

COAL DEPOSITS OF ALBERTA SO FAR AS KNOWN.

At Lethbridge the N. W. C. & N. Co. (at present known as "The Alberta Coal Co.") have worked a coal mine for a number of years, and, in connection with the building of a railway line to Grand Falls, M.T., it is anticipated that the output will this autumn be in the neighbourhood of 1,000 per day. The seam lies nearly horizontally, and about 4 ft. 8 in. in thickness, and the quality is semi-bituminous. It is very valuable for fuel and steam coal; it becomes somewhat friable, however, on exposure to the atmosphere for a considerable length of time. It can probably be coked only with considerable expense, but is mined very cheaply.

Some 30 miles below Lethbridge, on the Belly River at Woodpecker, there is an outcrop of coal about 3 feet thick lying horizontally, or nearly so. The quality of this is said by some parties to be superior to that at Lethbridge, and it has been worked to some slight extent to obtain fuel for the steamers when the N. W. C. & N. Co. were running them between Lethbridge and Medicine Hat. This property has not been prospected sufficiently to ascertain the area of coal existing; but, like Lethbridge, it is probably a very extensive one.

At Grasse Island, in the Bow River, in Tp. 17 W. 4th I.M., lying about due north of Woodpecker and south-west from Cassill's Station, there is a seam of coal of considerable thickness. This is said by some to be not equal to the Lethbridge deposit in quality; by others to be equal, if not superior. It undoubtedly extends for a considerable area. The thickness of this seam is upwards of four feet. It has been prospected, but not to any considerable extent. Its coking qualities are probably the same as that of Lethbridge.

Along Crowfoot Creek, from the Bow River north, and probably the south of that river, coal is found scattered over a very considerable area. The C. P. R. Co. have done a little development here, sufficient to satisfy themselves that the quality is good enough to warrant the opening of a mine should it be required. The seam is 8 or 9 feet in thickness, divided by two cores several inches wide. The quality of this is about the same as at Lethbridge, except that as there was no drainage, so far as mined, the coal comes out very wet, which has caused it to slack more than if the mine was supplied with proper drainage, which would be the case if properly opened.

On Rosebud Creek, immediately north of this, coal crops out in many localities. The quality, judging by the outcrop would appear to be superior to that at Crowfoot. It is also found in connection with considerable deposits of ironstone, which will probably render it very valuable in the future. Further north, along the Red Deer river, coal can be found in many places.

At Edmonton, on the North Saskatchewan river, a first-class lignite is obtainable; at that point the sea contains about 4 feet of coal. Some 20 miles above Edmonton a seam of coal 8 or 10 feet thick is found, the quality of which is said to be semi-bituminous.

As the river is ascended, the coal outcrops continue, and the nearer the Rocky Mountains one gets the better the quality, till Anthracite is reached, and there it is said to be in illimitable quantities.

A short distance west of Cochrane station, on the C.P.R., and lying parallel to the Rocky Mountains, seams of coal are found in many places, which will probably prove on further investigation to be contiguous. It is found on places in the Elbow River, Fish Creek, Sheep Creek (north and south forks) and the north fork of High River. It lies in a very disturbed condition, and has a dip varying from 30 to 50 deg.; the thickness varies from 2 to 4 feet. The quality of this coal for heating purposes cannot be surpassed, being full of resin, and as coking coal it ranks A1. It is, however, too friable where rough handling is required; it lies in a sandstone formation.

Along the north fork of the Old Man's River, and the middle and south fork, also on Pincher Creek and Lee's Creek, coal is found in many places. The quality varies considerably, but as a rule it is valuable as a coking coal; the thickness of the seam varies from 10 to 2 feet. None of these points have been sufficiently developed to enable their values to be reliably predicated, but no doubt many of them will prove very valuable properties. The coal, however, appears in many places to be considerably crushed, owing no doubt to the disturbed formation in which it lies. It will probably be found when sufficient depth has been obtained that the disturbance is less, and the coal will not be nearly so brittle or friable.

The next point to be spoken of is what is known as the Cascade Basin, which is said to extend from near Kanaskis River north-westerly to a considerable distance north-west of the Rocky Mountains Park of Canada, viz., from about Tp. 23 R. 9 to Tp. 28 R. 13 W. 5th. This basin contains coal varying from bituminous to anthracite. At Canmore, where more prospecting has been done than at any other point, some 13 or 14 workable seams have been discovered, varying in thickness from 2 to 14 feet, and it is reported that to the north of the said park they are found equal to 30 feet in thickness. The lower the seam the harder the coal, and many seams lower than anything yet met with may be found. They all lie in a hard sandstone formation, which will render the expense of propping very moderate. They dip to the south-west at an angle from 30 to 60 deg. They contain considerable gas, and some of the coals are very fair for coking purposes. For forging purposes steam coal, and also for the purposes

to which hard anthracite is put, they cannot possibly be surpassed. It is reported that iron in considerable quantities is found in this locality; if this is the case this must prove a valuable mining and manufacturing centre. Copper, silver and lead are also found in considerable quantities; limestone, dolomites, sandstone and slate, the latter valuable for roofing and other purposes, are also obtainable in unlimited quantities.

The foregoing represents the coals that are known; the probabilities are that the coal area is very much greater than at present known, as coal has only been found from outcrop, no shafting, tunnelling, or drilling having been resorted to for the purpose of discovery.

At Langevin station, C. P. R., just to the east of the eastern boundary of Alberta, and at Cassils station, some distance to the west of said boundary, natural gas wells have been burning for some years, obtained by drilling holes to obtain water for railway purposes, the only points at which any considerable depth was reached, and the probabilities are that these natural gas basins extend mainly, if not fully, to the foothills of the Rocky Mountains, possibly to the west of them.

SPORTING.

It is, of course, impossible that a city situated as Calgary is, at the foot of the Rockies, with rivers marking its north and south limits, should not afford splendid opportunities for sport of every description. The Bow and Elbow rivers abound with fish, and their banks are the favourite resort of the followers of Walton from far and near. The shooting is not to be equaled in the whole Dominion, consisting principally of prairie chicken, wild duck, geese, partridge and rabbit. Within a few day's ride from Calgary are to be found mountain goat, black goat and the formidable "grizzly." The Coyote timber wolf and red fox are constantly to be seen on the prairie, especially in the fall.

DAIRY INTERESTS OF CALGARY DISTRICT.

There is no doubt that at an early date the dairy industry is to be one of the, if not the most, important in this district. The following letter from a well-known gentleman speaks most eloquently for this interesting and remunerative branch of farming. Although in the course of it he refers to Alberta generally, yet it deals more particularly with the Calgary district. After stating that Alberta must, in his opinion, become in the near future one of the largest producers of the finest butter, he gives the following as his reason:

"To produce good butter the materials that make it must be good; the grass in warm seasons must be abundant, sweet and free from noxious or strong-flavoured weeds, and well-cured hay made from this grass for winter feeding. These, with cool, sweet water in abundance, are the principal materials with which any intelligent man, possessing a well-selected herd of milch cows, need ask no favours of any competitor. Well, how is Alberta in regard to the required pasture for dairy purposes? Let me tell you I have driven through central Alberta from Fort McLeod, on the south, to Edmonton, on the north, a distance of over 300 miles, and from the rolling foot-hills near the mountains to the undulating plains near the eastern border, and do not hesitate to say, without fear of contradiction, that the sun of our civilization does not shine on a fairer or more inviting field of choice, rich, abundant pastures than is to be found along the mountain streams of cool, sweet water that flow from out of the Rocky Mountain reservoirs eastward through the valleys of Alberta. The waters of our streams, flowing as they do from melting ice in the mountains, retain their coolness even in midsummer, the rapidity of the flow ensuring purity.

"Then, the nights, on account of our elevation, are cool and the air peculiarly pure and clear, following the warmest days of our warmest seasons. Now, the greatest obstacle which the Eastern butter maker meets with is the warm, stiff, muggy nights, when the slightest negligence in perfect cleanliness entails tainted cream; a continuation of these nights making every effort to make good butter a comparative failure. Alberta is free from all this, a fact which gives it a decided privilege over all other lands not similarly elevated and situated."

Then, after advising the settlers to commence dairy farming at once, on however small a scale, he says:—

"Now, I will get down to figures, and show the practical possibilities of a single township of Alberta pasture land. A township is six miles square, and contains 36 sections of 640 acres each. Let us suppose this divided into 12 farms of 320 acres, each farm capable of sustaining, both summer and winter, 20 cows; this makes 1,440 cows in the township. It will be admitted that a fair average cow will yield sufficient milk and cream to make one pound of butter a day for five months in each year. Now, 1,440 lbs. of butter at, say, 20 cents per pound, will amount in a season to \$43,200. Just think of this sum coming into a single township every season; and remembering all the while that after the farmer milks his cows in the morning, he can then, until the milking of evening, attend to all the demands and duties of his profitable mixed farming besides!"

As regards markets, he says that it is certainly safe to predict that the time is coming when train loads of Alberta butter will be shipped to both the eastern and western sea-

boards, finding a most ready market in Europe when its excellence and reputation has once been established.

In short, the advantages to be gained by the dairy farmer, both for the making of butter and cheese, are the peculiar luxuriance and richness of grasses, abundance of native hay for (partial) winter fodder, purity of water, coolness of night temperature, home and foreign demand for dairy produce, and ready and fairly cheap means of transportation to such markets.

CATTLE RAISING IN ALBERTA.

To-day Alberta stands peerless among the cattle countries of the world. An unknown land of a few years ago, it is now looked to as one of the greatest future supply depots of the British market.

Cattle raising in Alberta may be said to have commenced in the year 1881, when Hon. Senator Cochrane brought over from Montana several thousand head, and placed them on his leasehold, west of Calgary. Since then the cattle industry has grown steadily. In the spring of 1884 it was estimated that some 40,000 head of cattle were on the ranges of Alberta. Now (Dec. 1888), over 113,000 head of range and dairy cattle roam at will on the plains and foothills of our great grazing district; of this number, over 100,000 are owned by ranchers in Southern Alberta, who round-up their large herds every spring for the purpose of branding, etc., and give them no food or shelter at any season other than what nature provides. That this system is the most profitable one, is more than doubtful. Each year experience points out that there is more profit and economy in providing food and shelter for them during the worst winter. Severe seasons will now and again occur, and to insure against losses in such seasons food and shelter is advisable, and the belief is fast gaining ground among cattlemen that the most profitable way of handling cattle in large bands is to be prepared to feed calves and weak cows during severe storms, and thus avoid the risk of loss. The saying among Alberta stockmen is that "you cannot kill a steer with bad weather," as he will keep rustling and come out fat in the spring after the most severe winter. It has been conceded by experienced men of many countries that Alberta stands first as a cattle country, in the abundance of its native grasses, plentiful supply of water and natural shelter; and comparing the losses in Alberta, since cattle ranching commenced, with those of the Western States during the same period, it will be found that when the cattlemen of Montana and Wyoming lost 60 and 70 per cent. during severe winters, the losses on the Alberta ranges did not exceed 15 per cent. That even these losses should occur in a land where millions of tons of hay annually go to waste, shows that judicious economy is not exercised in the cattle business. Attention, industry and intelligent labour are as necessary to success in this as in any other occupation. In point of quality, the cattle of Alberta will compare favourably with those of any country; thoroughbred bulls of all breeds have been imported, and the result is that, taken as a whole, the cattle of Alberta are of a superior class. Alberta is now shipping fat steers to England—range fed beef, which holds its own with the stall fed article of the old country; with a local market which annually consumes over fifteen thousand beeves, and ever increasing, and with the great markets of the world within easy reach. With such natural advantages, enticing most experienced cattlemen from the American Territories and British Columbia to invest in the business here, who can say what will be the extent of this industry in the future, an industry which has grown with such gigantic strides in seven years?

There are millions of acres of land north of Calgary, stretching away through the verdant valleys of Red Deer and Battle Rivers, which are still unstocked; lands, too, capable of producing prolific crops of hay, grain and roots.

To the capitalist and the farmer who intend engaging in the cattle business, the writer would say: Examine well into the resources and attractions of any other country in which you may be inclined to make a home; compare the advantages it offers with those offered by Alberta, and having done so, there is little doubt but that you will make a happy and prosperous home for yourself under the shadow of the Rocky Mountains—and assist in stocking the fertile valleys of fair Alberta.

A POET'S MARRIAGE.

OTTAWA, June 25.—This morning Mr. Arthur Weir was wedded to Miss Louise Skead, second daughter of the late Robert Skead, of this city. The ceremony took place at the residence of the bride's mother on Somerset street, the Rev. J. M. Snowden, rector of St. George's church, being the officiating minister. The bride was attended by her youngest sister, Mr. W. A. Harking acting as best man. The bride was given away by Mr. G. Skead. Only the immediate friends of the bride were present, including Mr. William Weir, of the Ville Marie Bank, father of the groom; Mr. F. Weir, of Montreal and Mr. S. Skead, of New York. The newly married couple left for Newport and other watering places in the Eastern States, where the honeymoon will be spent, followed by the good wishes of a large circle of friends. Mr. Weir was formerly parliamentary correspondent and commercial editor of the *Star*, and is a talented poet, the author of the successful book of poems entitled "Fleurs de Lys."—*Montreal Witness*.