorite schist and phyllite roof pendant intruded by Unit 9. Initial work near the contact did not find any mineralization but did produce moderate anomalies in copper (101 to 112 ppm), lead (100 and 336 ppm) and zinc (360 to 1700 ppm). Comparison of this anomaly with dispersion levels measured around weak vein-type mineralization near intrusive contacts elsewhere in the project area suggests that this anomaly probably has a similar cause. However, one additional day of prospecting is recommended whenever a crew is nearby.

Anomaly B

Location: 61°18'N, 130°22'W ; NTS: 105G/8

Unmineralized quartz vein float was noted during the initial sampling, which produced moderate anomalies in copper (102 ppm in silt, 112 ppm in soil), lead (138 and 744 ppm) and zinc (248 to 608 ppm in soil, silts of 712 and 756 ppm). The area is underlain by Unit C gneiss and has fairly steep topography and better than average exposure. One day of prospecting is warranted if a crew is nearby.

Anomaly C

Location: 61°11'N, 130°42'W ; NTS: 105G/2

This is another moderate copper anomaly from a contact between Units C and 9. Minor amounts of weak skarn alteration , unmineralized quartz veins and a trace of malachite were noted in float during initial work. Soil response is in the 102 to 236 ppm copper range. Additional prospecting of the contact and the intrusion itself in warranted, which might require two days work.

Anomaly D

Location: 61°18'N, 130°51'W ; NTS: 105G/7

Three moderate copper values (120 to 152 ppm) were obtained in soil from an area underlain by Unit A chlorite schist. One day of prospecting is warranted when a crew is nearby.

MINERALIZATION

The project area contains at least 41 mineral occurrences, of which 19 were known and documented in the Northern Cordillera Mineral Inventory prior to the FJV program. Another 22 occurrences were discovered by FJV in 1973. Unfortunately, most of the mineralization in the project area occurs as small vein-type showings which have no economic potential. A wide variety of deposits were investigated in 1973, which can be classified as follows:

(a) Stratabound (?) copper-lead-zinc-iron in Unit A - Fetish and Palsy showings.

(b) Quartz veins containing galena, chalcopyrite and sphalerite (i.e. North Lakes and Alpine Creek anomalies, Fetish showing) are common only in Units A and C.

(c) Copper skarns and replacements (i.e. Fyre, Pack, and Dub showings) are also found in Units A and C but are less common.

(d) Tungsten in scapolite-feldspar-calcite skarn within Unit B limestone -Myda showing.

(e) Stockwork-type porphyry copper mineralization in Unit 9 hornblende diorites - Catsup showing.

The individual mineral occurrences are discussed in the following section and have been subdivided into those found by FJV in 1973, as distinct from previously known showings that were examined by FJV.

A - Occurrences Discovered in 1973 by FJV

(1) Fetish (See Figures 10 to 12 in pocket)

Location: 61°25'N, 130°07'W ; NTS: 105G/8

The reddish brown limonite gossan and vegetation anomaly, which forms the main showing, was found by prospecting from a flycamp on June 30. There is no record of prior staking or evidence of earlier work other than a few broken rocks. The first claims were staked on July 12 and the remaining 16 were added during the period July 15-23 when a flycamp was set up on the showing to conduct mapping and grid soil sampling. Short visits were made on August 16, 22, 31 and September 24 in order to dig hand pits in the anomalies.

Geology - The property is underlain by a narrow belt of Unit A schists which is bounded on the southwest by Unit C gneisses and on the northeast by foliated volcanic rocks. Foliation in all units trends northwest and dips about 40° northeast, and no contacts between the units are exposed. Outcrop is not plentiful in the area of subdued relief underlain by Unit A and C. Near the main showing, the topography consists of a series of swampy, overburden-filled gulleys which trend more or less parallel to the foliation. Overburden seems fairly thin and consists mainly of residual and fluvial material mixed with a little glacial till.

Mineralization has been found only in float near the main gossan and in handpits dug in the soil anomalies. Three types of mineralization have been found on the claims: (a) leached chlorite schist containing limonite and chalcopyrite which was found as residual till in Pit 7. A sample of schist with no visible sulfides assayed 3.53 per cent copper, 0.24 per cent zinc, 0.36 oz/ton silver, 0.01 per cent lead and trace in gold, antimony and arsenic. A second sample from the same location consisted of malachite-stained quartz

lenses from the schist horizons and it assayed 2.1 per cent copper, 0.09 per cent zinc, 0.06 oz/ton silver and trace in gold, lead, antimony and arsenic. Both assays were considerably higher than visual estimates, which suggests that some chalcocite, tenorite or copper pitch must be present in the limonite. (b) milky quartz float derived from veins or lenses containing minor amounts of galena and chalcopyrite. A sample of surface float with visible chalcopyrite assayed 0.18 per cent copper and trace gold and silver. (c) bedded magnetite and hematitic jasper found in a string of narrow quartzite outcrops (Unit Aa) just north of the gossan and geochemical anomaly. No samples were assayed.

Geochemistry - A total of 197 soil samples were collected, of which most were from a grid near the main showing. Grid samples were taken at 200 foot intervals on lines 400 feet apart over an area of about six claims centered on the main showing. As mentioned previously, overburden appears to be fairly thin (less than ten feet) over much of the property, and consists mainly of residual rock fragments and fluvial material, well mixed with small patches of glacial till. Details of the soil types encountered in the hand trenches are shown on Figure 10. Soil sampling has produced an aligned series of well-defined copper and lead anomalies over 3500 feet long, which follow the trend of the foliation and drainage channels and extend through the main showing.

Copper assays in ppm are plotted with molybdenum on Figure 11 and show a close relationship to underlying rock types. The northeast side of the grid, uphill from the showing, is underlain by volcanics of Unit 6a and has a background of about 60 ppm copper. Reconnaissance sampling over Unit 6a indicated several areas of weakly anomalous response (up to 164 ppm) from well exposed, steep slopes where no visible sulfides other than weakly disseminated pyrite were seen. Most of the grid is underlain by Units A or C which have a lower background of about 20 to 30 ppm copper. The copper anomaly consists of two parallel

linear zones that are generally less than 500 feet wide and show a strong contrast with assays in the range from 75 to 500 ppm. Low assays between the northeast side of the anomalies and a drainage channel near the contact between Units A and 6a indicates there has been no downslope contamination from higher background volcanics. The copper anomalies extend off both ends of the grid and the southeast end of the anomaly is partially obscured by a swampy drainage channel that could not be sampled.

Molybdenum response is generally less than 1 ppm and only one cluster of weakly anomalous (5 to 10 ppm) assays were obtained. These are too scattered to define a trend but generally occur along the southwest side of the anomaly where black shale float was seen in overburden. The soil response is thought to be caused by a higher rock background in the shale. One strongly anomalous silt assay of 26 ppm was obtained from a small stream flowing north into Fetish Lake. Reconnaissance soil sampling in this area returned background values and the high assay is probably an erratic.

Lead assays, which are plotted with zinc on Figure 12 , show a similar anomalous pattern to that outlined by copper. The only exception occurs at the southwest end of lines 24 and 28 NW, where three strongly anomalous assays between 200 and 516 ppm were obtained from an area with low copper response. Lead background is about 30 to 35 ppm over all rock types and anomalies show a sharp contrast in the range from 75 to greater than 500 ppm. The main anomaly is roughly coincident with the copper anomaly although shifted slightly uphill in a few places.

Zinc background is relatively low (under 100 ppm) even in the areas thought to be underlain by black shale. Anomalous response in the range from 250 to 1500 ppm is erratic and is usually associated with areas of highest

lead response. Three high zinc assays (424 to 1320) occur with low lead values near the northwest end of the claim group. A 456 ppm assay was obtained with a low lead value from the same silt sample south of Fetish Lake that was anomalous in molybdenum, suggesting that high rock background may be the source.

Trenching - Seven hand pits ranging in depth from 2 to 7 feet and in length from 4 to 15 feet were dug on geochemical anomalies. Bedrock was not reached in any trenches but all encountered soil and residual rock fragments which had not been transported more than a few hundred feet. Soil profiles and/or selected rock samples were assayed geochemically from each trench.

Trenches 3 and 4 are located in the main copper and lead anomaly about 1000 feet northwest of the main gossan. Trench 4 was just uphill from the anomaly and returned background assays. In Trench 3, assays of soil consistently increased in all four metals from fairly low values at surface to much higher values at a depth of 4 to 6 feet. The increases measured were : copper - from 44 ppm on surface to between 1200 and 1760 ppm ; molybdenum from less than 1 to between 8 and 13 ppm ; lead from 107 to between 375 and 680 ppm; and zinc from 148 ppm to between 3000 and 3200 ppm. Assays on samples of typical rock fragments from the bottom of this trench assayed 51 to 96 ppm copper, up to 7 ppm molybdenum, 12 to 52 ppm lead and 43 to 400 ppm zinc. The highest assays in each metal were obtained from a leached and brecciated phyllitic quartzite with weak limonite staining.

Trench 5 is situated 500 feet southeast of Trenches 3 and 4, within the main anomaly. No definite trend was obtained in soil samples from this trench but the highest copper and lead assays (363 and 180 ppm, respectively) were obtained midway down.

Trenches 6 and 7 were cut in the main gossan itself and showed that the limonitic soil is only a few inches thick and is underlain by near-bedrock float which retains its rough bedding attitude. Assays of leached chlorite schist fragments with malachite stain, as reported previously, are low in all metals except copper, which constitutes 3.53 per cent of the schist and 2.1 per cent of the quartz lenses from within the schist. Geochemical assays of soil from the trench below the gossan returned 7700 to 12,200 ppm copper, 6 to 11 ppm molybdenum, 172 to 375 ppm lead and 2050 to greater than 4000 ppm zinc. The limonitic gossan on surface assayed 2800 ppm copper, 7 ppm molybdenum, 835 ppm lead and greater than 4000 ppm zinc.

In summary, trenching has shown that the copper anomalies are probably derived from a leached stratabound sulfide zone in chloritic schist. Galena and sphalerite probably occur with pyrite in close association with the copper horizon, either together in a single horizon or as individual bands nearby. No information on the thickness of the mineralization has been obtained. The dip of the mineralization was measured in one pit as 50° southwest.

(2) Palsy (see Figures 13 to 15 on following page)

Location: 61°28'N, 130°13'W; NTS: 105G/8

The Palsy showing is situated on the northeast side of Wolverine Lake, about four miles northwest of the Fetish showing. It was discovered while prospecting a silt anomaly which assayed 268 ppm copper, 5 ppm molybdenum, 107 ppm lead and 1560 ppm zinc. The source of the anomaly appears to be a thin bedded iron formation composed of 30 to 70 per cent magnetite and hematite with minor euhedral pyrite in quartzite. Thickness is unknown because the zone was seen only in float but it is probably less than five feet. The iron rich quartzite is significant because it has the most resemblance to Hoo quartzite

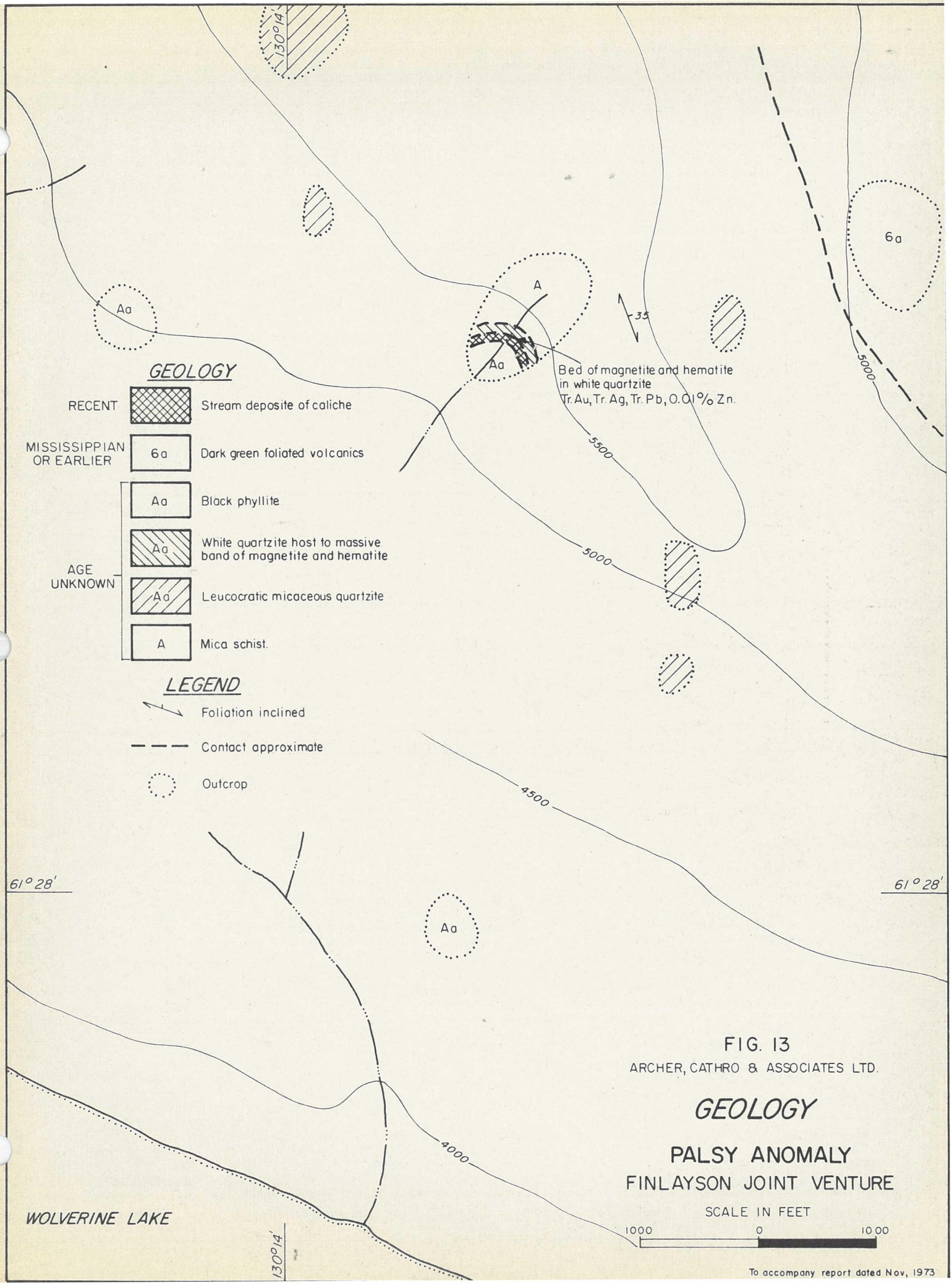


FIG. 13

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

PALSY ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

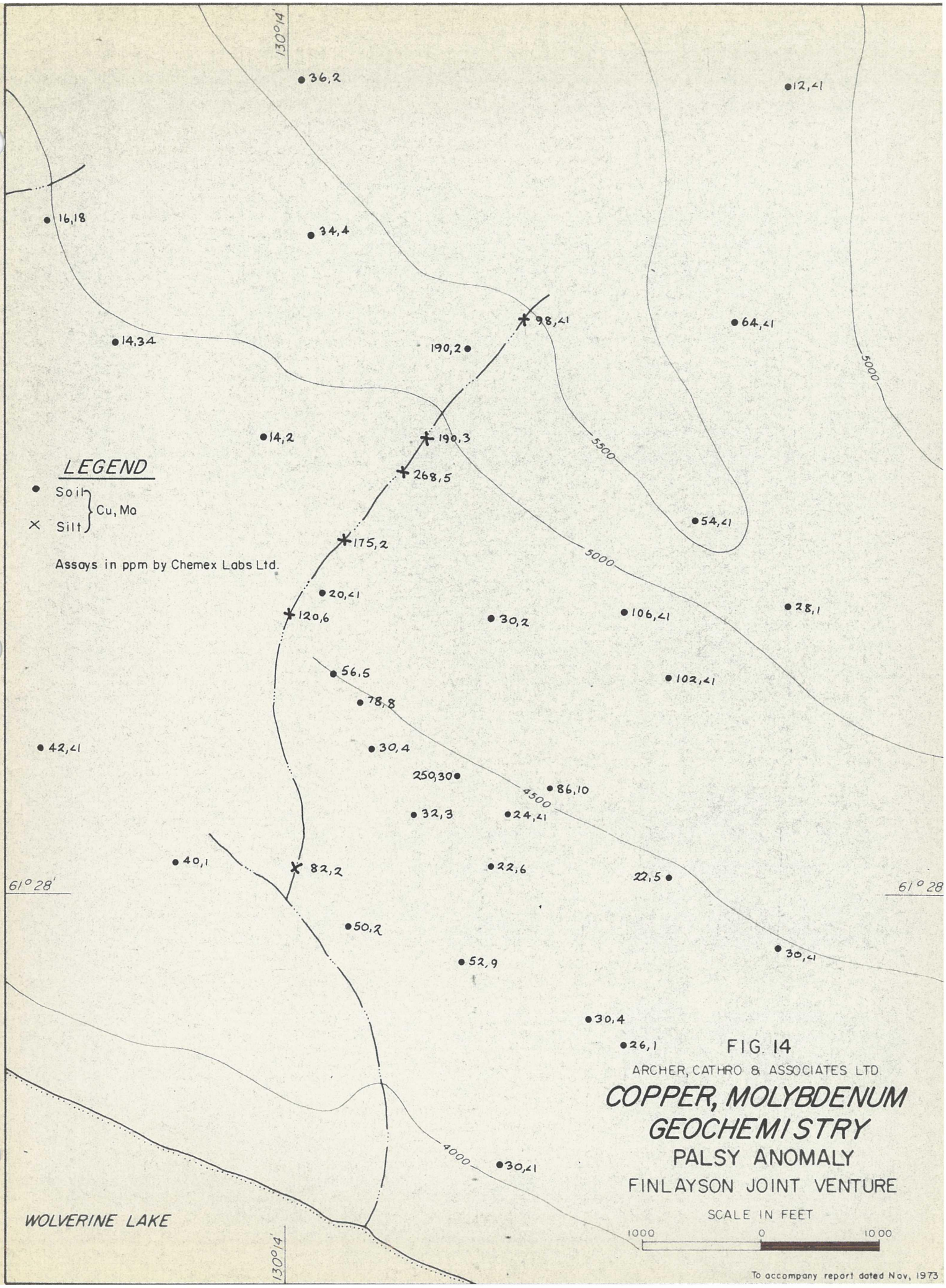


FIG. 14

ARCHER, CATHRO & ASSOCIATES LTD.

COPPER, MOLYBDENUM GEOCHEMISTRY

PALSY ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

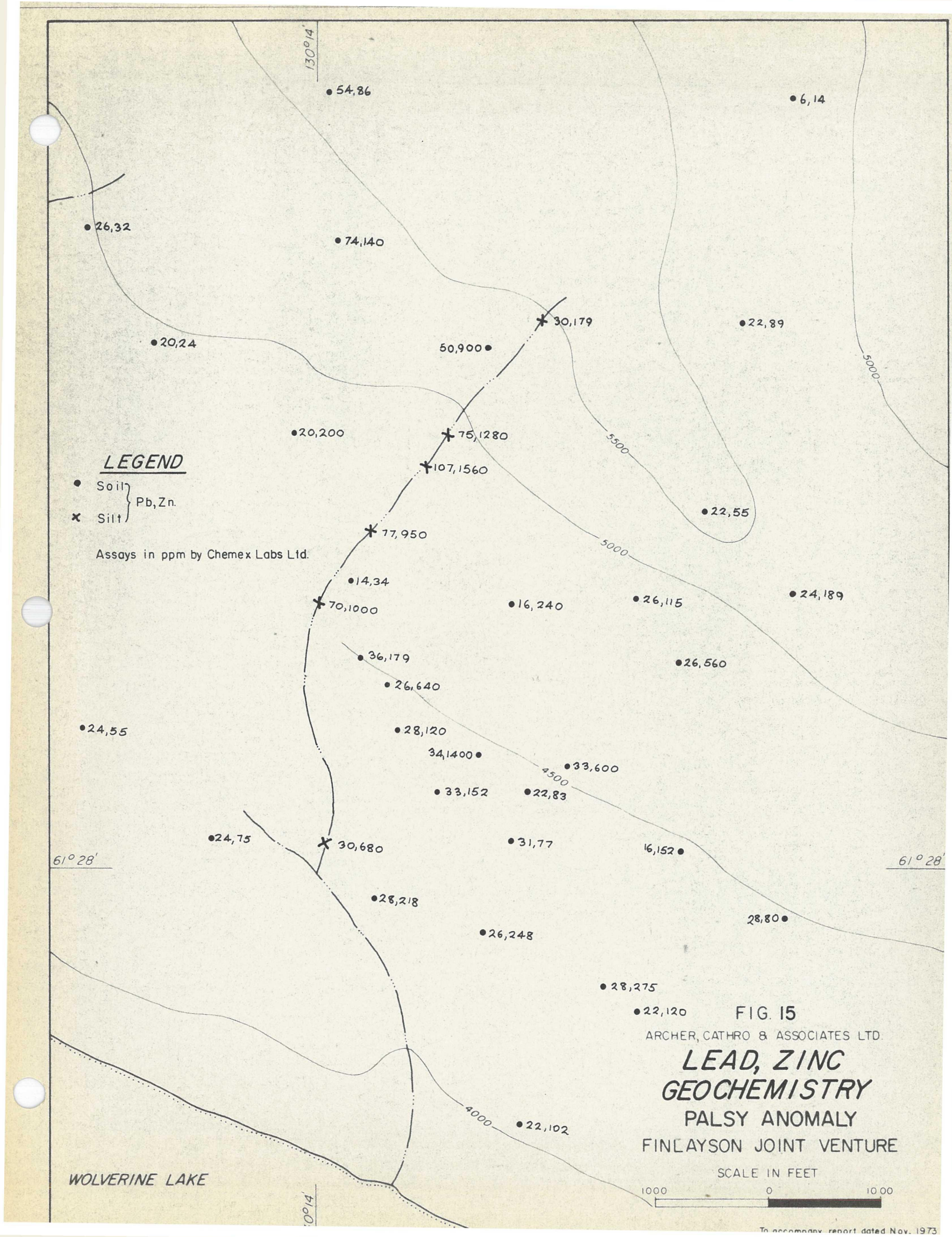


FIG. 15

ARCHER, CATHRO & ASSOCIATES LTD.

LEAD, ZINC GEOCHEMISTRY

PALSY ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

To accompany report dated Nov. 1973

of any rocks seen in the project area. A grab sample of the iron-rich float assayed less than 0.01 per cent (100 ppm) in copper, lead or zinc, less than 0.001 per cent molybdenum and trace silver and gold. A silt sample above the float assayed 98 ppm copper, less than 1 ppm molybdenum, 30 ppm lead and 179 ppm zinc. It seems likely that most of the copper, lead and iznc are derived from an unexposed, possibly leached horizon stratigraphically near the iron formation. Some additional prospecting is justified in this vicinity in conjunction with future work on the Fetish property.

(3) Myda (see Figure 16 in pocket)

Location: 61°24'N, 130°30'W ; NTS: 105G/7

Skarn alteration was recognized during FJV prospecting on July 3 in an area mapped by the G.S.C. as Units A and C. The skarn has developed in a thin (20 to 50 feet) limestone horizon (Unit B) within thinly laminated quartz-feldspar-biotite gneiss of Unit C at the contact of a small, unmapped stock of biotite quartz monzonite. There is no record of previous staking or evidence of earlier work. Abundant scheelite was recognized in the skarn while lamping on the night of August 17, following which the claims were staked on August 27 and detailed sampling was carried out during the period September 1 to 12. In hand specimen, the skarn is usually medium green and coarse grained. Microscopic work has shown that the rock is composed of 40 to 80 per cent scapolite, lesser amounts of plagioclase and minor amounts of interstitial diopside marble, vesuvianite and quartz. The rock is laced by irregular, narrow quartz veinlets which are most obvious on weathered surfaces due to differential weathering. Local patches of darker diopside-garnet skarn are rare. The scapolite skarn grades into patchy clots of skarn and quartz within marble.

Two prominent joint directions are found in all rock types on the Myda claims. These are steeply dipping or vertical joints striking 160° and 045°. A few pegmatite dykes are present containing quartz, feldspar, muscovite and tourmaline and these follow the jointing. Within the skarn, outcrop is very rare but joints with attitudes of 035/80W and 150/90 were measured at 23 south and 8 west. Along line 12 at 26 west, joints are 045/90 and 165/90 and an aplite dyke about two feet wide cuts Unit C gneiss at 045/90.

A grab sample consisting of small fragments from a dozen scattered pieces of mineralized float found during the initial lamping assayed 0.73 per cent WO_3 and 0.005 oz/ton Gold, while a semi-quantitative spectrographic analysis showed a minor tin and beryllium content.

Outcrop is virtually absent and the skarn can only be seen in near-outcrop float, felsenmeer and talus. The showing occurs near timberline on a gently rounded ridge. The lack of outcrop plus the normal difficulty of sampling scheelite mineralization without bias in the field created a special sampling problem. In order to determine tonnage and grade potential at minimum cost the following program was conducted. Zones containing scheelite were outlined by night lamping with an ultraviolet lamp. These were tied in to a picketed grid, mapped and divided into sample panels 25 feet long and 5 feet wide. To avoid bias, samples weighing 30 to 40 pounds were collected in daylight from 17 of the best mineralized areas. Each sample consisted of equal-sized fragments off all skarn boulders within each panel. Samples were sent to Whitehorse where careful grade estimates were made under ultraviolet light. The best eight samples were assayed for tungsten and gold at Whitehorse Assay Office and for beryllium and tin at Chemex Labs Ltd. The results were between 0.01 and 0.06 per cent WO_3, trace gold, 0.05 to 0.09 per cent BeO and 0.01

to 0.04 per cent Sn. Petrographic work showed that the skarn contains a trace of cassiterite and suggested that the beryllium is probably derived from vesuvianite.

This sampling program clearly indicated that the original sample suffered from the bias which commonly results from ultraviolet lamping and that the potential of this skarn is too low to warrant further work.

(4) Catsup (see Figures 17 to 19 on following page)

Location: 61°14'N, 130°19'W ; NTS: 105G/1

The Catsup showing is a new discovery which was found by the FJV crew on August 20 during a prospecting traverse. It is located in a north facing cirque eight miles east of Fyre Lake. The showing consists of stockwork-type porphyry copper mineralization and consists of chalcopyrite, pyrite, and malachite occurring along dry fractures and occasionally within narrow quartz veinlets cutting hornblende diorite and chloritized granite. To the east, hornblende diorite is in fault contact with a narrow band of grey marble, which is bounded further to the east by westerly dipping chlorite schist. To the south, intrusive rocks contact northwesterly dipping metamorphic rocks of Units A, B and C. Mineralization was found mainly in talus fragments, of which four selected specimens assayed between 0.02 per cent to 0.83 per cent copper. Although these assays are encouraging, mineralized fragments made up less than 5 per cent of total talus. Prospecting showed that fracture density and quartz veining is low, hydrothermal alteration is very weak and that the showing is fairly limited in size.

No porphyry-type mineralization had ever been encountered within the project area prior to the discovery of this showing and intrusions of Unit 9 were assigned a fairly low priority by FJV in 1973. The Catsup showing was found so late in the season that it was not possible to prospect all the plutons in the project

130° 18'

61° 14'

4000

4500

5000

5500

6000

6500

A

9c

9a

B

C

malachite
chalcopyrite

chalcopyrite
molybdenite

40

25

20

GEOLOGY

JURASSIC and/or CRETACEOUS	9a	Coarse grained biotite granite
	9c	Medium grained hornblende diorite
AGE UNKNOWN	A	Chlorite schist
	B	Thin bedded grey marble
	C	Biotite quartz feldspar gneiss

LEGEND

- Mineralized talus
- Fault: assumed
- Geological boundaries: approximate, assumed
- Limit of outcrop
- Foliation inclined

FIG. 17

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

CATSUP SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

130° 18'

61° 14'

4000

4500

5000

5500

6000

6500

268,1

14,5

96,2

46,1

44,5

18,<1

365,1

470,2

342,1

480,1

230,1

51,<1

60,4

86,<1

46,<1

48,1

40,<1

116,<1

136,1

38,<1

36,1

14,1

26,<1

16,1

400,7

46,<1

40,2

LEGEND

- ● Soil } Cu, Mo
- X Silt }

Assays in ppm by Chemex Labs Ltd.

FIG. 18

ARCHER, CATHRO & ASSOCIATES LTD.

COPPER, MOLYBDENUM GEOCHEMISTRY

CATSUP SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov. 1973

130°18'

4000

4500

5000

5500

6000

6500

61°14'

42,41

150,16

114,98

137,194

22,127

8,52

237,330

318,285

150,174

350,520

58,98

46,123

84,115

200,105

191,255

37,92

18,60

22,55

35,83

91,55

33,41

33,67

28,57

28,135

48,1700

24,98

39,127

LEGEND

- Soil } Pb,Zn
- × Silt }

Assays in ppm by Chemex Labs Ltd.

FIG. 19

ARCHER, CATHRO & ASSOCIATES LTD.

LEAD, ZINC GEOCHEMISTRY

CATSUP SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

area or even the remainder of the stock in which the showing occurs. While the potential for finding a major porphyry deposit in this area does not appear high, further prospecting is justified. Another interesting aspect of mineralization in this area is the suggestion of an easterly trend of copper mineralization through the Fyre and Catsup copper showings to the Denim anomaly.

(5) . Denim (see Figures 20 to 22 on following page)

Location: 61°13'N, 130°07'W ; NTS: 105G/1

The Denim anomaly consists of several copper, molybdenum, lead and zinc soil anomalies in an area underlain by Units A and C. Unit A rocks include chlorite schist, phyllite and thin beds of pyritic quartzite to the southwest and quartzite to the northeast, separated by a northwest trending band of Unit C gneiss. The pyritic horizons in quartzite have weathered to form gossans in two areas, while a small patch of pyritic greenstone to the northeast has produced a third prominent gossan .

Soil samples taken in and around the larger pyritic gossan to the southwest assayed up to 574 ppm copper, 65 ppm molybdenum, 362 ppm lead and 1120 ppm zinc. Confirmation samples in the same area were lower but still strongly anomalous. Up to 10 per cent pyrite occurs in the gossan area but no other sulfides were seen.

Two minor vein occurrences were found in Unit C near the centre of the anomaly. Chalcopyrite was noted in quartz float and an unidentified sulfosalt was seen in narrow quartz stringers cutting a quartzite bed nearby. Soil response was weak near both showings. A character sample of the sulfosalt assayed 0.1 per cent lead, 0.1 per cent zinc and copper, 2.52 per cent antimony, trace arsenic and gold, and 0.28 oz/ton silver. Pyritic greenstone produced anomalous geochemical response to the northeast, where soil values of 242 and 206 ppm copper and 39 and 44 ppm molybdenum were obtained from a small zone

130°08'

61°13'

C

3500

4000

4500

5000

5500

A

Aa

?

CAMP

20

Chalcopyrite

Sulfosalt

Tr. Au, 0.28 oz/ton Ag, 0.10% Pb, 0.01% Zn,
0.01% Cu, 2.52% Sb, Tr. As.

GEOLOGY

AGE UNKNOWN

- A — Chlorite schist and phyllite
- Aa — Highly fractured quartzite with quartz veins.
- C — Grey quartz feldspar biotite gneiss
- ? — Gossaned pyritic greenstone very fine grained, highly fractured.
- Gossan.

LEGEND

- Fault assumed
- Outcrop
- Swamp
- Contact approximate

FIG. 20

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

DENIM ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov. 1973

130°08'

61°13'

53,11
61,1
64,3
59,1
32,1
22,<1
22,<1
38,<1
30,<1
242,39
92,10
37,<1
46,5
206,44
64,2
146,13
50,5
33,2
30,1
94,1
70,1
11,<1
25,<1
CAMP
55,3
36,1
62,2
122,5
124,11
194.23
68,<1
58,2
64,1
62,1
84,<1
44,2
60,1
80,<1
90,5
112,7
73,2
116,5
114,4
74,2
189,11
120,10
574,65
99,<1
82,2
82,2
96,5
41,2
40,3
74,3
38,<1
63,2
26,<1
11,<1
20,<1
10,<1
60,<1
97,<1
55,<1

3500
4000
4500
5000
5500

LEGEND

- Soil } Cu, Mo.
- Silt }

Assays in ppm by Chemex Labs Ltd.

FIG. 21

ARCHER, CATHRO & ASSOCIATES LTD

COPPER, MOLYBDENUM GEOCHEMISTRY

DENIM ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

145,194
50,160
130°08'
3500
4500
4000
105,218
46,184
34,60
24,62
28,72
39,211
44,112
48,67
40,98
26,70
24,75
44,92
32,131
46,120
30,75
24,65
26,98
50,206
40,169
CAMP
26,72
12,52
28,152
64,70
46,152
48,275
5000
40,218
114,456
5500
61°13'
67,169
36,164
114,155
28,218
40,105
22,83
60,255
88,83
111,248
52,360
46,285
127,330
134,217
362,375
107,560
150,392
260,1120
110,189
34,152
37,184
44,206
161,98
270,174
36,169
34,140
94,112
107,189
8,30
12,55
34,123
48,115
34,127
79,98

LEGEND

- Soil } Pb, Zn.
- × Silt }

Assays in ppm by Chemex Labs Ltd.

FIG. 22

ARCHER, CATHRO & ASSOCIATES LTD

LEAD, ZINC GEOCHEMISTRY

DENIM ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

of highly fractured, pyritic greenstone, which has not been definitely assigned to any of the G.S.C. rock units. Follow-up prospecting failed to locate mineralization. The greenstone appears to be bordered by faults which are expressed as dry, intermittent stream beds.

More geochemical anomalies were obtained outside the borders of the detail maps, and these results are plotted on Figures 8 and 9. The best values (98 to 675 ppm copper, up to 15 ppm molybdenum, 100 to 260 ppm lead, and up to 1288 ppm zinc) were obtained in silts from north flowing streams immediately to the northwest. Near-outcrop-float of a white, moderately foliated, fine grained granitic rock was found at one place in the source area, but no mineralization was seen. Only a small amount of work has been done in this vicinity and further mapping and prospecting is warranted to determine if the mineralization occurs only in peripheral veins over a partially unroofed intrusion, or if porphyry-type mineralization occurs within the intrusion itself. This anomaly assumed added significance with the discovery of the weak porphyry type Catsup showing four miles west at the end of the field season.

(6) North Lakes (see Figures 23 to 25 on following page)

Location: 61°27'N, 130°37'W ; NTS: 105G/7

Strong but erratic geochemical anomalies in copper, lead and zinc were found in this area near two gossans. Minor vein mineralization consisting of chalcopyrite, galena, and sphalerite was found near the creek during initial prospecting. Detailed prospecting showed that a thin cover of metasediments overlies a white, aphanitic intrusion, which has been exposed in three or four small areas by erosion. The contacts in all cases were obscured by overburden but faulting is indicated at the southwestern outcrop, which is a prominent topographic knob on a ridge. A prominent gossan occurs on the west slope and the contacts are obscured under narrow saddles. Both the intrusion and Unit C

GEOLOGY

JURASSIC and/or CRETACEOUS
- 9b — White aphanitic intrusive with red brown weathering and minor quartz veins.

AGE UNKNOWN
- A — Green and brown weathering chlorite schist with biotite porphyroblast
- Aa — Dark grey to black micaceous quartzite
- C — Grey thickly laminated quartz feldspar gneiss

White barren quartz vein in felsenmeer

LEGEND

Outcrop

Fault approximate

Geological boundaries: Defined, Approximate

Foliation: Inclined

Gossan

130°37'

61°27'

40

spalerite, galena
chalcopyrite

38

23

galena, pyrrhotite
chalcopyrite,
spalerite

Au. Tr. - Ag. 0.04 oz/ton. - Pb. 0.01%
Zn. 3.24% - Cu. 0.30%

pyrrhotite
malachite

Camp

4000

4500

5000

5500

6000

6500

35

25

FIG. 23

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

NORTH LAKES ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

130°37'

61°27'

LEGEND

- Soil
- Silt } Cu, Mo
- Rock
- Showing

Assays in ppm by Chemex Labs Ltd.

6000

5500

5000

4500

6500

Camp

6,1
33,<1
56,<1
180,2
31,<1
108,2
13,1
70,1
30,1
31,2
48,1
31,1
7,5
13,1
56,2
190,2
16,1
32,<1
48,2
13,<1
21,1
200,2
76,1
22,<1
363,2
22,3
65,<1
8,<1
48,1
42,<1
30,<1
72,3
106,<1
38,1
21,<1
138,1
10,<1
96,123
46,2
28,1
83,1
30,<1
14,<1
64,2
22,1
26,2
13,<1
13,1
13,<1
20,1
20,2
46,3
21,<1
10,1
20,<1
20,1
15,<1
10,<1
42,<1
19,1
24,2
18,<1
240,16
13,<1
13,1
18,1
43,6
16,<1
21,3
13,<1
62,<1
13,1
26,1
34,7
28,1
36,6
42.5
40,4
50,<1
34,1
38,2
80,<1
21,1
21,1

FIG. 24

ARCHER, CATHRO & ASSOCIATES LTD.

COPPER, MOLYBDENUM GEOCHEMISTRY

NORTH LAKES ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

61° 27'

130° 37'

LEGEND

- Soil
- Silt } Pb, Zn.
- Rock
- Showing

Assays in ppm by Chemex Labs Ltd.

16,34
44,206
52,218
50,265
34,144
70,375
82,194
96,400
46,164
48,1320
237,1440
180,200
28,98
36,155
16,18
36,105
30,92
24,67
36,200
38,200
40,155
79,2720
36,275
28,120
98,1020
66,330
12,39
80,206
68,344
34,155
24,65
768,960
114,880
60,330
30,105
Camp
54,720
22,57
96,123
74,317
14,45
30,144
200,265
108,800
72,285
56,360
180,560
20,174
32,127
28,72
46,36
26,65
150,233
20,77
28,77
48,86
28,70
56,440
28,105
54,760
70,189
66,600
30,60
620,680
22,60
36,140
32,89
28,392
50,88
52,1040
32,330
42,950
34,206
1245,127
26,184
119,285
290,206
20,75
18,70
40,112
40,240
22,120
24,131
10,30
22,62

6000
5500
5000
4500
4000
6500

FIG. 25

ARCHER, CATHRO & ASSOCIATES LTD.

LEAD, ZINC GEOCHEMISTRY

NORTH LAKES ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov. 1973

gneiss have weathered to small talus fragments, which become smaller toward the saddles. A narrow band of dark green chloritic schists of Unit A outcrops along the southern contact. No mineralization was found in this zone during two days of intensive prospecting. The geochemical response however is strongly anomalous in lead (up to 1245 ppm) and zinc (200 to 1040 ppm) in the gossan. A similar intrusive and fault contact 1000 feet northeast returned a 240 ppm copper assay with lead and zinc values in the same range as at the gossan. Two days of detailed prospecting failed to find any mineralization and the source of the anomaly is presumed to be erratic traces of sulfides in narrow quartz veinlets or dry fractures near the contact.

Silt from the small stream flowing by the original vein showing assayed 108 ppm lead and 800 ppm zinc above the showing but are low below it. Soil samples near the showing gave erratic high response in copper, lead and zinc. Two other small quartz vein showings of chalcopyrite, galena and sphalerite were found near the original occurrence. A picked sample of the best mineralization assayed 3.24 per cent zinc, 0.3 per cent copper, 0.01 per cent lead, 0.04 oz/ton silver and trace gold. No further work is warranted in this area.

(7) Alpine Creek (see Figures 26 to 28 on following page)

Location: 61°16'N , 130°09'W ; NTS: 105G/8

This anomaly is located approximately 12 miles south of Wolverine Lake. It is underlain by Unit A chlorite schist and minor quartzite. Two soil gossans were found during initial prospecting and sampling, along with a recent campsite and sample grid which indicated previous work. Reconnaissance soils and silts are anomalous in all metals, with copper as high as 620 ppm over a background of 50 ppm, molybdenum weakly anomalous (5 to 10 ppm), lead

130°09'

61°16'

130°09'

A

A

A

A

A

A

A

A

A

A

10

10

20

20

18

20

5500

5000

4500

4500

4000

Old □
Campsite

chalcopyrite, galena

chalcopyrite, galena

130°09'

A

A

A

10

10

A

Old
Campsite

A

4500

5000

A 20

18

A 20

A

chalcopyrite, galena

chalcopyrite, galena

20

4500

4000

130°09'

61° 16'

GEOLOGY

AGE UNKNOWN | A | Chlorite schist, minor quartzite

LEGEND

Gossan

Quartz vein

Foliation: inclined

Outcrop

FIG. 26

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

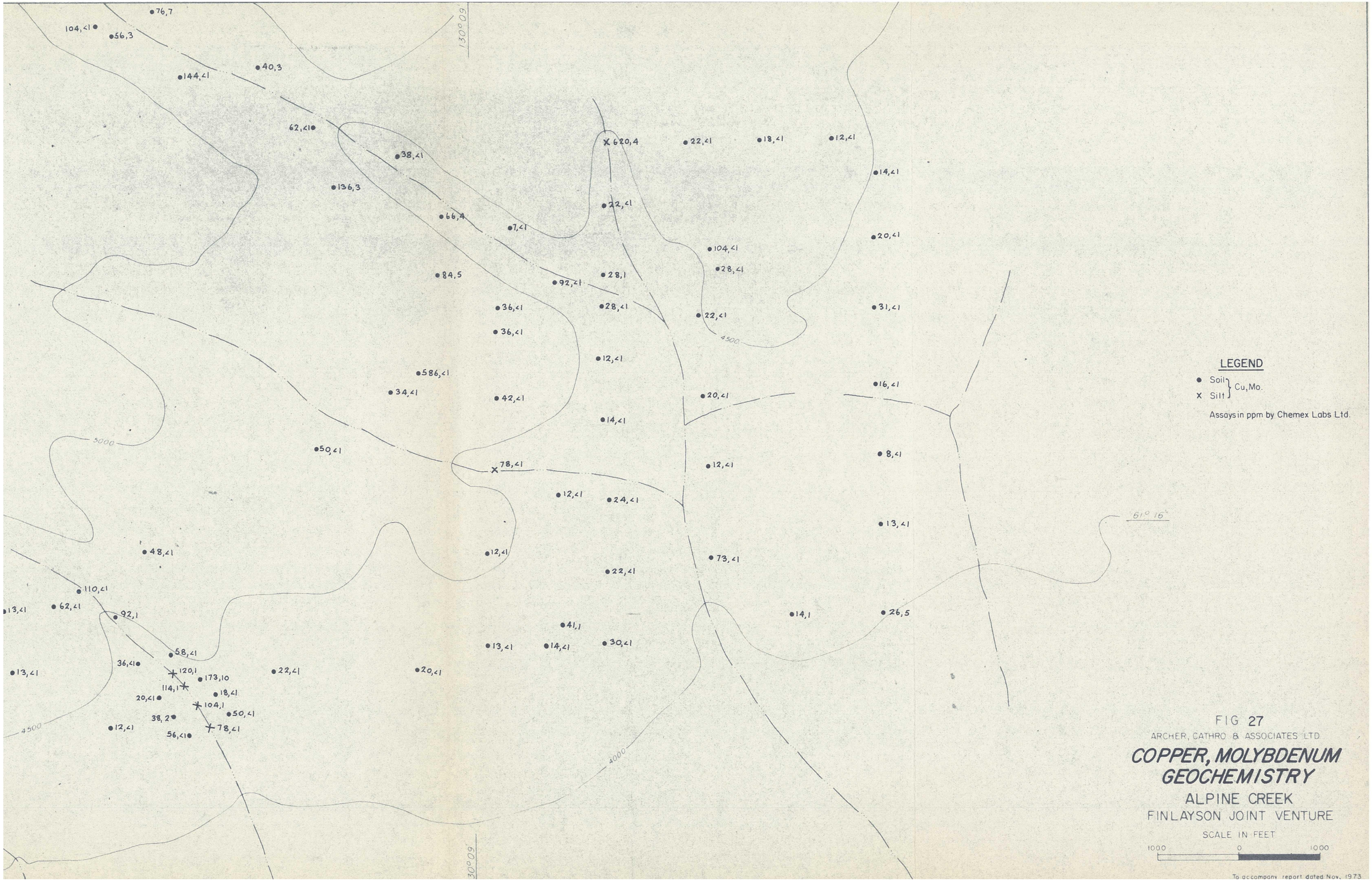
ALPINE CREEK
FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

76,7
104,<1
56,3
40,3
144,<1
62,<1
38,<1
136,3
66,4
7,<1
84,5
92,<1
36,<1
36,<1
586,<1
34,<1
42,<1
50,<1
48,<1
110,<1
13,<1
62,<1
92,1
36,<1
58,<1
13,<1
120,1
173,10
114,1
22,<1
20,<1
4,<1
18,<1
20,<1
104,1
38,2
50,<1
12,<1
78,<1
56,<1
18,<1
41,<1
X 620,4
22,<1
18,<1
12,<1
14,<1
22,<1
104,<1
28,<1
28,1
20,<1
31,<1
22,<1
12,<1
16,<1
20,<1
14,<1
78,<1
12,<1
24,<1
12,<1
22,<1
41,1
13,<1
14,<1
30,<1
8,<1
13,<1
73,<1
14,1
26,5
5500
5000
4500
4500
4000
130°09
61°16
130°09



LEGEND

- ● Soil } Cu, Mo.
- X Silt }

Assays in ppm by Chemex Labs Ltd.

FIG 27

ARCHER, CATHRO & ASSOCIATES LTD

COPPER, MOLYBDENUM GEOCHEMISTRY

ALPINE CREEK

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov. 1973

122,620
38,127
79,285
98,233
52,218
46,206
75,295
52,234
79,535
8,5
105,450
44,47
22,57
16,32
24,52
30,67
36,77
34,90
44,110
52,174
533,178
66,240
30,36
34,102
20,52
28,112
28,123
6,25
26,35
54,265
60,48
36,98
24,75
20,57
64,163
48,1360
22,57
24,25
30,22
30,98
16,16
86,138
24,47
20,45
26,67
72,1600
12,41
46,138
67,800
30,72
48,72
50,148
40,149
12,32
24,28
32,285
86,275
67,184
39,39
82,888
516,644
32,112
20,60
79,1240
14,16
26,98
28,70
84,1280
58,211
60,233
36,67
56,872
60,211
28,194
24,392
5500
5000
4500
4000
130°09'
61°16'

122,620
38,127
79,285
98,233
52,218
46,206
105,450
44,47
22,57
16,32
75,295
24,52
52,234
30,67
79,535
8,5
34,90
36,77
533,178
52,174
44,110
66,240
30,36
34,102
20,52
28,112
28,123
4500
6,25
26,35
24,75
54,265
60,48
36,98
20,57
5000
64,163
48,1360
22,57
24,25
30,22
30,98
16,16
61° 16'
86,138
24,47
20,45
26,67
72,1600
46,138
67,800
30,72
48,72
50,148
12,32
24,28
32,285
86,275
67,184
39,39
82,888
516,644
32,112
20,60
79,1240
28,70
26,98
84,1280
60,233
58,211
56,872
36,67
60,211
4500
4000
130° 09'

LEGEND

● Soil } Pb, Zn
X Silt }

Assays in ppm by Chemex Labs Ltd.

FIG. 28

ARCHER, CATHRO & ASSOCIATES LTD

LEAD, ZINC GEOCHEMISTRY

ALPINE CREEK
FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov. 1973

weakly anomalous (50 to 100 ppm) and zinc up to 1600 ppm . Further prospecting within the anomaly located a one foot wide quartz vein containing chalcopyrite, pyrrhotite and galena which is traceable in float for a length of over 1000 feet. Grades were visually estimated to be very low and no samples were assayed. Similar mineralization is considered to be the cause of all other anomalous results in this area and no further work is recommended.

(8) Fly (see Figures 29 to 31 on following page)

Location: 61°19'N , 130°33'W ; NTS: 105G/7

The geological setting consists of Unit C biotite quartz feldspar gneiss intruded by small plugs of Unit 9b biotite quartz monzonite and Unit D dark green ultramafic. Pyrrhotite occurs as weak disseminations and rarely as local concentrations up to 10 per cent near intrusive contact, often contributing to rusty weathering in the gneiss. Geochemical assays indicate several moderate to high anomalies in zinc and copper. The best sample assayed 118 ppm copper, 3 ppm molybdenum, 2190 ppm lead and 2472 ppm zinc. Other scattered anomalies include several copper values over 100 ppm, a few lead assays between 94 and 336 ppm and zinc assays ranging from 200 to greater than 4000 ppm. Two samples of gossaned gneiss collected near intrusive contacts were assayed geochemically and they returned 1720 and 80 ppm copper, 2 and 1 ppm molybdenum, 40 and 26 ppm lead, and 45 and 52 ppm zinc. The only sulfide seen, despite careful prospecting, was a trace of fine crystalline galena along a narrow fracture in gneiss. The source of the high geochemical response is probably similar scattered veinlets related to the intrusive contacts. No further work is recommended.

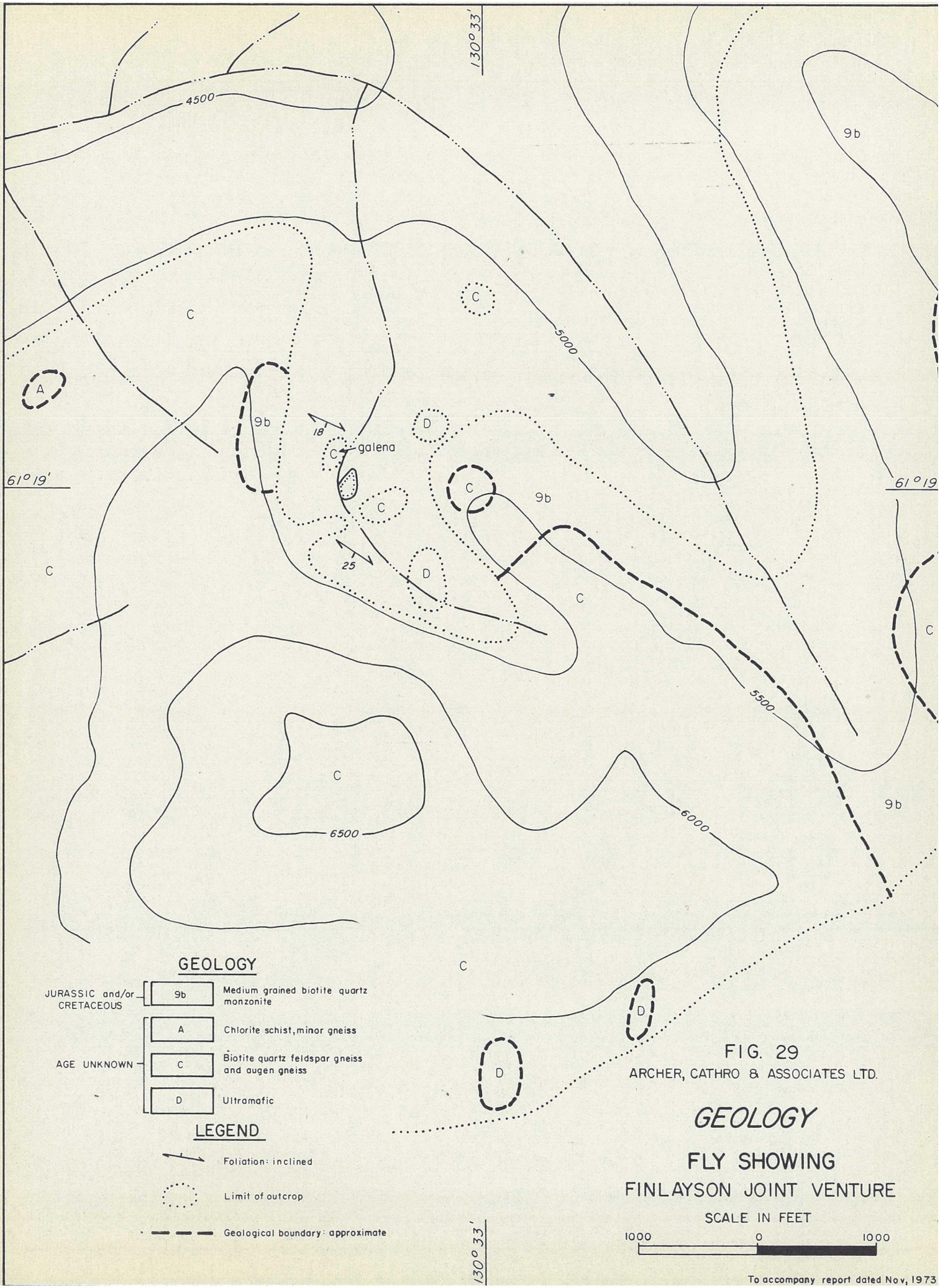


FIG. 29

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

FLY SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

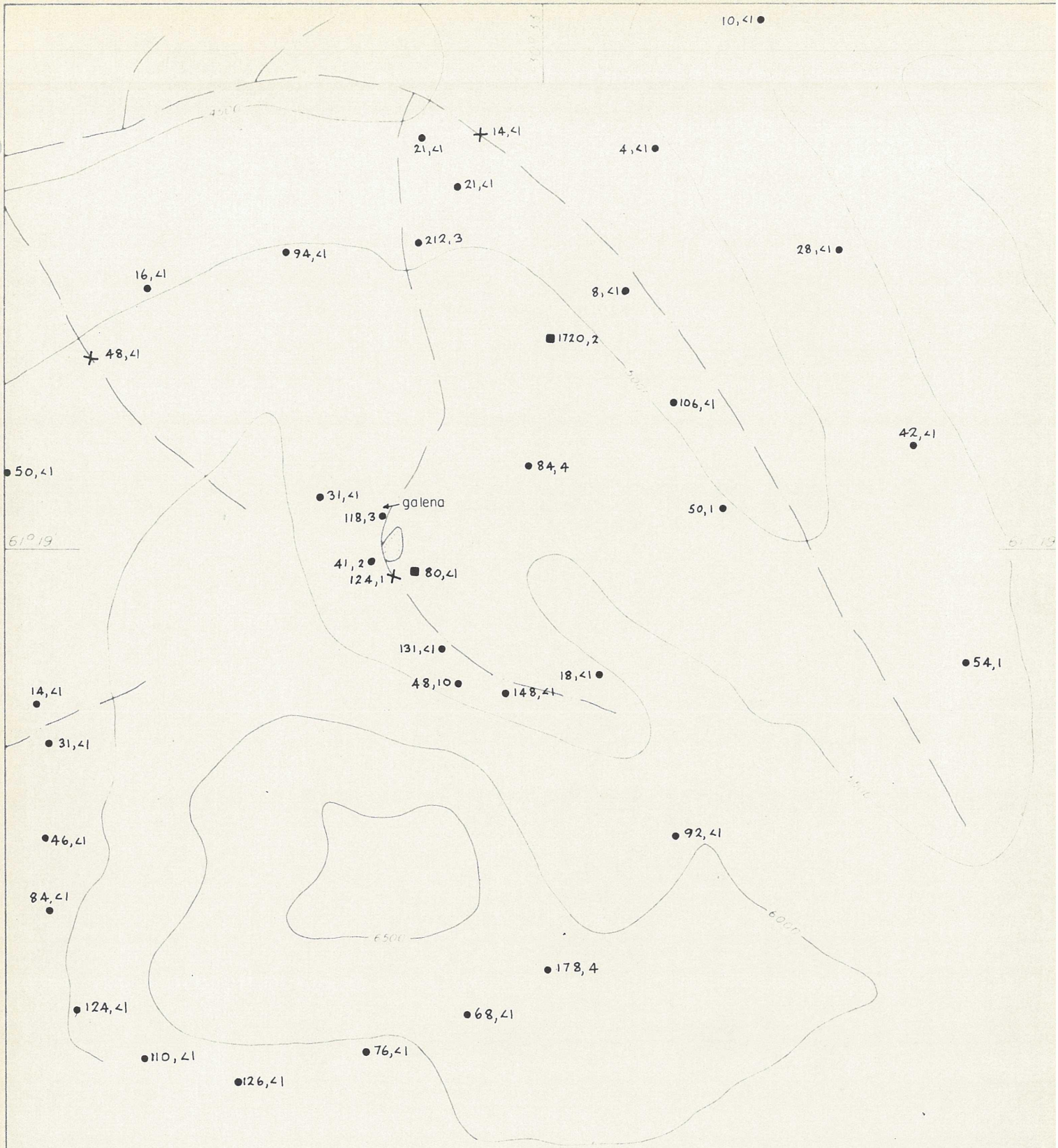


FIG 30

ARCHER, CATHRO & ASSOCIATES LTD

COPPER, MOLYBDENUM GEOCHEMISTRY

FLY SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

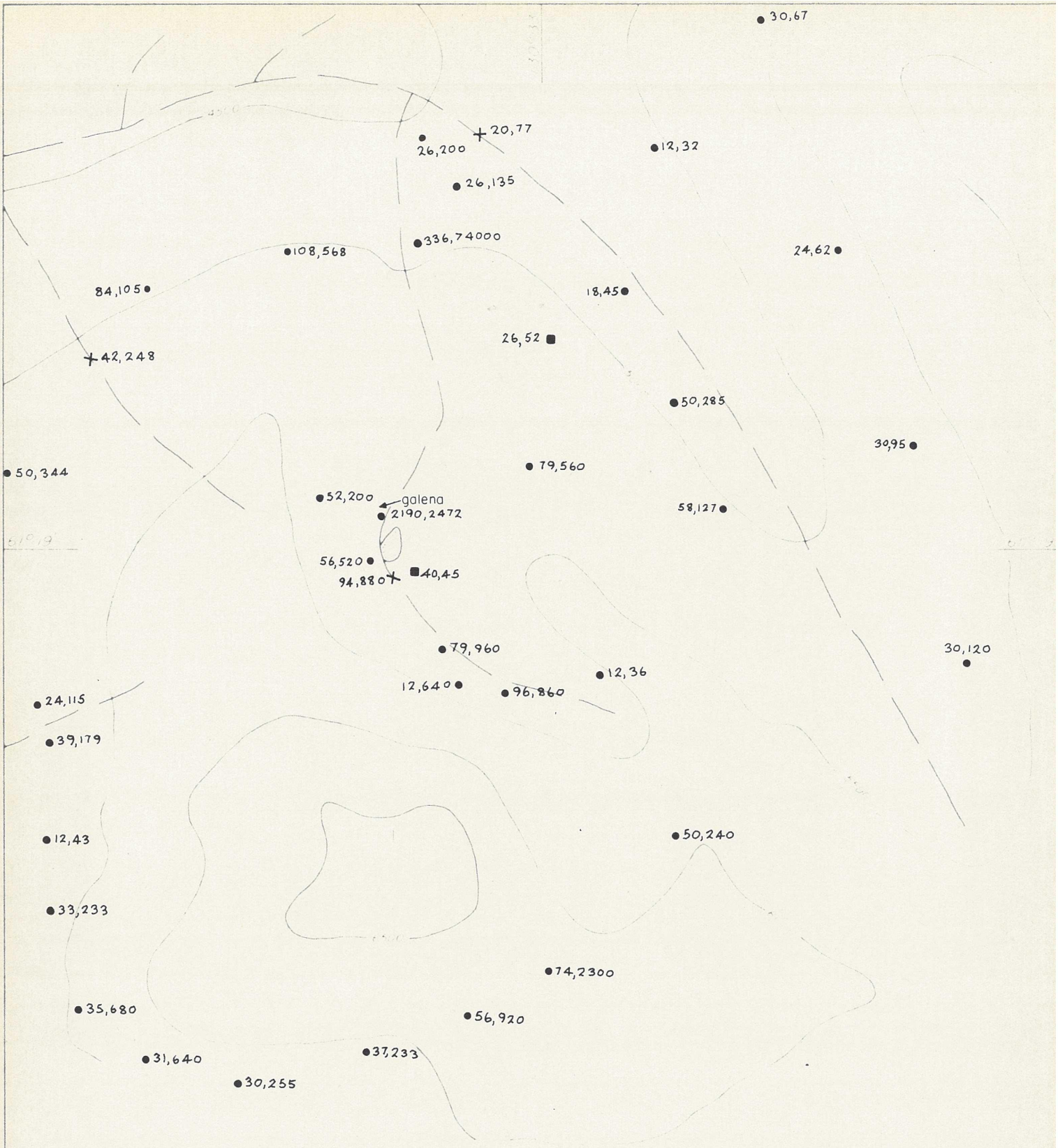
1000 0 1000

LEGEND

- ● Soil
- X Silt } Cu, Mo
- ■ Rock

Assays in ppm by Chemex Labs Ltd.

To accompany report dated Nov. 1973



LEGEND

- Soil
- Silt
- Rock

} Pb, Zn

Assays in ppm by Chemex Labs Ltd.

FIG 31

ARCHER, CATHRO & ASSOCIATES LTD.

LEAD, ZINC GEOCHEMISTRY

FLY SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

To accompany report dated Nov., 1979

(9) Airtight Lake Anomaly (see Figures 32 to 34 on following page)

Location: 61°31'N, 130° 25'W ; NTS: 105G/9

A moderate copper and zinc response and weak lead and molybdenum anomalies was obtained in a completely overburden covered area on the southwest shore of Airtight Lake. The vegetation cover consists of a mature spruce forest, buckbrush and thick moss on a gentle north-facing slope . The initial reconnaissance samples assayed 440 ppm copper, 4 ppm molybdenum, 14 to 44 ppm lead, 98 to 780 ppm zinc, and 5 to 20 ppm tungsten. A rock sample of shale assayed 110 ppm copper, 3 ppm molybdenum, 31 ppm lead, 2000 ppm zinc and a carbonate rock sample assayed 136 ppm copper, 5 ppm molybdenum, 18 ppm lead and 155 ppm zinc. Rock types mapped nearby include chlorite and muscovite schist, quartzite and garnet diopside skarn. Three hand pits were later dug to depths of 6 to 24 inches within the anomaly. These encountered 4 to 6 inches of black peaty soil with minor amounts of volcanic ash before reaching till. A foot of mixed glacial till was encountered in Pit A (closest to the lake) before reaching residual overburden while the others encountered only residual fragments. Bedrock consists of phyllite and chlorite schist which is occasionally flecked with finely disseminated limonite. Soil assays from the C horizon ranged from 82 to 168 ppm copper, 1 to 3 ppm molybdenum, 26 to 84 ppm lead and 127 to 1120 ppm zinc. The pit profiles showed conclusively that the original soil samples in this area were reflecting bedrock grades through a thin overburden cover and that the schist and phyllite in this area has a locally high background. This may be due to a higher pyrite content or be related to weak contact alteration near an unmapped intrusion that has caused the skarn development.

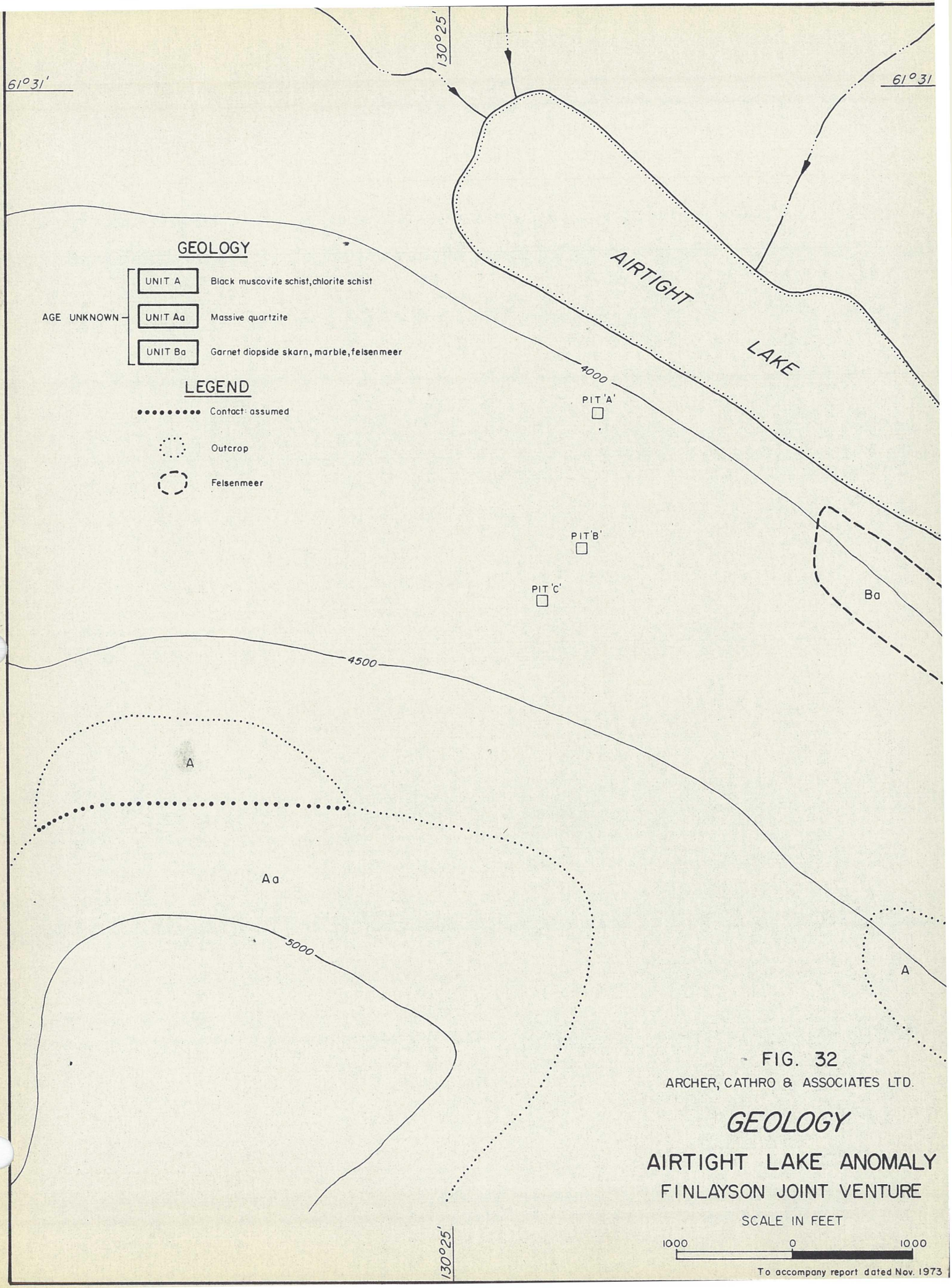


FIG. 32

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

AIRTIGHT LAKE ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov. 1973

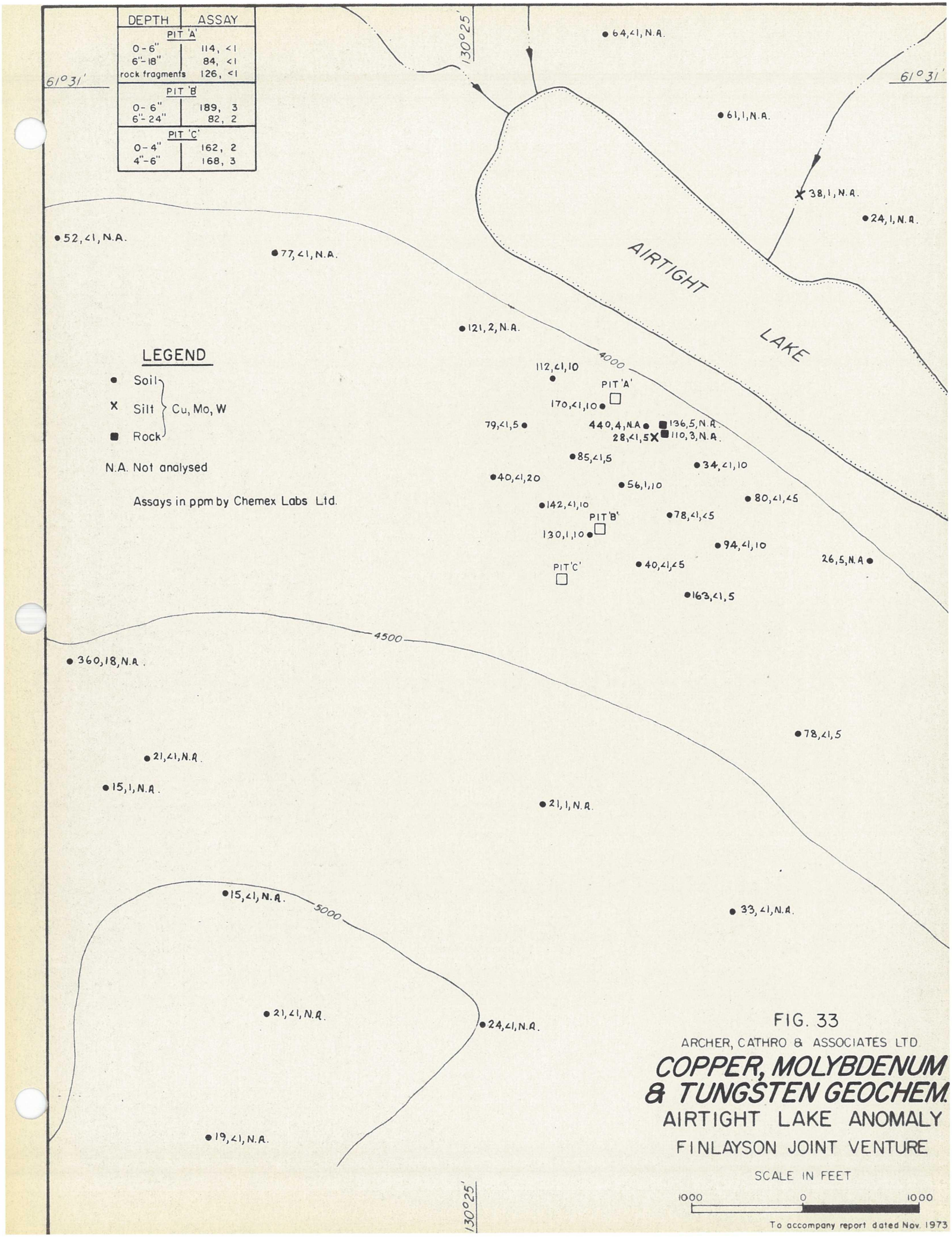


FIG. 33

ARCHER, CATHRO & ASSOCIATES LTD.

COPPER, MOLYBDENUM & TUNGSTEN GEOCHEM.

AIRTIGHT LAKE ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov. 1973

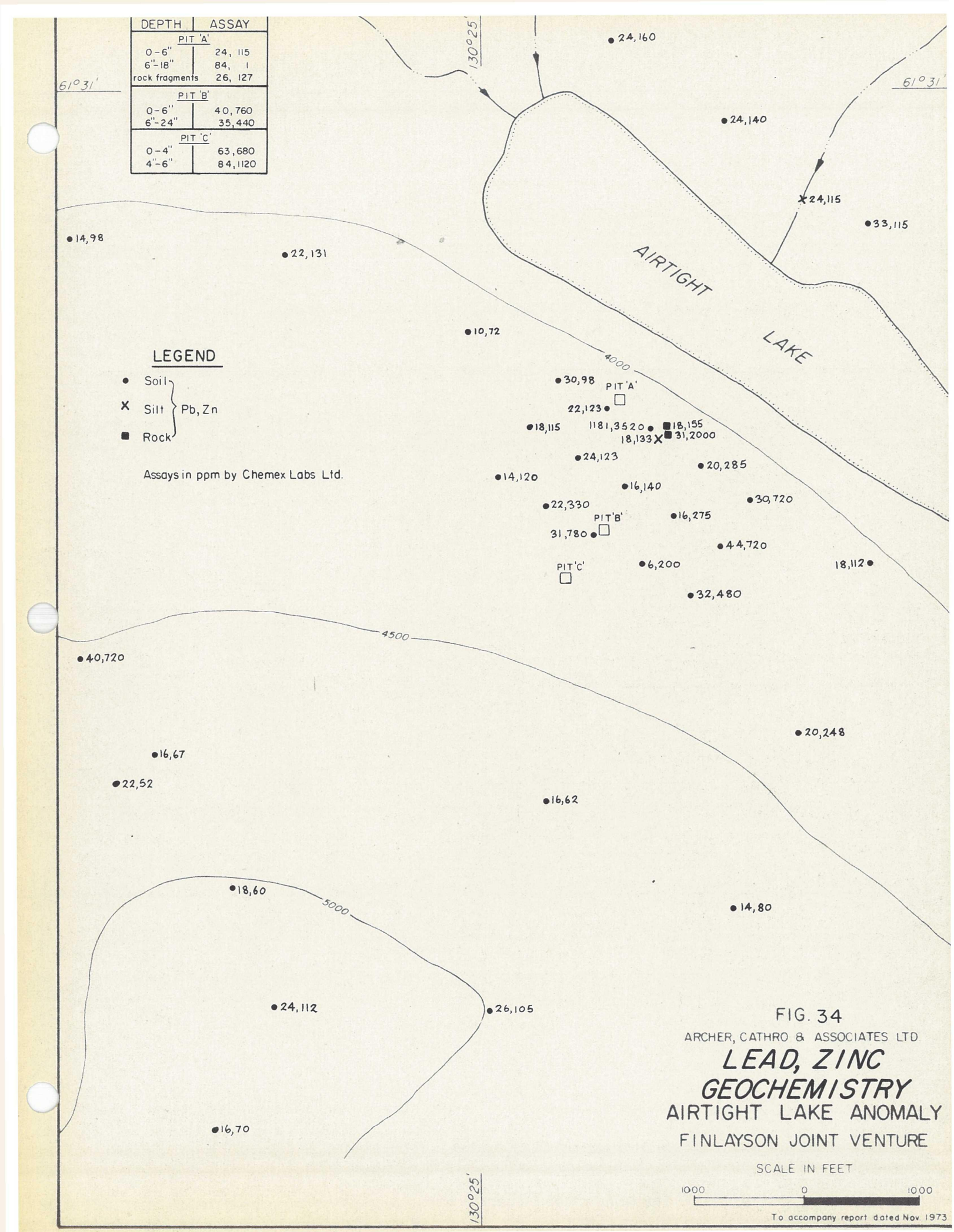


FIG. 34

ARCHER, CATHRO & ASSOCIATES LTD

LEAD, ZINC GEOCHEMISTRY

AIRTIGHT LAKE ANOMALY

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov. 1973

(10) Minor Occurrences

Minor quantities of vein-type mineralization were found at 12 other locations by FJV during 1973. Most were found while prospecting geochemical anomalies. No evidence of previous work or record of staking was found for any of these. They are plotted on the regional geochemical maps (Figures 6 to 9) and are summarized in the following table:

Latitude	Longitude	Description
Southeast Map		
61°10'N	130°23'W	- chalcopyrite, galena, and malachite in Unit 9 pegmatite.
61°11'N	130°20'W	- chalcopyrite in quartz vein in Unit C.
61°12'N	130°37'W	- chalcopyrite, galena in Unit C gneiss.
61°14'N	130°45'W	- chalcopyrite in quartz vein float in Unit C augen gneiss.
61°16'N	130°33'W	- chalcopyrite in Unit 6(a) metavolcanics and Unit A pyritic metaquartzite.
61°24'N	130°40'W	- galena in quartz vein in Unit C gneiss.
61°23'N	130°36'W	- galena and chalcopyrite in quartz float in Unit C gneiss.
61°25'N	130°52'W	- galena in quartz vein in Unit C.
61°25'N	130°54'W	- chalcopyrite and pyrite in rusty quartzite creek float.
61°22'N	131°03'W	- galena, arsenopyrite, pyrite in quartz vein ; also pyrite, galena, arsenopyrite, sphalerite replacing intrusive Unit 9.
61°11'N	130°44'W	- malachite in minor limestone and skarn associated with Unit C gneiss and intrusive Unit 9.
61°14'N	130°10'W	- minor galena in quartz vein , in Unit C gneiss.
61°27'N	131°04'W	- minor pyrrhotite and chalcopyrite in quartz float, area underlain by Unit C gneiss.
Northwest Map		
61°52'N	132°33'W	- sulfosalts in quartz vein in Unit 2.

B - Old Showings Examined by FJV

Most of these mineral occurrences were discovered in the mid-fifties by prospectors supported by horses or by fixed wing aircraft landing on the main lakes. The main technique used was conventional prospecting with emphasis on the better exposures at high elevations, obvious gossans and creek float. One of the showings found at that time was the Hoo sphalerite float. Following the Faro discovery by Dynasty (Anvil) in 1965, this area was further explored, primarily with airborne and ground geophysics supported with some goechemistry. Very few new showings were found at this time. All the occurrences in this section were documented in the Northern Cordillera Mineral Inventory (prepared by Archer, Cathro in April, 1972) and the numbers following each occurrence name [i.e. 105G(38)] are occurrence numbers used in the inventory.

(1) Fyre [105G(34)] (see Figures 35 to 37 on following page)

Location: 61°13'N, 130°31'W ; NTS: 105G/2

This is the only old showing in the project area which has any economic potential whatsoever. It was first staked in 1960 by Cassiar Asbestos Corp., which trenched and drilled in the following year. Drilling included 23 packsack holes which totalled 735 feet and 12 AX holes which totalled 1909 feet. From this work Cassiar outlined a pyritic zone about 50 feet wide which contains narrow chalcopyrite bands. Mineralization was traced along a strike length of 400 feet. Assays indicated a grade of 1 per cent copper, 1 per cent zinc and 0.25 oz/ton silver. The showing was restaked by Atlas Explorations in 1966. Atlas did an extensive airborne magnetic and electromagnetic survey and later drilled 6 core holes (1934 feet) in the western extension of the zone. The Atlas drilling showed grades of 0.4 to 2.0 per cent copper over

To Fyre Lake

61°14'

130°30'

4000

4500

5000

5500

6000

A

B

C

D

20

30

40

80

10

75

1.80% Cu, Tr. Au

2.25% Cu, Tr. Pb, 0.32% Zn, Tr. Au, 0.02 oz/ton. Ag.

0.005 oz/ton. Au, 0.20 oz/ton. Ag.

ATLAS DRILLING

CONWEST DRILLING

Camp

DUB CLAIMS

3 miles to Fyre Lake

JURAS
CRE

AGE

9b

GEOLOGY

JURASSIC and/or CRETACEOUS	9b	Medium to coarse grained biotite quartz monzonite granodiorite
AGE UNKNOWN	A	Chlorite schist
	B	Grey limestone
	C	Biotite quartz feldspar gneiss
	D	Serpentinized ultramafic sill

LEGEND

- Gossan
- Outcrop
- Geological boundary: approximate
- Foliation inclined
- Faults: Defined, assumed
- Diamond drill hole
- Claim post
- Silicified shear zone with chalcopyrite pyrrhotite, pyrite mineralization.

130°30'

61°14'

1.80% Cu, Tr. Au

2.25% Cu, Tr. Pb, 0.32% Zn, Tr. Au, 0.02 oz/ton. Ag.

0.005 oz/ton. Au, 0.20 oz/ton. Ag.

ATLAS DRILLING

CONWEST DRILLING

Camp

DUB CLAIMS

6000 5500 5000 4500

FIG. 35

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

FYRE SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

To Fyre Lake

61°14'

130°30'

4000

4500

5000

5500

66,<1

48,<1

31,<1

33,5

178,<1

26,<1

6000

44,<1

21,<1

54,1

218,<1

66,3

144,<1

51,<1

178,<1

128,<1

102,<1

230,<1

800,<1

330,<1

1930,<1

168,<1

41,<1

88,<1

670,<1

840,<1

386,<1

593,<1

54,1

42,2

62,<1

56,4

54,4

13,<1

20,<1

78,9

92,<1

20,<1

12,<1

41,<1

100,<1

84,13

26,<1

24,3

28,<1

28,<1

107,<1

30,<1

33,6

10,<1

80,<1

16,<1

28,<1

178,<1

54,8

8,<1

10,<1

78,<1

41,<1

20,<1

24,2

13,<1

14,<1

30,<1

66,2

66,2

24,<1

41,<1

4500

34,<1

28,<1

28,<1

30,4

12,<1

13,<1

124,8

38,5

62,10

122,1

18,<1

18,<1

110,2

42,2

56,13

16,<1

2080,2

1160,24

1280,24

28,<1

10,<1

60,1

Camp

33,<1

12,<1

12,<1

24,<1

63,4

74,7

36,3

48,3

84,2

42,3

20,<1

58,3

62,1

30,<1

74,1

21,<1

63,1

24,1

DUB CLAIMS

76,<1

90,3

28,<1

68,<1

20,<1

41,<1

62,3

28,<1

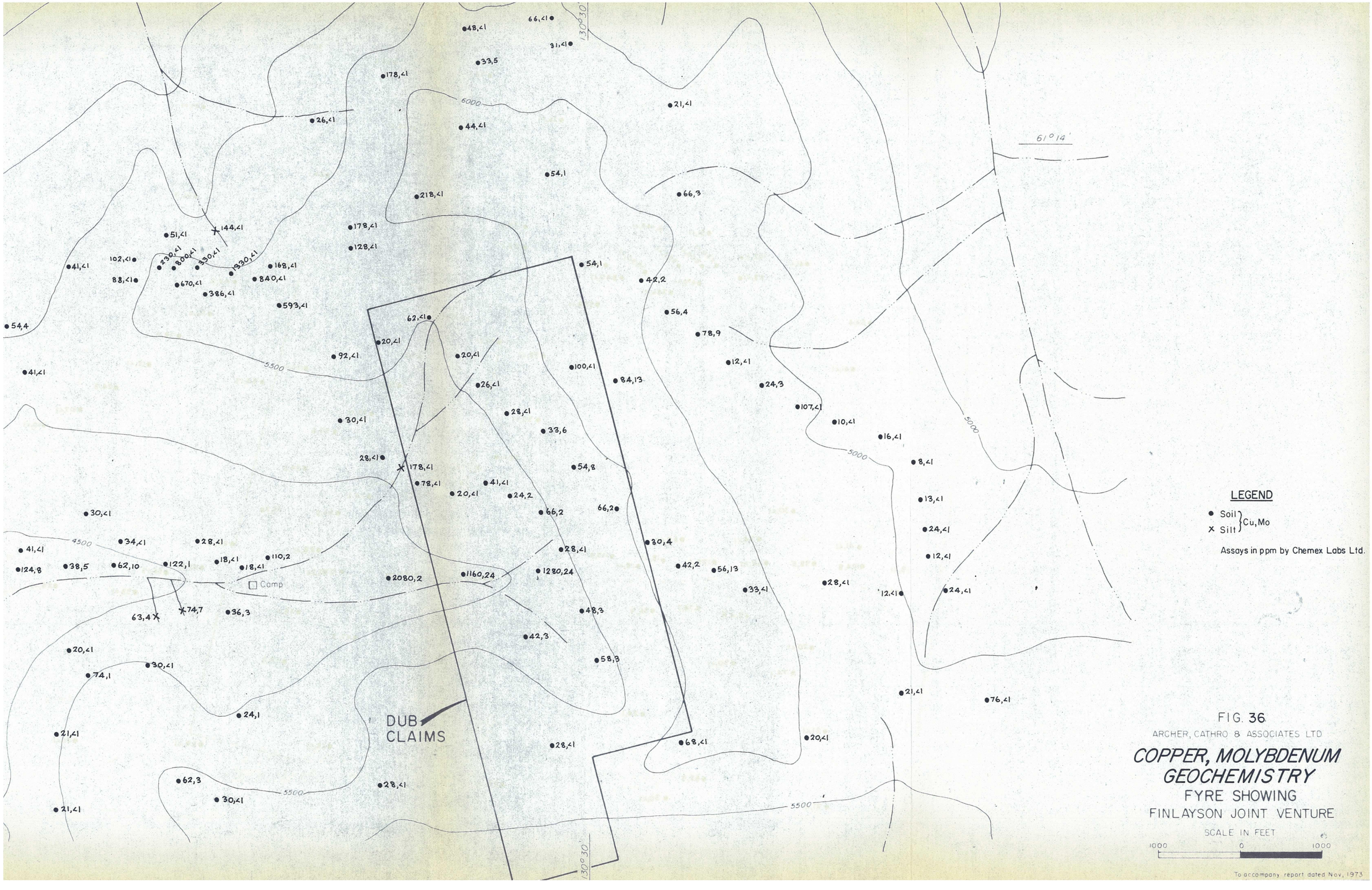
30,<1

21,<1

5500

3 miles to Fyre Lake

130°30'



LEGEND

- Soil } Cu, Mo
- × Silt }

Assays in ppm by Chemex Labs Ltd.

FIG. 36

ARCHER, CATHRO & ASSOCIATES LTD

COPPER, MOLYBDENUM GEOCHEMISTRY

FYRE SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

To Fyre Lake

61°14'

130°30'

4000

4500

5000

5500

6000

46,65

30,52

30,70

26,43

22,43

86,55

39,105

16,41

35,120

30,98

86,225

26,120

24,80

14,47

20,92

20,52

24,67

35,135

22,80

37,144

26,80

24,70

20,45

37,108

30,127

14,105

22,75

44,144

35,135

72,240

48,265

12,25

33,112

37,200

31,83

31,55

37,108

20,36

33,70

20,36

26,72

18,43

44,112

31,86

98,144

44,135

48,80

18,47

105,375

84,344

52,155

35,86

35,95

24,52

12,30

14,32

26,60

22,72

46,255

20,72

26,75

28,115

12,32

12,34

28,98

30,135

24,65

10,18

16,45

18,50

77,174

33,144

26,80

24,62

33,80

24,70

16,45

212,248

26,57

14,24

22,89

24,77

18,72

20,62

26,20

12,47

16,57

20,105

30,200

22,89

26,206

14,43

16,30

16,28

28,65

12,75

30,285

44,248

28,80

20,86

54,36

24,102

40,77

200,305

14,55

26,60

26,80

30,65

10,30

63,206

24,92

12,86

18,62

26,72

35,148

52,83

31,72

39,86

Camp

DUB CLAIMS

3 miles to Fyre Lake

30,70
26,43
22,43
86,55
30,52
46,65
39,105
16,41
35,120
30,98
86,225
26,120
24,80
14,47
20,92
20,52
24,67
35,135
22,80
37,144
26,80
20,45
37,108
30,127
24,70
14,105
22,75
44,144
35,135
72,240
48,265
12,30
14,32
26,80
16,45
26,60
33,80
22,72
46,255
20,72
12,25
33,112
37,200
31,83
31,55
37,108
26,75
28,115
12,32
12,34
28,98
24,65
10,18
30,135
16,45
18,50
77,174
33,144
20,36
33,70
20,36
22,89
24,77
18,72
20,62
18,47
48,80
44,135
98,144
26,206
22,89
30,200
20,105
12,47
16,57
26,20
52,155
84,344
105,375
31,86
44,112
18,43
26,72
30,285
44,248
28,80
35,86
35,96
54,36
40,77
24,52
200,305
26,60
26,80
26,72
35,148
52,83
31,72
39,86
63,206
18,62
24,92
12,86

Camp

DUB CLAIMS

6000
5500
5000
4500

61°14'

130°30'

LEGEND

- Soil } Pb, Zn
- × Silt }

Assays in ppm by Chemex Labs Ltd.

FIG. 37

ARCHER, CATHRO & ASSOCIATES LTD

LEAD, ZINC GEOCHEMISTRY

FYRE SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

20 to 40 foot widths. About ten of the Atlas claims (Dub group) are still in good standing.

A two man flycamp was set up by the FJV crew at this showing from August 1 to 4, during which time the surrounding area was mapped, sampled and prospected. The area near the showings is underlain by Unit A chlorite schist. Unit C biotite quartz feldspar gneiss occurs to the west and a Unit 9b intrusion occurs to the east, both separated from the main showing by block faulting. There is insufficient exposure near faults to ascertain the direction of movement. The main showing outcrops in a stream valley and consists of a pyritic zone which has replaced a steep northerly dipping fault. A grab sample of mineralized float containing pyrite and chalcopyrite assayed 2.25 per cent copper, trace lead, 0.32 per cent zinc, trace gold, and 0.02 oz/ton silver. A sample of massive pyrite from a gossan 500 feet west of the main showing assayed 0.005 oz/ton gold and 0.2 oz/ton silver.

A second minor mineralized zone consists of erratic copper showings located along a fault controlled, serpentinized ultramafic sill. Malachite was observed in several places along the fault. A grab sample of chalcopyrite-bearing, fine grained quartzite assayed 1.80 per cent copper and trace gold. Mineralization is very patchy however and has no economic potential. Work done by the FJV crew indicates that the Fyre showing is completely fault controlled and has been well outlined by previous work, with no indication of any extensions. No further work is recommended.

(2) Pick [105G(17)]

Location: 61°23'N, 131°11'W ; NTS: 105G/6

Prospecting of an area where claims were staked in 1965 disclosed minor amounts of galena in narrow quartz veins following a fault zone which cuts Unit C augen gneiss. A soil sample nearby assayed 128 ppm copper, 5 ppm molybdenum, 2000 ppm lead and greater than 4000 ppm zinc. No work is recommended.

(3) Grass [105G(18)

Location: 61°22'N, 131°09'W ; NTS: 105G/6

This showing was reportedly first found by Pelly River Exploration Ltd. in 1954 but was first staked in 1966 as the Grass group by Cassiar Asbestos Corp. Ltd. Molybdenite, pyrite, chalcopyrite and pyrrhotite are disseminated in quartz vein float which occurs near the head of a small creek. Earlier reports indicated vein widths up to 10 feet but nothing approaching this was seen by FJV. A soil sample near the showing assayed 38 ppm copper, 20 ppm molybdenum, 88 ppm lead and 218 ppm zinc. Grades are very low by visual estimate and no work is recommended.

(4) Sanders [105G(19)]

Location: 61°24'N, 131°06'W , NTS: 105G/6

The first staking was performed by Northlake Mines Ltd. in 1966 on a showing first located by Pelly River Exploration Ltd. in 1954. Northlake conducted an airborne mag and EM survey and grid soil sampling in 1966. The showing consists of a gossan which occurs on a ridge at the contact between an intrusion and Unit A chlorite schist. Specimens containing up to 30 per cent pyrrhotite were found in old hand pits and a minor amount of galena and sphalerite are also present in quartz veins. Two soil samples collected

below the gossan on either side of the ridge assayed 36 and 141 ppm copper, 1 and 5 ppm molybdenum, 26 and 98 ppm lead and 115 and 248 ppm zinc. This showing has no economic potential.

(5) Riley [105G(20)]

Location: 61°26'N, 131°11'W ; NTS: 105G/6

This showing has had an identical history to the Sanders showing. Disseminated pyrite in Unit A chlorite schist has weathered to form prominent gossans along a ridge. Traces of galena and chalcopyrite were found in quartz vein float at several points but overall grades are visually estimated to be very low. High soil assays were obtained only from within the gossans. No work is recommended.

(6) Zielinski [105G(21)]

Location: 61°27'N, 131°07'W ; NTS: 105G/6

This showing also has a common history with the Sanders showing. Traces of sulfides have been found in schists and gneisses in at least three separate areas but with one exception these showings have all consisted of quartz veins with minor amounts of galena, sphalerite, chalcopyrite, bornite, tetrahedrite, fluorite, arsenopyrite, pyrrhotite or pyrite. The exception was a lens of massive sulfides 50 feet long and 6 feet thick which was reported by the prospector from the original discovery. Subsequent investigations have failed to find anything resembling this. No assays have ever been reported from this property as none of the individual showing have been important enough to warrant sampling. FJV reconnaissance soil sampling gave low assays. No further work is recommended.

(7) Riviera [105G(26)]

Location: 61°27'N, 131°02'W ; NTS: 105G/6

Considerable physical work, including one 382 foot drill hole , was performed by Riviera Mines Ltd. in 1966 and 1967 on geophysical anomalies. No mineralization was found other than a few scattered fragments of pyrrhotite and pyrite with minor chalcopyrite as float in thick glacial drift and an 8 foot section of disseminated chalcopyrite and pyrrhotite in graphite schist in the drill hole which assayed 0.02 per cent copper and 0.05 per cent zinc. FJV conducted no work on this showing and none is recommended.

(8) Leo [105G(27)]

Location: 61°29'N, 131°05'W ; NTS: 105G/6

This is a soil geochemical anomaly with strong magnetic response which was discovered by Northlake Mines Ltd. in 1966. A few claims are still held in good standing but no work has been done since 1967. The anomaly is underlain by Unit A chlorite schist with minor quartzite and black phyllite and Unit B chloritic marble. Northlake reported peak values of 409 ppm copper, 100 ppm lead and 660 ppm zinc in the grid sampling. A small lens of pyrrhotite with minor chalcopyrite was found in an outcrop of chlorite schist by FJV during a brief examination. The sulfides are concentrated in the nose of the tight fold. This property may warrant a more careful investigation after the Northlake claims lapse but should be considered as fairly low priority.

(9) Gyp [105G(28)]

Location: 61°27'N, 130°59'W ; NTS: 105G/7

This showing also has the same history as the Sanders showing. Traces of galena are present in quartz veins cutting chlorite schist along a ridge.

FJV also found a little marcasite and pyrrhotite nearby but earlier workers reported the presence of sphalerite and chalcopyrite as well. No assays have ever been reported and no samples were assayed by FJV. A strong soil response was obtained in copper (90 to 440 ppm), lead (80 to 350 ppm) and zinc (250 to 690 ppm zinc) near the showing and for up to half a mile downhill to the east. No further work is warranted.

(10) Gee [105G(29)]

Location: 61°25'N, 131°00'W ; NTS: 105G/6 and 7

Pelly River Explorations Ltd. staked this showing as the Don claims in 1954 and Northlake Mines Ltd. restaked it in 1966 and conducted grid soil sampling and a ground EM survey later in the year. Pelly River panned galena from the mouth of the creek flowing into Grass Lake and found the source to be a trace of galena in quartz stringers cutting Unit C. Erratic high values in copper, lead, and zinc from nearby FJV reconnaissance soil samples suggest that similar veins are probably abundant. However they have no economic potential and no further work is recommended.

(11) Pit [105G(30)] (see Figures 38 to 40 on following page)

Location: 61°33'N, 130°57'W ; NTS: 105G/7

This showing has a similar history to the Sanders showing. Published reports indicated the presence of three separate showings (1) massive pyrrhotite float containing a little chalcopyrite which weathered to form a prominent gossan 200 feet by 100 feet, (2) a quartz vein 3 feet wide containing arsenopyrite and tetrahedrite, and (3) disseminated pyrrhotite and chalcopyrite in amphibolite. All assays were low. A brief examination by FJV showed that the host rocks are Unit C gneiss near an intrusive contact. A grab sample of the

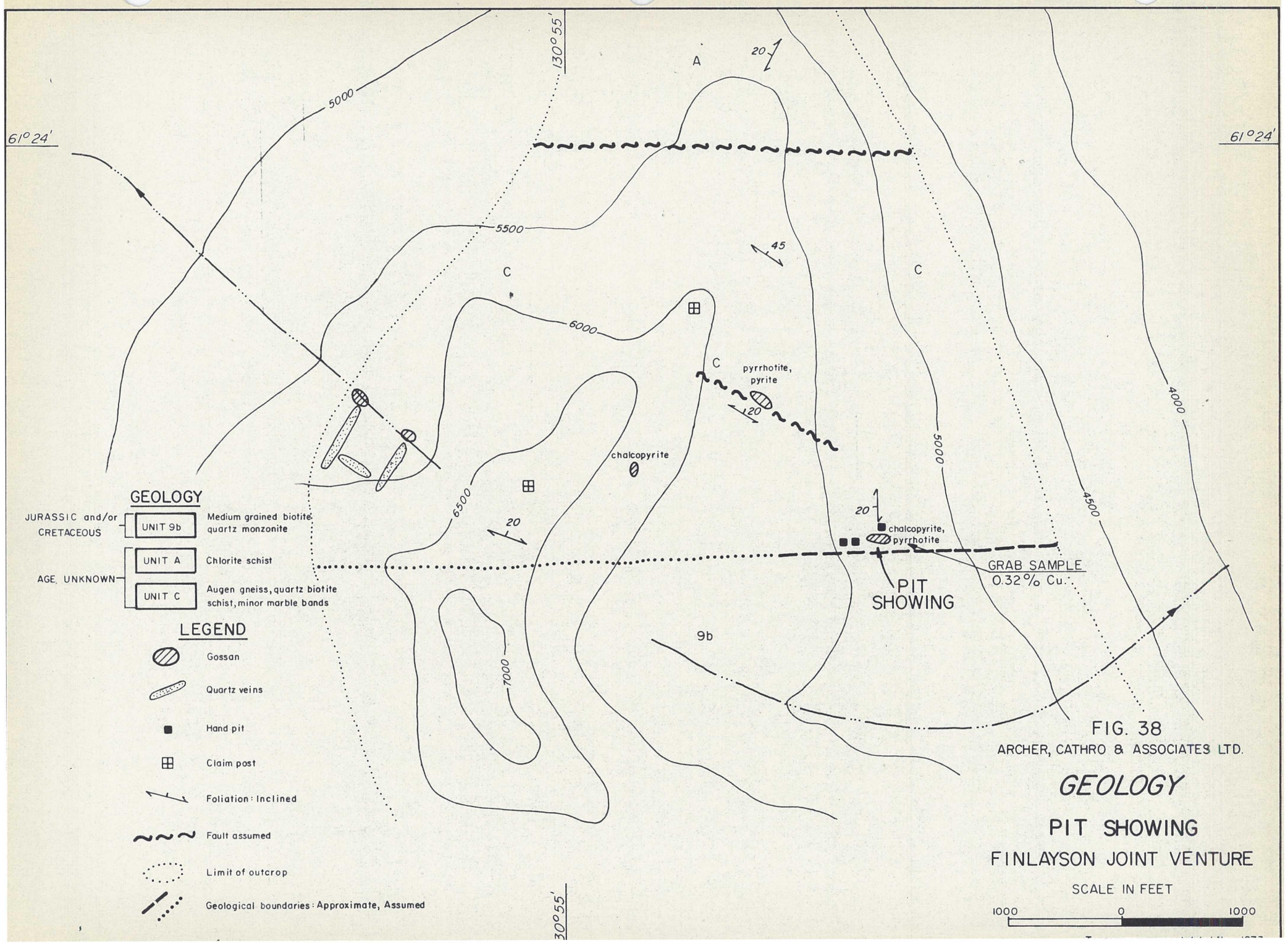


FIG. 38

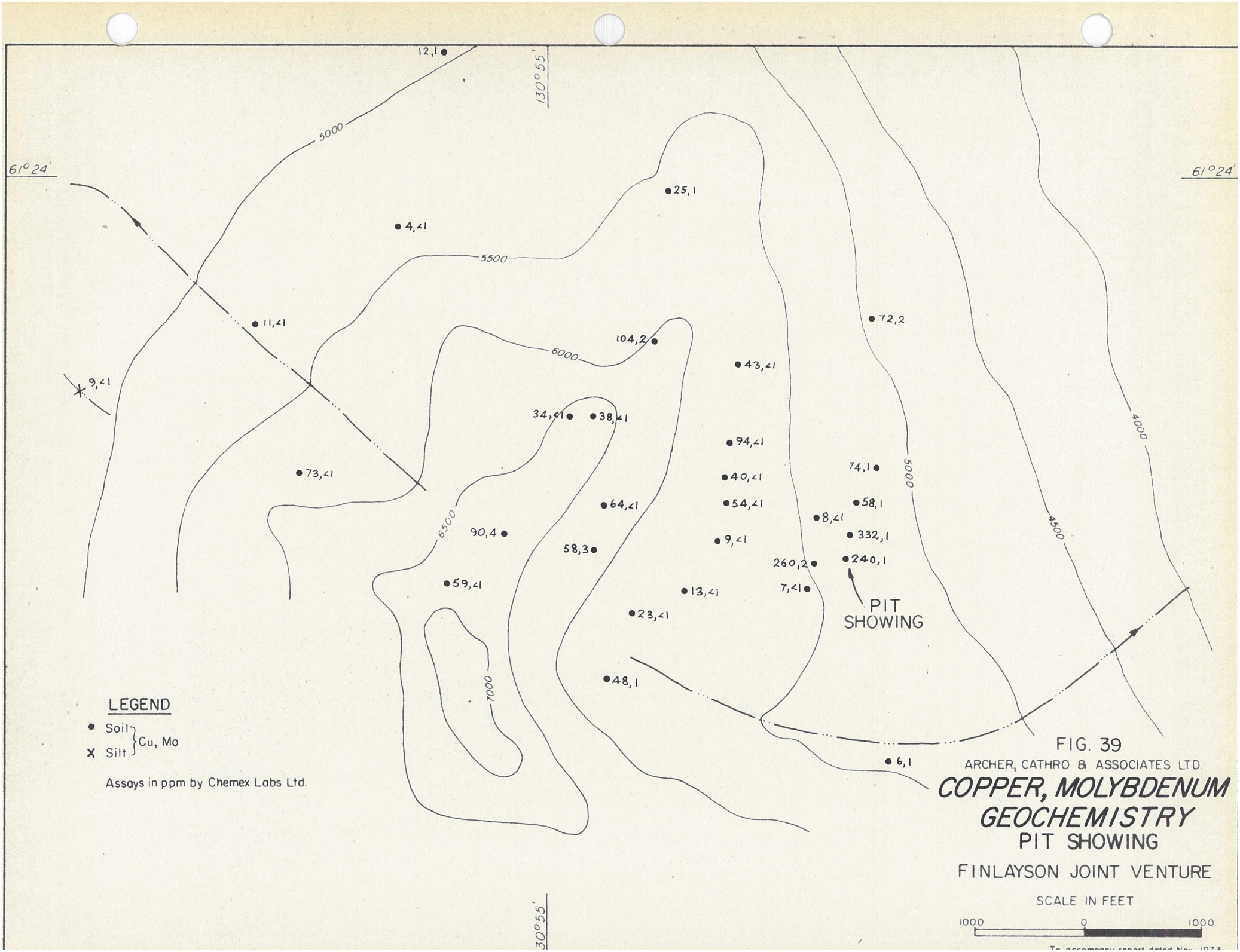
ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

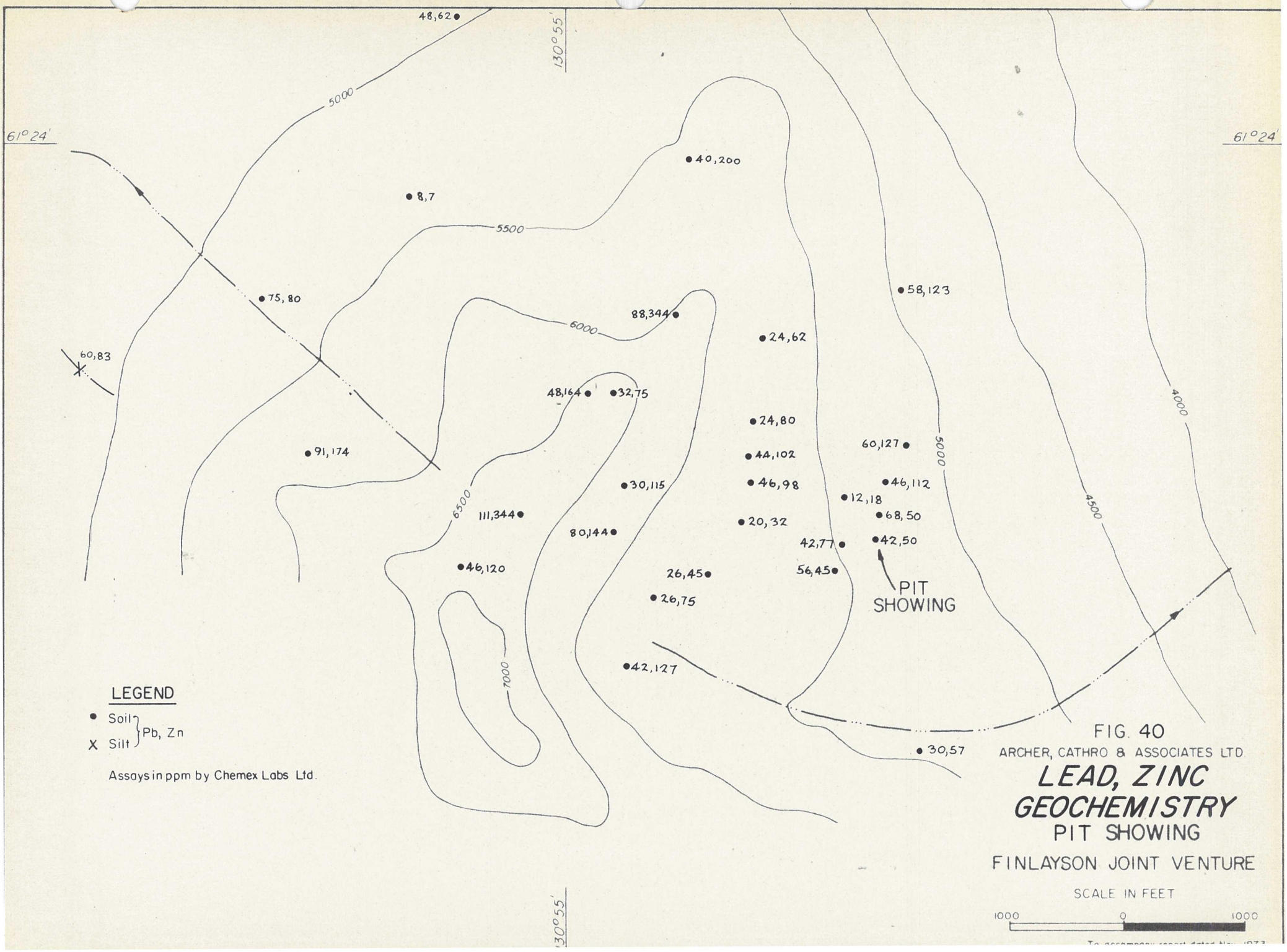
PIT SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET



To accompany report dated Nov. 1973


130°55'
61°24'
48,62
5000
8,7
40,200
5500
75, 80
58,123
88,344
6000
24,62
60,83
48,164
32,75
24,80
4000
91,174
60,127
44,102
5000
30,115
46,98
46,112
6500
12,18
111,344
68, 50
20,32
80,144
42,77
42,50
46,120
26,45
56,45
PIT
SHOWING
26,75
4500
7000
42,127
30,57
LEGEND
Soil
Silt
Pb, Zn
Assays in ppm by Chemex Labs Ltd.
FIG. 40
ARCHER, CATHRO & ASSOCIATES LTD.
LEAD, ZINC
GEOCHEMISTRY
PIT SHOWING
FINLAYSON JOINT VENTURE
SCALE IN FEET
1000
0
1000

best mineralization in a hand pit on showing (1) assayed 0.32 per cent copper. Minor marble and diopside skarn float were also seen, suggesting that this could be a skarn-type occurrence. Soil sampling near the showings have a moderately anomalous response in copper (70 to 90 ppm) and lead (75 to 175 ppm) and low molybdenum and zinc values. These showings appear to have very small dimensions and no further work is recommended.

(12) Rob [105G(31)]

Location: 61°22'N, 130°53'W ; NTS: 105G/7

This showing was staked in 1954 by Pelly River Explorations Ltd. and restaked in 1966 by Northlake Mines Ltd. Only grid soil sampling and ground geophysical surveys were performed. Mineralization reportedly consisted of massive pyrrhotite with chalcopyrite and massive arsenopyrite, both in float. FJV found the area to be underlain by chlorite schist of Unit A and discovered several pyritic gossans as well as galena in quartz float and a one foot thick bed of disseminated pyrite and chalcopyrite in a quartzite hroizon. A sample of the best mineralization from the latter assayed 0.09 per cent copper. Several erratic anomalies were obtained in this vicinity, suggesting the presence of more of these minor showings. Anomalous values are in the ranges of 250 to 410 ppm copper, up to 10 ppm molybdenum, 102 to 250 ppm lead and 400 to 3200 ppm zinc. No further work is recommended.

(13) Pack Showing [105G(32)] (see Figures 41 to 43 on following page)

Location: 61°21'N, 130°36'W ; NTS: 105G/7

The Pack showing was first staked in 1961 by Conwest Exploration Ltd., which drilled the property later the same year. The showing is a flat lying

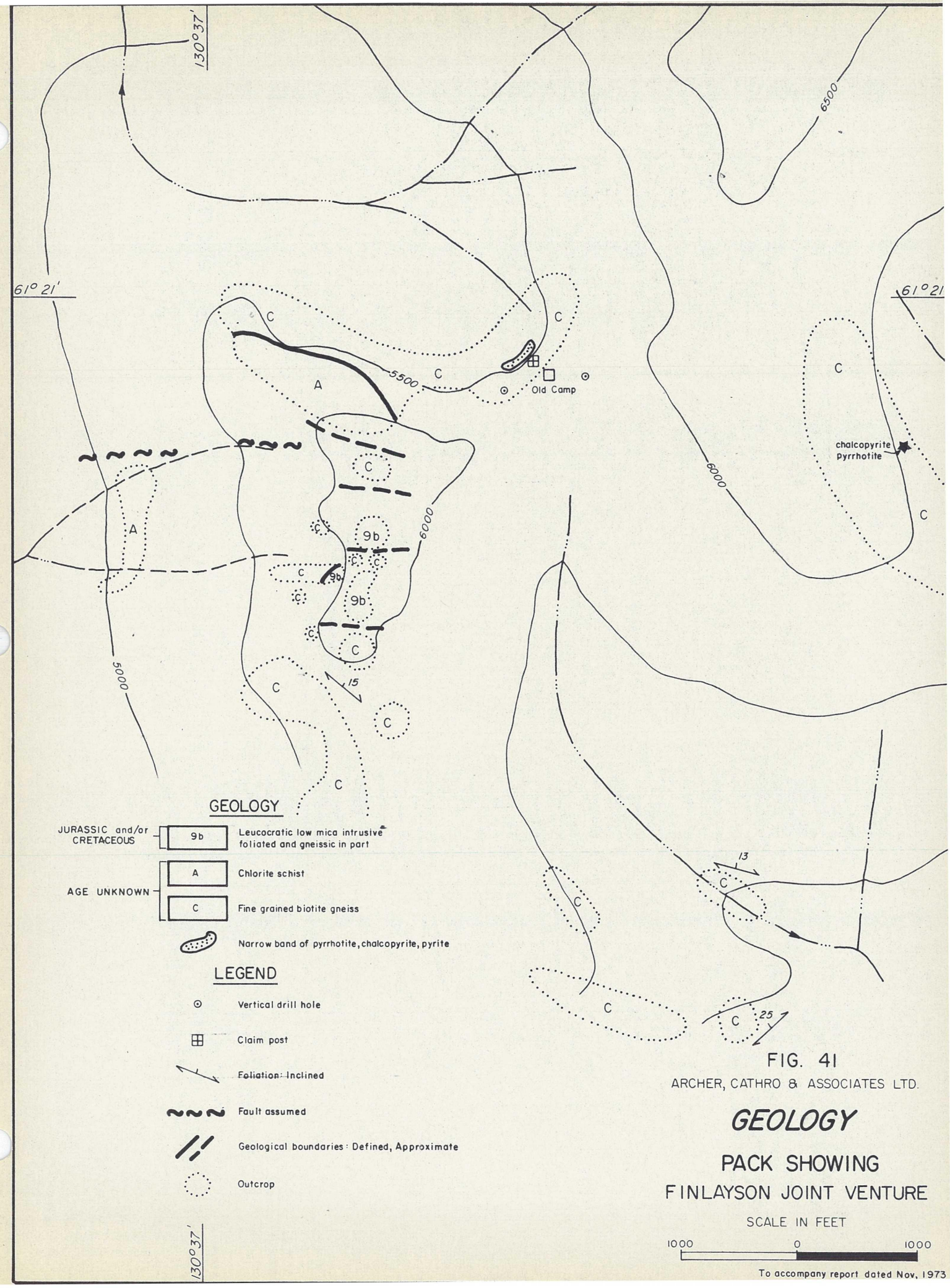


FIG. 41

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

PACK SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

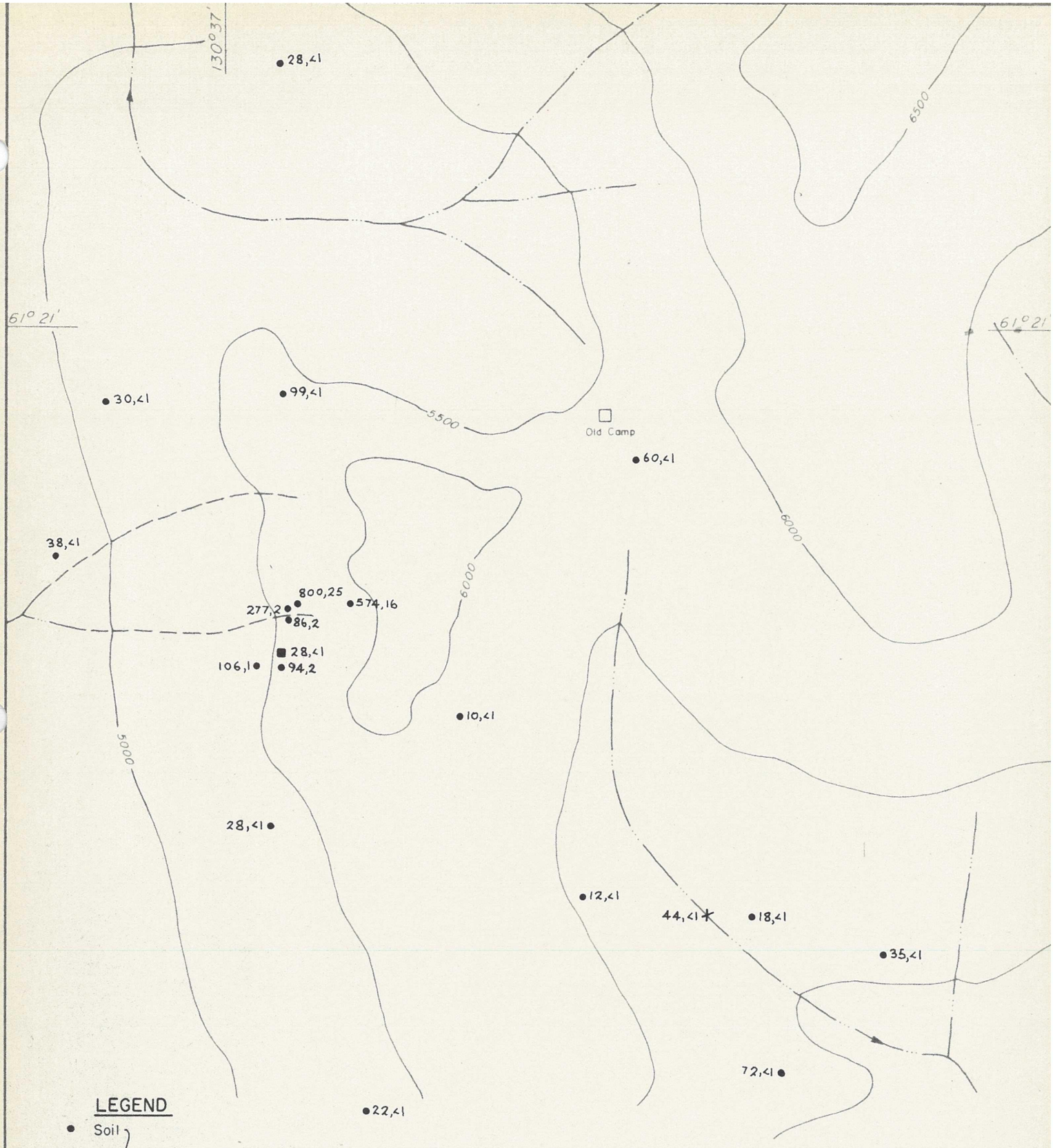


FIG. 42

ARCHER, CATHRO & ASSOCIATES LTD.

COPPER, MOLYBDENUM GEOCHEMISTRY

PACK SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

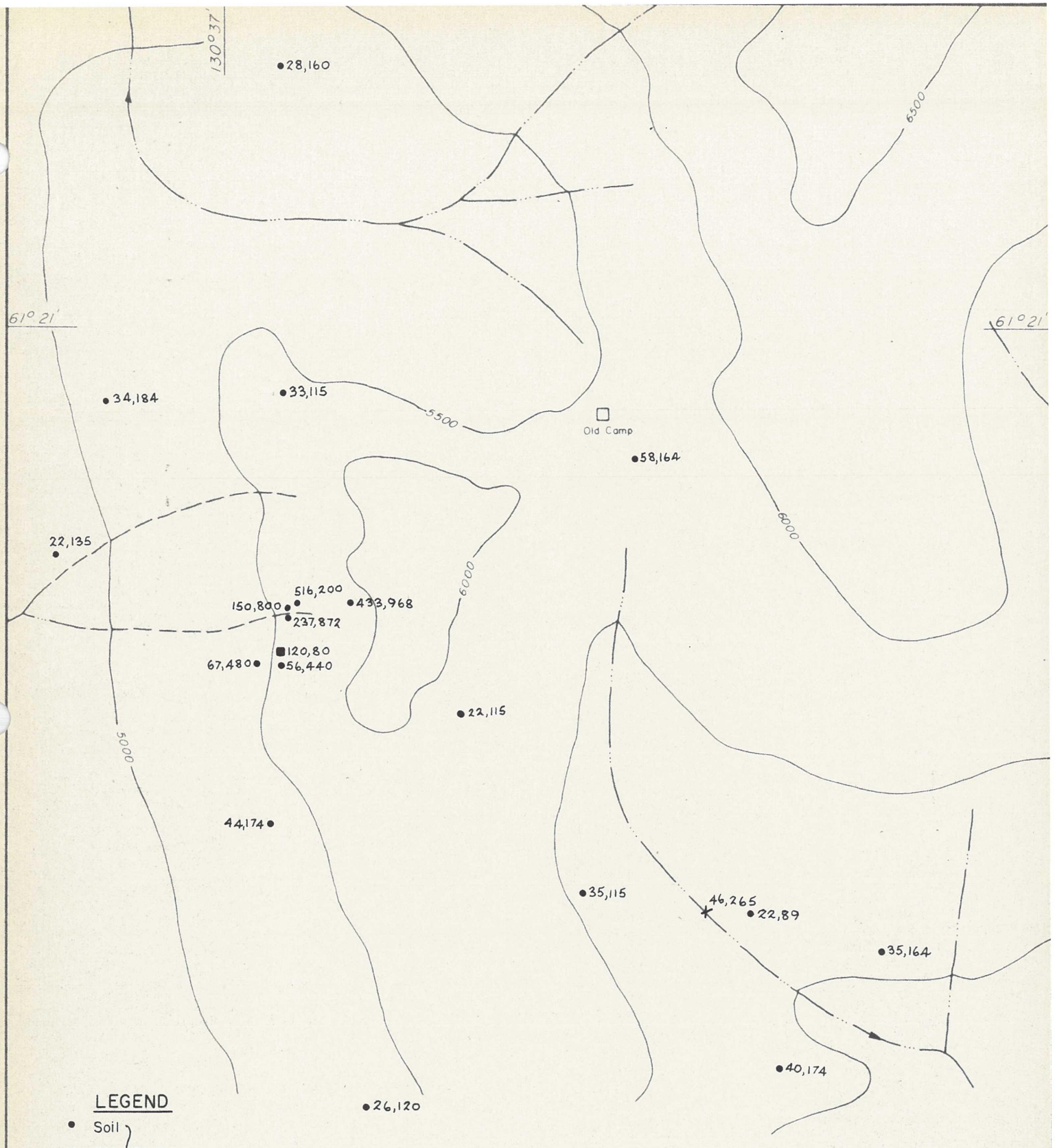


FIG. 43

ARCHER, CATHRO & ASSOCIATES LTD

LEAD, ZINC GEOCHEMISTRY

PACK SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

To accompany report dated Nov, 1973

bed of massive pyrrhotite and chalcopyrite which outcrops high up in the southeast face of a cirque wall. The sulphide band is located in gently dipping quartz-feldspar-biotite gneisses. An earlier published description states that mineralization occurs at the crest of a flat-lying overturned fold. Four grab samples assayed by Conwest average 4.3 per cent copper and 1.6 oz/ton silver.

The area is underlain by schist and gneisses of Unit A and C intruded by a leucocratic Unit 9 intrusion. The mineralized outcrop is not accessible and mineralization was only observed in talus below the cirque wall. No mineralization occurs in the valleys to the south, which proves that the showing has limited lateral extent in that direction. A few specks of chalcopyrite were found in talus fragments in the valley to the east, however.

To the west, large recumbent folds in Unit A rocks indicate a complex structure. Soil samples on the steep, west-facing slope are strongly anomalous in copper (100 to 800 ppm), molybdenum (up to 25 ppm), lead (up to 516 ppm) and zinc (up to 968 ppm). The anomaly is predominantly underlain by Unit C biotite-quartz-feldspar gneiss, which is overlain by Unit A chlorite schist further west. Leucogranite sills outcrop near the anomaly. In spite of good exposure and careful prospecting, no mineralization could be found. It is probably that minor amounts of sulfides are present along thin veins or fractures and that they are concentrated in the soil under the rapid weathering conditions that prevail. No further work is recommended.

(14) Dub and Top [105G (36 and 35)] (see Figures 44 to 46 on following page)

Location: 61°12'N, 130°31'W ; NTS: 105G/1 and 2

Cassiar Asbestos Corp. Ltd. discovered float assaying 1.57 to 2.08 per cent copper in 1960 and staked the first claim on the showings. Cassiar

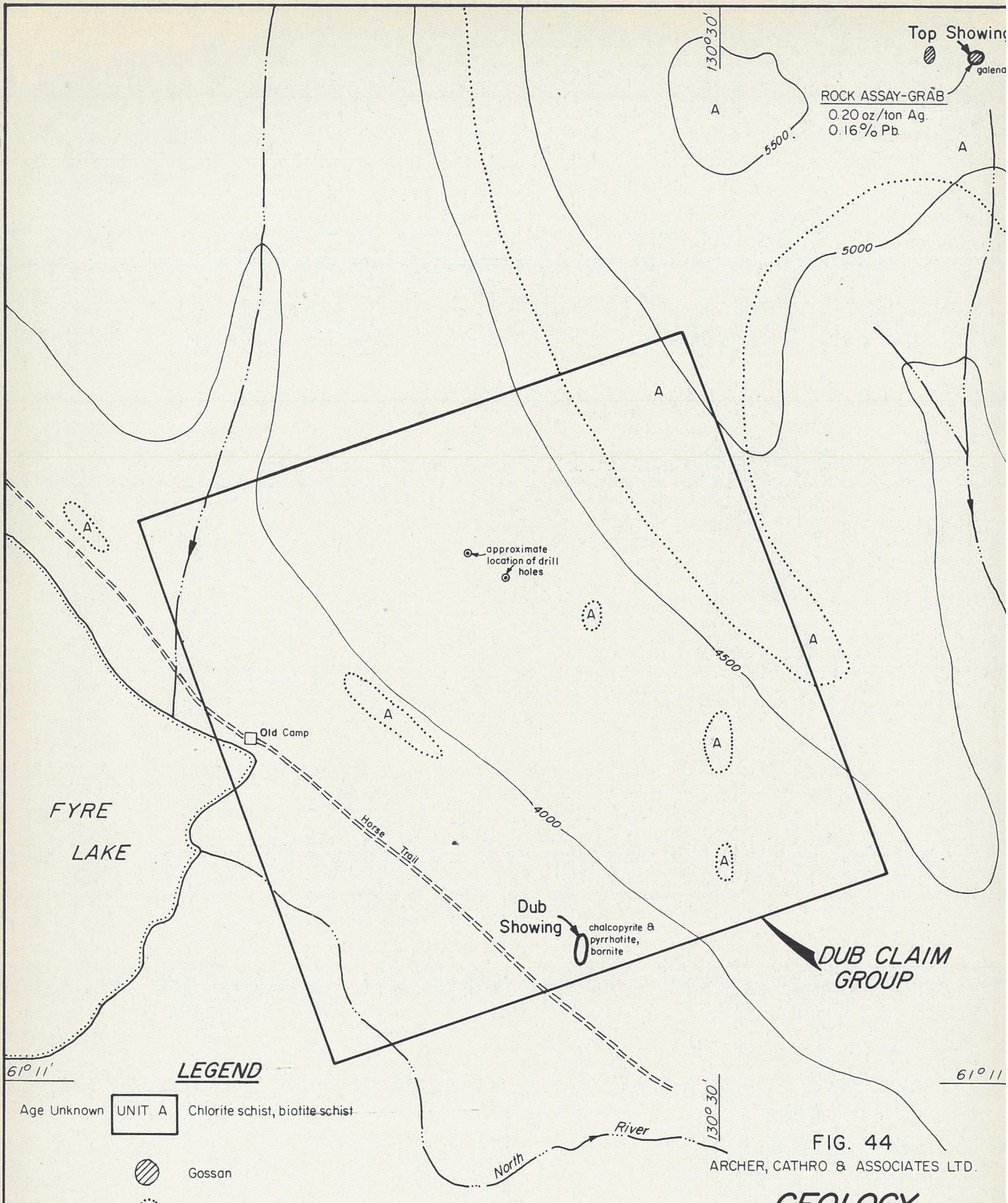


FIG. 44

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

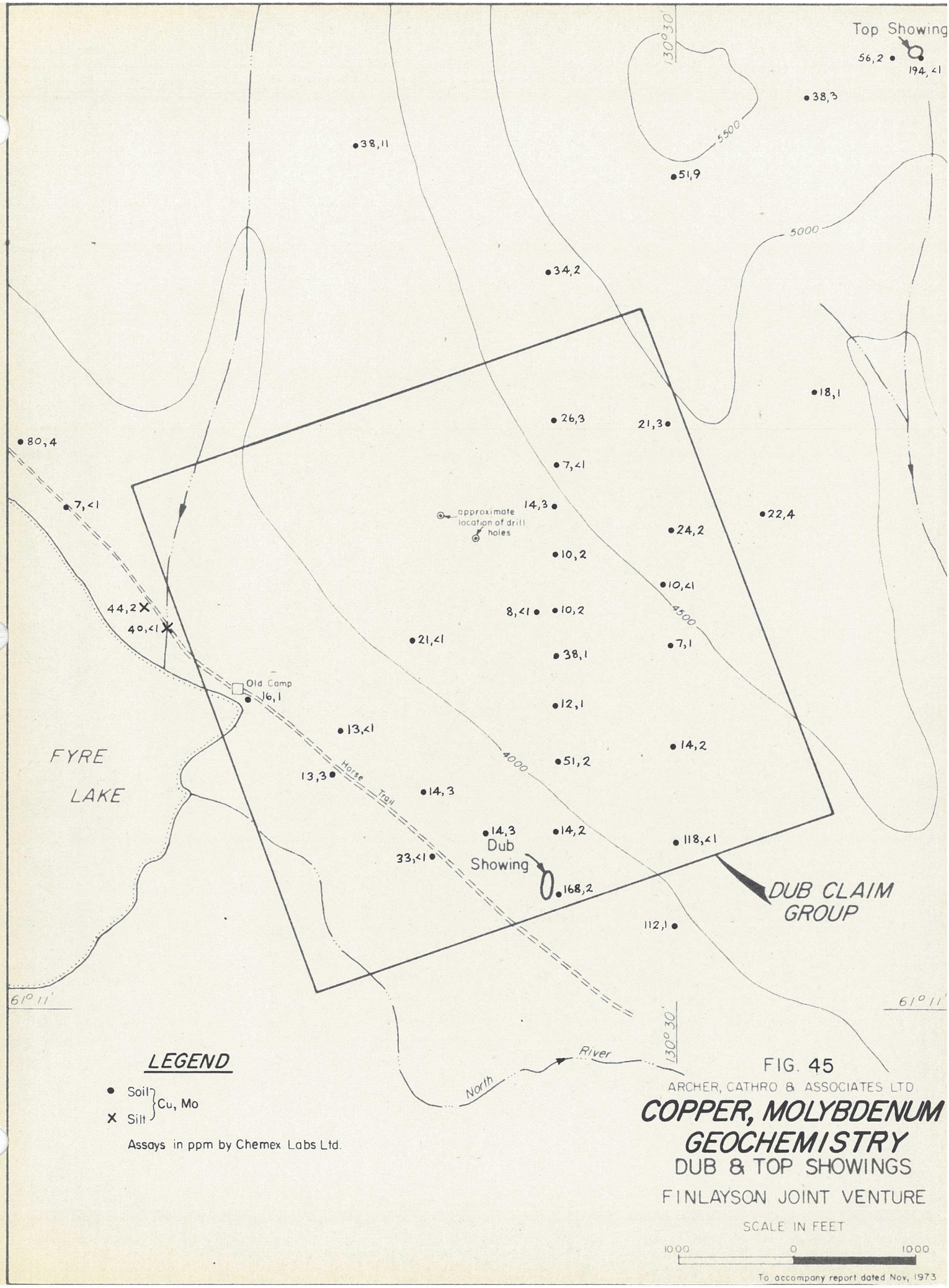
DUB & TOP SHOWINGS

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov. 1973



LEGEND

- Soil } Cu, Mo
- X Silt }

Assays in ppm by Chemex Labs Ltd.

FIG. 45

ARCHER, CATHRO & ASSOCIATES LTD

COPPER, MOLYBDENUM GEOCHEMISTRY

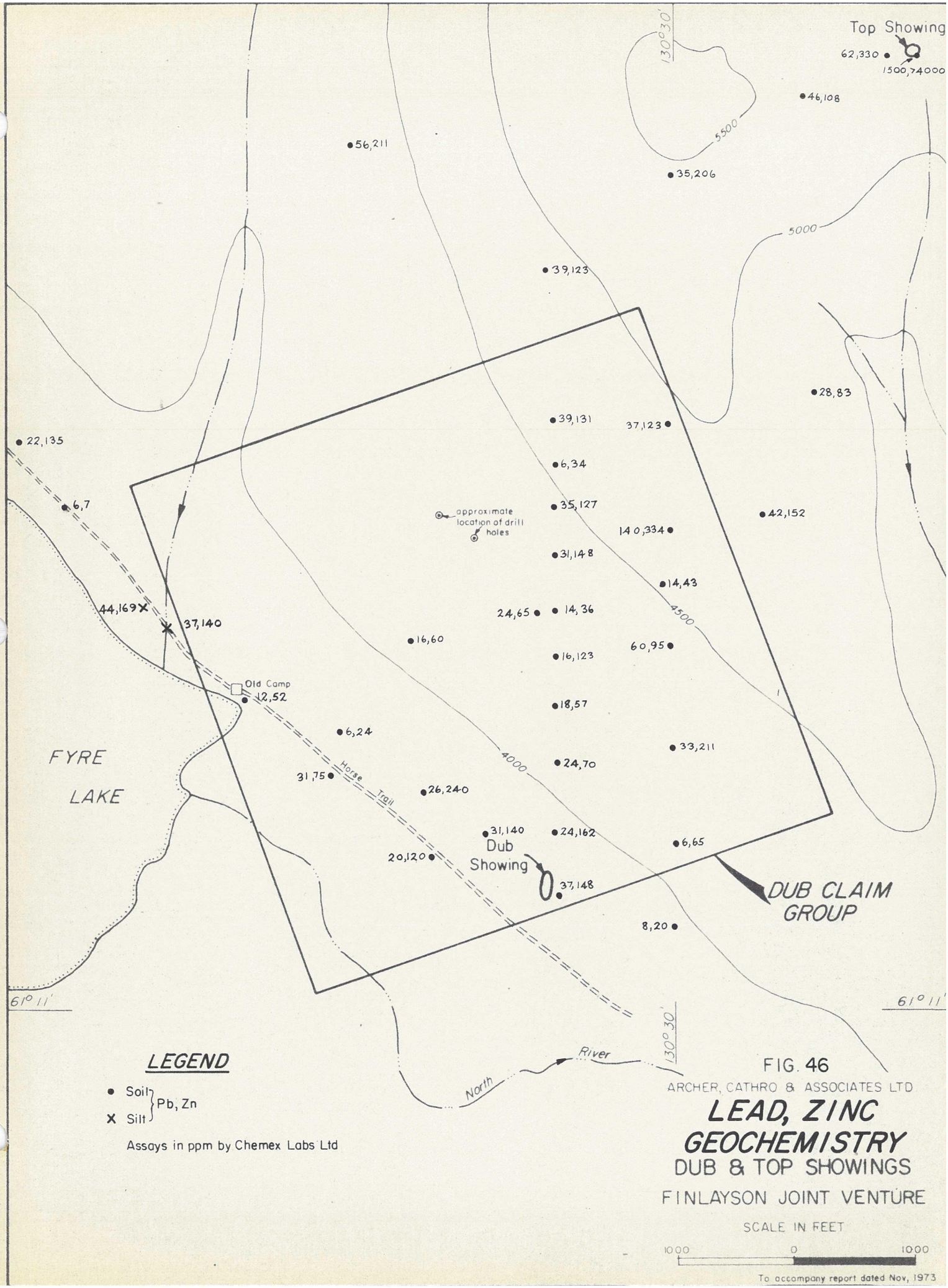
DUB & TOP SHOWINGS

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973



LEGEND

- Soil } Pb, Zn
- X Silt }

Assays in ppm by Chemex Labs Ltd

FIG. 46

ARCHER, CATHRO & ASSOCIATES LTD.

LEAD, ZINC GEOCHEMISTRY

DUB & TOP SHOWINGS

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

conducted only surface surveys and failed to find the source of the float. The showing was restaked in 1966 by Atlas Exploration Ltd., which performed a geochemical survey and airborne and ground geophysics, and drilled coincident geochemical and EM anomalies in 1967 without success. Overburden cover is extensive but the nearest outcrops are Unit A chlorite schist.

The Dub showing consists of a large boulder of heavily disseminated chalcopyrite, pyrrhotite and bornite which is exposed in a hand trench. The Top showing is located 1.5 miles north and consists of two closely spaced gossans, one of which contains a little galena in a rusty quartz vein. A grab sample assayed 0.2 oz/ton silver and 0.16 per cent lead. A soil sample from the gossan assayed 194 ppm copper, less than 1 ppm molybdenum, 1500 ppm lead and greater than 4000 ppm zinc. The only high response elsewhere was in the immediate vicinity of the Dub showing. No further work is recommended.

(15) MM [105G(38)]

Location: 61°11'N, 130°24'W ; NTS: 105G/1

This showing was found and staked in 1960 by Cassiar Asbestos Corp. Ltd. while investigating an aeromagnetic anomaly. The showing consists of intermittent pods and lenses of pyrite, pyrrhotite and chalcopyrite in chlorite schist near an intrusive contact. Erratic high copper values (100 to 437 ppm) were obtained up to a mile south and west. However, these were not followed up since the potential seems to be for vein mineralization only.

(16) BOT [105G(43)]

Location: 61°38'N, 130°53'W ; NTS: 105G/10

This is an asbestos occurrence which was first staked in 1969 by Atlas Explorations Ltd., which performed hand trenching and a magnetic survey the following year. Fibre has developed in an intrusion of Unit D which occurs

as small outcrops along the creek and which cuts Unit A schists. FJV did not examine the showing but found a sill of volcanics (?) about two miles downstream from the showing associated with a moderately anomalous soil response (114 and 160 ppm copper, 27 and 30 ppm molybdenum, and 305 and 320 ppm zinc). No sulfides were seen. The Atlas claims are still in good standing and no further work is recommended by FJV.

(17) Pup [105G(48)]

Location: 61°43'N, 131°44'W ; NTS: 105G/12

Newmont staked claims here in 1963 on an aeromagnetic anomaly and drilled two holes and cut several bulldozer trenches the following year. Low grade asbestos fibre was found in a small serpentinized ultrabasic body (Unit D). The target was not examined by FJV but is noted here simply because it has been drilled.

(18) Hoole [105G(61)]

Location: 61°25'N, 131°14'W ; NTS: 105G/6

The only previous work was detailed prospecting in conjunction with claim staking in 1961 by Cassiar Asbestos Corp. Ltd. A series of gossans occur near a ridge in an area of mixed Unit A and C rocks cut by an ultrabasic intrusion (Unit D). The gossans are caused by pyritic, altered zones containing mariposite near the contact. No sulfides were seen although a few moderately anomalous, erratic soil assays were obtained(86 to 164 ppm copper, 81 to 172 ppm lead, and 200 to 405 ppm zinc). No work is recommended.

(19) Fargo [105K(10)] (see Figures 47 to 49 on following page)

Location: 62°03'N, 133°04'W ; NTS: 105K/3

This showing is situated 15 miles northwest of the project area but was investigated beiefly to see it it occurred in a similar host rocks as the

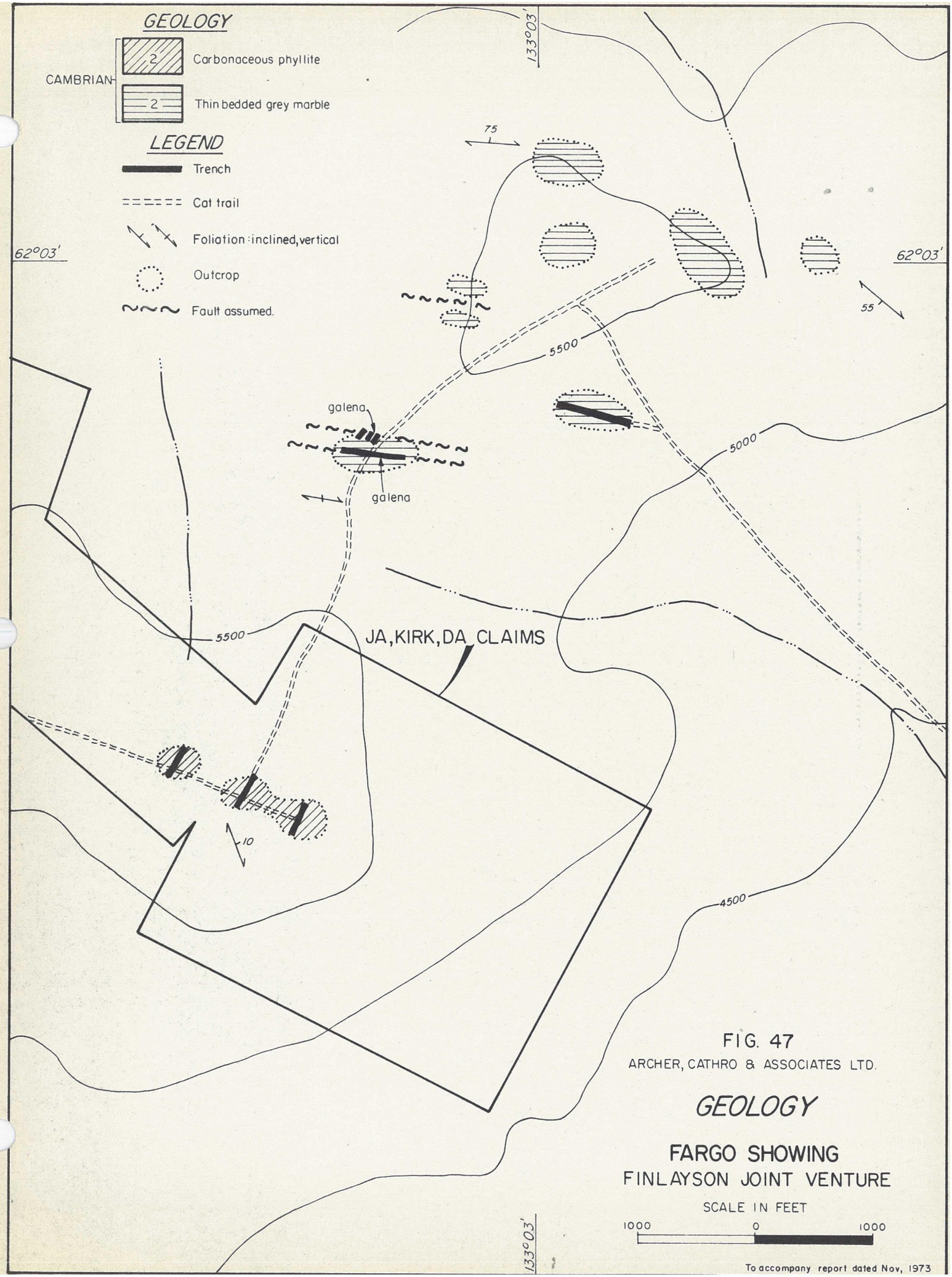


FIG. 47

ARCHER, CATHRO & ASSOCIATES LTD.

GEOLOGY

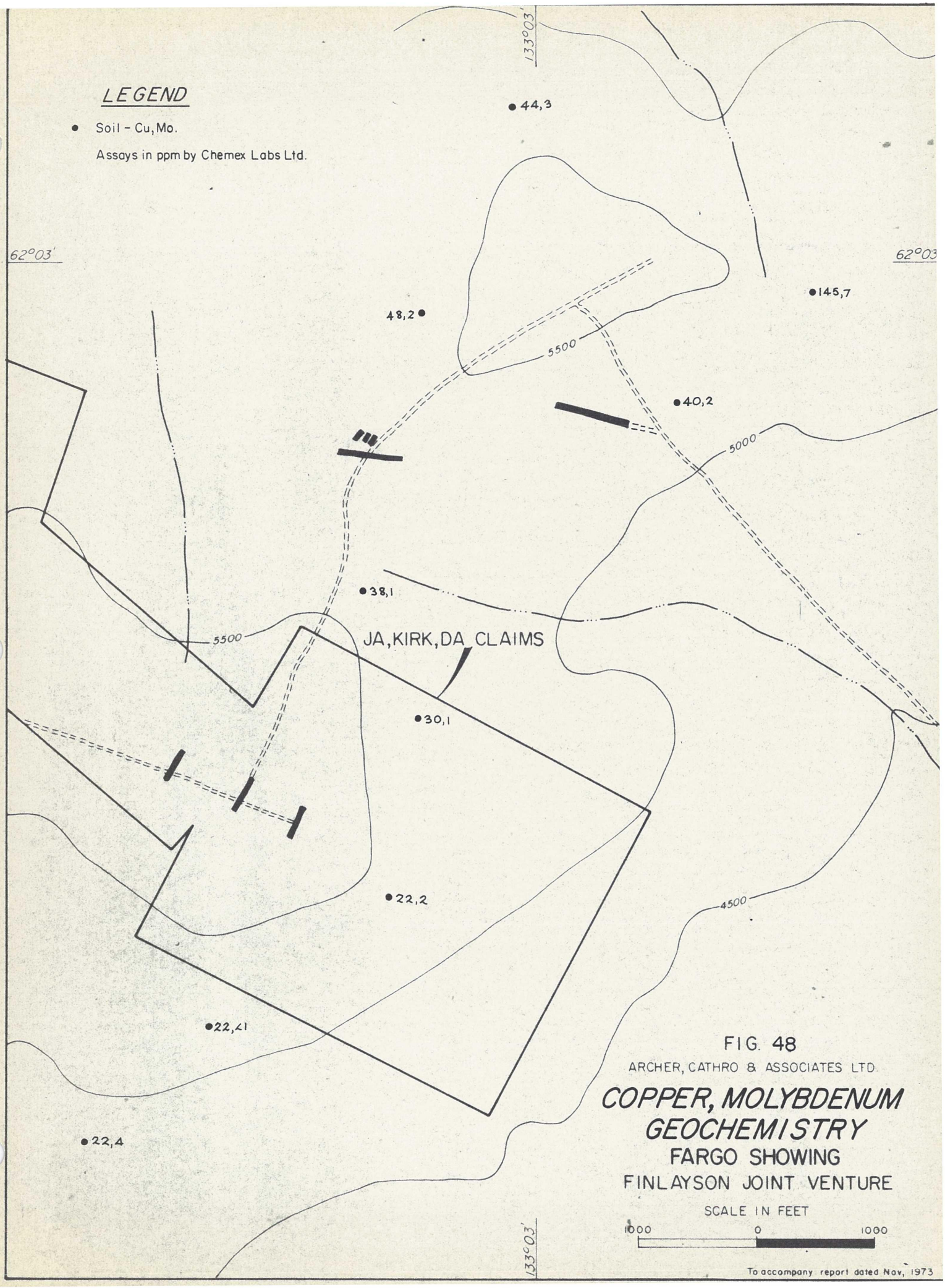
FARGO SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973


LEGEND
Soil - Cu, Mo.
Assays in ppm by Chemex Labs Ltd.
133°03'
62°03'
62°03
44,3
145,7
48,2
40,2
5500
5000
38,1
JA, KIRK, DA CLAIMS
30,1
22,2
22,41
22,4
4500
FIG. 48
ARCHER, CATHRO & ASSOCIATES LTD.
COPPER, MOLYBDENUM GEOCHEMISTRY
FARGO SHOWING
FINLAYSON JOINT VENTURE
SCALE IN FEET
1000 0 1000
To accompany report dated Nov, 1973

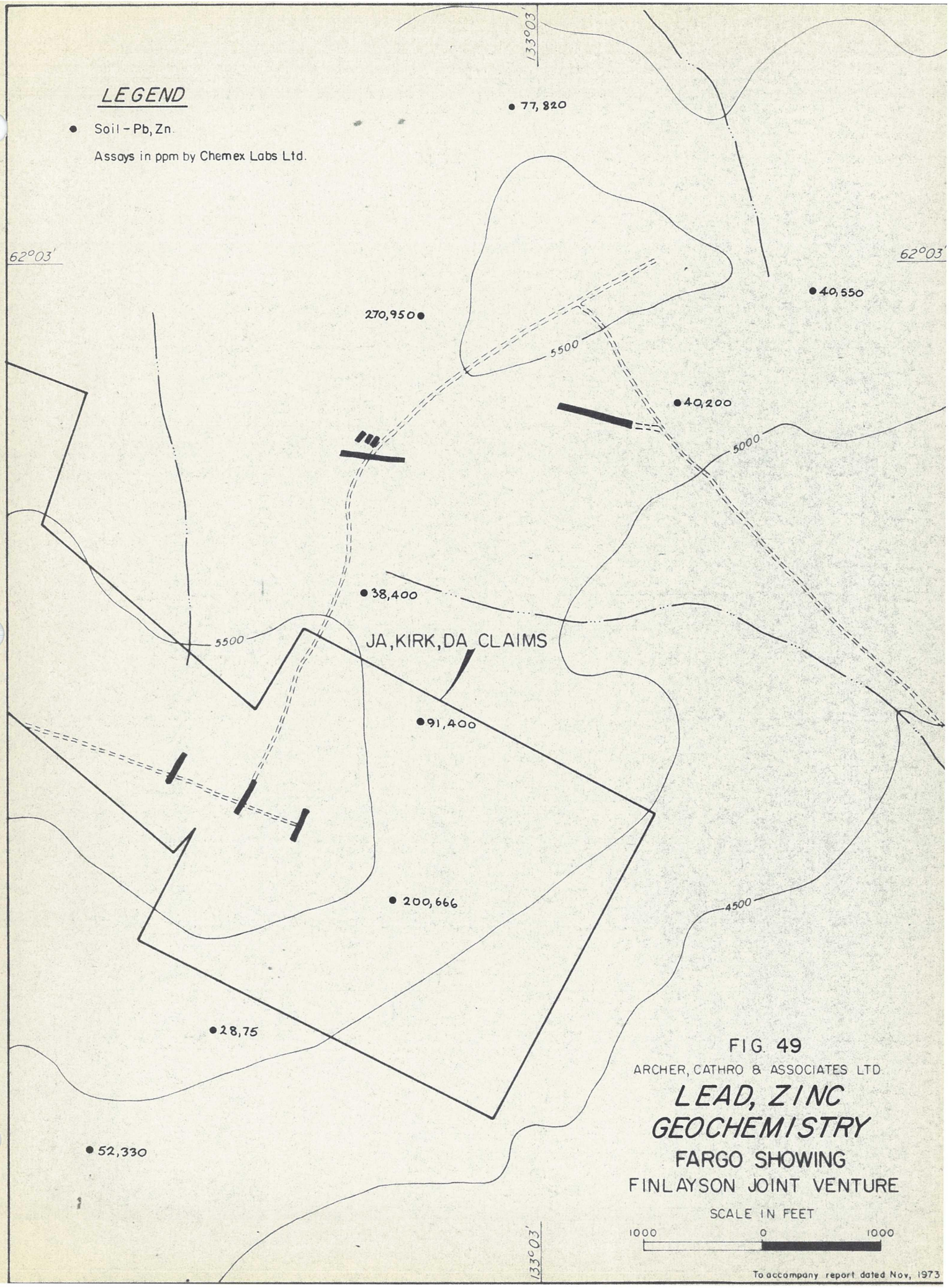


FIG. 49

ARCHER, CATHRO & ASSOCIATES LTD.

LEAD, ZINC GEOCHEMISTRY

FARGO SHOWING

FINLAYSON JOINT VENTURE

SCALE IN FEET

1000 0 1000

To accompany report dated Nov, 1973

Hoo mineralization. It was first staked in 1965 and explored intermittently with geophysical and geochemical surveys and trenching until 1969. Host rocks are Unit 2 Cambrian limy phyllite and thin bedded grey marble. Assays reported from previous work are as high as 25.8 per cent lead, 24 per cent zinc and 5.4 oz/ton silver on float associated with lead and zinc soil anomalies and the physical work completed on the showing comprises light shallow trenches, long ripper lines and connecting cat trails.

The main showing consists of a 30 foot by 500 foot shallow trench parallel to foliation, which strikes east and dips vertically. This trench is situated in a ridge saddle and may lie along a fault, since it exposes a heavy, dark brown, fine-grained altered rock and is bounded on either side by outcrops of thin bedded marble. Very fine grained galena occurs at the east end of the trench and in lesser amounts in patches elsewhere.

Three closely spaced shallow trenches cross cut the strike of a galena-siderite-quartz vein of a few hundred feet north of the main zone. Mineralization consists a narrow vein of coarse galena crystals with a geothite, siderite, and quartz gangue. The host rock is thin bedded marble which is brecciated along a narrow fracture. No samples were assayed. Visual estimates are very low and show that earlier reports were misleading both as to grade and type of mineralization.

Soil sampling around the showing returned high zinc values (400 to 950 ppm) with lead ranging between 38 and 270 ppm. Most of the zinc in soil is probably a result of high background in the limy phyllite. The highest lead response was obtained from a narrow topographic depression in which

unmineralized siderite-quartz gangue float was found. Mineralization on the Fargo property appears to be structurally controlled along narrow east trending, widely-spaced faults. No work is recommended.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES LTD.

R.J. Cathro, B.A.Sc., P.Eng.

Orchid L.
Marjorie Lake
Margerie L.
Carolyn L.
Wesse Lake
Earthbell
Mink Creek
False Canyon
Canol Road
Goss River
Blackfox Bend
Hoole Canyon
Hoole River
Bridge Lake
Keele River
PELLY RIVER
CAMPBELL HIGHWAY
FJV CAMP No.1
1972 DDH COMPLETE
SOUTH YUKON JOINT VENTURE (HOO) BOUNDARY
TINTINA FAULT

GEOLOGY

TERTIARY	11	Dark brown and black basalt flows and medium to coarse grained gabbroic rocks
PALEOCENE	10	Shale, sandstone, conglomerate, coal seams
JURASSIC CRETACEOUS	9a	Coarse grained buff granite
	9b	Medium to coarse grained, biotite granodiorite and quartz monzonite
	9c	Medium to coarse grained hornblende diorite
MISSISSIPPIAN (?) OR EARLIER	9d	Light grey to green quartz feldspar porphyry
	6a	Dark green massive and foliated volcanics
	6d	Massive grey limestone
MIDDLE AND UPPER CAMBRIAN	2	Black lustrous phyllite, thin bedded limestone, and grey phyllite
AGE UNKNOWN	A	Chlorite schist, black phyllite with minor vein and lenses of white quartz and calcite
	Aa	Grey to black phyllite quartzite associated with unit A
	B	Thin bedded to massive grey crystalline marble and limestone associated with unit A and C
	Ba	Soapstone, phyllite, calcite skarn, minor garnet, diopside skarn
	C	Biotite, muscovite quartz feldspar gneiss, chloritic schist, garnetiferous, feldspar augen gneiss, minor white quartz veins and lenses

LEGEND

- Gossan
- Limit of outcrop
- Mapped outcrop
- Assumed
- Approximate
- Defined
- Geological Boundaries
- Vertical
- Inclined
- Foliation
- Assumed
- Defined
- Fault
- Vertical
- Inclined
- Bedding
- FJV Camp
- Base Camp

FIG. 4
ARCHER, CATHRO & ASSOCIATES LTD.
REGIONAL GEOLOGY
NORTHWEST MAP
FINLAYSON JOINT VENTURE
SCALE 1" = 1 Mile (approx)
0 1 2 3 4 5 Miles

0091-05580
T1107-18
C4
F52-

1000559299

Rev. 1973

SOUTH YUKON JOINT VENTURE (HOD) BOUNDARY

PALSY

FETISH

DENIM

Finlayson Lake

Campbell Highway

Big Campbell Creek

Wolverine Lake

Monroe

North Fyre Lake

Fyre Lake River

Black River

Hoole R.

Loons

Lynx Creek

SEE FIG. 10

SEE FIG. 13

SEE FIG. 16

SEE FIG. 17

SEE FIG. 20

SEE FIG. 24

SEE FIG. 25

SEE FIG. 32

SEE FIG. 44

SEE FIG. 45

GEOLOGY

TERTIARY	11	Dark brown and black basalt flows and medium to coarse grained gabbroic rocks
PALEOCENE	10	Shale, sandstone, conglomerate, coal seams
JURASSIC OR CRETACEOUS	9a	Coarse grained biotite granite
	9b	Medium to coarse grained, biotite granodiorite and quartz monzonite
	9c	Medium to coarse grained hornblende diorite
	9d	Light grey to green quartz feldspar porphyry
MISSISSIPPIAN TO OR EARLIER	6a	Dark green massive and foliated volcanics
	6d	Massive grey limestone
MIDDLE AND UPPER CAMBRIAN	2	Black lustrous phyllite, thin bedded limestone, and limy phyllite
AGE UNKNOWN	A	Chlorite schist, black phyllite with minor veins and lenses of white quartz and calcite
	6a	Grey to black phyllite quartzite associated with unit A
	B	Thin bedded to massive grey crystalline marble and limestone associated with unit A and C
	8a	Soapstone plagioclase calcite skarn, minor garnet, diopside skarn
	C	Biotite, muscovite quartz feldspar gneiss, chlorite schist, hornblende feldspar gneiss, garnet, diopside, white quartz veins and lenses
	D	Black to dark green fine grained ultramafic intrusions, unmetamorphosed equivalents
		Limit of outcrop
		Mapped outcrop
		Assumed — Geological Boundaries
		Approximate — Geological Boundaries
		Defined — Geological Boundaries
		Vertical — Foliation
		Inclined — Foliation
		Assumed — Fault
		Defined — Fault
		Vertical — Bedding
		Inclined — Bedding
		F.I.V. Camp
		Base Camp
		Gossan

FIG. 5

ARCHER, CATHRO & ASSOCIATES LTD.

REGIONAL GEOLOGY

SOUTHEAST MAP

FINLAYSON JOINT VENTURE

SCALE 1" = 1½ miles (approx.)

1½ 0 1½ 3 miles

100-055560

TM27-10

DWG

FIG 5

100-559269

Orchie
Marjorie Lake
Carolyn Lk
Margorie L.
Campbell
Wedsel Lake
False Canyon
Canal
PELLY
RIVER
Hoole Canyon
Blanchford Creek
Horton Creek
CAMPBELL HIGHWAY
Keno
Mayo
Stewart River
Dawson
F.J.V. CAMP No.1
Mink Creek
SOUTH YUKON JOINT VENTURE (HOO) BOUNDARY
CAMPBELL HIGHWAY
Hoole River
Scurry Creek
1056[48]

LEGEND
- Soil
- Silt Cu Mo
- Rock
- N S Sample stored and not assayed
- Analyses in ppm by Chemex Labs Ltd
- "A" Geochemical anomaly described in report
- Mineral occurrence
- Mineral Occurrence (code number refers to Northern Cordillera Mineral Inventory)

FIG. 6
ARCHER, CATHRO & ASSOCIATES LTD.
REGIONAL GEOCHEMICAL SAMPLING
COPPER AND MOLYBDENUM
NORTHWEST MAP
FINLAYSON JOINT VENTURE
SCALE 1" = 1 Mile (approx)

0121105860
74G/1 NW
GY
FILE

1000559899

Orchie L.
Carolyn
Marjorie Lake
Margorie L.
Wolfsei Lake
Falls Canyon
Canal
RIVER
PELLY
Hoole Canyon
Hoole
Herron Creek
Kerr
Mink Creek
Campbell
Hoole River
CAMPBELL HIGHWAY
105G[48]

LEGEND

- Soil
- Silt
- Rock
- N S Sample stored and not analyzed
- Anomaly # ppm by Chemex Labs Ltd
- "A" Geochemical anomaly described in report
- Mineral occurrence
- Mineral Occurrence (code number refers to Northern Cordillera Mineral Inventory)

FIG. 7
ARCHER, CATHRO & ASSOCIATES LTD.
REGIONAL GEOCHEMICAL SAMPLING
LEAD AND ZINC
NORTHWEST MAP
FINLAYSON JOINT VENTURE
SCALE 1" = 1 Mile (approx.)

0124055669
74 G/5 W
074 F/12 E

1000159299

Finlayson Lake

CAMPBELL RANGE

Wolverine Lake

Money Creek

Big Campbell Creek

North Lake

Hoole R

Fyre Lake

North River

Black River

SOUTH YUKON JOINT VENTURE/YOA BOUNDARY

LEGEND

- Soil
- Silt / Cu, Mo
- Rock
- N.S. Sample stored and not assayed
- All analysis in ppm by Chemex Labs Ltd.
- "A" Geochemical anomaly described in report
- Metal mineral occurrence
- Mineral Occurrence (code number refers to Northern Cordillera Mineral Inventory)

FIG. 8

ARCHER, CATHRO & ASSOCIATES LTD.

REGIONAL GEOCHEMICAL SAMPLING

COPPER AND MOLYBDENUM

SOUTHEAST MAP

FINLAYSON JOINT VENTURE

SCALE 1" = 1 Mile (approx)

0131 85560
NTS 105 G/1
OA 1982

10005 53299

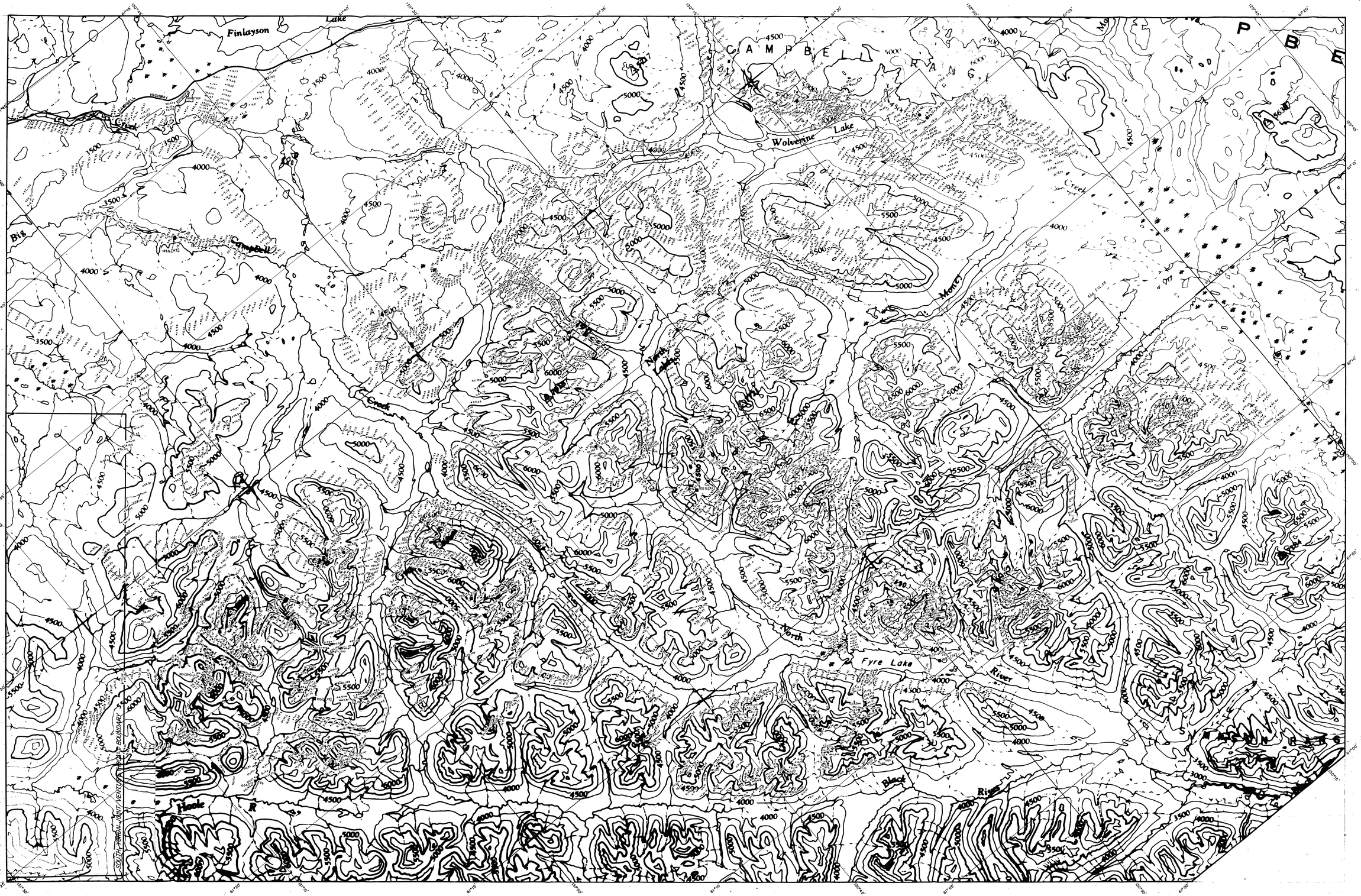


FIG. 9
ARCHER, CATHRO & ASSOCIATES LTD.
REGIONAL GEOCHEMICAL SAMPLING
LEAD AND ZINC
SOUTHEAST MAP
FINLAYSON JOINT VENTURE
SCALE 1" = 1 Mile (approx)

0105580
NPL 10
94 F 8W

1000557299

magnetite & hematite float

chalcopyrite, pyrite, galena, malachite

sulphosalt(?)galena

FJV Camp

TIE LINE 0+00

BASELINE 0+00

BASELINE 28+00SW

FETISH 1-20 CLAIMS

SECTION B-B

GEOLOGY

- Black organic
- Grey brown rocky soil
- Red brown rocky with gneiss float
- Micaceous quartzose gneiss outcrop

GEOLOGY

MISSISSIPPIAN OR EARLIER	Ga	Dark green foliated volcanics
AGE UNKNOWN	A	Chlorite schist, black phyllite, quartz muscovite schist, micaceous quartzite, quartz veins
	Aa	Metaquartzite, with magnetite up to 30%, minor pyrite
	C	Quartzose muscovite augen gneiss

LEGEND

- Hand pit
- Claim post
- Gosson
- Mineral occurrences
- Boulder train
- Swamp
- Foliation inclined
- Outcrop
- Geological boundary- approximate

FIG. 10
ARCHER, CATHRO & ASSOCIATES LTD

GEOLOGY

FETISH PROPERTY
FINLAYSON JOINT VENTURE

SCALE IN FEET
400 0 400 800 1200

0124-05560
TNS 7.48
C4
F52

100559 299

To accompany report dated Nov. 1973

Old Camp

WOLVERINE LAKE

FETISH LAKE

61°20'

4000

56+00NW

52+00NW

48+00NW

44+00NW

40+00NW

36+00NW

32+00NW

28+00NW

24+00NW

20+00NW

16+00NW

12+00NW

8+00NW

4+00NW

0+00

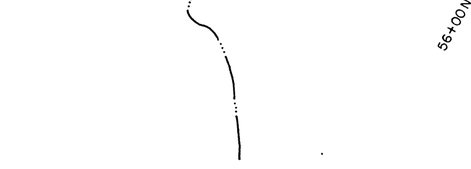
C

SECTION A-A

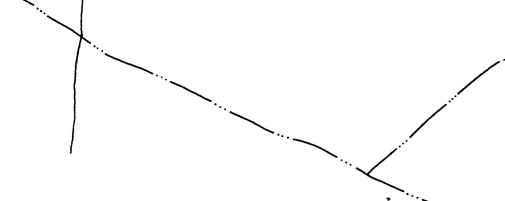
GEOLOGY

1. White and black organic
2. Yellow brown soil with rounded greenstone volcanic boulders
3. Yellow brown sandy clay
4. Weathered chlorite schist chlorite quartz muscovite schist.
5. Red to yellow brown soil with phyllite fragments and schist
6. Red brown stratified soil with angular micaceous quartzite and black phyllite Some bull quartz
7. Red-brown rusty gossan soil
8. Malachite bands in chlorite quartz muscovite schist
9. Quartz bands, minor malchite

CROSS SECTION OF PIT 7



SECTION B-B



GEOLOGY

- Black organic
- Grey brown rocky soil
- Red brown rocky with gneiss float
- Micaceous quartzose gneiss outcrop

FETISH 1-20 CLAIMS

BASELINE 0+00

BASELINE 28+00SW

TIE LINE 0+00

4000

4500

5000

5500

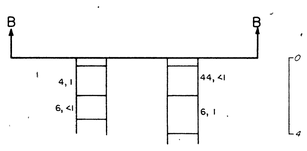
magnetite & hematite float

galena

chalcopyrite, pyrrhotite, galena, malachite

F.J.V. Camp

SECTION B-B



LEGEND

Soil } Cu, Mo
Silt }

Assays in ppm by Chemex Labs Ltd

Anomalous trend outlined by gnd sampling with copper response greater than 75 ppm

LEGEND

- Hand pit
- Claim post
- Gossan
- Mineral occurrences
- Boulder train
- Swamp

FIG 11

ARCHER, CATHRO & ASSOCIATES LTD

COPPER & MOLYBDENUM GEOCHEMISTRY

FETISH PROPERTY

FINLAYSON JOINT VENTURE

SCALE IN FEET

400 0 400 800 1200

012405560
TN27.48
C4
F52

10005299 To accompany report dated Nov. 1973

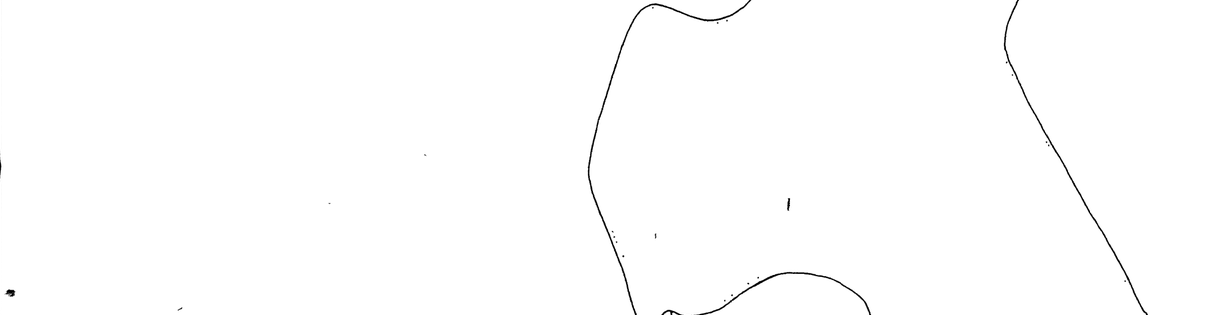
Old Camp

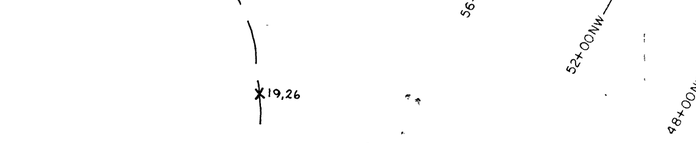
WOLVERINE LAKE

FETISH LAKE

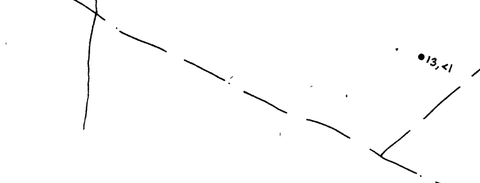
61°20'

SECTION A-A





SECTION B-B



magnetite & hematite float

galena

FETISH 1-20 CLAIMS

BASELINE 0+00

BASELINE 28+00SW

T/C LINE 0+00

4500

5000

4000

5500

F.J.V. Camp

A

280,3900

SECTION B-B

B

212,52

400,92

107,148

300,89

0

4

LEGEND

Soil } Pb,Zn
Silt }

Assays in ppm by Chemex Labs Ltd

Anomalous trend outlined by grid sampling with lead reponse greater than 75 ppm

LEGEND

Hand pit

Claim post

Gossan

Mineral occurrences

Boulder train

Swamp

FIG 12

ARCHER, CATHRO & ASSOCIATES LTD

LEAD & ZINC GEOCHEMISTRY

FETISH PROPERTY

FINLAYSON JOINT VENTURE

SCALE 1" = 400'

0 1/2 1 2 3 4

01 24-85560
TN27.48
C4
F52

10003599299

24,86

46,375

18,5

Old Camp

WOLVERINE

LAKE

44,155

39,148

30,165

12,11

30,144

35,135

33,65

22,1216

26,50

FETISH

LAKE

22,86

37,160

40,233

150,165

62,47

28,1320

30,105

30,189

26,108

26,424

28,123

16,60

31,152

24,83

22,120

161,127

26,86

16,62

40,95

16,57

31,98

16,55

6,9

28,456

61°20'

56+00NW

52+00NW

48+00NW

44+00NW

40+00NW

36+00NW

32+00NW

28+00NW

24+00NW

20+00NW

16+00NW

12+00NW

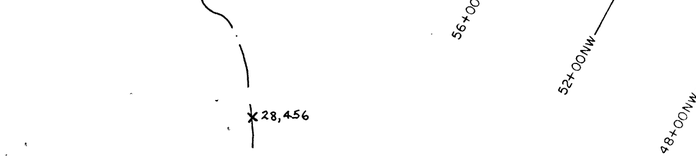
8+00NW

4+00NW

0+00

4000

SECTION A-A



SECTION B-B