

of 853,932 feet. In North Louisiana 798 wells were drilled with total footage of 2,355,514 feet. Of the total of 1,005 wells drilled in South Arkansas and North Louisiana, 564 were oil wells; 123 were gas and gas-distillate wells, 187 were dry holes in fields and 131 were wildcat dry holes.

In South Arkansas, during 1941 "Travis Peak" production was discovered in the Smart sand area of the Stephens field of Columbia County. Cotton Valley production was discovered in the East Schuler field in Union County, and Smackover lime gas-distillate production in the Macedonia field, in Columbia County. Smackover lime oil production was discovered in the Mt. Holly field, Union County and in the Patton field, Lafayette County.

In North Louisiana during 1941 six Eocene Wilcox sand oil fields were discovered in La Salle Parish and two in Catahoula Parish, with one gas-producing area in Caldwell Parish.

Lower Cretaceous Pettit limestone oil production was discovered in the Haynesville field, Claiborne Parish, during 1941. Other Claiborne Parish discoveries are the Athens and North Lisbon fields where gas-distillate production was found in the "Travis Peak." Smackover lime gas-distillate production also was developed in the North Lisbon field, the only Smackover production to date in North Louisiana.

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Silurian and Devonian Stratigraphy in the Area South and East of the Western Kentucky Coal Basin

The area under discussion is practically coincident with that underlain by Chester and Lower Mississippian south and east of the Western Kentucky coal basin, and includes Breckinridge, Meade, Hardin, Grayson, Larue, Hart, Warren, Barren, Allen, Logan, and Todd counties. Numerous wells have been drilled in these counties to test the so-called "Corniferous," or limestone beneath the Chattanooga shale.

The study of such samples as are available demonstrates the enormity of the erosional unconformity between the Beechwood (Hamilton) and the directly underlying formation, which may be Silver Creek (Hamilton), Jeffersonville (Onondaga), a member of the Silurian or Upper Ordovician. This thin limestone rests on older and older strata as the crest of the Cincinnati arch is approached on the east and has been entirely removed in many places close to the present outcrop.

The Jeffersonville with its basal sand also overlaps from Clear Creek onto the Louisville (Silurian) limestone. At the south end of the basin the pre-Jeffersonville unconformity is less striking than on the east, but the Chattanooga shale rests on strata ranging in age from Hamilton through Jeffersonville and Clear Creek to the Bailey (Helderberg), and in northern Tennessee the shale directly overlies the Upper Silurian.

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Onondaga Group of Parts of West Virginia and Virginia

The Onondaga group discussed in this paper includes all rock units between the top of the Oriskany (Ridgeley) sandstone and the base of the Marcellus formation of the Hamilton group. It corresponds in part to the "Corniferous" of older reports and drillers' records. Within the area described it contains two separable lithologic members, an upper shale and a lower chert.

In southeastern West Virginia the group is represented mainly by the Huntersville chert, which crops out in a belt about 120 miles long in Pocahontas, Greenbrier, Monroe, and Mercer counties. In Pocahontas and Greenbrier counties it is exposed on both flanks of the Browns Mountain anticline which lies west of the Allegheny Front. In Virginia and elsewhere in West Virginia it is confined to the Valley and Ridge physiographic province, where it has been traced as far south as Saltville, Virginia. The formation contains impure chert, highly silicified shale, silicified mudrock, and, commonly, one or more prominent glauconitic sandstones. In general the Huntersville has few fossils, but at some localities there occur numerous species which the author has identified and recorded. The Huntersville chert occupies a stratigraphic position held in northeastern West Virginia and northwestern Virginia by a shale of Onondaga age which is believed to correspond with the Needmore shale of southern Pennsylvania. The chert appears to grade laterally into this shale, although where both units are represented, the shale invariably overlies the chert. Thus, the shale is partly younger than the chert. The upper Onondaga contact is apparently conformable, but an unconformity at the base reaches great magnitude at several localities in Virginia.