ASX Code: MRR

19 July 2024

ASX Release

Mt Pleasant Sampling Results and Targeting Study

HIGHLIGHTS

- Results of a rock chip sampling program at the Mt Pleasant Cu-Mo-Au project in the Lachlan Fold Belt of NSW received.
- Sampling returned assay results including 9.3g/t Au and 2.01 g/t Au and reconnaissance also confirmed the potential of the broader project for Cu-Au porphyry mineralisation.
- Merlin Geophysics have been engaged to undertake compilation, processing and interpretation of the geophysical data sets to generate porphyry and orogenic gold targets for further on-ground testing.

MinRex Resources Limited (**ASX: MRR**) ("**MinRex**" or "the **Company**") is pleased to announce the assay results from a reconnaissance rock chip sampling program completed earlier this year over its 100% owned Mt Pleasant Project in the Lachlan Fold Belt of NSW.

About the Mt Pleasant Project

The Mt Pleasant licence (EL 9266) is located approximately 30km south of Mudgee in central west NSW and comprises a total area of 167 km^2 (refer Figure 4). The Castlereagh Highway between Lithgow and Mudgee passes along the eastern boundary of the tenement.

From 1975 to 1982, CSR Limited and Pacminex Pty Ltd completed 47 diamond holes for 14,986m and 9 percussion holes for another 996m at the Mt Pleasant prospect. The drilling defined molybdenum, scheelite and chalcopyrite (Mo-W-Cu) mineralisation modelled using Leapfrog software over 1.1km in length, 750m in width and to a vertical depth of 540m (refer to ASX Announcement 2 September 2021).

Geology and Mineralisation

The Mt Pleasant project lies on the eastern margin of the Silurian-Devonian Hill End Trough, a broad north-south oriented volcano-sedimentary basin in the Eastern Lachlan Fold Belt of NSW. The volcano-sedimentary sequence is chevron-folded into variably gently plunging anticlinal and synclinal structures. Near EL 9266, the Hill End Trough is bounded on the east by the Wiagdon Thrust Fault.

East of the Wiagdon Fault, sediments and volcanics of the Biraganbil & Piambong Formations of the Middle-Upper Silurian Chesleigh Group, form part of the Capertee High. The Piambong Formation is intruded by a north-trending Carboniferous metadolerite. These units are the main host to the Mt Pleasant Mo-W-Cu porphyry mineralisation.

Mineralisation at the Mt Pleasant prospect occurs within a fracture controlled stockwork of quartz veins and veinlets and is hosted within felsic-intermediate volcanics and sediments, dolerite dykes and felsic stock and dykes. Mineralisation is strongly associated with the upper stockwork portion of an intrusive porphyritic granite. Within the mineralised stockwork zone the metadolerite exhibits strong pervasive K- feldspar alteration in the upper zone, which can be up to 60m wide.

Sampling

At the Mt Pleasant project, the Company is targeting Cu-Mo porphyry and orogenic Au styles of mineralisation, with the three main prospects and several mineral occurrences inspected as part of the reconnaissance sampling program:

- Crown Gold Mine (interpreted sulphide-quart gold vein system) with historic production of 349 oz Au averaging 5.3g/ Au.

- Glasscock Prospect (interpreted epithermal sheeted vein system) with historic high-grade Au-Ag-Cu rock chips.
- Mt Pleasant Prospect (interpreted porphyry system) large Mo-Cu mineralised system from historic drilling.

A total of seven rock chip samples were collected: four from the main historic workings at the Crown Au Mine and a further three from the Glasscock prospect. The best result was 9.3g/t Au comprising a narrow (0.5m wide) quartz vein in the workings at the Crown Au Mine from sample MP001 (refer Table 1 and Figures 1 & 3). At the Glasscock prospect the best result was 2.01 g/t Au with anomalous Ag, As, Cu Pb and Sb comprising a narrow (0.3m wide) gossanous quartz vein from sample MP005 (refer Table 1 and Figures 2 & 3). The other samples did not return any significant results (≥1.5g/t Au).

Table 1 – Rock Chip Sample Results Mt Pleasant Project EL9266 (key elements)

Tenement	Prospect	Sample ID	MGA_Easting	MGA_Northing	Datum	Zone	Au (ppm)	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)	Pb (ppm)	Sb (ppm)	W (ppm)	Zn (ppm)
EL9266	The Crown Au Mine	MP001	758777	6361452	MGA94	55	9.3	0.512	86.4	10.55	0.31	43.3	3.73	3.5	42
EL9266	The Crown Au Mine	MP002	758731	6361447	MGA94	55	1.245	0.072	11.35	3.55	0.2	3.53	2.34	0.225	6.1
EL9266	The Crown Au Mine	MP003	758758	6361328	MGA94	55	0.056	0.045	1590	14.6	0.65	9.85	4.21	2.17	51.8
EL9266	The Crown Au Mine	MP004	758769	6361333	MGA94	55	0.105	0.042	78.8	14.25	0.22	11.05	1.96	0.098	16.8
EL9266	Glasscock	MP005	756782	6358159	MGA94	55	2.01	182	17900	301	0.37	1510	1620	1.815	22.4
EL9266	Glasscock	MP006	756740	6358156	MGA94	55	0.051	1.46	593	14.45	0.4	53.4	30.8	1.675	82.4
EL9266	Glasscock	MP007	756765	6358180	MGA94	55	0.035	0.772	528	43.7	0.22	54.4	77.3	5.88	90.4

Figure 1 – The Crown Gold Mine historic workings and location of sample MP001 on EL9266

Figure 2 – The Glasscock Prospect outcrop of sample MP005 on EL9266

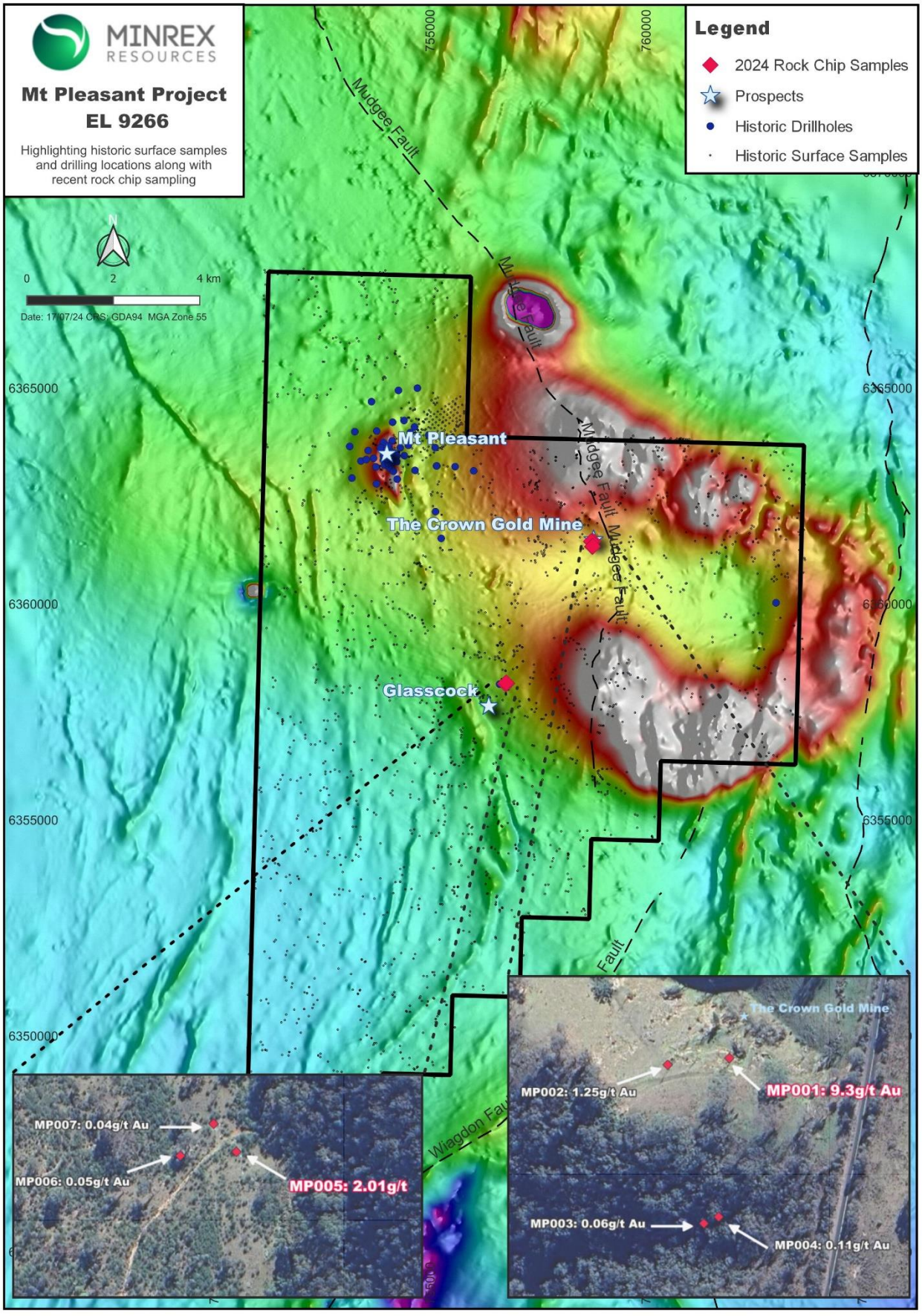

Figure 3 – Rock Chip Sample Results on TMI RTP aeromagnetic image at EL9266

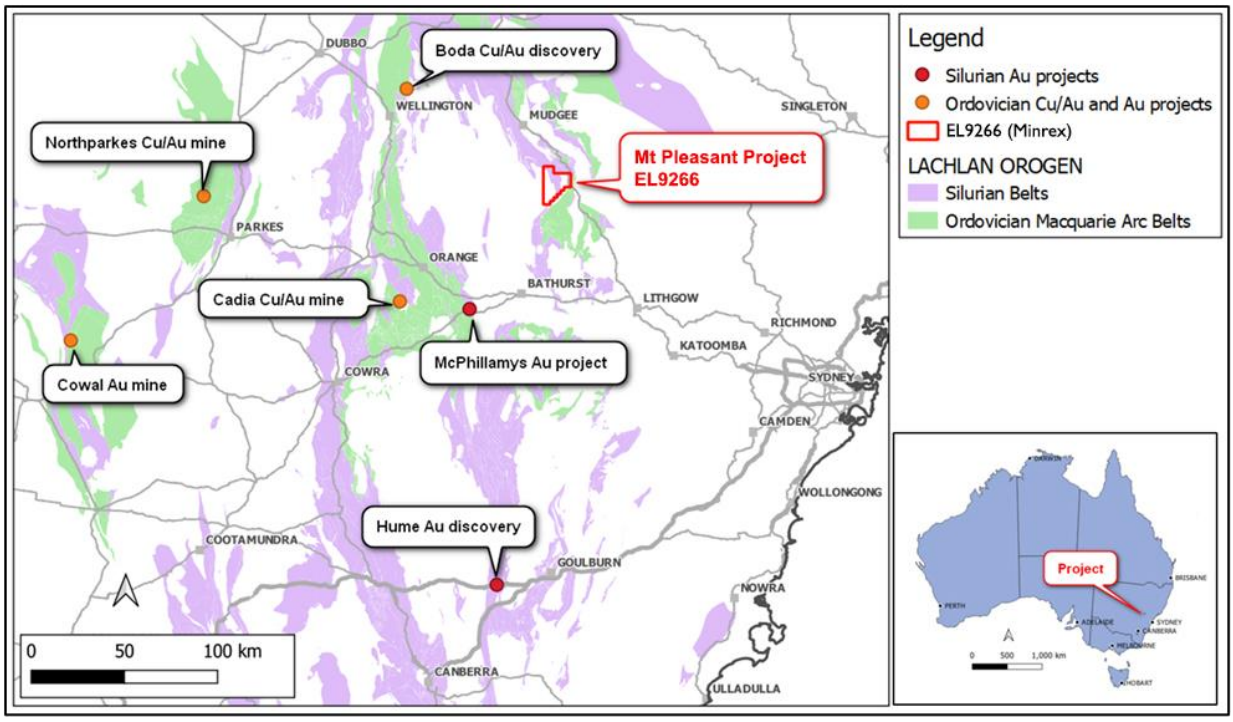

Figure 4 – MinRex Resources Mt Pleasant Project in NSW

Target Generation

MinRex has engaged Merlin Geophysics to compile, process and interpret all geophysical survey data in conjunction with the historic exploration data, including an extensive geochemical (rock chip, soils and stream sediment sample) data set and undertake target generation. The aim of the work is to generate additional targets for ranking and further on-ground assessment. The initial focus will be on the porphyry Cu-Au targets across the Mt Pleasant project.

This ASX announcement has been authorised for release by the Board of MinRex Resources Limited.

-ENDS-

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About MinRex Resources Ltd

MinRex Resources Limited (ASX: MRR) is an Australian based ASX-listed gold, base metals and battery metals explorer with highly prospective gold and base metals projects in the Lachlan Fold Belt of NSW and lithium-tin-tantalum projects in the Pilbara region of WA near the Global Lithium Archer Deposit. The Company's portfolio comprises around 500km^2 of tenements, including the Sofala Gold Project (NSW) which hosts JORC 2012 Resources totalling 352,000 oz gold.

Competent Persons Statement

The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Ian Shackleton. Mr. Shackleton is the Technical Director of MinRex Resources Limited and is a Member of the AIG of whom have sufficient experience relevant to the styles of mineralisation under consideration and to the activity being reported 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. Shackleton has verified the data disclosed in this release and consent to the inclusion in this release of the matters based on the information in the form and context in which it appears.

Forward Statement

This release includes forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning MinRex's planned exploration programs and other statements that are not historical facts. When used in this release, the words such as "could", "plan", "estimate", "expect", "anticipate", "intend", "may", "potential", "should", "might" and similar expressions are forward-looking statements. Although MinRex believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve known and unknown risks and uncertainties and are subject to factors outside of MinRex's control. Accordingly, no assurance can be given that actual results will be consistent with these forward-looking statements.

References

For further information please refer to previous ASX announcements on the project from MinRex Resources Limited:

- Mt Pleasant Project Approved for Exploration (2 September 2021).
- Investor Presentation November 2020 (25 November 2020).
- Minrex to Acquire Projects in Highly Prospective East Lachlan Fold Belt (NSW) and Raise $2.9M (22 October 2020).

Referenced material also include Technical Reports lodged with the Geological Survey of NSW Mining, Exploration & Geoscience as follows:

- Alexander, G.K. 1982 – Exploration Progress and Summary Report, Mineral Exploration Licence 1341, Windeyer, New South Wales. Six Months ending 27th September 1982. EMR145/82. CSR Limited. GSNSW Report No. GS1982/558.
- Barron, L.M., Cameron, R.G., Watkins, J.J., Colquhoun, G.P., Meakin, N.S. and Scott, M.M. 1999 – Carboniferous, pp. 256 – 280. In, Meakin, N.S. & Morgan, E.J. (compilers) 1999 – Dubbo 1:250 000 Geological Sheet SI/55-4, 2nd edition. Explanatory Notes. Geological Survey of New South Wales, Sydney, xvi + 504 pp.
- Cairns, B. 2012 – Mount Pleasant EL6083. Final Technical Report. Granted 19th May 2003 to current 18th May 2012. Moly Mines Ltd. GSNSW Report No. GS2012/1475.
- Clappison, D.J. 1975 – Progress Report No. 4 on Exploration Mineral Licence No. 628. Capertee, New South Wales, 14th March 1975 - 13th September 1975. Pacminex Pty Ltd Report PMR157/75. GSNSW Report No. GS1975/266.
- Clappison, D.J. 1976 – Progress Report No. 5 on Exploration Mineral Licence No. 628. Capertee, New South Wales, 14th March to 13th September 1976. Pacminex Pty Ltd Report PMR177/76. GSNSW Report No. GS1976/287.
- Clappison, D.J. 1977 – Final Report on Exploration Mineral Licence No. 628. Capertee, New South Wales. Pacminex Pty Ltd Report PMR/172/77. GSNSW Report No. GS1977/222.
- Gordon, C. 2007 – Mt Pleasant Mo-W Project, New South Wales. Report Prepared for Moly Mines Limited. Mining Assets Pty Ltd.
- Lea, W.L. 1991 – First Annual and Final Report for EL3679, Mudgee 2. For the Twelve-Month Period ending 15th November 1991. CRAE Report No. 17601. GSNSW Report No. GS1992/006.
- McConachy, T.F. 1993 – Final Report for EL4233 (Mudgee 3). CRAE Report No. 18792. GSNSW Report No. GS1993/152.
- Shedden, S.H. and Bright, D.V. 2009 – Sofala Project Exploration Licence 7078 New South Wales. Final Report for the Period ending 10th April 2009. Oroya Mining Limited. GSNSW Report No. GS2010/0111.
- Vicary, M.J. 1983 – Final Report on Exploration Licence No. 1213, Mt. Pleasant, Mudgee NSW. Volume 1. EMR77/83. CSR Limited. GSNSW Report No 1983/403.

JORC Code, 2012 edition – Table 1

Section 1: Sampling Techniques and Data

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.*	• A total of 7 rock chip samples were collected during reconnaissance exploration over the Mt Pleasant Cu-Mo Project. • Rock chip samples are representative of outcrops with samples collected from mineralised and non-mineralised rocks. • The weight of the rock chip samples collected are each nominally between 1 kg to 2 kg. • All samples were collected by a geologist on site and placed into uniquely numbered calcio bags and sent to ALS Laboratory in Orange. • A description of the sample, co-ordinates (location) and photograph of each of the samples were recorded. • ALS used industry standard method Au-ICP22 (50gm Fire Assay ICP-AES finish) ME-MS61L to analyze for a 48 element by four acid digestion and ICP-MS and MS61L-REE to analyze for a further 12 Rare Earh Elements. • No standards (CRM) or blanks were submitted in the field with the samples. ALS submitted 4 CRMs (OREAS 316 & MRCA-21) and 3 blanks as part of the laboratory QC practices. • Sampling and analysis are considered appropriate for the early stage of exploration undertaken.
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).*	• Not applicable, no drilling has been carried out.
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.*	• Not applicable, no drilling has been carried out.

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.*	• Information is of insufficient detail to support any Mineral Resource Estimation.
Sub-sampling techniques and sample preparation	• *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.*	• Not applicable, no drilling has been carried out. • No measures have been taken to ensure sampling is statistically representative of the in situ sampled material. The collection methodology is considered appropriate for this early-stage assessment of the project. • The sample size is considered appropriate to the early stage of exploration carried out.
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 7 samples collected were assayed by ALS using methods Au-ICP22 (50gm Fire Assay ICP-AES finish), ME-MS61L and MS61L-REE a four-acid digestion with analysis performed with ICP-MS instrumentation. • A total of two Zn-Pb-Ag ore standards (CRM) OREAS 316 & also two MRCA-21 were analysed by ALS. • There was no assay bias identified in the standards submitted by ALS.
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.*	• The results are considered acceptable and have been reviewed by a geologist. The company conducts internal data verification protocols which have been followed and results have been incorporated into a commercially managed database to preserve integrity of the sample data. • Results have not been adjusted.

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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Samples were located during collection by handheld GPS. • The grid system used is Australian Geodetic MGA Zone 55 (GDA94) • The level of topographic control offered by the handheld GPS is considered sufficient for the style of work undertaken
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).*	• Rock chip samples are representative of outcrops with samples collected from mineralised and non-mineralised rocks. Samples were generally collected from immediately known mineralised prospects. • The sample locations are each random and were not taken at regular spacings and give no indication of the variation in grades associate with any geological unit sampled.
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.*	• Sampling was carried out over separate portions of the project, and it is not known if they are representative. • Not applicable, no drilling has been carried out
Sample security	• *The measures taken to ensure sample security.*	• Industry standard sample collection and storage have been undertaken.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of the data have been conducted at this stage.

JORC Code, 2012 edition

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 Mt Pleasant Project comprises tenement EL 9266 held by Sofala Minerals Pty Ltd a 100% subsidiary of MinRex Resources Limited. • The tenement is granted and in good standing. • There are no impediments that have been identified for operating in the project area on EL 9266.
Exploration done by her parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Pacminex Pty Ltd, Clappison, 1977, EL6288, Period 1973-1977. Geological mapping, soil sampling, stream sediment sampling and diamond drilling. Airborne EM surveys, IP and magnetic surveys. • CSR Limited, Vicary, 1983, EL1213, Period 1979-1983. Stream sediment sampling, soil sampling, RC drilling, diamond drilling. Reprocessing airborne magnetic data. Additional airborne magnetics/radiometrics, ground gravity & photo geological surveys were also carried out. Mo resource defined. • CSR Limited, Alexander, 1982, EL1341, Period 1980-1983. Stream sediment sampling, soil and rock chip sampling, percussion drilling, airborne magnetic/radiometric surveys. • Sunshine Gold, Earth Resources Australia, 1985, EL2155, Period 1983-1985. Structural interpretation & trial gravity traverses. • CRA Exploration, Lea, 1991, EL3679, Period 1990-1991. No work completed. • CRA Exploration, McConachy, 1993, EL4233. Period 1992. Literature Review. • Hibernia Gold Pty Ltd, Moly Mines Limited, Moly Ex, Cairns, 2012, EL6083. Period 2003-2012. Soil sampling, rock chip sampling, re-logging of drill core, re-modelling of geophysical data, acquisition of reference geophysical datasets. • Oraya Mining Ltd, Shedden & Bright, 2009, EL7078. Period 2008-2009. Data and literature review.

Geology	• *Deposit type, geological setting and style of mineralisation.*	• Ordovician porphyry Cu-Au systems in the Macquarie Arc and orogenic gold deposited-sheeted vein systems.
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.*	• Drilling has not been carried out to test these latest rock chip sample results. • The rock chip sampling was undertaken to include a more extensive suite of elements and confirm historic surface sampling results. • MinRex has not undertaken any drilling on EL9266. All material historic drilling has been reported in the MinRex ASX Announcement Mt Pleasant Project Approved for Exploration dated 22 September 2021.
Data aggregation ethods	• *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 variation or aggregation methods have been applied to the assay or any other data.
Relationship between ineralisation widths nd 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').*	• Exploration is at an early stage and information contains insufficient data points to allow these relationships to be 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.*	• A sample location plan is included in the main text of 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 results are reported herein.

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.*	• The exploration reported herein is at a very early stage but the rock chip sample results are consistent with historic exploration undertaken at the Crown Gold Mine and Glasscock prospect
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.*	• MinRex has engaged Merlin Geophysics to compile, process and interpret all geophysical survey data in conjunction with the historic exploration data, including an extensive geochemical (rock chip, soils and stream sediment sample) data set and undertake target generation. • The aim of the work is to generate additional targets for ranking and ground assessment that have not been previously identified.