

PBN/VO'B.

July 21st, 1931.

Memorandum for /

Secretary for Mines,
HOBART.

The Lyndhurst, Forester, Warrentinna, New River and Alberton goldfields are portions of the main gold-bearing belt of north-eastern Tasmania which extends still further south-south-east through Mathinna, Tower Hill and Mangana. These fields are occupied by the folded and faulted Mathinna series of slates and sandstones or quartzites. The gold bearing belt is comparatively narrow with a trend from N.N.W. to S.S.E. On either side of the Mathinna series, granite of Devonian age occurs and it is with these intrusions that the mineralising solutions or magmas which formed the lode were derived.

From the geological and the economic view points the importance of these fields has a considerable range.

Lyndhurst (or Waterhouse) Field.

This field was one of the earliest discovered in the State being found and worked in the sixties and abandoned by 1873, all machinery including batteries being removed. Further work was possibly carried out in the late seventies, but the field was again deserted. It is doubtful if any very extensive amount of work has been done since then. A number of reefs were found, but they were only tested to shallow depths, the deepest shaft (the Pioneer) being over 100 feet in depth.

The necessity for shaft sinking and pumping machinery may have assisted in the early desertion of the field but it was probably the unpayable nature of the quartz that was the main factor. It is also stated that the sulphides - iron and arsenical pyrite - came in at shallow depths and affected the recovery. The gold was worth approximately £3 per ounce.

Forester Field.

A number of narrow quartz reefs have been discovered on the western and south-western sides of Mt. Horror, but generally very little work has been done on them.

Perhaps the greatest development was at the Linton Mine, the reefs of which were discovered in 1922. This mine was systematically opened up and a battery erected to treat the quartz. The results were not payable due partly to the high silver contents of the gold which had a value of a little over £2 per ounce.

Warrentinna Field.

Attention was devoted to this field in the late eighties. Numerous small reefs were found and mining and crushing operations were actively carried out in the early nineties. The Derby mine was the most successful and though crushings were small, several small

dividends were paid. Operations were continued for a long time but without any further success.

In later years the New Golden Mara G.M. Co. (1914) and the Golden Mara North Mine (1914) and the Mara G.M. Co. (1921) carried out mining and crushing operations. The final results were that the reefs were narrow and the quartz unpayable.

New River - Alberton Field.

The New River field is merely the northern extension of the Alberton field.

This field is the most important of those referred to in the memorandum. The reefs are very numerous (at least 100 having been found) but even in this field individual reefs are not sufficiently longwise to give sufficient reserves of quartz to form a mine.

The field was discovered in 1882 and small scale prospecting and mining operations have been carried on almost continuously up till the present time. Several mines have been equipped with batteries &c., but the results have almost entirely been unpayable.

Of the many companies which have operated one of the pioneer ones - the Mt. Victoria Co. - carried out extensive underground work and it is stated that it is the only company that paid a dividend, though in the end its efforts were not successful. In more recent years the Ringarooma United mine (including numerous reefs) has been opened up to a large extent and also equipped with a battery, the work having been undertaken by various companies &c.

The opinions of Twelvrees (1904) and Hills (1923) were that the field should be tested at greater depth as the future of the field depended upon extensions of ore shoots in that direction.

Conclusions.

From the above brief survey it is obvious that the Alberton goldfield is the most important of those described. Even in this field however, the results of the mining so far undertaken have not been profitable. In general the future possibilities of the field lie in the occurrence of ore shoots at depth.

To ensure efficient and economic operation of a battery and treatment plant, it is necessary that there should be continuous or nearly continuous supplies of ore for crushing and treatment. Otherwise the plant is idle; depreciation is excessive; attention or caretaking is necessary; and no return is possible for capital expended.

The only field likely to give any quantity of ore is the Alberton but even there, a much greater amount of development work is necessary before the provision of a State battery is justified. This is particularly so seeing that there are two batteries in existence at present, the owners of one of which at least appears to be willing to crush ore for other companies, individuals, &c.

P. B. Nye