SECOND ANNUAL REPORT

Ringwood EL 32244

Titleholder : Gempart (NT) Pty Ltd

EXPLORATION LICENCE EL32244

FOR THE PERIOD 20/03/2021 to 19/03/2022

by

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&

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Datum/Zone	GDA 94 – Zone 53
1:250000	Illogwa Creek SF53-15, Rodinga SG 53-2 and Hale River SG 53-3
1:100000	Limbla 5950, Pellinore 5849 and Todd 5949

Target	Gold, Base Metals, REE
Keywords	Airborne EM, Ground EM, Amadeus Basin, Ringwood Cu prospect, Waldo Pedlar prospect.

Copies to:

1. Gempart (NT) Pty Ltd
2. Northern Territory Geological Survey
3. Capricorn Mapping & Mining Title Services
4. A.W.Mackie

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ABSTRACT

EL32244 was granted in March 2020. Principal commodities sought are base metals, primarily copper. About one half of the area has outcrop/subcrop of Amadeus Basin sediments. Most of the Basin stratigraphies are represented within the tenement area, from basal Heavitree Quartzite to Devonian Pertnjara Group. Aeromagnetics suggests the remainder of the area has similar stratigraphies under cover. There are no mines or deposits within the EL area; copper has been recorded at Ringwood and Waldo Pedlar prospects. Previous explorers, notably Poseidon Exploration Ltd in the 1990's, targeted base metals in the late Neoproterozoic Bitter Springs Group, Areyonga Formation and Aralka Formation.

Elevated and anomalous Cu-Pb-Zn was identified from historical surface sampling and RAB/auger drilling, but only ten RC or diamond holes have been completed in 50 years of exploration.

Work in year one comprised comprehensive review and re-compilation of relevant data from government geotechnical databases and previous exploration results, and planning of airborne EM surveys.

In year two VTEM MAX data were acquired on 300 metre flight lines over two areas. The larger area, called "Ringwood", is 267 square kilometres for a total of 980 line kilometres, and the smaller survey area, called "No. 5 bore", is 13 square kilometres for a total of 51 line kilometres. Flying was completed in April 2021, and final data delivered in July 2021. Interpretation revealed two priority 1 anomalies, three priority 2 anomalies, and four priority 3 anomalies. Substantial areas of elevated and anomalous geochemistry from surface sampling by previous explorers are surprisingly devoid of any significant responses.

Field inspection of the more interesting anomalies reveal they all occur in areas of no outcrop.

Of the two priority 1 EM anomalies, one (RW01) is a curious annular-shaped feature two km in diameter located in the centre of an anticline. RAB holes drilled by Poseidon in 1993 which transect the feature intersected Amadeus Basin sediments and granitic rock. Bottom-of-hole assays are uniformly low. The EM anomaly is possibly weathering related to a granite intrusive.

Ground EM surveys were completed on the other priority 1 anomaly (RW03) and all three priority two anomalies. Preliminary interpretation shows that one, NFB01, is a possible formational conductor but requires further investigation. Of the others one is a shallow-dipping formational conductor response (RW03), one is interpreted to be part of the basic volcanics in the Bitter Springs Group (RW02de), and one is a false anomaly due to altitude variation (RW07).

In year 3 it is proposed to complete formal interpretation of the ground EM data and to further investigate the annular VTEM anomaly RW-01 with a view to drill testing the source.

1. INTRODUCTION

1.1 Location, Access and Physiography

EL32244 is located 130 km east-southeast of Alice Springs on Ringwood station; refer Figures 1 and 2. Access from Alice Springs is via the Ross Hwy for 33 km and then 158 km along the Ringwood-Numery Road. Access is then on unformed roads and station tracks which mostly service bores.

Elevation in the EL varies from 280 metres in sand dune country in the south-east of the tenement area to 580 metres over mesa-like outcrop of Heavitree Quartzite in the north-east corner. Physiographic relief comprises of occasional low, rounded hills, being sediments of the Amadeus Basin, rising typically 100 metres above the surrounding plain, and separated by broad flats. The dominant topographic feature is the Collins Range, a NE-SW striking ridge extending for twenty kilometres. The major watercourses are Col Creek and the Todd River, which transect the northern and southern parts of the EL respectively. Numerous tributaries drain towards the east and south. The extreme southern part of the EL is on the northern edge of the Simpson desert, and in places comprises sand dunes up to 5 metres high.

The climate is semi-arid and is characterized by large diurnal and annual fluctuations in temperature. Rainfall is typically 125-200 millimetres per year; most of the rain falls during sporadic storms.

2. TENURE

2.1 Mineral Title

EL32244 was granted for a period of six years on 20th March 2020 to Gempart (NT) Pty Ltd.

Table 1: Exploration tenure

Tenement	Name	Event	Area (Sq km)	Blocks	Date
EL32244	Ringwood	Application	639.7	204	19-Aug-19
EL32244	Ringwood	Grant	639.7	204	20-Mar-20

2.2 Land Title

The Ringwood tenement area is located entirely within Ringwood PPL.

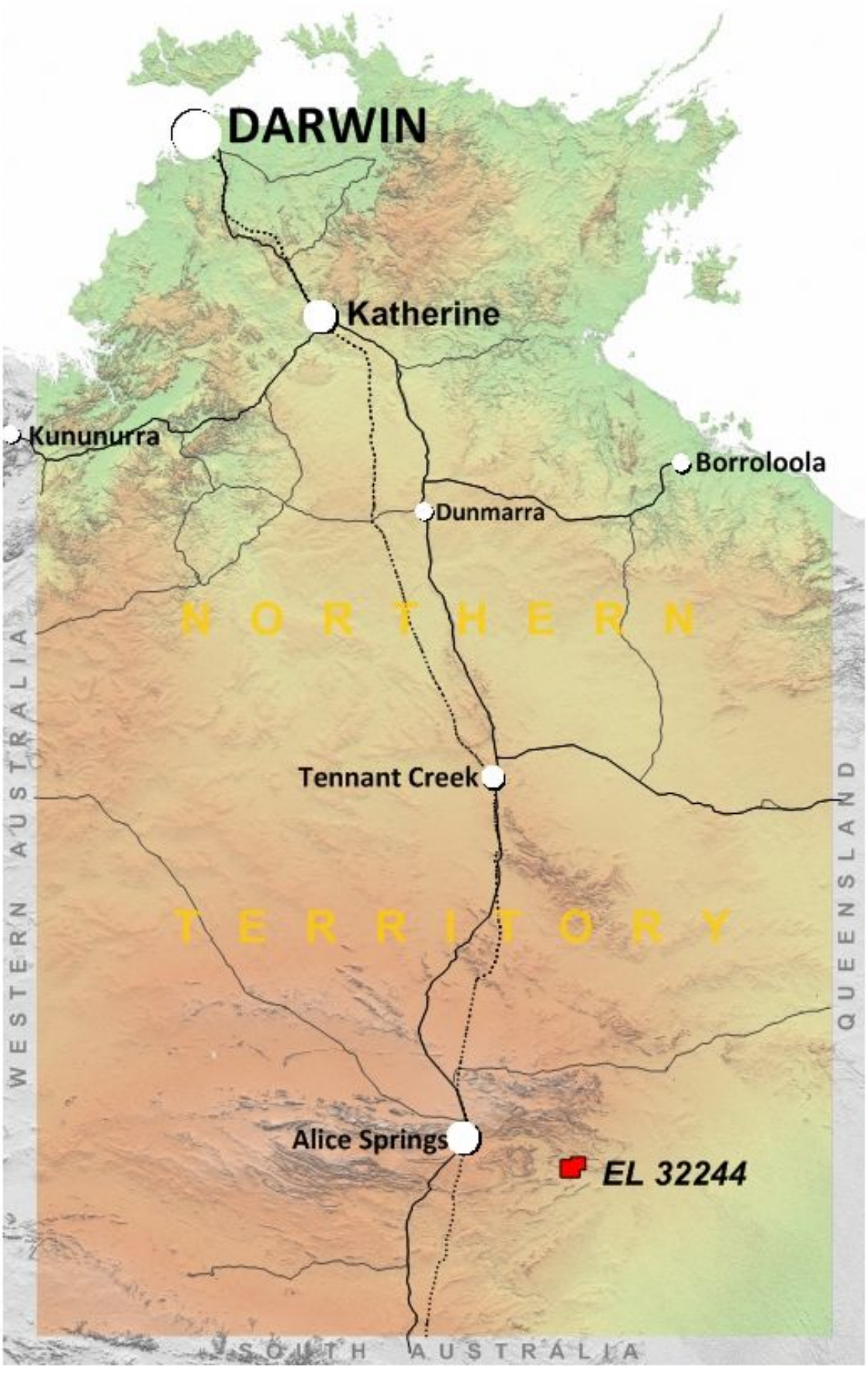

Figure 1. EL32244 Ringwood location map on NT base.

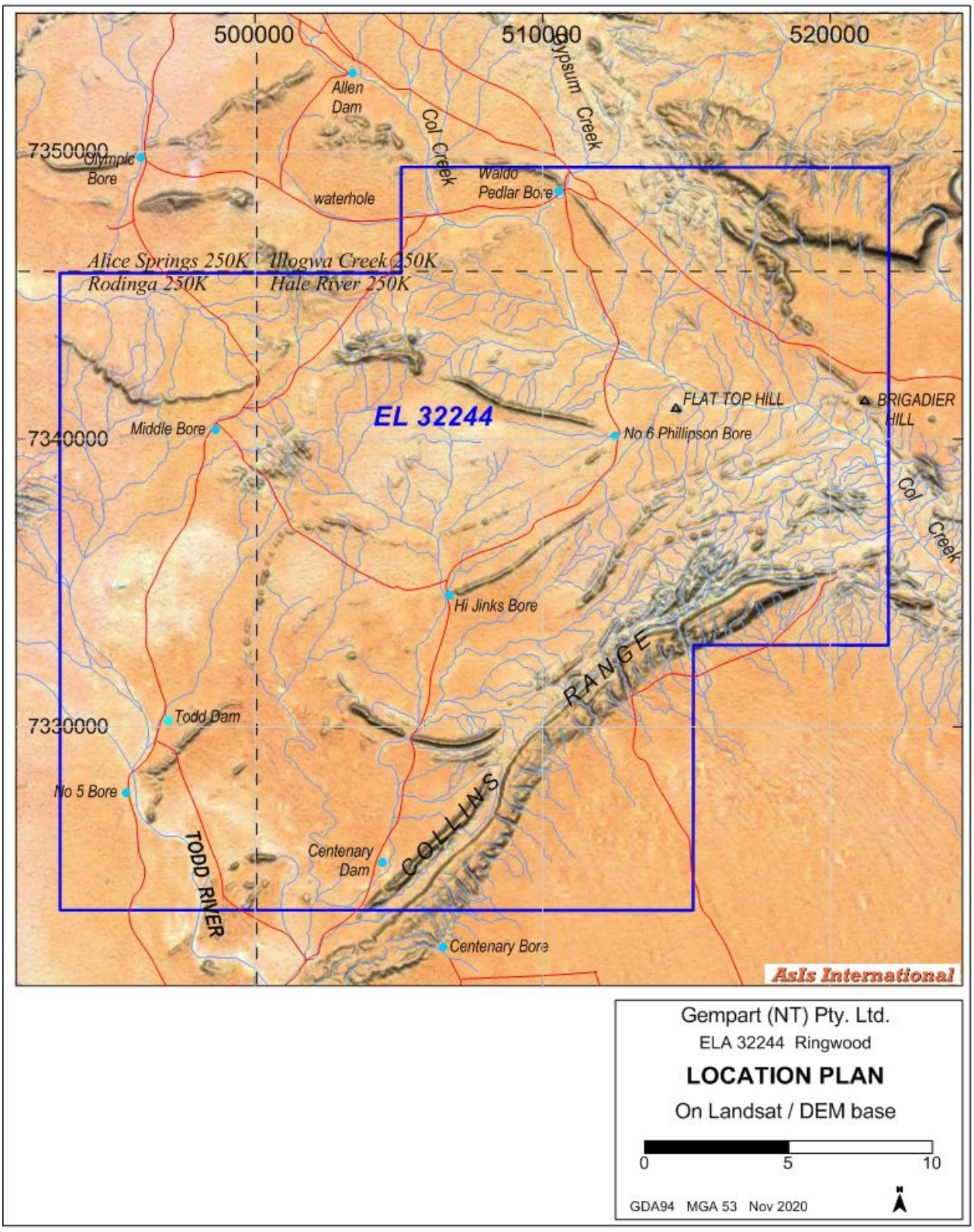

Figure 2: EL 32244 Location plan.

3. GEOLOGY

3.1 Regional geology

The project area is located on the interpreted southern edge of the North Australian Craton with substantial outcrop of Amadeus Basin sediments and minor outcrop of Palaeo-Mesoproterozoic Arunta Block granites. The Amadeus Basin is an intracratonic structural sedimentary basin. Sedimentation commenced in the late Proterozoic and continued until the late Palaeozoic. The maximum preserved thickness of sediments is estimated to be approximately 9 kilometres. The sedimentary sequence comprises sandstone, shale and carbonate deposited in a predominately shallow-marine environment. Subordinate depositional environments include fluvial, glacial, barred basin, supratidal, shallow restricted carbonate shelves and open shallow to deep marine.

The EL is located at the western end of the Casey Inlier, a basement inlier within the north-eastern part of the Amadeus Basin. The inlier is bounded to the south-west by the Woolangi Lineament, a structural zone trending ~303°. This direction parallels the G3 rift structure of O'Driscoll (parallel to 4A-4B corridor through Olympic Dam).

An early tectonic event during the mid-Proterozoic metamorphosed and dislocated the rocks into many fault-bounded blocks. The Late Proterozoic Arltunga Orogeny produced overturned strata and isoclinal folding. A later tectonic event, the Devonian-Carboniferous (~400-350 Ma) Alice Springs Orogeny, reactivated faults and generated thrust nappes. The event was accompanied by greenschist facies metamorphism.

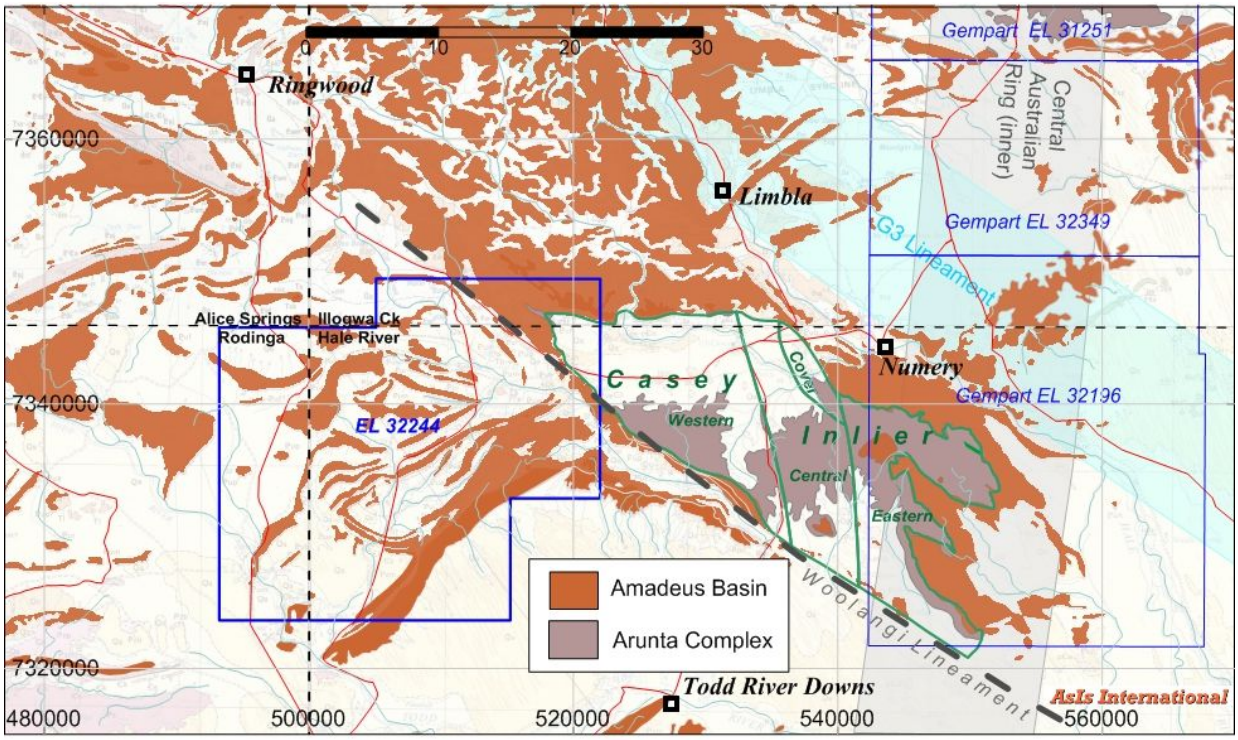

Figure 3. EL32244 - Project area regional geology

3.2 Project Area Geology

This description of the geology within EL32244 is derived from public domain Government and academic literature, and open file reports. A stratigraphic column relevant to the EL area is included at Figure 4, and maps of published and simplified pre-Cenozoic geology included at Figures 5 and 6.

The western extremity of the Western domain of the Casey Inlier is interpreted to lie under cover in the north-east of the EL area. Outcrop occurs to the east of the tenement boundary. The Western domain comprises mostly granites dated at ca. 1640Ma, metamorphosed to amphibolite facies, and correlates with the Warumpi Province.

The basal member of the Amadeus Basin is the Heavitree Quartzite a continental to shallow marine, red, quartz arenite to pebble conglomerate with minor siltstone. It rims the Casey Bore Uplift in the north-east of the EL area.

Disconformably overlying the Heavitree Quartzite is the Bitter Springs Group which is divided into three formations namely Gillen, Loves Creek, and Johnnys Creek. The Gillen Formation consists of evaporites and inter-bedded shale, sandstone and carbonates. Evaporites have acted as glide planes and formed salt domes from early in the development of the Amadeus Basin. The contact between the Gillen Member and Loves Creek Member is a disconformity.

The Loves Creek Formation disconfomably overlies the Gillen Formation and comprises predominantly dolostone, chert and limestone. The basal unit was deposited in a transgressive systems tract, with stromatolites forming as the water deepened. A gradual decline in the rate of sea-level rise and eventual sea-level still stand led to deposition of the upper unit in a prograding terrestrial and lacustrine environment.

The Johnnys Creek Formation is dominantly calcareous mudstones and dolostones deposited in shallow environments. At the top of the unit are basalts with amygdaloidal textures. These are the only observed volcanics in the Amadeus Basin sequence in the wider area. It is inferred they are likely tholeiitic and consistent with a plume-related source.

The Bitter Springs Group is in places overturned and isoclinally folded, due to the Late Proterozoic Arltunga Orogeny. This occurs within the tenement area on the north-east margin of the Arunta dome, where severely deformed Bitter Springs Formation is overlain by nearly flat lying Early Cambrian Pertaoorrta Formation sediments.

The Bitter Springs Group is terminated by an angular unconformity and overlain by the Wallara Formation. These rocks were deposited in a shallow marine environment and comprise dolostones and sandstones, and mudstones, in part carbonaceous. They do not outcrop in the EL.

The Areyonga Formation unconformably cuts into different levels of the underlying strata including Bitter Springs Group and Wallara Formation. It consists of fluvial and glaciogene rocks, overlain by shallow marine and fluvial units. Silicified fragments of Heavitree Quartzite and Bitter Springs Formation have been noted in glaciogene sediments.

Overlying the Areyonga Formation is the Aralka Formation, which consists of shallow marine carbonates and clastic sediments with minor shale. Within the Aralka Formation are the Ringwood Member which consists of dolostone and calcarenite, and Limbla Member comprising pebbly and sandy calcarenite, and festoon cross-bedded sandstone.

Between the Aralka and Pertatataka Formations are the Olympic Formation and Gaylad Sandstone. The former is a red and green mudstone and siltstone with intercalated sandstone which contains conglomerate and dolomite marker units. The Gaylad Sandstone is a coarse grained sandstone and conglomerate. Both units were deposited in fault controlled sub-basins.

Subsequently, deep water deposition took place with the base of the overlying Pertatataka Formation being turbidites and deep water pelagic sediments, coarsening up to sandstones. Within the Pertatataka Formation are two sandy units, the lower, Waldo Pedlar Member and upper, Cyclops Member. The Julie Formation overlies the Pertatataka Formation with the boundary being transitional and represents shallow marine conditions with dolomite and limestone including thick bedded ooid grainstones.

On the Hale River 1:250,00 map sheet rare scattered outcrop was annotated, in accordance with the simpler stratigraphic succession of the time, as generic Pertatataka Formation. These outcrops may represent any of the units now assigned to the Aralka Formation, Olympic Formation or Pertatataka Formation.

In the north and central Amadeus Basin deposition recommenced with the Cambrian Pertaoorrta Group. Initially, red bed sandstone, siltstone and conglomerate of the Arumbera Formation was deposited, followed by carbonates of the Todd River Dolomite, Chandler Formation, Giles Creek Dolomite, Jay Creek Limestone and Shannon Formation.

In the tenement area the Pertaoorrta Group is represented by the Arumbera Sandstone and Todd River Dolomite. A substantial thickness of the earlier Pertaoorrta Group, and all of the Cambrian-Ordovician Larapinta Group sediments were either not deposited or have been eroded.

The youngest Amadeus Basin sediments in the area are the Mereenie Sandstone and Brewer Conglomerate. The Mereenie Sandstone of Silurian?-Devonian? age is a porous, white to pale-brown, fine grained, well sorted quartz sandstone with minor conglomerate. The Brewer

conglomerate, a massive conglomerate, is in the upper part of the Devonian Pertnjara Group, which represents the final phase of Amadeus Basin deposition.

Deposition in the Amadeus Basin ceased with the onset of the 450-300 Ma Alice Springs Orogeny, when the Arunta Block was thrust to the south over the Amadeus Basin, accompanied by greenschist facies metamorphism.

Cenozoic sediments comprise mostly alluvium including sheetwash, scree, and aeolian sands.

The central part of the EL area is dominated by a broad 'half-anticline', structurally terminated to the north-west, exposing Bitter Springs Group through to Pertaoorrta Group. North-west of this is a broad syncline exposing Olympic Formation through to Areyonga Formation. Whilst the regional trend is NW-SE, the anticlinal and synclinal axes are oriented NE-SW and east-west respectively. The NE-SW direction is seen in Amadeus Basin sediments 50 kilometres away to the north-east of the Casey Inlier, and also corresponds to the strike of the carbonatitic dykes at Arthur Popes prospect 30 kilometres to the east.

3.3 Economic Mineral Potential

Within the tenement area there are no operating or historical mines, or mineral deposits. Two copper occurrences are located in Amadeus Basin rocks namely Ringwood and Waldo Pedlar prospects. Ringwood is hosted in dolomitic siltstones of the Areyonga Formation, and Waldo Pedlar in the Aralka Formation.

In the broader context the area has potential for many commodities. Mineralisation styles targeted by previous explorers include:

- Stratabound or strataform copper mineralisation such as Zambian Copperbelt style in the Amadeus Basin sediments, especially Bitter Springs Group.
- Lead-zinc and copper-cobalt exhalative mineralisation in Amadeus Basin sediments.
- Carlin style, Witwatersrand or SEDEX gold in Amadeus Basin sediments.
- Roll-front uranium mineralisation in Amadeus Basin sediments e.g. Brewer Conglomerate.
- Diamondiferous kimberlites associated with major structures e.g. the Woolangi Lineament.

On a regional scale mineral deposits in the Arunta Block and Amadeus Basin lithologies include:

- Gold in Heavitree Quartzite at White Range.
- Gold in Bitter Springs Group sediments-volcanics at Golden Goose (Winnecke goldfields).
- Sandstone-hosted uranium in the Brewer Conglomerate at Angela and Pamela.

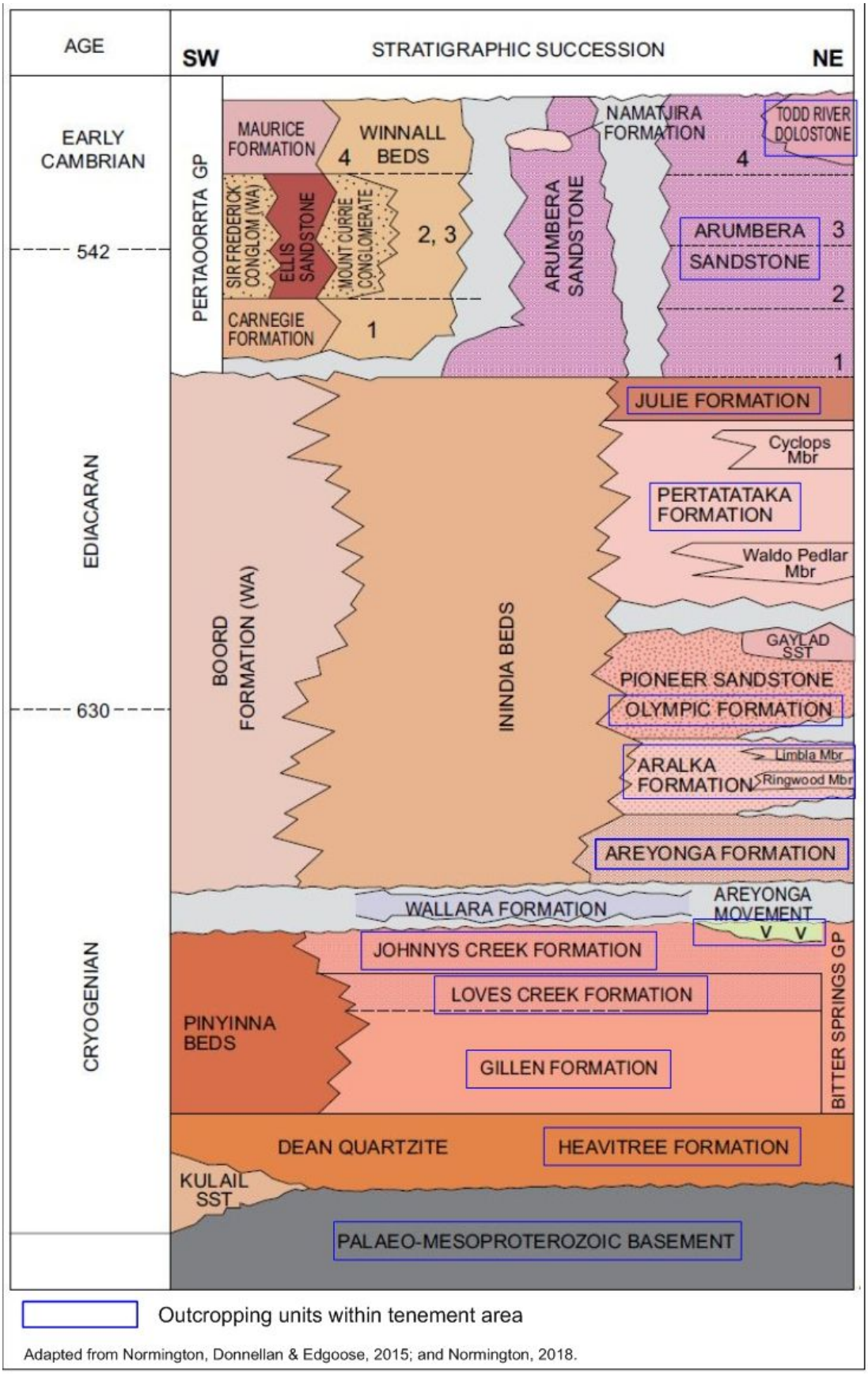

Figure 4. EL32244 Stratigraphy.

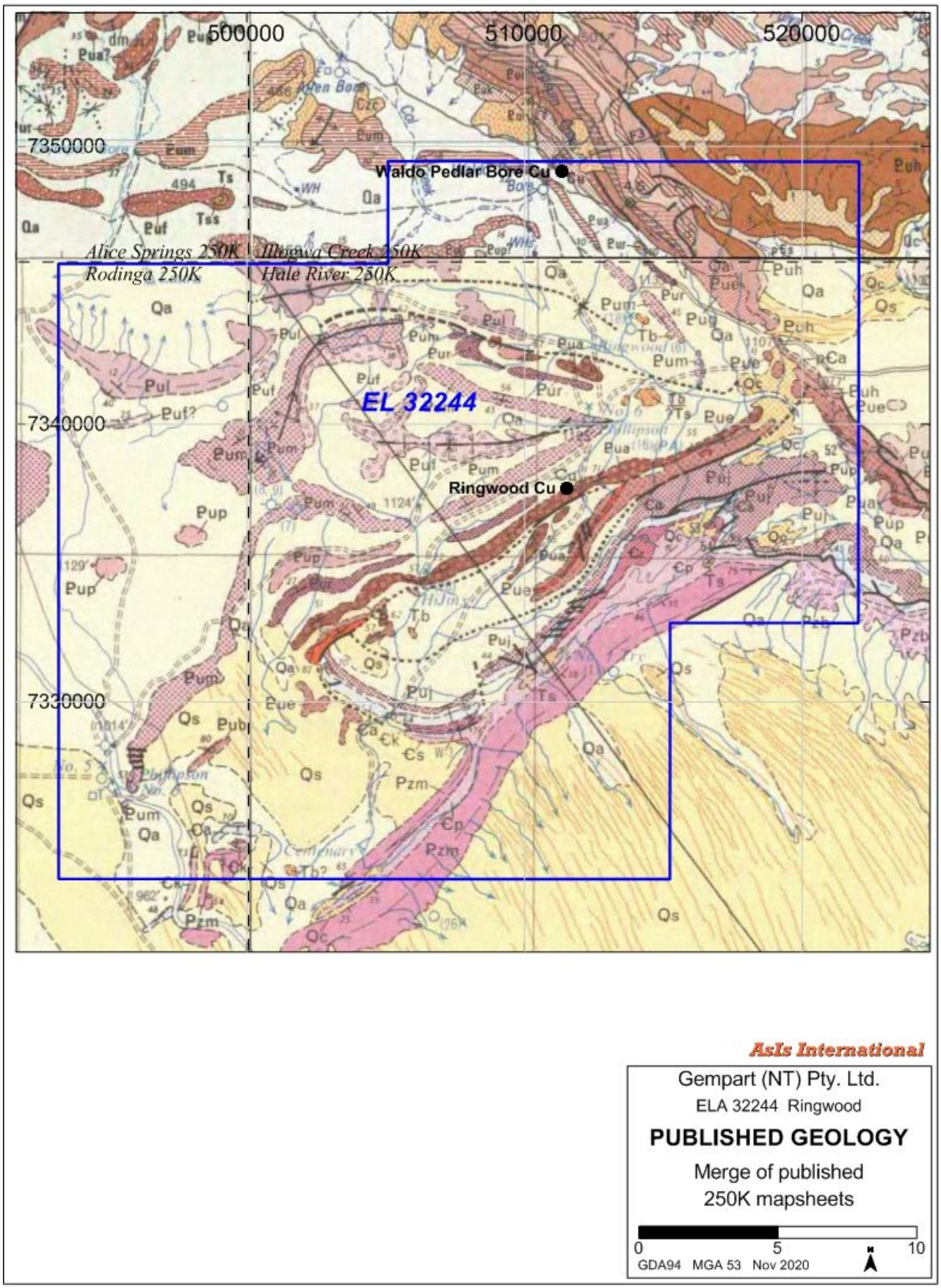

Figure 5. EL32244 1:250,000 scale published geology.

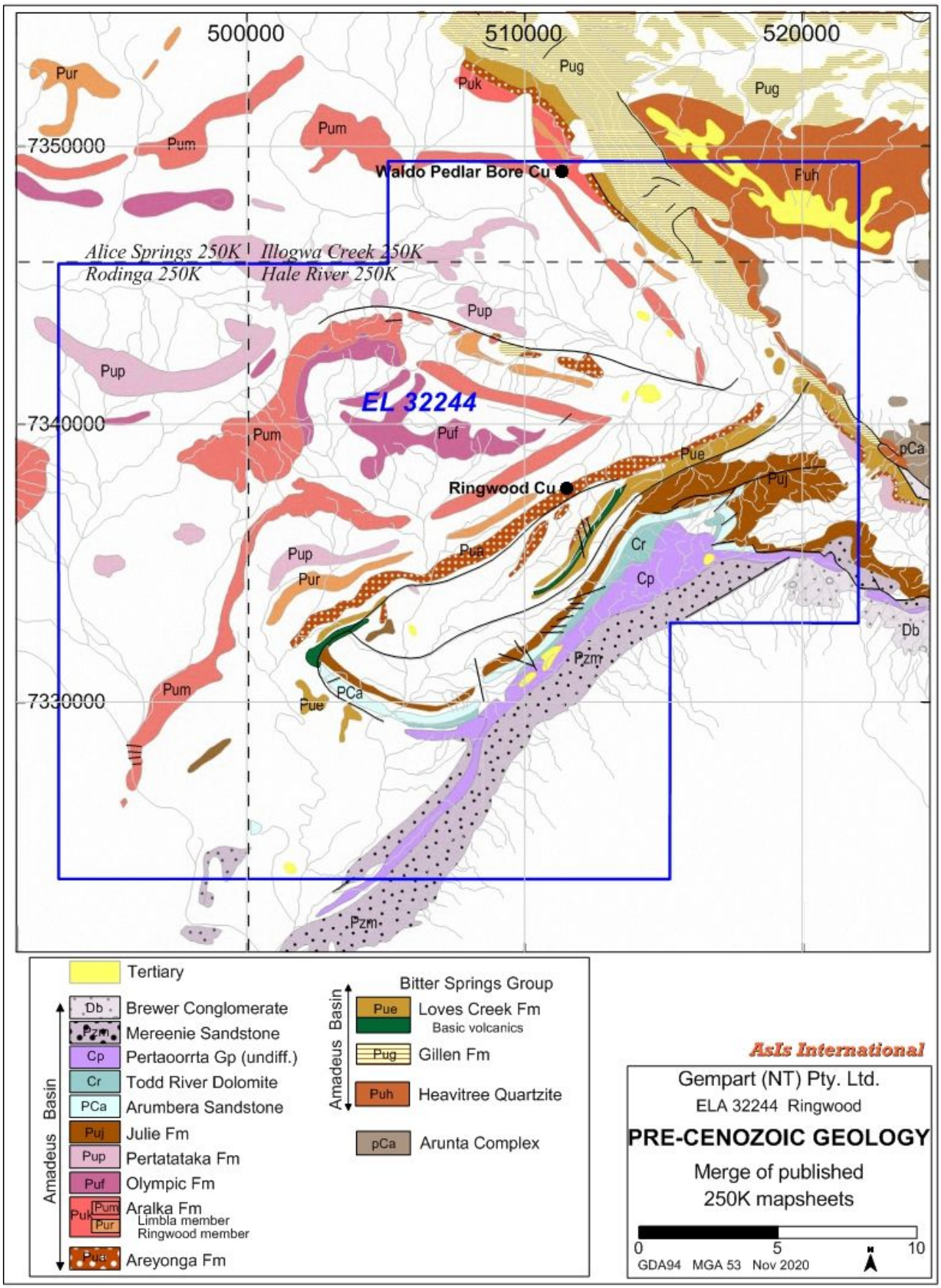

Figure 6. EL32244 1:250,000 scale Pre-Cenozoic geology.

4. PREVIOUS EXPLORATION

NTGS databases "Historical Mineral Titles" and "GEMIS" were interrogated to capture past exploration titles overlapping EL32244, and all relevant reports were reviewed. Table 2 is a summary of historical titles and results reported. Previous exploration efforts relevant to the area of EL32244 and/or involving collection of new data are summarised thereafter. Plans of historical tenement, drilling and sampling are included at Figures 7 to 9.

Table 2. Historical Mineral Titles Overlapping EL32244 & Exploration work summary

Title & Final Year	Titleholder, (Report reference) & exploration work
1966	Mines Branch, N.T.A. (GS1967-0004) [29]. 2 DDH's at Ringwood prospect. No significant results.
AP1584, AP1678, AP1716, AP1740. 1968	Australian geophysical P/L. (CR1967-0004) [11]. Area very relevant. Sampling, IP, drilling. Minor Pb mineralisation in drilling.
AP1923 1968	McIntye Mines (Aust) (CR1968-0062) [16]. Mostly NE of EL. No work carried out.
AP2459 1969	North Broken Hill Mines exploration (CR1970-0058) [27]. NE of EL. Sampling Gillen Mbr and petrography for Cu. No drilling justified.
AP2652 1970	Kratos exploration (CR1971-0043) [22]. Central to EL area. Auger sampling & diamond drilling. No economic mineralisation.
AP2698 1970	Fergusson, Underdown, Kruger (CR1971-0066) [8]. Mostly SE of EL. Assessment by geopeko for Cu but no work done.
EL1450 1979	Otter Expl (CR1979-0118) [12]. Uranium exploration - mapping, sampling, scintillometer surveys. No encouragement for drilling.
EL2070 1980	Stockdale Prospecting (CR1980-0150) [23]. Mostly to north of EL. Gravel sampling for kimberlitic indicators produced all negatives.
EL6964 1992	CRA Exploration. (CR1992-0613) [7]. Mostly west of EL. Sampling for diamond indicators & base metals without encouragement.
EL6997, EL7392 1995	**Poseidon Exploration. (CR1995-0067) [5]. Intensive drainage, soil and rock chip sampling, RAB & RC drilling for base metals.**
EL9337 2002	CRA Exploration / Rio Tinto Exploration P/L. (CR1998-0565) [6]. Multi-commodity; drainage and soil sampling; RAB drilling.
EL10267, EL10269 2003	Gutnick Resources N.L. (CR2004-0166) [25]. Stream sediment & rock chip sampling; No values near EL.
EL24249 2010	Imperial Granite & Minerals / Excelsior Gold. (CR2010-0978) [9]. Rock chip sampling; high Cu values from Waldo Pedlar & Ringwood prospects.
EL25711,EL25887, EL25888 2010	Mithril Resources Ltd. (CR2008-0544) [17]. Gravity survey on 1x1 km grid. No follow-up; no other work done.
EL29014 2014	Tropical Resources P/L (CR2014-0836) [10]. Research for Phosphate, U, Cu, Pb, Zn & iron. No new data acquired.
EL29046 2018	GRIGM Resources P/L. (CR2018-0199) [14]. Soil and rock chip sampling of Areyonga Fm for copper. Soil assays average; rock chip assays suspect.
EL29094, EL29095 2014	NT Minerals P/L (CR2014-0016) [21]. Targeting base metals, REE's, U, potash. Data review only; no field work done.
EL30309 2016	Williams Exploration Consulting. (CR2016-0174) [28]. Auger sampling.

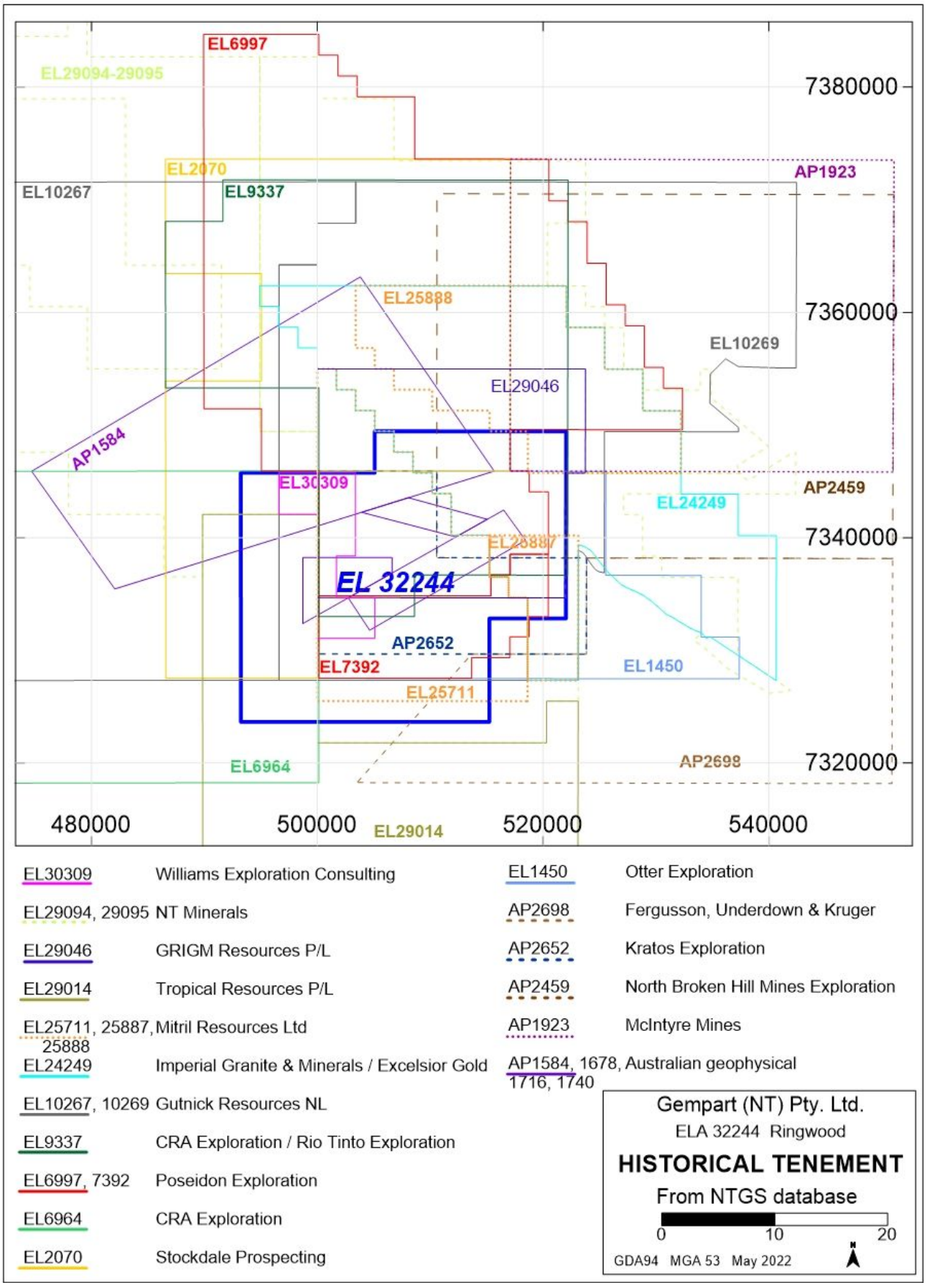

Figure 7. Historical tenement overlapping EL32244.

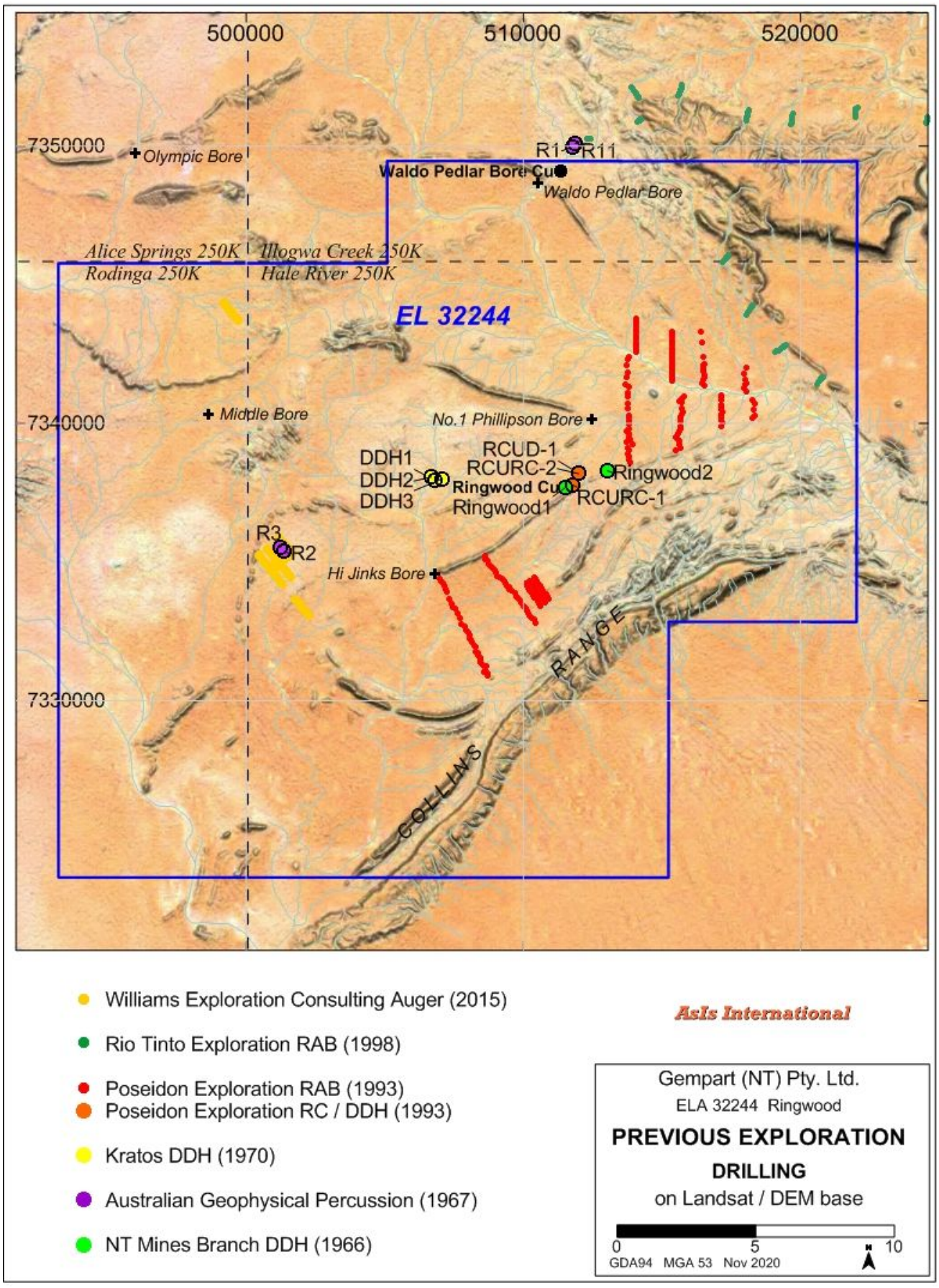

Figure 8. Previous exploration - drillholes.

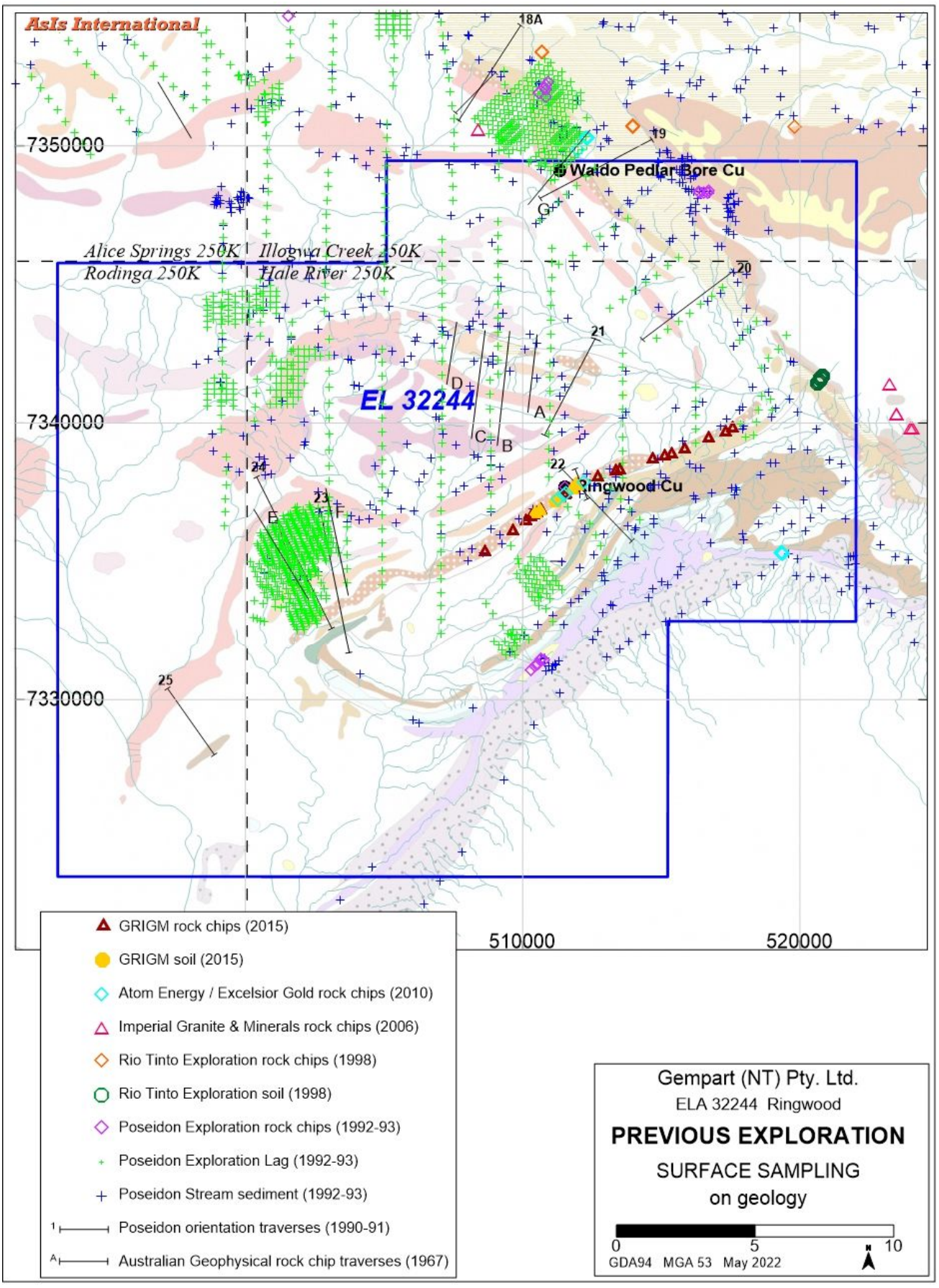

Figure 9. Previous exploration - surface sampling.

4.1 Mines Branch, Northern Territory Administration

In 1966 the Mines Branch of the N.T. Administration drilled two diamond drill holes on Ringwood Station [29]. The target to their drilling was a green laminated siltstone horizon 3-5 feet wide with traces of malachite within the Upper Proterozoic Areyonga Formation and exposed over a strike length of eleven miles. This horizon was intersected in both drill holes at depths of approximately 200 and 400 feet respectively and contained only trace amounts of chalcopyrite. Best copper assays were 3m @ 0.25% from 76.2m to 79.2m in hole 1, and 1.6m @ 960ppm Cu from 113.8m to 115.4m within laminated pyritic shales and dolomitic sandstone in hole 2. The report concluded that the drilling results show clearly that the Ringwood copper deposit is of the stratiform type.

The information in Tables 3 and 4 has been transcribed from the original report. Assays in ppm.

Table 3. Assays on sludge samples from drillhole Ringwood No.1.

From (ft)	To (ft)	From (m)	To (m)	Lithology	Cu	Pb	Zn	Co	Ni
210	220	64.0	67.1	Arkose	150	30	40	30	40
220	230	67.1	70.1	Sandstone, siltstone	120	25	30	25	40
230	240	70.1	73.2	Sandstone, siltstone	200	25	20	15	50
240	250	73.2	76.2	Sandstone, siltstone	80	20	220	100	50
250	260	76.2	79.2	Intraformational breccia	2500	20	220	50	30
260	270	79.2	82.3	calc. Siltstone	300	50	60	12	30
270	280	82.3	85.3	calc. Siltstone	150	10	20	8	15
280	290	85.3	88.4	calc. Siltstone	80	30	20	8	12
290	300	88.4	91.4	calc. Siltstone	200	40	25	15	25
300	310	91.4	94.5	calc. Siltstone	120	15	220	8	20
310	320	94.5	97.5	calc. Siltstone	80	20	25	15	20
320	330	97.5	100.6	calc. Siltstone	70	20	20	12	30
330	340	100.6	103.6	calc. Siltstone	100	15	20	10	25
340	350	103.6	106.7	calc. Siltstone	40	20	220	7	10
350	360	106.7	109.7	calc. Siltstone	60	40	25	8	20

Table 4. Assays on core samples from drillhole Ringwood No.2.

From (ft)	To (ft)	From (m)	To (m)	Lithology	Cu	Pb	Zn	Co	Ni
174	175	53.0	53.3	Thinly bedded grey-green feldspathic siltstone. Very thin bands black graphitic shale	70	25	20	150	5
175	176	53.3	53.6		50	20	20	200	4
176	177	53.6	53.9		60	50	20	120	3
177	178	53.9	54.3		80	50	20	200	4
178	179	54.3	54.6		120	50	20	80	4
244	246	74.4	75.0	Interbeds green-yellow feldspathic siltstone & arkose Very thin bands black graphitic shale	120	20	20	80	2
246	247	75.0	75.3		20	20	20	80	2
247	248	75.3	75.6		150	50	20	250	5
248	249	75.6	75.9		20	15	20	200	8
249	250	75.9	76.2		40	8	20	200	5

Table 4 (cont'd). Assays on core samples from drillhole Ringwood No.2.

From (ft)	To (ft)	From (m)	To (m)	Lithology	Cu	Pb	Zn	Co	Ni
250	251	76.2	76.5	Interbeds of green-yellow feldspathic siltstone & arkose. Very thin bands black graphitic shale	15	15	20	150	4
251	252	76.5	76.8		80	80	20	200	5
252	253	76.8	77.1		60	20	20	400	6
253	254	77.1	77.4		25	50	20	400	6
254	255	77.4	77.7		70	20	20	200	4
255	256	77.7	78.0		80	50	20	120	2
256	257	78.0	78.3		120	70	20	200	5
257	258	78.3	78.6		50	20	20	120	3
258	259	78.6	78.9		50	25	20	150	3
259	260	78.9	79.2		40	20	20	200	3
260	261	79.2	79.6		150	30	20	80	2
261	262	79.6	79.9		40	70	20	200	4
262	263	79.9	80.2		25	25	20	300	6
263	264	80.2	80.5		25	30	20	150	4
264	265	80.5	80.8		25	50	20	200	5
265	266	80.8	81.1	Coarse grained arkose	120	25	20	120	4
266	267	81.1	81.4		50	10	20	300	-
267	268	81.4	81.7		50	15	20	200	5
268	269	81.7	82.0	Black pyritic mudstone	100	70	20	80	4
269	270	82.0	82.3		50	25	20	100	3
270	271	82.3	82.6		100	30	20	150	3
271	272	82.6	82.9	Grey feldspathic, pyritic in part, siltstone & sandstone. Some thin black pyritic shales.	100	40	20	200	4
272	273	82.9	83.2		100	20	20	200	4
273	274	83.2	83.5		100	25	20	200	6
274	275	83.5	83.8		25	20	20	250	5
275	276	83.8	84.1		50	15	20	150	4
276	277	84.1	84.4		70	150	20	200	4
277	278	84.4	84.7		100	40	20	400	5
278	279	84.7	85.0		100	50	20	250	4
329	330	100.3	100.6	Dark grey pyritic graphitic shales, grey pyritic siltstone and feldspathic sandstone	30	20	20	8	8
330	331	100.6	100.9		40	15	20	15	20
331	332	100.9	101.2		40	8	20	7	8
332	333	101.2	101.5		40	10	20	6	8
333	334	101.5	101.8		20	12	20	8	10
334	335	101.8	102.1		50	20	20	8	12
335	336	102.1	102.4	Grey-green pyritic siltstone & pyritic dolomitic sandstone. Traces chalcopyrite.	100	20	20	20	15
336	337	102.4	102.7		10	7	20	7	15
337	338	102.7	103.0		20	7	20	7	15
338	339	103.0	103.3		20	7	20	10	15

Table 4 (cont'd). Assays on core samples from drillhole Ringwood No.2.

From (ft)	To (ft)	From (m)	To (m)	Lithology	Cu	Pb	Zn	Co	Ni
339	340	103.3	103.6	Interbedded grey-green pyritic silts & grey sandy dolomite with streaks & blebs & very thin beds of graphitic shale. Traces of chalcopyrite in dolomite at 348'.	25	7	20	12	15
340	341	103.6	103.9		20	10	20	12	12
341	342	103.9	104.2		40	8	20	15	15
342	343	104.2	104.5		120	12	20	15	15
343	344	104.5	104.9		100	8	20	15	15
344	345	104.9	105.2		20	10	20	20	15
345	346	105.2	105.5		20	8	20	8	20
346	347	105.5	105.8		15	8	20	10	15
347	348	105.8	106.1		12	7	20	8	10
348	349	106.1	106.4		60	12	20	20	20
349	350	106.4	106.7		60	12	20	40	15
350	351	106.7	107.0		200	10	20	30	15
351	352	107.0	107.3		40	10	20	20	15
352	353	107.3	107.6		80	12	20	30	20
353	354	107.6	107.9		12	5	20	8	15
354	355	107.9	108.2		15	15	20	20	20
355	356	108.2	108.5		15	20	20	50	25
357	358	108.8	109.1	Sandy dolomite	60	15	20	40	20
358	359	109.1	109.4	Grey & green pyritic siltstone & grey sandy dolomite - blebs graphitic shale. Trace chalco	80	10	20	20	15
359	360	109.4	109.7		80	8	20	20	12
360	361	109.7	110.0		60	7	20	25	25
361	362	110.0	110.3	Very badly broken – fault gouge	70	15	20	15	10
362	364	110.3	110.9		30	10	20	15	15
364	365.5	110.9	111.4		80	12	20	10	6
365.5	366.5	111.4	111.7	Dolomitic feldspathic pyritic sandstone with grey-green pyritic siltstone and thin graphitic shale beds.	60	8	20	20	10
366.5	367.5	111.7	112.0		80	12	20	20	12
367.5	368.5	112.0	112.3		150	12	20	10	8
368.5	369.5	112.3	112.6		100	8	20	15	20
369.5	370.5	112.6	112.9		250	15	20	5	10
370.5	371.5	112.9	113.2	Very thin laminations of green, grey & black pyritic shales and dolomitic feldspathic pyritic sandstone - traces chalcopyrite.	120	8	20	20	15
371.5	372.5	113.2	113.5		400	7	20	6	10
372.5	373.5	113.5	113.8		120	15	20	40	20
373.5	374.5	113.8	114.1		1000	20	20	6	12
374.5	375.5	114.1	114.5		600	6	20	6	15
375.5	376.5	114.5	114.8		800	8	20	8	12
376.5	377.5	114.8	115.1		1200	8	20	20	30
377.5	378.5	115.1	115.4		1200	7	20	70	40
378.5	379.5	115.4	115.7		70	7	20	120	15
379.5	380.5	115.7	116.0		20	3	20	7	6
380.5	381	116.0	116.1	Chert pebbles in green siltstone grades to chert pebble conglomerate	25	5	20	11	6
381	381.75	116.1	116.4		8	6	20	1	10
381.75	382.5	116.4	116.6		50	6	20	2	8

4.2 AP1584, AP1678, AP1716, AP1740 – 1967. Australian Geophysical P/L

In 1967 geological mapping, traverses of rock chip sampling, induced polarization surveys and a rotary percussion drilling programme were completed within the company's Authorities to Prospect No 1584, 1585, 1691, 1714 and 1716 [11]. In all 384 chip samples were collected, 48 km of IP acquired and eleven holes totalling 918 metres of percussion drilling completed on 14 traverses. Seven of these traverses, labelled A-G, are on EL32244. Stream sediment geochemistry was also attempted but unsuccessful.

Bedded base metal mineralization was discovered in various stratigraphic horizons from the top of the Bitter Springs Limestone to the Waldo Pedlar member of the Pertatataka Formation.

In the A-D area high geochemical values and possibly low order IP anomalies were associated with grey dolomite interbedded with red shales at the top of the Ringwood Member. However the grey mineralized beds were considered to be too narrow and widely apart to form an economic thickness.

In the Line E area the work disclosed a 100 foot thick zone of grey dolomitic siltstones of the Ringwood Member which carry lead and zinc mineralization. The best intersection from two holes, R2 and R3, yielded 0.38% Pb over a true thickness of 25 feet. Copper assays were low. As the whole sequence does not outcrop on the surface, gives a definite low order IP anomaly, and is open both down dip and to the west and south it still has considerable potential.

In the Line G Area near Waldo Pedlar Bore a low order IP anomaly and minor malachite mineralization lies in Bitter Springs limestone directly overlying intermediate volcanics. Drilling was attempted but due to high water pressure and other issues two holes, R1 and R11, failed to penetrate the zones of interest.

4.3 AP2459 - 1969. North Broken Hill Mines Exploration

This tenement is almost entirely outside EL32244 to the north-east [27]. During 1969 and 1970, reconnaissance exploration for base metals, particularly sedimentary-hosted copper, was conducted. In the first phase of exploration, reconnaissance sampling including collection of 432 rock chip samples on fifteen traverses failed to provide any encouragement, and the regional copper search was abandoned. Most samples were collected from the Gillen member in an area near the Hale River 10-15 kilometres east of the north-east corner of EL32244. The samples were analysed for copper only; assays rarely exceeded 100 ppm with a maximum of 170 ppm. Phase 2 was more focused on the Gillen Member and the Bitter Springs Formation and consisted of detailed sampling and petrography of gossanous material. The values obtained and the style of gossan observed could not justify a blind drilling campaign and the AP was surrendered.

4.4 AP2652 - 1970. Kratos Exploration

In 1970 Kratos Exploration conducted an auger sampling program along 13 km strike length of the Pertatataka Formation [22]. A total of 394 holes were drilled for 819 metres, and 720 surface and bottom hole samples assayed for copper, lead and zinc. The best results were tested with three vertical diamond holes totalling 378 metres. These were located along strike from holes R2 and R3 completed by Australian Geophysical P/L. No mineralisation of economic grade was intersected in any of the holes but the core contained minor anomalous values of Cu, Pb and Zn. It was concluded there is a marked facies change between the Kratos diamond holes and R2/R3, and that further drilling should be carried out to the east of R2/R3.

No assay data or drill logs are included in the report. The Kratos report states "*DDH 1 and DDH 2 were drilled approximately 1,500 ft and 1,800 ft respectively along strike to the west from percussion holes R2 and R3. DDH 3 was drilled further to the south and tested a zone lower in the stratigraphic sequence*". The location of holes R2/R3 was ascertained from maps and drill log headers in the Australian Geophysical report, and the Kratos holes are documented in the NTGS drillhole database. Plotting this information suggests the holes were drilled not to the west but 5-6 km ENE of R2/R3.

4.5 EL6964 - 1992. CRA Exploration

EL6964 is one of a group of four EL's located largely to the west of EL32244 [7]. Primary target was kimberlites. Interpretation of a new aeromagnetic survey identified six targets. Drilling of one anomaly revealed the source to be magnetic gravels. Reconnaissance gravel and loam sampling was undertaken at a density of 1 per 20 km^2. Eight gravel samples returned chromites of non-kimberlitic origin. The base metal potential was investigated by collection of 44 stream sediment and two rock chip samples. Several low order Zn-Cu-Mn-Fe anomalies are associated with catchments draining the Arumbera Sandstone, Chandler Limestone and Todd River Dolomite. Elevated Zn and Cu is believed associated with scavenging by Mn-Fe. Anomalous results from rock chip samples are also believed to be due to by Mn and Fe scavenging.

Location of the drillhole and base metal sample sites are all well outside EL32244.

4.6 EL6997 & EL7392 - 1995. Poseidon Exploration / Normandy exploration

These tenements, plus EL6998, comprised Normandy Poseidon's Amadeus Project. The Primary target was Pb/Zn and Cu/Co exhalative (sedex) mineralisation. Poseidon Exploration carried out an intensive exploration program comprising of surface sampling, geophysics and drilling. A compilation of exploration activities and prospect area locations is included at Figure 10.

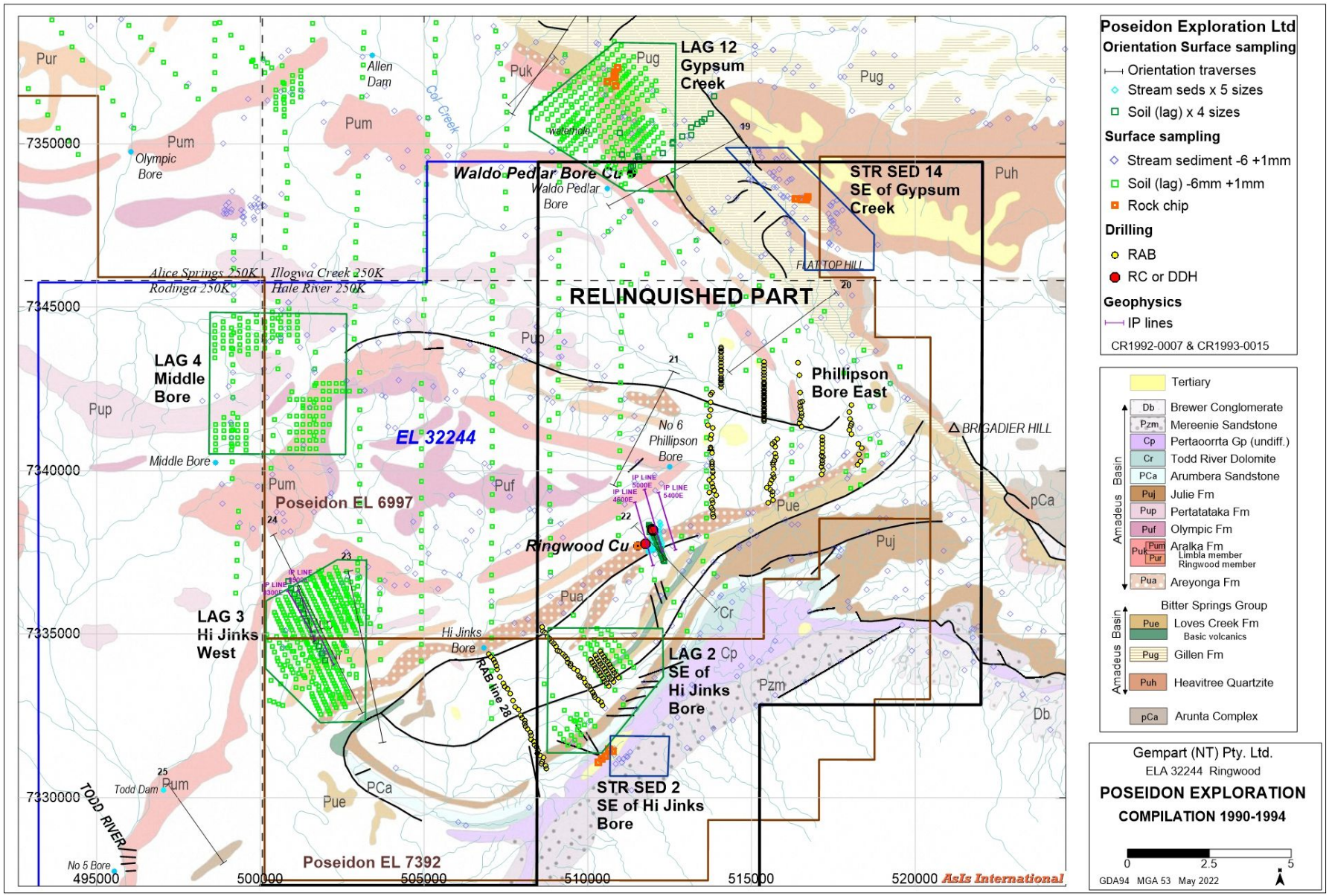

Figure 10. Poseidon Exploration summary of activities 1990-1994.

An orientation soil, stream and lag sampling programme was undertaken in 1990-91 to determine the best sampling technique for the area [2]. Stream and lag sampling have been shown to be the most effective technique except in areas of thick sand cover. Assays of various size fractions established that the optimum fraction size for soil samples is lag (-6+1mm), and for stream sediments is panned concentrate or -6+1mm.

In 1992 exploration activities consisted of regional lag and stream sediment sampling followed by infill sampling, and an aeromagnetic survey [3]. Seven general areas of interest were identified:

- Pulya Pulya Creek
- Olympic Bore
- Middle Bore - within EL32244
- Hi Jinks Bore - within EL32244
- Gypsum Creek area (Waldo Pedlar prospect)
- Kay Creek
- East of Phillipson Bore (Ringwood prospect) - within EL32244

Lag samples were collected on two kilometre spaced lines, with sampling on 500 metre spaced lines west of Hi Jinks Bore. Stream sediment samples were collected at a density of one per 1.3 square kilometres. Within EL32244, 844 soil samples and 438 stream sediment samples were collected, providing coverage over most of the tenement area. Multi-element assays were determined, but no assays for gold. Results identified numerous areas for follow-up, as shown in Table 5. Plans showing arsenic, copper, lead and zinc assays are shown at Figures 11 to 14. The best results from areas within EL32244 are summarised in Table 6.

Table 5. Areas selected for follow-up after regional sampling (from Poseidon report).

Area	Sample Type	Element	Location 1	Aka Location 2
Kay Ck	Stream, Lag	Cu, Pb, Zn	Kay Creek	Kay Creek
1	Stream	Zn	SE of Hi Jinks Bore	South of Ringwood
2	Lag	Cu	SE of Hi Jinks Bore	South of Ringwood
3	Lag	Zn, As, Pb, Cu	Hi Jinks west	Hi Jinks West
4	Lag	Cu, Pb	Middle Bore	Middle Bore
5	Stream	Cu, As	SE of Olympic Bore	Outside EL32244
6	Lag	Pb	West of Olympic Bore	Outside EL32244
7	Lag	Pb, Zn	E end of Purple Range	Outside EL32244
8	Lag	Zn, Mo	Sth of Pulya Pulya Dam	Outside EL32244
9	Lag	Zn	E of Pulya Pulya Dam	Outside EL32244
10	Stream	Mo	Mulga Dam	Outside EL32244
11	Lag	Cu	Allen Dam	Outside EL32244
12	Lag	Cu,As,Zn,Cd,Pb	Gypsum Creek	Waldo Pedlar
13	Lag	Cu	NE Allen Dam	Outside EL32244
14	Stream	Pb	SE of Gypsum Creek	East of Waldo Pedlar

Table 6. Exploration areas - geochemistry summary from plots of Poseidon data.

Location	Element	Best Assays	Anomaly	Geology
Area 2 Stream sediment	As	38, 32	Slightly elevated	Contact of Pertaoorrta Gp & Mereenie SS
	Cu		No elevated Cu	
	Pb		No elevated Pb	
	Zn	580, 540,260	Small Zn cluster	
Area 2 Lag	As		No elevated As	Loves Ck Fm & Julie Fm
	Cu	140, 120, 110	Small Cu cluster	
	Pb		No elevated Pb	
	Zn	340, 320, 320	Two Zn clusters	
Area 3 Lag	As	360, 230, 175	Coherent As cluster	Aralka & Areyonga Fm's
	Cu	100, 80, 80	Slightly elevated	
	Pb	140, 64	Slightly elevated	
	Zn	590, 390, 390	Large coherent Zn cluster	
Area 4[1] Lag	As		No elevated As	Pertatataka Fm
	Cu		No elevated Cu	
	Pb		No elevated Pb	
	Zn	840, 500, 290	2 Coherent Zn clusters	
Area 12 Lag	As		No elevated As	Loves Ck Fm, Areyonga Fm, Aralka Fm
	Cu	300, 165, 150	Coherent cluster	
	Pb		No elevated Pb	
	Zn	530, 340, 300	Coherent Zncluster	
Area 14 Stream sediment	As		No elevated As	Contact of Gillen Fm & Heavitree Qtzite
	Cu	70, 42	Slightly elevated	
	Pb	170, 135, 130	Small cluster	
	Zn		No elevated Zn	

The aeromagnetic survey was flown on north-south traverses with a line spacing of 500 metres, and was designed was to try and investigate subtle structures within the sub basin and to assist in target definition within the licence areas. Overall the area is magnetically quiet with subtle structures visible in the Phillipson Bore to Hi Jinks Bore area. The line spacing is probably too course to adequately define subtle features. In terms of line spacing and quality the data has been superseded by the 1997 Alice Springs-Alcoota airborne survey.

[1] Poseidon report area 4 as being anomalous in copper and lead; refer Table 5. Their assay data indicates anomalous zinc but no elevated copper or lead.

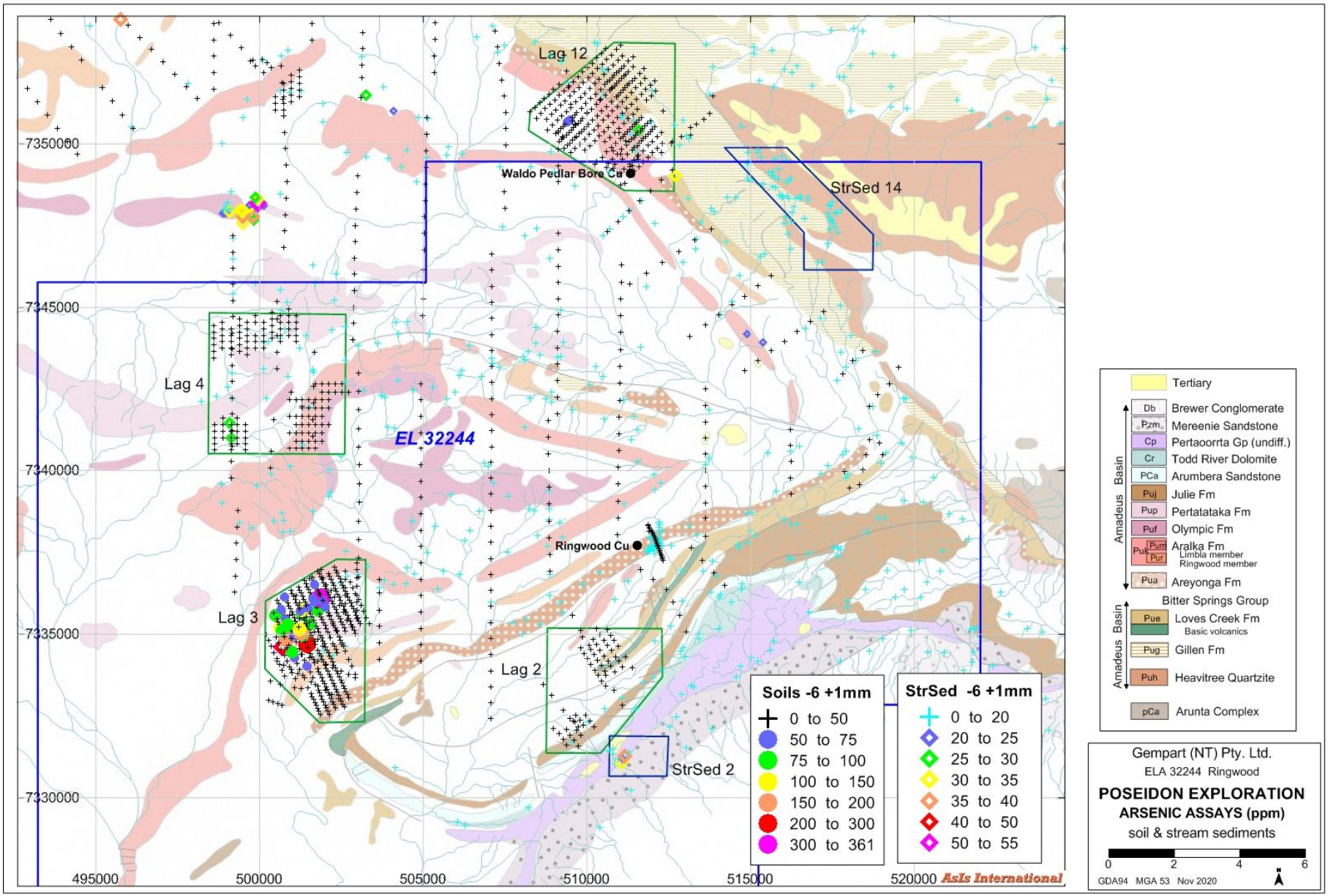

Figure 11. Poseidon Exploration arsenic assays.

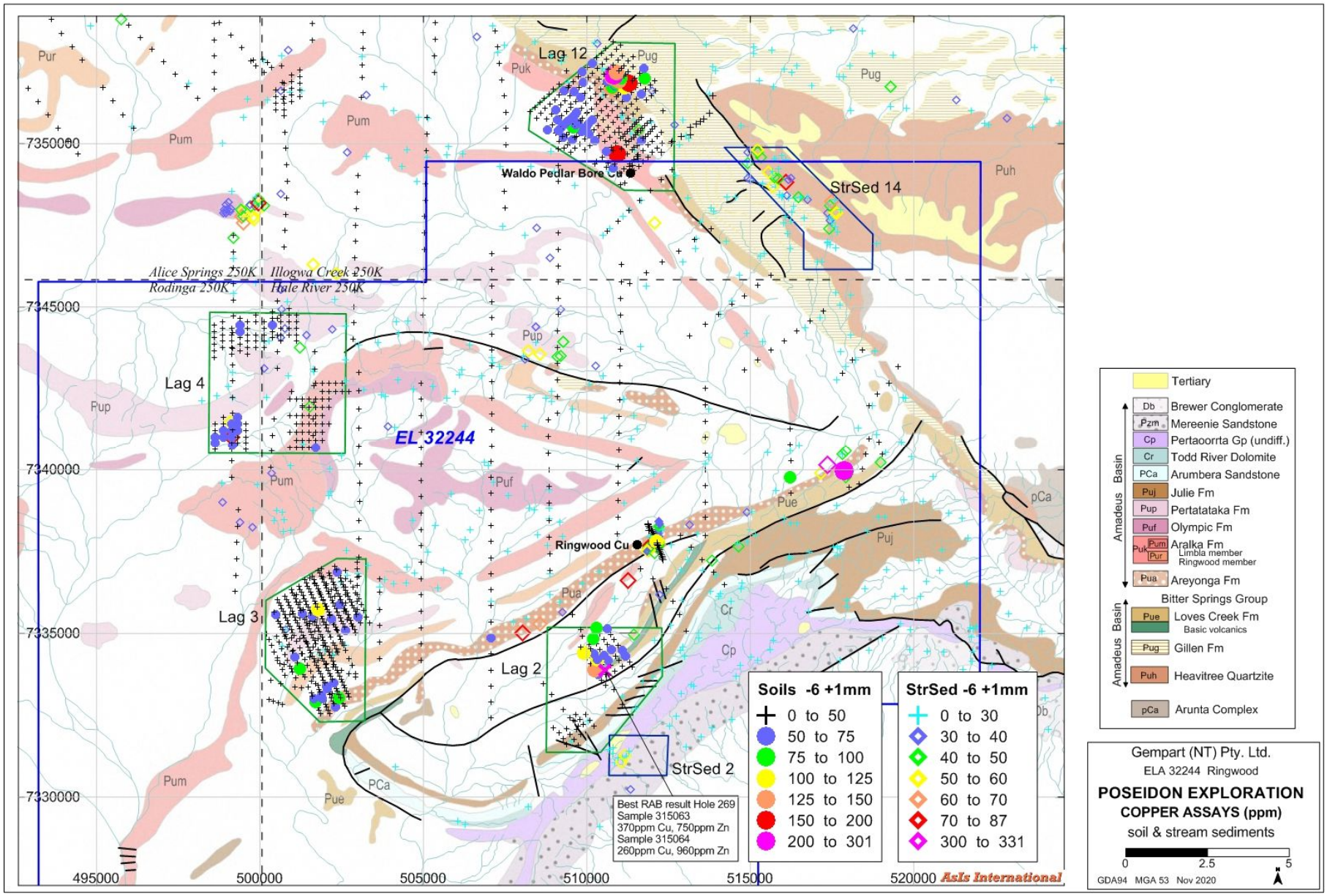

Figure 12. Poseidon Exploration copper assays.

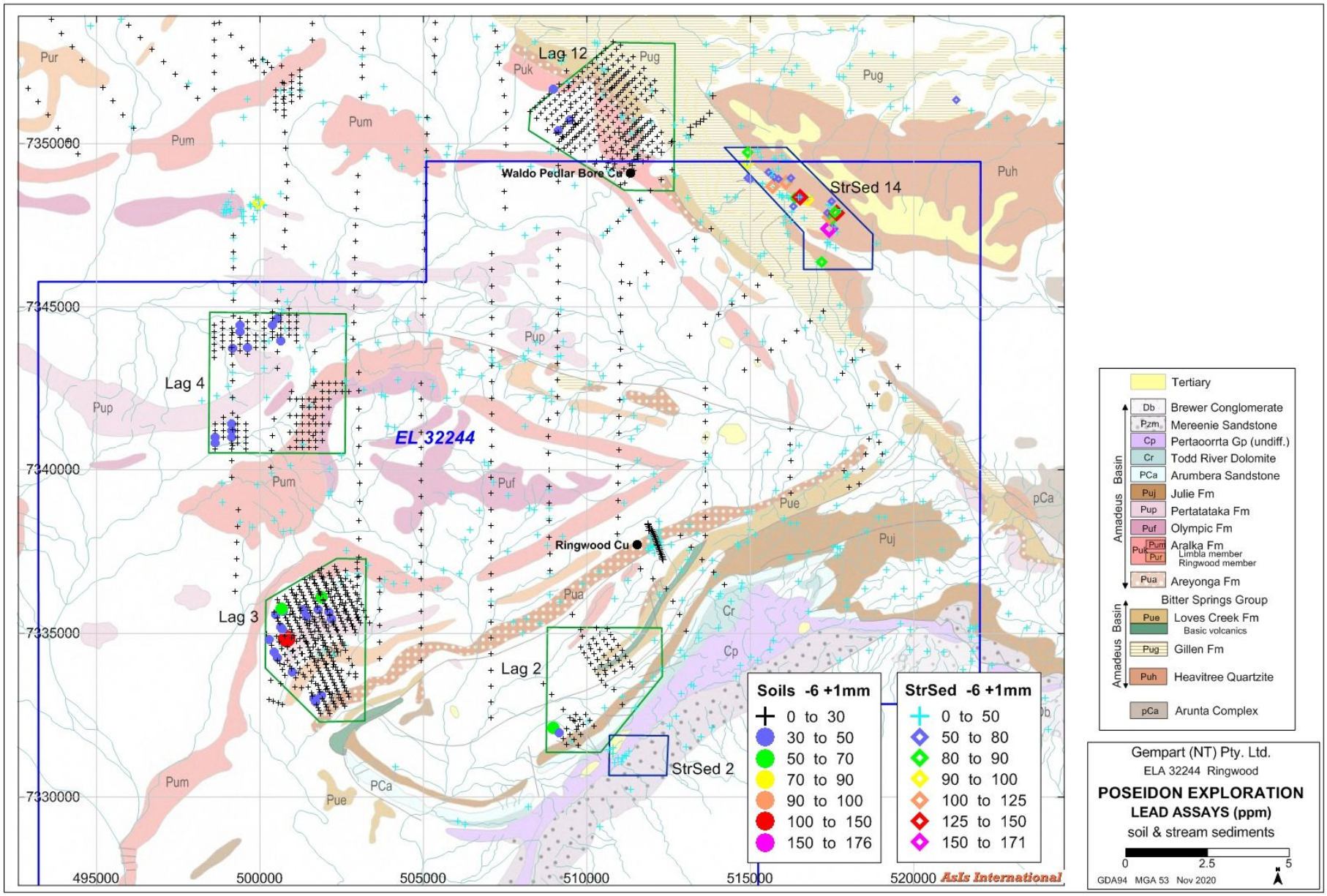

Figure 13. Poseidon Exploration lead assays.

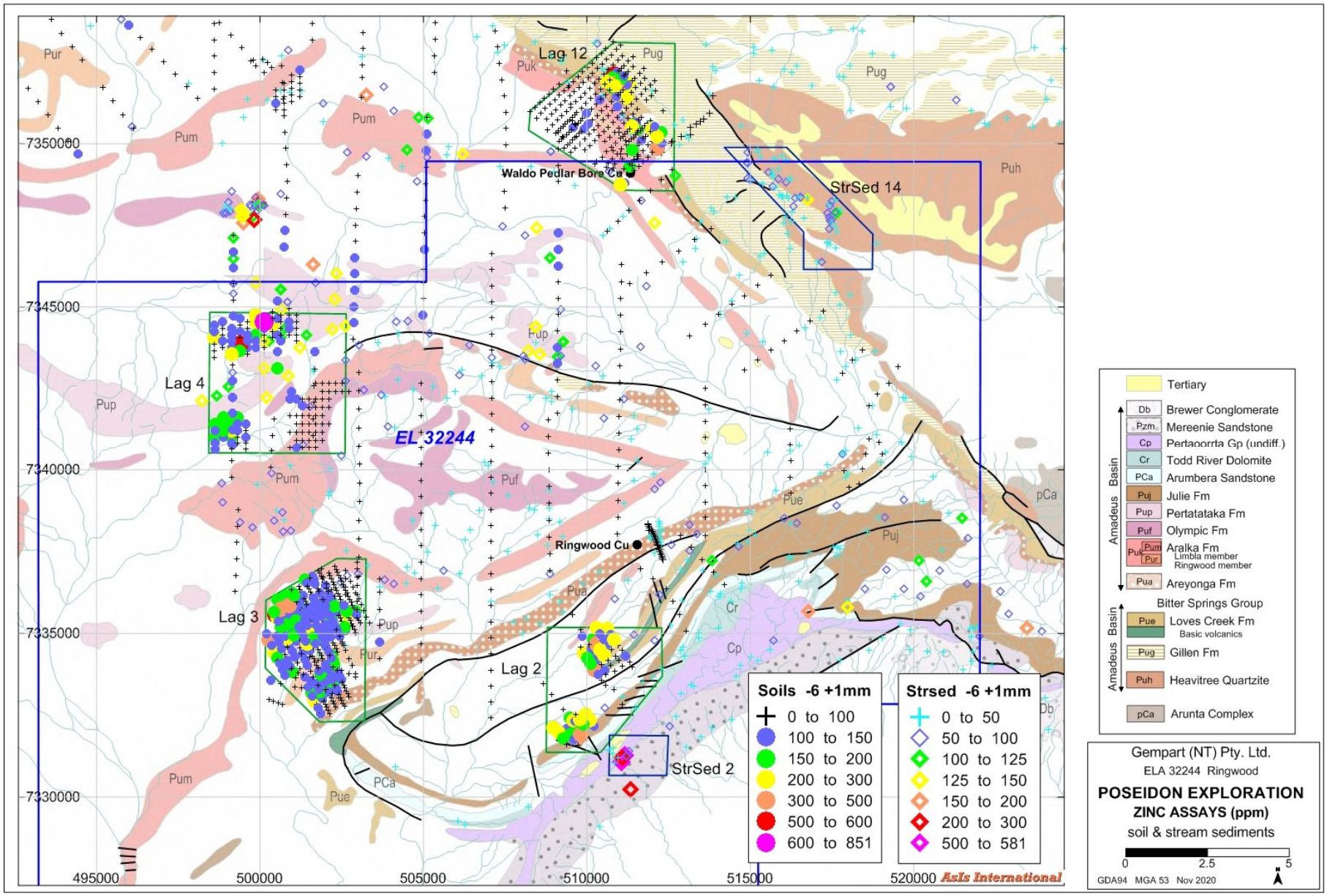

Figure 14. Poseidon Exploration zinc assays.

Exploration activity in 1993 [4] consisted of:

- gravity survey over southern part of project area
- further processing of aeromagnetic survey data
- Reconnaissance IP survey west of Hi Jinks Bore (Area 3) and at the Ringwood Cu Prospect
- Evaluation of follow-up lag and stream samples
- Regolith mapping and interpretation of follow-up sample areas
- RC and diamond drilling of IP anomaly near Ringwood Cu Prospect
- RAB drilling testing of geochemical anomalies in Areas 8, 6 and 2
- Regional/Reconnaissance RAB east of Phillipson Bore.

The gravity survey area generally corresponds to the area of EL32244 and comprised observations on a 1 x 1 km grid. The aim was to investigate basement flanking the NW-SE trending ridge for possible sub-basin development or thick accumulation of sediments. There is no record of the digital data.

The gravity data highlights the NW-SE trenching arch/ridge. On moving from SE to NW along arch/ridge, the change in gravity response reflects the increasing thickness of Bitter Springs Formation. West of the ridge the contours suggest thickening cover to the SW. South of the Collins Range there appears to be a rapid thickening of sediment.

IP surveys using 50 and 100 metre dipole-dipole configurations were completed at the Hi Jinks West area and the Ringwood Copper prospect. Two lines at Hi Jinks West failed to record any resistivity or chargeability anomaly. At Ringwood three lines spaced 400 metres apart defined a chargeability anomaly which oddly seems to coincide with a resistivity high.

The IP anomaly north of Ringwood Cu Prospect was tested by 2 RC and 1 diamond drill holes; refer Table 5. The anomaly occurred at the base of the scree slope of the ridge containing the copper shale horizon and is covered in scree and alluvium. The holes were drilled on IP lines 4600E and 5000E; refer Table 7. They were collared in slightly calcareous siltstone which changed to dark gray/black at approximately 40m downhole. The main lithology of the hole was dark gray/black highly carbonaceous/graphitic interbedded siltstone and shale with minor very fine pyrite. The hole finished in gray to light gray sandstone or diamictite of the Areyonga Formation.

Table 7. Collar locations for drillholes testing IP anomaly at Ringwood copper prospect.

Prospect	Hole No.	Local coord	East_Mga	North_Mga	Azimuth	Dip	Depth
Ringwood	RCURC-1	4600E	511768	7337778	160° Mag	-60	126m
Ringwood	RCURC-2	5000E	511998	7338178	160° Mag	-60	132m
Ringwood	RCUD-1	5000E	511978	7338208	160° Mag	-60	134.7m

The RC samples were composited over four metre intervals and assayed for Au, Ag, As, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb and Zn. No core from the diamond hole was assayed due to a handling mishap.

Results were uniformly disappointing; refer Tables 8 and 9. Best assay was 1130ppm Zn from 8-12m in RCU-RC1. All other assays were essentially background values.

Table 8. Assays from drillhole RCU-RC1 at Ringwood Copper prospect.

Interval	Au	Ag	As	Bi	Cd	Co	Cu	Fe	Mn	Mo	Ni	Pb	Zn
metres	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
0-4	<0.001	<0.1	<5	<1	0.1	17	14	1.02	220	<0.5	14	19	110
4-8	<0.001	<0.1	<5	<1	0.2	24	44	1.87	370	<0.5	22	26	155
8-12	<0.001	<0.1	<5	<1	0.2	26	31	2.22	350	<0.5	26	29	1130
12-16	<0.001	<0.1	<5	<1	0.1	24	34	2.06	340	<0.5	27	22	145
16-20	<0.001	<0.1	<5	<1	0.2	26	26	2.20	360	<0.5	26	28	155
20-24	<0.001	<0.1	<5	<1	0.2	27	32	2.52	350	<0.5	29	33	140
24-28	<0.001	<0.1	<5	<1	<0.1	24	29	2.06	320	<0.5	29	35	140
28-32	<0.001	<0.1	<5	<1	0.2	23	32	1.85	330	<0.5	23	33	140
32-36	<0.001	<0.1	<5	<1	0.2	23	28	1.85	310	<0.5	25	34	110
36-40	<0.001	<0.1	<5	<1	0.1	23	32	1.79	310	<0.5	26	33	89
40-44	<0.001	<0.1	<5	<1	<0.1	21	30	1.69	300	<0.5	25	28	92
44-48	<0.001	<0.1	<5	<1	0.2	23	38	1.79	280	<0.5	28	37	125
48-52	<0.001	<0.1	<5	<1	0.4	21	32	1.95	290	<0.5	28	39	155
52-56	<0.001	<0.1	<5	<1	0.3	23	33	1.92	320	<0.5	26	40	110
56-60	<0.001	<0.1	<5	<1	0.3	23	32	2.04	360	<0.5	26	41	125
60-64	<0.001	<0.1	15	<1	0.3	26	38	3.24	610	1.7	29	35	120
64-68	<0.001	<0.1	20	<1	0.1	27	37	3.48	680	<0.5	29	21	69
68-72	<0.001	<0.1	20	<1	< 0.1	30	41	3.68	700	1.7	30	39	61
72-76	<0.001	<0.1	20	<1	0.1	33	41	3.80	660	3.4	29	53	81
76-80	<0.001	<0.1	25	<1	0.4	27	39	3.02	970	7.7	24	58	190
80-84	<0.001	<0.1	<5	<1	<0.1	12	32	1.44	380	<0.5	10	6	44
84-88	<0.001	<0.1	<5	<1	<0.1	9	29	1.52	330	<0.5	8	5	29
88-92	<0.001	<0.1	<5	<1	<0.1	11	14	1.48	270	1.7	8.8	3	26
92-96	<0.001	<0.1	<5	<1	<0.1	6	23	1.39	210	0.9	6.4	1	22
96-100	<0.001	<0.1	<5	<1	<0.1	9	12	1.24	190	0.9	7.2	1	20
100-104	<0.001	<0.1	<5	<1	<0.1	8	6.3	1.12	280	0.9	5.6	1	20
104-108	<0.001	<0.1	<5	<1	<0.1	8	4.5	1.41	290	<0.5	6.4	<1	18
108-112	<0.001	<0.1	<5	<1	<0.1	12	5.4	1.91	340	<0.5	9.6	3	23
112-116	<0.001	<0.1	<5	<1	<0.1	14	8.1	1.98	370	<0.5	8.8	4	25
116-120	<0.001	<0.1	<5	<1	<0.1	11	9.9	2.26	360	<0.5	8.8	3	25
120-124	<0.001	<0.1	<5	<1	<0.1	11	8.1	2.12	350	<0.5	8.8	4	30
124-126	<0.001	<0.1	<5	<1	<0.1	11	11	2.20	370	<0.5	9.6	4	27

Table 9. Assays from drillhole RCU-RC2 at Ringwood Copper prospect.

Interval	Au	Ag	As	Bi	Cd	Co	Cu	Fe	Mn	Mo	Ni	Pb	Zn
metres	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
0-4	<0.001	<0.1	<5	<1	<0.1	6	13	0.00	130	<0.5	14	14	145
4-8	<0.001	<0.1	<5	<1	<0.1	12	23	1.89	380	<0.5	23	16	72
8-12	<0.001	<0.1	<5	<1	<0.1	12	17	1.05	300	<0.5	21	10	40
12-16	<0.001	<0.1	<5	<1	<0.1	12	23	1.89	410	<0.5	24	11	62
16-20	<0.001	<0.1	<5	<1	<0.1	15	22	2.16	420	<0.5	27	18	94
20-24	<0.001	<0.1	<5	<1	0.2	12	23	2.02	430	<0.5	25	18	105
24-28	<0.001	<0.1	<5	<1	0.2	14	21	1.64	380	<0.5	27	16	91
28-32	<0.001	<0.1	<5	<1	<0.1	14	22	1.54	390	<0.5	26	14	99
32-36	<0.001	<0.1	<5	<1	0.2	12	22	1.65	350	<0.5	28	17	170
36-40	<0.001	<0.1	<5	<1	<0.1	17	23	1.76	360	<0.5	27	17	105
40-44	<0.001	<0.1	<5	<1	<0.1	12	22	1.73	310	<0.5	27	22	110
44-48	<0.001	<0.1	<5	<1	<0.1	14	23	1.53	310	<0.5	28	19	80
48-52	<0.001	<0.1	<5	<1	<0.1	14	25	1.76	330	<0.5	27	14	87
52-56	<0.001	<0.1	<5	<1	<0.1	15	23	1.96	410	<0.5	27	15	84
56-60	<0.001	<0.1	<5	<1	<0.1	12	27	1.73	310	<0.5	29	13	70
60-64	<0.001	<0.1	<5	<1	<0.1	12	29	1.82	330	<0.5	31	10	80
64-68	<0.001	<0.1	<5	<1	<0.1	14	27	1.94	280	<0.5	31	15	75
68-72	<0.001	<0.1	<5	<1	<0.1	14	27	1.64	290	<0.5	30	16	80
72-76	<0.001	<0.1	<5	<1	<0.1	11	27	1.75	290	<0.5	30	22	69
76-80	<0.001	<0.1	<5	<1	<0.1	6	28	2.06	330	<0.5	29	22	75
80-84	<0.001	<0.1	<5	<1	<0.1	8	27	1.88	300	<0.5	29	22	91
84-88	<0.001	<0.1	<5	<1	<0.1	8	27	1.67	290	<0.5	28	19	80
88-92	<0.001	<0.1	<5	<1	<0.1	12	27	1.75	290	<0.5	29	21	68
92-96	<0.001	<0.1	<5	<1	0.4	12	31	2.04	340	<0.5	30	23	97
96-100	<0.001	<0.1	<5	<1	0.3	15	31	2.04	360	<0.5	31	28	185
100-104	<0.001	<0.1	<5	<1	<0.1	20	34	2.32	400	<0.5	29	39	83
104-108	<0.001	<0.1	<5	<1	0.2	15	34	1.85	390	1.8	27	42	165
108-112	<0.001	<0.1	<5	<1	<0.1	6	24	1.20	280	<0.5	14	3	30
112-116	<0.001	<0.1	<5	<1	<0.1	12	10	1.21	270	<0.5	8.5	8	20
116-120	<0.001	<0.1	<5	<1	<0.1	18	25	1.04	180	<0.5	10	10	20
120-124	<0.001	<0.1	<5	<1	<0.1	12	13	1.32	165	<0.5	9.4	7	17
124-128	<0.001	<0.1	<5	<1	<0.1	14	35	1.66	200	<0.5	14	8	19
128-133	<0.001	<0.1	<5	<1	<0.1	12	2	1.40	230	<0.5	7	4	17

Follow-up RAB drilling within the area of EL32244 was completed at Area 2, aka SE of Hi Jinks Bore, and Phillipson Bore East which is generally north-east of Ringwood prospect. At Area 2 five lines were drilled; the best result was the two samples from hole 269. Sample 315063 assayed 370ppm Cu and 750ppm Zn, and sample 315064 assayed 260ppm Cu and 960ppm Zn. At Phillipson Bore East eight lines were drilled but only half the holes reached bedrock. The results were generally low, Cu maximum 85 ppm, Zn maximum 380 ppm, Pb maximum 80 ppm.

In 1994 rock chip samples were collected in the northern part of Area 12 aka Gypsum Creek, located to the north of Waldo Pedlar prospect, and at Area 14 aka SE of Gypsum Creek [5]. At Area 12 mapping and rock chip sampling revealed highly ferruginous rock, forming bands, lenses and "blows" within dolomite; probably dolostones within Loves Creek Formation. The rock samples contained elevated Cu and Zn and up to 53% Fe and 5-8% Mn. The initial anomalies were explained as due to the ferruginous bands/lenses within the dolomite - although the follow-up lag revealed anomalous residual Cu and Ni values. At Area 14, seven rock chip samples comprising mostly dolomites were collected to investigate elevated lead assays identified from stream sediment sampling. The site plots on the contact of Gillen Formation and Heavitree Quartzite. Only one sample recorded anomalous Pb - 95 ppm. It also contained anomalous As - 26 ppm. The siltstone and dolomite Pb values ranged between 2 and 34 ppm.

Due to lack of encouragement from follow-up drilling and sampling, the tenements were surrendered.

4.7 EL9337 - 1998. CRAE / Rio Tinto Exploration

Rio Tinto explored for base metals, uranium, and diamondiferous intrusions within a series of ELs of which one, EL9337, overlaps the northern half of EL32244 [6]. Primary target was the Amadeus Basin sediments, particularly the contact between the Heavitree Quartzite and Gillen Member (Bitter Springs Formation) looking for stratabound, sediment-hosted copper (African Copper Belt, Kupferschiefer). Other targets were unconformity-related uranium mineralisation and kimberlites.

A substantial program was carried out including airborne magnetics/radiometrics, ground magnetics, stream sediment sampling, rock chip and soil sampling, RAB and RC drilling. Only a small amount of work was conducted within the area of EL32244 comprising:

- Six drainage gravel samples analysed for kimberlitic indicators.
- One orientation soil traverse of nine samples.
- 128 RAB holes on four traverses averaging 15m depth.

No kimberlitic indicator minerals were found in the gravel samples.

Orientation soil sampling was carried out on two lines coincident with RAB traverses to ascertain the efficacy of the method in areas not accessible to the RAB rig. One of these traverses was within EL32244. The multi-element assays of the -2+40# fraction revealed some significantly elevated values compared to the assays from the RAB drilling. It was stated in their report that '..these results would be misleading if soil sampling had been used for first pass geochemical sampling". It is noted that Poseidon had determined from orientation soil sampling in 1991 that the optimum fraction is lag (-6+1mm).

No encouragement was forthcoming from assays of the RAB samples.

RTE decided the results from the overall program failed to justify further work, and the project was abandoned. This occurred at the time of an industry-wide contraction in the exploration sector.

4.8 EL10267 & EL10269 - 2003. Gutnick Resources N.L.

The Rand Project of 22 EL's and was a joint venture between Gutnick Resources N.L. (manager) and Johnson's Well Mining N.L. Exploration for gold was conducted using a new genetic interpretation for the Witwatersrand mineralisation in South Africa. EL10269 substantially overlaps EL32244.

Orientation samples were collected from 23 sites at five different localities, and 36 BLEG and 21 stream sediment samples analysed [25]. Results indicated that shallow BLEG sampling of -4mm sediment is the most effective method for gold exploration. It was further concluded from past stream sediment surveys that the -2mm +40# fraction should be sampled and subject to multi-element assay .

A total of 510 stream sediment samples were taken to a density of one sample per 5 square kilometres [26]. Several discrete areas return elevated gold levels with 21 stream sediment samples containing in excess of 1ppb gold with a maximum value of 6.15ppb. One area also returned elevated silver results with 12 stream sediment samples containing 0.10ppm silver or better with a maximum of 0.25ppm. Elevated levels of base metals and other elements were also returned in a number of areas.

Reconnaissance rock chip sampling conducted during the stream sediment program returned several anomalous gold and silver values with maxima of 25ppb and 5ppm respectively. Maximum values for other metals include 350ppm arsenic, 1000ppm copper, 32ppm bismuth and 16.5ppm antimony.

All anomalous values reported above are located in tenements west of the Stuart Highway. No anomalous values occurred in samples collected in the vicinity of EL32244.

4.9 EL24249 - 2010. Imperial Granite & Minerals P/L / Atom Energy- Excelsior Gold.

EL24249 was secured by Imperial Granite & Minerals P/L to explore for Ni, Cu, Au, U and Co [1]. In the first two years of tenure 14 rock chip samples were collected and assayed; anomalous copper (853 ppm) reported from sample GL3 collected in unspecified Arunta's, and elevated V and Zn reported from another. All samples are outside the boundary of EL32244.

Atom Energy (renamed Excelsior Gold Ltd in June 2010) purchased the tenement in 2007 [13]. In 2008 water bore samples were collected and assayed for K, U, Na, Mg, Fe, Cu, Pb, Zn, Au, Ag, CO3, PO4, S and Cl. No anomalous values were reported. HyVista Corporation was contracted to acquire and process HyMap airborne hyperspectral scanner imagery. End products included:

- selected SWIR bands map the overall distribution of AL-OH, Fe-OH, Mg-OH (and carbonate if present)
- SWIR bands map the distribution of clay minerals, micas and carbonates.
- VNIR bands map the distribution of the iron oxides.

In 2009 41 rock chip samples were taken throughout the project area [24]. Sample sites within the area of EL32244 included Waldo Pedlar Bore and Ringwood Copper project. Samples were analysed for 50 elements. Best result was 4.89% Cu from malachite-stained sample HAL08348 collected on a dolerite-granite contact just east of the eastern boundary of EL32244. Four samples were collected from Ringwood Cu Prospect; one malachite-stained sample HAL08324 returned 2.17% Cu. Maximum assay from three samples collected from Waldo Pedlar was 0.387% Cu. Lead and zinc values were low.

During the final year of the licence term a review of the HyVista hyperspectral revealed no new targets and the tenement was surrendered [9]

4.10 EL25711, EL25887 & EL25888 - 2013. Mithril Resources Ltd.

These three EL's formed part of Mithril's Casey Project. Primary target on these tenements was copper mineralisation in the Bitter Springs Formation or Areyonga Formation.

Field work in 2008 comprised participation in infilling the 4x4km gravity data to 1x1km and 2x2km over the extent of the exploration licences [17]. The aim was to help determine potential mineralised structures and possibly accumulations of mineralisation (primarily copper) associated with the Bitter Springs formation as seen at the Pipeline Copper Prospect. Data from the survey, called area 6, is presented as Bouguer gravity contours at Figure 15, and an image of 1VD at Figure 16. The gravity increases to the north-east reflecting Heavitree Quartzite and Arunta Block. A structure is evident oriented NW-SE roughly coinciding with Gillen Formation; this runs through Waldo Pedlar prospect. Also evident is a prominent structure oriented NE-SW coincident with upper Amadeus Basin sediments i.e. Pertaoorrta Group and Mereenie Sandstone.

In 2009 no field work was completed [18]. An interpretation of the data from the gravity survey showed a potentially interesting linear gravity anomaly just south of the existing Ringwood Copper Occurrence.

Subsequently, Mithril focused exploration on tenement elsewhere and surrendered these EL's.

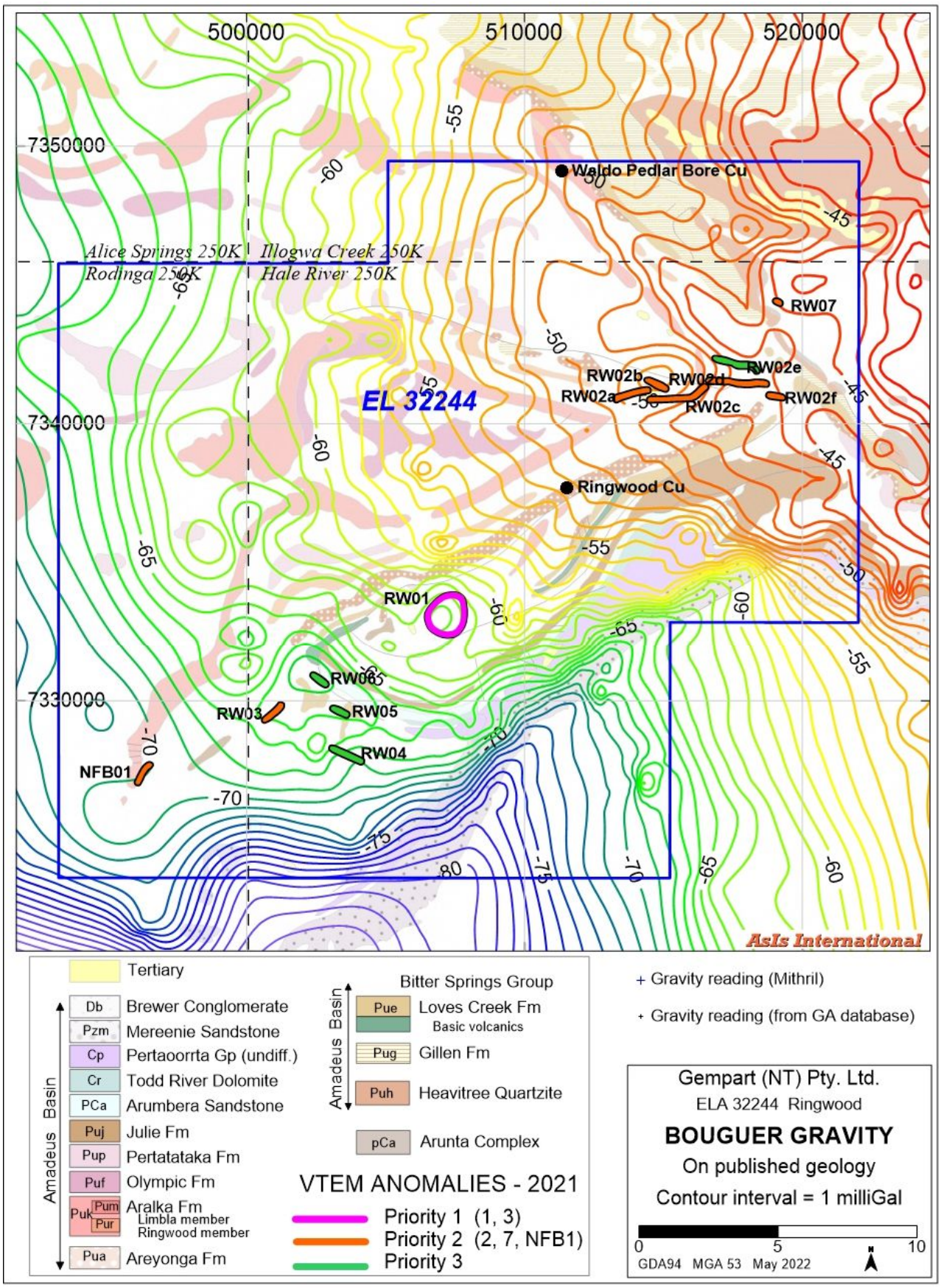

Figure 15. EL32244 Bouguer gravity contours and VTEM anomalies on geology.

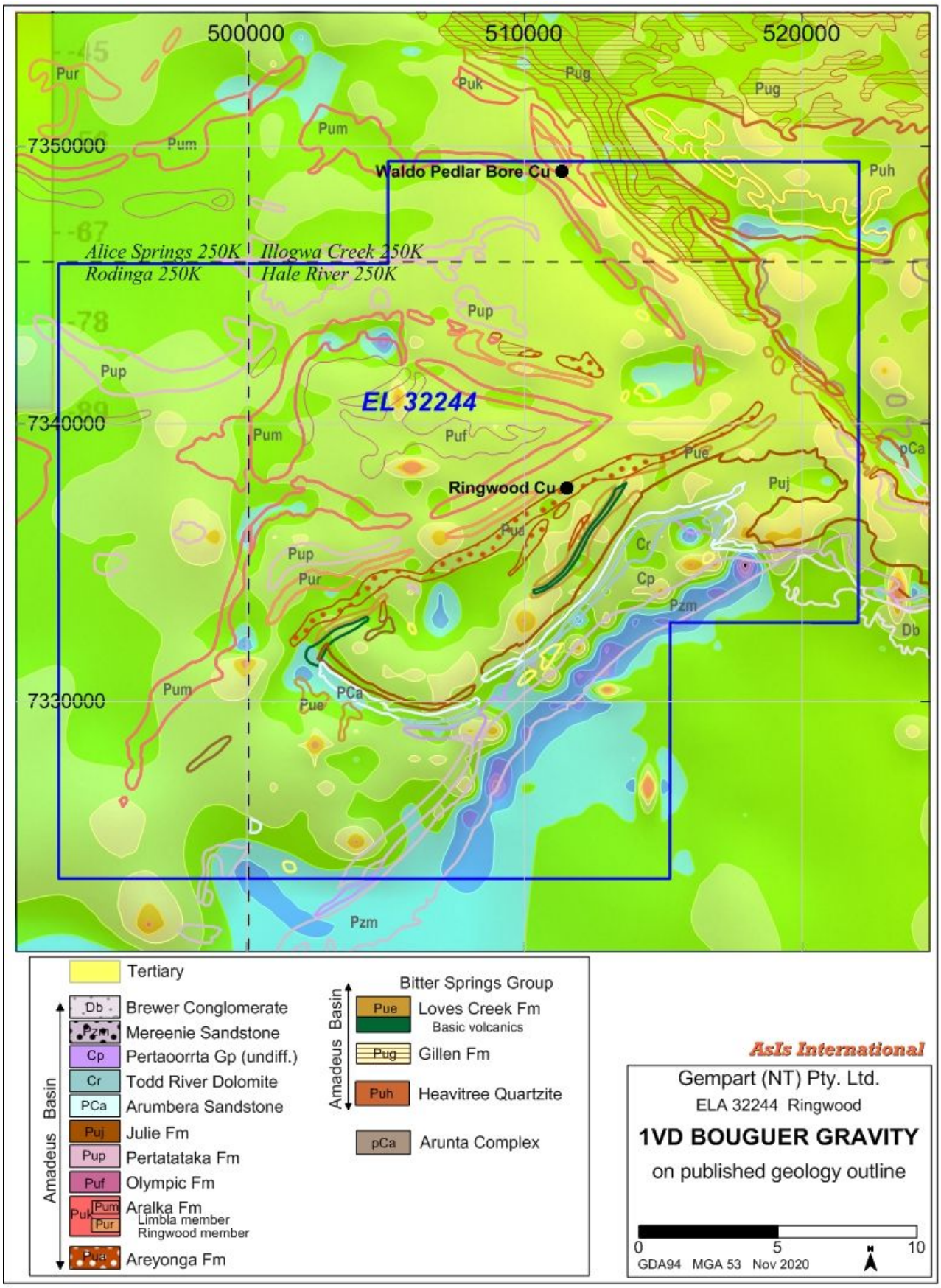

Figure 16. EL32244 Bouguer gravity 1VD image on geology.

4.11 EL29046 - 2018. GRIGM Resources Pty Ltd

Primary target was copper [14]. Collected 32 soil samples along the Areyonga Formation in the vicinity of the Ringwood copper prospect, and assayed for Cu, As and Sb. Maximum Cu assay was 103 ppm. Collected 27 rock chip samples on a nine km long strike length of the Areyonga Formation and assayed for Cu, Au, Ag, Se and Te. Samples assayed up to a maximum of 4.24% Cu with an average of 1.7%. However, the format of the headings in the laboratory report are difficult to interpret and the units in which these numbers are reported is uncertain.

4.12 EL30309 - 2016. Williams Exploration Consulting

The primary target on EL30309 was Carlin-like gold deposits [28]. Very few samples from previous exploration had been assayed for gold. The tenement was held for only one year, during which time data acquisition comprised collection and assay of bottom-of-hole power auger samples, lag sampling and processing of Landsat 8 imagery.

Two areas were targeted. Prospect HR1 investigated anomalous arsenic and zinc in the Ringwood Member of the Aralka Formation, identified by Poseidon Exploration at their Hi Jinks West area. Prospect RO2 investigated anomalous zinc values in the Olympic Formation, identified at Poseidon Exploration's Middle Bore area.

A total of 150 auger holes were drilled at 50 or 25 metre intervals, and bottom-of-hole samples analysed for 40+ elements. The lag samples were not assayed.

Table 10. Williams Exploration Consulting - Auger drilling, sampling and assay summary statistics.

Type	Sample Type	Programme	Primary	Duplicate	Total	Assayed
Bottom hole	auger cuttings	April 2015	105	10	115	Yes
Bottom hole	auger cuttings	September 2015	45	4	49	Yes
Sub-soil	auger cuttings	April 2015	105	10	115	No
Surface	lag	April 2015	95	8	103	No
		Total	350	32	382	

At HR1 West, As, Sb and Tl are anomalous and Au, Mo, Cu and Pb weakly so within a 300m wide, 1km long zone paralleling the strike of the rocks, mainly calcareous siltstone and silty limestone. Refer Table 11. RO2 showed no anomalous values and it is concluded that the Normandy anomaly, where auger drilled, may have resulted from downhill displacement of lag. No significant gold assays were reported.

Table 11. Williams Exploration Consulting - Auger bottom-of-hole assay statistics.

ELEMENT	COUNT	MIN	MAX	AVERAGE	STD DEV	THRESHOLD
GOLD (ppb)	150	<1	5	1.73	0.9	
ARSENIC (ppm)	150	2.4	1030	11.3	167	22
THALLIUM (ppm)	150	0.05	83.3	0.83	6.8	0.5
ANTIMONY (ppm)	150	0.0025	7.06	0.25	0.6	0.25
BARIUM (ppm)	150	50	1360	234	207	545
MOLYBDENUM (ppm)	150	0.05	4.85	0.49	0.5	0.37
LEAD (ppm)	150	3.3	144.5	11.5	13.1	27
ZINC (ppm)	150	15	271	47.5	26	74
COPPER (ppm)	150	4.8	72.4	13.4	8.3	22

A review of the sampling indicated that the sampling method was not as good as anticipated. A diamond drillhole was proposed to test the As-Sb-Tl-Au anomaly at HR1 West prospect, but the tenement was surrendered before any further work was done.

5. EXPLORATION COMPLETED IN YEAR ONE

The following work was completed in the first year of tenure [15]:

1. Review and assessment of previous exploration results and currently available geophysics.
2. Planning of two airborne EM surveys.

6. EXPLORATION COMPLETED IN YEAR TWO

The following work was completed in the second year of tenure:

1. Airborne EM (VTEM MAX) surveys over two areas.
2. Field trip to VTEM anomaly areas.
3. Ground EM surveys over four VTEM anomalies.

6.1 Airborne EM (VTEM) survey

UTS Geophysics P/L were commissioned to fly airborne EM surveys over two areas. The larger area, called "Ringwood", is 267 square kilometres for a total of 980 line kilometres, and the smaller survey area, called "No. 5 bore", is 13 square kilometres for a total of 51 line kilometres. Flight line spacing for both surveys was 300 metres. Flying was completed in April 2021, and final data delivered in July 2021. The survey area and anomalies recorded are shown on geology at Figure 17, and an image of the VTEM channel 40 response is included at Figure 18.

The "Ringwood" survey covered a substantial part of the outcrop areas within EL32244, encompassing the Ringwood and Waldo Pedlar copper prospects. It also covered large areas of geochemical anomalism discovered by historical exploration. Refer Figure 19. Previous explorers carried out many programs of surface sampling and RAB/auger drilling within the tenement area. Poseidon conducted intensive exploration in 1990-1994 which included orientation surveys, soil and stream sediment sampling, and RAB traverses. Substantial areas of elevated and anomalous geochemistry were identified; but they drilled only two diamond holes at the historic Ringwood copper prospect.

The "No.5 Bore" survey covered a discrete magnetic anomaly with no outcrop in the southern part of the EL area. Refer Figure 20. The interpreted geological setting and geophysical response bear similarities to those of the Pipeline copper prospect located in Amadeus Basin sediments 50 km to the east.

Interpretation was carried out by consultant geophysicist Kelvin Blundell. Nine anomalies were identified; two ranked as priority 1, three as priority 2 and four as priority 3. These are listed in Table 12, which is adapted from the Interpretation Report in Appendix 1.

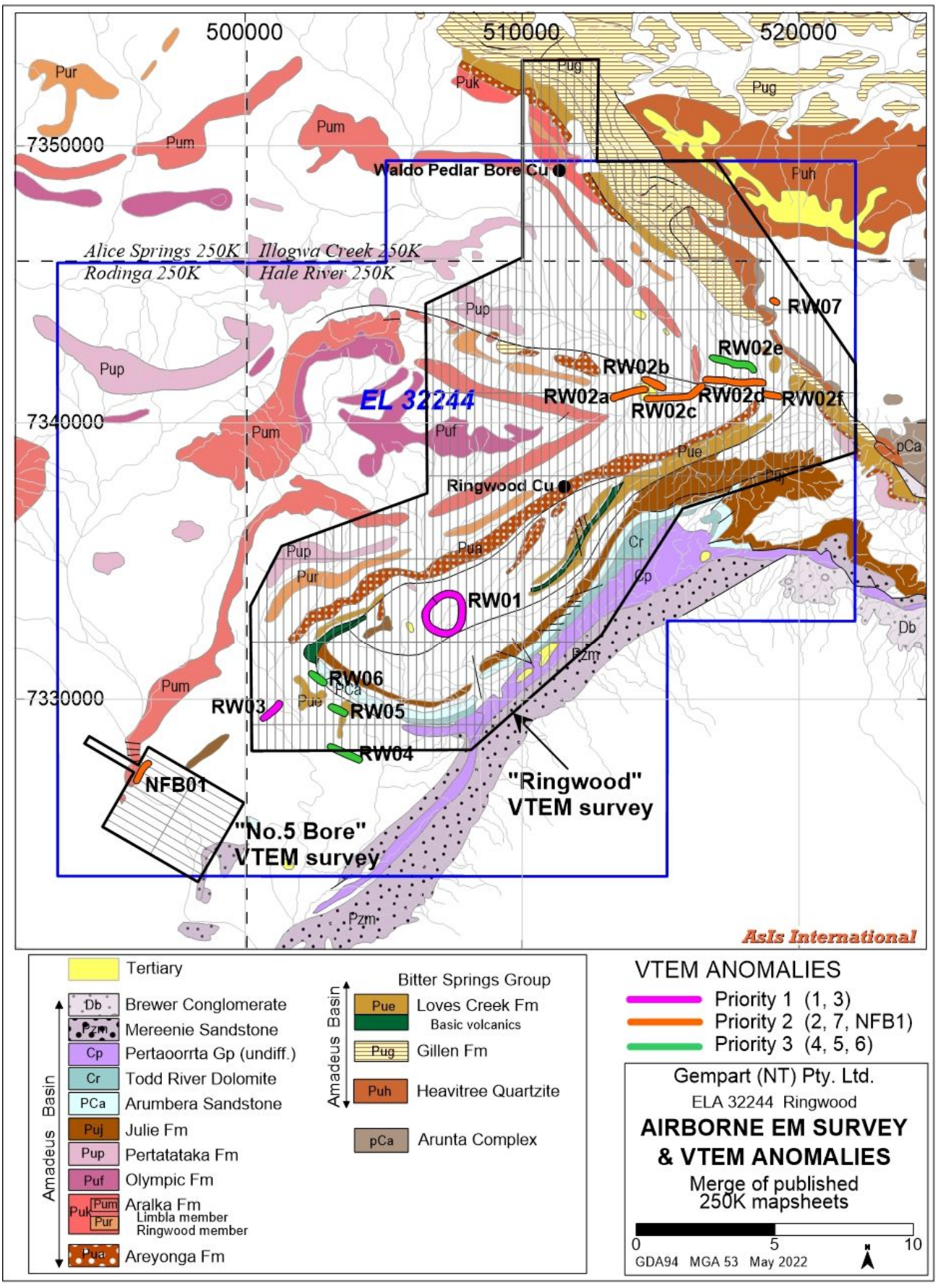

Figure 17. Location of Ringwood & No.5 Bore VTEM surveys and anomalies on geology.

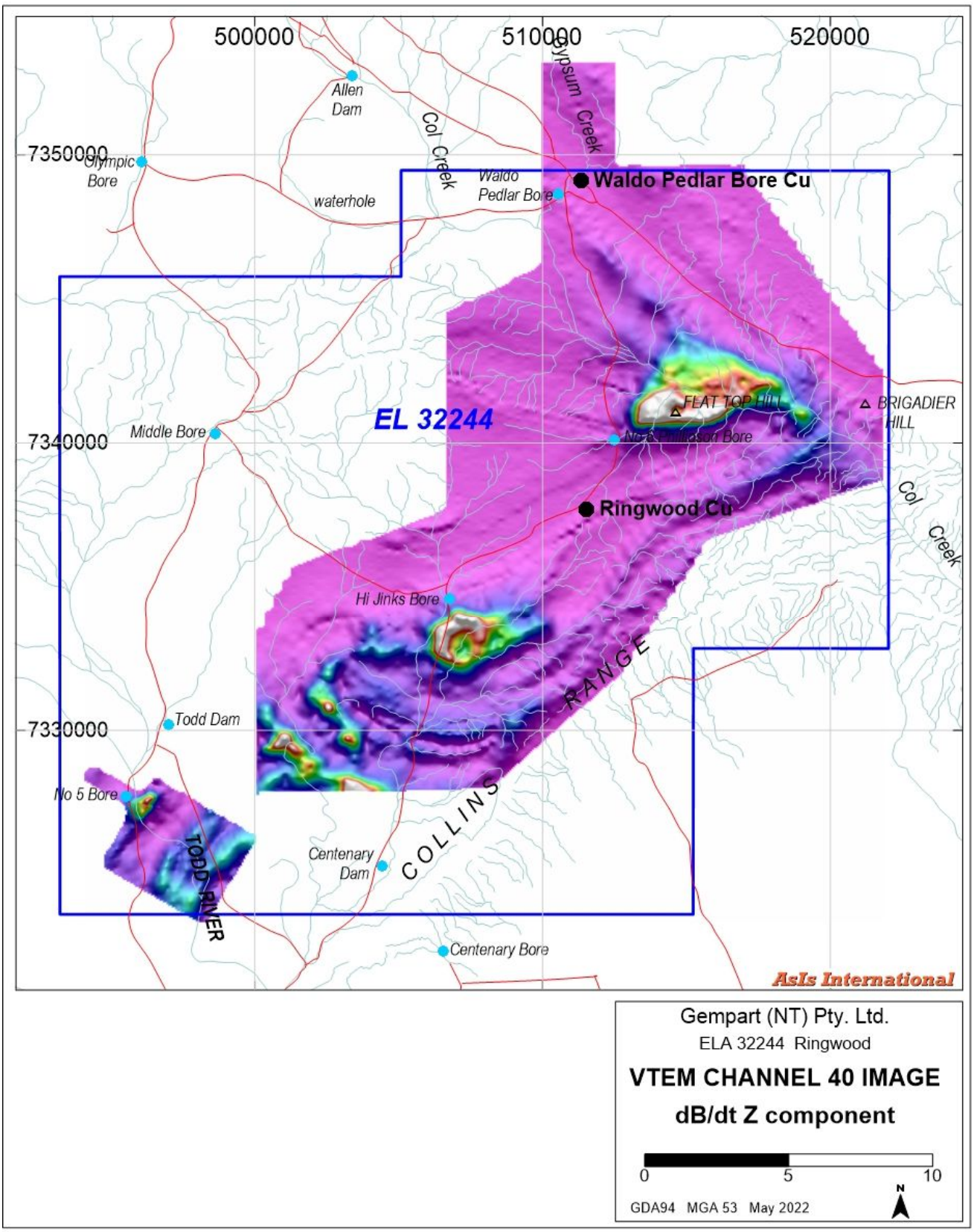

Figure 18. Ringwood & No.5 Bore VTEM image dBdt Ch40Z.

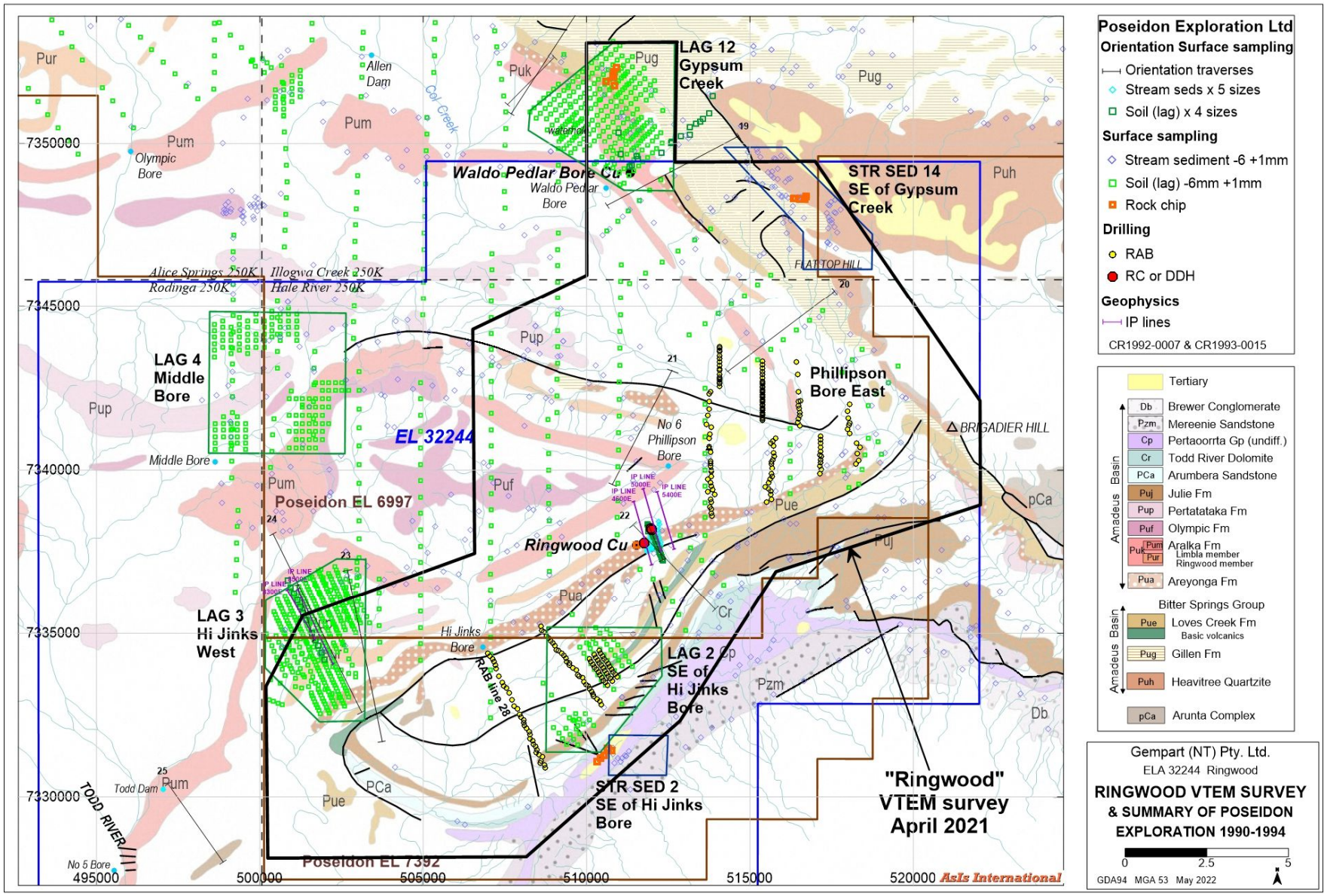

Figure 19. Location of Ringwood VTEM survey on Poseidon historical exploration summary.

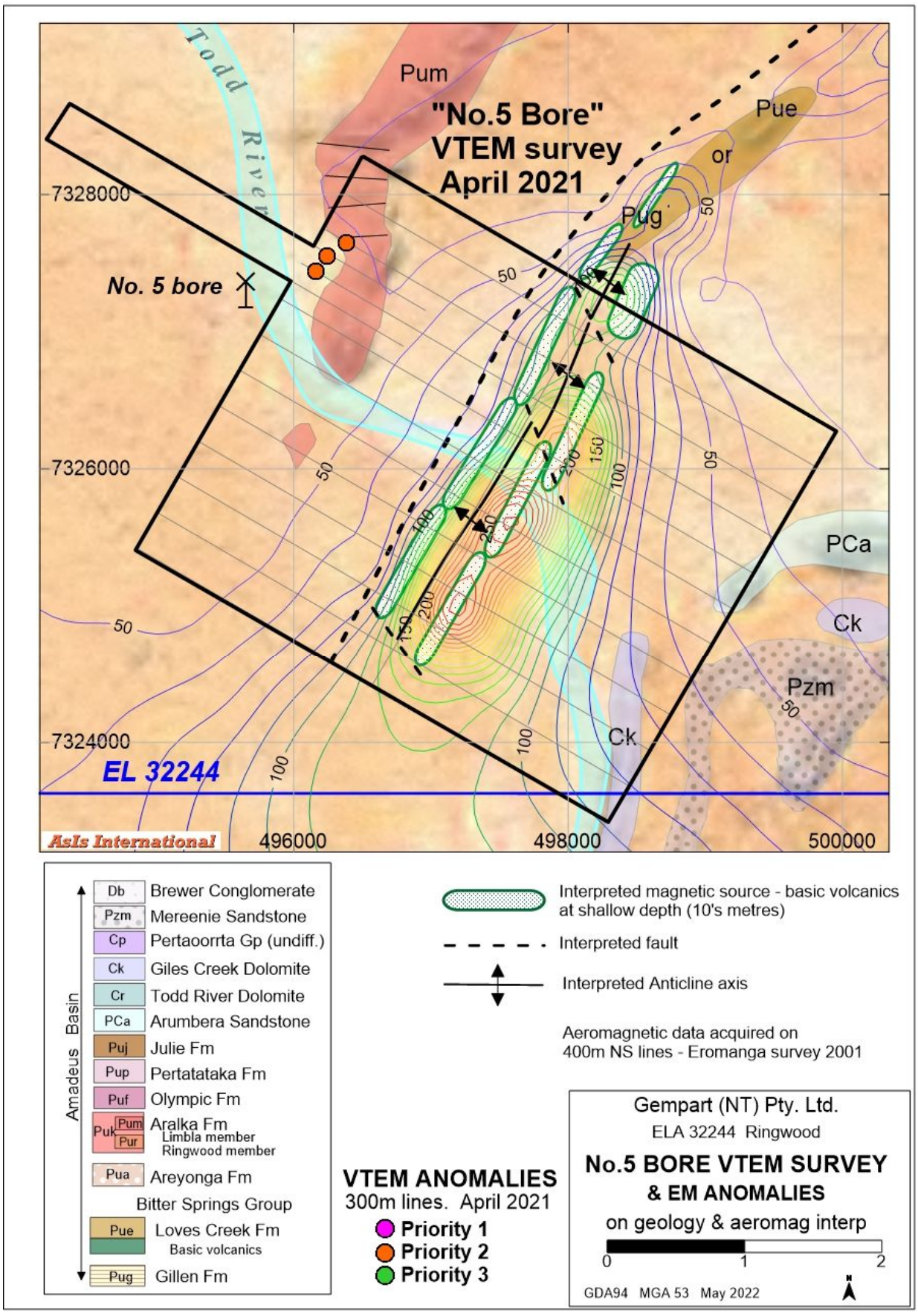

Figure 20. Location of No.5 Bore VTEM survey on prospect summary plan.

Table 12. VTEM anomaly descriptions.

Name	Priority	Description	Modelled	East	North	Length
RW01	1	Interesting circular late-time feature bound by folded magnetic stratigraphy and possible NW-SE faults	Yes	506926	7333690	42000
RW03	1	Good shielded late-time coincident with SW-NE mag unit. On contact between SW-NE and NW-SE domains	No	500942	7329592	800
NFB01	2	Broad mid- to late time anomaly. Locally anomalous part of larger strike-length conductive trend.	Yes	496232	7327450	800
RW02a	2	Good early- to late-time anomaly along hinge line of tight fold	No	513827	7341067	1200
RW02b	2	Early-to late time anomaly within fold nose	No	514738	7341413	600
RW02c	2	Good early- to late-time anomaly along hinge line of tight fold	No	515541	7340906	2000
RW02d	2	Good early- to late time anomaly on northern limb of fold nose - coincident with magnetic horizon	No	517612	7341436	2000
RW02f	2	Local extension of RW2d - also coincident with local magnetic anomaly	No	518977	7340992	500
RW07	2	Local low-amplitude late-time. Within area of complex magnetics	No	519072	7344352	100
RW02e	3	Weaker secondary peak to RW02d	No	517582	7342082	1600
RW04	3	Strong early- to late-time trend on edge of survey and along conductive trend that marks domain boundary	No	503582	7328104	1000
RW05	3	Locally stronger mid-to late-time anomaly along offset to SW of conductive trend	No	503340	7329648	500
RW06	3	Locally stronger mid-to late-time anomaly along conductive trend, close to fold nose	No	502588	7330789	500

6.2 Airborne EM (VTEM) survey – Summary of results

Generalised outcomes of the two VTEM surveys are:

- The area is amenable to exploration for bedrock conductors. There are no significant areas of conductive overburden response.

- There are no anomalies suggestive of significant bedrock conductor sources.

- The trend of the Amadeus Basin sediments can be seen in the early time channels.

- There are no EM responses observed over the two known copper prospects at Ringwood and Waldo Pedlar

- There are no EM responses over other areas of interest defined by historical surface sampling and drilling.

The individual selected anomalies are described hereunder.

- Priority 1 anomaly RW-01 is a curious annular-shaped feature about two km in diameter located in an area of no outcrop; refer Figure 21. The shape of the anomaly suggests a large pipe-like feature i.e. breccia pipe. It is in the centre of a broad anticline and coincides with a circular four milliGal gravity low; refer Figure 15. There is no magnetic expression. EM Interpretation suggests that modelled sources could be representing the top of a large depth extent body, with the upper surface having a saucer-shaped geometry. A line of RAB holes drilled by Poseidon in 1993 happens to transect the feature [4]. Not all holes reached bedrock, but those that did intersected Amadeus Basin sediments or granitic rock. Bottom-of-hole assays are uniformly low. Three lag samples on the EM anomaly collected by Poseidon contain no anomalous assay values. The anomaly is possibly a product of differential weathering over a granitic intrusion. This is significant, as there are no known granites in the general area. Rocks of a granitic nature may occur in Arunta Block metamorphics in the Casey Inlier some twenty km to the north-east, but the EM, gravity and magnetic signature are consistent with a discrete equidimensional intrusive body. If a granite intrusive source is correct, then its location in the exact centre of an anticline is intriguing. The intrusive may have exploited a zone of weakness in the anticlinal axis, and/or the anticline may be in part caused by the intruding body. In either case the postulated intrusive post-dates the Amadeus Basin sediments.

- Priority 1 anomaly RW-03 is orthogonal to the main lithological trend and coincides with a non-unique magnetic anomaly; refer Figure 22. Attempted modelling did not produce a good fit. The shape and character suggest a shallow-dipping shallow source.

- Priority 2 anomaly NFB-01 looks to be part of a larger strike-length formational conductor; refer Figure 23. Modelling indicates the source has a very shallow north-west dip and is effectively subcropping around VTEM line 7035.

- Priority 2 anomaly RW-02 is an east-west striking zone of at least six conductors labelled (a) to (f); refer Figure 24. RW-02d and RW-02f are coincident with a linear magnetic anomaly interpreted to be caused by basic volcanics within the Bitter Springs Group. The anomalies all suggest shallow-dipping sources and shallow depths.

- Priority 2 anomaly RW-07 is a late-time anomaly suggesting a deeper bedrock source. It is poorly defined and infill VTEM traverses confirmed it is very strike limited. Refer Figure 25.

- Priority 3 anomalies RW-04, RW-05 and RW-06 appear to part of a conductive trend and are likely caused by formational conductors.

The Interpretation report, UTS Geophysics logistics report and VTEM digital data are included as Appendices 1-3 respectively.

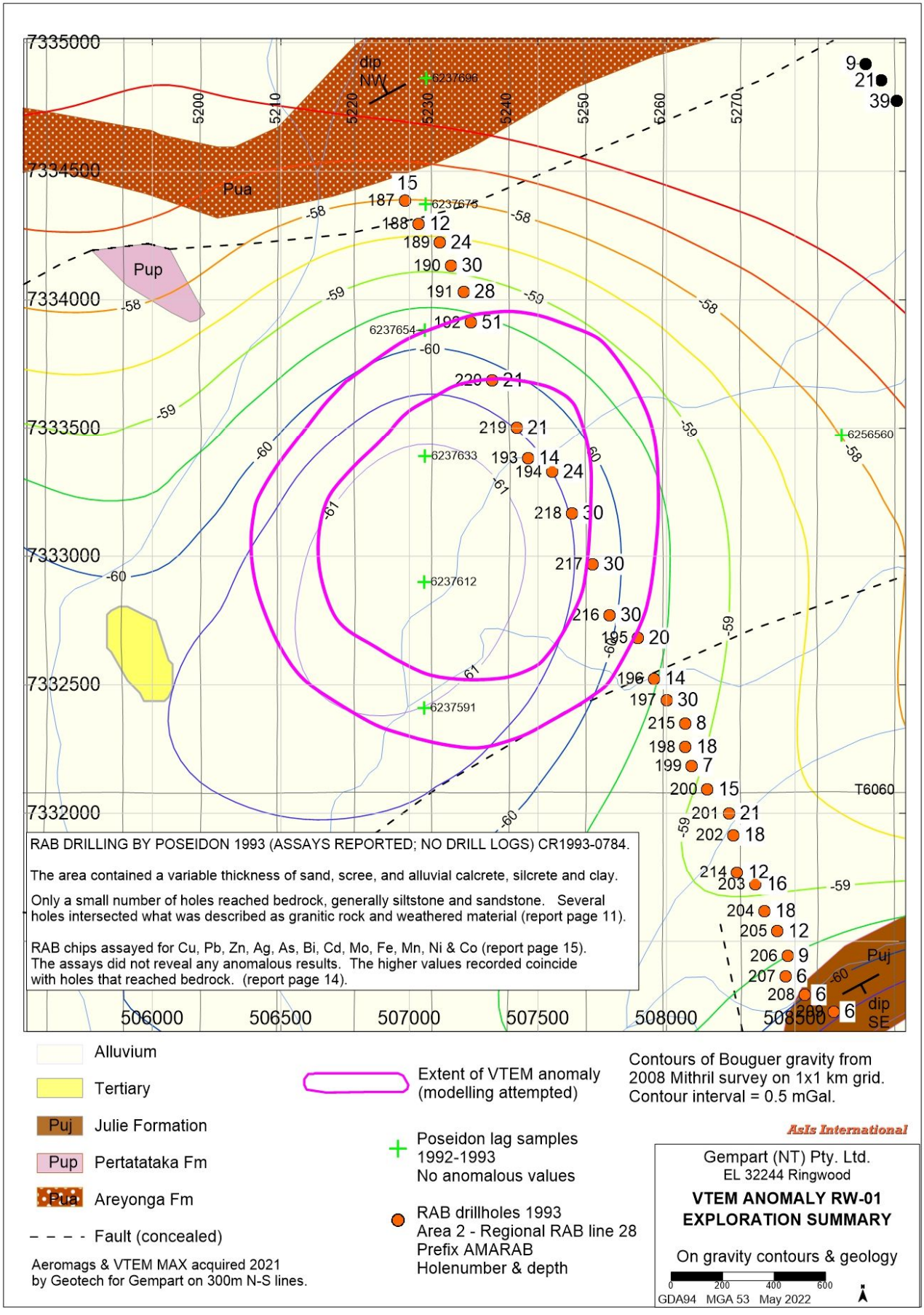

Figure 21. VTEM anomaly RW-01 exploration summary.

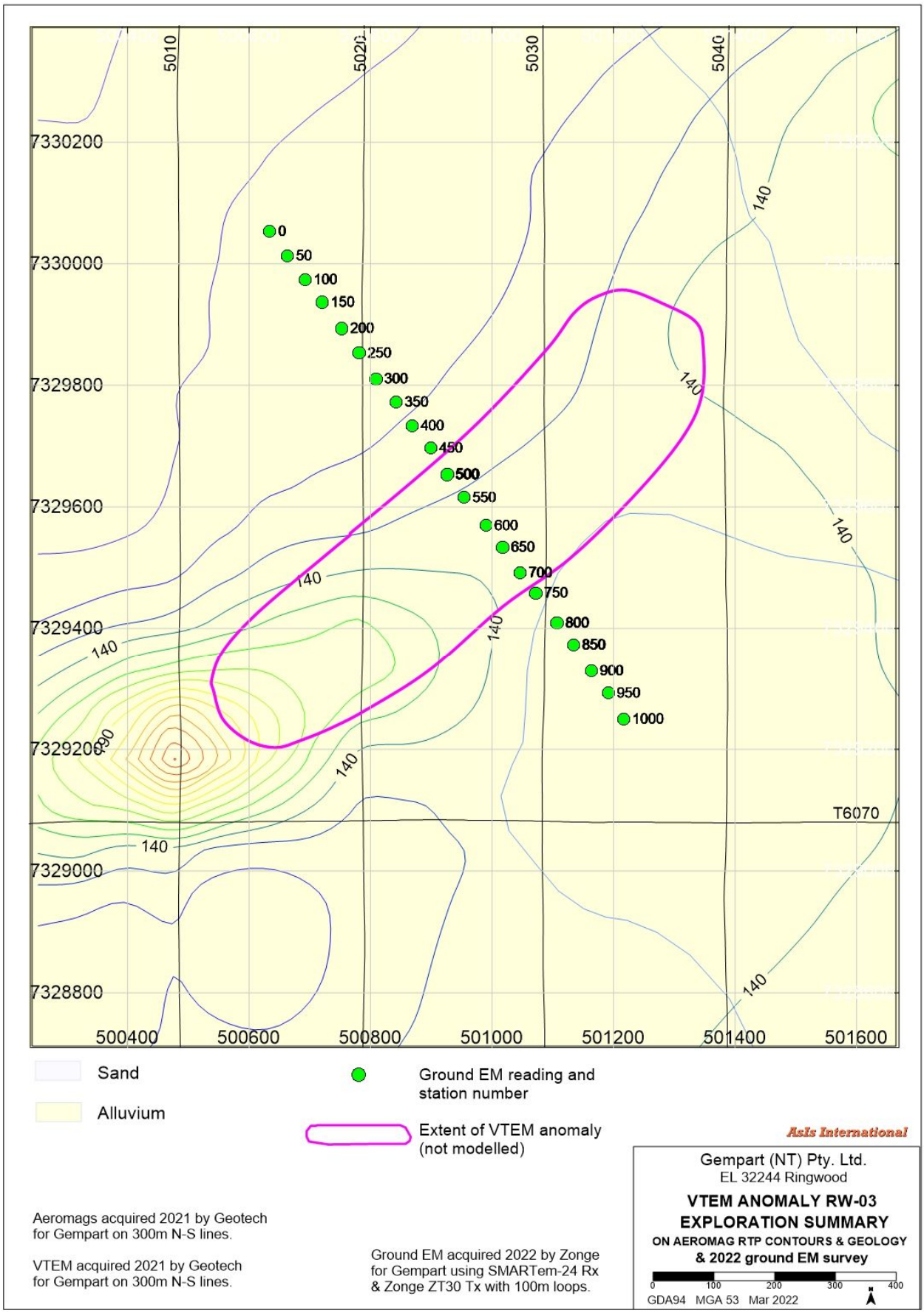

Figure 22. VTEM anomaly RW-03 exploration summary.

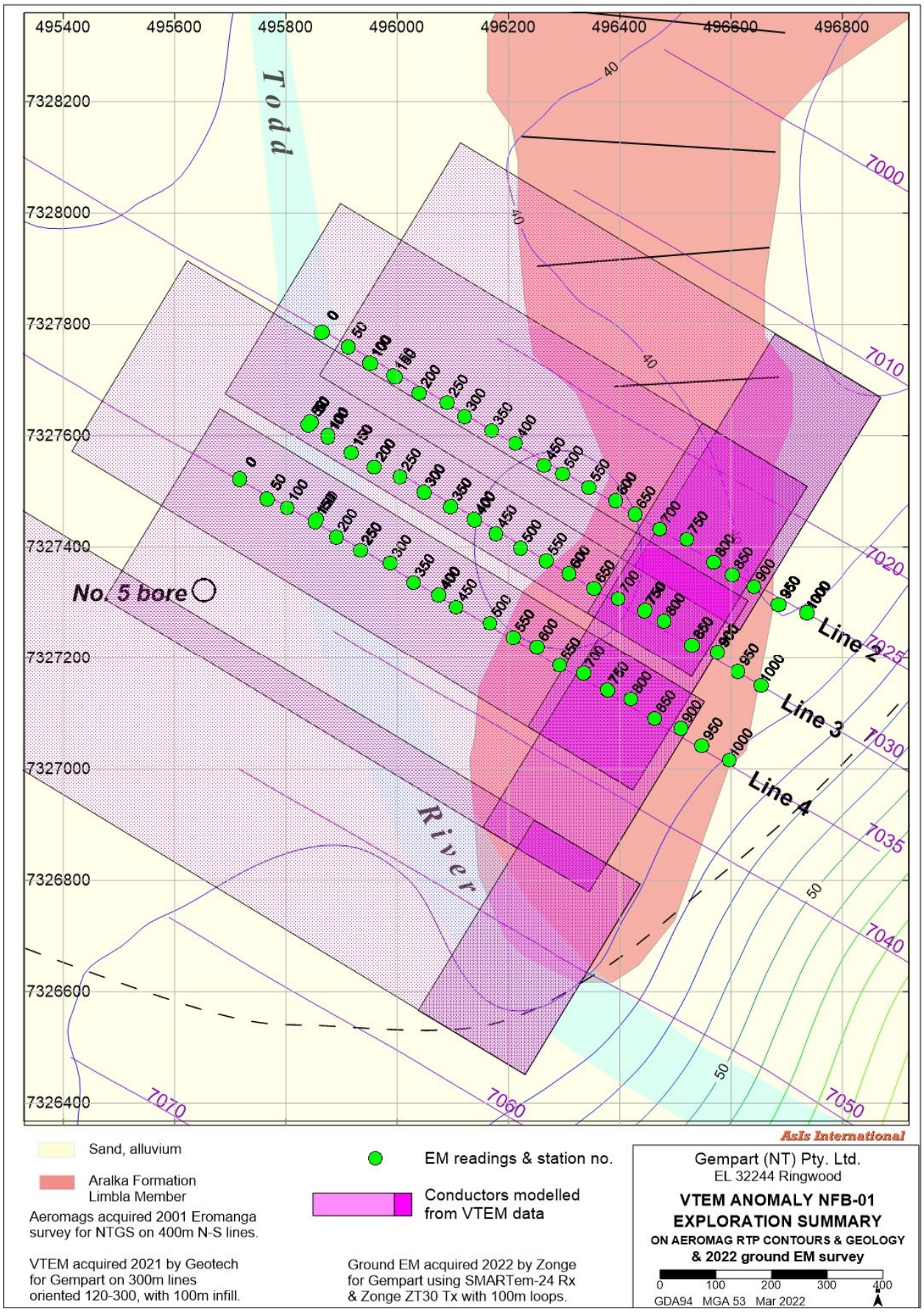

Figure 23. VTEM anomaly NFB-01 exploration summary.

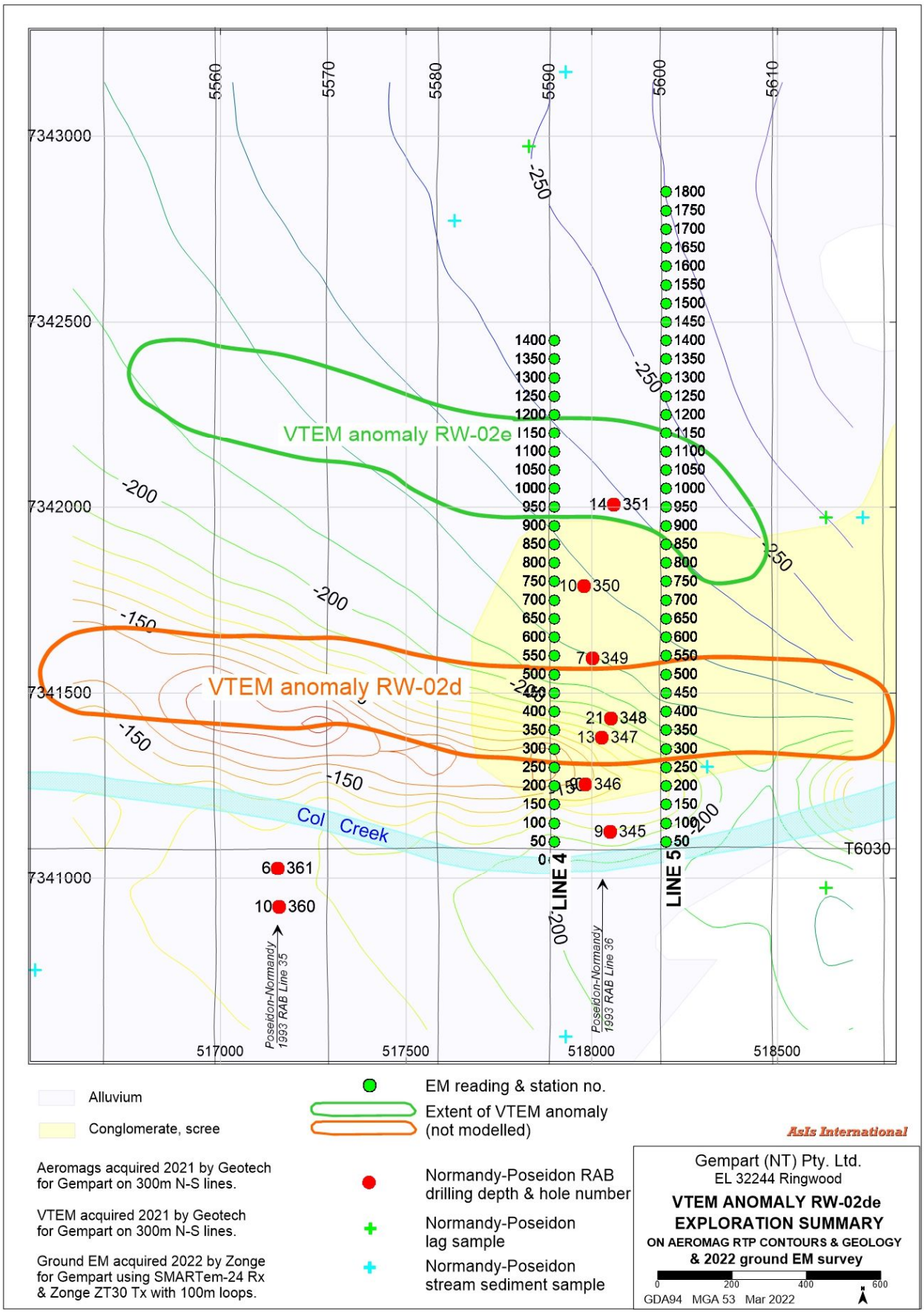

Figure 24. VTEM anomaly RW-02de exploration summary.

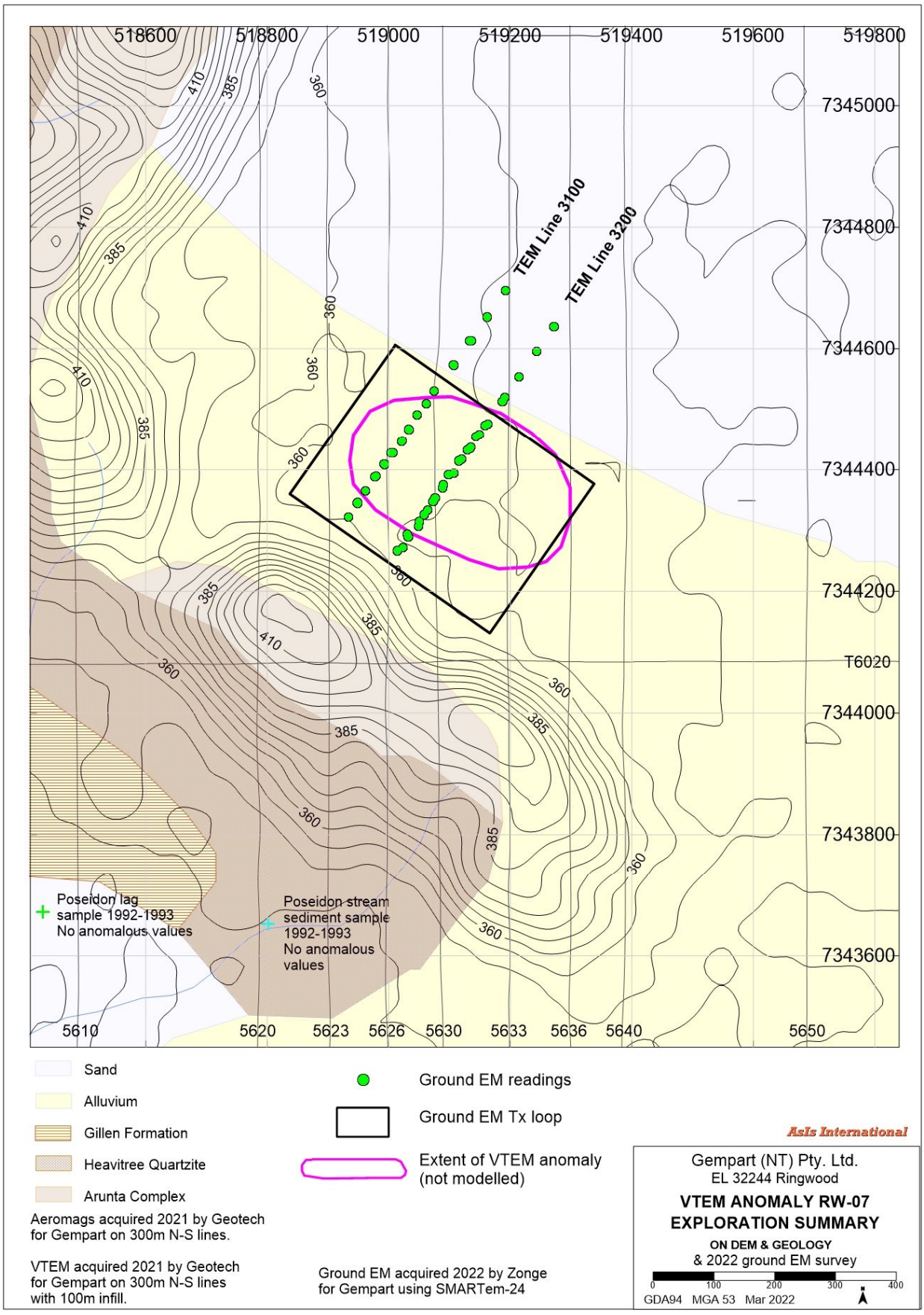

Figure 25. VTEM anomaly RW-07 exploration summary.

6.3 Field trip to VTEM anomaly sites

In May 2021 Central Mining & Exploration Services Pty Ltd, Alice Springs, were contracted to assist with a reconnaissance field visit to the sites of selected VTEM anomalies.

Observations are summarised thus:

- RW-01. Area four km west of this large annular anomaly has no outcrop; some fine-grained volcanic(?) float was observed.
- RW-03. No outcrop.
- RW-07. Dune sand with no outcrop. Quartzite scarp in background.
- NFB-01. Todd River flood plain; no outcrop.

Photos from the field trip are included as Appendix 4.

6.4 Ground EM surveys

Ground EM surveys were completed at VTEM priority 1 anomaly RW-03, and priority 2 anomalies RW-02de, RW-07 and NFB-01. Survey specifications were:

- Contractor : Zonge, Adelaide.
- Transmitter : Zonge GGT-10.
- Receiver : EMIT SMARTem24 receiver.
- Sensor : EMIT SMART fluxgate reading X, Y and Z component.
- Configuration : 100x100 metre moving loop except for RW-07 which was fixed loop.
- Field work commenced : 18th January 2022.
- Field work completed : 8th March 2022.

To the end of the reporting period the seriously rain-interrupted field work was finished but no formal interpretation completed. The data files are included in Appendix 5. Readings acquired and preliminary observations of the results are presented hereunder.

- RW-03. Completed a one km long line of 21 moving-loop readings as shown in Figure 22. Profiles of the X, Y and Z component response are plotted at Figure 26. Initial modelling suggests source is a local surficial feature.

- RW-02de. Completed two traverses, designated Lines 4 and 5, of moving-loop readings for a total of 3.2 km. A plan of the survey area is included at Figure 24, and EM profiles of lines 4 and 5 included at Figures 27 and 28. Initial interpretation suggests a large, weakly conductive (<40S) , sub-horizontal near surface source – probably preferential weathering over a locally more-mafic lithology. RW-02d is coincident with a linear magnetic anomaly which is interpreted to be caused by the basalt unit in the Bitter Springs Group. The two

EM traverses straddle a line of RAB holes drilled by Normandy-Poseidon in 1993 [4]. Assays reported no anomalous or elevated assays.

- RW-07. Completed two traverses each 500 metres long with fixed-loop; refer Figure 25. No EM response is evident in the ground data. There is significant local topographic variation up to 50 metres in the immediate area and the VTEM response is interpreted at this stage to be a function of terrain clearance variation +/- associated Tx-Rx movement. No preliminary data is available to plot.

- NFB-01. Completed three traverses, designated Lines 2, 3 and 4, of moving-loop readings for a total of 3.0 km. A survey area plan is included at Figure 23, and EM profiles from Line 4 included at Figure 29. Interpretation is difficult as ground profiles do not accord with the VTEM data. Near surface EM effects are suspected as causing spurious anomalies. A spurious late time anomaly occurs on line 3 which is not possible to model; refer Figure 30. Further modelling is required to complete assessment of this anomaly.

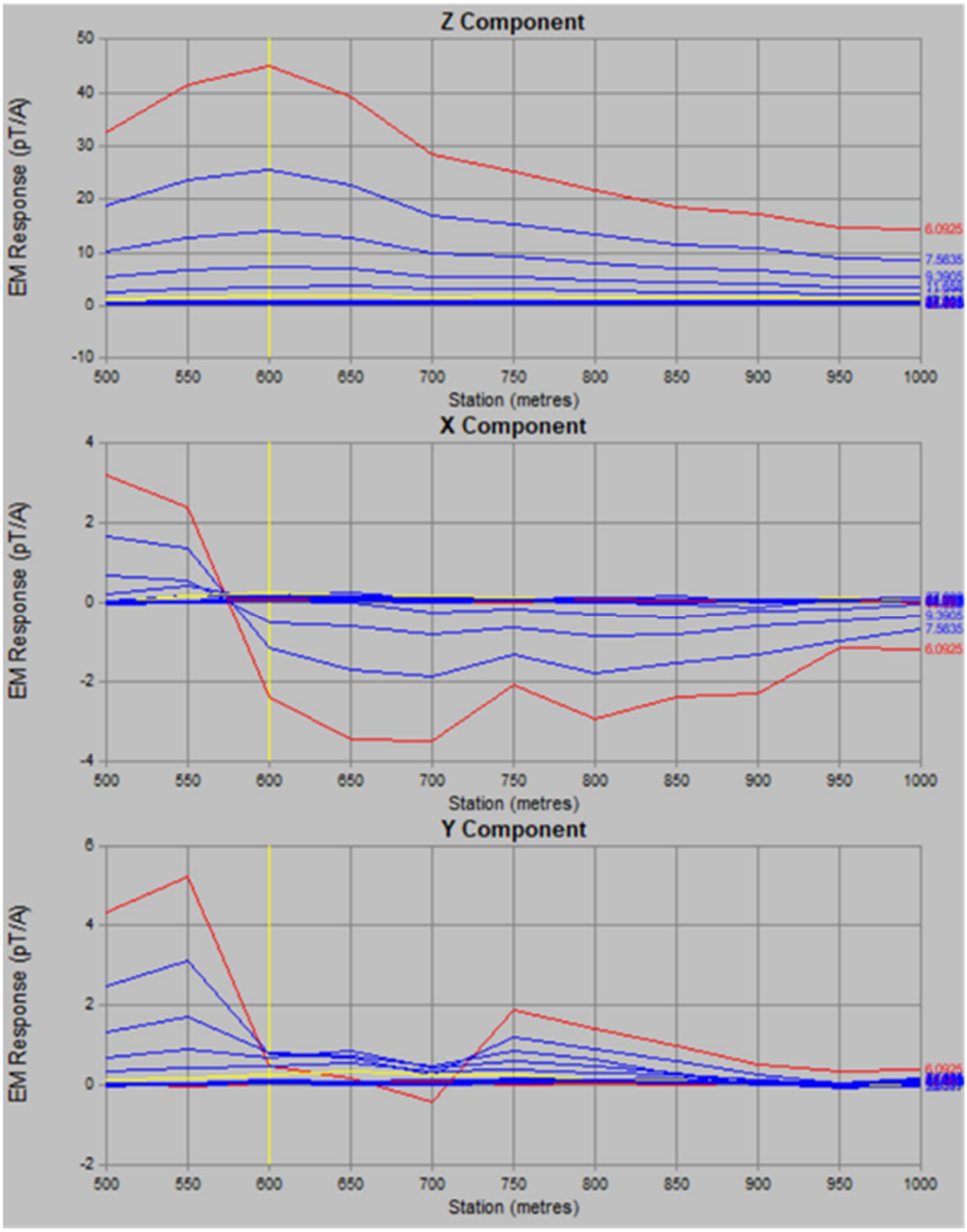

Figure 26. VTEM anomaly RW-03 ground EM profiles (preliminary).

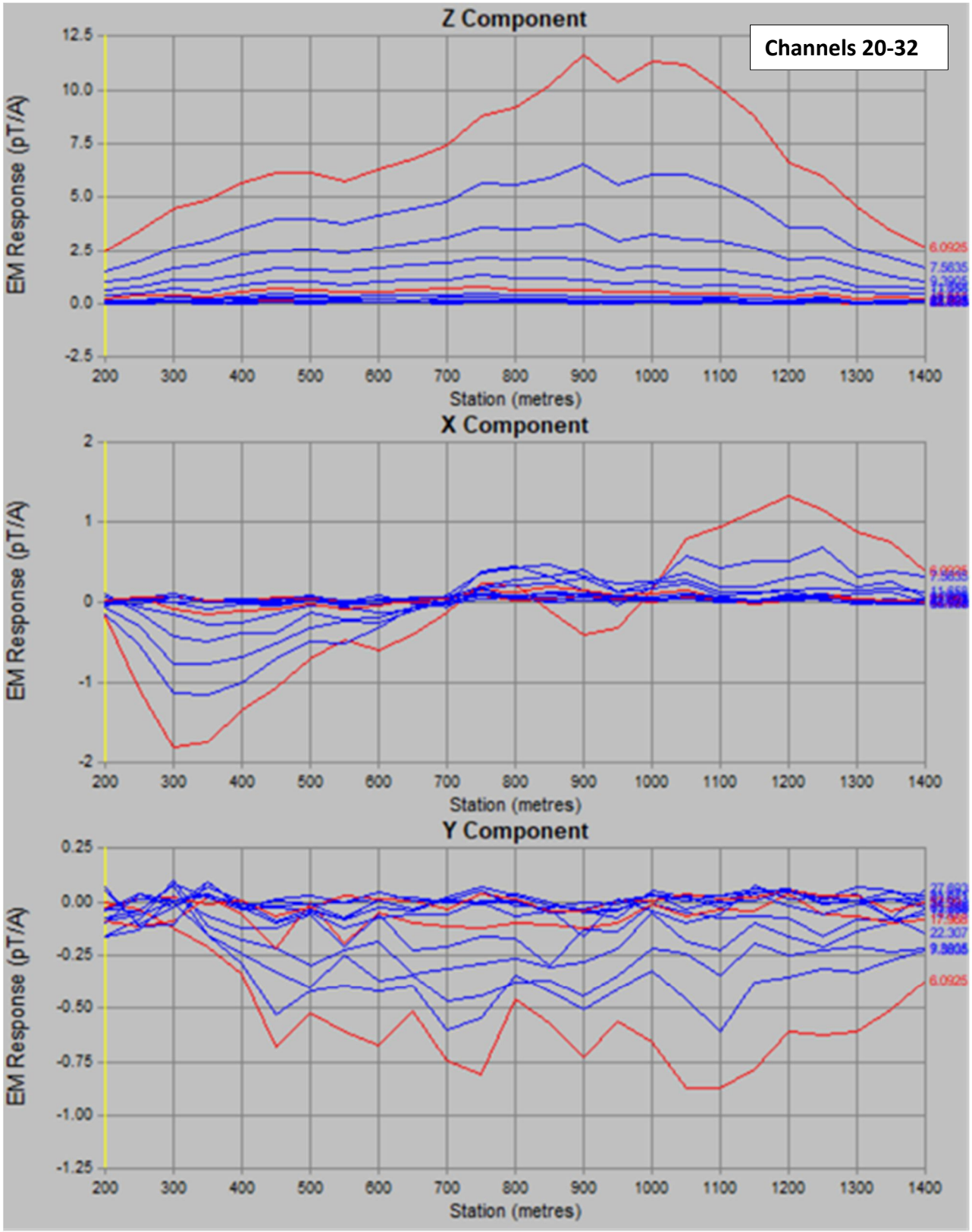

Figure 27. VTEM anomaly RW-02de Line 4 ground EM profiles (preliminary).

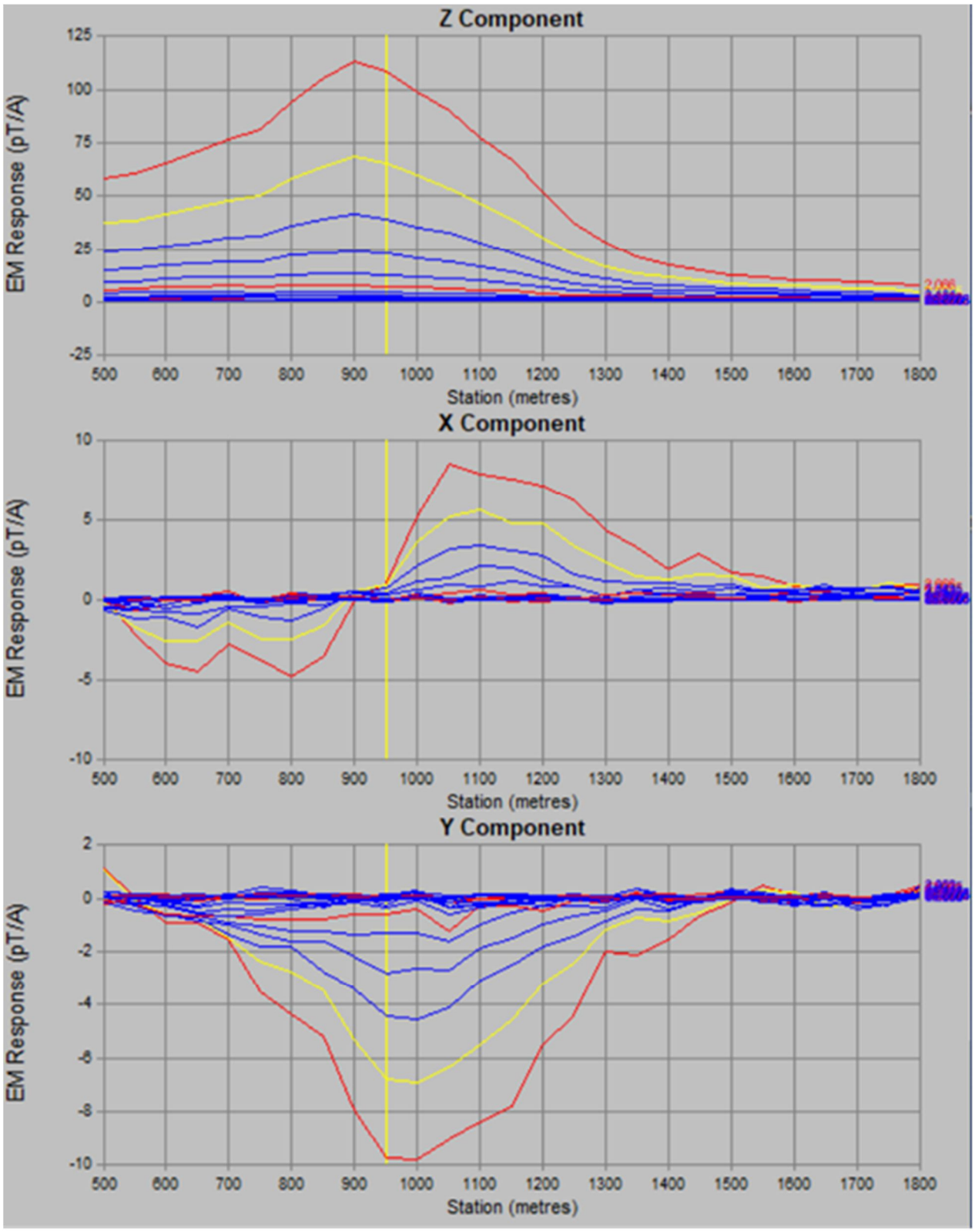

Figure 28. VTEM anomaly RW-02de Line 5 ground EM profiles (preliminary).

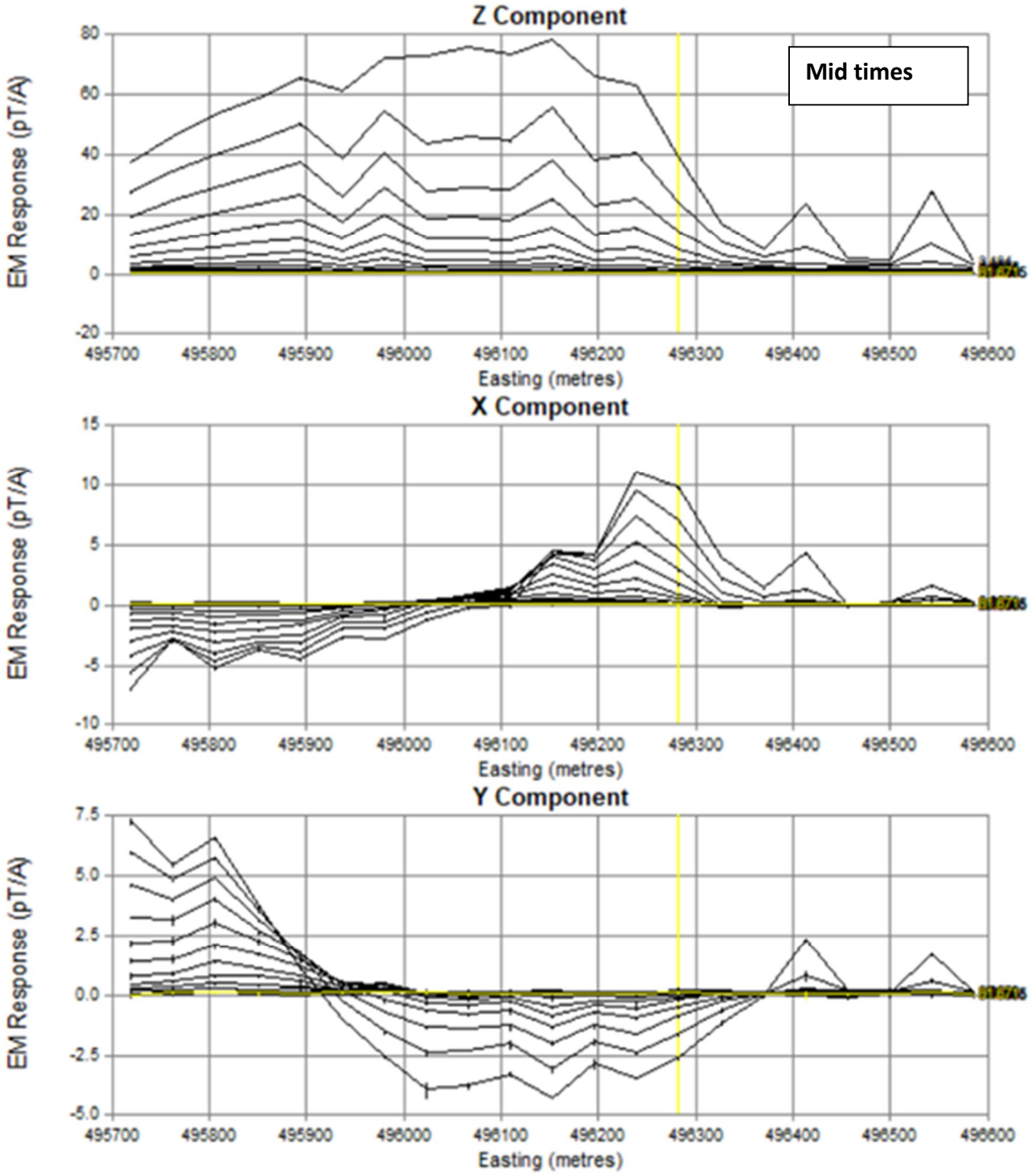

Figure 29. VTEM anomaly NFB-01 Line 4 ground EM profiles (preliminary).

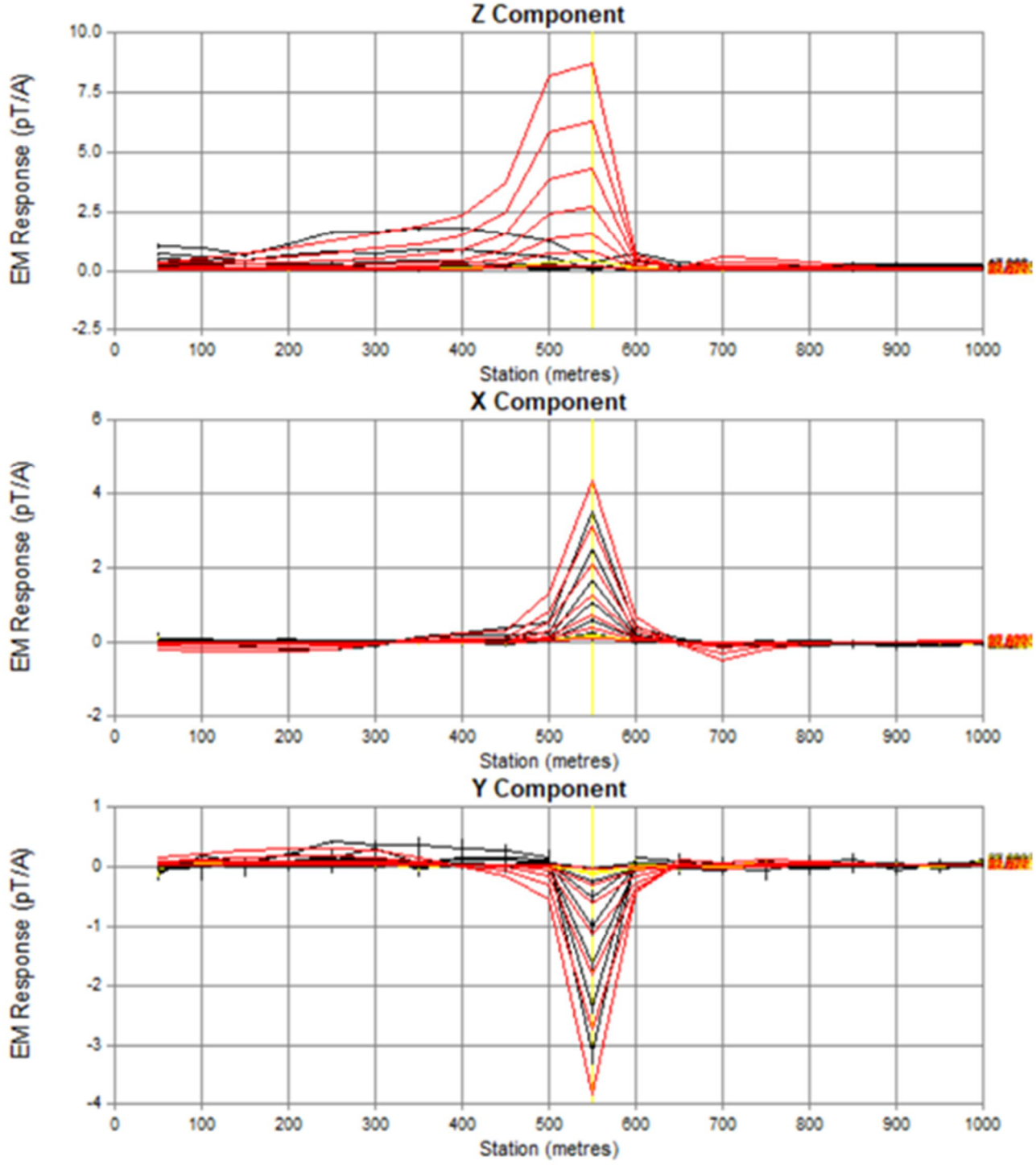

Figure 30. VTEM anomaly NFB-01 Line 3 ground EM profiles (preliminary).

7. CONCLUSIONS & RECOMMENDATIONS

Results of previous exploration, especially that of Poseidon, indicates the Amadeus Basin lithologies in EL32244 are prospective for base metals. Historically, substantial surface sampling has been followed up by limited drilling, with much of the geochemical anomalism unexplained.

Two VTEM surveys were flown on 300 metre line spacing over 280 square km covering a substantial part of the prospective areas as defined by previous explorers. The surveys delivered definitive outcomes; there is little conductive overburden and the data is good quality amenable to interpretation of discrete bedrock conductor anomalies. The lack of bedrock conductor anomalies over the areas of elevated or anomalous geochemistry from historical surface sampling suggests a disconnect between the geochemistry of the present day surface and the primary source of any mineralisation. No VTEM response is evident over the two recorded copper prospects at Ringwood and Waldo Pedlar.

Only nine anomalies were selected from the VTEM data, including two priority 1 anomalies, RW-01 and RW-03. RW-01 is a curious annular anomaly two km in diameter. Synthesis of the VTEM data with drillhole data collected by Poseidon and geophysical data suggests that a discrete granitic intrusive, probably post-dating Amadeus Basin sediments, is a possible source. This is significant as no granites are mapped anywhere in the wider region.

Priority 1 anomaly RW-03 is described as a good late-time response orthogonal to the geological trend.

Ground EM data were acquired over four VTEM anomalies. Preliminary interpretation indicates two are caused by shallow, shallow-dipping formational conductors or variations in the regolith. One requires further modelling, and one is a false 'altitude' anomaly. No ground EM data were acquired over the annular RW-01 as it is big enough to target with a drill rig.

In summary, the airborne and ground EM survey results are disappointing but have been very successful in effectively sterilising from further investigation a substantial part of the tenement area. Formal interpretation of the ground EM data needs to be completed to confirm the preliminary conclusions. It appears at least one very intriguing prospect at RW-01 has been defined. This should be drill-tested in the centre and on the margins of the interpreted source, and samples assayed for conventional elements and also energy metals, battery metals and REE's.

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