



MINERAL RESOURCES TASMANIA

**Archaeological Survey Report
1999/07**

**An archaeological inspection
of the Hellyer mine**

By Parry Kostoglou





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ACKNOWLEDGEMENTS

The consultant wishes to gratefully acknowledge the assistance provided by Mr Bob Reid, Human Resources and Environment Superintendent, Hellyer mine.

Introduction

Job brief

This archaeological inspection of Aberfoyle Limited's Hellyer mine was commissioned by Mineral Resources Tasmania in order to identify any sites of archaeological significance, which might merit preservation after the proposed closure of the mine in April 2000. The verbal brief for this assignment called for an escorted visit to the various precincts of the Hellyer mine site in order to ascertain its extent and range of resident plant. As a result of this inspection the brief finally sought a report identifying any sites at the mine deemed to be of sufficient significance to merit its retention after the mine's closure.

Methodology

Field work was undertaken over a half-day period on 8 July 1999. The various surface sites associated with mining and milling were examined, and the more technologically interesting features then photographed and inventoried. Half a day was also spent at the MRT library and map rooms in order to compile information on this mine site and author the report.

Location of survey area

The Hellyer mine complex lies at the headwaters of the Que and Swallow river systems some 30 kilometres northeast of Tullah in northwest Tasmania. Access to the mine is achieved via a private road branching off the Cradle Mountain Link Road.

Recommendations

As a result of this inspection, it is recommended by this consultant that:

- The concrete footings at the Hellyer mill not be demolished as part of the site clean up. In addition to the mine itself, this site is technologically and physically the most compelling component of the mining operation. It should therefore remain intact to bear testimony to the impressive and sophisticated scale of operations here. It is however deemed permissible to bury the footings under a shallow deposit of soil for environmental remediation purposes.
- The commemorative plaque honouring the discovery of the Hellyer ore body be protected from any clean up/salvage related damage.
- The ferro-concrete tunnel portal facade to the underground Hellyer mine workings be retained if possible, although it is understood that the actual portal itself will be plugged.
- The spillway for the tailings pond at the Que River mine site be retained intact as the sole remaining and significant site marker for the former Que River mine.

Historical overview

Prior to the discovery of the Hellyer ore deposit in 1983, Aberfoyle Ltd had previously conducted mining operations at the nearby Que River workings. This deposit was discovered in 1974 after an exploration program, involving both stream sediment analysis and an aerial electromagnetic survey, had identified the presence of a large geophysical anomaly. Underground exploration of this deposit began the following year and after successful results, underground mining at the Que River began in 1980.

Further exploration activities within Aberfoyle's lease culminated in the discovery of another composite silver, lead and zinc ore deposit nearby in 1983, which subsequently became known as the Hellyer deposit. Small scale trial production of this new deposit began in 1986. Trial milling of the ore was undertaken at the nearby Cleveland mine at this time. The construction of a larger resident milling plant and related office infrastructure at Hellyer throughout 1989/90 saw this mine become Aberfoyle's premier operation in the region. Since Hellyer's ascendancy at the beginning of the decade, the Cleveland and Que River mines have been closed and rehabilitated. With the Hellyer ore body now almost exhausted, this mine is expected to close in April 2000, unless last minute exploration activities or a proposal to rework a percentage of the mine's earliest tailings provide a reprieve for the mill and its resident work force.

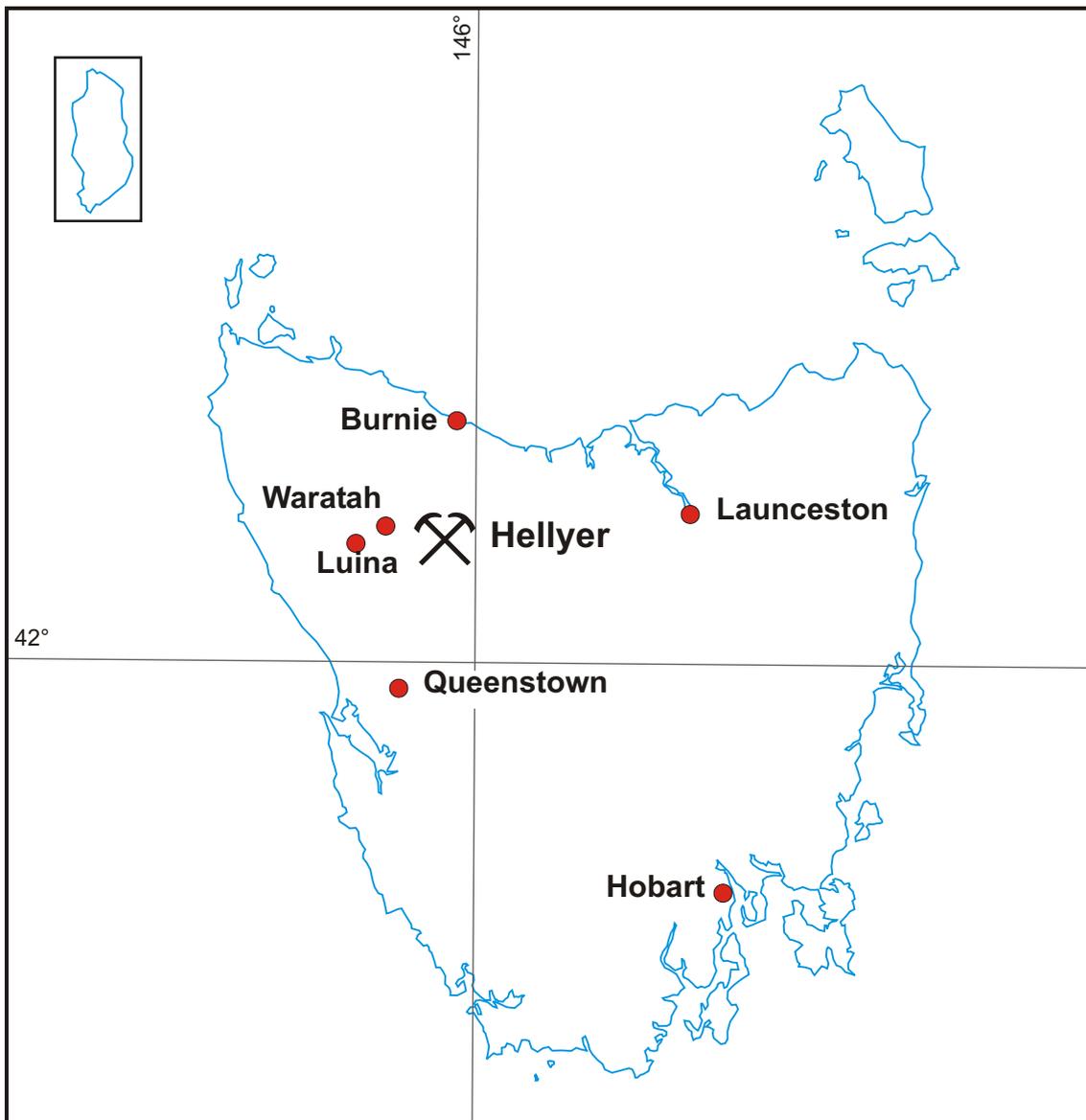


Plate I

Small scale map showing location of Hellyer workings in north western Tasmania..

Site reports

During the two hour inspection of the above-ground mine infrastructure, the following precincts were visited, and notes made of their resident plant and structures.

Hellyer mill and main office precinct

After the front security gate, this is the first compound entered at the Hellyer mine. The two principal structures at this site are the mill building and adjacent concentrates shed, although the main mine/administrative offices are also located in a wing attached to the northern side of the mill building.

The concentrating mill is the largest and certainly most imposing structure at the Hellyer mine. Measuring approximately 40 x 36 x 14 metres in height, this colourbond clad building houses the various crushing/grinding and flotation plant used to liberate the four types of concentrate from associated waste rock. It is assumed that subsequent to closure and salvage of the resident plant, only the concrete footings will remain on site. In association with the adit portal, this feature is deemed to be the only noteworthy heritage related item at the Hellyer mine, and it would be desirable to retain this feature after closure (see *Recommendations* section).

Immediately northeast of the concentrating mill shed stands the concentrates shed, where refined concentrates carried from the mill via a conveyor are stockpiled in four separate storage bays before they are loaded onto rail or road transport for passage to Burnie wharf. This shed is also an unremarkable colourbond clad structure erected over a concrete floor and form concrete ore bins. None of these features are deemed to have any heritage related significance. Nor does the office/administration wing at the northern end of the concentrating mill shed. This wing contains up to 30 office suites/conference rooms of varying sizes on two floors.

Hellyer mine tailings dam precinct

The tailings dam precinct and its associated wetlands was not visited during this inspection.

Hellyer mine

This precinct consists of the underground adit portal and related structures including a workshop, mine office change house and electrical substation. All of these structures are unremarkable examples of industrial infrastructure built during the past decade, consisting of steel frames supporting zinc colourbond sheet walls resting on a reinforced concrete slab. The concrete adit portal itself is the only feature at this site which is deemed to be of any nominal heritage related significance (see *Recommendations* section). Measuring approximately 10 x 8 metres in height, this arched concrete structure is the sole access point to the Hellyer ore body.

Que River mine

A brief visit was also made to the site of the former Que River mine, located some 2.3 kilometres southwest of the Hellyer mill compound. The only two surviving structures at the Que River mine appeared to be a corrugated iron shed formerly used by the Orica explosives company, and the ferro-concrete spillway for the former tailings pond. The former main shaft and related ventilation shafts have all evidently been capped, and the entire former mine landscape rehabilitated. Only the spillway itself is deemed to possess any heritage value (see *Recommendations* section). Its retention would be considered desirable as the sole surviving vestige of this former mine site.

References

- ABERFOYLE RESOURCES, 1992. *Environmental management plan No. 2*. Aberfoyle Resources Limited Hellyer Division.
- MIEDECKE & PARTNERS PTY LTD, 1987. *Hellyer project environmental management plan*. Aberfoyle Resources Limited.
- MIEDECKE & PARTNERS PTY LTD, 1988. *Hellyer Expansion Project environmental management plan*. Aberfoyle Resources Limited.

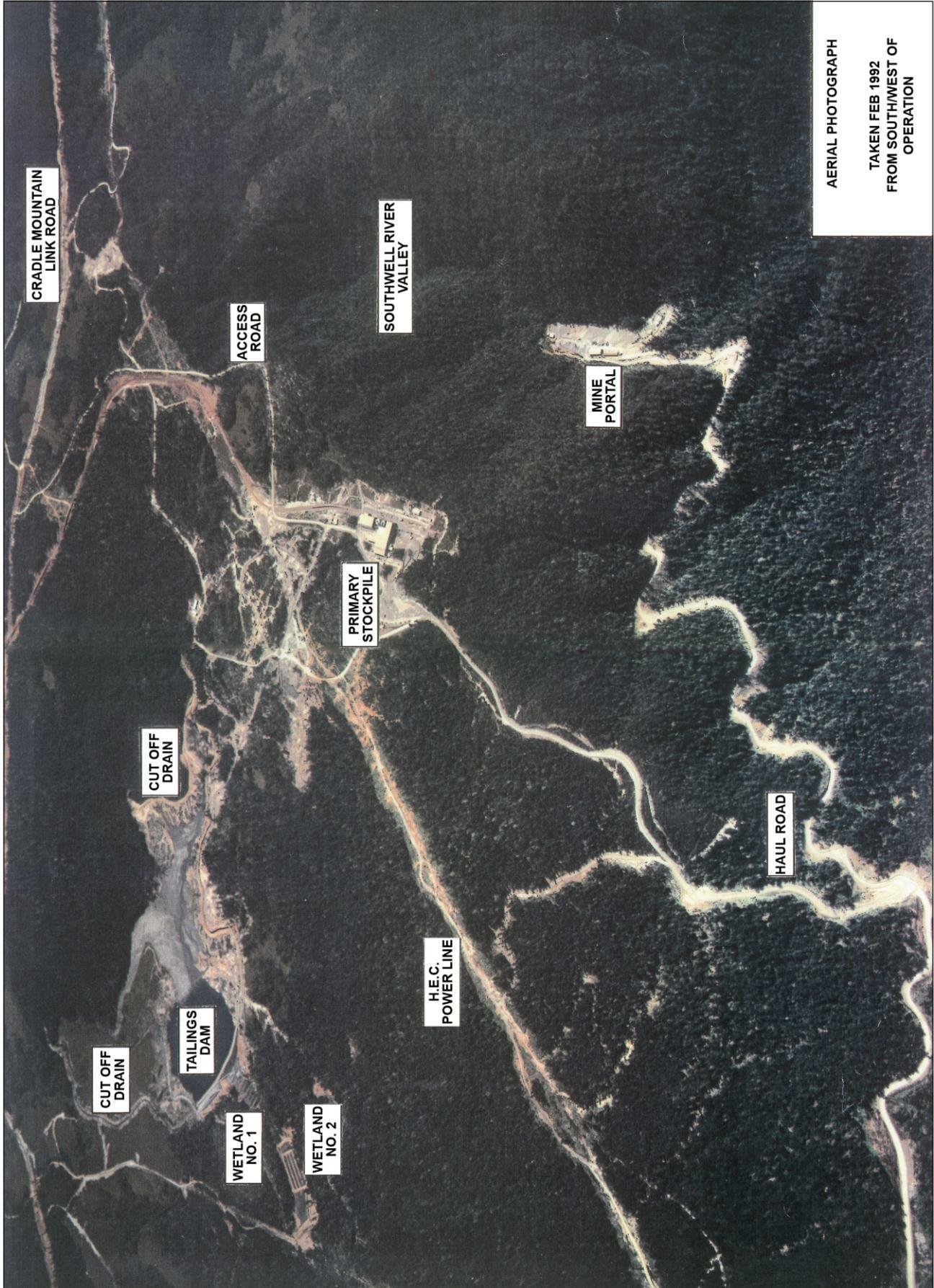


Plate 2. Aerial photograph showing location and extent of survey area.

APPENDIX

Contemporary survey photographs

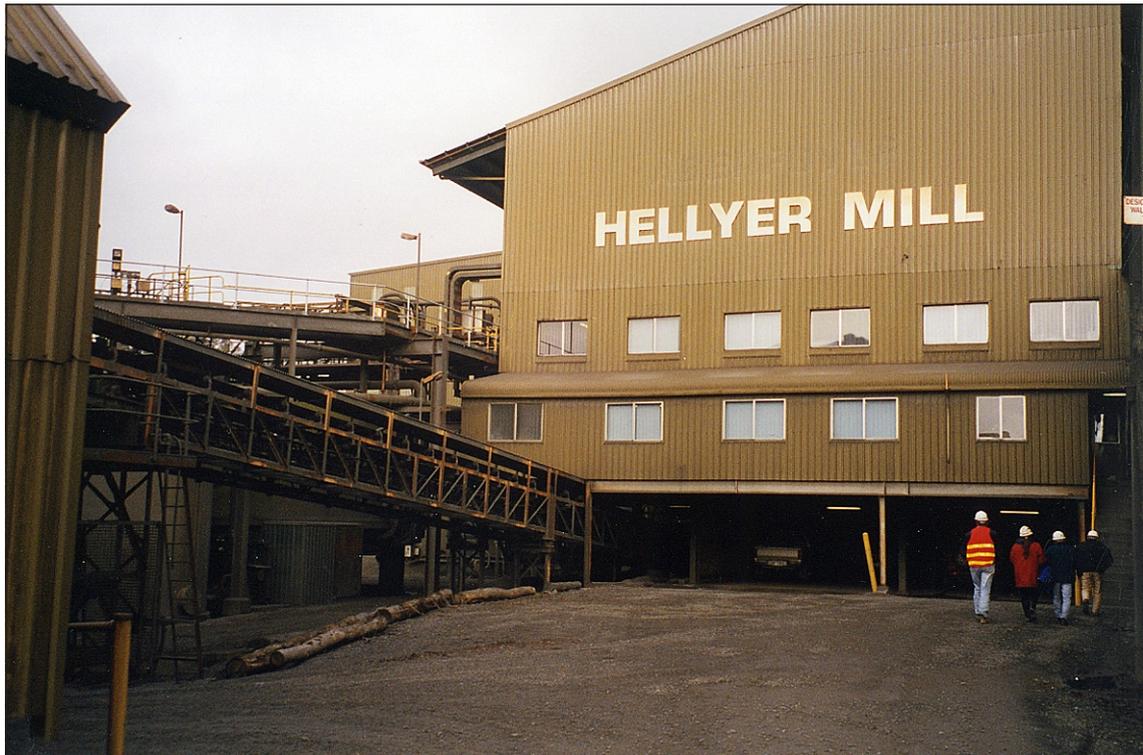


Plate 3

View of concentrating mill showing ore conveyer leading to concentrates shed.



Plate 4

View of ball mill in the concentrating mill shed.

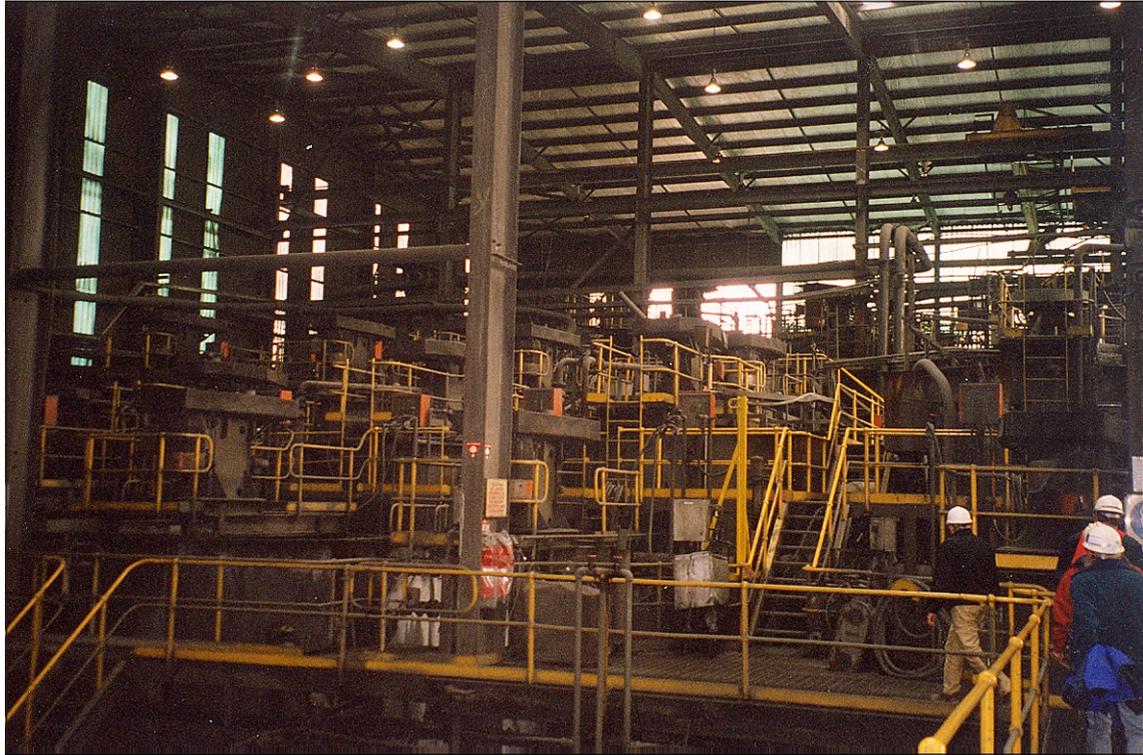


Plate 5

View of catwalks around various flotation cells in concentrating mill shed.



Plate 6

View of ore conveyer and concentrates ore storage bins beneath in the concentrates shed.



Plate 7

View of commemorative cairn and plaque beside the drill hole which first identified the Hellyer ore body.



Plate 8

View of the adit portal at the Hellyer mine.



Plate 9

View of the adit portal at the Hellyer mine.



Plate 10

View of concrete spillway for the former tailings pond at the Que River mine.



Plate 11

View of the Orica shed at the Que River mine. This is now the only standing structure at this mine site.