



ASX Announcement

ASX Code: MAR

19 June 2018

Lorena Gold Project – Update: Additional Gold to be Mined from Open Cut

Malachite Resources Limited (ASX Code: MAR) (“Malachite” or the “Company”) is pleased to provide the following update in respect of the Lorena Gold Project (“Project”). The Project is a joint venture between Malachite 55%, Cloncurry Gold Recovery Management Pty Ltd (30%) and Ore Processing Services Pty Ltd (15%).

The joint venture parties completed an assessment of the exploration carried out earlier in the year to determine whether modification of the pit design should be undertaken to increase the mineable resource within the pit. An updated resource block model, incorporating these recent exploration results, has now been completed. A preliminary re-design of the pit, based on this updated block model, has shown that a cut back to the south east corner of the pit could deliver up to an additional 9,000 ozs of gold at an average grade of between 4.0 and 4.5g/t Au. At this stage the economics of carrying out the cut back are encouraging and further work is being done to confirm the viability of revising the pit for mining purposes.

In May, the decision was made to temporarily suspend mining operations from the pit with the aim of resuming mining activities later in the year. This decision was made primarily on the basis that sufficient ore had been stockpiled on the ROM pad to provide feed to the processing plant for approximately six months and to determine whether a re-design of the pit was required as noted above.

Commissioning of the Project was substantially completed in the March 2018 quarter. Since that time the operator of the Project has been focussed on achieving design criteria from the processing plant. Over this period there have been a number of operating challenges, as one would expect with any new mineral processing plant. These challenges included issues with the on-site power generators, the leased secondary crusher (now changed from an impact crusher to a cone crusher to achieve the optimal sizing to feed the ball mill), maintaining design slurry density parameters, and bringing all six of the CIL tanks on line. During this time lower grade ore and B lode ore were utilised for the processing plant feed while the plant’s performance was being optimised. The Company is pleased to report that these challenges have been largely overcome and that the processing plant is now running consistently at its nameplate capacity of 25 tonnes per hour. Higher grade ore from A lode is scheduled to be processed later this week. Production details will be provided on an ongoing basis in the Company’s quarterly activity reports.



ROM stockpile in background behind processing plant – photo taken from tailings dam wall

Earthworks for the tailings dam have now been completed. Earlier this month the second cell of the tailings dam had been lined (refer photo below), with the final lining to be installed later in the year.



Second cell of the Lorena tailings dam liner being installed.

Exploration - Lorena near surface

As previously reported, the planned reverse circulation drilling program was undertaken by the Lorena Joint Venture for a total of 2,190m of drilling in 17 holes, during the course of February and March 2018.

The drilling was designed to test conceptual targets for gold mineralisation; in shears parallel to the main A-lode that is currently being mined, A-lode mineralisation below the current pit, up dip projections of high-grade mineralisation and potential extensions to A and B-lodes to the NW. A secondary aim was to update the reserve block model, allowing time for a review of the pit design, prior to the completion of mining.

Details and assay intercept reports for holes LMR107 to LMR116 were previously reported on 10 April 2018, under the title "Significant Exploration Results-Lorena".

Drillholes LMR117 to LMR120 reported gold intersections and these are reported in Table 1.

Drillholes LMR121 to LMR123 were drilled to test structural targets defined in Sub Audio Magnetic (SAM) data to the north of the pit. No mineralisation or encouraging alteration was intersected in these holes.

The drilling details and assay intercept reports for >0.5g/t Au for holes; LMR107 to LMR123 are presented in Table 1. The drillhole locations are shown in Figure 1.

Lorena Drilling Summary Table 1

HOLE ID	ML ID	MGA Z54 East	MGA Z54 North	MG A Z54 RL	Dip	Azimuth	EO H (m)	Intercept Depth: From (m)	Intercept Depth: To (m)	Au intercept at 0.5g/t Au cut-off
LMR107	ML7147	463410	7708982	195	-61	55	102			No significant assays
LMR108	ML7148	463463	7708867	195	-58	59	72	17	19	2m @ 1.31g/t Au
								35	40	5m @ 3.81g/t Au
								42	48	6m @ 12.86g/t Au
LMR109	ML7149	463422	7708873	195	-71	52	126	89	91	2m @ 1.42g/t Au
LMR110	ML90192	463503	7708833	192	-72	42	78	48	57	9m @ 11.32g/t Au
								59	60	1m @ 0.72g/t Au
LMR111	ML90192	463505	7708836	192	-55	42	60			No significant assays
LMR112	ML90192	463413	7708795	206	-57	47	168	153	157	4m @ 1.67g/t Au
LMR113	ML90192	463399	7708813	207	-57	47	174	148	149	1m @ 1.24g/t Au
LMR114	ML90192	463325	7708847	209	-64	46	186	144	146	2m @ 2.91g/t Au
								150	151	1m @ 0.62g/t Au
LMR115	ML90192	463330	7708853	209	-59	46	12			Failed pre-collar
LMR116	ML90192	463335	7708857	209	-58	44	168	134	135	1m @ 1.69g/t Au
LMR117	ML90192	463396	7708812	207	-65	56	168	90	92	2m @ 3.65g/t Au
LMR118	ML90192	463376	7708824	207	-59	45	168	146	149	3m @ 1.91g/t Au
								153	155	2m @ 1.72g/t Au
LMR119	ML90192	463352	7708836	208	-65	46	174	151	152	1m @ 1.64g/t Au
LMR120	ML90192	463354	7708838	207	-60	46	168	142	143	1m @ 1.88g/t Au
LMR121	ML7149	463269	7709030	216	-71	30	114			No significant assays
LMR122	ML7149	463337	7709004	216	-75	195	168			No significant assays
LMR123	ML90192	463540	7708986	210	-55	235	84			No significant assays

Intercepts calculated using a 0.5g/t Au cut-off and minimum dilution of 3m

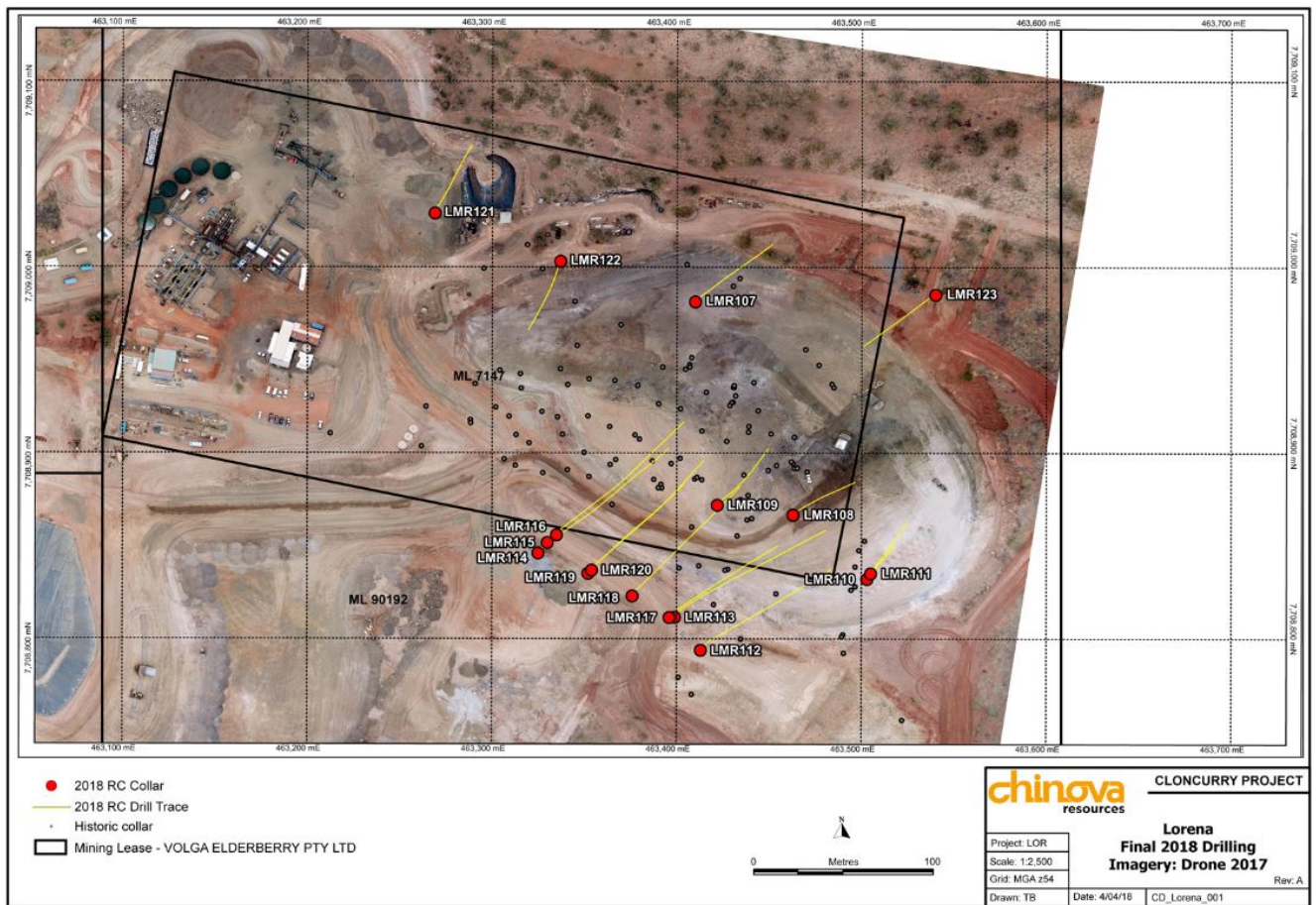


Figure 1: Drillhole Locations for the Feb/March 2018 program

Exploration – Lorena Deeps Drilling

Malachite has engaged a structural geological consultant to assist in targeting the best drilling locations to test for extensions of the Lorena deposit at depth. Based on 3D modelling, a drilling program has been designed with approximately 8 to 10 holes to expand on the results of recent exploration, previous drilling (LMRD092 which reported 6m @ 10.90g/t Au from 224m downhole) and downhole geophysics (completed by Malachite in 2012). Decisions in relation to this drilling program are expected to be confirmed within the next few months.

JORC TABLE 1

Section 1: Sampling Techniques and Data

Criteria	Explanation
Sampling techniques	<ul style="list-style-type: none"> Reverse Circulation (RC) drill hole sampling was undertaken using a 25% split being collected from a cyclone riffle splitter on the rig, every metre. Composites combining 2 one-metre samples were made up for areas with no mineralisation or alteration present.
Drilling techniques	<ul style="list-style-type: none"> Reverse Circulation drilling with a face sampling hammer was used.
Drill sample recovery	<ul style="list-style-type: none"> Sample recovery for the drilling program was good, although many holes had wet samples reporting to the cyclone.
Logging	<ul style="list-style-type: none"> One-metre chips are sieved through a kitchen sieve with the fines being collected in 100gm packets and the oversize visually logged by geologist and sample retained in plastic trays for later review. Chinova records geological information including lithological, alteration, mineralisation in RC drill logs. Magnetic susceptibility measurements are completed on each one-metre sample and pXRF readings are also measured when the sample is dry. The pXRF results are used to discriminate mineralised zones where arsenic and bismuth values are a good indicators of potential gold mineralisation.
Sub-sampling Techniques and sample preparation	<ul style="list-style-type: none"> RC chips are split from the cyclone to obtain approximately 25% sub sample around 4-5kg of material. A field duplicate, blank or certified reference standard is included every 10 samples. Samples are despatched with a maximum of 100 samples in each batch.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> All available QAQC data has been assessed. Chinova drilling has considerable QAQC data which includes; blanks, duplicates, standard reference material and check samples. Previous regular internal reviews by an Ivanhoe QAQC expert have ensured regular monitoring, correction and continuous improvement in sampling and assaying quality. Samples were dispatched using a security tag system and sent to ALS Mt Isa for processing. All samples were analysed for Ag, As, Bi, Cu, Co, Fe and S by ICP-AES41 with Au assayed as a 50gm fire assay by method Au-AA26. Over-range assays for As (1%) and Cu (0.5%) are reassayed by method OG-46 by ALS Townsville. All assays reporting greater than 5g/t Au are routinely collected and assayed as a group by a screen fire method; Au-SCR22AA. The information from this assaying method can be used to calculate the amount of coarse gold (>70microns) reporting from samples. Eight samples reported greater than 5g/t Au and were assayed by the screen fire assay method. For seven samples there is no discernible difference between the original and screen fire assay. This suggests coarse gold is not a factor at Lorena. Only one sample CD012895 reports; about double the gold in the screen fire compared to the original assay and duplicate. All despatches passed the QAQC process. The detection limit for gold analysis, AA26, is 0.01 g/t with all blank samples recording values below the detection limit except four samples which recorded values at the detection limit. The results from the blank samples indicate no contamination between samples assayed at the laboratory. The results from the duplicate samples indicate good precision for the sampling stage at the drill rig with only one sample showing significant variation. The CRM's consist of commercial standards obtained from Geostats Pty Ltd and

	Ore Research and Exploration Pty Ltd. All the results from the CRM's returned assay values within two standard deviations of the certified value with the exception of two samples. The whole batch with the two exceptions was reassayed for Au with no significant change in the results.
Verification of sampling and assaying	<ul style="list-style-type: none"> Assay data is imported electronically from a file sent from the laboratory into acQuire database. Assay priorities are assigned by assay method if different methods were used for the same interval. 'Best assay' is assigned the highest priority. Au duplicates and repeats are not averaged to produce the 'best' assay; this conforms to standard industry practice. All certified reference standards reported within a 2-standard deviation tolerance. The blank standard composed of Mt Dore granite reported no anomalous assays and the duplicate samples all report within accepted limits.
Location of data points	<ul style="list-style-type: none"> All collar locations were surveyed in by the Lorena Mine surveyor.
Data spacing and distribution	<ul style="list-style-type: none"> Drill hole data was composited to 2m intervals for zones with limited alteration or sulphide mineralisation. One metre samples were assayed for areas of interest.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> To intersect the main zone drillhole's azimuth was orientated to the ENE Two holes designed to intersect potential mineralisation along the NE Fault and the NW Fault were drilled to the SW, parallel to the assumed SW dip. This was done because the optimum position to drill was not accessible, within the pit.
Sample security	<ul style="list-style-type: none"> All samples are dispatched with tamper proof seals and locks and only opened when supervised by the laboratory manager along with the dispatch sheet that is issued separately. Chinova sample security processes go beyond normal Australian exploration practice.
Audits or reviews	<ul style="list-style-type: none"> The ALS Mt Isa lab was audited in March 2018 by Chinova staff and the ALS Townsville lab was also audited by Chinova staff, in December 2018. The competent person made two visits to the Lorena site during the drilling campaign and assisted with the sampling procedure and despatch of samples to the ALS Mt Isa lab.

Section 2: Reporting of Exploration Results

Criteria	Explanation
Mineral tenement and land tenure status	<ul style="list-style-type: none"> The drilling took place on two ML's owned by Volga Elderberry Pty Ltd a subsidiary of Malachite Resources Pty Ltd listed on the ASX. The two ML's are ML90192 and ML 7147. Chinova Resources is part of the Lorena Joint Venture, currently mining and processing gold on the two ML's.
Exploration done by other parties	<ul style="list-style-type: none"> Since 1985 a number of companies have explored and drilled at the Lorena Mine. Chinova Resources managed the RC drilling program for the Lorena Joint Venture.

Geology	<ul style="list-style-type: none"> Mineralisation at Lorena is located in a SW steeply dipping Fault system, composed of silicified and brecciated shale and siltstone of the Toole Creek Volcanic Formation. The Toole Creek Volcanic Formation is a carbonaceous siltstone and shale package with numerous intrusive, doleritic dykes and or sills. Dolerite is found in the footwall of both the A-lode and B-lode gold mineralisation. To the south, calc-silicate units ascribed to the Corella Formation, striking approximately East-West, dip about 40 degrees to the south. Gold mineralisation is associated with arsenopyrite, minor chalcopyrite and pyrite and bismuth minerals in a brecciated silicified carbonate rich zone. Pyrite is more commonly found in the footwall
Drill hole Information	<ul style="list-style-type: none"> All holes were drilled by reverse circulation using a face sampling hammer. All hole collars were surveyed by the Lorena Mine Surveyor. Downhole reflex gyro was used to track the inclination and azimuth of all holes.
Data aggregation methods	<ul style="list-style-type: none"> The initial AA-26 50 gm fire assay was used in calculating intercepts except Exploration intercept reports for gold were by weighted averaged over intervals above 0.5g/t Au. A maximum dilution factor of 3m was applied.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> No comment is made on True thickness in this report and all intercepts are reported as downhole intervals.
Diagrams	<ul style="list-style-type: none"> A map (Figure 1) and drill table with intercepts as Table 1 is presented.
Balanced reporting	<ul style="list-style-type: none"> Exploration results only, are presented in this report.
Other substantive exploration data	<ul style="list-style-type: none"> No other substantive information is presented in this report. Mining at Lorena along the A-lode is continuing.
Further work	<ul style="list-style-type: none"> Further work will concentrate on the depth potential of extensions of the A-lode to the south east and confirming the connection between LMR110 and LMRD092.

Mark McGeough, General Manager of Exploration, who is a Fellow of the Australasian Institute of Mining and Metallurgy, and a full time employee of Chinova Resources Pty Ltd. Mr McGeough has sufficient experience that is relevant to the style of mineralisation and the type of Exploration Results under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mark McGeough consents to the inclusion in the report of the matters based on his information on the form and context in which it appears.