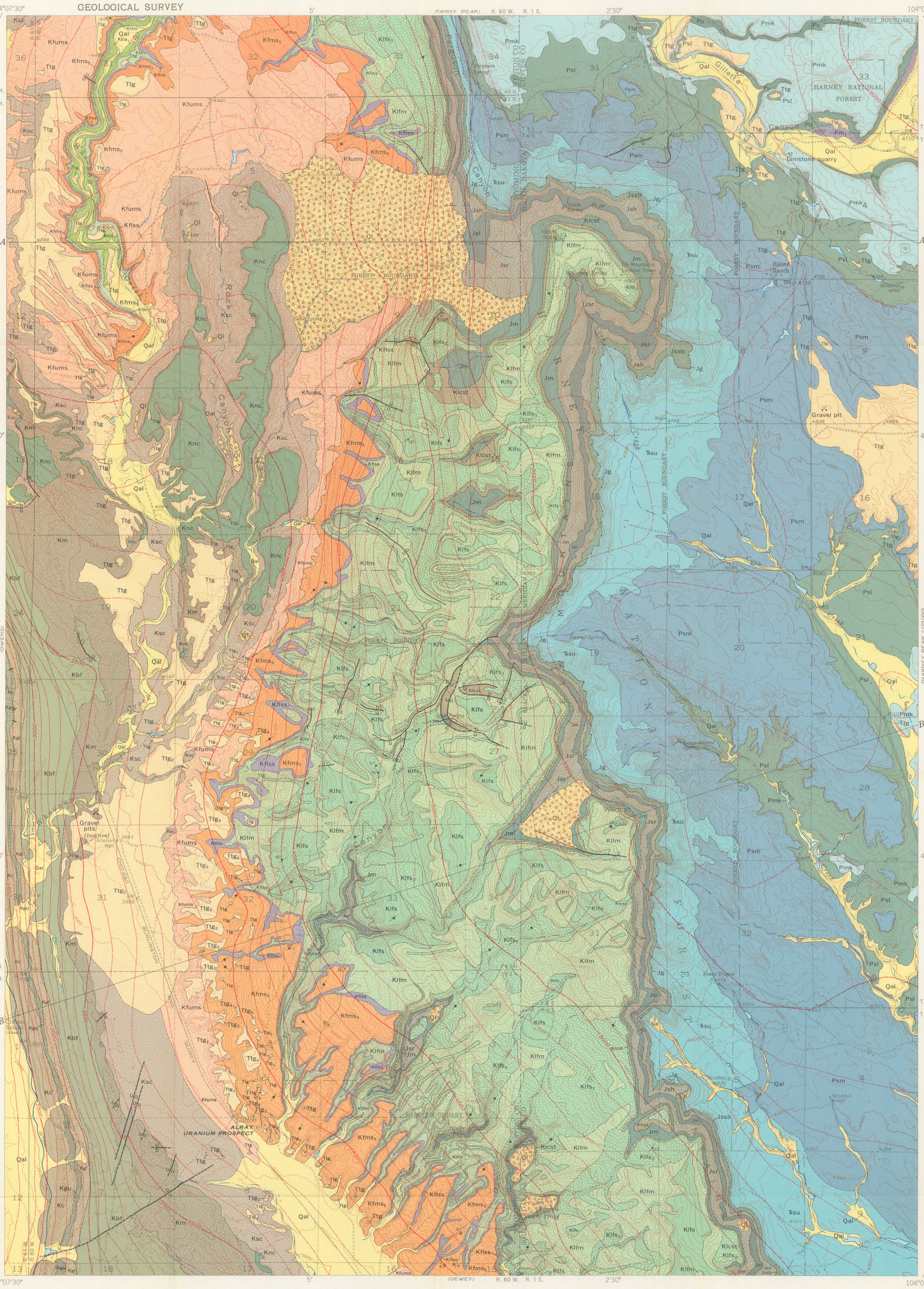


EXPLANATION

QUATERNARY

- **Qal** — Alluvium
- **Ql** — Landslide deposits

TERTIARY(?)

- **Ttg** (Ttg_5, Ttg_4, Ttg_3, Ttg_2, Ttg_1) — Terrace gravel
  Numbered Ttg_{1-5}, in order of age, number one terrace the oldest

CRETACEOUS

Upper Cretaceous

- **Kc** — Carlile Shale
- **Kgu**, **Kgl** — Greenhorn Formation
  Kgu, *upper unit.*
  Kgl, *lower unit*
- **Kbf** — Belle Fourche Shale

Lower Cretaceous

- **Km** — Mowry Shale
- **Knc** — Newcastle Sandstone
- **Ksc** — Skull Creek Shale

Inyan Kara Group

Fall River Formation

- **Kfums** — Upper unit
  Interbedded mudstone and sandstone
- **$Kfms_5$** — Middle unit
  Channel sandstone
- **Kflss** — Lower unit
  Interbedded sandstone and carbonaceous siltstone

Lakota Formation

- **Klfm**, **Klfs**, **$Klfs_3$** — Fuson Member
  Klfm, *mudstone.*
  Klfs, *sandstone.*
  $Klfs_3$, *conglomeratic channel sandstone*
- **$Klcs_1$**, **Klcst** — Chilson Member
  $Klcs_1$, *channel sandstone.*
  Klcst, *siltstone*

JURASSIC

Upper Jurassic

- **Jm** — Morrison Formation
- **Jsr**, **Jsl**, **Jsh**, **Jssb** — Sundance Formation
  Jsr, *Redwater Shale Member.*
  Jsl, *Lak Member.*
  Jsh, *Hulett Sandstone Member.*
  Jssb, *Stockade Beaver Shale Member*

Middle Jurassic

- **Jg** — Gypsum Spring Formation

TRIASSIC

- **Ꞧsu**, **Psm**, **Psl** — Spearfish Formation
  Ꞧsu, *upper unit, siltstone.*
  Psm, *middle unit, gypsum and siltstone.*
  Psl, *lower unit, siltstone*

PERMIAN

- **Pmk** — Minnekahta Limestone
- **Po** — Opeche Formation
- **Pm_1** — Minnelusa Formation (unit 1)

Contact
Dashed where approximately located; short dashed where indefinite or inferred

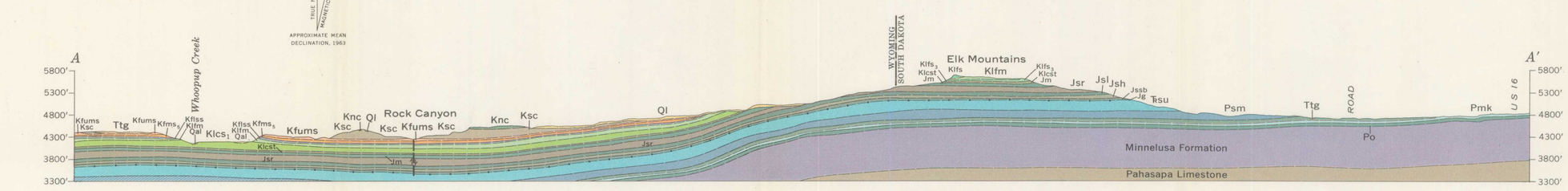
Structure contours
Drawn on the base of the Fall River Formation. Long dashed where buried; short dashed where restored. Contour interval 100 feet. Datum is mean sea level

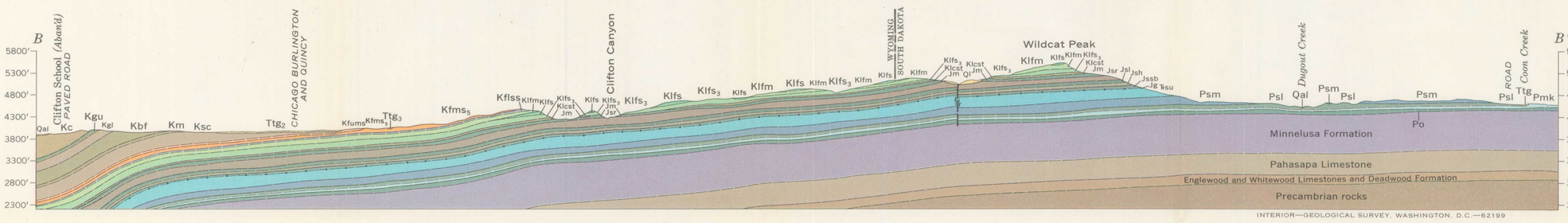
Color boundary in sandstone $Kfms_5$
G, *light gray;* Y, *yellow;* R, *red*

Fault
Dashed where inferred; dotted where concealed.
U, *upthrown side;* D, *downthrown side*

Strike and dip of joints

Strike of vertical joints





INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—62199

GEOLOGIC MAP AND SECTIONS OF THE CLIFTON QUADRANGLE, WESTON COUNTY, WYOMING AND CUSTER COUNTY, SOUTH DAKOTA

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL