

PRELIMINARY REPORT

ON

THE GEOLOGY OF THE MATHINNA GOLDFIELD

INTRODUCTION

The object of the recent survey of the Mathinna Goldfield was to determine the structural relationships between the geological formations and the gold bearing quartz veins with the object of selecting suitable areas for testing by diamond drilling.

Area Examined

A total area of fifteen square miles was mapped in detail. This extends from Mathinna southwards to the Tower Hill mine. Examinations were also made of some mining properties in the South Mt. Victoria and Mangana districts.

Geology

The rocks of the Mathinna field consist principally of slates and quartzites of Cambro-Ordovician age. These are folded into a series of anticlines and synclines, and are intensely sheared along the main portion of the gold bearing belt.

The Auriferous Quartz Veins.

The main gold bearing zone occurs along an axial line of folding consisting of four or more anticlinal folds. The quartz veins are disposed along, and on either side of, the main line of folding, but, with three exceptions, there is no relationship between the rock structures and the lode structures. In general the main line of folding trends N. 30 - W. The lodes may strike in almost any direction, and appear to have formed along major joint planes and shear zones in the slates. The bulk of the gold mined on the field has been won from comparatively short rich shoots and, apart from the Golden Gate Mine, none of these appear to have been very permanent.

Future Prospects

The field has been well prospected and it is fairly certain that most of the lodes outcropping at the surface have been found. At the same time it must be remembered that the two principal lodes of the Golden Gate Mine did not outcrop and for this reason there is justification for underground prospecting work in such portions of the field as have not been tested. In this respect the country between the North Golden Gate and Golden Stairs Mines offers possibilities, as there is a large area of unprospected ground in this locality. On the Enterprise Mine it is probable that the two veins worked in the past are junctioning to the south of the present workings and the contact would be worth testing at a depth of 100'.

Investigations are being made into the possibilities for underground prospecting work west from the Golden Gate Main Shaft.

With regard to surface prospecting the most favourable area is the country south east from the Jubilee Mine.

Other Areas Examined

A promising lode situated in the South Mt. Victoria district is now being prospected by H.A. Rayner. This has a length of over 700' and an average width of 2' to 3'. It carries gold throughout its length. Of ten samples taken across the full width of the lode five varied from 7 dwts. to 2 ozs. 4 dwts. per ton. These were from the northern portion of the lode. In the southern portion the values were lower. Samples obtained by Mr. Rayner, prior to my visit, have contained up to 14 ozs. of gold per ton. Considering its length and the fact that it contains some rich patches this lode is one which warrants developing. A full report on this property will be available in the course of a few days.

The Argyle Mine at Mangana contains some short shoots of fair grade ore which are worth following up.

FIELD GEOLOGIST.