Green ML & Donaldson Holdings Pty Ltd

EL 22/2020 Lake River

Year 1 Annual and Final Report

(Coordinate System MGA Zone 55, Datum GDA94)

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1.0 Summary

EL 22/2020 is a two part 12km^2 licence over portions of the poorly understood ?Neoproterozoic volcanic/metamorphic association of basement rocks in the Lake River area of the Western Midlands. The EL covers two sites, at Billop and Little Den, with outcropping occurrences of turquoise and detrital gold, potential indicators of alteration and mineralisation associated with the basement geology.

The aim of the exploration program is to investigate the origin of the anomalous gold and turquoise and determine the potential for more significant gold mineralisation requiring more intensive company-scale exploration over the entire basement inlier.

Year 1 work consisted of prospect scale mapping at Little Den; soil, creek sediment and rock chip sampling and assaying from both sites; and modeling and interpretation of the aeromagnetic/radiometric survey which covered the EL as part of the 2021 Geoscience Australia/MRT Tiers survey.

All gold detected is clearly detrital and confined to surficial soil and shallow regolith within a restricted area of terraced flood plain abutting an abrupt bend in the Lake River. The origin of the gold is uncertain but the evidence discussed in this report leans towards a lag deposit of detrital gold liberated from a blanket of decomposed Stockers Tillite over part of the Little Den flat. Concentration of gold particles in a restricted zone probably occurred during Holocene alluvial flood events and gold became incorporated in the formation of the post ice age development of the current soil profile.

No conclusions have been reached which upgrade the prospectivity rating of the basement geology. No evidence of primary gold was detected in basement rocks, including quartz veins in shallow diggings developed by early prospectors and alluvial miners.

At Billop, patchy fracture lining and veinlet style turquoise has so far only been located in pelitic schist and phyllite on a topographically anomalous north-south trending ridge we optimistically call Turquoise Bank. Assays of the turquoise bearing rocks and associated quartz veins have not detected significant gold or copper and no visible sulphide was observed in rock chip samples.

It is recognized that much more needs to be done to fit the Lake River inlier rocks into Tasmania's geology and to explain the source of Little Den gold but most of the required work is beyond the resources available to the current EL holders and therefore the EL will be relinquished.

Expenditure for the Year totaled $26,900.

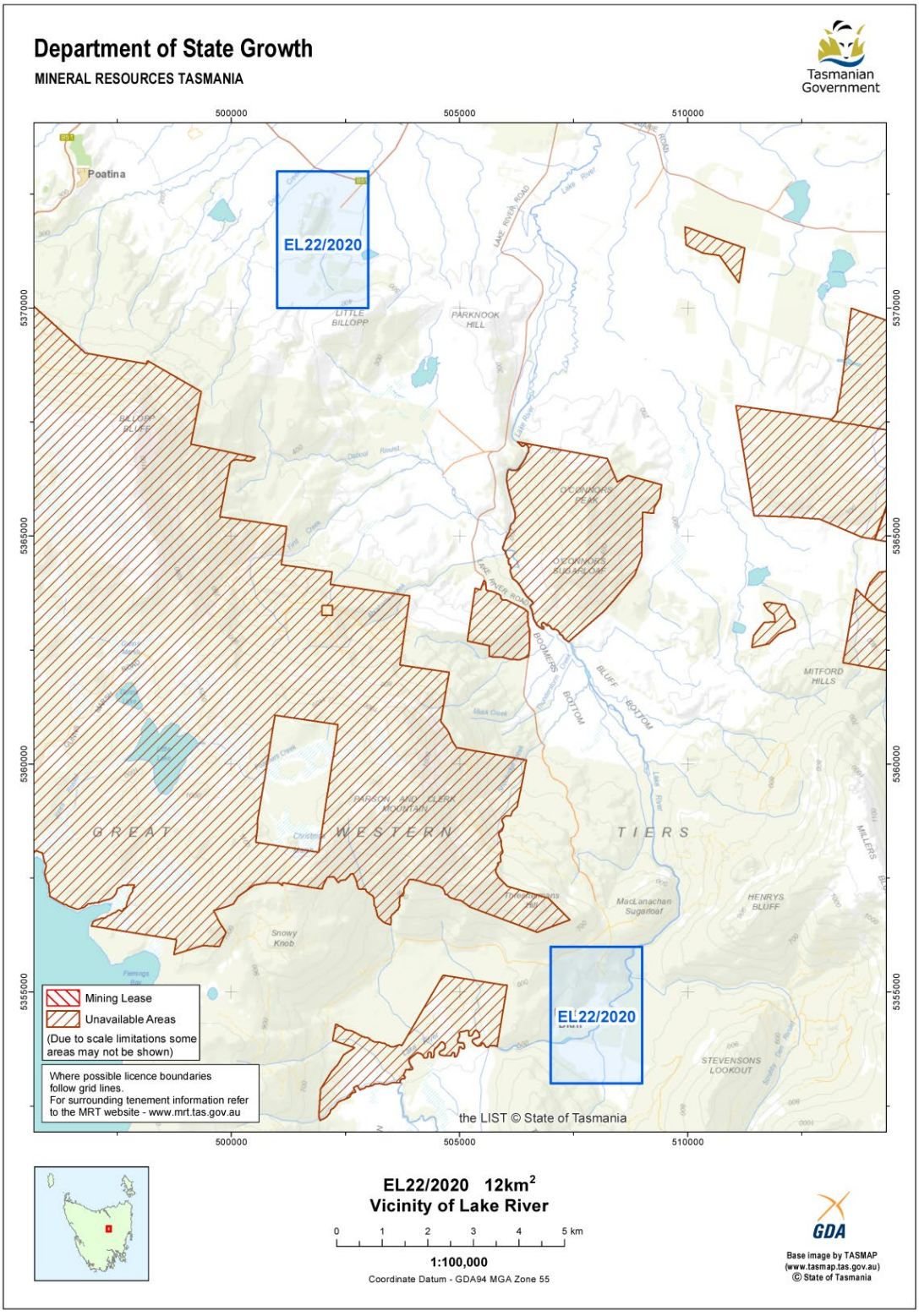

Figure 1. EL22/2020 Location Map

2.0 Introduction

2.1 Exploration Rationale

The syndicate of individuals operating this exploration program will apply traditional low cost manual prospecting methods, combined with modern science based ideas on the geological controls on the formation of gold deposits, to investigate the origin of the minor gold occurrence at Little Den and the minor turquoise occurrence at Billop*. The aim is to determine whether a realistic greenfields exploration target of interest to mainstream mining companies can be linked to the Lake River area regional geology.

**There is some uncertainty about the appropriate spelling of Billop/Billopp. In this report the spelling used for the farming property and the nearest topographic feature, ie Billop, is the used.*

2.2 Tenure and Ownership

EL 22/2020 Lake River is a 12km^2 licence consisting of two equal sized blocks, at Billop and Little Den, centred approximately 20 km apart (Figure 1). Land tenure (Figure 2) consists mainly of freehold farm land with minor State Forest and Conservation Area at the northern end of the Little Den block.

The EL is owned by Michael Green and the Donaldson family company Donaldson Holdings Pty Ltd, both parties being land owners covering most of the ground considered prospective within the EL. Additional private land considered prospective at Little Den is owned by three people; Robert Spencer, Roderick O'Connor and Michael Cresswell. Permission to explore on their land has been granted on mutually agreed terms.

All field exploration to date has been conducted and funded by a syndicate comprising the EL owners plus Henry (Harry) Stacpoole and Ken Morrison. Consulting geophysicist Phil Muir was engaged to down load and model data from the latest airborne magnetics/radiometrics survey flown by Geoscience Australia.

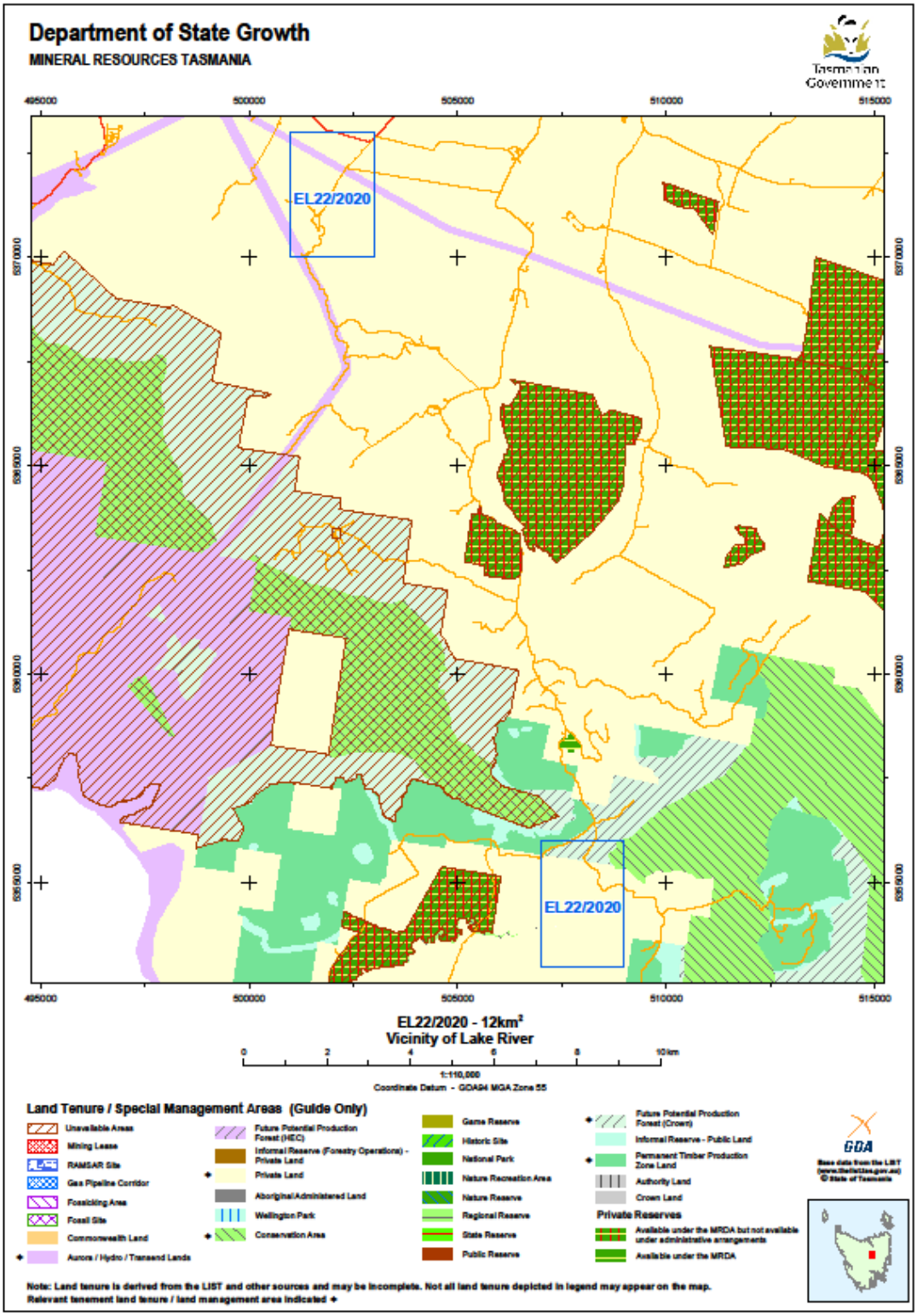

Figure 2. EL 22/2020 Land Tenure Map

2.3 Geology Review

The geology of the Lake River basement inlier is covered by published Department of Mines Geological Survey mapping on the Lake River 1:50,000 sheet (Matthews, 1974) and described in the Lake River Geological Survey Explanatory Report (Matthews, Everard and Clarke, 1996).

Figure 3 shows a portion of the MRT 1:250,000 digital map series geology over the area around EL 22/2020 (the Lake River 50K sheet has better colour codes but is not as clear to view at 100K scale). Fragments of the basement outcrop in windows through the widespread Jurassic dolerite, which is intruded through flat lying tillite and mudstone units of the Permo-Carboniferous basal Parmeener Supergroup. Partly lateritic surficial sediments within the southern margin of the Tertiary Longford Basin onlap the northern exposure of the older geology, including part of the basement inlier within the Billop block of the EL.

At the time of mapping the Lake River sheet the age of the basement volcanic-metamorphic complex was labeled “Eocambrian”, along with other units in western Tasmania which could not confidently be dated as either late Precambrian or early Cambrian. Since then, refined radiometric dating and more detailed stratigraphic and lithological correlations have resulted in the western Tasmanian Eocambrian units being confirmed as having a Neoproterozoic (late Precambrian) age. The Lake River rocks remain undated by modern techniques but this should change during 2022 if samples collected during the current exploration can be successfully dated at UTas.

The basement geology within EL 22/2020 consists of two main rock type suites; non magnetic phyllite, pelitic schist and pelitic slate, and magnetic porphyritic mafic volcanic schist. At Billop the entire basement outcrop is phyllite grading to pelitic slate (Figure 4). At Little Den a transitional boundary between volcanic schist northwest of the Lake River (Figure 5) and pelitic schist and slate southeast of the river, is exposed on the northwestern bank of the river. An earlier open spaced cleavage and a younger dominant slatey cleavage are preserved in all rock types. Deformed and planar quartz and quartz-calcite veining is common in both volcanic and pelitic schists.

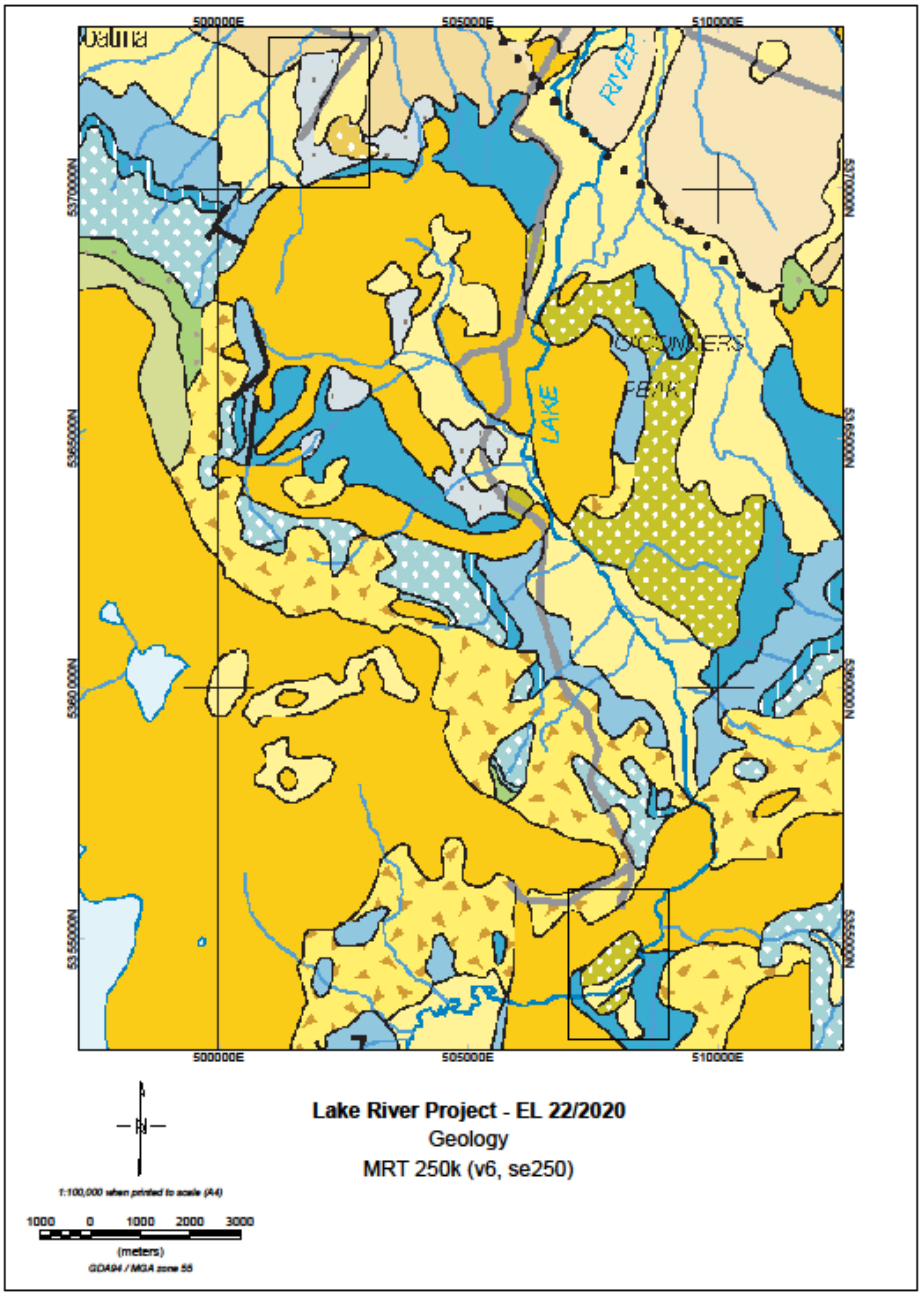

Figure 3. Regional Geology Map

Volcanic basement=olive with white dots, metamorphic basement=pale blue with brown dots, Permian sediments=various blues, Triassic sediments=greens, Jurassic dolerite=orange, Cenozoic sediments and talus=cream, fawn and brown.

Figure 4. Phyllite and Pelitic Slate Outcrop with Minor Turquoise, Billop Photo

Figure 5. Mafic Volcanic Schist Outcrop, Little Den Photo

2.4 List of Digital Files (sent to MRT separately)

Exploration work	Filename	File format
Report	EL222020_2022_07_30_Annual/Final Report_01	*pdf*
Surface sample location Surface sample geochemistry	EL222020_2022_07_30_SL_02 EL222020_2022_07_30_SG_03	xls xls
QA/QC geochemistry	EL222020_2022_07_30_ALS Assay certificates_04	.zip
File Verification Listing (this file)	EL222020_2022_07_30_Filelisting_05	xls

3.0 Review of Previous Work

Only two company reports located in the MRT archives describe mineral exploration on the Lake River area inlier basement geology. Some additional exploration for coal, oil and bauxite has occurred in the region on younger Permian-Tertiary geology.

In 1980 Billiton Australia acquired EL 65/80 which covered the entire area, including both parts of the current EL 22/2020 and the main area of inlier outcrop centred on O'Connors Peak. Billiton considered the inlier rocks to be Cambrian and aimed to explore the volcaniclastic facies for gold and base metals. Their field program of mapping, rock chip and stream sediment sampling was delayed due to prolonged and ultimately unsuccessful land access negotiations, especially over the O'Connors Peak area. Over half the EL was unavailable due to the entire area east of the Lake River being subject to a special type of tenure; the "Connorville Owners Consent Prospecting Area". Billiton carried out a one year good quality reconnaissance program of mapping and -80# and BLEG stream sediment geochemistry on the remaining available ground (Carter, 1985), which includes the Billop block of the current EL but not Little Den.

No compelling anomalies were detected and in combination with the land access issue, discouraged them from further work so they relinquished the EL in 1985.

Also in 1980, another group led by geologist Manuel Zapata-Camus formed an alliance with the Connorville owners and conducted a two year exploration program centred on O'Connors Peak, operated by Connorville Station Pty Ltd (Dickinson et al, 1982). Their focus was on nickel in the basement mafic volcanics, which they refer to as "greenstone". A program of stream sediment

and rock chip sampling plus four open hole percussion drill holes produced no encouraging results requiring further work (Dickinson et al, 1982). None of this work was on ground within the current EL.

Apart from a few creek sediment samples taken around Billop by Billiton (Carter, 1985), no record of modern exploration over the area of EL 20/2022 has been located. The gold occurrence at Little Den appears to have been known to prospectors since pre 1900 but the only documentation of prospecting and mining activity recorded is by Department of Mines inspectors and geologists, mainly in the 1930s (Scott, 1932, Nye and Blake, 1933 and Scott, 1935) and again in the 1960s (Threader, 1963). All these reports describe a small scale alluvial mining operation recovering detrital gold from a small area of surficial sediment, and hand dug trenches on quartz veins hosted in the basement volcanic and metamorphic rocks. Limited sampling of the veins by Scott (1932) produced one reported assay of quartz from a trench assaying approximately (converted to metric) 2.2 ppm gold and 8 ppm silver. Quartz sampling in the same area during the current program found no indication of gold.

4.0 Exploration Completed During the Reporting Period

The following work was conducted during the year ending 9 August 2022.

- Rock chip sampling and assaying of turquoise and quartz veins and fracture linings hosted in phyllite, around an existing farm road material pit at Billop (Figure 6, Table 1).
- Rock chip sampling and assaying of quartz veins in old prospecting trenches at Little Den (Figure 6, Table 1).
- Rock chip sampling a range of outcropping basement rock types in the district for possible zircon or apatite U-Pb dating at CODES, UTas (Figure 6, Table 1).
- Sampling, pan concentrate processing and assaying of soil, regolith and shallow weathered bedrock at Little Den (Figure 7, Tables 2 and 3).
- Outcrop fact mapping of the volcanic-metamorphic basement association at Little Den (Figures 8 and 9).
- Modeling and interpretation of aeromagnetic and radiometric data acquired by the 2021 joint Geoscience Australia/MRT Tiers survey (Figures 10-13).

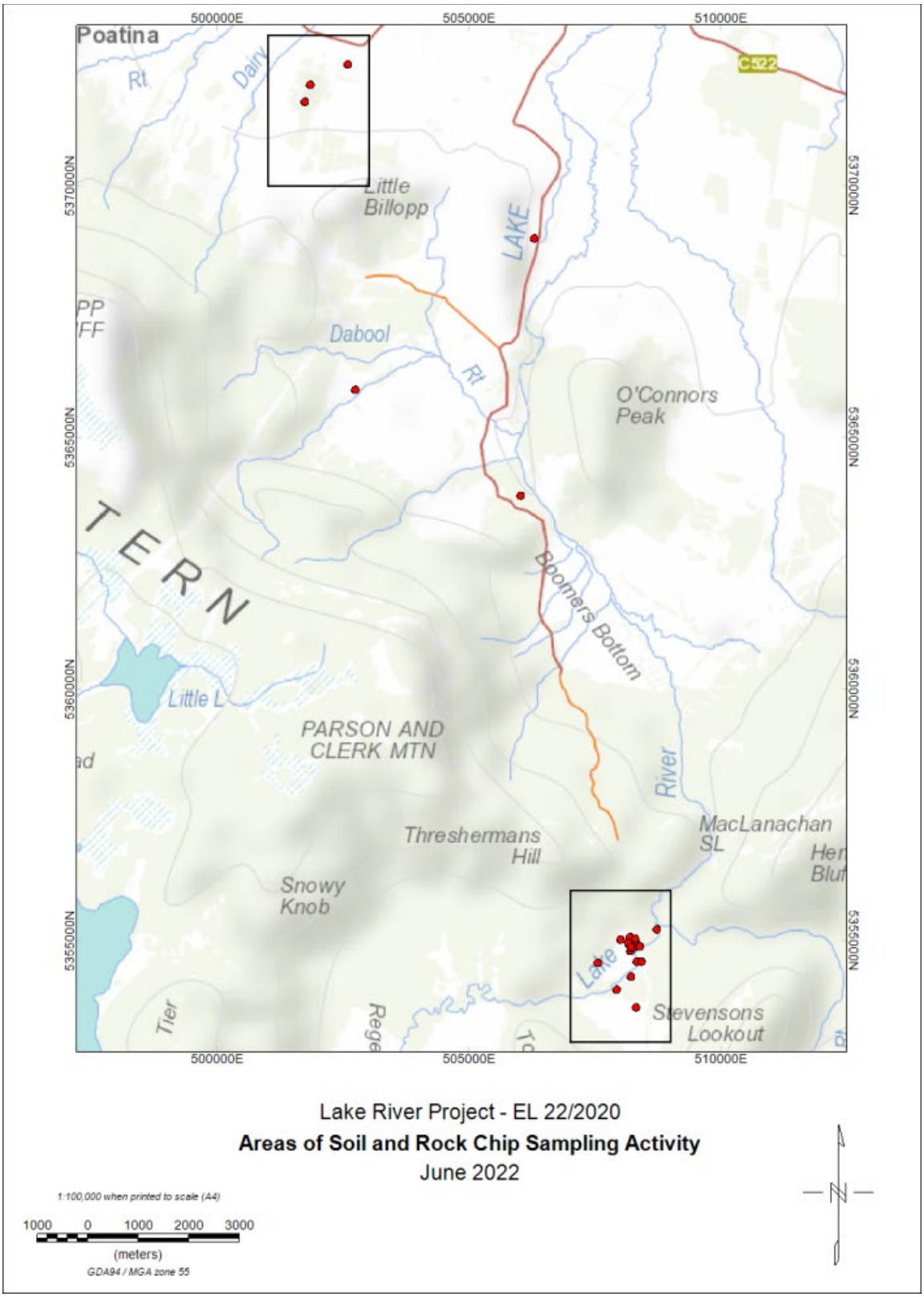

Figure 6. Sampling Activity Map

Table 1.

	EL 22/2020 Lake River Rock Chip and Quartz Vein Workings Register					
Sample ID	**Location**	**GDA East**	**North**	**Lithology**	**Auppm**	**Cuppm**
LRR001	north of Billop	502588	5372420	oxidised qtz, ironstone float in paddock	0.01	
LRR002	Billop gold hole	501846	5372010	oxidised vein quartz, wall rock schist	0.01	
LRR003	Billop gold hole	501846	5372010	oxidised vein quartz, wall rock schist	0.01	
LRR004	Billop gold hole	501846	5372010	oxidised vein quartz, wall rock schist	<0.01	
LRR005	Billop gravel pit	501736	5371676	qtz, turquoise veining, fracture fill	0.02	
LRR006	Billop gravel pit	501736	5371676	qtz, turquoise veining, fracture fill	<0.01	
LRR007	Billop gravel pit	501736	5371676	qtz veining in wall rocks	<0.01	
LRR008	Pit#3 rehab	508214	5354883	qtz fragment composite from basement	0.02	
LRR009	Faulkners Adit	507551	5354562	composite oxidised , pitted vein qtz	<0.01	
LRR010	Faulkners Adit	507551	5354562	composite oxidised , pitted vein qtz	0.04	
LRR011	Faulkners Adit	507551	5354562	composite oxidised , pitted vein qtz	0.06	
LRR012	Faulkners Adit	507551	5354562	composite oxidised , pitted vein qtz	<0.01	
LRR013	Faulkners Adit	507551	5354562	composite oxidised , pitted vein qtz	0.01	
LRR014	Lake River	508724	5355232	oxidised, pitted vein qtz +malachite float	0.02	
LRR015	First Creek	502738	5365953	metabasalt+Cu sulphides, Qtz-calc veining	0.03	145
LRR016	First Creek	502738	5365953	metabasalt+Cu sulphides, Qtz-calc veining	0.02	258
LRR017	First Creek	502738	5365953	metabasalt+Cu sulphides, Qtz-calc veining	0.03	258
TPR001	Billop gravel pit	501736	5371676	composite turquoise rich schist fragments	n/a	1260
LRR018	O'Flahertys Adit	507926	5354034	composite oxidised , pitted vein qtz	0.02	
LRR019	O'Flahertys Adit	507926	5354034	composite oxidised , pitted vein qtz	<0.01	
LRR020	O'Flahertys Adit	507926	5354034	composite oxidised , pitted vein qtz	0.01	
LRR021	O'Flahertys Adit	507926	5354034	composite oxidised , pitted vein qtz	0.02	
LRR022	O'Flahertys Adit	507926	5354034	composite oxidised , pitted vein qtz	0.02	
LRZ-1	Glen	502740	5365950	alterred metabasalt , traces of sulphide	Dating samples	
LRZ-2	Connorville	506019	5363848	metabasalt, traces of sulphide	Dating samples	
LRZ-3	Parknook	506291	5368959	schistose felsic volcanic	Dating samples	
		507926	5354034	historic quartz vein prospect-O'Flaherties		
		507551	5354559	historic quartz vein prospect-Faulkners		
		507951	5355277	historic quartz vein prospect-Unnamed		
		507983	5355226	historic quartz vein prospect-Unnamed		
		508051	5355205	historic quartz vein prospect-Unnamed		

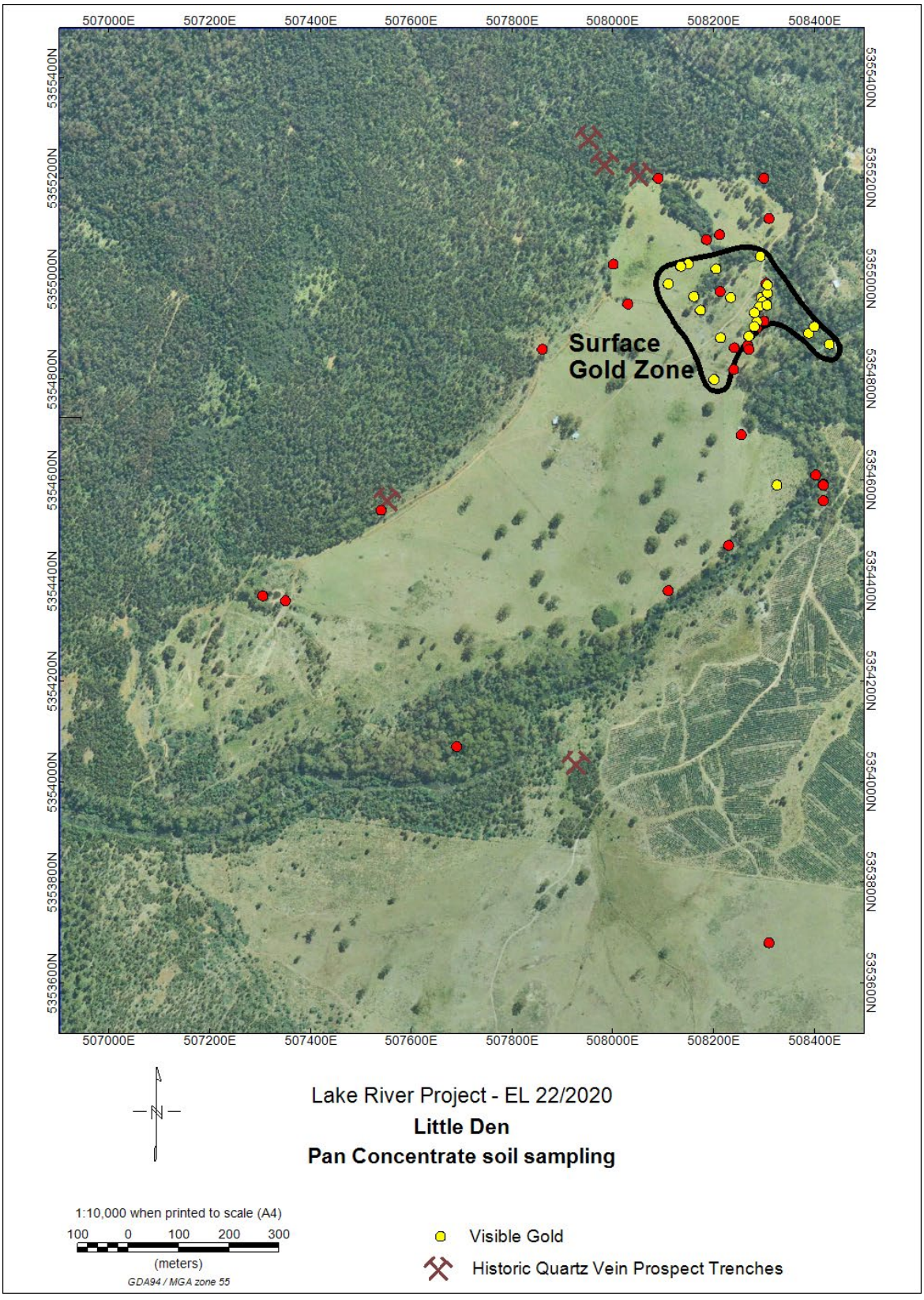

Figure 7. Pan Concentrate Sample Sites Airphoto

Table 2.

	Register of Pan Concentrate Soil Sampling				
MGA East	**North**	**Comments**		**Surface samples**	
508326	5354590	Pit 6 visible gold at surface	508293	5355045	visible gold
508201	5354800	Pit 5 visible gold at surface	508418	5354592	
508213	5354975	Pit 4	508389	5354892	visible gold
508214	5354883	Pit 3 visible gold at surface	508300	5355200	
508001	5355029	Pit 2	508310	5355120	
508212	5355088	Pit 1	508150	5355030	visible gold
		Surface samples	507860	5354860	
508310	5353680		507690	5354070	
508295	5354963	visible gold	507540	5354540	
508174	5354938	visible gold	508418	5354590	
508298	5354955	visible gold	508230	5354470	
508291	5354945	visible gold	508110	5354380	
508307	5354972	visible gold	508403	5354610	
508307	5354988	visible gold	508418	5354559	
508234	5354963	visible gold	508090	5355200	
508306	5354948	visible gold	508205	5355020	visible gold
508300	5354916		508135	5355025	visible gold
508304	5354991		508110	5354990	visible gold
508286	5354915	visible gold	508030	5354950	
508281	5354933	visible gold	508400	5354905	visible gold
508286	5354903		508430	5354870	visible gold
508270	5354886	visible gold	508270	5354860	
508268	5354868		508240	5354820	
508281	5354905	visible gold	508255	5354690	
508186	5355078		507305	5354370	
508161	5354965	visible gold	507350	5354360	
508241	5354863				

Table 3.

			Little Den Pan Concentrate Pit Results					
			(all results represent total gold from 20 litre parent samples)					
Sample ID	**East**	**North**	**Pit**	**Gold ppm**	**Comment**	**pan con g**	**Gold ppm ***	
LRPC001	508326	5354590	#6 surface	**6.62**	manual sample scraped at surface	35.06	**2.5**	
LRPC002	508326	5354590	#6 deep	**0.01**	deep alluvials no bedrock reached	34.51	**0**	
LRPC003	508201	5354800	#5 surface	**0.937**	apparent previous mining area	168	**1.5**	
LRPC004	508201	5354800	#5 deep	**0.248**	old schist bedrock- vertical contamination noted	73.41	**0.2**	
LRPC005	508213	5354975	#4 surface	**0.178**	some vein quartz at surface	89.02	**0.15**	
LRPC006	508213	5354975	#4 deep	**0.01**	old volcanics bedrock	89.22	**0**	
LRPC007	508214	5354883	#3 surface	**23.43**	abundant broken vein quartz	95.63	**23**	
LRPC008	508214	5354883	#3 deep	**2.146**	old volcanics bedrock-vertical contamination noted	97.74	**2**	
LRPC009	508001	5355029	#2 surface	**0.028**	young dolerite talus	186.1	**0.1**	
LRPC010	508001	5355029	#2 deep	**0.01**	old volcanics bedrock	156	**0**	
LRPC011	508212	5354291	#1 surface	**0.01**	mixed old volcanics + young dolerite float/talus	75.48	**0**	
LRPC012	508212	5354291	#1 deep	**0.01**	old volcanics bedrock	54.36	**0**	
					*** gold values adjusted to**			
					a uniform 100g sample weight			

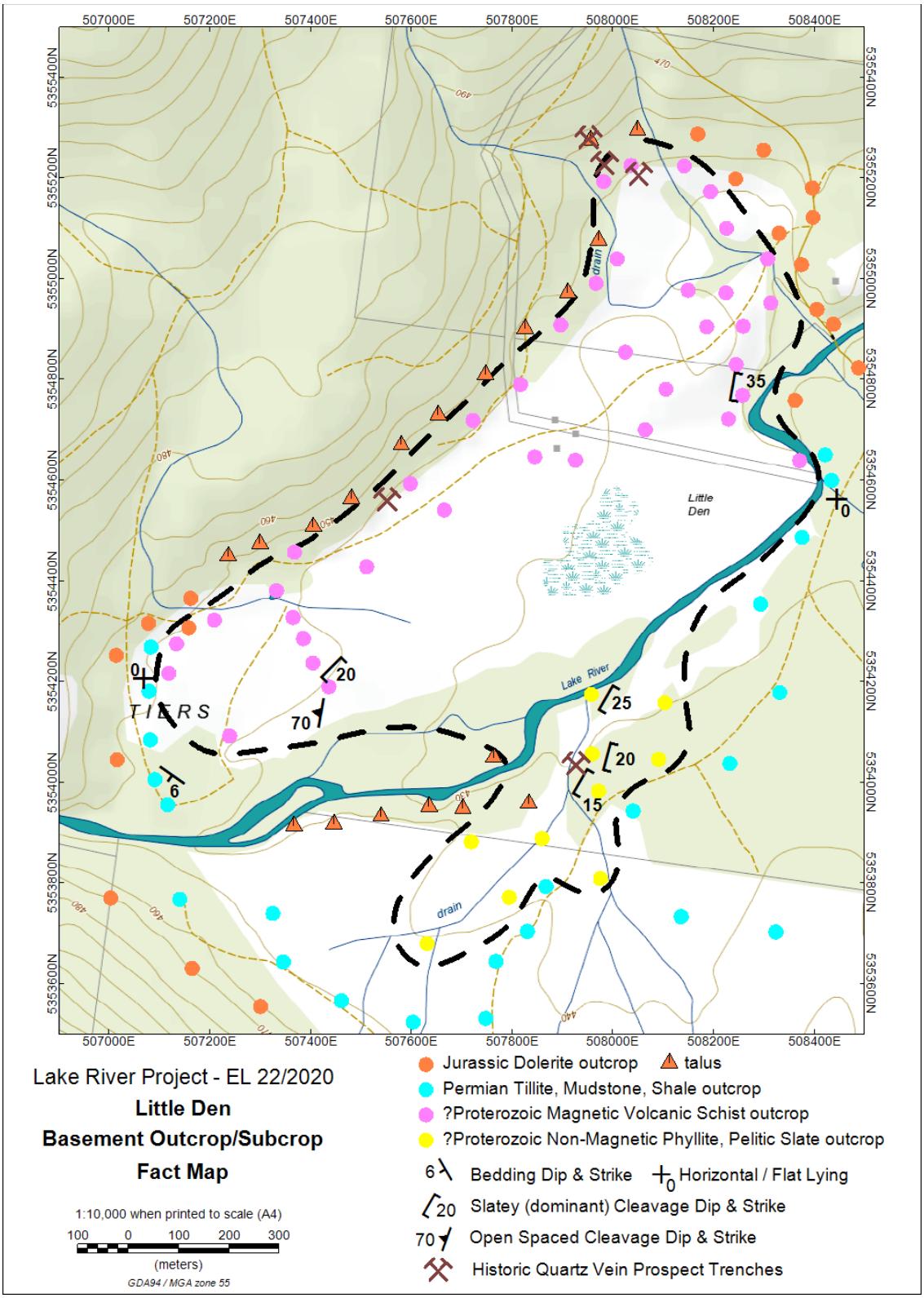

Figure 8. Outcrop Geology Map

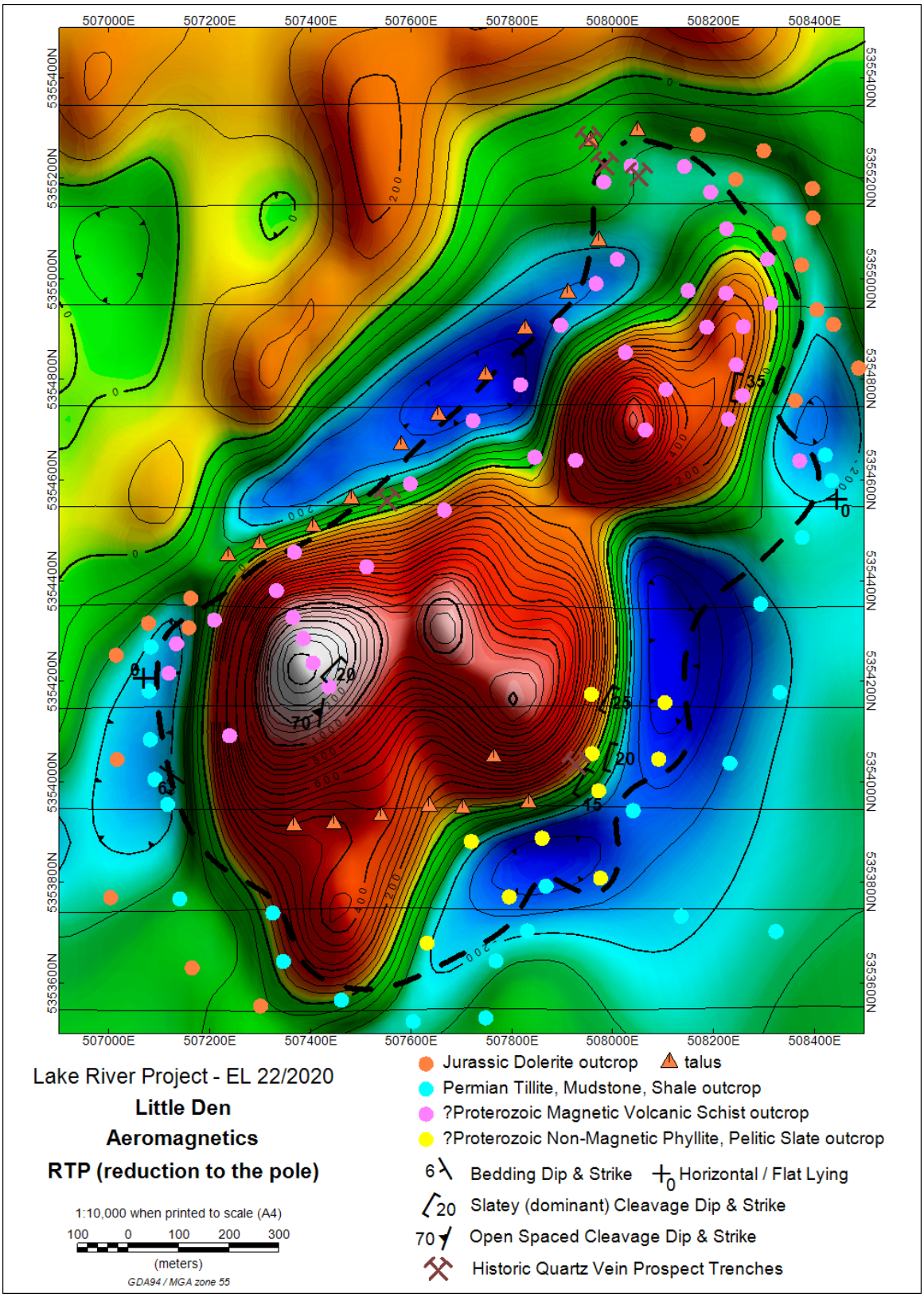

Figure 9. RTP Aeromagnetics Image Draped on Outcrop Geology Map

5.0 Discussion of Results

It would have been normal practice for the early prospectors and alluvial miners to search for quartz veins as the likely source of detrital gold they were panning and at Little Den there are several hand dug trench, pit and very small adit exploration workings (Figures 7 and 8). None show evidence of development and production and the only reference to quartz vein hosted gold encountered is from Scott (1932) who reports a sample taken from a trench on the eastern side of the Lake River (almost certainly O'Flahertys workings due to the slate host rock described) assaying 2.2 g/t gold. Some of the early diggings have likely been covered by plantation and pasture development but there is still sufficient material to sample around the three main areas of hard rock workings described in the 1930s reports.

Rock chip composite samples, hand picked with iron oxide in pits and vugs, were taken from these workings and from quartz enrichment exposed in outcrop and shallow pits dug during current sampling (Table 1). The highest gold values were 60 ppb and 40 ppb from Faulkners workings, hosted in mafic volcanics on the northwestern side in Little Den flat (Figure 8), and most samples returning close to the 10 ppb detection level. At Billop, sampling quartz and turquoise veins returned a highest gold value of 20 ppb. Although the Faulkner results are elevated, they are not considered especially anomalous for the range of trace gold concentrations encountered in Devonian (the veins are conformable with the dominant slatey cleavage, as discussed below in this report) orogenic quartz veins around Tasmania.

Much of the prospecting work in the current year involved washing pan concentrates from soil, regolith, creek sediments and from several shallow pits dug to test the reports that all gold found by the early miners was confined to the surface 30 cm or so. This was confirmed by the current work (Tables 2 and 3) as was the early observation that the surface gold appeared restricted to a small area of alluvial terrace adjacent to a sharp bend in the Lake River at the head of a gorge cut into Jurassic dolerite (Figures 7 and 8). Although consistent shows of visible gold can still be panned in this restricted area, concentrations are very low as we are sampling only the residual material left after mining and no new areas of significant mineralisation were discovered.

Figure 7 shows the location of 2 litre surface soil pan concentrate samples panned down carefully to a dominantly heavy mineral concentrate consisting mainly of magnetic and non magnetic black sand (probably magnetite and ilmenite) and minor very fine fawn coloured ?zircon. Visible gold in most cases consisted of only one or two specks per dish. Many (more than 100) additional sites across Little Den flat were sampled and panned by syndicate members at various times but the sample sizes varied greatly and GPS locations were not recorded. However the presence of visible gold was reported and apart from very rare single speck outliers, the zone shown on Figure 7 contains all detected gold.

A large number of recovered gold grains were examined under hand lens and without exception they show a primitive hackly shape and surface texture, which is at odds with the smooth and flattened particles characteristic of detrital gold transported and concentrated from alluvial gravel and sand. The gold zone on Figure 7 is entirely underlain by shallow, magnetic, mafic volcanic schist, which was initially considered a likely gold source but the lack of gold in the deeper regolith exposed by pit sampling, combined with the absence of gold elsewhere on Little Den flat, which is entirely underlain by mafic volcanics, does not support that idea.

The Little Den flat is covered with a blanket of dolerite talus, quartzite pebbles and conglomerate boulders derived from the Permian-Carboniferous Stockers Tillite, and alluvial terrace gravels closer to the current river. The pink hematitic quartzite pebble boulders are litho correlates of Owen Conglomerate, a major rock unit in Western Tasmania (and possibly elsewhere in parts of the former Gondwana continent). The cover thickens to the south and southeast and overall, good exposures of in situ basement outcrop are scarce (Figure 8). On the southeastern side of the Lake River most of the basement is non magnetic pelite; slate, phyllite and schist of sedimentary origin. A transitional facies change from magnetic volcanics to non magnetic pelite is exposed in the western bank of the river at 508,256E, 5,354,738N, indicating that the rock types are synchronous and probably formed in a sea floor environment, pre deformation.

Both the volcanic and pelitic schists exhibit two cleavages; a dominant slatey cleavage overprinting an earlier open spaced cleavage which forms a crenulation fabric in some exposures of phyllite. The slatey cleavage consistently dips to southeast (Figure 8) and is probably a Devonian Tabberabberan deformation. Where quartz veins in the early workings are well enough exposed, they appear conformable to this dominant cleavage. Only one decent measurement of the early cleavage has been made so far, on the best outcropping occurrence of the volcanic schist, at 507,409E, 5,354,201N, where the early foliation dips steeply west (Figure 8).

Due to the thickening surficial cover in the southeast of Little Den it was not clear from the mapping how far the basement subcrop extended across the river before being overlain by dolerite or Permian cover, or where the contact between volcanic and metamorphic basement rocks occurred under shallow cover. Figure 9 shows the close correlation between the magnetic volcanics and a draped RTP magnetic image modeled from the 2021 MRT survey flown by Geoscience Australia. The aeromagnetics allows a more accurate limit of the volcanic basement to be plotted. The extent of the metamorphic basement is limited by Permian outcrop and any magnetic signature it may have is masked by the normal halo of low response around the strong magnetic high (Figure 9).

Some of the bigger scale structures controlling geology and topography are well illustrated by DTM, magnetic and radiometric images generated from data derived from the 2021 survey (Figures 10-13). Of particular interest in attempting to explain the origin of Little Den gold is the

roughly circular 8km diameter feature extending south from the southern edge of the Billop EL block. This feature is well shown on the magnetics and the digital terrain model, and has subtle expression on the thorium radiometric image and the regional geology map (Figure 3), which shows the feature as a zone of Jurassic dolerite with patchy roof remnants of Permian sediments preserved. The southern edge of the feature appears on the DTM image (Figure 10) to be chopped off by one of two major west-northwest trending linear structure (the other one forming the head of the dolerite gorge on the Lake River and controlling the position of Scrubby Den Rivulet near Little Den). If a similar feature has locally uplifted basement at Little Den and there was only Permian cover, and no dolerite, overlying basement, it could account for the distribution of lag pebbles and boulders derived from the weathering of the tillite. It also adds support to a tillite source for the detrital gold. The good correlation between mapped tillite and thorium radiometrics (Figure 13) also can be interpreted as supporting a heavy mineral component to the tillite, presumably monazite and zircon, which along with any gold carried in that part of the glacial sediment, would be liberated and move vertically downwards as the tillite weathered, to eventually contributing to a lag deposit on basement.

The DTM (Figure 10) also shows two parallel north-northeast trending linears which appear to control the location and form of O'Connors Peak and the turquoise hosted phyllite ridge at Billop.

The RTP magnetic image (Figure 12) clearly shows the striking contrast between the highly magnetic volcanic basement at Little Den and the fairly bland magnetic signature of the main body of volcanic basement rocks centred on O'Connors Peak. Unfortunately no support for this unique lithology at Little Den being the gold source has been generated by the field work so far.

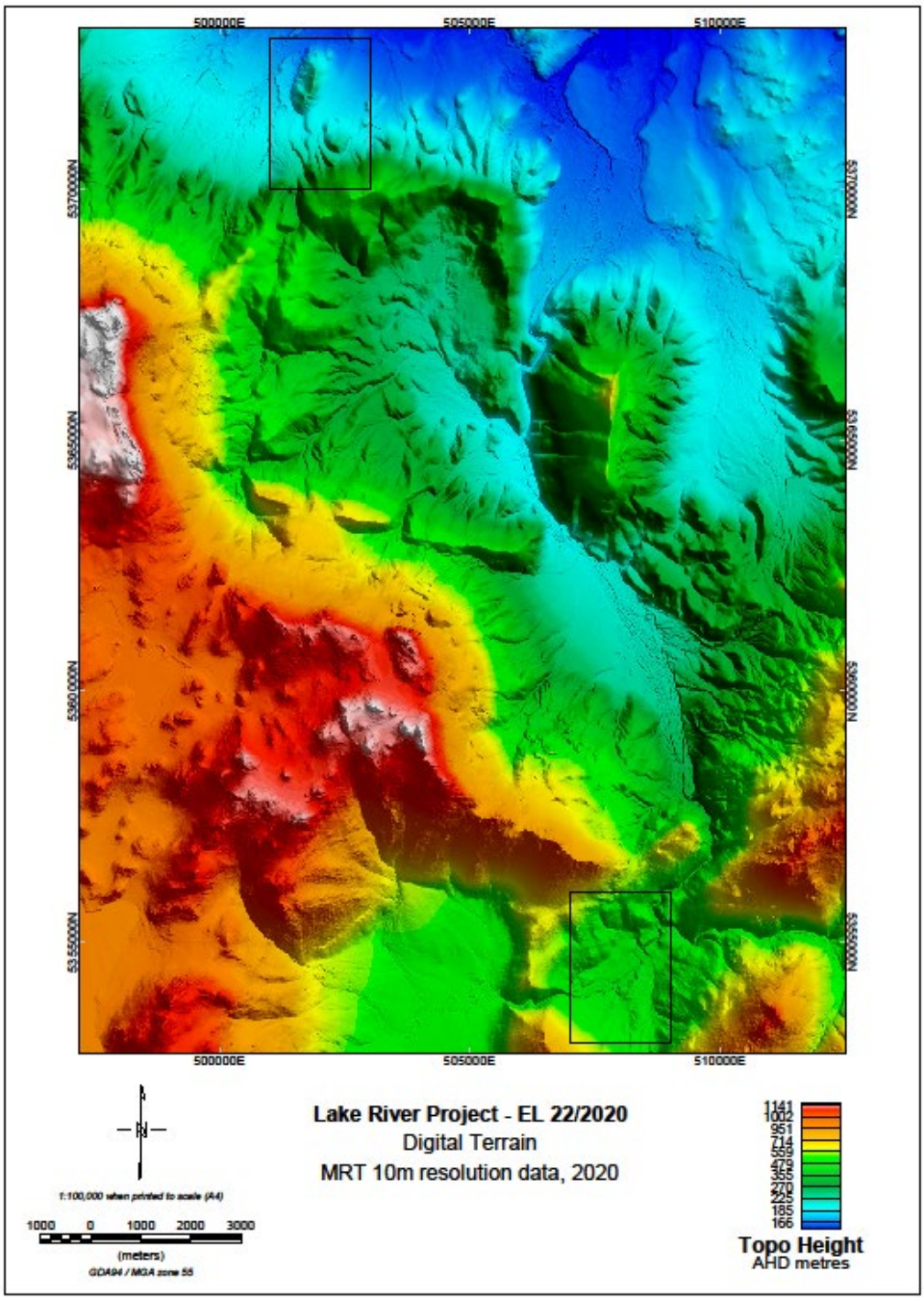

Figure 10. Digital Terrain Image

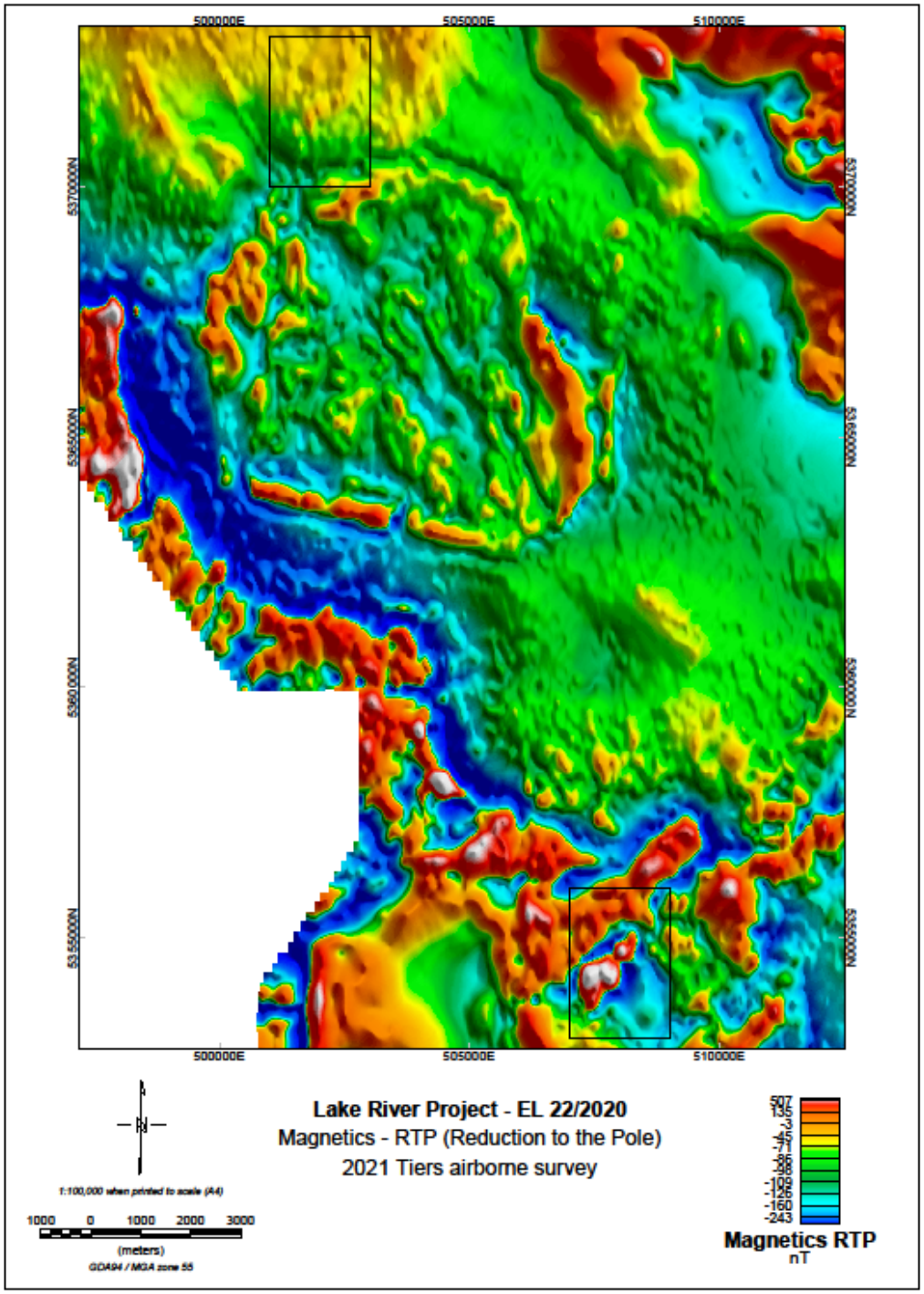

Figure 11. Aeromagnetics Reduced to Pole Image

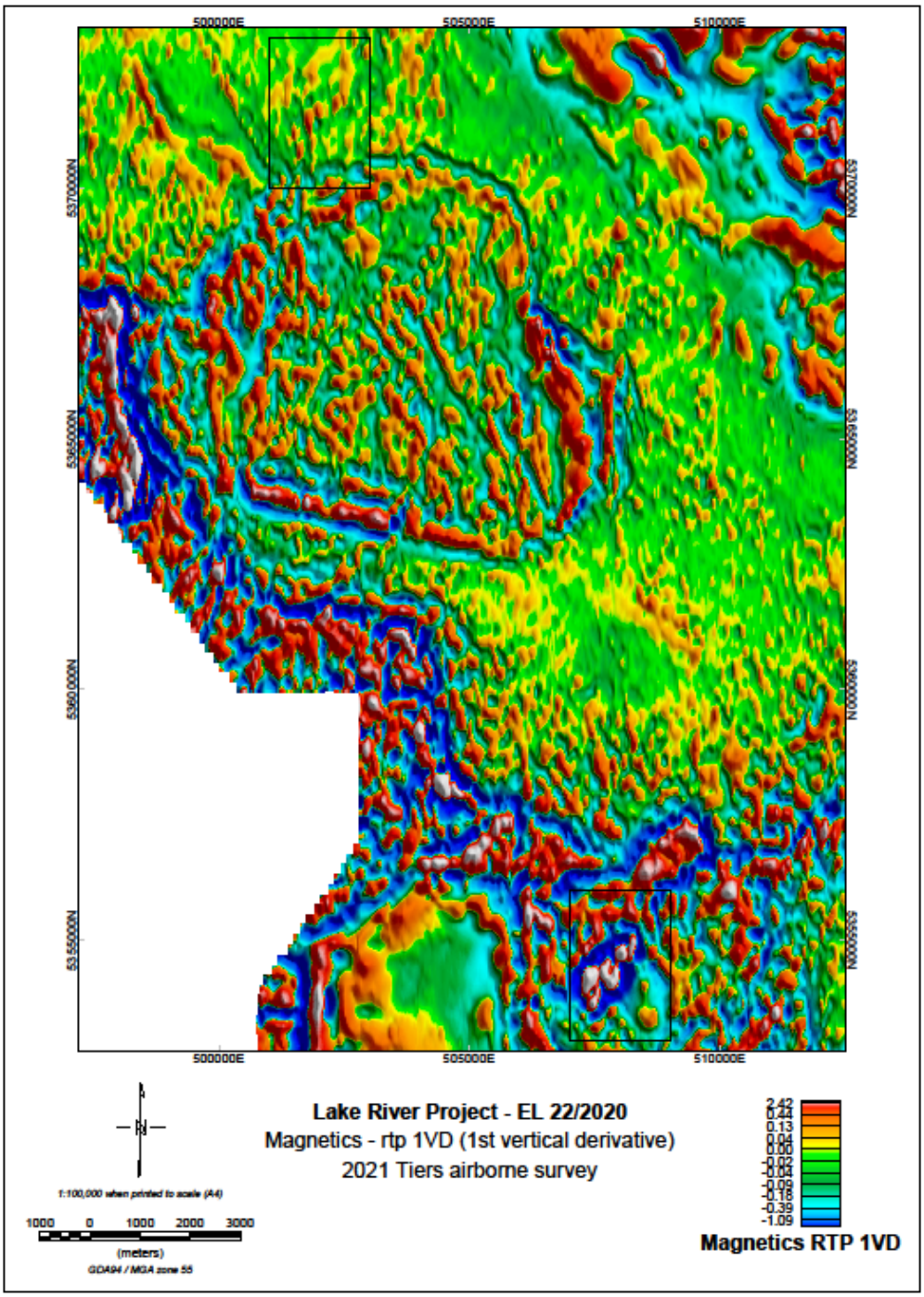

Figure 12. Aeromagnetics 1st Vertical Derivative Image

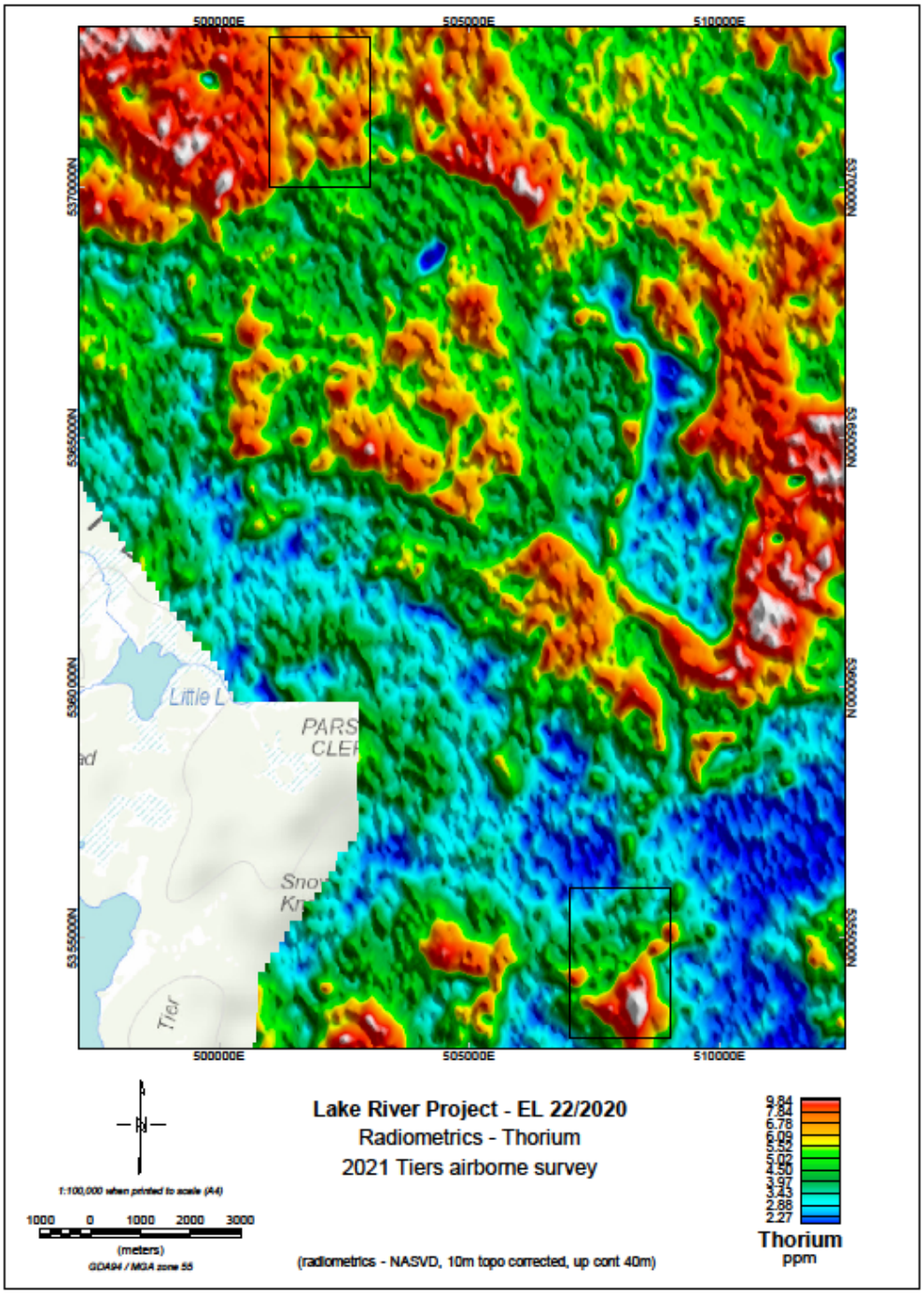

Figure 13. Thorium Radiometrics Image

6.0 Conclusions and Future Exploration

No conclusions have been reached which upgrade the prospectivity of the basement geology. No evidence of primary gold was detected in basement rocks, including basement hosted quartz veins in shallow diggings developed by early prospectors at Little Den, and veining and fracture lining turquoise +/-quartz in the Billop phyllites.

All gold detected is clearly detrital but the particles have a primitive texture, suggesting liberation from their primary source without significant alluvial transport. No smoothed or flattened particles were noted despite hundreds examined by hand lens. No composite gold-quartz or gold-rock fragment particles were detected but gold is always associated with rounded quartz/quartzite pebbles and occasional boulders of pink quartz pebble conglomerate confined to surficial soil and shallow regolith overlying volcanic schist basement.

The primary source of the known gold is uncertain but the evidence leans towards detrital gold liberated from a blanket of decomposed Stockers Tillite over part of the Little Den flat. The concept implies a residual lag deposit of quartz pebbles and heavy minerals including gold, remaining on the surface as the mudstone/wacke matrix of the tillite is weathered and dispersed by overbank flood water winnowing. Concentration of surficial gold particles in a restricted zone coincides with terrace sediments deposited adjacent to a prominent right angle bend in the Lake River which appears to be controlled by outcropping Jurassic dolerite. The gold concentration probably occurred during Holocene alluvial flood plain low energy winnowing, with gold becoming incorporated in the formation of the post ice age development of the current soil profile.

At Billop, patchy fracture lining and veinlet style turquoise has so far only been located in pelitic schist and phyllite on a topographically anomalous north-south trending ridge we optimistically call Turquoise Bank. Assays of the turquoise bearing rocks and associated quartz veins have not detected significant gold or copper and nor has any visible sulphide been identified.

It is recognized that much more needs to be done to fit the Lake River inlier rocks into Tasmania's geology and to prove the source of Little Den gold but most of the required work is beyond the resources available to the current EL holders. Samples of a variety of inlier rocks have been sent to Dr Sebastian Meffre, at CODES, UTas for possible dating and results at the time of writing are that crystals of zircon and apatite have been recovered from volcaniclastic sandstone and basalt respectively and are scheduled for U-Pb dating.

If the Little Den gold was sourced from Stockers Tillite there may be scope for a regional greenfields exploration play based on the quartz pebble conglomerate (Witwatersrand) deposit model but this is also outside the scope of the current project and therefore EL 22/2020 is to be relinquished at the August 9, 2022 anniversary.

7.0 Environmental Management

All mapping and sampling was done with the approval of the relevant landowners. Soil sample sites and pits caused only minor temporary ground disturbance and all sites were rehabilitated after sampling. No consumables or any form of litter remained on the ground and all tools used were cleaned prior to sampling.

No vegetation, native animals or farm livestock were affected by the work and land owner requirements regarding locked gates, no-go times (related to the deer hunting season), fire bans and wood cutting bans were strictly adhered to.

Landowners were kept informed of field activities and all sampling involving the digging of shallow pits was located on land owned by the EL holders and colleagues.

8.0 Expenditure

Mapping and Prospecting Geology	$7,600
Sampling and Sample Processing	$8,900
Assays (ALS and BRL)	$2,300
Geophysical Data and Modeling	$2,400
Land Access Negotiations	$2,100
Reporting, Accommodation and Office Costs	$3,600
(all rounded to nearest $100)	
TOTAL	**$26,900**

9.0 References

Carter, D. N. 1985. EL 65/80 O'Connors Peak Relinquishment Report, Billiton Australia, MRT report 85-2462.

Dickinson, D. R., Zapata-Camus, M. and O Connor, R. 1982. Compilation of Reports on Exploration Conducted in the Connorville Owners Consent Prospecting Area, 1980-1982, Connorville Station Pty Ltd. MRT report 82-1877.

Matthews, W. L. 1974. Lake River Geological Atlas 1:50,000 Series 8314S, Department of Mines Tasmania.

Matthews, W. L., Everard, J. L. and Clarke, M. J. 1996. Lake River Geological Survey Explanatory Report, Mineral Resources Tasmania.

Nye, P. B. and Blake, F. 1933. Report on the Lake River Goldfield (Western Tiers), Unpublished Report Department of Mines Tasmania 1933:115-124.

Scott, J. B. 1932. Recent Gold Discovery on Western Tiers, Unpublished Report Department of Mines Tasmania UR 1932a/14-16.

Scott, J. B. 1935. Lake River Gold Field, Unpublished Report Department of Mines Tasmania UR 195/81.

Threader, V. M. 1963. Little Den Goldfield, Technical Report Department of Mines Tasmania TR7-25-27.