



OreTeck
Mining Solutions

Tenement Review and Exploration Strategy- EL007285 Ballarat North

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Revision:	0

1 EL007285- North Ballarat (Blue Ribbon)

Tenement ID	Local ID	Size (km ²)	Mapping Sheet (1:100,000)	Municipality	Current Status
EL007285	North Ballarat	8	Ballarat	Ballarat	Application

EL007285 is located on the northern outskirts of Ballarat, adjacent to the Western Freeway (Figure 1).

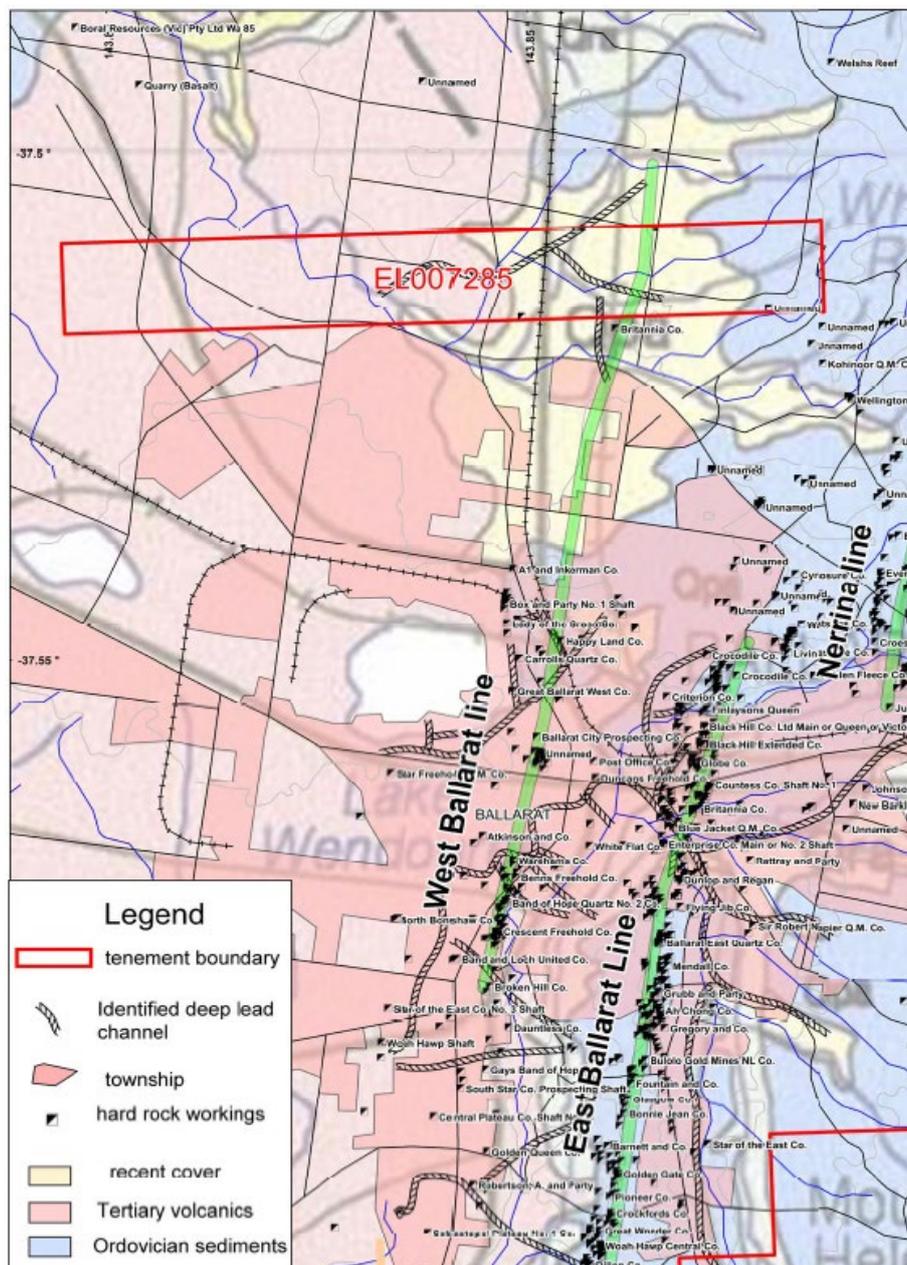


Figure 1. Ballarat West Goldfield and target position

2 Regional Geology

EL007285 is located within the Bendigo - Ballarat Zone of the Lachlan Fold Belt. The Bendigo Zone has an average width of 100 km and extends between the Avoca and Mt William Faults. The basement stratigraphy of the tenement area consists of folded N-S striking (result of E-W compression) interbedded turbidite deposits of sandstone and siltstone of the Ordovician Castlemaine Group (Taylor et al. 1996). These sediments carry a pervasive north-south foliation (Horwood 2008).

2.1 Local Geology

The Ordovician rocks are mostly concealed by Newer Volcanics with minor Pliocene colluvial. The only exposure of Ordovician sediments on the tenement occurs in the far eastern portion of the tenement and are typical of those in the Ballarat field. Multiple Cainozoic basalt flows have buried deep leads.

A graphitic slate zone (Black Slate) occurs throughout the Ballarat West line and is essentially the only significant lithological unit that can be extrapolated with confidence across this line. This zone is not observed on the Ballarat East line.

The black slates of Ballarat West are a zone varying in thickness from 22 m to 44 m, and consists of series of graphitic, dolomitic and pyritic black slates, pyritic mineral seams, laminated quartz lodes, crushed quartz and sediments.

The lode generally occurs close to the lowest black slate member in the zone, although two parallel lodes have been worked on laminated quartz in several mines including the South Star and New Kohinoor.

Being directly associated with the lode, the black slates have been well recorded in most historical texts and workings as well as in recent drill holes where they occur.

2.2 Mineralisation

The northern extension to the Ballarat West Goldfield is projected to occur in the eastern portion of the tenement. The mineralisation in this field is characterised by laminated quartz reefs hosted within black slate beds containing bedding parallel shears confined to west dipping fold limbs. The thrust faults controlling this system extend locally across the fold hinges into the east-dipping limbs as dilatant jogs within which quartz-vein stockworks (tension vein arrays) were mined (Horwood, 2011).

Several west draining deep leads occur in the central area of the tenement and are typical of those found in the Ballarat field.

3 Mining History/Production

The Deadhorse Lead produced 70,000 ounces over 2 km (Chintock, 2008) of strike length downstream from the where the lead crosses the projected northerly extension of the Ballarat West goldfield.

Individual deep lead mine production from the major mines on the tenement is listed in Table 1. Numerous small mines located on the tenement are lacking individual production records.

Table 1. Major mine production from EL007285 (GSV Database)

Mine	Production (Oz)
Ballarat Extension	21,396
Rose Hill GM	17,137
Great Northern Junction	6,233
Nil Desperandum Co	3,595

There is no record of primary gold production on the tenement.

The quartz mines of the Ballarat West goldfield have produced a recorded 800,000 ounces of gold at an average grade of approximately 14 grams per tonne. A further 6 million ounces of gold is estimated to have been won from the ancient river channels which cross the field (D'Auvergne, 1998).

3.1 Nearby Mining Activity

The Ballarat Gold Mine is currently mining the Ballarat East line, 5 km's south of the tenement.

4 Exploration History

No exploration has been completed on the tenement since the 19th century except for data collation and target generation.

5 Exploration Strategy

The primary target on this tenement is the northern extension of the Ballarat West Goldfield, assumed to be the source of the paleoplacer gold on the tenement.

This target is only 4 km north of the main Ballarat West field and 2 km north of its northernmost mined quartz reef - the projected Ballarat West field would fall within the tenement over the zone considered to be the main target area based on paleoplacer gold occurrences.

To define this target, the following processes should be considered:

- Investigate drainage channel directions to narrow the zone where the source of gold might have been.
- Review and interpret magnetic images to potentially interpret location of NE-SW faults that can offset the geology. The cover may make this difficult.
- Once target is finalised, a 1000 m drill program consisting of 3 individual holes would cost approximately \$150,000 (direct drilling costs) including mobilisation and associated drilling costs.

Other information to note:

- Six gold nuggets between 10 and 85 ounces were recorded from the workings of the Ballarat Extension Company and are unlikely to have travelled far from their source (Chintok 2008).
- Quartz veining was been recorded in several palaeoplacer mines on the tenement.

It is recommended that diamond drilling be used once the base of the basalt has been reached to allow the position within the fold sequence of the Ballarat field to be determined. The lodes of Ballarat West and for some-part Ballarat East are lithologically controlled.

This area remains relatively undeveloped by the way of residential development, allowing the potential to establish multiple drill platforms.

6 References

CHINTOCK, G, 2008. Range River Gold Ltd. EL4943, Ballarat North Project. Annual report for the period ending 31 December 2008.

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HORWOOD, D.J, 2011. Oroya Mining Ltd. EL 4943, Ballarat North Project. Annual report for the period ending 31 December 2011.

TAYLOR D.H, WHITEHEAD M.L, OLSHIRA A and LEONARD J.G, 1996. Ballarat 1:100,000 map geological report, Report 101, Geological Survey of Victoria.