

HIGHLAND VALLEY NOTES  
# 2, 1969.

898415

G series samples p. 80-82  
(Alwin core)

McMillon Notes

# 2, 1969

ARLINGTON DRILL LOGS

samples  
69-348-  
69-419

# DIKES

① Lt. Gray andesite porphyry (qtz phenos in some)

69-44 and 69-47 (almost white in color)

44 Bxtd, mineralized  
cpy, mal.

② CROWDED PORPHYRIES

(some qtz phenos)

69-6 gray-grn matrix one spec. not labelled

69-45 " " - embayed qtz w. malachite, phenos 60%

69-71 Dark olive green matrix - wtd face green with white fs phenos.

69-72 " " " - pyrite

69-86 Dk pinkish brown - nondescript

69-121 pinkish matrix ep/matic clots qtz pyrite

69-122 " " - ep. d. matic clots - lots of pyrite mineralized

? 69-68

? 69-119

121-type

qtz, almost  
no matrix  
ep/matic clots

③ Witches Brook - type & similar porphyries (most are qtz-rich)

69-42

" - 91

" - 95

" - 96

" - 97

" - 100

" - 102

" - 103

" - 104

" - 105 a separate phase?

" - 110

" - 116

" - 117

" - 123

" - 129

" - 132

Fig. Bethlehem?

91-type

④ Much like ③ but qtz-poor

" - 124

" - 127

" - 130

" - 131

121-type?

# DIKES

⑤ Pseudobethlehem

69-88

" - 108

" - 109

like 105(?)

⑥ Fg dk colored

69-93

" - 111

⑦ Crowded-type porphyries(?)

69-70 - 121-type

" - 87 qtz - poor hb fs porphyry

" - 89 " " " " "

...  
91 <sup>phenos m-c.g.</sup> zoned fs ↑ rel. abund. qtz in matrix  
fine grained pink mottled matrix

<sup>porphyritic</sup>  
f.g. Bethlehem? Witches Brook?  
↑ Favored ???

- larger spec. very convincing aug/69

95 — same —

counter the rock seems rather  
dark (more) for Wts. Bk.

97 —————

100 pink stained altered version of 91

102 " " " "

103 sl. coarser but like 91

104 Possibly in this gp but looks more like Wts. Bk B  
like Witches Bk B ) Favored

105 leucocratic version of 91(?)

108 like 105

84 Bxtd veined gneiss (?)  
tour / qtz matrix

90 altered gneiss - pink stain  
sericitic (grn fs) + semply  
enlargement of qtz xls

92 m-c gneiss - <sup>some</sup> pink mottling of  
matrix

98 Gneiss - chlorite - epidote veins  
F.g. version ?

Porphyries

86 - Fs porphyry - brown fg matrix

↑  
same dike

↓  
87 Hb Fs porphyry - matrix gray-green  
w. pink mottling  
(light gray wtd face) } f.g.  
Bethlehem  
???

↑  
same dike

↓  
88 Hb fs porph. matrix w. hb needles

89 DK green matrix hb fs porphyry

The hb is rel. stubby - it is c 9 and  
f.g. but not peppered like <sup>that of</sup> 86-88

NOT RADICALLY DIFFERENT FROM 86

93 flow banded? green fs - porphyry  
pyroxene?

99 - like 86

GUICHON QDi

mg two fs(?) quartz

some fs is altered & pinkish

some is plagioclase. The

vain may be selective altn  
rather than two fs's.

mafic - predom. hb some  
chloritized biotite (?) mafic rel.  
evenly distributed.

quartz - interstitial  
anhedral  
wedges

BETHSAIDA GD

Cg with large rounded

to euhedral quartz (glassy)

also - some have almost square X sections  
subsequent biotite (?) chlorite  
cherts and chlorite ~~and~~ pseudo-  
morphs after biotite (?) amphibole?

Pink and yellowish feldspar

ratio ~~1:1~~ 1:1. Yellowish are  
twinning plagioclase

Mafics vary in size and

are rel. unfr. dist. ~~(alt)~~ although  
they are locally spotty.



Tuesday June 16 Sunny, Hot  
(Actually June 17)

Driving roads on Valley Cr  
ground from HU rope to the  
aluminum Camp.

STOP 1 Trench Bethesda

Grd - cg subhedral plaq

biotite - subhedral books  
(15-20%)

large sub-rect Qtz (20-25%)

Somewhat porphyritic

Joints 128/76 NE

063/88 SW

040/22 NW

Shear w. 3" of gouge 035/78 SE

assoc. joint 058/78 SE

adj to joints the rk is rusty  
w/sg & fs pink; pink fs  
althn along seams

Floax has Qtz - cpy - barite  
veins

WM69-1

stop 2 core shack  
unathered to sericized  
and chloritized Bethsarda.

Veins of pink altn at  
small  $\frac{1}{2}$  and  $\perp$  to core.

9th vein has borders which  
are sheared and coated  
by  $MoS_2$ .

Joints 149/36 SW  
4'-2' spacing



112/81 NE  
slickensides?  
pitch 45°  $\frac{1}{2}$  Easterly  
2"-4" spacing

Stop 3 Small adit on H6

quartz - cpy, qtz - ser. - cpy

veins cutting sericitized

Bethesda. ~~It~~ must be

small because rx visible

at the points are pointed

on foot - scale and <sup>rel.</sup> unaltered.

Joints 170/64E

000/60W

080/81N

other points are less well-

developed. No slickensides

cpy also occurs as pods  
in highly altered areas.

was unable to get a  
reading (on the veins (not seen  
in place)

stop 4 Kamloops group  
light gray, soft, ~~white~~

qtz(?) & spar biotite porphyry

DDH 700' in vales

<sup>DDH</sup>  
under the Lake

lake

→ stop 4

□ Camp

Bethsaida

WM 69-2

Geol. - ex. of Mineral King  
Wells Cummins  
Eng Al Sadar  
Manager Albert Wells

Got invited to dinner -

said I would try to get

1000 scale fm next yr duplicated  
if possible (for Co's).

Geologist: WJM

Date: June 17/69

# BETHSAIDA GENERALIZED

Map: 1000 Scale

Point: STOP 1

Photo:

*Prelim.*

Sample: WM-1-69

Vicinity:

not punch = light } reverse to CI  
0-20 21-40 >40

Lith

not punched = coarse

slightly - biotite and plag.

%  
%  
%  
%

grain shapes - euhedral subrect  
" " - euhedral zoned laths  
" " uncertain  
" " euhedral books

Alter

Alter - sericite 1  
- chlorite 2  
- pink fs (?) 4  
- other 7

Min

Base metals ~~??~~ } reverse  
minerals <sup>cpy</sup> ①  
boronite ②  
ms sr ③  
thes ④ } Location - reverse

7	4	2	1	7	4	2	1	7	4	2	1
---	---	---	---	---	---	---	---	---	---	---	---

Geologist: WJM

Date: June 17/69

# BETHSAIDA GENERALIZED

Map: 1000 Scale  
Prelim.

Point: STOP 1

Photo:

Sample: WM-1-69

Vicinity:

not punch = light ) reverse to CI  
0-20 21-40 >40

Lith

not punched = coarse

slightly - biotite and plag.

grain shapes - euhedral subrect

" " - euhedral zoned laths

" " uncertain

" " euhedral blocks

Alter

Alter - sericite 1

- chlorite 2

- pink fs(?) 4

- other 7

Min

Base metals ~~77~~ ) reverse  
minerals <sup>cpy</sup> ①  
                  <sup>bornite</sup> ②  
                  <sup>msn</sup> ④  
                  <sup>other</sup> ⑦ Location - reverse

1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
4	4	4	4	4	4	4	4
7	7	7	7	7	7	7	7

new section

Joints

- 1 Tension
- 2 shear
- 4 unknown

Veins

- 1 quartz
- 2 quartz-opaque mineral
- 4 sericite
- 7 other

Relationships between veins  
and/or joints

-write this out and  
sketch relationship

description of Rock

Planes	Fault
	S <sub>0</sub> S <sub>1</sub>
a	1
b	2
c	4
d	7
e	1
f	2
g	4
h	7
i	1
j	2
k	4
l	7
m	1
n	2
p	4
q	7
r	1
s	2
t	4
u	7
v	1
w	2
x	4
y	7

Geologist: WJM

Date: 18/6/69

Bethlehem

Sunny, cumulous clouds

- Meta
- Intr
- Extr

Map:

Point: Stop 1

Photo:

Sample: -

Vicinity:

- Dark
- Med
- Fine
- Med

Lith

- Por

slight with larger plap + hb xls

- Q

25

interstitial with  $\frac{1}{2}$  edges and subsequent crystals

- P

55

twinned some differential altn - cores green

- Or

7

pinkish patches - may be plap altn zones

- Bio

- Musc

not prominent - chloritized

- Hb/Px

15

chloritized - euhedral mg xls  
some poikilitic - enclosing quartz  
and feldspar (these are phenocrysts)

- Other

- +

- -

Alter

- 1

- 2

chlorite after mafics

- 4

- 7

- Vein

aplite may be veins - etc not traceable (pink)

- Py

- Base

Min

- 1

- 2

- 4

- 7

none seen

Location

1	2	4	7	1	2	4	7
---	---	---	---	---	---	---	---



Planes

Fault

S<sub>0</sub>  
S<sub>1</sub>

Joints - the rocks are red  
massive with joints spaced  
~3' usually

055/70 NW <sup>spacing</sup> - 2" to 3'

125/v - 8"-5'

165/52 NE - 2-3'

008/72 E } - 1-3'

168/68 E } seem to cut off  
other joints  
(not certain)

aplite 105/10 NE - 2" vein -

borders mg pink fs-rich centers

aplite

Only two aplite veins were noted  
in the etc.

a	1
b	2
c	4
d	7
e	1
f	2
g	4
h	7
i	1
j	2
k	4
l	7
m	1
n	2
p	4
q	7
r	1
s	2
t	4
u	7
v	1
w	2
x	4
y	7

Geologist: WJM

Date: 10/6/69

BEAVER QD ?

Map:

Point: stop 2 1/2

Photo:

Sample: 69-5

Vicinity:

Lith

Alter

Min

slightly - hb (pinkish) bi-plag -  
encl. fs

interstiti forms "networks" among fs xls



← .5cm

Plag - twinned white like that a  
Or? - pinkish areas stop 2

hb predom. blocky + thin euhedral xls  
sphen? amber colored - with mafics  
seems almost to have a poor form  
defined by mafics

chlonte after hb.

+ thin hb laths are variously oriented

WM69-5

Location

1	2	4	7	1	2	4	7	1	2	4	7
---	---	---	---	---	---	---	---	---	---	---	---

aplite -  $\frac{1}{4}$ " vein  
 17 1/4 NE } aplite veins  
 are not  
 common

Joints 010/82E 2"-2' spacing  
 067/61SE 8" - missing  
 060/24NW 2" - many feet  
 128/88NE 4" - " "

no gtr veining no obvious  
 shearing

Planes	Fault	
	S <sub>0</sub>	S <sub>1</sub>
a	1	0
b	2	0
c	4	0
d	7	0
e	1	0
f	2	0
g	4	0
h	7	0
i	1	0
j	2	0
k	4	0
l	7	0
m	1	0
n	2	0
p	4	0
q	7	0
r	1	0
s	2	0
t	4	0
u	7	0
v	1	0
w	2	0
x	4	0
y	7	0

Geologist:

Porphyry  
~~Kambaga Sp. 2/18~~

Date: 18/6/69

- Meta
- Intr
- Extr
- Dark
- Med
- Fine
- Med
- Por
- Q
- P
- Or
- Bio
- Musc
- Hb/Px
- Other

Lith

Map:

Point: stop 2 1/2

Photo:

Sample:

Vicinity:

"hooded" feldspar porphyry  
with subhedral <sup>white</sup> f's phenos ~ 60%  
hb (partly altered? to epidote)  
(15%)  
phenos and clots. The matrix (15%)  
looks green because numerous  
tiny green hb xls lie in it.  
Squarish glassy qtz phenos  
also occur (10%)

Alter

The contact has more  
matrix is somewhat chilled  
It seems to trend 150/steep.  
Carró map shows trend 120°

- Vein
- Py
- Base

Min

- 1
- 2
- 4
- 7

WM 69-6

Location

1	4	2	1	7	4	2	1	7	4	2	1
---	---	---	---	---	---	---	---	---	---	---	---

Geologist:

Date:

SAMPLES

- Meta
- Intr
- Extr
- Dark
- Med
- Fine
- Med
- Por
- Q
- P
- Or
- Bio
- Musc
- Hb/Px
- Other

Lith

Map:

Point:

Photo:

Sample:

Vicinity:

Krain Turnoff -

pits with Guichen <sup>g-d</sup>  
outcrop

WM69-7

Trojan area - Guichen etc

WM69-8

- +
- 
- 1
- 2
- 4
- 7

Alter

Road cut 2 1/2 miles west of the  
Four corners - sample of

Witches Brook? phase

note lots of pink

WM69-9

- Vein
- Py
- Base

Min

- 1
- 2
- 4
- 7

No GUICHON

Location

1	2	4	7	1	2	4	7
1	2	4	7	1	2	4	7

## CONTENTS

Kraun → Laura → Alwin (core logged) (Guichon de property)	81
Highmont - visited Minex Bx w. Gerhard von Rosen -- then visited Valley Forge crew - (Mineral Mtn)	83
Bencrest + visited the property w. geologist	85
Mineral Mtn - visited the property with the two geologists	89
Zenith trip with A.S.B.	91
Drain area with A.S.B.	96
Sheba area	99
<u>Logging arlington DDH's</u>	101
South Seas Underground	104

- end -

Visited Krain - got maps  
Laura - Dave Comba

TUESDAY  
Aug. 19/69

near Guichon Cr  
Alwin Property # - Core Log.

Core from Alwin Prop near Guichon Cr.  
Hole ~~67-183~~ G1

15-46 Crushed up core - most is gray  
green matrix - rich f.g. - small areas  
are lighter (same texture but white  
fs). Carbonate veining, epidote altn.  
Some carb. veins are open space fillings

42-66 Similar w. local nearly black  
f.g. areas (xenoliths?) and  
branching dikelets(?) of white f.g.  
leucocratic (aplite?) material.  
Local stickensides are well devel.  
+ beautifully polished.

66-88 Calcite veined dk gray f.g.  
bb (40%) fs rock. Gray G-d (McAndrews)  
Locally the matrix fs is altered +  
is white. In those cases the rock  
has a different aspect.

samples 

G1-68 ordinary
G1-92 altered

G-1 88-112 Similar w. occasional cpy specs  
sample 61-89

134-176 Sand + Mud - no core

FAULT?

at 114 a dikelet(?) with asss.

pyrite matrix ~~is~~ <sup>is</sup> rel. <sup>w. white</sup> leucocratic matrix

The matrix (hb) in it are m-c  
grained and a xenolith of f9  
dk gray mat'l also occurs

sample 61-114

Hole ends at 176



18  
Hole G-2 - Alwin Guichon Property

overburden to 35'

35 - 54 Gray G-d veined by calcite.  
Bleaching ~~Altn~~ has caused color zones  
to form normal to the ~~core~~ core.

At 49' epidote veining has plebs  
of ~~egg~~ assos. w. it. Calcite  
& epidote veins seem to be  
synchronous. Sample G2-50'

about 48' the rock is a breccia with  
calcite/epidote matrix. White  
fibrous veins could be dehydrated.

54 - 75 Gray G-d w. local rock  
scale rel. leuco. dikelets

sample G2, 58'

Veining produces breccia at  
64 and 68'.

a second dikelet is at 69'

8/1/67 - her

MINEX BRECCIA

75-100 A 2' 1/2 gray porphyry (Bethlehem's andesite porphyry?) ~~occurs~~  
occurs at 92'.

sample 62-92'

100-137 The rock is bleached and  
Gray G.d. altered. It is cut by pinkish

62-107

aplite dikes and white aplite dikes  
is 5% mafic content. The hole  
seems to end in a dike 62-130 which  
is several feet across.

Breccia?  
Data 199?

Skarna - Ben  
overtones

red - Feb/78

Highmont

Aug 20/69

Start at Minex cabin go north

83-1 E-W chlor. fract. cut by Qtz veins

WM-69-348-1	Qtz chl Ep veined
" " 348-2	Skeena

White Qtz Eye fs ppy chylce - Gnaused

83-2 Contact sk/perph exposed. Mtn dyke

Type Colln (4-)

WM-69-349	perph. Skeena?
-----------	----------------

Qtz Eye Ppy - Gnaused Mtn dyke. cut by  
chl fr. Condensed on into

(Type Colln)  $\phi$

WM-69-350	aplitic Qtz porph Qtz Plag Ppy matrix wh fg subaphitic Diz? 6p?
-----------	---

83-3 The rock becomes gradually more broken with inter-fragment specularite and chlorite veins. some mal. stain

WM-69-351	Breccia? Bxt'd Ppy?
-----------	------------------------

83-4 In the bx Qtz veining precedes chlorite/hematite veining

Photo 8 + 9 Hall 7

# MINEX BRECCIA

83-5 Top of hill Bx WM-69-352  
352  
 matrix qtz - chl. - tour?

Just below the top of the hill  
 the porph. is no longer bxt'd

~~78N~~ 96N 25W IP str

83-6 Old Cabin, near creek

WM-69-353

(Cabin - type) porph. Skeena? Bethesda?

Mafic Qtz Ppy - P mafic chloritized  
 ep, mal on fractures

(Type  
 Colln)

96N 18W unusual Skeena? or  
 Bethesda?

some qtz eyes, biotite

96N 14W Skeena Trench going N-S

interstitial quartz } Good  
 biotite

WM-69-354

Skeena - Bm  
 overtones

83-7 Heading South

Subvertical shears trend 175°  
 mal. stains

MINEY BRCCIA

84-1 4-6" aplite like trends sbo.

The aplite becomes grt porphyry  
along strike. The contact is  
slightly chilled.

84-2 100' south the shears have swung  
to  $150^\circ$

The rock looks like Skeena in  
some of's but Bethesda in others

WM-69-355

6p (Ppytic Bsda)  
mal. on cracks

looked at thin sections

then went to Valley Forge in  
(Mineral Mtn)  
the afternoon sep 89

They have windows with  
in Watchdog Brook cutting  
Enichon.

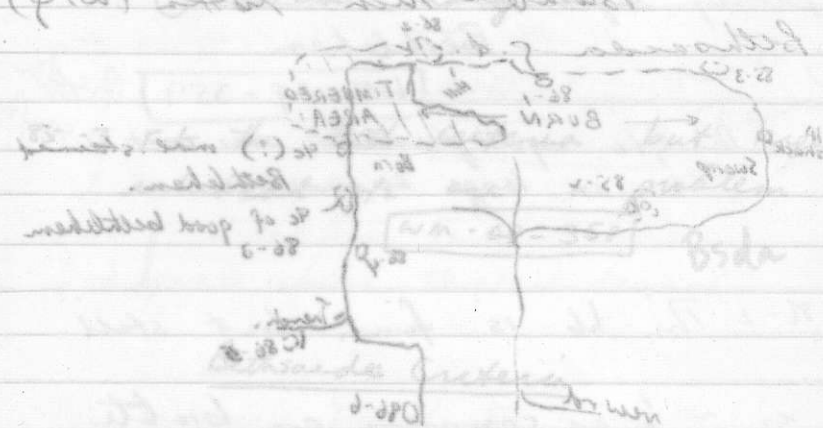
WM-69-356

D2 Chem Anal.

W. M. G. - 22-7  
is B. M. G.

515-0-102

87-1  
B. M. G. - 22-7  
subdivided coarse quartz  
side +



87-101  
87-102  
87-103  
87-104  
87-105  
87-106  
87-107  
87-108  
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87-191  
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87-196  
87-197  
87-198  
87-199  
87-200

\* called B. M. G. by  
company

Bencrest Visit

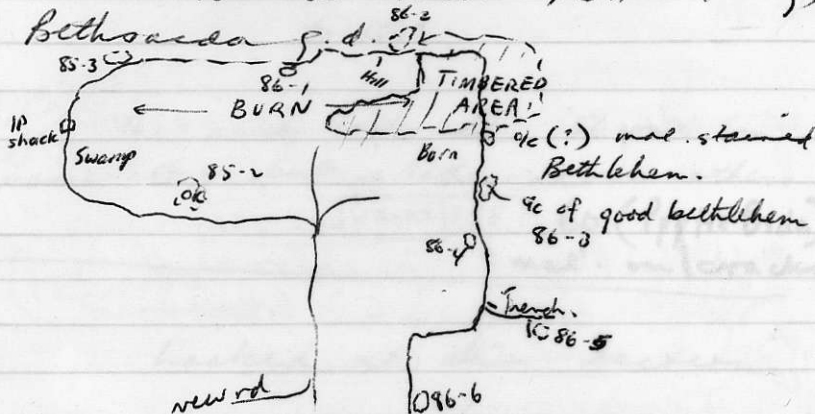
Aug 21/69

7128-139

7128-193

Old rd - Skuban crossing, east side

85-1 Bistite - rich matrix (wtg)



85-2 Well formed gt. phenos  
cg but smaller + less  
abund than 85-1 Bistite  
books - matrix mg fs  
mottled by pink

WM-69-357 Bsdn

Bi loc. chloritized

\* called Bethlehem by  
company geol.

# Criteria for Bethlehem vs Bethesda

- ① coarse poikilitic hornblende
- ② subhedral coarse quartz
- ③ matrix changeable

WM-09-358

85-3 Fits the Beth. criteria but large subhedral qtz are a problem

WM-09-358

Bsda

## Bethsda's Criteria

- ① Abundant round quartz
- ② " coarse biotite
- ③ Matrix not diagnostic

If hb is present - small not poikel.



86-1 small of aplite 070/v  
atypical trend.

qtz usually is most in eyes - hb is large & pink. with well to poorly defined borders.

Bethlehem

WM-09-359

Bsda  
presamples

The qtz eyes present are not as large as usual.

WM-09-360

86-2 The hb is finer but still is  $\sim \frac{1}{3}$  as common as biotite

qtz u. ill-formed (interstitial)

WM-09-360

relatively Bsda  
Feb 78 called it A.F.g

has one large hb

inclusion

86-3 Bethlehem

anhedral grt

cg phenos of hb + smaller

mafic (hb + biotite) in the matrix  
mafic 10-15%

86-4 also good

Bethlehem

Feb 78

WM-69-361

Skeena  
nearly Bm

86-5

Bethlehem

WM-69-362

Just above 9c-free trench

End of Trench

Small Bethleh. 9c to north

86-6 East of the road. Bethlehem? cut

by 6" east dipping aplite dikes

Bi is  $\gg$  hb. What ~~is~~ hb thereno  $\gg$  porphyritic

WM-69-363

Bethsaida

Feb/78

85  
Swamp 86-6

87-1

large trench 87.2

87-1 Bethlehem

WM-69-364

note of accessory barite

Bsda  
type calc.

at 44N 21E Survey Station  
(~~Chain Post~~)

87.2  
82 →

large trench - hb-rich  
Bethlehem

WM-69-365

Barite/mal along fractures  
w. chlorite

epidote? on fractures

local sericite fs altn may

be indicated by yellowish fs

mpc-rich  
patches  
of 5076  
Favos

POT 'N  
DRAWER FOR  
BENCHREST SHOWING.

Going south along the main road

87-3 etc of rock w. a few coarse porph.  
hb xls and biotite books which  
has rel. equant (subhedral) qtz.

This is apparently a contemporaneous (?) Bethesda? or

WM-69-366

Hb-Bio Rich  
Bsda  
+ Bsda

Bornite in chlor. fracts.

The rock is apparently intermediate  
between Bethlehem + Bethesda

87-4 S. end of swamp

etc is of intermediate character.

Magics chloritized.

87-5 etc is border phase Bethesda

w. occasional coarse hb + sl.

more common fine hb needles.

WM-69-367

Bsda

87-6 Trench & slip NW from the road

The rock is more closely affiliated  
with Bethlehem than Bethesda. The qtz  
is rel. fine + big porph hb's are  
scattered about.

WM-69-368

Bsda?

78  
88-1 a small well w. a slash left of  
the rd then an o/c alongside  
the rd.

poik hb + mostly anhedral  
gtz. (but some sub.)

Intermediate phase

WM-69-368

88-2 a small swamp  
o/c in int. phase but  
close to Bethesda

WM-69-369

(4N 26E IP str)

Bsda

88-3 Intersection - road splits a bit  
Bethsada?

some hb but not large

well-shaped gtz

big. brittle books

WM-69-370

Bsda

WM-69-368

Back to another major road  
which takes off ~~the~~ westward

Top of steep hill - trench

88-4 almost Bethesda but hb  
& some K's etc

WM-89-371

Bsda

S. Seas visit, Rock sorting

Aug 22/69

Mineral Mtn Aug 23/69

89-1

line F + 3E

just across the creek

Agglomerate with cobble-

to boulder - size frags.

Gray color. Frags - porphyritic

with bi hb fs.

aligned needles

89-2 Gently dipping northward

15° s. conchoidal gray and white

line F + 830E

89-3 Similar rock w. partly

xt lined vesicles - gtz.

line F, 1020E

sporadic o7c for

next 200'

89-4 065/15NW  
similar rock

89-5 F+ 26E same rock  
↓  
29

89-6 F+ 46E ~~small~~ large of north  
a few hundred ft of the line

89-7 pink wtrg & bi (chloritized) fs  
porphyry. Magnetite (hematite) prom.  
accessory.

line F, 5050 E

WM-69-372

Crowded Qtz Poor Magc Plag Ppy

89-8 Hb brq version of 372

Hb w. sieve texture.

WM-69-373

Qtz Poor  
Magc Plag Ppy  
posts also.

line F, 5930 E claim

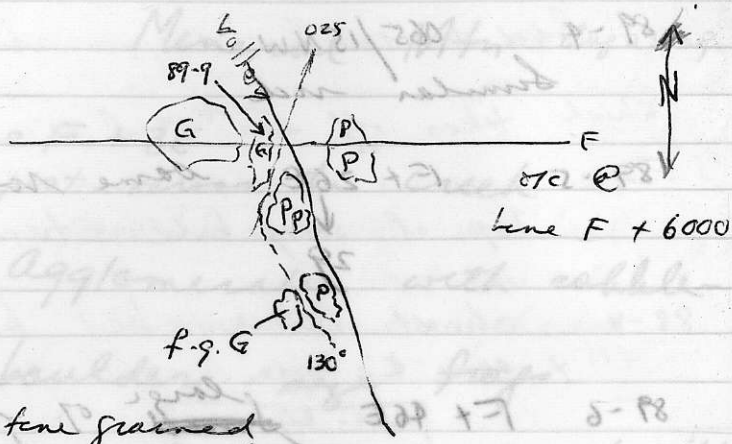
WM-90-375

89-9 F.g. gneiss - thru a valley

sta line F, 6000 E

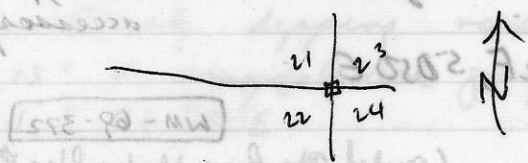


S. 3000 east, Rock valley Aug 22/29



fine grained  
gneiss

walked line to  
Claim post JO 21 22 23 24



Head south

pace 40 Bag

pace 60 by Gneiss etc ✓

75  
WM-69-375

second sample  
is CI 45 Hb  
Diorite

90-2 110-120

fq Guichon ✓

Type Collen.

WM-69-376

90-3 400

Small witches Brook etc

WM-69-377

same as 376

90-4 475-550

fq qtz poor fs porph.

WM-69-378

etc trends 020 ✓ fq Guichon

90-5 525

probably Guichon

WM-69-379

fq Gu-propylitic  
alt (1-2)

90-6 550

" "

↓

600

Guichon

WM-69-380

fq Guichon.

The line - line C

— Luvet —

Following line C westward  
Survey Stn 298-L

Guichon

90-7

Survey  
Stn 1701E

Agate Andesite

5th  
1701A 91-1 Still gray shale,  
steep slope

sta Red → gray matrix  
91-2 pebble → cobble agglomerate  
1701M Flat area

— Further along  
Climb post  
Erial 39/40  
Inceal 41/42

352  
Climb post

320

↓

600  
Climb post

The line - line

Following line

Station 278-279

Climb post

Station 1701  
Climb post

12M +  
if - ...  
8/25/69

Aug 24/69

# Rock Sorting Expense Account

DIKES CLASSIFIED - see p 90  
old note book (ie H. V. Notes  
1969 # 1).

WM-89-381

Continued at ...  
...

...  
WM-89-382

...  
WM-89-383

...  
WM-89-384

...  
WM-89-384

WJM &

A. Sutherland-Brown

Aug 25/69

Zenith Ground

91-1 at the corner

The rock has med. well-  
formed grt hb phenos + G.

WM-69-381

Contaminated Bethesda?  
ch. ser. Bsda

91-2 float? still border phase

WM-69-382

lost

91-3 Bethlehem taln 000/85W  
on line 36 E/TL

WM-69-383

Bm

Type Colln.

91-4 Classical Bethlehem

~~346~~  
160/735W

91-5 Chataway w. large hb  
phenos

WM-69-384

Mexico Cuv/  
Hydr.

91-6 Gneiss (?) Foln 000 - 040 / 80 W  
000 more common

WM-69-385 mafic Gneiss  
Type Colln.

91-7 Rather mafic gneiss

125/v pegmatitic gtz - fs  
vein 2' wide

Foln. WM-69-386  
140/steep mafic Gneiss

91-8 Hybrid - or v. mafic gneiss  
Foln swirly 120 - 140 / 80 W

Thin pegmatite veins 100/steep  
100/60 NE

WM-69-387 Biotite Brn  
mafic Gneiss

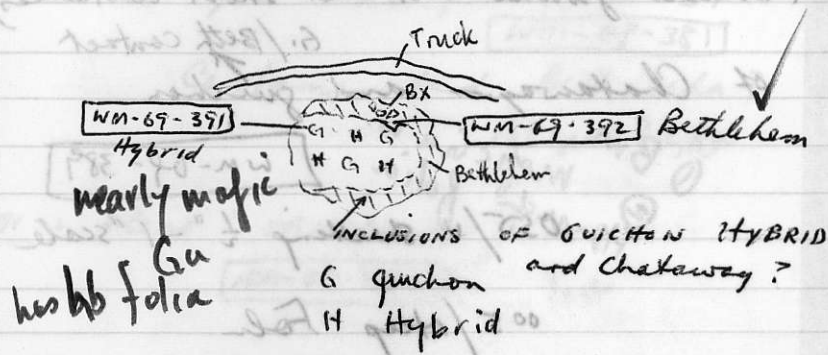
91-9 WM-69-388 155/80 W Foln  
IP 70N 4E - Hybrid - c.g.  
Hybrid - variable from f.g. Ab xls  
mafic to c.g. mafic mafic % varies considerably  
c.g. "leucocratic" (20% mafics)  
Some has bi > hb + greenish  
fs in matrix

Type Colln

Aug 25/69

f.g. gneiss foln 170/v

overlooking the road  
sheeting 040/80NW



\*the "Chataway" may represent only  
concentrations of mafics in  
the Bethlehem.

The Bethlehem seems to be a  
sheet - the dip is uncertain.



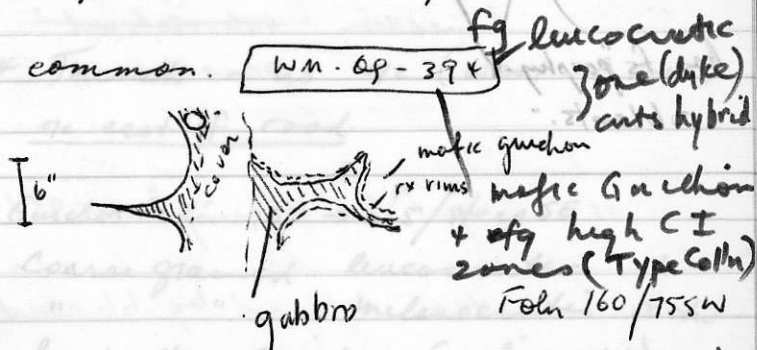
## Trenches

93-2 qtz-rich fs hb dike 3" wide  
trends 092/74 NE

WM-69-393

The rock is cg mafic-rich hybrid

and f.g. mafic-rich hybrid. Inclusions  
are common.



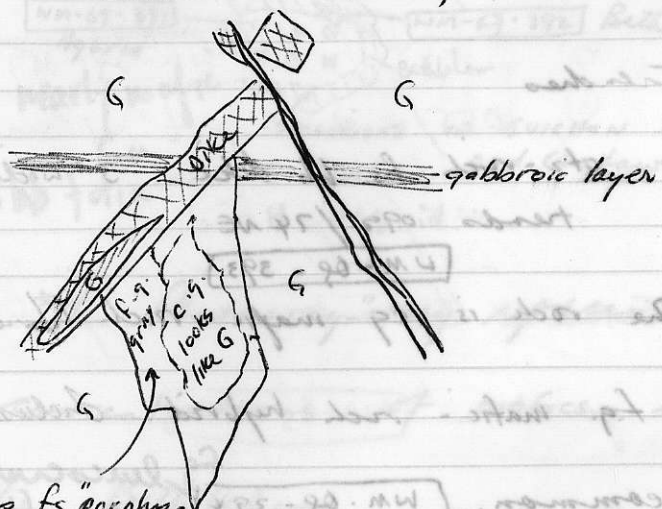
a 3" "bedded" layer trends Hybrid  
WM-69-395 145/58SW - continues for  
calc silicate hybrid zone 40'



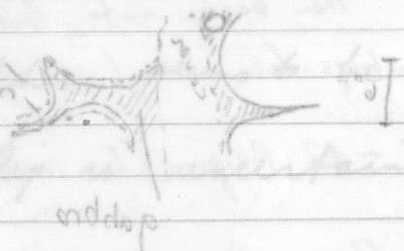
93-2 Dikes (as before) trend ~100

are cut by epidote veins (replacement-type)

Dikes cut foln, cut inclusions.



has fs "porphyroblasts."



93-2

94-1 Trenches on both sides - one small  
etc of mafic gneiss  
028/v foln.

94-2 f.g. brown dike

WM-69-396

in dyke box

94-3 Mafic gneiss w. magnetite - bi.  
clots

foln 015/v lin'g plunges 75°S

WM-69-397

94-4 Trench - no etc (west of road)  
etc east of road

Guichon Foln 037 → 025/steep SE

Coarse grained leucocratic +

" " melanocratic rock

first, then guichon (mafic-rich)

Sp Qtz Hb Swartz

chloritic Hb Plag Rock

WM-69-398

altered  
Guichon

Type Colln.

95-1 Glaciated or  
foln 005/steep.  
e.g. mafic gneiss

WM-69-399 mafic gneiss → Hybrid  
Biotite.

95-2 The outcrops is c.g.  
gneiss with layers +  
patches of hb-needle porphyry

This is probably a ~~gneiss~~ and  
could have been a Nicola  
dike? or a sedimentary or volc. rock

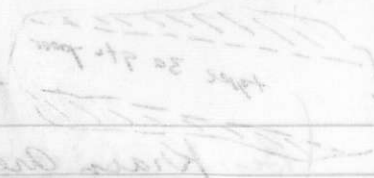
WM-69-400 HYBRID (Type  
Colln)  
foln out of the complex

Zone 015/70 NW (good)  
lineation - ~~sub-vertical?~~  
- parallel to the dip

at one spot the "layering" is 095/70 NE

Lineation defined by hb needles

Possibly a forced-up tuff/lava succession.



193.  
A 27  
W.M.  
Hand

Green River

of - rock pits  
porphyry

quartz



covered porphyry



change. pt

Further south

022/22N/11E  
200

042/step in



Truck

21 paces N 20 E from the truck

#pts of paper porphyry  
v. class A 3M zone  
2th 25003M/010

collected over to an  
outcropment - quartz

W.M. - (101) - (101) - (101)

W.M. - 69 - 402 - 101

9-124 etc - 3 samples

The rock has hb hybrid with monzonite zones which have hb needles up to  $\frac{1}{2}$ " long. The hybrid as cut by dykes similar to the monz but without hb needles. The rock is layered in places w. hrb/monz with needles interlayered. Needles are aligned at contacts but not in centres of monz layers.

Are we looking at a contamination rx or immiscible acid + basic magmas or what.

note Hb-rich clots occur locally + hb in hybrid conc @ monz contacts locally.

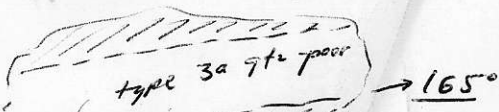
Station 69 - 388

Aplite cuts aplite which cuts gtz - ep fracture.

CR is hybrid with local coarse hornblende segregations.

2P

WJM  
A S Brown  
Holl  
Aug 26/69



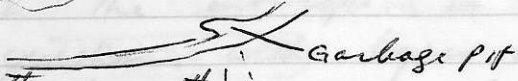
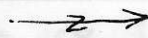
Krain Area

qtz-rich hbfs now porphyry

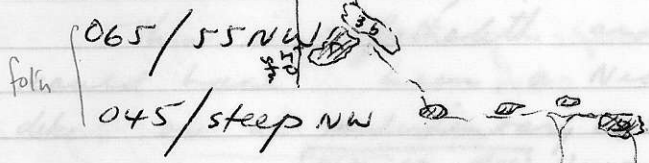
D1



28/9/70  
now D2 or B3 → D1



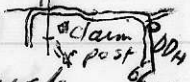
Further south  
Guichon



foln

under by  
vicarines?

Truck



21 paces N S E from the truck. 66-

± qtz hb kspar porphyry  
v. close to 3W line  
Sta 52 N 3W

ambled over to an  
outcropment - Guichon

WM-69-401 lost

Possibly a quartzite hill/low succession

moving 340°

Fractures 125/33SW

crossed a small stream

near stn 36N 4W

Gurchoon

road + old claim post

SE 5496 KRAIN

also IP 40N 3W nearby

Following line 40N back west

Gurchoon - points

100/48NE

102/23SW

143/31SW

010/60NW

east side  
of Canyon

Porphyry visible - type 36(?) but  
no epidote or pyrite.

No gte seen.

WM-69-402 | lost



Beside the Dam

north

qtz-rich Porphyry (36) in contact  
w. gneiss

qtz-poor porphyry chilled

against the qtz-rich one

qtz poor  
pyritic, epid. crowded ppy  
chilled margin

WM-69-403 (inside the body)  
WM-69-404 (chilled margin)

Lunch

Follow 18 line 20N.

Top of valley in porphyry

Porphyry - qtz-poor 3a type

into gneiss

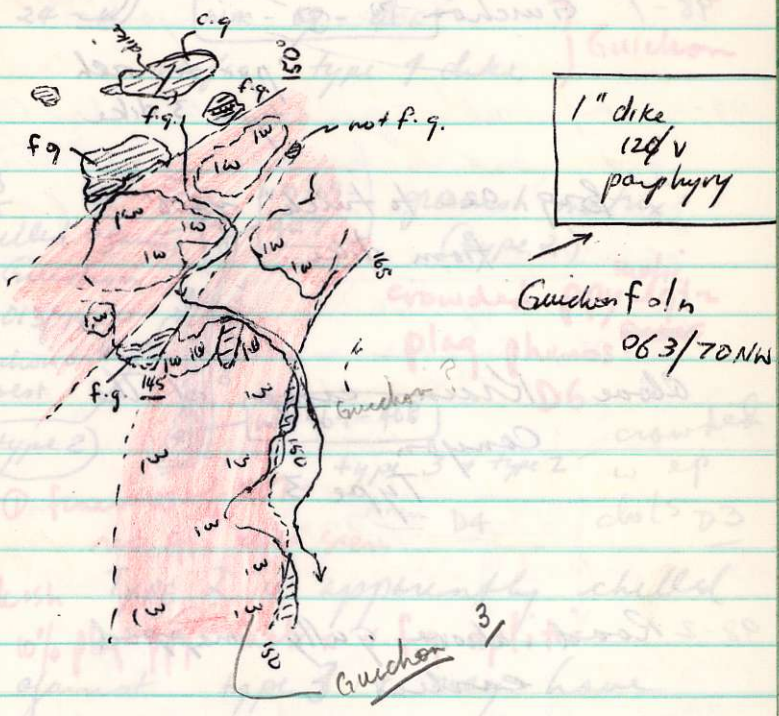
Chrysocolla - in shear 3-8"  
wide  
160/755W

Further along

46 needles 357/30

(in plane 160/80NE)

Dike/Guichon contact ~150°



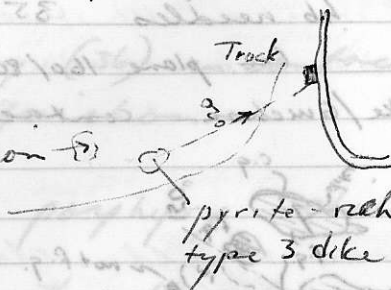
Following the ck.

Guichon 5 of ck

at 16N 6W

Gulley Swings near road

98-1 Guichon



Brq 020 to truck ~200'  
from dike

Above Krain camp at the  
Canyon  
Type 3

98-2 Road above gully mapped  
earlier

Guichon cut by magi  
dike trending 045/V

WM-69-405

Hybrid inclusion?

The dike further along is a

mafic type 1.

Sta 24-K

WM-69-406

mafic type 1 dike

Guichon

98-3

chilled against  
Guichon  
D13/73 NW  
Guichon on the  
west

type 2



WM-69-407

greenish matrix  
(type 2)

crowded ppy <sup>mafic</sup> qtz  
plag phenos ~~pm~~

D6

WM-69-408

+ type 3 + type 2

crowded  
w ep  
dots D3

① finer vs of 407-

no qtz eyes seen

② pinkish TYPE 2 is apparently chilled  
mafic 10% plag ppy - matrix v.f.g. aplitic  
against type 3 & may have

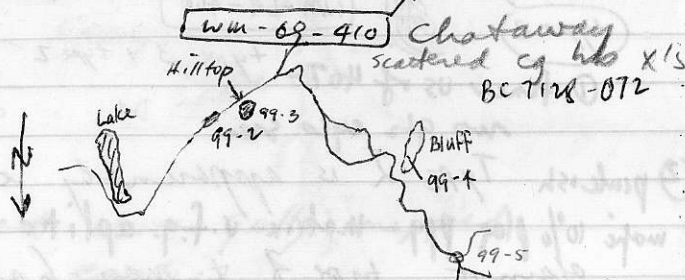
xenoliths of 3

Feb/78

Sheba Area

99-1 etc of Bethlehem g-d.  
WM-69-409 Scruffy Basish Gneiss  
(poor)  
mat. on joints

99-2 mg rel.  $\equiv$  granit. Bethlehem (?)  
g.d. cut by dikes with sharply  
gradul uneven borders (1' wide)  
of "f.g. Bethlehem" in the dike with  
phenos of hb + finer mafics  
in the matrix. The Bethlehem is  
foliated \*does not have a typical texture



99-3 Chataway cut by dikes  
of "f.g. Bethlehem" and heroy???

Type Colln  $\phi$  WM-69-411 3 samples  
Chataway with finer grained  
zones

87/009

99-4 Bluff etc of mg hb g.d. with rounded m-cg qtz.

Dike affiliation?

WM-69-412

fg Guichon - chat. overtones

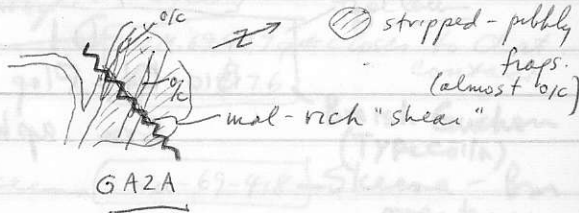
99-<sup>5</sup> The Gaza showing

malachite stain is extensive in northern <sup>easterly</sup> trending "shears" and along joints. The C.R. is pink - altered Chataway cut by hb porphyry (bi-hb-g-d) dikes (?)

cg chat.

WM-69-413

(lum. fr.) Hb needle British Guichon



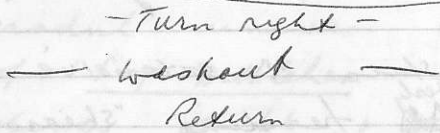
Feb/78

Feb/78

100-1 Pit to the south of the rd.  
C.R. foliated quartz chataway (looks like guichon at first glance)  
cut by rel. gt= poor hb bi fs dikes

type WN-69-414 British Guichon  
+ Chataway

These + subsequent locations plotted on Sheba Map



100-2 Trench  
"P3 porphyry" - fs gt= eye porphyry  
(c.g) cuts ~~guichon~~ <sup>chataway</sup> q.d.  
Sheba mapped chataway as guichon

WN-69-415 c9 Chataway  
D1

Bio Qtz Plap Ppy  
brn aphen. matrix

WN-69-411

Missed a turnoff

100-3 C.g. skeena (Bethlehem)

poik. hb phenos

Type Colln

WM-69-416

Bm - nearly Skeena  
or vice versa



Photo #7128-069

100-4 Sheba Map

"interesting etc"

The F.g. Bethlehem, with scattered

Bmish Guichon cut by gtz eyes  
aplite stringers

Type Colln

WM-69-417

← closer to Chat.  
contact

4176

Bmish Guichon  
(Type Colln)

100-5 Skeena

WM-69-418

Skeena - Bm  
overtones

100-6

Samples given

#5 Type Colln  
diss.

4. Guichon

5. Chat.

WM-69-419-1

1. alt. Gu - bn

2. Guichon

3. Gu + aplite

lots of gtz, epidote, aplite veins



Sept 1/69

## Valley Copper

all morning in the adit -  
shot off a roll of film (#8)

Afternoon -  
various types of dike in the core  
then looked at Arlington holes.

AAL 1 Agglomerate - tuffaceous  
matrix (not abundant)

Frag - hb qtz porphyry  
                        euhedral  $\beta$ qtz

- hb fs porphyry

plutonic - qtz - fs m.g. rock

volc - hb qtz fs porph. (purpleish)

volc - red lg frags

volc - aphanitic green frags

326 sample - dk green volcan. - clastic  
sediment (?) frag.

ARL 69-2 Throughout the hole  
~~102 426~~

The rock is granitic. It looks like Bethesda in some places but border phase Beths. or Skeena in others (esp. 426<sup>2</sup>)

qtz is only moderately well-formed  
 biotite books occur but there are also <sup>fine</sup> mafic in the matrix.

F. 9. Volcanic rock qtz bb fs rock, are 69-3 Where present bb needle-align-  
 ment is subparallel to core & color bands are about  $20^\circ$  <sup>to  $30^\circ$</sup>  to the core  
 by 90' the  $\alpha$  is  $\sim 40^\circ$

158' a bit swirly but still steep

layers at  $60^\circ$  to core  
 "mud" layer at  $70^\circ$  to core

in the same spec the ~~bb~~ mafic needles seem to be nearly parallel to the core

101  
Arl 69-3 475' layering at  
30° to core, f.g. layer cuts  
it at 80° to core

In nearby core the mud zones  
contain c.r. frags. they look like  
soft sed. consolidn features.

near the end (502') of the  
hole the color-bands, mafic  
alignment layering is at ~45°  
to the core.

---

Arl 69-4 the first bedrock is  
border phase (c.g.) skeena.

85 → 150

↑  
sheared, gangy rock.

131-132 pink qtz-eye aplite

158 onward biotite bands appear  
- qtz is rel. well formed  
Border phase Bethesda

to the end although local  
areas in between look  
like Skeena.

Core 69-5 Volcanic bi fs (qtz?) fuff(?)

97 mafic needles parallel to core  
muddy zones @  $70^\circ$  to core

320' mafic + layers  $50^\circ$  to core

430 Layering  $40^\circ$  to core

Local muddy zones

800 Color layering  $40^\circ$  to core

Abund. fs xls up to  $\frac{1}{4}$ "  $\phi$

-some are broken.

1000 Color bands form basin - some  
structures  
textures on the core -  
cut off by high 4 layers

0 to  $40^\circ$  to core

1178 end of hole - the layers  
are now only  $10^\circ$  to the core

Underground at South Hill

Holes - topographic map

Process

Brown A. ...

← END OF SEASON →

in ...

... ..

... ..

... ..

... ..

... ..

... ..

Sept 3/69

Underground at South Sea

Notes - tape recorder Tape 2.

Samples Breccia

Brown fs porphyry

On surface

Trenches visited

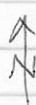
Bm fs porphyry N-trending

visited area w. Guichon +

Bx on one side, Kamloops

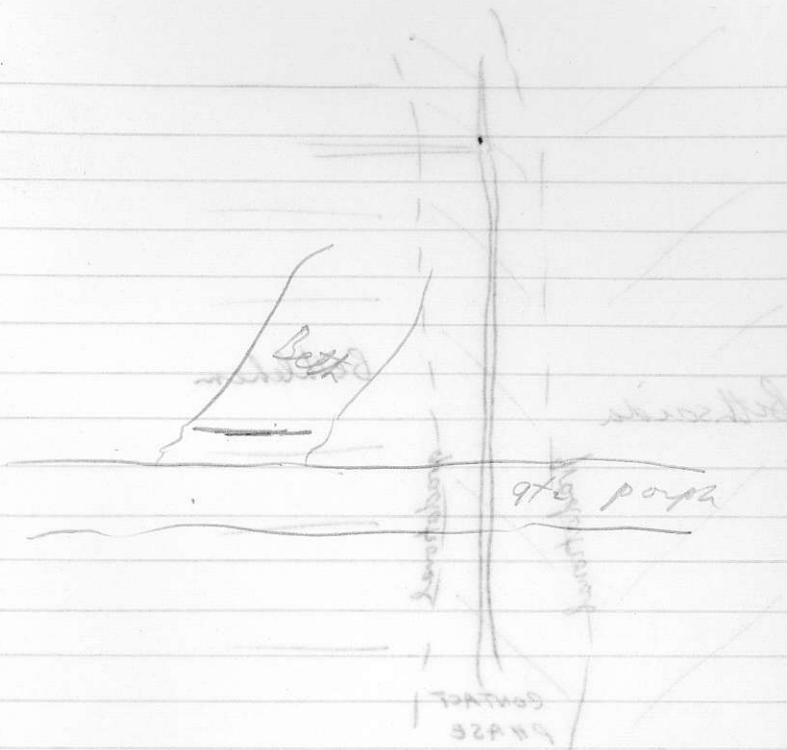
on the other.

Rhyolite (?) sampled

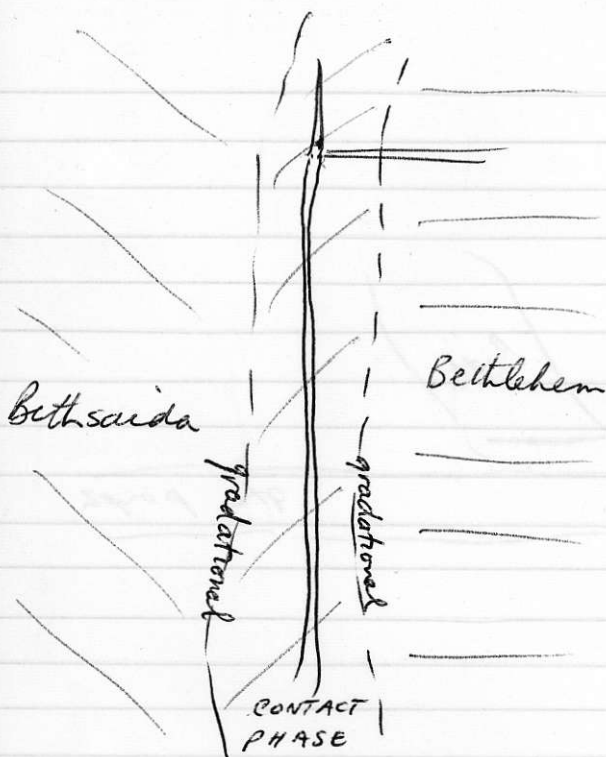


rhyolite (?) +  
sheared guichon

— END OF SEASON —







Valley Forge

Syd Allen Foreman

Paul Ropp ) Geol.  
Anthony Deery )

Box 564

Ashcroft

Combination

10 2rt

0 2lft

14 1nt