

IDENTIFICATION AND PLOTTING OF THE LINEAR FEATURES

This linear-features map was compiled for the U.S. Geological Survey's Radar Project. The linear features were compiled from Landsat satellite imagery for a comparison with linear features determined from a semicontrolled mosaic of side-looking airborne radar imagery of the Richfield 1° by 2° quadrangle (Litton Aero Service, 1979). The linear features observed on the radar imagery are not shown on the map.

Linear features occur on the Earth's surface as straight or slightly curved lines. These features often are referred to as linear trends or lineaments. The linear features shown on this map are not identified as to type or origin, although most probably represent fractures or fracture zones, including joints and faults. Fracture zones affect the movement of water and other fluids through the rocks.

The linear features were determined from visual inspection of false-color infrared composites of Landsat imagery at a scale of 1:500,000. The imagery was obtained from the Geological Survey EROS Data Center at Sioux Falls, South Dakota. The images were free of cloud cover and were enhanced to remove scan lines that tend to mask some of the features, including linear features.

Physiographic features are used to identify the linear features. These include straight segments of escarpments, ridges, canyons, and valleys, and ridge-and-valley topography of badlands. Vegetation growing on flood plains accentuates the configuration of shallow valleys in areas of low relief. On plains and broad slopes having slight local surface relief, tonal contrasts in color patterns indicating differences in vegetation, soils, or outcropping rocks helped in the recognition or extension of some of the linear features.

The linear features were plotted as dashed lines on transparent overlays on the Landsat images only in the locations where they were observed. Dashed lines were used because most of the linear features were observed as discontinuous lines. The most conspicuous, usually the longest, linear features were plotted first.

REFERENCES

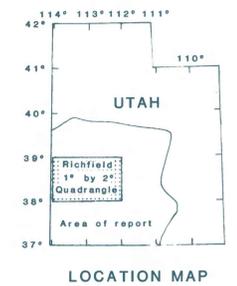
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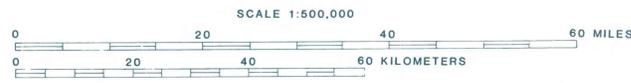
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- EXPLANATION**
- VALLEY-FILL DEPOSITS OF QUATERNARY TO LATE TERTIARY AGE--Clay to gravel. Based on Steven and others (1978) in Richfield 1° by 2° quadrangle, and determined from Landsat imagery elsewhere
 - CONSOLIDATED ROCKS, UNDIVIDED--Rhyolite to basalt of Quaternary and Tertiary age, sedimentary rocks of early Tertiary to Paleozoic age, and granitic and metamorphic basement rocks of Precambrian age
 - APPROXIMATE BOUNDARY BETWEEN THE BASIN AND RANGE PHYSIOGRAPHIC PROVINCE AND THE COLORADO PLATEAU PHYSIOGRAPHIC PROVINCE (Fenneman, 1946)
 - DIRECTION OF STRIKE AND DIP OF CONSPICUOUSLY TILTED SEDIMENTARY BEDS IN THE COLORADO PLATEAU
 - CONTACT
 - LINEAR FEATURE DETERMINED FROM LANDSAT IMAGERY
 - - - - - Less than 15 miles long
 - - - - - Greater than 15 miles long
 - PLAYA OR EPHEMERAL LAKE
 - BOUNDARY OF RICHFIELD 1° BY 2° QUADRANGLE



Base from U.S. Geological Survey State base map, Utah, 1:500,000, 1958.



Geology from Steven and others (1978) for Richfield 1° by 2° Quadrangle and determined from Landsat imagery by M.E. Cooley elsewhere.

LINEAR FEATURES DETERMINED FROM LANDSAT IMAGERY FOR THE RICHFIELD 1° BY 2° QUADRANGLE AND ADJACENT PART OF SOUTHWESTERN UTAH

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1984