

CASE HISTORY OF A SHOCKER

Judith Wright McKinney
 'Edge'
 Mongarlowe. NSW. 2622

FOR REFERENCE ONLY
 NOT TO BE REPRODUCED
 National Library of Australia

This story begins with an application by a small firm named Mehilo Pty. Ltd., for a mining and dredging lease on the Mongarlowe River, north of Braidwood. Under the Environmental Planning and Assessment Act, the Tallaganda Shire Council advertised this on July 25, 1984, as a Notice in "respect of Designated Development. The proposal was for an open-cut gold mine and a dredging lease in the river itself adjacent to the proposed mine. There was a thirty-day period for submissions and objections.

Mehilo Pty. Ltd. provided an EIS which was to say the least uninformed, misidentifying for instance Casuarina nana as introduced gorse, misinterpreting the position of mapped areas and making other questionable statements. The dredging development would, according to the firm, 'process gravels from the river bottom to a depth of 10m.' The mineral was to be hand washed and this would enable 'the removal of mercury which was left behind by the early miners.' Dams would be constructed for washing the ore and holding the sediments.

A number of people living along the Mongarlowe lodged objections, including the land-owners, Rondale Partnership, on whose land the proposed lease lay. The Tallaganda Shire Council granted the application for the open-cut mine but refused the dredging application. One of their reasons was the danger that dredging might, through resultant turbidity and disturbance of ~~sediments~~ sediments possibly containing the mercury to which the EIS referred, threaten the small population of the rare and endangered Macquarie Perch, which was of special interest to fisheries authorities as a possible source of stocking other eastern-flowing rivers with perch as a recreational fish. There are also a number of platypus

in the Mongarlowe - recently of even more scientific interest to zoologists as a result of work on fossil specimens, and of the rare Spiny Crayfish.

Rondale Partnership appealed against the Council's decision to grant the open-cut application, to the Land and Environment Court. The hearing of the Court is scheduled for May 1986, but in the meantime Mehilo Pty. Ltd. is carrying out a study of the 'aquatic environment,' requested by the Tallaganda Shire Council, to support their application.

To explain the background of the case: the Mongarlowe River and its tributary creeks and streams have a long history of gold mining. The river is a tributary of the Shoalhaven, rising in the coast range south of Mt. Clyde and running north parallel to the Budawang Range to join the Shoalhave beyond Charleyong. As such it is a source of water for livestock, some irrigation and household uses to the people who live near it. There is a motel and a small township, Mongarlowe, as well as a number of farms, but settlement has declined since the exhaustion of the alluvial and deeper gold deposits. A proposal for a major dam at Welcome Reef, on the Shoalhaven below its junction with the Mongarlowe, to augment Sydney's water supply, has been postponed several times. An environmental impact statement was commissioned over the dam area by the Metropolitan Water and Sewerage Board and completed some years ago, but there is still no firm indication of a date of commencement. However, part of the banks of the Mongarlowe and of some streams likely to be flooded by the dam's waters are now designated Crown recreation reserve.

Mining in the area was mainly alluvial but there are also a number of old shafts whose tailings heaps scar the landscape, still unvegated, and a number of other relics of mining such as gullies, disused roads and tracks, and old sluice dams. Meanwhile, subdivision has brought in a number of smallholders attracted by the beauty of the area and the comparative cheapness of land, which is mostly too poor to command high prices. However, a number of properties carry livestock and contribute to local pastoral production.

There is some tourism, especially for trout fishing and fossicking; but the latter is prohibited in wildlife refuge areas and dredging, though it occurs, is mostly illegal. The application by Mehilo was unwelcome to a number of people who saw that a resumption of mining would threaten their peaceful occupations and their land.

Mehilo may have relied on the dredging operation to supply a continuing source of capital to develop the open cut. Its balance sheet as at 30 June 1984 showed total assets of only \$21,000 including fixed assets and it had no cash at bank. The environmental study it had been directed to carry out was far from complete when the six-month entry permit to the Rondale Partnership's land ended in February 1986, and it applied to the Chief Mining Warden for an extension for another three months. This was granted, against the objection of the Rondale Partnership, which contended that the firm had done very little in the time and pointed out that the extension seemed to contravene provisions of the Mines Act 1973. Rondale Partnership was notified of the extension in a letter from the Warden dated 6th March 1986.

On that same date, Rondale received from Mehilo Pty. Ltd. a document showing that on the 20th of February 1986 the firm had been given a lease to mine gold and mercury over five areas, totalling about 13 ha, on the Mongarlowe banks. Of these areas, one is an old mining site above a gully running to the river, three are below old mine workings on gullies to the river, and one is on an old mine working in a flood-prone site on the river bank.

The partnership was especially alarmed because they had just received information on the high toxicity of mercury. This had reached them from the Department of Zoology, Monash University, which they had requested for advice in case the mercury mentioned in the dredging application would affect their water supply if disturbed. Dr P.S. Lake wrote in reply:

'In my opinion, it seems as if the Mongarlowe River has been contaminated by mercury from past dredging. If this is so, then the last thing that is needed is re-dredging. Such a step would most probably remobilise the sedimented mercury and create a new pollution hazard. Mehilo Pty. Ltd., if they were allowed to dredge the Mongarlowe River, would be doing a great community disservice, and threatening a viable population of Macquarie Perch - a fish whose future survival is the cause of considerable concern by freshwater biologists.'

The Sandale Partnership's concern over the original dredging application was now replaced by concern over an actual mining lease over their land, which was evidently contaminated by a highly toxic heavy metal. Mercury contamination was the cause of the tragic Minamata Bay outbreak some years ago. They had no cause to believe that Mehilo Pty. Ltd. had either the capital or the mining expertise to contain the disturbed mercury in the mining tailings on their land; they had had no chance to protest or to object; and they now learned for the first time that mercury was present in their land as well as in the river sediments in their water supply.

Mercury was used extensively in amalgamation processes to extract gold and silver during early goldmining in New South Wales and Victoria but was superseded by the Australian-invented cyanide gas process early this century and is now seldom used. Cyanide, though a highly poisonous process, is easily converted to harmless thiocyanate in the human body unless taken in massive doses. Mercury is much more hazardous, affecting the nervous system and crossing the placenta to poison the unborn child. Inorganic mercury in water is quickly converted to alkylmercurials through microbial action and enters the food chain, concentrating finally in larger predatory fish. The recommended 'derived working level' in drinking water is as low as 0.002 mg/l/(1) Note: / and World Health Organisation standards are even more stringent, requiring not more than 0.001 mg/l. 'It should be recognised that the concentration of mercury

in the rawwater gives little indication of the total amount in the system since the majority would be expected in the sediments or absorbed by aquatic life,' notes the publication. (P. 52)

Dr Lake provided an article to the Rondale Partnership on work done on mercury contamination of the Lerderberg River in Victoria from an abandoned gold field which states that

'significant levels of mercury are known to be contained in the tailings from amalgamation operations ... It has been estimated that the weight of mercury consumed in the amalgamation process is of the same order as the weight of gold recovered. On this basis the potential mercury contamination from old gold-mining areas can reach major proportions. Although it is many years since most Australian gold mines ceased operations, tailings dumps are still prominent features of the local landscape. Material from other dumps has been removed and possibly used for road surfacing or as filling materials in creeks and gullies. Thus there is potential for a continuing release of mercury from these tailings into adjacent aquatic environments.'

/ (2) Note:/

This certainly applies to the old diggings along the Mongarlowe.

The Rondale Partnership believes that the Department of Mineral Resources must have known in advance of the presence of mercury in the areas on or below old mine workings. Yet they granted (without EIS or previous notification to the public) the lease for gold and mercury to Mehilo, thus pre-empting the result of the recommended aquatic environmental study and of the decision of the Land and Environment Court on the action in progress. Moreover, though the holding of an actual lease must confer the right to entry on its holder, the Warden has extended the term of the 'permit to enter' granted to Mehilo and has done so while the lease has apparently actually come into force - a lease which extends to the end of 1995, five years after the date to which construction of the Welcome Reef dam has apparently been postponed.

All these apparently contradictory and secretive actions by the Department of Mineral Resources have given much cause for concern to dwellers along the Mongarlowe. We hope to hold a public meeting in Braithwood to question the whole issue - and its possible bearing on

the lives and future of others beside the people on the old gold diggings near the Mongarlowe. Come to that meeting. It will be advertised in local papers and the Canberra Times. and will be held in the hall of the Braidwood Services Club at 7.30 pm. on 29th April

Notes:

- (1) Compilation of Australian Water Quality Criteria, Barry T. Hart
Australian Water Resources Commission, Technical Paper No. 7
A.G.P.S. Canberra 1974.
- (2) Mercury Contamination of the Lerderberg River, Victoria, Australia, from an Abandoned Gold Field, B.M. Bycroft,
B.A.W. Collier, G.B. Deacon, D.J. Coleman, & P.S. Lake,
Environ. Pollut. Ser. A. 0143-1471/82/0028-0135/S02.75
Applied Science Publishers Ltd. England, 1982, Printed in
Great Britain.

FOR REFERENCE ONLY
NOT TO BE REPRODUCED

4849 ROLL

PAPERS 180-260
STATE 2
M.L. APPN No 84
MINING DIVISION GOULBURN
APPLICANT MEHILO PTY. LTD.
PARISH MONGARLOWE
COUNTY ST. VINCENT
SCALE 1:3,000 LENGTHS ARE IN METRES.

M.L. No 1117 ACT 1973.
LESSEE MEHILO PTY. LIMITED.

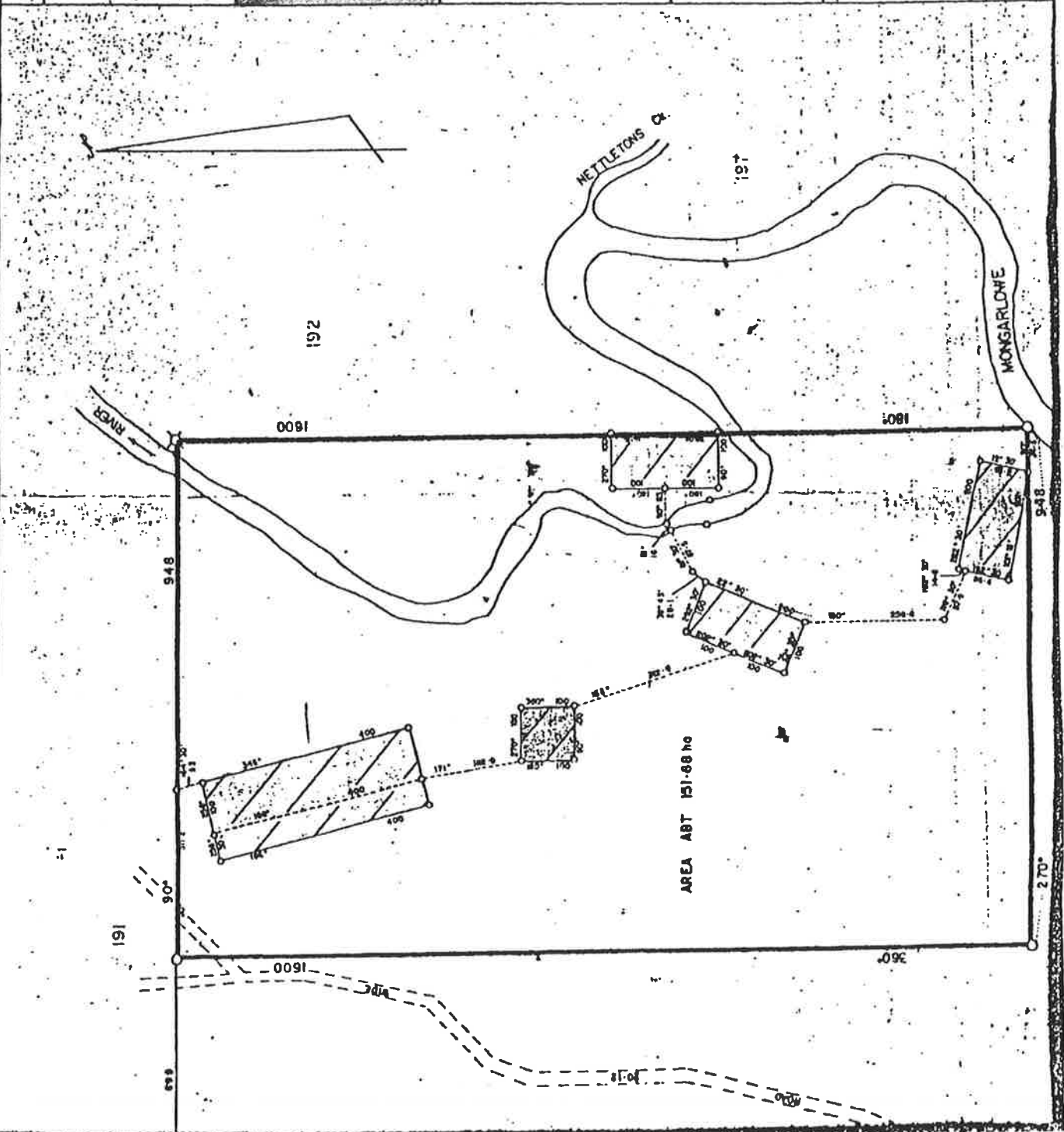
DATE OF GRANT 20-2-86.
TERM 31-12-1995.
MINERAL PURPOSE GOLD & MERCURY.

DEPTH RESTRICTION EMBRACES THE SURFACE & SOIL THEREOF TO A DEPTH OF 30 METRES FOR THE SURFACE RIGHT AREAS (abt 12.95 ha)

SURFACE EXCEPTION: EXCLUSIVE OF THE SURFACE & SOIL BELOW THEREOF TO A DEPTH OF 30 METRES FOR THE AREAS OUTSIDE OF THE SURFACE RIGHT AREAS (0.01872 ha).

MARKED OUT IN ACCORDANCE WITH SECTION 44 OF THE MINING ACT 1973 BY J. MULLEN 24. 9. 86
DIAGRAM PREPARED & CHARTED BY J. MULLEN
CHECKED BY DRAFTSMAN
EXAMINED BY J. MULLEN 23. 2. 84

SURFACE RIGHT AREAS SHOWN
SHOWN BY BLACK HATCHING



1. The Land and Environment Court upheld the appeal against Mongarlowe River gold and mercury mining.

As a result of the long series of hearings of the Land and Environment Court, the appeal by Ron Broomham and Dale Owen against the Tallaganda Shire Council and Mehilo Pty Ltd has been upheld.

The attached copy of the judgement by Mr Justice P L Stein of the Land and Environment Court of New South Wales is fairly self-explanatory. The result is that:

- (i) The original consent given by the Tallaganda Shire Council to the development application is void.
- (ii) Despite the mining lease granted by the Department of Mineral Resources, Mehilo cannot mine without a new development application to council, a new environmental impact statement and the usual public appeal process. Unlike the original, a new environmental impact statement would need to address the question of mining for mercury on the land area and its likely effects on the Mongarlowe River. Any new development application will be advertised in the Tallaganda Times by council and a further newsbulletin will be issued to keep this group up to date.

2. Mineral Resources Report

The Department of Mineral Resources has produced a 100 page report entitled "Water Pollution Hazard - Mongarlowe River" (Report GS 1986/071). It is perhaps indicative of the Department's intentions towards the Mongarlowe area that effort has been expended on such an exercise.

Ron Broomham and Dale Owen and Dr P S Lake from Monash University have examined this report and found many flaws. These include:

- (i) Too little time was taken for an adequate field study and too few samples were taken for reliable results.
- (ii) Mercury, having a high specific gravity, will sink with time. Despite this and the fact that the mining lease permitted work to 30 metres, samples of soil were taken only from the top 1.5 metres.
- (iii) The technique used to dry stream sediment samples is unusual when testing for mercury and could result in considerable mercury loss before the test is performed on samples.
- (iv) The report uses an old, overseas reference to imply that little or no mercury was used in the Mongarlowe area, yet the Department of Mineral Resources itself had granted a lease including mercury extraction.

Copies of the report can be obtained from The Publications Officer, Department of Mineral Resources, G.P.O. Box 5288, Sydney, N.S.W., 2001 for \$14.50 plus \$5.00 handling.

Anyone interested in photocopied extracts from the report and copies of the critiques of Broomham/Owen and Lake should contact Ron Broomham and Dale Owen on 048.422357 or at P.O. Box 13, Braidwood, N.S.W., 2622