#### **First Au Limited**

(ASX: FAU)



22 August 2022

#### **Testing on Economic Potential of Gimlet Gold Project, Kalgoorlie**

#### **Highlights**

- Initial metallurgical testing demonstrates gold recovery rates of 87.99%
- Further metallurgical testing has the potential to increase recovery rates
- Potential for further exploration upside outside the existing resource at Gimlet with several areas identified as drilling targets

First Au Limited ("FAU" or the "Company") (ASX:FAU, OTC: FRSAF) provides the following update on the Gimlet project, Kalgoorlie, Western Australia. The Company has been undertaking additional test work on the Gimlet project to advance the project through demonstrating its economic potential. The test work has demonstrated high recovery rates from the treatment and processing of gold bearing materials from Gimlet. The testing that has been completed to date has demonstrated gold recovery rates of 87.99%.

The current phase of the Gimlet testwork program was initiated to determine various metallurgical parameters relevant to gold extraction, and was a follow-up to previous testwork caried out by IMO Metallurgy in July 2019. FAU engaged Upside Metallurgy to oversee the current phase of metallurgical test work conducted by ALS Metallurgy, to further explore suitable processing options for the Gimlet project.

A master composite sample was prepared utilising diamond drill core. The master composite was split into two composites, where the first was subject to comminution (reducing the sample material to smaller fragments) test work, and the second to recovery test work.

Both Abrasion Index and Bond Ball Work Index tests made up the comminution phase of test work.

The recovery testwork program was designed to explore the potential recovery that could be achieved using a flotation and oxidative leach process route. The testing involved initially using flotation to produce a flotation concentrate, which was then subject to oxidative leach and subsequent cyanide leaching. The flotation tail was subject to gravity concentration and subsequent cyanide leaching to determine if leaching the flotation tail would increase recovery rates.

#### The principal findings were:

- Comminution test work showed that Gimlet is a relatively soft ore (13.3kWh/t) and has a very low Bond abrasion index (0.0129).
- The gold feed grade of the composite sample subjected to recovery testwork was 4.85g/t.
- Flotation of the ore produced a concentrate gold grade of 33.16g/t, with a stage recovery of 91.93%. Mass pull to the concentrate stream was 13.44%.
- The flotation tail stream, which was subject to gravity concentration and subsequent gravity tails leaching, contributed to 2.4% of overall recovery.

- The oxidative and subsequent cyanide leach stage recovery was 93.0%.
- The combined flotation, oxidative and cyanide leach recovery was 85.50%.
- The combined overall recovery (Flotation + Oxidative Leach + Flotation tailings cyanide leach) was 87.99%.
- The final tail grade achieved was 0.58g/t.

FAU will consider further metallurgical testing to determine the optimal gold recovery processing route in the oxidative leach and cyanide leach stages which has the potential to increase recovery rates.

In addition to the metallurgical works undertaken, FAU has also assessed other areas of the project. The Company has engaged consultants to undertake preliminary modelling of open-pit design and underground mining options. These works are early stage and based on a limited amount of geotechnical and hydrogeological information, however, it has proven useful in identifying future options to move the project forward.

As part of the preliminary optimization works, FAU has also undertaken a review of the existing resource model. The review has highlighted areas of potential upside to the existing resource, particularly to the north end of the resource where FAU believes it is open at depth below 90m.

The Company sees further opportunity for exploration success at Gimlet and is also encouraged by the recent exploration success of Horizon Minerals along strike within the Binduli-Teal area. FAU has undertaken a review of the exploration potential within the tenement outside the resource area, with several target areas identified for a future aircore drilling program.

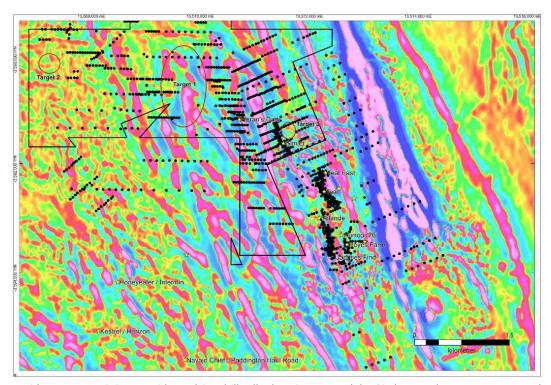


Figure 1. Airborne magnetic image with overlying drill collar locations around the Gimlet – Teal area. Note proposed aircore target areas

#### **Project Background**

The Gimlet Gold Project (E26/174 & MA26/849) is strategically positioned 15km NW of Kalgoorlie, in an area rich in infrastructure and potential toll treatment options.

The project has a Mineral Resource Estimate (MRE) of an Inferred Resource of 1,166,000 tonnes at 3.2g/t Au for 120,000 ounces at a 1 g/t cut-off (see Table 1 below for full breakdown)<sup>3</sup>.

Table 1: June 2021 MRE using 1 g/t Au cut-off

June 2021 Inferred MRE	Tonnes	Grade (g/t Au)	Ounces
Oxide	70,800	2.53	5,800
Transitional	93,400	3.21	9,600
Fresh	1,001,700	3.24	104,200
Total	1,165,900	3.19	119,600

#### Authorised by:

**Bryan Frost** 

**Executive Chairman, Managing Director** 

About First Au: First Au is an advanced gold and base metals exploration company listed on the Australian Securities Exchange (ASX: FAU) and is trading on the OTC market in the USA (OTC: FRSAF) and is pursuing exploration programs at its 100% owned Gimlet Gold project near Kalgoorlie and Victorian Goldfields Project in East Gippsland.

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#### **Competent Person's Statement**

The information in this report that relates to metallurgical testwork for the Gimlet project is based on information compiled by Mr Lee Richardson, a Competent Person who is a member of the Australian Institute of Mining and Metallurgy and a full time employee of Upside Group Pty Ltd. Mr Richardson has sufficient experience which 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 Exploration Results, Mineral Resources and Ore Reserves". Mr Richardson consents to the inclusion in the report of the matters based on his information in the form and context which it appears.

The information in this ASX Release that relates to the Gimlet JORC Resource is extracted from the following report which is available at www2.asx.com.au.

1. 23 June 2021, "JORC Resource Increases at Gimlet to Inferred Resources or 120,000 Ounces Au", Mr Andrew Bewsher and Dr Gavin England, competent persons.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of Minerals Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimate in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context of the respective competent persons' findings in relation to those reports have not been materially modified from the original market announcement.

# **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	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	Not applicable to metallurgical test works undertaken.
Drilling techniques	<ul> <li>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).</li> </ul>	Not applicable to metallurgical test works undertaken.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	Not applicable to metallurgical test works undertaken.
Logging	<ul> <li>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.</li> </ul>	Not applicable to metallurgical test works undertaken.

Criteria	JORC Code explanation	Commentary
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	Not applicable to metallurgical test works undertaken.
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	Not applicable to metallurgical test works undertaken.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	Not applicable to metallurgical test works undertaken.
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	Not applicable to metallurgical test works undertaken.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	Not applicable to metallurgical test works undertaken.
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	Not applicable to metallurgical test works undertaken.
Sample security	The measures taken to ensure sample security.	Not applicable to metallurgical test works undertaken.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not applicable to metallurgical test works undertaken.

## **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	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>Tenement E26/174 (which is overlapping with Mining application M26/216), of which First Au holds a 100% controlling interest. The area is now under a subsequent mining lease application.</li> <li>The tenement is in good standing with the WA DMIRS.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Not applicable to metallurgical test works undertaken.
Geology	Deposit type, geological setting and style of mineralisation.	Not applicable to metallurgical test works undertaken.
Drill hole Information	<ul> <li>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:</li> </ul>	Not applicable to metallurgical test works undertaken.

Criteria	JORC Code explanation	Commentary
	<ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> <li>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.</li> </ul>	
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Not applicable to metallurgical test works undertaken.
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	Not applicable to metallurgical test works undertaken.
Diagrams	<ul> <li>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.</li> </ul>	Not applicable to metallurgical test works undertaken.
Balanced reporting	<ul> <li>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.</li> </ul>	Not applicable to metallurgical test works undertaken.
Other substantive exploration data	<ul> <li>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</li> </ul>	Not applicable to metallurgical test works undertaken.

Criteria	JORC Code explanation	Commentary
	deleterious or contaminating substances.	
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Not applicable to metallurgical test works undertaken.

## **Section 3 Estimation and Reporting of Mineral Resources**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	Not applicable to metallurgical test works undertaken.
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	Not applicable to metallurgical test works undertaken.
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	Not applicable to metallurgical test works undertaken.
Dimensions	<ul> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	Not applicable to metallurgical test works undertaken.
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes</li> </ul>	Not applicable to metallurgical test works undertaken.

Criteria	JORC Code explanation	Commentary
Moisture	<ul> <li>appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> <li>Whether the tonnages are estimated on a dry basis or with natural</li> </ul>	Not applicable to metallurgical test works undertaken.
	<ul> <li>whether the tornages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	Not applicable to metallurgical test works undertaken.
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	Not applicable to metallurgical test works undertaken.
Mining factors or assumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	Not applicable to metallurgical test works undertaken.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	The current testwork has demonstrated that the Gimlet mineralisation is amenable to conventional gold extraction techniques using flotation, sulphide oxidation and CIL processing.

Criteria	JORC Code explanation	Commentary
Environmen- tal factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul> <li>The current metallurgical testwork envisages treatment at a toll processing plant, accordingly, there would be no on-site processing and hence no process residue to dispose of.</li> <li>At this stage, potential environmental impacts of a mining operation have not been assessed.</li> </ul>
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	Not applicable to metallurgical test works undertaken.
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	Not applicable to metallurgical test works undertaken.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	Not applicable to metallurgical test works undertaken.
Discussion of relative accuracy/confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	Not applicable to metallurgical test works undertaken.

Criteria	JORC Code explanation	Commentary
	<ul> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	