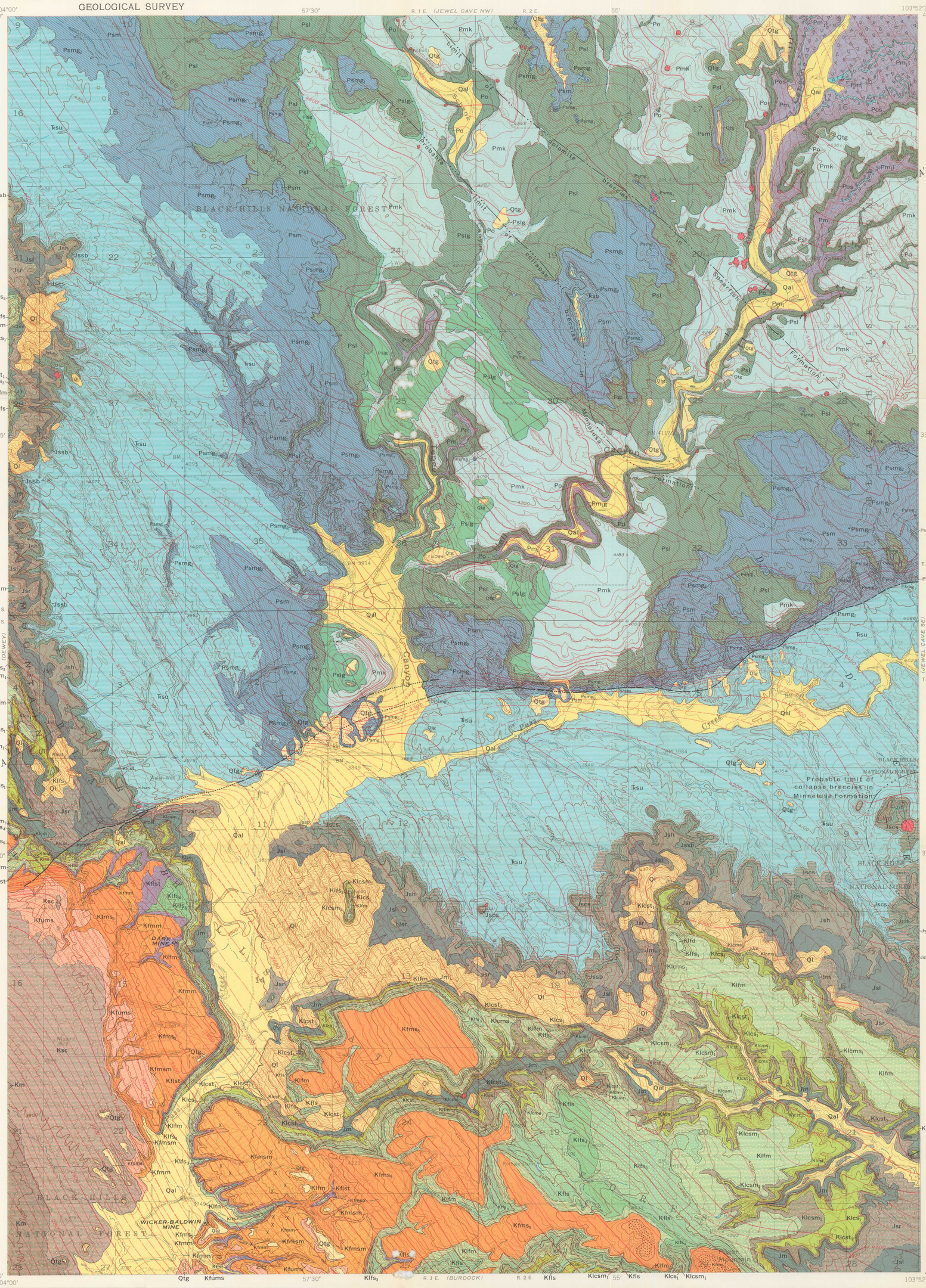


Base map by Topographic Division
U.S. Geological Survey, 1954

Geology by W. A. Braddock, George Carter, and T. E. Bridge, 1955–56

EXPLANATION

QUATERNARY — *Pleistocene and Recent*

- **Qal** — Alluvium. *Not shown in sections*
- **Ql** — Landslide deposits
- **Qtg** — Terrace gravel

CRETACEOUS — *Lower Cretaceous*

- **Km** — Mowry Shale
- **Ksc** — Skull Creek Shale
- Inyan Kara Group — Fall River Formation*
  - **Kfums** — Upper unit. *Variegated mudstone and thin sandstone*
  - **Kfmm, Kfmsm, Kfms$_5$** — Middle unit. Kfmm, *mudstone.* Kfmsm, *sandstone with interbedded mudstone.* Kfms$_5$, *iron-stained fine- to medium-grained cliff-forming sandstone*
  - **Kflst** — Lower unit. *Laminated carbonaceous siltstone*
- Inyan Kara Group — Lakota Formation**
  - **Klfm, Klfs$_4$, Klfs, Klfd, Klfs$_3$** — Fuson Member. Klfm, *mudstone.* Klfs$_4$, *fine- to coarse-grained channel sandstone.* Klfs, *white massive fine-grained sandstone.* Klfd, *dolomite.* Klfs$_3$, *gray, locally conglomeratic sandstone*
  - **Klcs$_1$, Klcms$_1$, Klcsm$_1$, Klcst$_1$** — Chilson Member. Klsc$_1$, *cliff-forming channel sandstone complex with interbedded units as follows:* Klcms$_1$, *mudstone with thin sandstone.* Klcsm$_1$, *thinly stratified sandstone and mudstone.* Klcst$_1$, *laminated carbonaceous siltstone*

JURASSIC — *Upper Jurassic*

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

TRIASSIC

- **Trsu** — Upper unit. *Siltstone*

PERMIAN

- Spearfish Formation
  - **Psmg$_2$, Psm, Psmg$_1$** — Middle unit. Psmg$_2$, *gypsum.* Psm, *siltstone.* Psmg$_1$, *gypsum*
  - **Psl, Pslg** — Lower unit. Psl, *siltstone.* Pslg, *gypsum*
- **Pmk** — Minnekahta Limestone
- **Po, Pos** — Opeche Formation. Pos, *sandstone*
- **Pm$_1$l, Pm$_1$g, Pm$_1$** — Minnelusa Formation (unit 1). Pm$_1$, *sandstone.* Pm$_1$l, *limestone.* Pm$_1$g, *gypsum*

Contact. *Dashed where approximately located; short dashed where inferred*

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

Crest of anticline

Trough of syncline

Structure contours. *Drawn on the base of the Hulett Sandstone Member of the Sundance Formation. Dashed where approximately located; short dashed where inferred. Contour interval 20 feet*

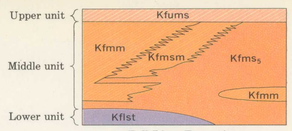
Silicified sandstone

Brecciated rock

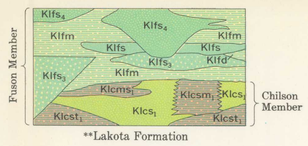
Breccia pipe

Uranium mine

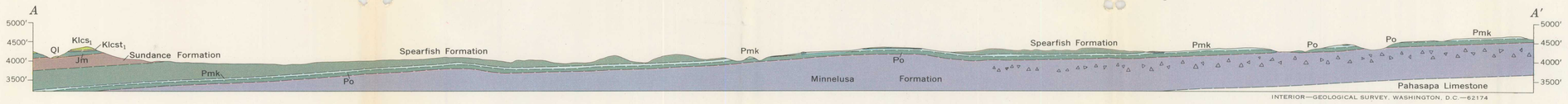
Uranium prospect



*Fall River Formation



**Lakota Formation



INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—62174

GEOLOGIC MAP AND SECTION OF THE JEWEL CAVE SW QUADRANGLE, SOUTH DAKOTA

SCALE 1:24 000

1 ½ 0 1 MILE

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL