2 August 2021

LYNAS EXPANDS KNOWLEDGE OF THE MT WELD ORE BODY WITH 1KM DEEP EXPLORATION DRILLHOLE

Lynas Rare Earths Limited (ASX:LYC, OTC:LYSDY) is pleased to announce the successful completion of 1020m deep core drilling into fresh carbonatite below the current Rare Earth Elements (REE) open pit mine.

The exploration drilling program was designed to expand the ore body knowledge of Mt Weld by understanding the primary Rare Earth Elements mineralisation and the geology and structure of the carbonatite host rock. The program was partially funded by WA government under the Exploration Incentive Scheme (EIS), 2020-2021.

The following report provides information about the exploration drill program which was completed ahead of schedule in June 2021.

Key highlights:

- Successfully completed 1020m deep exploration drillhole MWEX10270 by diamond core drilling method.
- The drillhole is collared from the current mine pit floor, designed at -55 degree inclination and drilled in a due west direction below the 2018 design of Life of Mine (LOM) future expansion in saprolite zone.
- Geological and structural core logging as well as core photography is complete (photos on following pages). Half splitting and quarter splitting the core using a diamond saw is in progress.
- The entire drillhole remained in the Mt Weld Carbonatite. Core logging has identified four domains of carbonatite: dolomite, ankerite, calcite and phoscorite.
- Varying concentrations of coarse grained and fine grained REE mineralisation was observed in multiple domains during core logging. REE mineralisation is not always visible during geological logging. Previous drill holes (LWB025 and LWB026 Lynas ASX update 26 November 2020) in which REE mineralisation was not visible, assayed up to 2.5% average REE mineralisation and identified coarse grained aggregates of REE minerals upon microscopic mineralogical study. REE content will be quantified once geochemical assay data and mineralogical results are received.
- The current exploration drillhole has ended in visible coarse grained REE mineralisation.
- First pass geochemical assay results, microscopic petrology and mineralogical study reports are expected by November 2021 and the drilling report is expected to be completed in December 2021.
- Further detailed analytical work including metallurgical test work will be conducted on the drillhole samples and follow-up geological work will be conducted.

Lynas Rare Earths CEO and Managing Director, Amanda Lacaze commented, “We are excited about this deep exploration drillhole into the Mt Weld carbonatite. The world will need increasing supplies of Rare Earths for many years to come. The Mt Weld orebody is recognised as one of the richest known deposits in

the world. Expanding our knowledge of this ore body is an essential part of ensuring Lynas continues to grow as a reliable supplier to global markets.

This is the first time we have conducted a one kilometre deep exploration drilling at Mt Weld. The results will expand the ore body knowledge of the Mt Weld REE deposit and will assist planning for future resource expansion drilling into the fresh carbonatite.

As well as understanding the primary Rare Earth Elements mineralisation, drilling to these depths has revealed the presence of the magnetic host rock which was the reason the Mt Weld deposit was identified in the 1960s via aerial magnetic surveys."

Further details of the latest drilling campaign are set out in the following pages.

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Background

On 26 November 2020, Lynas Rare Earths provided an update of the drilling results of two vertical boreholes, LWB025 and LWB026 drilled approximately 200m from the base of the current Mt Weld open pit mine. The drillholes discovered nearly homogeneous mineralogy and continuous mineralisation of coarse grained REE mineralisation ranging from 2.2% to 2.5% REO content throughout the drillhole. The current exploration drilling MWEX10270 is based on the follow-up geological work from the above-mentioned boreholes. During November 2020 Lynas Rare Earths made an application to the Western Australian Government for support under the Exploration Incentive Scheme (EIS) which was successful. As per the EIS agreement between Lynas Rare Earths and the Western Australia Government, Lynas Rare Earths will provide the half split drill core to the Western Australia Government core library and provide analytical results in the form of a geological interpretation report. The Western Australia Government will reimburse half of the direct drilling cost to Lynas up to a maximum of $200,000.

Exploration Drilling update

Blue Spec Drilling Kalgoorlie was the drilling contractor. Drilling commenced on 9 May 2021 and completed on 7 June 2021. The drill hole was collared at the current mine floor which is about 65m deep from the general topography (425 m AMSL) of the area (Figure 1). Drill collar coordinates are below.

Drill Hole ID	Grid MGA94					
	Northing	Easting	RL metres	Depth metres	Dip	Azimuth
MWEX10270	6807114.8	455825.5	365	1020.40	-55° *	270º *

Note *: Continuous downhole gyro survey was conducted by the drilling company through the drillhole to know the accurate dip and azimuth of the drill hole trajectory to conduct geological interpretation and modelling.

Drillhole specifics

Depth		Size			
From-metres	To-metres	Size	Hole diameter	Core diameter	Comment
0	92	HQ	96.1mm	63.5mm	Metal casing
92	1020.4	NQ2	75.7mm	50.7mm	Downhole core orientation mark was obtained on NQ2 core

Geological Update:

Two days prior to the completion of drilling, multi-probe geophysical down hole wire line logging was conducted through the drillhole. Wire Line Services Group, Perth, has conducted the wire line logging. Multiple petrophysical data including rock density, electrical conductivity, Full Sonic Wave acoustic property, natural gamma, magnetic susceptibility, and structural orientation logs were collected. After

completion of drilling, detailed geological logging, structural logging and core photography was completed. RQD data was collected on the drill core for geotechnical analysis. Currently, the drill core is being split into half core and quarter core using core cutting diamond saw.

Core logging of MWEX10270:

The Mt Weld Carbonatite (MWC) is a sub-vertical cylindrical igneous intrusion approximately 3 kilometres in diameter. Carbonatite is concealed under about 25 m thick layer of younger transported alluvial sedimentary cover. Prior to the sedimentation, prolonged lateritic weathering process has concentrated REE minerals in the upper saprolite zone of the carbonatite. The saprolite zone has variable thickness from about 80m to 120m (Figure 2). The current mine is only about 65m deep and is producing REE ore from the saprolite zone.

During core logging of MWEX10270 multiple geological domains were observed. The drillhole started in the saprolite zone. The primary (un-weathered) carbonatite rock occurring below the saprolite zone is a combination of ferroan dolomite, ankerite (dolomitic carbonatite minerals), sovite (calcitic carbonatite mineral) and phoscorite (carbonate minerals along with magnetite and mafic minerals). Multiple bands of dolerite and mafic minerals are observed in the phoscorite domain deeper in the drillhole. Significant thickness of hydrothermal alteration was observed by the presence of secondary chlorite minerals, and narrow veins of calcite, pyrite, fluorite, graphite and re-mobilised REE minerals.

During core logging, varying concentrations of disseminated coarse grained and fine grained REE mineralisation was observed in multiple domains of carbonatite (Figures 3, 4, 5 and 6). REE mineralisation is not always visible during geological logging. Samples from previous drill holes (LWB025 and LWB026 Lynas ASX update 26 November 2020) have analysed up to 2.5% average REE mineralisation without any significant visible REE minerals during geological logging. In those drill samples microscopic mineralogical studies have identified coarse grained aggregates of REE minerals in carbonatite. Current deep exploration drillhole MWEX10270 has ended in visible coarse grained REE mineralisation at 1020.4m depth (Figure 6). This doesn't imply that the entire drillhole has REE mineralisation. Geochemical assay will be conducted on the entire drillhole profile and microscopic studies will be conducted on all geological domains in the drill core. There will be variations in the distribution of REE minerals among different geological domains of carbonatite. Until geochemical assay data and mineralogical results are received, it will not be possible to quantify the REE content in the drill core.

Planned geological work

In the coming days, the half split core of the complete drill hole will be submitted to the Western Australia Government core library, Kalgoorlie. The remaining half core is simultaneously split into quarter core. One quarter of the core will be crushed and pulverised to conduct geochemical analysis at Intertek Genalysis assay laboratory, Perth. Select samples from all geological domains will be subjected to microscopic petrological and mineralogical studies.

All technical data will be assessed, interpreted, and modelled in 3D modelling geological software to build orebody knowledge of Mt Weld REE project for future business expansion. The combined geological interpretation report is expected to be prepared and updated by December 2021. A copy of the report will

be submitted to Western Australian Government Department of Mines, Industry Regulation and Safety, (DMIRS). The remaining quarter core will be preserved at the Mt Weld project geological storage for future reference as well as follow-up research studies.

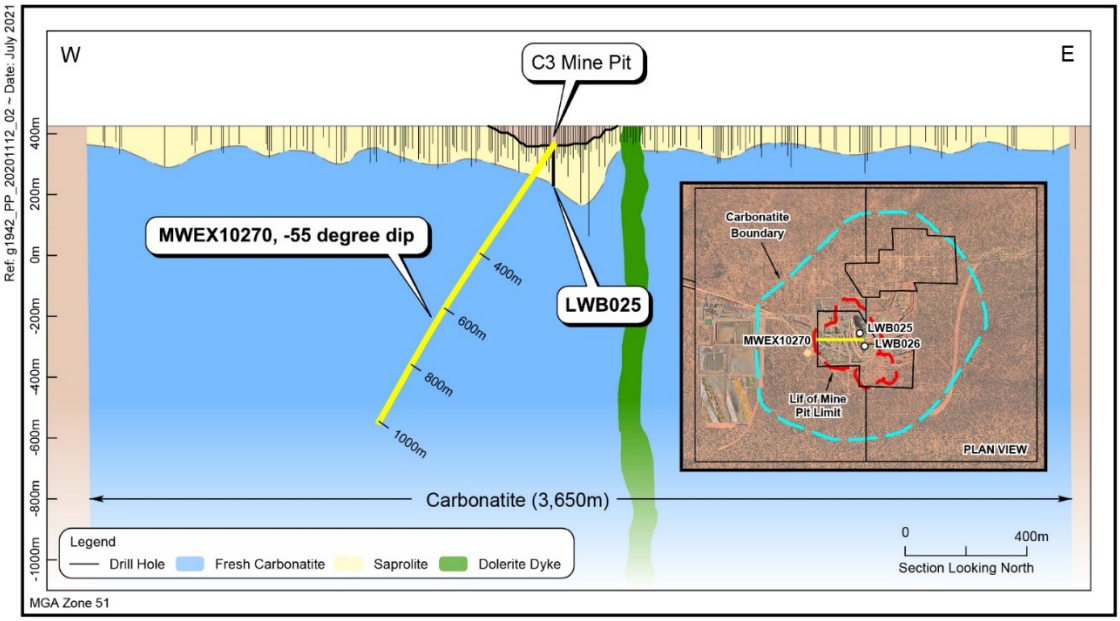

Figure 1 Schematic cross section of deep exploration drillhole MWEX10270 and plan view in relation to existing drillholes on the saprolite zone. Aerial photo shows the extent carbonatite boundary, 2018 design of life of mine saprolite zone and currently operating open pit in the middle.

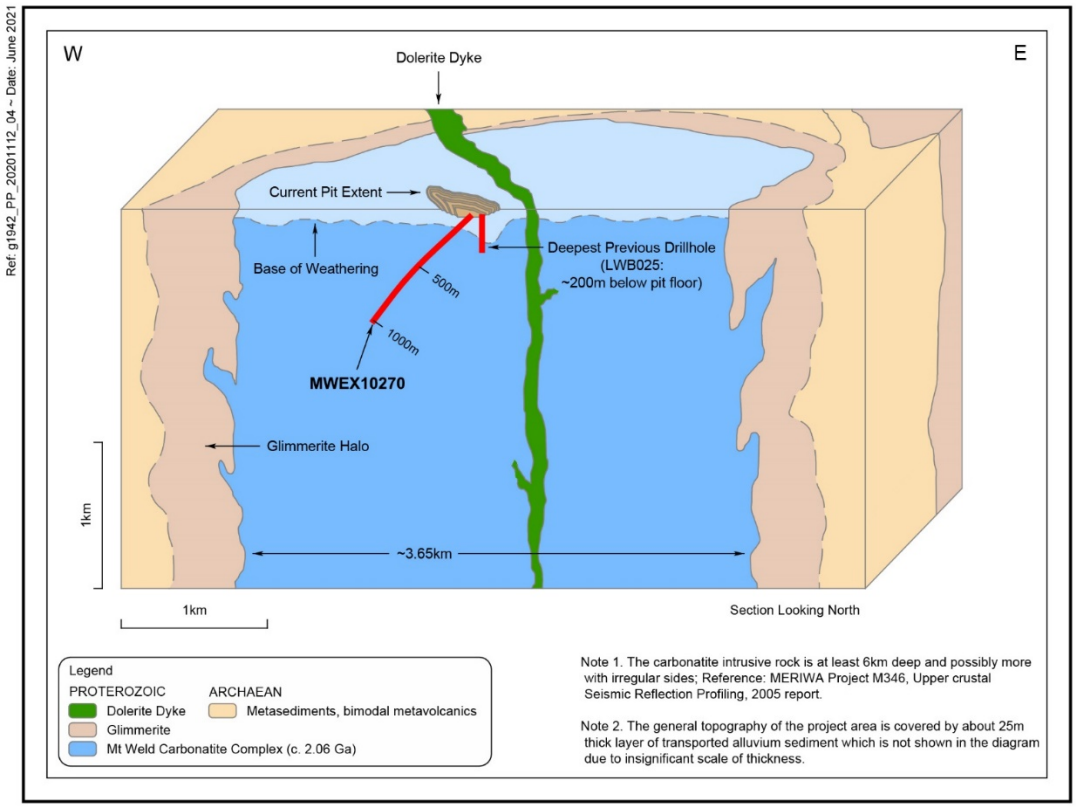

Figure 2 Schematic cross section of deep exploration drillhole MWEX10270 into primary carbonatite at Mt Weld REE project

Figure 3 Carbonatite with stylolite joints and vugs. Fine grained disseminated rare earth minerals visible under hand lens. Low level of chlorite alteration from 77.10m onwards.

Figure 4 Brick red coloured coarse grained REE minerals at 748m depth

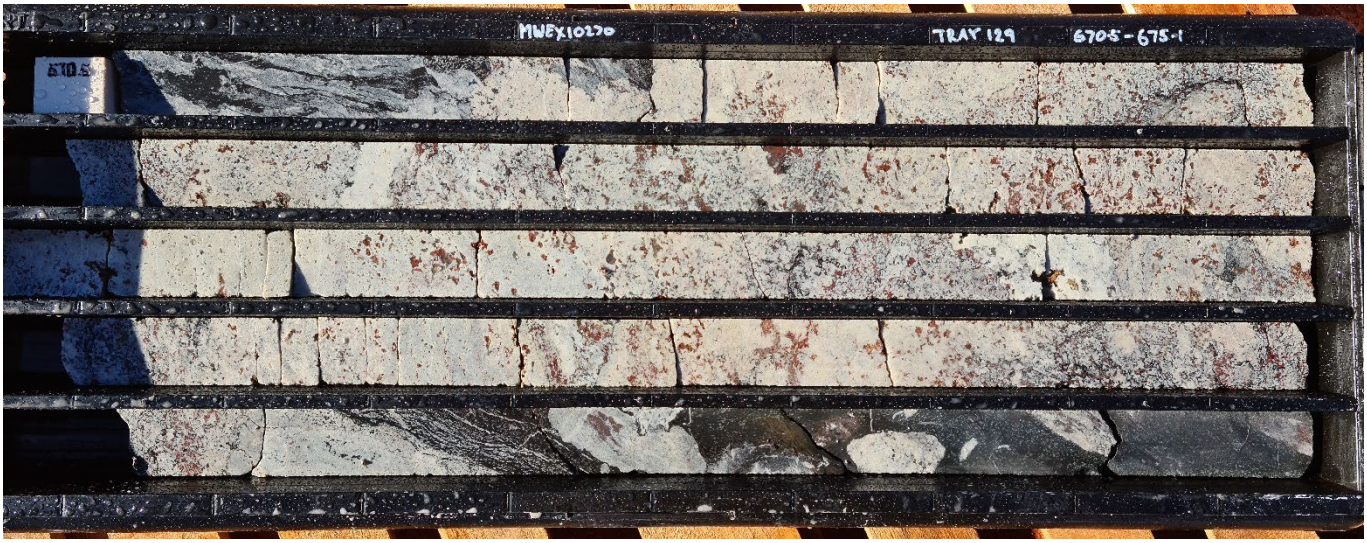

Figure 5 Brick red coloured coarse grained disseminated REE mineralisation in carbonatite, half split drill core. 670.5m to 675.1m drill depth

Figure 3 MWEX10270 Drillhole ending at 1020.4m depth in REE mineralisation

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• A single 1020.40m diamond drill was drilled from the open pit mine floor using a combination of HQ and NQ2 hole diameters. The core was measured and placed in core trays with core blocks showing depth and core recovery. • The core was cut in half than quarters using an automatic core cutting machine. • No geological samples have been submitted to an analytical laboratory. • Sampling work is under progress
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• A combination of HQ and NQ2 diameter diamond drilling was used within the hole. HQ diameter (hole diameter 96.1mm, core diameter 63.5mm) was drilled from hole collar to 92 meters and NQ2 (hole diameter 96.1mm, core diameter 63.5mm) was drilled from 92 meters to end of hole depth, 1020.40 meters. The hole was collared at an azimuth of 270° and a dip of -55°. Continuous downhole gyro survey was conducted by the drilling company through the drillhole.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• The length of each diamond rod drill was measured and compared to the measured length of the core returned. • The hole diameter was increased from NQ2 to HQ to maximise sample recovery for the first 92 meters. • Drilling techniques to ensure adequate sample recovery and quality included careful slow drilling especially in the saprolite zone to maximise the core recovery. Similar process was adopted at structural zones. • Worn out drilling bit was promptly replaced with a new diamond drillbit to ensure good quality core recovery • Downhole core orientation mark was recorded in NQ2 core to facilitate structural logging. Orientation marks were reliable which cold be linked to multiple drill runs • A Lynas employee geologist was engaged during the drilling process to ensure all geological QAQC protocols for reliable, representative, least contaminated sample collection were maintained. • Logging of all samples followed the established company procedures which included recording of qualitative fields to allow discernment of sample reliability. This included (but was not limited to) recording: sample condition and sample recovery. • No geological assay and petrology sample results are completed yet.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Each length of core was logged by a Lynas employee competent geologist to a level of detail to support the various studies carried out using the geological interpretations and future resource estimation process. • The logging is qualitative in nature with a review of the logging carried out after the assay data is received to ensure the logging fits with the geochemistry of the sample.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is*	• The core was cut in half than quarters using an automatic core cutting machine. • No geological assay and petrology sample results are completed. • Sampling work is in progress

Criteria	JORC Code explanation	Commentary
	representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• No geological assay sample results are completed.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No twinned holes have been undertaken. • Lynas Rare Earths has strict procedures for data capture, flow, data storage and validation of drilling information. • No geological assay sample results are completed.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Drill hole collar has been surveyed to an accuracy of +/- 1cm by an authorised mine surveyor. • Continuous downhole gyro survey was conducted by the drilling company through the drillhole. Additional continuous downhole gyro survey was conducted by an external contracting company whilst conducting wire-line logging. • The core was measured and placed in core trays with core blocks showing depth and core recovery. Each metre down-hole is measured from core blocks marked with driller depth. The depth of each metre interval is likely to have an accuracy of +/-2 cm.
Data spacing	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degrare earth element of geological and*	• No geological assay and petrology sample results are completed.

Criteria	JORC Code explanation	Commentary
and distribution	*grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The carbonatite plug is subvertical and the rare earth mineralisation in the carbonatite regolith is in horizontal layers. Geological orientation within the fresh carbonatite is unknown with a cross cutting dolerite striking NNW-SSE across the carbonatite. The diamond hole was collared at 270° azimuth and -55° dip. • No known sampling bias has been introduced by the drilling orientation. • No geological assay and petrology sample results are completed.
Sample security	• *The measures taken to ensure sample security.*	• No geological assay and petrology sample results are completed.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• None completed. Reviews of sampling techniques will be conducted during the next infill drill campaign.