

Seismic exploration proposal, Watheroo

Ampol Exploration Limited

**Report and recommendations of the
Environmental Protection Authority**

**Environmental Protection Authority
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**Seismic exploration proposal EP 351
25 km west of Watheroo**

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1. Project description

A proposal has been received from Ampol Exploration Ltd to conduct a seismic survey for petroleum within Exploration Permit 351, located about 200 km north of Perth. The company proposes to test for petroleum in an area lying immediately to the west of Watheroo National Park (see Figure). A total of 70 km of seismic traverses is planned. Portions of the survey may encroach into the western side of Watheroo National Park, parts of Flora and Fauna Reserve 27872, and an area proposed as a national park to link the Watheroo and Alexander Morrison National Parks.

The work requires the preparation of a reasonably clear line for the laying of cables and geophones, the passage of the Vibroseis trucks (used to generate the seismic source), and the drilling of some shallow holes which are required for the measurement of near-surface features. At the end of the survey the cables would be removed and the lines closed off to traffic access from main roads.

The precise extent and location of the survey lines is presently undecided because it is dependent on reprocessing of earlier seismic data, which is incomplete. However, the proponent has recognised that several kinds of environments could be involved and has committed to appropriate actions once the exact sites are known. (These commitments are listed in the Appendix).

The survey is planned for the summer season and is expected to take a few weeks to complete. This will enable the interpretation of the survey data, which will be used to site and drill an exploration well somewhere in the area by July 1991, under a commitment by Ampol to the Department of Mines.

The survey team is expected to camp on private property for the duration of the survey under mutually convenient arrangements with the land owner.

2. Existing environment

A significant portion of the area under consideration is cleared farmland. However, the larger part is rolling northern sandplain heath, with dense stands of Wandoo on lateritic rises.

3. Minimisation of impacts

Ampol has committed to a comprehensive management plan which should minimise the impacts of line clearing, and has undertaken to liaise with land owners, the Shire and the Department of Conservation and Land Management staff, as appropriate, to identify and incorporate specific requirements.

As the survey is planned for the summer period damage to roads is unlikely, but the fire risk will be high and there will be a fire control vehicle kept on site at all times during the survey. Dieback precautions will be taken, including the cleaning of machinery at least before arrival in the area and on entry to road sides or conservation reserves.

Once the exact survey sites are known an ecological appraisal will be carried out to identify sensitive areas, including rare flora, dieback infections and stands of Wandoo. The lines will then be modified as necessary to avoid or minimise the impacts to these areas, in consultation with the Department of Conservation and Land Management.

Specific procedures proposed would include using existing firebreaks or access tracks where possible, the use of front-end loaders to roll rather than doze vegetation so as not to disturb the soil, avoiding rare flora and, where possible, deviating around trees and dense vegetation. This planning will be carried out in appropriate consultation with the regional staff of the Department of Conservation and Land Management.

The entrances to lines would be obscured by including "doglegs" or brushing, and lines would not be cleared on the boundaries of reserves if an internal firebreak is present. This technique reduces the chance of the seismic line being seen from outside the reserve, with a corresponding reduction in casual accessibility to vehicles.

Drill holes would not be located in sensitive areas and would be filled in and left tidy after use. Necessary rehabilitation work would be carried out at the completion of the survey.

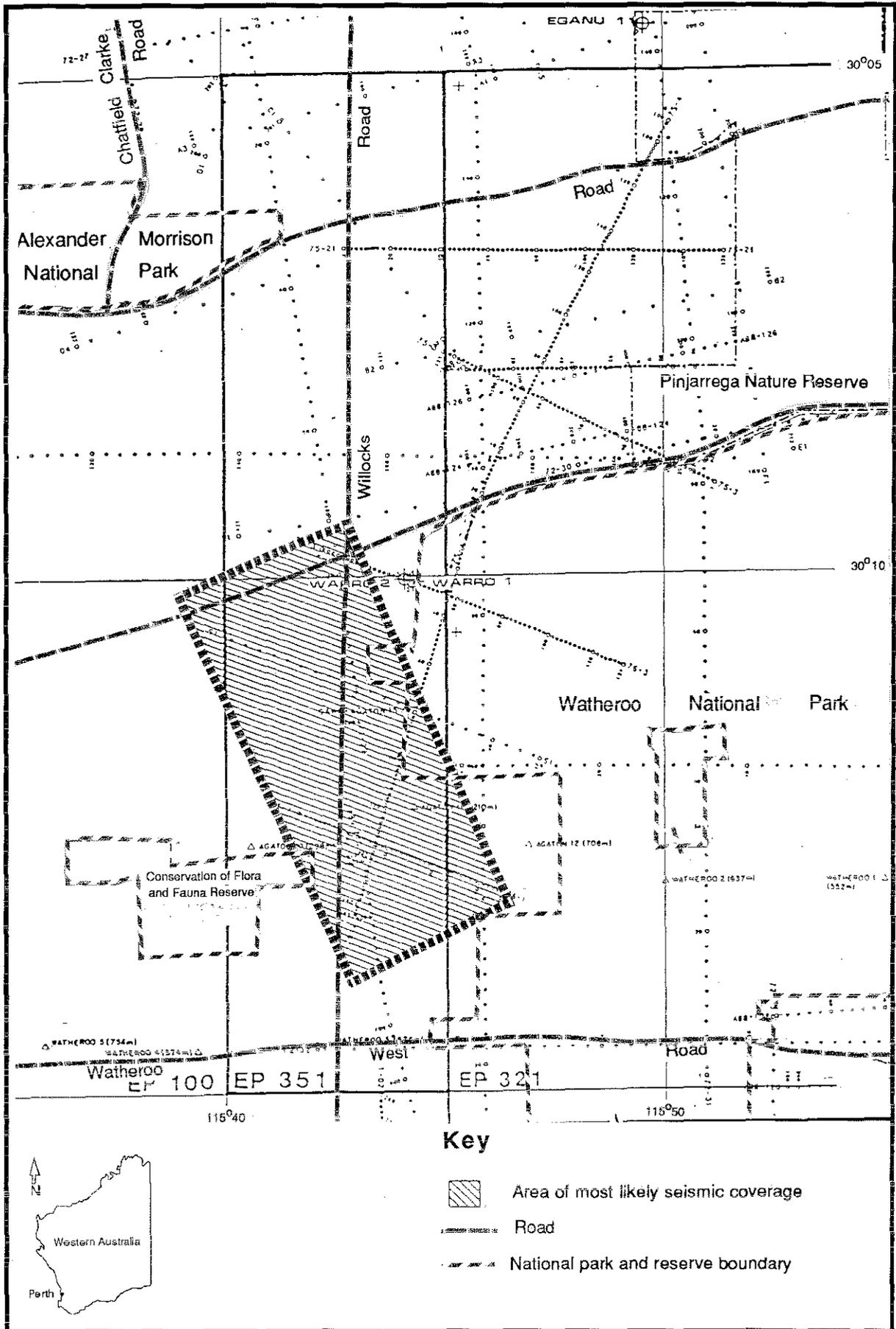


Figure 1: Location map.

4. Conclusion and recommendations

The Environmental Protection Authority notes that while the general pattern of survey lines is known, the precise location is yet to be determined. The Authority considers that this offers an opportunity for the proponent to ensure that one selection criterion is the minimisation of environmental impacts. This is especially important in areas of high quality native vegetation.

The exploration permit encompasses part of the Watheroo National Park and Reserve 27872. Where the proposed survey lines, once determined, impinge on these areas, the Authority considers that these components need to be referred back to the Environmental Protection Authority for further assessment consistent with the recently released Government policy 'Resolution of Conflict' (released 13 November 1990).

Recommendation 1

The Environmental Protection Authority has concluded that the proposal, as described in the proponent's Consultative Environmental Review, is environmentally acceptable and recommends that it could be allowed to proceed, subject to the proponent's commitments and the following recommendations:

Recommendation 2

The Environmental Protection Authority recommends that a competent botanist acceptable to the Environmental Protection Authority on advice from the Department of Conservation and Land Management should be retained by the proponent to locate rare or restricted vegetation and define other sensitive areas to be avoided once the intended locations of the survey lines are more precisely known. The proponent should adhere to the botanist's recommendations.

Recommendation 3

The Environmental Protection Authority recommends that once the intended locations of the survey lines are more precisely known, and before commencement, any proposal for the survey to enter Watheroo National Park or Reserve 27872 should be referred to the Environmental Protection Authority for further assessment.

Recommendation 4

The Environmental Protection Authority recommends that the proponent should complete restoration work to a standard and timetable satisfactory to the Environmental Protection Authority.

The Authority believes that any approval for the proposal based on this assessment should be limited to five years. Accordingly, if the proposal has not been substantially commenced within five years of the date of this report, then such approval should lapse. After that time, further consideration of the proposal should occur only following a new referral to the Authority.

Appendix 1

Environmental management commitments

The main environmental management aims identified are:

- reducing the damage to native vegetation to the minimum possible;
- avoiding sites of environmental sensitivity where possible, including conservation reserves;
- the protection of rare flora;
- preventing the introduction or spread of dieback;
- the blocking of seismic lines to prevent them becoming access tracks; and
- carrying out rehabilitation works where necessary at the end of the programme.

The following environmental management programme will be adopted.

1. An ecological appraisal of the seismic lines will be carried out once the exact sites are known. This will include the identification of sensitive areas, a rare flora survey and the identification of the need for specific dieback controls.
2. The company will liaise with land owners, the relevant Shires and the Department of Conservation and Land Management to incorporate any specific requirements.
3. All normal precautions will be taken in relation to fire control and a fire control vehicle will be kept on the site.
4. All rubbish and other items will be removed once the work is completed.
5. Sites with rare flora will not be damaged.
6. The work will be carried out with dieback controls, including at least the cleaning of machinery before arrival in the area and on entry to road sides or conservation reserves.
7. The seismic lines will be moved or bent where possible to avoid native vegetation, conservation reserves, sensitive sites, rare flora or other features to be protected.
8. Specific procedures will be adopted to minimise the damage to native vegetation where it is necessary to place lines through native vegetation. These procedures will include making maximum use of existing tracks and fire breaks, driving over or rolling vegetation rather than clearing the vegetation, using rubber tyred front end loaders and not bulldozers or graders, using the front end loader with the bucket sliding along the ground and the cutting edge above the ground so that the soil is not disturbed, avoiding trees and areas of dense vegetation where possible, planning the work carefully to reduce the traffic in areas of native vegetation, avoiding sensitive sites where possible, avoiding rare flora, and implementing effective dieback controls.
9. The entrances to seismic lines will be obscured by including dog legs, by starting them on stony ground or by brushing so that subsequent public use is minimised. If it is necessary for the lines to enter Watheroo National Park, the Boothendara Nature Reserve or the proposed reserve north of the Marchagee Track, the lines will not be cleared on the boundary of the reserves if there is an internal fire break present. In these cases the lines will be cleared from the internal fire break but stopped an appropriate distance from the edge of the reserve so that the line does not develop into an access track through the reserve boundary. Similarly, the lines will not be cleared where they cross narrow road sides with native vegetation. In these cases the cables will be laid by hand through the short section of intact vegetation.
10. The drill holes will not be located in sensitive areas. This is unlikely to be a problem because only a small number of holes will be required. The drill holes will be filled and left in a tidy condition.
11. The company will carry out any rehabilitation work necessary at the completion of the survey, including brushing of track entrances where this is desirable.
12. The company will carry out the survey within the guidelines for on-shore seismic exploration, issued by the Department of Mines.
13. The company will consult with the Moora District Office of the Department of Conservation and Land Management as soon as the exact positions of the lines are known.
14. The company will give at least a week's notice to the Moora District Office of the Department of Conservation and Land Management before any work is carried out.
15. Staff and contractors will receive instruction in the need for and conduct of the environmental management programme.