

REPORT ON

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VICTOR O.E.X. PROJECT

FIELD WORK, 1972

N.T.S. 115-G & H

By:

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DYNASTY EXPLORATIONS LIMITED

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DYNASTY EXPLORATIONS LIMITED

330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B. C.

REPORT ON VICTOR O.E.X. PROJECT FIELD WORK, 1972

INTRODUCTION

During the 1969 and 1970 field seasons Dynasty and Atlas Explorations carried out an extensive regional porphyry copper exploration program through the Dawson Range area of the Southwest Yukon. The project emphasized silt sampling primarily, coupled with geologic mapping of the whole area at a scale of 1 inch to 1 mile. Numerous geochemical anomalies were discovered during the course of the project. Several of these were staked and the more detailed evaluation of these claim groups began during the 1970 season. One of the prospects, the Max Claims, was drilled in 1971 under a joint venture agreement with Imperial Oil Ltd. This work is described in company reports by G. Pearse, K. Dawson and others, 1969 and 1970.

Because of budget restrictions and other exploration commitments many favourable geochemical anomalies discovered during the 1969-1970 seasons were never investigated or staked. Follow-up work on some of these targets was undertaken this year by a two-man crew consisting of a geologist-pro prospector and a field assistant-soil sampler.

The area investigated during 1972 included parts of the Nisling and Ruby Ranges, which together form the portion of the Yukon Plateau lying between Sekulman Lake on the east and Talbot Arm of Kluane Lake on the west. These ranges form the headwaters of several major streams, the largest of which are Tyrrell Creek

flowing to the north, Albert Creek flowing to the east and Talbot Creek flowing to the west. The project location and the four areas within it that were mapped and prospected this year are shown in Figures 1 and 2.

The valley occupied by Talbot Creek divides the rugged mountains of the Ruby Range on the south from the more subdued topography of the Nisling Range to the north. Mountains in the Nisling Range tend to have rounded or flat tops at about 5000 to 6000 feet. The area was not strongly glaciated, so good rock outcrops are rare. Mapping through most of the Nisling Range must be done mainly from "felsenmeer" and talus rock exposures. In the Ruby Range the peaks and valley walls are steeper so rock outcrops are more abundant. In both ranges the main valleys are filled with thick accumulations of glacial drift deposited as a result of the Ruby ice advance during the latter half of the Pleistocene. A few of the larger streams in the area have cut channels down to bedrock through this drift but, for the most part, outcrops are absent in the valley bottoms.

Mixed forests of spruce and balsam fir occur in the bottoms of valleys up to elevations of about 3800 feet. Above this the valley floors and mountain sides are clothed with willow and dwarf birch bushes and alpine tundra vegetation. Most of the valley bottoms lie at elevations greater than 3500 feet, so the greater part of the area is above timberline.

There are very few lakes in the area, therefore, access and mobility within the area relies heavily on the use of helicopters. Float planes can land at a few lakes scattered through the region and wheeled aircraft can land at the Aishihik airstrip, which lies on the eastern fringe of the Nisling Range. Helicopters are based at Haines Junction about 70 miles to the south and sometimes at Burwash Landing, about 30 miles to the west. We used helicopters exclusively for our work in the area this season.

SUMMARY AND CONCLUSIONS

Four areas of anomalous geochemistry were investigated by mapping, prospecting and further soil sampling. Most of the geochemical anomalies investigated are caused by small copper-lead-zinc occurrences in Yukon Group rocks close to the contacts of alaskite stocks and dikes.

A strongly altered quartz stock work in alaskite was discovered but neither rock samples nor soil samples from the vicinity were anomalous nor was there any visible mineralization in the altered rock.

Breccia zones are common in the area, but they do not appear to be breccia pipes such as are found in other porphyry copper regions and none that we saw were altered or mineralized. Several breccia samples were analyzed geochemically for copper with non-anomalous results.

Two areas of anomalous geochemistry were not written off this year and warrant further investigation. One of these lies in the headwaters of Albert Creek and can be investigated in one or two days by intensive rock breaking and detailed mapping. The other is east of Tyrrell Creek, and would require soil sampling, prospecting and mapping, using a picket line grid for control, and would require at least a week to properly evaluate.

The area is still considered to have good potential, and a three-part exploration program is proposed which would:

- (1) Investigate the two follow-up areas not written off this year,
- (2) Explore new areas northwest of Aishihik Lake for porphyry copper mineralization, and
- (3) Evaluate the potential of the rhyolite flows and pyroclastics as hosts for Kuroko type massive sulphide deposits.

GENERAL GEOLOGY

Yukon Group metasediments, Jurassic granitic rocks and younger, light-coloured intrusive rocks of rhyolitic composition underly the parts of the Nisling and Ruby Ranges mapped during 1972. The Yukon Group rocks, consisting of quartzite, schist, amphibolite, gneiss and marble, have suffered several phases of deformation and have been metamorphosed to at least garnet grade. These rocks are thought to be Precambrian in age but some metasediments of younger age may be included. The Jurassic granitic rocks form the Ruby Range Batholith and the Nisling "granodiorite". The major compositions present are quartz monzonite, granodiorite and quartz-diorite, but some small bodies of diorite and gabbro also occur. These rocks frequently have a gneissic texture and contacts with Yukon Group rocks are often gradational. The acidic plutonic rocks which make up the Nisling alaskite batholiths and the numerous rhyolite dike swarms throughout the area are thought to be Tertiary in age. These rocks always exhibit sharp intrusive contacts and seem to have been emplaced at shallow depth. Extrusive rhyolite flows which are related to these alaskite bodies occur in the eastern part of the Nisling Range. The youngest rocks in the areas mapped, other than Pleistocene glacial sediments, are fine-grained basic rocks of uncertain parentage which occur in narrow dikes throughout the area.

The known porphyry copper deposits in the Dawson Range area are associated with Tertiary acidic intrusive rocks and, therefore, these rocks have received the closest attention during mapping.

STRUCTURAL GEOLOGY

The Nisling and Ruby Ranges lie within the Yukon Geanticline, a structurally positive belt bordered on the northeast by the Tintina Trench and on the southwest by the Shakwak Lineament. The structural history of the region is not well understood but it is thought that periods of uplift, erosion and intrusion of granitic magmas occurred during Jurassic times and again during Early Tertiary times (Muller 1967). The rocks in the areas we have looked at have been cut by faults in NW, NE and N-S directions. The alaskite intrusions as a whole tend to be elongated in a NW-SE direction but most rhyolite dikes trend roughly north-south, so faulting in both directions may have been occurring during the emplacement of the Tertiary rocks.

TABLE OF FORMATIONS

The table of formations for the Dawson Range that follows is based on Geological Survey information and our own field work during 1969 and 1970. Only a few of the rock units numbered and described occur in the areas we covered this year but, for the sake of clarity and completeness, the entire list of rocks units is reproduced here. Only those rock units that we mapped this year are described in detail and the detailed descriptions apply only to the areas we covered.

TABLE of FORMATIONS

CENOZOIC	Modern and Tertiary	
	15	SELKIRK SERIES: Basalt and andesite flows
	14	Fine grained basic dikes
	Tertiary	
	13	Nisling Range acid intrusive complex.(13a)Medium to coarse grained alaskite,(13b)Rhyolite and fine grained alaskite,(13c)Quartz - Feldspar porphyry,(13d)Rhyolite cemented breccia. (13e) rhyolite flows.
	12	CARMACKS VOLCANICS: including andesite, dacite and trachyte flows, breccias and tuffs.
	11	Dark green to black medium grained peridotite to Gabbro
	Jurassic or Later	
	10	Quartz monzonite to granodiorite of Klotassin batholith, Nisling and Ruby Range 10a medium grained hornblende biotite granodiorite. 10b medium grained biotite quartz monzonite.
	9	medium to course grained hornblende syenite to medium grained biotite monzonite
	8	Diorite, Gabbro and allied rock types
MESOZOIC	7	MOUNT NANSEN VOLCANICS: andesitic to basaltic, including basalt, andesite and dacite flows, breccias and tuffs.
	6	TANTALUS FORMATION: conglomerate, sandstone, shale, coal seams
	Jurassic	
	5	LABERGE SERIES: conglomerate, sandstone, arkose, greywacke, shale, tuff, coal seams.
	Triassic	
	4	LEWES RIVER SERIES: limestone, some tuffaceous sandstone
PRECAMBRIAN and LATER	3	Granite - gneiss, diorite - gneiss
	YUKON GROUP	
	2	Limestone and marble
	1	Yukon group metamorphic complex.(1a) Quartz mica schist to micaceous quartzite, quartz - bio gneiss,(1b) Pure laminated quartzite,(1c) Coarse grained marble.

Discussion of Rock Types

Unit 1

The oldest rocks outcropping in the area are a succession of quartzose metamorphosed sediments of complex internal structure and uncertain age. These "Yukon Complex" rocks are metamorphosed to at least the garnet grade, and this, along with intensive isoclinal folding and unclear stratigraphic relationships, suggests that they have suffered multiple phases of deformation. Probably rock units of various ages are included but, in general, these rocks are considered to be Precambrian in age. Three main lithologies are present in the area: Quartzose mica schists and gneisses, finely laminated quartzite and coarse-grained grey or white marble. The complex internal folding is evident in all these lithologies and all have a well-developed foliation or lamination parallel to the axial planes of the isoclinal folds.

The schistose member, Unit 1a, is lowest in the sequence. It varies from a micaceous quartzite to a muscovite-biotite schist with about 50% quartz. In some places it takes on a gneissic texture, with biotite distributed in blebs throughout the quartz grains and with poor foliation. The more biotite-rich schists contain occasional large poikilitic garnets enclosing abundant biotite.

The finely laminated quartzite member, Unit 1b, lacks the mica of Unit 1a, and is a much "cleaner" quartz rock. The major impurity in the rock is graphite, which is locally present in sufficient abundance to colour the rock black. The rock is characterized by very fine colour banding in various shades of grey, with individual bands about 1 millimeter to 1 centimeter in thickness.

Within the quartzite unit there are lenses of fairly pure crystalline marble. These lenses are up to 50 feet thick and the larger ones persist for a few thousand feet in length. The marble is white to grey in colour and retains the same colour on weathered surfaces. In many places the larger marble lenses are cut by veins of spongy quartz. The quartz veins are made up of angular cavities lined with euhedral quartz crystals. In some veins, zones of coarse grained pinkish calcite and pale green fluorite are present. The larger marble lenses occur close to the base of the quartzite unit.

Unit 8

This unit includes occasional dikes and small stocks of medium to coarse grained quartz diorite, diorite, and gabbro. These small intrusive bodies intrude Yukon Group metamorphics and are intruded by the Nisling Range alaskite complex. They may be related in origin to the Klotassin Batholith of Jurassic or Cretaceous age.

Unit 10

Rocks of quartz monzonite, granodiorite and quartz diorite composition are included in Unit 10. These rocks often have gneissic textures and may be derived in part from the metamorphism of the Yukon Group rocks, but in some areas they show clear intrusive characteristics so rocks of both origins may be included. Unit 10 is a northern continuation of the Coast Plutonic Complex in B.C.

Small showings of chalcopyrite and molybdenite are associated with Unit 10 intrusives at several places in the Dawson Range, including an area south of Talbot Creek investigated by us this year.

Unit 13

Included in this unit are acidic intrusive rocks of great variety and complexity, collected together under the Geological Survey name "Nisling Range Alaskite". These rocks, which include alaskites, biotite granites, quartz-feldspar porphyries and rhyolite flows and breccias, are thought to be Tertiary in age, since they intrude the Klotassin Batholith granodiorites. For purposes of mapping, this great variety of intrusive rocks have been divided into five sub-units:

- 13a - medium to coarse grained alaskite and biotite granite;
- 13b - fine grained alaskite and felsite;
- 13c - medium grained quartz-feldspar porphyry;
- 13d - felsite breccia; and
- 13e - rhyolite flows.

These sub-units form essentially artificial categories, since intergradational forms between all rock types occur. In the case of sub-unit 13c, a very diverse assemblage of rock types are lumped together into the one sub-unit. Most of the rocks included in Unit 13 contain pyrite as an accessory mineral, and as a result the rocks weather to a buff or pale orange colour.

The most typical rocks of Unit 13a are medium grained alaskites with less than 1% biotite content. The alaskites are composed of about 65% subhedral buff and white feldspar and about 35% doubly-terminated, partially resorbed grains of glassy quartz. The quartz grains are often smokey. Typical accessory minerals are pale green fluorite and pyrite. The rocks are always strongly miarolitic, which indicates that they were emplaced at a shallow depth in the crust. These alaskites form the cores of several small batholiths which occur through the Dawson Range and are probably the parent rock from which the other types of intrusive and extrusive rocks are derived.

Sub-unit 13b is essentially the same rock type as 13a, but much finer grained. It forms the chilled contact zones of the alaskite batholiths and the majority of the dike swarms in the surrounding metasediments. Mirolitic textures are common and often the feldspars are spherulitic, indicating very rapid cooling in a near-surface environment. In some samples small orthoclase phenocrysts are present in a matrix of spherulitic feldspar. Tiny glassy quartz grains are present in most samples. The dikes tend to be oriented in a north-south direction and dip steeply.

Porphyritic rocks of highly variable appearance have been lumped together into Unit 13c. Phenocrysts consist of white to pink euhedral orthoclase and glassy, euhedral to subhedral, doubly terminated quartz crystals. These occur in a fine to medium grained matrix which in various samples is orange, pink, dark grey, greyish green and dark green in colour. The quartz crystals are exactly similar to those in the alaskite and relate these diverse porphyries to the parent magma. The rocks occur as very small stocks and as dikes, some of which intrude rocks of 13a and 13b.

Sub-unit 13d is a hybrid rock formed at the contacts of alaskite dikes with Yukon Group metamorphics. It consists of breccias containing from 10 to 80% disoriented fragments of quartzite and schist in a matrix of fine grained felsite. In some cases partial digestion of the fragments has occurred. Fragments of alaskite and of quartz-feldspar porphyry are present in some breccia samples, indicating that at least some solidification of the alaskite dikes had occurred prior to the formation of the breccia zones. The breccia zones do not appear to be breccia pipes of the sort that have been described from various porphyry copper mining districts. The most likely explanation for these breccia zones is that they were formed by movements along fault zones toward the end of the period

of active intrusion of the alaskite batholiths and dikes. There is no alteration or mineralization associated with any of the breccia zones we investigated this year.

The rhyolite flows of sub-unit 13e occur along Albert Creek, on the eastern fringe of the areas covered by us this year. The rhyolites weather to a buff or orange colour as a result of the abundant pyrite they contain. Fresh surfaces vary from white to pale green to purple in colour. A great variety of textures are present, including breccias composed of large angular fragments of country rocks suspended in a rhyolite matrix. Other breccias formed exclusively of rhyolite are present, with small angular rhyolite fragments surrounded by a more siliceous, aphanitic matrix. Spectacular flow banding is present in some samples, while equally impressive spherulitic textures are present in other parts of the flows. Feldspar spherules up to one-half inch in diameter are common and botryoidal masses of purple jasper contain silica spherules up to 2 or 3 inches in diameter. Because of the strong brecciation and pyritization in some parts of the flows, several samples were analyzed for copper, silver and gold, but the results were not anomalous. In the coarsest breccia zone within the flows, occasional clastic fragments of pyrite are present. These range in size up to 2 inches across, and may indicate that the rhyolites have some potential as hosts for Kuroko type massive sulphide deposits.

Unit 14

The youngest rock type found in the areas mapped, other than unconsolidated Quaternary sediments, occurs as small basic dikes. These rocks are fine grained to aphanitic, dark green to black in colour and are non-porphyrific. The dikes are usually less than five feet in thickness and cut both Yukon Group and Nisling alaskite rocks. These small dikes may be related to Upper Tertiary basic lavas which occur outside the areas covered this year.

ECONOMIC GEOLOGY

The geology of the known porphyry copper deposits in the Dawson Range have been described by Wayne Roberts in his "Proposed Exploration - 1972" Report and will not be discussed again in this report.

Figure 2 outlines the areas covered by us this year. Each of these four follow-up areas is discussed in detail with accompanying maps.

Exploration methods employed in the areas included contour soil sampling, prospecting for mineralization and alteration, and mapping at a scale of either 1:1320 ft. or 1:2640 ft. Soil samples were collected from the "B" or "B+C" soil horizons and were analyzed by Barringer Laboratories in Whitehorse, using a total perchloric extraction.

1. Tyrrell Creek Area

This area covers a belt of Yukon Group schists intruded by a small batholith of alaskite and numerous associated stocks and dikes. Interest in the area was aroused by the presence of several anomalous Cu, Pb and Zn geochemical values in stream sediments. Part of the area was staked by former Atlas Explorations employees as the "Blue L. Claims" in 1970 on the basis of anomalous geochemical results and favourable geology. These claims were investigated during our work in the Tyrrell Creek Area and have been discussed in a previous report by the author. The location of the anomalous 1970 silt samples are shown in Figure 3.

The geology of the Tyrrell Creek area was mapped at a scale of 1:1320 ft. and is shown in Figure 4. A great variety of intrusive rocks of Unit 13 are present in the area, including

Figure 2

Camp locations and areas prospected, mapped and sampled.

Scale 1" = 4 mi.

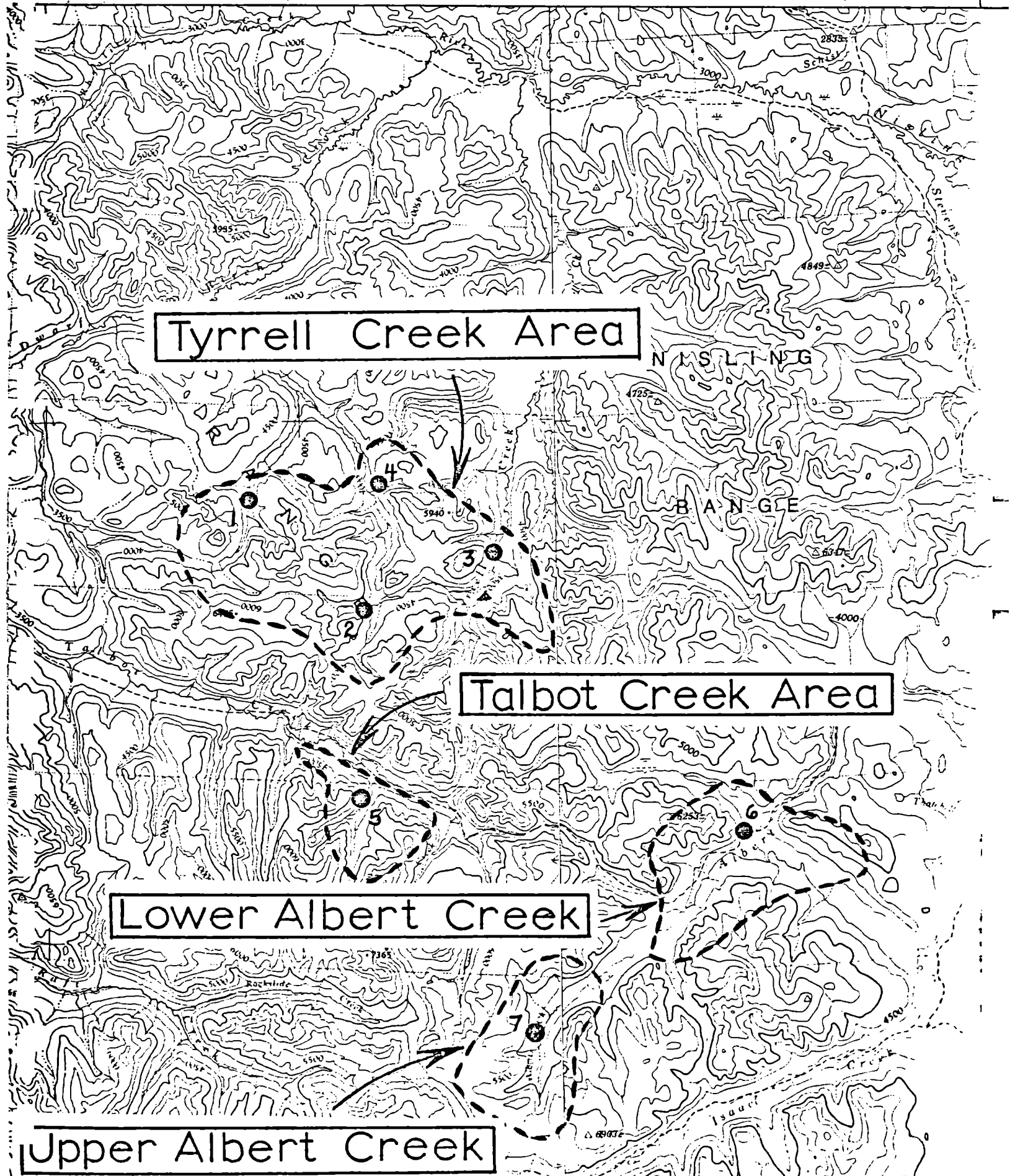


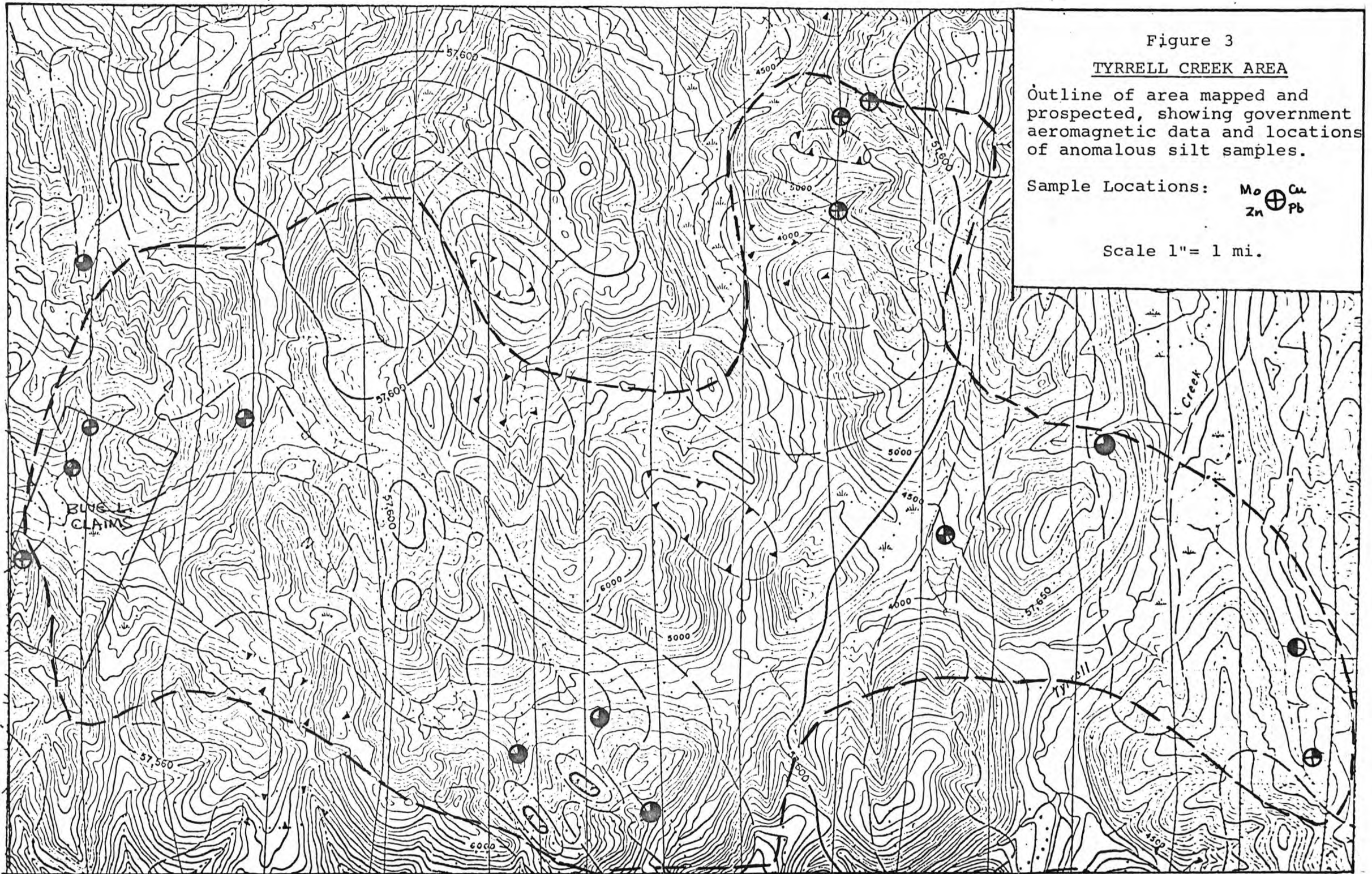
Figure 3

TYRRELL CREEK AREA

Outline of area mapped and prospected, showing government aeromagnetic data and locations of anomalous silt samples.

Sample Locations: $\text{Mo} \oplus \text{Cu}$
 $\text{Zn} \oplus \text{Pb}$

Scale 1" = 1 mi.



medium to coarse grained alaskite, fine grained alaskite, felsite dikes and breccias, and several distinctive types of quartz feldspar porphyry. Large blocks of rhyolite lava occur as float in a creek on the eastern fringe of the area but this rock type was not found in place. Other rock types mapped in the area include Yukon Group meta-sediments, gabbro and diorite, gneissic granodiorite and diabase dikes.

Contour soil sampling done by us this year confirmed the presence and position of the anomalous silt samples taken in 1970 but did not outline any new anomalous areas. The soil sampling results are plotted in Figure 5 at a scale of 1:1320 ft.

Numerous small sulphide showings were discovered throughout the area. Most of these are skarny sphalerite-chalcopyrite-galena occurrences in Yukon Group rocks close to contacts with alaskite stocks or dikes. Selected samples from some of these showings contain up to 10 or 15% zinc, by visual estimate, but always the skarns are small in size and none appear to be of any economic interest. Occasional grains of chalcopyrite are present in some alaskite dikes in the Blue L. claims area but, other than this, no copper or molybdenum mineralization was seen in the acid intrusive rocks. These small showings can adequately account for most of the anomalous geochemistry in the area.

A chunk of massive pyrrhotite-chalcopyrite float was found in a stream draining into Tyrrell Creek from the east. This tributary creek drains a valley with several areas of anomalous geochemistry and some gossans are present in the headwaters which warrant further investigation. Part of this creek drainage was once staked as the Vic Claims. Follow-up work should emphasize additional soil sampling, using low-level

air photographs or a picket-line grid for control. The geology in the area is complex and interesting, with numerous cross-cutting dikes of various compositions. The area can be covered in about one week of work by a crew of one geologist and two soil samplers.

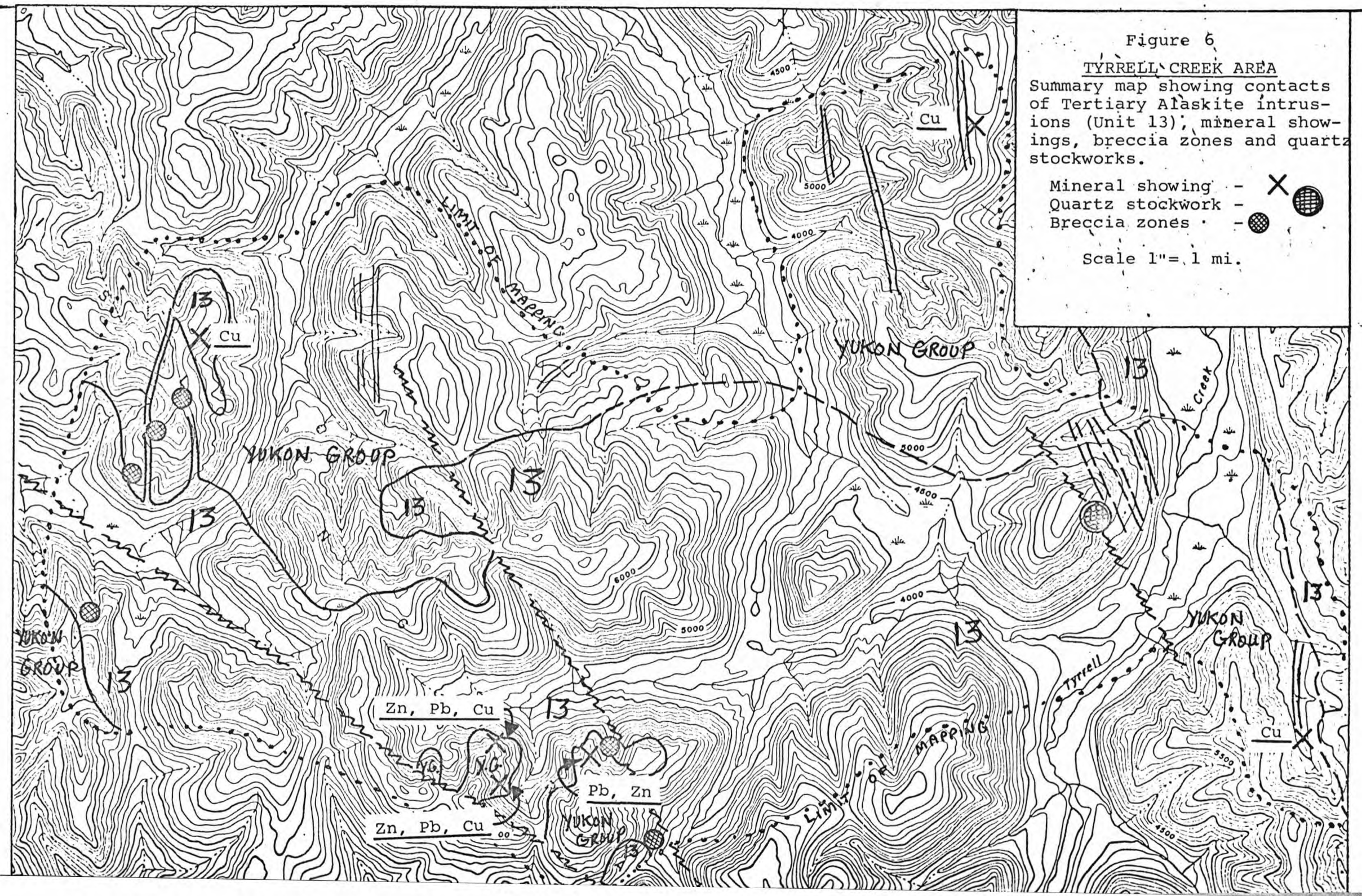
A strongly altered quartz stock work in alaskite was discovered about one-half mile west of Tyrrell Creek. The stock-work outcrops in a creek canyon on a steep hillside and is surrounded on three sides by talus. On the fourth side it is bounded off by a fault contact with Yukon Group schists. The altered rock outcrops nearly continuously for 300 ft. along the creek and over a width of about 50 ft. before it disappears under talus. Clay, epidote, fluorite and manganese alteration minerals are present in the stock-work in addition to the silicification. In spite of this very favourable looking alteration, there is not a trace of sulphide mineralization or of copper stain in any of the outcrops. Several samples were examined with a U.V. lamp for scheelite, with negative results. The geochemical results from a line of soil samples taken downslope from the outcrops were equally negative. As a final check, ten chip samples of the juiciest looking altered rock were sent to the lab to be analyzed for copper, silver and gold, and when these results proved to be non-anomalous, the stock-work was considered to be written off.

The Tyrrell Creek Area has been covered in sufficient detail to explain the anomalous 1970 geochemical results. With the exception of the quartz stock-work just mentioned, no significant porphyry copper mineralization or alteration was discovered. The only part of the area where more work is warranted is in the vicinity of the former Vic Claims, where a few days of detailed soil sampling and geologic mapping is required to investigate the sources of silt and soil anomalies, gossans and mineralized float in the creek. Approximate

Figure 6
 TYRRELL CREEK AREA
 Summary map showing contacts of Tertiary Alaskite intrusions (Unit 13); mineral showings, breccia zones and quartz stockworks.

Mineral showing - X
 Quartz stockwork - [grid symbol]
 Breccia zones - [stippled symbol]

Scale 1" = 1 mi.



geology and the locations of mineral showings, breccia zones and the quartz stock-work are summarized in Figure 6.

2. Talbot Creek Area

This area lies just south of Talbot Creek, about 4 miles south of the Tyrrell Creek Area. Three geochem samples strongly anomalous in copper and molybdenum were obtained from small sidehill seepages in 1970 (Figure 7). The presence, five miles to the southeast, of the Alaskite Creek copper-molybdenum-tungsten prospect, discovered in 1953, helped to make this area a worthy one for follow-up work.

Preliminary prospecting determined the source of the copper-molybdenum geochemical anomalies to be sparse pyrite-chalcopyrite-molybdenite mineralization dispersed along jointing surfaces in quartz monzonites of Unit 10. The mineralized zones are very small and the surrounding rocks all appear very fresh and unaltered, so the showings seem to have little potential. The copper-molybdenum occurrences are not similar to the ones on Alaskite Creek, which are associated with the younger Unit 13 alaskites.

Soil sampling on contour lines (Figure 8) did not turn up any new geochemical anomalies.

The geology of the area covered and the location of the copper-molybdenum occurrence is shown in Figure 9. No more work in this area is required.

Figure 7

TALBOT CREEK AREA

Outline of area prospect-
ed and sampled, showing
government aeromagnetic
data and locations of
anomalous silt samples.

Sample Locations: Mo Cu
 Zn \oplus Pb

Scale 1" = 1 mi.

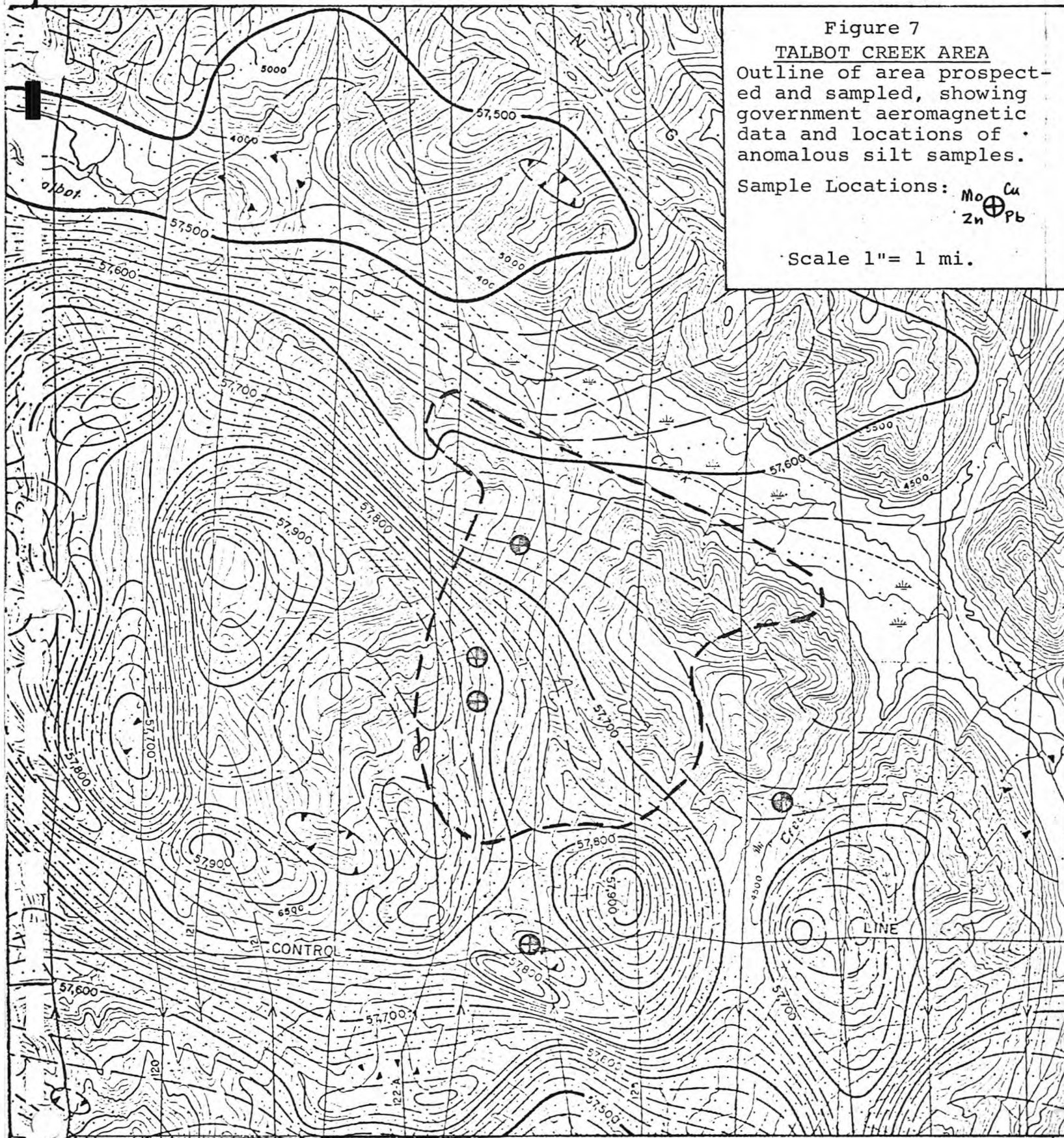


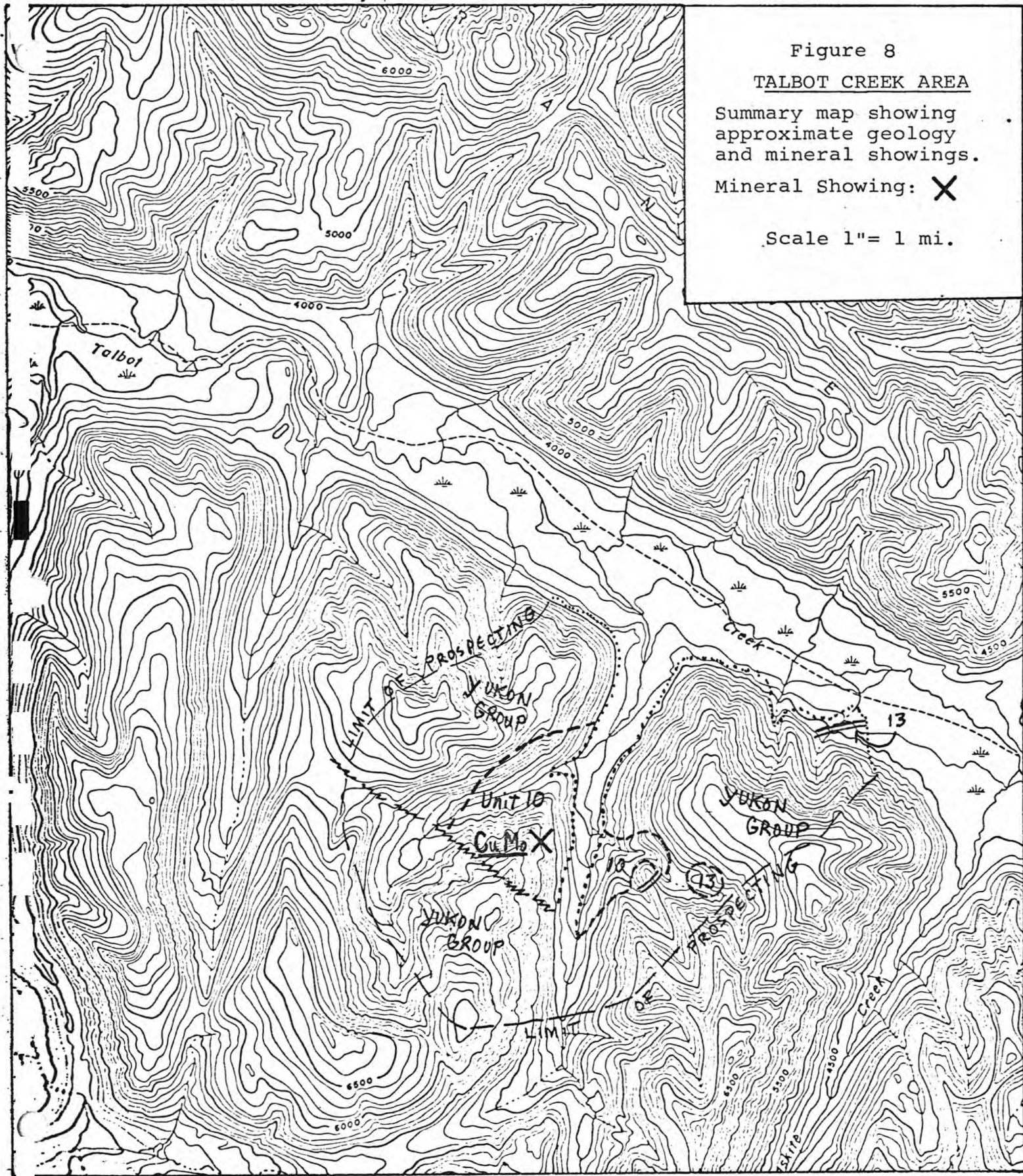
Figure 8

TALBOT CREEK AREA

Summary map showing
approximate geology
and mineral showings.

Mineral Showing: X

Scale 1" = 1 mi.



3. Lower Albert Creek Area

Attention was directed to this area by the presence of weak copper and zinc geochemistry, three weak magnetic lows on the government aeromagnetic map and favourable sub-volcanic igneous rocks. Figure 9 shows the position of the anomalous silt sample sites and the magnetic lows.

Mapping at a scale of 1" = $\frac{1}{2}$ mile proved that the magnetic lows were associated with deep terraces of transported glacial gravels (Figure 10). The southwestern half of the area is underlain by coarse grained alaskite. The northeastern half is underlain by Yukon Group schists and limestone, capped by extrusive flows of rhyolite. The rock types making up these flows vary greatly in appearance from place to place. In some places the rhyolites are strongly pyroclastic, in others good flow banding is developed, in still others the textures are strongly spherulitic. Coarse angular breccias including large chunks of Yukon Group schists occur at several spots in the area mapped.

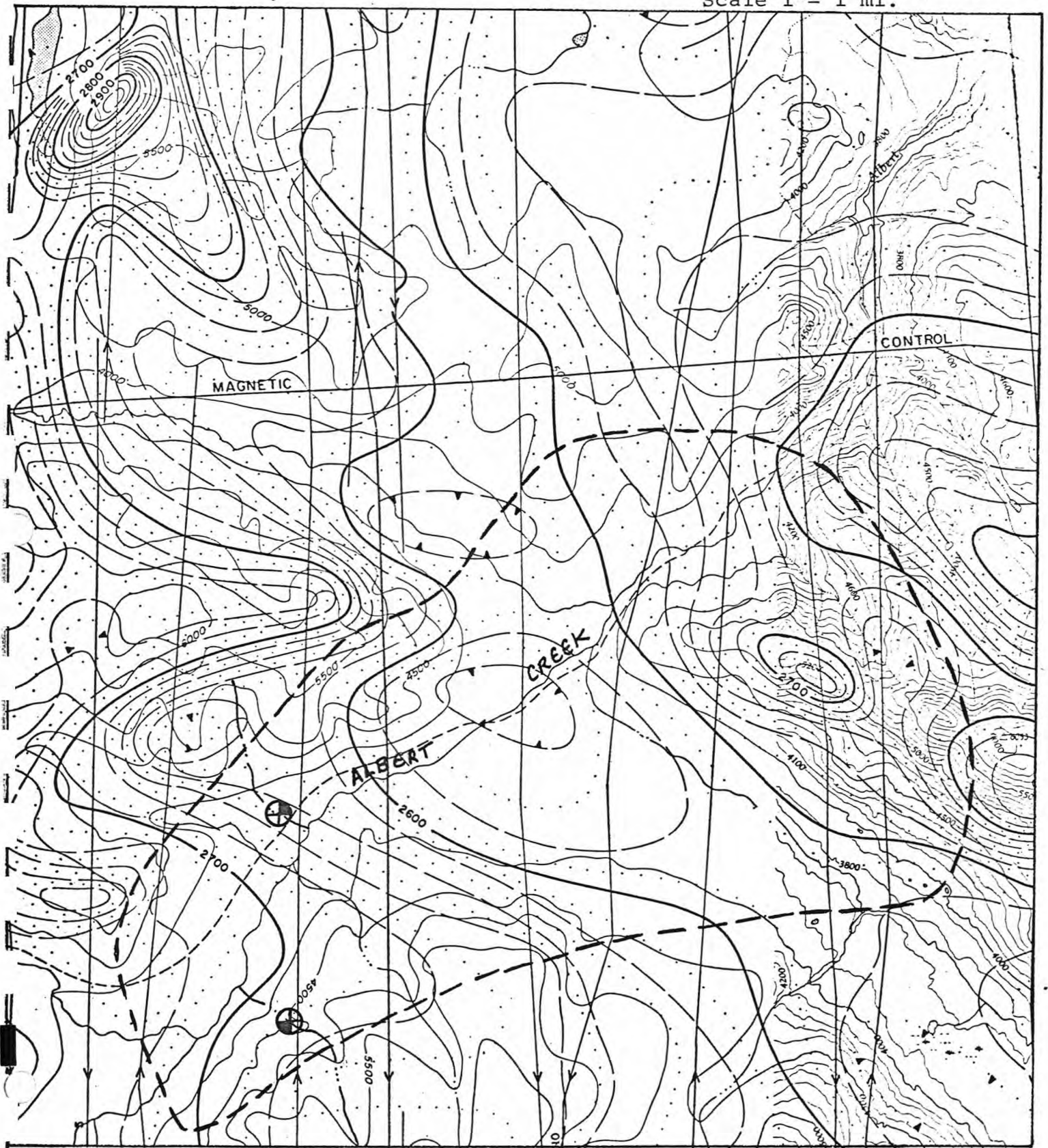
In the canyon of a creek which joins Albert Creek from the northwest, very coarse breccias are present which are bleached, somewhat silified and strongly pyritized. Occasional fragments of clastic pyrite occur in these breccias, which include clasts of Yukon Group schists as well as rhyolite. In this same canyon the rhyolites contact outcrops of more basic andesitic or basaltic volcanic rocks. The volcanics in this canyon and throughout the area generally seem to have many of the features found in the environments of Kuroko type mineral deposits. The association of the volcanics with acidic intrusive rocks which elsewhere in the Dawson Range have given rise to porphyry copper deposits enhances their economic potential even more. These rhyolite extrusives would seem to be a very worthwhile target for further exploration.

Figure 9
LOWER ALBERT CREEK AREA

Outline of area mapped, prospected and sampled, showing government aeromagnetic data and locations of anomalous silt samples.

Sample Locations:
Scale 1" = 1 mi.

Mo ⊕ Cu
Zn ⊖ Pb



soil and rock chip sampling around the bleached and pyritized breccias mentioned above failed to discover any anomalies. The rock chip samples were run for copper, silver and gold. Additional sampling upstream along that creek valley was hampered by the presence of unfriendly wolves who had a den with four pups in the bank of the creek. Sampling elsewhere in the Lower Albert Creek area (Figure 11) did not turn up any new geochemical anomalies but the original anomalies were confirmed. No mineralization was discovered which could explain these anomalies but they arise from an area where felsite dikes contact Yukon Group schists and limestone and probably their source is small contact mineral enrichments of no economic interest. The anomalies in any case are very weak and warrant no further work.

The Lower Albert Creek area in itself does not require any further follow-up work but mapping and prospecting should be continued to the north and northwest over the rhyolite flows and breccias. Some gossans and weak geochemical anomalies occur northwest of Albert Creek and these should be investigated in detail. Other areas of acid volcanics should be examined geologically for alteration types typical of Kuroko deposits, such as silicification, propylitization and pyritization.

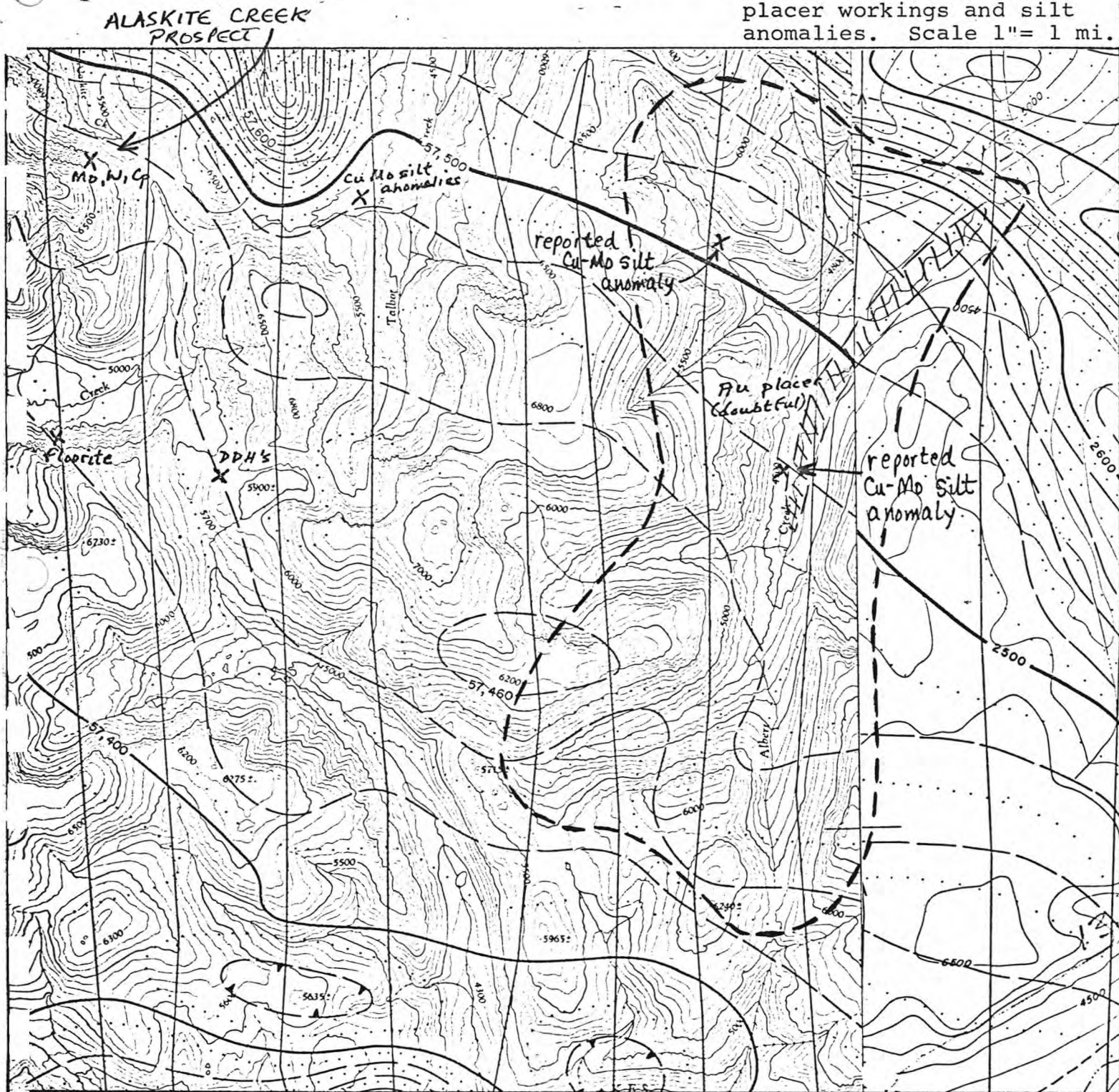
4. Upper Albert Creek

This area was selected for follow-up work because of known copper-molybdenum geochemical anomalies, proximity to the Alaskite Creek copper-molybdenum-tungsten prospect and reports that placer gold had been mined along the upper parts of Albert Creek many years ago (Figure 12). Atlas Explorations had done no previous work in the area.

Figure 12

UPPER ALBERT CREEK AREA

Outline of area prospected and sampled, showing locations of reported gold placer workings and silt anomalies. Scale 1" = 1 mi.



The upper part of Albert Creek lies in a fairly broad, flat-bottomed valley filled with alluvium. The sediments in the creek are all clean, coarse grained sand and gravel derived from granite. It seems most unlikely that placer gold could ever have been recovered from the stream. We found no signs of any old placer workings anywhere along the creek.

The area is entirely underlain by intrusive rocks (Figure 13). The main type occurring in the area we covered was a medium grained biotite granite which could be related to the Tertiary intrusives or to the older Jurassic Klotassin Batholith rocks. In the southernmost part of the area this rock graded into a finer grained hornblende-biotite quartz monzonite. The granite forms prominent pinnacles and cliffs and weathers grey, unlike the Tertiary Alaskite batholiths and, furthermore, it is intruded by a small stock of buff weathering, fine grained felsite, therefore it seems likely that the granite is Jurassic in age and not favourable for porphyry copper mineralization. In the Alaskite Creek area the showings are associated with a prominent rusty alaskite stock which has intruded this grey granite.

The rocks throughout the area we examined were barren and completely lacking in any sign of alteration or mineralization, yet the geochemical sampling (Figure 14) confirmed the presence of a strong copper anomaly in a small tributary of Albert Creek. Rock breaking in the creek draining this valley did not produce any sign of mineralization and a cursory examination of outcrops along the valley walls was equally unsuccessful in finding a source for the anomalous values. Our geochemical results were obtained after demobilization to Whitehorse and their immediate source area had not been prospected in detail. The highest values are all coming from a restricted cirque wall of 100% outcrop, so a couple of hours

of vigorous rock-breaking should be all the follow-up work the area needs.

Elsewhere in the Upper Albert Creek Area, a small chunk of rust stained biotite granite which was analyzed geochemically proved to contain 900 ppm copper. This rock was the only rusty piece of rock in a talus slope of barren, unaltered granite. A silt sample from a small seepage nearby was slightly anomalous in copper. This area also warrants a couple of hours of detailed follow-up.

In summary, the Upper Albert Creek area appears unfavourable geologically, yet has two interesting geochemical anomalies which are inadequately explored. Both anomalies occur in areas of abundant outcrop and can be evaluated in one day of intensive follow-up.

PROPOSED EXPLORATION

Recommended work includes follow-up on areas covered this year and preliminary coverage of new areas.

1. Using a contract helicopter based at the Aishihik airstrip the belt of acid volcanics between Tyrrell Creek and Stevens Creek, and extending from Sekulman Lake on the south to the Nisling River on the north, should be examined in a reconnaissance manner. Valleys should be flown to check for gossans and the ridges should be chopper-hopped to roughly map in the geology. Gossans and known geochemical anomalies should be examined briefly on the ground. The follow-up work on the Upper Albert Creek Area can be done during this phase of the project. About five days of helicopter work should be sufficient.

2. Contingent on the results of this airborne reconnaissance, selected areas can be followed up by 2-man prospecting-soil sampling crews working from fly camps. The follow-up work on the anomalous creek east of Tyrrell Creek (Vic Claims Area) can be done at this time.

ESTIMATED BUDGET

This budget assumes 5 days of helicopter reconnaissance followed by 3 weeks of contingent follow-up prospecting from fly camps. Contingent staking of 40 claims is included in the budget.

1. Geology

(a) Wages: estimate 1 month @\$1200/mo.	1,200	
(b) Supplies	100	
(c) Assays	<u>300</u>	\$ 1,600

2. Geochemistry

(a) Wages: 1 sampler for 1 month @\$700/month	700	
(b) Supplies	100	
(c) Analysis: 1000 samples @\$3/sample	<u>3,000</u>	\$ 3,800

3. Transportation

(a) Helicopter contract - 5 days at 4 hrs/day, plus 4 camp moves at 3 hrs. each, 32 hrs. x \$160/hr (including fuel)	5,120	
(b) Truck Rental - 1 month at \$600	600	
(c) Air fare from Vancouver - 2 return at \$166 each	<u>332</u>	\$ 6,052

4. Camp Support

70 man-days @\$800 per day		\$ 560
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5. Contingent Claim Staking

40 claims @\$40/claim		<u>\$ 1,600</u>
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Direct Costs \$13,612

6. Administration at 10%		<u>\$ 1,361</u>
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\$14,973

Say - \$15,000

Respectfully submitted,

Peter Dean,

February, 1973

Figure 8

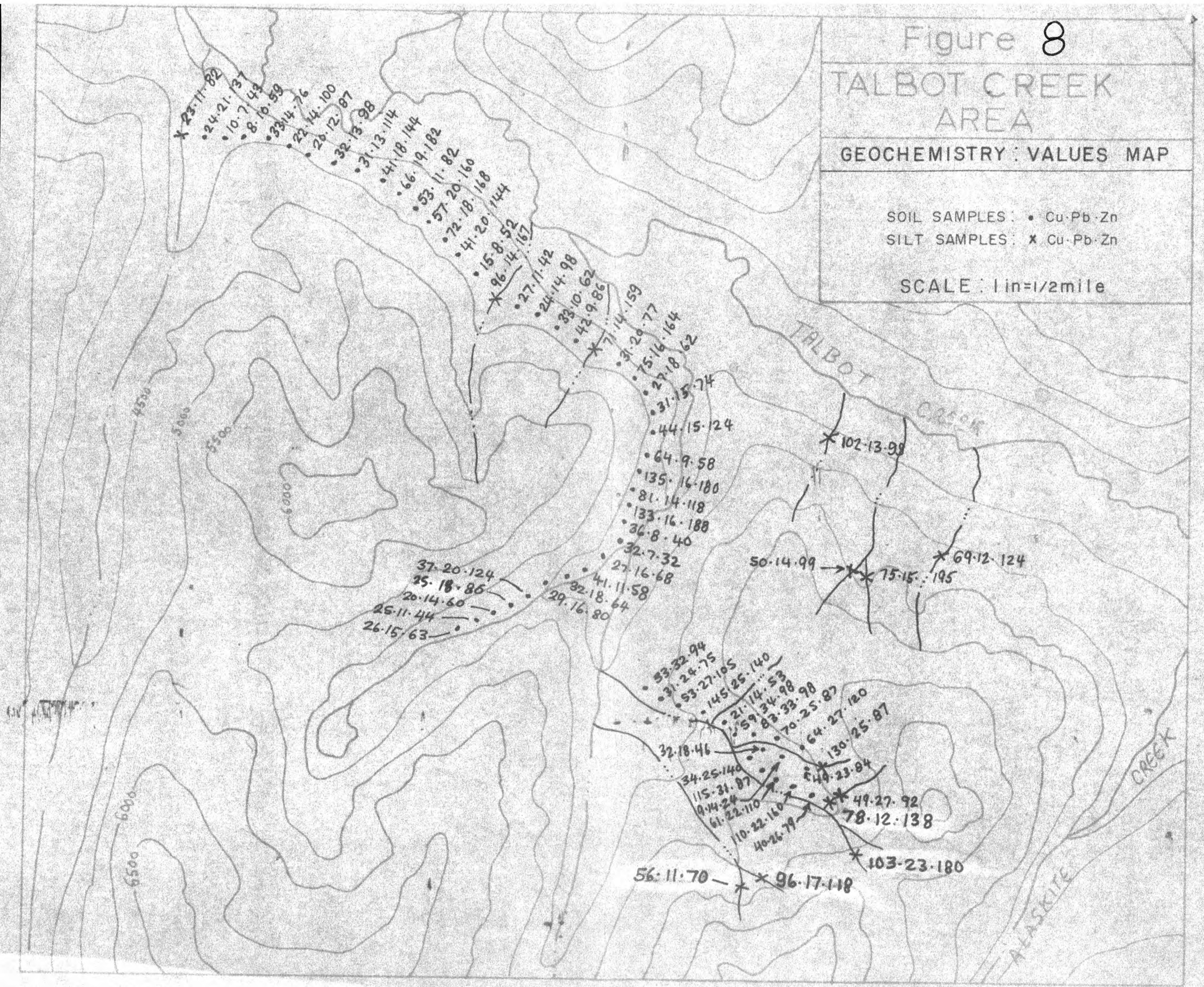
TALBOT CREEK
AREA

GEOCHEMISTRY: VALUES MAP

SOIL SAMPLES: • Cu-Pb-Zn

SILT SAMPLES: x Cu-Pb-Zn

SCALE: 1 in = 1/2 mile





BARRINGER RESEARCH LIMITED
1170 HORNBY STREET
VANCOUVER, BRITISH COLUMBIA
PHONE: 604-685-4231
CABLE: BARESEARCH VCR
TELEX: 04-507739

August 28th. 1972

Mr. P. Dean,
~~Dynasty ExplorationssLtd.,~~
355 Burrard Str.,
Vancouver, B.C.

Dear Mr. Dean:

Enclosed please find a copy of the histograms pertaining to your W.O. 42-A. There is a bimodal distribution evident in the copper and zinc results which you may want to plot separately according to rock type. I have, however, grouped these and suggested one threshold value instead of two.

I hope this is of use to you.

Yours sincerely,
BARRINGER RESEARCH LTD.

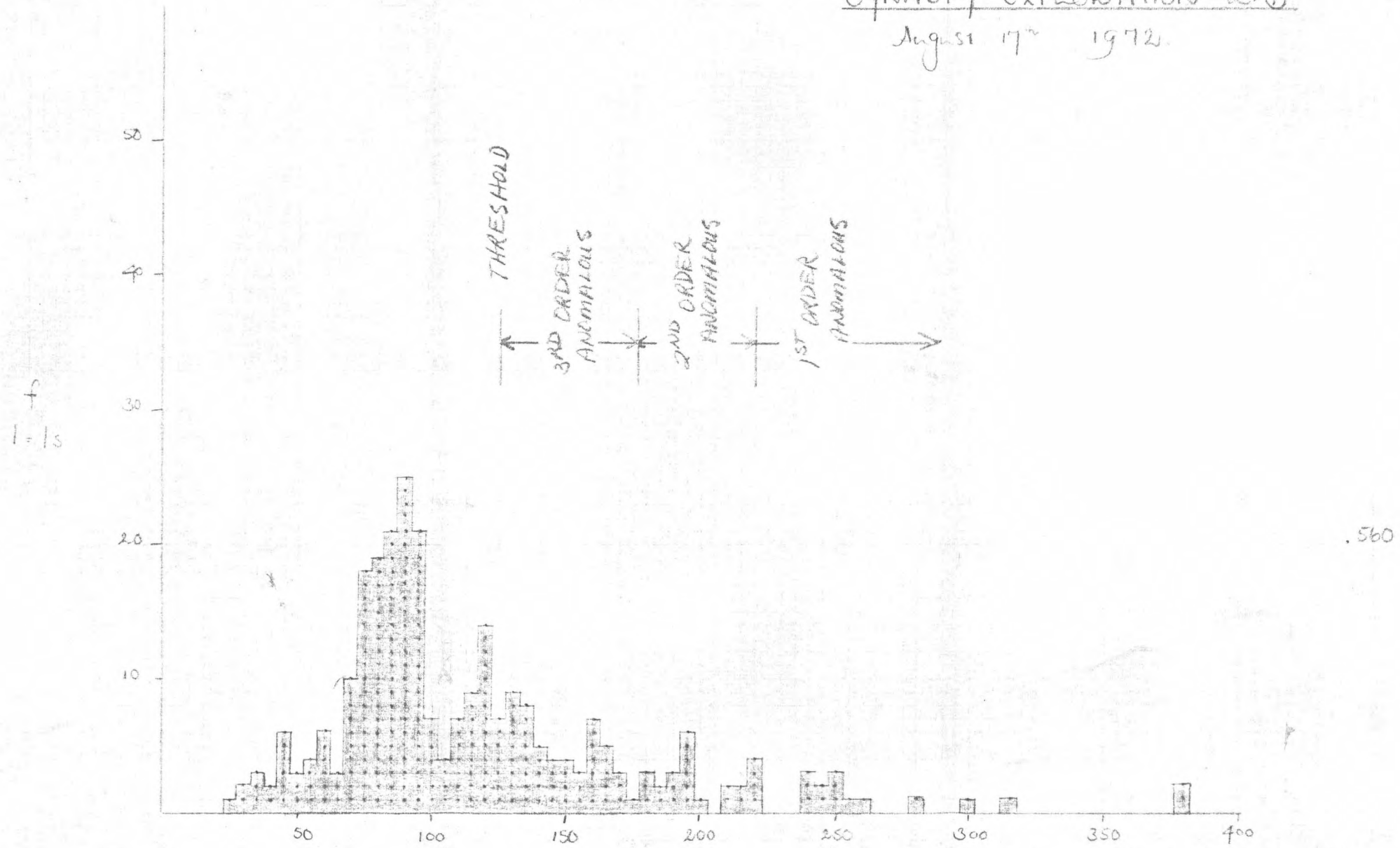
A handwritten signature in cursive script, appearing to read "B.W. Smee".

B.W. Smee
Geochemist

BWS/aa

SYNASTY EXPLORATIONS LTD

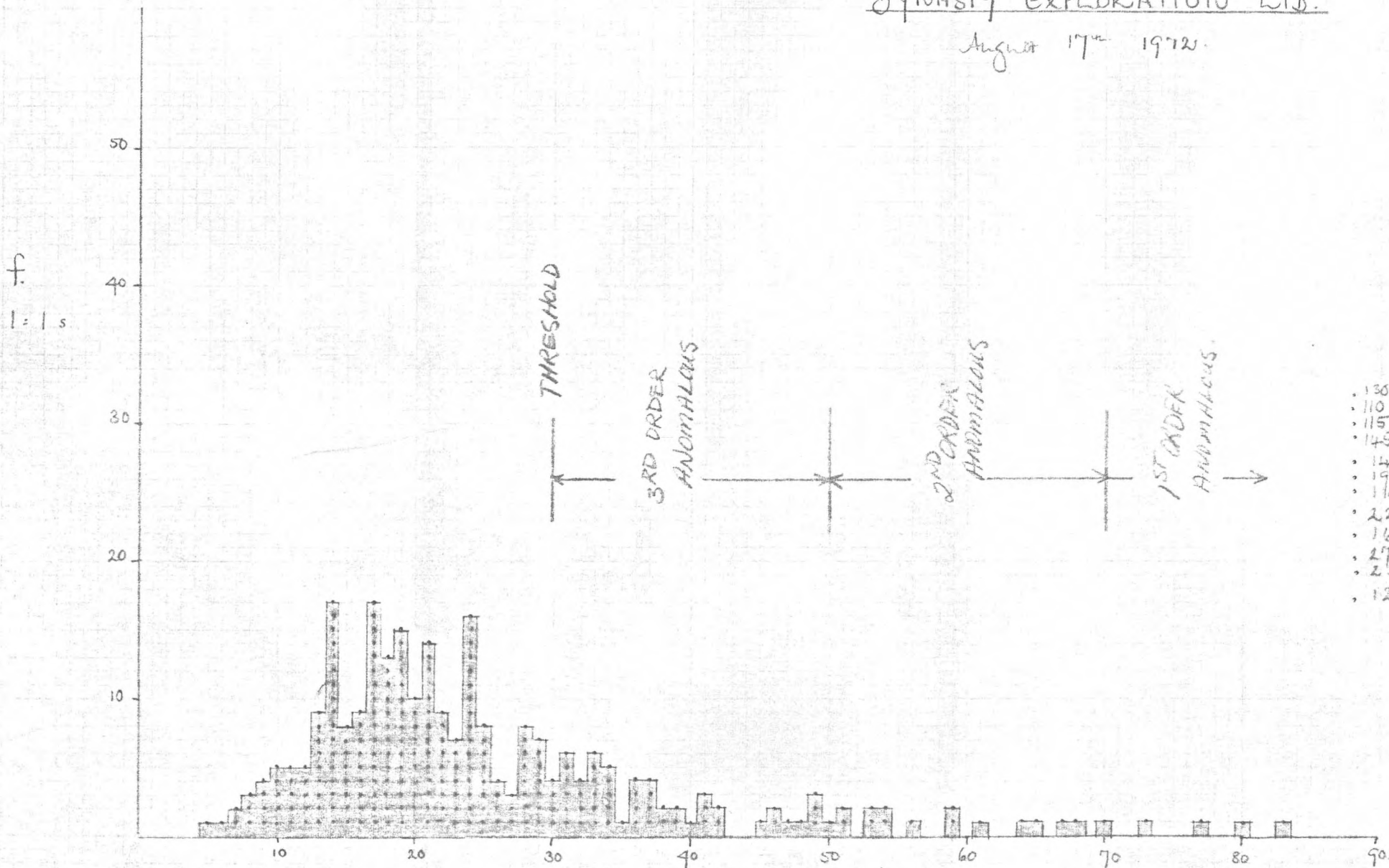
August 17th 1972.



(HClO₄) Zn ppm

DYNASTY EXPLORATION LTD.

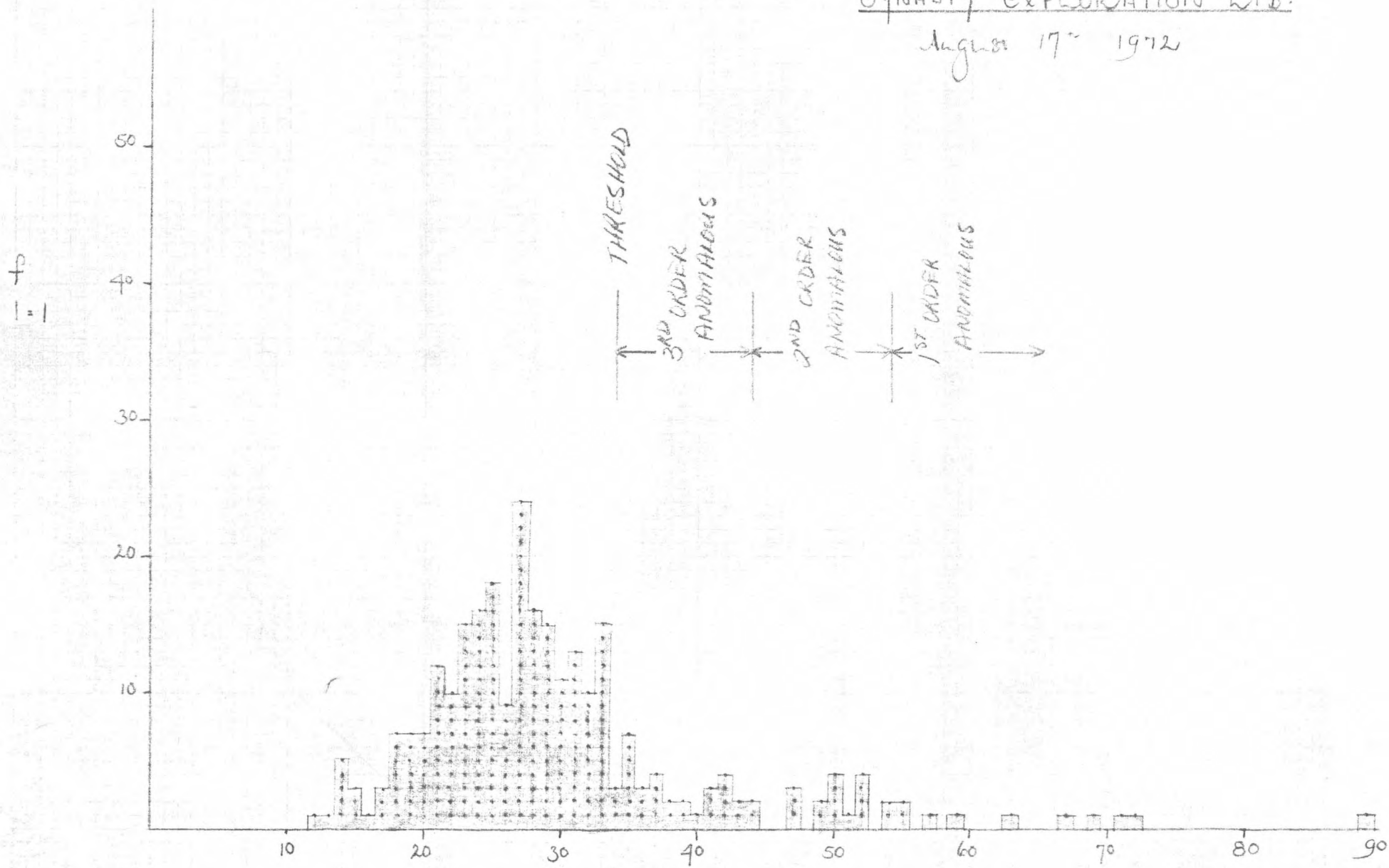
August 17th 1972.



(HClO₄) C_w ppm.

DYNASTY EXPLORATION LTD.

August 17th 1972



(HClO₄) Pb ppm.

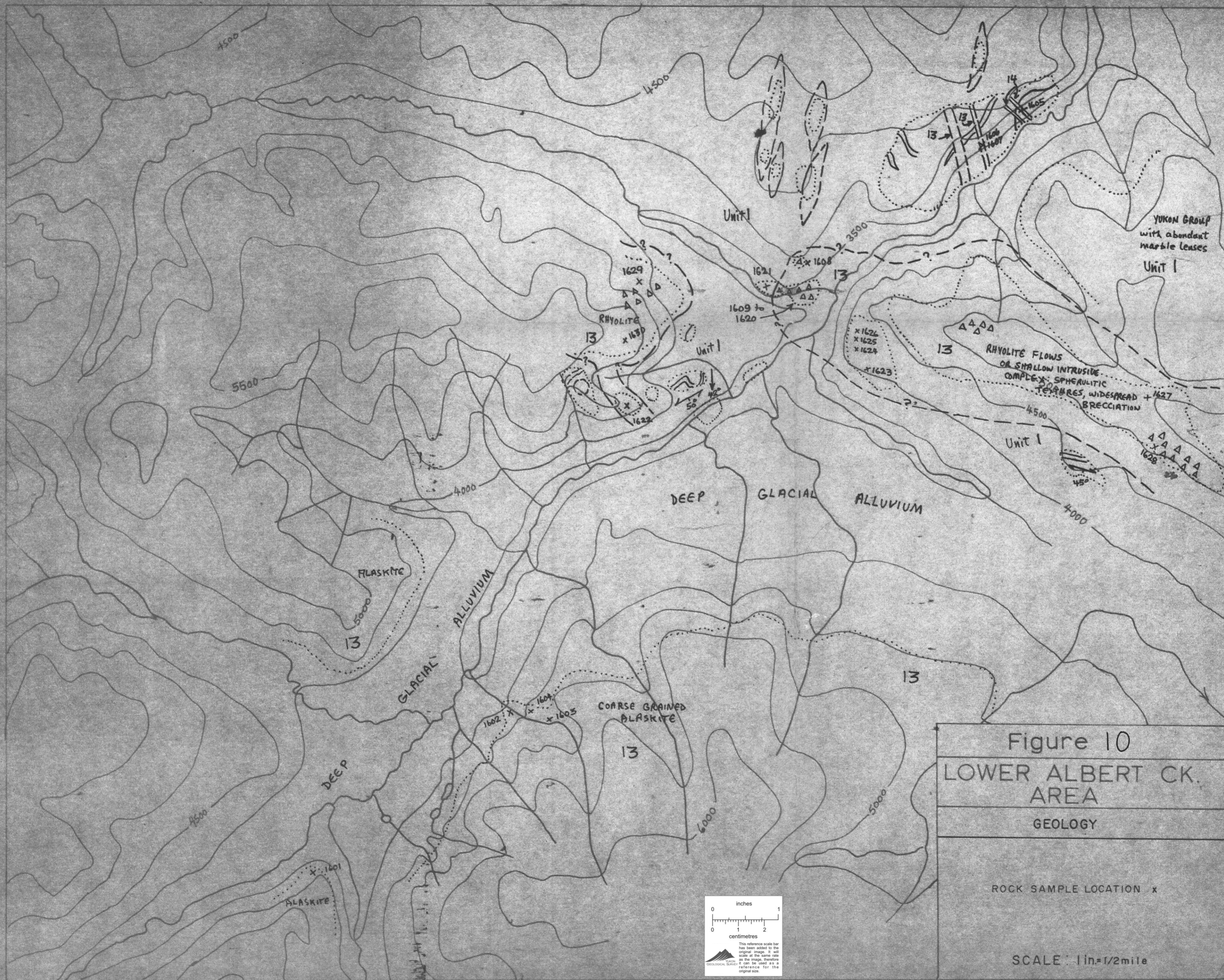
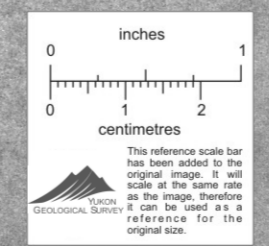


Figure 10
 LOWER ALBERT CK.
 AREA
 GEOLOGY

ROCK SAMPLE LOCATION x

SCALE: 1 in. = 1/2 mile



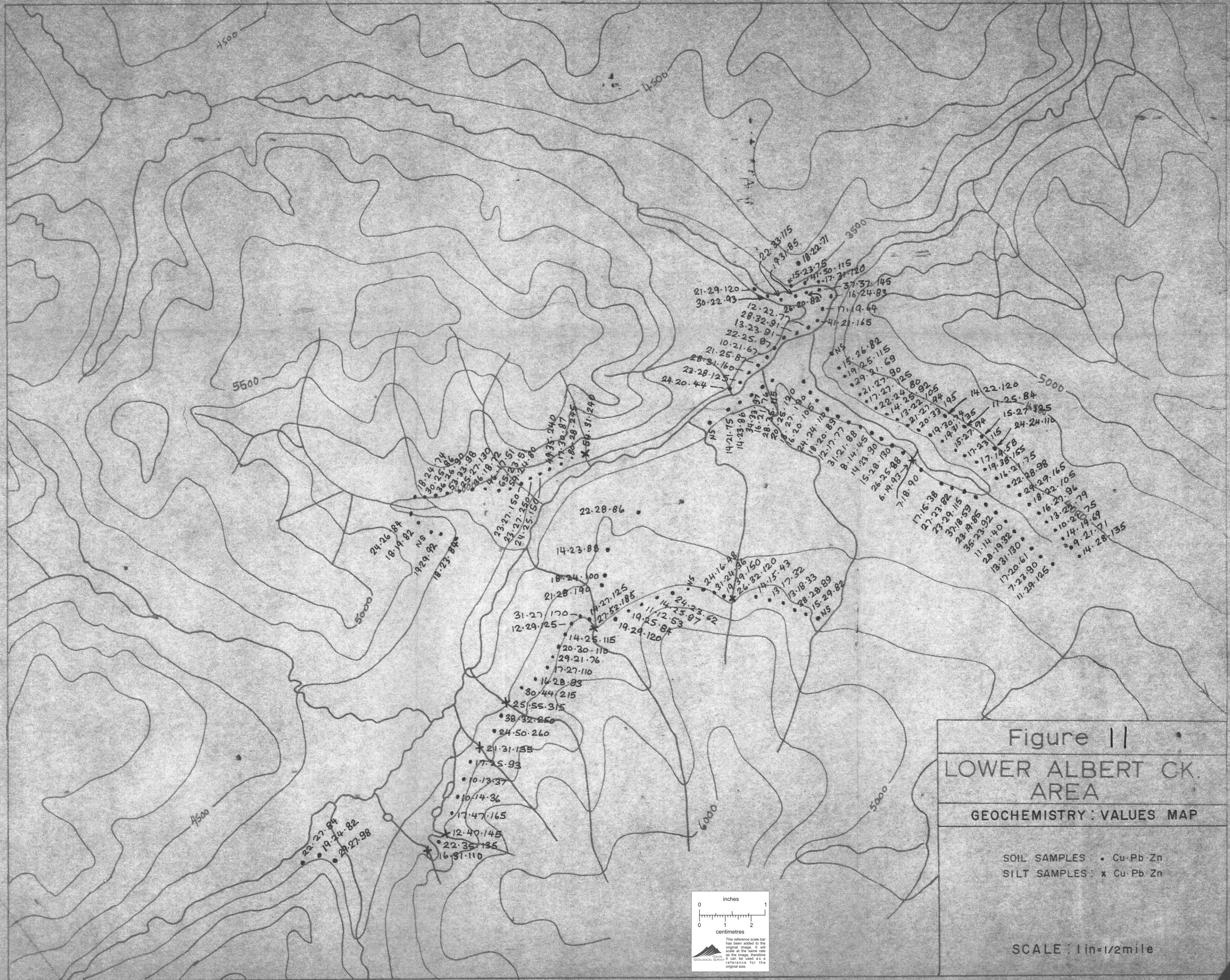


Figure 11
 LOWER ALBERT CK.
 AREA
 GEOCHEMISTRY: VALUES MAP

SOIL SAMPLES • Cu-Pb-Zn
 SILT SAMPLES x Cu-Pb-Zn

SCALE: 1 in = 1/2 mile

