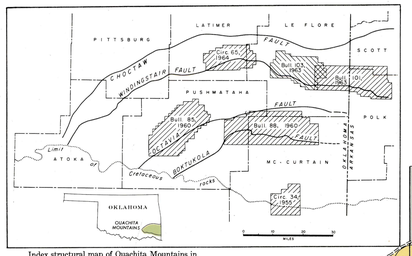
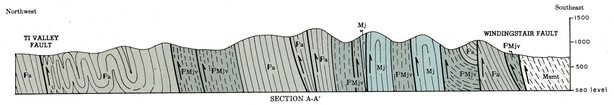
GEOLOGIC MAP AND SECTIONS OF THE WESTERN PART OF WINDING STAIR RANGE

LATIMER AND LE FLORE COUNTIES, OKLAHOMA

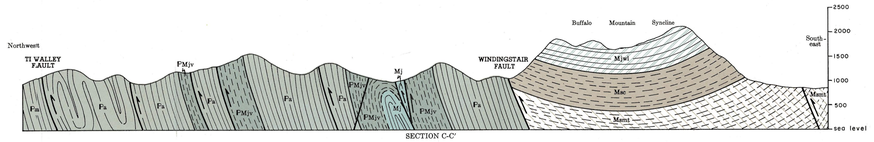
by
L. D. Fellows
1964



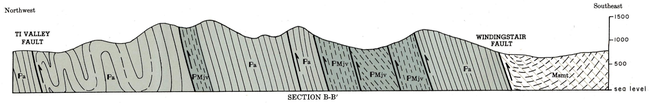
Index structural map of Ouachita Mountains in Oklahoma showing published reports of the Oklahoma Geological Survey, 1955-1964.



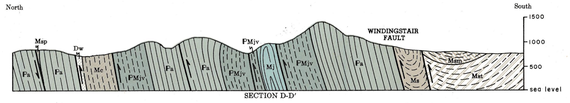
SECTION A-A'



SECTION C-C'



SECTION B-B'



SECTION D-D'

EXPLANATION

STRATIGRAPHIC UNITS SOUTH OF TI VALLEY FAULT

QUATERNARY

Qal — ALLUVIUM
(Gravel, sand, silt, and clay on flood plains of streams.)

Qt — TERRACE DEPOSITS
(Flat-lying or gently inclined alluvium-veneered surfaces adjacent to streams.)

PENNSYLVANIAN

Fa — ATOKA FORMATION
(Gray and black shales interbedded with cross-laminated gray sandstones that have well-preserved sole marks and ommolute lamination. Black siliceous shale near base. Estimated thickness; 6,000-7,000 feet. Top eroded in area of study.)

FMjv — JOHNS VALLEY FORMATION
(Interbedded olive-gray shales, green sandstones and siltstones, and gray sandstones. Black shales with phosphate nodules and Mississippian goniatite-pelecypod fauna at base of formation. Clasts of Arbuckle-province rocks in place in shale at several horizons. No unfaulted sections in area of study. Estimated minimum thickness; 500 feet.)

MISSISSIPPIAN

Mjg — GAME REFUGE FORMATION
(Gray shales interbedded with ripple-marked light-gray sandstones. No unfaulted sections in area of study.)

Mjwp / Mjwj — WILDHORSE MOUNTAIN FORMATION
(Prairie Hollow shale member [Mjwp] at top, with an estimated thickness of 300 feet, consists of easily eroded green shales and friable sandstones. Lower part of formation [Mjwj] consists of massive gray sandstones and dark-gray shales. No complete sections in area of study.)

Mac — CHICKASAW CREEK FORMATION
(Dark-gray shales, green shales, gray sandstones, and black siliceous shale and chert. Estimated thickness; 300 feet.)

Mamu / Mam / Mamb — MOYERS FORMATION
(Green shale with subordinate massive argillaceous sandstones. Black siliceous shale and chert at top [Mamu] and base [Mamb] of formation. No unquestioned complete sections in area of study.)

Mat — TENMILE CREEK FORMATION
(Green shale and argillaceous sandstone. Base of formation not exposed in area of study.)

Mamt — MOYERS FORMATION AND TENMILE CREEK FORMATION *(undifferentiated)*

Mj — JACKFORK GROUP *(undifferentiated)*

Ms — STANLEY GROUP *(undifferentiated)*

Morrowan Series? · *Meramecian and Chesterian Series* · *Jackfork Group* · *Stanley Group*

STRATIGRAPHIC UNITS NORTH OF TI VALLEY FAULT

PENNSYLVANIAN

Fa — ATOKA FORMATION
(Black shale, gray shale, and gray sandstone and siltstone. Shale predominant. Top eroded in area of study.)

Map — SPRINGER FORMATION
(Olive-gray shale, black shale, and subordinate thin beds of sandstone and siltstone. Lithologically similar to Johns Valley Formation but does not contain Arbuckle-province clasts. Base not exposed in area of study.)

MISSISSIPPIAN

Mc — CANEY FORMATION
(Laminated black shale with phosphate nodules and dense black limestone concretions. Gray-green siltstone near base. Top not exposed in area of study.)

Dw — WOODFORD FORMATION
(Alternating 2- to 5-inch beds of black chert and laminated black shale, some of which contain phosphatic nodules. Base not exposed in area of study.)

DEVONIAN

Mj — JACKFORK GROUP *(undifferentiated)*

Ms — STANLEY GROUP *(undifferentiated)*

Thrust fault
Saw teeth on upper plate

Fault showing relative movement

Axis of anticline

Axis of syncline

76 — Strike and dip of beds

57 — Strike and dip of overturned beds

Strike of overturned beds

Contorted zone

Stratigraphic contact
Dashed where inferred, dotted where concealed

Contact of surficial deposits with older rocks

Land slide

271 — U.S. Highway

69 — State Highway

Improved road

Unimproved road

Power line

0 1/2 1 2 3
MILES

SOUTHWESTERN 4500 N. SANTA FE OKLAHOMA CITY, OKLAHOMA