5 December 2022

Wonarah Phosphate Project:

Investigation of Drilling Database Identifies Potential High Grade Extensions within Avenira Tenure

Avenira Limited (ASX: AEV) ("**Avenira**" or "**the Company**") is pleased to provide the following update on its 100% owned Wonarah Phosphate Project.

Highlights

- Assessment of the tenure footprint (100% Avenira) surrounding Wonarah has been undertaken to assess potential extensions at a 27% P_2O_5 cut-off grade to support the DSO study being undertaken.
- This review assessed drillhole intersections of >27% P_2O_5 mineralisation not contained within the current Mineral Resource Estimate.
- Significant intersections include:
  - 5m@35.7% P_2O_5 from 55m in WNRC1525,
  - 8m@28.2% P_2O_5 from 47m in WNRC1748; and
  - 3m@33.4% P_2O_5 from 56m in WNRC1754

Exploration Drilling Intercepts

In parallel with the mining front-end engineering design study (FEED) for the DSO Project being undertaken by AMC Consultants, Avenira has undertaken a review of its exploration drillhole database. This review assessed the presence of drillhole intersections of >27% P_2O_5 mineralisation geographicaly external to the Mineral Resource Estimate.

Intersections were noted on Avenira tenure (100% owned) adjacent to both the Main Zone and Arruwurra resource footprints. Details regarding these intersections is detailed in Table 1 below with locations displayed in Figures 1, 2 and 4 and a type section displayed as Figure 3.

Intersections were approximately true widths due to the low angle of dip of the stratigraphy and the vertical orientation of the drilling. Samples for analysis were removed from the cyclone at 1 metre intervals and riffle split to provide a representative sample. All samples were analysed by XRF at Amdel Laboratories. Further detail on drilling and analysis is contained in Appendix 1.

Table 1: Drillhole Intersections >27% P_2O_5 outside the existing resource envelope

Hole ID	Easting (MGA94 Zone 53)	Northing (MGA94 Zone 53)	Collar RL (mASL)	EOH Depth (m)	Depth From (m)	Depth To (m)	Drillhole Thickness (m)	P_2O_5 (%)	Geology
WNRC0600	652748	7791753	286	51	43	44	1	**29.5**	TUP
WNRC0601	651748	7791749	289	54	45	46	1	**36.0**	TUP
WNRC1525	626980	7775002	274.	66	55	60	5	**35.7**	BPH
WNRC1526	620997	7775004	265	60	50	52	2	**34.1**	BPH
WNRC1528	629008	7774998	278	60	47	48	1	**28.7**	APH
WNRC1529	635995	7777002	277	39	32	33	1	**30.3**	BPH
WNRC1533	632004	7777004	287	42	39	40	1	**36.2**	BPH
WNRC1745	629997	7776001	284	56	45	46	1	**30.3**	APH
					49	51	2	**33.2**	BPH
WNRC1747	628005	7774004	266	62	38	39	1	**32.7**	APH
					54	55	1	**35.2**	BPH
WNRC1748	626000	7776006	271	65	47	55	8	**28.2**	APH
WNRC1753	623005	7776996	270	65	52	53	1	**34.7**	APH
				65	57	58	1	**27.1**	APH
WNRC1754	625005	7776998	273	62	56	59	3	**33.4**	APH
WNRC1755	627005	7776900	280	47	45	47	2	**33.3**	APH

Note: Descriptions of the geology are contained within JORC Table 1 (see Appendix 1)

All holes have a dip of -90 degrees and hence azimuth is 0 or not relevant

Drill intercepts >27% P_2O_5 are tabulated. All drill hole collars in the area concerned including those without intercepts below this threshold are shown in Figures 1-3 providing balanced and representative reporting.

Holes WNRC600-WNRC601 were drilled in July 2009 by Tom Browne Drilling Services (Dubbo). Holes WNRC1525-WNRC1533 were drilled in July 2010 by Well Drilled Pty. Ltd (Townsville). Holes WNRC1747-WNRC1755 were drilled in August 2012 by Kennedy Drilling (Kalgoorlie).

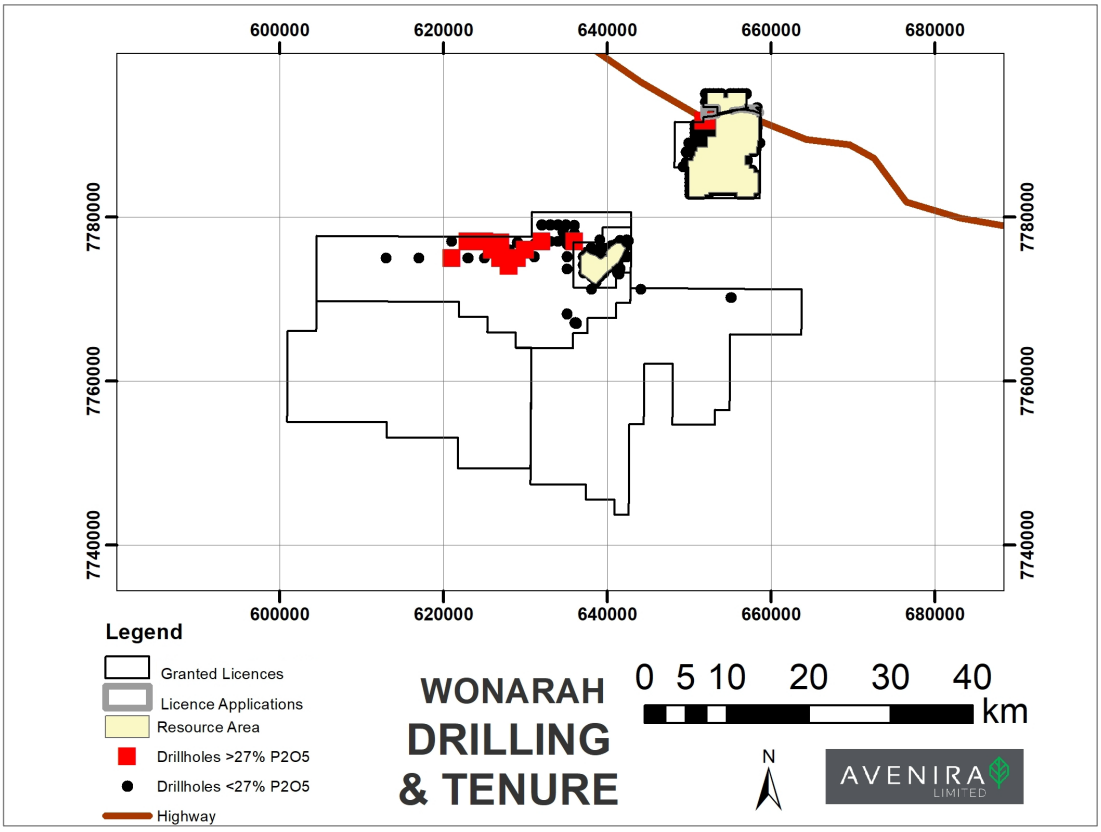

Figure 1: Overview of Wonarah Resource Area with drillhole intercepts of >27% P_2O_5 external to the Mineral Resource estimate.

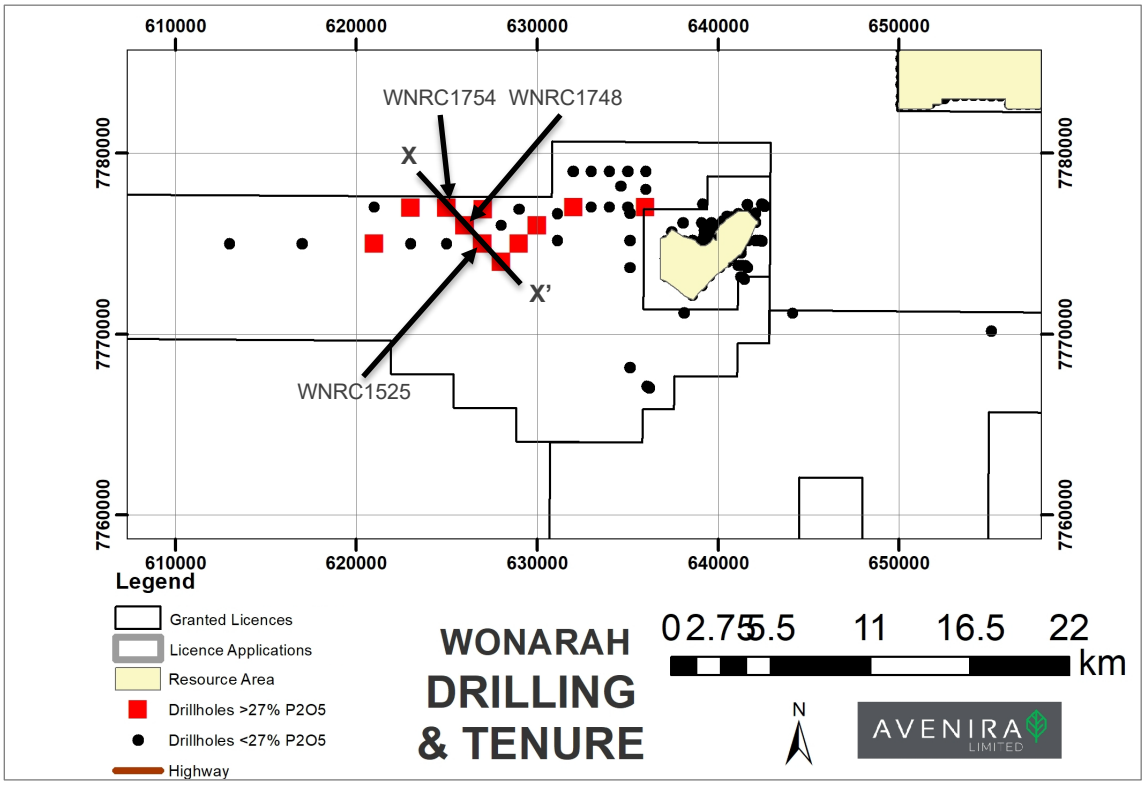

Figure 2: Wonarah Arruwurra Resource Area with drillhole intercepts of >27% P_2O_5 external to the Mineral Resource estimate. Includes location of Cross Section X-X' contained in Figure 3.

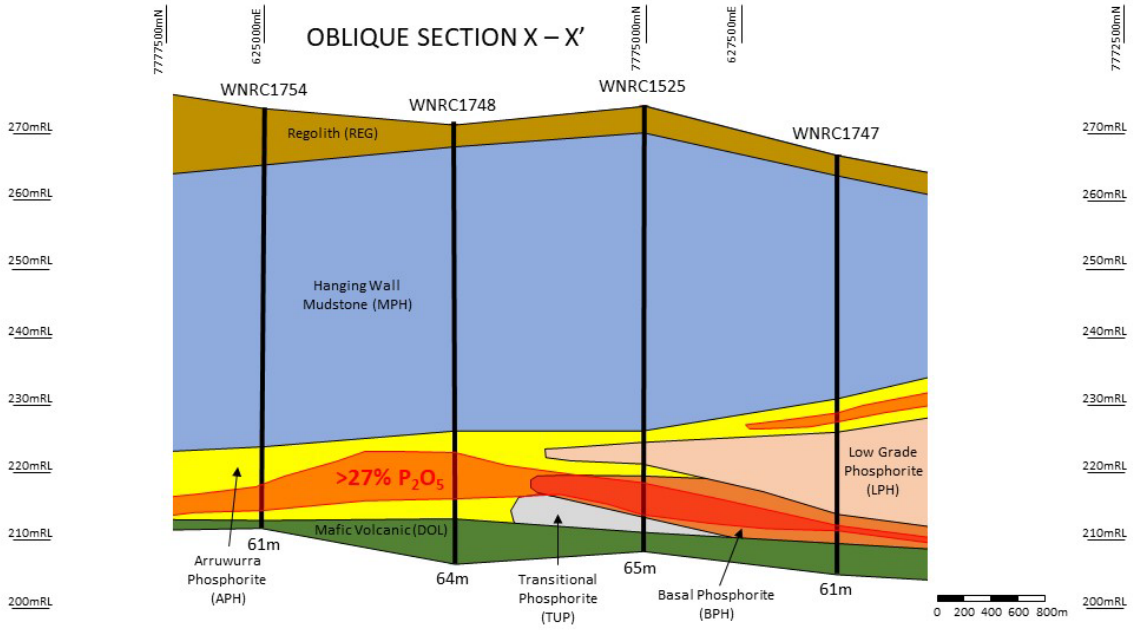

Figure 3: Cross Section X-X'

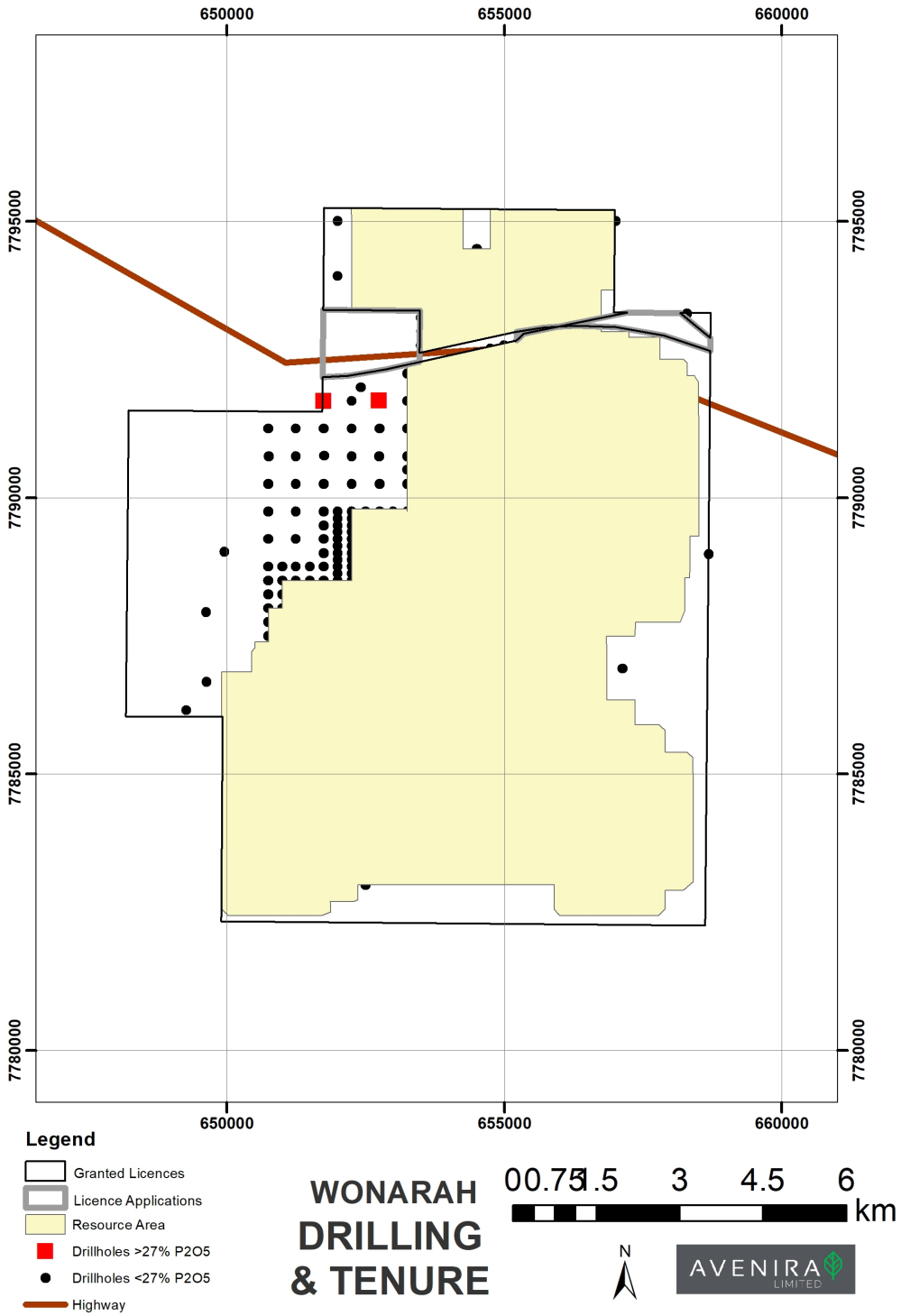

Figure 4: Wonarah Main Zone Resource Area with drillhole intercepts of >27% P_2O_5 external to the Mineral Resource estimate.

Brett Clark, Avenira Chairman and CEO said "*The high grade extensions to the Wonarah phosphate deposit further consolidate our views of the significance of the Wonarah deposit and its Tier 1 status amongst peers*."

This announcement has been authorised for release by the Board of Directors of Avenira.

Brett Clark
Executive Chairman
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Competent Persons Statement – Exploration Results

The information in this report that relates to Exploration Results is based on information compiled by Mr Steve Harrison, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr. Harrison is a full-time employee, share-holder and option-holder of Avenira. Mr. Harrison has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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. Harrison consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Compliance Statement

Information in this document relating to Exploration Results or estimates of Mineral Resources or Ore Reserves has been extracted from the reports listed below. The reports are available to be viewed on the company website at: www.avenira.com

Wonarah Project

30 April 2014: Quarterly Activities Report

14 October 2022: Annual Report Amendment

17 November 2022: Retraction of Certain Statements

Avenira confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Avenira confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Appendix 1:

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.*	• Exploration and resource drilling undertaken by Avenira (previously named Minemakers) and previous holders of the Wonarah tenements total 2,212 RAB, aircore, RC, blast hole and diamond cored holes for 104,829 m of drilling. • A small number of holes drilled by previous tenement holders (Rio Tinto and IMC) provide information in areas of limited Avenira sampling and represent around 10% of the drilling dataset. • All intercepts contained in Table 1 were drilled, sampled and analysed by MineMakers
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• RC and diamond holes were generally sampled over 1 m down hole intervals. • Avenira RC sub-samples were collected by riffle splitting. Diamond core was halved for assaying using a diamond saw. • All of Avenira drilling and sampling was supervised by field geologists.
	• *Aspects of the determination of mineralisation that are Material to the Public Report.*	• Hand-held XRF measurements were used to aid selection of intervals for assaying. These results were not used for drilling intercept calculations • pXRF is a hand-held XRF unit used to provide qualitative measurements and to confirm visual observations. • A Olympus Vanta M series hand-held XRF unit was used on 3-beam Geochem setting with a 20 second reading period for each beam. • Certified reference standard materials are used to ensure the unit is calibrated correctly in the field, with measurements completed daily. Calibration was successful if the reference standards returns observations within two standard deviations of the standards certified values
	• *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,*	• 77% of the exploration database analyses were completed by Avenira/Minemakers. Of these 93% of Avenira RC and diamond samples were assayed by Amdel. ALS and Ammtec assays provide 6% and 1% of the Avenira resource dataset respectively. All samples within the significant intrsections in Table 1 were analysed by Amdel

Criteria	JORC Code explanation	Commentary
	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	• All samples contained in Table 1 were analysed by Amdel using the method described below. • Amdel's sample preparation comprised oven drying and crushing of the entire sample to -2mm, with a 100 g sub-sample collected by rotary splitter pulverised to -106 microns. A 0.1 gram sub-sample of the pulverised material was fused with lithium metaborate and analysed by XRF for P_2O_5, Al_2O_3, CaO, Fe_2O_3, K_2O, MgO, MnO, Na_2O, SiO2 and TiO_2. ALS and Ammtec used similar procedures to Amdel.
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).*	• The RC drilling utilised face sampling bits with diameters of generally 5 to 5 ¼ inches (127-133 mm). • All Wonarah drilling was vertical with the exception of 4 diamond holes and 44 RC holes primarily drilled for ground-water investigation.
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.*	• Specific measurements for recoveries were not located for the holes containing the intercepts detailed in Table 1. Given the similar geology and sample conditions noted in logging observations in these holes compared to those investigated in the Mineral Resource estimate (refer to ASX release - 30 April 2014: Quarterly Activities report at avenira.com), it is assumed that similar conclusions will be drawn regarding sample recovery and bias as to those within the Mineral Resource estimate, which are copied below: • RC sample recovery was assessed by weighing total recovered sample material. The recovered weights show generally reasonably consistent sample recoveries averaging 84% for the mineralised samples which is consistent with good quality RC drilling. • Additional confirmation of the reliability of RC sampling is provided by 30 twinned diamond holes which show very similar average phosphate grades to the paired RC holes. • Available information suggests that sampling is representative and does not include a systematic bias due to preferential sample loss or gain.
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.*	• Avenira RC and diamond holes were routinely geologically logged by industry standard methods. All holes listed in Table 1 were logged. • Subsamples of all RC chips were retained in chip trays for the future reference. Diamond core was routinely photographed • The geological logging is qualitative in nature, and of sufficient detail to support the exploration results tabulations. • Hand-held XRF measurements were used to aid selection of intervals for assaying. These results were not used for drilling intercept calculations (see above for details on unit and QC protocols)
Sub-sampling techniques	• *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*	• RC samples were collected over generally 1m down-hole intervals and sub-sampled with a three tier riffle splitter. From observations in the geological database 3% of RC samples were wet, puggy or clayey. All samples in Table 1 were dry with no

Criteria	JORC Code explanation	Commentary
and sample preparation	*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.*	reported contamination • Measures taken to ensure the representivity of RC and diamond sub-sampling include close supervision by field geologists, use of appropriate sub-sampling methods, routine cleaning of splitter and cyclones, and rigs with sufficient capacity to provide generally dry, high recovery RC samples. • Information available to demonstrate the representivity of sub-sampling includes RC field duplicates and paired RC and diamond holes. • The available information demonstrates that the sub-sampling methods and sub-sample sizes are appropriate for the grain size of the material being sampled, and provide sufficiently representative sub-samples.
Quality of assay data and laboratory tests	• 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.	• Hand-held XRF measurements were used to aid selection of intervals for assaying. These results were not used for mineralised intersection calculations (see above for unit and QC protocols) • Avenira assay quality control procedures include certified reference standards, coarse blanks and external laboratory checks. These results have established acceptable levels of precision and accuracy. • Standards were inserted at a rate of 20:1 in the batches associated with the intersections within Table 1. All 17 standards for batches containing the intervals in Table 1 reported within accepted limits. • A total of 3 blanks were recorded in the batches associated with the intersections within Table 1. All analyses reported within acceptable limits (<0.1% P_2O_5). • Field duplicates for the analytical batches containing the holes in Table 1 display representative sampling which do not modify the intercepts contained in Table 1. One batch (10MI8009) contained 7 field duplicates, 3 of which reported a variation of 20%-30% (ratio). One was close to detection limit, with the other two containing primary and duplicate assays which both sat above or below the 27% P_2O_5 cut-off with no change of classification. The other batch (12MI8003) contained 9 pairings where the primary and field duplicate reported within 6% (ratio).
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	• The significant drill intercepts correlate with the geological logging and spatial location of the intercepts. These have been verified by the Competent Person.
	• *The use of twinned holes.*	• Avenira diamond drilling includes 30 holes drilled within 10 m of RC holes. The twinned diamond and RC holes show very similar mineralisation grades and thicknesses providing confidence in the reliability of the RC sampling.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• For Avenira drilling, sample intervals, and geological logs were directly entered into lap-top computers. These logs and laboratory assay files were merged directly into a central Micromine database • Avenira database and geological staff routinely validate database entries with reference to original data. • The Competent Person's independent checks of database validity include:

Criteria	JORC Code explanation	Commentary
		Comparison of assay values with geological logging, comparison of assay values between nearby holes, checking for internal consistency between, and within database tables. These checks showed no significant discrepancies in the drilling database.
	• *Discuss any adjustment to assay data.*	• No assay results were modified.
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.* •	• Collar locations were measured by hand-held GPS with X/Y accuracy of +/-6m, with elevations derived from a Digital Elevation Model derived from the Fugro 2008 LiDAR survey discussed below. • No holes were down-hole surveyed. For the comparatively widely spaced and shallow vertical holes the lack of comprehensive differential GPS collar surveys and lack of down-hole surveys and does not affect confidence in interval compilations.
	• *Specification of the grid system used.*	• All surveying was undertaken in Map Grid of Australia 1994 (MGA94) Zone 53 coordinates.
	• *Quality and adequacy of topographic control.*	• In October 2008, Fugro Airborne Surveys completed an aerial survey of the Wonarah area. Data captured in the survey included topographic elevations measured by radar altimeter relative to differential GPS locations. • Topographic control is adequate for current estimates.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• External to the area subject to the declared Mineral Resource estimate drill spacing between drillholes is up to 2,000 metres.
	• *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.*	• The data spacing in the area being reported has not established geological and grade continuity sufficiently to be contained in a Mineral Resource Estimate.
	• *Whether sample compositing has been applied*	• Compositing of assay results only was undertaken in compiling the data contained in Table 1. This was only completed and tabulated where the weighted average grade of the interval was >27% P_2O_5 as discussed above.
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 mineralisation is flat lying to gently undulating, and perpendicular to the generally vertical drill holes. • The drilling orientation achieves un-biased sampling of the mineralisation.
Sample security	• *The measures taken to ensure sample security.*	• Sample collection for Avenira drilling was supervised by Avenira geologists. • Wonarah is in an isolated area with limited access to the general public. Samples selected for assaying were collected in heavy-duty polywoven plastic bags that were immediately sealed. The bagged samples were then delivered directly to the analytical laboratories in Mount Isa by Avenira employees or contractors, or less

Criteria	JORC Code explanation	Commentary
		commonly by a local freight carrier. • Results of field duplicates and inter-laboratory checks, twinned holes, and the general consistency of results between sampling phases and drilling methods provide confidence in the general reliability of the data.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Sample data reviews have included comparisons between various sampling phases and methods which provide some confidence in the general reliability of the data. • The Competent Person independently reviewed the quality and reliability of the drilling data. These reviews included observation of drilling and sampling, review of database consistency, comparison of laboratory source files with database entries, and review of QAQC information. • The Competent Person considers that the sample preparation, security and analytical procedures adopted for the Wonarah drilling provide an adequate basis for the drilling intercept estimates.

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 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 Arruwurra Prospect lies within Exploration Licence 29840. The Main Zone Prospect lies within Exploration Licences 29849,32359 and EL33063 which are held by Avenira. The underlying land tenure is NT freehold held by the Arruwurra Aboriginal Corporation. • Mining Licence applications ML33343 and ML33344 are also in place over EL32359 and EL29840 respectively to ensure security of tenure • Additional granted Exploration Licences are held external to the Arruwurra and Main Zone prospects comprising EL33062, EL33192, EL33193. Exploration Licence application EL33063 is also held.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• A small number of holes drilled by previous tenement holders (Rio Tinto and IMC) represent around 10% of the drilling collar dataset. The intercepts displayed in Table 1 were drilled by MineMakers.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Wonarah is hosted by late Proterozoic to early Palaeozoic sedimentary rocks of the Georgina Basin. Phosphate mineralisation is hosted by gently undulating mudstone phosphorite and chert breccia phosphorite units of the Upper Gum Ridge Formation. Mineralisation is hosted within a sequence of mudstone phosphorite with an average thickness of around 9m. This is split into several units with similarities across the deposits in the Wonarah Project from top to base stratigraphically: APH – mudstone phosphorite unit BPH – basal indurated phosphorite unit TUP – undifferentiated transitional sediments which contain locally developed and generally discontinuous beds of high grade porcelaneous mudstone

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 theinformation 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.*
		• Refer to Table 1
		• Intervals not containing intervals >27% P_2O_5 have not been tabulated due to the large number of holes contained. They are however shown on Figure 1-3 to provide adequate context and balanced reporting.

Criteria	JORC Code explanation	Commentary
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.*	• A grade cut-off of 27% P_2O_5 has been used to define areas of interest and maintain consistency with cut-off reported for the ongoing DSO FEED study. • Composites calculated using length weighted average. The calculation was reverted to individual samples where any internal waste between intervals with >27% P_2O_5 reduced the interval average to less than 27% P_2O_5.
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No metal equivalents have been used
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').*	• The mineralisation is flat lying to gently undulating, and perpendicular to the generally vertical drill holes, with down-hole lengths representing true thicknesses.
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 1, 2 and 4 for plan views of drillholes • Refer to Figure 3
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.*	• Only drillholes external to the existing Mineral Resource are displayed. The Mineral Resource and associated data has been reported previously (refer to ASX releases - 30 April 2014: Quarterly Activities report, and, 14 October 2022: Annual Report Amendment at avenira.com). • To avoid misleading reporting the location of all drillhole collars are displayed on Figures 1-3.
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.*	• Metallurgical data has been previously reported. Additional scoping studies are in progress to assess the suitability of Wonarah mineralisation for inclusion in production of battery grade phosphoric acid and lithium iron phosphate cathode material (refer to ASX release – 17 November 2022: Retraction of Certain Statements at avenira.com).
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.*	• Further extensional and/or infill drilling, as well as drilling or bulk test pit activities to recover samples for further metallurgical and geotechnical test work prior to any proposed mining, Diagrams and plans may show culturally sensitive areas that are subject to a confidentiality agreement and are not shown here.