



Melior Announces Updated NI 43-101 Resource Report and Preliminary Economic Assessment for the Goondicum Project

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Melior Resources Inc. (TSXV:MLR) ("Melior" or the "Company") announced today that it has received an updated resource report and a preliminary economic assessment (the "PEA") on its Goondicum Project (the "Property") covering ML80044 and MDL2007. The PEA was independently prepared by TZ Minerals International Pty Ltd ("TZMI") in accordance with the guidelines of the Canadian National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101").

The key assumptions and findings of the PEA:

Financial Summary:

- Before tax Project NPV of US\$56.2 million¹; after tax Project NPV of US\$46.4 million¹
- Before tax Project IRR of 100%; after tax Project IRR of 92%
- Before tax Project payback period of 1.5 years; after tax Project payback period of 1.6 years
- Prestart capital costs of US\$7 million
- Total life of mine before tax cash flow of US\$92 million² with US\$51 million² generated in the first three full years of operation.
- Average unit operating cash cost of production of US\$124 FOB per tonne of product produced³
- Capital expenditure over the mine life of US\$16 million²
- TZMI forecast long term prices for Goondicum AA ilmenite and apatite of US\$204/tonne FOB Australia and US\$116/tonne Ex-works respectively

Operating Metrics:

- Average annual ilmenite production of 160,000 tonnes³ with peak production of 198,000 tonnes⁴
- Average annual apatite production of 40,000 tonnes³ with peak production of 56,000 tonnes⁴
- Mine life of 9 years using a high-grade mine plan
- Total mineral resource processed over the life-of-mine of 23.25 million tonnes at an average ilmenite and apatite grade of 7.0% and 2.3% respectively⁵

¹ 8% real discount rate and exchange rate of US\$0.76

² Excludes prestart capital and includes all subsequent capital except mine closure costs

³ Excludes commissioning

⁴ Scheduled for 2020

⁵ Includes indicated mineral resources and inferred mineral resources

Resource Summary:

- Total indicated mineral resources for the project of 66 million tonnes containing 3.4 million tonnes of ilmenite and 1.2 million tonnes of apatite⁶
- Total inferred mineral resources for the project of 27 million tonnes containing 1.4 million tonnes of ilmenite and 0.3 million tonnes of apatite⁶
- ML80044 has a high-grade portion of the indicated mineral resource showing 17 million tonnes of mineralisation at 7.8% ilmenite and 2.0% apatite and a high-grade portion of the inferred mineral resource showing 7.5 million tonnes of mineralisation at 7.1% ilmenite and 2.0% apatite
- Additional mineralization prospective for further exploration has been identified on the eastern side of MDL2007

The main reasons for the changes since the last PEA include:

1. A reduction in the resource estimate ilmenite grade (approximately 16%) due to the change in the methodology used to interpret the drill hole results. This has partially been off-set by the anticipated improvement in ilmenite recovery which has increased to ~90% for modelling based on the proposed plant improvements and revised ilmenite definition in the Resource estimate.

2. An increase in the CAPEX estimate of US\$13.5 million⁷ for year 1 and 2 compared with US\$7.4 million used previously.

Mark McCauley, Melior CEO, commented that *“along with the continuing strength in the titanium feedstock market, this study supports management’s belief that Goondicum is a valuable project and has the potential to generate strong cash flows when production resumes in the 4th Quarter 2018.”*

The PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty the PEA will be realized.

Based on the work carried out in this PEA and the preliminary economic evaluations contained therein, along with all the additional historic information and operating experience available, management believes a positive business case has been confirmed for the restart of operations of the Goondicum project. While the restart of production at the Goondicum project in the absence of a feasibility study demonstrating economic and technical viability presents increased uncertainty and economic and technical risk, the Company believes that these risks are mitigated by, among other things, the work conducted in the PEA, as well as the mine’s past history of production in 2007-2008 and 2012-2015. The IRR of the Goondicum project is high which is consistent with the brownfield nature of the project and low restart capital costs. This is also reflected in a short payback period.

Shareholders are strongly encouraged to refer to the complete updated technical report prepared in accordance with NI 43-101 in respect of the Project, which includes the results of the PEA described in this news release, which will be filed on SEDAR at www.sedar.com under the Company’s profile.

⁶ Apatite has only been assessed for ML80044 as no work has been completed on MDL2007

⁷ Includes Eastern Access Road

About the Mineral Resources

Melior Resources is a company focused exclusively on the mining sector. In 2014 Melior purchased the Property from Belridge Enterprises (“Belridge”) and completed a refurbishment and upgrade of the existing plant. The Property comprises a Mining Lease ML80044 (“ML”) and an adjoining Mineral Development License Application MDL2007 (“MDLA”) that are both owned 100% by Goondicum Resources Pty Ltd (“GR”). The Goondicum deposit was mined within ML80044 by GR in 2015 and by Belridge in 2012-2013. The project has been on care and maintenance since September 2015. Both leases have defined Mineral Resources that have been completed in the past three years. The original exploration work for both the ML and MDLA was completed by Monto Minerals in 1996 to 2005. Belridge followed up on this with the exploration drilling in 2009 on the ML.

The Goondicum Project is located 30 km due east of Monto, or about 50 km by bitumen and dirt road, in Central Queensland, Australia. Monto itself is approximately 150km south west of the port city of Gladstone.

The Goondicum Crater is a topographic feature centred on a roughly circular, 6 km diameter, layered gabbro complex. The main Goondicum ilmenite and apatite deposit lies within ML80044 which covers about 20 percent of the ‘crater’ (the northwest corner), with the remainder of the crater covered by concurrent mineral development license application MDL2007 and exploration leases, EPM 9100 and EPM 19382. Significant ilmenite, apatite and titanomagnetite mineralisation is variably present in a near surface weathered horizon throughout the crater. The dimensions of the mineralisation covered under ML80044 are approximately 3.5km by 1.3km for an area of approximately 5.1km² and is up to 25 m thick. The dimensions of the mineralisation covered under the western half of MDL2007 are approximately 7km by 1.5km for an area of approximately 10.5km² and is up to 15 m thick.

The gabbro in the area under investigation has undergone multiphase oxidation and erosion producing a relatively complex weathering pattern, complete with a full lateritic profile within the host rock. A new geological model has been developed with four mineralised units being delineated from drilling information and surface topography/mapping, comprising colluvium (“CL”), an upper clay-sand unit sub-divided into high slimes (“CS_H”) and low slimes (“CS_L”) and a lower decomposed gabbro (“DG”). The last unit contains a small amount of material that was recognised as fresh gabbro (“GA”). For the MDLA, the CL and clay-sand units are combined into a “CS” unit and are thought to represent in situ to short-distanced transported material from both alluvial and gravity slide (soil creep) processes. The CS_L may be indicative of more alluvial-worked material but resembles the DG and the two lithotypes have been amalgamated as the DG unit for modelling purposes. The DG is believed to be in situ. Mineralisation comprises resistive ilmenite and apatite grains (with associated titanomagnetite) liberated by the relatively complex weathering process.

The resource estimates for the ML are based on 224 aircore drillholes for 2,394m drilled in 2009. The logging codes were used to generate lithology surfaces with some minor modifications, particularly from the slimes assays, to maintain geological sense. The maiden resource estimates for the MDLA are based on 332 reverse circulation (“RC”) drillholes and 38 hand auger holes for 2,152m and 2,523 samples, drilled between 1996 and 2000. The new mapping information from 2014 and drillhole logging codes were used to generate new lithology surfaces for the base of CS_H and CS_L with some minor modifications, particularly from the slimes assays, to maintain geological sense.

The aircore drilling generated chip samples that were collected as bulk samples for each 1m drilled interval. The samples were transported to the Goondicum Minesite where they underwent sub-sampling prior to magnetic separation. The samples then underwent washing, size and magnetic fraction analyses at Belridge's minesite laboratory before dispatch of selected composited intervals to Downer EDI Mining – Mineral Technologies Pty Ltd (Mineral Technologies) for Clerici float/sink testwork and XRF analysis to determine ilmenite and apatite content. The QAQC for the sampling has included the use of a matrix-matched standards and field duplicates of the original aircore samples with no significant issues reported. The RC drilling generated chip samples that were collected as bulk samples for each 1m drilled interval. The 1996 samples were transported to the Monto-based DFS Laboratory where they underwent sub-sampling, screening, and washing, prior to magnetic separation. The 1999/2000 samples were transported direct from the drill site to Readings Laboratory in Lismore where they underwent a similar program of sampling, screening, and washing, prior to magnetic separation to that used previously in the Monto Laboratory. In both cases following magnetic separation, composited intervals of the 5.5amps magnetic fractions were forwarded to MD Mineral Technologies Laboratory, on the Gold Coast, for Clerici float/sink test work and XRF analysis to determine the contained ilmenite, reported as an 'ilmenite conversion factor' for different lithologies. The QAQC for the sampling has included field duplicates of the original 1996 and 1999/2000 RC samples, testing of repeat samples from both drilling programmes and comparison between the 1996 Monto DFS and the 1999/2000 Readings laboratories sample treatment. Based on re-testing some shaking table tailings, the Readings Laboratory, in producing higher ilmenite in the table concentrates, also 'lost' between 18 and 23% of the total 5.5amp magnetics fraction during tabling.

On the ML a total of 2,430 by 1m composites were used to model 'available ilmenite' and 2,430 by 1m apatite and slimes composites were modelled for the apatite and slimes grades. Ilmenite grades for the CL and CS_H are markedly higher than the CS_L and DG lithotypes due to probable weathering and transportation upgrades. There also appears to be some primary mineral zonation of the ilmenite in an arcuate zone parallel to the interpreted margin and the associated rock-forming mineralogical zonation of the layered gabbro. Higher apatite grades are linked to the arcuate outer 500m of the gabbro with similar grades for the CS_H, CS_L and DG, and probably represent remanent primary mineralisation. On the MDLA a total of 1,844 1m composites were used to model the 5.5amp recovered magnetic fraction and slimes data (no apatite drilling data). Ilmenite and slimes grades for the CS are markedly higher than the DG.

The drill collar elevations were made the same in order to 'flatten' the composite data to allow for better variogram searches and modelling. Modelling used Ordinary Kriging in a two pass search strategy with flat circular searches. For the ML the initial search diameter was 400m (x and y) by 4m (z) for Pass 1 to 800m by 6m for Pass 2. Minimum data was 8 for Pass 1 decreasing to 4 for Pass 2. Minimum number of drillholes was 3 and 1 for Passes 1 and 2 respectively whilst maximum number of points per hole was 4 and 6 for Passes 1 and 2 respectively. For the MLA the initial search diameter of 200m (X and Y) by 4m (Z) for Pass 1 to 300m by 6m for Pass 2. Minimum data was 8 for Pass 1 decreasing to 4 for Pass 2. Minimum number of drillholes was 3 and 2 whilst maximum number of points per hole was 4 and 6 for Passes 1 and 2 respectively. Post modelling data manipulation involved unflattening the data to place it in real space. Average density values from earlier diamond core work on the MDLA were used for reporting the resource estimates. New topographic surfaces were created for the ML based on the 2012 and 2013 LiDAR data in conjunction with the historic detailed 1m contour data and were used to constrain the resource modelling and the resource reporting. For the MDLA a topographic surface was created from detailed 1m contour data derived from an air photo interpretation. In both cases a base-of-assaying surface was also interpreted from the drillhole data to provide an additional constraint to the resource modelling.

Reporting of the resource estimates in both cases used a 2.5% ilmenite cut-off grade and partial percent volume adjustment factors for the topographic and the base-of-assaying surfaces. For the ML the available ilmenite grade field was used with no processing recovery factor. The ilmenite grade for the MDLA is based on the 5.5amp magnetics value multiplied by the ilmenite conversion factor which makes provision for likely ilmenite recoveries from processing. An additional constraint for the MLA was the mapped outlines of prospective areas generated from the recent mapping work. Classification of the resource estimates in both cases is primarily based on the search criteria after consideration of other impacting criteria e.g. grade continuity, QAQC, sample recovery, density and geological understanding.

ML80044							
Category	Tonnes Mt	Available Ilmenite %	Apatite %	Slimes %	Available Ilmenite Mt	Apatite Mt	Slimes Mt
Indicated	50.7	5.2	2.4	23.5	2.6	1.2	11.9
Inferred	14.2	5.4	2.4	28.6	0.8	0.3	4.1

(minor rounding errors)

MDL2007					
Category	Tonnes Mt	Ilmenite %	Slimes %	Ilmenite Mt	Slimes Mt
Indicated	15.6	5.1	29.5	0.8	4.6

Inferred	12.3	5.2	27.3	0.6	3.4
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(minor rounding errors)

The apatite data for the MDLA is limited in scope and has not been included in the resource estimate.

The resource estimates are also reported by host lithology.

ML80044					
Lithology	Category	Tonnes Mt	Available Ilmenite %	Apatite %	Slimes %
CL	Indicated	1.5	7.9	1.1	54.0
CS_H	Indicated	15.6	7.8	2.0	48.8
DG	Indicated	33.6	3.8	2.6	10.4
Totals	Indicated	50.7	5.2	2.4	23.5
CL	Inferred	0.1	6.9	1.0	51.4
CS_H	Inferred	7.4	7.1	2.0	44.7
DG	Inferred	6.7	3.6	2.8	10.5
Totals	Inferred	14.2	5.4	2.4	28.6

(minor rounding errors)

MDL2007						
Lithology	Category	Tonnes Mt	Ilmenite %	Slimes %	Ilmenite Mt	Slimes Mt
CS	Indicated	8.7	6.1	43.8	0.53	3.81
DG	Indicated	6.9	3.7	11.4	0.26	0.79
Total	Indicated	15.6	5.1	29.5	0.79	4.60
CS	Inferred	7.5	6.1	37.9	0.46	2.85
DG	Inferred	4.8	3.7	10.8	0.18	0.52
Total	Inferred	12.3	5.2	27.3	0.64	3.37

(minor rounding errors)

Block model validation consisted of visual comparison of block grades with composite grades, comparison with historical resource estimates and statistical comparisons including cumulative frequency plots and summary statistics. No significant issues were noted.

Reconciliation of the new H&SC ML block model with the 2012-2013 production showed a 10% difference which is considered acceptable for an Indicated Resource. Reconciliation of the new H&SC ML block model with the 2015 production showed a 24% difference in tonnes mined but only a 4% difference in recovered ilmenite product which is considered acceptable for an Indicated Resource. Depletion for the 2015 mining has not been factored into the current estimates due to the relatively small amount of material extracted and processed.

An in-depth review of the 2009 assay data for the ML by GR identified the mathematical process used by the original operators in 2009 for calculating the ilmenite conversion factors for the 5.5amps data. GR has also identified that many of the composited samples used for the Clerici sinks/floats testwork were 'contaminated' i.e. contained mixed lithology types, often only 1 sample out of 8 or 9 samples in a composite. This contamination was sufficient to bias the sinks testwork and removal of these composite samples allowed for a better correlation between the 5.5amp magnetics data and ilmenite grade i.e. this allowed for the generation of new ilmenite conversion factors for the different lithologies. This now meant that there were 2,430 ilmenite results for grade interpolation up from the previous figure of 977 and potentially of better quality as the contaminated samples had been removed. In addition to the creation of a new ilmenite dataset the new estimates also had a revamp of the geological interpretation. This included:

1. A major redesigning of the CL surface outline from air photo interpretation with ground truthing and linking it more realistically to the drill hole lithology codes.
2. Using the 1996/2000 drill hole logged geology and slimes grades for the ML to refine the base of CS_H.
3. The CS_L has now been interpreted as a more intensely weathered and hence friable DG and thus the CS_L sample

composites have now been combined with the DG for grade interpolation.
4. The CS_H and CL were combined for modelling purposes.

The current ML resource model stops about 150m short of the eastern boundary of the ML and there is potential for more resource in this area.

There are opportunities for expanding the size of the resource within the MDLA by drilling in the identified prospective areas of the crater that have no drilling to date. Further field inspection of the periphery of the prospective areas is required to confirm suggestions from the resource modelling of additional resource marginal to the target areas.

Further exploration opportunities exist within the remainder of the Goondicum Crater as some of the earlier drilling work by Monto Minerals had intersected significant amounts of similar style ilmenite mineralisation within the eastern part of the crater.

Further proposed exploration on the MDLA is primarily designed to expand the size of the resource.

Qualified Persons Statement

The Qualified Persons for the PEA are:

Steven Gilman, BAppSc (Extractive Metallurgy), FAusIMM (CP) (105881), SME (1158500), employed by TZMI as Principal Consultant, was responsible for Sections 1,2,13,15,16,17,18,19,21,22,24,25,26,27.

Mineral resources estimates were completed by H&S Consultants Pty Ltd ("H&SC"), a geological consultancy based in Sydney, NSW, Australia and are reported in accordance with Canadian Securities Administrators National Instrument 43-101. The effective date of the mineral resources estimates disclosed in this news release is December 16, 2017.

Simon Tear, BSc Hons (Mining Geology), P.Geo (Institute of Geologists of Ireland 17), EurGeol (26), employed by H&SC as a director and Consultant Geologist, was responsible (or partly responsible) for Sections 3,4,5,7,10,11,12,14,20,23,25,26,27.

Graham Lee, BSc (Geology), FAusIMM CP(Geo) (101602), MAIG (1990), employed by Graham Lee and Associates Pty Ltd as a Director and Consultant Geologist, was responsible (or partly responsible) for sections 6,8,9,10,11,20,25,26.

All of the scientific and technical information in this news release has been reviewed and approved by Steven Gilman, Simon Tear and Graham Lee. All three individuals are independent of Melior and all have the appropriate relevant qualifications and experience to each be considered an independent Qualified Person under the terms of NI 43-101.

About Melior

Melior is the owner and operator of the Goondicum mine, a past-producing ilmenite and apatite mine strategically located in Queensland, Australia. Further details on Melior and the Goondicum mine can be found at www.meliorresources.com and regulatory filings are available on SEDAR.

Melior is incorporated under the provisions of the Business Corporations Act (*British Columbia*) and has a registered office in Toronto, Ontario. Melior is classified as a Tier 1 Mining Issuer under the policies of the TSX Venture Exchange.

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Forward Looking Statements Disclaimer

Certain information contained in this news release constitutes forward looking information under the provisions of Canadian securities laws. Forward-looking statements are statements that are not historical facts and are generally, but not always, identified by the use of forward-looking terminology such as "plans", "expects", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", "projects", "potential", "believes" or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "should", "might" or "will" be taken, "occur" or "be achieved" or the negative connotation. Information provided in this document is necessarily summarized and may not contain all available material information.

All of the results of the PEA represent forward-looking information and statements. Statements in this news release that constitute forward-looking statements or information include, but are not limited to: commodity price assumptions, cash flow forecasts, projected capital and operating costs, recoveries, mine life and production rates, the financial results of the PEA

(including NPV and IRR conclusions) as well as other assumptions used in the PEA. Readers are cautioned that actual results may vary from those presented. Although the forward-looking statements contained in this news release reflect management's current beliefs based upon information currently available to management and based upon what management believes to be reasonable assumptions, Melior cannot be certain that actual results will be consistent with these forward-looking statements. A number of factors could cause events and achievements to differ materially from the results expressed or implied in the forward-looking statements. Such risk factors include but are not limited to risk factors identified by Melior in its continuous disclosure filings filed from time to time on SEDAR. These factors should be considered carefully and prospective investors should not place undue reliance on the forward-looking statements. Forward-looking statements necessarily involve significant known and unknown risks, assumptions and uncertainties that may cause Melior's actual results, events, prospects and opportunities to differ materially from those expressed or implied by such forward-looking statements. Although Melior has attempted to identify important risks and factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors and risks that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. These forward-looking statements are made as of the date of this news release, and Melior assumes no obligation to update or revise them to reflect new events or circumstances, unless otherwise required by law.