UNITED STATES

DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Gas Well 78

Control by USGS and USC&GS

zone 15, shown in blue

photographs taken 1970-71. Field checked 1971 Polyconic projection. 1927 North American data

1000-meter Universal Transverse Mercator grid ticks

10,000-foot grid based on Oklahoma coordinate system, south zon

generally visible on aerial photographs. This information is unchecked

# Prepared in cooperation with the U.S. Geological Survey and the Arkansas Geological Commission

WILBURTON QUADRANGLE

7.5 MINUTE SERIES (TOPOGRAPHIC)

OKLAHOMA-LATIMER CO.

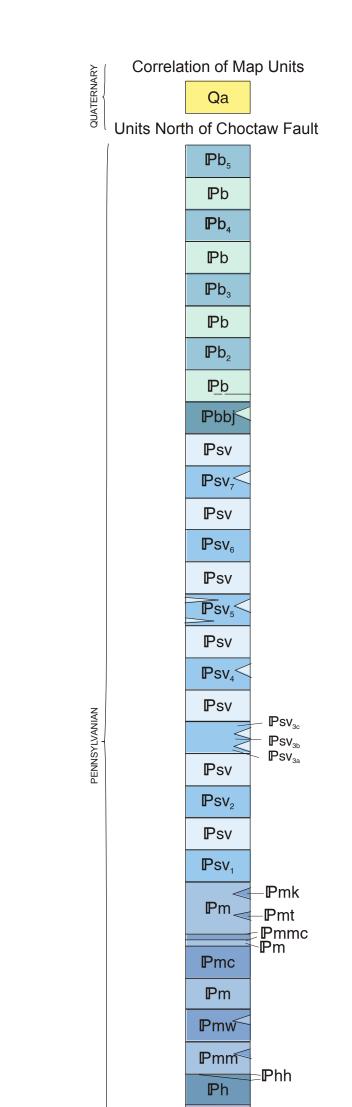
hard surface \_\_\_\_\_ Unimproved road \_\_\_\_\_

Interstate Route U. S. Route State Route

WILBURTON, OKLA.

N3452.5-W9515/7.5

1971 AMS 6953 IV NE-SERIES V883



Units South of Choctaw Fault

## DESCRIPTION OF UNITS

- ALLUVIUM (QUATERNARY)—Gravel, sand, silt, and clay on flood plains of present-UNITS PRESENT NORTH OF CHOCTAW FAULT BOGGY FORMATION (PENNSYLVANIAN)—Predominantly sandy, silty gray to olive-Pb gray tograyish-black shales and siltstones (Pb) with scarp-forming sandstones. At
- present in the shale units. Top of formation eroded. Thickness: 700-850 ft SAVANNA FORMATION (PENNSYLVANIAN)—Predominantly brown to olive-gray to dark-gray shales (Psv) with several mappable, brown, fine-grained sandstone units (Psv1, Psv2, Psv3, Psv4, Psv5, Psv6, Psv7). Psv3 in places contains two shale units separating the main sandstone into three units (Psv3a, Psv3b, Psv3c). Psv5 is a difficult-to-map group of sandstone units of variable thickness separated by shales that wedge out at several localities. Psv4 and Psv7 in places thin and split
- blocky shales containing abundant ironstone concretions. McCurtain Shale Member (Pmm) at the base is approximately 960 ft thick. A discontinuous, brown, shaly, thin, unnamed sandstone unit (Pmmu) lies approximately in the middle of McCurtain Shale Member. It is a resistant, brown, fine-grained, ridge-forming sandstone of variable thickness, and locally is split into an upper and lower unit separated by shale. Three named, brown,' fine-grained, thin-bedded sandstone units occur in the shale (Pm) above the Warner Sandstone Member: Cameron Sandstone Member (Pmc); Tamaha Sandstone Member (Pmt); and Keota
- UNITS PRESENT SOUTH OF CHOCTAW FAULT where weathered. Mostly fine-grained, rarely medium-grained, poorly to moderately sorted, noncalcareous, and composed of about 95% quartz, 3% marks typical of some beds. Unfossiliferous except for local concentrations of plant debris on bedding planes. Stratigraphic position of Atoka Formation exposed immediately south of trace of Choctaw fault unknown. Approximately 3750 ft (1150
- grayish-olive (10Y4/2), noncalcareous, poorly laminated shale and mudstone with thin siltstone beds. Locally mapped separately from Atoka Formation (Pa). Mostly covered with alluvium (Qa). Maximum thickness approximately 1000 ft (300 m) south of Choctaw fault
- Napanucka Formation (Pw) described below SPIRO SANDSTONE MEMBER (INFORMAL) OF WAPANUCKA FORMATION (PENNSYLVANIAN)—Well-exposed, light-brown (5Y5/6) to very pale-orange grained, stratified quartz arenite. Quartzose, mostly noncalcareous, locally with abundant trace fossils (Asterosoma) and fragments and molds of crinoids, corals, brachiopods, calamites, and other plants. Beds typically 2 cm to 1 m thick, amalgamated, and mostly parallel-stratified, but locally planar-tabular cross-
- MIDDLE SHALE MEMBER (INFORMAL) OF WAPANUCKA FORMATION (PENNSYLVANIAN)—Pooriy-exposed, noncalcareous, poorly laminated shale and mudstone similar to the lower Atoka—shale (Pal). Locally separates the dominantly elastic Spiro member (Pws) from the dominantly calcareous Wapanucka Formation (Pw).
- olive-gray(5Y4/1), locaNy slightly silty, mostly calcareous shale with lesser amounts of interbedded laminated siltstone. Siltstone beds locally contain abundant macrofossils (gastropods, brachiopods, nautitoids). West of mapped area unit contains 2-cm phosphatic(?) concretions, 2-cm to 30-cm limonttized

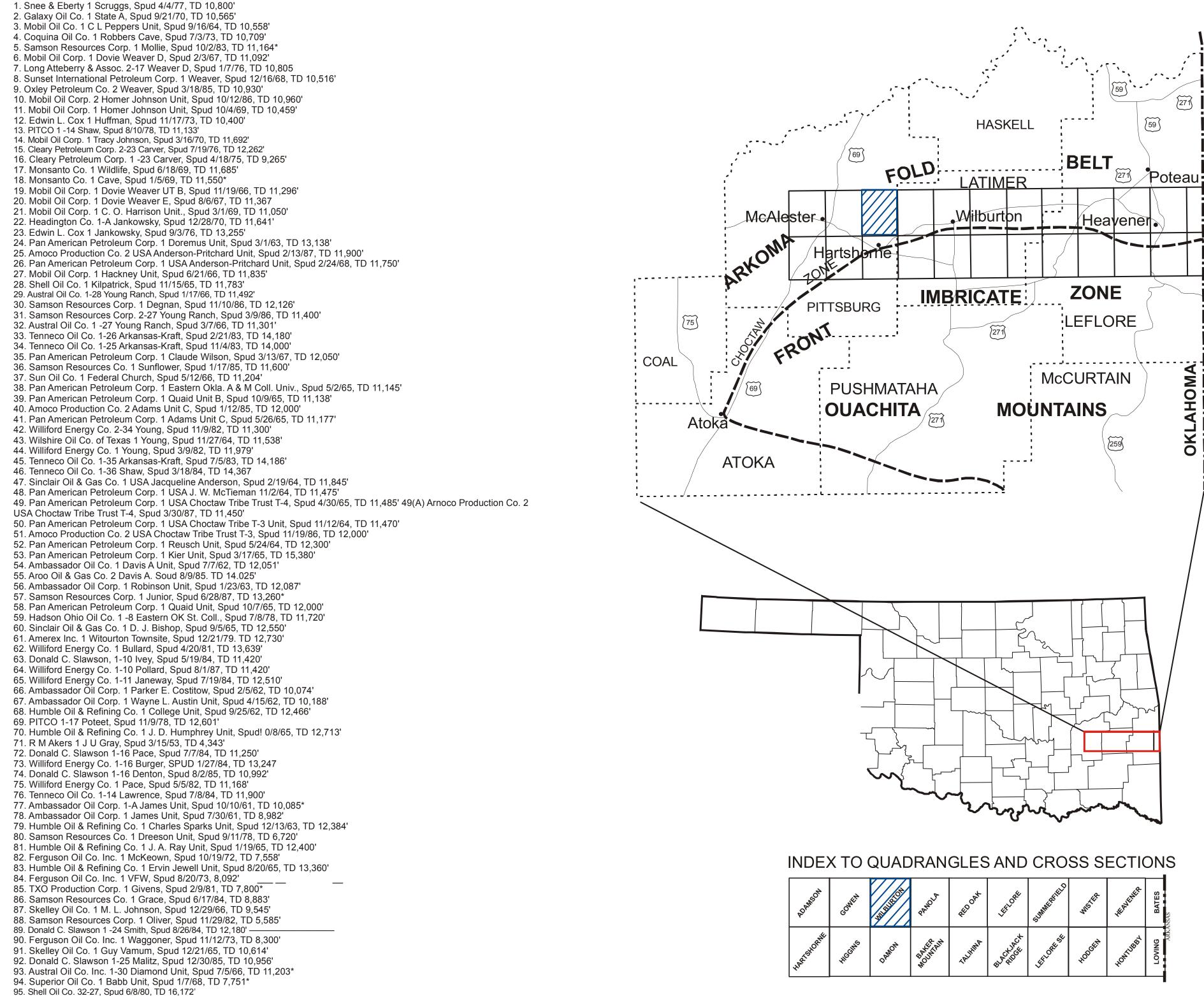
LIST OF WELLS SPUDDED BEFORE JANUARY 1, 1988

- base is the Bluejacket Sandstone Member (Pbbj), 170-260 ft thick. Numbered units (Pb2, Pb3, Pb4, Pb5) are mappable, scarp-forming, yellowish-brown sandstones. A 30-ft-thick, grayish-green shale unit occurs about 60 ft below the top unit of the Bluejacket Sandstone. A thin stringer of coal (Secor?) is present in the shale unit just above the Bluejacket Sandstone. Thin, unmappable sandstone lenses are
- into two units separated by shale. Most shales include thin, unmappable sandstone beds. Thickness: 1,500-2,000 ft
- McALESTER FORMATION (PENNSYLVANIAN)—Predominantly dark-gray to black, the McCurtain Shale Member. The Warner Sandstone Member (Pmw) overlies the Sandstone Member (Pmk). Unexposed McAlester and Upper McAlester coal beds (Pmmc) occur in the shale interval between the Cameron Sandstone Member and the Tamaha Sandstone Member. Surface-mined areas designated PmmcM.

Thickness: 2,000-2,400 ft

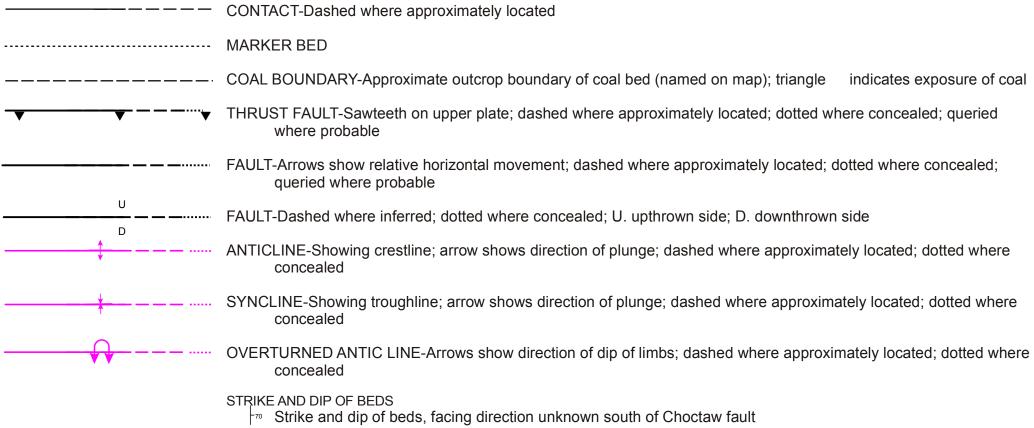
- HARTSHORNE FORMATION (PENNSYLVANIAN)—Brown to very light-gray, very finegrained, ripple-marked, bioturbated, thin-bedded to massive sandstone nterbedded with silty gray shale (Ph). Contains the Lower and Upper Hartshorne coal beds (Phh). Surface-mined areas designated PhhM. Thickness: Approximately
- ATOKA FORMATION (PENNSYLVANIAN)—Predominantly silty, brown to gray to grayish-black, noncalcareous shale (Pa) with discontinuous, ridge-forming, brown, fine-grained sandstones (Pass). Approximately 1,200 ft of upper part exposed north of the Choctaw fault
- 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 siltstone and thicker beds of sandstone. Lower shale (Pal) mapped separately. Sandstone is light olive-gray (5Y5/2) and grayish-orange (5Y7/2) where fresh, and grayish-orange (10YR7/4) 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 slopes easily identifiable on aerial photographs; some of these marker beds are mapped (close clotted line). Thicker beds are generally massive (corresponding to Ta of Bouma turbidite sequence) to parallel laminated (Tb); thinner beds commonly are at base of sandstone beds locally common. Dish-and-pillar structures and ripple
- m) of lower part exposed in southern part of quadrangle LOWER ATOKA SHALE (PENNSYLVANIAN)—Pooriy exposed, olive- gray (5Y3/2) to
- WAPANUCKA FORMATION, UNDIFFERENTIATED (PENNSYLVANIAN)—Includes Spiro sandstone member (informal) (Pws), shale in Wapanucka Formation (Pwsh), and
- 10YR8/2) or pale-yellowish-orange (10YR8/6), mostly well-sorted, porous, mediumstratified. Rarely spkxilar. Granule sandstone beds with abundant shale clasts rare. Weathers to very vuggy appearance. Forms ridge and dip slope throughout area. Locally contains thin limestone beds similar to those in the Wapauncka Formation (Pw). Maximum thickness approximately 350 ft (110 m) south of Choctaw fault
- Thickness 0 to approximately 70 ft (21 m)
- WAPANUCKA FORMATION (PENNSYLVANIAN)—Predominantly poorly- to moderately well-exposed, medium-gray (N5) to medium-dark-gray (N4), wavybedded, sparsely fossiliferous (crinoids, brachiopods, gastropods, corals) micrite and parallel- to rarely cross-stratified packstone and bioclastic limestone. Locally slightly spicular. Micrite locally nodular, slightly petroliferous odor; packstone locally sandy. Limestone mostly underlies middle shale member (locally mapped separately - Pwsh) and mostly underlying but locally interfingering with Spiro sandstone member (informal). Maximum thickness approximately 300 ft (87 m)
- "SPRINGER" FORMATION (PENNSYLVANIAN)—Pooriy exposed, dark-gray (N3) to siderite concretions, and local traces of pyrite. Maximum thickness approximately 650 ft (200 m) south of Choctaw fault

# Oklahoma Geologic Quadrangle OGQ-5 Geologic Map of the Wilburton 7.5' Quadrangle (previously Open-File Report OF2-90)

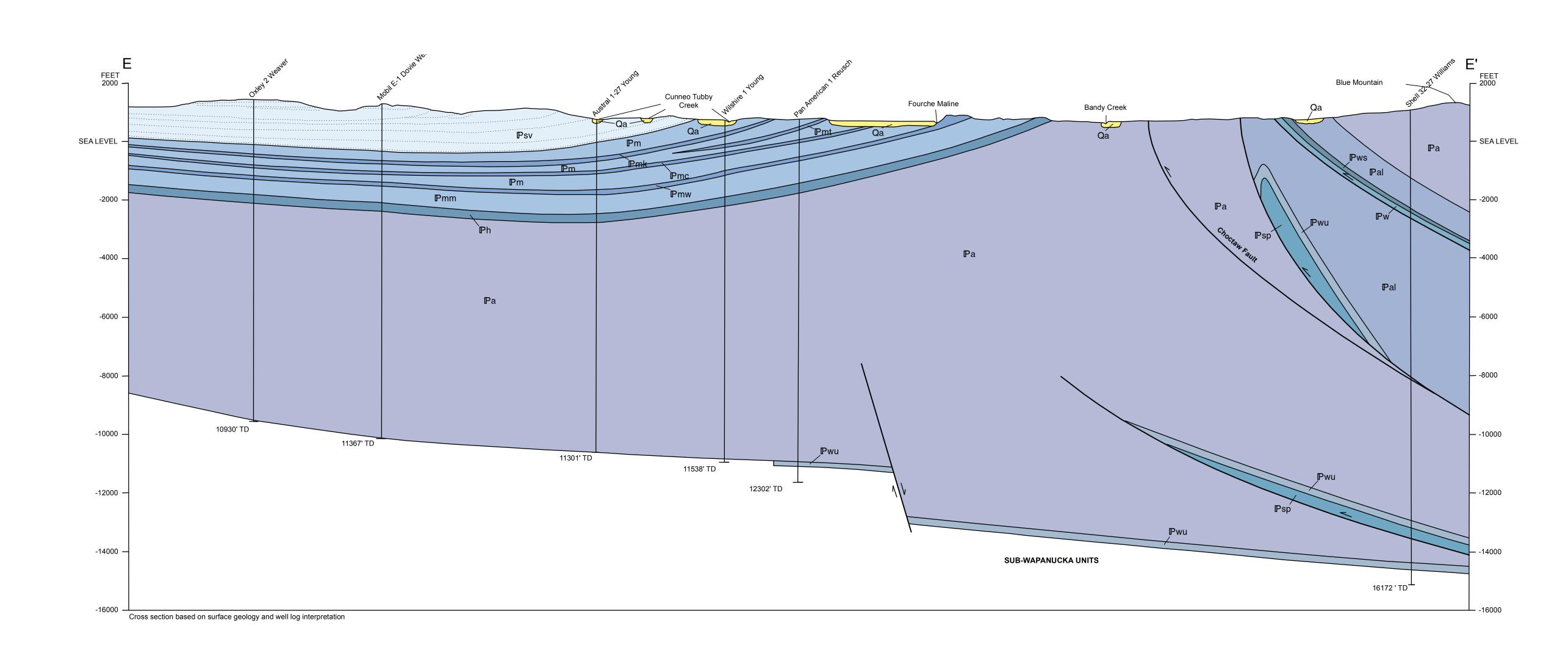


	CONTACT-Dashed where approximately located
	MARKER BED
	COAL BOUNDARY-Approximate outcrop boundary of coal bed (named on map); triangle indicates exposure of coal
<del></del>	THRUST FAULT-Sawteeth on upper plate; dashed where approximately located; dotted where concealed; queried where probable
	FAULT-Arrows show relative horizontal movement; dashed where approximately located; dotted where concealed; queried where probable
U	FAULT-Dashed where inferred; dotted where concealed; U. upthrown side; D. downthrown side
<del></del>	ANTICLINE-Showing crestline; arrow shows direction of plunge; dashed where approximately located; dotted where concealed
<del></del>	SYNCLINE-Showing troughline; arrow shows direction of plunge; dashed where approximately located; dotted where concealed
<del></del>	OVERTURNED ANTIC LINE-Arrows show direction of dip of limbs; dashed where approximately located; dotted where concealed
	STRIKE AND DIP OF BEDS  To Strike and dip of beds, facing direction unknown south of Choctaw fault

- + Vertical beds, facing direction unknown Vertical beds, ball indicates top of beds
- Dry hole, abandoned
- Gas well



- <sup>70</sup> Strike and dip of beds, upright
- 570 Strike and dip of beds, overturned
- Status unknown as of January 1,1988



## GEOLOGIC MAP OF THE WILBURTON 7.5' QUADRANGLE, LATIMER COUNTY, OKLAHOMA

CONTOUR INTERVAL 20 FEET

DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242

AND BY THE OKLAHOMA GEOLOGICAL SURVEY, NORMAN, OKLAHOMA 73069 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

LeRoy A. Hemish, Neil H. Suneson, and Charles A. Ferguson, 1990

Digitized by Jacob Hernandez, 2014