

From *Lithologies and depositional environments of the Pennsylvanian reservoir sandstone at Campo and Tanner fields, Baca County, southwestern Colorado*, by Craig D. Caldwell, part of Kansas Geological Survey Open-file Report 91-52, available online at http://www.kgs.ku.edu/PRS/publication/1991/OFR91_52/index.html

Plate I—Core units A-D

A—Gray, fossiliferous shale of core unit A, Kearley A-2 (4,050 ft, 11 inches, to 4,051 ft, 5 inches). Bioclasts are predominantly crinoid columnals and brachiopods. Siderite(?) nodules (SN) are indicated.

B—Gray, burrowed, argillaceous siltstone/very fine grained sandstone composing the upper part of core unit A, Kearley A-2 (4,047 ft to 4,047 ft, 5 inches).

C—Gray to dark-gray argillaceous siltstone/very fine grained sandstone of core unit A overlain by fine- to very fine grained, light-gray, burrowed sandstone of core unit B, Kearley A-2 (4,046 ft, 4 inches, to 4,047 ft).

D—Light-gray, fine-grained sandstone of core unit B, Kearley A-2 (4,045 ft, 2 inches, to 4,045 ft, 10 inches) displaying burrows (B), a bioturbated area (BIO), and in the upper part of the sample, parallel lamination.

E—Small-scale cross-stratified (X) and low-angle stratified (L), fine-grained sandstone of core unit D, Womack B-1 (3,982 ft, 7 inches, to 3,983 ft, 4 inches). Greenish-gray sandstone composing the lower part of the sample is tightly calcite cemented. A burrow (B) occurs at the top of the tightly cemented layer.

F—Cross-stratified (X), poorly sorted, coarse-grained sandstone of core unit D overlain by greenish-gray, poorly sorted, argillaceous sandstone of the lowermost part of core unit E, Womack B-1 (3,976 ft, 5 inches, to 3,977 ft).

PLATE I

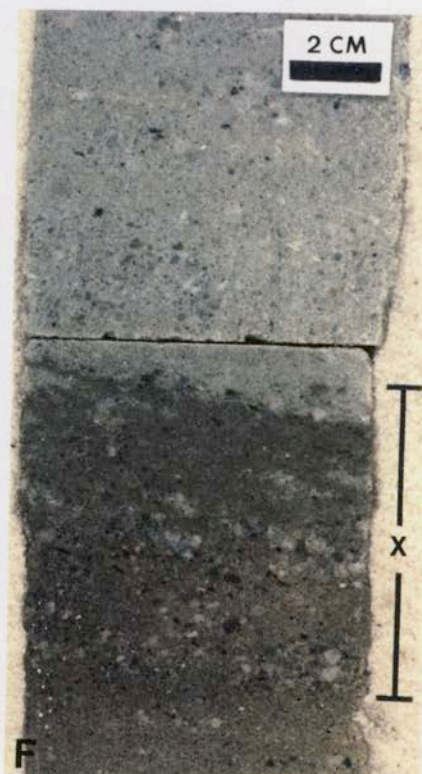
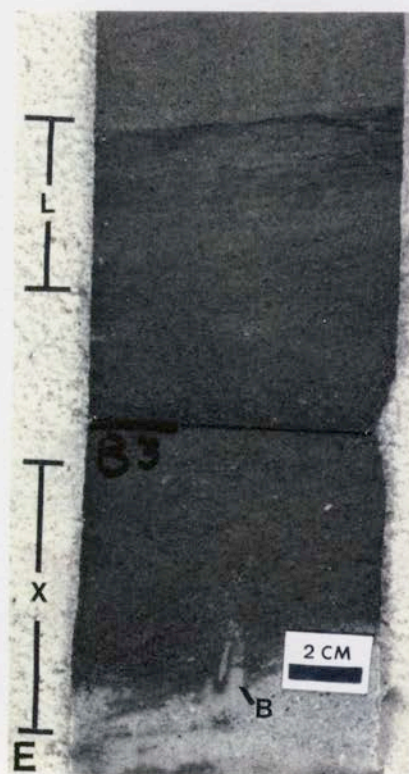
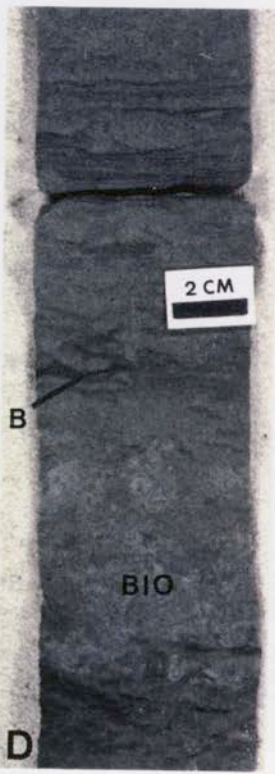


Plate II--Core unit D

A—Cross-stratified and low-angle stratified, generally fine-grained sandstone with scattered very coarse sand and granule-size, detrital grains, core unit D, Kearley A-2 (4,036 ft, 4 inches, to 4,036 ft, 9 inches).

B—Greenish-gray, tightly calcite-cemented sandstone overlying olive-gray, porous sandstone, core unit D, Womack B-1 (3,983 ft, 6 inches, to 3,983 ft, 11 inches).

C—Scanning electron microscope photomicrograph of authigenic, chlorite clay (CH) and finely crystalline dolomite (D) in intergranular pore of unit D sandstone, Kearley A-2 (4,038 ft) (scale bar is 10 microns).

D—Tightly calcite-cemented, fine- to very coarse grained sandstone of core unit D, Kearley A-2. Calcite cement (C) is stained red by alizarin red S. Some detrital grains display overgrowths (OG) formed prior to calcite cementation (80x).

E—Porous, fine- to very coarse grained sandstone of core unit D, Kearley A-2. Preserved intergranular porosity is filled by blue epoxy. Intergranular areas in the upper part of the photo are filled or partially filled by authigenic, chlorite clay and finely crystalline dolomite (D). Quartz overgrowth (OG) is shown (80x).

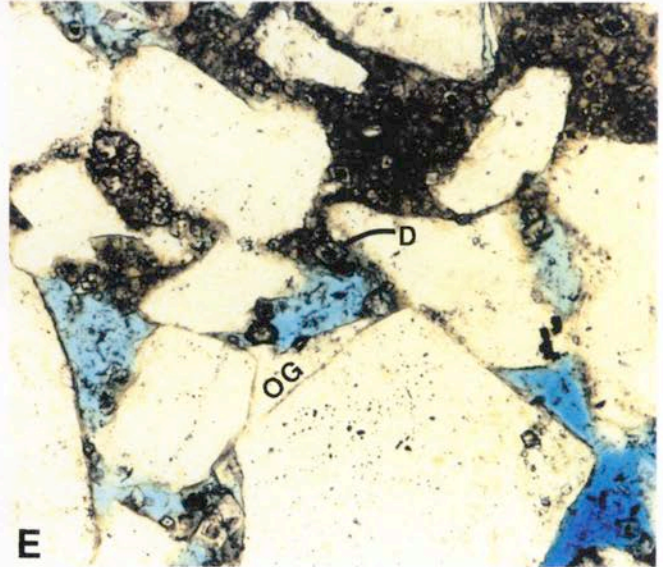
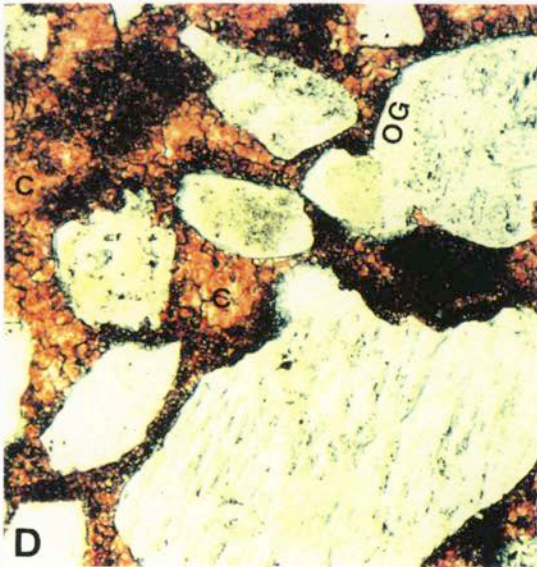


Plate III—Core units E-G

A—Fine- to coarse-grained sandstone of core unit E, Kearley A-2 (4,028 ft, 11 inches, to 4,029 ft, 6 inches). Gray, argillaceous lamination is common in the upper part of this sample.

B—Gray, algal limestone (LS) and greenish-gray, sandy shale (SH) of core unit F, Womack B-1 (3,973 ft, 5 inches, to 3,974 ft, 3 inches). The limestone has a digitate character with sandy shale filling the intervening areas. Calcite-filled fractures and/or dessication cracks (C) are present in the shale and limestone.

C—Close-up photo of algal limestone (LS) and sandy shale (SH), core unit F, Womack B-1 (3,973 ft, 5 inches, to 3,973 ft, 8 inches). The limestone is characterized by algal stromatolites (A).

D—Thin-section photomicrograph of calcite-cemented dessication cracks (C) in limestone of core unit F, Womack B-1 (3,974 ft, 10 inches) (30x).

E—Sandy, lithoclastic limestone (LLS) abruptly overlying argillaceous, sandy limestone with darker, irregularly shaped areas of fenestral limestone, unit F, Womack B-1 (3,972 ft, 5 inches, to 3,973 ft, 2 inches). The lithoclastic limestone grades upward into sandy, bioclastic and lithoclastic shale composing the lower part of core unit G.

F—Tight, sandy, bioclastic limestone (washed packstone) of core unit F abruptly overlain dark-gray, fossiliferous, silty mudstone/argillaceous siltstone of core unit G, Kearley A-2 (4,023 ft, 11 inches, to 4,024 ft, 7 inches).

G—Dark-gray, fossiliferous, silty shale of core unit G, Womack B-1 (3,971 ft to 3,971 ft, 9 inches). Macroscopic bioclasts are predominantly brachiopods.

PLATE III

