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The Land of Opportunity

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YAVAPAI, THE LAND OF OPPORTUNITY

BY G. M. SPARKES

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Yav-a-pai was the name given by the Apache Indians to all of northern Arizona. It means, literally, the mountain country, being derived from "yava" (the hills and "pais," pronounced pie) a corruption of the Spanish name "pais" (land).

Ever since the adventurous Coronado and his daring band, in 1540, went forth in search of the "Seven Cities of Cibola, whose wealth was beyond count," legends of immense treasures buried in the deep recesses of the mountains, and guarded by the fierce Apache, have made the name of Arizona a synonym of magic wealth, mystery and romance.

Of all pursuits, that of mining has the greatest fascination, and to many brings the most intense and satisfactory pleasure. It was a leading industry from the very earliest historical record. Ancient and modern history is full of reference to the bounteous results from the persistent pursuit of mining. In the time of Abraham, gold and silver, as the medium of exchange, were handled by weight; hence were mined in quantities, as is done now. The pursuit of the "Golden Fleece" has been actual as well as mythical. The life of every argonaut, ancient and modern, is itself an Illiad. There never has been a civilization in which mining has not been a prime factor. Egypt, Carthage, Rome, Spain—all—in the highest of their glory—were prominent in gold, silver and metal production and all decayed when they lost control of their mines.

It is not boastful to say that mining is the chief of industries. The metals, both precious and industrial, are immense factors in the development of civilization and energize the commerce of the world. There is not an industry of today in which metal in some form is not a factor in the equation.

Alexander von Humboldt, subsequent to his exploration in that part of the Great American Desert now known as Arizona, said of this State: "Here lies the mineral Treasure Vault of the United States." Sufficient mining development has already taken place in Arizona, and particularly during the year 1916 and at the present

time, fully to give assurance that the dictum of the great geologist and explorer was well founded in fact. Arizona may well be described as one of the marvelous portions of the American continent. Its mountain ranges, extending from border to border, are ribbed with mineral veins and deposits distinguished for the richness of their ores.

In Yavapai County, this mineral section embraces an area of, at least, one thousand square miles. The containing rock is nearly uniform throughout this entire section, producing a continuous yield of gold, silver, copper, iron, lead and zinc.

While this vast mining field has been habited for barely four decades and its mineral discovery and development are scarcely commenced, it has already added over a hundred millions to the world's wealth. Within the boundaries of Yavapai County there have been found and are yet to be discovered rich veins and bonanza deposits of gold, silver and copper sufficient to energize armies of men and millions of capital.

The history of mining in Yavapai County dates from the discovery of the rich placers in Weaver Gulch. In May, 1863, a party headed by the old pioneer, Paulin Weaver, discovered these diggings, which bear his name. In the same year, a Mexican in the employ of Jack Swilling, who was mining on Antelope Creek, crossed over the mountain to the Weaver Camp, happened on the world-famed deposit of gold in Rich Hill. Here, in a depression of the mountain, five thousand feet above tidewater, coarse gold was found lying on the very bedrock. Pieces of pure metal worth several thousand dollars were picked up and upwards of $500,000 was taken from an acre in extent within a few months. The mountain top, gulches and ravines running down from the mountain and surrounding country are very rich in placer gold and ore.

These stories of rich placer discoveries immediately resulted in the migration to Granite, Hassayampa and Lynx Creek of thousands of pioneers of California and the East; and despite the hostility of the Apaches, millions were taken out of the sands of these streams.

Prescott owes its present beautiful situation in the heart of the mountains of Yavapai County to the fortunes made by placer miners on Granite Creek. Over $3,000,000 in dust and nuggets was taken out of Groom Creek placers alone. These placers, situated fifteen miles southwest of Prescott, recently have been worked over for the sixth time.

Yavapai County is a region of mountains and valleys with a mean elevation approximately of one mile. Crossing it diagonally is that great mineral belt, which signalizes its entrance into northern Arizona

by the golden outburst of Mohave County and leaves as parting gift, the world famous copper mines in and near Bisbee.

With an area equalling that of the states of Connecticut, Rhode Island and Delaware combined, and a total population less than that of the single city of Ansonia in the first-named state, it is readily to be seen that Yavapai County is not overcrowded; that her mineral resources have just begun to be explored and that, as a field for the earnest prospector and investor it offers possibilities. In no other mining district on the American continent are the climatic conditions more ideal; in few other sections are mining timbers more accessible and, with scarcely an exception, Nature has placed within the reach of the miner here adequate supply of water for camp use and in most cases sufficient for ore treatment. Mine timbers are available at or near most of the camps in Yavapai County. Of commercial lumber, the Coconino Forest Reserve, being a part of the largest reserve of standing pine forest in the world, 100 miles northward, contains an inexhaustible supply, which, on account of splendid railroad facilities, is laid down at the camps at a price which a majority of the other great western camps would consider most advantageous. The main line of the Santa Fe, traversing the northern part of Arizona from East to West, and the main line of the Santa Fe, Prescott and Phoenix, with its many tributary branch lines gridironing Yavapai County in all directions, afford the mine operator and even the smallest producer exceptional facilities for the shipment of his ores to market at a nominal cost. Another item distinctly in favor of mining in Yavapai County is the splendid condition of her mountain roads, together with their up-keep. The Board of Supervisors is awake to the fact that in the construction of good roads to the various mining properties lies the success to a great extent of mining in this county. Feasible and economic power is always a problem. Yavapai County presents many easy solutions of this difficulty. In the newer camps, wood is generally obtainable at low cost; coal from Gallup on the eastern border of Arizona, and oil across the California line are laid down by the railroads at such rates as are proving a strong factor in the upbuilding of this great mining section.

Nothing speaks more clearly the substantial advance of the mining industry in Yavapai County than the herculean efforts of the Arizona Power Company to produce needed power in their hydro-electric plant. This company was incorporated in 1908. It makes use of the waters of Fossil Creek, which drops 1600 feet at the power site on the Verde River. The work of getting the machinery from the nearest railroad point was tremendous. The power plant is forty-five

miles due east from the railroad. Roads had to be built over an extremely precipitous country. In one part of the road there was an aggregate fall of 3400 feet in eight miles. A storage lake of 28 acres was provided, and a concrete lined tunnel, one mile long, was driven under the mountains from the lake and the water was carried thence by a four-foot reinforced concrete pipe to the line pressure pipe, where there was a head of 1100 feet on the pressure conduit. Transmission lines carrying 45,000 volts were run to a sub-station at Poland Junction, where they were divided, one line going over Mingus Mountain to the sub-station at Jerome, and the other going to Prescott. These lines are carried on 40-foot steel towers. Later, another 45,000-volt transmission line was run up the Verde Valley to the United Verde smelter at Clarkdale. In 1915 a second power plant was started. The new plant was not completed until May, 1916. It practically doubled the output of the company. Before July the entire output was taken up by new customers, although about 8000 horsepower is produced daily. Many properties could not be supplied with power, and a contract has just been let for an auxiliary steam and electric plant on the Verde River, about three miles above Clarkdale. The plant will cost approximately $1,000,000 and will generate 10,000 horsepower. Steam will be used. It should be completed by August of this year. It is hard to realize the full importance of "electric lines" in the developing of Yavapai County's mines. The price charged has resulted in a saving of from 30 to 50 per cent to consumers as compared with other means of power generation. In many cases it has supplied power easily, where the general condition of the country would practically prohibit the transportation of fuel. Among the principal customers connected to the company's lines at the present time are the following:

CUSTOMER	H. P. USED
Atchison, Topeka & Santa Fe R. R.	100
Prescott Pumping Plant, Del Rio	100
Consolidated Arizona Smelting Company, Humboldt, including smelter and mill, Blue Bell and De Soto mines	800
United Verde Copper Company, Jerome	4000
United Verde Extension Copper Company, Jerome	800
Hayden Development Company	300
Prescott Gas and Electric Company	350
Big Pine Mining Company	300
Arizona Binghampton Copper Company	450
Jerome-Verde Mining Company	100
Pittsburgh-Jerome Mining Company	100

Arkansas and Arizona Copper Company	100
Jerome-Portland Copper Company	75
Jerome-Victor Extension Company	150

Electric light and power is furnished for the cities of Prescott, Jerome, Clarkdale, Humboldt and Mayer. The plant for producing the electricity necessary for these purposes has required an expenditure of more than $2,500,000 since 1908. All the capital for building and equipping this enormous system was brought in from outside sources.

Due to the heavy demand for copper and the condition of the metals market, during the year 1916, Yavapai's principal industry showed a wonderful increase and brought prosperity to hundreds of her citizens, as well as to successful investors throughout the United States.

With the opening of that wonder mine—"the United Verde Extension,"—better known locally as the "Little Daisy," an impetus was given the mining industry which has awakened the world to the fact that here is located one of the richest, if not the richest, mining districts in America.

Among the most famous mines of the world is that of the United Verde Copper Company, situated nearly in the center of Yavapai County, the history of which reads like a modern Arabian Night tale. Its liquid stream of molten copper has poured millions each year, for many years, into the bank account of its fortunate owner, ex-U. S. Senator Clark. Even with its tremendous output, lately requiring a smelting capacity of 1500 tons daily, its great bodies of ore have given rise to the necessity for a mammoth smelter, which has been constructed at Clarkdale at a cost of over $3,000,000. The production of the United Verde mine to date has reached $41,197,000.

Since the opening of the United Verde Extension mine at Jerome, that city, which was formerly the center for the United Verde mine alone, has teemed with life and today there are hundreds of investors in that district, opening up new properties and developing ground which a few months ago remained dormant. There is no question but what Jerome has been and will continue to be the center of attraction of the mining investing public for many years to come.

During the past year a record has been made on the property of the Consolidated Arizona Smelting Company at Humboldt. This magnificent smelting plant has a daily capacity of over 850 tons and the opening of the ore bodies at the Blue Bell and De Soto mines have assured this property of a long-life term.

At Mayer and vicinity, including McCabe, noticeable activity is

apparent in the working of the copper properties and also old silver producers of days gone by.

In Copper Basin, adjacent to Prescott, much work is being done by both the Commercial Mining Company (Phelps Dodge) and also at the Loma Prieta, where a systematic development of the ground gives every reason to believe will develop into a large copper producing district.

At Crown King the pulse of the mining industry is being felt each day, old properties being revived and the opening of new bodies of ore holding the center of attraction.

To the south, in the Eureka mining district, much development work is being prosecuted by the owners of the various properties and it is the belief of those most conversant with the mining industry that at no late date this district will rival in production the famous Verde district.

To enumerate each and every mining property which is now being actively developed or to take up each mining district and give it its just due would require a booklet in itself.

Despite the great extent and meager population, a glance at the statistics of Yavapai mines proves that its mining industry is by no means a small one. While the assessed valuation of mines is not an adequate test, either of their value or the confidence felt in them by their owners, at the same time the following comparison in the valuation of the four larger producing mines in Yavapai County for the years 1915 and 1916 will give some idea as to the increase in the mining industry in one year.

	1915 VALUATION	1916 VALUATION
Commercial Mining Co.	$ 37,250.00	$ 167,935.79
Consolidated Arizona Smelting Co.	74,509.00	251,535.43
United Verde Copper Co.	15,319,160.12	20,687,010.89
United Verde Extension Mining Co.		5,360,280.73
	$15,430,919.12	$26,466,762.84

A glance at the figures of the County Assessor's records with respect to mine machinery and supplies for the years 1915 and 1916 will also prove convincingly of the wonderful increase made during the past year in the mining industry. In 1915, the assessed valuation under this head was $1,016,807; in 1916, $1,318,834, or an increase during the year 1916 of $302,027.

Broadly speaking, the ledges so far discovered lie in and near three mountain ranges: the great Yavapai Schist Belt, with which

the name of the famous Jerome and Verde districts may always be identified; the Bradshaw Range, including the famous Crown King Section, which is more active at the present time than at any other period in its history; and the Sierra Prieta Mountains.

Of the most sought metals—gold, silver, copper, lead, zinc, tungsten, antimony, vanadium, molybdenum, and in fact every metal in the mineral kingdom—all occur to some extent in the ores of each range named; but usually either one or more of these markedly predominate. It is the confident belief of persons qualified to judge, that the Yavapai schist will be found to contain greater deposits of copper, while the other two mountain ranges, with their spurs and foothills, contain ledges of gold and silver as rich or richer than any district of like area in the known mineral world. Tungsten is being mined principally in the Tip Top and Eureka districts, although the whole county is being prospected for the more precious metals. In copper, no area of equal size the world over can compare with Yavapai. Onyx, marble, tufa, granite, red sandstone, limestone, cement, clays and fire clay are also found in large quantities in this district. As a proof of the superior quality of the native granite and as an incentive to the opening up of a large quarry in Yavapai County, the Board of Supervisors let a contract for the facing of the entire new courthouse, which is being constructed at a cost of $250,000, with native Yavapai County granite.

With railroad transportation and smelter facilities at hand, the number of producers is fast growing larger and will continue to do so for many years to come. Many mines which will produce large tonnages of low and medium grade ores are scattered over the district, waiting to yield a golden harvest under intelligent and economic methods of operation now entirely possible. The prospector of the past, in his explorations, has been forced to pass by and abandon low-grade propositions, which, under the present improved conditions, can be operated and made to yield handsomely. What has thus far been accomplished is but a small part of what promises for the future. The value and long life of any mining region depends upon its medium and low-grade ores, when found in abundance, and not upon the comparatively insignificant amounts of the very rich ores that are found from time to time and are cause for temporary excitement. The average grade of large ore bodies may be extremely low and yet worked profitably if commercial conditions are such that a large tonnage may be handled at small expense. Throughout this district of Arizona there are numerous localities wherein the occurrence of immense deposits of copper ores, of low but marketable grade, is truly astonishing.

Such deposits will in the near future constitute the heavy producers of Yavapai County.

Attractive, Yavapai County has been and will be to the prospector, who will find in her extensive mountain ranges districts as yet very slightly explored. Veins are here as rich in gold and silver as those which dazzled the pioneers of the '60's and '70's, merely waiting for those persons industrious enough to tear away the often slight covering which conceals them from the careless seeker.

However, to another class of mining men, there is presented an even more attractive opportunity. This is found in the thousands of discovered prospects whose owners, having located the croppings of valuable ore and having developed the property as far as their varying resources would permit, must now turn over the work to individuals or companies with the capital necessary for their complete development and equipment for economical operation. In this class of embryo mines, the mountains of Yavapai are particularly rich. Many of them amply deserve further investment and will repay those who, with good judgment and capital, shall seek them out and convert them into mines. The price basis upon which these properties can be obtained is usually very reasonable.

There are also exceptional opportunities existing in the form of properties whose development has been advanced to a point where the great uncertainties of mining having been eliminated, where the amount and occurrence of the ore bodies have been defined with considerable accuracy. Capital for the operation of these properties as an organized, systematized business is needed and large and almost certain returns will follow its intelligent investment. Work must be conducted upon definite plans toward definite ends; adequate modern machinery must be installed; advantage must be taken of the improved conditions brought about in the last few years through better roads, lessened cost of power, reduced freight rates, enlarged and cheapened smelting facilities and those many changes of physical and commercial environment whose individual saving of pennies aggregate the enormous profits of properly conducted industry.

The Yavapai County Chamber of Commerce especially invites and urges upon the attention of those who make of mining a profession and a business, a consideration of Yavapai County from this point of view. During the last few years, and particularly 1916, the engineers who have visited Yavapai County are among the foremost in the world today and their opinions, together with the members of the Yavapai County Chamber of Commerce, believe that here will be found a region endowed by Nature with unusual mineral wealth, in which

the preliminary work of development has been advanced to a much greater extent than is generally understood and where the force of public opinion is and will be exerted in fostering and building up honest methods in mining. Every assistance possible will be extended those making that careful investigation which must always precede true mining success. There is no question but what the investor can bring his money to Arizona, and particularly Yavapai County, with the assurance that his investment will here receive a fair and impartial chance.