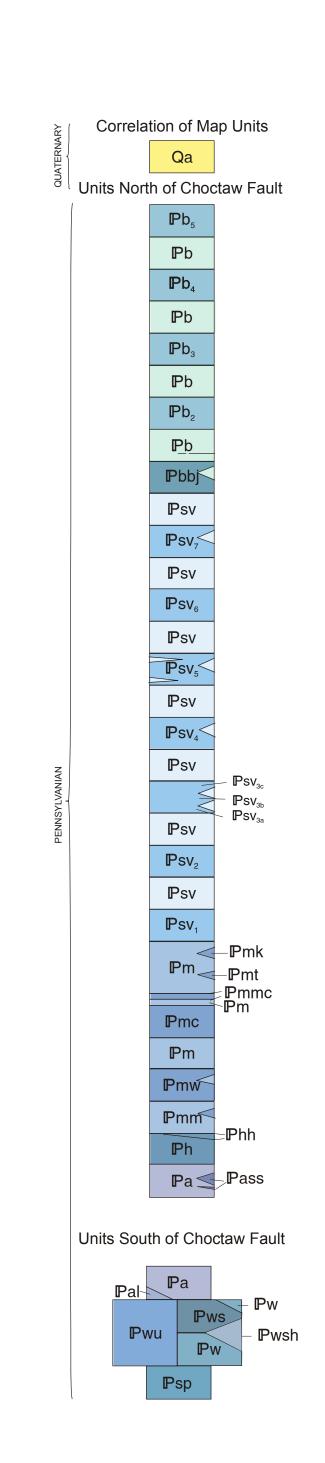


GEOLOGIC MAP OF THE WILBURTON 7.5' QUADRANGLE LATIMER COUNTY, OKLAHOMA

Neil H. Suneson and Charles A. Ferguson Digitized by Jacob Hernandez, 2014



DESCRIPTION OF UNITS

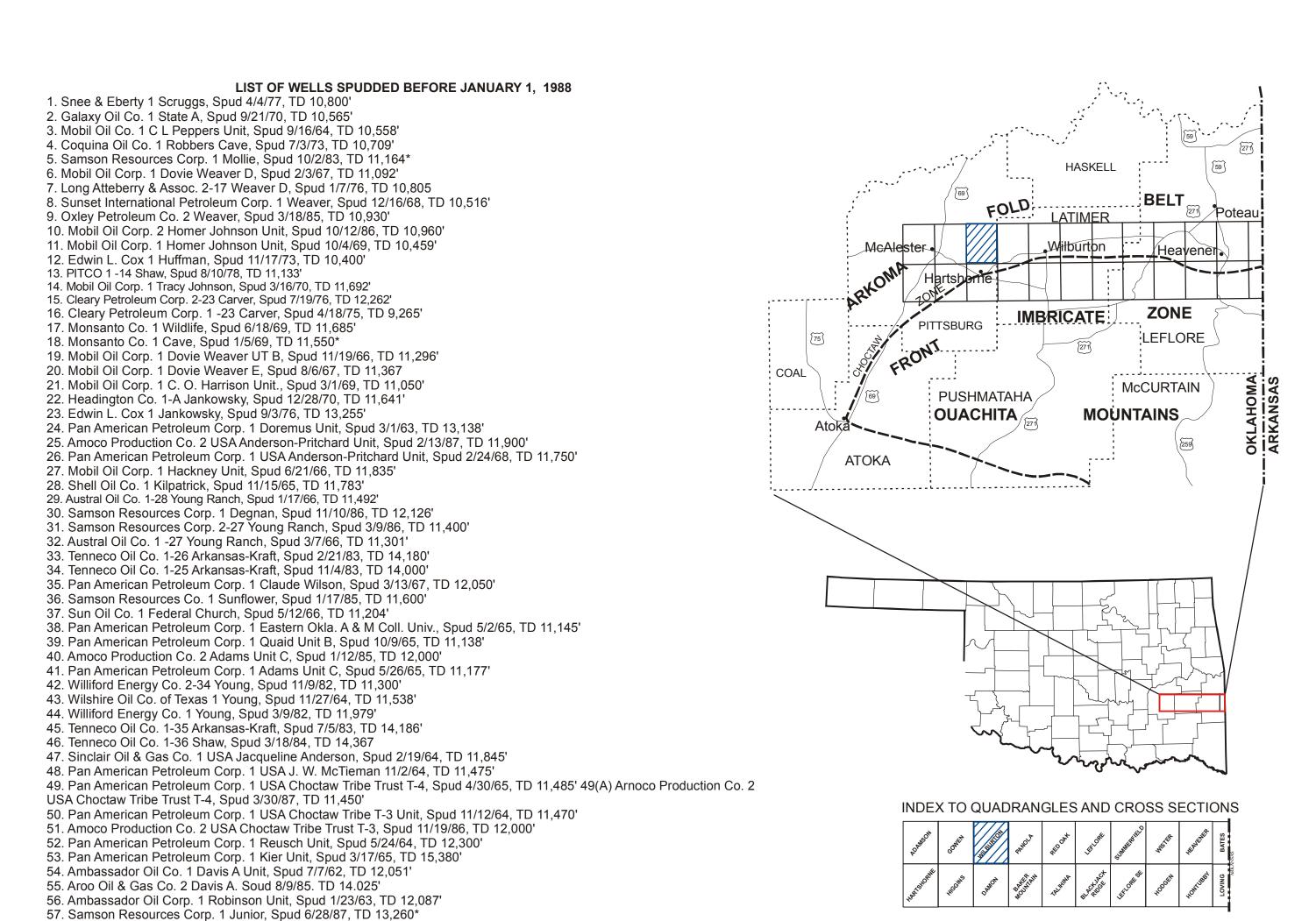
- ALLUVIUM (QUATERNARY)—Gravel, sand, silt, and clay on flood plains of present-UNITS PRESENT NORTH OF CHOCTAW FAULT
- BOGGY FORMATION (PENNSYLVANIAN)—Predominantly sandy, silty gray to olive-gray tograyish-black shales and siltstones (Pb) with scarp-forming sandstones. At base is the Bluejacket Sandstone 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 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 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, 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 the McCurtain Shale Member. The Warner Sandstone Member (Pmw) overlies the 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 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.
- HARTSHORNE FORMATION (PENNSYLVANIAN)—Brown to very light-gray, very fine-grained, ripple-marked, bioturbated, thin-bedded to massive sandstone interhedded with city gray shale (BL). On the light sandstone interbedded 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 4,000 ft of the present silts and stones (Pass). fine-grained sandstones (Pass). Approximately 1,200 ft of upper part exposed north of the Choctaw fault UNITS PRESENT SOUTH OF CHOCTAW FAULT
- Pa

 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 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) where weathered. Mostly fine-grained, rarely medium-grained, 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 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 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 m) of lower part exposed in southern part of quadrangle
- LOWER ATOKA SHALE (PENNSYLVANIAN)—Pooriy exposed, olive- gray (5Y3/2) to 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
- Pwu

 WAPANUCKA FORMATION, UNDIFFERENTIATED (PENNSYLVANIAN)—Includes
 Spiro sandstone member (informal) (Pws), shale in Wapanucka Formation (Pwsh), and
 Wapanucka Formation (Pw) described below Wapanucka Formation (Pw) described below
- SPIRO SANDSTONE MEMBER (INFORMAL) OF WAPANUCKA FORMATION (PENNSYLVANIAN)—Well-exposed, light-brown (5Y5/6) to very pale-orange (10YR8/2) or pale-yellowish-orange (10YR8/6), mostly well-sorted, porous, mediumgrained, 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 crossstratified. 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
- Pwsh

 MIDDLE SHALE MEMBER (INFORMAL) OF WAPANUCKA FORMATION

 (PENNSYLVANIAN)—Pooriy-exposed, noncalcareous, poorly laminated shale and mudstone similar to the lower Atoka shale (Pol). Locally soporates the deminantly mudstone similar to the lower Atoka—shale (Pal). Locally separates the dominantly elastic Spiro member (Pws) from the dominantly calcareous Wapanucka Formation (Pw). 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 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 siderite concretions, and local traces of pyrite. Maximum thickness approximately 650 ft (200 m) south of Choctaw fault



58. Pan American Petroleum Corp. 1 Quaid Unit, Spud 10/7/65, TD 12,000'

59. Hadson Ohio Oil Co. 1 -8 Eastern OK St. Coll., Spud 7/8/78, TD 11,720' 60. Sinclair Oil & Gas Co. 1 D. J. Bishop, Spud 9/5/65, TD 12,550' 61. Amerex Inc. 1 Witourton Townsite, Spud 12/21/79. TD 12,730' 62. Williford Energy Co. 1 Bullard, Spud 4/20/81, TD 13,639' 63. Donald C. Slawson, 1-10 Ivey, Spud 5/19/84, TD 11,420'

66. Ambassador Oil Corp. 1 Parker E. Costitow, Spud 2/5/62, TD 10,074'

68. Humble Oil & Refining Co. 1 College Unit, Spud 9/25/62, TD 12,466'

67. Ambassador Oil Corp. 1 Wayne L. Austin Unit, Spud 4/15/62, TD 10,188'

70. Humble Oil & Refining Co. 1 J. D. Humphrey Unit, Spud! 0/8/65, TD 12,713'

79. Humble Oil & Refining Co. 1 Charles Sparks Unit, Spud 12/13/63, TD 12,384'

64. Williford Energy Co. 1-10 Pollard, Spud 8/1/87, TD 11,420'

69. PITCO 1-17 Poteet, Spud 11/9/78, TD 12,601'

71. R M Akers 1 J U Gray, Spud 3/15/53, TD 4,343'

72. Donald C. Slawson 1-16 Pace, Spud 7/7/84, TD 11,250'

75. Williford Energy Co. 1 Pace, Spud 5/5/82, TD 11,168' 76. Tenneco Oil Co. 1-14 Lawrence, Spud 7/8/84, TD 11,900'

84. Ferguson Oil Co. Inc. 1 VFW, Spud 8/20/73, 8,092'

85. TXO Production Corp. 1 Givens, Spud 2/9/81, TD 7,800* 86. Samson Resources Co. 1 Grace, Spud 6/17/84, TD 8,883'

87. Skelley Oil Co. 1 M. L. Johnson, Spud 12/29/66, TD 9,545'

91. Skelley Oil Co. 1 Guy Vamum, Spud 12/21/65, TD 10,614' 92. Donald C. Slawson 1-25 Malitz, Spud 12/30/85, TD 10,956'

94. Superior Oil Co. 1 Babb Unit, Spud 1/7/68, TD 7,751*

95. Shell Oil Co. 32-27, Spud 6/8/80, TD 16,172'

88. Samson Resources Corp. 1 Oliver, Spud 11/29/82, TD 5,585'

90. Ferguson Oil Co. Inc. 1 Waggoner, Spud 11/12/73, TD 8,300'

93. Austral Oil Co. Inc. 1-30 Diamond Unit, Spud 7/5/66, TD 11,203*

73. Williford Energy Co. 1-16 Burger, SPUD 1/27/84, TD 13,247 74. Donald C. Slawson 1-16 Denton, Spud 8/2/85, TD 10,992'

77. Ambassador Oil Corp. 1-A James Unit, Spud 10/10/61, TD 10,085*

80. Samson Resources Co. 1 Dreeson Unit, Spud 9/11/78, TD 6,720'

81. Humble Oil & Refining Co. 1 J. A. Ray Unit, Spud 1/19/65, TD 12,400'

83. Humble Oil & Refining Co. 1 Ervin Jewell Unit, Spud 8/20/65, TD 13,360'

89. Donald C. Slawson 1 -24 Smith, Spud 8/26/84, TD 12,180' —————

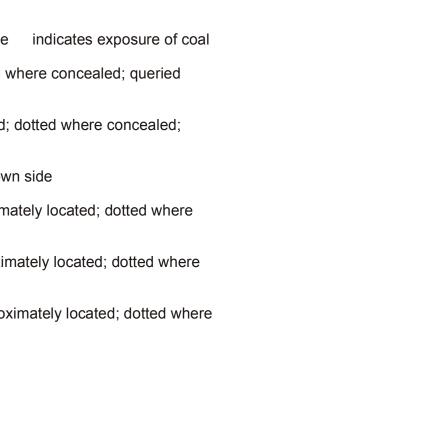
78. Ambassador Oil Corp. 1 James Unit, Spud 7/30/61, TD 8,982'

82. Ferguson Oil Co. Inc. 1 McKeown, Spud 10/19/72, TD 7,558'

65. Williford Energy Co. 1-11 Janeway, Spud 7/19/84, TD 12,510'



| | Symbols |
|-------------|--|
| | CONTACT-Dashed where approximately located |
| | MARKER BED |
| | COAL BOUNDARY-Approximate outcrop boundary of coal bed (named on map); triangle indicates exposure of coal |
| — | 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 |
| | 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 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 |
| | ¹ / ₇₀ Strike and dip of beds, upright |
| | \$\daggerightarrow\tau_{70}\$ Strike and dip of beds, overturned |
| | + Vertical beds, facing direction unknown |



- Vertical beds, ball indicates top of beds
- Status unknown as of January 1,1988
- Dry hole, abandoned Gas well

