

**QUEENSLAND FLOODS**  
**COMMISSION OF INQUIRY**

**STATEMENT OF ROBERT (ROB) ANTHONY LAWRENCE**

**WITH RESPECT TO THE MT OXIDE MINE (ABANDONED)**

I, **ROBERT (ROB) ANTHONY LAWRENCE** of c/- 5B Sheridan Street, Cairns in the State of Queensland, Regional Manager, Environmental Services, Department of Environment and Resource Management (DERM), make oath and states as follows:-

**Requirement from Queensland Floods Commission of Inquiry**

1. I have seen a copy of a letter dated 9 September 2011, which is attachment **RAL-01**, from the Commissioner, Queensland Floods Commission of Inquiry to me requiring a written statement under oath or affirmation, and which details the topics my statement should cover.

**Role**

2. I am currently Regional Manager Environmental Services, North Region, Regional Service Delivery Division, Operations and Environmental Regulator Business Group, DERM. I am based in Cairns, but my work covers the whole North Region. Attachment **RAL-02** is a map showing the regions.
3. From 1 Oct 2010 to present my roles were as follows:
  - a. From 1 October 2010 Regional Manager, Mining and Industry, North Region
  - b. On or around 4 April 2011 the role changed to Regional Manager, Environmental Services, North Region due to some internal realignment.
  - c. Reporting arrangements for a and b above are directly to the Regional Services Director, North Region, Regional Service Delivery Division, DERM.
  - d. I was on leave from DERM from 24 December 2010 until 28 January 2011 and 4 July 2011 until 11 July 2011.
  - e. I acted in the position of Regional Services Director from 8 August 2011 until 19 August 2011.

**Item 1: Department of Environment and Resource Management (DERM) activities in respect of the mine's flood preparedness in advance of the 2010/2011 wet season, including whether any particular activities were undertaken as a response to the forecast of an above-average rainfall wet season.**

4. The Mount Oxide Mine is an abandoned mine administered under the Abandoned Mine Land Program (AMLP) managed by the Department of Employment, Economic Development and Innovation (DEEDI) – Mines. The AMLP is not administered by DERM.
5. DEEDI provided a brief history and status of the abandoned Mt Oxide mine to DERM in June 2010 (**RAL-MO01-01** attached DEEDI history of site). That document identifies that the Mt Oxide mine;
  - a. Is located 158km by road north of Mount Isa;
  - b. Copper was mined whilst the mine was in operation;
  - c. The mine operated from around the 1920's until 1984.
  - d. The leases were surrendered in 1999;
  - e. The responsibility for the site rests with the AMLP.
6. My employment was with the former Environmental Protection Agency (EPA) one of DERM's predecessor departments. My involvement in the environmental regulation of mining has been from 2001 when the environmental regulation of mining was moved to the *Environmental Protection Act 1994* and administered by the former EPA.
7. I am advised that prior to 2001, environmental regulation of mining was administered by the Department of Mines and Energy, a predecessor department to DEEDI.
8. DERM has a pre wet season inspection program focusing on mining operations regulated by DERM. This program aims to inspect the larger level 1 mines with a particular focus on water management prior to the wet season. In addition the North region has a Mine Discharge Response Plan which provides a framework for incident management in relation to mine discharges as well as information for responding to a discharge such as, site access and land holder contact details. The plan is updated each year prior to the wet season ( **RAL-MO01-02** Mine Discharge response Plan with relevant page for Mt Oxide).
9. An Exploration Permit Mineral (EPM 10313) has been granted over land which includes the Mount Oxide abandoned mine ( **RAL-MO01-03** map showing EPM 10313). DERM regulates the environmental aspects of the exploration activities undertaken on the EPM through an EA issued under the provisions of the *Environmental Protection Act 1994*. The conditions of the EA require the holder to also comply with the conditions in the Code of Environmental Compliance for Exploration and Mineral Development Projects (Attachment **RAL-MO01-04** and **RAL-MO01-05** Copies of EA and Code).
10. The EA allows for exploration to occur over the EPM. The holder of the EA is not responsible for the historical disturbance of the Mt Oxide abandoned mine.
11. DERM officers carried out a compliance inspection of the EA which regulates the environmental aspects of the exploration activities prior to the 2010/2011 wet season (Attachment **RAL-MO01-06** DERM post inspection letter) but that inspection did not specifically focus on the Mt Oxide abandoned mine as that is the responsibility of DEEDI.

12. The management of the Mount Oxide abandoned mine is the responsibility of the AMLP by DEEDI. DEEDI are responsible for any flood preparations prior to the 2010/2011 wet season.

**Item 2: the water management sections of the environmental authority applicable at the mine during the 2010/2011 wet season, including:**

- a) Any concerns held by him or the Department of Environment and Resource Management (DERM) regarding its terms and the ability of the mine operator to comply with it
  - b) Any terms that the mine operator has indicated it is unable to comply with, or breached
  - c) Any terms that had to be amended from the Fitzroy model conditions because the model terms were unsuitable for this mine site
  - d) Any terms that he or DERM consider do not adequately promote environmental protection and dam safety.
13. As previously stated in paragraph 5 above, the Mount Oxide mine has not operated since the 1980s and the mining lease was surrendered in the late 1990s. The environmental regulation of mining was incorporated into the *Environmental Protection Act 1994* in 2001. As a result there is no EA for the Mount Oxide abandoned mine.

**Item 3: any transitional environmental program (TEP) issued or refused or any emergency direction (ED) given or considered regarding either mine during the period 1 October 2010 to 30 July 2011 related to water management, and for each, the following:**

- a) Information received from the mine operator
- b) Any relevant dam safety issues
- c) Relevant correspondence with the mine operator and other stakeholders
- d) Whether and, if so, how DERM consulted with stakeholders
- e) What considerations DERM took into account in making the decision
- f) Whether, and if so, how DERM balanced environmental considerations and economic consequences of mines being non-operational
- g) Whether, and if so how, DERM took account of downstream effects, including cumulative effects
- h) The terms of the TEP issued or ED given
- i) What actions were taken by DERM to advise emergency management personnel, including local and regional disaster management groups and local residents downstream of the dam about the TEP and any discharges or effects
- j) Reasons for the decision given to the mine operator
- k) Any breaches of the TEP or ED by the mine operator and DERM's response

14. I have conducted a search of DERM records and there were no TEP's issued or refused by DERM in relation to water management at the Mount Oxide abandoned mine during the period of 1 October 2010 to 30 July 2011.
15. I have conducted a search of DERM records and no ED was given in relation to water management at the Mount Oxide abandoned mine during the period of 1 October 2010 to 30 July 2011.

**Item 4: the effects on the environment, drinking water quality and public health downstream of each of the mine sites (as far as the Great Barrier Reef Marine Park) as a result of discharges of water from the mine during the period 1 October 2010 to 30 July 2011.**

16. DERM officers have been to the Mt Oxide abandoned mine on numerous occasions including when the creeks in the area are running. I am advised by DERM officers that water discharged from the Mt Oxide abandoned mine flows to Cave Creek immediately downstream of the abandoned mine. Cave Creek is an ephemeral creek and has ecosystem and stock water values. The creek water is not used for human consumption or recreation. Cave Creek flows to Gunpowder Creek which runs into the Leichardt River which flows to the Gulf of Carpentaria. It therefore does not discharge to the Great Barrier Reef Marine Park.
17. DERM officers undertook sampling of water and sediment in Cave Creek downstream of the Mt Oxide abandoned mine in March 2011 (Attachment RAL-MO04-01 Sample results March 2011). DERM officers have reviewed the results of the samples and advised as follows;
  - a. In relation to the effects on the receiving environment, the water quality immediately downstream of the release exceeded the Australian and New Zealand Environment Conservation Council (2000) (ANZECC 2000) water quality guideline trigger values for the protection of ecosystems specifically for metals. In addition sediment samples also exceed the ANZECC 2000 interim sediment quality guidelines.
  - b. In relation to the effects on drinking water and public health, it should be noted that Cave Creek is not used for this purpose, however the sample results indicate that the water in Cave Creek exceeded the Australian Drinking Water Guidelines, specifically for heavy metals. I am advised that the water samples taken from Cave Creek in March 2011 did not exceed the recommended recreational water quality for primary contact.
  - c. The sample results indicate that the water quality in Cave Creek exceeded the ANZECC 2000 livestock drinking water guideline values specifically for heavy metals.

18. DERM officers discussed the sample results with DEEDI and copies of sample results were provided to the landholder. DERM officers have also provided advice to the landowner on the interpretation of the results (RAL-MO04-02).

**Item 5: any actions taken by DERM in response to any effect of discharges from the mine falling into 4, above, during the period 1 October 2010 and 30 July 2011.**

19. As previously stated in paragraph 4 above, the Mt Oxide abandoned mine is managed by DEEDI under that department's AMLP. DEEDI is responsible for managing the abandoned mine and any actions arising from discharge of contaminated water from the mine.

20. DERM officers discussed the sample results with DEEDI and provided copies of the results to the landowner of Chidna Station on which the abandoned mine is located.

21. DEEDI has established an expert panel to review and provide advice on the management of the Mt Oxide abandoned mine. DERM has provided technical experts to support the expert panel (Attachment RAL-MO05-01 Last minutes of Expert Panel meeting).

22. The Director-General of DERM wrote to the Director-General of DEEDI on 8 August 2010 (Attachment RAL-MO05-02 Brief and DG Letter) and again on 15 September 2011 (Attachment RAL-MO05-03 Brief and DG Letter) in relation to the discharges from the Mt Oxide abandoned mine. The Director-General of DEEDI wrote back to DERM on 8 September 2010 outlining DEEDI's proposed management of the environmental issues on site (Attachment RAL-MO05-04 DG DEEDI letter). DERM is currently awaiting a response from DEEDI in relation to DERM's letter of 15 September 2011.

**Item 6: reports of visible blue precipitate downstream, including an account of DERM knowledge of the precipitate, the area affected by it, its cause and effects, and response actions taken by DERM.**

23. Since 2009 DERM officers have inspected the site numerous times and taken samples for analysis. The blue precipitation occurs in Cave Creek immediately downstream of the Mt Oxide abandoned mine. I have been advised by DERM officers that the cause of the blue precipitation in Cave Creek is due to the discharge of low pH (Acidic) water containing heavy metals including copper from the abandoned mine site after rainfall. The low pH water then flows downstream into Cave Creek where it meets clean storm water. The mixing of waters increases the pH which results in heavy metals, particularly copper, dropping out of solution leaving a blue precipitate on the surface of sediments in Cave Creek. A photograph taken by DERM officers during an inspection of Cave Creek on 16 March 2009 is attached. (Attachment RAL-MO06-01 PHOTO).

24. I have been advised by DERM officers that the most extensive contamination event occurred during the 2008/2009 wet season when Cave Creek was

significantly impacted by the blue precipitates. Subsequent wet seasons have also resulted in blue precipitates in Cave Creek though they have not been as extensive as the 2008/2009 wet season. The extent of the blue precipitates has only been observed by DERM immediately downstream of the abandoned mine in Cave Creek.

25. DERM has continued to liaise with the landholder directly affected by the release of contaminated water from the abandoned mine and has established a single point of contact for the landowner for all issues regarding the Mount Oxide abandoned mine. Copies of sample results that DERM officers have taken since 2009 (Attachment RAL-MO06-02 to RAL-MO06-12 and RAL-MO04-01 & RAL-MO04-02 All sample results) have been provided to both the landowner and DEEDI. DERM officers have also provided advice to the landowner in interpretation of the results.
26. DERM has made available technical experts to attend the expert panel meetings convened by DEEDI to provide advice and recommendations on how best to manage the abandoned mine. DERM has also made staff available to attend stakeholder information sessions facilitated by DEEDI to update stakeholders on proposed actions planned to occur at the abandoned mine.
27. As outlined in paragraph 22 above and attachments RAL-MO05-02, RAL-MO05-03 and RAL-MO05-04, the Director-General, DERM and the Director-General, DEEDI have been corresponding regarding the issue.

**Item 7: any ongoing concerns regarding uncontrolled or controlled discharges from Mt Oxide Mine (abandoned), including the quality of discharges**

28. DERM has concerns regarding uncontrolled release of poor quality water from the abandoned mine and will continue to participate in the expert panel process being run by DEEDI to assist in identifying appropriate management strategies for the abandoned mine.

**Item 8: details of any remediation works planned and the intended outcome of those works**

29. The management and remediation works at the Mount Oxide abandoned mine is the responsibility of the AMLP administered by DEEDI. Therefore, any remediation works under AMLP would be planned and carried out by DEEDI.

**Item 9: details of any flood preparedness activities planned to precede the 2011/2012 wet season**

30. The management of the Mount Oxide abandoned mine is the responsibility of the AMLP administered by DEEDI. DEEDI are responsible for any flood preparations prior to the 2011/2012 wet season.

31. DERM will continue with its pre wet season inspection program focusing on mining operations regulated by DERM. In addition, the North region has a Mine Discharge Response Plan, refer to attachment **RAL-MO01-02** above which is updated each year prior to the wet season. DERM is currently reviewing the Mine Discharge Response Plan in advance of the upcoming wet season.
32. DERM will maintain contact with the local landowner, liaise closely with DEEDI and will continue to monitor any discharge from the abandoned mine.

**Item 10: details of how the new Fitzroy Model Conditions negotiated during 2011, or any other discussions with DERM, will resolve any issue raised above in 1, 2, 3, or 4**

**And**

**Item 11: an explanation as to whether the new Fitzroy Model Conditions negotiated during 2011 are advantageous or disadvantageous to the mine operator in the management of water at the mine, the downstream environment and safety issues.**

33. I was not involved in the development of the Fitzroy model conditions however I understand that they were developed specifically for coal mining operations in Central Queensland. These conditions have not been applied to operational or abandoned metalliferous mines in North Queensland (of which Mt Oxide is one). I am not able to comment specifically on the details of the Fitzroy model conditions as these conditions are outside my area of expertise and were developed by DERM specialists.
34. The Mt Oxide mine is an abandoned mine, has no environmental authority and is managed by DEEDI under their abandoned mine land program.

I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the *Oaths Act 1867*.

Signed .

Robert Anthony Lawrence

Taken and declared before me, at Cairns this 27th day of September 2011

Solicitor/Barrister/Justice of the  
Peace/Commissioner for Declarations

