

## GOAL COMPOSITION REVEALS OIL AND GAS

The possibility of striking oil and gas in any locality is indicated by the composition of the coal found in that region, according to studies of Illinois coals by G. F. Moulton of the Illinois Geological Survey. The ratios of the fixed carbon to the total combustible matter, as determined by analysis of the coal, affords the petroleum prospector a scientific index to the probable presence and the depth of oil and gas accumulations in underlying strata.

The report issued by the Survey shows that in areas of high carbon ratios the lowest stratum with possibilities of oil production is shallow and limited to the later Paleozoic rocks, while in areas of low carbon ratios the lowest stratum with such possibilities lies deeper and includes the older Paleozoic formations as well as these of later origin. The coals mined in Illinois were found to have a fixed carbon content varying from 49 - 65 % of the total combustible matter, while most of the oil production is from areas with carbon ratios lying between 54 and 57 per cent.

The explanation of this relationship between the composition of the coal and the presence of petroleum is found in the metamorphic changes brought about by heat and pressure to which the deposits are subjected. Geologists have recognized for some time that the degree to which rocks have been metamorphosed is a factor affecting the accumulation of economically important pools of gas and oil.

Metamorphism causes chemical and physical changes in the material from which the oil is derived and probably brings about the transformation. It enhances the circulation of fluids through the rock strata, thereby promoting the accumulation of deposits of economic importance. It alters the nature of the reservoir-rock, sometimes making it unsuitable for efficient retention of oil. Finally, it changes the character of the oil after its formation and, if carried to the extreme scatters any accumulation and destroys its value.

The same conditions of heat and pressure which thus affect the accumulation of oil change the composition of the coal, and these changes, as expressed by the carbon ratio, were found to be closely related to the oil possibilities. The study of the petroleum-producing regions of Illinois shows that in areas where the carbon ratios are above 60 per cent., the oil and gas possibilities are poor, while the lower the ratios the greater the probability of large accumulations.

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COLOR MOVIES COMING IN VOGUE

Black and white motionpictures, now so popular, may soon be superseded almost completely by films taken and produced throughout in natural colors, judging by the activity of several companies.

Slapstick comedies will doubtless continue to appear in drab monochrome for some time, but in feature photography the large conservative Hollywood producers are now capitulating to the demand for color. At least a part of several major screen dramas now in preparation will revel in chromatic glory.