

Sept 15/76

841241  
Ice River

Clear

Ice River Area  
- saddle between Zn  
Mtz & Mt Manganese

- ~ 8750' BGS-15L

BG 290-300

- neph syenite, close  
to contact

- more mafics nearby,  
probably wollastonite?

px → 800-1000 cps  
Narrow zone, jaspers (?)

20' wide; high cps  
over 5'

- talus below Manganese Mtn  
in Sodalite Creek → 800'

→ perovskite neph syenite  
feldspar weaker white &  
neph is grey. Px is  
aligned (parallel)

Mafics 5% - 30%

- B.G. ~ 150-250

Biotite rich rock  $\rightarrow$  biotite  
up to 30% some nepheline  
& feldspar (???)  
Sample ①

Sample ②  $\rightarrow$  sodalite

Sample ③  $\rightarrow$  dark grey to  
black: light grey  
clots of feldspar,  
neph + minor px  
surrounded by black  
pyroxene (Schisto) +  
some honey sphere  
- area near impact of  
leucocratic + melanocratic  
syenite; lots inclusions  
- from talus

Carbonatite?

④ - near sodalite creek  
- rests on green, finely  
laminated argillaceous +  
calcareous sediment (?)  
- flow bands in carbonatite

\*  $\rightarrow$  B. G.  $\sim$  700-300  
One spot 1' x 3' has  
B.G. 500 cps with

maximum 4000 cps

in one spot only a few rocks in area.

- Assay sample

Across Sodalite Creek,

B. G. 700-300 cps

- leucocratic gneissite, mafic  
minor, in places with  
fragments

- lots float of mafic  
rock to north east

Sept. 16/76

- clear

Ice River Area

- Llanada - Plat

- Dropped off at 8750',  
in saddle S. of  
Mangrove Mtn

Zeolite Syenite?

- 150' below saddle,  
southerly side

- Saddle is S. E. of  
Mangrove Mtn.

- Greenish brown, pitted,  
lumpy & rotten, with  
irregular fragments &  
clots (Some are px  
fls up to 3" across)

- feldspar, px

- zeolites (needles) mainly  
in vuggy spots

320 LX Pacific  
Sept 16/76  
Ice River

Plot - Lomenda

Air borne with GAM 1,  
GSA-SI crystals, &  
Hewlett & Packard chart  
recorder

- Job B.
- ~~Ground~~ Ground clearance <sup>50'</sup>
- velocity - 40
- chart speed - 10 sec
- time constant

(1) - start

(2) - scale change to  
3K

(6) - over S.B. creek  
- Mc Kay

(7) - Unit V2

(9) - 10K

(10) - Majic complex

(11) - Carb contact

(12) - Carb spur

- (13) out of Carb 2  
L.M.C.
- (14) - 3K
- (15) - # 8  
Gourmet Mtn Supper.
- (17) - McKay  
3K
- (18) - Ice Creek
- (19) - Supper
- (20) End # 1
- 

Traverse 2

(1) Start

35 mph

(6) - S.B. Creek

8 - Contact zone

→ # 2 & 4

(10 1/2) - L.M.C.

(11) - to 3K

- contact

(12) - 1000 scale  
- carb.

320 LX Pacific Rim Photo  
 (13) to (36) - carb  
 with talus on top  
 (36) - carb.

(15) - 300  
 Contact LMC #2

(16) - Cirque Badwell  
 Peak

(17) - to carbonates

(18) - L<sub>100</sub>  
 - E<sub>100</sub>.

T - 3

(1) - 100 scale  
 - start

(4) - Start S. B. Cirque

(6) - contact

(9) -> Unit 12

(10) 1/2 -> ~~Unit~~  
 L<sub>100</sub>  
 - cirque

(71) Carb.  
3000 A

(13) - talus LMC

(13 1/2) - Carb.

(14 1/2) - 300

(15) - Stop.

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T 41

J ~ 1000 K

24.

(10 1/2) - LMC

(11)

(13) - talus LMC

(13 1/2) - Carb.

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T 5  
T h. Δ

(11) contact

(13) - end



T 6  
 Th f 300  
 (13) - end

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T 7  
 U f 1000 side  
 7300'

~~(16)~~ O.C. of L.M.C.

- (1)  
 (2) - O.C., snow & talus  
 (3) - Carb.  
 (4) - Contact with #6
- 

T 8  
 mouse Creek

8000' U.  
 f IK

" " "  
 (3) Jack "  
 (4) 7500'

Clear sunny, no wind  
55°F

15 Sept. '76

## SODALITE CK TRAVERSE

(A) & (O) Helicopter landing site between  
manganese Mt & Zinc Mt in  
Unit #13

17 photo # ~~18~~ Mt Robinson telephoto

photo #19 carbonatite red brown  
cutting leucocratic n.s. #13  
below Aquila Mt as seen  
from rdge @ (O) telephoto

photo # ~~18~~ 16 normal view of photo #17  
Mt Robinson @ extreme left (?); Otterland  
carbonates, med gy.

(1) 230cps

(2) location

photo # ~~20~~ 21 leucocratic neph. syenite  
dark gray, nepheline  
lt gray, sodic feldspar (?)  
smk blk, pyroxene, kaeserite or aegite

photo ~~20, 21~~ ~~blanks~~ 21, 22 cxi neph syen  
Unit #13

photo 24 coarse xl laths of feldspar  
in leuc. neph. syen.

(2) leuc neph syen., c.xl

15-09-76

2

Photo 25 flow banded ijolite as float block. upper part is leuc. next sy.

③ variety of ijolite collected on float. good ijolitic texture  
=a. Subhite

④ carbonatite or inclusion Photo # 26  
up to 2000 cps; average 300  
anomalous

white to light + grey green; mXl 1/2-1mm  
sucrosic w/ cXl  $\leq$  10mm.  
flow banded on centimetric scale (see photo)  
flowage cuts adjacent siliceous rock.  
contacted; nearly vertical: green laths  
on actinolite (?) present. appear poorly  
aligned

Sample No I.C. - 4 assay  
for uranium

⑤ Jacupirangite, bk, magnetite,  
collected in situ

< 0.001% U  
0.002% Th

16-09-76

F.W. PLUT & M. Lomenda

Radiometric Detail of ICE  
RIVER ALKALINE COMPLEX

~~Photo #26 Carbonate @~~

afternoon ground reconnaissance:

⑥ Helicopter landing site

⑦ Jacuprangite outcrop about 150'  
along ridge crest. sampled, black,  
magnetic, rotten; difficult to collect  
solid sample, outcrops between  
urtite above and mesocratic  
neph. syen below. Not shown  
on Currier's map.

16-09-76

~~(7)~~ Photo stop; Photo # 29  
Urtite w/ fragments of blk jacup.  
located @ contact of gne & Unit 10

[8] Urtite sample, lt gray-wh.  
vxl, neph  $\gg$  wollastonite =  
pyrox  $\gg$  sphene  $\gg$  calcite

(9) Mesocratic met. gne (?)  
looks a lot like ijolite.  
mapped as Unit 12. dark gray,  
m xl salt & pepper colored

# ICE RIVER LAYERED MAFIC COMPLEX

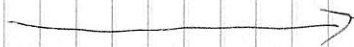
|                    | (5)   | (6)  | (7)                                    | (8)   | 9   |
|--------------------|---|--|--|---|---|
|                    | Jacupirangite                                       | Mela-isolite   | (Garnet)<br>Melanitic Ijolite          | Ijolite   | Urtite  |
| Essential minerals | black magnetite 18-18%<br>pyroxene 70%<br>nepheline | biotite, v. coarse 15-35%<br>titanaugite 40%<br>nepheline 10-25% | titanaugite 30%<br>nepheline 25-50%    | titanaugite 30-45%<br>nepheline 40-60%            | pyroxene 10-20%<br>nepheline >65%                     |
| Accessories        | magnetite<br>& sphene, honey<br>& phlogopite        | opagus 5-10%<br>sphene 0-10%                                     | melanite<br>garnet 10%<br>biotite 3-5% | <del>melanite</del> 10%<br>bio 5%<br>sphene .5-6% | wollastonite 0-10%<br>sphene 2-4%<br>canorinite .1-3% |

ijolite texture: cubic nepheline enclosed in stubby laths of pyroxene

# ICE RIVER ZONED SYENITE COMPLEX

|                 | (11)  | (12)   | (13)                            | (14)                            |
|-----------------|-------|--|---------------------------------|---------------------------------|
| Contact syenite |       | mesocratic to<br>melanocratic<br>neph. syen. | Leucocratic<br>nephelin syenite | Sodalite-rich<br>nephelin syen. |
| feldspar        | 75%   | K feldspar 0-30%                             | feldspar 40-80%                 | feldspar 45-70%                 |
| nepheline       | 0-25% | Na fxs 0-4%                                  | nepheline 0-30%                 | Sodalite 15-20%                 |
| pyroxene        | 0-20% | orthite 0-30%                                | pyrox 0-8%                      | acmite 4-8%                     |
|                 |       | pyrox 20-40%                                 | sodalite 5-13%                  | canonite 1-12%                  |
|                 |       | nepheline 10-25%                             | canonite 2-12%                  | nepheline 0-20%                 |
|                 |       | Kaersutite 0-20%                             | Kaersutite 0-12%                |                                 |

Very dark



gray



Kaersutite, rounded subhedral grains, as chains or intergrown with pyroxene & biotite  
 An amphibole in series w/ barkevikite with loss of Ti  
 acmite,  $NaFe^{3+}(Si_2O_6)$ , slender prismatic X's; brown to green (a variety of aegirite)