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## JUNE 2010 QUARTERLY REPORT

28 July 2010

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### CONTACTS

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### PROJECTS

**Cameroon:** iron ore, gold

**Pilbara:** nickel, copper, zinc,  
iron ore

**Gum Creek:** copper, nickel,  
PGE, gold, iron ore

**Mt Gibson:** zinc, copper, gold

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### HIGHLIGHTS

- **Cameroon drilling to commence in September Quarter**
- **Woodley magnetite Exploration Target of 1.75Bt -3.25Bt identified**

### OVERVIEW

Good progress has been made at the Cameroon Iron Ore Project over the quarter. Two targets at Eseka have been mapped and bulldozer access to both is all but complete. The access track achieves vehicular access to the targets to support the upcoming drill programme as well as providing valuable geological information. Mapping and assessment of targets at Logmangan and Melombo is well advanced.

Negotiations with Geosearch, a South African based drilling contractor, are close to finalisation, with equipment already mobilised to Legend's exploration camp at Eseka. Drilling is expected to commence shortly. The onset of the wet season is expected to impact access for drill rigs for the next three months to the more remote targets.

With the announcement of the Woodley magnetite exploration target (28 June 2010) the next stage at the Gum Creek Project is to plan an initial drilling programme to test the modelled targets, whilst considering all options.

The Pilbara Heritage Agreement negotiations have one final hurdle to overcome before meaningful plans for exploration activity can be commenced.



## 1. Cameroon Project

The Cameroon Project comprises granted exploration permits and an application covering an area of approximately 3,900km<sup>2</sup> and is considered prospective for iron ore, see Figure 1. Discovery of 50Mt of direct shipping ore (DSO) is the primary target, however itabirite ore (lower grade but potential very high tonnage) will also be targeted. The Ngovayang Project area has the added advantage of being well served by access infrastructure including rail and road networks to and from the port city of Douala.

During the quarter, Legend significantly advanced the geological knowledge of the project through mapping, pitting and geochemical sampling activities. This was aided by the completion of litho-structural interpretation of the aeromagnetic data and Landsat data processing of iron content and alteration patterns over the entire Ngovayang area. As a result, exploration efforts have been focussed on three prospects in the northern part of the project, namely Eseka, Logmangan and Melombo, see Figure 2. Bulldozers are currently establishing access tracks at Eseka to assist with the proposed drilling programme utilising a man portable diamond rig.

Results from 349 rockchip samples mainly from the Eseka prospect (306) and the remainder from the Logmangan prospect were reported to the ASX on 1 June 2010 and compliment previously released rockchip results (ASX announcement: 14 April 2010). The rockchip sampling is non-systematic and comprises predominantly float/grab samples due to limited outcrop.

The rockchip results indicate that the samples fall into three broad categories based on rock type and associated assay results; 1) massive magnetite, 2) goethitic/limonitic material after itabirite, and 3) weathered itabirite with variable iron/silica content. The massive magnetite group is characterised by high iron values between 63-69% Fe with associated low silica, alumina, phosphorus and loss on ignition (LOI) values. The goethitic/ limonitic group has an iron range of 47-63% Fe with varying levels of silica, alumina, phosphorus and LOI. Iron values of the weathered itabirite group have a range of 29-47% Fe (average 37% Fe) with associated silica ranging from 10-51% SiO<sub>2</sub> (average 35% SiO<sub>2</sub>), which is typical for itabirite bodies.

Figure 3 shows the location of all Eseka rockchip samples with iron results plotted over an aeromagnetic image (analytical signal of total magnetic intensity). This diagram shows three "clusters" containing high grade samples of >60% Fe predominantly associated with massive magnetite.



The high grade results and dimensions of the three “clusters” are considered encouraging, however the relationship of the samples to bedrock is unknown at present due to the lack of outcrop and the fact that most of the samples are of float material. This will only be resolved with drill testing.

#### **Cameroon Project - Next Phases of Work**

- Commence man portable diamond drilling programme at Eseka.
- Continue geological mapping and drillhole planning at Logmangan and Melombo.
- Continue regional iron mineralisation target identification/evaluation utilising aeromagnetic litho-structural interpretation and Landsat data processing.

## **2. Pilbara Project**

The Pilbara Project is located 7-50km south of Karratha in the northwest of Western Australia, (Figure 4) and comprises 686km<sup>2</sup> of granted tenements and tenement applications. Legend has previously defined 14 priority drill targets from airborne Versatile Time Domain Electromagnetics (VTEM) and ground EM surveys. The Project is considered prospective for nickel-copper, copper-zinc and magnetite iron ore.

Legend management attended a Ngarluma Aboriginal Corporation board meeting on 23 June to discuss outstanding issues related to the proposed alternative heritage agreement. Several outstanding issues were resolved but the parties remain deadlocked over one item relating to the Mining Clause. Negotiations are ongoing.

#### **Mt Marie JV (Legend earning 70% from Fox Radio Hill PL)**

Nothing to report.

#### **Munni Munni JV (Legend 30%, East Coast Minerals NL 70%)**

Joint Venture manager East Coast Minerals completed a seventeen hole RC drilling programme (2,602m) in the area north of the historic Elizabeth Hill silver mine. The drilling was targeting geophysical features identified by sub-audio magnetic (SAM) and electromagnetic (EM) surveys completed in 2009.



Details of the drillholes are provided in Table 1 below.

<b>Table 1: Elizabeth Hill RC Drilling Details</b>					
<b>Hole</b>	<b>Easting MGA_94</b>	<b>Northing MGA_94</b>	<b>Dip</b>	<b>Azimuth</b>	<b>Depth</b>
DH01	487150	7668785	-60	90	150
DH02	487200	7668785	-60	90	150
DH03	487250	7668785	-60	90	75
DH04	487250	7668500	-70	90	200
DH05	487325	7668500	-70	90	196
DH06	487450	7668500	-70	270	200
DH07	487250	7668350	-70	90	150
DH08	487325	7668350	-70	90	150
DH09	487400	7668350	-70	90	250
DH10	487125	7668150	-60	90	150
DH11	487175	7668150	-60	90	150
DH12	487225	7668150	-60	90	75
DH13	487042	7668083	-60	135	150
DH14	487078	7668047	-60	135	151
DH15	487114	7668011	-60	135	75
DH16	487100	7668785	-60	270	150
DH17	487072	7667989	-60	255	180
<b>Total</b>					<b>2,602</b>

Results from the drilling returned broad zones with anomalous silver values (see below), however individual assays did not get above 6.8g/t Ag over 4m composited intervals.

- 32m @ 4g/t Ag from 72m in hole DH14
- 44m @ 4.1g/t Ag from 24m in hole DH15
- 16m @ 5.4g/t Ag from 44m in DH17

#### **Pilbara Project - Next Phases of Work**

- Heritage Agreement negotiations with the Ngarluma Aboriginal Corporation to continue.
- Drilling of previously identified VTEM/ground EM and iron ore targets, following signing of Heritage Agreement and receiving all statutory clearances.



### **3. Mt Gibson Project**

An extensive rehabilitation programme over the mill/plant site was completed during the quarter and work commenced on the heap leach ponds and tailings dam.

#### **Mt Gibson Project - Next Phases of Work**

- Rehabilitation works will continue on the heap leach ponds and tailings dam with a view to reducing the environmental liability.

### **4. Gum Creek Project**

The Gum Creek Project is considered prospective for banded iron formation hosted magnetite and intrusion-related (Ni-Cu-PGE), see Figure 4.

During the quarter Legend received the results of magnetic modelling by independent geophysical consultants, Southern Geoscience Consultants (SGC), evaluating the magnetite potential of the Woodley prospect, see Figure 5. The results were reported to the ASX on 28 June 2010.

The modelling focussed on a 20km strike length of BIF and indicated the potential for a range of 1.75-3.25Bt<sup>1</sup> of magnetite. An expected grade of 30-40% Fe (average 34%) is considered likely based on 48 non-systematic rockchip samples of outcropping BIF taken by Legend and reported previously to the ASX on 4 August 2008. An aeromagnetic image of the total magnetic intensity with rockchip sample iron results is shown on Figure 6.

Forward-modelling (35 forward models) and 3D-inversion modelling (one model) techniques were used by SGC to model 100m line spaced aeromagnetic data over the Woodley BIF. The magnetic modelling was aimed at providing estimates of the thickness, depth to top and magnetic properties of the BIF, then using these estimates to calculate a volume and tonnage for the BIF.

<sup>1</sup> SGC consider the global tonnage estimate to equate to 2.5Bt with a perceived error of  $\pm 30\%$  (1.75Bt to 3.25Bt). The tonnage estimate is calculated down to a vertical depth of 250m below surface and assumes a density of 3.3g/cm<sup>3</sup>.

#### **West Bungarra JV – E57/709 (Legend 70%, Gateway Mining Ltd 30%)**

Three RC holes (LBMC001-003) for 343m were completed at the Black Mamba prospect during the quarter, see Figure 5. Details of the drillholes are provided in Table 2 below.



<b>Table 2: Black Mamba RC Drilling Details</b>					
<b>Hole</b>	<b>Easting MGA_94</b>	<b>Northing MGA_94</b>	<b>Dip</b>	<b>Azimuth</b>	<b>Depth</b>
LBMC001	750140	6974400	-60	0	121
LBMC002	749890	6974500	-60	0	126
LBMC003	749943	6974548	-60	225	96
<b>Total</b>					<b>343</b>

The drilling was targeting two moderate to strong ground EM conductors in an area where previous rockchip sampling returned a maximum value of 0.38g/t Au. The EM conductors were explained in the drilling by the presence of semi-massive sulphide zones with downhole thicknesses of 3m and 6m respectively.

Multi-element and gold assay results were received from all drillholes, with only LBMC003 returning anomalous intervals of; 4m @ 0.13g/t Au from 64m and 4m @ 0.18g/t Au from 72m. The 4m @ 0.18g/t Au interval coincides with the 6m zone containing semi-massive sulphide, however no associated anomalous base metal values were noted. No further work is planned at the prospect.

#### **Gum Creek Project - Next Phases of Work**

- Develop an exploration programme to advance the Woodley magnetite prospect.

## **5. Corporate**

The Annual General Meeting of shareholders was held in Perth on 20 May 2010 with the results of all resolutions passed by a unanimous show of hands, reported to the ASX on the same day.

### **Mark Wilson**

Managing Director

28 July 2010

*The information in this announcement that relates to Exploration Results has been compiled by Mr Derek Waterfield, a Member of the Australian Institute of Geoscientists and a full time employee of Legend Mining Limited. Mr Waterfield has sufficient relevant experience in the styles of mineralisation and types of deposit under consideration, and in the activity he is undertaking, to qualify as a Competent Person as defined in the 2004 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code), and consents to the inclusion of the information in the form and context in which it appears.*

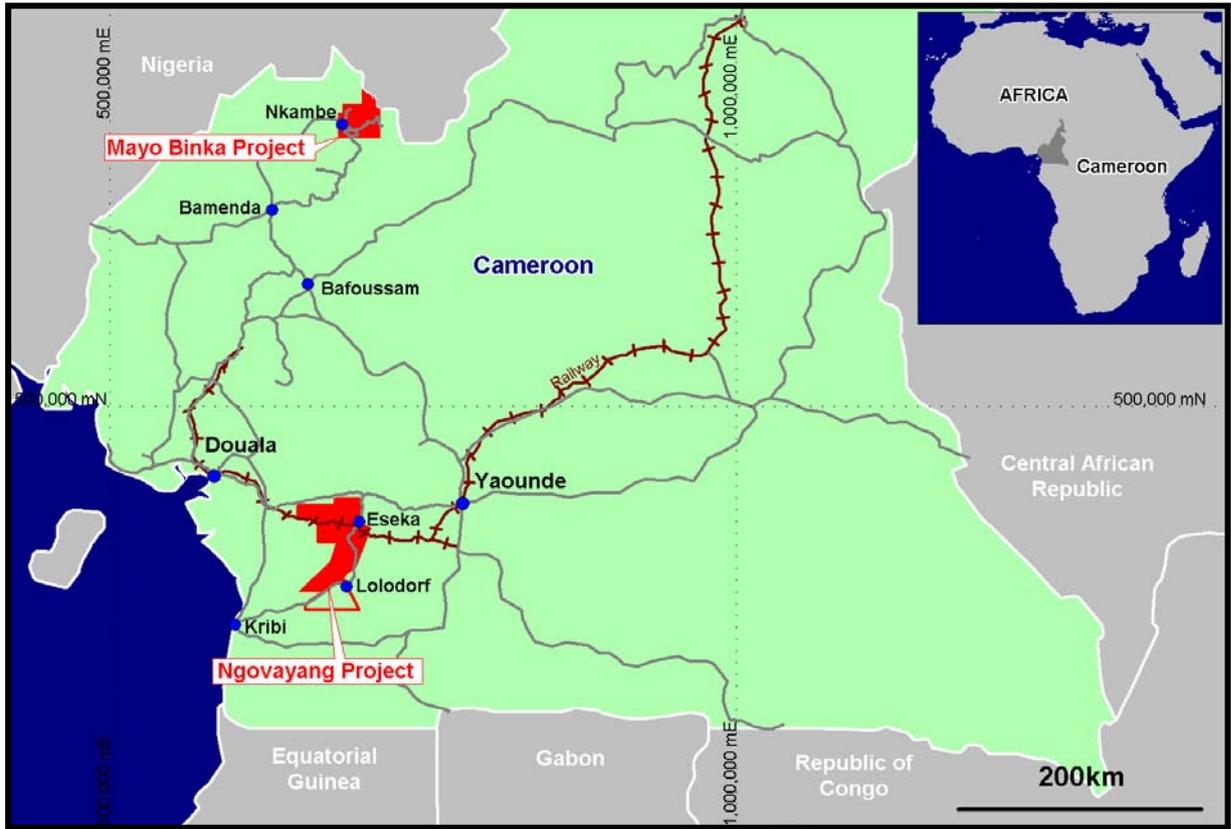


Figure 1: Cameroon Project Location

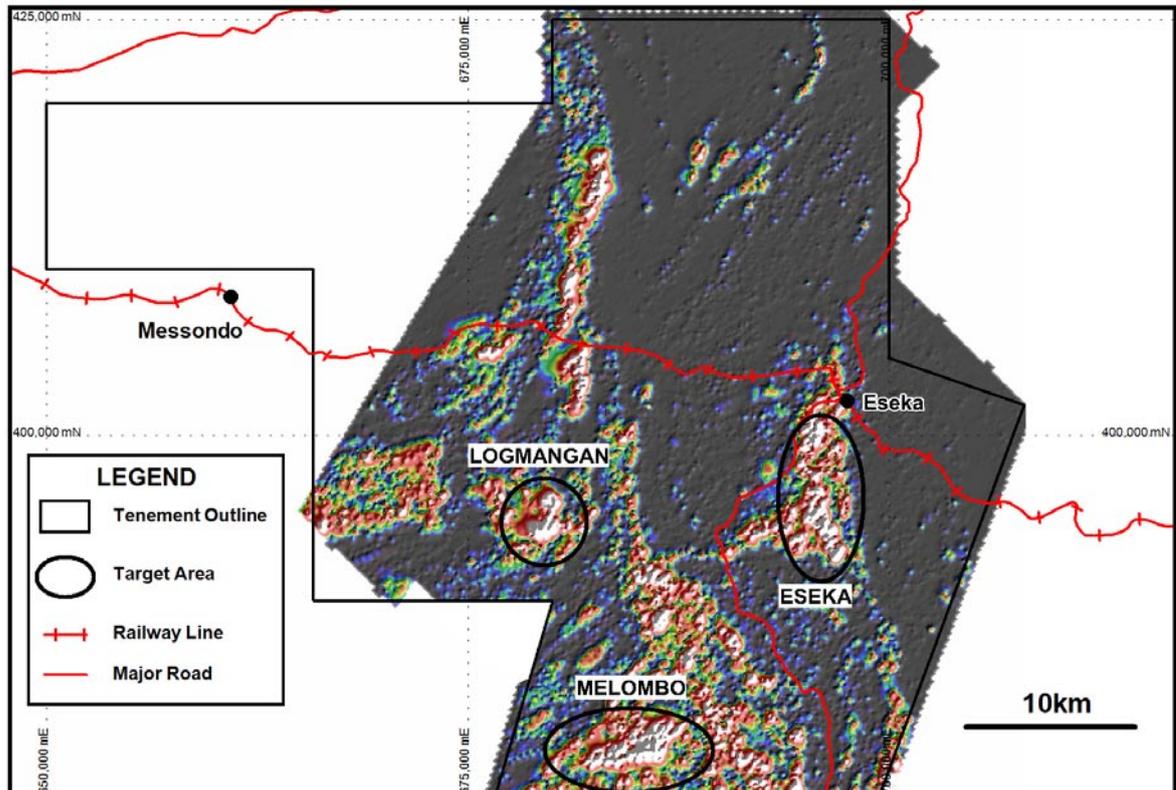


Figure 2: Ngovayang Project - Prospect Location

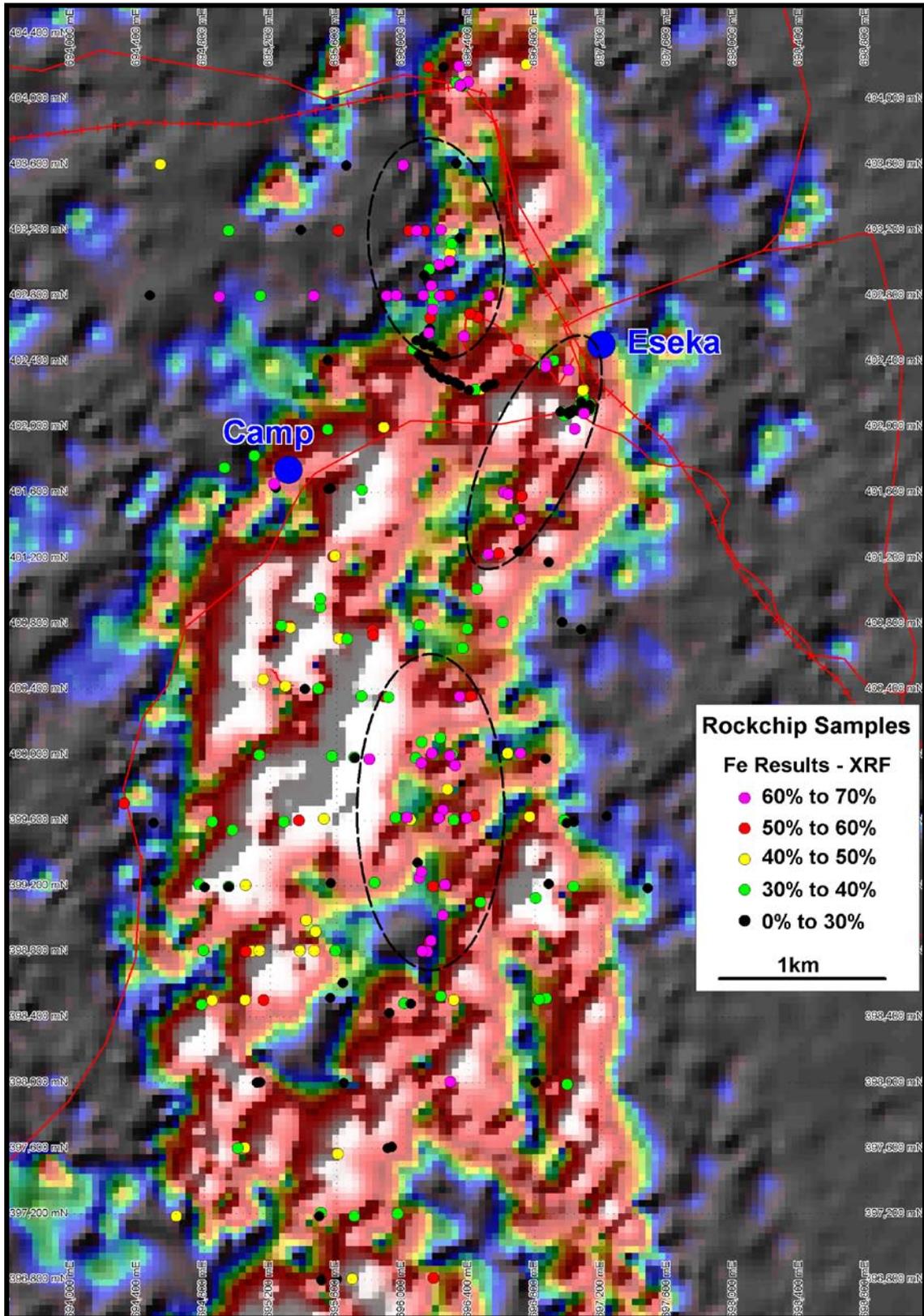


Figure 3: Eseka Prospect – Rockchip Sample Results (Iron) on Aeromagnetic Image (Analytical Signal of Total Magnetic Intensity) showing high grade “clusters”



**Figure 4: Western Australian Project Location**

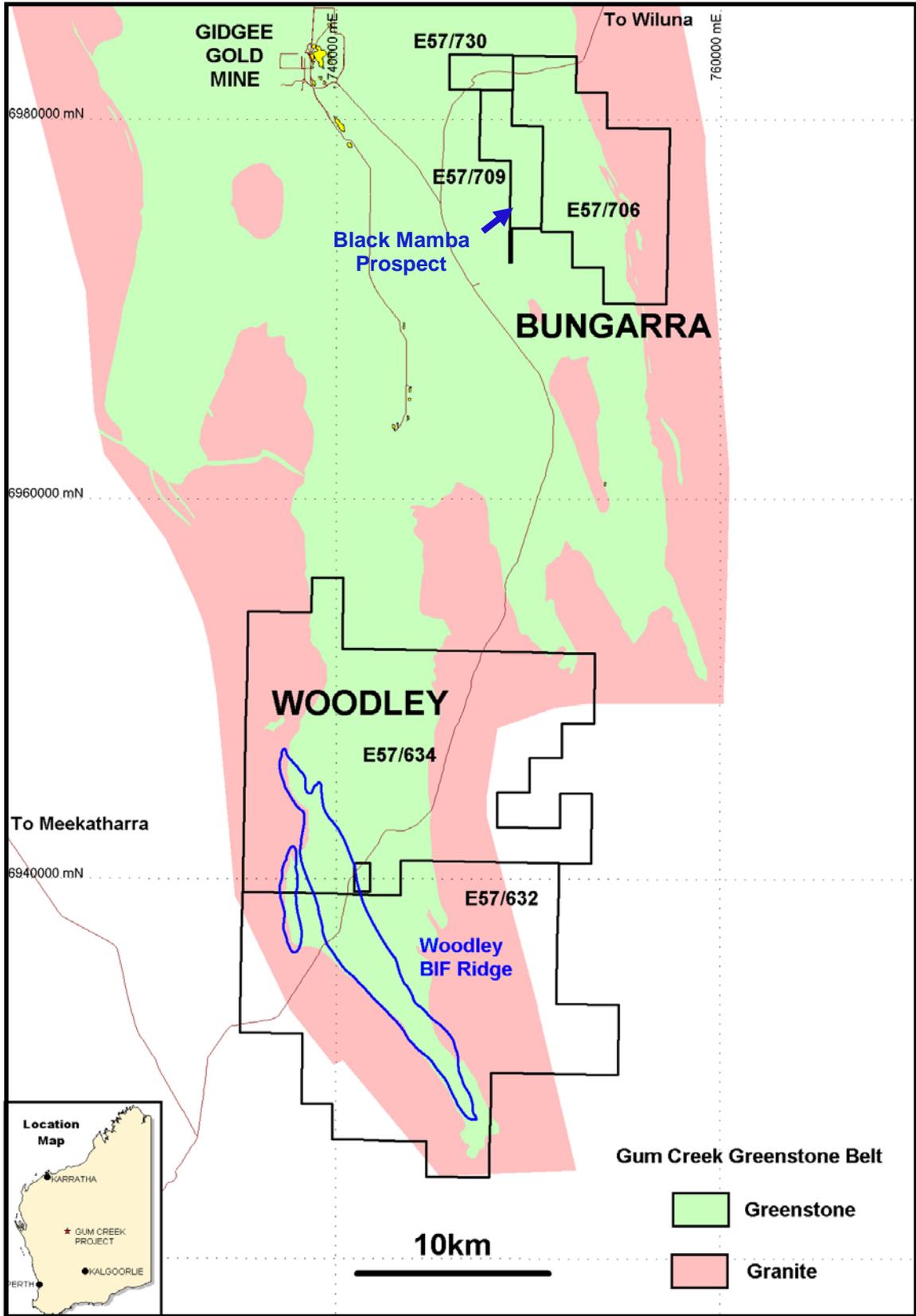


Figure 5: Gum Creek Project – Location of Woodley BIF and Black Mamba Prospect

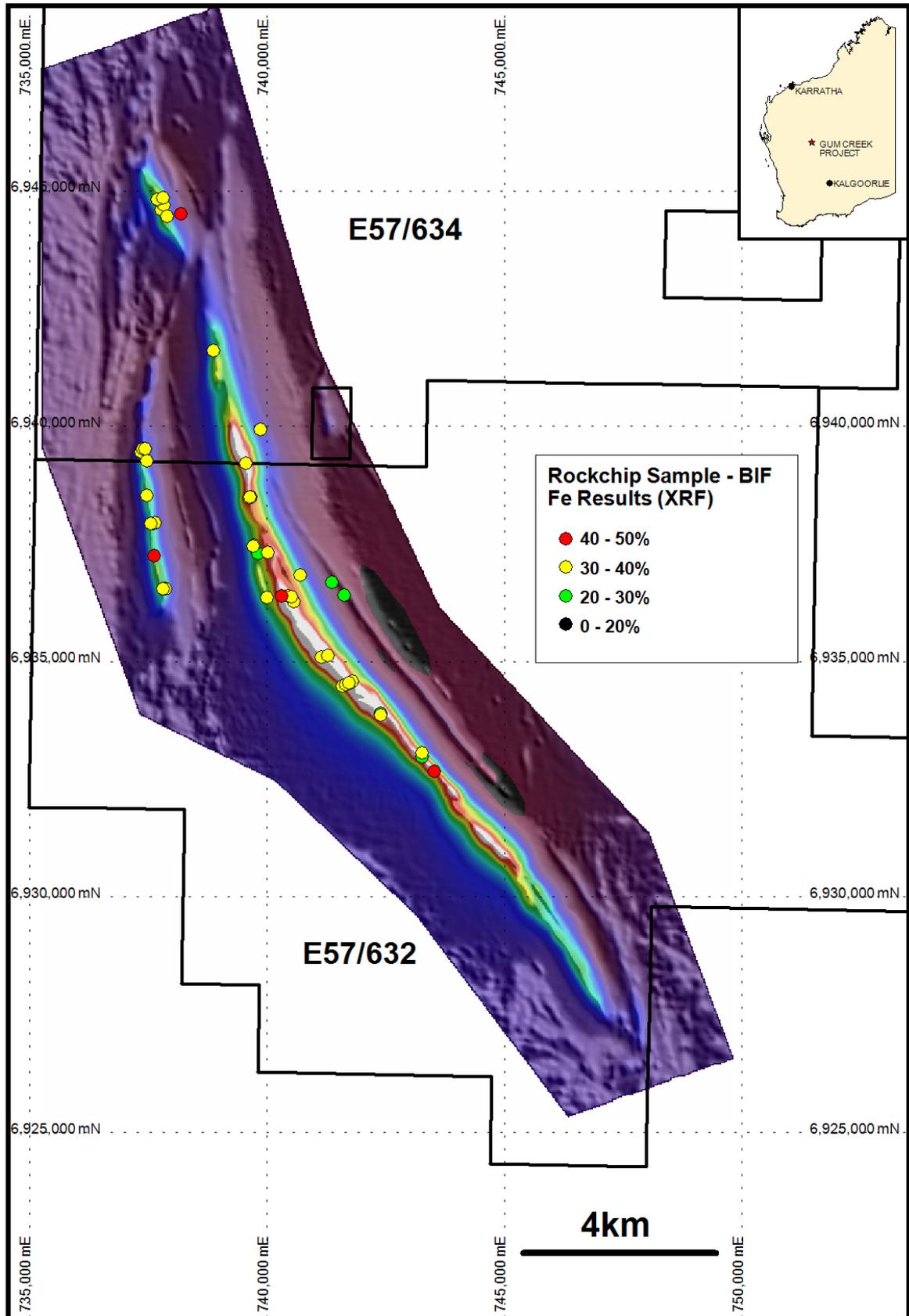


Figure 6: Woodley Rockchip Samples (iron) of BIF over Image of Total Magnetic Intensity