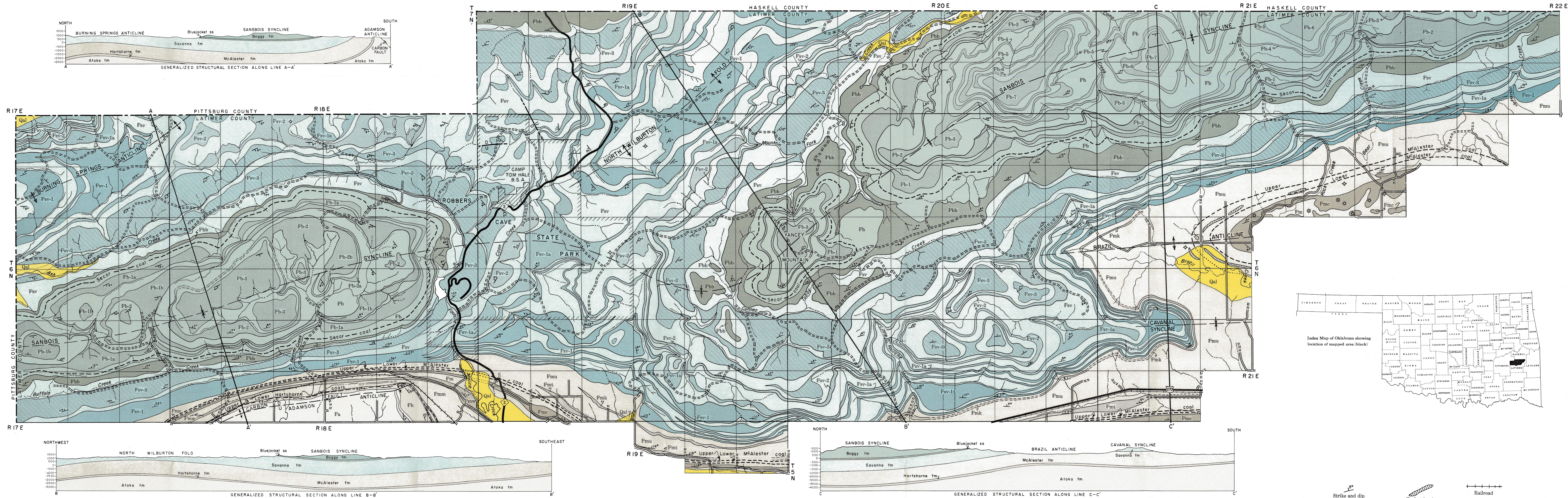
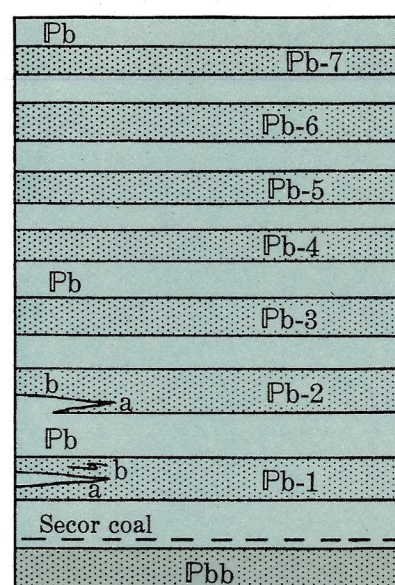


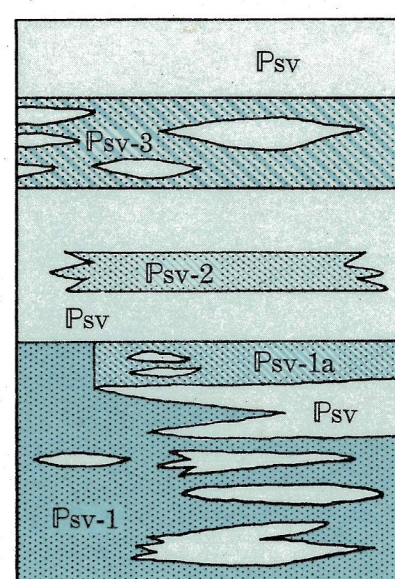


EXPLANATION

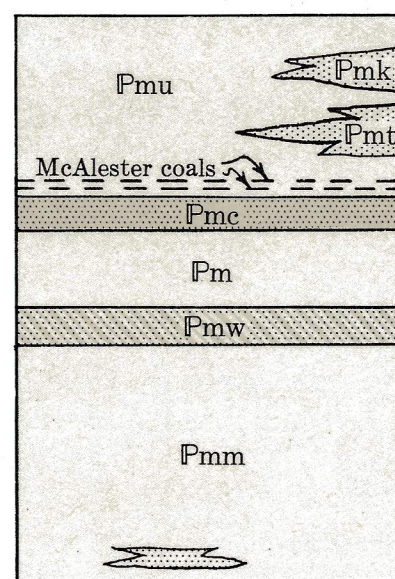
Qal
ALLUVIUM
(Sand, silt, and clay locally distributed on flood plains of larger streams.)



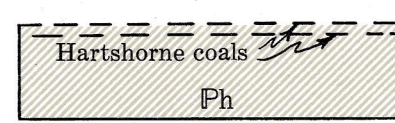
BOGGY FORMATION
(Brown to buff sandstones and siltstones [stippled] interstratified with gray silty shales. Blue-jacket sandstone member [Pb-1] at base and Secor coal seam in shale above Blue-jacket. Top eroded; maximum exposed thickness of 2,155 feet in northeastern part of map area.)



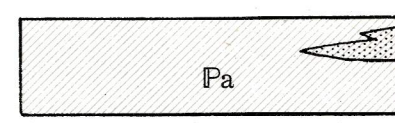
SAVANNA FORMATION
(Brownish fine-grained sandstones and siltstones [stippled] interstratified and intertongued with dark gray and gray-green silty shales. Thickness: 1,470 to 1,600 feet.)



MCALISTER FORMATION
(Chiefly dark gray shale containing clay-crinoid concretions, together with fine-grained brownish sandstone and two seams of coal, in a sequence 2,100 feet thick. Divided and mapped as follows: Fmu: Unnamed upper shale, 700 to 850 feet thick. Includes: Fmk: Kenda sandstone member, 0 to 30 feet thick. Fmt: Tamarla sandstone member, 0 to 18 feet thick. Upper McAlester coal seam. Fmc: Cameron sandstone member, 40 feet thick. Fm: Unnamed middle shale, 210 feet thick. Fmw: Warner sandstone member, 77 feet thick. Fmm: McCurtain shale member, 800 feet thick, containing a thin locally mappable sandstone bed.)



HARTSHORNE FORMATION
(Brown to gray silty sandstone interbedded with silty shale. Upper and Lower Hartshorne coal seams in upper part. Tubocky sandstone member in lower part, not mapped. Thickness: 84 to 516 feet.)



ATOKA FORMATION
(Brown silty shale with local brown silty sandstone beds [stippled] that grade upward into overlying Hartshorne formation. Exposed only in southwestern part of map area. Estimated exposed thickness: 1,850 feet.)

QUATERNARY
PENNSYLVANIAN
Des Moines Series
Krebs Group