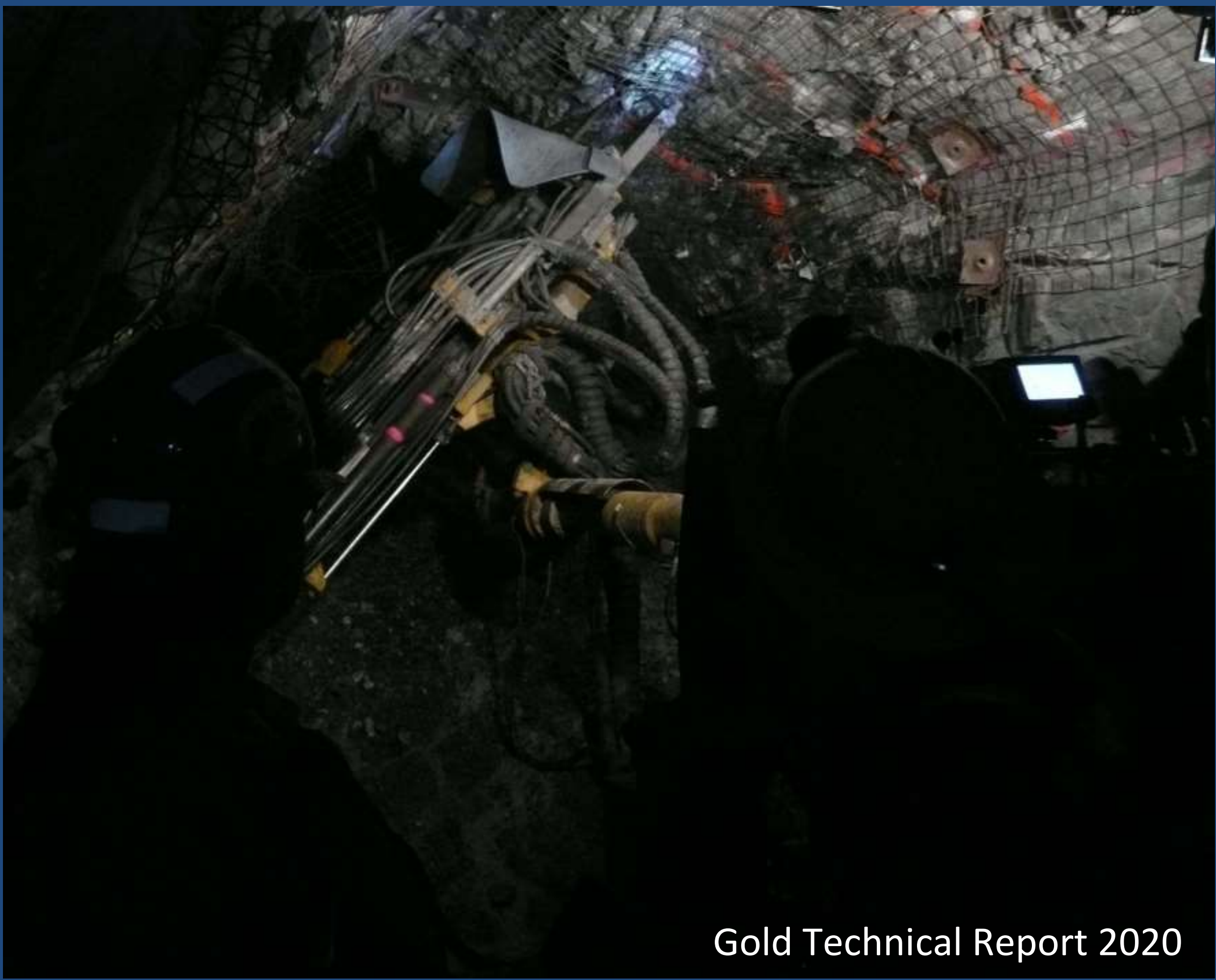
Mineral Resources and Ore Reserves 2020

Charters Towers Gold Project

Citigold Corporation Limited



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8 December 2020

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ITEM 1. Summary

This technical report has been prepared in accordance with the Australasian 2012 JORC *Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* and the Canadian *National Instrument 43-101 Standards of Disclosure for Mineral Projects 2005* ('**NI 43-101'**), although at the time of writing, Citigold Corporation Limited ('Citigold' or the 'Company') does not come under Canadian jurisdiction. The NI 43-101 definitions for resources and reserves have the meanings ascribed to those terms by the Canadian Institute of Mining, Metallurgy and Petroleum, as the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM Council. This report follows the format of the Canadian *Form 43-101 F1 Technical Report* for convenience, and for overseas investors familiar with the Canadian format. At the Charters Towers Gold Project :-

The **Probable Ore Reserves** at a 4 grams per tonne Au grade cut-off are:

> **2,500,000 tonnes at 7.7 grams per tonne gold containing 620,000 ounces (19,000 kilograms) of gold.** The Probable Ore Reserve is derived from and contained within, and is not additional to, the Indicated Mineral Resource. The **Indicated Mineral Resource** is 3,200,000 tonnes at 7.7 grams per tonne gold, containing 780,000 ounces of gold.

The **Inferred Mineral Resources** at a 3 grams per tonne Au grade cut-off are:

> **32 million tonnes at 14 grams of gold per tonne, containing 14 million ounces of gold**, using a cut-off grade of 3 grams of gold per tonne of mineralized material (grams per tonne Au or g/t Au) over a minimum sample true width of one metre (expressed as 3 metre-grams per tonne Au or 3m-g/t Au).

The Project was in gold production from 2007 to 2015, with all necessary infrastructure in place and has sold over 100,000 ounces of gold and 45,000 ounces of silver since 1997. Mining operations were put on care and maintenance in 2016 pending a major capital raising to enable full scale gold production.

Significant changes since the last formal report in 2012 include reallocation of the C30 Clarkes Moonstone lode from the Southern Area to the Central Area to better reflect its geographical position, addition of the new C36, C38 and C39 lodes to the Central Area, removal of three lodes from the Southern Area Resource and increasing the payability in the Central Area from 30% to 50% based on historical payabilities recorded there. Reserves were maintained at the Imperial Mine on a 3-month rolling replacement process where new ore was added in by new on-ore development and diamond-drilling ahead of mining, and known ore mined out during the period. Silver was removed as not material compared to gold.

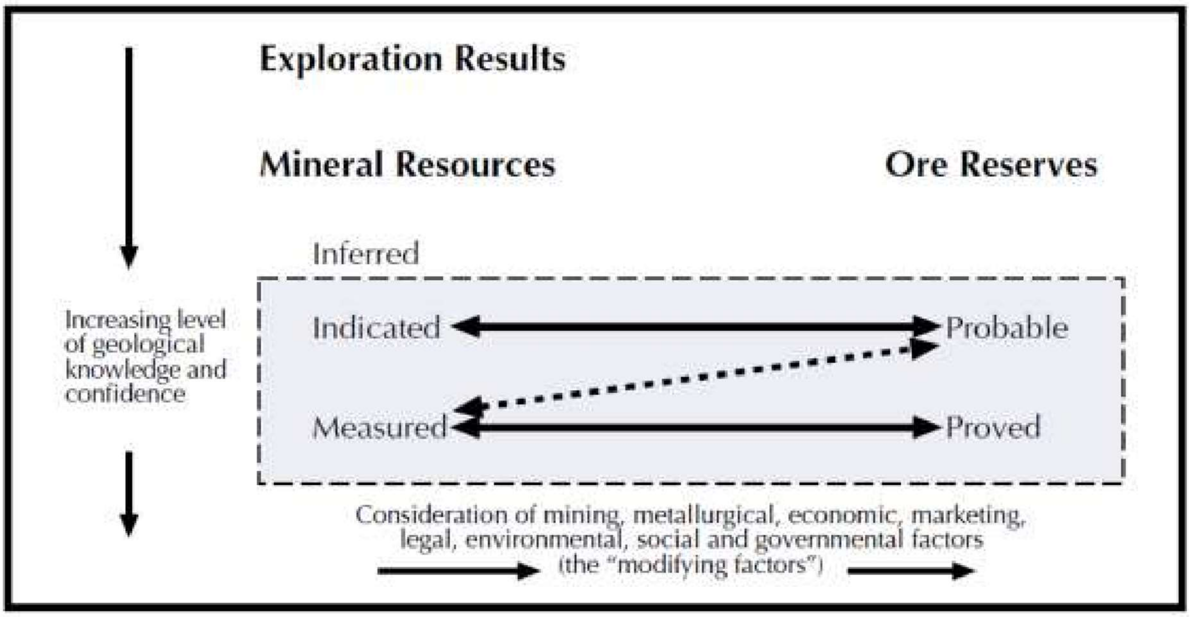
The confidence level is :-

> **±10 to 15% for the contained ounces in the Probable Ore Reserve**; and
>
> **±30% for the contained ounces in the Inferred Mineral Resource** because two known mining factors have been included (a minimum mining width of one metre, and a substantial discount of the tonnes (50%) based on known mine payability on the reefs).

ITEM 2. Introduction

The following terms, tabled below, are used in this report, and their equivalents are shown for the JORC Code and for NI 43-101.

JORC Code	NI 43-101 Equivalent Term	Category	Confidence Level
Inferred Mineral Resource	*Inferred Mineral Resource*	Resource	Lowest
Indicated Mineral Resource	*Indicated Mineral Resource*	Resource	Medium
Measured Mineral Resource	*Measured Mineral Resource*	Resource	Highest
Probable Ore Reserve	*Probable Mineral Reserve*	Reserve	Lower
Proved Ore Reserve	*Proven Mineral Reserve*	Reserve	Higher



ABOVE - General relationship between Exploration Results, Mineral Resources and Ore Reserves.

(from: Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves - The JORC Code. 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC)

2.1 For whom is this report prepared

This report has been prepared at the request of the Board of Citigold Corporation Limited.

2.2 Purpose for which this Report has been prepared.

The purpose of this Report is the updated quantification of the gold Resources and Reserves of the Charters Towers Gold Project (or Charters Towers project) held by Citigold Corporation Limited, which were last published as a formal report in May 2012 and reviewed annually in the Company's Annual Report. The Report is for the general information of Directors and shareholders of the Company, potential investors and for the general disclosure of information to the market. It has not been requested for any specific investment or capital raising proposal. It is a Public Report as defined under the JORC Code, and a Technical Report as defined under NI 43-101.

2.3 Sources of Information and Data.

Information has been sourced primarily from the Company's own sampling of drill core, drill chip data, underground mine workings, open pit mine benches and outcrops since the Company listed on the Australian Securities Exchange in 1993. Reliance has been placed on the work and reports of previous and current Company employees, research work by independent university researchers, Queensland State Government Geological Survey reports and maps, the Federal Government's Geoscience Australia reports and maps, and reports from other exploration and mining company reports covering the Company's ground prior to 1993 which are held on Open File by the Queensland Government. In some cases, original drill core drilled by other companies has been obtained by the Company, re-sampled, relogged and stored in the Company's Core Farm at Charters Towers. Details are given in other parts of this report.

2.4 Scope of personal inspection of the property

The *Competent Person* under the JORC Code and the *Qualified Person* under NI 43-101 responsible for this report, Mr Christopher Alan John Towsey, has been associated with the Project for 20 years from 1999 as a consultant geologist and employee. He joined the Company on full-time staff as General Manager Mining in July 2002, was promoted to Chief Operating Officer ('COO') in January 2004 and lived on-site at Charters Towers as COO and Site Senior Executive managing the day-to-day operations of the underground mining operations of the Imperial Mine from October 2009 to January 2011. He remained as a consultant geologist to the Company from January 2011 and re-joined the Company as Chief Scientist in 2014. He was a Director of the Company from 2014-June 2016. He inspected the operations in April and September 2011. His last personal underground inspection of the property was the 19th and 20th December 2011, inspecting the Central Decline underground down to the Brilliant Block Shaft 180m vertically below the city, and inspecting the 830 and 840 production levels in the Sons of Freedom ore body in the Imperial Mine 5 km southeast of the city. He last visited the site in 2016 and there has been no further mining activity or drilling since that time.

ITEM 3. Reliance on Other Experts

The work by the Company team in producing this report is founded on the fact that it is the first time since the field was discovered in 1871 that one company has controlled the whole goldfield. The team has been able to access and assess all available data going back 140 years to 1872 to evaluate the goldfield's potential. The geological conclusions in this plan represent a synthesis of the observations, calculations and conclusions made by many geologists over the past 140 years, including the Company's own work since 1994 and that of its now subsidiaries since the 1980's.

Other work used included the 1930's work of the renowned structural geologist Terence Conolly who developed the *'Conolly Contour'* method of ore body evaluation for Gold Mines of Australia ('GMA', the precursor to Western Mining Corporation) at Norseman and Charters Towers. Other external work used included that of James Cook University researchers Associate Professor Dr Roger Taylor, Dr Oliver Kreuzer and Andrew Allibone; prominent consultant geologists Garry Arnold, Bill Laing, Andrew Vigar and others. The work of numerous other geologists, including Tanya Strate, Sara Warren, previous Exploration Managers Kevin Richter, Murray Flitcroft, Jim Morrison, General Managers Geology Nigel Storey and Dr Simon Richards was also used, together with that of geologists of other mining corporations which had undertaken substantial work on their sections of the goldfield in the past (including BHP, Homestake, WMC, CRA, and Mt Leyshon). Other past and present Company employees have contributed significantly to the current sampling programs and geological understanding. Mining engineering input for preparation of the financial model and mining engineering design was undertaken by Garry Foord.

Extensive use was made of historic mining records such as: original mine plans; sections; mine managers' fortnightly reports; and production records from 206 mining leases covering 127 mines working 80 lines of reef and 95 crushing plants, grinding mills, cyanidation and chlorination plants. Other information sources include *The Queensland Government Mining Journal* ('QGMJ') from its inception in 1901 and onwards, Annual Reports from The Minister of Mines and The Mining Wardens, monthly reports from The Mining Wardens from 1872 onwards, mining company General Meetings minutes and reports, conference papers and *The Northern Miner* newspaper reports on the mine operations, from 1871 to 1920. The original mine level plans are all preserved in the Queensland Mines Department and Kevin Richter organised to have them digitised and modelled using proprietary computer packages, and these computer models were later cross-checked against survey pickups of the vertical shaft collars and inclined shaft portals. These records include those of the famous Robert Logan Jack (Thomas, 1999) the first Queensland Government geologist, and J H Reid, also a government geologist, both of whom mapped the goldfield during the early mining days. The reports and updated maps of a number of other Queensland Geological Survey geologists have been used.

3.1 Drilling undertaken by other parties

The drilling database includes:

- 1993 - Mt Leyshon Gold Mines Ltd extensions to CRA diamond drill holes in the Central 3 and Central 5 areas.
- 1991 - Diamond and RC drilling by PosGold in a joint venture with Charters Towers Mines NL that covered the Central 8 and Central 7 areas.
- 1981-84 - Diamond-drilling by the Homestake/BHP joint venture on the Central 1 area,
- 1975, 1981-82, and 1987 - Diamond and RC drilling on Central 2 and 3 on the Sunburst leases by A.O.G., CRA and Orion respectively.

Much of the diamond-drill core from these programs is held by the company at the Company processing plant site and core yard in Charters Towers. This core is available for re-assaying and re-logging. A large library of RC drill hole cuttings is similarly available at the Company's core yard.

ITEM 4. Property Description and Location

4.1 The area of the property

Citigold has a 100% control of the following mining tenements at Charters Towers as at 1 December 2020:

Exploration Permit Minerals	EPM 15964	EPM 15966	EPM 18465	EPM 18813	EPMa 27287
Minerals Development Licences	MDL 118	MDL 119	MDL 252		
Mining Leases	ML 1343	ML 1430	ML 1545	ML 10193	ML 10284
	ML 1344	ML 1472	ML 1585	ML 10196	ML 10335
	ML 1347	ML 1488	ML 10005	ML 10208	
	ML 1348	ML 1490	ML 10032	ML 10222	
	ML 1385	ML 1491	ML 10042	ML 10281	
	ML 1398	ML 1499	ML 10091	ML 10282	
	ML 1424	ML 1521	ML 10093	ML 10283	

Table 1. The Company has 100% control of 30 Mining Leases, three Mineral Development Licences, four Exploration Permits and one EPM Application.

The Mining Leases cover 22.6 square kilometres, with 25.9 km^2 under MDL and 162.6 km^2 under granted EPM, making a total area of 210.6 km^2.

4.2 Location

The City of Charters Towers, at the centre of the Charters Towers goldfield, is located 1,000 kilometres north of Brisbane, and 128 kilometres south west of Townsville in far north Queensland, at latitude 20° 04' South, longitude 146° 15' East.

The Company has an approved Plan of Operations for its Charters Towers Gold Project (including the Imperial Mine located at 20° 7' South, 147° 17' East) and holds a granted and approved Environmental Authority for its Charters Towers Gold Project. It has been mining and extracting gold intermittently from 1993, and continuously from 2007-2015. It has sold over 100,000 ounces of gold and 45,000 ounces of silver since 1997.

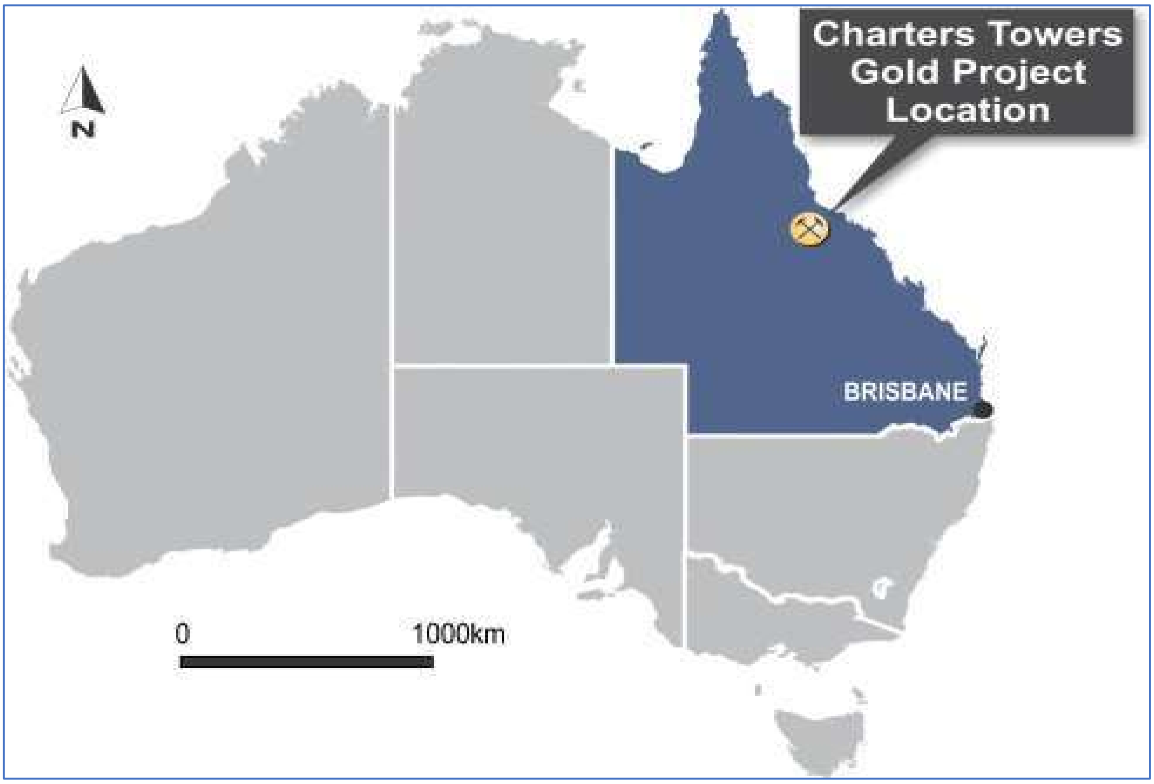


Figure 1. Location of the Charters Towers Gold Project

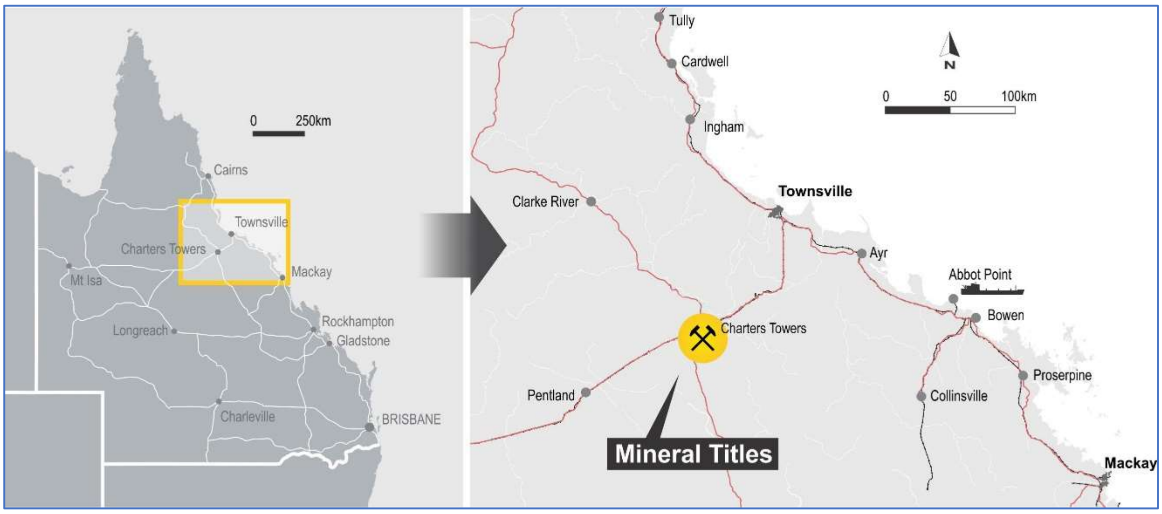


Figure 2. Detailed location of the Charters Towers project.

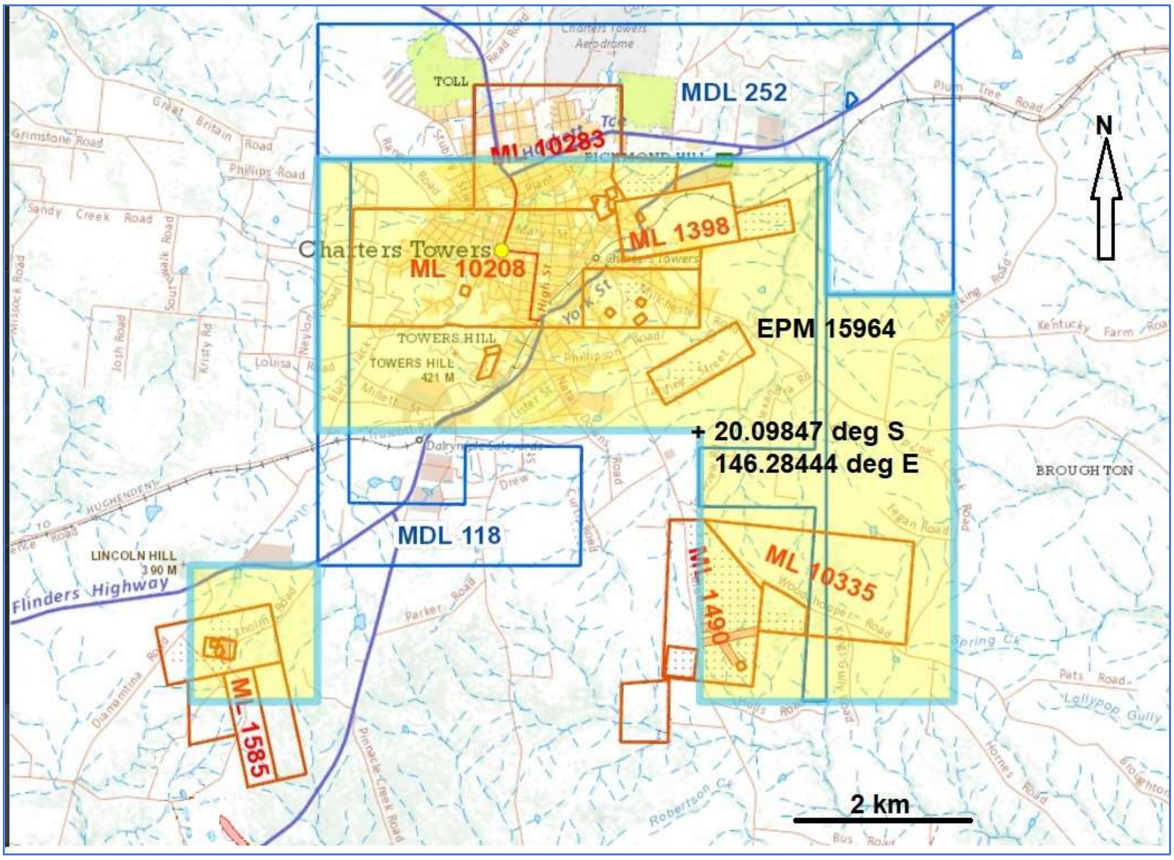


Figure 3. Location Map of the 30 Mining Leases, three MDLs and EPM15964 centred on the city of Charters Towers.

4.3 Types of Mineral tenures and identifying numbers

- **Mining Leases** (MLs) for minerals grant the right to mine and extract specified minerals other than coal, uranium, gas or petroleum, subject to the proposed mining operation being approved by the Queensland Department of Natural Resources, Mines and Energy (DNRME) and the Department of Environment and Science (DES). Leases are granted for a period up to 21 years, and can be applied for renewal at the end of the initial granted period. A Mining Lease is granted for mining operations and entitles the holder to machine-mine specified minerals and carry out activities associated with mining or promoting the activity of mining. It is not restricted to a maximum term - this is determined in accordance with the amount of reserves identified and the projected mine life. A ML can be granted for those minerals specified in either the prospecting permit, exploration permit or mineral development licence held prior to the grant of the lease. The Act does not specifically define the area or shape of land that can be granted under a lease although these must be justifiable. ML boundaries are surveyed and described by distance and azimuth from a defined datum post. There is an annual rental fee, currently $63.70 (excl. GST) per hectare.
- **Mineral Development Licences** (MDLs) are an intermediate stage between Exploration Permits and Mining Leases that allow the permit holder to retain the ground with minimal expenditure for five years. The period of tenure may be extended depending on circumstances subject to the approval of the State Government DNRME. An MDL allows the holder to undertake geoscientific programs (e.g. drilling, seismic surveys), mining feasibility studies, metallurgical testing and marketing, environmental, engineering and design studies to evaluate the development potential of the defined resource. The MDL can be granted to the holder of an exploration permit for a period of up to five years where there is a significant

mineral occurrence of possible economic potential. The MDL can be renewed. MDL boundaries are described by distance and azimuth from a defined starting point, the 'datum post'.

- **Exploration Permits for Minerals** (EPMs) in Queensland give the right to explore but not to mine. EPMs may be granted for up to five years and can be extended if conditions such as expenditure and work programs are met. One other condition usually is that the area to be renewed must be reduced by 50% each year after the initial two years. An Exploration Permit is issued for the purpose of exploration, and allows the holder to take action to determine the existence, quality and quantity of minerals on, in or under land by methods which include prospecting, geophysical surveys, drilling, and sampling and testing of materials to determine mineral bearing capacity or properties of mineralization. An EPM may eventually lead to an application for a mineral development licence or mining lease. Exploration Permit boundaries do not need to be surveyed and are defined as sub-blocks, each sub-block comprising one minute of latitude by one minute of longitude. In the Charters Towers area, one minute of latitude is approximately 1.8 km long and one minute of longitude is approximately 1.7 km, making one sub-block approximately 3.1 square kilometres. EPMs may be up to 100 sub-blocks and there is an annual rental fee per sub-block of $164.90 (excl. GST).

  A full list of all the Company's tenements is given above in Table 1.

The area of each title and the proportion of granted surface areas on the Mining Leases are tabled below in Table 2.

EPMs and MDLs generally are inclusive of surface rights.

	MINING LEASE	Lease Name	Total Area (ha)	Surface Area (ha)	Lease Expiry Date	Lease Status
1	**ML 1343**	The Hern	1.71	1.61	30/09/2027	Granted
2	**ML 1344**	The Gray / Bennett St	5.65	5.65	31/12/2020	Granted*
3	**ML 1347**	The Rainbow	1.98	1.98	30/04/2032	Granted
4	**ML 1348**	Ladybird	16.19	15.73	30/09/2024	Granted
5	**ML 1385**	Columbia	0.97	0.90	31/10/2025	Granted
6	**ML 1398**	Sunburst	128.60	-	30/09/2029	Granted
7	**ML 1424**	Stockholm	8.43	7.69	31/01/2025	Granted
8	**ML 1430**	Black Jack 4	117.50	25.74	28/02/2025	Granted
9	**ML 1472**	The Stack	5.66	5.66	31/01/2020	Granted*
10	**ML 1488**	PG Gold	42.82	22.20	31/10/2032	Granted
11	**ML 1490**	Golden Key	230.23	148.40	30/09/2025	Granted
12	**ML 1491**	Golden Sunrise	70.00	17.31	31/12/2020	Granted*
13	**ML 1499**	Brilliant East	124.50	15.15	31/12/2020	Granted*
14	**ML 1521**	The Jewellers Shop	53.66	7.75	30/09/2025	Granted
15	**ML 1545**	Sunburst Extended	31.16	31.16	31/03/2022	Granted
16	**ML 1585**	Black Jack 3	64.00	-	31/03/2028	Granted
17	**ML 10005**	Kelly's Road	1.00	1.00	30/04/2025	Granted
18	**ML 10032**	Stockholm No1	1.20	1.20	30/04/2027	Granted
19	**ML 10042**	Stockholm No2	0.88	0.88	31/10/2027	Granted
20	**ML 10091**	Imperial	1.00	1.00	30/09/2027	Granted
21	**ML 10093**	Caledonia	1.00	1.00	31/12/2020	Granted*
22	**ML 10193**	The Tiernay	1.50	-	30/06/2020	Granted*
23	**ML 10196**	Upper Mosman	1.38	-	30/06/2020	Granted*
24	**ML 10208**	Brilliant Central	566.90	4.09	31/12/2020	Granted*
25	**ML 10222**	Warrior East	33.40	16.59	30/09/2025	Granted
26	**ML 10281**	Brilliant Central Extended	1.19	-	31/10/2025	Granted
27	**ML 10282**	Black Jack No 3 Extended	64.00	-	28/02/2025	Granted
28	**ML 10283**	Brilliant North	332.74	-	31/10/2025	Granted
29	**ML 10284**	Black Jack No 5	50.00	-	28/02/2025	Granted
30	**ML 10335**	Warrior Extended	293.36	-	30/09/2025	Granted
	TOTALS (ha)		2,252.61	**332.69**		
	Percentage			**15%**	**Surface Area**	*Renewals lodged
	Area (km2)		**22.53**	**3.33**		

Table 2. List of the Company's Mining Leases and granted Surface Areas.

MDLs	Area km2
118	6.137
119	2.491
252	17.24
TOTAL MDL Area	**25.87 km^2**

EPMs	Subblocks	Area (km^2) (3.06 km^2/sub-block)
EPM 15964	14	42.84
EPM 15966	10	30.6
EPM 18465	3	9.18
EPM 18813	26	79.56
TOTAL EPM Area	**53 sub-blocks**	**162.18 km^2**

TOTAL AREA MLs, MDLs & EPMs	**210.6 km^2**

Table 3. Area of Exploration Permits Minerals (EPMs) and Mineral Development Licences (MDLs)

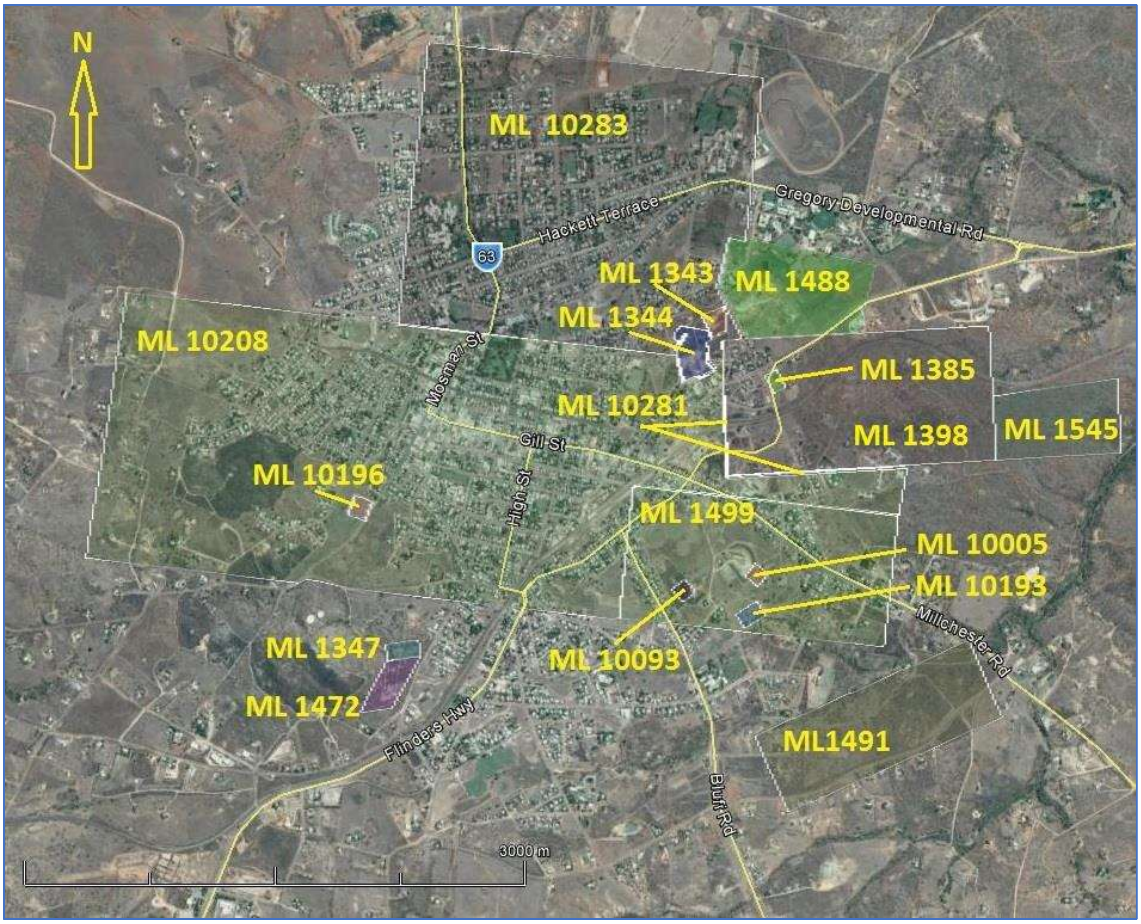


Figure 4. Mining leases in the Central area of the Project.

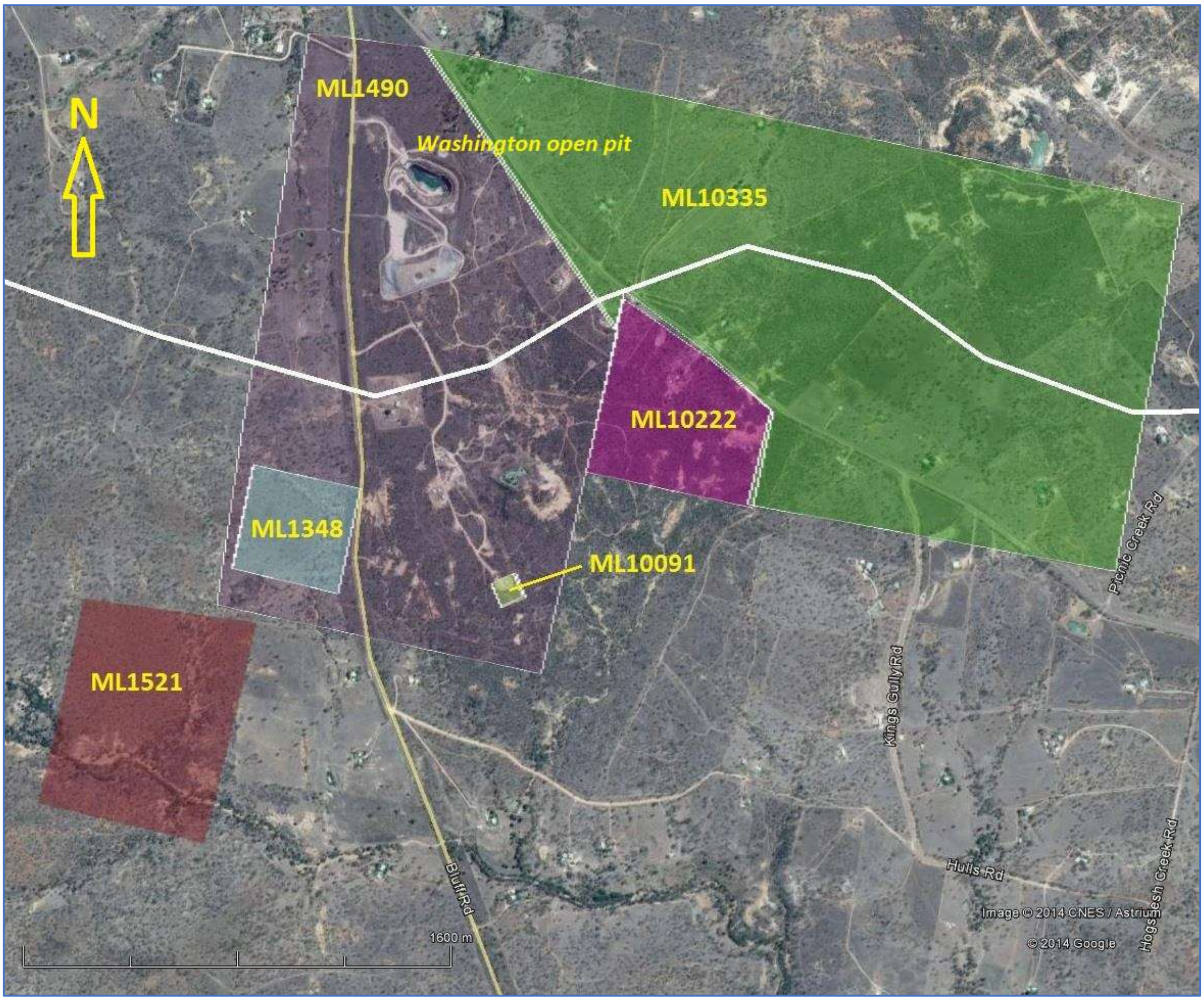


Figure 5. Mining Leases in the Imperial mining area. The Decline portal to the underground workings in located in the south wall of the Washington open pit.

At the time of reporting the Company had 4 (four) granted EPMs (numbers 15964, 15966, and 18465 and 18813) totalling about 162.2 square kilometres and one EPM under application.

The Company's main assets, its mines, offices, change-rooms and workshops are all located within granted Mining Leases shown in Figures 4 & 5 above.

Mineral Resource areas are shown in below.

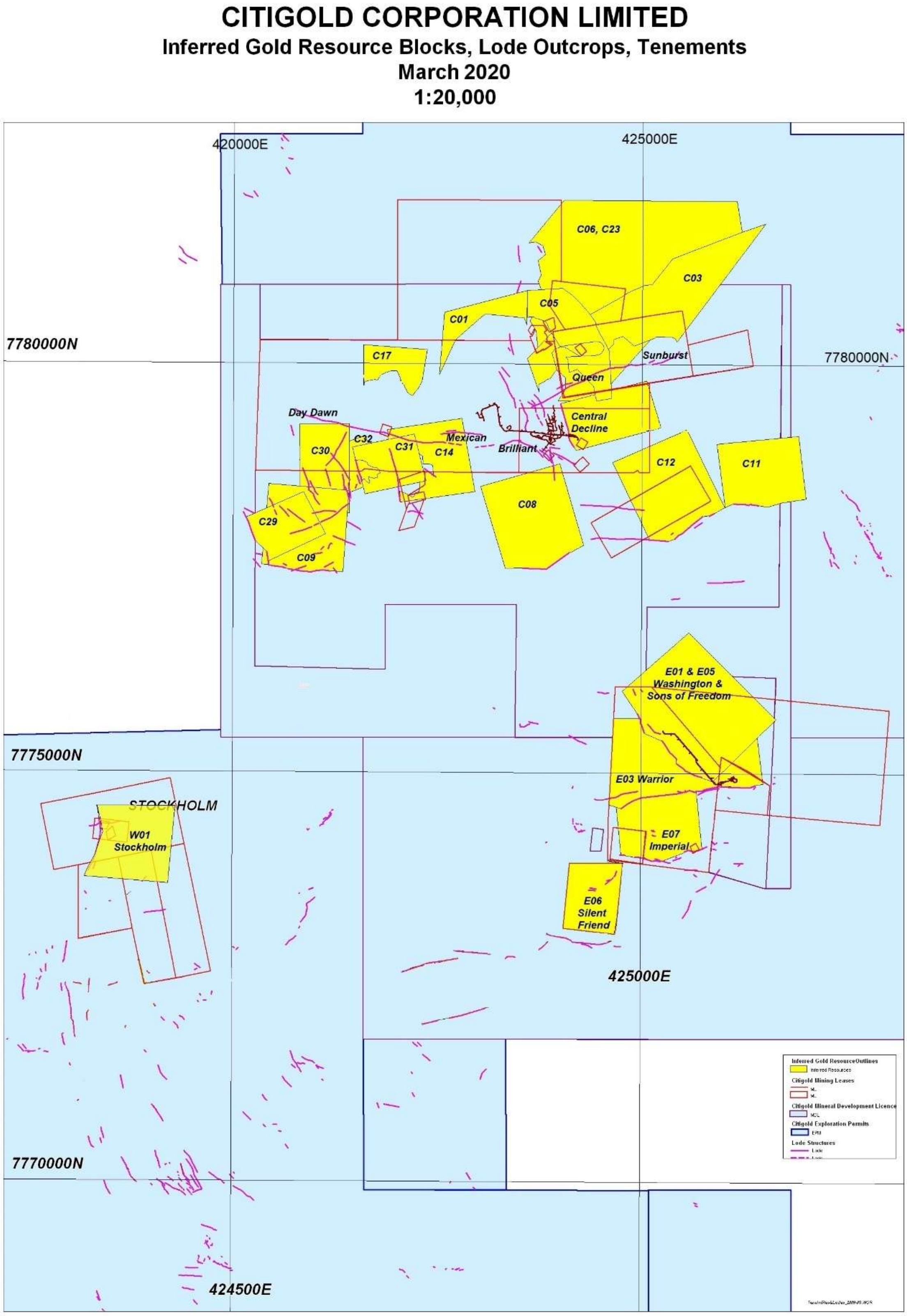


Figure 6. Location diagram of the Inferred Mineral Resources (yellow) of 32 million tonnes at 14 grams per tonne gold containing 14 million ounces of gold.

4.4 Other Agreements and Encumbrances

Fortune Gems and Jewellery DMCC has a 1% royalty interest in all gold production until 5 March 2023 (when the royalty agreement expires), secured against ML1348, ML1490, ML10222 and ML10335 (Warrior leases).

PAL Group Pty Ltd (ATF The I and F Trust) is a lender to the Company secured by a mortgage over ML1499 and ML10208.

4.5 Environmental Liabilities.

All EPMs and MDLs are granted accompanied by an Environmental Authority (EA), regulated by the Queensland Department of Environment and Science ('DES).

Mining Leases may require an Environmental Impact Statement ('EIS') before original grant, an EA, an Environmental Management Plan and a plan of operations prior to commencement. The plan of operations must include:

- **description of all activities that will take place** – on the site during the time frame covered by the plan.
- **proposed program of actions** – to comply with EA conditions.
- **rehabilitation program for land disturbed** - or land that will be disturbed during the period of the plan.
- **compliance statement** - describing how much the company has complied with its EA conditions.

Long term liabilities for the Charters Towers project include obligations to rehabilitate mined areas post-mining. An environmental security deposit of A$500,000 has been lodged with the Queensland Government to cover any default on rehabilitation, and the Company has budgeted an allowance of A$2 per tonne of ore mined in its 15-year mining budget forecasts to cover ongoing and end of mine rehabilitation. The Project, being an underground mine, operates with a minimalist surface footprint.

4.6 Permits that must be acquired to conduct the work proposed

The necessary permits are in place for the mining and processing proposed. Recent mining and processing have been conducted from 2006 to 2015. As the project progresses through its operational life any amendment to the permits required for larger scale and expanded operations are expected to be obtained in the usual course of business. Further Mining Leases may be acquired dependent on exploration discoveries.

Processing is planned to be conducted at a modern environmentally friendly new predominantly auto sorting and gravity plant to be installed at the Stockholm site. The site is located 8 kilometres from the Central underground portal and is held by the Company on already disturbed mining land. Alternatively, the Black Jack gold processing plant located about 12 km southwest of Charters Towers (formerly owned by Citigold but sold to Maroon Gold). Currently there is an agreement to toll treat Citigold's ore available at a cost of $35 per dry tonne of ore.

4.7 Other significant factors and risks that may affect access, title or the right or ability to perform work on the property.

Mining and processing have been conducted since 1997. There are no known factors that would prevent the implementation of the proposed next 15 years of mining and processing, provided the Company continues to meet its normal operational, environmental and Mining Lease obligations.

ITEM 5. Accessibility, Climate, Local Resources, Infrastructure and Physiography

Charters Towers city is accessible by good bitumen highway (the Flinders Highway) from the international seaport of Townsville, 128 km to the northeast. Townville has daily commercial jet flights from Brisbane and Cairns by several airlines. State Government railways connect Townsville to Brisbane in the south, and to Mount Isa via Charters Towers in the west. The Bruce Highway runs from Townsville to Brisbane. There are no scheduled domestic airline flights to Charters Towers, but charter aircraft flights operate from Townsville and Mount Isa to Charters Towers, as well as commercial passenger buses.

The climate is sub-tropical to semi-arid, with a distinct wet season (summer monsoon) from November to March bringing thunderstorms, cyclones and cyclonic rain depressions to the surrounding region. Winters are cool and dry and summers humid and hot. Mining operations are continuous through all seasons, although surface exploration, transport and access is occasionally impeded by the wet season, and crushing and screening in open-air facilities at the processing plant are hampered by wet weather. Weather conditions do not normally interrupt production.

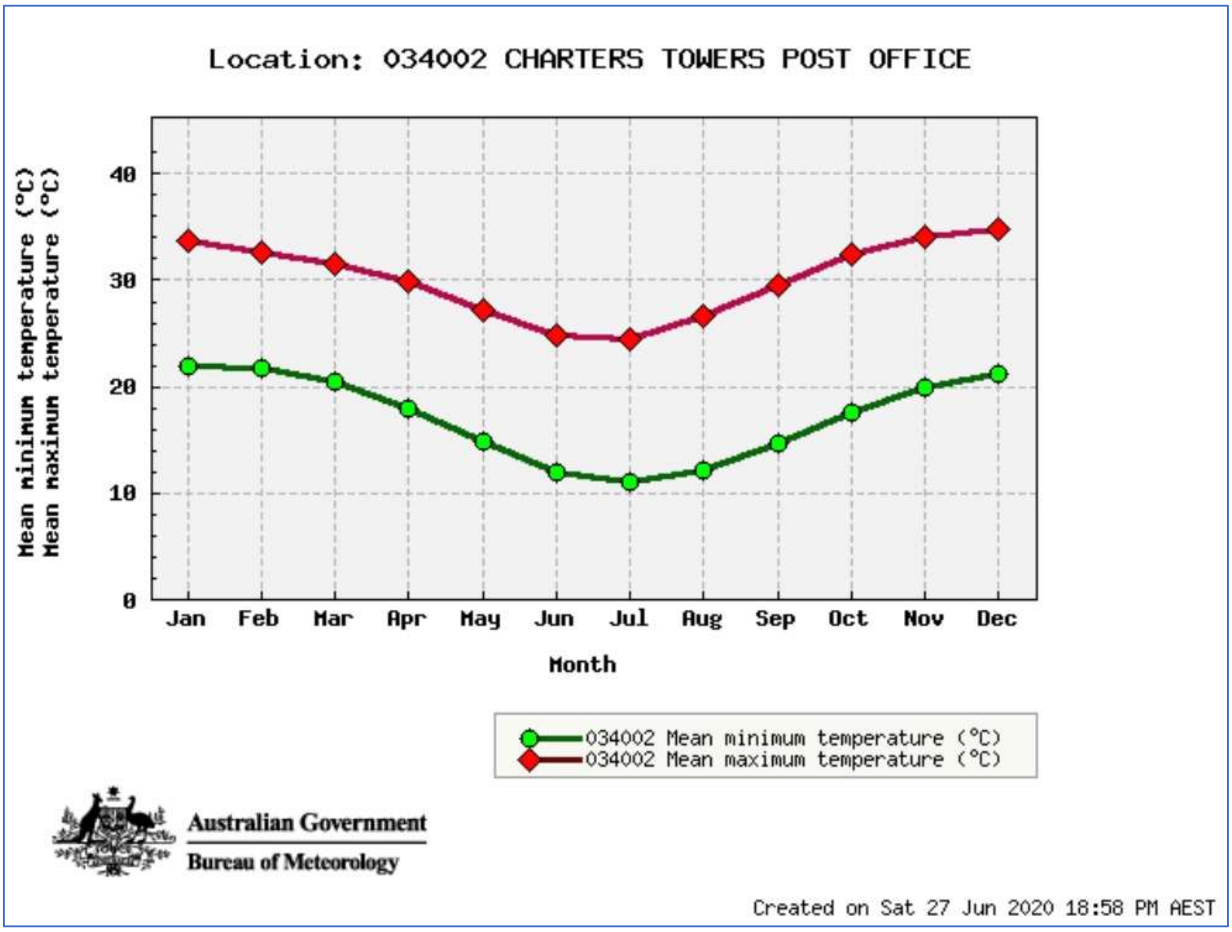


Figure 7. Average (mean) maximum and minimum temperatures for Charters Towers.

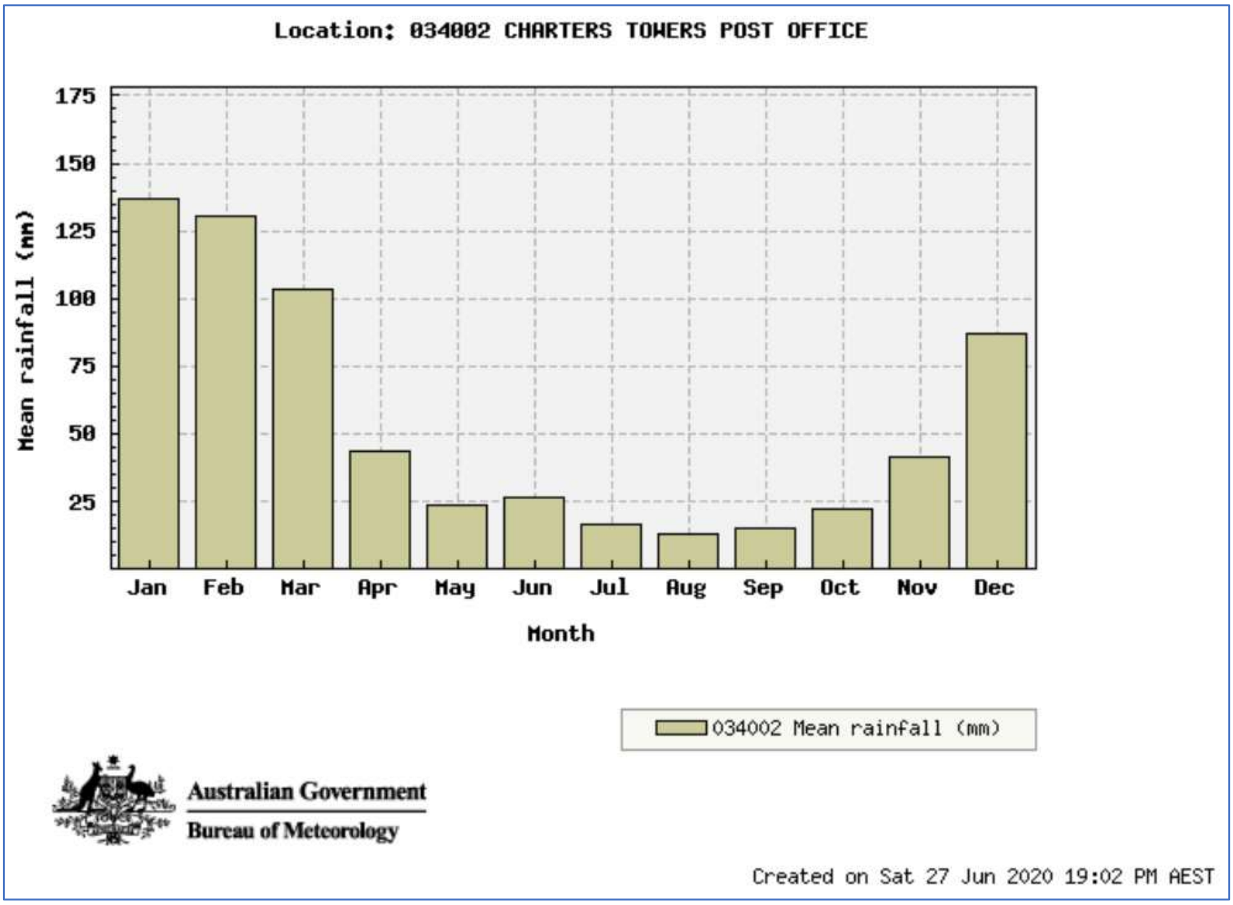


Figure 8. Average (mean) rainfall for Charters Towers.

The area is on an inland plateau approximately 300 metres above sea level, with cadastral maps showing all creek lines radiating 360 degrees away from Charters Towers town centre. This is an indication that conventional wide area land flooding is unlikely to near impossible. Rolling hills and plains of open dry sclerophyll forests comprising mainly eucalyptus and acacia trees with Flinders and Mitchell grasses. Local agriculture is cattle grazing, with large cattle sale-yards and holding pens at Charters Towers. Cattle are transported in three-tier road trailers, with up to three trailers hauled by a single prime mover truck (locally called “road trains” – see Figure 9 below). Most road freight and fuel transport uses similar road trains.

Figure 9. Typical cattle transport road train.

Local infrastructure is excellent, with two secondary schools with boarding facilities, State Government electricity supply to the mine and plant, a weir on the Burdekin River supplying fresh water to the town of 8,000 people, a hospital, ambulance and fire fighting services. The mine is self-sufficient in water, with water stored in open pits connected to underground workings, and recycling water in the processing plant and Imperial (Warrior) Mine.

The Imperial Mine is located on the bitumen Bluff Road about 5 km southeast of the centre of Charters Towers, and the decline portal is in the base of the Washington open pit on the southeast wall. The processing plant is located on the bitumen Gregory Developmental Road South (the Clermont Highway) about 10 km southwest of Charters Towers. The main Central workings are located under the central business district of Charters Towers and accessed by the Central Decline at Nagle Street in the western part of Charters Towers. Previous open pit mining was conducted in 1998-2000 at the Washington open pit (Imperial mine), and at the Stockholm open pit and underground workings located 2.5 km north of the gold processing plant.

The Project has sufficient surface rights on the Company's Mining Leases to house the required processing plant, tailings storage, ventilation and access shafts and tunnels for the life of the Project. Additional Mining Leases may be applied for if existing drill targets prove up additional viable resources. The approval time for a new Mining Lease is usually 12 to 18 months for application to be processed by the regulators.

Figure 10. Satellite image showing the three main mining areas (Central, Imperial and Stockholm) in and around the city of Charters Towers.

ITEM 6. History

6.1 History prior to 1993.

The goldfield was first discovered in December 1871 and produced some 6.6 million ounces of gold from 6 million tons of ore from 1872 to 1920, with up to 40 companies operating many individual mining leases on the same ore bodies. There were 206 mining leases covering 127 mines working 80 lines of reef and 95 mills, cyaniding and chlorination plants. The field produced over 200,000 ounces per year for 20 consecutive years, and its largest production year was 1899 when it produced some 320,000 ounces. This was a Queensland record for annual gold production that remained unbeaten for over 100 years.

The goldfield closed due to a series of events that reduced the profitability of the operations:

- The mines paid monthly dividends to shareholders, rather than retaining profits for capital works. When capital was required to sink a shaft or develop a new level, a call was made on shares, or the company reconstructed if all shares were fully issued and fully paid. From about 1905, overseas capital (mainly from London) began to be directed away from Australia to Africa and South America, particularly Argentina. In 1907, capital was being directed into copper, lead and tin mines rather than gold. The amount of capital available for investment in Charters Towers dropped off. Companies ceased paying monthly dividends, retaining profits for capital works and exploration, and going to quarterly or half-yearly payments, making them less attractive for investors seeking monthly income from dividends. In November 1906, no monthly dividends were paid at all by any mine for the first time, although two mines were paying quarterly. Investors started drifting away from investing in mining, and in 1914 when the First World War broke out, the Australian government issued war bonds to fund the war effort, and investment went out of mining into the war bonds.
- Increases in costs reduced profitability particularly wood (both as fuel and ground support) and wages. As mines closed, their water load passed to the operating mines, increasing their

bailing and pumping costs. In some areas where the ore bodies thickened to the full width of the drives (2.4m), there was no waste mullock to backfill stopes, and fill had to be mined on surface and taken underground (QGMJ June 15 1909 p.311 Mills United company Half-Yearly report. ‚*Stope filling has again been unavoidably heavy in cost, a large proportion of the necessary material being sent from the surface down the Day Dawn School Reserve shaft and thence distributed as required*‛.)

- The First World War reduced availability of skilled labour, increased wages for miners and reduced capital for investment in gold mines. In 1914 wages, which had been fixed for some 40 years, jumped from 8 shillings a shift to 16 shillings.
- The impact of inflation is not recorded in the QGMJ records, but Dawes (1996) has an excellent summary of the effects of inflation over the period the mines were operating. His summary showed that the real gold price in Australian currency declined by 60% from 1898 to 1920, bottoming out in 1930.
- The mines succeeded in lowering their operating costs, and successfully worked lower grade ores, increasing the tonnage produced. The Brilliant Extended in 1904 was payable at 8 pennyweights per tonne (12 grams per tonne), and record tonnages were produced 1904 to 1906. This apparent decrease in ore grade based on annual tons and ounces produced is a result of more exploration development ore being processed and decreased tonnages of sands being cyanided (QGMJ April 1907), rather than a major decrease in grade of ore mined. These annualized figures are partly responsible for the incorrect comments that "grade declined with depth". Annualized grade declined over time, and the mines were working deeper ground over time, but they were also doing more exploration development, much of which was unsorted and milled, because there were no stopes to dump waste into, and the development ore contained gold-bearing quartz. Compressed air rock drills were in use in 1913 in Charters Towers, improving face advance, once the dust problem had been overcome. Hand air drills are mentioned in the 1904 Journal (p.68 with illustrations, and p.485) and dust prevention in Cornish mines is mentioned on p.505. Rock drills were in use at Ravenswood in 1904 (p.31), so presumably were available to the Charters Towers mines as well. Another cost-cutting measure was the introduction of mechanical stokers for the boiler fires, which reduced fuel consumption by 12% to 15% by ensuring more complete combustion, and reduced the number of boiler attendants. The Water Board completed the building of the Burdekin River weir in 1903 just prior to the floods, creating a pondage of 400 million gallons extending for four miles upriver, ensuring a good water supply for the mills.

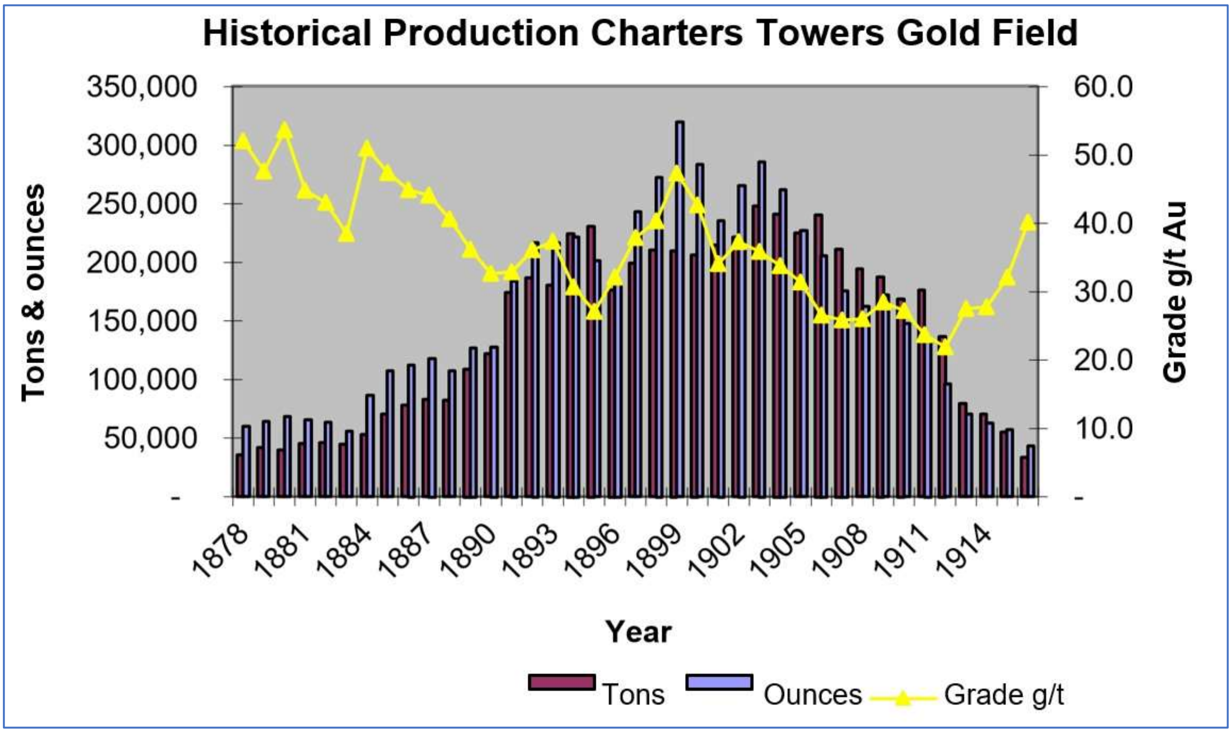


Figure 11. Historical Production from the Charters Towers Gold Field

- The mines did not own their own mills, paying contract rates to commercial millers. The milling companies were often owned by the same owners or directors as the mining companies. From 1909, the mines started buying up the mills as they came on the market after exhausting sands and tailings resources, further lowering the mines' overall costs.
- After production ceased in the 1920s, and prior to 1980, exploration and stratigraphic drilling was undertaken by Towers Drilling Co (1932), and the Queensland Department of Mines in 1923 and 1969-70.
- A detailed project evaluation was conducted by Gold Mines of Australia ('GMA', later taken over by Western Mining Corporation Ltd in September 1957) in 1934-35, and The Company holds copies of' much of their data.
- GMA was registered in Melbourne in April 1930, floated Mount Coolon Gold Mines NL in August 1931 and reached full production at the Mount Coolon gold mine by November 1932, yielding 79,000 ounces of gold by December 1934 worth more than £300,000 (300,000 pounds) (Hunt, 1996). The *West Australian* newspaper reported on 19 September 1934: *"The Minister for Mines (Mr. J. Stopford) announced today that authority to prospect over approximately 3550 acres at Charters Towers had been granted to Gold Mines of Australia Ltd. Exclusive right to prospect and mine for gold and other minerals, subject to certain reservations, was being given to the company for six months, during which the company would be required to expend not less than £1,000 in the collation of geological and other data and in the preliminary investigation of mining possibilities. [The Gold Exploration and Finance Co. of Australia, Ltd., which was formed in London in July with a capital of £2,000,000, has a controlling interest in Gold Mines of Australia, Ltd.]".*
- The Townsville Daily Bulletin reported on 3 September 1935: *"The statistical study by Gold Mines of Australia. Ltd. of the Charters Towers field was completed some time ago, but the geological examination is being continued. Should this last mentioned be satisfactory it is anticipated that the active exploration will be commenced at an early date. An unofficial report says that the prospects of activity at Charters Towers are good, and that final arrangements*

for work are in train. It is also said that Mount Coolon Gold Mines. NL, has been granted a 60 percent interest in the venture. The Melbourne 'Argus,' reviewing the interests held in the Commonwealth by Gold Exploration and Finance Co. of Australia, Ltd., includes a participation in Gold Mines of Australia and Mount Coolon Gold Mines. The point of interest in that regard is that should there be an organised exploration at Charters Towers the operators will be financially strong."

- GMA suffered cash flow problems following a sustained drought in the summer of 1934-35, and the lack of water hampered ore processing from the Mt Coolon Mine. Union activity was rampant in NSW and Qld at the time, with the Communist Party of Australia attempting to push for a single mining union, and different unions were in conflict. There had been disputes at Mount Isa (lead-zinc-silver) in 1933, Collinsville (coal) in 1934 and in the northern sugar districts in August - September 1935. GMA's decreased cash flow led to discussions about laying off workers, and the general unrest lead to protracted strike action at Mount Coolon for seven months from April to October 1935, and normal milling operations did not recommence until February 1936 (Hunt, 1996).
- On 28 September 1935, The *Townsville Daily Bulletin* reported: *"G.M.A. Abandons Prospecting Rights. CHARTERS TOWERS. Sent. 27th. A telegram received from Mr. W. J. Wellington this evening states: 'Gold Mines of Australia has abandoned its rights to prospect Charters Towers'".* This was presumably due to a lack of cash flow caused by the strike at GMA's Mount Coolon mine.

6.2 History after 1993.

The Charters Towers goldfield remained closed from the 1920s until Charters Towers Gold Mines listed on ASX in December 1993 and set about reopening this major goldfield. Prior to this, The Company is not aware of any attempt to re-open the central goldfield since its closure in the 1920's, apart from GMA's investigations in 1934-35.

- In 1994, consultant mining engineers Tennent, Isokangas Pty Ltd (subsequently Coffey Mining Ltd) were engaged to design the Brilliant East Decline (now called the Central Decline). The excavation of the portal commenced and contract mining of Stage 1 of the Central Decline by Peabody Resources Pty Ltd was commenced in 1994.
- Digitising of old mine plans and stope outlines, which had commenced in 1987 by previous owners, was accelerated in 1994.
- Cross reefs containing high-grade gold were intersected in the decline and exploration drilling of shallow targets commenced.
- The old Victoria Main Underlie shaft (Ventilation Shaft No.1, an inclined shaft) was reopened to the surface for ventilation.
- Underground diamond drilling commenced on the cross reefs.
- The Central Decline connected to the old Brilliant workings at 845 metres in (120 metres vertical depth) in 1995.
- Trial underground mining of stope fill commenced in the December quarter of 1995 on 868 Level (the old Victoria Mine) and fines in the stopes averaged 5 grams per tonne Au.
- Trial underground mining was undertaken on the No.2 Cross Reef north and south of the Central Decline on the 909 Level (the surface is at 950 RL).

- An exploration model was developed in 1996 based on five repetitions of the Brilliant-Day Dawn reef to the south, striking E-W, dipping shallowly to the north and spaced at various intervals south from the Brilliant-Day Dawn reef:
- The 500 metre structure, which includes Golden Surprise reefs,
- The 1,000 metre structure, includes Identity and Ruby reefs,
- The 4,000 metre structure, equivalent to the Warrior West and Warrior East reef, the cross reef is equivalent to Washington,
- The 4,800 metre structure is the Imperial reef,
- The 6,000 metre structure is Mt Cenis, also termed Monarch North, and
- The 6,600 metre structure is the Merrie Monarch, also termed Monarch South.
- In 1996 a gold processing plant was acquired, refurbished, upgraded and installed 10 km south of Charters Towers.
- Drilling was undertaken at Mt Cenis and Warrior.
- Stripping of overburden commenced at Stockholm, 8 km southwest of the Central Portal, in January 1996 for the commencement of trial open pit mining.
- In 1997 the plant was running seven days per week.
- The 500 metre structure was intersected by drilling at 424 metres below the Brilliant-Day Dawn reef, 200 metres south of the Central Decline confirming the exploration model in this area.
- The average grade of ore from No.2 Cross Reef was 7.15 grams per tonne for a 2,125 tonne parcel.
- Drilling Stockholm and the 4,000 metre Cross Reef Structure at Washington.
- Stage 2 of the Central Decline was developed by mining contractors Farnsway Faminco Pty Ltd, extending to 1.6 km length and 238 metres vertical depth.
- Brilliant Block Shaft (Ventilation Shaft No.2) was re-opened for ventilation and connected to the 180 metre vertical depth position on the Central Decline.
- In 1999 pre-stripping commenced at the Washington open cut for trial mining.
- Underground operations commenced off the Stockholm open pit.
- Gold production commenced in May 1999 from Washington open cut, and in the May quarter milled 10,232 tonne at 11.9 grams per tonne at 96% mill recovery for 3,747 ounces for the quarter.
- Stockholm old underground workings stope fill averaged 13 grams per tonne Au.
- Total gold production in trial mining from 1997 to 2000 exceeded 38,000 ounces at an average cash cost of A$475 per ounce. Investment in the project totalled A$43 million in 2002, including:
- 95 square kilometres of mineral holdings;
- excavation of two declines;
- acquisition of mining fleet;
- purchase, upgrade and commissioning of 340,000 tonnes per annum CIL plant; and
- opening and trial mining of two open pit mines and three underground mines.

Total Mineral Resources in 1999 were 2 million tonnes at 4.8 grams per tonne Au containing 300,000 ounces. During 2000, four key Mining Leases in the centre of the project were acquired from the Normandy Mt Leyshon Mining group. The total Mineral Resource increased to 2.7 million tonnes at 9.6 grams per tonne Au containing 850,000 ounces.

The Company had drilled 1,076 holes totalling 85,702 metres, comprising 76,393 metres of reverse circulation (RC) and 9,319 metres of diamond-core. The database, including data from other companies, totalled 141,539 metres of drilling in 1,811 holes. Cash cost of decline development averaged A$1,400 per metre. Following further work in 2001, the Total Mineral Resource increased to 3.3 million tonnes at 9.4 grams per tonne Au containing 1 million ounces gold and the Brilliant Gold Reef Project Prospectus (Brilliant Mine) was issued. In September 2001, the Brilliant Gold Reef Project commenced diamond-drilling with the first phase successfully completed in August 2002, further proving the continuity of the deep gold-bearing structures.

From 2002 to 2005, following additional deep drilling on the Brilliant Reef, there was a complete review of the drilling database, including the assigning of ore body codes to several hundred drill intersections that were previously unclassified. From this, a complete reinterpretation of the ore body structures was undertaken with the new intersection data, and the computer ore body solid models revised. Results from deep drilling and the completion of a PhD thesis by Oliver Kreuzer in 2003 proved that gold mineralisation at economic grades persisted to 1,200 metres vertical depth from diamond-drilling, and that research data indicated the mineralisation could persist to 3 km to 5 km depth.

In 2004 the Company acquired two companies, Great Mines Ltd and Charters Towers Mines Pty Ltd, that held certain Mining Leases and rights over parts of the goldfield. This gave the Company control of all of the central goldfield mineral holdings such that for the first time ever an overall resource and reserve assessment could be undertaken.

2005 Mineral Resources

The Inferred Mineral Resources were extended to 1,200 metres depth, increasing the Inferred Mineral Resource to 23 million tonnes at 14 grams per tonne Au containing 10 million ounces. This information was released to the Australian Securities Exchange in a 100 page report conforming to the JORC standards in May 2005, and followed by a 64 page report on the JORC classification Indicated Mineral Resources and Probable Ore Reserves (equivalent to the Canadian NI 43-101 definition category of *Probable Mineral Reserve*) in August 2005.

2012 Mineral Resources

In May 2012, additional ore bodies were added into the Resource and a 173 page report conforming to the 2004 JORC Code released to the Australian Securities Exchange in May 2012. A new JORC Code came into force in December 2012. The May 2012 report showed:

- A Probable Ore Reserve [termed *Probable Mineral Reserve* in the Canadian NI 43-101] at the Charters Towers Gold Project at a 4 grams per tonne Au grade cut-off of 2,500,000 tonnes at 7.7 grams per tonne gold and 5.1 grams per tonne silver, containing 620,000 ounces (19,000 kilograms) of gold and 410,000 ounces (13,000 kg) of silver. The Probable Ore Reserve is derived from and contained within, and is not additional to, the Indicated Mineral Resource.
- An Indicated Mineral Resource of 3,200,000 tonnes at 7.6 grams per tonne gold and 5.1 grams per tonne silver, containing 780,000 ounces of gold and 520,000 ounces of silver.
- An Inferred Mineral Resource of 25 million tonnes at 14 grams of gold per tonne and 9 grams per tonne silver, containing 11 million ounces of gold and 7 million ounces of silver, using a lower cut-off grade of three grams of gold per tonne of mineralized material (grams per tonne Au) over a minimum sample true width of one metre (expressed as 3 metre-grams per tonne or 3 m.g/t).

Mining re-commenced in 2004 with the driving of an access decline at the Imperial Mine into the Warrior ore body, about 5 km southeast of the centre of Charters Towers. The first gold from Warrior was poured in November 2006. Gold production from 2006 to September 2015 was just over 104,000 ounces, as tabled below in Table 4.

The mine was put on care and maintenance in 2016.

Financial Year ended 30 June	Gold Sold (ounces)
1996-2000	38,000
2006	201
2007	3,319
2008	13,784
2009	10,906
2010	15,888
2011	8,451
2012	7,560
2013	2,270
2014	2,806
2015 to 30 Sep	983
TOTAL	**104,168**

Table 4. Modern mining production from the Charters Towers project, from the commencement in 1997 through to 2000, and re-starting in November 2006 to September 2015. The mine was put on care and maintenance in 2016.

Expenditure on the Project since 1993 has exceeded $350 million.

Net assets as at 30 June 2020 were A$100 million.

ITEM 7. Geological Setting and Mineralisation

The mineralisation occurs within the Palaeozoic Ravenswood Batholith, and comprises mesothermal quartz reefs containing gold, pyrite, sphalerite and galena, hosted by the Ordovician age Towers Hill Granite. Host rock units for the mineralisation within the Batholith are the Towers Hill Granite, the Hogsflesh Creek Granodiorite, the Alabama Diorite and the Millchester Creek Tonalite of Ordovician and Devonian ages. Minor mineralisation also occurs in the Neo-Proterozoic Charters Towers Metamorphics. Mapping and petrological research shows the mineralised system is very large, over 40km across. Mineralisation at the Charters Towers and the Rishton-Hadleigh Castle mines was isotope dated and found to be the same age within an indistinguishable range, indicating synchronous formation of auriferous reefs dated at 404-408 million years (Late Silurian to Early Devonian geological age) and spread across a significant segment of the Ravenswood Batholith host (Kreuzer 2003, p.B-41, D-32, D-45).

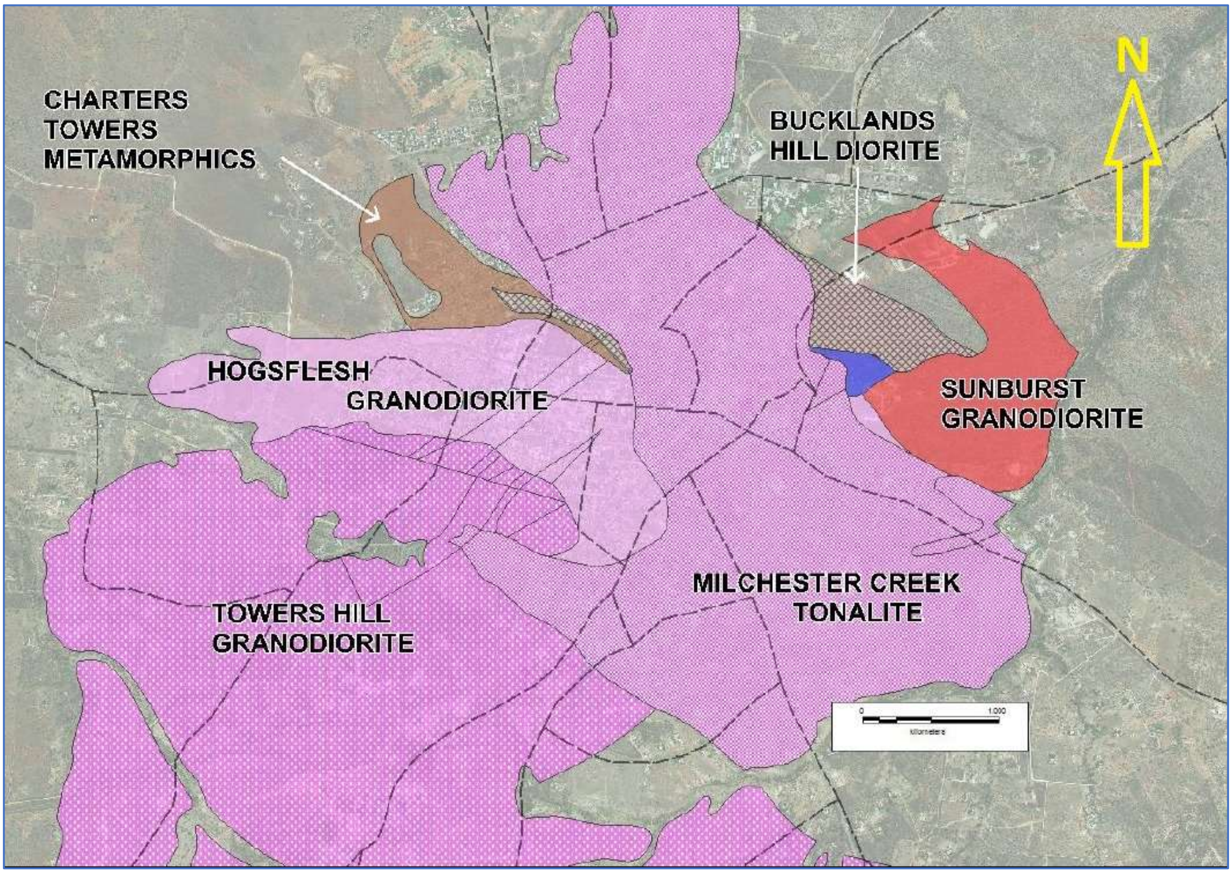


Figure 12. Regional geology of the project area.

Crustal Rocks: The Charters Towers granite/granodiorites, that are the predominant country rock of the Charters Towers project, in relation to physical properties can be best described as consistent very hard rock. This very strong country rock has a relatively shallow base of weathering at 10 metres to 15 metres depth from surface. Independent tests conducted by Sandvik AB on diamond drill cores of fresh rock gave rock hardness Uniaxial Compressive Strength (UCS) of 250 to 350 megapascals (MPa). By way of a simple comparison with concrete used in heavy commercial and special structures (high rise buildings, long span bridges, slabs exposed to heavy abrasion, etc.) they typically require concrete strengths of 28 MPa or more. Concrete of 41 Mpa is considered high strength. Therefore the Charters Towers country rock is 6 to 8.5 times stronger than high strength commercial grade concrete.

Although the country rocks are strong it breaks readily using conventional drill and blast mining methods. This is because the rocks are brittle with silica being the major constituent of the granite.

The gold-bearing reefs at Charters Towers are typically 0.3 metres to 1.5 metres thick, comprising hydrothermal quartz reefs in granite, tonalite and granodiorite host rocks. There are some 80 major reefs in and around Charters Towers city, of which 22 are included to date in the Company's resource estimate. The main east-west reef systems are the Brilliant, the Day Dawn, the Mexican, the Queen and the Sunburst, extending over a strike length of five kilometres and cut by NNW trending cross reefs. There is a second E-W system 800 metres to the south comprising the Golden Sunrise, Mary and Clark's Moonstone line of reefs, and a third system 500 metres further south, comprising the Ruby and Gladstone line of reefs. They are found in extensive sheet-like alteration zones (reefs). The most productive gold-bearing reefs (the Day Dawn, Brilliant and Queen) dip to the north beneath the city of Charters Towers.

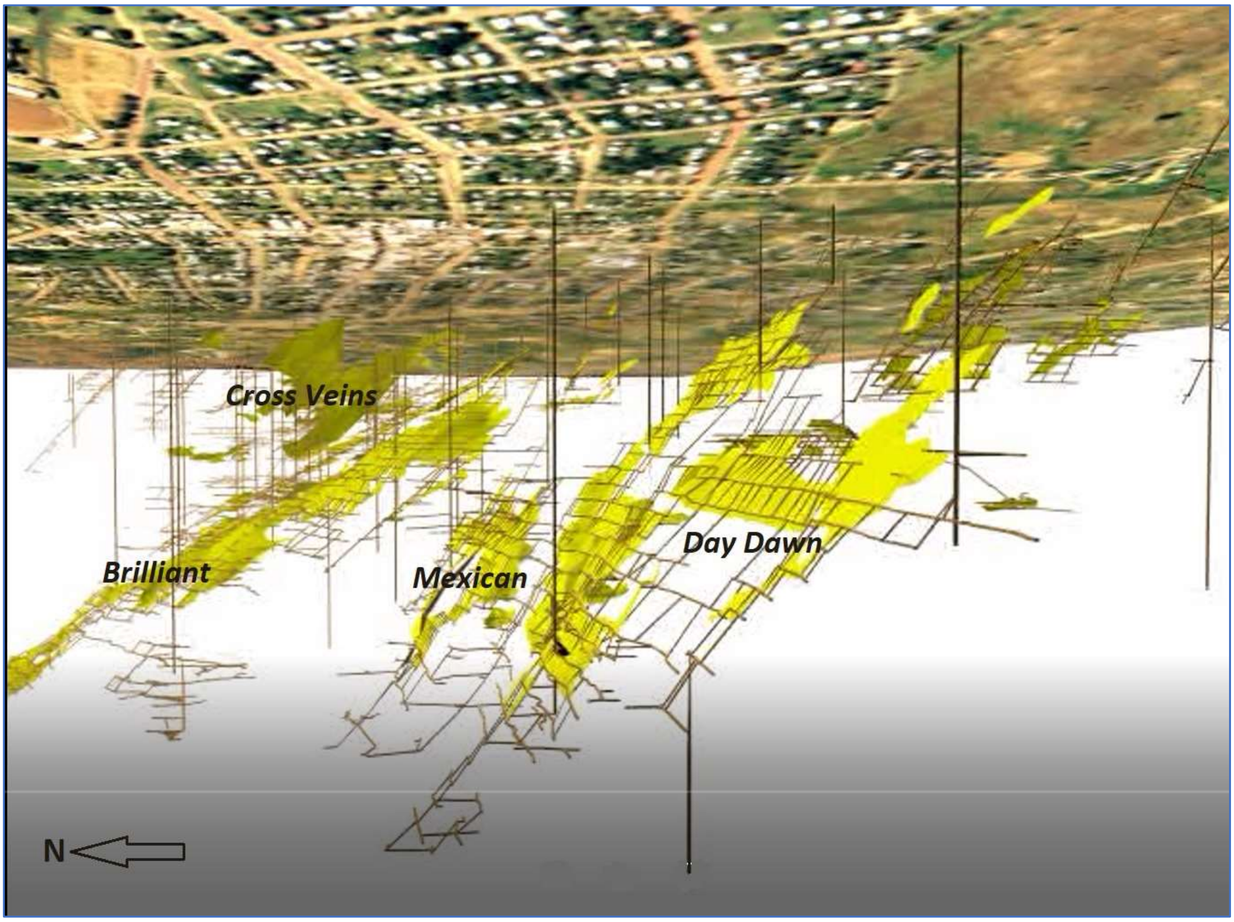


Figure 13. Perspective view of the Central (City) area looking southeast, showing the historical vertical shafts, inclined shafts and horizontal drives ("old workings") underneath the city of Charters Towers, with previously stoped (mined-out) areas shown in yellow colour. The main east-west-striking ore bodies dip to the north (towards the left of the image). The steeply dipping workings ~50 degrees on the right-hand side are the Day Dawn and Mexican areas, with the Brilliant workings on the left-hand side dipping at a shallower ~35 degree angle.

The majority of the ore mined in the past was concentrated within a set of fractures over 5 km long East-West, and 500 metres to 1,600 metres down dip in a North-South direction. The mineralised reefs lie in two predominant directions dipping at moderate to shallow angles to the north (main production), and the cross-reefs, which dip to the ENE. The E-W and NNW trends seen at the regional scale are repeated at local scale on the Company's mineral holdings. The reefs are hydrothermal quartz-gold systems with a gangue of pyrite, galena, sphalerite, carbonate, chlorite and clays. The reefs occur within sericitic hydrothermal alteration, historically known as 'Formation'.

While the reefs are typically 0.3 to 1.5 metre wide, they range locally up to 6 metres thick, and in isolated cases up to 15 metres. Blatchford (1953) suggested an average width of less than 0.9 metres over most of the field, and this was confirmed by the Company's modelling of stoped volumes. The ore shoots occur with a periodicity typically in the order of 120 to 300 metres within the reefs, and extend from 200 to 700 metres in the down plunge direction, and are 70 metres to 300 metres wide.

The deepest drilling used in the Reserve and Resource estimate was by BHP-Homestake in 1980-4 and the Company in 2002-03 has demonstrated that the gold mineralised reefs persist to at least 1,300 metres vertically and remain open at depth.

The Company drilled a 2,000m deep diamond-core hole CT5000 in 2008 which confirmed the presence of gold-related alteration and mineralisation beyond previously drilled depths and demonstrated continuation of mineralised structures to at least 1900m on the eastern side of the gold field. Gold mineralisation was now known to persist and extend 700m below the point previously detected and there was potential to significantly increase the total gold resource. Mineralisation was detected in nine structures – the C6 St Patrick, the C5 Brilliant, the C3 Queen West and six other structures that were unable to be correlated with known structures and appear to be previously unknown mineralisation. Lead and zinc values greater than 100 ppm and copper greater than 200ppm usually indicate gold mineralisation. The results of the Deep Hole CT5000 are tabulated below:

Depth From	Depth To	Length m	Au ppm	Pb ppm	Zn ppm	Cu ppm	Ore Body
559.40	559.70	0.30	0.04	90	6260	808	C6 St Patrick
560.00	560.30	0.30	0.53	0	49	135	C6 St Patrick
753.85	753.95	0.10	0.34	0	0	194	Gold Formation
958.90	959.05	0.15	0.02	646	125	38	West-dipping
960.75	960.95	0.20	1.86	5000	94	3190	quartz pyrite galena vein
965.85	966.05	0.20	0.14	14	93	61	
1224.10	1224.25	0.15	0.12	32	34	17	Gold Formation
1261.30	1261.45	0.15	0	1020	1470	512	Gold Formation
1320.05	1320.20	0.15	0.1	389	62	1690	C5 Brilliant
1341.25	1341.40	0.15	0.32	14	119	9	Gold Formation
1429.70	1430.35	0.65	0.35	12	87	16	Gold Formation
1430.70	1431.10	0.40	0.62	15	96	11	Gold Formation
1583.40	1583.65	0.25	0.12	7	90	12	C3 Queen West
1817.20	1817.30	0.10	0.38	11	74	32	Gold Formation

Table 5. Results of the 2,000m Deep Hole CT5000 drilling indicated mineralisation and alteration consistent with the typical Charters Towers vein "formation" in nine structures, six of which appear to be previously unknown or uncorrelatable structures.

Charters Towers gold is typically associated with galena and sphalerite in the pyritic sections of the quartz reefs and with associated shearing. Significant gold is not normally present in the disseminated pyrite which occurs in the proximal zone sericitic alteration. For more detailed descriptions of the geology refer to Kreuzer (2003). The ore was deposited at ~400 Ma at depths of between 5 and 14 km, mostly in Palaeozoic granitic rocks (Kreuzer et al, 2007, p16).

Figure 14 Typical high-grade gold ore, comprising pyrite (iron sulphide, brass coloured), galena (lead sulphide, silvery grey) and sphalerite (zinc sulphide, dark grey) in quartz and crushed granodiorite ("Formation"). The gold is too fine-grained to be visible. The top scale is in centimetres.

This mesothermal, orogenic style gold mineralisation characteristically has great lateral and vertical extent. The ore is typically very high-grade, with past production averaging over 1 ounce per tonne. The Goldfield clearly has excellent potential for high-grade ore beyond the currently identified resources.

Deep drilling by BHP in the 1980s, and more recently in 2008 by the Company under the Queensland Government sponsored Collaborative Drilling Initiative (CDI) program, has demonstrated that the gold mineralised reefs persist to at least 2 km vertically and remains open at depth. At Parcoy-Pataz in Peru (Schreiber et al, 1990) similar quartz-pyrite reefs outcrop and extend to a vertical distance of 1,700 metres.

Most past production was from ore shoots within quartz reefs in remarkably persistent, kilometre scale sheet-like reef structures (faults). In the central area the main producers were the easterly trending reefs, plus subordinate production from the NNW trending cross reefs. The reefs are gently to moderately dipping and are typically 0.1 to 1.2 metres wide, but locally range up to 6 metres thick. The ore shoots occur with a periodicity typically in the order of 200 to 300 metres on the reef structures, and in the city are mostly 200 to 700 m long in the down plunge direction, and 70 to 300 m wide normal to plunge direction (Morrison et al, 2004). The mined reef structures have statistically hosted ore shoots over 20% to 50% of their area ('payability') based on their usual overall cutoff grades of 6dwt (9g/t) gold. These figures are currently being replicated at the Company's Warrior operations. Time and again new high-grade ore shoots have been found in areas previously discounted as barren. Recent examples of this include the Company's Washington, Stockholm and Warrior mines.

The structural control of the Charters Towers ore shoots is subtle, often at changes of dip and strike, with some reefs thickening and thinning over short distances with no obvious controlling feature. Shallow plunging ore shoots that do not outcrop at the surface are common. Typical examples of this are the Day Dawn and the recently delineated ore shoots at Warrior. The 1.4 million ounce Brilliant ore shoot in the city was mined to 1.6 km down plunge but did not outcrop.

Due to the heterogeneous distribution of sulphides within the quartz, and the often erratic nature of the gold concentrations within the pyrite, ore grades display an irregular and non-uniform distribution. It is common for poorly mineralised zones of the fissures to pass rapidly along strike into high-grade ore, and vice versa. The ore is locally very rich, with several ore shoots known to average over 2 ounce gold per tonne (e.g. New Queen Cross, Talisman, parts of Brilliant). Although usually coarse-grained, high-grade ore is also found in fine-grained sulphides in shear zones e.g. at Stockholm and Warrior. The continuity of the ore shoots is locally disrupted by minor post-ore faulting which sometimes results in enriched zones of spectacular grade, for example, Day Dawn crushings of 10 ounces of gold to the tonne of ore (Reid, 1917). Structural, petrological and geochemical work is ongoing with the objective of defining vectors to the high-grade ore shoots.

The irregular and non-uniform distribution of gold grades at normal drill spacing and short geostatistical range makes ore shoot definition by diamond drilling expensive and time consuming. Gold reef deposits like Charters Towers have historically been delineated by underground development and bulk sampling. Conventional drilling is used to define the position of the reef and a spot grade, but this may not be representative of the local grade.

ITEM 8. Deposit Types

The mineralisation is of the 'orogenic lode gold' type, comprising mesothermal reefs of quartz containing gold and sulphide minerals including galena, sphalerite and pyrite, hosted by granitic bodies. The reefs are usually one to two metres thick, but have strike lengths of from several hundred metres and up to two kilometres in the Central area. Gold is relatively fine-grained, mostly less than one millimetre, and mineragraphic microscopy shows gold is primarily late-stage. Gold particles are located along grain boundaries, with minor amounts contained within sulphide grains, predominantly pyrite, making it amenable to gold extraction by cyanidation, as the sulphide grains break along grain boundaries and fractures during milling, exposing thin wide gold surfaces to the cyanide solution. The ore is not regarded as refractory, with recoveries usually of 97% to 98%.

Gangue minerals are quartz, calcite, and a variety of clay minerals derived from alteration of feldspars in crushed granitic rock ('formation') along reef margins.

The host rocks are Ordovician to Silurian granites, granodiorites and tonalites. Roof pendants within the granitic bodies comprise the older Charters Towers Metamorphics, which are predominantly mica schists.

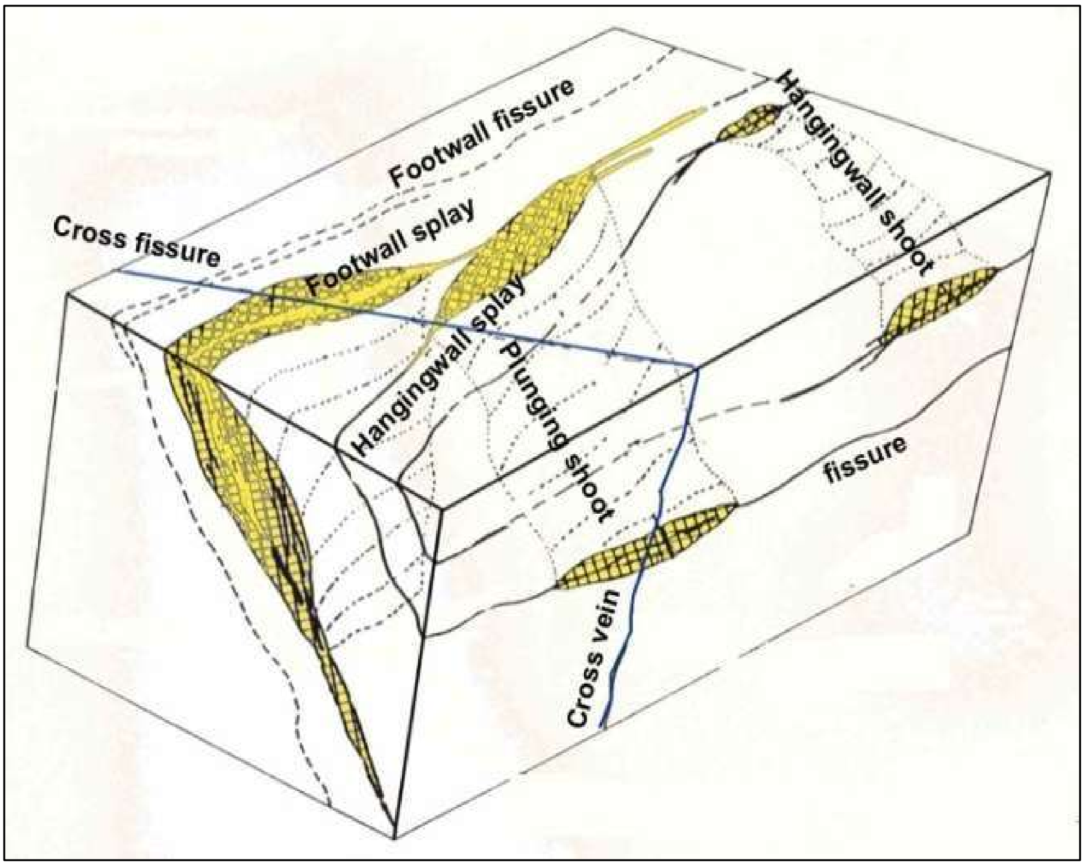


Figure 15. Block diagram showing the main reefs, cross reefs and splays containing the mineralized material.

ITEM 9. Exploration

The Company has been exploring the area since 1993, with extensive mapping, sampling of soils, stream sediments and rock outcrops, followed by an extensive drilling program.

9.1 The Geological Model

A key part of accurate Mineral Resource and Ore Reserve estimation is a clear understanding of the geological model or models of the mineralised body or system – the shape of the mineralised bodies, their orientation and location, the nature, chemistry and origin of the gold-bearing fluids, the fluid pathways, the control mechanisms on metal deposition and the continuity of the mineralised bodies.

The model must be robust and proven by testing, as is the case at Charters Towers. This information can be also used to define future exploration targets.

9.2 Research

Since 1980, there has been extensive research conducted on the Charters Towers and adjacent areas by over 20 government, industry and university researchers and presented in peer-reviewed publications and public domain documents.

Recent research since 1997 was based on new drill core, underground openings and open pits not available to previous workers. This research provided sound evidence that mineralisation is reasonably considered by the Company to persist to at least 3,000 metres depth, although Mineral Resources have been estimated to only 1,200 metres, limited by the deepest drilling to 2,000 metres. The ore body models defined in the Company's Inferred Mineral Resources report of May 2012 have since been tested and proven by underground mining on the Warrior ore body, a major east-west striking mineralised structure. Key points on which the Company's geological models are based are listed below:

- Mapping and petrological research shows the mineralised system is very large, over 40 km across. Mineralisation at the Charters Towers and the Rishton-Hadleigh Castle mines was isotope dated and found to be the same age within an indistinguishable range, indicating synchronous formation of auriferous reefs dated at 404-408 million years (Late Silurian to Early Devonian geological age) and spread across a significant segment of the Ravenswood Batholith host (Kreuzer 2003, p.B-41, D-32, D-45).
- Nitrogen isotope data indicates that the granitoid-hosted gold mineralisation is derived from deep-seated granitic plutons or metamorphics and has risen through the crust to its present position uncontaminated by near-surface water (Kreuzer 2003, p.D-58).
- Fluid inclusion studies on reef samples from the Brilliant, Day Dawn and Queen Reefs using petrography, microthermometry and laser Raman spectroscopy indicate formation pressures of the gold-bearing reefs equivalent to depths of 5 km to 14 km. Mineralogical studies on gangue, alteration and metamorphic minerals support this range. The preferred depth range of formation is 5 km ± 2 km. (Kreuzer 2003, p. D-31; Peters & Golding 1989).
- Oxygen and hydrogen isotope fractionation data indicate a formation temperature ranging from 170 degrees C to 360 degrees C with a preferred value of 310 degrees C. This temperature range is supported by studies of fluid inclusions, textures and wall-rock alteration mineralogy (Peters & Golding, 1989; Kreuzer 2003, pp. C-1, C-51, D-30).
- The low-permeability intrusions of the Ravenswood Batholith restricted and focused the ascending fluids rising from deep in the Earth's crust. Sudden fault rupturing focused the fluid flow into the active reef structures, precipitating gold and base metals by fluid mixing and subsequent chemical and pressure changes to the fluid (Kreuzer 2003, p.D-56 to 58).
- Geological and geophysical data indicate that the Charters Towers mineralisation was not subjected to further significant deformation after the gold mineralisation formed (Kreuzer 2003, p. E-67).
- The host structures are characterized by good vertical continuity to at least 2 kilometres based on the Company drilling and previous mine workings (Reid 1917), (Kreuzer 2003).
- The reefs are located on the margins of gravity lows that coincide with distinct intrusions or complex igneous bodies. (Kreuzer 2003, p. E-67; the Company's geophysical studies).
- The deposits are hosted by country rock comprising mainly oxidized I-type granites, granodiorites and tonalities. I-type granites are derived by re-melting of original igneous rock. (Kreuzer 2003, p. D-1; Peters 1987; the Company mapping).
- Wall rock alteration studies indicate the fluid was slightly acidic to near neutral (pH 5-6) (Kreuzer 2003, pp. C-54, C-59; Corbett & Leach 1998). The oxidizing fluids have produced red hematite alteration, destroying magnetite where it is in contact with the fluids and creating local magnetic lows. This creates a geophysical signature for exploration, of de-magnetised areas adjacent to gravity lows (The Company mapping and aeromagnetic and gravity geophysical surveys).
- Studies of quartz reefs from over 200 gold mines in North Queensland indicate the Charters Towers gold-bearing reefs are typical of granitic rather than sub-volcanic hosts (Dowling & Morrison, 1989: Kreuzer 2003 p. C-54).
- Structural domain, fabric studies and spatial autocorrelation (Fry analysis – see Glossary) indicate that the east-west and NNW-SSE striking planes of weakness were oriented most

favourably for reactivation during deformation, providing important loci for quartz reef formation and ascent of gold-bearing fluids. Areas with a greater density of intersecting structures were more likely to localize gold deposition. There was a single episode of reef formation and gold mineralisation during the fourth deformation event (designated D4). (Kreuzer 2003, p.E-67).

- The reefs have not been significantly shifted by fault movements after formation. Fault movements were minor, on a centimetre to metre scale. This is in agreement with earlier research at the time of mining where average fault separations were reported to be in the order of 0.9 metre to 1.2 metre (Reid 1917, Kreuzer 2003, p. B-31; the Company's mapping).
- The current exposure of the Ravenswood Batholith is at its roof zone, meaning that there is a high probability that most of the gold-bearing system is intact and has not been significantly eroded (the Company mapping; Hutton & Rienks 1997).
- There is a relationship of gold with galena (lead sulphide), where high gold values are accompanied by high lead values (the Company assaying). The presence of galena was used as an indicator of high-grade gold by previous miners (Reid 1917). The Company assays for lead to check for the location of ore shoots if gold values in drill samples are unexpectedly low.
- The potential for additional gold-bearing reefs to be discovered away from known mineral occurrences is considerable. Fractal analysis of the spatial distribution of the gold deposits suggests the area to the south of Charters Towers may contain undiscovered deposits. Earlier work by The Company prior to 1999 had already targeted the area to the south based on structural analysis and geological mapping. (Kreuzer 2003, p. E-1, E-67 to 68). The major previous highly-productive east-west lodes (the *Brilliant*, *Day Dawn*, *Mexican* and *Queen-Sunburst* lodes) all dip to the north, implying a down-dip source to the north and northeast, so there is potential for parallel repeats of the major east-west lodes to the north.

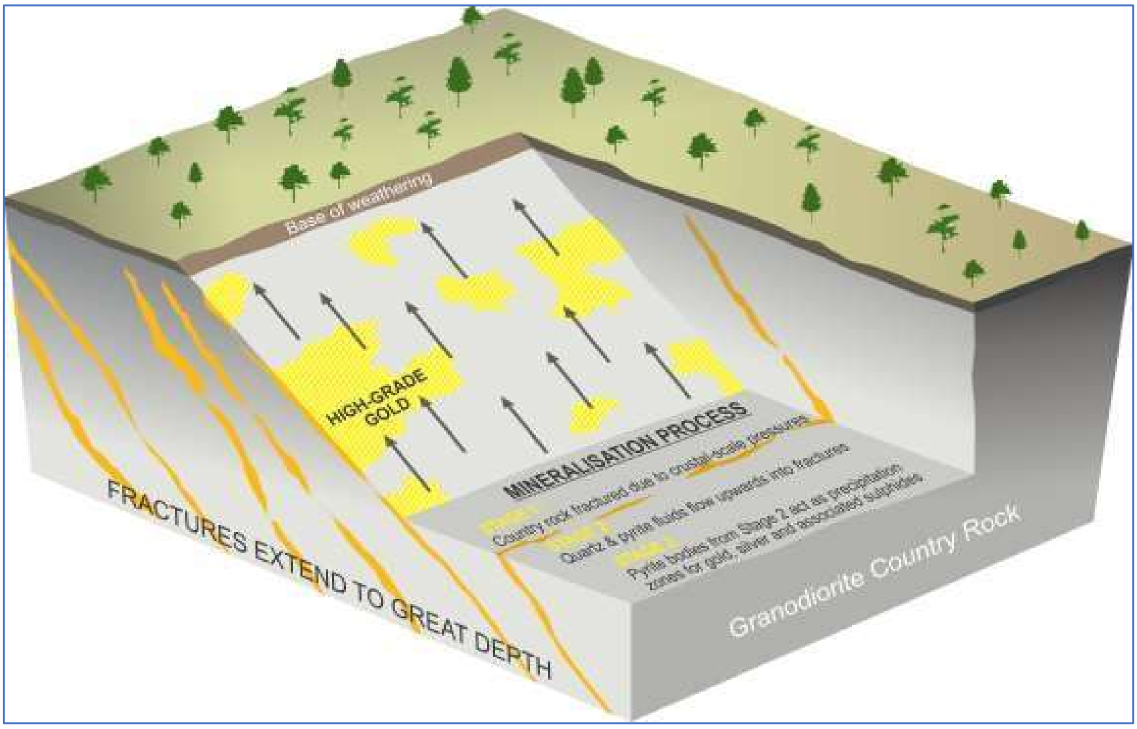


Figure 16. Diagrammatic representation of the mineralizing process that formed the Charters Towers reefs.

Figure 17. Typical mineralized reef exposed in the Company's underground mine workings at Charters Towers (looking easterly).

Figure 18 Typical mineralized reef exposed in the Company's underground mine workings at Charters Towers (looking easterly).

9.3 Testing the Model

9.3.1 Drilling

The Company has a robust geological model that has been ***predicted and then tested by diamond-core drilling down to 2,000 metres vertical depth***. Intersections into known quartz reefs have hit the predicted position within one metre at depths of up to 1,500 metres downhole. ***Over 350,000 metres of drilling have been conducted in 3,200 holes*** on down-dip and strike extensions of known reef systems, with 1,550 significant drill intersections. Previous explorers that drilled, mapped and sampled the area from 1980 until the float of the Company in 1993 include BHP, Homestake, CRA, AOG, Orion, Mt Leyshon Gold Mines and Great Mines. Prior to 1980 drilling was undertaken by Towers Drilling Co (1932), and the Queensland Department of Mines in 1923 and 1969-70. A detailed project evaluation was conducted by Gold Mines of Australia (the precursor of WMC) in 1935, and the Company holds copies of much of their data.

9.3.2 Open pit and Underground mining

Underground mining in five underground operations since 1994 (the Central Decline, No.2 Cross Reef, Stockholm, Washington and Warrior mines) has also confirmed predicted intersections with previous workings within 0.3 metre and has intersected geological structures to confirm the accuracy of the model. Old workings have been re-opened and entered on the Brilliant, Victory, Victoria and Washington reefs, and new underground workings driven on extensions of known reef systems at Warrior, Stockholm, Washington and the No.2 Cross Reef.

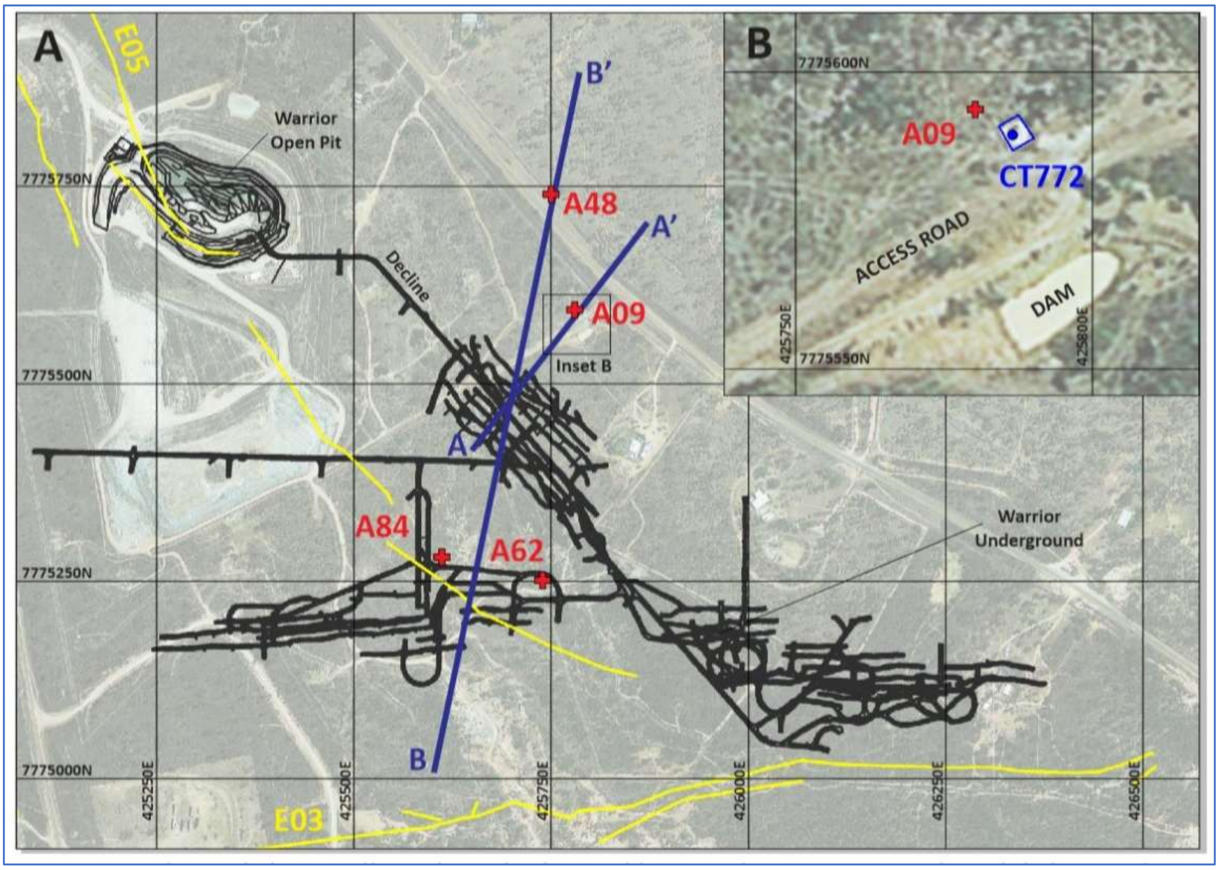


Figure 19. Plan view of the Company's underground workings at the Imperial mine area from 2006 to 2016. The access Decline portal is in the floor of the Washington open pit. Inset B shows the surface collar of the ventilation shaft and escapeway.

The new workings have been rock-chip sampled, bulk sampled and the reefs mined by on-reef development and long-hole open stoping. Open pit mining was conducted on the Washington and Stockholm reef systems in 1998-2000. The Washington reef is a classic Charters Towers style reef. Stockholm was more diffuse, and was a wider zone with some quartz reef stockworks. Old fill was intersected in previously mined stopes at Stockholm, and was sampled in a 1,500 tonne bulk sample. Total gold production from test mining and processing a small tonnage of tailings was 38,000 ounces of gold from 1997-2000. All ore was processed through the Black Jack processing plant.

In 2006, the Company commenced underground production from the Imperial Mine (Warrior and Sons of Freedom reefs) about 5 km southeast of Charters Towers city centre. Access to the Warrior reef was via a one kilometre-long decline (sloping tunnel) from the floor of the Washington open pit. A series of horizontal mining levels were driven in the ore body at initially 10 metre vertical separations and later 15 metre vertical separations. Total gold production to 31 December 2014 from Imperial was 65,185 ounces (2 tonnes) and mining operations and gold production were put on care and maintenance in 2016 on completion of the trial mining and pending capital raising for the full development of the Project. Processing plant recoveries have consistently been around 97%.

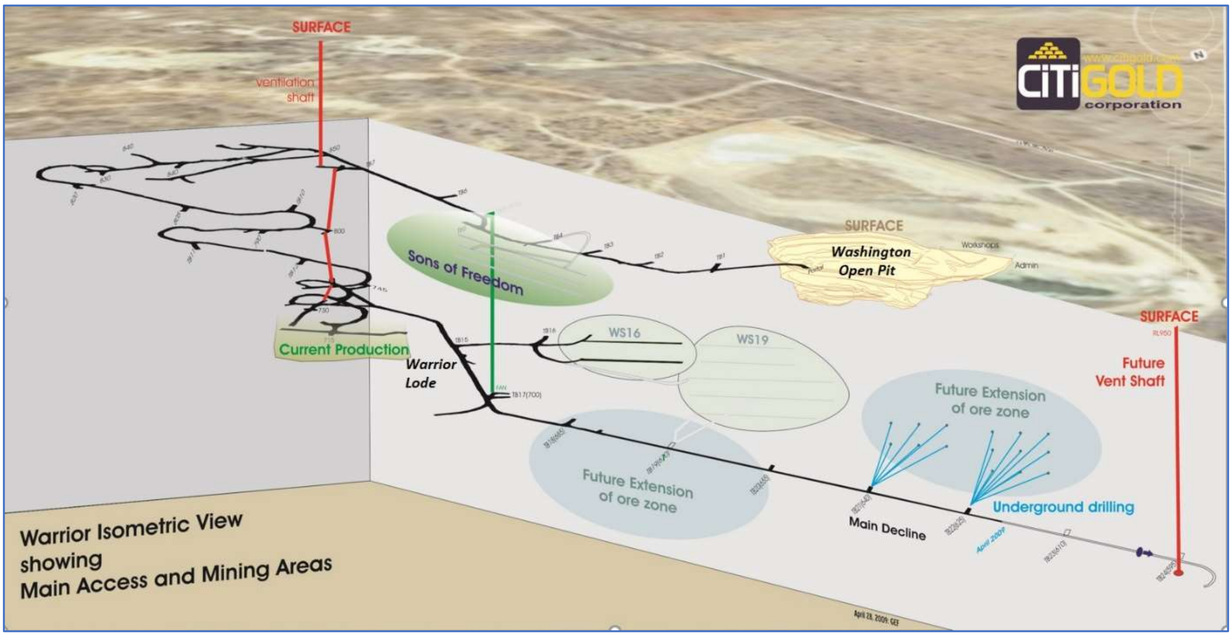


Figure 20. Isometric view of the Imperial mine area, showing the Decline from the floor of the Washington open pit that accessed the Sons of Freedom and Warrior lodes, with planned future mining areas.

Financial Year ended 30 June	Gold Sold (ounces)
2006	201
2007	3,319
2008	13,784
2009	10,906
2010	15,888
2011	8,451
2012	7,560
2013	2,270
2014	2,806
TOTAL	65,185

Table 6 (Above). Gold production from the Imperial Mine (Warrior and Sons of Freedom reefs) to 31 December 2014

All of the Company's mining has been along strike and down-dip from previously mined workings, confirming the initial assumption, that new extensions of previously-mined ore bodies would be found and mined. This has been proven now on the Stockholm, Washington, No.2 Cross Reef, Sons of Freedom and Warrior reefs. A total of 104,168 ounces (3.24 tonnes) of gold has been extracted since 1997, confirming initial assumptions, proving metallurgical recovery and trialling various mining methods and production or stoping Level intervals.

9.3.3 Survey Accuracy of Previous Workings

Detailed mine plans of previous mining operations from 1872 to recent times are held by the Company on site, and these have been digitized and modelled in commercial computer programs (SURPAC and MICROMINE), and cross-checked against modern survey data. The majority of previous plans were accessed from originals held by the Queensland Department of Mines and Energy.

The old mine plans inspected in the Company's office are all signed off by licenced mining surveyors who updated their survey pickups everyone to three months. A paper was presented on Mine Surveying by C.A.S. Andrews, Licenced Surveyor, to the General Meeting of the Queensland Institute of Surveyors in Brisbane in 1905, and summarised in the September and October 1905 issues of the QGMJ.

Andrews gives extensive details of surveying methods used in underlies and levels. All measurements were taken by plumb-line, theodolite and steel chain, strained by a spring balance, from shaft collars indexed to surface survey points. Steel pins were inserted in timbers or rock backs, identical to methods used today in Australian mines.

Detail is meticulous, even to the point of using two candles, one either side of the plumb-line, to ensure the centre of the line is sighted, rather than the centre of the illuminated portion if the line was lit from one side only. Distances on the chain were read to two decimal places.

The theodolite was set up on planks across vertical shafts to ensure it was directly over the plumbed centre-line. Levels were surveyed by theodolite and chain, using a metal tape to pick up drive outlines and other features such as winzes and rises. Measured offsets were not usually taken to the walls along the drives, as these were usually timbered over, so drives and cross-cut outlines were sketched from the centre-line survey, as were stope faces.

Survey pin positions were drafted onto the plans. Survey plugs were installed about two feet inside the lease boundaries for crosschecking when the level was broken into from the adjoining mine. Adjacent levels were crosschecked through the winzes and rises.

These records indicate a survey closure error of less than 1 in 5000 (i.e. ±200mm in one kilometre) in chainage and, in the bearings, less than one minute of arc per 1,000' of underground survey (i.e. ±292 millimetre offset in one kilometre). Measurements plotted on the previous plans were reported to one decimal of a foot and one minute of arc.

These previous mine plans at a scale of one inch to forty feet ('1:40' or 1:480) were digitized by the Company, showing detailed workings and stopes down to 928 m vertical depth. Most of the historic workings were driven on reef. Results used from these plans, when checked against recent survey work, have been within acceptable limits, usually within 0.3 metres.

Recent shaft-capping programmes by the Queensland Government have located and surveyed a large number of shaft collars, and this data has been used by the Company to further cross-check the computer models of both the workings and the geology against modern survey pickups. The Department of Mines and Energy (DME) launched a project in July 1996 to define the scope and cost of repairing abandoned mine shafts in the Central area. There are around 830 identified shafts within the Charters Towers Central limits area that have been catalogued, with 688 shafts (it is considered these could be anything from a few metres deep 'gouger pits' to deep shafts) having been located in the field and inspected. The remaining 143 shafts have yet to be located in the field. The possible existence of a further 280 shafts has been identified from old aerial photos and gold mining lease plans. DME has continued its shaft capping program, 567 sites having been investigated and 240 shafts made safe at Charters Towers and other goldfields since 2003. (Reference: Qld Government, *State of the Environment Report 2007*.)

9.3.4 Continuity of Geological Structures

The strike length continuity of the Brilliant structure has been proven by underground mining for over 800 metre along strike and down dip for 1,080 metres length to a vertical depth of 910 metres. The strike extent has been proven by drilling to extend for a further 500 metres west and 700 metres east, giving a total strike length of 2 km. The Day Dawn has been proved by underground mining for 1,700 metres along strike and 823 metres vertically. The East Mexican reef is interpreted as an extension of the Day Dawn, which increases the strike length of the Day Dawn to 2,100 metres. Sunburst West (part of the Queen structure) has been proven by underground mining for 350 metres and down dip for 225 metres to a vertical depth of 125 metres. The Queen structures continuity has been proven by underground mining in the Bonnie Dundee and Golden Gate mines for a strike length of 1,360 metres and down-dip for 450 metres to a vertical depth of 400 metres. In 2008 the Deep Hole CT5000 intersected the Queen West at 1,817m depth.

The Brilliant East structure continuity has been proven by underground mining over a strike length of 650 metres and down dip for 1,080 metres to a vertical depth of 910 metres. In 2008 the Deep Hole CT5000 increased this to 1320 metres depth.

The continuity of the Cross Reefs (Columbia, and St Patrick reefs) has been proven by underground mining over a strike length of 270 metres and down-dip for 510 metres to a vertical depth of 340 metres. The Columbia and St Patrick reefs are interpreted as the same structure, which increases the strike length to 1,300 metres. In 2008 the Deep Hole CT5000 intersected the Columbia St Patrick at 560m vertical depth.

The Deep Hole project drilled in 2008 a diamond-core hole to 2,000 metres depth and intersected the Columbia-St Patrick reef at 560 metres downhole, the Brilliant at 1,320 metres and the Queen West at 1,583 metres. Un-named structures were intersected at 1,817 metres and 1,982 metres downhole and while the grade was low (0.1 metre at 0.4 grams per tonne Au) it confirmed the persistence of gold mineralization at depth with mineralization identical to higher levels.

Extensions of these structures have been interpreted by matching drill intersections with the proven geological models developed from the underground workings. Some 1,559 significant drill intersections were used. Because the reefs are relatively narrow (usually one to two metres thick) and widely spaced (50 metre to 400 metre), it is usually possible to clearly define the correct mineralised body to which a drill intersection belongs. Some uncertainty existed where the cross-reefs approached or cut through the east-west structures, and core-to-reef angles were used in oriented core where possible to correctly assign drill intersections to mineralised bodies.

Only those intersections which were assigned unequivocally to a known, previously-mined mineralised body have been used in published resource estimates.

9.3.5 Payabilities

The payability of the reefs when mined historically (1871-1920) was around 30% (that is, the high-grade ore shoots producing the 38 g/t gold average ore grades occupied about 30% to 50% of the total reef area). This has been measured by the Company from computer modelling of the previous workings and stoped areas. The highest payability obtained was 51.8% on the Brilliant structure.

Because of the variability of gold values and the 30% payability producing the 38 g/t gold average ore grades, there is a strong statistical chance (70%) that a random hole drilled into a reef will be more likely to intersect a barren part of the reef rather than the payable ore shoot.

This payability factor is a mining factor usually introduced at the Reserve estimation stage, but is introduced here into both Inferred and Indicated Mineral Resources to account for the irregular and non-uniform grade distribution, and discount the tonnage back to what is reasonably expected to be economically extractable.

The Company uses drilling to confirm the presence of the gold-bearing structures, and the presence of gold in those structures at the drill intersection point. The gold grade in the intersection may or may not be representative of the grade in the surrounding area. Continuity of the structure is confirmed if the intersection matches the known geometry of the structure, given that the width of the structures is generally less than one metre but the structures are spaced 50 metres to 400 metres apart.

Grade continuity from historical mining records was around 200 metres to 500 metres along strike and up to 1,000 metres down the plunge of the shoot. Grade continuity is compensated for in the Company's estimates by using payabilities to discount the tonnes estimated on a given structure. These payabilities and grade continuity distances were confirmed during mining at the Imperial mine area on the Warrior structure.

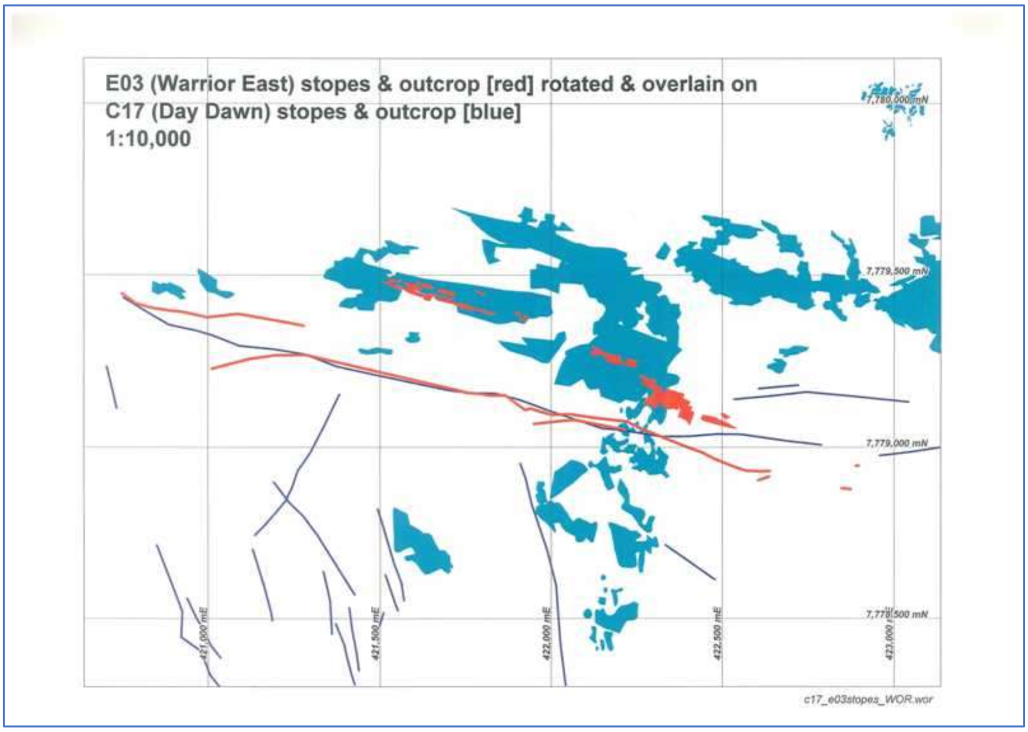


Figure 21. Plan view. Warrior East stopped areas (red) were rotated and overlain on the old Day Dawn stopped areas (blue), four kilometres away, and confirmed similar payabilities and grade continuity.

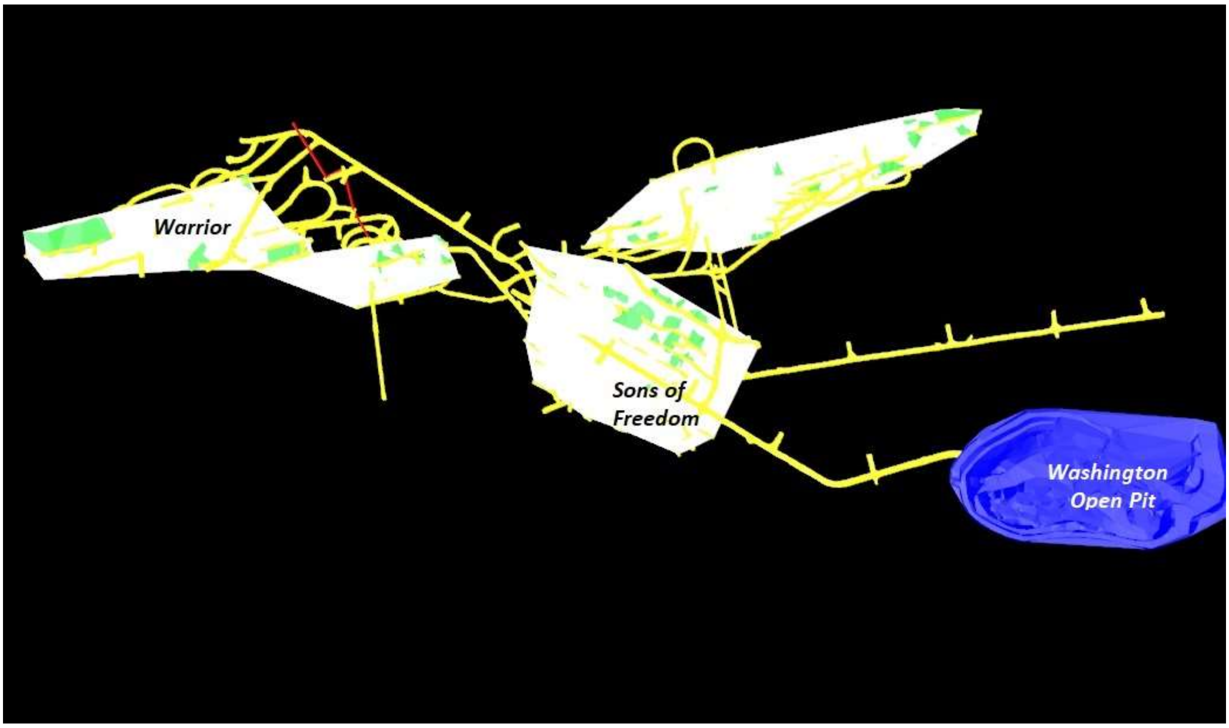


Figure 22. Oblique view of the underground workings at the Imperial mine area, with the decline portal in the bottom of the Washington open pit. Payabilities on the Warrior and Sons of Freedom lodes in the Imperial mine area were 30%, similar to historical payabilities in the Central area four kilometres away. The green areas are the stoped areas compared to the extent of the lode (white) defined by driving and drilling.

9.3.6 Other sampling techniques

Previous costean, stope and development sampling was by hammer, or hammer & chisel channel sampling averaging 2.5 kg samples of mineralised material. Individual reef splits and alteration zones were usually sampled separately. Standard sampling procedures were established. Underground faces are rock-chip sampled on horizontal lines across the face and also in individual samples perpendicular to the dip of the reefs.

ITEM 10. Drilling

10.1 Type and extent of Drilling

The Company has a robust geological model that has been predicted and then tested by diamond-core drilling down to 2,000 metre vertical depth. Intersections into known quartz reefs have hit the predicted position within one metre at depths of up to 1,500 metre downhole. Over 350,000 metres of drilling has been conducted in 3,200 holes on down-dip and strike extensions of known reef systems, with 1,559 significant drill intersections.

Previous explorers that drilled, mapped and sampled the area from 1980 until the float of the Company in 1993 include BHP, Homestake, CRA, AOG, Orion, Mt Leyshon Gold Mines and Great Mines. Prior to 1980 drilling was undertaken by Towers Drilling Co (1932), and the Queensland Department of Mines in 1923 and 1969-70. A detailed project evaluation was conducted by Gold Mines of Australia (the precursor of WMC) in 1935, and the Company holds copies of much of their data.

As at 30 June 2011, total drilling was over 3,200 holes totalling some 350,000 metres, comprising 847 diamond-core holes, 1,479 Reverse Circulation (RC) holes and 135 RC holes with diamond-core tails, as tabulated below. Drilling from 2012-2016 was predominantly geophysical research holes, stope and grade control drilling at the Imperial mine area that did not materially add to resources or reserves.

Drill Hole Type	No. Of Holes	Total Metres Drilled
Air Track	481	8,246.10
Diamond Drill Hole (DDH)	847	194,591.71
Open Hole Percussion (OHP)	123	6,640.20
Rotary Air Blast Percussion (RAB)	207	2,910.00
Reverse Circulation Percussion (RC)	1,479	112,380.70
RC with Diamond-core tail (RC-DDH)	135	33,756.59
	3,272	**358,525.30**

Table 7. Summary of drilling on which the resources were estimated– type, number of holes and metres.

10.2 Drilling, sampling and recovery factors

Surface drilling was carried out by independent drilling contractors. From 2000 to 2004 the company used a number of different surface rigs for both Reverse Circulation (RC) and Diamond drilling. Diamond core tails were drilled from some RC holes to test mineralised zones. Drilling within the Central (Central) urban area was undertaken using a quiet electro-hydraulic LM110 drill rig drilling HQ (64 millimetre diameter) and NQ (48 millimetre) size core. Drilling since 2006 has focused mainly on mine planning, grade control & stope drilling at the Warrior Mine and using the Company's own drill rigs (up to three Atlas Copco U8 rigs and two U6 rigs) drilling predominantly NQ size core with lesser amounts of BQ (34 millimetre diameter core).

All drill core and RC chips were logged on site by university degree-qualified geologists, (most with two or more years experience). Drill core is photographed and geotechnically and structurally logged. Base of oxidation and, where possible, depth to water was recorded for all holes, and Rock Quality Designation (RQD) recorded for engineering information.

Reverse circulation sample recoveries were estimated by bag volumes, and recoveries generally exceeded 90% in the mineralised zones of most holes. Diamond-drill core recovery was measured by tape from drillers' blocks and usually exceeded 95% through the mineralised zones. Reverse circulation (RC) drill holes were sampled every metre by collection of the sample in a dust suppressed cyclone. RC drilling samples were normally 3 to 5 kg sub-sampled either by riffle splitting, or systematic spear sampling. Riffle split ratios were normally 25:75. This procedure splits the sample down to sub samples of 5 kg or less. Normal RC drilling procedure was for the drilling bit to be lifted off the bottom of the hole and the hole blown clear between adjacent sample runs at the end of each 6 metre rod. As a general rule 5 metre spear samples were composited from the bulk bags and sent for assay. Individual 1m samples for any anomalous composite assay zones, and any specific intervals chosen by the geologists were also sent for assay.

Diamond-drill core samples were cut by diamond-saw with half-core samples assayed of discreet geological intervals. These typically produce 0.6 kg of sample per 0.1 metre of NQ size half core. Alteration zones were sampled separately from reef material. Diamond drill core sizes were usually NQ (48 millimetre diameter core).

10.3 Drill hole locations

This is an advanced project with some 3,200 drill holes totalling 358,000 metres of drilling. It is impracticable to present a plot of all holes in this report.

However, drilling and sampling results have been reported quarterly since 2004 and results are posted on the Company's web site.

ITEM 11. Sample Preparation, Analyses and Security

11.1 Quality of assay data and laboratory tests

The samples were assayed in 2000-2016 by commercial laboratories using 50 gram fire assays on 200 gram sub-samples riffle-split from dried crushed primary samples. The entire sample was pulverised to a nominal 85% of minus 80 mesh (75 micron) before splitting out the sub-sample. Assay blanks and standards were run by the commercial laboratories as part of their quality assurance procedures, usually two standards, five replicates and one reagent blank in every batch of 50 or 84 samples. The standards & blank are for internal use and depending on the laboratory, may not have been routinely reported to the client unless requested. Replicate (repeat) assays were reported to the company.

At times all samples returning an initial assay greater than 1 gram per tonne Au have been reassayed. Inter-laboratory comparisons are run periodically which indicate an assay precision of better than ±15% of the mean. Duplicate samples have a precision of ±10%, which is within normal limits. Assay grades, and therefore any estimate of contained ounces, should be regarded as ±10%.

Lead assays, useful as an indicator of gold mineralisation in the Charters Towers field, were determined by commercial laboratories, using a perchloric acid digest and flame AAS method. More recent work has shown the value of additional element assay in the search for mineralised zones. Since 1999 routine multi-element ICP analyses using aqua-regia digest have been undertaken to assist definition of mineral zonation and to investigate any high sulphide areas.

Previous auger samples were assayed for low level detection gold by solvent extraction graphite furnace AAS on 50g samples digested in aqua-regia. A number of samples, both from drilling and field sampling were also assayed, using ICP for a range of other elements, 7 to 36 depending on the sample. Where more precise multi-element assays were required a four acid 'near total' digestion is used, HF-HNO3-HClO4 acid digestion and HCl leach.

11.2 Verification of sampling and assaying

Samples were gathered in the field or at the rig by a geologist and a geological technician. RC drill samples are riffle split at the rig by the independent drilling company's driller's offsider and company field technicians. Diamond-drill core was cut at the company's core yard at Nagle Street. Samples were bagged on site and then transported to a commercial laboratory in Townsville.

Assaying was done by the commercial laboratory and results sent to the company by email, fax, and mail. The supervising and senior geologists made regular visits to drilling sites, to ensure correct sampling procedures were being followed. Twinning and wedging of drill holes was not done on a regular basis, although it has been carried out locally, especially in areas where mineralisation was confidently expected but returned low assays. Anomalous samples were re-sampled where required following further inspection by the project geologist.

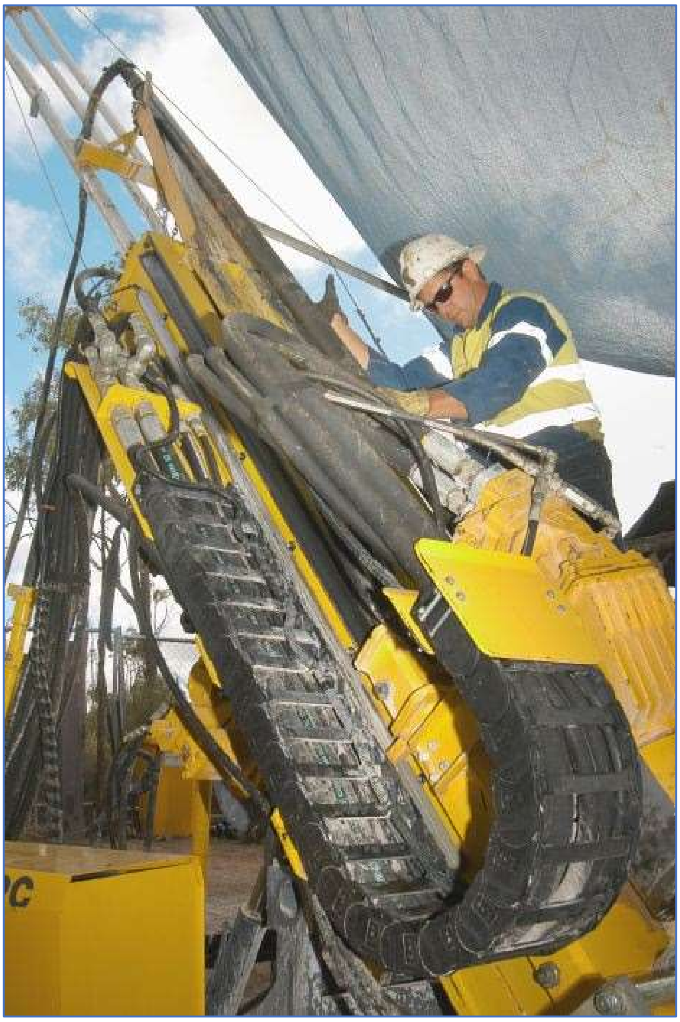


Figure 23. Drilling at the Charters Towers Gold Project.

ITEM 12. Data Verification

12.1 Location of data points

During the period 2000-2016, drill collars were picked up by either a professional surveyor, or by Differential Global Positioning System (DGPS) receivers. Some holes prior to 2000 were picked up by standard GPS receivers with a claimed precision of 3 metre to 10 metre. All diamond and most RC drill holes post 2000 were surveyed down-hole for azimuth and dip by borehole camera at 30 metre or 50 metre intervals. All recent Central area core was oriented with core orientation devices supplied by the drilling contractor.

Mine sample points were located by tape (or laser survey) and compass from surveyed pins. All underground and surface drill collars since 2006 have been located by professional surveyors.

Old imperial measurement mine plans were drawn up between 1870 and 1917 by licenced mining surveyors, and previous records indicate a survey closure error of less than 1 in 5000 (i.e. ±200mm in one kilometre) in chainage and, in the bearings, less than one minute of arc per 1,000' of underground survey (i.e. ±292 millimetre offset in one kilometre). Measurements plotted on the previous plans are reported to one decimal of a foot and one minute of arc. Results used from these plans, when checked against recent survey work, have been within acceptable limits.

All post 2002 rock chip and soil sample locations have been located by 12 channel GPS or by DGPS. Previous sample locations were mostly with reference to surveyed field grids.

12.2 Data density

Exploratory drilling from 2000-2016 has mainly been on a prospect scale, with 2 or more holes at approximately 50 metre spacing on section lines approximately 200 metre apart. Earlier drilling targeted known reef systems outlined by surface outcrop mapping, previous mine plans, trenching and pickups of previous shafts and prospecting pits. Holes were spaced at intervals of 100m to 500m apart where the reef system was confidently expected. Underground drilling was on nominal 50m spacing from the Central Decline. The Warrior East Ore Reserve was estimated based on holes at nominal 25 metre centres.

12.3 Audits or reviews

Assay duplicate precision has been audited and found to be within ±10% of the mean value, which is within acceptable limits for commercial assays. Selective re-assay of samples was undertaken following inspection of results where particularly high or anomalous assays were noted. Assay results were reviewed statistically, by cumulative frequency plots and histograms, and log normality of data sets was established for the mineralised zones. The database has been audited by several independent consultants since 1998 and most recently by Snowden in 2011.

12.4 Database Integrity

All drill hole assay data received from the laboratories by e-mail was loaded directly into spreadsheets without any retyping. These files were then uploaded to the database via Surpac, while the original e-mailed assay file was retained. Surpac runs an automatic validation procedure to ensure there are no double entries for sample numbers or overlapping of downhole intervals and prints an error report for any problems found. For drill holes, a hole path was plotted with assay data and visually scanned. The first assay received was normally accepted and subsequent repeat and check assays were used for QA/QC evaluation. However if a major discrepancy was noted between the first and subsequent assays a decision was made whether the original assay was used for resource estimation, or whether the first duplicate assay or an arithmetic average of all duplicate results was used. Drill hole collar coordinates and downhole surveys were entered manually by one geologist and then cross-checked by another, then a hole path was plotted and examined.

Assay data was validated by plotting and checking against assay sheets if data was manually entered, and hole collars and paths were validated by plotting in plan and section to ensure coordinates have been accurately entered. Data used in current resource estimation is all regarded as accurate. Validation of earlier data is continuing as required.

12.5 Assay Data Accuracy and Quality Control

It is often assumed by investors and non-mining readers that the chemical analysis or assay can be accepted as true values. This is not necessarily correct, as no chemical analysis technique is 100% accurate, and analytical values usually show a spread or range of values around an average value. There is also the uncertainty in deciding if the sample taken is representative of the surrounding area. The reader is referred to the Australian Mineral Industry Consultants Association web site for a range of professional papers by experienced consultants relating to quality control in sampling and chemical analysis, which highlights a range of potential errors, which if not managed and controlled, may lead to erroneous results.

It has been estimated that, industry-wide, sampling errors account for about 80% of the total error, with sample preparation contributing a further 15%, while assaying is only responsible for the final 5% (Matysek, 1999; Garnett, 1999). There are two main terms used in assessing analytical errors – **accuracy** and **precision**. Put simply, accuracy is how close a set of results is to the actual true value, whereas precision is the ability of a laboratory to obtain the same answer on one sample that is analysed many times. A set of results may be precise in that there is little variation between the repeated analyses, but they may not be accurate if the laboratory consistently returns results that are too high or too low.

The Company uses two types of samples to assess **precision** - ***duplicate samples*** (two samples prepared at the same time from the same starting material, especially RC drill cuttings, underground face and fill samples, and surface rock chips) and ***replicate samples***, where one sample is crushed and pulverised and several sub-samples taken and assayed.

The only way to assess **accuracy** is to compare the laboratory results achieved on specially prepared external standards. These standards contain a known amount of gold and therefore the true value is known. These may be artificial standards or natural standards. Artificial standards are prepared from laboratory reagents, such as Analytical Reagent (AR) grade gold chloride made into solution and disseminated through a neutral silica matrix such as crushed bottle glass. Natural standards are made from carefully homogenized naturally occurring gold ore, and are preferred as they have a matrix that more closely reflects the matrix (and therefore any interfering elements) that may be encountered in the project samples. The gold content of commercial gold standards is often determined by neutron activation analysis, which returns precise and accurate results, but usually requires the use of a nuclear reactor. This method is not commercially available within Australia. Australian laboratories offering such a service usually send their samples to Canada.

The following definitions from Hellman (1999) are useful:

*The term "**precision**"‵ is commonly applied to the spread of assay data as determined by duplicate pairs. This information is usually more readily available than replicate analyses of individual samples. Pairs of assay results, such as two determinations of gold from the same pulp that comes out of a pulveriser provide estimates of one type of precision whereas an original assay paired to a check assay of a split of the same pulp carried out by a different laboratory provides another type of precision. In these cases the absolute value of the difference between the two results divided by the pair mean is often used to estimate precision and is commonly expressed as a percentage. This has been referred to as the ‚**Absolute Mean Percent Difference**‛ or **AMPD** (eg Bumstead, 1984). The average of these values for a number of pairs is often reported.*

AMPDs from duplicate determinations of pulps by different laboratories are recommended by FrancoisBongarcon et al (1996) to be better than 10% (i.e. the value returned from duplicate of assays of 1.000 and 0.905 grams per tonne). This level increases to 20% when assays from coarse rejects are considered. These levels are somewhat arbitrary and depend upon the commodity of interest and concentration level. AMPDs from concentrations near the Lower Level of Detection will obviously be considerably higher than at higher concentrations.

*"**Accuracy**" of analyses or assays refers to closeness to the true value. Consistent and significant departure from accuracy is termed "**bias**" and can be expressed in a variety of ways such as an absolute difference or as a percentage. Thus an average value of 0.8 grams per tonne from several assays of a standard with a "**Recommended Value**" (**RV**) of 1.0 grams per tonne indicates a **negative** bias of 20%. **Positive** bias refers to results from unknowns that are consistently higher than accepted values. Bias is only "**relative**" unless results from samples are referenced against results for which there is proof of accuracy.*

Benchmark papers that discuss this terminology in relation to geochemical analysis include Thompson & Howarth (1978), Thompson (1992) and Ramsey, et al (1992).

Laboratory errors in gold analysis include:

- **Bias** – the laboratory method and techniques return values that are consistently high or low compared to the true value

- **Random precision errors** – the laboratory results may be high or low within some percentage range of the true value, but are not consistently high or low. The industry generally accepts that results with a precision of ± 10% of the mean value are acceptable for commercial laboratory fire assays for gold with an AAS finish.
- **Contamination errors** – samples are contaminated by other samples during preparation or analysis. This is relevant where sample preparation machinery is not adequately cleaned between samples, and low-grade samples are prepared after high-grade samples, giving false high values. If fire assay pots are re-used, care must be used in ensuring low grade samples are not fired in pots previously used for high-grade samples. Airborne dust and personal gold jewellery worn by sample collectors and preparers are other potential sources of contamination. Base metal contamination can occur from metal fragments ground or chipped off sampling, crushing and pulverizing equipment, especially steel alloy equipment containing iron, chromium, tungsten, molybdenum and manganese. Zinc, copper and lead contamination can occur from galvanized equipment and from common thread greases in drilling equipment, as well as the soft metal matrices on diamond saw blades and core fillet grinders.
- **Interference errors** – other elements present in a sample or the nature of the rock matrix may interfere with the element being analysed. For example, high iron content may interfere with the analysis of gold by atomic absorption spectrophotometry (AAS) as the spectrum absorption peak for iron is close to, and may overlap, the absorption peak for gold. High iron samples may return falsely high gold values if care is not taken to reduce the iron content or eliminate the interference. AAS analysis is commonly used in fire assaying for the final determination of gold. Certain minerals may affect surface tension or fluidity during the firing procedure or may release water molecules that are normally part of the mineral's crystal structure. The release of this water may change the weight of sample being analysed or carry away volatile elements and this may impact on the final assay result. The presence of tellurium in gold samples may affect the formation of the lead bullion collector or the gold prill on cupelling (volatilization of the lead collector) during fire assaying.
- **Analytical errors** – the use of inappropriate analytical methods, inappropriate fluxes in fire assaying, inappropriate firing temperatures or times, inappropriate gas mixtures in AAS, failure to calibrate machinery including scales and electronic balances and poor or inappropriate internal quality control checks all contribute to analytical errors in gold analysis.
- **Detection limit range errors** – different analytical methods work best at different ranges of concentrations, and these ranges may vary for any one method with the element required to be analysed. All analytical methods have a preferred range in which the laboratory recommends the use of the method. Accuracy and precision may vary outside acceptable limits as the sample element concentration approaches both the upper and lower detection limits.
- **Particle size errors** – the presence of coarse gold grains in samples has long been recognised as a potential source of errors in gold analysis, especially by partial extraction processes such as cyanidation or acid leaching. Crushing and pulverizing of samples may result in non-homogeneous distribution of gold particles in sub-samples, creating poor precision. Screen fire assaying is used where unacceptable precision errors indicate a coarse gold problem. In recent years, more efficient pulverizing machinery has improved the homogeneity of sub-samples, but the potential for coarse gold still needs to be kept in mind.

There are no established 'benchmarks' for levels of accuracy and precision that may be considered acceptable for mineral assay data, produced using commercial ‚production-type' analytical techniques. The accuracy within ± 5% of the accepted value for a particular element in a standard, and precision of better than 10% for 90% of samples determined using the Half

Absolute Relative Difference (HARD) technique (Shaw, 1997) are generally accepted for bankable feasibility study purposes. (Waltho & Shaw 1999). For a 50g fire assay of gold standards in an inter-laboratory comparison, after outlier results have been removed, the spread of analytical results averages about 20-30%, while base metal result spread can be anything up to an order of magnitude. (Eames, 1998, 1999; Bumstead, 1984).

12.5.1 Commercial Assays

One key point in this discussion is that mining companies generally use commercial laboratory assays, which offer a compromise between assay costs, turnaround times and accuracy/precision. Results may vary from the true value by 10% to 15% in both accuracy and precision. Therefore any estimate of ounces contained in a resource or reserve may vary from the true value by up to ± 15% based on analytical factors only. Sampling variation may increase this uncertainty, as will variations in estimating volumes, densities and resulting tonnages. In general, with a reasonable number of samples examined and using quality control procedures, assays should be within 5% of the true value.

12.5.2 Assay Uncertainty

A second key point is that the uncertainty may compound, or it may cancel out - a consistent high error in estimating gold grade may cancel out a consistent low error in estimating tonnage, reducing the impact on contained ounces. However, a consistent high error in estimating grade could compound with a consistent high error in estimating tonnage to overestimate contained ounces. Testing by the Company indicates that the assay uncertainty is neither high nor low – it cancels out over the significant gold value range and number of samples used by the Company.

12.5.3 Materiality

A third key point is materiality. While gold projects may be subject to the potential for numerous scientific errors, will these errors ***materially*** affect any conclusions on revenue flows, which is one purpose of estimating a resource and reserve? If the starting point of sampling and assaying produces a potential variation or confidence level of ± 15% to 30% in contained ounces, any potential errors need to be assessed to see if they will materially affect the contained ounces by more than 15% to 30%, or are they within this confidence level?

The JORC Code states: "*A company must disclose any relevant information concerning a mineral deposit that could* ***materially*** *influence the economic value of that deposit to the company. A company must promptly report any* ***material*** *changes in its Mineral Resources or Ore Reserves*`. The Code notes in Clauses 4 and 5 that "*the benchmark of Materiality is that which an investor or their advisers would reasonably expect to see explicit comment on from the Competent Person, thus the reporting of all relevant criteria on an "if not, why not" basis is required".*

A numerical value for what change or influence may be regarded as "**material**" is not defined in the JORC Code. However the ASX Guidance Note 8 on Continuous Disclosure: Listing Rule 3.1 states in Paragraph 93: "*Listing rule 3.1 provides examples of information that, if material, would require disclosure. One of those examples is a change in the entity's previously released financial forecast or expectation. As a general policy, a variation in excess of 10% to 15% may be considered material and should be announced by the entity as soon as the entity becomes aware of the variation."*

On this basis, the normal variation in sampling and assaying results borders on a material variation in most company resource and reserve reports. An investor looking at gold mining companies needs to be aware that revenue flows are based on recoverable, and therefore saleable, ounces of gold, and there is an inherent uncertainty in all figures generated. Mining companies are commercial businesses, not scientific research enterprises. In resource and reserve estimation, cost projections and revenue projections, they balance scientific accuracy against the cost to achieve an acceptable level of commercial risk. The cost of reducing resource grade or tonnage errors to less than ± 10% or 15% may not be commercially viable, but the results remain within a level of risk deemed as acceptable by the business. A 10% error in grade estimation is not uncommon, and is generally regarded as within an acceptable level of risk for an underground operation over time (for example, over a one-year period) (Dominy et al 2004). However in some cases, production/Ore Reserve reconciliation will show errors of ±50% to 80%. When it is considered that even for a good operation production costs are at least 50% to 75% of the mine site revenue, it can be seen that even a 10% decrease in grade can translate to a 20% to 40% decrease in operating surplus. (Dominy et al 2004).

The Company has used several commercial laboratories over the development of the project since 1994, and used three different techniques to determine gold values - fire assaying, bulk cyanide leach extraction and aqua-regia extraction. Fire assaying is regarded by the Company as the more accurate method, and aqua regia and bulk cyanide leach extraction are regarded as partial extraction methods, underestimating the true gold content. Since late 1998, only commercial fire assays have been used by the Company to analyse rock chip and drill samples for ore reserve estimates. Bulk cyanide leach extraction is still used for stream sediment sampling and for some types of soil sampling due to the advantage of its very low detection limit for gold. Internal quality control by the Company includes submitting ***duplicate samples*** (two samples prepared at the same time from the same starting material, especially RC drill cuttings, underground face and fill samples, and surface rock chips) and ***replicate samples***, where one sample is crushed and pulverised and several sub-samples taken and assayed.

Duplicate samples are often taken at every tenth sample, given consecutive sample numbers and submitted to the laboratory as part of the normal sample run, so that the laboratory is unaware that duplicates are being submitted.

Replicate samples are run by the laboratory, and the process is usually automatic where the first assay exceeds 1 gram per tonne Au, or if the laboratory has concerns about precision, or at the request of the Company. The Company will frequently request re-assaying of a laboratory pulp where the first result is high (over 10 grams per tonne Au) or appears unexpectedly high or low.

12.5.4 Precision in The Company Drill Samples

The Company has analysed replicate samples from RC and diamond drill holes, with 2,052 replicate samples analysed. Of these, 1,544 were over 0.1 grams per tonne Au, 976 above 4 grams per tonne Au, 796 above 6 grams per tonne Au and 82 above 10 grams per tonne Au.

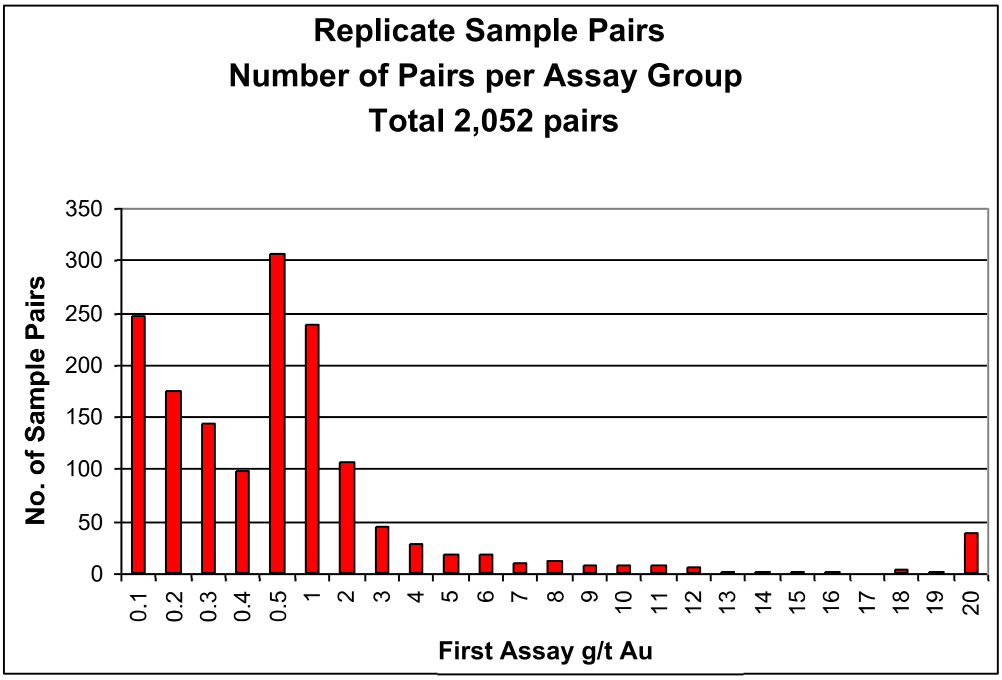


Figure 24. Replicate sample pairs from 2,052 sample intervals in RC and diamond core drilling, of which 1,544 are above 0.1 grams per tonne Au, showing the number of samples in each assay group.

Precision was analysed in two ways, one looking at the percentage difference from the average of two samples, regardless of whether the second sample was higher or lower than the first assay (Absolute Mean Difference, or **AMD**), and the second looking at whether the second value was higher or lower than the mean of the two samples (Half Average Relative Difference, or **HARD**). These are shown in Figures 24 & 25.

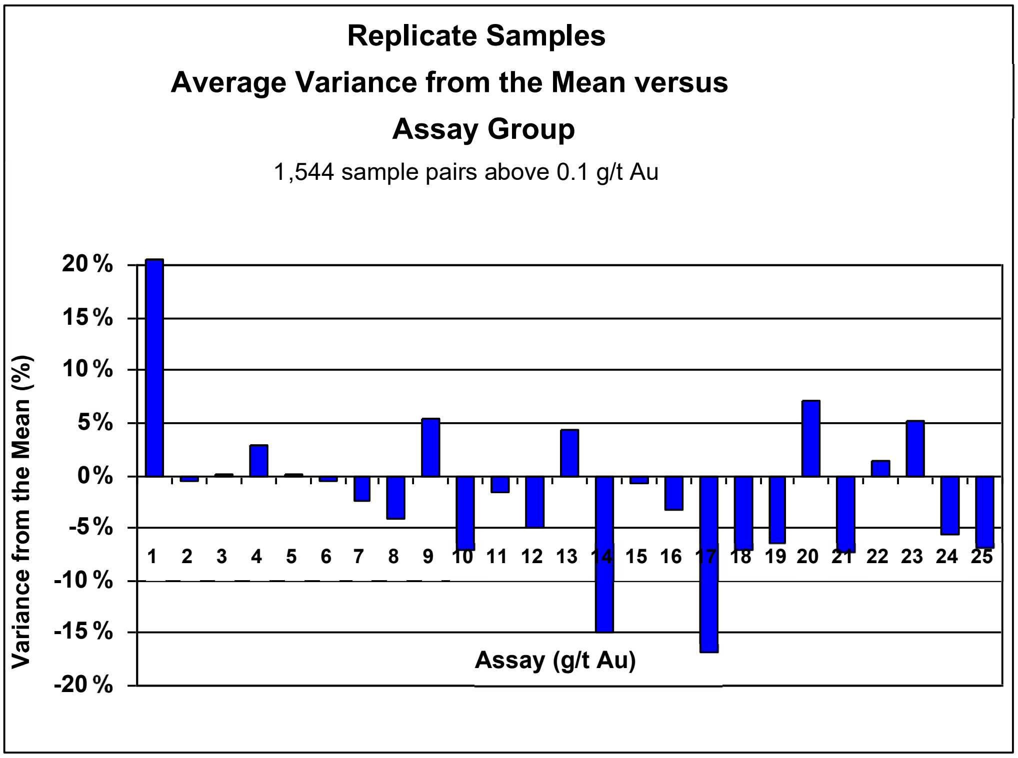


Figure 25. Half Absolute Relative Difference (HARD) plot of precision at various assay group values for replicate drill samples. This measures the average variance of two samples from their mean value.

This plot (Figure 25 above) shows that the average sample precision is highly variable but showing a slight tendency for the second assay to be up to 4% lower than the mean assay. Generally, the variation is random and less than ± 10%. Higher variabilities generally reflect a small number of assays.

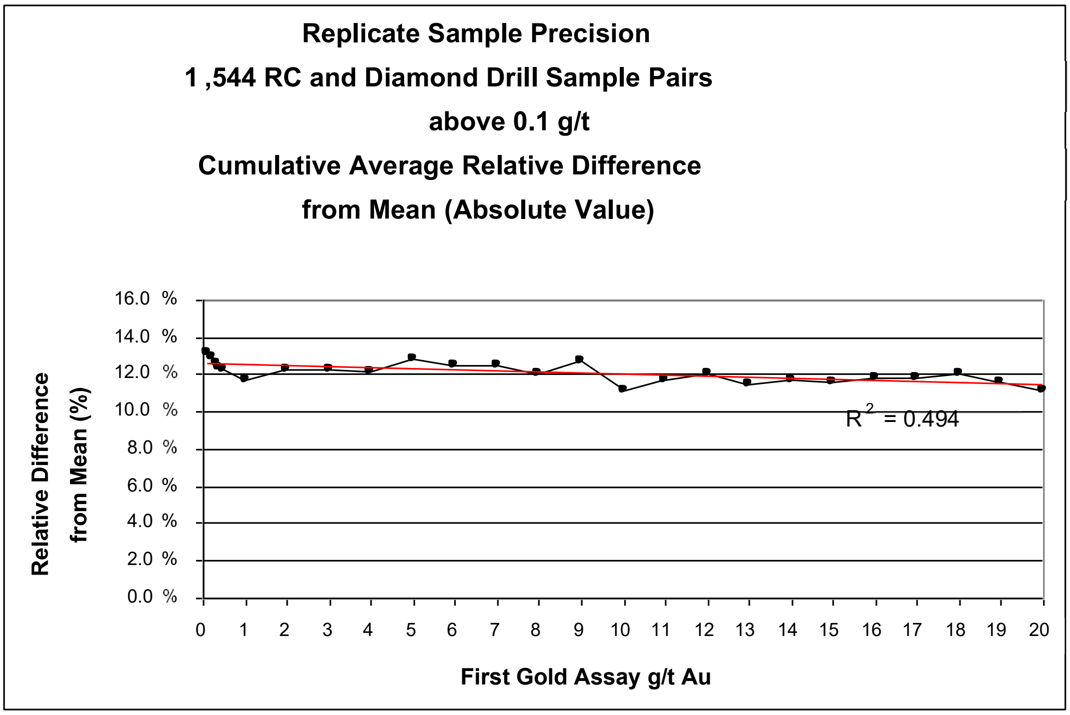


Figure 26. Cumulative Absolute Mean Difference (AMD) plot of precision at various assay group values for replicate drill sample assays. The absolute value is used (i.e. ignoring whether the difference is positive or negative).

Figure 26 above shows a general variation of plus or minus 12% from the average of two samples, with the precision improving (i.e., the difference reducing) from about 13% at low gold values to about 11% at higher values.

12.5.5 Bias in the Company Drill Samples

Sample bias between the first and second samples was also examined in the same data set of 2,052 samples, examining significant sample pairs over 0.1 grams per tonne Au (1,544 samples). The results are plotted in Figures 26 & 27 below.

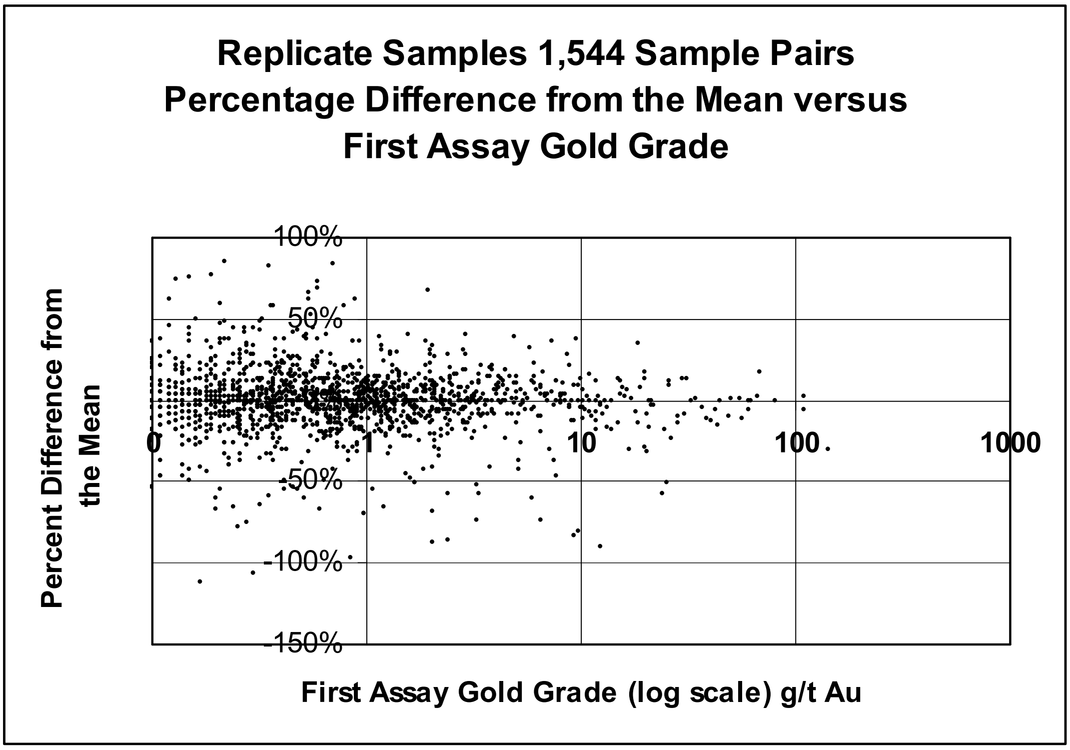


Figure 27. Variance versus grade, for 1,544 values above 0.1 grams per tonne Au. This plots the percentage difference of two samples from their mean (average) value. The ideal variance would be zero.

Figure 27 above shows there is no apparent bias in the difference of two assays from their mean, with a symmetrical distribution about the zero axis. The variance tends to increase at lower gold values, closer to the detection limit of the assay method, a common feature of chemical analysis. The values of interest to the Company are those above the mineral resource cut-off of 4 metre-gram per tonne Au (4 grams per tonne Au over one metre), and above the breakeven cut-of grade into the mill of 6 grams per tonne Au. These show that the repeat samples variances are random and tend to cancel out.

Figure 28 (below) shows the bias in each assay group. As the assay values drop below 1 grams per tonne Au and approach the detection limit of the assay method (0.01 grams per tonne Au) the variability increases to beyond 15%. Overall, the positive and negative bias would tend to cancel out. The higher percentage variations for a few assay groups between 10 grams per tonne and 20 grams per tonne result from a small number of samples assayed in these groups.

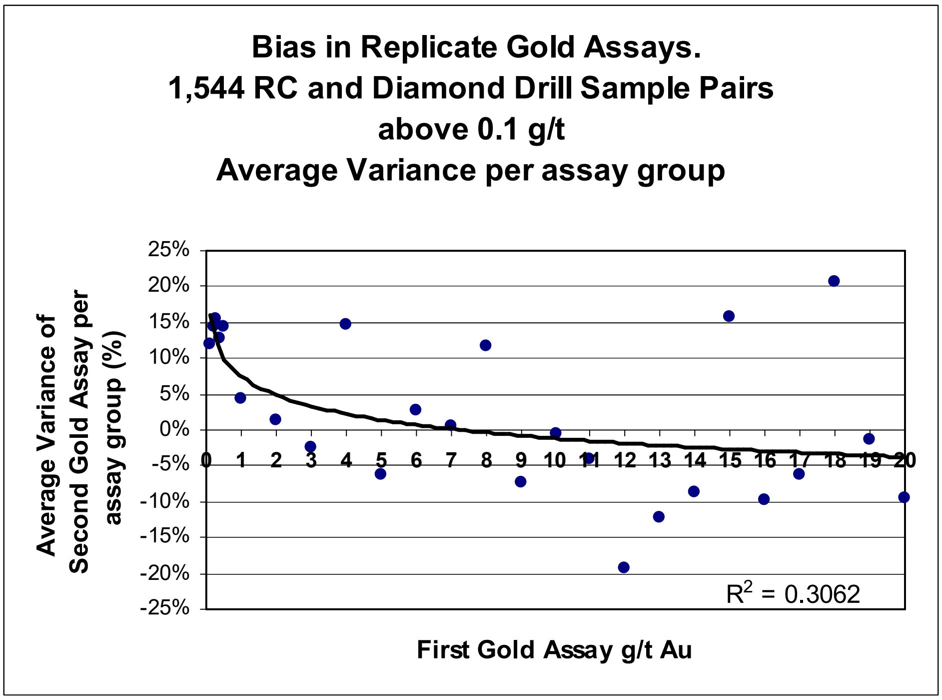


Figure 28. Bias in the average precision of two assays per sample, with a variable number of samples in each assay group. As values approach the detection limit of 0.01 grams per tonne Au the precision decreases to above 15%.

The data was examined to see if there was any relationship between variance and the number of samples in each assay group, as it would be expected that as more samples were analysed, the precision variance should approach zero if the variance was random. The precision was shown to improve with increasing numbers of samples (see Figure 29 below).

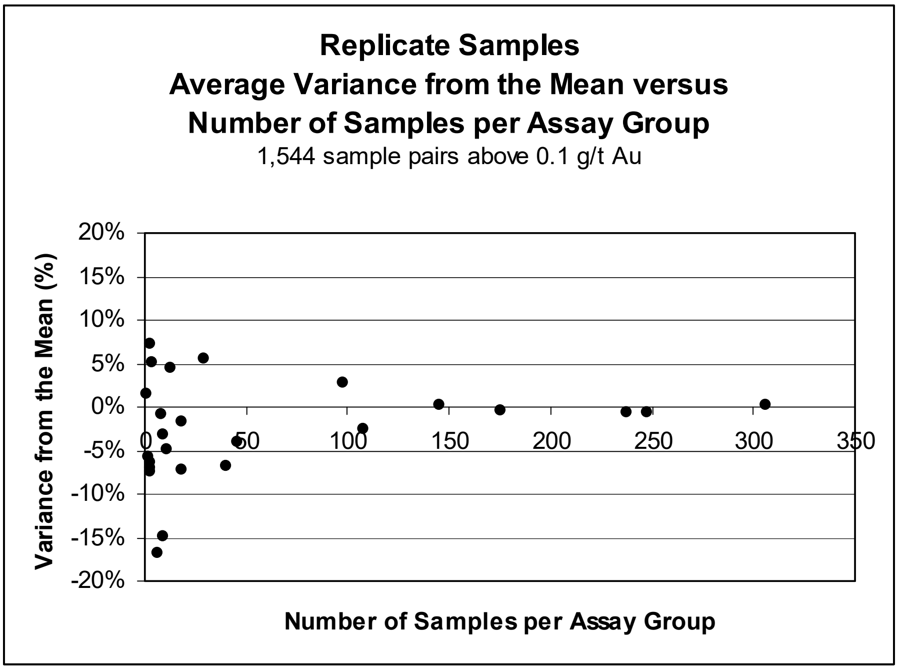


Figure 29. Plot of the variance (average difference of two assays from the mean of the two assays as a percentage of the mean) versus the number of samples per assay group

Figure 29 above shows an obvious correlation between the number of samples and any change in the variance. As more samples are analysed, the average variance tends towards zero. The assay precision variance is random, and can be reduced to zero if enough samples are taken. The precision is within ± 10% of the mean for most samples. This is within accepted industry practice.

Within the assay ranges of interest to the Company, which is generally above 0.1 grams per tonne Au for significant assays, 1 grams per tonne Au for mineral resource estimates and 3 grams per tonne Au for the breakeven cut-off, the results are generally within ± 10% and most within ± 15%, as shown in Figure 30 (below).

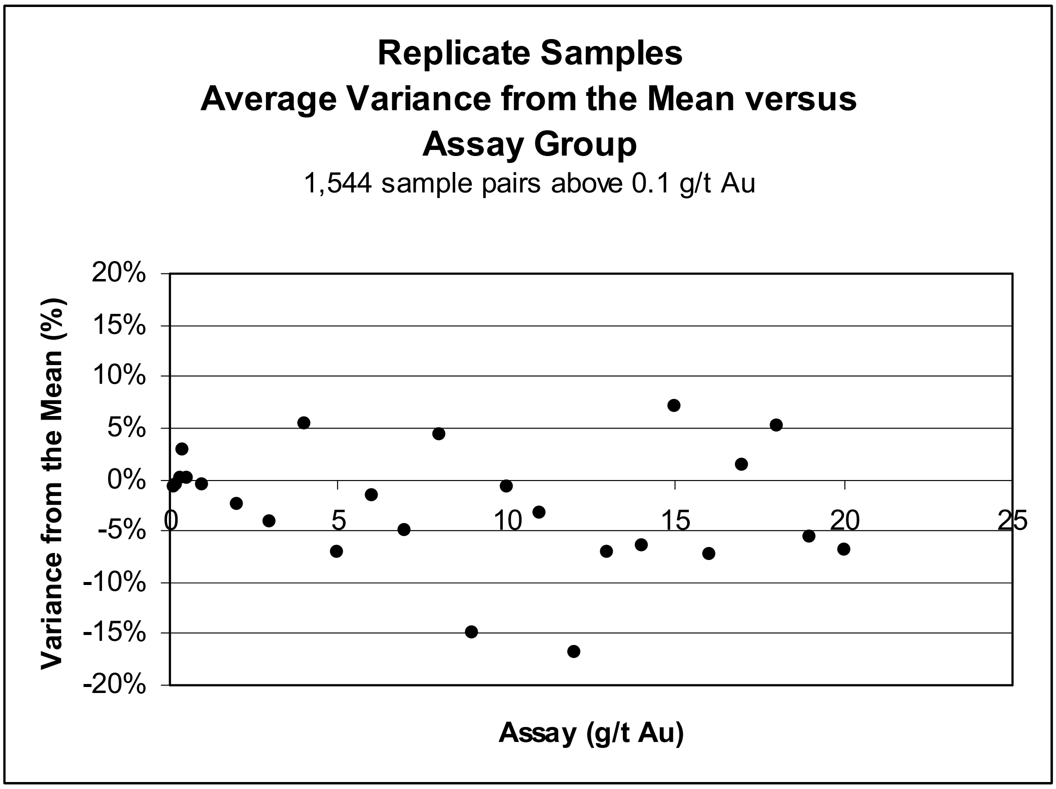


Figure 30. Plot of the variance (average difference of two assays from the mean of the two assays as a percentage of the mean) versus assay group. The results are generally within ± 10% and most within ± 15%.

To consistently achieve a variance of ± 5% with this assay technique in this deposit, the Company would need to analyse each sample 50 times or more (Figure 29 above). This is a commercially unrealistic expectation for the relatively small gain, and the variance of ± 10% is regarded by the Company as an acceptable level of risk, given that the purpose of mineral resource estimates is to be able to estimate life-of-mine cash flows and revenue, and the gold price may vary by 30% over a 5-year period.

12.5.6 Multiple Repeat Assays

The replicate samples were then examined to see how the first gold assay varied from the average of all repeat assays. Some samples were re-assayed up to six times. Figure 31 (below) shows the variance of the first gold assay from the average of all repeat assays for 1,544 samples above 0.1 grams per tonne Au. The plot shows that the variance is much higher as the assay values decrease, approaching the detection limit of the assay method.

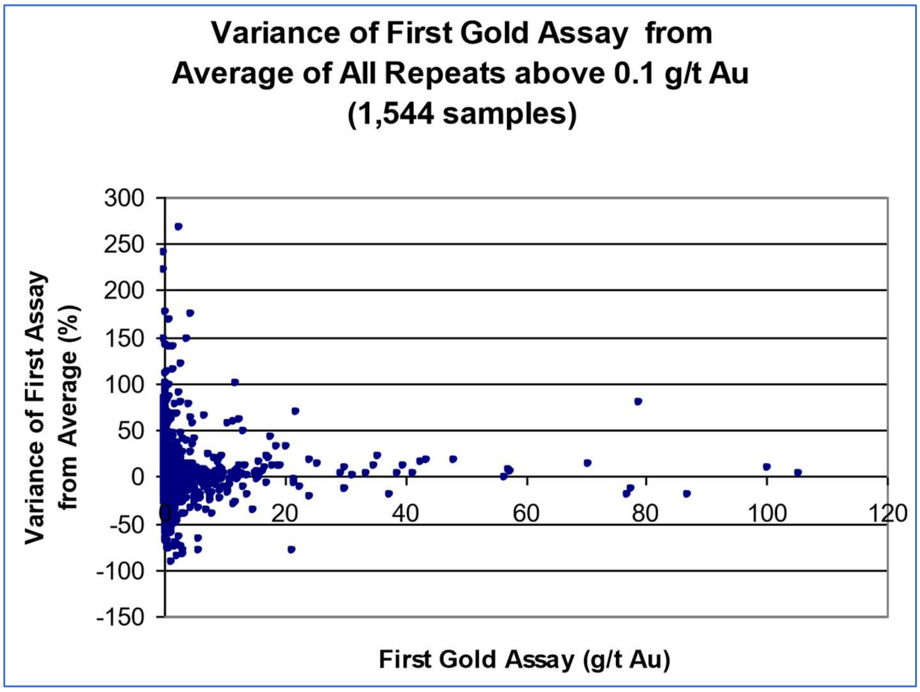


Figure 31. Variance of the first gold assay from the average of all repeat assays for 1,544 samples above 0.1 g/t Au.

The data was then partitioned above 4 grams per tonne Au, the normal Mineral Resource cut-off. The results for 190 samples above 4 grams per tonne Au is shown below in Figure 32.

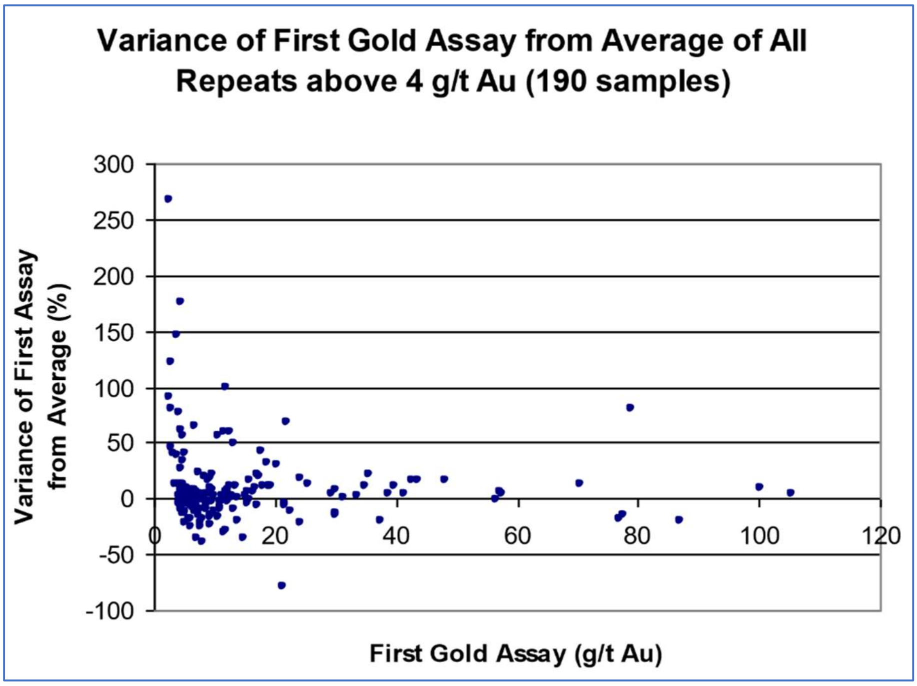


Figure 32. Variance of the first gold assay from the average of all repeat assays for 190 samples above 4 grams per tonne Au.

The results in Figures 30 & 31 show that the variance of the first assay from the average is random, and appears to improve slightly to within ± 10-15% as grades increase above about 10 grams per tonne. This high variability is expected with this type of deposit, which is known to have a irregular and non-uniform gold distribution caused by coalescence or not of many small gold particles. To put the percentage variance into perspective, a difference of ±25% at the breakeven head grade of 6 grams per tonne Au means that the result could be ±1.5 grams per tonne, varying from 4.5 grams per tonne to 7.5 grams per tonne. The same difference of ±25% at 10 grams per tonne means that the result could be ±2.5 grams per tonne, varying from 7.5 grams per tonne to 12.5 grams per tonne. If the differences remain random and not biased on the low side, the variation is unlikely to be material to cash flows over a period of time.

12.5.7 The Company Assay Precision above 4 grams per tonne Au

The significant assay range of interest to the Company's underground operations are those results above 4 grams per tonne Au. The precision of 180 repeat samples above 4 grams per tonne Au was examined to see how the precision varied. A summary of results are tabled below, and shown in Figure 33. Some 85% of the samples have a precision of better than 20% and 57% of samples have a precision of better than 10%. Some 38% of samples have a precision of better than 5%.

Variance Range %	Percentage of Samples	Cumulative Percent of Samples
0	10.0	10.0
5	27.8	37.78
10	18.9	56.67
15	21.1	77.78
20	7.2	85.00
25	2.2	87.22
30	2.2	89.44
35	2.8	92.22
40	2.8	95.00

Table 8. Variance range of 180 samples above 4 grams per tonne Au

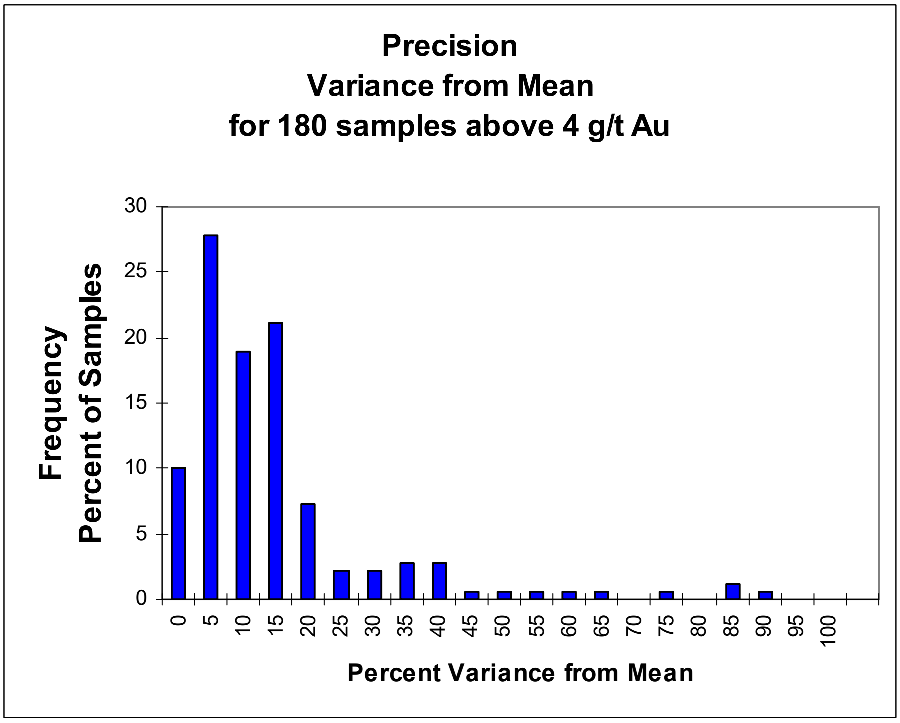


Figure 33. Precision of 180 samples above 4 grams per tonne Au.

12.5.8 The Company Assay Procedures

The Company samples were assayed in 2000-2015 by commercial laboratories using 50 gram fire assays on 200 gram sub-samples riffle-split from dried crushed primary samples. The entire sample was pulverised to a nominal 85% of minus 80 mesh (75 micron) before splitting out the sub-sample. Assay blanks and standards were run by the commercial laboratories as part of their quality assurance procedures, usually two standards, five replicates and one reagent blank in every batch of 50 or 84 samples. The standards and blanks are for the laboratories' internal quality control use and were not routinely reported to the Company. Replicate (repeat) assays were reported to the company. At irregular intervals, the Company inserts specially prepared laboratory standards into routine assay runs to check on laboratory accuracy and precision.

Inter-laboratory comparisons were run periodically on standards and replicates which indicated an assay precision of better than ±15% of the mean (see Figure 34 below). Duplicate samples have a precision of ± 10% to 15% at significant values (above 4 grams per tonne Au), which is within normal commercial limits and at an acceptable level of risk.

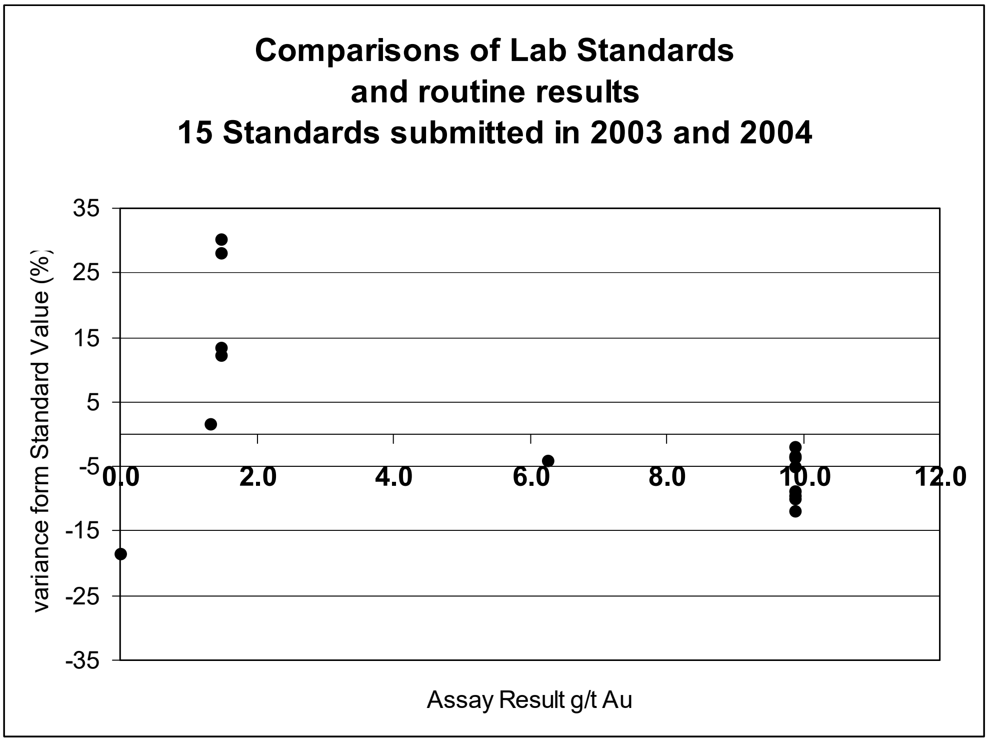


Figure 34. Plot of routine assays of specially prepared laboratory Standards submitted during normal sample runs. The results show a variation of ± 10-15% from the Standard value above 4 grams per tonne Au, normal for routine commercial fire assays in the range of material assays.

For comparison, the minimum daily average Australian dollar gold price over the five year period from 31 May 2000 to 31 May 2005 was $465.80 per ounce, and the maximum was $648.86 from figures supplied by Perth Mint, with a mid-point of $557.33. This is a variation of $183.07 or ± $91.53 (± 16.4%) from the mid value of $557.33, and a variation of over 30% from high to low.

For the five years from March 2005 to Feb 2010, when the gold price rose dramatically, the average gold bid price ranged from a low of A$546.14 to a high of A$1,524.23, with an average (mean) of A$907.10, a median value of A$847.12 and a most common value (mode) of A$568.97. The mid-point value was $1,035.19, with a variation of $489.05 (± 47%) from the mid-point.

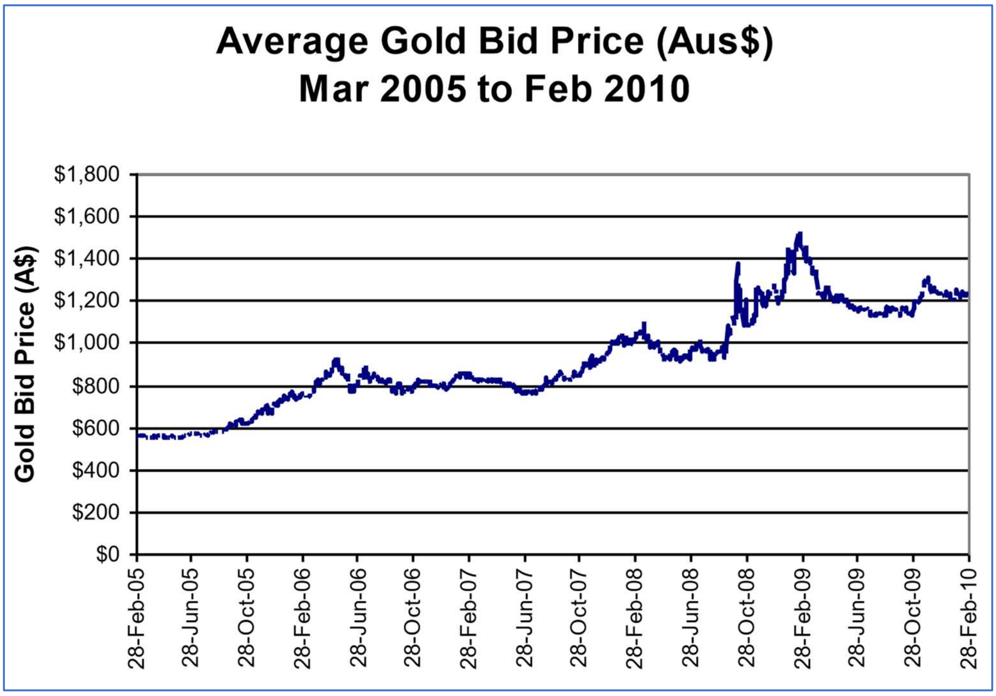


Figure 35. Plot of the average daily gold bid price in Australian dollars for the five years from March 2005 to February 2010.

Given that economic assessments such as cut-off grades and breakeven analyses are conducted using a selected metal price, the error in the metal price movements far exceeds the error in assaying. This level of assay risk (± 15%) is acceptable to the Company, balancing the materiality of potential errors against the increased costs of more precise assays.

Assay grades, and therefore any resultant estimate of contained ounces, on the Company project should be regarded as ± 15%. This is normal for external commercial assays and is at an acceptable level of commercial risk for this project.

12.5.9 Sampling Accuracy

Sampling errors have a greater impact than assay errors, making up to 80% of combined sampling and assaying errors (Matysek, 1999; Garnett, 1999). Surface drilling was carried out by independent drilling contractors. From 2000 to 2004 the company used a number of different surface rigs for both Reverse Circulation (RC) and Diamond drilling. Diamond core tails were drilled from some RC holes to test mineralised zones. Drilling within the Central urban area was undertaken using a quiet electro-hydraulic LM110 drill rig drilling HQ and NQ core. The majority of drilling since 2004 has been diamond-core. Some sludge sampling is undertaken underground to look for splits in the ore body, but these samples are not part of reserve estimates.

Indicated Mineral Resources grades derived for the project are based solely on assayed samples from diamond-core drilling. All Company drill core and RC chips were logged on site by university degree-qualified geologists, (most with more than 5 years experience). Company drill core is photographed and geotechnically and structurally logged. Base of oxidation and, where possible, depth to water was recorded for all Company holes.

Reverse circulation sample recoveries were estimated by bag volumes, and recoveries generally exceeded 90% in the mineralised zones of most Company holes. Diamond-drill core recovery was measured by tape from drillers' blocks and usually exceeded 95% through the mineralised zones in Company holes.

Reverse circulation (RC) drill holes were sampled every metre by collection of the sample in a dust suppressed cyclone. RC drilling samples were normally 3 kg to 5 kg sub-sampled either by riffle splitting, or systematic spear sampling. Riffle split ratios were normally 25:75. This procedure splits the sample down to sub samples of 5 kg or less. Normal RC drilling procedure was for the drilling bit to be lifted off the bottom of the hole and the hole blown clear between adjacent sample runs at the end of each 6 metre rod. As a general rule 5 metre spear samples were composited from 5 x 1 metre bulk bags and sent for assay. Individual 1 metre samples for any anomalous composite assay zones, and any specific intervals chosen by the geologists were also sent for assay.

Duplicate samples were taken as required, but not all drilling undertaken by other companies on the project area over the previous 20 years used duplicates as a standard practice. Common industry practice is that every tenth sample in RC, stream sediment, soil and rock chip sampling is a duplicate. However, the drilling by major companies such as BHP, Mt Leyshon Gold Mines, WMC and Orion is regarded by the Company as acceptable in its quality control, particularly as current Company staff had first-hand knowledge of techniques used by these companies as they were employed by BHP and Mt Leyshon during the relevant periods. The compiler of this report, Mr Christopher Towsey, was employed by BHP as Senior Geochemist from 1984 to 1987, and verified that BHP's analyses met suitable quality control and quality assurance standards. Mr James Morrison, General Manager Exploration, worked for Mt Leyshon Gold Mines from 1985 to 1996 and was involved in their Charters Towers drilling in 1993.

Diamond-drill core samples were cut by diamond-saw with half-core samples assayed of discreet geological intervals. These typically produce 0.6 kg of sample per 0.1 metre of NQ size half core. Alteration zones were sampled separately from reef material. Diamond drill core sizes were usually NQ (48 millimeter diameter core). Holes were initially started as PQ (85 millimetre diameter core) or HQ (64 millimetre diameter core) and then cased down to NQ as the holes deepened or as required by ground conditions within the hole. Samples were gathered in the field or at the rig by a geologist and a geological technician. RC drill samples are riffle split at the rig by the independent drilling company's driller's offsider and Company field technicians. Diamond-drill core was cut at the Company's core yard at Nagle Street, Charters Towers. Samples were bagged on site and then transported to a commercial laboratory in Townsville. Assaying was done by the commercial laboratory and results sent to the Company by email, fax, and mail. The supervising and senior geologists made regular visits to drilling sites, to ensure correct sampling procedures were being followed.

Twinning and wedging of drill holes was not done on a regular basis, although it has been carried out locally, especially in areas where mineralisation was confidently expected but returned low assays. Anomalous samples were re-sampled where required following further inspection by the project geologist.

12.5.10 Drilling Density

A significant cost factor to the Company on this specific project is that deep drilling is required (from 500m to 1,500m depth) and collar locations for the Central project area are located within the city limits of Charters Towers. This means that optimum collar locations are usually not possible, and the Company is forced to use vacant lots and open parklands to locate the drilling rigs and drill collar positions. The Company has to angle holes from non-optimum sites to get the required intersections, and to wedge off the main hole to get additional intersections without the cost of drilling 500m of primary hole. This imposes financial limits on the density of sampling that can be realistically used to achieve an acceptable level of risk.

Shallow deposits have been densely drilled – Warrior East on 25 metre centres and Warrior West on 15 metre centres. Deeper deposits such as Sunburst have been drilled on 50 metre to 100 metre centres. To drill the City area from surface to 1500 metre depth on 25m centres would cost more than extending the Central Decline to intersect and bulk sample the main mineralised bodies, and there is no guarantee that this drilling would adequately identify the grade distribution. The Company has therefore elected to explore the deposit by underground driving, and prove up the grade distribution by face sampling and bulk sampling the material derived from driving.

It is significant to remember that this is a very well understood deposit based on the fact that over 6,000,000 tonnes of ore has already been mined and modern studies have further advanced the knowledge and understanding of the mineralisation and the fractures that contain the mineralization, based on exposures in recent mine workings.

ITEM 13. Mineral Processing and Metallurgical Testing

Mineral processing was by conventional Carbon-In-Leach (CIL) solvent extraction, comprising crushing in jaw and cone crushers, screening, milling in a ball mill, dissolving of the gold and silver in a chemical solution and electroplating from solution onto steel wool. The steel wool is roasted and the gold and silver melted in a furnace and poured as doré bars which are about 60% gold and 35% silver. The plant had the capacity of 960 tonnes per day (340,000 tonnes per year) and was designed to allow doubling of the throughput at minimum cost or disturbance to current processing when production warranted the upgrade. The plant was formerly owned by Citigold but sold to Maroon Gold with an agreement to toll treat Citigold's ore. A new gravity processing plant is planned to be constructed at the Stockholm mining area using the latest sorting, gravity and small scale leaching of ore (*see figure 36*).

Metallurgical test-work was completed prior to the construction of the CIL plant in 1996-97, and fine-tuned as the plant operated intermittently from 1997 to 2000 and from 2007-2015. Some 103,000 ounces of gold has been processed and sold from 1997-2015. The plant operated continuously from late 2006-2015. Metallurgical recoveries were routinely reported each Quarter in the Company's Quarterly Activities Report to the ASX in 2006-2015, and averaged 97% to 98%. At head grades of 5 grams per tonne Au to 15 grams per tonne Au, less than 0.2 grams per tonne is lost in tails.

Silver is recovered in the CIL process along with the gold, recovering about one ounce of silver for every 1.5 ounces of gold.

Through contracting parties the Company has successfully has 'repurposed' waste rock from the mine into gravel, road materials and land reclamation into sporting facilities. This is discussed in more detail in Items 14 and 15.

Water supply from the old mine workings meet stock quality drinking water standards. The mine water is not acidic and is slightly alkaline.

The tailings from previous processing and the waste rock stockpiles have been assessed in detail and studied through the environmental geochemistry assessment with the conclusion that the mine waste cannot produce deleterious outcomes.

We make reference to the following technical documents:

a) Environmental Geochemistry Assessment of Waste Rock Stockpiles and Tailings for at Charters Towers Goldfield, Queensland: Parts 1 & 2, by Dr. Sibasis Acharya, Project Consultant, Experts in Mining and Mineral Processing Optimization (EM2PO) Ltd, Australia, dated 31/01/2016 (Part 1) and 23/08/2016 (Part 2);

b) Assessment of Neutral/Alkaline Mine Drainage of Waste Rock Stockpiles and Tailings for Citigold at Charters Towers Goldfield, Queensland, by the same author, and dated 22/10/2016.

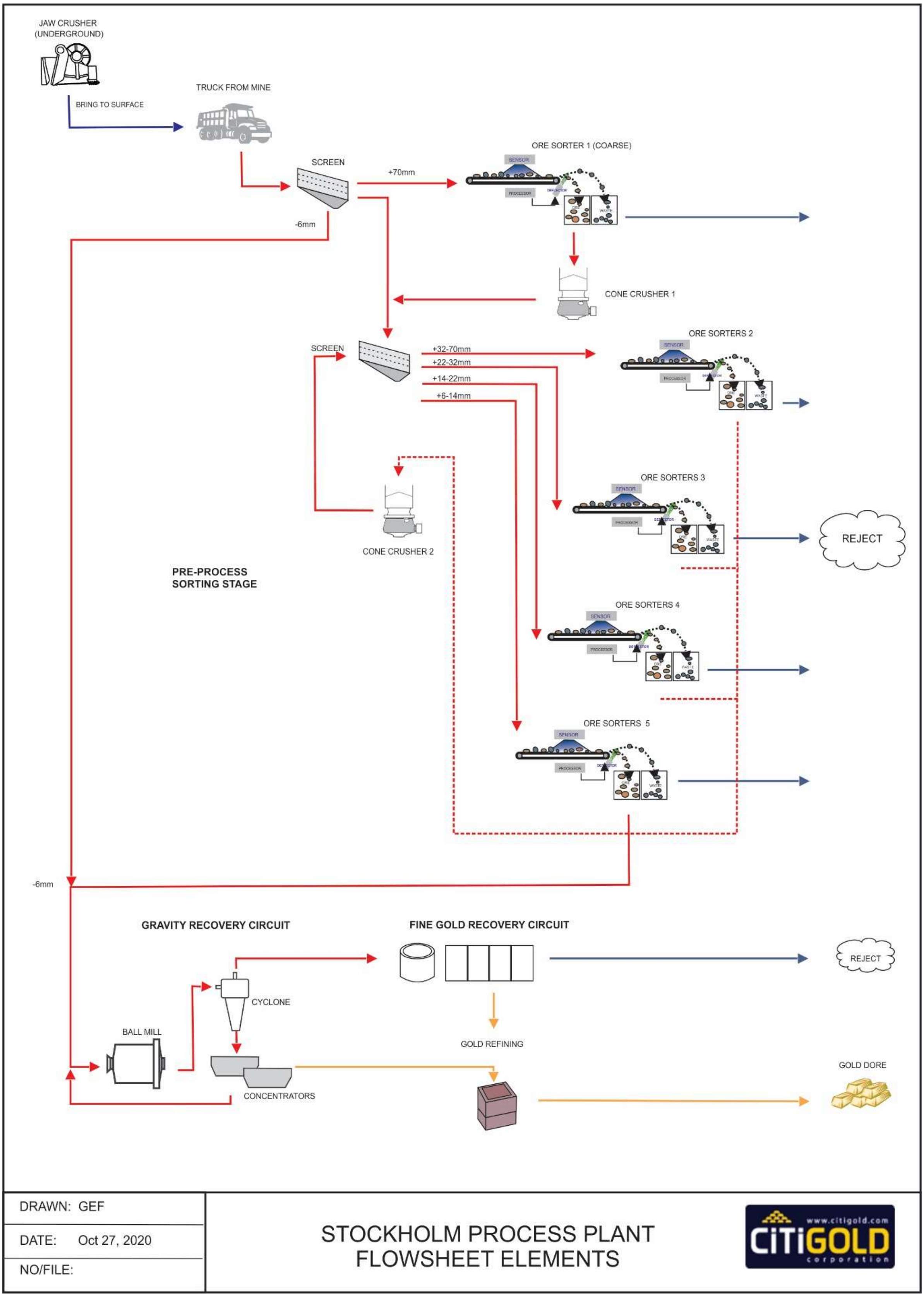


Figure 36. Gold production process flowchart.

Figure 37. Pouring the gold doré bars after extraction and smelting at the Company's Charters Towers project.

Figure 38. The final product – unrefined gold doré bars at the Company's Charters Towers project containing mainly gold and silver with ~5% impurities.

ITEM 14. Mineral Resource Estimates

14.1 Inferred Mineral Resource Grade Estimation

Gold Resource

The mineral resource drilling database in 2005 comprised 147,053 metres of drilling from 1,809 drill holes, of which 44,259 metres is diamond-core (mainly HQ [63.5 mm] and NQ [47.6 mm] diameter) in 322 holes, 94,694 metres is reverse circulation (RC) percussion drilling in 1,240 holes and 8,100 metres of other non-core drilling (mainly open-hole percussion) in 247 holes. The holes intersected down-dip and along-strike extensions of known structures. Drilling since 2005 to 30 June 2011 has increased the database to ***3,272 holes totalling 358,525 metres,*** an increase of 1463 holes and 211,472 metres. Diamond drilling increased by 525 holes and 150,332 metres (average hole length 286 metres and averaging seven holes completed per month), including the single Deep Hole (CT 5000) of 2,001 metres.

Since 2011 most of the diamond drilling has been within the Mining Leases associated with the Imperial Mine, drilling the Warrior, Sons of Freedom and Imperial reefs, and including a small number of holes drilled parallel to the Warrior ore body for geophysical test work and research. The vast majority of this drilling has been in-fill drilling, within the previous Inferred Mineral Resource for the Imperial area, and has not added significantly to the 2012 total Inferred Mineral Resource. The Imperial drilling was aimed at converting Indicated Mineral Resources to Probable Ore Reserves and grade control and stope definition drilling ahead of immediate mining.

From this database, there are 1,567 significant drill intersections for which a mineralised body code could be identified, in 645 drill holes. A significant drill intersection is one assaying 0.1 grams per tonne Au and/or over 100ppm lead, or sometimes an intersection with identifiable quartz reef or formation material indicating that the reef had been intersected even if assay values were low. Over 97% of the intersections are above 0.1 metre-gram per tonne Au and over 80% of intersections exceed 1 metre-gram per tonne Au. There are 30 significant drill intersections deeper than 1,000 metres, of which 27 are deeper than 1,100 metres and 18 deeper than 1,200 metres. The deepest significant intersection is 1,817.2 metres (0.4 grams per tonne Au), and the best gold grade deeper than 1,200 metres was 20.54 grams per tonne Au. This is positive proof that economic gold grades persist along strike and down dip from the previously mined areas down to at least 1,200 metres vertical depth, with identical mineralization in 18 intersections persisting to 1,800 metres depth.

The following sections examine:

- The statistical distribution of gold values in the drill intersections,
- The relationship between gold and lead in drill samples, and how this can be used to define ore shoots if drilling intersects an apparently barren section of the shoot,
- Lower cut-off grades to use in mineral resource estimation
- Whether or not a Top Cut should be applied to cut out outlying high-grade values.

14.1.1 Statistical Distribution of Drill Intersection

In common with many sets of geochemical data, the significant drill intersections at Charters Towers show a log normal distribution when standardised as grade-width accumulations in metre-grams per tonne (that is, the drill hole true width intersection in metres multiplied by the grade in grams of gold per tonne of rock). Figure 39 (below) shows a frequency distribution plot of the 1,559 drill intersections, and it shows a near-perfect log normal distribution. There is a slight negative skewness (-0.158), but the geometric mean is 2.42 metre-gram per tonne Au, close to the median value of 2.08 metre-gram per tonne Au. In a perfect normal distribution, the mean would equal the median. Therefore this normal distribution means that log normal statistics can be used when dealing with the whole population. However, care should be exercised when dealing with partitioned data, such as intersections above a particular cut-off, where the population of data points is no longer log normal.

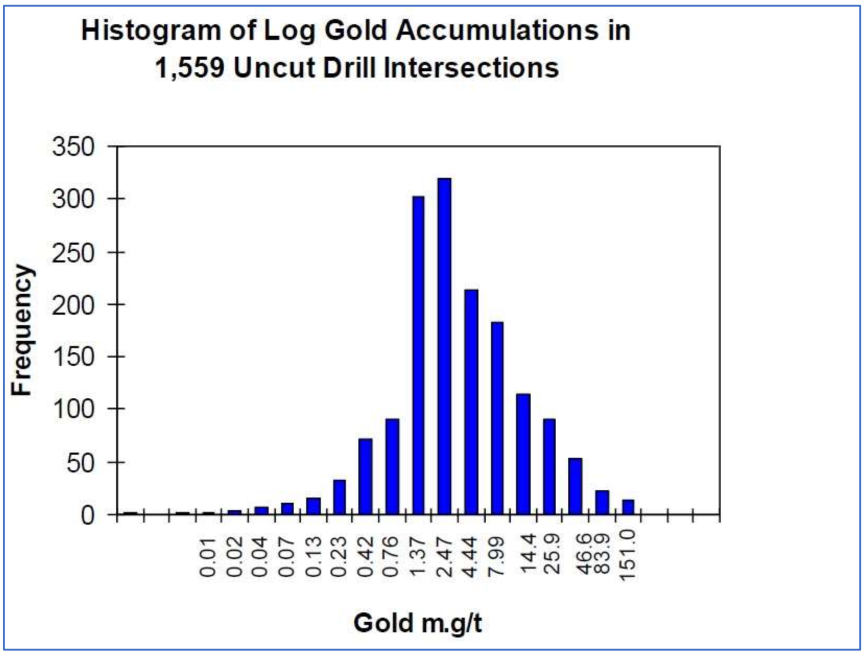


Figure 39. Frequency Distribution of Significant Drill Intersections showing log normal distribution

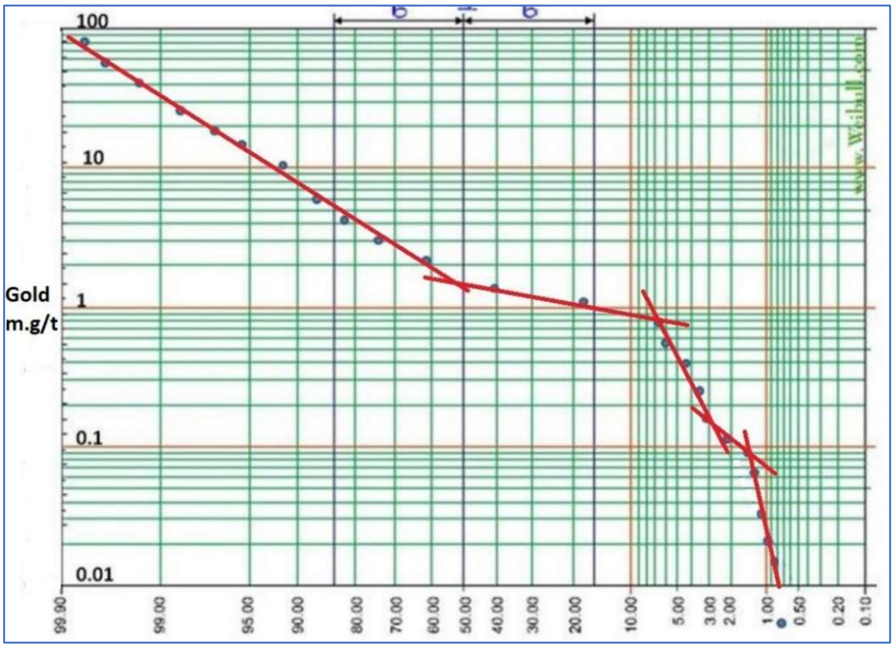


Figure 40. Log Probability plot of 1,559 drill intersections. It shows a background population below 0.1 m.g/t Au, one mineralising population from 0.3 to 1 m.g/t and a high grade mineralising population above 1 m.g/t Au.

14.1.2 Relationship of Lead and Gold in defining ore shoots

The gold distribution is not uniform within the reefs. Old mining records show that the gold was concentrated not in shoots but random areas or lenses within the reefs, and the previous miners used the presence of galena (lead sulphide) to define high-grade gold areas (Reid, 1917). Because of the variability of gold values and the 30% payability, there is a strong statistical chance (70%) that a random hole drilled into a reef will be more likely to intersect a barren part of the reef rather than the ore shoot. Averaging of all drill grades in a particular reef is therefore likely to grossly underestimate the average gold values, as an average would include all the barren 70% that would not be mined in practice. This would normally be countered by outlining the ore shoots and only using holes within the shoots, but historical records show that the shoots were not uniformly mineralised, with barren patches within shoots. Holes with low gold values may still be within a significant shoot, but this low-grade patch would be identified during mining and left behind as a pillar.

The Company examined the relationship between lead and gold to see if the lead values could be used to define the boundaries of shoots if gold values were low. Of the 1,559 intersections, 903 contain significant lead values. Initially, only samples that exceeded 1 grams per tonne Au were assayed for lead. More recent samples were assayed for lead regardless of gold values. Figure 41 (below) shows a log plot of gold versus lead for the 903 lead and gold intersections. It shows a denser clustering of values above 1 grams per tonne Au, which reflects the bias in assaying more samples above 1 grams per tonne Au. As gold and lead were assayed on the same sample, actual assay values were examined, in ppm (equal to grams per tonne) rather than grade-width accumulations, as the drill width is irrelevant when comparing gold to lead ratios in the same sample. The maximum lead value was 19,600 ppm (1.96%) lead. The maximum gold value was 117 grams per tonne Au. Lead is unlikely to pose a significant health risk or metallurgical penalty and has not been an issue in underground mining at the Imperial Mine since 2006.

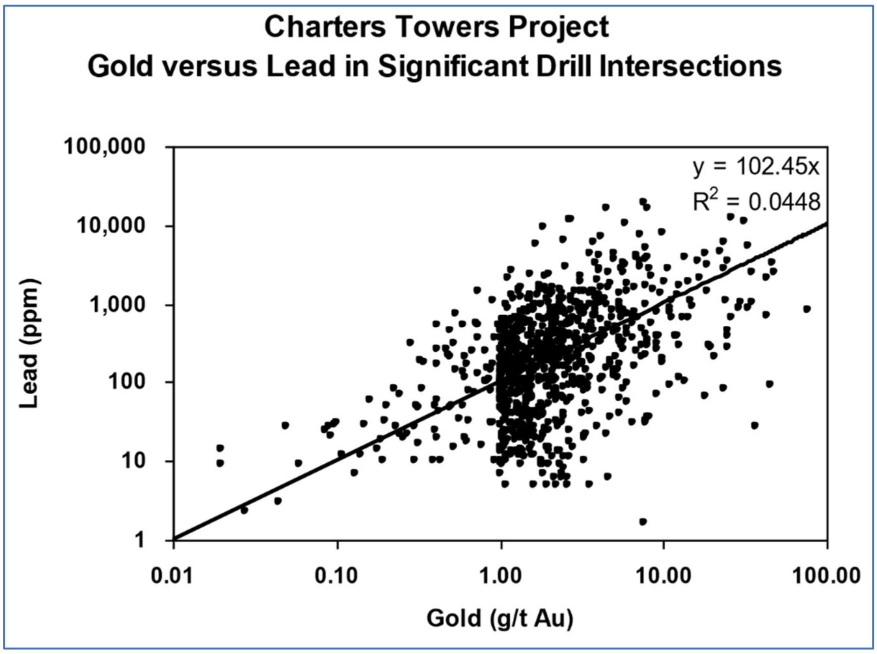


Figure 41. Log plot of gold versus lead for over 1500 drill intersections used in the Company's mineral resource estimation.

A linear regression line was calculated by the method of *least squares best fit*, which returned the linear regression equation of y = 102.45x

This indicates that a gold value of 1 ppm should be accompanied by a lead value of 102 ppm. The Coefficient of Determination (R^2 value) is 0.0448. The R-squared value (R^2) is a number from 0 to 1 that reveals how closely the estimated values for the trendline correspond to the actual data. A trendline is most reliable when its R-squared value is at or near 1.

The ratio also holds for smaller samples, such as the Brilliant Reef drill holes, and also holds for zinc as well, as shown in Figure 42 below:

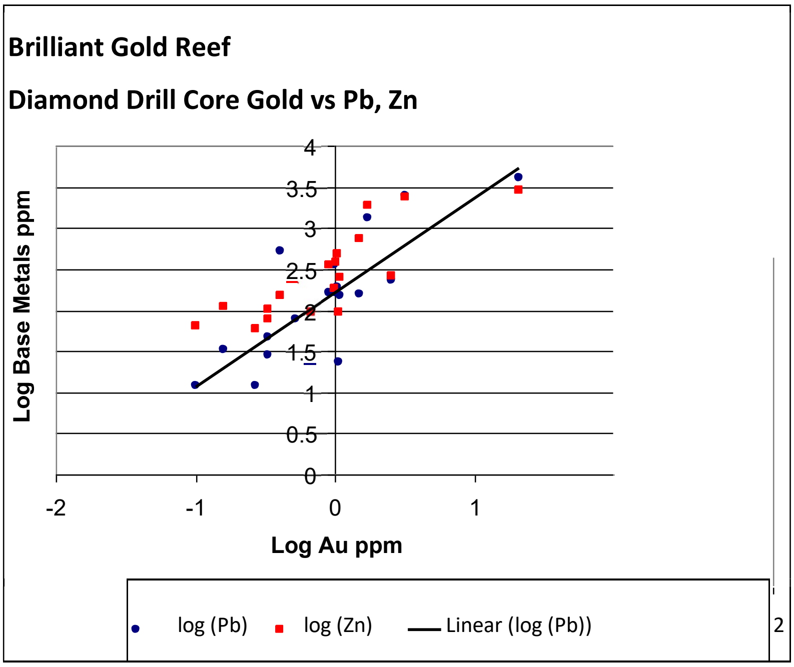


Figure 42. Log plot of gold versus lead and zinc for 19 drill intersections in diamond-core hole CT647 on the Brilliant reef

Face samples were examined from 488 samples in the No.2 Cross Reef (Maude St. Leger reef) and a similar relationship between lead and gold was found (Figure 43 below).

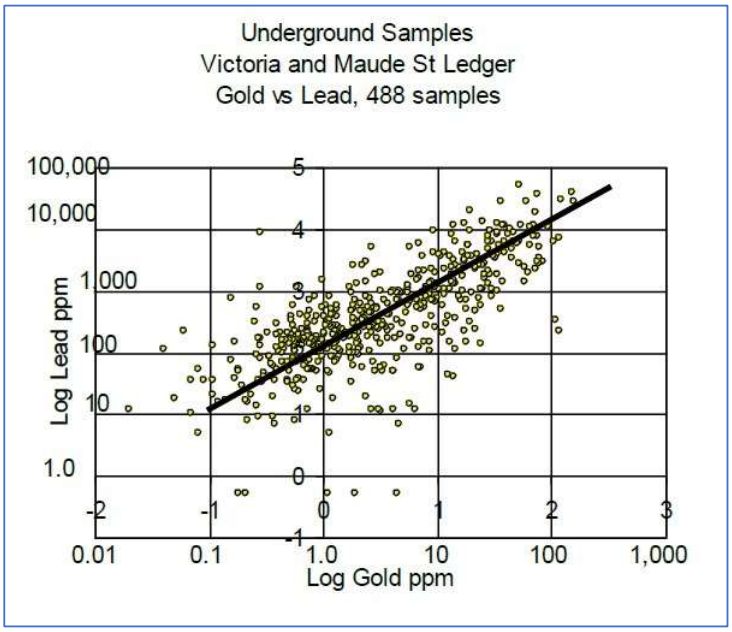


Figure 43. Log plot of gold versus lead and zinc for 488 stope face samples from the No.2 Cross Reef (Maude St Leger reef)

From this relationship, the Company has determined that ore shoots can be reliably defined by lead values where gold values are abnormally low due to the nuggetty distribution. A contour of 100 ppm lead should enclose gold values of 1 ppm (1 grams per tonne) and above. The presence of galena can be used as a visual guide to high gold grade areas during mining. This method was used by the previous miners as the primary method of underground grade control, supplemented by rare assaying and more frequent trial crushings of bulk samples (10 to 100 tons). From 1900 onwards, visual control was the prime method (*QGMJ* 1901-1920).

However, the Company uses conventional channel-sampling for grade control and blocking out reserves underground, sampling drive faces every cut. As the sample size using Gy's sampling theory would need to be of the order of 50 kg, creating a manual handling health risk underground, the Company uses smaller samples (3 kg to 5 kg each) but taken more frequently. Mining at Imperial from 2006 to 2015 has returned satisfactory reconciliations between face samples and gold produced.

14.1.3 Cut-off Grades

The JORC Code 2004 defines Cut-off Grade (p. 20) as: *"The lowest grade, or quality, of mineralised material that qualifies as economically mineable and available in a given deposit. May be defined on the basis of economic evaluation, or on physical or chemical attributes that define an acceptable product specification."*

Cut-off grades are usually the break-even grade – the grade at which the value of the gold content per tonne of rock equals to the cost to mine it, haul it and process it. A "top cut" is the artificial cutting of high-grade assays back to some predetermined figure to avoid biasing averages by a small number of abnormally high-grades. Cut-off grades may be calculated to determine minimum gold values for a number of different purposes, such as a local stoping area cut-off, a larger shaft or level area cut-off, milling or haulage cut-offs, low-grade and high-grade cut-offs for sensitivity analyses and Net Present Value calculations, and charting of tonnage-grade curves.

One variant of the cut-off grade is the operating break-even grade, which is the minimum amount of gold needed to cover mining and processing costs. The break-even grade will vary with the gold price and according to what costs are included as mining costs. The Gold Institute Standard definitions of mining costs are used by the Company in defining its Cash Costs and its Total Mining Costs.

Table 9 (below) illustrates an example of how the Company has derived its break-even grade. It is derived from a spreadsheet where the constantly changing variables of US dollar gold price and the US-Australian dollar exchange rate can be entered to constantly update the break-even grade. It calculates the grade of gold necessary to meet the Company's Cash Cost without allowing for depreciation, amortization, cost of capital etc. used in total mining cost.

In its 2005 Resource and Reserve Report, the Company used a US gold price of US$434.75 and an exchange rate of A$1.00 = US$0.7751, which were valid on 21 April 2005. At these variables, the operating break-even grade was 5.5 grams per tonne Au in ore delivered to the mill. In 2011, the gold price had risen dramatically to over $1,800 per ounce and the Australian dollar had moved to parity with the US dollar and beyond. In September 2011 it was AUD$1 = USD $1.03, down from highs earlier in 2011 of around US $1.10. These figures were used in the May 2012 Resource and Reserve Report.

A conservative breakeven cut-off in December 2020, as per Table 9 below, was 1.75 grams per tonne Au at a gold price of US$1,755 per ounce and an exchange rate of A$1 = US$

0.73. The cost to haul and process a tonne of rock landed at surface was 0.5 grams per tonne Au and mining costs of around 1.3 grams per tonne Au.

Gold-bearing ore at Charters Towers will be mined under a variety of circumstances, following successful mining at the Imperial Mine. The mining method used is long-hole open stoping on sub-levels 10 metres to 15 metres apart vertically, strike drives in ore whenever possible and decline access between sub-levels. The main Central area is likely to be mined by vertical shaft haulage with 3 metre x 3 metre twin parallel and generally adjacent declines access for men and supplies.

Exploration and much of the mine development will be mined along the strike of the mineralised body, mining through both high-grade shoots and more barren parts of the reef. Exploration and bulk sampling costs will be largely covered by ore won from the development drives. The reef width will vary along the drive. Using the factors in Tables 9 and 10 below a 3 metre x 3 metre production or exploration drive can be mined at breakeven if it carries a reef 1.0 metre wide at 5 grams per tonne Au within the reef (2 grams per tonne Au average development grade).

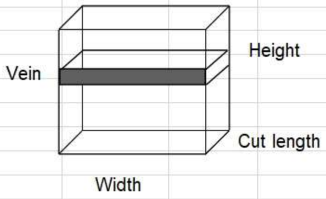
Because the operation may process rock at various grades below the break-even grade, a lower mineral resource cut-off grade-width accumulation of 3 metre-gram per tonne Au (3 grams per tonne Au over a one-metre width) has been selected for drill intersections. This includes material within, or marginal to, the shoots likely to be mined.

Figure 44 (below) shows a range of cut-off values and the percentage of the 1,559 drill intersections above cut-off. About 40% of the intersections are above 3 metre-gram Au, and 32% above 4 metre-gram. per tonne Au.

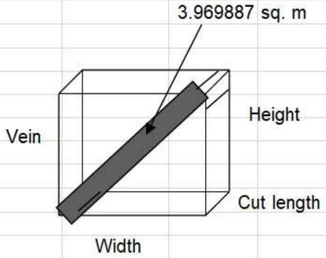
Charters Towers Gold Operations					
BREAK-EVEN GRADE ESTIMATOR					
Cutoff grade estimator	**RED cells are results**		**Enter new data in BLUE cells**	Aus$/t	Cost equivalent g/t
Enter new data in BLUE cells			Mining Cost (Aus$/t)	$ 81.00	1.05
Head Grade (g/t) =	8.1		Surface Transport (Aus$/t)	$ 6.00	0.08
Tonnes per ounce =	3.84		Ore Processing (Aus$/t)	$ 27.00	0.35
Mining Cost (US$/oz) =	$ 341.95		Rehabilitation & shutdown (Aus$/t)	$ 1.00	0.01
Mining Cost (Aus$/tonne)=	$ 122.00		Site Administration (Aus$/t)	$ 7.00	0.09
(incl.processing & transport)			**Total Cash Cost (Aus$/t)**	$ 122.00	1.58
Processing Plant recovery (%) =	95				1.7
Gold Price (Aus$/oz) =	$ 2,404.11		**Gold Price (US$/oz)**	$ 1,755.00	
Gold Royalty (%) =	5.0		**Exchange rate Aus$1.00=US$**	0.7300	
			Gold Price (Aus$)	$ 2,404.11	
Metal recovery after royalty (%) =	90.25		**Aus$ per gram**	$ 77.30	
Breakeven grade = (mining & milling costs)/(metal price x metal recovery)					
=	**1.75**	**g/t Au**		**1/06/2020**	
				Enter new data in BLUE cells	
Mining Cost Aus$ per ounce=	$ 468.42	**Costs as g of Au**	**Mining Cost**		
			Drill & Blast	$ 5	A$/tonne
			Stope Production	$ 10	A$/tonne
			UG Processing	$ -	A$/tonne
			UG Transport	$ 11	A$/tonne
			UG Services	$ 17	A$/tonne
			UG Administration		
			UG General	$ 5	A$/tonne
			Sub-total	$ 48.00	A$/tonne
			Mine Development	$ 33	A$/tonne
		1.0	**TOTAL MINING**	$ 81.00	A$/tonne
			Ore Processing		
			Surface Haulage	$ -	A$/tonne
			Crushing & Screening	$ -	A$/tonne
			Grinding	$ -	A$/tonne
			Leaching	$ -	A$/tonne
			Process Services	$ -	A$/tonne
			General	$ -	A$/tonne
			Environmental Rehabilitation	$ 2	
			Toll treating	$ 25	A$/tonne
		0.3	**TOTAL PROCESSING**	$ 27.00	A$/tonne

Table 9. Break-even grade estimator.

Value of gold contained in narrow veins in Decline and drives			
	Horizontal	45 deg dip	20 deg dip
Drive Height (m)	3.00	3.00	3.00
Drive Width (m)	2.60	2.60	2.60
Cut length (m)	2.70	2.70	2.70
Vein Width (m)	1.00	1.00	1.00
S.G. (t/cu.m)	2.80	2.80	2.80
Ore Grade (g/t Au)	5.00	5.00	5.00
Gold Price US$/oz	$ 1,750.00	1,750.00	1,750.00
Exchange rate A$1.00=US	0.7300	0.73	0.73
Aust gold price ($A/oz)	$ 2,397.26	2,397.26	2,397.26
Driving cost (A$ per metre)	$ 2,074.80	2,074.80	2,074.80
Ore haulage & sorting (A$/t)	$ 3.00	3.00	3.00
Waste tonnes (t)	39.31	28.96	38.05
Ore tonnes (t)	19.66	30.01	20.92
Contained gold (oz)	3.16	4.83	3.36
Value of recovered gold (Aus$)	$ 6,477	$ 9,890	$ 6,893
Profit/loss	**$875.22**	**$4,287.92**	**$1,290.91**
Mining, haul & sort cost (A$/t)	**98.00**	**98.00**	**98.00**
Physical Gold Losses	10%	10%	10%
Mill recovery	95%	95%	95%
Milling cost A$ per tonne	$ 27.00	$ 27.00	$ 27.00
Total milling cost ($/t ore)	$ 530.71	$ 810.33	$ 564.77
Net profit	**$344.51**	**$3,477.58**	**$726.14**
Average development grade	1.50	2.29	1.60
Total tonnes per cut	59.0	59.0	59.0
TARGET			
Ounces per year	30,000	oz/year	
Expected grade	5.00	g/t	
Weeks worked per year	51	weeks/year	
Shifts per day	2	shifts per day	
Cuts per shift per heading	1	cut per shift per heading	
Cut ratio (install services, bolting)	75%	(e.g. 3 cuts every 4 days = 75%)	
Days worked per week	6		
Ore Tonnes per year needed	186,620	tonnes	
Ore Tonnes per week needed	3,659	tpw	
Ore Tonnes per day	610		
Ore Headings needed	21	14	19



45 deg dip		20 deg dip	
3.969887	sq. m	2.77	sq. m



Mining cost A$/t	Admin, transport A$/t
$ 81.00	$ 14.00

Driving Cost per metre
$ 2,074.80

Table 10. Value of gold contained in on-reef development decline and drives. If the vein is one metre wide and runs 5 g/t Au, then the overall grade of 1.5 g/t Au is breakeven.

14.1.4 Variation in data set with cut-off grade

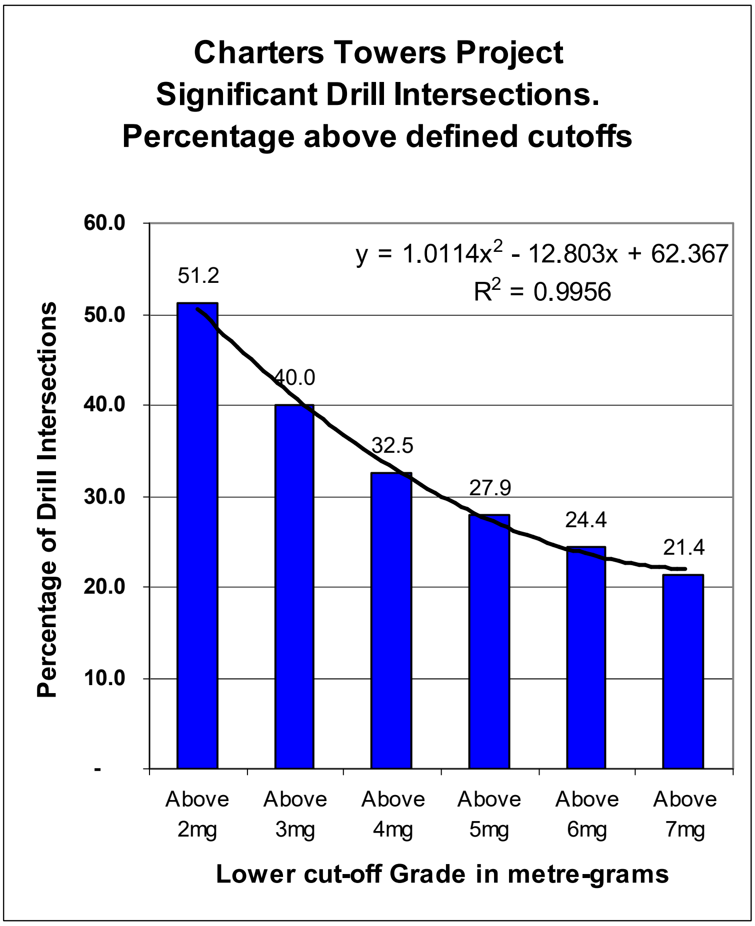


Figure 44. Plot of significant drill intersections showing percentage of intercepts above various lower cut-off grades.

A polynomial regression line was calculated by the *least squares best fit* method that returned the polynomial regression equation of:

$y = 1.0114x^2 - 12.803x + 62.367$

The Coefficient of Determination (R^2 value) is 0.9956. Given the high value of R^2 (high confidence) in Figure 44, the equation can be used to calculate the percentage of significant drill intersections (the 'y' value) at any cut-off value (the 'x' value).

Cut-off	Frequency	%
Above 0.1 metre-grams per tonne	1517	97.3
Above 1 metre-grams per tonne	1274	81.7
Above 2 metre-grams per tonne	798	51.2
Above 3 metre-grams per tonne	623	40.0
Above 4 metre-grams per tonne	507	32.5
Above 5 metre-grams per tonne	435	27.9
Above 6 metre-grams per tonne	381	24.4

Table 11. Frequency and percentage of significant drill intersections above a range of cut-off grade values in metre-grams per tonne gold.

14.1.5 Top Cut for high-grade values

There is considerable evidence from Reid (1917) and the fortnightly mine managers' reports that recovered grades on parcels of several thousand tons frequently exceeded two to five ounces per ton. A selection of the major mines, accounting for two-thirds of the total production, is listed in Table 12 below, showing average recovered grade. ITEM 4.1.2 of the 2005 report previously showed that the in situ grade used to assess the gold resource would be 10% to 20% higher than the various mines historical recovered grades. The Victory, Queen Cross and Victoria mines averaged over two ounces to the ton (62 grams per tonne) and eight mines exceeded 40 grams per tonne recovered. *In situ* stope grades in individual stopes would have exceeded the averages.

Geologists often cut high-grade values in ore reserve estimation to avoid biasing any averaging techniques by a small number of unusually high gold values. Given that the distribution of log normalised values in the Company drill intersections approximates a normal distribution (Figures 38 & 39, above) with no significant outlying high values, no top cut of drill grades has been used.

Cutting high-grades would artificially lower the average grade but there is no valid statistical basis in this data set for cutting high-grades. The high-grades (up to 117 grams per tonne and 151 metre-grams per tonne Au) are part of the normal data set. This is supported by mining in the Imperial mine from 2006-2015 which often showed face grades of hundreds of grams per tonne that were not detected in pre-mining drilling.

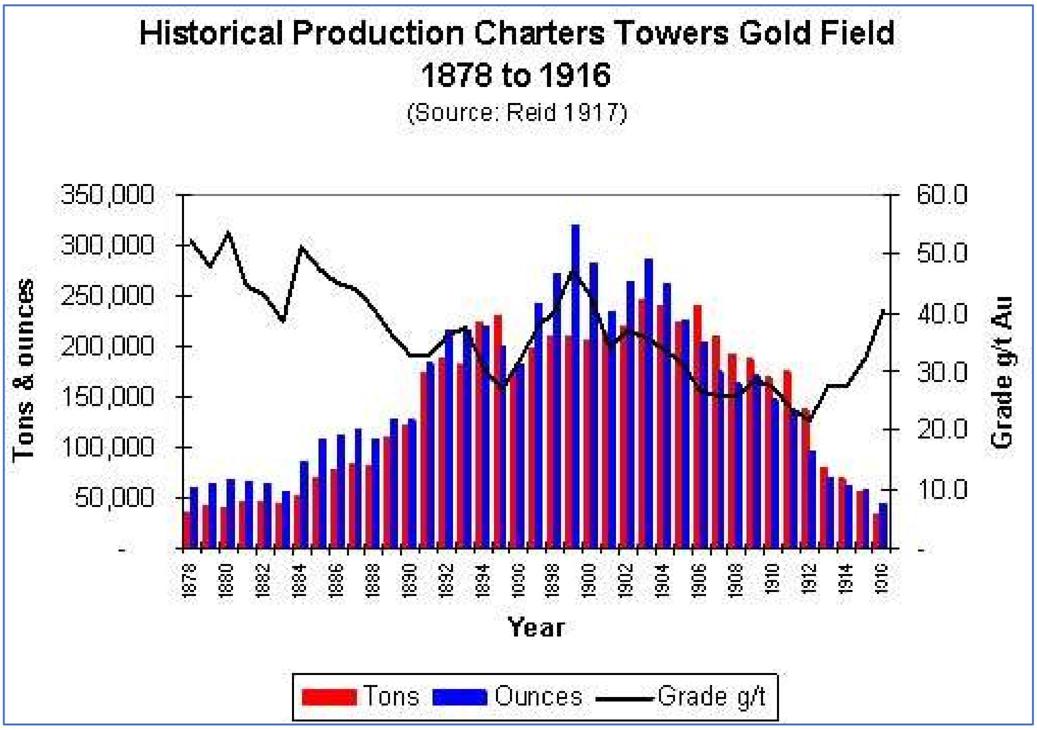


Figure 45. Historical production at Charters Towers gold field from 1878 to 1916 showing tons, ounces and yearly average recovered grades

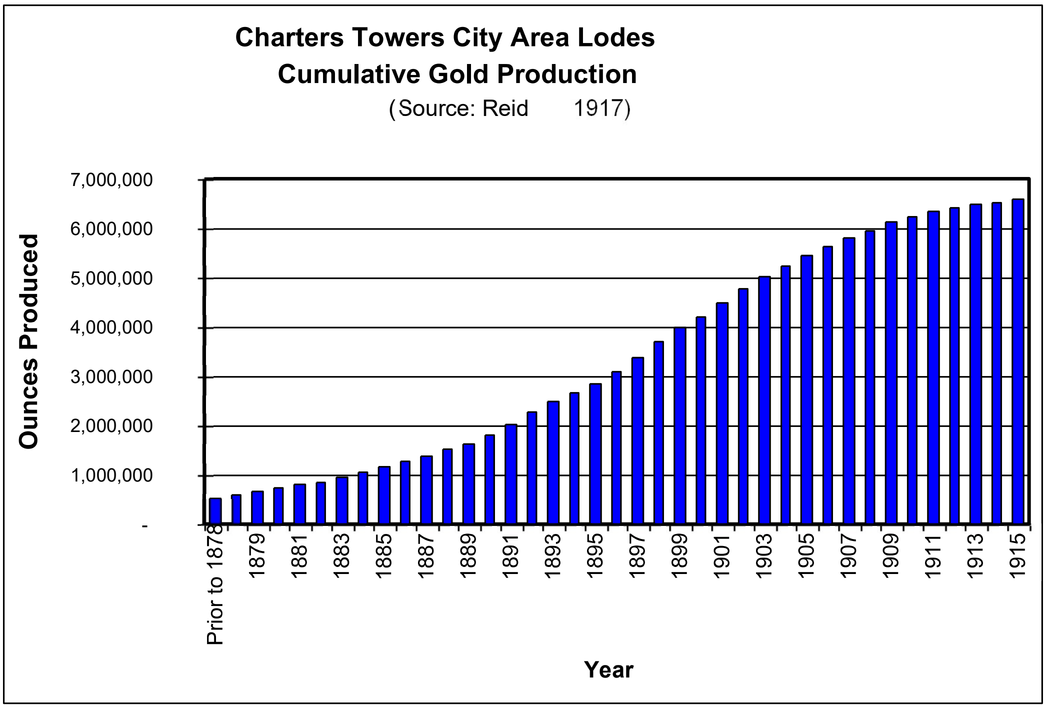


Figure 46. Historical cumulative gold production at Charters Towers was 6,600,000 ounces of gold from 1878 to 1916.

Historical Ore Grades - As a generalization, overall average recoveries of gold through the processing of the ore was about 90% of the contained gold (Reid 1917). Reid also stated that the goldfield recovered a total of 6,600,000 ounces of gold at an average *recovered grade* of 34 g/t gold. Therefore, as we are reporting on *in situ* grades for Mineral Resources in this report, it is reasonable to add 11% to the *recovered grades* to estimate the *in situ* ore grades of the ore before it was actually mined. On this basis the 34 grams per tonne recovered + 11% means the *in situ* ore grade was on average 38 grams of gold per tonne of ore (38 g/t at 90% processing recovery = 34 g/t recovered into gold bars).

The average reef width mined historically was 0.7 to 0.8 metres true width (Reid 1917). A similar width of 0.75 metres was estimated by Citigold by using Surpac modeling of stope voids and relating the volume to the actual tonnage extracted historically. A density of *in situ* material of 2.7 t/m^3 was used to derive the average thickness of 0.75 metres. To compare the in situ grades in metre-grams we need to convert the historic grades to metre-grams per tonne.

The historic estimated *in situ* grade was 38 g/t, at a conservative reef width of 0.7 metres, so the historic *in situ* accumulated grade in metre-grams will dilute by 30% to 27 metre-grams per tonne Au **(**38 g/t x 0.7 metres = 27 g/t over one metre). Therefore, any global Ore Reserve calculated at that time (1871-1916) at a one-metre mining width would have returned a global reserve grade of the order of 27 metre-grams per tonne Au. So for any modern global resource estimation this 27 metre-grams per tonne Au is the maximum grade that could be realistically expected at a one-metre reef width.

In the Company's drilling database there are over 1,500 new drill intersections used in the Company's mineral resource estimation (including both the Central and Southern areas). To correctly compare current and past ore grades we need to use the same historic mining cut-off grades. Applying the historic mining cut-off grade of 9 grams per tonne gold (6 pennyweights – Reid 1917) through the current database gives 272 intersections with an average grade of 27 metre-grams per tonne gold.

Therefore the modern drilling based, in situ, gold resource grades match the average in situ-ore grades for the previously mined and recovered 6,600,000 ounces of gold. The remarkably similarity of the new areas, that are along strike and down dip from the previously-mined shoots in the same structures, indicates that the mineralisation is identical.

This is positive proof that based on Citigold's drilling, there is extensive economic grade gold mineralisation at grades in a similar range to those achieved by previous production, located along strike and down-dip from previous underground workings.

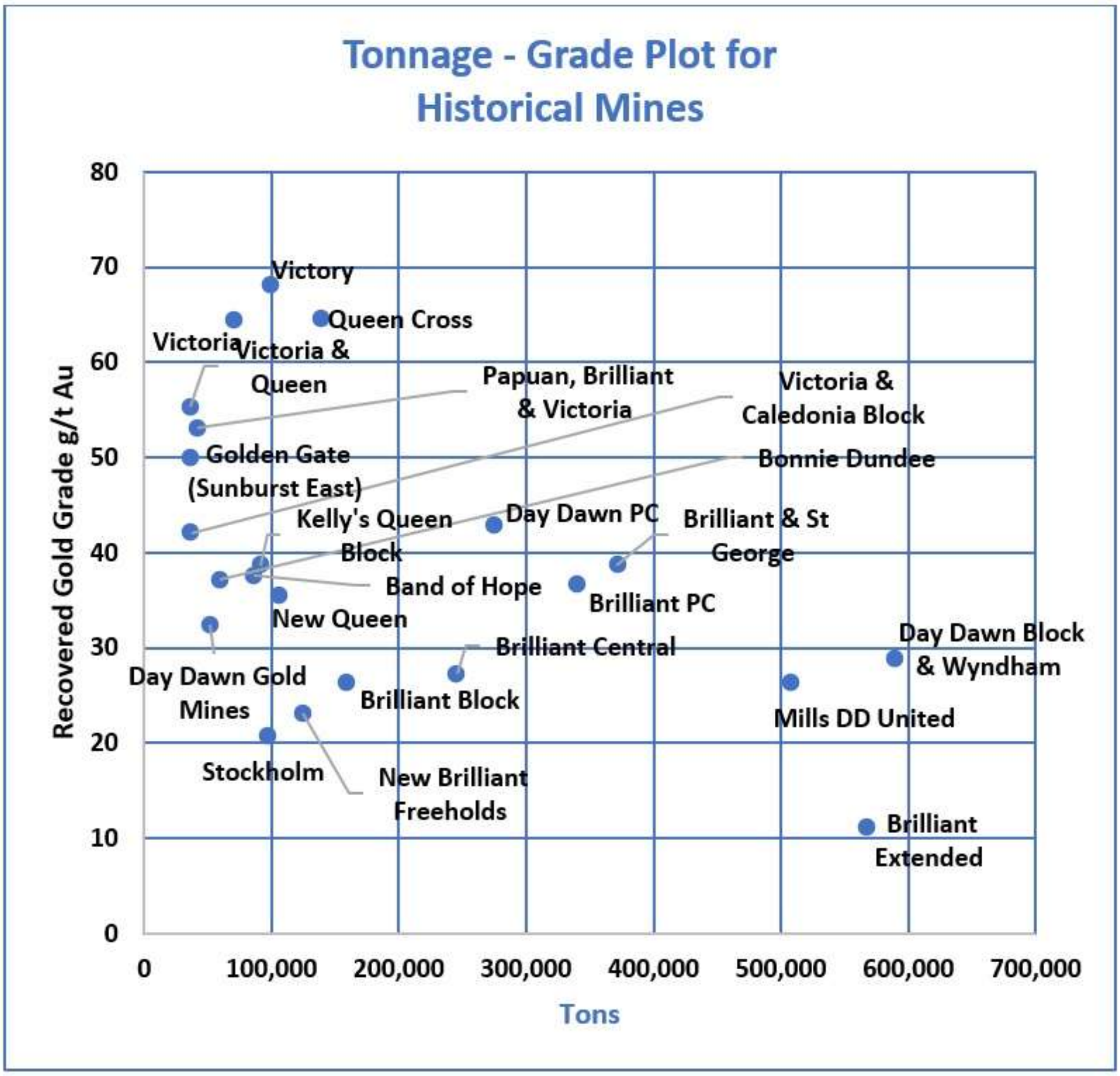


Figure 47. Tonnage – Grade plot for the historical mines.

Summary	Tons	Ounces	Recovered Grade (g/t Au)
Victory	98,803	216,360	68.1
Queen Cross	138,125	287,039	64.6
Victoria	70,913	146,968	64.5
Victoria & Queen	35,730	63,613	55.4
Papuan, Brilliant & Victoria	41,354	70,559	53.1
Golden Gate (Sunburst East)	35,303	56,626	49.9
Day Dawn PC	275,128	379,859	42.9
Victoria & Caledonia Block	36,849	49,906	42.1
Brilliant & St George	371,088	462,296	38.7
Kelly's Queen Block	91,586	113,937	38.7
Band of Hope	86,454	104,637	37.6
Bonnie Dundee	59,296	70,808	37.1
Brilliant PC	340,582	403,198	36.8
New Queen	106,366	121,515	35.5
Day Dawn Gold Mines	51,937	54,120	32.4
Day Dawn Block & Wyndham	589,531	546,871	28.9
Brilliant Central	245,477	215,523	27.3
Brilliant Block	158,606	133,988	26.3
Mills DD United	507,428	428,429	26.3
New Brilliant Freeholds	124,360	92,537	23.1
Stockholm	97,667	64,894	20.7
Brilliant Extended	567,500	202,188	11.1
TOTAL	**4,130,083**	**4,285,871**	**32.3**
			Weighted average recovered grade

Table 12.Production from the major mines, accounting for two-thirds of the total production, showing average recovered grades based on reported recoveries of 90% of the gold, the insitu average ore grades would have been 11% higher

14.2 Silver Resources

The silver resources and reserves are not considered material to the cash flow of the project in terms of "materiality" as defined in the ASX Guidance Note 8 paragraph 93, which defines "material" as a difference of 10% to 15%. In 2020 the silver price averaged around USD$17.50 compared to an average gold price of USD$1600, making the average silver price 1.1% of the average gold price (see Figures 47 and 48 below). This matches the average ratio of 1.12% achieved from Citigold's production from 2008-2015 as shown below in Table 13.

The silver resources were detailed in the 2012 Resources and Reserves Report and are not further reported here as the silver resource is not material to the Project.

Figure 48. The average gold price in the 12 months ended 30 June 2020 is around USD$1600 per ounce.

Figure 49. The average silver price in the 12 months to 30 June 2020 has been around USD$17.50, about 1.1% of the average gold price shown above in Figure 48.

From July 2008 to September 2015, the Company sold just over 62,000 ounces of gold and 34,000 ounces of silver, at a ratio of 1.8 ounces of gold for every ounce of silver. Silver revenue was 1.1% of the gold revenue, and silver ounces were 35% of the total weight of precious metal sold.

Financial Year ended 30 June	Gold Sold (ounces)	Gold Sold ($)	Gold Royalty 5%	Silver Sold (ounces)	Silver Sold ($)	Silver Royalty 5%
2008	13,784	$12,156,873	$ 607,844	8,343	$ 199,779	$ 9,989
2009	10,906	$13,027,965	$ 651,398	5,843	$ 139,924	$ 6,996
2010	15,888	$19,668,312	$ 983,416	8,027	$ 192,215	$ 9,611
2011	8,451	$11,772,024	$ 588,601	5,674	$ 135,863	$ 6,793
2012	7,560	$12,433,895	$ 621,695	3,056	$ 98,230	$ 4,912
2013	2,270	$ 3,433,470	$ 169,174	1,054	$ 28,016	$ 1,401
2014	2,806	$ 4,011,347	$ 195,567	1,084	$ 24,564	$ 1,228
2015 to 30 Sep	983	$ 1,359,008	$ 62,950	1,067	$ 24,509	$ 1,225
TOTAL	**62,648**	**$77,862,894**	**$ 3,880,644**	**34,148**	**$ 843,101**	**$42,155**
			Ratio in bar	35%	Silver	
				65%	Gold	
			$ Value Ratio	1.08%	Silver:Gold	

Table 13. Gold and silver production, sales revenue and royalties for the financial years 2008 to 2015.

14.3 Inferred Mineral Resources

14.3.1 Database Integrity

Between 1999 and 2003, the drill collar positions, drill logs, assays and the Company database were extensively cross-checked against original records, verified and audited to eliminate data errors prior to re-evaluating the resource estimate. The database was audited on three occasions during and after 1999 by external consultant groups (Pathfinder Exploration Pty Ltd, Veronica Webster Pty Ltd and Hackchester Pty Ltd). In 2011 the database was again audited by Snowden (Dominy, 2011 *unpublished*).

Some hole collars were re-surveyed, and drill core was frequently checked or re-logged to ensure that assayed intersections were correctly matched to the correct mineralised bodies. Where drill holes were interpreted in Surpac mining software to have passed through a body but no assay was recorded or assays were unremarkable values, the relevant logs were examined for the presence of quartz reef material or the core re-logged, specifically searching for ‘formation’ (altered granite adjacent to reef fissures) or quartz reefs. Any un-assayed reef material discovered in this process was half-core sawn and sent for assay.

Multiple gold assays on any one intersection, resulting from either quarter-core sampling or reassaying of original samples and check assaying were detected and a procedure written for handling such results. Generally, if the repeat assays were within 10% to 15% of the original, the original assay was used. Where the uneven gold distribution resulted in widely variable results, samples were often sent for further screen fire assaying, or professional judgment used to select a suitable value to use. This may have been an average of two or more of the more consistent or acceptable values, or severe outliers rejected from more closely grouped results.

14.3.2 Central Area

14.3.2 (a) Grade estimation

The 1,559 drill intersections were partitioned based on collar position northings and eastings to select holes within the Central area only (Figure 50 below). Holes included in the Central area are north of 7776000mN AMG and east of 420,500mE AMG. This easting excludes holes drilled on the Great Britain mine northwest of the Central, but includes all drilling on the Day Dawn, Brilliant, Queen Sunburst and Cross Reef structures that make up the majority of the previous production areas. The drilled extensions of these areas are planned for production by the Company.

There are 455 significant drill intersections within this area. The metal grade-width accumulations in metre-grams per tonne display a log normal distribution as shown in Figure 51 (below). The plot has a slight negative skewness (-0.06) and a small number of outlying high values. However, the geometric mean of 1.213 almost equals the median (1.218), indicating that the outliers do not distort the average by any significant amount. This confirms and supports the decision not to cut high-grades.

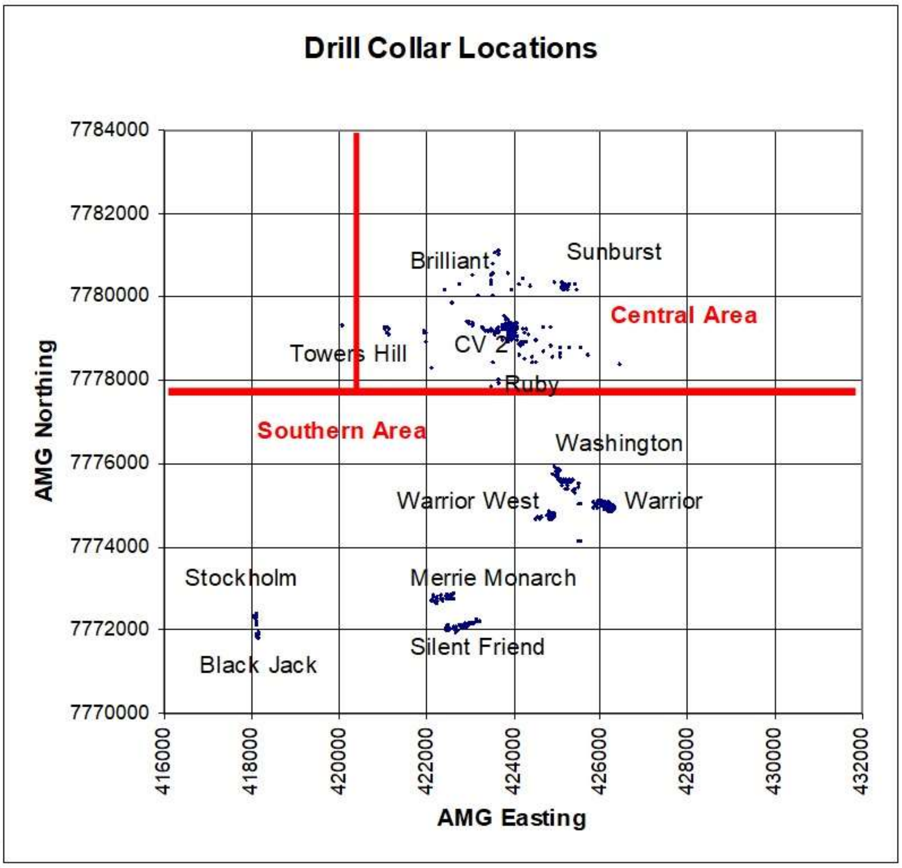


Figure 50. Drill Collar locations, showing the Central Area and the Southern Area, in which Mineral Resources were estimated.

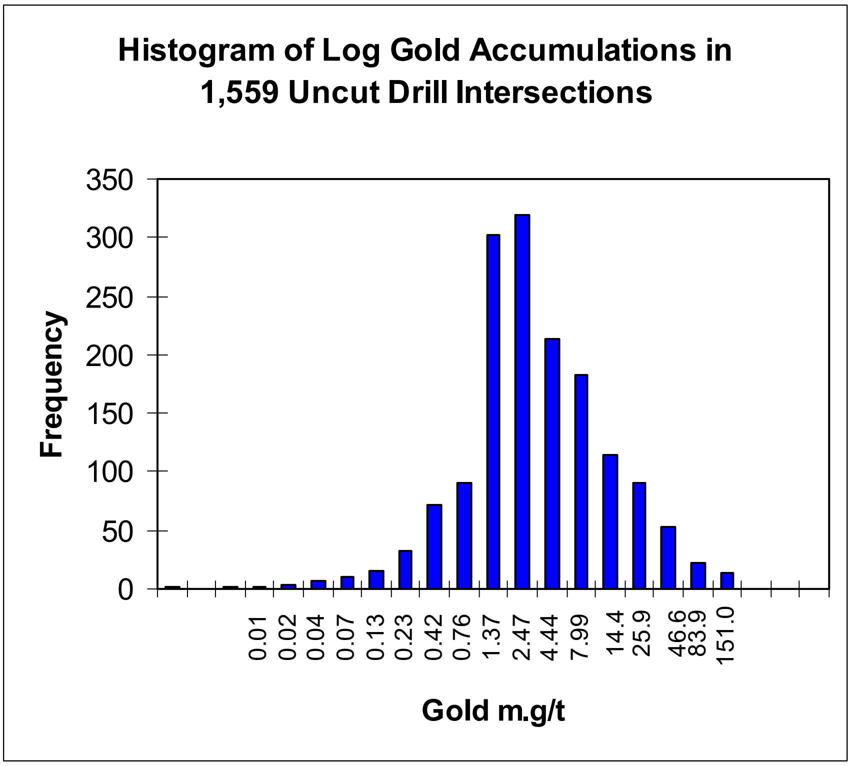


Figure 51. Plot of uncut grade-width metal accumulations in metre-grams per tonne for the Central area north of 7776000mN AMG and east of 420500mE AMG. The plot displays a log normal distribution.

There are 83 significant drill intersections above 4 metre-grams per tonne Au (18.2%) and 112 intersections above 3 metre-grams per tonne Au (24.6%). A lower cut-off of 3 metre-grams per tonne Au was selected to include all significant drill intersections within and immediately adjacent to the ore shoots or mineable patches within barren areas. This partitioned data set does not display any particular distribution (see Figure 52), so the arithmetic mean was used. The average of the 112 significant drill intersections above 3 metre-grams per tonne is 13.5 metre-grams per tonne Au (see Figures 54 & 55 below).

There are only five values above 50 metre-gram per tonne (the 95% percentile), of which only one exceeds 100 metre-grams per tonne. No outliers have been excluded or an arbitrary top cut used, and the average accumulated grade of 13.5 metre-grams per tonne Au has been used for the estimation of Inferred Mineral Resources at a 3 metre-grams per tonne Au cut-off. As the minimum ore body width used is one metre, the grade in grams per tonne is also 13.5 grams per tonne Au. This grade is seen as the minimum expected mining grade.

However, there is no evidence that these extensions of known shoots and reefs would not average close to the previously-mined grades of 38 grams per tonne Au in situ or 27 metre-gram per tonne diluted, implying that the grades could be much higher than the 13.5 grams per tonne used. At a 6 metre-gram per tonne Au cut-off, the average grade would be 24 grams per tonne Au, and at 9 metre-gram per tonne Au the average grade would be 27 grams per tonne Au. Current mining of the Imperial area reefs indicates that the mineralization is identical and the grades are similar to historical values. The Company expects that the 3 metre-gram per tonne Au cut-off more realistically reflects the likely operating cut-off, given that marginal grade material will often be adjacent to higher grade mineralisation, and/or contained in development rock that may be extracted anyway.

Modern mechanized mines seek to optimize the value of the deposit and profits by extracting maximum ounces to offset fixed overheads through efficiencies of scale. Therefore the marginal grade material only needs to cover the incremental costs of transport and milling, which are less than the revenue generated from 3 grams per tonne material.

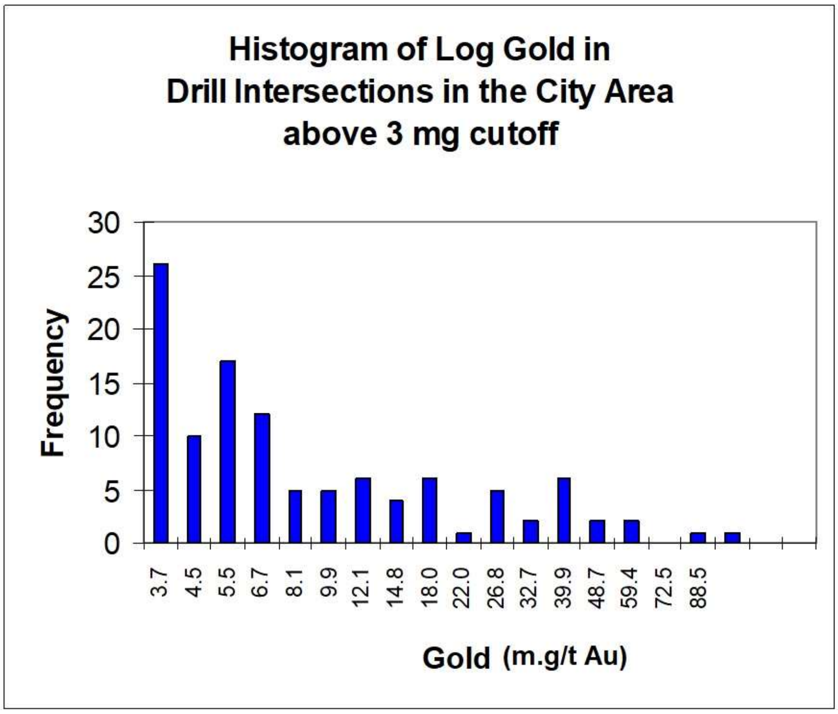


Figure 52. Partitioned data set of log grade-width accumulations in significant drill intersections above 3 metre-gram per tonne Au cut-off from the Central Area.

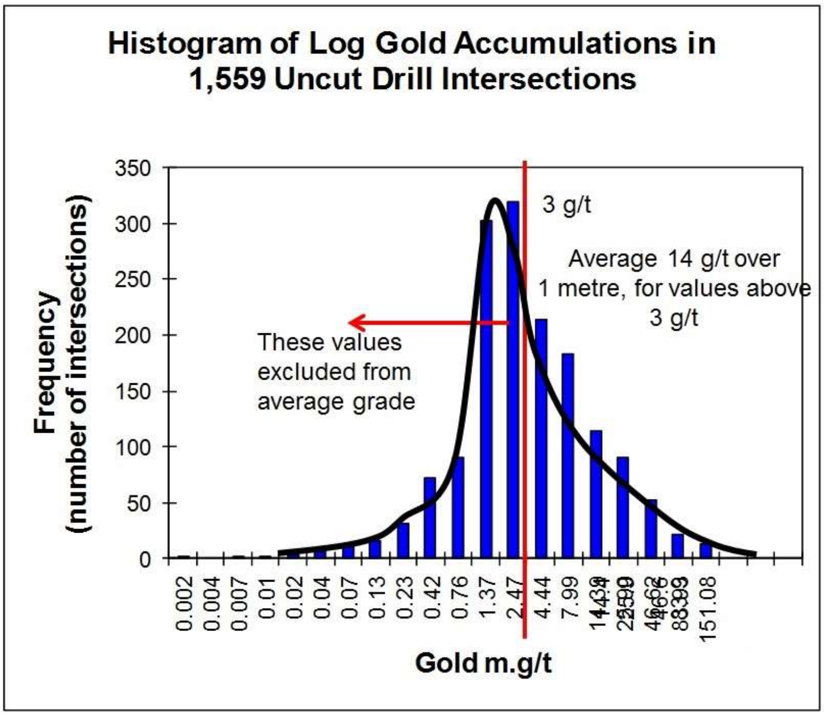


Figure 53. The average grade for drill intersections above the 3 m.g/t Au lower cut-off is 13.5 g/t Au over one metre.

14.3.2 (b) Volume and tonnage

Mineralised body solids were modeled as triangulated surfaces called Digital Terrain Models (DTMs) in Surpac down to 1,200 metres vertical depth, and allocated a thickness based on the true widths from drill intersections and the lowest levels of the old workings, to create three-dimensional solids. Previous mining on the Brilliant and Day Dawn structures extended down to near 1,000m vertical depth at times. There are five significant drill intersections in the +3 metre-gram per tonne Central area data set deeper than 1,000 metres and two deeper than 1,200 metres. The deepest intersection is 1,243 metres. There are 22 drill intersections in the total significant intersection data set deeper than 1,000 metres of which 10 are deeper than 1,200 metres. The solids were based on the strike extent of the previous workings to define the reef strike extent, and then extended down to 1,200 metres vertical depth with the digital terrain model (DTM) adjusted to fit drill intersections. The DTMs were clipped where they intersected other cross-cutting structures, or where they passed out of the main rock type within which they were mined.

The rock type is considered important as it may influence the gold distribution and payability depending on the rheology of the rock (rheology refers to a rock's ability to deform plastically, flow or stretch under stress rather than fail by brittle fracture) and the rock type's reaction to the stress regime. There is some evidence from the Company's drilling at the westerly outlying Great Britain mine (not currently held by the Company – it was drilled under a joint venture) that the reefs may split up or horsetail within the Charters Towers Metamorphics, whereas within the Millchester Creek Tonalite that hosts the majority of the Central reefs, the reefs remain fairly tight and coherent apart from major footwall or hanging-wall splits. The splits were frequently economic and mined previously.

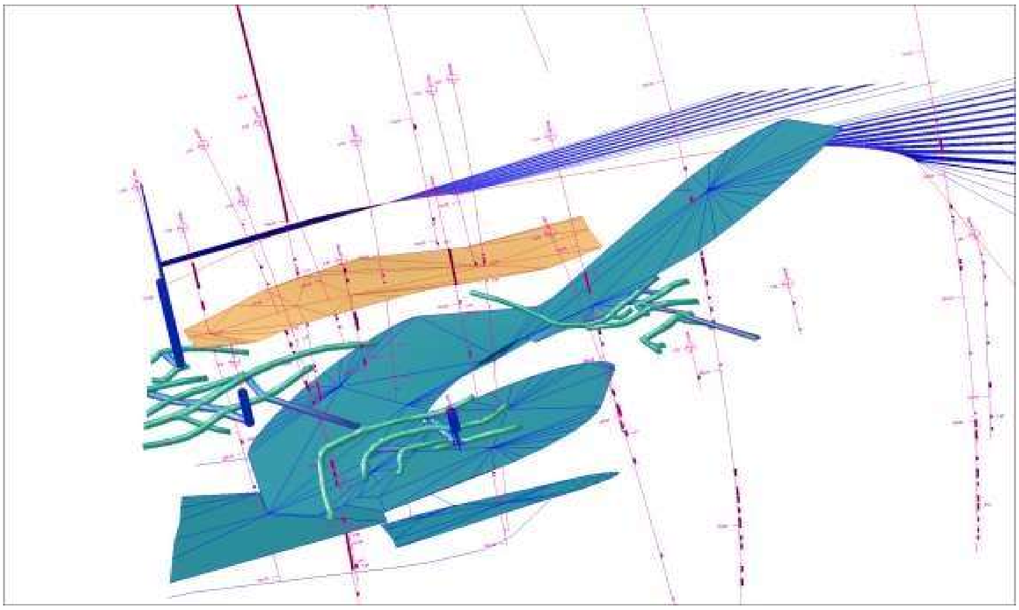


Figure 54. Digital Terrain Models (DTMs) were constructed in Surpac using all drill intersections. Widths were obtained from true width intersections through the structure and used to estimate tonnage within the DTM. Widths were diluted out to one metre if the true width was less than one metre.

Areas of the DTMs were calculated in Surpac and given a minimum mining width of one metre. The total tonnage contained within the clipped DTM was calculated from this volume at a density of 2.7 tonnes per cubic metre. The tonnage for a particular DTM assigned to Inferred Mineral Resource was then discounted by 50% to take into account the average payability of 50%, based on previous mining records. The payability was estimated from the DTMs of the areas defined by underground driving in the previously mined area and the DTMs of the areas previously stoped out. A grade of 13.5 grams per tonne Au, derived from average of the 112 significant drill intersections above the 3 metre-gram per tonne Au cut-off, was assigned to the discounted tonnage. This payability produces a ***minimum*** tonnage**.** This payability factor is a mining factor usually introduced at the Reserve estimation stage, but is introduced here into both Inferred and Indicated Mineral Resources to account for the irregular and non-uniform grade distribution, and discount the tonnage back to what is reasonably expected to be economically extractable.

The previous historical mining used a cut-off of 9 metre-gram per tonne (Reid, 1917). This is the applicable cut-off grade that was used to determine the 30% payability of the past explored reef area that produced the earlier mining grades of more than one ounce per tonne. The 30% payability is therefore a factual figure based on actual mining. At the Company's cut-off of 3 metre-gram per tonne Au, the Company will mine a higher percentage of each structure, resulting in a higher tonnage extracted from the same areas.

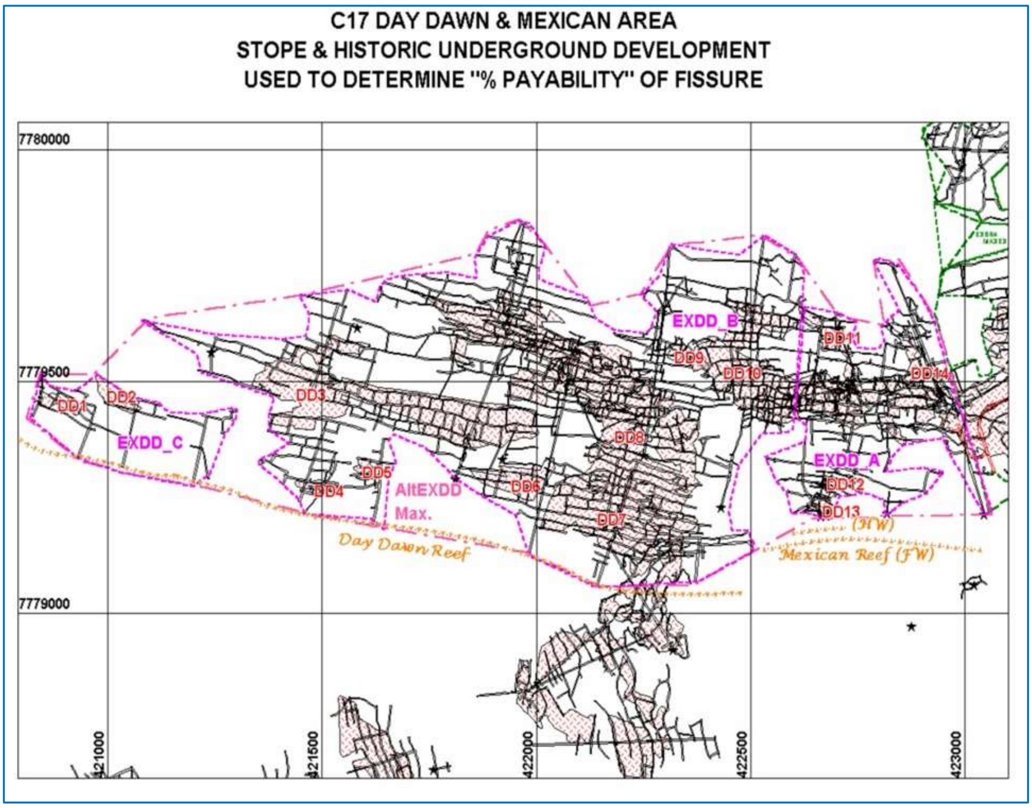


Figure 55. The "payability" is the ratio of the previously stoped areas from historical records (the stippled areas) compared to the total area of the structure as defined by exploratory drives (outlined by the dot-and-dash line). The average payability was estimated to be 30%, i.e. 30% of the whole structure was economic to mine, and 70% was not mined.

The C32 Lady Maria was added into the Towers Hill cross veins, adding about 250,000 ounces. Clarkes Moonstone C30 was shifted from the Southern Area to the central Area to better reflect its geographical location. Three new mineralised lodes, as yet unnamed, were added (C36, C38 and C39) adding 160,000 ounces. The payability was changed from 30% to 50% based on actual payabilities for the Indicated Mineral Resources, and the fact that past cut-off grades (the 6.6 million ounces) were 6dwts or 9 g/t. Therefore, modern mining cut-off grade of 1.75 g/t gold means 50% or higher of the reef line is expected to be economically mined. Most of the past payabilities exceeded 30%. A review of true widths and payabilities for the lodes in the Indicated Mineral Resources are tabled below.

Lode	True Width	Payability
C06 St Patrick	1.65	30.00%
C01 Brilliant West b	1.00	51.81%
C01 Brilliant West a	1.00	51.81%
C13 Mountain Maid	2.14	51.80%
C02 Sunburst	2.08	42.86%
C23 Columbia	2.44	30.00%
C05 Brilliant East 4	0.83	51.80%
C17 Day Dawn	0.57	32.54%
C05 Brilliant East 3	0.96	51.80%
C03 Queen West	1.27	41.17%
C26 Queen East [Golden Gate]	1.11	61.50%
C08 Ruby	1.17	34.00%
C04 All Other veins	1.27	100.00%
C07 Caledonia Extended	1.10	100.00%
Average width and payability	1.33	52%

Table 14. Average true widths and payabilities determined from historical mining and recent drilling.

The individual mineralised bodies modelled are tabulated in Table 15 below. For this 2020 report, the total 49 million tonnes in the Central is discounted by 50%, and rounded to two significant figures to give a ***total Inferred Mineral Resource for the Central area of 25 million tonnes at 14 grams per tonne Au containing 11 million ounces*****.**

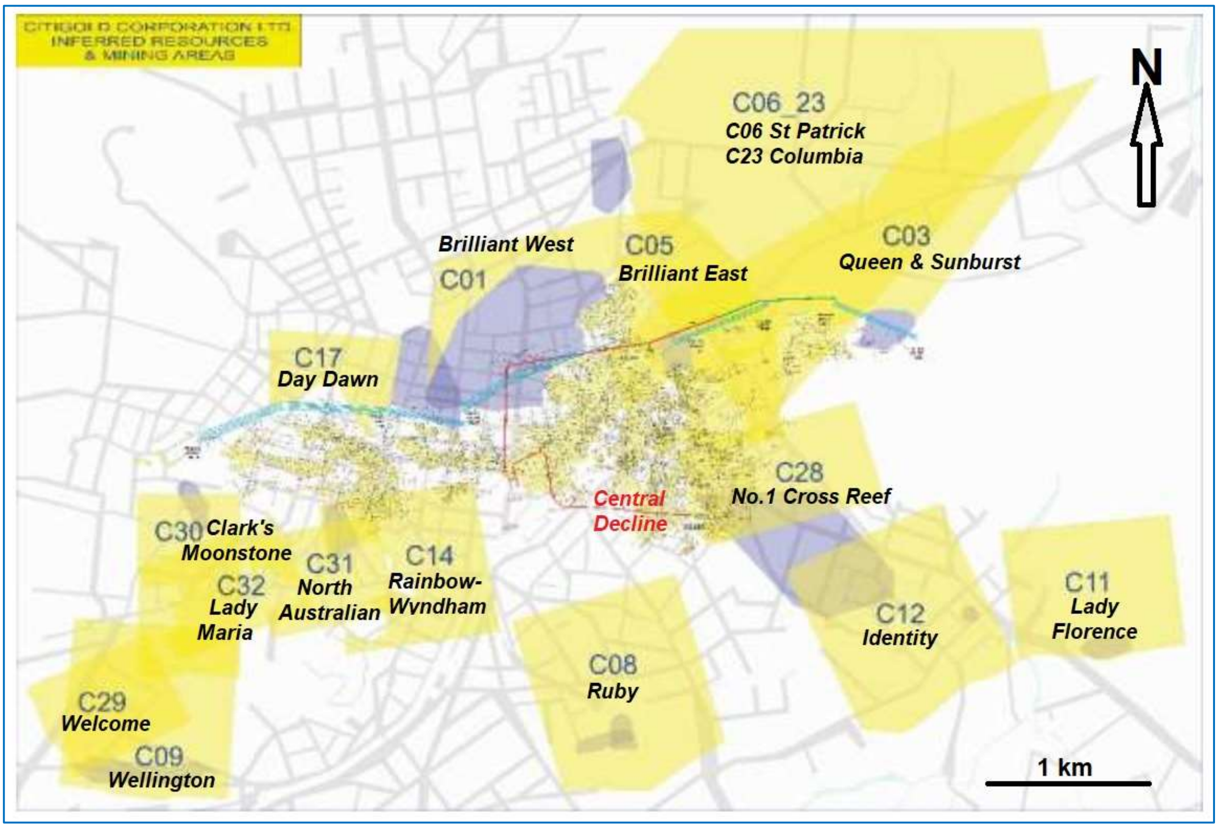


Figure 56. Plan view of the Inferred Mineral Resource reefs (yellow) in the Central area. Purple shapes are the Indicated Mineral Resources.

Structure	Structure Name	Area (m2)	Density (t/m3)	Tonnes	Payability	Payable tonnes	Grade (g/t Au)	Ounces
C01	Brilliant West	316,123	2.7	853,532	0.5	426,766	13.5	185,231
C05	Brilliant East (within Tonalite)	748,807	2.7	2,021,779	0.5	1,010,889	13.5	438,761
C17	Day Dawn	476,408	2.7	1,286,302	0.5	643,151	13.5	279,150
C03	Queen & Sunburst	2,073,794	2.7	5,599,244	0.5	2,799,622	13.5	1,215,134
C09, C14, C29, C30, C31, C32	6 x Towers Hill Cross Reefs, 600m strike each	4,320,000	2.7	11,664,000	0.5	5,832,000	13.5	2,531,293
C28	No.1 Cross Reef	720,000	2.7	1,944,000	0.5	972,000	13.5	421,882
C06, C23	St Patrick & Columbia Cross Reefs	4,447,019	2.7	12,006,951	0.5	6,003,476	13.5	2,605,719
C09	Wellington	1,200,000	2.7	3,240,000	0.5	1,620,000	13.5	703,137
C08, C11, C12	Identity, Ruby, Lady Florence	3,600,000	2.7	9,720,000	0.5	4,860,000	13.5	2,109,410
C36		148,653	2.7	401,363	0.5	200,682	13.5	87,103
C38		80,831	2.7	218,244	0.5	109,122	13.5	47,363
C39		43,712	2.7	118,022	0.5	59,011	13.5	25,613
C03W	Queen West	125,940	2.7	340,038	0.5	170,019	13.5	73,794
TOTAL Central Area						**24,706,737**	**13.5**	**10,723,591**
ROUNDED					Gold	25 million	14	11 million

Table 15. INFERRED MINERAL RESOURCES - CENTRAL AREA North of 79000mN

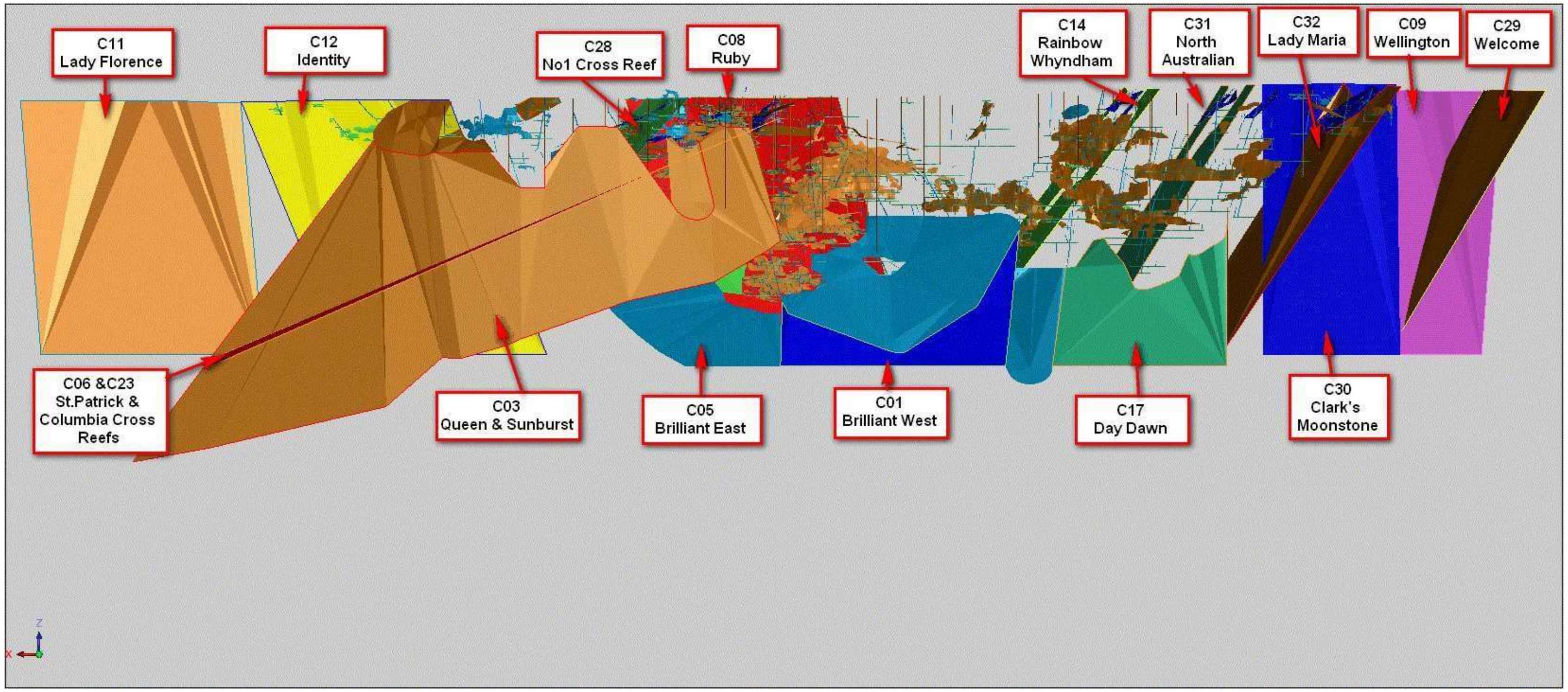


Figure 57. Long section looking South, showing the Inferred Mineral Resources outlines for each structure.

14.3.3 Southern Area

The 1,559 drill intersections were partitioned based on collar position northings and eastings to select holes south of the Central area. Holes included in the Southern area are south of 7776000mN AMG. There was no partitioning based on eastings (see Figure 51 above). This drilling includes all drilling prior to 2006 on the Warrior, Washington, Golden Alexandra, Sons of Freedom, Imperial, Black Jack, Stockholm, Silent Friend and Merrie Monarch areas, all which hold significant potential for production by the Company.

There are 905 significant drill intersections within this area, of which 418 are above 3 metre-gram per tonne Au and 328 above 4 metre-gram per tonne. The metal grade accumulations in metre-grams per tonne display a log normal distribution as shown in Figure 58 below. The plot has a slight positive skewness (+0.178) with a number of higher values above 1 metre-gram per tonne. The geometric mean is 3.21 metre-gram per tonne, slightly above the median (2.50 metre-gram per tonne), indicating a slight distortion towards the higher values. A lower cut-off of 3 metre-gram per tonne Au was selected to include all significant drill intersections within and immediately adjacent to the ore shoots or mineable patches within barren areas. This partitioned data set does not display any particular distribution (see Figure 59), so the arithmetic mean was used. The average of the 418 significant drill intersections above 3 metre-gram per tonne is 15.5 metre-grams per tonne Au. There are 24 values above 50 metre-gram per tonne (the 94.5% percentile), but no indication that the high values form a discrete second population. With no evidence of a second population of high values, there is no justification for cutting values to some arbitrary limit such as 50 metre-gram per tonne or the 95% percentile.

However, to maintain a conservative approach, it was decided to use the lower average grade of 13.5 metre-gram per tonne obtained in the Central area, rather than the actual Southern area average grade of 15.5 metre-gram per tonne. At this stage of the project, this conservative approach is preferred. Mineralised bodies were modelled as planar structures based on their mapped and drilled strike length and extended down dip for 1,200m. The bodies dip at angles between 30° and 50°, giving vertical extents of 600m at 30° and 920m at 50°. The individual mineralised bodies modelled are tabulated below in Table 16, and shown in plan view in Figure 60 below.

C30 Clarkes Moonstone lode was moved from the Southern Area to the central Area to better reflect its geographical position. Three other lodes were deleted- E03 Hidden Secret, S03 Merrie Monarch and S04 Mt Cenis as these are no longer part of the Southern Area project

For this 2020 report, the new ***total Inferred Mineral Resource for the Southern area***, rounded to two significant figures, ***is 7 million tonnes at 14 grams per tonne containing 3 million ounces***

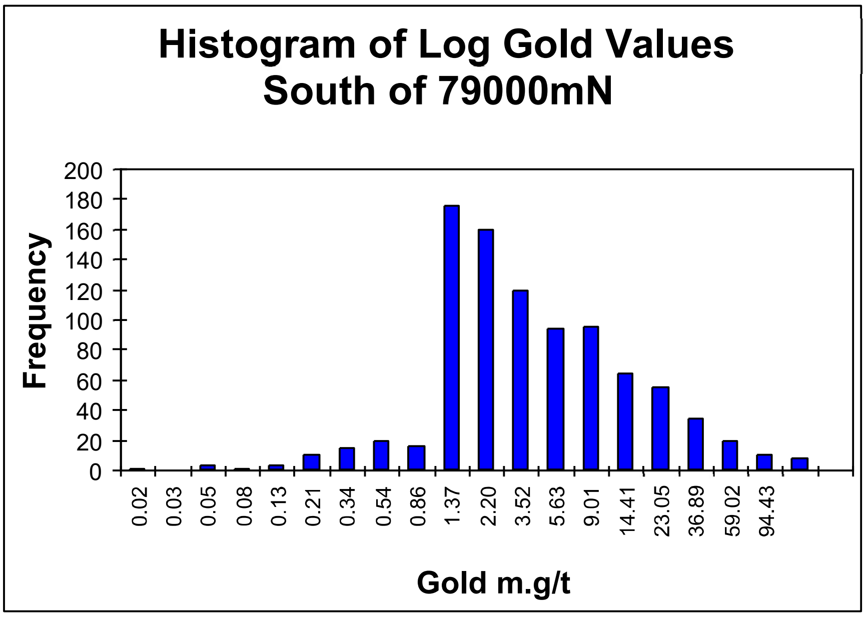


Figure 58. Plot of grade-width metal accumulations in metre-grams per tonne for the Southern area south of 7776000mN AMG. The plot displays a log normal distribution with a slight deficiency of values below 1 metre-gram per tonne.

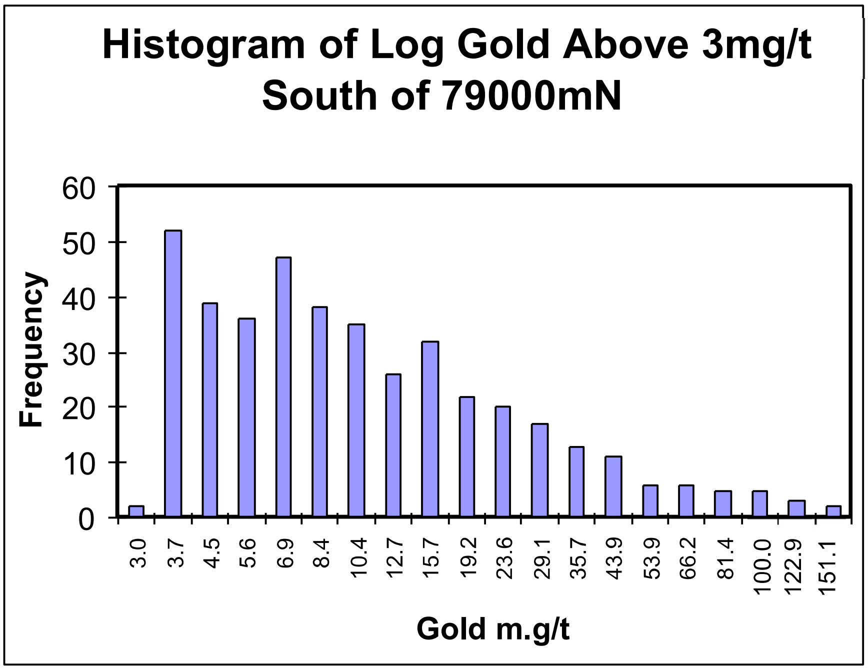


Figure 59. Partitioned data set of log grade-width accumulations in significant drill intersections above 3 metre-gram per tonne Au cut-off from the Southern area.

Structure	Strike Length	Structure Name	Down-dip Area sq.m	Density t/m3	Tonnes (t)	Payability	Payable tonnes	Grade g/t Au	Ounces
W01	1000	Stockholm	1,200,000	2.7	3,240,000	30%	972,000	13.5	421,882
E07	2,000	Imperial	2,400,000	2.7	6,480,000	30%	1,944,000	13.5	843,764
E06	700	Silent Friend	840,000	2.7	2,268,000	30%	680,400	13.5	295,317
E03	1,800	Warrior	2,160,000	2.7	5,832,000	30%	1,749,600	13.5	759,387
E01 & E05	1,500	Washington (E01) & Sons of Freedom (E05)	1,800,000	2.7	4,860,000	30%	1,458,000	13.5	632,823
TOTAL Southern Area							6,804,000	13.5	2,953,173
ROUNDED						**Gold**	**7 million**	**14**	**3 million**

		TONNES	GRADE	OUNCES
TOTAL INFERRED MINERAL RESOURCES For the Project	***Central + Southern***	***32,045,337***	***13.5***	***13,912,002***
ROUNDED	***Gold***	***32 million***	***14 g/t***	***14 million***

Table 16. INFERRED MINERAL RESOURCES - SOUTHERN AREA

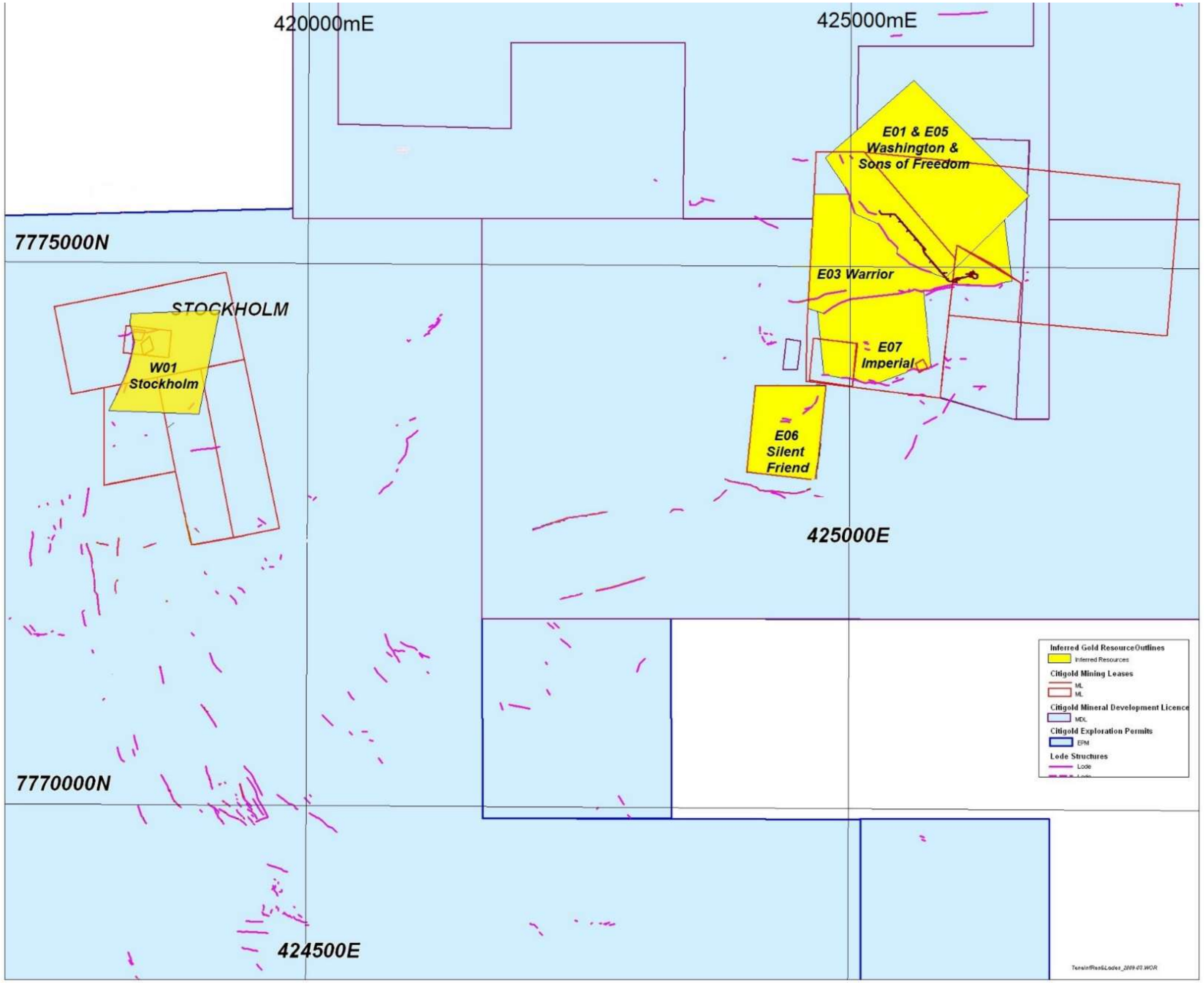


Figure 60. Plan view showing the main resource structures for the Southern Area.

14.4 Total Inferred Mineral Resources

AREA	TONNES	GRADE grams per tonne Gold	OUNCES Gold
CENTRAL	25 million	14	11 million
SOUTHERN	7 million	14	3 million
TOTAL	***32 million***	***14***	***14 million***

Table 17. Total Inferred Mineral Resource, combining both the Central and Southern areas, is 32 million tonnes at 14 g/t gold containing 14 million ounces of gold.

14.4.1 Extrapolation and Interpolation Distances

All Mineral Resources generally and the Inferred Mineral Resources in this report involve estimating the continuity of the geological structures and grades over nominated distances from the last data point and between data points. This distance varies greatly with the type of commodity being estimated, the complexity of the geology, the distribution of the commodity within its confining structures and the confidence the estimators have in their knowledge base. Obviously, this confidence is higher in an operating mine or a mine with a large amount of previous production than a project in which no mining has yet been undertaken. The Charters Towers Gold Project was mined for 40 years from 1871 to about 1920, producing a recorded 6.6 million ounces of gold from 6 million tons of ore processed.

The area has been intensively explored by the Company from 1993, and underground mining development commenced in 1994. Test mining and gold production was undertaken from 1997, and there were nine years of continuous gold production from 2007 to 2015.

The geological structures (reefs) are very continuous, geometrically simple, well-understood and predictable with no major folding and limited amounts of faulting. The gold grade within the reefs is highly variable, forming concentrations of fine gold particles clumped together to form areas of economic grades isolated by intervening areas of low grade mineralized material. The mineralized material is virtually continuous, but economic grades are not, with no clearly defined or mappable area of economic grade. The grade is therefore discontinuous.

'Extrapolation' is the distance from the last data point to the outside edge of the ore body. This is usually no more than 50 metres and limited to a maximum of 100 metres for Indicated Mineral Resources and Probable Ore Reserves. Extrapolation distances are higher for Inferred Mineral Resources. Extrapolation in triangular shapes may produce diagonal distances up to 200 or 300 metres. Plans and sections showing the extrapolated parts of the Inferred Mineral Resources are shown in the Appendix.

'Interpolation' is the distance between one data point and the next. For Indicated Mineral Resources and Probable Ore Reserves, interpolation distances are as close as 2.5

to 4 metres in drive faces which are rock-chip sampled across the face after each blast round of 2.5 to 4 metres apart, and extend out to 25 to a maximum of 80 metres between drill holes.

Extrapolation distances for mineralized bodies listed in the Inferred Mineral Resources are set out below in Table 18.

Inferred Mineral Resources	Reef	Strike extent	Dip Extent	Max Extrapolation Distance
Central	C01 Brilliant West	1050	2400	450
	C05 Brilliant East	1600	2400	530
	C17 Day Dawn	800	1400	680
	C03 Queen & Sunburst	1800	1200	1,100
	4x Towers hill cross reefs			
	C29 Welcome	610	1,420	1,120
	C30 Clark's Moonstone	245	1,450	1,150
	C31 North Australian	150	1,600	1,300
	C32 Lady Maria	250	1,000	700
	C28 No.1 Cross Reef	600	1,000	700
	C06-C23 St Patrick & Columbia	2,450	2,733	1,434
	C09 Wellington	1,000	1,550	1,250
	C08 Ruby	1,000	1,560	1,260
	C11 Lady Florence	995	1,375	1,075
	C12 Identity	1,010	1,540	1,240
South	W01 Stockholm	990	1,200	900
	C30 Clark's Moonstone	600	1,200	1,050
	E06 Hidden Secret (2 parts)	430 & 930	1,200	900
	E07 Imperial	1,350	1,200	900
	S03 Merrie Monarch	992	1,200	800
	S04 Mt Cenis	557	1,200	940
	E06 Silent Friend	1,005	1,200	1,100
	E03 Warrior E01 Washington &	2,016	1,200	350
	E05 Sons of Freedom	1,563	1,200	890

Table 18. Extrapolation distances for the Inferred Mineral Resources

14.5 Indicated Mineral Resources

14.5.1 Grade Continuity

Inferred Mineral Resources have been estimated within the Company's mineral holdings where the drilling density and other physical evidence is such that there is a reasonable certainty that the geological structures continue between the data points and that gold is present in these structures. This information was contained within the report titled "*Report on the Inferred Mineral Resources for the Charters Towers Gold Project, May 2005*" submitted to the Australian Stock Exchange ('ASX') as an announcement on 2 June 2005, and revised in Item 14 of this current report.

The continuity of grade within these structures is known to be highly variable and therefore grade continuity cannot be guaranteed without drilling of the structures at spacings that would be economically unviable, given that drilling would need to be up to 600 to 1200 metres depth and intercept spacings of less than 25 metres to achieve a confidence level of 90% or better. Kriging analysis indicates a range of 6 to 8 metres for reliable statistical results, that is, the grade can only be confidently projected for 6 to 8 metres away from a sample point, implying that a drill spacing of 12 to 16 metres is required for 95% confidence levels. Later in this report, information is given on the variability of the gold price over the last five years (a range of ± 44% from the mid-point) and the variability of assaying (10% to 15%) to show that cash flow projections for all gold projects may have an inherent variability risk of the order of ± 40% based on gold price assumptions alone. A prime purpose of mineral resource and ore reserve estimation is to generate cash flow projections to assess the feasibility of a mining project.

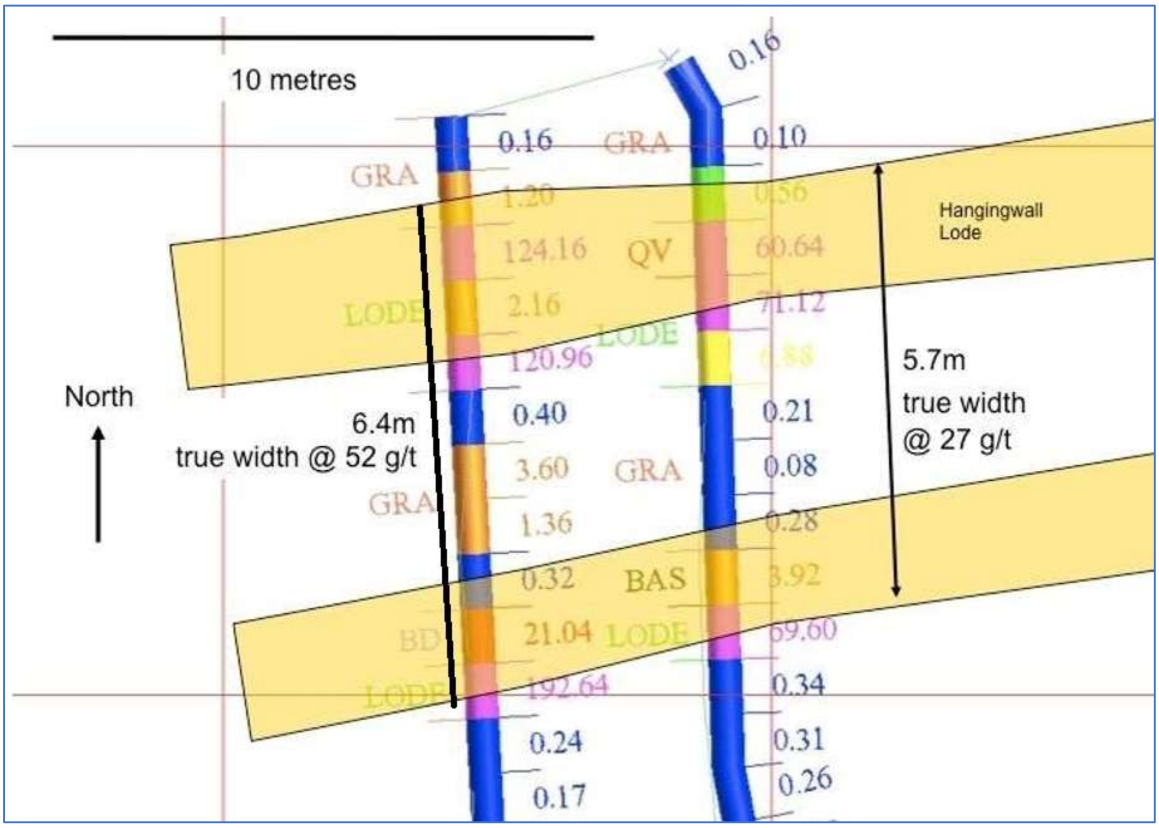


Figure 61. Plan view, showing the variation in gold assays in rock-chip samples along the walls of a cross-cut in the Warrior ore body. From one side of the cross-cut to the other (3.7m), the grade changes from 52 g/t Au to 27 g/t Au.

The Company believes that it has quantified the risk of grade continuity in the Charters Towers project sufficiently to move more densely drilled areas into the Indicated Mineral Resource category. The JORC Code 2012 (Paragraph 22) states that:

"An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to assume geological *and grade (or quality) continuity between points of observation where data and samples are gathered.*

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Ore Reserve.

Mineralisation may be classified as an Indicated Mineral Resource when the nature, quality, amount and distribution of data are such as to allow confident interpretation of the geological framework and to assume continuity of mineralisation.

Confidence in the estimate is sufficient to allow application of Modifying Factors within a technical and economic study as defined in Clauses 37 to 40."

The Company's Indicated Mineral Resource in the Central area is based on defining the geological structures from surface mapping over five kilometres of strike length, accurately locating previous mine shaft collars connecting to workings on the structures, diamond drilling to over 1,000 metres depth, combined with confident survey location and modelling of previous mine workings on the geological structures to depths of 400 metres for the Queen-Sunburst structure and over 900 metres for the Brilliant.

The Warrior, Sons of Freedom and Imperial resources are based on defining the geological structure from surface mapping over two (2) kilometres of strike length, underground mining on the Warrior and Sons of Freedom, previous mine shaft collars and confident survey location of previous workings, reverse circulation (RC) drilling and diamond drilling down to 270 metres.

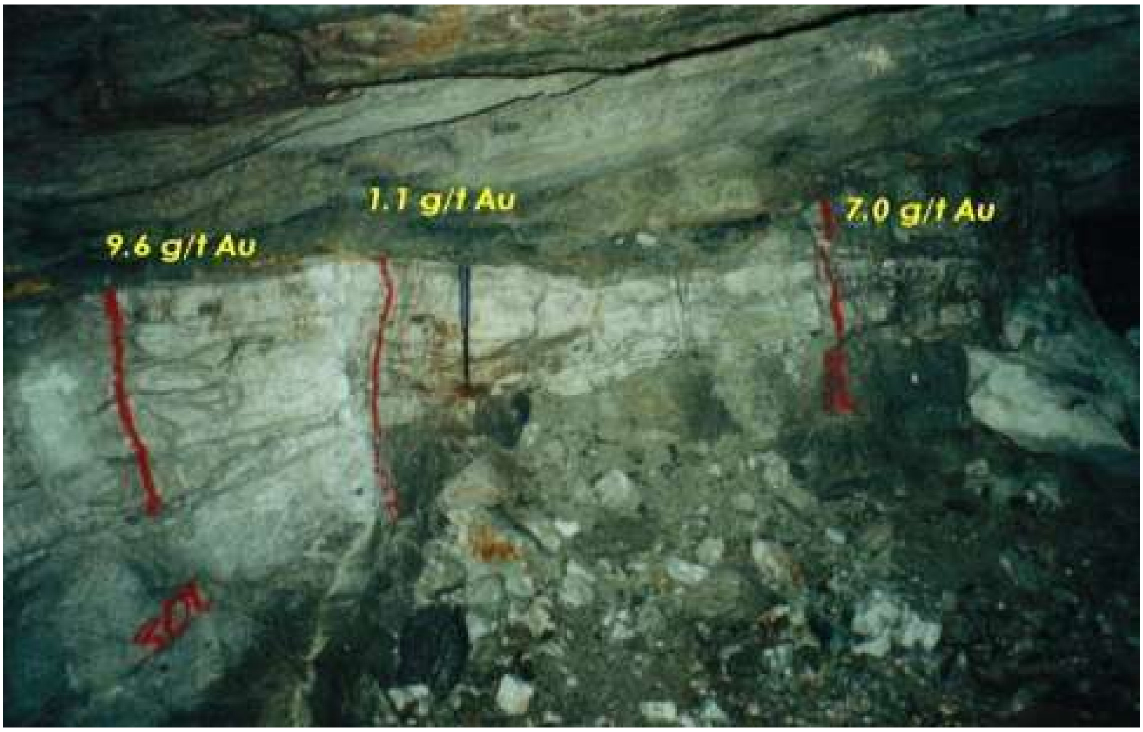


Figure 62. Sampling of the No.2 Cross Reef (Maude St Leger reef) in a remnant pillar on the 890 Level. The geological hammer is 40cm long. This reef is geologically continuous and has a reasonably uniform width, but the grade is highly variable.

Figures 61 & 62 (above) illustrates the point about grade continuity. Figure 62 is the No. 2 Cross Reef in the Central area, a typical Charters Towers reef, intersected in the Company's 1997-99 underground mine workings on the 890 Level. It is an extension of the previously-mined Maude St Leger Reef. It is representative of the type of reefs in the project areas. Rock chip face samples taken over the quartz reef show three different gold grades within a short distance of less than three metres. This block was left as a pillar and shows the rapid variation in grade over a short distance. If the reef had been one metre thick, this block would have been mined as a continuous unit, but a drill intersection from surface at each sample point would have returned two intersections above cut-off (9.6 metre-gram per tonne and 7.0 metre-gram per tonne) and one below (1.1 metre-gram per tonne). At a nominal drill spacing of 25 metres, the intersection would have either been included or excluded from any interpreted ore shoot, depending on which intersection was used.

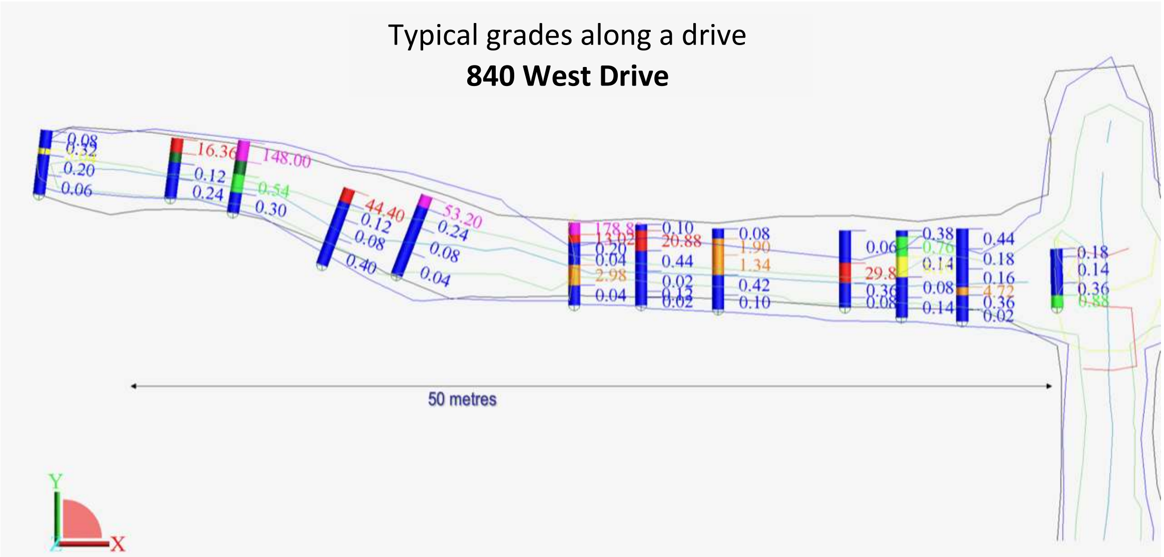


Figure 63. 840 West Level drive in the Warrior ore body, Imperial Mine, showing the variation in grade along the ore body over a 50 metre interval. Samples are line rock chip samples across the face at about chest height.

Attempting to 'join the dots' of drill intersections on a long section to create an outline of an economic shoot at 3 metre-gram per tonne, even at 25 metre centres, is subject to high levels of uncertainty. Even at a 5 metre spacing, there is such a high variability that determining a shoot outline as a grade contour with 100% certainty is impossible. Drilling out the Charters Towers project on 5 metre spacings to depths of 500 metres to 1,000 metres is not economically viable. It would incur a cost that would be similar to or higher than the cost of actually developing the access decline and drives required to mine the deposit.

Knowledge gained from mining since 1996 proves that the structures consistently behave the same way and are well understood. It is also very significant that the new drill database and the past *in situ* ore grade averages, when normalized to the same width and cut-off grades, are the same at 27 g/t (see ITEM 14.1.5 of this Report). This gives high confidence when extrapolating assumptions on geological continuity and expected recovered grades.

14.5.2 Assay Precision and Quality Control

The normal range of precision from commercial laboratories (as used by the Company) is 10% to 15% (Bumstead, 1984), meaning that repeat samples vary from the average of the samples by up to 10% to 15% (see Items 11 and 12, and References). Details of the results of the Company's quality control on precision and accuracy are given in Sections 11 and 12.

The significant assay range of interest to the Company's underground operations are those results above 3 grams per tonne Au. The precision of 180 repeat samples above 4 grams per tonne Au was examined to see how the precision varied. The majority (85%) of the Company's samples have a precision of better than 20% and 57% of samples have a precision of better than 10%. Some 38% of samples have a precision of better than 5%. As the majority of samples have a precision of better than 10%, which is within the documented precision of commercial laboratories (Bumstead, 1984), the results are regarded as acceptable. Assay variation is not regarded as a significant risk in the project. The variation is regarded as within acceptable limits of risk.

14.5.3 Ore Body Modelling

Ore body modelling refers to the process of producing a geometrical shape of the mineralised body, from which a tonnage can be estimated. The procedures used were as follows:

- The drill intersections and historic workings were examined in three dimensions (3D) using SURPAC computer software. Where a series of intersections were shown to lie in planar continuity with the historic workings a projected plane of extension to the mineralised fissures was defined.
- The total areas of the mineralised bodies in the Indicated Mineral Resource category were based on the projection of the mineralised fissure from the historic workings down dip or along strike to the drill intersections. The area in the curved surface of the fissure was calculated using SURPAC software. The surface was extended 50m to 100m beyond the boundary drill holes, depending on the drill density and confidence levels in the structure.
- Where appropriate, estimation of the area of the fissure taken to be payable was made based on the "% payability" determined from historically stoped areas versus the underground exploration development on the particular fissure.
- For the major mineralised fissures in the Central Area, the gold content of the fissure estimated to be above 3 metre-gram per tonne Au (estimated true width, 'ETW') cut off (using the "% payability" factor) was made using the average of the grade determined from drill hole intersections above 3 metre-gram per tonne within the whole mineralised body.
- Volumes were estimated based on the average of the drilled true widths of the reefs.
- Tonnages were estimated from the volume calculated, and a Bulk Density of 2.7 tonnes per cubic metre ($t/m^{3)}$, then where applicable, discounted by the % payability factor for the fissure.
- Grade was estimated by dividing the sum of the metal accumulation (ETW metre x grams per tonne Au) by the sum of the intersection widths (weighted average grade).
- Gold content calculations were based on metal accumulations (metre-gram per tonne Au) obtained from drilling intersections.

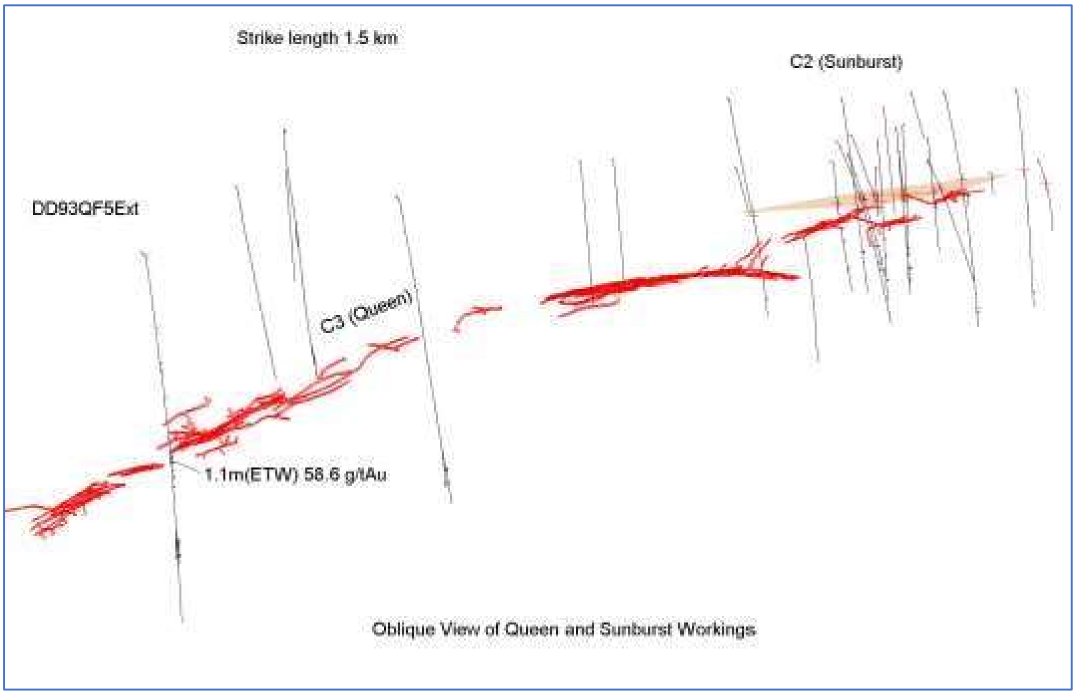


Figure 64. Oblique view of the Queen – Sunburst structure looking down the dip of the structure, showing diamond-drill hole paths along strike and down dip of previous workings. The geological significance is the remarkably uniform dip and strike over the 1.5 kilometre length and 600 metre down dip extent.

The confidence limits on the volume estimates are regarded as high.

The widths are based on the average of the drill intersection true widths, and the boundaries of the solids are constrained by drill intersections. Tonnage data is extrapolated for a maximum of 50m from the last sample point, and the total tonnage is then discounted by 70% according to the payability factor. There is a very small margin of potential error in the remaining tonnage expected to be economically extractable.

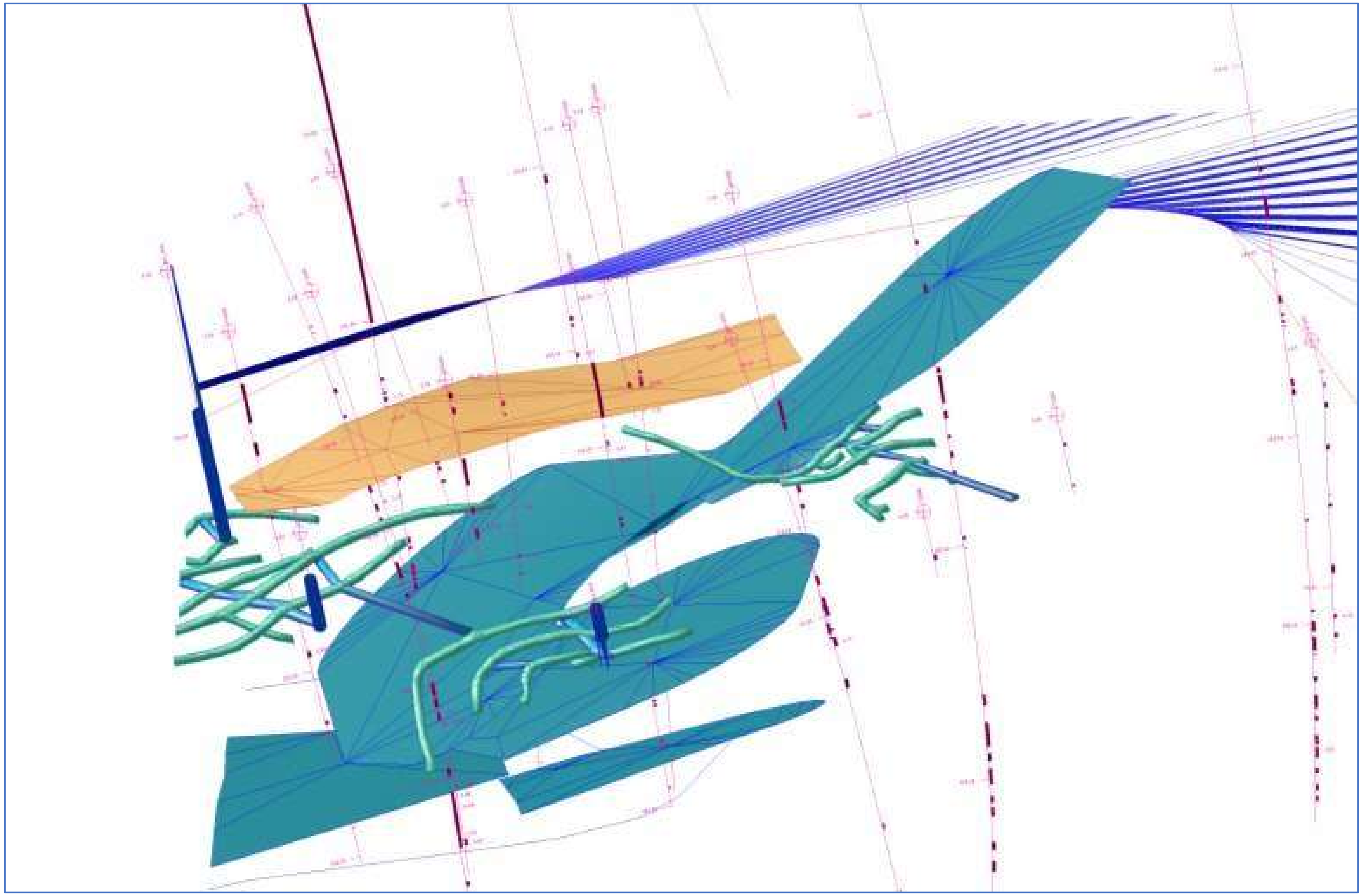


Figure 65. Example of a SURPAC model of the Queen East and Sunburst mineralised bodies constructed from drill intersections

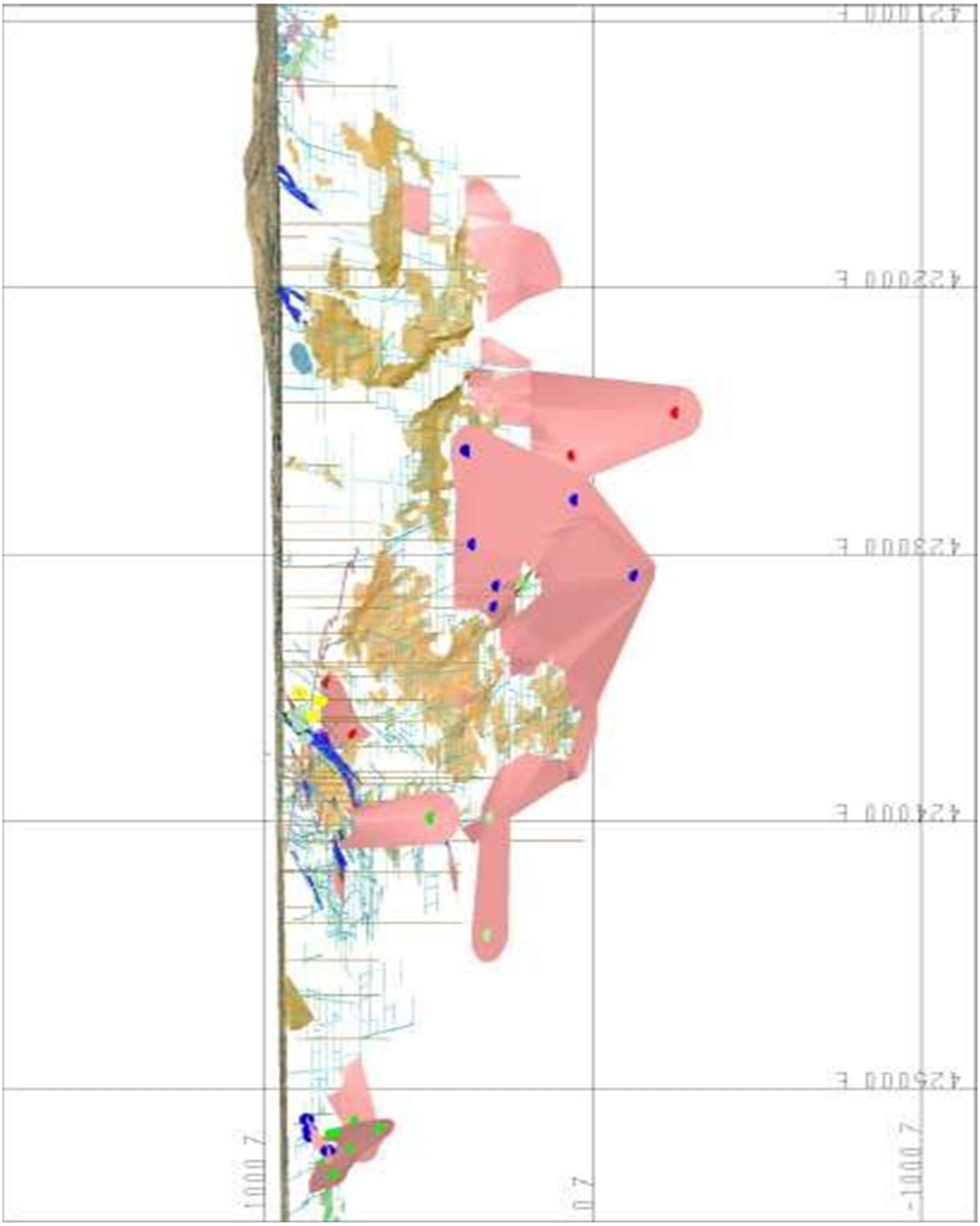


Figure 66. Long section looking south, showing the drill pierce points through the Central Area Indicated Mineral Resource structures.

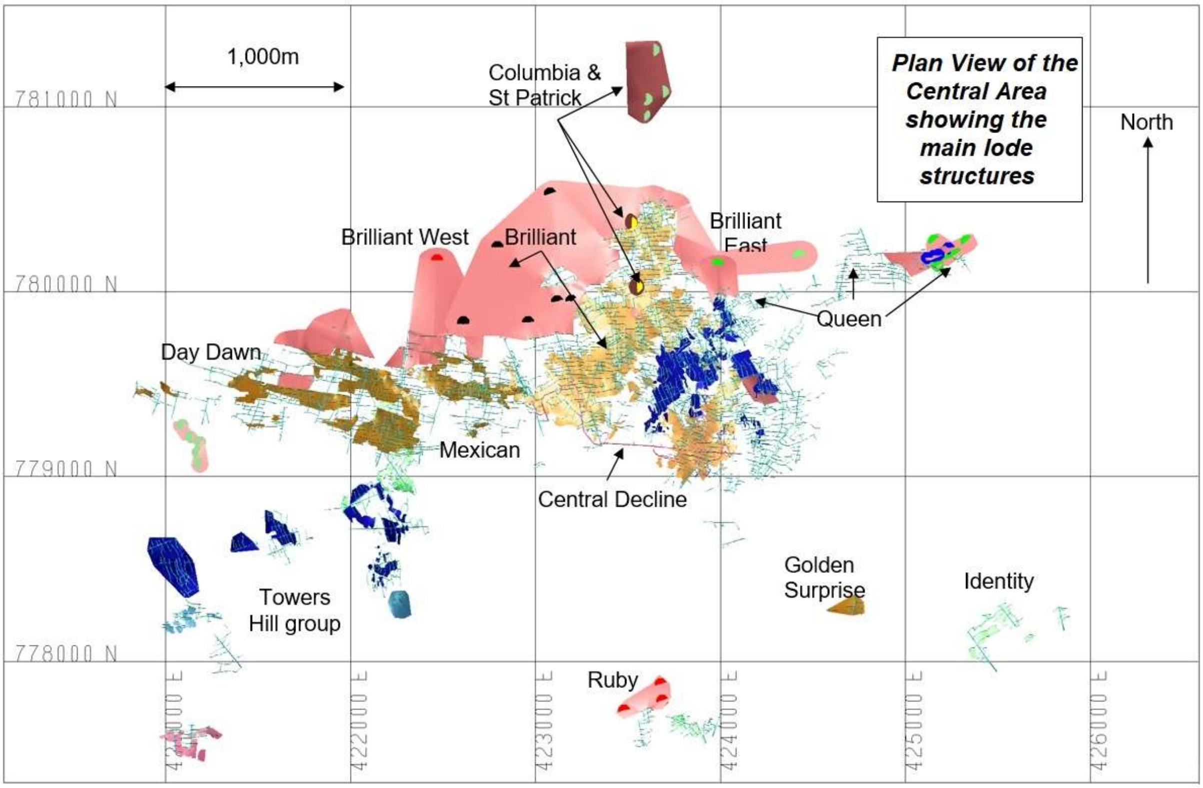


Figure 67 Plan view showing drill pierce points through the Central Area Indicated Mineral Resource structures.

14.5.4 Tonnage Estimates

Tonnages are estimated by defining a geological structure in three dimensions, from which a volume in cubic metres can be estimated. This volume is converted to tonnes by using a defined density. The main structures (reefs) were modelled in SURPAC. Variations in density will produce variations in tonnage estimates. The minimum density expected in the Company's underground mines is 2.65 tonnes per cubic metre (t/m^3), which is the density of pure quartz. The density of a quartz reef will be lower than this if the reef has void spaces in it or is porous. Mineral Resources in the Company's underground projects under the city of Charters Towers are limited to deeper than 50 metres below surface, as the Company believes that there is little probability of mining the top 50 metres in the near future (5 to 15 years). A minimum 50 metre crown pillar would be required to be left under any surface infrastructure for safety reasons, and to ensure that the perched water table is not disturbed by mining. The depth of weathering varies from a few metres to about 40 metres, averaging 25 to 30 metres. It is unlikely that underground resources will extend into the weathered zone to any material extent, and therefore the rock densities will be those of fresh rock.

A bulk density of 2.7 t/m^3 was used by the Company for tonnage estimation of hard rock mineralisation in order to estimate the minimum tonnage (i.e. to avoid over-estimation of tonnages which would result from a fixed volume at a higher density), even though a more realistic figure is in the range of 2.8 t/m^3 to 3.2 t/m^3 based on the Company measurements summarized in Tables 14-19 and 14-20 below. The figure of 2.7 t/m^3 was based partly on mining experience at the Stockholm and Washington open pits and the Imperial underground mine, using surveyed mined volumes and mill weightometer tonnes, and partly on measured densities of rock cores. Laboratory measurements of densities on granodiorite drill core by James Cook University returned values from 2.69 t/m^3 to 2.74 t/m^3 with an average of 2.72 t/m^3. Specific gravity ('S.G.', here synonymous with density) measurements were conducted by ALS on six hard rock, low-sulphide ore returning values from 2.64 to 2.75, and averaging 2.69 t/m^3.

Where pyrite (S.G. 5.02, 46.5% Fe), galena (S.G. 7.4-7.6, 86.6% Pb), or sphalerite (S.G. 3.9-4.1, 38%-67% Zn) occur in abundance in high-grade ore the density of the ore increases substantially. A quartz reef carrying 30% sulphides (10% each of galena, sphalerite and pyrite) will have an S.G. of 3.5, compared to the 2.7 currently used. If the S.G. is not corrected, this will underestimate reef tonnage (and therefore contained ounces) by up to 30%. Where reef widths are less than one metre, the impact of sulphides on SG is reduced as the ore body boundary is diluted to one metre. The maximum density recorded for 32 diamond-drill core samples taken from eight diamond-drill core holes at Warrior Mine was 3.05 t/m^3. The average density was 2.83 t/m^3 (see Table 19 below). The maximum density recorded for 102 ore samples weighing between half and one kilogram taken from the No.2 Cross Reef (Maude St Leger Reef) was 4.6 t/m^3. The average density was 3.1 t/m^3 (see Table 20 below). However, historical records of the 6 million tons of ore produced over 40 years indicate that sulphide levels are likely to be less than 10%.

The tonnages were also discounted by the historical payability of around 50%. The historical payability of 30% was based on a high cut-off of 9 metre-gram per tonne Au. The Company has used 3 metre-gram per tonne Au as the lower cut-off of drill intersections to examine for grade estimation, and for the marginal grade that may be taken to surface and milled if the material will be blasted in the normal course of mining. At the lower cut-off grades, substantially larger proportions of the structure will be mined, giving modern Company operations a higher payability, and therefore extracting more tonnes from a similar area as the historical mining operations. Consequently, the Company's tonnages are conservative, and a deliberate under-estimation of tonnages in order to produce a prudently conservative estimate of ounces for mine planning purposes.

Reserve tonnages estimated by the Company at 2.7 t/m^3 without correcting for SG will always be the minimum tonnage expected. A variation of 0.1 t/m^3 in the S.G. will vary the estimated tonnage by about 4%. The variation in densities from 2.7 t/m^3 to 3.2 t/m^3 will vary the tonnages by 20%. Payabilities used are the historical figures at a high cut-off grade of 9 metre-gram per tonne Au. The Company is likely to produce up to 20% more tonnage from a similar area by using a lower cut-off grade. The Company states that resource and reserve tonnages used in its planning are conservative and may be 20% to 40% higher. This variation is an acceptable level of commercial risk for mine planning.

Hole/Sample Id	Ore-zone / Prospect	Measured Depth From (m)	Measured Depth To (m)	Length (m)	Geology & Comments	SG
WEDD005	Warrior East	175.4	175.55	0.15	GFM	2.80
		176.05	176.1	0.05	GFM, QV	2.98
		176.6	176.7	0.1	QZ Zone	2.72
		176.8	176.9	0.1	GFM	2.83
CTRC346	Warrior East	161.9	162.1	0.2	GFM Wk ser	2.80
		162.2	162.4	0.2	GFM & QV Wk py	2.77
		162.4	162.5	0.1	GFM	2.80
		163	163.2	0.2	GFM & QV Wk ser Tr py	2.80
		168.45	168.55	0.1	frac GFM Wk ser	2.78
		168.65	168.75	0.1	frac GFM & QV Tr py Wk ser	2.77

		169.5	169.6	0.1	frac GFM & QV Tr py Wk ser	2.78
		170	170.55	0.55	Ox Qtz zone Wk py Wk GFM bands	2.72
		170.75	171.05	0.3	GFM & QV Tr py Wk ser	2.79
WEDD001	Warrior East	211	211.1	0.1	BD Tr py	2.96
		211.1	211.3	0.2	frac Qtz	2.69
		211.4	211.5	0.1	BD	2.89
WEDD002	Warrior East	161.6	161.7	0.1	GFM Wk ser Tr py	2.82
		161.7	161.91	0.21	QV Mod py	3.00
		161.91	162.08	0.17	GFM Wk ser Tr py	2.81
WERC028	Warrior East	266	266.1	0.1	BD Tr py	2.94
		266.1	266.35	0.25	QV Wk py	2.78
		266.65	266.75	0.1	BD Tr QV Wk py	2.90
		266.75	266.95	0.2	BD Pkfs	2.88
		266.95	267.05	0.1	GFM Wk ser	2.80
WERC024	Warrior East	182.45	182.6	0.15	frac BD micro vn's	2.90
		182.6	183.1	0.5	frac QV Tr py	2.67
		183.1	183.2	0.1	GFM Mod ser	2.92
WEDD002	Warrior East	178.95	179.06	0.11	GFM Mod ser Tr py	2.68
CTRC345	Warrior East	183.8	183.9	0.1	BD	3.05
		184.5	184.95	0.45	QV & BD broken core	2.76
		185	185.45	0.45	frac QV Mod py	3.05
		186.25	186.4	0.15	Qtz BD Mod py	2.83
					Average	**2.83**

Table 19. Specific gravity measurements done by the Company on 32 core samples from 8 diamond-core holes at Warrior East. Abbreviations – str = strong; mod = moderate; Wk = weak; py = pyrite; gl = galena; ox = oxidized; tr = trace; GFM = gold formation; sp = sphalerite;; QV = quartz veining; ser = sericitic alteration; frac = fractured; Pkfs = pink feldspar alteration; BD = basaltic dyke.

Hole/Sample Number	Geology & Comments	Dry Weight grams	Density
204511	str py	519	2.98
204512	str gl	452	2.86
204513	tr py	535	2.54
204514	mod py, gl	494	2.92
204515	mod py, tr gl	486	2.76
204516	str py	514	2.76
204517	str gl, py	519	3.6
204518	str py, tr gl	538	2.92
204519	wk py, ox	487	2.68
204520	str py, ox	446	3.03

204521	str py	524	2.66
204522	str py, mod gl	522	3.55
204523	str py	520	3.02
204524	str py	513	2.95
204525	str py, gl	494	3.27
204526	str py, gl ox	490	3.43
204527	str py gl	536	4.19
204528	str py mod gl	545	2.66
204529	str py	509	3.18
204530	str py	517	3.54
204531	str py	480	3.12
204532	str py	483	2.88
204533	str py	465	2.85
204534	mod py, gl	507	2.74
204535	tr py	473	2.67
204536	str py	499	2.95
204537	str py	519	3.87
204538	wk py	496	2.8
204539	str py, mod gl	529	3.55
204540	str py	554	3.01
204541	str py ox	509	3.49
204542	str py ox	451	2.77
204543	mod py ox	469	2.7
204544	str py gl	547	4.6
204545	str py ox	519	2.97
204546	str py ox	469	3.91
204547	str py ox	493	2.95
204548	str py	549	2.84
204549	wk py	510	2.66
204550	str py	522	2.95
204551	str py	521	2.96
204552	str py	540	3.09
204553	str py	448	3.2
204554	str py, gl	552	3.41
204555	mod py	530	2.68
204556	mod py, tr gl	543	2.66
204557	str py gl	541	3.32
204558	str py, mod gfm, tr gl	546	3.03
204559	str py, tr gl, wk gfm	533	2.94
204560	mod py	551	2.73
204563	tr py	1010	2.66

204564	tr py	1045	2.63
204565	wk py	983	2.61
204566	wk py	1029	2.63
204567	wk py	994	2.91
204568	wk py	1028	2.78
204569	mod py	1029	2.77
204570	mod py	951	2.74
204571	tr py	1022	2.65
204572	wk py	1025	2.67
204573	tr py	1017	3.09
204574	tr py	1016	2.65
204575	wk py	993	2.63
204576	wk py	1028	2.79
204577	mod py	1017	2.71
204578	wk py	1028	2.81
204579	mod py tr gl	958	2.72
204580	tr py wk ox	972	2.66
204581	tr py	1000	2.64
204582	mod py wk ox	990	2.73
204583	mod py	981	2.81
204584	str py	1024	2.69
204585	mod py	1005	2.78
204586	wk py	975	2.72
204587	str py wk ox	955	2.81
204588	str py tr gfm	962	3.33
204589	str py tr gl	1013	3.31
204590	str py str gl	1016	3.63
204591	str py str gl	943	3.53
204592	str py wk gl wk ox	1014	3.05
204593	str py	1023	3.82
204594	str py	1027	3.07
204595	str py mod gl	947	4.17
204596	str py mod gl	1004	4.1
204597	mod py	935	2.8
204598	Aplite blank sample	555	2.62
204599	str py mod gl	1019	3.77
204600	wk py wk gfm	1016	2.73
204601	str py	1022	3.52
204602	str py wk ox	1041	2.92
204603	str py	994	3.91
204604	str py mod gl	1028	4.02

204605	str py	934	3.71
204606	str py wk gl	1022	3.17
204607	str py mod gl tr mal	901	4.02
204608	str py	987	3.5
204609	Tonalite blank sample	365	2.63
204610	str py	957	3.86
204611	str py	1033	4.08
204612	str py mod gl mod sp	968	3.09
204613	str py bx freegold on face	952	3.84
204614	str py	1048	3.77
	Average	**748.13**	**3.1**

Table 20. Density measurements on 102 underground ore samples from the No.2 Cross Reef (Maude St Leger Reef). Average sample weight was 0.75 kg. Average density is 3.1 t/m3. Abbreviations – str = strong; mod = moderate; wk = weak; py = pyrite; gl = galena; ox = oxidized; tr = trace; gfm = gold formation; sp = sphalerite; bx = brecciated

14.5.5 Grade Estimates

Grade estimates are based on the average of those drill intersection grades that are above the lower cut-off grade, for the diamond drill holes penetrating each mineralised body. The orientation of the structure is known from computer modelling extended from extensive surveyed workings underground, combined with surveyed diamond-core hole intersections. All drill collars were surveyed and all holes surveyed downhole usually at 50 metre intervals. Oriented core samples were taken in the majority of recent drill holes, so that there is certainty in correlating reef intersections with known reefs. True widths of drill intersections were calculated in SURPAC (or similar) for reef intersections.

Where drill intersection true widths were less than one metre, the grades were multiplied by the true widths to produce metal accumulations in metre-grams of gold per tonne of rock (m-grams per tonne Au) to provide a standardised measure for statistics and comparisons. The material included in the one-metre interval outside the assayed section was assumed to be zero grade, diluting the original assay. This minimum mining width is a mining factor normally used in Reserve estimation but is introduced at the Resource stage to produce a meaningful Resource figure for both Inferred and Indicated Resources. It is improbable that any opening less than one metre can be economically mined in reality. Diluting grades in narrow intervals less than one metre ensures that average grades are not biased by thin high-grade values.

Figure 68. Where the ore body width is less than one metre, the grade is diluted out to an arbitrary width of one metre, as one metre is the minimum width that is likely to be mineable (looking easterly).

An arbitrary top cut of 50 grams per tonne Au was applied to high assays to reduce any potential biasing effect of the high-grades. This is a conservative approach, as there is no statistical basis for cutting high grades, as discussed in the Inferred Mineral Resources section, and several of the Central ore bodies averaged recovered grades of over 50 grams per tonne for tens of years when mined previously.

The drill intersections above a resource estimation cut-off of 3 metre-gram per tonne Au were averaged to produce the grade applied to the tonnage calculated from the SURPAC geological model, after the tonnage was discounted by the payability factor for each structure. This payability factor is also a mining factor usually introduced at the Reserve estimation stage, but is introduced here into both Inferred and Indicated Mineral Resources to account for the irregular and non-uniform grade distribution, and discount the tonnage back to what is reasonably expected to be economically extractable.

This method of grade estimation (averaging drill grades above a set cut-off) is essentially the same as the polygonal method of grade estimation. More sophisticated computerized statistical methods are inappropriate for this project given the number of drill intersections available at this stage of the project. As the project is not a grass roots project and has an extensive knowledge base of previous production exceeding six million ounces over 40 year period, this method is regarded by the Company as sufficiently accurate for its purposes at the Indicated Mineral Resource stage, within the stated confidence limits.

Drilling is primarily used by the Company to establish that the reef system exists at a particular point. The drill intersection may or may not contain economic levels of mineralisation and is probably not representative of the grade over an area much beyond 5 to 8 metres from the intersection. Diamond drilling is useful in this type of deposit for locating structures and can be used in a broad manner for global grade information once sufficient data points are obtained (in excess of 50 intersections). The Company has over 1,500 significant drill intersections and has drawn reliable conclusions on the global grade statistics. However, diamond drilling, even at large diameters, will not produce reliable local grade distribution information. Mine planning will rely on an effective day-to-day grade control management system during the mining process, as is common in these types of deposits.

A true indication of the grade distribution in this type of deposit will only be obtained by underground driving on the structures, and this requires the extension of the Central Decline down to 600 metres vertical depth. The Company is firmly of the opinion that additional drilling would not necessarily guarantee that the confidence limits on grade distribution would be materially improved, due to the known nature of the mineralisation and the known irregular and non-uniform gold grade distribution.

The Warrior reef has been extensively drilled in part on a nominal 25 metre x 25 metre pattern spacing. The majority of the drilling was RC with nine diamond-core holes into the deeper sections of the shoot. Resources were estimated at Warrior East in October 2002 by indicator kriging using a commercial computer program SURPAC 2000. The kriging parameters derived were judged to be sufficiently accurate to provide reliable grade estimates within an acceptable level of risk, and Warrior proceeded to the decision to mine stage.

Due to the difficulties in obtaining reliable and cost-effective grade distribution from drilling, the Charters Towers project will be unlikely ever to have extensive Proved Ore Reserves beyond one to two years of planned production. Mine planning will be extensively reliant on Inferred and Indicated Mineral Resources, and at best Probable Ore Reserves derived from Indicated Mineral Resources. This is not uncommon in reef type deposits where there is an extensive previous mining database.

Nevertheless, the confidence will be high at ±30% for Inferred Mineral Resources because –

- the base tonnes have been discounted already, and
- the ore body is well understood from current and past mining.

14.6 Indicated Mineral Resources

The Indicated Mineral Resources are tabled below:

INDICATED MINERAL RESOURCES

Ore Body	Tonnes	Grade g/t Au	Gold Ounces
C1 Brilliant West a	298,043	6.45	61,809
C1 Brilliant West b	691,681	5.63	125,220
C2 (Sunburst)	213,476	11.16	76,605
C3 Queen West	103,015	32.37	107,203
C5 Brilliant East 3	111,930	5.35	19,238
C5 Brilliant East 4	122,685	23.27	91,774
C 6 (St Patrick)	704,047	3.74	84,649
C 7 Caledonia Extended	14,969	15.00	7,219
C8 (Ruby)	32,816	5.54	5,848
C13 Mountain Maid	247,881	5.81	46,288
C17 Day Dawn	117,983	5.00	18,974
C23 Columbia	184,582	7.16	42,511
C26 Queen East [Golden Gate]	67,455	13.93	30,211
E3 Warrior East	203,847	7.16	46,920
W1 Stockholm	14,968	12.26	5,898
TOTAL	**3,129,379**	**7.7**	**770,366**
Rounded	**3,200,000 tonnes**	**7.7 g/t gold**	**780,000 ozs gold**

Table 21. Indicated Mineral Resources summary of the tonnes, grade and ounces in each of the resource blocks, and the factors used are below.

The factors used in the Indicated Mineral Resource estimate are tabled below.

***FACTORS**		
Top cut	50	grams per tonne
Lower cut-off	3	metre-gram per tonne
US Gold Price	$1,755	
Exchange Rate	0.73	
Australian Gold Price	$2,404	
Payability	Variable - 30% to 52%	
Minimum mining width	1.00	metre
Estimation method		
Area:	Surpac DTM's	
Thickness:	Drill hole average true width	
Grade:	Weighted average of drill intersections	

Table 22. Factors used in the estimation of the Indicated Mineral Resource in 2012.

These factors were reviewed in 2020 following a substantial change in the gold price, and reached the following conclusions:

- The Project's costs and revenue are primarily in Australian dollars, independent of the US dollar gold price as the exchange rate keeps the AUD gold price reasonably constant or rising.
- Mining costs have not changed significantly since the Project was last in production in 2015, due to low interest rates and low inflation in Australia.
- The Australian dollar gold price has increased significantly since the Probable Ore Reserves were estimated in 2012, justifying a review of the cut-off grade.
- Cut-off grades of 1 g/t Au to 10 g/t Au were considered.
- Dropping the cut-off grade to 1 g/t Au for the estimation of Probable Ore Reserves increases the tonnage by 84% compared to a 4 g/t Au cut-off and drops the grade by 29%. The ounces increase by 31% to 810,000 ounces (4.9 million tonnes @ 5.1 g/t Au).

Since the 2012 Ore Reserves Report, the gold price in Australian dollars has changed significantly, to over AUD$2,000 per ounce. As Citigold's costs are primarily in Australian dollars and independent of the US dollar exchange rate, it was appropriate to assess if the AUD gold price impacted the cut-off grade.

Overall the gold price is displaying an overall bullish sentiment over the 10 year period, with the Australian dollar exchange rate varying with the US dollar price to keep the Australian dollar gold price fairly stable at around AUD$1,400 to AUD$1,700 per ounce for the seven years since December 2012 (see Figure 69 below). The price has not dropped below AUD$1,400 per ounce since October

2014 and has shown a consistent upward trend in Australian dollars since 2012. It recently spiked to a record high of over AUD$2,000 per ounce. This coupled with the ongoing quantitative easing of many world governments all point to a stable performance in gold price over the foreseeable future.

Therefore the Project revenue assumptions should be achievable, as the model is based on current costs, and the majority of Citigold's costs are in Australian dollars.

Figure 69. Gold price in Australian and US dollars for the 10 years to 30 June 2020.

However, previous price performance cannot be used as a predictor of future prices or exchange rates against the USD and there is no guarantee that the AUD price may not drop back to 2012 levels. Tables 9 and 10 above outlined the calculations used to derive a cut-off grade of 2.1 g/t Au for a breakeven mining cost.

On this basis it was decided it would be prudent not to change the cut-off grade, which remains at 3 g/t Au for the Indicated Mineral Resource.

ITEM 15. Ore Reserve Estimate

The Probable Ore Reserve is derived from the Indicated Mineral Resource by applying various legal, economic and mining factors to the geological data that comprises the Indicated Mineral Resource. The Probable Ore Reserve at a 4 grams per tonne cut-off is tabled below, together with the mining factors:

Ore Body	Tonnes	Gold Grade	Gold Ounces	Gold Kg
C01 Brilliant West a	327,848	5.57	58,719	1,826
C01 Brilliant West b	760,849	4.86	118,959	3,700
C02 Sunburst	234,824	9.64	72,775	2,264
C03 Queen West	113,316	27.95	101,843	3,168
C05 Brilliant East 3	123,123	4.62	18,276	568
C05 Brilliant East 4	134,954	20.09	87,185	2,712
C07 Caledonia Extended	16,466	12.95	6,858	213
C08 Ruby	36,098	4.79	5,555	173
C13 Mountain Maid	272,669	5.02	43,974	1,368
C17 Day Dawn	129,781	4.32	18,026	561
C23 Columbia	203,040	6.19	40,385	1,256
C26 Queen East [Golden Gate]	74,201	12.03	28,700	893
E03 Warrior East	50,000	6.3	10,128	315
W01 Stockholm	16,465	10.58	5,603	174
TOTAL	2,493,634	7.696	616,986	19,190
ROUNDED	**2,500,000**	**7.7g/t gold**	**620,000 oz gold**	19,000 kg gold

Table 23. Probable Ore Reserve at a 4 grams per tonne cut-off, and mining factors below.

***FACTORS**		
Mining method	Long-hole open stoping, 10m sub-levels	
Minimum mining width	1.00	metre
Dilution	10%	
Gold losses	5%	
Payability	Variable - 30% to 52%	
Pillars left	0% due to payability factor	
US Gold Price USD	$1,755	
Exchange Rate	0.73	
Aus Gold Price AUD	$2,404	
Driving cost AUD	$3,000	per metre, 3.5 metre square
Driving cost equivalent	2.15	Ounces

Table 24. Mining Factors used in the 2012 report.

At current exchange rates, US$1500 would convert to AUD$2181 at 0.6877 exchange rate. A discussion on the gold price and exchange rate variations from the 2012 report to this current report is given above in ITEM 14.6. At current prices the breakeven cut-off is 2.1 g/t Au. It was decided that it would be prudent to maintain an Australian dollar gold price of AUD$1600 per ounce despite recent prices higher than that and retain the higher cut-off grade of 4 g/t Au for Reserves due to physical gold losses during mining and mining dilution.

15.1 Tonnage – Grade Curves

The tonnage, grade and contained ounces vary according to the selected cut-off. As the cut-off increases, lower grade areas are dropped out. In the Company's Project, some of the large tonnage bodies are relatively low grade, so increasing the cut-off reduces the tonnage significantly, but as a result the average grade increases, which buffers the change in contained ounces.

For the Probable Ore Reserves, doubling the cut-off grade from 3 grams per tonne to 6 grams per tonne reduces the tonnes by two-thirds, but only halves the ounces. It more than doubles the reserve grade. Increasing the cut-off above 6 grams per tonne does not change the ounces significantly until 10 grams per tonne cut-off grade (see Figures 72 and 73).

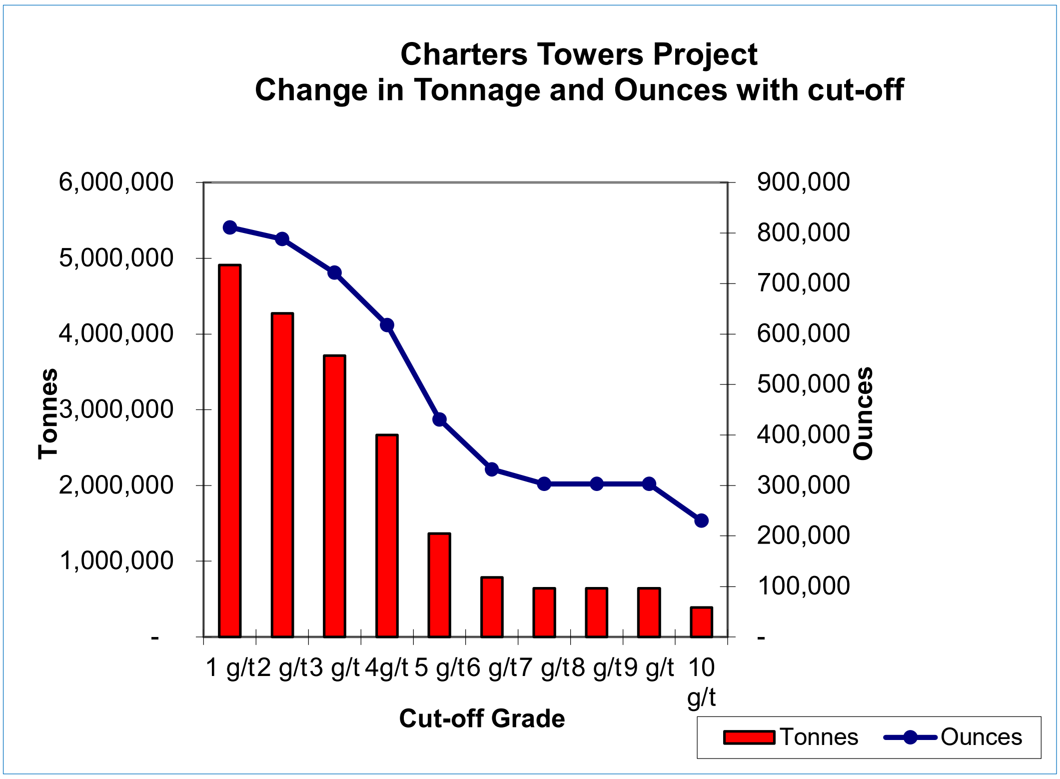


Figure 70. Tonnage-ounce curve showing change in tonnage and ounces with cut-off grade.

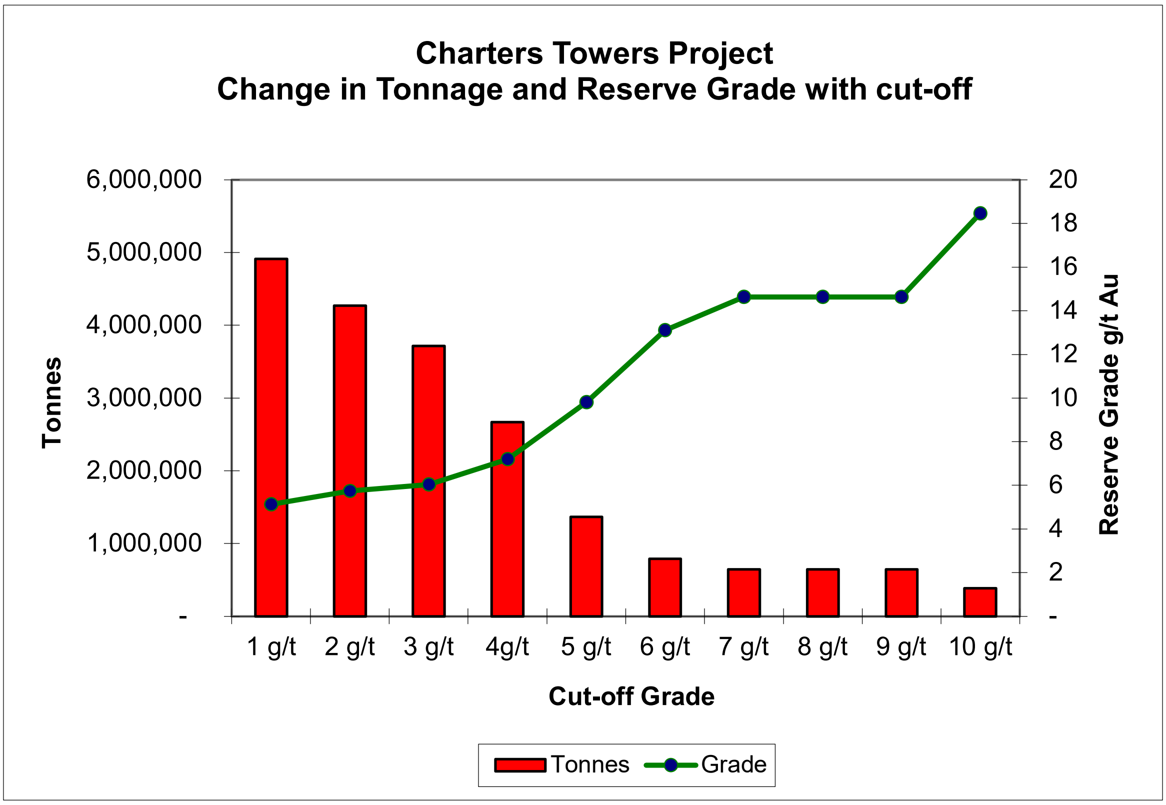


Figure 71. Tonnage-grade curve showing change in tonnage and grade with cut-off grade.

15.2 Minimum Ounces

Each of 33 mineralised bodies in the project area was examined and its contained ounces estimated. If the contained ounces were less than 5,000 ounces, the bodies were excluded from the Probable Ore Reserve category, as it was considered unlikely at this time that the target would be worth the cost of driving an underground access to mine the body. A total of 16 mineralised bodies were included in the Indicated Mineral Resource category, and were modified by mining, legal and commercial factors to produce Probable Ore Reserves.

Three smaller bodies (S1 Black Jack, Mount Cenis and Stockholm Cross Reef), with potential for open pit extraction, containing less than 5,000 ounces were dropped from the Resource as being too small to be likely to be mined in the short term. They are at open pit depths and located outside the Central area (i.e., not under the city of Charters Towers). Surface infrastructure does not impede likely development of these resources, and they will be mined at some time in the future.

Driving costs for underground access were estimated at $4,000 per metre for a 4 metre x 4 metre access drive, based on known operating costs from 1.6 km of driving on the Central Decline, the shorter Stockholm Decline, the current Warrior Decline and access levels, ramps, loading bays, stubs, cross-cuts and ventilation shafts underground at the Victory, Victoria, No.2 Cross Reef, Stockholm, Washington and Warrior workings. This cost per metre is equivalent to 2.5 ounces of gold revenue at A$1600 per ounce (breakeven), or 4 ounces of gold at a profit margin of 50% of revenue, for every metre driven if paid for from profits (sustaining capital).

The mineralised bodies are mostly within one and half kilometres at a gradient of one in seven from the planned Central Decline extension or are adjacent to other mineralized bodies that are to be mined. One and half kilometres of driving will absorb 4,000 ounces of gold revenue to break even. The Company considers that a minimum of 5,000 ounces is required in a given area before planning would be undertaken to access or mine that area.

15.3 Reconciliation

The test of the accuracy of Ore Reserve estimates is whether or not the actual production matches the predicted production. Actual mine production of gold is a function of gold sterilised during mining (made inaccessible by mining methods or ground conditions), gold deliberately left behind in supporting pillars, and metal physically lost as dust or fines during production and stockpiling. There are then further losses in the metallurgical process to extract gold from the ore in the processing plant. However, losses in processing, while affecting gold available for sale, are independent of errors and losses in converting gold ounces estimated in the reserve to gold ounces mined and brought to surface ready for processing. Recovery at the Charters Towers Gold Project in the processing plant have consistently been above 97%, as reported publicly in many Quarterly and Annual Reports by the Company to the ASX from 2006 to 2015. Reconciliations will vary with ground conditions and locations within the Project area.

In the 2010 Annual Report, the Company reported that of a parcel of 19,308 ounces outlined within the Probable Ore Reserve that was mined from the Warrior reef in the Imperial Mine, the refinery paid the Company for 19,210 ounces. At 98% recovery in the Mill, it was expected that 18,921 ounces would be sold, indicating the Company produced 288 ounces more than the Probable Ore Reserve estimate, or 101.5% of the metal estimated in the Reserve.

A more recent reconciliation in the December Quarter of 2011 for a Probable Reserve parcel of 3,315 ounces (8,761 tonnes at 11.8 grams per tonne) in the Sons of Freedom ore body in the Imperial Mine from the 840 and 850 Levels and the South Decline, the Company mined 2,421 ounces to truck to the processing plant, with 439 ounces left behind. This total of 2,860 ounces was 86.2% of the ounces estimated in the Reserve.

These results indicate that the reconciliations are within the range of errors expected, as routine chemical assaying of the gold grade may vary by 10% to 15%. A result where the recovered ounces are within ±15% of the estimate is regarded as acceptable for planning purposes.

15.4 Mining Factors

Mining factors used in the estimate are summarized below in Table 25. These were developed from data originally submitted to ASX in the Gold Production Plan of September 2002 and modified in the internal feasibility study for Sunburst Mine. A summary of the mining costs for the 2005 study was released in the March 2005 Quarterly Activities Report to the ASX and the Indicated Mineral Resources and Probable Ore Reserves report released to ASX in August 2005. Figures for 2012 costs were released to ASX in the 2012 Report in May 2012. The current figures are updated based on current operating costs at the Imperial Mine from 2006 to 2015.

Mining method	Long-hole open stoping, 10m to 15m sub-levels	
Minimum mining width	1.2 Metres	
Dilution	10%	
Gold losses	5%	
Payability	Variable - 30% to 52%	
Pillars left	0% due to payability factor	
US Gold Price USD	$1,755	per ounce
Australian Gold Price AUD	$2,404	per ounce
Driving cost AUD	$3,000 $4,000	per metre, 3.5m square per metre, 4 m square
Driving cost equivalent	2.15 to 2.5	ounces per metre
Mill recovery	95%	of mill feed

Table 25. Summary of 2020 Mining Factors

15.5 Risk Factors

Land Tenure and the Right to Mine

The relevant mining leases have been granted and the processing plant and tailings dam have been built and approved for operations. Some 104,000 ounces of gold have been already been produced from typical ore bodies with the existing plant facilities. Mining leases are usually granted for 21 to 25 year periods and are usually renewable provided all conditions have been met. The political risk factors of being able to obtain and retain the necessary land tenure and permission to mine are therefore regarded as zero.

Metallurgical Risk

Trial mining over a three-year period from 1997-2000 and a nine-year period from 2006 to 2015 has indicated that metallurgical factors are well known and thoroughly understood. Metallurgical variation over the field is minimal. Only primary ore is mined, with no oxidised material being mined or processed. Recoveries and reagent consumptions are not unusual and are within acceptable industry limits. Recent mining since 1996 and particularly in the period 2006-2015 shows recoveries are consistently around 97% with low reagent consumption. Metallurgical risk is considered very low.

Mining Method

Trial mining started with conventional handheld air-leg drilling with workers in stopes. This progressed to mechanised long-hole open stoping with remote-controlled mucking and workers always under supported ground protected by rock-bots, cable dowels and mesh. The mining method was proven in mining from 2006-2015 to be effective, reliable and minimising dilution. The risk of determining an appropriate mining method is considered very low.

Marketing Risk

Marketing risk factors are also regarded as being close to zero. It is anticipated that all gold and silver produced can be sold at prevailing market prices. The Company retains the right to withhold sales of precious metals to take advantage of any perceived price fluctuations.

Price Risk and Hedging

Production is not hedged at present, but the Company's hedging policy is reviewed when market conditions warrant. Hedging is a prudent strategy if the gold price is perceived to be likely to drop over a sustained period, provided that the buyers cannot bring forward the agreed delivery date and that no more than half of the predicted annual production is hedged. It is prudent to hedge no more than half of the published ore reserve. This protects the Company from the risk of annual production not meeting predicted targets or ore reserves not being accurate

Gold price variation is outside the Company's control, but the Company can control operating costs, head grade and volume of production to counteract adverse price variation to maintain or improve the profit margin per ounce.

Reconciliation of Reserves against Production

See Item 15.3 for a full discussion on reconciliation. The gold recovered matches the gold predicted within 10-15%, and is acceptable and satisfactory for this type of deposit.

The Probable Ore Reserves are derived from, and contained within, the Indicated Mineral Resources. The Probable Ore Reserves are not additional to the Indicated Mineral Resources. The total Probable Ore Reserves at a 4 grams per tonne Au grade cut-off are 2,500,000 tonnes at 7.7 grams per tonne gold, containing 620,000 ounces (19,000 kilograms) of gold. The risk of predicted ore reserves not matching actual production is considered low and acceptable.

Environmental Risk

See Item 20 for a full discussion on environmental factors. All Mining Leases are held under an approved Environmental Authority with granted approval to mine. The Company does not operate a Tailings Storage facility but retains the right to build one subject to normal standards, permissions and approvals. The unprocessed rock from development mining has been proven to be benign and non-acid-forming, with no harmful run-off being generated from rock stockpiles. Tailings after processing comprise mostly fine quartz sand. The environmental risk is considered low and acceptable.

ITEM 16. Mining Method

The mining method selected is long-hole open stoping, which was used in the Imperial Mine (Warrior and Sons of Freedom reefs) from 2006-2015 and is planned to be used in the Central Mine in its Sunburst, Brilliant and Day Dawn reefs in the future. This is a fully mechanised open stoping method that uses 10 metre to 15 metre vertical spacings for sublevels (depending on the dip) for drilling blastholes inclined in the plane of the ore body to ensure accurate and controlled breaking of the gold bearing quartz reefs. An arc of slash blast rings are drilled at one end of an area to be stopped so that millisecond delayed blasting of the first sub-horizontal holes creates the void into which broken material can expand during blasting. The vertical holes are inclined at 10 degrees off vertical in the plane of the ore body to throw blasted material into the void, avoiding hang-ups in the stope.

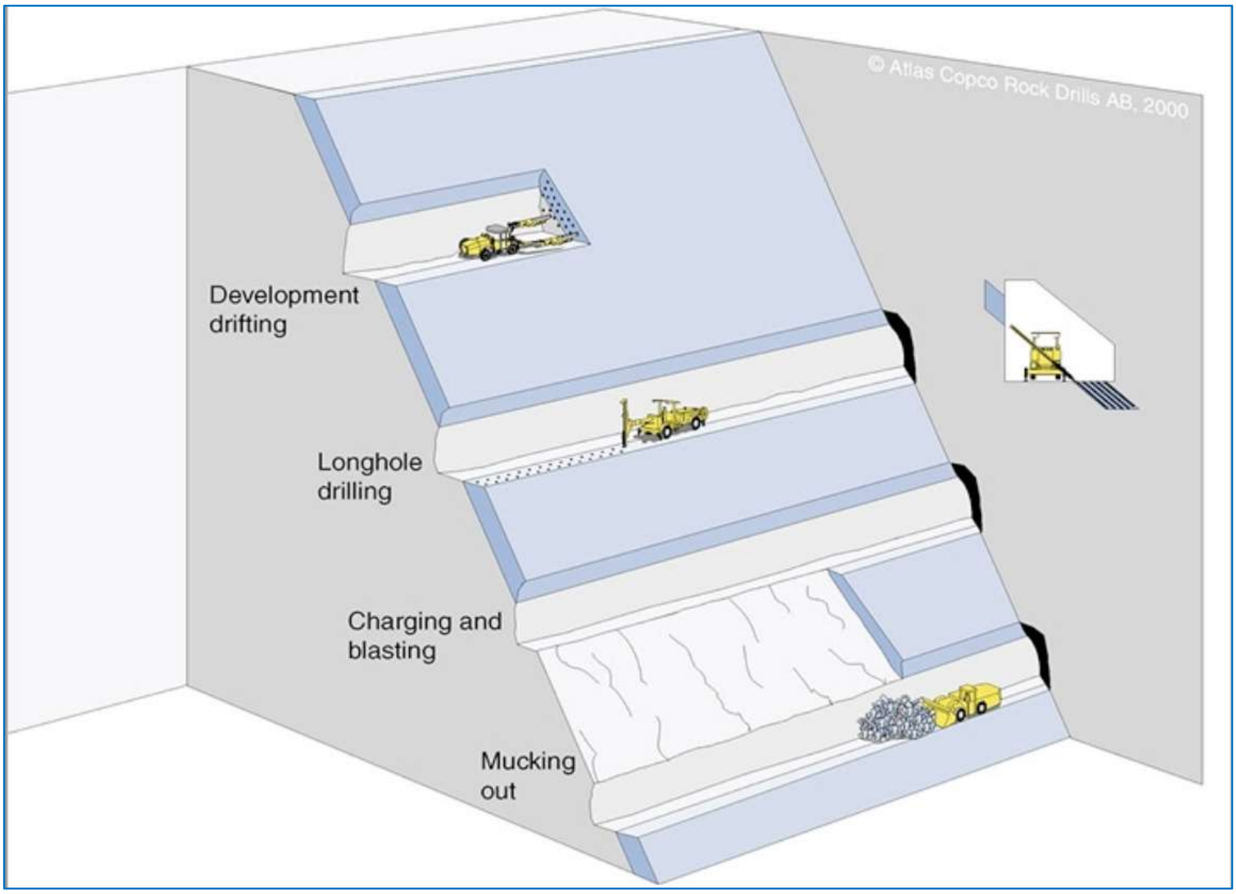


Figure 72. Proposed mining method will be long-hole open stoping, drilling blastholes in the plane of the ore body between levels 10 to 15 metres apart. This method was successfully trialled at the Imperial mine area and produced some 65,000 ounces of gold from 2006-2015.

Broken ore will be transported from the stopes to a transportable underground crushing, screening and photometric sorting plant for initial pre-processing to remove barren waste. The planned photometric sorting of ore will involve crushing to a 100 millimetre size and screened at 50mm with all the less than 50 millimetre reporting to ore and the 50-100 millimetre fraction being auto sorted to select and remove unwanted waste material which can be left underground in previously mined areas. The sorted gold ore together with the fines (below 50 millimetre) will be transported to the surface. Test work to date indicates that approximately 60% of the total volume of material can be removed using automated sorting equipment. This removes the bulk waste and will result in significant savings in transportation, downstream processing and handling, as well as upgrading the head grade.

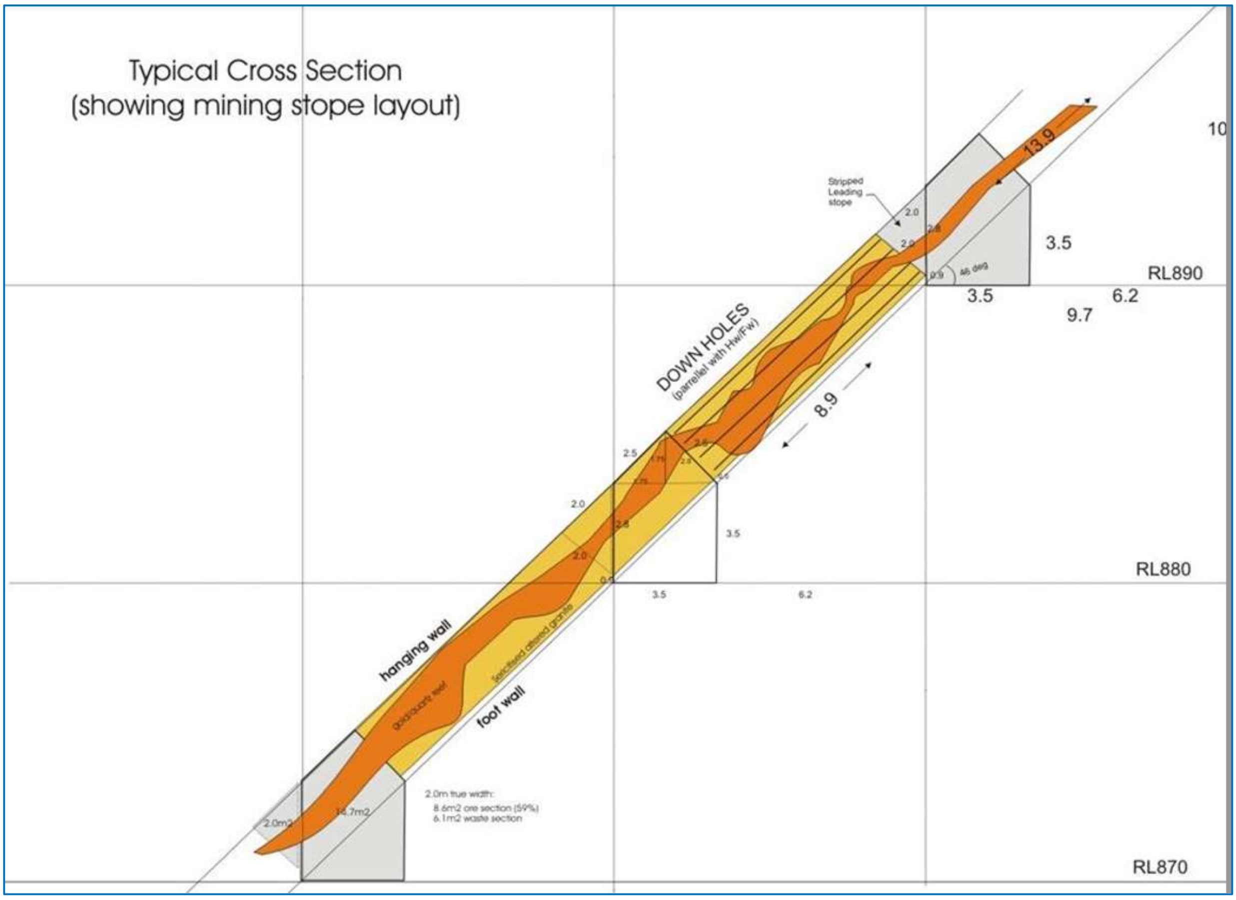


Figure 73. Blast holes are drilled in the plane of the ore body from level drives 10 to 15m apart vertically. Blast holes break through into the floor of the level above and the back of the level below and can be checked for accuracy on each level.

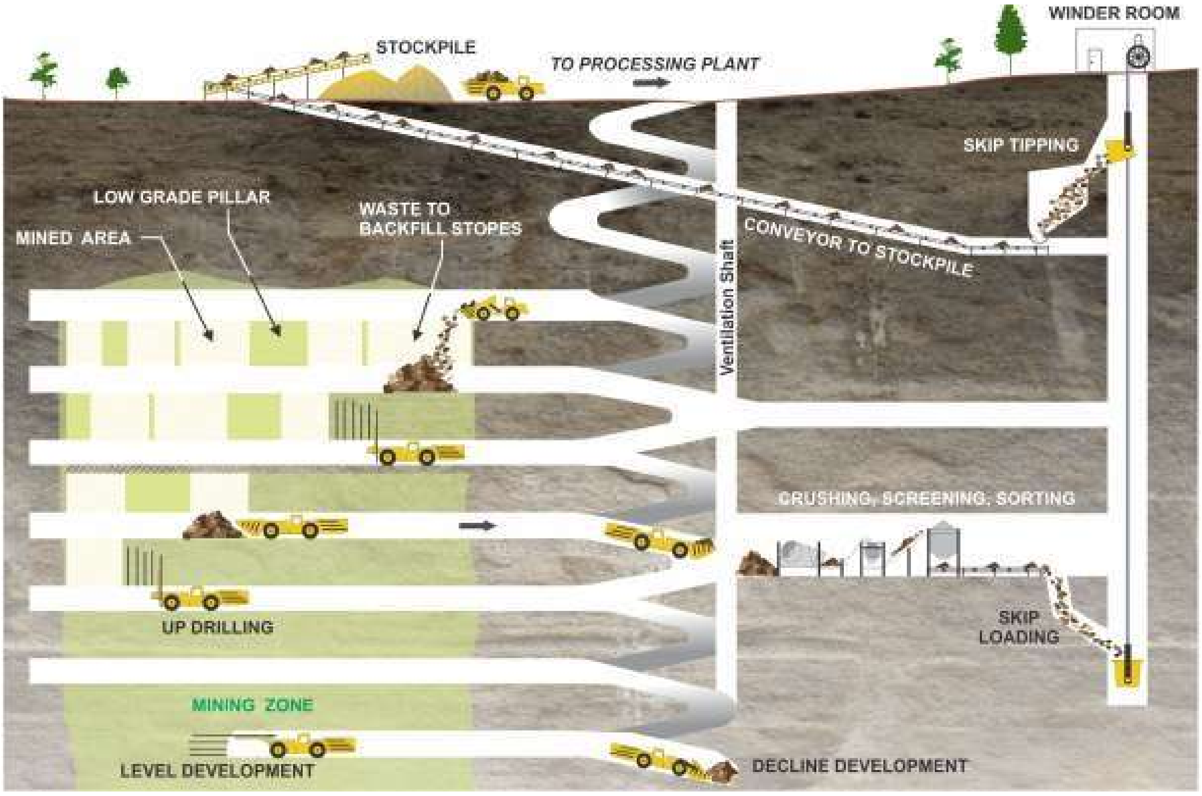


Figure 74. Diagrammatic representation of underground mining for the Central area if a vertical haulage shaft was used in combination with existing planned decline.

This auto sorting plant will also allow the recovery of gold in low-grade development headings (currently below grade and sent to waste), which adds to the total ounces produced from the resource.

Sunburst is the second of the four reefs planned to take the Central area over a four (4) year growth period. Sunburst will require a 2,000 metre extension of the existing 1,600 metre long Central decline underneath the Charters Towers township. This will enable access to the promising Brilliant and Queen reef systems at approximately 500 metres vertical depth within the Sunburst areas. The Sunburst system extends for approximately two (2) kilometres eastwards from the centre of Charters Towers, and includes the old Queen, Sunburst and Golden Gate reefs, and will access cross reefs such as the Queen Cross which together have already produced over one million ounces of gold.

Mining levels will be opened up in the western part of the Sunburst area over a distance of 300 metres as part of the initial development. An additional 300 metres will be exposed on the Eastern section after production starts in the western zone. Early planning is underway to establish an ore hoisting facility in the Central Mine utilising one of the old vertical shafts. This will represent a considerable saving in operating costs as well as enhancing mine ventilation by the reduction in use of diesel underground. Future mining will use electric haulage to reduce the heat and diesel particulate fume risks associated with diesel equipment underground.

Figure 75. Shanty-back level drive in ore in the Imperial Mine (looking westerly).

Figure 76. Gold-bearing quartz reef exposed in the Imperial Mine, prior to stoping (looking westerly).

Figure 77. Stope (void) left after the ore has been extracted, showing the clean break along each side, and stable walls of the stope. Part of the remaining un-mined reef can be seen at the top left. Low-grade parts of the reef are left in place to act as pillars to support the surrounding ground (looking westerly).

Figure 78. View looking east along the Sons of Freedom ore body in the Imperial Mine, showing the floor of the level drive, and the stope voids above and below the level. The ore has been cleanly extracted, with little dilution from the stable stope walls. While the access drive has to be about 3.5m x 3.5m to get drilling machines into the area, the stope slots between the levels are confined to the ore itself, minimizing dilution by maintaining a narrow stoping slot width.

16.1 Processing

Ore from the Central and Imperial mines will be transported to the gold processing plant to be located just outside the city bounds. This processing plant is discussed in detail in ***Items 13 and 17.*** The production rate builds up over four years from the Central area.

16.2 Development Capital Costs

The Charter Towers project is estimated to require A$149 million over the first three years to bring it into full scale production, of which at least A$50 million will be sought externally and the balance derived from cash flows. This will be spent over a three year period as tabled below (from Tab 10 of the Financial Model):

10. START UP CAPEX SCHEDULE		BUDGET 3 Years	YEAR 1	YEAR 2	YEAR 3
Mine Development	Main Access Tunnels "Twins"	25,801,200	7,817,500	11,180,300	6,803,400
	Ore Drives	19,920,000	3,000,000	6,300,000	10,620,000
	Exploration & Drilling	20,250,000	4,536,884	10,043,453	5,669,663
	Ventilation	7,528,000	1,648,000	2,993,333	2,886,667
	Dewatering	1,690,000	1,056,667	486,667	146,667
	UG Services	3,078,500	785,846	1,663,233	629,421
	UG Ore Handling System	9,000,000	4,000,000	2,500,000	2,500,000
	Processing Plant	20,000,000	20,000,000	-	-
	Admin, IT & Regulatory Overheads	14,000,000	7,000,000	7,000,000	-
	Mine Automation Program	9,000,000	1,000,000	3,000,000	5,000,000
	Land acquisition/ Environmental Bond	3,200,000	3,200,000	-	-
	Engineering, Project Mgt	6,916,000	1,207,556	3,200,022	2,508,422
	Contingency	9,000,000	3,000,000	3,000,000	3,000,000
	Total	**149,383,700**	**58,252,452**	**51,367,008**	**39,764,240**

Table 26. Summary of capital expenditure over the first five years estimated for the development of the Charters Towers project.

16.3 Production Schedule

The production schedule has not been calculated for this Report.

16.4 Operating Cost Estimate

The Project has produced over 100,000 ounces of gold since 1993 with the bulk of this production from 2006 to 2014.

Actual Cash Costs were published in the Quarterly Reports to the ASX, and these are shown below. For the 25 Quarters over six years from 2007 to 2013, the average gold price received for sales in Australian dollars was AUD$1,288 and the average Cash Cost was AUD$564, with the Cash Cost averaging 44% of the received gold price.

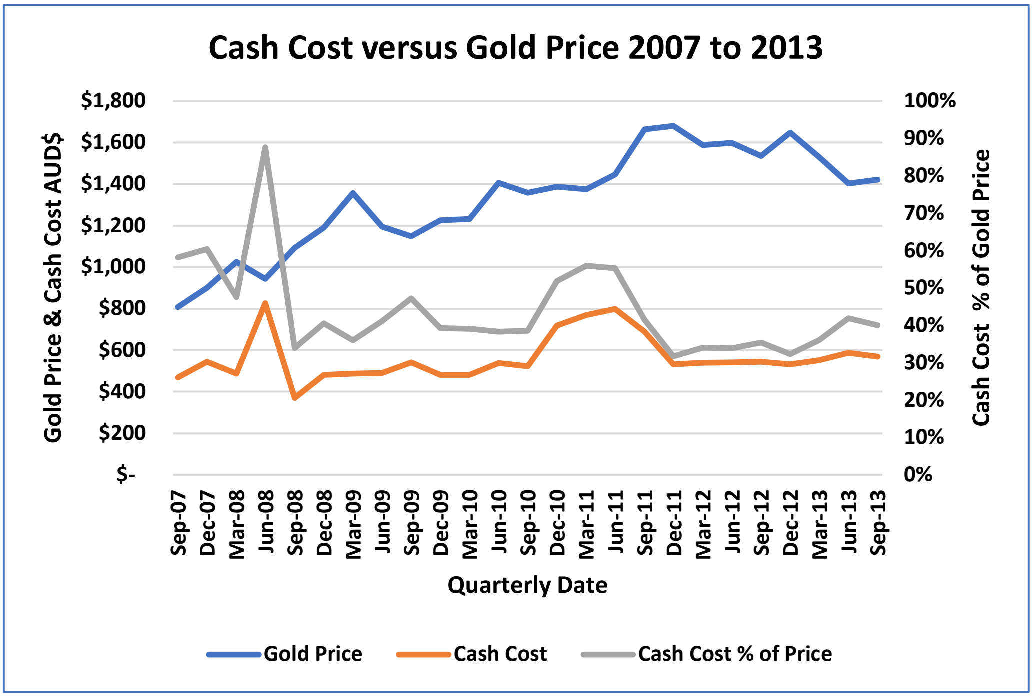


Figure 79. Actual gold production cash costs for the six years from 2007 to 2013 plotted against the gold sale price received. The average cash cost was 44% of the average received gold price.

The current Financial Model took these actual operating costs into account and made allowances for the massive increase in production output, the scale of the operation, inflation and the change in prices and costs since 2014. The projected operating costs are summarised below (Tab 5.1 of the Financial Model):

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Gold price in USD	US$ /oz	1,755	1,800	1,890	1,980	2,070	2,070	2,070	2,070	2,070	2,070
Exchange rate	US$ /A$	0.73	0.73	0.73	0.73	0.75	0.75	0.75	0.75	0.75	0.75
Gold price in AUD	AUD /oz	2,404	2,466	2,589	2,712	2,760	2,760	2,760	2,760	2,760	2,760
Cash Cost (AISC)	AUD /oz	**764**	**743**	**760**	**786**	**690**	**684**	**686**	**687**	**695**	**690**
Cash Cost % of Gold Price		**32%**	**30%**	**29%**	**29%**	**25%**	**25%**	**25%**	**25%**	**25%**	**25%**

Table 27. Projected Operating Cash Cost, gold prices in AUD and USD and exchange rate for the first 10 years.

The Operating Cost details are Tabled below:

OPERATING COST SUMMARY (AUD$)			$ PER PERIOD			$ TONNE ORE			$ OZ
			Materials	Labour	Total	Materials	Labour	Total	
DIRECT COSTS			12 months			882,036 tonnes ore			218,425 ozs
MINING	**Production**	Drill & Blast	2,750,918	2,019,500	4,770,418	3	2	5	22
		Stope Production	4,429,141	4,666,375	9,095,516	5	5	10	42
		UG Transport	5,684,728	4,040,750	9,725,478	6	5	11	45
		UG Services	13,817,346	1,400,875	15,218,221	16	2	17	70
		UG General	1,470,867	2,630,250	4,101,117	2	3	5	19
		Subtotal	**28,152,999**	**14,757,750**	**42,910,749**	**32**	**17**	**49**	**196**
	Development		18,876,976	10,008,250	28,885,226	21	11	33	132
	Total Mining		**47,029,975**	**24,766,000**	**71,795,975**	**53**	**28**	**81**	**329**
SURFACE HAULAGE			$5,292,219	-	$5,292,219	6	0	6	24
PROCESSING		Processing Costs	0	0	23,814,984	0	0	25	109
	Project Environment Rehabilitation				1,764,073			2	8
	Total Processing		**0**	**0**	**25,579,057**	**0.00**	**0**	**27**	**117**
ADMINISTRATION			2,872,625	2,872,625	5,745,250	3	3	**7**	**26**
TOTAL DIRECT COSTS			**55,194,818**	**27,638,625**	**108,412,501**	**62.58**	**31**	**121**	**496**
INDIRECT COSTS									
Administration & Regulatory Overheads									
Administration, Management Committee & Auditing Costs					1,000,000			1	
IT Systems, Infrastructure, Processes & Reporting					1,450,000			2	
Fees & Charges	Tenure Rents				400,000			0	
	Council Rates				500,000			1	
	Environment Fees				300,000			0	
	O&H Safety & Construction Levy				350,000			0	
	Construction Insurance				500,000			1	
Exploration & Reporting					1,500,000			2	
TOTAL INDIRECT COSTS					**6,000,000**			**7**	**27**
TOTAL OPERATING COSTS					**114,412,501**			**127.71**	**524**

Table 28. Summary of the estimated major operating costs on a "per tonne" and "per ounce" basis.

16.5 Gold Price

The Australian dollar gold price is a result of the US dollar gold price and the exchange rate between Australian and US dollars. The Australian dollar gold price from 2010-2020 has been within a band of A$1,400 to A$1,700 for most of the 10 year period, with the Australian dollar exceeding parity to the US dollar from late 2010 (the crossover point in Figure 80 below). The AUD gold price has risen substantially since the end of 2018 and has been trading above AUD$2,000 per ounce since June 2019.

The US dollar gold price has traded fairly consistently in the band between USD$1,000 and USD$1,500 per ounce until late 2019 when it rose above USD$1,500 per ounce.

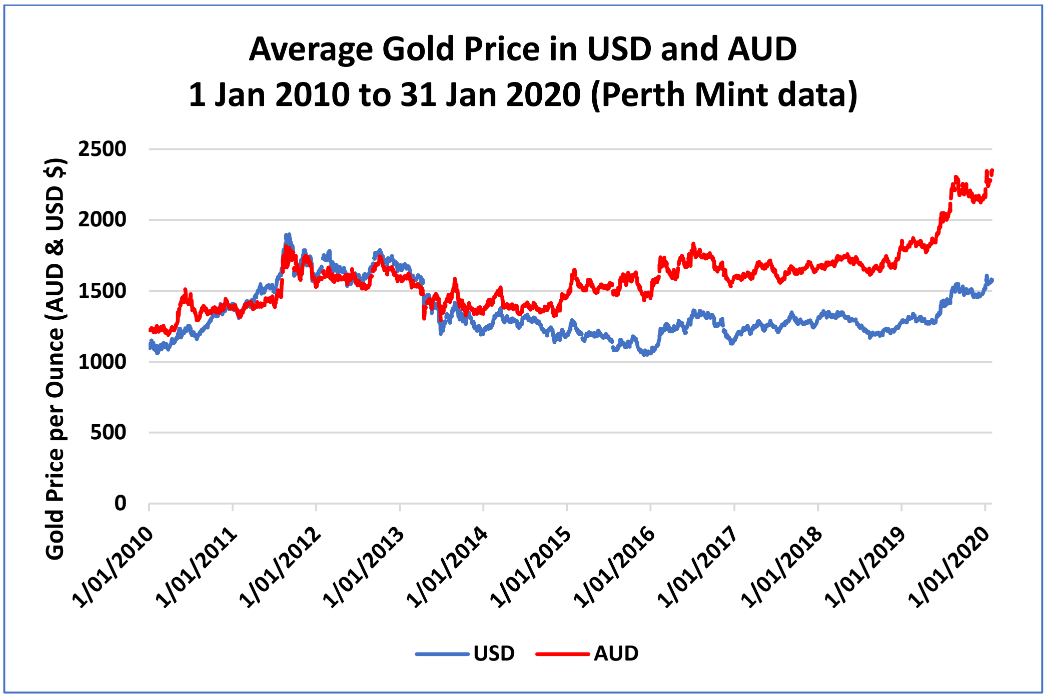


Figure 80 Daily average gold bid price in Australian and US dollars for the 10 years from January 2010 to 31 Jan 2020, showing the average price for the period. Data from the Perth Mint.

The Financial Model has used a USD gold price of USD$1,755 per ounce in Year 1 increasing to USD$2,070 per ounce in Years 5-10 while maintaining a constant exchange rate of AUD$1 = USD$0.73 in Years 1-4 and 0.75 in Years 5-10. The variation in future pricing is based on the best available forecasts and is tabled below for the first 10 years.

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Gold price in USD	US$ /oz	1,755	1,800	1,890	1,980	2,070	2,070	2,070	2,070	2,070	2,070
Exchange rate	US$ /A$	0.73	0.73	0.73	0.73	0.75	0.75	0.75	0.75	0.75	0.75
Gold price in AUD	**AUD /oz**	**2,404**	**2,466**	**2,589**	**2,712**	**2,760**	**2,760**	**2,760**	**2,760**	**2,760**	**2,760**

Table 29. Forecast gold prices in US dollars for the first 10 years of the project.

ITEM 17. Recovery Methods

17.1 Metallurgy

The metallurgy of mineralisation throughout the field is remarkably uniform, as discussed in the section on Inferred Mineral Resources and grade continuity. The Charters Towers project will initially be entirely underground, and resources under the Charters Towers township are limited to deeper than 50 metres below surface to maintain a safety barrier for surface buildings. This means that no oxidised or transition zone ore will be treated initially, although there is scope for open pit operations outside the Central area in later years.

Ore has already been processed from mining operations in four geographically separate areas: Stockholm (open pit and underground), Washington open pit, Imperial Mine (underground, mining the Warrior and Sons of Freedom ore bodies) and the No.2 Cross Reef in the Central area (a lateral extension of the previously-mined Maude St Leger Reef). No metallurgical problems were encountered in the trial mining production of 38,000 ounces of gold from the Stockholm, Washington and No. 2 Cross Reef areas in 1997-2000. Recoveries were as high as 98% in these areas, and consistently above 97% in 2007-2015 extracting over 65,000 ounces from the Imperial Mine. The Company has conservatively used 95% recovery in its reserve estimations, less than the recent recoveries in the treatment of some 104,000 ounces of gold.

The mineralogy is simple, consistent with mesothermal quartz reefs in granite. Gold is located mainly between sulphide grains, making it amenable to liberation by grinding and conventional Carbon-In-Leach (CIL) processing plant treatment. About 30% of the gold is gravity-recoverable through conventional spirals and shaker tables, with the balance recovered through the CIL processing plant. Final gold recovery is by electroplating onto steel wool, which is then roasted and smelted with fluxes to remove excess iron and produce a final doré bar of gold and silver, which is transported to a precious metals refiner (the Perth Mint) for final refining.

The mineralisation comprises free gold with a small amount of electrum (a natural gold-silver alloy), and the gangue minerals are sulphides of iron (pyrite), lead (galena), zinc (sphalerite) and copper (chalcopyrite). As the temperature of formation is relatively high (300° to 350° C), there are very low to undetectable concentrations of volatile penalty metal elements such as mercury, arsenic, antimony and selenium. Sulphides comprise no more than 5% to 10% of the material to be milled, and the associated metals do not consume adverse amounts of processing reagents.

Figure 81 below shows polished sections under a mineragraphic microscope. The gold grains tend to form along grain boundaries and late-stage fractures in sulphide grains, making the gold easily accessible to cyanide solutions when the rock is crushed and ground. The grinding process also liberates free gold particles with the potential to use alternative gravity separation such as high-speed centrifugal spinners to eliminate the need for cyanide processing of the bulk of the ore. Citigold previously used toxic cyanide to extract gold, requiring the building and maintenance of Tailings Storage Facilities (TSF) or dams to contain chemically treated tailings. The Company has since disposed of its cyanide plant and TSF. Future gold extraction will use high centrifugal force gravity extraction such as the Falcon centrifugal gold concentrators (Figures 84 and 85 below). The ore has been proven to yield an acceptable recovery by gravity treatment, and this will allow the treated sands to be pumped back underground as stope fill, eliminating the need for a TSF and eliminating the use of cyanide. The plant is planned to be set up as a series of transportable modules in 40-foot shipping containers requiring minimal environmental disturbance and eliminating the need for extensive concrete foundations.

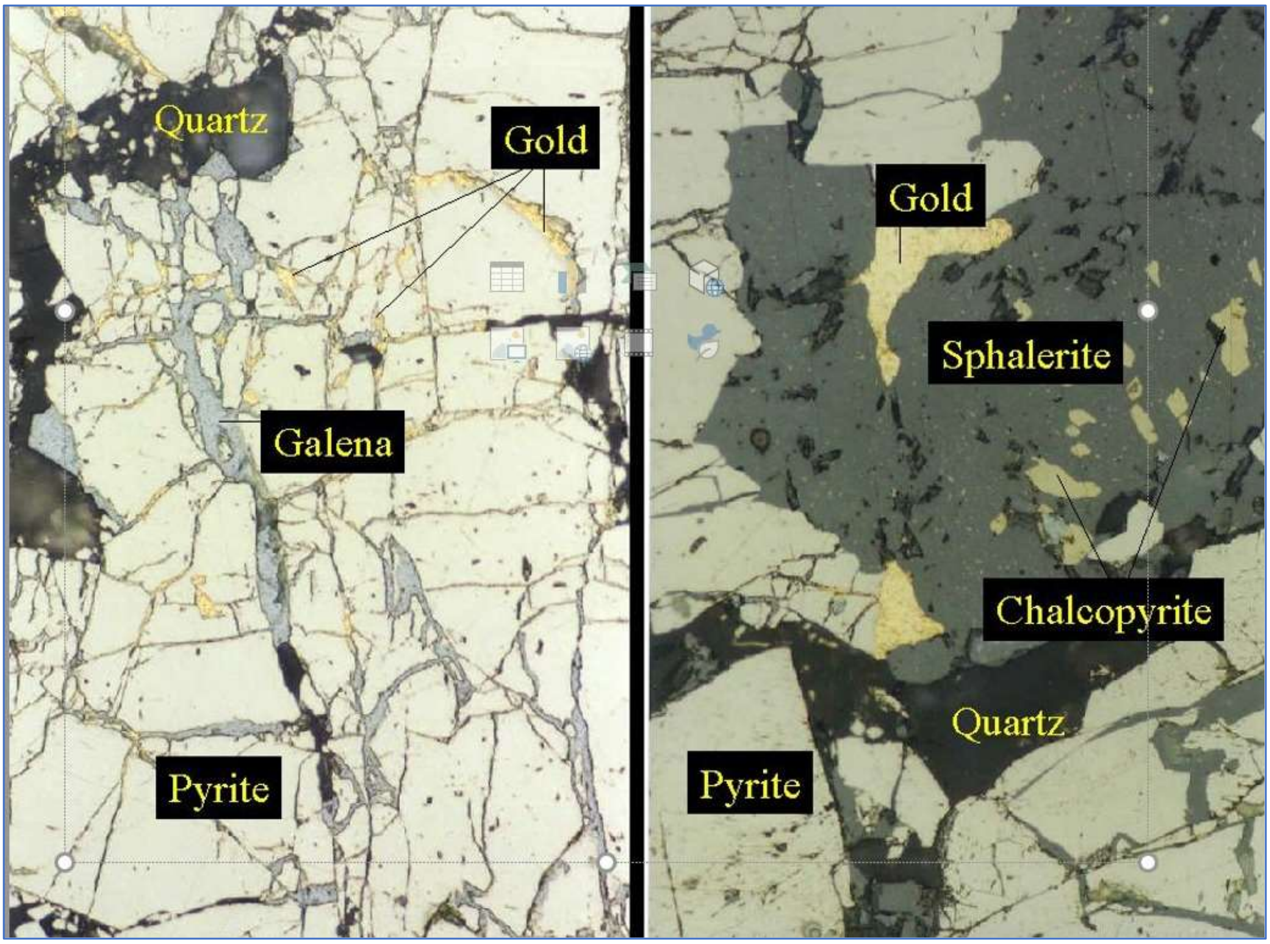


Figure 81. Photomicrograph of polished sections of typical Charters Towers ore, showing that gold is the last mineral to crystallize, filling cracks and interstitial spaces between previously-formed grains. This makes the ore readily amenable to gravity concentration and treatment in a CIL plant. (Photos by Oliver Kreuzer).

Current modular treatment plants are supplied by Gekko and their pressure jig pre-concentrators can process at 250 tonnes per hour (5000 tpd), twice the rate of Citigold's previously-owned Black Jack plant. Their centrifugal concentrators run at 30 tph, so a bank of nine would be needed to maintain 250 tph throughput. A Gekko plant processing 5000 tpd (20 hours per day) for 300 days per year (82% availability) would process 1,500,000 tpy, which at a head grade of 7 g/t Au and 85% recovery. Most gold plants achieve better than 90% availability with good scheduled maintenance and first-pass gravity recoveries at Charters Towers should exceed 85% recovery.

Current financial projections are based on $25 per tonne to process ore (these are based on the Company's prior operation of the processing plant where costs were less than $20 per tonne). The Company has budgeted to construct a modern, efficient processing plant using ore sorters, gravity circuits and potentially a small leaching circuit. Additionally it is noted that the recoveries are budgeted at 95%, providing a further cost cushion because actual gold recoveries are more likely to be 98% or higher. This produces a 3% revenue gain to cover any variations in processing costs. This 3% revenue at $2,000 per ounce gold equates to $60 per ounce or circa $15 per tonne of ore processed.

Figure 82. Falcon SB5200 centrifugal gold concentrator modules

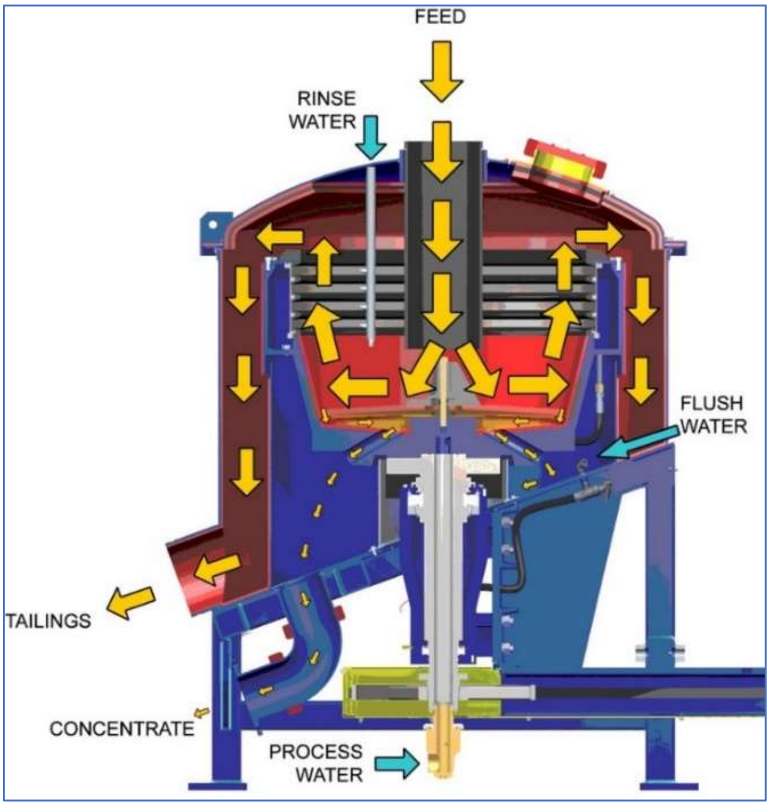


Figure 83. Cross section of the Falcon SB centrifugal concentrator

ITEM 18. Project Infrastructure

The Project has been producing gold since 1996 and has sold some 104,000 ounces of gold and 45,000 ounces of silver. All permits and infrastructure are already in place, and the project benefits from the availability of extensive Charters Towers community infrastructure including local industry, housing, skilled labour, sealed roads and community services.

Roads – bitumen-surfaced roads run from the main Flinders Highway at Charters Towers to service both the gold processing plant (on the Gregory Developmental Road South) and the Imperial Mine (on Bluff Road, Charters Towers). Ore is hauled by road-registered side-tipping road trains about 12 km from the Imperial Mine north through the outskirts of Charters Towers and then southwest to the processing plant.

Rail – Charters Towers is on the main rail link from the international sea-port of Townsville, 130 km to the northeast, and to Mount Isa some 900 km to the west. This east-west link joins the main rail system at Townsville that runs some 1,200 km south to Brisbane. The line from Charters Towers to Townsville is open all year round, even in the Wet Season.

Port facilities – there is a major export/import port facility at Townsville, exporting cattle, sugar, copper, nickel and zinc, and importing nickel ore, raw materials and manufactured goods. The port operates all year round with occasional closures once or twice each year due to cyclone activity.

Water Supply – the Project is generally self-sufficient in water, pumping from underground at the Central area in Charters Towers to freshwater holding dams at the processing plant. The water meets stock water drinking quality. Potable water is supplied by a Charters Towers treated water supply by tanker to tanks at the processing plant and the Imperial Mine. Process water is recycled from the tailings storage facility back into the plant, and mine water at the Imperial Mine is recycled through sediment ponds into the bottom of the Washington open pit from which it is re-used underground. Should water be required in the future, there is a weir on the Burdekin River that supplies Charters Towers, and a 12-inch raw water pipeline runs adjacent to the Company's pipeline from Charters Towers south to the processing plant.

Dumps and stockpiles – Run-of-Mine (ROM) stockpiles are established at the Imperial Mine and at the gold processing plant to ensure surge capacity from variable underground production is stored awaiting haulage to the processing plant or crushing at the plant. Waste material from the Imperial Mine is dumped on an above-ground stockpile at the mine. The material is non-acid-forming granite and granodiorite, which is crushed as required for gravel for mine roads and backfill (Olzard, 2015).

Processing plant – The Company sold the Black Jack processing plant to Maroon Gold Pty Ltd in December 2017 with an agreement that the Company could toll treat future ore production from the Project. The plant is a standard Minproc style design Carbon-in-Leach ('CIL') gold processing plant with a design capacity of some 960 tonnes per day or 340,000 tonnes per year. It was erected in 1996/7, run intermittently at about 50% capacity from 1997 to 2000 and then run at about 160,000 tonnes per year since 2007. The plant usually runs on a campaign basis as required. The plant is fed through a jaw crusher, cone crusher and screening plant that supplies -14mm ore by conveyor to a fine-ore bin. The crushing and screening plant and associated conveyors have a capacity of 150 t/h. Ore enters the primary crusher (KUE KEN 120 double toggle roller bearing jaw, 42-inch width x 30-inch gape) by a Hydraplant apron track feeder. Ore is crushed in closed circuit with a cone crusher (Cedarapids), El-Jay Rollercone 54-inch crusher, [standard head]) and Allis Chalmers 3 metre x 6 metre double deck vibrating screen. Product to the fine ore bin is 80% of 10 to 12 millimetre. The fine-ore bin discharges through a hopper onto a conveyor where lime is added before discharging from the belt into a single rubber-lined ball mill.

Grinding is by closed circuit ball mill and cyclones. The mill is an Allis Chalmers (3 metre diameter x 4 metre long [10 feet x 13 feet]), overflow discharge ball mill, rubber lined, 600 kilowatt (kW). The mill capacity is 340 000 tonnes per year (40 tonnes per hour) at 95% availability based on an average feed Bond Work Index of 15 kilowatt-hours per tonne. The mill cyclones are three Warman Cavex 230 VCX10 cyclones operated with two duty, one standby. The design criteria for the cyclones is to produce an overflow with 42% w/w solids P80 = 106 microns. Discharge from the ball mill goes to a series of six leach tanks where the gold and silver are adsorbed onto activated carbon, then stripped from the carbon and electroplated onto steel wool. The steel wool is roasted and the oxidised steel wool then smelted with fluxes to remove impurities, and the precious metals poured as doré bars. The plant layout was designed with provision for a second ball mill, expansion of the gold room and additional leach tanks in case of a future requirement to increase ore throughput.

Tailings disposal – Tailings comprise mostly 80% minus 106 micron fine quartz sand, crushed granite, minor clay and some metal sulphides (pyrite, galena and sphalerite) averaging 0.05 to 0.2 ppm gold at a slightly alkaline pH of 8.5 to 10. There is no acidic run-off as process water has lime added to it to maintain an alkaline pH, and the weathered granite generates calcium carbonate as the feldspars decompose, neutralising any acid that may form from the decomposition of the sulphides. The very high evaporation rate in the semi-arid Charters Towers area ensures tailings are solidified. The tailings from previous processing and the waste rock stockpiles have been assessed in detail and studied through the environmental geochemistry assessment with the conclusion that the mine waste cannot produce deleterious outcomes.

We make reference to the following technical documents:

a) Environmental Geochemistry Assessment of Waste Rock Stockpiles and Tailings for at Charters Towers Goldfield, Queensland: Parts 1 & 2, by Dr. Sibasis Acharya, Project Consultant, Experts in Mining and Mineral Processing Optimization (EM2PO) Ltd, Australia, dated 31/01/2016 (Part 1) and 23/08/2016 (Part 2);
b) Assessment of Neutral/Alkaline Mine Drainage of Waste Rock Stockpiles and Tailings for Citigold at Charters Towers Goldfield, Queensland, by the same author, and dated 22/10/2016.

Power –The plant and mine are electric powered, with a total of 10 megawatts currently supplied by Ergon Energy from the 66,000 volt (66 kV) Queensland State electricity grid. The Imperial Mine draws 3 Megawatts, supplied at 11,000 volts and transformed to 1000 volts for use underground. The Central Mine draws 2 Megawatts and the Processing Plant has capacity for 5 megawatts. Power supply is not considered to be an issue in developing the mine.

Power to the former Processing Plant was supplied from the Queensland state grid at 66 kV. It was transformed on the site to 11 kV by a 5 MVA transformer owned by the Company and metered at 11 kV. Power at 11 kV was reticulated to the crusher, plant and other substations where it was transformed to 415 V. Currently the plant draws between 2.0 MVA and 2.5 MVA. Supply is on a "time-of-use, low voltage tariff" which provides all of the plant’s power requirements.

For the Central project, there is currently adequate capacity at Nagle Street (2.0 MVA) and there is additional capacity (500 kVA) already installed at the Brilliant Block ventilation shaft. There are also opportunities to obtain additional capacity from the City ring main via the Brilliant Block shaft and other possible old shaft entries at other parts of the workings.

Current power costs are dependent on the time of day when the power is drawn, and there is also affixed minimum charge payable regardless of the amount of power used, so there is no single figure per kilowatt/hour that can be used, and likely to increase at the rate of inflation, expected to average 3% per year. The apparent cost per kilowatt/hour varies – if the usage is mainly Day Shift, the cost is higher. If the usage is low, then the fixed minimum cost inflates the apparent cost per kilowatt/hour.

Figures 85 to 87 below illustrate the fluctuation in cost per kilowatt/hour with usage and illustrating the impact of the fixed minimum cost on the apparent cost per kilowatt/hour.

Over the 18 months to April 2014, the Project power costs averaged 22 to 24 cents per kW/hr.

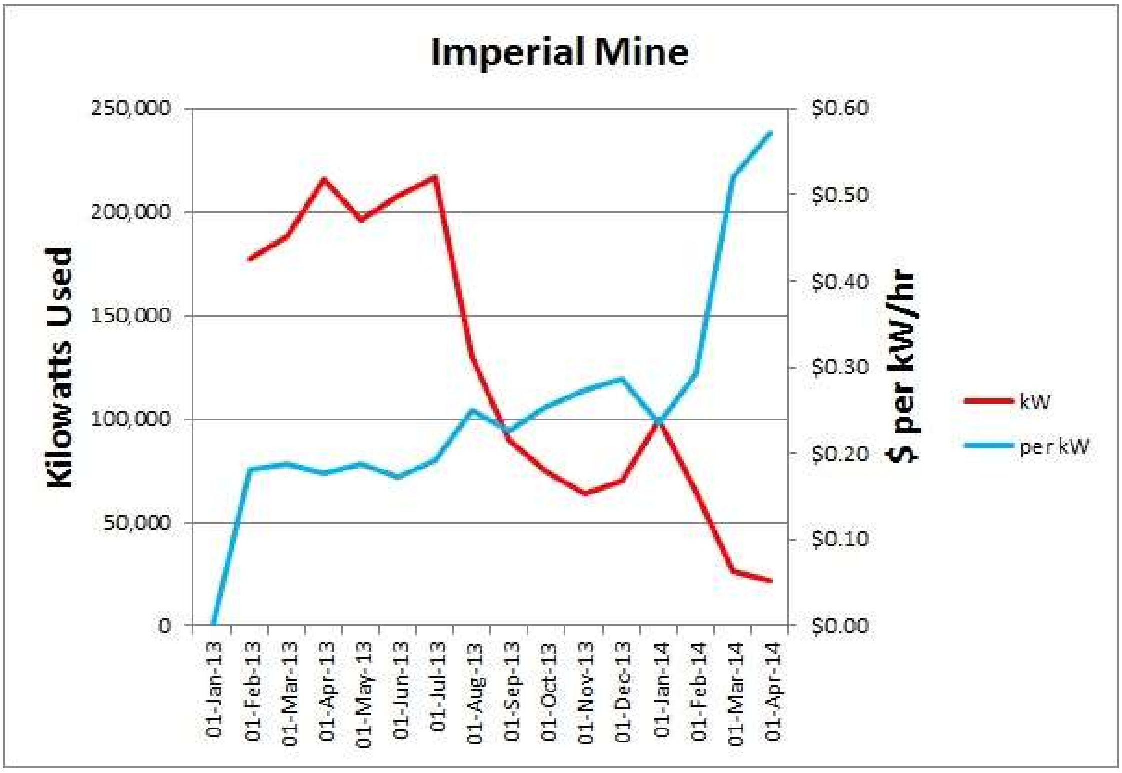


Figure 84. Power Consumption and Costs – Imperial Mine

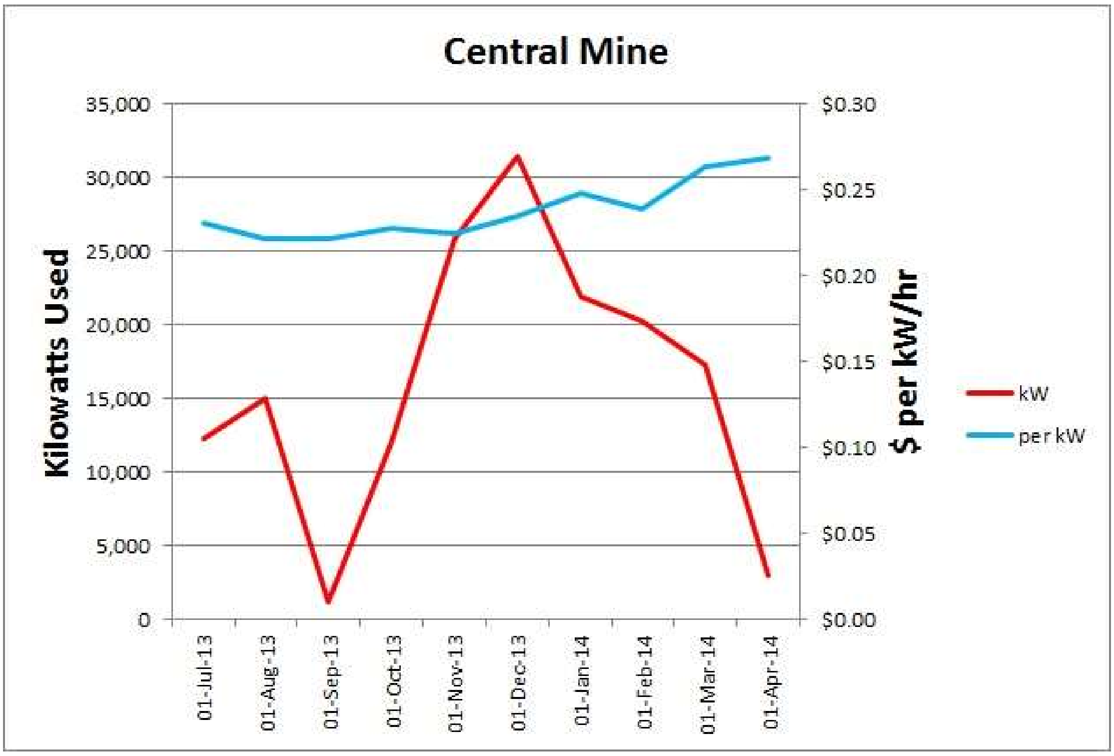


Figure 85. Power Consumption and Costs – Central Mine

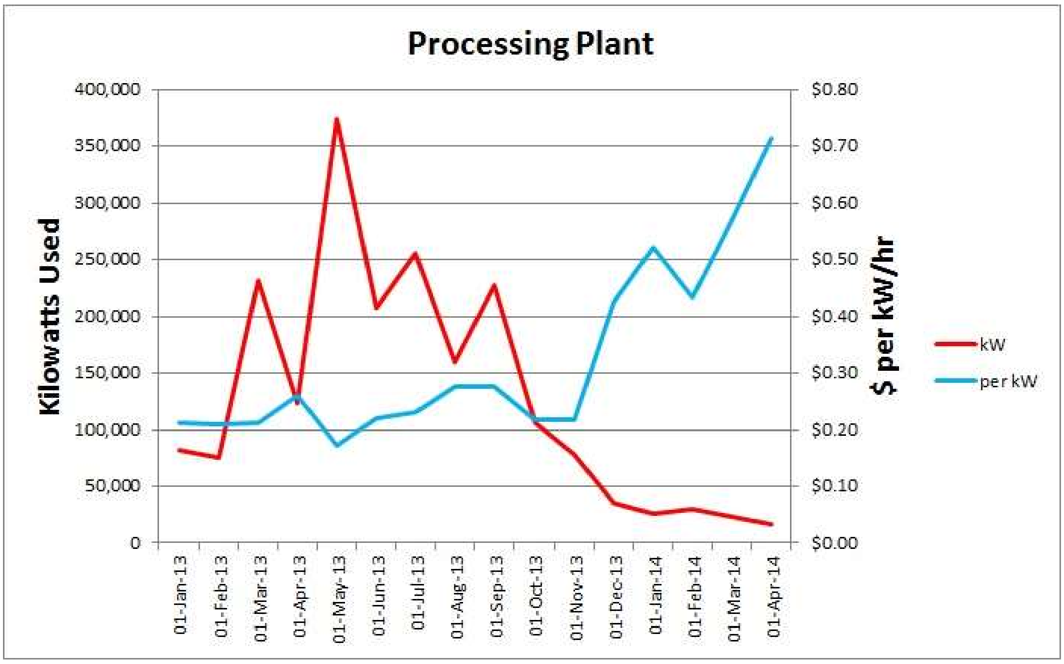


Figure 86. Power Consumption and Costs – Processing Plant

The use of diesel-powered equipment required higher air flows to remove heat and potentially carcinogenic diesel particulates in exhaust fumes. Future mining will use electrical equipment, generating less heat and no diesel fumes. The Company is investigating the use of solar farms to generate photovoltaic electricity for the mine and also to run an electrolysis hydrogen gas plant to supply hydrogen for powering vehicles and heating as well as exporting excess hydrogen through the port at Townsville.

Figure 87. Diagram of the main infrastructure for the Charters Towers project.

Figure 88. Central surface mine site showing decline portal to the underground.

ITEM 19. Market Studies and Contracts

19.1 Gold Market and Price

Commodity markets are looking strong. The Australian dollar gold price is the highest it has been in recent years, trading in excess of AUD$2,000 per ounce since mid-2019 (Figure 89 below).

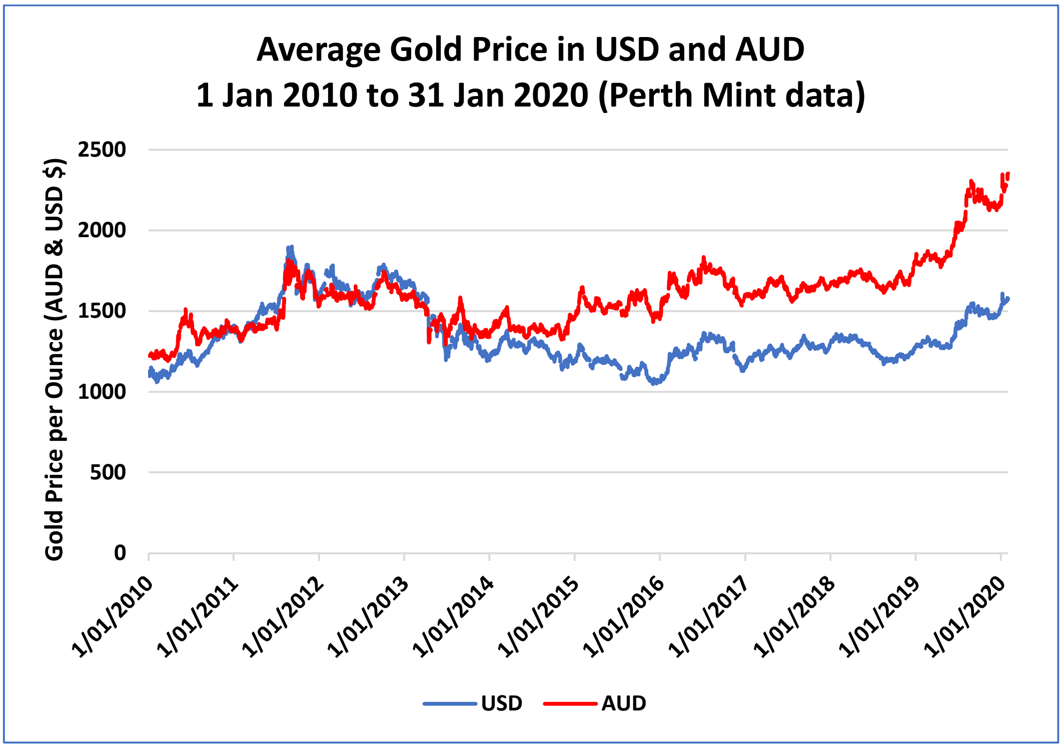


Figure 89. Gold prices in US and Australian dollars for the ten years from 2010 to 2020.

Long-term trends

- Data from the World Gold Council shows that over the past 12 months assets in global gold-backed Electronically Traded Funds (ETFs) have nearly doubled (+90%) with the bulk of the trade being in North America and Europe (see Figure 90 below).
- Following the May 2020 inflows, both holdings and assets of gold-backed ETFs continue to make all-time highs.
- UK-based gold funds continue to take regional and global market share, now representing 48% of European assets and 21% of global assets.
- Low-cost gold-backed ETFs in the US have doubled their collective holdings in the past year to 99t, which is roughly the size of all Asian-based funds.

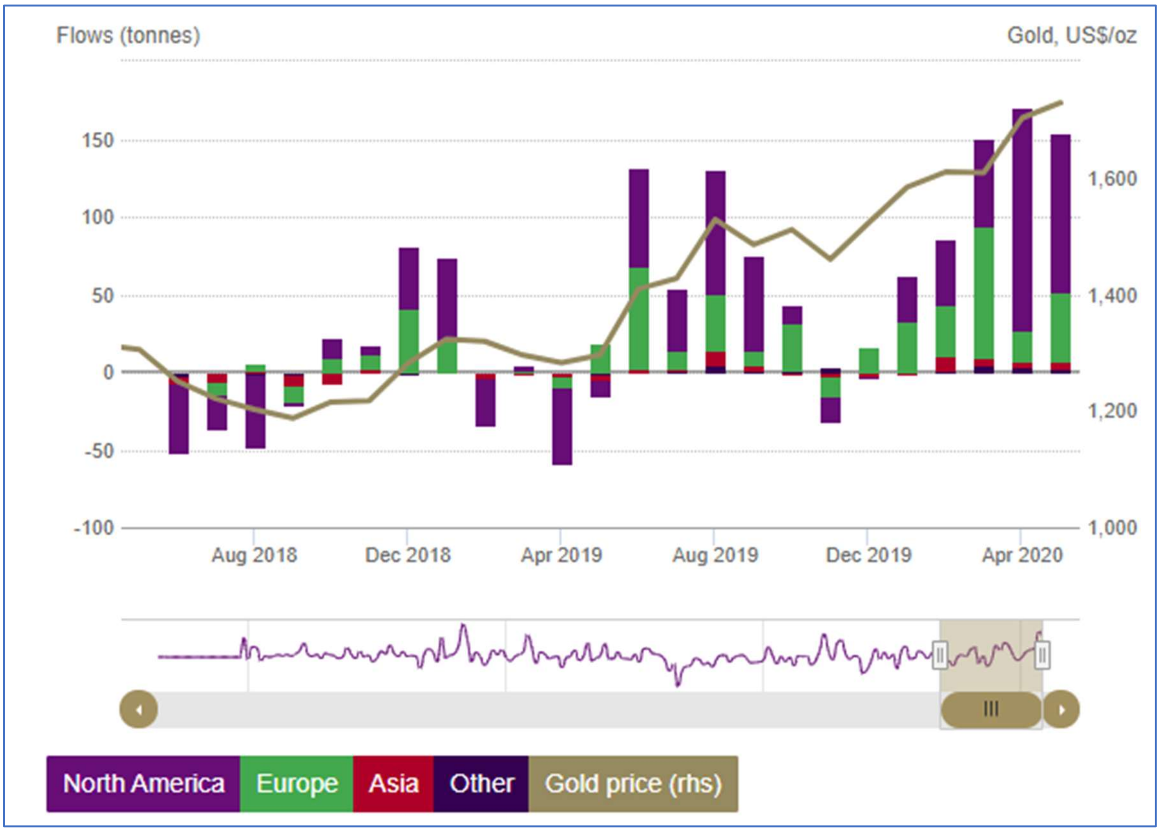


Figure 90. Change in ETFs (tonnes) over the last three years (left axis) and the gold price in USD per ounce (right axis). Data as of 31 May, 2020. Sources: Bloomberg, Company Filings, ICE Benchmark Administration, Shanghai Gold Exchange, World Gold Council.

Central banks have been steadily purchasing gold since 2018 – see Figure 91 below. Gold is still seen by the Central banks as an essential backing for fiat currency stability. The demand for gold is predicted to remain steady, increasing in times of political instability or natural disasters such as the COVID-19 epidemic.

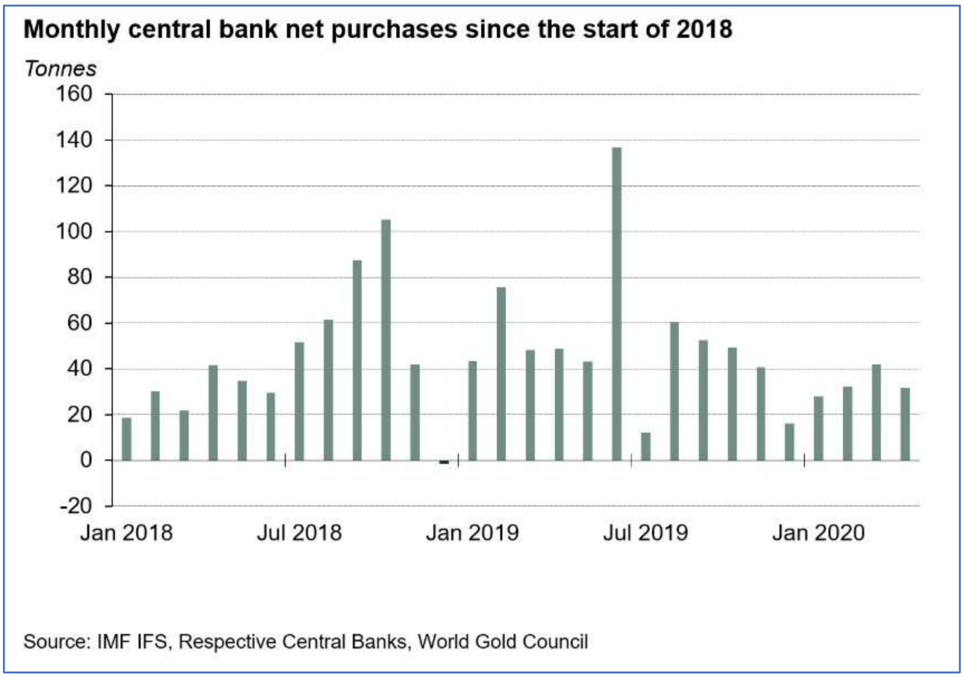


Figure 91. Central bank purchases of gold (tonnes) since 2018.

The outlook for gold remains positive, ensuring that, given sufficient capital, the Project should be able to get into production as planned and meet its targets

The World Gold Council commented on its gold outlook for 2020:
www.gold.org/goldhub/research/outlook-2020
"Gold shone in 2019"

> *Gold had its best performance since 2010, rising by 18.4% in US dollar terms last year. It also outperformed major global bond and emerging market stock benchmarks in the same period (Chart 1). In addition, gold prices reached record highs in most major currencies except the US dollar and Swiss franc.*
>
> *Gold prices rose most between early June and early September as uncertainty increased and interest rates fell. But investors' appetite for gold was apparent throughout the year, as seen by strong flows into gold-backed ETFs, growing gold reserves from central banks, and an increase in COMEX net longs positioning.*

Gold Outlook Chart 1:
Gold outperformed bonds and EM stocks against the annual performance of major global assets.

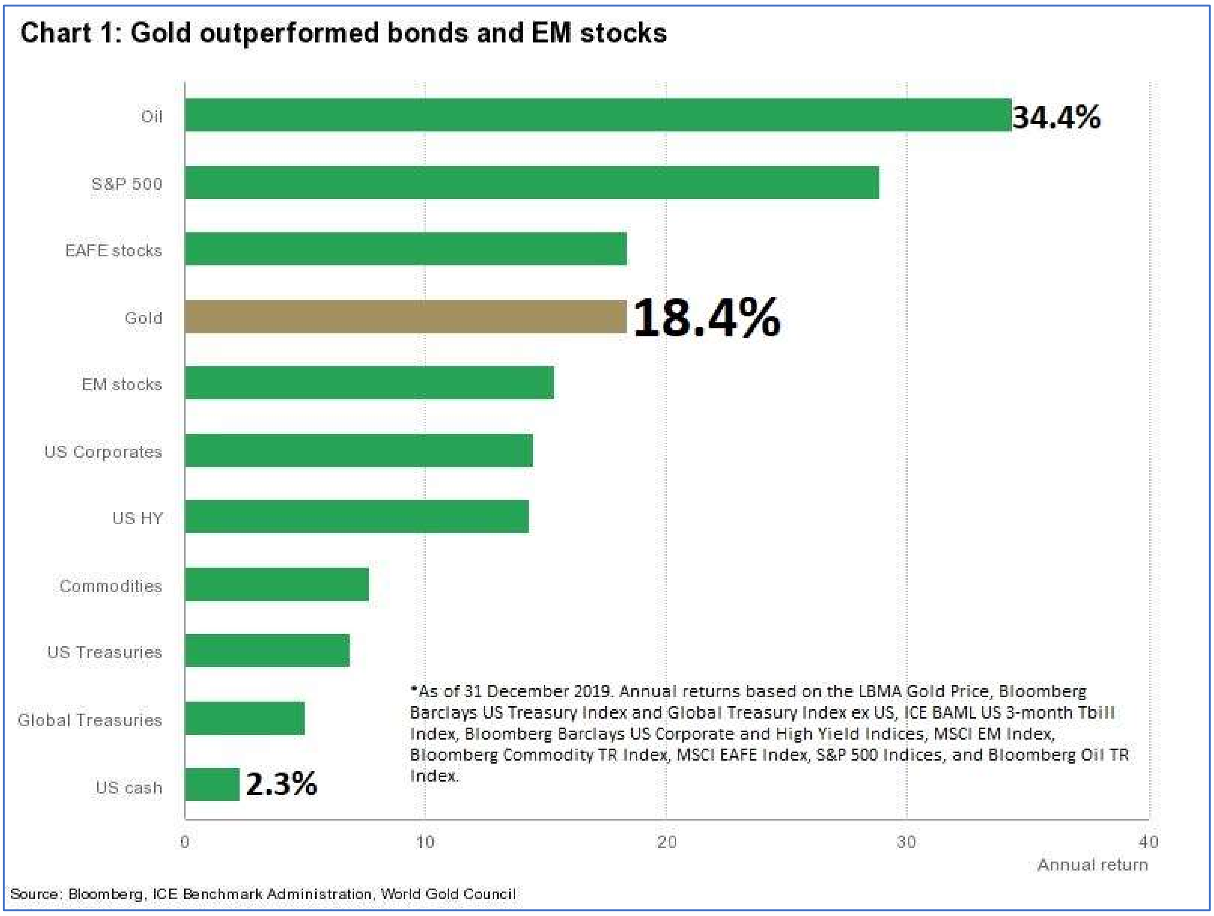


Figure 92. Gold outperformed Treasury bonds and the Commodities Index in 2019.

High risks and low rates on the horizon

We expect that many of the global dynamics seeded over the past few years will remain generally supportive for gold in 2020 and beyond.

In particular, we believe that:

- *Financial and geopolitical uncertainty combined with low interest rates will likely bolster gold investment demand*

- *Net gold purchases by central banks will likely remain robust even if they are lower than the record highs seen in recent quarters*
- *Momentum and speculative positioning may keep gold price volatility elevated*
- *And while gold price volatility and expectations of weaker economic growth may result in softer consumer demand near term, structural economic reforms in India and China will support demand in the long term."*

Global gold-mine discoveries reached their peak in the early 1980s according to data from specialists MinEx Consulting (https://www.gold-eagle.com/article/goldcorp-newmont-deal-points-more-mergers-and-acquisitions). They have predicted that gold output will peak in 2019 and then start to decline as shown below in Figure 93.

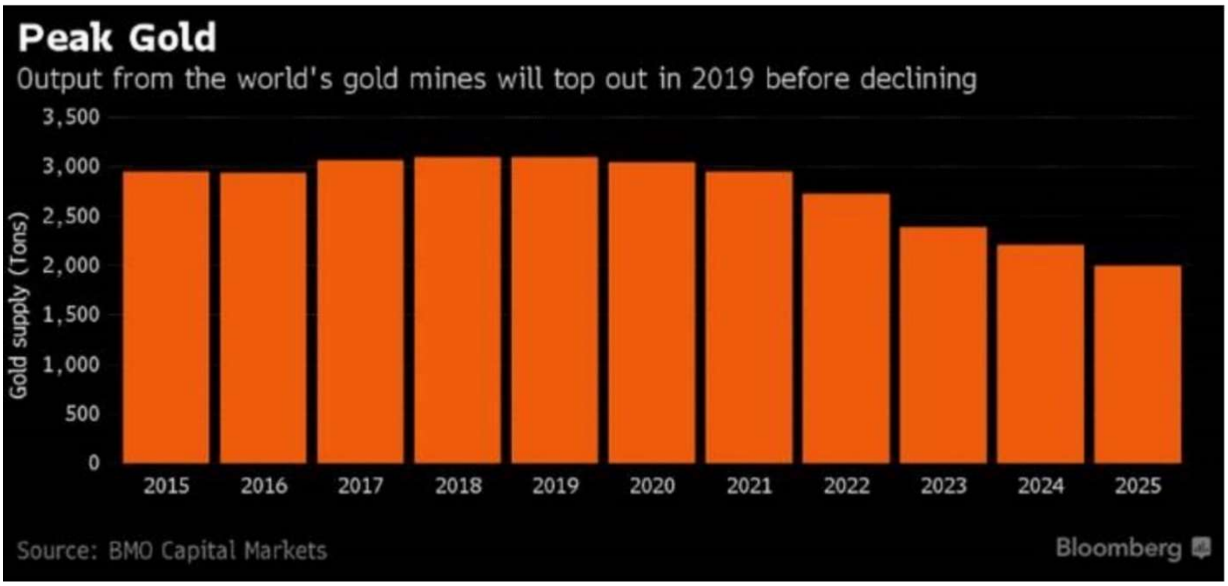


Figure 93. MinEx Consultants prediction that gold output will peak in 2019.

This means Citigold will be well-placed to bring its new mine into production, filling a void in the world market, with an All-In Sustaining Cost of below $900/ounce.

The gold price fluctuates by the minute, so making predictions for future prices are impossible to guarantee that they will be accurate or even reasonable.

The Company has chosen US$1,755 (rising to US$2,000) per ounce in Year 1 (see Table 30 above) and an exchange rate of AUD$1.00 = US$0.73 (rising to US$0.75) for its predictions over the next 10 years, assuming a weak US dollar and a low-performing world economy that will see gold prices in Australian dollars remain high and probably rise faster than inflation. It has been assumed all gold and silver produced can be sold at prevailing market prices, and that there will be no government intervention in the private ownership or sale of precious metals or company shares.

19.2 Contracts

There are no sale contracts, hedging contracts, forward sales or royalty contracts currently in place that lock the Company into any fixed sales arrangements. The PAL Group Pty Ltd (ATF The I and F Trust) is a lender to the Company secured by a mortgage over ML1499 and ML10208. Fortune Gems and Jewellery DMCC has a 1% royalty interest in all gold production until 5 March 2023 (date the royalty agreement expires), secured against ML1348, ML1490, ML10222 and ML10335 (Warrior leases).

The Company has an agreement to refine its doré bullion at the Perth Mint precious metals refinery in Western Australia at market refining prices. There is an opportunity, but no obligation, for the Perth Mint to sell the gold and silver on the Company's behalf if instructed by the Company.

The Company retains full flexibility to choose if, when and where it sells its gold and silver, and whether or not to enter into hedging or royalty agreements. Hedging is viewed as a prudent strategy if the future gold price is forecast to drop for an extended period (5 to 10 years), provided that the Company ensures certain safeguards. The safeguards include:

- *Ensuring the delivering date cannot be brought forward by the future buyer*. If the buyer can unilaterally demand early delivery, the Company may not be in a position to deliver on the new schedule and may be forced to buy gold on market at higher prices to meet its delivery obligations. This scenario can harm a gold mining business. The Company may agree to such a clause but only if the early delivery date is by mutual agreement, as an earlier delivery may assist cash flow.
- *The Company can bring forward the delivery date*. If gold production exceeds the planned scheduled production, the Company may wish to take advantage of a higher price in the hedge contract and deliver its agreed ounces earlier than scheduled. This disadvantages the buyer, who could buy the same ounces on market at a lower price, but is an advantage to the Company by improving cash flow. The buyer may agree to such a clause provided the earlier delivery date is by mutual agreement.
- *Not more than 50% of the annual production would be hedged each year.* Underground gold mining is subject to business interruptions such as unplanned falls of ground, industrial action, disease pandemics and weather events that may prevent the Company reaching its planned annual targets. However, the Company should be able to guarantee it will meet at least 50% of its annual production target. If only 50% of planned annual production is hedged, the Company should be able to meet its delivery obligations under a hedging contract despite business interruptions or production delays. Hedging the entire Reserve also prevents the Company from engaging in other later sales contracts that may be more attractive than the original hedge agreement.
- *Not more than 50% of the ore reserve would be hedged.* Ore Reserve estimates have an inherent uncertainty and production may not result in the planned conversion of Reserve ounces to production ounces. If the entire Reserve is hedged, or if part of the Resource is hedged and this part fails to convert to Reserve, the Company may not be able to fulfill its delivery obligations. Hedging the entire Reserve also prevents the Company from engaging in other sales contracts that may be more attractive than the original hedge agreement.

ITEM 20. Environmental Studies, Permitting, and Social or Community Impact

20.1 Environmental Harmonisation

Citigold has always endorsed Queensland's high environmental standards.

The majority of the Project involves underground mining with a minimal environmental footprint. The majority of the mining leases are in residential, light industrial or agricultural usage locations. Future ore treatment is planned to be using modern ore sorting and gravity separation technologies without the need for bulk chemicals.

The current area disturbed is 44 ha which is only 2% of the total area under Mining Lease.

The disturbed areas are to be returned to their original land use at the cessation of mining, and most of the original use is low intensity grazing or water storage. Low intensity grazing (22.2 ha) is defined as one head of cattle per eight hectares of land. This 22 hectares is only required to support 3 head of cattle.

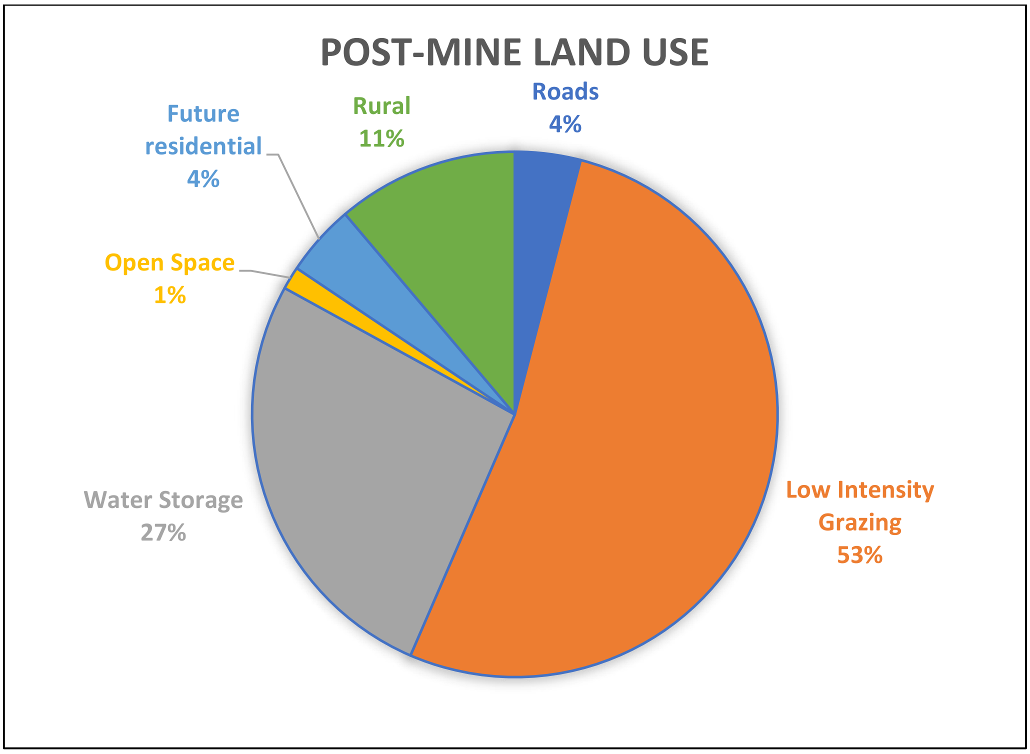


Figure 94. Proportions of the disturbed land area in each category of post-mine land use.

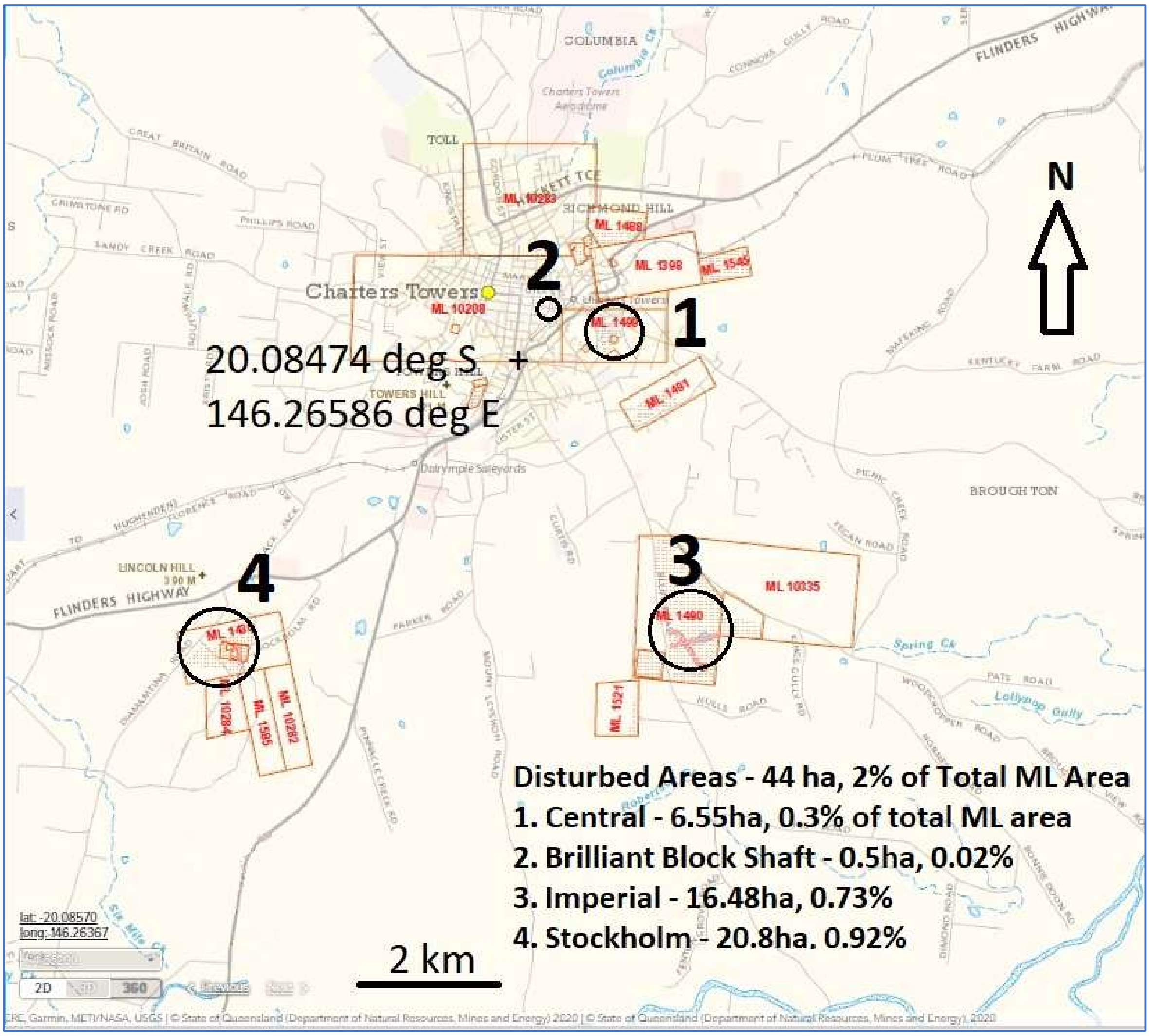


Figure 95. The total area disturbed by mining is only 44 ha or 2% of the total area under Mining Leases in the Project

Citigold Corporation has a formal environmental policy that is supported by the staff and board of directors. The Policy approved by Citigold Corporation and signed off on by the Managing Director, Mr Mark Lynch, is –

“Citigold Corporation Limited explores for and produces gold profitably and sustainably without harming its employees, the community or the environment."

Reporting of environmental monitoring and compliance assessment continues. Rehabilitation and routine groundwater analysis of mining areas is well advanced, in compliance with approved environmental plans. Citigold Corporation took the initiative early on to established a sound background in environmental management and community relations. The then Department of Mines & Energy (now Department of Natural Resources, Mines & Energy, DNRME) has recognised the efforts of Citigold at Charters Towers -

"Your proactive attitude… is commendable. This attitude has been evident throughout the past 10 months in the progressive rehabilitation, community consultation programs and maintained communications with this office. In relation to environmental management you should be congratulated for a consistent approach that has led to significant improvement at your sites." - 16 December, 1999.

"As you may be aware, I have monitored the results of your public consultation and the noise minimisation measures for night operations at the Brilliant shaft. … It is very clear that the care and consideration was much welcomed by the surrounding residents. Your company's staff and contractors have earned their

respect and this continuing public support will prove to be an important factor in the future success of your project." - 26 March, 1997.

20.2 Environmental Management Overview Strategy (EMOS)

An Environmental Management Overview Strategy (EMOS) for the Charters Towers Gold Project was approved by the Queensland Government then Environmental Protection Agency (EPA) now Department of Environment and Science (DES). An Environmental Authority (EA) has been granted to cover all operations.

In addition a Plan of Operations, in compliance with the EMOS and EA, has also been approved by the DRNME. These operating documents are in compliance with Queensland's stringent Environmental Protection Act and Regulation. These combined environmental operating documents are a major achievement for the management team at Charters Towers. The Plan of Operations includes a:

- **description of all activities that will take place** on the site during the time frame covered by the plan
- **proposed program of actions** to comply with EA conditions
- **rehabilitation program for land disturbed** or land that will be disturbed during the period of the plan
- **compliance statement** - describing how well the Company has complied with its EA conditions.
- **There has been extensive environmental documents prepared and are referenced elsewhere in this document, in particular Environmental Geochemistry Assessment**.

20.3 Local Community Supports Citigold's Mines

Citigold operates in a unique and rare mining environment with its mining operations located directly under and around a township. This relationship produces benefits for all parties. The Company supports local communities with personnel, labour and donations to a wide range of community activities, having included local rodeo associations and entrants, All Soul's School, Lions Club, St John Ambulance, National Aborigines and Islanders Day Observance Committee week parade, Country Music Festival, Police Citizens Youth Club, Charters Towers SkatePark, National Trust, Outback Celebration and the Combined Mines Charity Ball. As operations expand Citigold will continue to support and work in harmony with the local community.

Figure 96. The Company's underground drilling equipment on display during a local parade in Charters Towers. The Company operates locally through its wholly owned subsidiary Charters Towers Gold Pty Ltd.

Today there are two main sectors of environmental considerations – the natural environment and the people environment. Permitting to mine under a City with over 3,000 landholders and 8,500 residents presents a unique challenge. Much is to be learned from the success of the Citigold's Charters Towers operations and the need to inform people and treat each person as an important stakeholder. When Citigold conducted its initial exploration work on the mineral holdings under Charters Towers, as part of its huge gold project, none of nearly 8,500 residents of the town objected. Despite the Company's plan to drill and blast beneath the town, the only comment directed towards Citigold by a resident was a positive one, aimed at applauding the Company's ongoing good work. Earning the respect and trust of the community was an important part of ensuring the project's long term success.

After the successful exploration beneath the town in accordance with regulatory requirements, Citigold proceeded with the finalisation of Mining Leases and environmental permits. These were granted by the then Department of Mines and Energy (DME) and Environmental Protection Authority (EPA). Citigold acquired the last external mining leases in the Charters Towers township area in early 2004, when it took control of Great Mines Limited. This enabled the Company to achieve 100 per cent ownership of the Central goldfield.

20.4 Granted Mineral Holdings and the Right to Mine

The lengthy and complex process of negotiating, pegging and acquiring all the mineral holdings initially began in 1969. Citigold's late founder, Mr Jim Lynch, began the process by buying a small group of mineral holdings from their original owners and so began the complex process of amalgamation. The 35 year period it took to eventually obtain all the mining rights that now belong to Citigold, required dedication and the expenditure of substantial sums of money. This experience, however, has given the Company a detailed understanding of mineral holdings management in Queensland. All Citigold's mining rights are on the high-grade Charters Towers goldfield, which has the potential to build the Company. The 11 million ounce gold deposit confirms the large value of the Company's mineral holdings.

20.5 Environmental Sustainability

Citigold considers environmental sustainability as an integral component of its operational responsibilities and contributes to the local environment and community in numerous ways. In addition to regular environmental rehabilitation, recovery of surplus granite rock has contributed to the creation of a new athletic sports field and regular road construction works.

Gravel Operations

The existing rock stockpiles and future underground development mining rock are benign non-acid-forming granites, tonalites & granodiorites (see *Assessment of Neutral/Alkaline Mine Drainage of Waste Rock Stockpiles and Tailings for Citigold at Charters Towers Goldfield, 2016; Charters Towers Operations. Acid Rock Drainage Potential of Rock Stockpiles and Tailings Storage Facility, Olzard, November 2015* and *Geology and Rock Types of the Charters Towers Gold Project 2016, Pathfinder Exploration).*

In response to the Charters Towers Regional Council's requirement that, under their Compensation Agreements on several Mining Leases, rock mined from underground development be made available to the Council for engineering gravel due to a lack of local supplies, the Company has facilitated Queensland Gravel ('QG') to crush and screen the rock stockpiles. QG often through local subcontractors has supplied raw rock to the region, including to the Charters Towers Regional Council,since 1999 from the Diamantina Road/Stockholm site. QG plans to substantially expand under the recently established "Queensland Gravel" brand when all the infrastructure, including rock stockpiles, of Citigold Corporation Limited's StockholmImperial sites are handed over at the completion of mining. QG plans to produce and sell a range of types and grades of gravel and sand to public and private customers in the Burdekin River area, concentrating on the area around Charters Towers.

The DES indicated in writing in 2020 that they broadly supported the concept of removing stable unwanted rock from stockpiles as crushed gravel to reduce the post-mine environmental impact, subject to the gravel operations meeting all necessary permits and compliances.

This approach of 'repurposing' surplus rock is in keeping with the circular economy of recycling industrial products.

Water Recycling & Storage and Energy Minimisation

Water is systematically recycled from all underground mine water supplies, and the mine is largely independent of community water supplies. Monitoring of groundwater since 1998 has shown that analytes are generally below the Environmental Authority investigation trigger levels at Stockholm, Imperial and the three open pit water storages (Black Jack PC, Newtown Butler and Lubra pits) west of the old Tailings Storage Facility at the now sold Black Jack processing plant. No contamination of surface water or groundwater as a result of operations or overburden stockpiling has been detected in these areas. (see *Groundwater Studies at the Charters Towers Gold Project May 2016*).

The company has operated since 1993 without any major environmental incident.

Energy consumption is monitored and minimised to limit greenhouse gas emissions. Electricity is used in preference to petrol or diesel-powered equipment where possible, as this centralises greenhouse gas emissions at the State grid power station, making control and reductions of emissions easier.

20.6 Social and Community Impact

Citigold recognises the importance of community-industry relations in all of its operations and daily activities. In accordance with a comprehensive system of regulatory requirements, Citigold's exploration work under and around the township, has earned wide respect and support from the local community's leaders as well as its residents. An ongoing co-operative relationship has been established and Citigold will continue to promote open communication with and to work alongside local members of the community in expanding the gold deposits. Consistent with this is Citigold's commitment to upholding its sustainability practices for the community and its future. This positive stance, the surrounding community and the infrastructure of Charters Towers is an integral component of Citigold Corporation's mining operations and ultimately enables the maintenance and progression of a safe, profitable and successful operation.

Figure 97. Environmental Reference Site to monitor any changes to flora and fauna populations and soil geochemistry.

The State of Queensland has benefitted from this Project by the mineral royalties on this production, expenditure on exploration and mining, and job creation by the employment of mine employees and contractors. The Project landholdings cover extensions of known and mined lode systems, which have an extremely high potential to contain further resources and reserves of mineralised material that will form part of the future gold production from the Project. Considerable data has been gathered from the area so far by Citigold, and this data will used to advance the definition of future resources and reserves for production planning.

Gold Production and Royalties

Citigold Corporation Limited has produced gold and silver from its trial mining operations at Charters Towers since 1994. It has produced over 100,000 ounces of gold and approximately 30,000 ounces of silver in trial mining from the Charters Towers Gold Project worth some $150 million at current gold prices.

Royalties on the previously produced gold alone at 5% of the gross sale value would amount to $7.5 million.

Employment and Affirmative Action for Female Employees

This trial mining, combined with exploration for future gold resources in the surrounding area has provided substantial local employment for over 100 employees in 2008 with 21% female participation in 2015, well above the industry average of 14%.

Payments to Suppliers and Employees

Payments to employees and suppliers during mining and exploration over the last 16 years totalled $116 million, averaging $7 Million per year (see Table 31 below). Ten percent of this would have passed to the Federal Government in the Goods and Services Tax and employee and contractor wages would have been taxed by the Federal Government at around 25% to 30% of the wages bill as PAYG revenue. The balance would have been expended primarily in Queensland as wages and payments to suppliers. For most of the last 16 years there have been sufficient employees to incur Payroll Tax to the Qld Government. Local Government rates are payable on Mining Leases, as well as rents to the Qld Government for the EPMs, MDLs and MLs that comprise the Project.

YEAR	Payments to Employees & Suppliers ($ million)
2020	$1.89
2019	$1.09
2018	$3.98
2017	$0.43
2016	$3.40
2015	$8.30
2014	$7.50
2013	$13.40
2012	$9.10
2011	$15.80
2010	$13.00
2009	$9.20
2008	$13.54
2007	$10.44
2006	$2.20
2005	$2.43
TOTAL	**$115.70**

Table 30. Payments to employees (salaries & wages) and suppliers in the last 16 years totalled $116 million. Data from Citigold Annual Reports.

Benefits to Queensland and Australia

Continuing exploration and gold production by Citigold contributes millions of dollars to the State of Queensland in royalties, stamp duty and payroll tax, and further millions to the Federal government in company tax, GST and PAYG taxation on employees' salaries and payments to suppliers. Mining of the Project will ensure that future resources of gold and silver will be available to Citigold for mining and continuation of the benefits of employment, female participation in the workforce and taxation to the State and Federal government.

Ecotourism

On completion of mining at the Central Decline area at Nagle Street, ***Jupiter Ecotourism*** will be granted use of part of the underground workings and the surface infrastructure for a tourist mine.

Jupiter Ecotourism plans to use Citigold Corporation Ltd's existing infrastructure the Central mine, to create a tourist attraction for the Charters Towers Region. The aim is to develop a Gold mine tour to combine the old with the new. The internet domain **jupitergold.com** has been registered. The Central mine and surrounding area will be given to Jupiter Ecotourism as freehold land at the end of the mine operation. The goal will be to work symbiotically with the Regional Council, local tour operators, schools, existing businesses (Ghosts of Gold tour), Coach Tour operators and the Gudjala people. The Company expects significant success penetrating the regional tourist market and attracting them to Charters Towers to visit the mine.

A key initiative will be to involve the Traditional land owners, the Gudjala people, to integrate the mine tour with an ecotourism experience. Where tourists get to immerse themselves in the culture of the Gudjala people and learn more about the local area. The Company will be assisting the economic growth of the region whilst promoting ecotourism in many ways. There will be financial benefits for the local people as well as an empowerment of the Gudjala people, which we see as integral part of the operation. (see *Business Plan Jupiter Ecotourism Charters Towers September 2015*)

20.7 Mine Rehabilitation and Shutdown

An allowance of $2 per tonne of ore mined has been budgeted to cover progressive rehabilitation and final mine shutdown. This is picked up in the Financial Model spreadsheet under the Processing Cost, where the process cost has increased from $25 to $27 per tonne. With the current planned production schedule, this amounts to some A$26 million over 15 years, with progressive rehabilitation paid for from cash flow during mining.

Mine shutdown is relatively simple as operations will be all underground and not large open pits. The stope voids underground will generally be backfilled as mining progresses and the workings allowed to fill with natural groundwater. Above ground, buildings and shaft head-frames will be demolished and removed unless they can continue to be used for community or business purposes. Shafts and decline portals will be closed with concrete slabs, vented to equalize air pressure as water levels rise and fall with the natural seasons. Disturbed areas will be levelled, covered with topsoil and vegetated with native vegetation species seeded from the local area. Where feasible, stable non-mineralised granite mined from underground will be sold for landscaping, road & concrete gravel and rail ballast. Piezometers and groundwater monitoring bores will be maintained and monitored postmining in accordance with the requirement of the Environmental Authority (DNRM).

ITEM 21. Capital and Operating Costs

The capital and operating costs have been derived from historic development mining at the Imperial Mine site and preliminary discussions with mining contractors and consultants. Moreover in May 2011, an independent mining consulting firm evaluated and assessed capital and operating costs of the Charters Towers project. They did not independently verify these cost expectations but they accepted them based on their knowledge of other underground mining operations and gold processing plants, and considered that the estimates are realistic. The assumption is that the operating costs for the Central Area mine will be consistent with the operating costs for the Imperial Mine over the nine years from 2006 to 2015, adjusted for inflation, escalation and scale of operations.

Details of the Capital Costs are given above in Item 16.2

Details of the Operating Costs are given above in Item 16.4.

There is minimal ore production in the first year while the access ways, ventilation shafts and level drives are mined.

The Charter Towers project is currently estimated (Tab 10 Start Capex of the Financial Model) to require A$149 million over three years to bring into sustaining production, of which at least A$50 million will be sought externally and the balance derived from cash flows. This will be spent over a three year period as tabled below:

10.START UP CAPEX SCHEDULE		BUDGET 3 Years	YEAR 1	YEAR 2	YEAR 3
Mine Development	Main Access Tunnels "Twins"	25,801,200	7,817,500	11,180,300	6,803,400
	Ore Drives	19,920,000	3,000,000	6,300,000	10,620,000
	Exploration & Drilling	20,250,000	4,536,884	10,043,453	5,669,663
	Ventilation	7,528,000	1,648,000	2,993,333	2,886,667
	Dewatering	1,690,000	1,056,667	486,667	146,667
	UG Services	3,078,500	785,846	1,663,233	629,421
	UG Ore Handling System	9,000,000	4,000,000	2,500,000	2,500,000
	Processing Plant	20,000,000	20,000,000	-	-
	Admin, IT & Regulatory Overheads	14,000,000	7,000,000	7,000,000	-
	Mine Automation Program	9,000,000	1,000,000	3,000,000	5,000,000
	Land acquisition/ Environmental Bond	3,200,000	3,200,000	-	-
	Engineering, Project Mgt	6,916,000	1,207,556	3,200,022	2,508,422
	Contingency	9,000,000	3,000,000	3,000,000	3,000,000
	Total	**149,383,700**	**58,252,452**	**51,367,008**	**39,764,240**

Table 31. Start-up Capital Expenditure Schedule

The Operating Costs are planned to be AUD$128 per tonne and AUD$524 per ounce (see Item 16.4 above). The "All In" Sustaining Cost (the sum of total cash costs (net of by-product credits), sustaining capital expense, corporate, general and administrative expense (net of stock option expense) and exploration expense) varies from about A$684 to A$786 per ounce over the first 10 years' life of the Project.

ITEM 22. Taxation, Royalties and Government Levies

22.1 Summary of the taxes, royalties and other government levies

- All Australian companies are currently taxed at a flat rate of 30% on profits. A Goods & Services Tax of 10% is payable on most purchased items and services provided by consultants or contractors.
- Royalties on mineral production revenue is payable on the basis that the State generally has property in all minerals located on or below the surface of land and all petroleum produced to the surface of

land or in a natural underground reservoir in Queensland. The current royalty rate is 5% on gold and silver revenue and it is payable to the Queensland Office of State Revenue.

- Annual rental is payable on all mining, petroleum, geothermal and other tenures administered by the State. Rent on Mining Leases, Mining Claims, Mineral Development Licences and all petroleum tenures is payable in advance by 31 August for the rental year commencing from 1 September. The rental rates (see Table 36) , as follows:

Resource authority	Rental rate
EPM (exploration permit - mineral)	$164.90 (excl. GST) per sub-block
ML (mining lease - variable rate)	$63.70 (excl. GST) per hectare
Mineral Development Licence	
Year of the licence	**Rental rate**
Year 1	$4.55 (excl. GST) per hectare
Year 2	$9.40 (excl. GST) per hectare
Year 3	$14.40 (excl. GST) per hectare
Year 4	$24.85 (excl. GST) per hectare
After 4 years	$29.90 (excl. GST) per hectare
Area discounts for mineral development licences	
Hectares	**Percentage discount**
First 1,000ha	0%
Next 1,000ha	60%
Next 3,000ha	75%
Next 10,000ha	95%
Each addition 1ha	99%

Table 32. Queensland State Government rental rates for Exploration Permits, Mining Leases and Mineral Development Licences.

- Companies or groups of companies that pay $1.3 million or more a year in Australian taxable wages must pay payroll tax to the State Government. There are deductions, concessions and exemptions available to those that are eligible. From 1 July 2019 the payroll tax rate is: **4.75%** of the total annual payroll for employers or groups of employers who pay $6.5 million or less in Australian taxable wages. **4.95%** for employers or groups of employers who pay more than $6.5 million in Australian taxable wages. The tax is payable to the Queensland Office of State Revenue.

- The Department of Environment and Science (DES) administers legislative acts to help protect Queensland's environment and natural resources. DES assists company in accessing and managing its environmental risks associated to its mining project. All new mining projects must apply for an Environmental Authority (EA) under the Environmental Protection Act 1994 (EP Act). The Company who holds an environmental authority (mining activities) for a level 1 mining project is required to submit an annual fee and return. The 2020 renewal fee for an environmental authority for a gold project **$182,088**.

ITEM 23. Adjacent Properties

Citigold does not own, control or have an interest in any mineral properties outside the Charters Towers Project area. There are no adjacent properties that are included in this report. Adjacent properties held by other mining companies illustrate the prospective nature of the Project Area.

The Charters Towers area is one of a number of gold-bearing provinces in northern Queensland (see Figure 98 below). Surrounding gold mines with current or recent production include Pajingo (operating), Ravenswood-Mt Wright (operating), Kidston (closed) and Mt Leyshon (closed).

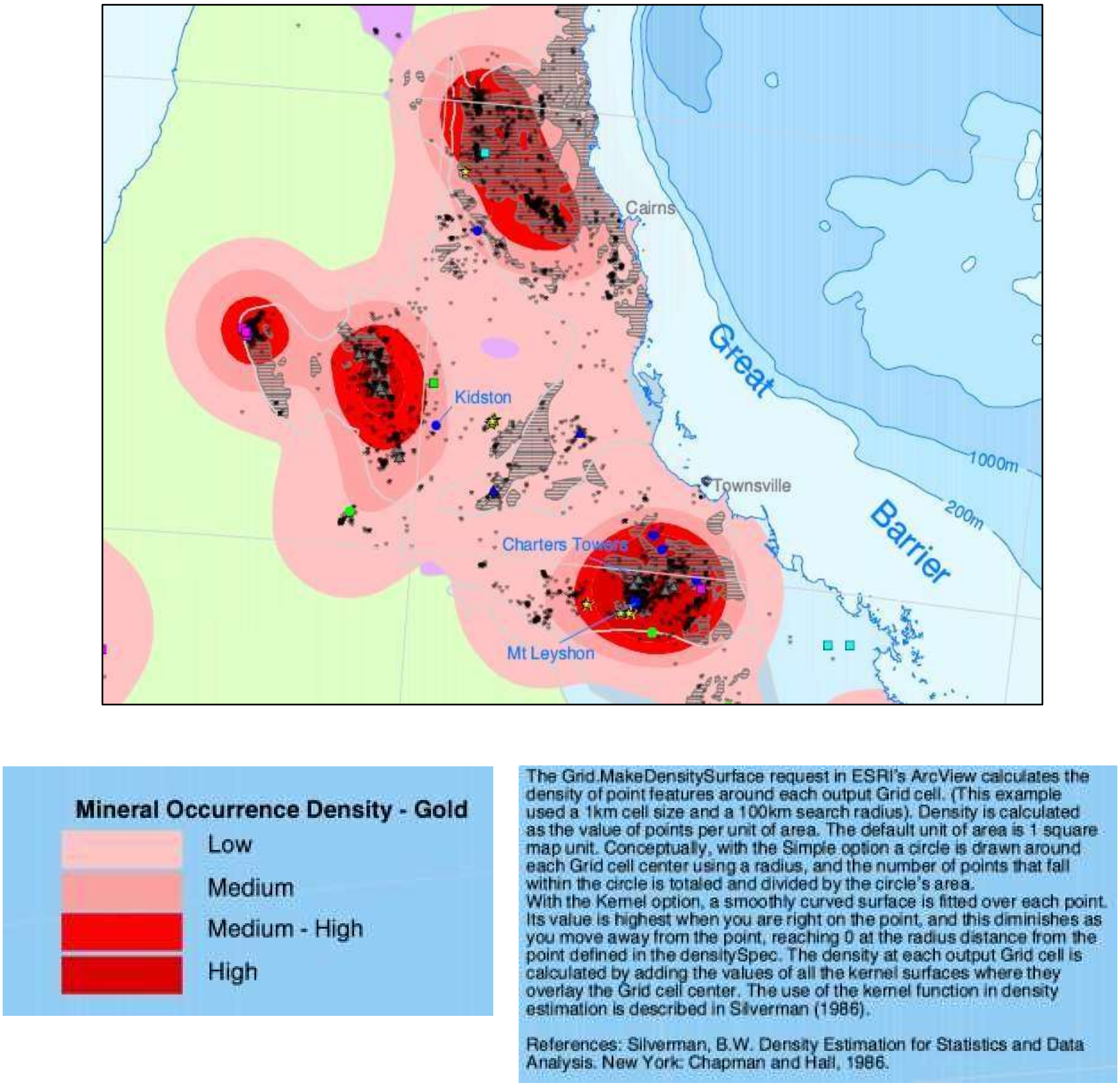


Figure 98. Gold-bearing provinces in northern Queensland, ranked by density of mineralisation. Source: Geoscience Australia February 2005, Australian Federal Government.

ITEM 24. Other Relevant Data and Information

All information or explanations necessary to make the technical report understandable and not misleading have been included above.

ITEM 25. Interpretation and Conclusions

The Company has a robust geological model that has been predicted and then tested by diamond-core drilling down to 2000 metres vertical depth. Intersections into known quartz reefs have hit the predicted position within one metre at depths of up to 1,500 metre downhole. Over 350,000 metres of drilling has been conducted in 3,200 holes on down-dip and strike extensions of known reef systems, with 1,600 significant drill intersections.

Over 1,500 pairs of repeat gold assays run on samples used in the resource estimate and assayed by commercial laboratories were examined. The precision of the results is generally within ± 10% of the average of two samples above 4 grams per tonne Au, within a range of ± 15% for the majority of samples used in resource estimation. This is consistent with the documented order of accuracy for commercial gold assaying.

The expected range of densities in material to be mined in the project varies from 2.7 t/m^3 to 3.2 t/m^3. This introduces a variability of 20% in any tonnages estimated. The tonnage estimates are regarded by the Company as conservative, using the lowest likely density of 2.7 t/m^3 and the low historical payability of 30%. The Company is likely to have a higher payability of 50% as it will use a lower cut-off grade than the 9 metre-gram per tonne Au used historically. This could increase the tonnage by as much as 40%.

The minimum daily average Australian dollar gold price over the last five years shows a variation of over 40% from the mid-point to the high and low values. The variation in gold price at any time is outside the control of the Company.

The Company believes it has quantified the confidence levels to an acceptable level of commercial risk for its Charters Towers project through trial mining, processing, reconciliation of predicted production against actual production and the sale of over 100,000 ounces of gold.

The **Probable Ore Reserves** at the Charters Towers Gold Project at a 4 grams per tonne Au grade cut-off are **2,500,000 tonnes at 7.7 grams per tonne gold, containing 620,000 ounces (19,000 kilograms) of gold.**

The Probable Ore Reserve is derived from, and not additional to, the Indicated Mineral Resource. The **Indicated Mineral Resource** is **3,200,000 tonnes at 7.6 grams per tonne gold, containing 780,000 ounces of gold.**

The **Inferred Mineral Resource** is **32 million tonnes at 14 grams of gold per tonne, containing 14 million ounces of gold**, using a lower cut-off grade of three grams of gold per tonne of mineralized material (grams per tonne Au) over a minimum sample true width of one metre (expressed as 3 metre-gram per tonne Au).

The Project was in gold production from 2006 to 2016, with all necessary infrastructure in place and has sold over 100,000 ounces of gold and 45,000 ounces of silver since 1997. The Project is currently on care and maintenance pending raising sufficient capital to re-enter full gold production.

The significant changes since the last formal report in 2012 have been:

- The production of some 13,600 ounces of gold from the Warrior and Sons of Freedom reefs in the Imperial Mine, making a total of 66,168 ounces of gold from Imperial since 2006. Reserves were maintained at the Imperial Mine on a 3-month rolling replacement process where new ore is added in by new on-ore development and diamond-drilling ahead of mining, and known ore is mined out during the period.

The confidence level is ±10 to 15% for the contained ounces in the Probable Ore Reserve. The confidence level is ±30% for the contained ounces in the Inferred Mineral Resource, because two mining factors have been included (a minimum mining width of one metre, and a substantial discount of the tonnes (50%) based on known mine payability on the reefs).

ITEM 26. Recommendations

The purpose of this report is to present an update on the current Mineral Resources and Ore Reserves of the Charters Towers Gold Project.

It is recommended that the Company vigorously proceed with the development of the Charters Towers Gold Project as stated in its public documents released to the market and set out in more detail in documents reviewed for this technical report.

The writer has extensive knowledge of the goldfield and is of the opinion that development of the goldfield into a larger gold producer will also allow the opportunity to, concurrently with gold production, efficiently obtain the additional geological data to upgrade more of the Inferred Mineral Resources to Indicated and then to move those into Ore Reserves.

Further drill-hole planning and exploration is already underway and ongoing by the Company, including the search for additional Mineral Resources. The goldfield has only been partly explored and there is substantial potential for further Mineral Resources and Ore Reserves to be defined.

ITEM 27. References

Blatchford, A., 1953. *Geology of the Tavua Goldfield, Viti Levu, Fiji.*

Bumstead, E., 1984. Some comments on the precision and accuracy of gold analysis in exploration. AusIMM Proceedings 289, pp 71-78.

Corbett, G.J. and Leach, T.M. (1998) Southwest Pacific Gold-Copper Systems : Structure, Alteration and Mineralisation. Special Publication Number 6, Society of Economic Geologists, pg. 236.

Davis, B. and Windham, C., 1995. Statistical Control for the Production of Assay Laboratory Standards. SME Annual Meeting, March.

Dawes B, 1996. *Re-establishing Rightful Prominence*. Barton Capital Ltd Mining Research, Sydney.

Dominy, S.C., 2006. Sampling Review and Heterogeneity Study. CTG Report CT2006-09 (unpubl.)

Dominy, S.C., 2011. Review of Mineral Resources and Ore Reserves, Sept 2011 (unpubl.)

Dominy, S.C., Annels, A.E., and Noppe, M.A., 2002. "Errors and Uncertainty in Mineral Resource and Ore Reserve Estimates: operator beware". Underground Operators Conference, Townsville, 29 to 30 July 2002. Australasian Institute of Mining & Metallurgy.

Dominy, S.C., Noppe M.A., Annels A.E., 2004. "Errors and Uncertainty in Mineral Resource and Ore Reserve Estimation: The Importance of Getting it Right." Explor. Mining Geol., Vol. 11, Nos. 1-4, pp. 77–98, 2002.

Dominy, S.C. and Johansen, G.F., 2005. "Development of Sampling and Assaying Protocols at the New Bendigo Gold Project, Victoria, Australia." Second World Conference on Sampling and Blending, Brisbane, Queensland, May 2005.

Dominy, S.C. and Petersen, J.S., 2005. "Sampling Coarse Gold-Bearing Mineralisation — Developing Effective Protocols and a Case Study From the Nalunaq Deposit, Southern Greenland." Second World Conference on Sampling and Blending, Brisbane, Queensland, May 2005.

Dowling, K. and Morrison, G.W.,1989. Application of quartz textures to the classification of gold deposits using North Queensland examples. **In: Keays, R.R., Ramsay, W.R.H. and Groves, D.I.** (Eds) *The Geology of Gold Deposits – the Perspective in 1988.* Economic Geology Monograph 6, Society of Economic Geologists, Littleton, pp. 342-355.

Eames, J.C., 1998. ‚Quality Control of Collected and Processed Information‛, Best Practice Mineral Exploration, Hotel Inter-Continental, Sydney, 23-24 February 1998.

Eames, J.C. 1999. Unrealistic Expectations of Assay Results. In *Good Project – Wrong Assays! Getting Sample Preparation and Assaying Right.* Seminar sponsored by MICA, AIG and AusIMM – Monday 26 July, 1999. See: **Mineral Industry Consultants Association Technical Documents** http://www.mica.org.au/index.cfm?pageid=5296_7_moria_pg&docid=335_24_moria_shelf

Francois-Bongarcon, D.M., Long, S.D. & Parker, H.M., 1996: Assay Quality Assurance-Quality Control Program. Mineral Resources Development, Inc.

Garnett, D. 1999. Assay quality - an overview. . **In** *Good Project – Wrong Assays! Getting Sample Preparation and Assaying Right.* Seminar sponsored by MICA, AIG and AusIMM – Monday 26 July, 1999.

http://www.mica.org.au/index.cfm?pageid=5296_7_moria_pg&docid=339_24_moria_shelf

Hall, G.E.M. & Bonham-Carter, G.F., 1988: Review of Methods to Determine Gold, Platinum and Palladium in Production-Oriented Geochemical Laboratories, with Application of a Statistical Procedure to Test for Bias, J Geoch Expl, 30, 255 – 286

Hall, G.E.M., Coope, J.A. & Weiland, E.F., 1989 Bias in Analyses for Gold. Explore, 65, pp 17 – 18

Handley, G.A., Lewis, R. W. & Wilson, G.I., 1987 The Collection and Management of Ore Reserve Estimation Data. Resources and Reserves Symposium. AusIMM, pp 27 - 30.

Hellman, P. L., 1999: Issues concerning the quality of assay results. **In** *Good Project – Wrong Assays! Getting Sample Preparation and Assaying Right.* Seminar sponsored by MICA, AIG and AusIMM – Monday 26 July, 1999.

Hunt, D., 1996. Industrial conflict at Mount Coolon, 1935. In **Dalton, B. J**. (Ed.), *Lectures on North Queensland history. No. 5* (pp. 36-51) Townsville, Qld.: Dept. of History and Politics, James Cook University of North Queensland.

Hutton, L.J and Rienks, I.P, 1997. Geology of the Ravenswood Batholith. *Queensland Geology 8,* Dept of Minerals and Energy, Brisbane.

James, C. & Radford, N., 1988 Quality Control - How do you Know if Your Data are Right? **In**

Sample Preparation and Analyses for Gold and Platinum-Group Elements. AIG Bull. No. 8, 129 - 133.

Johansen, G., 1987 Sampling, Assaying and Reporting in a Coarse Gold Environment. Assaying and Reporting Standards – Assessing Asian Mineral Investment Criteria in the Post-Bre-X Era. AIC Conference, Singapore.

JORC, 2004, 2012. Australasian Code for the Reporting of Identified Mineral Resources and Ore Reserves, Report of the Joint Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).

Kreuzer, O.P., 2003. *Structure, timing and genesis of auriferous quartz veins in the Charters Towers Goldfield, North Queensland: implications for exploration and prospectivity.* PhD thesis, School of Earth Sciences, James Cook University of North Queensland.

Kreuzer, O.P., T.G. Blenkinsop, T.G., Morrison, R.J and S.G. Peters, S.G. 2007. Ore controls in the Charters Towers goldfield, NE Australia: Constraints from geological, geophysical and numerical analyses. *Ore Geology Reviews*. V. 32, Issues 1-2, September 2007, pp 37-80.

Matysek, P., 1999. Toronto Stock Exchange Mining Standards Task Force Final Report: some implications and issues. In 'Quality Control in Mineral Exploration' Short Course notes, 19th International Geochemical Exploration Symposium, Vancouver, Canada. Association of Exploration Geochemists.

Melnbardis, L-D., 1991: A Comparison of Ring Versus Disc Pulverising for Metallic Screening. CMA Conference, 1991, Hull-Ottawa.

Morrison R.J, Storey N.J.M, and Towsey C.A.J, 2004. Management of Geological Risks associated with Quartz Reef Gold Deposits, Charters Towers, Queensland. In EGRU Contribution No. 62 pp 87-106. Mining and

Resource Geology Symposium, 2nd April 2004 Proceedings Volume, S Dominy Ed. Economic Geology Research Unit, James Cook University, Townsville, Qld.

Olzard, K., 2015. *Acid Rock Drainage Potential of Rock Stockpiles and Tailings Storage Facility.* SGS Consultants. Unpublished report to Citigold Corporation Ltd.

Peters, S.G., 1987. *Geology, fluid characteristics, lode controls and ore-shoot growth in mesothermal gold quartz veins, northeastern Queensland.* PhD thesis, School of Earth Sciences, James Cook University of North Queensland.

Peters, S.G., 1987. Geology and lode controls of the Charters Towers Goldfield, northeastern Queensland. *Contributions of the Economic Geology Research Unit 19,* School of Earth Sciences, James Cook University of North Queensland.

Peters, S.G. and Golding, S.D., 1989. Geologic, fluid inclusion and stable isotope studies of granitoidhosted gold-bearing quartz veins, Charters Towers, northeastern Australia. **In: Keays, R.R., Ramsay, W.R.H. and Groves, D.I.** (Eds) *The Geology of Gold Deposits – the Perspective in 1988.* Economic Geology Monograph 6, Society of Economic Geologists, Littleton, pp. 260-273.

QGMJ – Queensland Government Mining Journal (various years from 1901 onwards).

Ramsey, M. H., Thompson, M. and Hale M., 1992: Objective Evaluation of Precision Requirements for Geochemical Analysis Using Robust Analysis of Variance. Journ Geoch. Expl., 44, 23 – 36.

Reid, J.H., 1917. The Charters Towers Goldfield. *Geological Survey of Queensland Publication No. 256*. Department of Mines, Queensland. 236pp.

Schreiber, D.W., Fontboté, L., Lochmann, D., 1990, Geologic setting, paragenesis, and physicochemistry of gold quartz veins hosted by plutonic rocks in the Pataz region: Economic Geology, v. 85, p. 1328-1347.

Shaw, W.J., 1997. Validation of sampling and assaying quality for bankable feasibility studies, Paper 7 in The Resource Database Towards 2000. The Australasian Institute of Mining and Metallurgy Illawarra Branch, Wollongong.

Snowden, V., 1994: Improving Predictions by Studying Reality. **In** Geostatistics For the Next Century. Kluwer Academic Publishers.

Snowden, D.V. 1996. "Practical interpretation of resource classification guidelines", AusIMM Annual Conference, Perth.

Snowden D. V., 2001. "Practical Interpretation of Mineral Resource and Ore Reserve Classification Guidelines", in Mineral Resource and Ore Reserve Estimation, The AusIMM Guide to Good Practice. *AusIMM Monograph 23*, pp 643 -652.

Snowden, D.V., Glacken, I. and Noppe, M. 2002. Dealing with demands of technical variability and uncertainty along he mine value chain. *Value Tracking Symposium*, Brisbane Qld 7-8 October 2002.

Taylor, R. G., 2007. Aspects of gold occurrences within six samples from the Warrior vein system, Charters Towers goldfield, Queensland. CTG Report CT2007-24 (unpubl.)

Thompson, M., 1992: Data Quality in Applied Geochemistry: the Requirements, and How to Achieve Them. Journ Geoch. Expl., 44, 3 – 22.

Thompson, M. and Howarth R.J., 1973. The rapid estimation and control of precision by duplicate determination. The Analyst 98, pp 153-160.

Thompson, M. and Howarth, R., 1978: A New Approach to the Estimation of Analytical Precision. Journ Geoch. Expl., 9, 23 – 30

Towsey, C.A.J., 2003. "The Charters Towers Gold Project". **Northern Engineering Conference NEC 2003 Townsville.** *Institute of Engineers Australia.*

Towsey, C.A.J., 2004. Case Study – Breathing new life into Charters Towers. **2nd Annual Underground Mining 2004 Conference.** Perth 28th-30th July 2004

Towsey, C.A.J., 2005. The Warrior Mine, Charters Towers. **New Developments in North Queensland, NQ Branch AusIMM Symposium.** Charters Towers 9th-10th April 2005

Towsey, C.A.J., 2012. *The Mineral Resources and Reserves of the Charters Towers Gold Project.* Pathfinder Exploration Pty Ltd. Report to Citigold Corporation Limited. Released to the Australian Securities Exchange May 2012.

Towsey C.A.J, Morrison R.J., Foord G.E. & Storey N.J.M, 2002. The Charters Towers Gold Project Gold Production Plan, September 2002. *Charters Towers Gold Mines Ltd., Brisbane, Qld. http://www.citigold.com*

Towsey, C.A.J., Morrison R.J. and Storey N.J.M 2004. The Charters Towers Gold Project. **North Qld Exploration & Mining Symposium Townsville May 27-28 2004.** Aust Inst Geoscientists *AIG Bulletin No. 40.*

Waltho, A.E, and Shaw W.J., 1999. **Assay Program Management – Planning For Quality**. In *Good Project – Wrong Assays! Getting Sample Preparation and Assaying Right.* Seminar sponsored by MICA, AIG and AusIMM – Monday 26 July, 1999. **Mineral Industry Consultants Association Technical Documents** http://www.mica.org.au/index.cfm?pageid=5296_7_moria_pg&docid=333_24_moria_shelf

28.0 Date and Signature Page

The effective date of this Technical Report, titled the Gold Technical Report on the Mineral Resources and Ore Reserves of the Charters Towers Gold Project is 8 December 2020.

Signed,

Christopher Alan John Towsey, MSc BSc(Hons), DipEd, FAusIMM, Chartered Professional (Geology).

Pathfinder Exploration Pty Limited

29.0 Certificate of Competent Person

29.1 Name and address

Mr Christopher Alan John Towsey
Managing Director
Pathfinder Exploration Pty Ltd
14 Reg Percy Street, Mount Tarcoola
PO Box 596
GERALDTON WA 6530 Australia

29.2 Occupation

Consultant Geologist

29.3 Title and Effective Date of Technical Report to which Certificate Applies

Mineral Resources and Ore Reserves 2020
Charters Towers Gold Project
8 December 2020

29.4 Competent Person's Qualifications

29.4.1 Qualifications

MSc (Univ Sydney), BSc(Hons) (Univ Sydney),
Dip Ed (Sydney Teachers College),
Site Senior Executive BOE-SSE 11-020 (Qld Board of Examiners)

29.4.2 Relevant Experience

Chris Towsey is currently Managing Director of Pathfinder Exploration Pty Ltd, an independent geological consultancy. He has been associated with the Project for 20 years from 1999 as a consultant geologist and employee. He joined the Company on full-time staff as General Manager Mining in July 2002, was promoted to Chief Operating Officer ('COO') in January 2004. He lived on-site at Charters Towers as COO and Site Senior Executive managing the day-to-day operations of the underground mining operations of the Imperial Mine from October 2009 to January 2011. He remained as a consultant geologist to the Company from January 2011 and re-joined the Company as Chief Scientist in 2014. He was a Director of the Company from 2014-June 2016. He is an experienced mining & exploration geologist, graduating in 1974 and has particular expertise in geochemistry, narrow vein gold deposits and base metals. He was formerly Chief Geologist and Executive Manager Exploration for Emperor Mines Ltd at Vatukoula gold mine in Fiji from 1994-98, and General Manager Minerals for Century Resources Ltd in 1998. He has operated a consulting geology business as Managing Director of Pathfinder Exploration Pty Ltd since 1987. Prior to that he was a Project Geologist both underground and in surface exploration for Mount Isa Mines Ltd (now Glencore) and Senior Geochemist with BHP Minerals. He holds Honours and Masters Degrees in economic geology from Sydney University and is a Chartered Professional (Geology). He is a former Director of the Queensland Resources Council, Great Mines Ltd & Black Dragon Gold and a current independent Director of Otso Gold Corporation TSX-V 'OTSO') . He has worked in 26 countries around the world.

29.4.3 Professional Association Memberships

- Fellow of the Australasian Institute of Mining & Metallurgy (over 40 years' membership) and Chartered Professional (Geology)
- Member of the Mineral Industry Consultants Association

29.4.4 Competent Person

Mr Christopher Alan John Towsey is a Corporate Member and Fellow of the Australasian Institute of Mining and Metallurgy. Mr Towsey is a consultant geologist. He has the relevant experience in relation to the mineralisation being reported on to qualify as a ***Competent Person*** as defined in the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves and a ***Qualified Person*** under the Canadian NI 43-101, having worked on the Project as a consultant and former fulltime employee since 1999. Mr Towsey has consented in writing to the inclusion in this report of the matters based on the information in the form and context in which it appears.

29.5 Date and duration of the Competent Person's most recent personal inspection of each property

The *Competent Person* under NI 43-101 responsible for this report, Mr Christopher Alan John Towsey, has been associated with the Project since 1999 as a consultant geologist and employee. He joined The Company on full-time staff as General Manager Mining in July 2002, was promoted to Chief Operating Officer ('COO') in January 2004. He lived onsite at Charters Towers as COO and Site Senior Executive managing the day-to-day operations of the underground mining operations of the Imperial Mine from October 2009 to January 2011. He was a Director of the Company from 2014-June 2016. He has remained as a consultant geologist to the Company since January 2011.

His last personal underground inspection of the property was on the 19th and 20th December 2011, inspecting the Central Decline underground down to the Brilliant Block Shaft 180m vertically below the city, and inspecting the 830 and 840 production levels in the Sons of Freedom ore body in the Imperial Mine 5 km southeast of the city. He last visited the site in 2016 when the mine was placed on care and maintenance.

29.6 The item or items of the technical report for which the Competent person is responsible

Mr Towsey is responsible for the compilation of data and estimation of the Mineral Resources and Ore Reserves. He has relied on mining engineering information and legal & financial information supplied by employees of the Company for the conversion of resources to reserves, supplemented by his personal mine production experience underground as Site Senior Executive for two years from October 2009. He has compiled information on past gold price statistics from data supplied by the Perth Mint in Western Australia.

29.7 Whether the Competent person is independent of the issuer as described in section 2.1

Mr Towsey is currently independent of the Company and has been since January 2011, supplying occasional consulting services on a *per diem* invoiced fee at market rates.

He has held a small quantity of shares in the company since 2002, which were either inherited from his father or bought personally, either on market or purchased under a Share Purchase Plan available to all shareholders. He currently holds 1,700,000 shares with a weighted-average purchase price of 2.4 cents per share, worth $20,400 at the current market price (27 August 2020) of 1.2 cents per share. He would benefit financially by $17,000 for every cent that the share price exceeded 2.4 cents per share.

29.8 What prior involvement, if any, the Competent person has had with the property that is the subject of the technical report

Mr Towsey has been associated with the Project since 1999 as a consultant geologist and employee. He joined The Company on full-time staff as General Manager Mining in July 2002, was promoted to Chief Operating Officer ('COO') in January 2004 and lived on-site at Charters Towers as COO and Site Senior Executive managing the day-to-day operations of the underground mining operations of the Imperial Mine from October 2009 to January 2011 and was a Director from 2014-2016. He has remained as an occasional consultant geologist to the Company since January 2011.

29.9 That the Competent person has read this Instrument and the technical report, or part that the Competent person is responsible for, has been prepared in compliance with this Instrument

Mr Towsey has consented in writing to the inclusion in this report of the matters relating to Exploration Results, Mineral Resources and Ore Reserves based on the information in the form and context in which it appears, and as at the date of publication, had not withdrawn this consent.

29.10 That, at the effective date of the technical report, to the best of the Competent person's knowledge, information, and belief, the technical report, or part that the Competent person is responsible for, contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

At the effective date of this technical report, to the best of my knowledge, information, and belief, this technical report, or part for which I am responsible, contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Christopher Alan John Towsey

8 December 2020

JORC CHECKLIST

SECTION 1 SAMPLING TECHNIQUES AND DATA

(Criteria in this section apply to all succeeding sections)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	• The Charters Towers area has been sampled by a mixture of diamond (HQ and NQ2) and Reverse Circulation percussion ('RC') drill holes for the purpose of identifying the location of mineralised structures and for identifying potential for mineralisation on these structures and for down-hole ('DH') geophysics. • HQ / NQ core is typically cut in half (50%) using a diamond saw (100% of core recovered) and half or in some instances ¼ (25%) of the core is submitted for analysis. Only HQ-size drill core is used for quarter core samples. • RC drilling was sampled on 1m intervals or through sections where mineralisation was known to occur. RC results in precollars are not reported. • Due to the "narrow vein" style of mineralisation found at Charters Towers, the maximum HQ / NQ sample interval is 1m & minimum sample interval 0.1m. • Zones of mineralisation are defined by sericite, chlorite and epidote alteration of granite ("Formation") surrounding narrow, but high grade quartz veins containing sulphides, other gangue minerals and gold. Samples are taken from the mineralised zone and on either side of the mineralisation into unaltered granite. • Sampling methods follow guidelines and methodologies established by Citigold throughout its mining and exploration history. These methods are described in detail in the 2020 Mineral Resources and Reserves Report which can be found on the company's website (http://www.citigold.com/mining/technical-reports)
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	• Most diamond drilling has been 63.5mm diameter HQ core, although some NQ2 core (50.5mm diameter) has been drilled. RC pre-collars have been used for some drill holes where drilling was aimed at defining the location for the fracture. NQ2 drill core was typically used for the diamond tails on RC pre-collars. • Downhole surveys have been taken at a minimum of every 50m down hole. • 60mm PN12 PVC piping has been inserted into many holes to accommodate the DH geophysics tools and to maintain the internal integrity of the holes in case of further surveying requirements. • In 2013-16, all drilling was completed under contract to Citigold. • Core orientation is carried out on all drill holes CT9000 and above in order to constrain the geometry of load bearing fractures. Core orientation measurements are taken at 6m intervals by contracted drillers.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• Core is recovered by wireline drilling, where core is collected inside a core barrel winched back to surface inside the drill rods. The core is marked up and measured by senior field assistants and geologists under the guidance of the senior geologist. Core recovered (CR) is compared with the meters drilled (MD, recorded by the drillers in their daily log-sheets) and a 'core recovery' percentage is calculated; CR/MD x 100 = % recovered. All data is recorded within the Citigold database where it is checked by senior geologists. • Drilling is mostly within competent granites where core loss is minimal. However, in areas where high degrees of alteration and associated mineralisation occur, some core loss is expected and subsequently recorded. Accordingly, it is possible that some fine gold within clay could have been lost during drilling.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photo-graphy. The total length and percentage of the relevant intersections logged.	• 100% of core was logged. Samples were collected from intercepts where alteration or alteration and mineralisation were clearly seen. The nature of the ore-body is such that mineralisation or potentially mineralised structures are easily identified. Selected RC samples were geologically logged and sampled. • The logging describes the dominant and minor rock types, colour, mineralisation, oxidation, degree of alteration, alteration type, vein type, core recovery, basic structure. • Rock Quality Designation or RQD % has been noted in the core drill logs (also number of fractures per interval has been noted). Some magnetic susceptibility logging was undertaken for geophysical calibration.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled.	• Core is sawn in half and one half (50%) is submitted for analysis at NATA accredited laboratories in Townsville (Qld, Australia). • Selected HQ core is cut for ¼ core (25%), usually to check on high-grade results, and submitted for analysis at NATA accredited labs in Townsville (Qld, Australia). • The 25%-50% sampling of the HQ core is considered appropriate for the mineralisation type. NQ core is sampled for 50% only. • Samples are couriered or hand delivered to NATA accredited laboratories where they are dried at 105°C; weighed; crushed to –6mm; and pulverised to 90% passing 75um where a 200g sub- sample is taken. 5% of samples are dual sub-sampled (second split) for sizing and analytical quality control purposes. Fire assay: 50g of sample is added to a combustion flux and fired at 1000°C; the resultant lead button is separated from the slag and muffled at 950°C to produce a gold/silver prill; the prill is digested in aqua regia and the liquid read on an AAS. ICP40Q: A 0.2g sub-sample is digested using nitric/hydrochloric/ perchloric/hydrofluoric acids; the diluted digestion product is then presented to a Perkin Elmer 7300 ICP AES for analysis. Quality Control: second splits (5% of total); 2 in 45 sample repeats; and 2 CRM standards for each rack of 50 samples are analysed in all methods.

SECTION 1 SAMPLING TECHNIQUES AND DATA (CONT)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• Citigold uses standards sourced from Gannett Holdings Pty Ltd, Perth, Australia. Certificate number 13U20C-22-04-13. • A blank sample and/or a standard sample and/or a duplicate sample are randomly inserted in approximately every 30 samples that are submitted. • NATA accredited laboratories in Townsville have their own rigorous 'in lab' QA/QC procedures and are accredited for precious metal and base metal analyses. • A complete discussion on assay techniques, sample sizes, assay variance and sample bias can be found in the Citi gold 2020 Mineral Resources and Ore Reserves report at: http://www.citigold.com/mining/technical-reports
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	• Selected samples are submitted to other labs, including Citigold's on-site lab to check for consistency, accuracy and as a second means of obtaining a comparison result. • Anomalous holes or unusually high-grade samples are resubmitted for check assay. • No twinned holes were completed by Citigold since 2014. Prior exploration has engaged diamond drilling or geophysics as a means of checking anomalous RC drilling and to confirm the precise depth of the mineralised structure. • All drill holes are logged into laptop computers and checked before entering into database. Criteria have been established so that erroneous or incorrect characters within a given field are rejected thereby reducing the potential for transfer error. All logs are reviewed by the senior geologist. • All samples logs are recorded onto paper and assigned a unique sample number once cut. The sample and other details are entered into the Citigold database. • All significant intercepts are checked against the remaining core, checked for corresponding base metal grades and assessed for geological consistency.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	• Citigold uses a combination of grids including a local mine grid and AMG AGD66 Zone 55 which closely approximates the local mine grid. • Drill hole collars are surveyed using a Leica Viva Real Time Kinematic (RTK) Differential GPS system with a fully integrated radio, allowing for data capture in 3 dimensions at an accuracy of +/-25mm over baselines within 5km radius of the base station. • All coordinates are provided in AMG AGD66 unless otherwise stated. • Citigold uses a geo-registered 50cm pixel satellite photograph acquired in September of 2013 as a secondary check on the spatial location of all surface points. • Down-hole surveys are obtained using either a Ranger or Camteq downhole survey instrument. Survey tools are checked in Citigold's base station (a precise DH camera alignment station) prior to drilling holes over 800m or approximately every 4-5 holes in other circumstances. DH geophysics are obtained from most drill holes at which time the holes are often re-surveyed with a Camteq Proshot acting as a secondary check of the original survey..
Data spacing and distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	• Drill hole spacing and orientation is currently constrained by the requirements for DH geophysical surveying. Approximately 80m between points of intercept are planned, however; the nature of the structure may require alterations to the spatial pattern of holes. A full description of Citigold's Mineral Resources and Reserves with extrapolation & interpolation distances can be found in the 2020 Mineral Resources and Ore Reserves Report at: http://www.citigold.com/mining/technical-reports
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Drill holes are planned to intercept the mineralised structures (average 45 degree dip) at high angles. The presence of landholders and other features on the landscape prevent all holes from intercepting perpendicular to the structure. Typically, holes will be drilled in a fanning pattern with intercepts at no less than 60 degrees to the mineralised structure. True widths are determined only after the exact geometry of the structure is known from multiple drill holes. • Holes intercepting at angles of less than an estimated 60 degrees are reported as such. • Lode-parallel drill holes have been completed by Citigold, specifically designed for down-hole and surface geophysics, and are not reported.
Sample security	The measures taken to ensure sample security.	• All drill core is stored within locked yard guarded by contracted security. • Samples are delivered by Citigold staff to NATA accredited laboratories and/or by registered courier. • Standards are retained within the office of the chief geologist and only released under strict control. The chain of sample custody is managed and closely monitored by Citigold (management and senior staff).
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	• A full Mineral Resources and Ore Reserves report was completed in May 2020, written in compliance with the then-current 2004 JORC Code. The report contains a comprehensive review and assessment of all sampling techniques and methodologies, sub-sampling techniques, data acquisition and storage, and reporting of results. Statements on QA and QC can be found on page 48 of the report. The report can be found on Citigold's website at: http://www.citigold.com/mining/technical-reports . • Citigold's database has been audited by several independent consultants since 1998 and most recently by Snowden in 2011. There have been no material changes to this report since 1 October 2020.

SECTION 2 REPORTING OF EXPLORATION RESULTS

(Criteria listed in the preceding section also apply to this section)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• Citigold holds a number of different types of mineral tenements including Exploration Permit Minerals (EPM's), Mineral Development Licenses (MDL') and Mining Leases (ML's). Citigold currently holds five (5) EPM's, three (3) MDL's and thirty (30) ML's:- EPM15964, EPM15966, EPM18465, EPM18813 & EPMa27287 MDL118, MDL119, MDL252, ML1343, ML1344, ML1347, ML1348, ML1385, ML1398, ML1424, ML1430, ML1472, ML1488, ML1490, ML1491, ML1499, ML1521, ML1545, ML1585, ML10005, ML10032, ML10042, ML10091, ML10093, ML10193, ML10196, ML10208, ML10222, ML10281, ML10282, ML10283, ML10284, ML10335 Citigold holds current Environmental Authorities over the tenements, and has already produced over 100,000 ounces of gold. There are no known impediments to continuing operations in the area.
Exploration done by other parties	Deposit type, geological setting and style of mineralisation.	• Charters Towers is one of Australia's richest gold deposits that was discovered in 1871. A plethora of historical data from the Charters Towers area has been collected, collated and is included within the Citigold geological database. Previous exploration was summarised in the 2020 Mineral Resources and Reserves Report which can be found at: (http://www.citigold.com/mining/technical-reports). • Citigold's drill hole database includes historical drilling including: 1993 - Mt Leyshon Gold Mines Ltd extensions to CRA diamond drill holes in the areas. 1991 - Diamond and RC drilling by PosGold in a joint venture with Charters Towers Mines NL that covered parts of the Central area areas. 1981-84 - Diamond-drilling by the Homestake/BHP joint venture in the Central area. 1975, 1981-82, and 1987 - Diamond and RC drilling in central by A.O.G., CRA and Orion respectively. • Citigold retains all diamond core and a collection of core drilled by other companies is its on-site core-yard.
Geology	Deposit type, geological setting and style of mineralisation.	• Mineralisation at Charters Towers is referred to as "orogenic" style vein mesothermal gold deposit. See the 2020 Mineral Resources and Reserves Report which can be found at: http://www.citigold.com/mining/technical-reports • The many reefs are hosted within a series of variably-oriented fractures in granite and granodioritic host rocks. Mineralisation does occur in adjacent metasedimentary rocks. • The gold-bearing reefs at Charters Towers are typically 0.3 metres to 1.5 meters thick, comprising hydrothermal quartz reefs in granite, tonalite and granodiorite host rocks. There are some 80 major reefs in and around Charters Towers city. • The majority of the ore mined in the past was concentrated within a set of fractures over 5 km long East-West, and 500 meters to 1600 meters down dip in a North-South direction. The mineralised reefs lie in two predominant directions dipping at moderate to shallow angles to the north (main production), and the cross-reefs, which dip to the ENE. • The reefs are hydrothermal quartz-gold systems with a gangue of pyrite, galena, sphalerite, carbonate, chlorite and clays. The reefs occur within sericitic hydrothermal alteration, historically known as "Formation". • The goldfield was first discovered in December 1871 and produced some 6.6 million ounces of gold from 6 million tons of ore from 1872 to 1920, with up to 40 companies operating many individual mining leases on the same ore bodies. There were 206 mining leases covering 127 mines working 80 lines of reef and 95 mills, cyaniding and chlorination plants. The field produced over 200,000 ounces per year for 20 consecutive years, and its largest production year was 1899 when it produced some 320,000 ounces.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case..	• There are over 3,300 drill holes in the project area, and it is impracticable to list them all in this report. Drilling since 2004 has been tabulated on the Company's web site and significant results listed in the Quarterly reports. Summary information on and statistical analysis of the drilling is contained in the Company's 2020 Mineral Resources and Ore Reserves report at: http://www.citigold.com/mining/technical-reports
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	• The intercepts reported on in any public release are described in sufficient detail, including gold maxima and subintervals, to allow the reader to make an assessment of the balance of high and low grades in the intercept. • All sample interval lengths are presented as "Depth from" and "Depth to" and intercept length. • Assay results for Ag, Pb and Au are presented as ppm (equivalent to grams of metal per tonne of rock, written as g/t). In addition, Au (gold) is presented as metal accumulations (grade x width), in metre-grams per tonne (m.g/t), particularly where intervals are less than one metre, to put the results into perspective as the minimum mining width is one metre. • No aggregation of sections have been used. • Metal equivalents are not used.

SECTION 2 REPORTING OF EXPLORATION RESULTS (CONT)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	• All intercepts presented in tables in Quarterly Reports are reported as down-hole lengths unless stated as True Widths. • Structures within Charters Towers are highly variable in width and can be variable in dip over short distances, however, every attempt is made to drill approximately perpendicular to the dip of the structure. The intercepts reported as intercept widths may not necessarily represent true widths in some cases. • All tables clearly indicate "From" and "To" intervals.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• There are over 3,300 drill holes in the project area, and it is impracticable to list them all in this report. Significant drill hole collar locations are shown on Figure 14-11, page 87, of the 2012 Mineral Resources and Ore Reserves Report (http://www.citigold.com/mining/technical-reports).
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Almost every drill hole completed on the property from 2004 to 2011 is available from the Citigold website (http://www.citigold.com/mining/exploration). Drilling was suspended during 2012 and resumed in 2013. There has been no drilling since 2016. • Drill holes not included (regardless of intercepts and grade) are those that were drilled specifically for down-hole geophysics which were typically drilled parallel to the mineralised structure. All other drill holes have been reported, regardless of whether it has returned high or low grades. • Higher grade drill holes (above 0.5m.g/t) are reported in Quarterly Reports.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• The Project has produced over 100,000 ounces of gold. Details such as bulk density, metallurgical characteristics, groundwater and geotechnical data are covered in the 2020 Mineral Resources and Ore Reserves Report which can be found at: http://www.citigold.com/mining/technical-reports . Bulk sampling and geophysical survey results are reported Quarterly as available
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Future work will concentrate on in-fill drilling between drill hole intercepts in the Central area to increase the data density required to convert Inferred Resources to Indicated.

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

(Criteria listed in Section 1, and where relevant in Section 2, also apply to this section)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	Databases were manually audited and checked on three occasions by external consultants since 1998 and most recently by Snowden in 2011. The SURPAC computer program has an automatic error checking procedure that checks for duplication and column errors.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	The *Competent Person* (under the JORC Code) responsible for this report, Mr Christopher Alan John Towsey MSc BSc(Hons), DipEd, FAusIMM, CPGeo, MMICA, has been associated with the Project since 1999 as a consultant geologist and employee. He joined the Company on full-time staff as General Manager Mining in July 2002, was promoted to Chief Operating Officer ('COO') in January 2004 and lived on-site at Charters Towers as COO and Site Senior Executive, managing the day-to-day operations of the underground mining operations of the Imperial Mine from October 2009 to January 2011. He has remained as a consultant geologist to the Company since January 2011. On 21 February 2014 he was appointed as a Non-Executive Director of Citigold Corporation Limited, and Executive Director from April 2015-June 2016. He last visited the site on 22 September 2014. He has been abreast of daily operations since 21 Feb 2014, including video links to the site. There have been no material changes to resources & reserves since 2020.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	The geology is well known as the field has been mined since 1871 with some 180 km of underground drives and production of 6.6 million ounces of gold from 6 million tonnes of ore. The mineralisation is contained in fractures or shear zones (reefs) which have good geological continuity and predictability up to 2km along strike and down dip, but the reefs have an almost random distribution of ore grades within the reef. The reefs are widely spaced (usually >400m apart) and therefore drill intersections, especially with oriented drill-core, are usually clearly linkable to known reefs. The grade is known not to be continuous, making estimation of a Proved Reserve grade difficult without underground driving or bulk sampling. The statistical range derived from Ordinary and Indicator Kriging suggests a range of 6m to 8m (the distance an assay can be reliably projected away from the known point) but high grade areas have been found very close to sub-economic grade areas, meaning that a strike drive or potential stoping area often maintains an economic grade when averaged over say 200m. Drilling has also been found to underestimate the grade when compared to areas that have been mined and stoped. The variability in grade is compensated for by applying a mining factor, payability, to the resources – payability is the percentage of a nominated mineralised reef that can be economically mined based on previous production records. This variability is covered in the 2020 Mineral Resources and Ore Reserves report , which can be found at: http://www.citigold.com/mining/technical-reports

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	There are 25 mineralised bodies included in the Mineral Resource estimate. These are up to 2 km along strike. Mineral resources are estimated to a maximum depth of 1200m down dip. The tops of bodies in the Resources are terminated at 50 m below surface, as it is unlikely the top 50 m under the city can be safely mined without disturbing existing buildings and infrastructure such as rail lines and highways. Drilling has intersected mineralised structures down to 2000m depth. There are 30 significant drill intersections deeper than 1,000 metres, of which 27 are deeper than 1,100 metres and 18 deeper than 1,200 metres. The deepest significant intersection is 1,817.2 metres (0.4 grams per tonne Au), and the best gold grade deeper than 1,200 metres was 20.54 grams per tonne Au.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Drilling has been separated into two main domains, the Central and Southern areas. For Inferred Mineral Resources, there was no cutting of high grades or exclusion of high-grade outliers, as log-probability plots indicated no anomalous populations. Indicated Mineral Resources used a Top Cut of 50 g/t. A lower cut-off of 1 metre-gram per tonne was used to define the reef outlines and 3 metre-grams per tonne used to define Indicated & Measured Resources. Reefs were modelled in SURPAC to produce 3D solids. Grades for Inferred Resources were based on the geometric mean applied over polygonal areas. Indicated Resources were based on arithmetic means of drill intersection accumulations (metre-grams per tonne) for the smaller polygons modelled for Indicated status. Validation by comparing recovered ounces from stopped areas with ounces defined ahead of mining has been satisfactory.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	All tonnages are estimated on dry weight as all material is below the base of oxidation. Moisture content becomes an issue only for mill feed after mining and does not affect in situ Resources.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	See the 2020 Mineral Resources and Ore Reserves Report. A lower cut-off grade of three grams of gold per tonne of mineralized material (grams per tonne Au) over a minimum sample true width of one metre (expressed as 3 metre- gram per tonne Au). No Top Cut was applied to Inferred Mineral Resources as there is no statistical basis to do so, as explained in Item 14 but an arbitrary Top Cut of 50 g/t was applied to Indicated Resources.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	Two mining factors have been included (a minimum mining width of one metre, and a substantial discount of the tonnes (70%) based on known mine payability on the reefs). See the 2020 Mineral Resources and Ore Reserves Report.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Over 100,000 ounces of gold and 45,000 ounces of silver have been produced since 1998. From 2006 to 2012, the Company's Quarterly Reports to the Australian Securities Exchange listed the gold recovery from the plant. Recoveries were in the range of 95% to 98% recovery of gold entering the plant. A recovery of 98% has been used in the mining factors for estimating Ore Reserves and estimating mining and processing costs. See the 2020 Mineral Resources and Ore Reserves Report.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	The Project has been mining since 1994 with an accepted EMOS, granted mining leases and Environmental Authorities ('EA'). The Tailings Storage Facility was constructed in 1997 and is inspected annually by a qualified consultant engineer. The site normally does not release water from the site due to the high local evaporation rates, but has approval to release provided discharge waters are compliant with the conditions of the EA.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	The Project normally mines primary ore from underground. Oxidised ore was only mined in two trial open pits (Stockholm and Washington in 1997-2000). No oxidised material is included in Resources or Reserves. Extensive density measurements were carried out. A bulk density of 2.7 t/m3 was used. See Tonnage Estimates in the 2020 Mineral Resources Report for tables of density data.

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit.	The confidence level is ±30% for the contained ounces in the Inferred Mineral Resource, because two mining factors have been included (a minimum mining width of one metre, and a substantial discount of the tonnes (50%) based on known mine payability on the reefs).
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The last peer review of the Mineral Resources was by Snowden Associates in June 2012. Snowden concluded that the 2012 Technical Report is written in accordance with the 2004 JORC Code. In addition, Snowden considers that Citigold's approach to estimating Mineral Resources at Charters Towers are reasonable based on the nature of the mineralisation, the methodology adopted in preparing the estimate and the history of operations in the goldfield. There have been no material changes to Resources or Reserves since the 2012 report.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The confidence level is ±30% for the contained ounces in the Inferred Mineral Resource, because two mining factors have been included (a minimum mining width of one metre, and a substantial discount of the tonnes (50%) based on known mine payability on the reefs).

SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES

(Criteria listed in Section 1, and where relevant in Sections 2 and 3, also apply to this section)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral Resource estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	The Indicated Mineral Resource is 3,200,000 tonnes at 7.7 grams per tonne, containing 780,000 ounces of gold. The Probable Ore Reserve is derived from, and not additional to, the Indicated Mineral Resource. There are 16 separate mineralised bodies in the Indicated Mineral Resource, and of these 16, fourteen met the criteria to be classified as ore bodies in the Probable Ore Reserve.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	The *Competent Person* (under the JORC Code) responsible for this report, Mr Christopher Alan John Towsey MSc BSc(Hons), DipEd, FAusIMM, CPGeo, MMICA, has been associated with the Project since 1999 as a consultant geologist and employee. He joined the Company on full-time staff as General Manager Mining in July 2002, was promoted to Chief Operating Officer ('COO') in January 2004 and lived on-site at Charters Towers as COO and Site Senior Executive, managing the day-to-day operations of the underground mining operations of the Imperial Mine from October 2009 to January 2011. He has remained as a consultant geologist to the Company since January 2011. On 21 February 2014 he was appointed as a Non-Executive Director of Citigold Corporation Limited, and Executive Director in April 2015-June 2016. He last visited the site on 22 September 2014. He has been abreast of daily operations since 21 Feb 2014, including video links to the site. There have been no material changes to resources & reserves since 2012.
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	The project has been mining since 1993 and has produced over 100,000 ounces of gold and 45,000 ounces of silver in trial mining from 1994 to 2016 which constitutes a full Feasibility Study, even though there is no single document with that title. Mining Leases have been granted, a two million tonne capacity tailings storage facility constructed and a processing plant built and operated since 1994. Actual mining costs have been obtained, together with purchased mining equipment and over $350 million already invested. Material Modifying Factors and reconciliations have been tested under actual production conditions and validated.

SECTION 4 ESTIMATION AND REPORTING OF THE RESERVES

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	See the 2020 Mineral Resources and Ore Reserves report , which can be found at: http://www.citigold.com/mining/technical-reports. A lower cut-off grade of three grams of gold per tonne of mineralized material (grams per tonne Au) over a minimum sample true width of one metre (expressed as 3 metre-gram per tonne Au). No Top Cut was applied to Inferred Resources as there is no statistical basis to do so, as explained in Item 14. For conversion of Indicated Mineral Resources to Probable Reserves, a lower cut-off grade of 4 g/t gold was used to allow for physical losses and dilution during mining. An arbitrary Top Cut of 50 grams per tonne Au was applied to high assays in Ore Reserve estimation to reduce any potential biasing effect of the high-grades. This is a conservative approach, as there is no statistical basis for cutting high grades, as discussed in the Inferred Mineral Resources section, and several of the Central ore bodies averaged recovered grades of over 50 grams per tonne for tens of years when mined previously.
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). The mining dilution factors used. The mining recovery factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. The infrastructure requirements of the selected mining methods.	Mining method - Underground. Long-hole open stoping, 10m sub-levels Minimum mining width - 1 metre Dilution – 10% Gold losses - 5% Payability - Variable - 30% to 52% Pillars left - 0% due to payability factor US Gold Price - USD $1,755 Exchange Rate - 0.73 Aus Gold Price - AUD $2,404 Driving cost - AUD $3,000 per metre, 3.5m square Driving cost equivalent - 2.1 Ounces per metre, 3.5m square Mill recovery - 95% of mill feed All necessary infrastructure has already been built and some 100,000 ounces of gold already produced. For details of the Mining factors and assumptions, see Item 15 of the 2020 Mineral Resources and Ore Reserves report, which can be found at: http://www.citigold.com/mining/technical-reports.
Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. Any assumptions or allowances made for deleterious elements. The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole. For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	Metallurgical characteristics are well-understood, having operated the processing plant for over 20 years from 1993 to 2016 and recovered over 100,000 ounces of gold and 45,000 ounces of silver. Actual mill recoveries varied from 95% to 98% of mill feed. Mill recovery used for future projections is 95% of mill feed. See the 2020 Mineral Resources and Ore Reserves report, which can be found at: http://www.citigold.com/mining/technical-reports.
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	This risk is assessed as Low Risk. Waste rock is benign granodiorite and classed as Non-Acid Forming. The main ore sulphides are galena and sphalerite which are acid-consuming, and the weathering of feldspars in the host rock is also acid-consuming, forming a self-neutralising system. Tailings deposited are made alkaline with added lime, which prevents the dissolution of heavy metals or any acid formation. The Company has an approved *Environmental Management Overview Strategy* (EMOS) and Environmental Authority ('EA') in place and has been conducting mining and processing operation since 1993, and expects to be able to continue to do so. In addition a Plan of Operations, in compliance with the EMOS, has also been lodged with the DRNM. These operating documents are in compliance with Queensland's stringent Environmental Protection Act and Regulation. The Tailings Storage Facility has already been built and used since 1997. Adjacent land alongside has been acquired for any future expansion. Dry stacking of tailing above ground and pumping tailings back underground is being evaluated.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	Most of the infrastructure is in place, paid for and operational, having produced over 100,000 ounces of gold. Power is drawn from the State grid. The Project is mostly self-sufficient in water but could draw on local municipal supplies if necessary. There is major town in the Project area that supplies all accommodation, services, transport, emergency services and medical backup that may be required. There is a major port, international airport and city to the east, 1.5 hours drive by sealed highway, at Townsville with a population of 189,238 (30 June 2013). The major Mt Isa to Townsville rail line runs through the project area, as does the sealed Flinders Highway (east-west) and Gregory Developmental Road (north-south).

SECTION 4 ESTIMATION AND REPORTING OF THE RESERVES

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs. Allowances made for the content of deleterious elements. The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products. The source of exchange rates used in the study. Derivation of transportation charges. The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. The allowances made for royalties payable, both Government and private.	Operating, transport, treatment, refining and capital costs are based on actual costs since 2006. A gold price of US$1300, an exchange rate of 0.91 and an Australian dollar gold price of $1430 were used, based on analysis of the supply and demand by the World Gold Council, and actual prices and exchange rates over the 5 years from 2006-2012The deposit has low arsenic, selenium and mercury levels, and gold doré bars produced by the Company have met the refiner's specifications since 1994 without penalty. Royalties are currently at 5% of the gross revenue received from precious metal sales. This is set by the Queensland State Government and is subject to periodic change outside the Company's control. The Government has not announced any plans to change the gold royalty. Transport costs of the final product are minimal – the maximum projected output is 330,000 ounces per year weighing 10.3 tonnes, or 197 kg per week. Raw doré gold is air-freighted to the Perth Mint refinery in Perth, Western Australia. Actual cash cost for the September 2013 Quarter was A$569, down from A$588 the previous Quarter (June 2013).
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	These are covered in the 2020 Mineral Resources and Ore Reserves report, which can be found at: http://www.citigold.com/mining/technical-reports. Future metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns are simply unknown. Assumptions have been made based on the best available actual data and trends estimated by professional bodies and investment groups. Exchange rate variations combined with the USD gold price over the last 3 years has maintained the AUD gold price above A$1500 per ounce. Silver revenue is about 1.5% of the gold revenue and is immaterial to the Project, being less than the weekly variation in gold price, but the silver revenue covers the cost of secure transport, insurance and refining of the doré bars, with a small profit.
Market assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	Refined gold and silver are directly exchangeable for cash. There are no sale contracts, hedging contracts, forward sales or royalty contracts currently in place that lock the Company into any fixed sales arrangements. The Company has an agreement to refine its doré bullion at the Perth Mint precious metals refinery in Western Australia at market refining prices. There is an opportunity, but no obligation, for the Perth Mint to sell the gold and silver on the Company's behalf if instructed by the Company. The Company retains full flexibility to choose if, when and where it sells its gold and silver, and whether or not to enter into hedging or royalty agreements. See the 2020 Mineral Resources and Ore Reserves report , which can be found at: http://www.citigold.com/mining/technical-reports. Hedging is seen a prudent strategy by locking in a future sale price, removing the risk of an unknown sale price or exchange rate, provided that certain conditions are adhered to. Citigold believes it is not prudent to hedge more than 50% of projected annual production or more than 50% of the ore reserve, and because delivery is dependent on production, the buyer cannot bring forward the delivery date.
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs.	NPV has not been calculated for this Report.
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	This risk is assessed as Low Risk. There are no known social or heritage matters that are seen as having the potential to stop the Project proceeding. Any proposed government changes to royalties, mining legislation, environmental protection or transport regulations would apply to the whole of either Queensland's or Australia's mining sector, and would therefore not proceed without timely discussion and time to implement.
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	The Company holds all the necessary land and permits it requires, all necessary infrastructure has been built and is operational. It has been mining since 1994 and has produced over 100,000 ounces of gold and 45,000 ounces of silver. There are no legal matters in hand that appear likely to interfere with expanding the Project. Refined gold and silver are directly exchangeable for cash and do not require specialist marketing.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	Probable Ore Reserves are derived from Indicated Mineral Resources, which in turn are based on drill and face sample data at intervals of 25 to 80 metres. The Probable Ore Reserves are derived from, contained within, and not additional to, the Indicated Mineral Resources. There are 16 separate mineralised bodies in the Indicated Mineral Resource, and of these 16, fourteen met the criteria to be classified as ore bodies in the Probable Ore Reserve.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	The last peer review of the Ore Reserves was by Snowden Associates in June 2012. Snowden concluded that the 2012 Technical Report is written in accordance with the 2004 JORC Code. In addition, Snowden considers that Citigold's approach to estimating Ore Reserves at Charters Towers are reasonable based on the nature of the mineralisation, the methodology adopted in preparing the estimate and the history of operations in the goldfield.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The confidence level is ±10 to 15% for the contained ounces in the Probable Ore Reserve. Assay duplicate precision has been audited and found to be within ±10% of the mean value, which is within acceptable limits for commercial assays. Selective re-assay of samples was undertaken following inspection of results where particularly high or anomalous assays were noted. Assay results were reviewed statistically, by cumulative frequency plots and histograms, and log normality of data sets was established for the mineralised zones. See the Company 2020 Mineral Resources and Ore Reserves Report, available on the Company's web site at http://www.citigold.com/mining/technical-reports, pages 45 to 64. The normal range of precision from commercial laboratories (as used by the Company) is 10% to 15% (Bumstead, 1984 – see the 2020 Report), meaning that repeat samples vary from the average of the samples by up to 10% to 15%. Given that this precision of the most accurate starting number, the laboratory assay, is already ±10% to 15%, it is not possible to estimate contained ounces or confidence limits to a higher accuracy.

The following statements apply in respect of the information in this report that relates to Exploration Results, Mineral Resources and Ore Reserves:

The information is based on, and accurately reflects, information compiled by Mr Christopher Alan John Towsey, who is a Corporate Member and Fellow of the Australasian Institute of Mining and Metallurgy. Mr Towsey is currently a Chartered Professional (Geology) and currently independent of Citigold Corporation Limited, having previously been an Executive Director of the Company from April 2014 to June 2016. He has the relevant experience in relation to the mineralisation being reported on to qualify as a Competent Person as defined in the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Identified Mineral Resources and Ore Reserves 2012. Mr Towsey has consented in writing to the inclusion in this report of the matters based on the information in the form and context in which it appears.

Glossary of Terms

acid(ic)	In geology, a chemical classification of igneous rocks. Containing more than 66% silica. In chemistry, having a pH <7
aeromagnetics	Airborne geophysical survey measuring variations in the Earth's magnetic field
Ag	silver
alteration	(zone/envelopes) change in mineralogical composition of a rock commonly brought about by reactions with hydrothermal solutions
anomalous	a departure from the expected norm. In mineral exploration this term is generally applied to either geochemical or geophysical features (values higher or lower than the norm).
assay	Chemical analysis. Strictly refers to analysis of precious metals by the fire assay method with a gravimetric finish. Commonly used to mean any chemical analysis.
Au	gold
auriferous	containing gold (from Latin *aurum* meaning gold)
base metal	generally a metal inferior in value to the precious metals, mainly copper, lead zinc, nickel, tin and aluminium
batholith	a large mass of consolidated intrusive igneous material (usually of granitic composition) (see also pluton).
bedrock	solid rock underlying soil, alluvium etc
breakeven	In ore reserve estimation, the gold grade at which the mining cost equals the value of the extractable gold. At breakeven grades, the operation makes neither a profit nor a loss. Breakeven can be calculated at various cost levels, such as an operating breakeven (the grade required to continue operations) or total cost breakeven (which takes into account overheads such as depreciation, amortisation, cost of capital, off-site overheads, interest, tax etc).
carbonate	compound of carbon and oxygen with one or more metals, especially calcium (CaC03), magnesium (MgC03) and iron (FeC03).
chalcopyrite	copper-iron sulphide mineral. The main ore of copper.
chlorite	dark green iron magnesium mineral, often associated with metamorphism or alteration.
country rock	the enclosing rock around a body of ore
cross-cut	Mining passage constructed at right angles to the general trend of the ore body (see also drive, shaft, rise and winze)
cut-off	the estimated lowest grade of ore that can be mined and treated profitably in a mining operation.
cuttings	broken pieces of rock generated by a drill bit during drilling Forms the main part of percussion drill samples.

decline	usually refers to a downward sloping underground roadway
density	Mass divided by volume. Measured here in tonnes per cubic metre.
Devonian	Time unit of the Geological Time Scale, a geological Period, 416-359 million years ago
diamond drilling	A method of obtaining a cylindrical core of rock by drilling with a diamond impregnated bit.
Dilution	Reduction in grade resulting from admixture of lower grade material during mining or rock-breaking processes.
Disseminated	mineralisation more or less evenly distributed throughout a rock.
Drive	Horizontal mining passage or access way underground, oriented along the length or general trend of the ore body (noun and verb)(see also cross-cut)
dyke	a tabular body of igneous rock, cross cutting the host strata at a high angle.
ETW	estimated true width
fault	a fracture in rocks along which rocks on one side have been moved relative to the rocks on the other
feasibility study	a comprehensive study of technical, financial, economic and legislative matters of sufficient depth and accuracy to provide the basis for financing.
Fire assay	assay procedure involving roasting of a sample in a furnace to ensure complete extraction of all the contained metal.
Fluid inclusion	Bubbles of gas and/or liquid, sometimes containing crystals, within mineral grains that can be used to determine the temperature and pressure of formation of the mineral and provide data on the chemical composition of he original fluids
footwall	the wall or surface on the underside of an inclined geological feature such as a fault, vein, ore-body or stope.
Fractal analysis	A fractal is a geometrical figure consisting of a pattern that is repeated in finer and finer scales. It also refers to a process or structure that is made up of similar patterns at different scales and magnifications. Fractal patterns can be visualized on a computer using mathematical models and/or fractal geometry. Fractal analysis helps to see patterns in real objects and systems that at first appear not to be patterned.
Fracture	a break in the rock.

Fry analysis	Fry analysis is a statistical method of correlating data points to see if there is a preferred direction. It offers a visual approach to quantify characteristic spatial trends for groups of point objects. The technique was originally designed to quantify finite strain based on a 2-D analysis of the nearest neighbours to a central reference point, assuming that the original distribution pattern was random. Fry analysis can also be used to search for anisotropies (asymmetric trends) in the distribution of point objects. More specifically it can be used to investigate if a distribution of point objects occurs along linear trends, and whether such linear trends occur at a characteristic spacing. Fry analysis uses a geometrical method of spatial autocorrelation for point data. For n points there are n -n spatial relationships and, because of the square function, the method yields interpretable results with smalt as well as large data sets. Fry analysis is an alternative to variography for directional studies. At the regional scale, Fry analysis can assess distribution patterns of mineralization and potential controlling structures. At the deposit scale, the characteristics of zones of mineralization such as direction, spacing, high-grade ore direction, and grade distribution can all be deduced. See Fry, N. 1979. Random point distributions and strain measurement in rocks. Tectonophysics 60: 806-807
g/t	grams per tonne (grams/tonne)
Galena	lead sulphide mineral, an ore of lead
Gangue	Waste minerals associated with ore
geological mapping	the recording in the field of geological information on a map.
Geophysical	the exploration of an area in which physical properties (e.g. resistivity, conductivity, magnetic properties) unique to the rocks in the area are quantitatively measured by one or more methods
geostatistics	Mineral resource estimation method. A computer based method wherein particular relationships between sample points are established and employed to project the influence of the sample points. Based on the application of statistics to the variation in grade of ore bodies.
grade	quantity of ore or metal relative to its other constituents
granite, granitic	coarse grained igneous rock composed of quartz and feldspar with varying amounts of ferromagnesian minerals such as biotite or hornblende, with or without muscovite. Adjective is 'granitic'.
granitoid	Field term for body of rock of granitic composition
gravity survey	geophysical survey technique measuring variations in the Earth's gravitational field, due to variations in rock densities
hanging wall	the wall or surface on the upper side of an inclined geological feature such as a fault, vein, ore-body or stope.
head grades	a general term referring to the grade of ore delivered to the processing plant.
hydrothermal	pertaining to heated water (hot aqueous solutions), associated with the formation of mineral deposits or the alteration of rocks.
igneous	Rocks formed by solidification from the molten state.

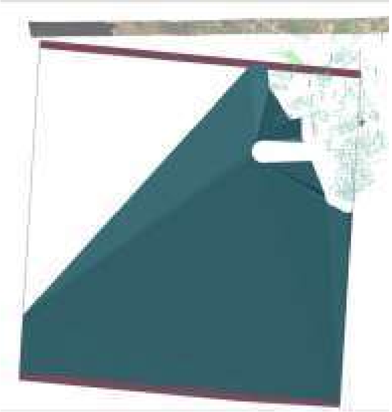
Indicated Resource	An 'Indicated Mineral Resource' is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.
Inferred Resource	An 'Inferred Mineral Resource' is that part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.
in situ	Term used to describe rocks and minerals found in their original position of formation.
intermediate	Igneous rocks between acid and basic in composition.
isotope	Different atoms of the same element, having the same atomic number but different atomic weights. The ratios of different isotopes in rocks and minerals can be used to estimate the age of the specimen or the time of crystallisation or thermal events.
joint	Fracture in rock along which no appreciable movement has occurred.
JORC Code	The ''*Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, The JORC Code 2012 Edition*", a report of the joint committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Australian Mining Industry Council. It is a comprehensive integrated exposition on geological resources and ore reserves, and adherence to the Code is a requirement under the Australian Stock Exchange Listing Rules
km	Kilometre
Kriging	Mathematical statistical technique used in ore reserve estimation. It is used for interpolating sparse and clustered spatial data.
level	Underground horizon at which an ore body is opened up and from which mining proceeds
lode	Tabular or vein-like deposit of valuable mineral between well defined walls.
Measured Resource	A 'Measured Mineral Resource' is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It 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. The locations are spaced closely enough to confirm geological and/or grade continuity
metre-gram(s) or metre-grams per tonne	is the assay grade normalised out to a minimum width of one metre width by multiplying the true width by the grade to produce metal accumulations over a metre of rock (ie. metre-grams per tonne Au or metre grams of gold per tonne of rock) and is used where the drill intersections true width is less than one metre. The material included in the one metre interval outside the assayed section is assumed to be zero grade thereby diluting the original assay.
microthermometry	Determination of the temperature of formation of minerals by examining, heating and cooling fluid inclusions under a microscope.
mineralisation	the introduction of valuable minerals into a rock body

mm	millimetre
nuggetty	a bias produced in geostatistics caused by isolated high values
open cut	synonymous with open pit
open pit	mine excavation or quarry, open to the surface
Ordovician	Time unit of the Geological Time Scale, a geological Period from 500 to 440 million years ago, a sub-division of the Palaeozoic Era
ore	rock or mineral(s) that can be extracted at a profit. Often applied (incorrectly) to mineralisation in general.
Ore Reserve (JORC Code)	An 'Ore Reserve' is the economically mineable part of a Measured or Indicated Mineral Resource. It includes diluting materials and allowances for losses that may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves
ore shoot	pods of mineralised material, often high-grade, within a vein
outcrop	a body of rock exposed at the ground surface
oxidised	near surface or after-mining decomposition of rocks, minerals or metals by exposure to the atmosphere and groundwater.
Palaeozoic	Time unit of the Geological Time Scale, a geological Era from 600-230 million years ago
percussion drilling	method of drilling using a hammering action with rotation, forcing dust and cuttings to the hole collar by compressed air. Usually refers to open hole percussion drilling, where cuttings return outside the drill rods. See also RAB drilling and RC drilling
petrography	the study of rocks under the microscope
pH	Literally, "power of Hydrogen". A measure of the concentration of hydrogen ions in solution that determines acidity or alkalinity. The pH ranges from 0 to 14, with 7 being neutral. Acids have a pH less than 7 and alkalis greater than 7.
portal	surface entrance to a tunnel or drive.
ppm	parts per million equal to grams per tonne
Probable Ore Reserve	A 'Probable Ore Reserve' is the economically mineable part of an Indicated, and in some circumstances Measured, Mineral Resource. It includes diluting materials and allowances for losses that may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. A Probable Ore Reserve has a lower level of confidence than a Proved Ore Reserve.
prospect	an area that warrants detailed exploration.

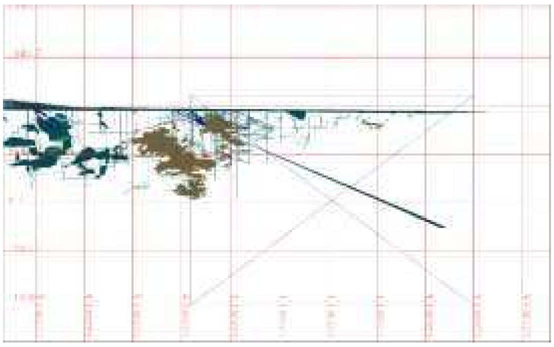
Proved Ore Reserve	A 'Proved Ore Reserve' is the economically mineable part of a Measured Mineral Resource. It includes diluting materials and allowances for losses that may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.
pyrite	An iron sulphide mineral, often associated with economic mineralisation. Occasionally used as an ore of sulphur.
quartz	Very common minerals composed of silica Si02. Amethyst is a variety of the well known amethystine (purple) colour. Aventurine is a quartz spangled with scales of mica, haematite, or other minerals. False topaz or citrine is a yellow quartz, Rock Crystal is a clear variety, Rose quartz is a pink variety, and cairngorm is a brownish variety. Tiger-eye is crocidolite (an asbestos-like material) replaced by silica and iron oxide. Quartz is the name of the mineral prefixed to the names of many rocks that contain it, such as quartz porphyry, quartz diorite.
recovered grades	means the eventual recovery after mining dilution and processing losses measured against plant feed tonnes.
recovery (drilling)	Proportion of core or cuttings actually recovered from a drill hole, compared to the maximum theoretical quantity.
reef	in mining, a gold-bearing quartz vein.
reserves (ore)	See Proved or Probable Ore Reserves. It is recommended that the reader study the ''Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, The JORC Code 2012 Edition", a report of the joint committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Australian Mining Industry Council for a comprehensive integrated exposition on geological resources and ore reserves. The various resource categories are classified according to the level of geological information, and thus the confidence, underlying the estimate. The Inferred Resources cannot become a Reserve. The Proved and Probable Reserves are derived respectively from the Measured and Indicated Resource after the application of sufficient technical, financial, marketing, economic, legislative, legal and environmental factors to be confident that their mining and processing would be economically viable. However, it should be appreciated that the Code does not define a level of profitability
resource	See Measured, Indicated or Inferred Mineral Resource. Mineralisation to which conceptual tonnage and grade figures are assigned, but for which exploration data are inadequate to estimate ore reserves
Reverse Circulation (RC) Drilling	Method of drilling whereby rock chips are recovered by pressurised air returning inside an inner tube within the drill rods, minimising contamination by preventing contact of the returning sample with the unprotected wall of the drill hole.
rock-chip sampling	Obtaining a sample, generally for assay, by breaking chips off a rock face.
Rotary Air Blast (RAB) Drilling	Method of drilling soft rocks in which the cuttings from the bit are carried to the surface by pressurised air returning outside the drill rods.
schist	Type of fine grained metamorphic rock with laminated fabric similar to slate.
sediment	Rocks formed of particles deposited from suspension in water, wind or ice.
sericite (sericitic)	Fine grained variety of mica generally formed by metamorphic processes

S.G.	Specific Gravity (see below)
shaft	A vertical or inclined passage from the surface by which a mine is entered and through which ore or ventilation air is transported
shear	Zone in which rocks have been deformed by lateral movement along innumerable parallel planes.
Silurian	Time unit of the Geological Time Scale, a Period from about 438 to 408 million years ago.
Specific Gravity	Mass divided by volume at a specified temperature compared to an equal amount of water that is assigned an SG of 1.0. Equivalent to density (mass per unit volume), measured here in tonnes per cubic metre.
sphalerite	Zinc sulphide mineral.
stockwork	Interlocking network of tabular veins or lobes.
stope	Mine excavation from which ore is being or has been extracted.
stream sediment survey	Systematic sampling of sediments within drainage channels, used to locate traces of mineralisation that has weathered from the ore zone and been shed into the drainage channels.
strike	The azimuth of a surface, bed or layer of rocks in the horizontal plane
sulphides	Minerals comprising a chemical combination of sulphur and metals.
t/m^3	tonnes per cubic metre
tailings	Material rejected from a treatment plant after the recoverable valuable minerals have been extracted.
tonalite	Igneous rock similar to granite but containing mainly calcium feldspar rather than alkali (sodium and potassium) feldspar.
true width	Width or thickness of a lode or other formation measured at right angles to its sides (see also apparent width
TSF	tailings storage facility
vein	A narrow dyke-like intrusion of mineral traversing a rock mass of different material.
volcanic	Class of igneous rocks that have flowed out or have been ejected at or near the earth's surface, as from a volcano
wall rock	Rock mass adjacent to a fault, fault zone or lode.
winze	A vertical or inclined underground shaft or access way between levels mined from the top down.

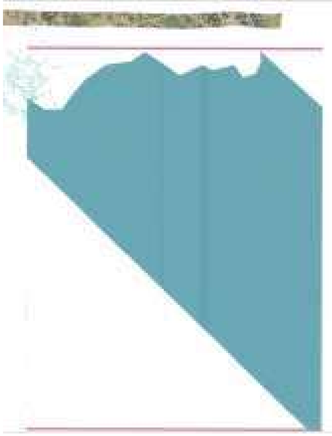
Appendix 1 Sections and Plans showing extrapolated material from old workings and drill holes



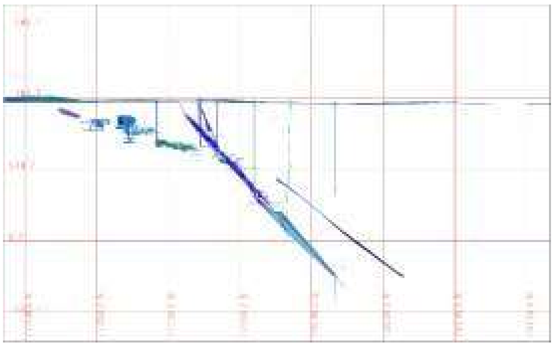
Long section of C05 Brilliant East, cut off on the left by the QueenSunburst reef.



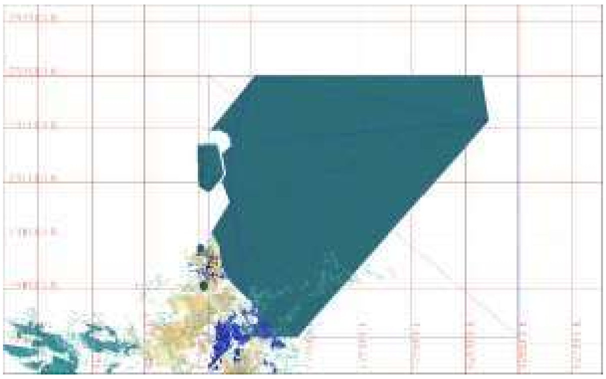
Cross-section view of C6-C23 St Patrick and Columbia cross-reef extending below the old workings.



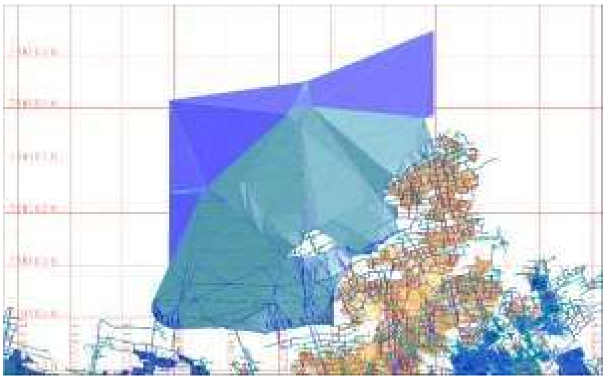
C06 St Patrick – Columbia crossreef, extended below the old workings and cut off on the left by the Queen-Sunburst reef.



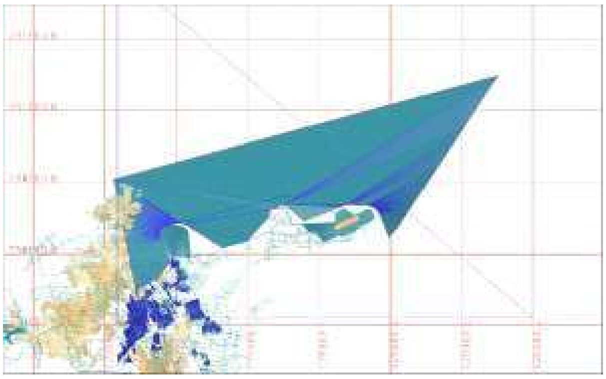
Cross section of the C01 Brilliant West (right) and C17 Day Dawn reefs (centre) extending below the old workings.



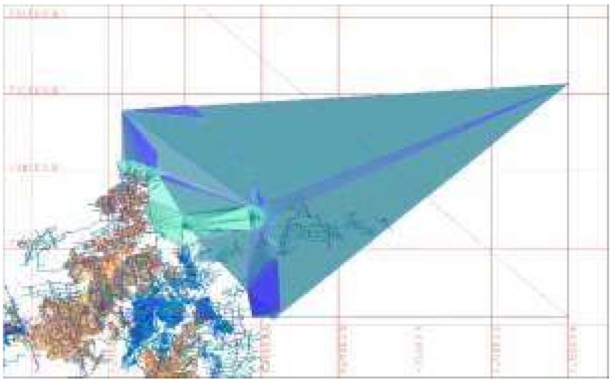
Plan view of the C06-C23 St Patrick Columbia reef, cut off on the right by the Queen-Sunburst reef.



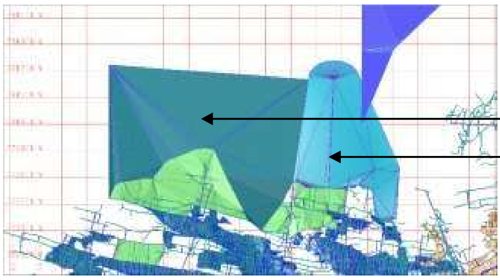
Plan view of the C01 Brilliant West reef extending below the old workings.



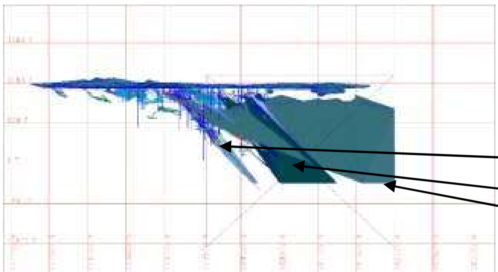
Plan view of the C03 Queen-Sunburst reef, cut off at the north (top) by the St Patrick – Columbia reef system.



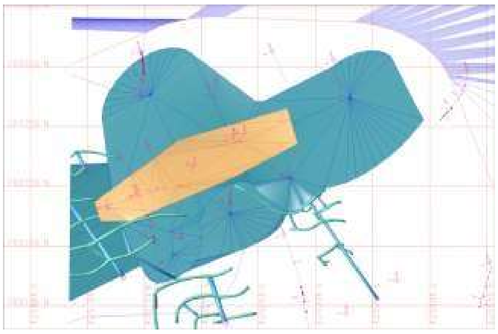
Plan view of C05 Brilliant East reef, cut off on the east (right) by the Queen-Sunburst reef.



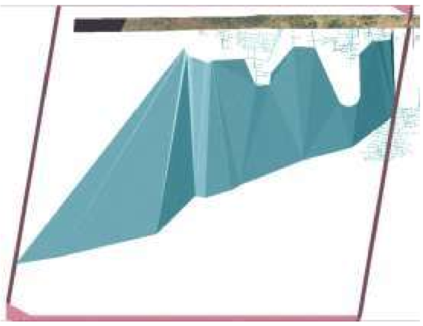
Plan view of the
C17 Day Dawn reef and the
C01 Brilliant West reef.



Crosssection looking west,
showing the
Day Dawn,
Queen-Sunburst and
St Patrick-Columbia reefs.



Plan view of the C26 Queen East (Golden Gate) reef



Long section of the C03 Queen Sunburst reef extending below the old workings.