ASX Announcement

10th August 2022

14 POTENTIAL NEW PIPES IDENTIFIED AT ARIES DIAMOND PROJECT

HIGHLIGHTS:

- ***Preliminary Geophysical Ground Gravity Survey Data Received***
- ***Gravity Imagery Shows the Likelihood of a Significant Increase in the Footprint of Aries***
- ***Additional Gravity anomalies Suggest Potential for 14 New Undiscovered Kimberlites***
- ***Aries Already known as Australia's Largest Diamondiferous Kimberlite***
- ***RC and Diamond Drilling will commence this Quarter***

David Lenigas, Executive Director of Odessa, commented:

"This news is a potential game changer for Odessa. This is the first new generation on-ground field work done at Aries since the mid-2000s and we are very excited to receive the preliminary data from the Gravity Survey over the Aries Kimberlite Complex ("AKC"). The initial processing has shown there is now real potential to increase the overall size of Aries.

The interpretation of data to date clearly shows kimberlite pipes as gravity lows, supporting the likelihood of Aries being a much larger system than previously thought. Encouragingly, the data clearly shows other circular features in the immediate area representing the real possibility of additional kimberlite pipes. The final modelling report is expected in the coming weeks and shareholders will be updated when it's received.

Slim-line RC drilling and diamond drilling is now the focus for Odessa. This gravity survey assists the geology team on finalising the drilling programme which will hopefully start before the end of August or early into September."

Odessa Minerals Limited (ASX: ODE) ("Odessa" or the "Company") is very pleased to announce that the Ground Gravity Survey ("GGS") has been completed over the Aries Kimberlite Complex in the Kimberley Region of Western Australia, located 35km East of Mt Barnett and 240km South of Argyle.

The GGS was conducted by Atlas Geophysics and modelling of the data is being undertaken by Fathom Geophysics Australia Pty Ltd ("Fathom Geophysics").

Preliminary data shows the presence of gravity lows over the known kimberlite pipes and multiple additional discrete gravity lows, which have a high possibility of being kimberlite pipes.

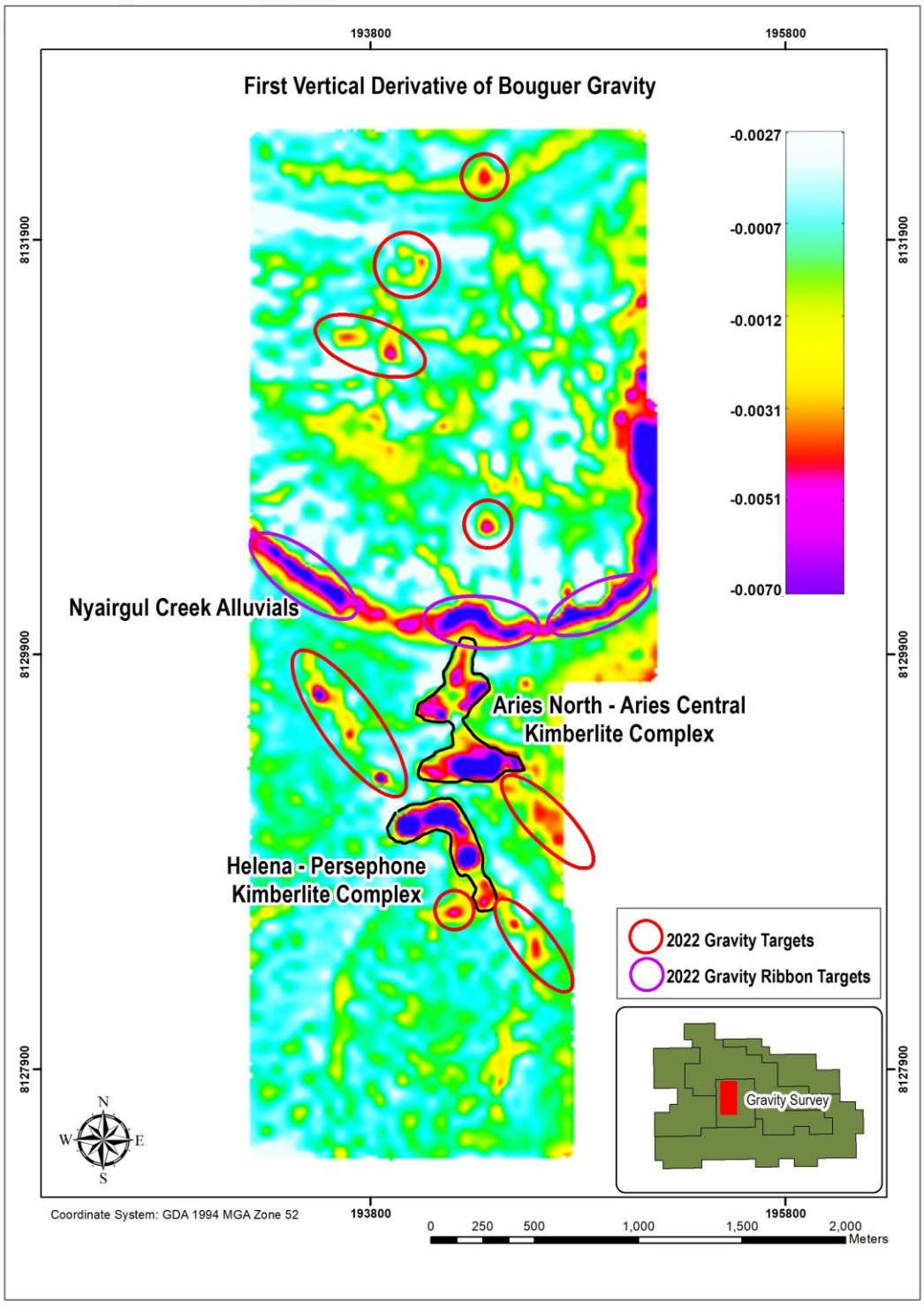

Figure 1: *Image of the preliminary Ground Gravity data, first vertical derivative of Bouguer gravity data shown, using a Colour table that shows gravity lows as being RED. No shading has been applied to the data in the generation of this image. The gravity lows of interest are circled. There are 14 new features of interest, some clustered together. The location of the gravity survey with respect to the wider tenement package is shown as the inset bottom right.*

ARIES GRAVITY DATA

Preliminary data received and reviewed clearly indicates the presence of discrete, circular, gravity lows scattered throughout the wider Aries area. It also shows the Aries footprint to be considerably larger than previously thought. As predicted, the data has identified the presence of a gravity low "ribbon" in the Carson Volcanics to the North. This ribbon could be host to additional new targets and further investigation is warranted.

Figure 1 shows the gravity response of known pipes such as the Aries North, Aries Central and Athena pipes. Other features that are possible kimberlite pipes are annotated as "Gravity targets". Based on a preliminary assessment, the gravity survey appears to have identified:

- A substantially larger kimberlite system compared to the original magnetic modelling
- Additional features that appear to be discrete geophysical anomalies that could be kimberlite pipes

The current drill program planned will test:

- the extent and extension of the known pipes from gravity modelling, and
- Other geophysical anomalies suspected of being additional pipes.

The "Ribbon" low gravity feature annotated as "host stratigraphy" is interpretated to be a geological unit that represents the contact between sandstone to the south and volcanic rock to the north and is **NOT** considered to be a kimberlite feature. There are features within this Ribbon geophysical anomaly that are suspected to be possible kimberlite pipes, but these requires additional investigation.

ARIES SUMMARY

The Aries Diamond Project is located approximately 30 kilometres southeast of the Mt Barnett Roadhouse in the Central Kimberley, approximately 240 SW of the Argyle Diamond Mine and 250km east 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 2005 a wide diameter "Bauer" drill program for bulk sampling processed 2,169 tonnes, recovering 181 diamonds for 25.34 carats (WAMEX Report A72519). A best grade of 4.9cpht (carats per hundred tonnes) was achieved in the Athena Pipe.

Note: The information in this report that relates to historical Exploration Results for the Aries Project is extracted from the Company's Prospectus released on 19 November 2021. The Company confirms it is not aware of any new information on data that materially affects the information in the Prospectus.

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

ENQUIRIES

Zane Lewis – Chairman
zlewis@odessaminerals.com.au

General enquiries:
info@odessaminerals.com.au

David Lenigas – Executive Director
dlenigas@odessaminerals.com.au

Please visit our website for more information and to sign up to receive corporate news alerts:
www.odessaminerals.com.au

Competent Persons Statement

The geophysical data initial review 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.

JORC TABLE 1

Section 1 Sampling Techniques and Data

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 representativity 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.*	Ground gravity surveying - completed by contractor Atlas Geophysics. A total of 3445 ground gravity stations were collected between the period 6th July 2022 to 26th July 2022. Data were collected across a regular 50m spaced grid. The data shown in this release is the preliminary data. Final data will be reported on soon. These survey specifications will not vary. Gravity surveying detects density contrasts which may be related to more / less dense primary rock types, alteration and/or mineralised systems. Sampling (by drilling etc.) is required to confirm the presence of alteration / mineralisation.
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).*	n.a.
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.*	n.a.
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.*	n.a.
Sub-sampling techniques and	*If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split,*	

sample preparation	*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*	n.a.
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.*	The following primary instrumentation was used for acquisition of the gravity data: ▪ One CG-6 Autograv Gravity Meter o (Serial Number: 21050345, SF: 1.001858) ▪ One CHCI70+ GNSS Rover Receiver ▪ One CHCI70+ GNSS Base Receiver – On site computer for data download and processing – Garmin autonomous GPS receivers for navigation – Iridium satellite phones for long distance communications <u>Calibration and Control</u> The gravity meters used for the survey had been recently calibrated on the Guildford Cemetery – Helena Valley Primary School calibration range (2010990117 - 2010990217) in Western Australia. The calibration process validated each gravity meter's scale factor to ensure reduction of the survey data produces correct Observed Gravities from measured dial reading values. One new GNSS/gravity control station 202208600001 "Aries" was used to control all field observations throughout the project. GNSS control was established at 202208600001 by submitting three 10-hour sessions of static data to Geoscience Australia's AUSPOS processing system, producing first-order geodetic coordinates. These coordinates are accurate to better than 10mm for the x, y, and z observables. Gravity control was established at station 202208600001 via an ABA tie to Australian Fundamental Gravity Network (AFGN) control station 1964910128 "Old airporthanger - Derby WA". <u>GNSS-Gravity Acquisition</u> Gravity data were acquired concurrently with GNSS data using a Scintrex CG-6 gravity meter. Data were acquired in single shifts of up to 12 hours duration, with each shift consisting of a single loop controlled by observations at the gravity control station. Each loop contained a minimum of two repeated readings so that an interlocking network of closed loops was formed. A total of 125 repeat readings representing 3.63% of the survey were acquired for quality control purposes. Repeat readings were evenly distributed, where possible, on a time-basis throughout each of the gravity loops. GNSS data were acquired with the rover receiver operating in post-process kinematic (PPK) mode with the GNSS rover sensors mounted to 2.00m walking poles. Static data were logged at the

		control station with a base receiver operating in post-process static (PPS) mode with the GNSS sensor mounted on a fixed tripod.
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*	<u>GNSS Processing and QC</u> The acquired GNSS raw data were processed daily using Novatel Waypoint GrafNav v8.90 post-processing software. GrafNav was used to transform the GNSS-derived WGS84 coordinates to GDA94 coordinates for each gravity station location. MGA coordinates were then derived by projecting the GDA94 geodetic coordinates with a Universal Transverse Mercator (UTM) transform using the appropriate zone. It should be noted that WGS84 and GDA94 coordinates (x, y, and z) are no longer roughly equivalent, with a difference in horizontal coordinates of greater than 1.0m and a difference in elevation of 90- 100mm. GrafNav produced GDA94 ellipsoidal heights for each gravity station location; and elevations above the Australian Height Datum (AHD) were modelled using the AUSGEOID09 geoid model, with separations (N values) added to GDA94 ellipsoidal heights. The resulting GrafNav data (output in Atlas Geophysics standard format) were then imported into Atlas Geophysics Reduction and Interpretation Software (AGRIS) for QC and used in the reduction of the gravity data. A module built into AGRIS allows the user to examine data quality factors such as station repeatability between multiple control stations, coordinate velocity, dilution of precision, coordinate quality factor and standard error for each gravity station location. The procedure is carried out before merging the positional data with gravity data for final reduction to Bouguer Anomaly. Comprehensive statistics, repeatability analysis and histogram plotting are also performed. QC procedures were applied to the GNSS data daily and any gravity stations not conforming to the quoted specifications were repeated. <u>Gravity Processing and QC</u> The acquired gravity data were processed using the company's in-house gravity pre-processing and reduction software, AGRIS. This software allows for full data pre-processing, reduction to Bouguer Anomaly, repeatability, and statistical analysis, as well as full quality control of the output dataset. Additional corrections were applied to produce Spherical Cap Bouguer Anomalies on the GDA94 transform of the GRS80 ellipsoid and AAGD07 gravity datum. For legacy reasons, Geoidal Bouguer Anomalies on the Australian Height Datum (AHD) and ISOGAL84 gravity datum have also been calculated. Bouguer anomaly data were calculated using a correction density of 2.67g/cm3. Repeatability of the data was excellent, with the standard deviation of the elevation repeats at 0.015m and the standard deviation of the gravity repeats at 0.007mGal. See: *M2022086_ODESSA_Aries_Gravity_Acquisition_Memo.pdf* for full processing details.
Location of data points	*• Accuracy and quality of surveys used to locate drill holes (collar and down-hole*	The gravity data were processed by the Atlas using their in-house gravity reduction software, utilising the GDA94/MGA52

	surveys), trenches, mine workings and other locations used in Mineral Resource estimation. *• Specification of the grid system used.* *• Quality and adequacy of topographic control.*	datum/projection, AAGD07 gravity datum and GDA94 ellipsoidal elevation datum. Bouguer anomaly data were calculated using a correction density of 2.67g/cm3, a 1VD filter was applied to the image displayed in this release. These data are preliminary data.
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*	Gravity stations were recorded on a nominal 50m x 50m grid, with overall coverage for the Project area measuring approximately 8.5 km2
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.*	Gravity surveying was completed on a square grid pattern therefore sampling bias has been minimised.
Sample security	*The measures taken to ensure sample security*	n.a.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data*	n.a.

Section 2 Reporting of Exploration Results

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 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 area of the gravity survey is wholly within the boundaries of E80/5027. E80/5027 was granted on 10/10/2017 to joint holders Jindalee Resources Limited and OD Aries Pty Ltd, a wholly owned subsidiary of Odessa Minerals Limited. ODE has a 90% interest in the tenement, with JRL retaining 10%. The licence is due for renewal on 09/10/2022.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	The Aries kimberlites were discovered by Freeport in 1986 and saw more or less continuous exploration by numerous parties in the following 20 years as summarised in the Independent Geologist's report in the prospectus lodged on 14 January 2022.
Geology	*Deposit type, geological setting and style of mineralisation*	The gravity survey targeted diamond-bearing kimberlite pipes and dykes intruding the Phillips Range anticline, a major structure in the Lower Proterozoic sedimentary and

		volcanic succession of the Kimberley Basin.
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.* *• 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.*	n.a.
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.*	n.a.
Relationship between mineralisation widths and intercept lengths	*• These relationships are particularly important in the reporting of Exploration Results.* *• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	n.a.
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.*	A plan view of the preliminary gravity data have been provided in this release.
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.*	n.a.
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.*	n.a.
Further work	*• The nature and scale of planned further work (eg 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*	Drilling to test the lateral extent of the known kimberlite bodies and to target possible new pipes. These are clearly marked on the maps in the main body of the announcement.