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Final Report - EL1/1995 - Lefroy Project

Lefroy Gold Mines Proprietary Limited*
Kornweibel, M. EL1/1995

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LEFROY GOLD MINES PTY LTD
(A subsidiary of Central Kalgoorlie Gold Mines Limited)

LEFROY PROJECT

EL 1/95

FINAL REPORT

MINERAL RESOURCES		
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September 2001

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**LEFROY PROJECT
EL 1/95
FINAL REPORT**

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1.

1. SUMMARY

EL 1/95 covering 42 skm at Lefroy in Northern Tasmania covers the historical Lefroy and Back Creek Goldfields. The licence was held by Lefroy Gold Mines Pty Ltd and was operated by Allstate Explorations NL until their withdrawal in February 2001.

EL 1/95 was granted until 19th May 2005. In its current form, EL 1/95 resulted from the amalgamation of the original EL 1/95 with neighbouring EL's 21/94 and 22/94 which was ratified in January 1998. Significant relinquishment of ground took place in 1997 and 2000.

Following the withdrawal of Allstate and the closure of the Beaconsfield Gold Mine it has become apparent that prospects for an exploration joint venture have been severely diminished and therefore the company has decided to surrender its exploration licence to concentrate on projects in Western Australia.

2. INTRODUCTION

Lefroy lies 12 km east of George Town near the north coast of Tasmania. The goldfield was one of the earliest discovered in Tasmania (1869) and has recorded production, mostly pre-1904, of 187,000 oz of gold (Keele, 1996). This gold came from auriferous quartz reefs within the Early Ordovician to Early Devonian Mathinna Beds, a monotonous sandstone-siltstone-shale sequence.

The goldfield and surrounding area was covered by EL 1/95 (Lefroy) of 42 skm, which was the amalgamated remnant of three licences totalling 451 skm. The EL was held by Lefroy Gold Mines Pty Ltd, a 100% subsidiary of Central Kalgoorlie Gold Mines Ltd. In July 1997 Allstate Explorations NL entered into a joint venture with Lefroy Gold Mines to earn 60% equity in the EL through the expenditure of \$700,000 over four years, Allstate subsequently withdrew from the Joint Venture in February 2001 after spending some \$300,000.

Lefroy Gold Mines was initially attracted to Lefroy by the near-total lack of systematic exploration, particularly drilling, in the modern era. Potential for further high-grade quartz vein-hosted gold deposits and bulk low-grade open-cut resources was recognised, but only the latter target type was tested by Lefroy Gold Mines. Work by Allstate Explorations focused on the former target by attempting to locate previously unknown extensions to known reef systems. In this endeavour Allstate Explorations completed one diamond drill hole to test the adjacent Pinafore and Chum reef systems 1 km north of the Lefroy township and three diamond drill holes with two daughter holes to test the Volunteer reef system 1.5 km south of the township. Diamond drilling totalled 1,510m (Purvis, 1998:1999).

2.

No work by the Joint Venture was completed in the past 12 months. During this period, Allstate Explorations, which were sole funding exploration, was pre-occupied with the final stages of redevelopment of the nearby Beaconsfield Gold Mine and then withdrew as difficulties continued at Beaconsfield. The statutory commitment for expenditure was met by accelerated expenditure during the earlier reporting periods.

This is the Final Report for the tenement in accordance with the statutory obligations.

3. LAND TENURE

EL 1/95 (Lefroy) currently covers ^{A ?}2 skm. The tenement was due to expire on 19 May 2005.

The EL is held by Lefroy Gold Mines Pty Limited, a 100% owned subsidiary of Central Kalgoorlie Gold Mines Limited.

In October 1994 Lefroy Gold Mines was granted two EL's surrounding Lefroy: EL 21/94 (Bell Bay) of 219 skm and EL 22/94 (Pipers River) of 202 skm. The contiguous EL 1/95 (Lefroy) covering 30 skm over the main goldfield area was granted to Lefroy Gold Mines in May 1995. All licences carried tenure periods of 10 years.

In October 1996, EL 21/94 (Bell Bay) and EL 22/94 (Pipers River) were reduced to 77 skm and 67 skm respectively. In July 1997 Allstate Explorations NL entered into a joint venture agreement with Lefroy Gold Mines on all three EL's whereby Allstate was required to spend at least \$200,000 by 31 July 1999, and a further \$500,000 by 31 July 2001 to earn 60% equity.

In October 1997, 90 skm was relinquished from the Bell Bay and Pipers River licences. Immediately following the reduction the remaining ground in all three tenements was amalgamated into the current single consolidated EL 1/95 (Lefroy), comprising two areas totalling 80 skm. The amalgamation was ratified by the Director of Mines on 14 January 1998 with tenure to 19 May 2005.

A further reduction in the size of the tenement by relinquishment of 38 skm in the Den Ranges and Curries River areas took place on 19 May 2000. This represented a 90% reduction in the original tenement granted.

EL 1/95 comprised Crown Land, State Forest-Multiple Use Forest Land, part of the Lefroy RAP and private property.

Within the licence area but excluded from it were:

- A small area of Crown Reserves
- 664 ha of Mining Leases (mainly in the Back Creek area).

The history of the tenure and the retained tenement are illustrated in Figure 1.

4. GEOLOGY

The following description of the geology of the Lefroy district is taken from Purvis (1998) verbatim.

The Lefroy Goldfield is hosted by sediments of the Early Ordovician to Early Devonian Mathinna Group, a thick deep-water turbiditic sediment sequence. Exposure is poor as the rocks weather readily. The Palaeozoic sequence is extensively covered by Tertiary basalt and Tertiary-Quaternary gravels and sands.

The Mathinna Beds at Lefroy comprise a folded and cleaved sequence of interbedded quartz-mica sandstones, siltstones and grey-black shales, striking NW and generally dipping at moderate angles to the SW. These rocks have been described by Powell and Baillie (1992) as being in the transitional contact zone between the basal unit of the Mathinna Group, the Stonyhead Sandstone, and the overlying unit to the NE, the Turquoise Bluff State. Although natural outcrop tends to be dominated by sandstone, roadcuts, drillholes, mine exposures and dumps show that the finer-grained rocks are equally represented.

At Lefroy the sediments are affected by conspicuous chlorite-sericite alteration strong enough to cause a regional-scale magnetic depletion centred on the goldfield. Within this magnetically depleted area there are extensive local magnetic lows, some of which appear directly associated with mined gold shoots (eg: at the Volunteer and Reward reefs). However, widespread shallow drilling of alteration anomalies in 1997 found they were unmineralised (Purvis, 1997). It is believed the alteration had an important precursor role in the location of the goldfield, probably by reducing the competency of the host rocks so that they later became a locus for the mineralised structures.

The Lefroy auriferous quartz reefs are hosted by large east-west faults dipping steeply north or south. Some of these structures, eg: the Chum, Pinafore and the Volunteer, are 1-2 km long with crush zones 10-20m wide. At least 30 parallel reefs are known, arranged like rungs of a ladder over a distance of 4.5 km along the NW strike of the sediments. About 165,000 oz of gold (90% of Lefroy's total production) has come from just four of these reefs: the Chum, Pinafore, New Native Youth and Volunteer.

Within the reefs the gold occurs in high-grade shoots. Historically, mined grades were of the order of 30 g/t Au. Almost all the known (now mined out) shoots were less than 130m deep and only traces of gold were found below 150m from surface, although in two cases (the Pinafore and Volunteer) the reefs were tested by underground development to depths of 370-400m. The only notable associate of the gold mineralisation is arsenopyrite.

4.

5. RESULTS OF 2000 - 2001 WORK

Due to the pre-occupation of the sole-funding joint partner Allstate Explorations NL with construction of the Beaconsfield Gold Mine and subsequent difficulties during the period, no work was carried out at Lefroy during 2000 - 2001. In February Allstate withdrew from the Joint Venture.

Earlier accelerated expenditure by Allstate Explorations NL negated the requirement for expenditure to satisfy the statutory commitment for the current reporting year.

6. CONCLUSIONS

The downturn in the mining and exploration sector in general and the problem of the Beaconsfield Mine in particular, has downgraded the Lefroy Goldfield as an exploration play.

Work carried out by Lefroy and Allstate has provided an excellent base for other explorers at a later date.

In the short term, ongoing systematic drilling for extensions to known reef structures is seen as the most likely route to exploration success.

The potential for deep-lead style mineralisation beneath Tertiary basalt flows now obscured by Recent gravel deposits along Blanket Creek to the north of the Lefroy township also exists. Extensions to known reef structures remain at prime exploration targets in the area.

7. EXPENDITURE HISTORY

Total expenditure on the Lefroy tenements has been \$806,308 as illustrated in the table below. The expenditure at this date is sufficient to satisfy statutory requirements.

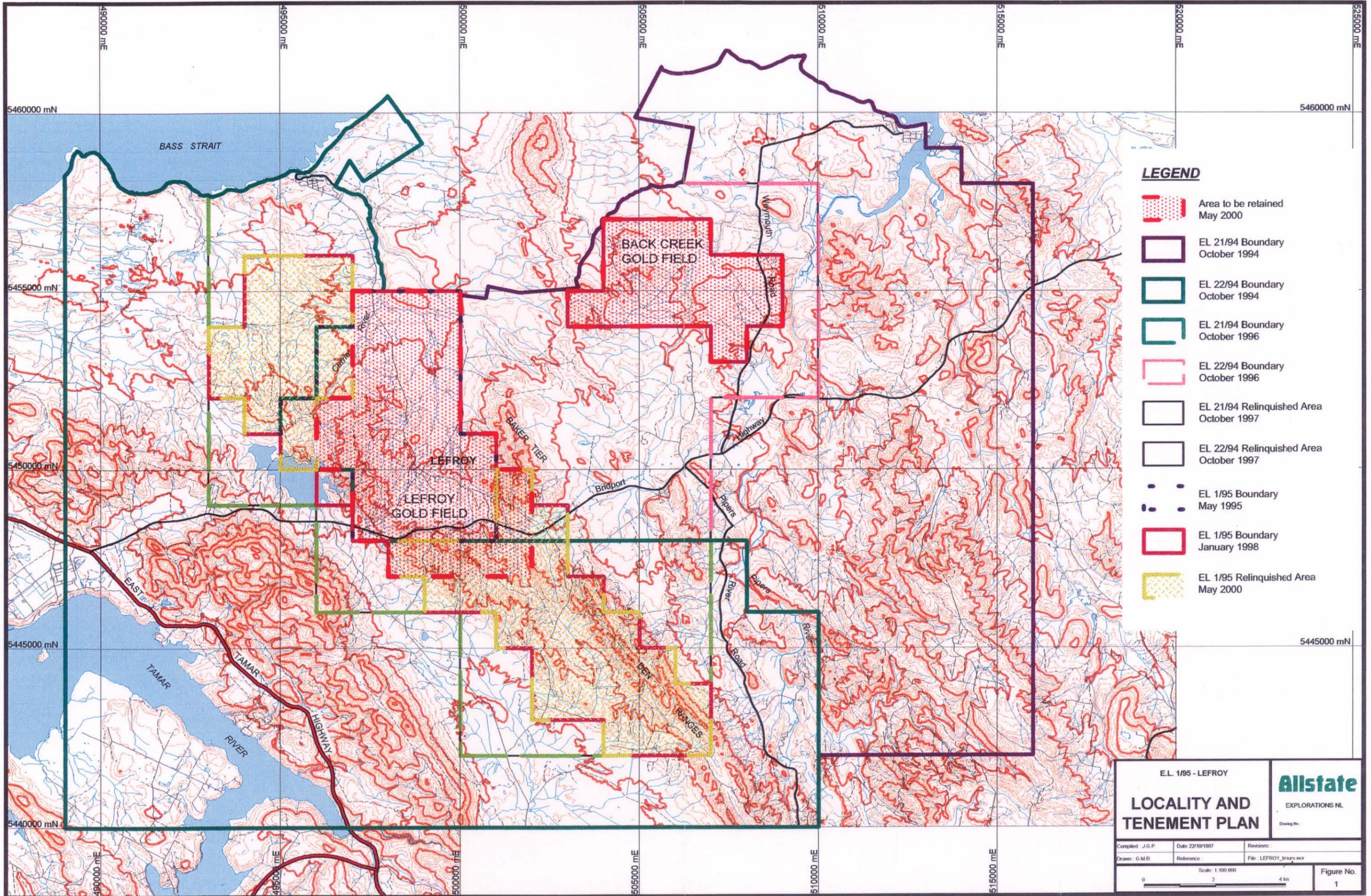
The following table illustrates expenditure by Lefroy Gold Mines Pty Ltd and the Lefroy Joint Venture since the granting of the original licences Bell Bay EL 21/94 and Pipers River EL 22/94 in October 1994.

Table 1. Expenditure History

	EL 21/94	EL 22/94	EL 1/95	Total
Commitment to Date	(164,600)	(148,800)	(465,000)	(778,400)
Expenditure to Date	87,002	68,708	650,598	806,308
Surplus/(Deficit)	(77,598)	(80,092)	105,598	27,908

8. REFERENCES

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LEGEND

-  Area to be retained May 2000
-  EL 21/94 Boundary October 1994
-  EL 22/94 Boundary October 1994
-  EL 21/94 Boundary October 1996
-  EL 22/94 Boundary October 1996
-  EL 21/94 Relinquished Area October 1997
-  EL 22/94 Relinquished Area October 1997
-  EL 1/95 Boundary May 1995
-  EL 1/95 Boundary January 1998
-  EL 1/95 Relinquished Area May 2000

E.L. 1/95 - LEFROY		Allstate EXPLORATIONS NL
LOCALITY AND TENEMENT PLAN		
Compiled: J.G.P.	Date: 22/10/1997	Revisions:
Drawn: G.M.B.	Reference:	File: LEFROY_tenure.wor
Scale: 1:100 000		Figure No. 1

