

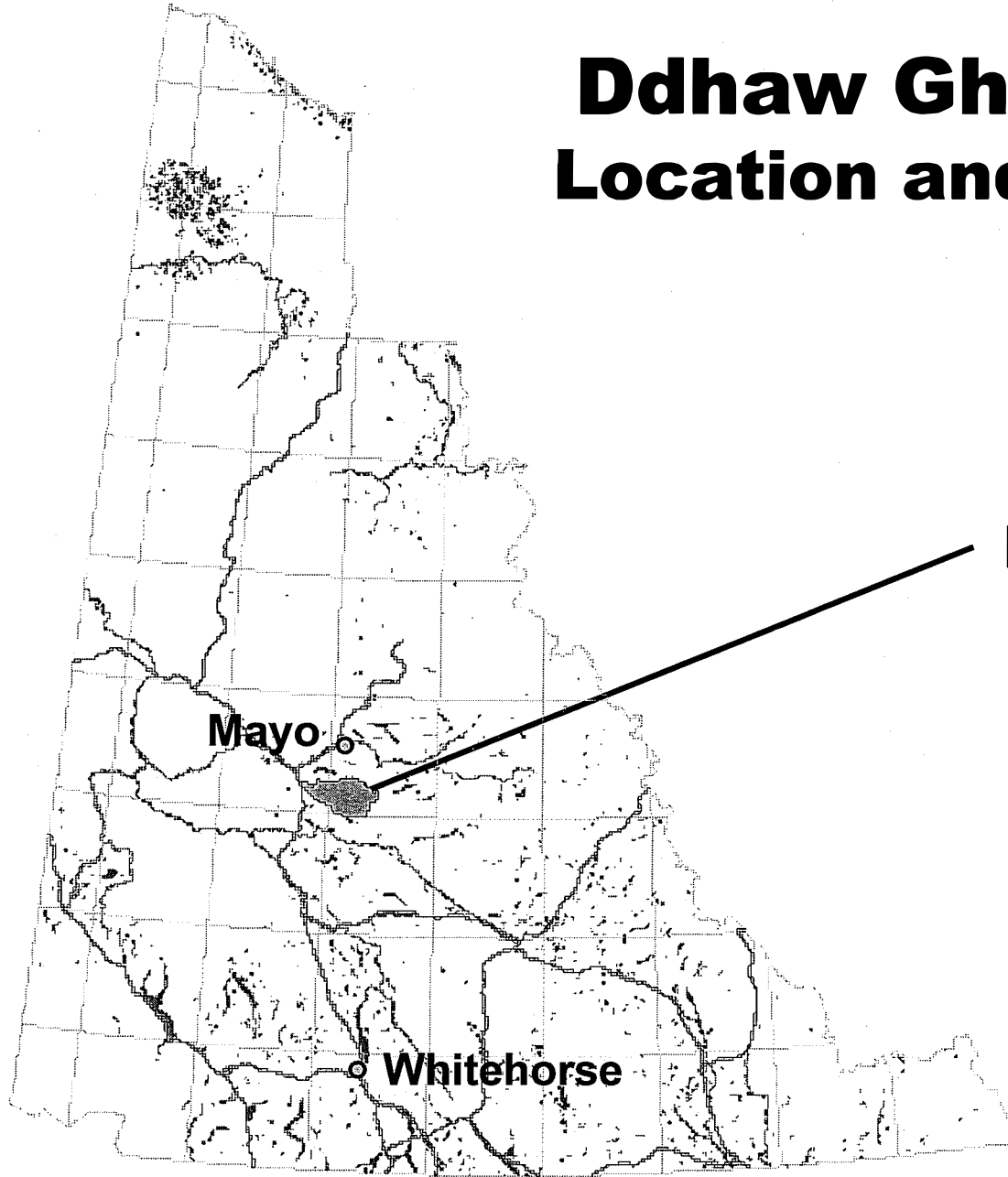
006260

**Ddhaw Ghro**  
**Special Management Area**  
**Habitat Protection Area**

**September 2001**

**Anna Fonseca**  
**YTG Mineral Resources Branch**

# **Ddhaw Ghro SMA Location and Access**



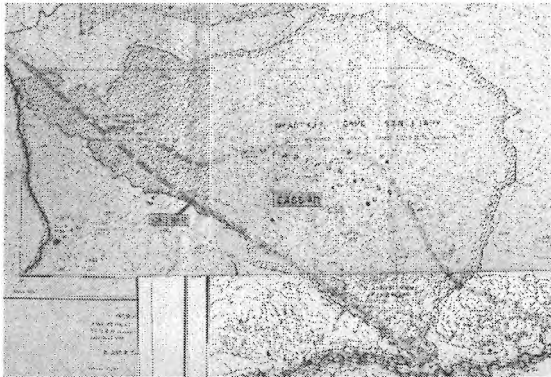
**Ddhaw Ghro SMA**

**Mayo**

**Whitehorse**

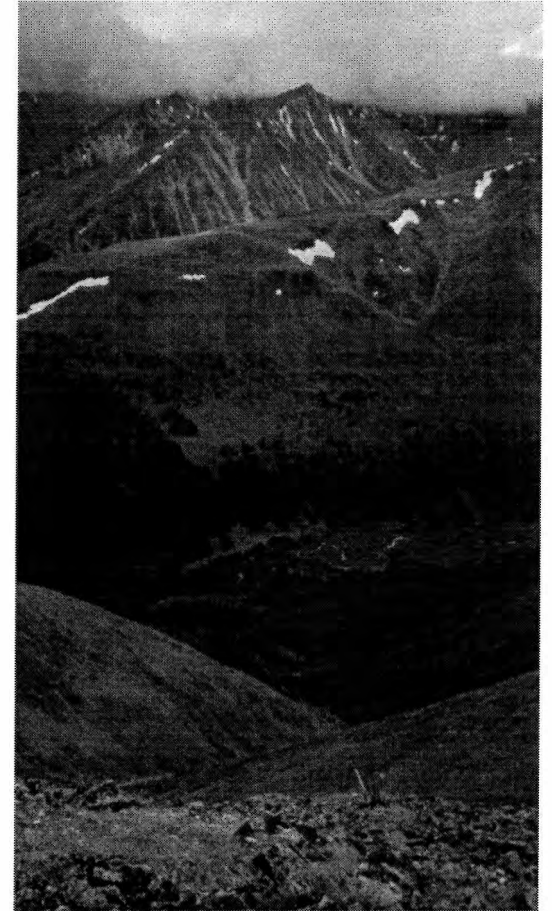
# McArthur Game Sanctuary

Proposed  
McArthur Range  
Ecological  
Reserve #10-21



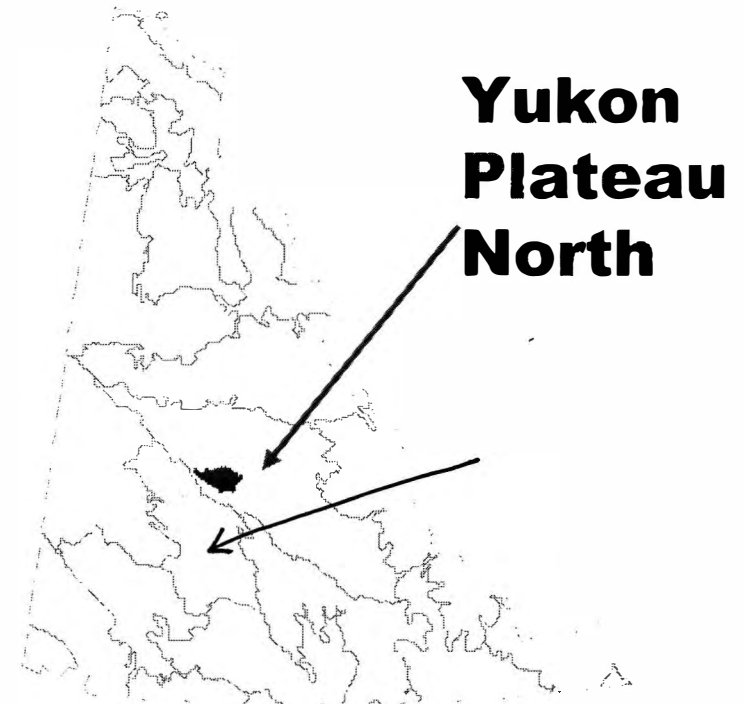
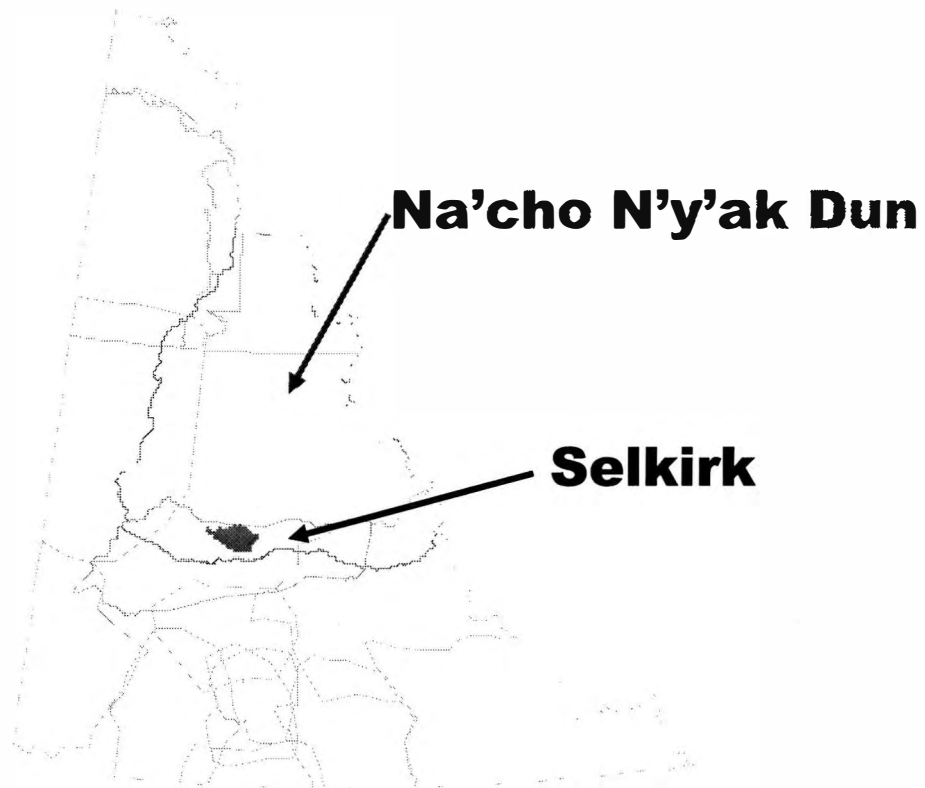
MINFILE Maps

- Map notation since 1972
- Proposed IBP site (1974)
- Withdrawn from disposition August 1997 (expired August 2000)
- Withdrawal extended for a further 5 years
- 2 regional mineral exploration projects since map notation in place
- No active quartz or placer claims



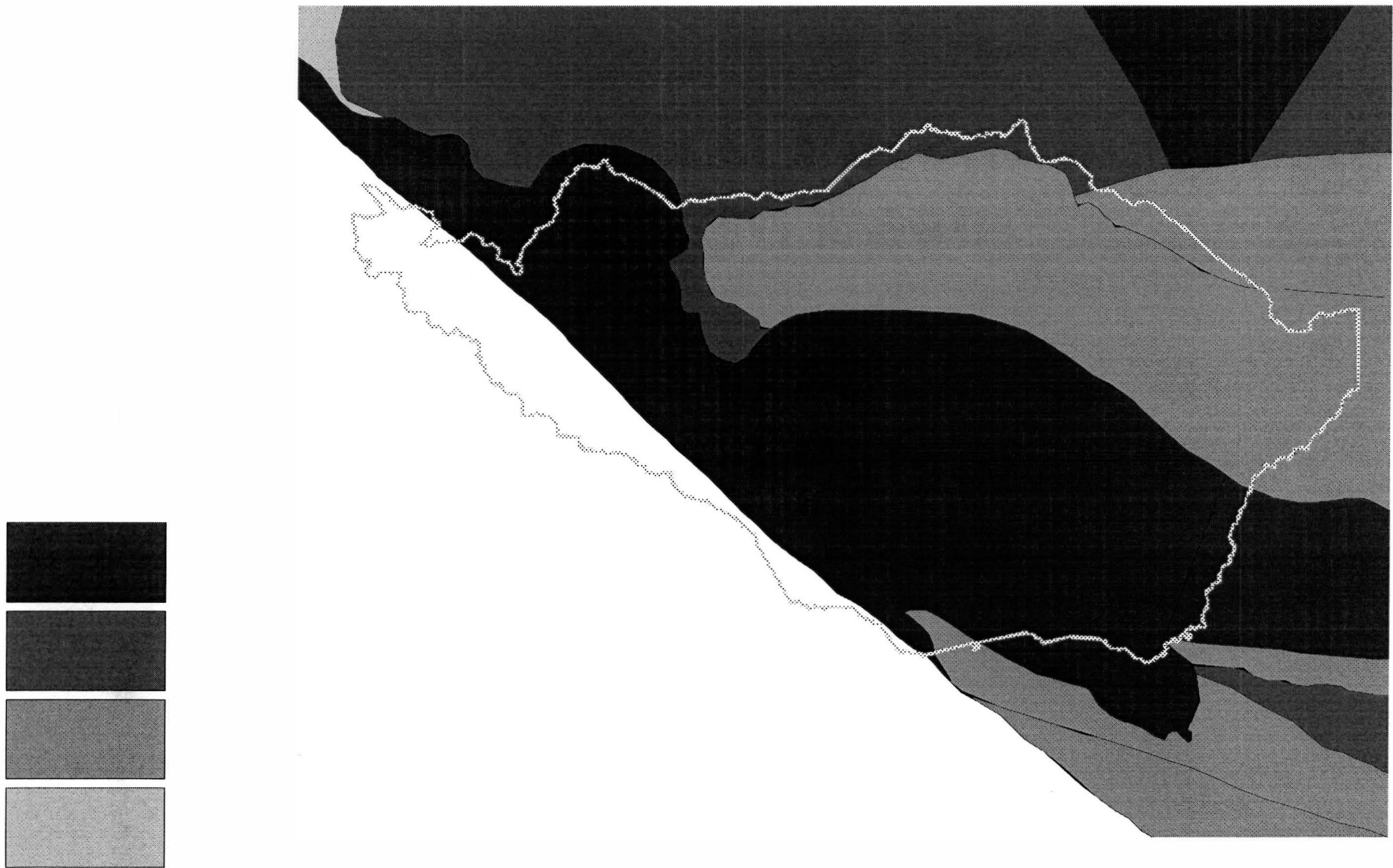
# **Ddhaw Ghro SMA**

## **Traditional Territories and Ecoregions**

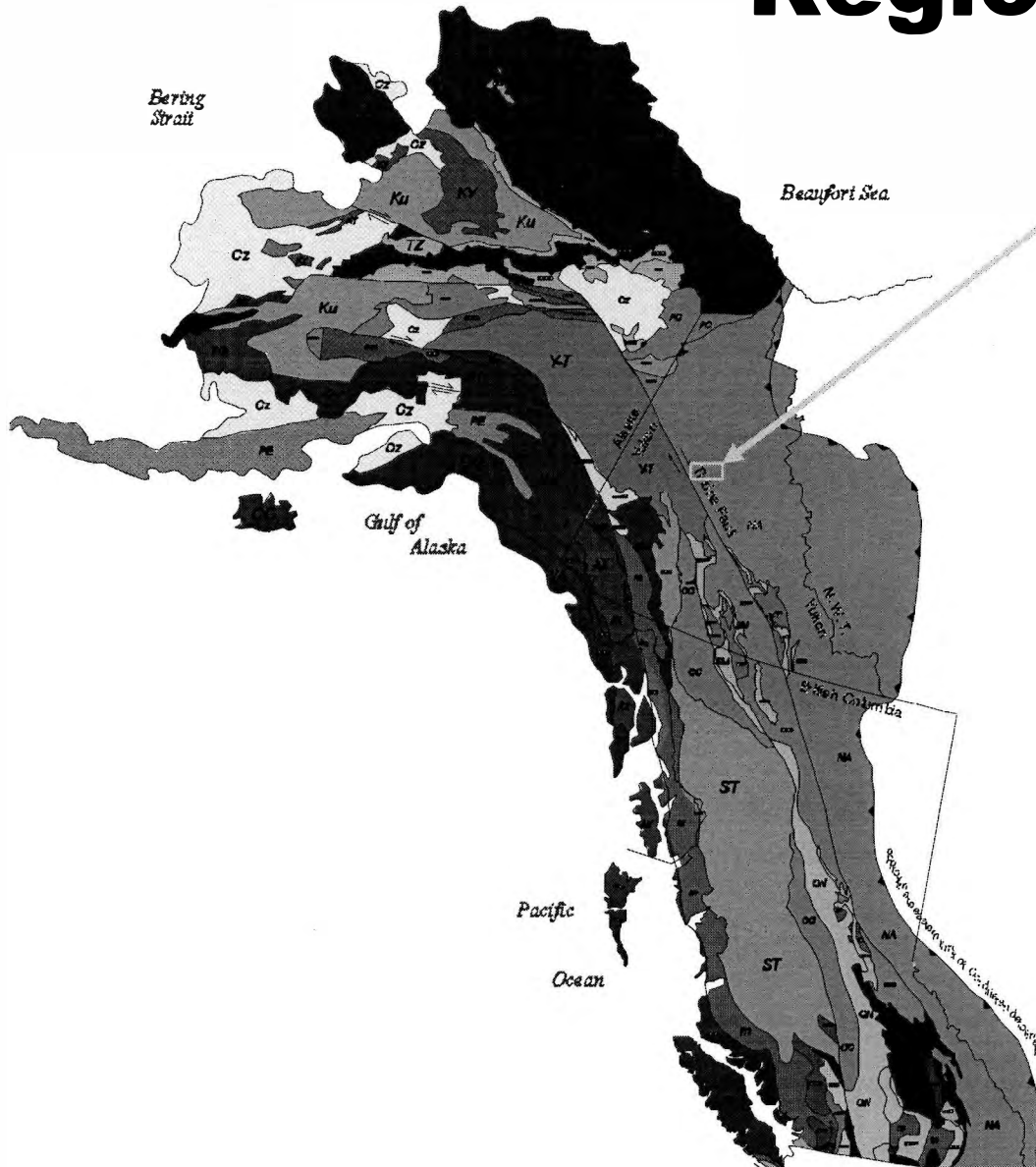


*2 ecoregions unrepresented  
→ possibly future YPAS target  
- recommended on future  
work for Summer  
2002*

# Regional Mineral Potential Map of Selwyn Basin



# Regional Geology



Ddhaw Ghro

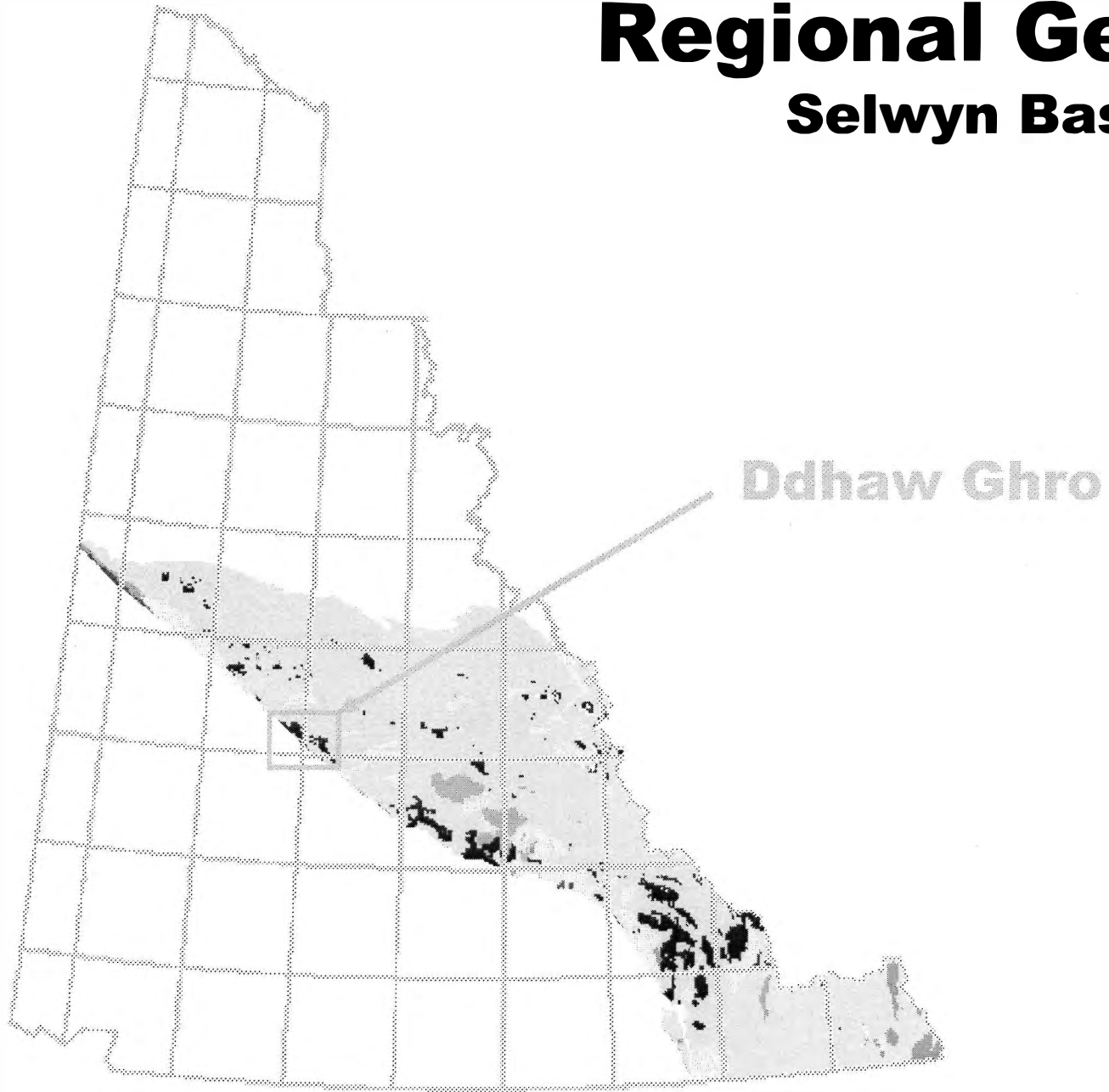
Ddhaw Ghro HPA:

- Mostly within North American crustal rocks (light blue)
- Southwestern-most corner in Yukon-Tanana Terrane (gray)

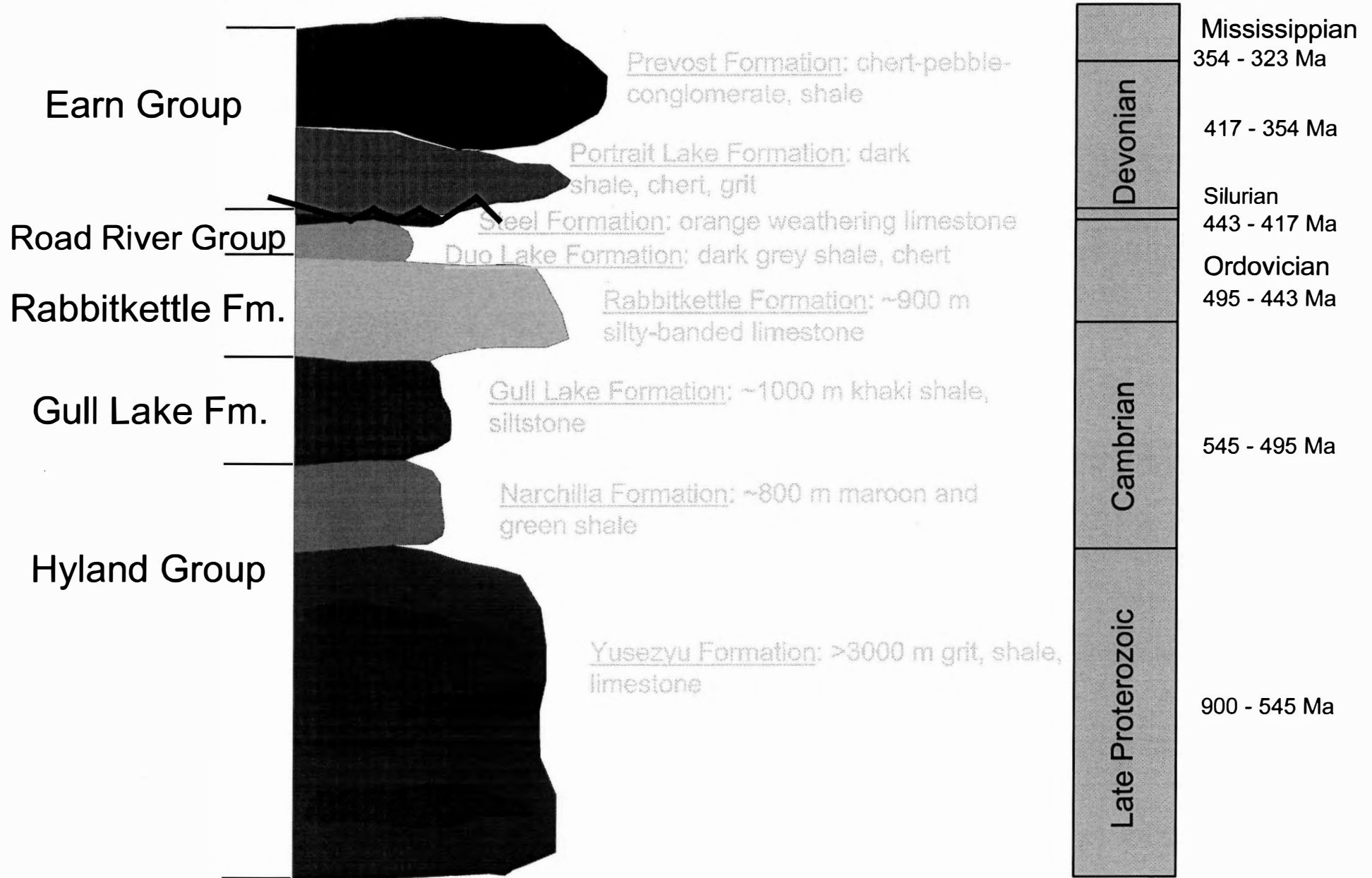
Terrane map of the northern Cordillera, Knockleberg and others, 1994.

# Regional Geology

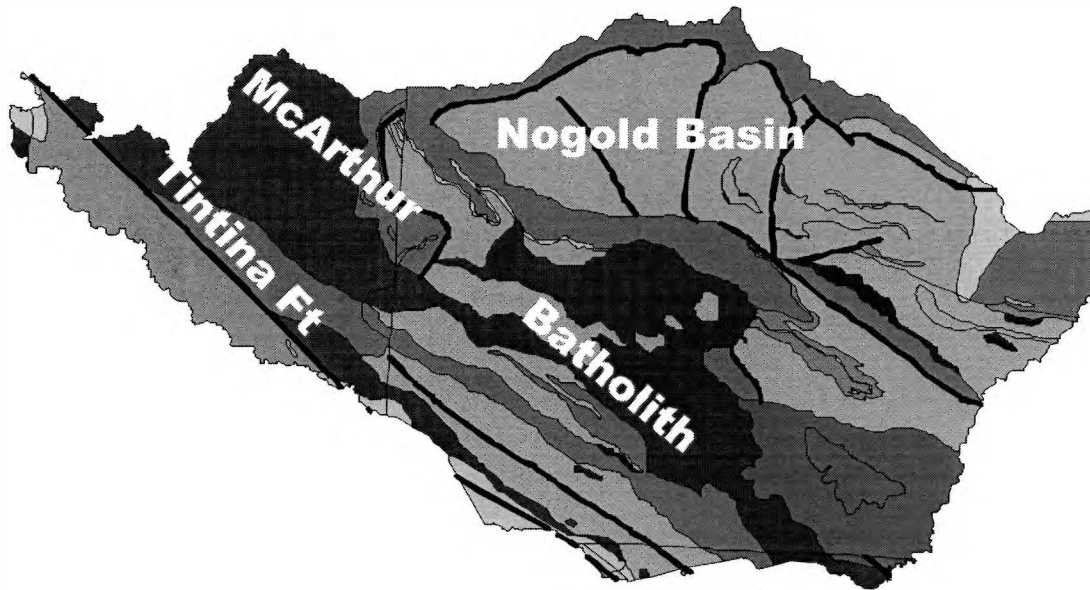
## Selwyn Basin



# Selwyn Basin Paleozoic Strata and Ages

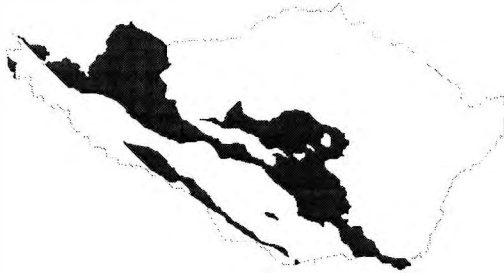


# Regional Geology



1:250,000 scale geological map of  
Mayo by C. Roots, 1996 Digital  
compilation by Steve Gordey -  
Yukon Digital Geology CD

# McArthur Batholith



-Medium-grained bt-hb-granodiorite to qz-monzonite

-Associated pegmatitic veins & fine-grained felsic dykes

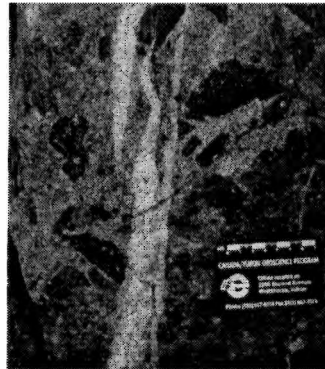
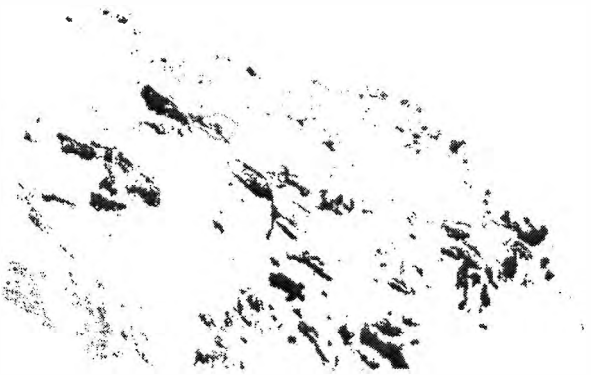
-Large mappable pendant

-Age: 94.0 $\pm$ 0.3 Ma (3 zircons + 1 monazite fractions, Roots, 1996)

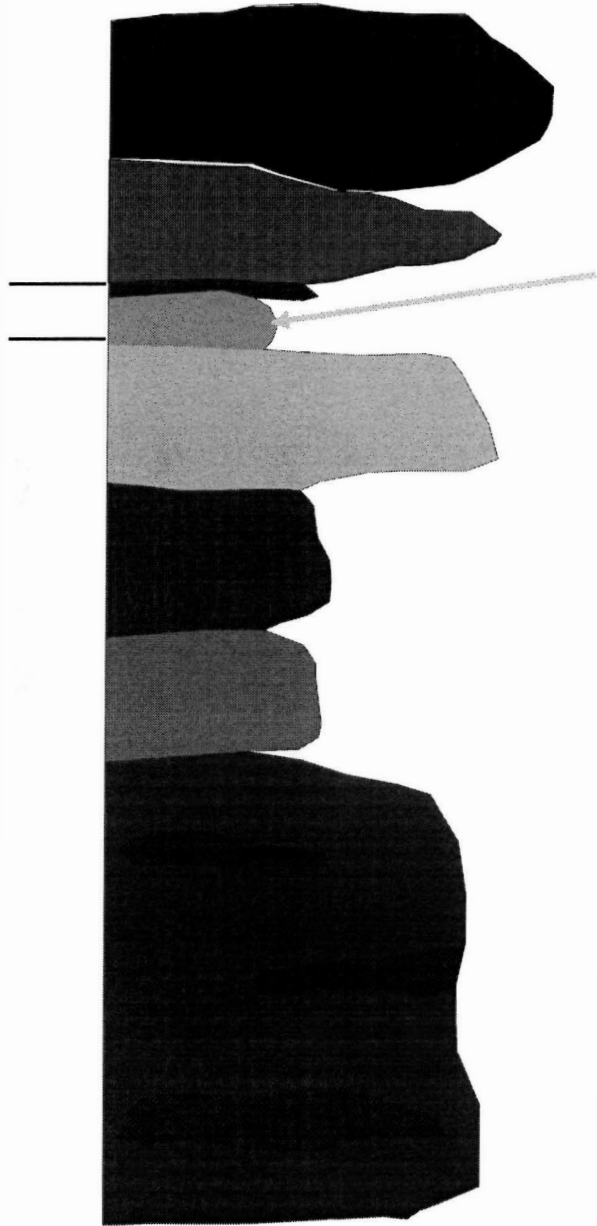
Mineral deposit types :

~~Intrusive~~  
- Fort Knox - type (in small plugs assoc. to batholith)

- ~~Other~~ intrusive - related above buried ~~pyrophyse~~ <sup>pyrophyse</sup>  
- mantos (Poly met, Au. rich)  
- Au. au vns  
- poly met vns  
- skarn

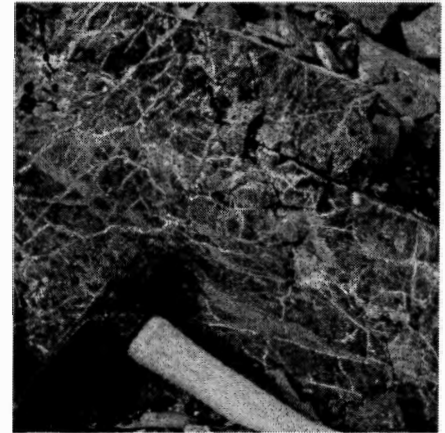


# Road River Group



Duo Lake  
Formation

dissem Au  
Grits

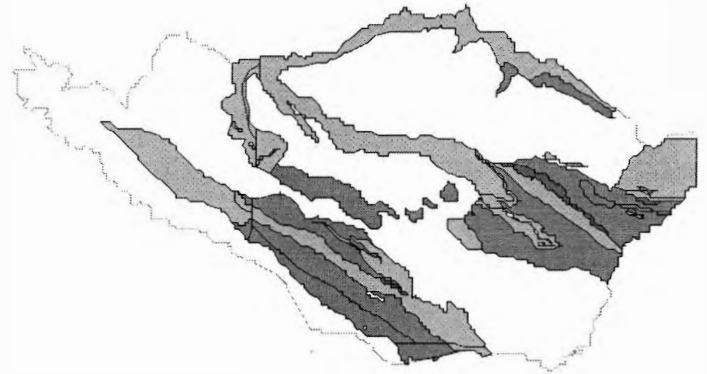


↳ skarn - W  
n Au - Cu

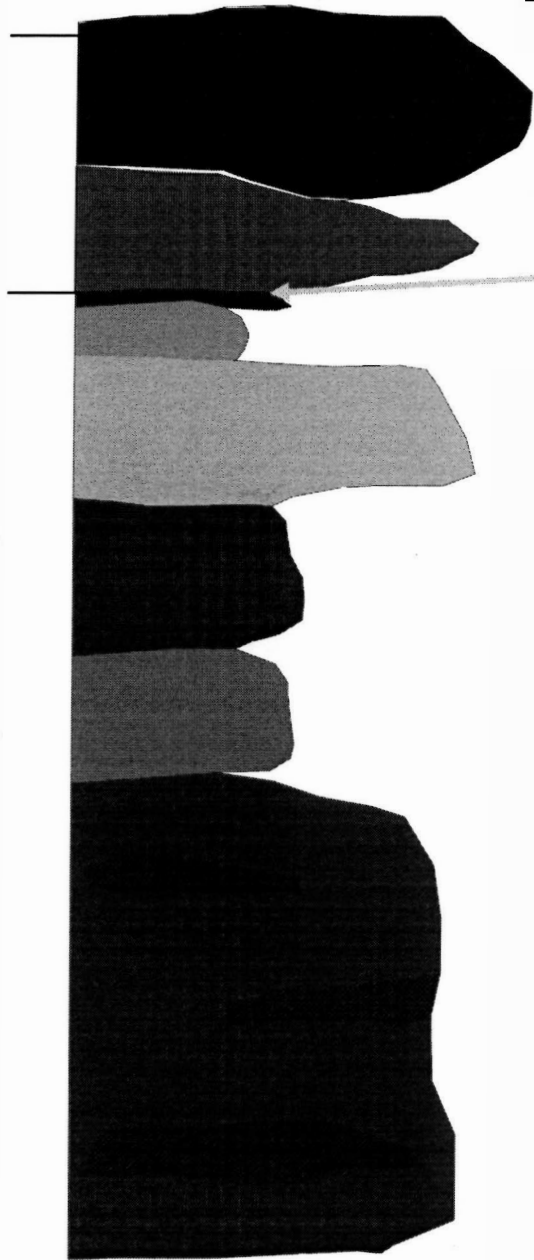
Black  
limestone



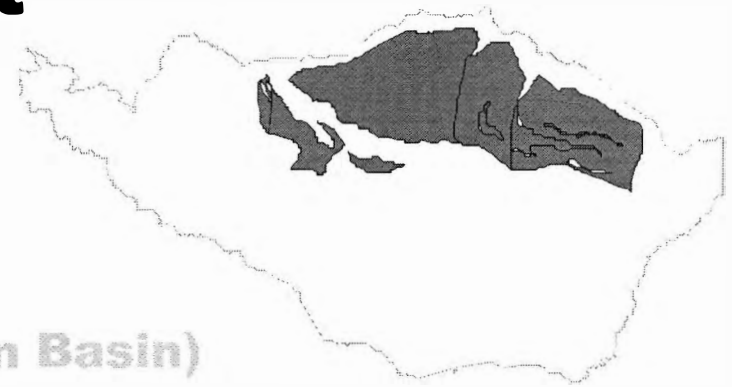
Black chert  
and shale



# Nogold Unit



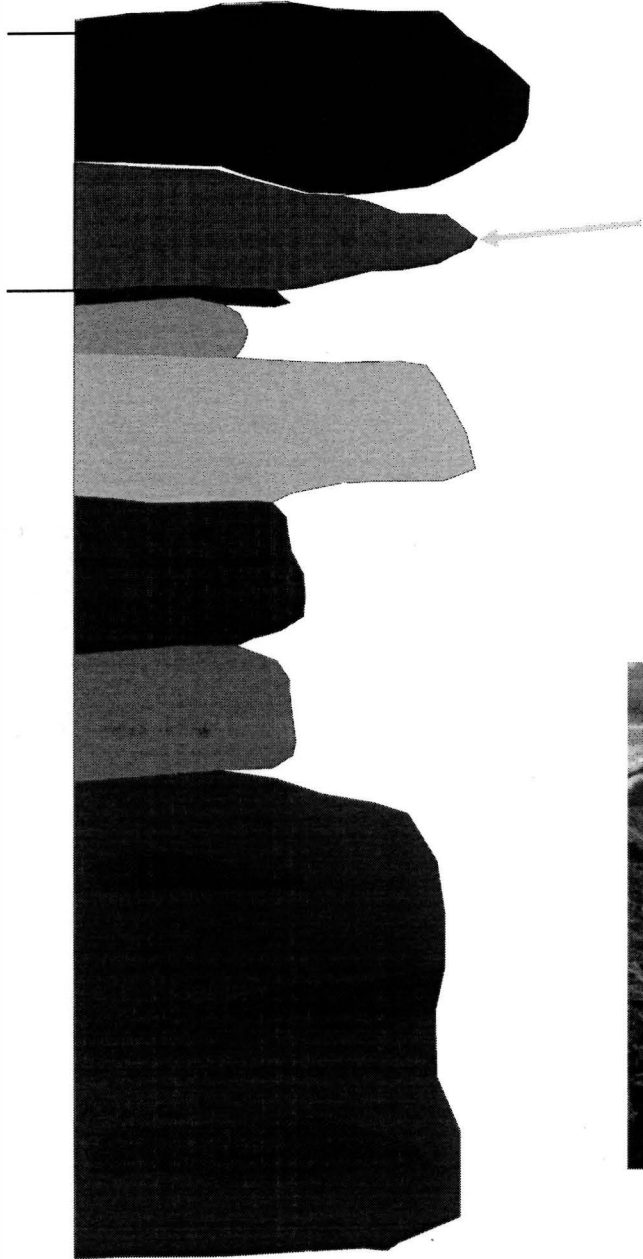
Nogold Unit  
(atypical of Selwyn Basin)



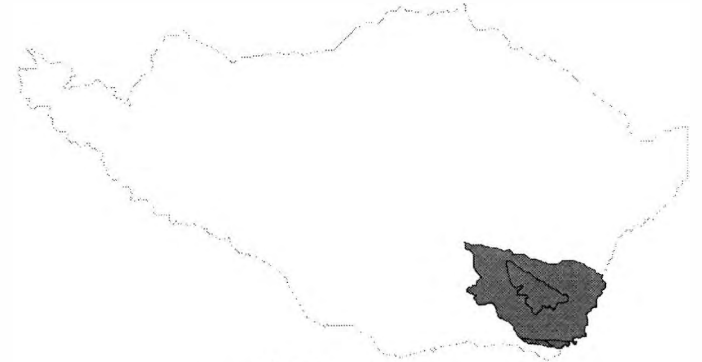
- skarn in 1st
- dissem Au in grits

Grit, maroon & green shale, limestone

# Earn Group



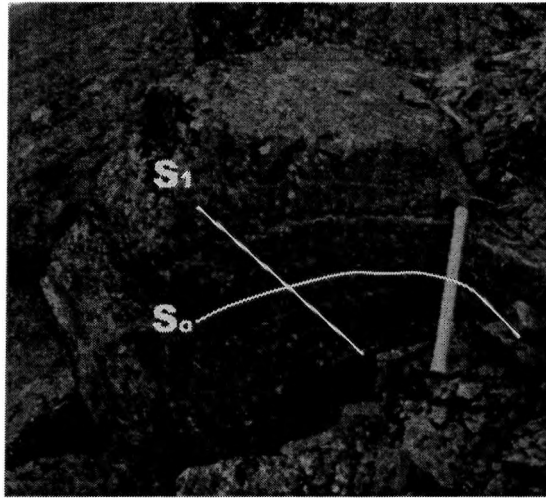
Portrait Lake  
Formation



- Nick-type
- Sedex
- VMS (volcs???)



Jet black shale

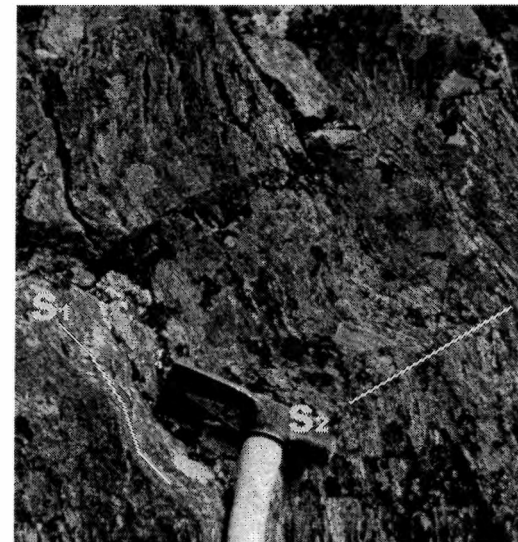
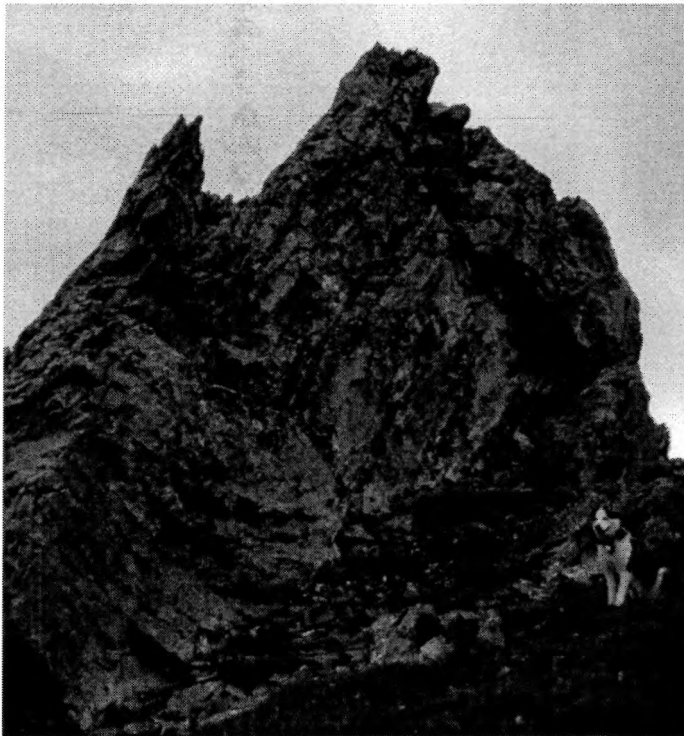


-NNE-directed thrusts and folds thickening Duo Lake strata (results in repetition of prospective carbonate units)

-2 phases of folding

-2 moderately to well developed foliations (cross-cutting relationships often obliterated by contact metamorphism)

## Structural Geology



# **Alteration**

## **Contact Metamorphism**

Biotite clots in grit

Kyanite, andalusite in gray shale

Garnet in intrusion

**Suggest emplacement at depth**

# Alteration Veins

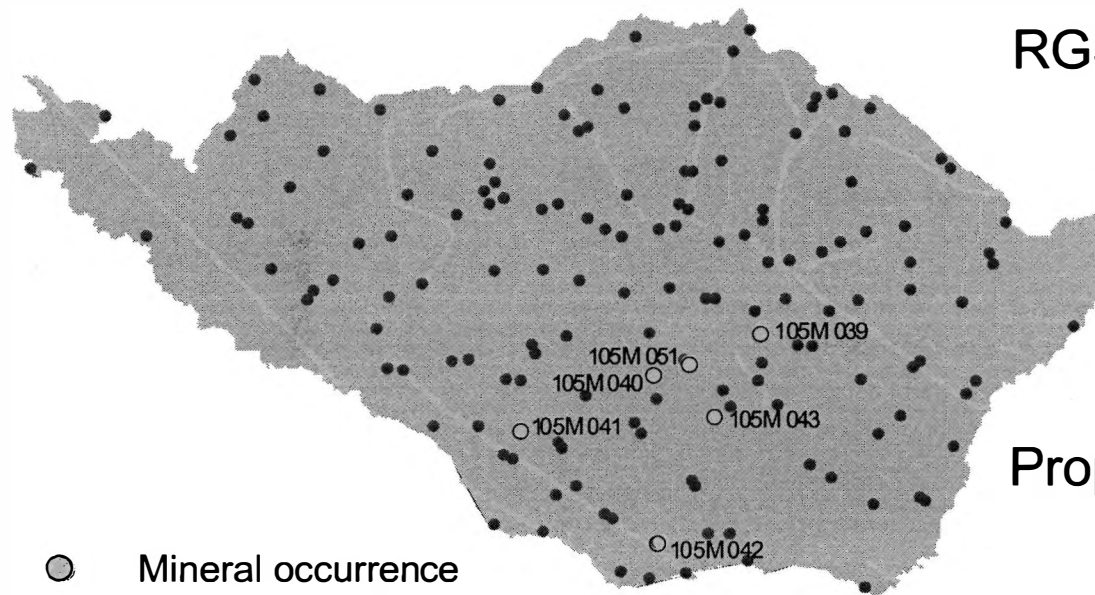
*Skarn - next slide*

Quartz-tourmaline veins

Bull quartz w/ malachite

Quartz-tourmaline-apatite(?)

# Geochemistry and Mineral Occurrences



- Mineral occurrence
- RGS sample
- Fault (from 1:250,000 map)

RGS coverage

-Lower Earn enriched in metals

-anomalous samples along NS-striking fault

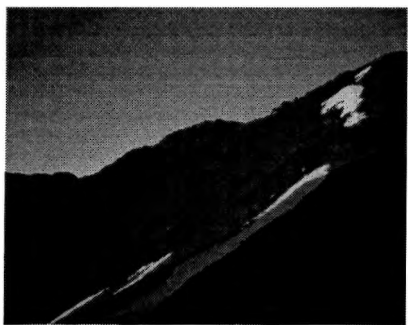
Proprietary data (not plotted)

MINFILE - 6 Mineral occurrences

-mostly intrusive-related

-tales of large low-grade Cu deposit

# **Sideslip MINFILE Occurrence (MINFILE # 105M 039) skarn, porphyry showing**



Skarn float w/ po, cp near geochemical anomaly. Source not found. Minor mineralization in porphyry dikes.

## **AF-120: chl-cp-scoro in talus**

**9589 ppb Au**

**223.9 ppm Sb**

**27442 ppm As**

**68 ppm Cu**



Oxidized skarn in black limestone interbedded with shale (AF-121)

## **AF-121: chl-cp-scoro in talus**

**1895 ppb Au**

**3.1 ppm Sb**

**50 ppm As**

**709 ppm**

**Great Horn MINFILE Occurrence  
(MINFILE # 105M 040)  
skarn prospect**

W,Cu,Zn stream sed anomalies associated with skarn in limy Tr rocks at contact with granite-quartz-monzonite stock.

**Ram MINFILE Occurrence  
(MINFILE # 105M 041)  
uncertain**

Claims cover two small quartz-porphyry stocks which intrude Tr limy sedimentary rocks. Geochemical sampling gave background values and no mineralization was found.

**Hot Spring MINFILE Occurrence  
(MINFILE # 105M 042)  
vein showing**

Minor silver-lead mineralization was found in a vein cutting Tr limy sediments near the contact of a granodiorite stock.

**Lost Wernecke Copper MINFILE Occurrence  
(MINFILE # 105M 043)  
unproved target**

Large Cu deposit (estimated grade >1%) found  
in the McArthur Mts., never staked.

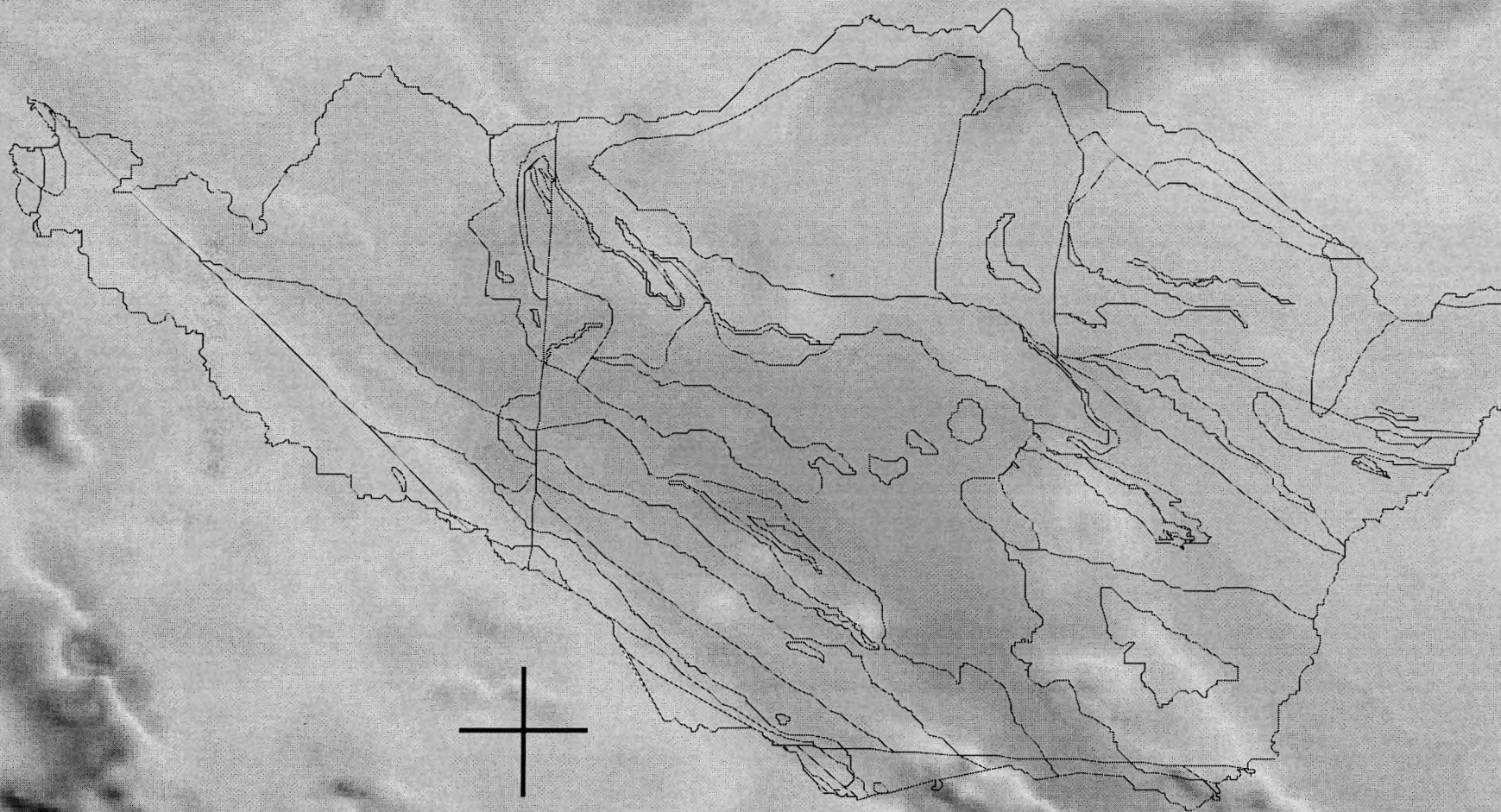
**Lost Wernecke Copper MINFILE Occurrence  
(MINFILE # 105M 051)  
skarn prospect**

2 skarns ~0.6m wide in limy Tr rocks near K granite stock. One followed for length of 30 m, another for 18 m. Mo specks in intrusion.

Grabs <3% Cu, 6%WO<sub>3</sub>.

Channels <72 g/t Ag, 0.7% Pb, 1.5% Cu, 0.34 g/t Au (scheelite erratically distributed).

# Airborne Magnetics



Station	UTM X	UTM Y	Sample ID	Purpose	Description
AF-100	469451.2	7000941	AF-100A	specimen (polished slab)	grab: beige weathering, lt brown-grey quartz-arenite, cut by bull-quartz w/ local pyrite
AF-103	470271	7001066	AF-103A	geochem	grab: beige weathering, lt brown-grey quartz-arenite, cut by bull-quartz w/ local pyrite
AF-106	470584.9	7000842	AF-106A	geochem	talus grab: strongly hornfelsed sandstone with <10% sulphides (py,cp,po)
AF-107	470676.5	7001074	AF-107A	specimen (polished slab)	float grab: strongly hornfelsed slate/shale with py <2%
AF-111	473692.9	7000312	AF-111A	geochem	rusty weathering, wt-gr sandstone, strongly hornfelsed, with po, py
AF-112	473766.1	7000259	M518754R	Viceroy's Yukon Regional Sample	obtain analyses from R. Diment
AF-115	474704.1	7000717	AF-116	conodonts	black limestone
AF-119	473418.3	6999582	AF-119A	geochem	strongly oxidized, biotite-altered grit (possibly along minor fault)
AF-120	473816.3	6999542	AF-120A	geochem	float grab: rusty boulders with strong chlorite (+scorodite?) alteration
AF-121	474000.7	6999234	AF-121A	polished thin section, geochem	strongly oxidized sandstone (silicified?) with <2% po
AF-123	474137.9	6999738	AF-123A	geochem	purple coated (Mn?), clay altered siltstone/fine sandstone
AF-130	478919.9	6998345	AF-130A	conodonts	black limestone
AF-135	477633.5	6996947	AF-135A	conodonts	black limestone
AF-136	477827.7	6996770	AF-136A	geochem	rusty weathering black phyllitic and silty shale
AF-141	478006.8	6995759	AF-141A	conodonts	black limestone
AF-143	474016.9	7001317	AF-143A	specimen (polished slab)	dark grey shale (Duo Lake Formation)
AF-145	473901.6	7001797	AF-145A	conodonts	black limestone rubblecrop
AF-147	473858.5	7001609	AF-147A	geochem	rusty siltstone/grit, with disseminated sulphides
AF-149	473558	7001617	AF-149A	thin section	quartz-monzonite intrusion