

ritory. The valley immediately north of the lake is thirty-five miles long and in places fully fifteen wide. Through it run many streams of pure water, while small lakes and springs abound. Besides this there are numerous valleys and bottoms along the tributaries of both the north and south forks of Upper Flathead river, such as, Smith lake valley, Ashley creek, Half-moon prairie, Spring creek, Tobacco plains, Whitefish creek, etc. Here are homes for thousands of people on free government land. At present hay is the chief crop and stock raising the leading industry among the few settlers who have located there; but grain and vegetables thrive when cultivated. Until the Northern Pacific was finished this region was completely isolated, but it is now made easy of access and is receiving a limited immigration which will be largely increased the coming spring. Lumber is very scarce and very expensive, being hauled from Missoula and other distant points, though the mountains are covered with dense forests and the demand for lumber is sufficient to consume the product of a good mill. A little schooner has been constructed to do freighting on the lake and river, saving many miles in the transportation of goods. Selish is the post office of this region.

Prof. G. E. Wolfe, at the head of one of the geological parties which the Northern Pacific has maintained in the field for several years, recently returned from an exploration of the Crazy mountains in Gallatin county. Crazy peak is 11,184 feet above the level of the sea, and from its summit, which is approachable within a few hundred feet by a saddle horse, a magnificent view of both the upper Yellowstone and Gallatin valleys delights the beholder. In places are immense bodies of fine fir and pine, while nutritious grasses extend high up on the mountain sides. Numerous streams pour down the mountains and through the foothills to the valleys, along which is fertile alluvial soil that will produce grain abundantly. Elk, deer and antelope abound, and the streams and little lakes are filled with fine trout and grayling. A magnificent waterfall was discovered at the headwaters of Big Timber. After a perpendicular plunge of 200 feet the water rushes down several hundred feet more in a series of beautiful cascades. In its progress down the mountain the stream passes from one level plateau to another upon each of which it gathers in a deep pool, forming a chain of mountain tarns whose delicately tinted depths mirror the bold rocks and giant pines that border them, the shadowy clouds and the outspread wings of the mountain eagle hovering over them in his flight from rock to rock.

In July, 1879, the legislature passed an act guaranteeing a bonus of \$1,000 to any person, company or corporation who should within one year construct a flowing artesian well five inches in diameter. This was an effort to encourage some one to make a practical test of the artesian well in the various portions of the territory where the scantiness of the rainfall renders artificial watering of crops necessary. No one claimed the reward and the act lapsed by limitation. Later the boring of a well was commenced at Billings, followed soon after by one at Miles City. The former has been sunk more than 700 feet and is still going down. The latter recently tapped a large vein of water at a depth of 352 feet, and has demonstrated the fact that large artesian wells are practicable in the Yellowstone valley at least.

This means more to the future welfare of Montana than appears upon the surface. In the territory are millions of acres of fine arable land requiring irrigation to render it productive, and which experience has shown will yield astonishing crops when moisture is thus artificially supplied. Much of this land is so situated as to be practically beyond the reach of irrigating ditches running from natural reservoirs, and has in consequence been classed as worthless. With artesian wells these lands can be redeemed and rendered extremely productive. The value of an irrigated farm exceeds that of one lying in the rain belt for two very evident reasons. In the first place by its exemption from drouth and certainty of crop it produces far more in a series of years; and in the second place it is generally situated in a region where farming lands are to a degree limited and its products consequently bring a higher price in the market. We hope to see artesian wells increase in number all over the territory.



From the government surveyors who have been at work on Lost river during the summer and fall, long valuable information is gained about a much neglected region. The valley of Lost river is some fifty miles in length and from two to twelve wide, containing a large area of arable and grazing lands. The natural grasses afford an abundance of hay easy to be cut and gathered. The range is very extensive and the winters so mild that stock requires but little care. The lower end of the valley has for years been a favorite place for drovers taking stock from Oregon and Southern Idaho to shipping points on the railroad, to halt a few days and recruit their cattle upon the luxuriant grass. The daily stage from Challis to Blackfoot passes through the valley and the road is lined with wagons; yet there are comparatively few settlers to be found there, though emigrants are constantly passing through in search of locations by no means so favorable. At the head of the valley is the Bay Horse mining district and across the divide on Salmon river are Challis and the rich mines surrounding it. Lost river derives its title from the fact that it suddenly disappears from view in the lava plains towards Snake river. Though a large stream flowing between permanent banks, it drops out of sight at the edge of the lava fields and flows for twenty miles through a cleft in the rock some distance below the surface, disappearing finally in an open sage brush plain near the foot hills. Little Lost river, about twenty-five miles east, also sinks from view in the plain. On this stream a farm of 1,000 acres was cultivated to grain this season with good results. Another year will find the valleys of Lost river sprinkled with settlers' cabins, and possibly those of the miner, as the hills that border the valley contain indications of mineral deposits and a number of good claims have been found.

Malad valley is twenty-three miles long and has an average width of ten miles. It contains a population of 4,000, a large portion of it engaged in agricultural pursuits. On the east side of the valley is Malad City, the county seat and chief business center of Oneida county containing 1,500 people; while seven miles distant, on the opposite side, is Samaria with a population of 400. A large number of cattle and sheep graze in the valley and on the surrounding hills. At Malad is a flouring mill with a daily capacity of sixty barrels. The city is divided numerically and geographically between Mormons and Gentiles. An artesian well company has been organized with a capital stock of \$125,000.

The Potlatch country, lying to the northeast of Lewiston has been visited by the editor of the *Nez Perce News*, from whose report the following facts are gleaned: The Potlatch country is a basin sixty-five miles in extent, through which runs Potlatch creek in a southerly course, receiving several tributaries from the west. The surface is quite broken, and the gulches in which the streams run divide the country into distinct series of upland prairies. That portion lying east of the main stream is called "Big Potlatch," and is a broad, fertile prairie extending twenty miles towards the north fork of Clearwater. This region will soon rank with the best in Idaho. The soil holds moisture well and crops mature without much rain during the growing season. The average yield the present season was twenty-two bushels to the acre without any rain whatever. Fruit trees planted a year ago stood the hard winter in good condition and give promise of bearing well another season. West of the main creek the country is drained by Little Potlatch, Middle Potlatch, Bear and Pine creeks, and the prairies lying along these streams are known as "Little Potlatch," "Fix" or "Middle Potlatch ridge," "American ridge," "Bear creek ridge" and "Pine creek ridge." The slopes of the rolling hills are covered with a deep layer of a fertile, alluvial soil. The gulches are filled with pine, fir and tamarack. The prairies are only from 1,200 to 1,800 feet above the level of the sea and the climate is mild and genial. Little rivulets run down the hillsides fed by living springs, one or more of which can be found on nearly every quarter section.

Among the guests invited by Mr. Villard from Germany to attend the celebration of the opening of the Northern Pacific railroad, and to be present at the driving of the last spike, was Mr. Conrad Dielitz of Berlin. This gentleman is the most celebrated painter in Germany, and has recently finished a portrait of the emperor of Germany and another of the crown prince, both of which are regarded as perfection in portrait painting. Mr. Villard had a purpose in inviting Mr. Dielitz to be present upon this interesting occasion, and that purpose was to secure a grand historical painting of the scene presented at the driving of the last spike. It was a great event and it is fit that it should be commemorated by a painting by the greatest artist of Europe. For this purpose Mr. Villard commissioned Mr. Dielitz to produce a picture that should be equal to the occasion, for which he is to receive \$20,000. It will be one of the largest pictures ever painted, and will measure twenty by fifteen feet, and will represent sixty persons, prominent men who were assembled midway between St. Paul and Portland. —*Minneapolis Tribune.*