

26 October 2023

Highlights

ASX Announcement

Carbonatite Potential Further Defined at Grasshopper

- 3D magnetic inversion modelling completed over Grasshopper Rare Earth prospect which displayed historical results up to 1698ppm Total Rare Earth Oxides (TREO) with elevated carbonatite pathfinder elements in upper basement (EOH GHA208)
- Modelling reveals multiple complex magnetic anomalies at Grasshopper, potentially representative of buried carbonatite bodies
- All bodies remain effectively untested, with historical drilling terminating in upper basement prior to intersecting the main body of magnetic anomalies
- Planning for drill testing of anomalies underway

Regener8 Resources NL (ASX: R8R) (**Regener8** or the **Company**) is pleased to provide an update regarding the East Ponton Future Metals Project. Further to confirmation of rare earth enrichment (REE) in historical results and the re-assay of pulps at the Grasshopper prospect (**Figure 1**) (ASX announcement 20 July 2023), the Company has completed 3D magnetic inversion modelling over potential targets.



Figure 1: Grasshopper - Max Downhole TREO values from historical AGA assays and R8R re-assay >500ppm TREO, with Total Magnetic Intensity (RTP) (ASX Ann: 20/07/2023)

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Detailed Magnetic Inversion Modelling of the Grasshopper prospect

The Grasshopper Prospect (E28/3218) is located within the eastern Biranup Zone of the north-eastern Albany Fraser Orogen (AFO) where the AFO contacts the Yilgarn Terrain. The Biranup is largely composed of late Paleoproterozoic granitic gneisses and metagabbros, along with fragments of Archean crust interpreted as having rifted off the Yilgarn Craton in a back-arc environment during active subduction in the late Paleoproterozoic (Kirkland et al., 2011)¹.



Figure 2: East Ponton Future Metals Project, Regional Geological setting over Total Magnetic Intensity (80m) RTP (DMIRS-069)

The prospect presents in aeromagnetic imagery as intense, discrete magnetic highs (Figure 1) associated with regional NE-SW trending fault zones (Figure 2).

Detailed public domain and multi-client aeromagnetic data over the Grasshopper prospect area was collated and inversion modelled by Southern Geoscience Consultants. The 3D models confirm the aeromagnetic interpretation of distinct, strongly-magnetic bodies which are likely to represent discrete intrusions within the non-magnetic country-rock gneisses (**Figures 3, 4 and 5**).

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¹ Kirkland, C. L., Spaggiari, C. V., Pawley, M. J., Wingate, M. T. D., Smithies, R. H., Howard, H. M., ... & Poujol, M. (2011). On the edge: U–Pb, Lu–Hf, and Sm–Nd data suggests reworking of the Yilgarn craton margin during formation of the Albany-Fraser Orogen. *Precambrian Research*, *187*(3-4), 223-247.





The modelled bodies display significant complexity, with multiple fingers or lobes protruding upwards from larger stock features (**Figures 3, 4 and 5**). The modelled depth to the top of the magnetic bodies ranges between 80 to 150m, with the south-eastern body (underlying the REE anomalism encountered in historical hole GHA208) extending to >1km depth (**Figure 5**).



Figure 3: 3D Magnetic Inversion model with TMI and historical drillhole collars (looking north-west)



Figure 4: 3D Magnetic Inversion model with TMI and historical drillholes (looking north-east)

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Magnetic Bodies Untested by Historical Drilling

The results of the 3D modelling demonstrate that the 2013 drilling by AngloGold Ashanti/ IGO did not intersect the main magnetic bodies which occur within the basement country-rock gneisses (**Figure 5**) (refer ASX Announcement 20 July 2023).

Although this historical drilling was undertaken directly over the anomalies, the maximum drilling depths attained were approximately 20 to 90m. This was largely because the air-core (AC) drilling technique could only penetrate the easily drilled transported cover sequences and hence, only limited sampling of the basement was possible.

The occurrence of elevated REE and the carbonatite pathfinders Sr, Ba and P in EOH GHA208 (refer ASX Announcement 20 July 2023) in the upper-basement overlying a strong discrete magnetic anomaly suggests that historical drilling may have intercepted the distal alteration zone of a deeper, buried carbonatite system. This is highly encouraging considering the proximity of Grasshopper to the Cundeelee and Ponton Creek carbonatite intrusions ~40km to the west within the Queen Victoria Springs Nature Reserve (**Figures A and B**). Like Grasshopper, these intrusions are discrete magnetic highs associated with REE, Sr, and P anomalies and proximal to large ~NE-SW trending structures that act as potential conduits allowing REE-enriched and mantle-sourced melts to be emplaced in the upper crust.

This new magnetic modelling and the historical drillhole geochemistry provide a compelling target for the Company to investigate.



Figure 5: 3D Magnetic Inversion model with TMI and historical drillholes (looking under surface, north-east)

The work to date establishes the basis for further targeting and drill planning. Over the coming months, the Company will continue to refine targets for a maiden drill program. Planning for this will include the continuation of work with the relevant Native Title party and applicable stakeholders regarding land access for the program.

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Managing Director of Regener8, Stephen Foley, comments:

"We're encouraged by the detailed inversion models that confirm our suspicion that the targets still essentially remain untested. The smoke signals we are seeing from the work to date for Grasshopper for possible carbonatite intrusions are becoming stronger, and we're looking forward to testing these targets as soon as possible. Regener8 looks forward to working with the traditional custodians of the land and relevant stakeholders to establish land access agreements over the coming months."

Relevant ASX Announcements:

- 19.09.2023 "Historical High Grade Nickel and Cobalt at East Ponton"
- 31.08.2023 "REE Enrichment confirmed at East Ponton Future Metals Project"
- 02.08.2023 "East Ponton Unveils Multi-Commodity Critical Metals Targets"
- 06.07.2023 "Option Secured for Transformational Future Metals Project"

This ASX Announcement has been authorised for release by the Board.

For further information, please contact:

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Information in this release that relates to Exploration Results is based on information reviewed by Neil Hutchison of Geolithic Geological Services. Mr Hutchison is engaged by Regener8 Resources NL as an independent consultant. Mr Hutchison has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'. Mr Hutchison is a Member of AIG. Mr Hutchison consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

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Background on the East Ponton Future Metals Project

Regener8 Resources NL executed a binding option agreement to acquire the Seven Sister and Grasshopper projects located approximately 220km East of Kalgoorlie (ASX announcement 6 July 2023). The project is nominally 40km south south-east of known carbonatite discoveries. These include the exploration restricted Cundeelee carbonatite, described by BHP *as the largest, effectively untested carbonatite in the world* (port A56942, BHP 1998) and the Ponton Intrusion discovery with *some of the highest grade intersections ever found in Australia* including (ASX: GXY announcement 11 January 2011):

- 16m @ 14.48% TREO (PN03A)
- 28m @ 10.50% TREO including 6m @ 20.57% TREO (PN10A)
- 26m @ 6.99% TREO from surface including 8m @ 13.12% TREO (PN09A)

Regener8 is advancing exploration at the Seven Sisters and Grasshopper prospects and will make a decision on acquisition during the option period. This will further investigate the potential prospectivity of these tenements across rare earths, lithium and gold, which could enable a complementary fit to the company and its assets.



Figure B: East Ponton Future Metals Project locality map

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1. JORC CODE, 2012 EDITION – TABLE 1

| Section 1 Sampling Techn | iques 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. | Aeromagnetic survey data: Data collated, gridded, merged and image processed from the following surveys: Seven Sisters (R#70933): 50m line spacing Zanthus (WAMEX A104212): 50m line spacing Biranup Central Multi-client (R#71542): 100m line spacing TG5 (R#71006): 100m line spacing Tropicana 2010 (R#70432): 100m line spacing Tropicana 2008 Area 1 (R#70062): 100m line spacing Merged grid cell size was 10 m. | |
| 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). | No drilling reported. | |
| 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. | No drilling reported. | |
| 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. | No drilling reported. | |

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| Sub-sampling technic and sample preparati | 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 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. | No drilling reported. |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quality of assay data 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. | Aeromagnetic inversion and modelling: 3D inversions were performed using Geosoft Voxi software on 10m grid data. Voxel models of magnetic susceptibility were generated with 50 x 50 x 25m (x,y,z) cell size. Inversion results were checked by 2D forward modelling along profiles perpendicular to strike using ModelVision software. |
| Verification of samplin 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 drilling reported. |
| Location of data point | 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. | Aeromagnetic data, inversion and modelling: All processed aeromagnetic grids and images and models are in GDA94 MGA Zone 51 coordinates. |
| Data spacing and distribution | Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. | No drilling reported. |

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| 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. | No drilling reported. |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sample security | The measures taken to ensure sample security. | No drilling reported. |
| Audits or reviews | The results of any audits or reviews of sampling techniques and data. | Data was reviewed by external geophysical consultants, Southern Geoscience Consultants, to evaluate the validity of geophysical data and the models. |

| Section 2 Reporting of Exploration Results | | | |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| (Criteria listed in the preceding section also apply to this section) | | | |
| Criteria | JORC Code Explanation | Commentary | |
| Mineral tenement and land tenure status | • Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. | The East Ponton Future Metals project comprises the following tenements that are under and option agreement with Beau Resources, the details of which are as per R8R ASX announcement 6 July 2023: Grasshopper: E28/3218 Seven Sisters: E28/3231 & E28/3238 | |
| | • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. | The licences are held 100% by Beau Resources Pty Ltd and under option agreement to Regener8 Resources NL. All the licences are in good standing. The project also includes tenements under application by Regener8 Resource NL: | |
| | | • E28/3348 | |
| Exploration done by other parties | Acknowledgment and appraisal of exploration by other parties. | AFMECO undertook exploration in 1978 for uranium exploration. A seismic survey and drilling of shallow targets were undertaken. Details can be found within WAMEX report A8324. CRA Exploration held tenure over the southern tenement area during 1979- | |
| | | 1981 for IOCG exploration. Airborne and ground geophysical surveys were undertaken, and loam sampling and a single AC drill hole performed over a geophysical anomaly. Details can be found within WAMEX report A9781. | |

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| | | Uranerz Australia held tenure over the tenement area during 1985-1987 fo uranium exploration. Geophysical surveys and RC drilling were undertaker Details can be found within WAMEX report A17454 and A20383. |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | WA Exploration Services (On behalf of Mark Creasy) held tenure over the northern tenement area during 1997-1998 for gold and nickel exploration. Laterite, carbonate and soil sampling was undertaken. Details can be found within WAMEX report A56040. |
| | | Dominion Mining (later Quadrio, Kingsgate Consolidated, Kamax Explorati and Orion Gold) over the tenement area from 2003-2013 for gold explorati AC and RAB drilling, and surface sampling was undertaken. Details can be found within WAMEX reports A77137, A80608, A88905 and A92408. |
| | | Anglo Gold Ashanti (JV with IGO) held tenure over the tenement area durin 2013-2015 for gold exploration. Geophysical surveys, AC drilling and surfa sampling were undertaken. Details can be found within WAMEX reports A101998 A105664, A105752. |
| | | Fortescue Metals Group held tenure over the tenement area during 2017-2 for predominantly gold exploration. Airborne and ground geophysical surve surface sampling and AC drilling were undertaken. Details can be found with WAMEX reports A124710. |
| Geology | Deposit type, geological setting and style of mineralisation. | The deposit type targeted is carbonatite and carbonatite-related (e.g. Pont Creek style) rare earth mineralisation. |
| Drill hole Information | A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. | No drilling reported. |
| | If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. | |

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| Data aggregation methods | In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. | No drilling reported. |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Diagrams | Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. | Refer to figures within this announcement. |
| Balanced reporting | Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. | All relevant exploration results are reported in the text. |
| Other substantive exploration data | Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. | All relevant exploration results are reported in the text. |
| Further work | The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. | Further work may include some or all of the following as determined by Regener8: Future geophysical work, future AC or RC drill testing of targets. |

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