

The Growth of Strip Coal Mining in Indiana

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This paper will trace and attempt to account for the growth of the strip coal mining industry in Indiana from the year 1914 up to, and including, the year 1949. The year 1914 is significant nationally with respect to this industry as it marked the first time that one million tons of coal were mined by strip operations in the nation. The year 1949 is chosen as the latest year as it is the last year for which comparable national and state-wide data on coal production is available.

While strip mining had been known in Indiana since 1904, the industry did not achieve major significance until 1917. In 1914 when the nation reached the one million ton level for the first time, Indiana produced slightly more than 170,000 tons by strip methods. In three short years, however, Indiana had achieved the one million ton level for the first time. Since 1917 Indiana dropped below this level only twice.

Since 1904 strip mining operations have taken place in some fifteen counties of the state. In 1949 fourteen counties were actively engaged in strip coal mining—Clay, Daviess, Fountain, Gibson, Greene, Knox, Owen, Parke, Pike, Spencer, Sullivan, Vermillion, Vigo, and Warrick (2). These same counties were also active in strip mining in 1948, which will be used as a more typical year for comparison purposes than 1949. The year 1949 is totally atypical due to the great drop in the total coal production in Indiana that year mainly as a result of the effect of the three day work week then prevalent in the coal industry. This drop was a reversal of the general upward trend in that industry prior to that year. The fact that 1949 was atypical is further evidenced by the upturn in coal production in Indiana since that year, an upturn that is in keeping with the trends evident before 1949.

The growth of strip coal production in Indiana from 1914 to 1948 has been slightly more than double the growth of the entire coal industry in the state. The net increase in the total coal production by all methods from 1914 to 1948 was 5,914,916 tons; whereas, the increase of coal produced by strip or open-cut methods during the same period was 13,385,719 tons.

The total amount of coal produced by all mining methods in Indiana has fluctuated widely in the twenty-six year period between 1914 and 1949. There were twelve years in which the 1914 production figure of 16,641,132 tons was not equaled—1928, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, and 1949. With the exceptions of 1928 and 1949 the low production figures represent the overall depressed state of industry in general during the immediate post-depression period. These years primarily represent the 1930 to 1939 period. Since then, and with the exception of 1949, the coal production has risen to a point where, by 1940, it had maintained itself at a production level in excess of 20,000,000 tons per year.

During the same period, 1914-1949, there were fourteen years during which the preceding year's level of production was not reached. These years were 1919, 1921, 1922, 1924, 1927, 1928, 1930, 1931, 1932, 1938, 1945, 1946, 1948, and 1949. The year of peak coal production in Indiana was 1918 when 30,310,102 tons were produced (1). The lowest production ebb came in the immediate post-depression years with only 12,557,029 tons being produced in 1932.

Percentage-wise, a greater proportion of Indiana coal has been produced by strip mining methods than for a comparable basis on the national level. From 1914 to 1949 the percentage of bituminous coal produced by open-cut mining methods by the nation as a whole rose from 0.33% to 24.2%; whereas, for the same period the figures for Indiana show a percentage increase from 1.02% to 58.81%. Indiana's peak year was 1948 when 59.23% of her coal was produced by strip mining methods.

Between 1914 and 1949 the tonnage of coal produced by open-cut methods in Indiana multiplied over fifty-four times. We should remember that 1949 was an abnormally low year due to strike conditions. If 1948 is taken as the nearest normal year, we find that the tonnage of coal produced by strip methods in 1948 was almost seventy-nine times greater than that produced in 1914. The production of bituminous coal by strip methods reached the million ton level for Indiana in 1917. Only in 1919 and 1921 did the production fall below the million ton mark. The increase in strip coal production has been a fairly steady one. In no year did the production fall below the 1914 level and in only eleven years—1919, 1921, 1930, 1931, 1933, 1938, 1943, 1945, 1946, 1948, 1949—did it fail to reach that of the preceding years. The peak production year was 1942 when 13, 807,067 tons were produced by open-cut methods.

The largest single tonnage increase in strip coal production was between 1940 and 1941 when an increase of almost 3,000,000 tons was reported. The production during and following the war years remained high with more than 11,720,000 tons being produced each year until 1949. In 1949 the production dropped to a point below that of 1939 with but 9,293,956 tons being produced, as a result of the three day work week. Despite the drop in production strip mining still managed to maintain its importance with respect to the general coal industry of Indiana as the general coal industry was also depressed. In 1949 Indiana produced 58.81% of her coal by strip methods. This represented a percentage decrease of less than 0.5% from the preceding year.

With respect to production there have been two periods of reasonably steady strip coal production, one from 1929 through 1934 when about five million tons were produced and the other from 1940 to 1946 when the production was in the neighborhood of twelve to thirteen million tons.

Probably the main reason for the expansion of strip coal mining is the fact that the coal can be produced more cheaply by this method than underground methods. There are perhaps six reasons that would account for this cheapness of production: (1) there is little coal wastage as no coal has to be left to support the mine roof; (2) more machinery

can be used, thus enabling a greater overall production; (3) smaller labor costs per ton due to the large number of machines; (4) there is a savings on insurance rates as a strip mine receives the same rates as does a regular construction company; (5) the cost of mine ventilation is eliminated; (6) the cost of hoisting the coal to the surface is largely reduced.

The importance of strip coal mining to Indiana can best be shown by the state's ranking as a coal producer and strip coal producer. In 1948 Indiana ranked sixth as a coal producer and fifth as a strip coal producer in the United States. Of the leading coal producing states Indiana produced a greater percentage of her coal by strip methods than any other state.

Summary

Strip mining has been known in Indiana since 1904; however, it was not until 1917 that one million tons of coal were produced by this method of mining. Since then the production of coal by open-cut methods has grown from slightly less than 5% of the total coal produced in 1917 to 58.81% in 1949 with the high point being 59.23% in 1948. In large part it is the low cost and ease of operation which accounts for the increase of production by this method.

Literature Cited

1. Coal Trade Association of Indiana, Report of Coal Production by Rail Shipping Mines in the State of Indiana During Calendar Years 1917 to 1950 Classified by Counties, Railroads, Veins of Coal, and Type of Operation. Terre Haute, Indiana: March 22, 1951, pg. 40.
2. United States Department of the Interior, "Bituminous Coal and Lignite in 1949", Mineral Industries Surveys, Mineral Market Report, No. 1923, October 20, 1950, Washington, D. C.: Government Printing Office, 1950, pg. 34.