

Before the Waikato Regional
and Hauraki District Councils

Under the Resource Management Act 1991 (**RMA**)

In the matter of An application for resource consents to extend the Waihi Gold Mine via underground and open pit mining methods known as Project Martha

By **Oceana Gold (New Zealand) Limited**
Applicant

Statement of evidence of Bernie O’Leary for Oceana Gold (New Zealand) Limited

29 October 2018

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Qualifications and experience

- 1 My name is Bernie O'Leary.
- 2 I am employed by Oceana Gold (New Zealand) Limited (**OGNZL**) as the General Manager Waihi Operation. I am a graduate of the Otago School of Mines, Otago University and qualified with a first class honours degree in Mineral Technology.
- 3 I have been General Manager at the Waihi Operation for the last 3 years. Prior to that I was the General Manager of the Macraes operation for a period of 6 years. The Macraes gold mining operation is in Otago and is also owned by OGNZL. I have over 35 years of mining industry experience comprising a combination of technical and management roles in NZ and overseas.
- 4 In preparing this evidence I have reviewed:
 - (a) The reports and statements of evidence of the other OGNZL employees giving evidence, and the evidence of all the independent experts;
 - (b) The written submissions made on the applications by interested people and groups;
 - (c) The section 42A reports prepared on behalf of the Hauraki District and Waikato Regional Councils.
- 5 I am giving this evidence as an employee of OGNZL and not as an independent expert. I therefore do not express opinions, and my evidence is restricted to matters of fact within my knowledge.

Scope of evidence

- 6 My evidence firstly provides an overview of Project Martha. This includes:
 - (a) An introduction to OGNZL and its contribution to New Zealand
 - (b) A brief overview of the Waihi Operation and an introduction to its existing components
 - (c) A discussion of the new aspects of the mine for which OGNZL is seeking consents as Project Martha – Martha Underground (including the Rex Vein) and Martha Open Pit Phase 4 (**MP4**)
 - (d) An overview of how the Project Martha components will be mined, including issues of timing and sequencing
 - (e) A discussion of some of the key controls used to ensure that the mine operates in compliance with its resource consents

- 7 The second part of the evidence deals with certain aspects of the consent conditions proposed by the respective Councils in their section 42A reports.
- 8 I confirm that my evidence relates to the proposal known as Project Martha as described in Chapter 3 of the Assessment of Environmental Effects dated 25 May 2018.

Project Martha

- 9 Project Martha represents the next significant stage in the development of the mineral resources in the Waihi area. It will extend the life of the Waihi Operation by around 12 years.
- 10 Open pit and underground mining have been a feature of Waihi since gold was first discovered at Pukewa (Martha Hill) in 1878, and even today OGNZL is essentially working the same resource that the original miners identified all those years ago.
- 11 The area is characterised by an extensive network of historical underground workings, modern underground workings that have been developed by OGNZL and its predecessors over the last two decades (which are backfilled once mining has finished in an area), and the large Martha Pit where modern mining commenced in 1987.
- 12 A unique feature of the Waihi Operation is the location of mining within the Waihi township itself. This has implications for the design and operation of the mine. We have to ensure that people and property are kept safe, and that we look after the amenity values of Waihi residents by carefully controlling the unavoidable effects of modern mining such as noise, vibration and dust. The ability to successfully operate in this environment has been rewarded by the granting of resource consents for the various stages of mine development over the last 30-odd years, and by the high degree of community acceptance of ongoing mining in the town. To the greatest extent possible we try to avoid or limit the extent to which our mining operations affect people. We do this by internalising effects, by adopting state-of-the-art mining techniques, by monitoring carefully and constantly adjusting what we are doing, and by maintaining strong and open communication with the community and the Councils.
- 13 OGNZL is a well-established and successful mining company with active operations in New Zealand (Waihi and Macraes). The OceanaGold Corporation group, of which OGNZL is part, also operates mines in the Philippines (Didipio) and United States (Haile). OGNZL has a strong record in successfully operating underground and open pit mines in compliance with strict environmental conditions.

- 14 The company has operated continuously in New Zealand since the late 1980s. The company produces well over 90% of New Zealand's total gold production. 100% of the gold (and silver¹) produced is exported to Australia. In addition to the operating mines in Waihi and Macraes, OGNZL also successfully developed, operated, and is now in the process of closing another open pit mine near Reefton.
- 15 OGNZL has owned the Waihi Operation since 2015 when the company acquired it from the previous owner Newmont.
- 16 Approximately 84% of OGNZL's total expenditure is in New Zealand, and in 2016 is estimated to have been \$373 million. In 2016 OGNZL contributed \$174 million to New Zealand's Gross Domestic Product, of which \$86 million was attributed to the Waikato economy, and the balance mostly to the Otago and West Coast economies where OGNZL's other mines are based.²
- 17 OGNZL employs people from Waihi and the surrounding area, and we provide work for many local contractors. We contribute to the local area in many ways, both economically and socially, and support our people to be fully involved as community members. Project Martha will enable these contributions to continue for another 12 years.
- 18 The Waihi Operation's major components are shown in the attached Figure 1 and are:
- (a) An open pit mining operation located within the Waihi township (**Martha Pit**)
 - (b) A series of interconnected underground mines to the east and southeast of Martha Pit (**Favona, Trio, Correnso, and Slevin Underground Mines**). The primary access to the Underground Mines is from the Favona Portal, located to the east of the township, close to the processing plant.
 - (c) A Surface Facilities Area (**SFA**), ore processing plant (**Processing Plant**), water treatment plant (**WTP**), three rock stockpiles (**Central, Northern and Eastern Stockpiles**) and two tailings storage facilities (**TSF**).
 - (d) Martha Pit is connected to the Processing Plant and rock stockpiles by an overland conveyor system (**Conveyor**). The Conveyor is the method by

¹ The type of mineralisation in the Waihi area means that there is a strong association between the presence of gold and silver. What this means in practice is that while the primary target for exploration and subsequent development is gold, it is inevitably the case that the gold the company finds will also have economic quantities of silver present. The processing methods we use allow this silver to be recovered as well, and this forms part of the product that we export. Like gold, all naturally occurring silver is owned by the Crown, and the company pays a royalty to the Crown on the silver, as well as the gold, recovered.

² OceanaGold's Contribution to New Zealand, KPMG, October 2017

which all ore and rock is moved from Martha Pit to the Processing Plant and Stockpile/TSF areas.

- 19 Martha Pit operated more or less continuously from 1987 until April 2015 when a series of small rockfalls undercut the main haul road into the pit, making ongoing mining impractical. There has been no further mining in the Pit since then. In April 2016 a major slip occurred on the north wall of the pit, and further mining will only be possible when access into the pit is re-established and the slip material removed.
- 20 All of the current mining takes place underground, mostly in the Correnso and Slevin Underground Mines. According to the current mine schedule, the existing known and consented ore reserves in the underground mines is likely to be exhausted by the end of 2019.
- 21 The employment and economic benefits that will follow from the Project Martha extension are significant – estimated to be around 300 FTEs per year, and an additional \$72 million to the New Zealand economy per year. Without Project Martha these benefits will not be realised.
- 22 Project Martha involves two components:
 - (a) An extension on the north wall of Martha Pit called Martha Phase 4 or MP4. This is shown below in Figure 2.
 - (b) The development of a new underground mine largely located under the Martha Pit (**Martha Underground**) with a small underground extension to the southeast of the Martha Pit beneath an area of residential, town centre and reserve (active) zoned land (**Rex Vein**). The proposed extent of underground workings is shown in plan view in Figure 3.
- 23 Project Martha will utilise the existing crusher and overland conveyor to move ore and rock from Martha Pit to the Processing Plant and associated facilities. Ore and rock recovered from Martha Underground will be transported via the existing network of underground roads to the Processing Plant and associated infrastructure. As the project develops, direct access from Martha Pit to Martha Underground will be established, and this will provide us with a number of advantages that will enhance the efficiency of mining including the ability to directly place rock from Martha Pit into the Martha Underground workings as backfill.
- 24 No new rock and tailings storage is proposed as part of Project Martha, with rock and tailings generated from the Project to be stored within existing consented facilities.

- 25 MP4 will allow the section of the north wall that failed in 2016 to be remediated to a stable and safe state. It will also enable vehicle access to Martha Pit to be re-established so that slip material can be removed, and so that ore in the base of Martha Pit can be mined. Associated with MP4 will be the establishment of an earth bund or screen to mitigate the effect of noise from the earthworks in the Pit, and a realignment of a section of Bulltown and Cambridge Roads.
- 26 Current scheduling has work associated with MP4 commencing with the realignment of Bulltown and Cambridge Roads and noise bund construction in Year 2 of the Project Martha consents, with earthworks on the north wall commencing in Year 3. Removing slip material from the north wall and re-establishing access to the base of the Pit is likely to take around 5 years, and mining of ore in the base of Martha Pit is scheduled from Years 8-10 of the Project Martha consent.
- 27 MP4 will utilise the same mining techniques and equipment as have been used previously for Martha Pit, and no new approaches are proposed.
- 28 No significant groundwater is expected to be encountered in the Pit as groundwater levels in the area have already been lowered below the base of the pit to allow mining of Correnso and Slevin.
- 29 Martha Underground involves recovering ore in and around areas of historical underground workings beneath and adjacent to Martha Pit, including the Rex Vein to the southeast. As the area we are targeting is lower than the existing mining level (but still generally within the areas accessed by the old-timers) we will need to progressively lower the groundwater level in the area so that the ore can be accessed.
- 30 Most of the underground mining is expected to utilise the same modified Avoca mining method that has been employed in the Trio, Favona, Correnso and Slevin Underground Mines. We are likely to also use other established mining methods that will enable us to work in and adjacent to historical workings. These workings constitute approximately 30% of the modelled underground ore. The mining method to be used in each area will be selected based on health and safety and geotechnical considerations.
- 31 Regardless of the choice of mining method in any particular area, the fundamentals of effects management will remain the same as with the existing underground operations, with close controls and monitoring on the size and placement of underground charges to limit the level of surface vibrations, and the placement of backfill in all voids created or encountered once mining has finished to avoid the possibility of surface slumping such as has occurred in the past from old underground workings that pre-date modern mining methods and backfilling.

- 32 Primary access to Martha Underground will initially be via the existing Favona Portal adjacent to the Processing Plant, and by Year 5 we expect that MP4 will have progressed to the point where we will be able to establish access portals in the south wall of Martha Pit.
- 33 Martha Underground development will commence as soon as Project Martha consents are able to be exercised. Mining the entire area is expected to take approximately 10 years to complete. Current scheduling will see the Rex Vein developed and mined over the first three years of the Project.
- 34 The Rex Vein lies beneath privately-owned property, and vibration effects on the surface similar to those experienced from blasting in the Correnso Underground Mine will be experienced. Because of this OGNZL is proposing that for Rex, the same approach to managing vibration effects on residential property as has been successfully used on a much larger scale for Correnso will be used. The key aspects are:
- (a) Strict controls on the number, timing and size of blasts;
 - (b) Payments to residents who are subject to higher levels of vibration
 - (c) The option for residents to require OGNZL to purchase their property at a fair price, plus payments towards legal and other costs, where properties are directly above mined areas;
 - (d) A 'Top Up' policy whereby genuine third party offers to buy properties affected by vibration can be 'topped up' to compensate for any reduction in the market value of houses as a consequence of people's perception that amenity value has been reduced.
- 35 The details of the property conditions that have applied successfully to Correnso are explained by Kit Wilson in his evidence, and the extent to which the property market has reacted to underground mining below houses in Waihi is described in Doug Saunders' evidence.
- 36 The levels of vibration that will be experienced are significantly less than the levels that could cause physical damage to properties.
- 37 Once mining has finished the dewatering pumps in the Martha Underground mine will be removed, allowing groundwater to rise and flood the backfilled workings and surrounding dewatered rock mass.
- 38 No change is proposed to the existing rehabilitation of Martha Pit as a lake as part of the Project.

- 39 There are advantages to the community in allowing the lake to fill over as short a period as is practical. The current consented arrangement is to take water from the Ohinemuri River to accelerate lake filling. Care needs to be taken to ensure that the taking of river water occurs in a sustainable manner so as not to cause adverse effects to the river environment. OGNZL has investigated the opportunity to increase the amount of river water taken at times of naturally higher river flows when the water can be safely taken without harming in-river values. Accordingly, we are proposing an increase the amount of water that is taken from the Ohinemuri River for lake filling. Water will be taken only at higher flows (2 times mean annual low flow and greater), and will not exceed 20% of the river flow. Modelling indicates this will yield approximately 15,000m³/day of water. This in turn means that the lake is predicted to take around 9.5 years to fill.
- 40 Other aspects of mine closure and rehabilitation will remain unaltered by Project Martha. The pit rim walkway will be re-established around the new pit crest on the north wall.
- 41 OGNZL will continue with its formal and informal interaction with stakeholders, including local iwi, community groups, individuals, and the Councils. Kerry Watson, Kit Wilson and Donna Fisher describe the work the company does in these areas in their evidence, and I can confirm that we have every intention to continue with the high level of engagement that has been a hallmark of this mine for over 30 years.
- 42 Our current resource consents, and the rules in the Hauraki District Plan require OGNZL to closely monitor and report on all relevant environmental effects of mining, including matters such as ground movement, water quality, noise and vibration levels, and dust. This monitoring and reporting is discussed by Kathy Mason in her evidence, and ensures that we are aware of the effects of mining, and can demonstrate that we are complying with all the limits that have been set to ensure the mine's effects are acceptable to the community at large.
- 43 All of the existing suite of monitoring and reporting will be continued with Project Martha.

Surface Stability

- 44 OGNZL engaged Pells Sullivan Meynink Pty Ltd (**PSM**) to assess the impacts of surface stability from the proposed mining of the MP4 pit and Martha underground mine. Tim Sullivan of PSM, who has been the geotechnical consultant for the Martha pit since 1995, will be giving evidence on the findings of this stability assessment.
- 45 In summary, the factors of safety for the proposed MP4 pit were assessed to be high. The numerical modelling undertaken by PSM also assessed the stability

effect of backfilling historic stope voids within 30m of the MP4 floor. The modelling of backfilling of these historic stope voids predicted a small reduction in strain of around 0.5% of the pit walls but also showed it had limited impact on localised displacements and strains for stopes backfilled in the toe of the planned north wall (page 17 of PSM report dated 23 May 2018, contained in Appendix P of the AEE).

- 46 HDC engaged Dr Peter Fuller to review PSM's assessment. His report is included in Appendix 1 of the HDC S42a report. Based on the recommendation of Dr Fuller, HDC has proposed a consent condition (in Appendix 8a of their S42a report, condition 71 g) requiring historical voids within 30m of the final depth of the MP4 pit to be backfilled with cement aggregate fill (CAF) as soon as access permits and before the base of the pit reaches 900mRL.
- 47 In Mr Sullivan's evidence, he will make it clear that such a prescriptive condition may not be necessary. The condition as currently proposed requires **all** historical unfilled stope voids to be backfilled with CAF if they are within 30m of the base of the MP4 pit. Mr Sullivan will outline that the PSM modelling showed only a small improvement to the stability with backfilling of these voids and that there is only a small reduction in strains when using CAF rather than using rock backfill.
- 48 There have been numerous historical unbackfilled stope voids that have been intersected since mining of the Martha pit began. The majority of these were partially backfilled and capped when encountered during open pit mining. Around 30 of these are still present in the walls of the current open pit and are currently inaccessible. Mining of MP4 may create an opportunity to access some of these voids, and it is reasonable that OGNZL be responsible for backfilling any of the voids that it mines into, and any in which structural integrity may be adversely affected by the proposed mining activity. However, it is not reasonable that OGNZL be made responsible for backfilling any existing stopes that it will not mine or that don't adversely affect overall structural integrity and that will remain inaccessible due to safety and/or geotechnical reasons and would not be able to be practically backfilled.
- 49 The HDC proposed consent conditions also introduce a method of backfilling of historical stopes when mining remnant stopes in the Martha underground mine (condition 71 a in Appendix 8a of the S42a report). The condition as written requires the mining of a remnant stope to commence at the top level. This removes the ability to commence mining at a lower level. It may not be economic or practical to commence mining at the top level. Nor does the level at which mining starts have any effect on surface stability, assuming the other consent conditions relating to surface stability are met. OGNZL should not be precluded from mining at a lower level.

- 50 Mr Mike Sandy of Australian Mining Consultants will address this point further in his evidence.
- 51 Proposed condition 71 h of the same document requires that should any new lodes be found between current Martha underground lodes that investigations demonstrate to the Council that surface stability is ensured before mining commences. There are over 100 known veins that exist in the Martha underground as encountered by historical mining. It is unclear what the Council intends when referring to a 'new lode'. If the Council intends that 'new lodes' comprise all veins and splays except the seven lodes listed in Table 2 of Peter Fuller's report then the expected frequency of encountering 'new lodes' will be very high and may paralyse OGNZL's mining operations whilst waiting for Council approval. OGNZL believes that the nature and details of such investigations (and the process of obtaining Council approval) when encountering 'new lodes' be agreed with Council in a Void Management Plan.
- 52 The proposed condition 75 of the same document also requires the consent holder to report the amount and type of backfill used and OGNZL's view is that the information required should be agreed with Council in a Void Management Plan.

Vibration Effects

- 53 OGNZL engaged Dr John Heilig to assess vibration effects of the proposed project. Dr Heilig will comment on the proposed conditions relating to blast vibration in his evidence but I'd like to make comment about three matters.
- 54 The first matter relates to the definition of a development blast and a production blast as outlined in 33 j and 33 k respectively of the draft consent conditions proposed by HDC.
- 55 A development blast is defined as a blast with a maximum instantaneous charge weight per hole of no more than 7 kilograms of explosives whilst a production blast is defined where a single hole in that blast has more than 7 kilograms of explosive.
- 56 Different average vibration compliance limits apply to each type of blast (condition 33 b).
- 57 Development blasts are used for tunnel/drive construction whereas production blasts are used to create open stopes for the mining of larger amounts of ore. In the AEE submitted by OGNZL with its consent application, a number of mining methods were described for production blasting in virgin stopes (page 54, section 3.2.4.1 of the AEE):
- Avoca stoping;
 - Floor benching; and

- Overhand cut and fill.

58 Two of these mining methods often have explosive charges of less than 7 kg per hole (floor benching and overhand cut and fill) and under the proposed definitions would be mis-classified as development blasts. A schematic diagram showing overhand cut and fill is shown in Figure 4 attached.

59 Conversely, there is expected to be times when ground conditions allow longer development blast holes to be drilled and these will contain more than 7 kg of explosives per hole. Therefore, under the Council's proposed wording these blasts will also be misclassified, as production blasts.

60 Consequently, a revised definition of development and production blasts has been proposed in Dr Heilig and Mr Turner's evidence. The proposed revised definitions explicitly define development blasts as being for tunnelling purposes and all other blasts as production blasts (except safety/maintenance blasts).

61 The second matter relates to the HDC question raised in the S42a report of dealing with anomalous blast vibration readings at a particular location. OGNZL's view is that if a property has statistically been proven to produce anomalous vibration results then a range of options are available, namely:

- the installation of a new compliance vibration monitor at that location;
- engaging with the landowner to negotiate affected party approval if the anomalies result in vibration levels that exceed the levels allowed in the consents; or
- purchasing of the property.

62 The last two options are already mitigating consent conditions in existing consents. The first option is also part of an existing Vibration Management Plan for mining of Correnso/SUPA areas and OGNZL endorses the proposed HDC consent conditions on this subject. It is worth noting that during around 30 years of blasting in the pit and underground there is only one property where anomalous vibration results have been encountered.

63 The third matter relates to whether commercial properties should be added for compliance purposes rather than restricting the compliance location to properties used for residential purposes (refer to page 21 of the HDC S42a report).

64 The compliance limits have been set to protect the amenity value of residents and if compliance limits were placed on commercial buildings, would have been set at a much higher level. OGNZL's view is that vibration limits that protect residential amenity value should not be imposed at commercial properties as these properties are not primarily for residential amenity purposes. This position is supported by

international standards that recommend higher vibration limits apply to commercial premises (e.g. 25mm/s in the Australian Standard). Additionally, it is worth noting that the need to comply with the 5mm/limit at residential dwellings close to the project and to the town centre, and some permitted residential uses within the centre, means that the maximum magnitude of vibration that could occur at commercial premises will be well below 25mm/s. Therefore, OGNZL does not agree with the HDC suggestion that vibration limits be placed on commercial buildings, other than those also lawfully used for residential purposes.

Traffic

- 65 Mr Ian Carlisle of Stantec (formerly Traffic Design Group) will cover traffic effects assessed for Project Martha. Mr Carlisle has had several meetings and discussions with NZTA and their consultants to discuss these impacts and to seek agreement regarding the proposed consent conditions as they relate to SH2.
- 66 At the time of writing, no agreement has been reached although a lot of common ground has been reached. OGNZL will continue to seek agreement on these conditions.
- 67 The proposed conditions that are contained in Mr Turner's evidence are appropriate to address the issues that NZTA has raised in relation to the potential impacts that OGNZL's operations might have on SH2 in the area of Baxter and Crean Roads. NZTA has indicated that it is about to undertake improvements at the Baxter and Crean Road intersections. Depending on the final configuration of those improvements further minor road works to accommodate future mine-related traffic may or may not be required. The conditions proposed provide for this.
- 68 Regarding the formation of a vehicle access off Grey St and the issues raised in the S42a report (pages 22 and 23), I note that Ian Carlisle discusses this in his evidence. In paragraph 22 (a) he says that the secondary access located on Grey Street approximately 200m south of King Street is used for infrequent access by heavy vehicles.
- 69 He further describes this in paragraphs 80 to 83. In summary it is expected that a small number of vehicles will require use of this existing access throughout the project. He states that six items of plant (large machinery) could be expected to use this entrance to enter the mine initially, with approximately 8 plant movements during each of year 3 and 4. A further 8 to 11 movements per year are expected for year 4-8. Occasional other movements may occur from time to time as production rises and falls or a machine needs replacement, and there would be a period towards the end of the project when the plant is removed from the mine.
- 70 To add to this, I note that the access to the mine from Barry Road/SH25 and along the perimeter road next to the Grey Street noise bund passes through the Grand

Junction Powerhouse Foundations. These are large concrete structures that are located close to the road and they are also a Category B Heritage Feature in the District Plan (HAU74). By its nature some of the mining plant is very large and there is insufficient room for it to pass through the foundations. It is therefore only the large plant that uses the alternative access and this is very infrequent.

- 71 The access is a metalled driveway that is, and will continue to be maintained by OGNZL. There is the potential for interaction with walkers on the pit rim walkway but OGNZL controls this for safety during the very limited times that the road is used. The very occasional use of this road for the access of heavy machinery has not resulted in complaints from nearby residences or walkers of the pit rim walkway.
- 72 I note that there is a locked gate at the entrance and this is largely to protect nearby residents from cars that might otherwise access the area at night. It is not intended that pedestrian access be precluded and OGNZL is happy to work with the Council to resolve any perceived pedestrian access issues.
- 73 Several submitters (Robert and Demelza Burrell and Colin Purcell) have raised safety concerns regarding the proposed realignment of Bulltown and Cambridge roads. OGNZL acknowledge those concerns and are supportive of road design measures that account for their concerns including the provision of a pedestrian crossing at an appropriate location. OGNZL is also prepared to work with Council to include a pedestrian refuge island and a narrowing of the road width to deter excessive traffic speeds. Mr Carlisle will also cover the concerns of these submitters in his evidence.

Property Purchases for Mitigation

- 74 To facilitate the MP4 cutback of the north wall, a realignment of Bulltown and Cambridge Roads will be required. It should be noted that OGNZL has reached agreement with the owners to purchase the property at 77 Bulltown Road and the relocation of the house on this property to a new location.
- 75 Two other properties in the vicinity of the MP4 cutback were recently purchased on 15 October 2018. These are at 5 Cambridge Road and 10 Pitt St/4 Miners Place. Noise modelling conducted by Hegley Acoustics showed that noise would exceed 50dB LAeq at these locations. Concerns have also been raised about the privacy of these residents adjacent to the proposed relocated pit rim walkway along the north wall (page 35 of the HDC S42a report).
- 76 The former owners are now occupiers of the property and if requested, will sign affected party consent for the project.

Air Quality

- 77 The WRC S42a report summarises the effects of Project Martha on air quality and cites the conclusions and recommendations of Dr Jonathan Cauldwell engaged by WRC.
- 78 OGNZL commits to ensuring any potential fugitive dust generated by our activities is identified and mitigated as an utmost priority. Our environmental staff will undertake proactive monitoring of dust levels in residential areas and mitigation measures will include the use of dust suppression using water trucks and sprinkler systems as appropriate.
- 79 OGNZL also commits to the education of our workforce regarding the importance of good dust management and achieving compliance with our consent conditions.

HDC MoU

- 80 In 2006, HDC and the company developed and signed a Memorandum of Understanding (MoU) that provided a framework within which each party committed to:
- continue to act in a socially responsible manner; and
 - respond in a timely manner and engage in meaningful dialogue when legitimate, potential nuisance effects on members of the Waihi community were identified.
- 81 The MoU established a consultative procedure for developing and implementing agreed mitigation actions where appropriate to address such effects. The MoU imposed “beyond compliance” obligations on the company, i.e. obligations outside the normal land use consent conditions and independent of the consent, as it potentially required changes to operational procedures to reduce effects arising from mining even if those effects remained within the limits set by the conditions.
- 82 The MoU formalised the approach already taken by the company, and the relationship between it and the Council, in understanding and managing the effects of its activities on its community. I understand that both HDC and the company were rightfully proud of the MoU, being the only such agreement known to either party and a clear demonstration of their commitment to maintaining their social licences with the Waihi community.
- 83 While originally established to cover the period of the south wall stability cutback project, the MoU was updated to cover subsequent projects; evidence of the faith and satisfaction both parties had in the agreement. I intend that OGNZL enter into an updated MoU with HDC in the same terms as that original document, amended as required to cover the Project Martha operations.

Conclusion

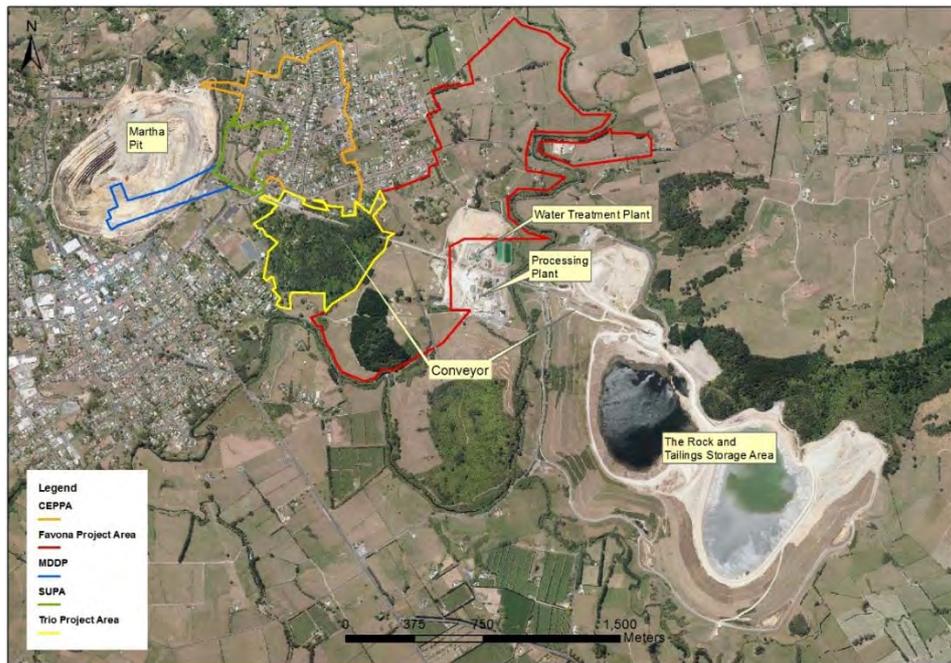
- 84 Project Martha comprises new underground and open pit mining that will allow for the continuation of this very successful mine for another 12 years. With that comes the continuation of important employment and economic opportunities.
- 85 The environmental effects of the proposal are very similar to those with which OGNZL, the Councils and the community are very familiar.
- 86 As we have demonstrated in the past, we can and do manage those effects well. We will continue to do so, and the consent conditions we have suggested will ensure that this happens, and that our community can be confident that the mine will continue to make a positive contribution to Waihi.



Bernie O'Leary

29 October 2018

Figure 1: Overview of Existing Mining Activities / Infrastructure¹



¹ The coloured polygons show the project areas for the various underground mines

Figure 2: Indicative Area of the Phase 4 Cutback (Cutback Area in Blue / Proposed Noise Bunds in Red)



Figure 3: Indicative Area of the Martha Underground Mine²



² Light Blue = Avoca Virgin Stopes, Green = Backfilled Remnant Backfilled Stopes, Pink = Ore Development and Purple = Remnant Stopes (not backfilled)

Figure 4: Overhand Cut and Fill

