

10 August 2011

Maiden Canegrass Inferred Resource

WESTERN AUSTRALIA

highlights

- Significant high grade vanadium Inferred Mineral Resource - 107Mt @ 0.62% V₂O₅, +0.5% cut-off
- Extensive upside potential - only 5% of prospective stratigraphy contained within current vanadium resource
- Iron Inferred Mineral Resource of 216Mt @ 25.4% Fe, +20% cut-off



Canegrass Magnetite Project (CMP)

Flinders Mines Limited (FMS) 100%

Flinders Mines Limited (ASX: FMS) is pleased to announce a maiden Inferred Mineral Resource, compiled in accordance with the 2004 JORC code, at the Company's Canegrass Magnetite Project (CMP) located in Western Australia's Mid-West region (Figure 1). Drilling completed late in 2010 targeted magnetite iron mineralisation and a maiden Inferred Mineral Resource has revealed significant high grade vanadium mineralisation in association with magnetite iron mineralisation.

The Mineral Resource for the vanadium mineralisation is 107 Mt @ 0.62% V₂O₅ (Table 1). The Mineral Resource is

Area	Inferred Mineral Resource for V ₂ O ₅ > 0.5% (5/8/2011)						
	Mt	V ₂ O ₅ %	TiO ₂ %	Fe%	SiO ₂ %	Al ₂ O ₃ %	P%
Fold Nose	87	0.63	5.9	29.3	24.1	12.6	0.005
Kinks	20	0.57	5.5	27.4	25.9	13.0	0.009
Total	107	0.62	5.8	29.0	24.5	12.6	0.006

Table 1 Canegrass vanadium Inferred Mineral Resource tonnage and grade report by area.

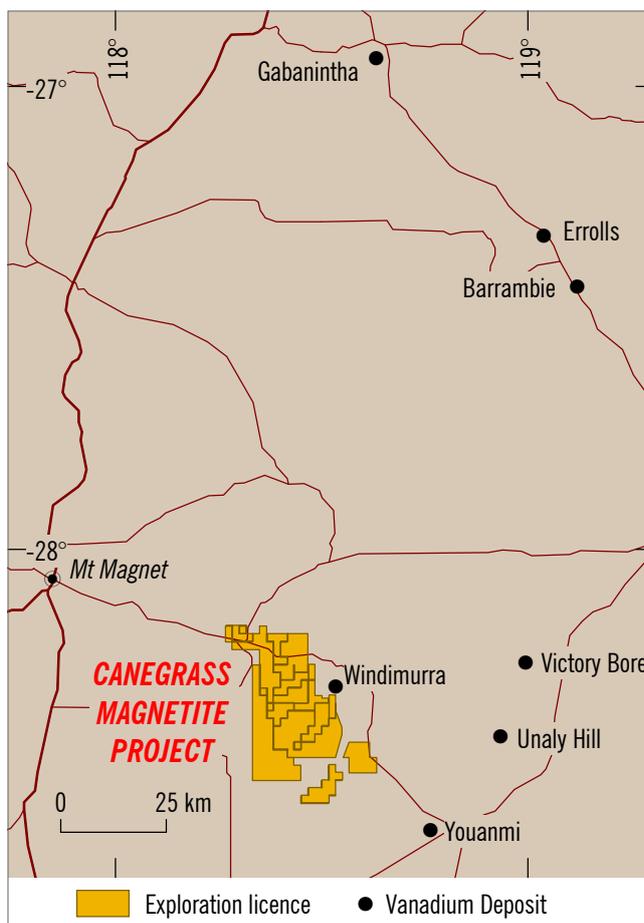


Figure 1 Canegrass Magnetite Project located near Mt Magnet, WA.

based on a +0.5% V₂O₅ cut-off. This Mineral Resource is a subset of the larger iron Mineral Resource discussed below and shown in Table 2. Both Mineral Resources are contained within the same geological units.

Flinders' Mineral Resource for the iron mineralisation is 216Mt @ 25.4% Fe (Table 2). This Inferred Mineral Resource is based on a +20% Fe cut-off.

Area	Inferred Mineral Resource for Fe > 20% (5/8/2011)						
	Mt	Fe%	TiO ₂ %	V ₂ O ₅ %	SiO ₂ %	Al ₂ O ₃ %	P%
Fold Nose	157	26.0	5.1	0.53	27.6	13.8	0.005
Kinks	59	23.8	4.8	0.48	29.3	14.7	0.013
Total	216	25.4	5.0	0.52	28.1	14.0	0.007

Table 2 Canegrass iron Inferred Mineral Resource tonnage and grade report by area.

The Canegrass project area is located approximately 60 km southeast of Mt Magnet and around 15km WSW of Atlantic Ltd's Windimurra vanadium project which is due to commence mining shortly (Figure 1). The Canegrass project covers an area of approximately 700 km² and hosts extensive magnetite mineralisation. Recent drilling and studies have highlighted excellent vanadium grades associated with the gabbro-hosted magnetite iron mineralisation.

Mineral Resource Estimate

The Mineral Resource estimate (Tables 1 & 2) was prepared by independent geological consultants, Optiro Pty Ltd, based on data collated and interpreted by FMS staff. The Mineral Resource was estimated in accordance with the guidelines of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2004).

The Mineral Resource estimate is based on the results of 27 Reverse Circulation (RC) drillholes and one diamond

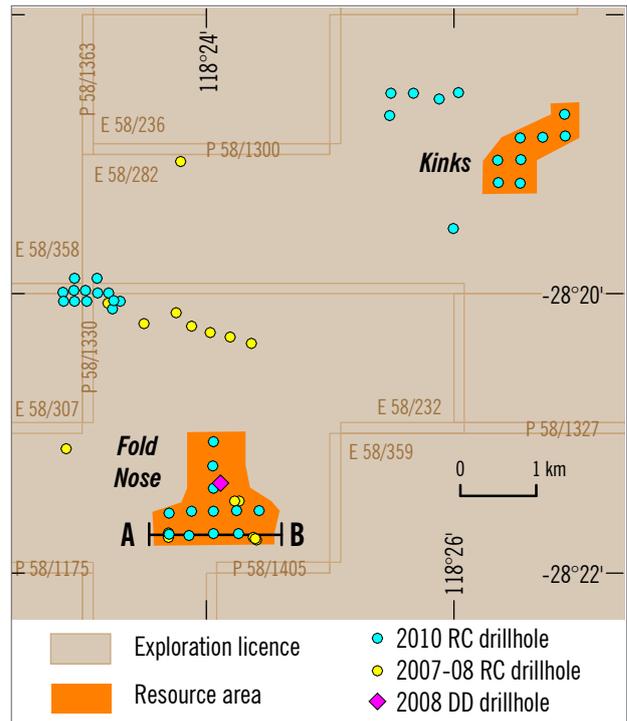


Figure 2 Completed RC drillholes and the Fold Nose and Kinks Resource areas, Canegrass Magnetite Project, Western Australia.

(DD) drillhole, drilled across two locations at the project between December 2007 and December 2010 (Figure 2). The total number of RC metres drilled is 4,814m. Total drill hole spacing was approximately 300m between holes. Average in situ densities were derived via direct measurement from four diamond holes drilled into mineralised lithologies across the project area.

Due to the stratigraphic nature and confidence in the continuity of the lithologies and mineralisation (Figure 3), extrapolation of the Mineral Resource has occurred beyond the current drilling extents. Approximately 50% of the Mineral Resource is based on the extrapolated data.

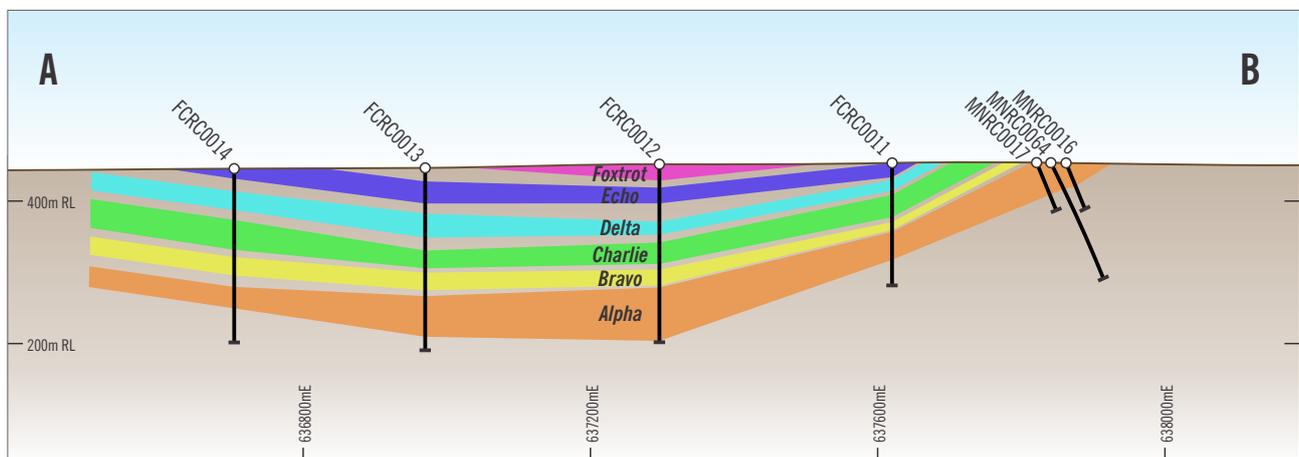


Figure 3 Cross section A-B showing correlation of magnetic iron and vanadium rich horizons.

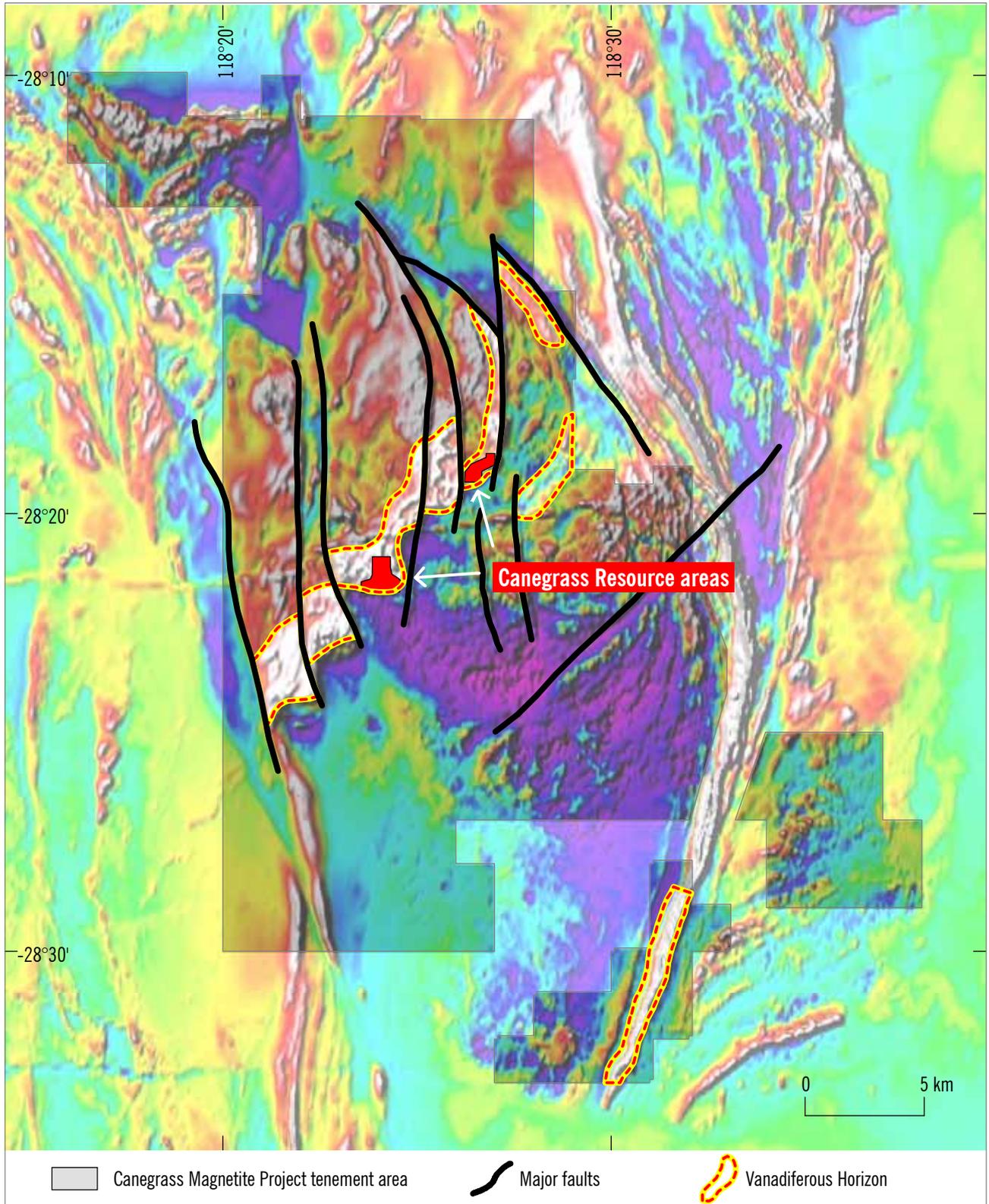


Figure 4 Regional magnetics (TMI) showing prospective vanadiferous horizons.

Geology

The Canegrass magnetite project is hosted within a large differentiated layered gabbro intrusion. Drilling has identified a continuous layered stratigraphy of more than 1,100m vertical thickness. Within this stratigraphy there are discrete magnetic horizons or mappable units that

can be correlated across the region (Figure 3). The upper units are iron and titanium rich and have been the focus of previous explorers due to the high iron concentrations. The lower units contain elevated vanadium grades with lower titanium and produce a more attractive iron and vanadium target. Therefore, it is these lower units which

form the focus of the current Mineral Resource estimate. Regionally, these units are readily identifiable in magnetic datasets and combine to form approximately 45-50km² of prospective vanadium rich horizons (Figure 4). The current resource only represents approximately 2.5km² or 5-6% of this target*.

Some of this area has been tested by coarsely spaced drilling and elevated vanadium grades have been intersected but the density of drilling is insufficient to undertake a resource estimate. A number of other areas remain to be drill tested.

Vanadium Resources

Gabbro-hosted magnetite deposits are a significant source of vanadium. Within the Mid-West region of Western Australia there are a number of other similar gabbro-hosted layered vanadium rich resources and deposits (Figure 1). They include the Windimurra Vanadium Project of Atlantic Ltd with a resource of 210Mt @ 0.47% V₂O₅, at a 0.28% cut-off and Reed Resources Ltd's Barrambie Deposit of 65.2Mt @ 0.82% V₂O₅, at a 0.5% cut-off. The grade and tonnages of these styles of deposits are quite sensitive to cut-off grade.

Metallurgy

A series of RC samples representing the whole range of titaniferous and vanadiferous magnetic horizons across the stratigraphic sequence were compiled into composites for metallurgical testwork. The testwork included Davis Tube Recovery (DTR), grind size optimisation and magnetic separation techniques such as LIMS and WHIMS. Grind size is the single most important factor for magnetite recovery and product quality. It was found that a saleable product could be achieved from a relatively coarse liberation of 80% passing 45 microns. Mass recoveries of up to 42% were achieved in the concentrates with Fe grades up to 58%, TiO₂ between 9.9 and 15.6% and SiO₂ <3%.

This work also highlighted high V₂O₅ concentrations from the more vanadiferous horizons. Of these units, V₂O₅ grades varied between 1.1 – 1.4% in the concentrates. This testwork was undertaken with a view to forming an Fe concentrate and has not been optimized for maximising the V₂O₅ concentrations.

**Note: Exploration targets are reported according to Clause 18 of the JORC Code. This means that the potential quantity and grade is conceptual in nature and that considerable further exploration, particularly drilling, is necessary before any Identified Mineral Resource can be reported. It is uncertain if further exploration will lead to a larger, smaller or any Mineral Resource.*

Future Work Program

In light of the discovery of significant iron and vanadium mineralisation at the project, the Company is now investigating opportunities to maximise the return from both the iron and vanadium mineralisation. This work will be carried out before any additional exploration takes place, given that the project tonnages are already substantial.

Additional marketing work is to be carried out over Q3 2011 leading to the commencement of discussions in Q4 2011 with third parties to gauge the demand of potential products. These discussions will include possible offtake and joint venture opportunities.



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MANAGING DIRECTOR

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QUALIFYING STATEMENTS

JORC compliance

The information that relates to the drilling data and geological interpretations is based on information compiled by Mr N Corlis (who is a Member of The Australian Institute of Geoscientists) and Dr G McDonald (who is a member of the Australasian Institute of Mining and Metallurgy). Mr Corlis and Dr McDonald are employees of Flinders Mines Limited. The information that relates to the Mineral Resource Estimate has been compiled by Mr Paul Blackney of Optiro Pty Ltd. who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Blackney, Mr Corlis and Dr McDonald have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that they are undertaking to qualify as a Competent Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Blackney, Mr Corlis and Dr McDonald consent to the inclusion of matters based on their information in the form and context in which it appears.

Forward-looking statements

This release may include forward-looking statements. These forward-looking statements are based on Flinders Mines Limited's expectations concerning future events. Forward-looking statements are subject to risks, uncertainties and other factors, many of which are outside the control of Flinders Mines Limited and the Company makes no undertaking to subsequently update or revise the forward-looking statements made in this release to reflect events or circumstances after the date of this release.