EXPLORATION UPDATE – ASSAYS CONFIRM NICKEL SULPHIDE MINERALISATION AT KALARKA

HIGHLIGHTS

- **Results significantly increase the prospectivity of the Tea Tree Ni-Cu Prospect**
- **Gravity interpretation identifies potential nickel "ore junction" and related chonoliths**
- **Leading Ni sulphide expert Dr Steve Beresford engaged to guide exploration**

Strategic Energy Resources Limited (ASX: SER) is pleased to announce drilling results from the recent two-hole 1574m diamond drilling program at the Kalarka Prospect within the Canobie Project, Northwest Queensland. Both holes intersected thick intervals of nickel-elevated ultramafic rock with semi massive sulphide zones. Drill holes were collared 535m apart; best intersections included:

- **CNDD001A:**
  - **132m of disseminated Ni-Cu sulphides within ultramafic @ 0.1% Ni from 507m including 2m @ 0.68% Ni, 0.17% Cu (from 635m)**
- **CNDD002:**
  - **43m of disseminated Ni-Cu sulphides within ultramafic @ 0.1% Ni from 615m and 0.6m @ 0.96% Ni, 0.11% Cu (from 661.6m)**

Strategic Energy Resources Managing Director, Dr David DeTata, said, *"The Company is highly encouraged by the results from these two drill holes at Kalarka. The significant intervals of ultramafics with disseminated sulphides plus the narrower nickel bearing semi massive sulphides demonstrates the potential for the greater Canobie Project to host more significant accumulations of Nickel sulphide mineralisation".*

"Furthermore, the reinterpretation of gravity data in light of these results, has led us to view that the Kalarka / Tea Tree region is part of a cluster of intrusions – termed an "ore junction". Potential chonoliths (confined chambers within the host intrusion) extend both north and south, which is a controlling feature of magmatic nickel deposits worldwide such as the Nebo-Babel deposit in the West Musgraves and the Nova-Bollinger deposit in the Fraser Zone, Western Australia."

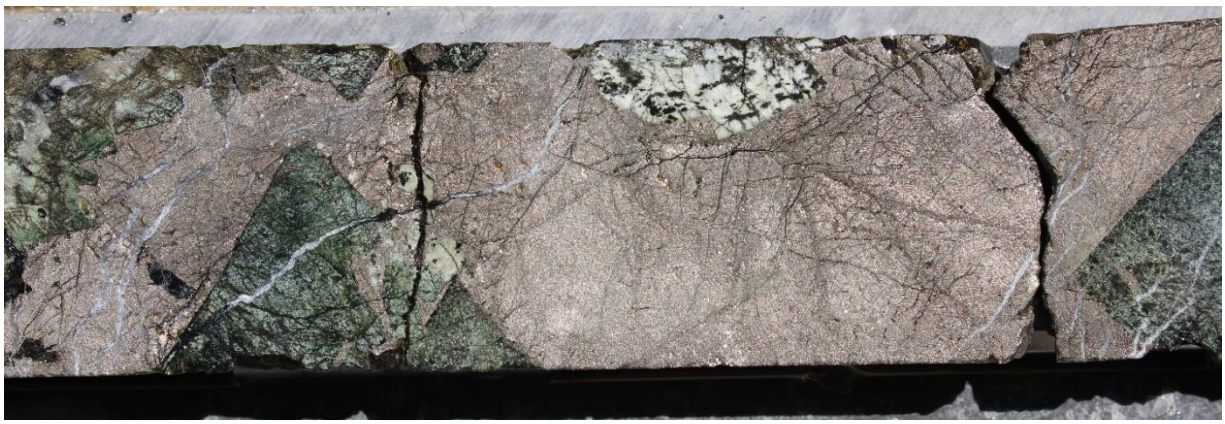

Figure 1: Semi massive sulphide intersected in CNDD001A at 662.1m (part of 0.6m interval containing 0.96% Ni)

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ASSAY RESULTS AND OBSERVATIONS

All assay results have been returned for both drill holes, with significant intersections contained within Table 1 & 2.

Hole ID	From (m)	To (m)	Width (m)	Ni %	Cu ppm	Pt ppb	Pd ppb	Sulphide texture and Average %
CNDD001A	507	639	132	976ppm	134			Disseminated (2-3% pyrrhotite)
including	614	639	25	0.16%	466			Disseminated (3-5% pyrrhotite)
including	635	637	2	0.68%	1730	175	260	Semi massive (40-50% pyrrhotite)
	792	793	1	0.19%	643			Semi massive (40-50% pyrrhotite)
CNDD002	573	574	1	0.34%	171			Semi massive (40-50% pyrrhotite)
	615	658	43	979ppm	104			Disseminated (2-3% pyrrhotite)
	661.6	662.2	0.6	0.96%	1100	160	150	Semi massive (40-50% pyrrhotite)

Table 1: Kalarka Prospect Significant Assay Results

Hole ID	From (m)	To (m)	Width (m)	Intersection	Ag ppm	Cu %
CNDD001A	489	490	1	1	1810	0.37

Table 2: Ag-Cu pegmatite related intersections

Of particular significance are multiple narrow semi massive intervals with elevated nickel returning grades including:

- CNDD001A: 2m @ 0.68% Ni, 0.17% Cu, 552ppm Co (from 635m), and
- CNDD002: 0.6m @ 0.96% Ni, 0.11% Cu, 744ppm Co (from 661.6m)

The two drill holes were designed to test a discrete 750 x 600m, 40nT aeromagnetic response characterised by an elevated Electromagnetic (EM) response and partially coincident anomalously higher density. Final drill hole specifications are detailed in Table 3.

Hole ID	Easting	Northing	RL	Azimuth	Dip	Total Depth (m)
CNDD001A	485385	7879490	60	90	-70	907.3
CNDD002	484850	7879490	60	90	-70	667.6m

Table 3: Kalarka Prospect completed drill hole specifications

Previous drill results at the nearby Tea Tree Nickel-Copper Sulphide Prospect (Fig. 2) recorded a 10.4m intersection at 0.25% Nickel and 0.28% Copper in drill hole TT00D1[1], located approximately 2.75km southeast of Kalarka. The results from these two Kalarka holes particularly the thick sequence of ultramafic rocks is an advancement to the previously known prospectivity of Tea Tree.

SER is highly encouraged by the significant intervals of ultramafic rocks coupled with an increase in nickel grade over a greater length within the sulphide zone which demonstrates, at a local scale, the potential for accumulations of nickel sulphides to occur within a sulphur saturated magmatic system. This advances the potential of the region to host significant Ni + Cu sulphide mineralisation as broad zones of thick nickel and copper-bearing disseminated sulphides can be associated with

[1]ASX Announcement 26 August 2020: Exploration Update: Saxby Gold Project

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more massive accumulations, as demonstrated between Western and Eastern Deeps systems at Voisey's Bay (Labrador, Canada) and within the Nebo-Babel deposit (West Musgraves Ranges, W.A.)

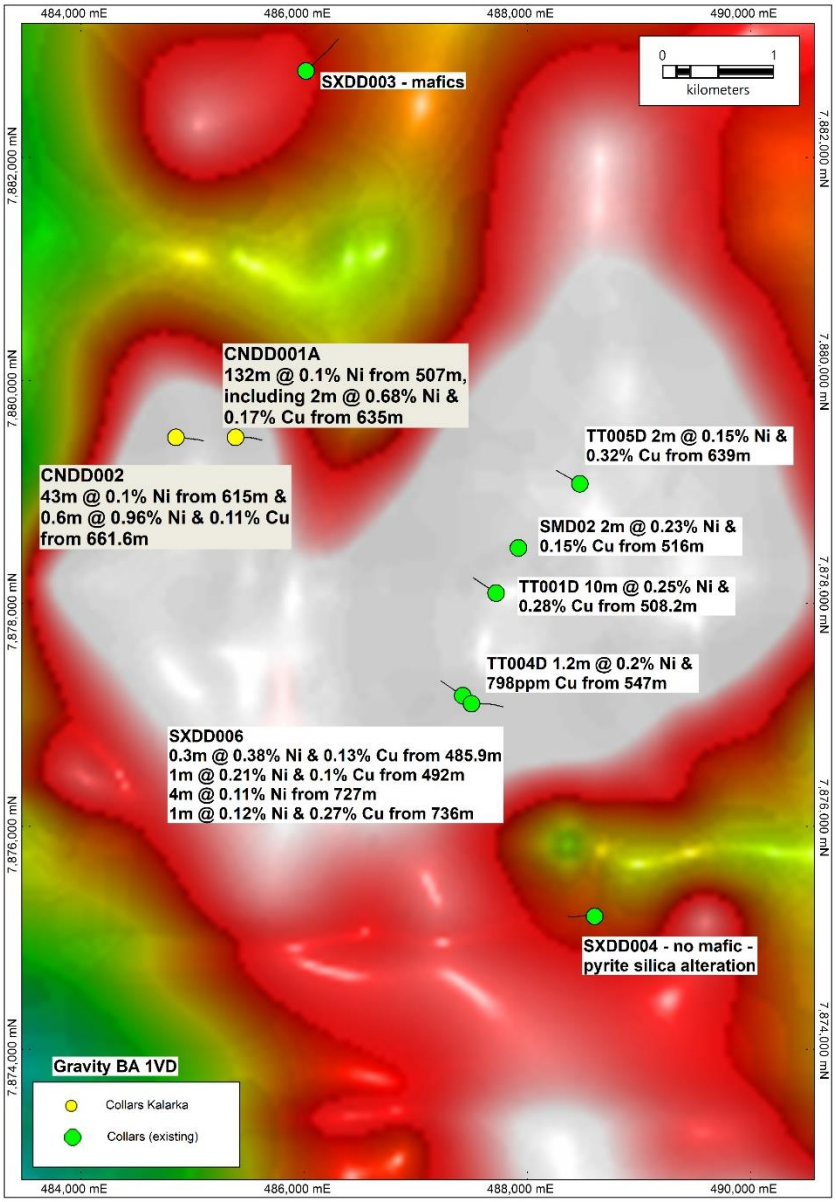

Figure 2: Bouguer Gravity 1 VD image with Tea Tree Ni-Cu sulphide intercepts

Furthermore, a revised interpretation of the detailed gravity data at Canobie shows that it maps mafic units across the project area and reveals that both the Kalarka and Tea Tree prospect form part of a larger ore junction. Importantly, extending north and south from the main ore junction are elongate gravity features interpreted as ribbon-like "chonolith" intrusions which have the potential to host higher tenor nickel-copper sulphide mineralisation (Figure 3).

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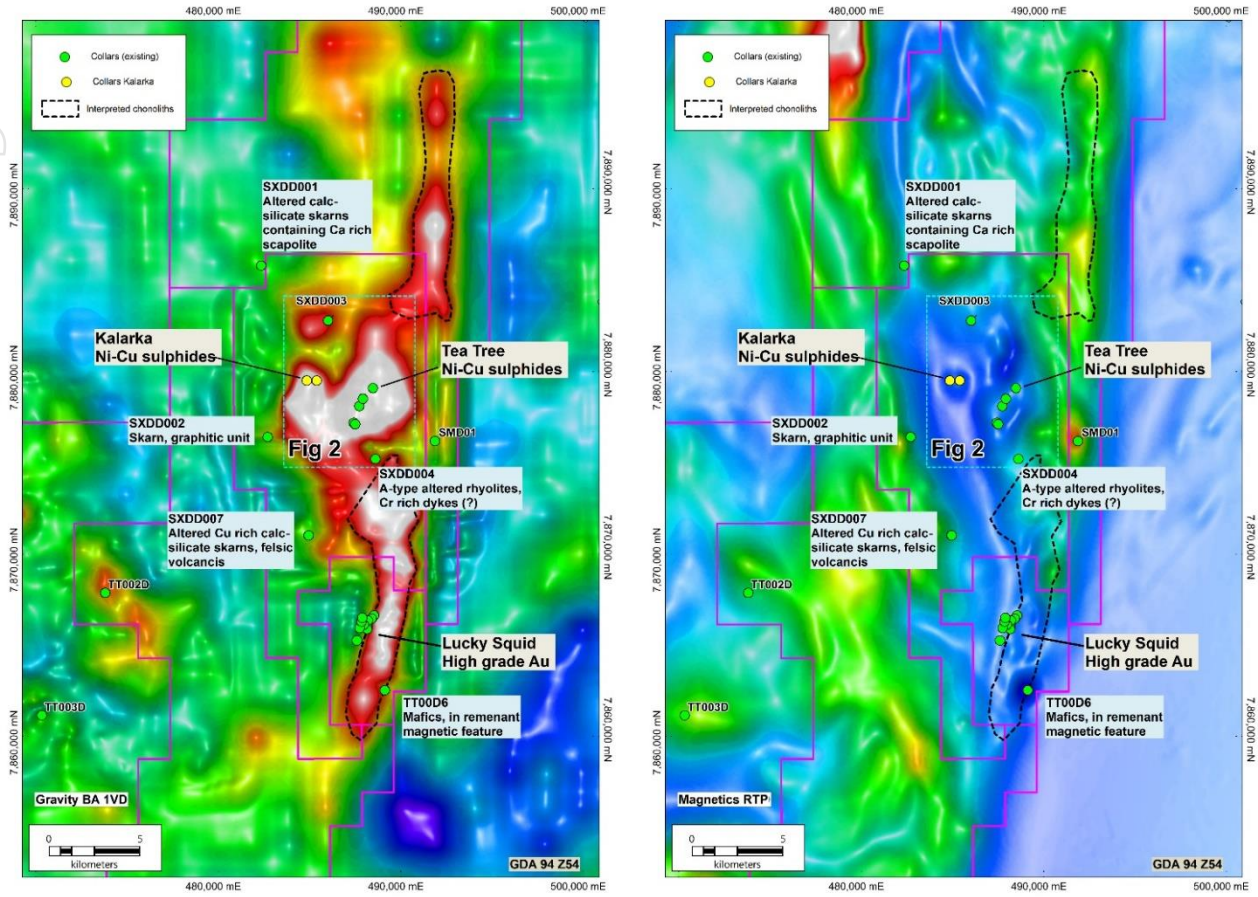

Figure 3: Left: Drill holes intersections surrounding the Kalarka Prospect over a Bouguer Gravity Image. Right: Reduction to Pole Magnetic Image. Note the elongate density highs (interpreted chonoliths) extending north and south from the ore junction.

Whilst SER acknowledges that the nickel grade and tenor is low, this may be due to sulphur over saturation driven by the interaction of magma with graphite. Historical drilling targeted conductivity anomalism subsequently revealed to be caused by graphite. There is evidence of other potential sulphur and metal source units locally in the rock record suggesting there could be other parts of the system which assimilated different, more favourable host rocks.

The Kalarka drill program received co-funding through the Queensland Government Collaboration Exploration Initiative.[2]

FUTURE WORK

A complete review of the project is underway. This includes re-logging all available drill core, selected additional geochemical analysis, and petrology and petrophysical data collection to map the lithochemical signatures and allow vectoring into more prospective portions of the intrusive system. An immediate outcome from the review was the reinterpretation of available gravity data across the project area in the search for similar "ore junction" gravity anomalies. Located approximately 50km to the south west of the Tea Tree Prospect an analogous gravity anomaly was identified on the southern margin of the Canobie project which has since been secured (EPM28180), (Figure. 4).

[2] business.qld.gov.au/industries/mining-energy-water/resources/geoscience-information/exploration-incentives/exploration-grants

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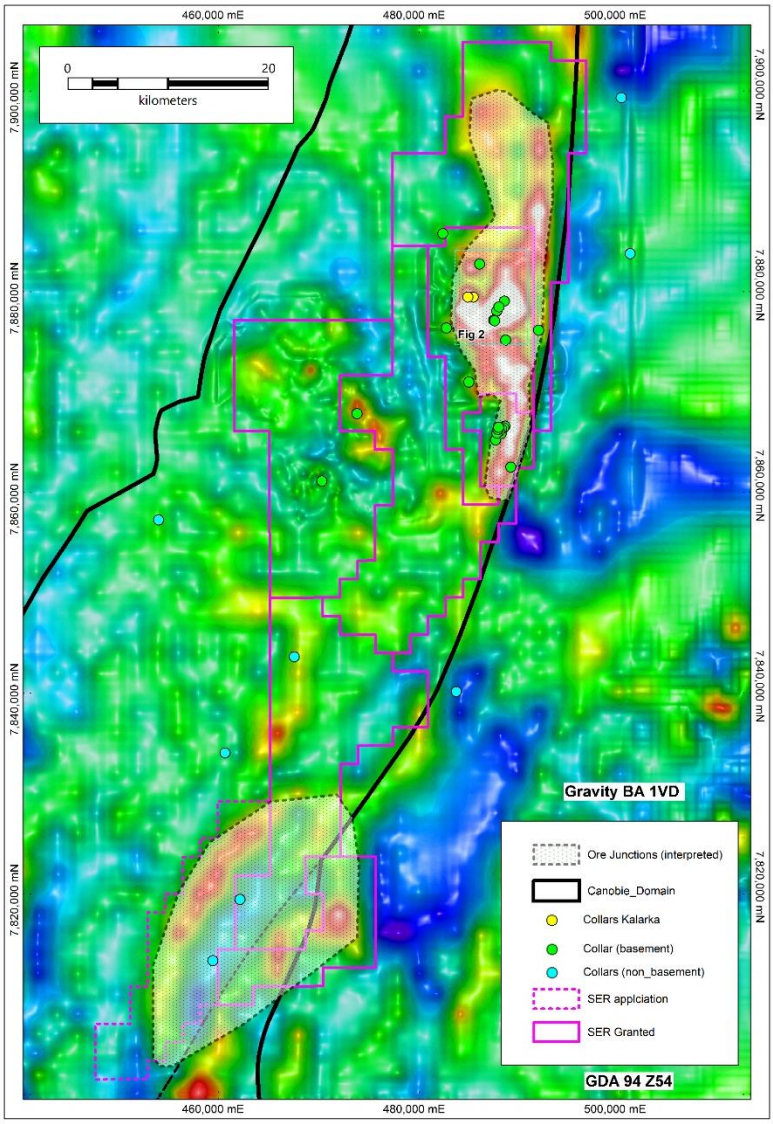

Figure 4: Canobie Project tenure with interpreted ore junctions and new SER ELA

PROMINENT NICKEL SULPHIDE EXPERT ENGAGED TO REVIEW PROJECT

SER has engaged a globally renowned expert in magmatic mineralisation styles, Dr Steve Beresford, the former Chief Geologist of major nickel explorers and producers IGO, First Quantum and MMG. Dr Beresford brings profound understanding of magmatic nickel sulphide systems and cutting edge exploration tools and techniques which have never previously been undertaken at this project.

MAGMATIC NICKEL DEPOSITS – TEA TREE AND KALARKA IN CONTEXT

Tea Tree and Kalarka have demonstrated that the Canobie District contains numerous key geological criteria which highlight the potential for more significant nickel and copper mineralisation (using the criteria described in Begg et al 2018).

The project is located adjacent to the upper lithospheric domain margin defined by the Gidyea Suture Zone which is the edge of the Mt Isa Province (Korsch et al 2012) associated with a large

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gravity high (up to 15m/gal) interpreted to be sourced from an ore junction (cluster of mafic intrusions, see Figure 4). This indicates that the mafics at Tea Tree and Kalarka were emplaced in a dynamic tectonic setting which is important in the formation of magmatic nickel systems.

The mafic rocks are interpreted to be Lunch Creek mafics equivalent which formed ~1740Ma associated with the voluminous Wonga – Burstall Suite (Neumann et al 2009). The host rocks appear to be Corella Formation equivalent (~1770Ma) which host the graphitic rich metasediments as well as calc-silicate skarns and potentially meta-evaporites as interpreted from petrological studies completed on historical drilling.

The Kalarka drilling results presented in this release intersected 100m+ of ultramafic and mafic rocks with basal semi massive sulphides indicating that the system has reached sulphur saturation with significant volumes of ultramafic rocks. The sulphides intersected thus far have a low nickel tenor which is potentially due to the over assimilation of graphite from the host metasediments. It is SERs hypothesis that the mafics may have assimilated the calc-silicates or meta-evaporites of the Corella Formation within other parts of the Tea Tree ore junction which would make an ideal target to explore for higher tenor nickel-copper sulphide systems.

SER believes there is potential for Tea Tree to contain chonolith intrusions which could act as magma transport and traps for higher tenor sulphides (interpreted chonoliths running north and south of the ore junction are seen in Figure 3). Chonolith hosted systems form a number of Tier-1 nickel-copper sulphide deposits globally, including Nebo Babel and Nova-Bollinger (Seat et al 2007; Barnes et al 2020). These chonolith targets can have a relatively small (~400m) diameters, so with the Tea Tree ore junction covering 20km north/south (Figure 4) there is extensive scale and exploration potential.

SERs exploration at Tea Tree will involve de-risking the project through cost effective exploration techniques to build the geochemical database of the currently intersected ultramafic and mafic rocks and utilise the existing geophysical data to attempt to map the intrusive body in 3D. This information will then be used to vector into high priority target areas which could host the trap sites for higher tenor sulphides.

CANOBIE AIRBORNE GRAVITY SURVEY COVERS SOUTHERN CANOBIE PROJECT AREA

Geoscience Australia has this month completed an airborne gravity gradiometry survey across a large area of the Mount Isa Basin north of Cloncurry. The Canobie Airborne Gravity is an initiative of the Queensland Government's New Economy Mineral Initiative (NEMI), aimed at attracting explorers into high-potential, covered greenfield terranes within the Mt Isa Basin[3]. The survey was flown at ~100m height with 1km spaced flight lines over an area of 5,000km^2, covering the southern region of SER's Canobie Project, including the recently secured new exploration licence mentioned above.

[3] Tenders - Airborne Gravity Gradiometry Survey, Canobie, Queensland, 2021 - Australian Tenders

ASX ANNOUNCEMENT
20 DECEMBER 2021
ASX: SER

ISA UNDERCOVER INITIATIVE BACKGROUND

The greater Canobie and Isa North projects – jointly referred to as the 'Isa Undercover Initiative' – comprises major undercover extensions of both the Eastern and Western Succession of the Mt Isa Province, which is one of the most highly mineralised provinces in the world.

The Canobie Project now consists of eight exploration licences (1837km^2) that encompasses an entire belt of the northern Mt Isa Eastern Succession, home to mines such as the giant Glencore & Evolution owned Ernest Henry Copper-Gold mine.

The Isa North Project comprises three exploration licences covering an underexplored 976km^2 belt located along the projected northern extension of the mineralised Mt Isa – Gunpowder Fault Zone. Several large deposits lie on or adjacent to this fault system, including the Mt Isa, Mt Oxide and Gunpowder copper deposits and the Mt Isa, Hilton and George Fisher lead-zinc-silver deposits. This month the tenement transfer process was finalised, and SER has already begun a review of the geophysical data covering the project area.

This announcement is authorised by the Strategic Energy Resources Limited Board.

For further information please contact:

Dr David DeTata
Managing Director

T +61 3 9692 7222
E info@strategicenergy.com.au
W www.strategicenergy.com.au

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About Strategic Energy Resources

Strategic Energy Resources (ASX: SER) is a specialised undercover mineral explorer and project generator focused on discovery in greenfield frontiers of Australia. SER is actively exploring our large tenement package in the emerging East Tennant copper-gold province of the Northern Territory; the undercover extensions of the world-class Mt Isa Province in northwest Queensland; and the Cobar Basin and Lachlan Fold belt of New South Wales.

The information in this report that relates to Exploration Results is based on information compiled by Mr Stuart Rechner BSc (Geology) MAIG MAusIMM, a Member of the Australian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy. Mr Rechner is a Director and shareholder of Strategic Energy Resources Ltd. Mr Rechner has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Rechner consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• CNDD001A & CNDD002: 2021 diamond drillholes (mud-rotary pre-collar) by SER • TT001D – TT005D: 1994 - 1995 diamond drillhole (mud-rotary pre-collar) by MIM Exploration • SXDD001-007: 2008 diamond drillholes (mud-rotary pre-collar) by Anglo American • SMD02: 2004 diamond drillhole (mud-rotary pre-collar) by Falcon Minerals • Diamond core samples are obtained from diamond drilling in basement lithologies • Core was cut and half core sampled on selected 1m or 2m intervals, with occasional <1m samples in mineralised sections using significant mineralisation contacts which were recorded in the sampling data
Drilling techniques	• Cover sequences were drilled by mud rotary drilling until intersecting basement • Diamond drilling was used to collect NQ diameter core of basement • Downhole surveys of diamond drilling were conducted approximately every 40m
Drill sample recovery	• Drillers core blocks indicate the length of a run and the amount of recovered core • When core recovery has been recorded by field geologist prior to sampling it has been described as typically 100% • Core recovery was not systematically recorded by previous Explorers, however review of core tray photos and core blocks indicates that close to 100% recovery occurred • No relationship between recovery and grade was observed • Recovery of cover sequence samples drilled by mud rotary was not recorded
Logging	• SER has undertaken an initial quantitative geological log of the lithologies, mineralisation and alteration. Petrology is planned to better understand the geological units and sulphide associations. • Logging data is recorded in lithological logs by MIM and in company logging files and databases by Anglo American, AngloGold Ashanti, Falcon Minerals and SER • SER has compiled all available logging data into a comprehensive database capturing collar, survey, lithology, mineralisation, alteration, veining, structural data (when available) and recovery (when recorded) • Geological logging by field geologist recorded qualitative descriptions • Photos (wet and dry) were taken of all core trays for later review • MIM, Anglo American, AngloGold Ashanti and SER recorded magnetic susceptibility measurements of core every meter. Falcon Minerals did not collect magnetic data of core.
Sub-sampling techniques and sample preparation	• SER: samples were crushed to 90% passing 4mm, then split and pulverised to better than 85% passing 75 microns • There is limited information regarding sample preparation of historical holes, however the analytical techniques are outlined below and it is likely standard sample preparation for those techniques was undertaken by the respective laboratories.
Quality of assay data and laboratory tests (Equipment used)	• SER's laboratory analysis included fire assay analysis with AAS finish for Au, Pt and Pd and four acid digest followed by ICP-MS for 31 element package, undertaken by ALS. SER inserted certified reference material and blanks every 40 samples. • MIM laboratory analysis is recorded as G001 undertaken by ALS for Cu, Pb, Zn, Co, Ni, Fe, Mn, P and U. No information on the use of blanks or standards is recorded. • Anglo American analysis was undertaken by ALS including check gold analysis using fire assay method (Au-AA25) on the mineralised zone of SXDD005. Four acid digest ICP-OES and ICP-MS technique was used for base metals. Blanks, duplicates and/or standards were inserted at a ratio of approximately 1 in 30 samples. • AngloGold Ashanti analysis was undertaken by ALS and ACME, analysing gold using FA50/AA (fire assay) and 56 other elements using RAR10/MS and AR25/MS. Blanks, duplicates and/or standards were inserted at a ratio of approximately 1 in 30 samples.

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	• Falcon Minerals analysis was undertaken by ALS for gold using fire assay (AU-AA25) and for 33 other elements using ME-ICP61 a four-acid digest with ICP-MS method. No information on the use of blanks or standards is recorded. • QAQC analysis of assay results indicates an acceptable level of accuracy and precision • Laboratory in-house QAQC includes the use of internal lab standards, splits and duplicates and participation in external umpire laboratory assessments
Verification of sampling and assaying	• Sample intervals defined by field geologist are assigned a sample identification number prior to core cutting and dispatch to laboratory • Assessment of reported significant assays are verified by review of core photography
Location of data points	• Drill collar location surveyed using a handheld GPS • Locations are reported in metres in GDA94 MGA Zone 54
Data spacing and distribution	• Drilling sampling is adequate for early exploration • Information available is not sufficient for the estimation of a Mineral Resource
Orientation of data in relation to geological structure	• Downhole lengths are not considered true widths given limited geological understanding
Sample security	• SER samples were collected, sealed and delivered to laboratory by company personnel • Sample security procedures are not recorded in the MIM, Anglo American, AngloGold Ashanti or Falcon Minerals reports
Audits or reviews	• None undertaken

JORC Code, 2012 Edition – Table 1

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• SER drilling occurred on EPM27378 which is an 100% owned granted licence • Canobie Project comprises 7 granted tenements 100% owned by SER EPM15398, EPM27378, EPM27586, EPM27587, EPM27588, EPM27638 & EPM27676 • The project is located 165km NNE of Cloncurry • Conduct and Compensation Agreement executed with landholders • Exploration Agreement executed with Traditional Owners • Tenements in good standing with no known impediments
Exploration done by other parties	• In 1994 MIM Exploration was targeting IOCG mineralisation by drilling magnetic / gravity anomalies when TT001D intersected 10m @ 0.28% Cu and 0.25% Ni • In 2004, Falcon Minerals drilled two further holes (SMD01 & SMD02) targeting Ni sulphides at Tea Tree • In 2008, Anglo American was targeting magmatic Ni-Cu-PGE mineralisation by drill testing bedrock electromagnetic conductors (7 holes SXDD001-SXDD007) hole SXDD005 hit high grade gold including 17m @ 6.75g/t Au from 631m at Lucky Squid/Saxby Prospect • In 2010, AngloGold Ashanti drilled five holes (SXDD011-015) to test for gold mineralised structures with best results in SXDD014 including 15m @ 9.09 g/t Au (Lucky Squid) • In 2012, Falcon Minerals drilled four further holes (SXDD0016-0019) with disappointing results. The best result was from hole SXDD016 which included 1m @ 26.1 g/t gold (Lucky Squid) • In 2019-2020 SER drilled a further four diamond drillholes at SXDD020-SXDD023 targeting Cu-Au mineralisation at Lucky Squid/Saxby. Best result was SXDD020 6m @ 12.08g/t Au from 519m.
Geology (Target deposit type)	• SER is targeting IOCG and Ni-Cu-PGE sulphide mineralisation hosted in basement rocks of the Eastern Succession of the Mt Isa Province buried beneath younger sedimentary cover of the Carpentaria Basin

	• There is very limited knowledge of the northeast Mt Isa Province, the small amount of drilling in this virgin terrain has a high strike ratio of mineralisation
Drill hole Information	• Please see table and figures in main body of text
Data aggregation methods	• Significant intersections: average grades are weighted by the sample width of each assay within the intersection • No metal equivalence calculations are used in reporting • Intervals calculated using a 500ppm Ni cut off with no more than 2m internal dilution
Relationship between mineralisation widths and intercept lengths	• Downhole lengths are not considered true widths given limited geological understanding
Diagrams	• See figures in release
Balanced reporting	• This report describes all relevant historical exploration and SER's planned work
Other substantive exploration data	• All relevant finalised exploration data has been included
Further work	• SER is undertaking a petrological investigation on the rocks intersected at Kalarka. SER will re-log historical Tea Tree and other prospect holes, collect selected geochemical data as well as petrophysics and further petrology to build a greater understanding of the potential for magmatic related systems and vector into new target areas.

REFERENCES

Begg, G. C., Hronsky, J. M. A., Griffin, W. L., & O'Reilly, S. Y. (2018). Global- to deposit-scale controls on orthomagmatic Ni-Cu(-PGE) and PGE reef ore formation. In S. K. Mondal, & W. L. Griffin (Eds.), *Processes and ore deposits of ultramafic-mafic magmas through space and time* (pp. 1-46). Elsevier.

Barnes, S.J., Taranovic, V., Miller, J.M., Boyce, G. and Beresford, S., 2020 - Sulfide Emplacement and Migration in the Nova-Bollinger Ni-Cu-Co Deposit, Albany-Fraser Orogen, Western Australia: *in Econ. Geol.* v.115, pp. 1749-1776.

N. L. Neumann, G. M. Gibson & P. N. Southgate (2009) New SHRIMP age constraints on the timing and duration of magmatism and sedimentation in the Mary Kathleen Fold Belt, Mt Isa Inlier, Australia, Australian Journal of Earth Sciences, 56:7, 965-983,

Korsch, R J.; Huston, D L.; Henderson, R A.; Blewett, R S.; Withnall, I W.; Fergusson, C L.; Collins, W J.; Saygin, E; Kositcin, N; Meixner, A J.; Chopping, R; Henson, P A.; Champion, D C.; Hutton, L J.; Wormald, R; Holzschuh, J; and Costelloe, R D., "Crustal architecture and geodynamics of North Queensland, Australia: insights from deep seismic reflection profiling" (2012). Faculty of Science, Medicine and Health - Papers: part A. 46

Seat, Z, Beresford, S.W., Grguric, B.A., Waugh, R.S., Hronsky, J.M.A., Mary Gee. M.A., Grove, D.I., & Mathison, C. I., 2007, Architecture and emplacement of the Nebo–Babel gabbronorite-hosted magmatic Ni–Cu–PGE sulphide deposit, West Musgrave, Western Australia, Miner Deposita (2007) 42:551–58

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