This satellite image is a portion of a mosaic of sixteen Landsat 7 scenes that cover parts of the State of Colorado. The scenes were acquired between October 1999 and October 2000. Landsat 7 is a medium-resolution, polar-orbiting satellite managed by the United States Geological Survey (USGS). The instrument is an eight-band spectrometer. This image is a false-color composite, which combines bands 5 (SWIR), 4 (near-IR), and 3 (Red) and displays them as red, green, and blue, respectively.

The appearance of shaded relief was created using the National Elevation Dataset, which is based on digital elevation models that have a resolution of 30 meters. The 2009 Ride The Rockies route was superimposed using the ESRI Data and Maps roads database in ArcInfo. Landsat 7 data are received, processed, and distributed by the USGS EROS Data Center in Sioux Falls, South Dakota. The EROS Data Center is the national archive for land remote sensing data, which includes aerial photography of the United States, elevation data, declassified satellite photography, and Landsat images. Information on the archive holdings may be obtained by contacting the EROS Data Center, Customer Services Department at 1-800-252-4547, email custserv@usgs.gov or browse http://earthexplorer.usgs.gov. The image on this poster may be downloaded for free from the USGS. Go to http://www.cr.usgs.gov/m/n/index.html to link to the download page.

**Quaternary—1.8 to 66 million years ago**
This is the geologic time period during which the present landscape formed. Elevation peaked and Several times, sculpting cirques (semicircular-shaped bowls at the heads of mountain valleys) and U-shaped valleys. Last major glaciers retreated about 12,000 years ago. Erosion of the surface during regional uplift—beginning 8 to 5 million years ago—shaped the present mountain landscape. Rifting (faulting) began about 20 million years ago, creating the Arkansas and San Luis Valleys.

- **Sedimentary rocks of Tertiary age** includes sandstone, siltstone, and coal, and minor limestone, gypsum, and evaporites (rilled rock fragments in a fine-grained matrix).
- **Igneous rocks of Tertiary age** includes extrusive rocks, such as basalt, rhyolite, and ash-flow tuffs (especially in the San Juan Mountains), and intrusive rocks with compositions similar to granite.
- **Metamorphic rocks** includes slate, schist, gneiss, and phyllite (rocks such as gneiss, schist, and quartzite).

**Jurassic and Triassic—146 to 251 million years ago**
Includes rocks as old as 200 million years. This was a time of widespread marine deposition when Colorado was intermittently below sea level.

- **Sedimentary rocks** includes sandstone, shale, and siltstone (rocks deposited in a near-surface environment).
- **Igneous rocks** includes basalt, rhyolite, and andesite (rocks such as basalt, rhyolite, and andesite).
- **Metamorphic rocks** includes slate, phyllite, and schist (rocks formed by the compaction and cementation of sediment).

**Mississippian to Cambrian—542 to 318 million years ago**
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**Permian and Pennsylvanian—318 to 251 million years ago**
Includes rocks as old as about 320 million years. During this time, rocks were uplifted to form the Ancestral Rocky Mountains, which were just as high and rugged as our present mountains. Erosion of older sediments resulted in deposition along mountain flanks and in basins.

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