



MINISTER FOR THE ENVIRONMENT;
LABOUR RELATIONS

Statement No.

000548

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)

GOLD MINE DEVELOPMENTS ON LAKE LEFROY, 7 KILOMETRES SOUTH-
EAST OF KAMBALDA

Proposal: The proposal includes gold mining developments within a defined project area on Lake Lefroy a naturally occurring salt lake approximately 7 kilometres south-east of Kambalda. Thirteen sites have already been identified for development of open-cut gold mining pits, some with underground portals and mining. Additional sites may be identified within the defined project area. Waste rock dumps, access infrastructure and mining support facilities such as workshops and contractor's compounds will be associated with the mining developments. Administration, central maintenance and processing of ore will occur at the existing St Ives Gold operations to the south of the lake. The project area, the approximate location of the identified resources, and the key characteristics of the proposal are documented in schedule 1 of this statement.

Proponent: WMC Resources Ltd (St Ives Gold)

Proponent Address: c/- Post Office Kambalda, Kambalda WA 6442

Assessment Number: 1250

Report of the Environmental Protection Authority: Bulletin 976

The proposal to which the above report of the Environmental Protection Authority relates may be implemented subject to the following conditions and procedures:

Procedures

1 Implementation

- 1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.
- 1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.

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- 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.

3 Proponent

- 3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 1986 is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.
- 3-2 Any request for the exercise of that power of the Minister referred to in condition 3-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.
- 3-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.

4 Commencement

- 4-1 The proponent shall provide evidence to the Minister for the Environment within five years of the date of this statement that the proposal has been substantially commenced.
- 4-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment will determine any question as to whether the proposal has been substantially commenced.
- 4-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement at least six months prior to the expiration of the five year period referred to in conditions 4-1 and 4-2.
- 4-4 Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.

5 Compliance Auditing

- 5-1 The proponent shall submit periodic Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.

- 5-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions, procedures and commitments contained in this statement and for issuing formal written advice that the requirements have been met.
- 5-3 Where compliance with any condition, procedure or commitment is in dispute, the matter will be determined by the Minister for the Environment.

Conditions

6 Environmental Management Program

- 6-1 Prior to the commencement of ground-disturbing activities of the first anticipated mining pit, the proponent shall prepare an Environmental Management Program to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Minerals and Energy, the Water and Rivers Commission and the Department of Conservation and Land Management.

The Environmental Management Program shall include the following environmental management plans:

1. a baseline plan that identifies the location of currently planned mining developments, the sequence of mining of pits, expected areas of disturbance and a conceptual rehabilitation schedule;
2. a mining plan that details the design and proposed layout of each mining pit, associated waste dumps and access infrastructure that is intended to be developed in the following 12 month period;
3. the environmental management measures to meet the Environmental Protection Authority's objectives;
4. a closure and rehabilitation plan for each pit, its associated waste dumps and access infrastructure that is intended to be developed in the following 12 month period. This plan shall describe :
 - the closure option selected for each pit. Where it is proposed to leave a mining void at the end of mining, demonstrate that the mine planning process has given due regard to the environmental importance of backfilling mining areas;
 - how the closure and decommissioning will be implemented;
 - the rehabilitation objective and completion criteria relevant to the selected closure option; and
 - the monitoring program that will be implemented to determine progress made in achieving the rehabilitation objective;
5. a baseline plan showing shoreline and fringing areas of the lake that are to be protected from the effects of mining, in particular, from the effects of groundwater discharges and physical disturbance;
6. a plan including measures to ensure fringing areas of the lake are not significantly affected or inundated and showing the location of proposed groundwater discharge points; and
7. a plan for managing acid-generating materials if present.

- 6-2 The proponent shall revise/update the Environmental Management Program required by condition 6-1 on an annual basis or as new pits are developed. Revisions of the Environmental Management Program will be subject to review by the Department of Environmental Protection with advice from the Department of Minerals and Energy, the Water and Rivers Commission and the Department of Conservation and Land Management.

Revisions of the Environmental Management Program shall address the following matters:

1. mining plan(s) for new pits anticipated to be developed in the following 12 month period;
 2. closure and rehabilitation plan(s) for each new pit, its associated waste dumps and access infrastructure that are anticipated to be developed in the following 12 month period;
 3. review and report on performance in implementing the existing mining plan(s) referred to in 6-1;
 4. review and report performance in implementing existing closure and rehabilitation plan(s) referred to in condition 6-1;
 5. research proposals, plans, and reports committed to (see schedule 2);
 6. present information on compliance with conditions and commitments (see schedule 2);
 7. key findings and recommendations of statutory monitoring and compliance reports; and
 8. proposed measures to implement recommendations referred to in 7 above.
- 6-3 The proponent shall implement the Environmental Management Program and revisions required by condition 6-1 and 6-2 until such time as the Minister for the Environment, on advice from the Environmental Protection Authority, determines that decommissioning and rehabilitation are complete.
- 6-4 The proponent shall make the Environmental Management Program required by condition 6-1 publicly available, to the requirements of the Environmental Protection Authority .

7 Final Decommissioning and Rehabilitation Plan

- 7-1 At least two years prior to the anticipated date of completion of mining or at a time agreed with the Department of Environmental Protection, the proponent shall prepare a Final Decommissioning and Rehabilitation Plan to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Minerals and Energy, the Water and Rivers Commission and the Department of Conservation and Land Management.

The objectives of the plan are to:

- render the minesite areas safe and stable; and
- encourage the re-establishment of self-sustaining ecosystems.

The plan shall address:

1. the removal or, if appropriate, retention of plant and infrastructure;

2. final rehabilitation of all disturbed areas to a standard suitable for agreed land use/s; and
 3. identification and remediation of contaminated areas, including the provision of evidence of notification to relevant statutory authorities.
- 7-2 The proponent shall implement the Final Decommissioning and Rehabilitation Plan required by condition 7-1 until such time as the Minister for the Environment, on advice from the Environmental Protection Authority, determines that decommissioning and rehabilitation are complete.
- 7-3 The proponent shall make the Final Decommissioning and Rehabilitation Plan required by condition 7-1 publicly available to the requirements of the Environmental Protection Authority.

8 Identification of Alternative and Additional Sites

- 8-1 Within the defined project area as documented in schedule 1 of this statement, at a site(s) not previously indicated and following a demonstration to the satisfaction of the Environmental Protection Authority by the proponent that the environmental impacts of mining at the particular site(s) are substantially the same as at those sites previously indicated, the proponent may mine, provided that all other requirements of the proposal are met.
- 8-2 The proponent shall notify the Department of Environmental Protection of its intention to mine at site(s) referred to in condition 8-1. In support of its notification of intention to mine, the proponent shall submit documentation identifying environmental impacts and proposing measures to manage identified environmental impacts.
- 8-3 The Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with conditions 8-1 and 8-2, and for issuing formal written advice that the conditions are satisfied, and that all other requirements of the proposal are met.
- 8-4 Documentation prepared by the proponent and the Department of Environmental Protection with regard to satisfying condition 8-1 will be publicly available.
- 8-5 Where compliance with condition 8-1 is in dispute, the matter will be referred to the Minister for the Environment for determination.

Note

1. The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the Environmental Protection Act.

CHERYL EDWARDES (Mrs) MLA
MINISTER FOR THE ENVIRONMENT

13 JUL 2000

The Proposal

The proposal includes gold mining developments within a defined project area on Lake Lefroy a naturally occurring salt lake approximately 7 kilometres southeast of Kambalda. Thirteen sites have already been identified for development of open-cut gold mining pits, some with underground portals and mining. Additional sites may be identified within the defined project area. Waste rock dumps, access infrastructure and mining support facilities such as workshops and contractor's compounds will be associated with the mining developments. Administration, central maintenance and processing of ore will occur at the existing St Ives Gold operations to the south of the lake. The project area and the approximate location of the identified resources are shown on Figure 1 (attached).

Key Characteristics Table

Element	Quantities/Description
Life of project	Approximately 10 years
Mining method	Open pit mining using conventional drilling, blasting, loading and hauling techniques. Underground mining may be conducted at some deposits.
Mining rate	Approximately 21 million tonnes of ore and 414 million tonnes of overburden will be mined during the ten year life of the project. The annual mining rate will vary dependent on the sequence of mining pits.
Mine operation	Continuous operation
Size of ore bodies	Approximately 435 million tonnes of ore and overburden
Strip ratio	Approximately 20:1
Depth of mining	30 - 150 metres
Dewatering volume rate (range)	4000 - 5000 Kilolitres per day for each pit to a maximum of 15000 Kilolitres per day
Approximate area of disturbance within the project area (including access)	805 hectares
List of major components	
open pits	240 hectares
overburden dumps	400 hectares
infrastructure (bunds, causeways, roads, settlement ponds, ore pads etc)	165 hectares
Total area	805 hectares

Figure 1. Gold Mining Sites and Project Area

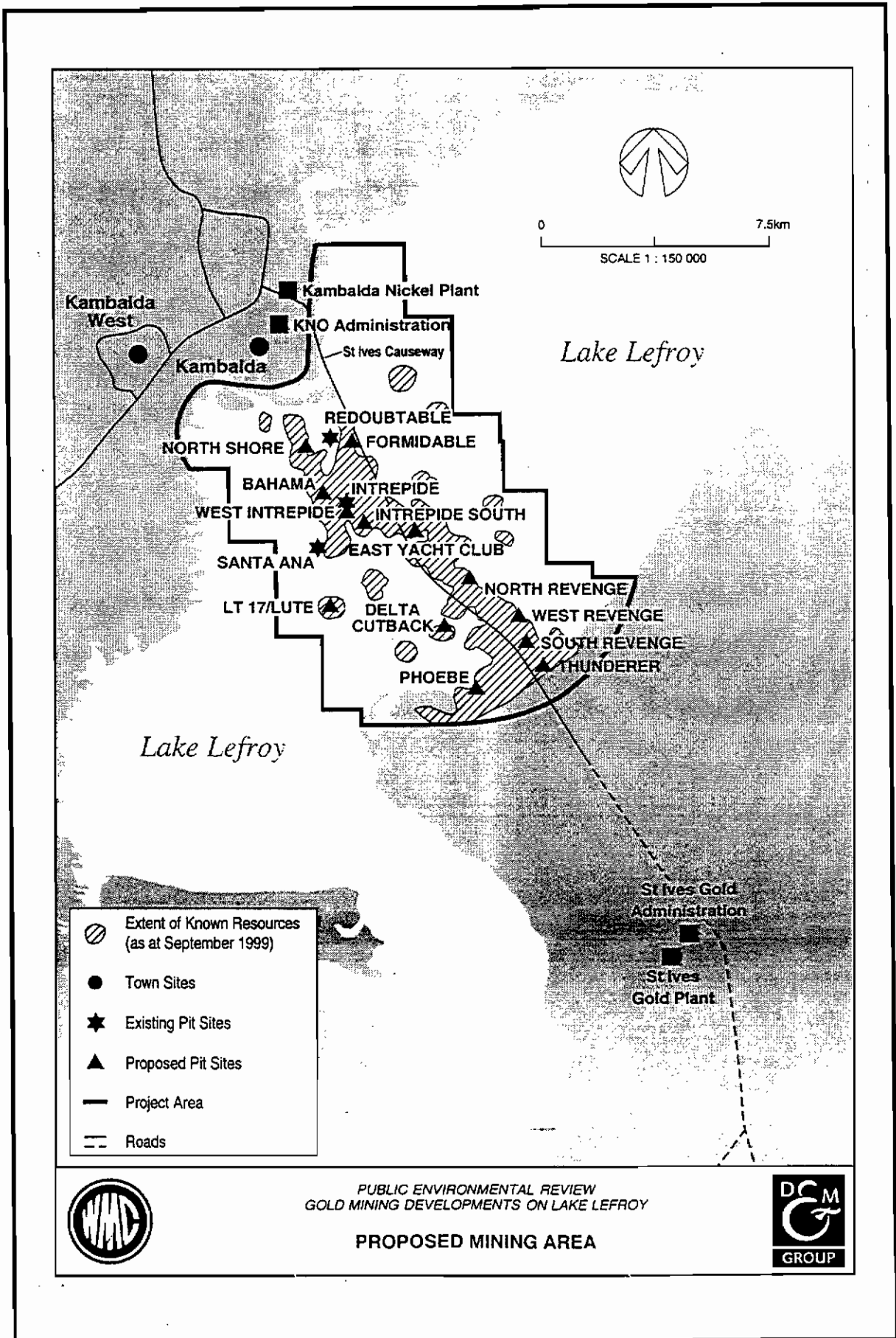


Figure 1. Gold Mining Sites and Project Area

**Proponent's Consolidated Environmental Management
Commitments**

April 2000

**GOLD MINE DEVELOPMENTS ON LAKE
LEFROY (1250)**

WMC Resources Ltd (St Ives Gold)

Proponent's Environmental Management Commitments (Assessment No. 1250)

Issue	Objective	Action	Timing	Whose Advice	Evidence of Compliance
1. Groundwater	1. To identify the dewatering requirements of each of the mine pits to be developed as part of this Project and to select the appropriate discharge option.	<p>1.1 For each new pit, undertake an investigation into the quality and volume of groundwater to be abstracted. Evaluate the various discharge options and select the most environmentally appropriate.</p> <p>1.2 Identify the environmental management measures (including protection of fringing and shoreline areas of the lake) required for selected discharge option.</p> <p>1.3 Apply for variations to WRC and DEP Licences.</p> <p>1.4 Provide a summary of actions in the EMP and the reference to monitoring results which will be reported separately under WRC and DEP Licence requirements.</p>	As each new pit is developed.	WRC	The results of these investigations will be reported in the EMP (or separately if timing constraints exist). The Proponent's DEP pollution control licence and WRC Groundwater well licence (GWL) will be modified as appropriate.
2. Surface water	2. To develop a more detailed understanding of the surface hydrology of Lake Lefroy.	<p>2.1 In the EMP provide a map which identifies the surface water monitoring points.</p> <p>2.2 Provide a legend with the map which identifies the type of monitoring undertaken at each site.</p> <p>2.3 Provide a summary in the EMP of the objective of the monitoring at each point.</p> <p>2.4 Provide summary data and discussions on the monitoring in the EMP.</p> <p>2.5 Provide reference to more detailed reports on the surface water monitoring in the EMP (e.g. WRC report, DEP Licence report, CSIRO study reports).</p> <p>2.6 Identify changes to the monitoring program and discussion on need for the change.</p>	Within 12 months following ground disturbing activities.	WRC	Reported in the EMP.

3. Lake Lefroy	3. To minimise further disturbance of natural islands within the Project Area.	3.1 No additional disturbance of Gamma Island, Oyster Island or Coral Island will occur as a result of the proponent's mining activities.	3.1 Throughout project life.		
4. Lake Lefroy	4. To control erosion and ensure that sediment loads in the lake do not increase significantly as a result of the Project.	4.1 Control erosion by minimising the extent of disturbance of the lakescape and progressively rehabilitating disturbed areas. To demonstrate this, report in the EMP: a record of areas disturbed for mining and related activities (map and tabular); a record of areas rehabilitated (map and tabular); and reconciliation of the areas disturbed and rehabilitated against areas proposed in mining plans presented in previous EMP's. * Note Information will be recorded in GIS format compatible with the GIS of the DEP and the DME.	On an annual basis	DME	Reported in the EMP
5. Rehabilitation.	5. To obtain a better understanding of the long term stability of the lake sediments (when partially submerged in lake water) to facilitate the development of appropriate management and closure strategies as required.	5.1 Provide in the EMP an overview of investigations/research undertaken and to be undertaken with respect to geotechnical pit wall stability post mining in the EMP. 5.2 Provide an update of findings in the EMP. 5.3 Identify and discuss any additional geotechnical investigations undertaken or to be undertaken in the EMP. 5.4 Report on the findings of the additional investigations in the EMP. 5.5 Detail in the EMP actions that are intended to be taken as a result of investigations.	5.1 Within 12 months of ground disturbing activities. 5.2 On an annual basis. 5.3 On an annual basis. 5.4 At the completion of research investigations. 5.5 At the completion of research investigations.	DME and WRC	Reported in the EMP.

6. Rehabilitation	6. To minimise disturbance to the biota of the Project Area.	In conjunction with Commitment 4 and 11 6.1 Areas of the Lake shoreline which will be disturbed in the next 12 months by the project will be specifically identified on a plan in the EMP. 6.2 Detail will be provided on how impacts from disturbance will be managed. * Note: Information will be recorded in GIS format compatible with the GIS of the DEP and the DME.	6.1 On an annual basis. 6.2 On an annual basis.	DME and CALM	Reported in the EMP.
7. Rehabilitation	7. To minimise the generation of dust during the construction and operation of the Project.	7.1 Prepare a management procedure detailing measures to minimise dust during the construction and operation of the project. The management procedure shall address: the use of saline water for dust suppression on haul roads and other exposed surfaces; and measures to control over-spraying by water trucks such as bunding to prevent the egress of saline water to the surrounds with run-off directed to catch pits.	7.1 Prior to ground disturbing activities.	DME	The management procedure will be included in the EMP. The effectiveness of the measures will be monitored by the DEP licence.
8. Surface water	8. To prevent flooding of fringing vegetation with hypersaline water from dewatering discharges and to minimise disturbance to the <i>Schizothrix spp</i> mats, aquatic flora and invertebrate fauna inhabiting the playas.	8.1 Any new mine dewatering discharge points required as a result of implementing this project will be identified on a map in the EMP. 8.2 The map will identify the relative elevations between the lake bed at the discharge point and shoreline vegetation when a discharge point is located within 100 m of the shoreline. 8.3 Additional protection measures such as sumps and bunds will also be identified when appropriate. 8.4 Photographic monitoring points will be established at discharge points when the discharge is within 100 m of the shoreline and photographs will be taken annually until the discharge point is no longer used. 8.5 Relative lake water levels will be noted when	8.1 As new discharge points are proposed.	WRC and CALM	Reported in the EMP

9. Fauna	9. To develop a better understanding of the vertebrate fauna of the Project Area and facilitate the development of appropriate management programs as required.	<p>they are greater than the elevation of the lake bed at the discharge point.</p> <p>8.6 Discussion will be provided in the EMP on any likely impacts of elevated lake water levels and on the impacts of dewatering on the shoreline and flora.</p> <p>8.7 Measures to manage impacts on shoreline areas will be proposed.</p> <p>* Note Information will be recorded in GIS format compatible with the GIS of the DEP and the DME.</p> <p>9.1 The existing vertebrate fauna monitoring program will be reviewed within 12 months of the project commencing.</p> <p>9.2 The findings of the review and any proposal to revise program will be reported in the EMP.</p> <p>9.3 Feral cat eradication will be conducted on an as needed basis.</p> <p>9.4 Results of any feral cat eradication program will be reported in the EMP.</p>	<p>9.1 Within 12 months following ground disturbing activities.</p> <p>9.2 On an annual basis.</p> <p>9.3 On an annual basis</p> <p>9.4 On an annual basis.</p>	CALM	Reported in the EMP.
10. Rehabilitation	10. To identify those lake muds that are suitable for use as plant growth media in rehabilitation programs.	<p>10.1 A research and investigation program on the use of lake muds as a rehabilitation media will be established with the University of Western Australia.</p> <p>10.2 The objectives of the study will be reported in the EMP.</p> <p>10.3 Results and recommendations will be reported in the EMP.</p>	<p>10.1 Within 12 months of ground disturbing activities.</p> <p>10.2 At the completion of the research investigations.</p>	DME and CALM	The results of these investigations will be reported in the AEMP.
11. Rehabilitation	11. To determine the feasibility of using overburden in dune	<p>11.1 When the feasibility studies for Phoebe and/or Thunderer pits are undertaken, the possibility of reconstructing dunes previously mined for sand will also be considered.</p>	<p>11.1 When the feasibility studies for Phoebe and</p>	DME and CALM	Reported in the EMP

	reconstruction.	<p>11.2 Any conceptual designs developed will be reported in the EMP.</p> <p>11.3 If dune reconstruction adjacent to these pits is feasible, designs and progress toward achieving these designs will be reported in the EMP.</p>	<p>Thunderer pits are undertaken.</p> <p>11.2 At the completion of the investigations.</p> <p>11.3 At the completion of the investigations</p>	
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Notes: Department of Conservation and Land Management (CALM)
 Department of Environmental Protection (DEP)
 Department of Minerals and Energy (DME)
 Water and Rivers Commission (WRC)
 Environmental Management Program (EMP)
 Geographic Information System (GIS)

Attachment to Statement 548 – Change to Definition of Proposal.

Proposal: Gold Mine Developments on Lake Lefroy, 7 Kilometres South-east of Kambalda.

Proponent: St Ives Gold Mining Company P/L.

Change: in Schedule 1, Key Characteristics Table

From:

Element	Quantities/Description
Dewatering Volume Rate (range).	4000 – 5000 kilolitres per day for each pit, to a maximum total of 15,000 kilolitres per day.

To:

Element	Quantities/Description
Mine Dewatering and Dewater Discharge to Lake Lefroy (Volume Rate).	Total of 20.0 Gigalitres per annum (GL/a) that incorporates: <ul style="list-style-type: none">• 14.3 GL/a from lake-based mining pits on Lake Lefroy within the defined project area; and• 5.7 GL/a from land-based mining pits (including underground mining) within the St Ives Gold mining lease.

Approval Date: 9/3/05