



ASSESSMENT REPORT
GEOLOGICAL MAPPING, GEOCHEMICAL SAMPLING
AND TRENCHING
MOUNT SKUKUM AREA

091061

KUKU 1-48 (YA 61199 - YA 61246)
KUKU 49-331 (YA 61623 - YA 61905)
WHITEHORSE MINING DISTRICT
NTS 105 D/3, 4, 5,6

LATITUDE: 60°12'N
LONGITUDE: 135°28'W

JULY 5th - July 15th and July 30th - September 18th, 1981

By: A. Doherty

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 42,000-.

P. Walker

for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

TABLE OF CONTENTS

	<u>Page</u>
1. INTRODUCTION	1
1.1 General	1
1.2 Location and Access	1
1.3 Physiography and Vegetation	1
2. GEOLOGY	2
2.1 General Geology	2
2.2 Volcanic Stratigraphy	3
2.2.1 General	3
2.2.2 Cycle I Volcanic Rocks	4
2.2.3 Cycle II Volcanic Rocks	5
2.2.4 Dykes and Intrusions	6
2.3 Structure	7
2.4 Detailed Geology of the Main Cirque	7
2.4.1 Introduction	7
2.4.2 Stratigraphy, Main Cirque	8
2.4.3 Latite Dykes	9
2.4.4 Structure	9
3. 1981 WORK PROGRAM	10
3.1 Summary of Previous Work	10
3.2 Orthophoto Mosaic	10
3.3 Detailed Sampling Program	10
4. MAIN ZONE, GEOLOGY, GEOCHEMISTRY AND GEOPHYSICS	11
4.1 Introduction	11
4.2 General	11
4.3 Soil Samples	11
4.4 Trenches 1 and 4	12
4.5 Magnetic Survey	13

5.	WORK ON KUKU 49-331	14
5.1	Soil Samples and Chip Samples	14
5.2	Stream Sediment and Heavy Mineral Concentrates	14
6.	REFERENCES	15

LIST OF APPENDICES

Appendix A	Analytical Methods
Appendix B	Claim Names and Grant Numbers
Appendix C	AGIP Personnel
Appendix D	Statement of Costs KUKU 1-48
Appendix E	Statement of Costs KUKU 49-331, Trenches 1 and 2
Appendix F	Gold and Silver Analyses, Main Zone
Appendix G	Statement of Qualifications

LIST OF FIGURES

Figure 1	Location Map
Figure 2	Mount Skukum, Geology
Figure 3	Main Zone, Geology
Figure 4	Zone Location Map
Figure 5	Main Zone, Soil Sample Geochemistry, Gold, Bondar-Clegg
Figure 5a	Main Zone, Soil Sample Geochemistry, Gold, Chemex Labs
Figure 6	Main Zone, Soil Sample Geochemistry, Silver, Bondar-Clegg
Figure 6a	Main Zone, Soil Sample Geochemistry, Silver, Chemex Labs
Figure 7	Main Zone, Trench #3
Figure 8	Main Zone, Trench #4
Figure 9	Main Zone, Magnetic Survey
Figure 10	Mount Skukum, Rock Chip and Soil Sample Geochemistry, Gold and Silver
Figure 11	Orthophoto Mosaic
Figure 12	Claim Group

1. INTRODUCTION

1.1 General

The Mount Skukum property, consisting of the KUKU 1-331 and CHIEF 1-71 claims, covers an area of 84.02 square kilometers in southwestern Yukon. All claims were staked in 1981. The CHIEF claims were staked in November 1981 and work carried out in that area will be described in a subsequent assessment report.

1.2 Location and Access

The Mount Skukum property is situated in southwestern Yukon at 60°12' North Latitude and 135°28' West Longitude, (NTS map sheet 105D; Figure 1). Whitehorse is 65 kilometers by air to the northeast. The southern boundary of the property crosses the south flank of Mount Skukum, which forms a block of high ground between the Watson River to the north and the Wheaton River to the south. These rivers follow parallel courses, first to the northeast and then turn sharply south and drain into Bennett Lake.

Good roads lead from Whitehorse for 75 kilometers, first southeast along the Alaska Highway and then south on the Carcross Road parallel to the White Pass and Yukon railroad, crossing the railroad onto secondary roads along the Wheaton River to the abandoned Wheaton River airstrip, 25 kilometers from Mount Skukum. From here a further 18 kilometers of four wheel drive road leads to within 7 kilometers of Mount Skukum.

1.3 Physiography and Vegetation

The Mount Skukum area ranges in elevation from 1000 meters to over 2350 meters. The main areas of interest lie

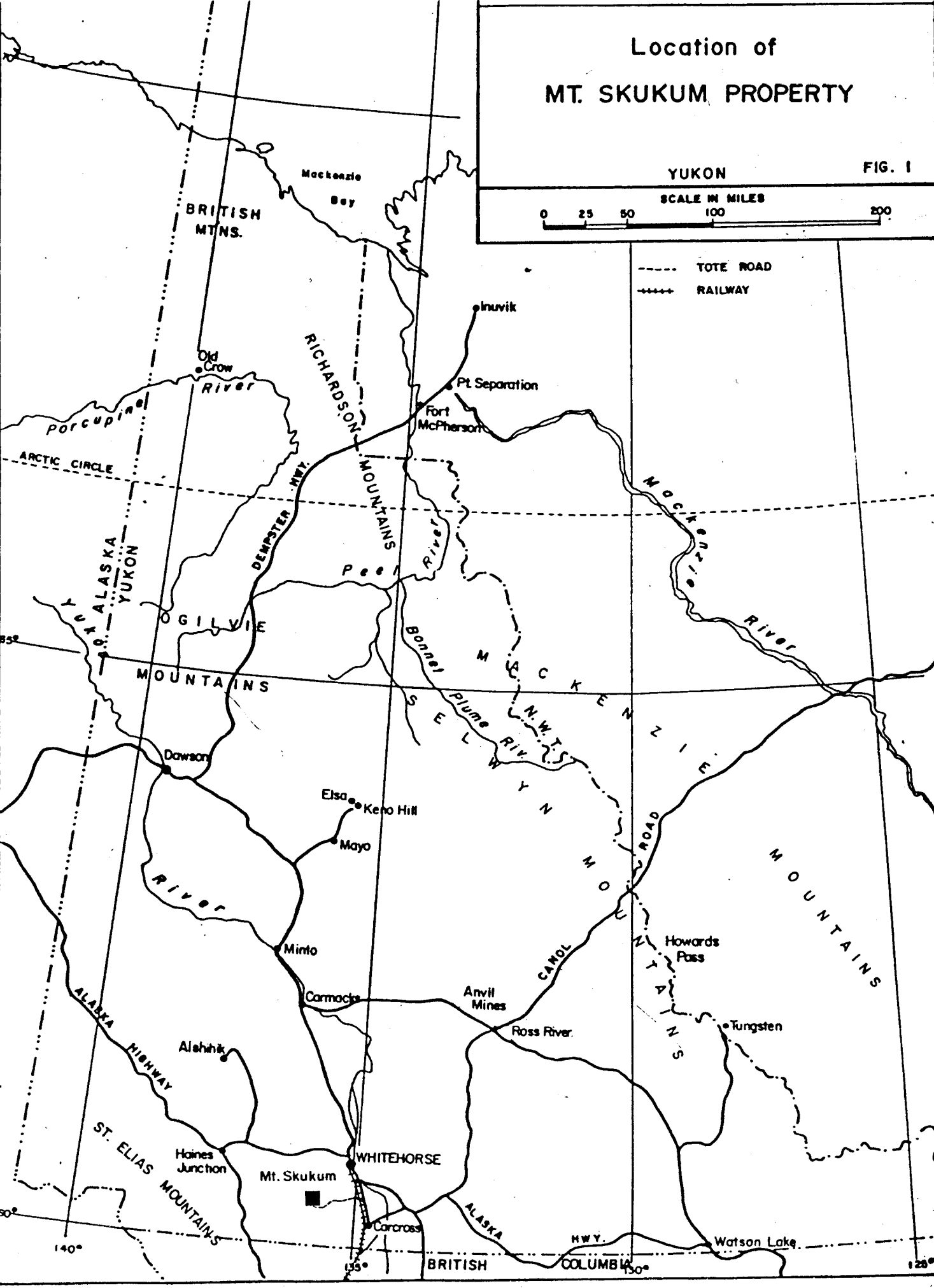
Location of MT. SKUKUM PROPERTY

FIG. 1

YUKON



- TOTE ROAD
- ++++ RAILWAY



between 1600 and 1900 meters. The topography is mountainous with sharp rugged peaks and serrated ridges surrounded by glacial cirques, deep U-shaped valleys and hanging valleys. Away from the higher peaks, the topography is much more subdued.

Vegetation in the area is very sparse above 1200 meters. The lower valleys are well-forested with white spruce and lodgepole pine at the lower elevations and alpine fir near treeline. Above treeline, the flora is typically alpine with stunted willows and dwarf birch along creeks near treeline and grasses, mosses and alpine plants occupying the floors of the lower cirques and hanging valleys. Large areas are barren and consist predominantly of felsenmeer. A few stagnant glaciers, permanent snowfields and a number of rock glaciers occur in the area.

2. GEOLOGY

2.1 General Geology

The Mount Skukum area consists of a 10 kilometers wide circular erosional remnant of Tertiary intermediate to felsic volcanic rocks of the Skukum Group. The Skukum Volcanics are considered part of the Sloko volcanic province (Aitkin, 1955) which extends through northcentral British Columbia into southern Yukon. In the Yukon, the Skukum group is considered part of the Mt. Nansen Group ranging in age from 70 to 50 Ma.

The Skukum volcanic sequence is unconformable over a basement consisting of metamorphosed Late Precambrian schist and marble intruded by granitic rocks of the Coast Plutonic Complex. Large remnants (roof pendants) of the Lake Precambrian metamorphosed rocks extend from the western margin of the Skukum complex several kilometers to the northwest.

Small Tertiary quartz-feldspar porphyries, latite dykes

and late basalt and diabase dykes are intrusive into the Skukum Group. The late basalts possibly correlate with the Quaternary Miles Canyon basalts, or are a late phase of Skukum magmatism.

2.2 Volcanic Stratigraphy

2.2.1 General

The volcanic rocks of the Skukum complex are flat-lying to gently dipping; the stratigraphy is highly dissected and discontinuous due to normal faulting. Paleotopography also exerts a marked effect on the distribution and thickness of volcanic units. Lithologies in the area are predominantly andesite to rhyolite and quartz latite flows and pyroclastics, with a greater volume of pyroclastics than flows.

Preliminary mapping within the claim block (Figure 2) indicates that two volcanic cycles are preserved in the Skukum Complex; both cycles commence with felsic to intermediate pyroclastics and terminate with andesites and basaltic andesite pyroclastics.

The contact between Cycle I and Cycle II is marked in some areas by an angular unconformity. At the southeastern side of the Main Cirque, autobrecciated rhyolite flows and welded ash-flow tuff were deposited against a steep paleo-slope cut through flat-lying andesites of the upper portion of Cycle I. The unconformity between Cycle I and Cycle II is less obvious in other areas.

The contact between pyroclastic rocks at the base of Cycle I and the Cretaceous Coast Crystalline Complex is exposed in a number of areas. Around Butte Creek and in the Pyroclastic Cirque (the large cirque 2 kilometers east of the Main Cirque) tuffaceous sediments and waterlain tuffs are draped over the underlying basement. In many of these locations, conglomerates consisting of weathered granite

boulders and cobbles in a silty hematite-rich matrix directly overlie the basement rocks and are interpreted as talus fans deposited along prominent fault scarps.

2.2.2 Cycle I Volcanic Rocks

Volcanic rocks of Cycle I are divisible into a lower pyroclastic sequence and an upper andesite flow sequence. The Cycle I pyroclastics consist of a layered sequence of ash-fall tuffs, waterlain tuff, lithic lapilli tuff, welded tuff, blocky tuff and breccia. Sections are well exposed to the northeast of the Main Cirque on cliffs above Butte Creek and within the Pyroclastic Cirque. The pyroclastics of Cycle I thin markedly to the north by ratios as high as 10 to 1.

The basal unit consists of 10-30 meters of well-bedded light green to grey ash-fall tuff and waterlain tuffs, transitional to siltstones and arkoses. The tuffs and epiclastic sediments contain a high proportion of crystal fragments and devitrified pumice shards in a matrix of volcanic dust.

The lower epiclastic sediments and tuffs are overlain by a massive unit of greenish to cream-yellow lithic lapilli tuff. The lapilli tuff unit varies in thickness from greater than 100 meters in the Pyroclastic Cirque to approximately 10 meters in the cliffs above Butte Creek, over a lateral distance of 2 kilometers. This lithology is a distinctive resistant cliff-forming unit.

The lapilli tuff contains a high proportion of andesite and trachyte fragments (lapilli) and broken crystals in a matrix of devitrified glassy shards, fine-grained crystal fragments and volcanic dust. Quartz crystals and lithic fragments of latite and rhyolite occur occasionally. The unit shows variable compaction and welding features.

A 10 meter thick unit of pink to reddish-weathering

densely welded tuff overlies the lapilli tuff in most areas. This unit is best exposed in cliffs on the south side of Butte Creek. The central portion of the tuff contains many flattened pumice fragments in a pink, crystal-rich, devitrified glassy groundmass. Numerous small fragments of granitic material are found in this unit.

Overlying the welded tuff is a section of 10-20 meters of light green tuff and epiclastic sediments. This unit is well bedded and is distinguished from the underlying horizon of tuffs and sediments by the presence of clasts of Late Proterozoic schist and marble (up to 30% of the rock). The tuffs are overlain by a thick section of andesitic to trachytic flow breccia (the term trachytic is used in the textural sense), porphyritic andesite flows, amygdaloidal trachyandesite and bedded andesite tuffs.

2.2.3 Cycle II Volcanic Rocks

Units of the Cycle II volcanic sequence are exposed in the southeastern side of the Main Cirque and over a large portion of the northeastern quarter of the KUKU claim block. Lithologies consist of autobrecciated rhyolite flows, flow-banded rhyolite, lapilli tuff, and densely-welded tuff.

Rhyolite autobreccia and flow-banded rhyolite capped by a thick section (over 100 meters) of densely-welded and columnar-jointed tuff and exposed in the southeast corner of the Main Cirque.

In the northeast corner of the claim block, the sequence of felsic volcanic rocks of Cycle II is not exactly the same as the section in the Main Cirque. The densely-welded tuff unit appears to be absent or is represented by non-welded lapilli or ash-fall units.

The final stage of Cycle II volcanism, (Unit 5a, Figure 2) covers most of the southwestern portion of the map area. Texturally, these flows consist of angular fragments of

porphyritic andesite in a highly comminuted and altered andesitic matrix. Generally the matrix is propylitically altered whereas the clasts are unaltered.

2.2.4 Dykes and Intrusions

Late dykes of rusty-yellow to cream-weathering quartz-latite are ubiquitous; minor microdiorite, diabase and basalt dykes are less common. One late rectilinear diabase dyke cuts the welded-tuff unit on the southeast side of the Main Cirque; this is a very fresh unit and may be of equivalent age to Quaternary Miles Canyon basalts.

Tertiary quartz-feldspar porphyry plugs outcrop in two locations. A small body outcrops on cliffs northeast of the Main Cirque and a large plug outcrops in the northeast corner of the claim block.

The quartz-latite dykes occur predominantly along north to northeast trends, coincident with a prominent fault trend. Dykes are rarely greater than 40 meters in width and a few hundred meters in strike length. The latites weather a dark, yellow, rusty color, commonly display fine flow-laminations, spherulitic textures and brecciated margins. Thin dykes (1-2 meters) of similar composition weather a greyish-green colour.

The latites are fine-grained to slightly porphyritic. In thin sections they have a highly recrystallized siliceous matrix with phenocrysts of albite, orthoclase (sanidine) and rare quartz.

A plug-like body of quartz-latite outcrops just north of the Main Cirque overlooking Butte Creek. This plug has a coarse porphyritic texture with phenocrysts of altered plagioclase up to 1.5 cm in length. In thin section fresh orthoclase and muscovite are also present. The groundmass consists of secondary patches of recrystallized quartz mosaic, in a fine-grained dusty crypto-crystalline matrix

containing up to 1-2% of secondary calcite. In some areas the latite plug displays crude columnar jointing.

Microdiorite dykes cut porphyritic andesites in the Main Cirque but are of minor importance. Thin (1-2 meters) dykes of columnar-jointed basaltic andesite cut the upper andesites of Cycle II.

2.3 Structure

The Skukum complex is located in a broad circular depression in the metasedimentary and granitic basement rocks. Marginal contacts between volcanics and underlying basement appear to be quite steep, especially in the south-eastern side of the complex.

The primary structural features within the complex are normal and extensional faults cutting both the volcanics and the underlying basement rocks. The volcanic units within the Skukum Complex are generally flat-lying to gently dipping.

The predominant fault trend within the complex is 045° and steeply dipping with a possible conjugate set trending 350° and steeply dipping. A third set trends east-west.

The 045°-trending faults are closely spaced in the Pyroclastic Cirque with measured vertical displacements up to 100 meters. The faults are frequently the loci of quartz-latite dykes, mineralized quartz and carbonate veins and peripheral propylitic alteration related to ascending hydrothermal fluids.

2.4 Detailed Geology of the Main Cirque

2.4.1 Introduction

The majority of detailed geological mapping undertaken on the KUKU claims during the 1982 field season was concentrated within the initial KUKU 1-48 claims and specifically within the Main Cirque in KUKU claims 15-20, 27 and 29.

Work on KUKU 49-331 was undertaken mainly during August and consisted of mapping, prospecting and stream sediment sampling.

2.4.2 Stratigraphy; Main Cirque

Outcrops within the Main Cirque are confined to the cirque floors and upper sections of the cirque walls. Large areas within the cirque proper are mantled by ice, glacial moraines, active talus slopes, and felsenmeer. Outcrop is exposed in approximately 15-20% of the cirque floor. Areas of alpine meadows are common.

Andesites of Cycle I are the predominant lithology exposed in the lower parts of the cirque, and are overlain by rhyolite auto-breccia, flows and densely-welded tuff. The southwestern portion of the cirque exposes massive outcrops (over 200 meters) of andesite. This unit forms the prominent peaks and ridges of the Mount Skukum area and is thought to be the last volcanic unit deposited.

The upper andesites of Cycle I are massive dark green to grey porphyritic flows and flow breccias. Massive fresh black basaltic andesite occurs interlayered with the andesites and as sills and dykes.

Andesite flow breccia and massive well-bedded andesitic tuffs are common on the east wall of the cirque. The flow breccias frequently show strong limonitic alteration caused by primary oxidation of flow tops.

On the east side of the cirque, the andesite flow breccia are overlain unconformably by well-banded purple and grey rhyolite flows and rhyolite auto-breccias. These units have an aggregate thickness of approximately 30 meters and are in turn overlain by a thick (over 100 meters) densely-welded ash-flow tuff with well-developed basal lithophysae and columnar jointing. These units are not continuous across to the west side of the Main Cirque due to non-deposition, erosion or faulting.

The west wall of the cirque exposes massive andesite tuff breccia, overlain by andesite explosion breccia containing angular andesite fragments in an altered groundmass.

2.4.3 Latite dykes

Quartz-latite dykes are common within the Main Cirque. Two dykes up to 40 meters wide outcrop in the base of the cirque over a strike length of 300 meters. The dykes weather a rusty to cream-yellow colour and have a prominent, closely-spaced orthogonal joint set producing a highly fractured weathering surface. Fine-scale laminations are common and marginal areas of the dykes are brecciated, possibly indicating forceful injection of the dyke systems. Coarse-grained areas of latite contain scattered phenocrysts of altered plagioclase and orthoclase. Quartz phenocrysts are rare. These features are most apparent in the large body of latite outcropping in the east side of the lower, northern, part of the Main Cirque.

2.4.4 Structure

The presence of fault systems transecting the cirque is indicated by detailed mapping on the camp grid (Main Zone, Figure 3) where a possible conjugate fault set with a number of small splays hosts gold-bearing quartz-calcite veins. The fault trending 045° contains the veins defining the Main Zone and can be traced for over 800 meters. Where the fault has been trenched, the common sequence is highly sheared and altered andesite, quartz-calcite veining and a zone of clay gouge. These fault systems are also suggested by the contoured magnetic data (Figure 9).

3. WORK PROGRAM

3.1 Summary of Previous Work

In May 1981, a block of claims (KUKU 1-48) were staked to cover an area of highly gossaned zones on the cirque walls surrounding the Main Cirque. Additional claims (KUKU 49-331), were staked in July 1981.

3.2 Orthophoto Mosaic

An orthophoto mosaic with superimposed topographic contour at 20 meter intervals was prepared by Pacific Survey Corporation in April 1982. The orthophoto mosaic covers all of the KUKU and CHIEF claims.

3.3 Sampling Program

Work at the Skukum Property consisted of an extensive program of soil sampling, chip sampling, trenching, detailed mapping, and a ground magnetometer survey within the Main Cirque. In addition, reconnaissance soil sampling, chip sampling and mapping were undertaken in other areas within the claim block. A detailed stream sediment sampling program within the claim block was also initiated with stream sediment samples collected at 100 meter intervals and panned heavy mineral concentrates at 200 meter intervals.

Soil samples from the camp grid, Main Zone were collected in duplicate (i.e. two separate samples, not sample splits) and sent to Bondar-Clegg in Whitehorse and Chemex in Calgary for replicate analyses of gold and silver.

4. MAIN ZONE; GEOLOGY, GEOCHEMISTRY AND GEOPHYSICS

4.1 Introduction

Areas within the Main Cirque containing either veins of quartz and calcite, or alteration, and returning anomalous gold values in soil and chip samples have been separated into zones to facilitate data management. Figure 4 shows the disposition of zones within the Main Cirque; these are the Main Zone, Lake Zone, Gully Zone, Pika and Fox Zones.

This section briefly describes the work undertaken in the Main zone and describes the geochemical and geophysical surveys and results.

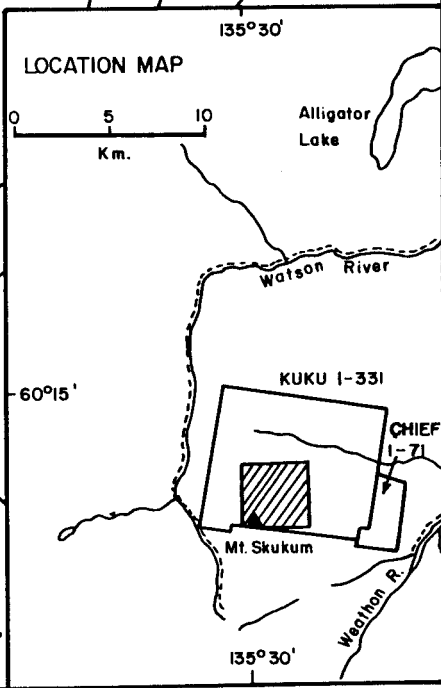
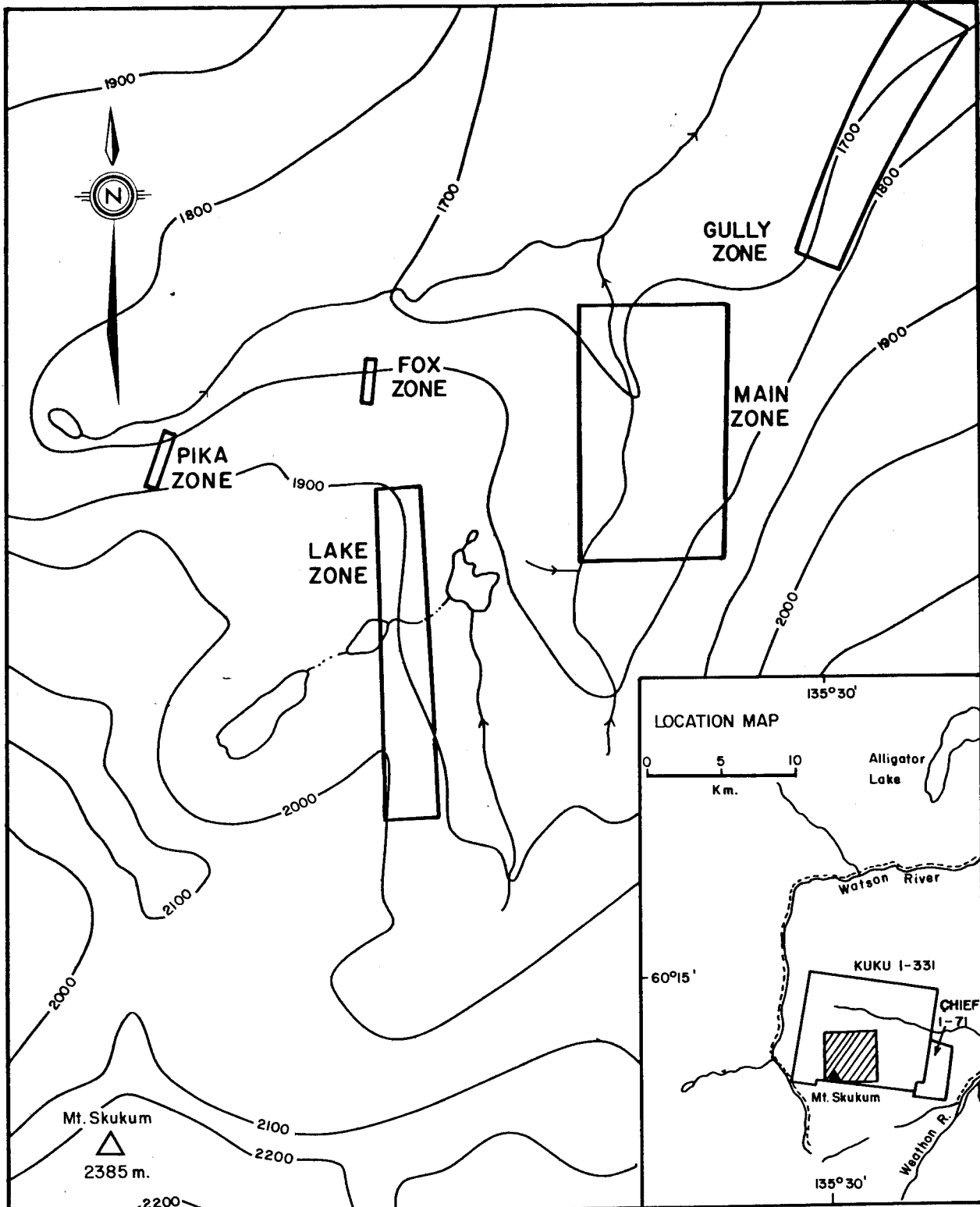
4.2 General

The Main Zone is a rectangular grid (800 by 500 meters) covering the base of the cirque and straddling the creek which contained the original stream sediment anomalies.

In the floor of the cirque there is approximately 20% outcrop of andesite flows and breccia, minor basaltic andesite and latite dykes. Outcrops of quartz-calcite veins occur discontinuously along a zone trending 045° over a strike distance of 375 meters with a maximum width of 100 meters. Minor north-south trending splays off the main vein system outcrop along the creek north of Trench #3 and are intersected in Trench #2. The geology of this area, the distribution of vein material and trench locations are shown in Figure 3.

4.3 Soil Samples

Extensive soil geochemical sampling for gold and silver was carried out on the Main Zone. Soil samples were collected in duplicate at each site and analysed at two laboratories to check sampling representivity. Figures 5 and 5a show



AGIP CANADA LTD.		
ZONE LOCATION MAP		
MT. SKUKUM MAIN CIRQUE		
YUKON		
Scale: 1:16,000	NTS: 105 / D	Date: DEC. 1981
Author: R.A.D.	Drawn by: J.B.	Figure: 4

contoured gold anomalies in soil samples from the camp grid. Contoured silver anomalies over the same grid are plotted on Figure 6 and 6a. One set of data (ie Figs. 5 and 6) is from Bondar-Clegg and a control set of data (Figs. 5a and 6a) is from Chemex Labs.

Soil samples were collected, where possible, at 15-20 cm depth, below the organic horizon. Samples generally consisted of grey to orange sandy gravel and clays, some sample variability resulted from lobes of transported colluvium washed into the base of the cirque from steep talus slopes on the east wall. Where possible, samples were pre-screened through a 10 mesh stainless steel sieve and the fraction analysed was normally -20 mesh.

. Maximum values for gold in soil on the camp grid are 1817 ppb gold over Trench 1, 1500 ppb gold adjacent to Trench 3 and 400 ppb gold near Trench 4. A prominent linear anomaly occurs along the creek where a wide zone of quartz and calcite veining is exposed. The anomaly is 110 meters long and 30 meters wide and values range from 300 ppb to 800 ppb gold. Four other isolated anomalies (over 400 ppb gold) occur along the strike of the 045° fault zone.

4.4 Trenches 3 and 4

Trench 3 was laid out to intersect outcrop of strongly veined quartz-latitude. This trench is 47 meters long by 2.0 meters wide by 1.5 meters deep and approximately 141 m³ were excavated. Figure 7 shows the plan view and section of Trench 3 with geology, sample locations and results. Maximum values are at the east end of the trench, 3200 ppb and 2150 ppb gold were found in two consecutive 1 meter chip samples at the east end of the quartz latitude. Soil samples taken in overburden adjacent to one chip sample run 440, 490 and 205 ppb gold.

Trench 4 (Figure 8) was located over an isolated outcrop of quartz and calcite veining in andesite. The dimensions of

this trench are 39 meters long by 2 meters wide by 0.75 meters deep and approximately 58 m³ of material was excavated. Results from this trench were generally poor, with a maximum value of 270 ppb gold in a 1.0 meter chip sample and 245 ppb gold from a 1 meter-long continuous soil sample in fault gouge. Analyses of gold, silver, mercury, antimony, copper and lead from Trench 4 are tabulated in Figure 11. Antimony is generally less than 2 ppm, mercury ranges from 20 to 150 ppb and copper and lead rarely exceed 15 ppm. Both trenches 3 and 4 are located with respect to the nearest claim post and are shown in Figure 3.

4.5 Magnetic Survey

From August 18th to August 26th, 1981, AGIP personnel completed 5.0 kilometers of magnetic survey on the camp grid at Mount Skukum.

The survey was performed using an Exploranium Unimag Model G-846B proton magnetometer and all data was corrected for diurnal variation using a CMG MR-10 Base Station magnetometer and recorder. Readings were collected at 10 meter station intervals and the corrected data is presented in contour form (Figure 9).

The results show two different magnetic patterns over the survey area with the eastern 200 meters of each survey line generally being quite quiet magnetically and the rest of the survey area being subject to steep magnetic gradients of up to 350 gammas peak to peak. There is no obvious lithological boundary between the different magnetic signatures, but faulting is inferred. The high gradients are probably due to an increase in the amount of pyrrhotite and magnetite in the porphyritic andesite.

There is a good correlation between the rhyolitic dykes and areas of low magnetic strength and a possible relationship between areas of weak magnetic strength and the quartz-calcite veins. Elsewhere the magnetic characteristics of the different lithologies are not diagnostic.

Structurally, several faults can be inferred from distortions and offsets in the contours of the magnetic data and they have been indicated on the contour map. Those interpreted faults have been edited on a geological basis and included, where justified, on the geological map (Figure 3).

5. WORK ON KUKU 49-331

5.1 Soil Samples

Figure 10 shows results and sample locations for soil samples, talus fines and chip samples within the claim block.

. A line of samples (talus fines) collected along the east wall of the Pyroclastic Cirque (approximately 2 kilometers east of the Main Cirque) has returned a number of anomalies over approximately 750 meters with a maximum value of 950 ppb gold.

5.2 Stream Sediment and Heavy Mineral Concentrate Samples

Figure 10 presents the data from stream sediment and heavy mineral concentrate sampling over most of the creeks within the claim block. The creek draining the Main Cirque is highly anomalous throughout its course. Values range up to 2,350 ppb gold in stream silts and 2950 ppb gold in heavy mineral concentrates. Most other streams within the claims returned only background values. One tributary to the north of Butte Creek returned two contiguous samples at 105 ppb and 400 ppb gold in silt. The creek draining the valley to the west of Mount Skukum has silver values up to 3.5 ppm over 300 meters with only background values for gold. These anomalies could be related to silver in marbles of the Late PreCambrian Yukon Group.

6. REFERENCES

Aitkin, I.D., 1955: Altin, British Columbia; Geol. Surv. Can.,
Paper 54-9.

APPENDIX ASAMPLING AND ANALYTICAL METHODSStream Sediment and Heavy Mineral Concentrate Samples

Stream sediment samples were collected at intervals of 500 meters during reconnaissance surveys, and at 100 - 200 meter intervals in detailed surveys. Ideally the samples were collected from the centre of the streams and the width, depth and flow rate of the stream noted as well as silt colour, size, composition and organic content when present. Sample weight ranged from 300 to 500 g and samples were stored in brown kraft paper bags and dried before shipping to the laboratory.

Heavy mineral concentrates were collected at 500 meter intervals in reconnaissance surveys and 200 meter intervals in detailed surveys. Concentrates are commonly collected at the same site as a stream sediment sample to allow comparison of both methods and to determine the concentration ratios. A 40 cm diameter gold pan was filled three-quarters full with silt and sand, screened through a 10 mesh stainless steel sieve, and then panned down to a 20-50 g heavy mineral concentrate. Samples were collected in a 15 cm x 25 cm plastic sample bag. Attempts were made to collect the heavy mineral concentrate in natural heavy mineral traps in the streams. Theoretically, ideal sites for collection of heavy mineral concentrates are less suitable for collecting silt samples;

in practice, in mountain areas, streams have high gradient and rapid runoff so that stream channels form a series of falls and pools. In such streams, sediment accumulation is often minimal and heavy and light minerals often tend to be deposited at the same site.

Soil and Talus Fine Samples

Soil samples were collected on soil grids and talus fine samples were collected along contour lines at the top of talus slopes below cliffs and outcrops showing evidence of mineralization or alteration. Sampling intervals varied from as little as 10 meters over detailed soil grids to 100 meters on reconnaissance soil or talus fine traverses. Average spacing on talus fine lines was 20-25 meters.

Samples were collected using small collapsable shovels at depths between 15-30 cm in the B horizon; in many areas, soil profiles are poorly developed. Frequently in talus slopes this proved impractical due to the very coarse blocky nature of the material, although generally sufficient fine material could be collected near the top of the talus slope. Where possible, the samples were field-screened through a 10 mesh stainless steel sieve. Field notes on color, size fraction and organic content were taken.

Chip Sampling

Chip samples were collected using a small sledge hammer andmoil into sample bags held by a sampling ring. Samples were collected in narrow 5-10 cm swaths as continuous chips across the strike of lithological units or veins. All samples were terminated at prominent lithological contacts. Lengths of samples ranged from 1-5 meters. In trenches, samples were normally collected over a maximum width of 1 meter. One to three kilograms of sample were collected.

Analytical Methods

Samples were collected as described in the previous section. Most samples were analysed for U, Au, Ag; a few selected samples were also analysed for As, Hg, Sb, Te, Cu, Pb, and Zn. The elements analysed were selected on the basis of sample types, previous surveys and geological criteria. Most samples were analysed for gold and silver only because initial geochemical surveys indicated that these elements produced the optimum results.

Samples were analysed by Bondar-Clegg Laboratories in Whitehorse, Ottawa, Vancouver and Denver. Inter-laboratory variability appears to be within acceptable ranges. A group of 800 soil samples were collected in duplicate on the camp grid at Mount Skukum and were analysed by both Bondar-Clegg in Ottawa and Chemex Laboratories in Calgary. Results for both laboratories were comparable.

Soil and stream sediment samples are dried and sieved to minus 80 mesh. Rock chip and heavy mineral concentrate samples are pulverized and a split of the minus 100 mesh fraction is analysed.

Gold analyses are by fire assay techniques using a 10 g sample, but after preparation of the lead bead, the bead is dissolved in acid and the gold content determined by atomic absorption spectrophotometry.

Gold assays are by standard fire assay techniques using a 16 g sample (one-half assay ton). After preparation of the bead, silver is removed by dissolving with nitric acid and the bead weighed to determine the gold content of the original sample.

Copper, Lead, Zinc and Silver are analysed by atomic absorption techniques; for most elements the sample is dissolved in hot aqua regia. Lead and Silver analyses require a correction for background. Silver values greater than 4.0 ppm are checked using a nitric acid digestion.

Mercury analysis is by flameless atomic absorption spectrophotometry after sample digestion.

Arsenic analyses are by perchloric-nitric acid digestion and colorimetric determination.

Antimony and Barium was analysed by x-ray fluorescence using a pressed pellet of pulverized rock.

Uranium analyses are by hot nitric acid digestion and fluorometric determination.

APPENDIX B

CLAIM NAMES AND GRANT NUMBERS

KUKU 1-48

KUKU 1	YA 61199	KUKU 25	YA 61223
KUKU 2	YA 61200	KUKU 26	YA 61224
KUKU 3	YA 61201	KUKU 27	YA 61225
KUKU 4	YA 61202	KUKU 28	YA 61226
KUKU 5	YA 61203	KUKU 29	YA 61227
KUKU 6	YA 61204	KUKU 30	YA 61228
KUKU 7	YA 61205	KUKU 31	YA 61229
KUKU 8	YA 61206	KUKU 32	YA 61230
KUKU 9	YA 61207	KUKU 33	YA 61231
KUKU 10	YA 61208	KUKU 34	YA 61232
KUKU 11	YA 61209	KUKU 35	YA 61233
KUKU 12	YA 61210	KUKU 36	YA 61234
KUKU 13	YA 61211	KUKU 37	YA 61235
KUKU 14	YA 61212	KUKU 38	YA 61236
KUKU 15	YA 61213	KUKU 39	YA 61237
KUKU 16	YA 61214	KUKU 40	YA 61238
KUKU 17	YA 61215	KUKU 41	YA 61239
KUKU 18	YA 61216	KUKU 42	YA 61240
KUKU 19	YA 61217	KUKU 43	YA 61241
KUKU 20	YA 61218	KUKU 44	YA 61242
KUKU 21	YA 61219	KUKU 45	YA 61243
KUKU 22	YA 61220	KUKU 46	YA 61244
KUKU 23	YA 61221	KUKU 47	YA 61245
KUKU 24	YA 61222	KUKU 48	YA 61246

All above claims, KUKU 1-48 (YA 61199-YA61246) owned by AGIP Canada Ltd.

KUKU 49-331

KUKU 49	YA	61623	KUKU 78	YA	61652
KUKU 50	YA	61624	KUKU 79	YA	61653
KUKU 51	YA	61625	KUKU 80	YA	61654
KUKU 52	YA	61626	KUKU 81	YA	61655
KUKU 53	YA	61627	KUKU 82	YA	61656
KUKU 54	YA	61628	KUKU 83	YA	61657
KUKU 55	YA	61629	KUKU 84	YA	61658
KUKU 56	YA	61630	KUKU 85	YA	61659
KUKU 57	YA	61631	KUKU 86	YA	61660
KUKU 58	YA	61632	KUKU 87	YA	61661
KUKU 59	YA	61633	KUKU 88	YA	61662
KUKU 60	YA	61634	KUKU 89	YA	61663
KUKU 61	YA	61635	KUKU 90	YA	61664
KUKU 62	YA	61636	KUKU 91	YA	61665
KUKU 63	YA	61637	KUKU 92	YA	61666
KUKU 64	YA	61638	KUKU 93	YA	61667
KUKU 65	YA	61639	KUKU 94	YA	61668
KUKU 66	YA	61640	KUKU 95	YA	61669
KUKU 67	YA	61641	KUKU 96	YA	61670
KUKU 68	YA	61642	KUKU 97	YA	61671
KUKU 69	YA	61643	KUKU 98	YA	61672
KUKU 70	YA	61644	KUKU 99	YA	61673
KUKU 71	YA	61645	KUKU 100	YA	61674
KUKU 72	YA	61646	KUKU 101	YA	61675
KUKU 73	YA	61647	KUKU 102	YA	61676
KUKU 74	YA	61648	KUKU 103	YA	61677
KUKU 75	YA	61649	KUKU 104	YA	61678
KUKU 76	YA	61650	KUKU 105	YA	61679
KUKU 77	YA	61651	KUKU 106	YA	61680

KUKU 107 YA 61681
KUKU 108 YA 61682
KUKU 109 YA 61683
KUKU 110 YA 61684
KUKU 111 YA 61685
KUKU 112 YA 61686
KUKU 113 YA 61687
KUKU 114 YA 61688
KUKU 115 YA 61689
KUKU 116 YA 61690
KUKU 117 YA 61691
KUKU 118 YA 61692
KUKU 119 YA 61693
KUKU 120 YA 61694
KUKU 121 YA 61695
KUKU 122 YA 61696
KUKU 123 YA 61697
KUKU 124 YA 61698
KUKU 125 YA 61699
KUKU 126 YA 61700
KUKU 127 YA 61701
KUKU 128 YA 61702
KUKU 129 YA 61703
KUKU 130 YA 61704
KUKU 131 YA 61705
KUKU 132 YA 61706
KUKU 133 YA 61707
KUKU 134 YA 61708
KUKU 135 YA 61709
KUKU 136 YA 61710

KUKU 137 YA 61711
KUKU 138 YA 61712
KUKU 139 YA 61713
KUKU 140 YA 61714
KUKU 141 YA 61715
KUKU 142 YA 61716
KUKU 143 YA 61717
KUKU 144 YA 61718
KUKU 145 YA 61719
KUKU 146 YA 61720
KUKU 147 YA 61721
KUKU 148 YA 61722
KUKU 149 YA 61723
KUKU 150 YA 61724
KUKU 151 YA 61725
KUKU 152 YA 61726
KUKU 153 YA 61727
KUKU 154 YA 61728
KUKU 155 YA 61729
KUKU 156 YA 61730
KUKU 157 YA 61731
KUKU 158 YA 61732
KUKU 159 YA 61733
KUKU 160 YA 61734
KUKU 161 YA 61735
KUKU 162 YA 61736
KUKU 163 YA 61737
KUKU 164 YA 61738
KUKU 165 YA 61739
KUKU 166 YA 61740

KUKU 167 YA 61741
KUKU 168 YA 61742
KUKU 169 YA 61743
KUKU 170 YA 61744
KUKU 171 YA 61745
KUKU 172 YA 61746
KUKU 173 YA 61747
KUKU 174 YA 61748
KUKU 175 YA 61749
KUKU 176 YA 61750
KUKU 177 YA 61751
KUKU 178 YA 61752
KUKU 179 YA 61753
KUKU 180 YA 61754
KUKU 181 YA 61755
KUKU 182 YA 61756
KUKU 183 YA 61757
KUKU 184 YA 61758
KUKU 185 YA 61759
KUKU 186 YA 61760
KUKU 187 YA 61761
KUKU 188 YA 61762
KUKU 189 YA 61763
KUKU 190 YA 61764
KUKU 191 YA 61765
KUKU 192 YA 61766
KUKU 193 YA 61767
KUKU 194 YA 61768
KUKU 195 YA 61769
KUKU 196 YA 61770

KUKU 197 YA 61771
KUKU 198 YA 61772
KUKU 199 YA 61773
KUKU 200 YA 61774
KUKU 201 YA 61775
KUKU 202 YA 61776
KUKU 203 YA 61777
KUKU 204 YA 61778
KUKU 205 YA 61779
KUKU 206 YA 61780
KUKU 207 YA 61781
KUKU 208 YA 61782
KUKU 209 YA 61783
KUKU 210 YA 61784
KUKU 211 YA 61785
KUKU 212 YA 61786
KUKU 213 YA 61787
KUKU 214 YA 61788
KUKU 215 YA 61789
KUKU 216 YA 61790
KUKU 217 YA 61791
KUKU 218 YA 61792
KUKU 219 YA 61793
KUKU 220 YA 61794
KUKU 221 YA 61795
KUKU 222 YA 61796
KUKU 223 YA 61797
KUKU 224 YA 61798
KUKU 225 YA 61799
KUKU 226 YA 61800

KUKU 227 YA 61801
KUKU 228 YA 61802
KUKU 229 YA 61803
KUKU 230 YA 61804
KUKU 231 YA 61805
KUKU 232 YA 61806
KUKU 233 YA 61807
KUKU 234 YA 61808
KUKU 235 YA 61809
KUKU 236 YA 61810
KUKU 237 YA 61811
KUKU 238 YA 61812
KUKU 239 YA 61813
KUKU 240 YA 61814
KUKU 241 YA 61815
KUKU 242 YA 61816
KUKU 243 YA 61817
KUKU 244 YA 61818
KUKU 245 YA 61819
KUKU 246 YA 61820
KUKU 247 YA 61821
KUKU 248 YA 61822
KUKU 249 YA 61823
KUKU 250 YA 61824
KUKU 251 YA 61825
KUKU 252 YA 61826
KUKU 253 YA 61827
KUKU 254 YA 61828
KUKU 255 YA 61829
KUKU 256 YA 61830

KUKU 257 YA 61831
KUKU 258 YA 61832
KUKU 259 YA 61833
KUKU 260 YA 61834
KUKU 261 YA 61835
KUKU 262 YA 61836
KUKU 263 YA 61837
KUKU 264 YA 61838
KUKU 265 YA 61839
KUKU 266 YA 61840
KUKU 267 YA 61841
KUKU 268 YA 61842
KUKU 269 YA 61843
KUKU 270 YA 61844
KUKU 271 YA 61845
KUKU 272 YA 61846
KUKU 273 YA 61847
KUKU 274 YA 61848
KUKU 275 YA 61849
KUKU 276 YA 61850
KUKU 277 YA 61851
KUKU 278 YA 61852
KUKU 279 YA 61853
KUKU 280 YA 61854
KUKU 281 YA 61855
KUKU 282 YA 61856
KUKU 283 YA 61857
KUKU 284 YA 61858
KUKU 285 YA 61859
KUKU 286 YA 61860

KUKU 287 YA 61861
KUKU 288 YA 61862
KUKU 289 YA 61863
KUKU 290 YA 61864
KUKU 291 YA 61865
KUKU 292 YA 61866
KUKU 293 YA 61867
KUKU 294 YA 61868
KUKU 295 YA 61869
KUKU 296 YA 61870
KUKU 297 YA 61871
KUKU 298 YA 61872
KUKU 299 YA 61873
KUKU 300 YA 61874
KUKU 301 YA 61875
KUKU 302 YA 61876
KUKU 303 YA 61877
KUKU 304 YA 61878
KUKU 305 YA 61879
KUKU 306 YA 61880
KUKU 307 YA 61881
KUKU 308 YA 61882
KUKU 309 YA 61883
KUKU 310 YA 61884

KUKU 311 YA 61885
KUKU 312 YA 61886
KUKU 313 YA 61887
KUKU 314 YA 61888
KUKU 315 YA 61889
KUKU 316 YA 61890
KUKU 317 YA 61891
KUKU 318 YA 61892
KUKU 319 YA 61893
KUKU 320 YA 61894
KUKU 321 YA 61895
KUKU 322 YA 61896
KUKU 323 YA 61897
KUKU 324 YA 61898
KUKU 325 YA 61899
KUKU 326 YA 61900
KUKU 327 YA 61901
KUKU 328 YA 61902
KUKU 329 YA 61903
KUKU 330 YA 61904
KUKU 331 YA 61905

All above claims, KUKU 49-331 (YA-61623-YA61905) owned by AGIP
Canada Ltd.

APPENDIX C
AGIP PERSONNEL

J.A. Climie	Exploration Manager	Program Supervision.
D.G. Bailey, Ph. D.	Chief Geologist	Program Supervision.
R.C.R. Robertson	Area Geologist	Program supervision, mapping, report writing.
D.R. Eaton	Chief Geophysicist	Geophysical survey supervision.
R.A. Doherty	Project Geologist	Project supervision, mapping, prospecting, geochemical sampling, map and report preparation.
S. Logan Gordanier	Project Geologist	Project supervision, mapping, prospecting, geochemical sampling, map and report preparation.
T. Garagan	Project Geologist	Mapping, prospecting, geochemical sampling.
P. Van Angeren	Project Geologist	Mapping, prospecting, geochemical sampling.
R. Hulstein	Senior Assistant	Mapping, sampling.
D. Charron	Senior Assistant	Mapping, sampling.
M. Fortier	Intermediate Assistant	Sampling, prospecting.
C. Malboeuf	Junior Assistant	Sampling, prospecting.
J. Pollock	Junior Assistant	Sampling, prospecting.
L. Mongeon	Cook	
A. Rousseau	Junior Assistant	Sampling, prospecting.
A. Malnasi	Junior Assistant	Sampling, prospecting.
J. MacRae	Contract Field Assistant	Sampling, prospecting, mountaineering

APPENDIX D
STATEMENT OF COSTS

KUKU 1-48

1. Surface Work, (KUKU 1-48), July 5th to September 16th

Preparation of contoured orthophoto map (1:10,000 scale) prepared by Pacific Survey Corporation, Vancouver.

Total cost \$9,500 - the area covered is 148 km² and covers all of KUKU 1-331 and CHIEF 1-71, prorated by claims is 9500/402 = \$23.50 per claim.

KUKU 1-48 = 48 x \$23.50	<u>1,128</u>
--------------------------	--------------

Labour Costs

J.A. Climie 1 day @ \$200	200
D.G. Bailey 1 day @ \$160	160
R.C.R. Robertson 4 1/2 days @ \$140	630
D.R. Eaton 1 day @ \$170	170
A. Doherty 13 1/2 days @ \$110	1,485
S. Logan Gordanier 16 days @ \$110	1,760
B. Morrison 11 days @ \$80	880
P. Van Angeren 2 days @ \$110	220
M. Fortier 12 1/2 days @ \$75	930
A. Rousseau 11 days @ \$60	660
A. Malnasi 6 days @ \$55	330
C. Malboeuf 13 days @ \$55	715
J. Pollock 14 days @ \$55	<u>770</u>
	<u><u>8,910</u></u>

Analytical Costs

Soil samples, Camp Grid; Main Zone

Duplicate samples collected and analysed for gold and silver by Bondar-Clegg in Whitehorse and Chemex Labs in Calgary.

Bondar-Clegg data is contoured in Figures 5 and 5a, Chemex data on Figures 6 and 6a.

Analytical costs per sample - Bondar-Clegg	\$ 7.60
- Chemex Labs	<u>\$ 7.40</u>
TOTAL	<u>\$15.00</u>
944 samples x \$15.00	<u>\$14,160</u>

Helicopter Costs

July 5th to July 29th, Bell 206 Long Ranger, casual helicopter contract from Shirley Helicopter, Whitehorse (costs include fuel).

4.8 hours	\$ <u>2,540</u>
-----------	-----------------

Total surface costs - KUKU 1-48

Orthophoto	1,128
Labour	8,910
Analytical costs	14,160
Helicopter costs	<u>2,540</u>
TOTAL	<u>\$26,738</u>

Analytical Costs

KUKU 273-275	12 chip samples @ \$9.50	114
KUKU 51	2 soil samples @ \$7.60	15
KUKU 244-281	33 soil samples (-20 mesh) @ \$7.60	250
	33 soil samples (-80 mesh) @ \$8.85	292
KUKU 49-331	192 stream silts @ \$7.60	1,489
	33 heavy mineral concentrates @ \$8.25	<u>314</u>
		<u>\$2,474</u>

Helicopter Costs

Hughes 500 D helicopter, contract machine from Liftair International Ltd., Calgary.

KUKU 49-331	23.8 hours @ \$379/hour	9,020
	fuel at 25 gal/hour x \$1.98 per gallon	<u>1,178</u>
		<u>\$10,198</u>

CAMP AND FIELD COSTS

- Food costs, estimated at \$20/man day
 KUKU 49-331, 86 man days x \$20 = \$ 1,720
- Camp and field equipment rental
 share of rental equipment (radios, scintillometers, generators, theodolite, etc).
 estimated at \$40/day for 30 days,
 30% to KUKU 49-331 = $0.30 \times (30 \times 40) =$ \$ 360
- Cost of field supplies estimated at \$10/day
 30% to KUKU 49-331, \$10 x 30 \$ 300

4. Demobilization Costs (Helicopter)

includes camp moves, supply and crew mobilization
to and from Whitehorse

July 30th to September 18th, 32.2 hrs - total cost \$14,678
30% applied to KUKU 49-331, (0.30 x 14,678) = 4,403

Total Surface Cost - KUKU 49-331

Orthophoto	6,650
Labour (inc. cooks wages)	9,610
Analytical costs	2,474
Helicopter costs	10,198
Camp and field costs	2,180
Demobilization	<u>4,403</u>
	<u>\$35,515</u>

Trenching Costs (July 30th - Sept. 1st, 1981) KUKU 17

Trench #3, KUKU 17, (47 m x 2.0 m x 1.5 m = 141 m³)

Labour Costs

Contract blasting crew, Bema Industries Ltd. (1 supervisor @ \$200/day, 1 blaster @ \$175/day and 1 technical assistant @ \$145/day)

Supervisor 10 days @ \$200	2,000
1 day @ \$175	175
Blaster 10 days @ \$175	1,750
1 day @ \$175	145
Technical 10 days @ \$145	1,450
Assistant 1 day @ \$105	<u>105</u>
	<u>5,625</u>

Mobilization, Demobilization, Labour and Helicopter

Share of contract labour - 1 man day	110
Helicopter August 13, 1.5 hours (inc.fuel)	830
Hotel and accommodation	<u>195</u>
	<u>\$1,135</u>

AGIP Personnel

R.C.R. Robertson 1/2 day @ \$140	70
A. Doherty 2 days @ \$110	220
R. Hulstein 1 day @ \$80	80
J. Pollock 1 day @ \$55	55
A. Kousseau 1 day @ \$60	<u>60</u>
	<u>\$485</u>

Equipment Rental

Drilling and blasting equipment rental from Bema Industries for 10 days @ \$50/day	500
Share of Wild T-16 Theodolite	<u>50</u>
	<u>\$550</u>

Explosives

Including Forcite, Amex, blasting caps, cord	
Total cost for 91 m of trenching (248.3 m ³)	
is \$4,902 or \$19.76/m ³ x 141 m ³ =	<u>\$2,786</u>

Helicopter Costs

Transporting blasting crew to site	
Bell 206 Long Ranger Aug. 14-16, 1.9 hours (including fuel)	1,032.00
Hughes 500 D Aug. 17-22, 3.8 hours x 379/hour	1,440.20
and 25 gal fuel/hour x 1.98 per gallon	188.10
AGIP personnel to site	
Hughes 500 D 2.0 hours x 379/hour	758.00
and 25 gal/hour x 198 per gallon	99.00
	<u>\$3,517.30</u>

Analytical Costs

10 soil samples (42105-42114) gold & silver @ 7.60	76.00
20 chip samples (41219-41224) gold & silver @ 9.50	190.00
oversize charge on 20 rock chips 136 lb. x \$0.30/lb.	40.80
8 assays for gold	64.00
6 assays for silver	48.00
	<u>\$418.80</u>

Food Costs

Estimated at \$20/day x 38.5 days	<u>\$770.00</u>
-----------------------------------	-----------------

Trench #3, Total Costs

Labour Costs, contract	5,625.00
Mobilization, Demobilization	1,135.00
Labour costs, AGIP	485.00
Equipment rental	550.00
Explosives	2,786.00
Helicopter costs	3,517.30
Analytical costs	418.80
Food Costs	770.00
	<u>\$15,287.10</u>

AGIP CANADA LTD.
Helicopter Costs

Hughes 500D Helicopter

6 hours @ \$379/hour =	2,274.00
25 gal fuel per hour x \$1.98 per gallon	<u>297.00</u>
	<u>\$2,571.00</u>

Analytical Costs

21 chip samples (41240-41263) analysed for Au, Ag, Hg, Sb, Cu, Pb + samples preparation = 21 x \$18.25 =	383.25
3 chip samples Au and Ag = 3 x \$9.50 =	28.50
8 soil samples (42115-42122) analysed for Ag, Ag	
- 20 mesh 8 x \$7.60 =	60.80
- 80 mesh 8 x \$8.85 =	<u>70.80</u>
	<u>\$543.35</u>

Equipment Rental

Blasting equipment @ \$50/day x 11 days	500.00
share of Wild T-16 Theodolite	<u>100.00</u>
	<u>\$600.00</u>

<u>Food Costs</u> estimated at \$20/day x 26 days	<u>\$520.00</u>
---------------------------------------------------	-----------------

Total Costs - Trench #4

Labour	5,453.45
Equipment rental	550.00
Explosives	1,146.00
Helicopter costs	2,571.00
Analytical costs	543.35
Equipment rental	600.00
Food Costs	<u>520.00</u>
	<u>11,383.80</u>

APPENDIX F
STATEMENT OF QUALIFICATIONS

I, RICHARD ALLAN DOHERTY, of the City of Calgary in the Province of Alberta, hereby certify:

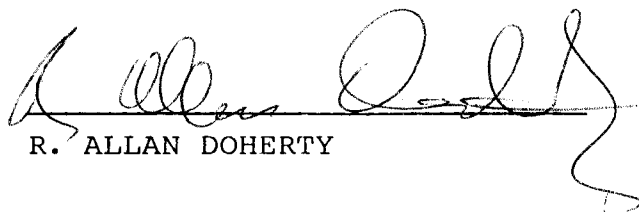
That I am a geologist employed by AGIP Canada Ltd. and that I caused to be performed the work described in this report.

That I obtained a Bachelor of Science degree with Honours in Geology from the University of New Brunswick at Fredericton in 1977 and carried out graduate studies at Memorial University, St. John's Newfoundland.

That I have been engaged in mineral exploration on a full-time and part-time basis for eight years of which five have been on mineral exploration programs in the Yukon Territory, Northwest Territories and British Columbia.

That I am a member of the Geological Association of Canada and of the Canadian Institute of Mining and Metallurgy.

Signed at Calgary, in the Province of Alberta, this 25th day of May, A.D., 1982.


R. ALLAN DOHERTY



MT SKUKUM AREA
SCALE 1:10,000
CONTOUR INTERVAL 20 METRES
KUKU 1/331 CHIEF 1/71
AGIP CANADA



SYMBOLS

- Pyrite, gossan
- Jointing vertical, inclined
- Flow layering in volcanics
- Bedding, inclined
- Fault, defined, approx., assumed (solid circle indicates downthrown side)
- Geological contact, defined, approx., assumed
- Stream
- Lake
- Claim block KUKU I-331

LEGEND

QUATERNARY

- 10 Alluvium, glacial deposits
- 9 Basalt dykes and silts

TERTIARY

- 8 Quartz feldspar porphyry

Skukum Group

- 7 Quartz Latite
 - 7a Lathite dykes, domes, possible flows in part, possible feeder dykes for unit 6
 - 7b Coarse-grained porphyritic quartz latite plug
- 6 Rhyolite to latite flows and pyroclastics
 - 6a Densely welded tuff ignimbrite
 - 6b Collapse breccia
 - 6c Rhyolite flows, spherulitic flows and breccia
- 5 Andesite
 - 5a Andesite breccia, monolithic explosion breccia
 - 5b Massive porphyritic andesite
 - 5c Andesite to trachyte flow breccia
 - 5d Well bedded pale to dark green chlorite tuff, volcanoclastic sediments.
- 4 Felsic to intermediate pyroclastics
 - 4a Light pink to red densely welded tuff
 - 4b Light yellow green massive lapilli tuff-unwelded to partly welded
 - 4c Light grey to maroon well bedded tuff and volcanoclastics

CRETACEOUS

- 3 Conglomerate coarse monolithic conglomerate, cobbles of unit 2
- 2 Coast crystalline complex, hornblende-biotite granite

LOWER PALEOZOIC

- 1 Yukon Group
 - 1a Quartz-biotite gneiss
 - 1b Grey and white marble with interbedded quartz-biotite gneiss

GEOLOGY		PROJECT NO.
Kuku I-331		4018
001061		SURVEYED BY
		H.A.D.
SCALE: 1:10,000		DRAWN BY
PROJECT: MT. SKUKUM		G.T. St.
YUKON		DATE
		October, 1981
		APPROVED
AGIP CANADA LTD.		FIGURE
		2



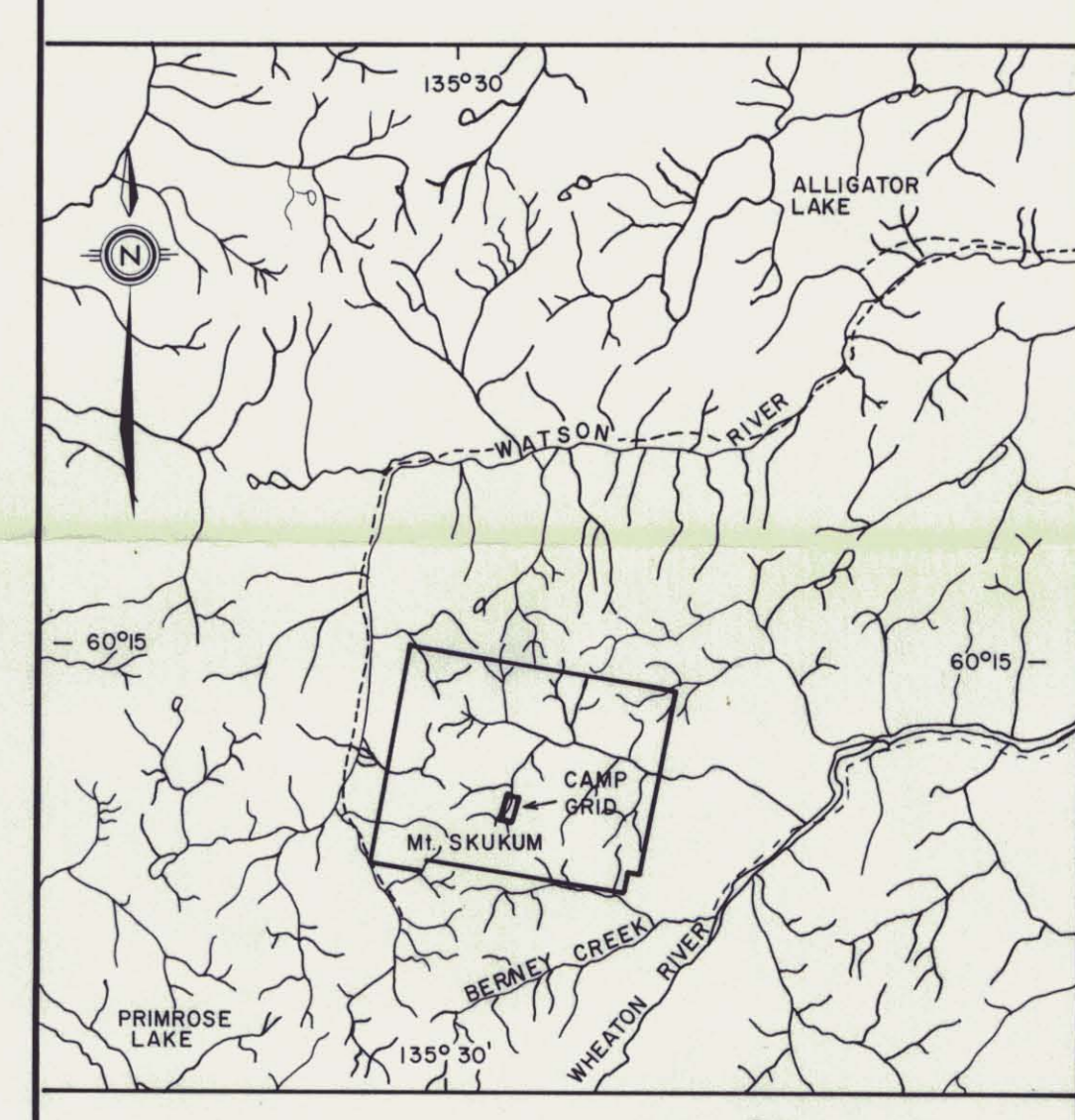
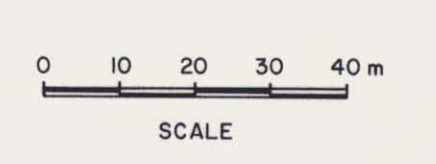
LEGEND

- 5 Diabase dyke
- 3b Massive quartz-calcite veins
- 3a Intrusive breccia margin, latite dyke
- 2 Flow laminated latite to rhyolitic dyke
- 1b Dark massive basaltic andesite
- 1a Andesitic flow breccia, trachytic in part.
- 1a Massive porphyritic andesite

- Fault, defined, approx, assumed
- Limit of active talus slope, dotted line on upslope side
- Stream, intermittent stream
- Swamp
- Frost heaved soil
- Outcrop
- Frost heaved subcrop, angular float
- Altitude of quartz-carbonate vein, vertical, inclined
- Pyrite gossan
- Trench location
- Geological contact defined, approximate, assumed
- Claim post with claim numbers



5+00N
4+00N
3+00N
2+00N
1+00N
0+00
1+00S
2+00S
3+00S
4+00S



001061

AGIP CANADA LTD.

MT. SKUKUM
MAIN ZONE-KUKU-15-22
GEOLOGY CAMP GRID

YUKON

SCALE: 1:1000	AUTHOR: R. A. D.	DATE: Sept 1981
DRAWN BY: J. B.	N.T.S.: 105 D/5	FIGURE: 3

1+50W 1+00W 0+50W 0+00 0+50E 1+00E 1+50E 2+00E 2+50E 3+00E 3+50E



26 JUNE 79

24 JULY 68
3 JUNE 66

14 MAR 79
15 MAR 79
22 JAN 79
15 DEC 79
8 OCT 79
22 JULY 79
14 JULY 79
10 JULY 79
25 JUNE 79
24 JUNE 79
13 MAY 79
14 AUG 79

KUKU

KUKU

KUKU

MT SKUKUM
7815

SKUKUM

NOMEN DUBIUM

UBION

B'U T'AI T'AO E

CHIEF

CHIEF

CHIEF

JON

JON

MIKE

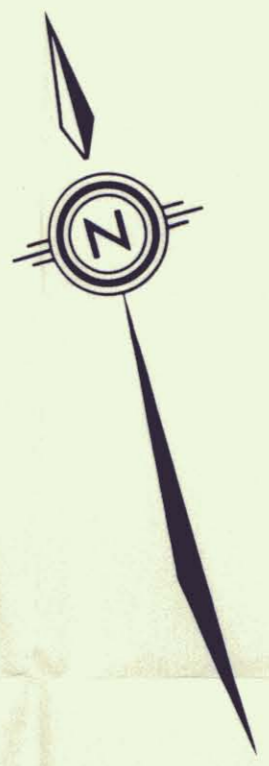
WH

CREEK

100.00

180.00
204

602179
60218



SYMBOLS

- Stream, intermittent stream
- Swamp
- Sample site

Contour interval:

- 50-99
- 100-199
- 200-499
- 500-999
- >1000

Analyses by Bondar and Clegg Whitehorse

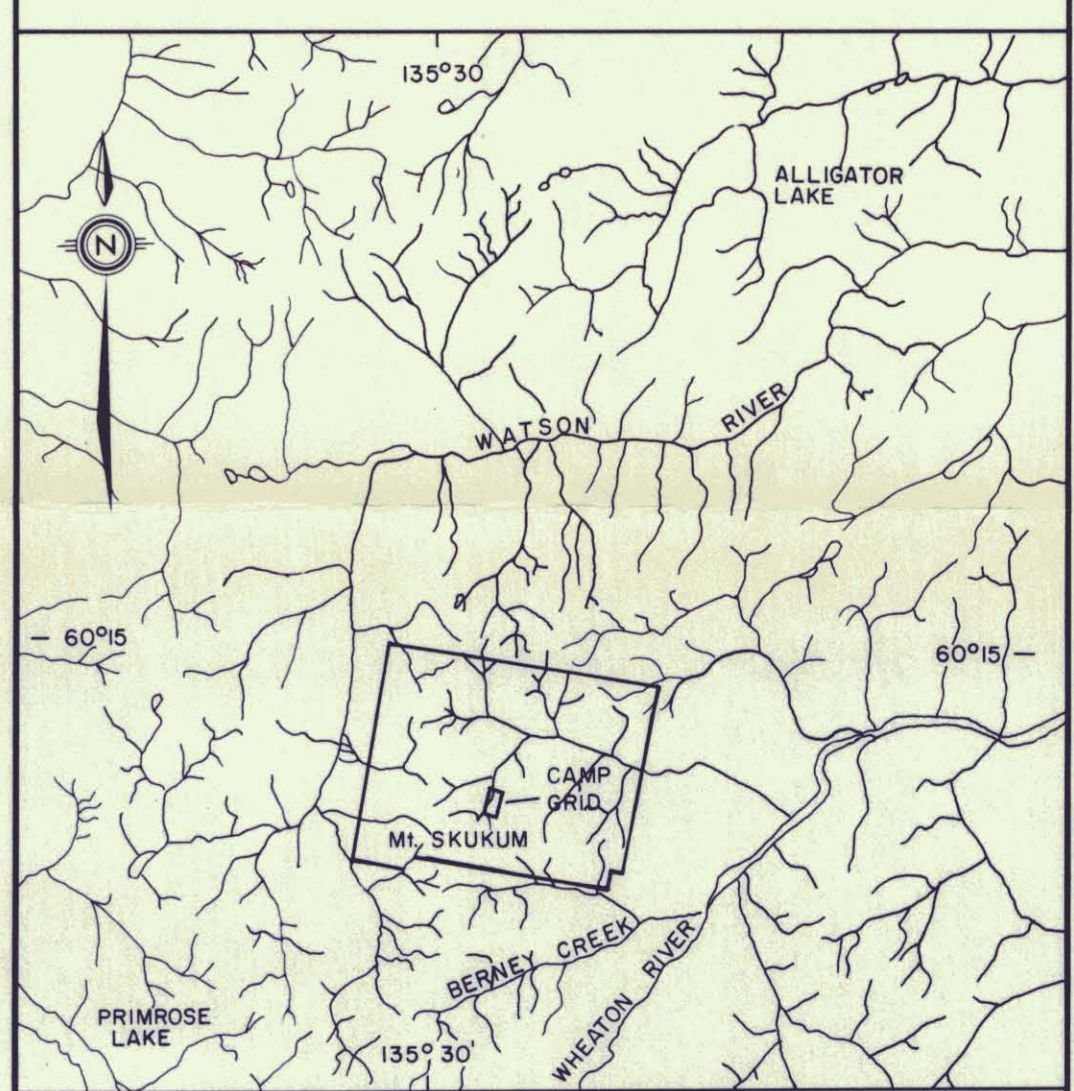
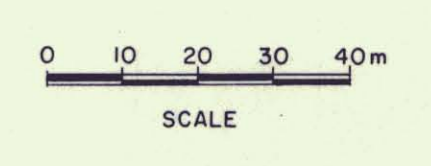
Threshold value 40 ppb

Fraction analysed: -20 mesh



5+00N
4+00N
3+00N
2+00N
1+00N
0+00
1+00S
2+00S
3+00S
4+00S

1+50W 1+00W 0+50W 0+00 0+50E 1+00E 1+50E 2+00E 2+50E 3+00E 3+50E

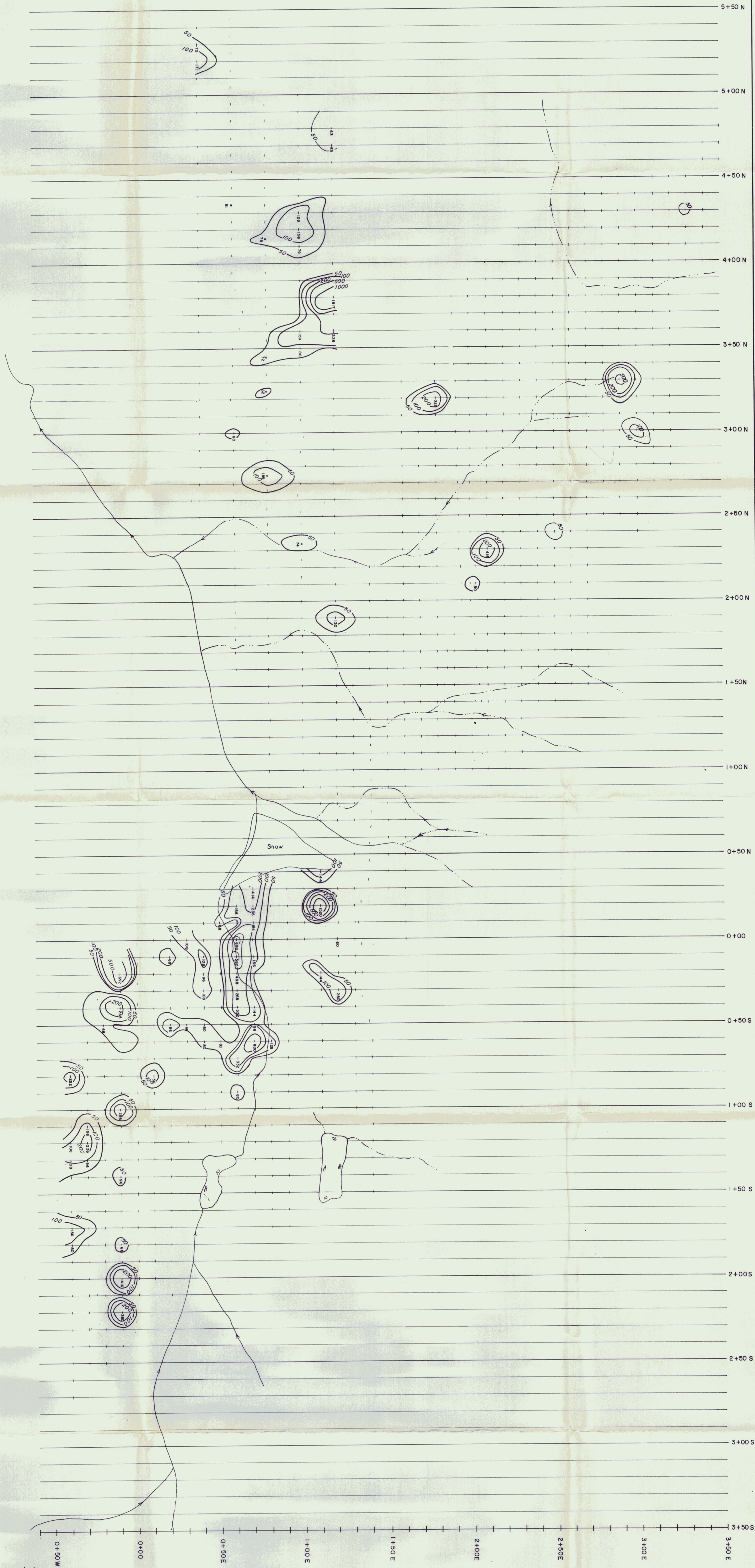
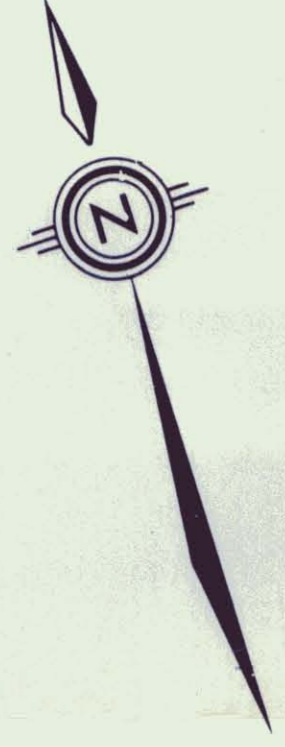


AGIP CANADA LTD.

MT. SKUKUM
MAIN ZONE-KUKU-15-22
GOLD ANALYSES SOILS

091061 YUKON

SCALE 1:1000	AUTHOR R.A.D.	DATE Sep 1981
DRAWN BY S.B.	N.T.S: 10S D/3	FIGURE 5



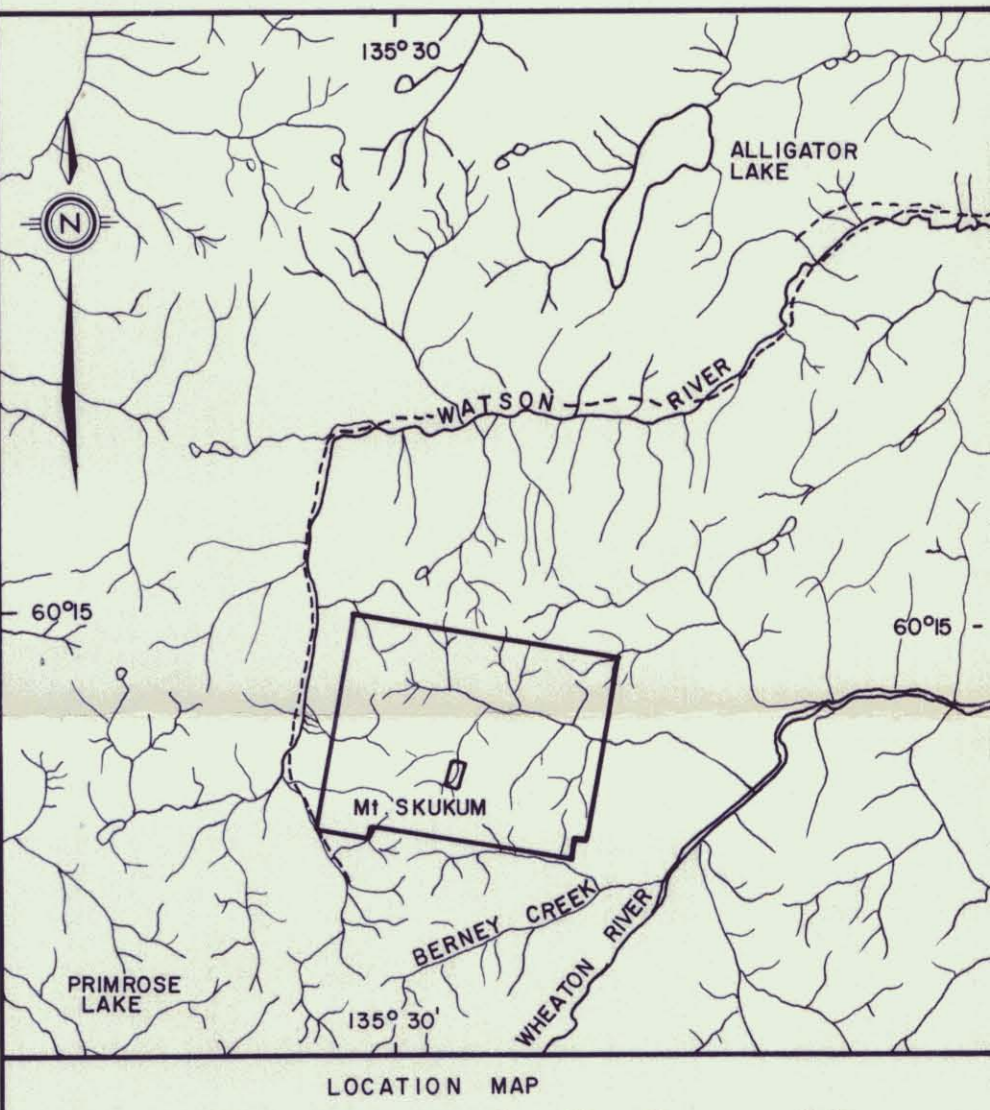
LEGEND

- Streams
- Intermittent streams
- Lake
- Reference coordinate lines

Contour interval:

- 50 - 99
- 100 - 199
- 200 - 499
- 500 - 999
- > 1000

Analyses by CHEMEX Calgary
 Threshold value 40 ppb
 Fraction analysed: - 20 mesh





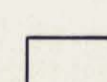
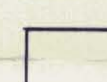
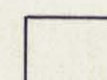
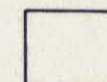
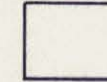


091061

CAMP GRID - MAIN Zone		PROJECT: 4008
GOLD ANALYSES (ppb)		APPROVED:
SOIL SAMPLES		DATE: 105-0-13
PROJECT:	YUKON	DATE: Sept. 22 / 1981
	MT. SKUKUM	DRAWN BY: R.A.D. R.H.
		SCALE: 1: 1,000
		FILE:
AGIP CANADA LTD.		FIGURE: 5A



SYMBOLS

-  Stream, intermittent stream
-  Swamp
-  Contour Interval (0.2 ppm)
-  Sample location
-  0.8-1.2 ppm
-  1.2-1.4 ppm
-  1.4-1.6 ppm
-  1.6-1.8 ppm
-  > 1.8 ppm

Analyses by Bondar & Clegg Whitehorse

Fraction Analysed - 20 mesh.

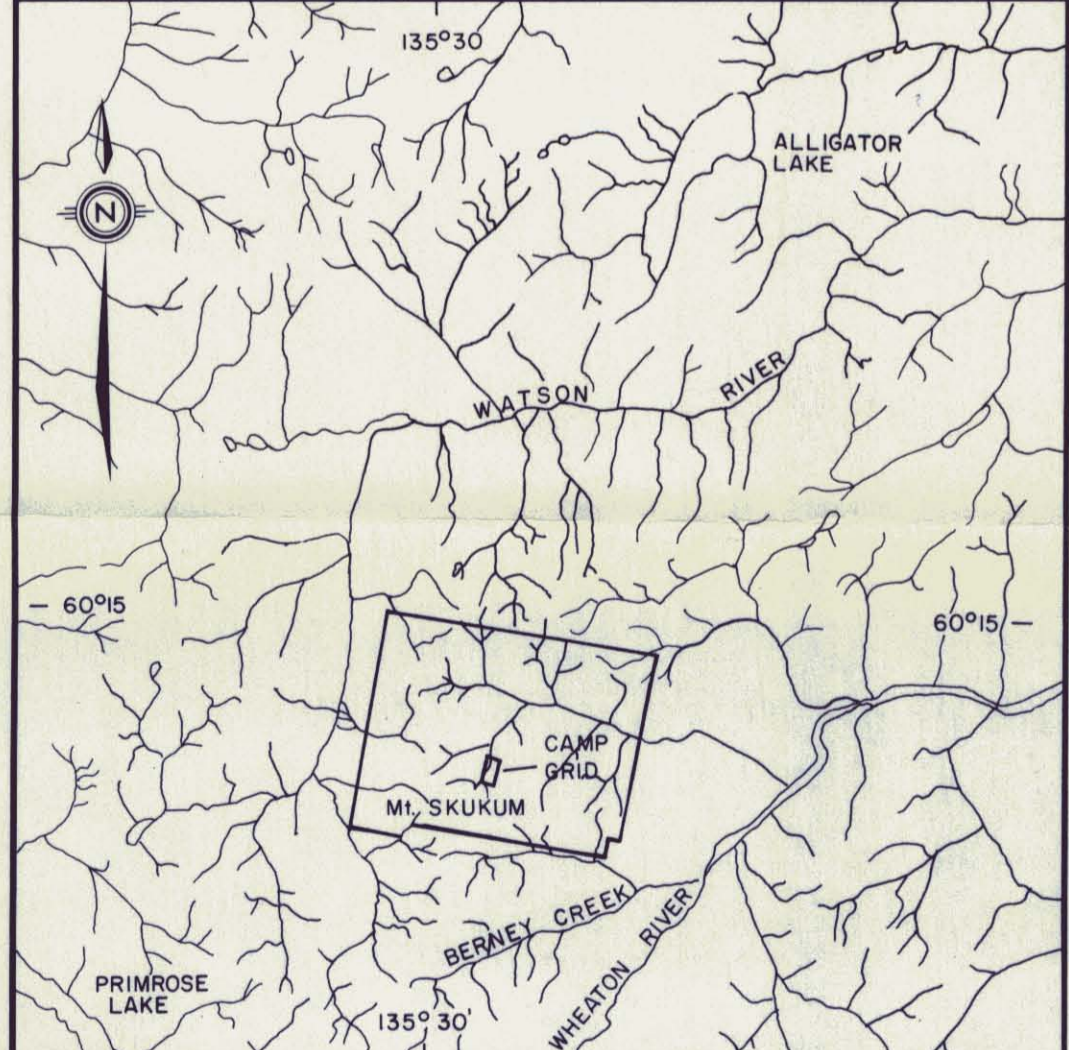
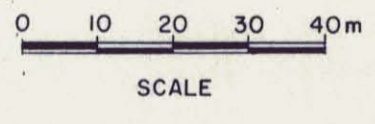
Background 0.2 ppm.

Threshold 0.8 ppm.



5+00N
4+00N
3+00N
2+00N
1+00N
0+00
-1+00S
-2+00S
-3+00S
-4+00S

1+50W 1+00W 0+50W 0+00 0+50E 1+00E 1+50E 2+00E 2+50E 3+00E 3+50E



AGIP CANADA LTD.

MT. SKUKUM 091061
MAIN ZONE-KUKU-15-22
SOIL SAMPLES
SILVER ANALYSES (ppm)
YUKON

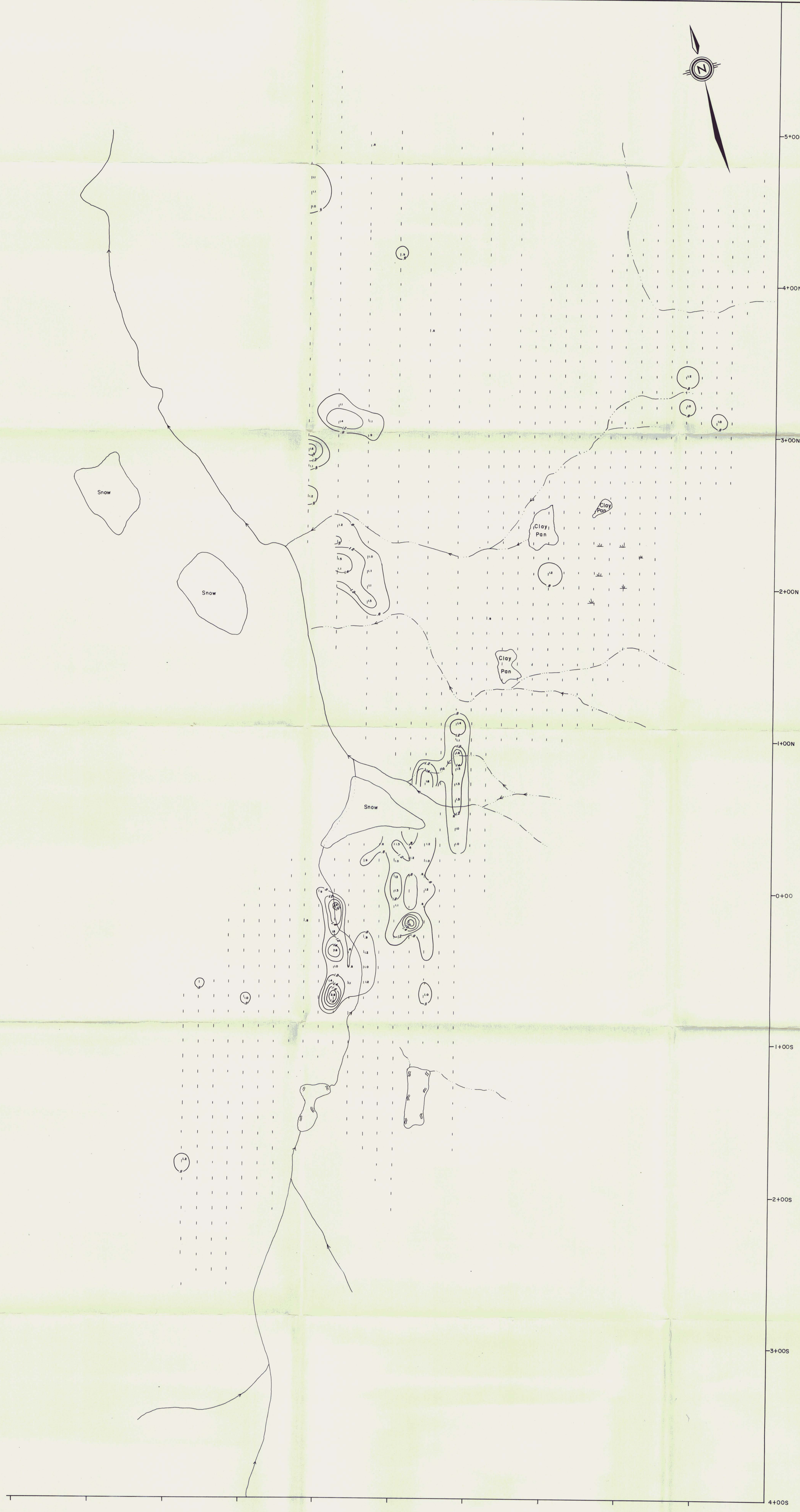
SCALE 1:1000	AUTHOR R A D	DATE Sept. 1981
DRAWN BY S.B.	N.T.S. 105 D/3	FIGURE 6



SYMBOLS

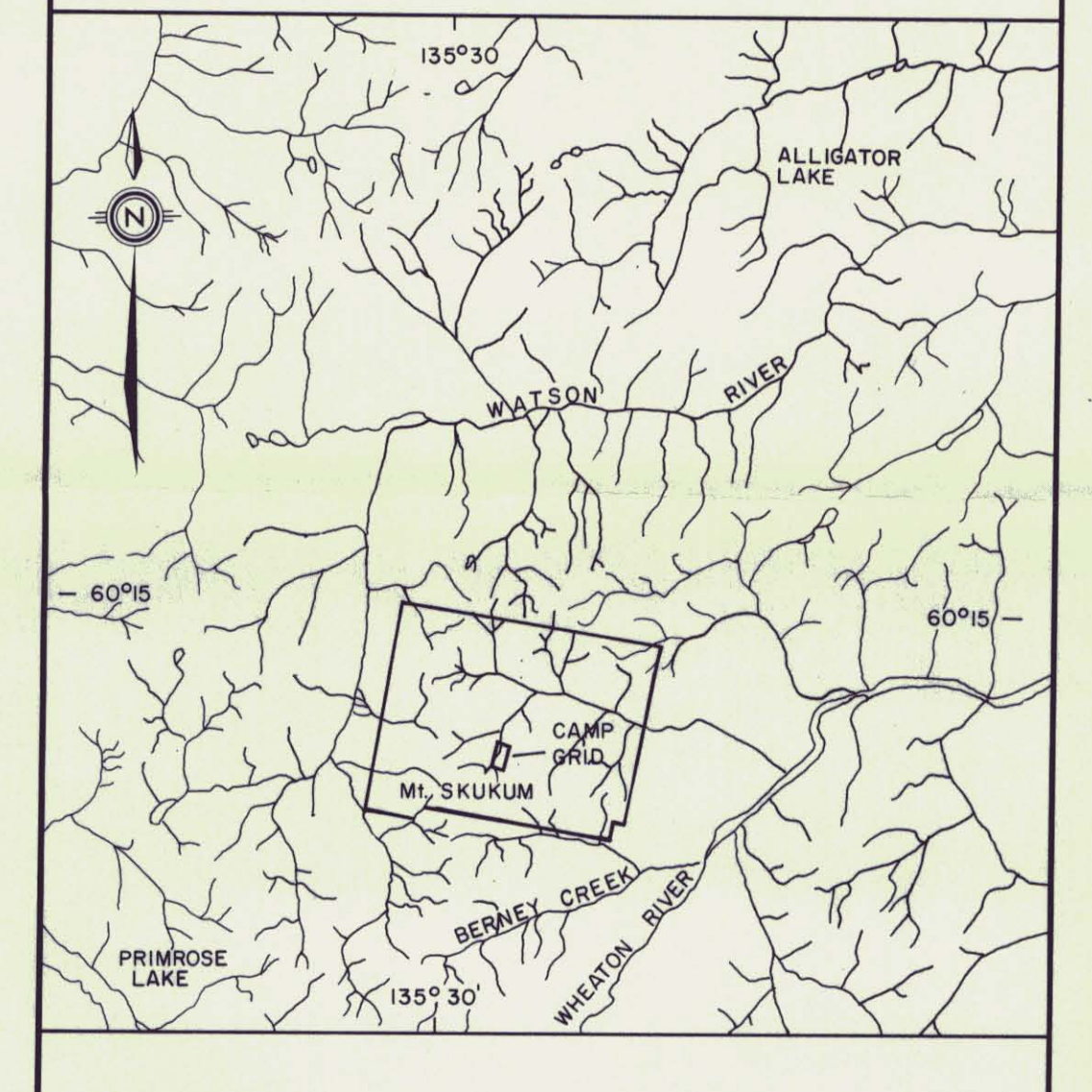
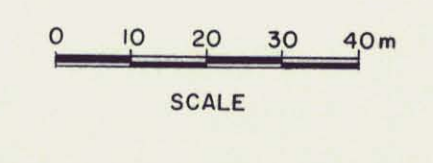
- Stream, intermittent stream
 - Swamp
 - Sample site
- Contour interval :
- 0.8-1.2
 - 1.2-1.4
 - 1.4-1.6
 - 1.6-1.8

Analyses by CHEMEX Calgary
 Threshold value 40 ppb
 Fraction analysed: - 20 mesh



5+00N
4+00N
3+00N
2+00N
1+00N
0+00
1+00S
2+00S
3+00S
4+00S

1+50W 1+00W 0+50W 0+00 0+50E 1+00E 1+50E 2+00E 2+50E 3+00E 3+50E



AGIP CANADA LTD.

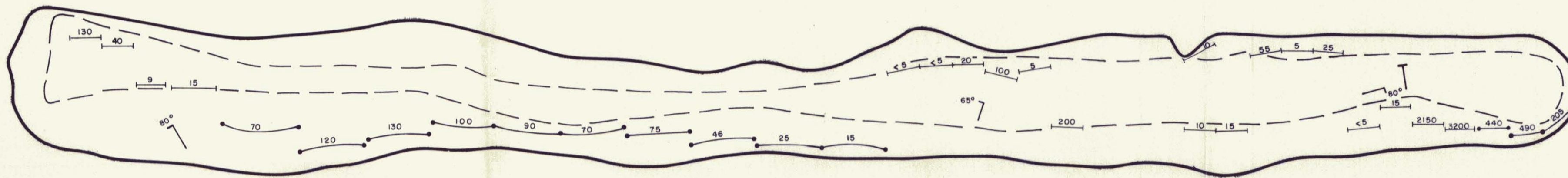
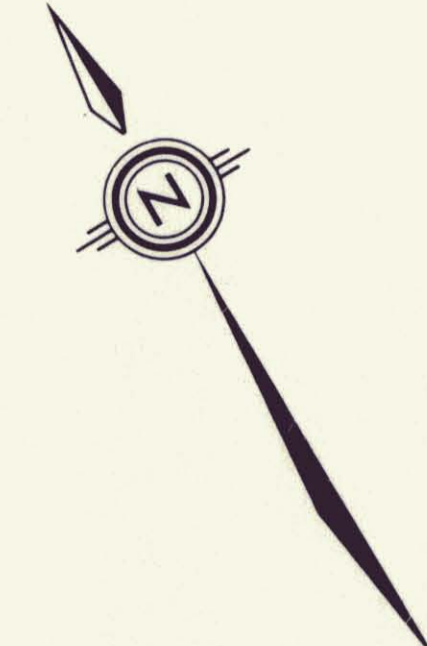
MT. SKUKUM 091061
MAIN ZONE-KUKU-15-22
SILVER ANALYSED SOILS
YUKON

SCALE 1:1000	AUTHOR R.A.D.	DATE Sept. 1981
DRAWN BY S.B.	N.T.S. 105 D/3	FIGURE 6A

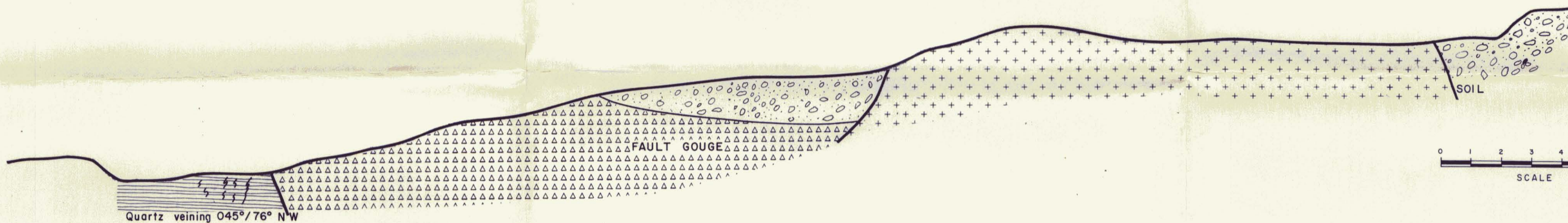
0+80 E

1+00 E

1+10 N

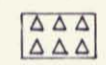
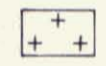




PLAN VIEW



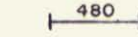






CROSS SECTION (FACING NORTH)

LEGEND

-  Fault gouge
-  Porphyritic Quartz Latite, with very minor Quartz vein and variable 0-1% Pyrite highly silicified and fractured
-  Light grey to brown weathering, blue-green silicified Andesite? Strongly veined with Quartz and with > 1% disseminated Pyrite in matrix
-  Soil colluvium

SYMBOLS

-  Outline of trench
-  Outline of base of trench
-  480 Continuous chip sample gold in parts per billion
-  250 Soil sample interval gold in parts per billion -80 Mesh
-  Joints (inclined, vertical)

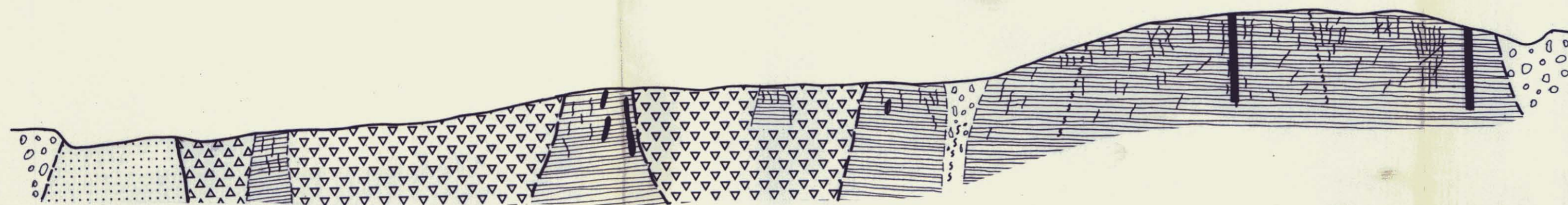
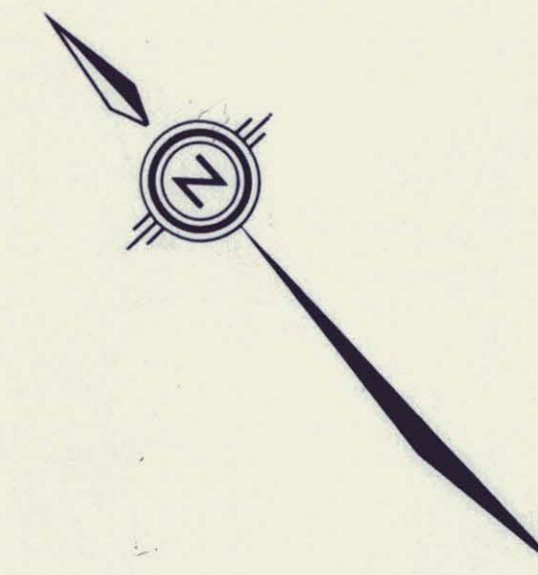
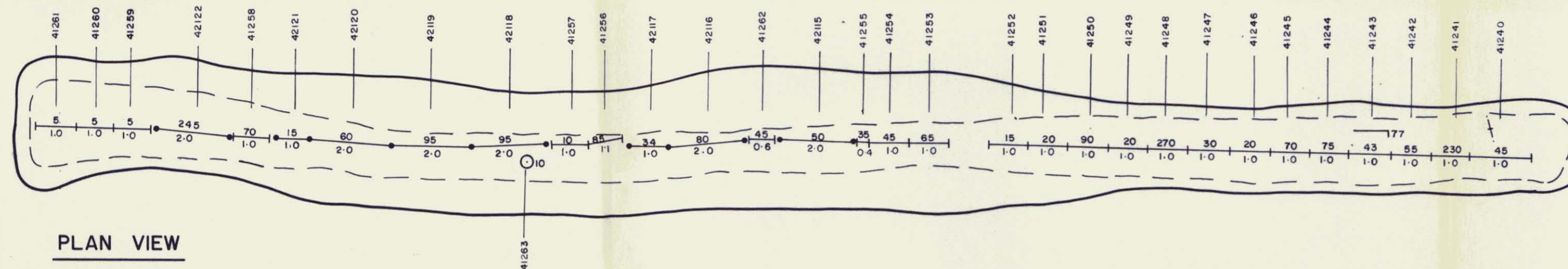
GEOLOGY & SAMPLE LOCATION MAIN ZONE, TRENCH # 3		PROJECT NO. 4008
		SURVEYED BY R. A. D.
SCALE: 1:100		DRAWN BY 
PROJECT: YUKON 091061 MT. SKUKUM		DATE Sept. 1981
 AGIP CANADA LTD.		APPROVED
		FIGURE 7

2+00E

2+20N

2+20 E

2+10N



CROSS SECTION (FACING NORTH)

LEGEND

- Overburden
- Fault gouge, containing milled rock fragments, vein material and gray to yellow clays
- Massive fresh basaltic andesite
- Quartz veins: heavy lines, veins > 10 cm; light lines veins less than 1 cm and millimeter scale net veins
- Pale to brown weathering, blue green silicified andesite Strongly veined with quartz-calcite and with < 1% disseminated pyrite

SYMBOLS

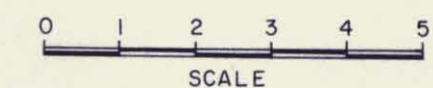
- Strike and dip of quartz vein (vertical, inclined)
- Jointing
- Quartz vug
- Fault
- Geological contact (defined, approximate)
- Au Chip sample, Gold in ppb over interval
- Continuous soil sample, Gold in ppb -80 mesh
- Grab rock sample Gold in ppb
- Outline of trench margin
- Outline of bottom of trench
- Grid lines

2+00E
2+10N

Sample number

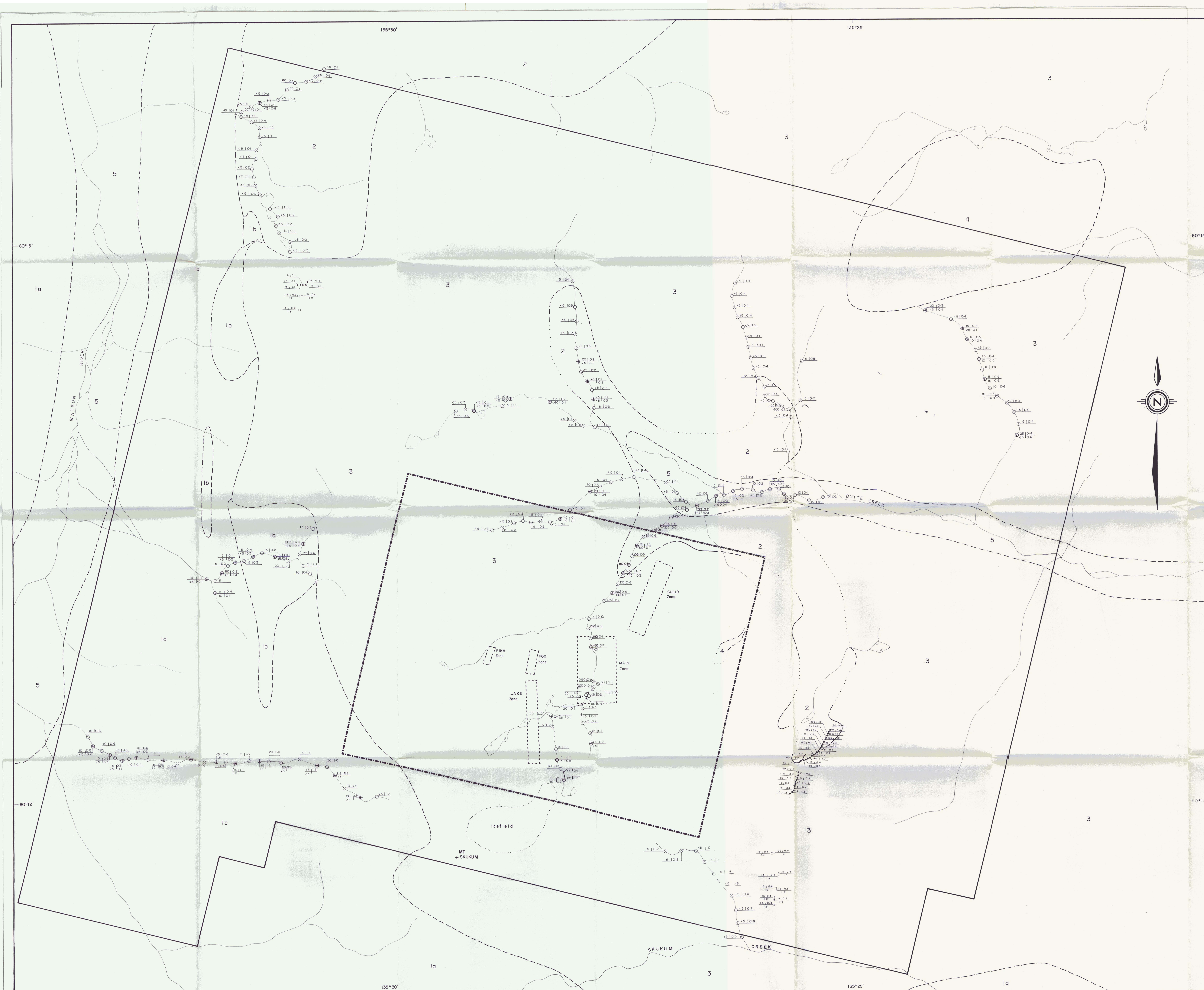
CHIP SAMPLES	TABULATED ANALYSES					
	Sample No.	ppb Au	ppm Ag	ppb Hg	ppm Sb	ppm Cu
41240	45	0.8	110	< 2	5	12
41241	230	1.0	150	< 2	6	8
41242	55	0.8	90	< 2	8	12
41243	45	0.9	80	5	4	10
41244	75	1.2	40	-	8	12
41245	70	1.0	50	< 2	8	12
41246	20	0.6	40	< 2	8	6
41247	30	0.3	40	< 2	7	8
41248	270	0.2	30	< 2	6	6
41249	20	0.6	40	< 2	15	8
41250	90	0.8	20	< 2	40	8
41251	20	0.8	20	< 2	15	12
41252	15	0.4	20	< 2	15	16
41253	65	0.9	20	< 2	10	10
41254	45	1.4	60	4	7	8
41255	35	1.0	60	< 2	6	11
41256	85	1.1	30	< 2	8	10
41257	10	0.6	20	< 2	15	8
41258	70	1.0	30	< 2	12	8
41259	5	0.2	15	< 2	11	8
41260	5	0.2	20	< 2	11	8
41261	5	0.2				
41262	45	1.0				
41263	10	0.6				

Soil Samples	MESH SIZE			
	- 80		+ 80	
Sample No	ppb Au	ppm Ag	ppb Au	ppm Ag
42115	50	0.8	35	0.8
42116	80	1.4	60	2.1
42117	34	1.4	70	0.7
42118	95	1.0	25	0.6
42119	95	0.8	65	0.4
42120	60	0.7	15	0.4
42121	15	0.4	10	0.2
42122	245	0.5	35	0.2



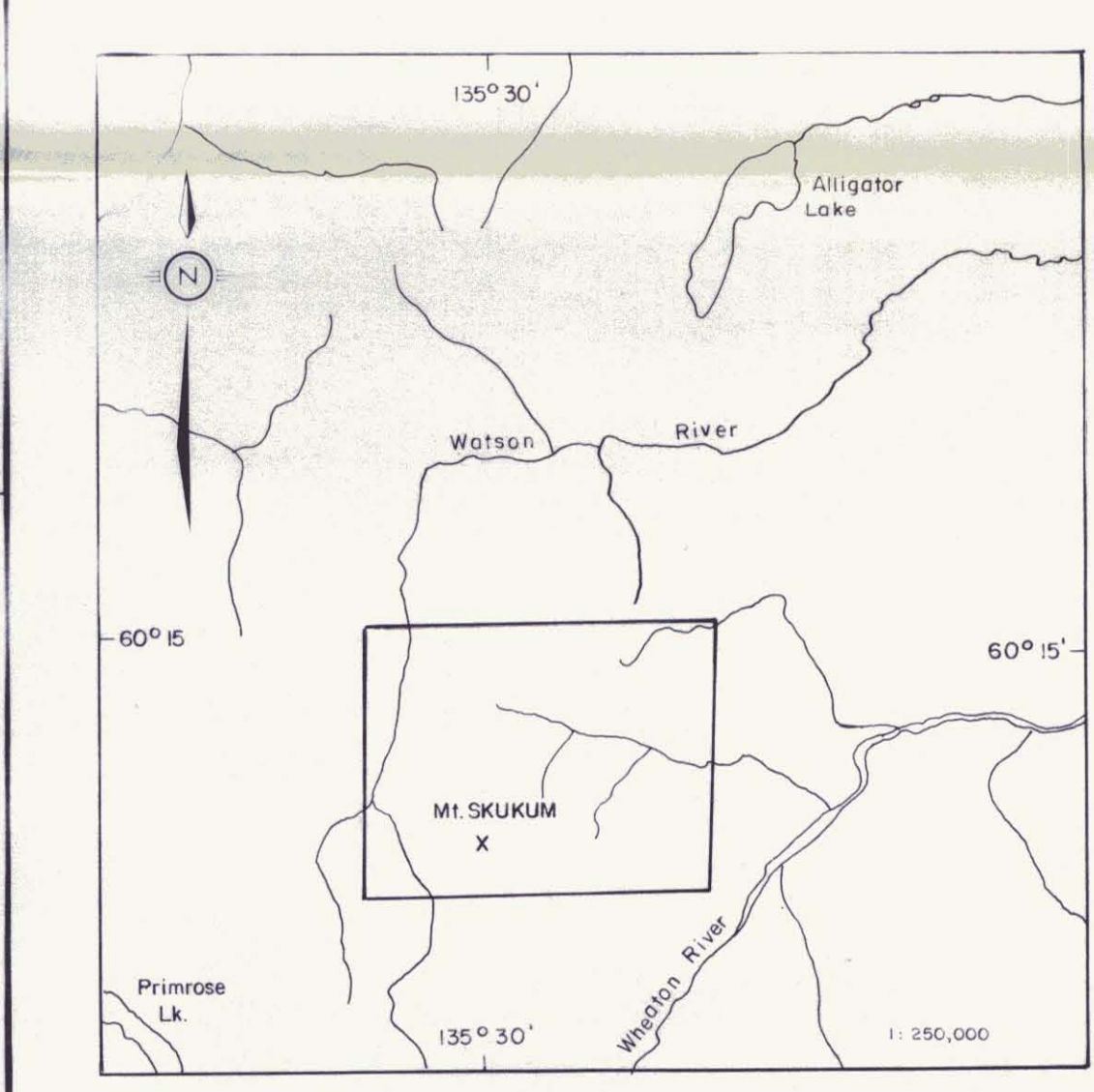
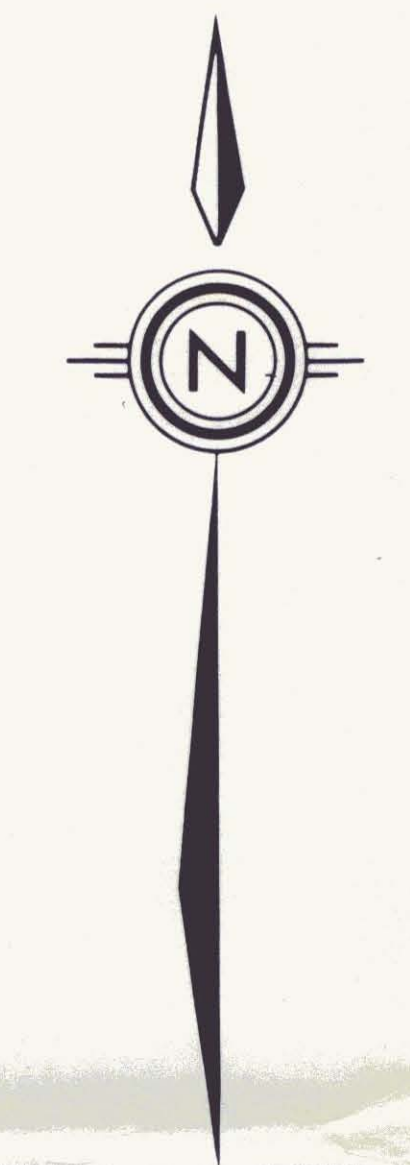
091061
091061

GEOLOGY AND SAMPLE LOCATIONS MAIN ZONE, TRENCH # 4 SCALE: 1:100 PROJECT: MT. SKUKUM-KUKU 19 YUKON	PROJECT NO. 4008
	SURVEYED BY R.A.D.
AGIP CANADA LTD.	DRAWN BY J.B.
	DATE Oct. 1981
	APPROVED
	FIGURE 8



- LEGEND**
- QUATERNARY**
- 5 Alluvium, glacial deposits
- TERTIARY**
- 4 Quartz felspar porphyry
 - 3 Skukum Group-porphyrific andesite, andesitic tuff, felsic tuff, lapilli tuff, rhyolitic flows and dykes.
- CRETACEOUS**
- 2 Coast Crystalline Complex-megacrystic to equigranular hornblende biotite granite to monzonite, minor mafic phases.
- PRE-CAMBRIAN**
- 1 Yukon Group-metasediments Ia quartz biotite gneiss
Ib grey to white marble with minor interbedded quartz-biotite gneiss.

- SYMBOLS**
- Geological contact defined approx., assumed
 - Stream
 - Lake
 - Claim boundary KUKU 1-48
 - Claim boundary KUKU 49-331
 - Soil sample
 - Chip sample
 - Stream sediment
 - Heavy mineral concentrate
 - Stream sediment
 - Heavy mineral concentrate
 - Gold in parts per billion (ppb)
 - Silver in parts per million (ppm)
 - Outline of zone



091061

STREAM SEDIMENT and HEAVY MINERAL CONCENTRATE SAMPLE LOCATIONS GOLD AND SILVER ANALYSES		PROJECT NO. 4008
SURVEYED BY R.A.D.		DRAWN BY G.T.Sc.
PROJECT MT SKUKUM		DATE October, 1981
YUKON		APPROVED
AGIP CANADA LTD.		FIGURE 10