SEPTEMBER 2020 QUARTERLY ACTIVITIES REPORT

Key points

- **Good financial position with A$12.6 million cash at quarter's end following a successful A$7.75 million placement in July, plus ~A$3 million position in Todd River Resources (ASX:TRT)**
- **Appointed Matthew Keane as new CEO subsequent to quarter's end**
- **Identified large, strong electromagnetic (EM) conductor at Fraser Range**
- **Signed agreement to earn into large gold and base metal exploration project at Jillewarra in WA subsequent to quarter's end**
- **Identified broad gold in soil anomaly at West Murchison project**
- **Received assay results from Aarni' East drilling in Finland, and also started follow-up drilling at Aarnivalkea subsequent to quarter's end**

CORPORATE

Finance

A total of A$1.01 million was spent during the quarter on operating activities, comprising A$0.74 million exploration and evaluation costs, A$0.09 million corporate costs, business development costs, overheads and payments for fixed assets, and A$0.12 million staff costs.

Proceeds from the issue of shares in the quarter was A$7.75M with related transaction costs of A$0.5M.

Investment in tenements in the quarter was A$0.06M

At the end of the September quarter cash totaled A$12.593 million.

Planned expenditure for the next quarter ended 31 December 2020 is anticipated to be approximately A$1.45 million, primarily reflecting planned drilling at the Company's Fraser Range nickel target in Western Australia and at the Aarnivalkea gold prospect in Finland.

Capital structure

In July 2020, 61,976,000 shares were issued at 12.5 cents per share in a placement to institutional and sophisticated investors, resulting in Jupiter increasing its holding in S2R to 14.93%, and Paradice becoming

a substantial shareholder with 6.45% of S2R. Paradice further increased its position to 7.53% during the quarter.

The total issued capital as at 30 September 2020 comprises 309,891,179 ordinary shares and 41.8 million unlisted options, which if exercised, would represent a capital injection of A$14.1 million to the Company.

In October 2020, 2,000,000 options were issued at 0.39 cents and 10,850,000 options lapsed.

Personnel

Shortly after the end of the Quarter, Matthew Keane was appointed as Chief Executive Officer to fill the vacancy created by Mark Bennett moving to the position of Executive Chairman. Mr Keane is a geologist with more than 20 years of experience in mining, exploration and financial markets. He has worked in various technical and operational roles including exploration, mine geology, scheduling and design, resource and reserve estimation, and production management for Lynas Gold (now Lynas Corp) and BHP.

He has also had a corporate development and investor relations role with uranium miner Paladin Energy, focussed on mergers, acquisitions and asset divestments.

Most recently, he has spent eight years in capital markets working as a metals and mining analyst for Argonaut Securities, covering gold, base metals, bulk commodities, specialty minerals and uranium. He holds a BSc (Hons) Geology from the University of Western Australia and a Masters of Business and Technology from the University of New South Wales.

EXPLORATION

Fraser Range nickel project, Western Australia (S2 100%)

The Company has three exploration licences covering 242 square kilometres of the Fraser Range nickel province, discovered by S2's precursor, Sirius Resources, in 2012. The licences are located 40 to 80 kilometres to the northeast of the Nova-Bollinger nickel-copper mine (discovered by S2's predecessor, Sirius Resources) and 80 to 120 kilometres southwest of Legend Mining's recently discovered Mawson nickel prospect.

During the quarter, moving loop electromagnetic (MLEM) surveying was undertaken on two Exploration Licences covering a nickel-prospective corridor and an "eye" like magnetic feature (see S2 ASX announcement of 10th August 2020 and Figure 1). This identified a conspicuous anomaly on initial 400 metre spaced lines and subsequent 200 metre spaced infill lines standing out clearly from the background with no other responses of note (see S2 ASX announcement of 17th August 2020 and Figure 2).

Modelling of the data by Newexco geophysical consultants identified a discrete, highly conductive elongate rectangular body which dips steeply west over a vertical interval of 160 metres and plunges to the northeast for a distance of 800 metres. The up-dip and up-plunge tip of this body commences at a depth of 200 metres below surface and deepens down plunge to the northeast. The observed response profiles fit very well with the theoretical responses, indicating a good fit to, and a high degree of confidence in the model.

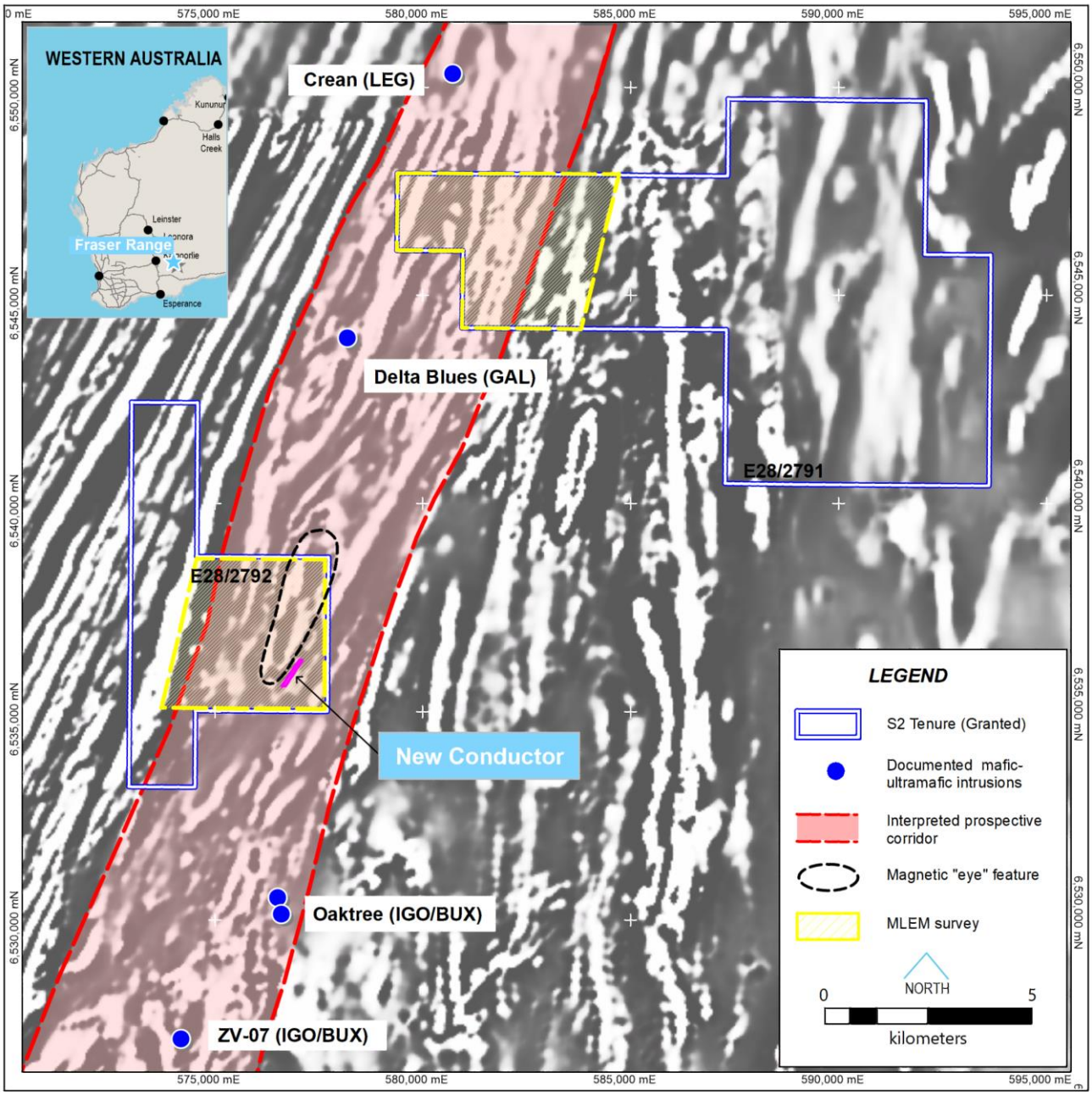

Figure 1: Location of MLEM surveys undertaken during the quarter (yellow), covering the nickel prospective corridor of mafic-ultramafics (pink), a magnetic "eye" target, and Ni-Cu sulphide occurrences reported by IGO (IGO), Buxton (BUX), Legend (LEG) and Galileo (GAL).

Very little is known about the geology of the area because of lack of outcrop, but the conductor sits within an interpreted prospective corridor of ultramafic intrusives and minor nickel sulphide occurrences previously identified by other companies (refer to S2 ASX announcement of 13th July 2020 for details). The tenement is entirely covered by recent transported sediments, rendering surface geochemical sampling ineffective, so no geochemical survey has been done. Also, the top of the conductive body is located 200 metres below surface, so surface geochemistry is likely to be irrelevant. The target is sufficiently well defined to drill as soon as heritage and drilling approvals have been obtained.

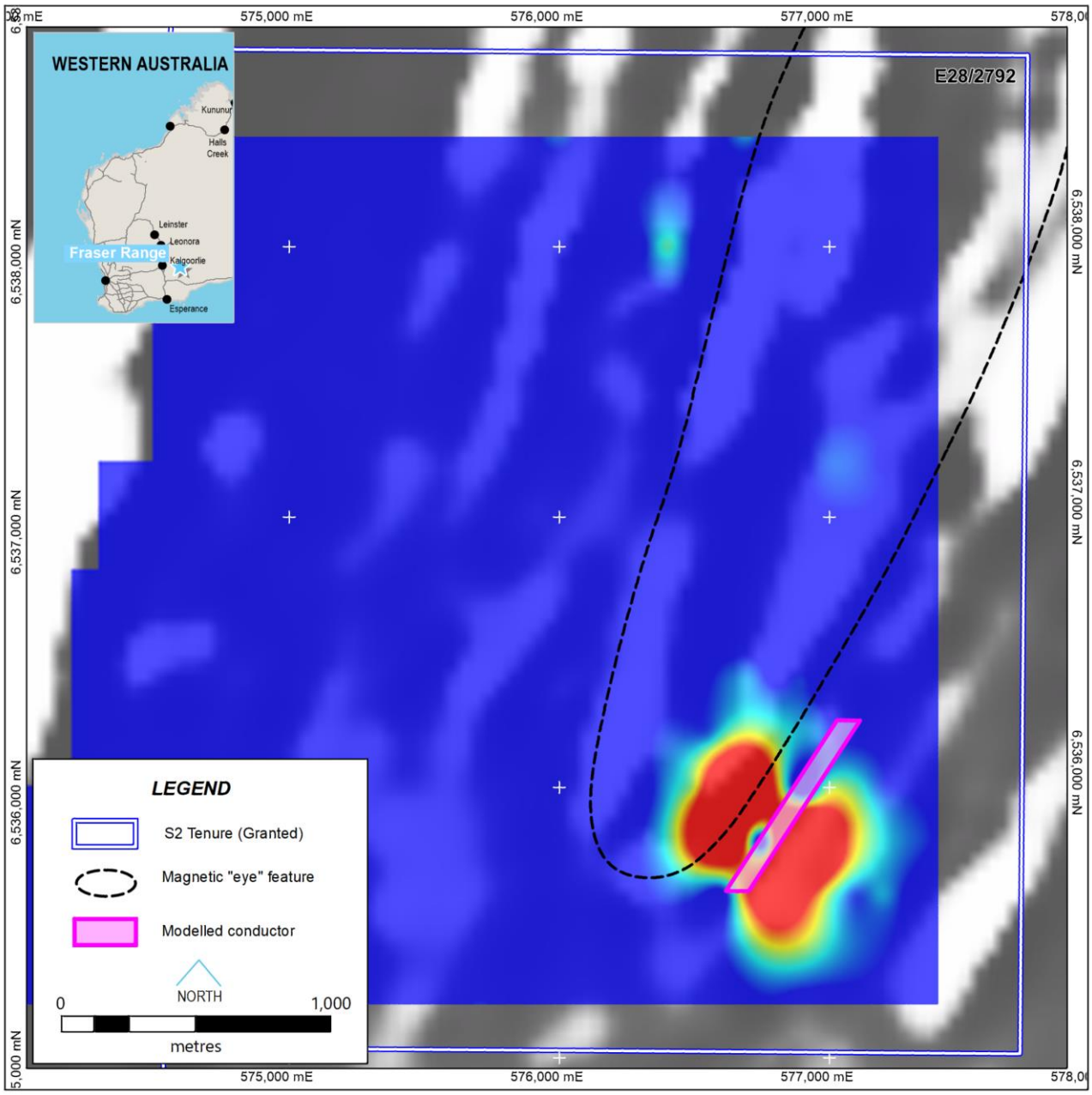

Figure 2: Colour "hotspot" map of MLEM survey responses showing distinct strong anomaly and modelled conductive plate relative to the eye, over magnetics. Note the classic butterfly shape of the anomaly - like a magnetic field around a magnet.

This conductor is scheduled to be drilled in late November 2020.

West Murchison nickel-copper-PGE target, Western Australia (S2 100%)

S2 has three Exploration Licence applications covering 880 square kilometres over several targets interpreted to represent mafic-ultramafic intrusions prospective for magmatic nickel-copper-PGE mineralisation.

During the quarter, samples previously analysed for base metals using a portable X-ray fluorescence spectrometer (PXRF) over the first of several targets were assayed for gold, platinum and palladium. This identified a modest platinum and palladium anomaly associated with the interpreted mafic-ultramafic intrusion and also a broad gold anomaly (see S2 ASX announcement of 10th August 2020 and Figure 3).

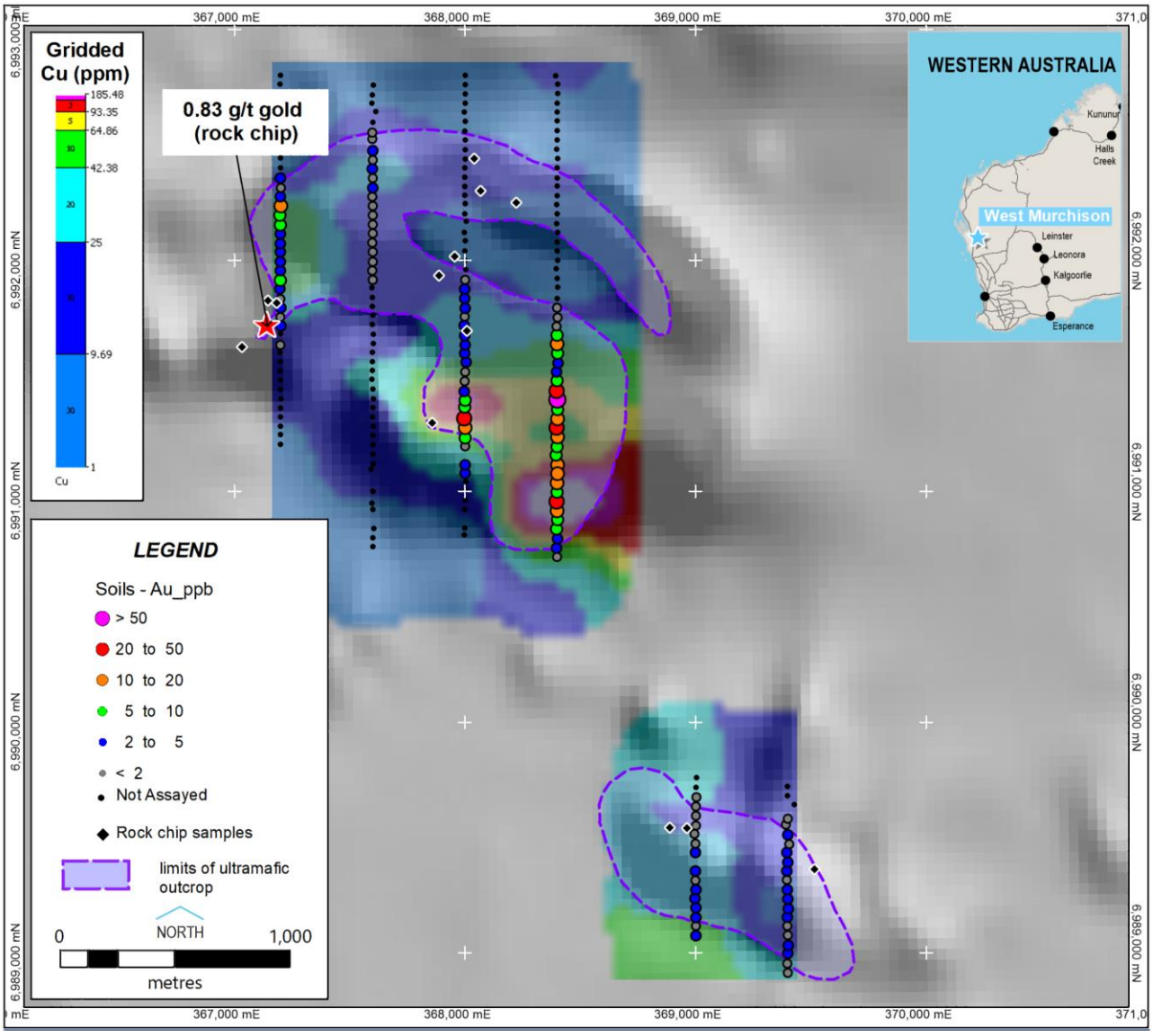

Figure 3: Gold in soil anomaly (coloured dots) over copper (colour background) and the magnetic anomalies interpreted to represent an ultramafic intrusion (grey background).

Further soil sampling is being undertaken to extend and infill this broad gold anomaly, with results expecting in the coming quarter.

Three Springs nickel-copper-PGE target, Western Australia (S2 100%)

S2 has two Exploration Licences covering approximately 478 square kilometres over several targets interpreted to represent mafic-ultramafic intrusions prospective for magmatic nickel-copper-PGE mineralisation.

The Exploration Licences comprising the Three Springs project were granted during the quarter. Initial landowner and stakeholder engagement has commenced.

Jillewarra gold and copper-zinc-lead project, Western Australia (S2 earning 70%)

S2 is earning a majority interest in the Jillewarra project which covers 790 square kilometres of gold and copper-zinc-lead prospective greenstones situated approximately 50 kilometres west of Meekatharra in the Murchison Goldfields of Western Australia.

Subsequent to the quarter's end, the Company signed a binding agreement to earn a majority interest in the Jillewarra project, which covers 790 square kilometres and 50 strike kilometres of a relatively unexplored greenstone belt located 50 kilometres west of Meekatharra, in the Murchison Goldfields of Western Australia (see S2 ASX announcement of 5th October 2020 and Figure 4).

It is considered highly prospective for gold and base metals, because, although the project area has been subject to intermittent prior exploration, previous drilling is of limited extent, effectiveness, and depth, and the exploration potential is high.

The project area contains a number of historic gold workings along several trends where limited and relatively shallow drilling has intersected high grade gold mineralisation, but despite this there is relatively little drilling to outline the lateral or down dip limits of the known mineralisation, or to systematically test along strike on the broader trends.

As an example of the project's gold potential, gold mineralisation at the Dorothy prospect is hosted by narrow sulphide-rich quartz veins dipping moderately to the SW within a southerly plunging shoot (see Figure 5). Effective drill testing of the Dorothy prospect has been limited to predominantly reverse circulation (RC) drilling immediately around historical workings, with better results including:

- 3 metres @ 40.9 g/t gold from 29 metres in DO018
- 4 metres @ 33.8 g/t gold from 33 metres in CHER16
- 4 metres @ 33.3 g/t gold from 35 metres in CFC044
- 9 metres @ 21.0 g/t gold from 45 metres in CFC058
- 8 metres @ 9.2 g/t gold form 57 metres in CFC057
- 8 metres @ 7.9 g/t gold from 72 metres in CFC001, and
- 1.8 metres @ 69.2 g/t gold from 73.3 metres in CHERD30 (*diamond hole)

The prospect remains virtually untested beyond a depth of 70 metres other than three widely spaced RC step-out holes that failed to effectively test the down-plunge extensions, and untested along strike.

Another example is the Margueritta prospect, located approximately 1.5 kilometres southeast of Dorothy along the same structural corridor. Gold mineralisation at Margueritta occurs within two sub parallel horizons, dipping moderately to the northeast and plunging shallowly to the north (see Figure 6). Better results from historical RC drilling of the East Lode include:

- 5 metres @ 6.1 g/t gold from 22 metres in RC002
- 4 metres @ 5.8 g/t gold from 32 metres in CFC008
- 3 metres @ 6.1 g/t gold from 21 metres in CFC007
- 2 metres @ 5.6 g/t gold from 35 metres in CFC050

Better results from historical RC drilling of the West Lode include:

- 5 metres @ 5.9 g/t gold from 38 metres in CHERC5
- 3 metres @ 7.2 g/t gold from 49 metres in RC004

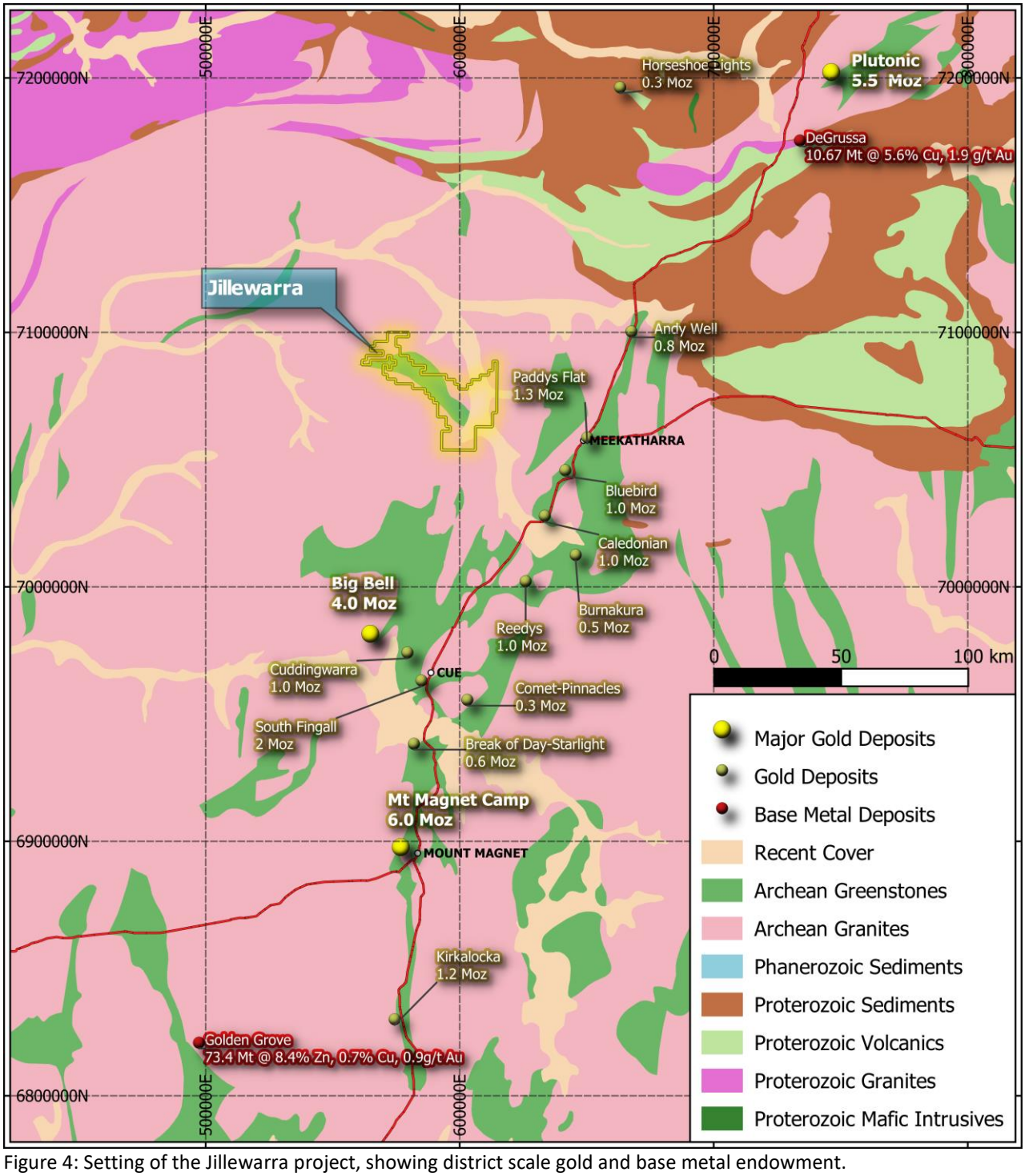

Figure 4: Setting of the Jillewarra project, showing district scale gold and base metal endowment.

The trend containing the Dorothy and Margueritta prospects is essentially untested at a depth greater than 100 metres and hardly drilled outside of the immediate environs of the historic workings. Limited RC drilling approximately 300 metres south of the Margueritta prospect has also intersected gold mineralisation, including 4 metres @ 5.2 g/t gold from 74 metres in hole CFC013.

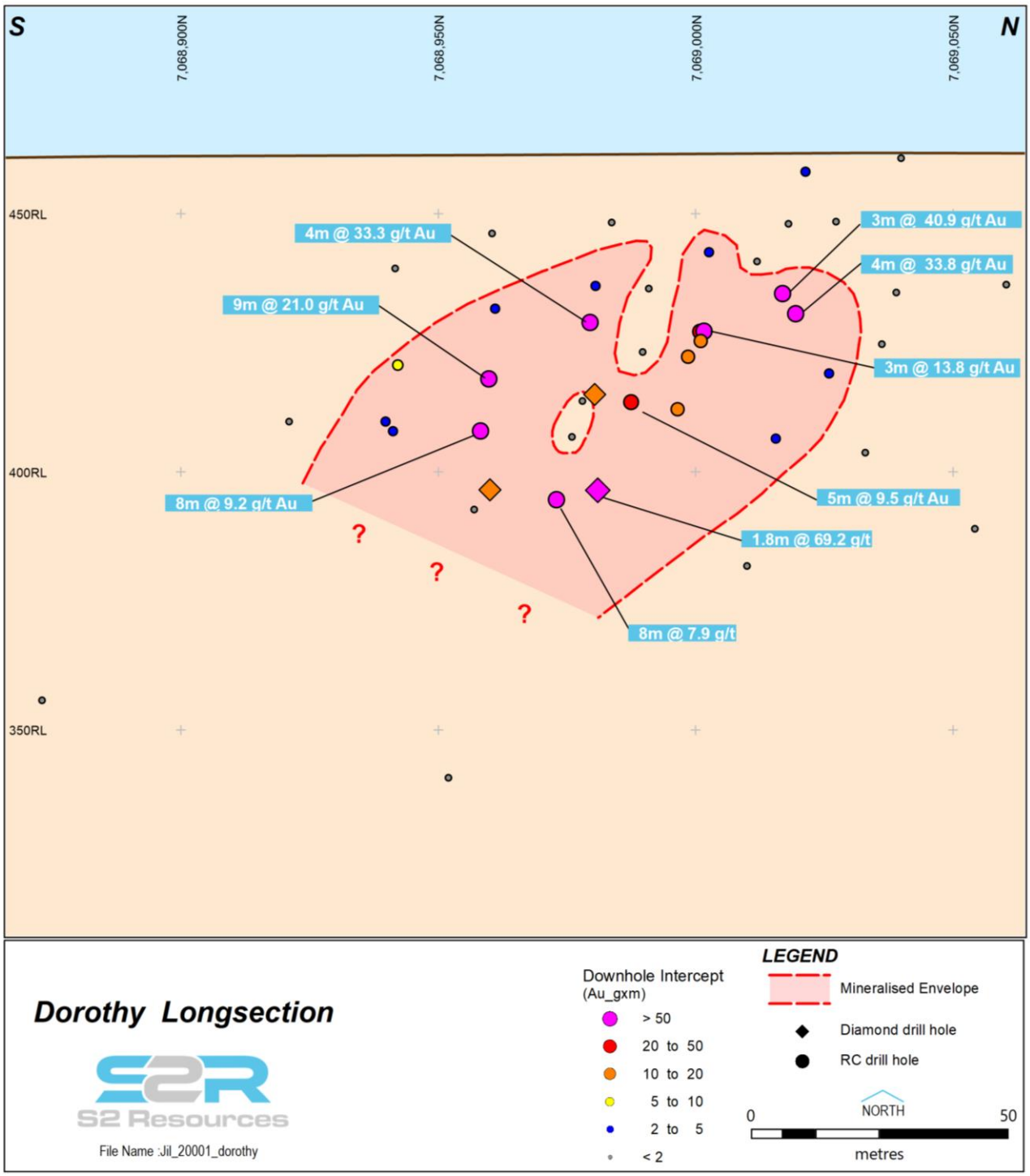

Figure 5: Long projection of previous drilling around the historic Dorothy workings.

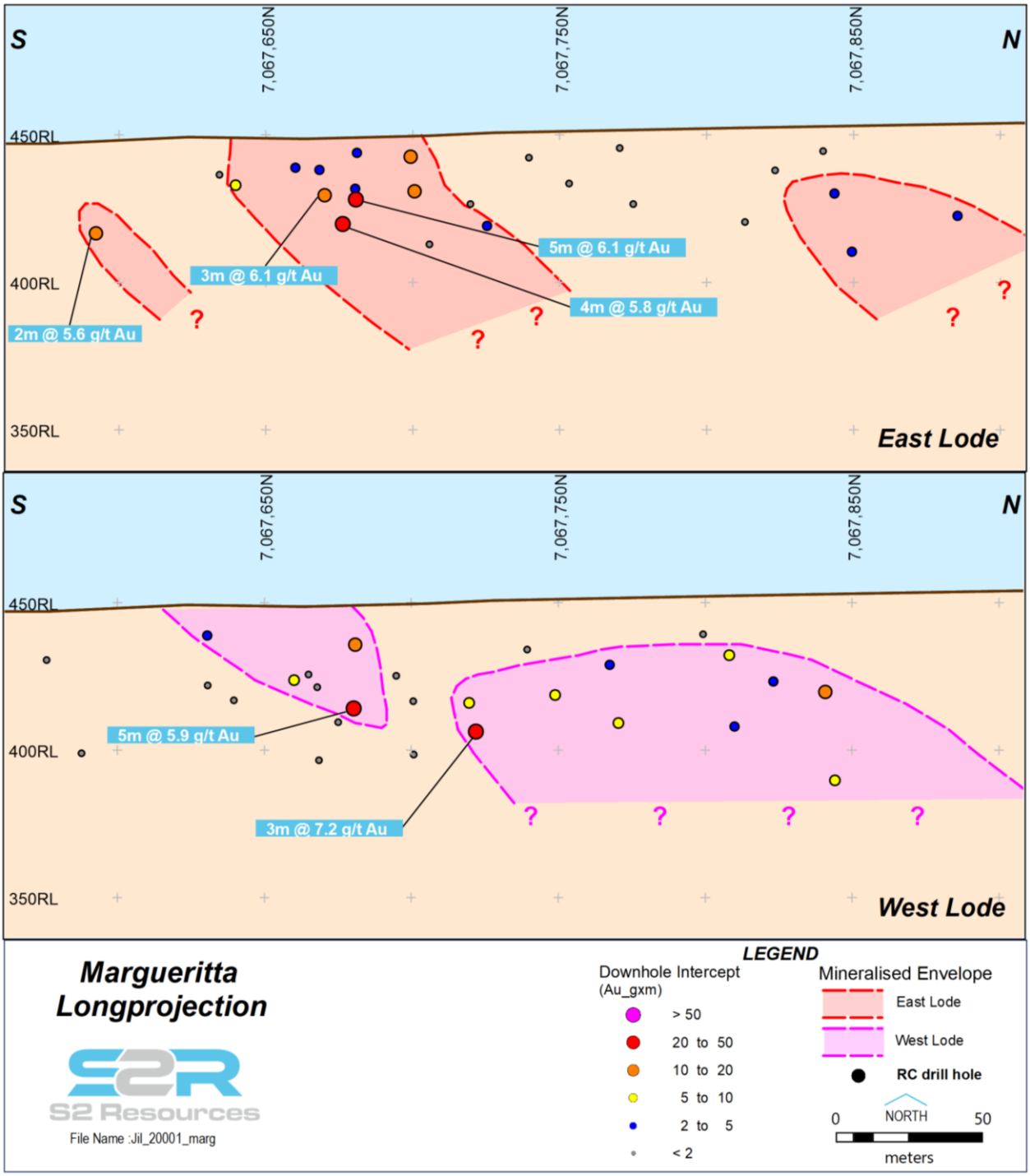

Figure 6: Long projection of previous drilling around the historic Margueritta workings.

The project area is also located midway between the Tier 1 Golden Grove Zn-Cu-Au mine and the high grade DeGrussa Cu-Au mine, and contains felsic volcanic stratigraphy considered prospective for VMS style mineralisation, and several coincident multi-element (Cu-Zn-Pb-Ag) soil anomalies such as those at the Woods and Selga-King localities (see Figure 7).

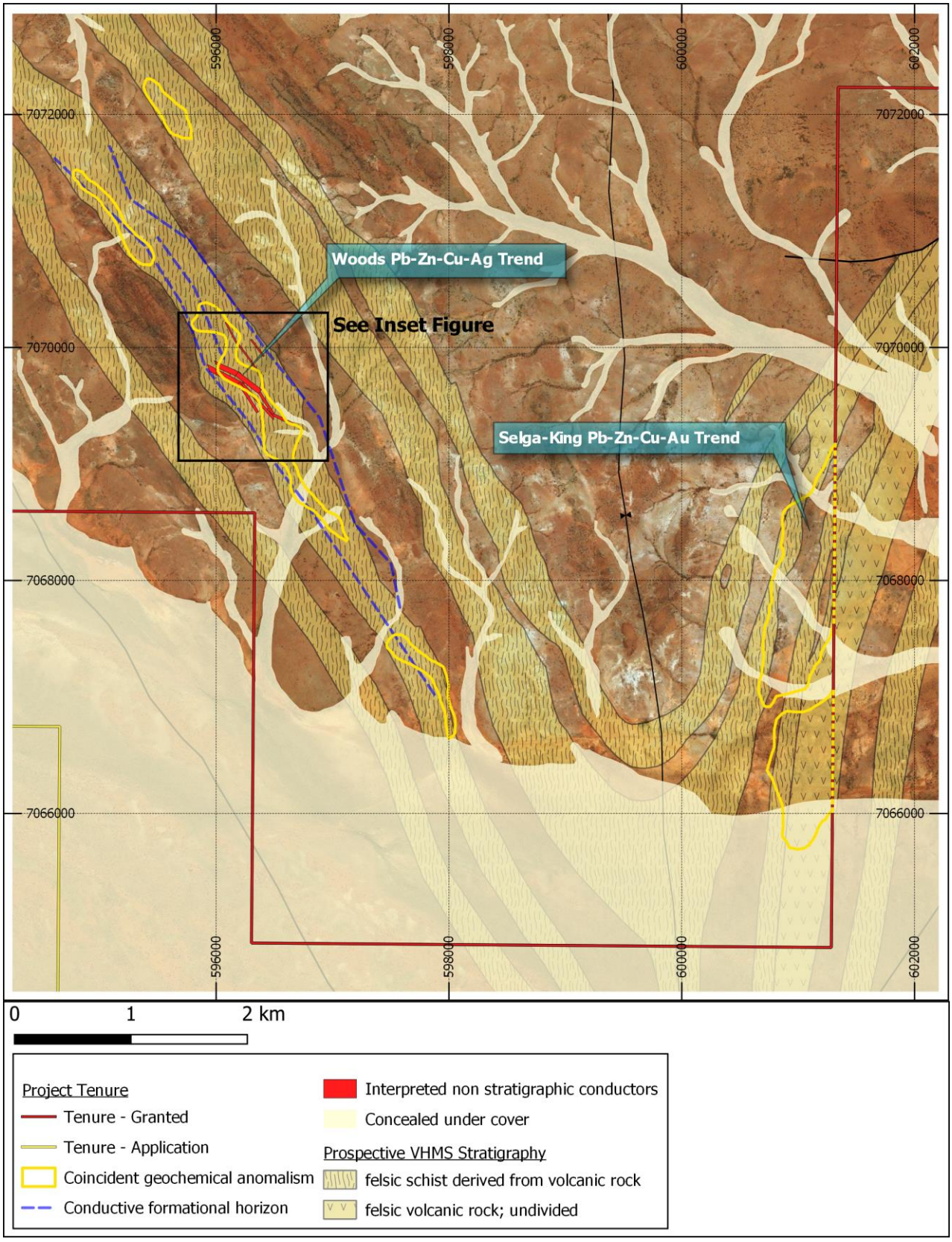

Figure 7: Overview of VMS prospectivity: felsic volcanic stratigraphy, soil anomalies, and non-stratigraphic electromagnetic (EM) conductors. The Selga-King trend is open to the east beyond the limit of sampling.

This prospectivity is further enhanced by the presence of a cluster of untested non-stratigraphic electromagnetic (EM) conductors up to 800 metres long (see Figure 8), barite occurrences, and even an occurrence of galena (lead sulphide) found at a depth of 80 centimetres below surface by prospectors whilst metal detecting for gold (see inset in Figure 8).

The farm-in comprises an up-front non-cash consideration, an earn-in phase, and a potential free carry, as summarised below:

- Issue of 5 million S2 shares to BRM at a nominal price of A$0.20, representing a consideration of A$1m
- Minimum expenditure of A$2m within 2 years
- Cumulative expenditure of A$5m within 5 years to earn a 51% interest
- Completion of a study on Inferred Mineral Resources of at least 250,000 ounces of gold (or base metal equivalent) within 7 years to earn a 70% interest
- On completion of this study by S2, BRM can elect to contribute, dilute, or revert to a free carried interest ("FCI") to commencement of commercial production
- In the event of BRM opting for a FCI, BRM's interest reduces to 25% and S2's interest increases to 75%, and BRM repays its free carry from 100% of its share of revenue
- In the event of S2 not completing a feasibility study within 7 years, S2's interest decreases to 49%

Polar Bear nickel project, Western Australia (S2 100% nickel rights)

S2's holds the nickel rights over an area of 510 square kilometres to the southeast of the Widgiemooltha and Kambalda nickel sulphide trends. S2 retained these rights when it sold the Polar Bear project (comprising the Polar Bear and Norcott projects and the Eundynie Joint Venture) to Higginsville Gold Operations (now owned by RNC). The nickel rights include the Halls Knoll, Taipan and Gwardar nickel prospects.

No activity this quarter.

Central Lapland gold and nickel project, Finland (S2 100%)

S2 has mineral rights covering approximately 684 square kilometres of ground in the Central Lapland Greenstone Belt of Finland, a region that contains significant shear zone hosted gold deposits, such as Agnico Eagle's 8Moz Kittila gold mine, and magmatic copper-nickel-PGM deposits, which include Boliden's Kevitsa mine and Anglo American's world class Sakatti deposit.

The Aarni' East gold target was drilled during the quarter. Although gold anomalism and low grade mineralisation was intercepted in several holes, the drilling failed to locate a specific sweet spot (see S2 ASX announcement of 17th August 2020).

No further drilling is planned at Aarni' East.

Late in the Quarter the Company decided to attempt two holes to test the interpreted southerly plunge of the Aarnivalkea gold prospect. Drilling commenced subsequent to the quarter's end.

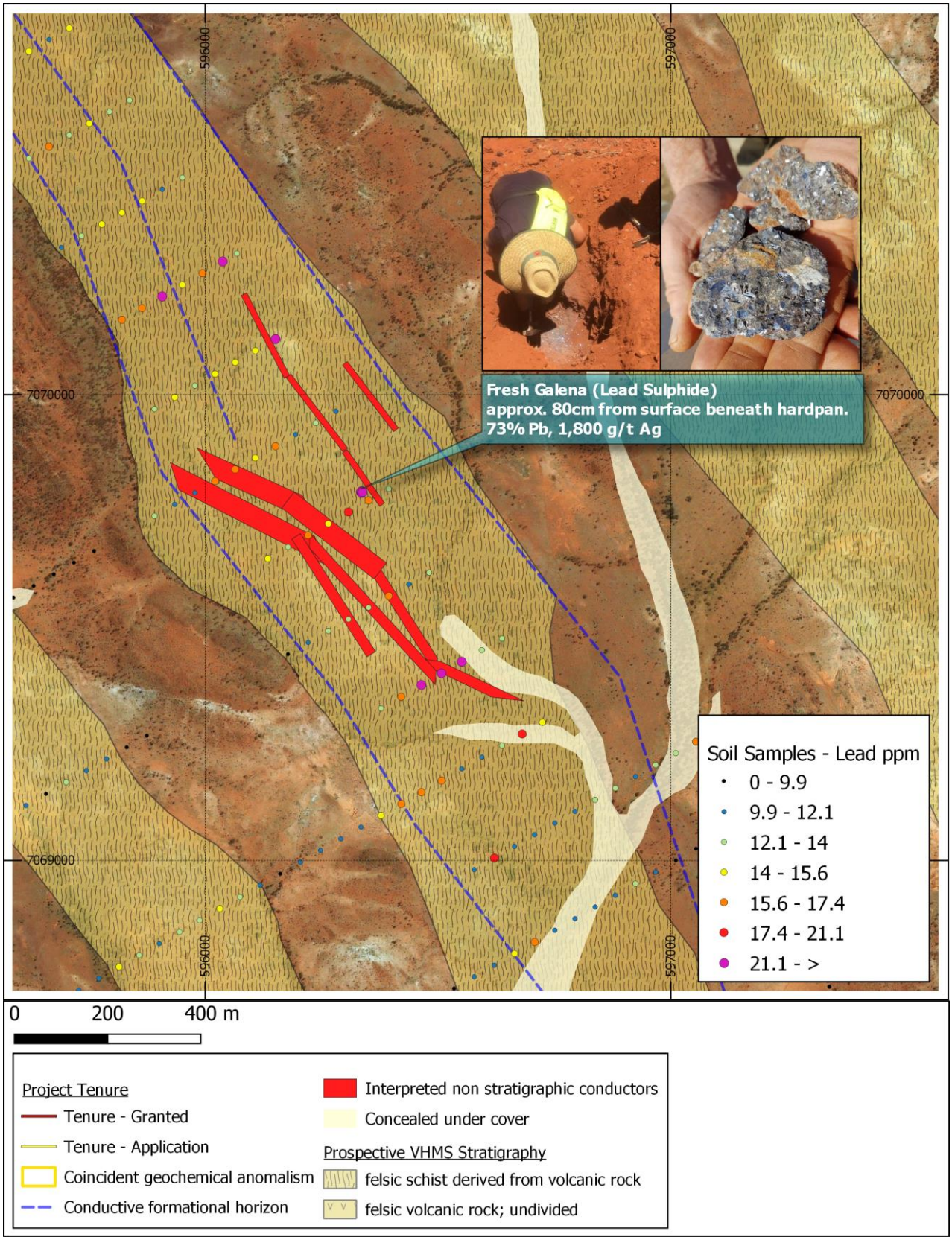

Figure 8. Detail of non-stratigraphic EM conductors and location of galena identified beneath hardpan by gold detectorists.

Berkshire Ni-Cu-PGE project, Western Australia (via 18.5% shareholding in Todd River resources)

S2 is exposed to the Berkshire nickel-copper-PGE project via its shareholding in Todd River Resources (ASX:TRT). The Berkshire project contains a number of mafic-ultramafic intrusions analogous to the Gonneville intrusion which hosts Chalice Gold's Julimar nickel-copper-PGE discovery.

During the quarter, Todd River Resources (ASX: TRT) completed an agreement to acquire Ni-Cu-PGE prospective projects from two private companies. This was approved by TRT shareholders subsequent to the end of the quarter.

TRT subsequently identified several nickel-copper-PGE anomalies in re-assaying of historic auger samples (see TRT ASX announcement of 12th October 2020), and has commenced landowner and stakeholder engagement as a precursor to further geochemical and geophysical surveys.

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Past Exploration results reported in this announcement have been previously prepared and disclosed by S2 Resources Ltd in accordance with JORC 2012. The Company confirms that it is not aware of any new information or data that materially affects the information included in these market announcements. The Company confirms that the form and content in which the Competent Person's findings are presented here have not been materially modified from the original market announcement. Refer to www.s2resources.com.au for details on past exploration results.

Project	Tenement ID	Registered Holder	Location	Ownership %	Status
Western Australia					
Fraser Range	E28/2791	Southern Star Pty Ltd	Fraser Range	100%	Granted
Fraser Range	E28/2792	Southern Star Pty Ltd	Fraser Range	100%	Granted
Fraser Range	E28/2793	Southern Star Pty Ltd	Fraser Range	100% when granted – subject to ballot	Application
Fraser Range	E28/2794	Southern Star Pty Ltd	Fraser Range	100%	Granted
Jillewarra	E51/1602	Tanzi Pty Ltd	Jillewarra	earning 51%	Granted
Jillewarra	E51/1603	Tanzi Pty Ltd	Jillewarra	earning 51%	Granted
Jillewarra	E51/1604	Tanzi Pty Ltd	Jillewarra	earning 51%	Granted
Jillewarra	E51/1617	Black Raven Mining Pty Ltd	Jillewarra	earning 51%	Granted
Jillewarra	E51/1906	Black Raven Mining Pty Ltd	Jillewarra	earning 51%	Granted
Jillewarra	E51/1915	Black Raven Mining Pty Ltd	Jillewarra	earning 51%	Granted
Jillewarra	E51/1955	Black Raven Mining Pty Ltd	Jillewarra	earning 51% when granted	Application
Jillewarra	E51/1956	Black Raven Mining Pty Ltd	Jillewarra	earning 51% when granted	Application
Jillewarra	E51/1965	Black Raven Mining Pty Ltd	Jillewarra	earning 51% when granted	Application
Jillewarra	E51/1966	Black Raven Mining Pty Ltd	Jillewarra	earning 51% when granted	Application
Jillewarra	M51/270	Tanzi Pty Ltd	Jillewarra	earning 51%	Granted
Jillewarra	M51/353	Tanzi Pty Ltd	Jillewarra	earning 51%	Granted
Jillewarra	M51/451	Tanzi Pty Ltd	Jillewarra	earning 51%	Granted
Jillewarra	P51/3082	Black Raven Mining Pty Ltd	Jillewarra	earning 51%	Granted
Jillewarra	M51/885	Wood, Sandra	Jillewarra	earning 51% when granted	Application
Jillewarra	P51/2696	Wood, Sandra	Jillewarra	earning 51%	Granted
Jillewarra	P51/2950	King, Trent Nathan	Jillewarra	earning 51%	Granted
Three Springs	E70/5380	Southern Star Pty Ltd	Three Springs	100%	Granted
Three Springs	E70/5381	Southern Star Pty Ltd	Three Springs	100%	Granted
West Murchison	E70/5382	Southern Star Pty Ltd	West Murchison	100% when granted	Application
West Murchison	E09/2390	Southern Star Pty Ltd	West Murchison	100% when granted	Application
West Murchison	E09/2391	Southern Star Pty Ltd	West Murchison	100% when granted	Application
Polar Bear	E15/1298	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	E15/1461	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	E15/1541	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	E63/1142	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	E63/1712	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	E63/1725	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	E63/1756	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	E63/1757	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	M15/651	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	M15/710	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	M15/1814	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	M63/230	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	M63/255	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	M63/269	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	M63/279	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	M63/662	Polar Metals Pty Ltd	Lake Cowan	100% nickel when granted	Application
Polar Bear	P15/5958	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	P15/5959	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	P63/1587	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	P63/1588	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	P63/1589	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	P63/1590	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	P63/1591	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	P63/1592	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	P63/1593	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Polar Bear	P63/1594	Polar Metals Pty Ltd	Lake Cowan	100% nickel	Granted
Eundynie JV	E15/1458	Polar Metals Pty Ltd / Shumwari Pty Ltd	Lake Cowan	80% nickel	Granted
Eundynie JV	E15/1459	Polar Metals Pty Ltd / Shumwari Pty Ltd	Lake Cowan	80% nickel	Granted
Eundynie JV	E15/1464	Polar Metals Pty Ltd / Shumwari Pty Ltd	Lake Cowan	80% nickel	Granted
Eundynie JV	E63/1726	Polar Metals Pty Ltd / Shumwari Pty Ltd	Lake Cowan	80% nickel	Granted
Eundynie JV	E63/1727	Polar Metals Pty Ltd / Shumwari Pty Ltd	Lake Cowan	80% nickel	Granted
Eundynie JV	E63/1738	Polar Metals Pty Ltd / Shumwari Pty Ltd	Lake Cowan	80% nickel	Granted
Norcott	E15/1487	Polar Metals Pty Ltd	Mt Norcott	100% nickel	Granted
Norcott	E63/1728	Polar Metals Pty Ltd	Mt Norcott	100% nickel	Granted
Finland					
Exploration Licenses					
Central Lapland	Keulakkopää ML2016:0058	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Paana Central ML2018:0081	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Aakenusvaara ML2018:0105	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Paana W2 ML2018:0107	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Kerjonen ML2015:0061	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Palvanen ML2016:0062	Sakumpu Exploration Oy	Central Lapland	100%	Granted
Central Lapland	Putaanperä ML2016:0063	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Sikavaara E ML2016:0056	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Paana East ML2017:0029	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Paana West ML2017:0028	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Selkä ML2017:0037	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application

Project	Tenement ID	Registered Holder	Location	Ownership %	Status
Central Lapland	Mesi ML2017:0034	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Ruopas Pahtapuura ML2017:0040	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Ruopas Pahtapuura 1 ML2020:0041	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Ruopas Ollerokka ML2020:0042	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Ruopas ML2020:0043	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Nuttio ML2017:0041	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Home ML2017:0042	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Hanhijarvi ML2017:0112	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Pikkulaki ML2017:0111	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Ruopas 1 ML2018:0065	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Home 1 ML2018:0109	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Pahasvuoma ML2019:0085	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Rova ML2019:0086	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application
Central Lapland	Sikavaara W ML2019:0107	Sakumpu Exploration Oy	Central Lapland	100% when granted	Application