



Qa	} QUATERNARY
Qao	
Pa	} PENNSYLVANIAN
Pjv	
Pjtu	
Pjtl	
Ms	} MISSISSIPPIAN

### DESCRIPTION OF UNITS

Qa ALLUVIUM (QUATERNARY)—Unconsolidated silt, sand, and gravel of present stream channels

Qao OLDER ALLUVIUM (QUATERNARY)—Unconsolidated silt, sand, and gravel above present level of stream channels














**ATOKA FORMATION (PENNSYLVANIA)**—Predominantly poorly exposed olive-gray (S13) to grayish-olive (10T4) slightly silty, noncalcareous, porous to medium and medium to coarse grained, medium to coarse sandstone and thicker beds of sandstone. Laminated siltstone near base of formation in southern part of area. Sandstone is light olive gray (S15) and gray (gray to black) in fresh and weathered surfaces. Grains are medium to coarse, fine-grained, rarely medium-grained, poorly to moderately sorted, noncalcareous, and composed of about 95% quartz, 3% feldspar and lithic fragments, and 2% to 3% thin white mica. Grains are rounded to subangular. Matrix is coarse to medium grained sandstone. Bed thickness ranges from 10 to 100 centimeters to several meters thick and average about 60 cm. Argillaceous beds common, forming resistant ridges and dip slopes easily identifiable on aerial photographs; some of these marker beds are mapped. Thicker beds are generally composed of alternating ripple and laminated sandstone and siltstone (S13 and T10); thinner beds commonly are ripple cross-laminated (T1). Some marks (like, grove, and local casts, trace fossils) at base of sandstone beds locally common. Bedding structure is generally ripple and laminated. Bedding is generally except for lowermost sandstone beds immediately above Johns Valley Formation that contain molds of bryozoans, bryozooids, crinoids, and rare corals; local corals and molds of plant stems are common in the lowermost sandstone beds. Maximum thickness approximately 5500 ft. (2,000 m) south of Chocoma fault.




**Py** **JOHNS VALLEY FORMATION (PENNSYLVANIA)**—Predominantly poorly exposed, medium-dark gray (N4) to pale-brown (E5/6), mostly nonconformable, bedded, slightly to moderately well-sorted, medium- to coarse-grained, noncarbonaceous laminated siltstone and thin to medium-bedded sandstone. Sandstones mostly light brown (E5/6) to grayish-green (10YR7/4), varying from massive to graded, and massive to ripple cross-laminated. Siltstones are mostly massive to ripple cross-laminated. Some marks and diastylar structures typical of some beds. Some sandstone marker beds mapped. Siltstone locally contains slightly to well-rounded pebbles, cobbles, and boulders of chert. The variety of textures and structures is consistent with sandstones (and packstones). Other lithologies within the shale include large masses of platy to very fissile, hard, grayish-black (N2) shale with calcareous concretions, pebbles, nodules, and thin bedded, platy, grayish-black (N2) shale. These are correlated with lower and middle Ordovician limestone units exposed to the north and west; chert clasts may be Woodford Formation (Devonian); and many black shale units may correlate with the Devonian (Barnes). Maximum thickness approximately 1,700 ft (500 m) south of Chocoma fault.

**JACKFORD GROUP, UPPER AND LOWER PARTS (PENNSYLVANIAN).**—Predominantly well-exposed, grayish-orange (10YR7/4), yellowish-gray (5Y7/2) to drab-yellow (5Y6/4), fine to medium-grained, quartzitic, nonconglomeratic, and micaceous sandstone, locally grayish green (5Y6/4) to gray (5Y5/1) and micaceous, interbedded, poorly exposed medium-gray (N5) to olive-gray (5Y3/2) shales and mudstone. Locally contains many thin (beds less than 10 cm), massive sandstone beds in amalgamated or shale-poor sequences located tens of meters thick. Sole marks and other small-scale sedimentary structures are common in the sandstone. Some beds. Locally sparsely fossiliferous (molds of crinoids and brachiopods), and with abundant impressions of plant debris on bedding planes. Sandstone marker beds occur locally. The upper part of the group is micaceous and contains mudstone contain thin, laminated siltsone layers and locally weather to "pencil" structure. Upper part (JF1) correlates with Game Refuge and Wesley Formations of other workers and lower part (JF2) with Widdowson Mountain Formation. Maximum thickness is approximately 1,300 (400) feet south of Chocoma fault. Thickness of lower part approximately 1,300 (400) feet south of Chocoma fault.

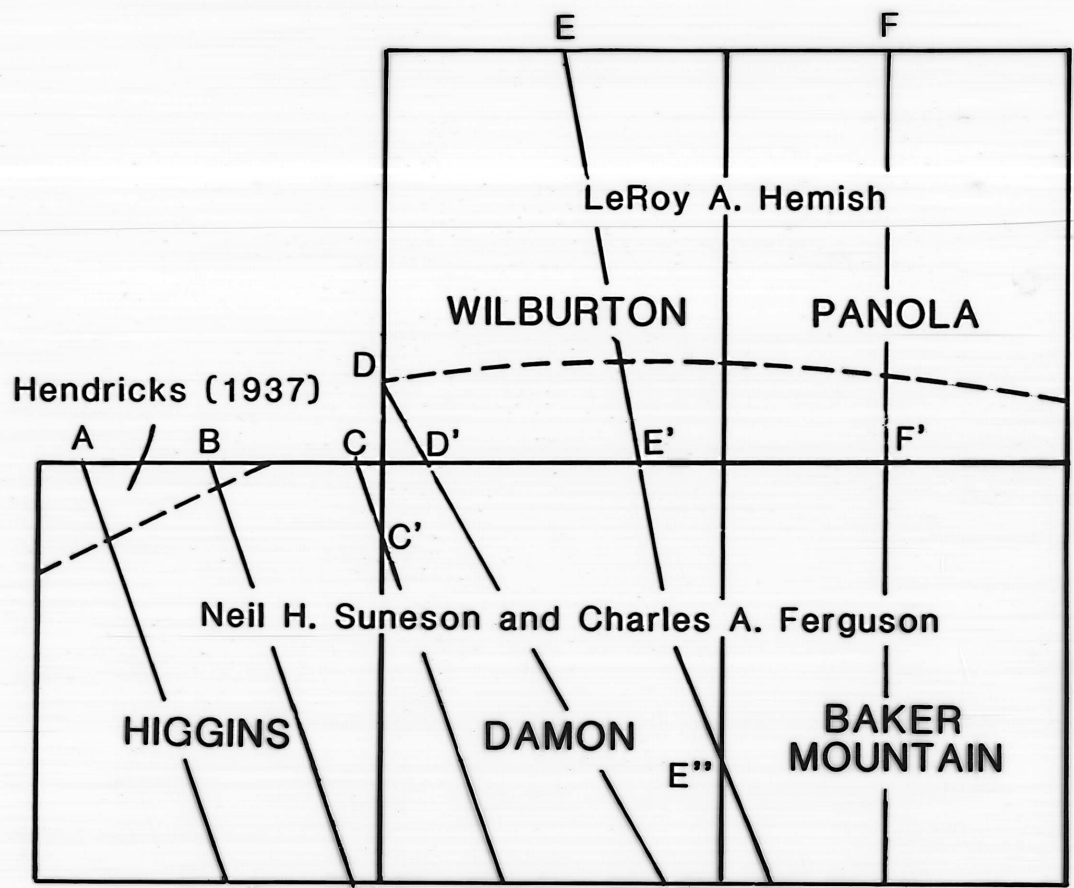
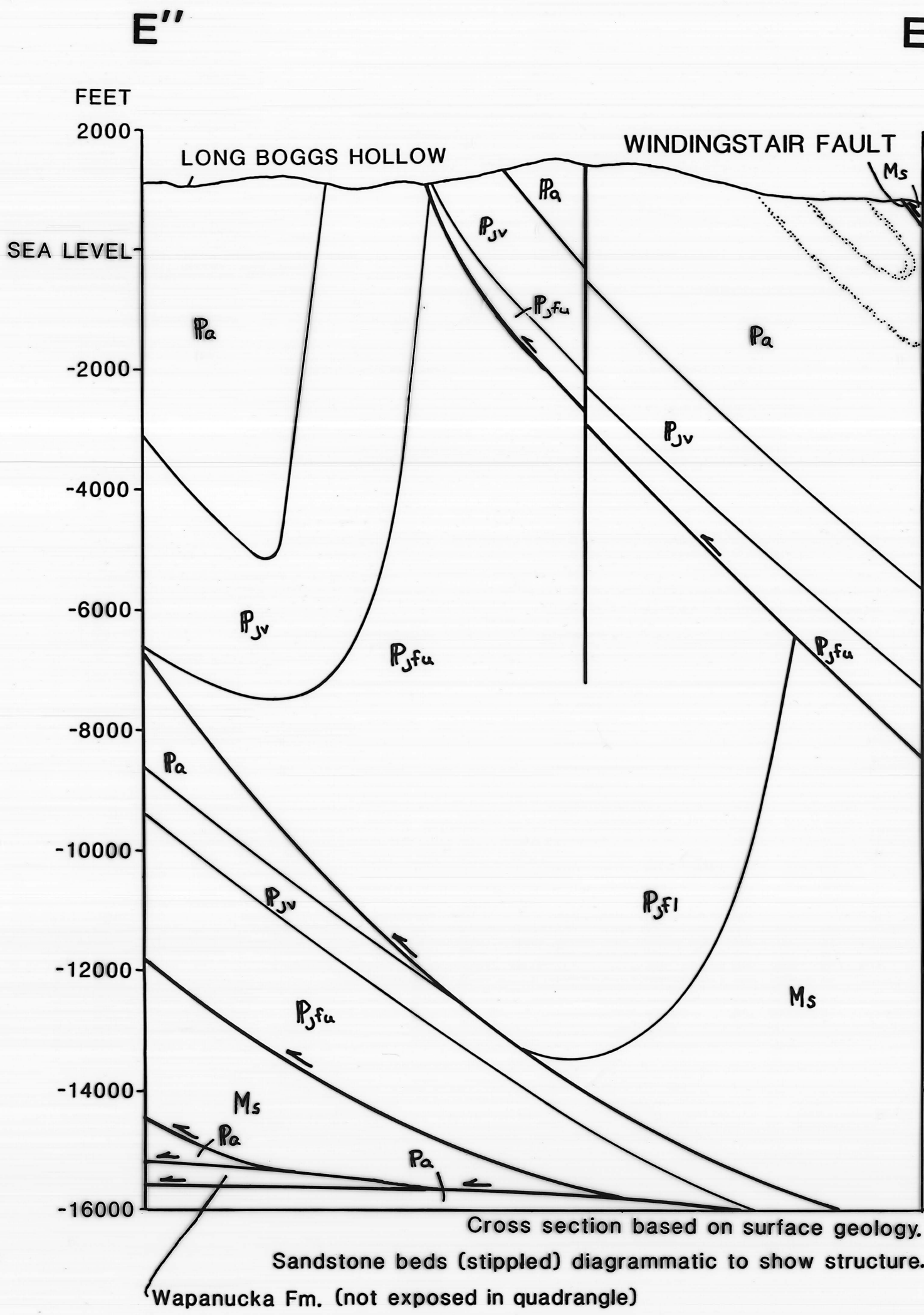
**Ms STANLEY GROUP (MISSISSIPPIAN)**—Predominantly poorly exposed, olive-gray (5Y6/2) to light-olive gray (5Y5/2), fine, noncalcareous shale and thin silstone beds with blocky to discoidal sandstone masses. "Pencil" structure typical in shales; sandstone blocky and shaly. Shale thicknesses range from 1 to 10 cm, with an average about 50 cm thick, varying from 5 cm to amalgamated beds as much as 10 m thick. Sandstone is medium gray (5Y5) to olive gray (5Y4/1), line-grained, poorly stratified to massive, typically slightly graded, and noncalcareous or calcareous. Rounded to subangular grains are 0.1 mm; irregularly abundant near base of some sandstone beds. Organic remains, graptolites, and pyrite fragments disseminated throughout. Bases of sandstone beds typically planar, but sole marks (load, groove, and flute casts, trace fossils) locally present. Shell rip-up clasts locally abundant. Laminated, blocky, brittle, dark-colored silstone shale or chert present at top of some Stanley Group units. Similar to sandstones with Moyers and Chickasaw Creek Formations of other workers. Maximum thickness approximately 1700 ft (500 m) north of Windingat fault.

## SYMBOLS

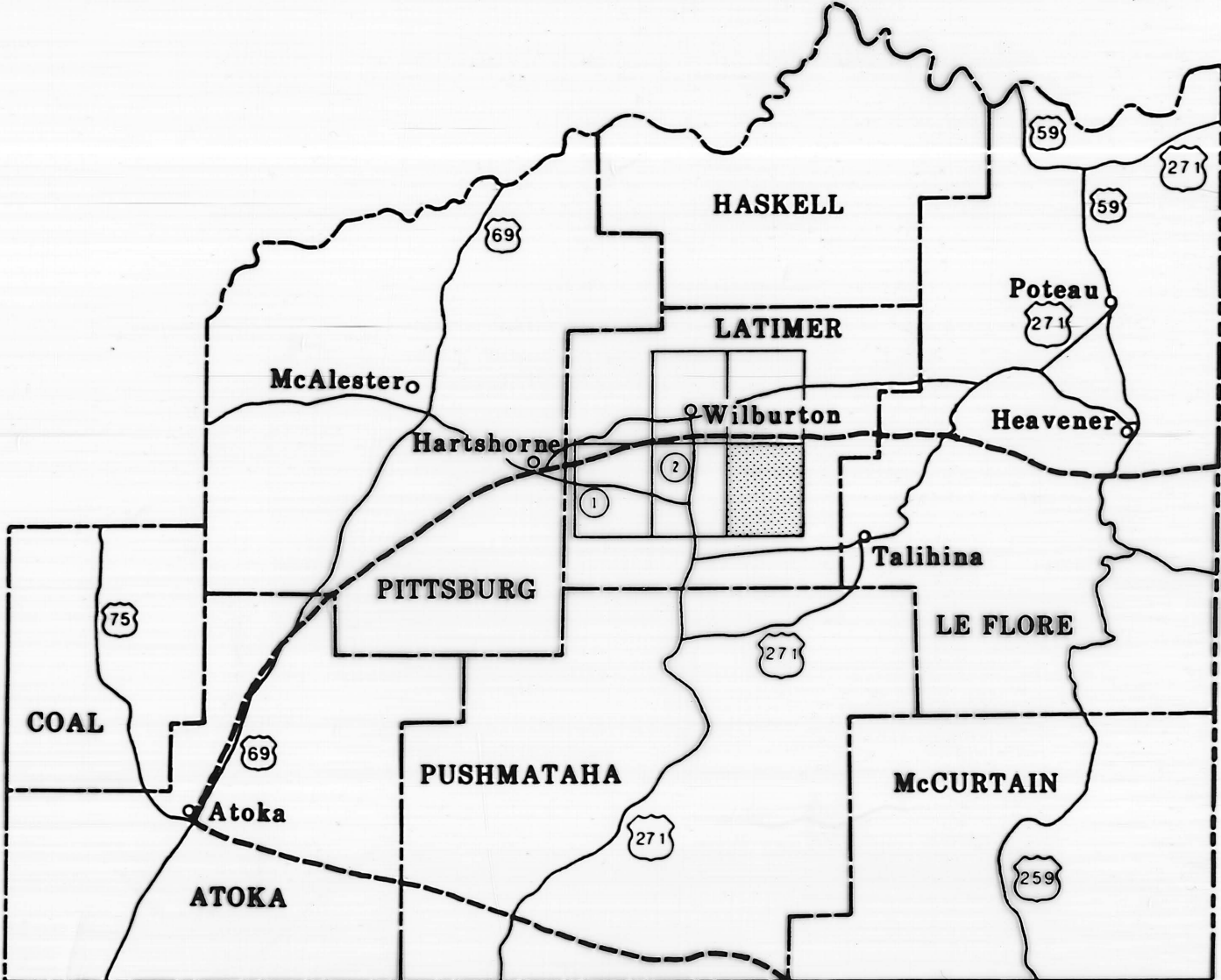
-  **CONTACT**—Dashed where approximately located
  -  **MARKER BED**
  -  **THRUST FAULT**—Sawtooth on upper plate; dashed where approximately located; dotted where concealed
  -  **FAULT**—Arrows show relative horizontal movement; dashed where approximately located; dotted where concealed
  -  **ANTICLINE**—Showing crestline; arrow shows direction of plunge; dashed where approximately located; dotted where concealed
  -  **SYNCLINE**—Showing troughline; arrow shows direction of plunge; dashed where approximately located; dotted where concealed
  -  **OVERTURNED SYNCLINE**—Arrows show direction of dip of limbs; dashed where approximately located; dotted where concealed
- STRIKE AND DIP OF BEDS**
-  Leader to location of measurement
  -  Strike and dip of beds, facing direction unknown
  -  Vertical beds, facing direction unknown
  -  Strike and dip of beds, upright
  -  Vertical beds, ball indicates top of beds
  -  Strike and dip of beds, overturned

- |   |                                      |
|---|--------------------------------------|
|  | Leader to location                   |
|  | Status unknown as of January 1, 1988 |
|  | Dry hole, abandoned                  |

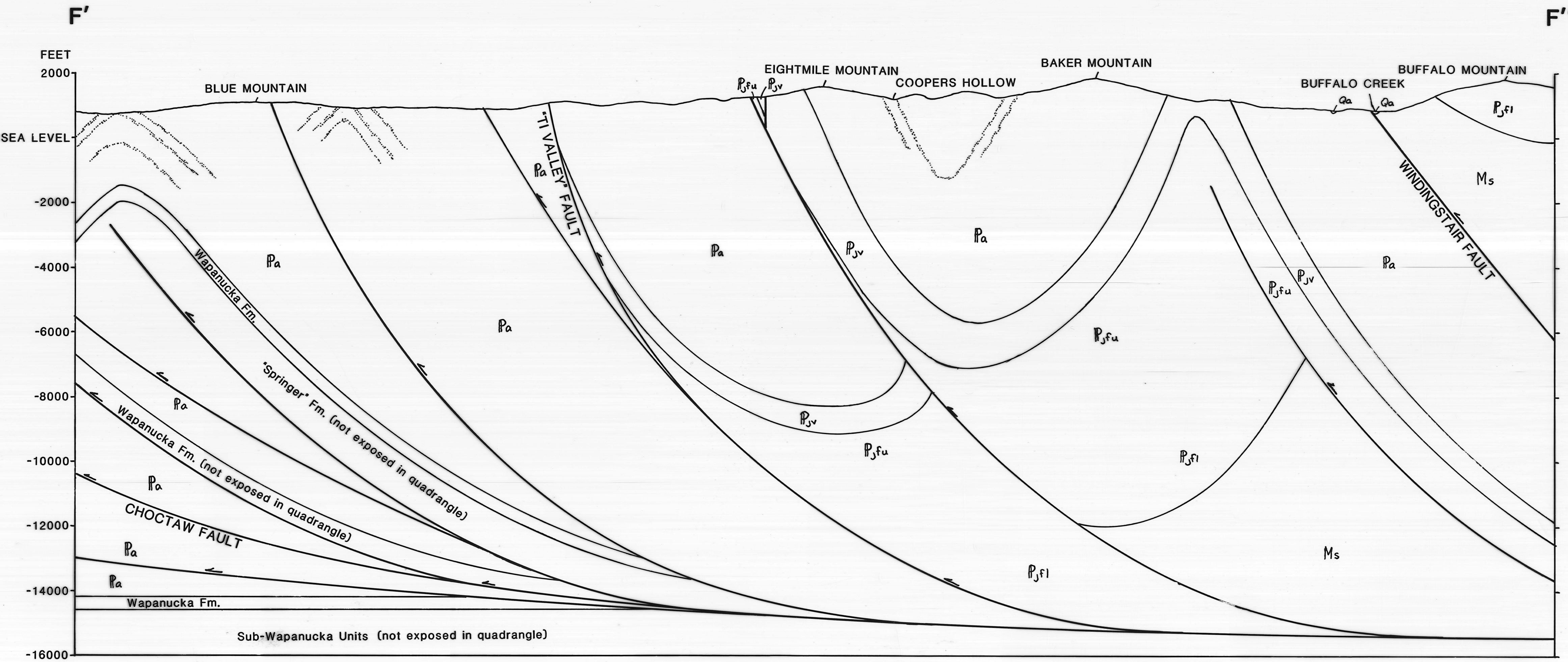
## LIST OF WELLS



## INDEX TO QUADRANGLES, CROSS SECTIONS, AND AREAS OF RESPONSIBILITY



LOCATION OF QUADRANGLE



Cross section based on surface geology  
Sandstone beds (stippled) diagrammatic to show structure

# GEOLOGIC MAP OF THE BAKER MOUNTAIN QUADRANGLE, LATIMER COUNTY, OKLAHOMA

By

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