



ASSESSMENT REPORT
SURFACE WORK
GEOLOGICAL MAPPING AND GEOCHEMICAL SAMPLING
MOUNT SKUKUM AREA

091462

KUKU 1-331 CLAIMS
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

JUNE 10TH TO SEPTEMBER 15TH, 1982

By: R.A. Doherty
May, 1983

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1. INTRODUCTION

1.1 General

The Mount Skukum property consists of 477 contiguous Quartz claims covering an area of 99.22 km² in the Wheaton River area of southwestern Yukon.

The property consists of the following claims (Figure 1);

<u>CLAIMS</u>	<u>STAKING DATE</u>
KUKU 1-48	May, 1981
KUKU 49-331	July, 1981
CHIEF 1-71	November, 1981
CHIEF 72-106	July, 1981
WOOF 1-40	August, 1982

In May of 1982 an assessment report was filed on the KUKU 1-48 and KUKU 48-331 claims with both claim blocks forwarded to common renewal date of June 9th. An assessment report on CHIEF 1-71 was filed in November of 1982.

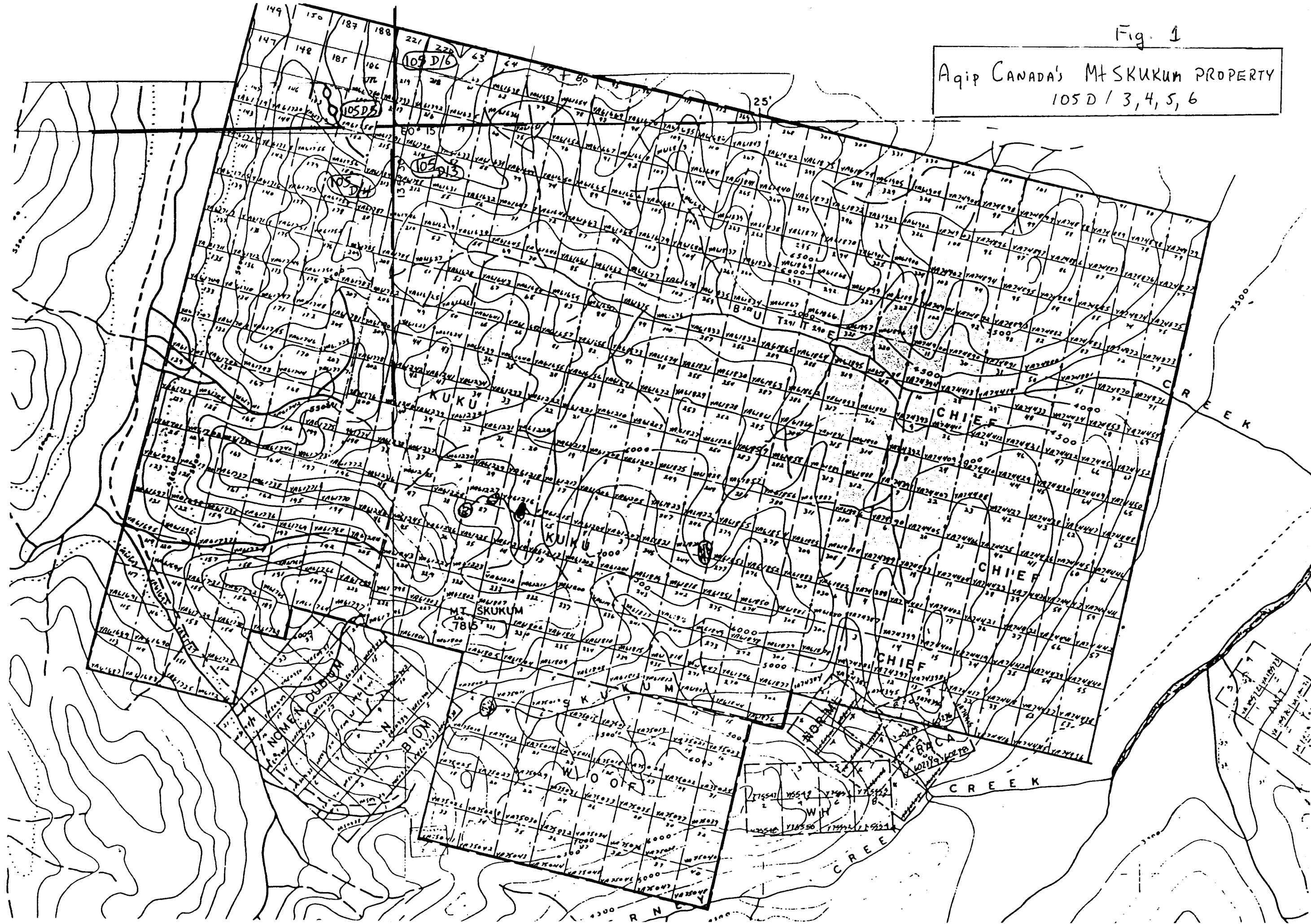
This report describes surface work carried out on KUKU 1-331 during the period June 10th, 1982 through to September 15th, 1982.

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 2). 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.

Fig. 1

Aqip CANADA'S M+SKUKUM PROPERTY
105D / 3, 4, 5, 6

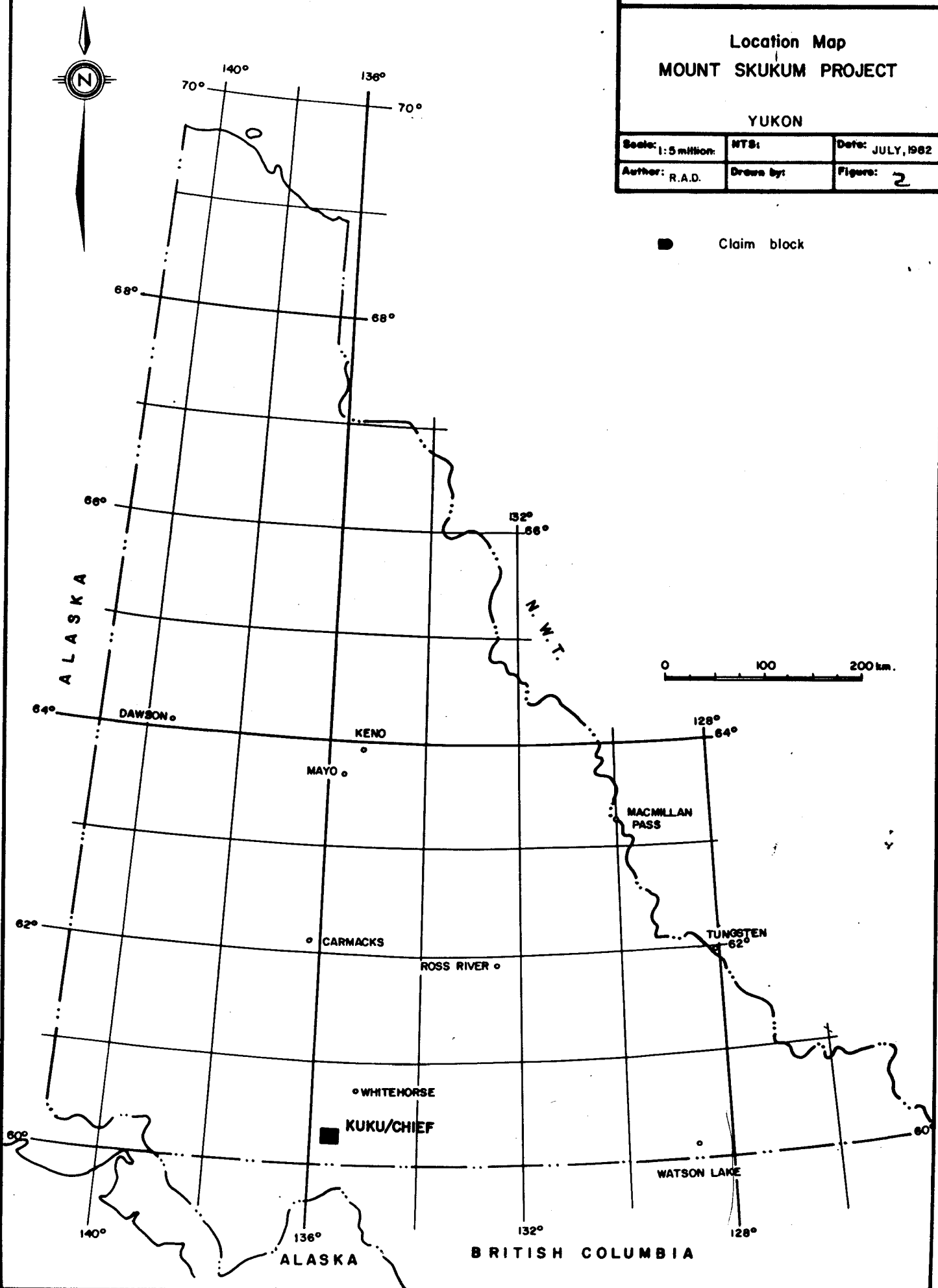


Location Map
MOUNT SKUKUM PROJECT

YUKON

Scale: 1:5 million:	NTS:	Date: JULY, 1982
Author: R.A.D.	Drawn by:	Figure: 2

■ Claim block



Good roads lead from Whitehorse for 65 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. From here a further 15 kilometers of four wheel drive road leads to Mount Skukum. The last 11 kilometers of road was constructed in October of 1982 to access the main working areas.

1.3 Physiography and Vegetation

The Mount Skukum area ranges in elevation from 1000 meters to 2350 meters. The main areas of interest lie 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 kilometer wide circular erosional remnant of Tertiary intermediate to felsic volcanic rocks of the Skukum Group (Figure 3). The Skukum Volcanics are considered part of the Sloko volcanic province

(Aitken, 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 Late 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 flows and pyroclastics, with a greater volume of pyroclastics than flows.

Detailed mapping at 1:10,000 scale over the claim block indicates that two volcanic cycles are preserved within the Skukum Complex. Cycle I consists of laharic breccias and intermediate to felsic, moderately to densely welded tuffs, capped by a thick (>700 m) pile of andesitic tuffs and flows. Cycle II volcanics consist of rhyolite flows, spherulitic flows, lapilli tuff and densely welded rhyolite ash tuffs. Cycle I volcanics, especially the andesites, are thickest at Mount Skukum and the Main Cirque. Cycle II felsic volcanics attain their greatest thickness in the northeast corner of the claim block. This relationship may

reflect separate vent areas for each cycle.

The volcanic stratigraphy at Mount Skukum is broadly correlatable with volcanic stratigraphy in the Bennett Lake Caldera as described by Lambert (1974), with one important exception. The Skukum Complex contains a thick (>700 m) andesitic pile developed at the end of Cycle I. The presence of an andesitic pile with basaltic andesite would suggest that deeper levels of a differentiated magma chamber were tapped.

2.2.2 Cycle I Volcanic Rocks

Volcanics of Cycle I are divisible into a lower laharic breccia, avalanche deposits, lapilli tuffs, moderately to densely welded ash flow tuff and an upper thick (>700 m) andesite pile. The basal unit overlying the Coast Crystalline granites varies from area to area, but is generally either well-bedded, light green to grey andesitic tuffs transitional to sandstone or siltstone, or a basal conglomerate (lahar?) containing a high proportion of angular to subrounded granitic cobbles.

In the northeast corner of the Skukum Complex, the lowermost units exposed are light grey to bluish, moderately to densely welded rhyolite lapilli tuffs which may be part of an older unit.

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 are 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.

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 predominant 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 cryptocrystalline 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 I.

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 southeastern 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 N30°W.

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-lattice dykes, mineralized quartz and carbonate veins and peripheral propylitic alteration related to ascending hydrothermal fluids.

3. EXPLORATION HISTORY

3.1 Previous Work

The Main Cirque at Mount Skukum was staked first by Agip Canada Ltd. Claims held by other companies are located around the southern margin of the Skukum Complex; most are staked over either Au-Ag or Sb-Ag vein systems. In 1967 and 1968 Yukon Antimony undertook a diamond drilling program at Chieftain Hill for porphyry copper mineralization; apparently the core was not assayed for gold.

NAT joint venture (Archer Cathro, Chevron and Armco) controls 22 claims along the southern margin of the Skukum Complex, all of which were staked over gold-silver veins or geochemical anomalies.

Agip Canada has been active at Mount Skukum since 1980 and previous work is summarized as follows:

3.1.1 1980 Season

Regional exploration was carried out in the southwestern Yukon for uranium targets around the Mount Skukum and Bennett lake area.

Because of the obvious potential for precious metal mineralization, samples were also analysed for Au, Ag and other elements. Anomalous gold dispersion trains were detected in the creek draining the Main Cirque. It was concluded that the potential for gold mineralization was high.

3.1.2 1981 Season

On May 27th, 1981, 48 claims (KUKU 1-48) were staked to cover the 1980 silt anomalies. This was followed by 9 days work by a crew of 8 who initiated extensive soil sampling and chip sampling in the Main Cirque. Results were positive and further work done from late July through to September, included mapping, soil sampling, chip sampling, blasting and trenching. This preliminary grid work uncovered highly anomalous gold values in soils and rocks over widely spaced zones. By the end of the 1981 field season, the Main Zone and Lake Zone had been identified as high potential areas for economic vein-type gold-silver mineralization (see Assessment report Geological Mapping, Geochemical Sampling and Trenching, Mt. Skukum Area, May 1982, by A. Doherty).

4. 1982 SURFACE EXPLORATION

4.1 Introduction

Surface exploration included detailed mapping, grid surveying, and geophysical and geochemical surveys. Work was carried out from a base camp in Butte Creek, 2 kilometers north of the Main Cirque.

A crew of between 14 and 22 persons worked out of the camp between May 29th and September 14th, 1982. Logistic support was supplied by a Hughes 500D helicopter on contract from Canwest Aviation in Calgary. Fuel and supplies were trucked into the Wheaton River airstrip and slung to camp with the helicopter.

Both surface mapping at 1:10,000 scale and geochemical sampling (rock and soil) over altered zones and favourable lithologies were carried out over the entire claim block. Detailed mapping at 1:1,000 scale was completed in the Main Cirque and in Middle Cirque.

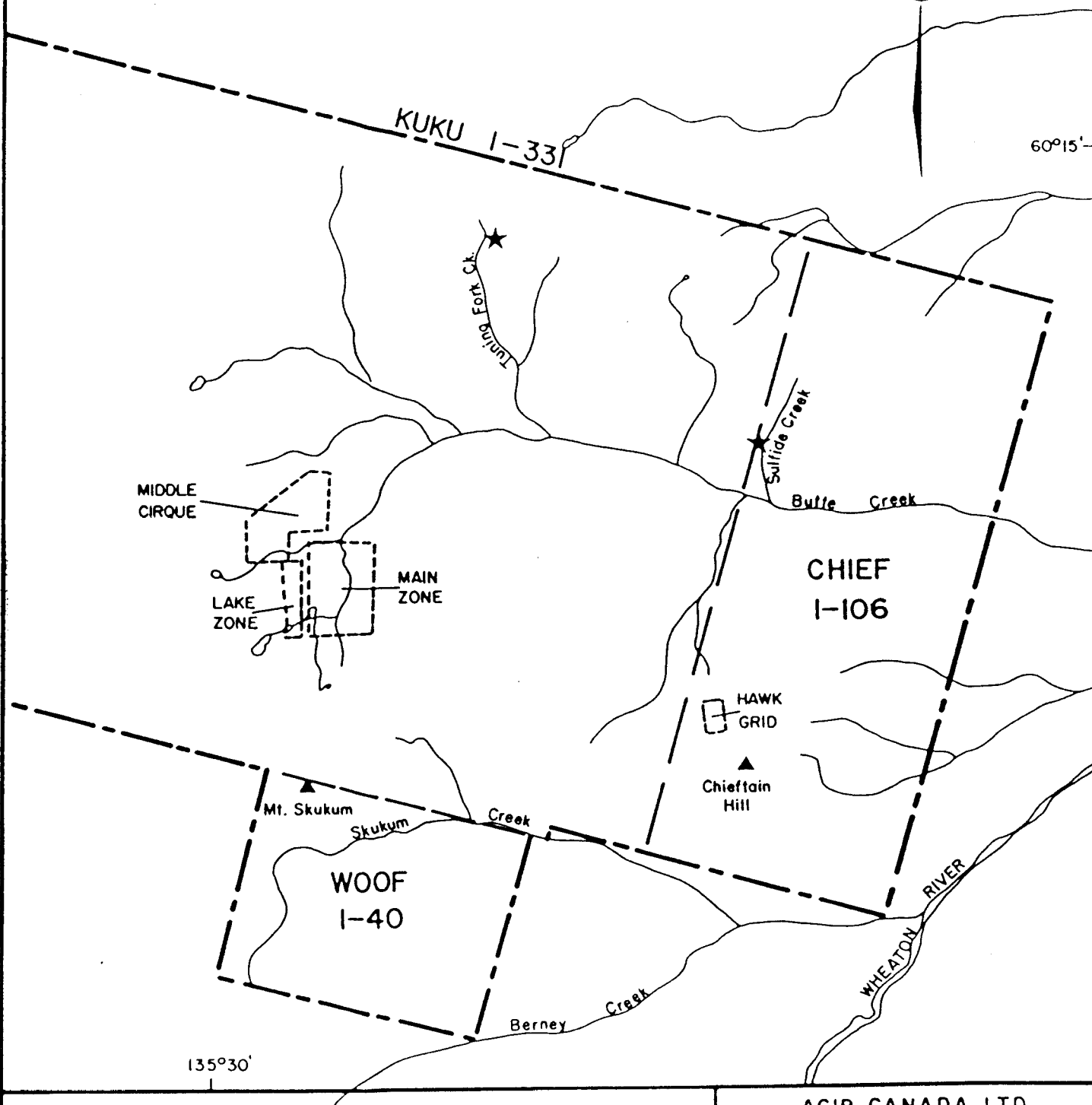
Soil sampling on the Main Zone was extended from baseline westward to the foot of the Lake Zone. A soil grid was also surveyed and sampled on the Gully Zone Plateau northeast of the Main Cirque. Zones mentioned in the text are shown in Figure 4.

4.2 Surface Work, Main Cirque

4.2.1 Main Zone and Grid West

4.2.1.1 Geology

The geology of the Main Zone is presented in Figure 5 and consists of an andesitic pile comprising andesite agglomerate, porphyritic andesite, minor andesitic tuff and basaltic andesite dykes and sills. One large (30-70 m) quartz-latitude dyke traces a



Geochemical Anomaly



Outline of zone



Claim boundary

AGIP CANADA LTD.

MT. SKUKUM

ZONE LOCATION MAP

YUKON

Scale: 1:15,000

NTS:

Date: DEC., 1962

Author: A.D.

Drawn by: J.B.

Figure: 4

curvilinear trend north-south along the Main Zone just east of the creek. The margins of this dyke are commonly brecciated. The quartz latite unit appears to pinch out at 1+00S. Outcrop on the Main Zone is sporadic and bedrock is well exposed only along the creek. Approximately 80% of the area is covered by overburden and grassy meadows. Structural trends were interpolated from surrounding cirque walls.

Quartz-calcite veins are best exposed between 0+00 and 1+00S along the creek where float of the same material was also noted. A number of smaller exposures at 2+00N define a N45°E trend over a strike length of 375 meters. Surface attitudes on veins suggest a steep west dip (80°).

North-south-trending splays off the main vein system are seen in outcrop in the creek north of Trench #3 and around Trench #2. Detailed mapping, soil sampling and magnetometer surveys during the 1982 season have defined a fault zone in the northwest corner of the grid trending N30°E. The zone hosts mineralized quartz calcite veins at the northwest end.

4.2.1.2 Geochemical Sampling

Chip sampling on the Main Zone during 1982 was very limited. Trenches #2 and #3 were re-sampled, as were outcrops along the creek between 0+00 and 1+00S. Results are presented in Figure 5 and 6. Re-sampling of Trench #2, returned two gold values of 20.9 g/t and 7.03 g/t, each over 1.0 meters, and one sample of 3,850 ppb Au over 1.0 meters. Maximum silver assay is 10.5 ppm over 1.0 meters corresponding with 7.03 g/t Au (Figure 6). Chip samples across veins along the creek at 1+00S returned high assays of 12.4 g/t Au over 0.20 meters and 19.7 g/t Au over 0.5 meters. Two chip samples 15 meters and 20 meters north of 1+00S alongside the creek returned 182 g/t Au over 0.12 meters and 63.8 g/t Au over 0.25 meters respectively (Figure 5).

Soil samples were collected from cat trenches along the trend of the Main Zone, but only the cat trench at the east end of Trench #3 returned significant values (up to 900 ppb Au; see Figure 7).

Soil sampling on the west side of the baseline was extended to the Lake Zone cliffs. Figure 8 presents a compilation of 1981 and 1982 soil sampling on the Main Zone, grid east and west. A large area of anomalous gold in soils was defined over the northwest portion of the grid. The high values (3,845 ppb Au, 3,410 ppb Au) are over three times as high as the maximum soil values recorded in the Main Cirque in 1981. The trend of this anomaly is coincident with a N30°W fault zone inferred from geology and magnetometer surveys. Chip samples of vein material from the northwestern end of this zone returned 46.5 g/t Au over 0.35 meters and 14.4 g/t Au over 0.5 meters. This mineralization represents a potential new zone between the Main Zone and Lake Zone.

4.2.2 Lake Zone

4.2.2.1 Geology

The Lake Zone forms the west wall of the Main Cirque and is located west of 4+00W on Figure 5. Lithologies exposed on the Lake Zone consist of porphyritic andesite, blocky andesite tuff, and basaltic andesite sills. A striking feature of the Lake Zone is the strong propylitic alteration assemblage dominated by epidote, chlorite, and pyrite. The bedded units in the Lake Zone dip gently to the west. The base of the Lake Zone cliffs is presumed to mark the trace of a steep normal fault with the east side downthrown.

Veins on the Lake Zone are exposed irregularly over a 400 meter strike length, with possible extensions to over 700 meters. At the south end of the zone, a 10 x 6 x 4 meter pod of quartz and calcite displaying coarsely lamellar and colloform texture outcrops.

Numerous small (5-30 cm) apophyses of vein and stockwork of quartz and calcite cut the surrounding andesite wallrock. North of the pod, intermittent veining can be traced to 0+25S, 4+25W on a N14°E trend. The veining here commonly consists of quartz and chalcedony or quartz $\pm$ calcite. In the central part of the zone (at approximately 3+00S) a rose-pink euhedral mineral, possibly rhodonite, occurs.

The system appears to branch into two separate veins at the north end of the zone; the upper vein is a 20 to 40 centimeter quartz-calcite vein and the lower zone consists of greenish-grey chalcedonic quartz stockwork, with small (1-3 cm) aphanitic wall-rock fragments. Small discontinuous veins of quartz and calcite have been located south of the zone (8+50S to 9+50S), but returned only background values (see Figure 6).

4.2.2.2 Geochemical Sampling

Chip sampling across the vein and adjacent wallrock indicates that the veins carry high grade gold values but that grades drop dramatically to background values within wallrock. A compilation of high assay values is presented in Figure 5, and other samples are plotted on Figure 6.

Chip sampling along the vein returned a high value of 159.56 g/t Au over 0.3 meters at 3+00S, the area containing the rhodonite (?). An average of 11 high assays along the 400 meter zone returned a grade of 27.8 g/t Au over an average width of 1.0 meters.

The two branching or separate vein systems outcrop on line 0+50S between 4+25W and 4+50W. The lower zone returned assays of 41.0 g/t Au over 3.5 meters and 32.3 g/t Au over 0.14 meters, approximately 12 meters apart. The upper zone returned 3 high assays within 20 meters; 78.07 g/t Au over 0.2 meters, 69.3 g/t Au over 0.3 meters, and 33.9 g/t Au over 0.3 meters (Figure 5).

4.3 Gully Zone Plateau

The Gully Zone Plateau is a possible continuation of the Main Zone. Because the zone has no exposed outcrop, a soil grid was surveyed and sampled. The results are presented in Figure 9.

4.4 Middle Cirque

4.4.1 Geology

Middle Cirque is a broad open cirque/valley northwest of the Main Cirque. Grid co-ordinates in Middle Cirque are surveyed from 0+00 on the Main Grid.

Figure 10 presents the geology and chip sample geochemistry from Middle Cirque. Lithologies are similar to the Main Cirque and consist of porphyritic andesite, porphyritic andesite breccia, andesite flow breccia, andesite lithic tuff, andesite dykes, basaltic andesite dykes or sills, and quartz latite and related felsic dykes.

Alteration and veining define a weak but persistent zone which trends between N35°E and N45°E, and which extends over 1000 meters.

Veining consists of weak multiple quartz $\pm$ calcite stockworks and less commonly of massive quartz and calcite veins. Alteration within the andesite is mainly propylitic (dominated by epidote and to a lesser extent pyrite) and silicification. Some evidence - slickensides and gouge - suggests that the veined zone is fault-controlled.

4.4.2 Geochemical Sampling

A number of chip and grab samples were collected along the zone. Four samples returned high gold values. A 0.5 meter chip sample at 5+00N, 8+50W returned 2.7 g/t Au; a grab sample at 6+00N, 8+50W returned 2.2 g/t Au; and two grab samples near 8+00N, 6+00W returned 4.3 g/t Au and 3.2 g/t Au respectively.

4.5 Tuning Fork Creek

Tuning Fork Creek is located approximately 4 kilometers north of the Main Cirque (Figure 4). The geology consists of Cycle I and Cycle II intermediate to felsic lithic and lapilli tuff, cut by quartz-latitude dykes and a Late Tertiary felsic dome (Figure 3). A number of fluorite + chlorite veins have been located around the felsic dome. The veins contain milky white quartz and euhedral (0.5 mm) green to yellow fluorite crystals. Open space cavities in the veins suggest that other minerals, either calcite or chlorite, have weathered out. The veins show strong multiple banding textures. A long, 20 meter wide, barren "bull" quartz vein occurs at the junction of the east and west branches of Tuning Fork Creek. These two types of veins are probably genetically unrelated, either to each other or to veins in the Main Cirque.

One vein at the top of the west fork returned analyses of 9.2 g/t Au and 15 g/t Ag (Figure 6). Soil samples on the east branch of Tuning Fork Creek returned a maximum of 60 ppb Au. Further prospecting and sampling is required in this area.

4.6 Sulfide Creek

Sulfide Creek is approximately 3 kilometers east of Tuning Fork Creek (Figure 4). It cuts through a highly altered and pyritized section of Cycle II volcanics which consist of rhyolitic, lithic ash fall, and welded tuffs intruded by a quartz-latitude dyke (see Geology, Figure 3). From a distance, this zone displays strong orange and grey to blue weathering colours due to alteration. Veining has not been located to date, but calcite-filled vugs and matrix calcite are present.

Soil samples collected on reconnaissance traverses across highly altered volcanics near the quartz-latitude dyke have returned consistently anomalous values (Figure 7). The highest value, on the slopes northwest of the creek, was 2620 ppb Au. A total of 45 samples was collected at 25 meter intervals over a distance of 1100 meters, for an average value of 206 ppb Au. Soil lines higher in the slopes returned background values. This area requires more detailed work. The general lack of vein material or obvious faulting suggests a possible disseminated gold source.

4.7 General, KUKU 1-331

Mapping, soil and rock geochemistry and prospecting were carried out over zones of alteration and/or structural trends throughout the entire claim area (see Figures 7 and 9).

5. REFERENCES

- Aitken, J.D., (1955): Atlin, British Columbia; Geol. Surv. Can., Paper 54-9.
- Lambert, M.B., (1974): The Bennett Lake Cauldron Subsidence Complex, British Columbia and Yukon Territory; Geol. Surv. Can., Bulletin 227.

APPENDIX A
SAMPLING AND ANALYTICAL METHODS

Soil and Talus Fine Samples

Soil samples were collected on soil grids and talus fine samples below cliffs and outcrops showing evidence of veining or alteration. Soil grid samples were collected at 25 m intervals; talus fine samples were collected on contour lines at 20-50 m horizontal spacing.

Samples were collected using small collapsible 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 and moil 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.

Analytical Methods (as detailed by Bondar-Clegg, Whitehorse)

Samples collected were analysed for gold and silver. Analyses were done by Bondar-Clegg Laboratories in Whitehorse and/or Vancouver.

Soil samples are dried and sieved to -80 mesh. Rock chip samples are pulverized and a split of the -100 mesh fraction is analysed.

Gold analyses are by fire assay techniques, a 10 g sample is mixed with flux and heated in the fire assay furnace. The molten mixture is then poured and the lead button containing the metals is separated from the slag. The button is then placed in a cupel and heated so that the lead is removed and the noble metals remain behind as a small bead.

The bead is transferred to a test tube and treated with nitric acid followed by aqua regia to dissolve it completely. The solution is then analysed for gold by atomic absorption using standards with a similar matrix.

Silver is analysed using a hot nitric acid digestion. A sample weighing 0.5 gm is placed in a test tube and 1.5 ml HNO_3 is added and the sample is heated in a hot water bath for one-half hour. Then 0.5 ml of HCL are added and the sample is heated for 1 1/2 hours further. The sample is then diluted with 10 ml water and allowed to settle. The sample is then analysed by atomic absorption using standards.

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
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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
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KUKU 330 YA 61904
KUKU 331 YA 61905

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

APPENDIX C
STATEMENT OF COSTS

Surface Work - KUKU 1-331, June 10th to September 15th, 1982

1. Colour Air Photography - 1:20,000 scale colour photographs flown over KUKU 1-331 and CHIEF 1-102 on August 13, 1983 by McElhanney Surveying and Engineering Services.

Total cost (includes 3.0 hours helicopter time to set out grid targets) is \$5,000.00

KUKU 1-331 \$11.5 x 331	\$ 3,806.50
-------------------------	-------------

2. Analytical Costs - KUKU 1-331

1,173 soil samples analysed for Au, Ag @ \$8.60	\$10,087.80
---	-------------

293 rock chip samples analysed for Au, Ag @ \$10.60	<u>3,105.80</u>
---	-----------------

Total analytical costs	\$13,193.60
------------------------	-------------

3. Helicopter Costs

June 10th to September 15th, 1982, Hughes 500D helicopter on contract from Canwest Aviation at \$505/hour including fuel

a) Transporting crews to and from traverses

83.0 hours x \$505	\$41,915.00
--------------------	-------------

b) Transportation of personnel and samples to and from Whitehorse, supplies and equipment

51.0 hours x \$505	<u>\$25,755.00</u>
--------------------	--------------------

Total helicopter costs	\$67,670.00
------------------------	-------------

4. Labour, Surface, mapping, sampling

J.A. Climie, Exploration Manager, 7 days @ \$208/day	\$ 1,456
F. Perfido, Asst. Exploration Manager, 4 days @ \$182/day	728
R. Robertson, Senior Geologist, 17 days @ \$182/day	3,094
D.R. Eaton, Chief Geophysicist, 17 days @ \$177/day	3,009
R. Tykajlo, Geophysicist, 18 days @ \$140/day	2,520
R.A. Doherty, Project Geologist, 47 days @ \$130/day	6,110
A.D. McLaughlin, Geologist, 34 days, @ \$140/day	4,760
P. Mudry, Geologist, 14 days @ \$135/day	1,890
P. Van Angeren, Geologist, 11 days @ \$135/day	1,485
R. Arthur, Senior Assistant, 58 days @ \$95/days	5,510
M. Balog, Senior Assistant, 42 days @ \$83/day	3,486
K. Bertrand, Senior Assistant, 62 days @ \$83/day	5,146
J. Haase, Senior Assistant, 16 days @ \$95/day	1,520
P. Ferri, Senior Assistant, 11 days @ \$95/day	1,045
K. Coswan, Surveyor, 42 days @ \$105/day	4,410
A. Beales, Intermediate Assistant, 30 days @ \$81/day	2,430
C. Malboeuf, Intermediate Assistant, 54 days @ \$78/day	4,212
A. Rousseau, Intermediate Assistant, 15 days @ \$88/day	1,320
B. Scott, Intermediate Assistant, 5 days @ \$88/day	440
J. Morris, Junior Assistant, 55 days @ \$57/day	3,135
R. Farrar, Junior Assistant, 68 days @ \$63/day	4,280
O. Taronna, Junior Assistant, 46 days @ \$47/day	2,162
S. Eldridge, Junior Assistant, 10 days @ \$63/day	630
M. Laing, Junior Assistant, 10 days @ \$63/day	<u>630</u>

Total man days = 693, Total labour \$ 67,928

5) Camp and Field Costs

a) Food costs estimated at \$20/manday	
KUKU 1-331 693 mandays x \$20	\$ 13,860
b) Field supplies (fuel, generator, camp supplies)	11,030
c) Cooks wages (cook and bull cook) prorated	<u>7,098</u>
Total camp costs	\$ 31,988

TABULATED SURFACE COSTS

1. Colour Air Photography	\$ 3,806.50
2. Analytical Work	13,193.60
3. Helicopter Costs	67,670.00
4. Labour Costs	67,928.00
5. Camp and Field Costs	<u>31,988.00</u>
Total Surface Costs	\$184,586.10

APPENDIX D
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.

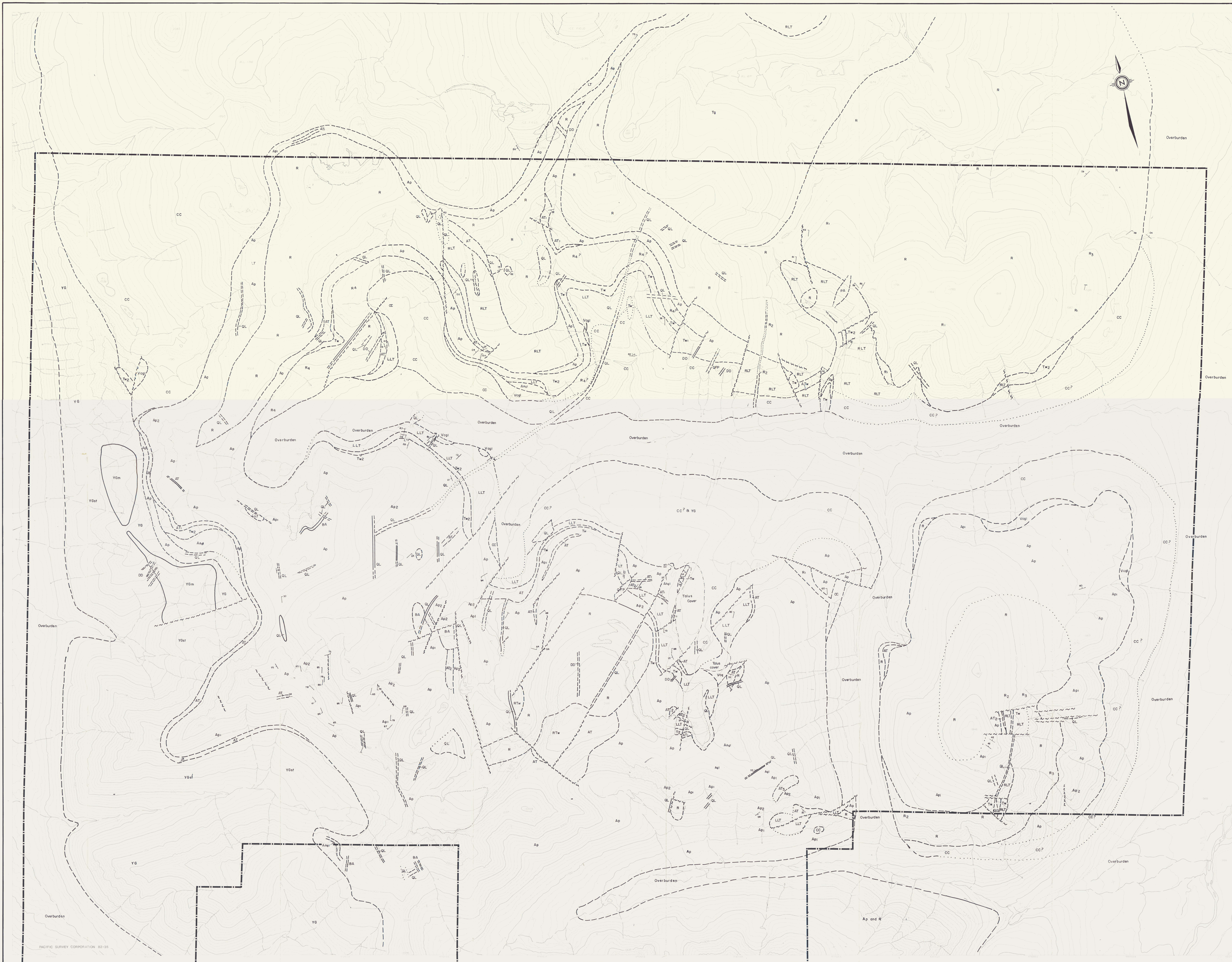
That I obtained a Bachelor of Science degree with Honours in Geology from the University of New Brunswick at Fredericton in 1977 and carried out graduate studies at Memorial University, St. John's, Newfoundland.

That I have been engaged in mineral exploration on a full-time and part-time basis for nine 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 Calgary Mineral Exploration Group and of the Canadian Institute of Mining and Metallurgy.

Signed at Calgary, in the Province of Alberta, this 10th day of May, A.D., 1983.


R. Allan Doherty



LEGEND

QUATERNARY

DD Diabase dikes and sills

TERTIARY

Tg Microgranite

QFP Quartz Feldspar Porphyry

SKUKUM GROUP

QL Quartz Latite and related dykes and sills

RTw Welded Rhyolite Tuff

R Rhyolite

R1 - grey to purple, green; flow banded, spherulites auto-brecciated
R2 - massive red to grey; siliceous
R3 - rhyolite tuff
R4 - light pink to red-brown; massive, distinct basal Jasper unit

RLT Rhyolite Lapilli Tuff - yellow weathering, recessive, tuffaceous character not always present, may be partly welded

BA Basaltic Andesite

Ap Andesite

Ap1 - massive

Ap2 - flow breccia

AAp Andesite Agglomerate

Tw Welded Tuff - felsic to intermediate

Tw1 - move-brown color (possibly hematitic); usually strongly welded

Tw2 - lower unit, partially welded, commonly highly altered and fractured, pink-red color

LLT Lithic Lapilli Tuff - yellow to yellow green, surface color; cliff forming, basement clasts common, moderately welded

AT Andesite Tuff

AT1 - well bedded, green to move color, - tuffs and epiclastic sediments

AT2 - blocky Andesite Tuff

AT3 - move colored, fine grained andesite tuff

Vog Volcanic Conglomerate

CRETACEOUS

CC Coast Crystalline Complex - granite, monzonite, granodiorite

PROTEROZOIC-PALEOZOIC

YG Yukon Metamorphic (Group) Complex

YGst - quartz biotite schist

Ygm - marble

SYMBOLS

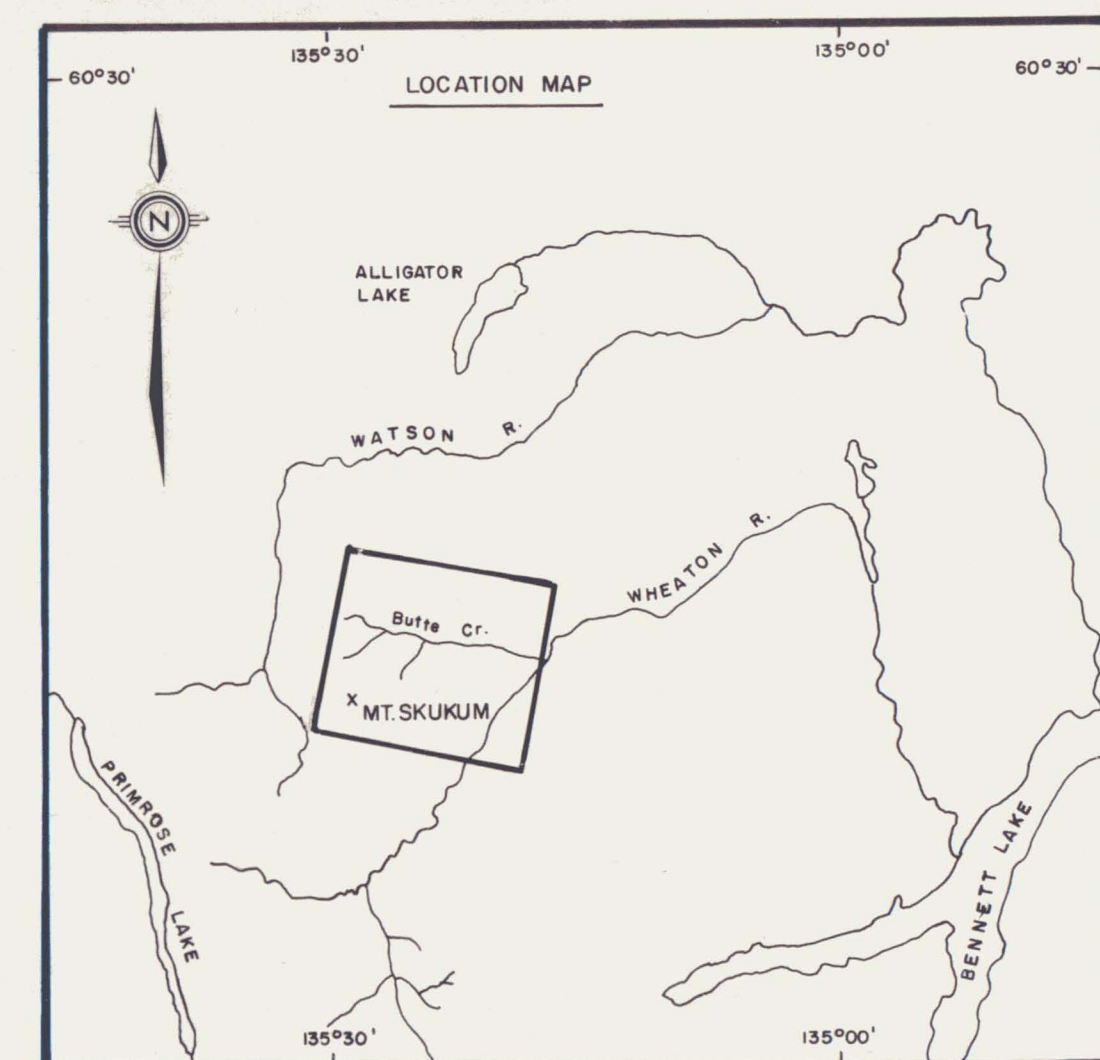
Geological contact (defined, approximate, assumed)

Fault

Claim block boundary

Bedding

Jointing (vertical, inclined)



AGIP CANADA LTD.

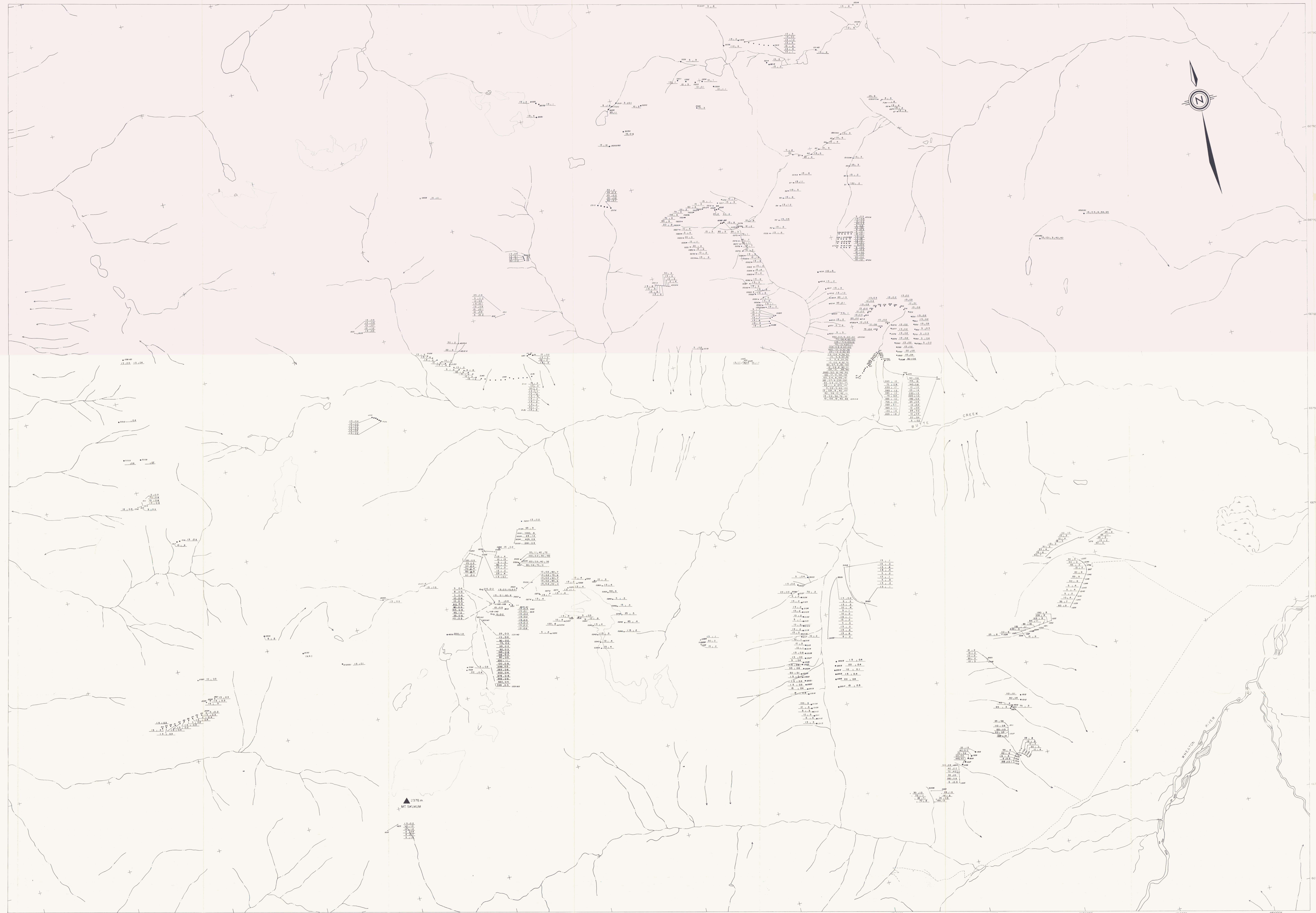
MT. SKUKUM

KUKU 1-331, CHIEF 1-102

Yukon

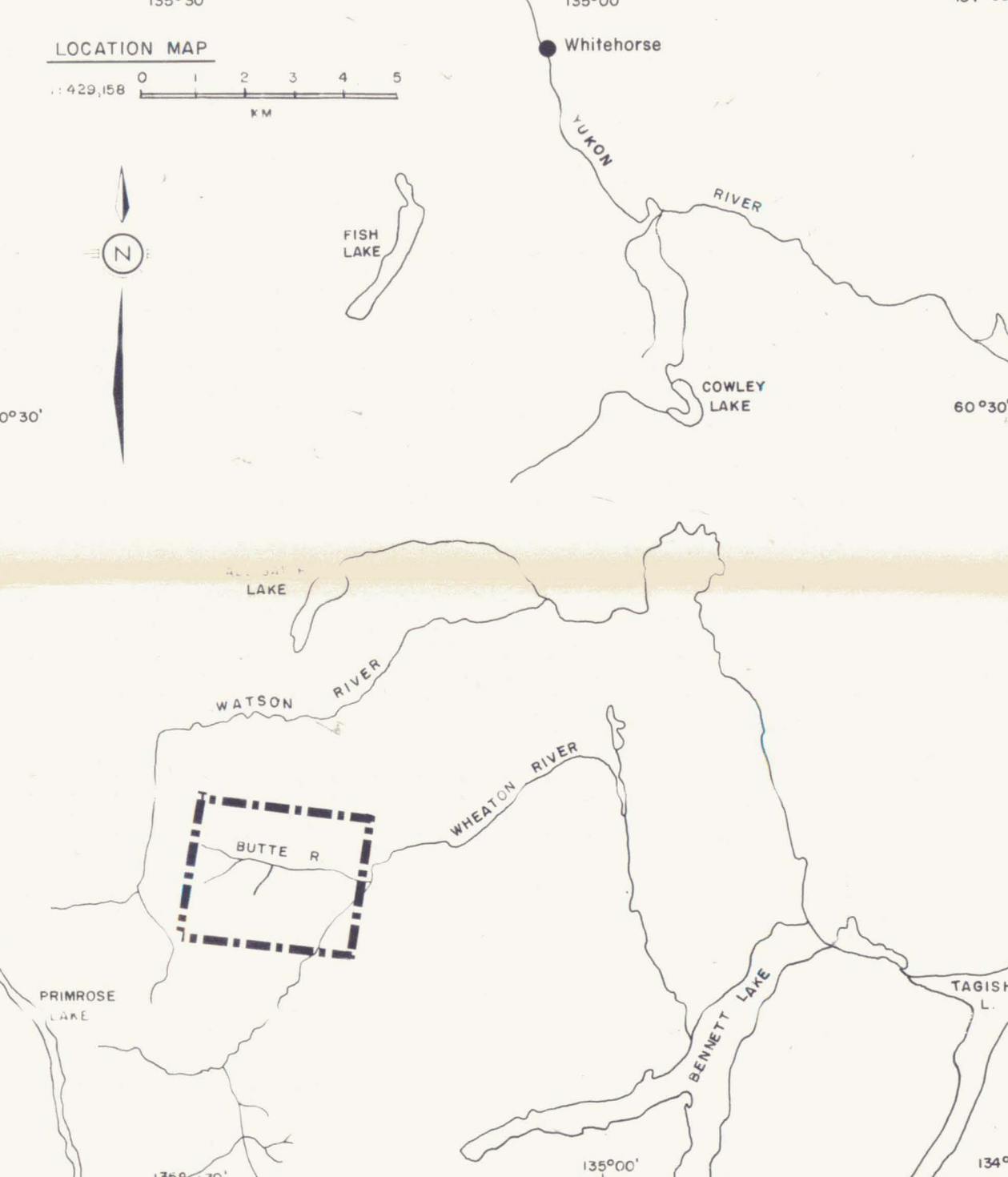
GEOLOGY

SCALE: 1:50,000	AUTHOR: J.A. D. W.A.	DATE: NOV. 1982
DRAWN BY: GTS	N.T.S.	FIGURE: 3



LEGEND

- Creek
Ice Field
Swamp
- Soil sample
• Au, Ag
Au, Ag, Hg, As
Au, Ag, Cu, Pb, Zn
- All values in ppm, except Au, Hg which are in ppb



0 100 200 300 400 500 METERS

091468

SOIL GEOCHEMISTRY

PROJECT MT. SKUKUM

LOCATION



AGIP CANADA LTD.

PROJECT NO. 400680

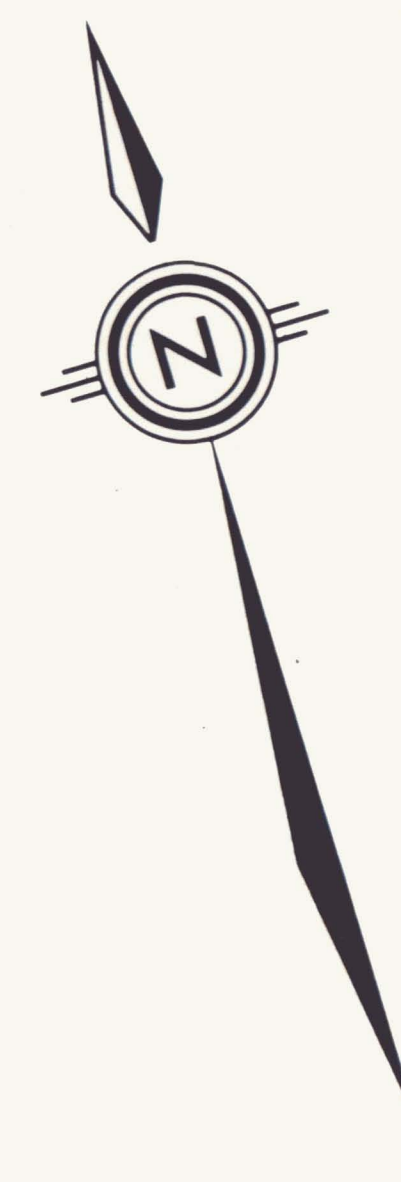
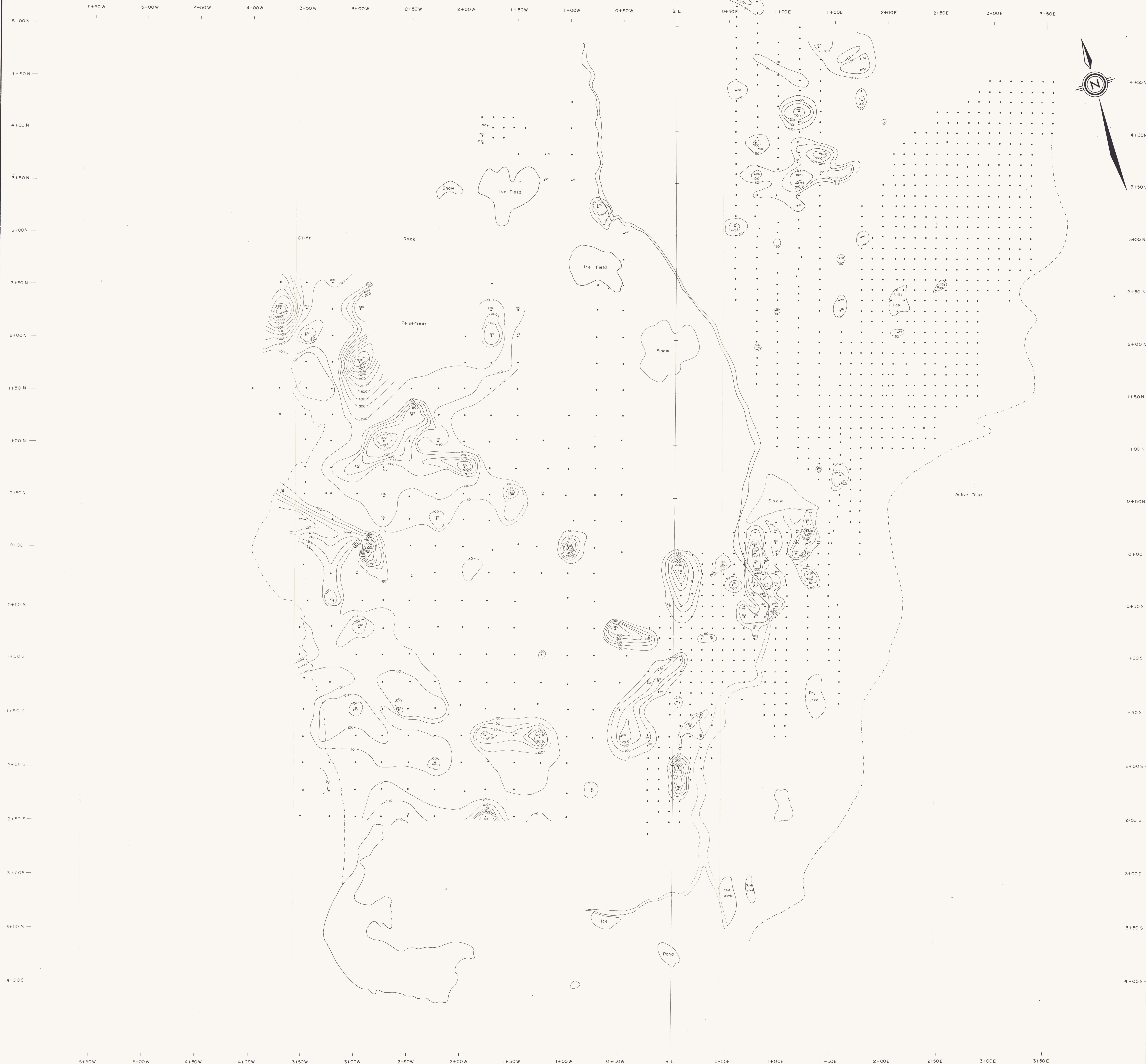
SUPPLIED BY ORTHOPHOTO

DRAWN BY GTS

DATE 1982

APPROVED

FIGURE 7



LEGEND

Soil Sample Location

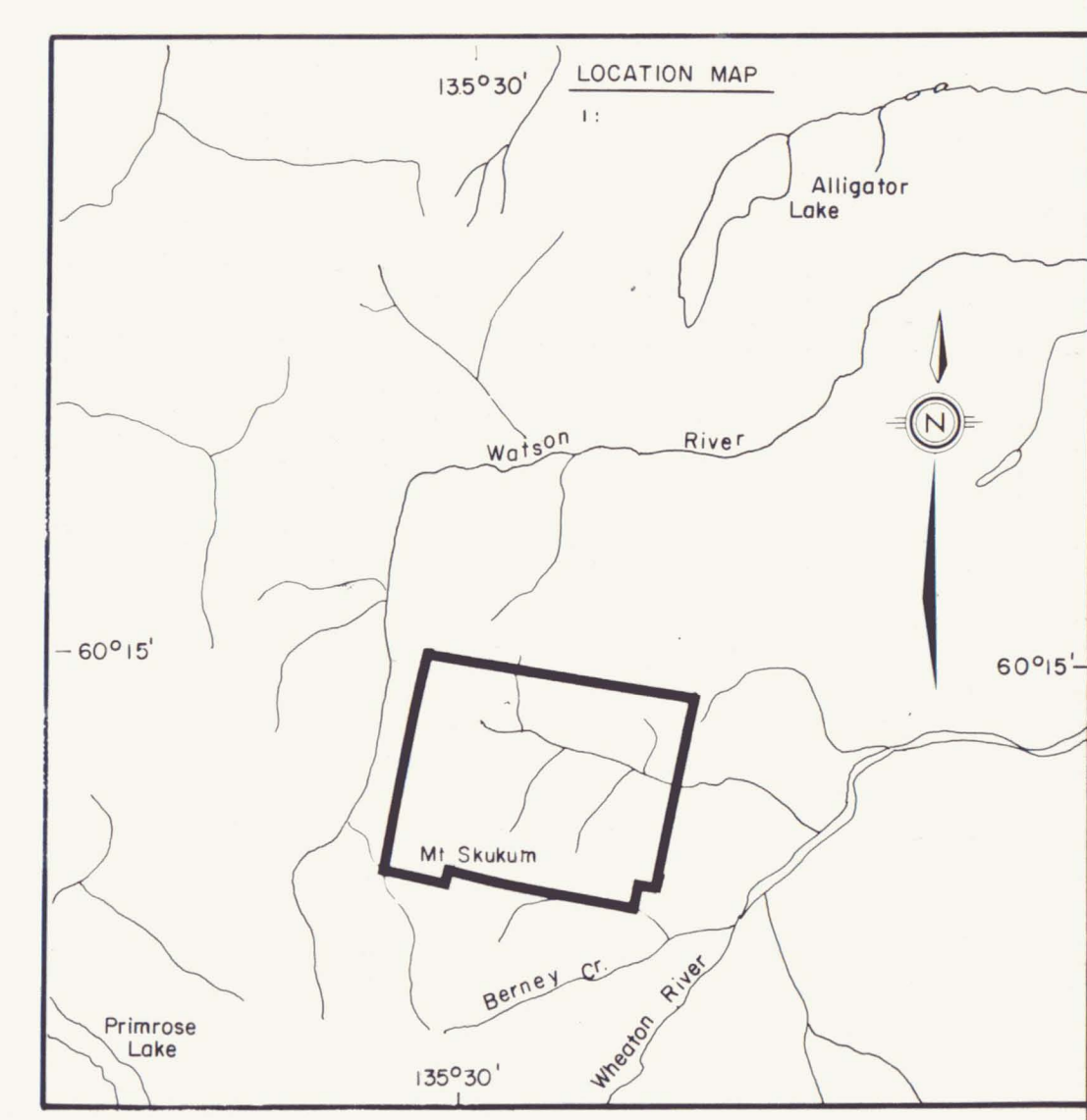
Contour Interval for 25 m Sampling below 500 ppb — contours at 100 ppb intervals
for 10 m Sampling (i.e. East side of map) contours at 50, 100, 200, 500, 1000 ppb intervals

Combined 1981, 1982 Data
1981-10 m sample intervals
1982-25 m sample intervals

All Analyses by Boulder-Clegg (Fire Assay) except samples 5/7 0+50W to 0+50E which were done by Chromex Labs.

- 50-500 ppb
- 501-1000 ppb
- 1001-2000 ppb
- 2001-3000 ppb
- > 3000 ppb

0 10 20 30 40 50
metres



AGIP CANADA LTD.		
MT. SKUKUM YUKON		
091462		
CONTOURED SOIL GEOCHEMISTRY Au (ppb)		
SCALE: 1:1,000	AUTHOR: R.A.D.	DATE: 1982
DRAWN BY: G.S.	N.T.S.	FIGURE: 8

5+00 N —

4+50 N —

4+00 N —

3+50 N —

3+00 N —

2+50 N —

2+00 N —

1+50 N —

1+00 N —

0+50 N —

0+00 —



1+00 W

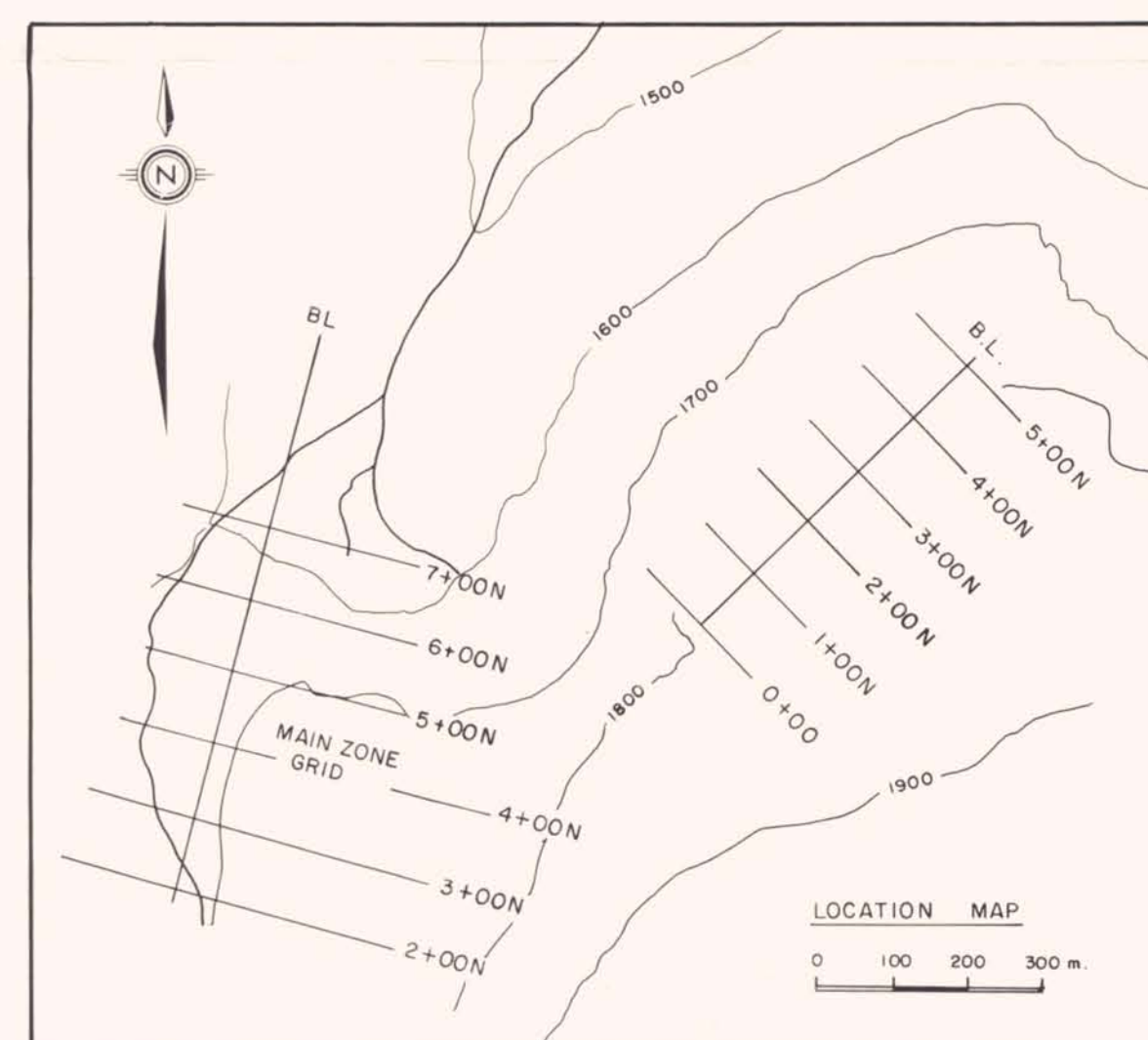
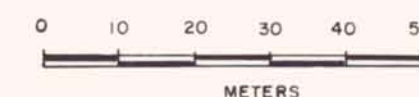
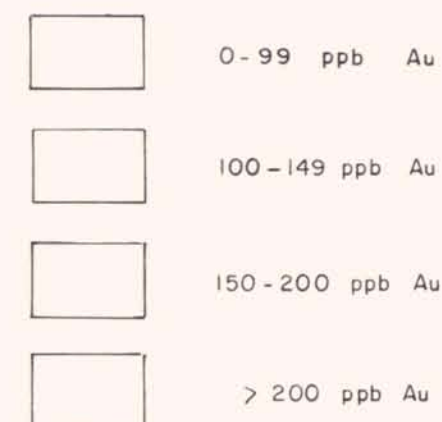
0+50 W

B.L.

0+50 E

1+00 E

LEGEND



AGIP CANADA LTD.

MT. SKUKUM
GULLY ZONE PLATEAU
Soil Anomaly (Au)

091462

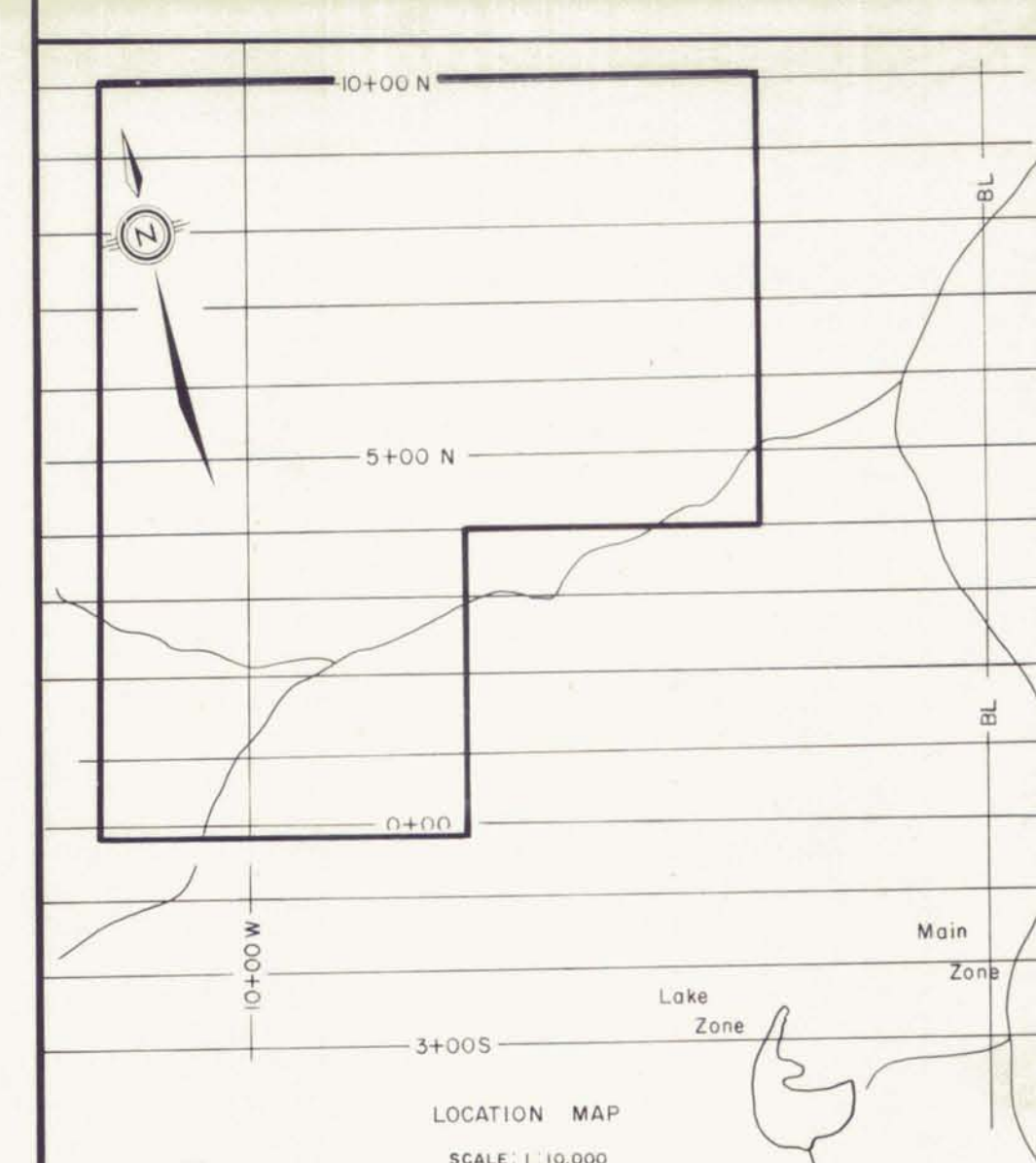
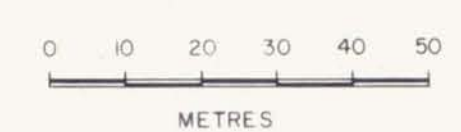
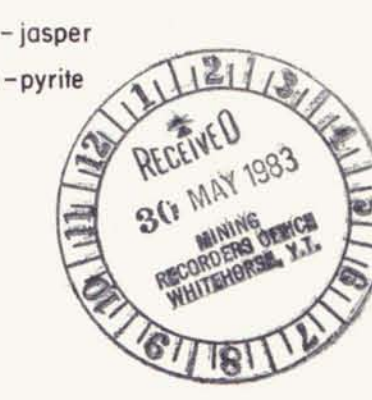
SCALE: 1:1000	AUTHOR: A.D.	DATE: Nov, 1982
DRAWN BY: G.T.Sz.	N.T.S.	FIGURE: 9



- LEGEND**
- | | |
|------|--|
| Ap | Porphyritic Andesite |
| Apbx | Porphyritic Andesite Breccia |
| ATB | Andesite Flow Breccia |
| ATL | Andesite Lithic Tuff |
| AD | Andesite Dykes |
| BA | Basaltic Andesite |
| OL | Quartz Latite and Related Dykes and Sills |
| DAp | Dacite-Andesite-Porphyritic, Felsite Dykes, Dacite Dykes |
| QCV | Zone of quartz or quartz-calcite |
| QCS | veining |
| QCS | stockwork |

- | | | |
|-----------------|----------------|-------------|
| epi - epidote | hem - hematite | sp - Jasper |
| sil - siliceous | chl - chlorite | py - pyrite |

- SYMBOLS**
- | | |
|---|-------------------------------|
| — | Bedding |
| — | Jointing (vertical, inclined) |
| — | Rock chip sample |
| — | Rock grab sample |
| — | Fault (approx, assumed) |
| — | Outcrop (defined, felsomeer) |
| — | Talus boundary |



AGIP CANADA LTD.

MT. SKUKUM-Middle Cirque

GEOLOGY & GEOCHEMISTRY

001462

SCALE: 1:1000 AUTHOR: AD/KB/PJA/MS DATE: December/1982

DRAWN BY: JB N.T.S. FIGURE: 10