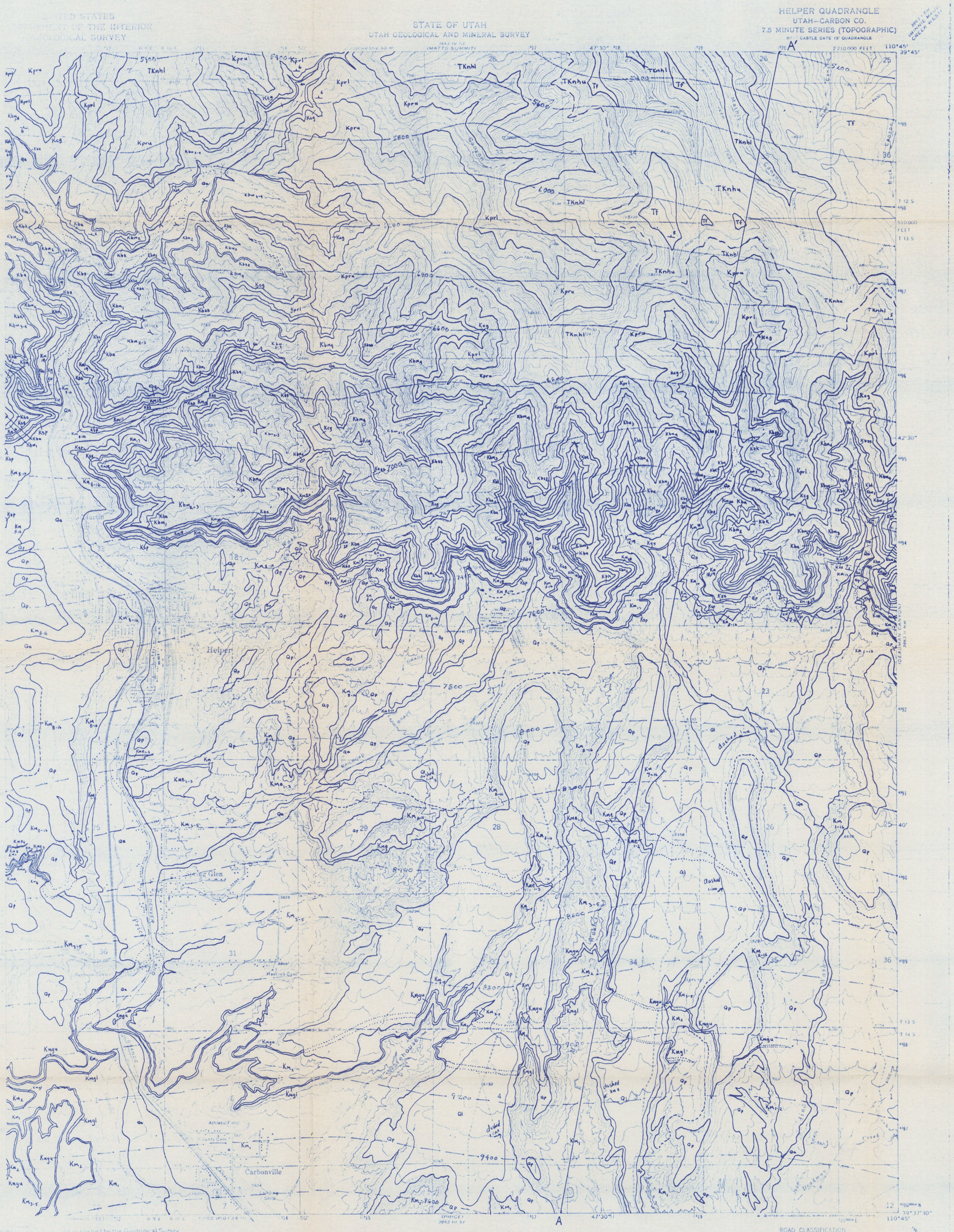



## EXPLANATION

**QUATERNARY**

- Qa — alluvium
- Ql — loess
- Qp — pediment gravels

unconformity

**TERTIARY**

- Tf — Flagstaff Limestone
- North Horn Formation
  - TKnhu — upper member
  - TKnhl — lower member

**CRETACEOUS**

- Price River Formation
  - Kpru — upper member
  - Kprl — lower member
- Kcg — Castlegate Sandstone
- Blackhawk Formation
  - $Kbm_4$ — Mudstone 4 Member
  - Kbss — Sunnyside Sandstone Member
  - $Kbm_3$ — Mudstone 3 Member
  - Kbk — Kenilworth Sandstone Member
  - $Kbm_2$ — Mudstone 2 Member
  - Kba — Aberdeen Sandstone Member
  - $Kbm_1$ — Mudstone 1 Member
  - Kbs — Spring Canyon Sandstone Member
- Star point Formation sandstone
  - Kss — Storrs Sandstone Member
  - Ksp — Panther Sandstone Member
- Mancos Shale
  - $Km_{1-28}$ — Undifferentiated mudstone beds
  - $Kme_{1-3}$ — Emery Sandstone Member
  - Kmgu — Garley Canyon Sandstone Member (upper)
  - Kmgl — Garley Canyon Sandstone Member (lower)

subsurface units

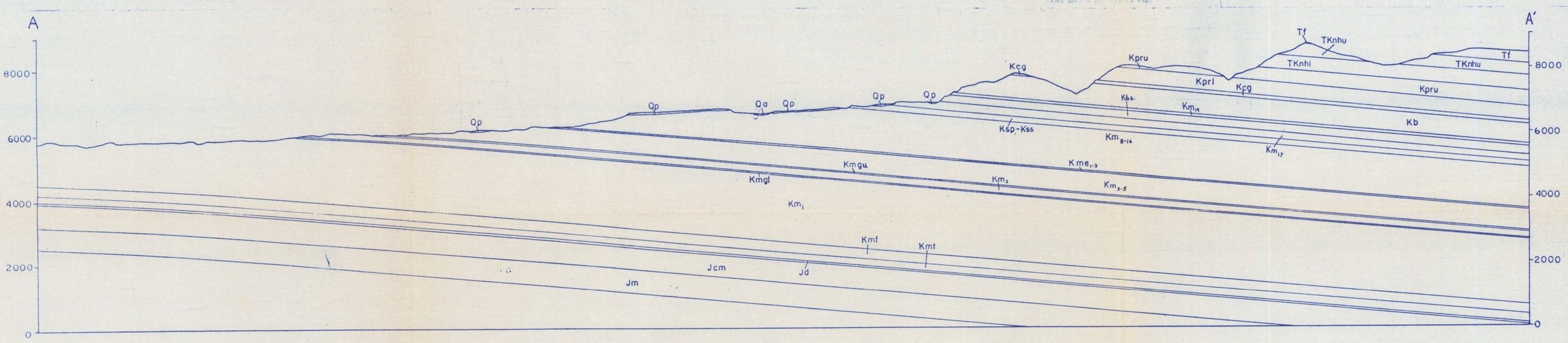
- Kmf — Ferron Sandstone Member
- Kmt — Tununk Shale Member

**JURASSIC**

- Jd — Dakota Sandstone
- Jcm — Cedar Mountain Formation
- Jm — Morrison Formation

SYMBOLS

- Dip and Strike
- Contact
- Inferred Contact
- Structure Contour Lines
- Inferred Structure Contour Lines
- Mine Portal




# INTERIM GEOLOGIC MAP OF THE HELPER QUADRANGLE, CARBON COUNTY, UTAH

by

Michael P. Russon

Utah Geological Survey Open-File Report 262 November 1992

Reference: Russon, M.P., 1987, Geology, depositional environments, and coal resources of the Helper 7½' quadrangle, Carbon County, Utah: Brigham Young University Geology Studies, v. 34, pt. 1, p. 131-168.

Thesis chairman: J. Keith Rigby

Field work during 1983