



MT TODD EXPLORATION PROJECT

NORTHERN TERRITORY AUSTRALIA

PARTIAL FINAL REPORT: EL32004

Period: 21st November 2019 to 22nd June 2023

Title Holder:	Vista Gold Australia Pty Ltd
Project Operator:	Vista Gold Australia Pty Ltd
Title:	EL32004
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Report Date:	12 th July 2023
Target Commodity:	Gold
Datum/Zone:	GDA94 (MGA94, Zone 52)
1:250 000 Map Sheet:	Fergusson River SD5212
1:100 000 Map Sheet:	Fergusson River 5269
Reduction Relinquished:	21 Blocks 67.83 km ²
Reduction Retained:	33 Blocks 95.29 km ²

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Vista Gold Australia, Mt Todd Library

ABSTRACT

This Partial Final Report describes work completed on the twenty-one relinquished blocks of EL32004 from 21st November 2019 to 22nd June 2023. This title is part of the Mt Todd Exploration Project, about 42 km north of Katherine and 260 km southeast of Darwin.

Apart from acquiring an Aboriginal Areas Protection Authority (AAPA) certificate and literature reviews, no exploration activities were conducted on the relinquished portion of the tenement. This was due to the potential of discovering any gold mineralisation was very unlikely within the Palaeozoic limestones, sandstones, and siltstones of the Daly River Group and the Cainozoic cover.

The main reason why EL32004 was partially cancelled was due to two consecutive years of non-compliance expenditure spending.

Future exploration activities within the retained portion of EL32004 will be concentrated on a Burrell Creek Formation inlier within the granitic rocks of the Cullen Batholith.

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1 INTRODUCTION

This Partial Final Report describes work completed on the twenty-one relinquished blocks of EL32004 from 21st November 2019 to 22nd June 2023 *Figure 1*. Vista Gold Australia Pty Ltd (Vista) is the operator and manages the exploration work. EL32004 is part of the Mt Todd Gold Project (approximately 1500 Hectares), centred about 42 km north of Katherine and 260 km southeast of Darwin, Northern Territory, *Figure 2*. EL32004 is part of the group report GR087 which also contains the exploration tenements of EL29882, EL29886 and EL30898.

The mining titles MLN1070, MLN1071, and MLN1127, were initially granted on 5 March 1993 to Zapopan NL. Vista Gold Australia Pty Ltd entered into an agreement to acquire an interest in the Project located in NT, Australia, on 1st March 2006. The acquisition was completed on 16th June 2006, when the mineral leases comprising the Project were transferred to Vista and funds held in escrow were released. MLN31525 was applied to allow the RAW water dam capacity expansion, which was granted on 4th September 2017. These licenses are reported separately in Group Report (GR463). The area surrounding the Mt Todd titles was the subject of several mining reserves held by the NT government. Vista applied for exploration licenses over the mining reserves as part of the purchase agreement (Tetra Tech, 2022).

The Mt Todd Gold Project contains several known occurrences of gold, which have been explored and exploited to various degrees. The largest and best-known deposits are the Batman and Quigleys deposits, both of which have had historic mining by prior operators. The Batman deposit has produced and been explored more extensively than the Quigley deposit. Vista has reported mineral resource and reserve estimates in accordance with National Instrument (NI) 43-101 Standards of Disclosure for Mineral Projects and Canadian Institute of Mining for the Batman and Quigley deposits.

Apart from acquiring an Aboriginal Areas Protection Authority (AAPA) certificate (Scambary, 2021) and literature reviews (Hamilton, 1985) (Anderson & Dempsey, 1990) (Harrop, 1986) (Holden, 1989) (Orridge, 1989) (Scriven, 1990), no exploration activities were conducted on the relinquished portion of the tenement. This was due to the potential of discovering any gold mineralisation was very unlikely within the Palaeozoic limestones, sandstones, and siltstones of the Daly River Group and the Cainozoic cover.

Future exploration activities within the retained portion of EL32004 will be concentrated on a Burrell Creek Formation inlier within the granitic rocks of the Cullen Batholith.

2 TENURE

Table 1: Title Tenure Details

Tenement	Holder	Current Area	Area Units	Sq Km	Application Date	Grant Date	Expiry Date	Internal Status
Mineral Leases (GR463)								
ML31525	Vista Gold Australia Pty Ltd (100%)	155.2	Hectares	1.552	3/02/2017	4/09/2017	3/09/2042	Granted
MLN1070	Vista Gold Australia Pty Ltd (100%)	3982	Hectares	39.82	27/01/1989	5/03/1993	4/03/2043	Granted
MLN1071	Vista Gold Australia Pty Ltd (100%)	1327	Hectares	13.27	27/01/1989	5/03/1993	4/03/2043	Granted
MLN1127	Vista Gold Australia Pty Ltd (100%)	79.99	Hectares	0.7999	5/03/1993	5/03/1993	4/03/2043	Granted
Exploration Licences (GR087)								
EL29882	Vista Gold Australia Pty Ltd (100%)	180	Blocks	555.52	4/02/2013	16/09/2013	15/09/2023	Granted
EL29886	Vista Gold Australia Pty Ltd (100%)	204	Blocks	594.56	4/02/2013	16/09/2013	15/09/2023	Granted
EL30898	Vista Gold Australia Pty Ltd (100%)	58	Blocks	186.7	2/07/2015	3/05/2016	2/05/2024	Granted
EL32004	Vista Gold Australia Pty Ltd (100%)	21	Blocks	67.83	5/10/2018	21/11/2019	22/06/2023	Reduction Relinquished
EL32004	Vista Gold Australia Pty Ltd (100%)	33	Blocks	95.29	5/10/2018	21/11/2019	20/11/2025	Reduction Retained
Exploration Licences (Application)								
EL32005	Vista Gold Australia Pty Ltd (100%)	62	Blocks	149.24	5/10/2018	-	-	Application

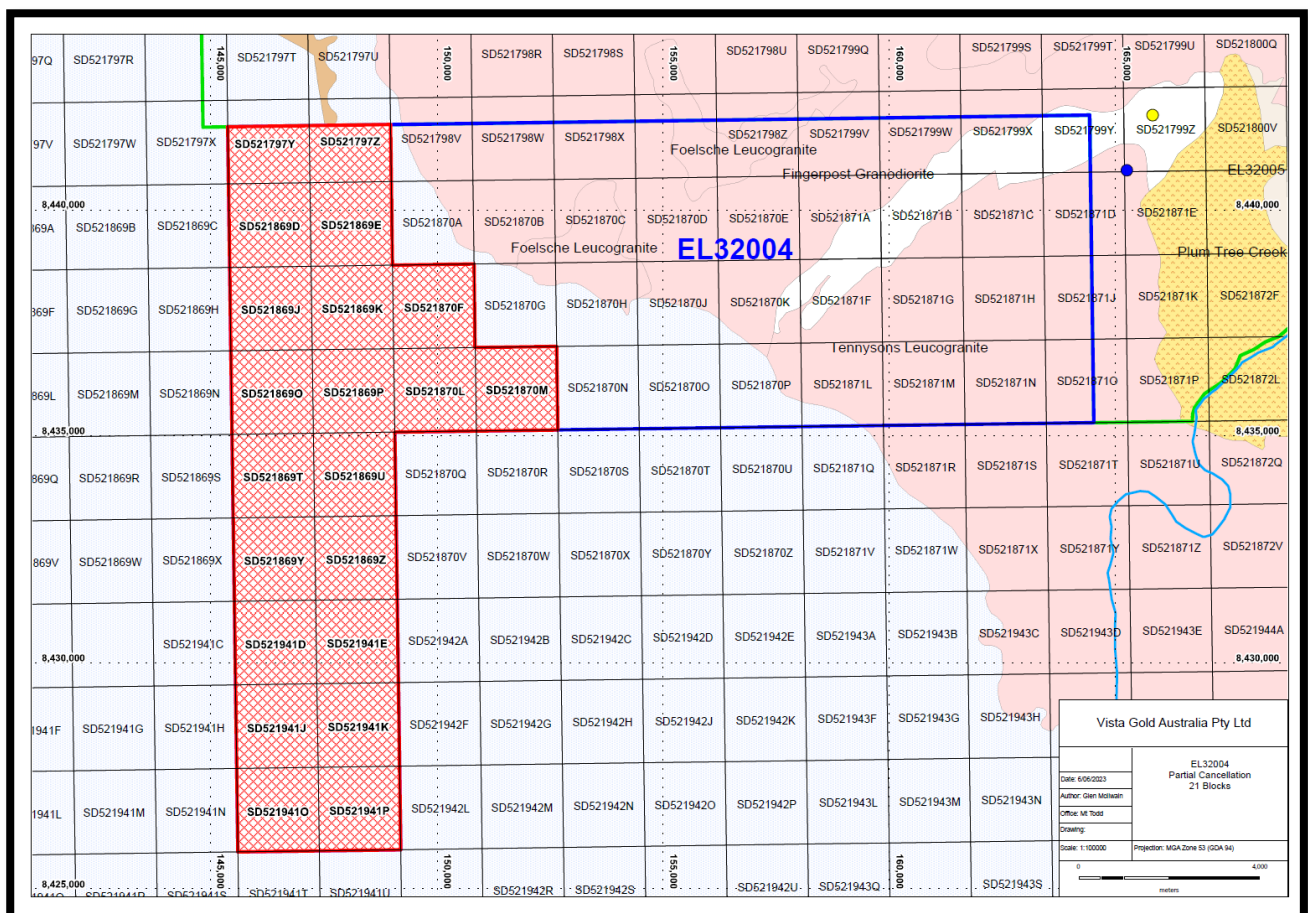


Figure 1: EL32004 Relinquished Area

3 HISTORY OF THE MT TODD GOLD PROJECT

Gold within the Mt Todd gold project was first discovered in 1875 within the Driffield Goldfield, thirteen kilometres northeast of Batman and fifty kilometres southeast of Pine Creek, *Figure 2*. Mining continued until 1912, from numerous open cuts and shafts to a maximum depth of 30m. The estimated total production from the Driffield Goldfield is 165kg from 10900 tonnes of ore (15.2g/t Au) and much more from extensive alluvial mining throughout the goldfield (Kinhill, 1989). In 1887 Gold and tin were discovered in the Mt Todd (Batman) area and were mined predominantly by underground operation (Wygralak & Ahmad, 1993). These included the Tollis, Jones Brothers (30.2g/t Au from 893 tonnes) and Quigley’s quartz-sulphide reefs for gold and Morris and Horseshoe cassiterite-sulphide-quartz veins for tin (830 tonnes of cassiterite concentrate).

Base and alloying metals were also discovered in the late 19th century within the Mt Todd Project at the Mt Davis, Wolfram Hill, Yenberrie and Wandie fields, *Figure 3*. Copper was initially mined up to 1930 in the Mt Davis area producing 1606 tonnes of ore averaging about 10% Cu. The Wolfram Hill deposit was worked intermittently until 1953 for a recorded production of 740 tonnes of wolfram concentrate, 258 tonnes of copper concentrate and 65 tonnes of cassiterite concentrate. A minor amount of lead was mined, mainly within the Wolfram Hill area, with 85 tonnes of galena mined during 1905-07 at Silver Spray (Ahmad & Hollis, 2013).

During the last quarter of the 20th century, sizeable open-cut gold mining commenced with Quigley’s (81,252 tonnes @ 3.84 g/t Au), Golf, Tollis and Batman’s (21.4 million tonnes @1.049 g/t Au) deposits.

Since 2007 Vista has drilled an additional 96 diamond holes for 52,424m into Batman and three diamond holes for 1,090m into Quigley’s. This drilling is a significant factor in increasing the mineral resources estimates shown in *Table 2* and hence the mineral reserve estimates in *Table 3* from the 2022 Mt Todd Gold Project – 50,000 tpd Feasibility Study (Tetra Tech, 2022).

A summary of important historical events of the Mt Todd Gold Project is shown in *Table 4*.

Table 2: Statement of Mineral Resources Estimates

	BATMAN DEPOSIT			HEAP LEACH PAD			QUIGLEYS DEPOSIT		
	Tonnes (000s)	Grade (g/t)	Contained Ounces (000s)	Tonnes (000s)	Grade (g/t)	Contained Ounces (000s)	Tonnes (000s)	Grade (g/t)	Contained Ounces (000s)
Measured (M)	77,725	0.88	2,191	-	-	-	594	1.15	22
Indicated (I)	200,112	0.80	5,169	13,354	0.54	232	7,301	1.11	260
Measured & Indicated	277,837	0.82	7,360	13,354	0.54	232	7,895	1.11	282
Inferred (F)	61,323	0.72	1,421	-	-	-	3,981	1.46	187

Table 3: Statement of Mineral Reserve Estimates

	Batman Deposit			Heap Leach Pad			Total P&P		
	K Tonnes	g Au/t	K Ozs Au	Tonnes (000s)	Grade (g/t)	Contained Ounces (000s)	Tonnes (000s)	Grade (g/t)	Contained Ounces (000s)
Proven	81,277	0.84	2,192	-	-	-	81,277	0.84	2,192
Probable	185,744	0.76	4,555	13,354	0.54	232	199,098	0.75	4,787
Proven & Probable	267,021	0.79	6,747	13,354	0.54	232	280,375	0.77	6,979

Table 4: Important Historical Events of the Mt Todd Gold Project

1875	Rich gold ores were discovered in the Driffield area, and alluvial deposits were worked.
1882 - 1912	Many hard rock gold open cuts and shafts were mined in the Driffield Goldfield.
1887	Mt Todd Goldfields were discovered.
1890 - 1930	Mt Davis Copper field was discovered and mined with shallow shafts.
1900 - 1953	Wolfram Hill deposit was discovered and mined via two shafts, an adit and several minor open cuts.
1902 - 1914	Gold mining of the Tollis, Jones Brothers and Quigley's deposits.
1906 - 1921	Tin mining at Horseshoe Creek, Morris and Emerald Creek tinfields.
1912 - 1930	Yinberrie Wolfram field was discovered and mined with shallow shafts.
1952	Minor uranium prospects were discovered within the Cullen Batholith greisen portions near the Edith River.
1973	Modern gold exploration began with Wanderoo Mining Corp Pty Ltd.
1986 - 1988	Pacific Goldmines NL conducted small-scale open-cut mining at Quigleys and Golf deposits.
1988	Mt Todd Joint Venture between Zapopan NL and Billiton Australia Gold Pty Ltd discovered the Batman deposit.
1989	Mining lease applications lodged. MLN1070 & MLN1071
1992	Zapopan acquired Billiton's equity in the project.
1993	Mt Todd project phase 1 development commenced in March.
1995	Pegasus Gold Australia Pty Ltd acquired Zapopan NL and became the project's sole owner and operator.
1996	Mt Todd project phase 2 development was completed, and in December, Pegasus poured the first gold from its new milling and processing facilities.
1997	The project closed as a result of technical difficulties and low gold prices. Deed administrators were appointed.
1999	In March, Mt Todd was sold to a joint venture, Yimuyn Manjer (YMJV), comprised of Multiplex Resources Pty Ltd and General Gold Resources Ltd.
1999 - 2000	YMJV mined the Batman open pit from July 1999 until July 2000.
2000	On 6th July, General Gold Resources Ltd appointed Ferrier Hodgson (the Deed Administrator).
2000 - 2006	Ferrier Hodgson (the Deed Administrators), Pegasus Gold Australia Pty Ltd, the government of the NT, and the Jawoyn Association Aboriginal Corporation held the property.
2006	Vista Gold Corp. acquired mineral lease rights from the Deed Administrators.
2006 - 2021	Vista Gold Corp. established a drilling campaign that produces environmental, economic, geotechnical, regulatory, and required studies. Vista completed its remediation of Batman Pit. A series of NI 43-101 reports were produced over the period with increasing detail.
2022	Vista Gold releases Mt Todd Gold Project - 50,000 tpd Feasibility Study.



Figure 2: General location

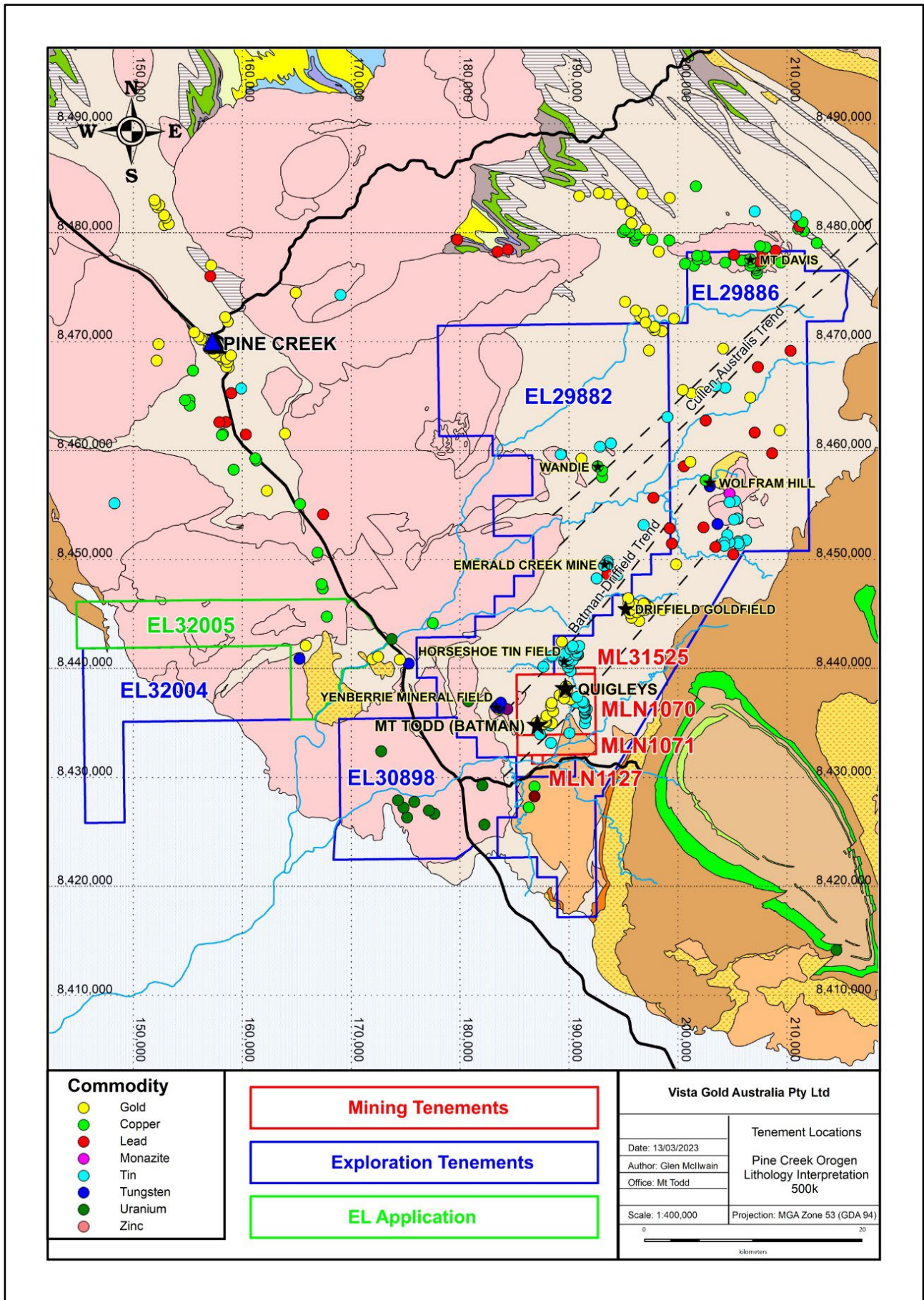


Figure 3: Tenement locations

4 GEOLOGY

4.1 Regional Geology

The Precambrian rocks of the Northern Territory have been divided into two principal orogenic provinces: the North Australian Craton and the Central Australian Mobile Belts. Orogenic domains within the North Australian Craton include the Pine Creek Orogen, the Tanami Region, the Murphy, Tennant and Arnhem Inliers, and the northern Arunta Province.

Historically, the Pine Creek Orogen has been the most prospective region of the Northern Territory (Ahmed et al., 1999). The Orogen extends southeast 260 km from Darwin to Katherine and east from Darwin to 130 km northeast of Jabiru. The Mount Todd Project lies at the southern end of the Central Region of the Pine Creek Orogen.

The Pine Creek Orogen has had a long and complex history of sedimentation, deformation, metamorphism and plutonism. It comprises an alternating sequence of psammitic and pelitic rocks with minor carbonate and volcanic rock. The age of the sequence is constrained between 2,470 and 1,870 Ma (Page et al., 1980). Regional metamorphism grades range from sub-greenschist facies in the Central Region to upper amphibolite facies along the western and eastern margins.

4.2 Local Geology

The Mt Todd project is located within the southeastern portion of the Early Proterozoic Pine Creek Geosyncline, consisting of metasediments, granites (mostly I-type), mafic intrusives, and felsic to intermediate volcanic rocks. The oldest rocks outcropping in the area are from the Burrell Creek Formation, which conformably overlies the Mt Bonnie Formation and is unconformably overlain by the Tollis Formation. All are intruded by the Cullen Batholith granites imposing upon them to be contact metamorphosed to hornblende-hornfels facies. Regional metamorphism of the metasediments to lower greenschist facies is of an earlier generation and is associated with structural deformation.

Interbedded greywackes, siltstones, and shales of the Burrell Creek Formation host the gold mineralisation in the Mt Todd area. These have a turbidite affinity and are interspersed with minor volcanics. The mineralisation is confined within a five km long northeast-trending magnetic and structural corridor, with the Batman deposit being the largest zone of gold mineralisation within this corridor.

Two main structural trends can be inferred from the aeromagnetic and satellite images, and both are geographically associated with known gold mineralisation. The southernmost of these is the Batman-Driffield Structural Corridor (BDSC), which consists of several subparallel linear features which connect Batman in the southwest with Driffield in the northeast and may also host the Wolfram Hill granite further to the northeast. To the northeast of this is the Cullen-Australis Structural Corridor (CASC), which is the more strongly defined of the two and connects the margin of the granite in the southwest with the Australis area in the northeast. A series of NNW-trending features that connect the north-eastern extent of the BDSC with the south-western extent of the CASC is known as the Emerald Creek Zone (ECZ).

Gold mineralisation is concentrated in and along the structural corridors, which suggests that their influence on the genesis of the mineralisation is significant. In particular, the BDSC hosts the Batman, Golf-Tollis, Quigleys, Regatta and Horseshoe deposits. Mineralisation is demonstrably linked to reverse structures occurring within the BDSC (Harris, 2022).

5 WORK COMPLETED

5.1 Exploration Rationale

Several gossanous outcrops have been identified within a Burrell Creek Formation inlier surrounded by granitic rocks of the Cullen Batholith. These gossanous outcrops produced inconsistent assay results, and due to this, Vista intended to map and sample all gossanous occurrences to attempt to identify gold mineralisation. Rock-chip sampling and possible soil sampling will follow the completion of the AAPA Authority Certificate.

5.2 Year 1 – 21st November 2019 to 20th November 2020

Exploration activities were limited to literature review and reconnaissance to identify access tracks, waterways, and other stakeholders. AAPA review commenced (Scambary, 2021). It was concluded that a Burrell Creek Formation inlier within the granitic rocks of the Cullen Batholith may hold the best chance of discovering any gold mineralisation, and this area is outside the twenty-one relinquished blocks.

5.3 Year 2 – 21st November 2020 to 20th November 2021

No exploration activities were conducted on the twenty-one relinquished blocks. AAPA review was reported on 7th June 2021 (Scambary, 2021).

5.4 Year 3 – 21st November 2020 to 14th March 2021 (16 months)

No exploration activities were conducted on the twenty-one relinquished blocks. EL32004 was added to the group report GR087.

6 WHY EL32004 HAS BEEN PARTIALLY CANCELLED

EL32004 was partially cancelled due to two consecutive years of non-compliance expenditure spending.

Reasons include:

- Major diamond drilling program within MLN1070 where all Vistas geological staff were required (McIlwain, 2022) (McIlwain, 2023).
- Delay in reporting the Aboriginal Areas Protection Authority (AAPA) certificate (Scambray, 2021).
- After the drilling program, the geological department was downsized, and compared to other gold targets Vista has within EL29882, EL29886 and the MLs, EL32004 is a very low priority (McIlwain, 2023a).
- The wet season started early in 2022, including the highest rainfall Vista recorded in 17 years.

The cancelled blocks were selected because the only part of EL32004 *Figure 4* that is of interest for gold exploration is a finger of Burrell Creek Formation sediments surrounded by the granites of the Cullen Batholith. Minor gold within the inlier has been found in stream sediments (Hamilton 1985). However, many previous authors have concluded that the inlier does not warrant further exploration (Hamilton, 1985) (Anderson & Dempsey, 1990) (Harrop, 1986) (Holden, 1989) (Orridge, 1989) (Scriven, 1990).

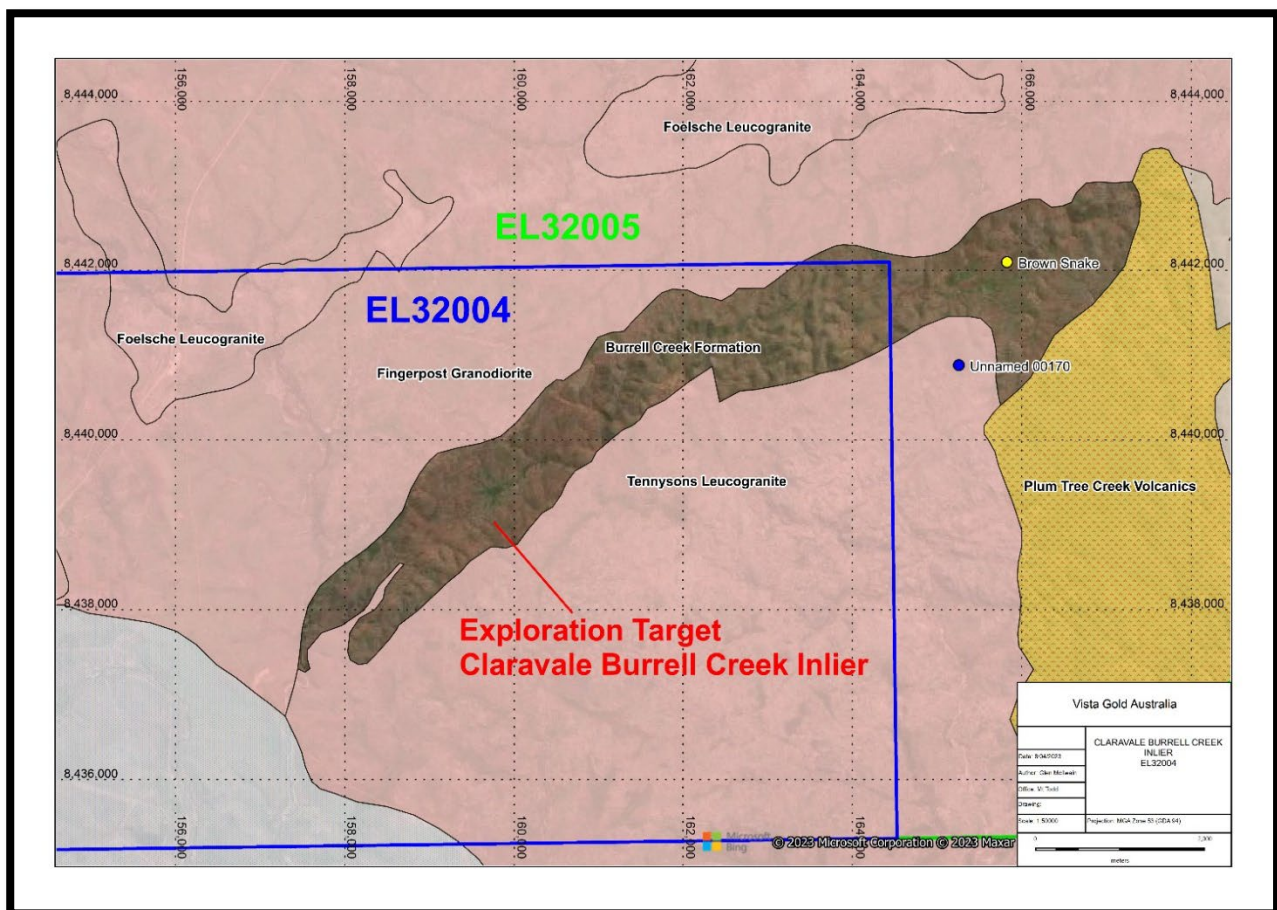


Figure 4: EL32004 Exploration Target – Claravale Burrell Creek Inlier

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