

A MINERAL SURVEY OF TASMANIA - BROADCAST TALK

Tasmania possesses an unusually large number of the known minerals, and for its size is perhaps richer in minerals than any equal area in the world. Comparatively few of the known minerals in the State can be said to occur in economic quantities, but from consideration of present production the order of importance is copper, tungsten, zinc, lead, tin, coal, silver, gold, pyrites, limestone, cadmium, kaolin, dolomite, silica, iron and osmiridium.

The mineral fields of Tasmania have a wide geographical distribution. The principal metallic mineral fields are situated in the western, north-western, and north-eastern parts of the State. The western and north-western districts include the copper, zinc, lead, silver, iron, nickel, osmiridium and part of the tin, gold and tungsten deposits.

The north-eastern district contains portion of the gold, tin and tungsten deposits and the ~~already~~^{at present} little known uranium deposits.

The coal deposits occur throughout the South-eastern, eastern and northern districts.

The oil shales are restricted to the northern and north-western portions.

Limestone deposits are distributed throughout the island.

The mining industry of Tasmania began with the discovery and mining of coal early in the nineteenth century. Coal was found at many localities, and numerous mines were opened in the thirties and forties. Work has ceased in these early mines, and coal production is now principally confined to the St. Marys district which is more favourable for the economic production of coal.

Another product which was also largely quarried in the early history of the State was the sandstones for building purposes, as witnessed by the large number of

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old sandstone houses, bridges and other buildings throughout the towns and countryside of the Eastern half of Tasmania.

The next important event was the discovery of payable alluvial gold near Mangana in 1852, which was followed by the location of the principal alluvial and lode goldfields during the sixties and seventies. The discovery of gold resulted from the impetus given to the search for the metal by the return in 1851 of gold diggers from Victoria and other mainland States where they had gained experience in the treatment of alluvial material for the recovery of gold. The alluvial drifts from which the earliest gold was won were widespread in occurrence and ranged over the King River, Pieman River, Long Plains and Bell Mount in the west to Lefroy, Lisle, Beaconsfield and Mathinna districts in the north-east.

There were no spectacular "gold rushes" in Tasmania and the discovery of large nuggets was rare. At least two important nuggets, weighing 243 ounces and 143 ounces respectively, were recovered from Rocky River in 1882, and a smaller one of 9 ounces had been obtained at Long Plains in the previous year.

After the exhaustion of the alluvial drifts the gold mining industry was maintained until more recent years by the mining and treatment of the primary gold bearing lodes in the north-eastern district. Numerous mines were operated but the outstanding ones were the Tasmania Mine at Beaconsfield and the Golden Gate Mine at Mathinna.

During and following the gold boom a large area of the State was prospected, and attention was also given to other metallic mineral deposits.

An epoch making event was the discovery of the world famous Mt. Bischoff Tin Mine, near the present town of Waratah, in 1871. This led to extensive prospecting in North-Western and Western Tasmania and the discovery of numerous other mineral fields. The discovery of the Heemskirk tinfield was made in 1876, followed by that of

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the Zeehan Silver-lead field in 1882 and the Mt. Lyell copper deposit in 1883.

In the late eighties and the nineties the remaining important fields of the West Coast, such as the zinc-lead deposits near Rosebery and the silver-lead deposits at Mt. Farrell and Dundas, were discovered.

During the same period the important tinfields of North-Eastern Tasmania, and further goldfields, were found.

Thus by the year 1880 the mining industry was firmly established, and became an important factor in the development of the State. The further development of the industry is indicated by the current value of production, which now realises about £13,500,000 per year.

The future of the mining industry depends on several factors, one of which is the continued working of the present mines. This is again dependent on many other considerations

such as the price of the products, extent and value of the deposits, and transport and mining costs. Though mines are not inexhaustible, it may be stated generally that there is no reason to expect the present mines and mining industries to do other than continue operations in the near future on the same scale as at present.

Another factor is the possible exploitation of known deposits at present largely undeveloped. There are known mineral deposits of considerable size and value which are either not being worked, or are being worked on a scale incompatible with their importance. This applies especially to the deposits of limestone, oil shale, iron, and partly to those of tin in the north-eastern and western districts.

The discovery of new mineral deposits is, of course, the factor upon which the ultimate future of the industry depends. In those parts, such as the western, north-western, and north-eastern districts, where the geological conditions are extremely favourable for the occurrence of primary mineral deposits, it is highly improbable that no further discoveries will be made.

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Surface prospecting may not reveal as many as it has done in the past, because naturally the most easily found have already been discovered. Nevertheless it is very probable that search in the least prospected areas will reveal new ore-bodies. The ordinary underground exploratory work of mining companies should also reveal new bodies of ores.

The greatest results are likely to be obtained, however, from scientific prospecting by geophysical methods in the known mineralised zones and their extensions. These are the methods which are now being used extensively over large tracts of the western districts as well as the north and north-eastern mineralised areas.

The preliminary search of the most favourable zones is undertaken by the use of specialised instruments carried in various types of aircraft and flown at low altitudes.

When positive results are obtained the air survey is followed by ground parties consisting of geologists and geophysicists who carry out intensive surveys within the indicated zones. From the results of the ground surveys, drill sites are selected to enable the mineral deposits to be tested at various depths below the surface.

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