



## PUBLIC REPORT TEMPLATE 2011

### Part 1 - Corporation Details

#### Controlling Corporation

#### Period to which this report relates

Insert the name of the Controlling Corporation exactly as it is registered with the EEO Program. The period to which the report relates is the total period of participation up to 30 June prior to when the report is due.

OZ Minerals Limited

From

1 July 2006

To

30 June 2011

#### Table 1.1 - Major Changes to Corporate Group Structure or Operations

##### Table 1.1 – Major Changes to Corporate Group Structure or Operations

OZ Minerals is an active participant in the Energy Efficiency Opportunities (EEO) program. During 2009, OZ Minerals went through a significant change to its company structure, which included the sale of operations that had previously been assessed under the EEO program. The assessments had identified a number of energy efficiency opportunities at these operations, and a significant amount of work had been carried out in progressing the implementation of the initiatives.

OZ Minerals has retained ownership of the Prominent Hill Copper-Gold operation in South Australia. The first quarter of 2009 saw the first copper concentrates exported to overseas markets. In effect this places the commencement date of the project from March 2009 and therefore the first complete capture of operational energy data for the operation. A requirement of the EEO program is to have two years of operational data to allow for an adequate assessment of the site's emissions. The Prominent Hill Operation's first Energy Efficiency Assessment was completed on June 30 2011

Total Energy Consumption at the Prominent Hill Copper-Gold operation in South Australia increased by 26% between the FY2010 and the FY2011. This was primarily due to an increase in the rock moved in the open pit (+32%) and ore milled through the plant (+16%).

#### Table 1.2 – Aggregate energy assessed covered in this report

<b>Total energy use covered by all assessments in this report</b>	2,799,989	<b>GJ</b>
<b>Total energy assessed as percentage of total energy use of the corporate group*#</b>	99.9	<b>%</b>

\* If this report covers only part of the corporate group, than the percentage should be computed on the total energy use for that part of the group covered in this report

# Please note that corporations are required to assess 80% or more of their energy use in the first five-year assessment cycle and 90% or more in subsequent five-year assessment cycles. Accordingly, for those corporations with a 2005-06 trigger year (i.e. those corporations at the end of their first-five year assessment cycle), the value in "Percentage of corporation's energy use assessed" above, must be more than 80%.



## Declaration

### Declaration of accuracy and compliance

The information included in this report has been reviewed and noted by the board of directors and is to the best of my knowledge, correct and in accordance with the *Energy Efficiency Opportunities Act 2006* and *Energy Efficiency Opportunities Regulations 2006*.

Terry Burgess  
(CEO and Managing Director)

Date 15.12.11

## Part 2 - Assessment Outcomes

**Table 2.1 – Assessment Details**

It is compulsory to complete a separate table for each group member, business unit, or key activity that has been assessed

**Name of group member or business unit or key activity**

Prominent Hill Operations

**Total energy use in the last financial year**

2,799,989

GJ

**Energy use assessed in this entity as a percentage of total entity energy use\***

100

%

**Energy use assessed in this entity as a percentage of total corporate energy use**

99.9

%

**Accuracy of above estimates related to energy use assessed - only required if not  $\pm 5\%$  or better**

%

**Period over which assessment was undertaken**

01/07/2009

30/06/2011

**Description of the way in which the entity carried out its assessment**

Compliance requirements with the National Greenhouse and Energy Reporting Scheme (NGERS) and OZ Minerals Pty Ltd internal Environmental Management System standard for management of Energy and Greenhouse Gas have resulted in the development of an inventory to manage emissions related data and ensure compliance with the Act. As a part of finalising the reporting for the NGERS report a verification audit is undertaken by Net Balance Management Group Pty Ltd to ensure the accuracy of the data contained within the inventory. This inventory data is then used to establish the overall GJ consumption for the operation.

OZ Minerals engaged the assistance of Golder Associates Pty Ltd to assist with the conversion of the data in the inventory into a baseline energy assessment over the two reporting periods of FY2010 and FY2011. The operation also appointed an internal position for an Environmental Advisor – Sustainability whom of which had day to day operational accountability for ensuring data was accurate. This above mentioned project team was tasked with reviewing the progress against the 6 key elements of the EEO process ensuring compliance for each element.

During FY2011 the Prominent Hill Copper-Gold operation initiated a Business Improvement Program that would enable the identification and channelling of projects through a pipeline for implementation and the subsequent tracking of energy savings. These projects were calculated and assessed by both the OZ Minerals and Golder Associates Project Team. Ongoing assessment tools were developed for each implemented project to ensure accurate data would be maintained into the future.

An initial meeting with each of the core business units within the operation was held to ensure all Senior Managers and/or delegates understood the



requirements of the EEO process and an initial review of the works currently scheduled for their area was undertaken. This allowed a baseline understanding of the sites activities and intended improvement projects to target the intended throughput and streamlining of the operation. Each business unit then assigned a Business Improvement Champion whom was accountable for data capture and reporting along with the site Environmental Advisor- sustainability for all Energy Efficiency Projects. With the guidance and support of the Golder Associates team workbooks were collated for each opportunity and a progress plan developed to ensure all necessary information was held in a sole location.

The initial project list was screened in a site workshop by the site Senior Management team to ensure endorsement for the works undertaken. This also enabled support for the development of a key drivers project to allow the operation to not only identify individual projects for implementation but to understand and appreciate the drivers for energy consumption and build models to allow an understanding of their movement into the future. To assist with this work OZ Minerals engaged Momentum Partners to develop models and tracking tools for both Diesel and Electricity. Momentum Partners had been pivotal in the development of the tools for the Business Improvement Program and through their work we were able to develop models that aligned with the language and layout seen throughout the operation.

All assessment work was undertaken over a six month period to ensure that adequate time was allowed to capture the information and properly identify and evaluate opportunities as the employees became familiar with the processes. Prior to finalisation of the energy works undertaken through FY2011 the Senior Management Team again met and reviewed the works and endorsed the projects for reporting.

\* Please note that, for individual sites that use more than 0.5PJ of energy, all energy use must be assessed (less a small proportion for non integral energy use).

**Table 2.2 - Energy efficiency opportunities identified in the assessment**

It is compulsory to complete a separate table for each group member, business unit, or key activity that has been assessed

**Table 2.2 – Energy efficiency opportunities identified in the assessment**

Status of opportunities identified to an accuracy of better than or equal to $\pm 30\%$		Total Number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – < 2 years		2 – $\leq 4$ years		> 4 years		
			No of Opps	GJ	No of Opps	GJ	No of Opps	GJ	
Business Response	Implemented	2	2	79,796	0		0		79,796
	Implementation Commenced	0	0		1	3,920	0		3,920
	To be Implemented	1	0		0				0
	Under Investigation	4	3	8,405	0		1	5,202	13,607
	Not to be Implemented	0	0		0		0		0
Outcomes of assessment	Total Identified	7	5	88,201	1	3,920	1	5,202	97,324
<b>Status of opportunities identified to an accuracy of worse than <math>\pm 30\%</math></b>									
Business Response	Implemented								
	Implementation Commenced								
	To be Implemented								
	Under Investigation								
	Not to be Implemented								
Outcomes of assessment	Total Identified								

Please note that Corporate Groups **are not required** to report opportunities with a payback greater than 4 years. Reporting this data is voluntary.



**Table 2.3 - Details of significant opportunities identified in the assessment**

Corporate Groups are required to provide at least 3 examples of significant opportunities for improving the energy efficiency of the group that have been identified in assessments.

Description of Opportunity	Voluntary Information	
<p><b>Pump Optimisation at the Aries Borefield</b> The Aries Borefield consists of 16 production wells (Aries 1-8 &amp; Aries 10-16) requiring 20 hours of Borefield pumping to meet the water requirement of the process plant (24 hours operation). All Aries production well pumps are fixed speed units operating with soft starters, except for Aries-7 &amp; 10 which are on variable speed drives (VSDs). An optimisation study was completed and recommended the use of VSDs for the control of pump speed.</p>	Business Response	Implementation Commenced
	Energy saved (GJ)	3,920
	Greenhouse gas abated (CO2-e)	947
	\$s saved	\$177,012/pa
	Payback period	3.22 years

Description of Opportunity	Voluntary Information	
<p><b>Mill Optimisation</b> A Grinding Expert System was installed in December 2009 to provide more consistent control and improve grinding performance for both the 10MW SAG Mill and the 10MW Ball Mill. Initial estimates of the energy savings achieved by the system are in the region of 11.7%. The project will be tracked to verify that these savings are continuing.</p>	Business Response	Implemented
	Energy saved (GJ)	76,464
	Greenhouse gas abated (CO2-e)	18,479
	\$s saved	\$1,404,617/pa
	Payback period	0.2 years

Description of Opportunity	Voluntary Information	
<p><b>In Basement Excavator Maintenance</b> Historically, the maintenance of basement excavators has been carried out at the No. 3 switchback area. Due to the pit depth it currently takes approximately three hours for basement excavators to tram to and from this area. The direct benefits from in-basement maintenance will be the reduction in diesel fuel consumption associated with travel to the maintenance facility. The cumulative travel time amounts to 264 hours per year.</p>	Business Response	Implemented
	Energy saved (GJ)	3,332
	Greenhouse gas abated (CO2-e)	250
	\$s saved	\$91,720/pa
	Payback period	Immediate

Please note that the "Description of the Opportunity" above should include information on the specific nature and type of opportunity, as well as information on the type of equipment and/or process involved.