



Grieves Siding – An Environmental Management Plan

Introduction

Grieves Siding is situated along the Henty Road approximately 15 kilometers south of Zeehan on Tasmanias West Coast. It is currently being explored for zinc mineralization under exploration licence number EL 47/2004 using a number of geological and geophysical exploration techniques by Icon Resources Limited.

The Grieves area has been the focus of mineral exploration for many decades by numerous companies and Icon Resources have only recently taken over the EL thus inheriting the resulting legacies.

The area contains 3 main lithologies – Moina sandstones on the eastern flank of the valley, Ordovician Gordon Limestone in the valley floor and Crotty Quartzites to the west with Tertiary gravels overlaying portions of the underlying lithologies.

As part of the exploration program and in an effort to try to better define the resource, diamond drilling was used to reconcile targets identified as a result of geophysical Induced Polarisation (IP) surveys carried out in the earlier part of the year.

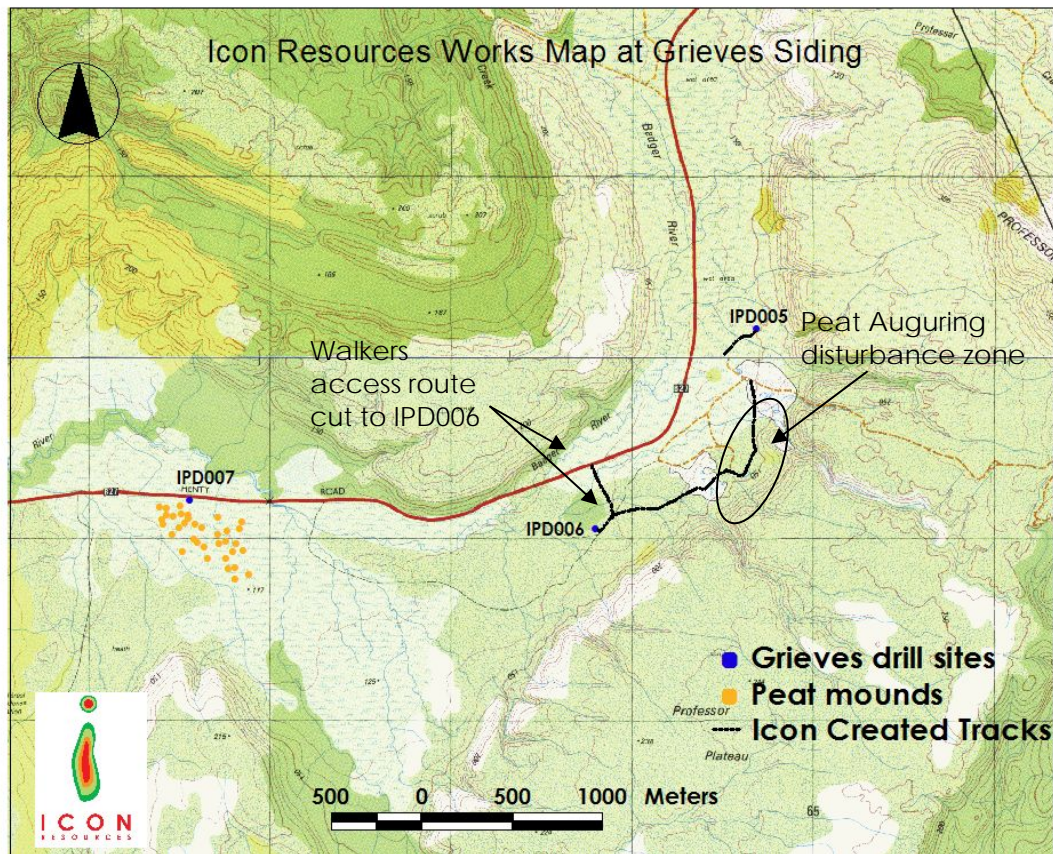
7 sites were drilled using a Mindrill 66 Rig. The drill rig is track mounted, weighs approximately 18 tonnes and is of the greatest environmental issue in the short to medium term. Other exploration techniques employed by Icon Resources have been geophysical in nature and rely mostly on foot travel and therefore have a much smaller environmental footprint.

The Grieves Environment

Exploration focus has so far been contained within the main valley that is dominated by Buttongrass moorland (Map 1). This moorland according to Brown (1992a) occupies more than 1 million hectares or about 14% of Tasmania. Scattered *Eucalyptus ?nitida* wet sclerophyll copses and thamnic rainforest occur on the western flank of the Grieves Valley and are fairly typical vegetation types of Tasmania's Western region.

Environment, Impacts and Rehabilitation

Works so far carried out by Icon Resources that have physically impacted on the environment include: Diamond drilling, mobilization and de-mobilization of the drill rig, auguring “peat” and to a minor extent geophysical IP surveys (Map 1).



Map 1. Map of the Grieves site showing peat mounds, drill collars, peat auguring area and tracks.

Environmental issues are listed below and are not necessarily in order of significance:

1. **Visual impacts:** The auguring sites are clearly visible from the Henty Road and appropriate considerations must be given to minimizing the visual impact of the operation as soon as possible.

It is proposed that jute matting and slash are to be put down over the disturbed areas. This will help to stabilize the ground, hold the seed-bank in place and reduce evaporation enhancing the chances of survival for germinating seeds.*

2. ***Phytophthora cinnamomi*.** Phytophthora is an introduced root rot fungus that attacks vegetation and is spread by soil transfer typically on boots or

wheels of vehicles traveling through infected areas. It has been known for many years that Grieves Siding is infected with Phytophthora.

Where access to drilling sites was by foot a boot wash down station was supplied containing a mild bleach solution. This also helped to reduce the risk of weed infection and dispersal.

3. **Weed control:** Gorse (*Ulex europaeus*) is the most significant weed in the area. Several minor weed grass species also occupy the area but are not regarded as a serious problem. A large section of the Henty Road is currently being managed by Greening Australia to control the spread of Gorse and the EL lies within a portion of their management area, however, ongoing controls must be undertaken in an effort to monitor and eradicate Gorse within the Icon Resources exploration sites.

Ongoing photo-monitoring is underway and weed eradication works are planned with the aid of a consultancy – yet to be determined.

4. **Compaction of soil and vegetation.** Mobilisation and demobilization of the drill rig and Bombardier over boggy ground caused significant compaction within the Buttongrass environment (Plate 1). The heathland vegetation has largely died off in those areas compacted by machinery.

Once rehabilitated the seed-bank should largely be in tact and over time the area should recover (Plate 2).

Photo monitoring sites have been established to monitor rehabilitation (map 2).

5. **Surface water management:** A number of creeks and rivers flow through the exploration area. Mobilisation and demobilization of the drill rig impacts on the water flow and turbidity of the waterways that need to be crossed en route to and from the drilling sites.

It was ensured that the water courses were re-established prior to leaving site. As the disturbance was limited to minor water courses turbidity was only a short-term issue (mostly minutes to hours) and is not regarded as a long-term environmental hazard.

6. **Hydrocarbon Spills.** Operating heavy machinery in the Grieves area meant there was potential for hydrocarbon spillage into the Grieves environment.

No hydrocarbon spills were reported.

7. **Peat Mounds:** Recently discovered peat mounds thought to be artifacts of past glaciation were discovered near the proposed IPD007 drill site (Map 1).

Because of the boggy approach to the original IPD007 drill site the drilling ultimately took place on the southern roadside west of the Badger River further than was originally anticipated from the peat mounds. The mounds were not disturbed during the attempt to approach the original IPD007 drill site.

*NB: As part of the vegetation management of the Grieves area Parks and Wildlife plan to burn the valley in late summer delaying the planned laying of jute and slash.



Plate 1. Access route to IPD005 used by the Drill Rig and "Bombadier" prior to rehabilitation.



Plate 2. Access route to IPD005 used by the Drill Rig and "Bombadier" after rehabilitation.

Mitigating Environmental Impacts

All works carried out were discussed on site with Mineral Resources Tasmania (MRT) personnel prior to being undertaken with a view to minimizing disturbance.

All tracks created were temporary and where possible minimization of vehicle use employed. A bombardier was hired to carry fuel, core and supplies into and out from site. The Drill crew walked to and from the rig each day, their vehicle was left parked on established roads. A walking access route to IPD006 was cut by Ian Rogers (Plate 1.). This route also has rehabilitation photo monitoring sites at the access and egress points.

Peat Auguring Sites

The peat auguring sites were restricted to a relatively confined area towards the base of the eastern escarpment just south of IPD005 (see Map 1). The auguring was carried out using an auguring blade attached to an 8 tonne excavator.

Rehabilitation

The timing of rehabilitation is planned for late summer 2008 but is dependent on a planned burn to be carried out by Parks and Wildlife in the area. As per Plates 3-5 jute will be laid onto the ground with native seed bearing slash spread across it taken from the immediate area. Access to affected areas with equipment, jute etc will be via quad bike.



Plate 3. The auguring area pictured is the largest and most visible disturbance from the Henty Road.

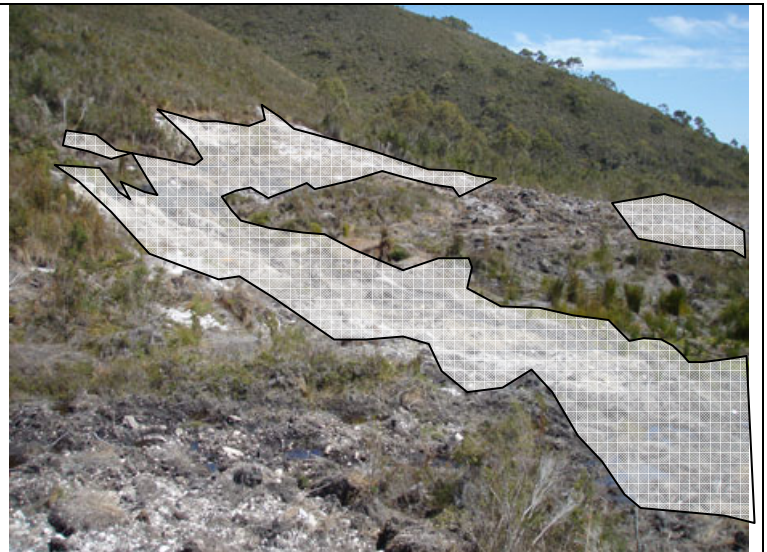


Plate 4. The shaded area is proposed to be covered in jute and slash. The remainder to be covered in slash only.



Plate 5. The above auguring site viewed looking west