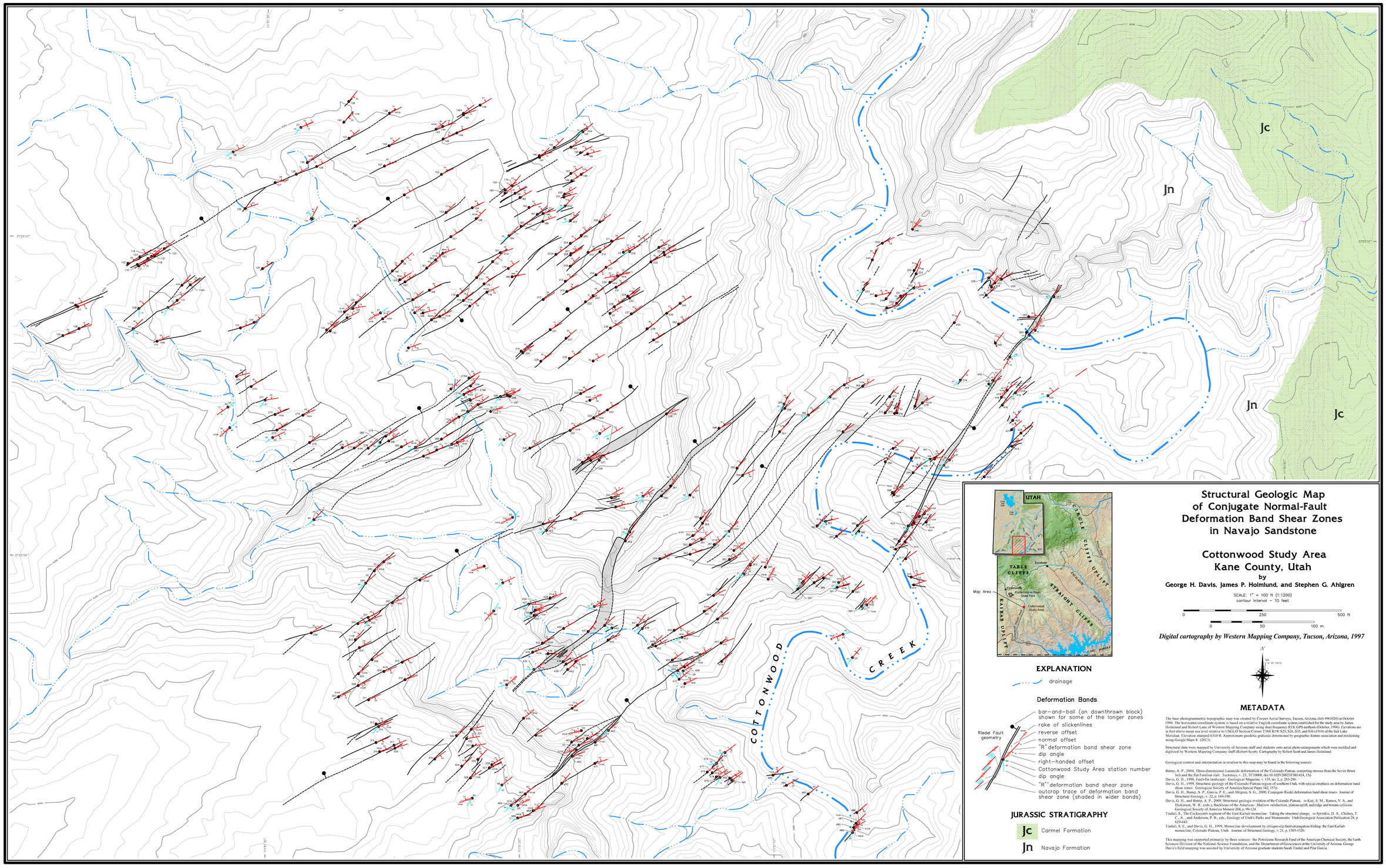

Structural Geologic Map of Conjugate Normal-Fault Deformation Band Shear Zones in Navajo Sandstone

Cottonwood Study Area
Kane County, Utah

by

George H. Davis, James P. Holmlund, and Stephen G. Ahlgren

SCALE: 1" = 100 ft (1:1200)
contour interval = 10 feet

0 250 500 ft

0 50 100 m

Digital cartography by Western Mapping Company, Tucson, Arizona, 1997

EXPLANATION

drainage

Deformation Bands

- bar–and–ball (on downthrown block) shown for some of the longer zones
- rake of slickenlines
- reverse offset
- normal offset
- "R" deformation band shear zone
- dip angle
- right–handed offset
- Cottonwood Study Area station number
- dip angle
- "R'" deformation band shear zone
- outcrop trace of deformation band shear zone (shaded in wider bands)

JURASSIC STRATIGRAPHY

Jc Carmel Formation

Jn Navajo Formation

N

METADATA

The base photogrammetric topographic map was created by Cooper Aerial Surveys, Tucson, Arizona, (Job #961026) in October 1996. The horizontal coordinate system is based on a relative English coordinate system established for the study area by James Holmlund and Robert Lane of Western Mapping Company using dual-frequency RTK GPS methods (October, 1996). Elevations are in feet above mean sea level relative to USGLO Section Corner T38S R19W S25, S26, S35, and S36 (1918) of the Salt Lake Meridian. Elevation stamped 6310 ft. Approximate geodetic graticule determined by geographic feature association and positioning using Google Maps ® (2013).

Structural data were mapped by University of Arizona staff and students onto aerial photo-enlargements which were rectified and digitized by Western Mapping Company staff (Robert Scott). Cartography by Robert Scott and James Holmlund.

Geological context and interpretation in relation to this map may be found in the following sources:

Bump, A. P., 2004, Three-dimensional Laramide deformation of the Colorado Plateau: competing stresses from the Sevier thrust belt and the flat Farallon slab: Tectonics, v. 23, TC10008, doi:10.1029/2002TC001424, 15p.

Davis, G. H., 1998, Fault-fin landscape: Geological Magazine, v. 135, no. 2, p. 283-286.

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Tindall, S., The Cockscomb segment of the East Kaibab monocline: Taking the structural plunge, *in* Sprinkle, D. A., Chidsey, T. C., Jr., and Anderson, P. B., eds., Geology of Utah's Parks and Monuments: Utah Geological Association Publication 28, p. 629-643.

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