

TARGET 77

MIR 69/70

-35-

004691

WHITEHORSE MINING DISTRICT

DAWSON RANGE AREA

Home Creek

VINA GROUP

Atlas Explorations Limited (40%)  
Dynasty Explorations Limited (60%)  
330 Marine Building  
355 Burrard Street  
Vancouver 1, British Columbia

Copper, Molybdenum,  
Zinc, Lead  
115 J 13  
(62°46'N, 139°45'W)

Claims: VINA 1 to 241

Location and Access:

The claims are mainly at the headwaters of Home Creek to the south but also occupy part of the headwaters of Moose Creek to the west, Carlisle Creek to the north and Independence Creek to the northeast.

Access to the claims in 1969 and 1970 was by helicopter from the Yukon River, and the Uranus, Polaris and Casino airstrips.

History:

The Home Creek area was examined by Atlas Explorations Limited geologists in the course of a reconnaissance of the Dawson Range in 1969. Favourable geology and geochemical results led to the staking of 148 claims in October, 1969. A total of 93 claims were added in 1970.

Subsequent to the 1970 exploration program, the western 52 claims and the northeastern 24 claims were allowed to lapse.

Description:

The oldest unit in the area, an assemblage of Yukon Group high-grade metamorphic rocks, underlies the northeastern third of the claim group and is intruded by numerous Cretaceous and Tertiary units. Hornblende gneiss with foliation trending west-northwest and dipping steeply south occurs along the northwest-trending contact of the Yukon Group with a Tertiary granitic sill in the southernmost outcrops of the group. This unit grades into quartz-muscovite gneiss, intercalated with quartzite, with a foliation trending northwest and dipping steeply southwest. To the north, hornblende-rich gneiss is predominant with intercalated amphibolite and blue grey quartzite having a moderately southwest dipping north-northwest trending foliation.

The southern Vina claims are underlain by Cretaceous Klotassin hornblende granodiorite which grades locally to quartz diorite and quartz monzonite. These rocks are medium- to coarse grained, commonly foliated and commonly gneissic adjacent to the contacts. The foliation roughly follows the northwest trend of the intrusive contacts. Related to the Klotassin intrusions is a large, 500 foot wide, medium-grained diorite dyke intruding the Yukon Group gneiss in the central-northeastern claims.

ization described with few exceptions. Erratic soil molybdenum anomalies occur over the granitic plug in the south. On the central grid, erratic molybdenum and copper anomalies reflect the presence of fine mineralized quartz veins and fractures. Lead and zinc anomalies show some correlation with the molybdenum anomalies and with rhyolite float but no galena or sphalerite was noticed. Copper, lead, zinc and molybdenum geochemical anomalies over the northern grid are believed to reflect contact mineralization in the gneiss.

FBH GROUP  
Fawn Bay Development Company Limited (50%)  
306 - 540 Burrard Street  
Vancouver, British Columbia.  
and  
Hanna Gold Mines Limited (50%)  
1111 - 409 Granville Street  
Vancouver, British Columbia.

Copper  
115 J 13  
(62°51'N, 139°44'W)

Claims: FBH 1 to 48 and EX 1 to 8

Location and Access:

The property covers part of the divide between, and part of the headwaters of, Independence Creek to the north and the eastern fork of Home Creek to the south. The tote trail linking the Polaris airstrip to the Polaris main camp crosses the eastern claims of the FBH group.

History:

The FBH and EX claims were staked in December, 1969, following the discovery of a copper-molybdenum porphyry deposit on the Casino Silver Mines Limited holdings. The southern 20 claims of the FBH group were allowed to lapse in 1970 after a geochemical survey was completed.

Description:

Outcrops on and adjacent to the claim group are quartz monzonite and granodiorites of the Klotassin Batholith. The Yukon Group schist and gneisses are present 2 miles to the north of the property.

Current Work and Results:

A geochemical survey was done in 1970 with samples being taken every 200 feet along contour lines at vertical intervals of 250 feet. A copper soil anomaly measuring 700 by 4,000 feet trends north-northeast and then east along the north facing slope of the divide. An aureole of above local threshold values surrounds the anomaly and extends to the northwest.

Property Name: Common      TONI TIGER      Other  
Location: Lat. 62°50'      Long. 139°29'      NTS 115J/14  
\* Metals: Major Molybdenum      Minor Tungsten, Copper, Silver  
Type of Mineral Deposit: Skarn

History and Previous Work:

\*\* Staked as Tony Tger cl (Y36916) in Sept/69 by Dawson Range JV (Straus E Inc, Martin Marietta Corp, Molybdenum Corp of American, Trojan Cons M, and Great Plains Dev C of Can L), which conducted grid soil sampling in 1969 and bulldozer trenching and mapping in 1970. Restaked as W cl (YA4005) in Dec/75 by M. Jorgenson, and as Caffeine cl (YA25283) in Aug/79 by Archer, Cathro and Assoc L.

Description:

\*\* A strong molybdenum soil anomaly, containing values from 20 to over 100 ppm, covers an area of over 400 acres. It is associated with a northeast-trending zone of aplite dykes, skarn alteration and mineralization and quartz vein stockwork. The anomaly occurs in quartzose schists and gneisses of the Yukon Crystalline Terrane near the south contact of a stock of mid-Cretaceous Coffee Creek quartz monzonite. Trenching exposed two areas of weak mineralization, comprised of small blebs and stringers and disseminations of molybdenite, chalcopyrite, scheelite, pyrite and arsenopyrite with quartz veinlets. A selected specimen assayed 0.08% Cu, 0.19% Mo, 0.1% WO<sub>3</sub> and 0.08 oz/ton Ag.

References:

MIR, 1969-70, pp.40-41

Geol of Casino Por. Cu Mo Dep.  
Godwin Casino 1975 PhD UBC

U/m assigned Perm and/or R by T-K, 1973  
phases of Klot. Bath

Q.D., f.g.

(F) Leuco G-Di 99.7

Hybrid G-Di

Klot. G-Di 98.3

(H) ✓ QMp 102.5

(G) bio QM inegugran QM 102.3 (looks like Tg he says)

(E) ADi fg QM f.g. 99.9

por. dy (G-Di comp) 99.3

Casino complex 70.3 ± 2.4

T-K said R or older since did not post date last  
meta event (@180my)

Ruby Bath 140 - 223 in Ash area.

Godwin emphasizes 100 my age since common  
throughout Cordillera

70 corresponds to numerous Cu-Mo's

Beavan A 1973 Rpt rep on SE Ash map area

CASINO - Godwin, '75

oldest. Fine grained GDi

Dark gy, inequigran,  
18% q, 7% ortho, 58% plag, 25% hb, 7% bio  
Crosses GDi bndy

Leuco GDi (L. GRDR)

Pale gy, equigran, m.g., sphene 1%, conspicuous  
Ave 18% q, 20% ortho, 54% plag, 8% subequal bio+hb  
99.7 my  $\pm$  3.  
Field is marginal to QM

#gb

younger Hybrid GDi (H. GRDR)

Pink, equigran to w.p., l. agmatite  
Ave 19% q, 15% ortho, 51% plag, 15% mat (mainly bio)  
Field all GDi

Klotassin GDi (K. GRDR)

Pale gy, equigran, m.g., euhedral hb  $>$  bio  
Abund. xenoliths 2:1  
24% q, 15% ortho, 40% plag, 20% matrics  
Field w. overlaps QM  
98.3  $\pm$  4. m.y.

Quartz MP (P. QZMZ)

Med gy. Phenos ~~to~~ : plag, hb, bio  
Field spans GDi boundary.  
Ave 26% q, 27% ortho, 47% plag, 12% bio, 9% hb.  
102.6  $\pm$  3.5 m.y.

## Inequigran QM (I.Q2M2)

Pale pink, c.g., pink ortho phenos to 13mm

26% q, 26% ortho, 34% plag, 14% mat (hb: bio)  
2:1

All in QM field, just

102-3 m.y.

## Fine gr. QM

Pale pink. Looks aplitic

32% q, 30% ortho, 30% plag, 8% bio (>>> hb)

99.9 m.y. Centred in QM field

youngest

## Por. dykes (P & DYKE)

G Di comp 12% q, 14% ortho, 46% plag, 29% mat.

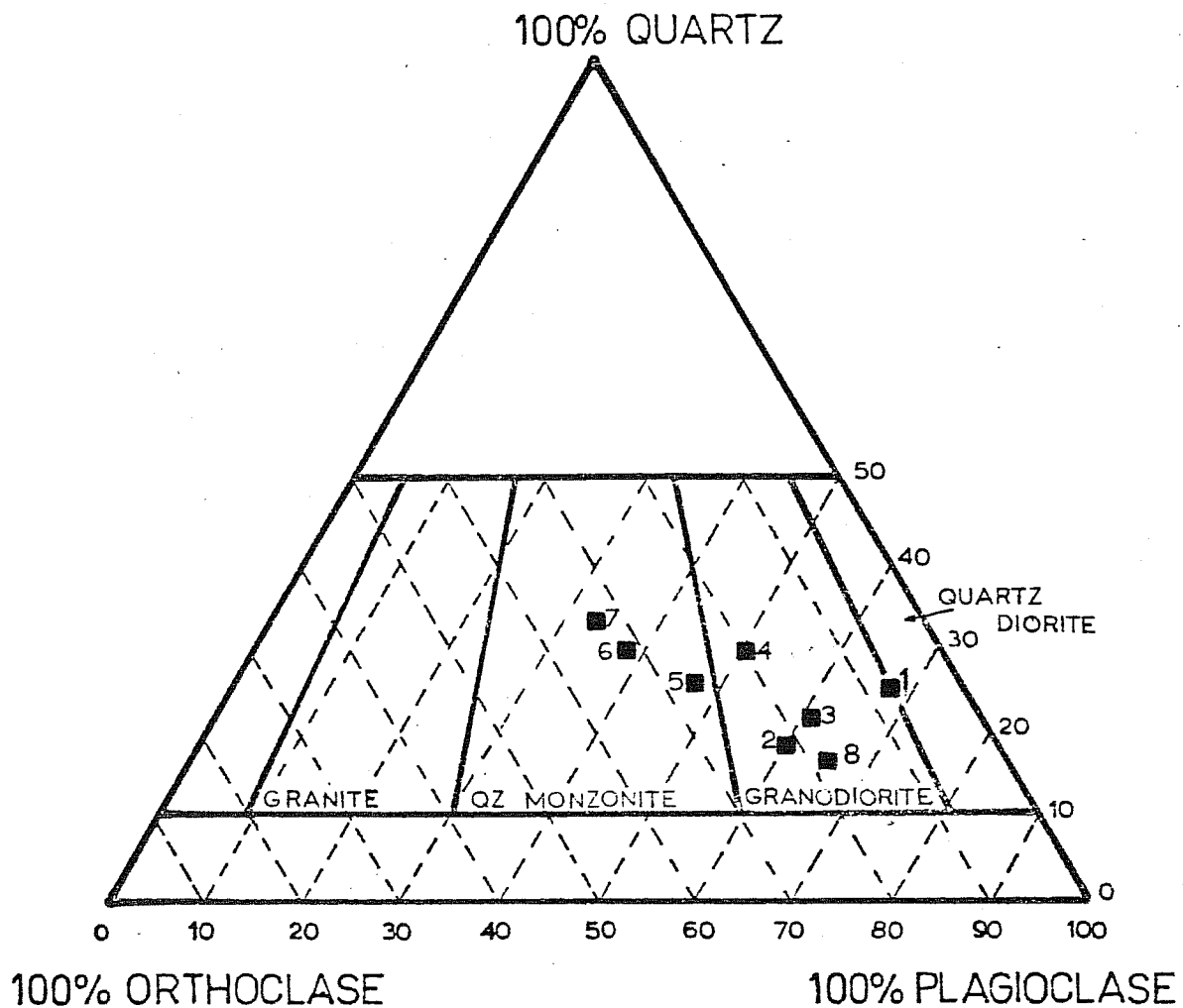
med gy, mg phenos

prom euh. hb phenos. Hb: bio = 4:1

## General

Probable Temp of Klatas. bath is @ epizonal/mesozonal boundary, about 300°C, about 4-5 mi deep!

All dates may be reset by 100 m.y. event (Temp. Kluit-)



1 FINE-GRAINED QUARTZ DIORITE

2 LEUCOCRATIC GRANODIORITE

3 HYBRID GRANODIORITE

4 KLOTASSIN GRANODIORITE

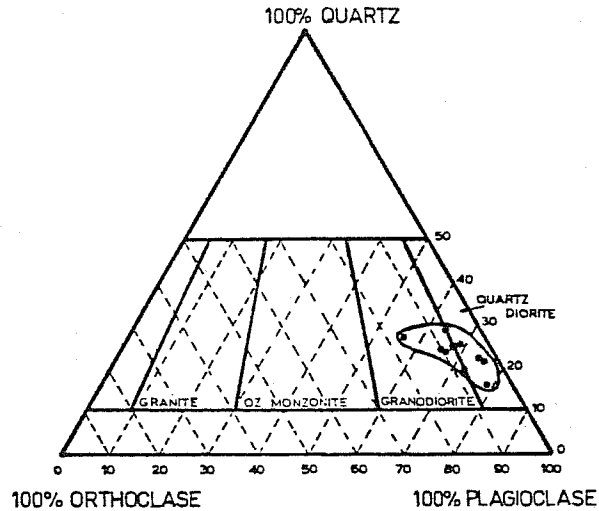
5 QUARTZ MONZONITE PORPHYRY

6 INEQUIGRANULAR QUARTZ MONZONITE

7 FINE-GRAINED QUARTZ MONZONITE

8 PORPHYRY DYKE

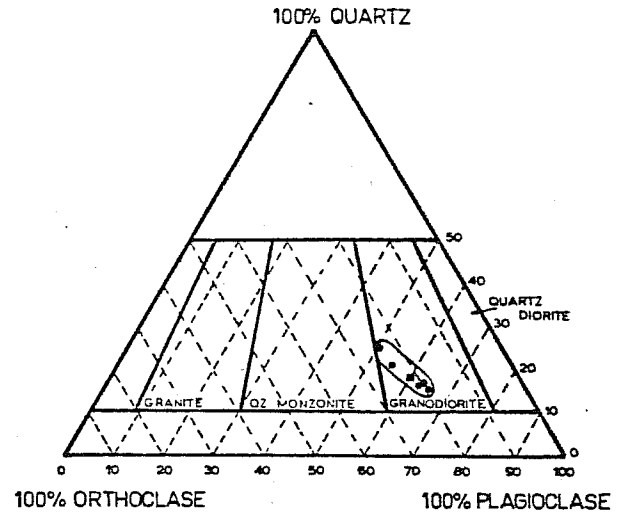
FIGURE 2.11: MEAN COMPOSITIONS OF GRANITIC ROCKS IN KLOTASSIN BATHOLITH, CASINO AREA, Y.T.



MODE: QUARTZ: 18%  
 ORTHOCLASE: 7%  
 PLAGIOCLASE: 53%  
 HORNBLende: 18%  
 BIOTITE: 5%  
 OTHER: 1%

COLOUR INDEX: 22  
 AN: 45  
 K AR AGE: NOT DETERMINED  
 HORNBLende / BIOTITE: 3.2

FIGURE 2.3: FINE-GRAINED QUARTZ DIORITE

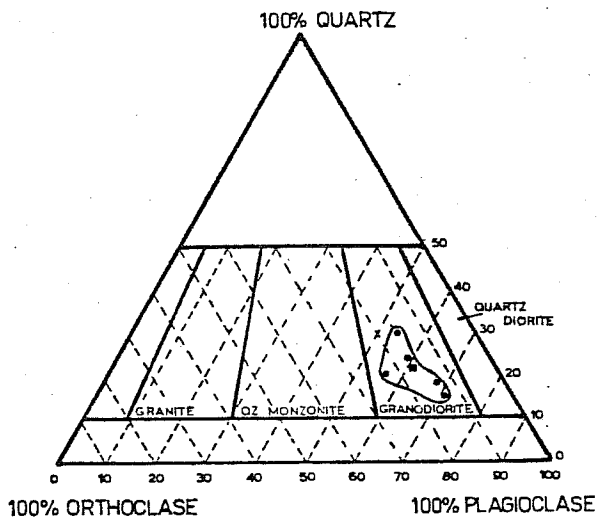


MODE: QUARTZ: 18%  
 ORTHOCLASE: 20%  
 PLAGIOCLASE: 54%  
 HORNBLende: 3%  
 BIOTITE: 3%  
 OTHER: 2%

COLOUR INDEX: 8  
 AN: 50  
 K AR AGE: B: 100 MY.  
 HORNBLende / BIOTITE: 1.0

FIGURE 2.4: LEUCOCRATIC GRANODIORITE

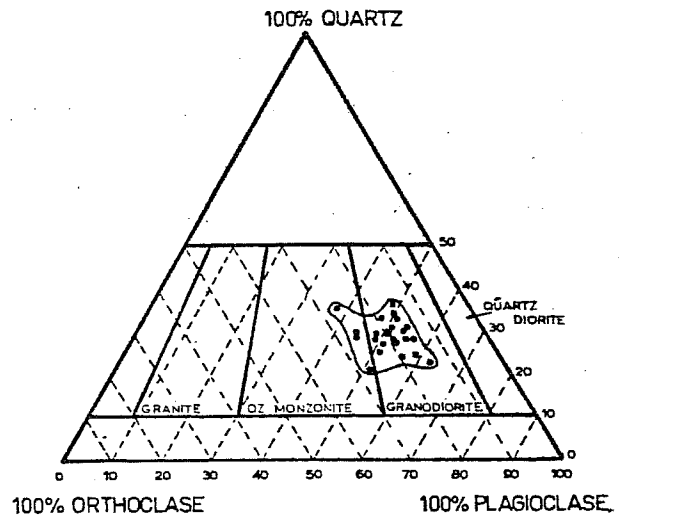
- Specimen mode
- Arithmetic average



MODE: QUARTZ: 19%  
 ORTHOCLASE: 15%  
 PLAGIOCLASE: 51%  
 HORNBLende: 4%  
 BIOTITE: 9%  
 OTHER: 2%

COLOUR INDEX: 15  
 AN: 50  
 K AR AGE: NOT DETERMINED  
 HORNBLende / BIOTITE: .5

FIGURE 2.5: HYBRID GRANODIORITE



MODE: QUARTZ: 24%  
 ORTHOCLASE: 16%  
 PLAGIOCLASE: 40%  
 HORNBLende: 10%  
 BIOTITE: 8%  
 OTHER: 2%

COLOUR INDEX: 20  
 AN: 47  
 K AR AGE: HB: 98.5 & 99; B: 101 & 95 MY  
 HORNBLende / BIOTITE: 1.2

FIGURE 2.6: KLOTASSIN GRANODIORITE

May 83

Prelim

SNA G  
115 J&K

General

TR gdm } cut by Eocene? granitics  
Prot./Paleoz. <sup>EP<sub>2</sub>e, EP<sub>3</sub>n</sup> gte, sch, gn }  
+ Eocene/younger volcs. { Donjek intem. ITvd  
Carmacks mat. eTcv  
Casino } fels. Tva  
Mt. Nansen } Tmn

Deposits: Mainly Cu-Mo, various hosts

Usual assoc<sup>n</sup>: TR stocks

PRIDE: Au Ag Pb Cu in q-CO<sub>2</sub> w/ hem. & tourm.

vns cut Meso. gd & Tmn & coeval syenite laccolith

(Part of Nat JV - Cherron/Arneo)

HAYES: Cu Mo Au Ag, vns. in q-CO<sub>2</sub> in rhys. por. near gm stock.

alt<sup>n</sup>: CO<sub>2</sub>, Kao, limo, si

GUESS: Q-v sulphides, adjacent to Hayes.

COCKFIELD & CO: Cu Mo at margin of gm stock which cuts

Meso gd and TR. gd. T volcs nearby

RUDE CK.: Ag Pb Zn Au, lens in TR gd batholith

BOMBER: Pb, Zn, py, Cu, shears " " " "

CASINO: Cu, Mo in bxd 70my Casino stock in " "

ROCKLAND: 2 small gfp stocks

BID: wgv, stocks & dykes in " "

VINA: vwgv, T gran. " " " " " " & Yukon gp.

TONI TIGER: qv stockwork w/ aplite dykes & skarns near T granite stock.

Mo Cu W py AS

Placers: About 1/2 seem to originate in prospects (Casino, Guess, Pride, Rude Ck. etc)

OVER  
→

## Areas of interest:

- Lo. { ① PRIDE } complexity & associated minerals. Also anomalous As or Ag.  
sh. → { ② HAYES } Tensional tectonics  
Lo. ③ TONITIGER  
Sh. ④ TMN patches N & W of PRIDE property - complexity, dyking. Tens. tect.  
Sh. ⑤ (5a) Tg stock @ 62°35', 138°15' w/ Bullterfield & Selwyn placers downstream  
Sh. ⑥ Tva (Casino volcs) on E flank Mt. Cockfield above Selwyn <sup>anom. As</sup> placer.  
Sh. ⑦ Highland surrounded by Kirkman, Ballarat & Touleary placers  
Sh. ⑧ Placer on Grayling (62°15', 138°25') assoc'd w/ thin band of felsic volcs (ITur) with sandstone (ITsp) beneath. Anom. As, <sup>Hg</sup> nearby.  
Sh. ⑨ Unexplained source Dan Man & Independence placers (62°55', 138°25')  
Low NOT MARKABLE ⑩ " " Isaac placer (2 peaks 62°43', 138°35')  
⑪ Conglomerates beneath Carmacks volcs (eTev) ??? (paper 73-41, p70)  
⑫ ~~" <sup>1988</sup> beneath ITvd~~

## Comments:

- Is it reasonable to say that abundance of placer Au streams in NE quadrant of map can be used as major selection factor? i.e. any gold present seems to be preserved by prevailing climate / chemistry [in Tg, TRgdm, EPSN]
  - Significance of abundant N., NNW dyking in SE quadrant. This lines up with some properties. Structural significance?
- ⑬ Coffee Ck. Source placer may be below claims. Ag-Hg group of highs in Tg and EPSN near serpentinized major fault contact w/ TRgd

115 J - 3

May 23

Main interest is felsic volcs (1Tur) and sandstone  
(1Tsp) associated with Ag Hg rock geochemical  
highs on Grayling Creek.

DOYLE CK 115J-11

May 83

Features: Nearly all pre-Tert. terrain

Targets: Tertiary Conglom. in vicinity major fault  
spot? checks Tva stock vicinities

APEX MTN

115 J-8

May 83

Features: Abundance Carmacks volcanics  
(looks as if TmN here above eTcv)

One P.M. / B.M. vein & placers off N. edge  
↳ mid level sheet.

Targets: TmN contacts against clearly older rocks

Two zones rock geochemistry

- NE area, in TmN
- $\phi$  area, in zone Tfp w/ abundant dyking.

MT. PATTISON 115 J 7

May 83

Features: Sheet dominated by Tgal stock coincident with NS Tfp dyking & central to Tmn  
Carmacks volcanics abundant & may be locally metal rich (some As, Ag, Hg rock highs)  
Geology appealing but unsupported by any Au deposits or placers & only minor B.M.

Targets: low priority search near base of Tmn or in areas intense Tfp dyking

Approach: Possibly a series of spot checks

SELWYN R - 115 J-9

May 83

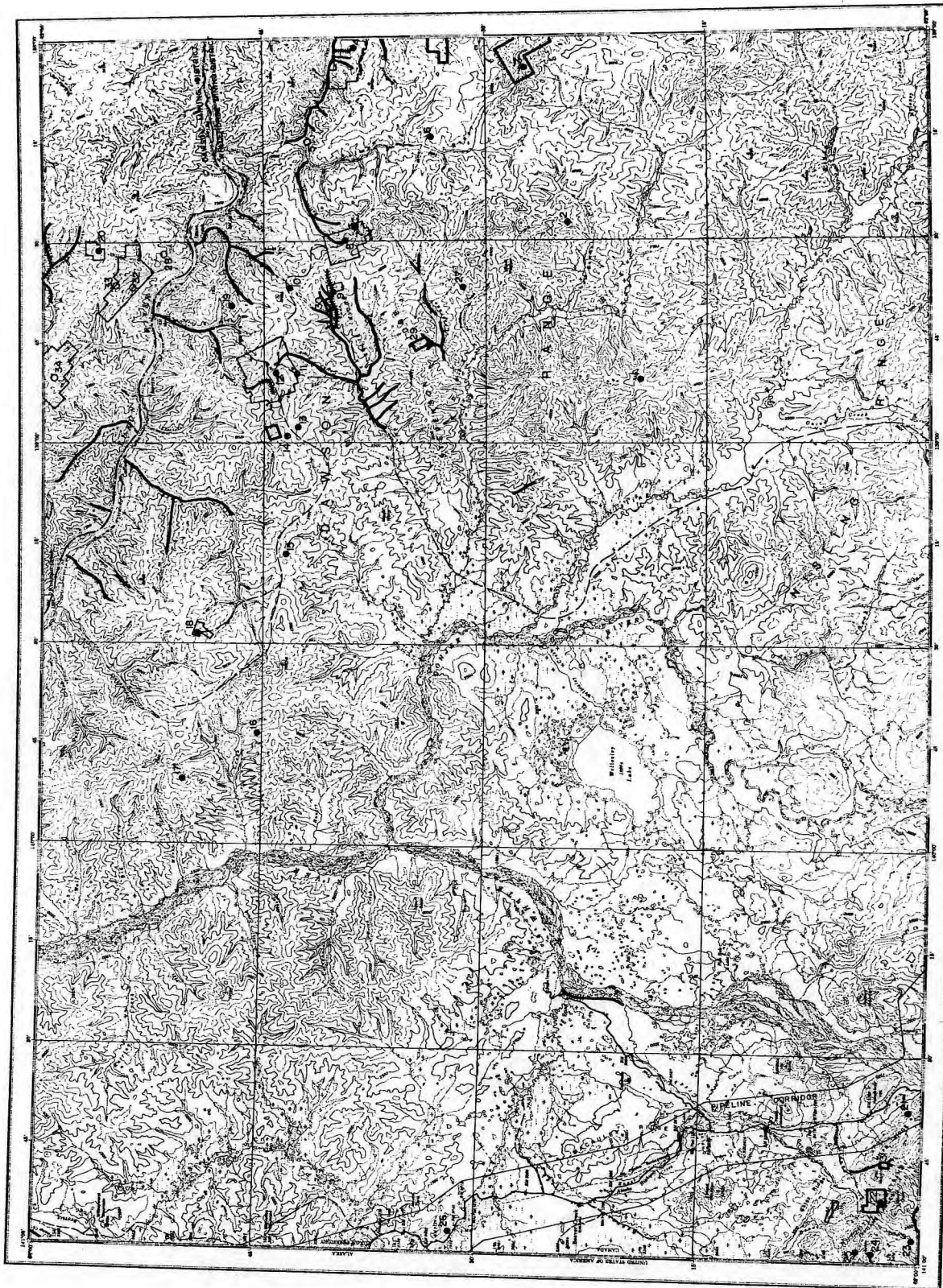
Features: Tert. granitic stocks (Tg)  
Minor Tert. volcs associated w/ subvolcanic  
dyking  
Placers fairly common

Targets:

Guess & Hayes veins in vicinity placer sources

Zone between Mt. Cockfield (Tm), main Tg stock,  
& Selwyn placer (lower)

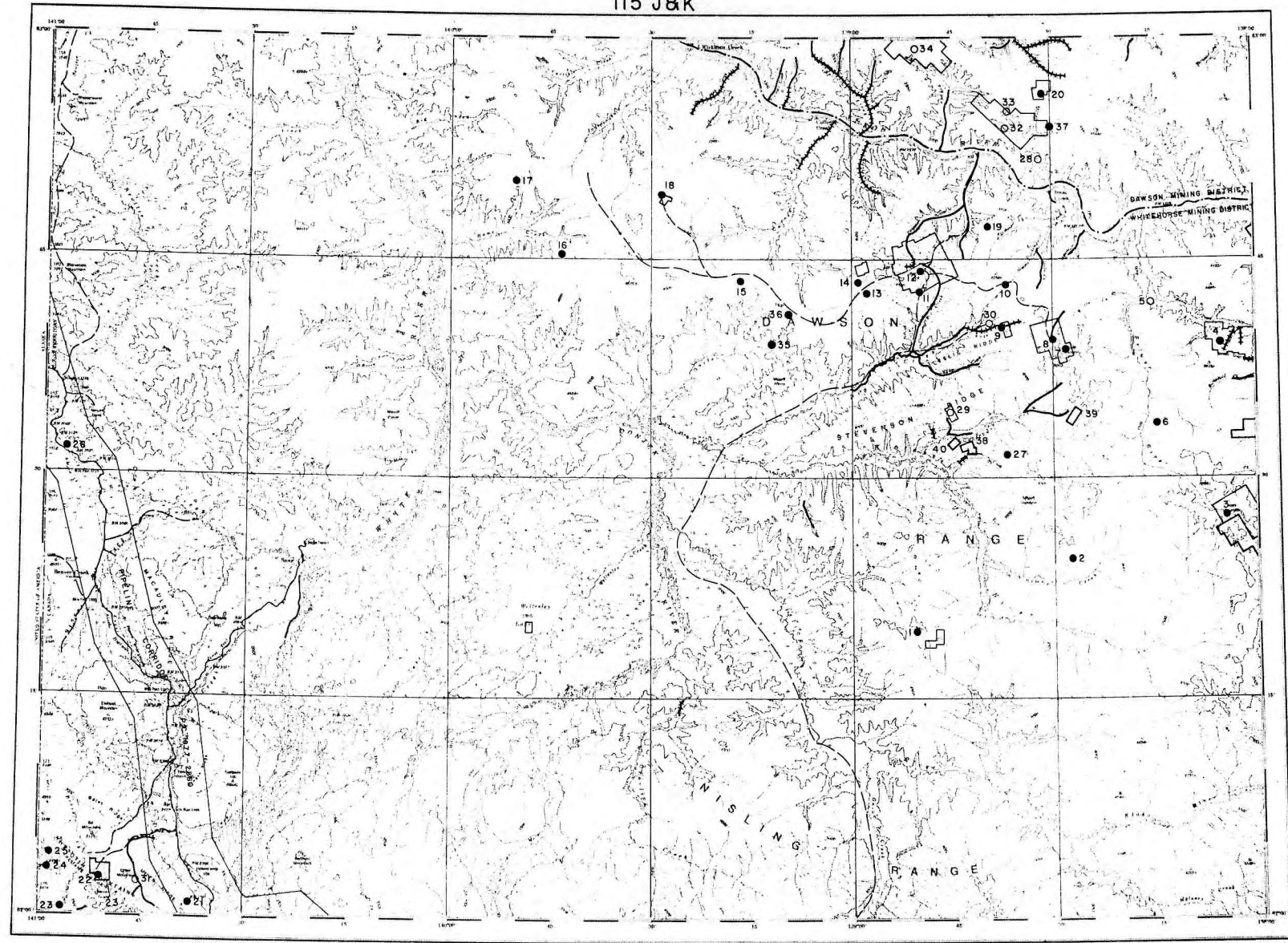
(Zone @ head Bullertfield Ck between placer &  
Tert. stock.)



SNAG  
YUKON TERRITORY



- G1 Mineral Deposit or Occurrence  
see Key on facing page
- G2 Unmineralized Target
- Mineral Claims in good standing (Jan 1981)  
and staked before Jan 1980
- Mineral Claims staked in 1980
- Placer Leases in good standing (Jan 1981)
- Placer Claims in good standing (Jan 1981)
- CEL Coal Exploration Lease
- CML Coal Mining Lease
- - - Tote Trail
- Driveable Road
- ◆ Oil or Gas Well
- Airstrip



SNAG  
YUKON TERRITORY



- 61 ..... Mineral Deposit or Occurrence  
see key on facing page
- 72 ..... Unmineralized Target
- ..... Mineral Claims in good standing (Jan. 1982)  
and staked before Jan 1981
- ..... Mineral Claims staked in 1981
- ..... Prospecting Leases in good standing (April 1982)
- +++++ ..... Placer Claims in good standing (April 1982)
- CEL ..... Coal Exploration Licence
- CM ..... Coal Mining Lease
- - - - - ..... Tote Trail
- ..... Driveable Road
- ✱ ..... Oil or Gas Well
- ..... Airstrip

SNAG MAP-AREA (NTS 115 J-K)

NO.	PROPERTY NAME	REFERENCE
1	KLOT	MIR, 1971-1972, p. 75
2	SOMME	MIR, 1969-1970, p. 72
3	PRIDE	Copper Vein
4	HAYES	This Report
5	SELWYN	G.S.C., Map 44-34 (marginal notes)
6	CROCK	MIR, 1969-1970, p. 68
7	COCKFIELD	This Report
8	CO	This Report
9	RUDE CREEK	MIR, 1969-1970, p. 63 G.S.C., Summary Report, 1927
10	NORDEX	Silver-Lead Vein
11	BOMBER	G.S.C., Pap. 67-40, pp. 32-34
12	CASINO	MIR, 1969-1970, pp. 55-57
13	AZTEC	MIR, 1969-1970, pp. 54-55
14	ZAPPA	This Report
15	BOREAL	MIR, 1969-1970, pp. 42-43
16	BID	MIR, 1969-1970, pp. 38-39
17	VINA	MIR, 1969-1970, pp. 35-37
18	TONI TIGER	MIR, 1969-1970, pp. 40-41
19	MARGUERITE	MIR, 1969-1970, pp. 51-42
20	SCROGGIE	This Report
21	ONION	Nickel-Copper-Molybdenum Magmatic
22	NUTZOTIN	Skarn Copper, This Report
23	CALIFORNIA	G.S.C., Mem. 50, p. 123
24	TRUDI	Copper-Molybdenum Porphyry
25	RIP	G.S.C., Mem. 50, pp. 121-122
26	BATRICK	G.S.C., Mem. 267, pp. 44-45
27	PATTISON	MIR, 1974, p. 94
28	BRI	This Report
29	STEVENSON	This Report
30	LESLIE	This Report
31	CHAIR	This Report
32	NEF	This Report
33	MK	This Report
34	HASL	This Report

HAYES  
Hudson Bay Exploration  
and Development Company,  
Limited

Gold, Silver, Vein(?)  
115 J 9 (4)  
(62°39'N, 138°05'W)

COCKFIELD  
Archer, Cathro and  
Associates Limited  
(Denison Mines Option)

Copper, Molybdenum  
Target  
115 J 9, 10 (7)  
(62°38'N, 138°28'W)

Reference: Sinclair et al (1975, p. 95-96)

Reference: Craig and Laporte (1972, p. 66-68)

Claims: SWEDE 1-6; SAM 1-86

Claims: KOKUP 1-24

Source: Summary by G. Abbott from assessment report 090777 by G. Douglas.

Source: Summary by D. Tempelman-Kluit from assessment report 090767 by R. J. Cathro.

History:

Anglo American Corporation of Canada, Limited staked the SAM claims in 1976 and optioned the SWEDE claims from S. Martenson and A. McDiarmid in late 1977. The property was explored with geochemical sampling; VLF electromagnetic surveys and trenching in 1977 and 1978 and 11 drill holes totalling 481.8 m in 1978. Hudson Bay acquired the property in 1978 and conducted a small geochemical program.

Current Work and Results:

In 1980, the property was explored with geochemical, magnetometer and VLF EM-16 surveys. Anomalies were tested with four drill holes totalling 397.4 m located on the SWEDE 4 and SAM 23 claims. The holes intersected Tertiary rhyolite porphyry that includes quartz-biotite gneiss and sheared and foliated basic volcanics. Alteration zones related to the rhyolite consist of carbonate, kaolinite, limonite and silica.

Current Work and Results:

The property was remapped and re-interpreted and a detailed map was produced. Many of the volcaniclastic rocks of the Casino Volcanics are interpreted as tuff and ignimbrite related to two explosive events that followed extrusion of the Mount Nansen Group. The Casino Volcanics are genetically related to, and generally of the same age as, the Mount Nansen Group. The original Cockfield property was staked over a copper-molybdenum geochemical anomaly over minor mineralization in a Cretaceous intrusion on Mt. Cockfield. Work in 1980 concentrated on the volcanic rocks of the Casino Volcanics where pyrite is common and where fractures are closely spaced.

A geochemical soil survey was done over the property and threshold values are approximately 150 ppm lead, 2 ppm silver, 100 ppm arsenic and 10 ppb gold. A number of the samples are anomalous in all metals, but most of these are not over the Casino Volcanics.

Overend Geol. Study of a Metam. Root Pendant &  
Surrounding Area in Dawson Range - 1975

Loc: Coffee Ck, 20 km S. of Yukon R.

UBCThes.

last stages reg! meta 180 my.

Godwin (75) thought G-Di M-Cret from K/Ar  $\approx$  Tg

L 25 my  
K/Ar

G-Di in Thesis area  $\phi$ s on G-Di (Q, Kt, Plag  $\Delta$ )  
but overlaps QD & QM slightly

" " Cassino " G-Di w/ overlap to QM only