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AMI Resources Pty Ltd

Annual Report

on

Mineral Tenement EL27942

Alice Springs Region

25/10/2017 to 24/10/2018

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1. Management Report: Year 8

This is AMI Resources Pty Ltd (AMI)'s annual report on EL27942 for year 2017-18, outlines work progress in geological exploration in the mineral tenement area covered by the license in year eight and provides geological report based on field geological prospecting and geochemical analysis results. This report then will propose further exploration work programs in the next year.

AMI has made a further progress in conducting geological survey, research and fieldwork prospecting. In particular, we have done more geo-engineering, mapping and sampling in the targeted areas. The geochemical assay results of rock samples have helped us in target generation and have prepared AMI for significant geological programs, especially drilling exploration in the forthcoming years.

The major progresses made in 2017-18 year are listed below:

- Further data search and analysis, literature review, interpretation of existing data and reports from various sources.

  •Conducted on-site prospecting, reconnaissance, mapping and sample collections and analysis. Carried out geochemical exploration for rocks samples (18 bags of rock-chips), with assays results being clear indicative.

2. Geological Settings: EL 27942- the Dulcie-Jervois Copper Project

By Ross Caughey[1]

AMI's tenement EL 27942 is 52 km^2, located in the north of the Plenty Highway, approximately 235 km northeast of Alice Springs. It is within the greater Jervois Mineral Field, but is about 35 km west of the previous Jervois mining area. Most known metalliferous deposits in the area are dominated by copper and tungsten, but they include a range of other base metals and other mineralisation.

2.1. Regional and Local Geology

The published 1:250,000 *Huckitta* geological mapsheet covers the Project area. The Huckitta region includes rocks from the mid Proterozoic metamorphic/igneous Arunta Inlier and the younger overlying sedimentary sequences of the late Proterozoic to Devonian

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Georgina Basin. Thin Cainozoic cover (alluvium, colluvium) also covers parts of the area. The tenement area is dissected by three major faults, the ENE-trending Oomoolmilla Fault, and the NNW-trending Picton and Charlotte Faults. The pre-Mesozoic regional geology of the tenement area showing the main structural blocks and fault zones is shown on *Figure 2*. The 1:250,000 scale geology of the project area is shown on *Figure 2*. (*Ref. Freeman, 1986, NTGS Huckitta Explanatory Notes*[1]).

In the southeastern part of the Dulcie Range tenement area, the geology is dominated by the Proterozoic Jinka Granite of the Jinka Block. This older granite is mid Proterozoic in age, around 1700–1800 Ma, and comprises biotite granite that is locally porphyritic and includes minor foliated granodiorite facies. Other mid Proterozoic granites in the region (Jervois Granite and Mt Swan Granite) have been recently dated at around 1771 to 1713 Ma.

To the east of the Jinka Granite, on the edge of the tenement and east of the Charlotte Fault are areas of older Proterozoic basement rocks of the Bonya Block. This area is dominated by the Bonya Schist, a unit comprising muscovite-biotite schist with minor andalusite, sillimanite and garnet, metapelite, felsic metavolcanics, amphibolite, skarn rocks and rare migmatite. *Figure 1* is a Landsat image enhanced to distinguish different rock types.

To the southwest and north of the Jinka Block lies a sequence of Neo-Proterozoic to Devonian sedimentary rocks of the Georgina Basin. To the southwest of the Jinka Granite are areas of Mounga and Keepera Groups (siltstone, sandstone, dolostone, shale, conglomerate), and then various Cambrian sequences (arenite, dolostone, calcareous siltstone, limestone, conglomerate). To the north of the Jinka Granite, on the north side of the Oomoolmilla Fault, is a large syncline comprising Cambrian to Devonian rocks, including the Devonian Dulcie Sandstone (largely quartz arenite) of the upper Georgina Basin sequence (*see Figure 2*).

Within the tenement area there are three major faults, the ENE-trending Oomoolmilla Fault, and the NNW-trending Picton and Charlotte Faults (*Figure 2*). These major faults juxtapose blocks of different ages and have probably been re-activated during several geological time periods. The area of intersection of these major structures is covered by the eastern part of AMI's Licence. This faulting appears to have controlled sedimentation of the Georgina Basin sequence to the north, into fault-bounded basins. Broad folding is present in the Georgina Basin sequence, for example at Dulcie Range in the northern part of the EL, a large syncline occurs. The older Proterozoic basement rocks of the Arunta Inlier are strongly foliated and faulted in places.

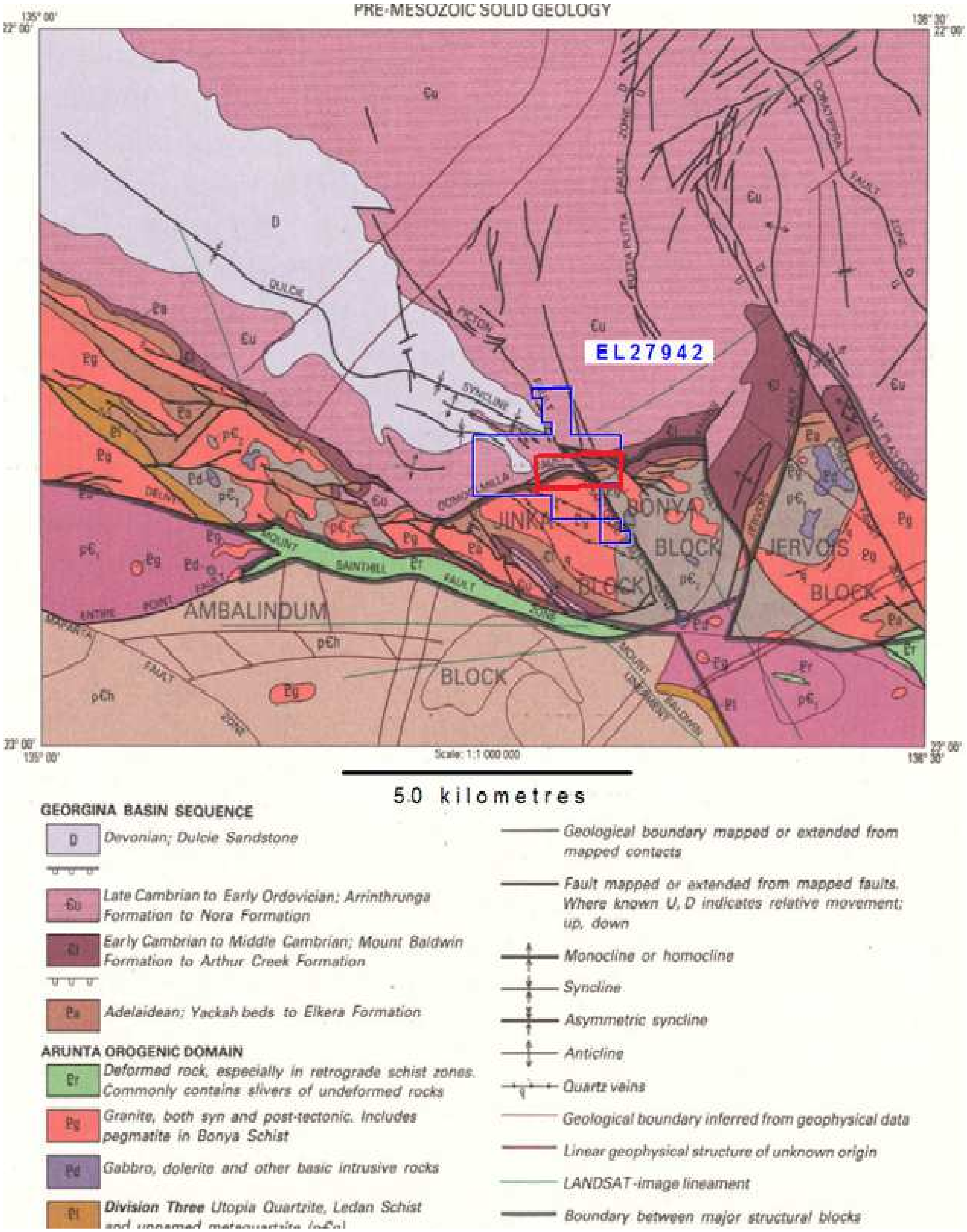

Figure 1:Published 1:1,000,000 pre-Mesozoic basement geology (from the Huckitta 1:250,000 mapsheet, 1986). AMI's EL 27942 is shown in blue. Note the cross-cutting and intersecting fault zones.

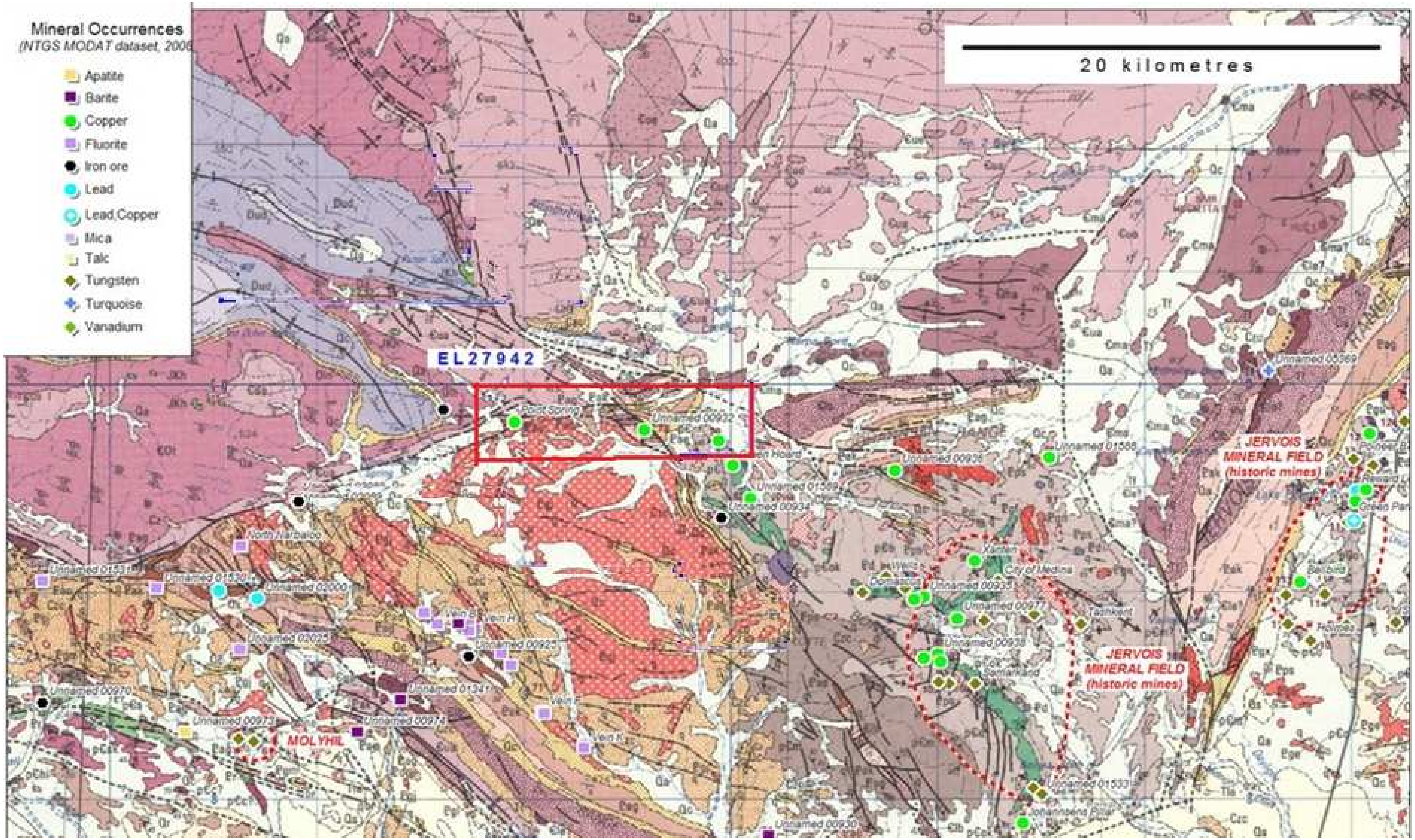

Figure 2: Published 1:250,000 geology (Huckitta mapsheet, 1986), with colour-coded mineral occurrences (NTGS MODAT dataset). The area in blue lines is the original area of EL27942. After partial reduction, the retained area is shown in the red line..

2.2. Mineral Occurrences

The mineral occurrences shown in *Figure 2* are all part of the Jervois Mineral Field, but the principal “Jervois” copper deposits mined in the past are about 35 km to the east. Freeman, 1986[1], quoted an inferred resource of 3.66 Mt @ 2.8% Cu and 60 ppm Ag, including 0.9 Mt @ 9.0% Pb and 3.0% Zn for the central Jervois Cu-Pb-Zn-Ag deposits, but more recent estimates are of the order of 6.1 Mt @ 2.1% Cu[2].

The deposits are hosted in the Bonya Schist unit, in the noses of isoclinal folds. The deposits are associated with magnetite-bearing schists that grade into magnetite-quartzites (banded iron formation (“BIF”), or similar). For the copper deposits, some workers suggest a structurally-controlled (but stratiform) copper origin. The Pb-Zn mineralisation is hosted in calc-silicates and some workers have also suggested a skarn origin. More recent publications suggest Jervois has some IOCG affinities, due to the high magnetite content. The Jervois mining field is located on a gravity and magnetic (high) anomaly.

To the south of EL 27942 is the Molyhil scheelite-molybdenite-magnetite-chalcopyrite deposit (*Figure 3*), which was discovered in 1971. The Molyhil deposits are hosted in calc-silicates and are classified as skarns, occurring in the roof of a leucogranite (probably part of the Jinka Suite[3]). Freeman, 1986[1], quoted reserves of 1.8 Mt @ 0.6% WO_3, 0.3% MoS_2 at Molyhil, but more recent estimates are of the order of 3.7 Mt @ 0.51% combined W & Mo[2].

Within EL 27942, several small mineral occurrences are located along the edge of the Jinka Granite, along the Oomoolmilla and Charlotte Faults (e.g. *Point Spring Copper*). These mineral occurrences are reported as being small in size, and are mainly composed of shallow secondary copper with some iron occurrences and rare barite. Many of these are unnamed occurrences with limited information. The only named occurrence is the *Point Spring Copper* occurrence, described briefly in the NTGS Modat database as an irregular small copper occurrence within the Jinka Block, classified as “low-temperature stratabound” mineralisation. The *Point Spring Iron* occurrence occurs to the west of the copper occurrence, and lies within oolitic ironstones of the Georgina Basin.

In the tenement area and further south, the Jinka Granite is cut by numerous small brecciated and recemented hydrothermal quartz-fluorite-barite±galena veins with low levels of metals (e.g. Au-Mo-Cu-Pb-As). These are referred to as the Oorabra Reefs[3].

The Geoscience Australia 'Arunta Inlier Synthesis' (*Budd, 2001*[3]) notes that the Jinka Granite suite *"shows many of the criteria considered important in the formation of granite-associated ore deposits*"; "*the granite . . . is a high-fluorine granite, which is considered to decrease a granite's mineralising potential for gold and base metals, but is important in concentrating such elements as Mo and W. Many fluorite and scheelite occurrences are found associated with this granite and with pegmatites and veins which cut it, and the granite with its associated country rock are considered to have high potential for further such deposits"; "The Molyhil mine is probably associated with this granite, as are scheelite deposits of the Bonya Ore District."*

The faulted or sheared margins of the Jinka Granite in EL 27942 are largely obscured by younger Quaternary sediments (alluvium, colluvium). It is in or near this area of deformation, however, that the few known mineral occurrences (such as *Point Spring Copper)* in the licence occur. There may be significant potential for buried mineralisation along this zone of structural complexity, which juxtaposes a variety of rock types of different ages. In the east of the licence, in particular, several intersecting major faults produce a complex structural mix of early-mid- Proterozoic Jinka Granite, Bonya Schist and amphibolite, late Proterozoic Adelaidean rocks and Cambrian Georgina Basin rocks.

There may also be uranium potential in the area. A preliminary review of available radiometric data indicates some localised uranium/thorium ratio anomalies in and near the licence, possibly associated with stratigraphic contacts in the Georgina Basin sedimentary rocks.

3. Geochemical Report

This Report provides a review and discussion of geochemical assay results obtained from the Jervois-*Dulcie Range* project, exploration licence 27942, held by AMI Resources Pty Ltd, in the 2017-18 reporting year.

3.1. Sampling Conducted.

During 2017-18, we conducted more geo-engineering and samplings using pitting and trenching methods in the three areas of copper occurrences—unnamed site 933, unnamed site 932 and Point of Springs copper sites. Our field prospecting and sampling were conducted in May 2018, focusing on three copper prospective areas:

Point Springs
unnamed site 932
unnamed site 933

Our geologist team has conducted trenching and pitting engineering work during the fieldwork and sampling, and also completed profile survey. Rock-chips samples were collected from the targeted area, especially on the three copper-prospective areas. The team has collected 18 rock samples in and between the areas of Point Springs, unnamed site 932 and unnamed site 933.

Sample descriptions and assay results are provided in Appendices 1 and 2. Sample locations are shown in Figure 3.

3.2. Location and descriptions of Samples

The description of the sample sites and location and the coordinates of samples are provided in Appendix 1. The samples in each location are listed in following tables.

Unnamed copper occurrence 933.

Location	Samples	Number of samples
To the north and west:- the main copper mineralisation (though 200-500m from the mapped site)	DC1, DC2, DC3, DC4, DC5	5

Unnamed copper occurrence 932.

Location	Samples	Number of samples
To the north:- close to the *MODAT* site about 120m southeast about 260 m further southeast	DC6, DC7, DC8, DC9. DC10	5

This site is about 5 km east of the *Point Spring* copper occurrence. The three samples were collected within 100-250 m on the southeast of the site in the MODAT database, but two rock-chip samples were collected from the east side of the copper occurrence 932 site.

Point Spring copper occurrence.

Location	Samples	Number of samples
About 20-50 m west of the channel-sampled main mineralization. And two sets of "channel sampling", south-north over 100 m, across mineralised zone	DC11, DC12, DC13, DC14, DC15, DC16, DC17 and DC18	8

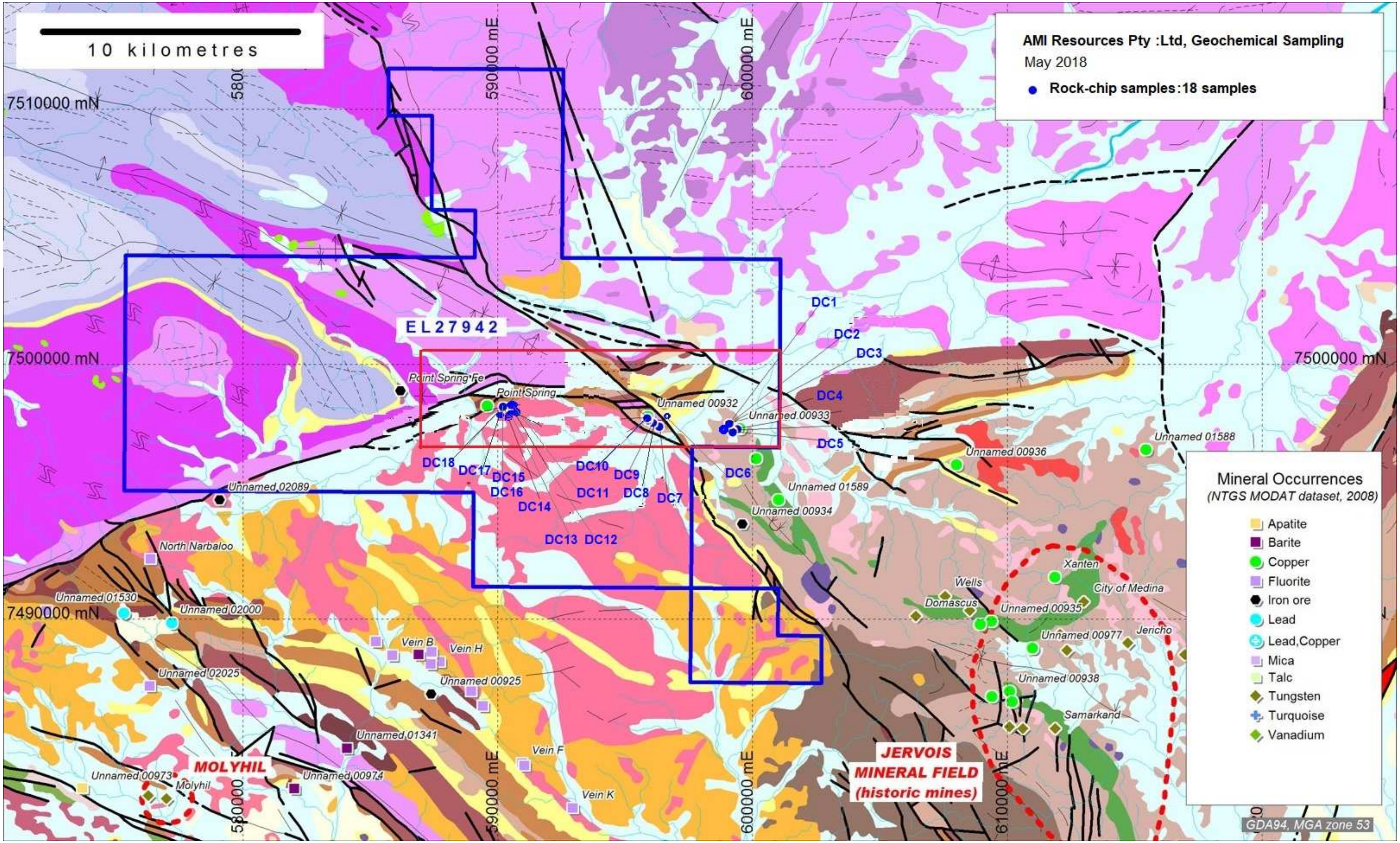

Figure 3: Dulcie Range Project, EL 27942: Sampling Locations in May 2018.

(background is the 1:250,000 geology (Huckitta mapsheet) digital dataset – refer to the published mapsheet or digital dataset for the legend)

Fig 4: Typical surface mineralisation in Point of Springs (Ore Body 1-TC1 prospect) with an average up to 2.41% Cu from extensive malachite mineralisation.

Fig 5. Disseminated-shape Copper Mineralization in Ore Body 3 (Copper Occurrence 933). This is *Typical surface mineralisation with a range of grades from 1.55 to 3.30% Cu from extensive malachite mineralisation.*

Fig 6: Typical surface mineralisation from TC3 prospect with a range of grades from 0.98 to 3.02% Cu from extensive malachite mineralisation.

3.3. Results Discussion.

The detailed geochemical analysis results are presented in Appendix 1 and Appendix 2.

As found from the previous geochemical analysis, the principal prospectivity of the project appears to be the three known copper occurrences and surrounding areas. *Point Spring* and the unnamed occurrence *932* are about 6 km apart and in or proximal to the Oomoolmilla and Charlotte Fault systems, and it is likely that the fault deformation has had some influence on the copper mineralization. The fault zones in between these two, and adjacent areas, and along trend to the west of *Point Spring* and south of occurrence *932* are prospective.

As shown in the Appendix 2, the eight rock samples collected from Point of Springs return an average grade of 2.01% at a range of 0.15% to 7.76%. The five rock-chip samples collected from *Unnamed 922 copper site* also present relatively high level of mineralization, with Cu grade at 1.036% on average.

The unnamed copper occurrence *933*, further east, is different in being hosted by the Bonya Schist basement, and is more similar to the Jervois Mineral Field copper deposits to the east and southeast. Prospectivity around this occurrence is more likely to be to the south-southeast, towards the Green Hoard occurrence, just outside AMI's licence, and to the east, where the *Kings Legend Amphibolite Member* probably lies under cover, and to the north, where any continuity of this mineralisation, and the *Amphibolite Member*, may extend under alluvial cover about 1 to 1.5 km further before terminating the eastern extent of faulting from the Oomoolmilla Fault system. The geochemical assays results show that the average Cu grade from our rock-chip samples collected in this fieldwork is 2.28% for this prospective area.

Based on our geologist team's fieldwork and mapping and trenching projects, it has been found that the three copper occurrence sites ---Point of Springs, unnamed site 932 and unnamed site 933 are possibly connected in structure and are likely form a large copper mineralized vein extending for 11 km in its length, with an average width of 80 meters. The geochemical analysis of rock-chips from trenching works, provided a firm indication of copper mineralization, at grade of 1.81% on average. These results are very close to previous geochemical assays results obtained from 2016-17, which show the average Cu grade of 1.86%.

4. Work proposal in the next year

The work done has indicated potential for quite thick copper mineralisation in granite at the *Point Spring* and occurrence *932* sites, and scattered copper (and tungsten) mineralisation has been found at the occurrence *933* site. All three areas warrant follow-up work.

At all the areas, the principal work required, in the near-term, is

- detailed geological mapping, to identify the nature and extent of the mineralised rocks, and any structural or stratigraphic controls, and whether mineralisation terminates or may extend further under cover
- more, and more systematic, and repeat, sampling, to confirm mineralisation (e.g. in the significant channel sample intervals at *Point Spring*), and to try to identify the limits of mineralisation (e.g. where the actual margins of the copper mineralisation are at Point Spring and occurrence *932*), and to better define the extents and continuity of mineralisation (e.g. what east-west extent the *Point Spring* mineralisation might have, and what dimensions and strike extent the mineralisation at occurrence *933* may have).

Targeted geophysical work need to be conducted. In the near-term, ground conductivity surveying could be considered, which might aid in defining extents of deeper sulphide mineralisation.

Additional prospectivity, of possible interest, may lie within about 1 to 1.5 km to the north of the unnamed occurrence *933*, in the east. In this area, any continuity of this mineralisation, and the *Kings Legend Amphibolite Member* (which carries disseminated pyrite and chalcopyrite, and may be related to the nearby copper mineralisation) is probably terminated to the north by the eastern extent of faulting from the Oomoolmilla Fault system, all under alluvial cover.

The Bonya-Schist-hosted mineralisation predates the Fault system, but the other two copper occurrences (*Point Springs* and *932*) suggest that the faulting has played some role in remobilising and redepositing copper. This faulted area north of occurrence *933*, therefore, may be significantly prospective. It may be one of the few or only areas where "Jervois-type" mineralisation is cut by such a major fault system, and it may have potential for significant remobilisation and deposition of mineralisation. It is entirely under alluvial cover, however, and there appears to be no indication of prior geochemical sampling or other exploration. Systematic soil sampling here may indicate geochemical anomalism, or (if considered warranted) detailed geophysical surveying may help to delineate the subsurface stratigraphy and structure.

Subsequent follow-up work that are in planning include:

- **Detailed low-level air-borne (or ground) geophysical** surveying, to better define geological structures which might host or control mineralisation, so measure the size of area with mineralisation anomalism
- **Targeted costeaning**
- **Drill testing in the targeted areas**.

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Society of Economic Geologists (SEG)

APPENDIX 1: **Jervois- Dulcie Range Project EL 27942: Samples Descriptions (2018)**

(*All coordinates are in GDA94, MGA zone 53).* (Collected in May 2018)

	Coordinates		lithology	Location
Samples	**North**	**East**		
DC1	599104	7497677	Copper site 933	Quartz schist containing Malachite sericite
DC2	599161	7497444	Copper site 933	Quartz schist containing Malachite sericite
DC3	599212	7497456	Copper site 933	Quartz vein, quartz schist containing magnetite
DC4	599226	7497354	Copper site 933	Volcano rock pores containing calcite
DC5	599237	7497594	Copper site 933	Quartz vein with the black mineral
DC6	596353	7497582	Copper site 932	The pyrite bearing porphyritic granite
DC7	596110	7497692	Copper site 932	Porphyritic granite
DC8	595925	7497834	Copper site 932	Granite with Malachite K-feldspar
DC9	595872	7497921	Copper site 932	Volcano breccia containing limonite
DC10	595857	7497916	Copper site 932	Volcano breccia containing limonite
DC11	590112	7497682	Point Spring copper site	Granite with Malachite K-feldspar
DC12	590120	7497686	Point Spring copper site	Granite with Malachite K-feldspar
DC13	590129	7497687	Point Spring copper site	Granite with Malachite K-feldspar
DC14	590137	7497686	Point Spring copper site	Granite with Malachite K-feldspar
DC15	590153	7498325	Point Spring copper site	Malachite mineralised altered rock
DC16	590218	7498332	Point Spring copper site	Granite with Malachite K-feldspar
DC17	590231	7498351	Point Spring copper site	Granite with Malachite K-feldspar
DC18	590243	7497357	Point Spring copper site	Granite with Malachite K-feldspar

APPENDIX 2: Dulcie Range Project, EL 27942: Geochemical Analysis Results for Rock-chip Samples collected in May 2018

SAMPLE	Sample	Au-AA26	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
SAMPLE	Pass75um	Au	Ag	Al	Ba	Be	Bi	**Cu**	**Cu**
DESCRIPTION	%	ppm	ppm	%	ppm	ppm	ppm	**ppm**	**%**
DC1		0.23	10.8	6.43	340	7.7	514	>10000	3.04
DC2		0.02	1.7	5.41	210	5.9	152	9260	0.926
DC3		<0.01	<0.5	7.32	2010	2.2	3	>10000	2.03
DC4		<0.01	7	4.38	3360	2.9	2	6810	0.681
DC5		0.18	16.6	3.1	330	9.7	1010	>10000	4.72
DC6		<0.01	<0.5	1.21	420	1.2	3	45	
DC7		<0.01	<0.5	0.78	2840	0.7	9	>10000	2.25
DC8	95.2	<0.01	1.2	3.29	3270	0.6	9	>10000	1.99
DC9		<0.01	<0.5	0.41	1210	8.4	2	7686	0.769
DC10		<0.01	<0.5	0.27	980	13.9	2	1724	0.172
DC11		<0.01	10.2	5.35	3640	1.7	2	>10000	2.28
DC12		<0.01	4.1	5.89	1480	1.6	9	8010	0.801
DC13		<0.01	16.2	4.61	1560	1.9	73	>10000	7.66
DC14		<0.01	1.6	5.66	1450	1.7	<2	1800	0.18
DC15		<0.01	15.2	6.24	1320	2	2	>10000	1.032
DC16		<0.01	8.8	6.47	2410	2	6	>10000	2.01
DC17		<0.01	9.6	5.48	580	1.4	17	>10000	1.95
DC18		<0.01	1.3	5.62	1240	1.6	<2	1536	0.154

		ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Fe	Mn	Mo	P	Pb	Sr	W	Zn
		%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DC1		3.72	2010	35	710	23	38	780	125
DC2		8.91	3420	55	480	16	77	2060	106
DC3		15.1	678	106	160	10	68	6280	16
DC4		0.98	102	1	80	9	59	<10	7
DC5		8.75	3050	81	560	26	43	1650	139
DC6		4.53	187	<1	190	6	13	20	7
DC7		3.69	162	3	70	29	34	10	5
DC8	95.2	1.2	134	4	380	22	842	<10	3
DC9		26.8	1530	4	7120	459	39	<10	620
DC10		28.52	2070	5	6130	1080	65	10	562
DC11		1.68	105	4	292	89	72	<10	13
DC12		0.6	122	2	140	26	48	<10	6
DC13		1.31	133	16	8340	31	292	10	9
DC14		0.52	106	2	160	14	41	<10	2
DC15		0.82	78	3	140	44	43	20	8
DC16		1.61	124	5	280	29	63	<10	5
DC17		0.96	111	4	960	28	81	<10	4
DC18		0.96	74	1	150	13	45	<10	3

References:

[1] Freeman,1986, Huckitta 1:250,000 Geology Explanatory Notes. Northern Territory Geological Survey.

[2] NTGS, 2008. Northern Territory Government 'Ore-Struck' promotional documents and website.

[3] Budd, A. (compiler), 2001. Arunta Inlier Synthesis. Geoscience Australia.

4. Hebei Bureau of Geology and Mineral Development, May 2017: AMI Geological Survey Report, 2017.