

104M/15
CATFISH

810986

G ERALD'S

NOTES

FOR

- MARCH 16/89 - APR 22/89

80 55
100 X

I like to make road / Glen

June 19/89

①

Starting from huge boulder

High
Height
Road

Heading 041°

road - old
on high

180 paces = 225m = 4.5cm

Heading 030°

H.A.

182 paces = 225m = 4.5cm

Head 040°

55 paces = 65m = 1.3cm

Head. 025°

paces = 75 90m = 1.8 cm

Head 02°

35 paces = 45m = 0.9cm

Head → 032°

43 paces = 55m = 1.1cm

Head → 030°

85 paces = 100m = 2cm

FIELD

(2)

Head 036° =

125 paces = 155m = 3.1cm

Head 034° =

42 paces = 50m = 1cm

Head 034°

237 paces = 295m = 5.9cm

Head, 036° →

325 paces = 400m = 8cm

Had Luneta here 12:20 PM.

$\frac{2}{100} = \frac{x}{88}$

with Glen
Soil Sampling

(3)
June 19/89

Hiked 650m up snowbank to end of
chain boundary. 540 paces.

S100° B layer approx 3cm

From S100, I took a bearing of 144°
toward the lowlying outcrop near
the opposite edge of the snowbank.
The outcrop was moderately fractured
light to pascaceous in color.

Heading at 018° from S100. 1270m

S101° "A" ≈ 6cm

"B" ≈ 1cm or less.

100m

back sight from
camp 239°

Heading at 027° from S101.

88m travelled only due to snowbank
100m would be in it. 1260m

S102° "A" ≈ 3cm

"B" ≈ 5cm but varying due to

"C" layer changing in position
back sight from camp 247°

Heading at 360°

Sample 103: found at boundary 1275m
between vegetation and scree back sight
from 257°

minimum "A" layer $\hat{=}$ 1cm travelled 93m

"B" $\hat{=}$ 3cm

* Note: "B" layer could be combined
with or else is the "C" layer
because of a large amount of sand
present

★ Also found near sample site was
a "granite" which appears to
have a metallic mineral evident on
the surface. Gold colored, possibly
pyrite or pyrrhotite but does not
seem to be magnetic. Maybe even
GOLD! HA! HA!

Heading at 040° from S103

travelled 100m to S104 1265m
stern near row of bushes running
towards bottom of valley.

"A" $\hat{=}$ 12cm

back sight from camp

"B" $\hat{=}$ 6cm

264°

Lunch at 12:25 P.M.

(5)

Heading at 028° travelled 105m

"A" $\hat{=}$ 3cm

S 105° "B" $\hat{=}$ 4cm but has been moved
with "C" 1280 m back sight from
camp 278°

Heading at 044°

S 106° $\hat{=}$ 1cm "A"
 $\hat{=}$ 12cm "B"

1270 m

back sight from
camp 297°

Note the thick "B" humus layer
structurally it may not be this
thick but it may be combined
with the "C" layer, as there were
pebbles visible with gr. size ranging
from 4mm to 8mm.

Heading at 077°

elev 1245

S 107° "A" $<$ 1cm

"B" $\hat{=}$ 8cm

STUHN GROUP ROCKS:

- variegated lapilli + ash tuffs
- cobble + boulder conglomerates
- pyrobre - porphyry - pyroclastics
- ashes, scoria + conglomerates
- pyroclastics overlain by Rhyolite Feldspar
porphyry breccias + tuffs.

June 20 Roy, Jim, Gerald

7
1 of 1

Mapping Claim 10

Outcrop 1

- probably a slate due to black color, splanatic beds bedding plane, facily
- conchoidal fracture
- shows evidence of finely disseminated pyrite.
- slight iron staining traces of malachite.

Sample #15701

68° 196°

80° 186°

70° 190°

on a map

Outcrop 2 - diagram on forwarding page.

small 2m center mafic stuff
med. - dark grey

E

W



(8)

25m

30m

45m

not want to show it about Fe stain



synclastic / fold
Sediment / Tuff

Mafic
Trap

1/2
5
1/2
1/2
1/2

Mafic outcrop is on south side of creek.
Heading up creek.

→ Med grey tuff similar to previous page

→ pyroclastic mafic breccia with
more felsic angular clasts to
20% ranging from coarse
sp. to 9 in.
the unit is slightly to med.
rust stained. Highly fractured

044°/024° ?

SAMPLE # 15702

Towards the W the breccia
turns to mafic tuff

SAMPLE # 15703

medium brown/green tuff with
potassic/chloride weathering

(10)
SAMPLE # 15704
diabase porphyry

orientation of contact $65^{\circ}/342^{\circ}$

(3) SAMPLE # 15705

elev 1425m

contains limonite eg. yellow-red
orange

SAMPLE # 15706

dark grey brown tuff
3% m to coarse gr. feldspar
porphyroblasts in an aphanitic
matrix

- weathers to a brown color
- no microlitization evident

(11)

GERALD/JIM/ RON

50m = 1cm 25m = 0.5
13m = 1.5cm 13m = 0.25cm
June 2/89

Mappings N side of south mountain.

$$\frac{81}{100} = \frac{13}{x}$$

$$\begin{array}{r} 80 \cancel{1} / 100 \\ 100 \\ \hline 100 \\ 80 \\ \hline 200 \end{array}$$

21m long is outcrop

38 paces from #2 to #7 at 85°
= 48m

$$\begin{array}{r} 21 \overline{) 2.3} \\ 42 \\ \hline 80 \end{array}$$

headings 71/105

0.754

5108 collected at 1380m

$$\begin{array}{r} 108 \overline{) 81} \\ 108 \\ \hline 1508 \end{array}$$

0.754

$$\begin{array}{r} 1.5 \\ 13770 \end{array}$$

7540

11310

~~5109~~ collected at 1360m

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FIELD

Gend / Pen

June 22/89

SOIL SAMPLING

We had doubted that sample
 S100 had been correctly located
 but the outcrop was misplaced
 instead. S100 was 25m too low
 so it was moved up.

elev for S100 1270m

S110 "A" horizon \approx 4cm

elevat. 1305m "B" horizon \approx 7cm

although some pebbles have
 been mixed with "B".

S111 ✓ "A" horizon \approx 3cm

1335m "B" horizon \approx 3cm

located \approx N of depression with
 boulder in it

Heading at 245°

S1121372m

minimal 'B' horizon 21cm
 had a lot of vegetation roots
 in the sample. Also, 'C'
 horizon looks intermixed with
 'B' as a result pebbles may
 be in sample

- 110m logged on top of
- 95 paces tramped uphill on
 quite a steep grade from
 S111
- 'A' horizon is of great majority
 $\approx 15cm$

S1131380m

no 'B' horizon evident
 Sample taken is a mixture
 of 'A' + 'C'. A mixture
 was taken because the 'C'
 horizon was too pebbly.

backlight from camp. 235°

S114

backlight from camp 235°

1330m

mineral 'B' lonzon ≈ 1cm
but it has the typical
'B' lonzon texture (beige, sandy)
'A' lonzon ≈ 6cm

- original part of vegetation in
the sample.

- 6m up slope from arsenopyrite vein

S115

located approx 10m NE
(down slope) of oddit H₂O
is above camp.

1185m

1cm 'A' lonzon
4cm 'B' lonzon
much textured

182

Gerald / Por Soil Sampling Post Camp
downstream

June 23/99

S/21

minimal 'A' horizon
1125m minimal 'B' horizon < 1cm
The 'B' horizon is difficult to recognize
due to the mixture of pebbles &
cobbles just below the 'A' horizon
- moderate wetness.

* - the sample is mainly 'C' horizon
with a bit of 'B' horizon

S/22

'A' horizon 1-2cm
1185m Again, the 'B' horizon is
intermixed with 'C' horizon. The
texture of the soil is quite
appropriate → sandy, beige color part of
clayish with the exception of
cobbles among the midst of the
soil.

- Sample taken is a mixture of
'B' + 'C' horizons

S123 + S124 Kup tok

1205m

'A' horizon approx 1cm

'B' horizon = 4cm

'B' horizon is a greyish brown color

- The reason why 2 samples were taken was because the 'C' horizon was quite orange in color (maybe indicating Fe content)

- 'C' horizon sample is S123

- 'B' horizon sample is S124

- S124 may contain some 'A' as 'B' horizon is very thin.

- 'A' + 'B' horizons are quite dry.

- 'C' horizon is moderate.

S125 66m travelled from S123

1205m

'A' horizon = 3cm

'B' horizon is absent

'C' horizon was collected

The color was rusty but not as rusty as S123. Pebbles were also abundant.

Heading at 276° for S125

S126 70m travelled.

1195m

'A' horizon \approx 5cm

'B' horizon \approx 1-2cm

Although there is 1/2cm of 'B' horizon there are small pebbles intermixed with 'B' from 'C'

- Color of sample is much darker and wet as rusty as S125 indicating lesser iron concentration
- markedly dry.

S127 109m travelled

1195m

'A' horizon \approx 2cm

Again 'B' is intermixed with 'C' giving is a more rusty color than previous sample 'B' horizon may be approx. 2cm also.

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(18)

S128

81m travelled

1195m

Samples taken from a

dried out creek bed on
a very steep slope

'A' horizon \approx 2cm

'B' horizon narrowing from
2-4 cm in depth

Again pebbles from 'C' horizon
are intermixed with 'B' horizon

- moderately wet

- sandy beige color.

S129

travelled 86m

1203m

'A' horizon quite thick \approx 15cm

'B' horizon \approx 1-2cm

abundance of vegetation in 'A' horizon

- color of 'B' horizon is dark

sandy beige

- moderately wet.

Gerold/Sim went to Whitehorse to pick
up supplies. June 24/89

June 25/89

Gerald Soil Sampling South Mountain
(north side)

S142 'A' horizon $\hat{=}$ 2cm
'B' horizon $\hat{=}$ 4cm

- nice profile ex. sandy large rd. clon
- minimum amt of pebbles.
- located at approx 1180m
- moderately dry.
- backbearing from \odot camp \rightarrow 216 $^{\circ}$
S100 \rightarrow 070 $^{\circ}$
S107 \rightarrow 182 $^{\circ}$

Heading at 083 $^{\circ}$ from S142

S143 62m travelled

B.B from \odot camp \rightarrow 196 $^{\circ}$
S107 \rightarrow 165 $^{\circ}$

- 'A' horizon $\hat{=}$ 5cm quite humic
absence of vegetation
- * - 'B' horizon is completely absent
- 'C' horizon was taken for sample it
included dark grey to black pebbles mixed
in with some 'A' horizon.

Heading at 086 $^{\circ}$ from S143

S144

B.B.

to ° camp → 181°
S101 → 154°

45m travelled.

minimal 'A' horizon < 1cm

- 'B' horizon appears to be intermixed with 'C' as a boundary between them is hard to distinguish
- sample taken had a small amount of pebbles in it
- color of sample was a bit darker than S143

Heading at 076° from S144

BB from ° camp → 160°
S100 → 080°
S101 → 143°

S145

'A' horizon nearly absent

'B' horizon ≈ 1-2cm but appears intermixed with 'C' due to the small pebbles that are deposited in the 'B' layer. Sample is probably a combo of B+C but mostly 'B'

Heading at 44°

(21)

S146

BB from camp $\rightarrow 152^\circ$
S107 $\rightarrow 142^\circ$

A horizon appears absent

- B horizon is quite pebbly
or very coarse sand
- Again it may be combined
with C horizon
- mod. dry

Heading at 012°

S147

BB to camp 143°
S107 133°

A horizon = 3cm

B horizon = 2cm

deposited in the B horizon are
pebbles ranging in size

- sample was very wet when collected
- had a light beige color to it.
- collected about 20m down from
an outcrop that is directly below
camp.

Heading at 35°

S148 'A' horizon \approx 8cm

'B' horizon \approx 5cm

- moderate to very wet
 - minimum amount of pebbles
 - more clayist than sandy
 - light brown color
 - moderate amt of vegetation in 'B'
- BB from camp \rightarrow 124°

Heading at 41°

S149 'A' horizon \approx 2cm

'B' horizon \approx 6cm

55m

Travelled

- minimum amount of pebbles
- good color \rightarrow medium brown
- moderately wet
- this sample is more sandy than clayist as opposed to the previous sample (S148)

BB to camp \rightarrow 106°

Heading at 54°

S150'A' horizon \approx 3cm'B' horizon \approx 6cm

- Due to the abundance of pebbles + the 'B' horizon, both 'B' + 'C' horizon may be intermixed with each other
- Sample has a more sandy texture compared to that of S148 which has a clay-like texture

Heating at 78°

S151 B₁B₂ from Comp \rightarrow 096°'A' horizon \approx 2cm

★ 'B' horizon is absent

- Cobbles are evident directly beneath 'A' horizon
- The 'B' horizon may also be intermixed with 'C' due to the sandy + pebbly appearance of the 'C' horizon.

S152

D.B to camp →

'A' horizon ≈ 4cm

'B' horizon ≈ 4cm

has a more sandy texture
light-med brown
moderately wet
very few pebbles visible
among the profile

June 26/81

continued soil sampling from S152

Heading at 080° S153 $\approx 100m$

travelled

'A' horizon \rightarrow very minimal'B' horizon - quite thick $\approx 10cm$ more sandy than clayey
medium to normal brownHeading at 070° S154at $070^\circ \rightarrow 77$ paces travelledat BB $153^\circ \rightarrow 28$ paces'A' horizon $\Rightarrow 6cm$

'B' horizon is quite dark

(i.e. brown to dark brown)

appears to be mixed with 'C'

due to presence of pebbles + cobbles

Overall texture is med. fine

Heading at 120°

(26)

S/55

approx 100m

travelled

'A' horizon \approx 3cm

'B' horizon \approx 5cm

'A' + 'B' horizons both have

a lot of vegetation in them

- color light to med brown
- half clayey / half sandy
- moderately wet / maybe due to rain

Heading at 174°

S/56

approx 60 paces

'A' horizon \approx 6cm

'B' horizon

very thin \approx 1cm

abundance of vegetation in

both 'A' + 'B' horizons

(e.g. roots)

pebbles directly 'B' horizon e.g. 'C' horizon

Heading at 115°

S157

approx 50 paces

sample taken because of rock exposure directly above sample location

A horizon \approx 4cm

B horizon absent

The C horizon was taken for a sample

color was a slight rusty brown that contained pebbles (mostly angular) it also had more of a sandy content.

subsampling by myself June 27/89
south mountain (east + south sides)

5158

approx. 1330 m

'A' horizon \approx 2cm

'B' horizon \approx 8cm

good profile
more sandy than clayey
small amount of pebbles
fairly dry
small amount of vegetation

Heading at 161°

5159

1325m

B.B. to bird 235°

All 'A', 'B', + 'C' horizons
seem to be polished. Boundaries
are indistinguishable. The only factor
may be a better color under
the top one. This color though
does not correlate with other 'B'
horizon colors. Color of sample is
dark brown to black.

Heading at 168°

5160

1340m

BB to level $\rightarrow 222^\circ$ 'A' horizon $\approx 4\text{cm}$ 'B' horizon $\approx 4\text{cm}$

med. brown

min. amt of pebbles, vegetation
 texture is more sandy than clayey
 fairly dry

heading at 182°

5161

1350m

BB to level 219°
 $\approx 90\text{m}$ travelled'A' horizon $\approx 4\text{cm}$ 'B' horizon $\approx 15\text{cm}$

good profile

- light brown in color
- coarse sand size grains in sample
- moderately dry
- abundance of "vegetation"

heading at 140°

S162
1330m

B.G. to brook 202°

'A' horizon ≈ 12cm

120m
travelled

'B' horizon ≈ 4cm

- moderately wet
- light to med. brown
- more sandy than clayey
- abundance of vegetation in both 'A' + 'B'
- mix out of pebbles in 'B'

Heading at 191°

S162
1370m

BB to brook 203°

'A' horizon ≈ 7cm

85m travelled

'B' horizon absent unless it is mixed with 'C' horizon

Pebbles + cobbles were abundant throughout the profile directly beneath 'A' horizon

- moderately wet

Heading at 223°

S164

1420m

B₁B₂ to profile 209°

'A' horizon ≈ 16cm

'B' horizon may be absent

boundary between 'B+C' is hard to distinguish as there are large pebbles among the sandy profile directly beneath 'A'.

- med. lignum.
- moderately wet.

heading at 217°

S165

1450m

'A' horizon ≈ 1 Foot (very deep)

'B' horizon is absent

Sample taken into 'C' horizon

- very pebbly with sizes ranging to small cobbles,
- very wet
- med. to dark brown.

heading at 210°

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S166
1490m

'A' horizon $\hat{=}$ 15cm

'B' horizon $\hat{=}$ 2cm

could be 'C' due to underlying pebbles.

medium amount of vegetation in sample.

medium amount of pebbles.

- med to dark brown in color.

Heating at 226°

S167
1525m

'A' horizon minimal 1-2cm

'B' horizon $\hat{=}$ 2cm (if that)

due to pebbles occurring directly beneath 'A' horizon

Sample is probably a combination of 'B' + 'C' horizons

moderately dry

- dark brown in color.

Heating at 336° to go back to comp.

June 28/89

continued sampling (soils) of east side of south mountain
Goal is to reach plain boundary.

Altimeter reads 1540m at last sample point (S167). Last Altitude recorded was 1525m. Today it's 15m higher.

Heading at 169°

The tape at sample (S167) was all eaten up
Sample was quite hard to find.

S168

1535m

A horizon ≈ 11cm

B horizon ≈ 6cm

- abundance of vegetation
- moderately wet
- minor pebbles observed in sampled horizon (B)
- mod. brown.

Heading at 198°

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S169

1540m

A horizon = 6cm

The boundary between B + C horizons is difficult to distinguish as

there are pebbles (quite a few) mixed in with the medium

- brown soil
- Texture is approx $\frac{1}{2}$ clay + $\frac{1}{2}$ sand
- moderately dry

Heading at 177°

S170

1520m

A horizon = 20cm

B horizon is absent

C horizon was abundant in small pebbles + vegetation

- moderately dry
- med. to dark brown

Heading at 199°

S171

1520m

'A' horizon \approx 20cm'B' horizon is absent large
cobbles are deposited directly
under 'A' horizonThe cobbles are mixed with a
 $\frac{1}{2}$ sand / $\frac{1}{2}$ clay texture.

- ~~is~~ fairly clay
- med. to dark brown

B.B. from north small 260° B.B. from south small 306°

S172

1520m

'A' horizon \approx 10cm

'B' horizon is absent

Cobbles are common in this
profile to result in the 'C'
horizon.

- The texture that is mixed with
these pebbles is more clayey
than sandy
- med brown color.

B.B. from N. small $\rightarrow 230^\circ$ suitable camp 1cm at 180° from
S172

(36)

S173

1570m

A horizon \approx 10cm

B' horizon may be absent or it may be combined with 'C'

125m travelled

because of the appearance of pebbles in the profile
(# cobbles)

- moderately dry
- med. brown

S174

1530m

No fine 'B' or 'C' horizons for 200m so I took an A horizon sample
mod. dry
black
abundance of mesolite

5175

1535m

A horizon \approx 3cmB horizon \approx 6cm

very fine texture
 minimum amt of pebbles
 a slight rusty brown color
 fairly dry

5176

A horizon \approx 20cm

- B horizon appears to be

absent but I could be wrong

- Sample taken was fine grained
 sand size particles.

- black or dark brown in color.

- moderately wet

could possibly be A horizon mixed
 with C horizon

Gard

58

July 1st / 89

after 1st elev. of it
quartz broadly large and
1345m to throught


① 15715

elevation 1345

B.A. to camp $\rightarrow 250^\circ$

" " 5107 $\rightarrow 230^\circ$

" " 5100 $\rightarrow 341^\circ$

- leucocratic (light colored)
- biotite $\approx 5\%$ basal
change evident  tubular
- plagioclase, perocrysts are in
some cases quite rounded
ranging in size up to 5mm
- plag. + Ksp $\approx 65\%$
- quartz $\approx 30\%$
- coarse grained crystalline
- some crystals are quite weathered
whereas others give a nice fresh
surface.

15716

coarse grained leucocratic
- appears to be more
fresh biotite in the sample than
in previous sample. (for fresh
surface samples only)

2 types were taken: "fresh surface"
and a weathered fresh surface

In the weathered sample the color
is π but more rusty. Also since
the abundance of biotite is absent
the rust color may be a result
from the Fe in the biotite weathering
- massive to weakly foliated.

15715 + 15716 appear to be similar
but 15716 may have but
some biotite in it.

B.B. to camp 252°
5167-230°

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15717

- massive outcrop, very weakly foliated
- streaky quartz along with round quartz.
- plag \rightarrow Kappan (2:1, maybe even 3:1)
- not as much biotite as in last sample. One thing similar to the orange weathered color. No pyrite was visible with hand lens. So rust color may be from biotite weathering.
- B. B. to camp \rightarrow 260°

15718

- coarse grained + crystalline
- no metallic minerals evident
- Mineralogy \rightarrow
 - Quartz: 30%
 - biotite: 7%
 - Kappan: 13%
 - plag: 50%
- small booklets of biotite can be seen.
- doesn't react with acid.

The granites I have seen thus far do not seem to have very much K sp. in them i.e. the "pinkish" color of granite.

P.A. to camp $\rightarrow 264^\circ$

1510 on the way to next sample there was what looked like a quartz vein except it had plag + K sp. in it. This time there was a majority of quartz. A metallic mineral.

15719

Occurring at the outcrop was a very felsic granite that is, it had very little mafic in it (biotite). Also on some samples there appeared to be metallic minerals present.

- greenish tinge was also observed
- the rock fractured in any way + did not break along cleavage planes)

Quartz $\approx 30\%$

K sp. + plag. $\approx 65\%$
biotite $\approx 3\%$

metall. $\approx 2\%$
(sulfides)

FIELD

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BB to camp → 267°

40m travelled

15720

came across a
quartzite/splite contact

The quartzite was once again
leucocratic with a near
absence of mafic
a major composition of rock
was plagioclase K-spar followed
by quartz
metallic sulfides were also
present, as in previous quartzite.

- The quartzite was quite weathered
as was the splite.

take splite out of bag. does not belong

BB to camp ≈ 272°

foliation of splite 85°/352°

July 3/89

25/5W/V

arsenopinite / quartz vein $86/098^\circ$
quite weathered dip
small outcrop 5m long 1m wide

25/35W/V?

spite with green weathering
mineralization evident in spite (arsens?)

R.B. from 25/25W/V $\rightarrow 114^\circ$

100/09W/V

arsenopinite vein, green weathering
foliation not very obvious

$68/016^\circ$

\approx 6m long up hill, 3m wide

100/17W/V

mild arseno vein not very green

$54/084^\circ$

maybe just spite not in arseno.

42
The both readings at 260° come
across another general vein
more rich in white?

It had a trend of $56^\circ/82^\circ$
I decided it was same vein
as 100/17W/V although
there appears to be some
white between the two.
did not take the sample.

100/35W/V?

$50^\circ/64^\circ$

could possibly be same vein
all of the could be one
big vein? did not
take sample.

78
85

Description

100/007E/H

15445

✓ PPM - metamorphic
- weakly banded

- v. fine grained
microalogy: 20% chlorite
5% quartzofeldspathic layers
75% argillite clayst slts

metamorphosed, silty argillite

25/50W/I - aplitic

✓ 2% quartz phenocrysts - up to 1mm
- 5% calcite

15428

- hairline fractures
- speckled, darker than most aplites

✓ 25/55W/H - metamorphic

- calcite veins
- light grey/white color
- very finely banded (1mm scale)
- sedimentary protolith

15427

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25/25W/I

- light to rusty beige
- has been stored slightly

15430

- very few nodules < 1cm
- weathers to a rusty orange
- sugary texture
- rhyolite

100/17W/U

- arseno. occurs with
the rhyolite in veins (3mm)
or splatichs

15441

- weathers/color → pistachio to
emerald green.
- fresh color →
- occasional quartz phenocrysts up to
2mm
- arseno. occurs in euhedral + subhedral
forms.
- baritic rhy. veins.

25/5W/V

- arseno vein
- occurs in fine grained
subhedral chunks

15431

- quartz is associated
- weathers in a variety of greys
- rest of rock is a n.t. grained
crystalline texture.

25/35 NW/I - white

15429

- very finely crystalline
- 5% ankers phenocrysts which are euhedral (some secular some blocky)
- weathers to a light rusty orange color
- fresh color (off white)

100/25W/I - white

15448

- fresh color → off white
- weathers to a rusty orange, and also to a light green.
- 2% ankers phenocrysts (euhedral)
- laminae fractures.
- minor glass of pyrite.

$$\begin{array}{r} 260 \\ 90 \\ \hline 350 \end{array}$$

$$\begin{array}{r} 260 \\ 50 \\ \hline 210 \end{array}$$

R. D. PENHALL LTD. MADE IN VANCOUVER, CANADA DUKEBAK WATERPROOF

100/9NW/V - arsenopyrite vein
with quartz.

- 15446 - arsenic occurs in blocks and in veins.
- arsenic in N.F. preserved
- weathers to a pistachio green color.

100/52W/H - weakly folded quartz-
feldspathic / argillite layers

- 15450 - Dark gray green
- metamorphic protolith
- Abiotic alteration.
- PPM
- may have preserved
- metamorphosed silty argillite
- weathers to a dark rusty brown.

100/25W/I - split with euhedral
arsenic arsenopyrite most of
which are acicular.

- 15448 - fresh color ranging from white to med gray/gray.
- weathered color is dark rusty brown.

- very finely crystalline.
- 4-7% phenocrysts.

100/50W/I

15449

- very finely crystalline spots
- fresh color - light beige to pale pistachio green.
- 7% euhedral apertic phenocrysts
- weathers to a dark rusty brown.
- parallel fracture planes

July 4/89

Continued Grid Sampling vein
see map!

165/10E/H

68°/205° foliation

quartz veins, was evident ^{50%} in
strong quartz/feldspathic lamellae
more visible 50% of rock.

Upper addit in vein located at
185/10W/I

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175/37W/V (50)

small vein with wall out of
Asp matrix in it

- 2m wide 10m long (uphill)

2 possible foliations: ① $58^\circ/18^\circ$

② $66^\circ/087^\circ$

→ nearly parallel to adjacent
split

- green weathering

- occurs in small blocks.

★ double checked on vein
helping me about 8m + the
strike was 86°

Description

165/10E/H - PPM

15469

- quartz veining evident
- strong quartzolitic lamellae were evident in 50% of rock.
- minor chlorite alteration
- very fine grained to micro-crystalline.
- white grey, to green grey in fresh color.
- bright siliceous s.s.

175/37W

- vein with about 3% arsenic in it.

15467

- may just be an arsenic-rich apatite.
- weathers smoky green
- arsenic occurs small blebs
- fine grained.

175/55W/H - PPM

15465

- fresh color → green grey
- weathered color → light to rusty brown
- 2% metallic (pyrite)
- very fine grained

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minor blebs of quartz

175/51W/I - ^{at} white

15466

- weathered color, rusty brown
- fresh color, off white
- lamproic quartz
inclusions < 1 mm wide
throughout sample
- very fine grained
- minor arsenic blebs
scattered throughout

175/25W/I - white

15468

- weathered color - light rusty brown
- fresh color - off white with
dark speckles
- very finely crystalline
- 5-7% arsenic plerite's
artificial

July 6/89

Sunny Tochar

Mapping South side middle ridge with Jim

elev 1345m location → just east of
Sloan zone

15419 - 15420 micro vein, Sloan zone
Backsight from camp → 290°

The lower end of the Sloan trends
at $\approx 013^\circ$ until it is jointed
then eroded for about 25m. it
then continues trending at $\approx 019^\circ$
cross cutting a number of joints
and eroding at several locations.
The spec. appears to continue to
the top of mountain. From our
position at the end of the lower
sloan, the sloan appears to veer
off to the north. This is often is
continuous at 019° .

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15721 - sample taken was
white, highly sheared pit
about end of lower shear zone
weathered color → very rusty brown.

- area that sample was taken was very pibbly (ie very sheared)
- occurred in clumps, not blocks.

15722 - med to dark grey volcanic
tuff / flow

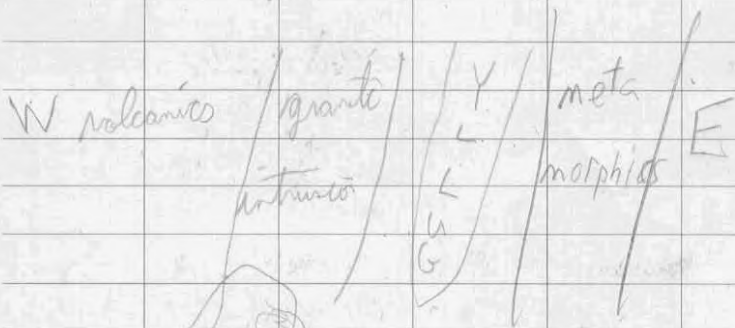
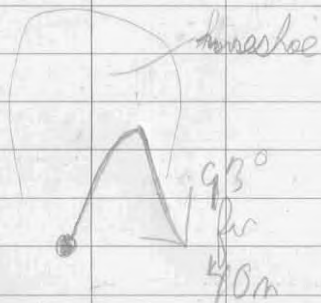
- microcrystalline
- very fractured in fractures is < 1% pyrite, chalcocyanite
- slate / sulfides in karline fractures
- weathers to a very dark rusty brown.

- sample taken on west side of lower sc
approx 20m N of our position

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DUKESEAK WATERPROOF

Heading 093° for ~40m.

No contact (possible) was found for the metamorphic + volcanic units. A quartzite intrusion has come up in between the metamorphics + the volcanics.



soft greenish rock maybe actinolite?

15723

sample taken for petrographic analysis

(71)

- greenish rock with acicular crystals
- fairly soft
- hardness \approx 5
- fine grained

(72)

Heading at 084° 20m
ppm

(73)

Heading at 181° for 35m

(76)

15724

ore zone near
with quartz
approx 1m wide

direction of \bullet S107, seen found it first

tracing $090^\circ/045^\circ$

micropyrite content ranging from 0-30%

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DUPLICATE WATERPROOF

Sunny Today

July 7/89

Continued mapping south side of middle ridge, east of oxidized zone.

76
cont'd

Just below sample 15724 is a mica-quartz-feldspar schist.

15725

- very fine grained
- very finely laminated
- < 1% pyrite
- light gray to medium brown grey
- weathered color → greenish brown.

82°/120°

(77)

Just after the schist (heading E) a quartz dike has intruded the metamorphic. In the dike though there appears to be a continuation of the same? qtz/arsene vein.

The dike has a variable texture

ranging from that of granite (fairly felsic)
to that of diorite (fairly mafic)

Heading at 052° for 23 paces = 28m

(78) still in the intrusion another small
outcrop of gneiss occurs. This time
it is quite weathered and next to no
quartz is observed.

But the ~~direction~~ this time is $71^\circ/194^\circ$

15726 - highly weathered gneiss vein
- 1/2 m long x 30 cm wide
- very fractured
back-sight to camp 309°

(79) elev 1270m location directly above
15726. From my location I went
up about 25m to see if I could
find the continuing contact. The
metamorphism + the intrusion do not
give a nice straight contact. The
contact is very distorted as the
intrusion flows irregularly.

331°

FIELD

OXIDIZED ZONE

METAMORPHICS

METAMORPHICS

SMALL GULLY

METAMORPHICS GULLY

15714

15715

15716

15717

15718

transverse vein

23m

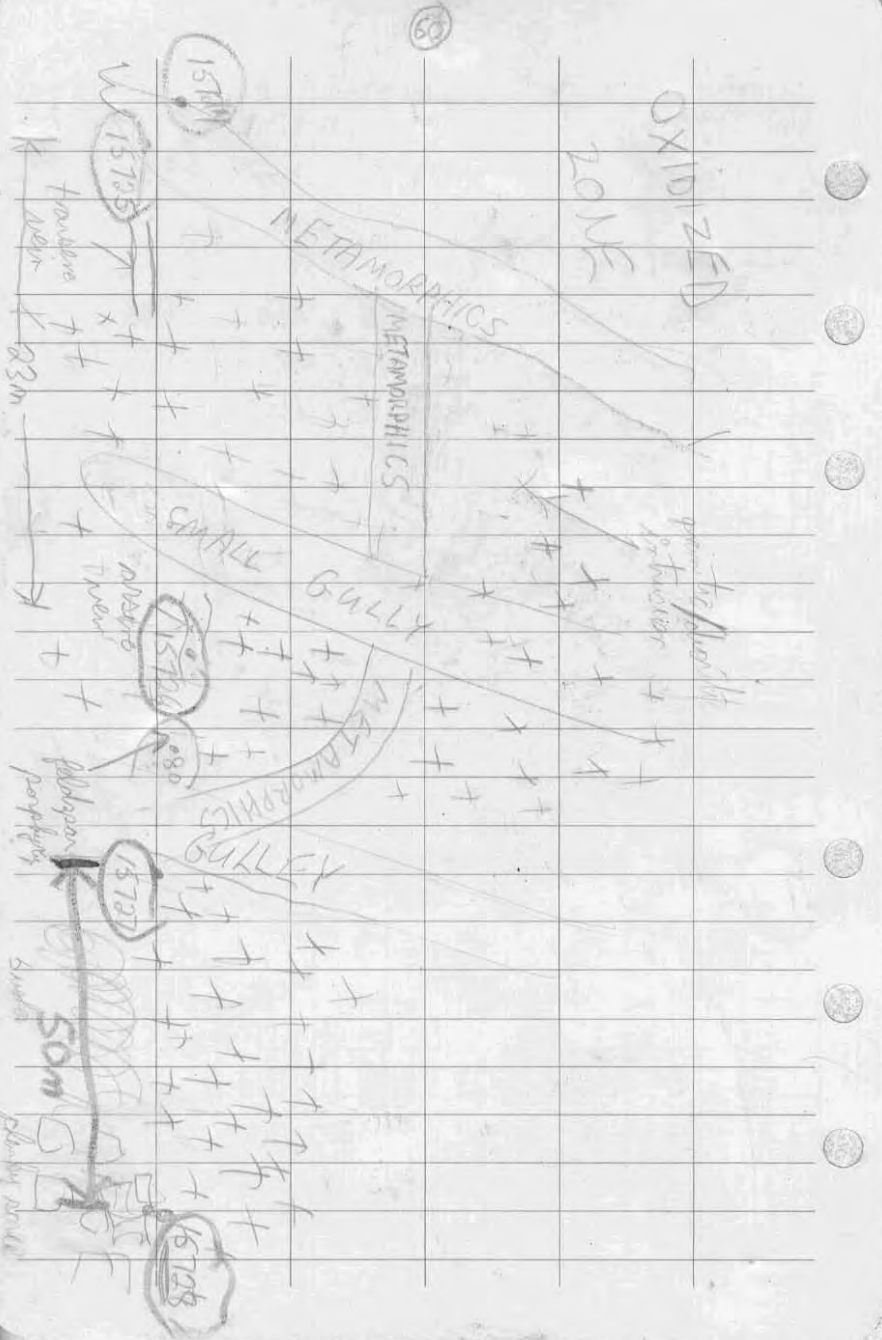
massive Mn

alabaster porphyry

Som

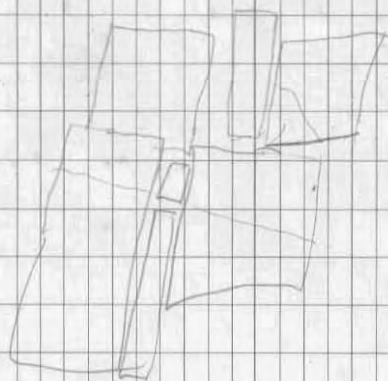
shaly mud

quartzite
of
fractures



One thing that was noticeable was that wherever there was a gully, in contact was usually to follow.

(80) Heading at 042° came across another gully. From (79) till now it had been metamorphic but right after the gully, the diorite / granite intrusion occurred again. The intrusion adjacent (E) to the gully was highly sorted, occurring in a blocky form.



13727

Composition was fairly even, but it had a more felsic quantity
 ≈ 60% quartz + plagi.
 ≈ 40% biotite, hornblende.

(6)

- slight mineralization was evident < 1% pyrite.

- coarse grained mesocratic
- no K feldspar observed.
- in some samples the biotite laths appeared to be aligned, possibly indicating trend of foliation.
- no readings were taken because of the high amt of jointing

The route I took to get to this spot was high up the rock adjacent to NW corner the gully appeared to be volcanic. Only it is not the same as 15727. This rock is more mafic & could possibly be called melanocratic. Also it has a fine grained groundmass with feldspar phenocrysts. Could this possibly be the feldspar porphyry that we found on the north side of the north mountain at the extreme west end?

Heading at 52° travelled for approx 50m

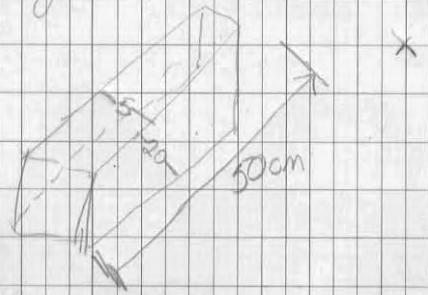
BB to camp 330°

81

15728

- small section of large outcrop that is highly eroded
- micaceous intrusive
- coarse grained
- similar to 15727 except it is more eroded.
- likely were too jointed to take a foliation measurement
- mineralization evident $\hat{=}$ 10% pyrite

Amidst the intrusive there was a very small vein of siderite
 strike-slip 74°/192° s-jt.
 The vein measured 5cm thick w
 50cm long 20cm wide h



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(64)

The samples taken are of high quality
arenopyrite, minimally weathered.

This is the only settling of the vein
as it does not crop out eastward of the
this point.

PICK UP KNIFE!!

GO HOME!

July 8/89

Gerrald/Jim

Mapping top of M. Ridge

15729 - very finely ~~x~~-stalline
spite

- no microclayton
- creamy white (fresh sides)
- rusty brown weathered color

1/4 on west of start.

15739 - 27°/122° ?

15741 - coarse grained quartz-feldspar
intrusive

- 1 feldspar evident
- some mafic present (biotite)

15743 - quartz-feldspar-biotite granite
- coarse grained x-stalline

- more K feldspar in it than
in previous sample
- leucocratic.

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DUMSBURY WATERPROOF

15739

- block, micro crystalline slate
- carbonaceous material was observed, possibly wood.
- very well sorted.
- conchoidal fracture.

15747

- fine grained x-stalline splite
- quartz phenocrysts 1-2 mm
- hairline fractures filled with qtz.
- small spec of greenist brown mafics embedded in fibric groundmass.
- weathers to a dark brown
- fresh color \rightarrow greenish beige
(due to mafics)
- no mineralization

15749

- fine grained x-stalline splite
similar to 15747
- hairline fractures filled with quartz
+ mafics.
- no mineralization.
- small greenist brown spec in fibric groundmass!
- light greenist beige is fresh color.

- 15745 - fine grained X-stalms white
 - more feldic than 15747 + 15749
 (no greenish brown speck)
 - quartz phenocrysts ranging from
 1-3mm
 - no mineralization evident
 - fresh color light beige.

Bendal/Ron mapping S side Middle Ridge July 10/89

From (81) we travelled eastward.

The diorite became finer grained,
less porphyritic, + darker grey (due to
a more mafic groundmass)

- less plagioclase phenocrysts
- chilled margin?

(82)

identified contact.

- chilled margin \approx 5m E of contact.

elev
1270m

Sample located directly adjacent (E side)
of gully that Ron + Gerald walked
where.

15751 - PPM

mica-quartz-feldspar schist

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DUKESEAK WATERPROOF

(68)

- dark grey to maroon grey in color.
- moderately micaceous
- very fine grained
- very finely laminated quartz + feldspar laminae

Qtz laminae \approx 1-3 mm
feldspar laminae \approx 1 mm

- minor chloritic alteration
 - slight mineralization $< 1\%$ pyrite
 - Along str near was observed next to sample location, it was about 0.5m wide, it appeared to be boudinized
- fracture of PPM 79°/138°

(83)

arsens vein 100m x 3m wide

- situated in PPM.

elev 1305m

vein is clearly visible when you walk up gully

65°/030°

15752

arsens vein w/ high concentration of arsens in it.

- massive arseno occurring with
- some minor quartz.
- some places highly weathered thru rot.
- the vein is 3m at its thickest point and then tapers off to about 0.5m at around 80m

(84)

82°/316° of foliation of schist
bt to comp. 346°

1335m

15753

(85)

Faencl Metamorphic zone

- highly oxidized.

1315m

- dark grey
- quartz - feldspar mic - schist
- very finely banded with quartz laminae up to 2mm.
- fine grained
- 1% metallics (pyrite)

Run tapes 15754

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DUNSBANK WATERPROOF



1395m

86

15755

apite/arsero vein on N side of middle ridge

- previous sample left by last geologist C8R94/L
- foliation $86^\circ / 330^\circ$
- arseno/apite intermixed
- samples are green but contain small amt of arseno in them.
- very fine grained apite
- below outcrop there appears to be large blocks of arseno in a mass of white (maybe blasted)
- the plane that the foliation was measured on a possible shear plane. it was quite straight.

87

some arseno apite intrusion

R. D. PENHALL LTD. MADE IN VANCOUVER, CANADA DUNSBRAK WATERPROOF

(72)

Herold	Soil Sampling	July 11/89
lower bench on S side of South Mtn	Claim 7	50m intervals

Started at 15747 took a
measurement to end of dotted
cuttersp. 0.26° at 400m

S177

410m travelled at 0.26°

'A' horizon \approx nil

'B' horizon \approx 10cm

abundance of vegetation + small
pebbles towards base of 'B'

- light beige
- moderately dry

Heading at 1840 at 80m

S178

- 'A' horizon \approx 5cm

- 'B' " \approx 8cm

- moderately dry
- med. amt of vegetation + pebbles
- med. brown

S Heading at 145° for 78m

S179 $A' \approx 10\text{cm}$

$B' \approx 5\text{cm}$

- moderately wet
- light brown dark beige
- minor pebbles + no vegetation in it

Heading at 210° for 68m

S180

$A' \approx 10\text{cm}$

$B' + C'$ appear to be intermixed as there are some medium sized pebbles among the sandy soil.

texture sand > clay.

- med. lignum.
- mod. wet

Heading at 210° for 76m

S181

'A' horizon ≈ 1 foot

but is intermixed with
slot of cobbles. Underneath cobbles
are a bit of sandy/clayst
soil. I called this 'B' horizon

- quite coarse.
- minor part of vegetation
- moderately wet.

* - runs across spherule zone ≈ 100m wide

Heading at 217° for 58m

S182

'A' ≈ 15cm

'B' ≈ 10cm

but appears to be intermixed
with 'C' due to presence of
small to med pebbles

- light brown
- finely wet
- texture sand > clay

Heading at 205° for 63m

S183

A' ≈ 20cm

B' ≈ 6cm

- clay > sand texture
- med dry
- med-dark brown
- min amt of vegetation

Heading at 212° for 57m

S184

A' ≈ 8cm

B' ≈ 5cm

- abundance of vegetation
- med to dark brown
- sand = clay in texture
- fairly dry

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DURABLE WATERPROOF

Heading at 183° for 40m

S 185

'A' horizon ≈ 10 cm

'B' " $\approx 1-2$ cm
very thin

- light beige
- mod. dry
- sand \rightarrow clay texture
- mod amt of vegetation + pebbles

Heading at 287° for 140m

S 186

'A' ≈ 10 cm

'B' absent

- A+C are intermixed although there was a light colored 'A' that had no interesting visible contact, I took some of this
- texture clay \rightarrow sand
- moderately wet
- dark brown
- mod amt of pebbles but large pebbles were in profile

(77)

Heading at 020° for 63m

S187

'A' \approx 3cm

'B' \approx 12cm

- texture clay > sand
- light to med brown
- moderately wet.
- no pebbles + min vegetation

Heading at 020° for 63m

S188

'A' \approx 5cm

'B' \approx 8cm

- orange brown in color
- min amt of vegetation + pebbles.
- texture sand = clay
- moderately wet

Heading at 024° for 60m

S 189

'A' ≈ 12cm

'B' ≈ 15cm

- texture clay > sand
- very wet
- dark beige
- min amt of vegetation + pebbles.

Heading at 011° for 65m

S 190

'A' ≈ 15cm

'B' ≈ 15cm

- texture sand > clay
- mod. wet
- slight mat to med. brown.
- min amt of pebbles + vegetation

Heading at 017° for 59m

S191

'A' \approx 15cm

'B' \approx 5cm

- Boundaries hard to distinguish
- mod. wet
- clay > sand texture
- dark brown (very slight mottles)

Heading at 359° for 91m

S192

'A' \approx 2cm

'B' \approx 6cm although there

are pebbles on top of 'B'. It
has the 'B' texture + color

- mod. dry
- light brown
- sand = clay texture
- fair amt of pebbles but
little vegetation

Gerald / for / Jim

July 15

Mapungu Gneiss Sampling

North side of M. Ridge

~~base~~

1445m

old

sample area

found

C8N217

C8N227

L100/2E/H

15771

- gray green color
- chlorite / feldspar / quartz schist
- minor quartz + feldspar laminae with a chloritic groundmass
- lamellae \approx 1mm thick
- metallic present $<$ 1% pyrite

Baseline 335°

Traverses 245°

L100/20W/I

- 15772
- f. gr. x-stalline splite
 - a very clean creamy white color with no mafics
 - mineralization present
 - $\approx 1\%$ arsenic which occurs in blebs
 - multiple hairline ptz fractures with occasional ptz phenocrysts ranging up to 3mm in diameter
- DUPLICATE # 15734

L100/47W/I

15773

* Bag to L100/47W/I

- v. f. gr. x-stalline splite
- minor mineralization < 1% arsenic
- multiple fracture ptz veins
- fresh color varies from creamy white to a green/gray white.
- weathered color \rightarrow grayish white with rust blebs

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L100/77W/I

- N.F. gr. x-stalline aplite
- weathered color → rusty brown
- fresh color → rusty to pinkish beige with dark specs.
- ≈ 5% mafics (eg. biotite) occurs as specs throughout the aplite
- layering fractures
- quartz phenocrysts ranging up to 5mm.

15774

L100/100W/I

- N.F. gr. - x-stalline aplite
- possibly chilled margin
- fresh color dark greenish beige
- weathered color med. rusty brown.

15775

* core across old sample site
C8R89L

L100/125 W/I

15776

- N. f. q. x stallo^{ed} splite
- fresh color ranges from a clean white to no fresh surface at all due to intense fracturing.
- = quartz phenocrysts up to 4mm.
- weathered color very rusty brown.
- no metallics but greenish tinge suggest links of arseno.

L100/135 W/H

- PPM

- greenish brown schist

15777- metallics present \approx 1% pyrite occurred in vein

- quartz feld lamellae poorly developed.

- weathers to a light greenish brown

- volcanic protolith.

Gerald/Kor

July 16/89

2
1
grid sampling N side of
middle ridge.

eln 1283

found old soil sample
C8N 238L - 248L. Dup
2 gullies East of camp.

Backlight to camp $\rightarrow 170^\circ$

L125N/002E/H

- PPM

15782

- very fine grained mafic
metamorphic

- chlorite alteration

- minor quartz + feldspar

- no laminations

- fresh color dark green grey

- rare occurrence of feldspar

porphyroblasts.

foliation 48°/165°

1st PPM/aphte contact occurs at $\approx 2W$
of OW

PECC

L123N/ 29W/I

- very fine grained x-stalined
spite

1578

- located in shear zone?

- trending at $90^\circ/190^\circ$ - slickensides were evident as
was extensive rubbing of the
spite- shear length x width $\rightarrow 30m \times 3m$

- weathered color - light rusty beige

- fresh color - creamy white

- previous sample site found.

C8N 218L

- metallic content $\approx 1\%$ arsenic

- hairline qtz fractures.

- extra large sample for duplicate

L125N/53W/I

15780

- n.f. gr. x-stallic sphite
- fresh color creamy white
- weathered, red gray to rusty brown
- qtz phenocrysts up to 4 mm and hairline qtz fractures.
- greenish specks are among the granoblasts (altho weathered color on biotite)
- no mineralization observed.

L125N/77W/I

15779

- u.f. x-stallic sphite
- hairline qtz fractures
- 2% mafic or metallic?
- fresh color - creamy white
- weathered color - dark gray to rusty brown.

metamorphic contact at 87W

(87)

L125N/100W/H

- PPM

45778

- dark grey to light greenish black (fresh color)



- 2% pyrite

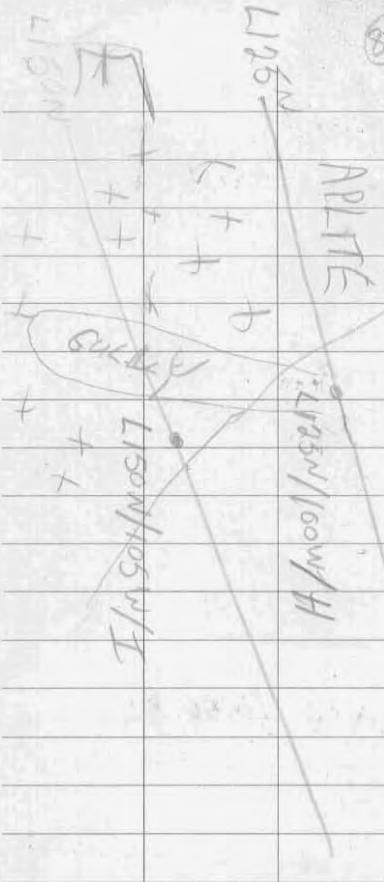
- occasionally banded quartz veinlets (up to 2cm wide)

- n.f. grained

- weathered color (light grey)

- chloritic alteration

- foliation 52°/190°



ppm

$$\begin{array}{r} 111 \\ 36 \\ \hline 85 \end{array}$$

July 17/80

Geald/Ron/Jim grid
sampling N side of middle ridge.

L175N/111W/I

15792

- v. fine crystalline apstite
- fine grained qtz veins + plerocrysts up to 4mm
- fresh color dirty creamy white to light beige.
- weathered color light rusty brown
- a very small vein (0.5cm) of arseno occurs.

- old sample site found at

L180N/111W/I

C8N224L

L175N/85W/I

15793

- v. fine crystalline apstite
- fresh - creamy white
- < 1% arseno
- < 1% mafics
- fine grained qtz fractures + qtz plerocrysts up to 3mm

R. D. PENHALL LTD. MADE IN VANCOUVER, CANADA
DUKESBAY WATERPROOF

(90)

W PPM contact at 175N/123W/

Sample at L175N/130W/H

- 15791
- PPM
 - massive / sp. gray in color
 - n.f. laminated quartz-feld
spathe layers $\approx 1\text{mm}$
 - n.f. granular
 - approx 1% pyrite occurring
in large clunks
up to 0.75cm

L175N/60W/I

- 15794
- n.f. of crystalline white
 - 2% mafic
 - <1% arsenopyrite + pyrite
 - hairline qtz fractures
 - some fractures appear to be
filled in with weathered away
pyrite.
 - fresh color - creamy white
 - weathered color - rusty brown

L175N / B5W / I

15795

- N.F. gr x-stallic aplite
- fresh color - creamy white with some rust staining.
- $\approx 2\%$ mafics
- str. phenocrysts up to 3mm
- multiple hairline str. fractures
- weathered color - light grey to rusty brown.

Contact on E side at 175N / 10W

L175N / 10W / H

15796

- foliation 79° / 141° R500
- N.F. granof. mafic schist with chlorite + mica
- $< 1\%$ pyrite (occurred in < 1 cm blob)
- very finely laminated quartz-feld aplite layers ≈ 1 mm
- dark green grey
- located between 2 arsenic pyrite veins

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L165N/2W/V

15797

stibiofoliation 58°/220°

arseno pyrite vein

- may massive arseno with some areas quite weathered
- located in large gully located just west of baseline.
- \approx 20m long x 1.5m wide

REDO

L180N/5E/U

15798

- arseno vein

- foliation 74°/090° ?

MGA

- massive arseno with massive pyrite \approx 10% pyrite occurring in luted of forms
- arseno has turned to scorodite in some areas.

REDO

GULLY

58
y

• L165N/2W/V

79° L175N/0W/H ✓

74° L180N/5E/V

E

FIELD

R. D. PENHALL LTD. MADE IN VANCOUVER, CANADA
DUKSBRAK WATERPROOF

Gould/Jim/Ron

July 27/89

Grid Sampling N side middle ridge

L250N/0W/H

- 15821
- foliation $56^{\circ}/141^{\circ}$
 - PPM, dark to light grey in color.
 - qtz - mica schist with actinolite veins.
 - mineralization present < 1% pyrite
 - sedimentary protolith?
 - weathered out bands were evident in outcrop but not in hand sample.

Contact on E side at L250N/10W

L250N/50W/I

- v.f. of crystalline splite
- little to no mafics
- 15822 - karlike qtz fractures + subhedral qtz phenocrysts up to 4mm
- fresh color - dirty creamy white to rusty white
- weathered color -> whitish rusty brown.
- no mineralization evident

L245N/83W/V

- arsenic - qtz vein
- trending at 60°/103° 60°
- 15823 - vein covers a distance of 40m x 1m at visible outcrop.
- MGA - the arsenic is not massive but occurs as veins in the qtz
- scorodite is also evident

~~15827~~

R. D. PENHALL LTD. MADE IN VANCOUVER, CANADA
DUKESIAN WATERPROOF

L250N/100W/I

15824

Duplicate

15487

- v.f. gr. x-stalline aphte
- $\approx 2\%$ mafics (biotite?)
- lamellar qtz fractures
- rounded qtz phenocrysts
- up to 6mm
- fresh color \rightarrow clear creamy white
- weathered color \rightarrow rusty gray
- no mineralization evident.

L250N/150W/I

15825

- v.f. gr. x-stalline aphte
- very small arsenic vein amidst the aphte ≈ 1 cm wide
- sample taken has that arsenic in it
- small amt of pyrite can be seen on the arsenic
- fresh color \rightarrow creamy to rusty white
- weathered color \rightarrow rusty white/gray

L250N/200W/I

15826

- v.f. gr. x stellular graphite
- fresh \rightarrow creamy white
- weathered - rusty brown
- $\approx 2\%$ mafics
- $< 1\%$ arsenic
- gty phenocrysts up to 7mm
and also K-spar phenocrysts
up to 7mm.

Continuing on for about 21 m, the
aphte appears to be quite rubbly, but
upon fitting it with the hammer, it
is quite solid + hard to break.

It starts to become rubbly at about
201 W. + finishes at 222 W

L250N/250W/I

15827

- v.f. gr. x stallove splite
- 10% mafico
- tan line qtz fractures + qtz phenocrysts
- fresh → creamy buff
- weathered → rusty brown
- no mineralization

L240N/290W/I

15828

- v.f. gr. x stallove splite
- no mafico
- <1% metallics
- fresh color → dark creamy white darker than previous splite
- weathered color - very rusty brown
- qtz phenocrysts up to 3mm

found qtz near 66°/076°
 1' wide 4m long.

W contact occurs at about 310W

L250N/315W/H

- PPM
- foliation 55°/172° 55° ↘

15829 - dark greenish gray in color

- v.f. grained
- < 1% pyrite
- quartz - feldspar bands are not too obvious.
- possibly a sed. protolith.

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DUKESAK WATERPROOF

July 28/89

~~Start at alt 1275m heading generally at 250°~~

C8N 234L sample found at 1295m
B.B. to camp 165°

Start at 1314m B.B. to camp 162°
Heading at 257°

43m travelled

- asp - qty near 62°/058°

≈ 20m long x 2m wide (at outcrop)

- qty > aspers

- the aspers occurs in small
veinlets ≈ 1 foot

0056

Heading at 244° for 46m (uphill) equals
to about 33m

- same qty - asp near 83°/070°

- most of aspers seems to have
weathered away leaving a greenish
tinge in the quartz

0057

Heading at 240° for 20m

0058

- same vein this time vein has no
arsene in it 100% qtz vein
surrounded by apite.

- $82/075^\circ$

- qtz is weathering a greenish
yellow to a slight rust color.
probably due to asp/apite content.

- a visible apite/qtz contact
was seen

- <1% mineralization

Heading at 284° for 50m

0059

very weathered apite located
on small west of gully that
is west of camp.

duplicate
sample

- B.B. to camp - 182°

- 1-2% mafics

- qtz fragments up to 3mm

- very brittle

- no fresh color, obtained due to
large amt of fractures.

0060

Heading at 330° for
52m down hill
real distance ~ 40m

- v.f. m. x stallion white
- fine gr. fractures
2 per cm
- ≤ 1% mafics
- fresh color - creamy white
- weathered color - very
rusty brown
- highly jointed + fractured

Heading at

July 31/89

Soil Sampling S.S. Middle Ridge <

with Tim

S 193A - very minimal

175m

- moderately dry
- dark brown
- absence of vegetation

Humus

No soil

B - light brown to rusty brown in
upper

- fairly wet
- texture clay > sand
- min amt of pebbles + vegetation
- 1 ft thick

C - light grey

- fairly coarse compared to
that of B
- texture sand > clay

1175m

S 194 A - \approx 1cm thick (1st A layer)

- fairly dry
- dark brown to black

* Note - There are 2 A horizons



The 2nd A is much more defined in color (ie darker). Color is black

- may have vegetation with small quartz pebbles (some sand)
fairly dry

B₂-

light brown to rusty brown
texture clay - sand

- mix part of pebbles + vegetation
- much wet

C₁

color - light brown to grey
texture sand - clay
quartz pebbles abundant
more than B

S195

elev 1170m

DB to camp 139°

A ₀	3cm
A ₂	3cm
B	1 foot
NO C	

\Rightarrow A₂ - dark brown to black
 - mod. dry
 - min amt of vegetation

B - very wet
 - texture clay \rightarrow sand
 - med. brown
 - min amt of vegetation
 + pebbles

C horizon is absent

S196

1185m

B horizon \approx 27"

- mod. wet
 texture sand \leftarrow clay
 - mod. to slight rusty brown
 - min amt of vegetation + pebbles

A₁ = 2cm Humus

- very humic i.e. rot soil
- black with abundance of vegetation
- minor amt of pebbles
- mod. dry

'C' horizon not reached after 3 feet

S197

C - light brown

- med amt of pebbles, no vegetation

1190m

+ mod. dry

- ~ 9 in

'B' - ~ 6"

- med amt of pebbles
- mod dry
- min vegetation
- med to dark brown
- texture sand & clay

A - soil

2-3 in

- dark brown to black

- mod. dry

- min amt of vegetation

S198

1180m

- 'C' - med. to light grey \approx 22" ¹¹
 - mod. wet.
 - ranging from fine to coarse
 - texture clay \rightarrow sand

~~No 'B' horizon.~~

Humus 'A' humus sample (no soil)

- very wet
- dark brown to yellowish brown
- abundance of vegetation

S199

1170m

No 'A' or 'C'

'B' & 'B₁' horizons thought to have been found.

- light brown
- mod wet
- texture sand \rightarrow clay
- min part of vegetation.

(108)

Aug 4/89

Gerald Soil Sampling N. Mountain
Por Checking out outcrops

found old? claim post at 1370m

CATFISH

Post # 1N 2W

Metal Tag # 91170

June 21/86

Catfish 3

Post # 1N 1E

Metal tag # 28835

Oct 21/86

plow 1332m

another claim post

Catfish 3

Post # 1N

Metal Tag # 28830

Oct 21/86

S200

elev 1300

A' horizon \approx 1cm'B' horizon \approx 5cm

- very dry
- texture sand > clay
- color light brown
- min amt of pebbles + vegetation

- located on small 25m W of Claim boundary

S201

elev 1255

same as S200 except
has more vegetation

S201

S202 elev. 1255

'A' horizon \approx 2cm

'B' horizon \approx 8cm

- fairly dry (very)
- light brown to slight rusty
brown.

- texture sand > clay
- abundance of vegetation
in 'B' horizon.

Heading at 090°

S203 elev. 1225

'A' horizon - none

'B' horizon \approx 6"

very dry

- very light brown.
- texture. sand > clay
- med. amt of vegetation +
pebbles.

B.S to my spot 016°

on ridge between 2 gullies.

S204 elev 1250m

same as before

B.S to spot 021°

travelled 105m

Gerald S.S N. mtr

Aug 5/89



altitude correction → 40m

high at S204. Today it

reads 1290m

Have to move line higher because its
to bushy.

S205 elev 1315m (1275m?)

'A' horizon ≈ 5cm

'B' horizon ≈ 10cm

- very dry
- light brown
- moderate amt of pebbles but little
vegetation

- texture sand → clay.

B.S. to spot 022°
to truck 334°

S206 elev 1328m

100m
traveller

'A' horizon ≈ 4cm

'B' horizon ≈ 20cm

texture sand < clay

fairly dry

very light brown

abundance of vegetation + moderate

cont of pebbles.

B.S. to S205 → 082°
spot → 027°

S207 elev. 1327m

100m
traveller

'A' horizon → more existent

'B' horizon ≈ 12cm

- moderately dry

- very light brown

- mix cont of vegetation + pebbles.

- texture sand ≈ clay

B.S. to spot → 031°

truck → 349°

S208

elev 1305 m

A horizon 2 cm

B horizon ~ 10 cm

moderately dry

moderate amt of vegetation but
little amt of pebbles.

texture sand to clay

color -> very light brown.

near gully near that I took a picture
of in left gully or the major
road gully.

S209

elev 1290 m

A horizon -> more

B horizon ~ 4 cm

A mixture of B & C may have been sampled.

- moderately dry
- very light brown
- medium to large amt of pebbles but
little vegetation
- texture sand to clay.

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DUKESBAK WATERPROOF

(114)

located on ridge w/ice road gully
splits up.

B.S. to S208 \rightarrow 086°

S210 elev 1310m

"A" horizon \approx 2cm with 1cm
lenses included

B horizon \approx 5cm

- major amt of cobbles etc.

- color - medium brown

Note color change.

- moderately wet

- texture \rightarrow sand = clay.

B.S. to S209 \rightarrow 094°

core across old road cut at 1335m

measures about 1m wide + 8m long.

It appears that a qtz vein has been
dug out.

B.S. to postmark #3 \rightarrow 004°

Aug 6, 7/89

Gerald/Ron/ Jim
Road Cuts

Gerald Mapping

Aug 8/89

Gerald Soil Sampling

Starting at addit elev 1350m
15m higher than last time
(Aug 5)S211 elev 1350m ADDIT. SAMPLEA horizon \approx 4cmB horizon \approx 4cm

- moderately wet
- medium to light rusty lining
- abundance of vegetation + pebbles
- texture \rightarrow sand < clay

(116)

~~S212~~ elev 1378m

'A' horizon \approx 4cm

'B' horizon \approx 15cm

- moderately wet
- abundance of vegetation, with med. amt of pebbles.
- med. to dark brown
- texture clay > sand
- located in small gully, 100m NE of addit

~~S213~~ elev 1410m

110m travelled

- 'A' horizon minimal \approx 1cm
- 'B' horizon \approx 15cm
- abundance of vegetation + med. amt of pebbles.
- moderately dry
- light to med. brown
- texture \rightarrow sand < clay
- B S to position #2 040°

S214

elev 1427m

'A horizon \approx minimal ≤ 1 cm

'B horizon ≈ 10 cm

- moderately wet
- med amt of vegetation + fair amt of pebbles.
- med brown
- texture \rightarrow sand = clay

located 50m NE of S213

B.S to S213 $\approx 075^\circ$

position #2 $\approx 039^\circ$

S215

elev 1435m

'A horizon \approx there were two of them

A + A₂ totalling 3cm

Also, 2 B horizons totalling ≈ 20 cm

A	2cm
B ₁	5cm
A ₂	1cm

B₂ was taken as sample:

B₂ 15cm

- very wet
- med brown
- abundance of pebbles.
- texture sand < clay

B.S to truck $\rightarrow 042^\circ$

50m travelled.

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DUMSBURY WATERPROOF

(118)

Heading at 174°

82m from S215, 2
posts were found

Final POST 359215
359216

S216 elev 1375m

'A horizon \approx mil muf's on
mostly humus.

'B' horizon \approx 10cm

- moderately wet

- light brown

- texture sand & clay.

- abundance of pebbles, little vegetation.

B.S to S215 $\rightarrow 176^\circ$

" " truck $\rightarrow 050^\circ$

Meteorites dipping to NE

74°/013° \rightarrow 64°/015°
54°/017 \rightarrow

Potential readings taken $\approx 30m$ at 100°
from S 216.

Area is heavily folded with
numerous anticline/syncline pairs
visible on weathered outcrop
scale $\approx 20 - 50cm$

1st reading was taken $\approx 15m$ away
from folded area

2nd reading taken in massive outcrop

S 217

elev. 1340m

A horizon \rightarrow more majority is limestone

B horizon $\approx 8cm$

- fairly dry
- texture sand = clay
- abundance of pebbles, little vegetation
- light to med brown

\rightarrow B.S to truck $\rightarrow 064^\circ$
 \rightarrow B.S to S 216 $\rightarrow 138^\circ$

105m trawled

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DUNSBRAK WATERPROOF

Heading at 300° for 50m from
 S217. A proposed (?) claim post
 was found. It had flagging tape
 on it but no identification
 tags were on the post (a clipped
 up tree)

revisited Aug 9/89

From S217 \rightarrow 36m at 277°
 \rightarrow 73m at 215° dead tree

S218

'A' horizon \rightarrow more just humus

'B' horizon - questionable?

sample area has a lot
 of pebbles content possibly C
 horizon + 'B' is absent.

- moderately wet

- med brown

- texture sand < clay

(12)

Heading 42 m at 140°
42 m at 156°

S219 100m travelled

no 'A' horizon - just humus.

'B' horizon = 5cm

- moderately dry
- large amt of pebbles + vegetation
- dark brown
- texture \rightarrow sand \leftarrow clay

Heading 83 m at 150°
13 m at 100°

S220

A horizon = 3cm

B horizon = 5cm

- fairly dry
- med. to dark brown
- very pebbly
- inconsistent boundary between B + C horizons.

B.S to Truck - 075°

Heading at 144°

(122)

S221

91m travelled downslope
76 m on map

'A horizon \rightarrow minimal

'B horizon \approx 7cm

- med amt of pebbles
- moderately dry.
- light to med brown.
- texture sand = clay.

B.S. to track \rightarrow 0840

Heading at 116°

S222

111m travelled relatively straight
along contours.

No 'A horizon

'B horizon

\approx 10cm

- relatively dry.
- med. brown
- very fine profile i.e.
went to no pebbles or vegetation
- texture \rightarrow sand = clay

Heading at 113° for 153m to

~~5223~~ 5226

Aug 10/89

Gerald / Jim / Ron Mapping North Mts
from top. Helicopters flew us up.

0156 - ① green/black mafic
- possibly on rock tuff
- from the Student

1640m - minor pyritization <1%
- epidotization is abundant
- v.f. gneiss
- fibrous mineral occurring in
veins evident, quite soft possibly
serpentine.

BS to dropoff point 034°

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#2

elev 1595m

124

came across a relatively small dike composed of feldspar porphyry. Measured approx 100m long * 3m wide.

- it was quite blocky massive and was quite distinct from the greenist epotized stutins group.

- the intrusion was a narrow dark grey color with feldspar phenocrysts only visible on a weathered surface

- 2 rock samples taken

B.S. to fishing spot $\rightarrow 273^\circ$

#3

elev 1575m

another mafic dike intrusion

same color + type as #2

- this one situated in middle of gully. not a wide + long as last one.

trending at $\approx 120^\circ$ both of them

(125)

B. Sta fishing spot $\rightarrow 276^\circ$

(3) elev 1588m ¹⁶⁰⁰

40m row in left gully.
of the major gully that I'm supposed to map.

0157 - intermediate to mafic
very fine grained hypilitic
truff? dioritic intrusion?

- slight epidotization
- no mineralization
- quite feldspathic.
- medium green gray to light grey.

B. Sta fishing spot $\rightarrow 279^\circ$

(4) 0158 1630m

Highly oxidized zone 30m x 4m

- fresh surface \rightarrow dark green gray
- weathered \rightarrow very rusty brown
- possible shear zone due to rock \rightarrow

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FIELD

(126)

being quite rubble. + oxidized
Spec. trended at $\approx 220^\circ$

$\approx 1\%$ pyrite

- abundance of qtz veining in mottled specimens.

B.S. to 0157 $\rightarrow 345^\circ$

look samples 4k + HR

0159 1545m

B.S. to fish spot 283°

intermediate to mafic crystalline
intrusive. doesn't look like
stuhoni.

- weathers to a med rusty brown
- abundance of quartz.
- fresh color \rightarrow dark grey
- no mineralization evident.

(5) typical of what I've been seeing
for a few hundred metres
med. grad. dipite? \uparrow

(127)

(6)

1435m

core across a mafic fine
 grained intrusive, a block,
 possibly another diorite dike
 B.S to Fisher spot $\rightarrow 280^\circ$

(7)

~~0160~~

1370m

- med green grey volcanic tuff
 - very fine grained to micritic texture
 - weathered color \rightarrow very rusty
 brown but there is little
 microchrysoberylite i.e. pyrite ($< 1\%$)
 - minor chlorite alteration
- B.S to Fisher spot $\rightarrow 282^\circ$

(8)

1300m

- core across or interbedded
 volcanics/breccia sequence
- epitaxial texture is evident across
 the contact between the two
- possibly still stibnite seeds. or
 is it Franklin?

128

10 ft
small rubble

possible
lean
very rusty

OUTCROP

0158

4L

4R

0159

OUTCROP

5

6

0160

7

E

⑨ 0161 1285m

interbedded volcanics / breccia

↙ bedding 48°/156°

↘ volcanics

breccia

dark green grey

dark green grey

- v-f gravel

clast sizes varying

- sub-conchoidal fracture

from 0.5mm to 10cm

- minor mineralization

(coarse sand to silt)

< 1% pyrite

- clast supported

- clasts composed mainly of gts.

S223

1260m

just N of gully

no 'A' horizon

- B₁ horizon = 8cm

- very dry

- texture → sand > clay

- no vegetation + little pebbles

S224

1235m

- A horizon $\hat{=}$ 2cm
- B horizon $\hat{=}$ 4cm
- C horizon $\hat{=}$ 5cm

- abundance of vegetation + little pebbles.
 - dark brown
 - moderately dry.
 - texture sand $\hat{=}$ clay
 - 'C' horizon is a very rusty brown. Some of it was put in the sample bag.
- B.S. to fishing spot $\rightarrow 287^\circ$

S225

1220m

- no A horizon
- B horizon $\hat{=}$ 7cm
- light to med brown
- fairly dry
- texture sand < clay
- abundance of vegetation but little pebbles ant

B.S. to fishing spot 290°

Aug 11/89

General Soil Sampling + Mapping

S226

1100m

'A' horizon minimal \rightarrow mostly humus.

- 'B' horizon \approx 4cm
- very pebbly + full of vegetation
- med to dark brown.
- texture sand > clay.
- moderately dry

S227

1080m

- no 'A' horizon just a humic layer.
- 'B' horizon \approx 5cm
- texture \rightarrow sand < clay
- dark reddish brown
- shreds of vegetation but small amt of pebbles.
- moderately dry.
- coincides with rock sample 0162

R. D. PENHALL LTD. MADE IN VANCOUVER, CANADA
DUNSBURY WA TERRACOTTA

(132)

0162

1080m

- PPM ranging from med. green grey to light greenish grey.
- very finely laminated with 0.5m between each lamina.
- quartz < 1%
- slight chloritic alteration
- $\approx 2\%$ biotite
- very obvious foliation in outcrop
 - $83^\circ / 025^\circ$
 - $88^\circ / 029^\circ$ $>$ $86^\circ / 027^\circ$

at 1085m, 45m E of 0162/5227
a diorite dike was found
trending up the mountain at approx
 304° . Pelagonite beds on the
weathered surface of the semi-blocky
outcrop were noticeable.
The dike measured approx 30m long
 \times 10m wide.

133

W

S

N

R. D. PENHALL LTD. MADE IN VANCOUVER, CANADA
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PPM

DIKE

PPM

• 0162
5227

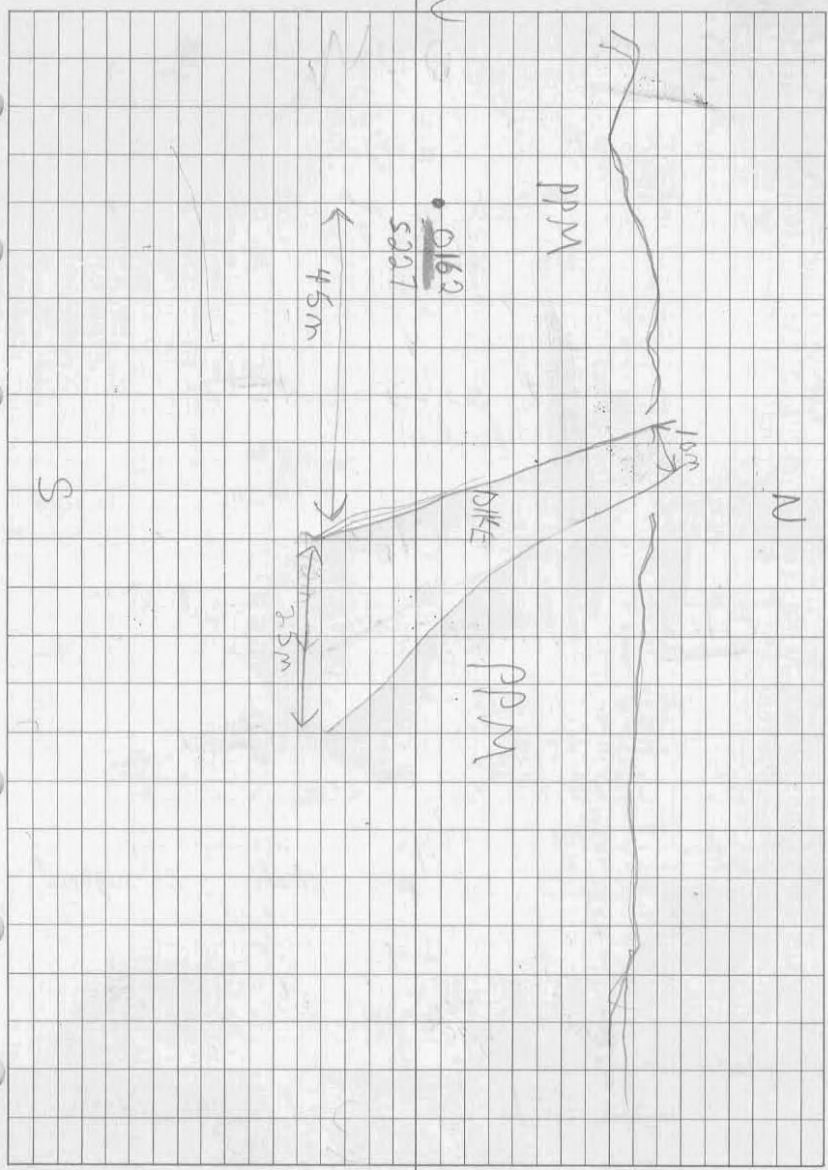
45m

25m

15m

FIELD

E



S 228

1090m

A horizon - mineral

B horizon = 5cm

- med amt of pebbles +
vegetation

- very dry

- med brown

- texture \rightarrow sand = clay

100m travelled

comparing with 0163

0163

1090m

- finely laminated light grey
PPM.

- fine gravel

- qtz + feldspar abundant throughout
rock- chloritic alteration throughout whole
rock also with chlorite comprising- \approx 1/3 of the mineral.

- mineralization evident < 1% metallic

- foliation 86°(020) ✓

S229 1095m

- minimal A horizon mainly a humus layer.
- B horizon \approx 5cm
- very dry
- numerous pebbles but minimal vegetation
- light brown
- texture \rightarrow sand > clay.

S164 1095m

- ppm-
- foliation $60^\circ/348^\circ$
- foliation laminated but not as laminated as the last samples.
- occasional qtz boulders up to 3cm long.
- v.f. gneiss
- no mineralization
- dark green grey to black
- laminae are of quartzofeldspathic composition.

Aug 12/89

Gardol Soil Sampling + Mapping
North Mtn.

- S230 - no developed A horizon
 - 'B' horizon \approx 7cm
 1095m
 - med brown
 - texture \rightarrow sand < clay
 - quite shy
 - med amt of pebbles and
 little vegetation

0165 1095mfoliation 85°/349° ✓

- PPM. - n.t. greened mafic schist
 with quartz-feldspathic laminae
 up to 0.5cm wide.
 - green grey
 - no mineralization although some areas
 weather to a rusty brown.

0166B.S to 0165/S230 \rightarrow 020°

75m travelled

1100m

Sample is definitely Stukens

Contact between PPM & Slickensite
probably about 65m E of S230/O/65
Good.

- dark greenish grey massive
exfoliated outcrop with exfoliation
dissected on fresh & weathered surfaces
- lack of foliation obvious as that
compared to PPM
- no metallics present

S231

1110m

17m from S230/O/65

'A' horizon = 2cm

'B' horizon = 7cm

- med to dark brown
- med. part of pebbles + vegetation
- very dry
- texture sand < clay.

S232

1090m

10cm handled

'A' horizon = 5cm

'B' horizon = 5cm

- med reddish brown.

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DUSSAK WATERPROOF



E

V85

PM1
1

D165

SR30

75m

S227

N. of road
N. of path

STAINING

2

O166

25m

S2231

W

- quite dry
- appearance of cobbles but little sand of pebbles.
- texture sand < clay.

0167

1070m

- fine grained mafic tuff
- dark green
- the epidote appears to have been weathered out or has started to weather leaving a dark green *stallite appearance.
- no mineralization observed.
- 50m travelled from 5232

0168

1065 m

100m travelled

- extremely brecciated dark green grey volcanic tuff (Stukini)
- N.F. gravel
- weathers to a very rusty brown in some areas on outcrop.
- ~ 1% pyrite.

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DUNSBANK WATERPROOF

evidence of epidote weathering
on some samples.

~~5233~~ 1065m

A horizon \approx 2cm

B horizon \approx 1cm

- very dry + fine
- texture sand < clay
- + med. brown
- lots of vegetation, but
little amt of pebbles.

~~0169~~

1065m

- dark green, grey tuff
- v.f. ground
- chlorite + epidote microlites
- weathers to a light grey grey
- < 1% pyrite + possibly Cu
- slightly beccated but not
to the extent of 0168

5234 1065m

'A' horizon < 1cm

'B' horizon ≈ 7cm

- very dry
- light to red brown
- med amt of vegetation, pebbles.
- tenders → sand & clay.

Aug 14/89

Geol Mapping East side of
North Mountain + soil sampling

approx = 70m N of C169/5234

- a transect site was core across
- the outcrop measured ≈ 5m W x 20m L
- it appears to have a sub-blocky appearance
- feldspar laths more noticeable on both weathered + fresh surfaces.
- elev. 1070m

R. D. FEHRLI, LTD. MADE IN VANCOUVER, CANADA
DUNSBRAK WATERPROOF

S235

(142)

1080m

A horizon $\hat{=}$ 3cm

B horizon $\hat{=}$ 6cm

- very dry

- med brown

- texture sand > clay

- abundance of vegetation

but med amt of clods

- $\hat{=}$ 130 m transect N of S234

- BS to pit spot 25'

0170

1100m

- outcrop of shaly dip + striated
dip approx 20m L x 6m W

- sample taken is a dark
green grey med to fine grained rock.

- epidotization + chloritization are
visible on specimens

- $\hat{=}$ 10% quartz

- some areas weather to a
light rusty brown

- located $\hat{=}$ 40m NW of S235

0171

1115m

- intermediate to fabric v. fine grained light grey lapilli tuff / pyroclastic porphyry
- weathered + fresh surfaces show 1-3m size lapilli whereas those are also pyroclastic (similar cleavage) amongst among the greyish white fine grained groundmass.
- outcrop is very brecciated but pore-th-less massive.
- located 42m NW of 0170

S236

1125m

- mineral 'A' horizon
- 'A' horizon \approx 8cm
- very dry
- dark brown
- texture \Rightarrow sand $>$ clay
- min out of shales + vegetation
- 17m from 0171

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(144)

S237

1130m

- no developed A horizon
part on humus layer
- no 'B' horizon
- sample taken in C
horizon.
- light beige
- large ranges of grain sizes
- no vegetation
- microtills dry
- 90m N of S236

Aug 15/89

For Gould mapping gully
on east side 1/2 mtr

elev 1395

66/103°

68/110°

126° approx direction

0172

- gty vein quite weathered
- 1/2 m at widest point and
narrows off to 1/2'

± 75 m long

- within a 50 m radius there
are a series of veins generally
trending in the same direction

- a total of 7 veins averaging
about 1 foot in width and about
50 m in length

- trend of the vein

$\frac{66^\circ/103^\circ}{68^\circ/110^\circ} > \underline{67^\circ/107^\circ}$

- just sighting the boundary of the vein 126°

- the vein is largest of them all.

- in the gully it appears to have been
folded as the direction changes.

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- no mineralization observed.
- samples were taken all the way up the vein & put into one sample bag.

0173

1555m

- on ridge between 2 gulches now
- PPM
- finely laminated, w.f. gashed intermediate schist
- micropinitic
- weathers to a very soft brown.

0174

1485m

- PPM
- fine grained, monoon grey schist
- qtz-fsp laminae well developed + large up to 5mm
- no mineralization observed
- contact between granite and PPM at about 1480m
- weathers to a dark grey/dark rusty brown.
- foliation 45°/007° ✓

1505m

- a very small dioritic dike
- feldspar both visible on weathered + fresh surfaces.
- found on bottom of gully.
- ≈ 10' x 5'

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0175

1510

- quartz vein in MoS_2 in granite
 - 2 0.5' wide x 40m long
 - trend 70°/082 ✓
 - large blocks of MoS_2
 - randomly occurring in vein
 - throughout length
-
- contact with granite / PPM
 - in other gully 1520m

0176

1450m

- leucocratic coarse-grained granite
- up to 20% biotite
- quite weathered + jointed
- no metallics present

0177

1405

64°/108°

- gty. vein in granite
- 2 1" wide x 70m long
- trending 64°/108° ✓
- this is a smaller vein of the Ton 8 vein series
- no mineralization observed.

Aug 16/89

Gould/Pon doing gully on S side N. vein.

0178

1200m

- coarse grained leucogranitic granite
- up to 20% biotite
- moderately weathered.
- no mineralization observed.
- outcrop ends at bottom of gully at 1180m
- minimum to near absence of K-feldspar (pink)

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(15)

- joints observed.

355°/86° ✓

095°/82° ✓

0179

1275m

- rusty off-white coarse
granitic biotite granite

- no metallog observed.

- ≈ 20% biotite

- essential assemblage

plag, biotite + qtz, but no K feldspar

- weathers to a dark grey.

- joints 030°/50° ✓

094°/77° ✓

0180

1300m

small outcrops of finely crystalline
aplite → 1m wide x 5m long

- < 1% mafic

- linear qtz fractures

+ qtz porphyroblasts up to
3mm.

- weathers to a slight rusty off white.
- fresh color → creamy white

0181 1430m

- qtz vein in granite
= 50m long x 1cm wide
- moderately weathered
weathers to a slight rusty brown.
- no mineralization observed.
- trending 73°/100° ✓

341/80
085/85°

0182 1320m

- coarse grained granite
- up to 20% biotite
- some with observable basal cleavage
- no mineralization
- off white color.
- trending 341°/80° ✓
085°/85° ✓

0183

1270 m

ppm on diorite

- dark grey f. q.

- < 10% granite

- quite massive in outcrop

✓ - at 280°

10m thick

0184

1240 m

granite

Same as 0182

Aug 19/89

Pon / Gerald finding Stuker's
Contact near camp.

found 3 PL PO 27 shear sample?
739m

Aug 22/89

Gerald / Pon mapping creek
of Paddy Pass.
Gerald Mapping

elev. 860m

foliation of PPM 64°/352°

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