

masking tape

MAY 17/77

671455

- set up camp - noon
- constant rain in afternoon
- scouted about camp in afternoon

NOTES

TARGET PROJECT

WEBER RIVER AREA

CAMP CHARLIE

MAY 17 → 24 / 77

MAY 18/77 sunny

working up river SW of camp

CB77-1 J 00/90

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200' upstream

J 070/90  
150/90

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100' up

nails + J 030/60 W  
90/90

some random

-20' 2" qty reins 90/90

↗ felt together

these cut a diameter 2"

reins ~~2"~~ 010/90

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CB-77  
2

NO SAMPLE

J 100/75° S

minn J 060/90

amyg. basalt

- pyrite in center of amyg.
- slightly magnetic
- massive top

basalt

no pyrite

basalt

- no pyrite
- extensively fractured

basalt - massive

+ 1% py - small cubes & grains

- large cliff along S. side of river
- 10, slightly magnetic

CB77-3. NO SAMPLE - 2 steps  
N & S side of  
mt

J 140/75°W



J 070/40  
135/90

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4 NO Sample

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CB77

-5

~~NO SAMPLE~~

J 60/90  
20/90

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CB77

6

FLOAT

SOUTH

fine gr. basalt

- < 1% pyrite

-> either bedding or jointing  
almost flat - dipping v. slightly  
to SW ~ 5-10°

NORTH

amyg. basalt

< 1% py

- extensive fracture + joints

- amyg. appear to decrease upwards  
in this step

- small white vesicles  
100/90

some oblique

1/9 basalt

magtic epidote

a) green amphibole + qtz  
b)

c) rock with spherical blebs  
with green core - extends  
into rocks

CB77-7 steep on forest to south  
extends down to edge of forest

CB77-6(c) cont'd

- spheroids - 2 → 5" diameter  
in linear array in basalt  
host
- has gran mineral core
- suggest:
  - a) weathering phenomena

→

- appears to be bedded
- sub horizontal
- inter-fingering flows?
- magtic

porphyritic basalt!

↗ augite?

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b) assimilation of inclusions by  
the host

MAY 18/77

overcast

CB77-8 NO SAMPLE  
- steep bank

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CB77-9 NO SAMPLE

@ stream & upper road  
3 all samples taken

- edged snow line



sample taken 100 yds North

J 130/70 E

80/85 N (some of 3 filled)

175/90 → 60 W (some of 3 filled)

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CB77-10



diomite

- appears in lenses 30' long 4' deep  
(secondary?)

plain, nondescript Basalt

to 160° in small mtn  
probably basalt  
dipping slightly SSW

- notice a felsic rock near top  
upper 50 feet

- perhaps some folding  
or domal intrusion.

\* Basalt

- green mineral in small blebs
- 4-12% py - associated to  
veins

diomite

flakes of mgite

CB77-11

contact 040/80W

(massive bodies on either side)

100 feet upstream - into basalt

- ~~to~~ 3' vein of granite

135°/

basalt to limit of top snow line

corresponds to silt sample # 25

- flat - note that got some of green mineral  
white & smoky quartz

ie like CB-77-6 a+b

frag basalt at ss station # 27

CB77-12

J 130/90

at ss # 41 → diorite in  
river bed

CB77-12

NO SAMPLE

contact area  
? horizontal? contact

CONTACT → 040/80W

diorite on east

(small scale  
measurement)

basalt on west - f. graind

Basalt

ultraphite as

a weinlets

b ~~thin~~ rare cells

c glomerophitic

MAY 20/77

sunny → overcast

CB 77-13

(along upper road)

fracture 50/80 N  
130/90

100 yds to east - see nodules  
in basalt (amyg)

- nodules reminiscent of CB 77 6 (c)
- some flat of green mineral seen

as go west basalt is invaded by  
2" vein of diorite

- get thicker to about several feet
- appears more mafic  
to perhaps

1) assimilate basalt or

2) intrusive relatively mafic

- also considerable qty veinlet  
along J's + F's - some may  
be shear planes

generally 100/80 N

CB 77-14 - several samples

mineralized fracture 040/90

sample location flagged

GABBAD

- extensively fractured & qtz filled  
- py -

→ pyroclasts?

diabase  
with moly, py, chalc, hornbl.  
in fracture

- also FLOW with malachite

CB77-15

fracture of CO<sub>2</sub>

060/variable  
90

CB77-16

CB77-17 NO SAMPLER

CB77-18

- green mineral in situ!  
fracture 140/90

CB77 19

diabase

sample is along a fracture  
- carbonate?

- diabase is intruded by small  
veins of Qtz (B)

- fine grained basalt & sample  
to amyg basalt  
to diabase (phyolith?)

- basalt - black, nodules (v. small)  
trace py

Basalt - nodules  
- amyg

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numerous small nodules of  
varying composition  
average diameter  $\leq 1$  cm  
72 mm

larger nodules 7 cm,  $\leq 10$  cm

CB77-20

- fracture filling 070/  
(~~perhaps~~ perhaps orientation  
of nodules)

- red of rock

CB77-21

PTO

CB77-23

CB77-24

several samples  
sulphide or fracture

80/90

20/90


150/85 E



trap rock

6 qtz nodules → sample  
qtz + minor chlorite in center  
rim of alteration.

- nodules 5x12" approx  
irregular

amyg basalt → dacite  


~~this belongs to MAY 21~~

dacite → amyg<sup>②</sup>

trace py  
siderite (?) - redish

DIORITE - py, bn

- some pink felds as well
- seem to be associated with sulphur
- rounded inclusions of basalt
- sulphide massive + abundant on all  
fracture surfaces

Malachite

DAY 21

RAIN

CB 77-22

CB 77 23

F+ J 040/90  
same thickness



CB 77-23

~~write on wrong page!~~

see previous  
page

CB 77-24

DACTYL

DACTYL ↔ RABBIT  
(tap/cens?)

100 yds north along road  
another step of diorite & sulphides  
- mafic

a) layers 1/2 ft thick, 3 feet thick  
continuous  
breccia of diorite in mafic  
intrusive!

- inclusion of biotite in granite  
R coarser than mafic

(Mafic fractures 060/90  
E slickenside ~~and~~ dextral  
by stream <sup>cut</sup> sample # 71

CB 77 25 sub sample taken

fractures 360/90

along which:

a) red soil development

b) red rock slickenside →

c) some mafic (intrusions?)

surrounded by diorite

- some parts of program in  
revisited

up to them - new, good

Next step

→ not sample

→ small sample

→ large sample

OB97-26

50 yds N - contact  $\approx$  amy. breccia

$\rightarrow$  90/30 N



this <sup>(probably)</sup> must be a local, small scale  
value  $\circ\circ$  this could not align  $\approx$   
the diorite thrust unless folded!

- I feel that this <sup>level</sup> probably  
represents the approximate roof  
of the intrusion in this valley



May 25/77 - highly  
questionable  
hypothesis

Basalt  $\rightarrow$  sub horizontal bedded ???  
dipping slightly SW

MAY 22/77 Beautiful day

CB77-27

NO SAMPLE

J 040/90

090/80 N

120/85 S → 90

min 170/90

CB77-28

bedding lenses of mpic (intrusion?)  
(040/65 S)

sampled contact

- note sulphide in mpic rk

- also FLOAT mpic rk show abundant  
chalcopyrite in sample fracture



# DIORITE

get layers of diorite 040/65 S  
increasingly taper toward thin  
mafic lenses up to 8" thick  
contacts are sharp  
- show

- rounded inclusions in diorite  
are coarse grained than  
mafic lenses  
- probably different materials

- layers of diorite vary from  
 $\approx$  4m to 1.5 ft thick  
- thinner layers above the  
mafic lenses

NO SAMPLE

CB77 29

160/

060/

at fracture  
more less

FLOAT - diatoms abundant  
py + chole of fracture surface

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CB77 30 FLOAT - small

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mapi lens offset by gts filler  
fracture

- denture appears to be  
altered by mapi intrusion  
alteration rim approx 3cm  
wide

- mapi lens left stuck

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Basalt (amyg.)

to massive py + ~~clay~~ clay on  
fracture surface

MAY 23 OVERCAST - RAIN

CB77 31 J 010/90

CB77 32

CB77 33 J 20° → 30° → 60°/90  
also some sub horizontal

<sup>10°</sup>  
25 yds to South in fresh dense  
prominent fractures & slick  
070/85N  
& sub horiz

DIORITE

- not felsic rock

(7)

same as diorite

diorite is slightly darker than  
andesite & is much finer

- one pass into what diorite  
is necessary

highly altered DIORITE

sub angular, deviate - flat  
→ extensive spy x spy along  
fracture surface  
↓ 20 yds down then from  
lepe

CB 77 34

060/80N contact

↳ may also be a full  
questionable  
stickerside

deviate fractures parallel  
to contact

basalt is up faulted

↓  
20 yds down then into deviate  
again - contact not seen

contact diorite LN  
result to S

- contact is v. sharp  
~~with no fractures~~

contact is a 2m gap!

MAY 24/77 sunny & nice

- broke up camp
- traveled along upper part  
road to SE - got several  
silt samples
- approximated intrusion contour



THE SULPHIDE ASSOCIATIONS :

1)  $\bar{c}$  Kspn in granite  
eg #24 Sep

- note that in #28 Kspn  
to increases quickly  
towards a fine grain mafic  
intrusion layer - although  
sulphide at this point were  
not abundant

2) mica content in granite  
perhaps the light colored  
to bronze colored mica  
content of the granite is higher  
proximal to sulphide enrichment  
of fracture! (although there  
doesn't seem to be any liquid  
connection in my mind)

3) sulphide fracture tend  
to 060/90 - in most cases  
in some cases 040/90

- note that Cam's high values 3.6/3-17  
roughly coincide  $\bar{c}$  fracture  
bands at EB27-14

Expend #126  
#127  
#128  
#129  
#130  
#131  
#132  
#133  
#134  
#135  
#136  
#137  
#138  
#139  
#140  
#141  
#142  
#143  
#144  
#145  
#146  
#147  
#148  
#149  
#150

4) note the highly altered granite sample # 15 which is close to the v. high sulphide fractures → # 14

- the same types of alteration appear in the river valley to the SW - several times eg # 33
- here it appears to be the ~~product~~ result of intense shearing allowing pervasive weathering.

5) BASALT - close to granite the fractures often contain sulphide py + sometimes cpy  
- this not seen often

eg

CONCLUDE: sulphides appear to originate from ascending solutions - depositing in fracture zones primarily in the granite & to a much lesser extent in the basalt  
- no estimate of thickness of intrusion ~~can~~ can be made from these observations

# Basalt

- generally fine grained  
but does vary extensively  
from

a) amygdaloidal - small <sup>(zeolites & chalcite veins?)</sup> rounded  
to wavy  
- often abundant

b) ~~is~~ porphyritic in nature  
c) small angular <sup>white</sup> feldspathic  
crystals

c) tuffaceous (?) basalt (eg #19)  
appear to have small  
rounded particles

larger  
amygdaloidal

d) nodular basalt - large  
nodules of (4" diameter) in  
basalt - altered rock  
- sometimes with core of  
actinolite  
- chemically resistant

→ suggest may be porphyritic

e) qtz nodules in basalt  
(eg #20) - qtz is dark green  
massive mineral - together  
surrounded by green  
alteration rim

→ there may be some ~~error~~ <sup>as a result</sup>  
of these 2 sulphides  
some float <sup>of all weights</sup> <sub>found</sub>  
contains insoluble &  
perhaps finely disseminated  
in by in the apt

A) content of bould varies from  
a trap rock to dacite  
to even perhaps a shyodacite