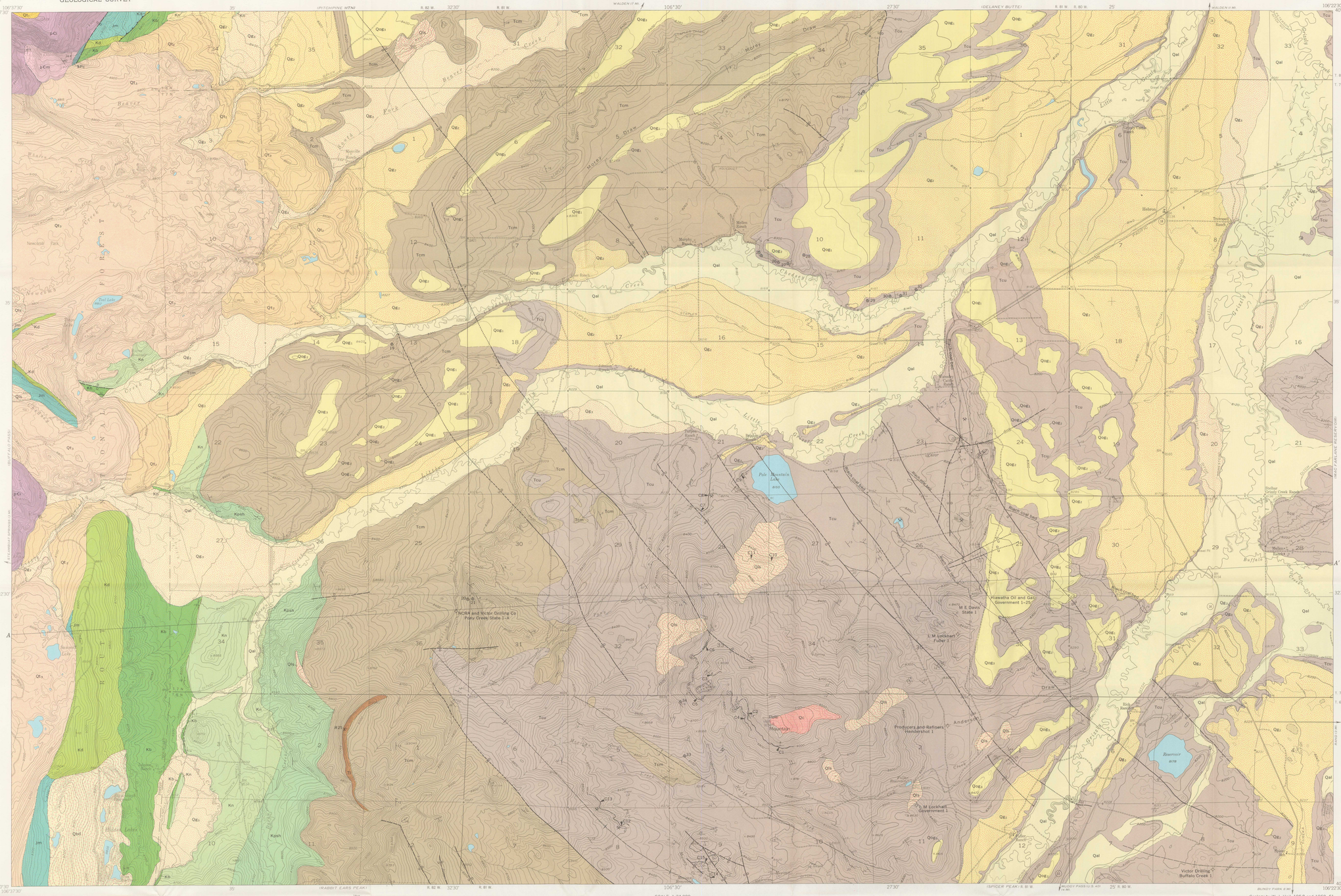
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 1257
PLATE 1



Base from U.S. Geological Survey topographic quadrangles, 1955

Roads modified 1965

Geology by W. J. Hail, 1958 and 1960–61

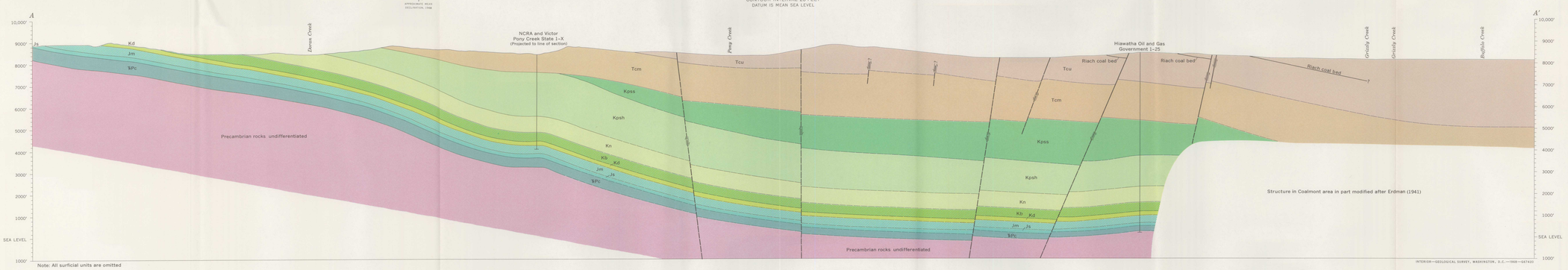
SCALE 1:24 000

1 MILE

1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

APPROXIMATE MEAN DECLINATION, 1968



Note: All surficial units are omitted

GEOLOGIC MAP AND SECTION OF THE TEAL LAKE AND COALMONT QUADRANGLES, COLORADO

EXPLANATION

Recent

- Qal — Alluvium. *Flood-plain deposits in present valley bottoms*
- Qbd — Block slide deposit. *Bedrock involved is mostly Dakota Sandstone*

Pleistocene and Recent — *Deposits of various ages and origin in glaciated portions*

- Qc — Colluvium. *Bubble of extrusive trachybasalt capping Pole Mountain*
- Qls — Landslide deposits

Pleistocene

- Qt3 — Till of glaciation 3
- Qt2 — Till of glaciation 2
- Qt1 — Till of glaciation 1
- Qoe3 — Outwash and stream terrace gravels. *Outwash and glaciofluvial terrace gravels of glaciation 3 in drainage of Little Grizzly and Beaver Creeks and their tributaries; nonglacial terrace gravels in drainage of Grizzly Creek*
- Qoe2 — Outwash and stream terrace gravels. *Outwash and glaciofluvial terrace gravels of glaciation 2 in drainage of Little Grizzly and Beaver Creeks and their tributaries; nonglacial terrace gravels in drainage of Grizzly Creek; interbedded glaciofluvial and nonglacial gravels in northeastern part of Coalmont quadrangle*
- Qoe1 / Qoe2 / Qoe3 — Older terrace gravels. *Numbered in order of age; Qoe3 is the oldest*

QUATERNARY

Oligocene(?)

- TI — Intrusive latite. *Medium-brownish-gray fine-grained locally amygdaloidal latite; sill*

Eocene

- Tcu / Tcm — Coalmont Formation. *Tcu, upper member: upper part is similar to middle member (Tcm); lower part is mostly brown carbonaceous shale; base of coal beds in Coalmont, Pale Mountain, and Mexican Creek areas shown by black line. Tcm, middle member: brown to gray arkosic sandstone; gray, green, and brown sandy claystone; some silty brown carbonaceous shale*

TERTIARY

UNCONFORMITY

Upper Cretaceous

- Kpss / Kpsh — Pierre Shale. *Kpss, sandy member: in section only. Kpsh, shaly member: gray, noncalcareous except near base*
- Kn — Niobrara Formation. *Mostly dark-gray calcareous shale; weathers light gray to yellow; shaly limestone in upper part; basal 20 feet is light-gray silty limestone*

Lower Cretaceous

- Kb — Benton Shale. *Interbedded brown calcareous sandstone, sandy limestone, and dark calcareous shale in upper part; dark calcareous to noncalcareous shale in middle part; gray siliceous platy shale in lower part; thin bentonite beds in middle and lower parts*
- Kd — Dakota Sandstone. *Light-gray to light-brown sandstone and minor dark-gray shale, including some carbonaceous and coaly shale in upper part; sandstone, locally conglomeratic, in lower part*

CRETACEOUS

Upper Jurassic

- Jm — Morrison Formation. *Variicolored claystone and shale, mostly gray or greenish gray, and lesser light- to greenish-gray calcareous siltstone and sandstone; minor lenticular limestone; lower part not exposed*
- Js — Sundance Formation. *In section only*

JURASSIC

- pPc — Chugwater Formation. *Red shale, siltstone, and sandstone; upper part absent because of faulting*

PERMIAN AND TRIASSIC

UNCONFORMITY

- pCi — Intrusive granitic rocks
- pCm — Metamorphic rocks

PRECAMBRIAN

Contact. *Dashed where approximately located; dotted where concealed (not necessarily shown beneath all surficial deposits)*

High-angle fault. *Dashed where approximately located; short dashed where inferred; dotted where concealed (not necessarily shown beneath all surficial deposits). U, upthrown side; D, downthrown side*

Tear fault. *Showing relative horizontal movement. Approximately located*

Reverse or thrust fault. *Approximately located. Sixteenth on upper plate. Not shown beneath surficial deposits*

Lineament. *From aerial photograph*

Anticline. *Showing crestline. Dashed where approximately located; dotted where concealed*

Syncline. *Showing trough line. Approximately located*

Strike and dip of beds

Strike and dip of foliation

Abandoned coal mine

C5 — Base of coal bed or coal zone. *Dashed where approximately located. Dotted where concealed. Triangle shows location of measured coal section*

Clinker area. *Baked red by burned coal*

Victor Drilling Buffalo Creek 1 — Dry hole

Fossil locality

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1968—G67420