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# Ferrex plc ('Ferrex' or 'the Company') Nayega Manganese Togo Update

Ferrex plc, the AIM quoted manganese development and iron ore exploration company focused in Africa, is pleased to announce that its Definitive Feasibility Study ('DFS') for an accelerated start-up at its Nayega Manganese Project in northern Togo is complete and a maiden Ore Reserve has been defined. The project is held through its 85% owned subsidiary SGM SARL. This is a significant milestone for the Company as it continues to develop Nayega into a 250,000tpa manganese export operation.

## Highlights

- Preliminary DFS results indicate significant reduction in capital and operating costs for a Nayega accelerated start-up
- Maiden Ore Reserve of 8.48Mt @ 14.0% Mn
- Third party review of DFS underway as part of financing due diligence
- Full details and results of the DFS to be released on completion of third party review and mining permit issue

**Ferrex Managing Director Mr. Dave Reeves said,** "I am delighted to announce the completion of the Nayega DFS in conjunction with defining a maiden Ore Reserve for our proposed 250,000 tonne manganese per annum export operation. From a first look, the reduction in capital and operating costs for the accelerated start-up appears to be significant and should have a substantial positive impact on the project's profitability. Financing due diligence is underway; a third party review of the DFS document is in progress and field trips to evaluate the project and existing infrastructure by potential financiers will commence in the near future.

"In line with these on-going developments, I look forward to releasing full details of the DFS once the third party review is complete and the mining permit has been issued."

### **Further Information**

### **Accelerated Start-up**

The accelerated start-up option for Nayega involves the simplification and modularisation of the process circuit to allow rapid construction and development. Other elements of the original model remain largely unchanged, with 750,000tpa ore throughput initially being mined using owner-operated fleet and processed by scrubbing/screening and DMS, albeit using a modified process flow route. Product will be backhauled by a contractor to the Port of Lome for shipment to customers. Full details

of the DFS and modified process flow route for the accelerated start-up mining option for Nayega will be announced on receipt of the mining permit and finalisation of third party due diligence.

# **Ore Reserve**

The Ore Reserve was defined for Nayega using the Measured and Indicated Resources. The Ore Reserve is based on a Whittle optimisation using input parameters from the DFS. This has resulted in a selection of Shell 32 as the preferred mining limit based on the inputs used. Figure 1 below shows the extent of the pit limits from the optimisation.



Figure 1 Total LOM Pit Shell 32 - Main Nayega deposit and T27 to the North

## Reserve Statement

The JORC Code 2012 compliant Ore Reserve (see table 1) has been determined by Intermine Consultants Pty Ltd (defined as a Competent Person under the JORC code) using:

- Dilution of 2.5% added tonnes at 0% Mn grade
- Using the LOM Whittle shell 32

Class	Lithology	Diluted (Mt)	Mn (%)	Fe (%)	AI (%)	Si (%)
Proved	Detrital	0.42	17.98	7.93	10.24	40.2
	Laterite	0.94	17.37	10.33	12.53	37.4
	Transitional	0.55	14.59	8.07	12.76	43.4
	Saprolite	0.60	12.25	7.60	9.92	50.4
	Sub-total	2.51	15.64	8.78	11.58	42.3
Probable	Detrital	1.82	14.64	11.07	12.25	41.4
	Laterite	0.84	14.04	9.21	12.52	43.4
	Transitional	3.31	12.40	6.68	12.40	49.6
	Saprolite	-	-	-	-	-
	Sub-total	5.97	13.31	8.37	12.37	46.2
All	Total	8.48	14.00	8.49	12.14	45.1

# Table 1 Ore Reserve Statement

The DFS also includes limited Inferred Resources that are defined in the T27 and T48 deposits. As these resources are categorised as Inferred Mineral Resources, they cannot be converted to an Ore Reserve under the JORC code. However, the optimisation included these Inferred Mineral Resources and those Inferred Mineral Resources that fall within the chosen Whittle pit shell have been summarised as an "In-pit Mineral Inventory" to allow an understanding of the potential total in-pit material available for processing. This In-pit Mineral Inventory is shown in Table 2.

Class	Lithology	Diluted (Mt)	Mn (%)	Fe (%)	AI (%)	Si (%)
Mining Inventory	Detrital	0.12	8.31	12.94	11.82	49.5
	Laterite	0.90	7.54	18.31	18.14	38.1
	Transitional	0.60	10.84	14.52	18.30	35.9
	Total	1.62	8.80	16.49	17.76	38.1

**Table 2 In-Pit Mineral Inventory** 

### Glossary

Al – aluminium

detrital - transported, loosely bound clastic sediment

DFS – Definitive Feasibility Study

Fe-iron

laterite - weathering product developed in tropical environments

LOM - life of mine

Mn – manganese

Mt - million tonnes

Ore Reserve - an 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

Probable Ore Reserve - the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Ore Reserve is lower than that applying to a Proved Ore Reserve.

Proved Ore Reserve - the economically mineable part of a Measured Mineral Resource. A Proved Ore Reserve implies a high degree of confidence in the Modifying Factors.

ROM - run of mine

saprolite - weathered bedrock

Si – silicon

t-tonnes

transitional - transitional between laterite and saprolite

tpa – tonnes per annum

### **Competent Person Statement**

Information in this release that relates to exploration results is based on information compiled by Ferrex Exploration Manager Mr Mark Styles. Mr Styles is a qualified geologist, a member of the Australian Institute of Geoscientists and is a Competent Person as defined in the Australasian Code for Reporting of Exploration Results. Mr Styles consents to the inclusion in the release of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources has been compiled by Mr Lynn Widenbar. Mr Widenbar, who is a Member of the Australasian Institute of Mining and Metallurgy, is a full time employee of Widenbar and Associates and produced the Mineral Resource Estimate based on data and geological information supplied by Ferrex. Mr Widenbar has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Widenbar consents to the inclusion in this report of the matters based on his information in the form and context that the information appears.

The information in this report that relates to the Ore Reserve has been compiled by Mr Steve O'Grady. Mr O'Grady, who is a Member of the Australasian Institute of Mining and Metallurgy, is a full time employee of Intermine Engineering and produced the Mining Reserve estimate based on data and geological information supplied by Mr Widenbar. Mr O'Grady has sufficient experience that is relevant to the estimation, assessment, evaluation and economic extraction of Ore Reserve that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr O'Grady consents to the inclusion in this report of the matters based on his information in the form and context that the information appears.

Caution Regarding Forward Looking Statements: Information included in this release constitutes forward-looking statements. There can be no assurance that ongoing exploration will identify mineralisation that will prove to be economic, that anticipated metallurgical recoveries will be achieved, that future evaluation work will confirm the viability of deposits that may be identified or that required regulatory approvals will be obtained.

#### \*\*ENDS\*\*

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### Notes

Ferrex plc is an AIM quoted, leading manganese development and iron-ore exploration company in Africa. The Company is focussed on advancing low capex deposits, which benefit from proximal established infrastructure, up the development curve and into production. Ferrex has a solid portfolio of assets including three primary projects: Nayega Manganese Project in Togo ('Nayega'), Mebaga Iron Ore Project in Gabon ('Mebaga'), and Malelane Iron Ore Project in South Africa ('Malelane').

At Nayega, Ferrex has concluded a Bankable Feasibility Study and expects award of the mining permit in mid 2015. A Scoping Study indicates that Nayega could produce 250,000 tonnes per year of manganese concentrate at 38%. A Scoping Study on a ferro manganese plant in Togo has also been concluded and shows a lowest quartile operation with robust economics. The company is focussed on bringing the mine into production on grant of the mining permit whilst advancing the ferro manganese studies.

In parallel with this, Ferrex is focussed on proving up resources at its Mebaga concession in Gabon. An exploration target comprising 90 to 150Mt @ 35 to 65% Fe (oxide material) and 550 to 900Mt @ 25% to 40% Fe (primary material) has been estimated for Mebaga. The oxide target will incorporate both DSO\* and bBSO\* material. Ferrex completed a preliminary drill programme at Mebaga that intersected significant widths of both DSO and bBSO mineralisation.

The Company also holds the Malelane Iron Ore concession in eastern South Africa. A Scoping Study on Malelane has demonstrated its potential to produce 1.8Mtpa of beneficiated ore per year, with initial capital expenditure of \$139m, a payback of 1.9 years, a Net Present Value of US\$523m (10% discount rate) and a 16.6 year life-of-mine.

Ferrex has 1,100,794,390 shares in issue. The Directors have subscribed for and purchased approximately 25.4% of the issued share capital of the Company and are thus aligned with shareholders' interests.