

CABINET - SUBJECTS FOR CONSIDERATION, 07 JULY 2003 9:00 AM

1 New Initiatives/Policy Matters

Not Relevant

102 **OED095/002/157CS** **Possible Expansion of Olympic Dam Mine**
APPROVED

All Ministers

Not Relevant

CABINET COVER SHEET

- 1 TITLE:** Possible expansion of Olympic Dam Mine
- 2 MINISTERS:** Acting Premier
- 3 PURPOSE:** To provide advice to **WMC Resources** as to whether there are any issues relating to the various water supply options for any future expansion of operations at the **Olympic Dam** mine that would cause the Government to rule out those options.
- 4 RELATIONSHIP TO GOVERNMENT POLICY:** Expansion of operations at **Olympic Dam** represents possibly the largest economic development opportunity in **South Australia**. Although any decision on expansion will not be made within the next four years, there are numerous stages of the investigations that have to be worked through prior to that date. The decision on water supply is crucial to the project proceeding.
- 5 RESOURCES REQUIRED FOR IMPLEMENTATION:** No additional resources required.
- 6 FINANCIAL IMPACT STATEMENT:** No financial impacts from this decision. Future decisions on the **Olympic Dam** expansion issue may have financial impacts.
- 7 OTHER MAJOR IMPACTS:** If it becomes widely known that **WMC** is investigating the option of sourcing its water from either the **River Murray** or the **Great Artesian Basin**, there are likely to be some community concerns that arise.
- 8 CONSULTATION:** There has been widespread consultation across Government through the representation on its **WMC** task force.

9 URGENCY:

10 day rule applies. (WMC is seeking a response from the Government by the middle of July 2003).

10 RECOMMENDATIONS:

It is recommended that Cabinet:

5.1 approve communication by the Premier of the following advice to WMC Resources:

5.1.1 that Cabinet remains supportive of any proposal to expand operations at Olympic Dam, provided that the expansion meets acceptable environmental objectives;

5.1.2 that Cabinet does not at this stage rule out any of the options for the provision of water to an expanded operation at Olympic Dam; and,

5.1.3 that the onus will rest with WMC to demonstrate to Cabinet the sustainability and environmental acceptability of whichever water supply option is chosen as the preferred option by WMC.



Kevin Foley MP
Acting Premier

25/6/2003

TO: CABINET

RE: POSSIBLE EXPANSION OF OLYMPIC DAM MINE

1. PROPOSAL

- 1.1 To provide advice to WMC Resources as to whether there are any issues relating to the various water supply options for any future expansion of operations at the Olympic Dam mine that would cause the Government to rule out those options.

2. BACKGROUND

- 2.1 WMC is investigating the possibility of expanding the scale of activity at the Olympic Dam mine in outback South Australia. A number of expansion options are being investigated, including the option of developing a large open cut operation at the southern ore body. If this option was to prove viable, it would involve a capital investment in the order of \$5 to \$6 billion, and a 250% increase in the production of refined metal from the mine.
- 2.2 To assist WMC with the process of negotiating the myriad of Government approvals necessary for an expansion of this magnitude, in September 2002 the Premier announced the establishment of a high-level public sector task force.
- 2.3 This task force has been working with WMC for some nine months. A full list of approvals required for any future expansion (particularly beyond the scope of the existing Roxby Downs Indenture Act) was given to WMC in January 2003. WMC has now requested advice from Government on any perceived hurdles relating to possible future water supply options.

3. DISCUSSION

- 3.1 Current mining and processing operations at Olympic Dam have the capacity to produce up to 235 000 tons of refined copper per annum, plus associated production of uranium and precious metal. The mining and processing operations, plus the domestic demand from Roxby Downs township, consume up to 42 megalitres (ML) of water per day. This water is sourced from two well-fields in the Great Artesian Basin (GAB), located 100 kilometres and 200 kilometres to the north and east of Olympic Dam.
- 3.2 To expand to what WMC believes is the maximum viable size, that is to produce 600 000 tons of refined copper per year, WMC believes it will require an additional 85 ML of water per day. To put this in perspective, Adelaide's daily average consumption of water in the month of June is 311 ML per day.

- 3.3 WMC believes that there are only three possible sources available that could deliver this amount of water. These are the GAB, the Murray Darling river system, and the use of desalinated seawater. Before proceeding to further investigate these sources, WMC wish to determine whether there are any political, environmental, ecological, social or other constraints that may be imposed by the State that would rule out any of these sources.
- 3.4 The task force engaged ArupWater (Arup) to provide some independent advice as to the viability of obtaining the required amounts of water from each of these sources. Arup undertook a big picture costing exercise to compare the capital and operating costs for each option. WMC has been involved in this process from the start, with a view to providing factual information regarding specific operating costs and consumption and recycling information.
- 3.5 From the time of the first discussions with WMC about water, the task force has stressed that there will be a strong expectation that WMC will make greater efforts to recycle water in its processes. However, a detailed analysis of water use in the WMC mining and processing operations suggests that WMC already is a frugal user of water, and the scope for additional reuse or recycling is not large. Nonetheless, the task force has requested WMC target a figure of 20ML per day for additional recycling. If that can be achieved, it would reduce the maximum demand for 'new' water to 65ML per day.

3.6 Water Supply Options

Great Artesian Basin

- 3.6.1 The GAB provides most of the water used in the Roxby Downs township and the Olympic Dam mine and processing operations. From the time when the GAB was first proposed as a water source for Olympic Dam, there have been concerns from the environmental lobby and other GAB users about the impact that WMC's extractions would have.
- 3.6.2 Over the past few years, the states overlying the GAB and the Commonwealth have embarked on an extensive program to cap free flowing bores in the basin and convert open bore drain channels to piped reticulation. This program has reduced daily extractions from the South Australian portion of the GAB quite considerably, with further savings to come.
- 3.6.3 If WMC was to nominate the GAB as its preferred source, it is possible to restrict the impact that its extractions have on other users and the GAB itself by the use of performance based conditions of approval and the issue of a Special Water Licence under the Indenture. This is the method currently used and it appears to be acceptable to all stakeholders. The Indenture will need to be revised to accommodate other areas of the development. Such changes could also consider the introduction of charges for new extractions from the GAB.

- 3.6.4 Through the auspices of the *Commonwealth Environment Protection and Biodiversity Conservation Act (EPBC Act)* the Commonwealth Government would have a say in any application to extract this water from the GAB.

Murray Darling Basin System

- 3.6.5 WMC need (up to) an amount of water roughly equivalent to 5% of the South Australian extractions for irrigation purposes. Again to put this into perspective, when John Elliott's rice farm was sold recently in NSW, it had entitlements (with varying degrees of security) to more water than WMC require. By agricultural standards, it is not such a huge amount of water.
- 3.6.6 Under existing legislation in South Australia, WMC could enter the market and buy water licences from the section of the river extending up to Swan Reach. WMC could also negotiate with SA Water to have it transport this water to Port Augusta using surplus capacity in the Morgan-Whyalla system. WMC would then have to construct additional infrastructure to get the water to Olympic Dam.
- 3.6.7 Any suggestion of WMC obtaining its water from the River Murray is likely to create considerable anguish in the community. If the potential environmental benefits of such a move are taken into consideration, such as transfer of salt out of the basin and increased river flows particularly during winter months, then it may be worthy of further consideration.
- 3.6.8 Without Government facilitation, initial economic evaluation of this option would appear to rule it out. WMC is unlikely to be able to purchase sufficient water under current trading regulations. The Murray Darling Basin Commission would probably need to modify the existing arrangements for water trading between the States.

Seawater Desalination

- 3.6.9 Australia's largest seawater desalination plant would be required to provide the water to Olympic Dam. Construction of a plant (possibly near Port Bonython) and development of new pipeline infrastructure to Olympic Dam would be required.
- 3.6.10 This option potentially delivers the fabled unlimited resource, with what are considered to be quite manageable environmental impacts. However, high construction and quite high operating costs both mitigate against it. The initial investigations by Arup indicate that *prima facie* this option may involve the highest total costs, but there are no reasons why the State would rule out this option.

3.7 WMC at this stage is seeking advice only as to whether any of these options should be ruled out from its considerations. WMC will be required to develop its own scientific case as the basis for arguing for its preferred option, when it has completed an evaluation of all options that is acceptable to Cabinet.

3.8 Economic, financial and budget implications

At this stage of WMC's investigations there are no economic, financial or budget implications. If at some future time the State was to choose to try and steer WMC towards an option that imposed significant cost penalties onto any proposed development, then there may be implications from that decision. That is not the case at present.

3.9 State development, social, environmental and other impacts

3.9.1 The task force has been very cognisant of the potential state development and other impacts of the possible expansion of Olympic Dam. If the Government advises that the Murray Darling option and the GAB option are worthy of further examination by WMC, by implication there is the suggestion that the State would give consideration to approving either of these options.

3.9.2 Regardless of the merit of the argument, that suggestion will be unacceptable to some parties. Conversely, to rule these options out of contention at this time may impose a cost regime onto WMC that would make the possible expansion uneconomic.

3.10 Staffing implications

3.10.1 The Olympic Dam task force has representation from every State Government agency or department with any significant interest in the project. The task force will continue to meet regularly to deal with the issues raised by WMC.

3.10.2 The Department of Water, Land and Biodiversity Conservation will continue to develop more sophisticated modelling techniques for predicting impacts of additional extractions in the GAB.

3.10.3 At this time neither of these activities has generated a need for additional staff or resources.

3.11 Consultation

3.11.1 Task force members are senior executives from the various agencies represented. Where consultation is necessary the task force members undertake that role within their agencies.

4. CONCLUSION

4.1 The task force has advised that in its view there are no environmental, social, cultural or economic reasons why all three of the options should not be investigated further by WMC. All these investigations are to be at WMC's risk. Before a final decision is made by WMC on the water source for any expansion, Cabinet must approve the proposal.

5. RECOMMENDATIONS

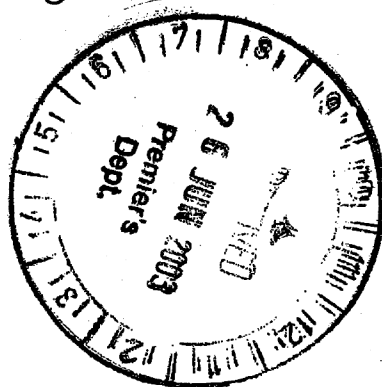
It is recommended that Cabinet:

5.1 approve communication by the Premier of the following advice to WMC Resources:

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25/6/2003



In Cabinet

- 7 JUL 2003

