



RED RIVER VALLEY.

3ts Geology discussed before the Historical Society.

SCIENTIFIC VIEW OF THE SURROUNDINGS OF WINNIPEG.

WHERE THE CITY'S WATER SUPPLY SHOULD BE OBTAINED.

OBSERVATIONS ON THE COAL AND OTHER IMPORTANT QUESTIONS.

The regular meeting of the Historical and Scientific Society, Thursday evening, Dec. 28th, was well attended, and interest even greater than usual was manifested in the proceedings.

THE PAPER OF THE EVENING.

Mr. J. H. Panton was then called upon to read his paper Gleanings from the Geology of the Red River Valley, which follows:—

Mr. President and gentlemen: To-night for a short time, we purpose directing your attention to the Book of Nature, and from the fragmentary leaves of the geological records glean something about the rocks beneath our city, and the loose material which overlies them. Rocks may exist in two forms, the solid, which is represented here some fifty feet below the surface, and the pulverized, which, mingled with decomposing vegetable matter, forms the soil of our fields. The solid form is fixed, and has not been removed from its present position since deposited, while the pulverized has in most cases been derived from rocks at a distance. These have been ground down and transported by agencies to which reference will be made afterwards. To say something regarding the nature of these rocks, as they form the foundation of this city, is our object in appearing before you to-night.

The geology of our great North West, like our vast plains and immense rivers, is on a magnificent scale. To the eye of the geologist a grand vision appears, as he contemplates the marvellous panorama that rolls before him, portraying the geo-

logical features of the country lying between the Laurentian rocks to our east, and the lofty mountains of the west. The former, representatives of the first rocks to triumph over the universal waters of primeval days and the latter belonging to a period near the summit of the geological series. Between these great natural boundaries, we see stretching before us, the three vast prairie steppes of the North West, rising in succession above each other and distinguished by characteristic physical features.

FIRST PRAIRIE STEPPE,

Known as the Red River Valley, is 52 miles wide at the international boundary line, widening to the north, with an elevation of 800 feet above sea level and embracing an area of 6,900 square miles or over 4,000,000 acres. The last of our country to emerge from water, it has received a rich compensation in the drainage of the North West for countless years, a rich alluvial deposit to which the eyes of the World are turned with astonishment at its almost inexhaustible fertility. In this rich valley abundant harvests are reaped upon fields which have been sown for fifty successive years with wheat, and as yet show no indication of less productive power.

Since our geological gleanings are to refer more particularly to this deposit, as it occurs beneath and around Winnipeg, we shall not dwell at present upon an area