

# Dutwa economic model update

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African Eagle Resources plc  
("African Eagle" or the "Company")

## UPDATED ECONOMIC MODEL FOR THE DUTWA NICKEL PROJECT, TANZANIA

African Eagle Resources plc (AIM: AFE; AltX AEA) announces that it has received the second iteration of the feasibility study economic model for its Dutwa nickel project in Tanzania from independent engineering consultant Simulus. The latest economic model evaluates both of the ore process routes available to the Company, heap leaching as well as atmospheric agitated tank leaching ("tank leaching") and includes ore throughputs of up to 5Mt per annum.

In this announcement, the currency is US dollars and all net present values ("NPVs") are at a 10% discount rate.

Key headlines:

+-----+	+-----+	+-----+	+-----+	+-----+
Ore Throughput - 3Mtpa	Heap Leach	Tank Leach		
+-----+	+-----+	+-----+	+-----+	+-----+
Nickel price   \$/lb	\$10	\$8	\$10	\$8
+-----+	+-----+	+-----+	+-----+	+-----+
NPV post-tax   \$M	705	260	870	385
+-----+	+-----+	+-----+	+-----+	+-----+
IRR post-tax   %	26	17	29	20
+-----+	+-----+	+-----+	+-----+	+-----+

- \* Capex estimates for heap leach of \$550M and for tank leach of \$600M
- \* Capital payback for both methods is between 3 and 5 years
- \* Cash operating cost estimates of \$3.37/lb for tank leach and \$3.56/lb for heap leach
- \* Throughput boost from 3Mtpa to 5Mtpa improves economics but increases logistics challenge

African Eagle's Managing Director Mark Parker commented:

"This latest economic modelling indicates that atmospheric tank leaching, rather than heap leaching, will give a better economic return at Dutwa. Our final selection of the best process option will be based on the outcome of bench-scale and pilot-scale metallurgical testwork now commencing in Perth, WA, leading to a pre-feasibility study, scheduled for completion by end Q3 2011.

A higher throughput of 5Mt per annum would improve the project returns, but under present conditions, logistical challenges are likely to make 3Mt per annum a more realistic production target. The throughput could be scaled up if proposed infrastructure developments allow."

The results reported here represent an expansion of the economic model announced in December 2010, to include heap leaching as well as agitated tank leaching and ore throughputs between 2Mt per annum and 5Mt per annum. In all cases, the model assumed that a mixed nickel-cobalt hydroxide intermediate product would be generated.

The mining and processing schedules used in the model were developed by Snowden Mining Industry Consultants (Perth, WA) from the Whittle pit optimisations, as recently announced.

The capital and operating cost estimates were made by AMEC Minproc (Perth, WA), to approximately  $\pm 20\%$ , using the best data currently available. The estimates indicate that the initial capital cost of a tank leach operation is not likely to be more than 10% greater than the cost of a heap leach operation for 3Mtpa or 5Mtpa throughputs. The capital intensity values for both process routes are far lower than those published for comparable projects which use the more expensive high pressure acid leach process.

The full results of the modelling for tank and heap leach, for throughputs of 3Mtpa and 5Mtpa are given in the tables below, on a 100% project ownership basis with debt financing not considered.

Over the coming months, the Dutwa economic model will be further developed and refined to take into account the results of the current metallurgical testwork and to assess the impact of producing a mixed sulphide intermediate product rather than a hydroxide and of using rail transport rather than road.

The next major milestones for the Dutwa Project are:

- \* Commencement of the Environmental and Social Impact Assessment (Q2 2011)
- \* Completion of JORC indicated resource estimation (Q2 2011)
- \* Completion of Pre-Feasibility Study (Q3 2011)
- \* Commencement of Definitive Feasibility Study ("DFS") (Q4 2011)
- \* Completion of DFS (end Q4 2012)
- \* Seek project financing during 2012
- \* Construction of the plant and other infrastructure (2013-2014)
- \* First production (Q1 2015)

Economic model results: Tank Leach			
Ore Throughput	3Mtpa	5Mtpa	
Nickel price	\$/lb	\$10	\$8
NPV post-tax	\$M	870	385
IRR post-tax	%	29	20
Payback period	Years	3.1	4.9
Capital expenditure	\$M	600	600
Capital intensity	\$/lb nickel/yr	11.7	11.7
Cash operating costs, \$/lb contained nickel	\$/lb		
Consumables		0.08	0.09
General & Admin		0.20	0.16
Labour		0.12	0.08
Maintenance		0.26	0.23
Mining		0.23	0.22
Power		0.01	0.01
Reagents		1.63	1.65
Transportation		0.99	1.01
Cobalt credits		-0.15	-0.15
TOTAL		3.37	3.30

Model assumptions and parameters	
Mine life  Years	26   17
Ore mined and processed  million tonnes	78.2   82.2
Strip ratio  waste/ore	0.43   0.45
Intermediate Product	MHP   MHP
Nickel payability  % of LME nickel price	75   75
Average nickel grade  %	0.97   0.95
Total contained nickel in product 000 tonnes	603   623
Average cobalt grade  %	0.03   0.03
Total contained cobalt in product 000 tonnes	15.0   15.7
Life of mine capital cost  \$M	659   918

Economic model results: Heap Leach	
Ore Throughput	3Mtpa   5Mtpa
Nickel price  \$lb  \$	\$10   \$8   \$10   \$8
NPV post-tax  \$M	705   260   920   310
IRR post-tax  %	26   17   27   17
Payback period  Years	3.2   5.2   2.8   4.5
Capital expenditure  \$M	550   550   770   770
Capital intensity  \$/lb nickel/yr	11.5 11.5 10.3 10.3
Cash operating costs, \$/lb contained nickel	\$/lb   \$/lb
Consumables	0.14   0.14
General & Admin	0.21   0.16
Labour	0.12   0.08
Maintenance	0.25   0.21
Mining	0.24   0.23
Power	0.08   0.06
Reagents	1.64   1.68
Transportation	1.03   1.06
Cobalt credits	-0.15   -0.15
TOTAL	3.56   3.47
Model assumptions and parameters	
Mine life  Years	25   17

Ore mined and processed  million tonnes	72.1		78.3	
Strip ratio  waste/ore	0.52		0.48	
Intermediate Product     MHP	MHP		MHP	
Nickel payability  % of LME nickel price	75		75	
Average nickel grade  %	0.99		0.97	
Total contained nickel in product 000 tonnes	543		574	
Average cobalt grade  %	0.03		0.03	
Total contained cobalt in product 000 tonnes	13.5		14.4	
Life of mine capital cost  \$M	603		839	

#### Qualified Person

Information in this report is based on financial simulations prepared by Tim Newton, BEng (Chem), MSc (Min Econ). Tim Newton is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM) and is Technical Director and a full-time employee of Simulus Ltd. Tim Newton consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### Technical terms

A glossary of technical terms used by African Eagle in this announcement and other published material may be found at [www.africaneagle.co.uk/p/glossary.asp](http://www.africaneagle.co.uk/p/glossary.asp)

For further information on African Eagle, see the Company's web site [www.africaneagle.co.uk](http://www.africaneagle.co.uk) or contact one of the following:

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#### Dutwa Project Overview

African Eagle is developing the major Dutwa nickel project in Tanzania. The Company discovered Dutwa in 2008 and is now conducting a pre-feasibility study for the project.

Economic modelling in late 2010 indicated a pre-tax project NPV of \$650 million at a nickel price of \$8/lb, with an estimated average cash cost of \$3.37/lb nickel. The model was based on throughput of 3 million tonnes per year for 26

years with processing by atmospheric tank leaching to a mixed hydroxide intermediate product, requiring estimated initial capital expenditure of \$600M and yielding life of mine earnings of \$8.2bn at \$8/lb nickel. The mining schedule was derived from Whittle optimisations of block models of an October 2010 inferred mineral resources. The financial models will be progressively improved as the feasibility study progresses.

Mineral resources are currently 98.6 million tonnes grading 0.93% nickel and 0.02% cobalt, of which 46.2 million tonnes are in the JORC indicated category and the remainder in the JORC inferred category. The Company believes that further drilling will increase the total resource by up to 10Mt.

The Dutwa project consists of two nickel laterite deposits which form the caps of two ridges about 7km apart. The current JORC mineral resources, at a 0.43% nickel equivalent cut-off, are 98.6Mt grading 0.93% nickel and 0.02% cobalt, containing in total 948,000 tonnes nickel metal equivalent. Of this, about half is now in the indicated category and half in the inferred. Because the deposits are at the surface, mining will be straightforward and strip ratios very low. The Ni equivalent grade (NiEq) is calculated using the following formula:

$$\text{NiEq} = \text{Ni} + [ \text{Co} * (\text{RCo}/\text{RNi}) * (\text{PCo}/\text{PNi}) ] = \text{Ni} + (\text{Co} * 1.32)$$

using metal prices (P) of \$10/pound Ni and \$17/pound Co, and metal recovery factors (R) of 90% for Ni and 70% for Co, derived from metallurgical test work conducted by African Eagle.

The Company believes that the resources can be increased by another 8Mt to 10Mt with further drilling. There is also future upside at Zanzui, 50km to the south, where the Company is evaluating another significant nickel laterite resource, and at Nyawa, 15km west of Dutwa.

Metallurgical tests have shown that the nickel ores are unusually easy to process, giving good recoveries from heap or tank leaching at atmospheric pressure, with no need for costly high pressure acid leach (HPAL).

African Eagle currently holds a 90% interest in the eastern Wamangola deposit, which hosts approximately 60% of the total Dutwa resource, with an option to acquire 100%. The smaller western Ngasamo deposit is subject to a joint venture between African Eagle and the SAFINA Group of the Czech Republic under which African Eagle is in the process of earning an interest of between 50% and 75% by conducting and funding evaluation work there.

On completion of the feasibility study covering both deposits, African Eagle's own interest in Wamangola, together with the two companies' respective joint venture interests in Ngasamo will be converted into equity in the mining company formed to develop and operate the combined project. African Eagle estimates that it will then hold about 76% of the equity.

#### About African Eagle

Since discovering a major nickel oxide deposit at Dutwa in Tanzania, African Eagle is in transition from an explorer into a nickel company. The Company completed a positive scoping study on the Dutwa deposit in July 2009 and is now working towards a feasibility study.

In addition to Dutwa, African Eagle is also evaluating a second promising nickel oxide at Zanzui, which is located 60 km from Dutwa. The Company holds a 49% interest in the Mkushi Copper Mines joint venture in Zambia, for which a draft feasibility study was completed in Q4 2008. It also holds a half million ounce gold resource at the Miyabi project in Tanzania, and a portfolio of gold and base metal exploration assets, including two projects in the Zambian Copperbelt.

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