



Montero identifies initial mineral resource of 3.3M tonnes grading 2.6% LREO5 including 510,000 tonnes averaging 4.4% LREO5 on the eastern ridge of the Wigu Hill Rare Earth Project, Tanzania

Toronto, Ontario (September 12th, 2011): Montero Mining and Exploration Ltd. (TSX.V: MON) ("Montero") is pleased to announce the completion of an independent NI 43-101 Resource Estimate of the Tembo and Twiga deposits on the eastern ridge of the Wigu Hill carbonatite complex. **A total inferred mineral resource of 3.3 million tonnes at a grade of 2.6% LREO5 (Light Rare Earth Oxide) has been outlined from the preliminary drilling program of 21 boreholes (2,225m). A cut-off sensitivity analysis has shown that the Inferred Mineral Resource contains a higher-grade portion consisting of 510,000 tonnes averaging 4.4% LREO5.** The independent estimate was prepared by AMEC Earth & Environmental Services Limited (AMEC) and has an effective date of 25 August 2011.

Dr Tony Harwood, President and Chief Executive Officer of Montero commented, "We are excited to report an initial inferred mineral resource of 3.3 million tonnes at 2.6% LREO5 based on 2,225m of drilling, with a higher grade core of 0.51 million tonnes at 4.4% LREO5. Our initial resource only represents shallow drilling down to 150m from surface on two of ten drill targets currently identified at Wigu Hill and we are focused on adding to our initial 43-101 Compliant Resource Estimate through exploration drilling on the remaining 8 targets. The resource is currently classified as inferred, however through further in-fill drilling and metallurgical test-work, currently underway, we are confident it can be upgraded to the indicated category. The results of our initial resource combined with the potential of the Tumbili and Nyati targets, indicate the potential for a sizeable Light Rare Earth deposit."

Overview

AMEC used assay results from 808 sawn outcrop channels and 914 sawn half-core samples totaling 1,617m sampled length, obtained from 63 trenches and 21 cored diamond drill holes, to develop the Mineral Resource Estimate which is reported according to CIM Definition Standards (2010).

Trenches were cut across the trend of the mineralized structures at spacing of 20m to 30m along strike in the mineralized zones that have been investigated. Detailed sampling in 2010 had identified high-grade TREO values on the Tembo and Twiga Targets with individual values of up to 26.20% TREO and 27.25% TREO, respectively (see news release dated [11/04/2011](#)). Outcrops of fresh crystalline carbonatite were traced over distances of up to 300 metres. The widths of the carbonatite dikes vary and the continuity of individual dikes is difficult to trace both along strike and in depth. The anastomosing nature of the intrusions makes it easier to correlate a zone of dikes, mostly with narrow intercalated bands of highly altered and carbonated gneisses. The higher concentrations of rare earth oxide minerals are focused within the carbonatite dikes. The dikes remain remarkably fresh, whereas the intercalated gneisses are highly weathered and friable. The amount of mineralisation in the adjacent altered gneisses is often very low, but ranges from 0.50% TREO to 3.00% TREO. The better trench values were returned from the Twiga target from the easterly trending dike, where high-grade TREO values could be traced over significant widths up to 12m true width and over a strike of more than 200m.

Exploration drilling by Montero on the Twiga and Tembo targets at the beginning of the year achieved 2,225m of core drilling from 21 boreholes (2 of which were re-drills). Drill holes were drilled on transverse sections, with two or three holes per section to a maximum depth of about 150m below the surface. The drill holes were angled at 50 degrees to intersect the mineralized structures at a high angle with intersections at spacing of between 30m and 70m in the down dip direction on individual drill sections. Inferred Mineral Resources totaling 3.3Mt grading 0.82% La, 1.04% Ce, 0.08% Pr, 0.21% Nd and 0.01% Sm were estimated; full details and corresponding REO grades are provided in Table 1. The effective date of the Mineral Resource Estimate is August 25, 2011; the cut-off date for assay data used in the resource estimate was May 8, 2011. Drilling recommenced on the Twiga deposit in August; no new assay data have yet been received and to date the geological information from the new holes is consistent with the interpretation used as the basis for the mineral resource estimate.

Zone	Tonnage Mt	Resource grades (REEs)						Corresponding oxide grades (REOs)					
		LREE5	La	Ce	Pr	Nd	Sm	LREO5	La ₂ O ₃	CeO ₂	Pr ₆ O ₁₁	Nd ₂ O ₃	Sm ₂ O ₃
		%	%	%	%	%	%	%	%	%	%	%	%
Twiga - NE	1.6	2.2	0.84	1.03	0.08	0.19	0.01	2.6	0.98	1.26	0.10	0.23	0.01
Twiga - SW	0.5	2.9	1.13	1.40	0.11	0.26	0.02	3.6	1.33	1.71	0.13	0.30	0.02
Tembo - NW	0.9	1.8	0.67	0.89	0.07	0.20	0.01	2.2	0.78	1.09	0.09	0.23	0.02
Tembo - SE	0.2	1.8	0.59	0.90	0.08	0.23	0.01	2.2	0.69	1.10	0.10	0.27	0.01
TOTAL	3.3	2.2	0.82	1.04	0.08	0.21	0.01	2.6	0.96	1.27	0.10	0.24	0.02
Notes:	<ol style="list-style-type: none"> The effective date for this resource estimate is 25 August 2011. The Qualified Person responsible for this resource estimate is Edmund Sides, EurGeol, P.Geol. The resource is reported according to CIM Definition Standards (2010). A selective mining unit (SMU) size of 3m by 3m by 3m was assumed when creating the block model. Reported grades are based on consideration of the grades of mineralised material and weakly to non-mineralised wallrock material estimated to fall inside each SMU. The reported Mineral Resource is based on a grade cut-off of 1.0% LREO5 (sum of estimated grades of La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃ and Sm₂O₃). The Mineral Resources for the Twiga and Tembo deposits have been constrained by an optimised pit shell defined by the following assumptions; slope angles of 50°; a mining recovery of 100% and mining dilution of 0% (already incorporated in the SMUs); a mining cost of USD2.85/t; process operating costs of USD12.0/t; G&A costs of USD 3.0/t of resource, with 90% recovery of REOs to a 45% LREO5 bastnaesite concentrate; and a concentrate price of USD10/kg. 												

Table 1: Wigu Hill Inferred Mineral Resource Statement (Cut-off of 1% LREO5)

Cutoff sensitivity analysis

To outline a higher-grade zone within the above resource, AMEC looked at the grade-tonnage distribution with respect to the 'mineralised indicator' value which has been estimated for each block and which has been used to determine the reported block grades (based on combination of wallrock and mineralized grades).

Where the mineralized indicator is close to 1.0 it indicates a higher proportion of the block is made up of mineralized material. An analysis was carried out of the distribution of tonnage and grade for the blocks on which the reported Inferred Mineral Resource is based (i.e. blocks having LREO5 >1% and falling inside the pit shell used to constrain the reported Mineral Resource). Based on consideration of the factors used to assess the prospects for economic extraction of the reported Mineral Resource, AMEC considers that applying a mineralised indicator cut-off of 0.7 (>=70% mineralised material within a SMU) would define a subset of the mineral resource estimate that would consist of smaller, higher-grade mineralised volumes that would also have realistic prospects for economic extraction. This sensitivity case has the sub-set mineral resources as tabulated in Table 2.

Zone	Tonnage Mt	Resource grades (REEs)						Corresponding oxide grades (REOs)					
		LREE5	La	Ce	Pr	Nd	Sm	LREO5	La ₂ O ₃	CeO ₂	Pr ₆ O ₁₁	Nd ₂ O ₃	Sm ₂ O ₃
		%	%	%	%	%	%	%	%	%	%	%	%
Twiga - NE	0.21	4.3	1.68	2.05	0.16	0.38	0.02	5.2	1.97	2.52	0.19	0.44	0.03
Twiga - SW	0.09	5.4	2.12	2.59	0.19	0.47	0.03	6.5	2.48	3.18	0.23	0.55	0.03
Tembo - NW	0.21	2.2	0.82	1.08	0.09	0.24	0.02	2.7	0.96	1.32	0.11	0.28	0.02
TOTAL	0.51	3.7	1.41	1.76	0.14	0.34	0.02	4.4	1.66	2.16	0.17	0.39	0.02
Notes:	<ol style="list-style-type: none"> The tonnages and grades quoted above are for a high-grade sensitivity sub-set of the total Inferred Mineral Resource and are not additive to it. The tonnages and grades given above are based on selection of only those blocks (SMUs) with >70% mineralised material. Isolated SMUs which could not realistically be mined separately have been excluded from the tonnage reported in this table. The effective date for the resource estimate on which these figures are based is 25 August 2011. The Qualified Person responsible for this resource estimate is Edmund Sides, EurGeol, P.Geol. The resource is reported according to CIM Definition Standards (2010). Reported grades are based on consideration of the grades of mineralised material and weakly to non-mineralised wallrock material estimated to fall inside each SMU. The reported Mineral Resource is based on a grade cut-off of 1.0% LREO5 (sum of estimated grades of La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃ and Sm₂O₃). The Mineral Resources for the Twiga and Tembo deposits have been constrained by an optimised pit shell defined by the following assumptions; slope angles of 50°; a mining recovery of 100% and mining dilution of 0% (already incorporated in the SMUs); a mining cost of USD2.85/t; process operating costs of USD12.0/t; G&A costs of USD 3.0/t of resource, with 90% recovery of REOs to a 45% LREO5 bastnaesite concentrate; and a concentrate price of USD10/kg. 												

Table 2: Wigu Hill – Sensitivity Case Subset of Mineral Resources (Reported at a 0.7 mineralised indicator cut-off)

The sensitivity case presented in Table 2 highlights the fact that the Mineral Resource contains some higher-grade areas which may be amenable to selective mining; in particular in the Twiga SW domain. More detailed investigation of these zones is warranted in the next phase of evaluation to try to better define the continuity and extent of such high-grade zones.

Resource estimate

The approach used for resource estimation included the following steps:

- The digital database of all relevant trench and drill hole data was compiled and validated.
- The data was then transferred to statistical and resource modelling software packages to allow the calculation of sample coordinates and additional analysis.
- Exploratory data analysis including preparation of histograms, cumulative frequency plots, boxplots and calculation of summary statistics was completed.
- The trench and drill hole data were visualised on sections and plans in order to assess the vertical and lateral continuity of the mineralisation and to assist in domain identification.
- Based on the results obtained in the three previous steps, an indicator approach was selected for use in resource estimation. A mineralised indicator value of 1.0 represents 100% mineralised dike, a value of 0.0 represents 0% mineralised dike (i.e. 100% weakly- or un-mineralised wallrock).
- Regular 1m down-hole composites were prepared for use in resource estimation.
- A regular 3-dimensional block model was established and block values were estimated for the mineralised indicator, grades of mineralised material and grades of wallrock material (weakly- to un-mineralised). Grades were estimated for lanthanum, cerium, praseodymium, neodymium, samarium, LREE5, thorium, and uranium.
- The estimated block values were validated using statistical analysis and displayed on sections and plans.
- Final block grades were then determined as a weighted combination of the estimated grades of mineralised and wallrock material, based on the relative proportions of mineralised and wallrock material present.
- In order to ensure that the reported resource has reasonable prospects for economic extraction, a pit shell was generated using optimistic economic parameters in order to eliminate isolated mineralised blocks and material at depth that does not have realistic prospects of being mined economically.
- Resource summaries were then tabulated and grade-tonnage curves generated.

Resource classification:

To support an assessment of reasonable prospects for economic extraction, AMEC completed a general review of likely capital and operating costs plus product recoveries and prices based on an open-pit mining operation, with recovery of a bastnaesite concentrate using flotation. Using parameters, which were considered realistic, a pit shell was developed to constrain the reported Mineral Resource so as to exclude isolated zones of mineralization which were unlikely to be amenable to economic extraction. The parameters used to develop the resource pit shell are indicated in footnote 4 at the bottom of Table 1.

Based on considerations of the evaluation database used, geological and grade continuity and economic factors, the reported resource has been classified as an Inferred Mineral Resource.

Risk/opportunity issues:

Comparison of the final resource model against the original trench and drill hole data used, indicated that in general the approach used provides a reasonably realistic representation of the interpreted geology and grade distributions. Most of the discrepancies that were noted are related to areas of the deposit where more limited, wider spaced, sampling is available. AMEC concluded that the resource model was acceptable for reporting of an Inferred Mineral Resource for the Twiga and Tembo deposits.

The Mineral Resource identified to date is relatively small and, due to the discontinuous nature of the mineralised dikes, the reported grades incorporate a considerable amount of weakly to un-mineralised wall-rock material. There is scope for increasing the overall tonnage potential of the deposit, or alternatively trying to identify larger, more continuous individual mineralised dikes where selective mining of higher-grade mineralisation might be possible. These aspects should be investigated in the next stage of the project.

An analysis of the grade-tonnage distribution for the blocks used as the basis for the reported Inferred Mineral Resource indicates that this contains a smaller higher grade portion which warrants further investigation. This resource is in part related to the higher-grade samples which are more common in the trench samples and as such may reflect near surface mineralisation which could be extracted at an early stage during the development of a mining operation.

Future work programs:

Metallurgical test work on samples from the property and further drilling, including infill drilling on the Twiga and Tembo prospects as well as drilling on other targets that have been identified, is in progress. These results will form the basis for an updated resource estimate and further more detailed studies of the property.

The inferred mineral resource estimate at Wigu Hill is very encouraging in that it confirms the presence of a significant quantity of Rare Earth Oxide material that is amenable to extraction. The tonnage itself may appear to be limited, however the resource reflects the potential of only a fraction of the Wigu Hill Complex. Exploration and core drilling on other defined targets at Wigu Hill is progressing and greater potential exists in the central portion of the carbonatite complex where more extensive occurrences of mineralized carbonatite have been located.

Definition of REE Terminology

The Mineral Resource grades for TREE (Total Rare Earth Elements) and corresponding TREQ (Total Rare Earth Oxides) grades in this release include only the 5 most abundant REEs, namely Ce, La, Nd, Pr, and Sm. The following oxide formulae were used: CeO₂, La₂O₃, Nd₂O₃, Pr₆O₁₁ and Sm₂O₃; these are based on the compositions used for marketed REOs for which price information is generally quoted. The sum of the analyses of the five elements indicated above is referred to as LREE5 (and LREQ5 for the corresponding sum of the oxide grades). Grades for these five REEs make up over 99% of the REE content at Wigu Hill; the other ten REEs (Eu, Er, Dy, Gd, Ho, Tb, Tm, Lu, Y and Yb) are present in trace amounts only. Due to the low grades and unknown analytical quality for the remaining ten REEs, AMEC concluded that the available database for these elements did not support their reporting as part of the Mineral Resource. [Note: Assay results reported in previous press releases used the 'laboratory convention' of REE₂O₃ for the REO grades which will give slightly different grades for the oxides of Ce and Pr].

Quality Assurance/Quality Control (QA/QC):

Montero has used blanks, field duplicates and one analytical standard to monitor the sampling and analytical quality. Results to date for the blank and field duplicates show acceptable quality for the main REEs of interest. The standard used was prepared on behalf of Montero using material from Wigu Hill and has certified analytical values for Ce, La, Pr and Sm based on analyses from 16 different laboratories. A review of the QA/QC results was completed by AMEC who concluded that the results for Ce, La, Pr, Nd and Sm were acceptable for use in the estimation of an Inferred Mineral Resource. A discussion of the results will be incorporated into the Technical Report to be filed within 45 days.

Qualified Person's Statement

The technical information contained in this press release has been reviewed by Mr. Mike Evans, M.Sc. Pr.Sci.Nat., who is a qualified person for the purpose of National Instrument 43-101 and a consulting geologist to Montero. Grab samples are selective by nature and are unlikely to represent average grades on the property. The independent estimate was prepared by AMEC Earth & Environmental Services Limited (AMEC) and is reported according to CIM Definition Standards (2010). The Qualified Person responsible for the resource estimate is Edmund Sides, EurGeol, P.Geo. an AMEC employee.

About Montero Mining & Exploration

Montero Mining and Exploration Limited is a mineral exploration and development company focused on the development of our flagship Wigu Hill Rare Earth Element Project in Tanzania. The Wigu Hill project is a high grade undeveloped Light Rare Earth Element deposit where the company's current focus is further exploration drilling to add to our initial NI 43-101 Mineral Resource Estimate.

Rare Earth Elements (a group of 15 metals) are critical in the advancement and development of emerging "green" technologies and high-tech applications such as electric and hybrid vehicles, wind and hydro power turbines, energy efficient lighting, LCD screens, MRI, X-ray machines and neodymium-based magnets crucial to ear-buds, MP3 Players, microphones, mobile devices and other computing equipment. Currently China produces 97% of world supply of REEs and these are becoming increasingly critical to both 21st Century technological progress and environmentally sustainable development. With the rising prices of REEs and China's control over export quotas, it is becoming imperative that the rest of the world develops new rare earth resources to meet the increasing demand from "green" technology.

Montero's growth strategy is to develop the Wigu Hill Rare Earth Element project and to bring this to account through eventual rare earth production and cash flow. Montero plans to operate in an environmentally and socially responsible manner, adding value to all stakeholders. Montero trades on the TSX Venture Exchange under the symbol MON.

Signed. Dr. Tony Harwood - President and CEO

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