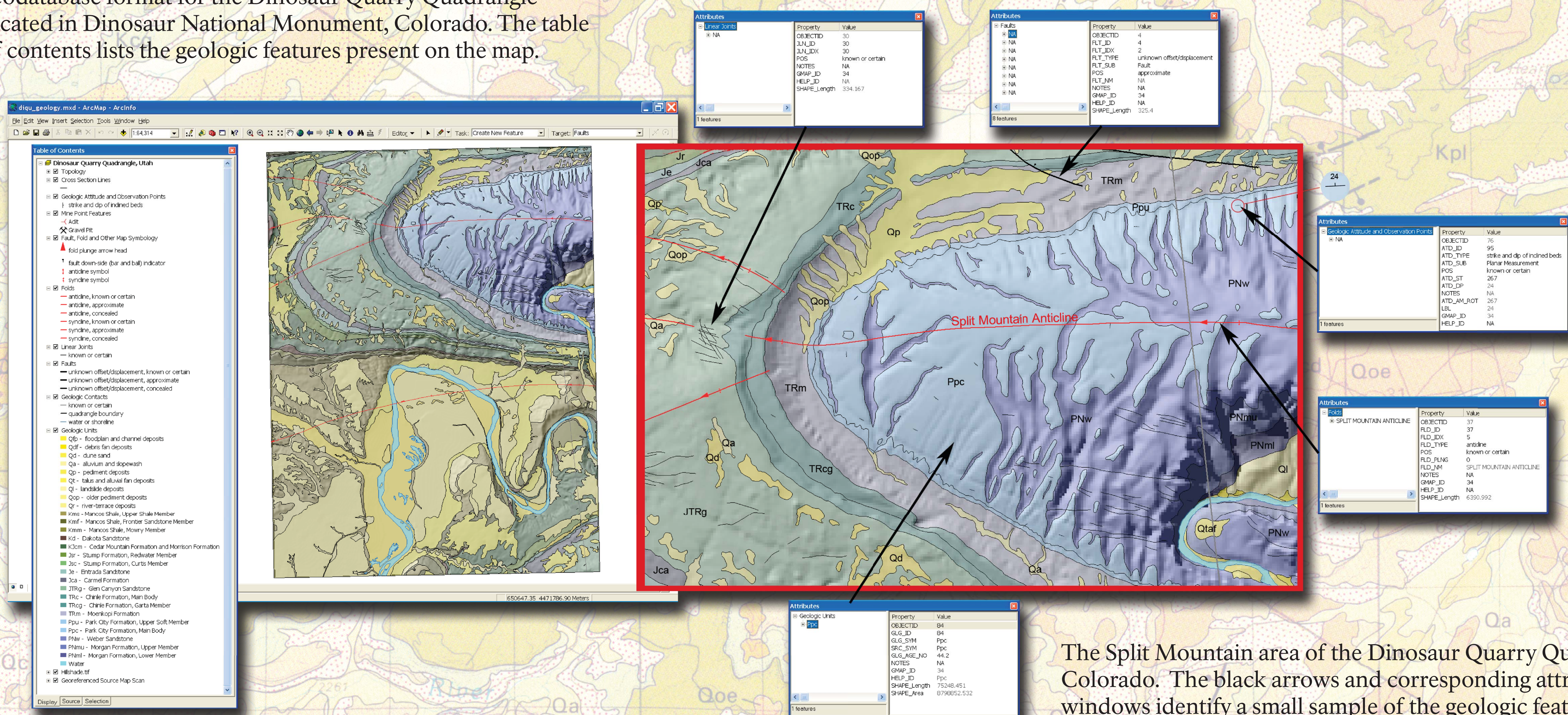


Prior to digitizing, geologic features (such as geologic units, faults, and attitude measurements) are identified on the source map and assigned to data layers. Lines on the source map are captured into a single data layer with limited attribution and later, differentiated into appropriate data layers. This method makes capturing coincident features, such as faults and geologic contacts possible. Lines that comprise the boundaries of polygonal geologic features, like geologic units, are used to construct polygons.

ArcMap screen captures showing two stages of digitization. The top figure shows the process of capturing geologic line features and the lower figure shows the attributes associated with geologic polygon features.

GRE team members parse components of the geologic data into assigned data layers and bring them together in a personal geodatabase. Point features are captured and attribution is completed for line and polygon features. All attribution follows the NPS GRE Geology-GIS Geodatabase Data Model's guidelines for capturing geologic data. The data model applies topology rules that ensure coincidence between geologic data layers and geometric properties within a single data layer. Relationships between tables and data layers are also established by the data model. Finally, each layer undergoes quality control.

ArcMap screen capture of the final deliverable GIS data in geodatabase format for the Dinosaur Quarry Quadrangle located in Dinosaur National Monument, Colorado. The table of contents lists the geologic features present on the map.



The Split Mountain area of the Dinosaur Quarry Quadrangle, Colorado. The black arrows and corresponding attribute windows identify a small sample of the geologic features and information contained in the GIS data.

The GRE GIS team delivers products in personal geodatabase, shapefile, and coverage formats. In keeping with the goal of preserving the original source map information, all source map text and graphics are captured in a help file providing detailed feature descriptions and keyword searchability. FGDC compliant metadata completes the package by recording reference, processing, and geospatial information.