



MANTLE
MINING CORPORATION LTD

ASX Release

31 January 2017

DECEMBER 2016 QUARTERLY ACTIVITIES REPORT

Mantle Mining Corporation Limited (ASX: MNM, “Mantle” or “the Company”) provides the following update on its activities for the quarter ended 31 December 2016.

Highlights:

- **The Company focused its attention on the Morning Star Gold Project, the Company’s highest priority, with drill assaying and geological analysis undertaken at Morning Star and Rose of Denmark:**
 - Drill results confirmed attractive vein thickness and continuity of gold bearing structures, which are easily accessible, including:
 - a newly-recognised east-dipping high grade zone intersected close to existing underground development,
 - new intersections of Stacpoole (Donaldson’s) reef showing relatively wide and well mineralised veining,
 - Stacpoole reef geometry and drill results which are similar to Whitelaw’s reef, which had historical production grades of 22 to 67 g/t gold,
 - Commencement of a program of underground sampling in the Morning Star adit,
 - New underground drill results from Rose of Denmark confirmed extensions of known mineralised shoots, and
 - Continuing comprehensive data collation and review of the Morning Star mine and surrounding tenements, with a view to developing high priority mining zones for an expedited return to production.

- **Over 1,150 previously unreported samples reinforced the existence of high grade gold mineralisation yet to be mined from Morning Star, Rose of Denmark and other sites within Mantle’s significant tenement holding in the region:**
 - A detailed geologic database is being developed and 3D modelling is ongoing focusing on the development and application of an improved structural model for the deposits which can guide development activities,
 - Mantle released its newly developed Morning Star geological model (refer ASX Release “Morning Star Geological Model”, 30 January 2017). This substantially updated geological model has been built for the Morning Star gold mine, and is the first model which faithfully reproduces the detailed geometry of the high grade gold-bearing targets on the margins of the Morning Star dyke, not previously undertaken by prior operators of the mine.

- **Norton Gold Mine development activities were confined to completion of gold processing studies and advancement of permitting;**
- **Corporate reorganisation complete:**
 - Relocation to centralised Brisbane office with shared corporate support services,
 - Significant reduction in monthly expenditure plus a halt on all lower priority and/or non-core projects,
 - All future project spend focused on achieving strategic outcomes - geological, mining, metallurgical, and financing, all leading to the earliest realization of commercial gold production possible,
 - Non-core projects: discussions underway for an orderly realisation of value from the Company's Queensland tenements, including potential sale or JV, and
 - Coal: Bacchus Marsh and La Trobe projects relinquished as planned with no further cost or obligation.

Mantle's Executive Director, Richard Valenta, commented, "Mantle is now well underway with a comprehensive program of works designed to expedite the most efficient reopening of the high grade Morning Star and Rose of Denmark gold mines, taking full advantage of the data and knowledge accumulated by previous operators and of the experience of our team".

Morning Star Gold Mine Development:

A near term priority work program is focused on the most accessible and highest grade gold zones at Morning Star and includes:

- Stacpoole, Kenny's, and Burns reefs (where samples up to 1,341g/t gold have recently been reported). Analysis is underway on the patterns of high grade gold mineralisation in relation to existing adit and shaft development, combined with further underground sampling and planning for a targeted drill program to further define ore body geometry and grade distribution in each location. This is seen as a key step prior to committing to mine development,
- Rose of Denmark is also showing significance in the re-interpretation of the geological data. Discussions are currently under way with the 51% JV partner for early development, including formulation of a proposal for a targeted drill program and further underground sampling and mapping,
- Assessing the potential for updated definition and de-risking of potential mining blocks, and also the potential for further underground sampling.

The plan is for these activities to be followed by surface and underground drilling, a review for optimisation of the existing 80,000 tpa gold processing plant, and ultimately trial mining.

During the quarter a decision was made to activate the agreed mechanism in the Recapitalisation Deed which permitted the Company to defer the Morning Star acquisition payment of \$1m due on 31 October 2016 for 120 days. Under this mechanism, an additional payment of \$100,000 was made by the Company in December.

Norton Gold Mine:

During the quarter, development activities continued at a low level awaiting completion of the gold processing studies and permitting. The Company continued to assess options for realising value for the Norton project, and discussions commenced with a number of potential acquirers and/or partners for the project.

Other projects

The Charters Towers Gold Project:

The Charters Towers Gold Project is located around the township of Charters Towers in north Queensland. Mantle's tenement (EPM 14388) contains two main project areas; Great Britain and Puzzler/Balfes Creek.

Discussions commenced with a number of potential acquirers and/or partners for the project.

Granite Castle Gold Project:

During the quarter, discussions commenced with a number of potential acquirers and/or partners for the project.

Bacchus Marsh & Latrobe Valley Coal to Renewables Projects:

All coal properties were relinquished by the end of the December quarter.

Cash Position & Use of Funds:

As at 31 December 2016, the Group had a cash balance of \$283,000 as outlined in this quarter's Appendix 5B.

Following lodgement of its submission to the Australian Taxation Office to access rebates under the Australian Government's Research and Development Tax Incentive scheme, the Company has now received a refund of \$459,000 in January in relation to the 2015/16 financial year.

Further funding options are currently under consideration.

For further information, please contact:

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Competent Persons Statement:

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Dr Richard Valenta, Executive Director of Mantle Mining Corporation Ltd. Dr Valenta is a Fellow of the Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Dr Valenta consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Mantle’s Projects and Tenements:

Figure 3: Mantle’s Project Locations.

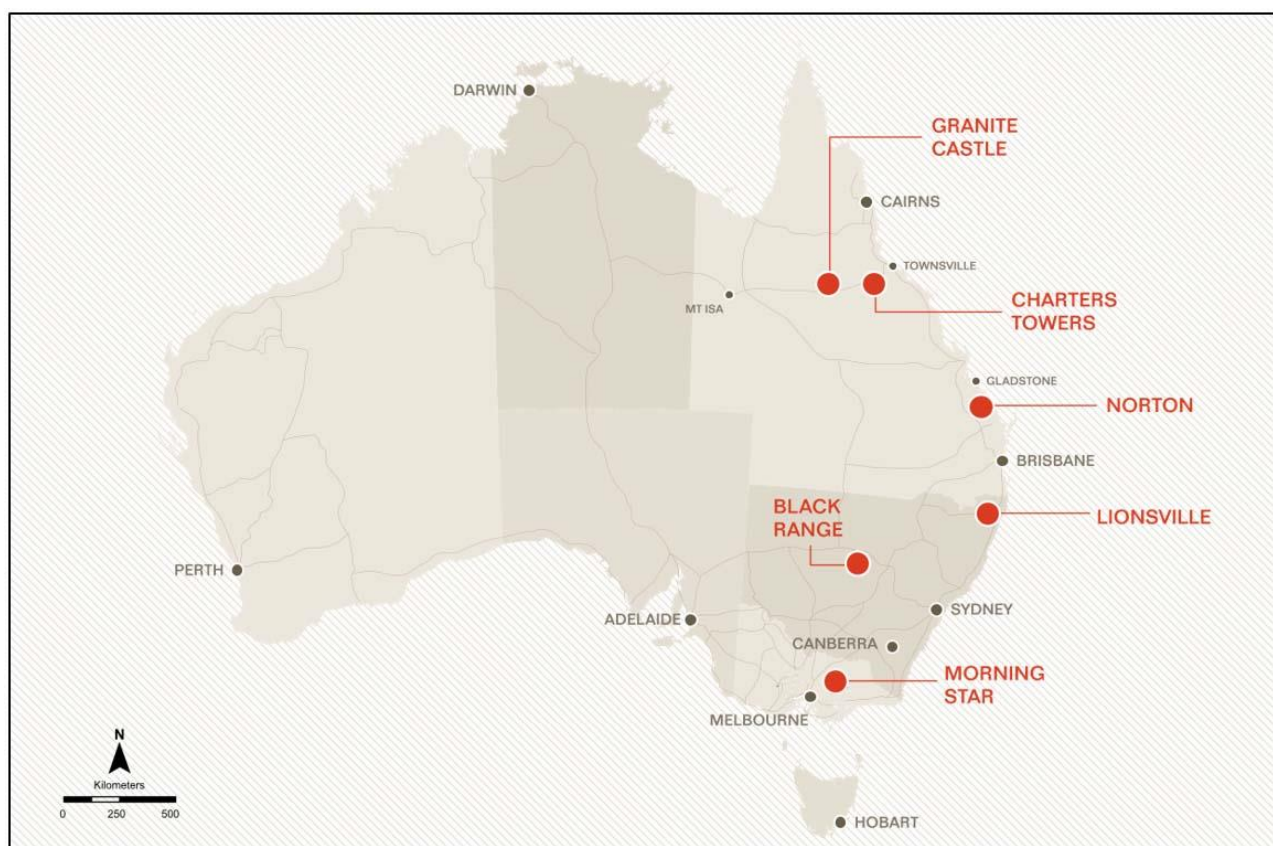


Table 1: Mantle's Tenement Schedule.

Tenement	Project	Name	Grant Date	Expiry Date	Area	Interest (%)
MIN 5009 ²	Morning Star	Morning Star	21/09/1990	Renewal	657 Ha	95
EL 4320 ²	Morning Star	Morning Star	16/11/2008	Renewal	101 km ²	95
MIN 5299 ²	Morning Star	Rose of Denmark	10/11/1981	Renewal	211 Ha	47
MIN 5560 ²	Morning Star	Wallaby	17/12/2013	16/12/2018	10 Ha	95
EL 6321	Morning Star	Morning Star	Application		547 km ²	95
ML 80035 ¹	Norton	Norton	04/04/1996	30/04/2017	22 Ha	90
EPM 14388	Charters Towers	Charters Towers	24/02/2005	23/02/2020	7 sub blocks	100
EPM 14179	Granite Castle	Range Creek	25/11/2004	24/11/2017	6 sub blocks	100
EPM 15527	Granite Castle	Oaky Creek	30/11/2007	29/11/2019	25 sub blocks	100
MDL 2005	Granite Castle	Range Creek	application		1,935 Ha	100
EL 6074	Lionsville	Lionsville	06/05/2003	Renewal	4 units	100
EL 5878	Black Range	Overflow	24/07/2001	Renewal	3 units	13

^{1.} Norton is 10% held by Avanti Mining and Contracting Pty Ltd.

^{2.} Morning Star is 100% held by Morning Star Gold NL, in turn held 95% by Mantle. MIN 5299 is a Joint Venture wherein Morning Star Gold NL holds 49%.

Mantle's Mineral Resources:

Table 2: Morning Star Mineral Resource (95% held by Mantle).

For information on the existing resource, please refer to the report entitled "910,000 Ounces Gold JORC Resource" created on 30 July 2008, which is available to view at www.asx.com.au under ASX code MCO.

Table 3: Norton Mineral Resource (90% held by Mantle).

Class	Tonnes	Au (g/t)	Au (oz)	Ag (g/t)	Ag (oz)
Indicated	107,000	6.2	21,100	15	50,300
Inferred	141,000	3.9	17,700	12	52,600
Total	248,000	4.9	38,800	13	103,000

The information in Table 3 is extracted from the report entitled "Norton Gold Mine Resource Estimate" created on 15 May 2015 and is available to view on www.mantlemining.com

Table 4: Granite Castle Mineral Resource.

Class	Tonnes	Au (g/t)	Au (oz)	Ag (g/t)	Ag (oz)
Measured	111,000	4.3	15,500	58	205,800
Indicated	250,000	3.6	28,800	71	567,900
Inferred	403,000	2.5	32,900	56	727,200
Total	765,000	3.1	77,200	61	1,500,900

The information in Table 4 is extracted from the report entitled "Improved Confidence Levels for Granite Castle Resource" created on 28 May 2008 and is available to view on www.mantlemining.com

Table 5: Charters Towers Mineral Resource.

Class	Tonnes	Au (g/t)	Au (oz)		
Inferred	1,535,000	2.2	109,000		
Total	1,535,000	2.2	109,000		

The information in Table 5 is extracted from the report entitled "Disclosure Document" created on 2 October 2006 and is available to view on www.mantlemining.com

In relation to Tables 3 through 5, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.