

fairly without a drop of rain if the grain is put in early and in good condition.

CHENEY TRIBUNE—O. A. Lance, one of our old settlers and successful farmers, informs us that his entire crop, both fall and spring sowing, will yield forty bushels per acre. Hon. D. F. Percival, has a large field of fall wheat on his Rock creek farm that will yield forty bushels to the acre. Mr. Patterson, living near Spangle, says his crops will be better than last year, and is well satisfied with the prospects of his yield. The cool nights for the last week were very favorable to grain, and the general impression now is that grain is filling well. Reports from the Big Bend country are that all kinds of crops will be fair, and in some localities good especially vegetables. Mr. Blackfan living near Brents, reports three thousand head of fine cabbages and other vegetables in proportion.

SPOKANE CHRONICLE—Col. Jesse Parker, of Selte lake, presented for our inspection this week a splendid illustration of what Spokane soil is capable of doing in defiance of the six weeks drouth. A specimen of Big Club wheat, sown on the 1st of April, is about ready to harvest, and shows a plump, perfect berry. A bunch of the Gold Dust variety, sown the 10th of May on bottom land, five feet in height and filling out finely, is good enough for any season. Specimens of Russian oats and of timothy over five feet in height, were satisfactory evidence that the country is going to stand up for its reputation and have something on which to feed the incoming immigrants. Col. Parker says that a piece of the same land—six acres—produced 1,800 bushels of potatoes last year.

WEST OF THE COLUMBIA.

GOLDENDALE GAZETTE—The grain crop will not be as large as was at first anticipated, but most of it will be better than was thought a month ago. The west winds, proved an offset to the apparent drouth. It is evident that much of our soil has a capacity for resisting the effects of dry weather. Some who will have poor crops through bad farming, will profit by experience and do better next time. In fact the tillers of the soil generally are beginning to use more industry and intelligence in their work.

MINING.

—A rich vein of free-milling ore, twenty-two inches in width, is being developed in the Bourbon mine, Birch creek district, Meagher county, Montana. The lead proper is over nine feet in width.

A vein of coal, six inches thick at the surface, has been discovered on John Day river, in Grant county, Oregon. Sample chunks taken from the croppings burn well and make good, clear ashes. It will be thoroughly tested.

Coal lands some fifteen miles northeast of Vancouver, in Clarke county, W. T., have been leased to a firm of capitalists, who will commence work upon an eighteen-inch vein at once. If it proves as valuable as it is believed to be, it will be worked on an extensive scale.

W. W. Perkins recently discovered a rich quartz ledge of free gold in the Coeur d'Alene mountains, near the headwaters of Palouse river, Idaho. Quite an excitement was created and many claims were staked off by men who rushed to the spot upon the first receipt of the news.

The mines about Bonanza and Custer City, Idaho, have been but little worked for a number of years, though of undoubted richness. When brought properly to the notice of capitalists they will no doubt receive the attention they deserve, and that district will again bustle with activity even greater than in the days of old.

On Wisconsin creek, seven miles from the town of Sheridan, Montana, the Western Mining Co. is erecting a smelter with a daily capacity of twenty tons. It will prove of great benefit to the surrounding districts, some of which have many large veins of low grade ore. A little town will probably spring up around the smelter.

As an indication of the character of the mines at Silver City, Idaho, awaiting the advent of capital, it is interesting to know that the Morning Star mill, with seven stamps, in 426 running days ending March 9, 1866, milled 7,369 tons of ore and produced \$1,127,617.39. None of the mines from which the ore was taken has yet a shaft 400 feet deep.

At the base of Black butte, eighteen miles south of Heppner, in the Blue mountains, is the coal mine of the Matteson Coal Mining Co. The company has expended \$15,000 in prospecting this property, by sinking ten shafts and running four tunnels, and developing several large veins of true bituminous coal. A railroad to the mine from Alkali or some other station on the Columbia will probably be built if the mine proves to be sufficiently extensive to justify it. The distance is seventy miles.

Silver King mine, situated about four miles southwest of Sawtooth, was sold recently to Matthew T. Scott, of Bloomington, Illinois, who is the principal owner of the Davitt mine. The amount paid was \$125,000. The ore vein averages over two feet in width, and the ore is chiefly high grade. There are forty-two tons on the dump now that are worth \$40,000, and 280 tons which will go \$185 per ton. The ore is ruby and native silver.

Since the Crow Indians relinquished their claim to the rich mineral belt in the eastern end of their reservation, there has been a rush of miners into the region known generally as Clarke's Fork. Many valuable ledges have been discovered and located on Clarke's Fork, Mill creek, Soda Butte creek and the numerous small streams that flow into the upper Yellowstone. Assays range from \$50 to \$22,500 per ton, and the ledges are numerous and some of them twenty feet in width. The nearest railroad station is Gardiner, the terminus of the National Park branch of the Northern Pacific, from which the mines are reached by a good road crossing a portion of the National Park. A smelter is now being put in at Cooke City. Wood and water are abundant, and with excellent facilities for procuring machinery, there seems little doubt about the growth of a large mining camp on Clarke's Fork.

The Montana district is situated in the Little Belt mountains, on Belt river, thirty-two miles from White Sulphur Springs, in Meagher county, Montana, from which it is accessible by a good wagon road. It is seventy-five miles from Fort Benton, the head of navigation on the Missouri, and a road is being made to that place with a view of receiving from there necessary machinery and supplies. The district is a new one but

partially prospected, the veins so far discovered being twenty-six, all running parallel to each other. The chief properties being developed by shaft and tunnel are the Banner and Bald Eagle, Southern View and Kentuck, Minnehaha and Montana Belle, Wide Awake and Fitzpatrick, Yellow Jacket and Helena, Queen of Montana, Deadwood and Frisco, Cora, Queen of the Hills, Homestake, O'Brien and Sampson. Assays from the various lodes average large, and the conditions for cheap working are good.

The great variety of processes still employed for the extraction of silver in different parts of the world, and each one possessing advantages over the other for the treatment of the ores of different localities, is rendered necessary by the great diversity existing in the associates of the metals, and the very large amount of materials that it is necessary to operate upon, owing to the argentiferous minerals often occurring minutely disseminated through large proportions of an earthy gangue, more or less intimately mixed ores or compounds of other metals, as galena, copper ores, etc. The methods employed for the separation of metallic silver from its ores, metallurgical products, in which it exists in notable quantity, may, however, be classed under three heads. The different methods of amalgamation employed, based upon the solubility of metallic silver in mercury, and the subsequent ready expulsion of the latter on the application of heat to the amalgam include: 1. The Mexican methods of amalgamation in heaps. 2. The European system of amalgamation in casks, known also as the "barrel process." 3. The methods of amalgamation in kettles and pans. There are various wet methods for the extraction of silver from its sulphides by first converting them into chloride or sulphate, which is then dissolved out by water, solution of common salt, or other suitable solvent, and the silver subsequently deposited by precipitation from the solution so obtained, these methods including: 1. "Augustin's" method, by which the ore, or cuprous regulus, is converted into argentic chloride, which is then extracted by a solution of sodic chloride, and the silver afterwards precipitated by metallic copper. 2. The method of "Ziervogel" for the conversion of argentic sulphide into sulphate, which is subsequently dissolved out by hot water, and the silver precipitated as cement silver, as in the Augustin process. 3. The method of "Von Partera," by which the argentic sulphide is converted into chloride, which is then dissolved out by a solution of sodic hyposulphite, from which the silver is precipitated as argentic sulphide freed from other metals, the sulphide being then reduced by the application of heat. Then there the methods in which the silver is concentrated in a quantity of lead, from which it is subsequently separated by the process of supellation. The silver in argentiferous copper matte, or other regulus, which was formerly separated by amalgamation methods, and very rich silver ores are also treated by these methods; while, in fact, all silver ores may be treated by fusion with galena or other lead-yielding product, with the separation perhaps of a larger portion of silver than is effected by the amalgamation process; but owing to the scarcity of fuel in certain localities, and the expense, this method cannot be applied, and the methods of amalgamation are there accordingly more convenient and economical.—Scientific Press.