



Plate 5

Photomicrographs of silicified rock and Ogallala "mortar bed" from Ness, Phillips, and Rawlins Counties, Kansas.

Fig. 1—Quartzite, showing shell fragment, foraminifers, and chalky shale from the underlying Niobrara formation; Cen. W. side, sec. 1, T. 16 S., R. 21 W., Ness County, Kansas; plane polarized light, X 35.

Fig. 2—Partly silicified Niobrara chalky shale from below the quartzite shown in 1; plane polarized light, X 35.

Fig. 3—Contact between silicified rind and unsilicified interior of boulder of Niobrara chalky shale included within the basal Ogallala quartzite; in sec. 29, T. 4 S., R. 20 W., Phillips County, Kansas; plane polarized light, X 25.

Fig. 4—Quartzite, showing opaline cement and weathered feldspar grains; from NW sec. 29, T. 2 S., R. 32 W., Rawlins County, Kansas; plane polarized light, X 10.

Fig. 5—Ogallala silty sand cemented with calcium carbonate; from sec. 19, T. 3 S., R. 19 W., Phillips County, Kansas; plane polarized light, X 25.

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