Foyson Resources Limited (ASX: FOY) Speculative Buy 0.9¢
Amazon Bay Iron Sands Project (PNG)

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Capital Summary

Issued Capital: 673.4m ords
65.0m opts
Share Price (15/06/12) 0.9¢
52 week low/high 0.7¢ / 2.8¢
Market Capitalisation (dil.) $6.65m
Cash (31/05/12) ~$1.5m
Enterprise Value (dil.) $5.15m

Key Points

- Foyson Resources is an ASX listed minerals exploration company with exploration licences in Papua New Guinea (PNG).
- Foyson’s flagship project is the Amazon Bay iron sands project which extends for over 100km along the coastline, southeast of Port Moresby.
- The company has identified an exploration target of 630Mt of vanadium-rich titanomagnetite iron sands at the Threadfin prospect.
- Preliminary metallurgical studies on material from Amazon Bay indicate a concentrate grade of 52% Fe, 1% V₂O₅ and 17% TiO₂ can be produced through grinding, cleaning and metallurgical separation techniques.
- The company is also assessing the viability of separating the iron sands into individual, near pure, titanium, vanadium and iron products which would fetch premium prices in the market.
- Foyson is currently planning a ~20,000m aircore drilling programme at Threadfin, scheduled to commence in mid-2012. Metallurgical testwork and an updated scoping study will also be initiated.
- A JORC-compliant maiden inferred resource at Amazon Bay is anticipated in late-2012.
- Foyson also had epithermal gold and porphyry copper-gold projects elsewhere in highly prospective regions of PNG. The company is looking to attract investment into these projects from major mining companies.
- Foyson has an experienced Board and Management team with a history of building low cost, high performance projects.

Directors & Key Management

Mr Doug Halley Non-executive Chairman
Mr John Haggman Non-executive Director
Mr John Holliday Non-executive Director
Mr Michael Palmer Chief Executive Officer
Mrs Aliceson Rourke Company Secretary

Share Price Graph (A$)

Major Shareholders*

<table>
<thead>
<tr>
<th>Shareholder</th>
<th>Shares</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Peter Hubert Otta</td>
<td>26,200,000</td>
<td>3.89%</td>
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<tr>
<td>Rogo Investments Pty Ltd</td>
<td>25,000,000</td>
<td>3.71%</td>
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<tr>
<td>Blue Lake Resources Pty Ltd</td>
<td>21,186,111</td>
<td>3.15%</td>
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<tr>
<td>Blue Lake Resources Pty Ltd</td>
<td>15,741,611</td>
<td>2.34%</td>
</tr>
</tbody>
</table>

* As at 31/05/12; Top 20 Shareholders hold 37.1%.

Our View

Foyson’s flagship Amazon Bay iron sands project has the potential to deliver a very large, vanadium-rich titanomagnetite iron sands resource. We view there to be considerable potential upside to Foyson’s valuation on the announcement of a maiden resource. Furthermore, additional value in Amazon Bay project could potentially be unlocked if a cost-effective processing methodology can be established to separate the iron sands into near pure, individual titanium and vanadium products. We look forward to the commencement of resource drilling and additional metallurgical test work in the near future. These activities should produce a steady news flow during the remainder of 2012. For the above reasons, we view there to be considerable upside to Foyson’s valuation as the Amazon Bay project develops and recommend it as a SPECULATIVE BUY.
Overview

Foyson Resources Limited (“Foyson” or “the company”) is an ASX listed resource company with a focus on iron sand, gold and copper-gold projects in Papua New Guinea (“PNG”) (Fig. 1). Foyson’s projects are located on islands or close to the coastline which provides favourable logistics for exploration and any potential developments. Foyson’s primary focus is the vanadium-rich titanomagnetite iron sands project at Amazon Bay, located on the southeast coast of the PNG mainland. The company is also targeting epithermal gold and porphyry copper-gold mineralisation styles within the highly prospective island chain surrounding the Bismarck Sea, northeast of the PNG mainland, and includes projects located in New Britain and New Ireland (Fig. 1).

Figure 1. Foyson’s project location map (Source: Company website).

Flagship project – Amazon Bay iron sands prospect

Foyson’s flagship project is the Amazon Bay iron sands project (“Amazon Bay’) which is located ~200km southeast of Port Moresby along the southern coastline of PNG. Foyson owns 50% of Amazon Bay with an option over the remaining 50% interest. Historical exploration activities at Amazon Bay identified a substantial area in excess of 100km of coastline that is considered prospective for vanadium-rich titanomagnetite iron sands (Fig. 2). Foyson is initially focussing on a ~30km stretch of the prospective coastline at its Threadfin prospect. The Company is currently planning a laterally extensive drilling programme with the view of establishing a JORC-compliant maiden inferred resource at Threadfin.

Figure 2. Amazon Bay project area radiometrics image showing the extent of iron sand strand lines (in red) (Source: Company release).
**Historical exploration at Amazon Bay**

The Amazon Bay iron sands prospect was identified by AOG during the late 1960’s. Preliminary studies in the early 1970’s, including a hand auger drilling programme, delineated a non-JORC resource to 9m depth of 445Mt heavy mineral sands. Preliminary metallurgical test work by CSIRO demonstrated the titanomagnetite-bearing material could be extracted by screening, gravity and magnetic separation methods to produce a low-grade concentrate. Subsequent studies by Titan Mines during 2006 demonstrated a higher grade concentrate could be produced at a finer grind size (Source: Company website).

More recently, Foyson completed a regional airborne geophysical survey to test the extent of the mineralisation within the Amazon Bay licences beyond the known mineralisation reported by AOG. Significant magnetic and radiometric anomalies were identified with an exploration target estimated to be 3 – 4 billion tonnes of magnetite-rich iron sands. Two significant magnetic anomalies, Barracouta and Threadfin, were targeted for initial auger drilling. In excess of 100 auger holes were drilled at the prospects from which composite samples were prepared for metallurgy, processing and marketing studies.

**Preliminary metallurgical test work and scoping study**

Initial metallurgical test work commissioned by Foyson aimed at establishing grinding and product separation methodologies for the iron sands. The study found that a combination of grinding, cleaning and high intensity magnetic and electrostatic separation could produce a concentrate grade of 52% Fe, 1% V₂O₅ and 17% TiO₂ (Source: Company release). Through alternative processing methodologies, the company is also assessing the potential to separate out high-grade, near pure vanadium and titanium products which would fetch a premium price in the market.

Downer EDI Mining were commissioned by Foyson to complete a scoping study for a dredge, floating concentrator plant, ore beneficiation plant, product storage and shipping facility operation. For an annual capacity of 2.5Mtpa of concentrate, capital cost estimates ranged between A$300m – A$600m with operating costs estimated to be in the range of $20/t – $46/t (A$50m – A$115m p.a.).

**Towards a maiden resource at Threadfin**

Foyson has identified an initial exploration target (non-JORC) of 630Mt (million tonnes) based on historical drilling, Landsat images and radiometric surveys covering Amazon Bay dune formation (Fig. 3). The company is currently planning an aircore drilling programme of ~20,000m with the view of establishing a JORC-compliant inferred resource at Threadfin towards the end of 2012. In addition, detailed sampling will be conducted to determine grade variations and additional metallurgical studies. These studies will determined what potential product mix can be generated, which will range from an iron-rich concentrate with titanium and vanadium credits, through to producing individual high-grade vanadium, titanium and iron products similar to that being proposed by Speewah Metals at its 4.7 billion tonne Speewah Dome titanium-vanadium-iron project.

![Threadfin prospect showing mineral strand lines (in red) adjacent to the coastline (Source: Company release).](image-url)
Epithermal gold & porphyry copper-gold projects

Foyson's also has exploration licences and applications on islands surrounding the Bismarck Sea, northeast of the PNG mainland. The Mussau Island licence application area is located within the Outer Melanesian Volcanic Arc ("OMVA") where the company is targeting epithermal gold projects. Elsewhere, the OMVA hosts that large Simberi (6Moz) and Lihir (56Moz) gold deposits. The Company also holds exploration licences prospective for bulk tonnage porphyry copper-gold deposits in the New Britain and New Ireland Islands. The licences are also located proximal to world class mining operations and have received limited modern exploration. Foyson is looking to progress exploration on these licences through Joint Venture Agreements with major mining companies.

Board and Management

The Board and Management at Foyson are highly experienced in the resource sector, with backgrounds in financial management, business development, corporate strategy, exploration and mining. It has a history of locating prospective projects in unrecognised and undervalued companies and building low cost, high performance projects.

Risks

We consider the main risks at Foyson’s Amazon Bay iron sands project to be:
• Exploration/resource risk – common to all exploration companies, the drilling out of a potential resource can result in unpredictable results. We view this risk to be largely mitigated at Amazon Bay due to the historical drilling (non-JORC) completed on the project which indicates anomalous accumulations of vanadium-rich titanomagnetite sands over an extensive area. Furthermore, geophysical surveys have delineated a very large lateral extent of the mineral sand strand lines which indicates a very large resource could be established.
• Funding risk – current macroeconomic conditions may impact on the companies ability to raise additional funds through equity in the short-term. This may impact on Foyson’s planned exploration programme at Amazon Bay
• Permitting risks – should the Threadfin prospect prove to be economically viable, there are always permitting risks associated within any proposed mining operation. Minimal human settlements in the area will be favourable from a permitting perspective.
• Sovereign risk – this is considered to be largely mitigated as PNG is highly dependent on mining as a revenue stream. PNG has a long history of mineral exploration and mining with the government being generally supportive of the industry.

Recommendation

We view there to be potential upside to Foyson’s valuation based on the high probability of establishing a large iron sands resource at Amazon Bay. As a JORC-compliant resource is established at the Threadfin prospect and metallurgical and scoping studies completed, Foyson has the potential to match the market capitalisations of its competitors, which currently range between ~$20–75m (Table 1). The favourable metallurgical qualities evident from preliminary studies at Amazon Bay indicate that the iron sands have the potential to be processed into quality products, especially if the individual high value titanium and vanadium products can be separated. We look forward to positive announcements on the project during the second half of 2012 as the project develops. For the above reasons, we recommend Foyson Resources as SPECULATIVE BUY.

Table 1. Comparison market capitalisations and resource size of selected ASX listed iron-vanadium-titanium focussed companies (Source: adapted from company release).

<table>
<thead>
<tr>
<th>Company</th>
<th>ASX code</th>
<th>Type</th>
<th>Location</th>
<th>Resource (Mt)</th>
<th>Market cap (A$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foyson</td>
<td>FOY</td>
<td>Iron sands</td>
<td>PNG</td>
<td>630 Mt</td>
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<td>Indo Mines</td>
<td>IDO</td>
<td>Iron sands</td>
<td>Indonesia</td>
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<td>$60m</td>
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<td>Amex Resources</td>
<td>AXZ</td>
<td>Iron sands</td>
<td>Fiji</td>
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<tr>
<td>TNG</td>
<td>TNG</td>
<td>Hard rock</td>
<td>N.T.</td>
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<tr>
<td>Speewah</td>
<td>SPM</td>
<td>Hard rock</td>
<td>W.A</td>
<td>4,700 Mt</td>
<td>$18.5m</td>
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</tbody>
</table>

1 Company Exploration Target.
2 Fully diluted.
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Date Prepared: June 2012
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