Tillei Lake
Glacial Till Project

Yukon Mining Incentives Program
Grassroots – Grubstake Proposal - 2002
Grant # 02-085
For Prospecting and basic exploration work

Watson Lake Mining Division
NTS map sheets 105 H Francis Lake
Claim map sheets 105H 11, 12, 13, 14
Latitude and longitude. centered on 61 45' / 129 30'
One Target area (five subsections)

Work completed by Jeff Boyce, Alynne Iversen, Melanie Mott
August to Sept 2002

Author Jeffrey D Boyce

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Glacial Till Project

Summary

From August to September of 2002 Jeff Boyce and two Field Assistants undertook a program of basic prospecting and exploration work directed at appraising the Au and Base metal potential of the region around Tillei Lake We applied new Glacial Till sampling methodology and interpreted glacial flow direction through study of existing surficial maps and new field observations This effort was made to generate new mineral targets and discoveries in an large area with scarce outcrop and no minfile references

Targets were based on airborne magnetic anomalies from government regional geophysics data referenced to geological mapping, regional minfile occurrences, and a positive record of mineral discoveries in the greater area

Numerous deposit models were considered for elements Au, Ag, Pb, Zn, Ba, Cu, Mo, W Such as Skarn, Porphyry, Vein and Sedex deposits

As the goal was to identify potential targets for focused exploration, we used a three pronged strategy
-Prospecting with rock sampling, and random stream sediment sampling when creeks were encountered
-Extensive regular stream sediment sampling of all creeks draining areas of prospective geology (or of areas thought to have potential of hidden prospective geology)
-Running widely spaced lines of Glacial Till samples across the deduced glacial ice flow direction

This prospecting and exploration activity took place over the period of August & September and of 2003

Table of Contents:

Introduction:

Property description:

This Project looked at areas without current mineral claims or proposed or enacted First Nation Land claims (A or B lands)

In the Selwyn Basin, eastern Yukon, just north of the east arm of Francis lake

Target area:

Situated to the east of the main road from Watson Lake to Ross River Approximately a 15 km radius around Tillei lake

Mining division	Watson Lake Mining Division
Claim map sheets	105H 11, 12, 13, 14
NTS map sheets	105 H Francis Lake
Latitude and longitude	centered on 61 45' / 129 30'

Access –route and method of transportation:

- Access from Whitehorse is via the Alaska Highway to Watson Lake Then up the Watson Lake to Ross River road to Finlayson Lake (where the truck was stored in Inconnu Lodge's locked parking area)
- Access at this point would be via float plane (the Beaver from Inconnu Lodge) to Tillei lake
- From camp access to target areas was by boat or on foot

Physiography of the region is a mixture of

- a large lake (Tillei) with shorelines sloping moderately uphill
- A few bench foothills and in the south a large area of lower rolling hills to 1556 m elevation interspersed with numerous (less than 1km in any direction) swampy areas
- In the northern half of the target area a slope further rising with increasing steepness to peaks and ridges formed of resistant units (intrusives) up to 1813m in the northeast and to 1895 in the northwest
- Drainages that exit the map area flow south into the Pelly River
- Some of the creeks draining into the lake have very large wide valleys with prominent depositional fans
- The entire target area is covered with Glacial till of varying thickness as Veneer or Blanket

Climate typical climate for the eastern Yukon with sunny summer mornings being the norm, then inevitable showers from afternoon storm cells, which both remain isolated and coalesce in larger local storms

Vegetation Mature forest of fairly closely spaced trees with moderate to dense undergrowth making cross country travel average to difficult (especially on west facing shores) Most low plateaus and valley bottoms consist of mixed white and black spruce with an understorey of willow and dwarf birch The exception being the large burn from the previous summer where black ash, standing deadwood and the occasional swampy grass patch make travel conditions ideal

Work Program:

Exploration History:

This area has been consistently explored in the last 100 years with occasional bursts of intense activity on a current metal (or metals) in high demand (ie Uranium, gold, lead-zinc-silver, or more recently, Tungsten)
This coverage is represented by the abundant Minfile occurrences in the immediate area (ie in the same structural / tectonic / sedimentary regimes) (within 20 km of Tillei Lake)
There are 20 Skarn type Minfile occurances (W, Mo,Pb, Zn,Cu,V, Ag)
4 Porphyry Minfile occurances (Cu, W, Mo)
2 Vein Minfile occurances (Ba, Pb, Zn, Ag)
3 Sedex Minfile occurances (Zn, Pb)

Current Program:

Reason / Rationale for project:

The target area was chosen for its high mineral potential based on historical mining, anomalous RGS data, Minfile occurrences, geologic mapping, aeromag anomalies, and accessibility

Specifically, the variety of showings in the area (Skarn, Vein, Sedex, Porphyry, etc) reflect very good prospecting ground with wide ranging economic potential

The RGS data supports this

Area #1 is based on a multi-element anomaly (Sn predominant)

area #2 is based on a multi-element anomaly (Au, Zn, Pb, Cu, As, including a Fe/Cu showing)

area #3 is based on a multi-element anomaly (Au, Zn, Pb, Cu, Ni, As, Co, Fe, U, Sn, including an anomalous Mo / U Till Sample)

area #5 is based on a multi-element anomaly (Zn, Sn, Ni, U, H, Sb)

Please see attached RGS data map of Au values

Geophysical Anomalies:

There are aeromag highs and lows where one would expect them to the north and north east of Tillei lake which are an expression of outcropping units 15, 16, 1 and 2 **(please see attached geology and aeromag maps)**

What is not explained by geology is the large, anomalous, aeromag high to the southwest end of Tillei Lake This is important data because I believe it is the signature of a sub surface intrusive, most probably unit 15 (monzonite, granodiorite, diorite, gneiss) with the same mineral potential as the northern area 3

I have called this area 4b as a sub-area of area 4

Forest fire exposure:

Last summer there was a 1603 hectare fire off the south west end of Tillei This gives a single-summer window of opportunity to prospect previously heavily vegetated and forested land and find usually hidden outcrop **(see attached 2001 fire map)**

5 strengths / advantages this type of project had over past exploration programs

- **Till geochemistry** - with the advent of this new methodology low lying, swampy areas, such as found to the west, south and east of Tillei lake (labeled as Till blanket / Till veneer) can now be successfully prospected
  This was proven over the last two summers by with Jeff Bond's regional Till Geochemistry program in the Finlayson Lake map area 105H (and by the previous Faro pilot project) Having worked a season with Jeff, I have competent training to use Till sampling to explore the land area, around southern Tillei Lake, which is characterized by scarce outcrop, no mineral showings nor minfile occurrences
  During grass roots exploration there is bias towards large easy to map outcrops, and I feel previous prospectors have preferentially chosen the high areas rather than walk the targeted low areas

Bonus – We found that for most every day walking the traverses during the Till Geochemistry program, we had new discoveries of outcrop or even mineralization (the Spice claims) to show for it This stems from the simple fact that a till sampling traverse is planned over very different ground than a typical prospecting day

- **Better geochemistry today** - advances leading to lower detection levels and a larger suite of elements means a better geochemical tool for exploration than in the past

- **Heap Leach** - recently, there is an increased viability of large low-grade gold/ Cu/ etc deposits due to the technological advances of heap-leach extraction (greater recovery and lower costs) Today areas, which were passed over by prospectors looking for high-grade veins, may now have significant potential

- **New deposit models** - See above under deposit (Sedex, etc), "hidden" mineralization of a Carlin deposit, fine-sheeted veinlets of a Fort Knox style deposit, or skarn mineralization such as found at the McQuestin property, may have been misunderstood or overlooked by earlier prospectors

- **Access** - Lastly, the target area is not in conflict with any proposed or current Protected Area Lands or First Nations Land Claims, and yet is close enough to be economically connect to a major all season haul road

Prospecting Targets:

We were looking for the following minerals: Au, Ag, Pb, Zn, Ba, Cu, Mo, W found in an extensive variety of deposit types (as research showed, all are represented in Minfile occurances in the immediate area around Tillei lake)

There are 20 **Skarn** type Minfile occurrences (W, Mo,Pb, Zn,Cu,V, Ag)
4 **Porphyry** Minfile occurrences (Cu, W, Mo)
2 **Vein** Minfile occurrences (Ba, Pb, Zn, Ag)
3 **Sedex** Minfile occurrences (Zn, Pb)

Prospective Deposit types.
Please see the Appendix for detailed descriptions taken from the BCGS website

W SKARNS
K05
Mo SKARNS
K07
Pb-Zn SKARNS
K02
Cu SKARNS
K01
Au SKARNS
K04

PORPHYRY Mo (Climax-type)
L08
PORPHYRY W
L07
PORPHYRY Mo (LOW-F-TYPE)
L05
PORPHYRY Cu+/-Mo+/-Au
L04

SEDIMENTARY EXHALATIVE Zn-Pb-Ag
E14

BESSHI MASSIVE SULPHIDE Zn-Cu-Pb
G04

VEIN BARITE
I10

POLYMETALLIC VEINS Ag-Pb-Zn+/-Au
I05

What did we do? / When? / Where?

The prospecting crew consisted of myself, Jeffrey Boyce, with two very capable prospecting assistants Alynne Iversen and Melanie Mott

Before leaving Whitehorse, we carefully studied air photos (at a scale of 1 40,000) of the target areas for old access trails, "kill zones", small hidden outcrop, etc

In addition we studied surficial geology maps and reports on regional glaciation in conjunction with air photo evidence to determine glacial ice directions and therefor to determine an effective sampling strategy and best site locations

As the goal was to identify potential targets for focused exploration, we used a three pronged strategy on the ground

-Prospecting with rock sampling, and random stream sediment sampling when creeks were encountered during traverses These same creeks were panned at the sample sites and a vial was filled with the concentrate for later ID using a microscope
Our goal was to use any float and outcrop found on the low lying (unit 16) areas to help explain the large anomalous aeromag high at the southeast end of Tiller

- Till samples were taken at regular intervals in several lines trending across ice direction Clasts were also collected at each site and later washed and identified
Some of "Till" trips were overnight or multi-day because of the tough travelling conditions found in the bush on the west facing slopes (old burns)

-Extensive regular stream sediment sampling of all creeks draining areas of prospective geology (or areas thought to have hidden prospective geology)

The area of last years burn was a priority for prospecting, because of the opportunity afforded by open unvegetated space to find outcrop

Description of type and amount of work:

⇒ Prospecting (rock sampling / panning / test sluice)	20 days
⇒ geochemical surveys (stream sediment)	27 days
⇒ Report writing	5 days

Total number of working days spent in the field by the applicant:

Time was 47 field days (not including an additional 2 unpaid field days) and an additional 6 unpaid mob days

In total·
stream sediment samples were collected
60 stream sediment samples were analyzed
rock samples were collected
13 rock samples were analyzed
Till samples were collected
8 Till samples were analyzed

Geology:

Regional Geology:

Please see attached geology map "Frances lake" MAP 6-1966

Generally this area could be characterized as Selwyn Basin, with sediments of various ages being intruded by Cretaceous? monzonites and granodiorites

The ice accumulation in east-central Yukon occurred in the Selwyn mountains at the divide with the Northwest Territories, and in the Pelly mountains to the south Tiller Lake is located only a few km south of a regional ice divide that developed during the last glaciation The ice divide corresponds roughly with the current hydrologic divide between Yukon River and Liard River drainages

An ice-sheet covered all but the highest peaks at least once during the Pleistocene Epoch, leaving erratics at elevations greater than 6,600 feet

Little evidence of direction of ice movement remains in the upland areas, but forms of drumlinoid ridges indicate that the ensuing valley glaciers flowed southward down the major drainage systems

Streamlined landforms such as crag and tails, and glacial grooves in bedrock, provide the evidence for the ice flow history **Please see the Surficial Geology map in the appendix.** During the waning stages of the glaciation, the ice sheet thinned and became topographically controlled Evidence of valley-confined ice flow is present only where topography is higher

Property Geology:

Tillei lake is surrounded by a outcropping of Unit 1 (shale, phyllite, feldspathic quartzite, quartz and feldspar conglomerate, and sandstone) with exposure being complete to the northwest, north and northeast and very spotty to the south In the north Unit 1 is intruded by Unit 15 (Cretaceous? monzonite, granodiorite, minor diorite and gneiss

In the southern area of our target, somewhere between the end of Tillei and the expoure of another widespread set of units 12 (dolomite and quartzite, minor dolomitic quartzite and silty to sandy dolomite) & 13 (Shale, chert, quartzite, greywacke, chert-pebble conglomerate) there is an important contact which remains buried and unmapped

It was hoped that the presence of this contact, the various carbonate rock units (and their potential for replacement mineralization), and a subsurface intrusive (to provide heat and hydrothermal fluids) would lend to a significant mineral occurrence

The whole southern area of our target is covered with significant quaternary units of unconsolidated glacial and alluvial deposits (both Till Veneer and Till Blanket) Basal tills have been categorized into two divisions based on presumed thickness

Basal till veneers are less than one meter in thickness and are commonly found on plateau summits and on slopes that faced into the direction of glacial flow

Basal till blankets are greater than one meter in thickness and are often mapped in local depressions and on slopes that are in the lee direction of the advancing ice sheet

Geochemistry / Testing:

Stream Sediment (Silt) Geochemistry

Collection Method

Sample site is located If creek enters a lake the sample is taken slightly up from the entry point to avoid contamination with lake shore sediments (lake levels rise and fall) Usually the strategy, at this grass roots level, is to sample each main tributary as it enters the creek and sample the main creek just up from these confluences

Samples are taken from silt size material in the creek bed (avoiding contamination from bank material) and are often a composite from a number of sites in close proximity to each other If there is no silt/ sand material available (in a very fast moving creek for instance) then moss mats may be sampled These mats are rigorously washed into the bag and the organic matter is discarded Samples are as large as can possibly fit in the bags

The bags used are standard kraft sample bags or small rice bags, and are clearly labeled on both sides with the sample number in indelible pen At each site a piece of flagging is tied with the sample number penned on A GPS reading is taken and recorded on Sample Data Sheets along with stream width, flow, gradient, sediment color, and any other pertinent information

Analysis Method
Geochemistry was tested by ACME Analytical Laboratories Ltd of Vancouver, B C
Digestion was by Aqua Regia,
Analysis by ICP-MS
This method offers near total precious and base metal data, but acts as only partial leach for rock forming elements As a result, the measured element concentrations of Cr, Fe, Mg, S, Sr, and Ti are lower than the actual concentrations in the sediments
For more details please see attached Assay sheets in appendix or visit Acme's web site

Interpretation of results
There were numerous anomalies and a few significant results Significance of values were checked against a geochem database for Selwyn Basin rocks and against the Yukon Geoscience data base of average elemental values for various terranes

Unfortunately the following are only anomalous within the target area
TL63SD01 slightly anomalous Co (27 2) Mn (8174) As (43 1)
TL71SD01 slightly anomalous Cu (44 4) Zn (212) Ni (46 6) Ba (443)
TL82SD01 slightly anomalous Au (45 4ppb)

Note two sets of duplicate samples give an different ideas of reproducibility
1) In the field we re-sampled a number of times to gauge reproducibility of our sampling method Only one of these field duplicated was analysed (95SD01 / 95SD01A PAN) which shows reasonable correlation except for typical problems with Au and the nugget effect

2) As to quality control at ACME labs, the sets (65SD01 / RE65SD01) and (84SD01 / RE 84SD01) show the lab reproducing most element values in the sample quite well, except Au which again shows typical problems with variation

Panning:

Collection Method
Sites are selected in the same manner as with silts, but fewer are chosen as priority is given to the main creek and main tributaries Panning occurs only where a test sluice sample is not possible Material is dug up from as deep in the sediment as possible with a shovel and at least two pans are panned down to the heavies These heavies are placed in a marked vial

Analysis Method
Heavies are later placed on a small white paper plate to dry and are then examined under a microscope and mineral grains identified

Interpretation of results
This identification is still in progress at the writing of this report A couple of creeks have had visible gold and significant amounts of magnetite black sands Some creeks with negligible gold in geochem results have visible gold illustrating the problems with a "nugget effect" when sampling

Rock Geochemistry

Collection Method
Sites where chosen based on geology and minerals present Where possible enough material was taken to produce both a hand sample and a portion to send to the lab for analysis

Samples were put in clear plastic poly bags with sample number clearly written on both sides Flagging with the sample number was tied at the site A GPS reading was taken and recorded on Rock Sample Sheet with rock description (color, texture, mineralogy, magnetic?, fizz in HCl?, and other information)

Analysis Method
Geochemistry was tested by ACME Analytical Laboratories Ltd of Vancouver, B C
Digestion was by Aqua Regia,
Analysis by ICP-ES
This method offers near total precious and base metal data, but acts as only partial leach for rock forming elements As a result, the measured element concentrations of Cr, Fe, Mg, S, Sr, and Ti are lower than the actual concentrations in the Rock
For more details please see attached Assay sheets in appendix or visit Acme's web site

Interpretation of results·
There was only one rock sample of any note and it was anomalous only against the Target area samples TLRK04 Sr (124ppm) Ca (5 35%) Mg (1 28%) and Au (15 1ppb)

As to quality control at ACME labs, the set (TLRK06 / RE TLRK06) shows the lab reproducing all element values in the sample quite well

Till Sampling:

Following the procedure used by Jeff Bond while we were doing a regional till geochemistry program to the north of the Tillei Lake target area on the Finlayson map sheet The following borrows from Jeff Bond

Till samples were collected along crude traverse lines oriented perpendicular to sub-perpendicular to the former ice-flow direction This enables maximum geochemical coverage of the underlying geology

At each sample station a shovel was used to collect a 2kgbulk sediment sample Hand excavation was used to expose the C-horizon sediment or unweathered parent material

We made an effort to chose our samples sites in only lodgement and basal meltout tills and avoided ablation tills, glaciolacustrine deposits and glacialfluvial deposits

We used a data sheet to record information at sample sites, including UTM coordinates, slope, surficial map unit, bedrock proximal, drainage, vegetation, soil properties (oxidation, permafrost) matrix properties (color, texture, percentage clay) and a basic description of the clasts sampled (angularity, minerals present)

Sample preparation and analysis – At Acme Till samples were oven-dried at 60C, and then screened through a –80 mesh stainless steel Tyler sieve (mesh aperture of 177 um) Several Till samples were split to obtain an estimate of sample precision, and the laboratory staff at ACME inserted additional analytical quality control samples of known composition to monitor the accuracy

Geochemistry was tested by ACME Analytical Laboratories Ltd of Vancouver, B C
Digestion was by Aqua Regia,
Analysis by ICP-MS
This method offers near total precious and base metal data, but acts as only partial leach for rock forming elements As a result, the measured element concentrations of Cr, Fe, Mg, S, Sr, and Ti are lower than the actual concentrations in the Till

Interpretation of results

There was only one Till sample of note and only relative to the other Till samples analyzed which it stood out against in the majority of elements
TLGT03 elevated Sb (2 5ppm), minor Mo, Cu, Pb, Zn, Ca, Ba

Conclusion and Recommendation:

Unfortunately, our geochem results do not suggest any significant potential for mineralization in our target area In itself though this is significant data, as it gives a greater degree of confidence to a company to not spend it's valuable exploration dollars on a target of low potential
I still have great confidence in the potential of Till Geochem sampling (when combined with surfacial mapping) as a useful exploration tool especially suited to low lying areas with dual problems of deep till overburden and swampy heavily vegetated terrane

Appendix:

Full Descriptions of DEPOSIT MODELS

W SKARNS

K05

COMMODITIES (*BYPRODUCTS*) W (Mo, Cu, Sn, Zn)

CAPSULE DESCRIPTION Scheelite-dominant mineralization genetically associated with a skarn gangue

HOST/ASSOCIATED ROCK TYPES Pure and impure limestones, calcareous to carbonaceous pelites Associated with tonalite, granodiorite, quartz monzonite and granite of both I and S-types W skarn-related granitoids, compared to Cu skarn- related plutonic rocks, tend to be more differentiated, more contaminated with sedimentary material, and have crystallized at a deeper structural level

Mo SKARNS

K07

COMMODITIES (*BYPRODUCTS*) Mo (W, Cu, Pb, Zn, Sn, Bi, U, Au)

CAPSULE DESCRIPTION Molybdenite-dominant mineralization genetically associated with a skarn gangue (includes calcic and magnesian Mo skarns) Mo skarns are broadly separable into polymetallic and "molybdenite-only" types (see comments below)

HOST/ASSOCIATED ROCK TYPES Stocks and dikes of evolved, commonly leucocratic quartz monzonite to granite (some containing primary biotite and muscovite) intruding calcareous clastic rocks Deposits tend to develop close to intrusive contacts Some of the Mo skarns in British Columbia are associated with high- level intrusions that have explosive breccia textures

Pb-Zn SKARNS

K02

COMMODITIES (*BYPRODUCTS*) Pb, Zn, Ag, (Cu, Cd, W, Au)

CAPSULE DESCRIPTION Galena and/or sphalerite-dominant mineralization genetically associated with a skarn gangue

HOST/ASSOCIATED ROCK TYPES Variable, from high-level skarns in thick limestones, calcareous tuffs and sediment to deeper level skarns in marbles and calcsilicate-bearing migmatites Associated intrusive rocks are granodiorite to leucogranite, diorite to syenite (mostly quartz monzonite) Pb-Zn skarns tend to be associated with small stocks, sills and dikes and less commonly with larger plutons The composition of the intrusions responsible for many distal Pb-Zn skarns is uncertain

Cu SKARNS
K01

COMMODITIES (*BYPRODUCTS*) Cu (Au, Ag, Mo, W, magnetite)

CAPSULE DESCRIPTION Cu-dominant mineralization (generally chalcopyrite) genetically associated with a skarn gangue (includes calcic and magnesian Cu skarns)

HOST/ASSOCIATED ROCK TYPES Porphyritic stocks, dikes and breccia pipes of quartz diorite, granodiorite, monzogranite and tonalite composition, intruding carbonate rocks, calcareous volcanics or tuffs Cu skarns in oceanic island arcs tend to be associated with more mafic intrusions (quartz diorite to granodiorite), while those formed in continental margin environments are associated with more felsic material

Au SKARNS
K04

COMMODITIES (*BYPRODUCTS*) Au (*Cu, Ag*)
CAPSULE DESCRIPTION Gold-dominant mineralization genetically associated with a skarn gangue consisting of Ca - Fe - Mg silicates, such as clinopyroxene, garnet and epidote Gold is often intimately associated with Bi or Au-tellurides, and commonly occurs as minute blebs (<40 microns) that lie within or on sulphide grains The vast majority of Au skarns are hosted by calcareous rocks (calcic subtype) The much rarer magnesian subtype is hosted by dolomites or Mg-rich volcanics On the basis of gangue mineralogy, the calcic Au skarns can be separated into either pyroxene-rich, garnet-rich or epidote-rich types, these contrasting mineral assemblages reflect differences in the hostrock lithologies as well as the oxidation and sulphidation conditions in which the skarns developed

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING Most deposits are related to plutonism associated with the development of oceanic island arcs or back arcs, such as the Late Triassic to Early Jurassic Nicola Group in British Columbia

HOST/ASSOCIATED ROCK TYPES Gold skarns are hosted by sedimentary carbonates, calcareous clastics, volcaniclastics or (rarely) volcanic flows They are commonly related to high to intermediate level stocks, sills and dikes of gabbro, diorite, quartz diorite or granodiorite composition Economic mineralization is rarely developed in the endoskarn The I-type intrusions are commonly porphyritic, undifferentiated, Fe-rich and calc-alkaline However, the *Nambija Wabu* and QR Au skarns are associated with alkalic intrusions

PORPHYRY Mo (Climax-type)
L08

COMMODITIES (*BYPRODUCTS*) Mo (W, Sn, pyrite and monazite have also been recovered from the Climax deposit)

CAPSULE DESCRIPTION Stockworks of molybdenite-bearing quartz veinlets and fractures in highly evolved felsic intrusive rocks and associated country rocks Deposits are low grade but large and amenable to bulk mining methods

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING High-level to subvolcanic felsic intrusive centres, multiple stages of intrusion are common

HOST/ASSOCIATED ROCK TYPES Genetically related felsic intrusive rocks are high-silica (>75% SiO_2), F-rich (>0 1% F) granite/rhyolite, they are commonly porphyritic and contain unidirectional solidification textures (USTs), particularly comb quartz layers Contents of Rb, Y and Nb are high, Ba, Sr and Zr are low Mineralized country rocks may include sedimentary, metamorphic, volcanic, and older intrusive rocks Tuffs or other extrusive volcanic rocks may be associated with deposits related to subvolcanic intrusions

PORPHYRY W

L07

COMMODITIES (*BYPRODUCTS*) W (Mo, Sn, Ag)

CAPSULE DESCRIPTION Stockwork of W-bearing quartz veinlets and fractures in felsic intrusive rocks and associated country rocks Deposits are low grade but large and amenable to bulk mining methods

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING High-level to subvolcanic felsic intrusive centres, multiple stages of intrusion are common

HOST/ASSOCIATED ROCK TYPES Highly variable, mineralized rocks may be predominantly genetically related intrusive rocks, but may also be related or unrelated sedimentary, volcanic, igneous and metamorphic rocks Genetically related felsic intrusive rocks are commonly F-rich (fluorite and/or topaz bearing) and porphyritic, unidirectional solidification features, particularly comb quartz layers, may also be present Tuffs or other extrusive volcanic rocks may be associated with deposits related to subvolcanic intrusions

PORPHYRY Mo (LOW-F-TYPE)

L05

COMMODITIES (*BYPRODUCTS*) Mo (Cu, W)

CAPSULE DESCRIPTION Stockwork of molybdenite-bearing quartz veinlets and fractures in intermediate to felsic intrusive rocks and associated country rocks Deposits are low grade but large and amenable to bulk mining methods

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING High-level to subvolcanic felsic intrusive centres, multiple stages of intrusion are common

HOST/ASSOCIATED ROCK TYPES All kinds of rocks may be hostrocks Tuffs or other extrusive volcanic rocks may be associated with deposits related to subvolcanic intrusive rocks Genetically related intrusive rocks range from granodiorite to granite and their fine-grained equivalents, with quartz monzonite most common they are commonly porphyritic The intrusive rocks are characterized by low F contents (generally <0 1 % F) compared to intrusive rocks associated with Climax-type porphyry Mo deposits

PORPHYRY Cu+/-Mo+/-Au

L04

COMMODITIES (*BYPRODUCTS*) Cu, Mo and Au are generally present but quantities range from insufficient for economic recovery to major ore constituents Minor Ag in most deposits, rare recovery of Re from Island Copper mine

CAPSULE DESCRIPTION Stockworks of quartz veinlets, quartz veins, closely spaced fractures and breccias containing pyrite and chalcopyrite with lesser molybdenite, bornite and magnetite occur in large zones of economically bulk-mineable mineralization in or adjoining porphyritic intrusions and related breccia bodies Disseminated sulphide minerals are present, generally in subordinate amounts The mineralization is spatially, temporally and genetically associated with hydrothermal alteration of the hostrock intrusions and wallrocks

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING High-level (epizonal) stock emplacement levels in volcano-plutonic arcs, commonly oceanic volcanic island and continent-margin arcs Virtually any type of country rock can be mineralized, but commonly the high-level stocks and related dikes intrude their coeval and cogenetic volcanic piles

HOST/ASSOCIATED ROCK TYPES Intrusions range from coarse-grained phaneritic to porphyritic stocks, batholiths and dike swarms, rarely pegmatitic Compositions range from calcalkaline quartz diorite to granodiorite and quartz monzonite Commonly there is multiple emplacement of successive intrusive phases and a wide variety of breccias Alkalic porphyry Cu-Au deposits are associated with syenitic and other alkalic rocks and are considered to be a a distinct deposit type (see model L03)

Fınal Expenses YMIP -Grassroots -Grubstake Proposal -2002
Tıllei Lake, field work completed Sept 10 #02-085

New costs Included

1) Daily Living Expenses			
No of days x YG rate/person, per day	47 x $35	$ 1,645 00	
2) Travel (state method road, air, etc)			
Truck - total km x YG rate/km	2900km x $ 42	$ 925 38	
Kluane Airways Ltd, Beaver 3hrs @ $600/hr		$ 1,926 00	$ 1,926 00
above includes 1 helicopter set out with Hughes 500			
3) ACME Analytical (see invoice for details)		$ 1,078 58	$ 1,078 58
4) Equipment Rentals / Supplies			
10' inflatable boat & 7 5HP motor	490/wk, $90/day	$ 1,300 00	
Truck (4 x 4)	$1450/mnth, $65/day	$ 1,170 00	
Satelite Telephone	$200/mnth	$ 200 00	
dome bug tent ie "office"	$5/day	$ 170 00	
35w solar panel, deep cycle battery, inverter	equiv To 500w gen	$ 180 00	
chainsaw	$450/mnth, $35/day	$ 450 00	
GPS	$90/mnth	$ 90 00	
steel bear-proof barrels	$40 x 2	$ 80 00	
Flagging tape,HCl, Topofil, shells, notebook	70	$ 121 07	$ 34 22
Soil & Sed sample bags, rice bags, H cont	80	$ 85 60	
Computer paper, disks, ink, film & develop	60	$ 73 72	$ 11 12
Fuel for stove, sm lantern, candles		$ 80 59	$ 35 07
Maps & Books		$ 161 07	$ 81 03
5) n/a			
6) n/a			
7) n/a			
8) n/a			
9) n/a			
10) n/a			
12) n/a			
13) Other Expenses			
Satelite Phone air time	75min 30sec	$ 209 21	$ 209 21
Wages of Prospectors Assistant	$140/day	$ 2,925 00	
shipping of samples	$1/kg	$ 165 00	$ 165 00
Report Preparation	40 hrs @ $20 / hr	$ 800 00	$ 800 00
Total Costs		**$ 13,836 22**	**$ 4,340 23**

YUKON MINING INCENTIVES PROGRAM

FINAL SUBMISSION FORM

INSTRUCTIONS: Please read the guidebook before completing form.
Please type or print.

Submit completed form and summary or Technical Report by January 31 for the Grassroots Prospecting, Grassroots Grubstake, Focused Regional and for the Target Evaluation programs to

Yukon Mining Incentives program
Energy, Mines and Resources
Government of the Yukon
2099 – 2nd Avenue
Box 2703, Whitehorse, Yukon, Y1A 2C6

TO BE COMPLETED AFTER PROJECT COMPLETION AND ACCOMPANIED BY THE SUMMARY OR TECHNICAL REPORT

Applicant Jeffrey D. Boyce File Number # 02-085

Proposed project area(s) (NTS map no and project name) completed? Attach list if space is insufficient.

1 Tillei Lake Glacial Till Project 105H (11,12,13,14) (Yes) No

2 ______ Yes No

3 ______ Yes No

4 ______ Yes No

Changes to proposed project(s) (if any)

because of problems with our boat motor (reliability, etc) we spent less time working the Northend of Tillei Than was proposed.

List other partners or personnel that worked on the project.

Jeff Boyce with assistants Alynne Iverson and Melanie Mott

I WORK PERFORMED BY APPLICANT

		No of days worked by Applicant
1 Project #1 area/name	Tillei Lake	
Traditional prospecting	No of Samples Panning & Rock Samples 13 Analysed	20
Geological surveys	Scale	
Geophysical surveys	Type	
Geochemical surveys	Type No of Samples Till Samples 8 Analysed, Stream Sediment 60 Analysed	27
Drilling	Type ______ Ft (m) ______	
Trenching	Method	
Other	Type	
	TOTAL	47

II. SIGNIFICANT RESULTS (please complete)

Project Area	New Showings and/or Anomalies	Commodity	Best Analyses
unfortunately No			

III CLAIMS STAKED DURING / AFTER ACTIVITY (please complete)

Project Area	Claim Numbers	Number of Claim Units
none		

IV. OPTION AGREEMENTS RESULTING FROM YMIP PROJECT (please complete)

Optionee	Property/Claim	Dollar Value of Work Component
none		

V. TYPE OF MINERAL EXPLORATION UNDERTAKEN (please check one)

_____ Preliminary work on claims
✓ Initial exploration
_____ Advanced exploration
_____ Development

VI. VALUE OF GOODS AND SERVICES PURCHASED (estimate, please complete)

Within the Yukon $ $ 7850.00

Outside the Yukon $ 1078.58

VII RESULTS OF MINERAL EXPLORATION (please complete)

✓ Applied New Exploration Methodology (Till Sampling) to New Area
_____ The discovery of a new prospect.
_____ The identification of a prospect warranting further exploration
_____ The identification of an economic mineral deposit.
_____ The identification of a deposit which cannot support production

VIII. SUMMARY OF EXPENDITURES

Please See attached Sheet
Final Budget.

1 Daily Living Expense
No of days x YG rate/person, per day ____________________ $ ________

2 Travel (state method road, air, etc)
Truck – total km x YG rate/km ____________________ $ ________

Air ____________________ $ ________

Other ____________________ $ ________

3 Analyses/Assay Costs (specify sample type and price/assay)

____________________ $ ________

4 Equipment Rentals/Supplies

____________________ $ ________

____________________ $ ________

5 Contractors (state name and type of work)

____________________ $ ________

____________________ $ ________

6 Line Cutting
No of km x price/km ____________________ $ ________

7 Geochemical Survey (specify sample type)
No of km x price/km ____________________ $ ________

8 Geophysical Survey (specify type of survey)
No of km x price/km ____________________ $ ________

9 Trenching (specify equipment used and price/hour)
____________________ $ ________

10 Drilling (specify diamond or percussion and rod size)
No of meters x price/meter ____________________ $ ________

11 Reclamation (specify type) ____________________ $ ________

12 Report Preparation ____________________ $ ________

13 Other Expenses (specify)

____________________ $ ________

____________________ $ ________

TOTAL EXPENDITURES $ ________

Attach list if space is insufficient

The Department of Energy, Mines and Resources may verify all statements related to and make herein this application

1 I am the person, or the representative of the company or partnership, named in the Application for Contribution under the Yukon Mining Incentives Program

2 I am a person who is nineteen years of age or older, or represent a person, who is ordinarily a resident of Canada.

3 I have complied with all the requirements of the said program

4 I hereby apply for the final payment of a contribution under the Yukon Mining Incentives Program (YMIP) and declare the information given above to be true and accurate

Signature of Applicant J D Boyce Date Jan 26, 2003

Name (print) Jeffrey David Boyce

Position or Title (if applicable) Prospector

ACME ANALYTICAL LABORATORIES LTD.

852 East Hastings,, Vancouver, B C , CANADA V6A 1R6
Phone (604) 253-3158 Fax (604) 253-1716
Our GST # 100035377 RT

FINIS TERRE EXPLORATION LTD.
1795 W 13th Ave
Vancouver, BC
V6J 2H2

Inv # **A205175**
Date Dec 10 2002

QTY	ASSAY	PRICE	AMOUNT
68	GROUP 1DA (10 gm) @	10 35	703 80
13	GROUP 1D - 32 ELEMENTS @	6 17	80 21
13	GROUP 3A - AU @	5 67	73 71
60	SS80 - STREAM SED @	1 35	81 00
13	R150 - ROCK @	4 50	58 50
8	SS80 - TILL @	1 35	10 80
	GST Taxable		1008 02
	7 00% GST		70 56
	CAD $		**1078 58**

Project TL 2002
Samples submitted by Jeffrey Boyce
FILE # A205175, A205176 & A205177 - UNIT PRICE REFLECTS 10% DISCOUNT

COPIES 1

Please pay last amount shown Return one copy of this invoice with payment
TERMS Net two weeks 1 5 % per month charged on overdue accounts

[COPY 1]

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Finis Terre Exploration Ltd. PROJECT TL 2002 File # A205177

1795 W. 13th Ave, Vancouver BC V6J 2H2 Submitted by: Jeffrey Boyce

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm
G-1	1.8	3 1	2.5	43	<.1	5.9	4.4	547	2.07	<.5	2.0	5	4.4	87	< 1	<.1	.1	42	.60	077	9	16.2	55	237	.142	1	1 02	097	51	2 6	<.01	2 3	3	< 05	5
TLGT01	.6	12.8	19 2	64	1	22.2	10 6	289	2.50	10.1	7	3 1	7 4	6	2	.4	3	22	.05	042	18	16 0	41	111	.018	1	1 73	004	04	6	.01	4 8	1	< 05	4
TLGT02	2.9	12 8	11.0	103	1	20.3	3.3	67	1.40	8.7	4	8	1.4	17	5	1.9	.1	37	04	036	6	7.2	.09	126	.001	1	58	002	.03	1	.04	1 2	1	<.05	2
TLGT03	4.4	26.7	15.5	169	.1	43.3	8 3	207	2.39	12.9	9	2 7	3.6	32	7	2.5	2	46	22	084	10	12.9	21	259	.002	1	97	< 001	.06	.1	05	2 5	2	<.05	3
TLGT04	.7	7.5	11 7	26	<.1	5.2	3.1	173	1.15	2.6	8	< 5	.1	6	1	.3	4	23	.03	029	13	8 0	10	52	010	1	70	007	.04	1	.01	3	1	< 05	5
TLGT06	4	8.7	8 3	36	<.1	8.6	4.6	146	2.19	4.2	7	1 0	6 8	5	< 1	.4	3	31	.02	020	20	9.1	.18	58	.009	<1	1 09	002	04	4	<.01	1.5	1	< 05	7
TLGT07	.3	7.0	9 4	13	< 1	4.7	3.4	156	1.73	5.0	4	< 5	3 3	5	<.1	.3	2	13	02	013	10	4 7	05	41	003	1	.65	003	.05	1	.01	9	1	< 05	3
TLGT20	1 7	12.2	15.8	67	.1	14.0	6.1	227	2.49	9.5	4	2.1	2 3	10	8	7	3	50	14	067	7	13.4	21	247	.006	<1	1 13	005	05	3	02	1 4	1	< 05	4
TLGT21	.8	11.5	14.1	56	.1	14.4	4.8	206	2 29	13.7	6	1.5	5.8	7	1	7	4	28	.08	053	17	14 2	37	64	020	<1	.99	003	05	7	01	1 2	.1	<.05	4
STANDARD DS4	6 4	119.4	31.6	155	.3	34.7	11.8	751	3 22	22.5	6.3	24.3	3.6	28	5 3	4 7	5 0	73	.52	.082	16	161 3	57	137	.087	1	1.68	030	15	3 7	27	3 5	1 1	07	6

GROUP 1DA - 10.0 GM SAMPLE LEACHED WITH 60 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG C FOR ONE HOUR, DILUTED TO 200 ML, ANALYSED BY ICP-MS.
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM
- SAMPLE TYPE TILL SS80 60C

DATE RECEIVED: NOV 22 2002 **DATE REPORT MAILED:** Dec 5/02 **SIGNED BY**.......... D. TOYE, C LEONG, J. WANG; CERTIFIED B C. ASSAYERS

Data FA ____

.ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Finis Terre Exploration Ltd. PROJECT TL 2002 File # A205175 Page 1

1795 W. 13th Ave, Vancouver BC V6J 2H2 Submitted by: Jeffrey Boyce

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm
G-1	1 7	3 0	2 8	45	<.1	5 6	4.3	563	2 06	.6	1.8	<.5	4.1	90	<.1	< 1	1	42	.60	.087	8	16 4	56	243	139	1	1.06	.093	50	2 2	< 01	2 3	3	<.05	5
TL1SD01	1 6	19.6	13.8	155	.2	23.5	8.0	1624	2 89	12.4	2 4	1.7	1.7	47	1.1	8	3	31	.89	.101	8	13.1	36	312	007	3	1 05	.009	.06	1 1	06	1 8	1	11	3
TL1SD02	3 1	20.4	15.6	205	.2	36.8	14.6	5897	4.05	23.0	2 0	2.1	1.9	62	1.9	1 0	.3	38	1.03	.110	8	16.0	.39	595	.008	4	1.12	.011	.06	1.5	06	2 1	1	12	3
TL1SD03	3 2	18.5	16.1	202	.1	37.1	16.1	6583	4 18	25 8	1 5	6	2.2	52	1 6	1 0	3	38	75	090	7	16.4	.39	766	.009	2	1 09	006	.06	.4	05	2 1	1	09	4
TL1SD04	3.0	17.2	15.8	200	.1	34.0	14.8	6133	4.05	23 4	1 3	6	3.0	45	1.4	1.1	3	38	.59	080	9	15.3	.39	671	.009	2	1 05	010	06	.7	.04	2.1	.1	06	4
TL1SD05	2 2	22 2	14.4	213	.3	31.1	8 9	636	3 65	11.2	2.6	1.8	2 2	50	6	1.1	2	32	.90	117	5	17.6	.40	275	004	3	1.17	.008	08	3	12	2.9	.1	.15	4
TL1SD06	1 2	28 1	16 9	178	.2	30.7	7.5	183	1 85	3.6	2.5	1.0	2 5	44	1 6	5	2	23	87	.076	5	16 4	32	239	004	2	1.12	010	.06	2	10	2 5	1	.70	3
TL2SD01	1 6	36.0	14 9	137	.3	30.3	7.1	212	1 54	4.7	5 2	2 0	3.5	44	2 0	9	3	24	.64	.070	10	17.7	.40	279	003	1	1 50	.008	.06	.2	12	2 6	1	29	4
TL2SD02	6	25.9	11.4	120	.3	22.6	6.6	175	1 45	4.8	2 1	7	2.8	37	1 1	8	2	28	73	086	9	11.3	.28	310	.003	1	.91	005	.04	1	13	2 2	1	< 05	3
TL3SD01	6	19.2	13.7	137	.3	20.9	8.0	646	2 10	6 1	1 6	< 5	3.5	53	.8	5	.3	25	93	076	9	14 6	.37	369	.004	1	1 17	009	.07	.2	.10	2 8	1	.15	3
TL3SD02	.6	22 1	14 8	139	.3	21.7	8.3	572	2.38	5.7	1.6	1.2	3.6	49	9	5	3	26	.93	077	9	15 9	38	405	004	2	1.24	008	07	.2	11	3.1	1	21	4
TL4SD01	4	15.3	11 7	102	.2	18.0	6 0	201	1 54	4.6	.8	1.1	2.5	38	5	5	2	24	94	.073	8	10 4	28	187	005	1	.81	.007	05	.2	.09	1.9	1	.07	2
TL5SD01	.8	16 5	9.8	140	.3	22.4	6.9	420	2 29	9 5	1.1	<.5	2.4	76	9	9	1	26	1.15	.121	7	11 0	32	307	003	2	79	.007	05	.1	12	2.5	.1	.08	2
TL5SD02	1 3	27.6	15.3	153	3	24.1	8.6	178	1.59	7 1	3.8	2.9	3.6	55	1.5	7	3	26	1.04	.066	9	16.4	.39	362	.004	2	1 19	.009	.08	2	11	3 8	.1	19	3
TL6SD01	7	19.3	24.4	108	2	21.0	8.7	643	2.05	5.6	1.7	1 2	4.2	38	6	.6	.3	25	94	.070	11	15 2	.42	299	006	2	1 11	009	.08	2	08	2 4	1	10	3
TL10SD01	1.4	14.5	14 1	143	.1	20.9	9.6	2031	2 63	12.1	.8	< 5	2 9	56	8	6	.2	25	1 00	077	7	13 0	42	470	006	2	.91	011	07	.2	.06	2 4	1	< 05	3
TL12SD01	1.1	15.4	11 9	133	.2	21 5	9.3	3666	2 59	12.6	1 0	<.5	2 2	67	1.3	4	2	22	1.04	083	7	12.7	37	509	004	3	1.08	010	.08	2	08	2 5	1	.08	3
TL60SD01	1.7	38.2	18 7	205	.4	40 4	12.1	772	2 95	8.8	1.4	.9	2 9	53	1 9	7	.3	28	.53	068	7	14.8	39	362	003	1	1.15	.007	08	2	.10	2 7	2	< 05	3
TL61SD01	8	41.3	17 5	227	.4	38.7	8 8	325	2 01	4.3	8	2.5	3 1	44	1.5	7	3	23	1.07	.075	8	14.5	37	349	003	3	1 07	.007	.07	2	25	3 7	1	.08	3
TL61SD02	1 1	29.2	15.1	214	.3	31 8	8 5	422	2.24	6 0	9	1 8	2.8	36	1.3	.7	2	25	81	078	8	11 7	.33	329	.003	1	.93	008	07	3	17	2 9	1	< 05	2
TL62SD01	.4	13 1	16 7	90	.1	18 3	9.9	688	2.71	9 0	.8	1.3	6 9	28	2	4	3	19	43	055	14	14 7	43	84	015	1	.96	009	06	.4	02	2 1	1	< 05	3
TL63SD01	1.6	27.8	18.6	101	.1	32.4	27.2	8174	6 96	43.1	2 4	1.1	5.1	63	1.4	6	4	23	.72	.069	13	14.7	40	345	013	1	.88	011	06	6	04	2 6	2	<.05	3
TL64SD01	1 8	16.2	15.7	101	.1	20.8	10.4	714	2 76	11 3	1 0	7	4.1	33	.5	4	.3	20	41	.073	10	13 9	.37	244	.004	1	1.07	.007	.05	4	05	2 2	.1	<.05	3
TL65SD01	4	18.9	17.6	82	.1	17.7	9 8	828	2.42	8 2	1.9	1 2	4.4	64	2	3	4	19	81	061	13	15 6	41	146	.010	1	1 23	.009	.07	3	03	2 4	1	<.05	4
RE TL65SD01	.3	18 7	17 9	81	.1	17.6	9.7	799	2.40	8.0	1.9	<.5	4 4	63	3	3	.5	19	82	061	13	15 5	.41	145	.011	2	1 23	009	07	3	03	2 4	.1	<.05	4
TL66SD01	1 2	15.4	12 9	93	.1	19.7	9.6	702	2 43	8 5	9	.5	3.9	32	.5	4	3	18	.43	.064	10	13.8	37	231	004	1	1.04	008	05	4	.04	2 2	1	< 05	3
TL67SD01	7	11.1	9 7	75	.1	16.2	8.2	526	2 11	6 5	.7	9	3.7	37	.3	.3	2	16	.34	.060	10	13 2	.36	220	005	<1	.97	008	.04	3	03	1 4	< 1	<.05	3
TL68SD01	1.4	23 8	17 2	114	.1	26 5	11.7	867	2 79	8.6	1.2	1.3	4 1	39	6	6	4	24	52	070	11	16 6	.40	261	.004	1	1 25	.007	07	3	07	2 7	1	< 05	4
TL69SD01	1.7	25.8	20 1	127	.2	27.1	13.2	1025	3 18	10.7	1.3	1.3	4.3	41	.8	8	4	26	53	074	11	16 7	41	281	.004	2	1.27	008	07	.3	09	3 0	.1	< 05	4
TL70SD01	4	15.0	13 2	81	.1	14.6	7.9	267	2 15	4.8	1.4	1.0	3.9	47	2	4	2	14	64	066	13	10.7	33	82	010	2	.86	007	.05	2	02	2 1	< 1	< 05	2
TL70SD02	3	9.4	12 0	78	<.1	13 6	8 2	561	2.30	5 0	1.1	<.5	6.2	35	1	.3	4	17	.44	047	16	11 4	.30	81	013	1	.80	008	05	4	01	2.0	< 1	< 05	3
TL70SD03	.4	17 0	19 1	99	<.1	20.1	13.3	790	3 47	8 1	1.2	.6	10 1	24	.1	.7	.3	14	24	043	16	12 6	.34	79	.008	1	.88	.008	.08	1	01	3.0	< 1	< 05	3
TL70SD04	.3	15 1	14 9	111	.1	14 7	8.5	402	2 34	5.0	1.0	<.5	4.3	45	.2	5	3	16	62	060	13	11 9	31	88	.013	2	87	008	.06	4	03	2 5	< 1	< 05	3
TL70SD05	.3	19.8	19.8	163	.1	18.7	12.0	710	3 23	6.7	1 4	5	5.1	46	.3	7	5	15	61	067	15	11 7	.31	106	011	1	.89	009	08	3	03	3 1	1	<.05	3
TL70SD06	5	22.9	18 0	109	.1	18.0	12.1	703	3 19	7 2	1 7	7	3.9	57	3	7	4	16	.77	084	14	13.3	.30	103	010	2	.89	009	08	.4	.04	3 2	1	06	2
STANDARD DS4	6 7	121.6	31.8	160	.3	33.6	11 8	792	3.22	22 4	6.2	25.2	3 6	28	5.3	4.9	5 2	74	54	.089	16	162 9	.57	138	.089	1	1.76	.030	.14	3 7	28	3.7	1 1	< 05	6

GROUP 1DA - 10.0 GM SAMPLE LEACHED WITH 60 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 200 ML, ANALYSED BY ICP-MS.
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
- SAMPLE TYPE: STREAM SED. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: NOV 22 2002 **DATE REPORT MAILED:** **SIGNED BY**.......... D. TOYE, C LEONG, J. WANG, CERTIFIED B C ASSAYERS

 Data FA

ACME ANALYTICAL

Finis Terre Exploration Ltd. PROJECT TL 2002 FILE # A205175

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm
G-1	1.0	3.0	3.2	46	<.1	5.2	4 7	587	2.20	<.5	2.1	1 3	4.6	102	<.1	<.1	1	44	.69	.075	10	10.9	.60	278	.157	<1	1.31	.168	.61	9	01	3.4	3	< 05	6
TL71SD01	1.2	44.4	16.2	212	.6	46 6	9.6	526	2.75	8 0	2 1	4.7	3 2	74	1 4	8	.4	29	.95	075	8	16.1	43	443	004	1	1.57	.010	.12	.2	.18	3 4	2	06	4
TL72SD01	8	8.6	15.7	100	<.1	20 0	10.2	451	3.13	11 4	1.3	3.1	5 0	25	.3	2	2	19	.41	054	11	16.3	50	56	011	<1	1 29	.008	.04	.4	.01	1 4	1	< 05	4
TL73SD01	5	8.0	12.2	73	< 1	16 6	8.5	407	2.42	5.4	1.2	.7	5 6	23	2	.2	.2	18	.31	049	12	16.5	48	71	018	<1	1 11	003	.05	.3	.01	1 6	<.1	<.05	4
TL74SD01	2	5 6	7.6	50	<.1	11 6	6.1	282	1.55	3.6	1.0	3.4	5.3	18	.1	.1	2	14	27	043	13	11.2	36	65	.018	<1	88	.005	.04	.5	.01	1.3	< 1	< 05	3
TL75SD01	.2	9 6	11 6	73	.1	18.7	9.3	342	2.42	3.1	1 4	1 0	6.5	22	.1	.1	3	17	34	045	15	16.0	46	50	.013	<1	1 23	.007	04	.8	02	1 6	< 1	<.05	4
TL76SD01	.4	9.1	10 1	65	<.1	16.0	8.1	299	2.07	3.2	1.4	< 5	6 1	19	.1	.1	.2	16	.26	.042	14	14.2	.42	51	.012	<1	1.11	006	.03	.9	01	1.4	< 1	< 05	4
TL77SD01	.4	24.9	22 6	155	<.1	36.5	22.0	1137	4.48	7.9	.9	.6	5 0	24	2	3	3	20	3.81	056	10	28 1	2 82	60	.004	<1	1 91	005	.02	2	02	2.4	< 1	< 05	6
TL78SD01	.4	18.2	17 4	115	<.1	33.3	17.0	727	4.24	5 8	1.2	.7	5 5	23	1	2	3	20	.52	044	13	28.6	73	38	006	<1	2 00	.005	.03	1	01	2 1	< 1	< 05	6
TL79SD01	.6	25.3	20.1	95	1	24.2	11.1	744	3.12	9 2	2 3	8	3.2	56	3	.5	.3	22	1 17	056	9	21 3	.56	162	017	1	1 59	.011	.06	.4	.03	1 9	.1	07	5
TL79SD01A	5	26 0	17.7	80	.1	19 1	9.1	575	2.53	8.1	3 2	1 3	2 1	67	.3	4	.3	18	1 50	052	7	17.5	.46	146	.014	<1	1 31	.010	05	.5	03	1 6	< 1	07	4
TL80SD01	1 5	22.9	23.0	120	.1	27 9	14.0	1179	3.11	13.0	1.1	9	4 6	34	.8	7	3	28	57	.063	12	13.4	.36	256	.007	1	1.03	.008	08	.3	07	2 6	.1	<.05	3
TL81SD01	.9	24.8	7 6	117	3	18.9	5.9	251	1.74	4 5	1.2	.8	1.0	70	1 1	.8	.1	19	1.24	.056	5	9 1	.35	334	.005	1	.70	008	.05	.2	17	2.2	.1	<.05	2
TL82SD01	.6	20.1	16.2	112	.7	22.0	9.5	556	1.95	6 1	2.2	45.4	4 2	64	1 0	.7	.3	18	.81	.048	12	12 6	.37	169	.011	1	.91	008	06	5	05	2.2	1	09	3
TL83SD01	6	12.6	11.6	75	1	14.7	7 5	477	2.08	5.3	8	9	4 7	35	3	.4	.2	17	53	046	12	11.1	32	115	012	<1	81	.008	.05	5	.02	1.8	< 1	< 05	3
TL83SD03	4	9 8	9 2	67	.1	13 4	7.2	548	2.08	4.5	1.2	.5	5.8	35	.3	3	2	21	.54	.049	15	11.5	.30	99	.011	1	.81	.009	05	.7	02	1 8	<.1	< 05	3
TL83SD06	2	16 9	10 7	58	.1	14 3	7.2	332	1.92	3.8	1 4	< 5	2.7	84	1	4	3	16	.97	.071	11	11.7	39	117	.018	1	.97	.012	07	.3	05	2 6	.1	.06	3
TL84SD01	.5	14.3	10 4	61	.1	15.5	7 8	316	2.17	4.8	1 0	1 8	5.3	34	2	5	2	19	44	048	13	10 8	.31	95	.011	<1	79	008	06	3	02	2.0	1	< 05	2
RE TL84SD01	.5	14.2	10 3	60	1	16.3	7 8	324	2.24	4 6	1 0	1 6	5 4	34	1	4	.2	19	44	048	14	10 8	.31	95	011	1	79	008	.06	5	02	2.1	1	< 05	3
TL85SD01	7	11.5	10.5	62	.1	14 9	8.2	451	2.22	5.2	2 5	.5	5 4	32	4	4	2	22	47	036	14	11.9	31	95	014	<1	84	.008	.06	7	02	1 9	1	< 05	3
TL86SD01	.7	13.3	11 5	115	.1	16.7	8.7	435	2.19	5.5	1 3	< 5	4.9	34	1 0	4	3	19	.50	.043	14	12 6	.33	98	.014	1	.94	.009	.08	.4	02	2 2	.1	< 05	3
TL88SD03	1.1	19.5	13 4	71	1	21.4	9.3	462	2 27	11.5	.9	8 6	5.2	54	.3	1 2	3	18	.78	.052	13	12.3	.39	104	.015	1	.97	009	07	.3	04	3 2	.1	< 05	3
TL88SD04	4	26.4	13.7	55	2	17.1	12.1	425	2.75	8 6	2.5	1.4	4.0	34	1	9	.4	14	43	.071	14	10 4	.26	91	011	<1	.86	006	.07	1	05	3.7	1	< 05	2
TL90SD01	8	16 4	15.4	68	1	19 2	9.2	485	2.32	7.1	1.0	9	7 4	17	3	7	.3	25	23	056	21	16 2	.44	95	031	<1	1.21	010	.09	4	02	2 3	1	< 05	4
TL91SD01	4	18.5	19.0	94	<.1	30 8	16.3	727	4.10	5.9	1 2	8	6.1	29	.1	.1	.3	20	54	050	13	26 8	60	52	.007	<1	1.89	.005	.03	2	.02	2 1	< 1	<.05	6
TL95SD01	4	15 8	14.9	87	.1	18.8	13.3	1097	4.09	27 7	1.1	<.5	4 4	53	4	3	.4	22	98	069	14	15.9	.48	310	.024	2	1 35	013	10	1 5	04	2 1	1	26	4
TL95SD01A PAN	.6	13 1	13 3	83	.1	17 5	13 0	1285	3 91	27.2	8	1 0	4 2	48	4	3	.3	21	78	064	14	14 6	.45	315	027	1	1 23	012	.09	1 7	03	1 8	1	26	4
LT	1.0	23.6	2 7	54	.1	50 9	12 5	922	2.21	7.9	8	1 4	2.8	29	.4	5	.3	52	.65	.066	9	50 1	99	156	098	2	1 00	.014	.10	1 4	.02	3 1	1	06	3
LT Tob	5	29 1	2.8	51	1	65.6	16.4	598	2 92	7 0	8	1 8	2 2	31	3	.6	1	61	.73	.068	8	93.4	1 58	102	.099	2	1 07	013	.07	2	03	3 1	.1	< 05	4
STANDARD DS4	6 4	121.1	31.4	152	.3	35 2	11.8	790	3 19	22 8	6 0	25.2	3 6	27	5 2	5.1	5 0	74	54	080	15	160.9	.57	136	.088	1	1.76	030	15	4.0	26	3 5	1 1	< 05	6

Sample type: STREAM SED . Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns

Data FA

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Finis Terre Exploration Ltd. PROJECT TL 2002 File # A205176

1795 W. 13th Ave, Vancouver BC V6J 2H2 Submitted by: Jeffrey Boyce

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppm	Au* ppb
SI	1	3	16	4	.4	1	1	3	06	2	<8	<2	<2	2	<.5	<3	<3	<1	08	<.001	<1	3	< 01	7	<.01	3	< 01	43	.01	2	<5	<1	2
TLCS7001	1	8	12	33	<.3	5	6	848	1 92	2	<8	<2	11	19	<.5	<3	3	2	1.21	.010	11	11	04	124	<.01	<3	.35	01	.26	3	<5	<1	.6
TLCS7002	1	5	15	55	<.3	12	8	787	2.14	<2	<8	<2	9	38	<.5	<3	<3	7	51	.013	21	21	26	85	<.01	4	.88	.02	19	4	<5	<1	<.2
TL1CS01	1	10	119	38	4	10	3	340	1.68	<2	<8	<2	3	23	<.5	<3	<3	4	.47	.024	9	13	42	19	<.01	4	75	01	.05	<2	<5	<1	< 2
TL1CS02	3	4	36	26	<.3	4	6	1749	1.05	5	<8	<2	<2	7	< 5	<3	<3	<1	.38	.030	<1	22	.02	63	<.01	7	05	< 01	01	8	<5	<1	< 2
TLRK01	7	6	3	168	< 3	17	4	161	1.42	21	<8	<2	<2	13	8	<3	<3	36	.10	.056	2	23	.05	78	< 01	3	30	< 01	06	8	<5	<1	1 2
TLRK02	4	3	12	27	< 3	7	3	1133	1.59	<2	<8	<2	<2	6	< 5	<3	<3	3	.29	.040	<1	16	.13	43	< 01	<3	36	< 01	01	2	<5	<1	3
TLRK03	2	6	3	28	< 3	6	4	433	1.40	3	<8	<2	7	5	< 5	<3	4	1	18	010	5	12	.03	39	< 01	<3	20	01	07	6	<5	<1	7
TLRK04	1	4	<3	17	< 3	10	8	1608	3.98	5	<8	<2	5	124	< 5	<3	5	<1	5 35	.028	4	9	1.28	30	< 01	<3	25	01	13	2	<5	1	15 1
TLRK05	1	15	12	69	< 3	19	12	360	2.77	6	<8	<2	6	4	< 5	<3	<3	4	04	.007	6	9	.11	39	<.01	<3	45	.01	14	4	<5	<1	3 5
TLRK06	1	5	<3	11	<.3	5	4	243	93	5	8	<2	15	8	< 5	<3	<3	1	32	.012	14	8	03	32	<.01	<3	24	.01	.15	2	<5	<1	1 7
RE TLRK06	<1	5	<3	12	<.3	6	4	243	91	3	<8	<2	15	8	<.5	<3	<3	2	32	013	14	9	03	32	<.01	<3	25	.01	15	<2	<5	<1	1 5
TLRK07	2	3	8	11	< 3	4	2	315	71	<2	<8	<2	<2	3	<.5	<3	<3	<1	10	.006	1	12	09	3	<.01	3	18	<.01	<.01	2	<5	<1	.5
TLRK80	1	8	3	25	<.3	5	1	63	.64	2	<8	<2	<2	1	<.5	<3	<3	<1	.02	006	1	14	.01	6	<.01	<3	.03	.01	.01	5	<5	<1	7
TL77SD01	1	4	<3	3	< 3	3	1	327	53	2	<8	<2	<2	8	<.5	<3	<3	<1	.28	.101	<1	10	<.01	2	<.01	3	.01	<.01	<.01	4	<5	<1	6
STANDARD DS4/AU-R	7	119	34	156	3	34	12	767	3.05	23	<8	<2	4	27	5.4	5	6	71	50	.089	16	153	55	139	08	<3	1 64	03	15	4	<5	<1	441 8

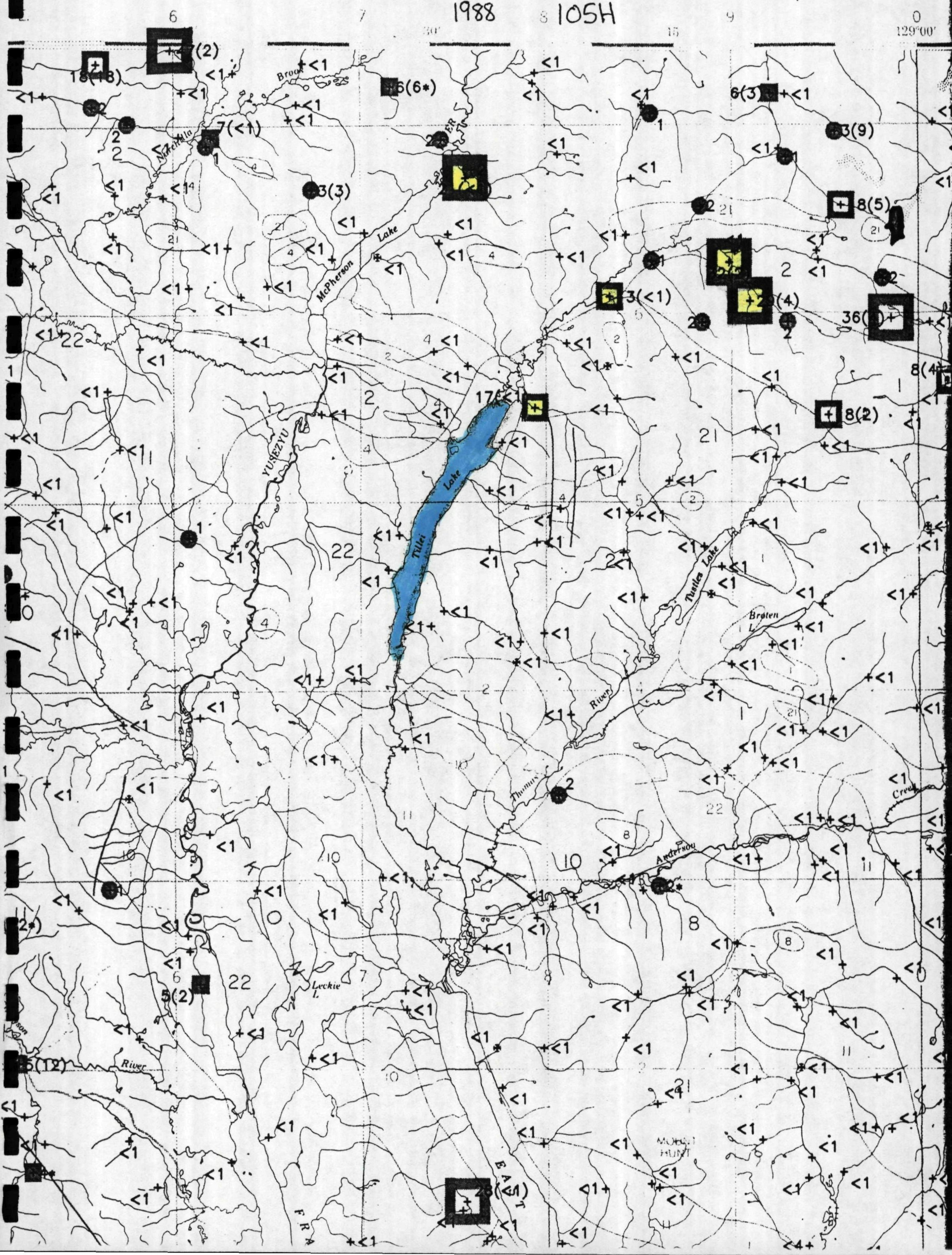
GROUP 1D - 0 50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES
UPPER LIMITS - AG, AU, HG, W = 100 PPM, MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM, CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: ROCK R150 AU* IGNITED, ACID LEACHED, ANALYZED BY ICP-MS. (10 gm)
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns

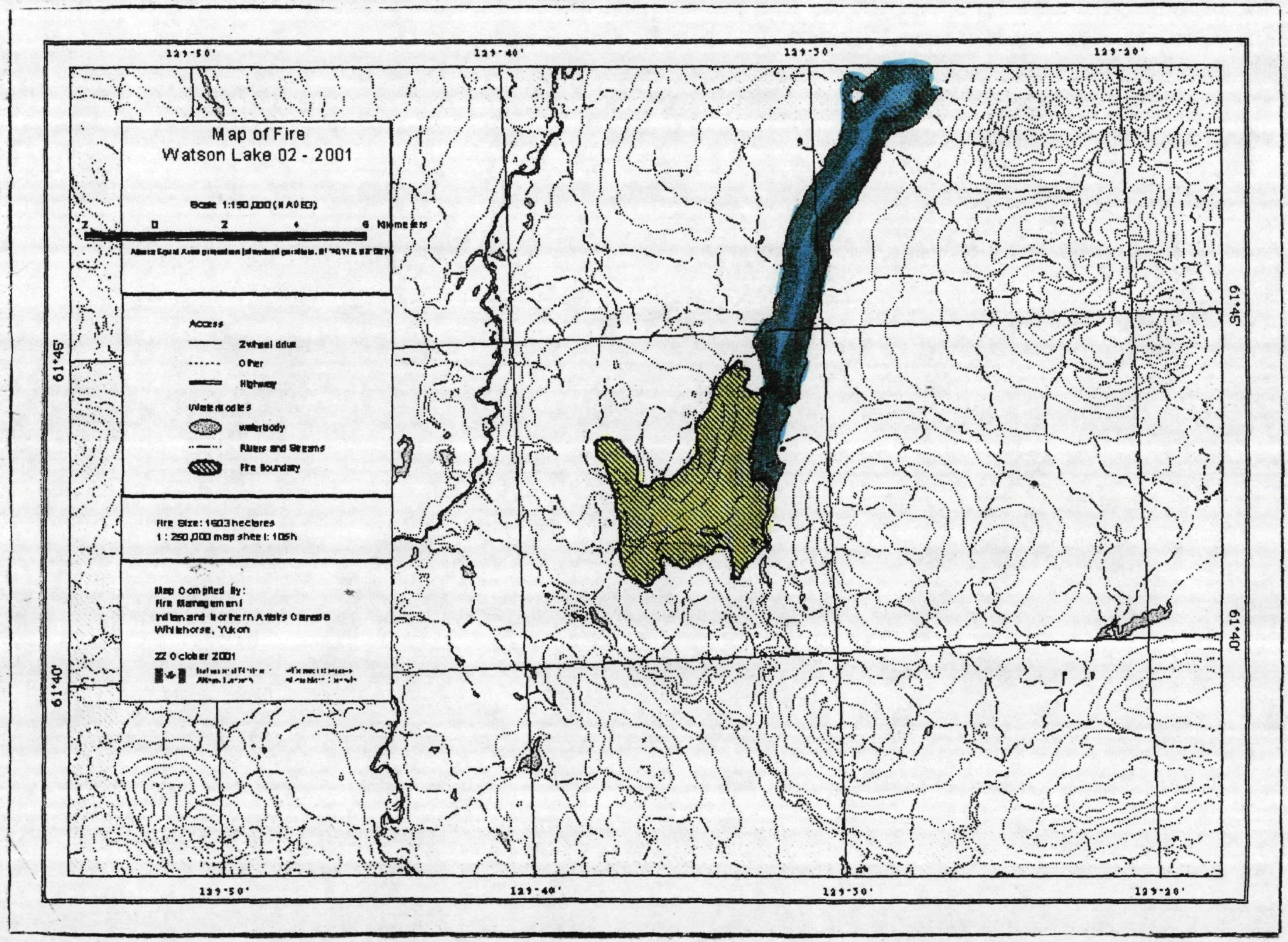
DATE RECEIVED: NOV 22 2002 **DATE REPORT MAILED:** Dec 5/02 **SIGNED BY** ....D TOYE, C LEONG, J. WANG; CERTIFIED B C. ASSAYERS

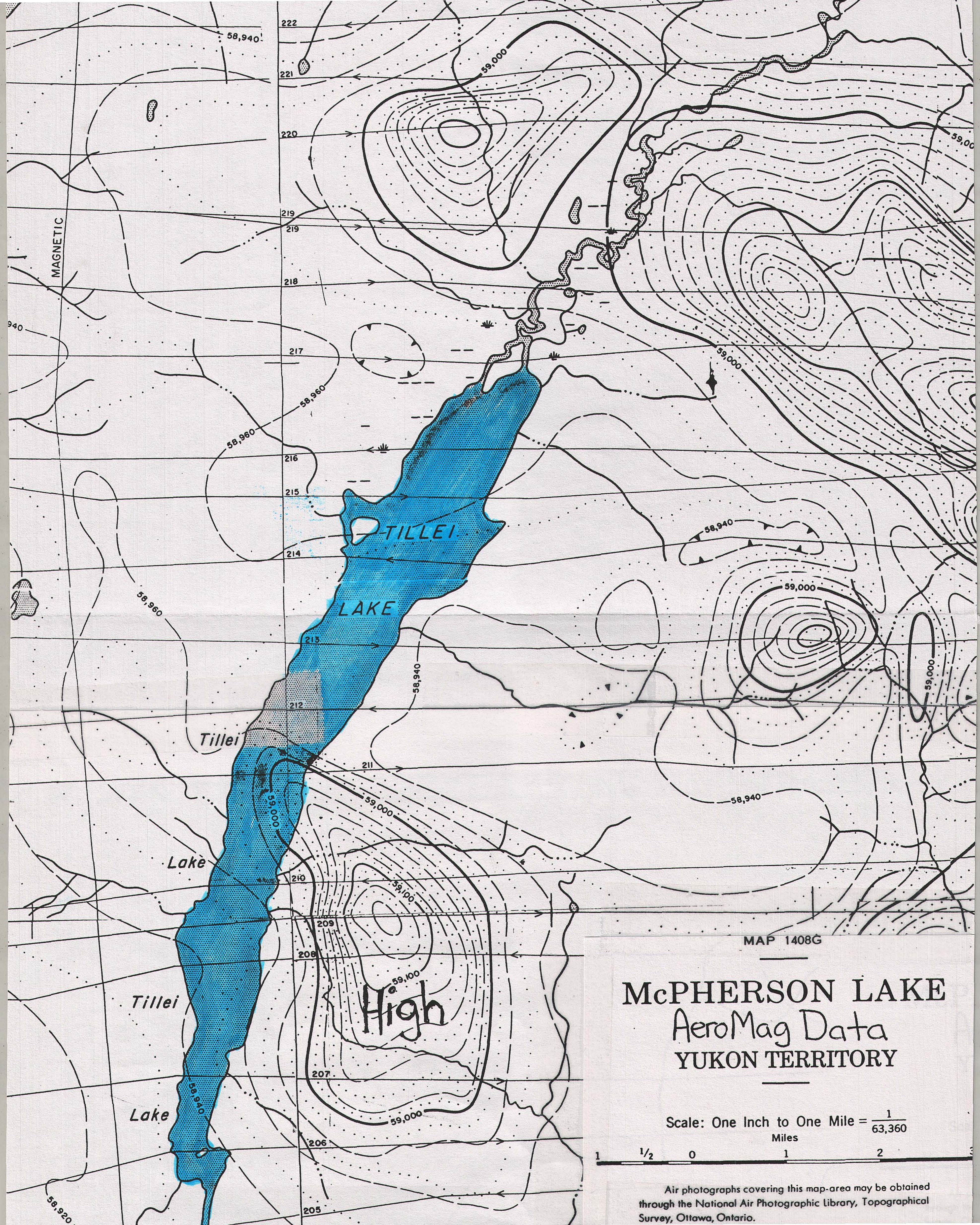
Data FA

Au Values in Stream Sediments GSC open file 1649

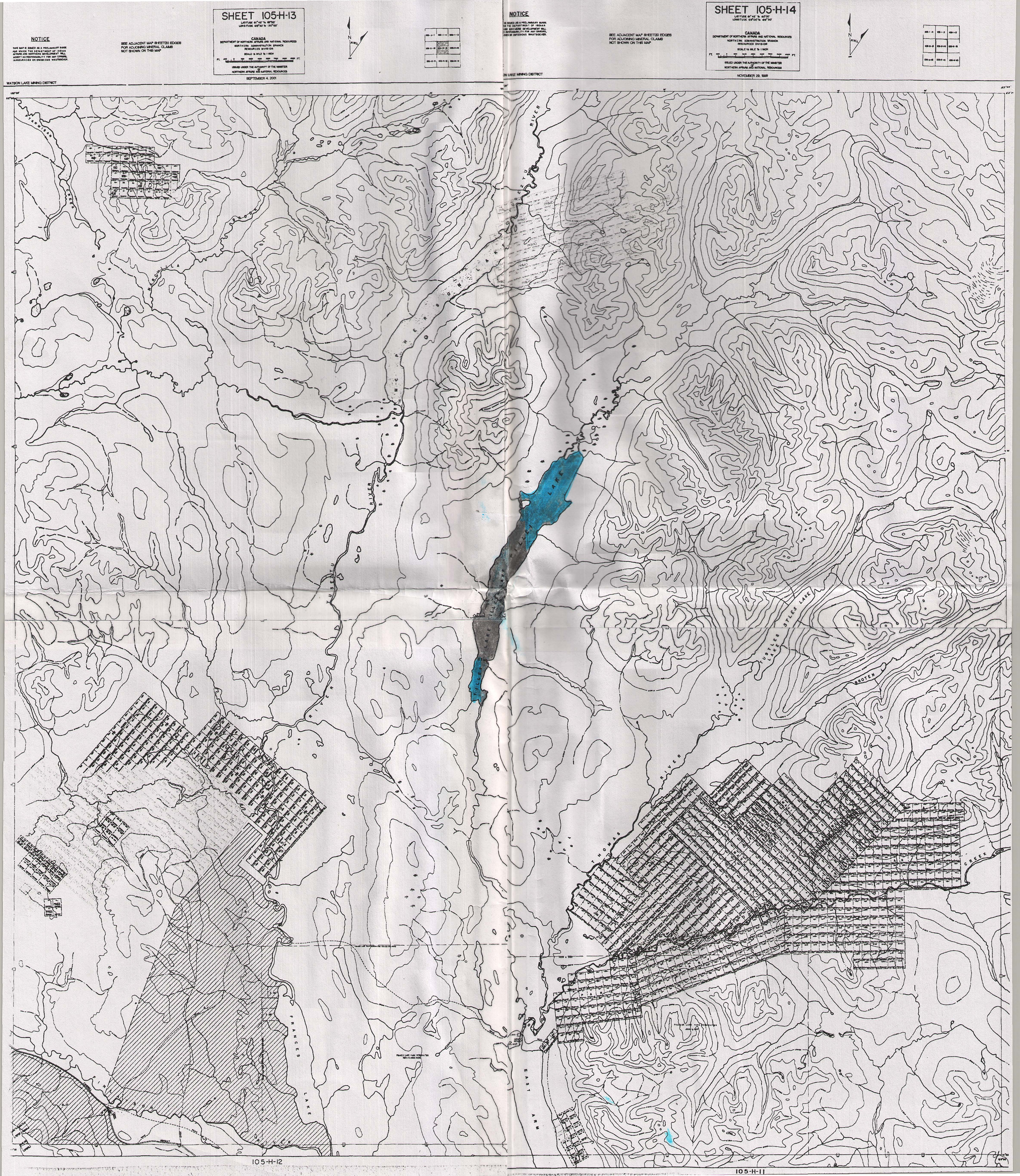
1988 105H




Map of Fire
Watson Lake 02 - 2001
Scale 1:150,000
0
2
4
6 Kilometers
Access
2wheel drive
Other
Highway
waterbody
Rivers and Streams
Fire Boundary
Fire Size: 1603 hectares
1 : 250,000 map sheet: 105h
Map Compiled By:
Fire Management
Indian and Northern Affairs Canada
Whitehorse, Yukon
22 October 2001
129°50'
129°40'
129°30'
129°20'
61°45'
61°40'



MAGNETIC
58,940
59,000
58,960
TILLEI
LAKE
Tillei
Lake
Tillei
Lake
59,100
High
58,920
222
221
220
219
218
217
216
215
214
213
212
211
210
209
208
207
206
205
MAP 1408G
McPHERSON LAKE
AeroMag Data
YUKON TERRITORY
Scale: One Inch to One Mile = 1/63,360
Miles
1 1/2 0 1 2
Air photographs covering this map-area may be obtained through the National Air Photographic Library, Topographical Survey, Ottawa, Ontario.


NOTICE
THIS MAP IS ISSUED AS A PRELIMINARY GUIDE FOR WHICH THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT WILL ACCEPT NO RESPONSIBILITY FOR ANY ERRORS, INACCURACIES OR OMISSIONS WHATSOEVER.
SEE ADJACENT MAP SHEET(S) EDGES FOR ADJOINING MINERAL CLAIMS NOT SHOWN ON THIS MAP
SHEET 105-H-13
CANADA
DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
NORTHERN ADMINISTRATION BRANCH
RESOURCES DIVISION
ISSUED UNDER THE AUTHORITY OF THE MINISTER OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
SEPTEMBER 4, 2001
N
WATSON LAKE MINING DISTRICT
NOTICE
SEE ADJACENT MAP SHEET(S) EDGES FOR ADJOINING MINERAL CLAIMS NOT SHOWN ON THIS MAP
SHEET 105-H-14
LATITUDE 61°45' To 62°00'
LONGITUDE 129°00' To 129°30'
CANADA
DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
NORTHERN ADMINISTRATION BRANCH
RESOURCES DIVISION
SCALE: ½ MILE To 1 INCH
ISSUED UNDER THE AUTHORITY OF THE MINISTER OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
NOVEMBER 29, 1999
N
RIVER
LAKE
FRANCES
LAKE
EAST
ARM
RIVER
CREEK
105-H-12
105-H-11

MAP 1676A

SURFICIAL MATERIALS AND LANDFORMS

YUSEZYU RIVER

YUKON TERRITORY

Scale 1:100 000 - Échelle 1/100 000

0 2 4 6 8 Kilomètres

LEGEND

This legend is common to maps 1674A, 1675A, 1676A, 1677A, coloured legend blocks indicate map units that appear on this map

SURFICIAL DEPOSITS
QUATERNARY

POST-LAST GLACIATION

NEOGLACIATION

GLACIAL ENVIRONMENT

ICE AND SNOW

Tn — *TILL: nonsorted debris, commonly bouldery, 0.5-20 m thick, forming discontinuous veneers, fluted, hummocky, or channelled blankets, and lateral and end moraine ridges; distinguished from older till by its general lack of vegetation; includes deposits of six advances, oldest of which postdates White River tephra (ca. 1200 years old)*

NONGLACIAL ENVIRONMENT

COLLUVIAL DEPOSITS: block accumulations and landslide debris, 1-50 m thick

Ca — *Talus (scree): accumulations of blocks, commonly exceeding 3 m in diameter, as much as 50 m thick, forming aprons and fans below cliffs; commonly crossed by debris flow channels and levees. Most slopes active*

Rock glacier debris: accumulations of talus deformed by flow of interstitial ice to form rock (talus) glaciers, generally 10-50 m thick, with pronounced transverse and longitudinal ridges and furrows, steep sides and fronts; includes deposits of several ages, at least three older and six younger than White River tephra (ca. 1200 years old)

Ch — *Landslide debris: rock avalanches more than 10 m thick and slumped and slid till incorporating organic detritus, 1-10 m thick, with hummocky or rolling surfaces and steep fronts*

ALLUVIAL DEPOSITS: gravel, sand, and organic detritus 2-20 m thick

Af — *Alluvial fan deposits: poorly sorted gravel and sand with organic detritus and buried organic soils; fans commonly laterally amalgamated, commonly crossed by debris flow channels and levees and subject to shifting stream courses*

Ap,t — *Alluvial plain and terrace deposits: well sorted gravel and sand with detrital organic beds, including concentrations of logs, forming meander scrolled plains* **Ap**, *and terraces* **At**

Er — *EOLIAN DEPOSITS: sand, 1-5 m thick, forming sharp crested dunes, now stable; probably formed immediately after deglaciation and prior to establishment of a vegetation cover*

LAST GLACIATION

PROGLACIAL AND GLACIAL ENVIRONMENT

Lt,p — *GLACIOLACUSTRINE DEPOSITS: fine sand, silt, and clay, 10-30 m thick, forming terraces deeply dissected by postglacial erosion where thick or plains where thin; deposited in glacier dammed lakes*

GLACIOFLUVIAL DEPOSITS: gravel and sand, 2-30 m thick, deposited on, beneath, and in front of the marginal zone of a glacier

Gt, p,f / **Gtk Gpk** — *Proglacial outwash: gravel and sand forming distal outwash terraces* **Gt**, *plains* **Gp**, *and fans* **Gf**, *and proximal kettled outwash terraces* **Gtk**, *and plains* **Gpk**; *characterized by abandoned braided channel patterns*

Ice contact stratified drift: gravel and sand, with clasts commonly 10-100 cm across, commonly faulted, forming lateral kame terraces and delta terraces **It**, *with ice contact escarpments and kettle holes* **Ik**, *hummocky moulin kame fields, or ice block disintegration terrain* **Ih**, *and eskers or crevasse fillings* **Ir**

GLACIAL ENVIRONMENT

TILL: nonsorted debris, 0.5-20 m thick, ranging widely in grain size and petrological composition but including deposits locally derived almost entirely from black shale, red shale, serpentine, marble, limestone, granite, and schist

Tv — *Till veneer: 0.5-2 m thick; surface mimics underlying rock surface, fluted in places, commonly channelled by meltwater*

Tb — *Till blanket: 2-20 m thick; much of surface lineated by flutings and drumlins or channelled by meltwater* **Tb**, *distinctly hummocky* **Tbh**, *where composed mostly or entirely of shale*

ROCK
PRE-QUATERNARY

R1 / **R2** — *ROCK: rock of various lithologies and ages forming alpine valley walls and ridges extensively modified by glacial erosion* **R1**, *and high plateau remnants of restricted extent showing little or no sign of glacial erosion* **R2**, *high plateaus and other low to moderate slopes commonly mantled by felsenmeer; patches of till and glacial erratics occur throughout*

Geological boundary (defined, gradational)
Cirque; cirques and arêtes; alpine escarpment formed by glacial oversteepening of bedrock
Drumlins (ice flow direction unknown)
Crag and tail (till tail)
Roche moutonnée or rock drumlin
End moraine
Lateral moraine, ornamented on glacier side
Medial moraine
Esker (direction of flow known)
Crevasse filling
Kame
Subglacial and proglacial meltwater channel (wide, narrow)
Sidehill (lateral) meltwater channel; barb on upslope side
Escarpment in unconsolidated sediment
Landslide scar (large, small)
Avalanche track, avalanche slope
Ground observation point
Site where permafrost encountered
Till sample with anomalously high levels of Zn,Pb, etc. ..... **58 Zn,Pb**

MINERALS

Chromium	**Cr**	*Molybdenum*	**Mo**
Manganese	**Mn**	*Uranium*	**U**


130°00'
45'
30'
15'
62°00'
McPherson Lake
Tillei Lake
THOMAS RIVER
ANDERSON
Finlayson
River
MOUNT HUNT
SIMPSON TOWER 15
Adjoins map 8-1960, "Finlayson Lake"
1
2
3
4
4b
5

GEOLOGY
105H-06
'66

MAP 6-1966

GEOLOGY

FRANCES LAKE

YUKON TERRITORY AND DISTRICT OF MACKENZIE

Scale 1:253,440
1 inch to 4 miles

Miles 4 0 4 8 12 Miles

Kilometres 6 0 6 12 18 Kilometres

CENOZOIC

QUATERNARY

16 Unconsolidated glacial and alluvial deposits

MESOZOIC

CRETACEOUS (?)

15 Fine- to medium-grained biotite-quartz monzonite, granodiorite, minor diorite and gneiss; 15a, fine- and medium-grained biotite hornblende quartz monzonite and granodiorite, in part porphyritic; 15b, hornblende syenite

PALAEOZOIC

DEVONIAN AND (?) MISSISSIPPIAN

13 Brown and black shale, black and grey chert, quartzite, greywacke, chert-pebble conglomerate; 13a, fine-grained light grey limestone and minor dolomite; 13b, greenstone; 13c, serpentinite

SILURIAN AND DEVONIAN (?)

12 Fine-grained light to dark grey dolomite and quartzite; minor buff-grey dolomitic quartzite and silty to sandy dolomite

14 Rusty brown weathering fine-grained schistose and spotted biotite hornfels, fine-grained quartzite, black pyritic argillite, dense light green to grey calc-silicate hornfels and fine-grained marble; minor slate, silty limestone and greywacke; 14a, light grey thin-bedded fine-grained marble and calc-silicate hornfels. May include some 1 and 2

ORDOVICIAN AND SILURIAN

11 Black shale, slate; minor chert, siltstone, dark limestone

CAMBRIAN

MIDDLE AND LATE CAMBRIAN

9 Light grey and brownish grey weathering, intercalated platy argillaceous silty limestone, siltstone, and fine-grained grey limestone

10 Dark grey and brown silty shale and finely laminated siltstone, dark grey slate, thin-bedded brown-grey fine-grained sandstone; minor hornfels

EARLY AND/OR MIDDLE CAMBRIAN

7 Buff-weathering dolomite, silty and sandy dolomite; minor sandstone and shale

6 Bright yellow and orange-weathering silty and sandy dolomite

EARLY CAMBRIAN

5 Sandstone, buff-weathering sandy and silty dolomite, dolomite, minor quartzite and argillaceous limestone; basic volcanic flows

8 Dark brown-grey to black, in part pyritic, calcareous argillite, slate, shale, and minor thin-bedded argillaceous limestone

4 'Swiss-cheese' limestone, irregular interbanded dolomitic siltstone and argillaceous to silty limestone; pods and lenses of limestone; minor blue-grey fine-grained limestone and orange-weathering dolomite

CAMBRIAN AND/OR EARLIER

3 Brown to red-brown weathering slate, phyllite, siltstone and fine-grained quartzite; 3a, green-grey slate and phyllite

PROTEROZOIC

1 Brown, grey, maroon and green shale; grey to green slate and phyllite, gritty feldspathic quartzite, quartz- and feldspar-pebble conglomerate, sandstone; 1a, minor limestone; 1b, light grey weathering, fine-grained grey limestone; 1c, mainly grey to green slate and phyllite; 1d, maroon and green shale and slate; 1e, mainly brown and grey shale and slate, minor maroon and green shale. 1d and 1e are probably equivalent and perhaps correlative with 1c

2 Quartz-feldspar-mica gneiss and schist, granitoid gneiss, feldspathic and micaceous quartzite, biotite schist, minor marble and skarn; numerous small granitic bodies, aplite and pegmatite; 2a, fine- to coarse-grained marble

A Highly altered, green to brown, megacrystic, coarse-grained biotite-quartz monzonite or granodiorite. Age uncertain

Geological boundary (defined, approximate or assumed) ....

Bedding (inclined, vertical) ....

Foliation (horizontal, inclined, vertical) ....

Lineation (horizontal, inclined) ....

Fault (defined, approximate) ....

Anticline (defined, approximate, arrow indicates plunge) ....

Syncline (defined, approximate, overturned) ....

Fossil locality .... Ⓕ

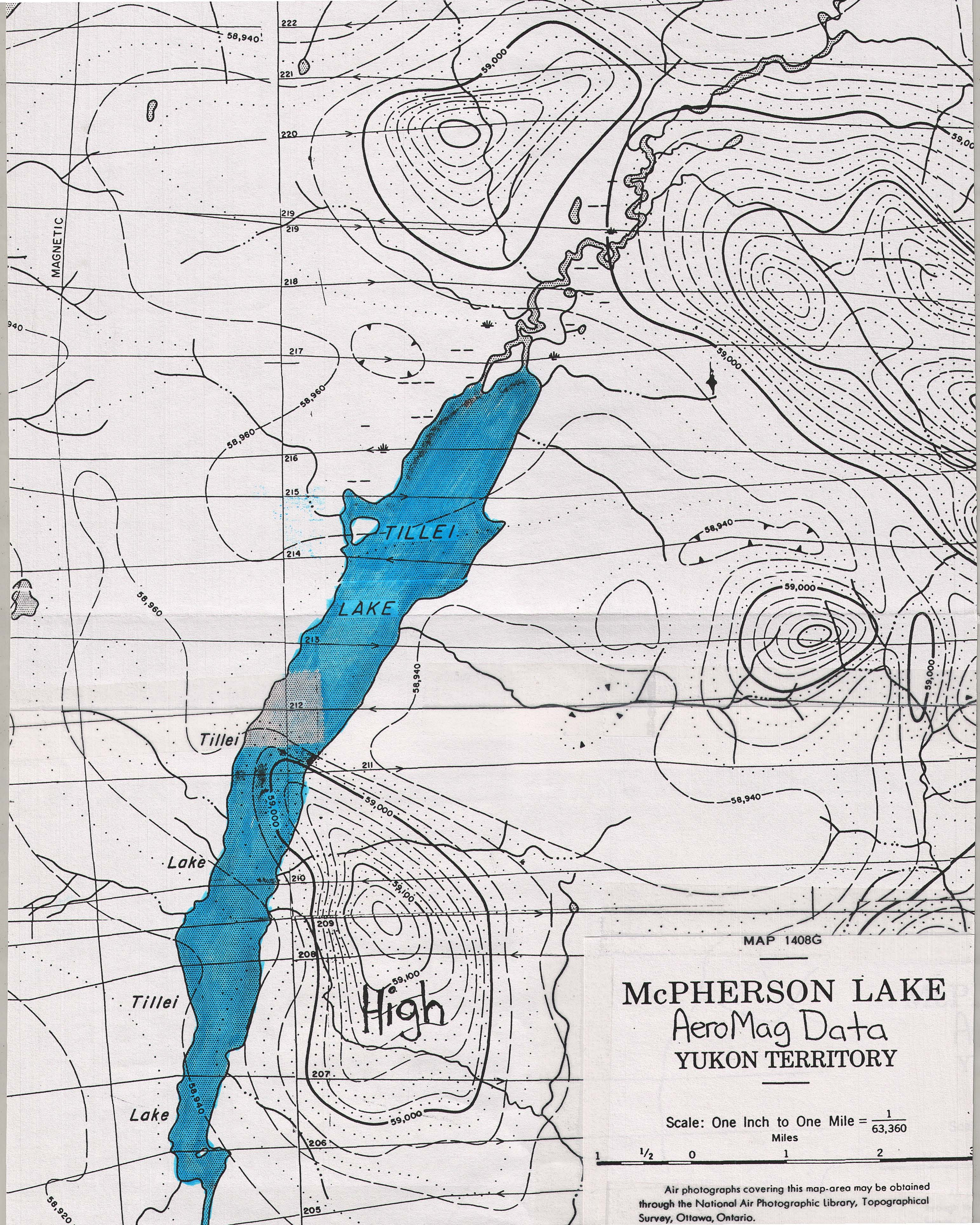
Mineral occurrence or prospect (tungsten, W; copper, Cu; zinc, Zn) .... ×W

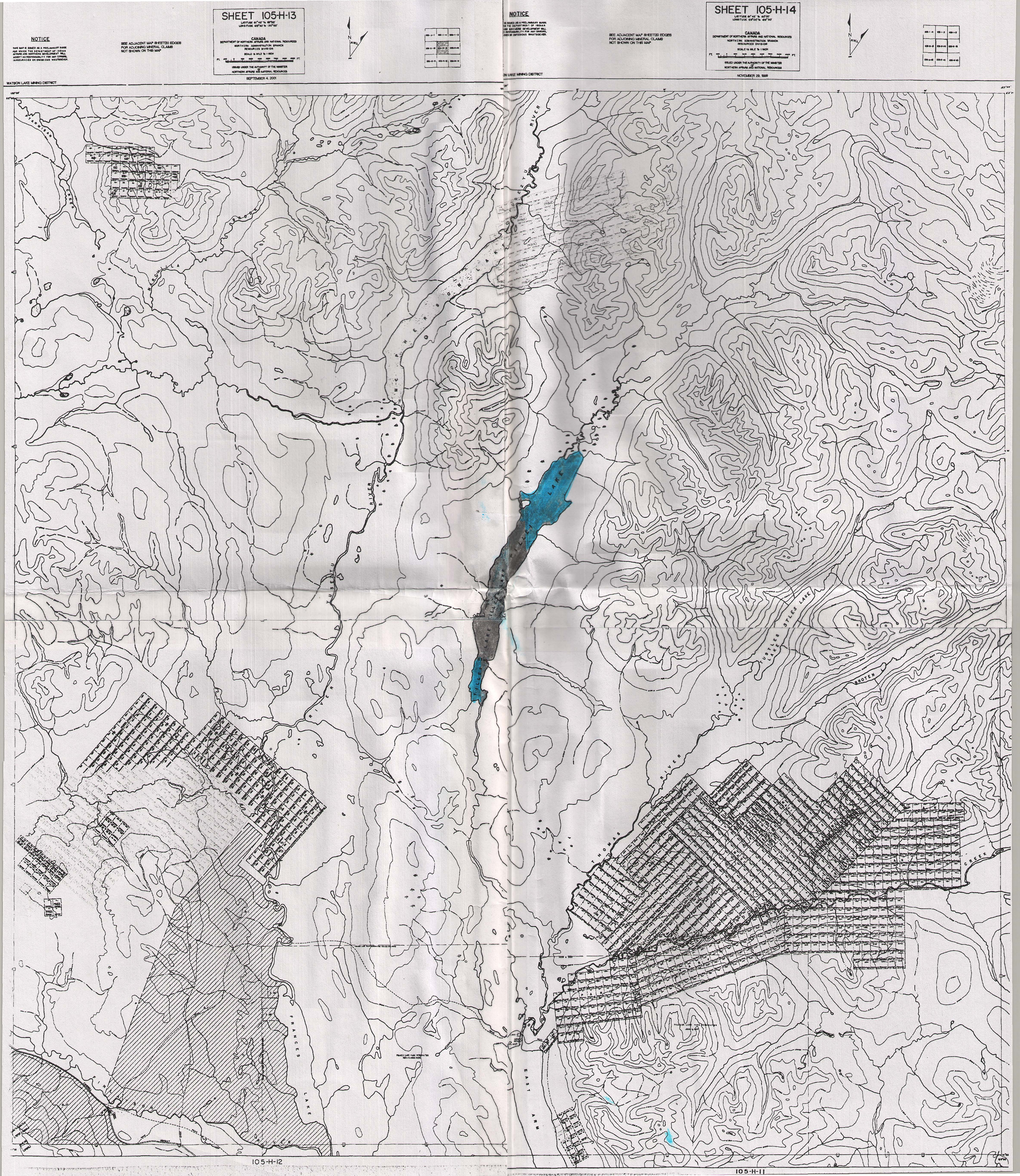
Areas of mineral prospects (zinc, Zn; lead, Pb; copper, Cu; silver, Ag) .... Zn,Pb

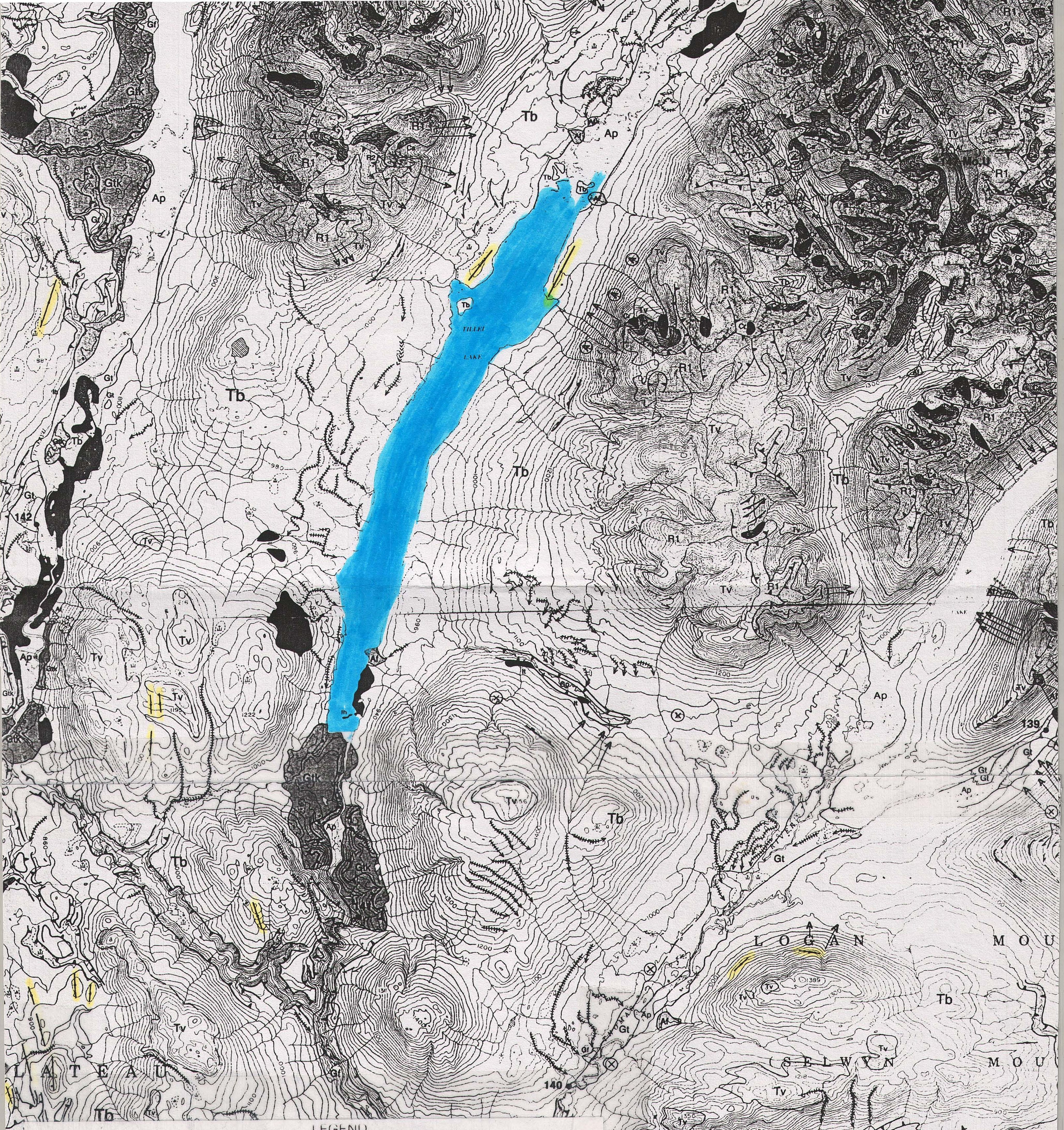
Hot spring .... H.S.O

Glacier .... Gl

Geology by E. F. Roots, 1953; L. H. Green and J. A. Roddick, 1960
S. L. Blusson, 1962 and 1965


MAGNETIC
58,940
222
221
220
219
218
217
216
215
214
213
212
211
210
209
208
207
206
205
59,000
58,960
58,940
TILLEI
LAKE
Tillei
Lake
Tillei
Lake
59,100
59,100
High
MAP 1408G
McPHERSON LAKE
AeroMag Data
YUKON TERRITORY
Scale: One Inch to One Mile = 1/63,360
Miles
1 1/2 0 1 2
Air photographs covering this map-area may be obtained through the National Air Photographic Library, Topographical Survey, Ottawa, Ontario.


NOTICE
THIS MAP IS ISSUED AS A PRELIMINARY GUIDE FOR WHICH THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT WILL ACCEPT NO RESPONSIBILITY FOR ANY ERRORS, INACCURACIES OR OMISSIONS WHATSOEVER.
SEE ADJACENT MAP SHEET(S) EDGES FOR ADJOINING MINERAL CLAIMS NOT SHOWN ON THIS MAP
SHEET 105-H-13
LATITUDE 61°45' To 62°00'
LONGITUDE 129°30' To 130°00'
CANADA
DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
NORTHERN ADMINISTRATION BRANCH
RESOURCES DIVISION
SCALE: ½ MILE To 1 INCH
ISSUED UNDER THE AUTHORITY OF THE MINISTER OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
SEPTEMBER 4, 2001
WATSON LAKE MINING DISTRICT
NOTICE
SEE ADJACENT MAP SHEET(S) EDGES FOR ADJOINING MINERAL CLAIMS NOT SHOWN ON THIS MAP
SHEET 105-H-14
LATITUDE 61°45' To 62°00'
LONGITUDE 129°00' To 129°30'
CANADA
DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
NORTHERN ADMINISTRATION BRANCH
RESOURCES DIVISION
SCALE: ½ MILE To 1 INCH
ISSUED UNDER THE AUTHORITY OF THE MINISTER OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
NOVEMBER 29, 1999
RIVER
LAKE
FRANCES
EAST ARM
THOMAS
CREEK
105-H-12
105-H-11



MAP 1676A

SURFICIAL MATERIALS AND LANDFORMS

YUSEZYU RIVER

YUKON TERRITORY

Scale 1:100 000 - Échelle 1/100 000

0 2 4 6 8 Kilomètres

LEGEND

This legend is common to maps 1674A, 1675A, 1676A, 1677A, coloured legend blocks indicate map units that appear on this map

SURFICIAL DEPOSITS
QUATERNARY

POST-LAST GLACIATION

NEOGLACIATION

GLACIAL ENVIRONMENT

ICE AND SNOW

Tn — TILL: nonsorted debris, commonly bouldery, 0.5-20 m thick, forming discontinuous veneers, fluted, hummocky, or channelled blankets, and lateral and end moraine ridges; distinguished from older till by its general lack of vegetation; includes deposits of six advances, oldest of which postdates White River tephra (ca. 1200 years old)

NONGLACIAL ENVIRONMENT

COLLUVIAL DEPOSITS: block accumulations and landslide debris, 1-50 m thick

Ca — Talus (scree): accumulations of blocks, commonly exceeding 3 m in diameter, as much as 50 m thick, forming aprons and fans below cliffs; commonly crossed by debris flow channels and levees. Most slopes active

Rock glacier debris: accumulations of talus deformed by flow of interstitial ice to form rock (talus) glaciers, generally 10-50 m thick, with pronounced transverse and longitudinal ridges and furrows, steep sides and fronts; includes deposits of several ages, at least three older and six younger than White River tephra (ca. 1200 years old)

Ch — Landslide debris: rock avalanches more than 10 m thick and slumped and slid till incorporating organic detritus, 1-10 m thick, with hummocky or rolling surfaces and steep fronts

ALLUVIAL DEPOSITS: gravel, sand, and organic detritus 2-20 m thick

Af — Alluvial fan deposits: poorly sorted gravel and sand with organic detritus and buried organic soils; fans commonly laterally amalgamated, commonly crossed by debris flow channels and levees and subject to shifting stream courses

Ap,t — Alluvial plain and terrace deposits: well sorted gravel and sand with detrital organic beds, including concentrations of logs, forming meander scrolled plains Ap, and terraces At

Er — EOLIAN DEPOSITS: sand, 1-5 m thick, forming sharp crested dunes, now stable; probably formed immediately after deglaciation and prior to establishment of a vegetation cover

LAST GLACIATION

PROGLACIAL AND GLACIAL ENVIRONMENT

Lt,p — GLACIOLACUSTRINE DEPOSITS: fine sand, silt, and clay, 10-30 m thick, forming terraces deeply dissected by postglacial erosion where thick or plains where thin; deposited in glacier dammed lakes

GLACIOFLUVIAL DEPOSITS: gravel and sand, 2-30 m thick, deposited on, beneath, and in front of the marginal zone of a glacier

Gt, p,f / Gtk, Gpk — Proglacial outwash: gravel and sand forming distal outwash terraces Gt, plains Gp, and fans Gf, and proximal kettled outwash terraces Gtk, and plains Gpk, characterized by abandoned braided channel patterns

Ice contact stratified drift: gravel and sand, with clasts commonly 10-100 cm across, commonly faulted; forming lateral kame terraces and delta terraces It, with ice contact escarpments and kettle holes Ik, hummocky moulin kame fields, or ice block disintegration terrain Ih, and eskers or crevasse fillings Ir

GLACIAL ENVIRONMENT

TILL: nonsorted debris, 0.5-20 m thick, ranging widely in grain size and petrological composition but including deposits locally derived almost entirely from black shale, red shale, serpentine, marble, limestone, granite, and schist

Tv — Till veneer: 0.5-2 m thick; surface mimics underlying rock surface, fluted in places, commonly channelled by meltwater

Tb / Tbh — Till blanket: 2-20 m thick; much of surface lineated by flutings and drumlins or channelled by meltwater Tb, distinctly hummocky Tbh, where composed mostly or entirely of shale

ROCK
PRE-QUATERNARY

R1 / R2 — ROCK: rock of various lithologies and ages forming alpine valley walls and ridges extensively modified by glacial erosion R1, and high plateau remnants of restricted extent showing little or no sign of glacial erosion R2, high plateaus and other low to moderate slopes commonly mantled by felsenmeer; patches of till and glacial erratics occur throughout

Geological boundary (defined, gradational)

Cirque; cirques and arêtes; alpine escarpment formed by glacial oversteepening of bedrock

Drumlins (ice flow direction unknown)

Crag and tail (till tail)

Roche moutonnée or rock drumlin

End moraine

Lateral moraine, ornamented on glacier side

Medial moraine

Esker (direction of flow known)

Crevasse filling

Kame

Subglacial and proglacial meltwater channel (wide, narrow)

Sidehill (lateral) meltwater channel; barb on upslope side

Escarpment in unconsolidated sediment

Landslide scar (large, small)

Avalanche track, avalanche slope

Ground observation point

Site where permafrost encountered

Till sample with anomalously high levels of Zn,Pb, etc. — 58 Zn,Pb

MINERALS

Chromium	Cr	Molybdenum	Mo
Manganese	Mn	Uranium	U


130°00'
45'
30'
15'
62°00'
McPherson Lake
Tillei Lake
THOMAS RIVER
ANDERSON
MOUNT HUNT
SIMPSON TOWER 15
Finlayson River
Adjoins map 8-1960, "Finlayson Lake"
14 Pb, Zn, Cu, Ag, As
14 Fe, Cu, As
1
2
3
4
4b
5

GEOLOGY
105H-06
'66

MAP 6-1966

GEOLOGY

FRANCES LAKE

YUKON TERRITORY AND DISTRICT OF MACKENZIE

Scale 1:253,440

1 inch to 4 miles

Miles 4 0 4 8 12 Miles

Kilometres 6 0 6 12 18 Kilometres

CENOZOIC

QUATERNARY

| 16 | Unconsolidated glacial and alluvial deposits |

MESOZOIC

CRETACEOUS (?)

| 15 | Fine- to medium-grained biotite-quartz monzonite, granodiorite, minor diorite and gneiss; 15a, fine- and medium-grained biotite hornblende quartz monzonite and granodiorite, in part porphyritic; 15b, hornblende syenite |

PALAEOZOIC

DEVONIAN AND (?) MISSISSIPPIAN

| 13 | Brown and black shale, black and grey chert, quartzite, greywacke, chert-pebble conglomerate; 13a, fine-grained light grey limestone and minor dolomite; 13b, greenstone; 13c, serpentinite |

SILURIAN AND DEVONIAN (?)

| 12 | Fine-grained light to dark grey dolomite and quartzite; minor buff-grey dolomitic quartzite and silty to sandy dolomite |

| 14 | Rusty brown weathering fine-grained schistose and spotted biotite hornfels, fine-grained quartzite, black pyritic argillite, dense light green to grey calc-silicate hornfels and fine-grained marble; minor slate, silty limestone and greywacke; 14a, light grey thin-bedded fine-grained marble and calc-silicate hornfels. May include some 1 and 2 |

ORDOVICIAN AND SILURIAN

| 11 | Black shale, slate; minor chert, siltstone, dark limestone |

CAMBRIAN

MIDDLE AND LATE CAMBRIAN

| 9 | Light grey and brownish grey weathering, intercalated platy argillaceous silty limestone, siltstone, and fine-grained grey limestone |

| 10 | Dark grey and brown silty shale and finely laminated siltstone, dark grey slate, thin-bedded brown-grey fine-grained sandstone; minor hornfels |

EARLY AND/OR MIDDLE CAMBRIAN

| 7 | Buff-weathering dolomite, silty and sandy dolomite; minor sandstone and shale |

| 6 | Bright yellow and orange-weathering silty and sandy dolomite |

EARLY CAMBRIAN

| 5 | Sandstone, buff-weathering sandy and silty dolomite, dolomite, minor quartzite and argillaceous limestone; basic volcanic flows |

| 8 | Dark brown-grey to black, in part pyritic, calcareous argillite, slate, shale, and minor thin-bedded argillaceous limestone |

| 4 | 'Swiss-cheese' limestone, irregular interbanded dolomitic siltstone and argillaceous to silty limestone; pods and lenses of limestone; minor blue-grey fine-grained limestone and orange-weathering dolomite |

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| A | Highly altered, green to brown, megacrystic, coarse-grained biotite-quartz monzonite or granodiorite. Age uncertain |

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Hot spring H.S.O

Glacier Gl

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