Province of British Columbia

885729 MEMORANDUM

TO: Vic Preto – Vic.
Ted Faulkner – Pr. Geo.

FROM: Tom Schroeter
BCGS
– Van.

SUBJECT: MT. MILLIGAN Write-up – Expl'n '89, M.B

DATE: Feb. 21/90

FILE: MT. Milligan

☑ For Your Information ☐ Please O.K. and Return ☐ Please Discuss With Me ☐ Per Your Request ☐ For Your Signature
☑ Please Process ☐ Return With More Details ☐ Investigate and Report ☐ Please Answer ☐ For Your File

Vic/Ted:
– my contribution, as committed/promised.
– Good luck – looking forward to seeing complete draft when I return on March 22nd.

Cheers,
Tom

REPLY:

Fold Here for Window Envelope

Fold Here for Window Envelope

FILE COPY FOR YOUR RECORD OF THE INQUIRY AND REPLY

Report for "EXPLORATION IN BRITISH COLUMBIA, 1989 - Part B

MOUNT MILLIGAN (Phil-Heidi)

by T.G. Schroeter, V.A. Preto, E.L. Faulkner

(Geological Survey Branch) and R.M. Rebagliati (Continental Gold)

LOCATION: Lat. 55°08'30" Long. 124°03' 93N/1E

OMINECA MINING DIVISION. The property is located on the southeast flank of Mount Milligan, approximately 95 kilometres north of Fort St. James

CLAIMS: PHIL 1, 8-12, 21-27, 29, HEIDI 1-4 (286 units). Represents a large contiguous block covering 42 sq. miles

ACCESS: Approximately 145 kilometres northwest of Prince George via Highway 97, Windy, Phillips Mainline and Rainbow Creek logging roads (50 kilometres west of Mackenzie).

OWNER/OPERATOR: Joint venture between CONTINENTAL GOLD CORPORATION (69.84%) and BP RESOURCES CANADA LIMITED (30.16%). Continental Gold is the operator.

COMMODITIES: Gold, copper

INTRODUCTION

This report is an update of previous brief reports by Faulkner (1986, 1987). The Mount Milligan deposits represent one of the largest undeveloped gold-copper projects in North America. Its discovery is of sufficient size and importance to rapidly expand and change the exploration/development/mining philosophies of industry in British Columbia. After a gap of some 15 to 20 years, the search for gold-rich porphyry copper deposits, particularly related to alkaline intrusive/extrusive events, has already begun in earnest with Mt. Milligan being a bonafide success story. The northern extension of the Quesnel belt (Trough) is a hot-bed of activity.

WORK DONE

To the end of 1989 the following work had been completed:

- approximately 340,000 feet (103,632m) of drilling in over 400 holes
- approximately 47,000 assays for gold and copper
- approximately 120 line kilometers of induced polarization surveys
- approximately 240 line kilometres of total magnetometer surveys.

HISTORY

- refer to earlier write-ups (Faulkner, 1986, 1987)

GEOLOGICAL SETTING

- property located in the central part of the Quesnel trough, a linear 1200 kilometre long northwesterly trending segmented belt of late Triassic to early Jurassic sedimentary, calc-alkaline to alkaline volcanic rocks and cogenetic plutons that extends from the US border into the southern Yukon.

- paleomagnetic and faunal studies show that the Quesnel trough is an allochthonous terrane, Quesnellia, which has been displaced several thousand kilometres northwards from its original paleolatitide. The eastern and western boundaries of the Quesnel trough are tectonic, being either major thrusts or shear zones. Rocks within the trough have been strongly block faulted, rather than folded. They have undergone mild greenschist facies metamorphism. The remarkable linear distribution of plutons and their 'spacing' (volcanic centres?) provide an indication of strong fault control for volcanism and intrusion. The intrusions are characterized by stong aeromagnetic signatures. Host rocks are predominantly late Triassic to early Jurassic Takla Group volcanic rocks consisting of a mixture of calc-alkaline, high-K calc-alkaline, shoshonitic and minor alkaline suites (Spence, 1985). The shoshonitic rocks consist of predominantly massive, unstratified subaqueous flows and fragmentals of pyroxene porphyritic andesite, latite and trachyte with subordinate intercalated tuffs and argillites. Subvolcanic (cogenetic?), commonly high level, alkaline stocks and dykes, some zoned, consisting of mostly diorite but including alkaline gabbro, monzonite and rare syenite, intrude the volcanic sequence. They display geological characteristics similar to other plutons associated with gold-rich

porphyry copper deposits elsewhere in the Quesnel belt (eg. Mt. Polley, Afton, ~~Similkameen~~ Similco).

SHOSHONITE ASSOCIATION

- shoshonite setting may be critical for gold mineralization
- related to late stages or 'deaths' of island arcs
- reorganization of plate boundaries, accompanied by transcurrent faulting and rotation of the arc out of the realm of subduction.
- definition:
  - $K_2O/Na_2O > 1$
  - low TiO_2, < 1.3%
  - basalts are near saturated in SiO_2
  - high Al (14-19%)
  - enrichment in P,Rb,Sr,Ba,Pb, light R.E.E.
- gold-rich porphyry copper deposits are characterized by feldspar and magnetite-stable alteration assemblages, at least in the early stages of mineralization.
- Sillitoe (1979) concluded that gold content is **not** related to geotectonic setting, composition of host intrusive, nature of wall rocks, age of mineralization, erosion level, size of ore body, or the presence or absence of sericitic alteration.
- characteristic zoning includes a central potassic zone, (K-spar, biotite, chalcopyrite, bornite) and a peripheral propylitic zone (chlorite, epidote, albite, carbonate, chalcopyrite, pyrite).

PROPERTY GEOLOGY

The property is centred on a large doughnut-shaped hydrothermal system (10 sq. kilometres) developed around a cluster of monzonite

porphyry stocks and dykes. Five stocks have been identified to date along with a mineralized 9m to 45m thick porphyritic monzonite dyke. The plutons form a N-NE alignment, suggesting a structurally controlled emplacement. The porphyritic character of the intrusive units and the number of dykes is indicative of a hypabyssal subvolcanic environment. Within this large system, two large porphyry type bulk tonnage copper-gold deposits have been outlined:

a) **MT. MILLIGAN:** 1200m long X 800m wide X 400m thick

b) **SOUTHERN STAR:** 1200m long X 500m wide X 300m thick

Host volcanic rocks include subaqueous flows and fragmentals of pyroxene porphyritic andesite, trachyte and latites with subordinate intercalated tuffs and argillites. The andesitic tuffs contain predominantly pyroxene phenocrysts, the trachytes include flow-banded flows and bedded tuffs, and the latites contain abundant pyroxene phenocrysts (generally lack hornblende). The trachytic tuffs and flows locally provide marker horizons. Host rocks dip 30^{o} to 85^{o} to the east.

Intrusion breccias are locally asociated with the stocks.

The **MBX** stock has an inverted cone shape. At depth, the Rainbow dyke (monzonitic) becomes 'detached' from the main stock. Further at depth, the stock shrinks and the dyke disappears (see Fig. ?). At the southeast end of the Mt. Milligan deposit a zone of strong gold mineralization (**66 Zone**) with only minor copper occurs at the transition between potassic and propylitic alteration assemblages. To the northwest, this zone of gold mineralization becomes progressively copper rich (**West Breccia Zone**) and is indistinguishable from the gold-copper mineralization in the main part of the deposit (**MBX Zone**).

The fine- to medium- grained monzonite host consists primarily of 20% plagioclase laths in an aphanitic potassium feldspar matrix.

The **Southern Star** Stock, located approximately 900 metres southeast of the MBX stock, hosts disseminated gold-copper mineralization in a similar manner as the Mt. Milligan deposit.

STRUCTURE

- The north-northeasterly alignment of plutons suggests a structurally controlled emplacement.
- Steep faults flank the west and north sides of the Mt. Milligan deposit (east side not tested)
- An east dipping, low angle fault (Rainbow Fault) trends northerly along the southeastern corner of the deposit (Fig. ?)

ALTERATION

Alteration patterns are complex, particulrly as a result of overprinting by other plutons

a) Potassic

- both MBX and Southern Star stocks and the 100m to 500m of enclosing volcanic rocks are extensively potassium metasomatized. A potassic alteration zone, comprised of earlier, fine-grained secondary felted biotite, superimposed on the volcanics and overprinted by pervasive grey potassium feldspar, hosts extensive stockwork veins and disseminated grains of chalcopyrite, pyrite and minor bornite (see Fig.?). All carry anomalous quantities of gold.
- within the potassic zone, concentrations of chalcopyrite and pyrite are highest adjacent to the monzonite stock, decrease inwards to the

core of the stock, and decrease outwards to the limits of the potassic alteration.

- within the potassic zone, pyroxene phenocrysts, which comprise 20%-40% by volume of the latites, the most prevalent volcanic lithology, are extensively replaced by carbonate
- biotite comprises 10% to 35% by volume of the volcanic units and potassium feldspar up to 50% by volume
- pyroxene is typically replaced by actinolite
- in the fine-grained laminated tuffs, massive potassium feldspar replacement is common
- intense potassic alteration, especially in zone occupied by the Rainbow Fault
- veinlets of magnetite with minor chalcopyrite post-date the main period of sulphide mineralization and are restricted to the potassic zone
- weak but pervasive sericite partially replaces plagioclase phenocrysts in the monzonite stock and in the porphyritic monzonite dyke within the zone of potassic alteration

b) Propylitic:

- the potassic alteration zone is enclosed by an extensive assymmetric propylitic alteration assemblage, comprised of epidote, chlorite, carbonate and pyrite which extends up to 3 kilometers from the MBX and Southern Star stocks.
- irregular boundary between the potassic alteration and the outer enclosing zone of propylitic alteration is marked by an increase in the pyrite content and a proportionately larger increase in secondary carbonate.

MINERALIZATION

Fig. ? shows the outline of the **Mt. Milligan** and **Southern Star** deposits as outlined to date. Bornite-rich areas are also indicated.

- distribution of sulphides is zoned but not uniformly
    i) pyrite-ubiquitous (av. +5%)
    ii) chalcopyrite - av. 1%
    iii) bornite - local - outside edge of stocks or in adjacent volcanics (absence of pyrite)
    iv) molybdenite - trace
- stockwork fracturing plus very fine-grained disseminations
- py:cpy ratio varies throughout deposits
- intrusive host rocks are monzonites with associated intrusion breccias

MBX Zone: - massive arcuate-shaped blanket of disseminated mineralization on the east side of the sulphide system (east side of MBX stock).

- 460m long X 335m wide X 240m thick
- magnetite breccia occurs on east side of MBX stock
- coarse grained sulphides adjacent to the MBX stock (up to 17 gram gold/tonne and 0.6% copper)
- two albite pipes (centres low in gold: higher gold values in outer zones)
- outwards from MBX stock (eg. 100m to 200m), fracture-related sulphides decrease
- pyroxene -->actinolite --> calcite 'outwards' in latites
- disseminated anhedral grains and coalescing grain aggregates of chalcopyrite and pyrite comprise approximately ~~6%~~ 5% of total sulphide

content. Fracture controlled pyrite-chalcopyrite mixed veinlets are less abundant. Chalcopyrite plus pyrite-Kspar-carbonate veinlets are relatively rare

- Quartz veining is noticeably absent.

66 Zone:

- mainly intensely propylitized volcanic rocks (epidote, pyrite) including a crbonate halo around pyrite - epidote veinlets in andesitic tuffs which have undergone earlier secondary biotite alteration
- trachytes exhibit both flow banding and veinlets with pyrite and chlorite, plus minor carbonate and epidote
- 760m long X 305m wide X 180m thick in a gently inclined panel
- Rainbow Fault and Rainbow dyke appear to have influenced the mineralization controls, especially in the 66 Zone, i.e. with depth, the dyke appears to be 'detached' from the MBX stock. Consequently, the 66 Zone becomes gold-rich and relatively copper-poor.

West Breccia Zone:

- west side of large circular sulphide system (MBX stock)
- 400m? long X 210m side X at least 150m thick
- indications are that the West Breccia and MBX zones are continuous
- Native Gold:
  - ranges from 5 to 100 microns in size
  - occurs in pyrite, as inclusions
  - occurs in microfractures in pyrite
  - occurs in association with chalcopyrite grains
  - occurs along grain boundaries of pyrite and chalcopyrite

Veins - at least 7 'high grade' veins have been identified radiating outwards from the MBX stock (eg. Creek and Esker veins) (see Fig. ?). These occur within the propylitized hornblende-pyroxene bearing porphyritic andesites approximately 300 metres southwest and 460 metres west of the MBX stock respectively. The zones strike northeasterly (cf. 79 Zone apparently striking northwesterly), and dip steeply to the northwest. They are tabular bodies of semi-massive to massive sulphides occupying fracture systems radial to the monzonite stock. Each zone comprises three to five subparallel, sulphide-rich bodies, spaced across 10 to 90m. Individual structures range from 0.3m to 3.0 metres in thickness; some carry anomalous values of gold (up to 98 grams/tonne). An average gold vein intercept is 4.8 metres with an average grade of 10.3 grams gold/tonne (Continental Gold News Release, December 21, 1989).

- local arsenopyrite and sphalerite
- 'granular', intensely re-brecciated pyrite with a predominantly carbonate gangue

Paragenesis:

- i) strong secondary biotite alteration
- ii) overprinting of secondary K-fspar $\pm$ magnetite
- iii) overprinting of carbonate
- iv) late stage calcite stringers

GEOCHEMISTRY

- SW -->NE glaciation
- gold-copper soil geochemical anomaly over 3 sq. miles in extent
- Ministry orientation studies by Surficial Group in progress
- all of **Ted's** data + discussion of results

GEOPHYSICS

- good aeromagnetic signatures
- IP surveys

METALLURGY

- operator is correlating data received from major companies who have examined the data package and/or taken samples with respect to possible option scenarios
- Lakefield Research indicates preliminary recoveries for: gold - 80%
  copper - 88%
- conventional bulk sulphide float **without** cyanide
- Bond Work Index ~ 11
- Copper concentrate estimated to contain 24% to 25% copper and 68.6 grams gold.

AGE DATING

(see Fig. ? for location)

- Two samples submitted in early 1989 for K-Ar dating:
  1) porphyritic monzonite dyke intruding Takla Group andesitic pyroclastics (TGS-1989-2)
  2) Hornfelsed Takla Group andesitic pyroclastic (TGS-89-3)

(see attached)

Comments: The results from these two samples are inconclusive, (one suggesting a mid-cretaceous (Albian) age & the other a younger late-Cretaceous (109±4Ma) to early Tertiary age (66.3±2.3Ma); as a result, two further samples of monzonite from near the core of the MBX stock (see Fig. ? for location) have been submitted for age dating utilizing either zircons or titanium bearing minerals. These two samples were taken from:

DDH-89-123 (108m to 122m incl.) - [TGS-89-4]

DDH-89-129 (154m to 164m incl.) - [TGS-89-5]

They have been submitted to Dr. Tom Krogh at the Royal Ontario Museum in Toronto. Dr. Krogh has observed abundant black and brown rutile in one of the samples, prompting him to examine the potential for dating the titanium (B. McMillan, personal communication, 1990).

These results will be reported upon in subsequent publications.

Mineral Inventory ('Reserves')

- ultimate reserves for the two large gold-copper deposits are dependent upon production costs, metallurgical recovery rates and commodity prices.
- combined 'reserves' of ~350 million tonnes grading the equivalent to 0.8% copper (where here, 1 gm of gold is equivalent to 1% copper (i.e. gold contributes approx. 70% of the value)
- ~293m tons (geological) @ 0.75% equiv. Cu (75% value in Au, 25% in Cu)

  a) Mt. Milligan: (mineable) ~ 257m tons @ 0.8% equiv. Cu

  b) Southern Star: ~160m tons @ 0.57% equiv. Cu

  [N.B. factor 1 gm Au ≡ 1% Cu]

  i.e. > 5m oz Au and 5 billion lbs Cu

  (est. > 400,000 oz Au/yr and 100,000,000 lbs Cu/yr)

FUTURE PLANS

- 1990 - $7.1m feasibility
  - 200 tonne bulk sample
  - 7 drills - condemnation, infill, delineation & bulk sampling
  - 9 geologists
  - 6" core for comminution tests
  - government permitting program (MDRC)
  - offsite mine, mill & feasibility engineering studies
- ore is a 'net' acid consumer
- established infrastructure, excellent deposit geometry, topography & good metallurgy = large scale, low cost open pit mine devel.
- completion of a bankable feasibility study in mid-1990 with production in late 1992 or 1993
- possibility of a) Ti in concentrate
  b) Pt-Pd in concentrate

  Eg. Study of Ti in tailings - Geol. Fdwk.(1984)
  - est. 50,000 tpd.

BCMEMPR: The Geological Survey Branch is examining proposals to conduct both mineral deposit studies (site-specific) and regional mapping (1:50,000 scale) studies in the Mt. Millian area, beginning in 1990.

DISCUSSION

- **Vic Preto** (comparison of alkaline porphyry systems in B.C. & worldwide)

ACKNOWLEDGMENTS

- cooperation of Continental Gold staff in providing information and ready access to company plans & reports is greatly appreciated
- also, thanks to field staff for taking time out of their very busy schedule to act as 'tour guides' to numerous Government visitors.

REFERENCES

- Faulkner, 1986 & 1987
- Previous assessment reports (**Ted**)
- Spence, 1985
- Continental Gold Corp News Release, Dec. 21,1989
- Other sources (eg. personal commun.)? (**Ted**)

FIGURES - (all to be redrafted by **Ted**, as required)

1. Geology - Mt. Milligan property (**Tom**) (needs inset location map for BC/**Ted**)
2. Geology of Mt. Milligan mineral deposits (**Tom**)
3. Geology of Mt. Milligan deposit, 1050 Level Plan
   (Drill holes projected vertically from surface)
   (**Tom and/or Ted's large map**)
4. Cross section, Mt. Milligan deposit - L9600N (**Tom**)
5. Cross section, Mt. Milligan deposit - L9100N (**Tom**)
   (Re: 4 & 5 - Note: **Mark** is to supply one or two in place of my Figs. 4 & 5)
6. Location of significant alkaline porphyry copper-gold deposits in B.C. (**Vic**)
7. Model for alkaline porphyries with special reference to B.C. deposits (**Vic**)
8. **Numerous** figures used in Chemistry Section re - analysis (**Ted**)

Table: Similarities/comparisons of alkaline Cu-Au porphyries in B.C./worldwide (**Vic, Ted**)

PHOTOGRAPHS

1. Nice aerial view, looking westerly, over Mt. Milligan deposits (**Vic**, from Andre or Bill)
2. Rock specimens, core? (**Ted**)

APPENDICES

1. Age Dating data (**Tom**)
2. Chemical Analysis (**Ted**)

TS:JB

Fig. 1 - requires 'BC' inset

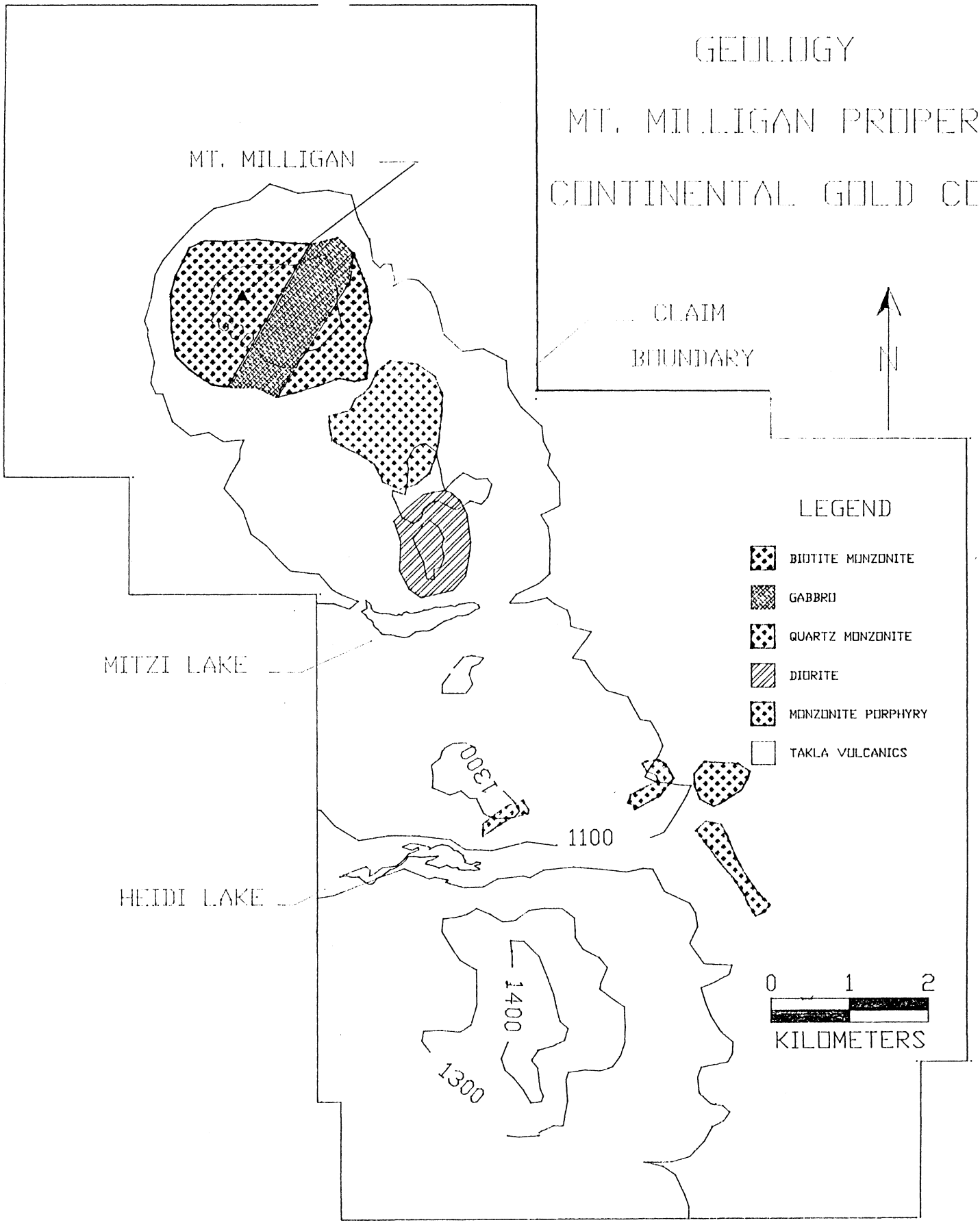


Fig. 2

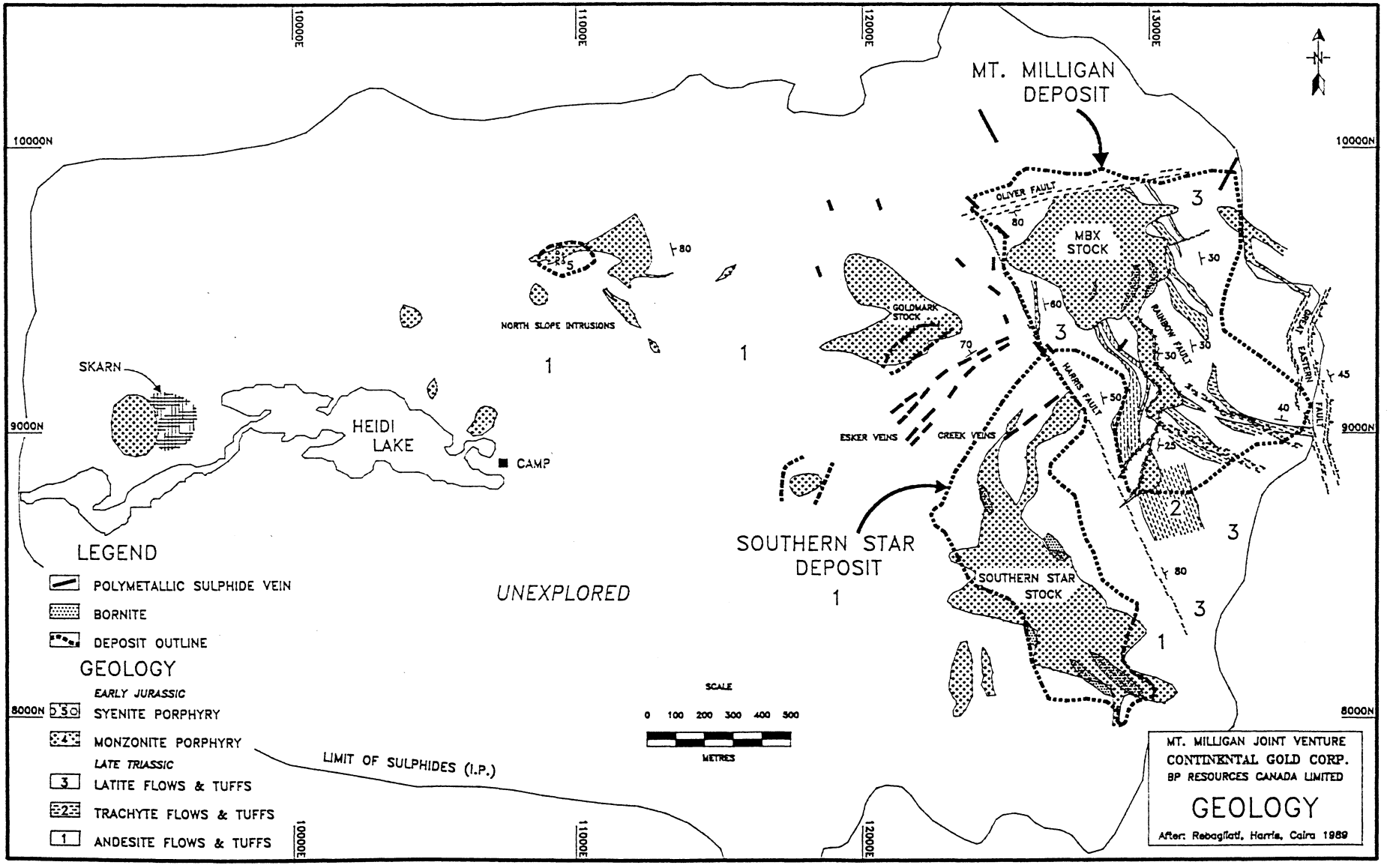
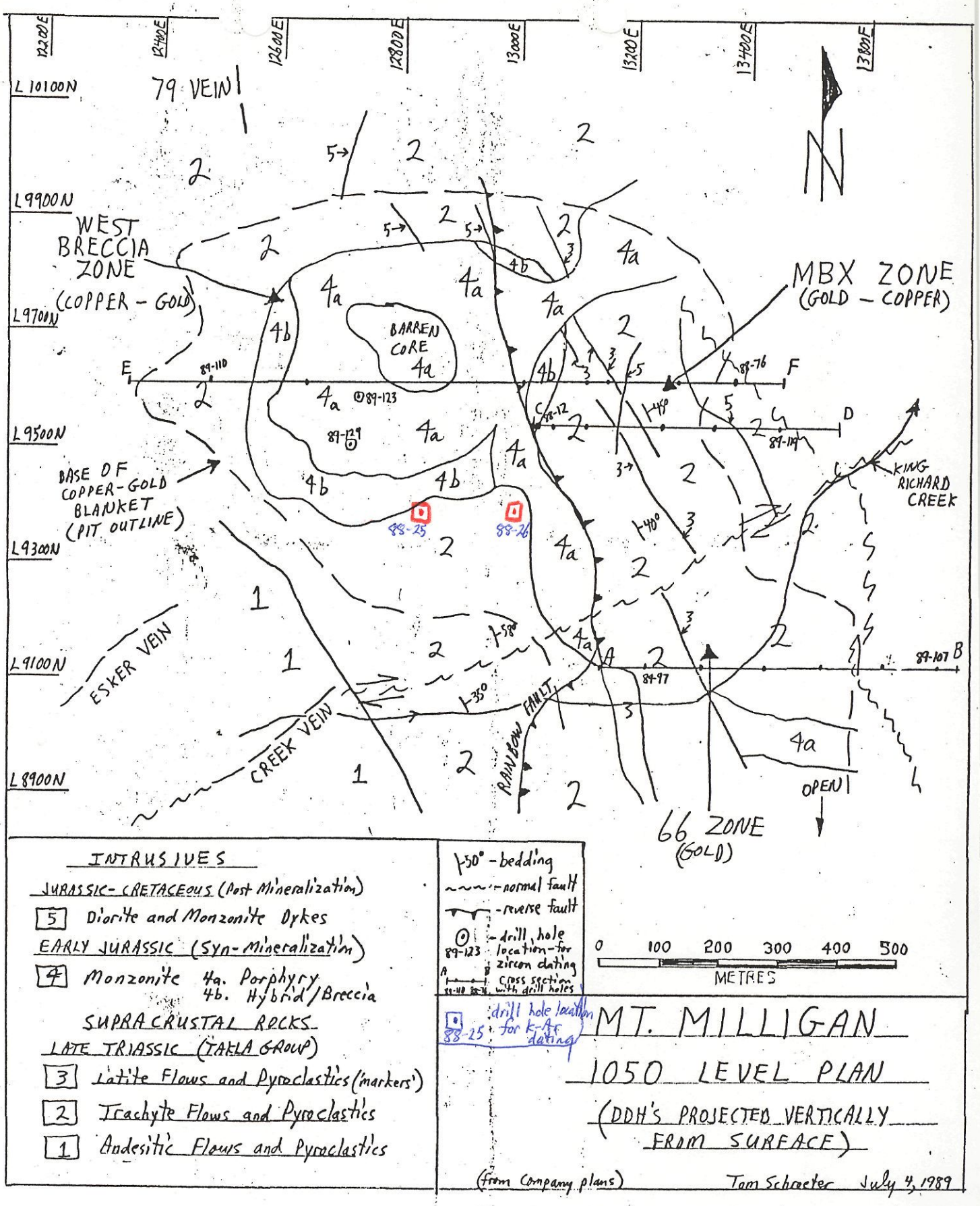

10000E
11000E
12000E
13000E
10000N
9000N
8000N
MT. MILLIGAN DEPOSIT
OLIVER FAULT
MBX STOCK
GOLDMARK STOCK
NORTH SLOPE INTRUSIONS
RAINBOW FAULT
HARRIS FAULT
GREAT EASTERN FAULT
ESKER VEINS
CREEK VEINS
SKARN
HEIDI LAKE
CAMP
SOUTHERN STAR DEPOSIT
SOUTHERN STAR STOCK
UNEXPLORED
LIMIT OF SULPHIDES (I.P.)
SCALE
0 100 200 300 400 500
METRES
LEGEND
POLYMETALLIC SULPHIDE VEIN
BORNITE
DEPOSIT OUTLINE
GEOLOGY
EARLY JURASSIC
SYENITE PORPHYRY
MONZONITE PORPHYRY
LATE TRIASSIC
LATITE FLOWS & TUFFS
TRACHYTE FLOWS & TUFFS
ANDESITE FLOWS & TUFFS
MT. MILLIGAN JOINT VENTURE
CONTINENTAL GOLD CORP.
BP RESOURCES CANADA LIMITED
GEOLOGY
After: Rebagliati, Harris, Cairo 1989

Fig. 3



MT. MILLIGAN

1050 LEVEL PLAN

(DDH'S PROJECTED VERTICALLY FROM SURFACE)

(from Company plans) Tom Schroeter July 4, 1989

Note: locations for age dating

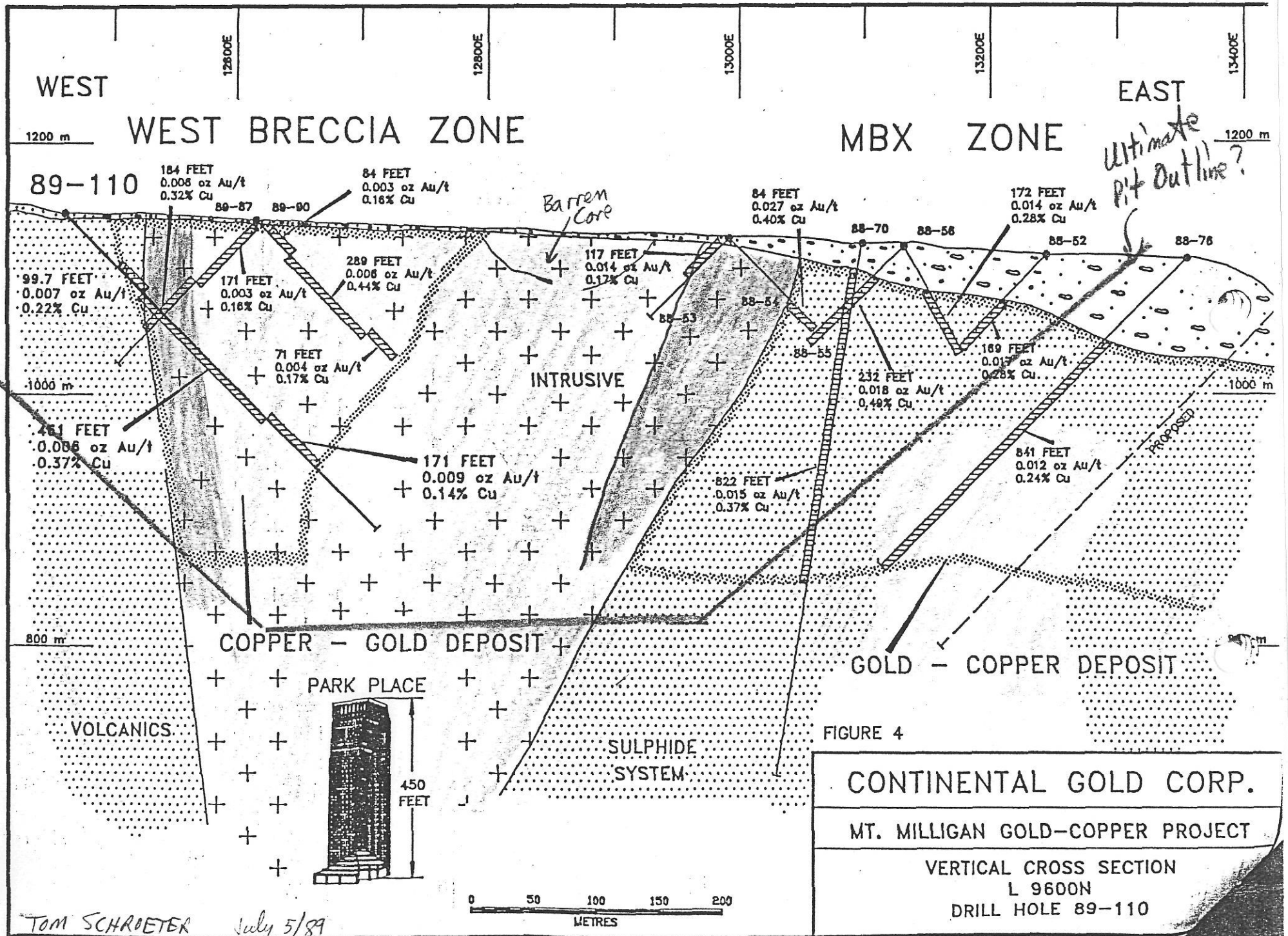


FIGURE 4

CONTINENTAL GOLD CORP.

MT. MILLIGAN GOLD-COPPER PROJECT

VERTICAL CROSS SECTION
L 9600N
DRILL HOLE 89-110

Prepared by: RWR MINERA

TOM SCHROETER July 5/89

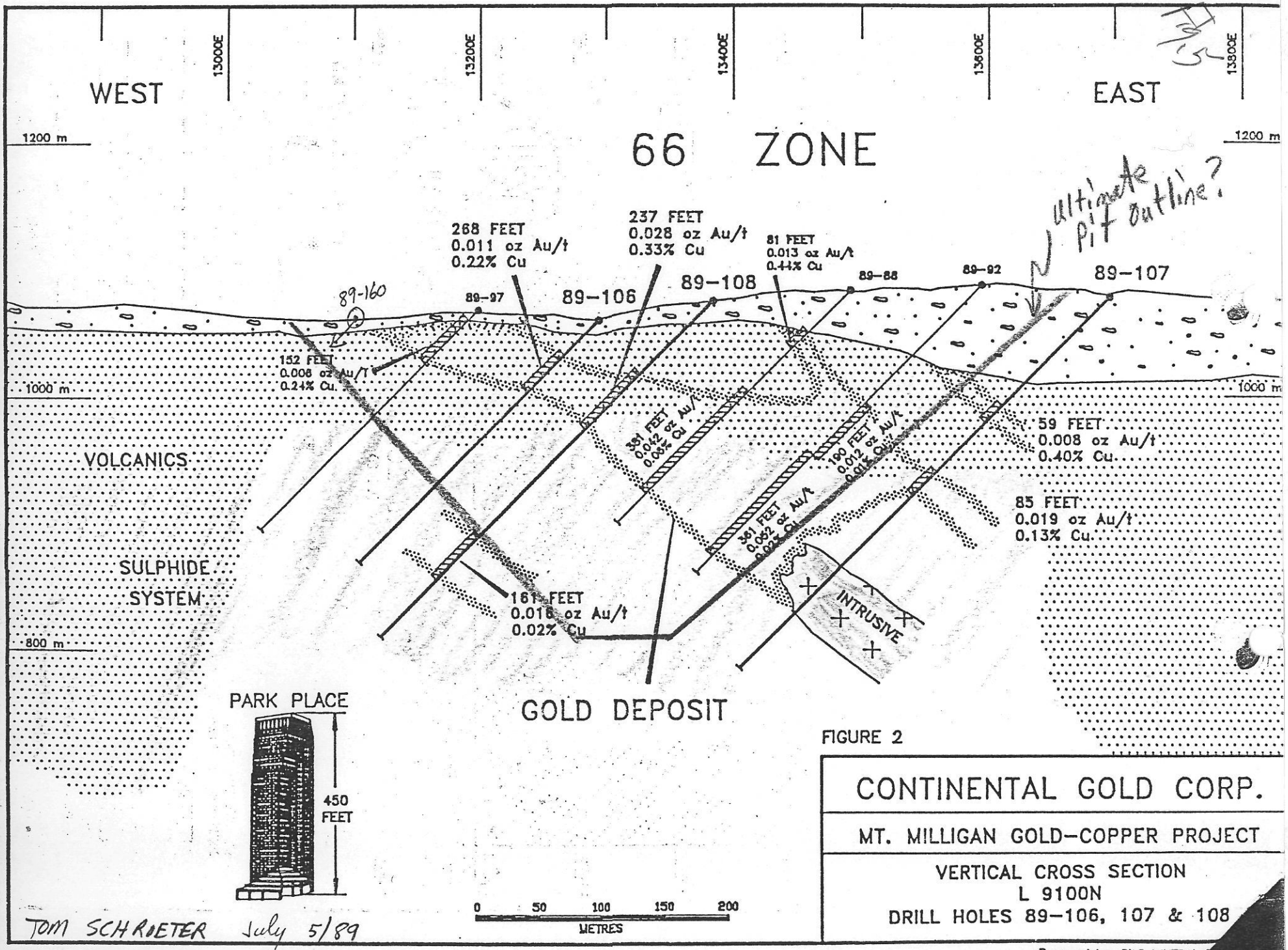


FIGURE 2

CONTINENTAL GOLD CORP.

MT. MILLIGAN GOLD–COPPER PROJECT

VERTICAL CROSS SECTION
L 9100N
DRILL HOLES 89–106, 107 & 108

Prepared by: RWR MINERAL

TOM SCHROETER July 5/89

for zircons (+ rutiles - TiO_2)

SEPARATION APPROVED _____

DATE _____

10-3: GEOCHRONOLOGY REQUEST FORM

Submitted by: TOM SCHROETER

K/Ar _____ Zircon X Other _____

MI 93N194

Sample Number TGS-89-5

Lab Number _____

Location Lat 55°07'N Long 124°02'W NTS 93N/01E

UTM Zone 10 Easting 610889 Northing 43440

Kind of Sample Hand specimen ___ Drill core X Other ___

Rock Type MONZONITE

Rock Unit/Formation/Group TAKLA GROUP ANDESITIC PYROCLASTICS

Mineral to be separated (specify if whole rock) zircons

Geologic Age Estimated Early Cretaceous?

Comments Mt. MILLIGAN (Phil, Heidi) property
DDH-89-129 (154-164 m)

Note: Previous K/Ar dates (TGS-89-2 & TGS-89-3) Mar. 89

Collected by Mark Rebagliati ⟶ Tom Schroeter

Dated by _____

Listed by _____ June 5/89

Name/Institution

for zircons

SEPARATION APPROVED _____

DATE _____

10-3: GEOCHRONOLOGY REQUEST FORM

Submitted by: TOM SCHROETER

K/Ar ____ Zircon X Other ____

MI 93N 194

Sample Number TGS-89-4

Lab Number _____

Location Lat 55°07'N Long 124°02'W NTS 93N/01E

UTM Zone 10 Easting 610819 Northing 4340

Kind of Sample Hand specimen ___ Drill core X Other ___

Rock Type MONZONITE

Rock Unit/Formation/Group TAKLA GROUP ANDESITIC PYROCLASTICS

Mineral to be separated (specify if whole rock) zircons

Geologic Age Estimated Early Cretaceous?

Comments Mt. MILLIGAN (Phil, Heidi) property
DDH-89-123 (108-122 m)

Note: Previous K/Ar dates (TGS-89-2 + TGS-89-3) Mar./89

Collected by Mark Rebagliati → Tom Schroeter

Dated by _____

Listed by _____ June 5/89

Name/Institution

(NTS 93N)

K-Ar

Sample Number(s) and Reference(s)	material	Date	1σ error
Lab No: TGS 89-2	decay constants: (W. Rx.)	66.3	±2.3 Ma
Ref: Tom Schroeter MEMPR.	□ 4.72/.584/1.19 ( )		± Ma
	□ 4.72/.584/1.18 ( )		± Ma
	■ 4.96/.581/1.167 ( )		± Ma

Record No:
Suite No: □ not reported
Sample Name:

Latitude: Longitude: (X° Y' Z" or X° Y.Y')
(55° 07' " N , 124° 02' " W (±); Elev.
UTM Zone 10 6108819 E 434101 N; Province B.C.
Sec. , T. , R. ; Co., State .
(NTS 93N/01E Manson River Map Area, Scale 1:250,000

Location: Mt. Milligan (Phil, Heidi) property
Source Type: Drill core DDH 88-26 -18m
Rock: Porphyritic latite (monzonitic?)
Geologic Unit: (Takla group andesitic pyroclastics. (Dike, intrudes)
Geologic Age:
Material Analyzed: Whole rock (-40+60), sulphides removed

Analytical Data: (list duplicate analyses or indicate n = 2, n = 3, etc.)

$K = \bar{X} = 6.74 \pm 0.03$ $K_2O =$ $n = 2.$	% ; (Ar^{40*} =	17.695 $\times 10^{-6}$ cc/gm) 7.896 $\times 10^{-10}$ mol/gm)	; (91.2 $\%\Sigma Ar^{*40}$)
$K =$ $K_2O =$	% ; (Ar^{40*} = %	$\times 10^{-6}$ cc/gm) $\times 10^{-10}$ mol/gm)	; ($\%\Sigma Ar^{40}$)
$K =$ $K_2O =$	% ; (Ar^{40*} =	$\times 10^{-6}$ cc/gm) $\times 10^{-10}$ mol/gm)	; ($\%\Sigma Ar^{40}$)
$K =$ $K_2O =$	% ; (Ar^{40*} =	$\times 10^{-6}$ cc/gm) $\times 10^{-10}$ mol/gm)	; ($\%\Sigma Ar^{40}$)

Comment on Analyses:

Interpretation: Early Cretaceous date expected. May be younger or nonretentive or altered and reset. Rock has abundant disseminated sulphides.

Collected by: Mark Rebagliati, for T. Schroeter
Dated by: T. Harakal & D. Runkle.
Listed by: (name, institution) Date: 03.28.89.

(NTS 93N)

K-Ar

Sample Number(s) and Reference(s)

Lab No: TGS 89-3

Ref: T. Schroeter MEMPR.

Record No:

Suite No:

Sample Name:

decay constants:

- ☐ 4.72/.584/1.19
- ☐ 4.72/.584/1.18
- ■ 4.96/.581/1.167
- ☐ not reported

material	Date	1σ error
(W. Rx.)	109	± 4 Ma
( )		± Ma
( )		± Ma

Latitude: Longitude: (X° Y' Z" or X° Y.Y')

(55° 07 ' " N , 124° 02 ' " W (±); Elev.

UTM Zone 10 6108819 E 434101 N; Province B.C.

Sec. , T. , R. ; Co., State .

(NTS 93 N/01E) Manson River Map Area, Scale 1:250,000

Location: Mt. Milligan (Phil, Heidi) property

Source Type: Drill core DDH 88 - 25 - 90m

Rock: Hornfels — altered volcanic with secondary biotite

Geologic Unit: Takla Group

Geologic Age:

Material Analyzed: Whole rock (-40+60), magnetite and sulphides remo

Analytical Data: (list duplicate analyses or indicate n = 2, n = 3, etc.)

$K = \bar{X} = 3.32 \pm 0.04$ %; K_2O = n = 2.	$(Ar^{40*} = 14.459 \times 10^{-6}$ cc/gm)	6.452×10^{-10} mol/gm)	; (94.5 $\%\Sigma Ar^{40*}$)
K = %; K_2O = %	$(Ar^{40*} =$	$\times 10^{-6}$ cc/gm) $\times 10^{-10}$ mol/gm)	; ($\%\Sigma Ar^{40}$)
K = %; K_2O = %	$(Ar^{40*} =$	$\times 10^{-6}$ cc/gm) $\times 10^{-10}$ mol/gm)	; ($\%\Sigma Ar^{40}$)
K = %; K_2O = %	$(Ar^{40*} =$	$\times 10^{-6}$ cc/gm) $\times 10^{-10}$ mol/gm)	; ($\%\Sigma Ar^{40}$)

Comment on Analyses:

A
M(P)

Interpretation: Contact mm related to Naver intrusion.

Collected by: M. Rebagliatti for T. Schroeter

Dated by: T. Harakal & D. Runkle.

Listed by: (name, institution) Date: 03.22.89

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