

**ASSESSMENT OF THE ECONOMIC EFFECTS OF OCEANAGOLD'S PROPOSED  
EXTENSIONS TO ITS OPEN PIT MINING OPERATIONS AT THE MACRAES GOLD  
PROJECT**

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## 1. SUMMARY

- 1.1 Since its start-up in 1990, the Macraes Gold Project has been, and continues to be, a significant contributor to levels of employment, incomes and expenditure for north-east Otago, metropolitan Dunedin and the Otago region. At a national level, the Macraes Gold Project has made, and continues to make a considerable contribution to Government revenues, GDP and exports. The proposed new MP4 consents will assist in extending the operating life of the Project, enabling these positive economic impacts to continue for a longer period.
- 1.2 In particular the granting of the MP4 open pit consents will enhance the economic well being of the north-east Otago, Dunedin City and Otago communities by helping to:
- (a) Maintain significant levels of local and regional employment, incomes and expenditure. For the north-east Otago sub-region the consents will result in the retention of 96 residents' jobs, \$11.6 million per annum of income and \$11.1 million per annum of expenditure with local businesses for an additional 5 years – from 2025 to 2029 (inclusive). For the Otago region the consents will lead to the retention of 354 residents' jobs, \$42.6 million per annum of income and \$32.6 million per annum of expenditure with local businesses for an additional 5 years. If the proposed new MP4 open pit consents are not granted, these significant regional economic benefits will cease and a number of the skilled and relatively highly paid workforce would mostly be redeployed elsewhere in New Zealand and/or overseas.
  - (b) Maintain population levels in north-east Otago, thereby maintaining the quality of some central government provided services;
  - (c) Extend the period of time for the local economy to benefit from greater diversity and resilience;
  - (d) Extend the period of time the mine and its workforce will contribute to local community activities and socio-economic benefits.
- 1.3 It will also improve resource use efficiency by retaining economic activity and population in north-east Otago, Dunedin City and the Otago region, enabling increased economies of scale in the local provision of goods and services. It will also assist in reducing unemployment and underemployment of labour and other resources and enable the

ongoing utilisation of existing infrastructure, plant and equipment with little, if any, alternative economic value.

- 1.4 At a national level, the Macraes Gold Project in 2021 contributed \$343 million to New Zealand's exports, \$4.1 million in royalties to central government and \$237 million to New Zealand's gross national product (GDP). This shows that the extraction of minerals provides a significant national public benefit and a level of land and labour productivity that could not otherwise be achieved using resources within New Zealand. The extension of life of open pit mining operations will help provide a continuation of these significant national level economic benefits from the Macraes site.
- 1.5 The MP4 Project will not give rise to economic externality costs.

## 2. INTRODUCTION

- 2.1 The Macraes Gold Project (the Project) commenced operations in 1990 following the granting of initial consents in 1988. Since that time a series of consent renewals and new consents have enabled open pit and underground mining to continue and mining activities to expand over new areas. Under existing consents all mining operations in terms of gold production, employment, wages and salaries and expenditure would cease around the end of 2025. In 2023, OceanaGold (New Zealand) Limited (OceanaGold) applied for (i) consents<sup>1</sup> to enable the Golden Point underground mining operation (GPUG) to continue for a further 5 years, from the end of 2024 to around 2029 inclusive; and (ii) consents under the Consents Continuity Project (CCP) for a limited extension of existing open pit operations (the Innes Mills 8 (IM8) extension) and stage 1 of a new tailings storage facility in the mined out Fraser Pit (the Fraser Pit Storage Facility (FPSF)). There would then follow a wind-down year (2030) with reduced gold production. This is scenario (1) or the "baseline" scenario.
- 2.2 OceanaGold is now seeking additional new consents to enable the expansion of three open pit mining operations at the Macraes site (Innes Mills, Coronation and Golden Bar) and the remainder of the new tailings storage facility in the mined out Frasers Pit as part of the Macraes Phase 4 Project (MP4). The MP4 open pit consents will enable the continuation of gold production from three open pit extensions over the period 2025 to 2029, with the same reduced gold production wind-down year in 2030 as for the baseline

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<sup>1</sup> Golden Point Underground – Layout Variation and Extension AEE (dated October 2023) and accompanying technical reports.

scenario. This is scenario (2). Additional gold production under scenario 2 will average 40,939 oz per year over the five year period 2025 to 2029 (inclusive). Closure and any site rehabilitation of open pit mining operations will then commence in 2031.

- 2.3 Future ore body definition beyond the current extent of planned mine workings allied with favourable future gold prices may enable open pit and/or underground gold mining activities to extend beyond 2030 at the Macraes site, but for this, new consents would be needed.
- 2.4 The purpose of this report is to consider the national, regional and local area economic effects of the MP4 open pit consents under scenario (2) relative to the baseline scenario. The economic effects of the existing, consented open pit mining and granting the GPUG consents only have already been covered in a previous separate economic effects assessment report<sup>2</sup>.
- 2.5 The new consents necessary for the MP4 open pit mining operations are required from the Waitaki District Council, the Dunedin City Council and the Otago Regional Council.
- 2.6 This report is divided into six parts (in addition to this introductory section). These cover:
- (a) A description of the key economic drivers of the Waitaki District, Dunedin City and Otago regional economies;
  - (b) A consideration of the relevance of economic effects under the Resource Management Act (RMA);
  - (c) The additional national, regional and local economic benefits of granting the consents to enable the proposed MP4 open pit mining operations;
  - (d) The regional and national economic significance of the MP4 open pit mining operations;
  - (e) Potential economic costs of the proposed MP4 open pit mining operations; and
  - (f) Some overall conclusions.

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<sup>2</sup> See: "Assessment of the Economic Effects of OceanaGold's Proposed Extensions to its Golden Point Underground Mining Operations at the Macraes Gold Project"; Mike Copeland, Brown, Copeland & Co Ltd; 1 August, 2023. (Appendix I to GPUG Consents Application)

### 3. THE WAITAKI DISTRICT, DUNEDIN CITY AND OTAGO REGIONAL ECONOMIES<sup>3</sup>

#### Geographical Extent of the Project and its Economic Effects

- 3.1 The site of the Project is principally located within the Waitaki District, which in turn is one of the districts within the Otago region, but part of the Coronation Pit is within the Dunedin City boundary.<sup>4</sup> However the employees of the mine reside in a number of centres stretching from Oamaru to Dunedin. Therefore in this report the “local” economic impacts are assessed for an area identified as north-east Otago, which includes the Waitaki District and the nearby north Dunedin City towns of Waikouaiti, Hyde and Middlemarch.
- 3.2 The wider regional economic impacts are assessed for the Otago region which includes the local sub-region of north-east Otago, the rest of Dunedin City and the other districts which make up the Otago region.

#### Population

- 3.3 Data from Statistics New Zealand show that the population of the Waitaki District in 2013 was estimated at 21,400 and by 2023 had grown to 24,300 – i.e. an increase of 13.6%. Dunedin City’s<sup>5</sup> population has grown from 123,500 in 2013 to 134,600 in 2023, an increase of 9.0%. Over this same period Otago’s population has grown from 208,800 to 254,600, an increase of 21.9%, whilst New Zealand’s population has grown by 17.6%.
- 3.4 Statistics New Zealand is forecasting relatively slow growth in Waitaki District’s and Dunedin City’s population<sup>6</sup> over the next 15 years. Its ‘medium’<sup>6</sup> population projections have the Waitaki District’s population increasing to 24,800 by 2048 – i.e., a gain of 500 or 0.1% average annual growth over the period 2023-2048. Dunedin City’s population is projected to grow to 141,600 by 2048, up by 7,000 or average annual growth of 0.3% over the period 2023-48. For Otago, the population is projected to grow to 282,600 by 2048 –

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<sup>3</sup> Data in this section from Statistics New Zealand.

<sup>4</sup> The Macraes site is largely within the Waitaki District but the northern part at Coronation extends across the district boundary with the neighbouring Dunedin City. The processing of all ore still occurs at OceanaGold’s processing plant within the Waitaki District.

<sup>5</sup> I.e. as defined by Statistics New Zealand’s boundaries – the city centre itself, the surrounding suburbs and the hinterland stretching up to the southern boundary of the Waitaki District and the eastern boundary of the Central Otago District.

<sup>6</sup> Statistics New Zealand produces high, medium and low projections corresponding to different assumptions about fertility, morbidity and migration. The projections also incorporate information about the existing age structure of the population within each district. The projections do not incorporate assumptions about the likely economic performance of different industries within each sector.

i.e. a gain of 28,000 or 0.7% average annual growth over the period 2023-2048. The comparative figures for New Zealand show a projected increase in population averaging 1.2% per annum over the same 15-year period.

## **Employment**

- 3.5 Statistics New Zealand 2023 industry employment data highlight the Waitaki District's reliance on the primary sector. The agriculture (forestry and fishing)<sup>7</sup> industry group accounted for 1,450 jobs or 13.3% of the labour force against a national percentage share for this industry group of only 4.7%. Agriculture accounts for 1,357 jobs or 12.4% of the labour force. This reliance on the agricultural sector is further illustrated by 1,750 jobs (16.1% of the Waitaki District labour force) in the manufacturing sector being in the food manufacturing industry group. Mining accounts for 680 jobs (of which 560 are metal ore mining jobs or 5.1% of the labour force).
- 3.6 Other significant sectors within the Waitaki labour force are retail trade (1,100 jobs or 10.1% of the total labour force), healthcare and social assistance (840 jobs or 7.7% of the total labour force), accommodation and food services (840 jobs or 7.7% of the total labour force) and construction (790 jobs or 7.2% of the total labour force). Total employment in the Waitaki District grew by 17.2% over the period 2006 to 2023, as compared to employment growth for New Zealand of 29.9%.
- 3.7 For Dunedin City, the key sectors are healthcare and social assistance (10,600 jobs in 2023 or 17.3% of the total labour force), education and training (8,200 jobs or 13.4% of the total labour force), retail trade (6,400 jobs or 10.5% of the total labour force), construction (5,300 jobs or 8.7% of the total labour force), accommodation and food services (4,950 jobs or 8.1% of the total labour force), and manufacturing (3,800 jobs or 6.2% of the total labour force). Mining accounts for 60 jobs (of which 30 are metal ore mining jobs or 0.05% of the labour force). Total employment in Dunedin City grew by only 7.72% over the period 2006 to 2023. This was largely due to manufacturing sector employment reducing by 37.7% from 6,100 in 2006 to only 3,800 in 2023.
- 3.8 For the Otago region as a whole, employment data suggest the most significant sectors in terms of numbers employed are tourism (with the accommodation and food services

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<sup>7</sup> The forestry and fishing labour force within the Waitaki District is estimated to be only 12 employees in 2023.

industry group<sup>8</sup> having 14,000 jobs in 2023 or 11.3% of the region's workforce), retail trade (13,200 jobs or 10.6% of the region's workforce), healthcare and social assistance (14,000 jobs or 11.3% of the region's workforce), education and training (11,200 jobs or 9.0% of the region's work force), construction (12,200 jobs or 9.8% of the region's workforce), agriculture, forestry and fishing (9,300 jobs or 7.5% of the region's workforce), and manufacturing (9,600 jobs or 7.7% of the region's workforce). Mining accounts for 850 jobs (of which 600 are metal ore mining jobs, or 0.5% of the labour force<sup>4</sup>). Total employment in the Otago region grew by 26.7% over the period 2006 to 2023.

- 3.9 Therefore the Macraes Gold Project has helped to diversify the Otago regional economy and especially the Waitaki District economy and the north-east Otago sub-region's economy, which remain heavily dependent upon agriculture and the processing of agricultural products. The ability of the mine to help offset periodic downturns in the agricultural sector was identified in the 1996 Brent Wheeler & Co. Ltd survey of local businesses in Palmerston and Waikouaiti.<sup>9</sup> The Project has also helped to sustain Dunedin City's economy through the location of OceanaGold's head office in Dunedin and the city's businesses providing goods and services to the mine, its employees and other businesses supplying the mine.<sup>10</sup> The Macraes Gold Project also provides some diversity to the Dunedin City economy, although in proportionate terms it has greater impact in the smaller and less diversified north-east Otago sub-region.
- 3.10 Therefore the granting of the proposed new MP4 open pit consents will help maintain the diversity of the Otago regional economy and especially the Waitaki District economy and the north-east Otago sub-region economy by extending the operating life of open pit mining at the Macraes Gold Project site.

## 4. ECONOMICS AND THE RMA

### Community Economic Wellbeing

- 4.1 Economic considerations are intertwined with the concept of the sustainable management of natural and physical resources, which is embodied in the RMA. In particular, Part 2

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<sup>8</sup> The accommodation and food services industry group is only a proxy for the tourism sector. It provides goods and services as well to customers who are not tourists, whilst tourists purchase goods and services from other industry groups.

<sup>9</sup> See *The Economic Impacts of the Macraes Gold Project*; Brent Wheeler & Co. Ltd; December 1996.

<sup>10</sup> Note: The office jobs associated with the Macraes Mine Project are not classified as mining jobs. Also the jobs flowing from the expenditure of the Project and its employees are not classified as mining jobs.

section 5(2) refers to enabling “*people and communities to provide for their social, economic and cultural well being*” as a part of the meaning of “*sustainable management*”, the promotion of which is the purpose of the RMA.

- 4.2 As well as indicating the relevance of economic effects in considerations under the RMA, this section also refers to “*people and communities*” (emphasis added), which highlights that in assessing the impacts of a proposal, it is the impacts on the community and not just those on the applicant or particular individuals or organisations, that must be taken into account. This is underpinned by the definition of “*environment*” which also extends to include people and communities.
- 4.3 Extending the life of open pit mining operations at the Macraes site will enhance the social and economic well being of the residents and businesses of both the Waitaki District and Dunedin City and the Otago region by retaining levels of gold production, and in turn expenditure on goods and services, employment of specialised mine workers and technical and operational roles, and high incomes for these staff –the average salary for OceanaGold Macraes employees is \$120,300 per annum compared to average earnings in the Waitaki District of \$66,619 per person employed and for all New Zealand, \$74,754 per person employed (see section 5 of this report).

### **Economic Efficiency**

- 4.4 Part 2 section 7(b) of the RMA notes that in achieving the purpose of the Act, all persons “*shall have particular regard to ... the efficient use and development of natural and physical resources*” which includes the economic concept of efficiency<sup>11</sup>. Economic efficiency can be defined as:

*“the effectiveness of resource allocation in the economy as a whole such that outputs of goods and services fully reflect consumer preferences for these goods and services as well as individual goods and services being produced at minimum cost through appropriate mixes of factor inputs”<sup>12</sup>.*

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<sup>11</sup> See, for example, in *Marlborough Ridge Ltd v Marlborough District Council* [1998] NZRMA 73, the Court noted that all aspects of efficiency are “*economic*” by definition because economics is about the use of resources generally.

<sup>12</sup> Pass, Christopher and Lowes, Bryan, 1993, *Collins Dictionary of Economics* (2<sup>nd</sup> edition), Harper Collins, page 148.



4.5 More generally economic efficiency can be considered in terms of:

- (a) Maximising the value of outputs divided by the cost of inputs;
- (b) Maximising the value of outputs for a given cost of inputs;
- (c) Minimising the cost of inputs for a given value of outputs;
- (d) Improving the utilisation of existing assets; and
- (e) Minimising waste.

4.6 Granting the new MP4 open pit consents is consistent with the efficient development and use of resources in that it will prolong the life of the existing open pit gold mining operations, more fully utilising the existing mine infrastructure, plant and equipment which has significant remaining economic life but that cannot be easily redeployed or sold for alternative uses. Also extending the life of more open pit mining at the Macraes site will help to retain the critical mass of the local communities in north-east Otago where many of the mine workers reside.

#### **Economic Growth and Employment**

4.7 Section 32 2(a) of the RMA requires reports prepared under the Act to:

*“Identify and assess the benefits and costs of the environmental, economic, social and cultural effects that are anticipated from the implementation of the provision, including the opportunities for:*

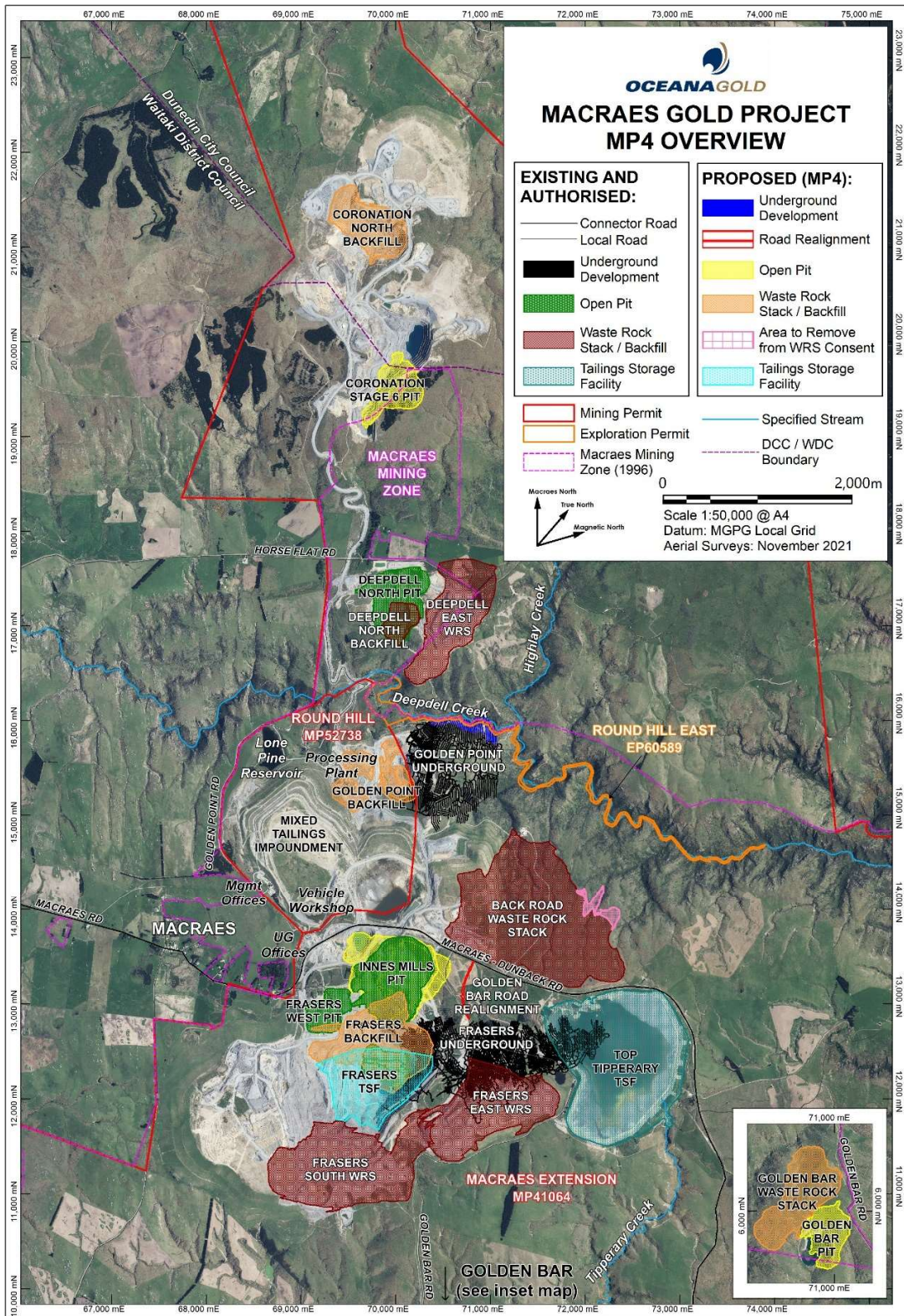
*Economic growth that are anticipated to be provided or reduced; and*

*Employment that are anticipated to be provided or reduced.”*

4.8 Although this section of the RMA relates to reports prepared in relation to proposed council plans or plan changes, it highlights that economic costs and benefits and economic growth and employment effects are relevant under the RMA. Extending open pit mining operations will contribute to economic growth and employment opportunities within the north-east Otago sub-region, Dunedin City and the Otago region.

## **Viewpoint**

- 4.9 An essential first step in carrying out an evaluation of the positive and negative economic effects of a development project is to define the appropriate viewpoint that is to be adopted. This helps to define which economic effects are relevant to the analysis. Typically a district or wider regional viewpoint is adopted and sometimes even a nationwide viewpoint might be considered appropriate - for example, in assessing this project's consistency with the National Policy Statement for Indigenous Biodiversity.
- 4.10 The diagram below shows the geographical coverage of the existing Macraes Gold Project operations, with the boundary between the Waitaki District and Dunedin City shown in the north – the Coronation mine area. To assess the economic effects of extending the life of open pit mining at the Macraes site it is appropriate to consider the north-east Otago economic impacts given the likely economic impacts for local residents and businesses, where north-east Otago is defined to include the Waitaki District (including Macraes Flat, Oamaru, Dunback and Palmerston) and the northern part of Dunedin City (including Waikouaiti, Hyde and Middlemarch). It is also appropriate to consider the impacts on Dunedin City, including metropolitan Dunedin – the location of OceanaGold's head office, and the wider Otago regional and national level economic impacts.



- 4.11 OceanaGold 2023 data on the residence of their own staff (i.e. excluding contractors) engaged on site at Macraes Flat indicate 31% reside in north-east Otago, 52% reside in other parts of Dunedin City, 3% live elsewhere in Otago and 14% live in other parts of New Zealand. For staff employed in OceanaGold's Dunedin office 9% reside in north-east Otago, 73% live elsewhere in Dunedin City, 6% live elsewhere in Otago and 12% live in other parts of New Zealand.
- 4.12 There are also private or financial costs and benefits associated with the extending the life of open pit mining operations at the Macraes site. If the proposed new consents are granted, and OceanaGold gives effect to those consents by extending the life of open pit mining, then it can be assumed that these private or financial costs and benefits have been responsibly and properly analysed and that from the viewpoint of those with money at risk, the expected financial benefits exceed the expected costs. Accountability for the accuracy of the financial analysis clearly rests with OceanaGold and ultimately the net financial benefits OceanaGold might receive from extending the life of open pit mining at the Macraes site are not directly relevant to the assessment of effects under the RMA. The focus of this report is therefore on the wider economic effects on parties other than OceanaGold and its customers. Economists refer to such effects as "externalities"<sup>13</sup>, and include the benefits employees bring to areas where they live and spend their remuneration.

## 5. **ECONOMIC BENEFITS OF THE PROJECT<sup>14</sup>**

### **Retention of Employment, Wages and Salaries and Other Expenditure**

- 5.1 The granting of the MP4 open pit consents will contribute an additional ~40,900 ounces of gold per annum production, employment, incomes and expenditure over a 5 year period (i.e. 2025 to 2029 inclusive) than would be the case if the only new consents granted are for the extension of GPUG operations and the consents sought under CCP.
- 5.2 For north-east Otago – i.e. the Waitaki District (including Macraes Flat, Oamaru, Dunback and Palmerston) and the northern part of Dunedin City (including Waikouaiti, Hyde and

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<sup>13</sup> Defined as the side effects of the production or use of a good or service, which affects third parties, other than just the buyer and seller.

<sup>14</sup> Data in this section provided by OceanaGold unless otherwise stated.

Middlemarch) - there will be the retention of an additional 64 jobs for local residents<sup>15</sup> over the period 2025 to 2029, and wage and salary payments to these employees of \$7.7 million per annum. The average salary for OceanaGold's Macraes employees is \$120,300 per annum, which is very high compared to average salaries in other industries. For example, in 2023 average earnings in the Waitaki District were \$66,619 per person employed and for all New Zealand, \$74,754 per person employed.<sup>16</sup>

- 5.3 There will also be additional other expenditure in the local economy averaging \$7.4 million per annum. Local businesses to benefit from this other expenditure are those providing construction services, automotive repair and maintenance, quarrying, professional, scientific and technical services and transport, postal and warehousing services.<sup>17</sup>
- 5.4 For the Otago region residents, the granting of the MP4 consents will enable the retention of 177 jobs over the period 2025 to 2029, wage and salary payments to these employees of \$21.3 million per annum and additional other expenditure of \$16.3million per annum. These are the direct economic impacts of the MP4 extension of open pit mining operations for 5 years.
- 5.5 In addition to these direct economic impacts there are indirect impacts arising from:
- (a) The effects on suppliers of goods and services provided to the MP4 mine operations (i.e. the "forward and backward linkage" effects); and
  - (b) The supply of goods and services to employees of OceanaGold and its contractors and to those engaged in supplying goods and services to OceanaGold and its contractors (i.e. the "induced" effects). For example, there will be the retention of jobs and incomes for employees of retail stores, restaurants and bars as a consequence of the additional expenditure by these employees.
- 5.6 District and regional multipliers can be estimated to gauge the size of these indirect effects. The size of the multipliers is a function of the extent to which a district or regional economy

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<sup>15</sup> Includes mostly employees at the Macraes site, but also a smaller number employed at OceanaGold's head office who reside in north-east Otago.

<sup>16</sup> See Waitaki District Regional Economic Profile; Infometrics; 2023.  
(<https://ecoprofile.infometrics.co.nz/Waitaki%20District/IStandardOfLiving/Earnings>)

<sup>17</sup> Source: Social Change Report, Macraes; Dirk Arts; March, 2022.



is self-sufficient in the provision of a full range of goods and services and the district's proximity to alternative sources of supply.

5.7 District multipliers typically fall in the range of 1.5 to 2.0<sup>18</sup> and conservatively taking the low point of 1.5 implies total economic impacts (i.e. direct plus indirect impacts) for north-east Otago over the period 2025 to 2029 (inclusive) of:

- (a) 96 retained jobs;
- (b) \$11.6 million per annum retained wages and salaries; and
- (c) Retained other expenditure with local north-east Otago businesses of \$11.1 million per annum.

5.8 Regional multipliers are higher than district multipliers because a region is more self sufficient in the provision of goods and services. The 1996 Brent Wheeler & Co. Ltd report produced Otago regional multipliers for gold mining of 2.24 for expenditure, 3.66 for employment and 2.67 for wages and salaries. In 2001 updated multipliers of 1.67 for expenditure, 2.45 for employment and 2.71 for wages and salaries were estimated. Conservatively a regional multiplier of 2.0 has been assumed for employment, incomes and expenditure. The estimated total regional economic impacts (i.e. direct plus indirect impacts) over the period 2025 to 2029 are:

- (a) 354 retained jobs;
- (b) \$42.6 million per annum retained wages and salaries; and
- (c) Retained other expenditure with Otago businesses of \$32.6 million per annum.

5.9 In addition, as a consequence of extending the life of open pit mining operations (i.e. the MP4 project) at the Macraes site, the Government will continue to receive additional royalty payments estimated by OceanaGold to average around \$1.0 million per annum

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<sup>18</sup> For example, employment and income multipliers estimated for the construction and operation of a proposed new Holcim cement plant at Weston in the Waitaki District ranged between 1.58 and 1.93 for employment and 1.46 and 1.58 for incomes. (See Environment Court Evidence of Michael Copeland in Holcim New Zealand Limited v Waiareka Valley Preservation Society and others, November 2008.)

over the period 2025 to 2029, whilst the New Zealand economy will benefit from higher gross domestic product (GDP) and exports.<sup>19</sup>

### **Economic Benefits from Increased or Retained Economic Activity**

5.10 As indicators of levels of economic activity, economic impacts in terms of increased or retained expenditure, incomes and employment within north-east Otago and the Otago region are not in themselves measures of improvements in economic welfare or economic wellbeing. However, there are economic welfare enhancing benefits associated with increased or retained levels of economic activity. These relate to one or more of:

- (a) Increased economies of scale: Businesses and public sector agencies are able to provide increased amounts of outputs with lower unit costs, hence increasing profitability or lowering prices;
- (b) Increased competition: Increases in the demand for goods and services allow a greater number of providers of goods and services to enter markets and there are efficiency benefits from increased levels of competition;
- (c) Reduced unemployment and underemployment<sup>20</sup> of resources: To the extent resources (including labour) would be otherwise unemployed or underemployed, increases in (or the retention of) economic activity can bring efficiency benefits when there is a reduction in unemployment and underemployment. The extent of such gains is of course a function of the extent of underutilised resources within the local economy at the time and the match of resource requirements and those resources unemployed or underemployed within the local economy; and
- (d) Increased quality of central government provided services: Sometimes the quality of services provided by central government such as education and health care are a function of population levels and the quality of such services in a community can be increased if increased (or retained) economic activity maintains or enhances population levels.

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<sup>19</sup> See later in this report in the section Economic Significance of MP4.

<sup>20</sup> Underemployment differs from unemployment in that resources are employed but not at their maximum worth; e.g. in the case of labour, it can be employed at a higher skill and/or productivity level, reflected in higher wage rates.

- 5.11 It is reasonable to presume that the retained economic activity (i.e. employment, incomes and other expenditure) within north-east Otago and the Otago region as a consequence of the MP4 operations would give rise to one or more of these four welfare enhancing economic benefits for the local and regional communities. For example, retaining population in north-east Otago helps underpin local school rolls, since the children of OceanaGold staff and permanent contractors at Macraes Flat make up significant proportions of the total numbers of pupils at local schools.

### **Increased Diversity for the north-east Otago, Metropolitan Dunedin and Otago Regional Economies**

- 5.12 As noted in Section 2 of this report, the Waitaki District economy is primarily driven by the agricultural sector and agricultural product processing and this is also the case for the north-east Otago area which includes the Waitaki District plus the towns of Waikouaiti, Hyde and Middlemarch and surrounding countryside. However, the Macraes Gold Project provides greater economic diversity to the north-east Otago area – for example, in 2023 mining contributed 24.2% to the Waitaki District's GDP, ahead of contributions of 12.3% by agriculture, forestry and fishing, 9.5% by electricity, gas and water and 6.9% by manufacturing.<sup>21</sup>
- 5.13 Granting the proposed new MP4 open pit consents will assist in extending the period of time the Macraes Gold Project will provide greater diversity and balance to the north-east Otago economy, retaining employment opportunities and incomes less dependent upon returns to the agricultural sector, and helping to strengthen the local economy's resilience to agricultural commodity price cycles. This greater diversity is reinforced by the contribution the Macraes Gold Project makes to tourism in north-east Otago (see next section).
- 5.14 This is also the case for the Otago region, although to a lesser extent because its economy is already more diversified and less dependent upon agriculture and agricultural product processing.

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<sup>21</sup> Waitaki District Regional Economic Profile; Infometrics; 2023.  
(<https://ecoprofile.infometrics.co.nz/Waitaki%20District/Infographics/Overview>)



### **Contribution to Tourism**

- 5.15 The Macraes Gold Project is an attraction encouraging tourists to visit Macraes Flat. The mine has a number of public viewing areas, which are currently in the process of being upgraded. A new mine information hub is being installed and it will include a small information building, interpretation signage and a dump truck and excavator display. The processing plant viewing area is also going to be upgraded with new interpretation signage and displays. The mine conducts tours by request – mainly for school and community groups. The granting of the MP4 open pit consents will help extend the period that the local economy will benefit from the direct and indirect impacts of tourism activity linked to the mine's operation.

### **Community Sponsorship Programmes**

- 5.16 In recognition of the important role the community plays in helping the Macraes Gold Project realise its potential, the company provides financial support to a number of initiatives at the community level. In the financial year 2021/22, distributions from OceanaGold to local community groups total \$259,643. In November 2014 the Macraes Community Development Trust was also formed as part of a revised rehabilitation strategy for the Macraes area. Funds to the value of \$2.25 million previously committed for the completion of the Heritage Art Park were redirected to the Trust. The purpose of the Trust is to support initiatives that assist future growth and development options for the Macraes community when mining ceases. Extending the life of open pit mining operations at the Macraes site will help underpin such contributions in the future.

### **Other Socioeconomic Benefits**

- 5.17 The Macraes Gold Project also contributes to the “social fabric” of the north-east Otago community via staff, contractors and their families belonging to service clubs, sports clubs and other voluntary organizations. As well as fulfilling leadership roles and making other contributions within the community, the Project staff, contractors and their families help provide the critical mass to underpin these organizations' ongoing sustainability.
- 5.18 In addition the Macraes Gold Project has on-site 45 emergency response personnel, who respond to community emergencies as and when required. The places of residence of these staff are Dunedin (19), Waikouaiti (6), Palmerston (3), Oamaru (4) and elsewhere in the Otago region. Appendix 1 to this report lists the incidents the OceanaGold's

emergency response team has attended for the wider community from 2018 up to mid-July, 2023.

- 5.19 The Macraes Gold Project emergency response team are also an official co-response unit (CRU) for the St John Ambulance southern region. As such it is dispatched as a first response unit by the ambulance communications centre. In this capacity it is responsible for an area that includes all of the Macraes-Hyde road between SH85 and SH67, SH85 up to Morrisons and Dunback, the Nenthorn Valley, Middlemarch and Hyde. The emergency response personnel have provided assistance to community organisations as well as individuals and in that way provide an important rural community function.
- 5.20 Again, the granting of the MP4 open pit mining consents will help support the Macraes Gold Project's contributions to, and viability of, these sorts of activities out to at least 2030.

## 6. REGIONAL AND NATIONAL ECONOMIC SIGNIFICANCE OF MP4

- 6.1 The previous section of this report has highlighted the economic impact of the MP4 open pit mining to the north-east Otago sub-region and the Otago region in terms of generating employment opportunities, wages and salaries and expenditure and in assisting the Macraes Gold Project in providing increased economic diversity at a sub-regional and regional level. This analysis shows that the ability to continue to extract gold from the site's open pits will provide significant regional economic benefits. For the north-east Otago sub-region these significant regional economic benefits include the retention of 96 residents' jobs, \$11.6 million per annum of income and \$11.1 million per annum of expenditure with local businesses for an additional 5 years – from 2025 to 2029 (inclusive). For the Otago region the significant regional economic benefits include the retention of 354 residents' jobs, \$42.6 million per annum of income and \$32.6 million per annum of expenditure with local businesses for an additional 5 years. If the proposed new MP4 open pit consents are not granted, these significant regional economic benefits will cease and a number of the skilled and relatively highly paid workforce would mostly be redeployed elsewhere in New Zealand and/or overseas.
- 6.2 At a national level, the Macraes Gold Project in 2021 contributed \$343 million to New Zealand's exports<sup>22</sup>, \$4.1 million in royalties to central government and \$237 million to

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<sup>22</sup> In 2021, wool exports from New Zealand were \$423 million and vegetable exports were \$484 million.

New Zealand's gross national product (GDP).<sup>23</sup> This shows that the extraction of minerals provides a significant national public benefit and a level of land and labour productivity that could not otherwise be achieved using resources within New Zealand. By revenue, Macraes ranked nationally at 118th in the Deloitte Top 200 Index.<sup>24</sup> The extension of life of open pit mining operations will help provide a continuation of these significant national level economic benefits from the Macraes site.

## 7. POTENTIAL ECONOMIC COSTS OF THE PROJECT

### Lost Agricultural Production

- 7.1 Lost agricultural production is not an external cost of lengthening the life of open mining operations at the Macraes site. The productive value of the land in alternative uses was internalised into the cost structure of MP4 – in other words OceanaGold when purchasing the land had paid a price reflective of future net returns from alternative uses for the land. Such costs are not costs borne by the wider community.
- 7.2 In terms of reduced economic activity within north-east Otago (and the Otago region) from a reduction in agricultural use, the direct and indirect economic impacts of gold mining operations at the site will significantly outweigh any reductions in economic activity from any displaced farming. In a report, *Contribution of OceanaGold to the New Zealand Economy*; Infometrics Ltd; August 2010, and the New Zealand Institute for Economic Research report for OceanaGold in 2011, the contribution to GDP of the Macraes Gold Project is shown to be substantially larger than the alternative of dairy farming at the site.<sup>25</sup> The reports found that the value of production equated to \$3 million per hectare at that time and that it would take 767 years of dairy production on an equivalent area of land to match the revenue earned by the mine from 1990-2010. In fact, the land required to be taken out of agricultural use by the MP4 open pit operations is generally not suitable for dairy production<sup>26</sup> and the alternative of forestry, sheep and/or beef farming would be even less productive.

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<sup>23</sup> In 2021, New Zealand's GDP was \$327 billion.

<sup>24</sup> Source: Evidence of Shamubeel Eaquab on behalf of OceanaGold before an Independent Hearing Panel in relation to the Proposed Otago Regional Policy Statement; 7 February, 2023.

<sup>25</sup> See also *Macraes Phase III Project Assessment of Economic Impacts*; Appendix 19 to the Assessment of Environmental Effects for MP3; Mike Copeland, Brown, Copeland & Co Ltd; April 2011.

<sup>26</sup> Source: OceanaGold.

- 7.3 In any case the area affected by the proposed new consents is not classified as highly productive land under the National Policy Statement for Highly Productive Land (policy 3.5(7)).<sup>27</sup>

### **Utilities**

- 7.4 Externality costs can arise when utilities provided by central or local government (e.g. roads, water supply, storm water and flood control systems and wastewater disposal) are not appropriately priced. In the case of extending the life of open pit mining operations at the Macraes Gold Project no such externality costs will arise. The Project will continue to be completely self-sufficient with respect to water supply, wastewater disposal and storm water and flood control systems. In addition to road user charges, and roading costs payable as part of the annual rates, OceanaGold will continue to be responsible for maintenance of key sections of local roads adjacent to the mine, as already required under conditions of consent for the Macraes Gold Project and these payments are to continue for four years after mine closure.

### **Local Road Congestion Costs**

- 7.5 The extension of the MP4 open pit mining operations will not increase traffic volumes above current levels on public roads, so it will not lead to any increase in local road congestion costs.

## **8. CONCLUSIONS**

- 8.1 Since its start-up in 1990, the Macraes Gold Project has been, and continues to be, a significant contributor to levels of employment, incomes and expenditure for north-east Otago, metropolitan Dunedin and the Otago region and is regionally significant. At a national level, the Macraes Gold Project has made, and continues to make a considerable contribution to Government revenues, GDP and exports and is regionally and nationally significant. The proposed new MP4 consents will assist in extending the operating life of the Project, enabling these positive economic impacts to continue for a longer period.

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<sup>27</sup> See [NZLRI Land Use Capability 2021 | LRIS Portal \(scinfo.org.nz\)](#)

- 8.2 In particular the granting of the MP4 open pit consents will enhance the economic well being of the north-east Otago, Dunedin City and Otago communities by helping to:
- (a) Maintain significant levels of local and regional employment, incomes and expenditure;
  - (b) Maintain population levels in north-east Otago, thereby maintaining the quality of some central government provided services;
  - (c) Extend the period of time for the local economy to benefit from greater diversity and resilience;
  - (d) Extend the period of time the mine and its workforce will contribute to local community activities and socio-economic benefits.
- 8.3 It will also improve resource use efficiency by retaining economic activity and population in north-east Otago, Dunedin City and the Otago region, enabling increased economies of scale in the local provision of goods and services. It will also assist in reducing unemployment and underemployment of labour and other resources and enable the ongoing utilisation of existing infrastructure, plant and equipment with little, if any, alternative economic value.
- 8.4 The MP4 Project will not give rise to economic externality costs.

Appendix 1**OGL EMERGENCY RESPONDER OFF SITE CALL OUTS 2018 - 2023****2018**

02 Jan	Hyde	Member of public with head injuries.
03 Feb	Palmerston A&P Show	- Sound Tech, head laceration.
03 Feb	Palmerston A&P Show	- 15mth old baby, reaction to bee stings.
21 Feb	Katiki	Vehicle rolled car in floodwaters.
01 Oct	Dunback	Police request for assistance with body recovery at accident.
22 Oct	Maheno	Medical assist. Cardiac, patient deceased.
10 Nov	Macraes	Public injured leg after falling on stone steps.
21 Nov	Dunback	Assisted to remove silt Dunback Bowling Green.
25 Nov	Macraes	Public cut foot with Angle Grinder. Dressed & sent to A&E.

**2019**

09 Jan	Nenthorn	MVA. Failed to take corner and hit rock.
16 Jan	Katiki	MVA. Tyre blew, car off road. Non injury.
2/3 Feb	Palmerston A&P Show	- first aid cover if required
19 Feb	Dunback	Member of public with grinding grit in the eye
07 Mar	Macraes	Assist to locate and mark hotspots after vegetation fire.
13 Mar	Dunback	Tree down on road to mine
14 Mar	Nenthorn	Child with burns to body and face.
19 Mar	Macraes	Person fallen from bicycle.
02 Jun	Waitaki Bridge	Fatal MVA, car vs 3 x motorbikes.
12 Jun	Nenthorn	Member of public suffering from asthma attack.
06 Sep	Redbank	Member of public suffering diabetic event.
21 Sep	Palmerston Spring Show	– first aid cover if required.
4/5 Oct	Palmerston Otago Field Days	– first aid cover if required.
31 Oct	Palmerston	- Assist Waikouaiti School climb up Puketapu.

**2020**

08 Feb PalmerstonA&P Show – first aid cover if required.  
 10 Feb Road Car accident in gravel section of road.  
 16 Feb Macraes Shearer lacerated leg with shearing handpiece.  
 02 Jun Macraes SWB Ute hit pigs on Sailors Cutting.  
 03 Jun Road WAE car failed to take corner, hit pole  
 27 Jun Oamaru Purple call. Resp arrest. Status Zero.  
 07 Jul Macraes Ute rolled; driver ejected through windscreen.  
 05 Sept Oamaru Car accident outside residence. Fatal.  
 14 Sept Sailors Cutting Diesel spill on Sailors Cutting. Spills-sorb used.  
 20 Sept PalmerstonSpring Show – first aid cover if required.  
 24 Sept Macraes Camper stuck - towed out.  
 28 Nov Oamaru Purple call, person in respiratory arrest. Resuscitated.  
 11 Dec Macraes Allergic reaction. Helo to ED.  
 14 Dec Oamaru Lift assist for cardiac patient on ground.

**2021**

08 Jan Macraes Local person dislocated knee in paddock. Transported to ED.  
 22 Jan Macraes Rural Fire PFO request to investigate smoke. Unpermitted burn.  
 29/30 Jan PalmerstonA&P show - first aid cover if required.  
 07 Feb Pigroot MVA, Ute into tree at speed. Helo to ED.  
 25 Feb Middlemarch Purple call to burns victim. Patient deceased. Stood down enroute.  
 25 Mar Moonlight Breathing difficulties, Helo to ED.  
 04 Apr PalmerstonMVA, car rolled in ditch.  
 19 Apr Dunback Purple call, breathing difficulties, Helo to ED.  
 27 Apr Dunback Lift assist, COPD, fall, unconscious, broken ribs. Ambo to ED.  
 09 May Oamaru Cyclist struck by car. Stat 2 TBI. Ambo to ED.  
 28 Jun Macraes Bus slipped of road in snow. Recovered and parked up.  
 29 Jun Macraes Multiple vehicles hit Armco in ice. Road hand gritted.  
 03 Jul Macraes Stanleys Hotel - Purple call. Breathing difficulties, Helo to ED.  
 05 Jul Macraes Vegetation fire.  
 09 Sep Macraes B Train unit tipped over in high wind.  
 27 Oct Nenthorn One year old girl with breathing difficulties. Ambo to ED.

27 Oct	Macraes	Vehicle rolled in dense fog.
12 Nov	Nenthorn	Farmer unwell, Cardiac, Helo to ED.
21 Nov	Moonlight	Dislocated hip. Helo to ED.
28 Nov	Oamaru	Member of public collapsed. Assessed & monitored.
11 Dec	Sailors Cutting	Ute rolled on 65km corner. Head laceration. Ambo to ED.

## 2022

14 Jan	Macraes	Vet kicked in head by bull while dehorning. Ambo to ED
28 Feb	Oamaru	Cardiac/ Respiratory Arrest event.
16 Mar	Macraes	Farmer got electric shock. Ambo to ED.
21 May	Macraes	Person unwell, assessed and recommended Urgent Doctors.
09 Jun	SH 85/Pigroot	3yo girl injured in ATV accident on local farm. Ambo to ED.
14 Jun	Oamaru	Resus member of public in Cardiac Arrest.
30 Jun	Macraes	Member of the public unwell. Checked over.
24 Jul	Weston	Purple call. Resus and Helo to Dunedin ED.
06 Sep	Moonlight	Member of local community unwell. Helo to ED.
10 Sep	Oamaru	11 year old boy run over by tractor. Helo to ED.
12 Sep	Hyde	Rescue farmdog from 6 metre mine shaft.
21 Nov	Oamaru North	Purple Call. Resus and stabilise for transport to ED.
18 Dec	Macraes	Person in respiratory distress at Stanleys Hotel. Ambo to ED.
19 Dec	Macraes	Farmer with insecticide in eyes. Flushed and sent to ED.

## 2023

25 Jan	Oamaru	12 year old girl hit by car. Ambo to ED.
02 Feb	Macraes	Ambo call to unwell person in village. Ambo to ED.
14Feb	Moeraki	MVA Helicopter to ED.
25 Feb	Moonlight	Person broke leg in shearing shed. Ambo to ED.
15 Mar	Katiki	Ambo call to community. Stood down enroute.
19 Mar	Oamaru	Flagged down for first aid to injured person.
24 Mar	Oamaru	Purple call. Possible stroke. DNR in place. stabilised.
28 Mar	Nenthorn	Hypothermic cyclists. Assessed while warming. Monitored.
17 Apr	Macraes	Person unwell at Stanleys Hotel. Urgent Doctors.
29 Apr	Oamaru	Purple call - Unconscious but breathing on arrival.



4 Jun	Moonlight	Call to member of public fallen and COPD. Ambo to ED.
8 Jun.	Oamaru	Purple call. CPR conducted. Patient deceased.
13 Jun.	Macraes	Orange call to unknown problem. Welfare check.
15 Jul	Nenthorn	Member of public with breathing difficulties. Ambo to ED.

Source: OceanaGold.