

676074

Endako

93K/03

January 5, 1981

Mr. E.T. Kimura
Placer Development Ltd.
P.O. Box 49330 (Bentall #4)
Vancouver, B.C.
V7X 1P1

Dear Ed:

Enclosed you will find the results of XRF and chemical analyses of the porphyritic granite dyke and adjacent dark rock collected in the Denak zone during my visit to Endako Mine on June 17, 1981.

The dark rock is significantly lower in SiO_2 and K_2O and higher in mafic constituents, i.e. FeO , Fe_2O_3 , MgO and CaO than porphyritic granite. The dark rock does not appear to be a chilled phase of P.G. Its composition is ~~close~~ ^{core} to an average granodiorite vs. a quartz monzonitic composition for the P.G. The dark rock probably is a discrete intrusive unit of andesitic composition that fortuitously follows the P.G. - Endako Q.M. contact in the area examined.

We have a norm computer program that is being modified at present but will be available shortly to give some estimated normative compositions from the analyses. If you have modal data from the P.G. and dark phase it would be useful. If not, I'll prepare thin sections from the specimens. I'm quite sure that the rocks are compositionally distinct.

I hope that the foregoing is useful to you. I'll send along any further data when more work is done on the specimens. I have the pulps if you wish to do any further analyses.

Best regards,

Ken Dawson

KD/wc

Encl.



Your file Votre référence


Our file Notre référence

GSC Field Party
General Delivery
Rock River YT
Y0B 1S0
July 9 1981

Mr. S. Abbey
CLTS
Geological Survey of Canada
601 Booth St
Ottawa Canada K1A 0E8

Dear Sid:

Enclosed please find two specimens;
DY 1909, 1910. They are granitic dyke rocks from
Endako Mine BC. I want to determine if the
dark rock is a chilled phase of the light
one, hence require a standard major element
analysis of both in order to compare compos-
itions.

Thanks very much

H.M. Dawson.

| | | | | | |
|----|------------|-------|----|-------|-------|
| BA | 0 - 0.3000 | 0.002 | 2 | 0.002 | 0.002 |
| NI | | | | | |
| RB | 0 - 0.0600 | 0.002 | 1 | 0.002 | 0.002 |
| SR | | | | | |
| ZN | 0 - 0.0200 | 0.002 | 10 | 0.002 | 0.002 |
| ZR | | | | | |

R.M. ROUSSEAU

* DETERMINATION ON FUSED DISC: 1G SAMPLE + 5G LI2B4O7 + 0.3G LIF,
SINGLE READING OF 20 MIN./DISC,
MATRIX EFFECTS CORRECTED BY ALPHA COEFFICIENTS.

ENERGY, MINES & RESOURCES
GEOLOGICAL SURVEY OF CANADA
ANALYTICAL CHEMISTRY LABORATORY
J.L. BOUVIER, SUPERVISOR.

REPORT OF ANALYSIS

DATE: 23/12/81

NAME: K.M. DAWSON

PROJECT: 000000

BATCH: 74-81

| | DY 1910 | DY 1909 |
|----------|------------|------------|
| SPL. NO. | 1 | 2 |

*DY 1909: Porphyritic granite dyke, located in Denak extension area
of Kudako pit. Collected by KM Dawson and ET Kimura
June 17 1981*

| | | |
|-------|------|------|
| SI02 | 60.2 | 69.9 |
| TI02 | .75 | .37 |
| AL203 | 16.0 | 14.6 |
| CR203 | | |
| FE203 | 3.0 | 1.5 |
| FE0 | 3.4 | .9 |
| MNO | .17 | .05 |
| MGO | 2.76 | .70 |
| CAO | 4.94 | 2.07 |
| NA2O | 3.4 | 3.4 |
| K2O | 2.64 | 4.25 |

*DY 1910: Dark fine grained rock marginal to PG dyke. Either
discrete intrusive unit (andesite?) or chilled border phase
of P.G. dyke.*

| | Dark rock | Porphyroite dyke |
|-------|-----------|------------------|
| SI02 | 60.2 | 69.9 |
| TI02 | .75 | .37 |
| AL203 | 16.0 | 14.6 |
| CR203 | | |
| FE203 | 3.0 | 1.5 |
| FEO | 3.4 | .9 |
| MNO | .17 | .05 |
| MGO | 2.76 | .70 |
| CAO | 4.94 | 2.07 |
| NA2O | 3.4 | 3.4 |
| K2O | 2.64 | 4.25 |

K.G mode (KMD thesis)

'orthoclase' 45% assume Or82 like Endako Q.Monz.

quartz 30%

plagioclase (An7) 20%

biotite 5%

zircon }

apatite } minor

sphene } accessories

Kapton { Orthoclase .45 x 82
Albite .45 x 18

plag { Anorthite .20 x 83
Albite .20 x 17

Qtz 30
Biot 5

| | | |
|----------|------|------|
| H2OT | .8 | .7 |
| CO2 | 1.2 | 1.0 |
| P2O5 | .33 | .14 |
| S | 0.00 | 0.00 |
| VOLATILE | | |

Recalculated mode:

| | |
|------------|--------|
| orthoclase | 36.9 % |
| albite | 11.5 |
| anorthite | 16.6 |
| quartz | 30.0 |
| biotite | 5.0 |
| | <hr/> |
| | 100.0 |

| | | |
|----|------|------|
| BA | .107 | .111 |
| NI | | |
| RB | .005 | .005 |
| SR | .052 | |
| ZN | .007 | .004 |
| ZR | | |

TOTAL 99.8 99.8

COMMENTS:

- ALL ANALYSIS BY XRF FUSED, EXCEPT FEO, H2OT CO2, S BY RAPID CHEMICAL.
- ANALYSIS BY OPTICAL EMISSION ARE EXPECTED TO BE MORE ACCURATE AT LOWER CONCENTRATIONS, I.E. SI, AL, FE, MG, CA, NA, WHEN LESS 1.0% AND TI, MN WHEN LESS 0.5%.
- CR203, NI, SR, ZR VALUES ARE REPORTED ONLY WHEN GREATER THAN 0.05%.
- VOLATILE: ALL COMPOUNDS LOST ON IGNITION OTHER THAN CO2 AND H2O.

ACCURACY OF XRF METHOD*

DATE: 23/12/81

| ELEMENT | CALIBRATION RANGE % | TOTAL MAX. ERROR ABSOLUTE + RELATIVE % | | DETERMINATION LIMIT | STANDARD DEVIATION |
|---------|---------------------|-------------------------------------------|---|------------------------|-----------------------|
| SI02 | 0 - 100 | 0.30 | 1 | 0.30 | 0.35 |
| TI02 | 0 - 3 | 0.01 | 1 | 0.01 | 0.03 |
| AL203 | 0 - 60 | 0.30 | 1 | 0.30 | 0.31 |
| CR203 | 0 - 4 | 0.01 | 1 | 0.01 | 0.01 |
| FE203 | 0 - 90 | 0.06 | 1 | 0.06 | 0.12 |
| FEO | 0 - 30 | 0.03 | 2 | 0.03 | |
| MNO | 0 - 1 | 0.01 | 1 | 0.01 | 0.03 |
| MGO | 0 - 50 | 0.16 | 1 | 0.16 | 0.17 |
| CAO | 0 - 35 | 0.05 | 1 | 0.05 | 0.07 |
| NA2O | 0 - 10 | 0.10 | 2 | 0.10 | 0.16 |
| K2O | 0 - 15 | 0.03 | 1 | 0.03 | 0.06 |
| H2O | 0 - 5 | 0.05 | 5 | 0.05 | |
| CO2 | 0 - 20 | 0.02 | 3 | 0.02 | |
| P2O5 | 0 - 1 | 0.01 | 1 | 0.01 | 0.01 |
| S | 0 - 3 | 0.02 | 5 | 0.02 | |
| BA | 0 - 0.3000 | 0.002 | 2 | 0.002 | 0.002 |
| NI | | | | | |