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By Chas. R. Jones, of the Charlotte Observer.

Gentlemen of the North Carolina Press Association:

By request I have been induced to prepare a short paper on the mines and mineral interests of our State to be read as information to members of our association, who, to a very large extent, hold within their grasp the destiny of the State, and as the representatives of that agency which has contributed much to make her what she is to-day.

Political economists tell us that there are but three sources of wealth: The agricultural, the mechanical and the mineral. The profits of agriculture heretofore have been regarded as our chief source of wealth, and it is known possibly to every member of this convention that in the census of 1870 the old North State filled up every blank in the census report. Our income from agricultural crops is very large, but I have no statistics upon which to base any calculation as to their value. I know, however, that within the limits of the State a population of 1,400,000 souls is being supported mainly by the products of our soil, and that besides this, immense quantities of cotton, tobacco, rice, lumber and naval stores, &c., are annually shipped from the State. It is a part of our early history that in the main our people were self-supporting, and this was so from the very nature of circumstances. Until the completion of the North Carolina Railroad the people of the two sections of the State, east and west, were almost unknown to each other. The average school geography had never gotten higher in an attempt to designate our great staples of production than the bare assertion of the fact that "North Carolina was noted for her tar, pitch and turpentine," a commodity of commerce almost, if not altogether, unknown to seven-eighths of the people of the State. Our mail facilities were in the main so few that there was little intercourse or commerce between the people of the opposite sections of the State, and the inhabitants of the larger portion of our territory were content to rest under the epithet of the "Rip Van Winkle" of the Union. Our forests teeming with the finest timbers known to commerce were either unknown to the world, or were literally "hewn down and cast into the fire" before the axes of the hardy pioneers, who regarded each tree cut down and destroyed as a victory over a foe not to be despised.

But it is not of these I would speak to-day. The past, with its follies, its neglected opportunies, and its omissions, is gone. The present is upon us, with its responsibilities and its duties. Brains, capital and enterprise demand that we let the dead past bury its own dead. A change has come over us, and that change, coupled with our earnest endeavors, can make our waste places and our "old fields" blossom as the rose, and, under its impulse, we can march forward to a glorious prosperity. With our other resources the development of our mines and mineral treasures offer to North Carolina a future as brilliant and as fair as her own glorious climate, and as rich as the fertility of her own soil.

Within in the past year or two, at least $200,000 have been expended in putting in machinery for producing gold, silver, iron and copper from the mines of North Carolina, and from this we take courage.

The general impression of those who have given the question careful study and examination, is that the business of mining for precious metals, will become one of the largest and most important industries of the country. Important in its value as a producer of a product always in demand, always available, however depressed may be the prices of every other production of farm or shop, of hand or brain, and is in a shape to be marketable at full value even after exposure to the action of the elements which would utterly destroy the commercial value of every other commodity.

"The impression that mining for gold and silver is to become one of the most valuable and prominent industries, is strengthened even by a dim comprehension of the vast and stable foundation upon which it rests. There is in all the works of nature a changeless law and system. The measure of duration and vastness is estimated by the ages of formation and massiveness of structure. In nature mountains do not labor to bring forth a mouse. The flower that comes from bud to blossom in a night fades and perishes in the sunshine of the morning, while the firm, enduring stratum of granite which the slow, grand march of countless ages have fashioned and hardened, endures without a preceptible loss a combat with the destructive elements of centuries.

Mining combines within itself in a large measure many of the most prominent elements of permanence. There is nowhere visible in any part of its structure signs of haste or weakness, but instead, massive solidity and breadth of foundation, which indicate an enduring and substantial existence upon which the development and needs of a generation of workers can make no impression.

With such a basis, with such immense resources, its product being in such regular and general demand, there can be but one future for such an industry. While its growth must of necessity be slow, and at all times almost imperceptible, it will gradually, but none the less surely, rise upon its solid foundations, to a grandeur and importance which no industry of the present day can ever hope to equal. The development of the resources of this branch of the productive forces is largely dependent upon capital and energy wisely and skillfully employed, and in this respect differs from almost every other line of business. A dead, inert mass waits to be acted upon with no force of life within itself, to blossom with new power when surrounded by the required influences. The seed of the farmer carries in its bosom the future harvest, and when placed in the earth and nurtured by the rain and sunshine of heaven, lives and perfects itself even when the husbandman sleeps, but the wealth that the miner seeks knows no resurrection. It is the dead effort of an epoch which is buried beneath the crumbling wrecks of centuries. Cold and dull, the germ of life crushed out in the tumultuous chaos, when the giant forces were upbuilding a new creation, it responds to no gentle touch of earth or heaven. Created, perhaps by the union of measured forces, it yields to no power but force, and a series of massive forces are required in every step or change from mining to coining.

Capital is a lever that moves the world. Capital is a reservoir of concentrated power, and a measure of force. It is a blind giant, of mighty strength, to do a master's will. When mining and capital are brought face to face, each will find a fitting mate. One will find a field of treasure broad enough for all its strength, and the other will meet a force to which it must bow down and yield a wealth of tribute. It is not strange that the prophets on the mountain tops behold, in the coming union of these two grand elements so admirably fitted for each other, visions of such vast results that they may well question, when they descend to the blinded toilers on the plain, the truth of what their eyes beheld of the future revealed.

We take especial State pride in asserting that the gold producing area of North Carolina covers about 12,000 square miles, and contains about 150 mines in various conditions of development, and it also contains large areas of copper, silver, iron and coal, to say nothing of the many other valuable substances, such as mica, hiddenite, corundum, etc. As to gold: Up to the 30th day of June, 1877, nearly $12,000,000 had been officially reported as the products of our mines. Since that time at least another million has been added, and this, it is thought, lacks from one-half to one-third of the amount actually produced, because much of it finds its way into commerce without passing through the assay offices, and much of it that passes through this avenue is credited to other gold producing sections. The gold field in North Carolina may be properly said to extend from Moore and Franklin counties on the east, nearly to the Tennessee line on the west. Within these limits may be found illustrations of every mode of occurrence of gold—placers, gravel washings, beds, veins and bottoms of streams. Within this area, too, are at least three different geological formations, each furnishing ores with peculiar characters.

The best known mines are upon the central or granite belt, stretching across the State in a northeast and southwest direction, with a width of ten to twenty-five miles, the towns of Greensboro and Charlotte being nearly on the axis of the line, and, by geologists it is considered as among the oldest on the North American continent.

To the east of this line is a large body of slates, generally argillaceous, with a width varying from fifteen to fifty miles, where mines abound, but where explorations have been less.

To the west is a still larger area, made up for the most part of gneissoid and schistose formations, and extending nearly or quite to the Tennessee border; this area, too, has a large number of mines, but the most valuable deposits are placers and gravel washings.

It is highly probable that gold was mined in this State as early as the Revolutionary war, but only in a small way by washing beds of streams. The discovery of the famous 28 pound nugget at the Reed Mine, in Cabarrus county, (then Mecklenburg) occurred in 1799, but regular operations were prosecuted not until some years after; by the year 1825 the Carolina gold mines had become well known at the North and abroad. A Legislative Report of 1830 puts the ascertained production at $500,000 per annum. Thus far work had been done only on placer mines, but the speedy exhaustion of these compelled the miners to hunt the veins which had been the source of such riches.

The large number of veins found put entirely new conditions to this now important industry.

Prior to the war, neither the circumstances, the knowledge nor the skill of that period were favorable to operations planned on a scale, or with aims such as we now witness in our Western territories; had they been so the entire industrial condition of the State would have ben completely changed; to this day nearly all mining work has been of the most desultory character. The veins were worked generally by farmers, who spent their odd time in these enterprises, using their slaves (otherwise unoccupied) as miners; the waste attending such random work was enormous, but as ores were abundant and rich, easily and cheaply treated, there was no incentive to economy. When the permanent water lines was reached—generally at the depth of 40 to 60 feet—the ore changed to refractory sulphurets, and as expensive pumping and hoisting machinery was necessary, and as all operations needed to be continuous, the work, then conducted ceased to be profitable, and mine after mine was discontinued; the larger number remain abandoned to this day.

The five years preceding the war witnessed a revival of mining industry, and a real progress was made towards a mastery of the methods of dealing with sulphurets in an economical and thorough manner. But the all absorbing issues of that struggle diverted all efforts in this direction, and at its close but one mine was in operation, and that only in a fitful manner.

The dependence of the country hereafter will be, on deep lying ores containing 15 to 30 per cent of sulphurets, mainly iron pyrites. Occasional bunches of copper pyrites are found in a large number of mines, which is sometimes present in proportions large enough to be smelted for copper alone, though in any rationally conducted treatment the contents in gold and silver are important enough to give a good margin of profit. From a large number of analyses made from ores of every variety and from numerous mines, it may be said that there is hardly one which will not yield ores ranging in value from $50 to $500 per ton, and not unfrequently pockets of ore are met with, which will for weeks average $50 per ton, but by far the greater quantity of ore mined will not reach to the half of this; were our mines running up to their capacity, it would be easy, by a simple picking, to obtain ores of $50 value. Galena occurs in a few mines in small quantities and is generally rich in gold and silver; blende is a frequent accompaniment of galena; arsenic and antimony are rarely present in more than traces. Nickel in workable proportion has never been met with though it is often present in minute quantities.

Both vein and hydraulic mining are practiced in the Carolinas.

At the Pentress and Gardner Hill, (vein mines) in Guilford county, N. C., the operations have been on a small scale; both of these mines were for a long period abandoned. The work recently has been to a great extent directed to the treatment of the low grade ore rejected in the former operations.

The Conrad Hill mine, long disused, is now to be re-opened; the work is reported to be in vigorous hands and on a scale which promises to place it among the producers of bullion.

The Allen and the Eureka mines, near Thomasville, have also been worked to a small extent, but neither seems to be very active at present.

At the Silver Valley mine, between Thomasville and Lexington, the operations are confined to developments, although a ten-stamp mill is at hand for treating the ores. The shaft has been sunk to the depth of 130 feet, and work has been extensively done. The mine is well opened for producing ore.

Much of the ore carries a considera-

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