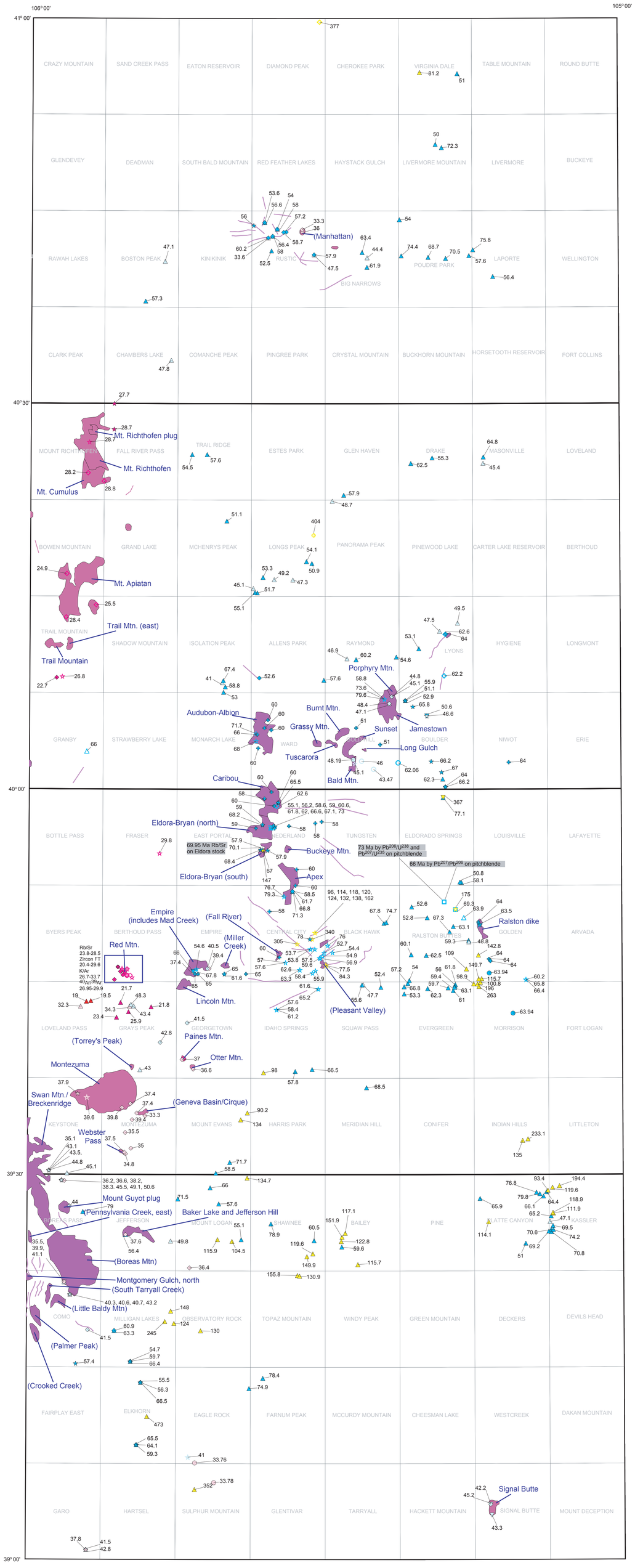
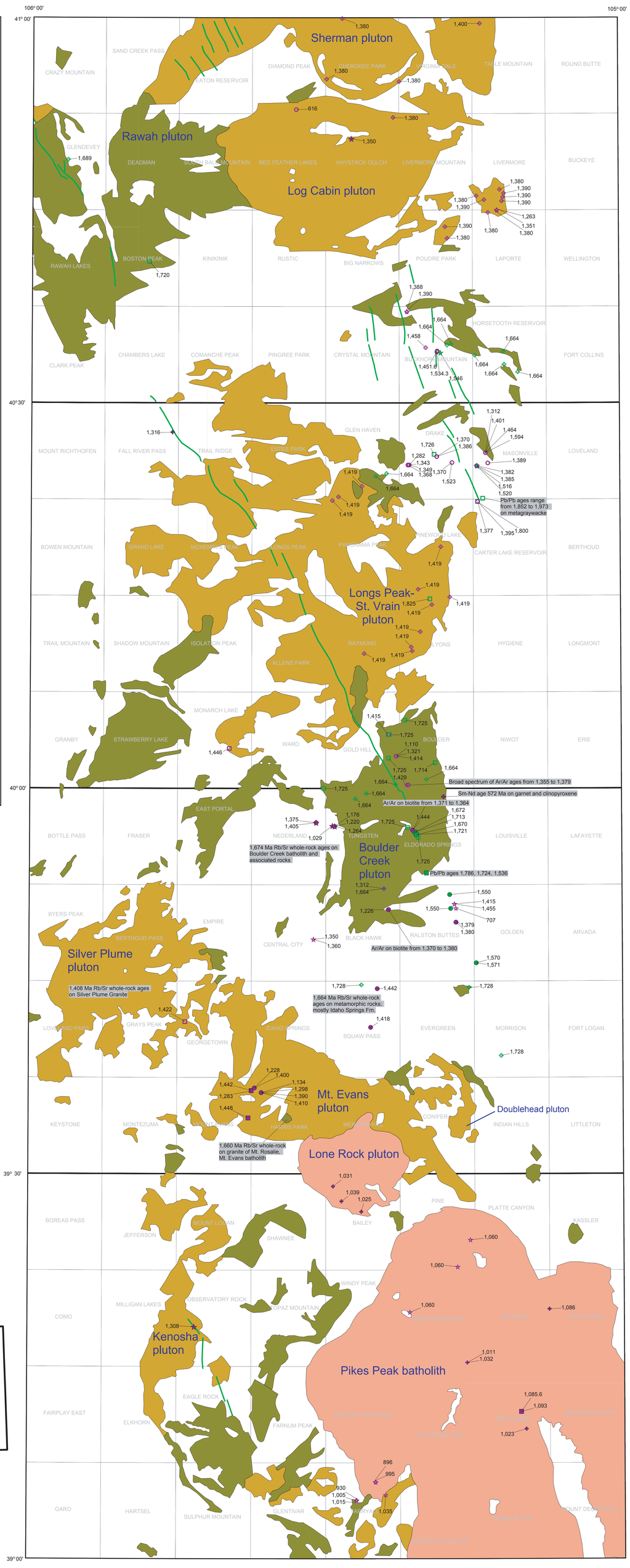
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT 2006-1051
SHEET 1 of 2
Version 1.0

PHANEROZOIC



PROTEROZOIC



MAP EXPLANATIONS

PHANEROZOIC

Tertiary and Cretaceous intrusive rocks

- Tmi 40 - 20 Ma intrusive rocks
- TKi 80 - 40 Ma intrusive rocks

Phanerozoic dikes

- Tbbi Basaltic or mafic rocks
- Tmi Tertiary(?) intrusions
- TKi Tertiary and (or) Cretaceous intrusions

Ages in millions of years (Ma)
(Open symbols indicate vague or inexact locations)

$^{40}Ar/^{39}Ar$ ages
- 30 - 40
- 40 - 50
- 50 - 80

Rb/Sr ages
- 20 - 30
- 50 - 80

K-Ar ages
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 80
- 80 - 540

U/Pb ages
- 50 - 80

Zircon Fission Track (FT) ages
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 80

Sphene Fission Track (FT) ages
- 30 - 40
- 40 - 50
- 50 - 80
- 80 - 540

Apatite Fission Track (FT) ages
- 0 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 80
- 80 - 540

PROTEROZOIC

Proterozoic intrusive rocks

- Yp Pikes Peak Granite (approx. 1,080 Ma)
- Yg Middle Proterozoic granitic rocks (approx. 1,400 Ma)
- Xg Early Proterozoic granitic rocks (approx. 1,700 Ma)

Proterozoic dikes

- Yam Middle Proterozoic dikes

Ages in millions of years (Ma)
(Open symbols indicate vague or inexact locations)

$^{40}Ar/^{39}Ar$ ages
- 540 - 1,500
- 1,500 - 1,900

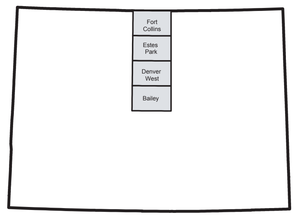
Rb/Sr ages
- 540 - 1,500
- 1,500 - 1,900

K-Ar ages
- 540 - 1,500
- 1,500 - 1,900

U/Pb ages
- 540 - 1,500
- 1,500 - 1,900

7 1/2' quadrangle boundary

30' x 60' quadrangle boundary



Index Map of Colorado
Map area shown with
1:100,000-scale quadrangles

SCALE 1:250 000
5 0 5 10 15 20 MILES
5 0 5 10 15 20 25 30 KILOMETERS

ISOTOPIC AGES OF ROCKS IN THE NORTHERN FRONT RANGE, COLORADO

Anna B. Wilson and Bruce Bryant

2006

Any use of trade names is for desciptive purposes only and does not imply endorsement by the U.S. Government.

This map was produced on request, directly from digital files, on an electronic plotter.

For sale by U.S. Geological Survey Information Services, Box 25286, Federal Center, Denver, CO 80225; 1-888-ASK-USGS.

GIS files and a PDF file are available online at http://pubs.usgs.gov/of/2006/