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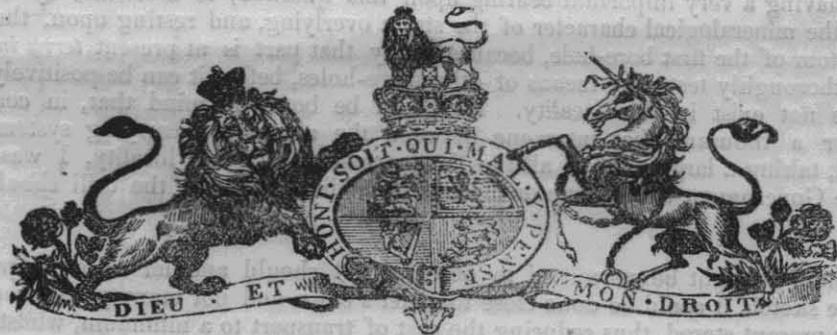
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GOVERNMENT GEOLOGIST

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SUPPLEMENTARY Report on the Mersey Coal Deposits, with reference to further Tests by means of boring through the Carbonaceous Strata with the No. 1 Diamond Drill.

Launceston, December, 1884.

As a preliminary, it may be stated that the opinion I have arrived at as to the probable existence of deep carbonaceous strata in which other seams of coal may exist, has been formed after a close examination of the district, its quarries and mines.

The fact that Mr. Gould, F.G.S., had also examined this locality, as well as other scientists, over fifteen years ago, and the maps these gentlemen constructed, have had no bearing on my labours, and, in point of fact, their reports were scarcely seen by me. It must be allowed that during the fifteen to twenty years that have elapsed since their inspections, when it was possible only to examine the surface and a very few mines, considerable changes have taken place, placing their successor in a better position to form a more recent opinion as to the prospects of these deposits; at the same time it is likewise submitted that as science progresses an opinion formed upon limited means years ago ought not to be accepted as perennial.

For convenience of description, and also on account of supplying the important additional information obtained by means of the bore of the diamond drill, I would most respectfully draw attention to the sketch of a geological cross section from the Don River to the east of the Mersey River herewith presented.

As the question of deep carbonaceous strata undoubtedly centres on the limestones, and as it will be remembered that in my Report, No. 61, 1883, I stated that—"From all appearances the Coal Measures rest on this limestone in parts, or, where it is wanting, on the still older Silurian and Metamorphic Schists," it has been proved by means of the diamond drill that not only was this substantially a correct view, but, what is more important still, the bore has proved the "dip" of that limestone to the east, as laid down on the geological sketch plan of that Report. This enables one to draw conclusions, having, very probably, important bearings upon the question at issue.

From the outcrop of these Don limestones to the mouth of the borehole is about three miles, the level of the surface placing the latter about 30 feet lower, and, as the diamond drill cut the limestone at a depth of more than 380 feet, a dip of about 20 degrees is established. We have, therefore, tested new country beneath the seam hitherto wrought to a depth of 320 feet, without encountering any other seam or seams of coal. The country, therefore, above A on the sketch, may be assumed as sufficiently tested, and *non-coalbearing*, rendering any other efforts at similar depths of bores futile. So far as I could judge from the bores submitted by Mr. Belstead, Commissioner of Mines, for my inspection, the lower strata, though more conglomeratic in character, still maintained its general lithological appearance.

It now remains only to study the question as to the probable prospects of the field as from *beneath* the bottom of this bore-hole, and to deduce such facts as are possible under the circumstances. The dip of the limestone at 20 degrees east still continuing in that, or rather a little more southerly

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direction, renders it quite possible—as the nearest Silurian, I am credibly informed, occurs only at or near Port Sorell (at a northern extension of that rock near Elizabeth Town)—that for several miles no obstruction will arise causing the limestones to alter their angle of inclination. And as these limestones form, by every appearance, the base of the carbonaceous beds, it is certainly a point of great interest, having a very important bearing upon this question, to ascertain, by means of the diamond drill, the mineralogical character of the strata overlying, and resting upon, the limestones beneath the bottom of the first bore-hole, because really that part is at present *terra incognita* and deserves to be thoroughly tested by means of other bore-holes, before it can be positively stated that other coal does not exist in this locality. It should be borne in mind that, in coal countries, frequently over a thousand feet intervene between the actual coal-carrying systems of seams, vertically; and, taking a large view of all the facts examined in that locality, I was induced to recommend the Government to sink one or more bores additional before the drill should leave the district.

In conclusion, I might be permitted to observe that should another bore be put down, as indicated on the sketch, it could be done close to water's edge, and not many yards from where the machinery is at present stored, thus reducing the cost of transport to a minimum, whilst, at the same time, it would settle the question of the probable existence of deeper seams of coal for good.

G. THUREAU, F.G.S.

Commissioner, Department of Mines, Tasmania.

As a preliminary to my report, I have to state that the geological map of the district, which was prepared after a series of explorations in 1883, and which is now being revised, is the only one of the kind in the colony, and that it is the only one which has been prepared after a series of explorations in 1883, and which is now being revised.

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For convenience of description, and also on account of the importance of the information obtained by means of the geological map, I would now respectfully draw attention to the sketch of a geological cross-section from the Don River to the east of the Mary River, which is attached to this report.

As the question of deep carbonaceous strata and shaly rocks in the limestones, and as it will be seen from the sketch, that the limestones are of the Devonian age, and that they are of the Devonian age, it is interesting to note that the limestones are of the Devonian age, and that they are of the Devonian age.

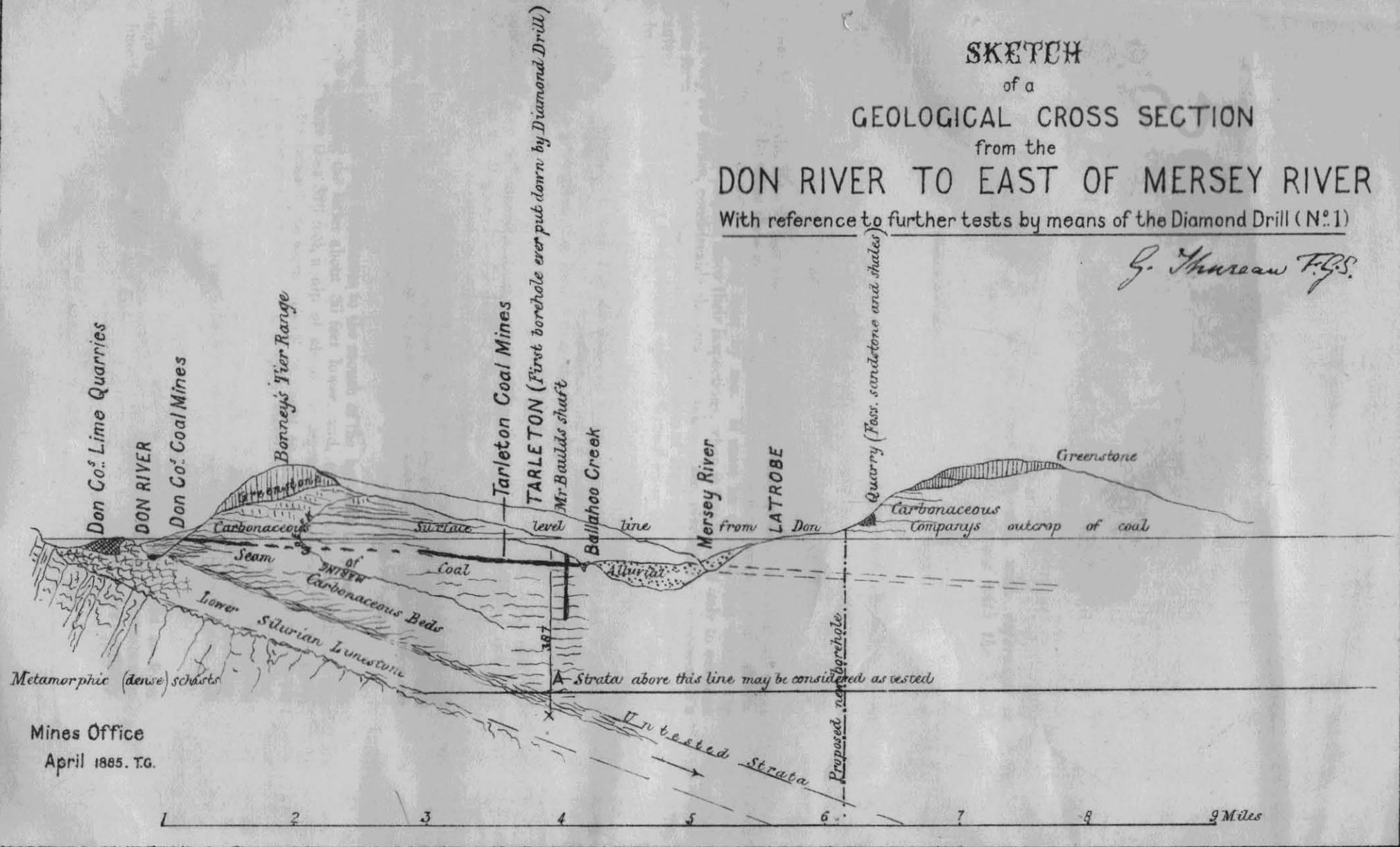
From the outcrop of these Don limestones, the dip of the strata is about 10 degrees, and the level of the surface shows the latter about 30 feet lower, and as the diamond drill cut the limestones at a depth of more than 300 feet, a dip of about 30 degrees is established. We have, therefore, a good example of the Devonian limestones, and as the limestones are of the Devonian age, it is interesting to note that the limestones are of the Devonian age, and that they are of the Devonian age.

It now remains only to state that the geological map of the district, which was prepared after a series of explorations in 1883, and which is now being revised, is the only one of the kind in the colony, and that it is the only one which has been prepared after a series of explorations in 1883, and which is now being revised.

SKETCH
of a
GEOLOGICAL CROSS SECTION
from the
DON RIVER TO EAST OF MERSEY RIVER

With reference to further tests by means of the Diamond Drill (N^o.1)

G. Thureau F.G.S.



Mines Office
April 1865. T.G.

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