

ORIGINAL SURVEY OF THE C., B. & Q. R. R. LINE.

BY THE LATE HON. ALFRED HEBARD.*

I will attempt to recall from memory a few incidents connected with the projection and first survey of the Burlington & Missouri River railroad in Iowa, (now the C., B. & Q. line) in which we of Montgomery county are most interested.

At an early day the success in various railroad enterprises and the speed and power of the gradually improved iron horse, awakened an interest that spread and grew until certain periods of the last half century might well be characterized as "railroad crazy." Everybody wanted a railroad that they might keep up with the rest of the world, and everybody that could, wanted to build and own a road for the supposed power and profit there was in it. Especially in our western country where an eager anxiety gave subsidies and grants of land worth in some instances more than the necessary cost of the construction. The parties who controlled the Michigan Central road and afterward built the C., B. & Q. from Chicago to the Mississippi river—touching it at Burlington and Quincy—encouraged by their success thus far, determined upon an extension of their line across the State of Iowa, and perhaps further, as inducements might offer. The facilities offered by the level prairies of Illinois led them to anticipate a similar experience in Iowa, because it was an open prairie country. The purpose

*Mr. Hebard was one of the best beloved and most distinguished of the pioneers of Iowa. He was born in Windham, Conn., May 10, 1811. He died at Block Island, R. I., September 21, 1896. He graduated at Yale College in 1832. "His favorite studies were in civil engineering," wrote the Rev. Dr. William Salter, in a sketch of Mr. Hebard's long and useful life which appeared in this series of *THE ANNALS*, vol. III, pp. 47-52. He was also eulogized in addresses delivered at a memorial service held in Red Oak, September 27, 1896, by Rev. E. C. Moulton, Hon. W. W. Merritt and Judge H. E. Deemer. Mr. Hebard had written some articles for *THE ANNALS* and intended to write others when he was overtaken by his last illness. His article which we print to-day was written for the purpose of being read at an old settlers' reunion.

was to build a first class road and allow no grade exceeding a limit of 40 feet to the mile. There was a warrant for such a purpose in an assumed certainty of an immense amount of business when these fertile lands were in cultivation, for, strange as it might seem to some, there is not an acre of land from one great river to the other incapable of being made a garden of profit.

The first step to be taken was to acquire a definite knowledge of the country through which their proposed extended line was to run. With that intent an engineering party was organized under my charge, fully equipped for any service that might be required, with no special instructions other than to explore and hunt out the most feasible route for the proposed line, from the Des Moines river at Ottumwa to the Missouri river, Council Bluffs being the objective point. In going out across the State we did not plant an instrument or stretch a chain, using our eyes for a careful reconnoissance and keeping notes of all we saw. The eye is the best surveying instrument ever made, especially on preliminary work. Mathematical instruments are of course necessary for the final adjustment of a determined line, where all the parts should sustain to each other the exact relation of tangent and curve, but much time is often spent and expense incurred in railroad surveys, by measuring obstacles that are apparent at a glance.

After a somewhat tedious trip by the Mormon and other trails, to find crossings of streams, we reached the Bluffs. Summing up our observations and notes we found we had a difficult task on our hands. The first day out from Ottumwa took us into gorges and chasms along Soap Creek that would require something like the pyramids of Egypt for bridging. We abandoned that route as fast as we could leave it, satisfied, however, that to the north we should find a drainage favorable to our line. It proved so on our return. We followed the trail of the Mormons to Mt. Pisgah, in Union county, a station on their line of travel in their

exodus from Nauvoo. From this point onward the rough country on the head branches of Grand River, the Nodaways, and other streams that had their sources in this region, forbid anything like a feasible line through to the Bluffs, and to this circumstance we are indebted for a more southerly location, where we have it to-day. The Rock Island railroad passes to the north, our road to the south, some 40 miles apart at Villisca. It was necessary for us to pass this drainage at a point lower down, after the head branches had united, forming a larger stream with one valley to be crossed instead of a dozen; besides, well defined streams 10 to 15 miles apart would have ravines or small secondary drainage favorable to our east and west line.

Iowa is a great uneven plain, without mountain, elevation or hill even, except relatively to adjacent valleys; highest in the north and northwest, with a southerly dip or decline sufficient to give direction to her drainage, and a somewhat rapid current to her streams, especially in time of floods. The action of these waters during a long period of years, on a loose and porous soil, has eroded valleys broad and deep, separated from each other by stretches of land that rise between them to the level of the general plane of the State. Between the water plane of the Missouri and West Bottany the elevation at some points is about three hundred feet, from East Bottany to Nodaway somewhat less, but still very high. The necessity of crossing these broad valleys and the intervening high divides put an end to our fancied idea of a grade limited to 40 feet to the mile. Unfortunately too, for the business capacity of a road is largely governed by its rate and amount of grades. The valleys were so broad that they could not be crossed by an elevated track and our only way to relieve grades was to hunt out the lowest points in the divides and run our line of levels through them, availing ourselves of every kind of ravine or lateral drainage to reach and leave these summits. Before leaving the Bluffs to make our survey I spent two entire

nights in the general land office, copying in rough manner the maps showing the streams as laid down by the surveyor on a strip three townships wide north and south through to the Des Moines in the second tier of counties. Within this limit I intended to succeed or fail in finding a practical line for the proposed railroad.

It is not worth while to go into every detail of our daily progress. It was simply crossing valleys—ascending and descending divides most of the way back to Ottumwa—carefully measuring and leveling the entire line, so that the company might have reliable data for future consideration. I did not have any great confidence in our line at the time. I knew I had left some hard points for subsequent solution, but, as whole seasons were spent in surveys afterward, and the road finally was located and built on the route indicated in this first survey, I am led to believe that the effort was not entirely a useless one. I wish to add that the line of our first survey did not pass through Villisca, but crossed the Nodaway some five or six miles to the north, the only change that I know of. Our whole work was a very quick and hurried affair but I know that I put in some five weeks of the hardest work I ever did. I will not name my compensation further than to say it would correspond very well with the price of oats* at the present time. I have no dates but all this was more than 40 years ago. Population was more than scarce—one squatter in Adams county and one man by the name of Starr engaged in commerce in Union county. He had a cabin near where Afton now is—a kind of half-way station on the “Mormon trail”. His stock in trade consisted of a keg of whisky and plug tobacco. Weary travelers could halt and refresh and then stock up for the balance of their journey. Although there is complaint about railroad management at the present time, we cannot deny that we, in our locality, are favored with a good and efficient

*This article was written some years ago, at a time, no doubt, when the price of oats was very low.

service. There was probably a lack of prudent caution in early railroad legislation. The people gave subsidies and lands without price and without conditions. They paid for those lands in buying them back at the highest prices they would bear. Community wants no quarrel—only a recognition of mutual rights. What is called the railroad problem is a difficult one. It will require a wise brain and a skillful genius to solve it.

FREMONT COUNTY, located in the southwest corner of the State, being bounded on the west by the Missouri river and on the south by the State line, is one of the best counties in the State. Its soil is unsurpassed for richness. It is well watered by the Nishnabotona and branches, and by several small branches running into the Missouri, while numerous large and beautiful springs flow from the Missouri bluffs. It contains a population of 1,250 souls. The southern portion of the county has been settled for about ten years, and contains many highly cultivated and extensive farms. The prairies are less extensive than in many of our eastern counties, while the timber is likewise more equally distributed. In the southern portion of the county the population is made up of emigrants from Kentucky, Tennessee, Indiana, and Missouri, together with a small settlement of French. On the Missouri bottom, in the western portion of the county, is the "Civil Bend" settlement, composed of between twenty and thirty families from the eastern states. In the northern portion of the county there are several small Mormon settlements. The county was organized during the past summer, and the coming legislature will undoubtedly provide for the location of its county seat.—*The Western Democrat, Andrew, Iowa, November 6, 1850.*

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