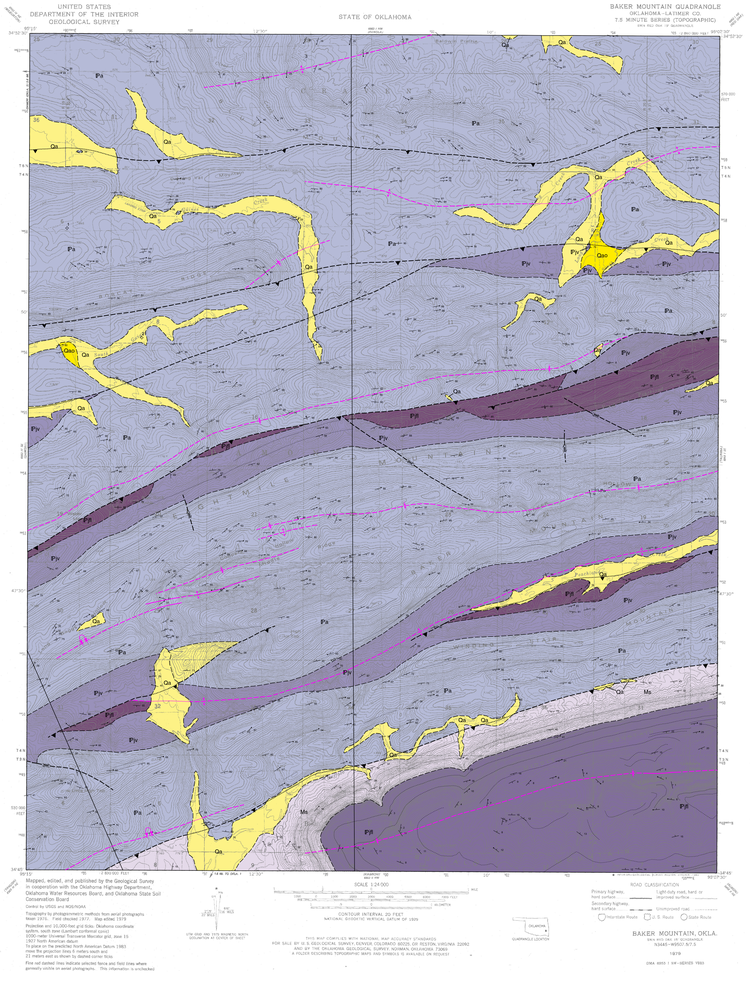


Mapped, edited, and published by the Geological Survey in cooperation with the Oklahoma Highway Department, Oklahoma Water Resources Board, and Oklahoma State Soil Conservation Board

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs
Water 1970. Field checked 1972. Map edited 1979

Projection and 10,000-foot grid ticks: Oklahoma coordinate system, North zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid, zone 15
1927 North American datum
10,000-foot ticks: Oklahoma coordinate Datum 1983
more the projection lines 6 meters each and
21 meters east as shown by dashed corner ticks.
Fine red dashed lines indicate selected fence and field lines where geometry visible on aerial photographs. This information is unchecked.

UTM GRID AND 1978 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

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

OKLAHOMA
QUADRANGLE LOCATION

ROAD CLASSIFICATION
Primary highway, hard surface — Light-duty road, hard or improved surface
Secondary highway, hard surface — Unimproved road
Interstate Route — U. S. Route — State Route

BAKER MOUNTAIN, OKLA.
SW4 SW4 SEC. 29, T. 1 N., R. 19 E.
NAD83 • WGS72 SCT. 5
1979
DMA 4000 I SW—SERIES V883

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

By
Neil H. Suneson and Charles A. Ferguson

Digitized by Jacob Hernandez, 2014

CORRELATION OF MAP UNIT

QUATERNARY: Qa, Qao

MISSISSIPPIAN - PENNSYLVANIAN: Pa, PIPv, PIPIu, PIPII, Ms

DESCRIPTION OF UNITS

Qa ALLUVIUM (QUATERNARY)–Unconsolidated silt, sand, and gravel of present stream chan

Qao OLDER ALLUVIUM (QUATERNARY)–Unconsolidated silt, sand, and gravel above prese stream channels

Pa ATOKA FORMATION (PENNSYLVANIAN)–Predominantly poorly exposed olive-gray o grayish-olive (10Y4/2) slightly silty, noncalcareous, poorly laminated shale and mudstone thin beds of laminated siltstone and thicker beds of sandstone. Laminated siliceous shale of formation in southern part area. Sandstone is light olive gray (5Y5/2) and grayish orange where fresh, and grayish orange (10YR7/4) where weathered. Mostly fine-grained, rarely grained, poorly to moderately sorted, noncalcareous, and composed of about 95% q feldspar and lithic fragments, and conspicuous white mica parallel to laminations. Indivi vary from several centimeters to several meters thick and average about 60 cm. Amalgam common, forming resistant ridges and dip slopes easily identifiable on aerial photographs; son these marker beds are mapped. Thicker beds are generally massive (corresponding to Ta turbidite sequence) to parallel laminated (Tb); thinner beds commonly are ripple cross- (Tc). Sole marks (flute, groove, and load casts, trace fossils) at base of sandstone be common. Dish-and-pillar structures and ripple marks typical of some beds. Unfossiliferous lowermost sandstone beds immediately above Johns Valley limestone that contain molds bryozoans, brachiopods, crinoids, and rare corals; local concentrations of plant debris o planes throughout the formation. Maximum thickness approximately 6,500 ft (2,000 m Choctaw fault

PIPv JOHNS VALLEY FORMATION (PENNSYLVANIAN)–Predominantly poorly exposed, mec gray (N4) to pale-brown (5Y5/2), mostly noncalcareous, poorly laminated, slightly silty mudstone. Contains thin beds of noncalcareous laminated siltstone and thin- to medium-bedded sandstone. Sandstones mostly light brown (5Y6/4) to grayish orange (10YR7/4), varying fr coarse-grained, with rare granule conglomerates, rarely calcareous or feldspathic, and massive or ripple cross-laminated. Sole marks and dish-and-pillar structures typical of some be sandstone marker beds mapped. Shale locally contains slightly- to well-rounded pebbles and boulders of chert and a wide variety of limestone lithologies (micrites to biosparites and packstones). Other lithologies within the shale include large masses of platy to very fis grayish-black (N2) shale with calcareous concretions, phosphatic(?) nodules, and dis pyrite. Limestone clasts have been correlated with lower and middle Paleozoic limes exposed to the north and west; chert clasts may be Woodford Formation (Devonian); and n shale masses may correlate with the Caney Formation (Mississippian). Maximum approximately 1,700 ft (500 m) south of Choctaw fault

PIPIu JACKFORK GROUP, UPPER AND LOWER PARTS (PENNSYLVANIAN)–Predominan exposed, grayish-orange (10YR7/4), yellowish-gray (5Y7/2) to dusky-yellow (5Y6/ medium-grained, quartzose, noncalcareous, and massive or slightly graded to poorly sandstone, with variable amounts of interbedded, poorly exposed medium-gray (N5) to (5Y3/2) shale and mudstone. Locally contains many thick-bedded (1-10 m), massive beds in amalgamated sole-poor sequences locally tens of meters thick. Sole marks, di pillar structures, ripple marks, and mud rip-up clasts typical of some beds. Locally fossiliferous (molds of crinoids and brachiopods), or with abundant impressions of plant bedding planes. Sandstone marker beds mapped locally. Sandstones commonly highly Shale and mudstone contain thin, laminated siltstone layers and locally weather to "pencil" Upper part (PIPIu) correlates with Garland Limestone and Wesley Formations of other workers and part (PIPII) with Wild horse Mountain Formation. Maximum thickness of upper part appr 2,300 ft (700 m); maximum thickness of lower part approximately 1,300 (400 m) south o fault

PIPII JACKFORK GROUP, UPPER AND LOWER PARTS (PENNSYLVANIAN)–Predominan exposed, grayish-orange (10YR7/4), yellowish-gray (5Y7/2) to dusky-yellow (5Y6/ medium-grained, quartzose, noncalcareous, and massive or slightly graded to poorly sandstone, with variable amounts of interbedded, poorly exposed medium-gray (N5) to (5Y3/2) shale and mudstone. Locally contains many thick-bedded (1-10 m), massive beds in amalgamated sole-poor sequences locally tens of meters thick. Sole marks, di pillar structures, ripple marks, and mud rip-up clasts typical of some beds. Locally fossiliferous (molds of crinoids and brachiopods), or with abundant impressions of plant bedding planes. Sandstone marker beds mapped locally. Sandstones commonly highly Shale and mudstone contain thin, laminated siltstone layers and locally weather to "pencil" Upper part (PIPIu) correlates with Garland Limestone and Wesley Formations of other workers and part (PIPII) with Wild horse Mountain Formation. Maximum thickness of upper part appr 2,300 ft (700 m); maximum thickness of lower part approximately 1,300 (400 m) south o fault

Ms STANLEY GROUP (MISSISSIPPIAN)–Predominantly poorly exposed, dive-gray (5Y3/2 olive-gray (5Y5/2), fissile, noncalcareous shale and thin siltstone beds with Wocky to siltstone masses. "Pencil" structure typical in shales; siltstones show cone-in-cone structu Contains sandstone beds that average about 50 cm thick, varying from 5 cm to amalgamatio much as 10 m thick. Sandstone is medium gray (N5) to olive gray (5Y4/1), fine-grain stratified to massive, typically slightly graded, and noncalcareous or calcareous. Rounde and chert grains (1-5 mm) relatively abundant near base of some sandstone beds. Organi plant debris, and pyrite disseminated throughout. Bases of sandstones locally planar, but so marks (load, groove, and flute casts, trace fossils) locally present. Shale rip-up cla abundant. Laminated, blocky, brittle, dark-colored siliceous shale or chert present a throughout upper part of unit. Correlates with Moyers and Chickasaw Creek Formatior workers. Maximum thickness approximately 1700 ft (500 m) south of Windingstair fault

SYMBOLS

CONTACT-Dashed where approximately located

MARKER BED

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

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

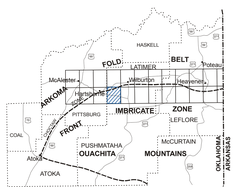
- Strike and dip of beds, facing direction unknown
- Vertical beds, facing direction unknown
- Strike and dip of beds, upright
- Vertical beds, ball indicates top of beds
- Strike and dip of beds, overturned

OIL AND GAS WELLS

- Status unknown as of January 1,1988
- Dry hole, abandoned

LIST OF WELLS

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



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