

# BIRTHDAY BAY IRON PROJECT

**EL8/2013: SORELL PENINSULA, WESTERN TASMANIA.**

ANNUAL REPORT TO: THE DIRECTOR OF MINES, MINERAL RESOURCES TASMANIA FOR  
THE PERIOD - OCTOBER 10, 2013 TO OCTOBER 9, 2014.



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**BIRTHDAY BAY PROJECT: EL 8/2013**

DATUM:	G DA94 - MGA ZONE 55
PROJECT NAME:	BIRTHDAY BAY IRON PROJECT
TENEMENT NUMBER:	EL8/2013
TENEMENT AREA:	104 KM <sup>2</sup>
TENEMENT OPERATOR:	MAINCOAST PTY LTD
TENEMENT HOLDER:	MAINCOAST PTY LTD
REPORT TYPE:	ANNUAL REPORT TO MRT
REPORT TITLE:	IRON PROSPECTIVITY ON EL8/2013
DATE OF REPORT:	FRIDAY, 21 NOVEMBER 2014
1:250 000 MAP SHEETS:	GEOLOGY OF SOUTHWEST TASMANIA, DIGITAL GEOLOGICAL ATLAS 1:250,000 SCALE SERIES

## SUMMARY

The Birthday Bay Exploration Licence EL 8/2013 was granted to Maincoast Pty Ltd (MCL or The Company), on the 10<sup>th</sup> of October, 2013 for a 'Category 1 - Metallic Minerals & Atomic Substances' licence.

Preliminary data acquisition and interpretation has identified an area which is considered prospective by the company for the identification and development of economically viable iron ore deposits. The prime target comprises defining a JORC-compliant 'Measured and Indicated' Iron Ore Resource as soon as possible.

The outline strategy for proposed exploration activity is summarised in this report. Circumstances have resulted in considerable difficulty being experienced by the Company with the almost universal flight of investment capital from the market, particularly so in the junior explorers sector. A recent very sharp decline in the iron ore price has further compounded the problems faced in getting even a low cost exploration drilling campaign underway. Consequently the Birthday Bay Iron Project has had little tangible work over the statutory reporting year.



Figure 1: EL8/2013; Project - Regional Location, Western Tasmania.

Proposed early Stage 1 work programs need to be changed, in response to the current straitened economic situation. This would involve skipping various preliminary exploration activities, such as mapping and ground geophysics and proceed directly to Diamond Drilling at least two boreholes into each of the three iron occurrences. This should involve generally NQ<sub>3</sub> diameter holes with a minor PQ<sub>3</sub> component to investigate the metallurgical properties of the iron ore.

Maincoast Pty. Ltd. has undertaken a literature review and has researched all available documentation on previous exploration activity. The following exploration works have been completed:

- ◆ a comprehensive open file and published report searches have been completed.
- ◆ project database compilation completed.
- ◆ a commodity review for various iron ore products.
- ◆ a reconnaissance field trip is complete.

## INTRODUCTION

Preliminary data acquisition and interpretation has identified a structurally controlled NE-trending zone on the lease which is highly prospective for the development of economically significant iron ore deposits.

A site visit in April, 2013 has confirmed the presence of three separate lenses or iron ore bodies. These three occurrences constitute the prime target of Maincoast's proposed exploration strategy and the objective was to define a JORC-compliant 'Measured and Indicated' Iron Ore Resource. The lease is very prospective for direct shipping grade ore (DSO), but the only instances of previous iron ore exploration activity are by BHP in the late 1950's. In 1967, a single drill hole was completed on the Deep Creek deposit (See Figure 2). A Resource Exploration Target based on information to date indicates a tonnage range of between 10 Mt and 20 Mt in total for a high grade DSO product. A regional location plan of the tenement area (EL8/2013) is included below.

The project area is located some 35 Km North of the extensive (1.3 Million Ha) World Heritage listed Conservation Area, in a region that already has numerous mining operations. The remote location on the Sorell Peninsula is strategically positioned such that any ore produced from the project could feasibly be loaded directly on to 5000 -10,000 tonne barges from the tenement area, for trans-shipment to waiting Handimax-sized vessels, sheltered by Macquarie Heads at the northern tip of the Sorell Peninsula. No faunal or floral reserves impinge on EL8/2013 nor have any A-Class State Conservation Reserves or Aboriginal Heritage Sites been identified.

Several companies have explored in the area. Early exploration models and interpretations of reconnaissance results met with limited success. This is partially due to the fact that deposits within the area are generally small and of low tenor. This is compounded by an almost complete lack of infrastructure and the general remoteness of the peninsula.

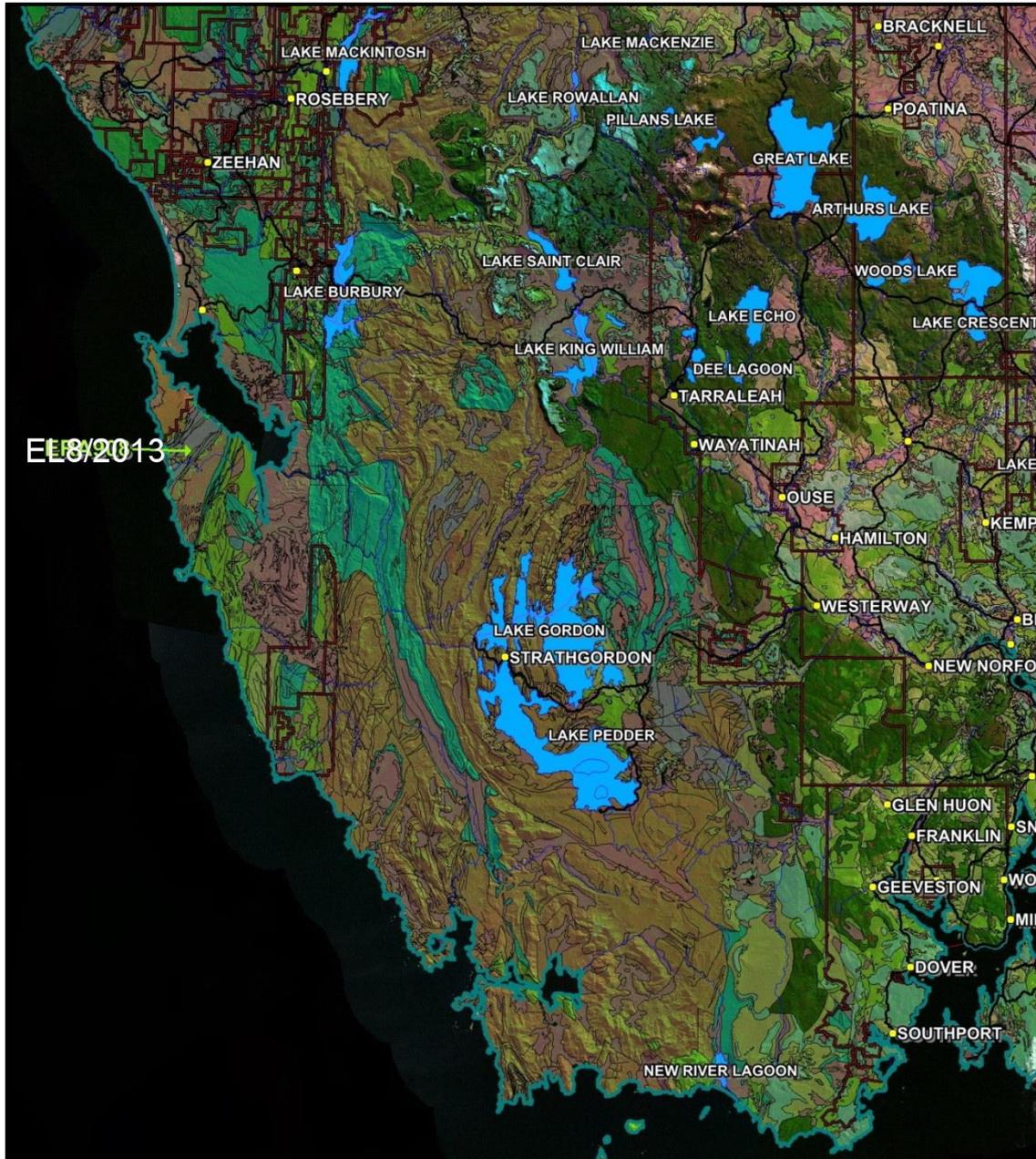


Figure 2: Regional Geological Setting, SW Tasmania

## LOCATION & ACCESS

The Licence area is on the West Coast of Tasmania in the vicinity of Macquarie Harbour. EL8/2013 coincides with expired tenement EL21/2007, formerly held by Macquarie Harbour Mining Ltd. (Figure 5). Located on the Sorell Peninsula to the west of Macquarie Harbour, access to the area is difficult. There are no permanent settlements and no roads except for some rough four-wheel-drive tracks. A sheltered boat landing is available at the southern end of **Birch's Inlet**, giving access to the Low Rocky Point track, nowadays mainly used for recreational motorbike and mountain bike riding. The landscape of the Macquarie Harbour–Elliott Bay area is dominated by old Tertiary marine surfaces at around 100–200 m above sea level, through which the many streams have cut gorges. Many of the surfaces are covered with light to dense scrub and forest, such that physical movement can be difficult without cut tracks. Some of the surfaces also have a shallow cover of superficial deposits obscuring the bedrock and affecting geophysical techniques. Thus, while the topography is generally more benign than in much of western Tasmania to the north, the scrub cover creates some problems for exploration (MRT, Tasmania). Figure 3, below shows a summary topographic & elevation image, extracted from SRTM data.

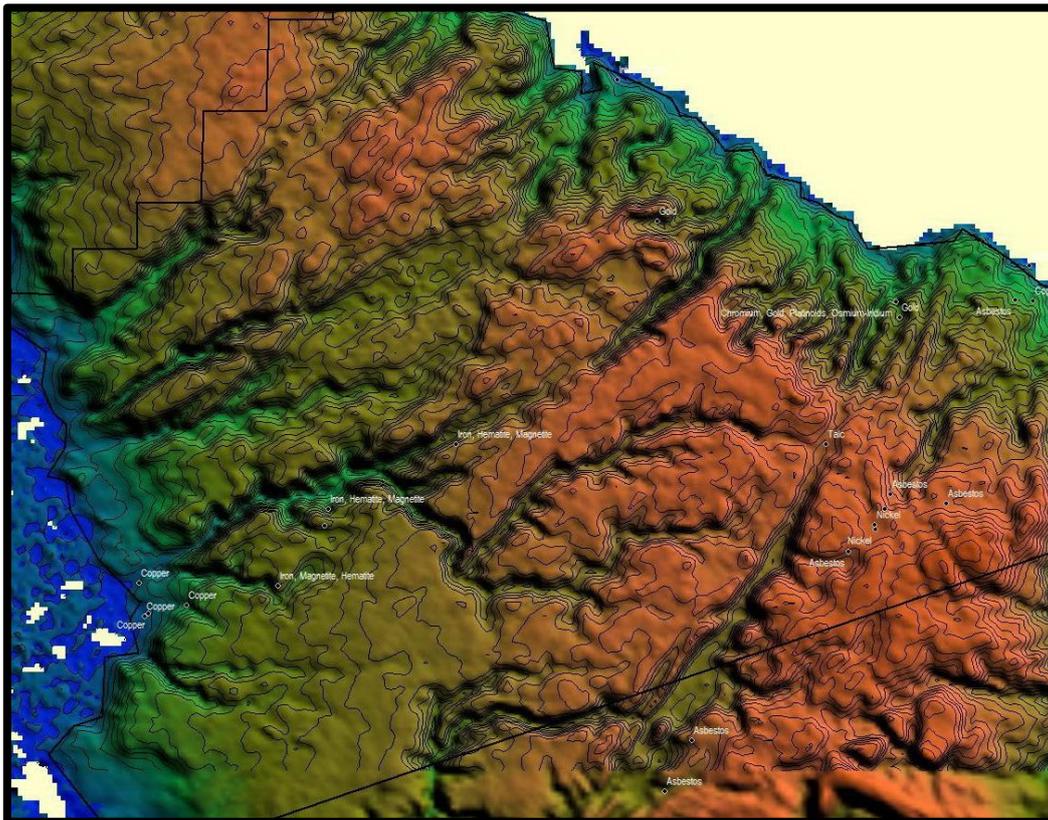


Figure 3: Birthday Bay Area: Elevation & Geomorphic Context.

## REGIONAL GEOLOGY

The regional geological unit comprises the Mt Read Volcanics, which are Cambrian in age and most of the mineralization is syngenetic, however the Renison and Avebury deposits are Devonian in age but have been emplaced in the Cambrian volcanic succession. At Avebury the mineralization is associated with ultramafic rocks that may be early Cambrian or Late Proterozoic, which have been subsequently tectonised and emplaced within the Cambrian rocks. In the Devonian Period the emplacement of a nearby granite intrusion was accompanied by the production and mobilisation of mineralising fluids which leached nickel from the ultramafics and redeposited it the form of nickel sulphides in adjacent areas. Similar ultramafic rocks are present on the southern Sorell Peninsula, but are outside the application area.

EL8/2013 is situated west and southwest of Macquarie Harbour covers outcrops of Neoproterozoic and Cambrian stratigraphy which extend south, along the Southern Ocean coastline. These rocks are regarded as extensions of the Mt Read Volcanics (Mineral Resources Tasmania). Figure 5 shows a geological map compiled by Featherstone Geological Consultants for a Prospectus issued by MHM in 2007.

## LOCAL GEOLOGY

Along the north-western boundary of the tenement application and extending to the north west of the Double Cove Belt are Proterozoic rocks of the Rocky Cape Group consisting of metamorphosed quartzite, mudstone/siltstone, and conglomerate. These rocks have been thrust over the top of the Neo-Proterozoic rocks to the southeast and lie on an almost level thrust plane. Proterozoic rocks previously covered the rocks now outcropping within the tenement but have since been largely eroded. Some inliers of thrust Proterozoic rocks can be found as remnants on higher ground within EL8/2013.

The north-western boundary of the prospective rocks covered by this tenement is somewhat irregular. Several small inliers of Proterozoic rocks are present near the boundary and SE of it. The south eastern boundary of the prospective rocks is a major strike fault trending NE with Neoproterozoic rocks of the Oonah Formation lying to the SE of the

fault. The north-eastern and western boundaries of the licence are the shorelines of Macquarie Harbour and the Southern Ocean respectively.

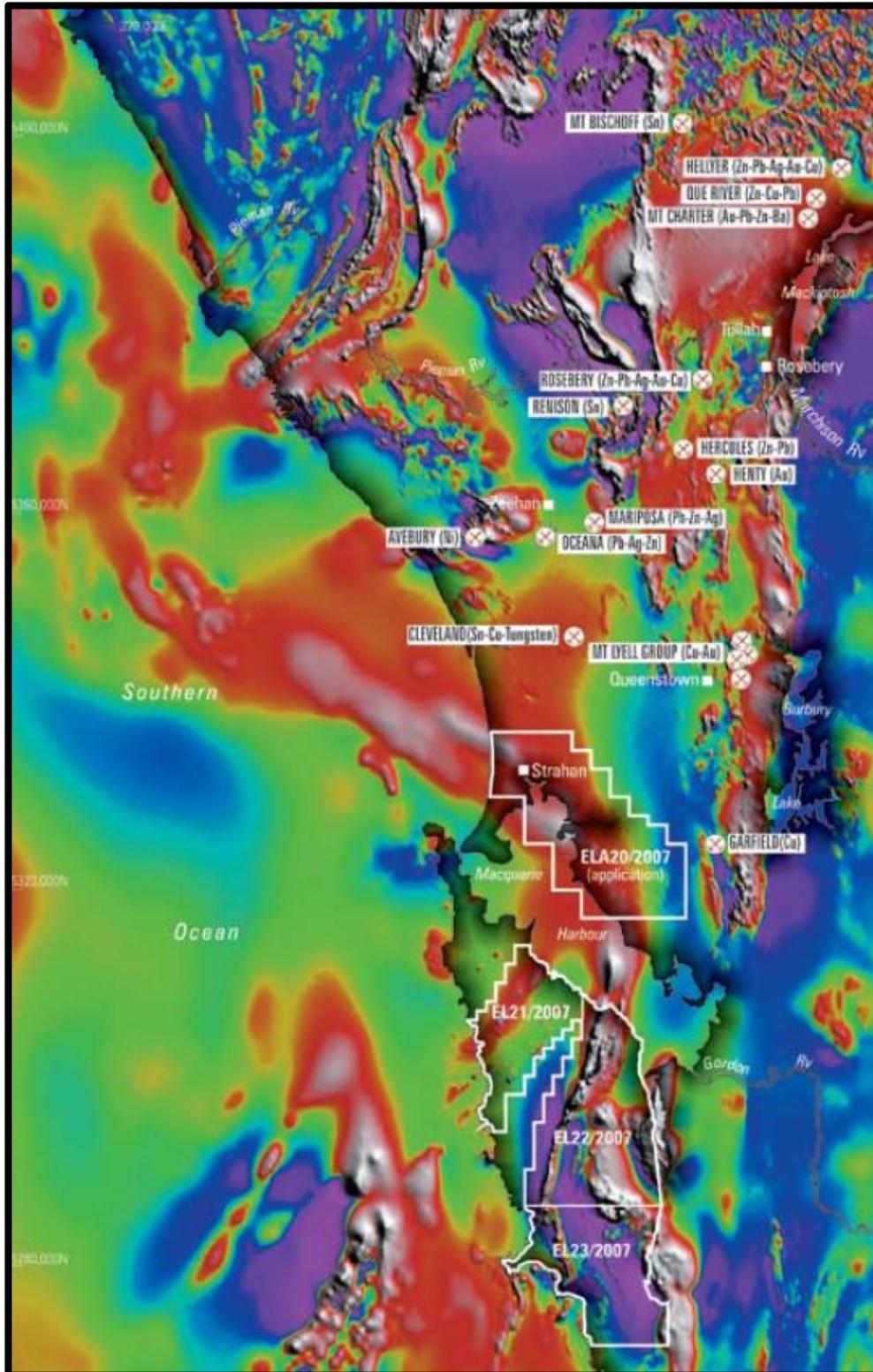


Figure 4: Regional Aeromagnetic Image with Mineral Deposits plotted.

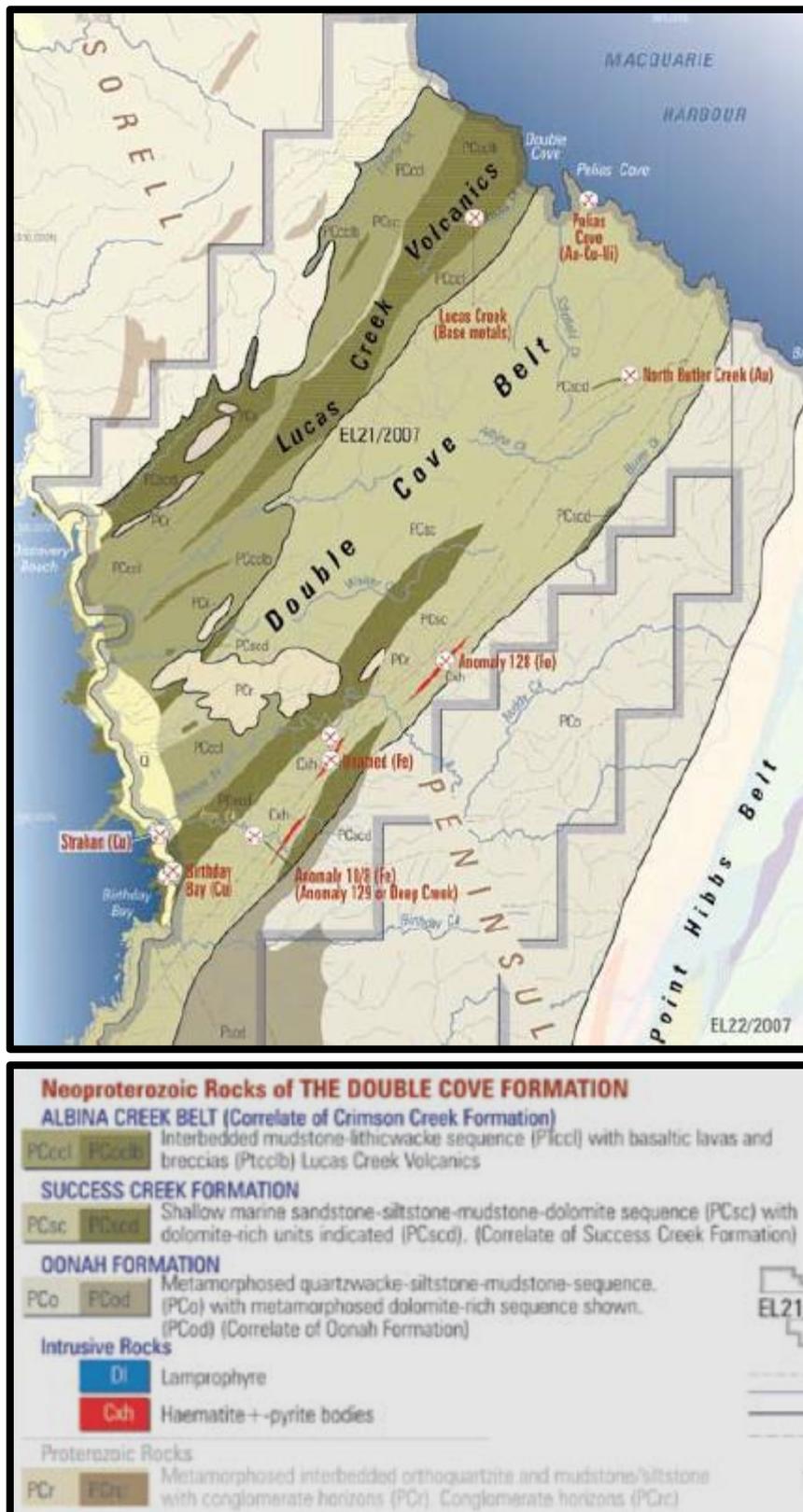


FIGURE 5: EL8/2013 AREA GEOLOGY.

Within the licence a number of major faults strike NE-SW. These faults divide the succession into a number of strips. The Double Cove rocks are considered to be correlates of the Crimson Creek Formation and the Success Creek Group. The fault bounded strips of Neo-Proterozoic have suffered major displacements on the faults. These displacements result in repetition and disorder of the stratigraphy. In the field the faults are typically marked by zones of strongly brecciated rock. In general the succession is sedimentary and youngs from the SE to the NW with the correlates of the Success Creek Group mainly in the central and southeast. These rocks are metamorphosed mudstones, siltstones, and sandstones, and are often calcareous or dolomitic. The correlates of the Crimson Creek Formation are mainly in the northwest where they are referred to as the Albina Creek Belt. The Albina Creek rocks are at the top of this succession and contain basaltic lavas and breccias. Some gabbro dykes of Cambrian age are present at the bottom of the succession.

At the northern end of Varna Bay on the ocean coast is a stock like intrusion of lamprophyre, of Devonian age, about 500m in diameter. Lying outside the area to the south east between this licence and MHM's former EL 22/2007 is a coherent block of slightly younger Neoproterozoic rocks (correlate of the Oonah Formation) bounded by major faults. The limestone unit of this formation, which is covered by the extreme southern portion of the area, is prospective for base metal and gold mineralization (MHM Prospectus).

Significant ferruginous occurrences have been identified by previous work, forming a northeast-southwest trending zone which transects the lease application area. Lenticular haematite bodies (with or without pyrite) have been emplaced along some sections of the NE-SW faults in the middle of the succession. These are of Cambrian age and are of economic interest and comprise the primary target of Maincoast's proposed exploration & development programs. Structural dips are generally steep in the immediate areas adjacent to the Fe-bodies and azimuths vary widely over short distances. This compounds the problem in accurately identifying the specifics required of a resource drilling program. There are many unknown parameters of these ferruginous hematite-hydro-hematite?-microplaty hematite?-magnetite-goethite-limonite?-ankerite?-pyrite? bodies and nothing of the three dimensional spatial parameters is apparently available. Accordingly it is difficult to postulate the required metreage needed to achieve a JORC 2012-compliant resource statement.

Furthermore, the unknown nature of these Fe bodies below the base of oxidation prevents formulating a definitive program, if these occurrences persist at depth, which would entail stepping back to intercept the deeper zones. It may be that the deeper regions may become increasingly sulphidic, an intrinsic possibility in Maincoast's opinion. The general strike of the interpreted regional iron occurrences is north-eastwards (Figures 6 and 7).

The Year 2 work program is characterised primarily by diamond core drilling and associated sampling/assaying. This is by far the largest expense item and its' execution is predicated on an improvement in the investment climate and the recovery in the Iron Ore price, which currently approximates to ~\$USD 70, a level which renders many Australian Iron Ore mines as barely marginal.

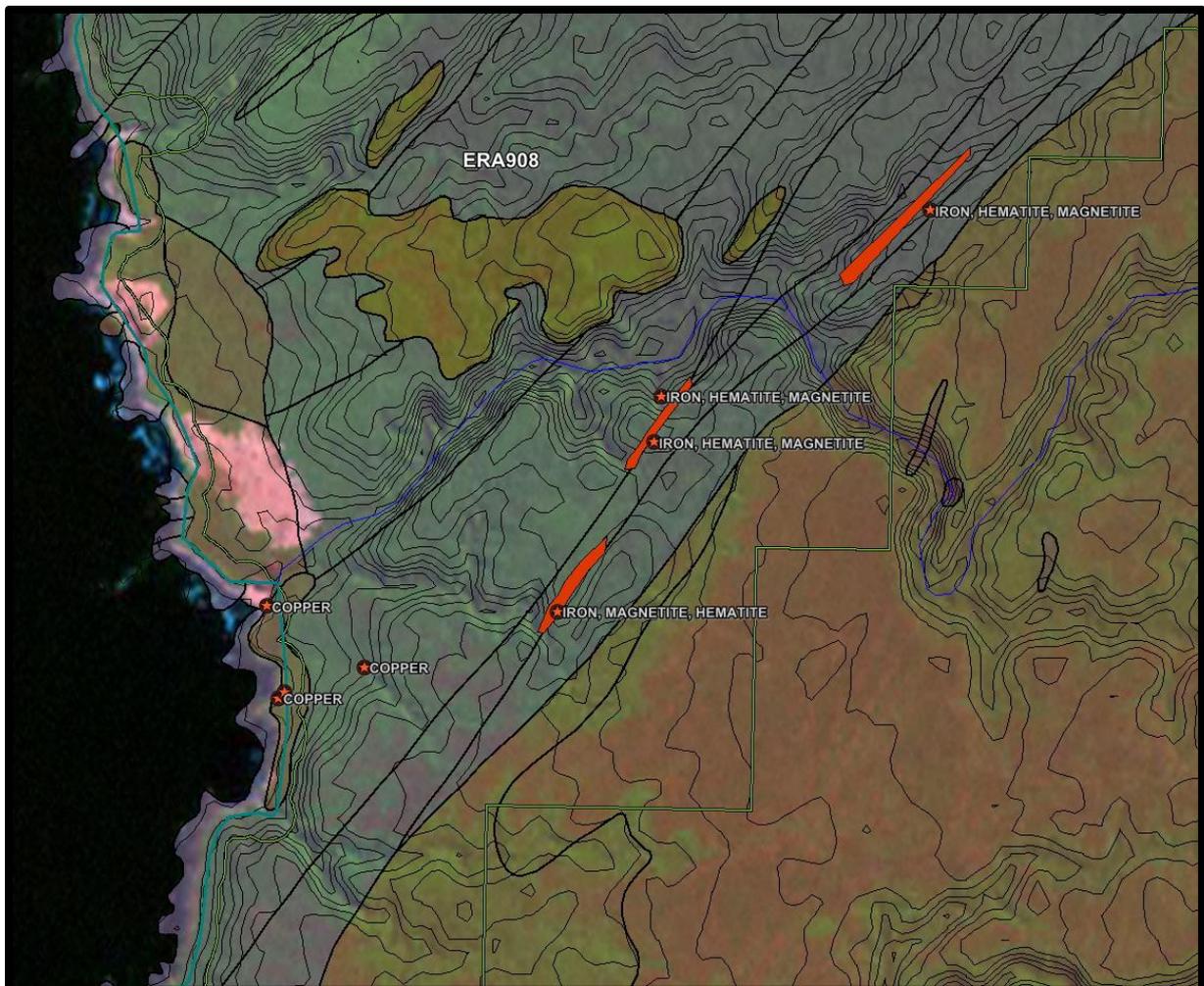


Figure 7: Approximate trace of the target Iron Deposits, Birthday Bay.

