Adams, Washington, and southern Idaho counties (Riggins)

The geology of the region between Riggins and Boise to the south reflects a long history of plate boundary interactions and terrestrial responses. Exposed along this route is the eastern edge of the Miocene Columbia River Basalt and associated sedimentary units, the western edge of the extensive plutonic rocks that comprise the late Cretaceous Idaho Batholith, and metamorphosed sedimentary and volcanic rocks of the Jurassic Seven Devils group.

During the Jurassic, an oceanic trench formed off the western margin of North American near the present western Idaho border. North America was moving west, away from the mid-Atlantic oceanic ridge. As the North American continental plate moved westward, the Pacific oceanic plate slid beneath it, and thus beneath the location of the future Idaho. Riding on top of the Pacific oceanic floor were numerous island arcs that eventually were emplaced onto the western margin of North America – prime examples of these emplaced volcanoes are the Seven Devils along Hells Canyon.

These rocks are visible in Hells Canyon, along US Hwy 95 outside of Riggins, and along State Hwy 55 and US Hwy 95 near New Meadows. Other geologic features that are visible along US Hwy 95 are Miocene Columbia River Basalts, deposited from fissure eruptions, and Miocene-Pliocene sedimentary units deposited as the result of stream blockage which occurred as streams were dammed up by basaltic flows.

Additional information on the Idaho Batholith can be found in the description of the geology of Boise County. For more information on plate boundaries and plate motions, please visit the USGS website http://geology.er.usgs.gov/eastern/tectonic.html. For more information on the Columbia River Basalts visit the University of North Dakota Volcano World website http://volcano.und.nodak.edu/vwdocs/volc_images/north_america/crb.html.