

## **ASX ANNOUNCEMENT**

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**27 September 2013** 

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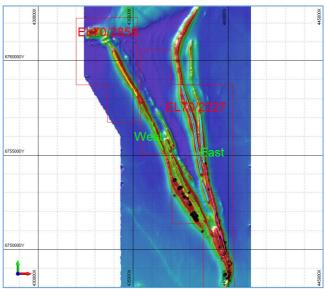
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# Resource Uplift for Perenjori Iron Ore Project

- Total inferred Resources in all zones increased by 30% to 191.7Mt at 36.6% Fe
- Inferred Resource within the Core BIF Zone increased by 42% to 93Mt at 37.2% Fe
- Further resource definition drilling planned to increase tonnage and confidence level of resources ahead of feasibility studies

Quest Minerals Limited (ASX: QNL, Company) is pleased to announce an increase in Resources at its Perenjori iron ore project in Western Australia in which it is earning an 80% interest.

The new estimate has been generated after incorporation of data from the metallurgical core drilling programme completed in November 2012 on EL 70/2777 ("Feral", on Figure 1).



**Figure 1:** Area of drilling (shown as black circles) contributing to Inferred Resource and un-drilled BIF contributing to the Exploration Target on both EL 70/2858 (Alken) and EL 70/2777 (Feral)



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Table 1: JORC Mineral Resource Estimate for Perenjori Iron Ore Project at cut-off grade of 20% Fe

Zone	Category	Tonnage Mt	Fe%	Al <sub>2</sub> O <sub>3</sub> %	SiO₂%	S%
Core BIF Zone	Inferred	93.3	37.22	1.67	41.59	0.05
Eastern Belt (excluding CBZ)	Inferred	78.7	37.64	1.45	41.66	0.03
Western Belt	Inferred	19.7	29.77	3.39	47.04	0.32
Total	Inferred	191.7	36.61	1.75	42.18	0.07

The estimate tabulated above was provided by the Company's consultants CSA Global (CSA) in Perth Western Australia using a lower cut-off grade of 20% Fe. It represents a 30% increase in total Inferred Resource, and a 42% increase in tonnes within the Core BIF Zone (CBZ).

Historical drilling (shown as black circles in **Figure 1**) which defined the previous resource estimate was confined to the southern part of Feral 70/2227. CSA's estimate has been derived using a density-Fe regression function that generates a significantly higher ore density value than that used in the previously released Inferred Resource for areas outside the CBZ.

Following the drilling of the two metallurgical core holes, CSA Global was asked to review resources within both the eastern limb and western limbs, and the Core BIF Zone located on the northern part of the eastern limb (*Figure 2*).

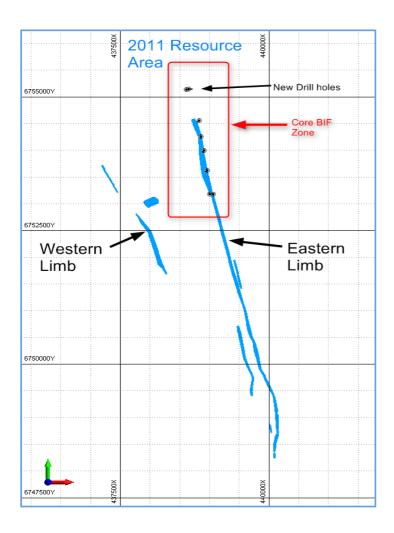


Figure 2 showing the area of inferred resource in the Core BIF Zone in relation to the Inferred Resource (blue bands) outside of the CBZ.



#### **Core BIF Zone**

Current scoping studies are focussed on an area expected to be the most likely location for any commercial development, designated as the Core BIF Zone (CBZ), on the eastern-most BIF of the eastern belt, between 6752550 mN and 6756230 mN. This is a zone of elevated topography and simple structure of the main BIF which is 50-55m in true width, and dips uniformly west at 72°.

The Core BIF Resource is 2,800m along strike, and has been modeled down to 300m below surface; however the *Inferred* category only extends to 175m below surface, all material lower than this is unclassified. A blank block model was created using 50mN x 10mE x 25mRl parent blocks, constrained within the mineralisation wireframe and sub-celled to 10m x 5 m x 2m were necessary to prevent volume loss. Assays were composited to 1m and estimated using the inverse distance squared method.

CSA Global now report an Inferred Resource within the Core BIF Zone as **93.3 Mt at 37.2% Fe** (refer Table 1) to a depth of 175m. Together with the previously reported exploration target within the CBZ, the conceptual tonnage potential of the CBZ is of the order of 150Mt, which is the figure used for conceptual scoping studies presently being undertaken by the Company.

CSA has previously estimated an overall *Exploration Target* of range 320 – 360Mt at 32-37% Fe for zones outside the area of historical drilling (*ASX release 29 Mar 2012*). The exploration targets have been estimated using the high-resolution (200m line spacing, 50m ground clearance) aeromagnetic imagery and extrapolation of the RC drill holes that contributed to the previously released Mineral Resource estimate. These tonnage targets lie outside the areas of the resource drilling. The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

The target zones lie within the northern part of Feral and in much of Alken, outside of the areas of historical drilling, as shown on **Figure 1**. The increment of 44.7 million tonnes in Inferred Resources included in CSA's present resource estimate falls within this target (for comparison, refer the Company's previous resource statement, included in ASX release 31 July 2013, Report for Quarter ended 30 June 2013). These results provide confidence that further resource-definition drilling planned by the Company will meet its stated Exploration Target.

Altogether there are now eight holes over a 2.6km strike length in the CBZ. None of these holes yet have downhole surveys. Only the recent core holes have located both the footwall and hangingwall of the BIF unit. However BIF contacts are accurately located at the surface using Geotracker linked to MapInfo and using high-resolution GeoEye satellite imagery. This enables a reasonable geological model to be constructed for the main BIF.

CSA modeled the Core BIF using a constraining wireframe based on lithology and a nominal cut-off of 20% Fe. Dip of the BIF unit was established using the surface mapping and downhole lithological intersections.

Jerome G Vitale Managing Director



## **Competent Persons Statement**

Information in this report that relates to exploration results reflects information compiled by Dr Dennis Gee Director of the company and a member of AIG. Dr Gee has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity upon which he is reporting on as a Competent Person as defined in the 2004 Edition of "The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves." He consents to the inclusion in this report of the matters based on the information compiled by him, in the form and context in which it appears.

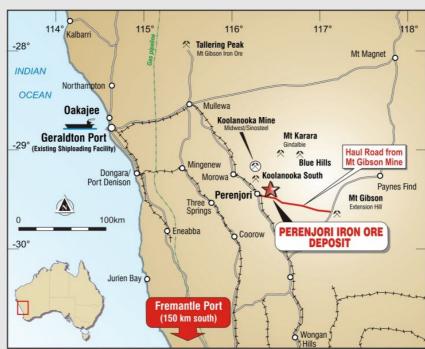
The information in this report that relates to in-situ Mineral Resources at the Perenjori Iron Ore project is compiled by Dr Bielin Shi and Rory Devlin of CSA Global Pty Ltd. They are Members of the Australian Institute of Geoscientists and have sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity they are undertaking, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2004 Edition). Dr Shi and Rory Devlin consent to the inclusion in this report of the matters based on the information compiled by them, in the form and context in which it appears.

# **About Perenjori High Grade Magnetite iron Ore Project**

Quest Minerals is earning 80% interest in each of EL 70/2777 (Feral) and EL 70/2858 (Alken), which are situated close to the northern wheat-belt town of Perenjori. The project is strategically located close existing infrastructure and only 14 km from the rail head that links to the port of Geraldton in mid-west of Western Australia.

## Main features of the project include:

- Strategically located close to key infrastructure.
- 330KV and 132 KV powerlines pass just north of the licence area.
- Mine site to Geraldton port rail link 14km, providing a cost advantage over other projects where transport logistics are significant.
- An environmental survey to be completed by Mattiske Environmental Consultants over the Core BIF Zone to facilitate the permitting of resource drilling.



**Project Location** 



# **About Magnetite**

Magnetite ore, when compared to hematite, typically has a much lower iron content when mined of between 25% and 40% Fe and in this form is unsuitable for steel making. The main iron mineral in magnetite ore is the ferrous iron oxide magnetite (Fe3O4) and requires complex processing to separate magnetite minerals from other minerals in the ore to produce an almost pure magnetite concentrate with an iron content of between 68% Fe and 70% Fe that is highly sought after by steel makers.

Magnetite ore is of little value in its raw state, but it offers considerable advantages in its concentrated form. These include providing a viable iron-making commodity for premium quality steel production and releasing less carbon emissions in steel production. In addition, the higher price fetched by premium quality steel produced from magnetite concentrate can offset the costs associated with beneficiation meaning it has an overall net global benefit in terms of carbon pollution reduction.

Magnetite ore is suitable for processing into iron ore pellets for use in modern steel production and currently accounts for approximately 50% of global iron ore production. The magnetic properties of magnetite enable it to be readily refined into an iron ore concentrate. In addition, less energy will be required to process the magnetite concentrate into steel in comparison to hematite products from the Pilbara.

The additional processing cost for the production of magnetite concentrate can be offset by the premium price which it attracts from steel mills because of the high iron content compared to benchmark DSO hematite products.

END