

Before a joint hearing of the

Otago Regional Council and

Waitaki District Council

RM 20.024

Under the Resource Management Act 1991

In the matter of applications by Oceana Gold (New Zealand) Limited for
resource consents for the Deepdell North Stage III Project

**Statement of evidence of Michael Campbell Copeland for Oceana Gold (New
Zealand) Limited**

4 August 2020

INTRODUCTION

- 1 My name is Michael Campbell Copeland. I am a consulting economist and managing director of Brown, Copeland and Company Limited, a firm of consulting economists which has undertaken a wide range of studies for public and private sector clients in New Zealand and overseas.
- 2 I have been asked by OceanaGold (New Zealand) Limited (OceanaGold) to provide evidence in respect of its application for resource consents to establish, operate and rehabilitate its proposed Deepdell North Stage III Project (the Project) at the Macraes site. Previously I prepared a technical report¹, which was attached as Appendix Q to the Application for consents.

Qualifications and Experience

- 3 My area of expertise is economics and economic effects.
- 4 I hold a Bachelor of Science degree in mathematics and a Master of Commerce degree in economics. I have over 45 years' experience in the application of economics to various areas of business, including resource management matters. A summary of my curriculum vitae is attached as Annexure 1.
- 5 Prior to establishing Brown, Copeland and Company Limited in 1982, I spent six years at the New Zealand Institute of Economic Research and three years at the Confederation of British Industry. During the period 1990 to 1994, I was also a member of the Commerce Commission and during the period 2002 to 2008 I was a lay member of the High Court under the Commerce Act.
- 6 With respect to the Resource Management Act 1991 (RMA), I have prepared evidence for clients covering a number of projects and policies. A selection of these is listed at the end of my curriculum vitae in Annexure 1. I have prepared evidence in relation to the obtaining of consents for previous expansions of OceanaGold's operations at its Macraes site.
- 7 While this is a Council Hearing, I acknowledge that I have read and am familiar with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014, and agree to comply with it. I confirm that this evidence is within my area of expertise, except where I state that this evidence is given in reliance on another person's evidence. I have considered all material facts that are known to me that might alter or detract from the opinions I express in this evidence.

¹ Macraes Gold Project – Deepdell North Project Assessment of Economic Effects; Mike Copeland, Brown, Copeland & Co Ltd; 8 October, 2019.

Scope of Evidence

- 8 In my evidence I will:
 - 8.1 Describe the key features of the Project as they relate to my area of expertise;
 - 8.2 Summarize and update the findings of my technical report which covered:
 - (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 the Project extending the life of the mine by 1 year; and
 - (d) Potential economic costs of the Project extending the life of the mine by 1 year.
 - 8.3 Identify and respond to economic issues raised by submissions;
 - 8.4 Address any economic issues arising from the s42A report; and
 - 8.5 Present my conclusions.

BACKGROUND TO THE DEEPDELL NORTH STAGE III PROJECT

- 9 Macraes Gold Project commenced operations in 1990 following the granting of initial consents in 1988. In 1992, 1997, 2000, 2001, 2002, 2004 and 2006 further consents were issued in relation to various expansions in both the rate of production and physical elements of the mine (pits, waste rock stacks and storage facilities for tailings and process water).
- 10 In 2011, OceanaGold sought and was granted an extension to the consented life of the Macraes Gold Project. The extension, called the Macraes Phase III Project, took the consented mine life through to 2020, instead of the mine closing as previously proposed in 2012. Under the Macraes Phase III Project, production at the Fraser's underground mine has continued in parallel with the open pits. The Macraes opencast mining operations were to be scaled back towards the end of the mine's life (i.e. in 2019 and 2020).
- 11 In 2013 OceanaGold sought and was granted another extension to the life of the Macraes Gold Project. The Coronation Project was expected to add approximately

1 year to the overall Macraes Gold Project's mine life. In other words, rather than the Macraes opencast mining operations being scaled back in 2019 and 2020 as was previously proposed, this was to be delayed until 2020 and 2021. The year 2019 would see a continuation of the same level of economic activity at the site as was proposed previously for the period 2015 to 2018 (inclusive) under the Macraes Phase III Project.

- 12 In 2016 OceanaGold sought and was granted a further extension called the Coronation North Project. This extension was to add 3 full years to the operational life of the mine – i.e. in terms of the economic effects of the Project the operating life of the mine was to continue at current levels into the years 2020, 2021 and 2022, with the scaling back of activities and rehabilitation push back to 2023 and 2024.
- 13 Currently consented activities are now expected to allow mining operations to continue at current levels into 2023, with the scaling back of activities and rehabilitation now expected in 2024 and 2025. A further extension of the Macraes Gold Project is now proposed called the DeepdellNorth Stage III Project (the Project). The estimated duration of the operation and rehabilitation activities of the Project will be approximately 1 year, with the Project effectively adding an additional full year to the operational life of the mine – i.e. in terms of the economic effects of the Project the operating life of the mine will continue at current levels into the year 2024, with the scaling back of activities and rehabilitation pushed back to 2025 and 2026. Further exploratory drilling may result in the operational life of the mine being further extended but that is uncertain at this time.
- 14 Also I understand from the evidence of the Macraes Mine General Manager, Mr Matt Hine, that the Deepdell North Stage III Project is critical to the possible future development of other mine projects including the new Golden Point undergroundmine and another brownfields open pit project centred on the original Round Hill pit. Whilst the Golden Point project is in the consenting phase, the open pit project is still in its early stages and it is likely to be several years before all of the technical and environmental studies are completed and consents secured. However the Deepdell North Stage III Project, by prolonging the life of the mining operations at the Macraes site, reduces the likelihood of all mine operations winding down in the mid-2020s and increases the likelihood of gold mining at the Macraes site (and their associated economic benefits) continuing for a further 20 years or so – see the evidence of Mr Matt Hine.

ASSESSMENT OF ECONOMIC EFFECTS – SUMMARY OF MY TECHNICAL REPORT

The Waitaki District, Dunedin City and Otago Regional Economies²

- 15 In Appendix Q to the Application I addressed this topic in Section 2. I set out the main points below, incorporating more recent data that has become available since my technical report was finalised.
- 16 Geographical Extent of the Project and its Economic Effects. The site of the existing Macraes Gold Project is located largely within the Waitaki District, which in turn is one of the districts within the Otago region. However the Coronation and Coronation North Projects extend the mining activities over the local authority boundary into Dunedin City³. Also the employees at the mine reside in a number of centres stretching from Oamaru to Dunedin. Therefore I have assessed the “local” economic impacts 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. 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.⁴
- 17 Population. Data from Statistics New Zealand show that the population of the Waitaki District in 2006 was estimated at 20,700 and by 2019 had grown to 23,200 – i.e. an increase of 12.1%. Dunedin City’s population has grown from 122,300 in 2006 to 131,700 in 2019, an increase of 7.7%. Over this same period Otago’s population has grown from 199,800 to 236,200, an increase of 18.2%, whilst New Zealand’s population has grown by 17.5%.
- 18 Statistics New Zealand is forecasting relatively slow growth in Waitaki District’s and Dunedin City’s population over the next 24 years. Its ‘medium’⁵ population projections have the Waitaki District’s population increasing to 24,100 by 2043 – i.e., a gain of 900 or 0.2% average annual growth over the period 2019-

² Data in this section from Statistics New Zealand. 2019 data that was not available at the time my technical report was finalised is now incorporated in my evidence.

³ Although the processing of all ore still occurs at the mine’s processing plant within the Waitaki District.

⁴ OceanaGold 2019 data on the residence of their own staff (i.e. excluding contractors) engaged on site at Macraes Flat shows that out of a total of 571 - 252 (44.1%) reside in metropolitan Dunedin, 85(14.9%) reside in Palmerston, 57 (9.9%) reside in Waikouaiti, 47 (8.2%) reside in Oamaru, 16 (2.8%) reside in Middlemarch, 5 (1.2%) reside in Waitati and Warrington, 2 (0.4%) reside in Macraes Flat and 107 (18.8%) reside elsewhere within the Waitaki District or Dunedin City. Another 22 staff work in the Macraes Dunedin Office. It is likely most, if not all, of these staff reside in metropolitan Dunedin.

⁵ 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.

2043. Dunedin City's⁶ population is projected to grow to 136,500 by 2043, up by 4,800 or average annual growth of 0.2% over the period 2019-43. For Otago, the population is projected to grow to 256,100 by 2043 – i.e. a gain of 19,900 or 0.3% average annual growth over the period 2019-2043. The comparative figures for New Zealand show a projected increase in population averaging 0.8% per annum over the same 24 year period. However with 2018 census population data now available these forecasts may be revised upwards as the recently released 2019 population estimates show higher population growth than previously estimated.

- 19 Employment. Statistics New Zealand 2019 industry employment data highlight the Waitaki District's reliance on the primary sector, which includes the agriculture, forestry and fishing industry group and mining. The agriculture forestry and fishing⁷ industry group accounted for 1,550 jobs or 15.4% of the labour force compared to a national percentage share for this industry group of only 5.4%. Agriculture accounts for 1,427 jobs or 14.1% of the labour force. This reliance on the agricultural sector is further illustrated by 1,550 jobs (15.4% of the Waitaki District labour force) in the manufacturing sector being in the food manufacturing industry group. Mining accounted for 550 jobs or 5.1% of the District's workforce.
- 20 Other significant sectors within the Waitaki labour force are retail trade (1,050 jobs or 10.4% of the total labour force), accommodation and food services (940 jobs or 9.3% of the total labour force), healthcare and social assistance (730 jobs or 7.2% of the total labour force) and construction (730 jobs or 7.2% of the total labour force). Total employment in the Waitaki District grew by 8.6% over the period 2006 to 2019, as compared to employment growth for New Zealand of 20.4%.
- 21 For Dunedin City, the key sectors are healthcare and social assistance (9,400 jobs in 2019 or 15.8% of the total labour force), education and training (8,200 jobs or 13.7% of the total labour force), retail trade (6,600 jobs or 11.1% of the total labour force), construction (4,850 jobs or 8.1% of the total labour force), accommodation and food services (4,700 jobs or 7.9% of the total labour force), and manufacturing (3,650 jobs or 6.1% of the total labour force). Total employment in Dunedin City grew by only 5.1% over the period 2006 to 2019. This was largely due to manufacturing sector employment reducing by 40.2% from 6,100 in 2006 to only 3,650 in 2019.

⁶ 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.

⁷ Apart from agricultural employees, other employees in this group are agriculture, forestry and fishing support services (220) – the majority of these will be employed in agriculture support services, aquaculture (45), forestry and logging (9) and fishing, hunting and trapping (9).

- 22 For the Otago region as a whole, employment data suggest the most significant sectors are tourism with the accommodation and food services industry group⁸ having 14,400 jobs in 2019 or 12.2% of the region's workforce), retail trade (12,500 jobs or 10.6% of the region's workforce), healthcare and social assistance (12,400 jobs or 10.5% of the region's workforce), education and training (10,900 jobs or 9.2% of the region's work force), construction (10,600 jobs or 9.0% of the region's workforce), agriculture, forestry and fishing (9,200 jobs or 7.8% of the region's workforce), and manufacturing (9,100 jobs or 7.7% of the region's workforce). Total employment in the Otago region grew by 20.4% over the period 2006 to 2019.
- 23 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, which remain heavily dependent upon agriculture and the processing of agricultural products. The Macraes Gold 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. The Project also provides some diversity to the Dunedin City economy, although in proportionate terms the Project has greater impact in the smaller and less diversified north-east Otago sub-region.

Economics and the RMA

- 24 In Appendix Q to the Application I addressed this topic in Section 3. I set out the main points below.
- 25 Economic assessments are relevant under the Resource Management Act 1991 (RMA), particularly in relation to economic wellbeing (section 5(2)) and the efficient development and use of resources (section 7(b)).
- 26 An essential first step in carrying out an evaluation of the positive and negative economic effects of a development proposal is to define the appropriate viewpoint to be adopted. For the proposed Deepdell North Project extending the life of the Macraes Gold Project 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 as I have defined earlier in my evidence. It is also appropriate to consider the impacts on metropolitan Dunedin (i.e. the city centre

⁸ 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.

and surrounding suburbs)⁹ and the wider Otago regional and national level economic impacts.

27 The main focus of my evidence is on wider external economic effects on people and communities, rather than OceanaGold.

28 I consider it is generally better to not attempt to estimate monetary values for things like amenity and biodiversity effects and rather to leave them to be assessed by appropriately qualified experts. This also avoids the danger of 'double-counting' – i.e. including them within a quantified measure of economic wellbeing or efficiency and treating them as a separate consideration in the overall judgement under section 5.

29 In this case I do not consider it makes a material difference whether intangible effects are monetised or not. Commissioners have the evidence and technical reports from other experts covering non-monetised effects available to them to consider alongside my assessment of employment and monetised economic effects.

Economic Benefits of the Deepdell North Project¹⁰

30 In Appendix Q to the Application I addressed this topic in Section 4. I set out the main points below:

31 Retention of Employment, Wages and Salaries and Other Expenditure. The Deepdell North Project will directly add approximately 1 year to the overall Macraes Gold Project's mine life. This will mean the reduction in economic activity within north-east Otago, metropolitan Dunedin and the Otago region as the mining operations are wound down will be delayed a year. This implies an additional year of full opencast mining activity in 2023, with the curtailing of production for the mine's last two years of operation now being in years 2024 and 2025, instead of 2023 and 2024.

32 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 Middlemarch) - there will be the retention for an extra year of 235 jobs¹¹ for local residents at the Macraes Flat site, wage and salary payments to these employees of \$23.1 million and other expenditure in the local economy of

⁹ Since this will be the area to benefit most from the additional economic activity generated by the Project.

¹⁰ Data in this section provided by OceanaGold unless otherwise stated.

¹¹ Mr Matt Hine's evidence identifies that jobs created by the Project are high paying jobs and employees cover a broad range of ages and educational levels. Also OceanaGold are active in seeking to increase the percentage of female staff.

\$19.9 million. For the Otago region there will be the retention for an extra year of 547 jobs, wage and salary payments to these employees of \$54.5 million and other expenditure of \$48.9 million. These are the direct economic impacts of the Project and although initial plans are for the Project to extend the life of mining operations on the Macraes site for only one year, I have covered earlier in my evidence that the Project increases the likelihood of the Macraes Gold Project as a whole (and its associated economic benefits) being extended for a further 20 years (see also the evidence of Mr Matt Hine).

33 In addition to these direct economic impacts there are indirect impacts arising from:

33.1 The effects on suppliers of goods and services provided to the Project (i.e. the “forward and backward linkage” effects); and

33.2 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 additional jobs and incomes for employees of supermarkets, restaurants and bars as a consequence of the additional expenditure by these employees.

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

35 District multipliers typically fall in the range of 1.5 to 2.0 and conservatively taking the low point of 1.5 implies total north-east Otago economic impacts of the Project (i.e. direct plus indirect impacts) for 2023 of:

35.1 352 retained jobs;

35.2 \$34.7 million in retained wages and salaries; and

35.3 Retained other expenditure of \$29.9 million.

36 Regional multipliers are higher than district multipliers because a region is more self sufficient in the provision of goods and services. 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) for 2023 of:

36.1 1,094 retained jobs;

36.2 \$109.0 million retained wages and salaries; and

36.3 Retained other expenditure of \$97.8 million.

37 It is expected that north-east Otago and metropolitan Dunedin will be the principle location of Otago suppliers to the Project and its employees. Also metropolitan Dunedin is the location of OceanaGold's head office activities. Therefore for metropolitan Dunedin (i.e. the city centre and surrounding suburbs) the economic impacts will be largely the difference between the Otago regional economic impacts and those estimated for north-east Otago. On this basis the direct plus indirect economic impacts of the Project for metropolitan Dunedin in 2023 are estimated to be:

37.1 741 retained jobs;

37.2 \$74.3 million retained wages and salaries; and

37.3 Retained other expenditure of \$67.9 million.

38 In addition the Government will continue receiving royalty payments for an extra year estimated to be worth about \$3.1 million, whilst the New Zealand economy will benefit from higher gross domestic product (GDP) and exports.

39 Again these beneficial economic effects from the Project extending the life of the Macraes Mine Project by just one year, need to be considered within the context of the Deepdell Mine Stage III Project potentially enabling such positive effects to continue for a further 20 years or so.

40 Economic Benefits from Increased Economic Activity. As indicators of levels of economic activity, economic impacts in terms of increased expenditure, incomes and employment within north-east Otago, metropolitan Dunedin 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 levels of economic activity. These relate to one or more of:

40.1 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;

40.2 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;

40.3 Reduced unemployment and underemployment¹² of resources: To the extent resources (including labour) would be otherwise unemployed or underemployed, increases in 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

40.4 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 economic activity maintains or enhances population levels.

41 It is reasonable to presume that the retention for an extra year of economic activity (i.e. employment, incomes and other expenditure) within north-east Otago, metropolitan Dunedin and the Otago region as a consequence of the Project 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. Data provided by OceanaGold indicates that in 2011 the children of OceanaGold staff and permanent contractors at Macraes Flat made up:

41.1 41% of pupils at East Otago High School (72 out of 175);

41.2 38% of pupils at Palmerston Primary School (49 out of 126);

41.3 33% of pupils at Waikouaiti Primary School (27 out of 82);

41.4 33% of pupils at Flag Swamp Primary School (3 out of 9);

41.5 22% of pupils at Karitane Primary School (6 out of 27);

41.6 35% of pupils at Macraes Moonlight Primary School (6 out of 7); and

41.7 28% of children at pre-school institutions in North-East Otago (74 out of 269).

¹² 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.

- 42 Since then local school rolls have changed – the current school rolls are approximately East Otago High School (135), Palmerston Primary School (114), Waikouaiti Primary School (80), Karitane Primary School (31), Macraes Moonlight Primary School (18) and Strath Taieri Primary School (51). However the children of OceanaGold staff and permanent contractors continue to underpin these school rolls. The local community benefits from better quality educational services as a consequence of the Macraes Gold Project providing a workforce, whose dependants increase the rolls at local schools and pre-schools.
- 43 Increased Diversity for the North-East Otago, Metropolitan Dunedin and Otago Regional Economies.As noted earlier in my evidence, 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.
- 44 The Project will extend 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, 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).
- 45 This is also the case for metropolitan Dunedin and at the regional and national levels, although to a lesser extent because these economies are already more diversified and less dependent upon agriculture and agricultural product processing.
- 46 Contribution to Tourism.The Macraes Gold Project mine tour is a major reason why tourists visit Macraes Flat. Extending the life of the mine by a year will extend the period that the local economy will benefit from the direct and indirect impacts of tourism activity linked to the mine's operation.
- 47 Increased Rates Revenue for Waitaki District Council.In 2018/19 rates paid by OceanaGold to the Waitaki District Council totalled about \$513,000 (excluding GST) representing about 1.6% of the Council's total rates income in the financial year 2018/19.¹³ Because of economies of scale it is likely that the rates paid by the Macraes Gold Project will be greater than the increase in Council's costs as a consequence of gold mining operations on the site as compared to pastoral

¹³ Total rates income for 2018/19 was \$31,835,000. Source: Waitaki District Council Annual Plan 2019/20.

farming. From the perspective of the Waitaki District Council and other ratepayers in the District, this broadening of the rating base provides the opportunity for a greater range of Council provided services or a reduction in the rates burden for other ratepayers. The Deepdell North Project will extend this contribution from OceanaGold by a year.

48 In addition OceanaGold pay around \$50,000 in rates to the Otago Regional Council and \$8,000 in rates to the Dunedin City Council. However at these levels it is unlikely that there is a significant surplus for other ratepayers from economies of scale.

49 Community Sponsorship Programmes.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.

50 Other Socioeconomic Benefits.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.

51 In addition the Macraes Gold Project has on-site 59 emergency response personnel, who respond to community emergencies as and when required. The places of residence of these staff are Dunedin (28), Waikouaiti (6), Palmerston (4), Oamaru (3) and elsewhere in the Otago region (18).

52 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.

Potential Economic Costs of the Deepdell North Project

53 In Appendix Q to the Application I addressed this topic in Section 5. I set out the main points below:

54 Lost Agricultural Production. Lost agricultural production is not an external cost of the Project. The productive value of the land in alternative uses was internalised

into the cost structure of the Project – 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 to be borne by the wider community.

- 55 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.
- 56 Utilities. 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 the Deepdell North Project no such externality costs will arise. The Project will 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 4 years after mine closure.
- 57 Local Road Congestion Costs. An analysis of the traffic effects of the proposed development has concluded that the proposed access arrangements will readily accommodate the volumes of vehicles envisaged and that the traffic generated during the Deepdell North Project will be safely and efficiently accommodated within the adjacent road network.¹⁴

ECONOMIC ISSUES ARISING FROM SUBMISSIONS

- 58 In his submission, Mr Neil Roy states:

“While it lasts, mining is a profitable venture but post mining the pits and waste rock stacks will last indefinitely and future livestock farming will be handicapped by their existence.”

- 59 I understand that the evidence of Mr Lee states that following mine rehabilitation the area still occupied by pits and rock stacks will be a very small/negligible proportion of the total site. However even if this was not the case I do not consider any future handicapping of livestock farming on the site to be a negative externality cost of the Project. As explained earlier in my evidence the cost of the loss of alternative land uses is internalised into the cost structure of the Applicant and is not a cost for the wider community to bear.

¹⁴ See the evidence of Mr Tim Kelly and Appendix P to the Application: Macraes Goldmine Deepdell North Stage 3 Traffic & Pedestrian Access Management; Tim Kelly Transportation Planning Ltd; October 2019.

60 Later in his submission Mr Roy states:

“Mining financially is extremely rewarding for those involved but this will cease post mining.”

61 My evidence and technical report has concentrated on the economic benefits for the wider communities of North-East Otago, Dunedin City, the Otago Region and New Zealand. I consider these to be significant and they exclude the financial returns to the applicant. Also as evidenced from the numerous new consents that have prolonged the economic life of the Macraes Mine, the consents applied for now may give rise to further extensions of the mine life, depending upon the results of further exploratory drilling and other potential mining developments at the Macraes site – see earlier in my evidence and in the evidence of Mr Matt Hine.

ECONOMIC ISSUES ARISING FROM S42A REPORTS

62 I have read the s42A reports¹⁵ from each of the Otago Regional Council (ORC) and the Waitaki District Council (WDC). The ORC s42A report acknowledges the positive economic benefits of the project (see, for example, at pages 29, 43, 48, 49, and 53). At page 53 the ORC report concludes that:

“The DDNSIII project will provide for the continuation of a range of major benefits relating to employment and socioeconomic wellbeing. The extended life of the MGP will continue to support the infrastructure activities of local communities.”

63 The WDC s42A report at pages 28 and 29 (paragraphs 139-143) discusses the economic effects of the project and notes the submission of Mr Neil Roy regarding the handicapping of livestock farming I have addressed earlier in my evidence. The report notes that the direct and indirect economic impacts of gold mining operations at the site will significantly outweigh any reductions in economic operations from any displaced farming. At page 34 (paragraph 172) the WDC report concludes that:

“... the proposal would represent an efficient use of resources under Section (7) (b) because the Plan anticipates mining in the rural zones generally, part of the site is located in a dedicated mining zone under the WDP, and otherwise the subject area is comparatively near the existing mining operation.”

¹⁵ Section 42A Staff recommending Report Application RM20.024 Oceana Gold (New Zealand) Limited; Otago Regional Council; 28 July, 2020; and Oceana Gold (New Zealand) Limited Resource Consent Application Proposed Deepdell Stage III Mining Proposal at Macraes Flat, North Otago Section 42A report – Land Use Consents; Waitaki District Council; 29 July, 2020.

CONCLUSIONS

- 64 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 Deepdell North Project will extend mining operations at Macraes Flat for approximately 1 year, enabling these positive economic impacts to continue for a longer period.
- 65 In particular the Project will enhance the economic well being of the north-east Otago, metropolitan Dunedin and Otago communities by:
- 65.1 Maintaining significant levels of local and regional employment, incomes and expenditure for an additional year;
 - 65.2 Maintaining population levels in north-east Otago, thereby maintaining the quality of some central government provided services;
 - 65.3 Extending the period of time for the local economy to benefit from greater diversity and resilience;
 - 65.4 Extending the period of time the mine and its workforce will contribute to local community activities and socioeconomic benefits.
- 66 The Project will improve resource use efficiency by retaining economic activity and population in north-east Otago, metropolitan Dunedin and the Otago region for an additional year, 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.
- 67 The Project will not give rise to economic externality costs.

Michael Copeland

Dated 4 August 2020

Annexure 1:

CURRICULUM VITAE OF MICHAEL CAMPBELL COPELAND

DATE OF BIRTH	3 October 1950
NATIONALITY	New Zealand
EDUCATIONAL	Bachelor of Science (Mathematics) 1971
QUALIFICATIONS	Master of Commerce (Economics) 1972

PRESENT POSITIONS

(Since 1982)	Economic Consultant, Brown, Copeland & Co Ltd
(Since 2017)	Trustee, Trade Aid, Kapiti

PREVIOUS EXPERIENCE

1978-82	NZ Institute of Economic Research Contracts Manager/Senior Economist
1975-78	Confederation of British Industry Industrial Economist
1972-75	NZ Institute of Economic Research Research Economist
1990-94	Member, Commerce Commission
2001-06	West Coast Regional Council Trustee, West Coast Development Trust
2002-08	Lay Member of the High Court under the Commerce Act 1986
2003-11	Director, Wellington Rugby Union
2010-13	Director, Southern Pastures
2010-17	Director, Healthcare New Zealand Holdings Limited

GEOGRAPHICAL EXPERIENCE

- New Zealand
- Australia
- Asia (Cambodia, India, Indonesia, Kazakhstan, Malaysia, Nepal, Pakistan, People's Republic of China, Philippines, Tajikistan, Sri Lanka, Uzbekistan, Viet Nam)
- South Pacific (Cook Islands, Fiji, Kiribati, Tokelau, Tonga, Tuvalu, Vanuatu, Western Samoa)
- United Kingdom

AREAS OF PRIMARY EXPERTISE

- Agriculture and Resource Use Economics (including Resource Management Act)
- Commercial Law and Economics (including Commerce Act)

- Development Programme Management
- Energy Economics
- Industry Economics
- Transport Economics

RESOURCE MANAGEMENT ACT SPECIFIC PROJECTS

- Port storage facilities at Westport;
- The proposed Clifford Bay ferry terminal;
- The proposed pipeline and related facilities to utilise water from the Waikato River for metropolitan Auckland;
- A container terminal expansion by the Ports of Auckland;
- The proposed Variation No. 8 to the Wellington City District Plan covering height and other controls on development of the airspace above the Wellington railway yards;
- Proposed expansion of Paraparaumu town centre within the Kapiti Coast District;
- Wellington City Council's heritage preservation policy;
- Solid Energy's proposed West Coast Coal Terminal at Granity;
- Solid Energy's Mt William North coal mine at Stockton in the Buller District;
- The proposed Waimakariri Employment Park;
- The designation of land for a proposed motorway extension in the Hawke's Bay;
- The Hastings District Council's Ocean Outfall – two consent renewal applications;
- A proposed new shopping and entertainment centre in Upper Hutt;
- Rezoning of land in Upper Hutt from Business Industrial to Residential;
- New regional correctional facilities in Northland, South Auckland, Waikato and Otago;
- Proposed controls on wake generation by vessels travelling within the waterways of the Marlborough Sounds;
- The expansion of marina facilities within the Marlborough Sounds;
- Southern Capital's proposed new township at Pegasus Bay, north of Christchurch;
- Renewal of water resource consents for the Tongariro Power Development Scheme;
- Economic analysis inputs to a Section 32 report for the Waitaki Water Allocation Board;
- The imposition of land use restrictions within noise contours surrounding Christchurch International Airport;
- The expansion of the Whangaripo Quarry in Rodney District;
- The economic significance of Winstone's proposed quarry at Wainui, in the north of Auckland City;
- A proposed five star hotel development for Wanaka;
- Holcim's proposed new cement plant near Weston in the Waitaki District;
- TrustPower's proposed new wind farm at Mahinerangi in Central Otago;
- TrustPower's proposed new Arnold hydroelectric power scheme on the West Coast;
- McCallum Bros and Sea Tow Limited's appeal before the Environment Court regarding extraction of sand from the Mangawhai-Pakiri embayment north of Auckland;
- The development of the Symonds Hill pit at Winstones' Hunua Quarry;
- The rezoning of land for residential development at Peninsula Bay, Wanaka;
- The rezoning of land for more intensive residential development at PekaPeka on the Kapiti Coast;
- A gondola development for the Treble Cone skifield;
- A gondola development for the Snow Farm and Snow Park skiing and snowboarding facilities;

- The extraction of gravel from the bed of the Shotover River;
- The proposed Hilton hotel development on Wellington's Queen's Wharf;
- Land use restrictions in relation to the Runway Extension Protection Areas for Christchurch International Airport;
- A new residential and commercial development by Apple Fields at Belfast on the outskirts of Christchurch;
- A proposed business park development on land at Paraparaumu Airport;
- The proposed redevelopment of Wellington's Overseas Passenger Terminal;
- The proposed Central Plains irrigation scheme in Canterbury;
- The staging of residential and business development at Silverdale North in the Rodney District;
- The redevelopment of the Johnsonville Shopping Centre;
- A Plan Change enabling the relocation of existing development rights for a residential and commercial development on Mount Cardrona Station in the Queenstown Lakes District;
- A new Pak'n Save supermarket at Rangiora;
- New supermarkets at Kaiapoi, Whitby, Silverstream and Havelock North;
- The extension of the TeRereHau wind farm in the Tararua District;
- MainPower's proposed new wind farm at Mount Cass;
- Fonterra's proposed new milk processing plant at Darfield and its subsequent expansion;
- Fonterra Pahiatua milk powder plant expansion;
- Fonterra's Studholme milk processing plant expansion;
- Renewal of resource consents at Fonterra's Edgecumbe, Edendale, Te Rapa and Te Awamutu milk processing plants;
- Fonterra's proposed new coal mine in the Waikato District;
- Assessment of the economic significance of ANZCO's Canterbury operations to the Canterbury regional economy;
- Resource consent extensions for Oceana Gold (New Zealand) Limited's gold mining operations at Macraes Flat in north-east Otago, the Globe Mine at Reefton and a proposed underground gold mine at Blackwater on the West Coast;
- Designation of land for NZTA's Waterview motorway project in Auckland;
- Designation of land and resource consents for NZTA's Transmission Gully motorway project in Wellington;
- Designation of land and resource consents for NZTA's MacKays to PekaPeka Expressway;
- Designation of land and resource consents for NZTA's PekaPeka to Otaki Expressway;
- Resource consents for NZTA's Basin Reserve Bridge Project;
- Resource consents for NZTA's Puhoi to Warkworth motorway extension;
- Assessment of the economic effects of a Queenstown Airport Corporation's proposed Notice of Requirement for the designation of additional land for aerodrome purposes;
- Assessment of the retail effects of proposed Plan Change 19 to the Queenstown Lakes District's District Plan;
- Assessment of the regional and national economic significance of Lyttelton Port;
- The economic benefits of utilising a Recovery Plan under the Canterbury Earthquake Recovery Act for the rehabilitation and enhancement of facilities at Lyttelton Port;
- The economic effects of the Lyttelton Port Company's Capital Dredging Project;
- Meridian's proposed new Mokihinui hydro scheme;

- Assessment of the economic effects of alternative wreck recovery options for the MV Rena and preparation of evidence for Environment Court hearing;
- Assessment of the economic benefits and costs of Transpower's corridor management approach to giving effect to the National Policy Statement on Electricity Transmission in District and City Plans;
- Assessment of economic effects of a proposed extension to Arrowtown's urban boundary;
- Assessment of the economic benefits of overhead deployment of ultrafast broadband infrastructure;
- Assessment of the economic benefits of the proposed Ruataniwha Water Storage Scheme;
- Preparation of evidence for Transpower in relation to the proposed Ruakura development on the outskirts of Hamilton City;
- Preparation of two reports reviewing the economic benefits of the Hobbiton movie set at Matamata;
- Assessment of the economic benefits of renewal of a water discharge consent for Silver Fern Farm's Belfast meat processing plant;
- Assessment of the economic effects of renewal of consents for the Alliance Group's Lorneville meat processing plant;
- Preparation of evidence for Winstone Aggregates in relation to the proposed extension of the Otaki quarry;
- An assessment of the economic benefits of NZTA's Waitarere Beach Road Curves Project, north of Levin;
- An assessment of the economic effects of enabling deeper quarrying in the Greater Christchurch sub-region;
- Preparation of evidence for Transpower in relation to the Proposed Auckland Unitary Plan;
- Preparation of evidence for Transpower, Ngāi Tahu Property Limited, the Lyttelton Port Company, Canterbury International Airport Limited, Tailorspace Limited, Church Property Trustees, the Roman Catholic Bishop of the Diocese of Christchurch, Pacific Park Limited, Fulton Hogan and the Christchurch Aggregates Producers Group in relation to the Proposed Christchurch Replacement District Plan;
- Preparation of evidence for Darby Planning LP, Soho Ski Area Limited, Treble Cone Investments, Lake Hayes Ltd, Lake Hayes Cellar Ltd and Mount Christina Limited in relation to economic issues concerning the Rural and Rural Recreation and Rural Lifestyle Chapters of the Proposed Queenstown Lakes District Plan;
- Preparation of evidence for Coastlands Shoppingtown Limited in relation to the proposed Kapiti Coast District Plan;
- Preparation of evidence for Tinline Properties Limited in relation to a proposed plan change to enable the establishment of an out of centre supermarket;
- The assessment of the economic effects of a proposed Plan Change for safeguarding the future efficient operations of the Rangiora Airfield;
- The assessment of the economic effects of proposed changes to Queenstown Lakes District Plan covering the Jack's Point resort area;
- The assessment of the economic benefits of the development of a marquee golf course in Christchurch;
- Economic assessment of Waitemata Harbour Crossing Project alternatives.
- Assessment of economic effects of proposed State Highway 3 Mount Messenger upgrade project.
- Assessment of economic effects of the proposed options for disposal of overburden from GBC Winstone's Otaika Quarry in Northland.

- Assessment of economic effects of Stevenson's proposed TeKuha coal mine near Westport.
- Assessment of the economic effects of Road Metals proposed extension of its Yaldhurst Quarry in Christchurch.
- Assessment of the economic effects of Simcox's Barracks Road quarry in Marlborough.
- Assessment of the economic effects of the Bay of Plenty Regional Council's proposed Plan Change 10 restricting the nutrient runoff into Lake Rotorua.
- Assessment of the economic effects of Fulton Hogan's proposed new Roydon Quarry at Templeton, Selwyn District.
- Assessment of the economic effects of the proposed Twin Rivers residential development adjacent to the Highlands Motorsports Park in Cromwell;
- Assessment of the economic effects of the Te Awa Lakes residential development adjacent to Fonterra's Te Rapa milk processing plant.