

ARIES KIMBERLITE COMPLEX GEOPHYSICAL GRAVITY SURVEY UNDERWAY

HIGHLIGHTS

Geophysics Gravity Survey Commences

- Gravity Geophysical Survey of the Aries Kimberlite Complex (“AKC”) is now Underway
- Survey is Designed to Understand the Potential for Extensions of the AKC
- Modelling Outcomes Expected Late July 2022
- Gravity and Magnetic Model to be used for Drilling Targets Scheduled for August 2022

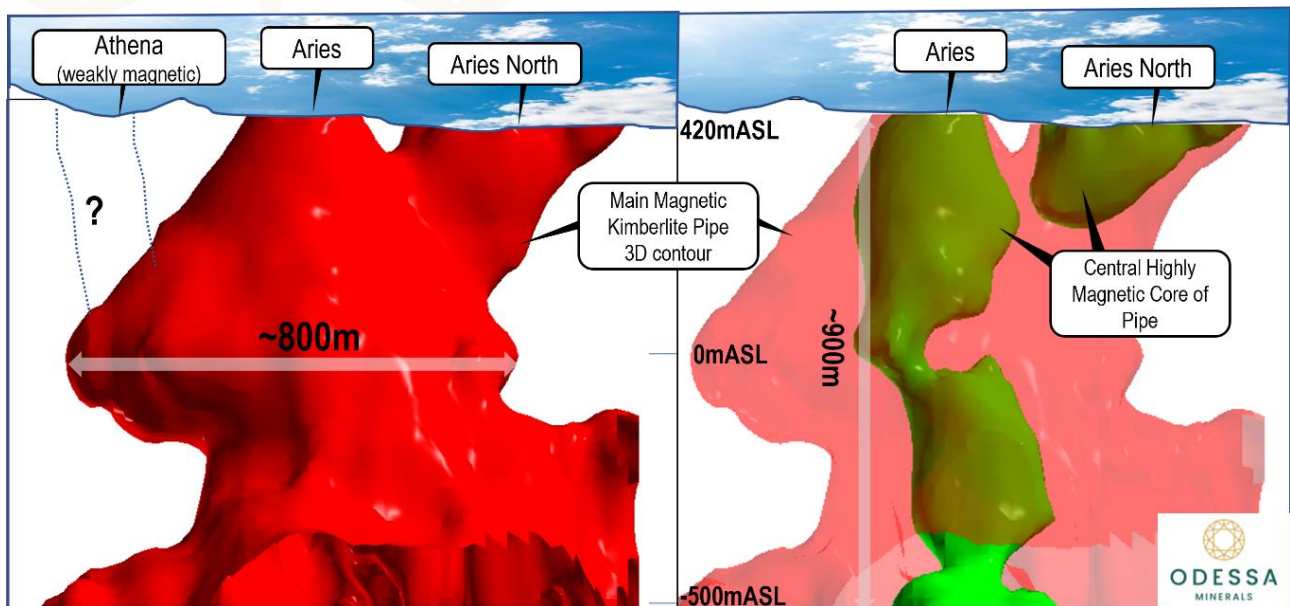
Previous Magnetic Modelling

- Magnetic Data Modelling over the AKC was Completed in February 2022
- Magnetic Data Modelling Suggests Kimberlites Extending to 900m+ depth
- Results Suggest a Magnetic Footprint of 800m x 350m at 400m Below Surface and a lack of Magnetic Signature to some Kimberlite Pipes at Aries in the Southern Complex.

Odessa Minerals Limited (ASX:ODE) (“**Odessa**” or the “**Company**”), a West Australian-focussed mineral exploration company, is pleased to announce that a ground gravity geophysical survey at the Aries Kimberlite Complex (“**Aries**” or “**AKC**”), has commenced. This survey marks the commencement of the field season for the Company at its flagship project in the Central Kimberley region of Western Australia.

This survey aims to extend and improve on the aeromagnetic data modelling completed in February 2022. The previous modelling demonstrated a large complex of kimberlite pipes with a potential geometry of 800m x 350m at 400m below surface.

Gravity data will aid in the assessment of the extended geometry of the AKC and assist in enhancing the design for the upcoming drilling programme scheduled for August 2022.



3D modelling of Aries Kimberlite Complex showing the main pipe (L) and with transparency to highlight the central magnetic core (R)

Mr Alistair Stephens, CEO of Odessa, commented:

"The Aries Kimberlite Complex is the largest known diamond-bearing kimberlite in Australia. Previous modelling demonstrated that the system extends to a significant depth, and confirms that this project represents a substantial diamond exploration target with known occurrences of gem-quality diamonds. The current gravity geophysical survey will result in a sounder understanding of the size and nature of the AKC north and south of the known pipe occurrence. The data will be important for finessing the Company's drill programme targets. Our 2022 field season is now underway".

Aries Magnetic Modelling - Previous Work Review

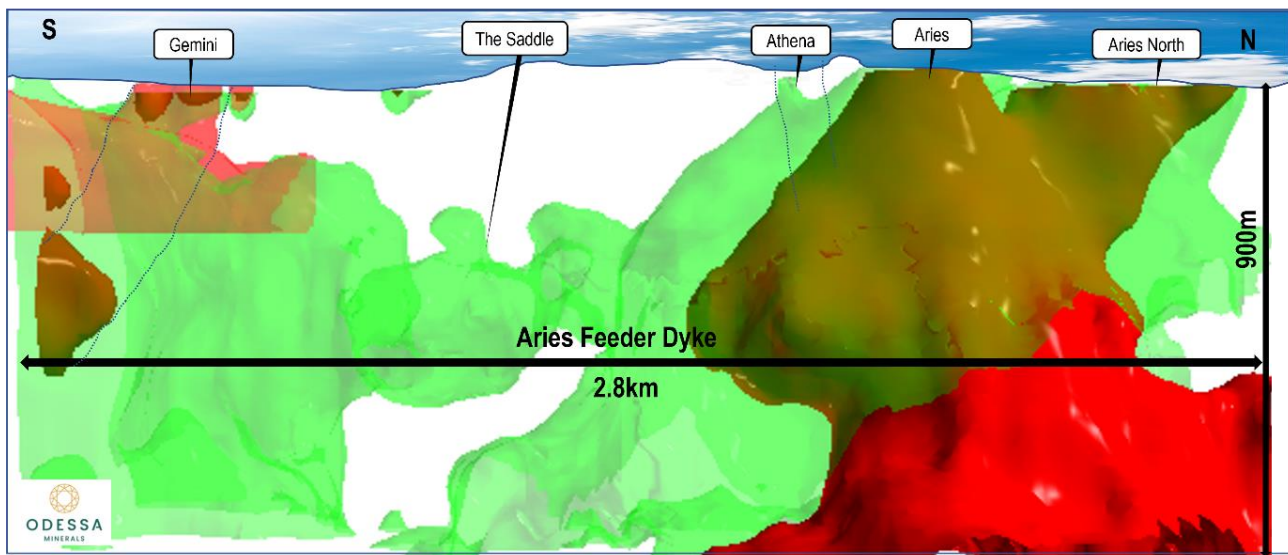
Odessa contracted Fathom Geophysics Pty Ltd (Fathom Geophysics) to review previous airborne magnetic data. A 50m line-spaced and 20m flight-height detailed magnetic survey, undertaken in 1997, was reprocessed using contemporary techniques in February 2022 (Refer to announcement on 10 May 2022) . The results indicated that the main kimberlites at Aries and Aries North are geologically mapped at surface over an area of approximately 10 hectares (Ha) (100,000 square metres), and this mapping correlates with distinct magnetic anomalies in the modelling.

The key findings of the magnetic modelling are:

- Aries is likely to extend beyond 900 metres vertical depth
- The pipes are elongate extending over ~800m north-south and >300metres east-west
- Pipes at surface coalesce into a single pipe beyond 300 metres depth
- The footprint of the magnetic model, which best fits the expression of magnetic kimberlite pipes, expands from:
 - 10ha footprint (100,000 square metre) in the near surface

- 13.4ha footprint (134,000 square metre) at 200 metres below the surface
- >20ha footprint (>200,000 square metre) at 400 metres below the surface

The deepest drillhole, AN15, drilled to a depth of ~300 metres in 1994, terminated in diamond-bearing kimberlite rock and returned a 12-fold increase in microdiamond count compared to the surface.



Long section view west of the various magnetic models showing the target extent of the Aries Kimberlite Complex to the south

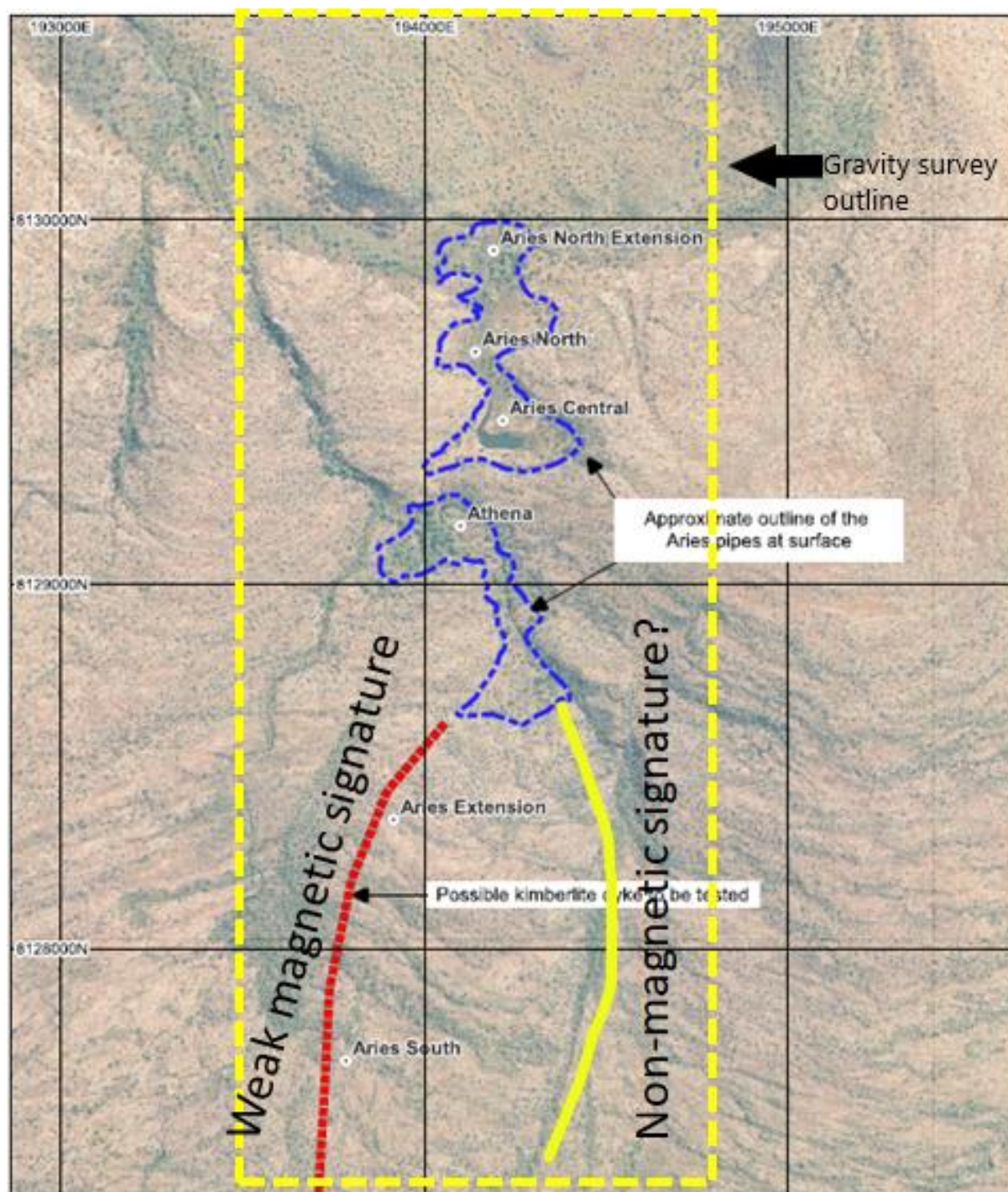
The Athena Pipe, one of several pipes located south of the Aries Central Complex, does not have a comparable magnetic signature to Aries. South of Aries, there may also be several kimberlite fissures (feeder dykes) with extensive strike length (2.8 kilometres). This dyke target expands into a potential kimberlite “blow” at about 300 metres below the surface named “The Saddle”. To the south of the Gemini prospect, the modelling suggests the dyke comes close to surface. Previous exploration has indicated kimberlite indicator minerals in the Gemini prospect, while limited historic drilling records intersected sandstone and no source for the indicator minerals has been found¹.

Non-Magnetic Kimberlite Pipes - Gravity Targets

Kimberlite rocks typically have a high specific gravity (or density) compared to other rock types. This geophysical technique is looking to identify kimberlites in the sandstone host rock (low specific gravity) to the south of Aries. To the north of Aries, it is proposed kimberlite pipes are present in the volcanic host rocks that have high magnetic signature but low specific gravity relative to kimberlite rocks. This gravity survey will help refine and define the presence of existing and new kimberlite pipes.

With gravity survey results likely in late July 2022, the Company is working on exploration drill plans to follow up gravity survey targets in late August 2022.

¹ Refer to the Independent Geological Report in the Prospectus available under code ODE on the ASX platform, dated 19 November 2021 (page 201,208).



Plan view of the gravity survey outline (Yellow dash) and the location of known kimberlite pipes.

Summary

The Aries Diamond Project is located approximately 30 kilometres southeast of the Mt Barnett Roadhouse in the Central Kimberley, and approximately 250km east northeast of Derby.

The Aries kimberlites were first discovered in 1986 and since then multiple campaigns, focusing on the near surface outcrop, have been undertaken by other explorers. The Aries Kimberlite Complex has been mapped at surface with a footprint over 10Ha, making this the largest known diamond bearing kimberlite complex in Western Australia.

In the early 1990s, surface bulk sampling and drilling recovered near surface grade estimates of up to 4.8cpht (carats per hundred tonnes). During 2005, a wide-diameter “Bauer” drilling bulk sampling campaign processed 2169 tonnes, recovering 181 diamonds for 25.34 carats².

Competent Persons Statement

The information in this report that relates to historic mineral exploration from the Aries project is based on information compiled from WAMEX archive reports and reviewed and reported by Mr. Jeremy Peters (BSc, BEng (Min)) in the independent report in the Company’s Prospectus dated 19 November 2021. Mr. Peters is a Fellow of the Australasian Institute of Mining and Metallurgy and a Chartered Professional Geologist and Mining Engineer. Mr. Peters is an employee of Burnt Shirt, a consulting company, and has sufficient experience that is relevant to the technical assessment of the mineral assets under consideration, the style of mineralization and type of deposit under consideration to qualify as a Practitioner as defined in the 2015 Edition of the Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets, and as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Peters consents to the inclusion of the matters based on his information in the form and context in which it appears in this report.

The geophysical data processing, filtering and modelling has been undertaken by Amanda Buckingham of Fathom Geophysics who is an independent advisor to the Company. Dr. Buckingham is a Registered Professional with the Australasian Institute of Mining and Metallurgy (AUSIMM) and has sufficient experience that is relevant to the style of geophysical data assessment and type of geophysical signatures 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’ (JORC code). Dr. Buckingham consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

² Independent Geological Report in the Prospectus available under code ODE on the ASX platform, dated 19 November 2021 (page 201,208).

This announcement has been approved for release by the Board of Odessa Minerals.

ENQUIRIES

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ABOUT ODESSA MINERALS

Odessa Minerals Limited (ASX:ODE) ("**Odessa**") is a mineral exploration company with a portfolio of high-quality diamond projects in the renowned Kimberley region of Western Australia. Odessa's strategic intent is to become a producer of ethically sourced, low environmental impact, gem-quality diamonds. Odessa holds 20 granted and application exploration licences covering 2,600km², which constitute the Aries, Ellendale, Calwinyardah, Noonkanbah and Argyle South projects in the Kimberley region of Western Australia, all of which are prospective for diamonds. The Aries Project is Odessa's lead project (90% by Odessa Minerals, 10% Jindalee Resources Ltd (ASX:JRL)), with past exploration identifying multiple occurrences of gem-quality diamonds.

Odessa acknowledges the Traditional Owners of the areas which we explore and recognizes their connection to the lands and waters of the Kimberley region of Western Australia. We pay our respects to their Elders and Leaders—past, present and emerging.

Please visit our website for more information and to sign up to receive corporate news alerts:

www.odessaminerals.com.au



