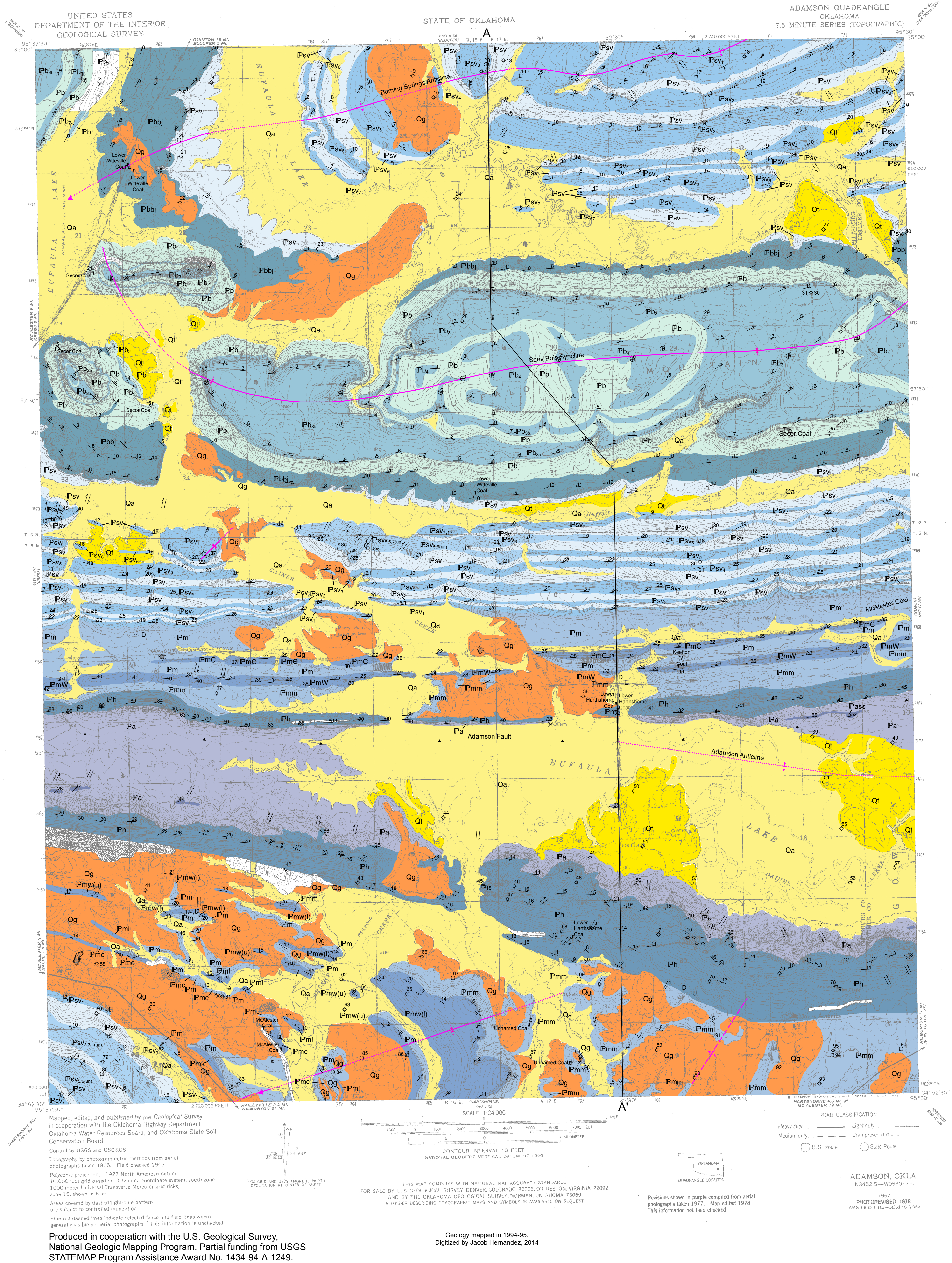
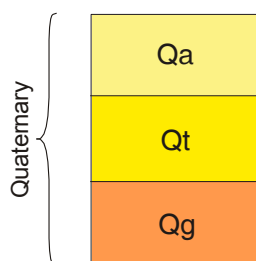


OKLAHOMA GEOLOGICAL SURVEY
Charles J. Mankin, *Director*

Oklahoma Geologic Quadrangle **OGQ-17**
Geologic Map of the Adamson 7.5' Quadrangle
(previously Open-File Report OF4-95)



Correlation of Map Units



Qa

ALLUVIUM (QUATERNARY)—Gravel, sand, silt, and clay on flood plains of present-day streams.

Qr

TERRACE DEPOSITS (QUATERNARY)—Subangular to subrounded cobbles, gravel, sand, and silt, forming a veneer, generally about 4-10 ft thick, on the surfaces of terraces that stand about 15-50 ft above the beds of present-day streams.

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GERTY SAND (QUATERNARY)—Unconsolidated gravel, sand, silt, and clay in abandoned river channel found at elevations well above modern flood plains. Main constituents of the sand and gravel are quartz, quartzite, chert, flint, pebbles, and shelled wood. Thickness varies from an estimated maximum of 50 ft to a thin veneer, in places (such as parts of sec. 14, T. 6 N., R. 16 E.), siliceous, well-sorted pebbles from the Gerty are scattered on weathered Savanna Formation, but the deposits are too thin to map as Gerty.

Pb

BOGGY FORMATION (PENNSYLVANIAN)—Predominantly silty, grayish black (N2) to olive gray (5Y4/1) to dark yellowish brown (10YR4/2) shales and siltstones (Pb) with several mappable, scarp-forming, fine- to very fine grained sandstones (Pb2, Pb3, and Pb4). At the base is the Bluegum Sandstone Member (Pb2), mostly moderate yellowish brown (10YR5/4), about 150-200 ft thick. The Bluegum contains a lower, very fine grained, silty, shaly, thin-bedded, parallel-bedded, ripple-marked, bioturbated sandstone unit 25-50 ft thick, a middle silty shale unit (generally covered), about 50-100 ft thick, and an upper fine-grained, medium- to thick-bedded sandstone unit about 25-75 ft thick, containing large-scale trough cross-bedding, abundant soft-sediment deformation features, and stacked channel sequences. A thin (0.05-0.4 ft) coal bed (Lower Witteville) is present in the middle shale unit of the Bluegum Member. It is exposed in the ditch along State Highway 31 in the SW 1/4 of sec. 15, T. 6 N., R. 16 E., and in a cut along the trail in the SE 1/4 of sec. 36, T. 6 N., R. 16 E. Pb2-Pb4 are predominantly dark yellowish brown (10YR4/2) to grayish orange (10YR5/4) to light brown, (Pb2), very fine grained, noncalcareous sandstones with abundant sedimentary structures such as ripples, cross-stratification, sole marks, and soft sediment deformation features. The Secor coal occurs in the shale interval between Pb2 and Pb3. It is of minable thickness in the northwestern part of the quadrangle where it is >2 ft thick. The Secor Rider coal is ~1 ft thick in this same area, and occurs ~40 ft above the Secor bed. Pb2 is discontinuous, or thin bedded and generally unmappable on the flanks of Buffalo Mountain. However, the unit is mappable in secs. 10, 21, 22, 27, and 28, T. 6 N., R. 16 E., where it is mostly thin-bedded, shaly, and generally not more than ~5 ft thick. Pb3 is a prominent thick, ledge-forming unit that is mapped as Pb3a and Pb3b at higher elevations on Buffalo Mountain and on the high hill in sec. 28, T. 6 N., R. 16 E. In those areas it is divided into two parts by a mappable shale unit (Pb4) is preserved only on the highest elevations on Buffalo Mountain. Top of formation eroded. Thickness: 700-900 ft.

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SAVANNA FORMATION (PENNSYLVANIAN)—Predominantly pale yellowish brown (10YR6/2) to olive-gray (5Y3/2) to medium dark gray (N4) shales (Psv) with several mappable moderate brown (5YR4/4) to grayish orange (10YR4/4) to moderate reddish brown (10R4/8), fine- to very fine grained, noncalcareous sandstone units (Psv1, Psv2, Psv3, Psv4, Psv5, Psv6, Psv7). The sandstones are massive to thin-bedded and shaly. They commonly are cross-bedded and ripple marked and in places contain abundant soft-sediment deformation features. Sole marks (trace fossils, brush and prod "marks", flute, grooves, and load casts) at the base of some sandstone beds are locally common. Psv1 marks the base of the formation throughout the map area. It locally grades upward in a fossiliferous, sandy limestone. Psv1-Psv7 are all mapped as single units, but generally contain shale beds of varying thicknesses. In secs. 1 and 2, T. 6 N., R. 16 E., and secs. 35 and 36, T. 6 N., R. 16 E., Psv5, Psv6, and Psv7 are undifferentiated in a structurally complex area. In the extreme southwest corner of the map, Psv2, Psv3 and Psv4 are mapped as a single, undifferentiated unit, as are Psv5 and Psv6. Most shales in the Savanna are thin, unmappable sandstone units. Thickness: 1400-1500 ft.

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HARTSHORNE FORMATION (PENNSYLVANIAN)—Grayish orange (10YR7/4) to moderate reddish orange (10R6/6) to very light gray (N8), very fine grained, ripple-marked, bioturbated, thin-bedded to massive sandstone interbedded with silty, medium-gray (N6) shale. Contains the Lower and Upper Hartshorne coal beds. The Lower Hartshorne coal ranges in thickness from 2.5 ft to 6.0 ft—average thickness is 4.0 ft; the Upper Hartshorne coal ranges in thickness from 2.3 ft to 3.5 ft—average thickness is ~3 ft. Both coals are exposed in the NE 1/4 of sec. 7, T. 5 N., R. 17 E., in a road cut, just southeast of Adamson. Thickness: approximately 220-300 ft.

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