

## X.—PROFESSOR ORAM'S REPORT.

KINGS COLLEGE, WINDSOR, N. S.,

December 9th, 1872.

DEAR SIR,—

I beg to transmit to you, for the information of the Commissioner of Mines, a detailed report of the mode of operation adopted in my survey of part of the Cumberland Coal Field.

The whole of this survey has been effected by means of a Troughton & Simm's 5 inch Ordnance Theodolite and a Gunter's Chain, the latter having been carefully tested at frequent intervals during the survey.

The plan I adopted was the following; First carefully selecting a suitable site for a base line, which in a country like Springhill is not an easy matter. I found the spot best adapted for this was a prominence called Boss's Hill, from which the best view of the country can be secured; the longest base I obtained was somewhat short of half-a-mile.

I then took accurate observations from each extremity of base, of conspicuous objects, houses and barns, situated on or near the line of survey. The information as to locality of houses, &c., I obtained from Mr. Miller, a resident at Springhill.

My next step was to connect this base, by means of a Traverse Survey, with the objects already noted, and in every instance when possible, I took back-sights on a flagstaff erected on Mr. A. Mill's barn, which is situated on the base line; this method has the effect of completely tying in the survey, and rendering the detection of any inaccuracy in plotting at once simple.

The different lines in the Traverse were measured between flagstaffs placed as far apart as the sinuous course of the road would permit; the relative and compass bearings of these lines were both carefully registered; a plan absolutely

SAMUEL B. B. B.