

769001

95-3758

OPEN FILE

MICROFILMED
FICHE No.013681

ANNUAL AND FINAL REPORT

ON EL 4/93 - KING RIVER

WESTERN TASMANIA

Prepared for

BRUCE RESOURCES N.L.

By

G KING

JULY 1995

SEARCHED		
FILE NO. EL 4/93		
21 AUG 1995		
ACC. NO.		
INDEXED	FILED	FILED
SEE	FOLIO	
36	37	
REMOVED TO	DATE	

95-3758

Annual and final report on EL 4/93
King River - Bruce Resources NL
King, G 1995

SUMMARY

Ordovician to Silurian siliciclastic and carbonate rich sequences within the EL are tightly folded, strongly sheared and faulted and are considered to have potential to host economically significant gold mineralisation.

Two possible styles of mineralisation which may be located within the King River EL include the sediment hosted disseminated type (Carlin Style), as evidenced by highly significant gold/arsenic/antimony mineralisation delineated in sheared limestones and marls adjacent to the major Harvey Creek Structure within Goldstreams EL. The second type is that of structurally controlled deposits (Henty Style) hosted by gold anomalous Cambrian volcanoclastics, which occur as fault bound slivers adjacent to major north-south trending structures such as the Harvey Creek Fault, and subsidiary splays such as the Goring Creek and Sulphide Creek Faults.

TABLE OF CONTENTS

		Page
1.	Introduction	1
2.	Location, Access and Tenure	1
3.	Regional Geology and Structure	1
4.	Previous Exploration and Mining	2
5.	Work Completed - Bruce Resources N.L.	2
6.	Conclusions	4

1. INTRODUCTION

EL 4/93 was applied for to assess the potential for Au mineralisation associated with two styles of mineralisation.

In the north of the EL, the prospective Mt Read Volcanics lie adjacent to the Harvey Creek Structure and show similarities to the "Henty Deposit" north of EL 4/93.

Reactive limestones and marls adjacent to major feeder structures provide the second target for exploration and display many similarities to the Lynchford Prospects immediately north of the licence.

2. LOCATION, TENURE AND ACCESS

EL 4/93 of approximately 40 square kilometres is located 11 kilometres south south west of Queenstown some 6kms south south west of Lynchford in central western Tasmania (Figure 1).

A sealed highway runs south from Queenstown and transects the northeastern most corner of the tenement and is the only major vehicular access. The original Mount Lyell railway can be accessed from the north or from the west (Strahan end) and provides the only reasonable foot access into the north and northwestern portions of the licence.

The western portion of the tenement has been selectively logged for minor species timber and as such should still have reasonable access tracks suitable for foot traversing and possible limited vehicular access. The remainder of the area remains rugged and remote.

EL 4/93 was granted for gold and base metals on 27 September 1994³ to remain in force until 10 September 1995. The minimum exploration commitment for this period is \$8,000.

The EL encompasses some uncommitted Crown Land and land vested in the HEC. However the majority of the tenement consists of the South West Conservation Area to which certain exploration guidelines need to be followed.

No pre-existing Mining Leases occur within the licence.

3. REGIONAL GEOLOGY AND STRUCTURE

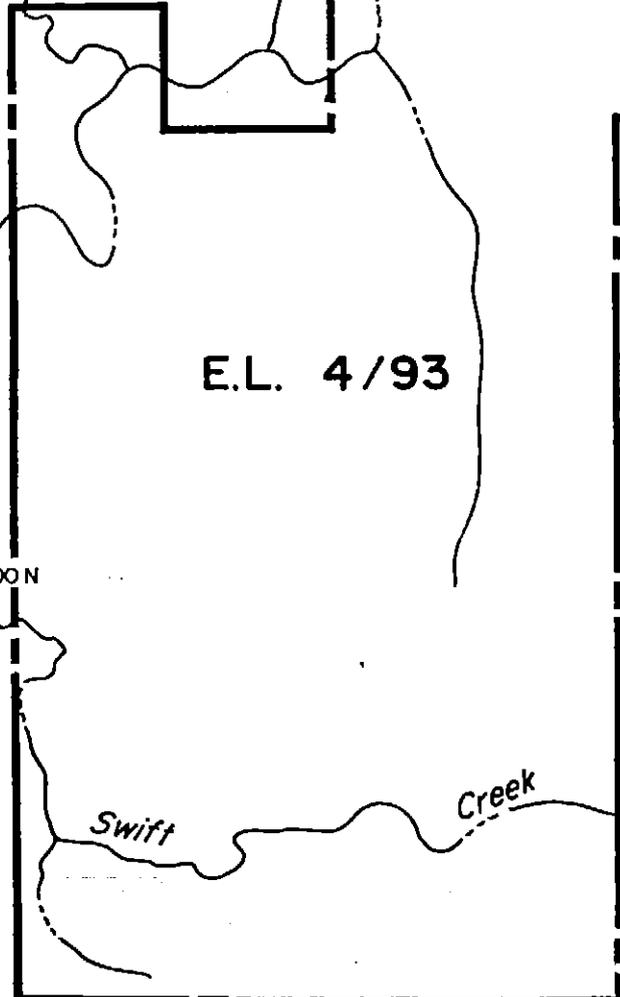
EL 4/93 lies within the Western Tasmanian Mineral Province (Dundas Trough) in a bound sequence of Ordovician to Devonian sediments (Henty Basin) adjacent to, and overlying the Cambrian Mt Read Volcanics. The sediments (both siliclastics and carbonates) are folded into a series of NNW trending shallowly plunging synclines and anticlines (Figure 2).

375 000 E

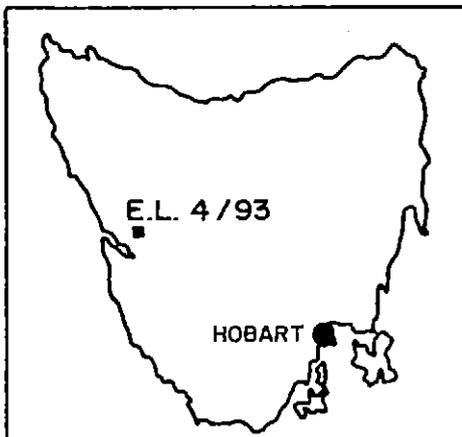
380 000 E

5 330 000 N

5 250 000 N



LOCALITY



BRUCE RESOURCES N.L.

E.L. 4/93

KING RIVER

LOCATION PLAN

LOCATED ON 1:250000 SHEETS

COMPILED	G. King	AUG. 95	LAST REVISION	
DRAWN	P.A. Loch	AUG. 95	SHEET No.	
SCALE	1:50 000		DWG No.	

FIG. 1

The more resistive silica sediments outcrop strongly, while the carbonate rich units have a more subdued expression. A NNW trending and possibly steeply E-dipping fault, the Harvey Creek Structure (HCS) has been delineated over a strike length of 15 kms and passes roughly through the centre of the tenement. To the north, it coincides with an anticlinal axis.

In the northern portion of the tenement, fault slivers of the Mt Read Volcanics lie adjacent to the HCS. Additional volcanic sequences occur further south along the Garfield Valley.

Two other structures, the Sulphide Creek Fault and the Goring Creek Fault appear to be splays off the HCS and pass through the NE portion of the EL.

4. PREVIOUS EXPLORATION AND MINING

Minor exploration has been conducted in the tenement area since the late 1860's. North of King River, gold was the principal commodity sought with minor base metal, silver and antimony prospects being identified over the following 40-50 years. Production however was minor.

The area south of the King River has had very little serious exploration conducted over it with only minor references to alluvial gold (Flanigan's Float) being won from the Garfield River area and reef gold (minor lead) at Harris' Reward in the NE portion of 4/93.

BHP and Mt Lyell have conducted regional surveys over a large proportion of the area south of Queenstown although the quality of some of the data is questionable.

More recent exploration has been confined to an area north of the King River and centred on a line of gold prospects trending south from the airport at Queenstown to the Coupon Prospect SSW of Lynchford.

Initially EZ assessed the region in joint venture with Trikon after which Montroyal Mining, Cyprus Minerals, Perilya Mines and Goldstream Mining N.L. all carried out various ground surveys designed to locate gold arsenic mineralisation along the 10km anomalous zone. Many of the surveys were of a reconnaissance nature and only one anomaly - the Coupon Prospect was ever drilled. Results from this drilling returned low grade (0.1 to 0.5 g/t Au) Au values over wide intervals.

Recent work by Goldstream has indicated that this shallow drilling has only tested geochemical haloes and leakage patterns thought to emanate from possible mineralised Ordovician limestone adjacent to the Harvey Creek "feeder zone".

5. WORK COMPLETED - BRUCE RESOURCES N.L.

Initial work completed by Bruce Resources included a detailed literature review and reassessment of pre-existing data. The results of this survey were coupled with an interpretation of the regional geology and structure of the EL.

This work resulted in the delineation of numerous targets within the EL worthy of detailed follow up exploration. These targets are detailed below.

(1) Harvey Creek Structure

Sporadic gold/arsenic mineralisation is associated with this fault along its entire length. Within the EL the Mount Read Volcanics occur as fault slivers adjacent to the HCS.

This spatial relationship of the Volcanics and structure holds similarities to the Henty Deposit (500,000 tonnes @ 10 g/t Au) north of Lynchford (approximately 40km north of EL 4/93). At Henty, the Mt Read Volcanics lie at the junction of 3 faults, the North and South Henty Faults and the Great Lyell Fault. The HCS may be temporally and spatially related to the South Henry Fault (Figure 2).

In addition, an airborne magnetic anomaly consistent with the HCS lies due north of the King River and probably marks the portion of one of these fault bound wedges of Mt Read Volcanics.

- (2) Further volcanics occur south along the Garfield Valley, adjacent to the HCS, and in an area known to have been worked for alluvial gold (Flanigans Flat). Work by Mount Lyell in this area highlighted bedrock gold anomalies which were subsequently drilled. Rock types encountered included intensely sheared and fractured, pyritic volcanoclastics and sediments with minor anomalous gold values. Core recoveries were very poor through the critical zones which therefore remain poorly tested.

Again, the association of Mt Read Volcanics, major structure and gold appear to have many similarities to the Henty Deposit.

- (3) Exploration work conducted by Goldstream on their Lynchford prospect indicates the potential for sediment hosted disseminated mineralisation within sheared limestones and marls adjacent to the HCS.

Within the EL 4/93, the Goring Creek Fault and the Sulphide Creek Fault appear as splays emanating from the main HCS. Goring Creek has returned anomalous gold values and shows indications of being worked alluvially. Published geological maps also display the Gordon Creek Limestone as outcropping along the entire length of this fault.

Consequently, the geology and structure appear very similar to the Lynchford Prospect.

6. CONCLUSIONS

Significant potential exists for gold/arsenic mineralisation associated with reactive Gordon Limestone (Carlin Style) in close proximity to major feeder structures such as the Harvey Creek, Goring Creek and Sulphide Creek faults. Additional potential exists for structurally emplaced gold mineralisation of the Henty Style associated with Cambrian volcanic sequences once again adjacent to major feeder structures.

This potential is highlighted by identical geology and structure to that observed on the adjacent Goldstream Mining N.L.'s tenement as well as by minor occurrences of gold in potentially anomalous locations. In addition, the prospectivity of the ELA must be ranked highly as this rugged and remote area has received very little recent exploration coverage and geological thinking for the area has altered dramatically and favourably over the last few years.