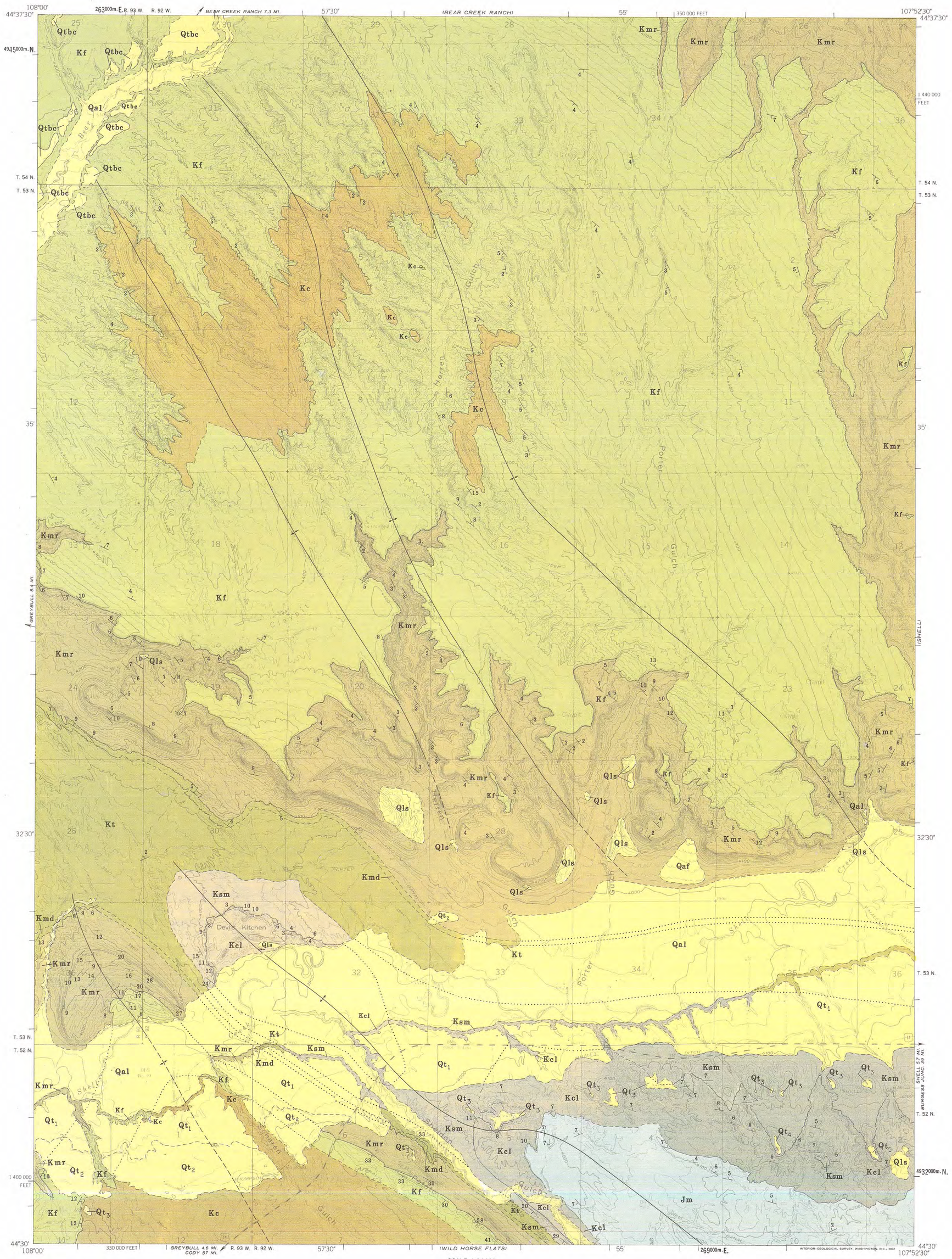
THE GEOLOGICAL SURVEY OF WYOMING
Gary B. Glass, State Geologist

MAP SERIES 18
Devils Kitchen Quadrangle
Big Horn County, Wyoming



Cartography by Fred H. Porter

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

16°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1960

WYOMING
QUADRANGLE LOCATION

ROAD CLASSIFICATION
Medium-duty — Light-duty
Unimproved dirt
U.S. Route

EXPLANATION

Quaternary

Qt_1, Qt_2, Qt_3, Qt_4, Qt_5, Qtbc — **Terrace Levels**
Qt Terraces along Shell Creek. Qt_1 is lowest surface, Qt_5 is highest.
Qtbc Undifferentiated terraces along Beaver Creek.

Qls — **Landslide Material**
Blocks of bedrock or loose slope debris.

Qal — **Alluvium**
Unconsolidated deposits of alluvium along stream valleys at or near present stream levels.

Qaf — **Alluvial Fan**
Unconsolidated fan-shaped deposits of alluvium.

Upper Cretaceous

Kc — **Cody Shale**
Dark gray, silty shale with layers of isolated septarian concretions. Thickness 3,250 feet.

Kf — **Frontier Formation**
Upper Torchlight Sandstone Member is nonresistant, light gray sandstone containing andesite, chert, and quartzite pebbles near the top. Middle part is dark gray, silty shale with thin bentonite layers. Basal Peay Sandstone Member is light gray sandstone. Thickness 400 feet.

Lower Cretaceous

Kmr — **Mowry Shale**
Upper 350 feet is gray and brown shale, in part siliceous, with fine-grained sandstone near the top. Contains fish scales and bentonite layers. Lower 295 feet is gray black, fissile shale with thin bentonite layers. Lower part was mapped as the Shell Creek Shale by the author, but has been included with the Mowry to reflect the most recent accepted nomenclature. Thickness 645 feet.

Kmd, Kt — **Thermopolis Shale**
Gray black shale with dahllite concretions. Upper 48 feet is Muddy Sandstone Member (Kmd) which is light gray, bentonitic sandstone. Thickness 270 feet.

Ksm, Kcl — **Cloverly Formation**
Variegated red and gray mudstone and shale interbedded with sandstone and siltstone. Upper 100 feet is mapped as Sykes Mountain Member (Ksm) which is thin-bedded, light brown siltstone, ferruginous siltstone, sandstone, and dark gray shale. Thickness 300 feet.

Jurassic

Jm — **Morrison Formation**
Variegated red and light green calcareous mudstone and siltstone. Thickness 300 feet.

Formation Contact
Dashed where approximately located; dotted where concealed.

Anticline
Trace of axial plane and direction of plunge. Dashed where approximately located.

Syncline
Trace of axial plane and direction of plunge. Dashed where approximately located.

26 **Strike and dip of beds**

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GEOLOGIC MAP OF DEVILS KITCHEN QUADRANGLE, WYOMING

by

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1986