

GSC 91-24	Biotite 40.1 ± 0.6 Ma	From the Mission Ridge Pluton, here a weakly foliated, medium to coarse-grained quartz monzonite, which intrudes the Bridge River schist.
	Wt % K=7.066 Rad. Ar=1.113x10 <sup>3</sup> cm <sup>3</sup> /g % Atmos. Ar=7.2	(92 J/16) Roadcut in Bridge River Canyon, B.C.; 50°47'30" N, 122°13'30" W; UTM zone 10U, 554750E, 5625250N; sample MC-89-1. Collected by M. Coleman and interpreted by R. Parrish.
K-Ar 4162		
	From a foliated, protomylonitic leucocratic hornblende-biotite quartz monzonite.	
(92 H/6)	From a ridge outcrop, elevation 2600 feet northeast of Hope, B.C.; 49°27.96'N, 121°23.32'W; UTM zone 10U, 616750E, 5480300N; sample MC-89-119. Collected by R. Parrish and M. Coleman and interpreted by R. Parrish.	This sample has a U-Pb zircon age of 47.5 ± 0.5 Ma. See GSC 91-28 for interpretation.
GSC 91-27	Biotite 45.5 ± 0.8 Ma	
	Wt % K=5.575 Rad Ar=9.993x10 <sup>6</sup> cm <sup>3</sup> /g % Atmos. Ar=7.1	
K-Ar 4214		
	From a quartz monzonite.	
(92 J/16)	From a roadcut in Bridge River Canyon, B.C.; 50°47'10" N, 122°11'00" W; UTM zone 10U, 557500E, 5627000N; sample MC-89-3. Collected by M. Coleman and interpreted by R. Parrish.	
GSC 91-25	Biotite 66.9 ± 1.2 Ma	
	Wt % K= 6.423 Rad. Ar= 1.701x10 <sup>3</sup> cm <sup>3</sup> /g % Atmos. Ar= 9.4	From the Mission Ridge Pluton, here a strongly foliated, mylonitized medium to coarse-grained quartz monzonite, which intrudes the Bridge River schist. This sample has a U-Pb zircon age of 47.5 ± 0.5 Ma. See GSC 91-28 for interpretation.
K-Ar 4212		
	From the Mission Ridge Pluton, here a weakly foliated, medium to coarse-grained quartz monzonite, which intrudes the Bridge River schist.	
(92 J/16)	From a roadcut in Bridge River Canyon, B.C.; 50°47'30" N, 122°13'30" W; UTM zone 10U, 554750E, 5625250N; sample MC-89-1. Collected by M. Coleman and interpreted by R. Parrish.	
	This sample has a U-Pb zircon age of 47.5 ± 0.5 Ma. See GSC 91-28 for interpretation.	
GSC 91-26	Hornblende 53.8 ± 2.8 Ma	
	Wt % K=0.833 Rad Ar=1.769x10 <sup>6</sup> cm <sup>3</sup> /g % Atmos. Ar=17.5	From a quartz monzonite. From a roadcut in Bridge River Canyon, B.C.; 50°47'10" N, 122°11'00" W; UTM zone 10U, 557500E, 5627000N; sample MC-89-3. Collected by M. Coleman and interpreted by R. Parrish.
K-Ar 4213		
	This sample was from the Mission Ridge Pluton, here a strongly foliated, mylonitized medium to coarse-grained quartz monzonite, which intrudes the Bridge River schist. This sample has a U-Pb zircon age of 47.5 ± 0.5 Ma.	

These six K-Ar dates (GSC 91-23 to 28) are from variably deformed granitic rocks which intrude upper greenschist to lower amphibolite facies metamorphic rocks of either the Bridge River schist (GSC 91-25,26,27,28) or the Custer gneiss (GSC 91-23,24). Coleman (1990) has interpreted these metamorphic rock units to be the same, displaced dextrally about 100 km by the younger Fraser River fault. Granitic rocks have U-Pb zircon ages of either 47.5 Ma (MC-89-1,3; Coleman 1990) or 68.5 Ma (sample MC-89-119 unpublished data, R. Parrish). The K-Ar ages of hornblende and biotites from these rocks are, with two exceptions, older than crystallization ages and the explanation for this must be excess argon. It is difficult to ascribe any significance to the dates because of this. The biotite ages of 45.5 Ma for GSC 91-27 and 40.1 Ma for GSC 91-24 could represent cooling ages which would be consistent with the known geological and age relationships.

## REFERENCE

## Coleman, M.E.

1990: Eocene dextral strike-slip and extensional faulting in the Bridge River terrane, southwest British Columbia; M.Sc. thesis, Carleton University, Ottawa, 87 p.

GSC 91-29 Biotite  
20.6 ± 0.6 Ma

Wt % K= 4.841  
Rad. Ar= 3.90x10<sup>6</sup> cm<sup>3</sup>/g  
% Atmos. Ar= 83.1

K-Ar 3955

From a fresh, medium grained hornblende biotite granodiorite intrusion.

(92H/12) Located on the shore of the east side of the north end of Harrison Lake, 1.3 km on a bearing of 53° from Doctors Point, on the west side of the lake, B.C.; 49°40'03", 121°57'50"; UTM zone 10U 574890E, 5502020N; sample MV85-492. Collected and interpreted by J.W.H. Monger.

This sample is from the northeastern extension of the Doctors Point pluton on the west side of Harrison Lake, K-Ar dates by Ray (in press) range from 19.3 Ma (Bi) to 20.4 Ma (Hb). It is younger than the Chilliwack Batholith and satellitic stocks (ca. 24 Ma) and slightly older than the Mount Barr Batholith (ca. 18 Ma) located about 50 km to the south-southeast. The intrusion is elongate in a northeast direction, which is the orientation of numerous faults and linears in the region. On other evidence, these structures are of late Tertiary age (Monger, 1989).

## REFERENCES

## Monger, J.W.H.

1989: Geology of Hope and Alsea areas, British Columbia; Survey of Canada, Maps 442-1989; scale 1:250 000.

## Ray, G.E.

in press: Vein gold mineralization related to r plutonism, Harrison Lake, British Columbia Economic Geology.

GSC 91-30 Biotite  
100.7 ± 1.4 Ma

Wt % K= 7.096  
Rad. Ar 2.855x10<sup>3</sup> cm<sup>3</sup>/g  
% Atmos. Ar= 4.4

K-Ar 3956

(92 H/11) From a muscovite-biotite gneiss located on the northwestern side of the Coquihalla River valley, ele feet, 1.5 km southeast of the south end of Falls Lake, B.C.; 49°12'10" N, 121°03'50" W; UTM zone 10U, 639960E, 5496120N; sample 881a. Collected by J.W.H. I

This sample is from a suite of muscovite-biotite Cretaceous plutons that occur on the west side of the Eagle Plutonic Complex (and its northern continuation the Mount Lytton Complex (Mong 1989). It is flanked on the west-southwest by the Passtrata across which are Triassic through early Late Cretaceous strata of the Methow trough. It is the westernmost, component of the Eagle Plutonic Complex, most components of which are latest Jurassic (ca. 110 Ma) in age based on extensive U-Pb dating (Greig 1989). The K-Ar date herein probably represents a cooling age as Greig has U-Pb dates of ca. 110 Ma from

## REFERENCES

## Greig, C.J.

1989: Geology and geochronometry of the Eagle Plutonic complex, Coquihalla area, southwest British Columbia; M.Sc. thesis, University of British Columbia, 423 p.

## Monger, J.W.H.

1989: Geology of Hope and Ashcroft areas, British Columbia; Geological Survey of Canada, Maps 41-1989 and 42-1989; scale 1:250 000.