

BURIED TREASURE

KENTUCKY'S POSSIBILITIES WAITING TO BE UNEARTHED.

Prof. C. J. Norwood, Curator of Kentucky Geological Survey, Shows in Interesting Address Before Kentucky Press Association the Great Possibilities of This State.

In an address before the Kentucky Press Association at Louisville, December 28, 1916, Prof. C. J. Norwood, of the Kentucky Geological Survey, spoke as follows:

Gentlemen of the Kentucky Press Association:

I shall not undertake to discuss in any detail all the buried treasure of Kentucky, which I understand to mean mineral resources, for three reasons. First, to do so in anything like an adequate way would be utterly impossible in a paper like this. Second, since I occupy a position, the duties of which call for efforts to bring men and money to the State, to assist in developing our mineral deposits and in establishing industries within the State for their utilization, as well as to give information to our own citizens concerning what they have, I want to appeal to you for help. Third, I wish to offer some suggestions as to how you may assist in promoting the growth of agriculture in the State. I will add a fourth reason: I wish to say something about the census, since that not only is a live topic just now, but as regards population is of much interest to those concerned with the mineral resources of the State.

One hundred years ago, according to Seybert's Statistical Annals (published in Philadelphia in 1818), Kentucky had a population of 406,511 persons, of whom 324,237 were "free whites." In ninety years the number grew to 2,147,174, and in the succeeding ten years we have reached 2,289,995—a gain of only 142,731 in the ten years, or only a little more than 6.6 per cent.

The smallness of the gain has shocked us. Without stopping to make any real investigation of the cause, many of us—contrary to all traditions—at once entered upon a course of self-condemnation that has been astounding, and our conduct has been no less hysterical than that of the suddenly converted. Blindly groping for an explanation of the census returns, some of us seem to have adopted the idea—originally the spawn of politics—that Kentucky is criminal, or at least criminally careless. All sorts of reasons have been given for the smallness of the increase of population. Illiteracy, night riders, poor schools, feuds, bad roads, bad taxation laws, rotten elections, murders and a lot of other ugly things have been set up as the causes; in fact, almost everything from toadstools to hook-worms has been blamed—almost everything except Halley's comet.

I do not know whether you gentlemen of the press have ever charged yourselves with any part of the poor showing we have made or not. I do not know whether you yourselves shoulder any part of the blame or not. But isn't it possible that at least some of you have so emphasized the fact that "a little leaven leaveneth the whole loaf," that one bad man from Bitter Creek has been made to give tone to the whole State? If so, would it not have been just as well to have used the man from Peaceful Valley instead? As for me, I believe the Peaceful Valley man represents the State, and that the man from Bitter Creek is merely an excrescence, and that he can be eliminated without ringing the riot alarm.

It may be, however, that I have misunderstood the recent clamor. Some years ago, as I remember it, Mr. Watterson, after a vigorous campaign in behalf of the Star-eyed Goddess, was charged with the awful crime of preaching free trade, pure and simple. He replied that the charges were wrong. What he wanted was not absolute free trade, but tariff reform; that, maybe, he had talked free trade somewhat more than less, but in doing so he was simply adopting the method of the man on one side of a street who wished to stop a man on the other side in order that he might have an important talk with him—he first yelled to attract the other man's attention, and then, having gained it, crossed over and conversed in quiet tones.

And so it may be that much of this recent shouting—I will not say how recent—has really been to attract our attention. If so, please remember that Mr. Watterson's man didn't keep on yelling; he crossed over and spoke quietly. And now that our attention has been attracted, let us exchange the compliments of the day and get to the real business of the times—that of encouraging a dignified self-respect throughout the State, of pandering less to the fear of alien enemies and of promoting confidence in the State and

its people, and a better understanding of our responsibilities to the younger generations.

It may appear that in commenting on the explosion following the census returns I have wandered far from the subject of my paper; this may be. Nevertheless, I am thinking of our "buried" treasures that may come nearer to explaining the disappointing census figures than do the reasons I have heard and read.

I am thinking of the treasure washed from our at one time culturable hill-sides and dipping farmlands, through poor agricultural methods, and buried in the Gulf of Mexico—resulting in the emigration of the careless stewards to new lands.

I am thinking of our treasures in men and women—the thousands of them—who, so far as we are concerned, are "buried" in Oklahoma, in Texas, and in other States, as the result of the efforts of local emigration agents, who have been and are now working 365 days in the year to do bury them! And what are we doing to offset this emigration? Surely the glowing accounts of these other lands that our own home papers print, and that the alien papers and magazines that come into the State print, alongside with catalogues of our own faults, do not constitute an offset.

With local agents working for emigration to other States, and some of our own papers indulging in editorials that tend to persuade the world that Kentucky is among all the States the worst governed, the worst taxed, the worst in educational facilities, and the worst in miscellaneous ways—including murder, arson and feuds—how could one expect the population of the State to grow? With our own people persuaded to leave and strangers scared out of coming, it seems to me that only an optimist of the rarest breed would expect growth. Kentucky has done well to show any increase at all; she has done so despite persuaded emigration and self-abuse.

Gentlemen, let us stop bumping our own heads. We do have our faults. We do have some feuds. Our taxation system may not be perfect. Our educational facilities do need to be increased and improved. We should, indeed, work to remedy every defect. But why be so violent about it? Why explode so much dynamite in order to dislodge a few obstructing rocks that the whole State is blown up? There are 119 counties in Kentucky. Why hold up the delinquencies of some one of them in such fashion as to make them appear representative of all other counties? Why not emphasize the fact that the State as a whole is one of the best places in the whole world in which to make a home and rear the generations that are to follow us. You know that to be true. Why not emphasize the fact that feuds and assassinations are no more representative of this State than are the feuds and murders in other States representative of them? You also know that to be true.

Some years ago the late Richard P. Rothwell said in an editorial in the Engineering and Mining Journal, "Kentucky is by nature, beyond all question, one of the most favored States in this country." No one questions that, but according to my reading most persons put the State's value in agricultural advantages to the forefront, whereas, fine as it is for farming purposes, it is, taken as a whole, greater in a mineral way. This latter fact is, apparently, more keenly appreciated by citizens of other States than by our own people. It is easier to obtain Kentucky capital for the development of mineral deposits in other States than it is to get it for the development of better deposits in our own State. It seems true, indeed, that "to be interested in distant objects, like the moon, and to neglect what lies at our feet, appears to be a trait of human nature."

Of the total expanse of the State (41,253 square miles), about 16,670 square miles are covered by coal-bearing formations, in which occur, according to locality, from nine to twelve or more workable coals; a region of about 2,000 square miles in the west is rich in veins of fluor spar, barytes and calc spar, with some lead and zinc; in the central part lead, barytes and calc spar veins, with some fluor spar, are found in enormous number distributed over an area of about 4,000 square miles; over the whole of Jackson's Purchase region, about 2,340 square miles, splendid clays abound, together with sands of high value, valuable siliceous earths, lignite beds, and other minerals; adjacent to the eastern and southern margins of the western coal-field is an area of perhaps 1,000 square miles in which are found excellent plastic clays and some kaolin, while on the western margin of the same field are large areas of high-clay refractory clays, or "fire-sands," with some kaolin. In addition, we have great areas of fine clays and cement-making materials on the rim of the central region; superior cement materials are also found in the margins of both coalfields and elsewhere. Then, also, we have large areas of the highest grade of fireclay in the eastern coalfield, hundreds of square miles of excellent iron ore, favorably placed with reference to fuel and flux; great areas of limestone and sandstone of the highest value for structural and other purposes; large areas of "rock asphalt," for paving, road-making and other purposes; an abundance of well-distributed road-making material other than limestone, consisting of clays for burning as such or mixed with sand, also chert and black shales; notably extensive fields of petroleum and natural gas, and of salt brines, large areas of potash shales and extensive areas of phosphate limestone and nodules; regions of glass sand, of molders' sand, of flint, of metallic paint beds and pigment earths; areas of excellent lithographic stone, and so on. We have all that, and yet the selling value of our mineral output, including cement and clay products, at the place of production, doubtless did not exceed \$18,000,000 for the current year.

Now, I believe that the press, in its anxiety to build up the State, has been prone to dwell to much on the immediate importance of obtaining an increase in the agricultural population. To increase such a population

—to have a larger percentage of our soil in cultivation—is a desirable thing, but I fear we have not gone about the business in quite the right way. Aside from the fact that it is of first importance to get better results from the soil we are already cultivating, we must first increase the industrial population of the State before we can hope to make any great advance in diversified farming; when that is done the agricultural increase will come, and we will, at the same time, be able to hold our young farmers at home. The farmer must have a better home market for his products; otherwise we need not expect an increase of prosperity simply through an increase in the number of farmers.

It seems to me that while we have hitherto rather thoroughly exploited the agricultural side of the State, we have failed to pay sufficient attention to the mineral side—not coal alone, but the varied mineral resources of the State.

I believe that if the editors will emphasize the mineral advantage of their regions more fully than has been the case hitherto, and work for the establishment of industries that may be based on them, they will accomplish more toward building up agriculture than can be done otherwise, since as the mining and manufacturing industries grow, the home market for agricultural products will grow.

See what coal-mining alone has done! From an output of 5,620,675 tons in 1900, the production of commercial coal has grown, according to present indications, to about 12,900,000 tons in 1916; possibly somewhat less, and possibly even 13,000,000 tons. This is an increase of about 7,879,000 tons, or about 137 per cent in the ten years, and we have just begun to mine coal.

The number of coal miners has also grown greatly; indeed, such gain in population as we have made since 1900 appears to be very largely, if not most largely due to mining. I believe it within reasonable bounds to estimate that the gain in the last ten years, exclusive of that portion of the population employed in mining, has been less than 80,000.

In 1900 there were 10,222 persons employed at the coal mines. Those employed at clay, fluor spar, barytes and iron mines may be estimated at 500, making a total of 10,722 miners. Assuming that 85 per cent of these miners represent families of five persons each, I believe that is somewhere near the correct proportion, the mining population in 1900 was about 47,174.

The total population was reported as 2,147,174. Subtracting the mining families leaves 2,100,000 as the non-mining population in 1900.

In 1910 about 24,919 persons were employed at the coal mines, and about 1,000 at other mines. These probably represent a population of about 113,000.

Subtracting this mining population from the total population reported reported leaves 2,176,900 as the non-mining population which is an increase of only 76,900 for the ten years. If these figures prove to be approximately correct, it shows that while there has been a gain of more than 14 per cent in the coal-mining population alone, the gain in other population was but little more than 3.5 per cent.

Were we to base calculations on the population represented by all families whose subsistence is dependent upon wages earned in the production of mineral substances in the State, thus including stone quarries, petroleum and natural gas, with the coal, clay, fluor spar, barytes, calcite and iron mines, we would naturally find that our gain since 1900 has been due chiefly to the development of our mineral values.

I believe that the growth of this State is to come through mining and the development of our oil and natural gas resources, and of manufactures allied with mining.

If it is to become a sheep-raising State, it must come through mining. If it is to become a cattle-raising State—not simply a grower of blooded herds—it must come through mining. If it is to be eminent as more than a tobacco-growing State, agriculturally, it must come through mining. When the people of the medium good lands, and of the poor lands, and of the impoverished lands see a local market developed they will take greater interest in improved farming. In scientific farming, in fertilizing, in intensive farming, and a tide of immigration will turn toward our State that we can not otherwise expect.

Kentucky is indeed one of the richest States in "buried treasures." You have done much to bring them to light; you can do more. Educate the people to a better understanding of tax laws; work for conditions that will be more favorable for an increase of manufactures; teach Kentucky capital to stay at home and assist in building up Kentucky. Instead of building up other States that, so built up, lure our people away to their borders; cease relying solely on outside capital; continue the work for good roads; work for a forestry law of some real value; pay more attention to the matter of improving our inland streams; teach better farming and preach against the fearful waste of our soils. Glorify the dear Old Kentucky, with her happy memories and homely ways, but preach a wholesome New Kentucky, a young man's Kentucky, a progressive Kentucky, a Kentucky whose future shall be commensurate with the wealth with which nature has endowed her; and at the end of the coming ten years the census will tell us quite another story from that ever which we now are troubled.

Gentlemen, I believe in Kentucky. I do not say, "With all her faults I love her still." I simply love her. You don't say that you love your wife, or your mother, or your sweetheart, "with all her faults." You simply love her. Well, that is the way I feel about Kentucky, and for many years I have been her loyal advocate. She is a splendid State, made so by her people, her soil, her rivers and her natural resources; she is beautiful in her strength, her character and her ideals. Let us stop throwing mud at her!

WEST VIRGINIA NEIGHBORS.

NEWS FROM COUNTIES JUST ACROSS THE RIVER IN WEST VIRGINIA.

The Kenova election, which was a warm one, resulted in the following officers:

For Mayor, J. H. Lambert. For Recorder, R. E. Partlow. Councilmen, Charles Lambert, W. P. Harris, J. B. Eakin, A. D. Hughes, W. W. Whitaker.

The House of Delegates of the West Virginia Legislature has organized by electing the Democratic caucus nominees as follows:

For Speaker—C. M. Wetzel, of Jefferson. For Clerk—M. M. Neely, of Marion.

For Sergeant at Arms—Neil Wood of Kanawha.

For Door Keeper, James Lemon, of Raleigh.

Hon. W. W. McCum, of Wayne county was a candidate for speaker, but, we regret, was not successful. The Senate has not yet organized there being a draw between the parties, each having 13 votes.

The McGregor Coal Co., of Charleston, W. Va., has incorporated with an authorized capital stock of \$300,000 to develop 5000 acres of coal lands in Logan county, 3000 acres in Raleigh county on Stone Coal Creek and 1500 acres in the same county on Tommy's Creek. The Logan county development will embrace the Cedar Grove and Holden seams, and will be provided with railroad facilities soon to be constructed. Operations in Raleigh county will be located within a half mile of the railroad, to which they will be connected by short lines, contracts for the construction of which it is said, will be awarded about January 15. Among the incorporators of the company are John Laing, W. T. Green and J. M. Laing of Charleston, A. W. Laing and David Evenden of Sharon, W. Va.

A report from Charleston, W. Va., states that the Campbell Creek Coal Co., Cincinnati, has opened a new the Campbell Creek Railroad, which mine at Putney, Kanawha county, West Virginia, about one mile from is operated by the company. The new mine will have eight entries and one tippie and is expected to reach its maximum production in 2 years. The company is now mining about 275,000 tons of coal per year, and will probably double this when the new mine is in full operation. It is stated that the equipment for the mine will cost approximately \$150,000.

Baltimore, Md.—Officials of the Davis Coal and Coke company plan to build up quite a market for their products in Cuba, which will result in a considerable tonnage of coal being shipped from Baltimore to Havana and adjacent points.

That there is opportunity for the development of a profitable market in that territory is evidenced by the contract which the Davis Coal and Coke company received which call for the shipment of five steamers laden with coal to Havana. This happened to be the first contract for coal ever received from Cuba and the company's officials believe that the trade there is worth going after.

WORKING COUNTRY PAPERS.

The cities of Cincinnati, Louisville and Lexington work the country newspapers to a finish for free advertising for fairs, poultry shows, etc. All they want is to get the country contingent to come in and spend their good money with the hotels, stores, saloons, etc., and the country press swallows the bait, and gives them the free blow, all right, all right. Stop and think a little, brethren of the country press, and see if it is to your interest to induce Farmer Corntassel, one of your good friends and patrons, to go to the city and blow in the money he owes you for last year's subscription while you are hustling round to get money to pay last month's paper bill—Bath County World.

SEEDS

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VEGETABLES IN THE ORCHARD.

Many fruit growers will want to know what success will attend the fruit trees. The plan has worked well on many fruit farms. Early cabbage and early potatoes are desirable crops for orchards. Peas are even better, because harvested early, and because they enrich the soil. Beans are highly valued by those who have grown them between fruit trees, and early tomatoes are especially successful in peach orchards. In intensive cropping two things require attention. The first is to plant the vegetables too close to the trees. The other is to provide ample plant food for both fruit and vegetables. On guard as to these requirements, there is no reason, so experience shows, why growing vegetables between fruit trees should not meet with entire success. This fact holds with special force in the case of young orchards, not yet bearing. For long the gardener must cultivate, prune and fertilize his orchard before it will yield a profitable crop. This difficulty is best overcome by growing raspberries, strawberries, currants, gooseberries, and similar short-lived fruits among the young trees. Even a crop of corn may be handled to advantage in a young and growing orchard. But never plow deeper than three inches in any kind of orchard.

A BUSHEL AND A HALF.

Three brothers—John, Henry and Bert Peck—and three sisters—Nellie, Zoe and Annie Walker—were married near Arapahoe, Okla.

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