UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Mapped, edited, and published by the Geological Survey in cooperation with the Oklahoma Highway Department,

Topography by photogrammetric methods from aerial photographs

Fine red dashed lines indicate selected fence and field lines where

generally visible on aerial photographs. This information is unchecked

taken 1976. Field checked 1977. Map edited 1979 Projection and 10,000-foot grid ticks: Oklahoma coordinate

1000-meter Universal Transverse Mercator grid, zone 1

system, south zone (Lambert conformal conic)

To place on the predicted North American Datum 1

move the projection lines 6 meters south and

21 meters east as shown by dashed corner tick

Conservation Board Control by USGS and NOS/NOAA

1927 North American datum

Oklahoma Water Resources Board, and Oklahoma State Soil

BAKER MOUNTAIN QUADRANGLE

OKLAHOMA-LATIMER CO.

7.5 MINUTE SERIES (TOPOGRAPHIC)

SW/4 RED OAK 15' QUADRANGLE

Light-duty road, hard or

BAKER MOUNTAIN, OKLA.

N3445-W9507.5/7.5

1979

DMA 6953 I SW-SERIES V883

hard surface Unimproved road

Interstate Route U. S. Route State Route

DESCRIPTION OF UNITS

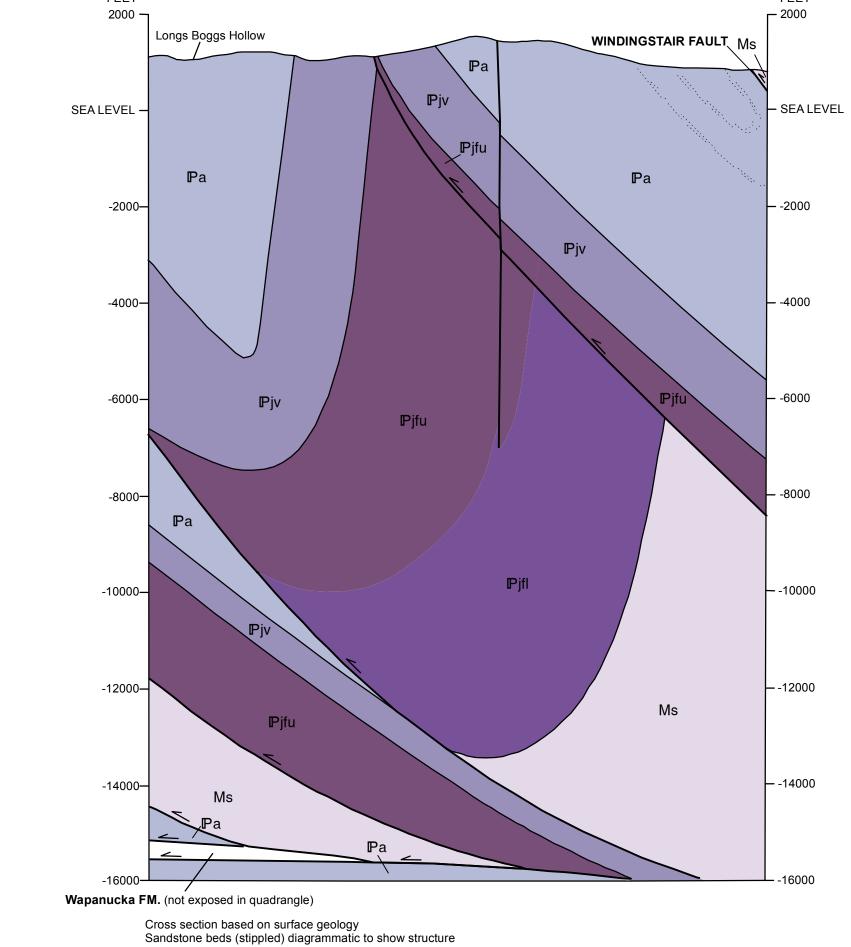
ALLUVIUM (QUATERNARYJ-Unconsdidated sit, sand, and gravel of present stream channels OLDER ALLUVIUM (QUATERNARY)--Unconsdidated silt, sand, and gravel above present level of

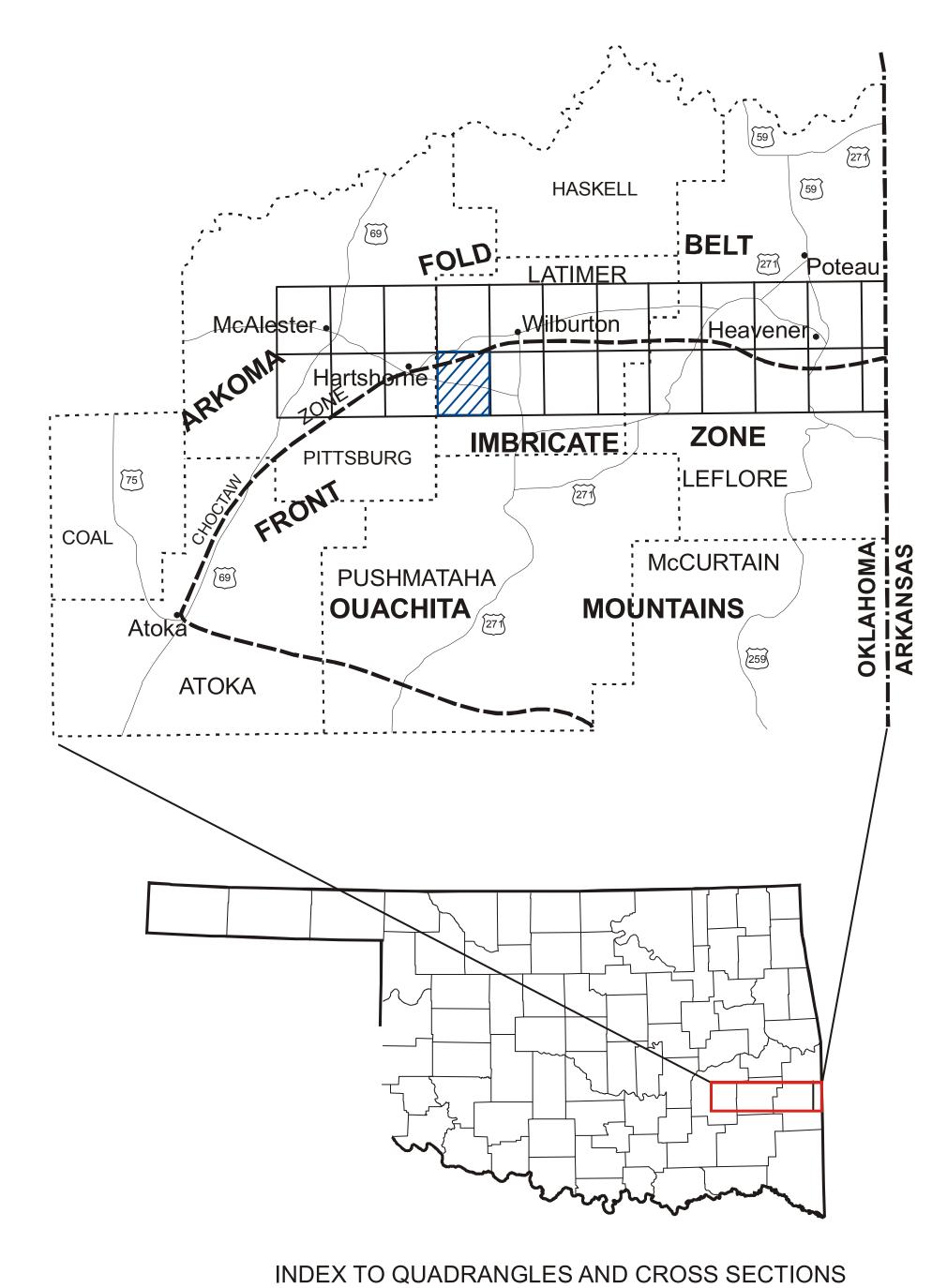
ATOKA FORMATION (PENNSYLVANIAN)-Predominantly poorly exposed olive-gray (5Y3/2) to grayish-olive (10Y4/2), slightly silty, noncalcareous, poorly laminated shale and mudstone. Contains thin beds of laminated sittstone and thicker beds of sandstone. Laminated siliceous shale near base of formation in southern pafarea. Sandstone is light dive gray (5Y5/2) and grayish orange (5Y7/2) where fresh, and grayish orange (10YR7/4) where weathered. Mostly fine-grained, rarely mediumgrained, poorly to moderately sorted, noncalcareous, and composed of about 95% quartz, 3% feldspar and lithic fragments, and conspicuous white mica parallel to laminations. Individual beds vary from several centimeters to several meters thick and average about 60 cm. Amalgamated beds common, forming resistant ridges and dip slepesy identifiable on aerial photographs; some of these marker beds are mapped. Thicker beds are generally massive (corresponding to Ta of Bouma turbkJite sequence) to parallel laminated (Tb); thinner beds commonly are ripple cross-laminated (Tc). Sole marks (flute, groove, and load casts, trace fossils) at base of sandstone beds locally common. Dish-and-pillar structures and ripple marks typical of some beds. Unfossilrferous except for bryozoans, brachiopods, crinoids, and rare corals; local concentrations of plant debris on bedding planes throughout the formation. Maximum thickness approximately 6,500 ft (2,000 m) south of

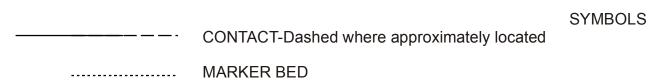
JOHNS VALLEY FORMATION (PENNSYLVANIAN)-Predominantly poorly exposed, medium-darkgray (N4) to pale-brown (5Y5/2), mostly noncalcareous, poorly laminated, slightly silty shale and nudstone. Contains thin beds of noncalcareous laminated siltstone and thin- tebeneeted m sandstone. Sandstones mostly light brown (5Y6/4) to grayish orange (10YR7/4), varying from fine- to coarse-grained, with rare granule conglomerates, rarely calcareous or fetid, and massive to parallelor ripple cross-laminated. Sole marks and dish-and-pillar structures typical of some beds. Some sandstone marker beds mapped. Shale locally contains slightly- to well-rounded pebbles, cobbles, and boulders of chert and a wide variety of limestone lithologies (micrites to biodastinegrainsto and packstones). Other lithologies within the shale include large masses of platy to very fissile, hard, grayish-black (N2) shale with calcareous concretions, phosphatic(?) nodules, and disseminated pyrite. Limestone dasts have been correlated with lower and middle Paleozoic limestone units exposed to the north and west; chert clasts may be Woodford Formation (Devonian); and many black shale masses may correlate with the Caney Formation (Mississippian). Maximum thickness approximately 1,700(500 m) south of Choctaw fault

JACKFORK GROUP, UPPER AND LOWER PARTS (PENNSYLVANIAN)-Predominantly wellexposed, grayish-orange (10YR7/4), yellowish-gray (5Y7/2) to dusky-yellow (5Y6/4), fine-to medium-grained, quartzose, noncalcareous, and massive or slightly graded to poorly stratified sandstone, with variable amounts of interbedded, poorly exposed medium-gray (N5) to olive-gray (5Y3/2) shale and mudstone. Locally contains many thick-bedded (1-10 m), massive sandstone beds in amalgamated **s**hale-poor sequences locally tens of meters thick. Sole marks, dish-andpillar structures, ripple marks, and mud rip-up dasts typical of some beds. Locally sparsely fossilrferous (molds of crinoids and brachiopods), or with abundant impressions of plant debris on bedding planes. Sandstone marker beds mapped locally. Sandstones commonly highly fractured. Shale and mudstone contain thin, laminated siltstone layers and locally weather to "pencil" structure. Upper part (Pjfu) correlates with Gamfuge and Wesley Formations of other workers and lower part (Pjfl) with Wild horse Mountain Formation. Maximum thickness of upper part approximately 2,300 ft (700 m); maximum thickness of lower part approximately 1,300 (400 m) south of Choctaw

STANLEY GROUP (MISSISSIPPIAN)-Predominantly poorly exposed, dive-gray (5Y3/2) to lightolive-gray (5Y5/2), fissile, noncalcareous shale and thin siltstone beds with Wocky to discoidal siltstone masses. "Pencil" structure typical in shales; silts at the legisle silts at the leg Contains sandstone beds that average about 50 cm thick, varying from 5 cm to amalgamated beds as much as 10 m thick. Sandstone is medium gray (N5) to olive gray (5Y4/1), fine-grained, poorly stratified to massive, typically slightly graded, and noncalcareous or calcareous. Rounded feldspar and chert grains (1-5 mm) relatively abundant near base of some sandstone beds. Organic material, plant debris, and pyrite disseminated throughout. Bases of sandston ploads blanar, but sole marks (load, groove, and flute casts, trace fossils) locally present. Shale rip-up clasts locally abundant. Laminated, blocky, brittle, dark-colored siliceous shale or chert present at top and throughout upper part of unit. Correlates with Moyers and Chickasaw Creek Formations of other workers. Maximum thickness approximately 1700 ft (500 m) south of Windingstair fault







THRUST FAULT-Sawteeth on upper plate; dashed where approximately located; dotted where concealed FAULT-Arrows show relative horizontal movement; dashed where approximately located; dotted where concealed ANTICLJNE-Showing crestline; arrow shows direction of plunge; dashed where approximately located; dotted

> SYNCLINE-Showing troughline; arrow shows direction of plunge; dashed where approximately located; dotted OVERTURNED SYNCLINE-Arrows show direction of dip of limbs; dashed where approximately located; dotted

STRIKE AND DIP OF BEDS

- 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
- [†]⁷⁰ Strike and dip of beds, overturned
- OIL AND GAS WELLS
- Status unknown as of January 1,1988 Dry hole, abandoned

1. Empire 1 Peters, Spud 5/24/61, TD 1,100' 2. Holland and Barnes 1 McCoy, Spud 12/14/52, TD 850 3. Wellhead Compression 2 Sumar, Spud 11/10/87

GEOLOGIC MAP OF THE BAKER MOUNTAIN 7.5' QUADRANGLE LATIMER COUNTY, OKLAHOMA

CONTOUR INTERVAL 20 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092

AND BY THE OKLAHOMA GEOLOGICAL SURVEY, NORMAN, OKLAHOMA 73069

A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

STATE OF OKLAHOMA

1 80 73 4 65

Neil H. Suneson and Charles A. Ferguson, 1989

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