

marl the phosphate was in the form of pebbles and more finely divided material. As the result of a long period of erosion covering most of the Miocene, the phosphatic materials accumulated at the surface and were reworked by the Bone Valley sea. The river-pebble deposits have been formed in the beds of streams that have lowered their channels into either the Alum Bluff or the Bone Valley phosphate horizons.

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*Lewis and Gilmer Counties.* By DAVID B. REGER. West Virginia Geol. Survey, 1916. Pp. 660, figs. 12, pls. 30, maps 2.

Several volumes each year are added to the excellent county reports already published by this state. Lewis and Gilmer counties, located near the center of the state, have large coal deposits and are rich in oil and gas. Some of the largest gas wells of the Appalachian field were drilled in Lewis County.

The Pennsylvanian formations do not reach the development in these counties that is reported from areas to the south and west. The Pittsburgh seam of the Monongahela series carries the principal coal reserve, and the oil and gas sands range in age all the way from the Chemung to the Dunkard series.

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*The Montana Group of Northwestern Montana.* By E. STEBINGER. Professional Paper, U.S. Geol. Survey, No. 90-G, 1914. "Shorter Contributions to General Geology, 1914." Pp. 61-66, fig. 1.

The Montana group of northwestern Montana is composed of four conformable formations which are, in ascending order: the Virgelle sandstone (220 feet thick) which is chiefly marine, the Two Medicine formation (1,950 feet thick) which is mainly a fresh-water deposit, the marine Bearpaw shale (490 feet thick), and the brackish and marine Horsethief sandstone (360 feet thick). These formations are similar to those of the Montana group described in southern Alberta by Dawson, but differ decidedly from those in the central part of Montana. The Belly River series of southern Alberta is equivalent to the Virgelle sandstone plus the Two Medicine formation, and these in turn are equivalent to the Eagle, Claggett, and Judith River formations (of central Montana) combined.

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