NI 43-101 Technical Report

for the

Didipio Gold / Copper Operation

Luzon Island, PHILIPPINES

S0037-REP-020-0

Report Date: October 29, 2014

Effective Date: October 29, 2014

Report Authors:

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TECHNICAL REPORT CERTIFICATION

The effective date of this Technical Report and sign off is October 29, 2014.

Simon Griffiths
Date of Signature: October 29, 2014

Michael Holmes
Date of Signature: October 29, 2014

Jonathan Moore
Date of Signature: October 29, 2014

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CERTIFICATE OF QUALIFIED PERSON

As a qualified person and co-author of the report titled "NI 43-101 Technical Report for the Didipio Gold/Copper Operation, Luzon Island, Philippines" (Technical Report) dated October 29, 2014, to which this certificate applies, I, Simon Owain Griffiths do hereby certify that:

1. I, Simon Owain Griffiths, am the General Manager Studies for OceanaGold Corporation. My business address is OceanaGold, Taunton Mews, 22 MacLaggan Street, Dunedin, New Zealand.

2. I graduated with a B.Eng. (hons) Minerals Surveying and Resource Management degree from the University of Exeter, Camborne School of Mines in 2000 and an MSc Mining Engineering in 2003 from the University of Exeter, Camborne School of Mines and an MSc Mineral Economics in 2010 from Curtin University School of Business.

3. I am a member and Chartered Professional (Mining) in good standing with the AusIMM and SME.

4. I have worked as a mining engineer and study manager in the mining industry for a total of 14 years since my graduation.

5. I have read the definition of "qualified person" set out in the National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101") and confirm that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101.

6. My most recent personal inspection of the Didipio Operation was on July 30 – August 8, 2014.

7. I am responsible for Sections 1.1 – 1.6, 1.12, 1.15 – 1.20, 1.22, 2 - 5, 13, 16.1 – 16.4, 17 - 22, 24, 25.5 – 25.9, 26.2 and 27 of the "NI 43-101 Technical Report for the Didipio Gold/Copper Operation, Luzon Island, Philippines" dated October 29, 2014.

8. I am not independent of OceanaGold Corporation applying all the tests in item 1.5 of NI 43-101 because I am an employee of OceanaGold (New Zealand) Limited.

9. Prior to my commencement of employment with OceanaGold in March 2013, I have had no involvement with the Didipio Operation.

10. I have read NI 43-101 and the items of the Technical Report under my responsibility have been prepared in compliance with NI 43-101.

11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Simon Owain GRIFFITHS

Date of Signature: October 29, 2014

CERTIFICATE OF QUALIFIED PERSON

As a qualified person and co-author of the report titled "NI 43-101 Technical Report for the Didipio Gold/Copper Operation, Luzon Island, Philippines" (Technical Report) dated October 29, 2014, to which this certificate applies, I, Michael Harvy Lou Holmes do hereby certify that:

1. I, Michael Harvy Lou Holmes, am the Chief Operating Officer for OceanaGold Corporation. My business address is OceanaGold Corporation, Level 5, 250 Collins Street, Melbourne, Australia.

2. I graduated with a Bachelor of Engineering (Mining) from the University of Queensland in 1987. I hold first class certificates of competency in Queensland and Western Australia.

3. I am a member and Chartered Professional (Management) in good standing with the AusIMM.

4. I have worked as a mining engineer, mine manager, general manager and chief operating officer in the mining industry for a total of 27 years since my graduation.

5. I have read the definition of "qualified person" set out in the National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101") and confirm that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101.

6. My most recent personal inspection of the Didipio Operation was on October 16, 2014.

7. I am responsible for Sections 1.14, 15, 16.5 and 26.3 of the "NI 43-101 Technical Report for the Didipio Gold/Copper Operation, Luzon Island, Philippines" (Technical Report) dated October 29, 2014.

8. I am not independent of OceanaGold Corporation applying all the tests in item 1.5 of NI 43-101 because I am an employee of OceanaGold Corporation.

9. Prior to my commencement of employment with OceanaGold in November 2012, I have had no involvement with the Didipio Operation.

10. I have read NI 43-101 and the items of the Technical Report under my responsibility have been prepared in compliance with NI 43-101.

11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Michael Harvy Lou HOLMES
Date of Signature: October 29, 2014

CERTIFICATE OF QUALIFIED PERSON

As a qualified person and co-author of the report titled ”NI 43-101 Technical Report for the Didipio Gold/Copper Operation, Luzon Island, Philippines” (Technical Report) dated October 29, 2014, to which this certificate applies, I, Jonathan Godfrey Moore do hereby certify that:

1. I, Jonathan Godfrey Moore, am the Chief Geologist for OceanaGold Corporation. My business address is OceanaGold, Taunton Mews, 22 MacLaggan Street, Dunedin, New Zealand.

2. I graduated with a BSc (Hons) Geology degree from the University of Otago in 1985 and a Graduate Diploma (Physics) in 1993 also from the University of Otago.

3. I am a member and Chartered Professional (Geology) in good standing with the AusIMM.

4. I have worked as a geologist in the mining industry for a total of 25 years since my graduation.

5. I have read the definition of “qualified person” set out in the National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (“NI 43-101”) and confirm that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a “qualified person” for the purposes of NI 43-101.

6. My most recent personal inspection of the Didipio operation was in August 2014.

7. I am responsible for Items 1.7 – 1.11, 1.13, 1.21, 6 – 12, 14, 23, 25.1 – 25.3, 26.1.1 of the “NI 43-101 Technical Report for the Didipio Gold-Copper Operation, Luzon Island, Philippines” dated October 29, 2014.

8. I am not independent of OceanaGold Corporation applying all the tests in section 1.5 of NI 43-101 because I am an employee of OceanaGold (New Zealand) Limited.

9. Prior to employment with OceanaGold in May 1996, I have had no involvement with the Didipio Project.

10. I have read NI 43-101 and the items of the Technical Report under my responsibility have been prepared in compliance with NI 43-101.

11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Jonathan Godfrey MOORE

Date of Signature: October 29, 2014

1 SUMMARY

1.1 Overview

The Didipio operation is an operating gold-copper mine in the northern Luzon region of the Republic of the Philippines with reserves currently estimated to be 1.77 million ounces gold and 0.21 million tonnes copper. The operating mine life remaining is 14 years. The average ore grade is 1.13 g/t Au and 0.44% Cu.

The previous Didipio technical report was in filed July 2011. This technical report prepared in accordance with Canadian National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") for the Didipio operation ("Technical Report") summarises study work completed by OceanaGold during the past twelve months covering optimisation of existing operations and further feasibility into underground mining at Didipio. This report supports updated Mineral Resources and Mineral Reserves as at September 30, 2014.

The material outcomes of the study include:

- An increase in contained metal of 280koz. and 28kt of copper,
- A reduction in open pit waste from 119mt to 52mt,
- After-tax free cash flow is $944 million,
- Improved ounce profile eliminating a previously known gap on 2017 of the mine plan,
- Reduced size of open pit and increased the size of the underground mine,
- Increased production rates in the underground mine,
- Confirmation of tailings suitability for use in underground paste backfill,
- Improved understanding of geotechnical and ground water conditions for open pit and underground,
- Improved open pit blasting practices,
- Reduced TSF construction requirements,
- Project execution plan for underground portal and development completed.

Table 1-1 illustrates the key changes in the mine plan introduced by this study. In Table 1-1 the Jan-14 numbers are based on the Mineral Reserves publically reported at December 31, 2013; these Mineral Reserves have then been depleted for 2014 production to enable comparison against study outcomes.

The Jan-15 data is the revised mine plan and is based on the updated September 30, 2014 Mineral Reserves and then depleted for 2014 Q4 production.

Table 1-1: Mine Plan Comparison, January 2014 vs. January 2015.

		Jan-14	Jan-15
Total Material Mined	kt	149,498	**89,788**
Total Ore Mined (OP & UG)	kt	30,425	**35,618**
Open Pit - Total Waste Mined	kt	119,073	**52,114**
Open Pit - Total Ore Mined	kt	24,515	**19,701**
Open Pit - Gold contained mined	koz	866	**616**
Open Pit - Copper contained mined	kt	106	**89**
Underground Production (mined)	kt	5,910	**15,917**
Underground Gold grade mined	g/t	2.25	**1.86**
Underground Copper grade mined	%	0.42	**0.43**
Underground Gold Contained mined	koz	428	**952**
Underground Copper Contained mined	kt	25	**69**
Stockpile Opening Balance	kt	10,816	**10,898**
Total Ore Milled	kt	41,241	**46,516**
Combined Gold grade milled	g/t	1.08	**1.15**
Combined Copper grade milled	%	0.42	**0.43**
Gold contained (inclu. stockpile)	**koz**	**1,432**	**1,713**
Copper contained (inclu. stockpile)	**kt**	**171**	**199**

Note that Mineral Reserves in this Technical Report are reported at September 30, 2014 and mine plans and valuations are from January 1, 2015.

1.2 Introduction

Construction of the Didipio operation commenced in June 2011 and was substantially completed by December, 2012. Commissioning of the mill with ore commenced in mid-December 2012 and was run through the first quarter of 2013. Official commercial production started in April 2013. Employment of contractors and employees peaked at about 2,200 in September, 2012 at the height of construction. The current operation employs about 1,200 personnel consisting of OceanaGold employees and its contractors. Over half of those come from the provinces of Nueva Vizcaya and Quirino.

In accordance with its statutory obligations and corporate social responsibility guidelines, the Company maintains an Environmental Protection and Enhancement Program (“EPEP”) and a Social Development and Management Program (“SDMP”).

Annual production has ramped up from nameplate 2.5 million tonnes of ore processed in 2013, and is expected to reach 3.5 million tonnes per annum from 2015. Average annual production is forecast to be 100,000 ounces of gold per annum over the life of mine plus 19,000 tonnes of copper per annum until 2017 reducing to 12,000 tonnes of copper per annum for the remainder of mine life.

Mining will continue to be carried out by open pit methods until the end of 2017 and thereafter by underground mining where mill feed is supplemented by surface stockpiles. The underground access decline will commence in Q1 of 2015, prior to ore production from underground in Q1 of 2018. Long hole open stoping (“LHOS”) with paste backfill is planned to mine underground stopes below the open pit. The production profile is reported in

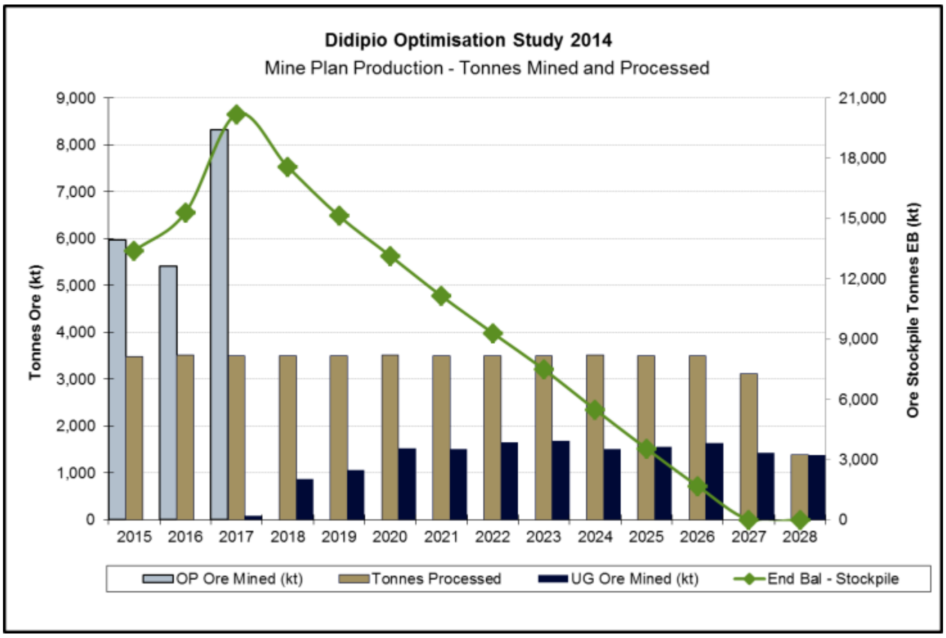


Figure 1-1: Production Summary

Table 1-2: Mine Plan Physicals and Unit Cost Assumptions

2014 Optimisation Study Valuation Date: 1 January 2015 Minerals Reserve Date: 30th September 2014		Total	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total Material Mined	kt	**89,788**	30,056	29,100	13,659	1,200	1,272	1,650	1,708	1,761	1,763	1,565	1,581	1,650	1,436	1,386
Total Ore Mined	kt	**35,618**	5,975	5,412	8,406	871	1,055	1,520	1,505	1,659	1,687	1,513	1,556	1,638	1,435	1,386
Open Cut - Total Ore Mined	kt	**19,701**	5,975	5,412	8,315	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Gold grade mined	g/t	**0.97**	0.81	1.00	1.07	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Copper grade mined	%	**0.45**	0.50	0.45	0.42	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Gold contained mined	koz	**616**	156	174	286	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Copper contained mined	kt	**89**	30	24	35	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Total Waste Mined	kt	**52,114**	23,914	23,395	4,805	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Total Material Mined	kt	**71,815**	29,889	28,807	13,119	-	-	-	-	-	-	-	-	-	-	-
Underground Production	kt	**15,917**	-	-	91	871	1,055	1,520	1,505	1,659	1,687	1,513	1,556	1,638	1,435	1,386
Underground Gold grade mined	g/t	**1.86**	-	-	1.87	1.75	1.77	1.90	2.09	1.66	2.06	1.67	1.85	2.13	1.49	1.98
Underground Copper grade mined	%	**0.43**	-	-	0.38	0.33	0.34	0.39	0.42	0.44	0.44	0.45	0.46	0.51	0.44	0.45
Underground Gold Contained mined	koz	**952**	-	-	5	49	60	93	101	89	112	81	92	112	69	88
Underground Copper Contained mined	kt	**69**	-	-	0	3	4	6	6	7	7	7	7	8	6	6
Stockpile Opening Balance	kt	**10,898**	10,898	13,390	15,292	20,197	17,568	15,123	13,133	11,139	9,298	7,485	5,488	3,544	1,683	(0)
Total Ore Milled	kt	**46,516**	3,483	3,510	3,501	3,500	3,500	3,510	3,500	3,500	3,500	3,510	3,500	3,500	3,118	1,386
Gold grade milled	g/t	**1.15**	1.13	1.38	1.27	1.25	0.94	1.06	1.13	1.01	1.21	0.96	1.05	1.22	0.91	1.98
Copper grade milled	%	**0.43**	0.69	0.56	0.50	0.40	0.35	0.35	0.37	0.38	0.38	0.38	0.39	0.41	0.38	0.45
Gold contained	**koz**	**1,713**	**126**	**156**	**143**	**141**	**106**	**119**	**128**	**113**	**136**	**108**	**118**	**137**	**92**	**88**
Copper contained	**kt**	**199**	**24**	**20**	**18**	**14**	**12**	**12**	**13**	**13**	**13**	**13**	**14**	**14**	**12**	**6**
Product Sold:																
Gold Dore	koz	**344**	25	32	29	28	21	24	26	22	27	22	24	28	18	18
Gold in concentrate	koz	**1,153**	85	106	97	95	71	79	85	75	92	73	79	92	61	62
Copper in concentrate	Mlb	**411**	50	41	37	29	25	26	26	27	28	27	28	30	24	13
Concentrate (dry) sold	kt	**746**	90	74	66	53	46	47	48	50	50	50	51	54	44	23
Mining Costs																
Open Cut	US$/t moved	**2.58**	2.44	2.58	2.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Underground	US$/t mined	**26.45**	0.00	0.00	122.09	38.45	32.37	27.29	27.96	26.60	25.39	25.85	25.23	23.57	27.19	9.36
Processing Costs																
Unit Processing	US$/t milled	**7.67**	9.30	7.71	7.85	7.22	7.47	7.34	7.37	7.36	7.31	7.34	7.39	7.36	7.53	10.63
Other site Costs																
Overheads & site costs	US$/t milled	**9.11**	9.42	8.80	9.06	9.07	8.76	8.75	8.65	8.66	8.74	8.73	8.83	8.83	9.97	14.95
Logistics																
Land Transport & Ship loading	US$/t concentrate	**55.50**														
Sea Freight	US$/t concentrate	**29.00**														
Concentrate agent fees & insurance	% of revenue	**0.18**														
Assumptions																
Gold Price	US$/oz	**1300**														
Copper Price	US$/lb	**3.20**														
Power	US$/kWh	**0.126**														
Diesel	US$/Litre	**0.91**														
Discount Rate	%	**7.0**														

1.3 Reliance on Other Experts

The authors, Qualified and Non-Independent Persons as defined by NI 43-101, were engaged by OceanaGold to study technical documentation relevant to the Technical Report, to contribute to or review the Technical Report on the Didipio operation, and to recommend a work programme if warranted.

The authors believe the information used to prepare the report and formulate its conclusions and recommendations is valid and appropriate considering the status of the operation and the purpose for which the Report is prepared. The authors, by virtue of their technical review of the Project’s exploration potential, affirm that the work programme and recommendations presented in the Report are in accordance with NI 43-101 and the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) technical standards.

1.4 Property Description, Location and Ownership

The Didipio operation is located in the north of Luzon Island approximately 270km NNE of Manila, in the Republic of the Philippines.

The operation is covered by the Financial or Technical Assistance Agreement No. 001 entered into between the Republic of the Philippines and Climax Arimco Mining Corporation ("CAMC") on June 20, 1994 ("FTAA"). The FTAA was subsequently assigned by CAMC to Australasian Philippines Mining Inc ("APMI") (renamed OceanaGold (Philippines), Inc. ("OGPI")), now a wholly owned subsidiary of OceanaGold. The FTAA was granted for a term of 25 years, renewable for a further 25 years. In collaboration with the Government of the Philippines, the FTAA grants title to OGPI to undertake large-scale exploration, development and mining of gold, silver, copper and other minerals within a fixed fiscal regime. The FTAA carries a minimum expenditure commitment of US$50 million, which has been exceeded.

Although the Didipio FTAA was granted prior to the promulgation of the Philippine Mining Act of 1995 ("Mining Act"), in common with subsequent FTAAs granted under the Mining Act and its Implementing Rules and Regulations, an Environmental Compliance Certificate ("ECC") and a Declaration of Mining Feasibility are both required as a condition for the implementation of the FTAA. Both an ECC and a Partial Declaration of Mining Feasibility ("PDMF") have been obtained and remain in place for the Didipio operation.

The FTAA now covers about 12,864 hectares (compared with the original 37,000 hectares). Parts of the original FTAA have been relinquished under the terms of the agreement. The PDMF for the Didipio operation covers 975 hectares within the FTAA.

Pursuant to a 1991 addendum agreement, a third party syndicate has a contractual right to an 8% interest in the operating vehicle that is formed to undertake the management, development, mining and processing of ore on, and the marketing of products from the Didipio mine.

1.5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

There are two alternative routes connecting the Didipio site by road to the port facilities at Manila (the destination port for inwards transit of bulk goods and reagents) and Poro Point, La Union (the departure port for ore concentrate). The main route, approaching from the North via the Municipality of Cabarroguis, is an all-weather route suitable for heavy trucks and bulk freight. The secondary access, approaching from the South via the Municipality of Kasibu, is also an all-weather route and is suitable for smaller trucks and light vehicles.

From Manila, access by road via Cabarroguis generally requires approximately 10 hours. From the port facility at Poro Point, La Union to the mine site and back, the travelling time is generally 26 hours.

Commercial air services operate four days per week between Manila and Cauayan (about 100km and 3 hours' travelling time from the Didipio site by road). The total travel time to site from Manila by road and air is approximately 7½ hours.

Didipio is located on the eastern side of Luzon and is classified under the Type III Modified Corona's Classification. Type III climate typically has no pronounced maximum rainfall period with a dry season from only one to three months, usually during the period from December to February or from March to May.

1.6 Project History

Since the discovery of alluvial gold in the 1970s, the Didipio area has been held by a succession of claim holders. In May 1975, Victoria Consolidated Resources Corporation and Fil-Am Resources Inc. entered into an exploration agreement with a syndicate of claim owners who had title to an area covering the Didipio valley and undertook exploration activities, including a stream geochemistry programme, between 1975 and 1977.

Marcopper Mining Corporation investigated the region in 1984, followed by further work undertaken in April 1985 by a consultant geologist (E P Deloso), and engaged by local claim owner Jorge Gonzales. Work by Deloso included geological mapping, panning of stream-bed sediments and ridge and spur soil sampling. Benguet Corporation examined the Didipio area in September 1985 and evaluated the bulk gold potential of the monzonite intrusion. Work included grab and channel sampling of mineralised outcrops, with sample gold grades ranging up to 12 g/t Au and copper averaging 0.14% Cu.

Geophilippines Inc investigated the Didipio area in September 1987 and carried out mapping, gridding, rockchip and channel sampling over the diorite ridge. In November 1987, Geophilippines Inc commissioned the Department of Environment and Natural Resources ("DENR"), Region 1, to undertake a geological investigation of the region in conjunction with mining lease applications.

Between April, 1989 and December 1991 Cyprus Philippines Corporation and then Arimco Mining Corporation carried out an exploration programme that included the drilling of 16 diamond core holes into the Didipio Ridge deposit. This work outlined potential for a significant deposit.

From 1992, CAMC exploration work concentrated on the Didipio Gold-Copper Deposit, although concurrent regional reconnaissance, geological, geophysical and geochemical programmes delineated other gold and copper anomalies in favourable geological settings within the Didipio area. Diamond drilling and other detailed geological investigations continued in the Didipio operation area and elsewhere in the Didipio region through 1993, and were coupled with a preliminary Environmental Impact Study ("EIS") and geotechnical and water management investigations. These works, producing 21 diamond drill holes for a total of 7,480m of drilling, formed the basis for a preliminary resource estimate (not quoted as it is not compliant with CIM guidelines) and the decision to commence a project development study, which was completed by Minproc Limited in January 1994.

Additional diamond drilling was completed at the Didipio operation as part of the project development study, providing a database of 59 drill holes within the deposit. A model of the deposit was developed and a resource estimate made (not quoted as it is not compliant with CIM guidelines). The work identified the key parameters for potential project development, which included the likelihood of underground block caving for ore extraction. The economics of this scenario were dependent in part on the delineation of a central core of higher-grade gold and copper mineralisation, but drill intersections in this area were too widely spaced to confirm geological and grade continuity at the Measured Resource category.

A programme of 17 additional diamond drill holes was undertaken to provide closer spaced sampling data, primarily within an area lying above the 2400mRL. This programme was completed in June, 1997, with all drill core assays received by early August 1997. These data formed the basis for a study completed by Minproc Limited in 1998.

By the time the FTAA was assigned to Australasian Philippines Mining Incorporated ("APMI") in 2004, CAMC had drilled 94 drill holes into the Didipio gold-copper deposit for a total of 35,653 m of drilling.

No large scale historical mining had been undertaken on the Didipio deposit prior to OceanaGold's Didipio operation.

1.7 Geological Setting and Mineralisation

The project area is situated within the southern part of the meridional Cagayan Valley basin in north-eastern Luzon and is bounded on the east by the Sierra Madre Range, on the west by the Luzon Central Cordillera range and to the south by the Caraballo Mountains. The regional geology comprises late Miocene volcanic, volcaniclastic, intrusive and sedimentary rocks overlying a basement complex of pre-Tertiary age tonalite and schist, which have been interpreted to represent an island arc depositional and tectonic setting.

The Didipio gold-copper deposit is hosted within the multiphase Didipio Stock, which is in turn part of a larger alkalic intrusive body, the Didipio Igneous Complex. The deposit has been identified as an alkalic gold-copper porphyry system, roughly elliptical in shape at surface (480m long by 180m wide) and with a vertical pipe-like geometry that extends to at least 800m below the surface. The local geology comprises north-northwest trending, steeply (80° to 85°) east-dipping composite monzodiorite intrusive, in contact with volcaniclastics of the Mamparang Formation. The monzodiorite lies in a circular topographic depression that is coincident with a circular IP anomaly.

Porphyry-style mineralisation is closely associated with a zone of K-feldspar alteration within a small composite porphyritic monzonite stock intruded into the main body of diorite (Dark Diorite). The extent of alteration is marked by a prominent topographic feature (the Didipio Ridge) some 400m long and rising steeply to about 100m above an area of river flats and undulating ground.

Chalcopyrite, gold and silver (electrum) are the main economic minerals in the deposit. Chalcopyrite occurs as fine-grained disseminations, aggregates, fracture fillings and veins.

Fine grained gold occurs as micro-inclusions in sulphides, as well as free gold, electrum and telluride. Visible gold is rare. Chalcopyrite can replace magnetite and is, in turn, replaced by bornite. Bornite occurs as alteration rims around and along fractures within chalcopyrite grains.

The deposit is oxidised from the surface to a depth of between 15m and 60m, averaging 30m. The oxide zone forms a blanket over the top of the deposit and largely comprises silicification, clay and carbonate minerals, accompanied by secondary copper minerals including malachite and chrysocolla.

Most of the oxide and transitional mineralisation has been mined since mining commenced in August 2012.

1.8 Deposit Types

The Philippines Archipelago constitutes one of the world's premier porphyry copper provinces and is a typical area for the study of island arc porphyry systems (predominantly calc-alkaline porphyry deposits).

While the Didipio gold-copper deposit has many broad similarities to the predominant Philippines calc-alkaline porphyry deposits, it is not a classic, large porphyry-style deposit. Rather, it is a smaller alkaline mineralised stock containing disseminated and fracture / vein-controlled gold-copper mineralisation that has been overprinted by late stage, structurally controlled, higher-grade, gold-copper mineralisation.

The Didipio porphyry Au-Cu deposit exhibits features that are common to other alkaline porphyries found in Eastern Australia and British Columbia, Canada.

1.9 Exploration

Prior to the acquisition of the Didipio Project by OceanaGold, previous explorers had drilled a total of 230 diamond drill holes aggregating 62,769 m. The drilling metres were mostly for the resource delineation of the Didipio porphyry Au-Cu deposit, with a small percentage of drilling in nearby prospects that include True Blue, D'Fox, San Pedro, D'Beau, and Morning Star (Figure 9-1). While there were mineralised drill intersections at True Blue and D'Fox, there has not been any exhaustive follow-up programme to delineate resources on these prospects. These prospects are all within 3km of the Didipio deposit.

OceanaGold continued follow-up works on some of the targets previously identified. The works included detailed investigation of the Mogambos, Papaya, Upper Tucod, MMB, and TNN prospects. Grid soil sampling over these prospects have delineated coincident Au-Cu anomalies over prospective lithologies that are worth drill testing.

OceanaGold also conducted exploratory drilling within the PDMF area in 2013 and 2014 to test the near-mine targets. The drilling programmes hit a number of low grade mineralised intersections at D'Beau, San Pedro and Chinichinga prospects. These intersections may indicate separate mineralised bodies from Didipio or peripheral low grade occurrences.

To complete the assessment of nearby targets and provide context to the drilling information to date, a deep IP survey using Titan 24 was implemented over the PDMF area. The survey consisted of 30.4 line-km of survey lines where Titan 24 scanned direct current chargeability and resistivity for about 500 m depth and Magneto-tellurics resistivity to a depth of 1,000 m. Results of this survey are still being processed at the time of writing. It is anticipated that follow-up drilling will be done over areas with IP anomalies that correspond to some Au-Cu anomalies from previous drilling.

1.10 Drilling

As of January 31, 2014, the complete drill hole database for the Didipio operation contained 346 holes for a total of 84,149.3m drilled. The drill hole database for the Didipio Ridge deposit comprises 188 holes totalling 48,334.3m, although only 103 holes totalling 41,577.6m are diamond core holes considered suitable for resource estimation. Drilling is generally spaced on sections with 25m to 50m along strike separations and with vertical separations of 50m in the north-west of the deposit. To the south-east, vertical separations up to 150m are more usual. This covers an approximate area of 300m across strike by 550m along strike.

1.11 Sampling Method and Analysis

Since 1989, sample preparation of Didipio drill core has been conducted in three phases (pre-OceanaGold, 2008 Infill and 2013 Infill), with each phase using slightly different sample preparation procedures. The majority of samples (72%) were prepared prior to OceanaGold's involvement.

The author considers that the sample preparation, security and analytical procedures used for the Didipio operation are appropriate and adequate for the style of mineralisation being assessed.

1.12 Metallurgical Test Work

Test work programmes on the gold-copper deposit at Didipio have been conducted in three major stages. Later test work managed by Ausenco Asia Pty Ltd and conducted by AMMTEC Ltd and internally by OceanaGold generally confirmed previous results and allowed establishment of design criteria for building the process plant and development of forecast recovery models for production planning.

Operational plant performance since the commencement of operations provides comparison data assisting in validating the recovery models developed in the prior feasibility phase. The plant is generally capable of meeting or slightly exceeding the modelled recovery estimates.

A further ore testing programme has commenced with the availability of fresh core from infill drilling programmes to allow variability testing to be undertaken and increase the knowledge of recovery and ore competency for production planning.

1.13 Mineral Resource Estimate

1.13.1 Reporting Date

Mineral Resources for the Didipio open pit and underground are reported as at September 30, 2014.

1.13.2 Qualified Persons

The mineral resources quoted here were prepared by Jonathan Moore, Chief Geologist for OceanaGold, with assistance from the Didipio Mine Geology team.

1.13.3 Mineral Resources

The resource estimate is sub-divided for reporting purposes: an open pit resource that includes all material above an elevation of 2,460mRL (base of the updated open pit design); and an underground resource between 2,460 and 2,070mRL (vertical extent of the underground designs). The open pit resources are depleted for mining as at September 2014.

The open pit resource uses a 0.47g/t AuEq cut-off grade (limited to above the 2,460mRL, which is the base of the open pit, but is not pit shell constrained), while the underground resource uses a 1.12g/t AuEq cut-off grade, based on metal prices of US$1,450 per ounce for gold and US$3.80 per pound for copper (the Mineral Reserve assumptions are US$1,250 per ounce for gold and US$3.20 per pound for copper).

The equation for contained gold equivalent is g/t AuEq = g/t Au + 1.638 x % Cu, based on Mineral Reserve metal prices.

The open pit, underground and combined resource estimates are presented in Table 1-3, Table 1-4,Table 1-5 and Table 1-6, classified in accordance with CIM Definition Standards for Mineral Resources and Mineral Reserves and the Joint Ore Reserves Committee's publication Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves - The JORC Code 2012 Edition ("JORC 2012"). The JORC 2012 Code and CIM Standards are identical except that JORC 2012 Code requires additional disclosure around resources extrapolated beyond actual sampled locations. All Mineral Reserves reported are included within the Mineral Resources reported for the same deposit.

Table 1-3: Open Pit Mineral Resource Estimate

Class	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	6.06	1.81	0.55	0.35	33.1
Indicated	21.91	0.59	0.36	0.42	79.1
Measured & Indicated	**27.96**	**0.86**	**0.40**	**0.77**	**112.2**
Inferred	9.81	0.4	0.2	0.1	20

*(above 2,460mRL at 0.47g/t AuEq cut-off grade)

Table 1-4: Stockpiles Mineral Resource Estimate

Class	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	10.99	0.40	0.43	0.14	47.2
Indicated					
Measured & Indicated	**10.99**	0.40	**0.43**	**0.14**	**47.2**
Inferred					

*(includes 100kt of transitional ore)

Table 1-5: Underground Mineral Resource Estimate

Class	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	2.57	2.50	0.48	0.21	12.3
Indicated	17.10	1.74	0.46	0.96	78.5
Measured & Indicated	**19.67**	**1.84**	**0.46**	**1.17**	**90.8**
Inferred	6.4	1.3	0.4	0.3	23

*(between 2,460mRL and 2,070mRL at 1.12 g/t AuEq cut-off grade)

Table 1-6: Combined Mineral Resource Estimate

Class	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	19.6	1.11	0.47	0.70	92.6
Indicated	39.0	1.10	0.40	1.38	157.6
Measured & Indicated	**58.6**	**1.10**	**0.43**	**2.08**	**250.2**
Inferred	16.2	0.83	0.3	0.4	43

*(at 0.47 g/t AuEq cut-off grade above 2,460mRL and at 1.12 g/t AuEq cut-off grade below 2,460mRL)

Less than 0.2% of the total resource comprises oxide and transitional mineralisation.

The resource is drilled on 50m to 25m sections, generally at 60 degrees to the south west. Vertical separations of intersections range between 50m in the northwest of the deposit, to 150m in the south east. The resource estimate is based upon diamond core samples, which overall show good recoveries. Given the style of deposit, ore body geometry and structural controls on mineralisation, the sampling is believed to be appropriate.

The Qualified Person ("QP") considers that the sample preparation, security and analytical procedures used for the Didipio operation are appropriate and adequate for the style of mineralisation being assessed.

The modelling approach used for the Didipio deposit is considered to be appropriate; the removal of geological constraints for modelling of the Tunja/Dark Diorite contact and the imposition of a hard boundary for the Biak Shear are supported by in-pit mapping and grade control data. Reconciliation of the resource estimates against grade control and mill back-calculations also validate the modelling approach. Additional drilling however, is planned for the resource beneath the open pit, in the area of the proposed underground mine, to improve confidence in the geological interpretation and local grade estimates.

1.14 Mineral Reserve Estimates

1.14.1 Reporting Standard

The Mineral Reserve estimates were compiled with reference to NI 43-101 and JORC.

This section summarizes the main considerations in relation to the estimation of Mineral Reserves and provides references to the sections of the study where more detailed discussions of particular aspects are covered.

The basis for the estimation of Mineral Reserves is metal prices of US$1,250 per ounce for gold and US$3.20 per pound for copper.

1.14.2 Reporting Date

The Mineral Reserves were first quoted in the NI 43-101 technical report filed in July 2011[1]. They have been depleted and reported annually since. Mineral Reserves for Didipio open pit and underground are reported as at September 30, 2014. The combined mineral reserves for Didipio Open Pit and Underground are summarised in Table 1-7.

Table 1-7: Combined Open Pit and Underground Mineral Reserve Estimate

Reserve Area	Reserve Class	Tonnes (Mt)	Au (g/t)	Cu (%)	Contained Au (Moz)	Contained Cu (kt)
Open Pit	Proven	6.65	1.77	0.54	0.38	35.7
	Probable	15.44	0.61	0.42	0.30	64.8
Underground	Proven	2.25	2.48	0.47	0.18	10.5
	Probable	13.67	1.76	0.43	0.77	58.1
Stockpile	Proven	10.99	0.40	0.43	0.14	47.4
	Probable	0.00	0.00	0.00	0.00	0.0
Total Proven		19.89	1.10	0.47	0.70	93.6
Total Probable		29.11	1.15	0.42	1.07	122.9
Didipio Total (Sept 30, 2014)		**49.00**	**1.13**	**0.44**	**1.77**	**216.5**

Reserves are based on the following metal price assumptions:
Commodity selling prices of: US$1,250/oz for gold and $3.20/lb for copper.
The cut-off grade for the open pit reserve is 0.52g/t AuEq and for the underground is 1.3g/t AuEq.
The gold equivalence grade is calculated as g/t AuEq = g/t Au + 1.638 X % Cu

1.14.3 Comparison with Previous Reserve Statement (December 2013)

The change in Mineral Reserves reported at September 2014 compared with those previously reported at December 31, 2013 is reported in Table 1-8.

[1] NI 43-101 "Technical Report for the Didipio Project" dated July 29, 2011, available on the Company's website.

Table 1-8: Dec 2013 Reserve Estimates vs. Sep 2014 Reserve Estimates

Reserve Area	Tonnes (Mt)	Au (g/t)	Cu (%)	Contained Au (Moz)	Contained Cu (kt)
December 31, 2013 Reserve					
Open Pit	32.32	1.02	0.46	1.064	147.3
Underground	5.91	2.25	0.45	0.428	26.6
Stockpiles	7.42	0.43	0.46	0.103	34.1
Didipio Total (Dec 31, 2013)	**45.65**	**1.09**	**0.46**	**1.594**	**208.0**
Changes to Reserve, Dec13 vs.Sept14					
Open Pit Production (9 mths FY14)	-5.86	0.06	0.00	-0.119	-31.5
Open Pit New Design	-4.36			-0.263	-15.3
Underground	10.01	-0.39	-0.02	0.524	42.0
Stockpile Movement	3.57	-0.03	-0.03	0.038	13.3
Didipio Total Reserve Changes	**3.35**	**0.04**	**-0.01**	**0.180**	**8.48**
September 30, 2014 Reserve					
Open Pit	22.10	0.96	0.45	0.681	100.5
Underground	15.92	1.86	0.43	0.952	68.6
Stockpiles	10.99	0.40	0.43	0.141	47.4
Didipio Total (Sept 30, 2014)	**49.00**	**1.13**	**0.44**	**1.774**	**216.5**

1.15 Mining Methods

OceanaGold has prepared a revised mine plan and Mineral Reserve estimates for the Didipio operation. The revised mine plan is based on a 220m deep open pit mined to an elevation of 2460mRL and underground mining by long hole open stoping below the open pit. This is a shallower open pit and a larger underground than was previously reported.

1.15.1 Recent Technical Studies

During 2014 OceanaGold completed various input studies to support its technical understanding of current and future operations at Didipio. The summary findings of those studies are included in this NI 43-101 Technical Report. The technical studies completed are:

- Hydrology, including surface water management plans, (GHD);
- Hydrogeology, comprising groundwater modelling and dewatering design, (GHD);
- Geotechnical engineering for open pit design, (AMC);
- Geotechnical engineering for waste rock management, (AMC);
- Geotechnical engineering for underground design, (AMC);
- Open pit study including pit optimisation, (AMC), mine design and scheduling, (OceanaGold);
- Underground ventilation, (AMC);
- Underground backfill, (AMC);
- Underground mine design and scheduling, (OceanaGold);
- Ore competency modelling, (OceanaGold);
- Economic evaluation, (OceanaGold).

1.15.2 Hydrogeology

OceanaGold engaged GHD to undertake review and testing of the hydrogeology inputs to the open pit and underground studies. The focus of the hydrogeology study was to review existing groundwater inflow predictions and produce an updated groundwater model based on the revised open pit and underground designs and schedules.

A robust groundwater flow model capable of representing the open pit mine developing over time, with varying recharge as the mine develops and changing river conditions has been developed. The model was calibrated using existing conditions, previous test work along with dewatering and monitoring data collected from site pumping (sump pumping and dewatering bores).

The groundwater system consists of a relatively low permeability rock mass and single highly transmissive structure, the Biak shear. The modelling predicts that the Biak shear could contribute as much as 40% of flows.

GHD recommended targeted dewatering bores directly into the Biak Shear coupled with well managed sump pumping to produce the most practical and cost effective groundwater management approach for the open pit.

Underground primary dewatering will be managed by a temporary pump station during decline development. At least two permanent pump stations will form the primary dewatering system during operations and these will report to sumps in the base of the completed open pit for sediment control before the water is discharged.

1.15.3 Geotechnical Engineering

OceanaGold commissioned AMC Consultants Pty Ltd (“AMC”) to complete geotechnical studies on open pit slope stability, underground design and waste storage facilities. Data collection for geotechnical studies included drilling, logging and laboratory analysis of 3,500m of core, geotechnical pit mapping and acoustic televiewer surveys.

The focus of the open pit geotechnical study was to optimise the pit design and ensure overall slope stability below critical infrastructure.

Underground mining by LHOS on 30m sub-level intervals, and stope footprint dimensions of 20m (l) x 20m (w) are deemed to be stable for underground mining. Preliminary ground support recommendations have been made but will be refined as more information is obtained from underground drilling and detailed investigations for critical underground infrastructure.

OceanaGold will continue to develop its understanding of geotechnical design requirements in line with study recommendations made by AMC and recently introduced data collection and monitoring regimes.

1.15.4 Open Pit Mining

The open pit study has resulted in an improved final (Stage 6) pit design which has reduced the mined waste by 67 million tonnes and improved operational efficiencies through improved haul profiles.

The study has examined in detail the optimum level for the crown pillar which has been relocated from 2380mRL to 2460mRL. The benefits of raising the crown pillar include earlier mining of high grade ore from the underground mine and increased underground production resulting from an increase in the number of underground working headings. Compared to the previous, larger Stage 6 pit the reduction in the open pit ore, and contained gold and copper, is minimal as the wider flat base to the pit has captured previously inaccessible ore tonnes.

The recently completed hydrology and hydrogeology studies will assist in de-risking the open pit operations. A site wide water management plan has been developed along with improved understanding of ground water conditions.

An improved understanding of the geotechnical environment affecting open pit mining operations is a key outcome of the study. Improved blasting practices to reduce back-break along with higher benches and wider berms will reduce localised geotechnical failures. The newly refined geotechnical domains have enabled a revision of pit designs to honour rock mass properties and structural influences. Additional monitoring, data collection and technical procedures are recommended. Further work is required to finalise the design of the North Slope above the planned Dinauyan river diversion, as this area has not been designed in detail.

The opportunity remains to reduce waste strip from the pit by redesigning the south-eastern section of the Stage 6 design. A trade-off is required on additional incremental haul distance and costs against the benefits of reduction in waste mined. There will also be slope stability benefits in the south if the switchback is removed.

The quantity of Inferred Mineral Resource which could be economically mined has been quantified, prompting OceanaGold to invest in a resource definition drilling programme to potentially translate Inferred material to an Indicated resource classification. The Inferred Mineral Resource has a low geological confidence and as such is not included in any economic evaluation reported in this Technical Report. It is however important to identify the spatial location of Inferred material to ensure there is no risk with regard to the location of critical site infrastructure.

The process used to assign values to the block model is similar to that used in the December 2013 Mineral Reserve process. This process requires that copper value be represented as an equivalent gold grade. The calculation of the equivalent gold grade, as it has been applied, assumes constant gold grades in the copper concentrate regardless of recoveries and grades of these elements in the milled material. The concentrate grade of these elements is expected to vary according to the relative grades being processed. When higher grade gold is fed with lower-grade copper; the gold grade in the concentrate will rise.

Silver is not included in the current block model; OceanaGold has completed a programme of adding silver assays to the block model and expects to update resource models with silver before year-end reserve reporting as soon as QA review of modelling has been completed. OceanaGold has been able to indicatively quantify the economic uplift of adding silver to the Didipio mine plans during this study but has not included any silver related revenue in the economic evaluation for the project.

1.15.5 Underground Mine

The Didipio underground mine has an NI 43-101 compliant Mineral Reserve of 15.9 Mt of ore at an average grade of 1.86 g/t Au and 0.43% Cu (2.57 g/t AuEq) for contained metal of 0.95 Moz of gold and 69k tonnes of copper (1.3 Moz AuEq). First development ore is expected in the final quarter of the third year of operations, with first stoping production at the start of the fourth year. The ramp up to the steady state production rate of 1.6 Mtpa is scheduled to take three years from first stoping, with this rate maintained for six years before a reduced production rate for the final two years of operation during the recovery of the crown pillar below the open pit.

The operating cost per tonne for the underground operation is $26.45/t of ore which includes all mining related costs, but excludes capitalised development, capital purchases and establishment costs. Adding all of the mining capital provides a total cost of $38.46/t of ore.

When compared to the previous NI 43-101 report issued in 2011 this shows a favourable variance, primarily attributable to:

- An increase in target production rate, from 1.2 Mtpa to 1.6 Mtpa;
- A reduction in binder addition rate for paste backfill; and
- A reduction in unit power costs.

The drill hole density constitutes a risk to the development of an underground operation due to limited information on the geological and mineralogical controls of the mineralisation at depth.

The breccia zone constitutes a risk to the design, schedule and cost estimate as it is currently poorly constrained and has limited geological and geotechnical data available for analysis. The small data set available for geotechnical analysis has resulted in a material impact on the proposed mine design and production schedule, with increased operating costs in this area as a result.

Delineating and improving understanding of the breccia zone will enable an improved mine design, production schedule and cost estimate. To mitigate this, a diamond drilling programme has been recommended to commence early in 2015, with information gathering in this area one of the key requirements. Due to the limited amount of information available, a conservative approach has been adopted in this study for stope designs in this area, and further drilling may indicate that ground conditions are better than what has currently been assumed.

Opportunities exist to improve the economics of the project through reducing capital expenditure, including:

1. Considering alternative mobile fleet strategies, such as equipment leasing, rather than purchase;
2. Refining the underground and surface pumping configurations to optimise the number and location of pump stations required;
3. Further design on the paste backfill reticulation network and surface plant to optimise costs;
4. Improved understanding of the Breccia which could result in reduction in lateral development; and
5. Alternative ventilation strategies.

Operational expenditure can potentially be refined by:

1. Further paste backfill test work to potentially reduce binder addition rates;
2. Further paste backfill test work to potentially reduce curing times required before exposure of fill walls underground;
3. Improved understanding of breccia zone geotechnical requirements, to optimise stope dimensions; and;
4. Potential conversion of Inferred resource material to Indicated or Measured category through drilling to increase the mining inventory available with minimal increase in capital expenditure.

1.16 Recovery Methods

Recovery of copper and gold at Didipio is achieved from the use of froth flotation following a conventional SAG Mill-Ball Mill grinding circuit. The design criteria for the process plant were established from test work outlined in Section 13 of this report. The plant has been successfully running for 18 months post-commissioning with a well-established workforce and management team in place.

Following introduction of first ore in December 2012 the plant throughput and recovery ramped up in line with the forecast plan. Concentrate shipments to the port commenced in late January 2013 and the first consignment of concentrate was dispatched from Poro Point on April 7, 2013.

The graph in Figure 17-2 shows the plant throughput rate compared to budget since the start of operations and shows the general exceedance of the budget. The throughput rate is also displayed normalised to an annual throughput rate at the budget 92% utilisation.

In the first calendar year of operation the process plant treated 2,598,867 tonnes of ore and exceeded the nameplate capacity of the plant (2.5 Mtpa) even with the phased ramp-up of both plant availability and throughput in the first 5 months of operation.

Following successful commissioning of the process plant investigations began on a debottlenecking project to lift plant throughput to 3.5 Mtpa. Currently the project works are scheduled to be completed by the end of 2014 to ensure the plant is capable of treating 3.5 Mtpa in calendar 2015. The completion of the tailings handling and process water upgrades have already realised gains in plant throughput as can be seen in the plant throughput performance in Q3 2014 in Figure 17-2. Completion of modifications within the grinding circuit should allow higher throughputs to be achieved by improving the circuit’s capacity to handle higher competency ores.

1.17 Project Infrastructure

The Didipio operation has been in full production since April 2013 and all mine site infrastructure has been completed to support the open pit operations including; tailings storage facility, workshops, camp, water treatment plant and ore processing facilities.

Planning and detailed design for the required underground mining infrastructure has commenced and construction will follow the initiation of the underground decline in 2015.

1.18 Market Studies and Contracts

Contracts are in place covering civil works and open pit mining (provided by Delta Earthmoving Inc. (“Delta”)), transportation and refining of bullion (Western Australian Mint), transportation and sale of gold-copper concentrate (Trafigura Pte Ltd (“Trafigura”)) and the purchase and delivery of fuel (Philippines Shell Petroleum Corporation (“Shell”)), explosives (Orica Philippines Inc. (“Orica”)) and other commodities.

OGPI currently undertakes processing and generation of the site's electricity requirements directly. Contractual arrangements to develop access to the national grid are being completed at the time of writing.

There is no project financing in place for the Didipio operation, which is funded out of operating revenue.

No hedge contracts have been entered into in relation to the Didipio operation. Refer to Section 19.4 for a description of the gold-copper concentrate off-take arrangements.

There are no market studies for gold or copper that forms the basis for the assumptions in this Technical Report.

1.19 Environmental and Permitting

The Didipio operation holds the permits, certificates, licences and agreements required to conduct its current operations. Refer to Section 4.9.1 and 20.1.2 for a list and discussion of the most significant of these.

OGPI is required to ensure that mining activities are managed in a technically, financially, socially, culturally and environmentally responsible manner. The DENR requires an ECC for any mining activity based on an EIS prepared by the company in accordance with procedures under the ECC system. An ECC obliges the company to comply with a comprehensive set of conditions, including submission and implementation of an EPEP for the life of the mine. The revised ECC for the current project was issued on December 2012.

The ECC system and the Implementing Rules and Regulations of the Mining Act regulate a funding structure to ensure company compliance with EPEP commitments, and ensure immediate funding in the form of a Contingent Liability and Rehabilitation Fund ("CLRF") is available for rehabilitation in the event of environmental damage during mining operations. CLRF funds are held in a Government depository bank and administered by a CLRF Steering Committee.

OGPI's Environmental Performance Report and Management Plan ("EPRMP") submitted in November 2011 includes survey work completed in November 2011 in conjunction with the Nueva Vizcaya State University, which establishes baseline conditions for ambient air and water quality, together with other studies that establish the basis for future environmental assessment.

The studies note that the natural environment in the vicinity of the site had been highly modified by human land use which is dominated by agriculture and small scale mining activity. In terms of water quality (surface water and groundwater) the surface waters within and adjacent to the project area were compromised by forest clearance and small scale mining. Baseline sediment monitoring similarly indicated effects on rivers of surrounding activities.

Change in land use for the open pit, underground mine, excavations, adits, and related engineering structures and installations where permanent mine facilities are established are expected to result in consequential impacts that are within acceptable regulatory limits.

1.20 Economic Analysis

The economic analysis reports pre-tax cash flows of $1,168 million resulting in a pre-tax NPV of $776 million at a discount rate of 7%. The after-tax free cash flow is $944 million and the after-tax NPV is $650 million.

The pre-production capital cost of the underground mine is estimated to be $116 million. The sustaining capital thereafter for life of mine is $143 million for underground, TSF, overhead power line and other operational requirements.

Total life of mine operating costs for open pit mining, underground mining, ore processing and general and administration is estimated to be $1,548 million.

1.21 Adjacent Properties

There are no adjacent properties that have an impact on the Didipio operation. The Didipio FTAA contains all Mineral Resources and Mineral Reserves on which this Technical Report is based.

1.22 Other Relevant Data and Information

1.22.1 Risk Management

The risk management process is not static and risks may change with time. The current study represents an understanding by the operations personnel and project team of significant risks associated with the Didipio operation, while recognising that the level of risk may change over time and that new risks may emerge. The risk register is considered a 'live' document and will form a part of the risk management plan which will be subject to regular review.

1.22.2 Health and Safety Performance

In general the health and safety performance of the Didipio operation is encouraging and well above the industry average. The operation also achieved 6 months of continuous operations without a single recordable injury (October 2013 to March 2014).

Health and safety remains a key focus of OceanaGold and the Health & Safety team work towards continuous improvement through targeted safety initiatives. OceanaGold's aim remains 'Zero Harm' with a focus on all employees being safe at work and at home.

1.23 Recommendations

1.23.1 Resource Definition

The drill hole spacing is relatively broad. Mine versus resource model reconciliation however has demonstrated that the resource estimates are robust for the open pit. The grade control data has also shown that mineralisation presents with a broad and vertically continuous footprint provided that low cut-off grades are considered (cut-offs below 1.5 g/t AuEq). On this basis the drill hole spacing is adequate for predictions for underground resources. In order to improve overall confidence in the estimates for the underground mine, particularly local estimates, a major programme of infill drilling (approximately 50km of diamond core) is expected to commence in 2015, for which US$10M has been budgeted. Resource updates will be completed as the drilling progresses.

OceanaGold has located and re-assayed 4,026 archived sample pulps for silver. A preliminary silver estimate has been undertaken, but validation has not been completed. This estimate will be reported as part of the end of year Resource and Reserve statement.

As part of the silver re-assay programme, 330 pre-OceanaGold pulps have been dispatched to on-site lab operated by SGS Philippines Inc. ("SGS") for check copper assays. These will supplement 890 existing pre-OceanaGold copper assay checks (that were not original accompanied with standards).

A site-based training and review session regarding the classification and implications of breccias and associated alteration will be led by an international expert in November 2014. This review will also consider the applicability of portable infrared mineral analyser ("PIMA") and portable x-ray fluorescence ("pXRF") analysis.

1.23.2 Open Pit Mining

The study has highlighted the following recommendations in the current open pit mining operation:

- Continuation of geotechnical, groundwater and surface water data collection and analysis.
- Detailed design for the North Slope and Dinauyan diversion drain is required to meet 2015 production targets, there is potentially an opportunity to remove a switchback in the south eastern corner of the pit to reduce waste strip even further and improve the stability of upper slopes in weathered material.
- A redesign of the north wall and geotechnical analysis to evaluate the opportunity to increase the distance between the Dinauyan diversion and the Stage 6 pit crest exists.
- Recommendations have been made by GHD for additional treatment options, utilizing the storage capacity of the TSF and the water treatment plant, to supplement the capacity of the settlement ponds, which receive flow from the open pit sump pumps and surface run-off.

1.23.3 Underground Mining

The key recommendations relating to the underground project include:

- Additional geotechnical investigation is required to improve definition of the breccia zone, and to enable detailed planning of major underground infrastructure such as vent shafts, the portal and the access decline. Numerical modelling should also be undertaken to confirm the required dimensions of the sill pillar and crown pillar, and their preferred extraction sequences.
- The underground mobile mining fleet requires finalisation. The fleet detailed in this report lists suitable equipment based on size and capability, but there may be other suppliers of similar equipment which may be equally suitable for an underground mining operation in The Philippines. Availability of fleet supply and maintenance are also key criteria that require confirmation.
- Material handling options that warrant further investigation are the use of open pit fleet to move underground material on surface. The schedule and cost model currently assume that the underground mobile fleet transport all material to its final destination, other than rehandle of ore into the crusher form the ROM stockpiles.
- Alternative primary ventilation strategies, such as increased use of long hole blasted raises to reduce the amount of raise boring activity underground warrant further investigation to optimise costs.
- Upon commencement of declining activities, as additional data is obtained the number and location of pump stations will be confirmed. Establishment of the pumping network will be a critical path activity to reduce the risk to the expanding underground mine.
- The electrical distribution network needs finalisation, to consider combinations of power being run down the decline and/or shafts or service holes from surface.
- The paste backfill reticulation network will be refined as additional test results become available.

2 INTRODUCTION

The Didipio operation is a gold-copper mine in the northern Luzon region of the Republic of the Philippines with Mineral Reserves currently estimated to be 1.77 million ounces gold and 0.21 million tonnes copper. The operating mine life remaining is 14 years. The average ore grade is 1.13 g/t Au and 0.44% Cu.

Construction of the Didipio operation commenced in June 2011 and was substantially completed by December 2012. Commissioning of the mill with ore commenced in mid-December 2012 and was run through the first quarter of 2013, with official commercial production from April 2013. Employment of contractors and employees peaked at about 2,200 in September 2012 at the height of construction. The current operation employs about 1,200 OceanaGold employees and its contractors. Over half of those come from the provinces of Nueva Vizcaya and Quirino. In accordance with its statutory obligations and corporate CSR guidelines, the Company maintains an Environmental Protection and Enhancement Program (“EPEP”) and a Social Development and Management Program (“SDMP”).

Annual production has ramped up from nameplate 2.5 million tonnes of ore processed in 2013, and is expected to reach 3.5 million tonnes per annum from 2015. Average annual production is forecast to be 100,000 ounces of gold and 14,000 tonnes of copper per annum over the life of mine.

Mining is carried out by open pit methods until the end of 2017 and thereafter underground mining with mill feed is supplemented by surface stockpiles. The underground access decline will commence in Q1 of 2015, prior to production from underground in Q1 of 2018. Long-hole open stoping (“LHOS”) with paste backfill is planned to mine underground stopes below the open pit.

2.1 Terms of Reference and Issuer for Whom the Technical Report is Prepared

OceanaGold has prepared this technical report for the Didipio operation according to NI 43-101 and Form 43-101F1, to provide an update on the Didipio operation. The Didipio Gold / Copper operation is owned by OGPI, a wholly owned subsidiary of OceanaGold Corporation (“OceanaGold”). OceanaGold is listed on the Toronto, Australian and New Zealand stock exchanges under the code “OGC” and is the issuer of this Technical Report.

The report is for use by the general investing community. It provides an update on the status of the Didipio operation and will be lodged with SEDAR in accordance with TSX requirements.

References in this report to “OceanaGold” include OceanaGold Limited, OceanaGold Corporation, OceanaGold (Philippines) Inc. and its subsidiaries and associates, as the context requires.

This report has been prepared to satisfy OceanaGold’s obligations as a reporting issuer in Canada.

2.2 Principal Sources of Information

This Technical Report was prepared by OceanaGold. Information for the Report was based on published material as well as the data, professional opinions and unpublished material obtained from work completed by OceanaGold, and materials provided by, and discussions with, third-party contractors / consultants retained by OceanaGold.

Reports and documents listed in Section 27 were also used to support preparation of the report. Additional information was sought from OceanaGold personnel where required to support preparation of this report.

Table 2-1: Specialist Consultants Who Provided Information to the Study

Consulting Company	Consulting Package
AMC Consultants Pty Ltd (“AMC”)	Mining, Geotechnical Engineering, Backfill and Ventilation
GHD (Australia) Pty Ltd (“GHD”)	Hydrology and Hydrogeology
Metso Technology PSTI Pty Ltd (“Metso”)	Ore Processing

2.3 Qualified Persons and Inspection of the Property

The Qualified Persons (QPs) for the Report are OceanaGold employees engaged for the preparation of the Report, as listed in Table 2-2.

Table 2-2: Didipio Gold-Copper Operation, Qualified Persons.

Qualified Person (QP's)	Employer	Position	Technical Report Item(s) Contributed to or Reviewed
Simon Griffiths (not independent) B.Eng.(Hons), MSc (Mining), MSc (Mineral Economics), MAusIMM (CP Mining), SME	OceanaGold	General Manager, Studies	Sections 1.1 – 1.6, 1.12, 1.15 – 1.20, 1.22, 2 - 5, 13, 16.1 – 16.4, 17 - 22, 24, 25.5 – 25.9, 26.2 and 27
Jonathan Moore (not independent) B.Sc.(Hons) Geology, GradDip Physics, MAusIMM (CP Geology)	OceanaGold	Chief Geologist	Sections 1.7 – 1.11, 1.13, 1.21, 6 – 12, 14, 23, 25.1 – 25.3 and 26.1.1
Michael Holmes (not independent) B.E.(Mining), MAusIMM (CP Management)	OceanaGold	Chief Operating Officer	Sections 1.14, 15, 16.5 and 26.3

Mr. Griffiths last visited the property between July 30, 2014 and August 8, 2014. During the site visit Mr Griffiths inspected open pit operations (including waste dumps), proposed portal location, recent surface water management improvements, tailings facility, viewed geotechnical core and held briefing with technical and management personnel.

Mr. Moore last visited the property in August 2014. During the site visit, Mr. Moore inspected drill core and the proposed location of the portal.

Mr. Holmes last visited the property on October 16, 2014 to conducted routine site inspection.

3 RELIANCE ON OTHER EXPERTS

3.1 External Consultants

The authors, Qualified, Independent and Non-Independent Persons as defined by NI 43-101, were contracted by the Issuer to study technical documentation relevant to the Report, to contribute to or review the Technical Report on the Didipio operation, and to recommend a work programme if warranted. The authors relied on reports detailed in Section 27, and opinions as follows for information that is not within the authors' fields of expertise:

- AMC Consultants Pty Ltd ("AMC") was retained by OceanaGold to provide professional services with respect to the Didipio operation. The scope of services was to determine the geotechnical engineering parameters for the open pit and underground operations, backfill requirements (underground), ventilation requirements (underground) and mining inputs. The AMC reports have been referenced for inputs to this report;
- GHD was retained by OceanaGold to provide professional services with respect to the Didipio operation. The scope of services was to determine the hydrology (surface water) and hydrogeology (groundwater) parameters of the Didipio operation and provide management plans for water. GHD also manages the design and construction of the tailings storage facility. The GHD reports were used to as inputs to this report;
- Metso was retained by OceanaGold to provide professional services with respect to the Didipio operation. The scope of services was to review ore processing and provide plant optimisation opportunities.

The authors believe the information used to prepare the report and formulate its conclusions and recommendations is valid and appropriate considering the operational nature of the Project and the purpose for which the report is prepared. The authors, by virtue of their technical review of the Project's exploration potential, affirm that the work programme and recommendations presented in the Report are in accordance with NI 43-101 and CIM technical standards.

3.2 Simon Griffiths

Mr Griffiths has relied, and believes he has a reasonable basis to rely, on information provided by the following third parties for the following areas of the report.

Table 3-1: Reliance on Third Parties

NI 43-101 Section Ref #	Subject Matter	Information Source	Date
Sections 15 and 16	Resource block model for use in mine planning and mine design	Jonathan Moore MAusIMM (CP)	30-Mar-14
Sections 16.3 -16.5, 18.10, 18.16, 20.3, 21.1, derived inputs, summaries and recommendations	Hydrology, hydrogeology, TSF Design	GHD (Australia)	Aug-14
Sections 16 and 18, derived inputs, summaries and recommendations	Geotechnical design criteria (open pit, underground mine, WRD), underground ventilation and backfill	AMC Consultants Pty Ltd	Aug-14
Sections 13.3 - 13.4, 14.4, 16.4, 17, derived inputs, summaries and recommendations	Metallurgical recoveries	David Carr, OceanaGold Chief Metallurgist	Apr-14
Section 15 and 16, derived inputs, summaries and recommendations	Pit optimisation study	AMC Consultants Pty Ltd	16-Oct-14
Section 15.6	Open Pit Mineral Reserves	Craig Fawcett, Didipio Manager Mining	Oct-14
Sections 4, 5, 19 and 20, derived inputs, summaries and recommendations	Permits, land tenure, accessibility and local resources, contracts and environmental and social licenseto operate	Brad Norman, Country Director, OGPI	10-Oct-14
Sections 21 and 22, derived inputs, summaries and recommendations	Production physicals, costs and revenue data for the underground mine used in economic analysis	Murray Smith, Principal Mining Consultant, Mining Plus Pty Ltd	Oct-14
Sections 21 and 22, derived inputs, summaries and recommendations	Taxation, FTAA calculations, discount rate and commodity assumptions	Mark Chamberlain, Chief Financial Officer	28-Oct-14

3.3 Michael Holmes

Mr Holmes has relied, and believes he has a reasonable basis to rely on information provided by the third parties listed in Table 3-1 above for the supervision and compilation of Mineral Reserve Estimates.

3.4 Jonathan Moore

None.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Didipio operation is located in the north of Luzon Island approximately 270km NNE of Manila, in the Republic of the Philippines.

The site is at 121.45º E 16.33º N (Longitude/Latitude – World Geodetic System 1984). The locations of the Financial or Technical Assistance Agreement ("FTAA") area and the Didipio operation are shown in Figure 4-1.

The FTAA straddles a provincial boundary, with part of this property within the Province of Nueva Vizcaya and part within the Province of Quirino.

4.2 Area of Property

The FTAA now covers about 12,864 hectares (compared with the original 37,000 hectares). Parts of the original FTAA have been relinquished under the terms of the agreement. The approved Partial Declaration of Mining Project Feasibility ("PDMF") for the Didipio operation covers 975 hectares within the FTAA.

4.3 Mineral Tenure

4.3.1 FTAA

The Didipio operation is covered by the FTAA which grants OGPI the right to undertake large-scale exploration, development and mining of gold, silver, copper and other minerals within a fixed fiscal regime.

The FTAA application was lodged in February 1992 and granted to OGPI's related company, OGPEC, on June 20, 1994 under Executive Order No. 279 and the Mineral Resources Development Decree of 1974. The FTAA therefore pre-dates the Mining Act, which is the empowering legislation for subsequent FTAAs. On December 23, 1996, OGPEC entered into an Assignment, Accession and Assumption Agreement with OGPI affecting the transfer of all of OGPEC's rights and obligations under the FTAA to OGPI. That transfer was approved on December 9, 2004 by an Order of the Philippines Department for the Environment and Natural Resources ("DENR"). OGPI is the current holder of the Didipio FTAA.

Pursuant to the FTAA, OGPI notified the DENR that commercial production had commenced at the Didipio operation on April 1, 2013.

The FTAA makes provision for exploration over a 5-year term from grant of the FTAA. On February 20, 2002, OGPI requested a five-year extension of the FTAA exploration period and this was approved by the DENR on August 15, 2005. On June 28, 2010, OGPI applied for a further five-year extension of the exploration period of the FTAA. This extension, which impacts only on exploration tenements outside the Didipio operation area, is awaiting endorsement by the Mines and Geosciences Bureau ("MGB") for the approval of the DENR.

4.3.2 ECC and PDMF

Although the Didipio FTAA was granted directly under Executive Order and Decree, in common with subsequent FTAAs granted under the Mining Act and its Implementing Rules and Regulations, an Environmental Compliance Certificate ("ECC") and a Partial Declaration of Mining Feasibility ("PDMF") are both required as a condition of the implementation of the FTAA. Both an ECC and a PDMF have been obtained and remain in place for the Didipio operation.

4.4 Property Boundaries

The boundary corners of the FTAA are defined in Figure 4-1.

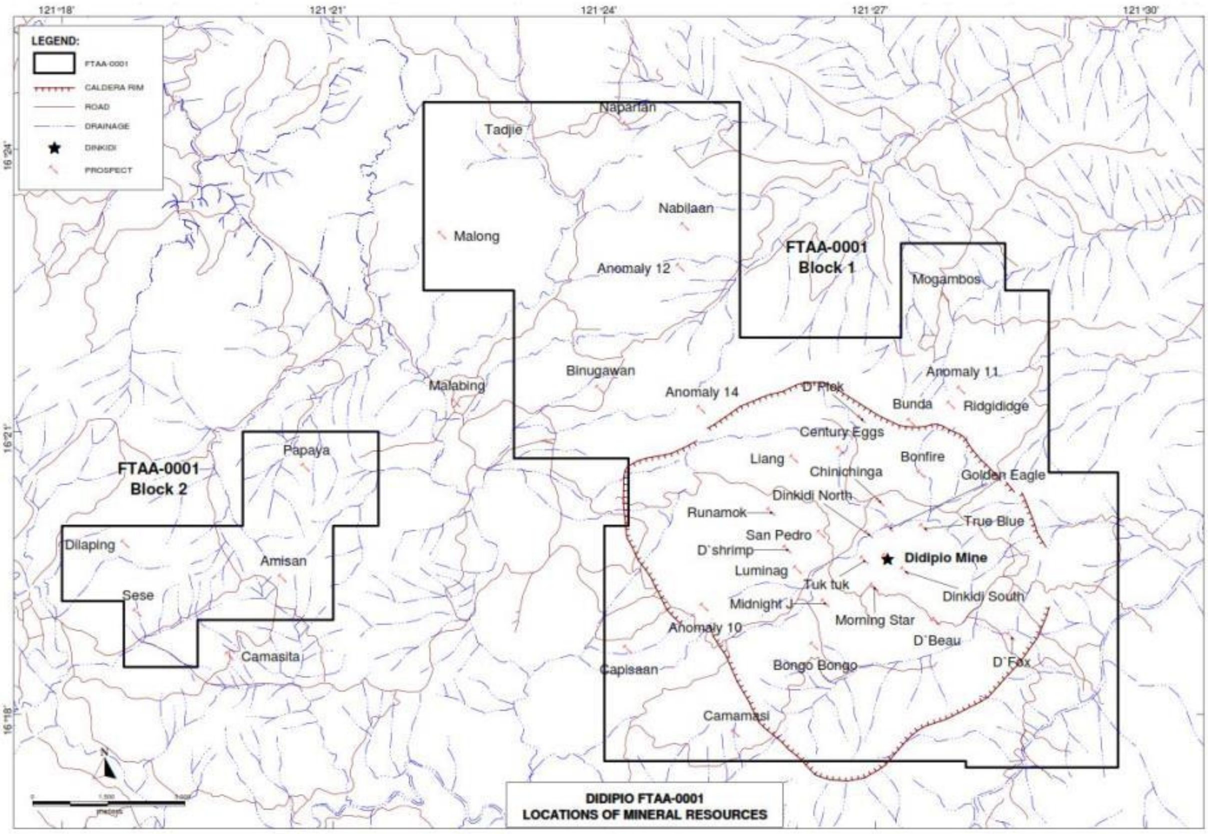


Figure 4-1: FTAA Boundaries

4.5 Surface Rights

The Company has acquired, through voluntary agreements, the surface rights to all the land required for the Project for the foreseeable future. The main route providing access to the Didipio operation is from the north, culminating in a provincial road linking the site to Barangay of Debibi in the Municipality of Cabarroguis. Refer to Section 5.2 for details of road access to the site.

4.6 Didipio Operation Ownership

The ownership structure for the Didipio assets is illustrated in Figure 4-2.

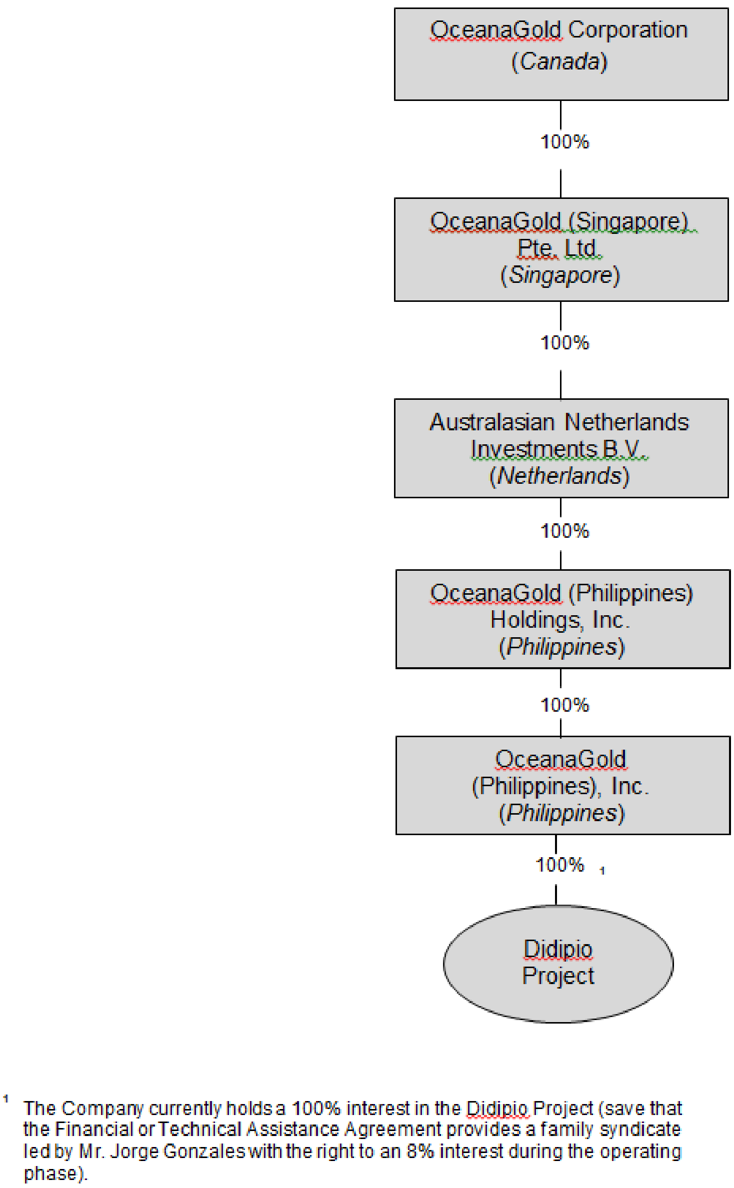


Figure 4-2: Didipio Ownership Structure

OGPI holds the FTAA and PDMF, has the surface rights associated with the mining area and is responsible for the mining, exploration, environmental, social and community relations on the project site.

The open pit mining physical works are undertaken by Delta Earthmoving, Inc. (“Delta”) under a works contract between OGPI and Delta. Delta employs the mining workforce and owns and finances most of the mining fleet and has granted OGPI an option to purchase the fleet at the expiry of the works contract (see Section 19.1). Other site-based contractors operating under works contracts include Orica Philippines, Inc. who own and operate the on-site explosives facility and provide explosives supply and services, SGS Philippines, Inc., who provide laboratory services and Didipio Community Development Corporation, who provide camp administration and catering, among others.

OGPI has developed and owns the process plant, open pit, waste dumps and stockpiles, TSF, power station, water treatment plant and other vital infrastructure, as described more fully in Section 5.5.1.

OGPI is responsible for the sale of all gold, silver and copper (both metal and concentrate) produced from the Didipio operation.

4.7 Government Royalties and Imposts

4.7.1 Government Share under the FTAA

Under the terms of the FTAA, OGPI has up to five years from April 1, 2013 in which to recover its pre-operating expenses and property expenditure from "net revenues" (as referred to below) from the project area. At the end of that period, or following the recovery of such expenses and expenditure, OGPI is required to pay the Government of the Republic of the Philippines 60% of the net revenue earned from the Didipio operation. If such expenses and expenditures are not recovered by the end of such five year period, the Company can allocate the unrecovered portion as a depreciation allowance, deductible from net revenues over the next three years.

For the purposes of the FTAA, "net revenue" is generally the gross mining revenue from commercial production from mining operations, less deduction for, among other items, expenses relating to mining, processing, marketing and mineral exploration, consulting fees, depreciation of capital, and certain specified overheads and interest on loans.

In addition, all taxes paid to the Philippine Government, including excise, customs, sales, corporate taxes (30%) and value added taxes, and the 2% NSR royalty and any distribution made to the holder of the 8% interest (refer to Section 4.8), effectively count towards and are deducted from the 60% of net revenue that is payable to the Government. OGPI also holds an income tax holiday certificate for a period of 6 years from April 2013, which is the commencement date of commercial operations. The Didipio Operation cost model contains appropriate allowances for taxes and other duties.

4.7.2 Contribution to Development of Mining Communities, Sciences and Mining Technology

Under the Mining Act, OGPI is required to make a minimum contribution of 1.5% of its operating costs annually during mining operations for the development of the host and neighbouring communities under the SDMP, advancement of mining technology and geosciences, and development of information, education and communication programme. Of that 1.5%, 75% must be apportioned to the implementation of the SDMP. OGPI's funding of community development programmes to date exceeds the minimum requirements of the Mining Act. Refer to Section 20.5 for a detailed discussion of OGPI's SDMP contributions and commitments.

4.8 Third Party Interests

OGPI has an agreement (known as the "Addendum Agreement") with a Philippine claim owner syndicate (the "syndicate") which covers that portion of the FTAA previously included in a block of mineral claims held by the syndicate (the "area of interest"), including the PDMF area in its entirety. Once certain conditions have been met, the Addendum Agreement provides that the syndicate will be entitled to an 8% interest in the operating vehicle to be established to undertake the management, development, mining and processing of ores, and the marketing of products from the area of interest.

The 8% interest will entitle the syndicate to a proportionate share of any dividends declared from the net profits of the operating vehicle, but not until all costs of exploration and development have been recovered. The syndicate is also entitled to a 2% NSR royalty on production from the area of interest. There is currently a legal proceeding involving the claim owner syndicate and a third party on beneficial ownership of the mining claims.

A 0.6% NSR royalty (which is capped at a cumulative total of AUD$13.5 million) is payable by OceanaGold to the Malaysian Mining Corporation.

4.9 Permits

4.9.1 Permits Required

The Didipio operation holds the permits, certificates, licences and agreements required to conduct its current operations. The more materially significant permits and approvals include:

- FTAA

- Partial Declaration of Mining Feasibility
- Environmental Compliance Certificate: ECC-CO-1112-0022
- Utilization Work Program
- 5-Year Social Development and Management Program
- Permit to Operate the crushing plant/ROM PAD: Permit No. 014-POA-I-0250K-012
- Permit to Operate Power Station: Permit No. 013-POA-D-0250K-009
- Discharge Permit for Sewage Treatment Plant: Permit No. 2014-DP-A-0250-009
- Discharge Permit for Tailings Storage Facility: Permit No. 2014-DP-D-0250-010

OGPI obtains a range of other operating permits (including those for transportation and export of ore concentrate and importation of individual reagents into the Philippines) on an ongoing basis. These and other permits, certificates and licences are issued for various periods and need to be regularly reviewed and where applicable, renewed. The Philippines has an established framework that is well regulated and monitored by the DENR and other regulatory bodies. OGPI has dedicated programmes and personnel involved in monitoring permit compliance and works closely with authorities to promptly address additional requests for information.

4.9.2 ECC

The ECC for the project was originally granted in August, 1999, with subsequent amendments in January 2000 (extension of area), August, 2004 (definition of direct impact zone) and most recently on December 10, 2012 (to accommodate a revised work plan ahead of commencement of commercial production in 2013).

The revised ECC specifies the project mining methods, production rate, processing methods and other aspects of the mining operation. The ECC covers the range of activities required to be undertaken as part of the current operations and any amendments that may be required to the ECC to accommodate changes associated with the recent optimization work are expected to be minor. Refer to Section 20.1.2.1 for details of the activities covered by the ECC.

4.9.3 PDMF and Associated Work Programs

In March 2005, OGPI submitted a PDMF for approval by the DENR. In conjunction with the PDMF, OGPI submitted (among other things) a study for the project as well as the 3-Year Development and Utilization Work Program ("DWP").

The PDMF was approved under an Order of the DENR issued on October 11, 2005, when OGPI was deemed to have satisfied all conditions required for its approval. Subsequent DWPs received approval from the DENR leading up to the commencement of commercial operations on April 2013.

A DWP submitted to the DENR on March 27, 2013 forms the basis for the current operations.

The PDMF is defined as only 'partial' at this time as it applies specifically to the current development zone around the Didipio deposit. Subject to the successful outcome of OGPI's application to extend its rights to explore (see Section 4.3.1), OGPI retains the right to seek further partial declarations of mining feasibility in the future over other deposits in the FTAA area.

4.10 Environmental Liabilities

The revised ECC sets out the applicable environmental management and protection requirements for the Didipio operation.

OGPI submitted, on November 23, 2011, the final version of its Environmental Performance Report and Management Plan in support of the approval of the revised ECC ahead of commencement of operations. OGPI also submitted an EPEP following the revision to the ECC in 2012. The EPEP is currently being reviewed by the Mine Rehabilitation Fund Committee. In the meantime, OGPI has implemented the approved Annual EPEP for 2013, and the Annual EPEP for 2014. OGPI likewise has submitted a draft Final Mine Rehabilitation and Decommissioning Plan, which awaits approval.

The Mining Act and its Implementing Rules and Regulations mandate the setting up of a CLRF in the form of the Mine Rehabilitation Fund ("MRF"), Mine Waste and Tailings Fees ("MWT") and Final Mine Rehabilitation and Decommissioning Fund ("FMRDF"). Prior to operations, OGPI established the required Rehabilitation Cash Fund, Monitoring Trust Fund and Environmental Trust Fund, forming part of the MRF. OGPI likewise pays the mandated MWT for mine wastes.

The Didipio operation is being closely monitored by the Mine Rehabilitation Fund Committee and its Multipartite Monitoring Team.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Topography, Elevation and Vegetation

The Didipio operation is located approximately 270km NNE of Manila in the southern part of the Mamparang mountain range adjacent to the border of Nueva Vizcaya and Quirino Provinces (Figure 5-1 and Figure 5-2).

The project area is located within the southern part of the Cagayan Valley basin in north-eastern Luzon, the Philippines. The area is bounded on the east by the Sierra Madre Range, on the west by the Luzon Central Cordillera range and on the south by the Caraballo Mountains. The regional geology comprises late Miocene volcanics, volcaniclastics, intrusives and sedimentary rocks overlying a basement complex of pre-Tertiary tonalites and schists. This geology is indicative of an island arc depositional and tectonic setting.

The geomorphology of the project area is diverse. The project can be generally subdivided into at least six geomorphic units: ridges-and-spurs, escarpment zones, hills-and-slopes, valley-and-gully sides, infilled valley bottom and mass movement zones. Infilled valley bottoms occur as narrow strips of low and flat-lying areas within the project area. These areas occupy the main Didipio Valley. Morphological associations include the floodplain and terraces along the Didipio River.

The valley floor near the project centre is at 690-700m above sea level with the surrounding ridge-lines rising another 150-200m above this.

In the project area, three segments of existing vegetative cover have been identified, and consist of:

- Grassland, which covers both primary and secondary impact areas;
- Brushland (riparian), which is located within the primary impact site; and
- Low-density forest, which is located within the secondary impact area.

Development of the operation has involved partial clearance of some vegetative cover, comprising the clearance and covering or inundation of trees, brush and scrub. All removal of trees has been subject to appropriate clearance permits, which ensure that any trees of harvestable size are harvested in accordance with regulatory requirements.

5.2 Accessibility

There are two alternative routes connecting the Didipio site by road to the port facilities at Manila (the destination port for inwards transit of bulk goods and reagents) and Poro Point, La Union (the departure port for ore concentrate). The main route, approaching from the North via Cabarroguis, is an all-weather route suitable for heavy trucks and bulk freight. The secondary access, approaching from the South via Kasibu, is also an all-weather route and is suitable for smaller trucks and light vehicles.

The main access to the Didipio operation is via Cabarroguis. From Manila, the Maharlika Highway/Pan-Philippine Highway leads North to San Jose. From the port facility at Poro Point, La Union, the MacArthur Highway leads South and meets the Maharlika Highway at San Jose, where the routes from both ports converge. The Maharlika Highway continues North to Bayombong then Cordon and from there a concrete sealed road leads South to Debibi in Cabarroguis. From Debibi, there is a 22 kilometre gravel all-weather road passing across a concrete bridge over the Debibi River to the mine site. OGPI has committed to fund the concreting of certain portions of the all-weather provincial road, in coordination with the barangays and local government units. To date, around 14% of the 22 kilometre road has been completely concreted. In addition, OGPI agreed to the concreting of another road passing thru another barangay in the province of Quirino. The current status of this road is all weather, with certain sections concreted, and sufficient for two way traffic (both light and heavy vehicles).

From Manila, access by road via Cabarroguis generally takes approximately 10 hours. From the port facility at Poro Point, La Union to the mine site and back, the travelling time is generally approximately 26 hours.

A secondary access connects the site by an all-weather gravel road to Kasibu, which is in turn connected by concrete road to the Pan-Philippine Highway at Bambang. From Bambang, the routes to the port facilities at Manila and Poro Point, La Union via the Maharlika Highway/ Pan-Philippine Highway are the same as those described above, travelling south from Bayombong.

5.2.1 Air Access

Commercial air services operate four days per week between Manila and Cauayan (about 100km and 3 hours' travelling time from the Didipio site by road). The total travel time to site from Manila by road and air is approximately 7½ hours.

5.3 Proximity to Population Centres

The Didipio operation lies approximately 35km to the ESE of the municipality of Bayombong, near the heart of Northern Luzon (Figure 5-1). The FTAA straddles a provincial boundary, with part of the property located within the Municipality of Kasibu, Province of Nueva Vizcaya and part within the Municipality of Cabarroguis, Province of Quirino (Figure 4-1).

Figure 5-1: Location Map

The provinces of Nueva Vizcaya and Quirino have total populations of approximately 421,355 and 176,786 people respectively (2010 Census). Nueva Vizcaya is subdivided into a total of 15 municipalities, of which Bayombong (population 57,416 in the 2010 Census) is the provincial capital and Bambang and Solano are the major commercial centers. Quirino has 6 municipalities and Cabarroguis is its capital.

The municipality of Kasibu is subdivided into 30 Barangays, with a mix of rural and built up areas. Seven (7) of these Barangays have been identified as the hosting the neighbouring barangays of the Didipio operation for the purposes of SDMP funding. Kasibu has a total population of approximately 33,379 people (2010 Census) and a local economy dominated by agriculture. Didipio is amongst the largest of the Barangays within Kasibu municipality.

Cabarroguis the capital municipality of Quirino and has a population of 29,395 people (2010 Census). It comprises 17 Barangays in total. Of these, 3 have been identified as neighbouring barangays of the Didipio operation for the purposes of SDMP funding, with a total recorded population of 6,388 as of March 2014 (Data from the Municipal Nutrition Office, Cabarroguis, Quirino).

The nearest significant town to the Didipio operation is Cabarroguis, located approximately 20km to the north and connected by paved road to Bayombong to the west. The nearest major population centre to the Didipio site is the City of Santiago (population 132,804 in the 2010 Census). The City of Santiago is located about 2 hours by road from the site.

5.4 Climate

Didipio is located in Nueva Vizcaya on the eastern side of Luzon and is classified under the Type III Modified Corona's Classification. Type III climate typically has no pronounced maximum rainfall period with a dry season only from one to three months, usually during the period from December to February or from March to May. Figure 5-2 shows the location of Didipio within the Modified Corona's Classification.

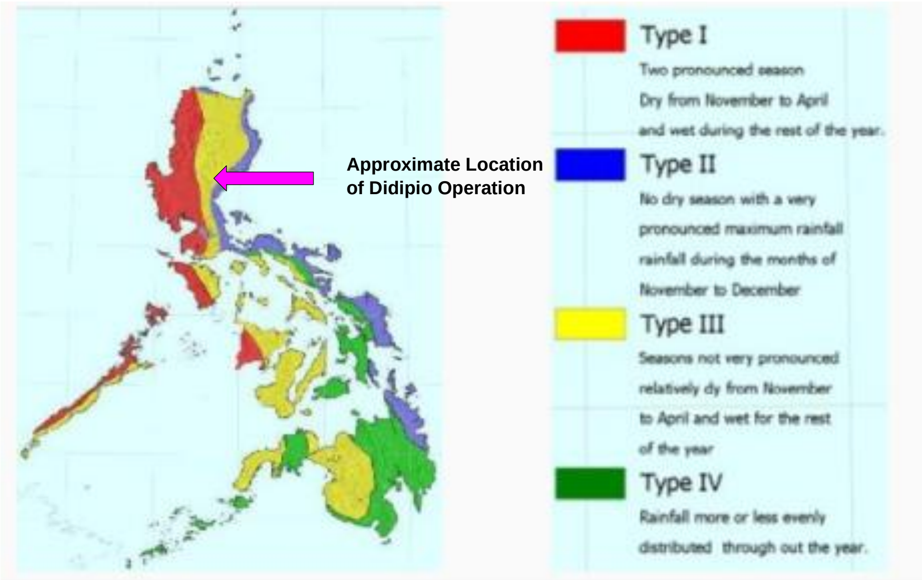


Figure 5-2: Modified Corona's Classification of the Philippines

At the Didipio operation site, rainfall has been monitored daily since May 1989. The mean annual number of rainfall days at the site is 226 and the mean annual rainfall is 3,201mm. Consistent with the Type III Modified Corona's Classification, the mine site area experiences a tropical climate consisting of three main seasons: the south-west monsoon season in June-September; the north-west monsoon in October-January; and a transition period in February-May. Didipio receives most of its rainfall during the monsoon seasons. The wettest months are normally September and November and the driest month is normally March (Figure 5-3).

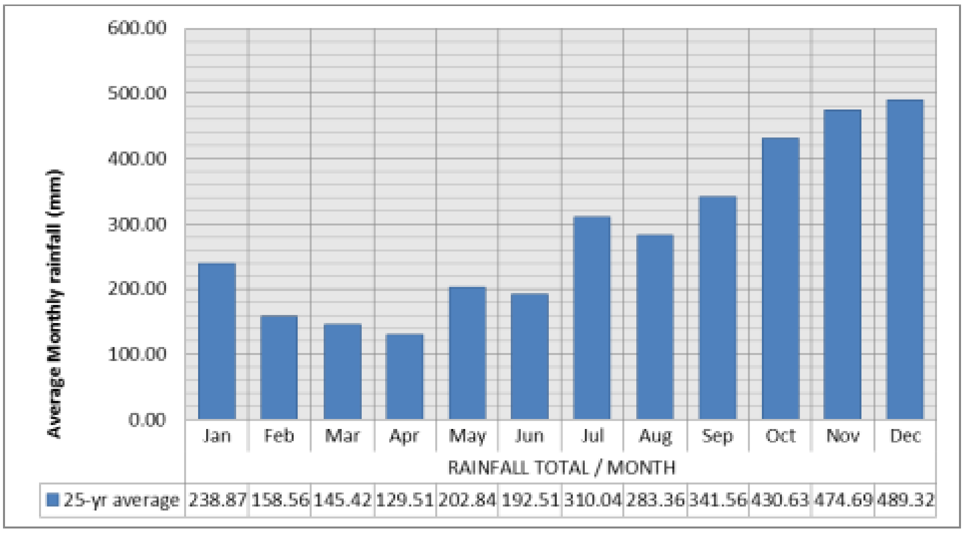


Figure 5-3: Average monthly rainfall for Didipio (mm)

The maritime setting of the Philippines results in relatively small temperature ranges being experienced. Based on the temperature monitoring data from 2012 to present at site, the mean annual temperature at the project site is 22.8ºC. The hottest months were May 2012 and July 2014, and the coldest month was January 2014.

Luzon Island's setting combined with its high rainfall, results in high humidity levels. The average annual humidity is 80.9% and nearly all regional weather stations report a relative humidity in excess of 70% on a monthly basis. A large majority of these stations report a relative humidity of greater than 80% for more than eight months of the year.

The prevailing winds tend to conform to the dominant seasonal air streams. Consequently, north-east winds are associated with the north-east monsoon season. Local topography and diurnal effects do, however, influence this general trend to some extent. The average annual wind speed is 3.75m/s.

The Didipio region is subject to the effects of an average of two tropical typhoons a year, which, together with topographical effects, can greatly influence wind speeds and contribute to the high annual rainfall. In such instances, wind speeds can exceed 50m/s and may reach as much as 75m/s. The average wind speed over such surge periods normally exceeds 38m/s.

The Didipio operation has experienced 3 typhoons since commercial operations commenced in April 2013. The effect on operations has been minimal. OGPI monitors typhoon and tropical storm development and progress, and has developed emergency planning to protect personnel and equipment in the event of a typhoon impacting the site.

5.5 Local Resources and Infrastructure

5.5.1 Site Infrastructure and Surface Rights

Figure 5-4 presents the general site layout of the Didipio operation, showing the main items of infrastructure associated with the current operations and planned infrastructure, including that associated with the changes identified in the recent optimization review. The infrastructure includes:

- A 69ha (approximately) open pit (final design surface disturbance) - the optimization is expected to result in a reduced footprint for the excavation of the pit and a similar area of disturbance, including contouring around the margins of the pit;
- A 3.5 Mtpa capacity processing plant;
- A diesel-powered power station and switchyard;
- A TSF – tailings storage requirements are expected to reduce with the recent optimization of the mining plan (see Section 18.10.2);
- A waste dump – the recent optimization has resulted in a reduction in the volume of waste rock generated (see Section 18.6);
- Workforce accommodation compounds;
- A water treatment plant;
- Plant sediment ponds and other waste water storage ponds;
- Warehousing, workshops, offices, cribrooms;
- Fuel farm, paste plant, emulsion plant;
- Site roads and bridges; and
- Armoured river diversion channel (to be constructed in the later stages of open pit excavation).

The infrastructure is described in detail in Section 18 of this report. OGPI has acquired surface rights over all of the land on which the current and planned site infrastructure is located.

Figure 5-4: General site plan

5.5.2 Water

The daily water demand for the Didipio operation at 3.5 Mtpa is approximately 20,000m^3, of which the majority is recycled water for the process plant, sourced from decant water from the thickeners and the tailings pond. Any fresh makeup water is sourced from two deep bores located at the perimeter of the open pit mine. These bores serve to depressurize the pit wall to improve the wall stability as well as providing a source of fresh water. Potable water treatment plants in the processing plant and camp supply all water requirements.

A water discharge permit (Permit No. 2014-DP-D-0250-010) for the TSF is currently held to allow discharge of up to 67,462.8m^3 per day from the tailings storage facility. A water treatment plant with capacity to process 48,000m^3 per day ensures OGPI meets the required discharge standards. In the event of a storm in excess of the combined capacity of the decant system, the water treatment plant and available storage capacity in the TSF, clean decant water from the TSF can be discharged via a spillway. Refer to Section 20.3.1 of this report.

5.5.3 Power Supply

Currently all of the Didipio operation's power requirements are self-generated on site by an OGPI owned power station consisting of fourteen diesel powered generator sets supplying a maximum of 16 MW of power to site, for which OGPI holds a permit to operate: Permit No. 013-POA-D-0250K-009. The peak demand is currently around 11 MW for the entire site. As the operations ramp up to 3.5 Mtpa, this is expected to increase to 18MW.

A small supply overhead line connects Didipio Valley to reticulated power. In 2013, a study was undertaken to assess the practicality of bringing power from the national grid as an alternative source of power. In September 2014, OGPI entered into agreements with Nueva Vizcaya Electric Cooperative ("NUVELCO") for the construction of a 69kV high voltage line to connect the mine site to NUVELCO's existing 69 kV high voltage line at Bambang, Nueva Vizcaya; and subsequently, a 69 kV line to National Grid Corporation of the Philippines' transmission system at Bayombong, Nueva Vizcaya, that will connect the mine site to the Luzon Grid. OGPI is in discussions with San Miguel Consolidated Power Corporation and San Miguel Energy Corporation for the supply of electricity following the commissioning of the power line.

5.5.4 Sewage

Sewage from locations around the Didipio operations site is piped or transferred to a site-based sewage treatment plant for which OGPI holds a Discharge Permit: No. 2014-DP-A-0250-009. This permit allows the current discharge of wastewater not exceeding a flow rate of 5.23m^3 per day.

5.5.5 Refuse Disposal

As part of the Company's commitment to comply with its ECC, OGPI is implementing best practice in waste management. Refuse wastes are currently disposed in a temporary waste disposal pit near the TSF while awaiting construction of category II type sanitary landfill. Recyclable wastes are collected in a Material Recovery Facility operated by a contractor and sold to recyclers. Scrap metals generated in the operation are collected at a metal scrap yard and sold to scrap buyers. Waste oils and lubricants are recovered and disposed of at a registered waste treatment or disposal facility in accordance with Philippines Government requirements.

5.5.6 Port Facilities

The Port of Manila (372km from the Didipio site) is the destination port for inwards transit of bulk goods and reagents, while the existing copper concentrate storage and shipment facilities at Poro Point, La Union (356km from the Didipio site) are the departure port for the shipment of ore concentrate (see Section 5.2 of this report for descriptions of the routes between these ports and the site).

5.5.7 Personnel

During construction, the total complement of contractors and employees was 2,200 people. During the commissioning phase, leading up to and in the period immediately following commencement of commercial production in April 2013 there were approximately 1,900 employees and contractors employed by the project. This number has reduced to 1,295 employees directly employed by OGPI and its main contractors (1,927 including second tier contractors) at the end of September 2014. The number of direct OGPI employees stood at 538 at the end of September 2014.

Under the FTAA, OGPI is committed to target 100% employment of Filipinos in unskilled, skilled and clerical positions and 60% employment of Filipinos in professional and management positions. Long-term contractors servicing the project are required to follow a similar employment policy.

Where possible, recruitment for the Didipio operation, particularly of mining and processing plant personnel, is from the local area. The Didipio operation sources the majority of its employees from the provinces of Nueva Vizcaya and Quirino. Positions requiring skills and experience not available locally are filled from the remainder of the Philippines. There are a small number of highly skilled and experienced expatriate employees present at the Didipio operation. These expatriates actively mentor and assist in the skill development of OGPI's Filipino employees. At the end of September 2014, OGPI employed approximately 33 expatriates, consistent with the requirements of the FTAA.

5.5.8 Accommodation

A site-based camp offering single-status accommodation is provided for all personnel recruited from outside the Didipio region. The camp includes both permanent and temporary operational accommodation in a mix of self-contained one-bedroom apartments, single bedrooms with ensuites or shared ensuites and barracks-style accommodation with a shared ablutions block.

Other buildings/facilities within the accommodation camp include:

- Kitchen and mess hall;
- Clinic;
- Accommodation camp laundry and linen storage;
- Recreation room;
- Camp office;
- Sewage treatment plant;
- Emergency generators; and
- Guard house.

The camp is operated by a local contractor, the Didipio Community Development Corporation, whose role includes providing meals, cleaning duties for the camp and mine site buildings, laundry services, provision of linen, cutlery and shuttle services for employees.

5.5.9 Communications

Satellite and terrestrial services provide telephone and data communications to the Didipio operation. Mobile telephone coverage is available throughout the majority of the mining area.

A multi-channel radio network is utilised for operations communication within the mine and process plant.

In conjunction with the planned connection of the Didipio site to the national power grid in 2015, a fibre optic link will be established giving enhanced communications.

6 HISTORY

6.1 Prior ownership

The Didipio area was first recognised as a gold province in the 1970s, when alluvial gold deposits were discovered there. There followed a succession of owners undertaking exploration activities in the region. Prior to the Didipio operation, there has been no large scale mining in the Didipio region and, while artisanal miners have been active in the area, there are no records of production.

Since the discovery of alluvial gold in the 1970s, the Didipio area has been held by a succession of claim holders:

- In May 1975, Victoria Consolidated Resources Corporation and Fil-Am Resources Inc. entered into an exploration agreement with a syndicate of claim owners who had title to an area covering the Didipio valley and undertook exploration activities, including a stream geochemistry programme, between 1975 and 1977.
- In April 1985, the property area was explored (with work including geological mapping, panning of stream-bed sediments and ridge and spur soil sampling) by a consultant geologist engaged by local claim owner Jorge Gonzales.
- Geophilippines Inc. investigated the Didipio area in September 1987 and made mining lease applications in November 1987.
- In 1989, Cyprus Philippines Corporation (“Cyprus”) and subsequently Arimco NL (as Arimco Mining Corporation in the Philippines (“Arimco MC”)) entered into an agreement with Geophilippines Inc. and the local claim owner, Jorge Gonzales, to explore the Didipio area, undertaking an exploration programme between April 1989 and December 1991.
- In 1992, Climax acquired control of Armico MC (renamed Climax-Arimco Mining Corporation (“CAMC”)) and the entire Cyprus-Arimco NL interest in the Didipio Project. The FTAA was executed in 1994 and was subsequently assigned from CAMC to Australasian Philippines Mining Incorporated (“APMI”), a subsidiary of Climax, in 2004.
- Following the merger of Climax and OceanaGold in 2006, APMI became OceanaGold (Philippines) Inc., a wholly owned subsidiary of OceanaGold Corporation.

6.2 Previous Work

Indigenous miners from Ifugao Province first discovered alluvial gold deposits in the Didipio region in the 1970s. Gold was mined either by the excavation of tunnels following high-grade quartz-sulphide veins associated with altered dioritic intrusive rocks, or by hydraulicing in softer, clay-altered zones. Gold was also recovered by panning and sluicing gravel deposits in nearby rivers, and small-scale alluvial mining still takes place. No indications of the amount of gold recovered have been recorded.

Since 1975, exploration work carried out in the area has been managed by the following:

- From 1975 to 1977, Victoria Consolidated Resources Corporation (“VCRC”) and Fil-Am Resources Inc undertook a stream geochemistry programme, collecting 1,204 panned concentrates samples that were assayed for gold, copper, lead and zinc. A large area of hydrothermal alteration was mapped, but, although nine drill holes were planned to test it, no drilling eventuated. Despite recognition of an altered diorite intrusive (the Didipio Gold-Copper Deposit), no further work was undertaken.
- Marcopper Mining Corporation investigated the region in 1984, followed in April 1985 by a consultant geologist (E P Deloso) who was engaged by local claim owner Jorge Gonzales. Work by Deloso included geological mapping, panning of stream-bed sediments and ridge and spur soil sampling. Deloso described the Didipio Gold-Copper Deposit as a protruding ridge of diorite with mineralised quartz veinlets within a vertically dipping breccia pipe containing a potential resource. The resource is not compliant with CIM guidelines and is therefore not quoted.

- Benguet Corporation examined the Didipio area in September 1985 and evaluated the bulk gold potential of the diorite intrusion. Work included grab and channel sampling of mineralised outcrops, with sample gold grades ranging up to 12 g/t Au and copper averaging 0.14% Cu. It was concluded that the economic potential of the diorite intrusion depended on the intensity of quartz veining and the presence of a clay-quartz-pyrite stockwork at depth.
- Geophilippines Inc investigated the Didipio area in September 1987 and carried out mapping, gridding, rockchip and channel sampling over the diorite ridge. In November 1987, Geophilippines Inc commissioned the DENR, Region 1, to undertake a geological investigation of the region in conjunction with mining lease applications.
- Between April 1989 and December 1991 Cyprus and then AMC carried out an exploration programme that included the drilling of 16 diamond core holes into the Didipio Ridge deposit. This work outlined potential for a significant deposit.
- From 1992, Climax exploration work concentrated on the Didipio Gold-Copper Deposit, although concurrent regional reconnaissance, geological, geophysical and geochemical programmes delineated other gold and copper anomalies in favourable geological settings within the Didipio area. Diamond drilling and other detailed geological investigations continued in the Didipio operation area and elsewhere in the Didipio region through 1993, and were coupled with a preliminary Environmental Impact Study ("EIS") and geotechnical and water management investigations. These works, producing 21 diamond drill holes for a total of 7,480m of drilling, formed the basis for a preliminary resource estimate (not quoted as it is not compliant with CIM) and commencement of a Project Development Study (“PDS”) by Minproc Limited in January 1994.
- Additional diamond drilling was completed at the Didipio operation as part of the PDS, providing a database of 59 drill holes within the deposit. A model of the deposit was developed and a resource estimate made (not quoted as it is not compliant with CIM guidelines). The work identified the key parameters for potential project development, which included the likelihood of underground block caving for ore extraction. The economics of this scenario were dependent in part on the delineation of a central core of higher-grade gold and copper mineralisation, but drill intersections in this area were too widely spaced to confirm geological and grade continuity for measured resource category.
- A programme of 17 additional diamond drill holes was undertaken to provide closer spaced sampling data primarily within an area lying above the 2400mRL. This programme was completed in June 1997, with all drill core assays received by early August 1997. These data formed the basis for a study completed by Minproc Limited in 1998.
- By the time the FTAA was assigned to APMI in 2004, CAMC had drilled 94 drill holes into the Didipio gold-copper deposit for a total of 35,653m of drilling.

6.3 Historical Estimates

Several resource estimates have been made since 1985. The chronology of these is presented below. None of the resource estimates are quoted as they do not adhere to the CIM guidelines. No work is proposed to upgrade or verify the historical estimates.

- Work by Deloso in April 1985 suggested a potential resource.
- In September 1985, Benguet Corporation estimated the total resource potential.
- In December 1993, Climax produced an estimate based on available data including the first 21 diamond drill holes; interpolation method was inverse distance squared into 25 x 25 x 25m blocks.
- Snowden Associates produced a resource estimate in 1995 using additional drill holes (up to hole DDDH65). This model effectively used a 3g/t AuEq interpretation and wire-framing of the high grade core of mineralisation. Interpolation was by indicator kriging into 15x15x15m blocks and classification was based on search radii and number of samples.
- The Minproc Limited DFS estimate used all 79 holes (up to hole DDDH83) plus the data for nine surface trenches. The stockwork and high grade core were modelled separately and grades were interpolated using ordinary or indicator kriging (with grade top cutting) into 15 x 15 x 15m blocks.

6.4 Previous Production

There was no large-scale mining at Didipio prior to the Didipio operation and there are no records of production by artisanal miners.

7 GEOLOGICAL SETTING AND MINERALISATION

The project area is situated within the southern part of the meridional Cagayan Valley basin in north-eastern Luzon and is bounded on the east by the Sierra Madre Range, on the west by the Luzon Central Cordillera range and to the south by the Caraballo Mountains. The regional geology comprises late Miocene volcanic, volcaniclastic, intrusive and sedimentary rocks overlying a basement complex of pre-Tertiary age tonalite and schist (Figure 7-1), which have been interpreted to represent an island arc depositional and tectonic setting.

The basal sequence of the Caraballo Group is of Cretaceous to Eocene age and comprises andesitic pyroclastics, andesitic lavas and basaltic tuffs with inter-layered beds of sandstone, shale and tuff. The Caraballo Group includes the Alimit Volcanics and is intruded by tonalites, diorites, quartz diorites and gabbros of the Coastal Batholith (27 to 49 Ma) and the Dupax Batholith (26 to 33 Ma).

The Caraballo Group is unconformably overlain by the Mamparang Formation of the Oligocene age, comprising andesitic and basaltic lavas and volcaniclastic rocks ('Dark Diorite'). This was intruded by various alkalic plutonic rocks including syenite, monzonite and a variety of K-feldspar-rich igneous rocks that comprise the Palali Batholith (17 to 25 Ma). This batholith includes intrusive rocks found in the Didipio area (Didipio Igneous Complex).

Unconformably overlying the Caraballo Group and Mamparang Formation, the Palali Formation comprises basaltic and andesitic lavas, mudstones, sandstones and dacitic pyroclastics of early to middle Miocene age.

Regionally, the volcanic and sediments are folded about meridional anticlinal and synclinal axes and are cut by prominent, steeply dipping, north-west and north-trending faults sub-parallel to the major Philippine Fault zone (Figure 7-1 and Figure 7-2). A set of later, steeply north dipping, east-north-east-trending faults are associated with the batholitic intrusions.

Recent geological mapping in the Didipio region has been interpreted to indicate the Didipio Gold-Copper Deposit is hosted within the multiphase Didipio Stock, which is in turn part of a larger alkalic intrusive body, the Didipio Igneous Complex. The Didipio Igneous Complex consists of:

1. An early composite clinopyroxene-gabbro-diorite-monzodiorite pluton that comprises medium-grained, clinopyroxene-biotite rich microdiorites and monzodiorites of the dark diorite (pre-mineralisation);
2. The Surong clinopyroxene to biotite monzonite pluton. Breccia textures on the margins of the Surong pluton are interpreted to indicate that the Surong monzonite intruded into the Dark Diorite. The Didipio area lies within a circular physiographic feature, approximately six to eight kilometres in diameter. The Pimadek Porphyry (latite porphyry) occupies the topographic highs of the Didipio circular feature and is characterised by coarse K-feldspar phenocrysts (<20mm to 30mm) in a pale grey-green feldspathic groundmass. Pyroclastic deposits (ignimbrites, autobreccias) recognised in the area suggest that the Pimadek Porphyry could represent both the feeder dyke and extrusive product of an intra-caldera ignimbrite;
3. The Au-Cu mineralised Didipio Stock; and
4. Post-mineralisation andesite dykes.

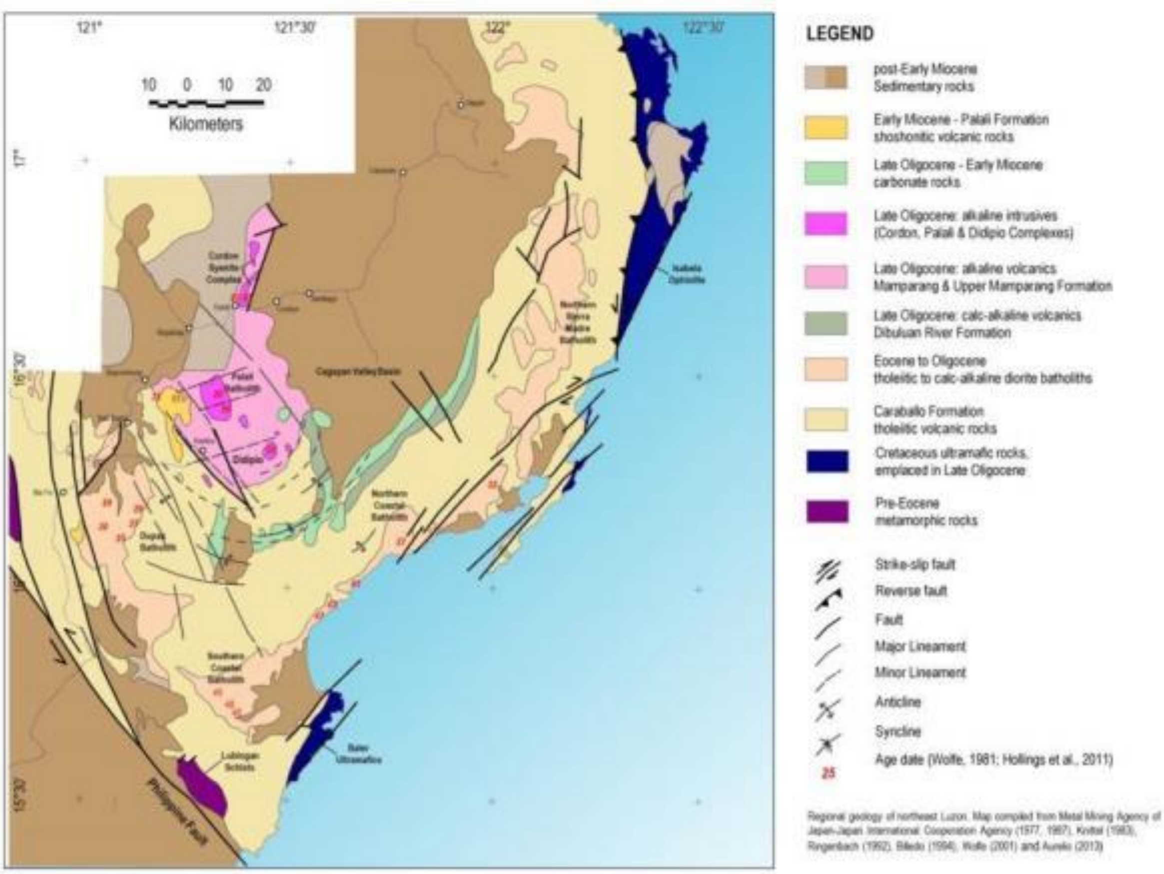


Figure 7-1: Northern Luzon – Major Geological Subdivisions and Structural Elements

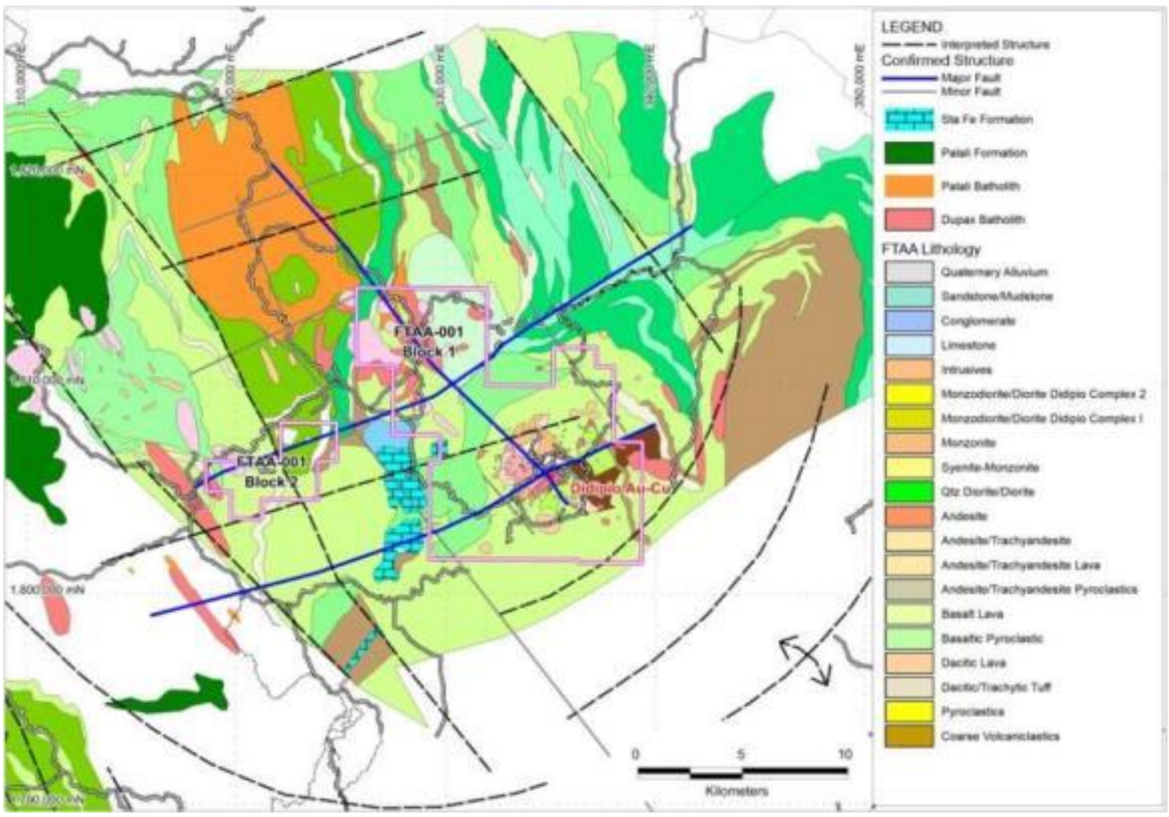


Figure 7-2: Regional Geology

7.1 Deposit Geology

The Didipio Project has been identified as an alkalic gold-copper porphyry system, roughly elliptical in shape at surface (480m long by 180m wide) and with a vertical pipe-like geometry that extends to at least 800m below the surface.

The local geology comprises north-northwest trending, steeply (80° to 85°) east-dipping composite monzodiorite intrusive, in contact with volcaniclastics of the Mamparang Formation (Figure 7-3). The monzodiorite lies in a circular topographic depression that is coincident with a circular IP anomaly.

The area is cross-cut by a north-northwest trending regional magnetic lineament, which is possibly a geophysical expression of major strike-slip faulting. North to northwest trending strike-slip faults in the Luzon Cordillera area have been recognised as major controls on the emplacement and elongation of porphyry deposits (Sillitoe and Gappe, 1984) and a similar structural control may have been important in the Didipio area.

Porphyry-style mineralisation is closely associated with a zone of K-feldspar alteration within a small composite porphyritic monzonite stock intruded into the main body of diorite (Dark Diorite). The extent of alteration is broadly marked by a prominent topographic feature (the Didipio Ridge) some 400m long and rising steeply to about 100m above an area of river flats and undulating ground.

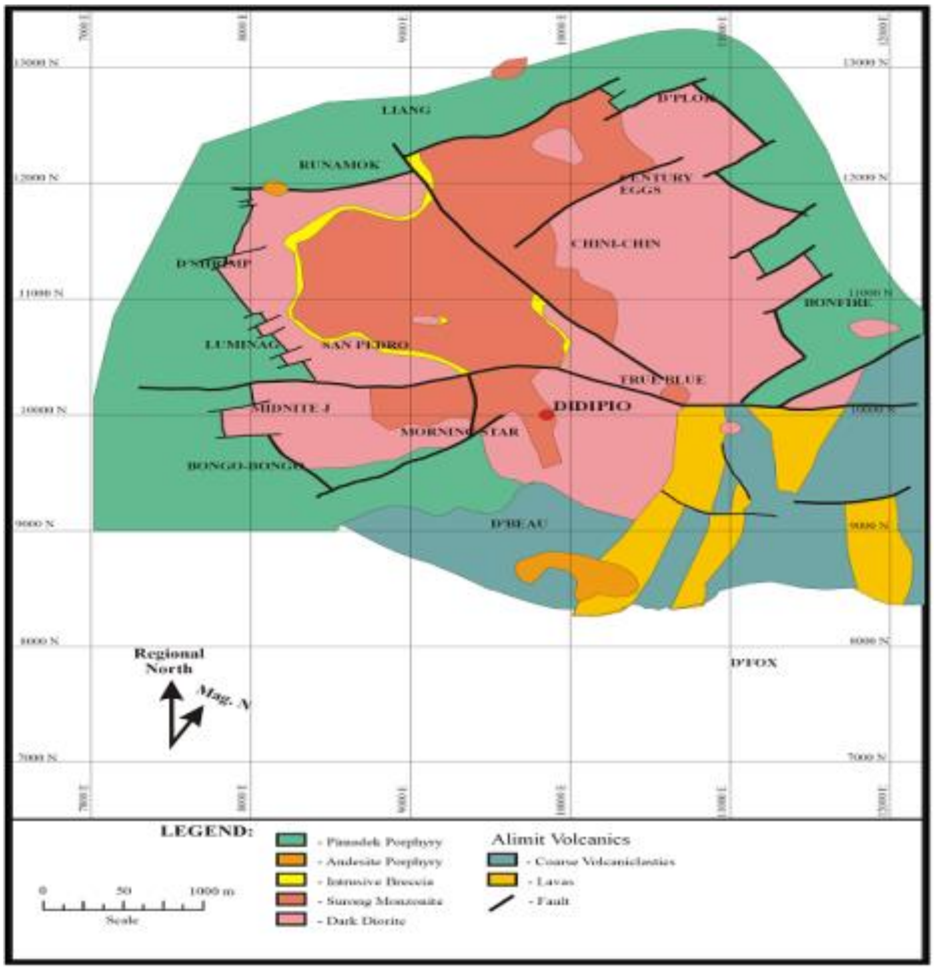


Figure 7-3: Local Geology

7.2 Didipio Operation Deposit Mineralisation

Chalcopyrite, gold and silver (electrum) are the main economic minerals in the deposit. Chalcopyrite occurs as fine-grained disseminations, aggregates, fracture fillings and veins.

Fine grained gold occurs as micro-inclusions in sulphides, as well as free gold, electrum and telluride. No coarse gold has been observed.

Chalcopyrite can replace magnetite and is, in turn, replaced by bornite. Bornite occurs as alteration rims around and along fractures within chalcopyrite grains.

7.3 Surface Oxidation

The deposit is oxidised from the surface to a depth of between 15m and 60m, averaging 30m. The oxide zone forms a blanket over the top of the deposit and largely comprises silicification, clay and carbonate minerals, accompanied by secondary copper minerals including malachite and chrysocolla.

Most of the oxide and transitional mineralisation has been mined since mining commenced in August 2012.

7.4 Lithology

The Didipio Gold-Copper Deposit is hosted by a series of hydrothermally altered and structurally controlled Miocene intrusives, which were emplaced along the regional Tatts Fault structure. Mineralisation is predominantly hosted by the Tunja Monzonite, which intrudes the Dark Diorite. Significant mineralisation also occurs in the surrounding Dark Diorite units immediate to the Tunja. The core of the Tunja is intruded by the Quan Monzonite porphyry, which is spatially related to the higher-grade mineralised zones (Figure 7-4 and Figure 7-5). The relationship of the Quan and a deeper intrusive, termed the Bufu, is uncertain, as Quan/Bufu contacts are both graduated and faulted in places.

The north-western end of the deposit is truncated by the Biak Shear.

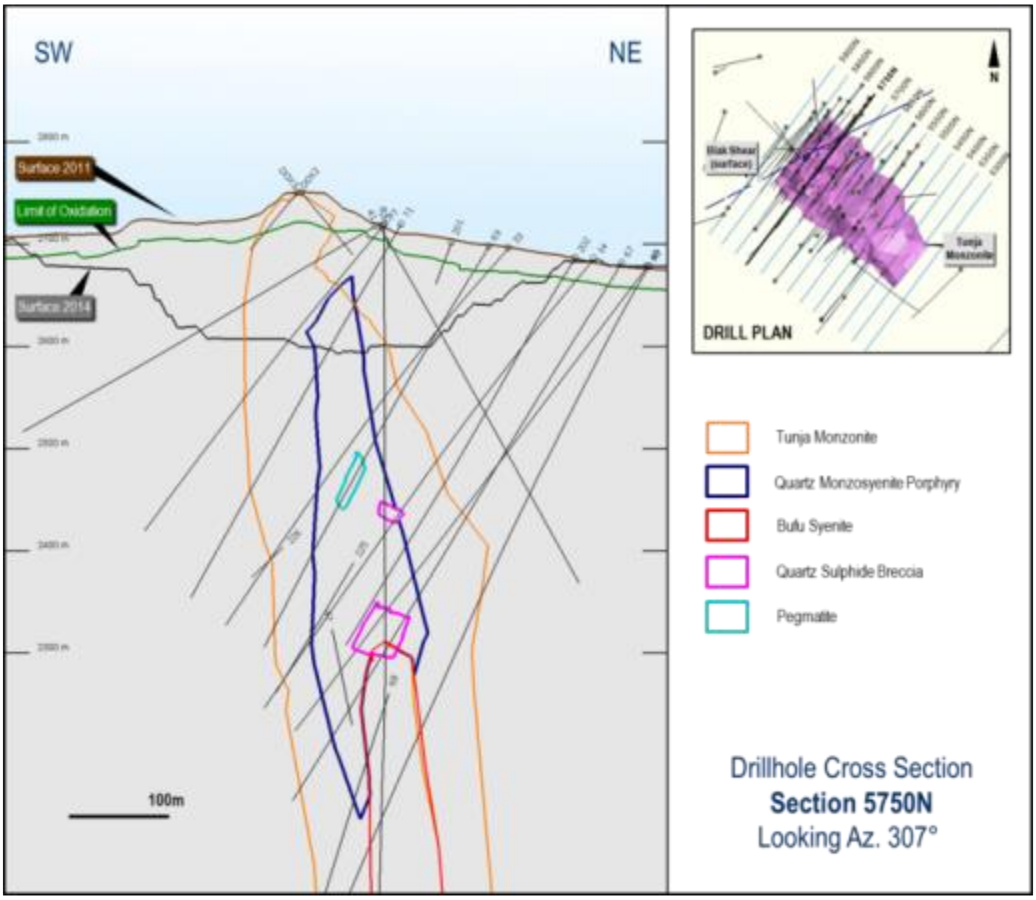


Figure 7-4: Didipio Operation Geology Section as of September 30, 2014

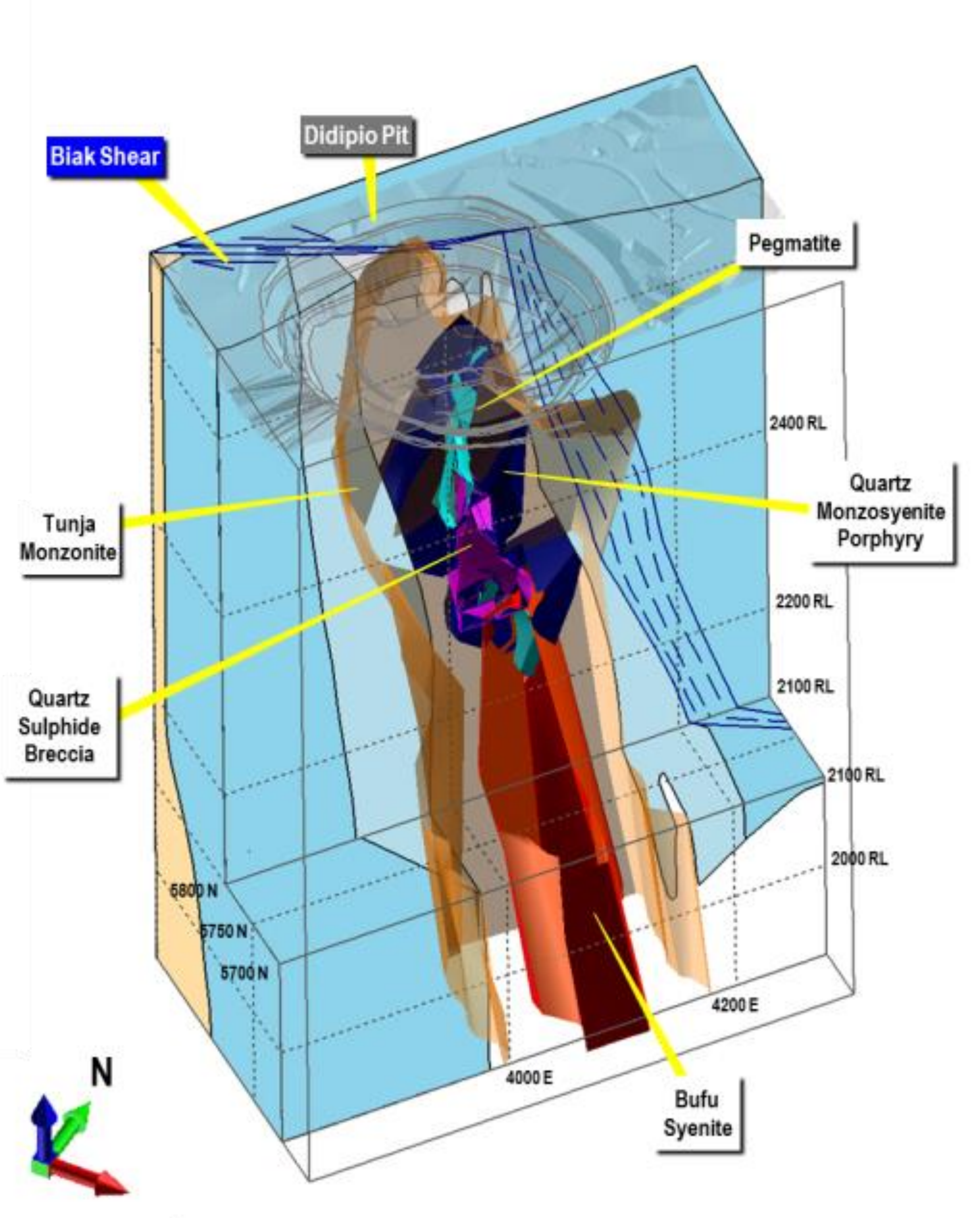


Figure 7-5: Didipio Operation Geology Cut Out as of September 30, 2014

7.5 Dark Diorite

The Dark Diorite is a grey-black medium-grain equigranular to weakly plagioclase and clinopyroxene-phyric clinopyroxene-diorite (Figure 7-6).

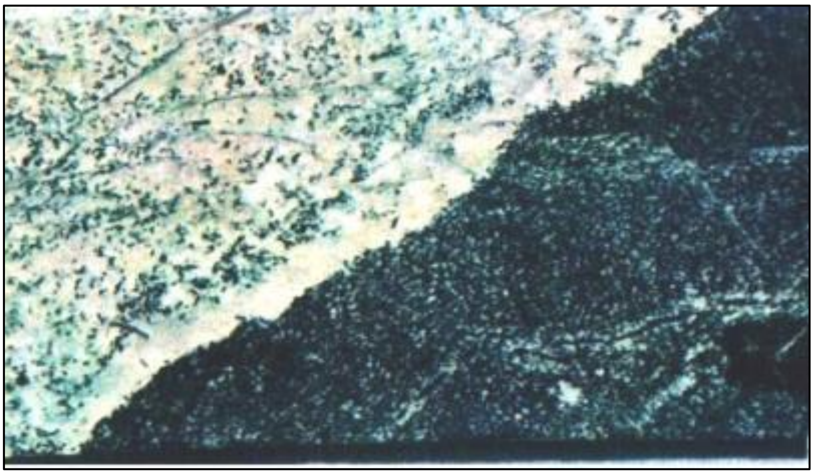


Figure 7-6: Sharp Intrusive Contact Tunja (left) and Dark Diorite

7.5.1 Tunja Monzonite

The Tunja Monzonite stock intrudes the Dark Diorite. Monzonite dykes penetrate into the surrounding Dark Diorite for over 100m.

The Tunja stock comprises a white to pale pink-grey medium to coarse-grained holocrystalline plagioclase-phyric biotite-monzonite. Euhedral plagioclase prisms are set in a very coarse granular mosaic of primary anhedral K-feldspar. Interstitial sites that once held primary biotite account for approximately 10% of the volume (Wolfe, 1996).

7.5.2 Quan

The Quan is a porphyritic monzosyenite that intrudes the Tunja. In the upper parts of the deposit, sharp intrusive contacts are evident, but at depth the contacts are masked by intense alteration. Rare Tunja xenoliths also occur within the Quan.

7.5.3 Bufu Syenite

At depth the Quan grades into a distinctive bleached-white vuggy equigranular to crystal-crowded leucocratic quartz-syenite.

7.5.4 Breccias

There are a number of breccia styles present. The most distinct breccia (widely termed the Bugoy Breccia, a polymictic breccia) is shown below in Figure 7-7 and in this case is running 15.9 g/t Au and 1.11 % Cu. Given the significance of these breccias (and associated alteration), and the additional drilling during 2013 and 2014, a site-based training and review session will be held in November 2014. This review will focus on the classification and implications of these breccias, associated alteration, and will also consider the applicability of PIMA and pXRF analysis.

Figure 7-7: Quartz Breccia

7.5.4.1 Quartz Lithic Breccia

A matrix-supported, polymictic breccia with quartz and lithic fragments in a darker colored, altered monzonite matrix. The lithic fragments are altered to light grey and white clasts (identified as monzonite and syenite respectively). These are sub-angular to sub-rounded, range from 0.5-5.0 cm. Quartz fragments are sub-rounded to rounded with sizes that range from 0.5-1.0 cm.

Mineralisation is approximately 5-10% with coarse chalcopyrite and pyrite occurring as patches, coarse/fine disseminations and specs.

7.5.4.2 Quartz Sulphide Breccia

Matrix supported monomictic breccia with clasts of white colored quartz hosted in a highly altered matrix with color ranging from light to dark gray. The fragments are sub-rounded to rounded with a size range of approximately 0.5-1.0 cm. Mineralisation is approximately 10 to 20% chalcopyrite and pyrite commonly occurring as coarse patches and specs. Some radial patches of chalcopyrite.

7.5.5 Biak Shear Zone

The Biak Shear Zone truncates the northern end of the deposit, reflecting post-mineralisation movement. There is however evidence of primary mineralisation within the Biak Shear, suggesting that the structure was present during mineralisation. Intrusives within the shear zone are extensively carbonate veined and sheared.

7.5.6 Hydrothermal Events and Alterations

Within the Didipio deposit, alteration defines the broad limits of mineralisation. Alteration textures, intensity and mineralogy vary reflecting a continuum of intrusive and alteration events. Alteration appears to have been focused along lithological contacts, particularly between the Quan, Bufu and Tunja porphyries, where it has overprinted the intrusive contacts and caused destructive modification of original rock textures in many parts of the deposit.

The outer limits between unaltered and altered rocks are relatively abrupt and characterised by the introduction of carbonate and alteration of magnetite. Eight alteration zones are recognised, representing both pervasive and vein-related alteration. The pervasive alteration types are listed in Table 7-1 and exhibit a generally concentric distribution from the inner or core zone to the outer limits of alteration. The dominant trend appears to be for a decrease outward in K-feldspar alteration relative to sericite-carbonate-clay, but the transitions are gradual and subjective and there can be repetitions of either type at several points down a single drill hole. Vein alteration types are listed in Table 7-2.

Table 7-1: Pervasive Alteration Types

Zone	Alteration Mineralogy	Occurs Within Unit
Leached	Carbonate-K-feldspar-muscovite±sericite-silica	Bufu Syenite
K-feldspar-SCC	K-feldspar±sericite-carbonate-clay	Quan
SCC-K-feldspar	sericite-carbonate-clay-K-feldspar	Tunja Monzonite
SCC-K-feldspar-biotite	sericite-carbonate-clay-K-feldspar-biotite	Tunja Monzonite
Mixed	sericite-carbonate±silica-K-feldspar	Quan/Tunja Monzonite
Skarn	calc-silicate(diopside-hedenbergite)-magnetite-K-feldspar	Tunja Monzonite

Table 7-2: Vein alteration types

Zone	Alteration Mineralogy
QFS	Quartz-feldspar-carbonate-chalcopyrite-pyrite±magnetite veins
CSS	Calc-silicate (actinolite-tremolite?)-feldspar-sulphide veins

7.6 Pit Mapping

Pit maps are updated by integrating in-pit structural measurements of mineralised and non-mineralised faults, joints and veins. Grade control chip logging allows detailed 3D interpretations of diorite and monzonite units. 3D modelling of grade control sample Fe content (collected by SGS for XRF matrix corrections) maps out mafic content, allowing independent validation of monzonite / diorite boundaries.

Figure 7-8 summarizes interpretations based on pit mapping to-date. Vertical to sub-vertical vein interpretations reveal near-orthogonal vein sets. One set is parallel to the ore body strike and the other perpendicular to it. Mineralisation of these veins is a combination of chalcopyrite, pyrite and bornite that occur as coarse/fine disseminations, coarse patches, quartz-carbonate vein selvages and thin fracture infill.

The Biak shear is quite visible in the open pit, accentuated by a contact between oxidized and relatively fresh rock, seemingly related to hydrological control along the Biak.

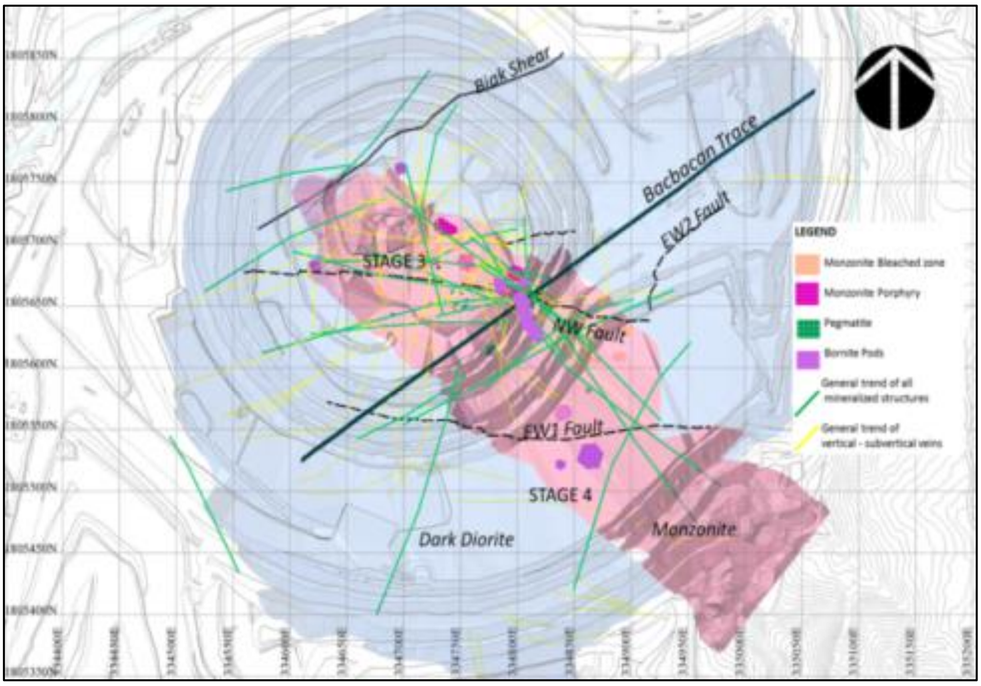


Figure 7-8: Geologic Composite Maps (Fault, Biak Shear, veins and lithologies)

The stereographic plots below, are divided into quadrants, and show the global structures as well as measurements filtered to mineralised structures only. The mineralised veins reflect the orientations seen in the non-mineralised sets.

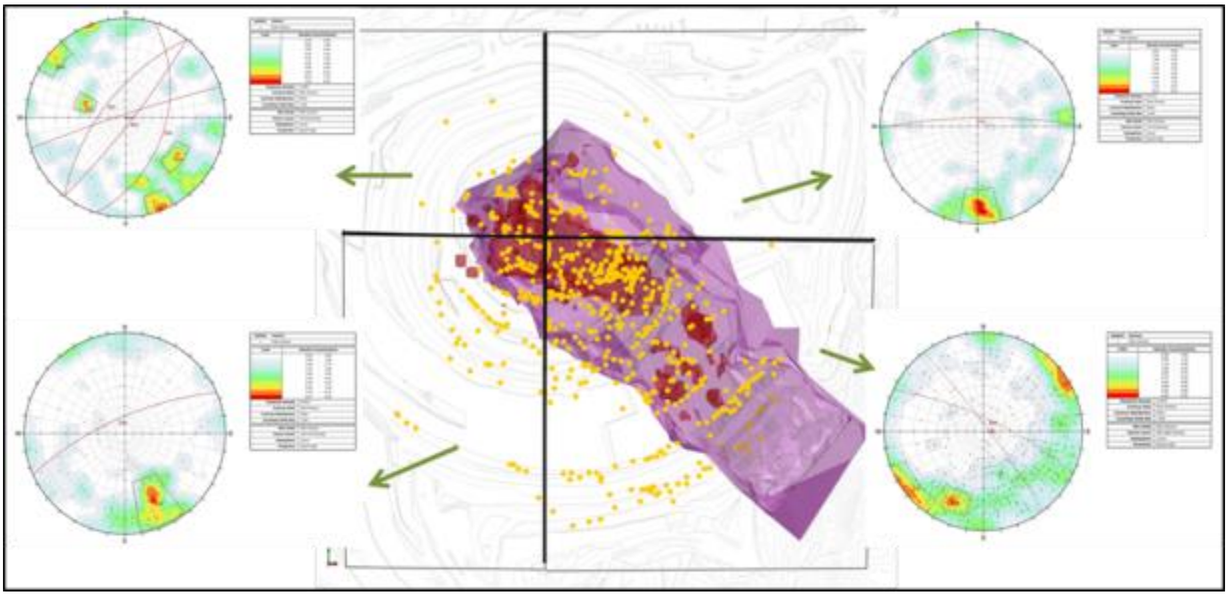


Figure 7-9: Stereoplots Showing Structure Orientations by Quadrant

In-pit point load testing in conjunction with RC grade control penetration rates and lithological mapping is being investigated as a means to predict mill comminution properties.

7.7 Grade Control

Blast hole sampling was implemented in 2013, but was subsequently replaced by RC drilling in May 2014. RC grade control drilling is oriented along a grid running parallel (azimuth 135) to the long axis of the mineralisation. Spacing in the long axis is 10m by 8m across the long axis. The pattern is staggered. Inclined drilling (inclined 60 degrees to the south) was introduced in August 2014 (refer to stereo plots in Figure 7-9). Drilling was previously vertical, with 30m lengths drilled on half patterns collared every 15m to provide 10m x 8m drilling for the first 15m and 10m x 16m for the next 15m to 30m interval. This ensured fully drilled grade control stocks for 6 x 2.5m flitches, and an additional 6 x 2.5m flitches drilled to half density for short term planning. Flitch heights of 3.75m have recently been implemented on a trial basis.

Ore block outlines are based on 5m x 5m ordinary kriged grade control model blocks, using gold equivalence grade. The ore block geometries are designed to allow efficient mining, whilst honouring modelled grade boundaries as much as possible. Oxide, transitional and fresh metallurgical distinctions provide further classification, where this is based upon the extent of sulphide corrosion, rather than host rock weathering per se (almost all oxide/transitional ore has now been mined). Where practical, rock-types are separated.

8 DEPOSIT TYPES

The Philippines Archipelago constitutes one of the world's premier porphyry copper provinces and is a typical area for the study of island arc porphyry systems.

8.1 Description of Deposits

In a comprehensive review, Sillitoe and Gappe (1984) reported the characteristics of 48 mineralised predominantly calc-alkaline porphyry deposits in the Philippines, many of which have been in production (see Figure 8-1). The size of the deposits varies from 50 Mt to more than 300 Mt and copper grades are characteristically 0.40% Cu to 0.55% Cu, with gold content varying from 0.1 g/t Au to 0.4 g/t Au.

The list following does not cover all known characteristics, but it provides a framework into which it is possible to fit many of the geological features of calc-alkaline porphyry deposits and construct a generalised genetic model of a typical Philippines gold-copper porphyry deposit.

Sillitoe and Gappe (1984) found that the majority of calc-alkaline porphyry deposits studied:

- occurred in subduction settings;
- were emplaced into volcanic, volcano-sedimentary or subordinate fine-grained sedimentary sequences of late Mesozoic (95 Ma) to Neogene (5.3 Ma) age;
- are centred on small (mainly <0.5 km^2 in plan), roughly cylindrical composite stocks of diorite to quartz- diorite porphyry;
- exhibit the development of syn-mineral and post-mineral intrusive phases. These may occur as low grade deep cores to the deposits or as larger, phaneritic plutons that truncate the deposits at depth;
- were emplaced in strike-slip fault zones of regional extent;
- show development of widespread K-silicate, sericite-clay-chlorite and propylitic alteration, combined with more restricted sericitic, advanced argillic and calc-silicate development;
- are characterised by pyrite-chalcopyrite-bornite-magnetite mineralisation introduced as part of the K- silicate alteration phase;
- are characterised by widespread overprinting of K-silicate alteration by the sericite-clay-chlorite assemblage, with attendant partial alteration of magnetite to haematite;
- contain ore zones having steep cylindrical forms preferentially developed in intrusive rocks;
- show a positive correlation between gold and hydrothermal magnetite;
- show evidence that a major part of the gold was introduced with K-silicate-related copper mineralisation, and that more than 50% of the gold is closely associated with chalcopyrite and bornite;
- contain hydrothermal breccias of syn-mineral and post-mineral age, as pipes, dykes and irregular bodies; and
- exhibit thin (generally <50m) supergene profiles developed since the Pliocene. In situ oxidation of pyrite mineralisation resulted in goethitic cappings containing oxide copper minerals. Supergene enrichment is not common, probably due to the low pyrite content and neutralising capacity of the K- silicate alteration style.

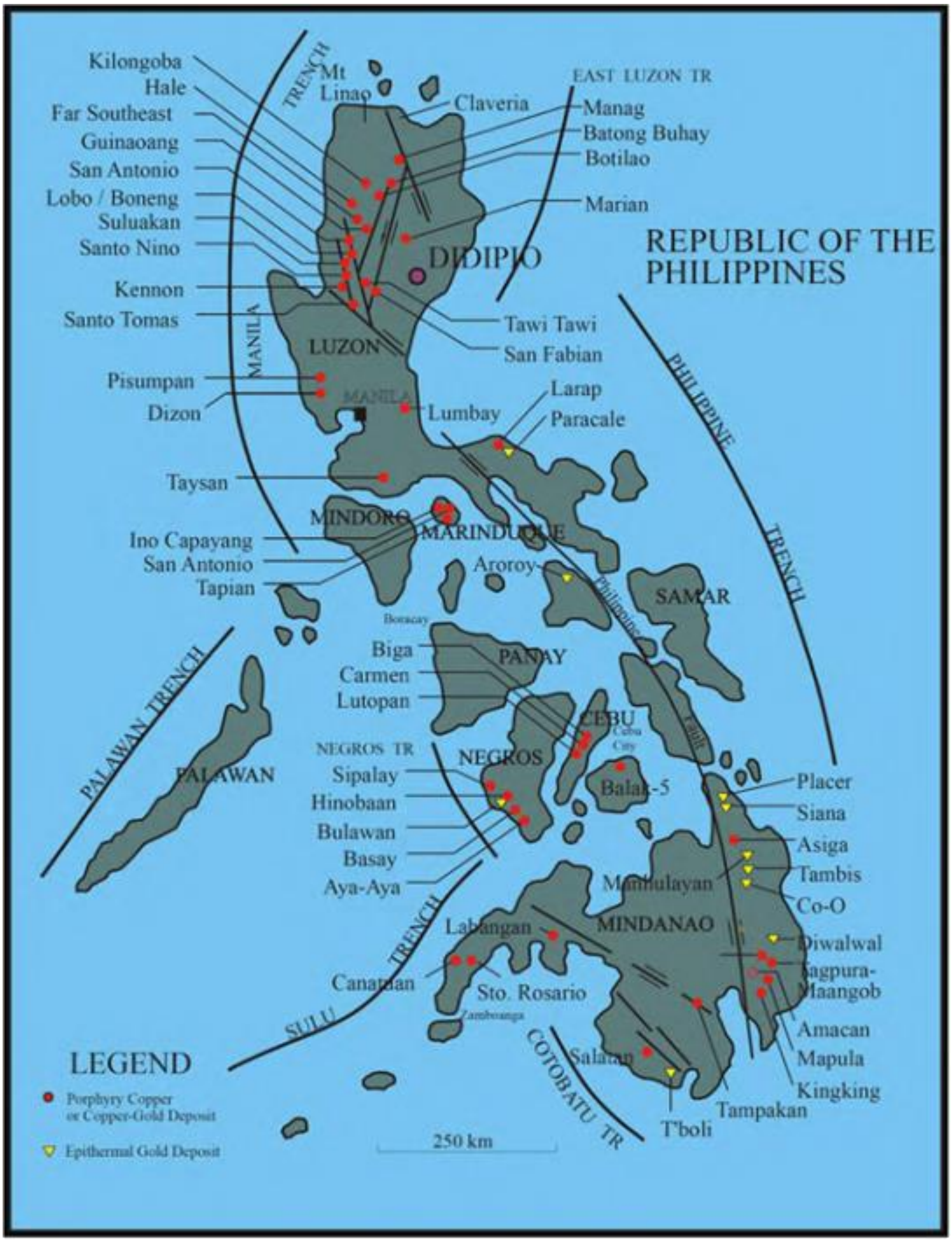


Figure 8-1: Porphyry Au-Cu deposits and epithermal deposits, Philippines archipelago

While the Didipio Gold-Copper Deposit has many broad similarities to the geological features documented by Sillitoe and Gappe (1984), it is not a classic, large porphyry-style deposit. Rather, it is a smaller alkaline mineralised stock containing disseminated and fracture/vein-controlled gold-copper mineralisation that has been overprinted by late stage, structurally controlled, higher-grade, gold-copper mineralisation.

The Didipio Porphyry Au-Cu deposit exhibits features that are common to other alkaline porphyries found in Eastern Australia and British Columbia, Canada. These are:

- Alkalic porphyry intrusions as host to Au-Cu mineralisation;
- Presence of calc-potassic alteration consisting of orthoclase, magnetite, apatite, perthite, and diopside that is associated with the main stage Au-Cu mineralisation;
- Occurrence in the back-arc setting;

- Sulfur isotope compositions are closer to the sulphides at alkalic porphyries in New South Wales and British Columbia than the sulphides in calc-alkaline porphyries in the Philippines (Wolfe and Cooke, 2011).

There is no commonly agreed, detailed model for the formation of the Didipio Gold-Copper Deposit, although there is general agreement about the style of the mineralisation and many of the key elements. The framework appears to be as follows:

- Intrusion of Dark Diorite as a composite intrusive of clinopyroxene microdiorite ("CMD") followed by porphyritic monzonite porphyry, with intrusive breccia developed along the contacts. The later intrusive (and all subsequent intrusives) appears likely to have been controlled by the north-trending Tatts Fault.
- Intrusion of biotite clinopyroxene monzodiorite (Tunja monzonite), probably accompanied by some potassic metasomatism and biotite-magnetite alteration along the contacts and for up to 200m into the Dark Diorite. Some pervasive K-feldspar alteration and veining may have accompanied this event.
- Intrusion of Quan monzonite porphyry into the Tunja intrusive, with accompanying magmato-hydrothermal alteration leading to formation of mineralised skarn and calc-silicate pegmatite at the Tunja/Quan contact and calc-silicate-K-feldspar veining (Garrett, 1995) extending into adjacent Tunja rocks. K-feldspar flooding also extended along the contact into Tunja monzonite.
- Bufu "microgranite" emplaced as a separate but related intrusive, or possibly representing a deeper crystallising phase of the Quan. Development of a silica-rich cap to the Bufu and build-up of hot SiO_2- CO_2 rich fluids beneath this cap.
- Multiple pressure release events related to continuing movement on the Tatts Fault, or due to overpressuring. Initially, weak development of quartz+K-feldspar-sulphide stockwork and irregular veining (Garrett, 1995) concentrated in the Quan above the Bufu intrusive, and in adjacent Tunja rocks.
- Formation of Bugoy breccia due to a combination of physical disruption and hydrothermal brecciation of the silica cap, quartz-sulphide stockwork veins and local adjacent skarn rocks. The timing of this event is unclear, but the matrix is often strongly mineralised and thus the event accompanies a significant period of hydrothermal alteration and mineralisation.
- Cooling and mixing of magmato-hydrothermal and meteoric waters leading to pervasive sericite-chlorite-carbonate-sulphide alteration (Garrett, 1995) occurring along contacts and other fractures and cavities within Quan and Tunja lithologies.
- Late-stage mixing, cooling and collapse of the hydrothermal system, with clay-carbonate-zeolite alteration along open fractures in Quan, Tunja and Bugoy breccia.

Garrett (1995) recognised post-mineralisation shearing and brecciation as exemplified by the Biak Shear, with associated remobilisation of gold-copper mineralisation into these shear zones. Wolfe (1996) suggested that there was a more extensive post-mineralisation carbonate alteration event, with carbonate + sulphide and late silica veining within the body of the deposit as well as within the Biak Shear.

An age date of 23.2 ± 0.6 Ma has been reported by Wolfe (1996) for a rock specimen tested for Newmont from a K-feldspar vein within the nearby True Blue prospect biotite monzodiorite. It is likely that this date is broadly synchronous with the intrusion of the Didipio operation monzonite suite and its associated mineralisation.

9 EXPLORATION

Prior to the acquisition of the Didipio Project by OceanaGold, previous explorers have drilled a total of 230 diamond drill holes aggregating 62,769 m (Table 9-1). The drilling metres were mostly for the resource delineation of the Didipio porphyry Au-Cu deposit with a small percentage of drilling in nearby prospects that include True Blue, D'Fox, San Pedro, D'Beau, and Morning Star. While there were mineralised drill intersections at True Blue and D'Fox, there has not been any exhaustive follow-up programme to delineate resources on these prospects. These prospects are all within 3km of the Didipio deposit shown in Figure 9-1.

Table 9-1: Summary of Exploration works on the Didipio FTAA

Activity	Pre-OGC Exploration	OGC Exploration
Geophysics		
Airborne Magnetics	100,000 line km	
Ground Magnetics	205 line km	
Gradient Array IP	300 line km	
Dipole-dipole IP	65 line km	
Ground DCIP and MT (Titan24)		30.4 line km
Geochemistry		
Stream Sediment Sampling	2,248 samples	263 samples
Soil Sampling	8,298 samples	4,443 samples
Rock Sampling	5,287 samples	1,360 samples
Drilling		
Diamond Drilling	62,769 m / 230 holes	28,529 m / 144 holes

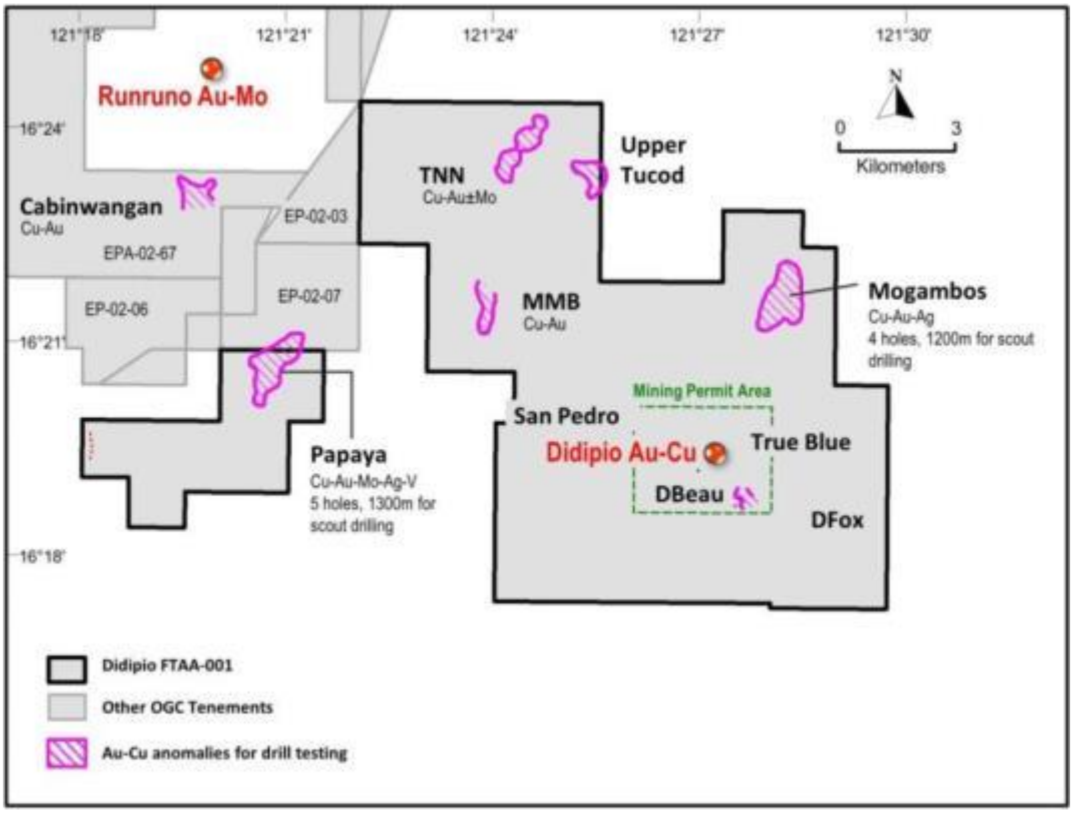
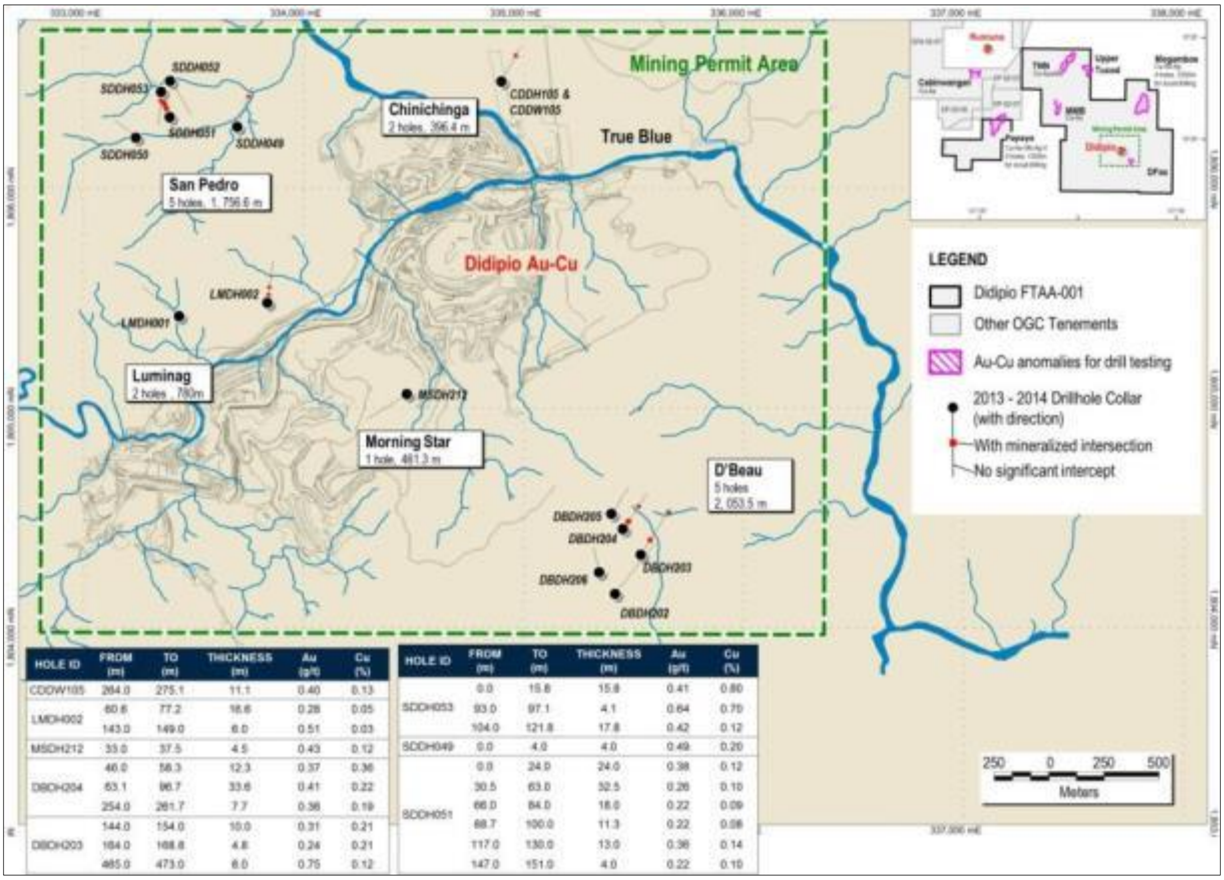


Figure 9-1: Regional prospects identified

Likewise, previous companies have conducted methodical exploration works that assess the regional prospectivity of the FTAA tenement and follow-up detailed investigations on the targets identified. The regional works include about 100,000 line-kilometres of airborne magnetics and radiometrics, 2,248 stream sediment samples, and 5,287 rock samples. Follow-up programmes consisted of detailed mapping, grid soil sampling, induced polarisation, and ground magnetics surveys.

OceanaGold continued follow-up works on some of the targets previously identified. The works included detailed investigation of the Mogambos, Papaya, Upper Tucod, MMB, and TNN prospects shown in Figure 9-1. Grid soil sampling over these prospects have delineated coincident Au-Cu anomalies over prospective lithologies that are worth drill testing. OceanaGold is securing an extension to the FTAA Exploration Period to be able to drill the regional prospects.

OceanaGold also conducted exploratory drilling within the PDMF area from 2013 to 2014 to test the near-mine targets. A total of 5,447.8 m over 15 holes were drilled over the period. The drilling programme hit a number of low grade mineralised intersections at D'Beau, San Pedro and Chinichinga prospects as summarised in Figure 9-2. These intersections may indicate separate mineralised bodies from Didipio or peripheral low grade occurrences.



HOLE ID	FROM (m)	TO (m)	THICKNESS (m)	Au (g/t)	Cu (%)
CDDW105	264.0	275.1	11.1	0.40	0.13
LMDH002	60.6	77.2	16.6	0.28	0.05
	143.0	149.0	6.0	0.51	0.03
MSDH212	33.0	37.5	4.5	0.43	0.12
DBDH204	46.0	58.3	12.3	0.37	0.36
	63.1	96.7	33.6	0.41	0.22
	254.0	261.7	7.7	0.36	0.19
DBDH203	144.0	154.0	10.0	0.31	0.21
	164.0	168.8	4.8	0.24	0.21
	465.0	473.0	8.0	0.75	0.12

HOLE ID	FROM (m)	TO (m)	THICKNESS (m)	Au (g/t)	Cu (%)
SDDH053	0.0	15.8	15.8	0.41	0.80
	93.0	97.1	4.1	0.64	0.70
	104.0	121.8	17.8	0.42	0.12
SDDH049	0.0	4.0	4.0	0.49	0.20
SDDH051	0.0	24.0	24.0	0.38	0.12
	30.5	63.0	32.5	0.26	0.10
	66.0	84.0	18.0	0.22	0.09
	88.7	100.0	11.3	0.22	0.08
	117.0	130.0	13.0	0.36	0.14
	147.0	151.0	4.0	0.22	0.10

Figure 9-2: Location of OceanaGold exploration holes with summary Au-Cu intersections

To complete the assessment of nearby targets and provide context to the drilling information to-date, a deep IP survey using Titan 24 was implemented over the PDMF area. The survey consisted of 30.4 line-km of survey lines where Titan 24 scanned direct current chargeability and resistivity for about 500 m depth and magneto-telluric resistivity to a depth of 1,000 m. Results of this survey are still being processed as of this writing. It is anticipated that follow-up drilling will be done over areas with IP anomalies that correspond to some Au-Cu anomalies from previous drilling.

10 DRILLING

All drill hole collar, down hole survey, assay, magnetic susceptibility and logged geology data, including pre-OceanaGold (i.e. Climax) data, has been transferred to an ODBC database via an AcQuire interface. In some cases it was not possible to locate original source copies of pre-OceanaGold data.

All drilling at Didipio has been performed by contractors.

As of January 31, 2014, the complete drill hole database for the Didipio operation contained 346 holes for a total of 84,149.3m drilled. The drill hole database for the Didipio Ridge deposit comprises 188 holes totalling 48,334.3m, although only 103 holes totalling 41,577.6m are diamond core holes considered suitable for resource estimation. Drilling is generally spaced on sections with 25m to 50m along strike separations and with vertical separations of 50m in the north-west of the deposit. To the south-east, vertical separations up to 150m are more usual. This covers an approximate area of 300m across strike by 550m along strike.

10.1 Drilling Campaigns

In reverse chronological order:

- Three deep drill holes (DDDH 227 – DDDH 229, targeting the Bufu Syenite, were drilled in April 2014. These are not included in the report or resource estimate;
- Between August and October 2013, five diamond drill holes (DDDH 222 – DDDH 226) totalling 2,156.4m were drilled by Quest Exploration Drilling from the floor of the open pit. These holes tested the extent of high grade gold mineralisation in the transition between open pit and the proposed underground mine. Targeting was restricted by physical access and proximity to mining activity. 292.6m were drilled using PQ size core and 1,863.8m for HQ size core;
- An infill drilling programme at the Didipio Gold Copper Project was completed in mid-2008. This programme, which aimed to improve the understanding of the high grade gold / copper core of the deposit as well improve confidence within the open pit design, comprised 21 infill drill holes for 7,390.6m. These drill holes were incorporated into the October 2008 resource update.

OceanaGold acquired Didipio in late 2006.

An in-fill programme was designed and undertaken in the first half of 1997 to reduce drill hole spacing to approximately 50m down dip on sections 25m to 50m apart, concentrating on the high-grade mineralisation in the north-western part of the deposit.

Up to July 31, 1995, a total of 74 diamond drill holes had been drilled on the Didipio project. Fifty nine of these holes were drilled at Dinkidi Ridge, including oxide definition holes, largely on 50m sections, with a vertical separation of 120m to 180m.

Diamond drilling on site has been carried out by several different contractors, but from January, 1994 (from drill hole DDDH29 – DDDH83) all holes were drilled by one of two contractors, Core Drill Asia or Diamond Drilling Company of the Philippines. Both contractors used Longyear drilling rigs and wireline drilling methods. The 2008 infill drilling programme (DDDH201 – DDDH221) was done by DrillCorp Philippines Inc, using CS 1000 drilling rigs. The 2013 – 2014 drilling programme (DDDH222 – DDDH 229) was done by Quest Exploration Drilling using an Edson MP drilling rig.

Earlier holes were collared using 5¼" roller bits to refusal (generally less than 10m depth), cased off and then drilled HQ (63.5 mm core diameter) as far as possible, reducing to NQ (47.6 mm core diameter) as required. Depth limitations with HQ equipment were generally around 600m. From DDDH29 onwards, all holes were drilled by diamond coring starting from surface.

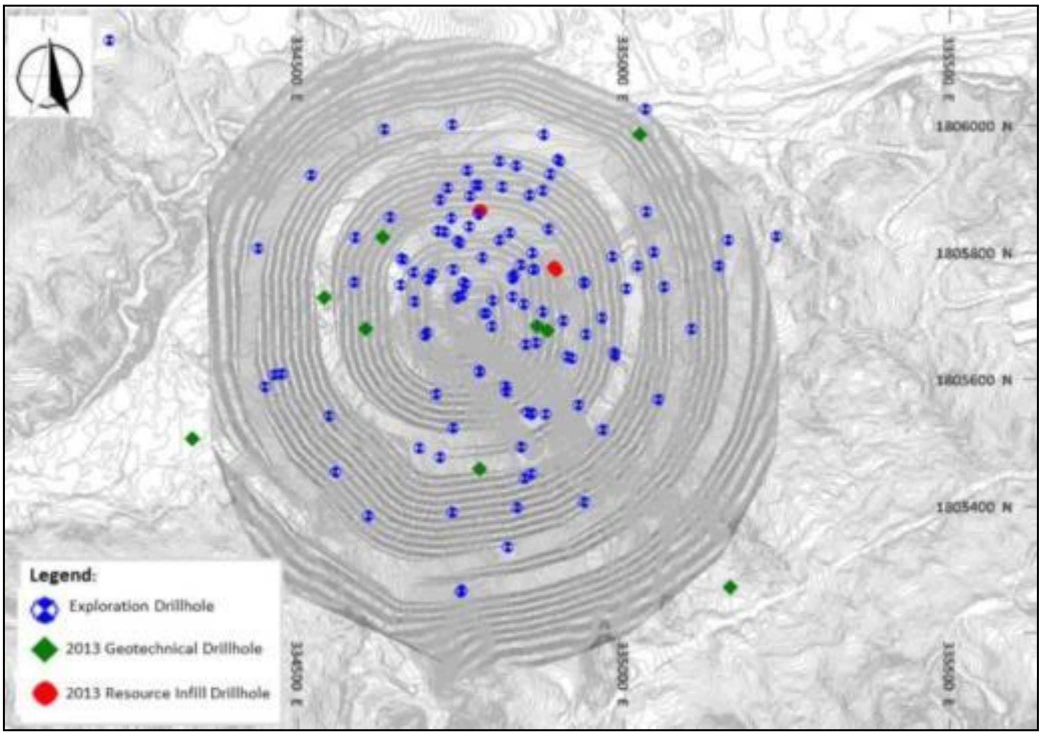


Figure 10-1: Didipio Operation Geology Plan, showing Drill Hole Locations

10.2 Infrastructure Sterilisation Drilling

A total of 56 diamond drill holes have been drilled for sterilisation and infrastructure. Drill hole collar locations are shown in Figure 10-2.

At the time of issue of the Minproc Limited 1998 study, no significant mineralisation had been intersected during sterilisation drilling.

Additionally, the following exploration has been conducted over the intended plant site, underground infrastructure, waste dump and tailings dam sites, and the accommodation village:

- induced polarisation surveys;
- aerial geophysical surveys (including magnetics);
- geochemical surveys; and
- geological mapping.

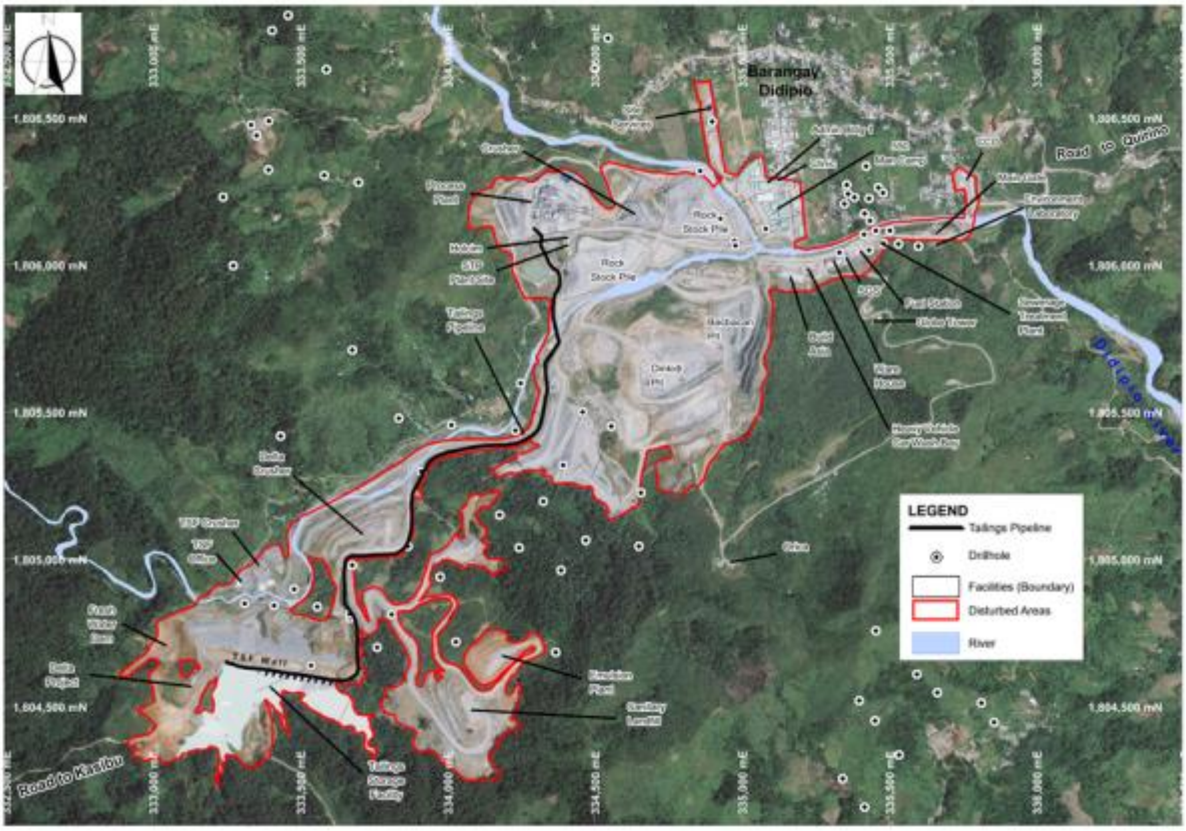


Figure 10-2: Position of Sterilisation and Infrastructure Drill Holes around the Deposit

10.3 Down Hole Surveying

Drill holes for the 2013 campaign were surveyed using Reflex EZ-shot camera at 20 m to 30 m intervals and cores oriented using a Reflex ACT II orientation tool. Surveys have been corrected for the 2013 local magnetic declination of -2.07°. Given the high magnetite content for many of the rock types at Didipio, DDDH223 was resurveyed using real-time gyro operated by GXD. The gyro confirmed the accuracy of the Reflex EZ - shot down hole surveys. No further validation gyro surveys were performed.

Prior to 2013, where possible, drill holes were surveyed down hole using an Eastman survey camera, generally at 50m to 100m intervals. Overall, down hole directional changes are generally minor; holes tend to steepen by 3° in the first 100m and 1° per 100m or less thereafter. Little change in azimuth was noted where holes were drilled perpendicular to strike, whereas for drill hole DDDH47, which was drilled sub-parallel to strike, the azimuth deviated by 15° over 1,005m.

Downhole survey readings were examined for anomalous values related to local high concentrations of magnetite. Within the mineralised zones, low magnetic susceptibility readings on the drill core indicated little potential for magnetic interference on downhole azimuth measurements, whereas a few spurious azimuths from more highly magnetic units were noted and rejected from the database.

10.4 Surface Surveying

Prior to OceanaGold, three grids were used in the collection of survey data within the Didipio operation area. All drill hole collar coordinates are now captured in Universal Transverse Mercator ("UTM") (or National) Grid. The previous use of three grids, and in particular, the conversions between them, has resulted in some locational uncertainty for earlier drilled holes. The three grids are summarised below.

10.4.1 National Grid

The National Grid, known as the Philippine Transverse Mercator, is based on UTM coordinates and is used in all national mapping.

10.4.2 Regional Grid

This grid was set up by Climax, with its northing orientation 30° west of true north (UTM), and 10,000 N, 10,000 E located in the vicinity of the Didipio Ridge. Historically it has been assumed that magnetic declination is negligible and that true north equates closely to magnetic north.

10.4.3 Drill Grid

Originally this grid was centred on the Didipio Gold Copper Project with grid north parallel to the ridge axis, i.e. 21° to the west of the Regional Grid or 51° west of true north.

10.5 Core Orientation

Drill holes for the 2013 campaign cores were oriented using a Reflex ACT II orientation tool. Surveys have been corrected for the 2013 local magnetic declination of -2.07°. For holes drilled prior to this, spear orientations were used. Structural analysis of the 2013 orientations suggests that some of the core may not have been orientated appropriately.

10.6 Core Logging

Immediately after retrieval from a drill hole, a drill core is colour photographed in wet and dry states. Some cores, particularly from early drill holes, were also re-photographed after splitting with a diamond saw.

On site, core logging and marking up is carried out in several stages.

Preliminary geological logging is carried out by the site geologist using logging sheets and/or notes to construct a brief geological log that includes:

- lithology;
- alteration; and
- mineralisation.

Geotechnical logging uses standard logging forms:

- recoveries;
- orientations; and
- rock quality – RQD

Physical property measurements:

- point load testing (after DDDH31);
- magnetic susceptibility measurements are taken at approximately four readings per metre;
- specific gravity determinations; and
- PIMA and pXRF are being trialled.

Detailed geological logging is generally carried out after the core is split and sampled. For consistency in geological interpretation, Sam Garret of Climax (1995-97) logged all Didipio Project drill cores up until 1997.

All physical property data is included in the database.

During early exploration at the Didipio Project by Climax, a total of eight trenches were cut down to bedrock across part of the ridge at irregular intervals, for a total length of 237m. Depths from surface varied from less than 1m to 2m. These trenches were channel chip sampled in 10cm wide by 5cm deep channels, at intervals ranging from 2m to 5m (averaging 3m), providing a total of 155 samples in the database.

In addition, 21 near-horizontal tunnels were developed by local miners to investigate high-grade gold mineralisation in shears, veins and breccias in the upper part of the Didipio Ridge. Tunnel location and orientation depended on topography. Channel sampling along the walls was carried out by Climax over 2m sample intervals to provide a total of 178 samples to the database.

Both trenches and tunnels only investigated the oxide zone. They were surveyed by tape and compass only and geologically mapped at 1:100 scale.

In 2008 five trenches for 88m on the spine of the Didipio hill top were excavated and channel/chip sampled at 2m intervals. The results confirmed strong copper mineralisation within the oxide zone.

Trench samples were not used for resource estimation.

10.7 Sampling Method and analysis

The core processing and storage facilities were transferred from Cordon to Didipio site in mid-2014. The reorganisation of core storage will be completed by the end of the year.

10.7.1 Sampling

The overall envelope of mineralisation at Didipio Ridge has a steep easterly dip, with the >0.5 g/t gold equivalent footprint dimensioned 180m wide and 480m long. In terms of local mineralisation controls, Figure 7-9 shows three dominant orientations for mineralised structures. The majority of holes were drilled at around 60° to the south west, which is considered appropriate, although does result in some acute intersection angles immediate to the Biak Shear Nominal sample lengths of 2m to 3m (which equates to 1m or 1.5m in plan view projection) are considered adequate to define the grade distribution within this zone.

Downhole core sample intervals are generally 2m or 3m.

Future infill drilling from underground development will be sampled more tightly.

Sample intervals were defined during the initial logging of cores on site. Core was cut in half using a diamond saw either on site (up to hole DDDH16) or at Cordon (holes DDDH17 onwards). Core has typically been sampled in intervals 2m or 3m under supervision of the site geologist or sample preparation manager, generally crossing rock type boundaries. After sampling, the remaining half core was stored for further technical and/or metallurgical purposes. In 1992, all drill cores on site were moved and stored at Climax's facilities at Cordon.

For the 2013 drilling (DDDH 222 to DDDH 226), the diamond core was cut and prepared at 2 m intervals at Didipio. All 2013 core is stored at Didipio site.

10.7.1.1 Core Recovery and Sample Quality

Core recoveries were generally better than 95%, although in local areas of severe structural deformation recovery was as low as 50%.

A review of core recoveries indicated that there was no strong relationship between core recovery and grade. The sampling is considered to be appropriate for purposes of resource estimation.

10.7.1.2 Tunnel Sampling and Trenching

Tunnel sampling and trench sampling data were excluded from the resource estimation database.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 Sample Preparation

Since 1989, sample preparation of Didipio drill core has been conducted in three phases (pre-OceanaGold, 2008 Infill and 2013 Infill), with each phase using slightly different sample preparation procedures. The majority of samples (72%) were prepared prior to OceanaGold's involvement. Details of each method are described in detail below and are summarised in Table 11-1.

Climax Mining maintained a sample preparation facility at the town of Cordon, comprehensively stocked with diamond saws, crushers, pulverisers, mills and riffle splitters. A large working area was kept relatively clean and dust free by means of an efficient extraction system. The sample preparation and core storage areas were under the supervision of experienced local staff. The storage facility was kept by OceanaGold until mid-2014, when all core was transferred to a recently constructed core shed at Didipio site.

Table 11-1: Didipio Operation Sample Preparation

Period	Company	Sample preparation	Drill holes	Number of samples	% of total database
1989	CYPRUS	ANALABS (MANILA)	DDDH1-5	352	2.9
1990-1	ARIMCO	ANALABS (MANILA)	DDDH8-11	350	2.9
	ARIMCO	AMC	DDDH14-16	252	2.1
1992-1998	CLIMAX	CLIMAX	DDDH18-89	8051	66.8
2008	OGC	McPHAR (MANILA	DDH201-221	2442	20.3
2013	OGC	INTERTEK (MANILA)	DDH222	188	1.6
		SGS (DIDIPIO)	DDDH223 - 226	409	3.4

The following sample preparation sequence was used by Climax:

- Oven-dry quarter core samples;
- Jaw crush to minus 6mm;
- Disc pulverise to minus 2mm; and
- Hammer mill to minus 1mm.

Riffle split into two by 2kg samples and fine pulverised with one split to minus 200 mesh:

- Screen >95% minus 200 mesh;
- Riffle split 150g to 200g for assay;
- All sample rejects stored;
- Prepared samples air freighted to Analabs Proprietary Limited ("Analabs") in Perth, Western Australia for assay.

For the 2008 drilling (DDH 201 to DDH 221) as well as DDDH 222 of the 2013 drilling, the diamond core was cut at Didipio. Half core was transported to the McPhar facility in Manila. McPhar-Intertek sample preparation procedure is as follows:

- Oven dry core samples;
- Crushed core to 90% passing 2mm;
- Riffle split to 1000g – 1500g, retain coarse reject;
- Pulverize 1000g – 1500g to 95% passing 75µm;
- Riffle split to 200g – 250g, retain pulp reject;

For the 2013 drilling (DDDH 223 to DDDH 226), the diamond core was cut and prepared at 2 m intervals at Didipio. Crushed core were submitted to the SGS facility on site. SGS sample preparation procedure is as follows:

- Oven dry core samples;
- Crushed core to 75% passing 2mm;
- Rotary split to 500g – 1000g, retain coarse reject;
- Pulverize 500g – 1000g to 85% passing 75µm;
- Scoop 250g for analysis; retain pulp reject;

11.2 Analytical Methods

Since 1989, three assay laboratories have been used; Analabs until 2007, McPhar-Intertek (Manila) in 2008, and SGS (on site) since 2012. All three laboratories are considered independent of OceanaGold. SGS laboratory facilities are located at Didipio site, but are staffed by SGS employees.

11.2.1 Gold Assay Procedures

The standard gold assay procedure used by Analabs in Perth (NATA certified)[2] was as follows:

Laboratory Method Code 313:

- A 50g sample pulp was fired with litharge and flux and the lead-silver button cupelled. This was followed by acid dissolution of the silver-gold prill, and gold content was measured by AAS to a 0.005ppm Au lower detection limit.
- Assaying for gold in samples from DDDH1 to DDDH6 was performed by Analabs in Manila, but this practice was discontinued in November, 1989. The same procedures were used by the Manila and Perth laboratories.

The standard gold assay procedure used by McPhar-Intertek (Manila) was as follows:

Laboratory Method Code PM6 (2008):

- A 50g sample pulp was fired with litharge and flux and the lead-silver button cupelled. This was followed by acid dissolution of the silver-gold prill, and gold content was measured by AAS/GTA to a 0.001ppm Au lower detection limit.

Laboratory Method Code FA30/AA (2013):

- A 30g sample pulp was fired with litharge and flux and the lead-silver button cupelled. This was followed by acid dissolution of the silver-gold prill, and gold content was measured by AAS to a 0.01ppm Au lower detection limit.

The standard gold assay procedure used by SGS (on site) was as follows:

Laboratory Method Code FAA303.

- A 30 g of sample pulp was fired with fire assay flux and the button was cupelled. The collected prill is dissolved in an acid. The gold in solution is then quantified using AAS at a detection limit of 0.01 ppm.

11.2.2 Copper and Silver Assay Procedures

The standard procedures used by Analabs, Perth, for copper and silver assays were as follows:

Laboratory Method Code 101:

- Perchloric acid digest then AAS finish to a 4ppm lower detection limit for copper and a 2ppm lower detection limit for silver.

[2] The National Association of Testing Authorities (NATA) is Australia's national laboratory accreditation authority and the largest such system in the world. NATA accreditation recognises and promotes facilities competent in specific types of testing, measurement, inspection and calibration.

For samples containing >1% Cu: Laboratory Method Code 104:

- Mixed acid digest followed by volumetric dilution and AAS finish to a 25ppm copper lower detection limit.

The standard copper assay procedure used by McPhar-Intertek (Manila) was as follows:

Laboratory Method Code ICP1 (2008):

- Acid digest using HCl-HNO_3 then ICP to a 1ppm copper detection limit.

Laboratory Method Code 4AH1/AA (2013):

- Acid digest using HCl-HNO_3 -$HClO_4$-HF then AAS to 1ppm copper detection limit.

The standard copper and silver assay procedure used by SGS (on site) was as follows:

Laboratory Method Code AAS22D:

- Acid digestion using HCl-HNO_3-$HClO_4$. The AAS detection ranges are 0.01%-10% and 0.5-500 ppm for copper and silver, respectively.

11.2.3 Analysis of Other Elements

Sulphur analyses were carried out by Analabs, using the Leco method, on 833 composites made up of assay sample pulps. These composites were selected by Climax to coincide approximately with the boundaries of the 15m square mining blocks proposed as part of the Minproc Limited 1995 PDS, and thus do not coincide with geological or grade boundaries. No check sulphur analyses have been undertaken.

Metallurgical testing has shown evidence of minor quantities of other metalliferous elements including molybdenum, lead and zinc, but none are present in significant amounts.

OceanaGold have located and re-assayed 4,026 archived sample pulps for silver. A preliminary silver estimate has been undertaken, but validation has not been completed. This estimate will be reported as part of the end of year resource and reserve statement.

11.3 Sample Security

There is no specific documentation of sample security procedures prior to OceanaGold's involvement in the project. However copper assays are consistent with mineralisation observed in core and gold assays are generally consistent with mineralised features. Metallurgical test work, independent verification work by other companies, and two years of mine versus resource model reconciliation support this view.

11.4 Statement of Sample and Assaying Adequacy

The author considers that the sample preparation, security and analytical procedures used for the Didipio operation are appropriate and adequate for the style of mineralisation being assessed.

12 DATA VERIFICATION

12.1 Performance of Blanks, Standards, Laboratory Repeat and Field Duplicates

12.1.1 Summary

Three laboratories performed the assay analysis for the materials inserted; Analabs (1989 – 1998), McPhar (2007 – 2013) and SGS (2013 – 2014).

Of the 25,160 samples (1989-2014 drill holes) sent for lab analysis, 3,200 control samples (including standards, standard blanks, lab repeats and field) have been inserted for gold and copper analysis.

For 2013 resource infill drill holes, a total of 1,197 samples from diamond cores were dispatched to SGS Lab and Intertek (previously McPhar) for analysis. 138 samples (including standards, coarse and pulp blanks, and field duplicates) were inserted. For the previous exploration drill holes (1989 – 2008), out of 23,963 core samples sent to laboratories for assay analysis, 3,062 control samples (including standards, coarse and pulp blanks, lab repeats and field duplicates) were inserted.

Table 12-1: Materials statistics for Exploration core samples (1989-2008)

QC Material	Quantity Au Analyze	Quantity Cu Analyze
Standard	109	109
Blank	117	117
Field Duplicates	663	65
Lab Repeats	2,173	683
Total	**3,062**	**974**

Table 12-2: Material Statistics for 2013 Resource Infill Drill hole samples

QC Material	Quantity Au Analyze	Quantity Cu Analyze
Standard	41	41
Blank	51	51
Field Duplicates	46	46
Lab Repeats	44	21
Total	**3,062**	**974**

12.1.1.1 LAB Repeats – Analabs, SGS and McPhar-Intertek

Figure 12-1 to Figure 12-3 present laboratory repeats for copper and gold.

Gold precision, whilst not as good as for copper, is acceptable.

Very few copper repeats were submitted prior to Oceanagold's involvement at Didipio, however 890 inter-laboratory assays were subsequently submitted and indirectly suggest acceptable precision for copper assays submitted to Analabs (see Table 12-3). Copper precision is good for both McPhar-Intertek and SGS laboratories.

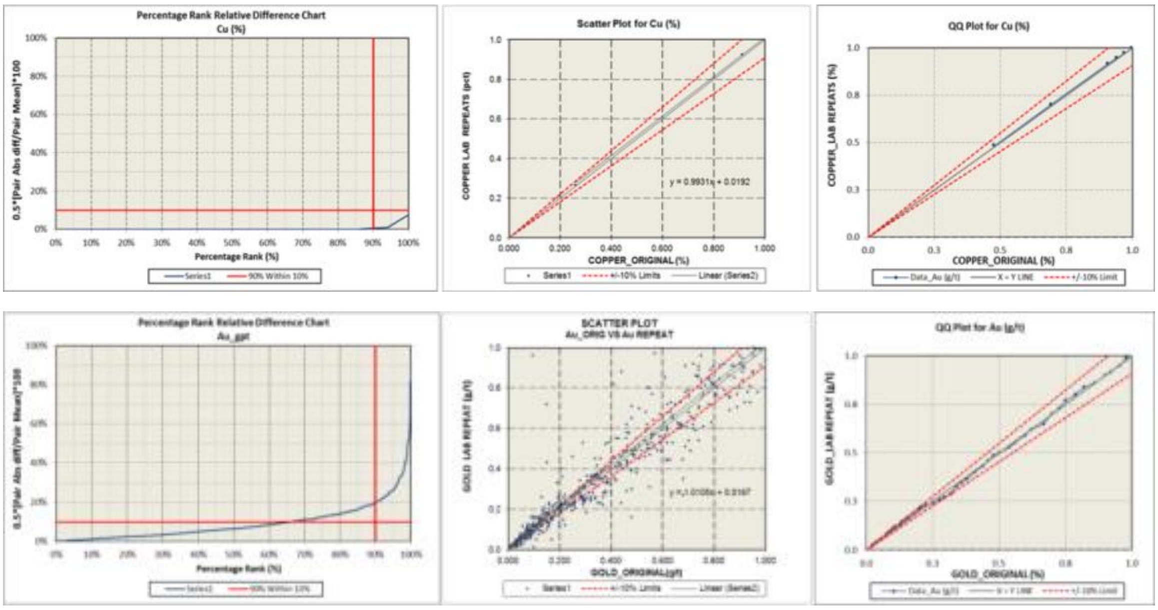


Figure 12-1: Analabs Laboratory Repeats for Cu and Au

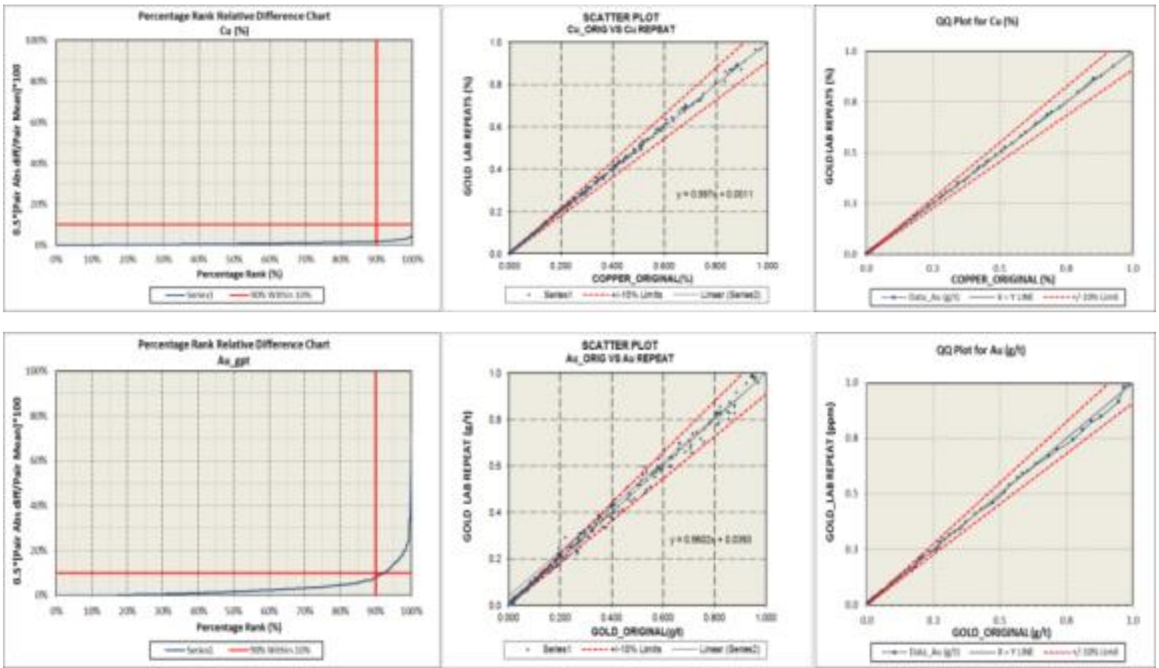


Figure 12-2: Lab Repeats for Cu and Au by McPhar-Intertek Laboratory

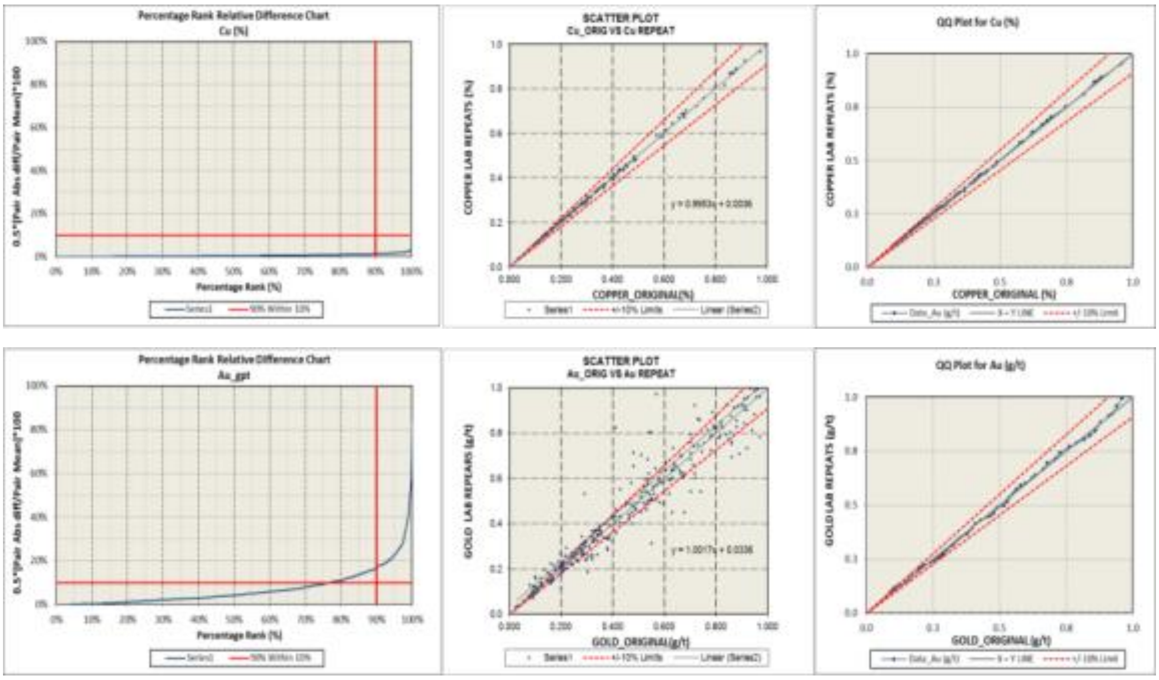


Figure 12-3: Lab Repeats for Cu and Au performed by SGS Laboratory

12.1.2 Field Duplicates – Analabs, SGS and McPhar-Intertek

Copper results show good pass precisions with 96% pairs within 10% and 99% within 20%. Gold results show fair pass precisions with 75% pairs within 20%. QQ plot for gold shows grade with > 0.6 g/t Au has more variances (duplicate vs. original) but is still within the ±10% pass limit QQ plot for copper is less variable across the entire grade range. Figure 12-4 includes all field duplicates data from 1989 – 2013 diamond drill holes.

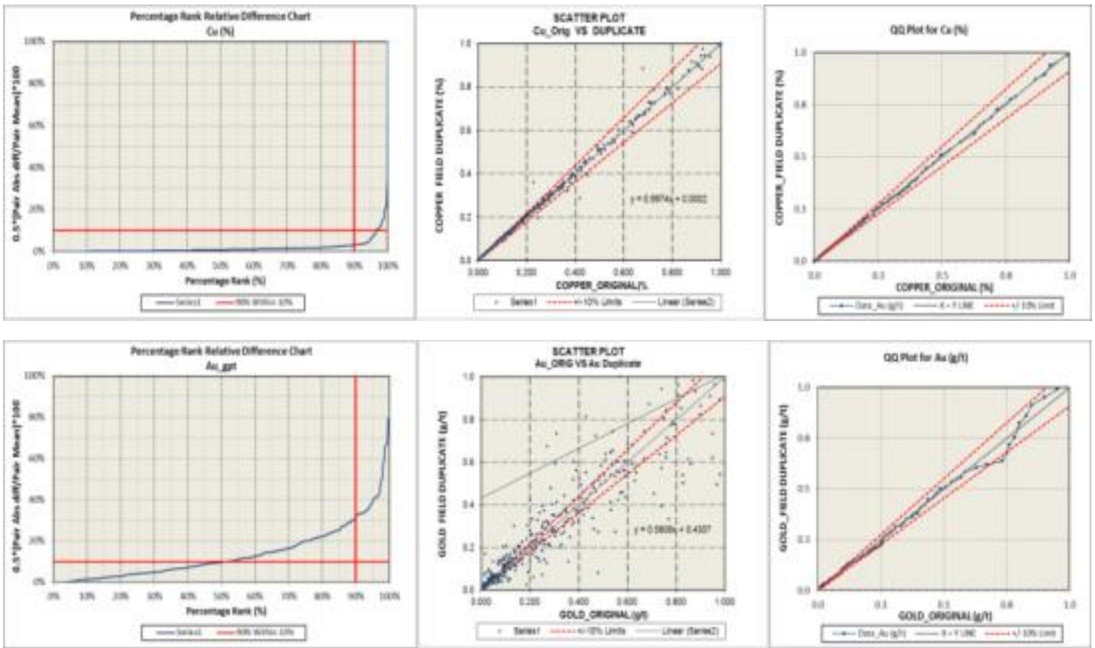


Figure 12-4: Field Duplicates for Cu and Au

12.1.3 Standards – Analabs, SGS and McPhar-Intertek

The performance of gold standards for Analabs is acceptable with total accuracy of 81% of results within ±10% of the recommended value (Figure 12-5). A negative bias of approximately 4% is observed throughout the range of values. It was noted that the available records of the standards used does not identify the individual standards.

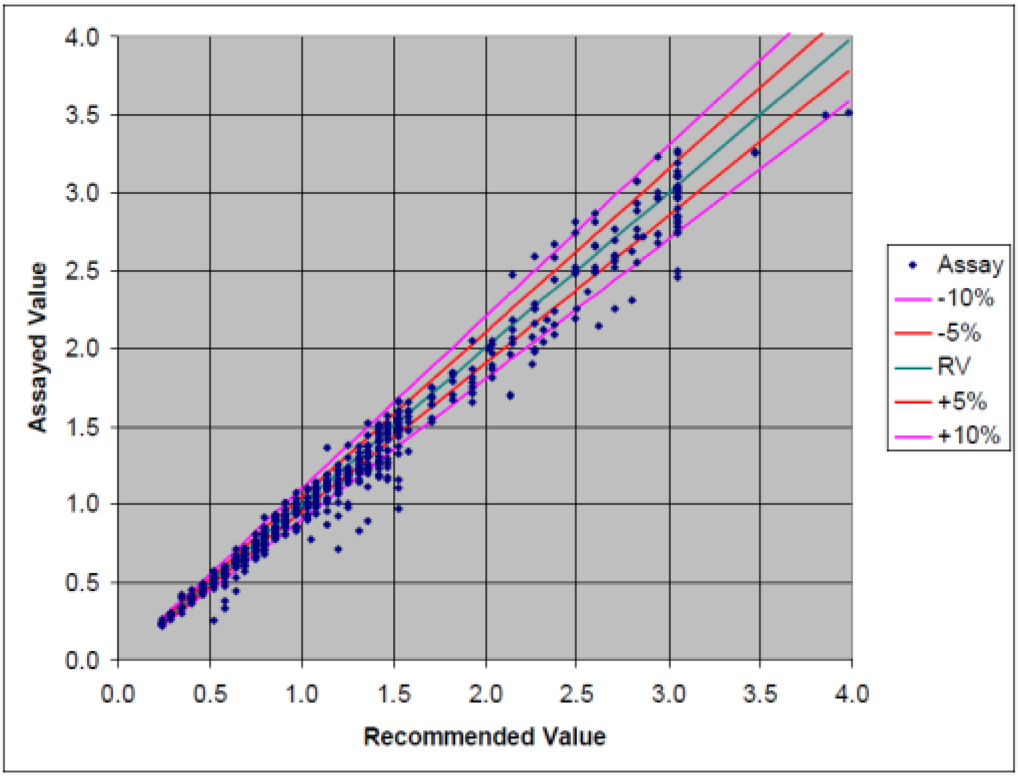


Figure 12-5: Gold Standards (g/t Au) – Analabs

Note that there were no copper standards on record prior to OceanaGold's involvement. Given the lack of copper standards, 890 inter-laboratory analyses were undertaken (Table 12-3). These confirmed that the copper analyses were reproducible within acceptable limits, albeit considerable variance between laboratories is evident.

Table 12-3: Inter-Laboratory Assay Checks

Data Set	Samples	Mean Original	Mean Duplicate	Difference in Means	Relative Bias	Relative Precision
Au AMDEL	607	1.182	1.129	4.60%	Yes	60.00%
Au Beq	196	2.484	2.532	-1.90%	No	36.60%
Au ITS	183	1.203	1.255	-4.30%	Yes	40.20%
Au McPhar	58	2.86	2.932	-2.50%	No	24.50%
Au Newmont	42	0.693	0.683	1.40%	No	33.30%
Cu AMDEL	607	0.437	0.41	6.70%	Yes	8.80%
Cu ITS	183	0.34	0.357	-5.00%	Yes	11.70%
Cu McPar	58	0.902	0.86	4.70%	Yes	7.70%
Cu Newmont	42	0.249	0.227	8.80%	Yes	7.90%

The overall performance of gold standards for McPhar is acceptable with 97% of gold standards within ±2STDEV (Figure 12-6) and 95% within ±2STDEV for copper (Figure 12-7). A 5% negative bias is evident on one standard, the OREAS 54Pa.

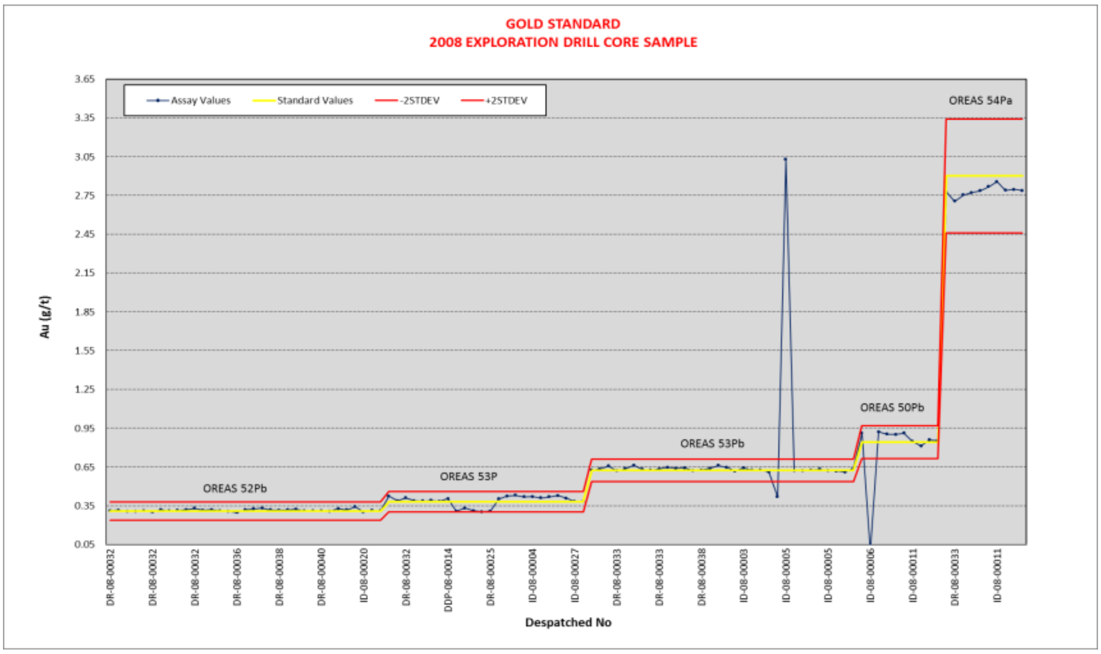


Figure 12-6: Standard for Au - McPhar. 2008

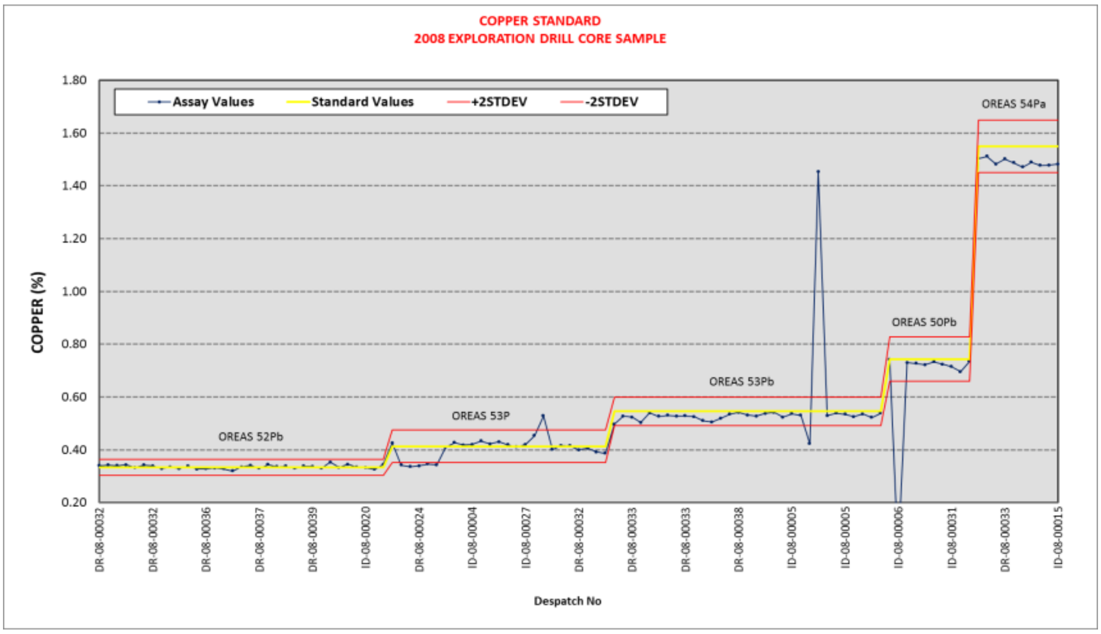


Figure 12-7: Standard for Cu - McPhar. 2008

For drilling during 2013, the overall performance of standard is fair for gold with 70% within ±2STDEV, with a negative bias only noted in high grade standard (Figure 12-8).

Copper showed poor precision with 33% within ±2STDEV (Figure 12-9). Furthermore, a negative bias on copper analyses was evident across all grades. Note that standards sent to Intertek during this time were within acceptable limits. As a consequence, a total of 155 samples analysed by SGS (≥0.5 %Cu) were re-assayed for copper by SGS via acid digestion. Re-assay values suggest that the original assays were negatively biased by approximately 10%. Original assays were therefore replaced with the re-assayed values.

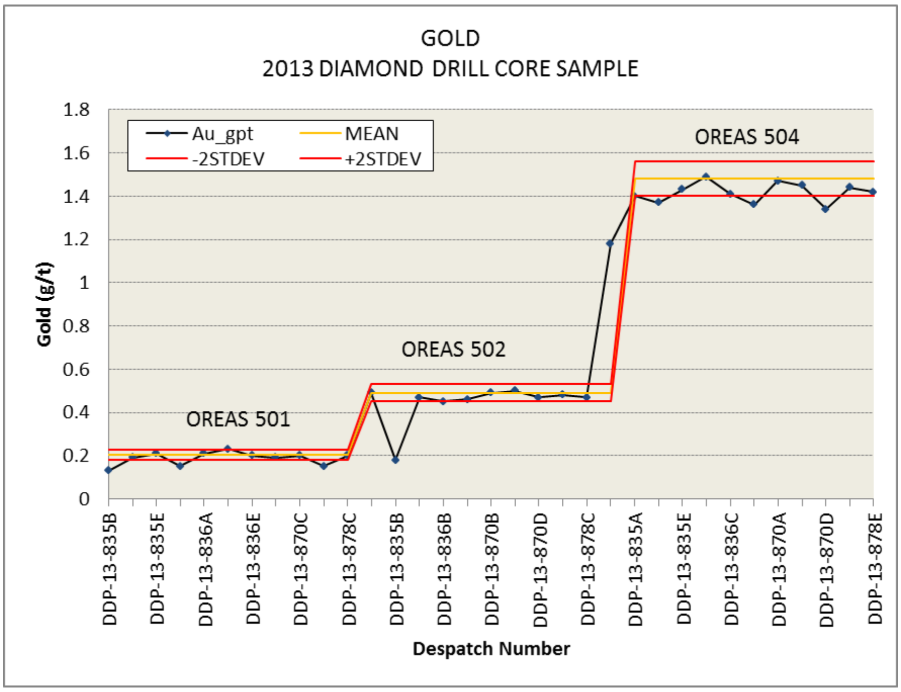


Figure 12-8: Standard for Au - 2013 Resource Infill Drill Hole Samples

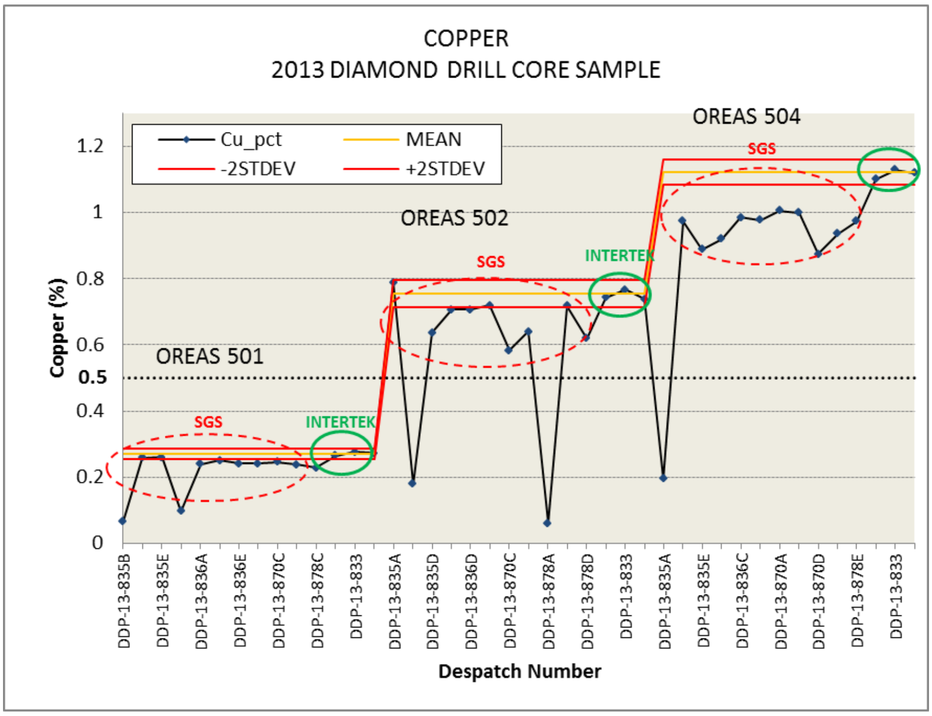


Figure 12-9: Standard for Cu by Laboratory - 2013 Resource Infill Drill Hole Samples

12.1.4 Standard Blanks – SGS and McPhar – Intertek

McPhar's overall performance is acceptable for both gold (Figure 12-10) and copper (Figure 12-11). Failed data shown are identified as mixed up with OREAS 53Pb during sample preparation. Note that there were no coarse blanks used as part of this programme.

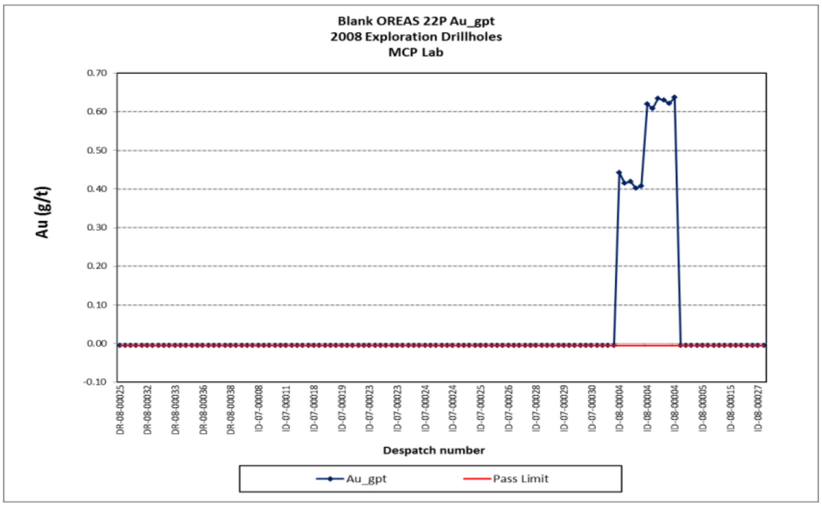


Figure 12-10: Standard blank for Au – McPhar. 2008

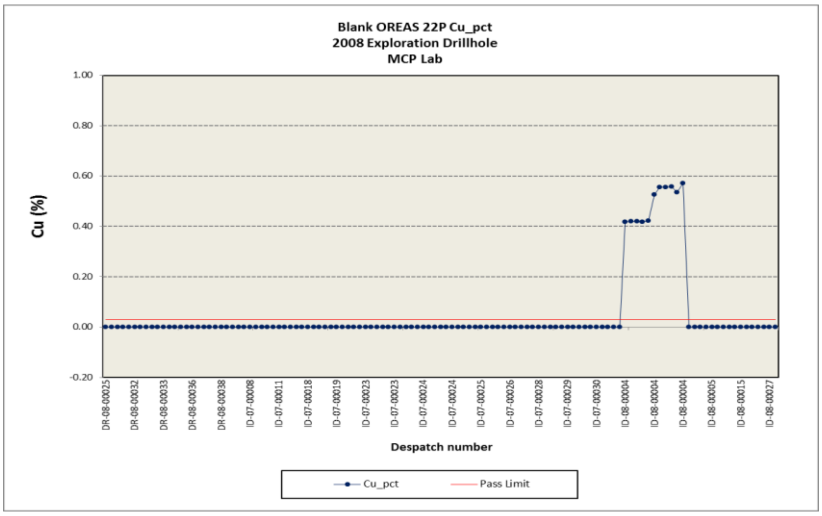


Figure 12-11: Standard blank for Cu – McPhar. 2008

For the 2013 drill programme SGS and Intertek laboratories were used, the overall performance for blank samples are within the pass limit (three times the detection limit) for gold (92%), and copper (99%). Results of blanks suggest that contamination has not been excessive during lab handling – refer to Figure 12-12.

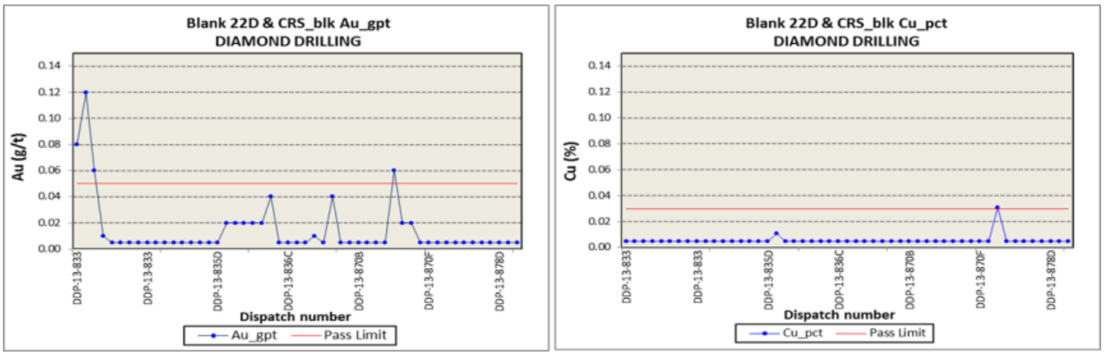


Figure 12-12: Standard blank for Au (LHS) and Cu (RHS), 2013

Prior to OceanaGold no records of blanks being used were identified.

The analysis of blanks, standards, laboratory repeats and field duplicates has revealed periods of erratic performance. While improvement is required, overall the performance has been acceptable. The absence of copper standards prior to OceanaGold's involvement was mitigated by subsequent round robin analyses. This will also be further investigated in tandem with the silver analyses on archived exploration pulps.

12.1.5 Adequacy of Data

The available resource drilling has been assessed and OceanaGold considers the data to be of a suitable quality for resource estimation purposes.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Introduction

Test work programmes on the gold-copper deposit at Didipio have been conducted in three major stages:

- The first programme was conducted from 1990-1993 and incorporated a number of bench-scale flotation tests to determine the characteristics of the materials.
- The second programme was conducted by a number of laboratories from 1994-1995 with more detailed test programmes, including locked cycle flotation tests and two mini-pilot plant studies.
- The third phase was conducted in 1997, testing primarily core from deeper drill holes, being material potentially mineable via underground methods, and included confirmatory tests based on the flow sheet developed in the previous test work.

Recent test work managed by Ausenco and conducted by AMMTEC and internally by OceanaGold has generally confirmed previous results.

Operational plant performance since the commencement of operations provides comparison data assisting in validating the recovery models developed in the prior study.

13.2 Ore Mineralogy

The Didipio mineralogy work has been based on the principal rock types (Tunja monzonite, Dark Diorite and Quan monzosyenite) together with the higher-grade breccia and the quartz-feldspar-carbonate altered zones. Volumetrically, OceanaGold estimates that the Tunja monzonite will comprise more than 75% of the projected mill feed.

Mineralogical studies were carried out from 1994-1995 by Wally Fander of Central Mineralogical Services and by Ian Pontifex of Pontifex and Associates. In addition, Amdel conducted some optical and X-ray diffraction studies. All three groups are well respected in the industry.

The principal mineralogical characteristics of the primary ore are as follows:

- Principal sulphide minerals are chalcopyrite, pyrite and bornite, with traces of chalcocite and digenite; chalcopyrite is the principal copper mineral , whilst bornite generally contributes less than 20% of the contained copper;
- Magnetite comprises approximately 5-7% of ore, but there are few composite grains with the sulphides;
- The sulphides are generally well liberated, with liberation generally >92% in the float concentrates;
- Minor or trace talc / sericite is present in the higher-grade samples; and
- There is little or no evidence of oxidation in the sulphide samples tested except for some tarnishing.

13.3 Metallurgical Samples

13.3.1 Previous Sampling

13.3.1.1 Minproc Limited

The Minproc Limited study reported on the following test work:

- The Phase 1 test work was based on samples obtained from early stages of deposit drilling, and as such is considered less than wholly representative;
- The Phase 2 test work studied five separate composites of primary material, both low-grade and high-grade, from three vertical sections of the deposit;
- Within the second phase test work, a programme was conducted on sample composites made up of a large number of mineralisation intercepts;
- Nine variability samples tested in Phase 2 were selected to represent ore feed for the first five years of production and to test each of the four main rock types; and

- Two pilot plant studies were carried out. The first was based on approximately 2t of sample comprising 140m of intersections from a single PQ drill hole. The second pilot plant test programme was based on 1.25t of quarter core samples selected from throughout the deposit representing approximately 600m of core.

13.3.1.2 Ausenco

- Comminution testwork was conducted on a number of composites from HQ core;
- Media competency testwork was conducted on portions of the pilot plant PQ sample; and
- In 2006 confirmatory testwork was conducted at AMMTEC's laboratory in Perth; three drill holes were sampled and composited into three samples, used for flotation tests and for comminution tests.

13.3.1.3 OceanaGold 2008

In 2008, OceanaGold completed copper flotation testing on 22 near-surface samples from dedicated diamond core (DOX series holes). The samples were taken to metallurgically define the weathering profile. The results are colour coded in Figure 13-1 to reflect the flotation recoveries (red>90%, orange>60%, yellow>40%, green>20%, blue<20%). It is worth noting that these recoveries closely match oxidation intensities that were independently logged visually in core in 2008. These modelled recoveries were successfully used as the basis for the grade control strategy whilst mining the top of the ore body in 2012 / early 2013.

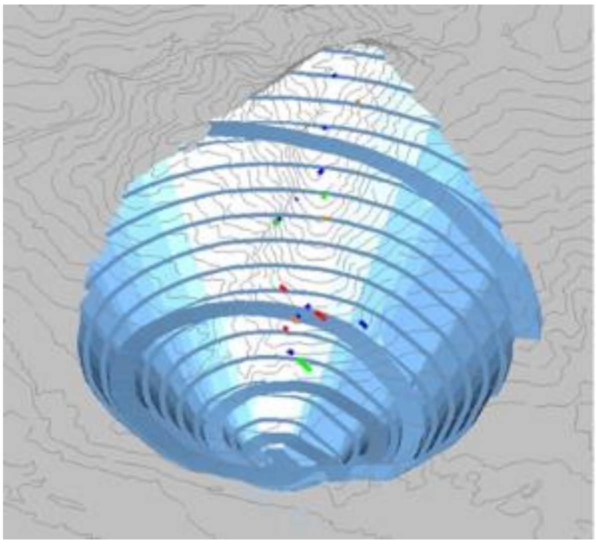


Figure 13-1: Copper Flotation Samples in 2008 Relative to the Stage 2 Pit

13.3.2 2011 Metallurgical Sampling

By 2011 numerous changes to the project had occurred since the previous round of metallurgical sampling, including changes to the relative size of the underground mine, the open pit staging, the reagent regime etc. Due to these changes, it was decided to collect supplementary test samples. The opportunity was also taken to collect samples according to broad rock types (Tunja Monzonite (yellow), Dark Diorite (maroon), and Biak Shear) and gold / copper ratios. The sampling to date has tested Stage 2 and the upper regions of stage 3 pits, these are shown in Figure 13-2 and Figure 13-3.

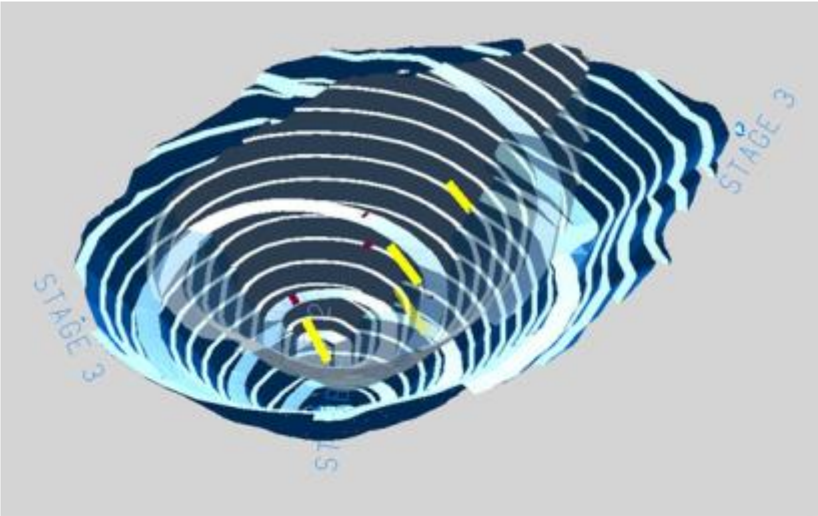


Figure 13-2: Metallurgical Samples Collected in June 2011

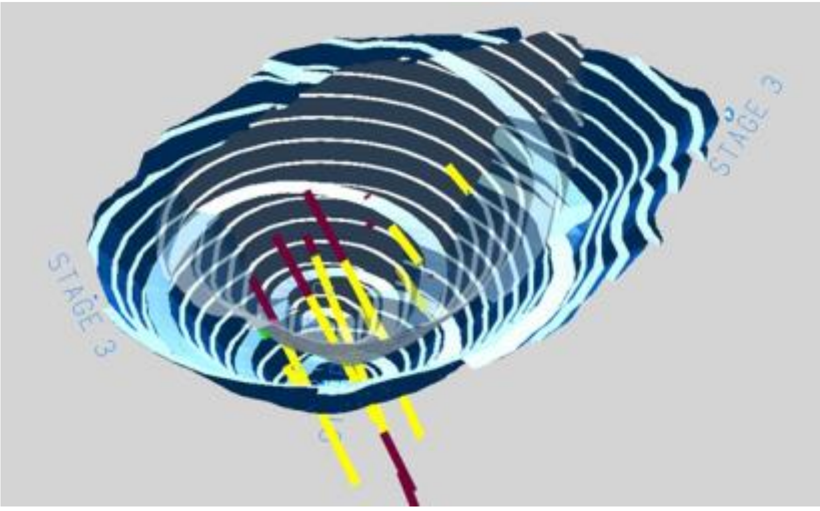


Figure 13-3: Metallurgical Samples Collected in October 2011

13.3.3 Comminution Test Work

A number of studies were conducted to investigate the physical and comminution characteristics of the various mineralised samples. Three laboratories conducted test work as follows:

- AMMTEC conducted standard comminution tests, including Bond Work Indice tests, on HQ samples from different rock types at different deposit depths and JK Tech Proprietary Limited ("JK") Pendulum tests on PQ core from the pilot plant testwork sample;
- Amdel conducted Media Competency tests on the PQ core intersections; and
- Lakefield Research in Canada conducted Aerofall grinding evaluation tests on PQ core.

Minproc Limited evaluated the data to determine the appropriate circuit design and correct mill sizing. Table 13-1 summarises the various comminution results.

Table 13-1: Measured Grinding Results

Material Type		Bond Indices			JK Tech Parameters					
		Ball - Bwi kWh/t	Rod - Rwi kWh/t	Abrasion - Ai	A	b	A*b	Dwi	ta	SG
Tunja Diorite	Range	12.3 - 14.8	13.2 - 15.2	0.204 - 0.315						
	Average	13.8	14.3	0.277						
Dark Diorite	Range	13.8 - 15.1	15.0 - 17.5	0.185 - 0.371						
	Average	14.1	16.2	0.255						
Quan Diorite	Range	13.2 - 14.8	13.9 - 15.5	0.211 - 0.337						
	Average	14.1	14.9	0.295						
PQ Samples	Range	12.7 - 12.9	12.5 - 16.3		71.2	0.54	38.5		0.39	2.67
	Average	12.8	14.4							
2006 Testwork	Average	14.1	14.1	0.1456	74.6	0.9	67.2	3.9		

These results indicate that the Didipio rock types can be classified as having a low to moderate level of competency, which suggests a relatively low power consumption to reduce the material to the required particle size distribution for processing. The abrasion indices also suggest relatively low levels of abrasive wear on grinding media, liners, plant chutes and pipes. Ausenco has adopted 14.6 kilowatt-hours per tonne ("kWh/t") for the Ball Mill Work Index and 14.5kWh/t for the Rod Mill Work Index with an Abrasion Index of 0.26.

The 2006 test work programmes were carried out by JK and Dr Steve Morrell of SMCC Proprietary Limited. JK comments that the DWi, or drop weight index, at 3.9 is relatively low, indicating that the Didipio material is fairly soft with relatively low power requirements to grind to a specified size, with a minimum of critical size development. The parameters A, b and the product A*b also indicate a relatively soft material.

Other comminution tests conducted on the PQ samples are shown in Table 13-2.

Table 13-2: Other Measured Grinding Results

Tested	Autogenous	Unconfined Compressive Strength			Impact Crushing Work Indices - kWh/t				
	WI kWh/t	Range MPa	Peak MPa	Failure	102-76mm	76-51mm	51-38mm	38-25mm	25-19mm
PW - Avg	13.2				38.9	23.2	9.4	8.7	6.7
PQ - Max					57.8	45.4	13.7	15.4	11.3
PQ - Min					28.3	16.2	6.5	3.8	3.9
Tunja Monzonite		45 - 130	130	Shear					
Dark Diorite		45 - 175	175	Shear					
Quan Monzosyenite		50 - 110	110	Cataclisis					

The impact indices indicate that there could be a need for a recycle pebble crusher after the SAG mill since the rock competency increases significantly from the 51mm fraction to the 76mm fraction. However, this is not supported by other data that suggests there will be a minor amount of critical size build-up. It would be appropriate in the plant design to allow for the possible later insertion of a recycle pebble crusher if required.

13.3.4 Gravity Gold Recovery Test Work

Consistent gold recoveries were difficult to attain based on flotation test work alone. This is not unusual with gold-copper deposits that contain high levels of gold with a significant amount of free gold. Hence it was decided to investigate the use of gravity recovery techniques prior to flotation. Optimet carried out test work on the nine variability samples based on tabling and hand panning the table concentrates. The overall recovery to a gravity product was approximately 20% or more, indicating that gravity recovery to bullion was likely to be economically viable.

Subsequently, tests were undertaken using a laboratory Knelson high G-force concentrator followed by amalgamation of the Knelson concentrates. Details of the test results have been published previously in the “Technical Report for the Didipio Project” dated July 29, 2011. Figure 13-4 shows the results of the gravity testing program showing the established relationship between feed grade and gravity-Amalgam recovery.

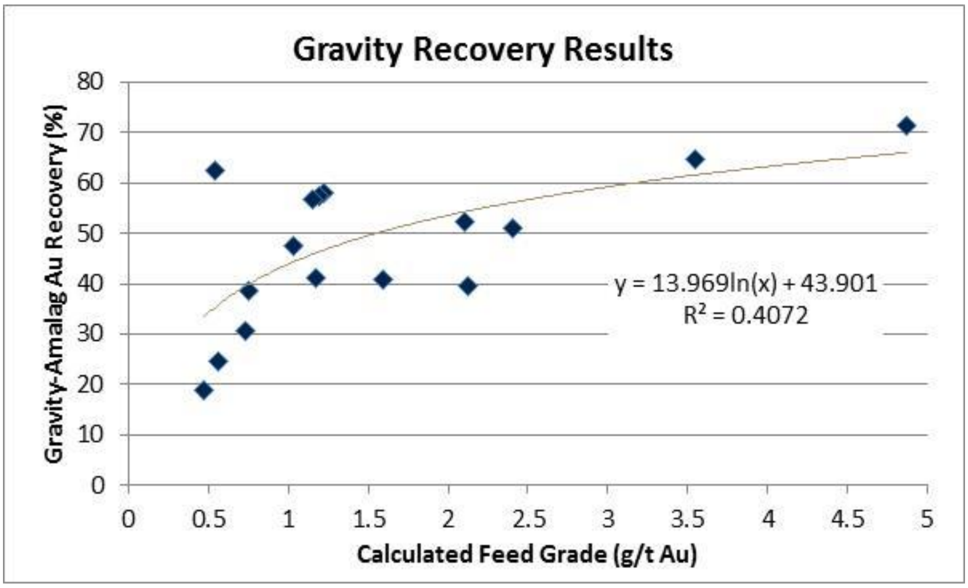


Figure 13-4: Gravity Recovery Results

Gold particles observed in the panned concentrates were generally much finer than 100µm in size.

13.3.5 Flotation Recovery Test Work

Flotation test work during the prefeasibility stages was carried out in several phases broadly characterised as:

- Flotation Recovery Test Work;
- Optimisation Flotation Test Work;
- Ore Variability Test Work; and
- Pilot Plant Testing.

General conclusions were that:

- copper flotation kinetics were rapid;
- copper recoveries were generally high with acceptable concentrate grades;
- over-grinding was detrimental to good metallurgical performance; and
- gold recovery to copper concentrate generally ranged from 80-90%.

More detailed discussion and results of these programmes have been previously published in the earlier “Technical Report for the Didipio Project” dated July 29, 2011.

13.3.6 2006 Validation Tests

A test work programme was carried out on new samples. Batch tests were conducted as well as locked cycle tests. Gravity gold was removed prior to flotation test work, Table 13-3, summarises the results, which are generally consistent with the results from the early programmes.

Table 13-3: 2006 Validation Test Work Results

Sample	Head Grade		Concentrate			Recovery %			
				Grade			Gold		
	%Cu	g/t Au	Type	%Cu	g/t Au	Copper	Total	Gravity	Flotation
LS0001	1	2.12	Locked Cycle	23.6	22.8	95.6	90	43.5	46.5
			Batch Locked	28.4	16.7	94.3	88.1	39.5	48.6
LS0002	1.09	2.4	Cycle Batch	26.5	23.1	94.8	91.2	49.4	41.8
			Locked Cycle	28.5	24.2	93.6	91.8	51.0	40.8
LS0003	0.81	1.17	Batch	29.2	17.6	95.9	92.9	46.6	46.3
				26.5	23.2	95.7	90.5	41.0	49.5

13.4 Metallurgical Performance of the Process Plant

Based on the test work programmes undertaken, a series of models were developed to predict flotation tail grades of copper and gold as a function of feed grade. These have been used in previous feasibility studies to calculate predicted recovery for the process plant and to establish cut off grades for the open pit and underground operations. These models were based on results of the various flotation tests and normalised to predict performance at a primary grind size P_{80} of 75 µm.

Bench scale testing of samples collected in 2011 by OceanaGold was completed using the final design reagent suite and tested the performance at a primary grind P_{80} of 75 µm and 106 µm. The test work indicated the recovery trade-off from coarsening the primary grind was in the order of 1% and reflected well on the established models at the finer grind size. This lead to an adjustment of the models for higher planned throughputs with expected coarser grind sizes.

Since commissioning of the process plant, recovery of copper and gold ramped up in line with budget expectations (Figure 13-5) with recovery expected to meet the model within 9 months of plant operations commencing. In general the plant copper recovery (red trace) can be seen to meet or exceed the model based recovery (green trace). Similarly the overall plant gold recovery (gold trace) has met or slightly exceeded the modelled recovery (blue trace).

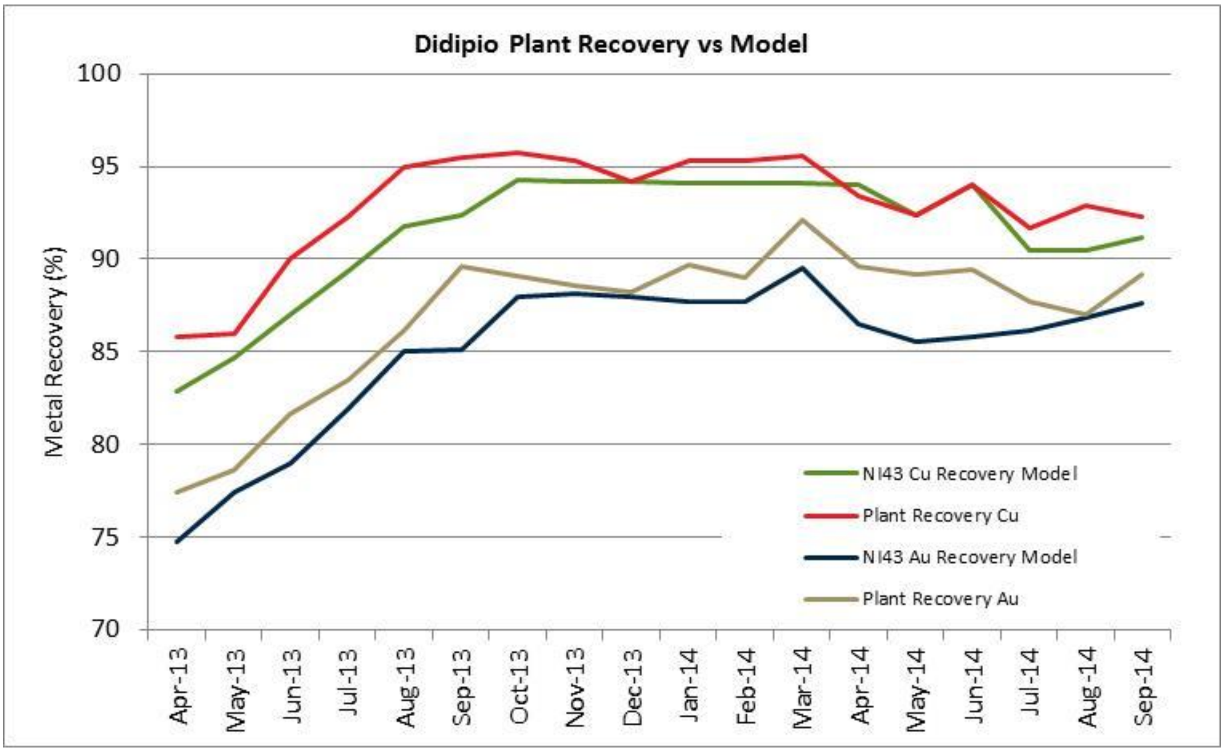


Figure 13-5: Didipio plant recovery since start-up

During Q2 and Q3 2014 stockpiled transitional material was added to the mill feed blend at up to 15% of the feed tonnes. This transitional material was not in the mine reserves but was stockpiled during early mining based on internal tests indicating a 70% recovery was achievable and higher contained copper grades. The weighted average of the feed types is apparent in the change in expected recovery and the actual plant performance has consistently achieved or bettered the model.

The production data from the first 18 months of commercial operation has validated the recovery models used to predict recovery for the orebody and allows forward production planning to be undertaken.

13.5 Future Ore Testing

Infill drilling into the lower open pit / underground resource was undertaken by OceanaGold in 2013 and 2014, providing access to fresh core for the deposit. A structured programme has commenced to conduct further variability testing on smaller composite samples (15m core intervals) to check rougher recovery performance and grind time, looking for anomalies in the expected performance of the process plant.

The effects of grind sensitivity, reagent requirement and concentrate quality will be tracked and additional infill drilling programmes will be considered for addition to the programme.

13.6 Competency Testing

As part of the review of plant performance and evaluation of options to increase plant capacity to 3.5 Mtpa the impacts of variation in ore competency was considered as a risk factor. A programme was instigated with the geotechnical team to undertake Point Load Index (“PLI”) measurements on existing diamond core reserves held in storage for the ore zones.

Samples representing the original Stage 3 and 4 pit shells were selected and testing of all of the available drill core (including all Monzonite, Dark Dioriate and mineralisation in proximity to the Biak shear) was completed as the first priority with the deeper stages and underground to be progressively tested. In parallel, selected core intervals are being selected for SMC testing to provide a lithology based reference model to identify any areas of concern from higher expected competency that may affect mill scheduling. Table 13-4 shows preliminary results of the point load measurement data along with two recent plant surveys being used to build up a more detailed knowledge of expected ore competency variability.

Table 13-4: Recent Ore Competency Measurements from Core

Rock Type	IS50 Avg	IS50 SD	Count	Dwi	A	b	A*b
Monzonite	3.6	1.97	631	631	631	631	631
Diorite	4.6	2.91	263	263	263	263	263
Blends	3.9	2.28	28	28	28	25	28
Breccia	1.8	1.03	12	12	12	12	12
Survey 1				2.52	64.9	1.61	104.5
Survey 2	4.08	1.37		4.59	73.4	0.77	56.5

Amongst the key items of information found in the PLI measurements taken to date are:

- The north side of the ore zone has a lower PLI measurement compared to the south;
- The north side of the deposit correlates with the higher grade zones of mineralisation; and
- There is no appreciable increase in PLI measurement with increasing depth in the deposit.

Upon successful commissioning of the pebble crusher circuit and stabilisation of the plant throughput additional plant surveys will be conducted to update the JKSimmet model of the plant to allow better correlation of pit based competency measurements with expected plant throughput predictions for production planning.

Infill drilling into the lower open pit / underground resource was undertaken by OceanaGold in 2013 and 2014 and PLI measurements are now part of the standard geotechnical logging procedure to continue to expand the dataset of measurements.

14 MINERAL RESOURCE ESTIMATES

A number of resource updates have been completed since OceanaGold acquired the Didipio operation. The first OceanaGold estimate was completed in 2007 by Hellman and Schofield ("H&S") to satisfy NI 43-101 compliance for OceanaGold's TSX listing. Earlier resource estimates used grade-based wireframes to constrain high grades. These wireframe constraints were removed in 2007, which resulted in significantly lower modelled grades (subsequent models have incorporated additional drilling and translated the model into UTM grid, but otherwise are premised on a similar geological interpretation). Resource model to mine reconciliations from August 2012 onwards have validated the removal of these constraints.

The resource was last updated in 2011 in order to reduce the block size from 15mE x 15mN x 20mRL to 15mE x 15mN x 10mRL, to be more in line with likely flitch heights.

14.1 Geological Interpretation

The Dark Diorite, Tunja Monzonite, Quartz Breccia, Bufu Syenite and Biak Shear have been coded into the model. In 2007, 3D comparisons of interpreted geology, gold and copper grades, and magnetic susceptibility led to the conclusion that; of the key interpreted geological entities (Dark Diorite, Tunja Monzonite, Quartz Breccia, Bufu Syenite and Biak Shear), only the Biak Shear and Bufu Syenite represented "hard" grade boundaries, and that all other geological components, while contributing to the distribution of mineralisation, did not tightly constrain mineralisation.

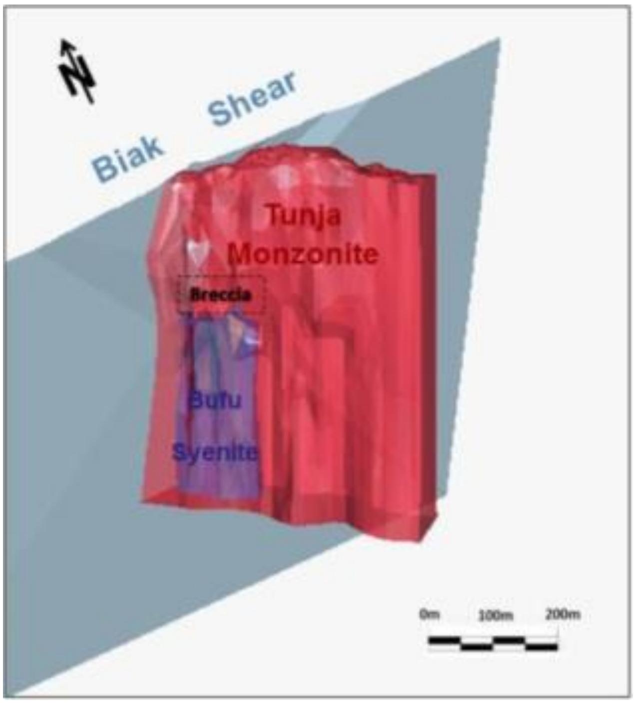


Figure 14-1: Oblique View (-20 to 030) of Simplified Didipio 3D Geological interpretation

Figure 14-2 is a plan view (2680mRL) showing the key modelling domains (Tunja, Dark Diorite and Biak) superimposed over the grade control block model grade contours (0.5, 1.0 and 2.0 g/t AuEq in blue, orange and red respectively). This view demonstrates the diffuse nature of grade across the Dark Diorite / Tunja boundary versus the sharp grade boundary between the Tunja and the Biak, which is consistent with OceanaGold's domaining strategy.

Figure 14-2: 2680mRL Floor, Grade Control Model (AuEq) contours with Biak Shear Interpretation

It should be noted that the confidence in the geological interpretation reduces with depth. Infill drilling is planned from underground development. No resource is reported below the 2070mRL.

14.1.1 Data Analysis

Table 14-1 shows the 3m composited Drill Hole Samples of gold and copper grade statistics by geological domain. As the drill hole spacing is tightened with infill drilling from underground development, the Tunja domain may well be subdivided into high versus low grade domains.

Table 14-1: Gold and Copper Summary Statistics

	Tunja	Bufu	Biak	Dark Diorite
No. Samples	6,438	284	812	2,867
GOLD				
Mean	1.2	0.63	0.2	0.25
Median	0.49	0.38	0.06	0.11
Maximum	57.46	10.13	16.7	9.94
CV	2.35	1.59	3.13	2.16
COPPER				
Mean	0.43	0.11	0.06	0.15
Median	0.29	0.08	0.03	0.08
Maximum	6.94	1.2	0.66	2.57
CV	1.09	0.99	1.34	1.44

The histogram for gold grade within the Tunja monzonite (Figure 14-3) shows a single, approximately log-normal distribution. Fifty per cent of the total contained gold is contained within the top 8% of the gold grades.

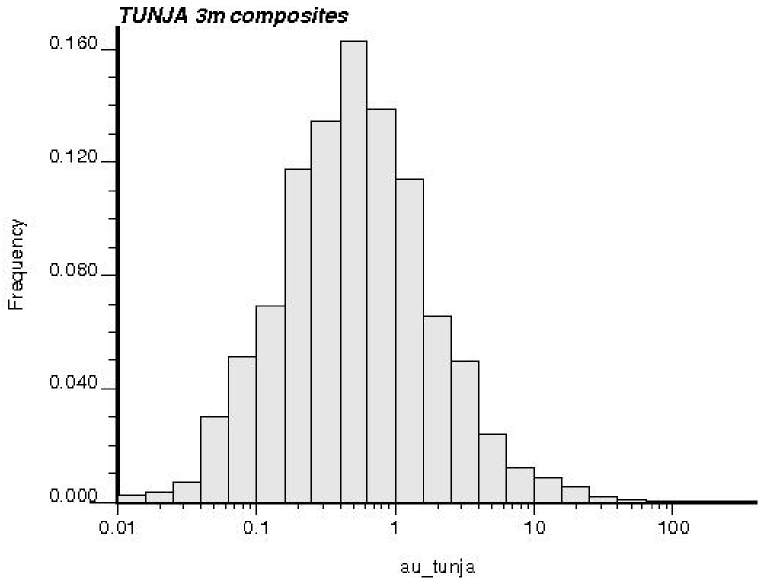


Figure 14-3: Histogram of 3m Composited Gold Grades for Tunja

The histogram for gold grades within the Dark Diorite (Figure 14-4) shows a single, approximately log-normal distribution. Fifty per cent of the total gold is contained within the highest 9% of the gold grades.

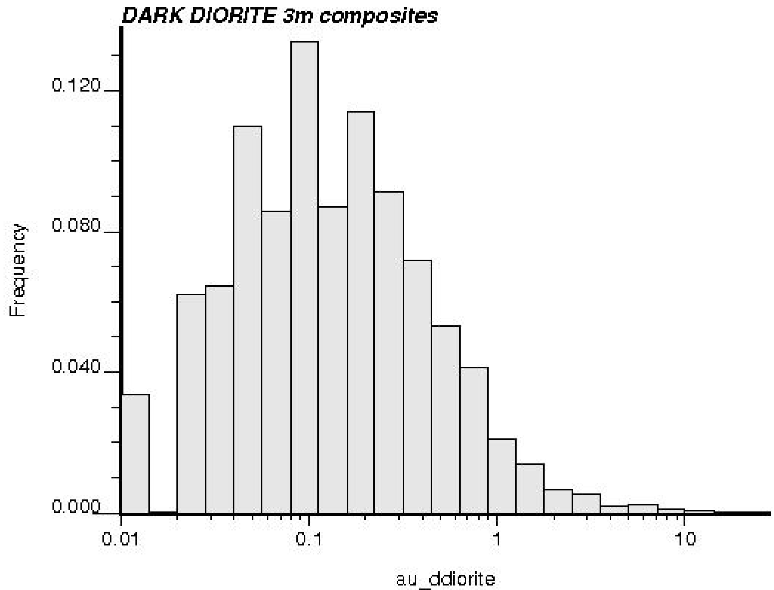


Figure 14-4: Histogram of 3m Composited Gold Grades for Dark Diorite

The histogram for copper within the Tunja monzonite shows a single approximately log-normal distribution (Figure 14-5). The copper distribution is less skewed than the gold distribution, with 50% of the total metal in 19% of the samples.

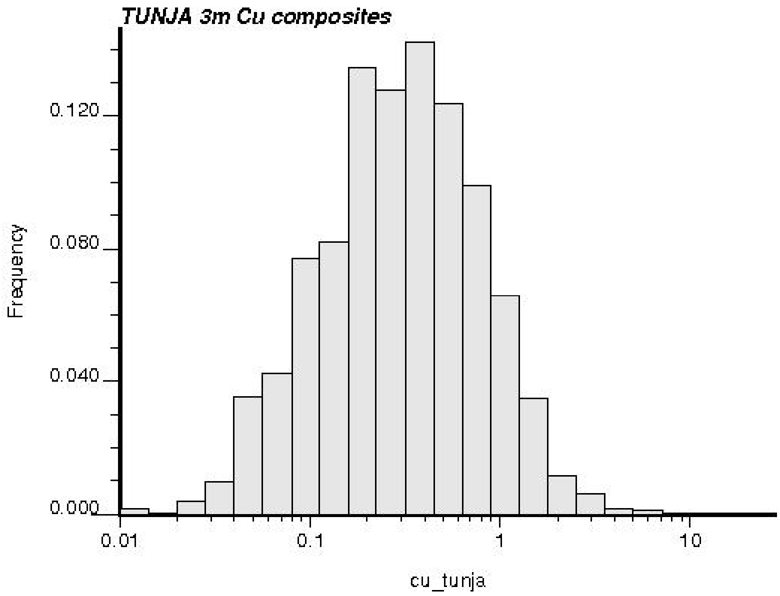


Figure 14-5: Histogram of 3m Composited Copper Grades for Tunja Monzonite

The histogram for copper within the Dark Diorite shows a single approximately log-normal distribution (Figure 14-6). The copper distribution is less skewed than the gold distribution, with 50% of the total metal in 13% of the samples.

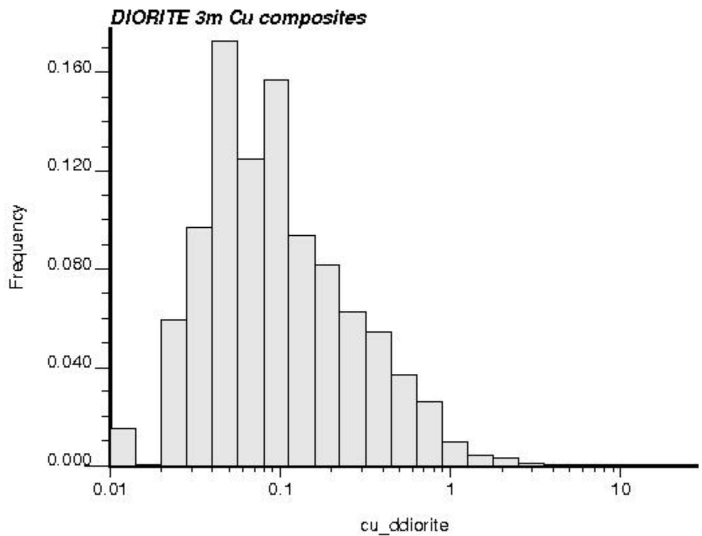


Figure 14-6: Histogram of 3m Composited Copper Grades for Dark Diorite

14.1.2 In Situ Density Determinations

In situ density determinations were carried out by Climax Mining at regular intervals on 2,302 drill core samples (DDDH1-DDDH28 every 5m; DDDH29-DDDH61 every 10m). The method involved drying and sealing the selected sample with a waterproofing compound, then weighing the sample both in air and in water. Each sample comprised approximately 10cm of half drill core.

Data from a total of 2302 samples were statistically analysed. Paper records for 1,173 specific gravity measurements were located at the Cordon core facility in August 2008. These were scanned, entered into Excel and finally loaded into Minesight for 3D geological coding. The specific gravity values are tabulated in Table 14-2 and are similar to those used by Climax Mining.

Table 14-2: Statistics for Specific Gravity Data by Rock Type

	Oxide	Trans	Tunja	Bufu	Biak	D diorite	Breccia
No samples	31	N/A	474	17	86	558	7
Mean	2.42	N/A	2.51	2.39	2.66	2.73	2.56
Median	2.35	N/A	2.52	2.37	2.72	2.75	2.57
Mean minus extremes	2.51	N/A	2.51	2.4	2.67	2.73	N/A
Minimum	2.09	N/A	2.09	2.01	2.08	2	2.54
Maximum	3.03	N/A	3.18	2.66	3.11	3.5	2.58
Value used	2.2	2.4	2.5	2.35	2.67	2.72	2.45

*Mean excluding values outside 2.5% and 97.5% quantiles

Australian Geostandards conducted check measurements on 22 adjoining and 11 identical drill core samples. Check measurements were on average 1.3% higher than original measurements.

There was insufficient density data available for analysis of the transition zone, so an average value of 2.4 t/m^3 was used. Oxide and transitional material has largely already been mined.

In-pit samples are currently being collected for specific gravity determinations to augment the database.

14.2 Variography

Spatial analysis of grades (variography) commenced with variogram maps to determine the principal directions of continuity. Both gold and copper show a strike slightly west of north and a steep easterly dip, consistent with the observed geology (Figure 14-7 and Figure 14-8). Variogram maps in the plane of mineralisation (approximately N-S) are fairly isotropic, suggesting no significant plunge component to the mineralisation.

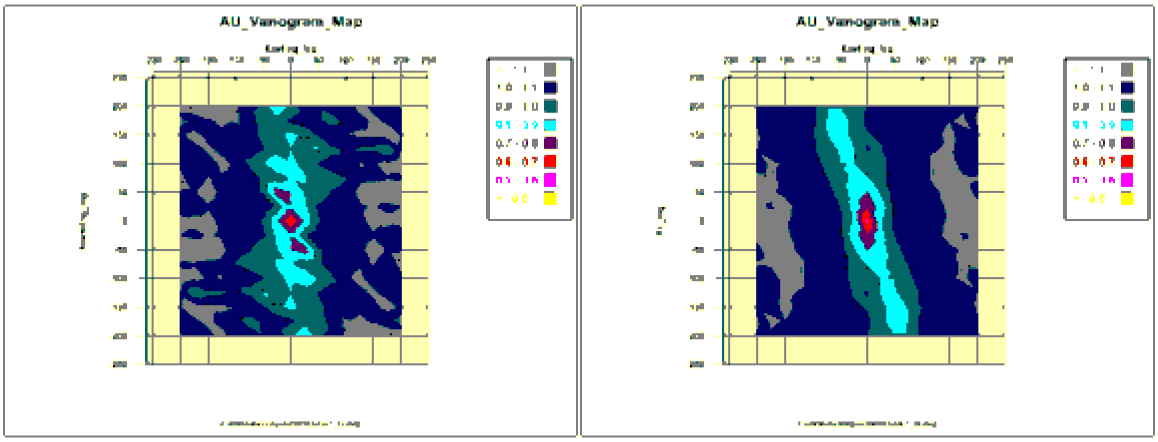


Figure 14-7: Variogram Maps for Gold (LHS=Plan, RHS=E-W Section)

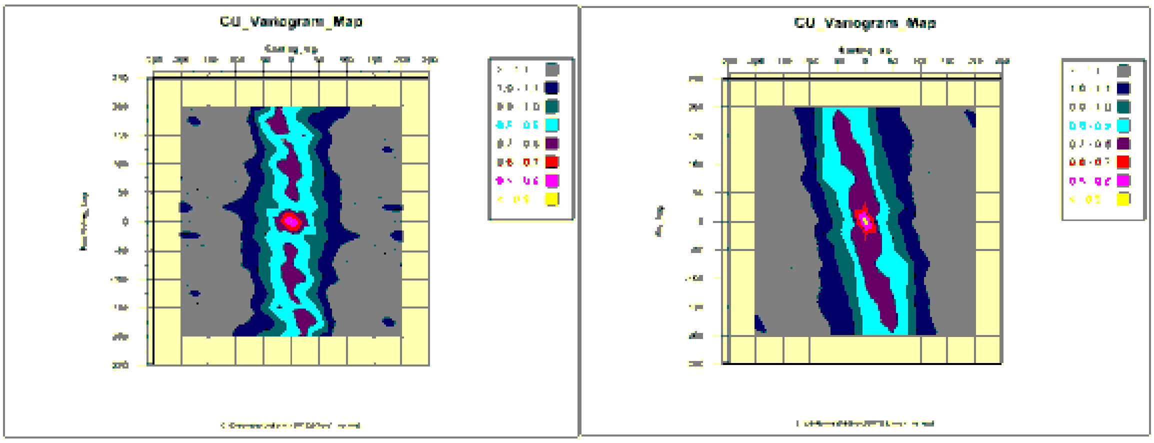


Figure 14-8: Variogram Maps for Copper (LHS=Plan, RHS=E-W Section)

A single resource model has been used for both open pit and underground resource estimation.

Ordinary kriging was considered the appropriate estimation method for gold and copper because these elements have manageable coefficients of variation and their grade distributions are reasonably smooth and gradational, i.e. there is generally a smooth transition from high to low grades.

There was insufficient data in the oxide and transition zones to determine whether these zones are enriched or depleted in gold or copper. Therefore, no boundaries were used between primary, transitional and oxide mineralisation during grade estimation (note that all oxide mineralisation has been classified as Inferred).

Drill hole DDDH83 is the most strongly mineralised drill hole within the resource database. DDDH83 is vertical. Because of this and the lack of adjacent holes to the north, the previous model used a two sweep approach to mitigate its contribution. The 2013 drill programme targeted two drill holes to test the grade immediately to north of this. Due to the addition of these two holes, DDDH83 was treated as all surrounding drill holes.

14.3 Search Strategy

For the Biak Shear Domain a primary 15mE x 75mN x 75mRL search (rotated 64 degrees clockwise, and tilted 8 degrees to the SE) with a minimum of 18 samples, a minimum of three drill holes and a minimum of three octants. A secondary search of 15mE x 100mN x 100mRL for Inferred Resources (rotated 64 degrees clockwise, and tilted 8 degrees to the SE) with a minimum of 12 samples and two drill holes.

For all other domains, a primary 15mE x 75mN x 75mRL search for Measured and Indicated Resources (rotated 50 degrees anti-clockwise, and tilted 8 degrees to the NE) with a minimum of 18 samples, a minimum of three drill holes and a minimum of three octants. A secondary search of 15mE x 100mN x 100mRL for Inferred Resources (rotated 50 degrees anti-clockwise, and tilted 8 degrees to the NE) with a minimum of 12 samples and two drill holes.

14.4 Block Model Dimensions

The block dimensions in the resource block model are as follows:

Minimum (m)	333150mE	1804140mN	2000mRL
Maximum (m)	335715mE	1806705mN	3020mRL
Block Size (m)	15mE	15mN	5mRL
No. of Blocks	171	171	204

14.5 Resource Classification

Resource classification is a reporting-based scheme of classification and relates to the confidence of estimates made within reasonable range of the reporting cut-off grades. The confidence in estimates declines as higher cut-off grades are applied.

The modelling parameters in Section 14.3 outline the search criteria used to define the Indicated and Inferred classes. These define the base classification to which the following modifications were made:

- All resource within the Biak Shear and within 10m of the interpreted southern plane of the shear was classified as Inferred. This primarily reflects structural complexity of the Biak;
- All oxide resource was classified as Inferred. Metallurgical test work shows that little copper will be recovered from oxide material via flotation. Given that overall the gold content of the oxide is generally low, all oxide material has been classified as Inferred. Most of the oxide resource was mined out during 2012;
- The classification of Measured resource was based both on search criteria and 3D geometry. As a first pass, a kriging sweep was set up using the 60m x 15m x 60m search dimensions / rotations as presented in the modelling parameter tables. The minimum sample number required was 20 and the minimum drill hole and octant requirement was 5. The blocks meeting these criteria were then used as a guide to wireframe a volume that was geometrically continuous. These criteria ensure that all Measured Mineral Resource has data falling within both hemispheres of the search, which is important where grade trends are present;
- Blocks with 80% or more within the Bufu solid are classified as Inferred; and
- All mineralisation meeting the Measured criteria below 2390mRL, the previous transition to proposed underground mining, was reclassified as Indicated.

14.6 Mineral Resources

14.6.1 Reporting Date

Mineral Resources for the Didipio open pit and underground are reported as at September 30, 2014.

14.6.2 Qualified Persons

The mineral resources quoted here were prepared by and under the supervision of Jonathan Moore, Chief Geologist for OceanaGold, with assistance from the Didipio Mine Geology team.

14.6.3 Resource Statement

The open pit, underground and combined Mineral Resource estimates are reported in Table 14-3 to Table 14-6, classified in accordance with the JORC 2012 Code and the CIM Definition Standards for Mineral Resources and Mineral Reserves.

The JORC 2012 Code and CIM Standards are identical except that JORC 2012 Code requires additional disclosure around resources extrapolated beyond actual sampled. All Mineral Reserves reported are included within the Mineral Resources reported for the same deposit.

The resource estimate is sub-divided for reporting purposes: an open pit resource that includes all material above an elevation of 2460mRL (base of the updated open-pit design); and an underground resource between 2460mRL and 2070mRL (the vertical extent of the underground design). The open pit resources are depleted for mining as at September 30, 2014.

The open pit resource uses a 0.47g/t AuEq cut-off grade (limited to above the 2460mRL, which is the base of the open pit, but is not pit shell constrained), while the underground resource uses a 1.12g/t AuEq cut-off grade, based on metal prices of US$1,450 per ounce for gold and US$3.80 per pound for copper (the reserve assumptions are US$1,250 per ounce for gold and US$3.20 per pound for copper).

The equation for contained gold equivalent is g/t AuEq = g/t Au + 1.638 x % Cu, based on reserve metal prices of US$1,250 per ounce for gold and US$3.20 per pound for copper.

Table 14-3: Open Pit Resource Estimate

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	6.06	1.81	0.55	0.35	33.1
Indicated	21.91	0.59	0.36	0.42	79.1
Measured & Indicated	**27.96**	**0.86**	**0.40**	**0.77**	**112.2**
Inferred	9.81	0.40	0.20	0.10	19.6

*(above 2460mRL at 0.47g/t AuEq cut-off grade)

Table 14-4: Stockpiles

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	10.99	0.40	0.43	0.14	47.2
Indicated					
Measured & Indicated	**10.99**	**0.40**	**0.43**	**0.14**	**47.2**
Inferred					

*(includes 100kt of transitional ore)

Table 14-5: Underground Resource Estimate

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	2.57	2.50	0.48	0.21	12.3
Indicated	17.10	1.74	0.46	0.96	78.5
Measured & Indicated	**19.67**	**1.84**	**0.46**	**1.17**	**90.8**
Inferred	6.39	1.30	0.40	0.30	23.4

*(between 2460mRL and 2070mRL at 1.12g/t AuEq cut-off grade)

Table 14-6: Combined Resource Estimate

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	19.6	1.11	0.47	0.70	92.6
Indicated	39.0	1.10	0.40	1.38	157.6
Measured & Indicated	**58.6**	**1.10**	**0.43**	**2.08**	**250.2**
Inferred	16.2	0.77	0.27	0.40	43.0

*(at 0.47g/t AuEq cut-off grade above 2460mRL and 1.12 g/t AuEq cut-off grade below 2460mRL)

Less than 0.2% of the total resource comprises oxide and transitional mineralisation.

14.6.4 Comparison with December 31, 2013 Mineral Resource Inventory

The combined open pit, underground and stockpile inventory remains relatively unchanged between December 31, 2013 and September 30, 2014 (Table 14-7), despite processing 2.24 Mt @ 1.11 g/t Au and 0.87 % Cu, a smaller redesigned open pit, an expanded underground mine design and lowering the underground resource cut-off grade from 1.5 g/t AuEq to 1.12 g/t AuEq. Both estimates are based on the same resource model, but the gold equivalence has been revised from AuEq = (Au + 1.671 x Cu) to AuEq = (Au + 1.638 x Cu).

Table 14-7: Comparison to Previous Resource Estimate

Mineral Resource Estimate as at September 30, 2014

OPEN PIT

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	6.06	1.81	0.55	0.35	33.1
Indicated	21.91	0.59	0.36	0.42	79.1
Measured & Indicated	**27.96**	**0.86**	**0.40**	**0.77**	**112.2**
Inferred	9.80	0.40	0.20	0.13	20.0
Total	**37.78**	**0.74**	**0.35**	**0.90**	**131.8**

UNDERGROUND

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	2.57	2.50	0.48	0.21	12.3
Indicated	17.10	1.74	0.46	0.96	78.5
Measured & Indicated	**19.67**	**1.84**	**0.46**	**1.17**	**90.8**
Inferred	6.40	1.30	0.40	0.27	23.0
Total	**26.07**	**1.71**	**0.44**	**1.43**	**114.2**

STOCKPILES

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	10.99	0.40	0.43	0.14	47.2
Indicated					
Measured & Indicated	**10.99**	0.40	**0.43**	**0.14**	**47.2**
Inferred					
Total	**10.99**	**0.40**	**0.43**	**0.14**	**47.2**

COMBINED

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	19.61	1.11	0.47	0.70	92.6
Indicated	39.01	1.10	0.40	1.38	157.6
Measured & Indicated	**58.62**	**1.10**	**0.43**	**2.08**	**250.2**
Inferred	16.20	0.80	0.30	0.40	43.0
Total	**74.83**	**1.03**	**0.39**	**2.47**	**293.3**

Mineral Resource Estimate as at December 31, 2013

OPEN PIT

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	10.58	1.85	0.55	0.63	58.2
Indicated	35.36	0.66	0.36	0.75	127.3
Measured & Indicated	**45.94**	**0.93**	**0.40**	**1.38**	**185.5**
Inferred	12.9	0.4	0.2	0.17	26
Total	**58.84**	**0.82**	**0.36**	**1.55**	**211.3**

UNDERGROUND

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured					
Indicated	7.67	2.36	0.51	0.58	39.1
Measured & Indicated	**7.67**	**2.36**	**0.51**	**0.58**	**39.1**
Inferred	1.80	1.60	0.40	0.09	7.0
Total	**9.47**	**2.22**	**0.49**	**0.67**	**46.3**

STOCKPILES

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	7.42	0.43	0.46	0.10	34.1
Indicated					
Measured & Indicated	**7.42**	**0.43**	**0.46**	**0.10**	**34.1**
Inferred					
Total	**7.42**	**0.43**	**0.46**	**0.10**	**34.1**

COMBINED

Classification	Tonnes (Mt)	Au (g/t)	Cu (%)	Au (Moz)	Cu (kt)
Measured	18.00	1.26	0.51	0.73	92.3
Indicated	43.03	0.96	0.39	1.33	166.4
Measured & Indicated	**61.03**	**1.05**	**0.42**	**2.06**	**258.7**
Inferred	14.70	0.50	0.20	0.26	33.0
Total	**75.73**	**0.95**	**0.39**	**2.32**	**291.7**

14.7 Model Validation

Both visual and statistical validation has been undertaken.

Numerous sensitivity models were built in the evolution of this model.

Bench by bench comparisons of modelled grade versus composite grades are presented here for both copper and gold. Declustered 3m composites are presented also, and provide a more meaningful comparison.

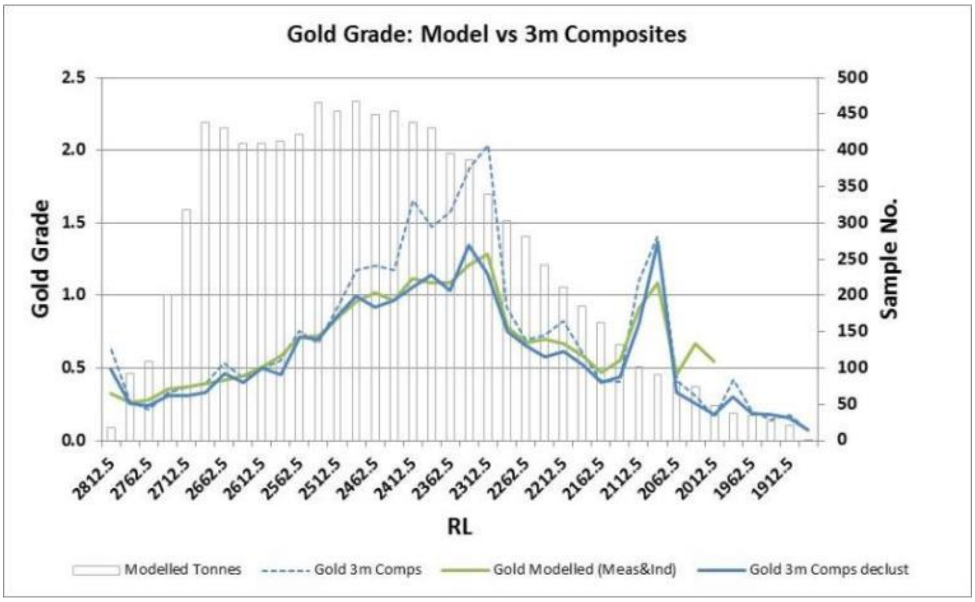


Figure 14-9: Resource Model versus Sample Gold Grades

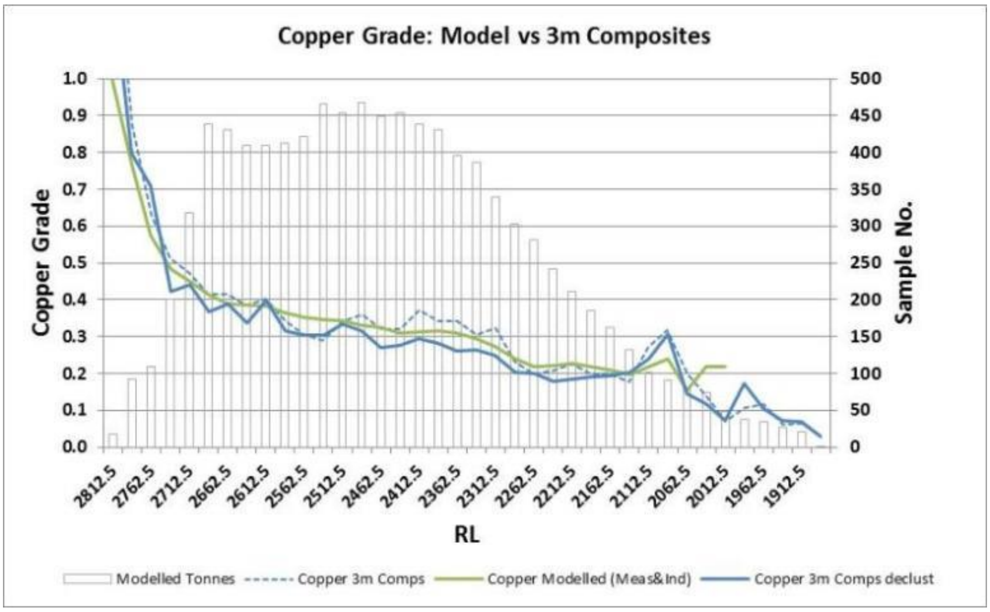


Figure 14-10: Resource Model versus Sample Copper Grades

Mine vs mill reconciliations are presented in Section 14.8.

14.8 Reconciliation

The following section presents resource model versus mined comparisons as well as mine feed versus mill comparisons at 0.5 g/t AuEq and at 1.5 g/t AuEq cut-offs.

Table 14-8 and Table 14-9 compare resource model versus mined tonnages and grades (note that only Measured and Indicated resources are included). Figure 14-11 and Figure 14-12 chart month by month comparisons. For the period, August 1, 2012 up until August 31, 2014, OceanaGold had mined 14.9 Mt and 5.2 Mt at 0.5 g/t and 1.5 g/t AuEq cut-offs respectively. This is sufficient tonnage to meaningfully compare the resource model versus trucked and mill estimates.

The grade control estimates for a good proportion of the resource mined up until May 2014 however, were based on blast hole sampled grade control. Blast hole sampling was discontinued in May 2014 due to concerns over sampling quality as well as the inability to provide reliable short term short term scheduling models (due to 7.5m drill hole reach, as opposed to 30m for RC grade control).

Whilst the grade control feed estimates compare well with mill back-calculated, Table 14-10, more mined tonnage based upon reverse circulation sampled grade control will increase confidence in the reconciliations. When sufficient tonnage is reconciled (by early/mid 2015), the resource modelling parameters will be reviewed).

Table 14-8: Mine versus Resource Model for ≥ 0.5 AuEq

August 2012 to August 2014	Project to Date				
	Mt	Grade		Contained Metal	
		Cu, %	Au, gpt	Cu, T	Au, oz
Load and Haul (survey adjusted)	14.91	0.58	0.59	86,400	283,000
Resource Model	12.96	0.56	0.61	72,500	254,000
Ratio Trucked / Resource	1.15	1.04	0.97	1.19	1.11

Table 14-9: Mine versus Resource Model for ≥ 1.5 AuEq

August 2012 to August 2014	Project to Date				
	Mt	Grade		Contained Metal	
		Cu, %	Au, gpt	Cu, T	Au, oz
Load and Haul (survey adjusted)	5.22	0.93	1.01	48,600	170,000
Resource Model	4.97	0.87	1.06	43,200	169,000
Ratio Trucked / Resource	1.05	1.07	0.95	1.12	1.00

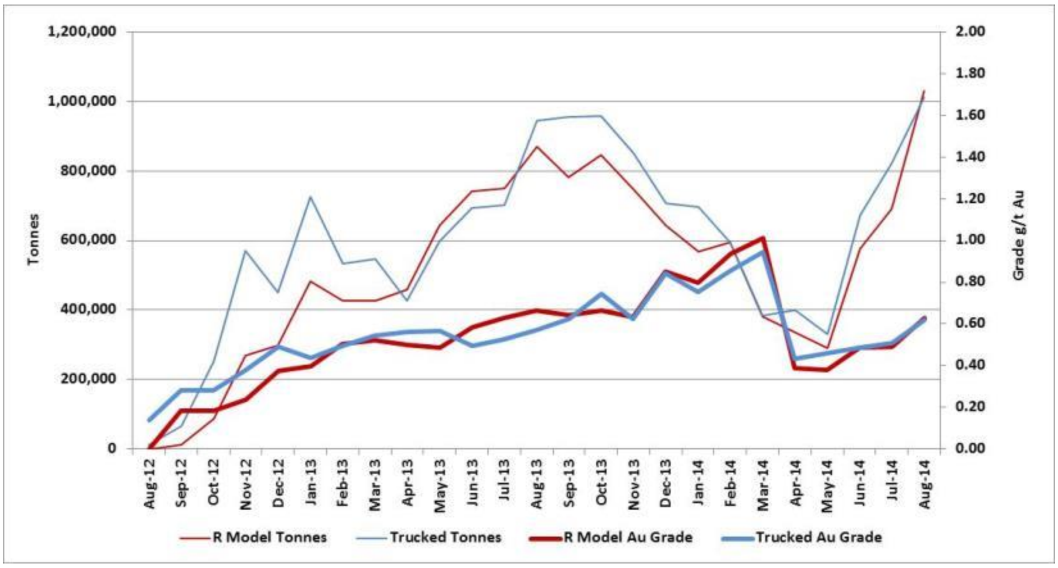


Figure 14-11: Gold Estimates, Mine versus Resource Model for ≥ 0.5 AuEq, by Month

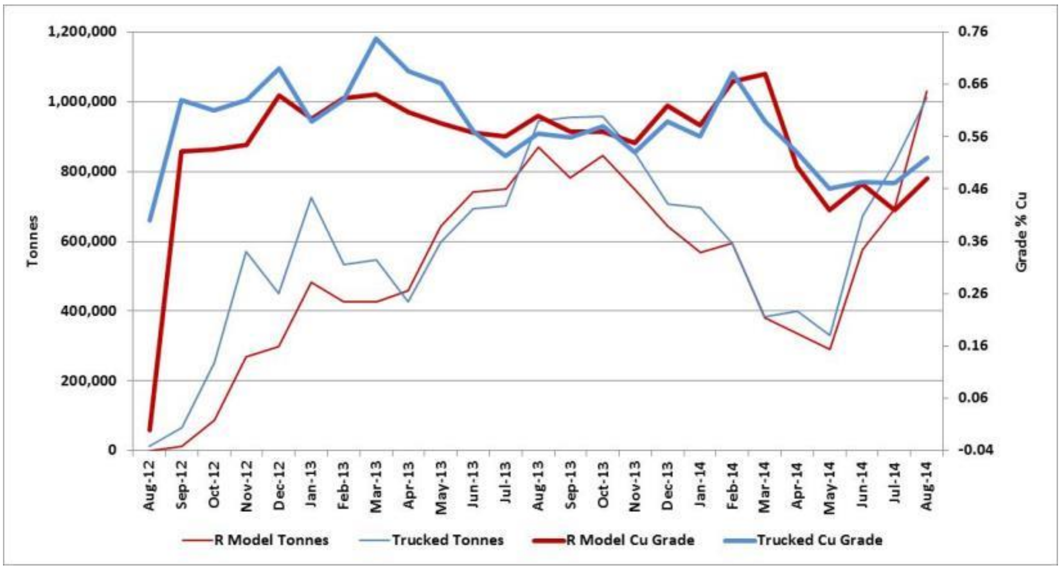


Figure 14-12: Copper Estimates, Mine versus Resource Model for ≥ 0.5 AuEq, by Month

Table 14-10 compares mine versus mill feed tonnes and grade estimates. While short term reconciliation remains erratic, the underlying, long term estimates are in good agreement.

Table 14-10: Milled (CV3) vs Mine Feed

January 2013 to August 2014	Project to Date				
	Mt	Grade		Contained Metal	
		Cu, %	Au, gpt	Cu, T	Au, oz
Milled (CV3)	4.60	0.92	1.00	42,300	147,000
Crusher Feed	4.66	0.93	0.99	43,200	148,000
Ratio Milled / Feed	0.99	0.99	1.01	0.98	1.00

14.9 Issues Affecting Mineral Resources

The author is not aware of environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issues that will materially affect the resource estimates.

15 MINERAL RESERVE ESTIMATES

15.1 Reporting Standard

The reserves were compiled with reference to the NI 43-101 and JORC.

This section summarises the main considerations in relation to preparation of reserves and provides references to the sections of the study where more detailed discussions of particular aspects are covered.

The basis for the estimation of Mineral Reserves is metal prices of US$1,250 per ounce for gold and US$3.20 per pound for copper.

15.2 Reporting Date

The Didipio operation Reserves were first quoted in the NI 43-101 technical report filed in July 2011[3]. They have been depleted and reported annually since.

Mineral Reserves for Didipio open pit and underground are reported as at September 30, 2014.

15.3 Qualified Persons

The qualified person responsible for the reporting of open pit and underground Mineral Reserves at Didipio operation is Mr. Michael Holmes MAusIMM (CP), Chief Operating Officer of OceanaGold Corporation. The Mineral Reserves have been prepared under the supervision of Simon Griffiths, MAusIMM (CP) for Open Pit Reserves and Mr. Murray Smith, MAusIMM (CP) for Underground Reserves. Both Mr Griffiths and Mr Smith are Qualified Persons as defined by NI 43-101 and have visited Didipio during the past three months. Mr Griffiths is an employee of OceanaGold (not independent) and Mr Smith is an employee of Mining Plus Consultants Pty Ltd (Independent).

15.4 Mineral Reserves

The combined Mineral Reserves for Didipio Open Pit and Underground are summarised in Table 15-1:

Table 15-1: Combined Open Pit and Underground Mineral Reserves Estimate

Reserve Area	Reserve Class	Tonnes (Mt)	Au (g/t)	Cu (%)	Contained Au (Moz)	Contained Cu (kt)
Open Pit	Proven	6.65	1.77	0.54	0.38	35.7
	Probable	15.44	0.61	0.42	0.30	64.8
Underground	Proven	2.25	2.48	0.47	0.18	10.5
	Probable	13.67	1.76	0.43	0.77	58.1
Stockpile	Proven	10.99	0.40	0.43	0.14	47.4
	Probable	0.00	0.00	0.00	0.00	0.0
Total Proven		19.89	1.10	0.47	0.70	93.6
Total Probable		29.11	1.15	0.42	1.07	122.9
Didipio Total (Sept 30, 2014)		**49.00**	**1.13**	**0.44**	**1.77**	**216.5**

Reserves are based on the following metal price assumptions:
Commodity selling prices of US$1,250/oz. for gold and $3.20/lb for copper.
The cut-off grade for the open pit reserve is 0.52g/t AuEq and for the underground is 1.3g/t AuEq.
The gold equivalence grade is calculated as g/t AuEq = g/t Au + 1.638 X % Cu.

[3] NI 43-101 "Technical Report for the Didipio Project" dated July 29, 2011, available on the Company's website.

15.5 Comparison with Previous Reserve Statement (December 31, 2013)

The change in Mineral Reserves reported as at September 30, 2014 compared with December 31, 2013 is reported in Table 15-2.

Table 15-2: Dec 2013 Reserve Estimates vs. Sep 2014 Reserve Estimates

Reserve Area	Tonnes (Mt)	Au (g/t)	Cu (%)	Contained Au (Moz)	Contained Cu (kt)
December 31, 2013 Reserve					
Open Pit	32.32	1.02	0.46	1.064	147.3
Underground	5.91	2.25	0.45	0.428	26.6
Stockpiles	7.42	0.43	0.46	0.103	34.1
Didipio Total (Dec 31, 2013)	**45.65**	**1.09**	**0.46**	**1.594**	**208.0**
Changes to Reserve, Dec13 vs.Sept14					
Open Pit Production (9 mths FY14)	-5.86	0.06	0.00	-0.119	-31.5
Open Pit New Design	-4.36			-0.263	-15.3
Underground	10.01	-0.39	-0.02	0.524	42.0
Stockpile Movement	3.57	-0.03	-0.03	0.038	13.3
Didipio Total Reserve Changes	**3.35**	**0.04**	**-0.01**	**0.180**	**8.48**
September 30, 2014 Reserve					
Open Pit	22.10	0.96	0.45	0.681	100.5
Underground	15.92	1.86	0.43	0.952	68.6
Stockpiles	10.99	0.40	0.43	0.141	47.4
Didipio Total (Sept 30, 2014)	**49.00**	**1.13**	**0.44**	**1.774**	**216.5**

15.6 Open Pit

15.6.1 Open Pit Reserves

Using a cut-off grade of 0.52 g/t AuEq, the Didipio operation's open pit Mineral Reserves are 22.10 million tonnes at a grade of 0.96 g/t Au and 0.45% Cu.

The reserves are evaluated within an updated final stage six pit design with a basal limit of 2460mRL.

Table 15-3: Open Pit Reserves, September 30, 2014

Reserve Area	Tonnes (Mt)	Au (g/t)	Cu (%)	Contained Au (Moz)	Contained Cu (kt)
Proven	6.65	1.77	0.54	0.380	35.7
Probable	15.44	0.61	0.42	0.301	64.8
Total Open Pit	**22.10**	**0.96**	**0.45**	**0.681**	**100.5**

The quantity of waste within the same updated stage six pit design is 52.31 million tonnes, with a strip ratio of 2.5:1 (waste:ore).

The open pit waste quantity includes approximately 4.5 million tonnes of Inferred Resource. OceanaGold is undertaking a targeted resource definition drilling programme during Q4 of 2014 with the objective of converting near term Inferred Resource tonnes to an Indicated Resource classification. This Inferred Resource material has not been included in either Mineral Reserve totals or economic evaluation, but has been included as waste.

15.6.2 Reserve Block Model

The parameters for the resource block model used in the reporting of mineral reserves are reported in Table 15-4.

Table 15-4 : Open Pit Reserve Block Model Parameters

Reserve Block Model Parameters	Description			
Block model file ref.	Summaryupdated-model-jun4			
Minimum Coordinates	1805100	334110	2325	
Maximum Coordinates	1806300	335400	2825	
User Block Size	5	5	2.5	
Min. Block Size	5	5	2.5	
Rotation	0	0	0	
Total Blocks				
Attribute Name:	***Type***	***Decimals***	***Default***	***Description***
au	Real	2	0	Resource gold grade
cu	Real	2	0	Resource copper grade
sg	Real	2	0	Density value from resoruce block model.
class	Integer	-	0	0- Unclassified, 1- measured, 2-Indicated, 3-Inferred
weath	Real	-	0	1-Oxide, 2&3-Transitional, 4-Fresh Rock
aueq	Real	-	0	au + (cu *1.638), using Au and Cu price provided by geology
material	Character	-	unassigned	Unassigned attribute for mineshced
stage	Integer	-	0	3 - Stage3, 4 - stage4, 5 - Stage5, 6 - Stage6

15.6.3 Cut-off Grade

The cut-off grade applied in the reporting of Mineral Reserves for the Didipio Open Pit is 0.52g/t AuEq. The cut-off grade is derived using the following parameters:

Table 15-5: Didipio Open Pit Cut-off Grade Parameters

Parameters	Units	Value
Gold price	US$/oz.	1,250
Ore processing - operating cost	US$/t Ore	7.88
G&A (inclu. GC and ROM)	US$/t Ore	9.45
Au recovery	%	87.5
Au royalty	%	2.0
Open pit cut-off grade		**0.52**

The ore processing and G&A parameters above have non-material differences from those used in the earlier Whittle pit optimisation study which were based on input parameters from the 2014 LOMP.

Didipio has an operating process plant capacity of 3.5 million tonnes per annum (Mtpa), which is expected to be achieved in Q4 of 2014 following completion of ramp up initiatives. Large low-grade stockpiles are being accumulated to be processed along with higher grade ore from the underground mine.

Experience from earlier studies shows that the contribution of higher early cash flows to present value of the project outweighs the effect of costs brought forward by mining faster to maintain 3.5 Mtpa in year three of high-grade feed.

15.6.4 Mining Dilution and Ore Loss

The ore zones are broad on each mining bench, and the overall dilution edge effects are minimal, with the result that there is little difference between the overall in situ and diluted tonnes and grade. This could be a consequence of known Inferred Resource material which exists around the targeted Mineral Reserve. Experience to date has shown that any dilution occurring at the boundaries comprises of mineralised material which is not currently included in the Mineral Reserve estimate.

In addition, the Mineral Resource block model has a block dimension which is larger than the optimum selective mining unit (SMU) for the equipment currently operating at Didipio.

As a result of these factors, when estimating open pit Mineral Reserves there is no requirement for additional mining dilution subsequent to the geological modelling stage. OceanaGold will continue to monitor the reconciliation of mining (design to actual), and the potential impacts of mining dilution.

No mining losses were applied. It is considered that the resource estimation technique applied to the broad ore zones provides an adequate estimate of the run of mine (ROM) tonnes and grades. Recent reconciliation data from mining the Didipio open pit supports this approach.

15.6.5 Mineral Reserve Categories

The open pit Mineral Reserves are derived from the Measured and Indicated Mineral Resource blocks in the resource block model. Proven Mineral Reserves are derived from Measured Resources and Probable Mineral Reserves are derived from Indicated Resources.

Given current operational experience of open pit mining at Didipio, no extraordinary risk factors were identified to warrant downgrading of the open pit Mineral Reserve categories in the conversion of Mineral Resource material to Mineral Reserve.

Table 15-6: Didipio Open Pit Ore Categories

Grade BIN	Type	Destination
<0.5gteq and <0.15% Cu	Waste	Construction Material
0.15-0.3% Cu	Waste - Blue	Stockpiled & quarantined for future rise in Cu prices
0.5-1.5 g/teq	Low Grade	Stockpiled for future processing
1.5-2.0g/teq	ROM Grade	Fed as ROM feed if it does not displace High Grade. Otherwise stockpiled.
>2.0g/teq	High Grade	Priority mill feed

15.7 Underground

15.7.1 Underground Mineral Reserves

The 2014 study supported a reduction in cut-off grade from 1.65 g/t AuEq used in the previous study undertaken in 2011, to the current value of 1.3 g/t AuEq. A revised mine design, schedule and cost model were completed and have formed the basis for the estimation of the underground Mineral Reserve as at September 30, 2014.

Using a cut-off grade of 1.3 g/t AuEq, the Didipio underground Mineral Reserves are 15.9 million tonnes at a grade of 1.86 g/t Au and 0.43% Cu (Table 15-7).

Table 15-7: Underground Mineral Reserves, September 30, 2014.

Reserve Area	Reserve Category	Tonnes (Mt)	Au (g/t)	Cu (%)	Contained Au (Moz)	Contained Cu (kt)
UNDERGROUND	Proven	2.25	2.48	0.47	0.179	10.5
	Probable	13.67	1.76	0.43	0.772	58.1
Total Underground Reserve		**15.92**	**1.86**	**0.43**	**0.952**	**68.6**

The change in Mineral Reserves by reporting category since the previous release at December 31, 2013 is detailed in Table 15-8.

Table 15-8: Change in Underground Mineral Reserves by Reporting Category

Underground Reserve Category	Tonnes (Mt)	Au (g/t)	Cu (%)	Contained Au (Moz)	Contained Cu (kt)
Proven Reserve					
As at 31 Dec 2013	0.00	0.00	0.00	0.000	0.0
Change in Design	2.25	2.48	0.47	0.179	10.5
As at 30 Sep 2014	2.25	2.48	0.47	0.179	10.5
Probable Reserve					
As at 31 Dec 2013	5.91	2.25	0.45	0.428	26.6
Change in Design	7.76	1.38	0.41	0.345	31.5
As at 30 Sep 2014	13.67	1.76	0.43	0.772	58.1
Total Underground Reserve at 30 Sep 2014	**15.92**	**1.86**	**0.43**	**0.952**	**68.6**

15.7.2 Ore Recovery and Dilution

The underground mine plan is based on a long hole open stoping (LHOS) mining method, with cemented paste backfill incorporated to enable a primary and secondary extraction sequence. There are two stope designs, being 20m (w) x 20m (l) x 30m (h) where ground conditions permit, and a reduced stope size of 10m (w) x 20m (l) x 15m (h) in areas of anticipated poorer ground conditions, generally associated with the presence of a breccia style of mineralisation.

The design establishes two mining horizons. The lower horizon extends from 2070mRL to 2280mRL, with a 30m high sill pillar from 2250mRL to 2280mRL. The upper horizon extends from 2280mRL to 2460mRL, with a 30m high crown pillar from 2430mRL to 2460mRL, immediately below the final open pit floor. The sill pillar is to be recovered at the completion of the lower mining panel, and the crown pillar at the end of the mine life.

Loss and dilution factors were applied as follows in Table 15-9.

Table 15-9: Ore Recovery and Dilution Parameters

	Dilution	Recovery of Design Excavations			
		15m stopes		30m stopes	
		Tonnage	Metal	Tonnage	Metal
Lateral Development - Waste	10%	110%	-	110%	-
Lateral Development - Ore	0%	100%	100%	100%	100%
Vertical Development - Waste	5%	105%	-	105%	-
30 m high Longhole Stope - Primary	3%			103%	98%
30 m high Longhole Stope - Secondary	8%			108%	95%
15 m high Longhole Stope - Primary	4%	104%	98%		
15 m high Longhole Stope - Secondary	10%	110%	95%		
30m high Sill/Crown Pillar Stope				80%	80%

Dilution grades were assumed to have zero grade, to account for minimal remnant grade in the placed paste backfill, principally comprised of mine tailings.

15.7.3 Cut-off Grade

A mine design and schedule were completed at a preliminary estimated cut-off grade of 1.5 g/t AuEq. The underground mining inventory was determined using a combination of 20m (w) by 20m (l) by 30m (h) and 10m (w) x 20m (l) x 15m (h) long hole open stoping method mine designs that targeted effective extraction of economic material above this cut-off grade. This initial design and schedule also targeted the recovery of material classified as an Inferred Resource.

A detailed, first principles cost model was developed based upon the schedule, and was used to ascertain average life-of-mine costs for mining, processing and general and administrative. These average, life-of-mine costs were then used to derive the cut-off grade of 1.3 g/t AuEq. The gold price assumption applied is US$1,250/oz. Other input parameters including process recoveries, treatment and recovery charges were derived from the initial schedule and technical economic model, refer Table 15-10.

Table 15-10: Underground cut-off grade parameters

Parameters	Units	Value
Mining unit cost - Operating	US$/t Ore	26.99
Mining unit cost - Capital	US$/t Ore	11.94
Ore Processing unit cost	US$/t Ore	7.88
G&A:		8.74
Total on-site underground opex	**US$/t**	**55.54**
Gold price	US$/oz.	1,250
Au Recovery	%	87.5
Au payability	%	98.2
Au royalty	%	2.4
Treatment charge	US$/dmt	75.0
Site operating cut-off grade	**g/t AuEq**	**1.30**

A revised design was undertaken on the cut-off grade of 1.3 g/t AuEq, again targeting all economic material, including material classified as an Inferred Resource. Each design item was interrogated against the resource block model with material broken down by resource category. Dilution and recovery factors were applied as detailed in Table 15-9, and the average grade of each design item reassessed only allowing contribution of metal from Measured and Indicated Mineral Resource categories. As such, any Inferred Resource material was effectively included as diluting material at zero grade.

This recalculated reserve grade was assessed against the cut-off grade criteria previously determined to be 1.3 g/t AuEq, and any design item above this threshold was retained for inclusion in the reserve schedule. In addition, any design items with a recalculated reserve grade below 1.3 g/t AuEq but above a marginal cut-off grade of 1.0 g/t AuEq were individually assessed for inclusion.

The calculation of the marginal cut-off grade includes the milling and engineering costs and the variable cost differential between hauling waste to the waste dump and ore to the ROM pad. The marginal cut-off grade is used when lower grade is material is required to be mined to access higher grade material (and can be processed providing it doesn't offset higher grade mill feed).

Approximately 5% of metal included in the Mineral Reserve estimate detailed in Table 15-7 is sourced from material with an average grade of less than 1.3 g/t but more than 1.0 g/t AuEq, i.e. above marginal cut-off.

15.7.4 Underground Reserve Categories

The underground Mineral Reserves are derived from the Measured and Indicated Mineral Resource category blocks in the Mineral Resource model. Proven Mineral Reserves are taken from Measured Mineral Resources and Probable Reserves are taken from Indicated Resources.

As discussed in Section 15.7.3, a modest amount of lower grade material is included in the Mineral Reserve inventory as it is necessary underground development material that must come to surface, at which point it is economically attractive to treat it rather than send it to waste based on ROM loading, processing and overheads costs.

15.8 Sensitivity of Reserves

The Mineral Reserve Estimates will be materially affected by planned resource definition drilling which is expected to increase Mineral Reserves. The economic analysis has included a provision of $10 million for approximately 50,000 metres of resource definition drilling over the next 3-4 years. Inferred resources which are expected to translate to reserve classifications in the open pit and the underground mine have been identified based on technical and economic parameters.

The operation has generated revenues derived from silver production. Based on recent assaying and resource modelling OceanaGold expects production of silver to continue at approximately the levels recently experienced. It is expected that silver will be included in the next update of Mineral Reserve Estimates at December 31, 2014. The impact of introducing Silver will be material to Mineral Reserve Estimates.

16 MINING METHODS

16.1 Deposit

This Technical Report relates only to the Didipio deposit and no other nearby deposits are included in the evaluation of mining methods. Gold and copper grades are zoned from a high-grade core outwards to a lower-grade halo. Gold grades within the core tend to increase with depth, whereas copper grades tend to decrease with depth.

16.2 Survey Model

The grid system used at the Didipio operation is UTM 51N WGS84. The topographical survey file used in the open pit mining study is *EOM_2014_September.str/dtm* file pair and the file format is GEOVIA Surpac™ mining software.

16.3 Recent Technical Studies

During 2014 OceanaGold completed various input studies to support its technical understanding of current and future operations at Didipio. The summary findings of those studies are included in this NI 43-101 Technical Report. The technical studies completed are:

- Hydrology, including surface water management plans, (GHD);
- Hydrogeology, comprising groundwater modelling and dewatering design, (GHD);
- Geotechnical engineering for open pit design, (AMC);
- Geotechnical engineering for waste rock management, (AMC);
- Geotechnical engineering for underground design, (AMC);
- Open pit study including pit optimisation, (AMC), mine design and scheduling, (OceanaGold);
- Underground ventilation, (AMC);
- Underground backfill, (AMC);
- Underground mine design and scheduling, (OceanaGold);
- Ore competency modelling, (OceanaGold);
- Economic evaluation, (OceanaGold).

16.3.1 Geotechnical Engineering

OceanaGold commissioned AMC to complete geotechnical studies on open pit slope stability, underground design and waste storage facilities. Data collection for geotechnical studies included drilling, logging and laboratory analysis of 3500m of core, geotechnical pit mapping and acoustic televiewer surveys. OceanaGold will continue to develop its understanding of geotechnical design requirements in line with study recommendations made by AMC and recently introduced data collection and monitoring regimes.

16.3.2 Hydrology

OceanaGold engaged GHD (Australia) in 2013 to review the site water balance and surface water management. The hydrology study re-assessed the base case and revised mine plans to reduce uncertainty in relation to ground and surface water management

A key output of the hydrology study was a Surface Water Management Plan and assessment of the impacts of the alternative mining methods or pit designs under consideration.

16.3.3 Hydrogeology

GHD were also engaged to undertake review and testing of the hydrogeology conditions affecting the open pit and proposed underground mine. The focus of the hydrogeology study was to review existing groundwater inflow predictions and produce a new groundwater model based on the revised designs.

A robust groundwater flow model capable of representing the open pit mine developing over time, with varying recharge as the mine develops and changing river conditions has been developed for the Didipio operation. The model was calibrated using existing conditions, previous test work and dewatering and monitoring data collected from site pumping.

16.3.4 Paste Backfill

OceanaGold engaged AMC (Australia) to undertake backfill test work to verify the suitability of the processed tailings for paste backfill. The analysis also included a preliminary review of fill mass stability, mix design, system rates, fill plant flow rates and utilisation, backfill demand, paste plant conceptual process flow and specification.

16.3.5 Ventilation

AMC (Vancouver) were engaged to undertake a detailed ventilation study for the proposed underground mine. The purpose of the study was to review the ventilation plan for the underground mine and detail airflow requirements.

AMC’s study assessed the overall ventilation approach, airflow requirements, overview of primary ventilation and overview of auxiliary ventilation and network modelling of the deposit.

The proposed mine will be ventilated by a “Pull” or exhausting type ventilation system. The ‘primary mine’ ventilation fans will be located at the primary exhausts and will develop sufficient pressure to provide ventilation to all workings from the intakes through to the exhaust system and to the surface.

16.3.6 TSF Design Review

GHD has conducted a design and capex review of the TSF at the Didipio operation. The revised mine designs for the open pit operation has resulted in a significant reduction in mined waste over the life of mine. In addition the suitability of using tailings for underground paste backfill has been confirmed by recent test work which significantly reduces the volume of tailings which will report the TSF. These factors have resulted in a reduction in the final TSF design height.

To achieve the required flood storage capacity a storage basin between the TSF and WRD structures has now been included in designs.

The revised TSF crest level has reduced by 6m from 2818mRL to 2812mRL and subsequent saving of $3M in TSF capital expenditure for the embankment alone. Other cost savings not estimated are TSF pumping operating costs.

16.3.7 Open Pit Mining Limits

During the 2014 optimisation study OceanaGold contracted AMC to assist with the study of open pit mining limits and assessment of the optimum location for the transition between open pit and underground, i.e. location of the top of the crown pillar.

The analysis concluded that the optimum location for the base of the open pit is 2460mRL.

16.4 Open Pit Mining

16.4.1 Mining Method

The mining method at Didipio open pit is conventional drill, blast, load and haul with standard mid-sized mining equipment comprising 90 tonne class off-road haul trucks and 200 tonne excavators.

16.4.2 Mining Contract

OceanaGold has had a mining contractor for open pit operations, in place since commencement of the pre-strip in January 2012.

The Didipio Gold and Copper Project Open Cut Mining Agreement No. 2012-DDP-005 is a mining contract where works are done under a schedule of rates for:

- clear and grub;
- drilling and blasting, includes drilling, charging, firing, and any blasting accessories;
- load and hauling, which includes excavation, in-pit road formation, road and pit bench and dump maintenance, rates for each 15 m vertical interval in each pit stage;
- pit dewatering;
- crusher feeding and stockpile reclaim; and
- variation works outside of the schedule of rates are done under day rates.

The mining fleet and ancillary fleet are owned and financed by the contractor. OceanaGold has retained an option to purchase or take on the lease in the event of early termination of the contract.

The mining contract term is for six years though OceanaGold has the option to terminate after four years.

16.4.3 Geotechnical Engineering

Prior to this NI 43-101 Technical Report, the Didipio open pit design was based on geotechnical studies undertaken by RDCL (NZ) in 2008.

OceanaGold engaged AMC in 2013 to undertake a detailed geotechnical study for the Didipio operation open pit and underground projects. The focus of the open pit geotechnical study was to optimise the open pit design and ensure overall slope stability below critical infrastructure.

16.4.3.1 Data Collection

Data collection for the geotechnical study included:

1. **Drilling**, refer to Figure 16-1,
   - 2014 geotechnical holes shown in red; 2013 resource holes shown in blue; 2008 RDCL geotechnical holes shown in green.
   - the 2014 geotechnical drilling and the 2013 resource drilling produced a combined 4,460 m of drill core.
   - drill core from each hole was orientated using a ‘Reflex ACT II’ orientation tool. Orientation lines were marked on the core by the drillers.
2. **Core logging**
   - Interval logging and structural logging of the 2014 geotechnical drilling was conducted jointly by OceanaGold and AMC. Interval logging of these drill holes was structured to enable assessment of RMR_{89} (after Bieniawski) for each logged interval.

- Re-logging of the 2013 resource drilling was also completed by AMC to ensure consistency of data.
- Structural logging of drill core involved measuring alpha and beta angles relative to the orientation line. This data was then processed using DIPS software to obtain true dip and dip direction. Some inconsistency was identified in the orientation data and as such much of the structural drilling data was not considered for the structural analysis.
- Structural property data from the drilling logging was used as inputs to the rock mass classification.

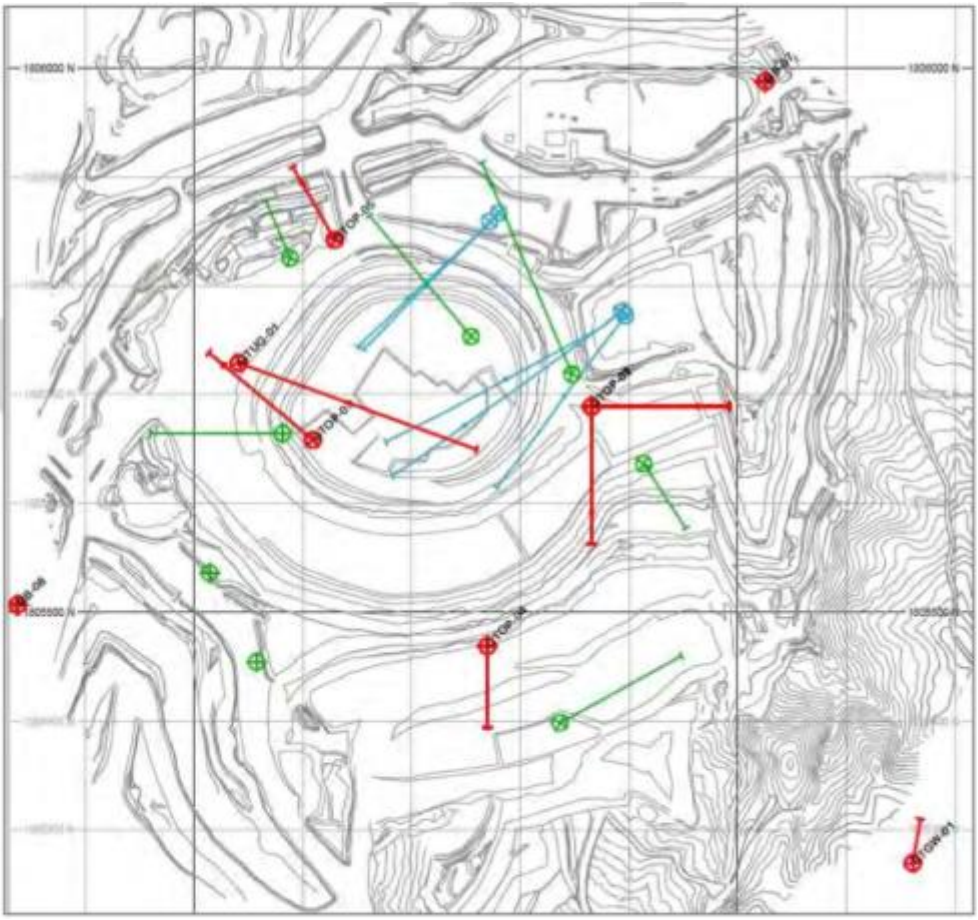


Figure 16-1 : Geotechnical and Hydrogeology Investigation drill holes

3. Acoustic televiewer survey

- In addition to orientated drill core data, acoustic televiewer (ATV) surveys were conducted in the majority of 2014 geotechnical drill holes.
- The ATV is a geophysical tool the records a sonar log (image of the walls of the hole. From the image, geotechnical structures can be identified and classified based on prominence, and the structure orientated.
- The orientation data from the ATV surveys is considered to be more reliable than that from orientated drill core as the image of the drill hole is taken in-situ, and orientated based on a separate gyro survey of the drill hole.
- Over 2,500 structures were picked from the ATV surveys.

4. Geotechnical pit mapping

- Detailed geotechnical mapping was undertaken by OceanaGold in 2013 and again by AMC and OceanaGold in 2014 along with data collected from site.
- A total of more than 2,000 m of line mapping of fresh rock exposures was available for this study.
- Mapping data was collected from each of the major geotechnical domains incorporated in the structural analyses.

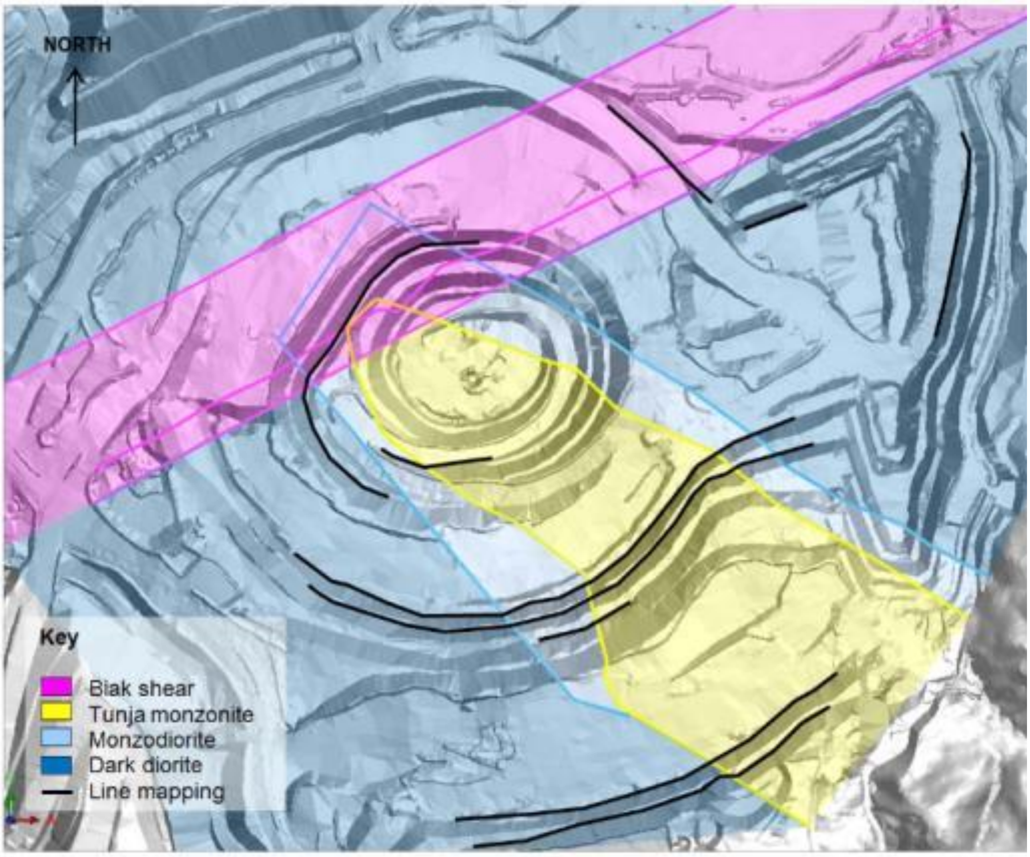


Figure 16-2: Line Mapping (black lines) and Geotechnical Domains, Open Pit (Feb 2014).

5. **Laboratory testing**
   - Laboratory testing of intact rock testing structural strength properties on whole core samples selected from the 2014 and 2013 drilling programmes. The summary of testing, completed by two separate laboratories, is presented in Table 16-1.
   - The purpose of UCS, UTS and HTX testing is to define the strength of intact rock. The purpose of the direct shear testing is to define the shear strength of the natural fractures (structures) within the rock mass.

Table 16-1: Summary of laboratory testing

Test	E-Precision Laboratory	Geotechnical Corporation
Uniaxial Compressive Strength (UCS)	12	18
UCS with Young's Modulus (E) and Poisson's Ratio (v)	18	-
Brazilian Indirect Tensile Strength (UTS)	18	4
Triaxial Strength tests - single stage (HTX)	24	12
Direct Shear tests (single stage)	27	5
Total Tests	**99**	**39**

16.4.3.2 Pit Design Recommendations

The slope design parameters recommended are based on the results of bench scale, inter-ramp and overall slope scale analyses, and with consideration of the acceptance criteria presented in Table 16-2. The acceptance criteria are based on common industry applied values (after Read and Stacey), except for the north-west, north and north-east walls, in which more stringent acceptance criteria have been applied due to the proximity of critical mine infrastructure to the pit crest in these areas.

Table 16-2: Slope design acceptance criteria

Slope	Slope Scale	Factor of Safety	Probability of Failure (%)
North-west, North and North-east	Bench	1.05	25
	Iner-ramp	1.30	10
	Overall	1.50	3
Other	Bench	1.05	25
	Iner-ramp	1.15	10
	Overall	1.35	5

Table 16-3 reports the recommended slope design parameters including bench face angles (BFA) and corresponding inter-ramp angles (IRA) for each geotechnical domain for each pit sector. These recommendations are based on a bench height of 20 m and berm width of 8 m, and apply to 'fresh' and 'slightly' weathered rock mass conditions. The relative locations of the pit sectors within the optimised Stage 6 design are illustrated in Figure 16-3.

A maximum overall slope angle of 47° is recommended (within 'fresh' or slightly weathered rock mass conditions). AMC recommends that overall slope stability be reassessed if any redesign incorporates a steeper overall slope angle.

Table 16-3: Recommended Slope Design Parameters

Pit Wall Sector	Geotechnical Domain							
	Dark diorite		Biak Shear		Tunja monzonite		Monzodiorite	
	BFA (°)	IRA(1) (°)	BFA (°)	IRA (°)	BFA (°)	IRA (°)	BFA (°)	IRA (°)
A & B	65	49.1	55	42.3	n/a		n/a	
C	60	45.7	55	42.3	n/a		n/a	
D & E	55	42.3	55	42.3	n/a		n/a	
F & G	65	49.1	n/a		n/a		65	49.1
H	n/a		n/a		60	45.7	n/a	
I	65	49.1	n/a		n/a		65	49.1
J & K	70	52.6	n/a		n/a		70	52.6

(1) IRA is angle resulting from recommended bench configuration

n/a = geotechnical domain not well represented in pit wall sector based on geological model

Bench height and berm width dimensions were selected with consideration of achieving improved catch capacity, and reducing rock fall hazard at the mine. Early observations of the pit walls showed significant crest loss in many areas of the pit, with resulting loss of catch capacity. OceanaGold has since implemented improved blasting practices, refer to 16.4.13.2.

Recommendations for slope design parameters in weathered and transitional materials are summarised in Table 16-4.

Table 16-4: Slope design parameters for weathered and transitional materials

Parameter	Completely Weathered Material		Transitional Materials
	North Wall	All Other Walls	
Bench Face Angle (BFA)	20°	25°	45°
Bench Height	15 m	15 m	15 m
Berm Width	10 m	10 m	8 m

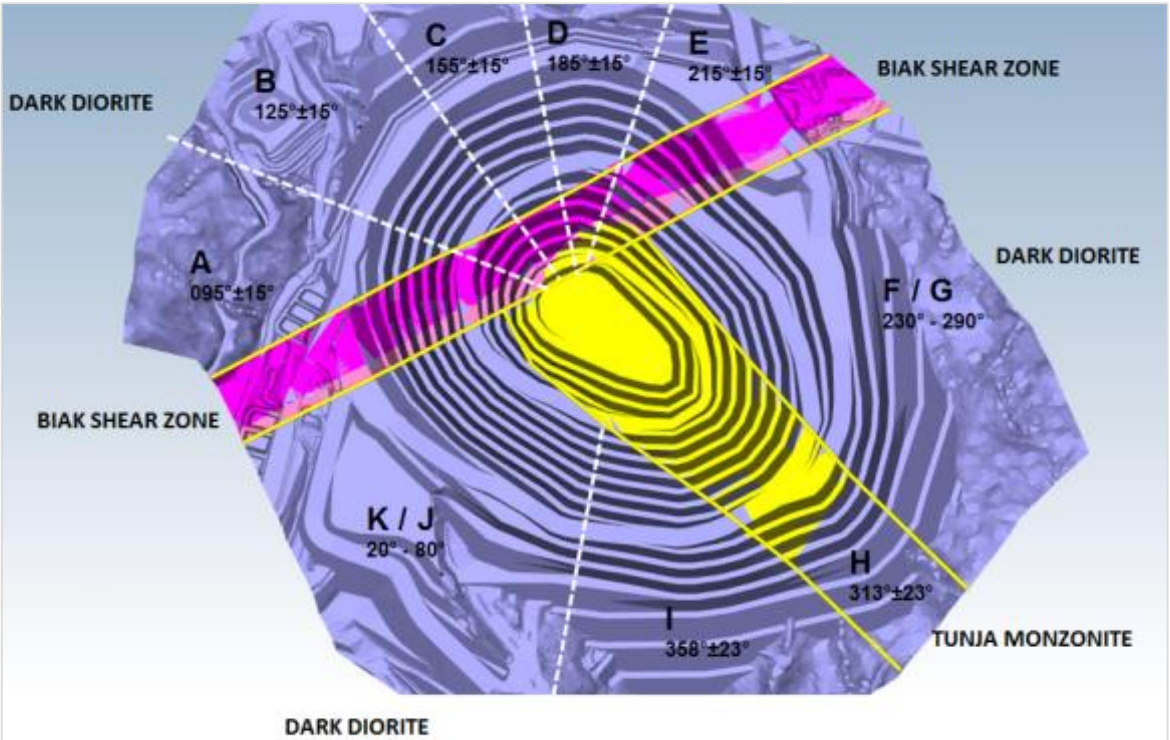


Figure 16-3: Plan view of Stage 6 pit design with design sectors

In addition to the above AMC recommended maintaining a minimum set-back distance of 50 m between the north wall pit crest and critical infrastructure associated with the processing facility. This has been incorporated into OceanaGold's latest pit designs.

16.4.3.3 Waste Dump and Stockpiles

The stability of the final waste dump design at Didipio and an alternative steeper design was completed using 2D limit equilibrium analysis using SLIDE software. Deterministic analyses were undertaken using the Bishop Simplified and GLE / Morgenstern-Price methods.

Table 16-5: Waste dump stability acceptability criteria

Seismic Loading	Design FOS
0.15 g	1.25
Static	1.50

Four scenarios for presence of water were analysed to represent different conditions and also determine the sensitivity of the model to water. Circular failure of the waste dump and underlying weathered material could occur if the phreatic surface reaches a critical level. This may occur during or after periods of high and intense rainfall. The model results indicate that maintaining a free-draining waste dump will be important at Didipio.

Piezometers will be installed to monitor groundwater pressures and development of the phreatic surface and the waste dump slope will be monitored routinely for displacement.

Table 16-6: Waste Dump Design Criteria

Design	Criteria	Units	Value
Base Case	Bench face angle	°	37
	Bench Height	m	10
	Berm width	m	18
	Inter-ramp angle	°	17.7
	Ramp width	m	30
	Total Slope Height	m	130
	Overall slope angle	°	16.5
Alternative steeper design	Bench face angle	°	37
	Bench Height	m	10
	Berm width	m	12
	Inter-ramp angle	°	21.6
	Ramp width	m	30
	Total Slope Height	m	130
	Overall slope angle	°	18.6

16.4.4 Hydrogeology & Dewatering

OceanaGold engaged GHD to undertake review and testing of the hydrogeology inputs to the open pit and underground studies. The focus of the hydrogeology study was to review existing groundwater inflow predictions and produce a new groundwater model based on the revised open pit and underground designs.

16.4.4.1 Groundwater Modelling

A robust groundwater flow model capable of representing the open pit mine developing over time, with varying recharge as the mine develops and changing river conditions has been developed for Didipio. The model was calibrated using existing conditions, previous test work along with dewatering and monitoring data collected from site pumping (sump pumping and dewatering bores).

The groundwater system consists of a relatively low permeability rock mass and single highly transmissive structure, the Biak shear. The modelling predicts that the Biak shear could contribute as much as 40% of flows.

The primary output of the modelling work relates to the prediction of the phreatic surface for use in geotechnical analysis. The resultant GHD model assessed a number of dewatering scenarios with 'sump pumping only' considered the base case. This scenario was used by AMC in the slope stability assessments.

16.4.4.2 Dewatering Recommendation

Predictive groundwater flow modelling has demonstrated how in-pit sump pumping represents the lowest volume pumping requirements for the pit, but this also results in the least amount of drawdown adjacent to the pit.

Out of pit pumping (in perimeter bores and the Biak Shear), at realistic rates (in the order of > 5 l/s) results in far greater drawdowns, lower volumes reporting to sumps, but also larger total pumped volumes. However, due to the low permeability of the general rock mass the number and spacing of perimeter pumps required would be prohibitive.

Targeted dewatering bores directly into the Biak Shear coupled with well managed sump pumping produces the most practical and cost effective groundwater management approach. This approach requires that there will be some interaction between mining operations and dewatering infrastructure that will have to be carefully managed. GHD has provided recommendations on the positioning, specification and cost estimate for dewatering during and after open pit operations.

16.4.5 Pre-Study Reserves and Design

The Didipio December 2013 open-pit Ore Reserves were depleted to the projected 2014 end of year surface. The contents of the depleted Mineral Resource block model contained within the December 2013 Didipio Ore Reserve open-pit mine design (the Dec13 design) are summarised in Table 16-7. These quantities correspond to the December 2013 Ore Reserve less the forecast 2014 mining production schedule. These numbers are reported as a baseline comparison for the previous reserve and do not represent current reserves as reported in Section 15.

Table 16-7 Mineral Resource Contained Within the Dec13 Ore Reserve Open-Pit Mine Design

Resource Classification	Total (Mt)	Total (Mbcm)	Ore (Mt)	Au (g/t)	Cu (%)	AuEq(g/t)	Au (Moz.)	Cu (Mt)
Measured & Indicated			25.6	1.10	0.44	1.81	0.91	0.11
Inferred			4.8	0.53	0.22	0.89	0.08	0.01
Total	144	55	30.4	1.01	0.4	1.67	0.99	0.12

Note: Ore tonnes and grades refer to the material above a 0.55 g/t AuEq cut-off grade. AuEq = Au + 1.638 x Cu.

The material contained within the Dec13 design, with a Mineral Resource classification of Inferred, is low-grade and outside the main high-grade core. This Inferred material could possibly be converted to Measured or Indicated classification with additional drilling.

The Dec13 design has a strip ratio of 3.7:1 (waste tonnes:ore tonnes), including Inferred material as waste in the strip ratio calculation. The pre-study pit design is shown in Figure 16-4.

The Dec13 design extends to a lower level of 2380mRL (approximately 300m deep) and is an inverted cone shape. There is dual access down to the 2525mRL by two dual-lane ramps, which exit the mine on the eastern and western sides of the pit. Access from the 2525mRL to the 2380mRL is by a single dual-lane ramp. The mine has overall slope angles ("OSA") from 35° to 38.5°, measured from the base to the crest of the design. The shallow wall angles are a function of the ramp positioning in the design and not geotechnical criteria.

The terrain in the pit area is hilly and the crest of the Dec13 design ranges from 2660mRL to 2810mRL, Figure 16-4.

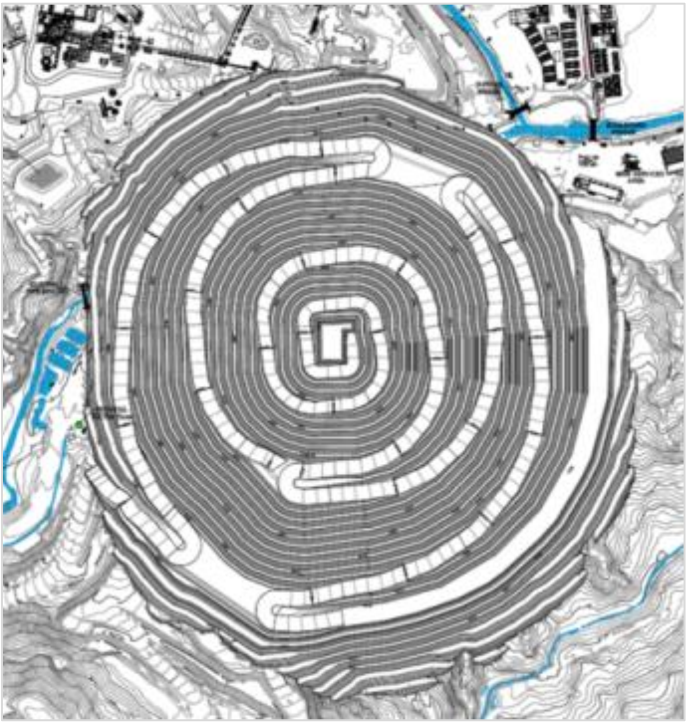


Figure 16-4: Pre-Study Stage Six (Final) Pit Design

16.4.6 Open Pit Study Assumptions

The majority of the input assumptions used in the pit optimisation study were derived from the latest approved OceanaGold mine plan being the Dec13 Ore Reserve estimation.

The input assumptions discussed in this section relate specifically to the pit optimisation study to determine the optimum transition level from open pit to underground and not the full economic evaluation of the project or cut-off grade calculation to derive mineral reserves.

16.4.6.1 Currency and Conversion

All currencies are US dollars. Conversion factors are reported in Table 16-8:

Table 16-8: Currency and Conversion Factors

Parameter	Value
Currency	US dollars (USD or $US or $)
Copper equivalent factor	AuEq = Au g/t + Cu % x 1.638
Conversion factors:	
Gold	31.103477 grams to 1 troy ounce
Copper	2.20462 pounds to 1 kilogram

16.4.6.2 Commodity Selling Prices

The assumed commodity prices are detailed in Table 16-9.

Table 16-9: Selling Prices

Item	Value
Gold ($/oz.)	1250
Copper ($/lb)	3.20
Silver ($/oz.)	20

16.4.6.3 Ore Processing Costs

The ore processing method at Didipio is in two stages. Firstly, the gravity circuit recovers some of the gold then a flotation circuit produces a copper concentrate that is transported off-site for treatment at a smelter.

The applied ore processing costs in the Whittle analysis includes addition of G&A costs. The processing (including G&A) cost is $18.04/t ore, as detailed in Table 16-10.

Table 16-10: Ore Processing Cost Assumptions

Item	Value
Plant processing	7.57
G&A	9.96
Ore Rehandle	0.51
Total Processing	**18.04**

16.4.6.4 Selling Costs

Selling costs includes transportation, treatment (smelting) and refining. The selling cost assumptions applied in the open pit mining study are based on the most recently approved OceanaGold life of mine plan.

16.4.6.5 Process Recoveries

The processing recovery assumptions for gravity, flotation and smelter are reported in Table 16-11:

Table 16-11: Processing Recovery Assumptions

Item	Value
Gravity Recoveries:	
Gravity gold recovery	23.0%
Refining recovery	99.9%
Flotation Recoveries:	
Flotation gold recovery	88.1%
Flotation copper recovery	92.5%
Smelter Recoveries:	
Smelter recovery gold in concentrate	97.0%
Smelter recovery copper in concentrate	96.0%

16.4.6.6 Open Pit Mining Cost

An assessment of the actual mining costs achieved at Didipio operation was completed to verify mining cost input assumptions for the Lerch-Grossman ("LG") optimisation process.

AMC initially extracted the unit mining cost from the supplied 2014 life-of-mine plan. A reference level of 2670mRL was used when applying mining costs.

Analysis of the 2014 life-of-mine plan produced a reference unit mining cost of $1.96/t. Recent AMC experience in similar projects indicates that an appropriate incremental mining cost of $0.10/t per 10 m bench depth should be used. This mining cost was used in the pit optimisation process.

Subsequently, 18 months of production information and accompanying mining costs were supplied; Figure 16-5 shows these unit costs for the comparison. These are direct mining costs and do not include TSF or re-handle related activities.

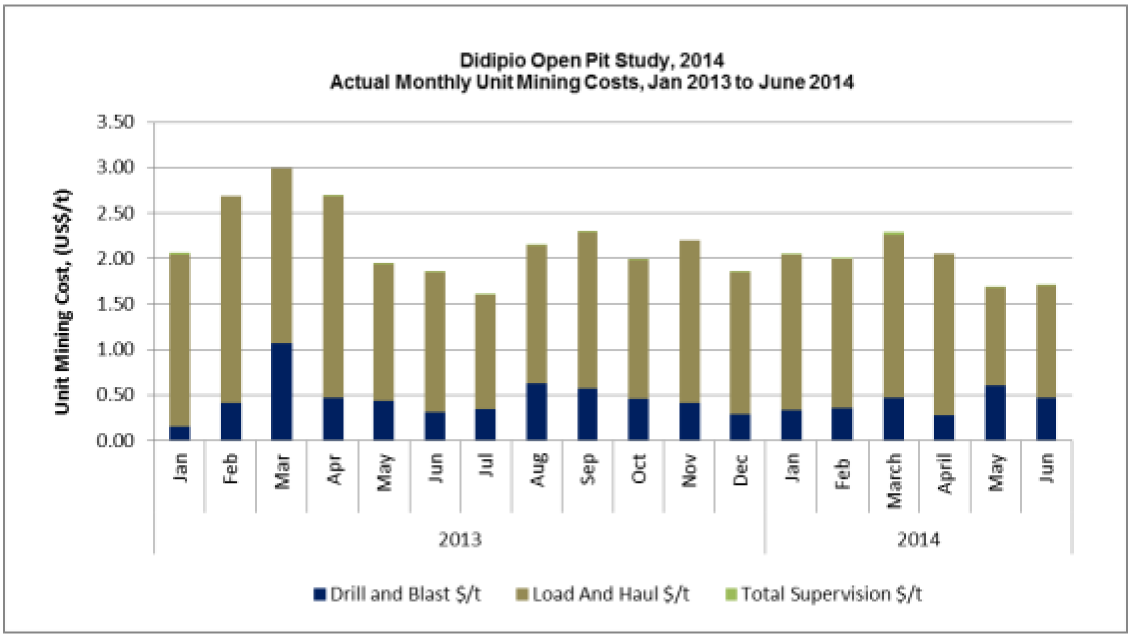


Figure 16-5 : Didipio Open Pit Direct Mining Costs, Jan 2013 to Jun 2014

The results do not show a correlation between depth and cost (Figure 16-6). Long hauls to the tailings dam were experienced during this period and may account for the unit higher costs.

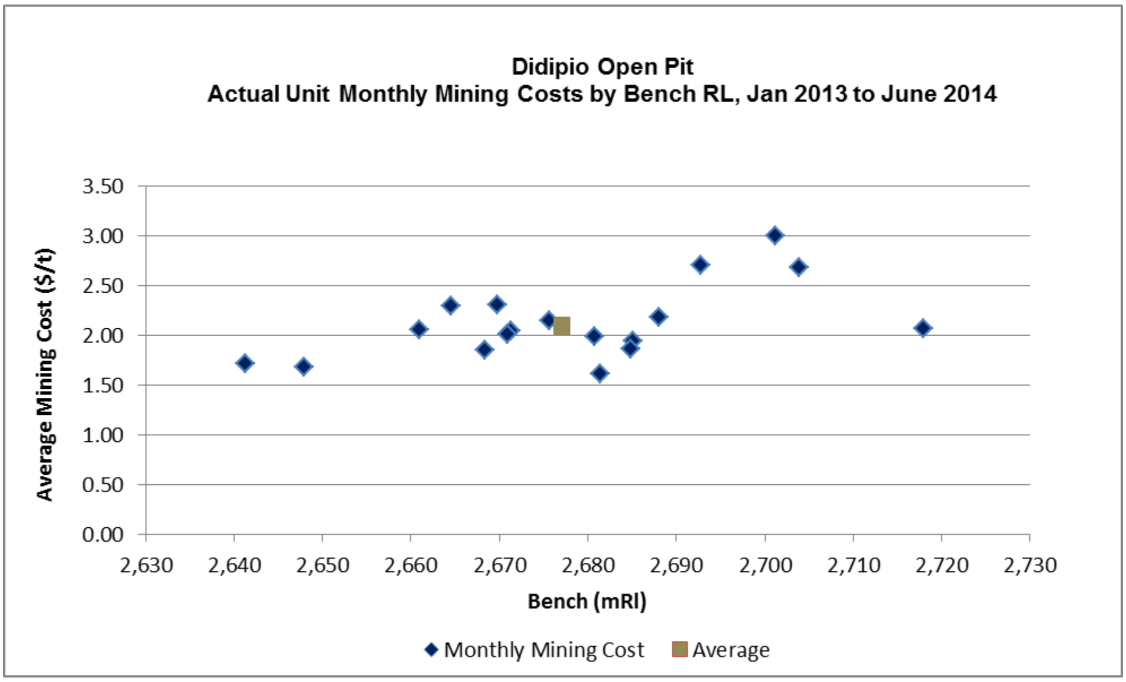


Figure 16-6 : Actual Mining Costs by Bench

The weighted average mining cost (dollars per tonne mined) for the 18-month period is $2.09/t mined and excludes TSF related haul costs and stockpile re-handle.

The weight average level for the corresponding 18 months is 2677mRL.

The unit cost estimate, when adjusted to the 2670mRL reference level is US$ 2.03/t mined. This is comparable and supports the $1.96/t mined assumption used in the Whittle analysis.

Table 16-12 lists the mining inputs used in the Whittle process:

Table 16-12: Cost Assumptions Applied in Whittle Optimisation

Item	Value
Reference mining cost (US$/t mined)	1.96
Reference mining level (m RL)	2670
Assumed bench height (metres)	10
Incremental haul cost (US$ per 10 metre bench)	0.10

The mining cost analysis above is specific to the input requirements for the pit optimisation Whittle analysis and differs to that applied in the economic evaluation in Section 22 of this Technical Report. As an example, grade control is applied in Whittle to the process cost and not to the unit mining cost.

It is recommended that future iterations of pit optimisation use a predictive haulage profile and first principles mining cost estimates.

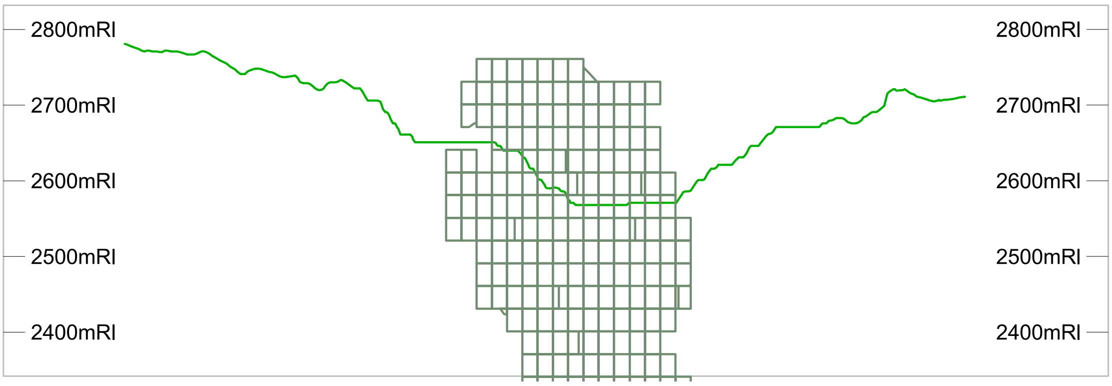
16.4.6.7 Underground Cost

In order to determine the open pit to underground transition the LG optimisation process included allowance for underground mining costs in the Whittle model. To be included in the open pit, the total mining cost for ore and associated waste, above the ore, must be less than the cost for the same tonne of ore mined from underground. The LG calculation groups ore with waste to derive this total cost when generating pit shells.Underground stope shapes were used to flag potential underground mineable material in the block model. The stopes were generated using mineable stope optimiser[4] (MSO) at an AuEq cut-off grade of 1.3 g/t. This cut-off grade was selected because it is the incremental breakeven cut-off.

The incremental breakeven cut-off assumes that the level and underground development is in place and the only costs encountered are the incremental underground extraction and processing costs. Material with a Mineral Resource classification of Inferred was included in the generation of the stope shapes for this exercise, (not for estimation of reserves, mine plans or economic evaluation).

Figure 16-8 is a cross section showing the MSO stope shapes and the 2014 forecast end of year topography surface.

An estimated underground unit mining cost was applied and used to generate a total underground ore cost (mining and processing), for use in the LG process.



Note: Stope shapes were generated using a 1.3 g/t AuEq cut-off grade. AuEq = Au g/t + 1.638 x Cu %.

Figure 16-7 : Long Section – MSO Stope Shapes

16.4.7 Evaluation Methodology

Pit optimisation analysis was undertaken to test the optimum pit mining limits and to assist in the determination of the transition point (crown pillar) between open pit and underground.

OceanaGold engaged AMC to complete this work and the Lerch-Grossman (LG) algorithm was applied using GEOVIA Whittle™ software.

The following summarises the processing steps undertaken in preparing for the LG pit optimisation.

16.4.7.1 Mining Model Preparation

Reconciliation of the Dec13 Ore Reserve figures to the input block model was completed prior to commencement of the model manipulation for this study.

The resource block model was prepared for optimisation by applying estimated depletion for 2014, flagging underground ore, and adding fill.

Where depletion surface was above the original topography, fill was added to the model. This material includes waste dumps and stockpiles.

[4] Mineable Stope Optimiser software developed by Alford Mining Systems.

16.4.7.2 Exclusion Zone

The processing plant infrastructure standoff distance of 50 m and the additional 43 m for the river diversion and haul road at the crest of the pit design have been combined to apply in the LG optimisation. Although these two items are separated, the nett effect is to move the northern wall away from the processing plant infrastructure by the desired distance.

Any additional material above the river diversion within the exclusion zone can be considered capital and should not be included in the optimisation process. Figure 16-8 shows the location of the 50 m standoff and the additional 43 m for the river diversion and haul road as a section through the north end of the mine.

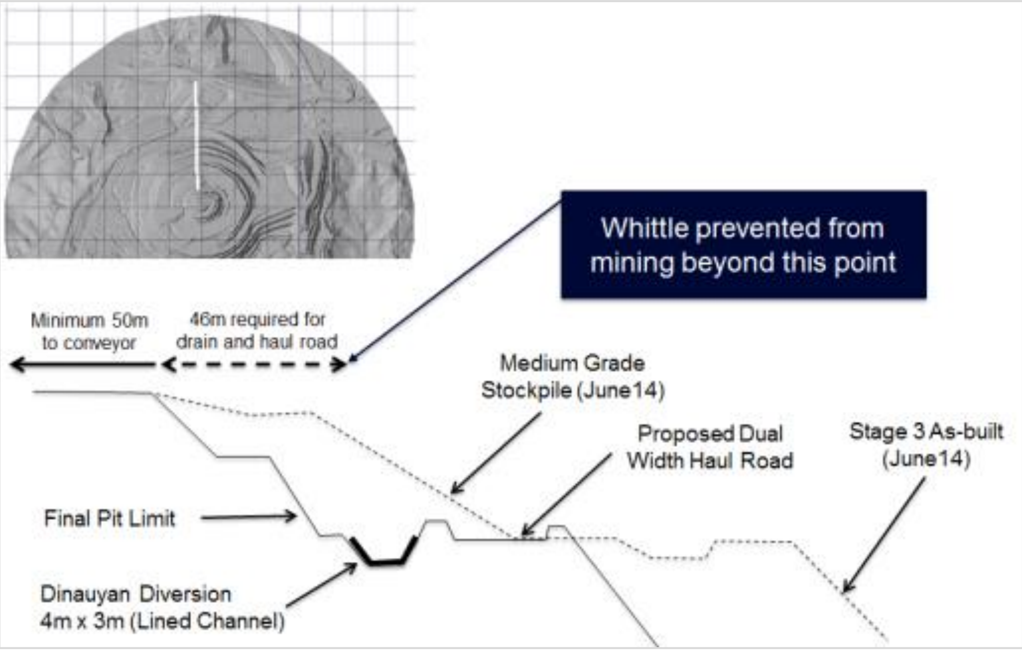


Figure 16-8: Infrastructure Exclusion Zone Applied in Whittle during Pit Optimisation

16.4.7.3 Whittle Process

Prior to exporting the block model unit mining costs, rock types, metal (AuEq grams), total tonnes, and ore tonnes were set in the block model.

Inferred Resource material was given a separate rock type so that Whittle could report the tonnes and metal separately and so that the processing could be turned off for Inferred material.

Underground material was given a separate rock type so that only this rock type would be considered for mining by underground methods.

The slope angles were applied in Whittle by bearing. The bearings and slopes are shown in Table 16-13:

Table 16-13: Whittle Slopes

Bearing	Slope Angle
30°	40°
68°	47°
92°	47°
130°	40°
140°	40°
179°	47°
269°	47°
308°	40°

It is recommended in future iterations of the long-term mine planning to assign the rock type domains in the block model.

16.4.7.4 Underground Inclusion

Two underground rock types (UGMI for Measured and Indicated and UGIN for Inferred) were assigned in the block model and flagged for mining or not mining in Whittle. This was done by including an underground method for that rock type. Whittle does not report the quantities of underground material.

In order to gauge the total value of the project (open pit and underground), the content of the underground material was quantified. This was so that the material below the base of the pit could be added to the quantities within the open pit in the summary spreadsheets.

16.4.8 Pit Optimisation Analysis

Several sets of LG optimisations were run to test the effect of various scenarios.

All optimisation scenarios included the 'exclusion' zone to account for the standoff from the pit crest and infrastructure beyond the north wall of the pit

The scenarios reported in this NI 43-101 Technical Report are referenced in Table 16-14.

Table 16-14 : Whittle Scenarios used to determine open pit to underground mining limit

Scenario Reference	Description
Case 1a	Unconstrained at depth, measured and indicated only.
Case 2a	Constrained to 2460m RL, measured and indicated only.
Case 1b	Unconstrained at depth measured, indicated and inferred.
Case 2b	Constrained to 2460m RL, measured, indicated and inferred.

16.4.8.1 Results

The following results are the revenue factor 1 ($1,250/oz.) shells from the optimisation runs. Table 16-15 is a summary of the pit shell contents and corresponding underground ore below the pit shells.

Table 16-15 : Summary of Results

Scenario		Class	Lowest Bench	Waste (Mt)	Ore (Mt)	Au (g/t)	Au (koz.)	Cu (%)	Cu (kt)	AuEq (g/t)	AuEq (koz.)
1a	Unconstrained at depth	M&I	2360	62.5	26.9	1.05	912	0.43	116	1.76	1525
2a	Constrained at 2460mRL	M&I	2460	42.1	20.2	0.98	635	0.44	89	1.70	1104
1b	Unconstrained at depth	M,I+I	2345	80.9	35.8	0.95	1098	0.39	141	1.60	1839
2b	Constrained at 2460mRL	M,I+I	2460	44	25.1	0.89	716	0.40	101	1.54	1245

Table 16-16 : Combined Open Pit and Underground Relative Underground Cash Surplus

Scenario		Class	Lowest Bench	Cash Surplus (US$ M)
1a	Unconstrained at depth	M&I	2630	1293
2a	Constrained at 2460mRL	M&I	2460	1466
1b	Unconstrained at depth	M,I+I	2345	1445
2b	Constrained at 2460mRL	M,I+I	2460	1637

The combined ore tonnes and combined surplus of the open-pit and underground material are shown in Figure 16-9 and Figure 16-10, and tabulated in Table 16-16. The revenue factor 1 shells are highlighted in black. The red curve is representative of the combined open-pit and underground operating surplus. The blue curve is representative of the open-pit portion of the operating surplus. These operating surplus metrics are relative to the decision to select the preferred scenario; they do not therefore represent final mineral reserve or related financial metrics reported in this NI 43-101 Technical Report.

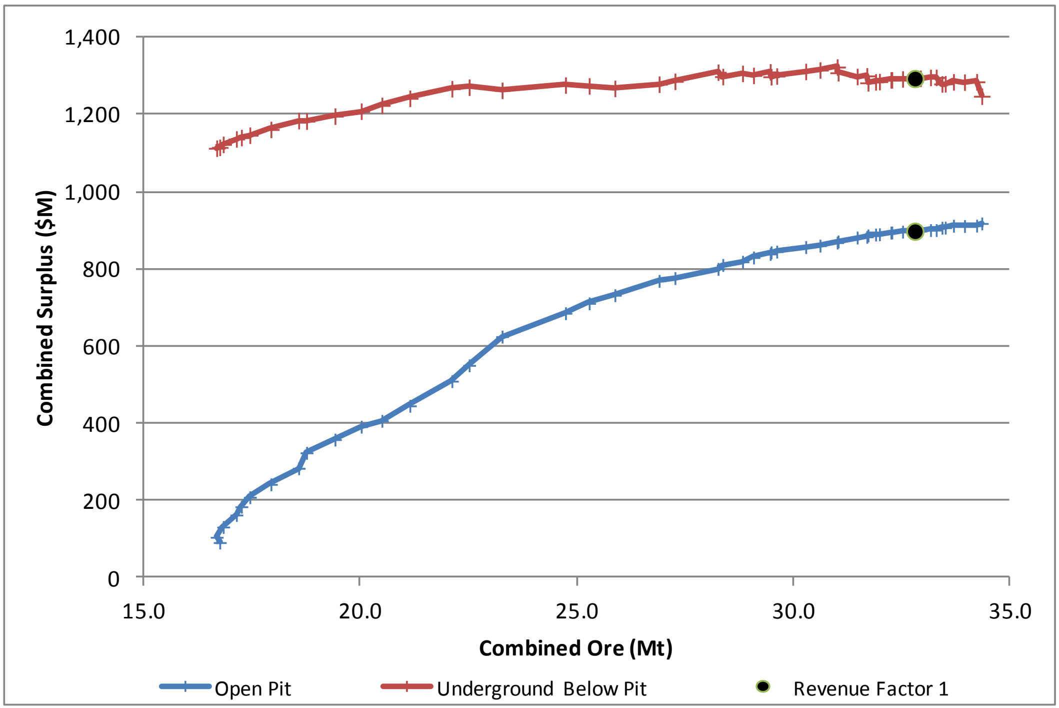


Figure 16-9: Scenario 1a, Unconstrained at Depth, Measured and Indicated

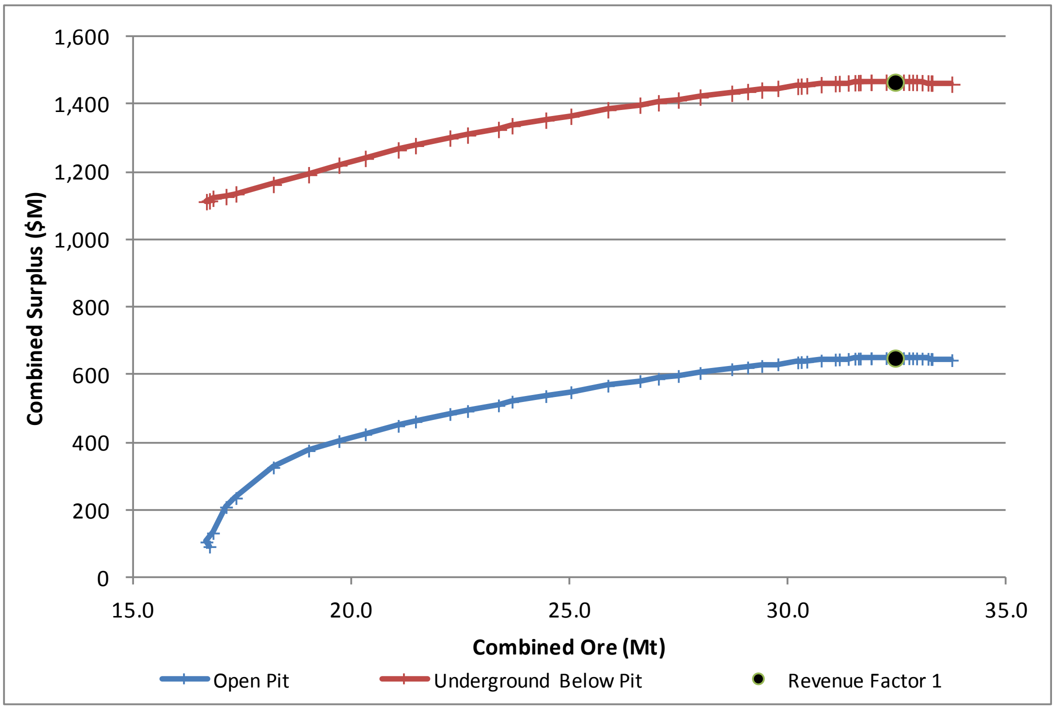


Figure 16-10: Case 2a, Constrained to Pit Basal Limit 2460mRL, Measured and indicated

16.4.8.2 Slope Sensitivity

Whittle optimisations based on Scenario 2a were run for steeper and shallower slope angles. Table 16-3 shows the effect of changing the slopes by ±5°.

Table 16.4: Slope Angle Sensitivity

Scenario		Revenue Factor	Lowest Bench	Waste (Mt)	Ore (Mt)	Au (g/t)	Au (koz.)	Cu (%)	Cu (kt)	AuEq (g/t)	AuEq (koz.)
+5%	Base case slope angles plus 5%	1.0	2460	31.0	20.4	0.98	642	0.44	90	1.70	1116
2a	Base case slope angles	1.0	2460	42.1	20.2	0.98	635	0.44	89	1.70	1104
-5%	Base case slope angles less 5%	1.0	2460	54.2	19.1	0.96	592	0.45	85	1.69	1040

The results indicate that the value of the ore is sufficient to pay for the extra waste, thus increasing total pit size. Steepening the walls marginally increased the amount of ore, but reduced the total pit size. This indicates any opportunity to increase the slope angle will decrease mining costs (less waste) and increase project value. These optimisations were constrained to above the 2460mRL.

Figure 16-11 is a section of the shells generated to show slope sensitivity. The northern end of the pit is constrained by the processing infrastructure, and thus flattening the walls reduces the ore accessible in the northern end of the ore body.

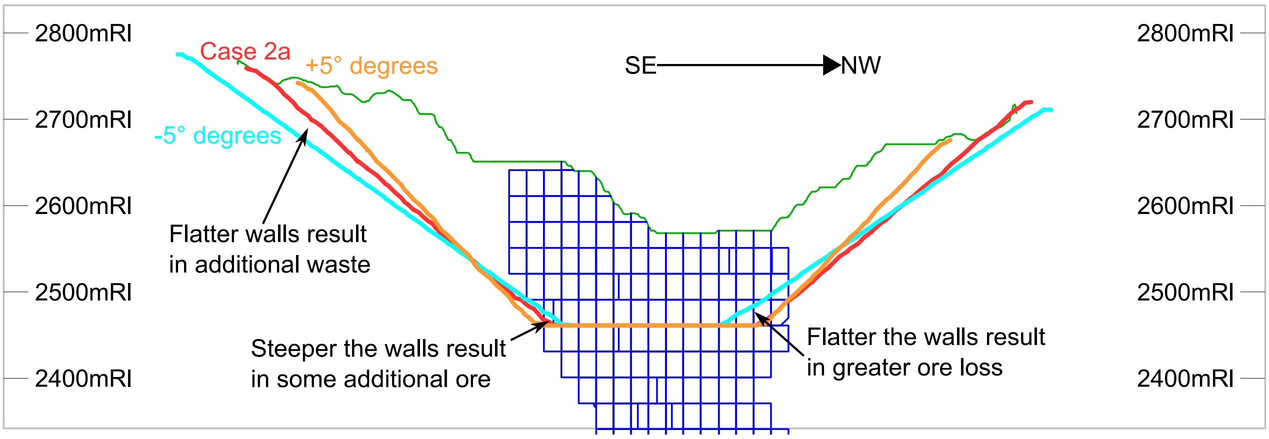


Figure 16-11 : Slope Angle Sensitivity Cross-Section

16.4.8.3 Discussion

The combined open-pit and underground operating surplus generates curves which are relatively flat near the top of the curve. Various shells are valid ultimate pits. Scenarios 1a (and 1b) were run to test the shape of the pit when underground costs are used to find the optimal depth for the underground interface. Unfortunately, because of the nature of the orebody, the optimised shells ended in an inverted cone shape, the base of which sterilises the adjacent underground ore.

It was decided that a flat-bottom pit would maximise the ore recovered and improve the operating surplus of the combined open pit and underground. Figure 16-12 is a section showing the material that was to previously be mined by the open pit (Dec13 reserves design) and ore that was previously sterilised is now available to the underground.

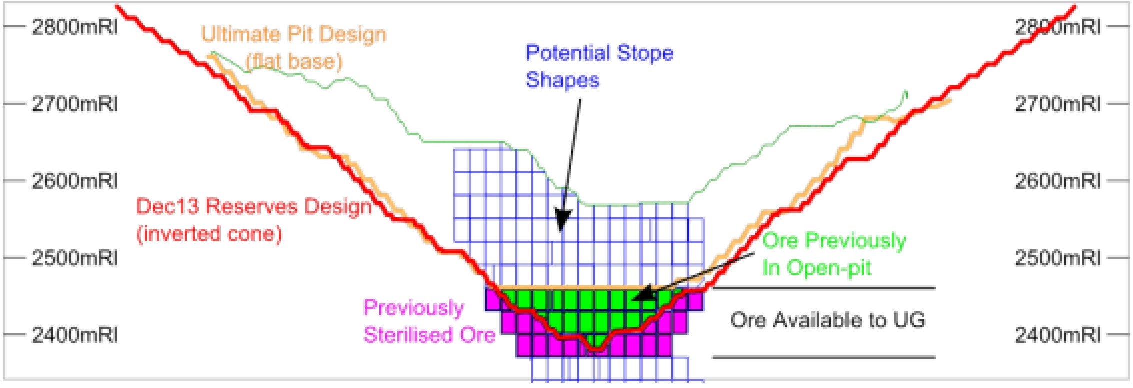


Figure 16-12: Cross-section illustrating additional ore available to underground mine (magenta).

The new Stage 6 design has substantially less tonnes than the Dec13 design. The new Stage 6 design contents (with a resource classification of measured and indicated) have 67 Mt less waste and 5 Mt less ore than the Dec13 design. This is driven by limiting the base of the pit to the 2,460mRL, and revised slope angles bringing the crest in relative to the Dec13 design. Refer to Figure 16-14 for a comparison of the pit revised Stage 6 pit crest compared with the Dec13 design.

Following an analysis of grade by bench/level it was decided to limit the depth of the open pit to 2460mRL. This enables two mining fronts in the underground mine which improves the profile of the process plant feed grade and reduces unit mining costs.

Cases 2a (and 2b) were run after removing the portion of the block model below the 2460mRL. The optimal base of the pit could be decided by testing different levels and scheduling the combined cash flows for each level.

Case 2b includes Inferred material when optimising. This scenario represents a potential upside option and is useful in determining locations for future drilling and positioning of infrastructure. It cannot, however, be used as the basis of an ore reserve or included in financial evaluation of the project. This pit is important for positioning of the underground decline and infrastructure such as ventilation shafts.

From the shells available in Case 2a (flat-bottom pit at 2460mRL without Inferred material), the revenue factor 1 and revenue factor 1.12 (corresponding shells 40 and 45) have similar operating surpluses. This is the case for both for the open pit and the combined open pit and underground. Figure 16-13 is a plan view of shell crest locations of shells 40 and 45 for Case 2a.

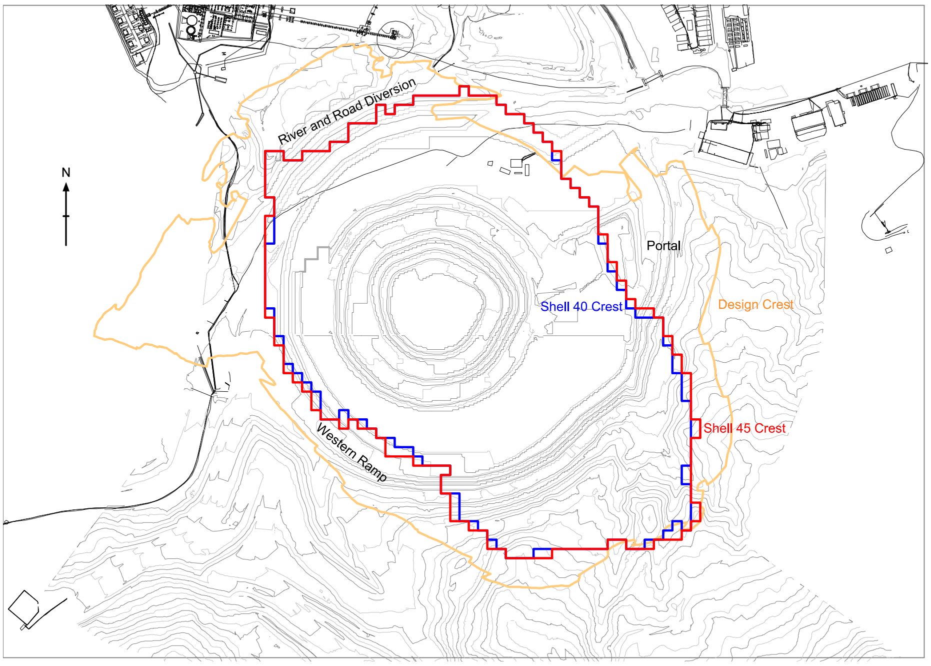


Figure 16-13: Whittle Shell Selection

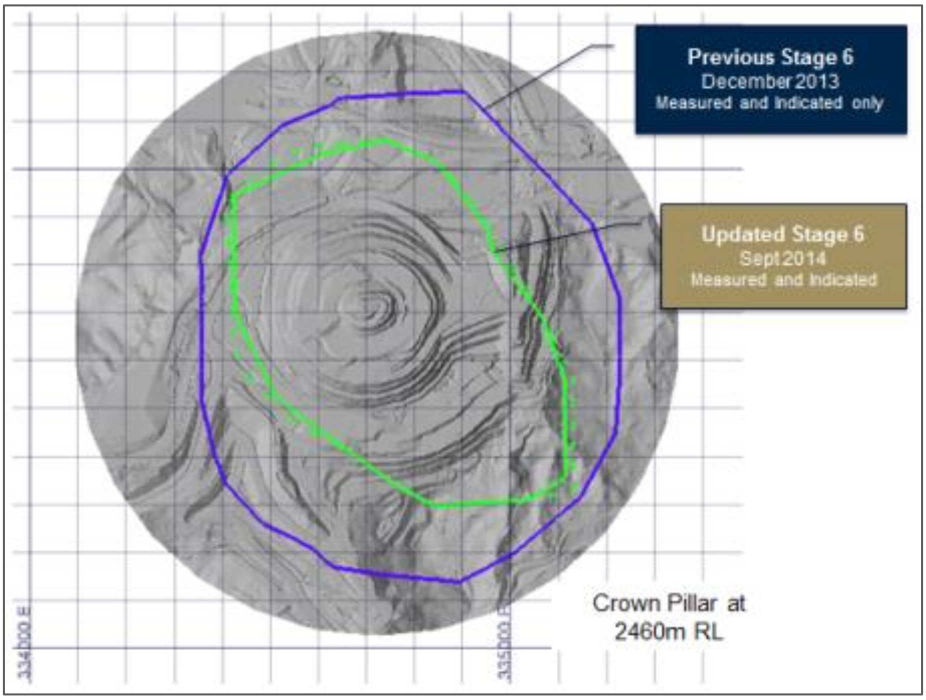


Figure 16-14: Comparison of Previous Stage 6 pit crest vs. Revised Stage 6 pit crest.

16.4.9 Pit Designs

16.4.9.1 Haul Roads

Pit designs have been revised significantly as a consequence of geotechnical design input criteria and a review of ramp configuration and positioning.

The location of the waste dump is to the west. The run-of-mine and ore stockpiles are to the north-east. Ramp access is to be provided to both sides of the pit.

Ramps are designed to accommodate the largest haul trucks. The FY14 study design uses 25 m wide ramps at a 10% gradient. This configuration conforms to industry practices and will be used in the design parameters. Figure 16-15 shows the calculation for a typical ramp configuration.

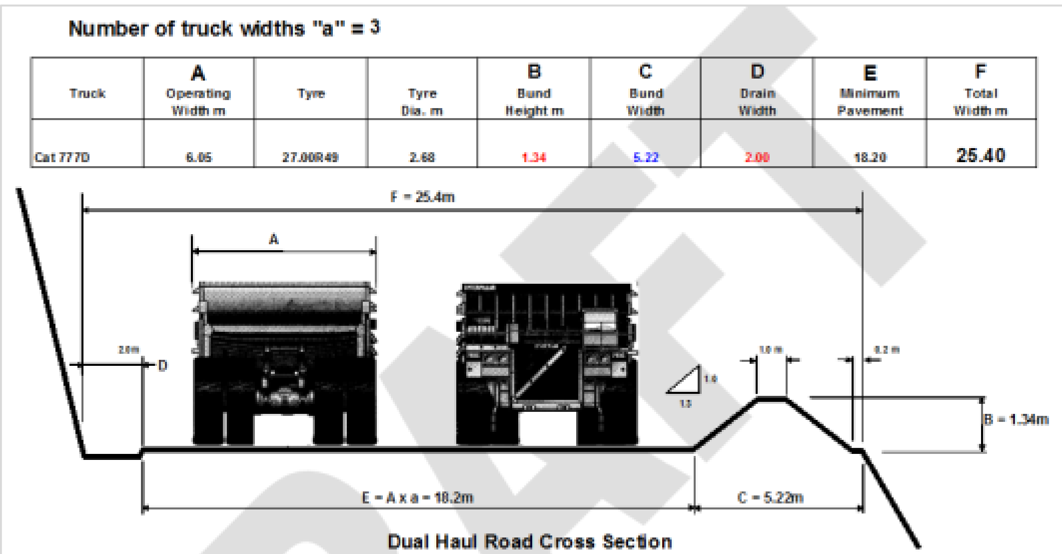


Figure 16-15 : Ramp Width Configuration

The preferred portal location is in the eastern wall. This was incorporated into the design, including access to the surface.

16.4.9.2 Pit Design (Stage 6)

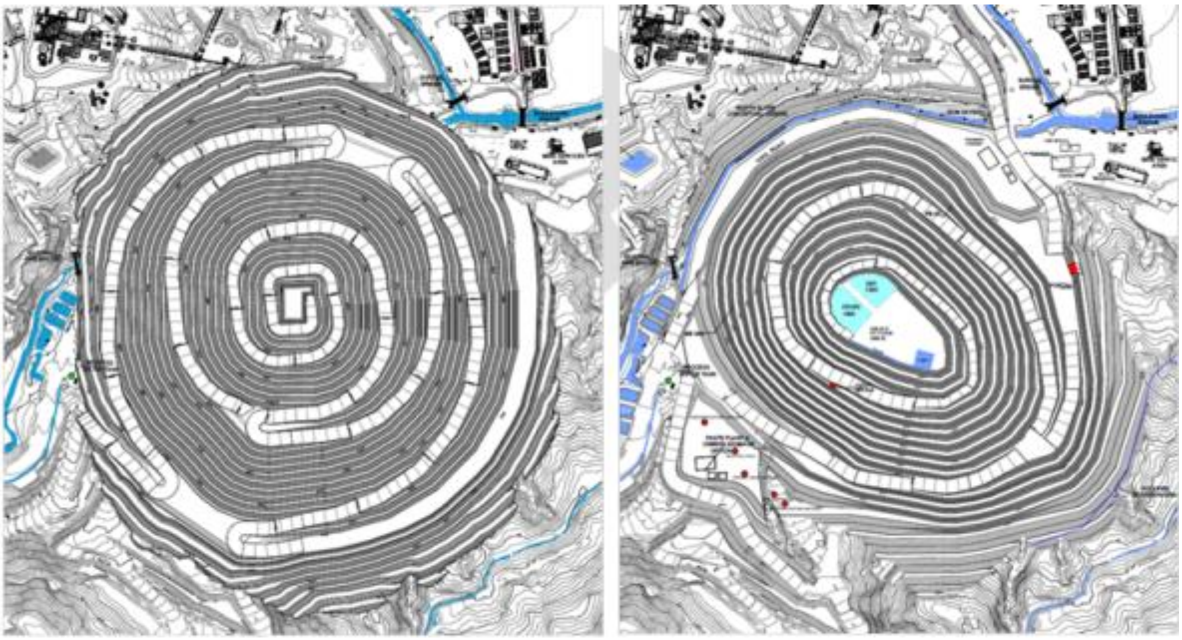


Figure 16-16: Pre-Study Pit Design (Stage Six) on Left, New Design on Right.

16.4.10 Cut-Off Grade

The cut-off grade is 0.52 g/t Au Eq.

16.4.11 Production Schedule

The revised final pit design has resulted in significantly (approximately 67 million tonnes) less material to be mined with minimal reduction in ore tonnes. The revised production schedules have also enabled an improvement in process plant feed grade in 2017 by bringing forward high grade ore.

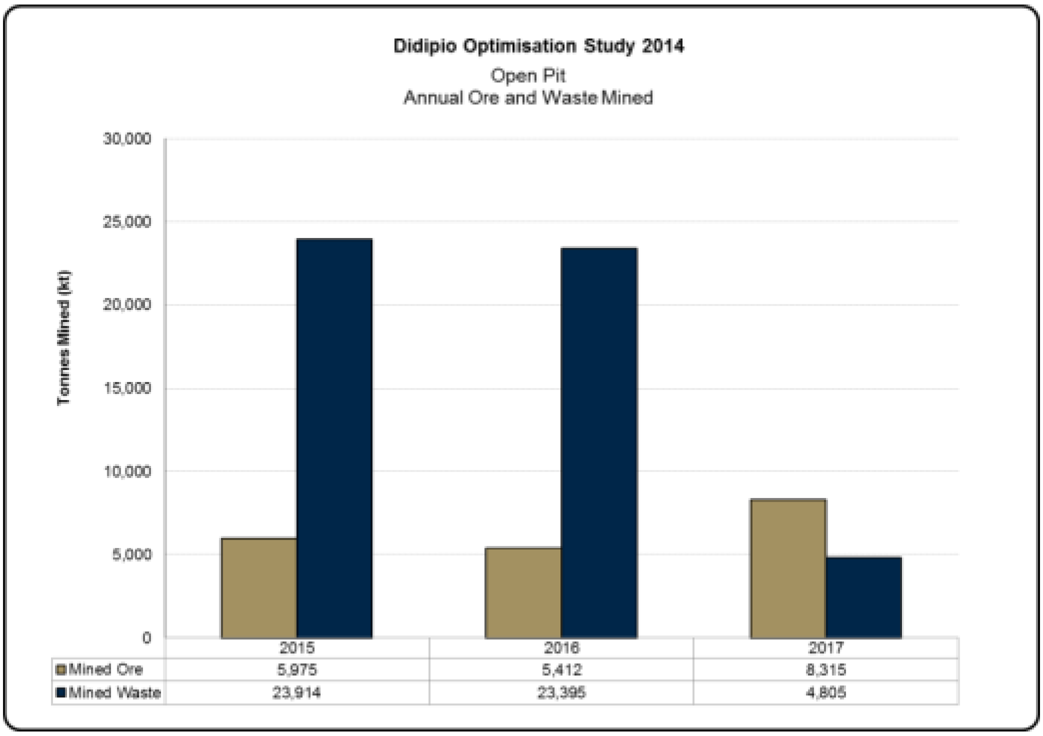


Figure 16-17: Open Pit Mining Schedule, Waste and Ore Mined

16.4.12 Process Plant Ramp-up

Didipio is an operating mine with eighteen months of ore processing experience since achievement of commercial production. During that time OceanaGold has implemented various ramp up projects which are designed to take the Didipio ore processing facility to 3.5 million tonnes per annum, expected to be achieved by the end of 2014.

16.4.13 Mining Operations

16.4.13.1 Grade Control

Blast hole sampling was implemented in 2013, but was subsequently replaced by RC drilling in 2014. RC grade control drilling is oriented along a grid running parallel (azimuth 135) to the long axis of the mineralisation. Drill spacing in the long axis is 10m by 8m across the long axis, on a staggered pattern. Inclined drilling (inclined 60 degrees to the south) was introduced in August 2014. Drilling was previously vertical, with 30m lengths drilled on half patterns collared every 15m to provide 10m x 8m drilling for the first 15m and 10m x 16m for the next 15m to 30m interval. This ensures fully drilled grade control stocks for 4 x 3.75m flitches, and an additional, 4 x 3.75m flitch drilled to half density for short term planning.

Ore block outlines are based on 5m x 5m ordinary kriged grade control model blocks, using gold equivalence grade. The ore block geometries are designed to allow efficient mining, whilst honouring modelled grade boundaries as much as possible.

Oxide, transitional and fresh metallurgical distinctions provide further classification, where this is based upon the extent of sulphide corrosion, rather than host rock weathering per se (almost all oxide / transitional ore has now been mined). Where practical, rock-types are separated.

16.4.13.2 Drill and Blast

Fragmentation and wall damage have been fundamental concerns at Didipio since commencement of operations. During 2014, OceanaGold engaged a specialist drill and blast advisor to review drill and blast practices. The review recommendations have been implemented and measured improvements to fragmentation, blasting efficiency and blast damage have been noted.

Practices that have subsequently changed include:

- On-site training & mentoring
- Screened stemming
- Change of pattern designs, loading, timing and sequencing
- KPI monitoring and reporting
- Restructuring of blast engineering and supervision

Figure 16-18: Unscreened stemming before (left), screened stemming after (right)

Pattern design changes have been implemented to increase fragmentation and productivity, and also to reduce blast induced wall and berm damage. This has reduced the risk of geotechnical instabilities within the pit (Figure 16-19).

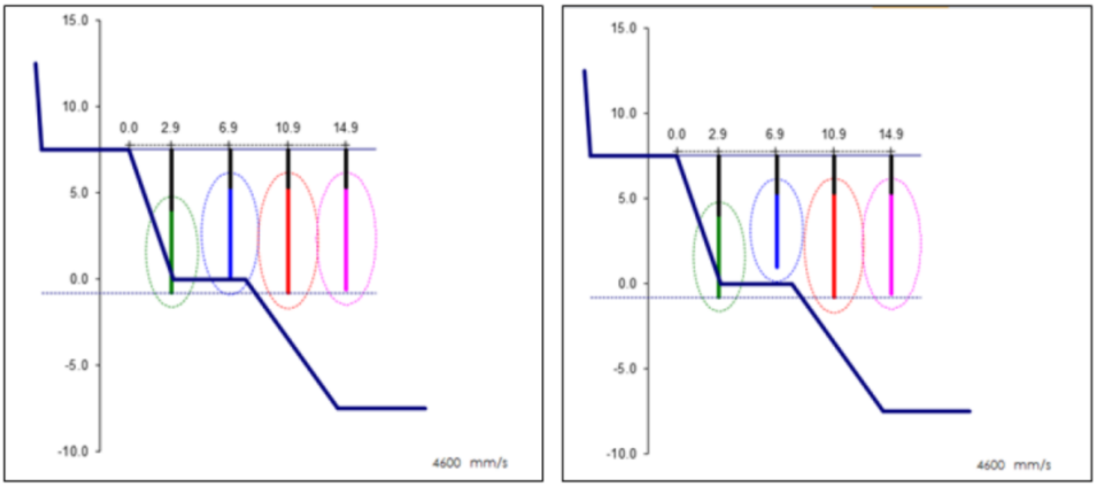


Figure 16-19: Drill pattern before (left), drill pattern after (right).

Fragmentation analysis of the rock illustrates the previous size fraction versus the current size fraction (Figure 16-20).

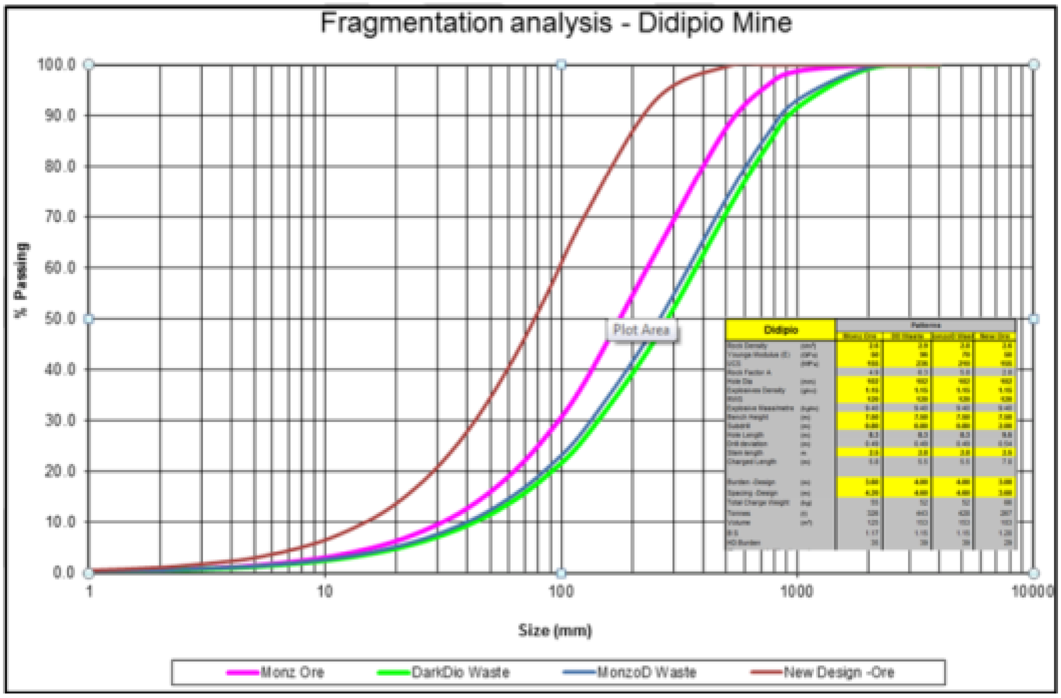


Figure 16-20: Size fragmentation analysis of improved drill spacing

OceanaGold now plans and implements all blasting on site. Orica provides an in-hole loading and charging service only.

16.4.13.3 Material Handling

All material handling is with 90t and 50t class off-road haul trucks, with blasted rock from the pit loaded with PC2000 and PC1250 excavators.

Waste rock is hauled and placed at the 'flow-through' dump, waste dumps which are downstream from the TSF and used for the construction of the TSF. High-grade ore is hauled directly to the ROM with other medium and low grade ore hauled to long-term stockpile. Ore on the ROM is re-handled into the crusher using front end loaders.

16.4.13.4 Waste Rock Management

There are currently no specialised handling practices for waste rock at Didipio. There is no acid forming waste rock in the open pit. During the early stages of the pit, suitably sized waste rock was delivered to and used in the construction of the TSF.

16.4.13.5 Mining Equipment

The contractors mining equipment fleet list is reported in Table 16-17.

Table 16-17: Open Pit Mining Equipment Fleet List

Mobile Mining Equipment Type	2014	2015	2016	2017
Production Excavators:				
Hydraulic Excavator - PC1250	3	3	3	3
Hydraulic Excavator - PC2000	2	3	3	3
Haul Trucks:				
A40F	6	6	6	6
773D	2	8	8	8
HD785	8	14	14	14
777D	4	6	6	6
Production Drills:				
DP1100i	4	6	6	6
DP900	2	2	2	2
DX800	2	2	2	2
DR560	1	1	1	1
ROM Crusher Fleet:				
988H	3	3	3	3
HL780	2	2	2	2
Ancilliary Equipment:				
HL757 Wheel loaders (HL757, HL760)	2	2	2	2
D9R Dozer	8	9	9	9
14M Grader	3	3	3	3
Compactors	7	7	7	7
PC200 Excavators (PC200, EC210, EX800, EC480, 336,S210)	8	8	8	8
UJ210 / QH330	1	1	1	1
GR500 Crane	1	1	1	1
HD465 Water trucks (HD465, other)	3	3	3	3
Water Pump	5	7	7	7

16.4.13.6 Operating Time

The open pit operates three panels on two twelve hour shifts with an hour allocated for each shift change.

16.4.13.7 Equipment Availability and Utilisation

The 2014 year-to-date equipment availability performance for the load and haul fleet is favourable against planned target. The production drills are not currently achieving target availability. Target utilisation is being achieved for trucks but not for excavators and production drills.

Equipment availability and utilisation have not affected open pit production during the early years of production suggesting that contractor performance is meeting production objectives.

There is likely to be some additional capacity in the existing mining fleet.

16.4.13.8 Labour Headcount

The forecast headcount for the open pit life of mine is reported in Table 16-18.

Table 16-18: Open Pit Headcount by Job Category

Department	2014 (Actual)	2015	2016	2017
Crusher Department	8	8	8	8
Drill and Blast - Production	54	54	54	30
Drill Maintenance	15	15	15	15
Executive Office	4	4	4	4
HE Operators/Drivers	155	155	155	100
Health and Safety	12	12	12	12
HR/Admin	18	18	18	18
IT Department	1	1	1	1
Maintenance	123	123	123	100
Mine Planning and Engineering	12	12	12	12
Production Dispatch	4	4	4	4
Spotter/Checker	17	17	17	17
Production Auxiliary	23	23	23	23
Production Manager/Superintendents/Supervisors	19	19	19	19
Purchasing	3	3	3	3
Security	2	2	2	2
Training	6	6	6	6
Warehouse	15	15	15	15
Total	**491**	**491**	**491**	**389**

16.4.14 Interpretation and Conclusions

The open pit study has resulted in an improved final (Stage 6) pit design which has reduced the waste tonnes by 67 million tonnes and improved operational efficiencies through improved haul profiles.

The study has examined in detail the optimum location for the crown pillar which has been relocated from 2380mRL to 2460mRL. The benefits of raising the crown pillar are earlier mining of high grade ore from the underground mine and increased underground production resulting from an increase in the number of underground working headings. Compared to the previous, larger Stage 6 pit the reduction in the open pit ore, and contained gold and copper, is minimal as the wider flat base to the pit has captured previously inaccessible ore tonnes.

The recently completed hydrology and hydrogeology studies will assist in de-risking the open pit operations. A site wide water management plan has been developed along with improved understanding of ground water conditions.

An improved understanding of the geotechnical environment affecting open pit mining operations is a key outcome of the study. Improved blasting practices to reduce back-break along with higher benches and wider berms will reduce localised geotechnical failures. Newly refined geotechnical domains have been introduced. Additional monitoring, data collection and technical procedures are recommended. Further work is required to design the North Slope above the proposed Dinauyan river diversion, as this area has not been designed in detail

The opportunity remains to reduce waste strip from the pit by redesigning the south-eastern section of the stage 6 design. A trade-off is required on additional incremental haul distance and costs against the benefits of reduction in waste mined. There will also be slope stability benefits in the south if the switchback is removed.

The amount of Inferred resource which could be economically mined has been quantified, prompting OceanaGold to invest in a resource definition drilling programme to potentially translate Inferred to Indicated resource classification. The Inferred resource has a low geological confidence and as such is not included in any economic evaluation reported in this Technical Report. It is, however, important to identify the spatial location of Inferred material to ensure there is no risk with regard to the location of critical site infrastructure.

The process used to assign values to the block model is similar to that used in the Dec13 Ore Reserve process. This process requires that copper value be represented as an equivalent gold grade. The calculation of the equivalent gold grade, as it has been applied, assumes constant gold grades in the copper concentrate regardless of recoveries and grades of these elements in the milled material. The concentrate grade of these elements is expected to vary according to the relative grades being processed. When higher grade gold is fed with lower-grade copper; the gold grade in the concentrate will rise.

Silver is not included in the current block model; OceanaGold has completed a programme of adding silver assays to the block model and expects to update resource models with silver before year-end Resource and Reserve reporting, as soon as a QAQC review of modelling has been completed. OceanaGold has been able to indicatively quantify the economic uplift of adding silver to the Didipio mine plans during this study but has not included any silver related revenue in the economic evaluation for the project.

16.4.15 Recommendations

The study has highlighted the following recommendations:

- Resource drilling to potentially translate Inferred Mineral Resources to Indicated Mineral Resources;
- Continuation of geotechnical data collection and analysis;
- Continuation of groundwater and surface water data collection and analysis;
- Creation of operating procedures for geotechnical, hydrology, hydro-geology and mine planning technical disciplines;
- Detailed design for the North Slope and Dinauyan diversion drain is required to meet 2015 production targets, there is potentially and opportunity to remove a switchback in the South eastern corner of the pit to reduce waste strip even further and improve stability of upper slopes in weathered material.
- Redesign of the north wall and geotechnical analysis to evaluate the opportunity to increase the distance between the Dinauyan diversion and the Stage 6 pit crest.
- Recommendations have been made by GHD for additional treatment options, utilising the storage capacity of the TSF and the water treatment plant, to supplement the capacity of the settlement ponds, which receive flow from the open pit sump pumps and surface run-off.
- Installation of additional flow monitoring for the various mine catchments is recommended.

16.5 Underground Mining

The proposed underground mine design targets the extraction of 1.6 million tonnes per annum of ore by the long hole open stoping (LHOS) mining method. This mining method is suitable for the geometry and ground conditions of the Didipio underground resource. Paste backfill with binder additive has been incorporated into the design to enable a primary-secondary extraction sequence, to maximize both resource recovery and mining productivity.

A main decline from a surface portal located in the east wall of the open pit will be used to access the mine. A fleet of 17 tonne Load Haul Dump loaders (“LHDs”) and 60 tonne trucks will be used for material loading and transport from the underground working areas through an internal ramp system that connects all levels to the main decline. Loading will occur in close proximity to the stoping areas and ore will be hauled directly to the existing coarse ore stockpile (ROM) adjacent to the processing plant.

An underground development programme that attains a peak rate of 550 m per month of jumbo advance is required to develop and maintain access to adequate resources to sustain the targeted ore production rate. The decline development to access the production areas of the mine is expected to take 36 months to complete. The ramp-up period to full production will require three years from the first stope being mined. Waste generated through infrastructure development will be hauled to the surface waste dump, with an estimated 2 Mt of waste being generated over the life of mine.

Key mine infrastructure includes two exhaust ventilation raises with accompanying primary fans, an intake fresh air raise, a paste backfill plant with associated infrastructure and an underground dewatering system. Excavation of underground drill platforms to facilitate infill drilling will also be a priority.

16.5.1 Mine Design

16.5.1.1 Access and Mine Infrastructure

A 4.2 km access decline driven at a -1 in 7 gradient from the surface portal will provide access for personnel and equipment. The decline has been sized at 5.8m (w) x 6.2m (h) to provide adequate clearance for mobile equipment operation, and to enable a low resistance intake air way, refer to Section 16.5.10.

The access decline will be excavated whilst the open pit is still operational and the design portal elevation is 2661mRL. The position of the portal and decline relative to the final Stage 6 pit design can be seen in Figure 16-21. Later in the mine life a connection will be mined from the decline to break back into the pit, nearer the base, which will provide an alternative means of egress and fresh air supply.

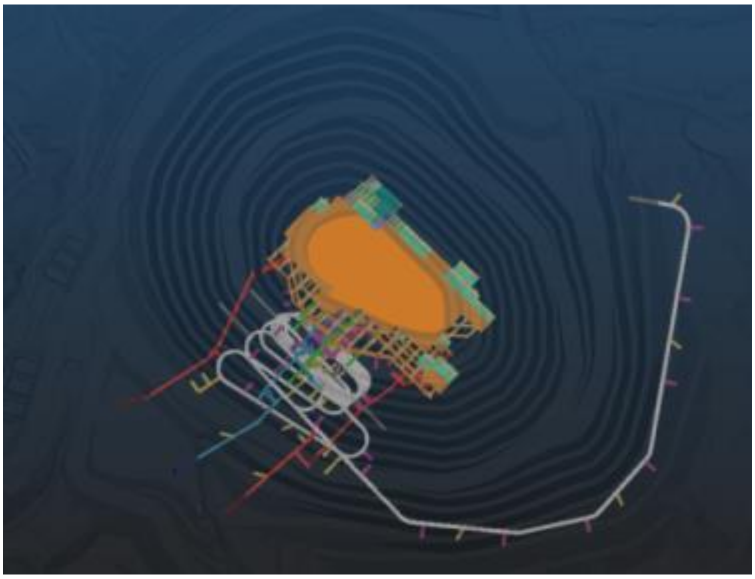


Figure 16-21: Access decline with final Stage 6 pit design - Plan View

After reaching the base of the final pit design, the access decline will continue as seen in Figure 16-22, connecting to each mining sub-level and associated infrastructure as the mine deepens. Scheduling priorities include the decline, the establishment of drilling platforms for diamond drilling, primary ventilation infrastructure and the primary dewatering infrastructure.

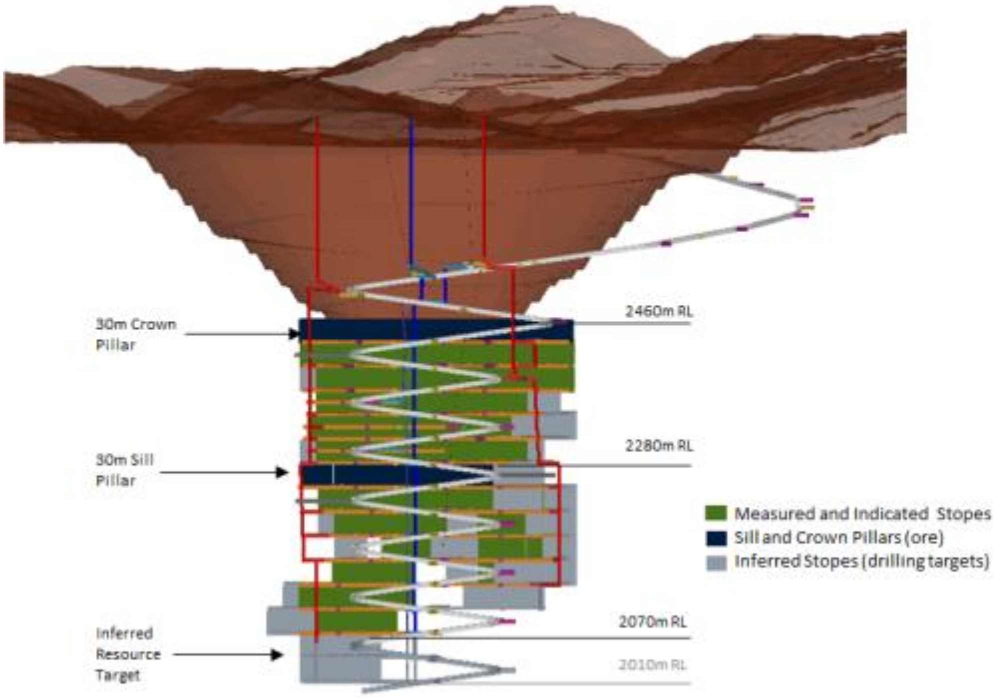


Figure 16-22: Underground mine design, long-section view looking north-east

The mine design includes a significant amount of raise development to establish and extend the primary air circuit. Two exhaust raises and one fresh air raise to surface will be required. As the mining levels are developed from the access decline, the primary circuit will be extended by raisebore excavations (Figure 16-22), necessary to permit the exhaust of contaminated air by advancing the primary circuit in increments. The emergency egress will be extended level to level by raiseboring 1.8m diameter holes and installing escapeway ladders, fully caged with rest landings spaced at required intervals.

Mine infrastructure will also include:

- A workshop for the maintenance and repair of underground equipment;
- An explosives magazine and a detonator magazine;
- Permanent refuge chambers;
- An underground lunchroom;
- Substations installed as the decline advances;
- Dewatering stations and a suite of local settling sumps;
- Dedicated service holes for rising mains;
- Service holes for reticulation of paste backfill; and
- Drill drives for diamond drilling infill.

16.5.1.2 Level Development

Sublevels will be accessed from the access decline on a 30m vertical interval that is defined by the planned stoping heights. Within the breccia zone intermediate sublevels have been included to permit the reduced stoping height of 15m. The decline stand-off from the footwall drive has been designed to be 60m, greater than the geotechnical recommendation to allow for capital infrastructure (fresh air raise, emergency egress, level sump, and loading bays) to be located off the level access drive between the decline and the footwall drive.

The minimum stand-off distance between the footwall drive and the orebody is 20m. Where possible the footwall drive has been located in waste or low grade mineralisation (to allow for additional footwall stopes if economics become more favourable).

Stockpiles will be used on all levels for the placement of blasted ore during the mining cycle. Trucks will be loaded in loading bays situated off the level access drives.

Ore drives outside the breccia zone are spaced at 20m centres. Within the breccia zone ore, where the stopes have been designed to be smaller ore drives are spaced at 10m centres. For stoping outside of the breccia zone, slot drives are developed to the width of the stope. No dedicated slot drives have been included in the breccia zone.

Figure 16-23 shows a sublevel arrangement in cross-section and Figure 16-24 shows typical level development requirements.

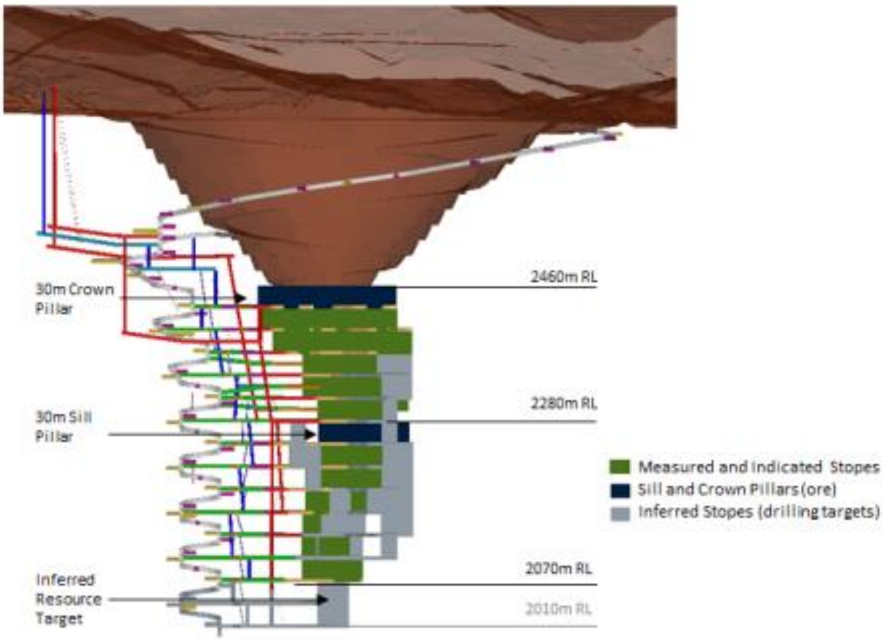


Figure 16-23: Underground mine design, cross-section view looking north-west

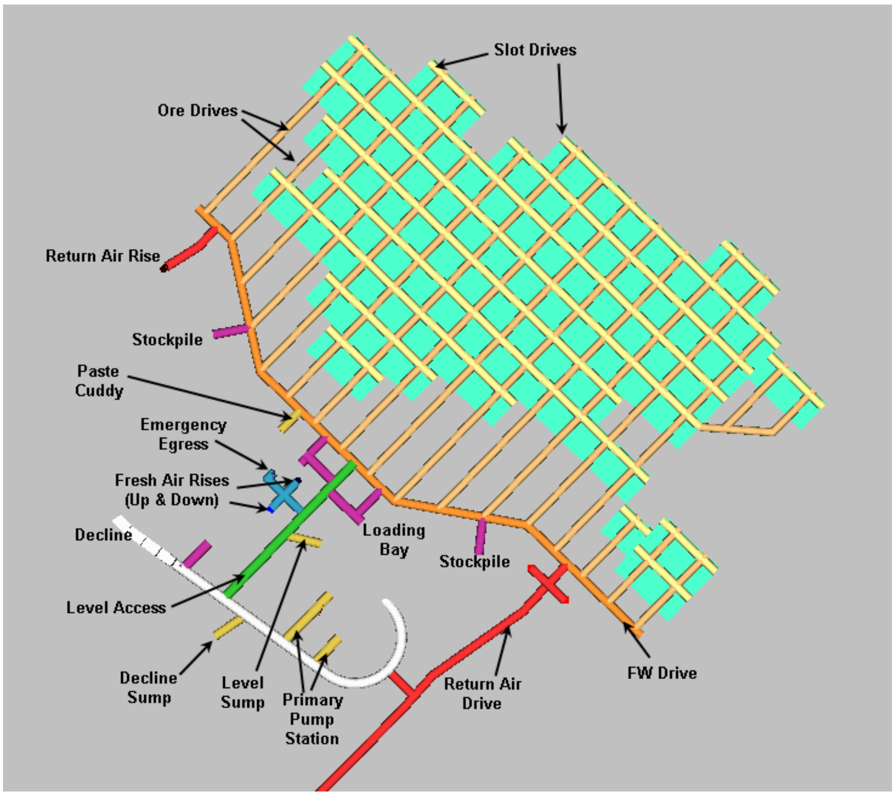


Figure 16-24: Didipio underground mine design - plan view of level layout

Development design standards considered equipment size, services, and required activity. The widest mobile equipment planned at Didipio underground, the TH663 60-tonne truck, is 3.5m in width. Therefore, haulage-ways (designed at 5.8m width) have ample clearance for truck and pedestrian traffic – refer to Figure 16-25, which also shows indicative placement of flexible ventilation ducting within the haulage.

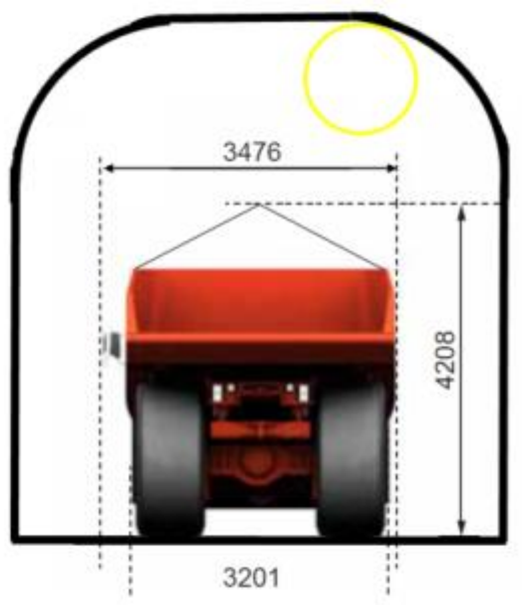


Figure 16-25: Decline profile with TH663 truck

Footwall drives and ore drives were designed at 5m high to provide adequate overhead clearance between mine equipment and services such as ventilation ducting. Ore drives were designed at 4.5m wide to permit adequate spacing for a remote stand for remote stope mucking. The height and width also provide sufficient operating clearance for the production drill rig.

Development design parameters are summarised in Table 16-19.

Table 16-19: Development profiles

Lateral Development Profiles	Width (m)	Height (m)
Decline	5.8	6.2
Decline Stockpile	5.5	5.8
Level Access / Loading Bay	5.5	5.8
Sump / Paste Cuddy / Drill Drive / Dewatering Drive	5.0	5.0
Fresh Air Drive / Return Air Drive / Level Stockpile	5.0	5.0
Footwall Drive	5.0	5.0
Ore Drive	4.5	5.0
Slot Drive	5.0	5.0
Vertical Development Profiles	**Width (m)**	**Height (m)**
Ventilation Raise (Longhole Blasted)	4.0	4.0
	Diameter (m)	
Primary Vent Raises	4.0	
Escapeway Raise	1.8	
Drain Hole / Paste Backfill Hole	0.3	

16.5.2 Cut-Off Grade

A 1.3 g/t AuEq (gold equivalent) cut-off grade was applied for the purpose of delineating the stoping inventory based on a preliminary estimate of operating costs of $27/t ore mined. A lower (1.0 g/t AuEq) cut-off grade was applied to development within mineralised horizons on the basis that the mining cost is effectively sunk, and the remaining costs to process this material as mill feed are marginal. A more detailed discussion of cut-off grade is presented in Section 15 of this report.

16.5.3 Production

16.5.3.1 Mining Method

The LHOS mining method is a commonly employed, high-production, low-cost mining method that is suited to steeply dipping tabular-like orebodies. The method allows a high degree of mechanisation and offers good mining selectivity, good recovery and is relatively flexible to suit variable geometries and ground conditions. It is also considered to be relatively simple to implement.

The LHOS mining method can provide a high production rate once sufficient stopes are accessed. The method is considered low-risk because mining crews do not have to enter the stope void. Remote mucking of blasted ore is required once the stope brow is open to the extent where the operator may be exposed to uncontrolled sloughing from the stope cavity. To protect the operator from the remotely operated loader, a remote mucking stand is the minimum requirement, or a remote mucking cubby excavated into the ore drive sidewall may also be used.

Production can commence once the top and bottom development ore drives (in ore) are established and the expansion slot raise is mined between the two levels. Drilling of the slot raise and production rings will be with a top hammer drill rig. For the study downholes have been assumed, although it is expected that production drilling will be a combination of both upholes and downholes.

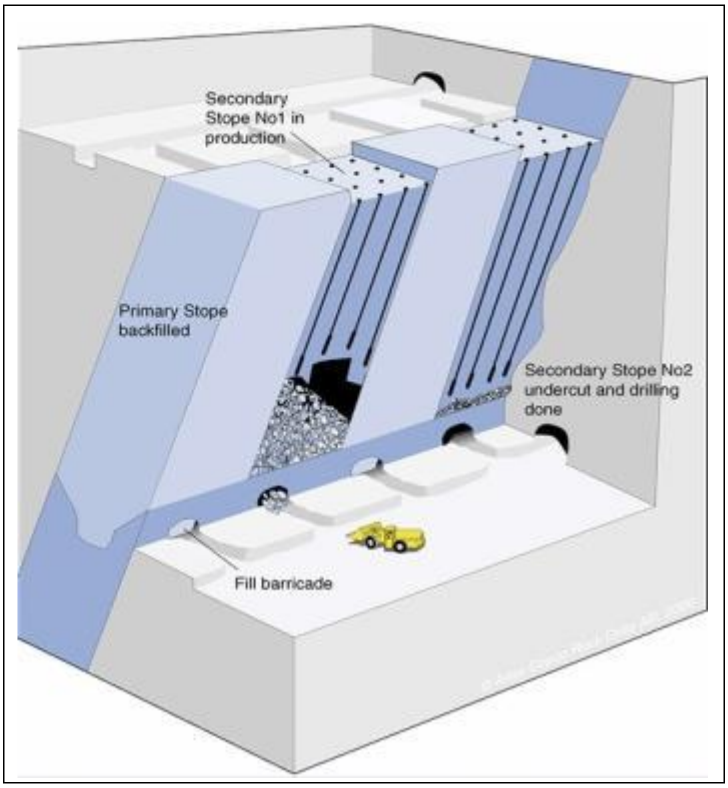


Figure 16-26: Typical long hole open stoping arrangement

LHOS is a non-entry method, with remote mucking of blasted ore required once the stope brow is open to the extent where the operator may be exposed to uncontrolled sloughing from the stope cavity. To protect the operator from the remotely operated loader, a remote mucking stand is the minimum requirement; a remote mucking cubby excavated into the ore drive sidewall may also be used.

Once mucking of blasted ore is complete, backfilling commences with the placement of paste backfill that will be re-exposed during the extraction of the next stope in sequence. Once sufficient curing time has been allowed (scheduled at 28 days), the immediately adjacent stope can commence extraction.

16.5.3.2 Stope Cycle and Sequence

The mine design incorporates two major production blocks (refer to Figure 16-22 and Figure 16-23). The lower horizon extends from 2070mRL to 2280mRL, with a 30m high sill pillar from 2250mRL to 2280mRL. The upper horizon extends from 2280mRL to 2460mRL, with a 30m high crown pillar from 2430mRL to 2460mRL, immediately below the final open pit floor. The sill pillar is to be recovered at the completion of the lower mining panel, and the crown pillar at the end of the mine life.

A transverse primary-secondary stoping sequence has been incorporated into the schedule. The overall sequence would progress bottom-up, working on top of and adjacent to previously mined stopes which have been filled with paste backfill. The mining sequence includes extraction of primary stopes followed by mining the secondary pillars. Primary stopes will be filled with cemented paste backfill to allow mining of the adjacent secondary stope. Due to the orebody geometry and the thickness of the orebody, the majority of the secondary stopes will also require a cemented backfill.

Using a primary-secondary sequence, it is possible for stoping to be undertaken concurrently in a number of working areas which allows for increased production rates compared to alternative sequence options, such as a continuous front approach.

Figure 16-27 illustrates a conceptual primary-secondary stoping sequence, in plan-view (not to scale). Primary stopes are shown in blue, with secondary stopes shown in red. Primary stopes will generally have three walls formed in rock. Overbreak from these walls is from waste country rock, or from the planned adjacent secondary stope. Secondary stopes generally have three stope walls formed in paste backfill. Dilution from paste backfill can be expected, particularly if overbreak occurred within the primary stopes, and the backfill is undercut by mining of the secondary stope.

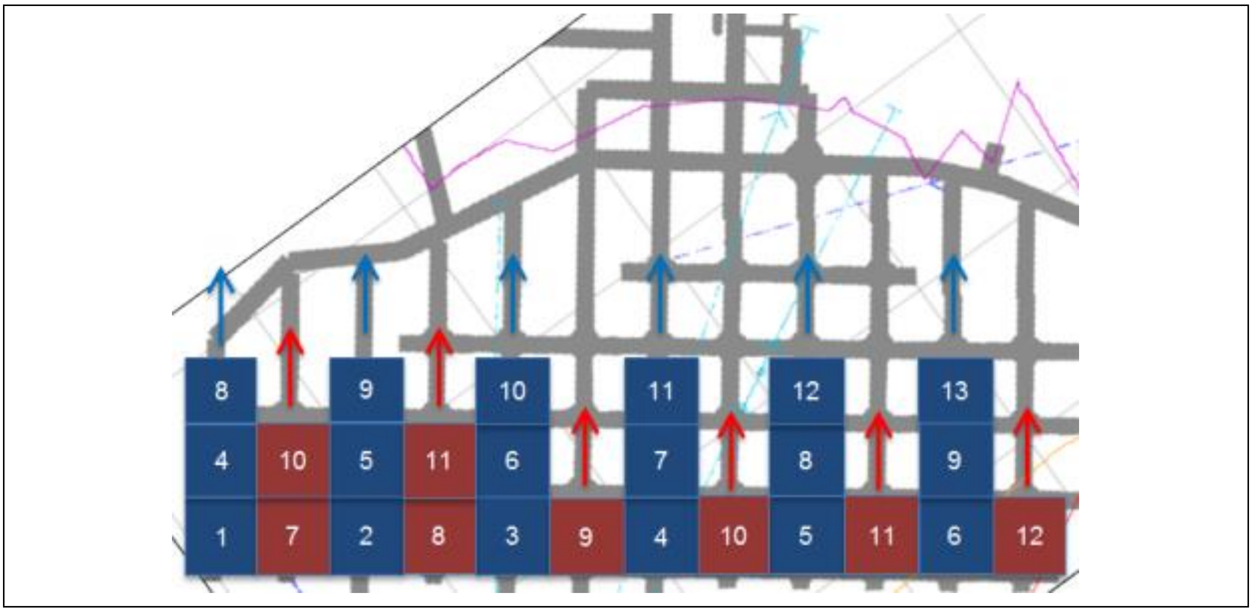


Figure 16-27: Plan view showing conceptual transverse primary-secondary extraction sequence

16.5.3.3 Stope Design

The long hole open stope (LHOS) design for Didipio consists of three stope designs:

- The standard stope design is based on a 30m level interval, using a 20m (w) x 20m (l) x 30m (h) stope shape.
- The stope design for areas mining the breccia zone are based on a 15m level interval, using a 10m (w) x 20m (l) x 15m (h) stope shape.

- The sill pillar and crown pillars are based on a 30m level interval, using a 20m (w) x 20m (l) x 30m (h) stope shape. The crown pillar is located at the base of the final pit floor (2460mRL) whilst the sill pillar is located between 2450mRL and 2480mRL.
- Based on the geotechnical information available, there is potential for double lift stopes to be mined; that is 20m (w) x 20m (l) x 60m (h) but the location of the more competent ground for these stopes is uncertain. Therefore no double lift stopes have been included in the mine design. Definition drilling to better define the geotechnical domains will commence in 2015.

16.5.3.3.1 Breccia zone

Based on the geotechnical design parameters, three additional sub-levels have been included to reduce the hydraulic radius for stoping within the breccia zone. In addition, ore drive spacing for the breccia zone has been reduced from 20m centres to 10m centres, as shown in Figure 16-28 and Figure 16-29. Figure 16-30 shows the 2310mRL level and the impact of the breccia zone on the design layout and the production areas, with the breccia zone 15m (h) stopes coloured in purple and the standard 30m (h) stopes shown in teal.

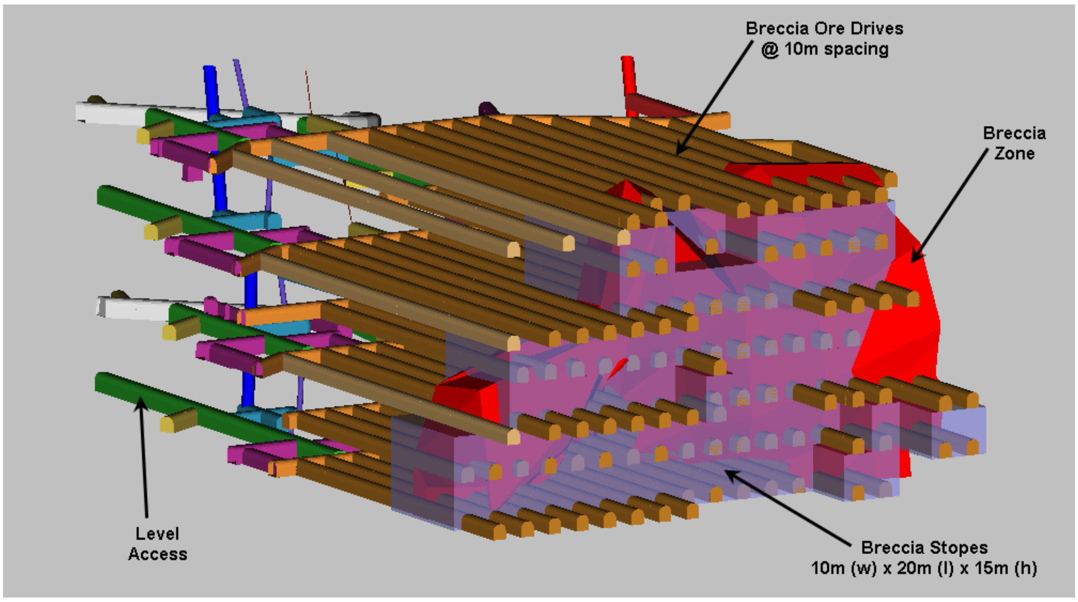


Figure 16-28: Isometric view showing breccia zone development and stopes

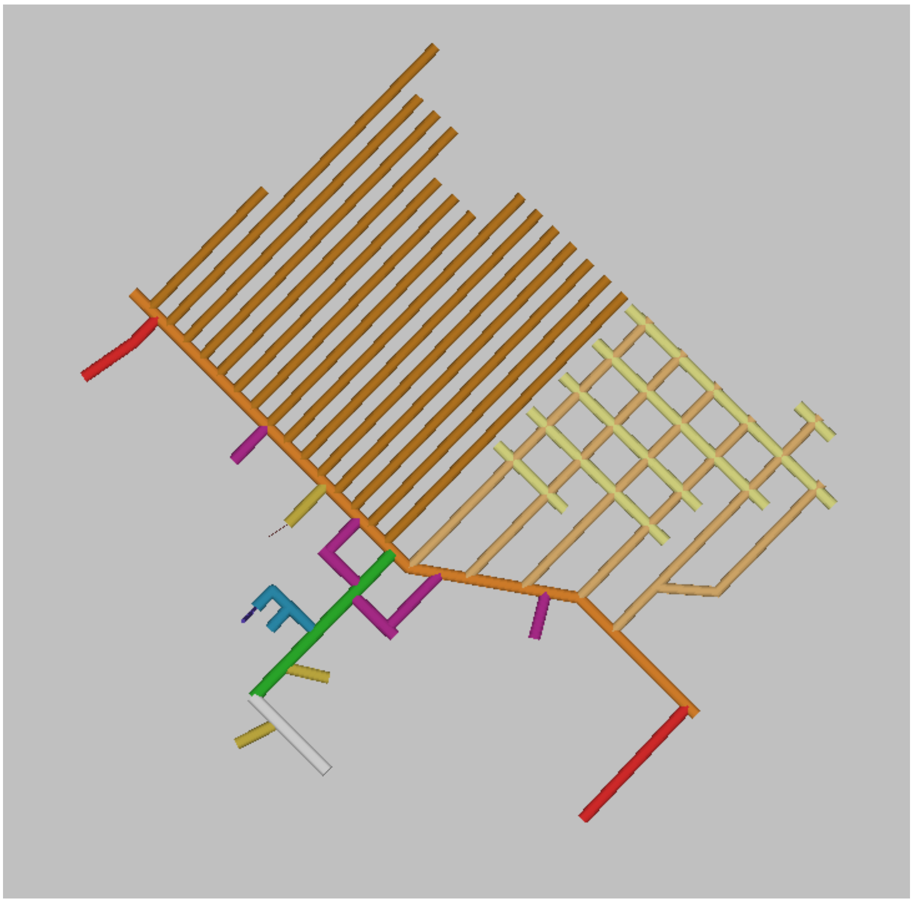


Figure 16-29: Plan view of the 2310mRL, development only

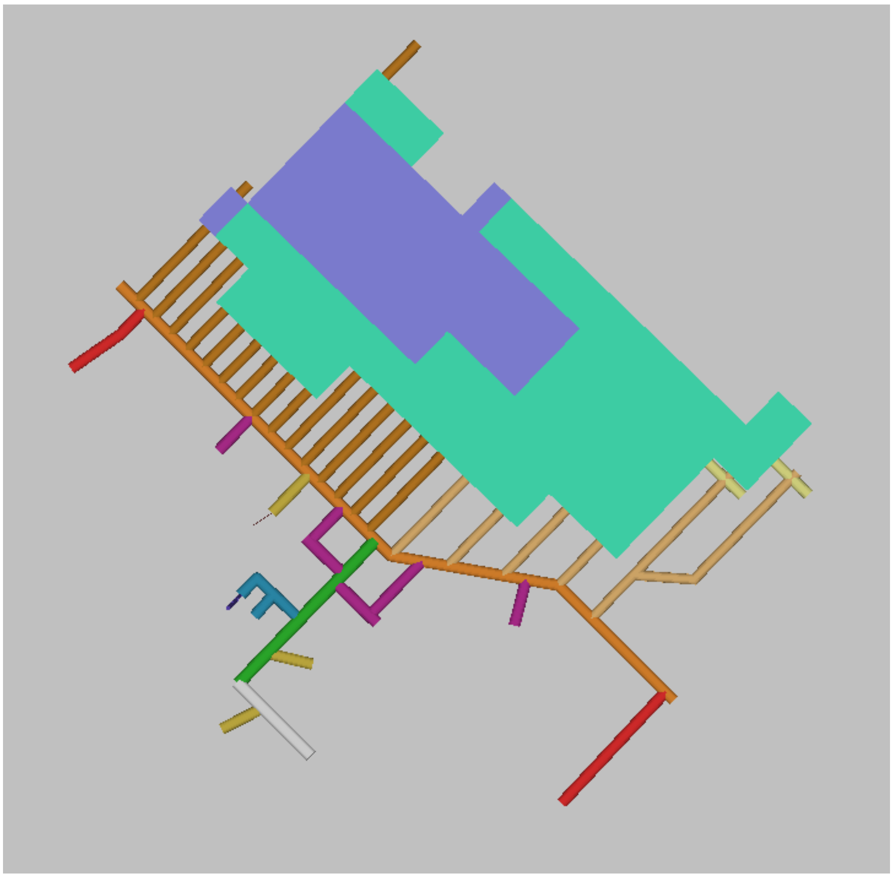


Figure 16-30: Plan view of the 2310mRL – development and production

Production rates in the breccia zone are significantly lower due to the paste backfill curing time required between each stope in the primary-secondary stoping sequence. Additional development is also required, resulting in a higher operating cost. These factors have been incorporated in the production schedule and cost model.

Further work is required to optimise the mining method and mine design for the breccia zone. Alternative mining methods, such as cut-and-fill, may be required if the ground conditions in the breccia zone are predominantly poor and production rates are low. Conversely, the ground conditions could allow for increased stope dimension and a reduction in the designed level development.

16.5.3.3.2 Crown pillar

A 30m high crown pillar has been designed below the base of the final pit, between the 2430mRL and the 2460mRL, and is scheduled to be extracted at the end of the mine life.

The extraction of the crown is expected to be similar to a sub-level cave (SLC) operation, where a footwall drive will be developed as a slot drive for the entire level. A "one shot" slot raise will be fired through to surface, providing a free face for the firing of the slot drive, nominally firing 2-3 rings at a time. Once the slot drive is opened up sufficiently, the production rings associated with the ore drives can commence firing. As the firings will daylight into the pit, the number of rings fired in any one blast will be based on the planned production rate, geotechnical considerations and the remote loader capabilities.

Ground conditions for the crown-pillar stopes are expected to deteriorate once the crown stoping sequence starts. As such, the recovery of crown-pillar stopes has been reduced to 80%. The extraction of the crown pillar should be targeted during the dry months, to minimise water inflows. Further work is required on modelling the impacts of the crown pillar extraction on overall slope stability and to determine the preferred extraction sequence for the crown pillar.

16.5.3.3.3 Sill pillar

A sill pillar has been designed between the 2250mRL and the 2280mRL. The extraction of the sill pillar is at the conclusion of mining the lower mining block, with an overall recovery of 80% planned.

The extraction process for the sill pillar is expected to be similar to the crown pillar, as are ground conditions. The extraction sequence for the sill pillar assumes a continuous mining front. An allowance for paste backfilling the sill pillar post-extraction has been included in the cost estimate. Further work is required to optimise and model the preferred extraction sequence.

16.5.4 Production Modifying Factors

16.5.4.1 Stope dilution

There are four major sources of stope dilution in LHOS operations:

- Hangingwall dilution
- Footwall dilution
- Floor dilution
- Backfill dilution

Of the four sources of dilution, the main source for the Didipio orebody (at zero grade) will be dilution associated with paste backfill, either from the walls of backfilled adjacent stopes or from mucking above a previously backfilled stope.

As the Didipio orebody is a gradational orebody, both hangingwall and footwall dilution will generally carry some grade, and with the exception of the perimeter stopes, the dilution will be from an adjacent (yet to be mined) stope. As such hangingwall and footwall dilution have not been included in the study.

Dilution from adjacent stopes is dependent on the number of backfilled walls exposed by the active stope.

Table 16-20 shows a typical primary-secondary stoping sequence and the number of backfilled walls exposed during extraction, with reference to the proposed extraction sequence seen in Figure 16-27. A backfill dilution skin of 0.5m is typical for long hole stoping operations which use paste backfill as their main source of backfill, and where a full height of paste backfill wall is exposed. For the breccia zone stopes, a 0.25m dilution skin has been assumed due to the reduced stope height.

Table 16-20: Number of backfill walls exposed during extraction sequence

	Pri 20m	Sec 20m	Pri 20m	Sec 20m	Pri 20m	Sec 20m	Pri 20m	Sec 20m	Pri 20m	Sec 20m
20m	0	2	0	2	0	2	0	2	0	1
20m	1	3	1	3	1	3	1	3	1	2
20m	1	3	1	3	1	3	1	3	1	2
20m	1	3	1	3	1	3	1	3	1	2
20m	1	3	1	3	1	3	1	3	1	2
20m	1	3	1	3	1	3	1	3	1	2
20m	1	3	1	3	1	3	1	3	1	2
Key - No of Backfill Walls Exposed During Extraction						0	1	2	3	4

The other source of dilution (at zero grade) is floor dilution. Where stope mucking is conducted on top of a backfilled stope, a 0.5m skin of waste dilution from the floor of the drive has been assumed. A 0.3m skin of waste dilution has been assumed for the breccia zone stopes.

For the stoping arrangement shown in Table 16-20, the average weighted dilution for the level is estimated at 5.6% for 30m high stopes and 6.8% for the breccia zone stopes. For 30m high stopes, dilution ranges from 0% (a primary stope with no backfilled stope below) to 8.9% (stopes that expose three backfill walls during extraction). For 15m breccia zone stopes, dilution ranges from 0% to 10.7%.

Dilution was applied to the stope designs during the mine sequencing and scheduling phase.

16.5.4.2 Mining recovery factors

Table 16-21 summarises the mining recovery factors for Didipio underground. Capital and operating lateral waste development assumes 10% overbreak whist vertical waste development (long hole raise only) assumes 5% overbreak.

No overbreak is assumed for operating lateral ore development as the overbreak tonnes are generally ore which are included in the stope tonnes. Assuming zero overbreak in the ore drives removes the risk of either double counting or under calling ore tonnes and metal.

Tonnage recovery factors shown in Table 16-21 for stoping include in-situ ore, plus dilution material. Metal recovery factors take into account the difficulties associated with recovering all ore from a stope, particularly under remote control operations. Additionally, it allows for the potential loss of metal due to excess dilution burying ore (i.e. a minor paste backfill wall failure), and not recovering all of the ore and metal.

Table 16-21: Summary of mining recoveries

Activity	Tonnage recovery	Metal recovery
Lateral Development – Capital Waste	110%	-
Lateral Development – Operating Waste	110%	-
Lateral Development – Operating Ore	100%	100%
Vertical Development – Capital Waste	105%	-
30m high Longhole Stope - Primary	103%	98%
30m high Longhole Stope – Secondary	108%	95%
15m high Longhole Stope - Primary	104%	98%
15m high Longhole Stope - Secondary	110%	95%
15m high Longhole Stope - Secondary	110%	95%

16.5.5 Paste Backfill

An online paste backfill system is proposed for Didipio, which continuously receives and processes tailings from the process plant. The paste plant requires an instantaneous production capacity of 120m³ per hour at an utilisation of approximately 60% to meet mine production requirements.

Test work has been completed which confirms that the particle size distribution of the Didipio tailings derived from the current open pit is suitable for making paste backfill. For the planned primary-secondary stoping sequence (Figure 16-27), the estimated stope fill mass design strength requirements are summarised in Table 16-22.

Table 16-22: Paste backfill mass design strength

Stope Dimension	UCS (kPa)				Factor of Safety
(m)	1st Exposure	2nd Exposure	3rd Exposure	4th Exposure	
20m (w) x 20m (l) x 30m (h) (Standard Stope)	300	350	500	550	1.5
10m (w) x 20m (l) x 15m (h) (Breccia Zone Stope)	200	250	300	350	1.5

The cement dosage required to meet the design strengths detailed in Table 16-22 is projected to range between 2.5% and 4.5%, depending on the stope dimensions and number of vertical exposures. For cost estimates all stopes excluding the sill pillar and crown pillar will be paste backfilled at a binder addition rate of 3.5%. As detailed in Section 16.5.3.3.3 the sill pillar void is scheduled to be filled post-extraction, which has been included in the cost estimate at a binder addition rate of 1%. The crown pillar is not scheduled to be filled.

Paste backfill volumes have been calculated on the in-situ stope volume and potential stope wall overbreak and over-mucking of the floor. Paste backfill delivery holes have been duplicated in the cost model to ensure continuity of operation in the event that a hole becomes blocked over time. Figure 16-31 shows the life-of-mine paste backfill required to be placed.

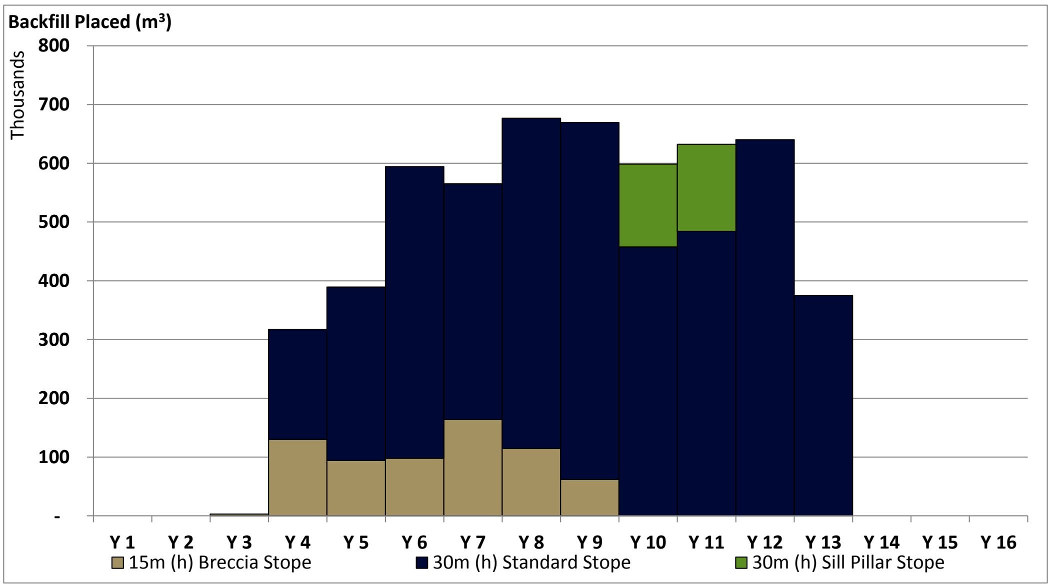


Figure 16-31: Extent of mine development at the onset of production, 2280 Level

An allowance of $16 million for the purchase and installation of the paste backfill plant has been included in the cost model, based on a quotation from a supplier.

16.5.6 Development and Production Schedule

16.5.6.1 Pre-Production Development

Critical path pre-production activities include:

- Portal construction and development of the main decline
- Establishment of primary ventilation raises to support the advancement of the main decline
- Establishment of secondary egress
- Establishment of primary dewatering infrastructure
- Definition diamond drilling

Pre-production development will span a 36-month time frame before the first stope is mined. The ramp up to full production will require three years from the onset of stoping, with ore production commencing at the base of the upper mining block on the 2280 Level. Figure 16-32 illustrates the extent of development at the onset of stope production in Q1 Year 4.

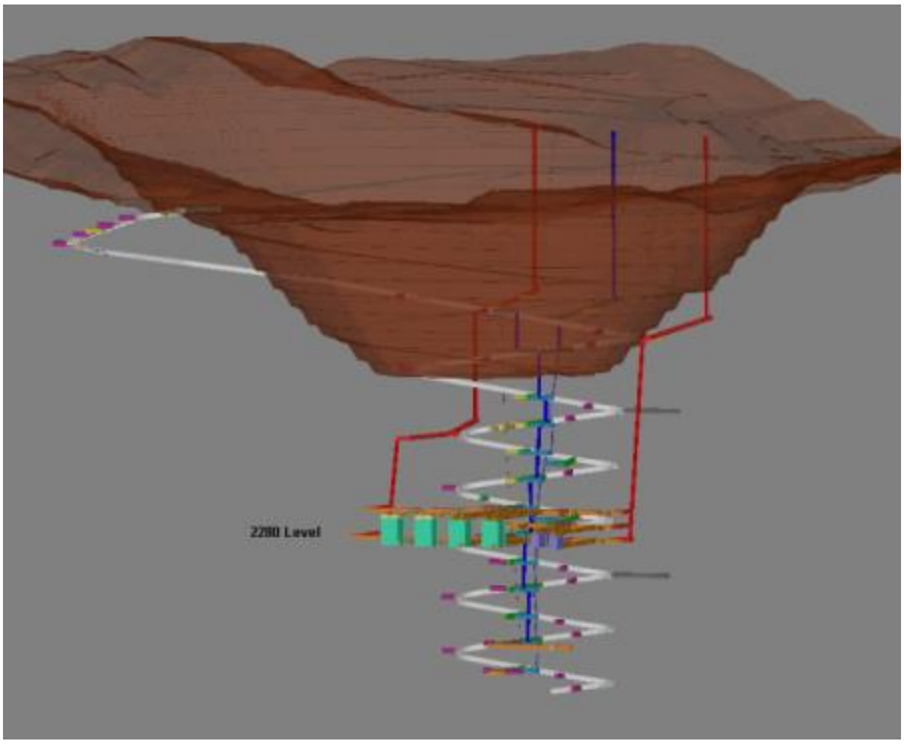


Figure 16-32: Extent of mine development at the onset of production, 2280 Level

16.5.6.2 Sustaining Development

A peak lateral development rate of 600 m per month is required, in years 3 and 4, and thereafter the maximum development rate is 550 m per month (Figure 16-33). The peak development year coincides with the availability of a large number of development headings due to the completion of the extension of the primary ventilation circuit, and with access to multiple ore headings. The majority of the headings will be of short length, and have a quick mining cycle turnaround. Additional development jumbos, loaders and trucks are scheduled for purchase in year 3 to ensure that adequate resources are available to complete the scheduled development. Approximately 60% of the life-of-mine lateral capital development required has been completed by the end of year 3, and 25% of the life-of-mine total lateral development.

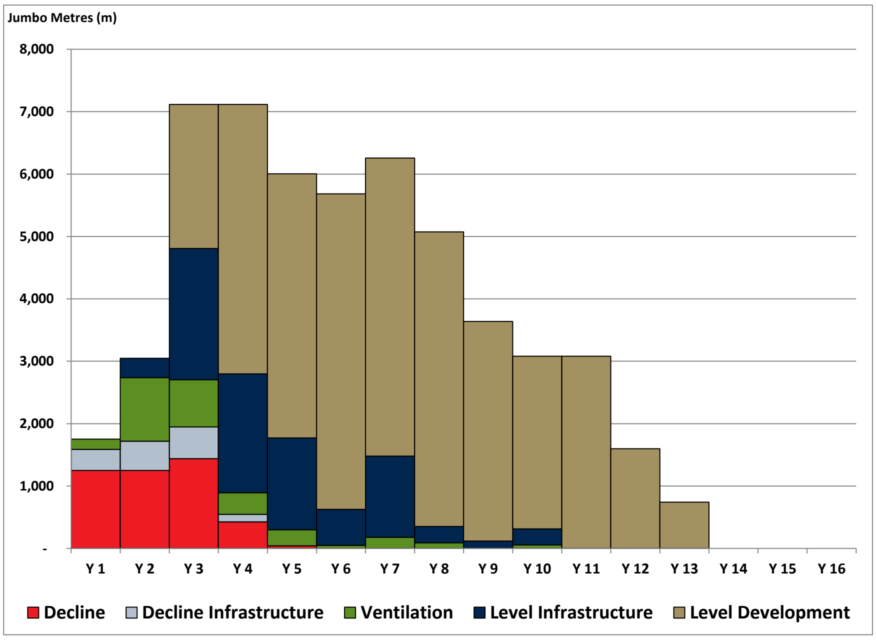


Figure 16-33: Lateral jumbo development metres

16.5.6.3 Life of Mine Production Schedule

Figure 16-34 illustrates the ramp-up to full production tonnage, with ore contributions by source.

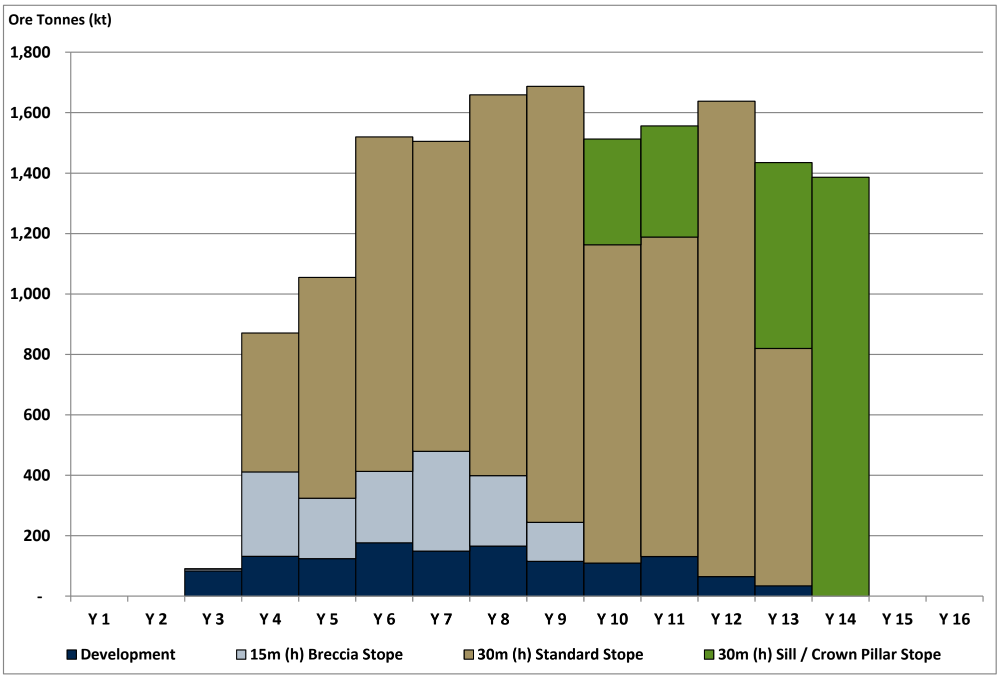


Figure 16-34: Underground production profile

16.5.7 Underground Geotechnical

The previous technical report for the Didipio operation (OGC, 2011), incorporates a mine design for underground mining which utilises LHOS with paste backfill. A high level geotechnical assessment of stable stope spans for input into the LHOS design was previously undertaken by AMC Consultants Pty Ltd (2007).

The LHOS design detailed in this Technical Report incorporated level development on 30m sub-level intervals, and stope footprint dimensions of 20m (l) x 20m (w). The mining sequence proposed was 'bottom-up', working on top of the backfill placed in the level below. Level access was planned from the south-west side of the orebody, with cross cuts aligned approximately perpendicular to the long axis of mineralisation.

As part of the geotechnical study in 2014 a mining method review was conducted and LHOS was retained as the preferred mining method. All recommendations made as part of the 2014 geotechnical study were adopted as the minimum requirement for the mine design, schedule and cost model.

16.5.7.1 Geotechnical Data Collection

Data collection for the 2014 underground geotechnical study included drilling, diamond core logging, and acoustic televiewer surveys, refer to Section 16.4.3.

Table 16-1 summarises the laboratory test work undertaken for this study.

Uniaxial Compressive Strength (UCS) and Uniaxial Tensile Strength (UTS) tests are most relevant for consideration as part of the current underground geotechnical study. The results of these tests are summarised in Table 16-23 and Table 16-24.

The UCS test results indicate that each lithology is very strong to extremely strong. There is significant variation in the results for the monzonite and monzodiorite units. The laboratory testing provides good coverage of the Dark Diorite, monzodiorite, and Tunja monzonite units, but limited coverage of the breccia units which make up a small proportion of the underground resource.

Table 16-23: Summary of UCS test results

Lithology	UCS (MPa)			E (GPa)			v		
	Count	Mean	Standard Deviation	Count	Mean	Standard Deviation	Count	Mean	Standard Deviation
Dark Diorite (DKD)	14	236.4	41.8	7	95.6	18.5	7	0.32	0.03
Monzodiorite (MZD)	11	211.9	73.3	5	72.5	10.0	5	0.26	0.04
Monzonite (TJM)	20	155.3	65.6	5	50.1	19.1	5	0.27	0.08
Quartz Monzonite (QMP)	3	115.9	34.3	1	52.6	-	1	0.31	-

Table 16-24: Summary of UTS test results

Lithology	UTS (MPa)		
	Count	Mean	Standard Deviation
Dark Diorite (DKD)	6	20.4	5.1
Monzodiorite (MZD)	6	15.3	2.1
Monzonite (TJM)	6	21.5	18.9
Quan Monzonite (QMP)	4	20.2	9.6

16.5.7.2 Stable Stope Spans

Assessment of stable stoping spans was undertaken using the Modified Stability Graph method, an empirical method, as described by Hutchinson and Diederichs (1996).

Based on the stability graph analysis of stable stope spans, the following conclusions were made:

- 20m x 20m stope crowns were forecast to be stable with cable bolt support installed. Crown cable bolts would also provide brow support when mining the above stope;
- Within the Tunja monzonite, the analysis results were generally consistent with those from AMC's previous study from 2007. The analyses indicated that stope walls were generally expected to be stable at the proposed stope dimensions. A moderate degree of stope over-break could be expected in some stopes within poorer rock mass conditions, resulting in possible dilution and oversize reporting to the stope. However, the majority of stopes were expected to be largely stable with only minor or localized stope over-break. The analysis indicated that in areas of good rock mass conditions, mining of double lift stopes is plausible; and
- Within the breccia, the analysis indicated that significantly smaller stope dimensions may be required to maintain stable stopes. The breccia zones represent a minor portion of the underground ore body and the underground mine design incorporates smaller stopes in the breccia zone to protect against potential instability, designed at 15m sub-level intervals and stope footprint dimensions of 20m (l) x 10m (w).

AMC considers stope over-break is possible from stope walls mined in close proximity of the Biak Shear. Options for minimising the impact of this on stope productivity and recoveries may include a combination of the following measures:

- Leaving a 'skin' pillar between stope walls and the shear zone. The thickness of the skin pillar required would depend upon the dimensions of the stope walls, with deeper break-back likely for larger dimension stope walls. For a stope height of 30m and width of 20m, AMC expects that the minimum skin pillar requirement would be around 8 m;
- Mining smaller stopes to restrict extent of over break; and
- Use of cable bolt support in stope walls to reinforce the rock mass adjacent to the shear, to provide some added confinement and reduce the extent of unravelling. It should be noted that the effectiveness of cable bolt support to prevent unravelling-style failures can be limited when not used in combination within effective surface support.

16.5.7.3 Development Layout

Based on the current understanding of geotechnical conditions, access to the orebody from the south-west is the preferred orientation. AMC recommends that the following minimum stand-off distances between stoping and mine infrastructure be adopted:

- 20m for hangingwall/footwall development and associated infrastructure e.g. internal vent raises, truck loading bays, working party magazines, rescue chambers, etc.; and
- 50m for decline and other life of mine level development.

In addition, the following general recommendations are made for waste development design:

- Avoid designing development intersections in fault zones;
- Development should cross faults at a high angle, preferably perpendicular, so as to minimize potential impact on development stability;
- Avoid placing development parallel along strike of well-defined geological contacts;
- Avoid placing development within approximately 20m of the footwall of the Biak Shear (the interpreted extent of the Biak Shear zone); and
- Avoid placing development within the Biak Shear, or on the hangingwall of the Biak Shear.

16.5.7.4 Portal Location

The decline portal is situated in the east wall of the current Bacbacan open pit within a fresh Dark diorite rock mass. AMC considers the current selected location to be generally well suited to this purpose, as the portal could be established with fairly minimal site preparation as it sits within fresh rock of generally 'good' but blocky rock mass conditions. The prime focus would be to ensure the area is protected from rock fall hazard from the slope above the portal. Indicative ground support requirements for the portal area are:

- The immediate portal area (10m either side and 5m above) be supported with a nominal 75 mm of shotcrete, and reinforced with 3m full encapsulated solid bar rock bolts on a 2m x 2m pattern.
- Reinforce the walls of the portal face with a ring of 6m long twin strand cable bolts installed around the portal perimeter (including the backs), parallel to the decline walls, on a 1m spacing.

16.5.7.5 Upper decline and vent shafts

Specific geotechnical investigations will be undertaken for the upper decline and all vent shafts requiring raiseboring.

16.5.7.6 Pillars

AMC considers that a 30m vertical pillar (equivalent to 1 sub-level) is appropriate for both the crown and sill pillar, to be confirmed by future numerical modelling. No other pillars are planned as part of the LHOS mining method.

16.5.7.7 Ground Support

AMC makes the following recommendations regarding development ground support:

- AMC recommends that surface support (either mesh or fibre-reinforced shotcrete) be installed in the backs and shoulders of all development due to the generally blocky rock mass conditions observed within the Tunja monzonite and Dark diorite. Mesh is recommended as the basic surface support in median rock mass conditions, with fibre-reinforced shotcrete recommended in lower-bound rock mass conditions;
- Given the generally wet rock mass conditions expected, AMC recommends either fully encapsulated bolts, or grouted friction bolts for all development to provide protection against corrosion; and
- Due to the intensely structured rock mass conditions and scatter in structural orientation data, AMC recommends that an allowance be made to install cable bolts in 50% of all waste development intersections. A nominal allowance per intersection of 15 twin strand cable bolts, each 6m in length, is recommended.
- Indicative development ground support requirements for each geotechnical domain and development type are presented in Table 16-25.

Table 16-25: Indicative development ground support requirements

Dev. Type	W (m)	H (m)	Geotechnical Domain	Rock Mass Conditions	Approx. Proportion of Development (%)	Surface Support		Reinforcement			
						Type	Coverage	Type	Specifications	Bolts/Ring No.	Ring Spacing (m)
Main Decline	5.80	6.20	Dark Diorite	Median	90	Mesh	Backs and walls to 3.5m from floor	Soild Bar	2.4m long fully encapsulated	7*	1.5
				Lower Bound	10	FRS	75m thick, backs and walls to 2m from floor	Solid Bar	2.4m long fully encapsulated	9	1.5
Level Accesses	5.50	5.80	Dark Diorite/Tunja Monzonite	Median	90	Mesh	Backs and walls to 3.5m from floor	Solid Bar	2.4m long fully encapsulated	7	1.5
				Lower Bound	10	FRS	75m thick, backs and walls to 2m from floor	Solid Bar	2.4m long fully encapsulated	9	1.5
FW Drives	5.00	5.00	Dark Diorite/Tunja Monzonite	Median	85	Mesh	Backs and walls to 3.5m from floor	Fricition Bolts	2.4m long fully encapsulated	7	1.5
				Lower Bound	10	FRS	75m thick, backs and walls to 2m from floor	Solid Bar	2.4m long fully encapsulated	9	1.5
			Biak Shear Zone	Median	5	FRS	75m thick, backs and walls to 2m from floor	Solid Bar	2.4m long fully encapsulated	9	1.5
Ore Drives	5.00	5.00	Tunja Monzonite	Median	70	Mesh	Backs and walls to 3.5m from floor	Fricition Bolts	2.4m long fully grouted	8	1.5
				Lower Bound	10	FRS	75m thick, backs and walls to 2m from floor	Solid Bar	2.4m long fully encapsulated	9	1.5
			Bugoy Breccia	Median	20	FRS	75m thick, backs and walls to 2m from floor	Solid Bar	2.4m long fully encapsulated	9	1.5

16.5.8 Underground Hydrogeology

Following initial groundwater modelling of the open pit and the preliminary underground mine design GHD validated the groundwater model using data obtained from site and the 2014 geotechnical drilling programme. Validation of the groundwater model allowed recalibration of the key parameters including removal of anisotropy and a decrease in the hydraulic conductivity of the deep country rock.

The recalibrated groundwater model was then used to model the final underground mine design and produce predicted inflows over the life of mine.

16.5.8.1 Predictive Modelling

Validation of the initial groundwater model provided a level of confidence to allow the transient modelling to be used for predictive modelling.

The mine geometry was incorporated into the model using the following:

- Mining of the open cut represented by drains with elevations applied using a transient TIN using a linear interpolation from the current pit to the end of the Stage 6 pit;
- Mining of the capital development underground represented by linear drains; and
- Mining of the underground stopes represented by aerial drains.

16.5.8.2 Model Results

The modelled flows rise quickly with the vertical advancement of the decline before approaching a steady state flow of approximately 250 l/s at the base of the mine. The model shows that a less aggressive capital development schedule will have a positive effect in reducing potential peak flows.

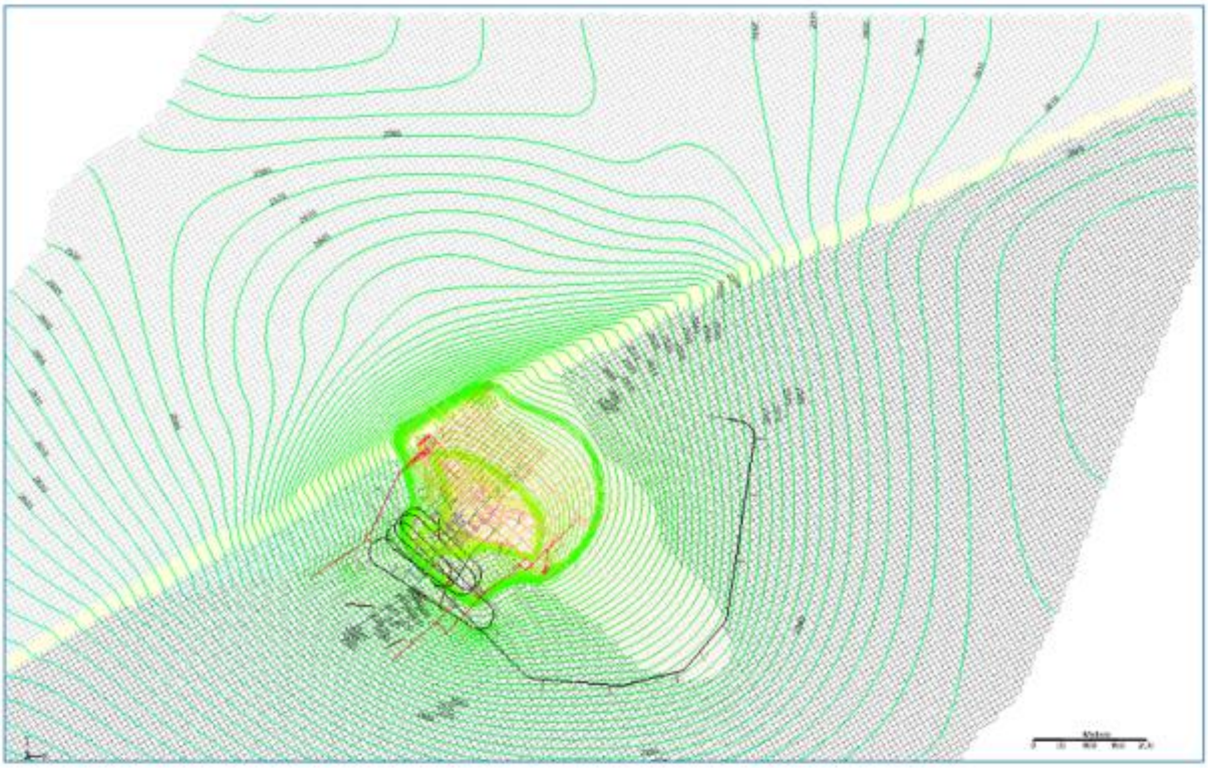


Figure 16-35: End of year 2018 modelled groundwater heads (mRL)

16.5.9 Mobile Equipment Requirements

Specialist contracting companies will be retained for raiseboring activities, but all other underground mining will be carried out by OceanaGold or nominated sub-contractors

Table 16-26 and Table 16-27 summarise the estimated mobile fleet requirements for the Didipio underground operation. The fleet numbers have been built up from first principles, based on equipment specifications, manufacturer supplied data, benchmark data and estimates based on experience.

The cost estimate assumes that all mobile fleet items are purchased as capital items. No lease fee or write-down has been included in the estimate. Additionally, no salvage value has been included in the estimate.

Table 16-26: Proposed mobile fleet requirements (annualised)

Mobile Mining Fleet	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14
Twin Boom Jumbo	1	2	4	3	4	4	4	3	3	3	3	1	1	0
Production Drill / Cable Bolter	1	1	1	3	4	5	5	5	5	5	5	5	4	1
Loaders	1	1	2	5	6	7	8	8	8	8	8	8	8	3
Trucks	1	1	3	6	7	8	8	8	8	8	8	8	8	3
Ancillary	6	6	6	6	6	6	6	6	6	6	6	6	6	2
Total	**11**	**12**	**17**	**24**	**26**	**31**	**31**	**31**	**30**	**30**	**30**	**29**	**27**	**9**

Table 16-27: Indicative maximum mobile fleet requirements

Description	Number
Twin boom development jumbo	4
Long hole drill rig	3
Cablebolter	2
Haulage Articulated 50 tonne truck	8
Articulated loader	8
Shotcrete sprayer	1
Shotcrete carrier	1
Production charger	1
Road grader	1
Underground stores – delivery	1
Underground Integrated Toolcarrier	2
Underground watercart	1

16.5.10 Ventilation

OceanaGold engaged AMC in 2014 to undertake a detailed ventilation study for the proposed underground mine. The purpose of the study was to review the ventilation plan for the underground mine and detail airflow requirements.

AMC's study covered the following:

- Overall ventilation approach;
- Airflow requirements;
- Overview of primary ventilation;
- Overview of auxiliary ventilation; and
- Network modelling of the deposit.

16.5.10.1 Design Criteria

The mine will be ventilated by a "Pull" or exhausting type ventilation system. That is, the 'primary' mine ventilation fans will be located at the primary exhausts of the mine, and will develop sufficient pressure to provide ventilation to all workings from the intakes through to the exhaust system and to the surface.

The following further general criteria are also established:

- Air residence time will be kept as short as possible to minimise personnel exposure to dust, heat, diesel particulates and other contaminants.
- Each level will be developed such that an exhaust route is established prior to commencement of production on that level.
- Recirculation is entirely prohibited.
- Series ventilation will be kept to an absolute minimum and only if a suitable quantity of fresh air is introduced at the start of the series.
- The use of ventilation doors and in particular airlock doors in ramps will be avoided where possible.
- Regulators will be used to control and redistribute the quantity of flow in each split of air.

Many jurisdictions in the world designate airflow requirements to mitigate the impact of diesel exhaust fumes in terms of a defined airflow per kW rated diesel engine power. However, Philippine legislation (DAO 2000-98 Mine Safety and Health Standards) does not designate such a requirement. It is considered reasonable, based on international standards, for mine airflow estimation purposes to consider a ratio of 0.06 m^3/s per kW diesel engine power to be a reasonable application.

The velocity of air is a primary factor of a safe working environment in terms of contaminant dilution/removal, and workplace thermal regulation. Additionally, excessive velocities may cause discomfort to personnel, dust problems, and unacceptable ventilation operating costs. Velocity criteria are based on standards employed at other mine sites.

16.5.10.2 Ventilation Approach

Each level will have its own ventilation circuit and will be ventilated as part of the overall mine "Pull" or exhausting type ventilation system. Fresh air will enter each level via both the decline portal and the internal fresh air raise system and exhaust to the surface via two dedicated return airways; one at either extremity of each level.

A series of fresh air rises (FARs) and return air rises (RARs) will be developed as the mine deepens, connecting at each level. Contaminated air from each active level will enter the RAR system via a drop board regulator installed in the access to the RAR on each level. The RAR system will connect to the surface.

Development

- The ventilation strategies for development uses a forced air fan (push) and duct system. To define the required ventilation flow for the excavation heading, a minimum flow of 0.06 m^3 / sec / kW has been used as described in Section 16.5.10.1.

Production

- Each production level has at least one fresh air source and at least one exhaust route. This allows for adequate distribution of air on each level even during the times of highest activity whilst keeping velocities below design criteria limits.
- Referring to Figure 16-36 for a typical production level, the general approach is to ensure unrestricted flow along the footwall drives between fresh air intakes and exhausts. Each production heading will receive the freshest air possible and the use of series ventilation will be avoided wherever possible.
- Regulation of airflows is attained through application of drop board regulators at each raise access.

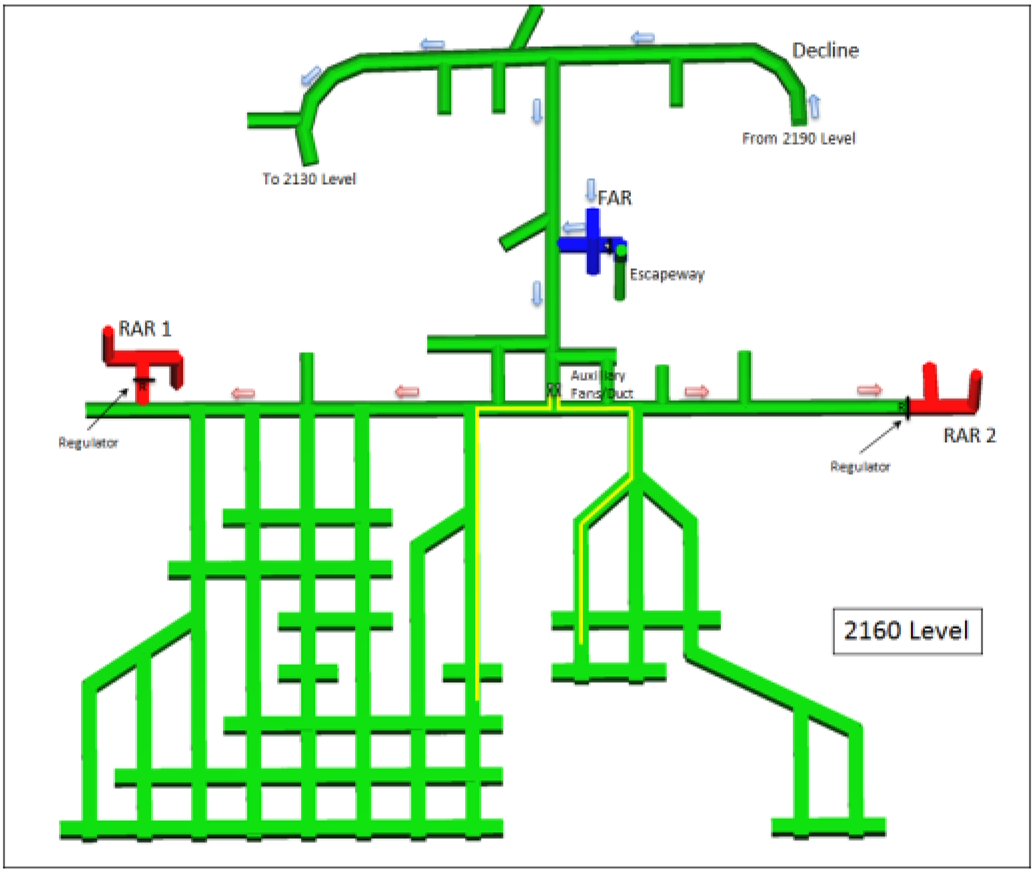


Figure 16-36: Typical mining production level

16.5.10.3 Ventilation Modelling

The ventilation system was modelled using Ventsim Visual™ Advanced. This software provides for three dimensional visualisation of a network and uses a form of the Hardy-Cross method for the ventilation network calculations. Based on operational diesel engine capacity and activities required to sustain production at the scheduled rates, it was determined that the total mine airflow required is the range of 550-600 m³/s.

The ventilation network was analysed by importing the mine design from the Datamine mine design programme and then applying attributes for each of the airways relative to their dimensions, frictional resistance, length, etc.

The airflow required was applied to the network such that each RAR was exhausting an equal 298.m³/s. Figure 16-37 shows a graphical output from Ventsim showing the primary ventilation routes.

Primary Raises

Primary intake and exhaust raises have been modelled as either raisebored to a 4m diameter or long hole blasted to an excavation size of 4m x 4m. These excavation sizes have been used for determination of primary fan specifications, and budgetary cost estimates.

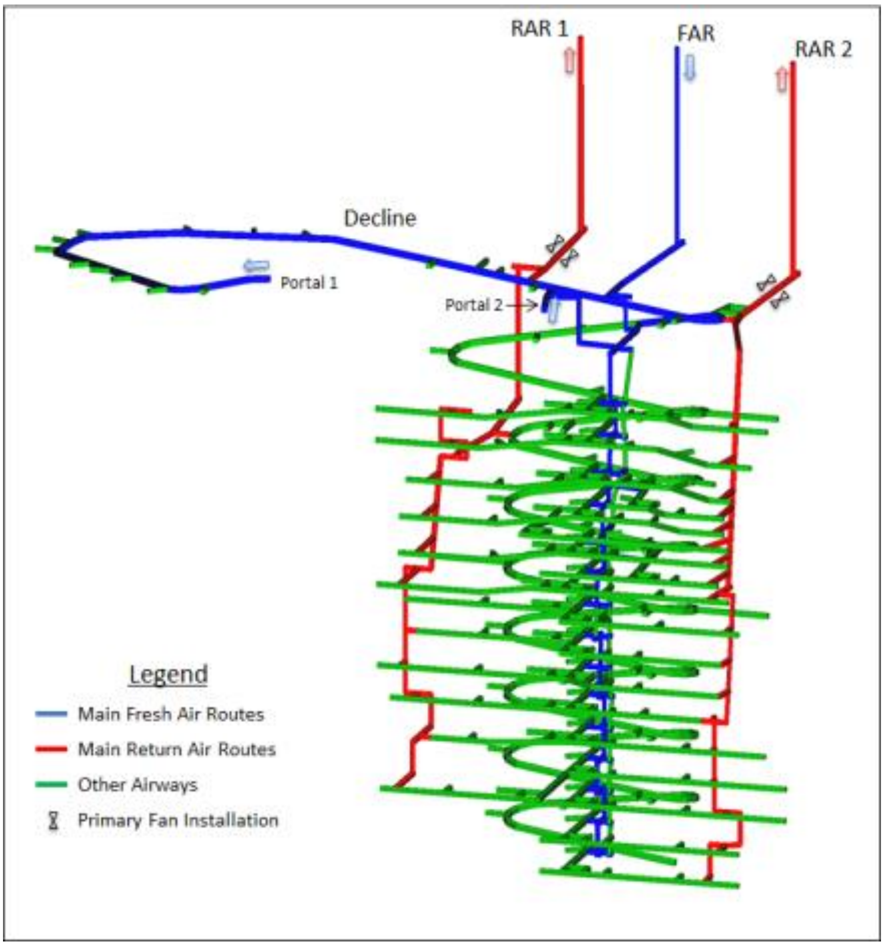


Figure 16-37: Primary ventilation system – Ventsim^{TM} output

16.5.11 Emergency Preparedness

In development of the ventilation strategy for Didipio underground, and with due regard to other operational issues, consideration has been given to the potential for mine emergencies. As such, the following criteria have been established:

- Decline and level accesses will be in fresh air once developed;
- On all levels, escape can be either to a ramp or to the escape ladderway in the internal fresh air raise system;
- In the decline, escape may either be up the ramp or down the ramp to a safe area;
- Three permanent twenty-person refuge stations will be established adjacent to the main decline (refer to Section 16.5.12.1);
- Two other portable refuge chambers are budgeted for flexibility of location at the most appropriate points in the mine; and
- Whilst the primary means of communication will be by radio, a stench system will be in place for introduction of ethyl mercaptan (stench gas) into both portal and primary fresh air raise concurrently in the event of fire.

There are a variety of incidents that will trigger the emergency response plan and/or evacuation plan. Such events may be fire, rock fall, injured personnel or major ventilation equipment breakdown.

In the event that the primary egress (main access decline and portal) is unavailable, a secondary means of egress from the mine must be available to allow evacuation of all underground persons when it is safe to do so.

Emergency egress from the mine is to be via a series of escapeway rises in the fresh air ventilation system. A provision has been made in the capital costing for supply and installation of 500 meters of escapeway ladderways, installed at between 80° and vertical, fully caged with rest landing spaced at required intervals. This provides vertical egress from the base of the mine to the secondary portal mined into the pit at an elevation of approximately 2520mRL.

16.5.12 Underground Infrastructure

16.5.12.1 Refuge Stations

Permanent 20 man refuge chambers have been located off the decline every 200m vertically, at approximately 2450mRL, 2250mRL and 2070mRL.

Figure 16-38: Twenty person refuge chamber

The positioning of refuge chambers assumes every worker is equipped with a self-contained self-rescuer (SCSR) with a nominal duration of 30-minutes.

Smaller, portable refuge chambers (suitable for eight people) have been proposed for use in areas where a second means of egress cannot be provided. Three permanent and two portable refuge chambers have been included in the budget estimate.

16.5.12.2 Mine Dewatering

Didipio mine site is located in an area with high seasonal rainfall, and it is expected that there will be high connectivity between regional structures and the underground operation. A 30m high crown pillar has been designed below the base of the open pit floor, to be left in situ for the life of the underground mine. This is designed to limit, as much as is possible, inflow of surficial water from the open pit into the mine workings. It should be noted however, that the crown pillar will not be impermeable: there will be some connection between the open pit and underground mine through the crown pillar. This will occur initially through natural fractures and drillholes. As stoping progresses, inflows would be expected to increase as mining induced stress changes in the crown pillar result in further rock mass damage and loosening, and an increase in permeability. To mitigate this, water retained within the base of the pit will be kept to a minimum, but pumping capacity will remain in place to deal with any surface accumulated water.

Two options for pipeline routes were considered, with different combinations of piping via the decline and rising mains. The preferred option is to install a temporary pump station in the upper portion of the decline, with the final pumping configuration consisting of pumping via rising mains to the base of the completed open pit, with stage pumping from the pit floor (Figure 16-39). The in-pit pumping will need to be bypassed before recovery of the crown pillar can be undertaken at the end of the underground mine life.

The modelled underground mine inflows rise quickly with the vertical descent of the decline, peaking at approximately 450 l/s before approaching a steady state flow of approximately 250 l/s at the base of the mine. In order to manage this change in flow rate over the life of mine, at each major pumping station it is proposed that two 225 l/s pumps are installed (operating in a duty/assist configuration), with a standby pump also installed. A temporary pump station has also been designed for dewatering of the decline and associated underground workings prior to installation of the permanent pump stations.

The preliminary pump station arrangement shown in Figure 16-39 has been incorporated into the cost model.

- Major pump Station at Level C pumps to the sump at Level B.
- Major pump Station at Level B pumps to the sumps at the base of the open pit.
- Temporary pump station and pipeline at Level A pumps up the decline.
- The open pit pumping capacity will be increased to discharge the underground water to the surface following sediment control.

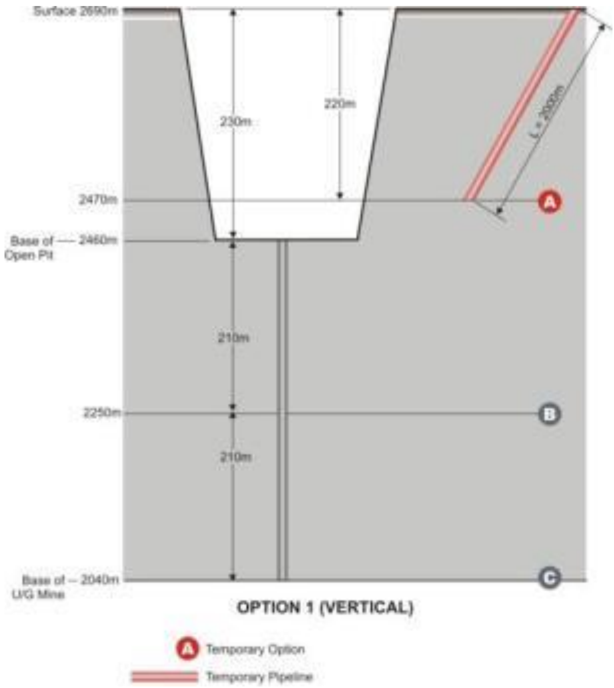


Figure 16-39: Pump station location schematic

Due to the relatively high heads for the pump stations, all pipes will be steel with the exception of the temporary pump station A, which will utilise HDPE pipes in the decline.

The pump arrangement for the mine (section view) and layout schematic for a single pump station (plan view) are shown in Figure 16-40 and Figure 16-41 respectively.

Each pump station will incorporate a pressure relief valve to limit surge pressures. This would be located off the manifold and over the sump so that any discharge would be directed into the sump. A drain valve would be provided to enable each rising main to drain back into the sump in the event that work needs to be carried out on the rising main.

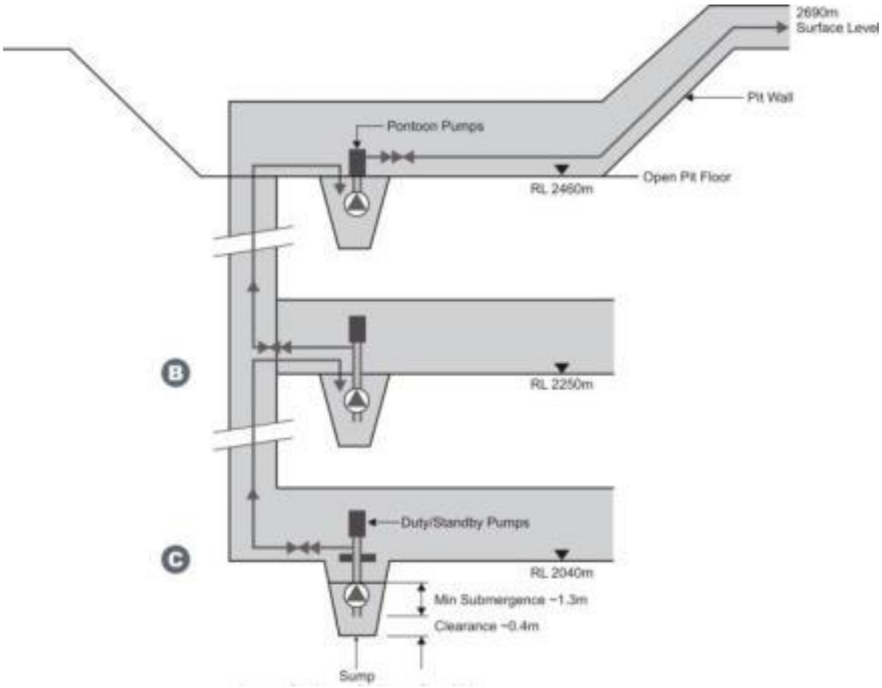


Figure 16-40: Pump arrangement – cross-section view

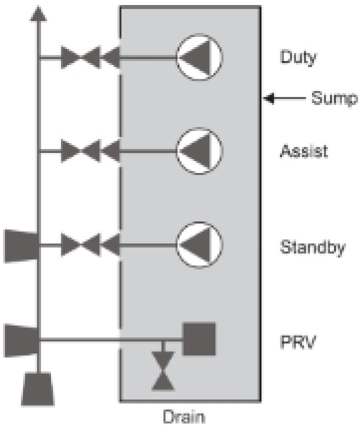


Figure 16-41: Pump schematic – plan view of a single pump station

16.5.12.3 Compressed Air

It has been assumed that compressed air will not be reticulated throughout the entire mine. Where compressed air is required for mining, alternative solutions have been considered and allowances made in the cost estimate, including:

- An Atlas Copco GA90-10 skid-based compressor (or equivalent) to supply compressed air for underground usage in localized areas.
- Small compressors installed on mobile fleet, such as the production and development drills and the charge up machine.

16.5.12.4 Mine Water Supply

Once the underground dewatering systems are in place, active controlled dewatering targeting the Biak Shear at depth will be targeted for clear water supply.

16.5.12.5 Service Bay and Wash Bay

An underground service bay and wash bay will be established for basic services for the drill rigs. The service bay and wash bay will be located in redundant stockpiles and will include:

- Service bay with jib crane.
- Oil sump and separator.
- Fire suppression system.

It is anticipated that the service bay will be used for minor maintenance only. Major repairs will be carried out in the surface workshop. An allowance has been made in the capital expenditure estimate for fitting out the service bay and wash bay.

16.5.12.6 Explosives Magazine

A provision has been made in the capital cost estimate for an underground magazine, located off the decline near the main return air drive, connecting through to surface. Separate explosives and detonators magazines have been included.

16.5.12.7 Communications and Automation

Allowance has been made for a VHF leaky feeder system. All mobile equipment will be equipped with radio sets. Key labour and supervision staff will be provided with handheld radio sets to provide communication on dedicated chat channels. Radios will also be installed in offices (such as the technical, emergency response, and first aid offices). Emergency response will have its own dedicated channel.

16.5.12.8 Electrical Distribution

Power at Didipio mine site is currently provided by diesel generators. A connection to grid power is planned to be completed in Q4 of 2015, which will significantly reduce the reliance on diesel power, and reduce the unit cost.

The underground electrical power supply assumes reticulation of the high-voltage feeder line to the Bacbacan portal (down the pit wall in cable trays) and then down the decline to the first substation. Any further extensions to the high-voltage reticulation feeder would be via service holes between the levels.

From the underground transformers, the reticulation will be distributed at 600 Volts at 60 Hertz. The 600 Volt maximum is determined by the MGB Mine Safety and Health Standards Rule 1052. The estimated peak demand for the underground will be 6.5 MW, with the peak expected in 2017 / 2018, primarily associated with the peak dewatering requirement currently modelled.

16.5.12.9 Underground Manpower Requirements

Specialist contracting companies will be retained for raise boring activities, but all other underground mining will be carried out by OceanaGold or nominated sub-contractors. Labour numbers detailed here exclude raisebore contractors, but include all other personnel. Labour for raisebore operations is included in an all-inclusive cost per metre in the cost model.

Labour estimates assume either:

- A 14 day on, 7 day off, three panel roster working 2 x 12 hour shifts per day on a continuous roster, or
- A dayshift only roster

Sources of labour have been split into three categories, being:

- Expatriate labour;
- National labour; and
- Local labour.

Where applicable labour estimates have been based on mobile fleet requirements which are in turn driven by mine production. For other areas such as supervision and technical services, labour estimates have been based on OceanaGold's operational experience. All labour costs have been based on current experience with the operating open pit.

Table 16-28 and Table 16-29 show the estimated underground labour requirements by work area and category respectively.

Table 16-28: Underground labour requirements by area

Labour By Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Maximum
Supervision	15	15	16	19	19	19	19	19	19	19	19	19	19	11	19
Tech Services	14	20	29	39	39	39	39	39	39	39	39	39	39	23	39
Maintenance	42	42	42	42	42	42	42	42	42	42	42	42	42	25	42
Lateral Dev.	16	18	23	25	27	27	27	25	24	24	23	18	17	5	27
Vertical Dev.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Production	0	0	2	8	12	15	15	15	15	15	15	15	13	3	15
Material Handling	9	9	12	21	23	28	30	30	30	30	30	30	30	13	30
Backfill	0	0	4	15	15	15	15	15	15	15	15	15	15	9	15
Mine Services	13	13	13	13	13	13	13	13	13	13	13	13	13	8	13
Total	**109**	**117**	**141**	**182**	**190**	**198**	**200**	**198**	**197**	**197**	**196**	**191**	**188**	**95**	**200**

Table 16-29: Underground labour requirements by category

Labour By Category	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Maximum
Expatriate	16	16	16	17	17	17	17	17	17	17	17	17	17	10	17
National	45	50	63	82	87	90	90	88	87	87	86	81	78	38	90
Local	48	51	62	84	86	91	93	93	93	93	93	93	93	48	93
Total	**109**	**117**	**141**	**182**	**190**	**198**	**200**	**198**	**197**	**197**	**196**	**191**	**188**	**95**	**200**

16.5.13 Interpretation and Conclusions

The Didipio underground mine has an NI 43-101 compliant Mineral Reserve of 15.9 Mt of ore at an average grade of 1.86 g/t Au and 0.43% Cu (2.57 g/t AuEq) for contained metal of 0.95 Moz of gold and 69k tonnes of copper (1.3 Moz AuEq). First development ore is expected in H2 of the third year of operations, with first stoping production at the start of the fourth year. The ramp up to the steady state production rate of 1.6 Mtpa is scheduled to take three years from the onset of stoping, with this rate maintained for six years before a reduced production rate for the final two years of operation during the recovery of the crown pillar below the open pit.

The operating cost per tonne for the underground operation is $26.45/t of ore, which includes all mining related costs, but excludes capital purchases and establishment costs. Adding all of the mining capital provides a total cost of $38.46/t of ore.

When compared to the previous NI 43-101 report issued in 2011 this shows a favourable variance, primarily attributable to:

- An increase in production rate, from 1.2 Mtpa to 1.6 Mtpa;
- A reduction in binder addition rate for paste backfill; and
- A reduction in unit power costs.

The drill density constitutes a risk to the development of an underground operation due to limited information on the geological and mineralogical controls of the mineralisation at depth.

The breccia zone constitutes a risk to the design, schedule and cost estimate as it currently poorly constrained and has limited geological and geotechnical data available for analysis. The small data set available for geotechnical analysis has resulted in a material impact on the proposed mine design and production schedule, with increased operating costs in this area as a result.

Delineating and improving understanding of the breccia zone will enable an improved mine design, production schedule and cost estimate. To mitigate this, a diamond drilling programme has been recommended to commence early in 2015, with information gathering in this area one of the key requirements. Due to the limited amount of information available, a conservative approach has been adopted in this study for stope designs in this area, and further drilling may indicate that ground conditions are better than what has currently been assumed.

Opportunities exist to improve the economics of the project through reducing capital expenditure, including:

1. Considering alternative mobile fleet strategies, such as equipment leasing, rather than purchase;
2. Refining the underground and surface pumping configurations to optimise the number and location of pump stations required;
3. Further design on the paste backfill reticulation network and surface plant to optimise costs;
4. Improved understanding of the Breccia which could result in reduction in lateral development; and
5. Alternative ventilation strategies.

Operational expenditure can potentially be refined by:

1. Further paste backfill test work to potentially reduce binder addition rates;
2. Further paste backfill test work to potentially reduce curing times required before exposure of fill walls underground;
3. Improve understanding of breccia zone geotechnical requirements, to optimise stope dimensions; and
4. Potential conversion of Inferred Resource material to Indicated or Measured category through drilling, to increase the mining inventory available with minimal increase in capital expenditure required.

16.5.14 Recommendations

The key recommendations relating to the underground project include:

Additional geotechnical investigation is required to improve definition of the breccia zone, and to enable detailed planning of major underground infrastructure such as vent shafts, the portal and the access decline. Numerical modelling should also be undertaken to confirm the required dimensions of the sill pillar and crown pillar, and their preferred extraction sequences.

The underground mobile mining fleet requires finalisation. The fleet detailed in this report lists suitable equipment based on size and capability, but there may be other suppliers of similar equipment which may be equally suitable for an underground mining operation in The Philippines. Availability of fleet supply and maintenance are also key criteria that require confirmation.

Material handling options that warrant further investigation are the use of open pit fleet to move underground material on surface. The schedule and cost model currently assume that the underground mobile fleet transport all material to its final destination, other than re-handle of ore into the crusher form the ROM stockpiles.

Alternative primary ventilation strategies, such as increased use of long hole blasted raises to reduce the amount of raise boring activity underground warrant further investigation to optimise costs.

Upon commencement of declining activities, as additional data is obtained the number and location of pump stations will be confirmed. Establishment of the pumping network will be a critical path activity to reduce the risk to the expanding underground mine.

The electrical distribution network needs finalisation, to consider combinations of power being run down the decline and/or shafts or service holes from surface.

The paste backfill reticulation network will be refined as additional test results become available.

17 RECOVERY METHODS

17.1 Introduction

Recovery of copper and gold at Didipio is achieved from the use of froth flotation following a conventional SAG Mill-Ball Mill grinding circuit. The design criteria for the Process Plant, was established from test work outlined in Section 13 of this report. The plant has been successfully running for 18 months since commissioning, with a well-established workforce and management team in place.

17.2 Process Flowsheet

Ausenco recommenced detailed design for the 2.5 Mtpa processing plant in February 2011 and site construction of the plant commenced in November 2011. First ore was introduced to the plant on December 14, 2012 and the plant commenced commercial production on April 1, 2013.

The process flowsheet is shown in Figure 17-1 and utilises a conventional process for recovery of a gold-copper concentrate and doré. The pebble crusher on the SAG mill trommel overflow is currently being installed and will be online before the end of 2014.

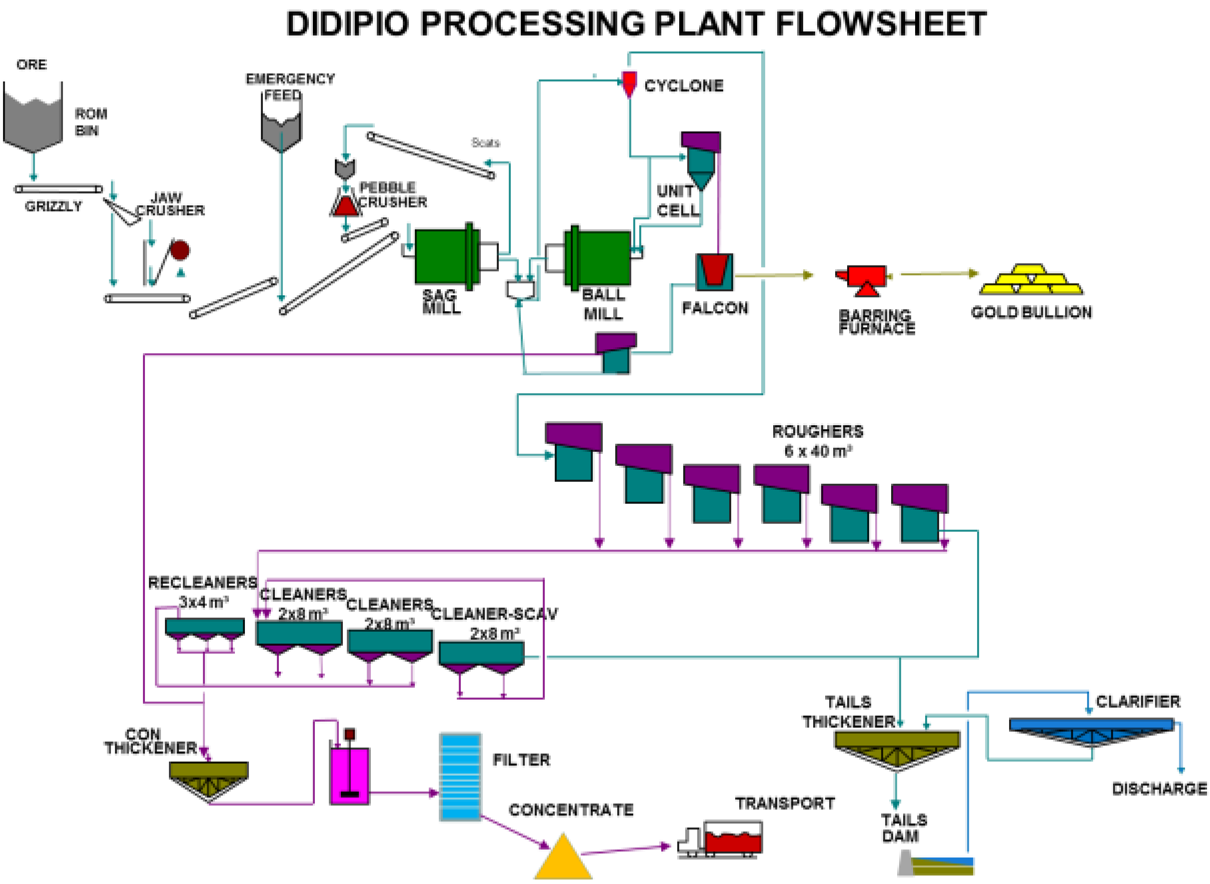


Figure 17-1: Process Plant Flowsheet 2014

17.3 Production Performance

Following introduction of first ore in December 2012 the plant throughput and recovery ramped up in line with the forecast plan. Concentrate shipments to the port commenced in late January 2013 and the first consignment of concentrate was dispatched from Poro Point on April 7, 2013.

Minor modifications were implemented in the process plant to improve the performance of the circuit in the post commissioning period with noticeable improvements in copper recovery from the retrofitting of larger froth crowders in the rougher cells. Plant surveys confirmed pre start-up laboratory test work indicating the trade-off of coarsening the primary grind size had a minimal impact on copper recovery of less than 1%. From the second quarter of commercial production, above budget throughput rates were achieved with the primary grind target raised to a P_{80} of 110-120µm.

Figure 17-2 shows the plant throughput rate compared to budget since the start of operations and shows the general exceedance of the budget. The throughput rate is also displayed normalised to an annual throughput rate at the budget 92% utilisation. April and May 2014 experienced unexpected downtime due to issues with the tailings line and major mill reline activities.

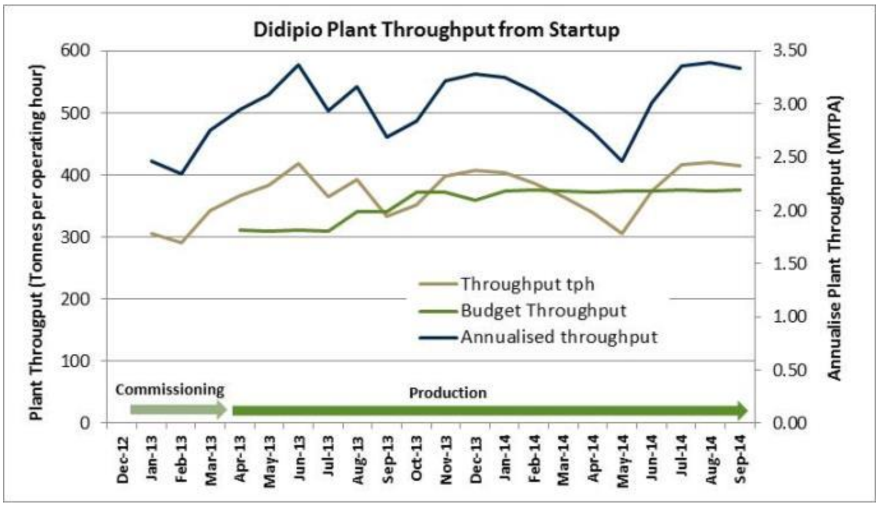


Figure 17-2: Process Plant Throughput 2012-2014

In the first calendar year of operation the process plant treated 2,598,867 tonnes of ore and exceeded the nameplate capacity of the plant (2.5 Mtpa) even with the phased ramp-up of both plant availability and throughput in the first five months of operation.

Concentrate production data is shown in Figure 17-3 from the commencement of operations. Concentrate grade has consistently been above the target grade of 24% copper with gold grade in concentrate varying in line with head grade. Silver content of the concentrate has been tracking around 90g/t and is a payable credit under the current off-take agreement. OceanaGold expects to include silver in Mineral Reserve Estimates at December 31, 2014. No penalty elements have been recorded in the concentrate that affects the calculation of payable metal.

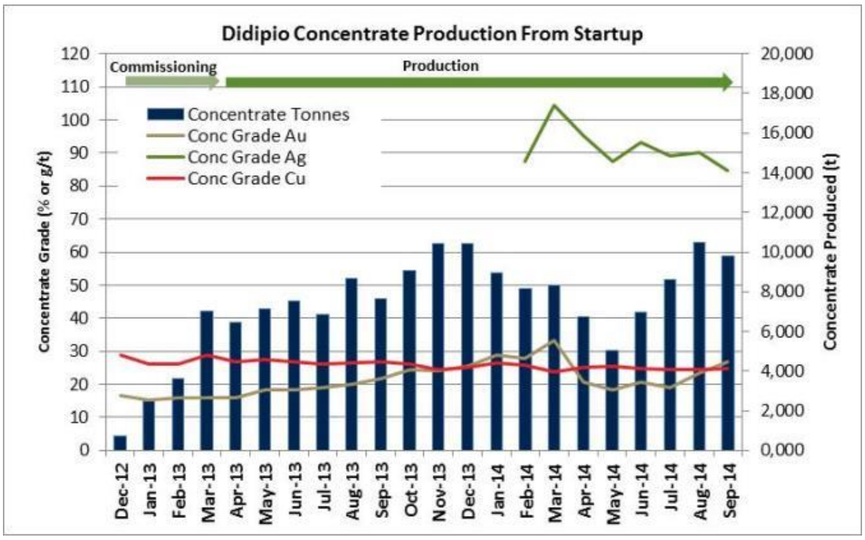


Figure 17-3: Didipio Concentrate Production Data

17.4 Upgrade to 3.5 Mtpa

Following successful commissioning of the process plant investigations began on a debottlenecking project to lift plant throughput to 3.5 Mtpa. A series of full grinding circuit surveys were undertaken and JKSimmet models developed to test various circuit scenarios to increase tonnage to different target levels. The conversion of the current grinding circuit to a SAG mill / Ball mill / pebble crusher (“SABC”) circuit to achieve a 3.5 Mtpa rate represented the best value proposition in terms of capital investment, installation time and improved cashflow.

Targeted capital expenditure was directed at the key infrastructure items to allow production rates to be increased without significant loss to recovery or availability. The key upgrades to the original plant include:

- Installation of a Sandvik CH-440 pebble crusher on the scats recycle stream on the SAG mill;
- Installation of 4 additional plates in the concentrate filter to increase capacity by 20%;
- Installation of an additional concentrate storage tank to increase flexibility with filter downtime;
- Installation of a vane feed well and vibrating trash screen on the concentrate thickener;
- Installation of a third stage of tailings pumps; and
- Upgrade of the process water pump motors to increase process water pressure.

Currently the project works are scheduled to be completed by the end of 2014 to ensure the plant is capable of treating 3.5 Mtpa in calendar 2015. The completion of the tailings handling and process water upgrades have already realised gains in plant throughput as can be seen in the plant throughput performance in Q3 2014 in Figure 17-2. Completion of modifications within the grinding circuit should allow higher throughputs to be achieved by improving the circuit’s capacity to handle higher competency ores.

17.5 Process Plant Facilities Description and Design Characteristics

17.5.1 Primary Crushing

The crushing circuit is situated next to the ROM pad. Mining trucks haul ore from the open pit to the ROM pad. ROM ore is fed by a front end loader (“FEL”) through an 800mm square aperture static grizzly into a 100-tonne live capacity ROM bin. The FEL is required to remove oversize material retained by the static grizzly.

The ROM ore is reclaimed from the ROM bin by an apron feeder and is discharged on to a static grizzly into a single toggle crusher. Fines will bypass the crusher. Static grizzly bars are set at nominally 100mm clearance.

The single toggle crusher, selected to handle 900mm maximum lump size, crushes the ROM ore to a typical P_{80} product size of 100mm. An overhead travelling crane is provided for changing out crusher jaw plates and for maintenance on other adjacent equipment. Dust suppression water sprays are provided at the ROM bin and at the head of the transfer bin feed conveyor, emergency stockpile feed conveyor and SAG mill feed conveyor. The sprays will be automatically turned on/off from the plant control system.

17.5.2 Crushed Rock Handling and Storage

The ore from the crusher is transported via conveyor one (CV-001) and CV-006 to a transfer bin. The transfer bin has a live capacity of approximately 15 minutes of mill feed. An apron feeder located beneath the bin transfers the crushed ore onto the mill feed conveyor CV-003, if CV-003 (or the SAG mill) is offline a diverter gate at the top of the bin directs the ore onto CV-002 the Extra Fine Ore (“EFO”) conveyor, CV-002 discharges ore onto a 5,000 tonne emergency stockpile.

If the crusher is offline then the ore from this emergency stockpile is fed onto CV-003 via the emergency feeder which is a low profile belt feeder. The ROM FEL is utilised to feed this emergency feeder as required. This allows crusher maintenance to be done outside of mill shutdowns, to reduce overall manning levels.

17.5.3 Primary and Secondary Grinding

The 7.3m diameter by 4.57m effective grinding length ("EGL") grate discharge SAG mill is fitted with steel liners and pulp discharges and initially processed 2.5 Mtpa of ore. The SAG mill is equipped with a 4,300 kW wound rotor induction motor and Liquid Resistance Starter ("LRS") and has capability to provide speed variation through a Slip Energy Recovery ("SER") unit.

Media charging is from 900kg drums of 125mm grinding balls via a kibble to the mill feed chute. A target ball charge of 12% is maintained with a media addition rate of 0.28kg/tonne of feed. Mill load is determined from monitoring the hydrostatic pressure in the trunnion mill lube system and controls the mill feed rate. A microphone is used to monitor the mill for low load conditions to allow the mill speed to be reduced to minimise liner damage.

Discharge from the SAG mill flows through a rubber-lined trommel and into a common mill discharge hopper. Oversize from the trommel screen (scats) is directed to the scats recycle conveyor for return on to the SAG mill feed conveyor. A Sandvik CH-440 pebble crusher will be commissioned in Q4 2014 to reduce the scats size to -12mm. The current scats recycle conveyor discharge will be redirected into the crusher feed bin and a new transfer conveyor will transfer the crushed material back to the mill feed conveyor allowing the current system to be used as a crusher bypass.

The 5.5m diameter by 8.38m EGL rubber lined ball mill is fitted with a 4,300 kW wound rotor induction motor, LRS, trommel screen and retractable feed spout/chute. Discharge from the ball mill flows through a rubber-lined trommel into the common mill discharge hopper. The combined SAG and ball mill discharge is pumped to a nest of eight Krebs 20" hydrocyclones. The hydrocyclone underflow is split, with approximately 40% reporting to ball mill feed. The other 60% reports to an Outotec SK-500 Flash Flotation Rougher cell for recovery of the coarse liberated gold and copper particles. The concentrate from the Flash Flotation Rougher reports to a gravity circuit and the hydrocyclone overflow gravitates on to the flotation rougher circuit.

The Flash Flotation Rougher utilises the twin outlet design with the low density top valve tailings reporting to the common mill discharge hopper to maintain ball mill density.

17.5.4 Gravity Circuit

The purpose of the gravity circuit is to recover free gold from the Flash Flotation concentrate. The gravity circuit utilises a Falcon SB2500 concentrator batch concentrator. A bypass option allows the Flash Flotation Rougher concentrate to bypass the concentrator and report directly to the Flash Flotation Cleaner when the concentrator is in a rinse cycle or is offline. The other gravity circuit components consist of a surge bin for the concentrate, a Gemini table treating all the concentrate and a further Falcon model SB250 concentrator on the table tails, all of which is located in the secured area gold room.

The concentrate from the SB2500 concentrator unit gravitates to the gold room for further processing. The tailings from the concentrator reports to the Flash Flotation Cleaner TC-10 flotation cell where the coarse copper and gold particles are recovered with the concentrate, then report to the combined final concentrate hopper with the Re-cleaner concentrate and pumped to the concentrate thickener. The tailings from the Flash Flotation Cleaner report to a hopper and are then pumped back to the combined mills discharge hopper to be pumped back to the cyclones.

17.5.5 Flotation Circuit

Cyclone overflow reports by gravity line to the first of six rougher flotation cells. Outotec TC-40 tank cells are used for the roughers with progressively increasing froth crowders installed down the train. Rougher concentrates are pumped to the cleaner cells, the rougher tailings report to the flotation tailings hopper for pumping to the tailings thickener.

Concentrate from the cleaner cells feeds the bank of re-cleaner cells. Tailings from the re-cleaner cells re-join the rougher concentrate as feed to the cleaner cells. Concentrate from the re-cleaner cells will be directed to the final concentrate pumpbox and then transferred to the concentrate thickener. The tails from the cleaner cells feed into the cleaner-scavenger cells with the tailing from these cells reporting to the cleaner-scavenger cells. The tails from the cleaner-scavenger cells reports to the flotation tails pumpbox.

The concentrate from the cleaner/cleaner-scavenger cleaner cells can be fed to either the feed of the re-cleaner cells or the cleaner cells dependent on concentrate grade. The concentrate from the cleaner- scavenger cells reports back to the feed of the cleaner cells.

17.5.6 Concentrate Handling

Final copper concentrate is thickened in a 12m diameter high rate thickener fitted with a van feedwell and deaeration tank. The underflow is pumped at about 60-70% solids to a 400m^3 storage tank. A Outotec PF-930 horizontal plate pressure filter press produces a concentrate filter cake at about 8% moisture, which will be suitable for transport and sea freight to smelter customers.

The filter cake discharges to a concentrate stockpile of about 15 days capacity located within the concentrate storage shed. The concentrate is loaded into rigid trucks using a FEL with a nominal payload of 20 wet tonnes per load. Composite samples are prepared from trucks as they are loaded, for moisture and metal content. A weighbridge weighs all trucks leaving site to account for movement, inventory control of material and tracking for permit requirements.

Concentrate is trucked by road to a storage shed located at Poro Point, La Union with the capacity to hold up to 15,000t of material. Ships are loaded periodically in 5,500 or 11,000t shipments. Turnaround time for the concentrate trucks averages 27-32 hours.

17.5.7 Tailings Handling

Combined flotation tailings will gravitate to a combined flotation tailings hopper and are pumped to a 20m diameter high rate thickener with a vane feed well. Flocculent, Magnafloc 919, is dosed to the thickener feed box by variable speed helical rotor pumps to aid in the settling of concentrate and to provide necessary clarity in thickener overflow.

Three stage variable speed thickener underflow pumps pump thickened tails to the Tailing Storage Facility (TSF) through a 250mm steel/HDPE line approximately 2,000m to the dam crest. Tailings then moves through a spigot manifold along the length of the dam wall allowing formation and control of the tailings beach. Approximately 200m^3/h of decant water (a mixture of tailings transport water and rainfall in the catchment) is pumped back to the process plant for makeup water. Excess water in the catchment is pumped to the water treatment plant for release.

17.5.8 Gravity Gold Concentrate Treatment

The concentrates from the Falcon concentrator are screened with a Kason screen and the products individually retreated using a Gemini shaking table. Fine free gold is separated from the predominantly chalcopyrite/bornite primary gravity concentrate with screening utilised to improve the processing efficiency of the table. Concentrates from the table are filtered and dried prior to smelting in a standard diesel-fired barring furnace. The tailings and middlings product from the table are retreated in a small Falcon concentrator, with the concentrates joining the table concentrates for smelting. The tailings from the secondary concentrator are returned to the final concentrate pumpbox to minimise any gold losses from the gravity cleaning circuit.

The dried gravity concentrates are mixed in batches with fluxes designed to allow the best separation of the gold and silver into doré. These batches are smelted and poured into moulds to produce the gold/silver doré bars, which assay 85% gold and 15% silver. Iron and base metal levels in the bars are typically less than 3%.

17.5.9 Reagents

A number of reagents are imported to the site, generally in bulk form. Hydrated lime is imported in 1t bulk bags and stored in a purpose built reagent shed. The hydrated lime is mixed with water to a solids density of about 20% solids and distributed to the plant using a ring main system, whereby the slurry can be fed to various distribution points as required to maintain target pH.

Three collectors are currently used in the process plant. CMS2500 is delivered to site in 1,000L IBC containers and is dosed to the flash flotation feed as a primary copper collector to minimise issues with natural hydrophobicity.

SIBX is delivered in pellet form in 850kg bags sealed inside wooden crates and mixed on site to a 5% target strength. A header tank with a control valve and flow meter, controls dosing of SIBX to three points in the rougher circuit as a secondary copper collector.

S701 is delivered in 1,000L IBC containers and dosed to the mills discharge hopper as a free gold specific collector via peristaltic dosing pumps.

IF6500 frother comes in 1000L IBC containers and is distributed to the selected flotation points with peristaltic dosing pumps.

Flocculent is delivered in 25kg bags. This powder is mixed in a Ciba Jetwet mixing unit to a 0.5% solution strength and then stored in a storage tank. Flocculent distribution is by a variable speed pump.

17.5.10 Control Room and Maintenance Shop

A Yokogawa CentumVP DCS system is utilised throughout the process plant and power station for process control. A permanently manned control room monitors and controls the process from the primary crusher to the TSF return water pumps. The PI Historian from OSISoft collects process and alarm data from the DCS for reporting and analysis.

A maintenance workshop facility is located adjacent to the process plant allowing for overhaul of equipment on site.

17.5.11 Metallurgical Laboratory

A metallurgical laboratory is located adjacent to the maintenance workshop and is provisioned with a laboratory rod mill, L40 Falcon Concentrator, flotation cells, pressure filters, ovens, rotary splitter and cyclosizer. The laboratory undertakes routine diagnostic testing on the process plant, processes survey samples and future ore testing programmes on drill core samples.

17.6 Energy, Water and Consumable Requirements

17.6.1 Energy

Process plant power requirements were approximately 10MW in the first 18 months of operation since commissioning, with an increase of 1MW occurring with the ramp-up in throughput to 3.5 Mtpa from increased ball mill charge, third stage tailings pumps, pebble crusher and an increase in overall slurry pumping volumes.

Power is sourced from the onsite power station consisting of 14 generator sets rated at 1.3MVA each. Overall total site power demand is expected to be an additional 1MW. Design is underway for the addition of a high voltage step down transformer to connect the plant power station to grid supply in 2015 to reduce operating costs. The current power station will be maintained as back up supply with two generators envisaged to be constantly operating to ensure backup power for essential services in the event of a grid power outage to minimise downtime before a plant restart.

17.6.2 Water

Raw water is currently sourced from a pair of production bores located outside the expected ultimate pit shape. These bores pump water to the Mine Dewatering Tank which transfers water to the plant raw water tank for use in gland sealing, reagent mixing and potable water treatment. Currently the installed bore pump capacity exceeds the requirements of the process plant even at the higher 3.5 Mtpa throughput rate.

Process water is recovered within the plant from the tailings and concentrate thickeners with makeup sourced from the TSF pond at $20m^3/h$. Recycle rates of process water are high, exceeding 90% with the only raw water makeup into the system from services requiring higher quality water.

17.6.3 Water Treatment Plant

The level of the decant water pond in the TSF is maintained by discharging excess water to the Dinauyan River via a Water Treatment Plant (“WTP”). The WTP currently consists of a 34m diameter Outotec clarifier located remote from the plant capable of treating up to 2,000m^3/h of decant water to reduce the total suspended solids to below 30ppm prior to discharge to the river. Local coagulant and flocculent dosing systems are provided with periodic transfer of solids underflow pumped back to the main process plant tailings thickener.

17.6.4 Consumables

Key consumables in the plant are the flotation reagents and grinding media and are generally transported to site from Manila. Consumption rates of key consumables for the last 12 months of operation are listed in Table 17-1. Collector consumption rates have reduced significantly from pre-commissioning estimates with natural hydrophobicity in the orebody greatly assisting in reducing collector usage.

Table 17-1: Consumable Consumption Rates

Reagent	g/tonne
Lime	173
IF6500	40
CMS2500	2.8
SIBX	4.2
S701	1
Magnafloc 919	17.2
SAG Media	0.28
Ball Media	0.5

Lime usage has also tracked below the original feasibility estimates with the flotation circuit being operated at a pH target of 9 rather than 10.2, as the low levels of gold bearing pyrite are recovered into the final concentrate at acceptable final product grades.

17.7 Labour

The process plant currently operates with a three panel crew roster on a continuous shift 14 on, 7 off roster. Total operations establishment numbers 68.

Plant maintenance is performed by OceanaGold personnel and totals 85 people to maintain the crusher, process plant and power station.

18 PROJECT INFRASTRUCTURE

A general infrastructure site plan is shown in Figure 18-1.

18.1 Clean Water

Water is sourced from dewatering bores sunk around the perimeter of the open pit. A potable water treatment plant is located in the process plant with a second potable plant for the camp accommodation areas. One 370 kilolitre fire water tank and one 200 kilolitre potable water tank were erected to provide water storage for the Didipio operation.

18.2 Power Supply

Currently power is provided by a 15MW diesel generation system, although OGPI is currently planning to construct a 69 kV Overhead Power Line ("OHPL") into the Didipio operation infrastructure. The diesel generators will be maintained as a back-up power supply to the OHPL grid power supply.

The OHPL is planned to be commissioned by the third quarter of 2015.

18.3 Sewage

Sewage from the project site is piped to a site based sewage treatment plant, whereas sewage from small isolated locations is held in holding tanks and then transferred to the sewage treatment plant. Sewer pump stations, septic tanks and leach fields were also constructed in the camps.

18.4 Refuse Disposal

As a commitment; the company complies with its ECC. Best practices in waste management are being implemented as follows: refuse wastes generated by the operation are disposed into a category II type sanitary landfill which caters for both biodegradable and residual wastes. Recyclable wastes are housed in a Material Recovery Facility ("MRF") operated by the local corporation (DiCorp). Scrap metals generated are temporarily housed in a metal scrap yard. Collection is carried out via communication to local waste bidders.

In compliance with the Environmental Compliance Certificate, specifically hazardous waste management, hazardous waste (used oil, lubricants etc.) being generated is temporarily stored into individual hazardous waste storage areas.

A centralized hazardous waste area is scheduled for construction within the next 6 months. These wastes are being sent out to DENR accredited transporters and hazardous waste treatment facilities for final disposal and treatment in accordance with the Philippine Government Regulations.

18.5 Accommodation

Single-status accommodation is available in a central camp for all personnel recruited from outside the Didipio area. The accommodation consists of varying standards of sleeping quarters, with their allocation based upon the role of the person.

The styles of permanent operational accommodation and the numbers of buildings are as follows:

- **550 Man Camp:**
  - Senior management/VIP accommodation – 2 single bedrooms with a shared lounge area.
  - Senior staff accommodation - 48 single bedrooms with ensuite.
  - Junior staff accommodation – 84 bedrooms with shared ensuite.
  - Junior shared staff accommodation - 36 bedrooms with shared ensuite.
  - Rank & File staff accommodation – barracks-style accommodation with shared ablutions block for 384
  - Kitchen and mess hall suitable for approx. 600 persons, 240 per sitting.

  - Camp office for Contractor (Dicorp)
  - Guard House
  - Camp laundry
  - Recreation room which includes training room and music room
  - Gym
  - TV Block for the Rank and File Staff
  - Administration Office (OGPI Staff)
  - Clinic
  - Emergency generators
- **150 Man Camp:**
  - Senior staff accommodation - 32 single bedrooms with ensuite.
  - Junior shared staff accommodation - 36 bedrooms with shared ablutions
  - Rank & File staff accommodation – barracks-style accommodation with shared ablutions block for 120
  - Kitchen and mess hall suitable for approx. 200 persons, 50 per sitting
  - Administration Office (OGPI Staff)
  - 3x Camp offices for contractor (Dicorp)
  - 3x Admin Offices for contractor (Delta)
  - Camp laundry and linen storage
- **CCO Man Camp:**
  - Senior staff accommodation-2 single bedrooms with ensuite.
  - Junior shared staff accommodation-10 bedrooms with shared ensuite.
  - Rank & File staff accommodation – barracks-style accommodation with shared ablutions block for 320
  - Kitchen and mess hall suitable for approx.350 persons, 160 per sitting
  - Camp laundry and linen storage
  - Recreation Room
  - Guard House
  - Emergency generators
- **Other Buildings within the Site:**
  - Guard House at main gate
  - Sewage treatment plant for all three camps

The camp is operated by a contractor (Dicorp), whose role includes providing meals, cleaning duties for the camp buildings, cleaning duties for the mine site buildings, laundry services, provision of linen, cutlery etc. The site G&A costs include the accommodation camp operating costs.

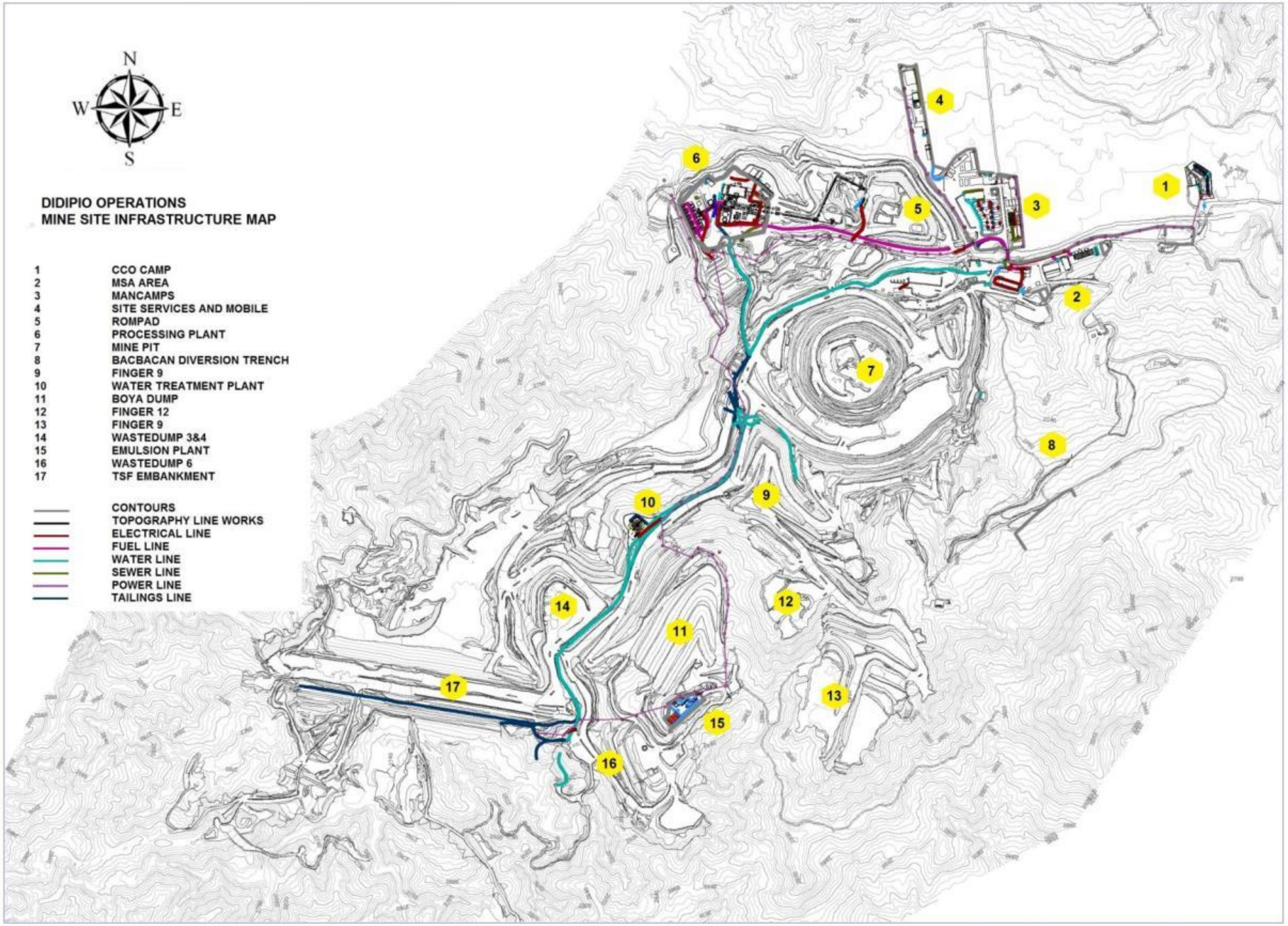


Figure 18-1: Didipio General Arrangement, October 2014

18.6 Bulk Waste

The tailings storage facility has been constructed approximately 1km to the west of the open pit on a tributary creek to the Dinauyan River and consumes a significant amount of the open pit mine waste generated. The site chosen for the TSF has a relatively small rainfall recharge and allows the main river to flow by the facility.

In addition to the TSF embankment, open pit mine waste is placed in the valley between the TSF and the mine, in effect buttressing the downstream embankment of the TSF.

18.7 Port Facilities

The existing copper concentrate storage and shipment facility at Poro Point is sufficient to handle the concentrate shipments from the Didipio operation. The shipment entails a 365 kilometre truck haul over an existing well maintained sealed pavement national highway, prior to storage at the port. The storage facility has capacity for 12,000 tonnes of concentrate.

18.8 Personnel

Manning profiles were derived from the following sources:

- Assessment of labour requirements from first principles;
- Contractor’s assessment of labour requirements;
- Benchmarking from similar operations; and
- Previous study information.

Currently there are 20 – 25 expatriate positions on site now that a steady-state operation has been achieved. The site satisfies the requirements for localisation under the FTAA.

Where possible, recruitment, particularly of mining and processing plant personnel, will be from the local area. Contractors servicing the project will be obliged to follow a similar employment policy

The FTAA sets out targets for localisation, which requires up to 100% Filipinos in unskilled, skilled and clerical position and up to 60% Filipinos in professional and management positions.

18.9 Sufficiency of Surface Rights

The company has acquired, through voluntary agreements, the surface rights to all of the land required for the project for the foreseeable future. If a requirement arises for some additional area in the future due to any alteration to the project design it is not anticipated to result in a material impact on the capital cost required or on the operations.

18.10 Tailing Storage Facility (TSF)

18.10.1 TSF Development to 2780mRL and Flow Through Drain with the Waste Rock Dump

To meet the tailings storage requirement at the Didipio operation in 2014, expansion of the existing 2770mRL Tailings Storage Facility (TSF) to 2780mRL was required. The approved 2014 development plan (by GHD) required the raising of the existing facility from 2770mRL to 2780mRL before the onset of the 2014 wet season (October, 2014). This commenced on October 1, 2013 and was completed on September 30, 2014. The total current storage capacity is approximately 5,000,000m^3.

Construction of the Flow-Through Drain (“FTD”) entry was undertaken in November 2013 and completed on April 14, 2014. Construction was scheduled early to protect the FTD works that would be undertaken by the operations team at Waste Dumps 3 & 4 in late 2013 to open up more dumping area for mining. The FTD intake required approximately 130,000 m^3 of rockfill to complete, and was extended 1,100m downstream from the flow through entry location to near the open pit.

Construction of the 600m section of the drain from the FTD entry was undertaken by the Projects team beginning in mid-April and completed in August 2014.

Accelerated development of the valley between the TSF and the mine with the construction of the FTD, raising of the TSF to 2780mRL from 2770mRL, Boya waste dump reaching capacity and the expansion of waste dump 3 & 4 it necessitated the relocation of the tailings pipeline corridor to a higher elevation. This will be outside of future development to limit any potential further need for relocation. Movement of the tailings pipeline included upgrading of the existing tailings pump station and the installation of a 300mm diameter carbon steel pipe section and 450mm HDPE tailings line to transfer tailings material from the Process Plant to the TSF.

Assessment of the location of the tailings line to the river determined the requirement to construct catchment ponds in the event of a pipeline failure, cross sectional bunding of the tailings corridor and the installation of containment measures under the pipe bridge.

To meet the needs of the required waste rock storage from the pit and the future tailings storage requirements, expansion of the TSF from 2780mRL to 2790mRL is required. Works commenced on this stage in April 2014 with a scheduled completion date of June 30, 2015.

18.10.2 TSF Design Review

GHD (Australia) has conducted a design and capital expenditure review of the TSF at the Didipio operation. The revised mine designs for open pit and underground have resulted in a significant reduction in mined waste volumes over the Life of Mine ("LoM") and have resulted in a change to the TSF / WRD concept.

The original waste volumes enabled the TSF and WRD to merge to an integrated structure with a significant flood storage volume between the TSF and WRD crests. To enable the same flood storage capacity with the reduced waste rock volume it has been necessary for the TSF and WRD to be separated to leave a storage basin between the structures.

The impacts on the TSF / WRD due to the revised mine designs from the optimisation study, with a focus on TSF construction costs are:

- Simplification of open pit cutbacks on the North wall, resulting in a single diversion of the Dinauyan River catering for the LoM, which presents savings over the originally proposed multiple cutbacks and multiple diversions;
- Cessation of open pit mining earlier than previously anticipated (meaning TSF stages need to be accelerated);
- Reduction in mine waste by approximately 60Mt over the LoM, reducing waste available for use in the integrated TSF/WRD;
- Utilising tailings as mine backfill reduces the required tailings storage capacity by approx. 10Mt over the LoM, resulting in a reduced ultimate TSF wall height and associated saving on tailings disposal costs; and
- Change in overall water management plan and integrated Waste Management Plan through separating the TSF and WRD facilities.

The reduction in storage requirements for mine waste (waste rock and tailings) and their impact on estimated TSF height and subsequent estimated TSF construction savings are presented in Table 18-1

Table 18-1: Optimisation study impact on TSF

Description	Optimistion Study	Original Mine Plan
Forecast tailings production to end of 2014[1]	5.5 Mt	5.5 Mt
Forecast tailings production to LOM[1]	48.0 Mt	48.0 Mt
Planned underground backfill paste[1]	10.0 Mt	0 Mt
Total tailings storage required in dam[1]	43.5 Mt	53. 5 Mt
Total tailings storage required in dam (based on density of 1.3t/m^3)	33.5 Mm^3	41.2 Mm^3
PMF partly stored with safe release via spillway	3 Mm^3	3 Mm^3
Required total storage in dam	36.5 Mm^3	44.2 Mm^3
Required ultimate dam crest height[2]	RL 2812m	RL 2818m
Estimated TSF embankment construction capex from (Jan 2015)[3]	15M $AUD	18M $AUD

The estimated TSF construction costs for the remaining life of mine are shown in Table 18-1, which shows the impact of the optimisation study resulting in an ultimate TSF crest level reduction of 6m from 2818mRL to 2812mRL and subsequent saving of $3M in TSF capital expenditure for the embankment alone. Other savings not estimated are TSF pumping operating expenditure due to the reduced crest elevation.

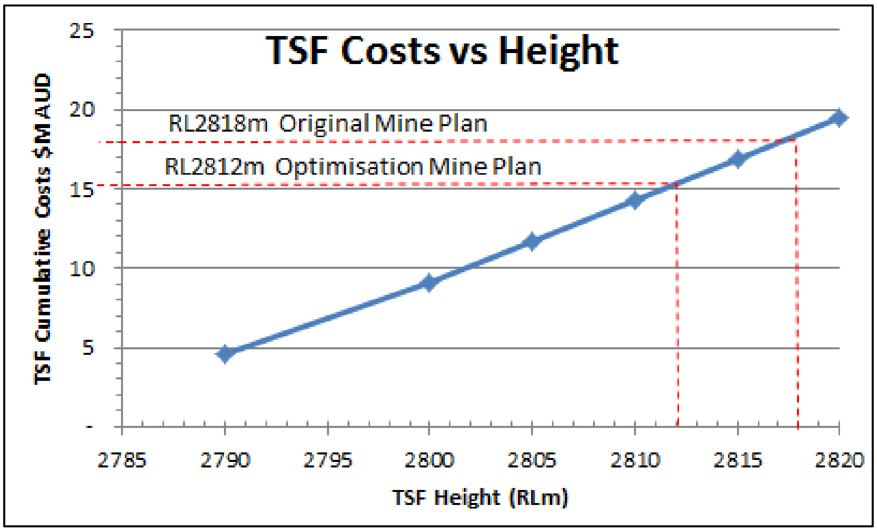


Figure 18-2: Estimated TSF cost vs. height for LoM

A typical cross section through the TSF / WRD showing stages over time is presented in Figure 18-3.

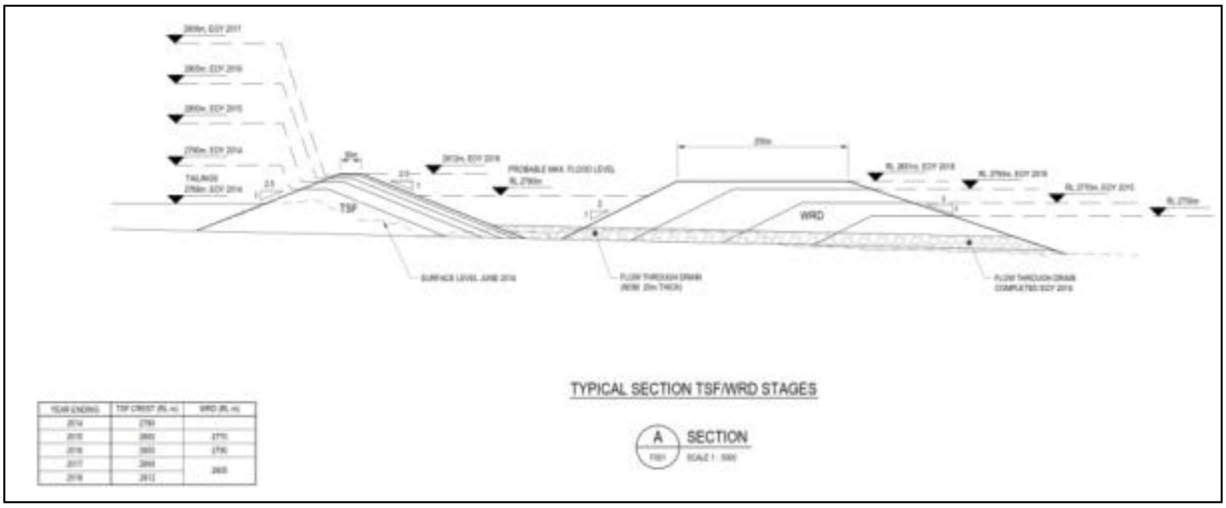


Figure 18-3: Typical cross-section showing TSF / WRD stages

18.11 Core Shed

The existing OGPI core shed located at Cordon does not meet OHSE requirements and is undersized for life of mine core storage. A new core shed was constructed at Didipio site to meet immediate core storage requirements and allow exploration personnel and facilities to be located on site at Didipio. The core shed has been designed to allow expansion of the core storage area in the future as storage requirements increase.

18.12 Water Treatment Plant

The major component of the Water Treatment Plant is the new 34M Clarifier circuit that was constructed to treat the decant water from the Tailings Storage Facility ("TSF") using coagulant and flocculent reagents to reduce the total suspended solids ("TSS") prior to discharge into the Dinauyan river. Clarifier underflow solids recycle and flocculent is added to bind and settle the solids impurities which are discharged back to the TSF.

18.13 Phase 1 and Phase 2 - 3.5 Mtpa Ramp-up Project

Since plant commissioning in late 2012, a series of ramp-up and "de-bottlenecking" projects have been undertaken by the OceanaGold Project Development Group. Phase 1 and Phase 2 were identified during 2013 processing operations which will further improve Didipio processing efficiency and capacity resulting in cost savings to OceanaGold. The breakdown of Phase 1 and Phase 2 projects is listed below.

Phase 1 Projects:

- SABC crusher study;
- Installation of larger feed well and froth breaker for the concentrate thickener;
- Installation of Float Force rotors and stators in Rougher Cells FC- 5/6/7/8;
- Increase process water pressure to 400 Kpa;
- Installation of 3rd stage tailings pumps;
- Installation of vibrating screen for concentrate thickener trash;
- Installation of second pressure filter feed tank;
- 4 plate upgrade of the existing concentrate pressure filter; and
- Installation of a twin mono-rail system for SAG reline activities.

Phase 2 Projects

- SABC Circuit Installation.

18.14 SABC Circuit

SABC circuits are typically deployed when critical sized material accumulates in the SAG ore charge due to low breakage rates and is regarded as quite conventional comminution practice. Removal of pebbles via large aperture grates for cone crushing in closed circuit with the SAG mill feed results in higher milling rates by coarsening the transfer size from the SAG to ball mill. This coarsening of transfer size will result in increased SAG mill capacity, typically in the region 15 to 20 per cent depending on ore characteristics which determines pebble production rates. The economic viability of this option is subject to the sensitivity of metal recovery to a further coarsening of the grind size P_{80}. A grind size P_{80} of about 140-145 microns is anticipated at a 4.0 Mtpa milling rate with a SABC circuit.

Project execution of the SABC Circuit as Phase 2 of the 3.5 Mtpa (ramp-up) project commenced in February 2014 and is scheduled for commissioning early November 2014. Completed areas of the SABC circuit layout as at October 1, 2014 are highlighted in yellow in Figure 18-4 to Figure 18-6.

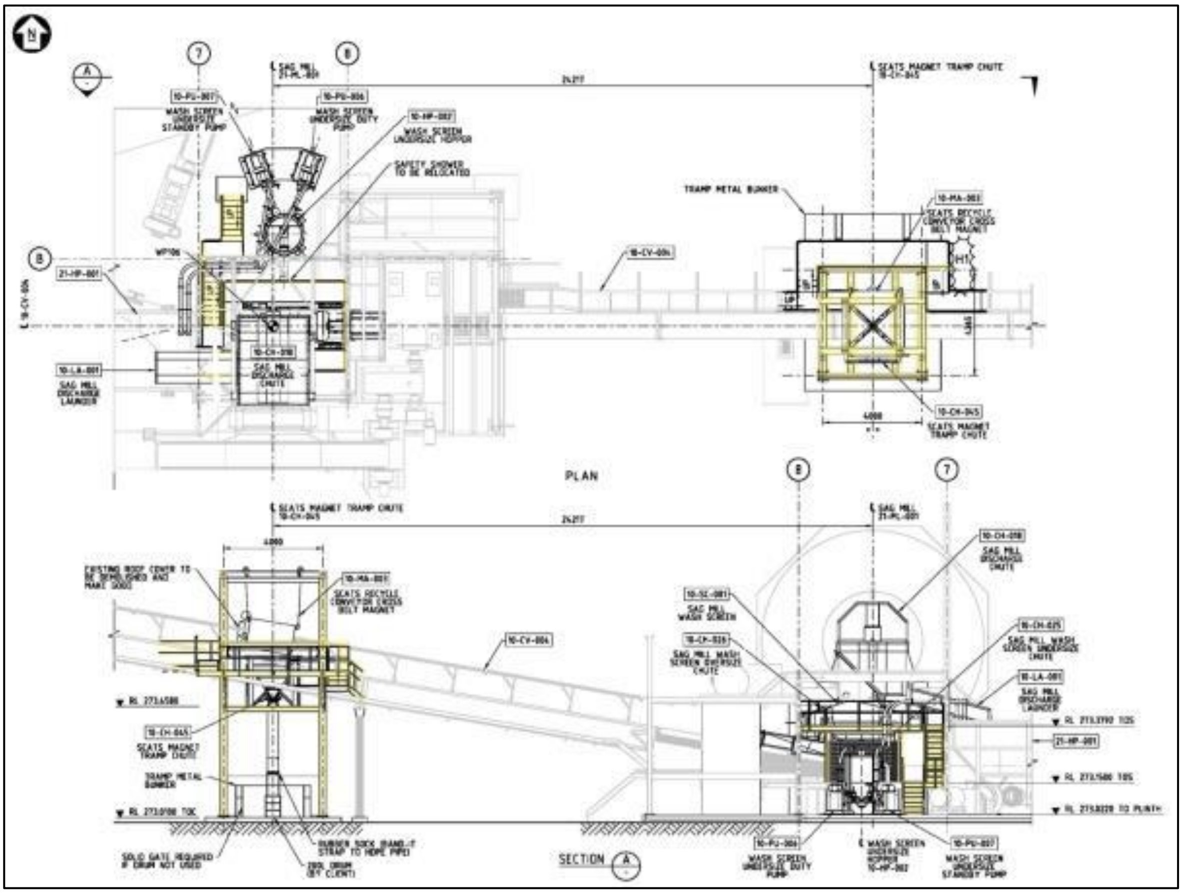


Figure 18-4: Mill Discharge & Magnet Area

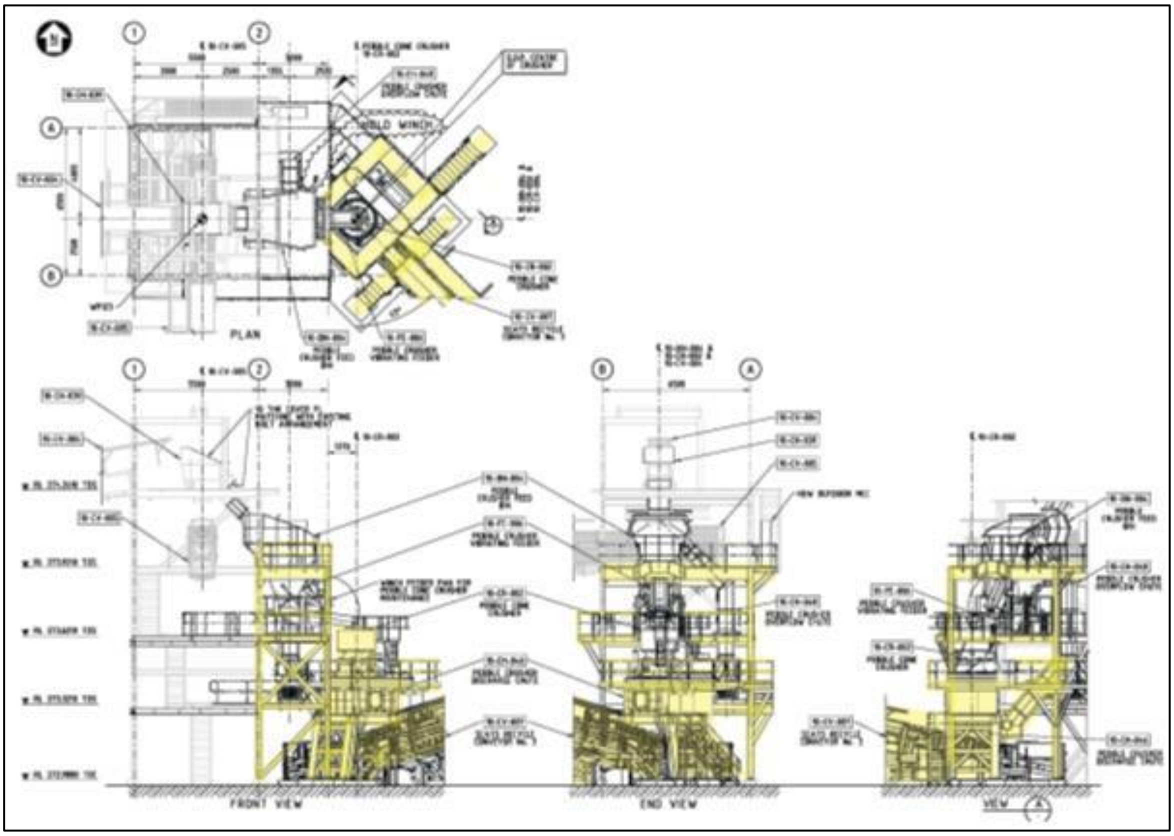


Figure 18-5: TS-03 Extension Pebble Crusher Area

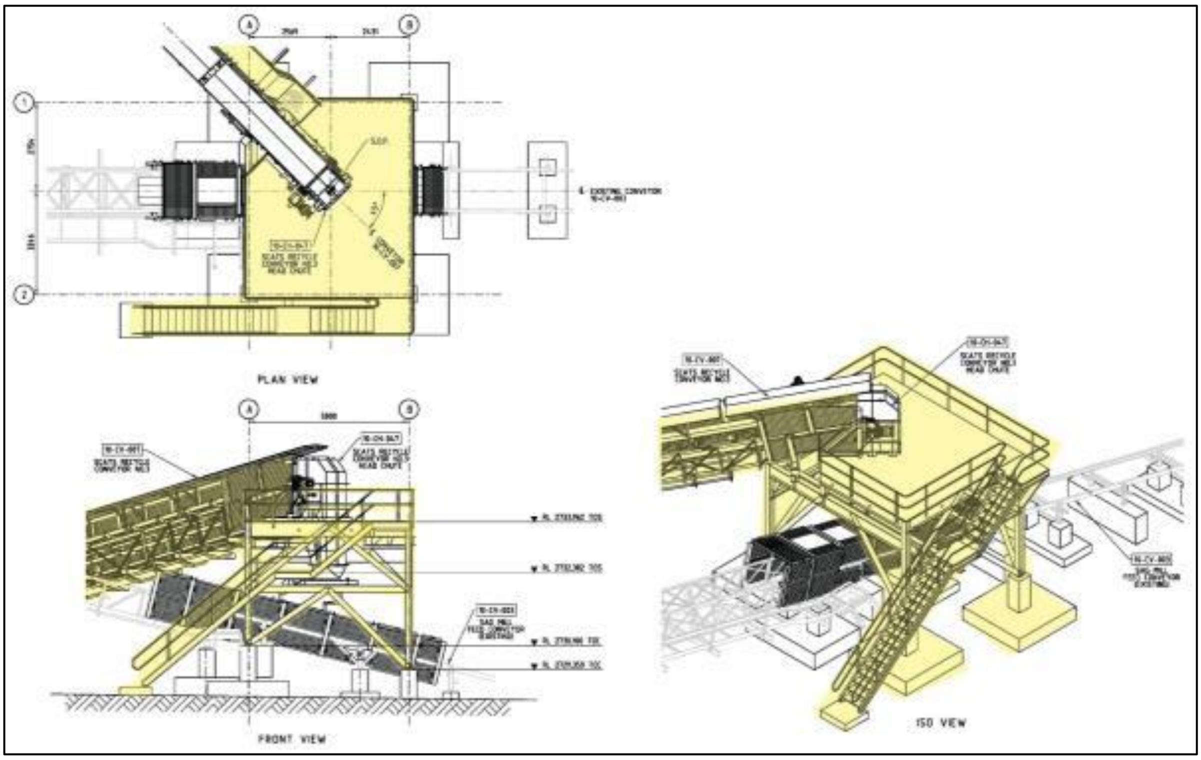


Figure 18-6: 10-CV-007 Transfer Tower

18.15 Underground Infrastructure

The proposed infrastructure will include the workshops, change rooms, Paste Backfill Plant, portals, vent rises, sub-stations etc. for the underground mine at Didipio. Design and concept plans are underway in preparation for the underground development stage of the project.

Power demand for the underground mine has been provisioned in the OHPL design and the power supply contracts with San Miguel Corporation. The capital cost of the infrastructure has been provisioned in the capital costs.

18.16 Site Water Management

OceanaGold engaged GHD in 2013 to review the site water balance and surface water management as part of the optimisation study on the Didipio operation. GHD was directed to reassess the base case mine plan to reduce uncertainty in relation to ground and surface water management in the current plan, as well as consider alternative mining plans and methodologies.

The key output of the hydrology study was a Surface Water Management Plan ("SWMP") and assessment of impacts of the alternative mining methods or pit designs considered by the Didipio operation.

18.16.1 Hydrology & Water Balance Study

A permanent flow monitoring station has been installed at the toe of the WRD which can be used to calibrate outflows of the FTD, which is a critical input to the design of the Dinauyan river diversion infrastructure and construction and storage requirements for the WRD.

With regard to flood impacts to the pit and key surface infrastructure the following can be concluded;

- The impact of the flood storage available in the TSF and removal of the pit catchment area has had significant benefit in reducing the downstream flood impacts to the pit camp infrastructure at the Dinauyan and Surong confluence since the 2011 flood mapping, which showed significant areas of the camp were at risk of flooding in 1:50 and 1:100 year events. This is also partly due to more a refined modelling approach in applying flood flows than in previous work in addition to refinement on assumptions of the Didipio Gorge geometry via use of recent actual survey data.
- The modelling undertaken has provided the following design flood flows for the Dinauyan catchment (Table 18-2) upstream of the pit to enable sizing of the future Dinauyan diversion channel for various scenarios. These scenarios cater for the impact of the WRD storage being developed and subsequent throttling of the WRD flow through underdrain back to its design flow capacity, as this is currently much higher than the design and minimal storage is currently available upstream of the WRD.

Table 18-2: Dinauyan River flood for diversion drain sizing

Average Recurrance Interval (ARI)	Dinauyan River Flood for Diversion Drain Sizing (m^3/ s)	
	Without WRD / Flow Through Throttling	With WRD / Flow Through Throttling
1:20 year event	37.5	20.9
1:100 year event	80.2	40.7

Modelling of the open pit water balance has been undertaken to determine potential sump pump requirements for the pit. The modelled pump capacity of 500 l/s is equivalent to 53mm of rainfall per day on the pit catchment. Based on the last 21 years of historical rainfall the 500 l/s pumping rate is capable of keeping up with daily inflows 95% of the time based on average annual inflows and 90% of the time based on the wettest months of September-December.

Pit catchment flood inflows were modelled, and a 500 l/s pumping rate is capable of removing a 1:100 year flood event stored in the pit within 10 days (not accounting for any additional inflows during the pump out period before or after the flood event).

18.16.2 Water Management Structures

18.16.2.1 Dinauyan Diversion Drain

Part of the open pit mine plan is the diversion of the Dinauyan River diversion. The diversion channel will be a concrete lined structure to reduce the risk for ground water recharge to the pit (in accordance with the recommendation of the GHD groundwater model) and to ensure that the channel will be stable with minimal maintenance over the life of the mine.

Construction of the diversion drain will involve cutting back of the north wall which is in highly weathered material. The north wall will be an engineered slope to ensure that it meets the acceptance criteria recommended by AMC.

The diversion channel is designed without considering the water-retention benefits of the completed WRD storage and is sized to accommodate at least a 1:100 year flood event.

Detailed design of the diversion channel is currently underway by GHD, with Figure 18-7 illustrating the current conceptual layout.

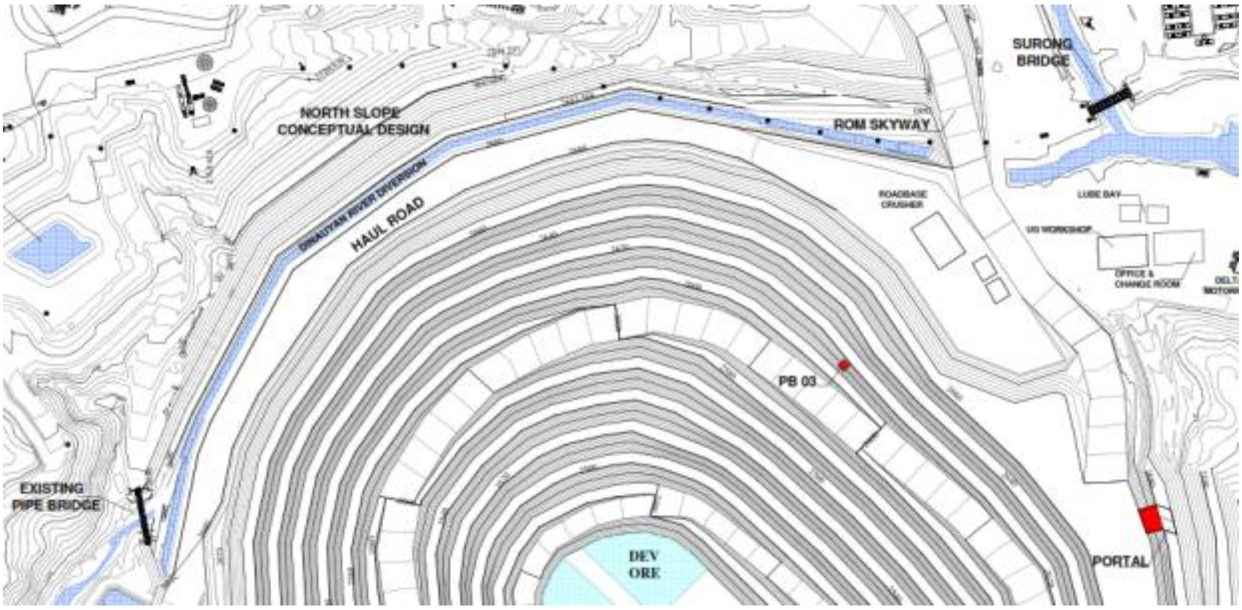


Figure 18-7: Dinauyan River Diversion relative to the final open pit design

18.16.2.2 Waste Rock Dump (WRD)

The WRD is constructed with a FTD which is monitored for outflows to continually assess as-constructed flow capacity in order to better understand performance and in preparation to throttle the drain at the upstream intake once the WRD has sufficient flood retention capacity.

WRD flood storage will be targeting 20m of storage depth within the WRD, capable of storing a 1:100yr event. The WRD downstream face shall have an overtopping spillway for overflow flood events.

18.16.2.3 Tailings Storage Facility (TSF)

The TSF height means it is capable of storing without release a 1:100yr event as a minimum. Mine waste movement between the TSF and WRD shall be traded off to keep both achieving minimum design criteria for flood storage. The majority of the TSF is to be constructed prior to cessation of open pit mining, allowing economical tailings storage and flood protection.

18.16.3 Open Pit Water Management

Diversion drains

The open pit footprint is surrounded by diversion drains of varying width and depth that divert general seepage and high precipitation event flows from reaching the pit. Montoring and maintenance of this drainage network is a priority as they prevent additional water reporting to the pit floor, which would increase pumping costs.

Maintenance and improvement of such drains is seen as a priority as the open pit footprint expands over the life of the mine. Ongoing maintenance of the drains will occur post open pit mining to ensure as little water as possible reports to the retained open pit sumps while underground mining operations continue.

Pit water management

A pit water balance was completed by GHD in June 2014 as part of the hydrology study. GHD showed a 500 l/s in pit sump pump could manage inflows for 90% of the historical daily rainfall occurred in the last 21 years over the wettest months of September – December. This pumping capacity will be capable of removing a 1:100 year inflow event from the pit within 10 days excluding other rainfall inflows during the pump out period.

As the open pit progresses, flows are directed to in-pit sumps incorporated in the mining plan. The sumps allow ease of pumping from the pit to the sediment ponds and ensure that mining is able to occur under optimal conditions with production benches being drained prior to excavation. A pontoon pump station capable of 450 L/s will be established near the end of open pit mining.

18.16.4 Process Plant Water Supply

Clean water is supplied to the process plant via dewatering bores.

19 MARKET STUDIES AND CONTRACTS

19.1 Mining

Delta Earthmoving, Inc. ("Delta") provides a comprehensive civil works and open pit mining service to the Didipio operation under an industry standard contract with OGPI that commenced in January 2012 for a term of six years. The contract covers the development and extraction of the open pit, estimated at about 50 million BCMs of ore and waste over the six year term of the agreement. Delta's scope of works includes clearing and grubbing, site preparation, drilling and blasting, loading, hauling, ore feeding, waste dump and TSF construction, construction and maintenance of haul roads and drainage systems, bench maintenance and pit dewatering.

The majority of the mining fleet of trucks, excavators, tractors, production diggers and various items of auxiliary equipment are owned and financed by Delta. Under agreements signed with Delta, its financiers and selected other equipment lessors and a Philippine bank (as Escrow Agent), OGPI has retained an option to purchase or subrogate into the leasing of the fleet at the expiry or in the event of early termination of the mining contract.

OGPI and Delta cooperate in sponsoring and supporting community and environmental initiatives in the Didipio region. In June 2014 construction started on a jointly sponsored housing project to assist families affected by Typhoon Yolanda.

19.2 Processing

OGPI owns the on-site processing plant and undertakes all processing directly. Supply contracts with a typical term of 1 year are in place for a range of the main reagents, grinding media and other consumables used in processing the ore. These supply contracts set prices or contain mechanisms for the setting of prices for the relevant commodities under terms and conditions which generally comply with industry norms.

19.3 Transportation and Refining of Bullion

A contract is in place with Western Australian Mint (Perth Mint) for the refining of doré bullion into fine gold and silver for sale. The contract commenced in March 2013 and has an indefinite term, subject to termination by either party. This contract sets a range of prices and surcharges for refining the doré under terms and conditions which generally comply with industry norms.

Perth Mint is accredited with the London Bullion Market Association and operates policies and procedures consistent with LBMA Standards to prevent contributing to conflict, human rights abuses, terrorist financing practices, and to combat money laundering.

19.4 Transportation and Sales of Copper/Gold Concentrate

In October 2012, OGPI signed an off-take agreement with Trafigura Pte Ltd (as Buyer) and Trafigura Beheer B.V (as Guarantor) (collectively "Trafigura") for the sale of copper concentrate from the Didipio operation. Trafigura is leading international commodities trader, specialising in the supply and transport of concentrates. Trafigura owns and operates concentrate storage facilities worldwide, as well as in China, which support OceanaGold's trading activity. The key terms of the off-take agreement, as amended and restated, are:

- 100% of the Didipio copper / gold concentrate production is sold to Trafigura under a pricing formula, including treatment / refining charges, that is considered competitive in world markets;
- The offtake is for the term of 5 years beginning April 4, 2013;
- Trafigura takes delivery of the gold-copper concentrate at the delivery point, which is currently the warehouse at Poro Point, La Union; and

- While Trafigura was initially responsible for the land transportation from the mine site to the port, the agreement was amended such that OGPI took over the land transportation of the concentrates with its own fleet of trucks. At certain times, OGPI engages the community corporation and other local contractors to provide additional trucks in hauling the copper concentrates from the mine site to port.

19.5 Power Supply

OGPI owns, operates and maintains a site-based diesel-fired power generation plant, which has the capacity to meet all of the site's power requirements. In addition to the self-generation of electricity, OGPI has identified advantages in having the ability to source power from the national grid. A contract to construct a line connecting the site to the national power grid and have power delivered commencing in 2015 has been signed with the local cooperative, and OGPI is in discussions with a power supplier (see Section 5.5.3).

19.6 Fuel Supply

OGPI has an arrangement with Philippines Shell Petroleum Corporation ("Shell") for the supply and delivery of diesel for use in the mining works, power generation, and general vehicle and equipment use at the Didipio operation. Under the contract, Shell delivers fuel to the Didipio site into OGPI's modular, transportable "Transtank" brand fuel-farm consisting of two 60,000 litre tanks and two 12,000 litre tanks. Delivery times are typically 24-48 hours, with a choice of three depots from which fuel deliveries can be made.

The contract contains a pricing scheme based on international fuel-oil pricing, and is consistent with industry norms.

19.7 Supply of Explosives

Orica Philippines Inc. ("Orica") manufactures and supplies bulk emulsion, and initiating and packaged explosives and provides associated "down-the-hole" loading services under a contract for a term of five years that commenced in March 2012.

The site-based emulsion manufacturing facility is owned, operated, licensed and maintained by Orica, and will be removed from site at the completion of the contract. The site-based magazines for storage of initiating and packaged explosives are owned, licensed and maintained by OGPI.

Pricing for the explosives and associated services supplied under OGPI's contract with Orica is based on a mix of fixed charges and unit rates, with price adjustment clauses, and the contract is reflective of industry norms.

19.8 Project Financing

There is no project financing in place for the Didipio operation which is funded out of operating revenues and from a loan with an OceanaGold group entity.

19.9 Gold Hedging and Forward Sales

There are no hedge contracts in respect of production from the Didipio operation. Refer to Section 19.4 for a description of the gold/copper concentrate off-take arrangements.

19.10 Market Studies for Gold and Copper

There are no market studies for gold or copper that form the basis for the assumptions in this Technical Report.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 Permitting

20.1.1 Permits Required

The Didipio operation holds the permits, certificates, licences and agreements required to conduct its current operations. Refer to Section 4.9.1 for a list and discussion of the most materially significant of these.

20.1.2 Main Environmental Permits

OGPI is required to ensure that mining activities are managed in a technically, financially, socially, culturally and environmentally responsible manner. The DENR requires an Environmental Compliance Certificate (“ECC”) for any mining activity based on an Environmental Impact Statement (“EIS”) prepared by the company in accordance with procedures under the ECC system. An ECC obliges the company to comply with a comprehensive set of conditions, including submission and implementation of an Environmental Protection and Enhancement Program (“EPEP”) for the life of the mine. The EPEP forms the parent document for the development and implementation of Annual Environmental Protection and Enhancement Program (“AEPEP”). Amongst other things, OGPI is required to allocate 3-5% of its direct mining and milling costs for EPEP implementation.

The ECC system and the Implementing Rules and Regulations of the Mining Act regulate a funding structure to ensure company compliance with EPEP commitments and ensure immediate funding in the form of a Contingent Liability and Rehabilitation Fund (“CLRF”) is available for rehabilitation in the event of environmental damage during mining operations. CLRF funds are held in a Government depository bank and administered by the CLRF Steering Committee.

Under the Mining Act, OGPI is also required to make a minimum contribution of 1.5% of its operating costs annually during mining operations for the development of the host and neighbouring communities under a Social Development and Management Program (“SDMP”), advancement of mining technology and geosciences, and development of information, education and communication program. Of that 1.5%, 75% must be apportioned to the implementation of the SDMP.

20.1.2.1 ECC

The current revised ECC (No. ECC-CO-1112-0022) covers the full 975 ha area covered by the PDMF.

The revised ECC specifies the project mining methods, production rate, processing methods and other aspects of the mining operation on which it is based. Following its revision in 2012 and subsequent submission of a Utilization Work Program to the DENR on March 27, 2013 to cover the first three years of commercial production, the ECC allows for activities including (but not limited to):

- an open pit;
- underground long hole open stoping operations;
- a tailings dam and impoundment;
- waste rock dumps;
- a mill plant (capacity 2.5 Mtpa to 3.5 Mtpa);
- explosive magazines; and
- administration and housing facilities.

20.1.2.2 EPEP and AEPEP

An Environmental Protection and Enhancement Program ("EPEP") is a regulatory requirement and involves a conceptual environmental management plan for the life of mine, including an estimated total cost. An EPEP was approved by the MGB in January 2005. There has been a series of revisions to this document since that time. OGPI has engaged a consultant, AECOM, to assist in finalising the most recent revisions to the EPEP and associated Final Mine Rehabilitation and Decommissioning Plan ("FMRDP"). The most recently revised EPEP was submitted to the DENR on February 24, 2014. The EPEP and FMRDP have received a technical review by both OGPI and MGB and have been presented to the Mine Rehabilitation Fund Committee ("MRFC") body, comprising representatives of the DENR, local authorities, community representatives and a representative of OGPI, for their acceptance and endorsement to the CLRF Steering Committee.

The EPEP provides a description of the expected impacts and proposed mitigation of the activities comprising the Didipio operation, sets out the life of mine environmental protection and enhancement strategies based on best practice in environmental management in mining, and presents the environmental management program for the operation.

An Annual Environmental Protection and Enhancement Program work plan ("AEPEP") is a yearly environmental management work plan based upon the EPEP, which OGPI is required to lodge with the MGB. The AEPEP makes provision for monitoring of meteorological data, noise levels, and water quality data from designated measurement stations within the river and TSF systems, water quality and flow velocity data from the stream gauging stations, and groundwater data. Air quality monitoring is carried out to ensure compliance with Philippine ambient air quality objectives during both construction and operation activities, and similarly noise and vibration monitoring checks for compliance with noise and vibration requirements.

OGPI has submitted AEPEPs annually since 2007. The AEPEP submitted for 2014 incorporates that year's activities based on the current ECC and draft EPEP. The interim AEPEP is used as reference for the regular inspections by the MRFC and MMT bodies pending the approval of the EPEP and FMRDP by the CLRF committee.

20.1.2.3 CLRF

A Contingent Liability and Rehabilitation Fund ("CLRF") is required to be established and maintained with regular contributions under the terms of the Mining Act and its Implementing Rules and Regulations. It is a financial requirement in the form of an environmental guarantee fund to provide for rehabilitation and compensation costs arising from any adverse environmental impacts of the Didipio operation. It ensures the availability of funds to comply with the commitments and performance standards stipulated in the EPEP and AEPEP. The CLRF comprises a Mine Rehabilitation Fund ("MRF"), the payment of Mine Waste and Tailings Fees and a Final Mine Rehabilitation and Decommissioning Fund ("FMRDF"). The CLRF is administered by the CLRF Steering Committee.

Prior to the commencement of commercial production, under a Memorandum of Agreement signed by OGPI with the Mine Rehabilitation Fund Committee established by MGB (Region 2) dated October 18, 2004, OGPI has established bank deposits to service the Monitoring Trust Fund ("MTF"), Environment Trust Fund ("ETF") and the Rehabilitation Cash Fund ("RCF"), which collectively form the MRF. As of August 13, 2014 the balance of the MRF associated with the Didipio operation is PHP6.222M.

20.1.2.4 SDMP

On February 8, 2005, the MGB approved the first SDMP.

A socio-economic survey was done in 2011 and the results were used to develop the second 5-year SDMP. On September 17, 2013 the MGB approved the second 5-year SDMP commencing on January 1, 2013 with a total estimated SDMP fund in the amount of PHP215 Million.

The SDMP benefits the host barangay of Didipio and 9 neighbouring barangays located in the provinces of Nueva Vizcaya and Quirino. These 10 barangays have entered into a Memorandum of Agreement governing the sharing of the SDMP fund among themselves, and granting a certain percentage of the fund to the Municipalities of Kasibu and Cabarroguis. Each of the beneficiary barangays has executed agreements with OGPI regarding the implementation of the SDMP. As the basis for the SDMP Fund for 2014, OGPI reported to the MGB its total operating cost for 2013 as amounting to US$141,821,491.

20.1.3 Other Permits

Clearance was obtained for the Didipio operation from the National Irrigation Authority during the ECC permitting process. In accordance with Philippine requirements for the grant of water rights, OGPI has entered into an agreement with a Philippines company covering the water requirements for the operations, including securing the water permits necessary for the development and operation of the project.

Permits were obtained to construct and operate various infrastructure, including for Pollution Source Equipment (“PSE”) and Pollution Control Equipment (“PCE”), primarily comprising the power station, the crushing plant, the TSF and the camp. Permits to construct and operate any new installations will be required on an ongoing basis. Securing these permits requires all design details to have been finalised, allowing the various construction permits, and subsequent permits-to-operate, to be granted.

Zoning and Location Clearances were also required and obtained from the HLUR (Region 2) covering the PDMF area in March 2007. There were likewise local permits (such as locational clearances, construction permits and occupation permits) obtained from the Municipality of Kasibu for the construction of the structures at the Didipio operation.

20.2 Environmental Studies

20.2.1 Location of Didipio Operation

The Didipio operation is located approximately 270km north of Manila in the southern part of the rugged, forested, Mamparang mountain range. The FTAA straddles the borders of Nueva Vizcaya and Quirino provinces on Luzon Island. The site is located 30km south of the Quirino provincial capital of Cabarroguis, at an elevation of between 500 and 1100m above sea level. The site is located in an area below the forest line in a relatively isolated and sparsely populated valley that has established all-weather road access pre-dating the mine.

The project lies to the south-west of the more densely populated Cagayan Valley. The major economic activity is agriculture with rice, corn, vegetables and citrus being the main products. Commercial activity centres on trading, some manufacturing and food processing. The majority of families in the Didipio area earned below the poverty line prior to the development of the mine. Cabarroguis is the local municipal centre. Although commercial activity is strong in areas such as retailing, agriculture is the municipality’s main economic activity.

The Didipio operation site is located along a stretch of the Dinauyan River, which flows into the Didipio River, which eventually discharges into the Diduyon River. The Diduyon River is used as a source of irrigation water.

Refer to Section 5.4 for a discussion of the local climate.

20.2.2 Environmental Impact Statements

20.2.2.1 Baseline Studies

An EIS was submitted in 1998, in support of an application for an ECC. An amended application was lodged a few months later. There followed an EIS (reference Environmental Impact Statement Amendments for CAMC’s Didipio Gold-Copper Project – Gaia South Inc., July 1999 and April, 2004) completed by Gaia South Inc, environmental consultants, on behalf of OGPI in April, 2004. This formed the basis for a revised ECC issued on August 8, 2004.

On November 23, 2011, ahead of commencement of operations, OGPI submitted its Environmental Performance Report and Management Plan ("EPRMP"), comprising the updated Environmental Impact Statement ("EIS") for the Didipio operation. The EPRMP included survey work completed in November 2011 in conjunction with the Nueva Vizcaya State University which established updated baseline conditions for ambient air and water quality. The revised ECC for the current project was issued on December 10, 2012.

These studies establish the base line environmental survey pre-dating the commencement of operations as the basis for future environmental assessment. The studies note that the natural environment in the vicinity of the site had been highly modified by human land use which is dominated by agriculture and small scale mining activity. In terms of water quality (surface water and groundwater) the surface waters within and adjacent to the project area were compromised by forest clearance and small scale mining. Baseline sediment monitoring similarly indicated effects on rivers of surrounding activities.

Ambient air quality parameters monitored included; total suspended particles ("TSP"), SO_2, NO_2 and noise level. Overall, the air quality of the Didipio operation prior to operations was satisfactory and typical of that for a rural area.

Flora and fauna surveys indicated a depleted wildlife environment in the vicinity of the project.

20.2.2.2 Potential Impacts Identified in the EIS

Potential environmental impacts were assessed for surrounding land, water, terrestrial and aquatic biota and people. Primary impacts assessed for land included change in geomorphology or topography of the mine area, loss of topsoil, increased sedimentation, potential subsidence in relation to the underground mine workings and potential slope stability concerns. Impacts assessed for the water environ included potential impacts to water quality and flow. Potential impacts identified for the terrestrial and aquatic biota included loss of vegetation due to clearing activities and possible encroachment or loss of habitat for both terrestrial and aquatic fauna as mine development progresses. Changes in air quality and elevation of noise levels particularly during the construction phase were anticipated for the air quality module. As for the socio-economic concerns, potential in-migration and competition of social services were anticipated as potential negative impacts. On the other hand, generation of employment opportunities and improvement of basic social services and utilities were anticipated as positive impacts that could be realized from the mine development and the company's corporate social responsibility initiative. Appropriate mitigation measures were recommended in the EPEP and monitoring parameters by which the efficacy of these measures may be assessed were presented in the document.

The EIS concluded that the predicted change in land use for the open pit, underground mine, excavations, adits, and related engineering structures and installations where permanent mine facilities are established are expected to result in consequential impacts brought about by identified environmental aspects associated with this mining operation within acceptable regulatory limits.

20.3 Environmental Performance of the Didipio Operation

20.3.1 Tailings Disposal

Tailings are stored in an engineered TSF (Section 18.10). The TSF concept design has been developed by a division of GHD Group Pty Ltd, a respected specialist consulting firm specializing in tailings dam design. GHD also conducted geotechnical site investigations. In addition, Cullen Mining Services Pty Ltd conducted a review of the TSF design in 2011. These designs formed the basis for an application to the National Water Resources Board for a permit to dam and divert water and deposit tailings in the affected catchment.

The single cell TSF has been designed to store approximately 50Mt of dry tails (which is sufficient to accommodate the current Didipio Gold-Copper Deposit reserves) and a design storm event. The TSF is located in a tributary area above the Dinauyan Valley, approximately 2 km south west of the plant site, and designed as a cross-valley impoundment. It will be built in increments over the life of the project, using waste rock material from the open pit, as a staged downstream construction design. If the Didipio operation is extended, there is capacity to raise the TSF above its current final design height, subject to necessary approvals.

OGPI pumps all tailings from the tailings thickener (sited near the process plant), at 60% solids, into the TSF for storage. The tailings are deposited into the TSF using a spigot discharge method and directed against the TSF wall to make the wall more impermeable. Water is reclaimed via a floating pontoon pumping system.

The TSF has a contained catchment and all precipitation within the catchment is collected in the TSF. Water collected in the TSF is used, as required, in the process plant. Water in excess to this requirement flows into a controlled decant system, and is discharged into the Dinauyan River at a standard suitable for discharge and in accordance with a discharge permit 2014-DP-D-0250-010. Monitoring ensures any water that is released complies with discharge standards for Class D waterways and DENR approval needs to be obtained prior to release.

Tailings liquor samples from test work indicate alkaline liquor, with low levels of Pb, Cu, Zn, and Hg. Tailings waste characterisation studies have been undertaken and indicate that the tailings are low in both total and soluble metals. Monitoring throughout the life of mine will be continued to ensure that the tailings characterisation is understood and potential changes managed throughout the life of the operation.

The spillway draining into the Dinauyan River is constructed on the western side of the TSF wall and adjacent waste rock dump as a “last line of defence” for managing surplus decant/rainfall waters. After mine decommissioning, this spillway is planned to carry water to the Dinauyan River, once the decant system is removed. The hydrologic design storm event for the TSF storage volume (below the spillway) is a one in 100 years average return interval for a 24-hour event, over and above maximum operating volume of tailings and water. The hydrologic design storm event for the spillway design (which is available to pass major storm events greater than the 1:100 average return intervals) is sufficient to contain and pass a probable maximum precipitation rainfall event. Ongoing monitoring and risk reviews are undertaken, as required by DENR, to ensure compliance and TSF containment integrity.

The TSF is designed to be decommissioned as a mainly dry facility, with final tailings generated from the processing of oxide material to provide a suitable capping for re-establishment of vegetation. Upon closure, the decant system will be decommissioned. Surface run-off and seepage from the capped dam will be allowed to flow to the downstream river system via a permanent spillway. A post-decommissioning monitoring program will monitor water quality to ensure that water quality criteria are met.

20.3.2 Seismic Design Criteria

A seismic hazard assessment of the site has been undertaken by Knight Piésold, which shows that the site is located in a seismically sensitive zone. Three major sources of seismic activity are present within 200km radius of the site: the Philippine Fault (40km to the west); the Manila Trench (125km to the west); and the East Luzon Trench (70km to the east).

The results of the seismic hazard evaluation have been used to determine a design ground acceleration value for the TSF and for a waste rock dump stability analysis.

The TSF embankment has been assigned a dam failure consequence category of “High C” and has therefore been designed to sustain a 1:1,000 AEP Operating Basis Earthquake (“OBE”) and a 1:10,000 AEP Maximum Design Earthquake (“MDE”). The OBE design has increased from 1:475 used in earlier designs due to a change in the applicable ANCOLD guidelines, which were issued in May 2012.

The design allows limited deformation of the tailings dam under seismic loading from the MDE, provided that the overall stability and integrity of the facility is maintained and there is no release of stored tailings or water.

20.3.3 Waste Rock Dump

Waste material is used in construction of the TSF and other infrastructure. In addition a waste rock dump has been established across the Dinauyan River Valley and will be operational throughout open pit mining. Waste generated from underground mining will be crushed and available for road maintenance, with capacity to store surplus waste from underground mining operations in the waste dump if required. No additional waste rock dumps are planned. The waste rock dump will be built in progressive lifts and as each lift is completed the faces of the lift will be rehabilitated.

A flow through drain has been designed into the waste rock dump to allow the Dinauyan River to pass through the waste rock dump at a rate exceeding the average annual flow of the river. This flow through drain will have the effect of attenuating flood flows in the Dinauyan River during the peak of the flood and increasing the duration of slightly higher than average flows after the flood event has passed.

20.3.4 Open Pit

The permitted final open pit footprint (that is the disturbed area associated with the open pit, at approximately 69Ha) is not expected to change following the recent optimization studies, but the footprint of the excavated pit itself is likely to be less. Dewatering of the pit and its environs is by perimeter boreholes and by pumping from a sump located in the pit.

Following completion of the open pit operation, access to the pit will be restricted by fencing but cut-off drains will be maintained to minimise surface water flow through the base of the pit and into the underground zone. The roadways on each underground extraction level will be graded to direct any water filtering to level sumps, from where it will be directed to sumps below the production levels for containment before pumping to a surface settlement dam for removal of sediment and hydrocarbons prior to release into the Didipio River system.

The decommissioning phase will make provision for the surface and groundwater flows to enter and be retained in the pit and the remaining open underground workings, eventually flooding the pit to the level of the lowest point on the pit crest. The pit is intended to become a permanent lake and sediment trap for water flowing over the tailings dam and waste rock areas. Overflows from the pit are planned to be directed to a reinstated river channel that flows into the Didipio River.

Given the potential for some minor wall rock acid drainage to develop during and after mining, and in view of the high rainfall in this area, it is proposed that the final pit will be flooded, which will submerge any potential acid-generating pit wall rock (see Section 20.3.6 for a discussion of the potential for acid-generating materials). Surface flow from the completed pit will be tested to ensure it continues to meet the water quality discharge criteria. Environmental monitoring of water quality in the vicinity of the closed open pit will be undertaken by a long-term, multi-partite committee funded by the company (see Section 20.1.2.3).

20.3.5 Water Management

20.3.5.1 Baseline Water Quality

The Didipio operation is sited along the Dinauyan River, which has a catchment area generating some $27Mm^3$ maximum annual water flow. The Dinauyan River flows into the Didipio River, and is joined by flow from the Camgat and Surong Rivers, which contribute 36 Mm^3 maximum annual water flow. The Didipio River becomes the Diduyon River, downstream of the confluence with the Alimit River.

Baseline water surveys undertaken prior to the commencement of development at the Didipio operation and updated in 2011 concluded that the existing water quality of the Dinauyan River, Camgat River, Surong River, Didipio River, Alimit River and Diduyon River is compromised by sediment runoff from forest clearing and agriculture and sediment containing elevated heavy metals (copper and others) as a result of long-term small scale mining in the area. Elevated mercury levels have also been recorded in sediments of the Dinauyan and Didipio Rivers resulting from small scale mining in the catchment. The water is generally highly turbid and home to a reduced range of aquatic biota and riparian vegetation.

20.3.5.2 Water Takes

The daily water demand for the Didipio operation at 3.5 Mtpa is approximately 20,000m^3, of which the majority (about 90%) is recycled water for the process plant, sourced from decant water from the thickeners and the tailings pond.

Any fresh make-up raw water that is required for processing or other site needs is sourced from two deep bores located at the perimeter of the open pit mine. An off-take from the dewatering bores directs a small amount of this water to a potable water treatment plant. The rest is collected in a raw water storage tank and either used as make-up water in the processing plant or, to the extent the bore water exceeds make-up water requirements, directed into the sediment pond system for discharge.

20.3.5.3 Water Discharges

The overall approach to water management at the Didipio operation is to minimise discharge from the operating site and direct all dirty surface water flows including any waste rock seepage to a series of settlement ponds to remove TSS before discharge to the Dinauyan River. Water is monitored prior to release to ensure compliance with the DENR's water standards for Class D waterways.

The majority of the water used on site is recycled from the TSF via floating pontoon mounted pumps to the plant for reuse in the process cycle. A project design water balance was completed in the development stage by Knight Piésold and this was updated by MWES Consulting, covering the range of possible rainfall events. This determined that a net discharge would be necessary in most years and this is managed via the decant system discharging to the processing plant and the water treatment plant.

A water discharge permit for the TSF (Permit No. 2014-DP-D-0250-010) is currently held to allow the release of up to 67,462.8m^3 per day of clean water from the decant pond on the surface of the TSF. A water treatment plant with capacity to process 48,000m^3 per day ensures OGPI meets the required discharge standards for the TSF.

In the event of a storm in excess of the combined capacity of the decant system, the water treatment plant and available storage capacity in the TSF, clean decant water from the TSF can be discharged via a spillway to the Dinauyan River. Any such discharge would be covered by Permit No. 2014-DP-D-0250-010. In practice OGPI maintains a 5m freeboard at all times.

Make-up water is sourced from the open pit dewatering bores. Most of this water comes from the Biak Shear Zone. Water exceeding the capacity of the two bores is pumped from the pit sump to the sediment settling.

Analyses of the groundwater in the pit area show mild salinity and some elevation of arsenic, zinc, iron, manganese and sulphate. These naturally occurring levels are within compliance with the DENR water quality standards for Class D waterways and can be discharged directly to the Dinauyan River.

As part of the recent optimization studies, including the review of the site-side water management plan by GHD, recommendations have been made for additional treatment options, utilizing the storage capacity of the TSF and the water treatment plant, to supplement the capacity of the settlement ponds, which receive flow from the open pit sump pumps and surface run-off. An updated water balance completed by GHD as part of the recent optimization studies indicates enhanced LOM capacity to manage rainfall events as a result of proposed changes to the open pit, with capacity to store and handle a 1:100 year flood event, assuming the current capacity of the water treatment plant is unchanged.

A water discharge permit (Permit No. 2014-DP-A-0250-009) for the sewage treatment plant allows the discharge of wastewater not exceeding a flow rate of 5.23m^3 per day. A minor discharge associated with the vehicle wash-down pad also has a water permit (Permit No. 2014-DP-A-0250-009).

20.3.6 Acid-Generating Materials

Pre-development test work undertaken by the Mineral Resources Development Laboratory of the Department of Mineral Resources, NSW, Australia using waste material samples indicates that the dominant rock types excavated from the open pit have negative acid producing potential (“NAPP”) and that leachate from the weathered material would be alkaline, thereby having an acid-neutralising capacity. Similarly, tailings liquor samples have also been found to be slightly alkaline. If potentially acid-generating material is identified in the waste (e.g. from low-grade stockpile reject material), it will be placed in engineered cells and encapsulated in non- acid forming waste. No acid-forming waste requiring sequestration has been encountered to date.

20.3.7 Noise and Impacts on Villages

A noise assessment has been conducted and noise mitigation measures implemented. Noise levels from construction and operation of the open pit and processing plant are not perceived to be issues of concern, particularly as the nearest village is approximately 1km from the noise-generating areas. Noise effects of the power station have been assessed and comply with DENR standards and statutory requirements.

20.3.8 Health and Safety Issues Associated with Road Transport

The use of existing roads in the project area by mine vehicles and the construction of access, service and haul roads raises positive and negative potential health, safety and environmental issues. Multiple trips daily hauling concentrate from the plant site to the port have the potential for significant effects on villages located along the route. Therefore, the extent of the impact on affected settlements is closely monitored and measures are taken to mitigate the risk of accidents and damage to infrastructure associated with these haulage operations.

20.3.9 Biodiversity Impacts

Baseline environmental studies have identified a depleted wildlife environment in the vicinity of the project, apart from the possible presence of some endangered bird species. Therefore the proposed management measure to ensure protection of important biodiversity is focussed on the ultimate establishment of an Avian Protection Zone.

20.3.10 Archaeological, Historical and Cultural Impacts

On November 21, 2003, the National Museum issued a Certification to the effect that the PDMF area was inspected for possible archaeological remains by the Archaeological, Cultural and Environmental Consultancy, Inc. The finding was that the area has no visible archaeological resources based on the over-all negative result of the archaeological assessment survey.

OGPI was likewise mandated to report to the National Museum should archaeological materials be found in earth-moving activities. No reports have been made to date.

20.3.11 Refuse Disposal

Waste management policies implemented on site utilise the principles of reuse and recycle. Hazardous waste including hydrocarbons (oil and lubricants), reagent packaging and batteries are collected from site by operators with registered recycling facilities.

20.3.12 Fuel and Chemicals

The 12 diesel storage tanks comprising the fuel farm are located adjacent in an appropriately bunded area. Plant chemicals are also stored in an appropriately bunded area. Waste oils and lubricants are recovered and transported to a registered facility for treatment, recovery or disposal.

20.4 Site Monitoring

DENR officials conduct routine inspections and audits of the operation.

The Didipio operation conducts routine self-monitoring of a range of environmental parameters including monthly surface water analysis, noise monitoring and air quality measurement. Annual emission testing is also conducted at the power station. Results of site environmental monitoring are made available to the DENR. Annual ecological surveys are also undertaken.

20.5 Community Development

From a legal and regulatory perspective, OGPI has complied with its obligations under the Mining Act and it's implementing Rules and Regulations to obtain community endorsement for the Didipio operation to the satisfaction of the DENR. The establishment of the SDMP is discussed in Section 20.1.2.4. The current Memorandum of Agreement with the Didipio community was executed in 2013 and supersedes the earlier MOAs signed in 1999, 2001 and 2006.

OGPI has continued to partner with and seek the full support of the Didipio community through an open consultation process. OGPI continues to hold regular information meetings for community members to raise their concerns and resolve any issues in an open forum, as well as the daily interaction between community members and the personnel of the OGPI's Community Partnership Department who are members of the community. In addition, OGPI is committed to assisting the long-term development of the Didipio community beyond the life of the mine through its social development programs.

The SDMP is intended to provide a sustained improvement in the living standards of the host and neighbouring communities by helping them to define, fund and implement development programs before commercial production at the Didipio operation begins, during the life of the mine and after mine closure.

In this regard, ten barangays comprising of the host barangay, and adjacent barangays from the FTAA host provinces of Nueva Vizcaya and Quirino, have signed a Memorandum of Agreement in December 2011 reiterating their support to the Didipio operation and agreeing on the sharing of the SDMP Fund.

For 2013, OGPI funded various SDMP projects covering education, infrastructure, sports and socio-cultural, enterprise development and agriculture, health and capacity building. A bulk of the projects covered infrastructure such as farm to market road improvements, road upgrading, construction of rice sheds, bridges, concrete fences and pathways, construction of day care centres, levelling of school grounds, construction and improvement of irrigation systems and rehabilitation of water systems. On education, OGPI continued with its scholarship grants, salary and subsidy for day care workers, teachers and utility workers, provision of various sports equipment and school facilities, assistance to training and seminars of teachers. There was also the initial capital assistance for different livelihood projects. On health, there was the provision of first aid kits, assistance to medical missions, procurement of medicines and clinic facilities, salary assistance to community health workers and adoption of a mother and child health program. OGPI likewise funded the conduct of a population census as well as for the training and seminars of various local government leaders, including assessment and planning workshops to prepare the community leaders for implementing the SDMP for 2014 to 2017.

On top of its SDMP commitment, OGPI undertakes community projects and programs. For example, the Memorandum of Agreement signed with the host barangay of Didipio in October 2013 contained a commitment by OGPI to fund capital related community development projects. These include the construction of a sports complex, hospital, water system, farm to market road, barangay administration building and buildings for elementary, high school, faculty and school administration. Aligned with its corporate social responsibility policy, OGPI likewise participates in community development projects outside of its host provinces and within the Philippines.

20.6 Mine Closure

Conceptual mine closure planning is included within the EPEP and approved by the DENR.

On February 22, 2014 OGPI submitted the FMRDP to the MGB Regional Office for review. Under the Implementing Rules and Regulations of the Mining Act, the FMRDP is submitted to the MRF Committee through the MGB Regional Office, and to the CLRF Steering Committee through the MGB.

The current EPEP document submitted to the DENR contains details which are expected to form the basis of the detailed mine closure plan. This closure plan will be refined and finalised throughout the life of the mine in consultation with stakeholders. Development of a detailed plan and financial provisioning for final closure/decommissioning costs at an early stage is considered to be best practice.

The main rehabilitation and closure work streams will be the closure of the waste rock dump, the open pit and TSF. Closure planning will ensure that these structures are geotechnically and geochemically stable landforms. Rehabilitation will be undertaken progressively during the operating phase and this is considered an operating expense.

It is required that the FMRDP contain a cost estimate for the implementation of the FMRDP. The FMRDF is established to ensure that the full cost of the approved FMRDP is accrued before the end of the operating life of the mine. The FMRDF has been deposited as a trust fund in a Government depository bank and may be used solely for the implementation of the approved FMRDP. An annual cash provision to the FMRDF is based on an agreed formula. It is required that based on the expected mine life, the initial annual cash provision is made to the MRF Committee within sixty (60) days from the date of the FMRDP's approval and every anniversary date thereafter.

The FMRDF, which is part of the CLRF, is administered by the CLRF Steering Committee, which includes DENR officials as members. Under the FMRDP submitted by OGPI, the estimated total fund amounts to US$10,202,447.

20.7 Conclusions

The Didipio operation holds the permits, certificates, licences and agreements required to conduct its current operations. Refer to Section 4.9.1 for a list and discussion of the most materially significant of these.

OGPI is required to ensure that mining activities are managed in a technically, financially, socially, culturally and environmentally responsible manner. The DENR requires an Environmental Compliance Certificate ("ECC") for any mining activity based on an Environmental Impact Statement ("EIS") prepared by the company in accordance with procedures under the ECC system. An ECC obliges the company to comply with a comprehensive set of conditions, including submission and implementation of an Environmental Protection and Enhancement Program ("EPEP") for the life of the mine. The revised ECC for the current project was issued on December 10, 2012.

The ECC system and the Implementing Rules and Regulations of the Mining Act regulate a funding structure to ensure company compliance with EPEP commitments and ensure immediate funding in the form of a Contingent Liability and Rehabilitation Fund ("CLRF") is available for rehabilitation in the event of environmental damage during mining operations. CLRF funds are held in a Philippine government deposit account and administered by the DENR.

OGPI's Environmental Performance Report and Management Plan ("EPRMP") submitted in November 2011 includes survey work completed in November 2011 in conjunction with the Nueva Vizcaya State University, which establishes baseline conditions for ambient air and water quality, together with other studies that establish the basis for future environmental assessment. The studies note that the natural environment in the vicinity of the site had been highly modified by human land use which is dominated by agriculture and small scale mining activity. In terms of water quality (surface water and groundwater) the surface waters within and adjacent to the operational area were compromised by forest clearance and small scale mining. Baseline sediment monitoring similarly indicated effects on rivers of surrounding activities.

Change in land use for the open pit, underground mine, excavations, adits, and related engineering structures and installations where permanent mine facilities are established is expected to result in consequential impacts that are within acceptable regulatory limits.

21 CAPITAL AND OPERATING COST

21.1 Capital Costs

The capital costs are based on the development of the underground operation, sustaining capital and expenditure for project development including grid power supply and TSF construction, outlined in Table 21-1. The range of accuracy for the capital cost estimate is +/- 15%.

Table 21-1: Capital Cost Estimate from January 1, 2015

Description	Units	LoM	2015 1	2016 2	2017 3	2018 4	2019 5	2020 6	2021 7	2022 8	2023 9	2024 10	2025 11	2026 12	2027 13	2028 14
CAPITAL COST SUMMARY																
Open Pit		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Underground		191,172	23,357	50,363	42,546	17,499	16,095	12,016	4,811	5,764	3,644	6,968	4,725	3,021	363	-
Sustaining & Non-Sustaining		67,877	26,010	8,597	9,652	5,763	3,359	3,147	2,393	2,493	1,999	1,566	1,103	550	907	337
Total		**259,049**	**49,367**	**58,960**	**52,198**	**23,262**	**19,454**	**15,163**	**7,205**	**8,257**	**5,643**	**8,533**	**5,828**	**3,571**	**1,270**	**337**
UNDERGROUND MINING																
Development	$000s	77,002	8,761	21,724	21,881	12,360	4,765	1,522	3,429	953	424	1,182	-	-	-	-
UG Mobile Equipment Pre-Production	$000s	27,327	9,126	1,961	16,240	-	-	-	-	-	-	-	-	-	-	-
UG Mobile Equipment Rebuilds	$000s	23,735	-	225	1,029	136	2,113	4,625	932	3,379	2,450	3,375	2,089	3,021	363	-
UG Mobile Equipment - Sustaining	$000s	23,159	-	-	-	2,895	6,696	5,869	450	1,432	770	2,411	2,636	-	-	-
UG Electrical Equipment	$000s	9,194	1,349	6,889	861	32	64	-	-	-	-	-	-	-	-	-
UG Infrastructure	$000s	27,076	2,013	19,104	1,897	1,756	2,307	-	-	-	-	-	-	-	-	-
UG Other	$000s	3,678	2,109	460	638	320	150	-	-	-	-	-	-	-	-	-
Total	**$000s**	**191,172**	**23,357**	**50,363**	**42,546**	**17,499**	**16,095**	**12,016**	**4,811**	**5,764**	**3,644**	**6,968**	**4,725**	**3,021**	**363**	**-**
Capital Expenditure & Rehabilitation																
Sustaining Capital	$000s	37,084	6,167	4,847	5,902	3,513	3,109	2,897	2,143	2,243	1,849	1,516	1,103	550	907	337
Non-sustaining Capital	$000s	30,793	19,843	3,750	3,750	2,250	250	250	250	250	150	50	-	-	-	-
Total	**$000s**	**67,877**	**26,010**	**8,597**	**9,652**	**5,763**	**3,359**	**3,147**	**2,393**	**2,493**	**1,999**	**1,566**	**1,103**	**550**	**907**	**337**

Pre-production and life of mine sustaining capital for the underground mine is reported in Table 21-2.

Table 21-2: Pre-production and Sustaining Capital Cost Estimate Summary

Description	UG Pre-Production (US$M)	UG LOM Capital (US$M)
Underground Mining Capital		
Development	52	25
UG Mobile Equipment Pre-Production	27	0
UG Mobile Equipment Rebuilds	1	22
UG Mobile Equipment - Sustaining	0	23
UG Electrical Equipment	9	0
UG Infrastructure	23	4
UG Other	3	0
Total Underground Capital	**116**	**75**

21.1.1 Basis of Estimate

The capital cost estimate is based on a combination of equipment supplier quotations, supplier pricing, OceanaGold price assumptions and benchmarking from similar sized operations.

Capital cost estimates for the underground mine are based on quotations from suppliers. A provision for freight has been included.

Capital cost estimates for enhancement of operations and project developments are based on the current Didipio life of mine budget.

The infrastructure capital cost estimates for the underground include additional fixed offices and buildings, site establishment costs, ventilation fans, pumps, civil works and paste backfill infrastructure. The three largest cost items include the primary pumping network, primary fan installations and the paste backfill plant, which account for 80% of the total infrastructure capital.

21.1.2 Exclusions

Inflation and price escalation have not been included in the capital cost estimates.

21.1.3 Pre-Production Capital Costs, Underground Mine

21.1.3.1 Introduction

The pre-production period for the underground has been scheduled for three years, with two years required to establish the access decline and a further twelve months for underground mine development in preparation for ore production. The pre-production capital cost for the underground is estimated to be $116 million, Table 21-3, which includes pre-production development mining, purchase of mobile equipment, electrical equipment and infrastructure.

Table 21-3: Underground Pre-Production Capital Cost

Description	Yr. 1 US$M	Yr. 2 US$M	Yr. 3 US$M	Total
Development	9	22	22	**52**
UG Mobile Equipment Pre-Production	9	2	16	**27**
UG Mobile Equipment Rebuilds	0	0	1	**1**
UG Mobile Equipment - Sustaining	0	0	0	**0**
UG Electrical Equipment	1	7	1	**9**
UG Infrastructure	2	19	2	**23**
UG Other	2	0	1	**3**
Total	**23**	**50**	**43**	**116**

21.1.3.2 Decline Development

The pre-production development capital costs are related to the development of the access decline. Development costs have been built up from the following activities:

- Equipment operating cost;
- Ground support;
- Explosives;
- Ventilation;
- De-watering; and
- Labour.

21.1.3.3 Mobile Equipment

Mobile equipment costs are based on quotations sourced from suppliers.

21.1.3.4 Electrical Equipment

Electrical equipment costs are based on quotations sourced from suppliers.

21.1.3.5 Infrastructure

Major Infrastructure costs include $16 million for the backfill paste plant, $10 million for the primary underground dewatering pump stations. Quotations support the estimates.

21.1.3.6 Other

Other capital costs include safety equipment, mine communications and de-watering.

21.1.4 Sustaining Capital Costs

21.1.4.1 Introduction

Sustaining capital provision also includes open pit, ore processing and rehabilitation.

Total sustaining capital for the life of mine is $143 million. This includes $75 million for underground development and $68 million for enhancement of operations and project development. The major expenditure items which make up sustaining capital are $13.5 million for upgrades to the TSF and $15 million to connect grid power to the Didipio mine site.

Life of mine sustaining capital estimates for the open pit, process plant and project development was sourced from the 2014 LoM Plan.

21.1.4.2 Underground Mine

Sustaining capital cost includes mobile equipment replacements and rebuilds, capitalised development, and a modest amount of additional infrastructure required as the mine extends to the lowest levels.

21.1.4.3 Grid Power

Didipio are currently incorporating a 69 kV Overhead Power Line ("OHPL") into the Didipio Mine site. Construction will begin in the final quarter of 2014 and is expected to be commissioned by the third quarter of 2015 at a cost of $15 million.

21.1.4.4 Tailings Water Management

A study was carried out by GHD to examine the impact of the new open pit and underground mine plans on the TSF design. The study resulted in a final TSF design which is estimated to cost $13.5 million. The reduction in previous estimates for cost of TSF construction has resulted due to the tailings being confirmed as suitable for use in the underground mine as paste backfill, with a concomitant reduction in TSF capacity required. The estimated saving is $3m.

21.1.4.5 Site Rehabilitation

Progressive rehabilitation has been estimated for the remainder of mine life.

21.2 Operating Costs

21.2.1 Introduction

A detailed cost model provides the basis for the estimate of underground operating costs. The cost model was developed using first principles derived from supplier quotations and / or benchmark data from other similar operations.

Open pit mining, concentrate treatment, freight, insurance and general and administrative costs have been sourced from recent corporate assumptions and approved life of mine plans. Table 21-4 reports the total life of mine operating costs, and Table 21-5 an annual breakdown of on-site costs.

The concentrate treatment, concentrate freight and insurances cost estimate is $151m for the life of mine.

Table 21-4: Operating Cost Summary, (excluding selling costs).

Description	Total (US$M)
Open Pit Mining	185
Stockpile Reclaim	10
Underground Mining	421
Processing	357
General and Administration	424
Total	**1,397**

Table 21-5: Annual operating cost estimate, (excluding selling costs)

Description	Units	LoM Total	2015 1	2016 2	2017 3	2018 4	2019 5	2020 6	2021 7	2022 8	2023 9	2024 10	2025 11	2026 12	2027 13	2028 14
PRODUCTION SUMMARY																
Open Pit Ore	kt	19,701	5,975	5,412	8,315	-	-	-	-	-	-	-	-	-	-	-
Open Pit Waste	kt	52,114	23,914	23,395	4,805	-	-	-	-	-	-	-	-	-	-	-
Total Material Mined	**kt**	**71,815**	**29,889**	**28,807**	**13,119**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Underground Ore	kt	15,917	-	-	91	871	1,055	1,520	1,505	1,659	1,687	1,513	1,556	1,638	1,435	1,386
Total Ore Mined	**kt**	**35,618**	**5,975**	**5,412**	**8,406**	**871**	**1,055**	**1,520**	**1,505**	**1,659**	**1,687**	**1,513**	**1,556**	**1,638**	**1,435**	**1,386**
Ore to Mill	kt	46,516	3,483	3,510	3,501	3,500	3,500	3,510	3,500	3,500	3,500	3,510	3,500	3,500	3,118	1,386
Waste Mined	kt	52,114	23,914	23,395	4,805	-	-	-	-	-	-	-	-	-	-	-
Total Material Mined	**kt**	**87,732**	**29,889**	**28,807**	**13,210**	**871**	**1,055**	**1,520**	**1,505**	**1,659**	**1,687**	**1,513**	**1,556**	**1,638**	**1,435**	**1,386**
OPERATING COST SUMMARY																
Open Pit Mined	$000s	184,925	72,817	74,196	37,912	-	-	-	-	-	-	-	-	-	-	-
Stockpile Reclaim	$000s	10,099	-	-	-	1,315	1,223	995	997	921	906	998	972	931	841	-
Underground	$000s	420,944	213	2,460	11,109	33,490	34,150	41,475	42,090	44,128	42,836	39,110	39,269	38,618	39,023	12,971
Processing	$000s	356,790	32,386	27,048	27,486	25,259	26,151	25,754	25,790	25,751	25,578	25,754	25,878	25,751	23,472	14,733
General and Administration	$000s	423,908	32,796	30,875	31,730	31,728	30,656	30,692	30,260	30,321	30,583	30,643	30,912	30,896	31,089	20,726
Total	**$000s**	**1,396,665**	**138,212**	**134,579**	**108,238**	**91,792**	**92,179**	**98,916**	**99,137**	**101,121**	**99,903**	**96,505**	**97,032**	**96,197**	**94,426**	**48,429**
UNIT OPERATING COST																
Open Pit Mined	$/t mined	**2.58**	2.44	2.58	2.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stockpile Reclaim	$/t reclaim	**0.50**	0.00	0.00	0.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.00
Underground	$/t mined	**26.45**	0.00	0.00	122.09	38.45	32.37	27.29	27.96	26.60	25.39	25.85	25.23	23.57	27.19	9.36
Processing	$/t milled	**7.67**	9.30	7.71	7.85	7.22	7.47	7.34	7.37	7.36	7.31	7.34	7.39	7.36	7.53	10.63
General and Administration	$/t milled	**9.11**	9.42	8.80	9.06	9.07	8.76	8.75	8.65	8.66	8.74	8.73	8.83	8.83	9.97	14.95
Total	**$/t Milled**	**30.03**	**21.15**	**19.08**	**141.89**	**55.23**	**49.10**	**43.87**	**44.48**	**43.12**	**41.93**	**42.42**	**41.96**	**40.26**	**45.19**	**34.93**

21.2.2 Power and Fuel

The current Didipio power costs are US$0.24/kWh using onsite diesel generators. When the overhead grid power is commissioned in Q3 of 2015, the power price will be reduced to US$0.14/kWh, with a further reduction to US$0.13/kWh from January 2018.

The diesel cost used is US$0.91/litre, which is the current long term OceanaGold benchmark price.

21.2.3 Headcount

During pre-production of the underground, total labour for the entire operation peaks at 722 employees. As Didipio transitions to the underground operation total labour is forecast to reduce to a consistent level of around 586 employees.

The total labour force will be comprised of approximately 4% expatriates with the remaining workforce recruited locally or nationally.

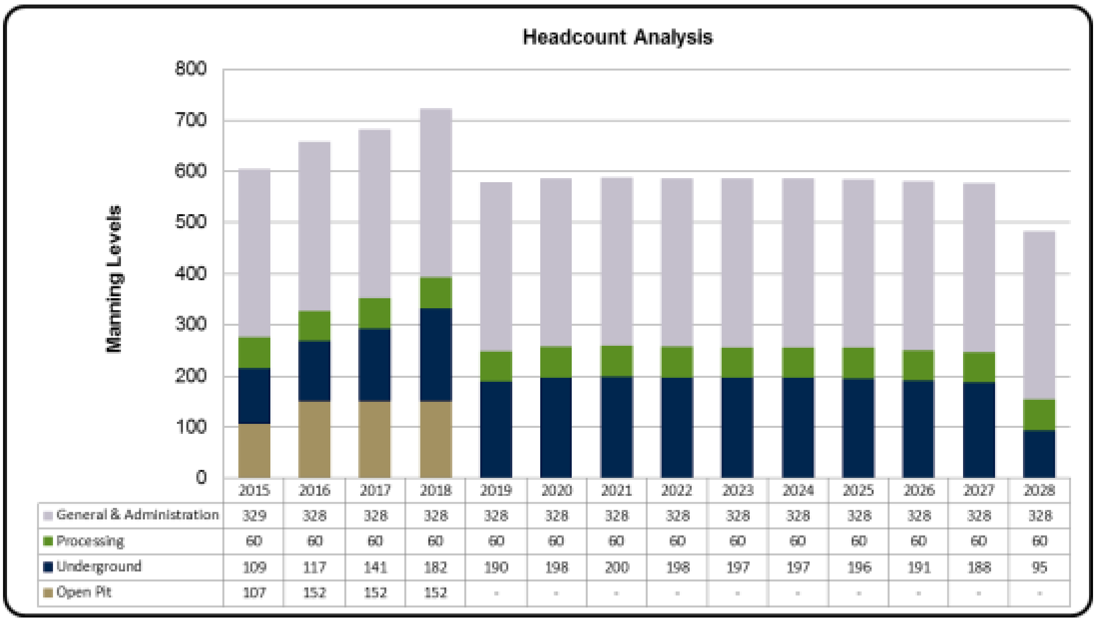


Figure 21-1: Estimate Headcount for the Didipio Operation

21.2.4 Open Pit Operating Costs

Open pit mining costs are based on contractor mining rates and recent performance. Unit mining costs for the open pit are $2.44/tonne of material mined in 2015, $2.58/tonne in 2016 and $2.89/tonne in 2017. The total estimate of operating cost for open pit mining operations is $185 million.

21.2.5 Underground Operating Costs

The unit operating cost for the underground is estimated to be $26.45/tonne of ore mined. The total estimate of operating mining cost for underground mining operations is $421 million. Figure 21-2 illustrates the underground mining cost split for the life of the underground mine. This is comparable with the estimate of $33.50/tonne in the 2011 technical report. Both estimates exclude capitalised development expenditure.

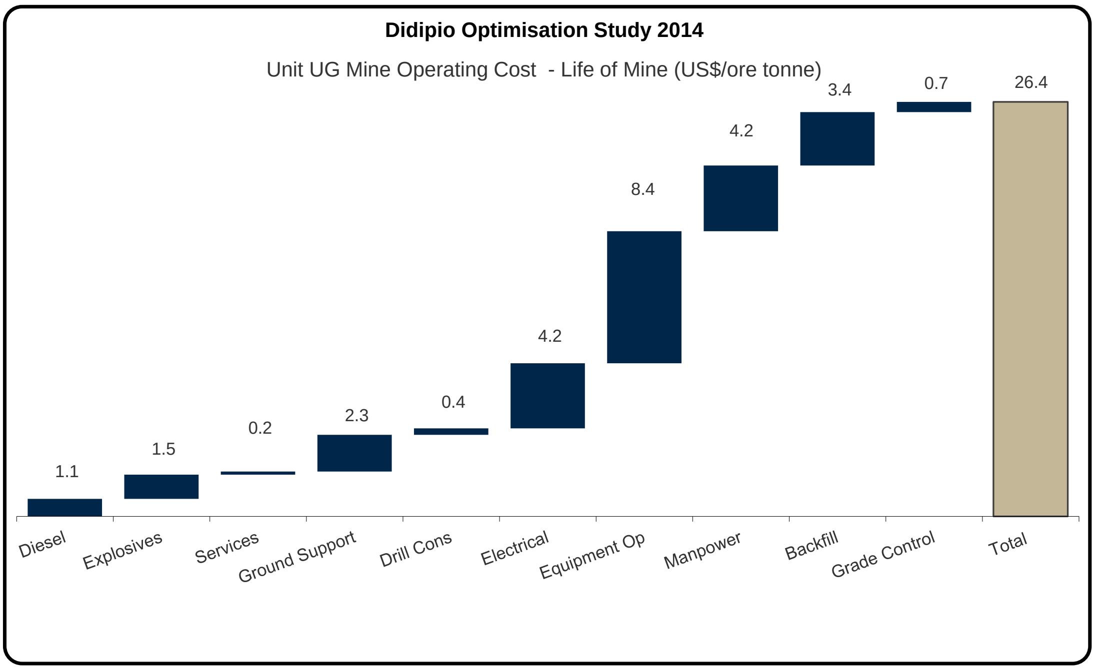


Figure 21-2: Unit Underground Operating Cost

21.2.6 Ore Processing Costs

The unit operating cost for ore processing is estimated to be $7.67/tonne of mill feed. This includes the reduction to power cost starting in Q4 2015, due to the national grid power network connection. Once grid power is commissioned, power costs will reduce to $0.20/kWh from Q4 2015 to $0.14/kWh in 2016/17 and $0.13/kWh for the remainder of mine life. The total estimate of ore processing costs is $357 million. A breakdown of ore processing costs is provided in Figure 21-3.

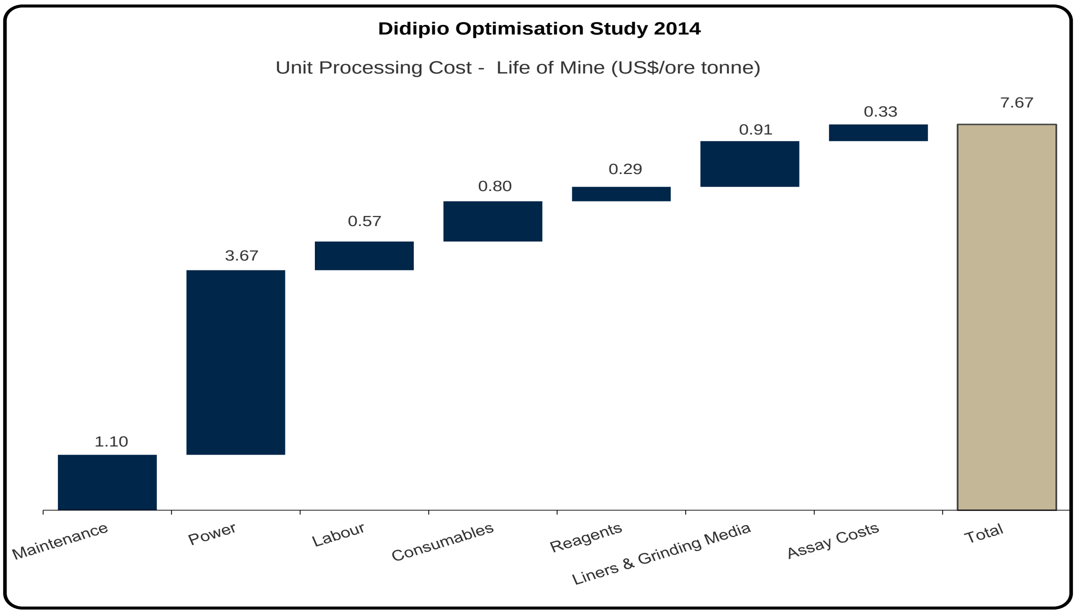


Figure 21-3: Unit Processing Cost

21.2.7 General and Administration Costs

General and Administration costs refer to site wide operational costs rather than costs directly associated with operational departments. These costs have been sourced directly from the 2014 Didipio life of mine plan, and reported in Table 21-6.

Table 21-6: General and Administration Costs

Description	Unit	Total
Safety	US$M	9
Environment	US$M	13
Supply	US$M	69
Asset Protection	US$M	18
Community Partnership	US$M	90
Maintenance (excl. Process Plant)	US$M	61
Commercial / Camp / IT & Communications	US$M	143
Government Relations	US$M	8
Human Resources	US$M	12
Total	**US$M**	**424**

21.2.8 Transportation and Refining

Mine to port transportation cost is estimated to be $55/wet metric tonne of concentrate for the life of mine. Shipping cost from port to smelter is estimated to be $29/wet metric tonne of concentrate for the life of the project.

Refining charges for gold doré are $0.70/oz. of payable gold and $4.50/oz. of payable gold for gold contained in concentrate.

22 ECONOMIC ANALYSIS

22.1 Summary

The pre-production capital cost of the underground mine is estimated to be $116 million. The sustaining capital thereafter for life of mine is $143 million for underground, TSF, overhead power line and other operational requirements.

Total life of mine operating costs for open pit mining, underground mining, ore processing and general and administration is estimated to be $1,548 million.

The economic analysis shows pre-tax cash flows of $1,168 million resulting in a pre-tax NPV of $776 million at a discount rate of 7%. The post-tax free cash flow is $944 million and the post-tax NPV is $650 million.

22.2 Methods, Assumptions and Basis

This section summarises the results of the economic evaluation of the Didipio Optimisation Study. The updated pre-tax $NPV^{7\%}$ for the project from 1 January 2015 is $776 million pre-tax and $650 million post-tax.

The date of valuation is January 1, 2015.

Mineral Reserve Estimates in Section 15 of this Technical Report are reported at September 30, 2014.

Assumptions used in the study have been considered by the board of OceanaGold as appropriate and used across the group for evaluation purposes. They are based on review of forecasts in the markets as well as the historical prices.

Table 22-1 presents the principal assumptions and inputs used in this economic evaluation.

Table 22-1: Economic Model Parameters

Description	Value
Currency of economic model	USD
Mine life	14 Yrs.
Available operating days per year	350
Discount rate	7%
Base case gold price (US$/oz.)	1,300
Base case copper price (US$/lb)	3.20
Power cost (grid power at steady state) US$/kWhr	0.13
Diesel cost (US$/litre)	0.91

22.3 Production Schedule

Figure 22-1 annual ore production. Open pit ore is stockpiled during the final years of the open pit operations and will then be blended with high grade underground ore until the stockpile is depleted in 2027, leaving only underground ore to be processed in 2028.

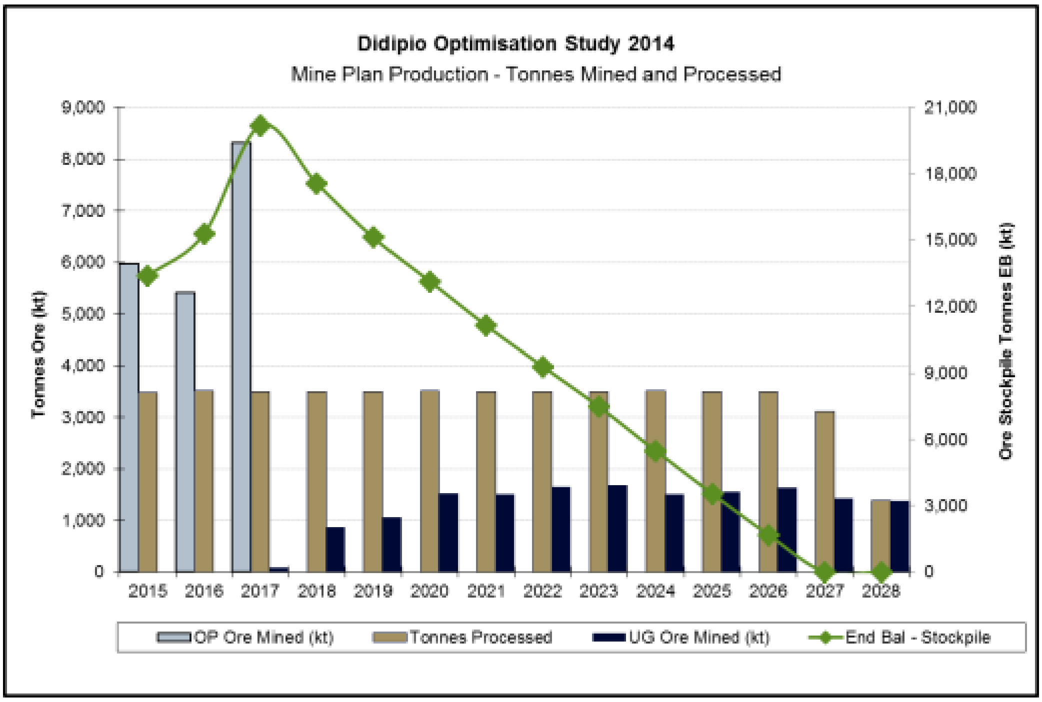


Figure 22-1: Mining and Processing Schedule

Figure 22-2 illustrates the mill processing schedule of open pit, underground and stockpile ore.

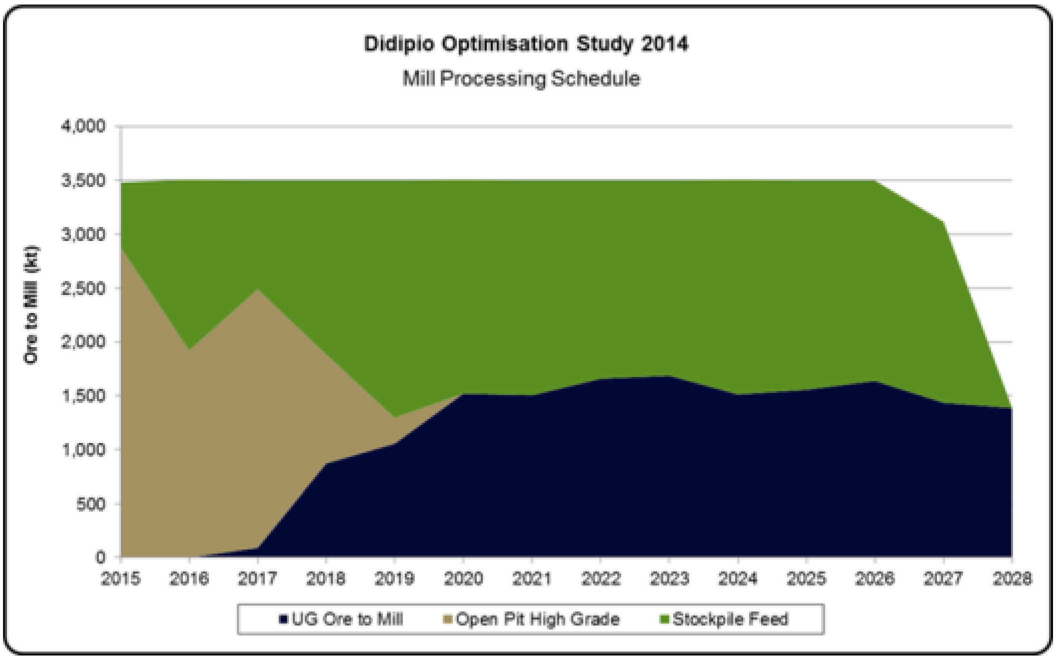


Figure 22-2: Ore Processing Schedule.

Processing recovery assumptions remain as per year-end reserve reporting despite current year positive performance, refer Figure 13-5.

The mine plan reported in this Technical Report has 1,713 million ounces of gold and 199 kilo-tonnes of copper contained. The valuation date is from 1 January 2015 which reports different contained metal to the Mineral Reserves, September 30, 2014, reported in Sections 15. Only Mineral Reserves are included in the economic evaluation, Inferred Resources have been omitted.

There is no silver included in valuation even though the operation is consistently generating silver revenue. NI 43-101 statutory guidance does not permit the reporting of revenue derived from mineralisation which is not included in the Measured and Indicated resource. OceanaGold has completed a programme of assaying and resource modelling of the contained silver and expects to include silver in year-end reporting.

Processing recovery assumptions remain as per year-end reserve reporting despite current year's positive performance, refer Figure 13-5.

The economic evaluation mine plan inputs are reported in Table 22-2.

Table 22-2: Mine Plan Physicals and Cost Assumptions

2014 Optimisation Study Valuation Date: 1 January 2015 Minerals Reserve Date: 30th September 2014		Total	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total Material Mined	kt	**89,788**	30,056	29,100	13,659	1,200	1,272	1,650	1,708	1,761	1,763	1,565	1,581	1,650	1,436	1,386
Total Ore Mined	kt	**35,618**	5,975	5,412	8,406	871	1,055	1,520	1,505	1,659	1,687	1,513	1,556	1,638	1,435	1,386
Open Cut - Total Ore Mined	kt	**19,701**	5,975	5,412	8,315	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Gold grade mined	g/t	**0.97**	0.81	1.00	1.07	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Copper grade mined	%	**0.45**	0.50	0.45	0.42	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Gold contained mined	koz	**616**	156	174	286	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Copper contained mined	kt	**89**	30	24	35	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Total Waste Mined	kt	**52,114**	23,914	23,395	4,805	-	-	-	-	-	-	-	-	-	-	-
Open Cut - Total Material Mined	kt	**71,815**	29,889	28,807	13,119	-	-	-	-	-	-	-	-	-	-	-
Underground Production	kt	**15,917**	-	-	91	871	1,055	1,520	1,505	1,659	1,687	1,513	1,556	1,638	1,435	1,386
Underground Gold grade mined	g/t	**1.86**	-	-	1.87	1.75	1.77	1.90	2.09	1.66	2.06	1.67	1.85	2.13	1.49	1.98
Underground Copper grade mined	%	**0.43**	-	-	0.38	0.33	0.34	0.39	0.42	0.44	0.44	0.45	0.46	0.51	0.44	0.45
Underground Gold Contained mined	koz	**952**	-	-	5	49	60	93	101	89	112	81	92	112	69	88
Underground Copper Contained mined	kt	**69**	-	-	0	3	4	6	6	7	7	7	7	8	6	6
Stockpile Opening Balance	kt	**10,898**	10,898	13,390	15,292	20,197	17,568	15,123	13,133	11,139	9,298	7,485	5,488	3,544	1,683	(0)
Total Ore Milled	kt	**46,516**	3,483	3,510	3,501	3,500	3,500	3,510	3,500	3,500	3,500	3,510	3,500	3,500	3,118	1,386
Gold grade milled	g/t	**1.15**	1.13	1.38	1.27	1.25	0.94	1.06	1.13	1.01	1.21	0.96	1.05	1.22	0.91	1.98
Copper grade milled	%	**0.43**	0.69	0.56	0.50	0.40	0.35	0.35	0.37	0.38	0.38	0.38	0.39	0.41	0.38	0.45
Gold contained	**koz**	**1,713**	**126**	**156**	**143**	**141**	**106**	**119**	**128**	**113**	**136**	**108**	**118**	**137**	**92**	**88**
Copper contained	**kt**	**199**	**24**	**20**	**18**	**14**	**12**	**12**	**13**	**13**	**13**	**13**	**14**	**14**	**12**	**6**
Product Sold:																
Gold Dore	koz	**344**	25	32	29	28	21	24	26	22	27	22	24	28	18	18
Gold in concentrate	koz	**1,153**	85	106	97	95	71	79	85	75	92	73	79	92	61	62
Copper in concentrate	Mlb	**411**	50	41	37	29	25	26	26	27	28	27	28	30	24	13
Concentrate (dry) sold	kt	**746**	90	74	66	53	46	47	48	50	50	50	51	54	44	23
Mining Costs																
Open Cut	US$/t moved	**2.58**	2.44	2.58	2.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Underground	US$/t mined	**26.45**	0.00	0.00	122.09	38.45	32.37	27.29	27.96	26.60	25.39	25.85	25.23	23.57	27.19	9.36
Processing Costs																
Unit Processing	US$/t milled	**7.67**	9.30	7.71	7.85	7.22	7.47	7.34	7.37	7.36	7.31	7.34	7.39	7.36	7.53	10.63
Other site Costs																
Overheads & site costs	US$/t milled	**9.11**	9.42	8.80	9.06	9.07	8.76	8.75	8.65	8.66	8.74	8.73	8.83	8.83	9.97	14.95
Logistics																
Land Transport & Ship loading	US$/t concentrate	**55.50**														
Sea Freight	US$/t concentrate	**29.00**														
Concentrate agent fees & insurance	% of revenue	**0.18**														
Assumptions																
Gold Price	US$/oz	**1300**														
Copper Price	US$/lb	**3.20**														
Power	US$/kWh	**0.126**														
Diesel	US$/Litre	**0.91**														
Discount Rate	%	**7.0**														

22.4 Cash Flow

The operation generates a total Before-tax cash flow of $1,168 million with a steady state average of $83 million per annum.

The After-tax cash flow is $944 million at an average of $68 million per annum. Annual cash flow after taxes and before capital expenditure are shown in Figure 22-3 with equivalent gold sales, and Figure 22-4 illustrates the cumulative cash flow and NPV$^{7\%}$, both before and after tax.

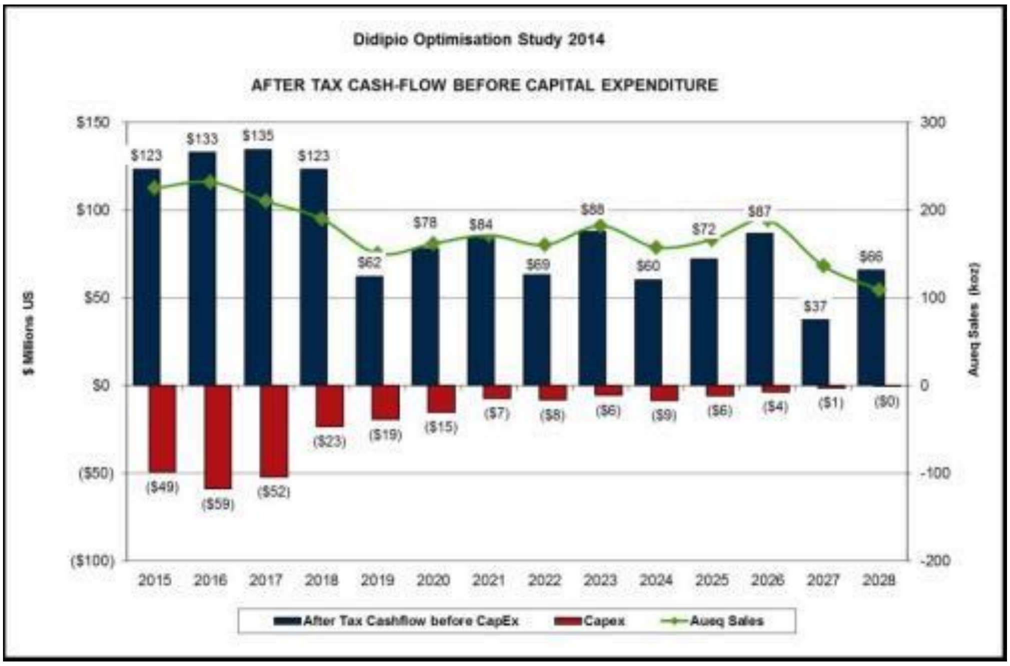


Figure 22-3: Life of Mine Cash Flows, After-Tax

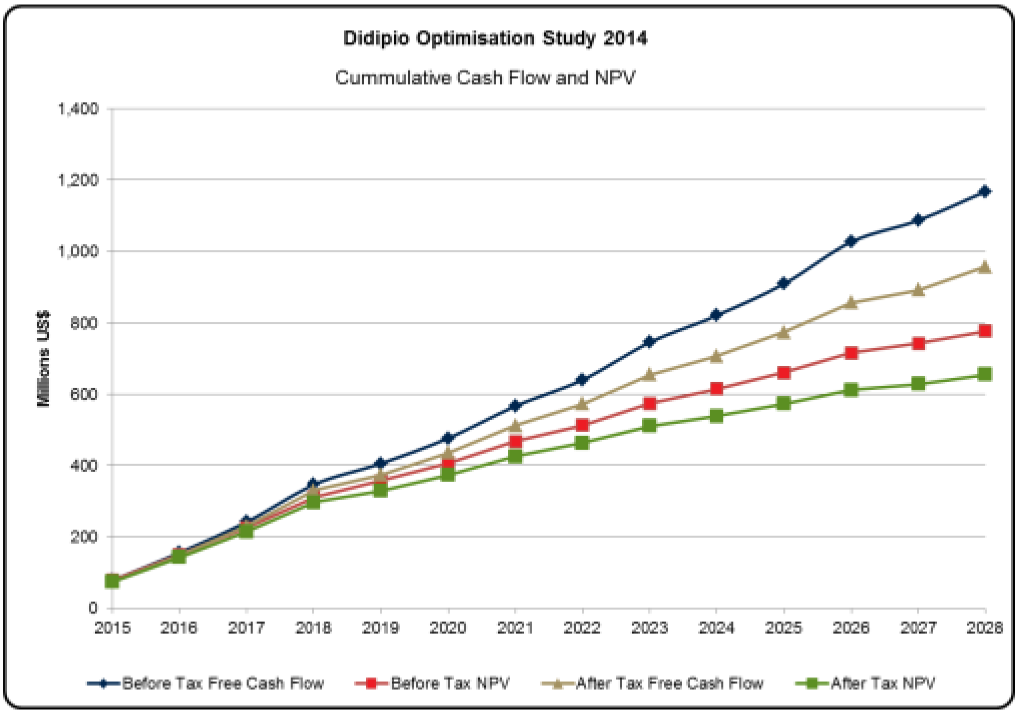


Figure 22-4: Pre-Tax and Post-Tax Cumulative Cash Flow and NPV

22.5 Royalties and Other Fees

There are two sets of royalties, one at 2% of net smelter return (“NSR”) and the second at 0.6% of 92% of NSR, which is capped at a total of AUD$13.5million.

There is an excise duty for gold, being 2% of gross sales, and copper which is 2% of gross sales less treatment charges, refining charges, metal losses and sea freight.

Included in other fees which are deducted before calculating the before taxes return as part of the economic evaluation are:

- Real Property Tax which is imposed by the local Province based on the value of improvements to the land.
- Business Tax which is imposed by the local municipality based on 2% of gross revenues and applies from December 2015.

22.6 Salvage Value

Salvage value has been excluded from the economic evaluation.

22.7 Taxation

The corporate income tax rate in the Philippines is 30%. However the Philippines Board of Investments has provided a six year income tax holiday for the project which expires on March 31, 2019. Also withholding tax on the payment of interest applies at the rate of 15%.

22.8 Financing Costs

Financing costs have been included at 10% on initial $350 million investment costs. A loan from a subsidiary of OceanaGold Corporation is used to finance the Project is assumed to remain in place for the life of the Project. The assumed applicable interest rate is 10%.

22.9 Third Party Interest

Pursuant to a 1991 addendum agreement, a family syndicate became the holder of an 8% interest in the operating vehicle that is formed to operate the Didipio mine. The interest entitles the holder to 8% of equity in the operating vehicle and dividends to be paid once OceanaGold recovers its initial investment. Any such dividends paid to the claim owner are deducted from the Government Share as detailed below.

22.10 Financial or Technical Assistance Agreement (“FTAA”)

Pursuant to the terms of the FTAA, the project “Net Revenue” is shared between the Government of the Philippines and OceanaGold on a 60/40 basis; that is 60% of the Net Revenue is the Government’s portion and 40% applies to OceanaGold. OceanaGold has a period of up to five years after the Date of Commencement of Commercial Production (being April 1, 2013) to recover its initial investment. Only after this period does the right of the Government to share in the “Net Revenue” accrue. Royalties, other fees, corporate income tax and other taxes are included when calculating the 60% Government share.

In the event OceanaGold has not recovered its investment in that 5 year period it has a further 3 years in which the remaining amount is amortised as a deduction against net revenue.

The initial investment includes not only the construction and development of the project but also payments to claim owners, land owners, exploration programmes, and maintenance of the exploration tenement, feasibility studies, administration of offices and the net commissioning cost up to commercial production.

Figure 22-5 illustrates the calculation of the additional Government Share.

Revenue
Less:
Operating costs
Sales costs
Underground mine development
Depreciation of post development capex (excluding underground development)
Interest costs

= Net Revenue
(Applicable only after the recovery of the initial investment w ithin 5 years w ith the balance to be recovered being amortised for 3 years after that). This is the base for calculating the Additional Government Share

then:
60% of Net Revenue
Less:
2% royalty paid
2% excise duty paid
2% business tax
Corporate income tax / withholding tax / other taxes paid
Dividends paid relating to the 8% free carried interest

= Additional Government Share

Figure 22-5: Calculation Methodology for Additional Government Share.

22.11 Sensitivity Analysis

Table 22-3 reports sensitivity analysis for post-tax NPV with varying revenue and operating cost inputs. The analysis suggests that the project is economically robust at revenue prices significantly less than assumed and at higher operating costs than assumed.

Table 22-3: Post-tax NPV Sensitivity

NPV (US$million) @ 7%	-25%	-20%	-15%	-10%	-5%	0%	5%	10%	15%	20%	25%
Revenues	215	319	413	502	590	**650**	697	753	789	842	881
Operating Costs	742	721	704	687	669	**650**	632	613	587	556	525

23 ADJACENT PROPERTIES

There are no adjacent properties that have an impact on the Didipio operation. The Didipio FTAA title held fully contains all known significant gold-copper mineralisation associated with the operation in the area.

24 OTHER RELEVANT DATA AND INFORMATION

24.1 Risk

OceanaGold conducted a risk assessment for the Didipio operation. This was an opportunity to gain input from a variety of internal and external experts. The objectives of the risk assessment process were:

- to systematically identify and define risks to the success of the Didipio operation;
- identify the causes of the risks;
- to identify existing measures in place to manage those risks;
- to assess the likelihood of each consequence occurring, taking into account the existing management strategy;
- to identify addition risk management opportunities that could be applied for each risk; and
- to log risks on a live register to be updated regularly.

24.1.1 Risk Profile

The overall risk profile is presented in Figure 24-1, with 29 risks in total identified with 1 extreme risk and 8 high risks associated with the Didipio operation at the current level of understanding.

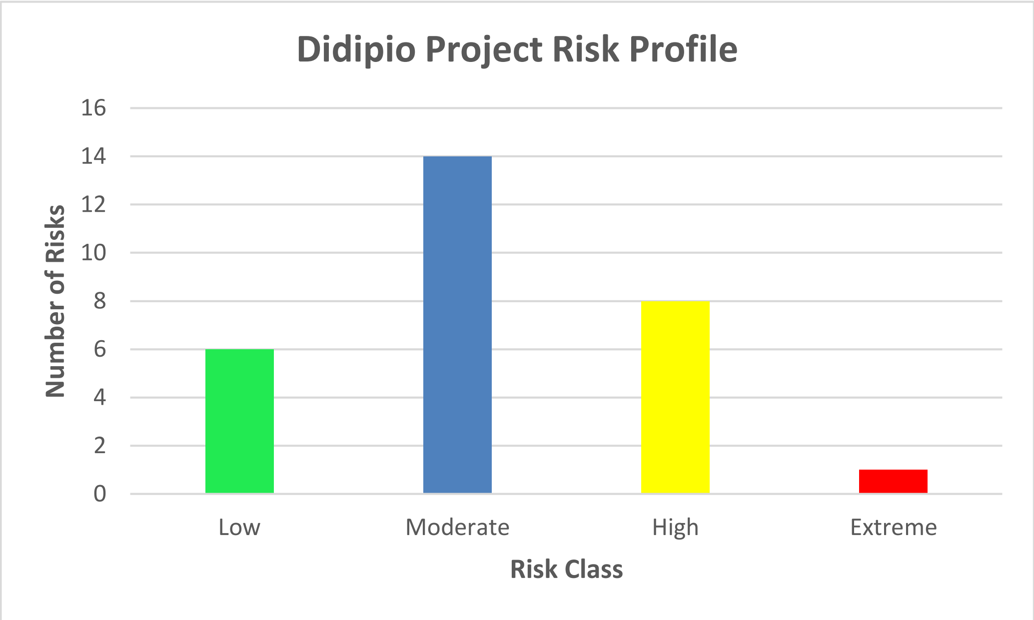


Figure 24-1: Didipio Operation Risk Profile

Extreme risks

The extreme risk identified states that if sufficient drilling and analysis is not undertaken then existing resources may not be identified. It is ranked as extreme as the financial impact of lost opportunity is significant.

Mitigation of the risk involves infill drilling in the open pit to further delineate the ore body and potentially convert Inferred resources to Measured or Indicated status.

High Risks

A total of eight high risks were identified during the risk assessment process and all but 1 relate to potential delays. The risks range from open pit wall failure to unforeseen permitting delays. The other risk relates to underground resource definition.

Detailed studies covering geotechnical engineering, hydrology and hydrogeology, ventilation, mining and backfill have been undertaken during 2014 by external consultants which increases confidence that the mining method and the implementation of the underground mine at the Didipio operation is unlikely to face significant project delays.

An extensive underground drilling programme will be initiated in the underground from the first available drilling platform off the decline in advance of underground production.

24.1.2 Management of Risks

OceanaGold's risk assessment methodology allocates a Credible Worst Case ("CWC") consequence (poorly controlled case) as well as a risk ranking based upon a reasonable consequence with controls taken into account.

On some occasions (where appropriate) risk treatment will respond to the CWC consequences not simply the risk ranking.

Consultation and communication are essential parts of the risk management process and the assessment was undertaken with a multidisciplinary group to ensure that appropriate consultation occurred.

Communication of risk is an ongoing process. However, the development of the Risk Register provides the basis for communication of these aspects of risk to appropriate personnel.

The risk management process is not static and risks may change with time. The current study represents an understanding by the operations personnel and project team of significant risks associated with the Didipio operation, while recognising that the level of risk may change over time and that new risks may emerge.

The risk register will be considered a 'live' document and will form a part of the risk management plan which will be subject to regular review.

24.2 Health & Safety Performance

The health and safety performance of the Didipio operation is above better than the industry average. The operation also achieved six months of continuous operation without a single recordable injury (October 2013 to March 2014).

Health and safety remains a key focus of OceanaGold and the Health & Safety team work towards continuous improvement through targeted safety initiatives. OceanaGold's aim remains 'Zero Harm' with a focus on all employees being safe at work and at home.

25 INTERPRETATION AND CONCLUSIONS

25.1 Sampling Method, Approach and Analysis

The resource estimate is drilled on 50m to 25m sections, generally at 60 degrees to the south west. Vertical separations of intersections range between 50m in the northwest of the deposit, to 150m in the south east. The resource estimate is based upon diamond core samples, which overall show good recoveries. Given the style of deposit, ore body geometry and structural controls on mineralisation, the sampling is believed to be appropriate.

25.2 Sampling Preparation, Analysis and Security

The author considers that the sample preparation, security and analytical procedures used for the Didipio operation are appropriate and adequate for the style of mineralisation being assessed.

Prior to OceanaGold, few copper standards were inserted, although 890 subsequent inter-laboratory analyses were conducted. As part of the re-assay programme for silver modelling, 330 pre-OceanaGold pulps have been dispatched to SGS on site lab. These will provide further checks on pre-OceanaGold copper assays.

25.3 Mineral Resources

The removal of geological constraints for modelling of the Tunja / Dark Diorite contact and the imposition of a hard boundary for the Biak Shear are both supported by in-pit mapping and grade control data. Reconciliation of the resource estimates against grade control and mill back-calculations also validate the modelling approach.

Grade control model contours at 1 to 1.5 g/t AuEq reveal relatively broad footprints which support the use of resource estimates for the underground resource estimates. Approximately 50,000m of diamond drilling is planned to infill the underground resource. This will improve local grade estimates for the underground resource as well as improve the geological confidence at depth.

25.4 Mineral Reserves

Using a cut-off grade of 0.52 g/t AuEq, the Didipio operation's open pit Mineral Reserves are 22.1 million tonnes at a grade of 0.96 g/t Au and 0.45% Cu. The reserves are evaluated within an updated final stage six pit design with a basal limit of 2460mRL.

The quantity of waste within the same updated stage six pit design is 52.3 million tonnes giving a strip ratio of 2.5:1 (waste:ore). The open pit waste quantity includes approximately 4.5 million tonnes of Inferred Resource material above the cut-off grade. OceanaGold is undertaking a targeted resource definition drilling programme during Q4 of 2014 with the objective of converting near term Inferred Resource material to an Indicated Resource classification. This Inferred Resource material has not been included in either Mineral Reserve totals or economic evaluation, but has been included as waste.

The Didipio underground mine has an NI 43-101 compliant Mineral Reserve of 15.9 Mt of ore at an average grade of 1.86 g/t Au and 0.43% Cu (2.57 g/t AuEq) for contained metal of 0.95 Moz of gold and 69kt of copper (1.3 Moz AuEq). The increase in Mineral Reserves compared with previously reported reserves is the consequence of a lower cut-off grade supported by this detailed technical study and a larger underground mine resulting from raising the location of the crown pillar.

25.5 Mining Methods

25.5.1 Open Pit

The open pit study has resulted in an improved final (Stage 6) pit design which has reduced the waste tonnes by 67 million tonnes and improved operational efficiencies through improved haul profiles.

The study has examined in detail the optimum location for the crown pillar which has been relocated from 2380mRL to 2460mRL. The benefits of raising the crown pillar are earlier mining of high grade ore from the underground mine and increased underground production resulting from an increase in the number of underground working headings. Compared to the previous, larger Stage 6 pit the reduction in the open pit ore, and contained gold and copper, is minimal as the wider flat base to the pit has captured previously inaccessible ore tonnes.

The recently completed hydrology and hydrogeology studies will assist in de-risking the open pit operations. A site wide water management plan has been developed along with improved understanding of ground water conditions.

An improved understanding of the geotechnical environment affecting open pit mining operations is a key outcome of the study. Improved blasting practices to reduce back-break along with higher benches and wider berms will reduce localised geotechnical failures.

The newly refined geotechnical domains have enabled a revision of pit designs to honour rock mass properties and structural influences. Additional monitoring, data collection and technical procedures are recommended. Further work is required to design the North Slope above the proposed Dinauyan river diversion, as this area has not yet been designed in detail.

The opportunity remains to reduce waste strip from the pit by redesigning the south-eastern section of the Stage 6 design. A trade-off is required on additional incremental haul distance and costs against the benefits of reduction in waste mined. There will also be slope stability benefits in the south if the switchback is removed.

The amount of Inferred Resource which could be economically mined has been quantified, prompting OceanaGold to invest in a resource definition drilling programme to potentially translate Inferred to Indicated resource classification. The Inferred resource has a low geological confidence and as such is not included in any economic evaluation reported in this Technical Report. It is however important to identify the spatial location of Inferred material to ensure there is no risk with regard to the location of critical site infrastructure.

The process used to assign values to the block model is similar to that used in the Dec13 Ore Reserve process. This process requires that copper value be represented as an equivalent gold grade. The calculation of the equivalent gold grade, as it has been applied, assumes constant gold grades in the copper concentrate regardless of recoveries and grades of these elements in the milled material. The concentrate grade of these elements is expected to vary according to the relative grades being processed. When higher grade gold is fed with lower-grade copper; the gold grade in the concentrate will rise.

Silver is not included in the current block model; OceanaGold has completed a programme of adding silver assays to the block model and expects to update resource models with silver before year-end reserve reporting as soon as QA review of modelling has been completed. OceanaGold has been able to indicatively quantify the economic uplift of adding silver to the Didipio mine plans during this study but has not included any silver related revenue in the economic evaluation for the project

25.5.2 Underground

First development ore is expected in H2 of the third year of operations, with first stoping production at the start of the fourth year. The ramp up to the steady state production rate of 1.6 Mtpa is scheduled to take three years from the onset of first stoping, with this rate maintained for six years before a reduced production rate for the final two years of operation during the recovery of the crown pillar below the open pit.

The operating cost per tonne for the underground operation is $26.45/t of ore, which includes all mining related costs, but excludes capital purchases and establishment costs. The previous NI 43-101 filed in 2011, estimated $33.50/t and this study shows a favourable variance, primarily attributable to:

- increase in production rate, from 1.2 Mtpa to 1.6 Mtpa;
- reduction in binder addition rate for paste backfill; and
- reduction in unit power costs.

The drill density constitutes a risk to the development of an underground operation due to limited information on the geological and mineralogical controls of the mineralisation at depth.

The breccia zone constitutes a risk to the design, schedule and cost estimate as it currently poorly constrained and has minimal geological and geotechnical data available for analysis. The small data set available for geotechnical analysis has resulted in a material impact on the proposed mine design and production schedule, with increased operating costs in this area as a result. Delineating and improving understanding of the breccia zone will enable an improved mine design, production scheduling and cost estimate to be produced. To mitigate the risk a diamond drilling programme has been recommended to commence early in 2015, with information gathering in this area one of the key requirements. Due to the limited amount of information available, a conservative approach has been adopted in this study for stope designs in this area, and further drilling may indicate that ground conditions are better than what has currently been assumed.

Opportunities exist to improve the economics of the project through reducing capital expenditure, including:

1. Considering alternative mobile fleet strategies, such as equipment leasing, rather than purchase;
2. Refining the underground and surface pumping configurations to optimise the number and location of pump stations required;
3. Further design on the paste backfill reticulation network and surface plant to optimise costs;
4. Improved understanding of the Breccia which could result in reduction in lateral development; and
5. Alternative ventilation strategies.

Operational expenditure can potentially be refined by:

1. Further paste backfill test work to potentially reduce binder addition rates;
2. Further paste backfill test work to potentially reduce curing times required before exposure of fill walls underground;
3. Improve understanding of breccia zone geotechnical requirements, to optimise stope dimensions; and
4. Conversion of Inferred Resource material to Indicated or Measured category through drilling, to increase the mining inventory available with minimal increase in capital expenditure required.

25.6 Metallurgy and Processing

The process plant has been successfully running for 18 months since commencement of commercial production, with a well-established workforce and management team in place and exceeded nameplate capacity and recovery within the first year of operation.

A debottlenecking process is almost complete to lift plant throughput to 3.5 Mtpa from 2015.

Plant recovery for both copper and gold has tracked well with recovery models developed for the orebody from testing of drill core samples of ore and provides confidence in forward production planning using the established relationships.

25.7 Infrastructure

All mine site infrastructure has been completed to support the open pit operations including; tailings storage facility, workshops, camp, water treatment plant and ore processing facilities.

Underground infrastructure is in the planning and design phase. Required infrastructure for the underground mine will include workshops, change rooms, paste backfill plant, portals, vent rises, sub-stations and switch gear.

The power demand for the underground mine has been allowed for in the OHPL design and the power supply contracts with San Miguel Corporation.

Ongoing projects to optimise the operation include:

- Installation of the overhead power line;
- Continuation of 3.5 Mtpa ramp-up project;
- Including installation of SABC circuit;
- Dinauyan river diversion; and
- Raising of TSF to final height before completion of open pit mining.

25.8 Environmental and Permitting

The Didipio operation holds the permits, certificates, licences and agreements required to conduct its current operations. In addition to the FTAA, ECC, PDMF and the other primary permits associated with the site, OGPI maintains a range of secondary operating permits. Permits are reviewed and, where applicable, renewed as part of the ordinary course of OGPI's business.

OGPI is required to ensure that the subject mining activities are managed in a technically, financially, socially, culturally and environmentally responsible manner, in accordance with the ECC. An ECC obliges the company to comply with a comprehensive set of conditions, including submission and implementation of an Environmental Protection and Enhancement Program ("EPEP") for the life of the mine.

The ECC system and the Implementing Rules and Regulations of the Mining Act regulate a funding structure to ensure company compliance with EPEP commitments and ensure immediate funding in the form of a Contingent Liability and Rehabilitation Fund ("CLRF") is available for rehabilitation in the event of environmental damage during mining operations. CLRF funds are held in a Philippine government deposit account and administered by the DENR.

The Didipio operation, including land uses associated with the open pit, underground mine, excavations, adits, and related engineering structures and installations where permanent mine facilities are established, are expected to result in consequential environmental and social impacts that are within acceptable regulatory limits.

25.9 Economic Analysis

The pre-production capital cost of the underground mine is estimated to be $116 million. The sustaining capital thereafter for life of mine is $143 million for underground, TSF, overhead power line and other operational requirements.

Total life of mine operating costs for open pit mining, underground mining, ore processing and general and administration and selling costs is estimated to be $1,548 million.

The economic analysis show robust pre-tax cash flows of $1,168 million resulting in a pre-tax NPV of $776 million at a discount rate of 7%. The post-tax free cash flow is $944 million and the post-tax NPV is $650 million.

26 RECOMMENDATIONS

26.1 Resource Definition

The drill hole spacing is relatively broad. Mine versus resource model reconciliation however has demonstrated that the resource estimates are robust for the open pit. The grade control data has also shown that mineralisation presents with a broad and vertically continuous footprint provided that low cut-off grades are considered (cut-offs below 1.5 g/t AuEq). On this basis the drill hole spacing is adequate for predictions for underground resources. In order to improve overall confidence in the estimates for the underground mine, particularly local estimates, a major programme of infill drilling (approximately 50km of diamond core) is expected to commence in 2015. US$10 million has been included in the economic evaluation. Resource updates will be completed as the drilling progresses.

OceanaGold have located and re-assayed 4,026 archived sample pulps for silver. A preliminary silver estimate has been undertaken, but validation has not been completed. This estimate will be reported as part of the end of year Mineral Resource and Mineral Reserve statement.

As part of the silver re-assay programme, 330 pre-OceanaGold pulps have been dispatched to SGS on site lab for check copper assays. These will supplement 890 existing pre-OceanaGold copper assay checks (that were not originally accompanied with standards).

A site-based training and review session regarding the classification and implications of breccias and associated alteration will be led by an international expert in November 2014. This review will also consider the applicability of portable infrared mineral analyser (“PIMA”) and portable XRF analysis.

26.2 Open Pit Mining

The study has highlighted the following recommendations:

Resource drilling to potentially translate Inferred Mineral Resources to Indicated Mineral Resources;

Continuation of geotechnical data collection and analysis;

Continuation of groundwater and surface water data collection and analysis;

Creation of operating procedures for geotechnical, hydrology, hydro-geology and mine planning technical disciplines;

Detailed design for the North Slope and Dinauyan diversion drain is required to meet 2015 production targets, there is potentially and opportunity to remove a switchback in the South eastern corner of the pit to reduce waste strip even further and improve stability of upper slopes in weathered material.

Redesign of the north wall and geotechnical analysis to evaluate the opportunity to increase the distance between the Dinauyan diversion and the Stage 6 pit crest.

Recommendations have been made by GHD for additional treatment options, utilising the storage capacity of the TSF and the water treatment plant, to supplement the capacity of the settlement ponds, which receive flow from the open pit sump pumps and surface run-off.

Installation of additional flow monitoring for the various mine catchments is recommended.

26.3 Underground Mining

The key recommendations relating to the underground project include:

Additional geotechnical investigation is required to improve definition of the breccia zone, and to enable detailed planning of major underground infrastructure such as vent shafts, the portal and the access decline. Numerical modelling should also be undertaken to confirm the required dimensions of the sill pillar and crown pillar, and their preferred extraction sequences.

The underground mobile mining fleet requires finalisation. The fleet detailed in this report lists suitable equipment based on size and capability, but there may be other suppliers of similar equipment which may be equally suitable for an underground mining operation in The Philippines. Availability of fleet supply and maintenance are also key criteria that require confirmation.

Material handling options that warrant further investigation are the use of open pit fleet to move underground material on surface. The schedule and cost model currently assume that the underground mobile fleet transport all material to its final destination, other than rehandle of ore into the crusher form the ROM stockpiles.

Alternative primary ventilation strategies, such as increased use of long hole blasted raises to reduce the amount of raise boring activity underground warrant further investigation to optimise costs.

Upon commencement of declining activities, as additional data is obtained the number and location of pump stations will be confirmed. Establishment of the pumping network will be a critical path activity to reduce the risk to the expanding underground mine.

The electrical distribution network needs finalisation, to consider combinations of power being run down the decline and/or shafts or service holes from surface.

The paste backfill reticulation network will be refined as additional test results become available.

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27.2 Technical Glossary and Abbreviations

"AAS" atomic absorption spectroscopy

"AEP" Annual Exceedance Probability

"AEPEP" Annual Environmental Protection and Enhancement Programmes

"Ag" silver

"**AMC**" AMC Consultants Pty Ltd

"Analabs" Analabs Proprietary Limited

"ANCOLD" means the Australian National Committee on Large Dams Inc., which is an Australian based non-government, non-profit association of professional practitioners and corporations with a professional interest in dams. ANCOLD is a member of the International Commission on Large Dams (ICOLD) and publishes internationally recognised guidelines for the sustainable development and management of dams and water resources.

"**APMI**" Australasian Philippines Mining Incorporated

"**Arimco MC**" Arimco Mining Corporation

"ASX" Australian Securities Exchange

"**ATV**" Acoustic Televiewer

"Au" gold

"AU$" Australian dollar

"AuEq." gold equivalent

"Barangay" is the smallest administrative division in the Philippines and is the native Filipino term for a village, district or ward.

"bcm" bank cubic metre(s)

"**BFA**" bench face angles

"**BIR**" Bureau of International Revenue

"block model" is a computer based representation of a deposit in which geological zones are defined and filled with blocks which are assigned estimated values of grade and other attributes. The purpose of the block model is to associate grades with the volume model.

"bulk density" is the dry in-situ tonnage factor used to convert volumes to tonnage.

"CAAP" Civil Aviation Authority of the Philippines

"CAMC" Climax-Arimco Mining Corporation

"CIL" carbon in leach

"CIM" the Canadian Institute of Mining, Metallurgy and Petroleum

"CIM Standards" are the CIM Definition Standards for Mineral Resources and Mineral Reserves adopted by the CIM Council on 27th December, 2010, for the reporting of Mineral Resource, Mineral Reserve and mining studies used in Canada. The Mineral Resource, Mineral Reserve, and Mining Study definitions are incorporated, by reference, into NI 43-101, and form the basis for the reporting of reserves and resources in this Technical Report. With triple listings on the TSX, ASX and NZX, OceanaGold also reports in accordance with the JORC Code and where necessary reconciles its reporting to ensure compliance with both the CIM Standards and the JORC Code.

"CIP" carbon in pulp

"Climax" Climax Mining Limited and, as the context requires, its related bodies corporate

"**CLRF**" Contingent Liabilities and Rehabilitation Fund

"cm" centimetre(s)

"CSR" corporate social responsibility

"Cu" copper

"cut-off grade" is the lowest grade value that is included in a Mineral Resource statement, being the lowest grade, or quality, of mineralised material that has reasonable prospects for eventual economic extraction.

"CWC" Credible Worst Case

"Cyprus" Cyprus Phillippines Corporation

"Delta" Delta Earthmoving, Inc

"DENR" is the Department for the Environment and Natural Resources. The DENR is the Philippines government agency primarily responsible for implementing the government's environmental policy and for regulating the exploration, development, utilization and conservation of the Philippine's natural resources.

"DH" drill hole

"diamond drilling" is a rotary drilling technique using diamond set or impregnated bits, to cut a solid, continuous core sample of the rock.

"**DWP**" Development and Utilization Work Program

"E" East

"ECC" means an Environmental Compliance Certificate, issued by the DENR, certifying compliance with the EISS.

"**EIS**" Environmental Impact Study

"EISS" means the Environmental Impact Statement System, established under the Mining Act for classifying projects in terms of their potential impact on the environment. A project that is classified as environmentally critical or located in an environmentally critical area requires an ECC from the DENR, certifying that the operator will not cause a significant negative environmental impact and has complied with all of the requirements of the EISS.

"EMB" means the Philippine Environmental Management Bureau, established within the Department of Environment and Natural Resources, as the Philippines national authority responsible for pollution prevention and control, and environmental impact assessment.

"EOM" end of month

"EOY" end of year

"**EPCM**" Engineering, Procurement and Construction Management

"EPEP" means the Environmental Program and Enhancement Program for the Didipio operation submitted under the conditions of the ECC.

"**EPRMP**" Environmental Performance Report and Management Plan

"ERA" mean the Environmental Risk Assessment conducted under the conditions of the ECC.

"ESE" East South East

"ESIA" Environmental and Social Impact Assessment

"ETF" means the Environmental Trust Fund established for the Didipio operation under the conditions of the ECC.

"**FAR**" fresh air rise

"Fe" iron

"**FMRDF**" Final Mine Rehabilitation and Decommissioning Fund

"FMRDP" means the Final Mine Rehabilitation/Decommissioning Plan which is still being reviewed by the Mine Rehabilitation Fund Committee

"**FTAA**" Financial or Technical Assistance Agreement

"**FTD**" Flow through drain

"g" gram(s)

"G&A" general and administration

"**GHD**" GHD (Australia) Pty Ltd

"g/t" grams per metric tonne

"GTA" graphite tube atomization

"H&S" Hellman and Schofield

"ha" hectare(s)

"HDPE" high density polyethylene

"Hg" mercury

"HLUR" Housing and Land Use Regulatory Board

"HQ" is a reference to the ~ 96 mm diameter of drill rods used to recover diamond drill core

"ICC" means Indigenous Cultural Communities under the Indigenous People's Rights Act, Republic Act No. 8371.

"Implementing Rules and Regulations" means DENR Administrative Order No. 2010- 21, 28th June, 2010, issuing Revised Implementing Rules and Regulations of Republic Act No. 7942, Otherwise Known as the "Philippine Mining Act of 1995"

"Indicated Mineral Resource" as defined under the CIM Standards is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

"Inferred Mineral Resource" as defined under the CIM Standards is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

"IP" means Indigenous Peoples under the Indigenous People's Rights Act, Republic Act No. 8371.

"IRA" inter-ramp angles

"**JK**" JK Tech Proprietary Limited

"**JORC Code**" means the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves which became effective 20th December, 2012 and mandatory from 1st December, 2013. The JORC Code is the accepted reporting standard for the ASX and the NZX.

"kg" kilogram(s)

"km" kilometre(s)

"km^2" square kilometre(s)

"koz" thousand troy ounces

"kt" thousand metric tonnes

“kV” kilovolts

“kWh” kilowatt hour(s)

“kWh/t” kilowatt-hours per tonne

“lb” pound(s)

“**LG**” Lerch Grossman

“**LHOS**” long hole open stoping

“**LoM**” Life of Mine

“μm” micron or micrometre

“m” metre(s)

“M” million(s)

“m^3” cubic metre(s)

“m^3/h” cubic metres per hour

“m/s” metres per second

“Ma” million years

“MCE” Maximum Credible Earthquake

“MDE” Maximum Design Earthquake

“Measured Mineral Resource” as defined under the CIM Standards is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

"**Metso**" Metso Technology PTSI Pty Ltd

“MGB” means the Mines and Geosciences Bureau, established under the DENR to administer the Mining Act.

“Mineral Reserve” as defined under the CIM Standards is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined. The term ”Mineral Reserve”, when used in this Technical Report, is consistent with “Ore Reserve” as defined by the JORC Code.

“Mineral Resource” as defined under the CIM Standards is a concentration or occurrence of diamonds, natural solid inorganic material or natural solid fossilized organic material including base and precious metals, coal and industrial minerals in or on the Earth’s crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

“mineralisation” means the concentration of minerals in a body of rock.

“Mining Act” means Republic Act No. 7942, also known as the Philippine Mining Act 1995, which governs the granting of rights to explore and mine for minerals in the Philippines.

“mm” millimetre(s)

"MMT" Multipartite Monitoring Team

"Moz" million troy ounces

"**MRF**" Mine Rehabilitation Fund

"**MRFC**" means Mine Rehabilitation Fund Committee established to administer the EPEP and FMRDP and comprising representatives of the DENR, local authorities, community representatives and a representative of OGPI

"mRL" metres above sea level. Note: for technical reasons all mRL coordinates described in this Technical Report have had 2000m added, ie: 2000m represents sea level.

"MSO" Mineable Stope Optimiser software developed by Alford Mining Systems.

"Mt" million metric tonnes

"MTF" Monitoring Trust Fund

"Mtpa" million tonnes per annum

"multiple indicator kriging" is a grade estimation technique

"MW" megawatt(s)

"**MWT**" Mine Waste and Tailing Fees

"N" North

"NAPP" negative acid producing potential

"NATA" National Association of Testing Authorities, the body which accredits laboratories and inspection bodies within Australia

"National Internal Revenue Code" means the Tax Code of the Philippines or Republic Act No. 9337, as amended.

"NCIP" means the National Commission on Indigenous Peoples, which is responsible for identifying and delineating ancestral domains/lands in the Philippines with the consent of the ICC/IP concerned.

"NE" Northeast

"NI 43-101" National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators.

"NNE" North North East

"NPV" net present value

"NQ" is a reference to the ~ 76 mm diameter drill rods used to recover diamond drill core.

"NW" Northwest

"NWRB" means the National Water Resources Board, which grants authorities for taking water from and discharging to rivers and waterways in the Philippines in accordance with the Water Code.

"NMV" means Net Metal Value

"NSR" net smelter return

"NUVELCO" Nueva Vizcaya Electric Cooperative

"NZX" means NZX Limited, the New Zealand Stock Exchange.

"OBE" Operating Basis Earthquake

"OceanaGold" means OceanaGold Corporation and/or any of its subsidiaries.

"OCEANAGOLD" or **"OGC"** means OceanaGold Corporation

"OGPEC" means OceanaGold (Philippines) Exploration Corporation (previously Arimco Mining Corporation, then Climax Arimco Mining Corporation)

"OGPI" means OceanaGold (Philippines), Inc (previously Australasian Philippines Mining, Inc)

"OHPL" Overhead Power Line

"ordinary kriging" is a grade estimation technique.

"OREAS" certified gold and copper reference standards produced by Australian-based company Ore Research and Exploration and used internationally in the assay of samples.

"Orica" Orica Philippines Inc.

"oz" troy ounce (31.103477 grams)

"Pb" lead

"PCE" Pollution Control Equipment

"PDMF" Partial Declaration of Mining Feasibility

"**PIMA**" Portable Infrared Mineral Analyser

"PHP" Philippine Peso

"polygonal method" is a grade estimation technique.

"PPA" Philippines Port Authority

"ppb" parts per billion

"ppm" parts per million

"PQ" is a diamond drill tube size equivalent to 85 mm inside diameter.

"Preliminary Feasibility Study" as defined under the CIM Standards is a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a preferred mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, is established and an effective method of mineral processing is determined. It includes a financial analysis based on reasonable assumptions on mining, processing, metallurgical, economic, marketing, legal, environmental, social and governmental considerations and the evaluation of any other relevant factors which are sufficient for a Qualified Person, acting reasonably, to determine if all or part of the Mineral Resource may be classified as a Mineral Reserve. The CIM Standards require the completion of a Preliminary Feasibility Study as the minimum prerequisite for the conversion of Mineral Resources to Mineral Reserves.

"Probable Mineral Reserve" as defined under the CIM Standards is the economically mineable part of an Indicated Mineral Resource and, in some circumstances, a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. The term "Probable Mineral Reserve", when used in this Technical Report, is consistent with "Probable Ore Reserve" as defined by the JORC Code.

"Proven Mineral Reserve" as defined under the CIM Standards is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified. The term "Proven Mineral Reserve", when used in this Technical Report, is consistent with "Proved Ore Reserve" as defined by the JORC Code.

"PSE" Pollution Source Equipment

"**pXRF**" portable X-ray fluorescence

"Q1" Quarter beginning 1 January and ending 31 March

"Q2" Quarter beginning 1 April and ending 30 June

"Q3" Quarter beginning 1 July and ending 30 September

“Q4” Quarter beginning 1 October and ending 31 December

“QA/QC” quality assurance / quality control

“Qualified Person” or **“QP”** as defined under the CIM Standards means an individual who is an engineer or geoscientist with at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these; has experience relevant to the subject matter of the mineral project and the Technical Report; and is a member or licensee in good standing of a professional association.

“QQ” Quantile-Quantile

“PLI” Point Load Index

“RAB” rotary air blast

“RAR” return air rise

“RC” reverse circulation

“RCF” Rehabilitation Cash Fund

“Revised Forestry Code” means Presidential Decree No. 705, enacted in 1975, which regulates the location, prospecting, exploration, utilization or exploitation of mineral resources in the Philippines, within forest concession areas. Licences, leases and timber permits, permitting mining operations within forest concession areas, are granted by the Director of the Bureau of Forestry.

“RL” relative level. Note: for technical reasons all mRL coordinates described in this Technical Report have had 2000m added, ie: 2000m represents sea level.

“RMI” Risk Management Intercontinental Pty Ltd

“ROM” run of mine

“RQD” the Rock Quality Designation index of rock quality

“S” South

“SABC” SAG mill / Ball mill / pebble crusher

“SAG” semi-autogenous grinding

“SCSR” self-contained self-rescuer

“SDMP” means the Social Development and Management Program prescribed by the Mining Act and its implementing rules and regulations and approved by the MGB.

“SE” Southeast

“SG” specific gravity

“SGS” SGS Philippines Inc.

“Shell” Philippines Shell Petroleum Corporation

“SMU” selective mining unit

“SSM” small scale mining or miners

“STDEV” standard deviation

“SW” Southwest

“SWMP” Surface Water Management Plan

“t” metric tonne (1,000 kilograms)

“TEM” technical economic model

“t/m^3” tonnes per cubic metre

“tpa” tonnes per annum

“tpd” tonnes per day

“tpm” tonnes per month

“**Trafigura**” Trafigura Pte Ltd

“TSF” tailings storage facility

“TSP” the total suspended particulate

“TSS” total suspended solids

“TSX” Toronto Stock Exchange

“UCS” Uniaxial Compressive Strength

“US$” United States dollars

“UTM” Universal Transverse Mercator

“UTS” Uniaxial Tensile Strength

“VCRC” Victoria Consolidated Resources Corporation

“Water Code” means Presidential Decree No. 1067, enacted in 1976, which regulates the taking of water from and discharges to rivers and waterways in the Philippines.

“WRD” waste rock dump

“W” West

“wt” weight

“**XRF**” x-ray fluorescence

“**Zn”** Zinc

“3D” three-dimensional

“@” at

“%” percent

“°” degrees

“°C” degrees Celsius