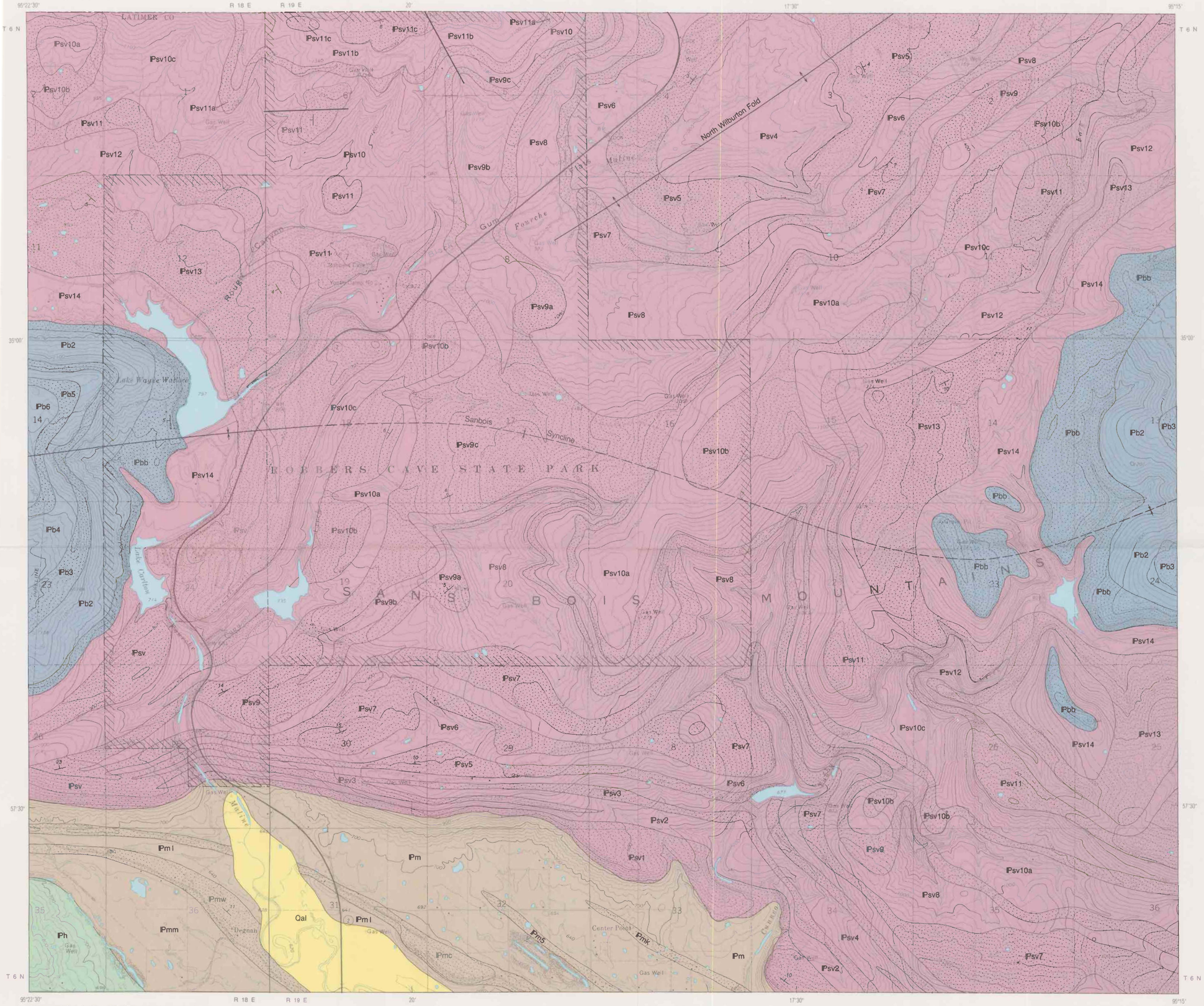


Base from U.S. Geological Survey 7.5-minute-quadrangle map series: Quinton South, 1969; Wilburton, 1971

Geology by Dearl T. Russell, 1958; modified by Arthur J. Myers, 1982

GEOLOGIC MAP OF ROBBERS CAVE STATE PARK AREA

By

Dearl T. Russell and Arthur J. Myers

1985

STUDY AREA

EXPLANATION

QUATERNARY

Alluvium

Qal — Sand, silt, and clay on flood plains of present streams

PENNSYLVANIAN

Boggy Formation

IPb6, IPb5, IPb4, IPb3, IPb2 — Odd-numbered units (IPb3, IPb5) are prominent sandstones; even-numbered units (IPb2, IPb4, IPb6) are shales
Brown to buff sandstones, siltstones, and dark- to-light-gray silty shales
Only lower part of formation crops out in map area

IPbb — Bluejacket Sandstone Member (IPbb)

Savanna Formation

IPsv14, IPsv13, IPsv12, IPsv11 (c, a, b), IPsv10 (c, b, a), IPsv9 (c, b, a), IPsv8, IPsv7, IPsv6, IPsv5, IPsv4, IPsv3, IPsv2, IPsv1 — Odd-numbered units (IPsv1, IPsv3, IPsv5, IPsv7, IPsv9, IPsv11, IPsv13) are prominent sandstones; even-numbered units (IPsv2, IPsv4, IPsv6, IPsv8, IPsv10, IPsv12, IPsv14) are shales
Brown, fine-grained sandstone and siltstone beds and gray-green to dark silty shales
Thickness: 1,470 to 1,990 feet
IPsv11 locally consists of lower (IPsv11a) and upper (IPsv11c) sandstone beds separated by a thin middle shale (IPsv11b)
IPsv10 locally consists of lower (IPsv10a) and upper (IPsv10c) shale beds separated by a middle sandstone (IPsv10b).
IPsv9 locally consists of lower (IPsv9a) and upper (IPsv9c) sandstone beds separated by a middle shale (IPsv9b).

McAlester Formation

IPm
- **IPmk** — Keota Sandstone Member (IPmk): brown, fine-grained, thin-bedded
- Unnamed shale (IPm): dark, blocky; contains clay-ironstone
- **IPm5** — Tamaha Sandstone Member (IPm5): brown, fine-grained, thin-bedded

IPmc — Cameron Sandstone Member (IPmc)

IPml — Unnamed shale (IPml): dark, blocky; contains clay-ironstone concretions

IPmw — Warner Sandstone Member (IPmw)

IPmm — McCurtain Shale Member (IPmm)

Hartshorne Formation

Ph — Brown to gray silty sandstone, interbedded with silty shale; only upper part is present in mapped area

Contact

Fault

Anticline, showing trace of crestal plane

Syncline, showing trace of trough plane; dashed where approximately located

10 — Strike and dip of beds

Outline of park area

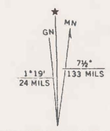
SCALE 1:24 000

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



UTM GRID AND 1971 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET