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Upgraded Scoping Study finds Marenica set to be a significant, cost-competitive uranium project

Key Conclusions

- Forecast to produce 3.5 Million pounds of uranium per annum via heap-leach operation; 13-year mine life
- Average operating cost estimated to be US\$38 per pound
- Capital cost estimated to be US \$260 million
- Estimated five year payback

Marenica Energy (ASX:MEY) is moving closer to becoming a leading uranium producer, after scoping study finds the Marenica Project in Namibia could deliver 3.5 million pounds of uranium per annum at the highly competitive operating cost of US \$38 a pound. The study focussed on the development of a heap leach operation that has an estimated capital cost of US \$260 million.

Undertaken by SRK Consulting, the study found the Marenica Project could produce a total of 45 million pounds of uranium over a 13-year life based on the existing defined indicated and inferred mineral resource. This is a significant increase on the Company's earlier expectations as a result of the decision to develop a bulk open pit and heap-leach operation with a lower cut-off grade (COG) of 50ppm, rather than as a continuous agitated leach circuit fed by higher-grade ore. SRK Consulting ran Whittle optimisations on several models at different cut off grades and determined the optimum marginal COG at 50ppm for the heap leach scenario (see table 2).

"This study shows that the Marenica project stands to become one of the more significant uranium producers in the world," Marenica Chief Executive John Young said.

"This mine is expected to support an operation with a greater production profile than was originally believed possible in an agitated leach circuit. We believe the option presented in this study represents an achievable, realistic view given the size of the resource at Marenica."

Mr Young said Marenica believed that infill drilling should expand the resource base to further boost the project's economics.

The Mineral Resource Estimate was updated by SRK Consulting using a 50ppm LCOG deemed to be appropriate for bulk mining methods (see table 1) and has been reported in accordance with the guidelines given in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2004 (the JORC Code). The revised estimate is tabulated below but in total SRK has defined a total resource of **648 million tonnes at 97ppm U3O8 for 138M lbs.**

Table 1 - Mineral resource statement for the Marenica Deposit, September 2010.

Category	Domain	Tonnage (Mt)	Grade (U ₃ O ₈ ppm)	Uranium (M lb)
Measured	Channel	-	-	-
	Basement	-	-	-
	Sub Total	-	-	-
Indicated	Channel	14.6	117	3.8
	Basement	33.1	115	8.4
	Sub Total	47.7	116	12.2
Inferred	Channel	230	99	50
	Basement	370	93	76
	Sub Total	600	95	126
Total Resource	Total	648	97	138

Table 2 - The Whittle parameters used for the optimisation.

Parameter	Unit	Heap Leaching
Mining Costs - Palaeochannel	USD/t mined	1.00
Mining Costs - Base	USD/t mined	1.30
Incremental cost above reference level	USD/t mined	0
Incremental cost below reference level	USD/t mined	0
Mining dilution	%	5%
Mining recovery	%	97.5%
Grade control	USD/t ore mined	0.5
G&A	USD/t ore mined	0.61
Scrubbing yield	%	50.0%
Scrubbing recovery	%	90.0%
Scrubbing costs	USD/t ore mined	0.30
Processing costs - Palaeochannel	USD/t processed	3.45
Processing costs - Base	USD/t processed	3.99
Processing Rehandling costs	USD/t processed	0.478
Transport costs final product	USD/t processed	0.012
Royalty to vendor	USD/t processed	0.03
Processing recovery - Palaeochannel	%	80.0%
Processing recovery - Base	%	75.0%
Sales Price	USD/lb U3O8	65
Sales royalty	per lb U3O8	3.0%
MCOG (exact) - Palaeochannel	ppm	34
MCOG (exact) - Base	ppm	39
MCOG (used)	ppm	40

The mining optimisation study defines a potentially minable 270M tonnes of low-grade oxide ore, to be processed as run of mine heap-leach material. The mineralisation is upgraded through a combination of screening and scrubbing, with approximately 50% of the run of mine ore discarded

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as waste prior to processing. This upgrade process reduces the ore to be processed over the life of mine to 135M tonnes, and potentially increases process grades to 193ppm U₃O₈ using a conservative upgrade factor of 1.8 times, this is to be confirmed but is believed achievable based on work by ANSTO. Previous metallurgical work by ANSTO has shown that ROM material can be upgraded 2.5 to 3.5 times.

The mining costs are based on an assumed US \$1.00/t for palaeochannel material movement at the reference level, and US \$1.30/t for basement material due to the expected requirement for shatter blasting. No incremental adjustments above and below the reference level have been applied as the pits are expected to be only 80m deep. The SRK report notes that the model creates realistic, minable shells due to the block size of 50m x 50m x 5m (xyz), and that creating pit designs from these shells will not significantly increase the stripping ratio and hence not significantly reduce the cashflow. The tonnages determined by Whittle were (flat line) scheduled over a 13 year (heap leaching) minimum mine life, with pre-stripping of waste in the year before production starts. The mine optimisation is based on current indicated and inferred mineral resource and the proposed upgrade of these inferred resources by further drilling should improve resource confidence and further enhance the already attractive project economics.

Table 3 – The Schedule for the heap leaching scenario

	Units	Total	Year -2	Year -1	Year 1	Year 2	Year 3	...	Year 12	Year 13	Year 14
Mining											
TMM	(t)	831,392,455	-	21,624,590	63,953,266	63,953,266	63,953,266	63,953,266	63,953,266	42,328,676	-
Channel waste mined	(t)	416,024,484	-	16,000,942	32,001,883	32,001,883	32,001,883	32,001,883	32,001,883	16,000,942	-
Basement waste mined	(t)	146,214,844	-	5,623,648	11,247,296	11,247,296	11,247,296	11,247,296	11,247,296	5,623,648	-
Waste mined	(t)	562,239,328	-	21,624,590	43,249,179	43,249,179	43,249,179	43,249,179	43,249,179	21,624,590	-
Channel ore mined	(t)	189,248,998	-	-	14,557,615	14,557,615	14,557,615	14,557,615	14,557,615	14,557,615	-
Basement ore mined	(t)	79,904,129	-	-	6,146,471	6,146,471	6,146,471	6,146,471	6,146,471	6,146,471	-
Ore mined	(t)	269,153,127	-	-	20,704,087	20,704,087	20,704,087	20,704,087	20,704,087	20,704,087	-
Channel U3O8 grade	(ppm)	102	-	-	102	102	102	102	102	102	-
Basement U3O8 grade	(ppm)	121	-	-	121	121	121	121	121	121	-
Total U3O8 grade	(ppm)	107	-	-	107	107	107	107	107	107	-
Total contained U3O8	(lb)	63,631,060	-	-	4,894,697	4,894,697	4,894,697	4,894,697	4,894,697	4,894,697	-
Strip Ratio	(w:o)	2.09	-	-	2.09	2.09	2.09	2.09	2.09	1.04	-
Scrubbing											
Ore produced	(t)	134,576,564	-	-	10,352,043	10,352,043	10,352,043	10,352,043	10,352,043	10,352,043	-
Ore U3O8 grade	(ppm)	193	-	-	193	193	193	193	193	193	-
Ore U3O8 content	(lb)	57,267,954	-	-	4,405,227	4,405,227	4,405,227	4,405,227	4,405,227	4,405,227	-
Waste produced	(t)	134,576,564	-	-	10,352,043	10,352,043	10,352,043	10,352,043	10,352,043	10,352,043	-
Waste U3O8 grade	(ppm)	21	-	-	21	21	21	21	21	21	-
Waste U3O8 content	(lb)	6,363,106	-	-	489,470	489,470	489,470	489,470	489,470	489,470	-
U3O8 recovered											
Channel ore	(lb)	30,497,484	-	-	1,703,231	2,345,960	2,345,960	2,345,960	2,345,960	2,345,960	642,729
Basement ore	(lb)	14,359,575	-	-	801,957	1,104,583	1,104,583	1,104,583	1,104,583	1,104,583	302,625
Total recovered	(lb)	44,857,058	-	-	2,505,189	3,450,543	3,450,543	3,450,543	3,450,543	3,450,543	945,354

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In order to achieve the ore processing rate of 10.3 million tonnes per annum (Mtpa) after scrubbing, and around 64 Mtpa total material movement, mining cost estimates are based on using a combination of Caterpillar 785 trucks (136 t) loaded by a Komatsu PC4000 excavator. Eight excavators and around 44 trucks are required, and mining services have been costed as contract only.

The estimated capital cost is expected to be US \$260M for the crushing, screening and process facility including a 10Mtpa On/Off leach pad, ancillary infrastructure and closure costs.

The metallurgical work currently underway at AMMTEC involves a series of upgrade, agglomeration and column leach tests. The aim is to produce an upgraded dry (screened) product that is combined with an upgraded (scrubbed) slurry that will be agglomerated as preparation for column leaching. This work is being supervised by Kappes, Cassidy & Associates, who specialise in the development, engineering and implementation of extractive metallurgical processes for the mining industry and have particular expertise in heap leaching. The results of this column leach test work will provide critical information on leaching kinetics, water and reagent use that will allow further optimisation of the costs used in the current economic model.

Operating and capital costs used to develop this scoping study were based on industry standard capital and operating cost data for similar sized mining, production processes. Using a long term uranium price of US \$65 a pound, the study indicates that the Marenica project can produce a positive NPV and IRR and pay back the initial project capital in 5 years (see table 4). It is to be noted that this economic model is based on inferred and indicated resources. The results of the study have provided Marenica with the confidence to undertake additional drilling and metallurgical work in order to upgrade inferred resources, which should continue to improve the economic parameters of the project.

Upon sufficient indicated resource being delineated a definitive feasibility study will commence. The project described in the scoping study will require mining and environmental permits and a site-wide Environmental and Social Impact Statement (ESIS). Preliminary work required for the ESIS, such as baseline water sampling, meteorological and dust monitoring, will begin in November 2010. The scoping study assumes receipt of all required permits to construct and operate the mine and plant within three years. Management believes that construction and commissioning of the plant would take place in 2013 and 2014.

Table 4 - Scoping Study – Key Operating and Financial Parameters (undiscounted)

Description	Units	HL_UC5mZ
		50ppm
Total Ore processed	(Mt)	134.6
Contained U ₃ O ₈	(Mlb)	57.3
Recovered U ₃ O ₈	(Mlb)	44.9
Mine Life	(years)	13
Ore processed per year	Mt	10.4
Net Revenue	(USDm)	2,828
Operating Costs	(USDm)	1,709
Net operating cashflow	(USDm)	1,119
Capital Costs	(USDm)	260
Net Project cashflow	(USDm)	859
Payback	(year)	5
Cash cost	(USD/lb U ₃ O ₈)	38.10
Total cost (incl capital)	(USD/lb U ₃ O ₈)	43.90

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Notes

The information in this announcement that relates to Mineral Resources is based on information compiled by a team of full time employees of SRK Consulting (UK) Ltd which was directed by Dr Mike Armitage.

Dr Armitage who is a Member of the Institute of Materials, Minerals and Mining and a Fellow of the Geological Society of London, both of which are 'Recognised Overseas Professional Organisations' ('ROPOs'), is the Chairman of SRK Consulting (UK) Ltd and has taken responsibility for the Mineral Resource aspects of SRK's work. Dr Rob Bowell, a Principal Geochemist with SRK and who is also a Fellow of the Geological Society of London as well as a Fellow of the Institute of Mining, Materials and Minerals and a Member of the Royal Society of Chemistry takes responsibility for any comments related metallurgical testwork.

Other team members, Dr John Arthur and Ms Tracey Laight are both Fellows of the Geological Society of London, Dr Arthur is also a Member of the Institute of Materials, Minerals and Mining.

Both Dr Armitage and Dr Bowell have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they have undertaken 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'. Both Dr Armitage and Dr Bowell consent to the inclusion in this announcement of the matters based on their information in the form and context in which these appear."

The scoping study has been prepared based on the Company's presently delineated inferred and indicated mineral resource estimate and any investment decision should be considered based on this information.

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