

A little to the north of Winona Road, not far from the line, is a travertine deposit which I did not see. Mr. Looney informed me that it is equal in size and quality to any of the deposits on the land on the south side of Winona Road.

Some distance to the north, travertine appears on the north-west bank of Heilmann Creek for a distance of over 30 yards. To the west is a swampy area of about 5 acres, and travertine occurs under a part or perhaps nearly the whole of this area, which is roughly 170 ft. above sea-level (as determined by an aneroid observation).

Some distance to the north-west, near the line of Arwata Road (which is not formed north of Winona Road), two pits have been dug in travertine, and one of these shows that the deposit is at least 3 ft. thick.

Further north, on Mr. H. Bartle's land, a few strata below the present half-line, calcareous sinter shows for more than 5 chains (probably 10 chains) along the banks of a small creek draining to the main stream. Travertine is also seen on the banks of a tributary till.

What is said to be a large deposit of calcareous sinter has lately been discovered on Mr. S. Campbell's land, and it is not far from the boundary than any of the deposits seen by me.

I was also informed that in a large swamp on the line of Arwata Road, towards the present National Park boundary, several outcrops of calcareous sinter forming mounds have been seen. Deposits of sinter also occur on the banks of the main stream west of the upper (unformed) part of Arwata Road, not far from Bartle's sinter.

Quantity of limestone available.—In comparison with most limestone deposits, the calcareous sinter of spring-deposited limestone of the Opunake district are small. I will the various deposits are opened up to a reliable statement of the amount of sinter can be made. Yet since some idea of the quantity available is better than none at all, I give the following very rough estimates as a kind of guide to what may be expected: Mound on south side of Winona Road near line of Arwata Road (not seen), 2,000 tons (1); Heilmann Creek and neighbouring swamp (about 28), 2,000 tons (2); deposit seen on line of Arwata Road about a mile (3) north of Winona Road—no estimate of any kind can be made; deposit on Mr. H. Bartle's land near tributary of main stream—no estimate can be made, but there are certainly some thousands of tons.

I think one may safely say that at least 10,000 tons of limestone can be obtained from the deposits seen by me. Small though this amount is, it is greater than I expected. How far future exploitation will add to the quantity of limestone in sight is uncertain, but from what I saw and was told I anticipate that ultimately not less than 20,000 tons of limestone will be found, and possibly a good deal more.

Value of deposits.—Notwithstanding the smallness of the deposits, they are worth developing for they are situated in a district where lime is daily needed. The sinter, however, is not of great value and can be easily worked. Thus, so far as they go, it is certainly worth working, but only for the next few years to the surrounding district.

Working the deposits.—It is desirable to have a means to drain the more accessible of the sinter deposits, and it is necessary to determine at least roughly the amount of sinter that can be easily drained. The sinter in such a place that it will not impede the working-out of the whole of the deposit. The sinter for the most part is fairly soft and porous, so that it can be easily quarried and broken.

Working the sinter.—The calcareous sinter may be pulverized and used direct as a soil-dressing. I recommend crushing the lumps (after drying) in a portable pulverizer. Electrical power to work this can be obtained from the Opunake Power Board. The drying of the sinter before pulverization will need careful attention. The lumps of sinter should be broken or crushed, but the individual deposits are so small and scattered that the expense of drying them is not likely to be warranted. In any case, lime will be a valuable fertilizer, and it can be used in a field, and also of small quantities mixed with soil for local fertilization. The material of the deposits makes it necessary to use a good deal of sinter for each acre of land.

Use for lime.—The sinter is not so good as the limestone for use as a soil-dressing, and other reasons besides, but it is a valuable fertilizer. The sinter is not so good as the limestone for use as a soil-dressing, and other reasons besides, but it is a valuable fertilizer. The sinter is not so good as the limestone for use as a soil-dressing, and other reasons besides, but it is a valuable fertilizer.

Use for fertilizer.—The sinter is not so good as the limestone for use as a soil-dressing, and other reasons besides, but it is a valuable fertilizer. The sinter is not so good as the limestone for use as a soil-dressing, and other reasons besides, but it is a valuable fertilizer. The sinter is not so good as the limestone for use as a soil-dressing, and other reasons besides, but it is a valuable fertilizer.

Conclusion.—I certainly would believe that the deposits of calcareous sinter in the Opunake district will be found to be of great value for the next few years. As already indicated, they are not sufficiently large to supply the whole of the Opunake district with the lime it so much needs.