Redbank Copper Limited

High-Grade Copper Mineralisation Supports Exploration Strategy

Highlights:

- **Historic drill core sampling supports high-grade copper mineralisation**
- **Re-assaying of 4,692 drill core and pulp samples from historic drilling confirms high-grade copper intersections from each of the 7 deposits reported below, including*:**
    - ***58m @ 2.73% Cu from 3m (RB07-004 – Redbank deposit)***
    - ***17m @ 3.04% Cu from 1m (AZ07-004 – Azurite Deposit)***
    - ***60m @ 1.53% Cu from 44m (AD1 – Punchbowl Deposit)***
    - ***50m @ 3.03% Cu from 193m (RNRC09-005 – Roman Nose Deposit)***
    - ***102m @ 2.24% Cu from 100m (BL-071 – Bluff Deposit)***
    - ***17m @ 1.03% Cu from 18m (PRRC10-11 – Prince Deposit)***
    - ***78m @ 2.34% Cu from 193m (SF008 – Sandy Flat Deposit)***

  (*historic intercepts reported have all been re-assayed and the correlation coefficient between historic and new assays is ~0.9)
- **Historic Redbank Project drill assay results have now been validated and merged into a JORC 2012 compliant database for resource update**
- **Work commenced on data base by Entech Pty Ltd on 30 March and is progressing**
- **Re-assays of drill core and pulp samples indicates the predominant sulphide in mineralised samples is chalcopyrite with little to no pyrite present**
- **Results from multi-element sampling program significantly enhance both the scale and prospectivity of the broader Redbank Project area**
- **Previous drilling within breccia pipes often terminated in copper mineralisation and there remains potential for extensions of copper mineralisation at depth**
- **Specific Gravity ('SG') determinations completed on historic drill core indicates historic reporting of density has been under-reported**
- **Exploration strategy and target generation programs now well advanced ahead of commencement of field work programs on 1 June 2021**

Redbank Copper Limited (ASX: RCP) ('**Redbank**' or '**the Company**') advises that results have been received from the re-sampling of historic drill core and a regional soil sampling program completed at the Company's Redbank Copper Project in the McArthur Basin, Northern Territory.

Importantly, this has enabled an independent mineral resource estimate to commence with confidence in the database supplied to Entech Pty Ltd, who are updating the existing resource to JORC 2012 classification. An updated resource estimate is now expected this quarter.

Following completion of the 2020 field work program, Redbank has now significantly increased confidence in historic copper assay results which date back 50 years. The re-sampling program has confirmed a good correlation between historic and recent assays.

An interpretation of the 48 element geochemical data from both drill core and soil samples provides a new insight into the reasons for such high-grade copper within the breccia pipes. These multi-element assays have been collected across the Redbank Project area and have provided Redbank's technical team with invaluable insights into the formation of the copper deposits.

Management Commentary

Redbank Executive Director Mike Hannington commented: *"Our team has put in a huge effort to not only validate 50-year-old data to include in our database for estimating a JORC 2012 mineral resource, but also to integrate all this data to provide a clear plan on what exploration methods are most effective in our future copper exploration programs. The fact that mineralisation appears to be predominantly chalcopyrite with little pyrite is significant and allows our team to design follow-up exploration programs with a high-level of conviction.*

ASX ANNOUNCEMENT
ASX Code: RCP

29 April 2021

DIRECTORS & MANAGEMENT

Anthony Kiernan
Non-Executive Chairman

Michael Hannington
Executive Director

Bruce Hooper
Non-Executive Director

Daryl Henthorn
Non-Executive Director

Keith Middleton
Non-Executive Director

Melanie Ross
Company Secretary

ASSET PORTFOLIO

Redbank Tenements (Granted)
Northern Territory – 8,791km²

Redbank Tenements (Applications)
Northern Territory – 4,122km²

Millers Creek Project
South Australia – 1,110km²

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Although a considerable amount of work has been completed at the project in a short period of time, what is clear is that this is just the starting point for Redbank in our pursuit of large-scale copper systems in the McArthur Basin. The scale of our ground position is significant and through the detailed review of huge amounts of internal and industry historic data, overlaid with modern techniques and tools, our team has now established a much clearer geological understanding of the Redbank Project and the significant opportunity at hand."

Historic Drill Core Sampling Supports High-Grade Copper Mineralisation

Redbank has completed re-assaying 4,692 historical drill core and pulp samples from approximately 25,000m of diamond drill core stored at the Redbank Exploration Camp. This work was critical to validate historic assays, some going back over 50 years to 1970 when Newmont Ltd first discovered multiple copper mineralised breccia pipes within a small area of the Redbank Project.

Importantly, Redbank's technical team has been able to validate several high-grade copper intersections from historic drill programs completed within the Redbank Project area. Several of these copper intersections have been recorded at targets that will form part of Redbank's exploration plans this year.

Some of the best high-grade intersections validated by Redbank include*

- ***128m @ 1.65% Cu from 15.24m (SF009 – Sandy Flat Deposit)***
- ***58m @ 2.73% Cu from 3m (RB07-004 – Redbank deposit)***
- ***17m @ 3.04% Cu from 1m (AZ07-004 – Azurite Deposit)***
- ***60m @ 1.53% Cu from 44m (AD1 – Punchbowl Deposit)***
- ***50m @ 3.03% Cu from 193m (RNRC09-005 – Roman Nose Deposit)***
- ***102m @ 2.24% Cu from 100m (BL-071 – Bluff Deposit)***
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- ***78m @ 2.34% Cu from 193m (SF008 – Sandy Flat Deposit)***

(*historic intercepts reported have all been re-assayed and the correlation coefficient between historic and new assays is ~0.9)

Note: these copper grade/intervals are historic assays included in the JORC 2004 mineral resource for the 7 deposits of 6.23Mt @ 1.53% Cu and reported in the 2011 Redbank Annual Report released to the ASX on 27 October 2011 and the Prospectus released to the ASX on 13 February 2013: refer to Table 1.

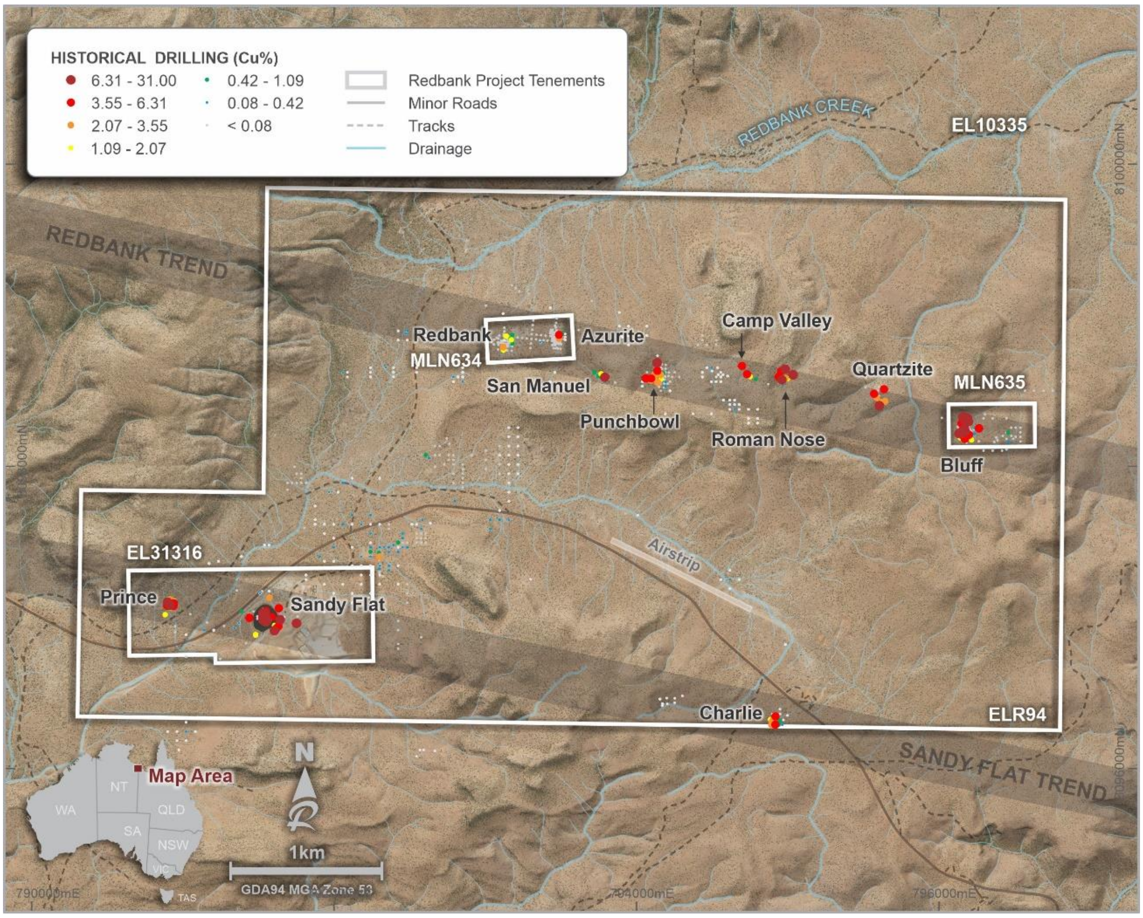


Figure 1. Redbank Project showing deposits and prospects where several historic high-grade copper intersections have been validated

JORC 2012 Resource Update

All historic drill collar locations, downhole surveys and assays have now been validated. This underpins the integrity of the drill hole database and further strengthens the Company's confidence and geological understanding of the Redbank Project area.

A re-sampling program was undertaken to gain confidence in both the repeatability of the historical copper analyses and densities reported by SRK in 2010 as part of the Redbank JORC 2004 resource estimate of 6.23Mt @ 1.53% Cu.

Although these historical samples are up to 50 years old, both core and pulp assay results display a high correlation with original data. This work provides Redbank with a high level of confidence that historical assays can be used in future mineral resource estimates.

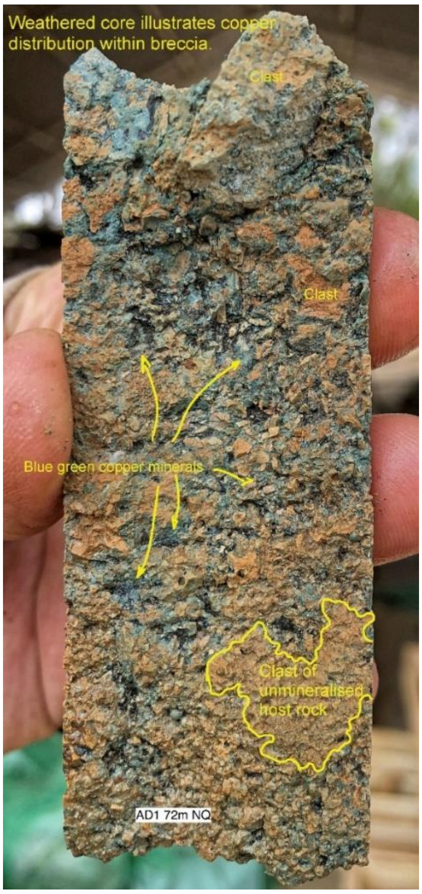
At the end of March, all validated information was provided to Entech to commence JORC 2012 resource estimation work. The validation was confirmed to be of a high quality which will assist with the processing timeline and a site visit to Redbank is planned for early May to enable the independent competent person to further validate the Redbank Project for JORC 2012 compliance.

The updated JORC 2012 resource estimate is expected to be reported this quarter.

Historic Drill Core Analysis

Inspection of core (figures 2 and 3) reveals high-grade mineralisation is confined to the matrix of breccias which may be amenable to ore sorting and beneficiation. Mining studies will form part of future work to determine the optimized parameters for economic extraction.

The existing resource is hosted within only 7 breccia pipes covering an area of 10km²; a small portion of Redbank's 12,913km² ground position. Further significant discovery opportunities lie within the 50+ breccia pipes within current Redbank Project tenements which provide near surface indications to direct exploration for a significant strata-bound copper deposit.



Figures 2-3. Inspection of historic drill core

Detailed analysis of the core has identified significant amounts of pyrobitumen, highlighting that oil and gas has travelled along the same fluid pathways as copper bearing fluids. Interpretation of thin sections have been made and confirm the predominance of chalcopyrite as the only copper sulphide. These thin sections will assist in collecting samples for age dating the copper deposits at Redbank to compare with the mineralising events which formed zinc deposits at McArthur to the west, and Century to the east of the Redbank Project.

Regional Soil Sampling Program

Over the last 50 years, few multi-element assays have been reported from ~16,000 soil samples collected over the Redbank Project area. In November 2020, reconnaissance soil sampling was undertaken on 500m centres over an area of ~200km^2 for a total of 805 samples (figure 4). This broad soil sampling program generated the first 48 element regional dataset at Redbank.

This data has been used to understand variations in base metal distribution and in particular, the presence of copper in the soils and its associated geochemical footprint.

Preliminary results have been received, however, final results are currently the subject of a laboratory contamination error relating to only one of the 48 elements. Consequently, results are unable to be reported for the soils sampling until final laboratory certification is received.

Preliminary results demonstrate broad anomalism in multiple elements that will require further infill sampling to close down the 500m spaced sample intervals to enable drill targetting.

What is clear is that all samples have been influenced by both magmatic volcanism and hydrothermal fluids. This provided two methods for emplacing copper into the breccia pipes. Redbank expects to extend soil sampling beyond the 2020 survey area and collect samples along station tracks and fences to gain regional and background information.

Analysis of 2020 soil results will be further reported when final laboratory certification is received.

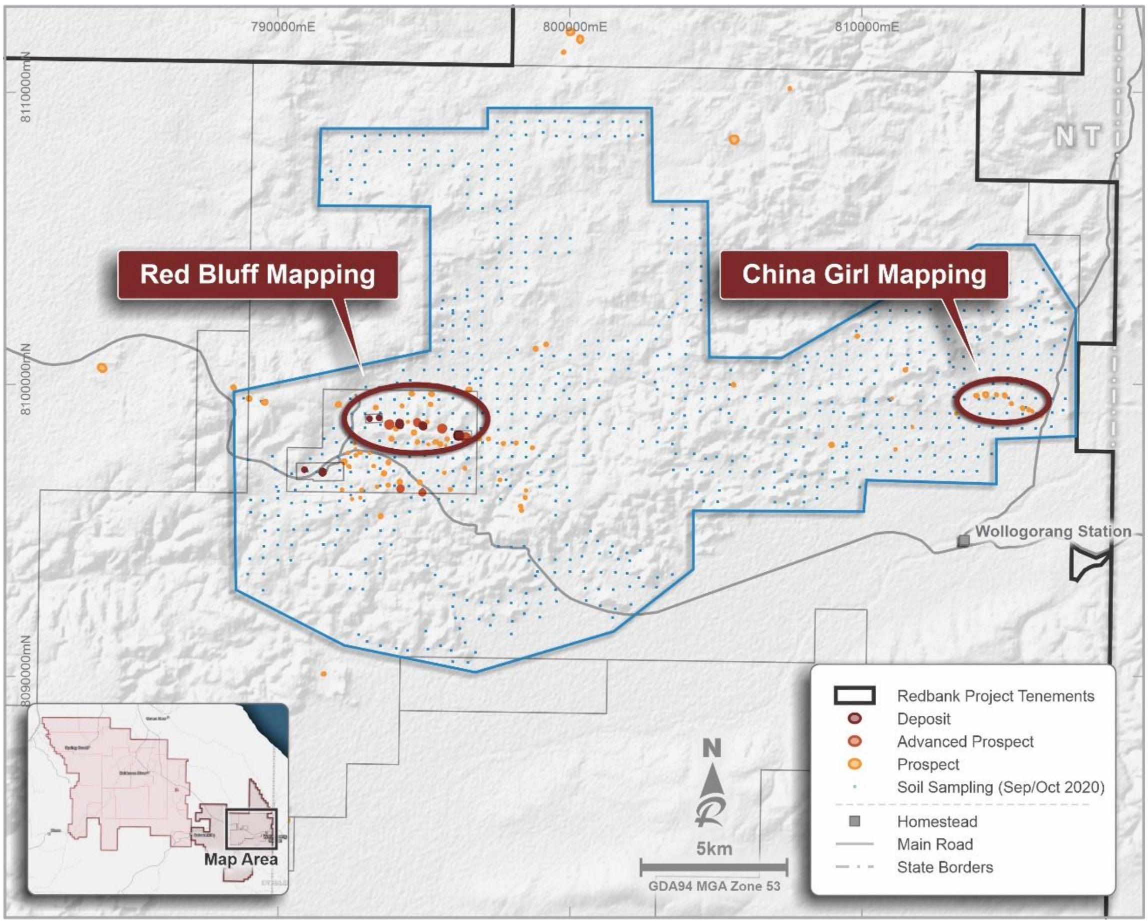


Figure 4. Redbank Project – Soil sampling locations

Sandy Flat Tailings Storage Facility Update

As previously reported, Redbank's ability to achieve a commercial outcome from the Sandy Flat Mine Site (figure 5) remains limited with the Northern Territory Government yet to determine a rehabilitation plan for the Project. The Northern Territory Government holds all liability to rehabilitate the Sandy Flat Mine Site, and relevant studies are underway. Redbank Operations Pty Ltd, a wholly owned subsidiary of Redbank Copper Ltd, purchased and owns all extracted copper at surface.

Redbank advises that initial observations from the 302 short-hole drill program into the Sandy Flat tailings storage facility suggest intercept thicknesses are lower than first expected. End-of-hole depths varied between 0.7m and 6m, with an average depth of 2.8m. Depth to basement varied between 0.58m and 4.89m, averaging 2.55m.

Further analysis and follow-up exploration work is required and the full suite of results from the Sandy Flat drill program will be reported this quarter as a JORC 2012 resource estimate in conjunction with the reporting of the updated Redbank Project JORC 2012 resource estimate.

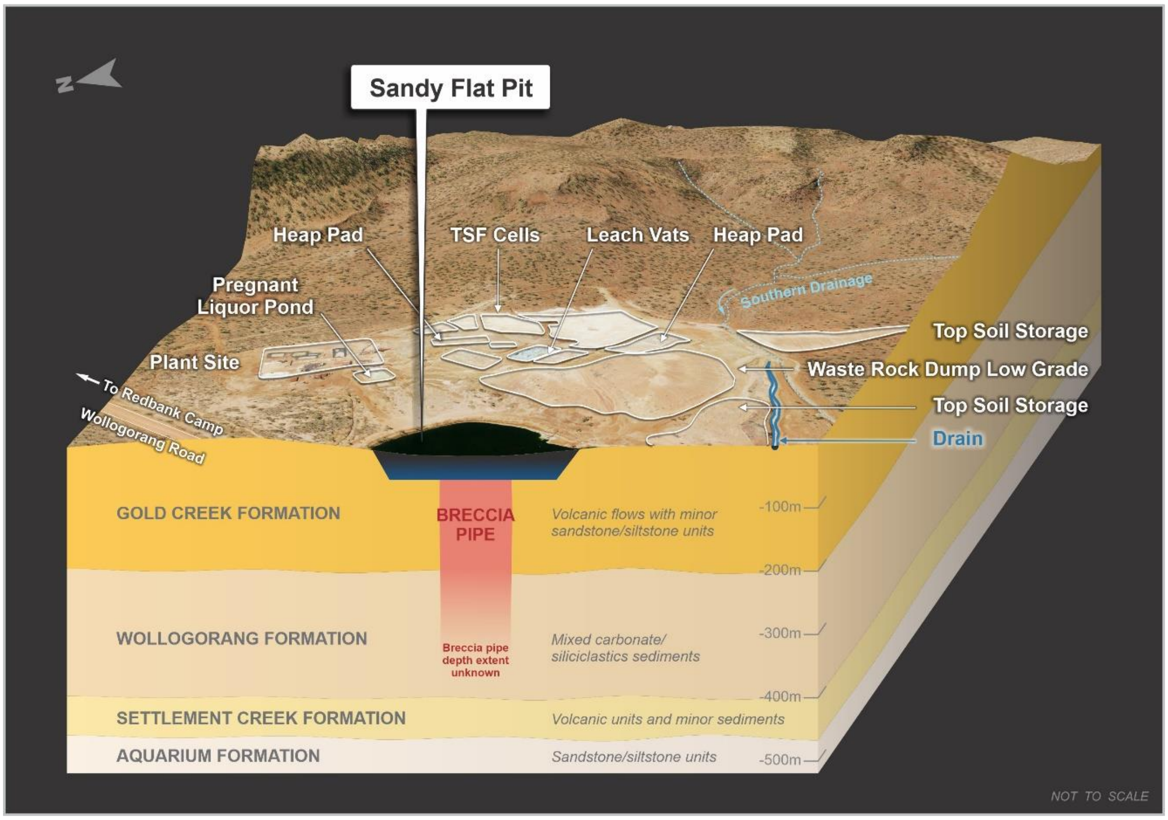


Figure 5. Sandy Flat Mine Site – Cross section

2021 Exploration Program

Redbank is currently finalising planning for the 2021 exploration program which is due to commence on 1 June. Full details on the program, including priority targets and exploration strategy, will be provided to the market over the coming weeks.

STATEMENT ON ASSAY RESULTS

The list of assay results reported in this announcement relate to the existing JORC 2004 mineral resource estimate reported in the 2011 Redbank Annual Report announced to the ASX on 27 October 2011. The assay results reported are not new information and formed information included in the JORC 2004 mineral resource estimate reported by Phil Jankowski in his capacity as Competent Person in reporting the JORC 2004 mineral resource estimate. These assay results and intervals have been extracted from the Redbank drillhole/assay database used to estimate the JORC 2004 mineral resource with no modification or alteration. The Company has provided a JORC 2012 complaint Table 1 Sections 1 and 2 below. This provided a comprehensive review of the information related to the current drillhole and assay database. In order to fully inform the reader and not derogate from the current work being undertaken by Entech Pty Ltd as it undertakes a JORC 2012 mineral resource estimate, Redbank believes that there needs to be a clear separation between the veracity and competent person attribution of data related to the JORC 2004 mineral resource estimate and data used for the JORC 2012 mineral resource estimate. Once a JORC 2012 mineral resource estimate is published by Entech Pty Ltd and Entech's independent competent person, then Redbank will provide a JORC 2012 Table 1 Sections 1, 2 and 3 as an ASX announcement which will be materially different to the JORC Table 1 provided in this announcement.

		GDA2020 zone 53							
Hole ID	**Hole Type**	**MGAE**	**MGAN**	**RL**	**Dip**	**Az**	**Total Depth (m)**	**Cu Intersection (m)**	**Cu Grade (%)**
SF008	DD	791525.7	8097006	175.6	-90	0	319.4	78	2.34
SF009	DD	791510.3	8097021.3	175.6	-90	0	404.9	128	1.65
RB07-004	RC	793119.1	8098804.8	188.3	-60	0	75	58	2.73
AZ07-004	RC	793458.1	8098857.4	186.9	-60	180	18	17	3.04
AD1	DD	794417.4	8098586.9	214.2	-90	0	334.7	60	1.53
RNRC09-005	RC	794984.8	8098643.4	222.9	-70	190	252	50	3.03
BL-071	DD	796192.2	8098244.9	195.8	-90	0	219.8	102	2.24
PRRC10-11	RC	790900.8	8097092.5	174	-60	94	60	17	1.03

Table 1. Redbank Project: selected historical drill hole mineralised intervals used as part of the JORC 2004 mineral resource estimate (see Figures 6 to 12 below which provide context on the location of each drill hole with respect to the JORC 2004 mineralised wireframe for each of the 7 deposits)

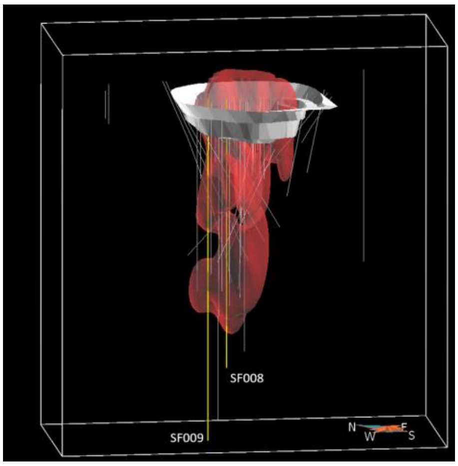


Figure 6. Sandy Flat (0.7%Cu wireframe) – SF008 & SF009

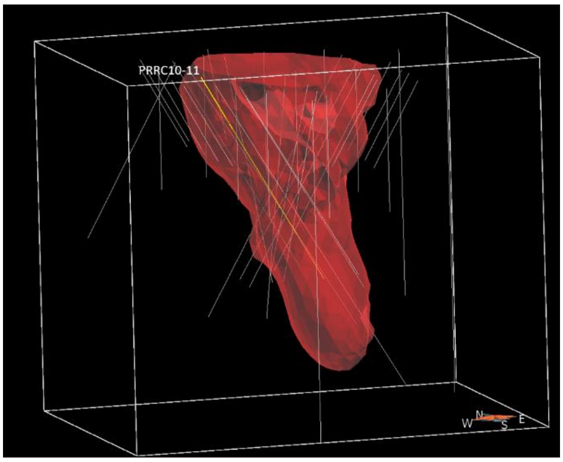


Figure 7. Prince (0.7%Cu wireframe) - PRRC10-11

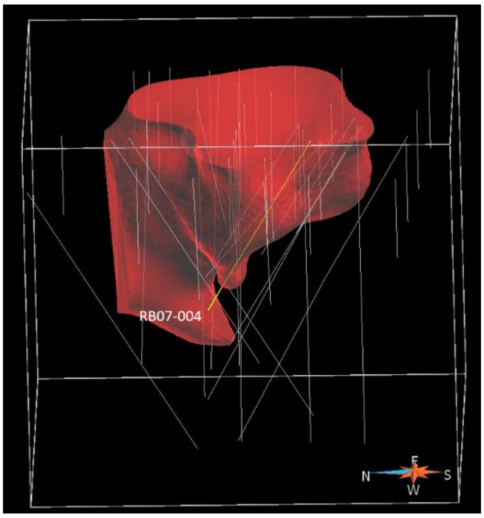
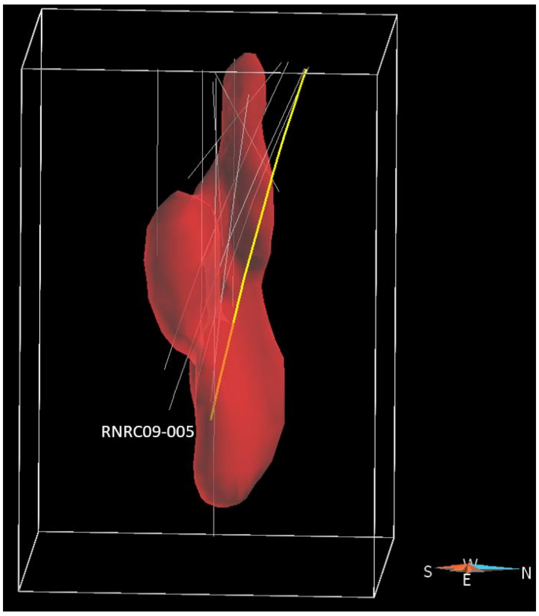


Figure 8. Redbank (0.5%Cu wireframe) – RB07-004

Figure 9. Azurite (0.5%Cu wireframe) – AZ07-004



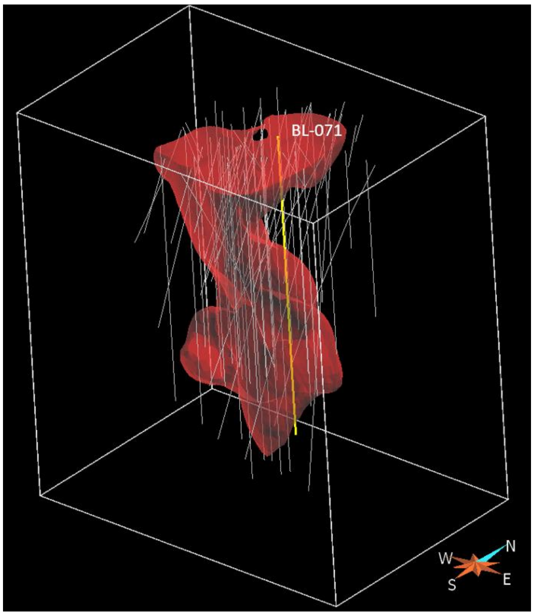


Figure 10. Roman Nose (0.5%Cu wireframe) – RNRC09-005

Figure 11. Bluff (0.5%Cu wireframe) – BL-071

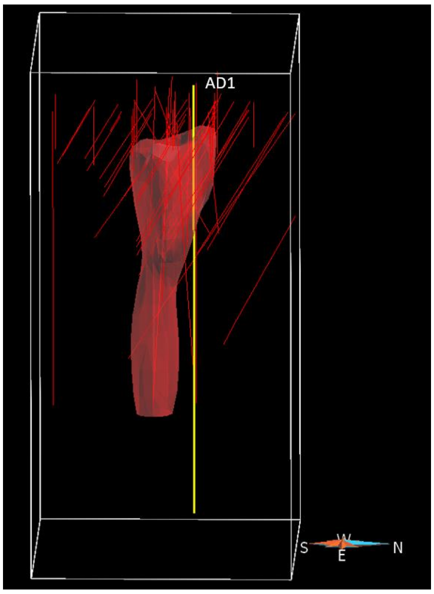


Figure 12. Punchbowl (0.6%Cu wireframe) – AD1

COMPETENT PERSON'S STATEMENT

The information that relates to Exploration Targets and Exploration Results is based on, and fairly represents, information compiled by Mr Michael Hannington, a Competent Person, who is a Member of the Australian Institute of Geoscientists. Mr Hannington is the Executive Director of Redbank Copper Ltd and is employed as a technical consultant by the Company. Mr Hannington has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity 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 Hannington consents to the inclusion of the matters based on his information in the form and context in which it appears.

The information that relates to the historic JORC2004 Mineral Resource is based on, and fairly represents, information compiled by Mr Phil Jankowski, a Competent Person, who is a Member of the Australasian Institute of Mining and Metallurgy. At the time the Mineral Resource Estimate was reported to the ASX on 8 December 2009, Mr Jankowski was a full-time employee of SRK Consulting (Australasia) Pty Ltd. Mr Jankowski has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he undertook to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Jankowski has previously consented to the inclusion in Redbank Copper reports of the matters based on his information in the form and context in which it appears.

DISCLAIMER
This announcement contains certain forward-looking statements. Forward looking statements include but are not limited to statements concerning Redbank Copper Limited's ('Redbank's') planned exploration program and other statements that are not historical facts including forecasts, possible or assumed reserves and resources, production levels and rates, costs, prices, future performance or potential growth of Redbank, industry growth or other trend projections. When used in this announcement, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should", and similar expressions are forward-looking statements. Such statements are not a guarantee of future performance and involve unknown risks and uncertainties, as well as other factors which are beyond the control of Redbank. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors. Nothing in this announcement should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities.

-ENDS-

For further information please contact:
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This announcement was approved and authorised for issue by the Board of RCP.

JORC Code, 2012 Edition – Table 1

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.* • *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.*	• Primary samples for use in the JORC 2004 mineral resource estimate (MRE) have been collected from reverse circulation and diamond drilling providing samples for chemical analysis by accredited laboratories. • There are 840 holes in the Redbank drilling database. Of these holes 361 holes have been validated for resource studies over the seven resource areas • There has been no documented measures to ensure representivity or calibration of sampling systems. • The quality of sampling media in the database over time has been recorded as metadata, however, the quality of this data have been inconsistently recorded. • Data used in the MREs has been collectively entered and digitised since records began in the late 1960s. The bulk of this work has been completed from 1970 to 2010 including long periods of inactivity. • There is no reason to doubt that best-industry practice was observed at the time the data was collected. Major mining companies including Newmont Ltd have used best industry practise in collecting and collating geoscientific data. • More recently, Giles (1995) writes of the resource drilling in Sept/Oct 1994, that *samples were collected using a face sampling hammer, holes were essentially kept dry during drilling and good quality samples were obtained. All samples were riffle split using a 7:1 splitter.* • The quality of sampling media and assay data has been reviewed by the competent person for all the MREs (see ASX announcements 26 October 2005, 18 July 2007, 17 September 2008 and 8 December 2009) • Sampling of potentially recoverable resources at Sandy Flat including the existing stockpiles from mining in the 1990s, mineralised pit water and mineralised tailings on the Sandy Flat TSF have been historically poorly documented • Drilling of the Sandy Flat TSF in October 2020 has provided samples from 302 drill holes from a push tube short hole drill rig • In 2005, to estimate the total Cu grade in the active (main) transitional ore leach pad, 100 samples were taken from the active leach pile; 80 samples at approx. 3m intervals around the pile at approx. 1-2m from the base and 20 samples from the top of the pile. A narrow trenching shovel was used to take a 20cm channel into the pile; any visible crust of leached coper was scraped off prior to sampling. • Samples on the active pad averaged 6.8% Cu. Assaying was completed by the NT Environmental Laboratory (NTEL) in Darwin for total copper analysis. No assay method is documented. • The active transitional pad assay dataset is not available but was considered "un-

Criteria	JORC Code explanation	Commentary
		skewed" having a low coefficient of variation "*supporting the contention that the stacking strategy homogenized the pile*". No top-cut was applied. • Densities for the stockpile were measured in 2000. Material was tamped into 200 litre drums and weights recorded resulting in an average density of 1.8t/m^3. No method was documented, or records kept. • Survey records exist for 7 other oxide and transitional stockpiles surveyed in 2004 by licensed surveyors. Grade was established from 138 daily crusher sample results averaging 5.8% Cu. No assay records were kept or methods documented. Sample positions were not located. • Mineralised pit water was listed in the Valuation of the Redbank project in the 2005 MRE document (announcement to ASX 26 October 2005) Sampling methods of pit water was not documented, however, a single sample assayed 621mg/l (0.621g/l) Cu from the outflow pump of the treatment plant in April 2005. Sample position was not located. • Two 5 litre pit water samples, labelled "10m" and "30m", were used by AMMTEC (2006 – report C00021). Samples had a pH of 2.29 to 2.61 and a copper grade between 610-631mg/l (0.61-0.631g/l). Head assays were completed by Ultra Trace by ICP-MS in report u87171. Sample positions were not located. • In 2005, the volume of the water in the Sandy Flat pit was estimated from the base of the pit to the 780mRL as 541,000m^3; reported as 541,000t (1m^3 of water is 1 tonne). No method was documented but was written to be calculated from the pit design and the known water level. • Stockpile resources were again included in the MRE completed in 2009 (JORC 2004 compliant and announced to ASX on 9 December 2009). No information has been documented of any sampling techniques, analysis or surveying to support 40,000t @ 2% Cu • The Sandy Flat Tailings Storage Facility (TSF) is a recoverable copper resource. • Incomplete historical sampling records exist of inflows to the TSF in 1994-1995. Continuous processing records from November 1994 to September 1995 have recorded monthly inflow tail assays between 0.3% and 1.8% Cu, averaging 1.2% Cu. Sampling methods or analysis records were not documented. It has been inferred that these assays relate to the slurry collected and not the resultant dried laboratory sample. • A single indicative sample taken at the TSF in 2019, assayed by ALS Metallurgy via agitated leach returned 4.89% Cu. • No other meaningful sampling of inflows to the TSF are available in historically available records from other processing activities. • It is known that mineralised pit water was pumped onto the TSF in the 2000s to avoid seasonal overflow.

Criteria	JORC Code explanation	Commentary
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).*	• Details of reverse circulation (RC) drilling equipment over time is rarely and incompletely documented. • Diamond drilling equipment used in this time is also rarely and incompletely documented. • Double-barrel core drilling was industry standard in the 2000s. • BQ-sized core was commonly utilized in the 1970s and both NQ and PQ sized core in modern times. • No drilling has ever been completed on the stockpiles
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.*	• Sampling recovery data for RC or diamond drilling has rarely been recorded. Recovery data, where it exists is in stored, hand-written logs. • No documentation exists about how sample recovery and sample representativity was managed. • The 2007 MRE reports that analyse bag weights shows that *apart from the top 3m, there is no clear relationship between sample size and depth downhole, suggesting the sample recovery is good and that minimal contamination has occurred.* • Relationships between sample recovery and grade did not form part of any documented procedure.
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.*	• All diamond core and RC samples were geologically logged for lithology, structure, mineralogy and oxidation state. • Logging is both qualitative and quantitative in nature. A visual percentage estimate for lithology, mineralogy, weathering and features were routinely recorded with summary comments. • The level of detail is considered sufficient to support Mineral Resource estimation, mining and metallurgical studies • In the 1990s and 2000s logging was hand-written • Drill core photography was not routinely completed or has been lost. Very limited core photography has been recovered from 2007/8. • SRK completed detailed geotechnical logging and other geotechnical studies in 2009. • An incomplete record of diamond core in trays from the 1970s to present is stored on site at Redbank. Incomplete sets of RC chip trays from 2007-2009 in poor condition are also stored on site. • Residual metallurgical RC and core material from testwork in 2009/10 is stored in Perth in 44 gallon drums. These RC and core samples have been double wrapped and remain relatively unoxidised.
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 whether*	• Mineralised diamond core is typically half-cored using a diamond saw. Half or quarter core has generally been used for analytical and

Criteria	JORC Code explanation	Commentary
and sample preparation	*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.*	metallurgical work. Core is depth delineated and sampled in appropriate intervals. The residual core was stored on site for future reference. • Due to the 5 decade span of drilling at the Redbank Project drill core was initially sampled in feet, often in 5 feet intervals, with modern post-1980 sampling in metres, at 1 metre intervals. • RC samples are generally collected dry, as 1m down-hole intervals, via a splitter. Sample collection and QC procedures have not been documented. • Sample sizes are considered to be industry-standard and appropriate to represent mineralisation at Redbank.
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.*	• Historically, independent laboratories have been used for analytical work used in MREs. • Drill hole samples (since 2004) have been sent to either SGS (AAS22D) or ALS (Cu-AA05s) in Brisbane or Townsville. • Drill hole samples are subjected to a mixed acid digest or a sulphuric acid leach (non sulphide) with an AAS finish for Cu only. • The selected assay procedure involving a near total digest and reading by AAS is considered appropriate. External checks returned good results and have been reviewed by the competent person. • Assessment of pit water by Ammtec in 2006 is well documented and considered appropriate and confirmatory to historical tests. • The nature and quality of historical assaying and laboratory procedures of TSF inflows is unable to be assessed as details were partially documented. Historically, appropriate industry assay methods were used. • Stockpile sampling in 2005 is considered appropriate for the MRE • 2009 Mineral Resource Estimate includes tonnes and grade for stockpiles. No documentation can be found on how these figures were determined. • Commercially sourced Certified Reference Materials were inserted at undocumented intervals. Reference materials were not documented. • The use of duplicates is undocumented and unknown. • No quality control procedures have been documented for historical sampling of any post-mined materials.
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.*	• Sampling of significant intersections was regularly monitored/ inspected by senior geological staff, however, no verification was undertaken by independent personnel. • No twin drilling has been completed. • Close-spaced drill holes in the oxide zone have been used to confirm short-range variability. • Assay certificates from the analytical laboratories have not been imported

Criteria	JORC Code explanation	Commentary
		into the drill database. • Assay data has been checked against original lab reports where available, when not available, data is checked against original data dumps. • Original assay data from 2006 has been re-issued, verified and merged into the database. • Sampling and logging data was hand-written and transferred to spreadsheets manually and then uploaded into the MS Access database. A database administrator reviewed and validated all data before appending to the database. The geological data in the database however is rudimentary. • It is recognized that the volume of pit water is seasonal and variable. • No independent checks have been undertaken to verify the volume of water in the Sandy Flat pit • A single indicative sample taken at the TSF in 2019 assayed by ALS Metallurgy via agitated leach returned 4.89% Cu. • Assay results of pit water has again, been independently verified with sampling completed in 2019. A 20 litre sample of pit water was taken by Redbank personnel in October 2019 and assayed by ALS.
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.*	• Drill hole collar locations have been recorded using Differential GPS. • GDA2020 Zone 53 is the grid system covering the region. • Some diagrams in this announcement are still located in the superseded MGA94 co-ordinate system • This new GDA2020 co-ordinate system has been inconsistently adopted by the States and Territories. The GDA2020 co-ordinate system has been mandated for use by the Commonwealth Government, however, this co-ordinate system is yet to be formally adopted by the Northern Territory Government who still use the superseded MGA94 co-ordinate system. • Eight local grids are known to have existed over time. • All grids have been referenced back to GDA2020 z53. • The 2007 MRE documented that all identified collars were surveyed with DGPS. Errors were noted and corrected. • Reconstruction of old grids was undertaken post-2013 from reliable and verifiable data to reliably geo-reference old plans and sections, and to check positioning of XY locations within the database. • The old grids were reconstructed from DGPS pickups of historic survey control points, surveys conducted by licensed surveyors include survey control points that overlap with known location data. • This system of data positioning has helped reposition drill holes that have gone through many transformations over time and seem to have slipped

Criteria	JORC Code explanation	Commentary
		from the original position. • Checking was enhanced with independent georeferenced 2009 aerial photography, repositioning many holes back to their original locations and highlighting obvious errors. • Historical drilling was mostly vertical, downhole survey data is currently being digitized from historic Camteq Instruments' glass compass disks and from the hand written survey cards. No original electronic downhole survey data has been found and only limited data was found that was supplied by drilling contractors. Lack of information caused some data to be excluded from the MRE. • The 2007 MRE documented the use of *a Ranger downhole tool in the most recent program to measure dip but no azimuth was possible inside the drill casing.* • Downhole survey data (post 2006) was compared to originally recorded data where available. • Exact location of Redbank stockpile and water samples have not been documented. Their position is estimated within a few metres.
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.*	• Sample compositing has been used in selected individual resource calculations, but no physical compositing of drilling has been employed. (ASX MRE announcements 26 October 2005, 18 July 2007, 17 September 2008 and 8 December 2009) • Nominal spacing of diamond and RC drilling across individual deposits at Redbank has not been stated. • Data spacing for stockpiles, where reported in MREs in 2005, has been reviewed and accepted by the competent person.
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.*	• Historical drill holes are predominantly short and vertical, reflecting the flat, readily amenable supergene mineralised horizons. Fewer angled holes intersect sub-vertical primary sulphide mineralisation at depth, consistent with primary sub-vertical pipe-shaped bodies. • Intersection angles of the drilling with the Redbank-style mineralisation ranges from perpendicular to oblique. • SRK was of the opinion the predominant drilling orientation is suitable for mineralisation volume delineation in the individual deposits at Redbank and does not introduce bias nor pose a material risk to the MRE.
Sample security	• *The measures taken to ensure sample security.*	• Individual samples were collected in calico bags and delivered to SGS laboratories or ALS laboratories in Brisbane or Townsville by local transport companies. No chain of custody security has been documented.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• All sampling, sub sampling and assay techniques in respect to the MREs were reviewed by the competent person. • No other review of sampling techniques has taken place.

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 license to operate in the area.*	• The Redbank Project is located in the Northern Territory and tenements are 100% held by Redbank Operations Pty Ltd a wholly owned subsidiary of Redbank Copper Limited. See Table below ***Table: Central Redbank Project Tenement Summary*** (see table below)

Table: Central Redbank Project Tenement Summary

Tenement	Area (km^2)	Granted	Expiry
EL31316	0.97	6 Feb. 2017	5 Feb. 2023
ELR94	19.05	10 Aug. 1989	9 Aug. 2024
MLN634	0.1618	12 Mar. 1973	31 Dec. 2028
MLN635	0.1618	12 Mar. 1973	31 Dec. 2028
EL24654	328.5	5 Dec. 2005	4 Dec. 2022
EL10335	679.39	15 Aug. 2002	14 Aug. 2022
EL28288	16.4	19 Apr. 2011	to be amalgamated with EL10335
EL28289	10.16	19 Apr. 2011	to be amalgamated with EL10335
EL28290	9.84	19 Apr. 2011	to be amalgamated with EL10335

- Additional tenements form the greater Redbank Project, however, these tenements span an area of approximately 13,000km^2 with an east-west district wide length of approx. 300km.
- The Redbank Project was purchased as part of the acquisition of Redbank Mines Pty Ltd by Burdekin Pacific Ltd (see ASX announcement 31 August 2005). Burdekin changed its name to Redbank Mines Ltd and later in 2009 to Redbank Copper Ltd.
- The **2005 Sale and Purchase Agreement** verifies the tenement status at the time of purchase and specifically includes the surface copper inventory (see Schedule 6, Redbank Sale and Purchase Agreement dated 5 August 2005) as part of the purchase.

Criteria	JORC Code explanation	Commentary
		• All tenements are in good standing.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Copper mineralisation was first discovered at Redbank in 1916. The Redbank area has been subject to a semi-continuous history of discovery and mining. • The Redbank area has been systematically explored by numerous companies since 1969. Prominent amongst these were Newmont (1970-1972), Triako Mines NL (1972-1983) with various JV partners (Amax Iron, Aquitane Australia Minerals) and Alameda with CRA Exploration. • Previous work included geologic mapping, soil geochemistry, airborne and ground geophysics, extensive drilling campaigns and early non-JORC resource calculations (1970s to 1980s) and rudimentary 2004 JORC calculations (1989-2004). SRK Consulting completed the most recent MREs (JORC 2004) between 2005-2011
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Redbank mineralisation is consistent with breccia pipe deposits. • The Redbank mineralisation consists of 7 discrete mineralised vertical pipe-shaped deposits, although more than 50 pipe-like intrusions have been identified within $10km^2$ of the deposits. • Copper bearing breccia pipes of the Redbank district intrude an interbedded sequence of late Proterozoic-aged igneous and dolomitic sedimentary rocks which have undergone localised potassic alteration or metasomatism. These rocks are collectively known as the Tawallah Group • Breccia pipes are steeply inclined, small in size and cylindrical in outcrop and typically show insitu brecciation. • The core of these pipes contains both autochthonous and allochthonous breccias of trachytic affinity (the genetic extrusive equivalent of an intrusive syenite). • Copper mineralisation is almost exclusively chalcopyrite hosted within the matrix, with clasts barren of any copper mineralisation.

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*
		• This announcement refers to insitu resources and other recoverable resources of the Redbank Copper deposit and is not a report on Exploration Results. All drill intersections have been historically released to the market.
		• Due to management changes on 2 August 2019, all available Redbank data has been recompiled from data available to management from 2 August 2019 onwards. The Redbank project contains approximately 841 documented drill holes.
		• For clarity, the 7 deposits forming the Redbank MRE have the following number of drillholes with mineralised intercepts whose data has been

Criteria	JORC Code explanation	Commentary
	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.	used to estimate the mineral resource: • Sandy Flat (76 holes) • Bluff (70 holes) • Redbank (54 holes) • Azurite (62 holes) • Roman Nose (12 holes) • Punchbowl (48 holes) • Prince (39 holes) • A listing of all drill hole collar details and drill hole intercepts used in resource estimates is not appropriate for this document. All drill hole information has been previously reported and its exclusion does not detract from the understanding of this report. • Exploration has been documented in company annual reports and announcements
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.*	• No exploration results are reported in this document • No aggregated exploration data is reported in this document • No metal equivalents are reported in this document
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 mineralised intercepts reported are formed from cumulative metre intervals sampled. Assays are from either half core or from RC chips. Importantly, given the mineralisation is hosted entirely within the matrix of the breccia (and not within the clasts) some commentary on the matrix/clast volumetric ratio is warranted. Matrix is observed to generally forms approx. 20% by volume of the core sample (and the clasts form approx. 80% by volume of the core sample). Given the assays report the entire 1 metre interval and it is known by simple visual observation that the clasts are barren of mineralisation. The % content of the matrix is 5 fold of the reported assay. This has important implications for concentration and extractive processes, in particular, the use of ore sorting techniques using visual, density (XRD) and EM ore sorting sensors.
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*	• No diagram portrayed the location of the drillhole intercepts reported. The deposit names are reported next to the drill hole intercepts and the deposits are clearly identified in diagrams.

Criteria	JORC Code explanation	Commentary
	locations and appropriate sectional views.	
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.*	• Drill hole intercepts are reported to show the validation via re-assaying of a high correlation coefficient between historic and recent assay results.
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.*	• Since the discovery of copper at Redbank considerable geological information concerning the mineralisation and its host has been compiled. Similarly, geochemical and geophysical surveys have been conducted to support drilling across the tenement package. This information is well documented in company announcements and annual reports. • Metallurgical test work on drill core samples from the Redbank deposits has been carried out from the 1970s to 2010 forming part of the MREs. • Additional geotechnical data was added post 2005. SRK was contracted in late 2008 to provide geotechnical studies on the available core and outcrop, to refine proposed open pit slope angles in optimisation work being undertaken on block models generated from the resource. Geotechnical samples were submitted to SGS Rock Mechanics Laboratory in Welshpool in 2009.
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.*	• Following an assessment of the data, an update of known resources to JORC 2012 is expected before July 2021. The reporting of surface copper at the Sandy Flat Mine Site under the JORC2012 Exploration Target Range is the first stage in undertaking further geotechnical work to increase the level of confidence in the surface mineralisation of copper occurrences at surface at the Sandy Flat Mine Site. It is expected in the future that additional drilling will be planned to improve geological confidence categories (i.e. from Inferred to Indicated Resource, and from Indicated Resource to Measured Resource) and delineate additional areas of potentially economic mineralisation both within the existing deposits and also within existing breccia pipes identified from field mapping and as yet un-drilled.

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	• *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.*	• Redbank drill hole data is stored in MS Access databases. Historical non-digital data has been entered by explorers since the 1970s, with most of this work completed from 1990 by CRA (now Rio Tinto).

Criteria	JORC Code explanation	Commentary
	• *Data validation procedures used.*	Historically, data and been subject to poorly documented validation controls, typical of the years the information was collected. Hand-written drill hole logs and early historical reports, where they still exist, are stored or scanned in digital form. The geological work completed is of a high quality. • Dedicated data validation and review began in 2013. Data was checked against original documents, drill hole locations and survey marks were re-surveyed in the field with DGPS where possible, verified from historical data or transformed. Assay data was checked and imported from original reports where available. • In 2020, database and MRE data in archive was recovered from SRK and Maxwell Geoscience. This data is has been verified against existing data. • No drilling has been done at Redbank since 2014. • The Redbank database is largely derived from the Maxwells 2009 SQL database, merged with data from various Microsoft Access databases post 2009. The Maxwells 2009 database and the various Microsoft Access databases had limited data validation and required significant fixes to the data • The collar table was validated by going back to original data sources wherever possible, as compounding errors had caused significant offset in some collars. • Original grid systems have been resurrected with the help of drillhole layout images and each of the collars has been checked against these layouts. The following grid systems have been used on the Redbank Project: (i) Bluff Pre 1971ft, (ii) Quartzite Pre 1971ft, (iii) Prince Pre 1973ft, (iv) Redbank Pre1973ft, (v) Redbank AAM 1971, (vi) Sandy Flat Mine Grid 1990 • Pre 1971 exploration grids were established over each of the prominent prospects. These grids were imperial and aligned approximately 5.9 degrees east of MGA2020z53 north. • In 1971 Newmont tasked Australian Aerial Mapping to establish survey control for the Redbank Project. This work involved locating and connecting isolated exploration grids and integrating them into one grid system. This survey also aimed to connect the survey to the nearby Trig stations and tie them to the National Geodetic Network • In 1990 Spectrum Surveys established the Redbank Mine Grid primarily covering the Sandy Flat Mine. This work involved the conversion of imperial control to metric, but only one point was

Criteria	JORC Code explanation	Commentary
		converted to the AMG datum. • Mining commenced at Sandy Flat in September 1993 with SF070-SF079 holes drilled within the pit in September 1994. • In 2009 Redbank Mines tasked Sinclair Knight Merz to establish Redbank Mine photo control over the Redbank Project Area. • In 2010 Redbank Copper reported survey errors to the Titles Department of the Northern Territory Government. They discuss an inaccuracy that was "is most likely less than 5 metres. This inaccuracy issue is due to the 1970s survey information having approximate distances from survey control. • At Sandy Flat, when georeferencing the 1990 drill hole location plan using AAM grid control points, an offset of approximately 2.5 metres was recognised with respect to the AM9 control point. The location of the AM9 control peg does not correlate with the AAM grid locations and is no longer present due to mining activity. • Numerous drillhole coordinates were found in each of the historical databases with significant differences in the drillhole locations. Wherever possible the original source data was utilised, this was usually from one of the following three data sources: (i) Differential GPS (DGPS), (ii) GPS (handheld), (iii) Historical local grid coordinates • When more than one data source was located for a particular collar, an assessment was made as to the reliability of the data. The highest quality data was then added to the Orig coordinate fields in the database. • The MinRep collar data structure has Orig coordinates for the highest quality source data with the NAT grid coordinates derived from the Orig coordinates. All supplied Nat grid coordinates are in MGA2020 zone 53 datum. • In 2016 Aerometrex completed high resolution aerial photography over the project and generated a high-resolution Digital Surface Model (DSM). An elevation difference of around 0.65 metres was recognised in some of the DGPS drillholes. Levelling to the DSM has been applied to many of the DGPS hole with large discrepancies. • Levelling of GPS and Local Grid derived coordinates has also been carried out, with an estimated RL provided over areas mined (Sandy Flat and Redbank). • The local grid coordinate fields (and lat long fields) in MinRep should be ignored as they have not been populated from the Orig source data, and at times numerous local grid coordinates have been used.

Criteria	JORC Code explanation	Commentary
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• SRK consultants conducted site visits as part of the original 2005 MRE. SRK continued involvement with each of the subsequent four estimates/upgrades to the most recent, completed in 2011. • The Competent Persons responsible for the Mineral Resource estimates (JORC 2004) are of the opinion that all work has all been completed in line with industry best practice and to an appropriate standard for the mineral resource reported. • Since October 2019, 4 site visits have been made by the competent person attesting under JORC 2012 for exploration results related to re-establishment of collar locations, downhole surveys, historic assays and geological descriptions of core and RC drill chips.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• There is a high confidence level in the geological interpretation of the mineral deposits. Mineralised structures have predictable geometries and the mineralised framework of individual deposits is robust. • Historical SRK estimates relied heavily on assay data to build a geological interpretation with logging data captured by geologists who were familiar with deposit geology and mineralisation. • Assay data from surface sampling, drill hole logging and density together with geophysical data, including airborne and ground magnetic and electrical methods, have all been used to aid geological interpretation • There appears to be limited scope for alternative interpretations. The mineralised zones are clearly defined in pipe-shaped geometries, while the oxidation zones are more subjective. It is considered unlikely that any alternative interpretations would have a substantial impact on the Mineral Resource Estimates due to the generally close-spacing of the data points. • Models for emplacement of breccia pipes may vary and potentially have a bearing of future regional exploration • The mineralised zones were treated as having hard boundaries during grade estimation, while the oxidation boundaries were treated as soft boundaries, due to their gradational nature.
Dimensions	• *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.*	• Mineralisation is generally contained in pipe-like geometries in individual deposits and generally has a surface expression of 100-200m with a semi vertical, steep dipping conical tail up 300m deep. The deeper drilling has not found the bottom of the breccia pipes.

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	• *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.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Historical resources (pre-JORC) were completed by Baird (1971) and Mason (1971). The first JORC code-compliant resource was completed by McDonald (1989) and later rudimentary estimates by Giles (1995) and Hill (2004) using sectional methods. • SRK completed five consecutive 2004 JORC-compliant resource estimates (see ASX announcements 26 October 2005, 18 July 2007, 17th September 2008 and 8 December 2009) as follows **2005 Mineral Resource Estimate** Estimated for Sandy Flat, Bluff and Punchbowl including transitional dump and oxide stockpiles and valuation including pit water. **2007 Mineral Resource Estimate** Including additional data at Punchbowl, Redbank and Azurite with maiden and revised estimates. **2008 Mineral Resource Estimate** Including additional data at Sandy Flat, Bluff, Redbank and Azurite. **2009 Mineral Resource Estimate** RC drilling and large diameter diamond drilling including estimates of the remaining stockpiles generated from surveys and sampling to update estimates. **2011 Mineral Resource Estimate** Redbank, Azurite and Prince modelled and added to the 2009 mineral resource statement. The combined 2011 statement tabulates resources across 7 individual deposits • In the initial 2005 MRE, SRK created initial domains of each of three deposits for the resource estimates using Leapfrog software at a cut-off grade of 0.5% Cu (0.4% Cu at Bluff) created from variably composited assay data. Domains were further divided on assay values and population density. Domains were unconstrained where data was not sufficiently dense. Multiple variograms were constructed using Gaussian transformed values. Grades were estimated by Ordinary Kriging. • Consecutive MREs in 2007, 2008, 2009 & 2011 include successive additional deposits in the Redbank district and follow fundamentally the same procedure for estimation, albeit with lesser data, assay density

Criteria	JORC Code explanation	Commentary
		and confidence. • Models for Sandy Flat were validated against the Sandy Flat production tonnes and grade inside the open pit with the sum of ore processed and stockpiled. Although the production was close to the grade tonnage curve, the model suggests that significant amounts of low grade mineralisation may have been sent to the waste dump during mining. • To validate resource estimates on other deposits, the mean grades and distributions of the input composites, and the block estimates were compared.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• The tonnages were estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• SRK established cut-off grades determined from optimisation work.
Mining factors or assumptions	• *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.*	• No mining factors were assumed in the Mineral Resource Estimates.
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.*	• Two types of ore are present. Copper-bearing oxide ore and sulphide ore. • Oxide ore at Redbank is known to be acid soluble. Copper has been historically extracted from oxide and transitional ore to produce a copper cement product • Investigation was made in 2009/10 to upgrade the plant to include flotation, solvent extraction and electrowinning of sulphide ores.
Environmental factors or assumptions	• *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.*	• The Redbank Plant processed copper ore in 1994-1996 and 2006-2008. Mining in the 1994-96 period left behind stockpiles of copper bearing ore, waste and the Sandy Flat pit filled with copper-bearing water. Investigations are currently being conducted to rehabilitate and remove copper from pit water and surface rock piles created from historic mining activity. A process flow sheet using a bespoke ion exchange unit using resin/polymer beads that remove copper from solution using a double ionic bonds has been bench-tested. Sandy Flat Pit water run through these polymer beads shows good recovery of copper and further testwork by ALS Metallurgy in Perth shows that a liquid copper sulphate

Criteria	JORC Code explanation	Commentary
		saleable product can be made with discharge of potable water following filtration of minor particulates and sulphites. This testwork has been supervised by PPM Global: specialists in hydro-metallurgical testwork regimes and operation of ion exchange plants.

Bulk density	• *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.*
	• *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.*
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*
		• Bulk density data has been collected from core and used in successive 2004 JORC-compliant estimates.
		• The 2005 Sandy Flat MRE used a bulk density of 1.8t/m^3 which was derived from both previous testwork and samples of fresh core in April 2005. It was reported that there was no clear trend of increasing density with increasing depth.
		• The 2005 Bluff MRE used a bulk density of 2.1/m^3 which was derived from samples taken vertically in the orebody. It was reported that there was no clear trend of increasing density with increasing depth.
		• In the 2005 MRE no density determinations were completed on Punchbowl. An average value of 2.1t/m^3 was applied and assumed from Sandy Flat and Bluff. Four density values were collected for Redbank and 2.1t/m^3 was used in post 2005 estimates. Density measurements for Azurite were assumed at 2.1t/m^3. No density data existed for Prince and a density of 2.2t/m^3 was applied to oxide and 2.4t/m^3 to fresh ore.
		• Industry standard practices for determining density were reviewed by the competent person but no procedures have been documented.
		• The current Redbank drillhole/assay database contains 487 specific gravity determinations from across the project area, with two main types of density measurement undertaken, these are:
		  • Displacement method using Archimedes principal on drill core "MEAS"
		  • Apparent SG using gas pycnometers on pulp samples "PY"
		  • Note that apparent SG measurements taken using a gas pycnometer appear to be greater than measurements taken in the field using the displacement method. The gas pycnometer method does not consider porosity or natural water content, which might be responsible for the differences in specific gravity.

Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *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).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Classification of mineral resources for individual deposits at Redbank were based on assay data density and the constrained nature of the grade shells as assigned by the competent person.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• There have been no external audits of MREs
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.* • *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.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The Mineral Resource estimates are considered to be globally representative but there is uncertainty relating to local representation of volume and grade due to the current variable drill hole spacing, small scale localised geological discontinuities and metal zonation. • With respect to Mineral Resources estimated at the deposits, the geological interpretation for lithology, weathering, and mineralisation domains are adequate for the estimation of Indicated and Inferred Mineral Resources.