SIANA LIFE OF MINE REPORT

ADDENDUM TO FEASIBILITY STUDY UPDATE AND ORE RESERVE REPORT

For

RED 5 LIMITED

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1 EXECUTIVE SUMMARY

Mining One Consultants (Mining One) were retained by Red 5 Pty Ltd (Red 5) to undertake a review of the 2016 Underground Feasibility Study and the 2017 Open Pit Life of Mine Study with changes to the key assumptions for the Project. Review of the feasibility study had two primary goals; firstly the study aimed to develop and test the viability of a new life of mine plan based on what is currently understood of the Siana resource. The second and related goal was to update and test the mine plan based on only those parts of the mineral resource that are convertible into an ore reserve estimate according to the JORC Code (2012).

This report is aimed at presenting the updated Life of Mine plan as an addendum to the updated ore reserve report and will make reference to the Siana Feasibility Study Update and Ore Reserve Report, July 2020. This report outlines the results from work conducted by Mining One that reassesses the previous studies at the Siana Gold Project (SGP) for Red 5 Limited (Red 5). This review was motivated by an updated gold price projection and technical information relevant to the SGP. The report considers both the open pit and underground mineral resources.

Siana is a multi-metallic deposit with testable quantities of copper, lead, zinc, silver and gold. The Siana resource is currently considered a gold deposit with a small contribution in value from silver.

The updated Life of Mine plan considers the recent understanding of geotechnical and hydrogeological issues on site and an increase in projected medium-term gold price. The Life of Mine plan includes the whole mineral resource including inferred mineral resources and the ore reserves form the basis of the mine plan. The pit optimisation and associated mine plan was completed to a prefeasibility level of study. The underground planning work was completed to a feasibility study level of detail.

The open pit mine plan takes into account the failure zones in the current pit wall. A conservative approach to mining these areas has been developed in order to stabilise the walls and provide access to the mineral resource. The proposed mine plan has been informed by a geotechnical review. Importantly, this review recommends further work for the management of the geotechnical risk and detailed assessment of the mining of these areas.

The open pit was optimised using a cash-maximising cut-off grade of 1.06 g/t to determine an ore reserve and the new Life of Mine plan.

Cost estimates for open pit works were based on historical data validated and adjusted for the independent cost modelling.

Over the life of mine a total of 1,814 kdmt is scheduled to be treated at an average grade of 2.47 g/t. A total of 118 koz of gold is expected to be produced from the open pit over the Life of Mine (LoM). The proposed open pit life of mine schedule would produce 1.676 Mt of ore at an average gold grade of 2.59 g/t for contained ounces of 139.5 koz (recovered ounces of 115.8 koz). The mine schedule prioritises HG ore (Au >2.0 g/t) over stockpile and/or MG ore (Au>1.06 g/t).

The technical details of the underground mineral resource, ore reserve and Life of Mine plan are largely the same as outlined in the 2016 Feasibility Study completed by Mining One (Trembath, et al., 2016). However, changes in the economics of the mining of the mineral resource and the impact of changes in the open pit design have been tested in an updated mine plan. Where these changes are considered material to the ore reserve estimate, they have been highlighted in this report. For all other technical details, the reader is directed to the original 2016 feasibility study (or other relevant report).

The proposed underground Life of Mine plan involves the excavation of 4.1 million ore tonnes over a 11 year mine life. The mining method selected in the 2016 Feasibility Study was short up-hole retreat with cemented paste fill and will form the basis of this new mine plan. Short-hole stoping will account for 82% of the minable resource, and trough-caving method with cemented paste fill for the remaining 18% around the crown pillar. The trough-caving method has been selected principally for the mining of the crown pillar and for safe extraction of ore in and around old underground workings. The estimated life of mine gold equivalent grade is 4.24 g/t. It is envisaged that approximately 20 km of capital waste development would be required for the efficient excavation of the resource.

In order to develop an ore reserve estimate an updated cut-off grade analysis was conducted. Although silver, lead, copper and zinc are also present with the gold, only the silver makes a small contribution to the economics of mining the resource. In any case the financial assessment took into account silver credits as the mill produces doré. The analysis indicated that a 2.2 g/t gold equivalent grade would be the near optimal cut-off grade given the assumptions of the analysis. Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020.

A review of the geotechnical assessment of the mining method and tunnel development was conducted. On review there was no significant change in geotechnical data and therefore no further changes were made to the stope dimensions.

A cemented paste fill plant will be required to successfully mine the underground resource. Much of the work previously completed (Revell 2008, Revell 2009, AMC 2009) is still relevant and was incorporated into the mining assessment. Outotec provided an updated binder price, capital and operating cost for the paste plant.

Although the underground capital design has changed somewhat since the 2016 FS these design changes are not considered significant. As such, much of the infrastructure assessment for ventilation, dewatering, paste fill power and services reticulation is still relevant to the current mine plan.

Scheduling of the new Life of Mine plan was based on the use of conventional development utilising jumbo drill development with loader and truck haulage and long hole drilling for stope production.

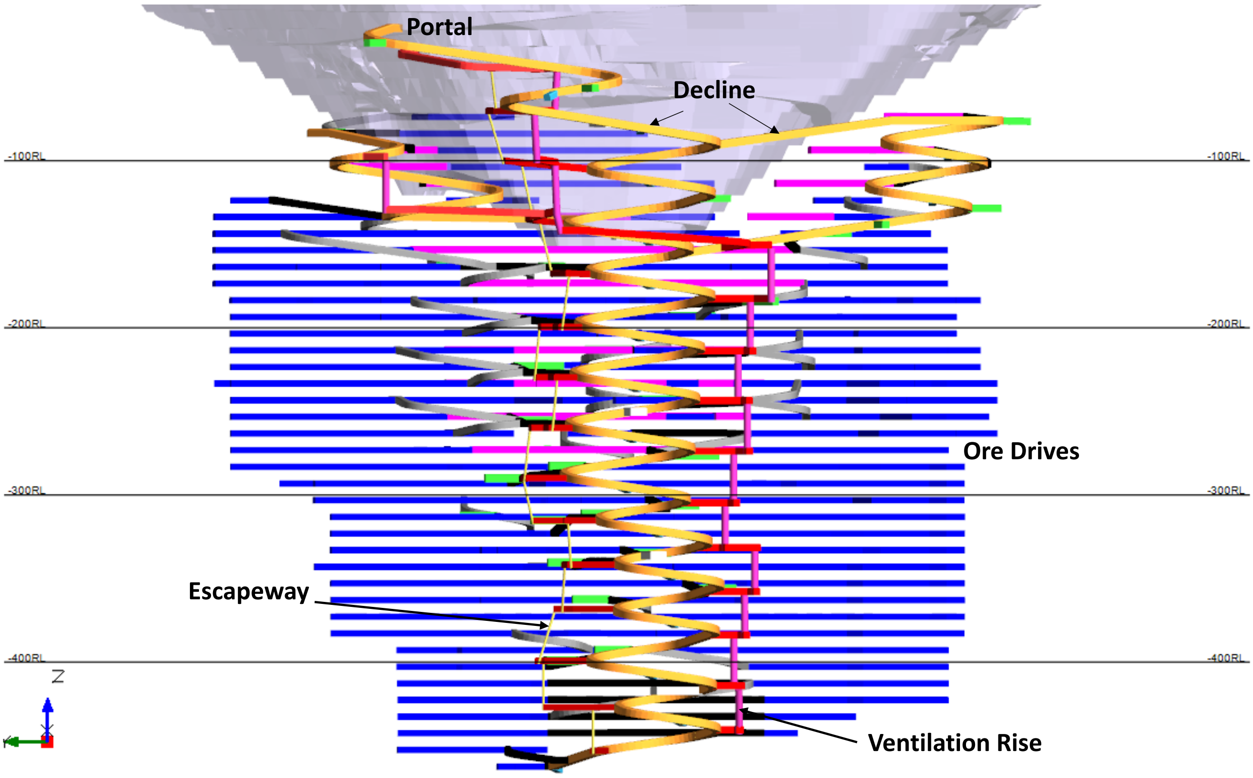

Figure 1-1 General underground layout of mine development

Modifying factors were applied to account for resource recovery and dilution. Dilution was estimated on the basis of the geotechnical modelling. Further dilution factors were applied to account for cemented paste fill dilution.

The long term mine plan production schedule is based on conservative productivities. The mining inventory and gold equivalent head grade (g/t) is summarised graphically in Figure 1-2. It is important to note that this schedule includes material classified as inferred mineral resource in the resource model.

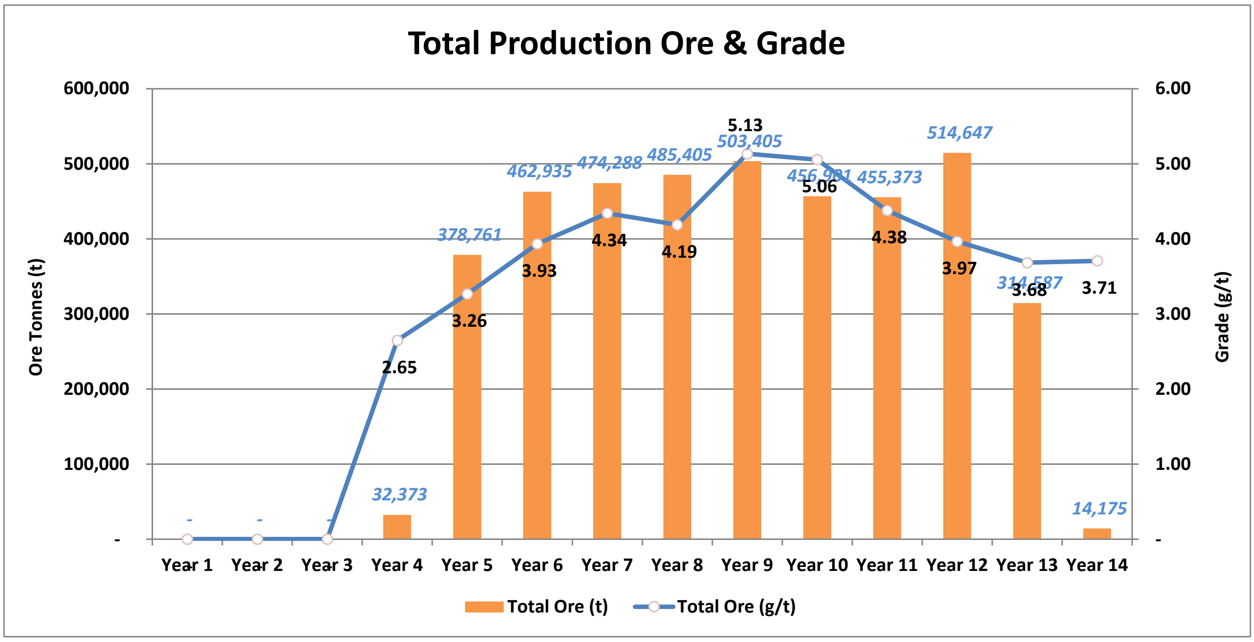

Figure 1-2 Underground life of mine plan production schedule

A financial assessment of the mine plan was completed. Cost estimates were based on either recently updated cost database or quotes from suppliers. In particular, contract mining specialists Paramina and Pybar were used to estimate the direct mining costs. Processing and administration costs were supplied by Red 5 and are based on historical site based data. Outotec provided an updated binder price, capital and operating cost for the paste plant. For the purpose of this report the financial results will not be discussed any further as the financial model forms the basis of an inhouse Red 5 financial model.

A gold price of US$1400 per ounce of gold and US$14 per ounce of silver were used for the financial analysis. These prices were supplied by Red 5 and are considered to be reasonable estimates consistent with various long term projections (World Bank Group, 2020). The relevant royalties and excise taxes have been applied.

A combined production schedule is shown below for mining both the open pit (commencing in April 2021) and underground (commencing in December 2022). It is envisaged that interaction between the open pit and underground will not have a significant effect on the productivity of either. It is assumed that stockpiling will be minimal or have a minimal effect on the economics of the resource. Figure 1-3, Figure 1-4 and Table 1-1. provide the details of the combined production profile for the open pit and underground operation for the SGP optimised Life of Mine Plan.

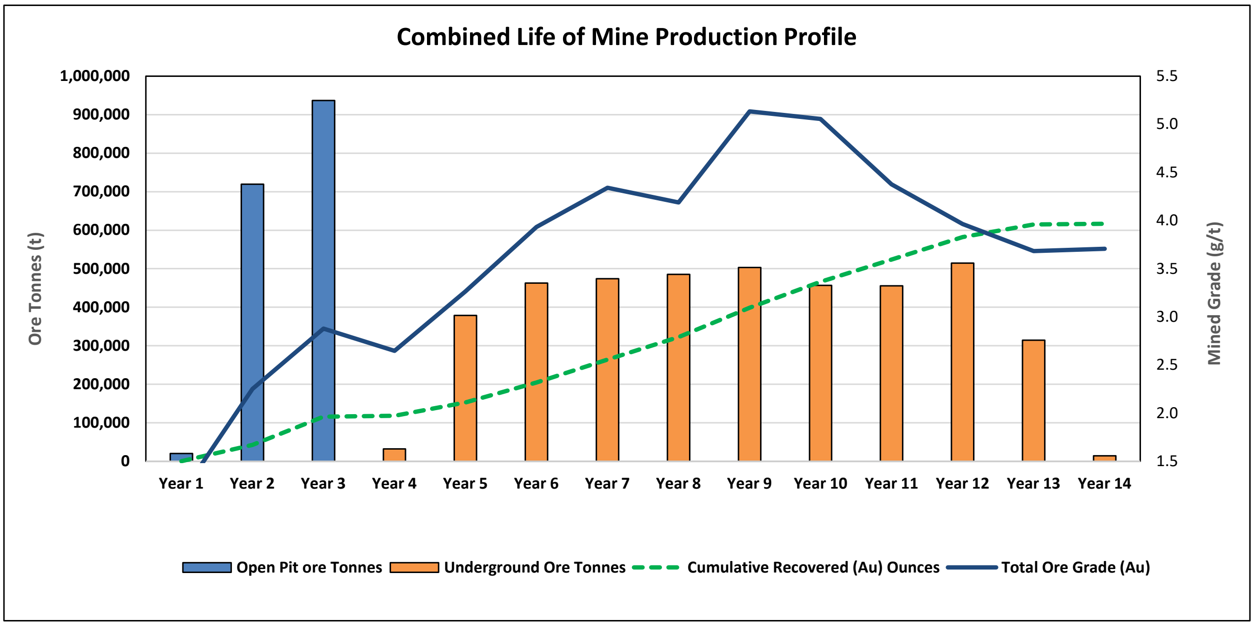

Figure 1-3 Overall Mine Production Profile

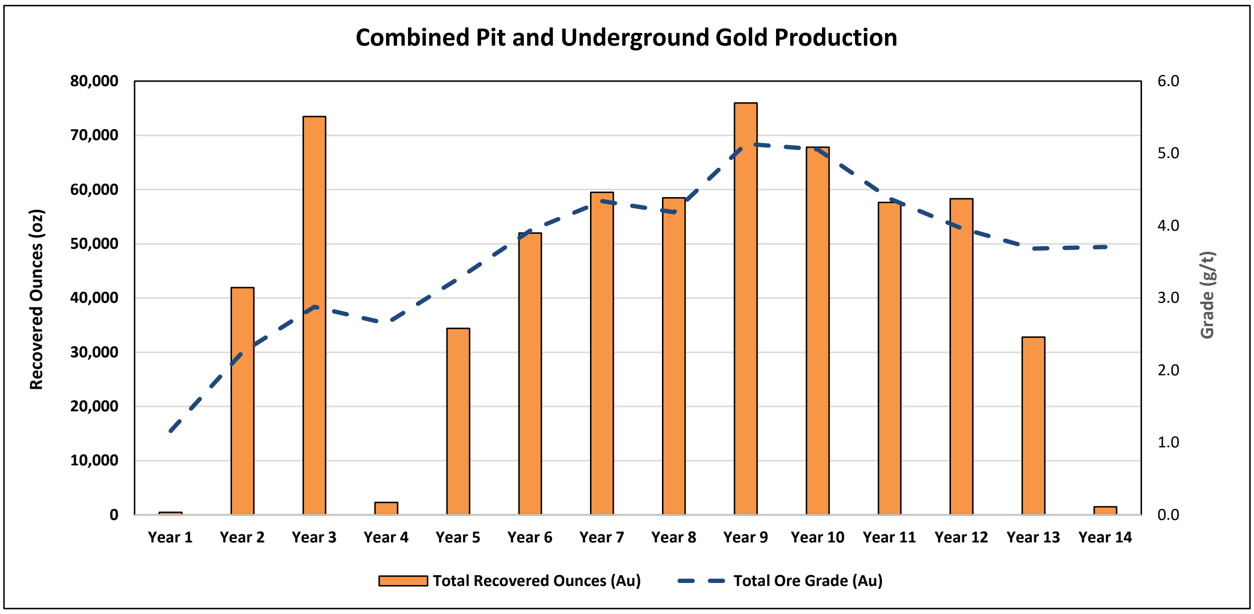

Figure 1-4 Overall Gold Production by Year Associated with the Life of Mine Plan

Table 1-1 Summary of Combined Open Pit and Underground Production

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Total
Open Pit Production	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	
Open Pit ore Tonnes	20,394	719,515	936,958												1,676,867
Open Pit Grade (Au)	1.16	2.25	2.88												2.59
Open Pit Mined Ounces	760	52,078	86,710												139,549
Open Pit Revovered Ounces	472	41,900	73,456												115,828
Underground Production															
Underground Ore Tonnes				32,373	378,761	462,935	474,288	485,405	503,405	456,901	455,373	514,647	314,587	14,175	4,092,851
Underground Grade (Au)				2.65	3.26	3.93	4.34	4.19	5.13	5.06	4.38	3.97	3.68	3.71	4.24
Underground Mined Ounces				2,755	39,759	58,540	66,203	65,355	83,092	74,277	64,066	65,611	37,244	1,689	558,591
Underground Recovered Ounces				2,297	34,401	51,991	59,494	58,488	75,971	67,814	57,624	58,330	32,794	1,489	500,692
Combined Production															
Total Ore Tonnes	20,394	719,515	936,958	32,373	378,761	462,935	474,288	485,405	503,405	456,901	455,373	514,647	314,587	14,175	5,769,718
Total Ore Grade (Au)	1.2	2.3	2.9	2.6	3.3	3.9	4.3	4.2	5.1	5.1	4.4	4.0	3.7	3.7	3.8
Total Mined Ounces	760	52,078	86,710	2,755	39,759	58,540	66,203	65,355	83,092	74,277	64,066	65,611	37,244	1,689	698,140
Total Recovered Ounces (Au)	472	41,900	73,456	2,297	34,401	51,991	59,494	58,488	75,971	67,814	57,624	58,330	32,794	1,489	616,520
Cumulative Recovered (Au) Ounces	472	42,372	115,828	118,125	152,525	204,517	264,010	322,498	398,469	466,283	523,907	582,237	615,031	616,520	616,520

Concluding Remarks and Key Recommendations

There is an opportunity to increase the sub-level height with the intent to excavate a stope with shorter strike length but maintain the same hydraulic radius as recommended in the 2016 Feasibility Study. There are many benefits with mining a short strike stope over an increased sub-level height, including:

- Reduction in the number of levels.
- Reduction in level development requirements and improving jumbo productivity.
- Optimising the decline design and location.
- Increase production rates though improved efficiency and productivity.
- Reduction in remote bogging requirements.
- Improved turnover of paste filing process from preparation to filling.
- Drilling longer production holes and hence reducing the number of holes per stope tonne.
- Reduction in power requirements.
- Mining One recommends that a further geotechnical study should be undertaken to investigate the sub level height in light of the sub-level to stope strike length ratio if this opportunity was further pursued.

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2 INTRODUCTION

A considerable amount of work has already been completed assessing both open pit and underground methods in previous studies. The most recent work assessing minability of the mineral resource is provided in Trembath, et al., (2015b). Importantly, there is currently an operating mine compliant with all legal, social and environmental obligations on site producing gold from the open pit operations.

The Siana resource is a multi-metallic deposit located on the island of Mindanao in the Republic of The Philippines. Figure 2-1 provides a map showing the location of Siana Gold Project. There is a history of successful open pit mining compliant with all legal, social and environmental obligations producing gold and silver from the operations at Siana.

In April 2017 open pit mining operations at Siana were suspended due to delays in obtaining regulatory approvals for an expansion of tailing storage facilities and ongoing uncertainty regarding regulatory and government mining policy in the Philippines. Subsequently, the mine has been placed in care and maintenance with a focus on plant maintenance and pit dewatering to preserve the assets value.

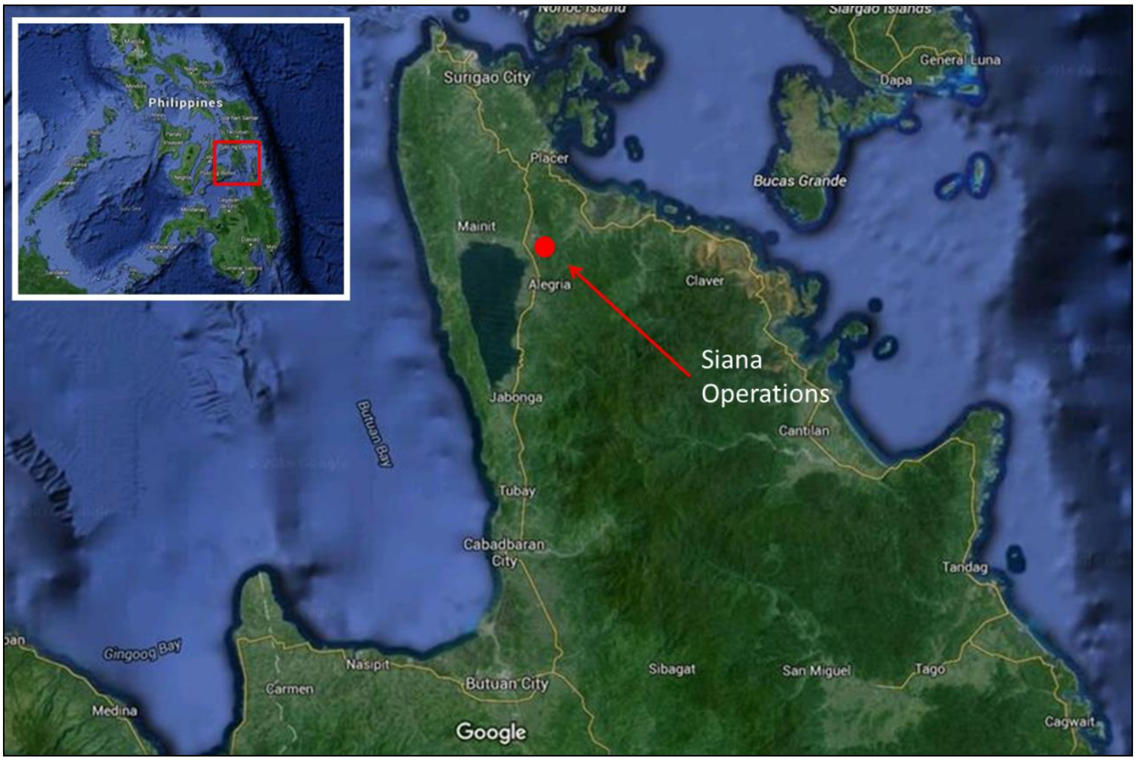


Figure 2-1 Siana Resource Map

Some underground tunnelling work was completed prior to the mine care and maintenance. These have been used to validate or where necessary adjust the mining cost estimates. This included 455m of tunnel development and the construction of three portals. Figure 2-2 provides a recent picture of the portal access to the underground operations at Siana.

Figure 2-2 Portal Access to the Siana Underground Operation

This report considers the minability of the Siana resource beneath the current mined pit. The primary purpose the report is to review the current body of work that assesses the technical and financial viability of mining this resource. The report considers the compliance of this work with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012).

The current overall strategic plan is to mine the resource using open pit methods to the -152.5 mRL. In order to recover the remaining resource at depth a combination of open pit and underground methods is proposed, the detail of which has been the subject of a mining feasibility study (Trembath, et al., 2016) and the open pit work.

The ore reserve (and mineral resource) is divided into an open pit and underground component. This is largely because of the role of modifying factors in assessing the financial and technical minability of each part of the resource. The ore reserve estimate is only referenced in this report, and not discussed in depth (refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020).

The open pit ore reserve is based on optimisation work completed by Mining One for the purpose of updating the ore reserve estimate and is not discussed in depth and has been used as the basis for the Life of Mine Plan. A summary of the results of this work is detailed in this report.

In 2016 Mining One completed a detailed feasibility study assessing the technical and financial viability of mining the underground resource (Trembath, et al., 2016). Much of this work is still relevant to the current underground reserve estimate and the Life of Mine Plan. However, changes to the gold price estimate, updated cost information and other financial assumptions motivated a design and schedule review. For all other technical details, the reader is directed to the original 2016 Feasibility Study (or other relevant reports).

What follows are some of the key information relevant to the ore reserve estimate primarily from recent work conducted by Mining One (refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020). More detail can be found in the relevant report cited. Detailed models and designs used in the assessment of the ore reserve are the property of Red 5 and access to this work is at their discretion.

4 SCOPE OF WORK

The Siana resource has undergone several levels of assessment (Red 5 Limited, 2009a), (Trembath, et al., 2015a), (Trembath, et al., 2015b), and (Trembath, et al., 2015c). More recently an amalgamation study was compiled summarising all the previous studies that have been completed on the Siana Gold Project (Van Leuven, et al. 2020). Mining One's opinion is that the analysis to date constitutes all that was covered in the feasibility study completed by Trembath et al. (2016). Mining of the resource was voluntarily suspended in April 2017 and Siana was placed under care and maintenance. Thus, the current analysis builds on this body of work, and what is currently known from mining the resource, to review the 2016 feasibility study with changes to some of the key assumptions, primarily the gold price and foreign exchange rates, but not limited to these assumptions. A key feature of the current study will be to produce a long term mine plan with associated financial analysis such that the viability of mining the open pit and underground resource can be re-assessed.

The review of the feasibility study will also provide a technical and financial evaluation of two mining approaches, one of which will be detailed to a standard such that it can be used as the basis of a JORC 2012 ore reserve estimate and establishment of a new life of mine plan based on the updated key assumptions. Note, the report will discuss in detail the Life of Mine Plan and the ore reserves will only be referenced and not discussed in depth.

The key outcomes of the review of the feasibility study include;

1. Updated resource model with associated JORC 2012 compliant resource declaration report.
2. Updated ore reserve with associated resource declaration report.
3. Updated Life of Mine Plan (LoMP) with associated LoMP report.

Designs and specifications will be based on international best practice standards commensurate with the scale of operation. The results of this analysis will be summarised in a report with recommendations made on further work. All data models and designs will be made available to Red 5.

4.1 Resource Modelling

The development of a resource model would involve, but not be limited to; statistical assessment of sample data including variography, selection of appropriate estimation methodology, review of lithological and mineralogical constraints and selection of estimation block size and orientation. Further assessment of the mineral resource will be based on the requirements set out in Table 1 of the JORC Code 2012 relevant to the reporting of mineral resources.

4.2 Mineral Resource Reporting

A technical report detailing the mineral resource estimation results and methodology will be prepared in accordance with requirements of the JORC Code 2012 and ASX reporting guidelines.

4.3 Geotechnical Analysis

A geotechnical assessment of the Siana Gold Project was completed in the 2016 feasibility study (Trembath et al., 2016). The 2016 assessment would benefit from some back analysis based on what was encountered and achieved during previous mining phases. This would help validate or otherwise the current assessment of the geotechnical conditions likely to be encountered in the proposed underground mine plan.

A geotechnical assessment from the 2016 feasibility study will be reviewed on a high-level basis for both the underground mining and open pit components.

4.4 Mining Method Analysis

A range of underground mining methods have been considered in the 2016 feasibility study and the selected method will form the basis of the new LoMP and no further review of the underground mining methods will be considered. Mining of the open pit, including cutting back walls to make the pit safe and mining the current crown pillar will be considered.

4.5 Pastefill Analysis and Sample Tests

The mining method selected in the 2016 feasibility study utilised cemented pastefill for filling stope voids and stope wall stabilisation and will be the basis of the new life of mine plan. No other backfill methods will be considered in the review of the feasibility study, however updating the capital cost estimate for the paste-fill plant and associated surface works will be considered.

4.6 Hydrogeology

An important recommendation from previous reports was a review of the hydrogeological modelling conducted in 2008. The principal purpose of this review would be to validate or otherwise the model estimates of water ingress into the proposed mine.

4.7 Cut-off Grade Assessment

A cut-off grade assessment of the new resource model will be required in order to maximise both the value of the mineral resource and potential ore reserve. The cut-off grade will be reviewed as part of the mineral resource and ore reserve estimate and will form the basis of the review of the 2016 feasibility study and the open pit mining. References only to the cut-off grade will be made in this report and not discussed in any detail.

4.8 Capital Tunnel and Shaft Design

Decline access was chosen in the 2016 feasibility study to access the underground resource and will form part of the review process and establishment of the new LoMP . No other access options will be discussed in this review.

4.9 Ore Drives and Stoping Design

Ore drives and stope designs will be complete for the two mining approaches identified in the mining method analysis. These designs will be reviewed and updated for mining the resource and will form the basis of the new LoMP.

4.10 Production Schedule

In order to properly assess the productivity of the mine a detailed mine schedule will need to be developed. This will provide guidance on equipment selection and test the sensitivity of the project to the productivity assumptions. The results from the production schedule modelling will be used in the financial model in order to assess the value of the mineral resource.

4.11 Load and Haulage Assessment

A review of the previous load haul analysis in light of the new resource model and proposed mining method will be required.

4.12 Ventilation Design

No further review will be considered in the review of the feasibility and the designs established in the 2016 feasibility study will form the basis for the new LoMP.

4.13 Underground Infrastructure

A detailed infrastructure design for the power reticulation system, dewatering, fill reticulation and services will be required, however the 2016 feasibility study will form the basis of the new LoMP.

4.14 Request for Quotes

Cost items including mining contractor costs will be required, however the 2016 feasibility study will form the basis of the new LoMP.

4.15 Financial Modelling

A review of the financial model from the 2016 feasibility study will be required based on the new resource model for Siana which will consider a range of mining assumptions. The new LoMP will form the basis of the new financial model. However. Red 5 has requested that the financial analysis will not be discussed in detail, however the financial model will form the basis of an inhouse specific Red 5 financial model.

4.16 Sensitivity Analysis

A sensitivity analysis will not be considered in the review of the 2016 feasibility study, it will be completed inhouse by Red 5.

4.17 Risk Assessment

The risk assessment completed in the 2016 feasibility study will be reviewed, however the existing 2016 risk assessment will form the basis of the new LoMP .

5 METHODOLOGY

5.1 Method Overview

More detail on the methodology used can be found in the relevant section; however, some general comments on the overall approach are in order.

The Siana resource has undergone several levels of assessment (Red 5 Limited, 2009a), (Trembath, et al., 2015a), (Trembath, et al., 2015b), and (Trembath, et al., 2015c). Mining One's opinion is that the analysis to date constitutes all that was covered in the feasibility study completed by Trembath et al. (2016). Mining of the resource was voluntarily suspended in April 2017 and Siana was placed under care and maintenance. Thus, the current analysis builds on this body of work, and what is currently known from mining the resource and the review of the 2016 feasibility study with changes to some of the key assumptions, primarily but not limited to the gold price and exchange rate. A key feature of the current study will be to produce a long term mine plan with associated financial analysis such that the viability of mining the open pit and underground resource can be re-assessed.

Key to the mine plan is the determination of a reasonable estimate of the new cut-off grade with changes to the key assumptions. The application of the cut-off grade will, to a large extent, dictate the size of the mine and stopes, potential mining methods, the general layout of the decline development and ventilation network and the expected productivity profile of the mine.

The next important determinant for a mine plan is the modelling and optimising the production and development rate. The production profile will feature in the selection of equipment and mining method; and is obviously an important determinant of mine life and economic value of the resource.

With a design and production model in place, the value of the resource can be re-assessed in a financial model. Mining One were requested by Red 5 to deliver a draft Life of Mine Plan and a financial model, however for the purpose of this report the outcomes from the financial analysis will not be discussed as Red 5 have developed their own financial model using data from the model delivered by Mining One.

The overall cost estimates are importantly related to the mine design and schedule. The mining physicals are imported directly into the financial model from the schedule. The calculation of base equipment productivity is also provided in the model. All modelling and estimates have been validated against data obtained for similar mines and advice from specialist mining contractors.

To properly assess the minability of the resource and associated risks, a range of mine plans have been assessed, with the most viable used for the financial model.

Importantly, for the purpose of reporting ore reserves under the JORC Code 2012 there are certain obligations that need to be complied with: for instance, inferred material cannot be included in the assessment of the minability of the resource. As such the basis of an ore inventory that could be used for an ore reserve declaration under the JORC Code 2012 is made explicit in the Siana Feasibility Study Update and Ore Reserve Report, July 2020 report. This is to say that while the long term mine plan will consider the technical and economic viability of the whole resource, the ore inventory that might form an ore reserve declaration will be based on those parts of the mineral resource that can be considered convertible into an ore reserve (principally measured and indicated mineral resource categories). The justification for using the whole mineral resource in the long term mine plan is that the inferred material is, by definition, likely to be converted into indicated mineral resource (JORC, 2012). Not taking this material into account risks misrepresenting the value of the resource and may result in a less than optimal long term mine plan. Although the mine design will take into account the location of inferred material the basis of any ore reserve assessment will exclude the majority of this material (refer to the Siana Feasibility Study Update and Ore Reserve Report, July 2020).

5.2 Open Pit

The open pit ore reserve, life of mine designs and schedules were based on a Whittle™ optimisation assessment of the resource model. This approach utilises the Lerchs Grossmann algorithm to find a series of value maximising theoretical pit shells given a range of financial, geotechnical and mining constraints (Lerchs & Grossmann, 1965). These theoretical pit shells act as guides for the development of more detailed design and scheduling.

The management of hydrogeological and geotechnical issues will be key to the success of open pit mining. As such a thorough review of the geotechnical work completed to date in combination with the operating experience was used to develop a conservative slope design criteria to access the mineral resource.

The Whittle™ optimisation result in combination with hydrogeological, geotechnical and operational advice was used to develop a mine plan. The detailed open pit staged designs were developed based on the mine plan which in turn informed the scheduling and financial assessment. Cost estimates were based on site experience validated with independent modelling by Mining One.

Open pit dilution and mining recovery were dealt with through a process of 'regularising' the block model such that the minimum block size and associated attributes in the model represented the selective mining unit applicable to the available equipment. Reconciliation results were used to assess dilution and mining recovery associated with the selective mining unit.

Within the open pit designs breakeven cut-off grade was calculated based on known metallurgical recoveries, rehandling and processing costs.

Capital investment was based on budget pricing and or site experience.

5.3 Underground

For the underground ore reserve and life of mine plan a new high level cut-off grade assessment was completed with changes to the key assumptions in light of new financial assumptions similar to the approach adopted in (Trembath, et al., 2016). Although there has been a modest change to the cut-off grade, however this has not had a material effect on the mining method selection, ventilation modelling, dewatering, power reticulation and the like.

Mine dilution and mining recovery estimates were based on geotechnical assessment informed by professional opinion. Depending on the type of dilution, it was either applied as a 'skin' to stope designs or as a factor. Mining recovery is applied as a factor.

An automated mine shape optimiser (MSO) was used to develop initial stope shapes that were adjusted in light of professional opinion as to their minability. MSO applies a cut-off grade to the resource model constrained by geotechnical and minability considerations to determine the size and shape of the optimal stopes. Capital and ore access development tunnels were then designed.

5.4 Mine Scheduling and Financial Assessment

Detailed scheduling has been undertaken to properly assess the technical and economic viability of the proposed mine plan.

Cost estimates are based on site operating costs or budget pricing obtained from suppliers.

A pre-tax financial assessment of the open pit was based on a free ownership of the resource taking into account the relevant royalties, metallurgical recoveries, closure costs and the like. The results of this assessment are considered commercially sensitive and as such are not published.

7 ACCURACY

Mining One has conducted the following analysis to a level of detail that is typically expected of a feasibility study for the scale of the resource currently understood at Siana. A key factor in the economic assessment of the mine plan is the accuracy of the cost estimates and key determinants such as the mine production profile. Confidence intervals around such estimates are almost impossible to quantify (McCarthy 2009, p.63). Sufficient detail has been considered to show that the mine plan has a reasonable chance of success (given a range of assumptions and identified risks).

A cost model has been developed on a first principle approach and informed by the relevant industry standards, in particular the Cost Estimation Handbook (2nd Edition, AusIMM Monograph 27) has been utilised in the construction of the model. Quotations for key cost items have been obtained.

A key determinant of the model is the estimation of the relevant productivity rates for the operation of the mine. The basis for the productivity estimates are the equipment specifications in combination with professional consideration of the local operating conditions. In some instances modifying factors have been applied to ensure that estimates fall within what is considered a reasonable range for this type of operation.

Mining One believe that the required attention to detail has been given to the project based on the agreed scope of works such that assumptions and estimates are based on reasonable grounds. Importantly, it should be noted that many of the error margins used in such analysis are difficult if not impossible to quantify using empirical data. In these instances, professional judgement has been used.

Where assumptions have been made, this fact has been clearly stated.

For the open pit ore reserve and Life of Mine design the assessment is to a level of detail that is typically expected of a preliminary feasibility study for the scale of the resource currently understood at Siana. Although there is significant open pit operational experience, the lower confidence here (compared to the underground ore reserve) is principally because of uncertainty around the geotechnical engineering required to properly design and schedule.

8 CUT-OFF GRADE ANALYSIS

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020.

9 MINERAL RESOURCES

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020.

10 GEOTECHNICAL ASSESSMENT

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020.

11 HYDROGEOLOGY

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020.

13 MINING METHOD

It has been assumed that the Whittle™ pit optimisation process has identified the point at which underground mining is more cost effective than conventional open pit mining. This assumption has not been tested in the current study.

A range of underground mining methods have been considered in previous studies. The mining 2016 feasibility study (Trembath, et al., 2016) involved further technical and financial assessment of potential underground mining methods. The mining methods considered in the mining feasibility study were:

1. Short-hole stoping (SHS) with pillars.
2. Short-hole stoping (SHS) with paste-fill.
3. Avoca.
4. Underhand drift and fill (cut and fill with paste-fill).

The assessment indicated that short-hole stoping with cemented paste fill was the most economic and technically robust method for the majority of the resource. However, special consideration was given to mining in and around the old workings and crown pillar areas. In order to safely extract the resource in these zones the mine plan proposed a trough-caving with cemented paste fill method. This method is a non-entry method that involves introducing cemented paste fill as ore from the stope is extracted, thus preventing any uncontrolled caving. More detail is available in Trembath, et al. (2016).

The Open Pit operation is scheduled to be mined using conventional open pit mining methods using top hammer drill rigs, CAT 40 tonne articulated Dump Trucks and Kobelco (~85 t) hydraulic excavators. Mining bench heights are 5 m with mining generally conducted on 2 m x 2.5 m flitches. Mining rate is a nominal 8,000 BCM/day.

15 ANNUAL PRODUCTION RATES

The mill is scheduled to operate at 2,986 dmt/day at an average utilisation of 80%. This equates to approximately 875,000 tonnes per annum. The open pit has been scheduled so that far as possible the mill utilisation will be maximised. However, production remains constrained by mining.

A maximum bench-drop per month of three is applied as a constraint in the open pit schedule, with a bench-drop per month maintained mostly at no more than two.

A general rule for assessing maximum production rate for underground narrow-veined resources is that no more than 50 vertical metres of the resource should be mined in any one year (Bullock, 2011, p. 1137). The current resource ranges over about 500 m vertically. This equates to a 11 year mine life at an average of between 450 kt and 500 kt per annum. Although this range is targeted, the production profile used for assessment of the resource has been developed on the basis of a detailed schedule.

The mining method and associated equipment selection is a key determinant of the productivity of the mine, the detail of which has been modelled. Equipment selection has been based on targeting the average productivity while not committing to an excessive capital expense relative to the size of the resource.

17 MINE DESIGN

17.1 Open Pit

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020.

17.2 Underground

What is presented below is an update of the designs developed in the 2016 feasibility study completed by Mining One (Trembath, et al., 2016) and the long term mine plan with consideration of the technical and economic viability of the whole resource including the ore reserve and inferred material outside of the ore reserve . The justification for using the whole mineral resource in the long term mine plan is that the inferred material is, by definition, likely to be converted into indicated mineral resource (JORC, 2012). Not taking this material into account risks misrepresenting the value of the mineral resource and may result in a less than optimal long term mine plan (refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020).

17.2.1 Proposed Development and Stoping

The proposed design involves a decline from within the current designed pit with a horizontal ventilation return airway also located within the pit. Figure 17-1 and Figure 17-2 shows the general layout of the proposed development design. A ventilation and escapeway system was designed that is compliant with the relevant guidance (Department of Environment and Natural Resources, WA, 2000).

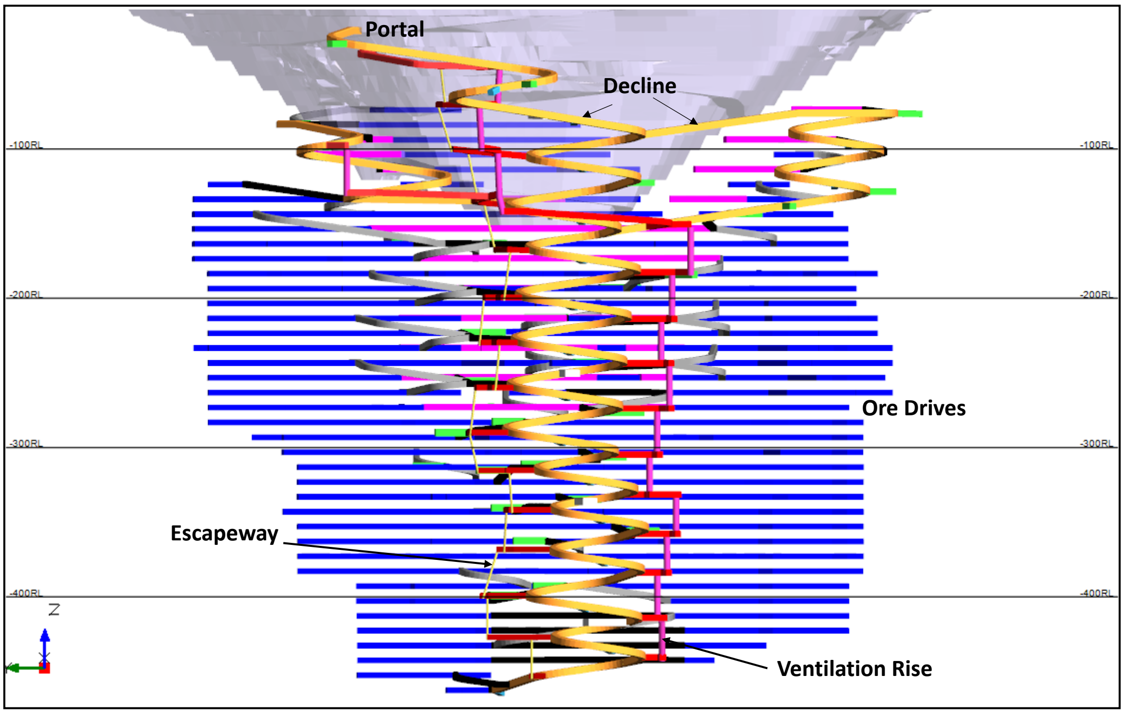


Figure 17-1 Long Section View of the Proposed Life of Mine Development Design

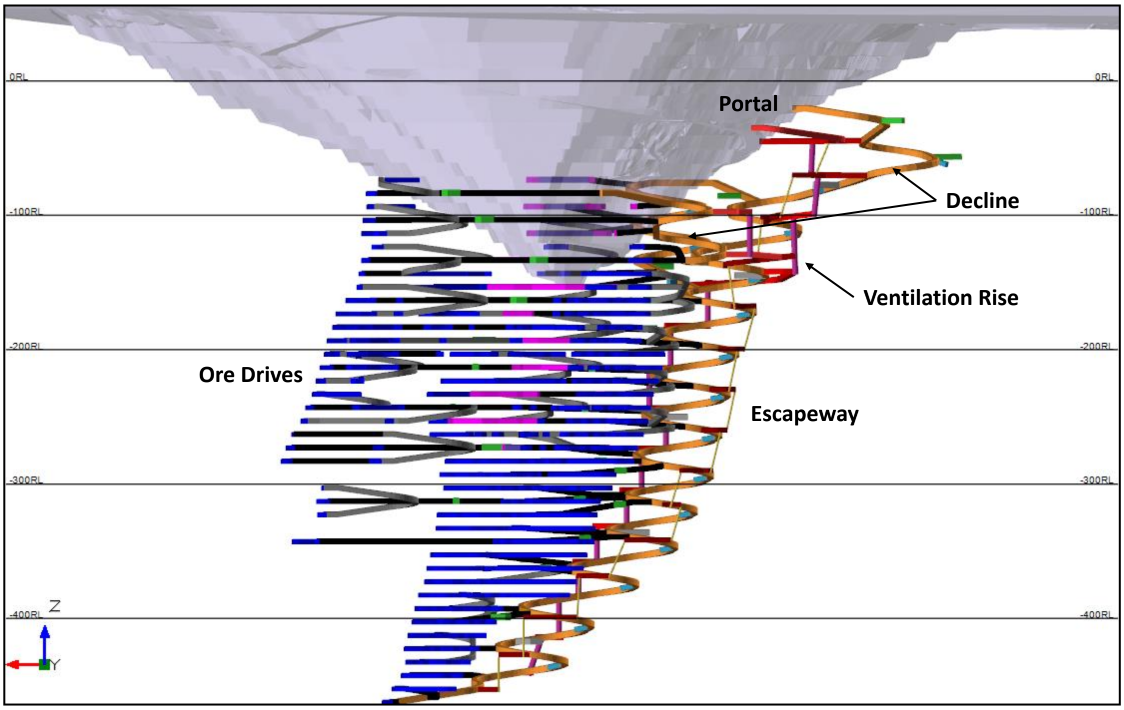


Figure 17-2 Northern End View of Proposed Life of Mine Development

The stope designs were based on a geotechnical assessment of the relevant host rock mass and optimal cut-off grade considering both the hydrological setting and previous mining. Stope shapes were initially developed using a mine shape optimiser (MSO) to interrogate the underground resource. These designs were adjusted to ensure minability. The current plan is to use a cemented paste fill to maintain mine stability and maximise the resource extraction. Figure 17-3 and Figure 17-4 provide the general layout of the proposed stoping.

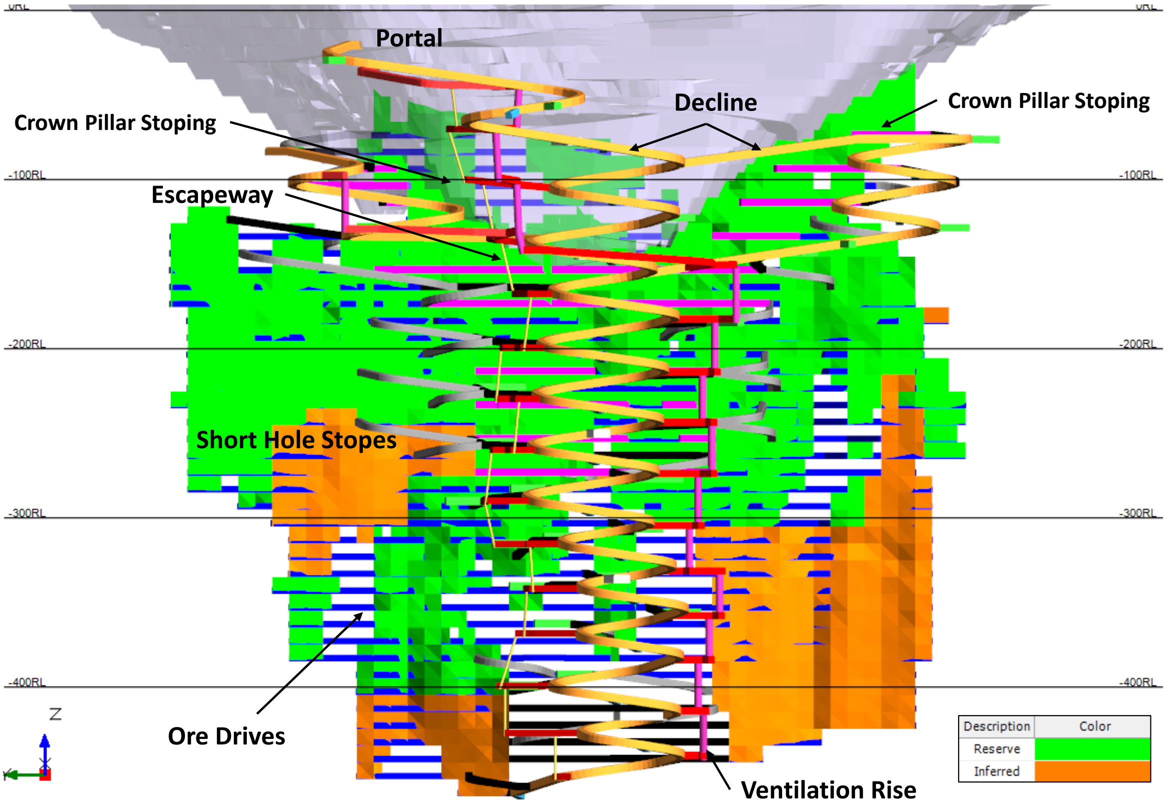


Figure 17-3 Long Section View Showing the Stope Designs by Category

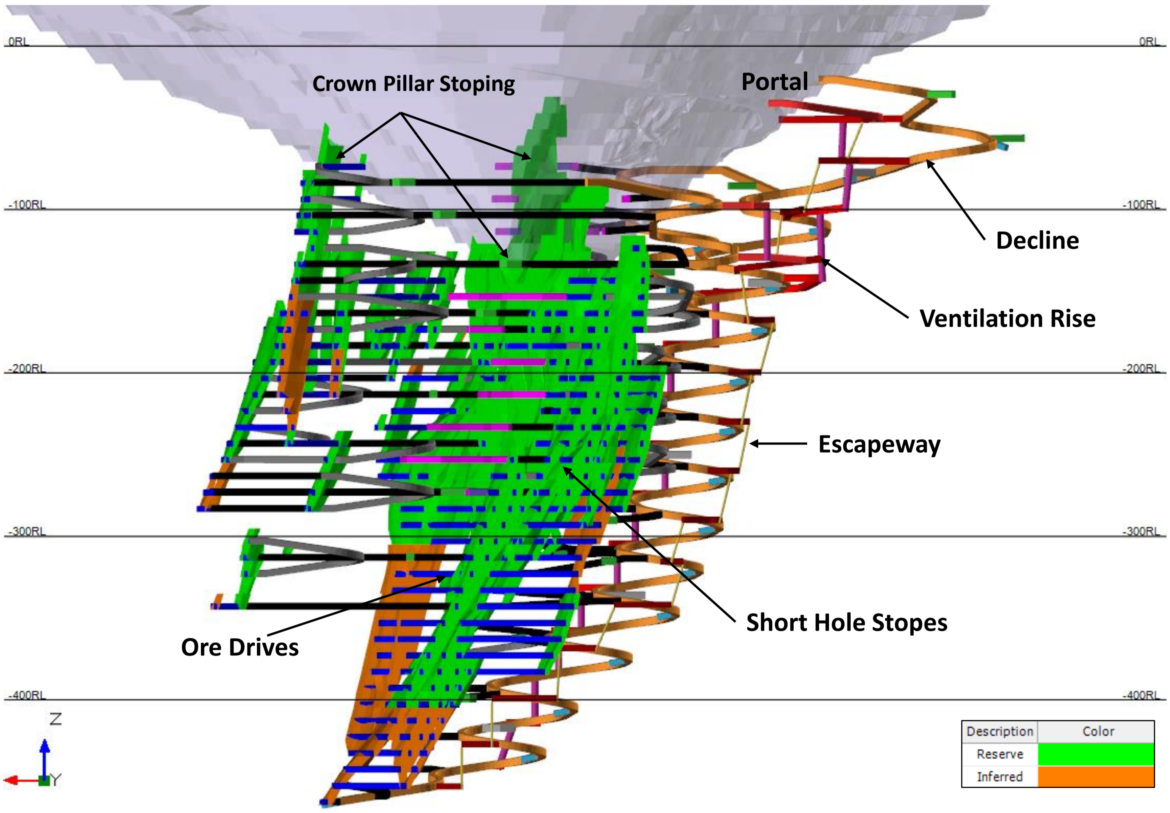


Figure 17-4 Northern End View of Proposed Stoping by Category

17.2.2 Previous Mining

The resource was previously mined as an underground operation. A file has been provided modelling where previous mining has occurred (see Figure 17-5). However, it is understood that the mine is likely to have collapsed or backfilled or both (Red 5 Limited, 2009a). The current resource model takes this previous mining into account by adjusting the density of the resource blocks in the region of the old workings.

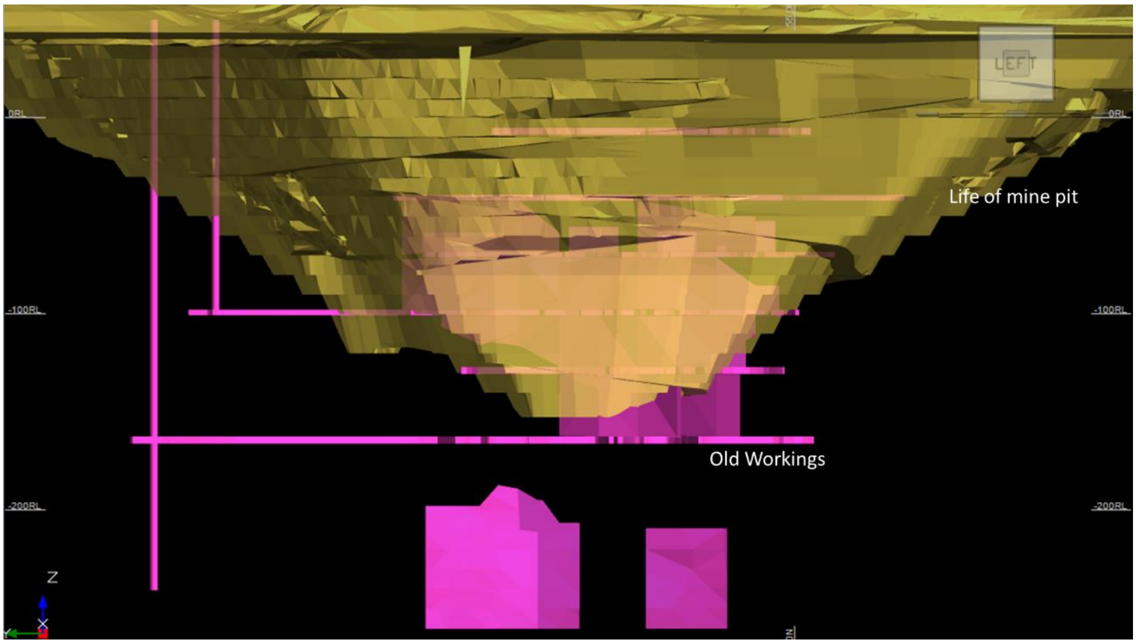


Figure 17-5 Long-section View of the Previous Mining Relative to the Current Final Pit Design

17.2.3 Dilution and Recovery

Dilution estimates have been based on a geotechnical analysis in combination with the mine designs. The average over-break based on the geotechnical analysis was added to the stope design to produce a diluted stope shape. A 0.75 m of dilution to the footwall and 0.5 m of dilution to the hanging wall was applied. Further dilution from paste fill was accounted for using a dilution factor. A conservative 5% dilution from paste was applied across all stoping.

A 95% extraction rate for open stoping is an industry standard. It accounts for bridging of stopes, wall failures that sterilise ore, drill and blast quality control and the like. For mining in and around old workings an 80% extraction has been assumed.

A conservative extraction factor has been applied to the crown pillar mining. The previous ore reserve assumed 30% mining recovery and is now considered too conservative. Changes to the geometry of the final pit and revised mining methodology in the crown pillar zone suggest a recovery in the order of 50% is likely. This represents material that has to be left as a pillar or is sterilised due to ground control issues.

Over-break in ore and waste development is assumed to be offset somewhat by under-break and 3% was added to the development as over-break. 100% mining extraction rate for ore development is assumed.

17.2.4 Ventilation Design

No changes have been made to the ventilation design that was modelled in the 2016 feasibility study completed by Mining One (Trembath, et al., 2016).

17.2.5 Water Management

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

17.2.6 Cemented Backfill Supply and Reticulation

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

17.2.7 Electrical Reticulation

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

17.2.8 Grade Control

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

19 PROCESSING

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

20 MINE SAFETY AND EMERGENCY SYSTEMS

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

21 SURFACE INFRASTRUCTURE

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

22 ENVIRONMENTAL, LEGAL AND SOCIAL OBLIGATIONS

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

23 ADMINISTRATION AND MANNING

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

25 PRODUCTION SCHEDULE

25.1 Open Pit

The Life of Mine (LoM) open pit mine schedule is largely the Ore Reserves schedule with modifications to include inferred material, existing stockpile and a change to start date for both mining and processing operations (refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020). The following key aspects of the LoM schedule are highlighted:

- Design pits are as used for the Ore Reserves schedule.
- Inferred mineral resources within design pits are included as ore with associated processed metal included in gold sales in the LoM Schedule. Inferred mineral resources added to the LoM schedule is estimated to be 110 kt @ 2.35 g/t.
- Inclusion of 137.7 kt @ 0.99 g/t of low-grade stockpile material in the processing schedule. The inclusion is justified by a higher gold price used for the LoM and/or lower tails grade of 0.3 g/t for head grade lower than 1.0 g/t.
- Inclusion of a further lower grade material mined from pit estimated at 303 kt @ 0.87 g/t in the processing schedule.
- As noted in the Study Update, it is important that the development of a schedule for the SGP open pit to factor the wettest months of the year (typically December through to March) during which timed activities in the pit bottom and those associated with civil construction are relatively limited. The start of mining has therefore been updated to commence in the month of April in the LoM schedule.

The following considerations taken into account in developing the Ore Reserves schedule also apply to the LoM Schedule:

- The primary hydraulic excavator fleet consists of three 85 t-class units. Unit capacity is variable with a maximum rate of 3,563 BCM/day when mining fresh rock. This maximum rate reduces to 2,192 BCM/day when mining silt. Productivities have been estimated from first principles using such data as bucket capacity, swell factors, fill factors, the details of which are provided in the schedule spreadsheet.
- The 40 t-class ADT haulage fleet is at a maximum of 22 units, estimated using physical availability of 85%. The maximum of 22 is less than the notional 25 trucks determined as the maximum the site can handle comfortably.
- The limestone outcrop at “Kevin’s Knob”, adjacent to the WSF delivers material at a rate of 17,000 BCM/month when mining operations are ongoing.
- Silt and failure debris currently in the pit bottom is estimated to be 560,000 m^3 (838 kdmt at an average dry density of 1.5 t/m^3) and is to be excavated simultaneously with fresh rock.
- Maximum bench-drop per month of three is applied as a constraint in the schedule with bench-drop per month maintained mostly at no more than two.
- The Stages 5 and 7 cut-backs are started in April 2021 from surface. Stage 5 is mined with one dig unit whilst Stage 7 commences with two dig units. One of the dig units leaves Stage 7 to commence mining of Stage 6A. The two dig units from Stage 5 and 6A then proceed to mining Stage 6B. Stages 7 and 8 join up and the joined pit is mined down bench by bench.

- Ore mined from the pit is stockpiled until it reaches a level that, together with pit supply, will sustain continuous operation of the mill.
- Mill is scheduled to operate at 2,986 dmt/day at an average utilisation of 80% for 2,389 dmt/day each month once the mill is restarted.
- Figure 25-1 to Figure 25-4 summarises the SGP open pit mine schedule. Total material movement include activities out of the pit i.e. stockpile rehandling and limestone. The troughs and crests in material movement from period to period are dictated by constraints including those associated with weather, mining of silt material and allowable bench-drop-down rates. The schedule takes into account expected productivity drops during the mining of silt. The reduced activity in year 2 is due to an inability to advance bench faces in the peak of the wet-season whilst mining the lowest elevations of the pit.

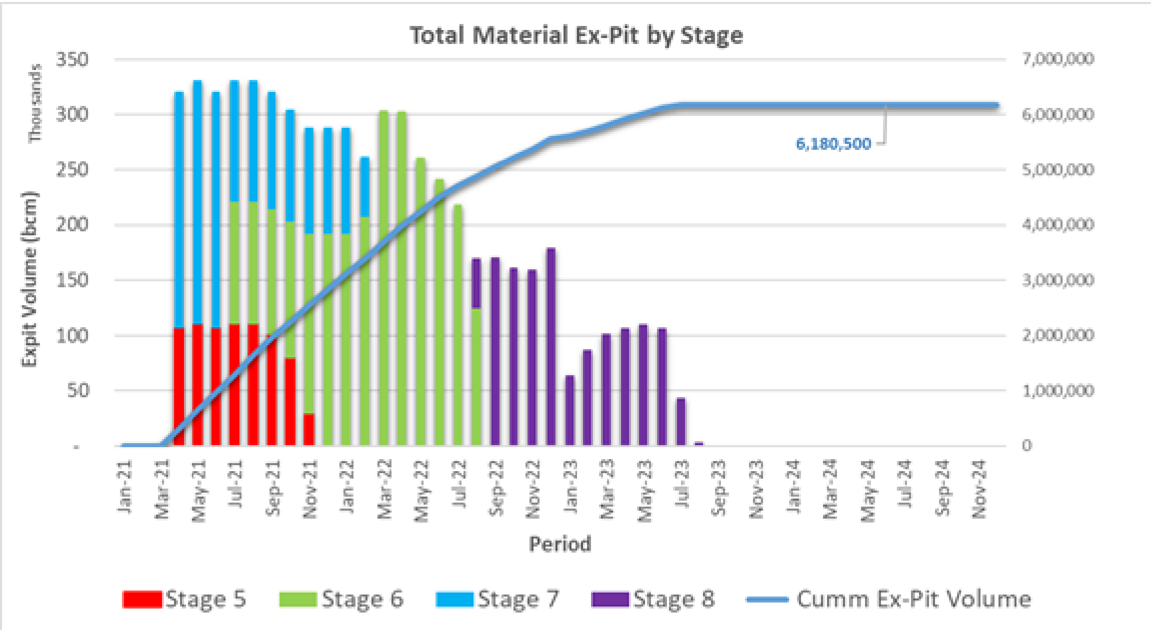


Figure 25-1 Open Pit Movement by Stage

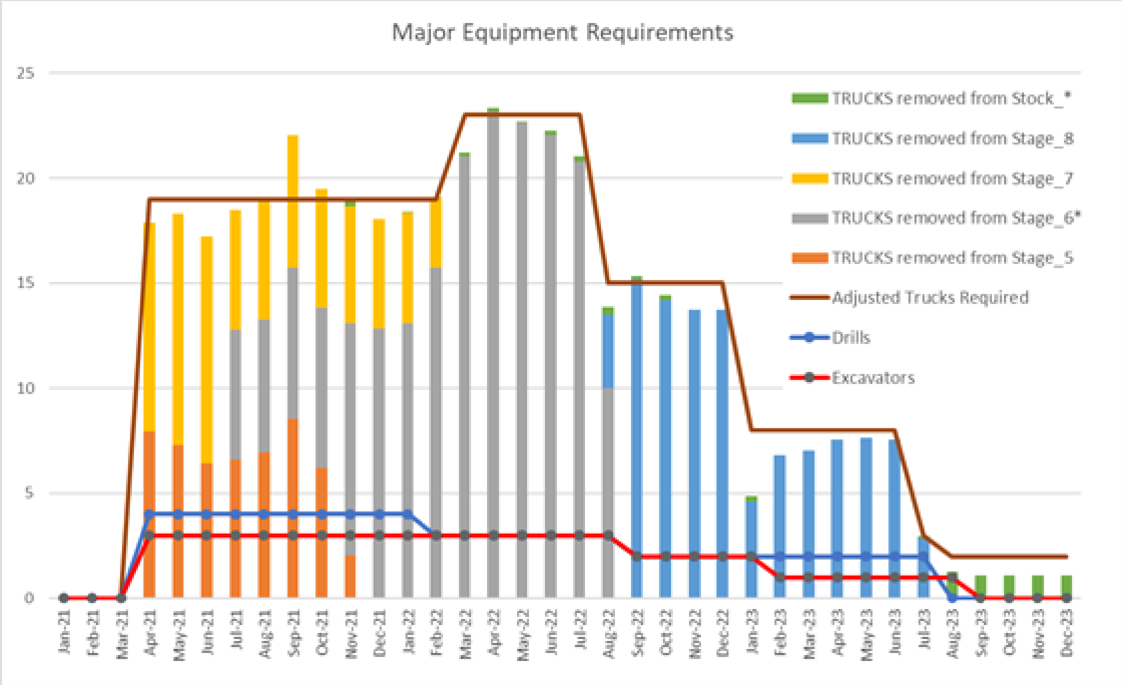


Figure 25-2 Period Equipment Requirements

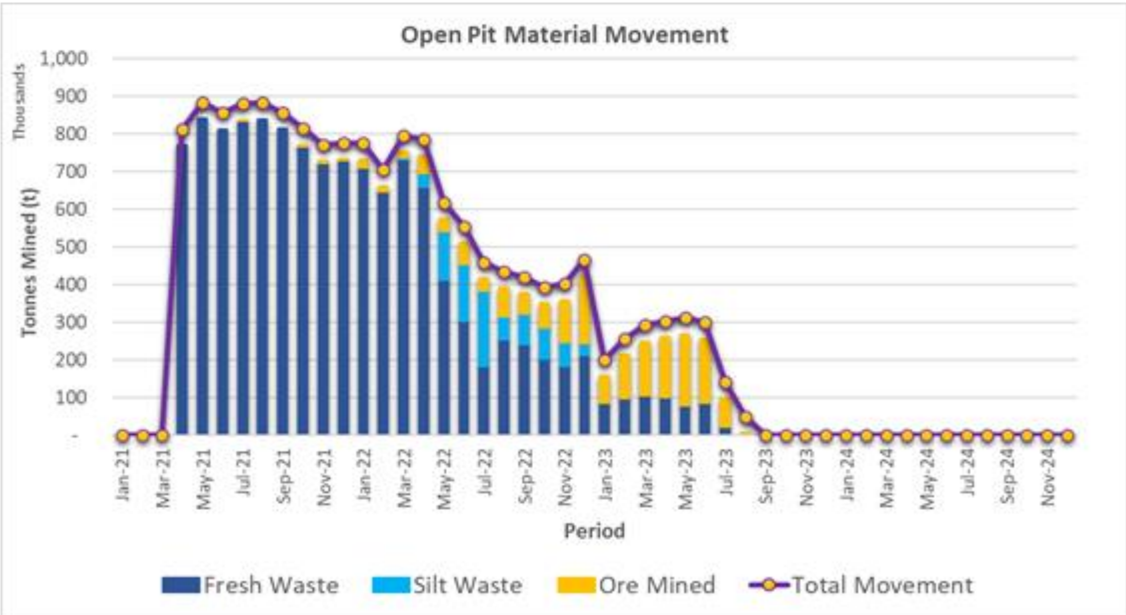


Figure 25-3 Open Pit Movement by Material Type

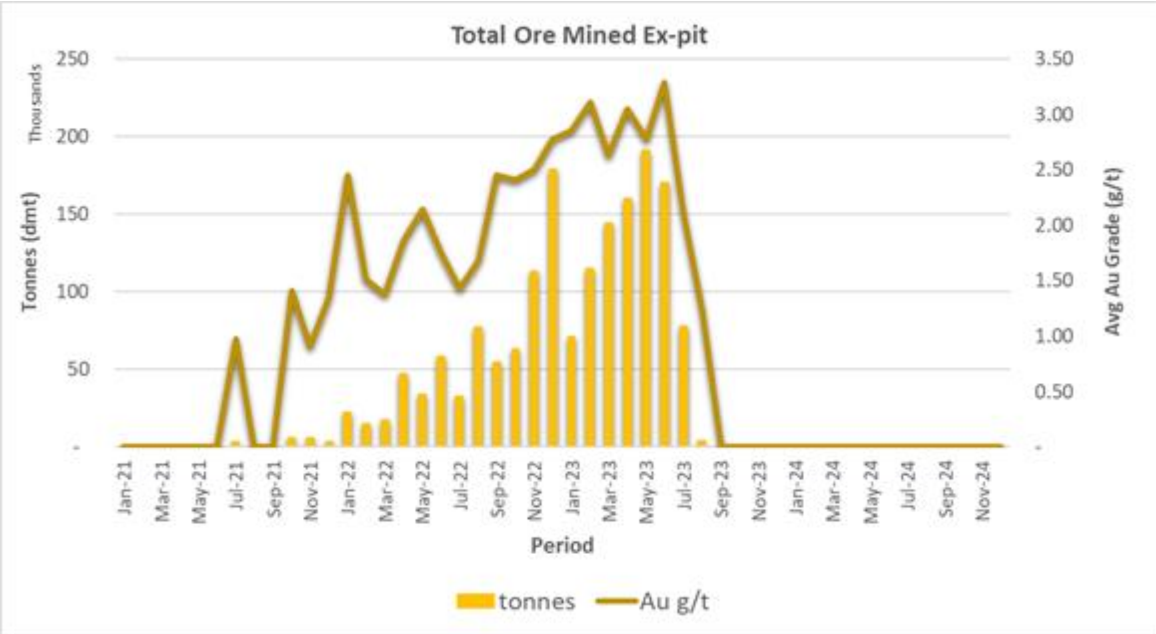


Figure 25-4 Ex-pit Total Ore Tonnes and Average Au Grade

The schedule estimates the truck requirement peaking at 23, taking into account expected availability and utilisation of availability. Truck factor tonnes have been estimated differently for fresh rock and silt using their respective known swell and fill factors, moisture contents and densities. The total number of drills required is expected to peak at four noting that the schedule has not made provision for presplit drilling as this is currently not a routine on site. The first decommissioning of a dig unit will occur in the middle of Year 2 when the pit floor narrows down and is not able to sustain efficient productivities of three dig units. The second decommissioning will occur soon after, also in Year 2, primarily to manage increasing stockpile levels.

The Processing plant is scheduled to recommence operations earlier in the LoM Schedule when compared with the Ore Reserves schedule, resulting from higher tonnages of ore that become available earlier in the schedule to support earlier commencement of process operations. The plant will recommence operations 10 months after mining commences in the LoM schedule compared with 16 months in the Ore Reserves schedule. The start-up aligns with stockpile volumes, ensuring that the Mill does not run out of material once recommissioned. Should the historic positive reconciliation on ore tonnes continue, it is possible that the Mill could be started earlier than planned in the schedule.

The schedule adopts a plant throughput of 2,986 dmt/day at monthly utilisation of 80% for net throughput of 2,389 dmt/day. Over the life of mine a total of 1,814 kdmt is scheduled to be treated at an average grade of 2.47 g/t. The proposed open pit life of mine schedule would produce 1.676 Mt of ore at an average gold grade of 2.59 g/t for contained ounces of 139.5 koz (recovered ounces of 115.8 koz).

Mill recoveries have been estimated using a fixed tail of 0.44 g/t in line with historic performance of the processing plant. No cap has been applied to recoveries and peak at 90% in October 2022. Plant recovery over the LOM is estimated to be 85%. The 0.44 g/t tails grade has been used although available historical data shows that tails grade is lower at about 0.3 g/t when feed grade is lower at about 0.5 g/t.

A total of 118 koz of gold (recovered) is expected to be produced from the open pit over the LoM. The mine schedule prioritises HG ore (Au >2.0 g/t) over stockpile and/or MG ore (Au>1.06 g/t). Figure 25-5 shows the increasing gold produced in line with increasing grade mined from pit and then a sudden drop in gold produced as feed from pit runs out and mill feed is predominantly from stockpile. The chart offers insight into how operational cut-off grades can be manipulated to optimise cashflow with time.

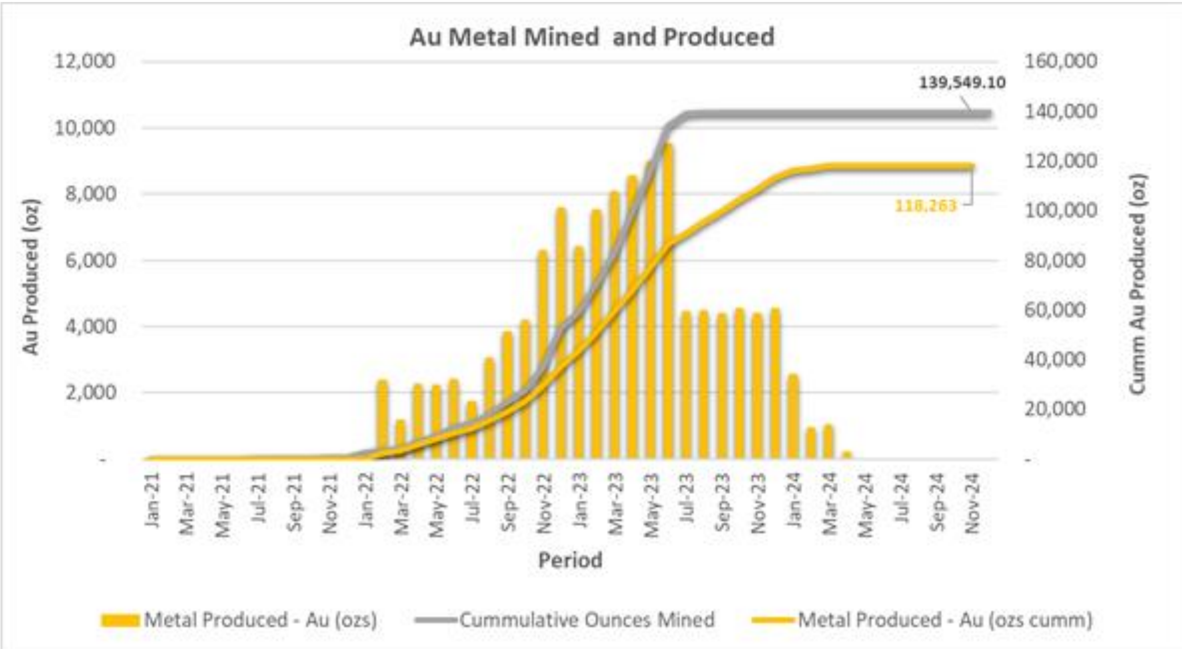


Figure 25-5 Period and Cumulative Au Metal Mined and Produced

25.1.1 Equipment Selection

Previous truck and shovel fleet characteristics were used for the development of production profiles. The primary hydraulic excavator fleet consists of three 85 t-class units. Productivities have been estimated from modelling using such data as bucket capacity, swell factors, fill factors and previous operational performance, the details of which are provided in the schedule spreadsheet. The 40 t-class ADT haulage fleet is at a maximum of 22 units, estimated using physical availability of 85%.

25.2 Underground

25.2.1 Schedule Summary

The Life of Mine schedule uses the whole mineral resource including the inferred material, as by definition, it is likely to be converted into indicated mineral resource (JORC, 2012). Waste development is scheduled to commence December 2022. There were three production schedules developed and these are outlined below:

1. Optimised LoM Schedule – This production schedule is used for development of the Plan discussed in this report. This schedule restricts production from the Inferred Mineral Resource to the later years of the LoM and is considered the lower risk schedule to effectively mine the underground resource in conjunction with the open pit.
2. Restricted LoM Schedule – This production schedule is used as an alternative to the optimised schedule for development of the LoM Plan as discussed in this report. This schedule does not restrict production from the Inferred Mineral Resource and assumes the Inferred material is mined along with the ore reserve. This schedule is considered the higher risk schedule to effectively mine the underground resource in conjunction with the open pit. This schedule is therefore not discussed further in this report.
3. Underground Only LoM Schedule – This production schedule is used to evaluate the viability of Siana Gold Project as an underground only project exclusive of the open pit. This schedule includes production from around the base of the current open pit, ore reserve and inferred mineral resource. This schedule is not discussed any further in this report as Red 5 determined that it produced a less favourable financial outcome than the Optimised LoM Schedule based on their objective to reduce the maximum cash drawdown.

The current approach assumes the use of jumbo development and primarily long-hole stoping in combination with a truck and loader fleet. The schedule was based on the proposed mine design outlined above modelled using the software package Deswik.Sched in combination with Deswik.CAD. Deswik.Sched was used to optimise each of the schedules to produce a realistic production rate and timing for key activities and estimates for equipment requirements.

25.2.2 Equipment Requirements

Estimates of the productivity were made based on the likely conditions to be expected and specifications for the proposed mine design. Manufacturer's information was used in combination with rates achieved under similar circumstances. An important determinant of the schedule is the assumed development rates. A conservative 70 m per month for the decline has been used and 30 m per month for ore development (Rupprecht, 2006). Table 25-1 provides the overarching constraints on the production schedule while the constraints in Table 25-2 are applied by activity. More detail is available in the worksheets provided.

Jumbo development is a flexible and proven method of excavation for a wide range of rock types and has been assumed as the principal development method. Long hole drills and low profile loaders and mine trucks have been assumed in the mine plan.

The current study is based on a contract miner providing, at least initially, the mining equipment, with the mine going to an owner operator model in the third year of operation.

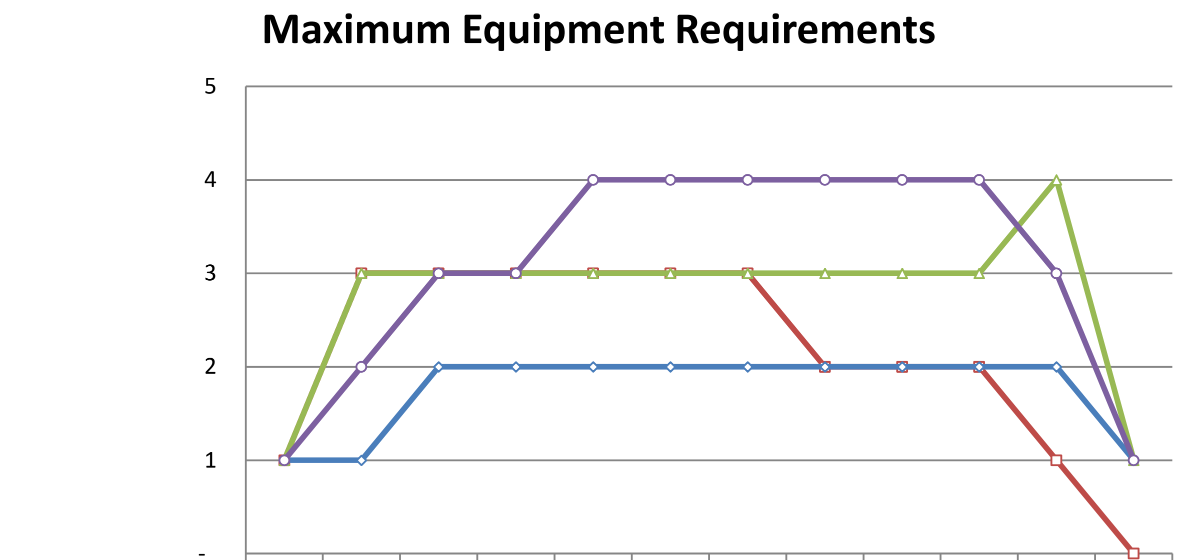
A profile analysis was conducted to determine the appropriate size equipment to maximise the value of the resource and minimise risks. Figure 25-6 summarises the major equipment requirements by year to sustain the required production profile.

Table 25-1 Resource Rates Applied in Production Schedule

Resource Rates	Value	Units
Dev Jumbo (Twin Boom)	200	m/month
Long Hole rig	1,500	m/week
Production Bogger	800	t/day
Development Bogger	1,020	t/day
Pastefill Plant	900	m^3/day
Trucks Ore	1,600	tkm/day
Trucks Waste	1,660	tkm/day

Table 25-2 Detailed Limiting Rates Applied to Schedule Modelling

Resource Rates	Value	Units
Decline	70	m/month
Level Access	70	m/month
Draw Point Drive	70	m/month
Return Air Way	70	m/month
Decline Stockpile	70	m/month
Level Stockpile	70	m/month
Sump	70	m/month
Level Ore Drive	30	m/month
Return Air Rise	100	m/month
Escapeway Rise	100	m/month
Production Drilling	300	drm/day
Stope Bogging	1000	t/day
Pastefill Limitations	900	m^3/day



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
Total: Jumbo	1	3	3	3	3	3	3	2	2	2	1	-
Long Hole Rig	1	1	2	2	2	2	2	2	2	2	2	1
Total: Bogger	1	3	3	3	3	3	3	3	3	3	4	1
Total: Trucks	1	2	3	3	4	4	4	4	4	4	3	1

Figure 25-6 Equipment Allocation to Achieve Production Schedule

25.2.3 Production Schedule for Life of Mine Plan

Given the constraints outlined above in Section 25.2.2 and the mine plan proposed, a schedule for the life of mine plan was developed. The results from the scheduling form an important determinant for the financial modelling of the resource and are summarised in Table 25-3 and Table 25-4. Figure 25-7 provides a summary of the expected ore production and grade profile with Figure 25-8. Tunnel development, both in ore and waste, forms an important component of the scheduling. Figure 25-9 provides some detail on the required development by year and type.

The major determinant of the production schedule is the paste plant commissioning and the rate at which it can deliver paste. Mining One recommends more work to properly optimise both the plant design and reticulation analysis so as to maximise the mining rate and reduce the technical risk associated with this critical piece of infrastructure.

The proposed mine plan would produce in the order of 4.09 Mt of ore at an average gold equivalent grade of 4.22 g/t over an 11 year mine life. The estimated mean full production rate would be 477 kt per annum. Some low-grade material has to be mined as development in order to access the resource above the economic cut-off grade. This material is not economic by itself; however, given that it has to be mined and transported to surface the valuable metal need only cover the cost of treatment and result this material has been included for the purpose of estimating the value of the project.

Figure 25-10 summarises the proportion of mining inventory by resource classification. Inferred material does make up a significant proportion of the total mining inventory. As required under the ASX listing rules (Australian Stock Exchange, 2013) inferred material has been scheduled for later in the mine life.

It is also a requirement of the Australian Stock Exchange (ASX) (2014) Section 5.16.5 that a cautionary statement about the confidence in the inferred material be made. As such, it should be noted that there is a low level of geological confidence associated with inferred mineral resources in the resource model and there is no certainty that further exploration work will result in the conversion of this inferred mineral resource to an indicated or measured classification with similar grade tonnage characteristics.

Table 25-3 Life of Mine Underground Production Schedule

Name	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	LOM
Development HG ore (t)	-	-	-	14,120	101,606	123,844	120,593	119,616	120,137	56,609	62,876	44,455	84	-	**763,940**
Development HG ore (g/t)	-	-	-	3.35	4.14	5.11	5.26	4.67	6.48	5.44	5.87	3.88	7.97	-	**5.13**
Development LG ore (t)	-	-	-	6,740	47,993	46,324	37,732	65,496	34,783	25,397	30,033	40,637	-	-	**335,134**
Development LG ore (g/t)	-	-	-	1.56	1.57	1.66	1.47	1.67	1.63	1.60	1.53	1.65	-	-	**1.61**
Stope ore (t)	-	-	-	11,512	229,162	292,767	315,962	300,293	348,486	374,895	362,465	429,555	314,504	14,175	**2,993,777**
Stope ore (g/t)	-	-	-	2.42	3.23	3.80	4.33	4.54	5.02	5.23	4.35	4.19	3.68	3.71	**4.31**
Total Ore (t)	-	-	-	32,373	378,761	462,935	474,288	485,405	503,405	456,901	455,373	514,647	314,587	14,175	**4,092,851**
Total Ore (g/t)	-	-	-	2.65	3.26	3.93	4.34	4.19	5.13	5.06	4.38	3.97	3.68	3.71	**4.24**

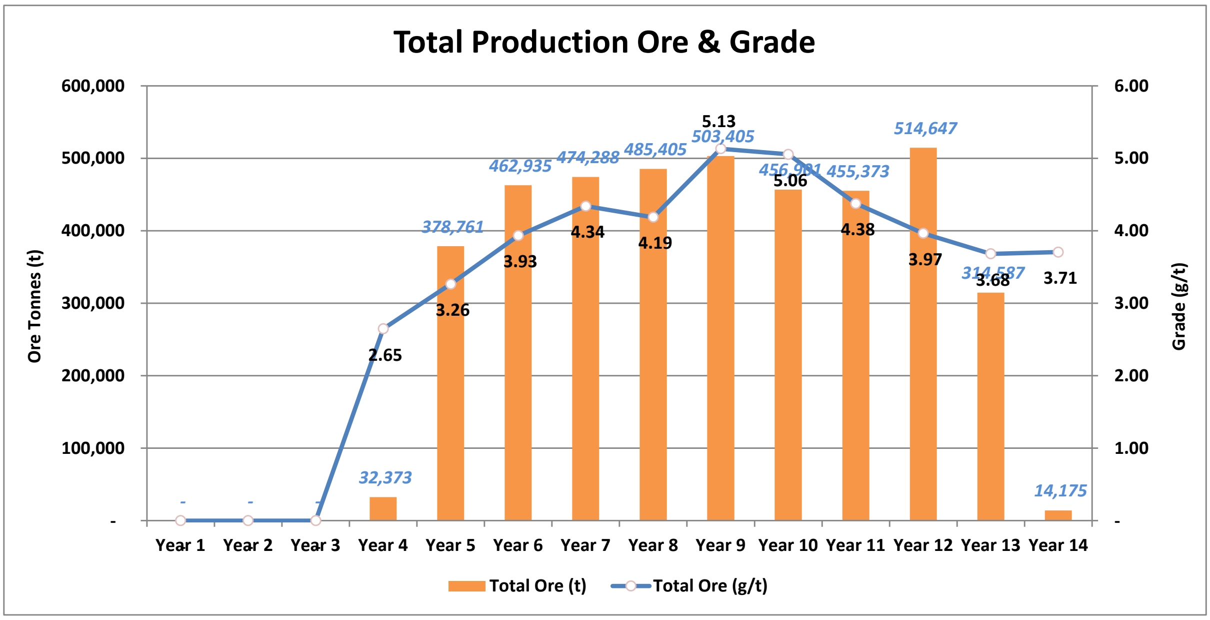


Figure 25-7 Production and Grade Profile for Proposed Mine Plan

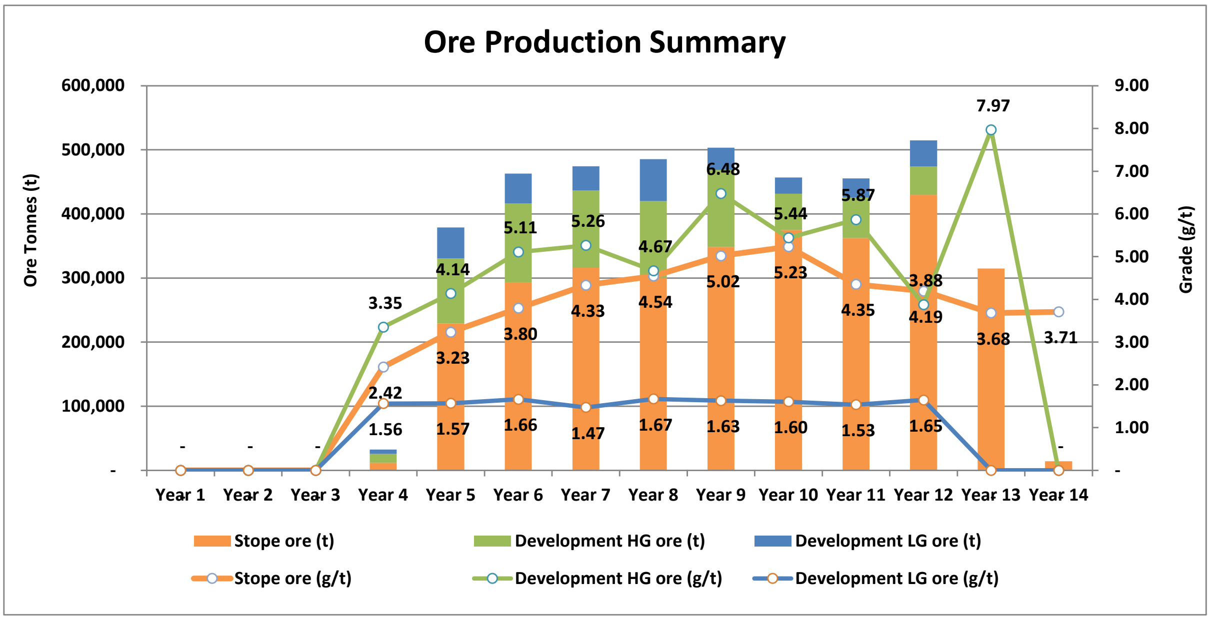


Figure 25-8 Ore Production Summary by Source

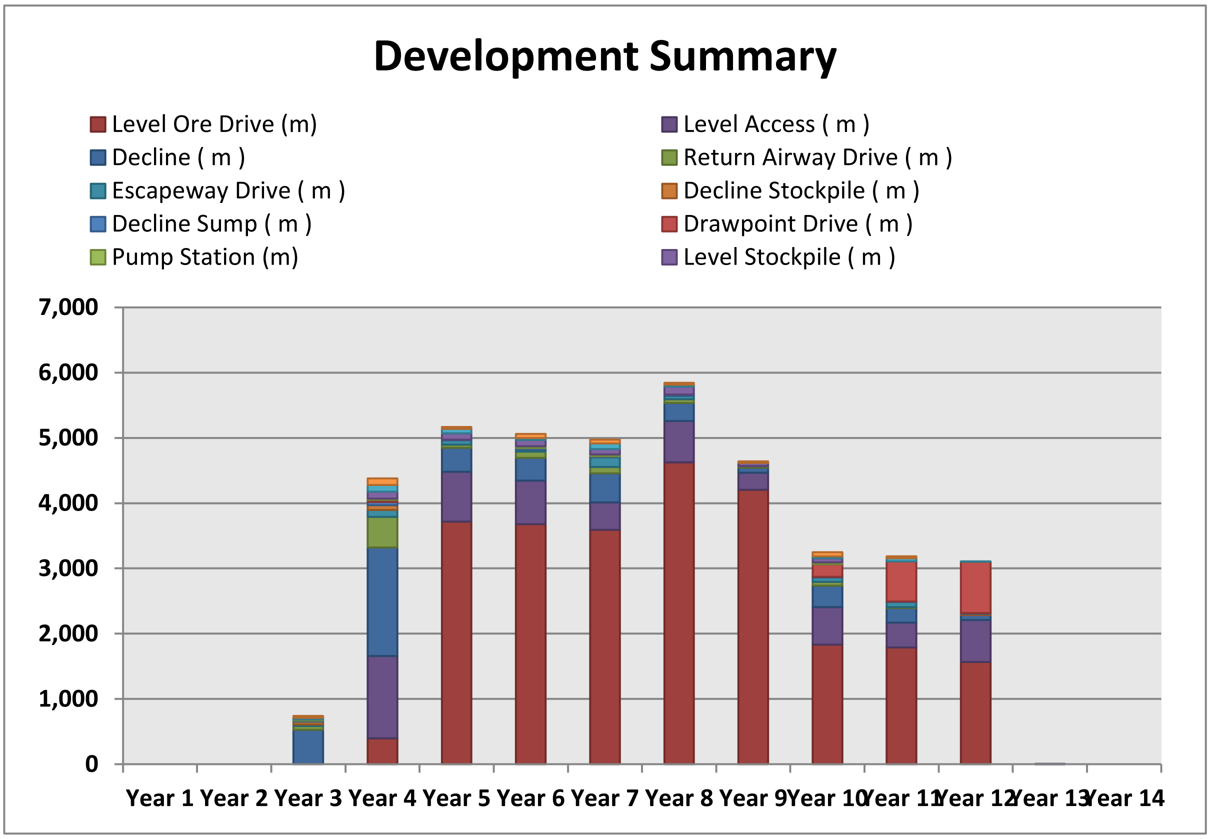


Figure 25-9 Development Schedule by Type

Table 25-4 Summary Production Schedule

Description	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
ORE DEVELOPMENT															
HG Ore Development (m)	**16,973**	-	-	-	314	2,264	2,735	2,673	2,672	2,686	1,255	1,390	982	2	-
HG Ore Development (t)	**763,940**	-	-	-	14,120	101,606	123,844	120,593	119,616	120,137	56,609	62,876	44,455	84	-
HG Ore Development Grade	**5.13**	-	-	-	3.35	4.14	5.11	5.26	4.67	6.48	5.44	5.87	3.88	7.97	-
HG AU Ounces (oz)	**126,102**	-	-	-	1,521	13,512	20,344	20,406	17,968	25,028	9,901	11,860	5,540	21	-
LG Ore Development (m)	**7,241**	-	-	-	138	1,044	998	825	1,443	761	543	631	857	-	-
LG Ore Development (t)	**335,134**	-	-	-	6,740	47,993	46,324	37,732	65,496	34,783	25,397	30,033	40,637	-	-
LG Ore Development Grade	**1.61**	-	-	-	1.56	1.57	1.66	1.47	1.67	1.63	1.60	1.53	1.65	-	-
LG AU Ounces (oz)	**17,297**	-	-	-	338	2,421	2,475	1,784	3,514	1,823	1,310	1,482	2,151	-	-
WASTE (Lat + Vert)															
Waste Development (m)	**23,399**	-	-	738	4,741	2,842	2,342	2,069	2,084	1,471	2,426	2,660	1,930	97	-
Waste Developemnt (t)	**1,215,005**	-	-	43,356	258,784	144,000	123,031	105,900	105,260	71,475	126,740	133,944	97,912	4,604	-
ALL DEVELOPMENT															
Total Devlopment (m)	**47,613**	-	-	738	5,193	6,150	6,076	5,567	6,199	4,918	4,224	4,681	3,770	99	-
Total Development (t)	**2,314,079**	-	-	43,356	279,645	293,599	293,198	264,225	290,372	226,394	208,746	226,853	183,004	4,687	-
STOPE PRODUCTION															
Production Drill Metres (drm)	**830,313**	-	-	-	4,150	60,124	75,334	76,164	75,179	88,449	100,856	126,412	109,131	110,802	3,713
Short Hole Stope (t)	**2,292,340**	-	-	-	7,527	229,162	292,767	315,962	300,293	348,486	289,767	144,740	192,633	156,827	14,175
Short Hole Stope (g/t)	**4.46**	-	-	-	2.42	3.23	3.80	4.33	4.54	5.02	5.69	4.94	4.39	3.81	3.71
Short Hole AU Ounces (oz)	**328,336**	-	-	-	587	23,826	35,722	44,013	43,873	56,242	52,964	23,000	27,203	19,218	1,689
TRC Stope (t)	**701,436**	-	-	-	3,985	-	-	-	-	-	85,128	217,725	236,921	157,677	-
TRC Stope (g/t)	**3.85**	-	-	-	2.41	-	-	-	-	-	3.69	3.96	4.03	3.55	-
TRC AU Ounces (oz)	**86,856**	-	-	-	309	-	-	-	-	-	10,102	27,724	30,717	18,004	-
Total Stope Ore (t)	**2,993,777**	-	-	-	11,512	229,162	292,767	315,962	300,293	348,486	374,895	362,465	429,555	314,504	14,175
Total Stope Ore (g/t)	**4.31**	-	-	-	2.42	3.23	3.80	4.33	4.54	5.02	5.23	4.35	4.19	3.68	3.71
Total St0pe AU Ounces (oz)	**415,192**	-	-	-	895	23,826	35,722	44,013	43,873	56,242	63,066	50,724	57,920	37,223	1,689
PRODUCTION SUMMARY															
TOTAL Ore Tonnes (t)	**4,092,851**	-	-	-	32,373	378,761	462,935	474,288	485,405	503,405	456,901	455,373	514,647	314,587	14,175
TOTAL Ore Grade (g/t)	**4.24**	-	-	-	2.65	3.26	3.93	4.34	4.19	5.13	5.06	4.38	3.97	3.68	3.71
TOTAL AU Ounces (oz)	**558,591**	-	-	-	2,755	39,759	58,540	66,203	65,355	83,092	74,277	64,066	65,611	37,244	1,689
BACKFILL															
TOTAL Backfill (t)	**2,864,880**	-	-	-	8,367	223,828	306,624	322,458	300,716	326,135	315,023	280,440	272,604	484,140	24,545
TOTAL Backfill (m3)	**1,432,440**	-	-	-	4,183	111,914	153,312	161,229	150,358	163,067	157,512	140,220	136,302	242,070	12,272

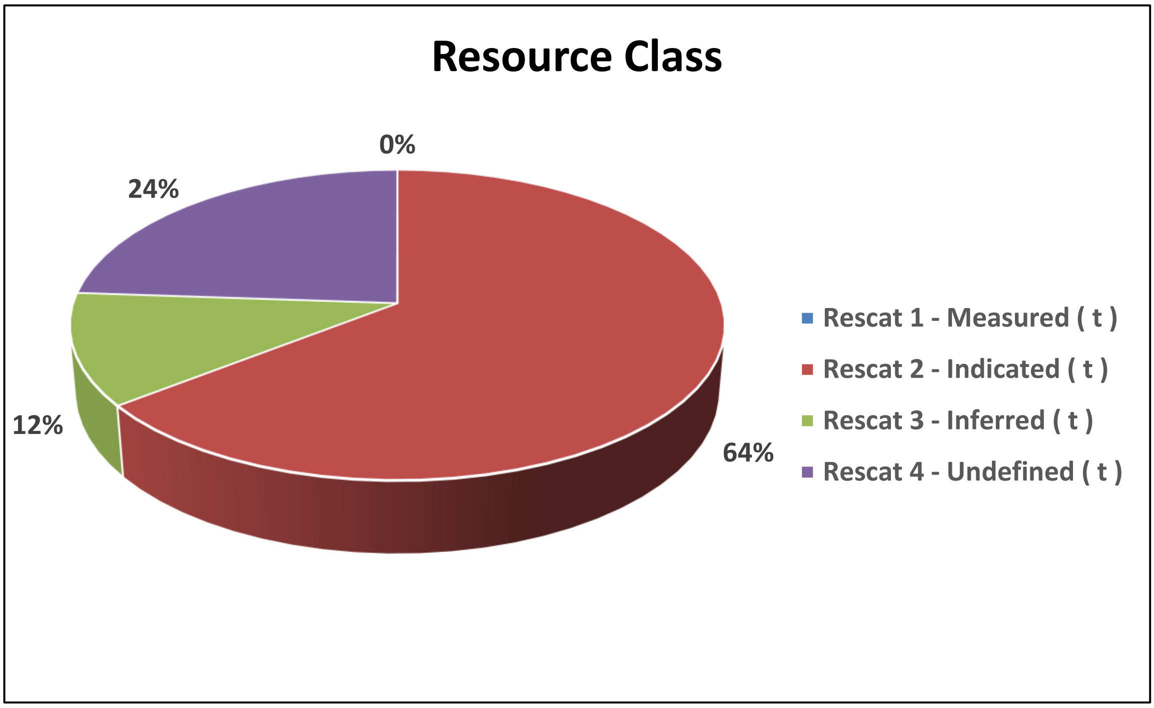


Figure 25-10 Mining Inventory by Resource Category

25.3 Combined Production Schedule

A combined production schedule is shown below for mining both the open pit (commencing April 2021) and underground (commencing December 2022). It is envisaged that interaction between the open pit and underground will not have a significant effect on the productivity of either. It is assumed that stockpiling will be minimal or have a minimal effect on the economics of the resource. Figure 25-11, Figure 25-12 and Table 25-5. provide the details of the combined production profile for the open pit and underground operation for the SGP optimised LoM Plan.

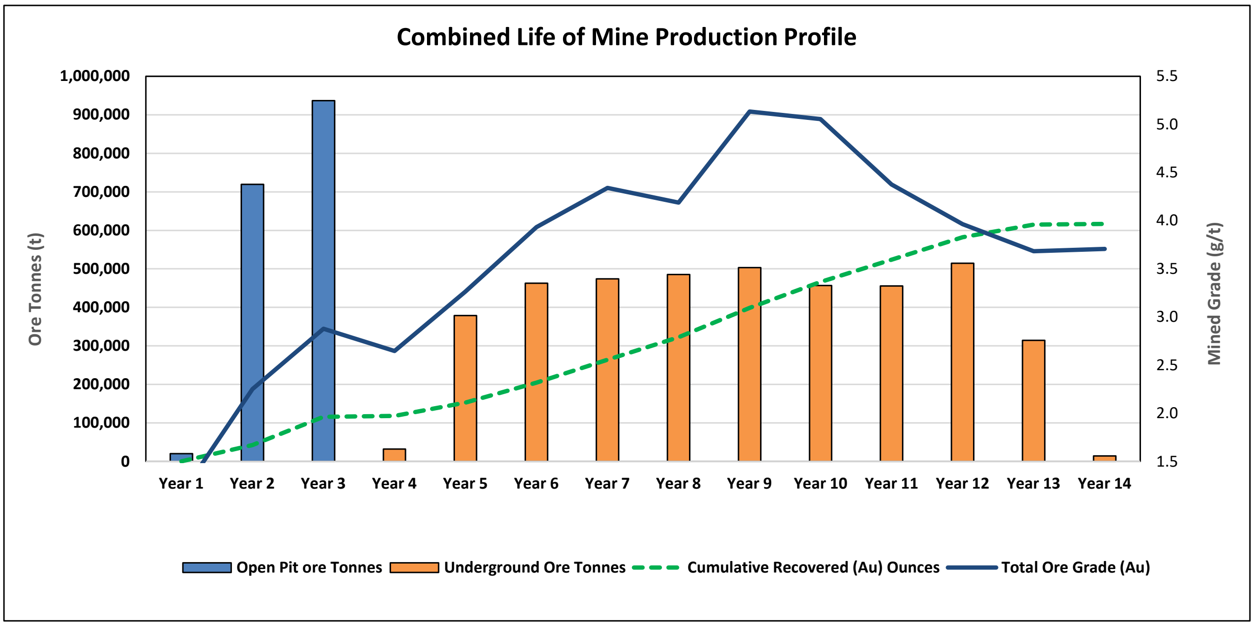


Figure 25-11 Overall Mine Production Profile

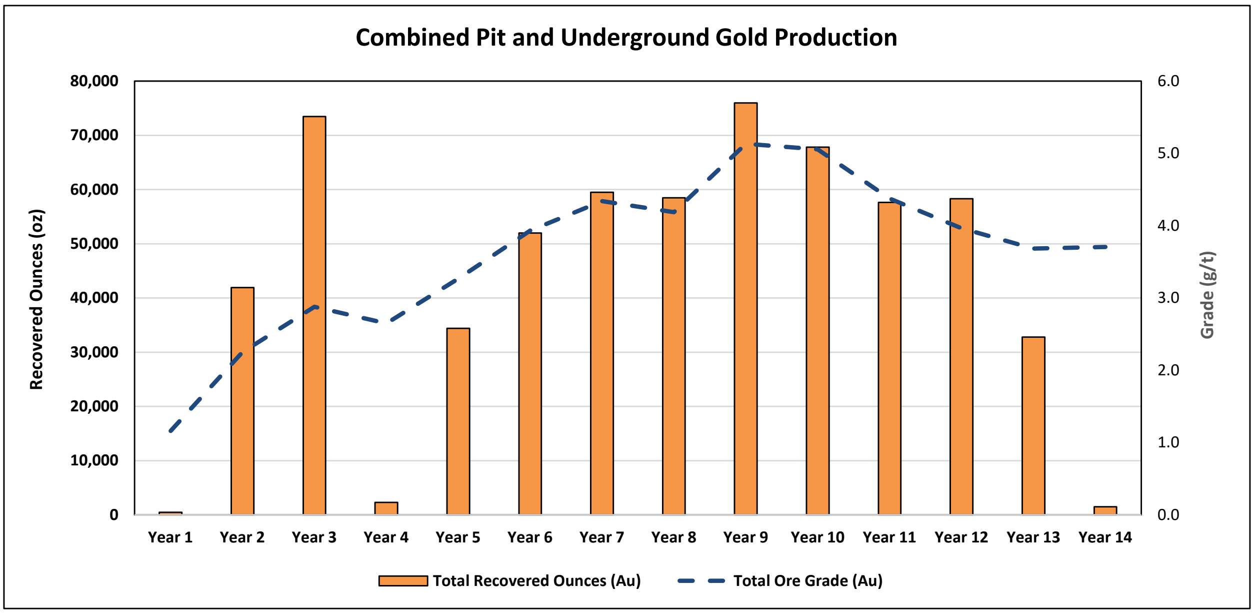


Figure 25-12 Overall Gold Production by Year Associated with the Life of Mine Plan

Table 25-5 Summary of Combined Open Pit and Underground Production

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Total
Open Pit Production	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	
Open Pit ore Tonnes	20,394	719,515	936,958												1,676,867
Open Pit Grade (Au)	1.16	2.25	2.88												2.59
Open Pit Mined Ounces	760	52,078	86,710												139,549
Open Pit Revovered Ounces	472	41,900	73,456												115,828
Underground Production															
Underground Ore Tonnes				32,373	378,761	462,935	474,288	485,405	503,405	456,901	455,373	514,647	314,587	14,175	4,092,851
Underground Grade (Au)				2.65	3.26	3.93	4.34	4.19	5.13	5.06	4.38	3.97	3.68	3.71	4.24
Underground Mined Ounces				2,755	39,759	58,540	66,203	65,355	83,092	74,277	64,066	65,611	37,244	1,689	558,591
Underground Recovered Ounces				2,297	34,401	51,991	59,494	58,488	75,971	67,814	57,624	58,330	32,794	1,489	500,692
Combined Production															
Total Ore Tonnes	20,394	719,515	936,958	32,373	378,761	462,935	474,288	485,405	503,405	456,901	455,373	514,647	314,587	14,175	5,769,718
Total Ore Grade (Au)	1.2	2.3	2.9	2.6	3.3	3.9	4.3	4.2	5.1	5.1	4.4	4.0	3.7	3.7	3.8
Total Mined Ounces	760	52,078	86,710	2,755	39,759	58,540	66,203	65,355	83,092	74,277	64,066	65,611	37,244	1,689	698,140
Total Recovered Ounces (Au)	472	41,900	73,456	2,297	34,401	51,991	59,494	58,488	75,971	67,814	57,624	58,330	32,794	1,489	616,520
Cumulative Recovered (Au) Ounces	472	42,372	115,828	118,125	152,525	204,517	264,010	322,498	398,469	466,283	523,907	582,237	615,031	616,520	616,520

27 FINANCIAL ASSESSMENT

27.1 Financial Assumptions

A range of assumptions key to the financial assessment was provided by Red 5 (Table 27-1). These assumptions are based on what is currently observed on site. To the extent possible, these assumptions have been validated and are thus considered reasonable.

The financial analysis for the life of mine plan includes an assessment of the cash value of mining the Siana underground and open pit resource. It does include revenue from processing ore stockpile from the open pit works or other sources. It does not take into account financing costs (if required), taxation (apart from excise tax, royalties and other local direct taxes) or the distribution of costs not directly associated with the project (depreciation, previous losses and the like). Capital costs directly associated with mining the resource are accounted for in the financial modelling.

A gold price of US$1400 per ounce of gold and US$14 per ounce of silver was used for the financial analysis. These prices were supplied by Red 5 and considered to be consistent with long term estimates provided by (World Bank Group, 2020) (International Monetary Fund, 2019). The relevant royalties and excise taxes have been applied, although a company tax has not been applied.

The discount rates chosen are for the purpose of measuring the value of the resource relative to a conservative alternative investment. This allows for a proper valuation of the project given the risks involved; or from a different perspective, an estimate of the value of the risk. Using aggressive discount rates are sometimes used to account for the level of the risk in the financial model itself. However, this approach has been criticised on the grounds that it can produce a bias towards short term investments and does not properly value long term mine plans (Hall, 2014). For the purpose of the current Life of Mine plan estimate a discount rate of 5% was used.

Table 27-1 Key Financial Assumptions

Assumption		Unit	Rate
Exchange Rates	PHP/USD		50
	PHP/AUD		38.00
	AUD/USD		0.70
Discount Rate		%	5
Metal Prices	Gold	US$	1,400
	Silver	US$	14
Metal Weight Conversion	Troy Ounce / Grams		31.103
Fuel Price		US$/L	0.61
Power cost		US$/kWh	0.15
Material Moisture Content	Ore	%	15

	Waste	%	8
Processing Rate	Name Plate	dmt/day	3,264
	Actual	dmt/day	2,389
Recoveries	Gold (Fixed Tail)	g/t	0.44
	Silver	%	45
Metal Price Received	Gold	US$/g	38.58
Processing	Variable	US$/t	17.25
	Fixed	US$/month	110,000
Other	G&A	US$/month	600,000
	Rehandle	US$/t	0.37

27.2 Life of Mine Economic Value

Financial modelling of the LoM mine plan was based on a combination of assumptions supplied by Red 5 and cost and production inputs resulting from the schedule modelling. Cost estimates were based on either recently updated database figures or budget quotes from local or international suppliers. In particular, a Philippines based contract mining were used to estimate the direct mining costs. Fuel, power and labour cost are already received on site, and were provided by Red 5. Quotes for consumables such as explosives, ground support, cement, drilling tools were obtained. Quotes or budget estimates for major capital items were also sought. Processing and administration costs were supplied by Red 5 and are based on historical site-based data.

Outotec provided an updated binder price, capital and operating cost for the paste plant.

Metallurgical recoveries were supplied by Red 5 and are based on what has historically been achieved in the mill. Other modifying factors such as dilution and mining recovery have been estimated by Mining One and applied accordingly.

All tunnel development that is low grade or above is accounted for as an operating cost.

27.3 Lead and Zinc Value

The value of the lead and zinc contained within the stope shapes was also assessed. Although there is some indication that this may in the near future constitute part of the mineral value, it was excluded from the financial assessment of the current ore reserve estimate.

28 CONCLUDING REMARKS AND RECOMMENDATIONS

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

In addition to the conclusions and recommendations in the above reports the selected sub-level interval is to cater for a 10 metre high short-hole stope, however there may be an opportunity to increase the sub-level height with the intent to excavate a stope with shorter strike length but maintain the same hydraulic radius as recommended in the 2016 Feasibility Study. There are many benefits with mining a short strike stope over an increased sub-level height, including:

- Reduction in the number of levels.
- Reduction in level development requirements and improving jumbo productivity.
- Optimising the decline design and location.
- Increase production rates though improved efficiency and productivity.
- Reduction in remote bogging requirements.
- Improved turnover of paste filing process from preparation to filling.
- Drilling longer production holes and hence reducing the number of holes per stope tonne.
- Reduction in power requirements.

Mining One recommends that a further geotechnical study should be undertaken to investigate the sub level height in light of the sub-level to stope strike length ratio if this opportunity was further pursued.

29 BIBLIOGRAPHY

Refer to Siana Feasibility Study Update and Ore Reserve Report, July 2020 and Siana Underground Feasibility Study, May 2016.

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