

All these samples, it must be remembered, are of highly weathered coal, and were taken from or near the cliff face. If any samples were assayed from the end of the drive they were done privately for the company, and the results are not obtainable, whilst at present the drive is full of water. When it is remembered, therefore, that it is only outcrop coal, we have every reason to predict that it will improve greatly when opened up further, and should prove to be a very similar coal to that being worked at the Collie.

The Midland Railway Company, upon whose concession the Coalfield is, have put down several bore holes to test it, but most of this work has been done without system, whilst in the deepest bore, which is something like 500ft., they abandoned work just as they struck black shale. The known outcrops are almost upon the line of the proposed railway between Mingenew and Mullewa, and therefore will be of great value to the Murchison Goldfield, where the great scarcity of fuel is already being greatly felt. Therefore, although it is not a first-class coal, it should be able to hold its own against imported coal, when we consider the extra handling, shippage, carriage, duty, &c. We may therefore hope before long to see this long neglected field the centre of a thriving industry.

A belt of carboniferous country, about 20 miles in width, extends from the Irwin River to the Northward, crossing the Greenough, the Murchison, the Wooramel, the Gascoyne, the Lyons, and Minilya Rivers, then spreading out over the Henry, Ashburton, and Fortescue Rivers, and forming the great tableland at the head of the DeGrey. It is true that up to the present only carbonaceous shales have been found, and the fossils all belong to the lower carboniferous or even to the Devonian series, but when the enormous area over which these rocks extend is taken into consideration, and that they dip under the Mesozoic formation to the Westward, it is highly probable that true coal measures do exist further North than the Irwin; but this point can only be proved by boring, and this work should be started at once along the Cue-Geraldton railway where it crosses the sand plain to the Westward of Mullewa.

HARRY P. WOODWARD,

Government Geologist.

14-1-96.

## Appendix 2.

*Report on the Yalgoo Goldfield, by H. P. Woodward, Government Geologist.*

*From the Government Geologist to the Hon. the Minister for Mines.*

SIR,

I have the honour to hand you Map and Report of the Yalgoo Goldfield. I am sorry that I was unable to carry out my original intention of making detailed maps of the chief centres; but, since no map of the leases had been published at the time of my visit, this was impossible.

I have, etc.,

HARRY P. WOODWARD,

Government Geologist.

11-2-96.

This Goldfield, although only declared in 1895, had been worked for some years previously as part of the Murchison Goldfield, but since the principal workings were so far from the official centre of that field, it was decided to divide the field into two. Gold was first discovered upon this field at the Nancarrong Hills in 1890, but as this discovery did not prove to be of any great value it was abandoned, and nothing more done upon the field until 1894, when the rich discovery at Yalgoo, later on known as the Emerald Mine, was made. Since, the gold has been found at several places along a belt of country which runs in a North-Westerly direction from the Lakes Monger and Moore to the main Cue road near Chain Pump.

The main mining centres of this goldfield are nearer the coast than any other in the Colony, Yalgoo itself being about 150 miles from the coast. This field embraces what was the Western portion of the Murchison Goldfield, and is situated upon the high ground immediately behind the range which rises at the head of the Irwin River. It is drained by the Murchison and Greenough Rivers, whilst to the Southward all the streams discharge themselves into Lake Monger; of these the Greenough River drains much the largest area; in fact this goldfield may be said to be situated upon the upper courses of that river. The surface is broken and hilly, small stony sides or granite hills rising abruptly from alluvial flats. As a rule it may be called well watered country, and the water is generally fresh, but it is rather doubtful whether any large supplies will be obtained in depth. Both timber and firewood will be serious items in the near future, but since the railway will cross this field shortly this difficulty may be overcome.

The principal centres of the field are Yalgoo, Carlaminda, Melville, Gullewah, Pinyalling, Woodley's, Damperwah, and Nancarrong.

Yalgoo, which is the official centre, is situated upon the Cue Railway. The reefs occur in a broken belt of schistose country, the strike of which is East and West, whilst the diorite dykes and lodes mostly follow the same lines. Many of these veins were extremely rich, particularly one called the Emerald, where a very showy deposit was discovered, but which, when the company that had purchased it started to work, proved to be, instead of the cap of a lode, a small almost flat reef, with no defined formation, and of no extent. Several of the other lodes here are nothing more or less than lenticular bunches of quartz, and although often pretty rich they will not pay since there is no great quantity of stone. There are a series of small reefs with a more North and South strike, which are more likely true lodes, but they are so small that they will scarcely pay deep work. A few miles North of Yalgoo a cap of a large reef carrying gold has been discovered, but it is not probable that it will increase its size along its strike. The stone has a promising appearance and is highly mineralised, but will be found to contain sulphides in depth.

The "Joker" line is also a few miles South of Yalgoo, where a series of rich veins strike off from a large dyke.

At Carlaminda a reef about 2ft. 6in. has been taken up and tested for about a mile along its outcrop. It has a good formation and will, probably, continue in depth. It is rather small, but should the stone prove to be rich it may pay very well.

Melville is situated a little further North on the same belt of country, but at the point where it is suddenly cut off by the granite, the country is much broken, the reefs strike in many different directions, and are mostly of the same lenticular form as at Yalgoo. They are not true fissures lodes, and will not probably be of any extent, although the large rich masses of stone may pay very well to crush.

At Gullewah are a series of small reefs, some of which are pretty rich, but they are rather small to work.

At Pinyalling, which is situated on a ridge at the East end of Lake Monger, are a series of very promising reefs; they are not particularly rich, but carry fine gold all through the stone. They have a very good formation to a depth of 100ft. (as far as tested), but the great feature is the abundance of stone, for the reefs are of considerable size, and there are so many of them.

Woodley's and Damperwah are situated further to the Westward, at the Southern end of ridges of schistose country, which are cut off by granite outcrops. The exact positions of these finds are uncertain, but it is generally believed that they are outside the boundary of the Yalgoo field. Several other small finds have been made about Mt. Singleton, near Lake Moore.

At the Nancarrong Hills, a few miles East of Yeuwin sheep station, a few reefs have been worked off and on during the last five years, but never with any success.

Upon this field it will be found, as a general rule, that the more or less North and South lodes are true veins, and may be expected to continue in depth, whilst many of the others which have a more or less East and West course will be found to be only purely local bunches, and will cut out. This is a great pity, because some of these contain really good stone, and are of a considerable size, whilst many of the true veins are either too poor or too small to work.

The great point this field has in its favour is its proximity to the settled districts, which so greatly reduces the price of cartage.

The belt of country which should be thoroughly prospected extends South from Yalgoo to Lake Monger, and it is highly probable that some very good discoveries will be made.

There are three large crushing plants upon the field, one being at Yalgoo and two at Melville, whilst a third small plant is at Nancarrong. These batteries crush for the public, so that there should be no difficulty in working the reefs in these districts, as no outlay is required, therefore it is not necessary to put them into companies, and if a man has anything really good he is certain not to want to do so.