**28 October 2009** **ASX Announcement**

# MAGNETITE EXPLORATION TARGET OF 600Mt - 1,000Mt IDENTIFIED AT PILBARA PROJECT

- **Magnetite associated with 20km strike length of Banded Iron Formation (BIF) within Cleaverville Formation**
- **A grade of 25-35% Fe is expected based on known BIF deposits in the district**

Legend Mining Limited (Legend) today announced the results of a magnetic modelling report by independent geophysical consultants, Southern Geoscience Consultants (SGC), evaluating the magnetite potential of it's Pilbara Project, see Figure 1.

The report was focussed on a 20km strike length of BIF within the Cleaverville Formation and indicated the potential for a range of 600Mt-1,000Mt[1] of magnetite. An expected grade of 25-35% Fe is considered likely based on the reported grades from the nearby Cape Lambert and Mt Oscar resources also hosted in the Cleaverville Formation.

Legend Managing Director Mr Wilson said; "Considering the 1.6Bt Cape Lambert resource and the 800Mt global Mt Oscar exploration target, it is clear we have the potential for a magnetite deposit of regional significance".

Of the 20km strike length of BIF, 10.8km lies within 100% Legend owned tenements, while the remaining 9.2km lies within Mt Marie JV tenements where Legend is earning a 70% interest from Fox Radio Hill PL, see Figure 1. This BIF unit is the extension of the host unit to the Cape Lambert deposit situated some 7km to the northeast.

"Our challenge is now to more accurately define the tonnes and grade of this exploration target", said Mr Wilson.

***Technical Discussion***

Forward-modelling (21 forward models) and 3D-inversion modelling (one model) techniques were used by SGC to model high resolution 50m line spaced aeromagnetic data over the Cleaverville Formation 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.

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[1] SGC consider the global tonnage estimate of 800Mt to be broadly indicative at best, potentially accurate to ±25% ( 600Mt to 1,000Mt), however should be considered accurate to ±50% ( 400Mt to 1,200Mt) for planning purposes. The tonnage estimate is calculated down to a vertical depth of 200m below surface and assumes a density of 3.3g/cm$^3$.



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The models along with images created from the magnetic data have been used to calculate a global tonnage estimate of 800Mt for the magnetic portion of the BIF. This estimate is considered broadly indicative and should be accurate to ±25%, giving a potential tonnage range of 600Mt - 1,000Mt at an expected grade of 25-35% Fe.

The tonnage estimate is calculated over a 20km strike length, to a vertical depth of 200m below surface and assumes a density of 3.3g/cm$^3$. The forward models created from profiles of the total magnetic intensity and analytical signal data are well constrained and compare well with the 3D model, providing a good indication of the overall size and attitude of the magnetic BIF.

Figure 2a shows a total magnetic intensity image of the BIF, while the location of profiles and outlines of the forward modelling over a reduced to pole image are provided in Figure 2b. Full details of the forward modelling are also presented in Table 1.

Previous rockchip sampling results (44 samples) over the Cleaverville Formation BIF were announced by Legend to the ASX on 20 November 2008. This non-systematic sampling programme was targeting high grade magnetite-bearing BIF, with 30 samples returning results ranging between 30-58% Fe, see Figure 3. This confirms the magnetite potential of the Cleaverville Formation within Legend's Pilbara Project.

**Background**

Legend currently holds interests in three Projects in WA, namely, Pilbara, Gum Creek and Mt Gibson. Legend also announced to the ASX on 4 September 2009 that it had signed a legally binding Heads of Agreement with Camina SA to explore for iron ore in Cameroon, West Africa.

The Cameroon Project (iron ore, gold) comprises granted exploration permits and applications covering an area of approximately 2,400km$^2$. 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 southern 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.

The Pilbara Project (iron ore, nickel-copper, zinc-copper) comprises 686km$^2$ of tenure in the West Pilbara, all within 50km of Karratha. As well as the magnetite potential associated with BIF of the Cleaverville Formation, Legend has identified 14 priority base metal drill targets from Versatile Time-Domain Electromagnetic (VTEM) surveys.

The Gum Creek Project (iron ore, nickel-copper-platinum group element) is located 640km northeast of Perth in the Yilgarn Province. The Woodley region contains a 22km BIF unit with the potential for a significant tonnage of magnetite. The project is also considered prospective for both intrusion-related (Ni-Cu-PGE) and komatiite flow-related Ni-sulphide mineralisation.



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The Mt Gibson Project (zinc-copper-gold) is located 290km northeast of Perth in the Murchison Province. Mt Gibson operated for 12 years as a gold mine from 1986 following the discovery of gold in surface laterite. The operation produced 870,000 ounces of gold from 16.5Mt of ore at an average grade of 1.68g/t. Legend, through a study conducted in 2006 by Dr S Carras of Carras Mining Pty Ltd, estimated the residual gold Mineral Resource (Indicated and Inferred) to be 8.7Mt at 1.98g/t gold for 559,000 ounces (see 2006 Legend Annual Report).

Visit www.legendmining.com.au for further information and announcements.

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***Competent Person Statement***

*The information in this announcement that relates to Exploration Results is based on information 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.*

***Exploration Target***

*While the company remains optimistic it will report resources and reserves in the future at its Pilbara Project, any discussion in relation to exploration targets, resource potential, reserves or 'ore' is only conceptual in nature, there has been insufficient exploration to define a Mineral Resource at the company's Pilbara Project and it is uncertain if further exploration will result in the determination of a Mineral Resource.*



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## Table 1: Forward Modelled / Interpolated Dimensions

| Id | Model | X | Y | Z | C-Z | Depth | Strike | (SI) | Thickness | C | Dip | Mt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **486900** | 486888 | 7693738 | -44 | 18 | **51** | 87 | **1.42** | **59** | 600 | 84 | **17.5** |
| 2 | **486900** | 486891 | 7693412 | -82 | -23 | 94 | 85 | 0.25 | 130 | 0 | 80 | |
| 3 | **486900** | 486884 | 7694730 | -20 | 53 | 9 | 83 | 1.5 | 80 | 0 | 70 | |
| 1 | **487700** | 487693 | 7693756 | -47 | 18 | **49** | 87 | **1.35** | **51** | 650 | 85 | **16.7** |
| 2 | **487700** | 487696 | 7693439 | -184 | -117 | 187 | 85 | 0.25 | 150 | 0 | 75 | |
| 1 | **488700** | 488685 | 7693761 | -20 | 43 | **24** | 92 | **1.28** | **78** | 600 | 69 | **29.1** |
| 2 | **488700** | 488685 | 7693392 | -134 | -71 | 134 | 85 | 0.25 | 150 | 0 | 75 | |
| 1 | **489400** | 489389 | 7693744 | -29 | 37 | **34** | 87 | **1.2** | **68** | 750 | 75 | **28.9** |
| 2 | **489400** | 489171 | 7693537 | -84 | -17 | 78 | 85 | 0.25 | 150 | 0 | 75 | |
| 1 | **490500** | 490507 | 7693908 | -30 | 31 | **29** | 85 | **1.1** | **61** | 1000 | 65 | **38.0** |
| 2 | **490500** | 490500 | 7693708 | -65 | -2 | 57 | 85 | 0.25 | 80 | 0 | 70 | |
| 1 | **491700** | 491694 | 7693964 | -55 | 14 | **40** | 81 | **0.95** | **48** | 1300 | 70 | **35.1** |
| 2 | **491700** | 491708 | 7693368 | -83 | -12 | 60 | 85 | 0.25 | 80 | 0 | 70 | |
| 2 | **493100** | 493100 | 7693860 | -121 | -58 | 104 | 81 | 0.32 | 400 | 0 | 100 | |
| 1 | **493100** | 493090 | 7694370 | -45 | 16 | **30** | 77 | **1.5** | **44** | 950 | 70 | **25.0** |
| 2 | **494200** | 494196 | 7694413 | -132 | -64 | 103 | 63 | 0.15 | 250 | 0 | 70 | |
| 1 | **494200** | 494200 | 7694795 | -71 | -4 | **43** | 62 | **0.9** | **45** | 900 | 70 | **22.3** |
| 1 | **494700** | 494693 | 7695042 | -50 | 17 | **24** | 58 | **0.95** | **48** | 950 | 70 | **28.2** |
| 1 | **495900** | 495885 | 7695719 | -41 | 23 | **27** | 64 | **1.05** | **62** | 2000 | 55 | **86.4** |
| 1 | **497200** | 497187 | 7696435 | -15 | 49 | **17** | 55 | **1.12** | **75** | 900 | 75 | **42.2** |
| 2 | **497200** | 497191 | 7696557 | -12 | 55 | **7** | 60 | **1.2** | **63** | 600 | 80 | **24.4** |
| 1 | **498200** | 498201 | 7697036 | -11 | 53 | **13** | 55 | **1.12** | **90** | 1000 | 75 | **57.5** |
| 2 | **498200** | 498211 | 7697157 | -27 | 26 | **50** | 60 | **1.25** | **80** | 1000 | 100 | **40.2** |
| 6 | **498200** | 498219 | 7697111 | 9 | 70 | **1** | -125 | **1.5** | **75** | 1000 | 90 | **12.6** |
| 4 | **499500** | 499495 | 7697866 | -24 | 28 | 66 | 55 | 0.3 | 110 | 0 | 90 | |
| 2 | **499500** | 499500 | 7698173 | -31 | 41 | **39** | 55 | **1.25** | **110** | 650 | 95 | **38.1** |
| 4 | **500200** | 500180 | 7698255 | -20 | 43 | 53 | 55 | 0.3 | 140 | 0 | 90 | |
| 3 | **500200** | 501087 | 7699587 | -68 | -3 | 82 | 55 | 1.2 | 122 | 0 | 80 | |
| 2 | **500200** | 500185 | 7698604 | -27 | 55 | **38** | 55 | **0.95** | **155** | 450 | 95 | **37.4** |
| 1 | **501000** | 500990 | 7699315 | -52 | 6 | **70** | 55 | **1.2** | **70** | 750 | 70 | **24.0** |
| 2 | **501000** | 500988 | 7699438 | 1 | 58 | **19** | 55 | **1.1** | **60** | 750 | 80 | **27.3** |
| 6 | **501000** | 501022 | 7699348 | 16 | 72 | **6** | -125 | **1.2** | **70** | 750 | 80 | **12.3** |
| 3 | **501000** | 500988 | 7699619 | -4 | 57 | 18 | 55 | 0.25 | 120 | 0 | 80 | |
| 1 | **501500** | 501474 | 7699518 | -51 | 26 | **51** | 63 | **1.3** | **78** | 550 | 60 | **24.4** |
| 2 | **501500** | 501486 | 7699701 | -2 | 64 | **24** | 66 | **1.1** | **65** | 550 | 65 | **22.9** |
| 6 | **501500** | 501473 | 7699596 | 28 | 87 | **10** | -115 | **1.2** | **40** | 550 | 65 | **4.0** |
| 3 | **501500** | 501478 | 7699873 | -6 | 66 | 9 | 63 | 0.25 | 103 | 0 | 80 | |
| 4 | **501500** | 501478 | 7699700 | 20 | 88 | **1** | -115 | **0.85** | **30** | 550 | 65 | **1.2** |
| 9 | **502000** | 501997 | 7700271 | -49 | 16 | 51 | 50 | 0.4 | 100 | 0 | 70 | |
| 2 | **502000** | 501997 | 7700101 | -12 | 55 | **15** | 50 | **0.95** | **70** | 1000 | 70 | **45.5** |
| 1 | **502000** | 502000 | 7699968 | -36 | 40 | **29** | 49 | **0.75** | **55** | 200 | 70 | **6.6** |
| 2 | **502800** | 502788 | 7700741 | -33 | 25 | **34** | 55 | **1** | **80** | 200 | 90 | **8.8** |
| 3 | **502800** | 502790 | 7700669 | -80 | -20 | **77** | 55 | **0.7** | **40** | 200 | 90 | **3.2** |
| 4 | **502800** | 502991 | 7700530 | -116 | -42 | 105 | 55 | 0.85 | 100 | 0 | 90 | |
| 2 | **503000** | 502990 | 7700976 | -44 | 19 | **34** | 55 | **1.15** | **64.5** | 200 | 80 | **7.2** |
| 3 | **503000** | 502988 | 7700810 | -83 | -17 | **71** | 55 | **0.7** | **122** | 200 | 80 | **10.5** |
| 4 | **503000** | 503002 | 7700423 | -28 | 29 | **52** | 55 | **1** | **66** | 250 | 80 | **8.2** |



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| Id | Model | X | Y | Z | C-Z | Depth | Strike | (SI) | Thickness | C | Dip | Mt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | **503200** | 503193 | 7701068 | -33 | 30 | **22** | 55 | **1** | **65** | 350 | 80 | **13.6** |
| 3 | **503200** | 503193 | 7700957 | -122 | -55 | **107** | 55 | **1.15** | **80** | 350 | 80 | **8.7** |
| 4 | **503200** | 503036 | 7700423 | -39 | 19 | 57 | 55 | 0.85 | 70 | 0 | 90 | |
| 4 | **503600** | 503364 | 7700720 | -35 | 34 | 30 | 55 | 0.188 | 110 | 0 | 80 | |
| 3 | **503600** | 503406 | 7701270 | -53 | 16 | **35** | 55 | **0.95** | **65** | 200 | 75 | **7.3** |
| 2 | **503600** | 503810 | 7701627 | -37 | 24 | **48** | 55 | **0.8** | **55** | 650 | 80 | **18.2** |
| 1 | **503600** | 503587 | 7701159 | -117 | -49 | 104 | 55 | 0.45 | 100 | 0 | 75 | |
| | | | | | | | | | | | **Total** | **834Mt** |

***Table Parameters:***

| | |
|---|---|
| X, Y, Z, C-Z | Coordinates refer to top of model, with C-Z = corrected Z. |
| Depth | Vertical distance to top centre of model from surface. |
| Strike | Strike of the model. |
| Thickness | Thickness of the model. |
| Dip | Dip of the model. |
| SI | Modelled magnetic susceptibility $x10^{-3}$. |
| C | Interpolated strike length between model. |
| Mt | Tonnage calculated from strike, thickness, depth and assumed 3.3g/$cm^3$ density. |





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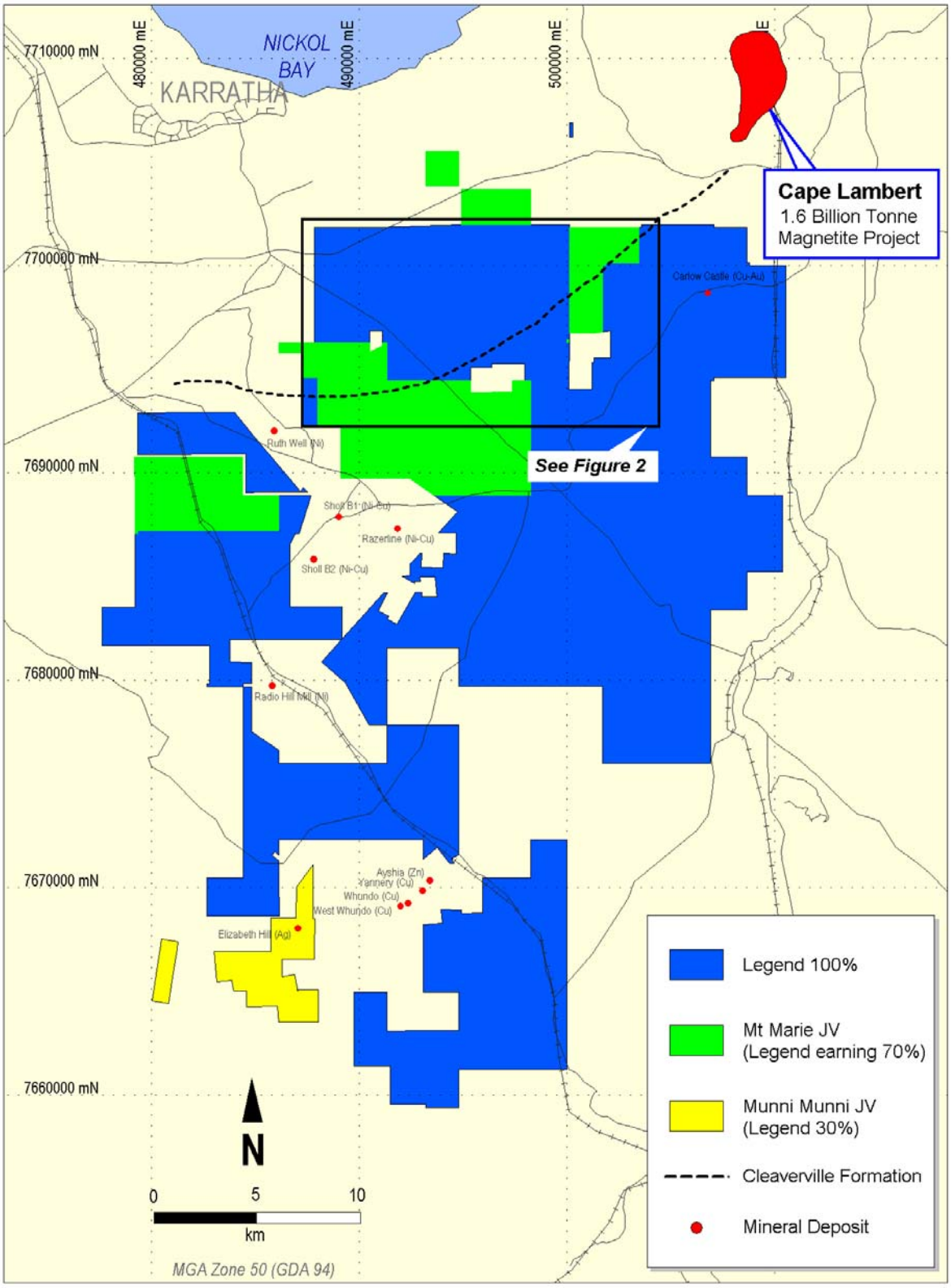


**Figure 1: Pilbara Project – Tenements with Cleaverville Formation**



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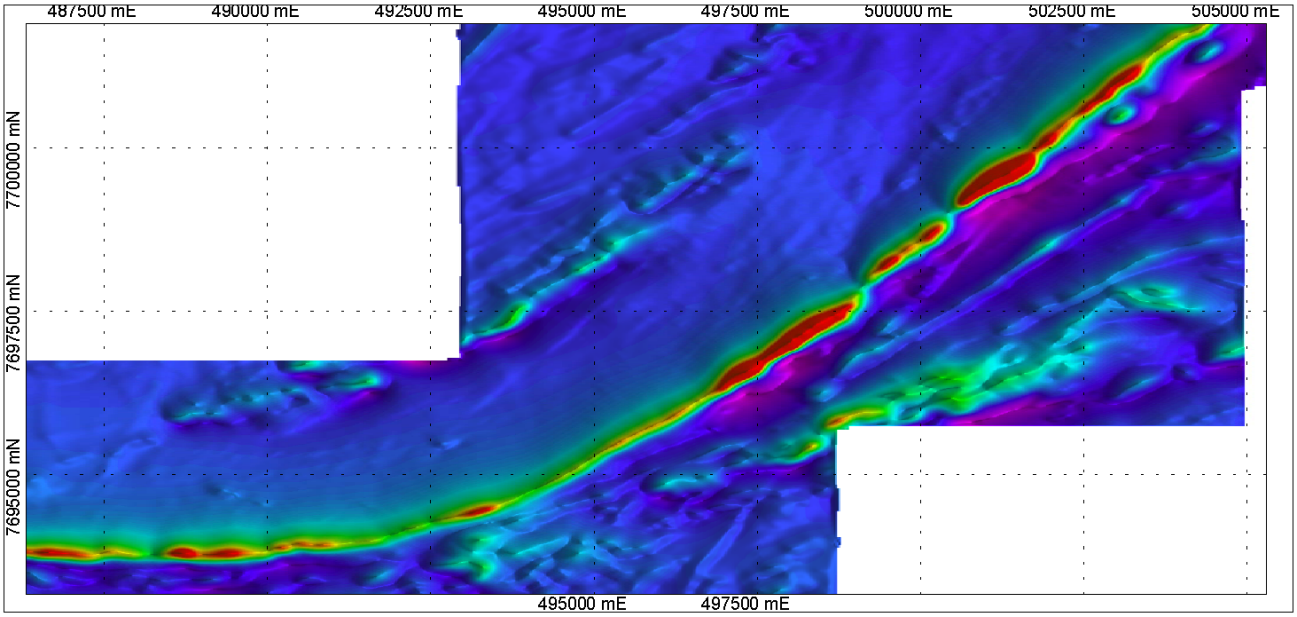


**Figure 2a:** Total magnetic intensity (TMI) image over the Cleaverville BIF.

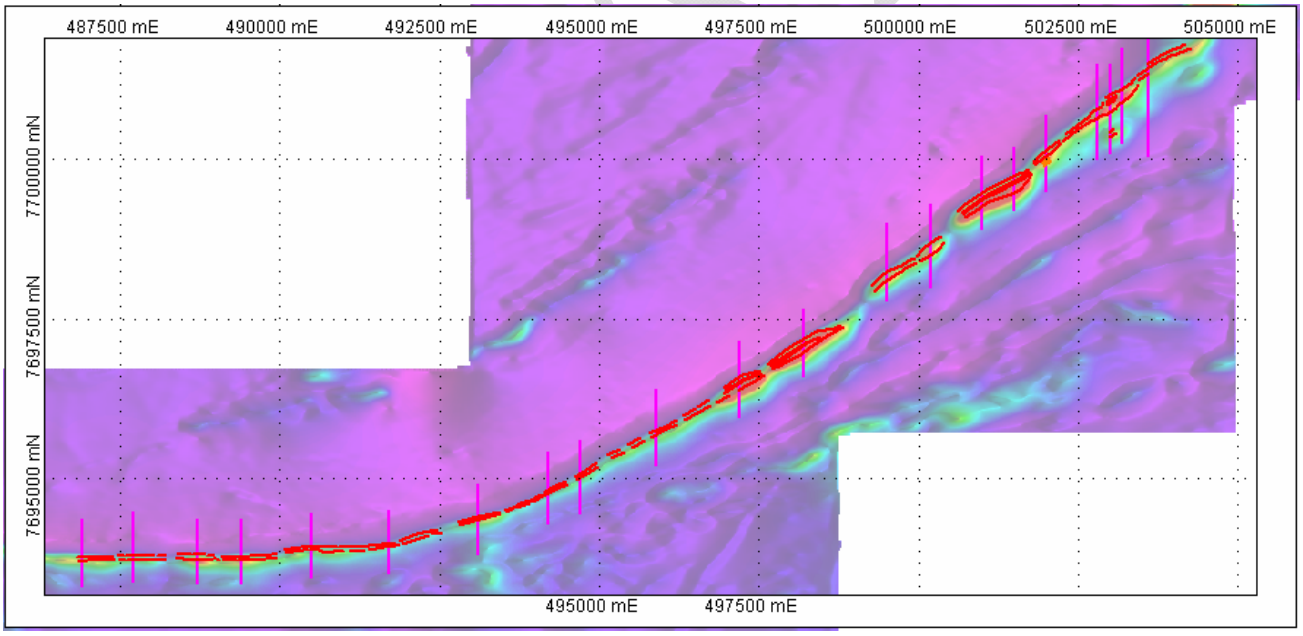


**Figure 2b:** Locations and extents of the 21 north-south forward-modelled magnetic-profiles (magenta) and outlines of forward models (red) on an image of the reduced to pole (RTP) magnetics.



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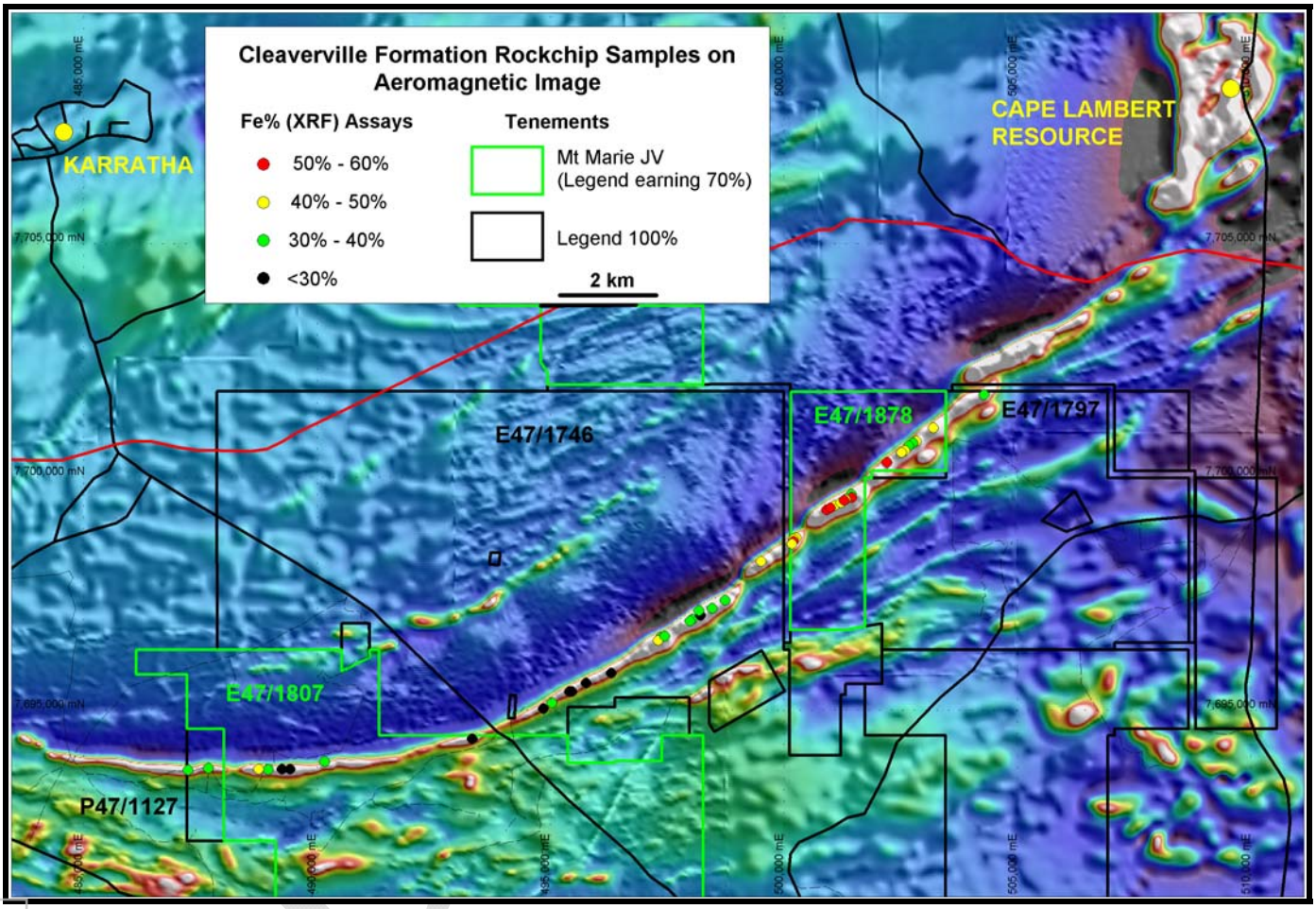


**Figure 3: Aeromagnetic Image showing Rockchip Results and Tenements**



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