CHESSER'S SCOPING STUDY CONFIRMS ROBUST LOW-COST GOLD PROJECT AT DIAMBA SUD, SENEGAL

Chesser Resources Limited ("Chesser" or "the Company") (ASX:CHZ) is pleased to report on the results of the Scoping Study undertaken over the Area A and Area D Mineral Resources at the Diamba Sud Gold Project ("Project") in Senegal, West Africa.

STUDY HIGHLIGHTS[1]

- Pre-tax **NPV_5 A$560M** (US$402M) **and IRR 69%** at a US$1,800/oz gold price
- Post-tax **NPV_5 A$419M** (US$301M) **and IRR 59%** at a US$1,800/oz gold price
- **Payback 1.25 years** from commercial production
- **7.5-year Project life producing 704koz gold at an average AISC of US$820/oz**
- **First two years of gold production totals 244koz at an average AISC of US$545/oz**
- Total Project mining inventory of 14.7Mt at an average grade of 1.6g/t gold (70% from Indicated Resources) containing 750koz of gold at a strip ratio of 2.8
- Ore mined and processed in first two years of operations @ an average grade of 2.0g/t gold (83% from Indicated Resources) containing 257koz of gold at a strip ratio of 1.9
- Pre-production capital cost of US$159M including US$23M contingency
- Industry standard 2Mtpa CIL processing circuit with average gold recoveries of 94%
- **Significant Resource upside** – Areas A and D remain open and new discovery at Area H (Karakara) with drilling underway
- Opportunities to further enhance economics through project optimisation
- ESIA baseline activities have commenced
- Board approval to commence a Definitive Feasibility Study
- Diamba Sud represents a **potential long life, technically simple, low risk and highly profitable mining operation** that will generate significant benefits to all stakeholders

The Scoping Study results clearly demonstrate the very significant potential value from a future mine development at Diamba Sud. Importantly the study does not include any potential Mineral Resources from the new discovery at Area H (Karakara) or any further resource additions that might result from the current 15,000m to 20,000m drilling program all of which would further enhance the value of the Diamba Sud Project

Chesser MD and CEO Andrew Grove commented*: "These excellent Scoping Study results clearly demonstrate that there is a low risk and very robust potential future gold mine at Diamba Sud. The Project economics are expected to improve with future growth in Mineral Resources associated with the current drilling campaign which is focussed on defining the new discovery at Karakara and extending the resources at Areas A and D, as well as exploration leading to new discoveries. Relative to the Company's current market capitalisation of ~A$50m, the Scoping Study NPV of approximately A$560m and resource growth potential at the Project highlights the potential for significant future value creation for Chesser shareholders."*

[1] All Scoping Study results are approximate. Cost estimates are subject to Scoping Study level of accuracy of +/- 35%.

Cautionary Statement

The Scoping Study referred to in this ASX release has been undertaken for the purpose of initial evaluation of a potential development of the Diamba Sud Gold Project, Senegal. It is a preliminary technical and economic study of the potential viability of the Diamba Sud Gold Project. The Scoping Study outcomes, production target and forecast financial information referred to in this release are based on low accuracy level technical and economic assessments that are insufficient to support estimation of Ore Reserves. The Scoping Study has been completed to a level of accuracy of +/- 35% in line with a scoping level study accuracy. While each of the modifying factors was considered and applied, there is no certainty of eventual conversion of Mineral Resources to Ore Reserves or that the production target itself will be realised. Further exploration and evaluation work and appropriate studies are required before any Ore Reserves or assurance of an economic development case. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

Of the Mineral Resources scheduled for extraction in the Scoping Study production plan approximately 70.3% are classified as Indicated and 29.7% as Inferred. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised. Inferred Resources comprise 22% of the production schedule in the first two years of operation and the payback period which is 1.25 years. Chesser confirms that the financial viability of the Diamba Sud Gold Project is not dependent on the inclusion of Inferred Resources in the production schedule.

The Mineral Resources underpinning the production target in the Scoping Study have been prepared by a competent person in accordance with the requirements of the JORC Code (2012). The Competent Person's Statement is found in this ASX release. For full details of the Mineral Resources estimate, please refer to Chesser's ASX release dated 16 November 2021. The Competent Person's Statement is found in this ASX release. Chesser confirms that it is not aware of any new information or data that materially affects the information included in that release. All material assumptions and technical parameters underpinning the estimates in that ASX release continue to apply and have not materially changed.

This release contains a series of forward-looking statements. Generally, the words "expect," "potential", "intend," "estimate," "will" and similar expressions identify forward-looking statements. By their very nature forward-looking statements are subject to known and unknown risks and uncertainties that may cause our actual results, performance or achievements, to differ materially from those expressed or implied in any of our forward-looking statements, which are not guarantees of future performance. Statements in this release regarding Chesser's business or proposed business, which are not historical facts, are forward-looking statements that involve risks and uncertainties, such as Mineral Resource estimates, market prices of gold, capital and operating costs, changes in project parameters as plans continue to be evaluated, continued availability of capital and financing and general economic, market or business conditions, and statements that describe Chesser's future plans, objectives or goals, including words to the effect that Chesser or management expects a stated condition or result to occur. Forward-looking statements are necessarily based on estimates and assumptions that, while considered reasonable by Chesser, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in such statements. Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made.

Chesser has concluded that it has a reasonable basis for providing these forward-looking statements and the forecast financial information included in this release. This includes a reasonable basis to expect that it will be able to fund the development of the Diamba Sud Gold Project upon successful delivery of key development milestones and when required. The detailed reasons for these conclusions are outlined throughout this ASX release and Section 18 in Attachment 1 Scoping Study report. While Chesser considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

To achieve the potential mine development outcomes indicated in the Scoping Study, funding in the order of US$180 million will likely be required. Investors should note that there is no certainty that the Company will be able to raise funding when needed, however the Company has concluded that it has a reasonable basis for providing the forward-looking statements included in this announcement and believes that it has a "reasonable basis" to expect it will be able to fund the development of the Project.

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions, including sufficient progression of all JORC modifying factors, on which the production target and forecast financial information are based have been included in this ASX release.

CONFERENCE CALL

Managing Director, Andrew Grove, will host a conference call to discuss the Scoping Study at 11:00AM Australian Eastern Daylight Time ("AEDT")/ 8:00AM Australian Western Standard Time ("AWST") on Wednesday 16 March 2022.

Participants will be able to access the webinar approximately five minutes before the start of the event, using the link below:

https://zoom.us/j/99568872552

Meeting ID: 995 6887 2552

Dial by your location

+61 8 6119 3900 Australia (Perth)
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INTRODUCTION

This Scoping Study details the potential for an open pit mining operation and gold processing plant at Chesser's Diamba Sud gold project in Eastern Senegal.

Diamba Sud is located within the highly prospective Senegal Mali Shear Zone which hosts numerous world-class gold mines including Barrick's 12.5Moz Loulo mine and its 5.5Moz Gounkoto mine, both located within 12km and 7km of Diamba Sud respectively.

The Project is located within the 53.2km^2 Diamba Sud permis de recherche (exploration license) which is 100% owned by Boya SAU a wholly owned Senegalese subsidiary of Chesser. The Senegalese government is entitled to a 10% free carried interest in the project upon granting of the exploitation permis (mining license).

Site is accessed from the sealed N24 highway which runs within a few kilometres of the Project and connects Dakar, the capital and main port of Senegal to Mali. The nearest community, Gamba, is located 5km west of the project site.

The Scoping Study is based on the 781koz gold maiden Mineral Resource inventory covering Area A and Area D, released to the market on the 16 November 2021, summarised in Table 1. Resources do not include mineralisation from the new discover at Area H (Karakara), located 1.2km from the Area D pit, Figure 4.

Table 1: Maiden Mineral Resource- Diamba Sud[1]

Resources Constrained within US$1,800/oz pit shell by Material Type and Classification – COG 0.5g/t									
Oxidation	Indicated			Inferred			Total		
	Tonnes	Grade	Metal	Tonnes	Grade	Metal	Tonnes	Grade	Metal
	Mt	g/t	Koz	Mt	g/t	Koz	Mt	g/t	Koz
Oxide	3.7	2.2	262	1.3	1.2	50	5.0	2.0	312
Fresh	5.1	1.7	276	5.1	1.2	194	10.3	1.4	469
Total	**8.8**	**1.9**	**538**	**6.4**	**1.2**	**243**	**15.2**	**1.6**	**781**

A standard 2Mtpa CIL SAG/Ball circuit gold processing plant was considered to be appropriate for the Scoping Study. Tailings from the CIL will undergo cyanide detox and report to a tailings storage facility. Raw water for processing will be sourced by seasonal pumping from the Falémé River, approximately 7km to the east, to a water storage dam.

Mining from three open pits (Area D, Area A and Area D South) is assumed to be undertaken by a mining contractor utilising standard truck and shovel open pit mining methods.

The project will include an on-site accommodation village housing part of the workforce, with the balance residing in adjacent communities. Power will be generated on site.

[1] Refer to ASX announcement dated 16 November 2021 for details of the Mineral Resource Estimates which includes a Competent Person statement prepared in accordance with the requirements of the JORC Code (2012). The Company is not aware of any new information or data that materially affects the information included in the referenced ASX announcement and confirms that all material assumptions and technical parameters underpinning the estimates in the market announcement continue to apply and have not materially changed.

The cash flow and economic analysis has been prepared on a 100% of project, constant first quarter calendar 2022 US dollar basis. Cost estimations are considered to be at a scoping study level of accuracy of +/-35%.

The Scoping Study inputs were compiled from reports prepared by external consultants and certain estimates generated by Chesser (Table 2) and assessed to be at a scoping level of accuracy.

The Scoping Study report can be found in Attachment 1 and the JORC Tables in Attachment 2 of this release.

Table 2: Scoping Study Contributions

STUDY INPUTS	
Study Compilation	Chesser
Geology	Chesser
Resource Estimation	Dr. John Arthur (CGeol, FGS)
Geotechnical	Peter O'Bryan & Associates
Mining Design and Scheduling	Cube Consulting
Mine Operating Costs	Majesso Consulting Pty Ltd
Metallurgy Testwork	ALS, Lycopodium Limited, JK Tech, IMO and Mintrex
Process Engineering and Design	Mintrex
Operating Costs	Mintrex
Infrastructure	Mintrex
Capital Costs	Mintrex
Environmental, Social and Licensing	Chesser, Earth Systems SARL and ESS
Tax and Fiscal terms	Chesser and Senegalese Legal input
Financial Modelling	Infinity Corporate Finance, Orimco and Chesser

Figure 1: Diamba Sud project aerial photo, looking east

KEY STUDY OUTCOMES and ASSUMPTIONS

The Scoping Study demonstrated the technically simple and low risk nature of the Project and the very significant potential economic value that would result from a future development at Diamba Sud. There remains significant upside both in exploration to add to the Mineral Resource inventory and from future Project optimisation studies. A summary of the initial physical and financial evaluation of the Project is shown in Table 3 with additional details provided in the Scoping Study report.

Table 3: Scoping Study Results and Key Assumptions[1]

DIAMBA SUD GOLD PROJECT SUMMARY SCOPING STUDY RESULTS		
Physicals and Costs		
Mining Physicals		
Ore Tonnage	Mt	14.7
Grade	g/t Au	1.6
Contained Ounces	koz Au	750
Plant Throughput	Mtpa	2.0
Mine Life	Years	7.5
Strip Ratio	waste:ore	2.8
Process Recovery	%	94
Gold Production	koz Au	704
Capital Costs		
Initial Capital	US$M	142
Pre-production Mining	US$M	17
Sustaining and Closure	US$M	23
Total Capital Cost	US$M	182
Operating Costs		
Mining	US$/t total material	3.9
Mining	US$/t Ore mined	14.7
Processing	US$/t Ore processed	14.1
Maintenance	US$/t Ore processed	1.5
General & Administration	US$/t Ore processed	4.1
Transport, Insurance and Refining	US$/t Ore processed	0.1
Royalties & Statutory Costs	US$/t Ore processed	3.0
Total	US$/t Ore processed	37.6
Financials and Key Assumptions		
Gold Price	US$/oz	1,800
Exchange Rates	AUD:USD	0.72
	XOF:USD	581
Gold Sales Revenue	US$M	1,267
AISC	US$/oz Au	820
AISC - first two years	US$/oz Au	545
Project Net Cash Flow - Pre-tax		
Project Net Cash Flow, pre tax	US$M	531
PVNCF5%	US$M	402
IRR	%	69
Payback Period, pre-tax	Months	15
Project Net Cash Flow - Post-tax, all equity basis		
Income Tax	US$M	132
Project Net Cash Flow,	US$M	399
PVNCF5%	US$M	301
IRR, post-tax	%	59
Payback Period	Months	15

[1] All Scoping Study results are approximate. Cost estimates are subject to Scoping Study level of accuracy of +/- 35%.

MINING and PROCESSING and INFRASTRUCTURE

Contractor mining will be undertaken from three open pits using industry standard truck and shovel mining methods, Figure 2. Ore cut-off grades were determined to be 0.5g/t gold for weathered and 0.6g/t gold for fresh materials.

Metallurgical testwork returned high gold recoveries, averaging 96% (94% recovery used in Scoping Study), rapid leaching with low reagent usage and no evidence of refractory or preg-robbing ore materials.

An industry standard 2Mtpa gold processing plant, shown in Figure 3, containing SAG/Ball circuit grinding to 75µm, classification, a gravity circuit, CIL, split AARL elution, electrowinning and smelting to produce gold dore was selected.

Tailings from the CIL will undergo cyanide detox and report to a Tailings Storage Facility ("TSF").

Raw water for processing will be sourced by seasonal pumping from the Falémé River to a water storage dam. Process water will be supplied from the TSF decant water and thickener overflow.

The project will include an on-site accommodation village housing part of the workforce, with the balance residing in adjacent communities.

12MW of power will be generated on site under a Build Own Operate ("BOO") contract arrangement.

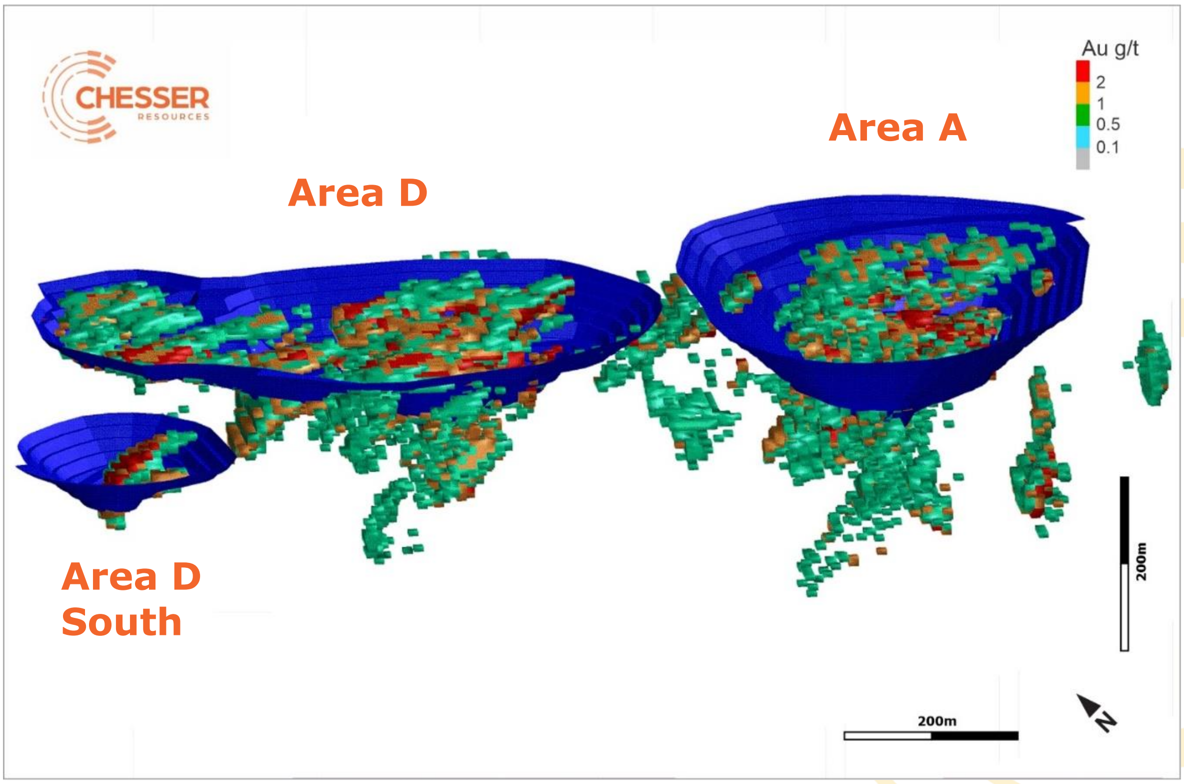

Figure 2: Diamba Sud Pit Design and Resource Blocks

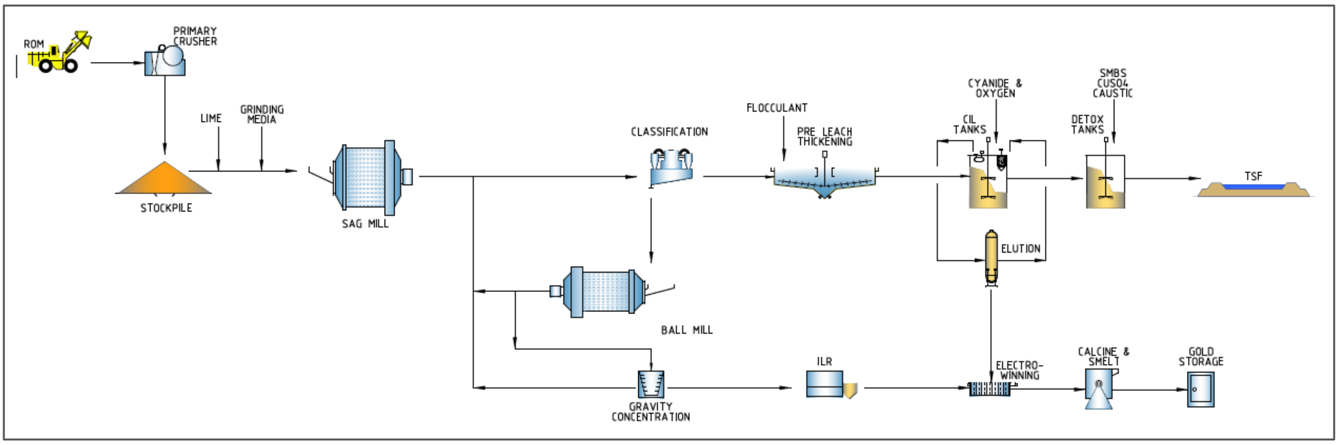

Figure 3: Diamba Sud Process Flowsheet

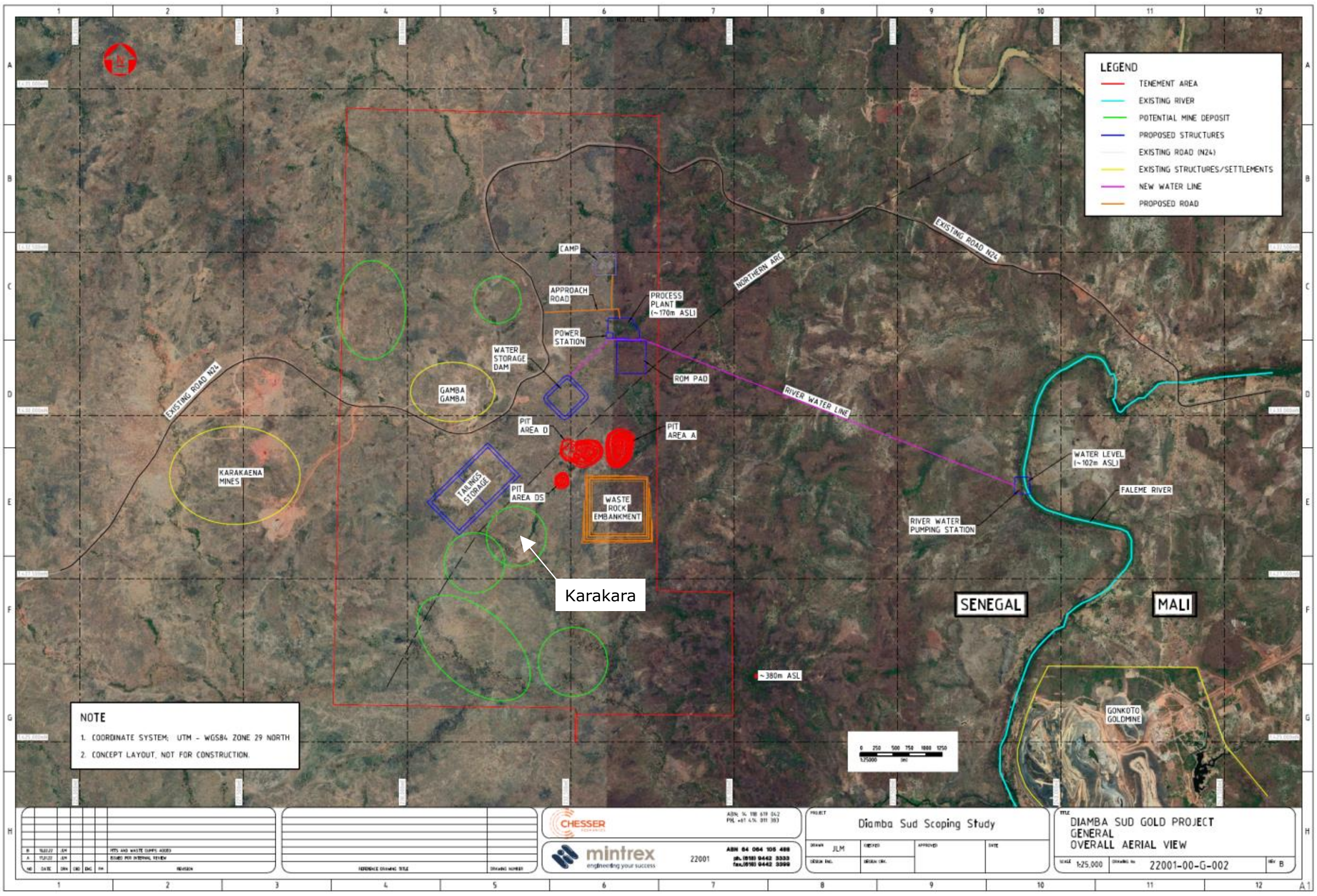

Figure 4: Diamba Sud Project Layout

PRODUCTION PROJECTIONS

The production profile of the Diamba Sud Gold Project demonstrates annual production of up to 136koz in year two, with an average production of 94koz per year over the current Project life. 70% of the gold production is sourced from Indicated Resources and the remainder from Inferred Resources. During the first two years of production which includes the payback period, gold production is sourced 83% from Indicated Resources, mainly from the Area D pit. The increase in Inferred material processed in years three and four relates to mining from the Area D South pit which will be subject to further drilling targeting an increase in the proportion of Indicated Resources. In addition, mining schedule optimisation may lead to mining from the Area D South pit being deferred until later in the mine life.

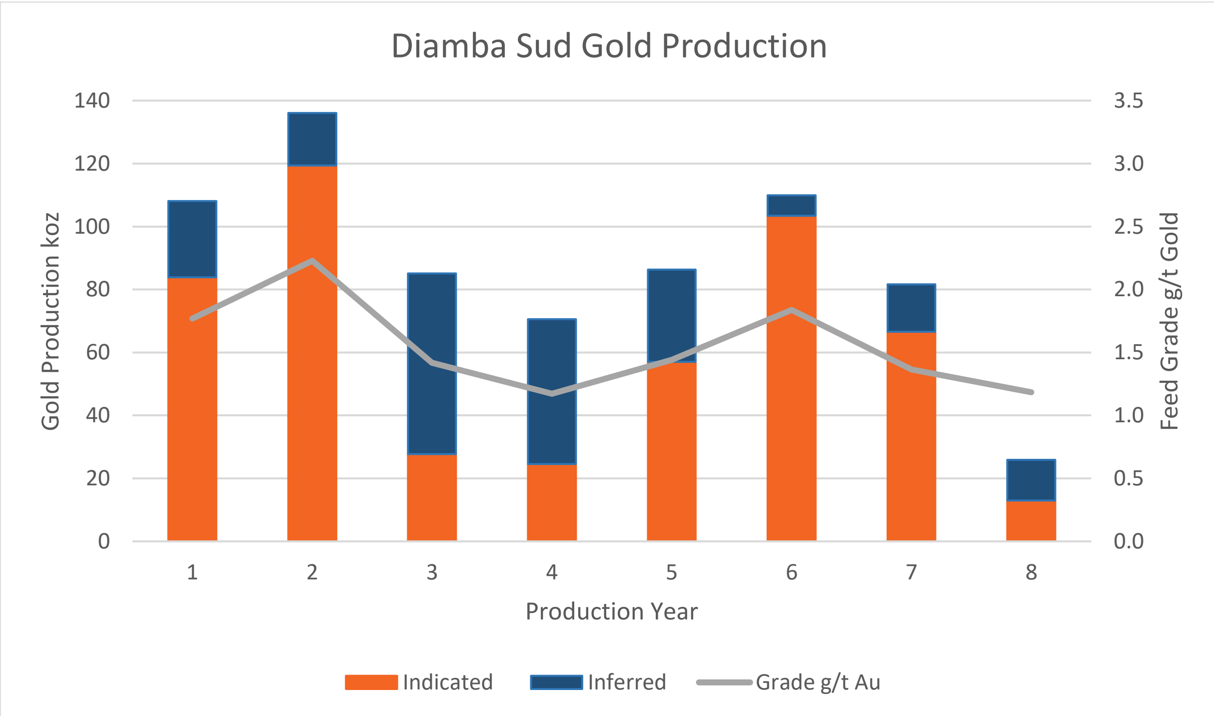

Figure 5: Diamba Sud Annual Production Projection (koz gold)

SENSITIVITY ANALYSIS

Sensitivity analysis shows the Project to be resilient to changes in both capital and operating costs. Like most mining projects the economics are most sensitive to changes in revenue parameters such as the commodity price.

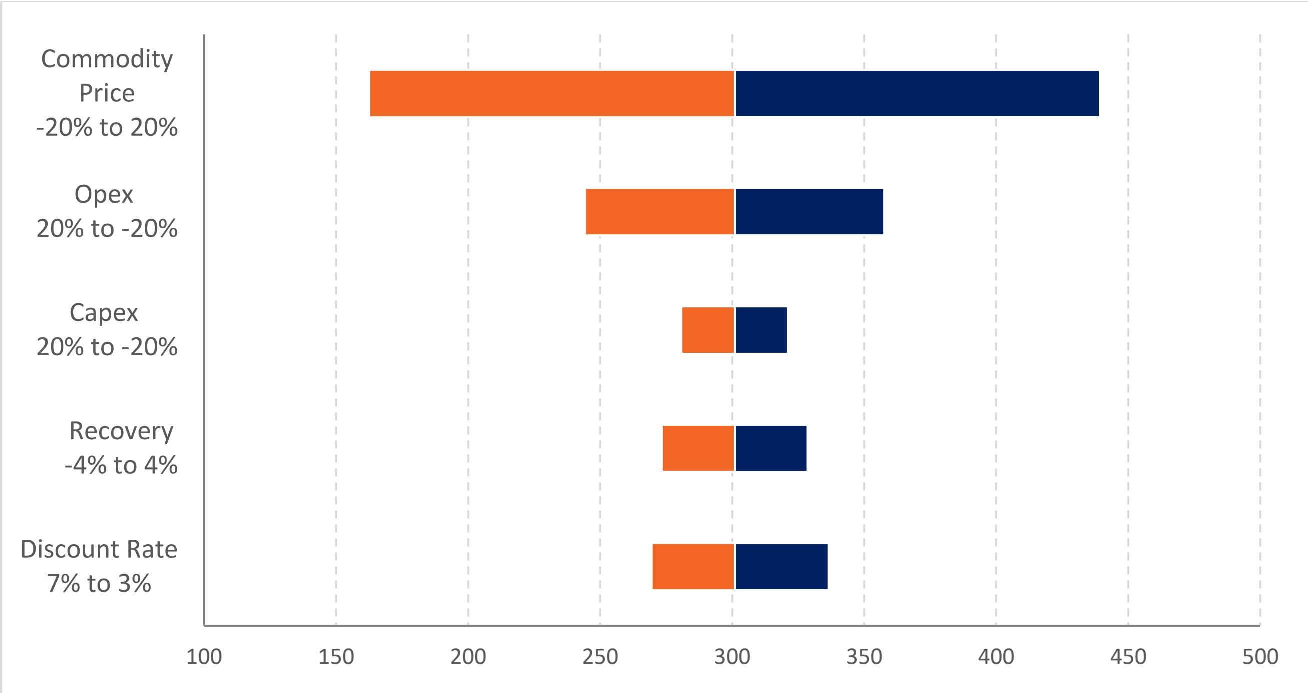

Figure 6: Project NPV (post tax) Sensitivity Analysis (US$M)

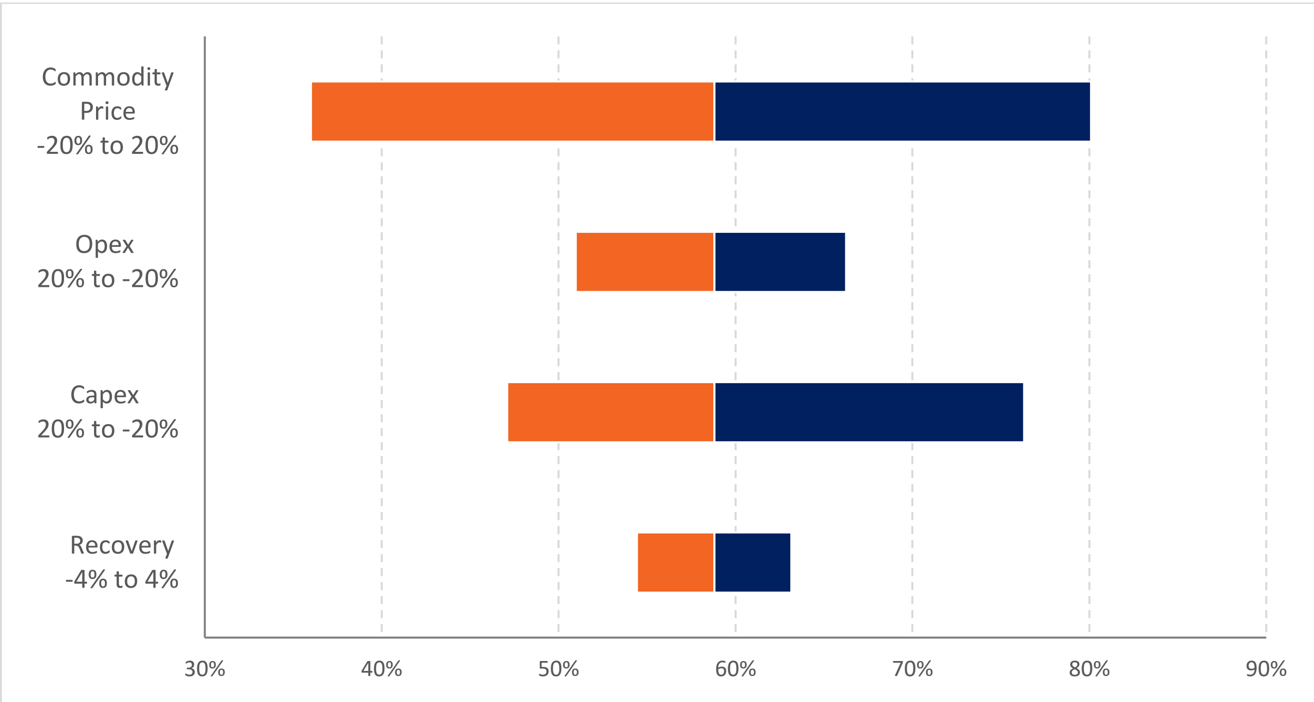

Figure 7: Project IRR (post tax) Sensitivity Analysis (%)

CAPITAL COST ESTIMATE

The Scoping Study costs are provided in US Dollars and target a Class 5 (+/- 35%) estimate as defined by the American Association of Cost Engineering ("AACE"). As the basis for its capital cost estimate, Mintrex used a Class 3 Bankable Feasibility Study ("BFS") estimate prepared in 2018 for a similar scaled gold project in a comparable West African location. The reference project progressed to operation, substantially validating that previous estimate. For this Study contingencies were increased to reflect the lower definition (resources, testwork, vendor pricing) of the work undertaken. The overall contingency is US$23M which is ~20% of the base estimate. The rates for project bulks and labour were adjusted based on a 2021 BFS for another project in West Africa.

Pre-production mining costs were derived from the Majesso Consulting mining study. These costs relate to mining activities for a period of approximately eight months before commercial production starts.

Table 4: Diamba Sud Capital Cost Estimate[1]

CAPITAL COSTS	US$M
Pre-Production Mining	17.1
Process Plant	**58.2**
Construction Overheads	5.7
Bulk Earthworks	1.1
EPCM	10.4
Primary Crushing	3.9
Milling & Classification	20.7
Leaching & Adsorption	9.6
TSF & Decant Return	0.5
Metal Recovery & Refining	2.7
Reagents	1.2
Services	2.6
Infrastructure	**36.6**
Tailings Storage Facility	8.8
Process Plant Infrastructure	14.1
Camp	7.8
Power Supply	3.1
Plant Vehicles & Mobile Equipment	2.7
Other Costs	5.6
Owner's Costs	15.8
Contingency (~20%)	23.3
WHT, duties, levies	2.3
Total Pre-Production Capital Capital	**159**
Sustaining & Closure Capital	22.7
Total LOM Capital	**182**

[1] All Scoping Study results are approximate. Cost estimates are subject to Scoping Study level of accuracy of +/- 35%.

OPERATING COST ESTIMATE

The operating cost estimate was prepared by Majesso Consulting and Mintrex to an accuracy of +/-35%.

Majesso Consulting estimated the mining costs based on a contractor mining strategy.

Mintrex's operating cost estimate was based on a Class 3 BFS estimate prepared in 2018 for the reference project.

Table 5: Diamba Sud Operating Cost Estimate[1]

UNIT COSTS		
Mining	USD/t total material	3.9
Mining	USD/t Ore mined	14.7
Processing	USD/t Ore processed	14.1
Maintenance	USD/t Ore processed	1.5
General & Administration	USD/t Ore processed	4.1
Transport, Insurance and Refining	USD/t Ore processed	0.1
Royalties & Statutory Costs	USD/t Ore processed	3.0
Total	**USD/t Ore**	**37.6**

REASONABLE BASIS FOR FUNDING ASSUMPTIONS

The Diamba Sud Project is technically simple and relatively low risk with very strong economics that provide a strong platform for Chesser to source traditional financing through debt and equity markets.

To achieve the range of outcomes indicated in the Scoping Study, pre-production funding of approximately US$180M may be required. Typical project development financing would involve a combination of debt and equity. Chesser has formed the view that there is a reasonable basis to believe that requisite future funding for development of the Diamba Sud Gold Project will be available when required.

There are grounds on which this reasonable basis is established including:

- The Diamba Sud Gold Project is low risk, technically simple and has a rapid payback of only 15 months from commercial production
- The very strong post-tax cashflows of US$399M and rapid payback would support a high level of conventional debt financing for the Project development
- There is significant potential to grow the Mineral Resource base that is the basis of this Scoping Study. It is expected that growth in Mineral Resources would further strengthen the Project economics
- The Chesser board and management has extensive experience in mine development, financing and production in the resources industry and West Africa and specifically in Senegal

[1] All Scoping Study results are approximate. Cost estimates are subject to Scoping Study level of accuracy of +/- 35%.

CONCLUSION and RECOMMENDATIONS

The Study indicates that the Diamba Sud Project is a low risk, technically simple and economically robust Project which has significant potential to grow.

Given the low risk nature of the Project the Board of Chesser has approved commencement of a Definitive Feasibility Study ("DFS") without the requirement for a preliminary study phase.

NEXT STEPS

An extensive 15,000 to 20,000m drill program has commenced to aggressively target resource definition and expansion at Areas A, D and H (Karakara) and to systematically explore other prospective targets on the Diamba Sud exploration tenement.

An updated Mineral Resource estimate including Karakara drill results will be undertaken in the second half of 2022.

Work to continue advancing the technical studies to de-risk the project and to undertake a Definitive Feasibility Study.

Baseline environmental and ESIA work has commenced over the Project area.

The timeline to complete the DFS and obtain required government approvals and to reach Financial Investment Decision ("FID") is approximately 18 to 24 months.

Assessment and exploration planning has commenced over the newly granted exploration tenements of Bondala and Morichou, which are proximal to the Diamba Sud licence area.

This release was authorised by the Board of Directors of Chesser Resources Limited.

-END-

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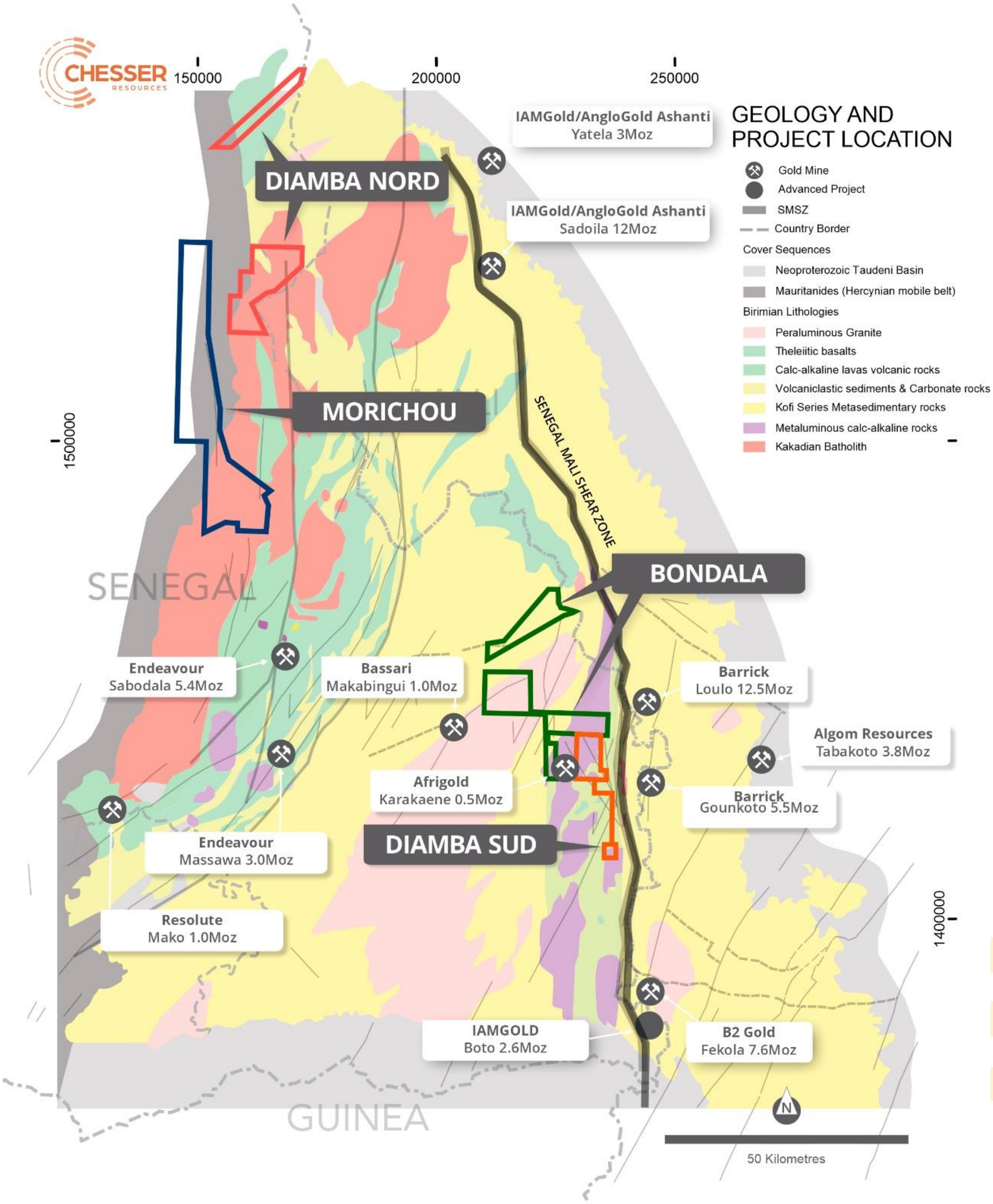

Figure 8: **Schematic regional geology of eastern Senegal, showing Chesser's Project locations including the Diamba Sud Project and its proximity to both the SMSZ and the major gold operations and projects.**

ABOUT CHESSER RESOURCES

Chesser Resources is an ASX listed gold exploration company with projects located in Senegal, West Africa. Chesser has discovered three high-grade gold Projects (Areas A and D and Karakara) at its flagship Diamba Sud project. The Company currently holds 872km^2 of highly prospective ground in this underexplored world-class gold region. The Company has corporate offices located in Brisbane and Perth, Australia and a corporate and technical team based in Dakar, Senegal.

Diamba Sud, covers an area of 53.2km^2 and is located ~2km to the west of the Senegal Mali Shear Zone ("SMSZ"), a major regional structure that host numerous multimillion-ounce world class gold deposits including: B2Gold's 7.6Moz Fekola mine, Barrick's 18Moz Loulo-Gounkoto complex and Allied Gold's Sadiola and Yatela mines. Diamba Sud lies just 7km to the west of Barrick's 5.5Moz Gounkoto mine and to the immediate east of the privately owned 0.5Moz Karakaene mine.

Competent Person's Declaration

*The information in this report that relates to **Exploration Results** has been extracted from the referenced ASX Announcements filed by Chesser Resources Limited (Exploration Results Announcements) and available to view at www.chesserresources.com.au and for which Competent Persons' consent were obtained. The Competent Persons' consents remains in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent. The Company confirms that it is not aware of any new information or data that materially affects the information included in the Exploration Results Announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the Exploration Results Announcements.*

*The information in this report that relates to **Mineral Resources** was first reported in the announcement titled 'Robust Maiden Mineral Resource – Diamba Sud' released to the Australian Securities Exchange (ASX) on 16 November 2021 (Original Announcement) and available to view at www.chesserresources.com.au and for which a Competent Persons' consent was obtained. The Competent Person's consent remains in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent. The Company confirms that it is not aware of any new information or data that materially affects the information included in the Original Announcement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the Original Announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the Original Announcement.*

*The Information in this report that relates to **Scoping Study** report was compiled by Mr. Andrew Grove, BEng (Geology), MAIG, who is employed as Managing Director and Chief Executive Officer of Chesser Resources Ltd. Mr Grove has sufficient experience in the development of gold projects from the studies phase through to the operational phase and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

Forward looking statements

Statements relating to the estimated or expected future production, operating results, cash flows and costs and financial condition of Chesser Resources Limited's planned work at the Company's projects and the expected results of such work are forward-looking statements. Forward-looking statements are statements that are not historical facts and are generally, but not always, identified by words such as the following: expects, plans, anticipates, forecasts, believes, intends, estimates, projects, assumes, potential and similar expressions. Forward-looking statements also include reference to events or conditions that will, would, may, could or should occur. Information concerning exploration results and mineral reserve and resource estimates may also be deemed to be forward-looking statements, as it constitutes a prediction of what might be found to be present when and if a project is developed.

These forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable at the time they are made, are inherently subject to a variety of risks and uncertainties which could cause actual events or results to differ materially from those reflected in the forward-looking statements, including, without limitation: uncertainties related to raising sufficient financing to fund the planned work in a timely manner and on acceptable terms; changes in planned work resulting from logistical, technical or other factors; the possibility that results of work will not fulfil projections/expectations and realize the perceived potential of the Company's projects; uncertainties involved in the interpretation of drilling results and other tests and the estimation of gold reserves and resources; risk of accidents, equipment breakdowns and labour disputes or other unanticipated difficulties or interruptions; the possibility of environmental issues at the Company's projects; the possibility of cost overruns or unanticipated expenses in work programs; the need to obtain permits and comply with environmental laws and regulations and other government requirements; fluctuations in the price of gold and other risks and uncertainties.

ATTACHMENT 1
SCOPING STUDY REPORT
DIAMBA SUD GOLD PROJECT, SENEGAL
15 March 2022

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1. EXECUTIVE SUMMARY

This Scoping Study details the potential for an open pit mining operation and gold processing plant at Chesser's Diamba Sud gold project in Eastern Senegal.

The Project is located within the Diamba Sud exploration license which is 100% owned by Boya SAU (wholly owned Senegalese sub of Chesser). The Senegalese government is entitled to a 10% free carried interest in the project upon granting of the mining license.

Site is accessed from the sealed N24 highway which connects the capital Dakar, ~800km to the west. The nearest community, Gamba Gamba, is located 5km west of the project site.

The Scoping Study is based in the Maiden Mineral Resource over Areas A and D of 781koz reported on 16 November 2021. Industry standard open pit contract mining and 2 Mtpa CIL gold processing plant was considered to be appropriate for the Scoping Study.

The cash flow and economic analysis has been prepared on a 100% of project, constant first quarter calendar 2022 US dollar basis. Cost estimations are considered to be at a scoping study level of accuracy of +/-35%.

The Scoping Study inputs were compiled by Chesser from inputs from external consultants and Chesser as detailed in Section 2 of this report.

The Scoping Study clearly demonstrated the technically simple and low risk nature of the Project and the very significant potential economic value that would result from a future development at Diamba Sud.

There remains significant upside both in exploration to add to the Mineral Resource inventory and from future Project optimisation studies.

A summary of the initial physical and financial evaluation of the Project is shown in Table 1.1.

In summary the Scoping Study returned the follow key economic metrics:

- Pre-tax NPV_5 US$402M and IRR 69% at a US$1,800/oz gold price
- Post-tax NPV_5 US$301M and IRR 59% at a US$1,800/oz gold price
- Payback 1.25 years from commercial production
- 7.5-year Project life producing 704koz gold at an average AISC of US$820/oz
- Technically simple, low risk and high value potential Project with significant upside from resource growth and Project optimisation.

Given the strong cashflows and rapid payback it is considered that conventional debt and equity funding would be available of the Project development.

The board has approved commencement of the Definitive Feasibility Study and timeline to development decision is approximately 18 to 24 months.

Table 1.1 Scoping Study Results and Key Assumptions

DIAMBA SUD GOLD PROJECT SUMMARY SCOPING STUDY RESULTS		
Physicals and Costs		
Mining Physicals		
Ore Tonnage	Mt	14.7
Grade	g/t Au	1.6
Contained Ounces	koz Au	750
Plant Throughput	Mtpa	2.0
Mine Life	Years	7.5
Strip Ratio	waste:ore	2.8
Process Recovery	%	94
Gold Production	koz Au	704
Capital Costs		
Initial Capital	US$M	142
Pre-production Mining	US$M	17
Sustaining and Closure	US$M	23
Total Capital Cost	US$M	182
Operating Costs		
Mining	US$/t total material	3.9
Mining	US$/t Ore mined	14.7
Processing	US$/t Ore processed	14.1
Maintenance	US$/t Ore processed	1.5
General & Administration	US$/t Ore processed	4.1
Transport, Insurance and Refining	US$/t Ore processed	0.1
Royalties & Statutory Costs	US$/t Ore processed	3.0
Total	US$/t Ore processed	37.6
Financials and Key Assumptions		
Gold Price	US$/oz	1,800
Exchange Rates	AUD:USD	0.72
	XOF:USD	581
Gold Sales Revenue	US$M	1,267
AISC	US$/oz Au	820
AISC - first two years	US$/oz Au	545
Project Net Cash Flow - Pre-tax		
Project Net Cash Flow, pre tax	US$M	531
PVNCF5%	US$M	402
IRR	%	69
Payback Period, pre-tax	Months	15
Project Net Cash Flow - Post-tax, all equity basis		
Income Tax	US$M	132
Project Net Cash Flow,	US$M	399
PVNCF5%	US$M	301
IRR, post-tax	%	59
Payback Period	Months	15

2. STUDY INPUTS

The Scoping Study inputs were compiled by Chesser from inputs from external consultants and Chesser and assessed to a scoping level of accuracy for the technical requirements, environmental impacts and financial robustness of the Diamba Sud Gold Project.

Table 2.1 Scoping Study inputs

Study Compilation	Chesser
Geology	Chesser
Resource Estimation	Dr. John Arthur (CGeol, FGS)
Geotechnical	Peter O'Bryan & Associates
Mining Design and Scheduling	Cube Consulting
Mine Operating Costs	Majesso Consulting Pty Ltd
Metallurgy Testwork	ALS, Lycopodium Limited, JK Tech, IMO and Mintrex
Process Engineering and Design	Mintrex
Operating Costs	Mintrex
Infrastructure	Mintrex
Capital Costs	Mintrex
Environmental, Social and Licensing	Chesser, Earth Systems SARL and ESS
Tax and Fiscal terms	Chesser and Senegal legal input
Financial Modelling	Infinity Corporate Finance, Orimco and Chesser

3. PROJECT SETTING

The project is located in Eastern Senegal, abutting the Faleme river which defines the border with Mali. There are numerous gold mines in the region, the closest being the small Karakaene project immediately to the West. Barrick's large Gounkoto mine is just across the Faleme River to the East.

Access to the site will be developed from the N24 highway which runs across the Chesser tenement to the Moussala frontier point. N24 ties into the national road system at Saraya, some 30 km to the West. The nearest community, Gamba Gamba, is only around 5km West of the project site, adjacent to the Karakaene gold project.

For access to the site the nearest airport for chartered flights is Tambacounda, ~300 km from Diamba Sud. Imported project materials and equipment will be routed through the seaport of Dakar and delivered approximately 800 km by road to the site. The surrounding region has multiple operating gold plants so the logistics for Diamba Sud will be similar to projects previously undertaken.

3.1 Regional Data

Meteorological data is available for Sabodala, Mako and Kedougou, which are ranged N-S some 90 km West of the site showing annual rainfall of 750-1300 mm. The majority of the rain falls in a short wet season – June to September.

Flow gauging records were sighted for Gourbassi on the Faleme River, some 55 km North of the site. This showed high river flows for around 4 months of the year peaking in September at 700-1700 m^3/second. There is negligible river flow for at least six months each year from the end of December through to late June. This influences the criteria for the required extraction licence. Assumed criteria were used to define the water extraction system flow rate.

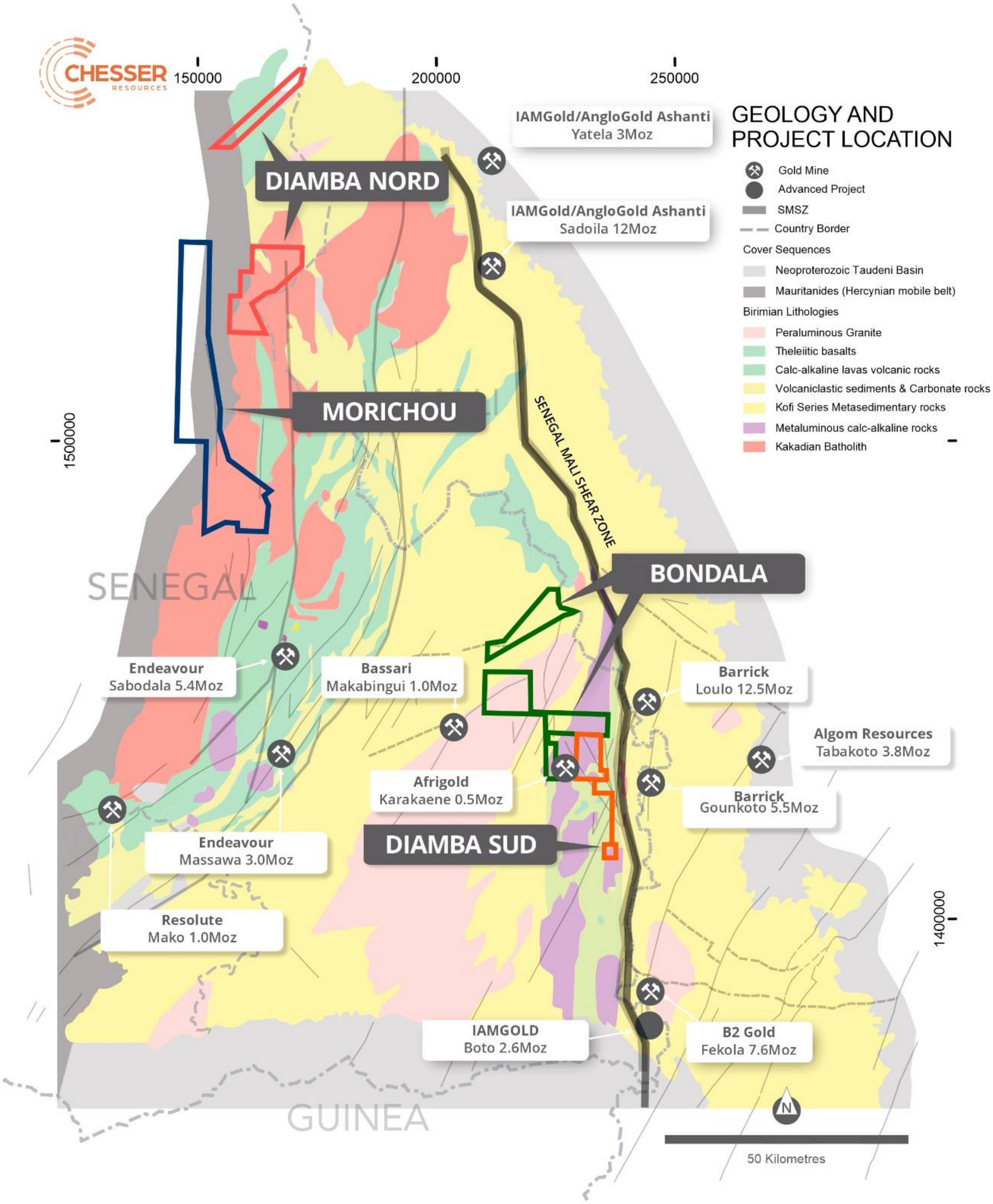


Figure 3.1 Diamba Sud Tenement Location and Geology Map

4. ENVIRONMENTAL SOCIAL AND LICENSING

An Environmental and Social Gap Analysis study was completed at Diamba Sud in January 2021 by consultants Environmental and Social Sustainability ("ESS"). The Analysis was undertaken in line with the 2014 Equator Principles ("EP"). The objective of the analysis was to identify key environmental, social, health, safety and security ("ESHSS") risks and impacts associated with the Project in relation to the applicable standards including the Equator Principles and the International Finance Corporation ("IFC") Performance Standards (PS).

The study found that exploration ESHSS issues were generally being proactively managed, although some gaps were observed in relation to personnel, auditing and documentation. Chesser's policy and procedural development have been guided by the review findings including the future employment of a dedicated environmental and community manager.

Earth Systems SARL have been engaged and have commenced environmental and social baseline studies for input into the Environment Social Impact Assessment ("ESIA"). Earth Systems have also been engaged to complete the ESIA and associated licensing required for the grant of an Exploitation (Mining) permit. The timeline for this work is between 12 and 18 months.

Environmental and Social Permits/Plans required:

- ESIA
- Environmental and Social Management and Monitoring Plan
- Stakeholder Engagement Plan
- Mine Rehabilitation and Conceptual Closure Plan
- Hazard Study

There are currently no known material environmental, social or ethnographic issues that would preclude the licensing of the Project. However significant work, which has commenced, is required prior to final licensing.

Earth Systems are ideally positioned to assist the Company with these requirements having a strong local presence and were responsible for the licensing and are still involved in the on-going environmental management of the Mako Gold Mine in Senegal, owned and operated by Resolute Mining.

A social investment agreement framework with the local community of Gamba-Gamba has been put in place and specifies environmental, social, economic, and ethical support programs and undertakings for all parties and is reviewed annually. Chesser through Boya (local operating entity) maintains an open dialogue with village representatives through a community consultation committee, updating them regularly on activities as part of an open communication policy. The purpose of which is to build and maintain an effective partnership between the Company and the local population by promoting trust, transparency, and regular communication. The Company is committed to supporting local employment, education and skills training and the community is committed to supporting the Company's activities and access. The Company has completed a number of community development projects including the construction of a clinic, solar powered water well and fencing of the school yard. 2022 projects are being agreed but will include establishing a faring co-op run by the community women's group.

The Diamba Sud Project located within the 53.2km^2 Diamba Sud permis de recherche (exploration license) which is 100% owned by Boya SAU (wholly owned Senegalese sub of Chesser). The current term of the exploration license expires on 9 June 2024, however there are provisions to extend under the term. The Company's intention is to seek the grant of an Exploitation license prior to the expiry date and as soon as practical at which point the government will be granted a 10% free carried interest in the Project.

5. GEOLOGY AND RESOURCES

The Diamba Sud Project is located in eastern Senegal and within the eastern portion of the Kédougou-Kénieba inlier, the second most richly endowed area discovered to date within the Paleoproterozoic rocks of West Africa (Figure 3.1). Mineralisation on the belt is generally associated with the crustal scale terrane boundary Senegal Mali Shear Zone ("SMSZ").

Exploration at Diamba Sud identified two areas of shallow high-grade mineralisation in July 2020 at Areas A and D.

The ore deposit type is defined as orogenic lode gold with supergene enriched saprolitic zones. The geology at Diamba Sud is composed of sedimentary packages that are intruded by mafic to felsic intrusions of varying proportions and trajectories. Mineralisation is structurally controlled by faults and shears and mineralisation can occur within all lithologies that mineralised structures crosscut. Mineralisation can be disseminated or veined and is dominantly associated with pervasive alteration. Supergene enrichment of orogenic mineralisation within the saprolite zone is responsible for increasing grades of mineralisation dominantly within Area D.

The maiden Mineral Resource estimate was undertaken by Dr. John Arthur (CGeol, FGS) and includes all drilling up to and including the 18 October 2021 utilising an Ordinary Kriging estimation methodology. The

Resource has been reported in accordance with the JORC Code (2012) and was reported in detail to the ASX on 16 November 2021 and is shown in Table 5.1 and Table 5.2.

The Mineral Resource is reported within a pit shell using metal price assumptions of US$1,800/oz gold, conservative input parameters and is reported above a 0.5g/t gold cut-off grade ("COG").

Table 5.1 Diamba Sud Mineral Resource (November 2021)

Resources Constrained within US$1,800/oz pit shell by Material Type and Classification – COG 0.5g/t									
Oxidation	Indicated			Inferred			Total		
	Tonnes	Grade	Metal	Tonnes	Grade	Metal	Tonnes	Grade	Metal
	Mt	g/t	Koz	Mt	g/t	Koz	Mt	g/t	Koz
Oxide	3.7	2.2	262	1.3	1.2	50	5.0	2.0	312
Fresh	5.1	1.7	276	5.1	1.2	194	10.3	1.4	469
Total	**8.8**	**1.9**	**538**	**6.4**	**1.2**	**243**	**15.2**	**1.6**	**781**

Table 5.2 Diamba Sud Mineral Resource (November 2021)

Resources Constrained within US$1,800/oz pit shell by Area, Material Type and Classification – COG 0.5g/t										
Area		Indicated			Inferred			Total		
		Tonnes	Grade	Metal	Tonnes	Grade	Metal	Tonnes	Grade	Metal
		Mt	g/t	Koz	Mt	g/t	Koz	Mt	g/t	Koz
Area D	Oxide	3.1	2.4	234	1.2	1.3	47	4.2	2.1	280
	Fresh	0.3	1.4	14	3.6	1.2	139	3.9	1.2	152
	Total	**3.4**	**2.3**	**247**	**4.8**	**1.2**	**185**	**8.2**	**1.6**	**432**
Area A	Oxide	0.6	1.4	29	0.1	0.9	3	0.7	1.3	32
	Fresh	4.8	1.7	262	1.5	1.1	55	6.3	1.6	317
	Total	**5.5**	**1.7**	**291**	**1.6**	**1.1**	**58**	**7.1**	**1.5**	**349**
TOTAL		**8.8**	**1.9**	**538**	**6.4**	**1.2**	**243**	**15.2**	**1.6**	**781**

Other than exploration results released subsequently, Chesser confirms that it is not aware of any new information or data that materially affects the information included in its ASX release dated 16 November 2021 (Robust Maiden Mineral Resource – Diamba Sud). All material assumptions and technical parameters underpinning the estimates in these releases continue to apply and have not materially changed.

6. MINING

6.1 Summary

Cube Consulting (Cube) was engaged by Chesser Resources Limited (Chesser) to complete mining engineering work towards a scoping study for the Diamba Sud Gold Project (the Project) located in Senegal.

The scope of work included: collation of input parameters, open pit optimisation studies and pit production scheduling.

The pit optimisation process resulted in the selection of a pit shell comprised of 3 distinct pits for which detailed mine designs were prepared. These designs contained a total of 14.7 Mt of ore material at an average grade of 1.58 g/t Au with an associated waste tonnage of 41.0 Mt, for an overall waste to ore strip ratio of 2.8:1

The pit production and process feed schedule was completed in annual increments resulting in a mine life of 8 years at a treatment rate of 2.0 Mtpa. Key results of the resultant mining and process feed schedule are shown in Table 6.1 and Table 6.2.

Table 6.1 Tonnes Mined by Destination

Tonnes Mined										
Year	**PP**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Total**
ORE	299,321	1,768,612	2,368,031	1,729,785	2,189,439	1,780,136	2,050,422	1,948,179	595,863	14,729,788
WASTE	3,566,945	4,019,751	3,772,577	4,106,742	10,281,927	10,113,607	2,747,532	2,122,308	307,399	41,038,788
Grand Total	**3,866,266**	**5,788,363**	**6,140,608**	**5,836,527**	**12,471,366**	**11,893,742**	**4,797,954**	**4,070,487**	**903,262**	**55,768,576**

Table 6.2 Ore Tonnes and Grade Processed by Oxidation and Classification

Mill Feed										
Year	**PP**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Total**
Indicated										
Ox Tonnes		1,380,000	1,470,000	320,000	590,000	67,848				3,827,848
Au g/t	1.06	1.99	2.61	1.89	1.34	1.61	0.00	0.00	0.00	2.11
Fresh Tonnes			70,000	200,000	10,000	1,000,000	1,830,000	1,600,000	345,894	5,055,894
Au g/t	0.00	0.00	1.12	1.56	1.48	1.80	1.89	1.39	1.25	1.65
Inferred										
Ox Tonnes		620,000	460,000			72,152			102,328	1,254,480
Au g/t	0.91	1.28	1.19	1.00	0.95	0.95	0.95	0.95	0.95	1.20
Fresh Tonnes				1,480,000	1,400,000	860,000	170,000	400,000	281,567	4,591,567
Au g/t	0.00	1.40	1.50	1.30	1.10	1.06	1.29	1.26	1.18	1.18
Total Ore	**0**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**729,789**	**14,729,788**
Au g/t	**0.00**	**1.77**	**2.23**	**1.42**	**1.17**	**1.44**	**1.84**	**1.37**	**1.18**	**1.58**

6.2 Resource Model

The resource model utilised in this study was supplied by Chesser, named bm_all_blks_211104.mdl which is a Surpac format model.

The model block dimensions of the parent cells (XYZ) of 10m x 10m x 5m with no sub-celling with the dimensions shown in Table 6.3.

Table 6.3 Block Model Dimensions

Dimensions	Y	X	Z
Minimum	1,428,950	232,200	-200
Maximum	1,429,950	233,600	200
Block Size	10	10	5

6.3 Input Parameters

Input parameters were sourced from accessing available literature on analogous projects as supplied by Chesser and in the case of processing costs and recoveries, from data supplied directly by Chesser. The project was undertaken in two distinct stages. Following analyses of the optimisation runs using these initial inputs, a project revision resulted in final parameter assumptions being established. It was these final parameters which were then used for the rest of the mine engineering study, the most pertinent of which were the mining costs which were estimated after completion of the mining schedule and discussed in the proceeding section of this report.

Key initial inputs relating to processing costs, revenue and other costs are shown in Table 6.4 below.

Table 6.4 Optimisation Inputs

Item Descriptor		Unit	Input
PROJECT BASE PARAMETERS			
	Processing feed capacity	Mtpa	2.0
	Project discount rate	%	5
	Project start date	dd/mm/yyyy	1year
	Base currency		**USD**
	Production schedule periodicity		Quarters
	USD:AUD Currency exchange rate	USD:AUD	0.7
MINING			
	Load & Haul Cost	$/t	2.65
	Drill & Blast Cost - Fresh	$/t	0.80
	Mining Dilution	%	10%
	Mining Recovery	%	95%
ORE BASED COSTS			
	Process Variable Costs		
	Weathered	$/t	13.2
	Transitional	$/t	
	Fresh	$/t	17.0
	Plant Fixed Costs		
	Labour and laboratory	$/t	0.00
	General & Admininstration	$/t	4.2
	Tailing Storage Facility (TSF)	$/t	1.0
	Subtotal Plant Costs	**$/t**	**5.20**
	Mining - Ore Based Costs		
	Ore re-handle Cost	$/t	0.50
	Percentage Ore Re-handle	%	80%
	Ore re-handle Cost per feed tonne	$/t	0.40
	Mining Owners team cost	$/t	1.12
	Pit Dewatering	$/t	0.10
	Grade Control	$/t	0.50
	Ore Over- Haulage	$/t	0.00
	Subtotal Mining Ore Costs	**$/t**	**2.12**
	Total Ore Based Costs		
	Weathered	$/t	20.52
	Transitional	$/t	
	Fresh	$/t	24.32
METALLURGICAL RECOVERIES			
	Weathered	%	95%
	Transitional	%	
	Fresh	%	93%
REVENUE			
	Selling price	$/oz	1,500
	Royatly		
	Government Royalty	%	5.5%
	Other Royalty	%	0.0%
	Net Selling cost	**$/oz**	**1,417.50**
	Net Selling cost	$/g	**45.57**
CUT-OFF GRADE			
	Weathered	g/t	0.55
	Transitional	g/t	
	Fresh	g/t	0.66

6.3.1 Mining Dilution and Ore Loss

Mining dilution and ore losses were represented by the factors contained in the inputs sheet and were applied to pit optimisation, design, and scheduling.

6.3.2 Cut-off Grade Calculation

Treatment plant breakeven cut-off grade was calculated to demonstrate a theoretical break-even point within the resources. A theoretical, calculated cut-off was determined by:

$$Cut - Off\ Grade\ (ppm) = \frac{Treatment\ Plant\ Costs}{Metal\ Price * (1 - Royalty) * Recovery}$$

Where:	*Treatment Plant Costs*	=	*Processing and all ore related costs ($/t)*
	Metal Price	=	*Gold Price*
	Royalty	=	*State Royalty plus land title royalty*
	Recovery	=	*Metallurgical Recovery (%)*

The calculated breakeven cut-off grade using the above input parameters was 0.5 g/t for weathered and 0.6 g/t for fresh materials.

6.3.3 Geotechnical Parameters

Slope angles were supplied by Chesser based on a technical note in relation to slope design parameters from Peter O'Bryan and Associates. Cube used these base wall design parameters as inputs in our overall wall angle calculations using assumed ramp passes and ramp widths to determine an estimate of overall wall angles for use in the pit optimisation process. These estimated overall wall angles are shown in Table *6.*5 and Table 6.6 for the Area A and Area D deposits respectively.

Table 6.5 Overall Pit Slope Angles Area A

		Upper East	Mid East	Lower East	Upper Other	Mid Other	Lower Other
Item	Unit	0-25m	25-70m	70m+	0-25m	25-70m	70m+
Batter Angle	°	50	55	60	50	55	65
Berm Width	m	5.00	6.00	7.00	5.00	6.00	7.00
Super Berm	m	0	0	0	0	0	0
Berm Interval (vertical metres)	m	10	15	20	10	15	20
Super Berm Interval	m	0	0	0	0	0	0
Inter ramp Angle	°	**36.8**	**42.3**	**47.2**	**36.8**	**42.3**	**50.8**
Pit Weathering depth	m	25.0	45.0	130.0	25.0	45.0	130.0
Number of berm lifts	num	**2.5**	**3.0**	**6.5**	**2.5**	**3.0**	**6.5**
Ramp Width - Single Lane	m	15.0	15.0	15.0	15.0	15.0	15.0
Number of Ramp Passes	num	0	0	1	0	0	1
Ramp Width - Double Lane	m	25.0	25.0	25.0	25.0	25.0	25.0
Number of ramps	num	0.5	0.5	1	0.5	0.5	1
Ramp Gradient	%	10	10	10	10	10	10
Overall Slope Angle	°	**29.0**	**35.0**	**39.0**	**29.0**	**35.0**	**42.0**

Table 6.6 Overall Pit Slope Angles Area D

		Upper East	Mid East	Lower East	Upper Other	Mid Other	Lower Other
Item	Unit	0-40	40-100	100+	0-40	40-100	100+
Batter Angle	°	50	55	60	50	55	65
Berm Width	m	5.00	6.00	7.00	5.00	6.00	7.00
Super Berm	m	0	0	0	0	0	0
Berm Interval (vertical metres)	m	10	15	20	10	15	20
Super Berm Interval	m	0	0	0	0	0	0
Inter ramp Angle	°	**36.8**	**42.3**	**47.2**	**36.8**	**42.3**	**50.8**
Pit Weathering depth	m	40.0	60.0	100.0	40.0	60.0	100.0
Number of berm lifts	num	**4.0**	**4.0**	**5.0**	**4.0**	**4.0**	**5.0**
Ramp Width - Single Lane	m	15.0	15.0	15.0	15.0	15.0	15.0
Number of Ramp Passes	num	0	0	1	0	0	1
Ramp Width - Double Lane	m	25.0	25.0	25.0	25.0	25.0	25.0
Number of ramps	num	0.5	1	1	0.5	1	1
Ramp Gradient	%	10	10	10	10	10	10
Overall Slope Angle	°	**31.0**	**33.0**	**36.0**	**31.0**	**33.0**	**39.0**

6.4 Mining Cost Estimation

Indicative open pit mining costs based on a mining a contractor model have been generated from first principles by Majesso Consulting Pty Ltd.

The indicative costs generated are based on a number of assumptions which will be further refined during subsequent pre-feasibility and feasibility study stages. Primary assumptions and the basis of the mining operations are discussed below.

For each pit it has been assumed that the pit exit distances to the toe of the waste dump ramp and entry (ramp) to the ROM ore pad are as shown in Table 6.7.

Table 6.7 Estimated Ex-pit Tramming Distances

Pit	Pit Exit to Toe of Waste Dump Ramp (m)	Pit Exit to Toe of ROM Entry (m)
Area A	600	1,100
Area D	450	2,600
Area D South	750	2,900

Fuel cost at the site is assumed to be USD0.80 per litre.

This cost estimate is based on a mining operation using two 12 hour shifts per day, 7 days per week while the last 22 months of operation will require a dayshift only. The local workforce will work a notional 2 week on, 1 week off roster while expats will work longer roster cycles.

The workforce will need to be accommodated in a site-based accommodation village. There are no sizeable populations within a reasonable daily commute to the mine site with the nearest large town of Kedougou being approximately 90 kilometres away. It may be possible to source some unskilled labour from Kedougou (approx. population 20,000) however the majority of the national workforce will likely come from further afield such as the capital Dakar. An allowance for accommodation and messing has been included in this study.

On the basis of the previous assumptions, the great majority of the workforce is expected to be FIFO ex Dakar. It has been assumed people will travel to and from the site on flights between Dakar and Kedougou, the latter also having a suitable sealed airstrip. Flight costs for this travel have been allowed within the mining costing. Travel between the mine and Kedougou has been allowed using buses.

To achieve the provided mine production schedule the following

Table **6.8** lists the prime mining equipment required. It is assumed that the orebody will allow the use of the nominated scale of excavator (notionally 140t class backhoe fitted with 8m3 bucket) which are commonly used successfully on many gold mining operations in West Africa.

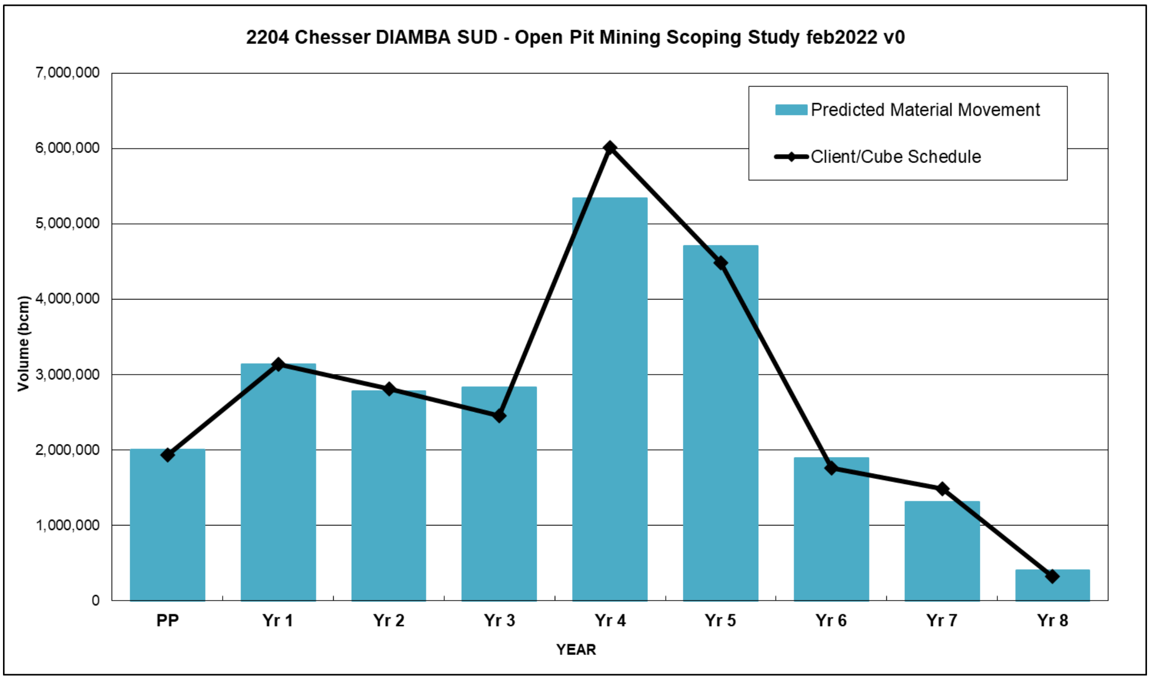
The make and model of each item nominated below are notional and other brands may be used depending on the open pit mining operator.

Table 6.8 Notional Equipment Brands and Sizes

Make / Model	Number of Operating Units by Period			
	Pre-Production Months 1 - 8	Production Months 9 - 46	Production Months 47 - 65	Production Months 66 - 96
Cat 6015 Excavator	1	1	2	1
Cat 777 Dump Truck	4	4 - 6	6 - 12	6
Cat D9 Track Dozer	1	1	2	1
Cat 16M Grader	1	1	1	1
Cat 777 Watercart	1	1	1	1
Cat 336 R/breaker	1	1	1	1
Cat 966 FEL	1 - 2	2	2	2
Sandvik DP1500 Drill	1	1 - 2	2 - 4	2

The total duration of mining is 96 months inclusive of an assumed 8-month pre-production period. The mining fleet nominated above delivers the material movements compared against the production schedule provided as shown in Figure 6.1.

Figure 6.1 Mining Fleet Estimate by Scheduled Period



Minor support equipment has been allowed to cover items such as light vehicles, buses, service/fuel truck, IT, backup gensets, buildings and workshop, fuel tanks and diesel-powered standpipe.

A basic allowance has been made for pit dewatering in the absence at this time of detailed information on likely groundwater inflows.

No cost allowance has been made for infrastructure associated with the supply of electrical power, water and telecommunications and the supply of electrical power and water.

The peak workforce for mining totals 220 people (inclusive of allowance to cover for personnel on R&R), with a project life average workforce of 130 people. This is inclusive of expat and national personnel.

Based on the material properties provided it is expected that there may be a proportion of free digging material. This estimate assumes 25% of material classified as “Oxide” will be free digging and all of the balance will require blasting. It is assumed that any material requiring blasting will be performed using bulk emulsion, 115mm diameter holes on 5 metre benches. No allowance has made at this time for presplitting of final walls.

For the purposes of the mining cost generation, moisture contents assumed are 10% for oxides and 3% for fresh materials.

The cost estimate assumes a typical mining contractor scope of work and has no allowance for matters related to statutory mine management, mine engineering and other technical activities that are typically the domain of the mine owner. These include disciplines like geology, geotechnical, mining engineering, survey and grade control.

It is expected that ore feed to the process plant crusher will be via front end loader (FEL) rehandle at an assumed rate of 320 wet tonnes per hour. An indicative price for this work, using a Cat 966 FEL or equivalent, has been included.

Mobilisation and establishment costs will vary between contractors due to differing operational approaches and standards. In addition, the likely location from which equipment will be mobilised will be specific to where the contractor may have equipment, if purchased new, hired, etc.

The resultant estimated mining costs are shown in Table 6.9.

Table 6.9 Summary of Estimated Mining Costs

Item / Description		Unit	Quantity	USD Unit Cost	USD Total Amount
1.0 MOBILISATION, ESTABLISHMENT & DEMOBILISATION					
1.1	Mobilisation	LS	1	$870,000.00	$870,000
1.2	Establishment	LS	1	$921,000.00	$921,000
1.3	Demobilisation	LS	1	$832,000.00	$832,000
2.0 DRILL & BLAST - ORE & WASTE					
2.1	Oxide Materials	bcm	10,056,443	$1.67	$16,794,259
2.2	Fresh Materials	bcm	11,004,440	$3.34	$36,754,830
3.0 MINING - LOAD & HAUL - ORE					
3.1	Area A	bcm	2,621,905	$7.82	20,495,287
3.2	Area D	bcm	3,342,433	$6.21	20,742,498
3.3	Area DS	bcm	204,298	$7.27	1,486,084
4.0 MINING - LOAD & HAUL - WASTE					
4.1	Area A	bcm	11,277,820	$5.25	59,247,186
4.2	Area D	bcm	6,418,315	$5.41	34,725,493
4.3	Area DS	bcm	548,260	$4.97	2,727,071
5.0 ORE REHANDLE					
5.1	Ore Rehandle into Crusher using FEL (<100m tram)	wet t	15,525,461	$0.52	$8,073,239
TOTAL		bcm	24,413,030	**$8.34**	$203,668,947

6.5 Pit Optimisation

Open pit optimisations were undertaken using the parameters discussed in the preceding.

A number of pit optimisation iterations were carried out to enable a complete understanding of the sensitivity of the deposits to key variables. The final shell selection process was guided by using the base pit optimisation runs which used a base gold price of $1,500 per ounce. These shells were then evaluated at a gold price of $1,800 per ounce, the results of which are shown here and were used to guide the selection of the shell for pit designs.

The final shell selected at the conclusion of the optimisation work is highlighted in the tables below. The selected shell 35 is the highest value discounted worst shell from the $1,800 valuation. This represents a good compromise and strategic advantage for the range of gold prices considered.

The results of this final (Run B2) optimisation run are shown graphically in Figure 6.2 and tabulated in Table 6.10

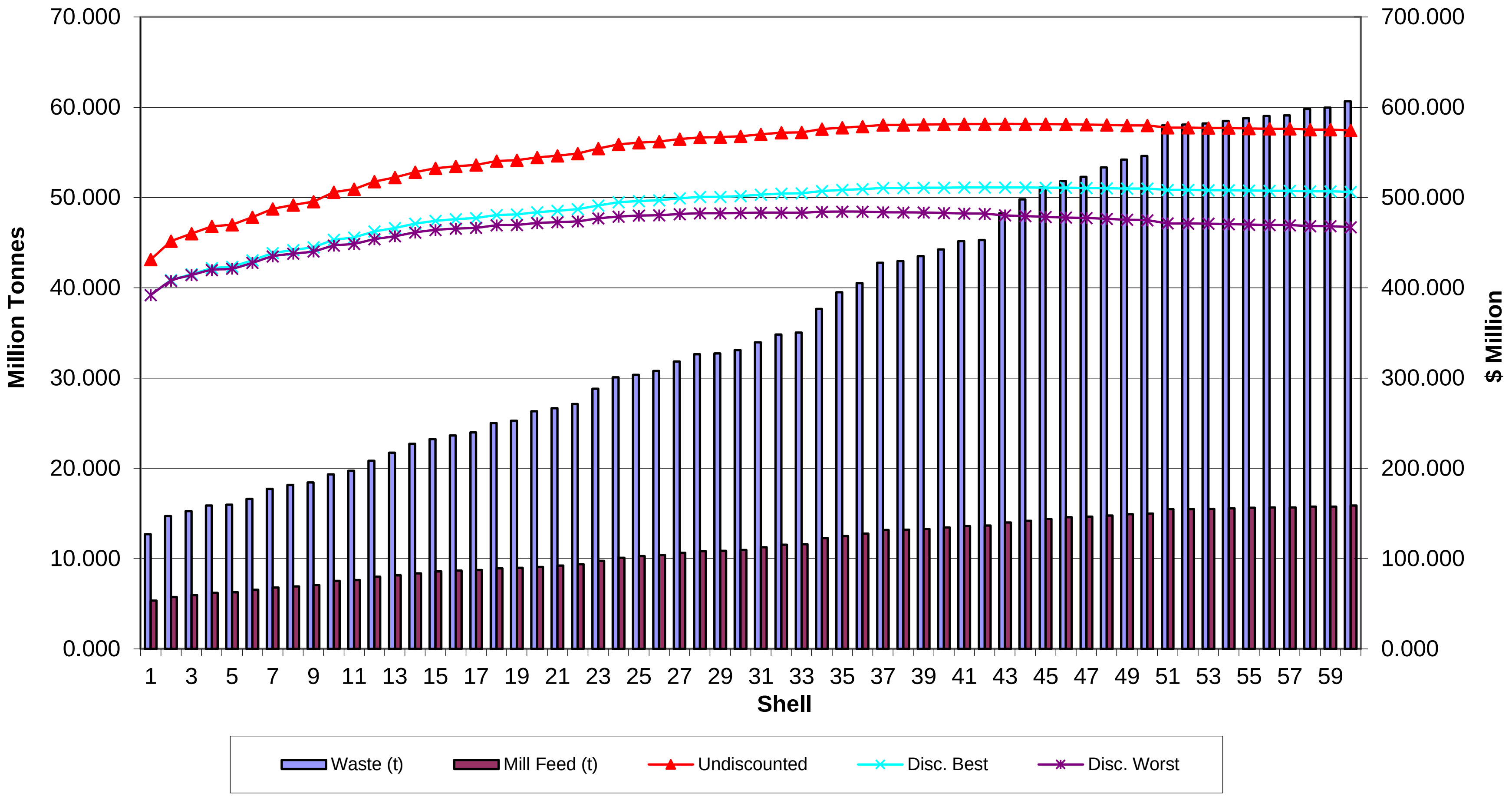


Figure 6.2 Tonnage/Cash Flow Chart (Showing $1,800 evaluation)

Table 6.10 Optimisation Results $1,500, Shells Evaluated at $1,800

			Base	Total	Waste	Strip	Mill Feed		Recovered	Mining	Process	Selling Cost	Revenue	Undiscounted	Discounted	Discounted	Cost	Incremental	Inferred
Shell	Factor	Price	RL	Tonnes (Mt)	Tonnes (Mt)	Ratio	Tonnes (Mt)	Au g/t	Au kOz	Cost ($M)	Cost ($M)	Au ($M)	Au ($M)	Cash Flow ($M)	Best ($M)	Worst ($M)	/Oz	Cost /Oz	%
1	0.500	750	30	18.048	12.708	2.4	5.340	2.18	352.41	52.233	115.930	34.889	634.346	431.294	391.992	391.992	576	576	13.1%
2	0.517	775	30	20.459	14.699	2.6	5.760	2.14	374.41	59.581	125.675	37.067	673.944	451.621	408.500	407.672	594	876	13.3%
3	0.533	800	30	21.240	15.280	2.6	5.961	2.12	383.63	62.067	130.390	37.979	690.534	460.097	415.196	414.077	601	880	13.3%
4	0.550	825	30	22.099	15.886	2.6	6.212	2.09	392.86	64.437	135.795	38.894	707.155	468.029	421.882	419.837	609	941	14.0%
5	0.567	850	30	22.268	15.987	2.6	6.281	2.08	395.22	64.944	137.389	39.127	711.400	469.940	423.510	421.257	611	990	14.3%
6	0.583	875	25	23.153	16.609	2.5	6.544	2.04	405.24	67.655	143.461	40.119	729.434	478.199	430.495	427.678	620	976	14.7%
7	0.600	900	25	24.517	17.726	2.6	6.791	2.02	416.55	71.783	149.154	41.238	749.784	487.608	438.375	434.883	629	968	15.5%
8	0.617	925	25	25.081	18.154	2.6	6.927	2.01	421.87	73.535	152.279	41.765	759.373	491.793	441.831	437.821	634	1,015	15.7%
9	0.633	950	25	25.514	18.446	2.6	7.068	1.99	426.78	74.853	155.566	42.251	768.199	495.529	444.885	440.383	639	1,038	16.2%
10	0.650	975	25	26.865	19.334	2.6	7.531	1.94	441.54	78.815	166.148	43.712	794.768	506.093	453.339	446.686	654	1,084	19.4%
11	0.667	1000	25	27.385	19.746	2.6	7.639	1.93	445.83	80.435	168.659	44.137	802.497	509.265	455.871	448.793	658	1,061	19.6%
12	0.683	1025	25	28.814	20.830	2.6	7.984	1.90	458.02	84.798	176.567	45.344	824.437	517.727	462.494	453.848	670	1,106	22.1%
13	0.700	1050	25	29.876	21.738	2.7	8.138	1.89	464.73	88.052	180.078	46.009	836.522	522.383	466.292	457.145	676	1,107	23.0%
14	0.717	1075	25	31.082	22.714	2.7	8.367	1.87	473.50	91.713	185.523	46.877	852.304	528.191	471.003	461.364	685	1,138	23.5%
15	0.733	1100	25	31.825	23.248	2.7	8.576	1.85	480.10	93.912	190.371	47.530	864.185	532.371	474.349	464.125	691	1,167	24.7%
16	0.750	1125	25	32.326	23.639	2.7	8.687	1.84	483.82	95.406	192.938	47.898	870.869	534.627	476.141	465.553	695	1,193	25.5%
17	0.767	1150	25	32.716	23.970	2.7	8.747	1.84	486.21	96.646	194.315	48.135	875.180	536.084	477.297	466.474	697	1,192	25.5%
18	0.783	1175	25	33.946	25.025	2.8	8.920	1.83	493.36	100.538	198.367	48.843	888.057	540.309	480.631	469.156	705	1,209	25.7%
19	0.800	1200	25	34.241	25.269	2.8	8.972	1.82	495.23	101.430	199.573	49.028	891.410	541.379	481.468	469.760	707	1,225	25.9%
20	0.817	1225	25	35.413	26.324	2.9	9.089	1.82	500.95	105.215	202.387	49.594	901.710	544.513	483.923	471.765	713	1,252	25.7%
21	0.833	1250	25	35.901	26.674	2.9	9.227	1.81	504.84	106.701	205.625	49.979	908.714	546.408	485.363	472.746	718	1,313	25.8%
22	0.850	1275	25	36.513	27.115	2.9	9.398	1.79	509.61	108.587	209.548	50.451	917.295	548.708	487.094	473.757	723	1,318	26.4%
23	0.867	1300	20	38.570	28.825	3.0	9.744	1.77	521.71	115.256	217.877	51.649	939.070	554.288	491.282	476.865	738	1,339	25.9%
24	0.883	1325	15	40.183	30.084	3.0	10.099	1.74	532.46	120.511	226.288	52.714	958.432	558.919	494.723	478.857	750	1,369	26.7%
25	0.900	1350	15	40.637	30.347	3.0	10.290	1.73	537.14	122.010	230.872	53.176	966.844	560.786	496.162	479.968	756	1,401	27.7%
26	0.917	1375	15	41.180	30.780	3.0	10.399	1.72	540.29	123.649	233.371	53.489	972.521	562.011	497.101	480.462	760	1,411	28.1%
27	0.933	1400	15	42.493	31.838	3.0	10.655	1.70	547.99	127.823	239.455	54.251	986.387	564.858	499.263	481.722	769	1,431	29.1%
28	0.950	1425	15	43.455	32.627	3.0	10.828	1.69	553.27	130.810	243.598	54.773	995.879	566.698	500.645	482.566	776	1,451	29.4%
29	0.967	1450	15	43.596	32.745	3.0	10.851	1.69	553.96	131.230	244.122	54.842	997.124	566.931	500.818	482.647	777	1,464	29.5%
30	0.983	1475	15	44.081	33.114	3.0	10.967	1.68	557.00	132.736	246.838	55.143	1,002.593	567.876	501.517	482.872	780	1,489	29.8%
31	1.000	1500	15	45.236	33.961	3.0	11.275	1.66	564.64	136.347	254.104	55.899	1,016.347	569.997	503.055	483.268	791	1,522	30.8%
32	1.017	1525	15	46.361	34.829	3.0	11.532	1.64	571.15	139.740	260.066	56.544	1,028.074	571.724	504.288	483.300	799	1,535	31.6%
33	1.033	1550	15	46.651	35.035	3.0	11.615	1.63	573.07	140.655	261.957	56.734	1,031.524	572.179	504.606	483.210	802	1,563	31.8%
34	1.050	1575	-10	49.936	37.661	3.1	12.274	1.59	590.97	151.342	277.887	58.506	1,063.738	576.004	507.321	484.215	825	1,586	32.3%
35	1.067	1600	-10	51.997	39.505	3.2	12.491	1.59	598.85	158.109	283.033	59.286	1,077.922	577.494	508.405	**484.453**	836	1,611	32.5%
36	1.083	1625	-10	53.273	40.515	3.2	12.759	1.57	605.65	162.126	289.394	59.960	1,090.177	578.697	509.261	484.389	845	1,623	33.4%
37	1.100	1650	-20	55.961	42.784	3.3	13.177	1.55	617.52	170.500	299.460	61.134	1,111.536	580.442	510.477	483.680	860	1,653	34.4%
38	1.117	1675	-20	56.176	42.964	3.3	13.212	1.55	618.47	171.193	300.258	61.229	1,113.247	580.568	510.563	483.600	861	1,667	34.5%
39	1.133	1700	-20	56.825	43.526	3.3	13.300	1.55	621.04	173.203	302.361	61.483	1,117.873	580.826	510.736	483.401	865	1,700	34.8%
40	1.150	1725	-20	57.711	44.249	3.3	13.462	1.54	625.22	176.114	306.227	61.897	1,125.400	581.162	510.954	482.918	870	1,720	35.5%
41	1.167	1750	-20	58.770	45.165	3.3	13.605	1.53	629.36	179.452	309.678	62.307	1,132.853	581.415	511.113	482.326	876	1,739	36.2%
42	1.183	1775	-20	58.957	45.299	3.3	13.658	1.53	630.44	180.042	310.876	62.413	1,134.788	581.456	511.133	482.075	878	1,762	36.3%
43	1.200	1800	-20	62.253	48.243	3.4	14.009	1.52	641.47	190.260	319.324	63.505	1,154.638	**581.549**	**511.144**	480.249	893	1,792	36.2%
44	1.217	1825	-20	63.988	49.806	3.5	14.183	1.51	647.22	195.953	323.500	64.075	1,164.992	581.464	511.083	479.438	902	1,815	36.6%
45	1.233	1850	-30	65.525	51.124	3.6	14.401	1.50	653.08	200.857	328.762	64.655	1,175.549	581.275	510.949	478.633	910	1,832	37.2%
46	1.250	1875	-30	66.433	51.841	3.6	14.592	1.49	657.32	203.780	333.280	65.074	1,183.169	581.034	510.781	477.785	916	1,857	37.7%
47	1.267	1900	-30	66.960	52.294	3.6	14.665	1.49	659.27	205.511	335.043	65.268	1,186.692	580.871	510.667	477.352	919	1,884	38.0%
48	1.283	1925	-30	68.111	53.327	3.6	14.784	1.49	662.81	209.076	337.858	65.618	1,193.051	580.499	510.409	476.385	924	1,905	38.1%
49	1.300	1950	-30	69.142	54.213	3.6	14.929	1.48	666.52	212.359	341.373	65.985	1,199.731	580.014	510.073	475.412	930	1,931	38.5%
50	1.317	1975	-30	69.600	54.601	3.6	14.999	1.48	668.16	213.740	343.044	66.148	1,202.693	579.761	509.900	474.782	932	1,954	38.8%
51	1.333	2000	-35	73.464	57.989	3.8	15.475	1.46	681.05	226.407	354.555	67.424	1,225.899	577.512	508.370	471.483	952	1,974	40.2%
52	1.350	2025	-35	73.587	58.094	3.8	15.492	1.46	681.47	226.791	354.955	67.465	1,226.641	577.429	508.314	471.297	953	2,000	40.2%
53	1.367	2050	-35	73.737	58.209	3.8	15.528	1.46	682.14	227.278	355.783	67.532	1,227.847	577.254	508.197	471.004	954	2,061	40.3%
54	1.383	2075	-35	74.058	58.489	3.8	15.569	1.45	683.14	228.270	356.788	67.631	1,229.656	576.967	508.003	470.599	955	2,086	40.4%
55	1.400	2100	-35	74.420	58.797	3.8	15.623	1.45	684.38	229.444	358.082	67.754	1,231.886	576.606	507.761	470.060	957	2,091	40.4%
56	1.417	2125	-35	74.686	59.023	3.8	15.663	1.45	685.28	230.311	359.053	67.843	1,233.507	576.301	507.555	469.633	959	2,139	40.4%
57	1.433	2150	-35	74.791	59.109	3.8	15.682	1.45	685.64	230.638	359.483	67.878	1,234.154	576.155	507.457	469.441	960	2,207	40.4%
58	1.450	2175	-35	75.557	59.801	3.8	15.755	1.45	687.71	233.143	361.266	68.084	1,237.884	575.392	506.944	468.472	963	2,168	40.6%
59	1.467	2200	-35	75.726	59.955	3.8	15.771	1.45	688.13	233.665	361.643	68.125	1,238.629	575.197	506.813	468.252	964	2,271	40.7%
60	1.483	2225	-40	76.530	60.657	3.8	15.873	1.44	690.57	236.337	364.110	68.367	1,243.027	574.214	506.156	467.187	968	2,202	41.0%

6.6 Pit Designs

The selection of pit shells as the guide for designs, was undertaken in consultation with Chesser to satisfy the company's strategic objectives in defining life-of-mine targets, resulting in the selection of Shell 35 for guiding the pit design process. The designs were completed following the pit wall design parameters supplied in the Peter O'Bryan and Associates' technical note which had varying slope design configurations at three distinct depth horizons within each of the deposit areas.

In addition to the prescribed slope design configurations, ramp design parameters used were are as follows:

- 15m wide single lane ramps at a gradient of 1 in 10 (10%) for ramps designed for the bottom 45 vertical metres to the base of the pit (all of Area D South).
- 25m wide dual lane ramps at a gradient of 1 in 10 (10%) above the bottom 45 vertical metres from the pit base.

A comparison between optimisation and design is shown in Table 6.11 where it can be seen that a good correlation between optimisation shell and detailed pit design was achieved, with an overall increase of 5% in waste tonnages and an increase of 2% in ore tonnes within the design. This resulted in a very acceptable 1% decrease in undiscounted pit value overall when compared to the optimised shells. The variances in the tonnages and grades shown in the comparison tables and the pit optimisation results are due to the exclusion of small impractical pieces which are included in the pit optimisation tables but excluded here. Another difference is a change in cut-off grade used for reporting, where the optimisation table used the cut-off from the $1,800 gold price, but the valuation and scheduling was undertaken at a higher cut-off grade corresponding to a $1,600 gold price, resulting in less ore tonnes at a higher grade.

Plan views of the designs are shown in Figure 6.3 to Figure 6.6**Error! Reference source not found.**. A waste d ump design was completed and is shown in the overall layout view in **Error! Reference source not found.** 6.3

Table 6.11 Optimisation Shell 35 vs Pit Design Comparison

Shell	Total Tonnes (Mt)	Waste Tonnes (Mt)	Strip Ratio	Mill Feed Tonnes (Mt)	Mill Feed Au g/t	Recovered Au kOz	Mining Cost ($M)	Process Cost ($M)	Selling Cost Au ($M)	Revenue Au ($M)	Undiscounted Cash Flow ($M)	Cost /Oz
Area A	30.9	25.9	5.1	5.1	1.70	261.1	94.1	115.1	23.0	417.7	185.6	889
Area D	18.7	12.8	2.2	5.9	1.82	323.0	57.0	133.4	28.4	516.7	298.0	677
Area DS	2.3	1.7	3.3	0.5	1.57	25.4	6.9	12.2	2.2	40.7	19.4	838
Total	51.9	40.4	3.5	11.5	1.76	609.5	158.0	260.6	53.6	975.1	502.9	775

Design	Total Tonnes (Mt)	Waste Tonnes (Mt)	Strip Ratio	Mill Feed Tonnes (Mt)	Mill Feed Au g/t	Recovered Au kOz	Mining Cost ($M)	Process Cost ($M)	Selling Cost Au ($M)	Revenue Au ($M)	Undiscounted Cash Flow ($M)	Cost /Oz
Area A	31.9	26.7	5.2	5.2	1.68	262.5	96.9	117.3	23.1	420.1	182.7	904
Area D	19.7	13.8	2.3	6.0	1.80	324.5	60.0	135.3	28.6	519.2	295.3	690
Area DS	2.5	2.0	3.7	0.5	1.56	25.6	7.8	12.3	2.3	41.0	18.7	870
Total	54.2	42.5	3.6	11.7	1.74	612.7	164.7	265.0	53.9	980.3	496.7	789

Difference	Total Tonnes (Mt)	Waste Tonnes (Mt)	Strip Ratio	Mill Feed Tonnes (Mt)	Mill Feed Au g/t	Recovered Au kOz	Mining Cost ($M)	Process Cost ($M)	Selling Cost Au ($M)	Revenue Au ($M)	Undiscounted Cash Flow ($M)	Cost /Oz
Area A	0.9	0.8	0.1	0.1	-0.02	1.5	2.9	2.2	0.1	2.4	-2.8	15
Area D	1.0	0.9	0.1	0.1	-0.02	1.5	3.1	2.0	0.1	2.5	-2.7	13
Area DS	0.3	0.3	0.4	0.0	-0.01	0.2	0.8	0.2	0.0	0.3	-0.7	32
Total	2.2	2.0	0.1	0.2	-0.02	3.2	6.7	4.3	0.3	5.2	-6.2	14
Area A	3%	3%	1%	2%	-1%	1%	3%	2%	1%	1%	-2%	2%
Area D	5%	7%	6%	1%	-1%	0%	5%	1%	0%	0%	-1%	2%
Area DS	12%	15%	13%	1%	-1%	1%	12%	1%	1%	1%	-3%	4%
Total	4%	5%	3%	2%	-1%	1%	4%	2%	1%	1%	-1%	2%

Figure 6.3 Mining Overview

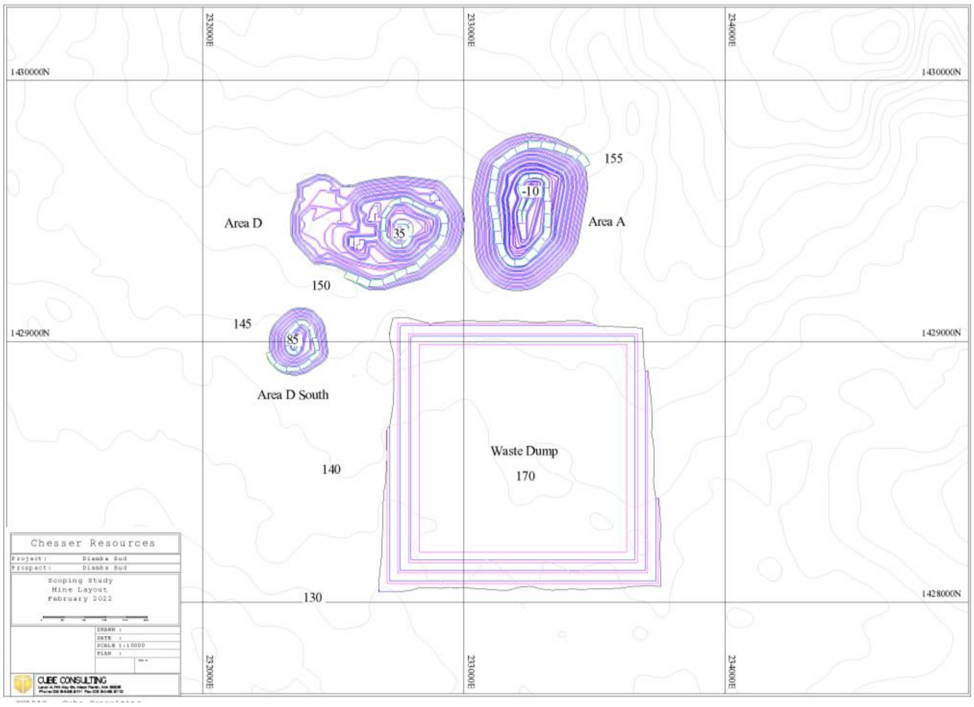


Figure 6.4 Area A Pit Design

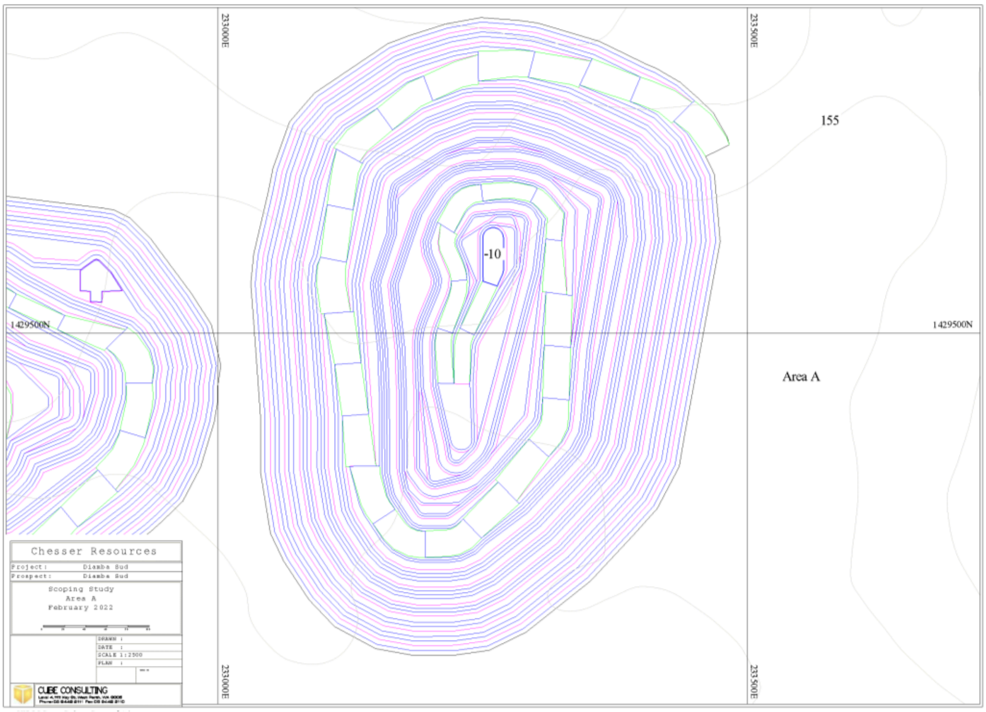


Figure 6.5 Area D Pit Design

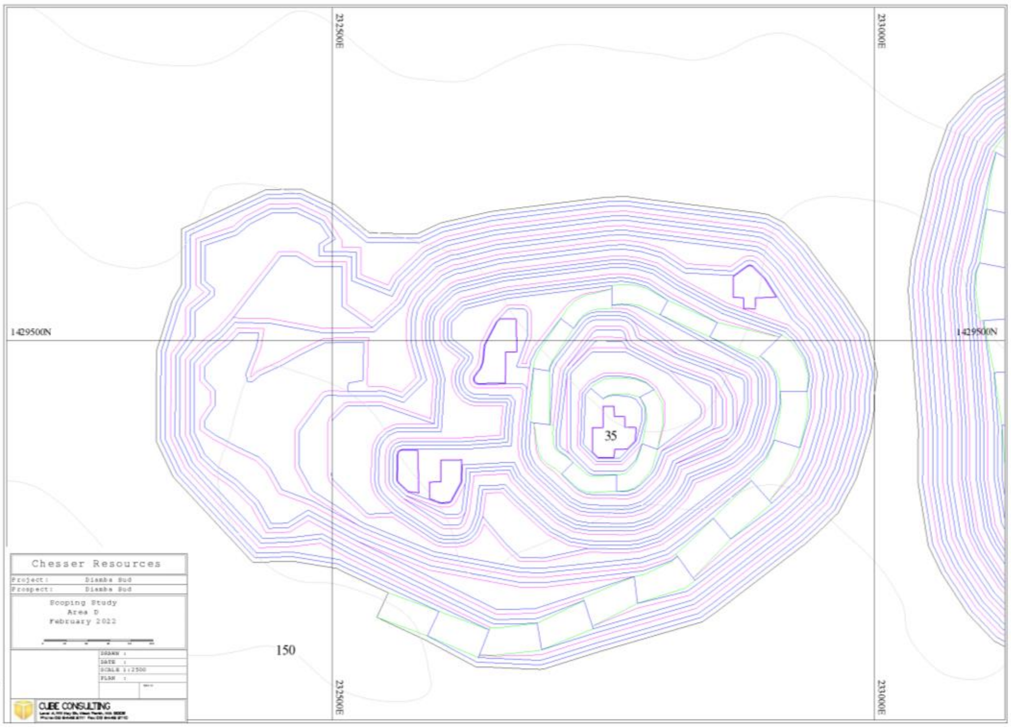
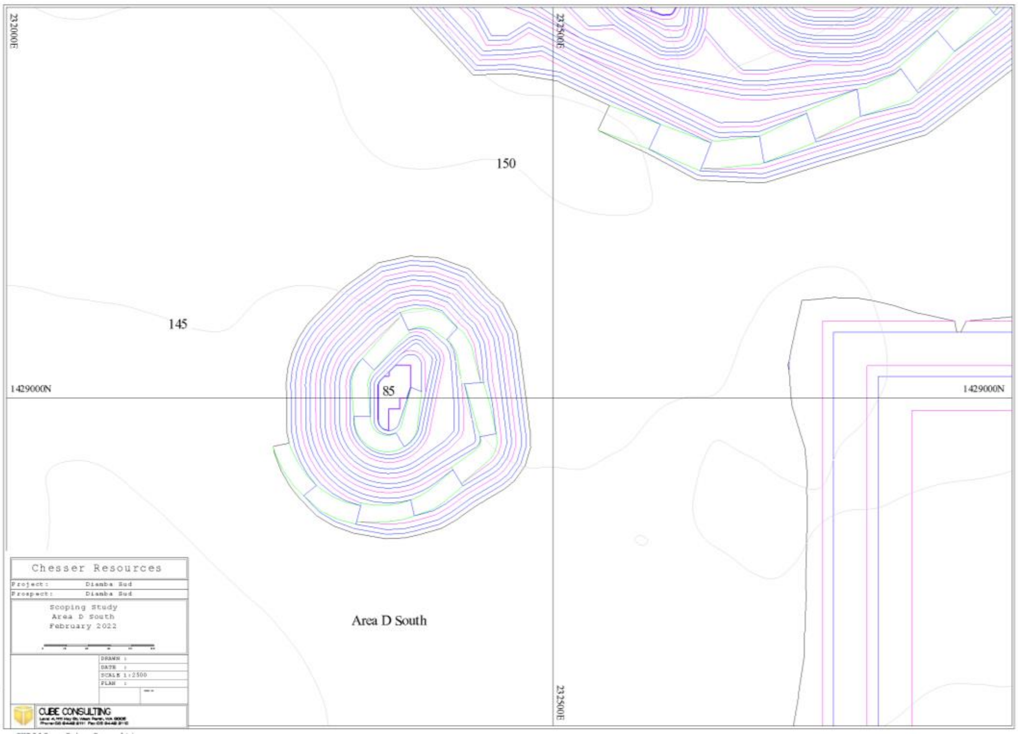


Figure 6.6 Area D South Pit Design



6.7 Production Schedule

Cube completed a mining production schedule using the detailed pit designs discussed in the preceding section. The primary aim of the production schedule was to maximise project value while producing an ore feed within the prescribed design capacity of 2.0 Mtpa.

The schedule makes use of stockpiles which serve as a buffer between the open pit mining production and the planned ore feed to the processing facility.

In reflection of the level of study, the schedule was undertaken in annual periods.

6.7.1 Scheduling Constraints and Drivers

One of the major scheduling constraints in relation to practical mining is a limit on the vertical rate of advance. This schedule was limited to a vertical advance rate of no more than 60 metres in a 12-month period. It is notable that this limit was not reached throughout the schedule which implies that the mining production is not considered a significant risk factor in the achievement of ore feed supply for processing.

The schedule also attempts to provide a smooth and practical mining rate to facilitate the efficient use and mobilisation of mining equipment.

6.7.2 Schedule Results

The schedule achieves the primary objective of supplying ore feed to the process facility capacity for life of operation resulting in seven years of full capacity processing at 2 Mtpa and the final year processing 0.73 Mt which equates to just over 4 months.

The maximising of project value is evidenced by the fact that the early years of production process higher grade material, combined with the deferral of waste mining with total mining peaking at 12 and 11 Mtpa in years 4 and 5 respectively.

The ROM stockpiling was utilised effectively to facilitate the smoothing of the mining schedule while providing consistent process feed material. The end of year stockpile balance peaked at 435 kt in Year 2 with a low of just 67 kt in year 1.

The schedule required a pre-production period in which 3.9 Mt of material was planned to be mined. During this period a ROM stockpile of 299 kt was established providing the assurance of ore supply to the process facility from start-up.

Key schedule results are shown in Table 6.12 to Table 6.17.

Table 6.12 Tonnes Mined by Destination

Tonnes Mined										
Year	**PP**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Total**
ORE	299,321	1,768,612	2,368,031	1,729,785	2,189,439	1,780,136	2,050,422	1,948,179	595,863	14,729,788
WASTE	3,566,945	4,019,751	3,772,577	4,106,742	10,281,927	10,113,607	2,747,532	2,122,308	307,399	41,038,788
Grand Total	**3,866,266**	**5,788,363**	**6,140,608**	**5,836,527**	**12,471,366**	**11,893,742**	**4,797,954**	**4,070,487**	**903,262**	**55,768,576**

Table 6.13 Volume Mined by Destination

Volume Mined										
Year	**PP**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Total**
ORE	131,670	933,185	1,191,300	655,215	919,078	657,828	750,833	713,735	215,793	6,168,635
WASTE	1,805,830	2,206,315	1,616,768	1,797,798	5,096,923	3,825,898	1,006,668	776,265	111,933	18,244,395
Grand Total	**1,937,500**	**3,139,500**	**2,808,068**	**2,453,013**	**6,016,000**	**4,483,725**	**1,757,500**	**1,490,000**	**327,725**	**24,413,030**

Table 6.14 Tonnes Mined by Pit Area

Tonnes Mined By Area										
Year	**PP**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Total**
AREA A				1,577,700	10,103,790	11,404,178	4,797,954	4,070,487	903,262	32,857,371
AREA D	3,866,266	4,658,184	5,741,727	4,195,722	2,367,576	489,564				21,319,039
AREA DS		1,130,179	398,881	63,105						1,592,165
Grand Total	**3,866,266**	**5,788,363**	**6,140,608**	**5,836,527**	**12,471,366**	**11,893,742**	**4,797,954**	**4,070,487**	**903,262**	**55,768,576**

Table 6.15 Ore Tonnes and Grade Mined by Oxidation and Classification

Ore Mined in Period										
Year	**PP**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Total**
Indicated										
Ox Tonnes	263,763	1,133,870	1,463,818	321,626	586,940	57,830				3,827,848
Au g/t	1.06	2.20	2.61	1.86	1.33	1.66				2.11
Fresh Tonnes			119,804	162,574	1,438	1,013,701	1,825,469	1,613,304	319,604	5,055,894
Au g/t			1.12	1.69	0.85	1.80	1.89	1.39	1.24	1.65
Inferred										
Ox Tonnes	35,558	623,210	434,088	64,322	97,302					1,254,480
Au g/t	0.91	1.30	1.18	0.97	0.91					1.20
Fresh Tonnes		11,533	350,321	1,181,264	1,503,759	708,604	224,953	334,874	276,259	4,591,567
Au g/t		1.40	1.51	1.23	1.09	1.05	1.31	1.25	1.18	1.18
Total Ore	**299,321**	**1,768,612**	**2,368,031**	**1,729,785**	**2,189,439**	**1,780,136**	**2,050,422**	**1,948,179**	**595,863**	**14,729,788**
Au g/t	**1.05**	**1.88**	**2.11**	**1.38**	**1.15**	**1.49**	**1.83**	**1.37**	**1.21**	**1.58**

Table 6.16 Ore Tonnes and Grade Processed by Oxidation and Classification

Mill Feed										
Year	**PP**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Total**
Indicated										
Ox Tonnes		1,380,000	1,470,000	320,000	590,000	67,848				3,827,848
Au g/t	1.06	1.99	2.61	1.89	1.34	1.61	0.00	0.00	0.00	2.11
Fresh Tonnes			70,000	200,000	10,000	1,000,000	1,830,000	1,600,000	345,894	5,055,894
Au g/t	0.00	0.00	1.12	1.56	1.48	1.80	1.89	1.39	1.25	1.65
Inferred										
Ox Tonnes		620,000	460,000			72,152			102,328	1,254,480
Au g/t	0.91	1.28	1.19	1.00	0.95	0.95	0.95	0.95	0.95	1.20
Fresh Tonnes				1,480,000	1,400,000	860,000	170,000	400,000	281,567	4,591,567
Au g/t	0.00	1.40	1.50	1.30	1.10	1.06	1.29	1.26	1.18	1.18
Total Ore	**0**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**729,789**	**14,729,788**
Au g/t	**0.00**	**1.77**	**2.23**	**1.42**	**1.17**	**1.44**	**1.84**	**1.37**	**1.18**	**1.58**

Table 6.17 End of Period Stockpile Balances

Closing Stockpile									
Year	**PP**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**
Indicated									
Ox Tonnes	263,763	17,633	11,451	13,077	10,017	0	0	0	0
Au g/t	1.06	1.99	2.61	1.89	1.34	1.61	0.00	0.00	0.00
Fresh Tonnes	0	0	49,804	12,378	3,816	17,517	12,986	26,290	0
Au g/t	0.00	0.00	1.12	1.56	1.48	1.80	1.89	1.39	1.25
Inferred									
Ox Tonnes	35,558	38,768	12,856	77,178	174,480	102,328	102,328	102,328	0
Au g/t	0.91	1.28	1.19	1.00	0.95	0.95	0.95	0.95	0.95
Fresh Tonnes	0	11,533	361,853	63,117	166,876	15,480	70,433	5,308	0
Au g/t	0.00	1.40	1.50	1.30	1.10	1.06	1.29	1.26	1.18
Total Ore	**299,321**	**67,934**	**435,964**	**165,750**	**355,189**	**135,325**	**185,747**	**133,925**	**0**
Au g/t	**1.05**	**1.48**	**1.48**	**1.23**	**1.04**	**1.07**	**1.15**	**1.05**	**0.00**

7. MINTREX EXECUTIVE SUMMARY

Mintrex proposal (22-001-CHZ) offered a Scoping Study and cost estimation (+/-35%) for a potential gold processing plant at Chesser's gold resource at Diamba Sud in Eastern Senegal.

The Client has provided testwork information indicating that a good gold recovery has been achieved in testwork with 75 µm grind, gravity and CIL processing. A 75 µm P_{80} grind has been adopted for this study. After discussion it was agreed that 2 Mt/a was a suitable throughput for scoping level assessment, relative to expected resource magnitude.

Given the grind selected we proceeded on the basis of a SAG/Ball circuit to ensure the correct sizing is readily achieved. A standard gold processing plant containing classification, a gravity circuit, CIL, split

AARL elution, electrowinning and smelting is designed to produce gold dore. Tailings from the CIL will undergo cyanide detox and report to a tailings storage facility.

Raw water for processing will be sourced by seasonal pumping from the Faleme River to a water storage dam located to the East of the plant site. Process water will be supplied from the TSF decant water and thickener overflow.

The project will include an on-site accommodation village housing part of the workforce, with the balance residing in adjacent communities.

The estimated total capital cost for the Diamba Process Plant and Infrastructure is USD 139M (Q4, 2021) as depicted in Table 7.1. The total fresh operating costs is USD 22.6/t (Q4,2021) and oxide operating costs is USD 18.5/t (Q4,2021) as per Table 7.2 and Table 7.3 respectively.

Several risk and opportunities were identified during this scoping study which form the recommendations for future work on this project. Further testwork on comminution and recovery may indicate a coarser grind size and hence reduce CAPEX and OPEX. Further testwork may also reduce cost of reagents.

The plant is likely to run on softer ore during the initial 2-3 years; therefore, the cost of the ball mill may be deferred until required. Oxide ores potentially contain clay pockets which can lead to material flow issues. Mitigating steps such as ROM blending and/or plant operation adjustments will need to be confirmed and implemented.

Table 7.1 Estimated project CAPEX for Diamba Sud

Capital Cost Summary	USD ($M)
Process Plant	$58
Infrastructure	$37
Project Indirect Costs	$21
Contingency	$23
Total Project Cost	**$139**

Table 7.2 Estimated processing OPEX for the Diamba Sud Process Plant Fresh

Processing Fresh	Annual $M	USD/t processed
Plant Labour	$3.6	$1.8
Maintenance	$3.1	$1.6
Mobile Equipment	$1.9	$0.9
Power	$14.9	$7.4
Consumables	$10.1	$5.1
Laboratory	$0.9	$0.5
Total Processing Cost	**$34.6**	**$17.3**
General & Admin	$8.4	$4.2
Owners Mining	$2.2	$1.1
Total	**$45**	**$22.6**

Table 7.3 Estimated processing OPEX for the Diamba Sud Process Plant Oxide

Plant Labour	$3.6	$1.8
Maintenance	$2.4	$1.2
Mobile Equipment	$1.9	$0.9
Power	$8.9	$4.4
Consumables	$8.9	$4.4
Laboratory	$0.9	$0.5
Total Processing Cost	**$26.5**	**$13.2**
General & Admin	$8.4	$4.2
Owners Mining	$2.2	$1.1
Total	**$37**	**$18.5**

The 2 Mtpa throughput is based on total mineral resources which includes indicated as well as inferred resource. Continued exploration and drilling is required to confirm the plant throughput is suitable for the resource before the next phase of this project.

8. ORE PROPERTIES

This project will treat surface oxides, transition ore, and deeper fresh ore. The fresh ore constitutes about 60% and the transitional and oxide ore about 40% of the current defined resource. The processing properties of the ore types indicate a single treatment plant design to process all types individually or as blends. Table 8.1 presenting the mineral resource and oxidation state as published on 16 November 2021 is below:

Table 8.1 Diamba Sud Mineral Resource (November 2021)

Classification	Indicated			Inferred			Total		
Oxidation	**Tonnes Mt**	**Grade g/t**	**Metal Koz**	**Tonnes Mt**	**Grade g/t**	**Metal Koz**	**Tonnes Mt**	**Grade g/t**	**Metal Koz**
Oxide	3.7	2.2	262	1.3	1.2	50	5.0	2.0	312
Fresh	5.1	1.7	276	5.1	1.2	194	10.3	1.4	469
Total	**8.8**	**1.9**	**538**	**6.4**	**1.2**	**243**	**15.2**	**1.6**	**781**

It is important to note the process plant throughput selected is based on the total mineral resource and therefore further confirmation of indicated resource should be settled before PFS.

8.1 Comminution

It is expected that the oxide ores will be soft and free milling. Comminution testwork competed by IMO on three fresh samples in 2022 showed an average BBWi of 14.8 kWh/t which is typical of medium to hard ore. SMC test report 22005/P1 also indicated a medium to hard ore with an A*b averaging 36 kWh/t. The Abrasion Index (Ai) of 0.29 is also typical of gold ore. Summary results are presented in Table 8.2.

Mintrex based the definition of the comminution and other parts of the process on this testwork and a previous study for a 2.0 Mtpa SAG/Ball circuit engineered for another gold project requiring 75 µm grind size and 24 hour leach residence. This circuit has been proved adequate in processing competent fresh ore in addition to softer shallow material. In view of the softer ore properties at Diamba, crushing of the recycled SAG mill scats is not included.

It is possible that testwork will show potential to achieve good gold recovery at significantly larger sizing which would reduce both CAPEX and OPEX.

Table 8.2 2022 Comminution Testwork Summary

		Units	DMET015	DMET016	DMET017	DMET013	DMET014
Composite Details	Type		Fresh	Fresh	Fresh	Oxide	Oxide
BAi	Bond Abrasion Index		0.1332	0.3739	0.3561		
	Paddle In	g	86.5913	86.6422	86.6057		
	Paddle Out	g	86.4581	86.2683	86.2496		
BBWi 106 µm	Bond Ball Work Index	kWh/t	12.1	16.4	16.0		
	Feed F_{80}	µm	1,986	1,849	1,846		
	Product P_{80}	µm	82	80	77		
	Grindability	g/rev	1.736	1.198	1.193		
BBWi 150 µm	Bond Ball Work Index	kWh/t	12.2	17.4	16.6		
	Feed F_{80}	µm	2,013	1,825	1,881		
	Product P_{80}	µm	113	111	111		
	Grindability	g/rev	2.002	1.308	1.379		
Levin Grindability	P_{80} 75	kWh/t				-3.2	-4.9
	P_{80} 45	kWh/t				0.9	1.6
	P_{80} 25	kWh/t				5.7	9.1
SMC	Dwi	kWh/m3	6.5	7.8	8.8		
		%	48.0	64.0	76.0		
	Mia	kWh/t	18.0	22.3	24.1		
	Mih		13.2	17.0	18.8		
	Mic		6.8	8.8	9.7		
	Mib		13.0	20.2	19.1		
	SG	t/m3	2.9	2.7	2.7		
	A	#	83.5	100.0	100.0		
	b	#	0.5	0.3	0.3		
	Ta	#	0.4	0.3	0.3		
		%	59.0	70.9	76.9		
	A*b	#	43.4	34.4	31.0		
		%	53.9	75.8	82.9		
	SCSE	kWh/t	9.9	10.6	11.2		
		%	58.3	71.6	80.7		

8.2 Gold Recovery Testwork

Metallurgical testwork was conducted by ALS on ten ore samples in 2020 and an additional twelve samples in 2021. Testwork completed in 2020 was on fresh ore while testwork in 2021 was on eleven saprolite and saprock ore and one saprock/fresh ore sample. Head grade ranged from 14.6 to 0.8 g/t with an average recovery by cyanidation approximately 96% by bottle roll cyanidation tests. Head assays did not indicate significant deleterious minerals such as organic carbon, arsenic or mercury. Screen fire assays indicated low Gravity Recoverable Gold (3% – 14% above 75µm) across the twelve 2021 samples.

Cyanidation testwork was conducted at a grind size of 75 µm, 30% and 40 %w/v solid density, with $Pb(NO_3)_2$, cyanide, lime and oxygen sparge. Two summary extracts from the ALS reports A22538 and A21535 are presented in Table 8.3 and Table 8.4 below for the ten 2020 and twelve 2021 samples respectively.

Average cyanide and lime consumption was 0.2 kg/t and 1.8 kg/t, respectively across all twenty-two samples. High initial recovery and subsequent diagnostic leaching did not indicate refractory gold.

Table 8.3 2020 Cyanidation Testwork Summary

DIRECT CYANIDATION TESTWORK							
Composite ID	Test ID	Gold				Consumption	
		Head Grade (g/t)	Leach Feed Grade (g/t)	Leach Rec'y (%)	Residue (ppm)	NaCN (Kg/t)	Lime (g/t)
HGBR01	CT2961	12.0/10.9	13.39	98.7	0.17	0.22	0.60
HGBR02	CT2962	9.88/8.99	7.10	99.4	0.05	0.24	0.63
HGBR03	CT2963	12.1/12.6	11.68	98.0	0.23	0.18	0.79
LGBR07	CT2964	1.01/0.83	0.96	96.9	0.03	0.18	0.36
LGBR08	CT2965	0.88/1.20	1.09	92.6	0.08	0.18	0.61
MGBR04	CT2966	2.18/2.91	3.12	97.4	0.08	0.15	0.72
MGBR05	CT2967	2.65/3.83	2.87	97.2	0.08	0.18	0.86
MGBR06	CT2968	2.32/2.26	2.23	97.8	0.05	0.15	0.57
MGCA10	CT2969	2.92/2.34	2.33	86.3	0.32	0.15	0.37
MGGR09	CT2970	4.75/2.54	2.16	97.7	0.05	0.15	0.94

Table 8.4 2021 Cyanidation Testwork Summary

DIRECT CYANIDATION TESTWORK							
Composite ID	Test ID	Gold				Consumption	
		Pulp Density (% w/w)	Lch Feed Grade (g/t)	Leach Rec'y (%)	Residue (ppm)	NaCN (Kg/t)	Lime (g/t)
DMET 001	CT3301	30%	7.91	99.7	0.02	0.16	2.40
DMET 002	CT3302	30%	15.04	99.4	0.09	0.16	1.82
DMET 003	CT3303	30%	7.77	97.8	0.17	0.16	2.81
DMET 004	CT3304	30%	3.98	98.2	0.07	0.28	3.20
DMET 005	CT3305	30%	3.74	98.9	0.04	0.16	3.74
DMET 006	CT3306	30%	4.69	99.1	0.04	0.23	2.32
DMET 007	CT3307	40%	0.72	88.9	0.08	0.32	2.36
DMET 008	CT3308	30%	1.83	98.4	0.03	0.28	1.97
DMET 009	CT3309	30%	1.16	97.4	0.03	0.28	2.59
DMET 010	CT3310	40%	1.82	95.1	0.09	0.18	2.23
DMET 011	CT3311	40%	2.17	95.4	0.10	0.18	4.57
DMET 012	CT3312	40%	4.52	86.0	0.63	0.33	3.53

8.3 Slurry Viscosity

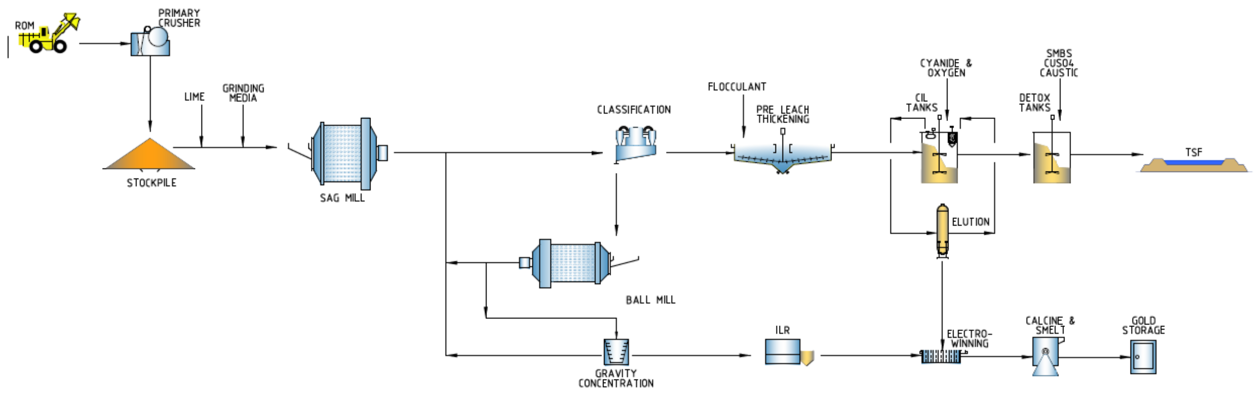
It has been identified in testwork that slurry viscosity increases substantially above 50% w/w solids due to the presence of clay materials. The circuit includes a pre-leach thickener allowing for reduced cyclone feed density to maintain classification performance. The viscosity issue is another reason to limit grinding to just the extent needed for good gold recovery.

8.4 Plant Definition Philosophy

The underlying philosophies which steered the flowsheet development are:

- This is a first pass design for a medium-scale gold plant. Basing on a known successful design of equal capacity provides a conservative base line. Increased grind size and better definition of ore properties may provide opportunities to improve CAPEX and OPEX;
- Leading off with a primary crusher and SAG mill will be a robust configuration as there is likely to be significant clay content in early plant feed which discourages the use of additional crushing stages.
- The preliminary process design criteria (PDC) selected are presented in Appendix E.
- A block flow diagram of the processing plant is presented in Figure 8.5.

Figure 8.5 Scoping Level Process Block Diagram for the Diamba Sud Processing Plant



9. PROCESS PLANT

9.1 Crushing

The ROM hopper (150t) will be dimensioned to allow direct dumping from mine trucks up to 90t payload. Some ore will be dumped on the ROM pad for FEL rehandle, assumed to be CAT 988 or equivalent. The same loader will recover dead stock from the coarse ore stockpile to maintain mill operation when the crushing section is idle. The ore fed through the primary crusher is then directed to an open stockpile.

9.2 Milling and Gravity

Coarse ore is reclaimed from the stockpile by an apron feeder with a similar feeder outside the stockpile for FEL reclaim. A single conveyor feeds up to the SAG mill.

The SAG and ball mill are both sized around 3MW with a preference that the drive trains would have common major components.

The SAG discharge is scalped on a vibrating screen with oversize returned to SAG feed, and undersize pumped to the cyclones. Cyclone underflow reports to the ball mill feed. A fraction of the ball mill discharge is routed to the gravity circuit while the excess overflows to the SAG discharge hopper.

The testwork shows a low gravity gold yield (~10%) so a modest capacity (~50% of fresh feed) is routed through gravity. A single 30" Knelson (or similar) unit is installed. Gravity tails return to the SAG discharge hopper.

The concentrator accumulates around 40 kg of gravity con per cycle (~40 minutes). At the cycle end, feed is shut off and the machine purges its accumulated contents as a gravity flow of slurry to the intensive leach reactor (ILR) housed in the gold room.

9.3 Carbon in Pulp Leach

The cyclone overflow passes over a trash screen into the first Carbon In Leach (CIL) tank. Cyanide is added to commence the leaching of gold. Five more tanks with carbon provide a total leach holding time of 24 hours.

The tails from the last tank pass over a safety screen to capture any fugitive carbon for recovery of gold value. The loaded carbon is extracted from tank 2 as a slurry, screened and rinsed then delivered to the carbon elution hopper with a batch size of 4 tonnes.

A conventional hydrochloric acid wash and split AARL elution process follows to recover gold from carbon as a pregnant solution. This is processed with electrowinning in the gold room to produce gold as a cathode sludge.

9.4 Cyanide Detoxification

The safety screen undersize slurry passes through two agitated tanks with addition of SMBS, copper sulphate ($CuSO_4$) and oxygen to reduce the level of cyanide to the extent required by operating permits.

In addition caustic is added to neutralise the acid (H_2SO_4) formed in the reaction, maintaining pH at 9 or above. Caro's acid is an alternative process which can be used instead of the INCO process mentioned above. It uses hydrogen peroxide (H_2O_2) and concentrated sulphuric acid (H_2SO_4). Further investigation between these two options is warranted for the next phase of the project.

9.5 Gold Recovery

Both the intensive leach reactor and carbon elution system deliver gold as a cathode sludge. These are accumulated and processed separately for metallurgical accounting reasons. The sludge is removed from the cells, drained and oven-dried, then smelted to bars in a tilting furnace. Bars are taken into the gold-room safe until removed for secure transport to point of sale.

9.6 Reagents

The plant has various reagents to be handled in bulk and delivered into the process. These are handled in different ways depending on the usage rate, material properties and delivery format.

9.6.1 Solid Reagents for Dissolution

Broadly similar make-up systems are provided for caustic soda, cyanide, SMBS and copper sulphate ($CuSO_4$). Bulk solids are delivered in Bulki-boxes (cyanide) or bulk-bags (others). A hoist raises these packages into a bag-breaker enclosure which discharges the contents into a water-charged mixing tank below. When dissolution is complete the batch is transferred to an adjacent storage tank providing continuous availability of reagent at the designated concentration.

There are two separate bunds for cyanide/caustic and SMBS/$CuSO_4$. The former is a DG bund with 110% containment capacity. The latter reagents are not DG, and containment is only nominal via paving and kerbing.

9.6.2 Quicklime

The daily lime usage is in the range of 15 t/d. A 200 tonne vertical silo provides around 13 days storage. The reagent is delivered by self-unloading pneumatic bulk tankers. Discharge equipment provides a controlled delivery onto the mill feed conveyor, proportioned to the ore feed rate.

9.6.3 Liquid Reagents

Hydrochloric acid is handled within its own Dangerous Goods bund. Tanker deliveries are transferred into a vertical storage tank for delivery to the process.

9.6.4 Other

Activated carbon pellets are delivered as a 0.5 tonne bulk bags, with expected circuit make-up of 1 bag per 5 days. This is hoisted by the CIL crane and delivered into the final leach tank.

Flocculant is delivered as bulk bags which are loaded into the flocculant preparation system (~ 1 bag/week). It is important to minimise air contact as humidity leads to poor flow of the powder reagent.

Oxygen is sourced from an on-site pressure-swing-adsorption (PSA) plant. This provides oxygen reticulation at ~350 kPag to the CIL tank agitators, detox tanks and the gold room leach reactor system.

9.7 Services

The plant includes the following reticulated services:

- Compressed air – primarily for control valves (as dried instrument air) and for air tools.
- Potable water – used in the plant primarily for eyewash/safety showers, and also piped to other infrastructure buildings.
- Raw water - used for elution, pump gland water, washdown and fire protection.

9.8 Mobile Equipment

The major item of mobile equipment for the plant is a CAT 988 front end loader (or similar). During crushing plant operation this machine is used to supply some of ROM to the crusher feed, or to recover crushed ore from the dead stockpile when crushing is off-line.

This will require a full-time operator on every shift, so 4 drivers on the regular roster, plus another qualified person available to provide leave coverage.

The other mobile equipment units included in the process plant costings are:

- Skid-steer loader for plant cleanup and minor earthworks.
- 3t stores telehandler – used for warehouse operation and with man-cage for personnel access.
- Prado 4WD – Process Plant Manager.
- Hilux dual-cab 4WD – Site ops/maintenance pool vehicle.
- Hilux dual cab (4WD) – Admin/OHS/Logistics pool vehicle.
- A 40-seater bus providing a shift-change transport between local communities and the plant for process plant and mining personnel.

Vehicles are all included as capital items together with appropriate fuel and maintenance costs. It is expected that the plant will be self-sufficient in mobile equipment.

9.9 Infrastructure Summary

Infrastructure scope includes site preparation, access and several buildings

The main infrastructure elements included within the estimate are:

- A tailings storage facility (TSF);
- Groundwater bores and delivery lines for raw water to supply potable purposes;
- River pumping station, relay tank and overland pipeline.
- Large lined pond for storage of river water;
- Lined pond for storage of process water,
- A Build-Own-Operate (BOO) diesel-fuelled power station providing electricity for the process plant, village and associated infrastructure;
- Workshops and store buildings to service the gold plant;
- Plant site amenities, mess halls, and plant administration area.
- Entry gate post and security office, and medical/ambulance centre
- An on-site accommodation for 200 personnel.

9.10 Water Supply

The water supply for ore processing is derived by seasonal pumping from the Faleme River, some 5 km East of the proposed plant location. This is fresh water which is likely to have some turbidity from fine solids. A large holding dam to provide water supply across the dry season will allow for settlement of solids. Gauging data at Gourbassi some 85km to the North indicates river flow is substantial for only 4 months of the year. The river water extraction system will be designed for 400% of the average raw water demand, allowing for harvesting of the year's raw water in 3 months.

Water for potable use will be derived from bores within the mining lease areas. When representative water samples are available, these should be tested to inform the extent of water treatment required to meet WHO potable standards.

9.11 TSF Concept

The TSF concept and costing for this study is based on the reference project. The two adjacent cells are around 600 metres square at the crest with an ultimate capacity of 12.5 Mt per cell. One cell is available for startup, with the second cell built in the next dry season. The cells are lifted alternately with downstream raises during each dry season.

The preliminary positioning was selected with a view to minimising risk to the process plant and accommodation village. It was also necessary to maintain clearance from the N24 road, and prospective resource mining areas. Sterilisation drilling will be required to validate the location of this structure and other major infrastructure items.

The TSF cells will be plastic-lined with underdrainage systems to minimise potential for seepage. Decant towers within each cell will return supernatant water to the process water system.

9.12 Water Storage Dam

The water storage dam is able to store up to 1.2 Mm3 of water, extracted from the Faleme River during 4 months of wet season pumping. It is HDPE lined to minimise losses, with abstraction towers for pumps delivering raw water to the plant. The pumping rate from the Faleme River is nominally 4 times the average demand for raw water.

9.13 Accommodation Village

The accommodation village is based on a capacity of ~200 personnel. There will be many more employed for the operation but the expectation is that local communities will be supported by providing some of those employees, and accommodation for many more from wider areas within Senegal.

The village will be configured as modules of ~20 ensuite rooms constructed from concrete blocks made on-site. The same basic room footprint will be utilised as one-bed or 2-bed occupancy, depending on the employment level. A nominal village sizing has been established as 60 x 2-bed rooms and 80 x 1-bed rooms, for a total capacity of 200. Rooms/beds will be vacant while occupants are off-site.

The accommodation village will have management office, kitchen/mess hall facilities, wet mess, laundry blocks, a lighted multi-sports court and a swimming pool. The accommodation village is located close enough to the plant (~0.6 km) for walking to be the routine travel means between the two locations.

The accommodation village will also be the location for the potable water treatment and waste water treatment plants. Treated waste water will be disposed into the plant tails system, thereby reporting into the process water circuit.

The accommodation village is powered from the main plant system via an overhead power line. A standby generator will support essential services in the event of outage.

10. BASIS FOR CAPITAL ESTIMATE

The target is a Class 5 (+/- 35%) estimate as defined by the American Association of Cost Engineering (AACE). This is often undertaken by identifying purchase costs for major mechanical equipment items, then factoring in the values for other elements (mechanical installation, civil, platework, structural, electrical, controls) based on typical ratios for plants of this nature.

On this occasion Mintrex used as basis a Class 3 (BFS) estimate prepared in 2018 for a very similar reference project in a comparable location. The reference project progressed to operation, substantially validating that base estimate. For this study contingencies were increased to reflect the lower definition (resources, testwork, vendor pricing) for the current project. The overall contingency totalled $ 23 M which is ~20 % of the base estimate. The rates for project bulks and labour were adjusted based on a 2021 BFS for another project in this region.

Adjustments were also made for specific scope unrelated to mechanical plant/equipment e.g. infrastructure items. An estimate summary is presented in Table 10.1 and a mechanical equipment list in Appendix D. The scoping level costs are provided in US Dollars as at Quarter 1, 2022. The only specific relevance of the date is an update of international exchange rates as at 4/1/2022.

10.1 Inclusions and Exclusions

The capital cost estimate notionally includes:

- The engineering, procurement and construction of the process plant;
- The engineering, procurement and construction of the project infrastructure (access road, TSF, water supply systems, plantsite buildings and accommodation village);

- Commissioning services (first fill consumables, engineering support, vendor representatives and technical services);
- Commissioning and capital spares;
- Pre-operation costs for the process plant (workforce recruitment, training, payroll) until first production.

The capital cost estimate does not include:

- Mining exploration, testwork, further feasibility phases up FID;
- Establishment of a Senegal national office e.g. Dakar;
- Mine development (mine infrastructure buildings and systems, mining fleet and consumables, pre-strip, haul roads, ROM pad);
- Builders Margin for an EPC execution of the project.
- Working capital while production cash flow is established
- Financing costs
- Changes to the process treatment requirements
- International economic or political shocks

The estimate assumes international borders are open into Senegal, commercial flights are available and that international shipping is normalised.

Table 10.1 Estimated Capital Costs for Diamba Sud Gold Project (USD)

Cost Area	Total ($M)
Process Plant Costs	
Construction Overheads	$6.8
Bulk Earthworks	$1.3
EPCM	$12.3
Primary Crushing	$4.6
Milling & Classification	$24.7
Leaching & Adsorption	$11.3
TSF & Decant Return	$0.6
Metal Recovery & Refining	$3.2
Reagents	$1.4
Services	$3.1
Total Process Plant Costs	**$69.3M**
Infrastructure	
Tailings Storage Facility	$11.1
Process Plant Infrastructure	$17.1
Village	$9.3
Power Supply	$3.8
Plant Vehicles & Mobile Equipment	$3.2
Other Costs	
Temporary Construction Facilities	$0.7
Capital Spares	$3.8
First Fills	$2.1
Owner's Costs	$19.0
Total Indirect Costs	**$70.2M**
Total Project Costs	**$139M**

10.2 Implementation

Several stages of design development are required before the Final Investment Decision (FID). Design development would generally include further testwork, a Pre-Feasibility Study (PFS) and Bankable/Definitive Feasibility Study (BFS/DFS). Once the FID has been made the capital development time to complete construction and commissioning may vary significantly with an indicative range of 15-21 months.

11. BASIS FOR OPERATING COST ESTIMATE

The operating cost estimate has been evaluated at a fairly detailed level based on the OPEX estimate for the reference plant with updates as appropriate. However, the available testwork has limitations and there is potential for future changes to shift the OPEX in either direction, so it is only considered as accurate to +/-35%, as for CAPEX. The OPEX for both fresh and oxide ore is estimated with the primary differences being the reduced maintenance and energy required for milling and different reagent consumptions. The operating costs are provided in US Dollars in Quarter 1, 2022 (see Table 11.1 and Table 11.2). The estimated OPEX includes no specific contingency allowance so must be considered to have a significant probability of exceedance.

Table 11.1 Operating Cost Estimate for the Diamba Sud Process Plant Fresh Ore

Processing Fresh	Annual $M	USD/t processed
Plant Labour	$3.6	$1.8
Maintenance	$3.1	$1.6
Mobile Equipment	$1.9	$0.9
Power	$14.9	$7.4
Consumables	$10.1	$5.1
Laboratory	$0.9	$0.5
Total Processing Cost	**$34.6**	**$17.3**
General & Admin	$8.4	$4.2
Owners Mining	$2.2	$1.1
Total	**$45**	**$22.6**

Table 11.2 Operating Cost Estimate for the Diamba Sud Process Plant Oxide Ore

Processing Oxide	Annual $M	USD/t processed
Plant Labour	$3.6	$1.8
Maintenance	$2.4	$1.2
Mobile Equipment	$1.9	$0.9
Power	$8.9	$4.4
Consumables	$8.9	$4.4
Laboratory	$0.9	$0.5
Total Processing Cost	**$26.5**	**$13.2**
General & Admin	$8.4	$4.2
Owners Mining	$2.2	$1.1
Total	**$37**	**$18.5**

The development of major costs was assessed as listed below.

11.1 Power

The installed power per mechanical equipment list was totalled to ~12 MW. The largest items are the SAG mill and ball mill at ~3200 kW each. A demand factor of was applied by area to estimate the running load for 8000 mill operating hours per annum, and reduced load for the balance (760 hours). This arrived at a typical demand load of ~6.6 MW with 52 GWh/a of power use for fresh ore.

Mintrex has estimated a total BOO tariff of 29 ¢/kWh for diesel-generated power. This gives a total power cost of ~$14.9M pa for fresh or ~$8.9M pa for oxide, including the feeders supplying Mining Services and other infrastructure elements.

11.2 Manning for the Plant

A proposed manning complement for the Diamba process plant is presented as Table 11.3. With a 4-panel roster, continuous shift personnel work an average 42 hrs/week.

Each of the positions was priced based on typical pay rates as assessed for a comparable project in 2020 and factored with indicative payroll burden and charges to determine a total labour cost. The factors applied were as determined for another West African country within the group using the CFA (West African Franc) currency system. These approximations would be improved in future studies.

It is typical practice to start a new mineral project with substantial expatriate supervision, and transition toward higher local employment by replacing these positions when the operation is established. This will generally result in some growth in head count but a reduction in labour cost with exit of high-cost personnel. The estimate prepared only covers the “starting team” complement and makes no estimate of future personnel costs.

Feedback from other projects in the region is that locally-employed personnel numbers require close management as the number of employed personnel tend to increase, but the low cost rates mean this is only a minor issue.

Table 11.3 Manning for Diamba Sud Project

Management	
Resident Manager	1
Executive Assistant	1
Management Sub-Total	**2**
Mining Open Pit	
Mining Manager	1
Mining Superintendent (2IC)	1
Chief Geologist	1
Chief Mining Engineer (Technical Services Manager)	1
Mining Engineer	2
Production Engineer/Pit Supervisor	1
Senior Surveyor	1
Surveyor	2
Data Entry Clerk	1
Senior Mine Geologist	1
Mine Geologist	4
GeologyTechnician/Samplers/Survey Assistants	10
Secretary/Data Entry	2
Mining Open Pit Sub-Total	**28**
Process	
Processing Manager	1
Senior Metallurgist	1
Senior Metallurgist	1
Plant Metallurgist	1
Graduate Metallurgist	2
Mill Foreman	1
Goldroom Supervisor	1
Shift Supervisor (Trainers)	3
Process Operators (DS, NS, Off + Training)	28
Process Sub-Total	**39**
Process Maintenance	
Maintenance Superintendent	1
Electrical Foreman	1
Electrical Supervisor	1
Electrician	3
Mechanical Foreman	2
Mechanical Supervisor	2
Mechanical Fitters	10
Boilermakers	4
Maintenance Planner	1
Mill Clerk	1
Power Station Operator (BOO)	
Senior Maintenance Engineer	1
Outside Crew (Roads/Dams/Fences/ROM)	10
Light Vehicle Mechanics	4
Process Maintenance Sub-Total	**41**
Commercial & Administration (Country Office)	
General Manager	1
Government Relations Officer	1
Accounting Manager	1
Senior HR Officer	1
Office Manager	1
Supply Supervisor	1
Purchasing Officer	2
Logistics Coordinator	2
Drivers	4
Accountant	2
Commercial & Administration (Country Office) Sub	**16**
Commercial & Administration (Site)	
Administration Manager (Site Admin, Accounting,	1
Accountant	1
Accounts & Payroll Clerks	2
IT Officer	2
HR Officer	2
Administration Clerk	2
Bus Drivers	4
Motor Pool Driver	3
Warehouse Supervisor	1
Warehouse Labour	6
Commercial & Administration (Site) Sub-Total	**24**
E & OHS	
Manager	1
OH&S Officer	1
ERT Manager/Co-ordinator	1
Training Officer	2
Environmental Co-ordinator	1
Environmental Technicians	3
CSR Manager	1
Senior Community Relations Officer	1
Community Relations Officer	2
E & OHS Sub-Total	**13**
Security	
Security Co-ordinator	1
Security Supervisor	4
Security Sub-Total	**5**
TOTAL	**168**
International Expatriates	**14**
West African Expatriates	**17**
Local Staff	**50**
Local Workers	**87**
TOTAL	**168**

11.2.1 Operations

The plant is scheduled to operate 7 days per week, 24 hrs/day. The gold room would operate day shifts for 5 days/week, needing only 2 personnel.

The laboratory is treated as a fully contracted (on-site) operation, so the lab personnel do not appear in the owner's site manning. This laboratory would not process mine exploration and grade control samples.

11.2.2 Management and Administration

It is proposed that management and administration personnel work day shifts, Monday to Friday. No additional provisions are made for leave and sickness cover.

11.3 Plant Maintenance

It is proposed that the Maintenance Supervisors, fitters, electricians and instrument technicians work dayshift 5 days/week. These personnel would be contacted for call-outs if required on night shift.

Routine lubrication will be undertaken with the plant on line. Only mill discharge, tailings and water pumps are fully spared permitting on-line maintenance. There will be occasional scheduled shutdowns for other maintenance.

Major plant shutdowns will be required around twice per year for a mill re-line, to be undertaken by a contracted organisation.

11.4 Reagents and Consumables

This section covers wear parts, grinding media, and the entire range of reagents. The reagent usage is as defined in the Process Design Criteria. The major cost elements in this section (>$1M/a each) are.

- Grinding media;
- Mill liners;
- Lime;
- Cyanide;
- SMBS;
- Copper sulphate.

All of these cost items are considered "soft" based on the current level of process definition but they will constitute the major portion of consumable costs. The difference in reagent consumption between fresh and oxide is that fresh is estimated to consume 0.9 kg/t while oxide consumes 2.8 kg/t.

11.5 Maintenance

This covers routine maintenance (excluding wear consumables). It is based on factoring the plant and infrastructure costs.

The Total Direct Costs of $70M factors to an expected maintenance cost estimate of $3.1M per annum, in addition to the maintenance personnel noted above. Maintenance for oxide is factored as 75% of fresh cost which equates to $2.4M pa.

11.6 General and Administration

These amount in total to ~$8M per annum. The major components comprising this total are:

Personnel within Mgmt, Commercial/Admin, Sustainability & Security	$3.5M
Office expenses (country and site locations)	$0.5M
Insurances, financials, government fees	$0.8M
Personnel costs and Environmental	$0.4M
Contracts (Village accommodation & messing, Security, health service)	$2.0M
Admin vehicles and village power	$0.8M

11.7 Commentary on Opex

There are a number of aspects of the opex which have significant uncertainty. Key issues are:

- Informed selection of a grind size for the ore: 75 µm leads to large mills, large power and media use;
- Lime, cyanide, SMBS and $CuSO_4$ usage are important reagent parameters which are still to be verified.

It is appropriate to exercise some caution in applying the estimated operating cost.

12. EXCLUSIONS

The estimate focuses only on the process plant operation from ore delivery at the ROM pad to dore bars in the safe. It makes only a few specific provisions outside of this scope – nominated mainly as buildings and water system.

The more significant exclusions are:

- Permitting and approvals;
- All mine development and operation scope;
- All communications systems (other than plant controls and plant buildings);
- Future costs for downstream raising of the TSF during operating years 1 and 2 are not included – these are correctly sustaining capital costs.

13. DRAWINGS

13.1 Process Flow Diagrams

Process flow diagrams 22001-05-P-001/2/3 (Appendix C) were prepared showing the scope and process arrangements for the process plant. The focus is on defining the major elements and key transfer streams rather than details e.g. gravity circuit components.

The drawings include a mass-balance flow stream tables based on a mass-balance model of the plant process operation. Equipment numbers marked on the PFD's are aligned to corresponding items in the equipment list and capital estimate.

13.2 Plant Layout

Two arrangement drawings are presented in Appendix B. Drawing 22001-00-G-001 presents an indicative layout for the project with infrastructure, access routes, mine pits and other relevant features. Drawing 22001-00-G-002 presents the same with an aerial view background.

14. ECONOMIC ANALYSIS

This section summarizes the economic analysis completed to support the scoping study of the Diamba Sud project. The economic analysis was completed by Infinity Corporate Finance Pty Ltd (Infinity) on instruction from, and with the assistance of Chesser. The economic analysis was reviewed by Chesser and Orimco.

14.1 Summary

The Diamba Sud project has been evaluated on a discounted cash flow basis. The results of the analysis show the Diamba Sud project to be economically very robust. The present value of the net cash flow with a 5% discount rate (PVNCF5%) is $402 million on a pre-tax, project basis, using a base gold price of $1,800/oz. Project post-tax PVNCF5% at a $1,800 gold price is $301 million on an all-equity basis. Project internal rates of return (IRR) are respectively 69% per annum pre-tax and 59% per annum post-tax.

Project payback period at a gold price of $1,800/oz is expected to be 15 months on both a pre-tax and post-tax, all equity basis. Payback period is defined as the time after process plant start-up that is required to recover the initial expenditures incurred developing the project. This is the point in time when the cumulative undiscounted net cash flow is zero.

Like most gold mining projects the key economic indicators of PVNCF5% and IRR are most sensitive to changes in revenue parameters such as the gold price. A $200/oz reduction in the gold price would reduce the post-tax PVNCF5% for the Diamba Sud project by $77 million and reduce the post-tax IRR by 13% per annum. A $200/oz increase in the gold price would increase the Project post-tax PVNCF5% by $77 million and increase the post-tax IRR by 12% per annum.

The cash flow analysis has been prepared on a 100% of project, constant first quarter calendar 2022 US dollar basis. No inflation or escalation of revenue or costs has been incorporated.

14.2 Mine Production and Mill Feed

The mine production schedule presented in the Scoping Study – Mining Engineering Report for the Diamba Sud Gold Project dated February 2022 by Cube Consulting Pty Ltd (Cube Report) is summarised in Table 14.1, below. Life of mine (LOM) mill feed totals 14.73Mt at an average grade of 1.58 g/t gold. This feed is comprised of 5.08 Mt of oxide material at an average grade of 1.89 g/t gold and 9.65 Mt of fresh material at an average grade of 1.42 g/t gold. The average mill feed grade during the first two years of operations is 2.00 g/t gold.

Mining commences nine months prior to the commencement of mill operations and continues for the duration of processing plant operations. The ore is milled over a 7.5-year period. It is assumed that ore will be either directly fed to the crusher or stockpiled adjacent to the crusher and rehandled to the plant as required to meet the processing schedule. Table 1 shows that material ore stockpiles are maintained throughout the mine life. These stockpiles represent a significant asset and a buffer between the mine and the processing plant.

The ore processing rate is a function of the testwork results and the process flowsheet design described in the Diamba Sud Gold Project Scoping Study Report 22001-00-GE-REP-001 prepared by Mintrex (Mintrex Report).

Table 14.1 includes annual estimates of recovered gold, which is derived from the processing testwork results presented in the Mintrex Report. The average overall process recovery over life of mine is estimated to be 94%. Total recovered gold over life of mine is estimated to be 704 koz, for an average of 94 kozs per year over the 7.5-year ore processing period. The average production rate during the first two years of operations is estimated to be 122 kozs per year.

Table 14.1 Diamba Sud Project – Mine Production and Mill Feed Schedule

Diamba Sud Project Mine Production and Mill Feed Schedule												
	Units	Total	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Mining												
Ore Mined	Mt	14.7		0.3	1.8	2.4	1.7	2.2	1.8	2.1	1.9	0.6
Ore Grade	g/t Au	1.58		1.05	1.88	2.11	1.38	1.15	1.49	1.83	1.37	1.21
Waste Mined	Mt	41.0		3.6	4.0	3.8	4.1	10.3	10.1	2.7	2.1	0.3
Processing												
Ore Milled	Mt	14.7			2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.7
Head Grade	g/t Au	1.58			1.77	2.23	1.42	1.17	1.44	1.84	1.37	1.18
Recovery	%	94			95	95	93	94	93	93	93	93
Gold Recovered	Koz	704			108	136	85	71	86	110	82	26
Ore Stockpile, End of Year												
Ore	Mt			0.3	0.1	0.4	0.2	0.4	0.1	0.2	0.1	0
Grade	g/t Au			1.05	1.48	1.48	1.23	1.04	1.07	1.15	1.05	0
Contained Gold	Koz			10	3	21	7	12	5	7	5	0

Differences between the total over life of mine, and the sum of the years, are due to rounding.

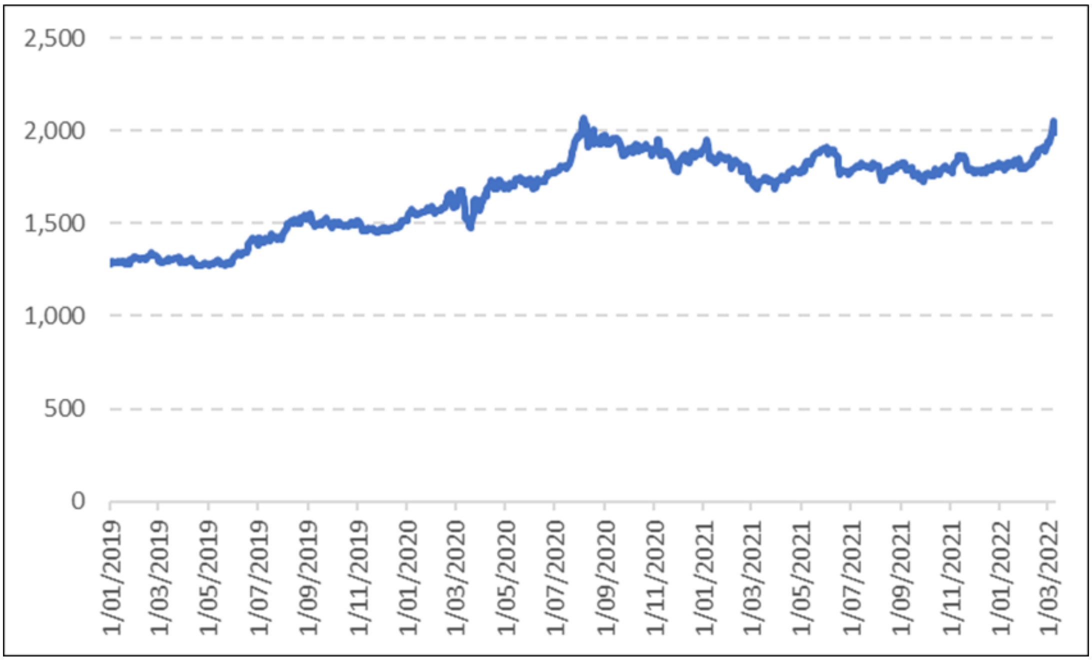
14.3 Gold Price Assumptions

A base case gold price of $1,800/oz was utilized to evaluate the Diamba Sud project. This price is a significant discount to the prevailing spot gold price at the effective date of this report, and is approximately equal to the two-year trailing average metal price (i.e. $1,811/oz for the period from 11 March 2020 to 10 March 2022, inclusive).

The gold price has been relatively stable over the past two years as shown in Figure 14.1. Despite this, the impact of a range of higher and lower gold prices on project economic results is addressed as part of project sensitivity analysis.

International exchange rates were as at 4/1/2022. AUD:USD 0.72 and XOF:USD 581.

Figure 14.1 Historical Gold Price – Data source: KPMG



14.4 Cost Estimates

All cost estimates are in US dollar currency as of the first quarter of calendar 2022.

The costs presented include an estimate of import duty, levies, and fuel excise, to the extent applicable. Import duty, levies and fuel excise are described in section 5 of this Economic Analysis.

The estimate of import duty, levies and fuel excise were prepared by Chesser, except in the case of duties and levies applicable to mining costs which are presented in the Cube Report.

14.4.1 Capital and Operating Costs

Initial capital cost estimates are presented in the Mintrex Report and sustaining capital cost estimates have been prepared by Chesser.

Initial capital is estimated at $142 million and sustaining capital is estimated at $17 million over life of mine. The initial capital cost is inclusive of contingencies of $23 million.

Pre-production mining cost estimates are presented in the Cube Report. The estimated total pre-production mining cost is $17 million.

Table 14.2 includes an estimate of the operating costs during the production period.

Mining cost estimates are presented in the Cube Report. Processing, maintenance, and general and administration costs are presented in the Mintrex Report.

The capital and operating cost estimates are based on a diesel fuel price of $0.80/L, exclusive of fuel excise, customs duty, levies and VAT.

Table 14.2 Diamba Sud Project – Mine Production and Mill Feed Schedule

Diamba Sud Project Operating Costs During the Production Period			
Item	**LOM Cost (US$M)**	**LOM Cost / Ore Tonne (US$/t)**	**LOM Cost / Ounces Produced (US$/oz)**
Mining	217	14.74	309
Processing	208	14.10	295
Maintenance	22	1.52	32
General & Administration	61	4.11	86
Transport, Insurance and Refining	2	0.14	3
Royalties and Statutory Costs	44	3.01	63
Total	**554**	**37.63**	**788**

14.4.2 Closure and Salvage Value

Chesser estimated a net amount for mine closure of $6.4 million, which has been included within sustaining capital costs. This amount is calculated as the difference between the mine closure costs and the salvage value of the equipment and facilities. This cost is incurred immediately following completion of mining and processing.

Under Senegal legislation an environmental fund needs to be established over the mine life, and contributions made to the fund to ensure that closure funds are available at the end of the mine life.

14.4.3 Working Capital

Chesser has assumed that the delay in receipt of gold revenue associated with the build-up of gold in circuit, doré inventory on site or in transit to the refinery, and the cost of purchasing operating supplies in advance of commencement of operations is offset by the build-up in accounts payable associated with both capital and operating costs.

14.5 Taxes, Duty, Royalties and Other Statutory Costs

Several taxes, royalties and other statutory costs are included in the economic evaluation, as described below. Chesser sought advice on Senegal mining legislation and taxation and worked together with Infinity in the modelling of taxes, royalties and other statutory costs.

The tax and fiscal assumptions are based on the 2003 Senegal Mining Code and the Diamba Sud Convention Miniere dated 8 April 2015.

The fiscal terms applicable to the Diamba Sud project will be detailed in a new convention miniere that will be negotiated and agreed upon granting of an exploitation permit for the Diamba Sud project.

14.5.1 Government Royalty

The government of Senegal assesses a 3% gross revenue royalty in respect of the mining permit.

14.5.2 Local Economic Contribution

While not a requirement under the 2003 Senegal Mining Code and the Diamba Sud Convention Miniere dated 8 April 2015, a provision was made for a Local Economic Contribution calculated as 0.5% of gross revenue derived from the mining permit.

14.5.3 Customs Duty and Levies

The government of Senegal assesses customs duty of between 0% and 20% (depending on the nature of the goods), a 1% statistical import charge and other levies of up to 3.7% in aggregate (depending on the nature of the goods) on imported goods. Except for the statistical import charge and the PCS levy of

0.5%, Chesser is exempt from paying customs duty and levies for a period of four years from granting of an exploitation permit for the Diamba Sud project.

A detailed estimate of customs duty and levies payable on each imported item has not been completed for this study. For the purposes of cash flow forecasting it is assumed that the 1% statistical import charge and 0.5% PCS levy are applicable to imported items during the four-year exemption period. Following the exemption period it is assumed that customs duty averaging 10%, the 1% statistical import charge, 0.5% PCS levy and other levies totalling 2.7% are applicable to imported items.

14.5.4 Fuel Excise

The government of Senegal levies a fuel excise of XOF10,395 per hectolitre for diesel. This is equivalent to approximately $0.18 per litre.

During the exploration phase and for a period of four years from grant of an exploitation permit, the project is exempt from paying fuel excise.

14.5.5 Value Added Tax

Senegal has a Value Added Tax (VAT) rate of 18%.

During the construction period, the payment of VAT is suspended and subsequently payable in equal monthly instalments in the twelve-month period following the commencement of gold production. Following commencement of gold production, VAT is payable in the ordinary course.

It is assumed that VAT is refunded promptly after it is charged.

14.5.6 Withholding Tax

The government of Senegal assesses withholding taxes of 20% on payments for services rendered by foreign individuals and companies and 5% on payments for services rendered by certain resident individuals and companies.

A detailed estimate of withholding tax payable on services provided to the Diamba Sud project has not been completed for this study.

14.5.7 Corporate Income Tax

A corporate tax rate of 30% is applicable to gold mining projects in Senegal.

Deductions from income for the purpose of estimating income subject to tax include mine operating expenses and the items described below.

In determining income tax payable, an investment tax credit is deductible from pro-forma taxable income during a period of up to five years commencing on first gold production. The total investment tax credit is calculated as 40% of the total funds invested in the project (exploration and development expenditure). The maximum investment tax credit deductible in any year is 50% of the pro-forma taxable income (before the investment tax credit is applied).

From the grant of the exploitation permit, a minimum corporate income tax is payable (if there is no taxable income). The minimum amount payable is 0.5% of turnover, subject to a maximum payment of XOF5 million.

Depreciation

It is assumed that all facilities are depreciated using the units-of-production depreciation methodology. Depreciation commences once the facilities are placed into service and the mine and mill are operating. Using the units-of-production approach, equipment and facilities are fully depreciated over the mine life.

Carry Forward Income Tax Losses

Mine operating losses can be carried forward and deducted from income for a maximum period of three years

14.5.8 Government Free Carried Interest

Under the mining code of Senegal the Government is entitled to a 10% interest in the project upon award of an exploitation permit. As the Diamba Sud scoping study has been prepared on a 100% of project basis, the Government 10% free carried interest has not been included in the economic analysis.

14.6 Economic Results

As summarised in Table 14.3, the base case economic results for the Diamba Sud project are very strong. The pre-tax project PVNCF5% is $402 million at the base gold price of $1,800/oz. Project, post-tax, all equity basis PVNCF5% at $1,800 gold is $301 million. IRRs are respectively 69% per annum pre-tax and 59% per annum post-tax.

At a gold price of $1,800/oz, the project post-tax, all equity basis payback period is expected to be 15 months.

Detailed cash flow estimates by year are presented in Table 14.4.

Table 14.3 Diamba Sud Project – Base Case Economic Results Summary

Diamba Sud Project Base Case Economic Results Summary	Units	LOM Total
Gold Revenue		
Gold Price	$/oz	1800
Gold Sales	Koz	704
Gold Sales Revenue	**$M**	**1267**
Pre-production Costs		
Initial Capital	$M	-142
Pre-production Mining	$M	-17
Production Period Costs		
Mining	$M	-217
Processing	$M	-208
Maintenance	$M	-22
General and Administration	$M	-61
Transport, Insurance and Refining	$M	-2
Royalties and Statutory Costs	$M	-44
Sustaining and Closure Capital	$M	-23
Project Net Cash Flow, pre-tax		
Project Net Cash Flow, pre-tax	**$M**	**531**
PVNCF5%, pre-tax	**$M**	**402**
IRR, pre-tax	**% pa**	**69**
Payback Period, pre-tax	**Months**	**15**
Project Net Cash Flow, post-tax, all equity basis		
Project Net Cash Flow, pre-tax, from above	$M	531
Income Tax	$M	-132
Project Net Cash Flow, post-tax	**$M**	**399**
PVNCF5%, post-tax	**$M**	**301**
IRR, post-tax	**% pa**	**59**
Payback Period , post-tax	**Months**	**15**

Differences between the total cash flow over life of mine and the sum of the cash flows in each year is due to rounding.

Differences between (i) Project Net Cash Flow, pre-tax and Project Net Cash Flow, post-tax and (ii) the calculation of Project Net Cash Flow, pre-tax and Project Net Cash Flow, post-tax based on the cash inflows and cash outflows in Table 4, is due to rounding.

Differences between (i) PVNCF5% for Project Net Cash Flow, pre-tax and Project Net Cash Flow, post-tax and (ii) the calculation of PVNCF5% based on Project Net Cash Flow, pre-tax and Project Net Cash Flow, post-tax based on the cash flows in Table 4 are due to a) rounding, and b) the difference between the periodicity of the annual cash flows in Table 4 and the quarterly cash flows which were used in the calculation of PVNCF5%.

Table 14.4 Diamba Sud Project – Base Case Cash Flow Details

Diamba Sud Project Base Case Cash Flow Details												
	Units	**Total**	**Year -2**	**Year -1**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**
Mill Feed												
Ore Milled	Mt	14.7			2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.7
Head Grade	g/t Au	1.58			1.77	2.23	1.42	1.17	1.44	1.84	1.37	1.18
Recovery	%	94			95	95	93	94	93	93	93	93
Gold Recovered and Payable	Koz	704			108	136	85	71	86	110	82	26
Revenue												
Gold Price	$/oz	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
Gross Revenue	$M	1,267			195	245	153	127	155	198	147	47
Operating Costs												
Mining	$M	-217			-24	-26	-25	-42	-43	-25	-25	-8
Processing	$M	-208			-22	-22	-28	-30	-31	-32	-32	-12
Maintenance	$M	-22			-2	-2	-3	-3	-3	-3	-3	-2
General and Administration	$M	-61			-8	-8	-8	-8	-8	-8	-8	-4
Transport, Insurance and Refining	$M	-2			0	0	0	0	0	0	0	0
Royalties and Statutory Costs	$M	-44			-7	-9	-5	-4	-5	-7	-5	-2
Capital Costs												
Mining Pre-production	$M	-17	0	-17	0	0	0	0	0	0	0	0
Initial Capital	$M	-142	-28	-113	0	0	0	0	0	0	0	0
Sustaining and Closure Capital	$M	-23	0	0	0	-2	-3	-3	-3	-3	-3	-7
VAT												
VAT Paid net of Refunds	$M	0	0	0	-6	4	0	0	0	1	0	2
Environmental Fund												
Release from (Contribution to) Environmental Fund	$M	0	0	0	-1	-1	-1	-1	-1	-1	-1	6
Project Net Cash Flow, pre-tax												
Project Net Cash Flow, pre-tax	**$M**	**531**	**-28**	**-131**	**125**	**179**	**80**	**36**	**61**	**120**	**70**	**20**
Project PVNCF5%, pre-tax	**$M**	**402**										
Project IRR, pre-tax	**% pa**	**69**										
Project Payback Period, pre-tax	**Months**	**15**										
Project Net Cash Flow, post-tax, all equity basis												
Project Net Cash Flow, pre-tax	$M	531	-28	-131	125	179	80	36	61	120	70	20
Income Tax	$M	-132	0	0	-8	-25	-32	-11	-8	-20	-21	-9
Project Net Cash Flow, post-tax	**$M**	**399**	**-28**	**-131**	**117**	**154**	**48**	**25**	**53**	**100**	**49**	**11**
Project PVNCF5%, post-tax	**$M**	**301**										
Project IRR, post-tax	**% pa**	**59**										
Project Payback Period, post-tax	**Months**	**15**										

14.7 Sensitivity Analysis

The PVNCF5% and IRR sensitivity to changes in gold price is shown in Table 14.5. At the base case gold price of $1,800/oz the project post-tax, all equity basis PVNCF5% is $301 million and the project, post-tax, all equity basis IRR is 59% per annum. If the gold price increases to $2,000/oz the project post-tax, all equity basis PVNCF5% rises to $378 million and the project, post-tax, all equity basis IRR rises to 71% per annum. Conversely, a reduction in the gold price to $1,600/oz results in a drop in the project post-tax, all equity basis PVNCF5% to $224 million and a reduction in the project, post-tax, all equity basis IRR to 46%. At a gold price of $1,600/oz the project post-tax, all equity basis payback period increases to 17 months from 15 months when the gold price is $1,800/oz.

Table 14.5 Diamba Sud Project – Project Economics Sensitivity to Gold Price

Diamba Sud Project Project Economics Sensitivity to Gold Price				
Gold Price	**$/oz**	**1,600**	**1,800**	**2,000**
Project Net Cash Flow, pre-tax				
Project Net Cash Flow, pre-tax	$M	395	531	667
PVNCF5%	$M	294	402	510
IRR	% pa	55	69	82
Payback	Years	17	15	13
Project Net Cash Flow, post-tax, all equity basis				
Project Net Cash Flow, pre-tax	$M	395	531	667
Income Tax	$M	-91	-132	-173
Project Net Cash Flow, post-tax	$M	304	399	494
PVNCF5%	$M	224	301	378
IRR	% pa	46	59	71
Payback	Years	17	15	14

The sensitivity of the project, post-tax, all equity basis PVNCF5% and IRR to changes in the key parameters of commodity price, opex, capex, recovery and discount rate are shown in Figure 2 and Figure 3.

The sensitivity results reflect a change in one parameter at a time, assuming the other parameters are unchanged.

A review of Figure 14.2 and Figure 14.3 indicates that, like most mining projects, the post-tax PVNCF5% and IRR are most sensitive to changes in revenue parameters such as the commodity price.

The project post-tax, all equity basis PVNCF5% is more sensitive to changes in operating costs than capital costs. This is attributed to the fact that total base case operating costs (mining, processing, maintenance, transport, insurance, refining and general and administration costs) over life of mine are about 2.8 times total capital costs (mining pre-production, initial capital and sustaining and closure capital).

The project, post-tax, all equity basis IRR is more sensitive to changes in project capital costs than the project, post-tax, all equity basis PVNCF5%. This is because capital costs are weighted more heavily to the front-end of the project than operating costs.

Figure 14.2 Project NPV Sensitivity Analysis

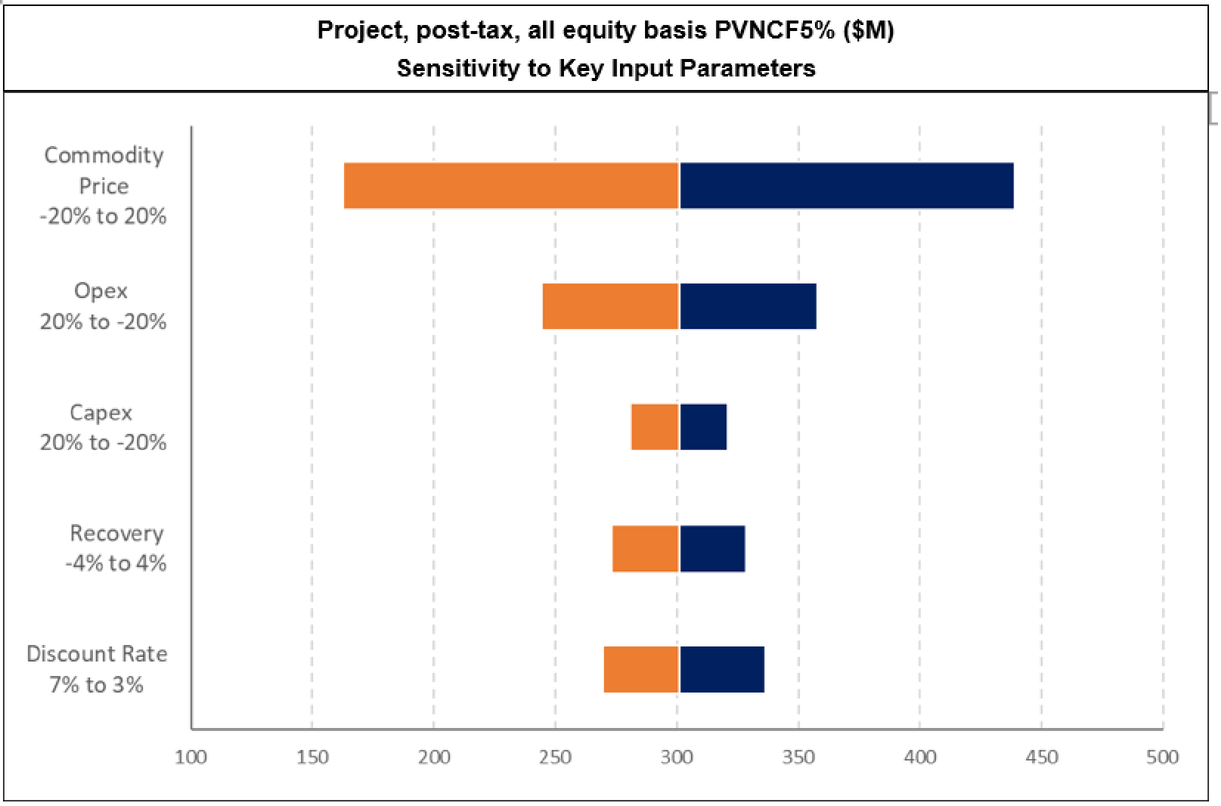
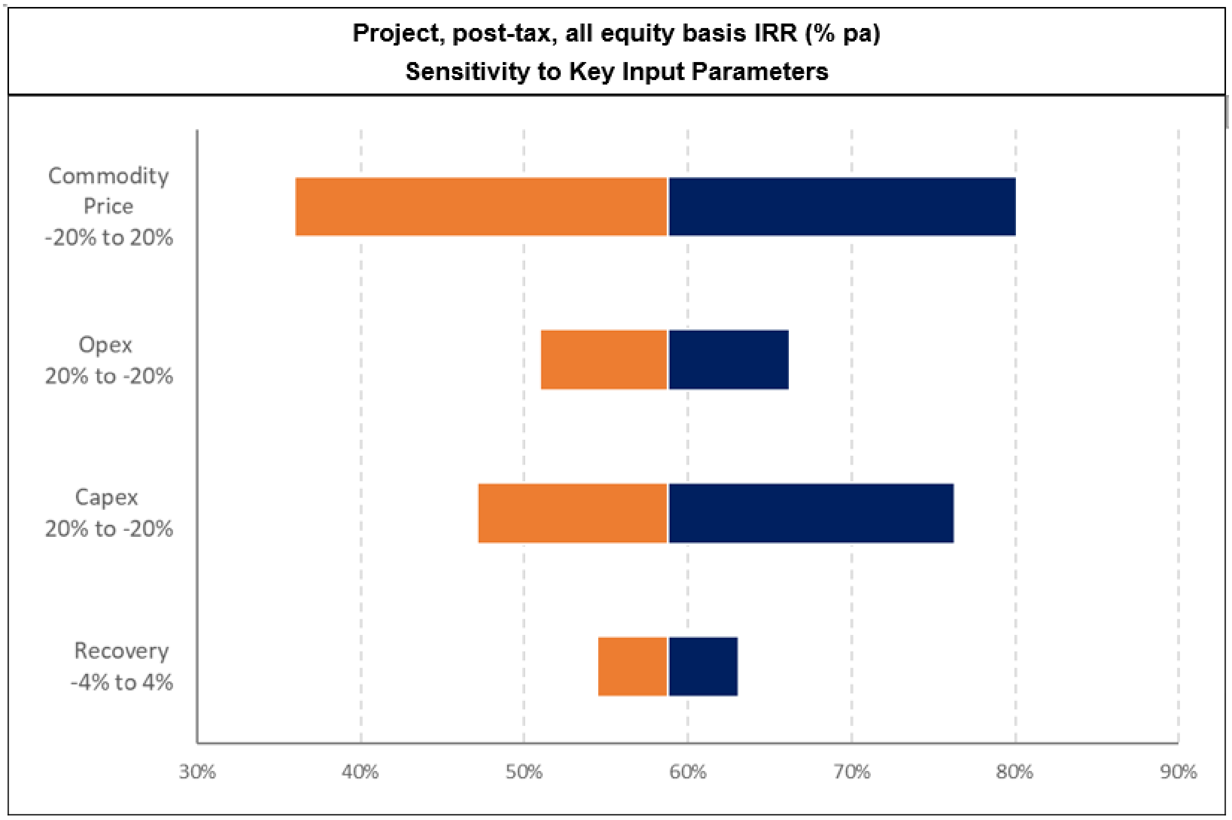


Figure 14.3 Project IRR Sensitivity Analysis



15. ISSUES FOR FURTHER DEVELOPMENT

In the course of preparing this scoping study numerous aspects where information is limited, and risks/opportunities were identified but could not be resolved. These are noted below to provide some prompts for more detailed studies on this project in the future.

15.1 Increased Grind Size

The preparation for testwork to date has utilised 75 microns grind size and achieved very satisfactory leach extraction. It is possible that the leach extraction may be adequate at significantly coarser grind size. It is important to resolve this as it offers the opportunity to reduce both capex (lower mill specs) and OPEX (less power and grinding media). This should be largely settled before the project proceeds to PFS.

15.2 Reagent Consumption

Lime, cyanide, copper sulphate, SMBS and flocculant.

15.3 Deferred Capital Expenditure

The project will run on soft near-surface ore for 2-3 years. It appears possible that the SAG mill selected for future ore properties could have enough grinding capability to reach the required grind size without the ball mill. This would allow deferring a large amount of capital (~$4.7M) for the corresponding period of time.

15.4 Clay Content

Oxide ores potentially contain clay pockets which can lead to material flow issues in crushers and bins. The incidence of clay in proposed resources must be identified and methods selected to limit its effects (ROM blending, steeper chute angles, wider crusher gap setting etc).

15.5 Mineral Resources

Plant throughput advised by Chesser is based on total mineral resources which includes indicated as well as inferred resource. Continued exploration and drilling is required to confirm the plant throughput is suitable for the resource before the next phase of this project.

15.6 Material Scheduling

There is the potential to schedule higher grade ore through the plant and delaying the lower grade material using cut-over strategy especially given the limited mining constraints and continuity of high-grade mineralisation. Further analysis is required.

16. DEVELOPMENT SCHEDULE

An indicative development schedule for the project is as follows:

• Feasibility Study	2022-2023
• Development Application Assessment	2022-2023
• Construction Phase	2024-2025 (15-21 months)
• Operational Phase	2025 onwards

17. CONCLUSION AND NEXT STEPS

The Study provides justification that the Diamba Sud Project is a low risk, technically simple and economically robust project with significant potential to grow. The Board of Chesser has approved progression of the Project directly to a Definitive Feasibility Study (“DFS”).

The DFS will commence in parallel with ongoing exploration and resource drilling. The DFS completion is targeted for the second half of calendar year 2023.

18. REASONABLE BASIS FOR FUNDING ASSUMPTION

The Diamba Sud Project's low risk, technically simple and strong economic fundamentals provide a strong platform for Chesser to source traditional financing through debt and equity markets, in addition to pursuing other financing strategies should this be to the benefit of shareholders. There is, however, no certainty that Chesser will be able to source funding as and when required,

Whilst no formal funding discussions have commenced the Chesser has engaged with a number of financial institutions and these financial institutions have expressed a high level of interest in being involved in the funding of the Project.

To achieve the range of outcomes indicated in the Scoping Study, pre-production funding of approximately US$180M may be required. Typical project development financing would involve a combination of debt and equity. Chesser has formed the view that there is a reasonable basis to believe that requisite future funding for development of the Diamba Sud Gold Project will be available when required.

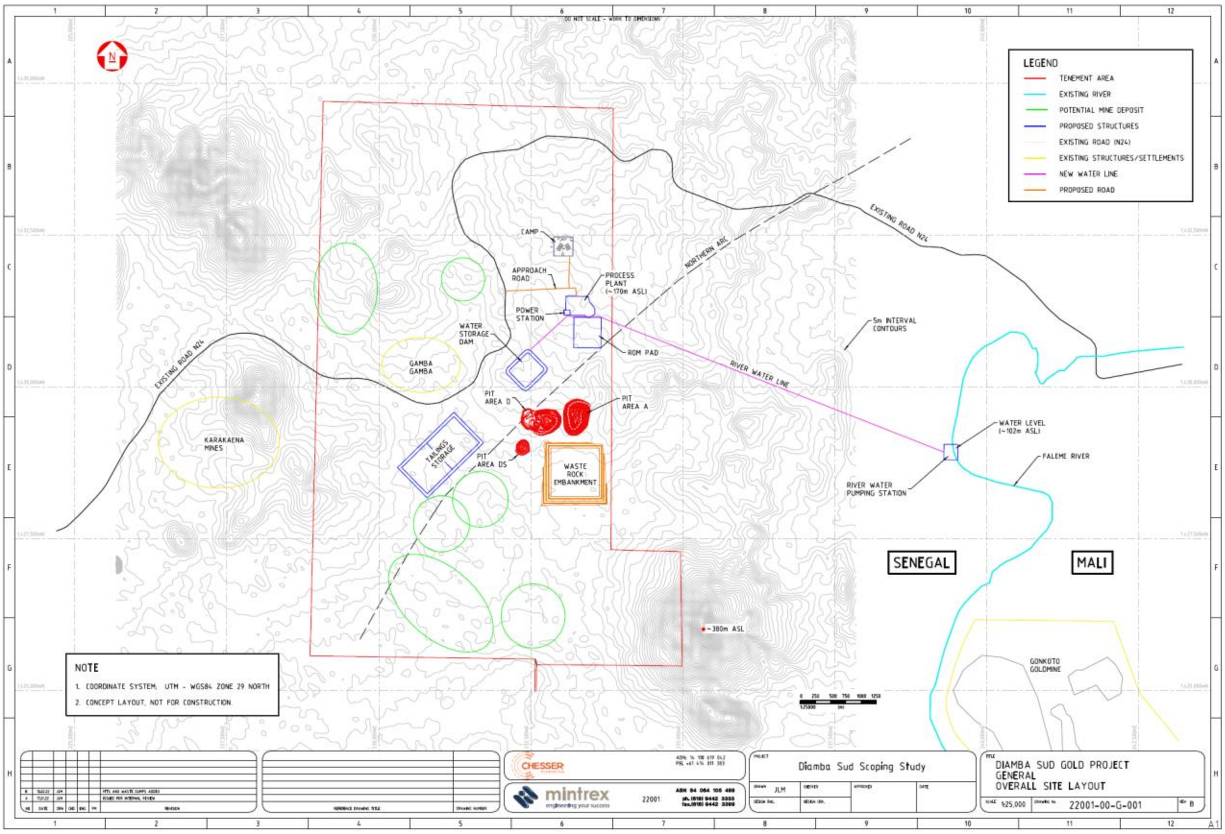
There are grounds on which this reasonable basis is established including:

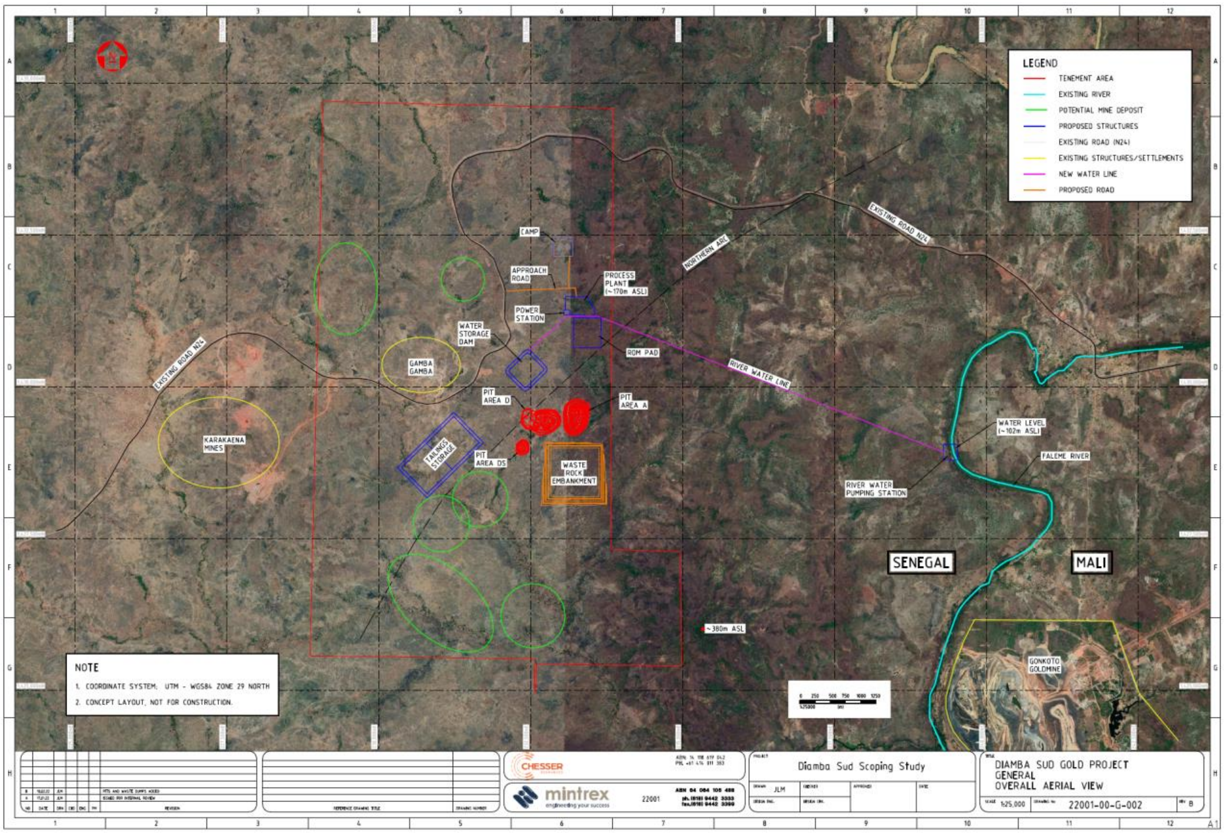
- Global debt and equity finance availability for high-quality gold projects remains robust.
- The Diamba Sud Gold Project is low risk, technically simple and has a rapid payback of only 18 months from commercial production
- The very strong post-tax cashflows of US$399M and rapid payback would support a high level of conventional debt financing for the Project development
- Diamba Sud has significant exploration potential to growth Mineral Resource base that forms this Scoping Study which will likely further strengthen the potential Project economics.
- Commodity price risk can be managed through gold hedging.
- Release of these Study results provides a platform for Chesser to discuss the outcomes with potential financiers.
- The Chesser board and management has extensive experience in mine development, financing and production in the resources industry and West Africa and specifically in Senegal.
- Management and the board were involved in the funding and development of both the Sabodala and Mako gold mines in Senegal.
- Senegal is a stable, mining and investor friendly jurisdiction with a history of successful traditional debt financing of gold mine developments.

APPENDIX A: TESTWORK – NOT INCLUDED

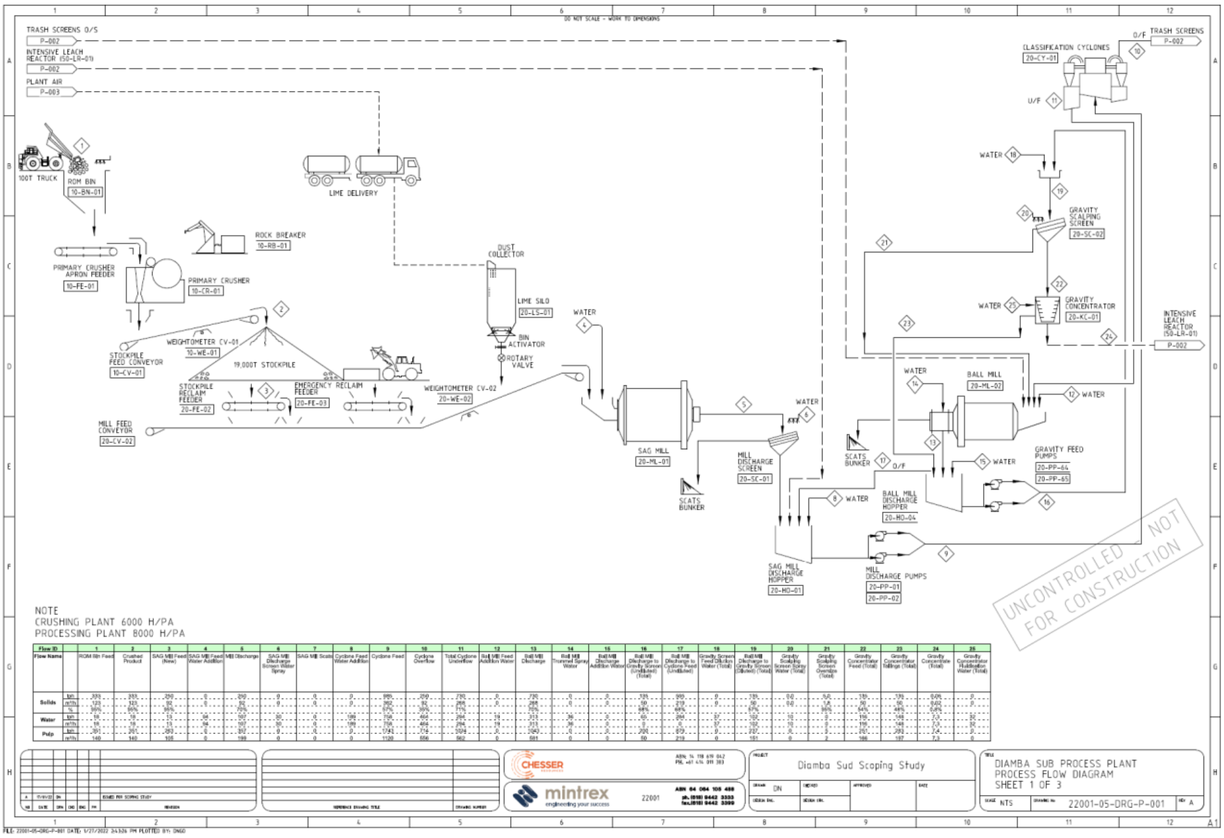
No detailed reports included in this copy of the report – see summaries in the body of the report Section 8 Ore Properties

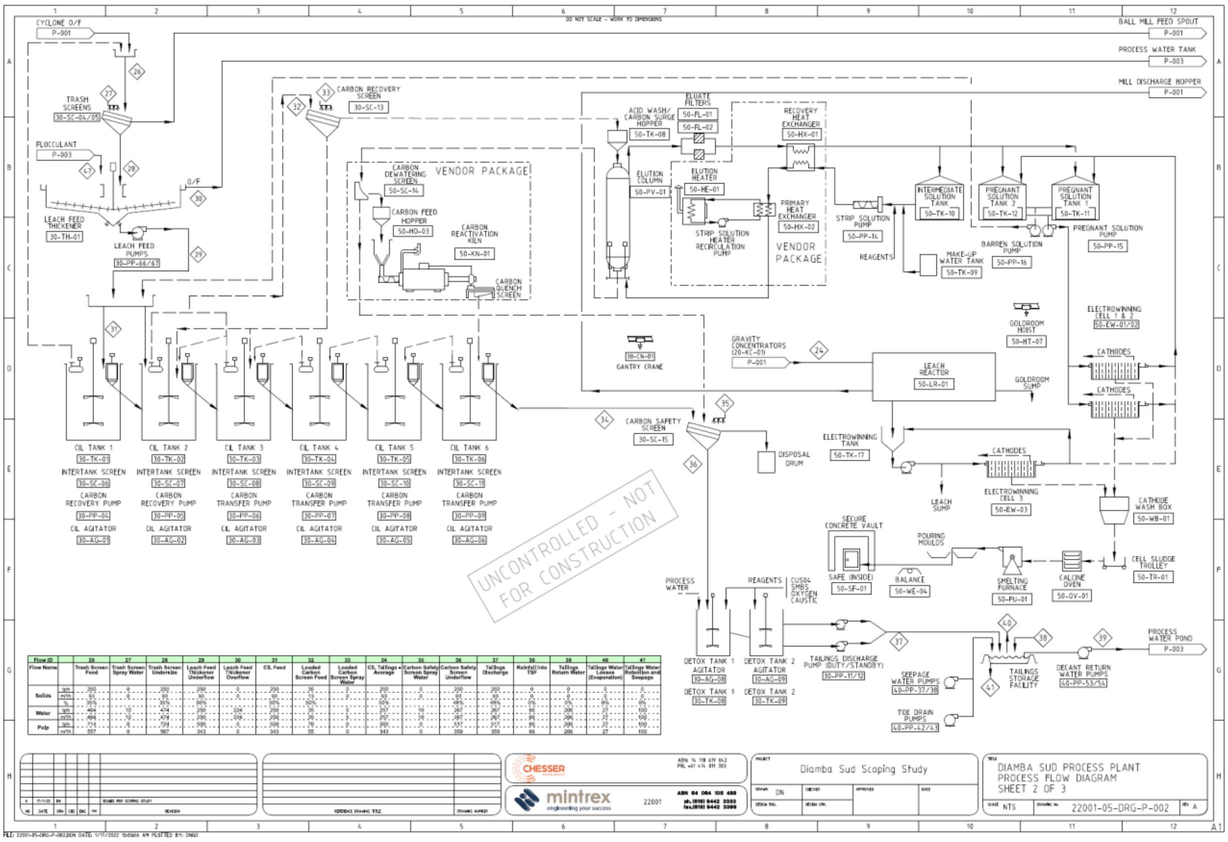
APPENDIX B: PLANT LAYOUT PLAN

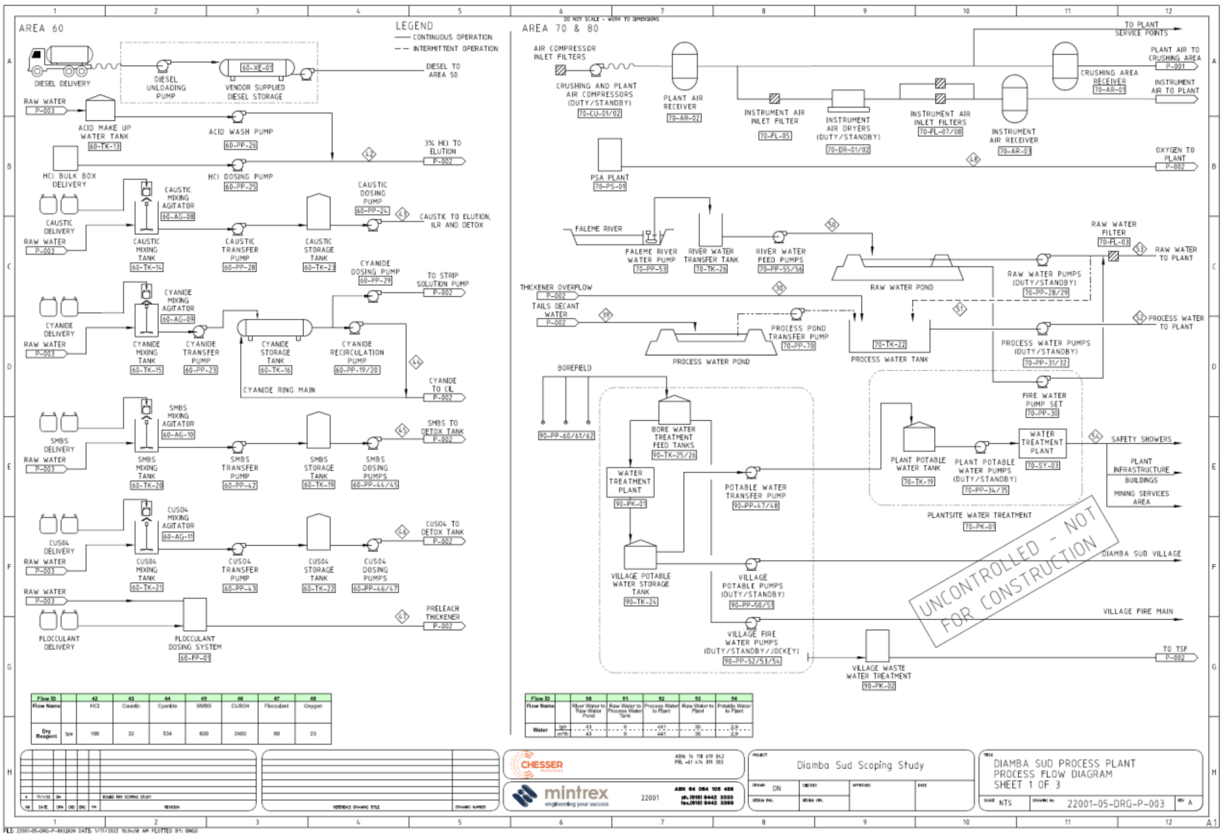




APPENDIX C: PROCESS FLOW DIAGRAMS






AREA 60
LEGEND
CONTINUOUS OPERATION
INTERMITTENT OPERATION
AREA 70 & 80
DIESEL DELIVERY
DIESEL UNLOADING PUMP
VENDOR SUPPLIED DIESEL STORAGE
DIESEL TO AREA 50
ACID MAKE UP WATER TANK
ACID WASH PUMP
HCl BULK BOX DELIVERY
HCl DOSING PUMP
3% HCl TO ELUTION
CAUSTIC DELIVERY
CAUSTIC MIXING TANK
CAUSTIC TRANSFER PUMP
CAUSTIC STORAGE TANK
CAUSTIC DOSING PUMP
CAUSTIC TO ELUTION, ILR AND DETOX
CYANIDE DELIVERY
CYANIDE MIXING TANK
CYANIDE TRANSFER PUMP
CYANIDE STORAGE TANK
CYANIDE RECIRCULATION PUMP
CYANIDE RING MAIN
CYANIDE TO CIL
SMBS DELIVERY
SMBS TO DETOX TANK
CUSO4 DELIVERY
CUSO4 TO DETOX TANK
FLOCCULANT DELIVERY
FLOCCULANT DOSING SYSTEM
PRELEACH THICKENER
RAW WATER
AIR COMPRESSOR INLET FILTERS
CRUSHING AND PLANT AIR COMPRESSORS (DUTY/STANDBY)
PLANT AIR RECEIVER
INSTRUMENT AIR INLET FILTER
INSTRUMENT AIR DRYERS (DUTY/STANDBY)
INSTRUMENT AIR RECEIVER
CRUSHING AREA RECEIVER
TO PLANT SERVICE POINTS
PLANT AIR TO CRUSHING AREA
INSTRUMENT AIR TO PLANT
PSA PLANT
OXYGEN TO PLANT
FALEME RIVER
FALEME RIVER WATER PUMP
RIVER WATER TRANSFER TANK
RIVER WATER FEED PUMPS
RAW WATER POND
RAW WATER PUMPS (DUTY/STANDBY)
RAW WATER FILTER
RAW WATER TO PLANT
THICKENER OVERFLOW
TAILS DECANT WATER
PROCESS WATER POND
PROCESS POND TRANSFER PUMP
PROCESS WATER TANK
PROCESS WATER PUMPS (DUTY/STANDBY)
PROCESS WATER TO PLANT
FIRE WATER PUMP SET
BOREFIELD
BORE WATER TREATMENT FEED TANKS
WATER TREATMENT PLANT
PLANT POTABLE WATER TANK
PLANT POTABLE WATER PUMPS (DUTY/STANDBY)
SAFETY SHOWERS
PLANT INFRASTRUCTURE
BUILDINGS
MINING SERVICES AREA
PLANTSITE WATER TREATMENT
POTABLE WATER TRANSFER PUMP
VILLAGE POTABLE WATER STORAGE TANK
VILLAGE POTABLE PUMPS (DUTY/STANDBY)
DIAMBA SUD VILLAGE
VILLAGE FIRE MAIN
VILLAGE FIRE WATER PUMPS (DUTY/STANDBY/JOCKEY)
VILLAGE WASTE WATER TREATMENT
TO TSF
UNCONTROLLED - NOT FOR CONSTRUCTION
CHESSER
mintrex
Diamba Sud Scoping Study
DIAMBA SUD PROCESS PLANT
PROCESS FLOW DIAGRAM
SHEET 1 OF 3
NTS
22001-05-DRG-P-003
A

APPENDIX D: EQUIPMENT LISTS

Project: 22001-CHZ
Document Number: 22001-00-MEL-G-001
Revision: A
Date: 14/05/2021

Prepared By: A. Kerr
Checked By:
Approved By:

Diamba Sud 2 Mt/a - Mechanical Equipment List

Equipment Number	Equipment Description	Equipment Details	PFD No.	kW installed	Installation Lift (kg)	Reference	EDS/ Contract No	Cost	Vendor	Revision	Reference	Motor Control
10-BN-01	ROM BIN	100m3 capacity (150 tonne), MS construction, Bisalloy lined Designed With removable wing wall.	22001-005-P-001							A		
10-CH-01	APRON FEEDER DISCHARGE CHUTE	MS construction, bisalloy lined								A		
10-CH-02	APRON FEEDER DRIBBLE CHUTE	MS construction, UHMWPE lined								A		
10-CH-03	PRIMARY CRUSHER DISCHARGE CHUTE	MS construction, bisalloy lined								A		
10-CH-04	CV-01 HEAD CHUTE	MS construction, bisalloy lined.								A		
10-CM-01	CRUSHER CONTROL ROOM	Primary Crusher Control Room, 10-DB-03		5						A		
10-CR-01	PRIMARY CRUSHER	METSO C150, 220 kW motor	22001-005-P-001	220					Metso	A		
10-CV-01	STOCKPILE FEED CONVEYOR	1500mm wide, 25m lift and 131m long, c/w pulleys, scrapers, idlers etc.	22001-005-P-001	132						A		
10-DC-01	DUST SUPPRESSION SYSTEM	ROM bin dust suppression system							DMS	A		
10-FE-01	PRIMARY CRUSHER APRON FEEDER	1500 mm wide by 8500 mm long APRON type feeder VVVF drive, max speed 0.061 m/s	22001-005-P-001	30	51200	19077 EDS from Metso			Terex Jaques	A		
10-HT-01	PRIMARY CRUSHER MAINTENANCE HOIST	5t capacity, dual speed electric wire rope hoist and electric travel c/w pendant control.		10.5					Capital Crane	A		
10-LT-01	NO DUMP/DUMP LIGHT	Green/Red light configuration								A		
10-MH-01	ROCKBREAKER HYDRAULIC PACK	Part of rockbreaker (10-RB-01)		37					Transmin	A		
10-RB-01	ROCK BREAKER	Boomer Rockbreaker System B30/30, Swivel base , Boom Jib Hydraulic Cylinders, MB1000 hydraulic Impact Hammer.			17028	19077 EDS from Terex			Transmin	A		
10-SS-01	CRUSHING AREA SAFETY SHOWER	Combination Shower & Eye Wash Unit								A		
10-WE-01	WEIGHTOMETER CV-01	Weightometer to suit 1500mm wide belt	22001-005-P-001	0.1	810				Thermofisher	A		
20-CH-05	STOCKPILE RECLAIM FEEDER FEED CHUTE	MS construction, bisalloy lined			2750					A		
20-CH-06	STOCKPILE RECLAIM FEEDER DRIBBLE CHUTE	316 S/S - construction								A		
20-CH-07	STOCKPILE RECLAIM FEEDER DISCHARGE	MS construction, bisalloy lined			9606					A		
20-CH-08	EMERGENCY RECLAIM FEEDER FEED CHUTE	MS construction, bisalloy lined								A		
20-CH-09	EMERGENCY RECLAIM FEEDER DRIBBLE CHUTE	316 S/S - construction								A		
20-CH-10	EMERGENCY RECLAIM FEEDER DISCHARGE CHUTE	MS construction, bisalloy lined								A		
20-CH-11	CV-02 HEAD CHUTE	MS construction , bisalloy lined								A		
20-CH-12	MILL FEED CHUTE	Part of SAG Mill (20-ML-01) - Trolley mounted								A		
20-CH-13	SAG MILL SCATS CHUTE	MS construction, bisalloy lined								A		
20-CH-15	CV-03 HEAD CHUTE	MS construction, bisalloy lined								A		
20-CH-16	PEBBLE RECYCLE TRANSFER CHUTE	MS construction, bisalloy lined								A		
20-CH-18	CV-04 HEAD CHUTE	MS construction, bisalloy lined								A		
20-CH-19	GRAVITY SCALPING DISCHARGE O/S CHUTE 1	MS construction, rubber lined								A		
20-CH-25	BALL MILL TROMMEL COVER	MS construction								A		
20-CH-26	BALL MILL SCATS CHUTE	MS construction, bisalloy lined								A		
20-CV-02	MILL FEED CONVEYOR	1200m wide, 9m lift x 210m horizontal centres c/w pulleys, scrapers, idlers etc	22001-005-P-001	132						A		
20-CV-03	PEBBLE RECYCLE CONVEYOR 1	750m wide, 9.6m lift x 50.5m horizontal centres c/w pulleys, scrapers, idlers etc	22001-005-P-001	11						A		
20-CV-04	PEBBLE RECYCLE CONVEYOR 2	750m wide, 3.7m lift x 20m horizontal centres c/w pulleys, scrapers, idlers etc	22001-005-P-001	11						A		
20-CY-01	CLASSIFICATION CYCLONES	18 x 250CVX10 Cavex Cyclone Cluster (13 Operating, 5 Standby)							Weir Minerals	A		
20-FD-01	CYCLONE UNDERFLOW BOIL BOX	MS construction, rubber lined	22001-005-P-001							A		
20-FD-02	GRAVITY SCALPING SCREEN FEED DISTRIBUTOR	MS construction, rubber lined								A		
20-FD-03	GRAVITY CONCENTRATOR DISTRIBUTOR	MS construction, rubber lined								A		
20-FE-02	STOCKPILE RECLAIM FEEDER	1200 mm wide by 7800 mm long APRON type feeder VVVF drive, max speed 0.084 m/s	22001-005-P-001	18.5					Terex Jaques	A		VSD
20-FE-03	EMERGENCY RECLAIM FEEDER	1200 mm wide by 7800 mm long APRON type feeder VVVF drive, max speed 0.084 m/s	22001-005-P-001	18.5					Terex Jaques	A		VSD
20-HL-01	LIME HANDLING SYSTEM	Lime handling system c/w bulk bag unloading station, pneumatic conveying system and Lime storage hopper		17					CON V-AIR	A		
20-HO-01	SAG MILL DISCHARGE HOPPER	MS construction, rubber lined	22001-005-P-001							A		
20-HO-04	BALL MILL DISCHARGE HOPPER		22001-005-P-001							A		
20-HT-02	LIME BAG HOIST	Supplied as part of the Lime Handling System (20-HL-01)		1.5					CON V-AIR	A		
20-HT-03	GRAVITY CONCENTRATOR MAINTENANCE HOIST 1	1T SWL MONORAIL.		3.5					CAPITAL CRANE	A		
20-HT-04	GRAVITY CONCENTRATOR MAINTENANCE HOIST 2	1T SWL MONORAIL.		3.5					CAPITAL CRANE	A		
20-HT-05	MILL HOIST	1T SWL MONORAIL.		3.5					CAPITAL CRANE	A		
20-HT-06	MILL HOIST	1T SWL MONORAIL.		3.5					CAPITAL CRANE	A		
20-KC-01	GRAVITY CONCENTRATOR 1	Consep QS30 Knelson Concentrator		30					CONSEP	A		
20-ME-02	MILL INCH DRIVE MOTOR	Part of SAG mill (20-ML-01)		90					Outotec	A		
20-ML-01	SAG MILL	Ø6.7 x 3.8m EGL SAG Mill Steel Lining System, Grate Discharge	22001-005-P-001	3200					Outotec	A		VSD
20-ML-02	BALL MILL	Ø5.0 x 8.8m EGL Ball Mill, Steel Lining System, Overflow Discharge	22001-005-P-001	3200					Outotec	A		LRS
60-PP-18	DIESEL UNLOADING PUMP			5.5					Dynapumps	A		
60-PP-28	CAUSTIC TRANSFER PUMP	ARGAL TMR 10.15 mag drive horizontal pump. 4.2L/s duty flow at 10m TDH.		1.5					Dynapumps	A		
60-PP-29	CYANIDE DOSING PUMP	Seepex BN2-6L. 0.5 L/s duty flow at 6.5m TDH.		1.5					Dynapumps	A		
60-PP-42	SMBS Transfer Pump			1.1						A		DOL
60-PP-43	CUSO4 Transfer Pump			1.1						A		DOL
60-PP-44	SMBS Dosing Pump 1			1.1						A		VSD
20-RV-01	LIME ROTARY VALVE			2.2						A		VSD
20-SC-01	MILL DISCHARGE SCREEN	Single Deck vibrating flat screen with screening area 2.4m x 4.8m, c/w isolation frame	22001-005-P-001	18.5					Joest	A		
20-SC-02	GRAVITY SCALPING SCREEN 1	DERRICK SCREEN 2SG48-120W-4, with screen frame support frame and dual model SG motors	22001-005-P-001	2x1.86					Derrick	A		
20-SS-02	MILLING AREA SAFETY SHOWER	Combination Shower & Eye Wash Unit								A		
20-SS-03	CYCLONE TOWER SAFETY SHOWER	Combination Shower & Eye Wash Unit								A		
20-SS-04	LIME SILO SAFETY SHOWER	Combination Shower & Eye Wash Unit								A		
20-WE-02	WEIGHTOMETER CV-02	WEIGHTOMETER TO SUIT 1200mm WIDE BELT	22001-005-P-001	0.1					Thermofisher	A		
20-WE-03	WEIGHTOMETER CV-04	WEIGHTOMETER TO SUIT 750MM WIDE BELT	22001-005-P-001	0.1					Thermofisher	A		
20-XE-01	SAG MILL AUXILIARIES	Part of SAG Mill (20-ML-01)		150					Outotec	A		
20-XE-02	BALL MILL AUXILIARIES	Part of Ball Mill (20-ML-02)		150						A		
20-XM-01	LINER HANDLER	3-Axis, 1500kg Mill Liner Handler		85					Maxitool	A		
30-AG-01	CIL TANK AGITATORS	Dual LIGHTNIN A310 MODEL 781Q75, cast gear box, dual aerofoil Impeller		55	11372				SPX	A	SPX (2/10/2020)	
30-AG-02	CIL TANK AGITATORS	Dual LIGHTNIN A310 MODEL 781Q75, cast gear box, dual aerofoil Impeller		55	11372				SPX	A	SPX (2/10/2020)	
30-AG-03	CIL TANK AGITATORS	Dual LIGHTNIN A310 MODEL 781Q75, cast gear box, dual aerofoil Impeller		55	11372				SPX	A	SPX (2/10/2020)	
30-AG-04	CIL TANK AGITATORS	Dual LIGHTNIN A310 MODEL 781Q75, cast gear box, dual aerofoil Impeller		55	11372				SPX	A	SPX (2/10/2020)	
30-AG-05	CIL TANK AGITATORS	Dual LIGHTNIN A310 MODEL 781Q75, cast gear box, dual aerofoil Impeller		55	11372				SPX	A	SPX (2/10/2020)	
30-AG-06	CIL TANK AGITATORS	Dual LIGHTNIN A310 MODEL 781Q75, cast gear box, dual aerofoil Impeller		55	11372				SPX	A	SPX (2/10/2020)	
30-AG-07	CIL TANK AGITATORS	Dual LIGHTNIN A310 MODEL 781Q75, cast gear box, dual aerofoil Impeller		55	11372				SPX	A	SPX (2/10/2020)	
30-AG-08	DETOX TANK 1 AGITATOR	Lightnin 98Q75		55					SPX	A		DOL

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Checked By:
Approved By:

Diamba Sud 2 Mt/a - Mechanical Equipment List

Equipment Number	Equipment Description	Equipment Details	PFD No.	kW installed	Installation Lift (kg)	Reference	EDS/ Contract No	Cost	Vendor	Revision	Reference	Motor Control
30-AG-09	DETOX TANK 2 AGITATOR	Lightnin 98Q75		55					SPX	A		DOL
30-CH-21	TRASH SCREEN 1 O/S CHUTE	MS construction. Rubber lined.								A		
30-CH-22	TRASH SCREEN 2 O/S CHUTE	MS construction. Rubber lined.								A		
30-CH-23	CARBON RECOVERY O/S CHUTE	MS construction, epoxy lined.								A		
30-CH-24	CARBON SAFETY O/S CHUTE	MS construction, epoxy lined.								A		
30-CM-02	LEACH AREA CONTROL ROOM	LEACH AREA CONTROL ROOM, 30-DB-08		10						A		
30-CN-01	TOWER CRANE CRANE	8t crane c/w 35m jib and 25m hook height		34					SAEZ	A		
30-FD-03	TRASH SCREEN DISTIBUTOR BOX	MS construction, rubber lined.								A		
30-FD-04	CIL FEED DISTRIBUTOR	MS construction, rubber lined, c/w actuated dart valves								A		
30-FD-05	CARBON SAFETY SCREEN FEED DISTRIBUTOR	MS construction. Rubber lined.								A		
30-LA-01	INTERTANK LAUNDER 1	800mm x 1200 mm deep, MS construction c/w gates and weirs.								A		
30-LA-02	INTERTANK LAUNDER 2	800mm x 1200 mm deep, MS construction c/w gates and weirs.								A		
30-LA-03	INTERTANK LAUNDER 3	800mm x 1200 mm deep, MS construction c/w gates and weirs.								A		
30-LA-04	INTERTANK LAUNDER 4	800mm x 1200 mm deep, MS construction c/w gates and weirs.								A		
30-LA-05	INTERTANK LAUNDER 5	800mm x 1200 mm deep, MS construction c/w gates and weirs.								A		
30-LA-06	INTERTANK LAUNDER 6	800mm x 1200 mm deep, MS construction c/w gates and weirs.								A		
60-PP-45	SMBS Dosing Pump 2			1.1						A		VSD
60-PP-46	CuSO4 Dosing Pump 1			1.1						A		VSD
60-PP-47	CuSO4 Dosing Pump 2			1.1						A		VSD
20-PP-01	MILL DISCHARGE PUMP (DUTY)	WARMAN 250MCR, c/w 300kW motor	22001-005-P-001	300					Weir Minerals	A		VSD
20-PP-02	MILL DISCHARGE PUMP (STANDBY)	WARMAN 250MCR, c/w 300kW motor	22001-005-P-001	300					Weir Minerals	A		VSD
20-PP-03	MILL AREA SUMP PUMP	WARMAN 100WBV VERTICAL SPINDLE		18.5					Weir Minerals	A		
30-PP-04	CARBON RECOVERY PUMP 1	WARMAN 4/4 TC		11					Weir Minerals	A		
30-PP-05	CARBON RECOVERY PUMP 2	WARMAN 4/4 TC		11					Weir Minerals	A		
30-PP-06	CARBON TRANSFER PUMP 1	WARMAN 4/4 TC		7.5					Weir Minerals	A		
30-PP-07	CARBON TRANSFER PUMP 2	WARMAN 4/4 TC		7.5					Weir Minerals	A		
30-PP-08	CARBON TRANSFER PUMP 3	WARMAN 4/4 TC		7.5					Weir Minerals	A		
30-PP-09	CARBON TRANSFER PUMP 4	WARMAN 4/4 TC		7.5					Weir Minerals	A		
30-PP-10	CARBON TRANSFER PUMP 5	WARMAN 4/4 TC		7.5					Weir Minerals	A		
30-PP-11	TAILINGS DISCHARGE PUMP 1	WARMAN 8/6 AH		132					Weir Minerals	A		
30-SC-04	TRASH SCREEN 1	DERRICK SCREEN 2SG48-120W-4M, Complete with screen frame support frame and dual SG motors MS constr.		2 x 1.86	1814				Derrick	A		
30-SC-05	TRASH SCREEN 2	DERRICK SCREEN 2SG48-120CP-4M, c/w screen frame support frame and dual SG motors MS constr.		2 x 1.86	10500				Derrick	A		
30-SC-06	INTERTANK SCREENS 1	MPS 800(P) Interstage Pumped Screen		15	10500				Kemix	A		
30-SC-07	INTERTANK SCREENS 2	MPS 800(P) Interstage Pumped Screen		15	10500				Kemix	A		
30-SC-08	INTERTANK SCREENS 3	MPS 800(P) Interstage Pumped Screen		15	10500				Kemix	A		
30-SC-09	INTERTANK SCREENS 4	MPS 800(P) Interstage Pumped Screen		15	10500				Kemix	A		
30-SC-10	INTERTANK SCREENS 5	MPS 800(P) Interstage Pumped Screen		15	10500				Kemix	A		
30-SC-11	INTERTANK SCREENS 6	MPS 800(P) Interstage Pumped Screen		15	2000				Kemix	A		
30-SC-12	INTERTANK SCREENS 7	MPS 800(P) Interstage Pumped Screen		15					Kemix	A		
30-SC-13	CARBON RECOVERY SCREEN	DERRICK SCREEN 2SG48-120W-4M, Complete with screen frame support frame and dual SG motors MS constr.		2 x 1.86	10500				Derrick	A		
30-SC-15	CARBON SAFETY SCREEN	DERRICK SCREEN 2SG48-120W-4M, Complete with screen frame support frame and dual SG motors MS constr.		2 x 1.86					Derrick	A		
30-SS-05	CIL AREA SAFETY SHOWER	Combination Shower & Eye Wash Unit								A		
30-SS-06	CIL AREA SAFETY SHOWER	Combination Shower & Eye Wash Unit								A		
30-TH-01	LEACH FEED THICKENER	Ø30m High Rate Thickener		7.5						A		
30-TK-01	CIL TANK 1	Ø 11.9 x 14m, bolted tank, 1563m3 capacity								A		
30-TK-02	CIL TANK 2	Ø 11.9 x 14m, bolted tank, 1563m3 capacity							CTI	A		
30-TK-03	CIL TANK 3	Ø 11.9 x 14m, bolted tank, 1563m3 capacity							CTI	A		
30-TK-04	CIL TANK 4	Ø 11.9 x 14m, bolted tank, 1563m3 capacity							CTI	A		
30-TK-05	CIL TANK 5	Ø 11.9 x 14m, bolted tank, 1563m3 capacity							CTI	A		
30-TK-06	CIL TANK 6	Ø 11.9 x 14m, bolted tank, 1563m3 capacity							CTI	A		
30-TK-07	CIL TANK 7	Ø 11.9 x 14m, bolted tank, 1563m3 capacity							CTI	A		
30-TK-08	DETOX TANK 1	~400 m3								A		
30-TK-09	DETOX TANK 2	~400 m3								A		
30-TK-26	TAILINGS HOPPER	26m3 capacity. Ø4.06m x 3.6m O/A. MS construction, rubber lined bottom only.								A		
30-PP-12	TAILINGS DISCHARGE PUMP 2	WARMAN 8/6 AH		132	2000				Weir Minerals	A		
30-PP-13	TAILS AREA SUMP PUMP	WARMAN 65WBV		15	2000				Weir Minerals	A		
50-PP-14	STRIP SOLUTION PUMP	Seepex BN17-12 Helical Rotor Pump, 5.5L/s @ 98.6m TDH		15	11000				Dynapumps	A		
50-PP-15	PREGNANT SOLUTION PUMP	ARGAL TMR 16.20 6.5L/s @ 7m TDH		2.2					Dynapumps	A		
50-PP-16	BARREN SOLUTION PUMP	ARGAL TMR 36.3 10L/s @ 23m TDH		7.5					Dynapumps	A		
50-PP-18	GOLD ROOM SUMP PUMP	WARMAN 65QVSP		7.5					WEIR MINERALS	A		
50-EW-01	ELECTROWINNING CELL 1	600 X 600 X 12 CATHODE CELLS STAINLESS STEEL CONSTRUCTION WITH RUBBER LINED V-BOTTOM C/W VALVES							Como Engineers	A		
50-EW-02	ELECTROWINNING CELL 2	600 X 600 X 12 CATHODE CELLS STAINLESS STEEL CONSTRUCTION WITH RUBBER LINED V-BOTTOM C/W VALVES							Como Engineers	A		
50-EW-03	ELECTROWINNING CELL 3	600 X 600 X 12 CATHODE CELLS STAINLESS STEEL CONSTRUCTION WITH RUBBER LINED V-BOTTOM C/W VALVES							Como Engineers	A		
50-FA-01	ELECTROWINING FUME EXTRACTION FAN	Ø 152 axial, inline fan		0.55						A		
50-FA-02	GOLD ROOM EXTRACTION FAN	Ø 152 axial, inline fan		1.5						A		
50-FA-03	SMELTING FURNACE EXTRACTION FAN	Model BIF-T-550 tube 316s/s axial fan, Inlet hood and silencer and mounting transitions. Duty 2.5m3/s, 1600rpm		4					MARC	A		
50-FH-01	SMELTING FURNACE FUME HOOD	Stainless Steel Hood								A		
50-FL-01	ELUATE FILTERS	Ø120 x 1000 long, 316 stainless steel construction c/w insertion baskets.								A		
50-FL-02	ELUATE FILTERS	Ø120 x 1000 long, 316 stainless steel construction c/w insertion baskets.								A		
50-FU-01	SMELTING FURNACE	Ansac TA100D diesel fuelled		0.55					Furnace Technology	A		
50-HE-01	ELUTION HEATER	Ansac JO2500D		110					Ansac	A		
50-HO-03	CARBON FEED HOPPER	4.5t capacity, MS construction, supplied with (50-KN-01)							Ansac	A		
50-HT-07	GOLD ROOM HOIST	200kg manual chain hoist								A		
50-HX-01	RECOVERY HEAT EXCHANGER	Part of strip soln. heater, Plate heat exchanger 31 x AISI 316L St. St. EPDM gasket							EPS	A		
50-HX-02	PRIMARY HEAT EXCHANGER	Part of strip soln. heater, Plate heat exchanger AISI 316L St. plate material. Viton seals							EPS	A		
50-KN-01	CARBON REACTIVATION KILN	Ansac HK640LP, Diesel fuelled		3					Ansac	A		
50-LR-01	LEACH REACTOR	Consep Acacia CS1000 reactor C/W electrowinning tank feed pump		40					CONSEP	A		
50-OV-01	CALCINE OVEN	DCF800-6 Calcine Oven, Diesel Fuelled		21	770				Furnace Tech'y	A		

CHESSER RESOURCES

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Diamba Sud 2 Mt/a - Mechanical Equipment List

Equipment Number	Equipment Description	Equipment Details	PFD No.	kW installed	Installation Lift (kg)	Reference	EDS/ Contract No	Cost	Vendor	Revision	Reference	Motor Control
60-PP-19	CYANIDE RECIRCULATION PUMP (DUTY)	Assoma AMA-CT mag drive horizontal pump. 1.5L/s duty flow at 40m TDH.		5.5					Dynapumps	A		
60-PP-20	CYANIDE RECIRCULATION PUMP (STAND-BY)	Assoma AMA-CT mag drive horizontal pump. 1.5L/s duty flow at 40m TDH.		5.5					Dynapumps	A		
60-PP-21	CYANIDE TRANSFER PUMP	Seepex BN2-6L Helical Rotor Pump 0.5 L/s duty flow at 5m TDH.		0.55					Dynapumps	A		
60-PP-22	REAGENT AREA SUMP PUMP	65 SPR centrifugal sump pump. R55 natural rubber impeller, R55 natural rubber liner.		18.5					Weir Minerals	A		
50-PV-01	ELUTION COLUMN	4t Carbon Capacity Column (10m3 bed volume), SAF 2205 construction							Alloytech	A		
50-RE-01	RECTIFIER 1	0-10VDC, 0-800A transformer rectifier c/w all instrumentation and controls, IP54 MS enclosure		8						A		
50-RE-02	RECTIFIER 2	0-10VDC, 0-800A transformer rectifier c/w all instrumentation and controls, IP54 MS enclosure		8	7550					A		
50-RE-03	RECTIFIER 3	0-10VDC, 0-800A transformer rectifier c/w all instrumentation and controls, IP54 MS enclosure		8						A		
50-SC-14	CARBON DEWATERING SCREEN	Ansac SB1000 SS 316 Body and wire Ansac supply with kiln							ANSAC	A		
50-SE-01	SECURITY SYSTEM	TBA								A		
50-SF-01	SAFE	DV/JV4524 category 5 vault safe							Mutual Austen SS	A		
50-SF-02	GOLD ROOM VAULT DOOR	DS250 category 5 vault door c/w 2 x combination locks, 1 x key lock							Mutual Austen SS	A		
50-SS-07	GOLD ROOM AREA SAFETY SHOWER FLOOR LEVEL	Combination shower/eyewash unit.								A		
50-SS-08	GOLD ROOM AREA SAFETY SHOWER FIRST LEVEL	Combination shower/eyewash unit.								A		
50-TK-08	ACID WASH / CARBON SURGE HOPPER	15m3 capacity, Ø 3.0 x 4.8m O/A, MS Construction, rubber lined								A		
50-TK-09	MAKE UP WATER TANK	10m3 capacity								A		
50-TK-10	INTERMEDIATE SOLUTION TANK	45 m3 capacity, Ø 4.2 x 3m O/A, MS construction c/w insulation and cladding.								A		
50-TK-11	PREGNANT SOLUTION TANK 1	45 m3 capacity, Ø 4.2 x 3m O/A, MS construction c/w insulation and cladding.			3000					A		
50-TK-12	PREGNANT SOLUTION TANK 2	45 m3 capacity, Ø 4.2 x 3m O/A, MS construction c/w insulation and cladding.								A		
50-TK-17	ELECTROWINNING TANK	Supplied with intensive leach reactor. MS construction, 1.9m3 capacity.							CONSEP	A		
50-TR-01	CELL SLUDGE TROLLEY									A		
50-WB-01	CATHODE WASH BOX									A		
50-WE-04	BALANCE	0-30kg electronic balance, electronic output								A		
60-AG-08	CAUSTIC AGITATOR	Supplied as part of the Caustic Mixing System (60-XE-02). Mixtec 1037 vertical mixer.		0.37					Mixtec	A		
60-AG-09	CYANIDE AGITATOR	SPX ECL-M5Q-150 mixing agitator.		1.5					SPX	A		
60-AG-10	SMBS Mixing Tank Agitator			1.1						A		DOL
60-AG-11	CuSO4 Mixing Tank Agitator			1.1						A		DOL
60-BS-01	CYANIDE BAG SPLITTER	MS construction, knife-edged, machined point.								A		
60-BS-02	CAUSTIC BAG SPLITTER	Supplied as part of the Caustic Mixing System (60-XE-02).							Effect	A		
60-FP-01	FLOCCULANT DOSING SYSTEM	Polymore Mini 30-1.2 flocculant dosing system.		1.5					Prominent	A		
60-HT-07	CuSO4 Bag Hoist	1.5T WLL electric hoist c/w 3.7 kW YSS-200 hoist, 0.25 kW MTD-200 motorized trolley.		4						A		Feeder
60-HT-08	CYANIDE HOIST	1.5T WLL electric hoist c/w 3.7 kW YSS-200 hoist, 0.25 kW MTD-200 motorized trolley.		3.95					Capital Cranes	A		
60-HT-09	SMBS Bag Hoist	1.5T WLL electric hoist c/w 3.7 kW YSS-200 hoist, 0.25 kW MTD-200 motorized trolley.		4						A		Feeder
60-HT-10	Caustic Bag Hoist	1.5T WLL electric hoist c/w 3.7 kW YSS-200 hoist, 0.25 kW MTD-200 motorized trolley.		4						A		Feeder
60-PC-01	PNEUMATIC CYLINDER	Caustic Bag splitter CA2TF50-300-XAS20516, 50mm bore x 300mm stroke air cylinder.							SMC	A		
60-PC-02	PNEUMATIC CYLINDER	Caustic Bag splitter CA2TF50-300-XAS20516, 50mm bore x 300mm stroke air cylinder.							SMC	A		
60-PC-03	PNEUMATIC CYLINDER	Cyanide Bag Splitting								A		
60-PC-04	PNEUMATIC CYLINDER	Cyanide Bag Splitting								A		
60-PC-05	PNEUMATIC CYLINDER	SMBS Bag Splitting								A		
60-PC-06	PNEUMATIC CYLINDER	SMBS Bag Splitting								A		
60-PC-07	PNEUMATIC CYLINDER	CuSO4 bag splitting								A		
60-PC-08	PNEUMATIC CYLINDER	CuSO4 bag splitting								A		
60-PP-23	CYANIDE TRANSFER PUMP	ARGAL TMR 10.15 mag drive horizontal pump. 4.2L/s duty flow at 10m TDH.		1.5					Dynapumps	A		
60-PP-24	CAUSTIC DOSING PUMP	Seepex BN2-6L. 0.5 L/s duty flow at 6.5m TDH.		0.55					Dynapumps	A		
60-PP-25	ACID DOSING PUMP	ARGAL TMR 16.15 mag drive horizontal pump. 1 L/s duty flow at 5m TDH.		1.5					Dynapumps	A		
60-PP-26	ACID WASH PUMP	ARGAL TMR 30.25 magnetic horizontal pump. 10 L/s duty flow at 20m TDH.		7.5					Dynapumps	A		
60-PP-27	HCL ACID AREA SUMP PUMP	Graco Husky 515 air operated double diaphragm pump.							Dynapumps	A		
70-PP-28	RAW WATER PUMP 1 (DUTY)	PWT 150x125-500 81L/s @ 80m TDH		110					Pentair	A		
70-PP-29	RAW WATER PUMP 2 (STANDBY)	PWT 150x125-500 81L/s @ 80m TDH		110					Pentair	A		
70-PP-30	FIRE PUMP	SOUTHERN CROSS Iso Pro 150x125-315 81L/s @80m TDH , Diesel engine 132kW @ 2600rpm, AS2941 & AS2417		2					Pentair	A		
70-PP-31	PROCESS WATER PUMP 1 (DUTY)	PWT 250x200-500 140L/s @ 75m TDH		185					Pentair	A		
70-PP-32	PROCESS WATER PUMP 2 (STANDBY)	PWT 250x200-500 140L/s @ 75m TDH		185					Pentair	A		
70-PP-33	WATER TREATMENT PUMP	SOUTHERN CROSS PVMI45-3-2T 10L/s @50m TDH		11					Pentair	A		
70-PP-34	PLANT POTABLE WATER PUMP (DUTY)	SOUTHERN CROSS PVMI45-3-2T 10L/s @50m TDH		11					Pentair	A		
70-PP-35	PLANT POTABLE WATER PUMP (STANDBY)	SOUTHERN CROSS PVMI45-3-2T 10L/s @50m TDH		11					Pentair	A		
30-PP-36	CIL SUMP PUMP	WARMAN 65WBV		22					Weir Minerals	A		
70-PP-36	LIGHT VEHICLE WASH DOWN WATER TRANSFER PUMP			3						A		
40-PP-37	SEEPAGE WATER PUMP (DUTY)	XYLEM MF3085.172 CI/Hard Iron Submersible		1.8					Dynapumps	A		
70-PP-37	LIGHT VEHICLE WASH DOWN BOOSTER PUMP (DIESEL)									A		
40-PP-38	SEEPAGE WATER PUMP (STANDBY)	XYLEM MF3085.172 CI/Hard Iron Submersible		1.8					Dynapumps	A		
60-SS-09	ACID AREA SAFETY SHOWER	Combination Shower & Eye Wash Unit								A		
60-SS-10	CYANIDE AREA SAFETY SHOWER	Combination Shower & Eye Wash Unit								A		
60-TK-13	ACID WATER TANK	5m3 capacity, MS construction.								A		
60-TK-14	CAUSTIC MIXING TANK	Supplied as part of the Caustic Mixing System (60-XE-02).							Effect	A		
60-TK-15	CYANIDE MIXING TANK	MS construction.								A		
60-TK-16	CYANIDE STORAGE TANK	MS construction.			12500					A		
60-TK-19	SMBS STORAGE TANK									A		
60-TK-20	SMBS Mixing Tank									A		
60-TK-21	CuSO4 Mixing Tank									A		
60-TK-22	CuSO4 Storage Tank									A		
60-TK-23	CAUSTIC STORAGE TANK	MS construction.								A		
60-XE-01	DIESEL FUEL TANK	Self bunded diesel tank. 82,200L safe fill C/W transfer pump		5.5						A		
60-XE-02	CAUSTIC MIXING SYSTEM	Skid mounted caustic mixing system c/w 1m3 mixing tank, mixing agitator, platforms, handrails, bag splitter.							Effect	A		
60-XE-04	CuSO4 Bag Splitter	Bulky bag splitter - MS construction								A		
60-XE-05	SMBS Bag Splitter	Bulky bag splitter - MS construction								A		
70-AR-01	CRUSHING AREA AIR RECEIVER	1m3 CAPACITY VERTICAL. With PRV gauge Manual and automatic drain valve							Atlas Copco	A		
70-AR-02	PLANT AIR RECEIVER	2m3 capacity VERTICAL. With PRV gauge Manual and automatic drain valve							Atlas Copco	A	17053	
70-AR-03	INSTRUMENT AIR RECEIVER	2m3 capacity VERTICAL. With PRV gauge Manual and automatic drain valve							Atlas Copco	A	17053	

Project: 22001-CHZ
Document Number: 22001-00-MEL-G-001
Revision: A
Date: 14/05/2021

Prepared By: A. Kerr
Checked By:
Approved By:

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Diamba Sud 2 Mt/a - Mechanical Equipment List

Equipment Number	Equipment Description	Equipment Details	PFD No.	kW installed	Installation Lift (kg)	Reference	EDS/ Contract No	Cost	Vendor	Revision	Reference	Motor Control
70-CU-01	AIR COMPRESSOR 1	C/W Integral air dryer		55.7					Atlas Copco	A		
70-CU-02	AIR COMPRESSOR 2	C/W Integral air dryer		55.7					Atlas Copco	A		
70-DR-01	INSTRUMENT AIR DRYER	Refrigerant type dryer		2.2					Atlas Copco	A		
70-DR-2	INSTRUMENT AIR DRYER (STANDBY)	Refrigerant type dryer		2.2					Atlas Copco	A		
70-FL-03	RAW WATER FILTER	PS200-CS-FL SERIES 250 SIMPLEX BASKET STRAINER, TABLE "E" INLINE FLANGES c/w 1mm 316ss BASKET								A		
70-FL-04	INLET FILTER	TBA								A		
70-FL-05	INLET FILTER	TBA								A		
70-FL-07	INSTRUMENT AIR FILTER	High efficiency oil free protection filtering to 0.01 micron.ZANDER G14ZD								A		
70-FL-08	INSTRUMENT AIR FILTER	High efficiency oil free protection filtering to 0.01 micron.ZANDER G14XD								A		
70-FL-09	PROCESS WATER FILTER	PS250-CS-FL SERIES 250 SIMPLEX BASKET STRAINER, TABLE "E" INLINE FLANGES c/w 1mm 316ss BASKET								A		
70-FL-10	GLAND WATER FILTER									A		
70-FL-11	GLAND WATER FILTER									A		
70-OS-01	OILY WATER SEPARATOR	Used in light vehicle wash down								A		
70-PP-40	GLAND WATER PUMP 1			2.2						A		
70-PP-41	GLAND WATER PUMP 2			2.2						A		
40-PP-42	TOE DRAIN PUMP (DUTY)	XYLEM MF3085.172 CI/Hard Iron Submersible		5.5					Dynapumps	A		
40-PP-43	TOE DRAIN PUMP (STANDBY)	XYLEM MF3085.172 CI/Hard Iron Submersible		5.5					Dynapumps	A		
70-PP-45	WATER STORAGE DAM TRANSFER PUMP 1	168L/s @ 20m TDH		75					Pentair	A		
70-PP-46	WATER STORAGE DAM TRANSFER PUMP 2	168L/s @ 20m TDH		75					Pentair	A		
90-PP-47	PLANT POTABLE WATER TRANSFER PUMP 1 (DUTY)	SOUTHERN CROSS PVMI45-3-2T, 10L/s @ 50m TDH		11					Pentair	A		
90-PP-48	PLANT POTABLE WATER TRANSFER PUMP 2 (S/BY)	SOUTHERN CROSS PVMI45-3-2T, 10L/s @ 50m TDH		11					Pentair	A		
90-PP-50	CAMP POTABLE WATER PUMP (DUTY)	SOUTHERN CROSS PVMI45-3-2T, 10L/s @ 50m TDH		11					Pentair	A		
90-PP-51	CAMP POTABLE WATER PUMP (STANDBY)	SOUTHERN CROSS PVMI45-3-2T, 10L/s @ 50m TDH		11					Pentair	A		
90-PP-52	CAMP SEWAGE MACERATING PUMP (DUTY)			5.5						A		
40-PP-53	DECANT RETURN WATER PUMP (DUTY)	ABS/SULZER XFP 150M-CB2 PE 750/4		32					Dynapumps	A		
70-PP-53	FALEME RIVER WATER PUMP	210L/s @ 10m TDH		55					Pentair	A		
90-PP-53	CAMP SEWAGE MACERATING PUMP (STANDBY)			5.5						A		
40-PP-54	DECANT RETURN WATER PUMP (STANDBY)	ABS/SULZER XFP 150M-CB2 PE 750/4		32					Dynapumps	A		
90-PP-54	CAMP FIRE PUMP (DUTY)			5.5						A		
70-PP-55	RIVER WATER TRANSFER PUMP 1 (DUTY)	500 m3/hr @ 100m TDH		400					Dynapumps	A		VSD
90-PP-55	CAMP FIRE PUMP (STANDBY)			5.5						A		
70-PP-56	RIVER WATER TRANSFER PUMP 2 (STANDBY)	500 m3/hr @ 100m TDH		400					Dynapumps	A		VSD
90-PP-56	CAMP FIRE PUMP (JOCKEY)			5.5						A		
70-PP-60	PLANT MACERATING PUMP (DUTY)			5.5						A		
70-PP-70	PROCESS POND TRANSFER PUMP	69 m3/hr @ 15m TDH		5.5						A		
70-PS-01	PSA OXYGEN PACKAGE	OA-1750 Model, 90% purity volume,12.7 Sm3/hr (90% by volume) @ 350 kPag, 45 deg C, incl.PLC controls, alarms		79					Oxair	A		
70-TK-18	WATER TREATMENT TANK	100kL Bolted and plastic lined tank with roof								A		
70-TK-19	PLANT POTABLE WATER TANK	160kL Bolted and plastic lined tank with roof								A		
70-TK-21	RAW WATER TANK	620kL Bolted Tank, open top								A		
70-TK-22	PROCESS WATER TANK	790kL Bolted tank, open top								A		
70-TK-26	RIVER WATER TRANSFER TANK	770kL Bolted and plastic lined tank with roof								A		
80-IB-01	ADMINISTRATION OFFICE			50						A		
80-IB-02	PLANT WORKSHOP			50						A		
80-IB-03	PLANT OFFICE			30						A		
80-IB-04	ABLUTION BLOCK			10						A		
80-IB-05	CHOP SERVERY AND MESS (32 PPL)			5						A		
80-IB-06	LABORATORY			80						A		
80-IB-07	PLANT STORE			10						A		
80-IB-08	CHOP KITCHEN AND MESS (48 PPL)			15						A		
80-IB-09	LIGHT VEHICLE WORKSHOP			25						A		
80-IB-10	VEHICLE WASH BAY			5						A		
80-IB-11	ENTRANCE GATE			5						A		
80-IB-12	SECURITY & PLANT GATEHOUSE			15						A		
80-IB-13	MINING CONTRACTOR AREA			200						A		
90-PK-01	CAMP WATER TREATMENT PLANT	170m3/day		13					Proxa or equ	A		
90-PK-02	CAMP WASTE WATER TREATMENT PLANT	120m3/day		5.5					Proxa or equ	A		
70-PP-61	PLANT MACERATING PUMP (STANDBY)			5.5						A		
70-PP-62	MCA SEWAGE MACERATING PUMP (DUTY)			5.5						A		
70-PP-63	MCA SEWAGE MACERATING PUMP (DUTY)			5.5						A		
20-PP-64	GRAVITY FEED PUMP (DUTY)	WARMAN @150m3/hr, TDH 20m @ 57% W/W	22001-005-P-001	200						A		VSD
20-PP-65	GRAVITY FEED PUMP (STANDBY)	WARMAN @150m3/hr, TDH 20m @ 57% W/W	22001-005-P-001	200						A		VSD
30-PP-66	LEACH FEED PUMP (DUTY)			150						A		VSD
30-PP-67	LEACH FEED PUMP (STANDBY)			150						A		VSD
20-PP-68	MILL AREA SUMP PUMP	WARMAN 100WBV VERTICAL SPINDLE		18.5						A		
30-PP-69	LEACH FEED AREA SUMP PUMP	WARMAN 65WBV		15						A		
90-TK-24	CAMP POTABLE WATER TANK	180kL Bolted and plastic lined tank with roof								A		
90-TK-25	CAMP BORE WATER TANK	180kL Bolted and plastic lined tank with roof								A		
90-TK-26	CAMP BORE WATER TANK	180kL Bolted and plastic lined tank with roof								A		

APPENDIX E: PROCESS DESIGN CRITERIA

CHESSER RESOURCES	mintrex engineering your success

DESIGN CRITERIA				PAGE	
DOCUMENT NO.	22001-DES-001			JOB No.	22001-CHZ
DESCRIPTION	CHESSER RESOURCES DIAMBA SUD GOLD PROJECT PROCESS DESIGN CRITERIA				
OFFICE OF ORIGIN	MINTREX			G.A.	
WRITTEN BY				SCOPE	
REVIEWED BY				CONTRACT	

STATUS APPROVAL BY CLIENT RESPONSIBLE MANAGER/ENGINEER			
	SIGNED	DATE	REV.
ACCEPTED			
ACCEPTED EXCEPT AS NOTED			
REVISE AND RESUBMIT			
APPROVAL BY RESPONSIBLE MANAGER			

Rev.	Date	Description	By	Chk'd	Reviewed
A	15/12/2021	Work-in-Progress	AK		
B	5/01/2022	Issued for Internal Review	DN	LL	DN
C	20/01/2022	Issued for Client Review	DN		

Client	Chesser Resources Ltd	**Rev**
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Design Document	Process Design Criteria	

Process Design Criteria

Assumed	1	Engineers Experience	6
Client Advised	2	Process Simulation	7
Calculated	3	Testwork	8
Vendor Advice	4	To Be Advised	TBA
Estimated	5	Not Applicable	NA

	AREA	UNITS	OXIDE ORE	FRESH ORE	DESIGN (FRESH)	REFERENCE	REV
1	**LOCAL CONDITIONS**						
	Location				250 km SW of Tambacounda Senegal	2	A
	Elevation	mASL			150	2	A
	Temperature Range Maximum	°C			16 (Dec) - 40 (Apr)	6	A
	Mean Annual Rainfall	mm			1160	6	A
	Wet days per year	No			NA	6	A
	Wet season				June - September	6	A
2	**TREATMENT SCHEDULE**						
	Annual Throughput	t			2,000,000	2	A
	Annual Operating Days	d			365	6	A
	Operating Shifts per Day	#			2	6	A
	Shift Duration	h			12	6	A
	Plant Utilisation	%			91.3	3	A
	Annual Operating Hours	h			8,000	1	A
	Daily Throughput	tpd			5,479	3	A
3	**MATERIAL CHARACTERISTICS**		*OXIDE ORE*	*FRESH ORE*	*DESIGN (FRESH)*		
3.1	**General**						
	Design Solids SG		2.69	2.72	2.72	2	A
	Liquid SG		1.00	1.00	1	1	A
	Bulk Density - Compacted	t/m^3	1.8	1.8	1.8	1	A
	- Loose	t/m^3	1.6	1.6	1.6	1	A
	Average Moisture Content	%	5	5	5	1	A
	Maximum Lump Size	mm	500	800	800	1	B
3.2	**Elemental Composition**						
	Gold Head Grade	g/t	1.8	1.5	1.6	2	A
3.3	**Metal Recovery**						
	Gravity Recovery	%	10.0	20.0	20.0	2	B
	Leach Recovery	%	95.0	95.0	95.0	8	B
	Total Recovery	%	95.5	96.0	96.0	3	B
3.4	**Metal Production**						
	Gravity Production	oz/a	11,574	19,290	20,576	3	A
	Leach Production	oz/a	109,956	91,630	97,738	3	A
	Total Production	oz/a	121,530	110,920	118,315	3	A
3.5	**Comminution**						
	Unconfined Compressive Strength	Mpa		50	75	8	B
	Crushing Work Index (Average)	kWh/t	4.1	10.8	10.8	8	B
	Bond Rod Mill Work Index (Average)	kWh/t	10	22.2	22.2	8	B
	Bond Ball Mill Work Index (Average)	kWh/t	12	18	18	8	B
	Abrasion Index (Average)		0.133	0.365	0.365	8	B
	Appearance Function Axb (Average)		150	40	40	8	B
4	**CRUSHING**						
4.1	**Crusher Operating Schedule**						
	Annual Crushing Days	d			365	6	B
	Crushing Shifts per Day	#			2	6	B
	Crushing Shift Duration	h			12	6	B
	Crushing Plant Availability	%			68.5	3	A
	Daily Operating Hours	h			24	6	B
	Effective Daily Operating Hours	h			16.4	3	A
	Effective Annual Operating Hours	h			6,000	3	B
	Required crusher throughput	tph			333	3	A
		tpd			5,479	3	A
	Design crusher throughput	tph			450	6	A

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AREA		UNITS				REFERENCE	REV
		tpd			7,397	3	A
	Final Crushing Circuit Product Size P_{100}	mm			233	6	B
	Final Crushing Circuit Product Size P_{80}	mm			117	6	B
4.2	**ROM Bin**						
	Ore Delivery				Front End Loader (CAT980 or Equivalent)	2	A
	Storage Capacity @ Design Crushing Rate - Live	min			20	3	A
		t			150	2	A
	ROM Ore F_{100}	mm			600	6	B
	ROM Ore F_{80}	mm			317	6	B
4.3	**Primary Feeder**						
	Type				Apron	1	A
	Model				AF8	4	A
	Capacity - Design	tph			450	6	A
	Dimensions - Width x Length	mm			1500 x 8500	4	A
4.4	**Primary Crusher**						
	Type				Jaw Single Toggle	6	A
	Make				Metso	6	A
	Model				C150	6	A
	Crusher Size	mm			1400x1200	4	A
	Installed Power	kW			200	4	A
	Feed Size F_{100}	mm	900	900	900	6	B
	Feed Size F_{80}	mm	450	450	450	7	A
	Product Size P_{100}	mm	300	233	233	7	A
	Product Size P_{80}	mm	180	117	117	7	A
	Closed Side Setting	mm	200	138	138	7	A
5	**CRUSHED ORE STORAGE**						
5.1	**Crushed Ore Storage**						
	Storage Method				Open Air Stockpile	6	B
	Angle of Repose	degrees			35	6	B
	Draw Down Angle	degrees			70 (Design) - 40 (Maximum Live)	6	B
5.2	**Reclaim Feeder**						
	Feeder Type				Apron	6	A
	Feeder Capacity - Design	tph			250	3	A
	Feeder Capacity - Installed	tph			350	6	A
	Feeder Dimensions	mm			1,200 x 7,826	4	A
5.3	**Primary Ore Stockpile**						
	Storage Method				Open Air Stockpile	6	B
	Stacking Method				Stacking Conveyor	6	A
	Capacity - Live	t			3000	3	A
	Capacity @ Design Grinding Rate	h			12.0	6	A
	Maximum Live Storage Capacity	t			3000	3	A
	Maximum Equivalent Grinding Time	h			12.0	3	A
	Stockpile Height	m			16	3	A
	Total Capacity	t			15000	3	A
6	**GRINDING AND CLASSIFICATION**						
6.1	**Operating Schedule**						
	Grinding days per year	d			365	6	B
	Grinding shifts per day	#			2	6	B
	Grinding shift duration	h			12	6	B
	Plant availability	%			91.3	6	B
	Operating hours per day	h			24	6	B
	Effective operating hours per day	h			21.9	3	A
	Effective operating hours per year	h			8000	6	B
	Required grinding throughput	tph			250	3	A
	Design circuit throughput	tph			250	3	A
		tpd			5479	3	A
6.2	**General**						
	Configuration				SAB	2	A
	Feed size F_{100}	mm			233	7	A
	Feed size F_{80}	mm			117	7	A
	Product size P_{80}	µm			75	2	A

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Estimated	5	Not Applicable	NA

AREA		UNITS		REFERENCE	REV
6.3	**Primary Grinding Mill**				
	Type		SAG	7	A
	Duty		Closed Circuit	7	A
	Nominal Size (Diameter x Effective Grinding Length)	m	ø6.7 x 3.8	4	A
	Pinion Power - Required	kW	2,180	6	B
	Pinion Power - Maximum	kW	2,700	6	B
	Installed Motor Power	kW	3,200	6	B
	Rotational Speed	rpm	12.5	4	A
	Critical Speed	%	75	4	A
	Ball Charge - Duty	%vol	10	6	B
	Ball Charge - Maximum	%vol	13	6	B
	Make-up Ball Size	mm	125	6	B
	Discharge Method		Grate	4	A
	Liner Type		Steel	4	A
	Mill Discharge Solids	tph	250	3	A
	Mill Discharge Density	%w/w	70	1	A
	Mill Discharge Slurry	tph	357	3	A
		m^3/h	199	3	A
	Discharge Hopper Minimum Residence Time	s	120	6	A
	Discharge Hopper Volume - Required	m^3	25	3	A
	Discharge Hopper Volume - Design	m^3	40	6	A
6.4	**SAG Mill Discharge Screen**				
	Type		Vibrating Screen	6	A
	Screen Aperture	mm	12	6	A
	Screen Feed Rate	m^3/h	199	3	A
	Screen Area	m^2	12	3	A
	Screen Width	m	2.4	4	A
	Screen Length	m	4.8	4	A
	Specific Screening Duty	$m^3/m^2.h$	17	3	A
	Screen Oversize	tph	0	6	A
	Screen Oversize Density	%w/w	96	6	B
	Screen Underflow	m^3/h	199	3	A
	Screen Spray Water	m^3/h	30	6	A
6.5	**Classification**				
	Type		Hydrocyclones	6	A
	Size (Diameter)	mm	250	7	A
	Number of Clusters	#	1	7	A
	Operating Cylones	#	13	7	A
	Standby Cyclones	#	5	6	A
	Feed Density	% sol	56.5	7	A
	Feed Volumetric Flowrate	m^3/h	758	3	A
	Feed Solids Rate	tph	985	3	A
	Overflow Density	% sol	35.0	7	A
	Overflow Volumetric Flowrate	m^3/h	556	3	A
	Overflow Solids Rate	tph	250	3	A
	Underflow Density	% sol	71.3	7	A
	Underflow Volumetric Flowrate	m^3/h	566	3	A
	Underflow Solids rate	tph	735	3	A
	Product Size P_{80}	µm	75	1	A
	Recirculating Load	%	292	6	B
	Operating Pressure	kPa	120	7	A
	Overflow Destination		Trash Screen	6	A
	Underflow Destination		Ball Mill Feed	6	A
6.6	**Secondary Grinding Mill**				
	Type		Ball	7	A
	Duty		Closed Circuit	7	A
	Nominal Size (Diameter x Effective Grinding Length)	m	ø5.0 x 8.8	4	A
	Pinion Power - Required	kW	2,880	6	B
	Pinion Power - Maximum	kW	3,190	6	B
	Installed Motor Power	kW	3,200	6	B
	Rotational Speed	rpm	14.5	4	A
	Critical Speed	%	75	4	A
	Ball Charge - Duty	%vol	30	6	B
	Ball Charge - Maximum	%vol	35	6	B
	Make-up Ball Size	mm	50	6	B
	Discharge Method		Overflow	4	A
	Liner Type		Steel	4	A
	Dicharge Screen		Trommel	6	B

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Estimated	5	Not Applicable	NA

AREA		UNITS		REFERENCE	REV
	Screen Apperture	mm	5	4	A
	Screen Spray Water	m^3/h	36	6	A
	Mill Discharge Solids	tph	730	3	A
	Mill Discharge Density	%w/w	70	1	A
	Mill Discharge Slurry	tph	1043	3	A
		m^3/h	581	3	A
6.7	**Trash Screen**				
	Feed source		Cyclone Overflow	6	A
	Make		Derrick	6	A
	Type		Horizontal Vibrating	6	A
	Screens installed	#	2 (Duty/Duty)	6	B
	Screens operating	#	2	6	B
	Total screen pulp feedrate	m^3/h	556	3	A
	Nominal width	m	1.2	6	A
	Nominal length	m	3.0	6	A
	Calculated area	m^2	3.6	3	A
	Total screen area	m^2	7.2	3	A
	Specific Screen Duty	$m^3/m^2.h$	77	3	B
	Screen aperture	µm	800	6	A
	Screen cloth material		Polyurethane	6	A
	Screen spray water flowrate - total	m^3/h	10	6	A
	Screen split to oversize	%	0.5	6	A
	Screen oversize percent solids	%	94	6	A
6.8	**Leach Feed Thickener**				
	Feed stream		Trash Screen Underflow	6	A
	Type		High Rate Thickener	4	A
	Design feed rate - solids	tph	250	3	A
	Specific settling rate	$t/m^2.h$	0.6	1	B
	Thickener area required	m^2	417	3	A
	Thickener diameter required	m	24	3	A
	Thickener diameter design	m	24	6	B
	Underflow density	% solids	50	1	A
	Underflow flowrate	m^3/h	341.9	3	A
	Overflow flowrate	m^3/h	224	3	A
7	**Pebble Crushing (not required)**				
7.1	**Pebble Circuit Throughput**				
	Nominal Throughput	tph	0	6	B
	Design Throughput	tph	0	6	B
7.2	**Pebble Crusher - not required**				
	Type		Cone	NA	B
	Installed Power	kW	0	NA	B
	Feed Opening	mm	100	NA	B
	Closed Side Setting	mm	10	NA	B
8	**GRAVITY CONCENTRATION**				
8.1	**Gravity Circuit Scalping Screen**				
	Type		Horizontal Vibrating	6	A
	Make		Derrick	6	A
	Feed source		Ball Mill Discharge	6	A
	Number of screens	#	1	6	A
	Feed solids	tph	135	3	B
	Screen pulp feedrate	m^3/h	166	3	A
	Screen feed pulp density	%w/w	57	6	B
	Nominal width	m	1.1	4	A
	Nominal length	m	3.0	4	A
	Calculated area	m^2	3.3	3	A
	Total screen area	m^2	3.3	3	A
	Screen aperture	mm	2.0 cross flow slots	4	A
	Screen cloth material		Polyurethane panels	4	A
	Screen spray water flowrate	m^3/h	10.0	6	A
	Screen feed dilution water	m^3/h	37	3	A
	Screen solids split to oversize	tph	5.0	1	B
	Screen undersize percent solids	%	54	3	B
	Screen oversize percent solids	%	95	1	A
	Screen oversize destination		Ball Mill Feed	6	B
	Screen undersize destination		Gravity Concentration	6	A

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Estimated	5	Not Applicable	NA

AREA		UNITS		REFERENCE	REV
8.2	**Gravity Concentration**				
	Type		Centrifugal	6	A
	Size	inch	30	6	A
	Number of units	#	1	6	A
	Feed solids rate each unit	tph	135	6	B
	Feed density	% sol	53.8	3	A
	Volumetric feed rate each unit	m^3/h	165.5	3	A
	Fluidisation water each unit	m^3/h	32	4	A
	Fluidisation water total	m^3/h	32	3	A
	Concentration cycle time	min	45	6	A
	Number of cycles per day	#	32	3	A
	Mass of concentrate per cycle	kg/cycle	40	4	A
	Concentrate discharge pulp density	%w/w	0.8	3	A
	Total mass of concentrate per day	kg	1280	3	A
	Volume of flush water per cycle	m^3	5	4	A
	Typical flush duration	min	30	6	A
	Concentrate treatment method		Intensive Cyanidation	6	A
	Gravity tailings destination		Ball Mill Feed	6	A
	Concentrate SG		3.0	6	B
	Gravity concentrator feed dilution water	m^3/h	37.3	3	A
9	**INTENSIVE LEACH**				
9.1	**Intensive Cyanidation**				
	Type		Intensive Leach Reactor	6	A
	Required feed rate per batch	kg/batch	1280	3	A
	Design feed rate per batch	kg/batch	1500	4	A
	Required feed rate per batch	L/batch	1287	3	A
	Required batches per day	#	0.9	3	A
	Design batches per day	#	1	6	B
	Average Daily Gold Recovery	g	1753	3	A
	Concentrate Gold Grade	g/t	1370	3	A
	Leach extraction, gold	%	99	1	B
	Gravity gold recovered to dore	g/d	1736	3	B
	Final liquor solution gold grade	ppm	868	3	A
	Pregnant solution volume	m^3	2.0	4	A
	NaCN in solution (intensive leach)	%	1.0%	6	A
	NaCN concentration (intensive leach)				
		kg/batch	13	3	A
		Av kg/d	13	3	B
		m^3/batch	0.02	1	A
	NaOH consumption (intense leach)	%w/v	25%	3	A
		kg/batch	7.5	3	A
		Av kg/d	6.4	3	A
		m^3/batch	0.03	1	A
	Leach aid consumption (intense leach)	kg/batch	1.5	1	A
		Av kg/d	1.3	3	A
	Reagent makeup duration	h	0.2	1	A
	Concentrate collection vessel percent solids	% solids	80	1	A
	Concentrate transfer duration	h	0.5	1	A
	Concentrate deslime	h	0.5	1	A
	Concentrate leaching	h	16	1	A
	Leach water addition	h	1.0	1	B
	Concentrate wash	h	0.03	1	A
	Concentrate drain	h	0.5	1	A
	Concentrate discharge duration	h	0.5	1	A
	Concentrate discharge percent solids	% solids	30	1	A
	Reactor wash water	m^3/batch	0.5	1	A
	Concentrate transfer	m^3/h	5	1	A
	Stratification and deslime flowrate	m^3/h	14	1	A
	Pregnant solution recovery flowrate	m^3/h	11.5	1	A
	Residue discharge flowrate	m^3/h	14	1	A
10	**LEACHING AND ADSORPTION**				
10.1	**General**				
	Leach feed rate - solids	tph	250	3	A
	Leach feed pulp density	%sol	50	1	A
	Leach feed water flowrate	m^3/h	250	3	B
	Leach feed pulp flowrate	m^3/h	342	3	B
	Design gravity recovery - Au	%	20	3	B
	Design leach feed grade - Au	g/t	1.28	3	A

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	Design leach extraction - Au	%	95	8	B
	Solids residue grade - Au	g/t	0.06	3	A
	CIL recovered gold	g/t	1.22	3	A
		g/d	6663	3	A
10.2	**Carbon in Leach Tanks**				
	Number of tanks		6	1	A
	Design solids leaching capacity	tph	250	3	A
	Pulp feed rate	m^3/h	342	3	A
	Residence time per tank	h	4.0	3	A
	Residence time - total	h	24	8	B
	Total tank capacity required	m^3	8206	3	A
	Individual tank capacity required	m^3	1368	3	A
	Design tank capacity	m^3	1378	3	A
	Tank diameter	m	11.55	6	A
	Total tank height	m	13.7	6	A
	Tank freeboard	m	0.5	6	A
	Effective tank height	m	13.2	3	A
	Agitation type		Mechanical Open Impeller	6	A
	Leach feed pH		10.5	6	B
	Oxygen addition method		Sparge (Tanks 1 - 2)	6	A
10.3	**Carbon**				
	Metal Recovery From Solution	g/d	6663	3	A
	Loaded Carbon grade	ppm	2000	1	B
	Required carbon movement per day	t	3.3	3	A
	Design carbon movement per day	t	4.0	6	A
	Average carbon concentration per tank	g/L	10	1	A
	Carbon tonnage per tank	t	13.8	3	A
	Carbon in circuit	t	82.7	3	A
	Assumed carbon loss	g/t	12	1	A
	Carbon size	mesh	6 x 10	1	A
	Carbon transfer period	h	6.0	1	A
	Carbon and pulp transfer rate	m^3/h	55.5	3	A
	Carbon transfer method		Recessed Impellor Pump	6	A
10.4	**Interstage Screens**				
	Screen type		Pumped Screen	6	A
	Interstage screen aperture	µm	800	6	A
	Interstage screen area	m^2	8.2	3	A
	Screen diameter	m	1.3	4	A
	Screen length	m	2	4	A
	Design specific screening duty	$m^3/m^2.h$	41.9	3	A
	Maximum specific screening duty	$m^3/m^2.h$	75	4	A
	Screen cloth material		Stainless Steel	6	A
10.5	**Loaded Carbon Screen**				
	Type		Horizontal Vibrating	6	A
	Screen feed period	h	6.0	3	A
	Screen pulp feedrate	m^3/h	55.5	3	A
	Screen specific duty	$m^3/m^2.h$	25.7	3	A
	Nominal width	m	0.9	1	A
	Nominal length	m	2.4	1	A
	Calculated screen area	m^2	2.16	3	A
	Screen aperture	µm	850	6	A
	Screen cloth material		Polyurethane	6	A
	Screen spray water flowrate	m^3/h	5	6	A
	Loaded carbon destination		Acid Wash	6	A
10.6	**Carbon Safety Screen**				
	Type		Declined Linear	6	A
	Number installed	#	1	6	A
	Screen pulp feedrate	m^3/h	342	3	A
	Screen specific duty	$m^3/m^2.h$	95	3	A
	Nominal width	m	1.2	1	A
	Nominal length	m	3.0	1	A
	Calculated screen area	m^2	3.6	3	A
	Screen aperture	µm	1000	6	A
	Screen cloth material		Polyurethane	6	A
	Screen spray water flowrate	m^3/h	10	6	A

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11	**TAILINGS DISPOSAL**				
11.1	**Tailings Discharge**				
	Tailings Discharge Hopper Feed	m^3/h	359	3	A
	Tailings Density	% solids	48.4	3	A
	Tailings Slurry SG		1.44	3	B
11.2	**Tailings Storage**				
	Type		Paddock	6	B
	Tailings Discharge Method		Multi - Point Spigot	6	B
	Water Reclaim Method		Central Decant (Pump)	6	B
12	**ELUTION**				
12.1	**General**				
	Process Type		Split AARL	6	A
	Elution circuit capacity - design	t	4.0	1	B
	Operating schedule	d/week	5	1	A
	Average carbon processing rate	t/d	4.0	3	A
	Required elutions per week	#	4.2	3	A
	Number of elutions per week - design	#	4.0	1	A
	Loaded carbon grade with gravity				
	Au	ppm	2000	6	B
	Barren carbon grade				
	Au	ppm	50	6	B
	Metal desorbed per strip				
	Au	g	7800	3	A
	Dry carbon bulk density	t/m^3	0.48	6	A
	Wet carbon bulk density	t/m^3	1.45	6	A
	Carbon bed volume	m^3	8.3	3	A
	Design carbon bed volume	m^3	8.3	3	A
	Acid wash vessel volume	m^3	8.3	3	A
	Design acid wash vessel volume	m^3	8.3	3	A
	Elution cycle time (excluding carbon return)	min	370	3	A
		h	6.2	3	A
	Solution ambient temperature	°C	20	1	A
12.2	**Elution Column**				
	Column capacity - required	t	4	3	A
		m^3	9.0	3	A
	Column diameter	m	1.37	4	A
	Column height	m	7.6	4	A
	Column volume - calculated	m^3	11	3	A
	Temperature	°C	140	6	B
	Pressure	kPa	600	6	A
	Materials of construction		S/S Steel SAF2205	6	A
12.3	**Acid Wash Hopper**				
	Hopper Capacity - required	t	4	3	A
		m^3	9.0	6	A
	Hopper Volume - Design	m^3	12	6	A
12.4	**Elution Heater**				
	Elution Heater Type		Diesel Fired	6	A
	Heater Power Rating	kW	1400	6	A
12.5	**Acid Soak**				
	Cycle Time	min	20	6	A
	Water Flowrate	BV/h	2	6	A
		m^3/h	16.7	3	A
	Volume Water Used	m^3	5.56	3	A
		BV	0.7	3	A
	Acid Type		HCl	6	A
	Acid Strength - Neat	%w/w	32	6	A
	Acid Strength - Wash	%w/v	3	6	A
	Acid Flowrate	m^3/h	1.3	3	A
	Acid Consumed	m^3	0.4	3	A
12.6	**Acid Water Rinse**				
	Cycle Time	min	90	6	A
	Water Flowrate	BV/h	2	6	A

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AREA		UNITS		REFERENCE	REV
		m^3/h	16.7	3	A
	Volume Water Used	m^3	25	3	A
12.7	**Carbon Transfer**				
	Carbon Transfer Time	min	30	6	A
	Carbon Transfer Concentration	g/L	500	6	A
	Transfer Flowrate	m^3/h	16	3	A
	Transfer Method		Gravity/Wash	6	A
	Carbon Destination		Elution Column	6	A
12.8	**Stage 1 - Elution Pre-treat**				
	Cycle Time	min	25	6	A
	Solution Flowrate	BV/h	2	6	A
		m^3/h	16.7	6	A
	Total Pre-treat Solution Volume (inc. Reagents)	m^3	6.9	3	A
	Solution Temperature	°C	110	6	A
	Potable Water Volume	m^3	6.9	3	A
	Solution Strength - NaCN	%w/v	2.0	6	B
	Solution Strength - NaOH	%w/v	2.0	6	B
	NaCN Addition	kg	139	3	A
		m^3	0.38	3	A
	NaOH Addition	kg	139	3	A
		m^3	0.44	3	A
	Flow Destination		Pregnant Solution Tank	6	A
12.9	**Stage 2 Recycle Elution**				
	Cycle time	min	90	6	A
	Solution flowrate	BV/h	2.0	6	A
		m^3/h	16.7	3	A
	Solution temperature	°C	140	3	A
	Potable water volume	m^3	25.0	3	A
	Flow Destination		Pregnant Solution Tank	6	A
12.10	**Stage 3 Fresh Water Elution**				
	Cycle time	min	90	6	A
	Solution flowrate	BV/h	2	6	A
		m^3/h	16.7	3	A
	Solution temperature	°C	140	3	A
	Total flow	m^3	25.0	3	A
	Flow Destination		Intermediate Solution Tank	6	A
12.11	**Stage 4 Elution Carbon Cool**				
	Cycle time	min	25	6	A
	Solution flowrate	BV/h	2	6	A
		m^3/h	16.7	3	A
	Start solution temperature	°C	140	3	A
	Final solution temperature	°C	98	6	A
	Total Flow	m^3	6.9	3	A
	Flow Destination		Intermediate Solution Tank	6	A
12.12	**Stage 5 Carbon Transfer**				
	Carbon transfer time	min	60	6	A
	Carbon transfer concentration	g/L	200	6	A
	Transfer flowrate	m^3/h	20	3	A
	Transfer method		Eduction	2	A
	Transfer water type		Raw	2	A
	Total flow	m^3	20	3	A
	Carbon destination		Regen Kiln/CIL Circuit	6	A
12.13	**Intermediate Solution Tank**				
	Required Working Volume	m^3	32	3	A
	Total Volume - Design	m^3	42	3	A
	Tank Diameter	m	4.2	6	A
	Tank Height	m	3	6	A
12.14	**Make Up Water Tank**				
	Required Working Volume	m^3	32	3	A
	Total Volume - Design	m^3	42	3	A
	Tank Diameter	m	4.2	6	A
	Tank Height	m	3	6	A
12.15	**Pregnant Solution Tank**				

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AREA		UNITS		REFERENCE	REV
	Number of Tanks	#	2	6	A
	Required Working Volume	m^3	31.9	3	A
	Total Volume - Design	m^3	42	3	A
	Tank Diameter	m	4.2	6	A
	Tank Height	m	3	6	A
13	**ELECTROWINNING**				
13.1	**Elution Solution Electrowinning**				
	Parallel Trains	#	2	6	A
	Operating Cells Per Train	#	1	6	A
	Total Cells	#	2	3	A
	Cathode Dimensions	m	0.6x0.6	6	A
	Cathode Width	m	0.6	6	A
	Cathode Height to Liquid Level	m	0.5	6	A
	Effective Cell Cross-Sectional Area	m^2	0.3	3	A
	Electrowinning Feed Flow	m^3/h	7	3	A
		$m^3/h/cell$	7	3	A
	Electrowinning Duration	h	14	6	A
	Mass of Metal Eluted per Elution Cycle				
	Au	g	7800	3	A
	Electrowinning Current Efficiency				
	Au	%	12	6	A
	Electrowinning Current Requirement				
	Au	A	632	3	A
	Total	A	632	3	A
	Nominal Rectifier Rating	A	800	6	A
	Cathode Type		Stainless Steel	6	B
	Cathode Surface Area	m^2/g	0.017	4	A
	Cathode Submerged Mass (Each)	g	450	6	A
	Cathodes per Cell	#	9	6	A
	Effective Cathode Surface Area	m^2	70	3	A
	Current Density	A/m^2	9.0	3	A
	Nominal Metal Loading per Cathode	kg	2.3	3	A
	Cathodes Removed per Week	#	13.9	3	A
	Barren Solution Assay	ppm Au	5	6	A
13.2	**Gravity Solution Electrowinning**				
	Electrowinning Gold Tenor (Feed)	ppm	868	3	A
	Operating Cells	#	1	6	A
	Total Cells	#	1	6	A
	Cathode Dimensions	m	0.6x0.6	6	A
	Cathode Width	m	0.6	6	A
	Cathode Height to Liquid Level	m	0.5	6	A
	Effective Cell Cross-Sectional Area	m^2	0.3	3	A
	Electrowinning Feed Flow	m^3/h	6	6	A
		$m^3/h/cell$	6	3	A
	Electrowinning Duration	h	12	6	A
	Mass of Metal Won per Gravity Cycle				
	Au	g	1736	3	A
	Electrowinning Current Efficiency				
	Au	%	12	6	A
	Electrowinning Current Requirement				
	Au	A	164	3	A
	Total	A	164	3	A
	Nominal Rectifier Rating	A	800	6	A
	Cathode Type		Stainless Steel	6	A
	Cathode Surface Area	m^2/g	0.017	6	A
	Cathode Submerged Mass (Each)	g	450	6	A
	Cathodes per Cell	#	9	6	A
	Effective Cathode Surface Area	m^2	70	3	A
	Current Density	A/m^2	2.3	3	A
	Barren Solution Assay	ppm Au	5	6	B
14	**CARBON REACTIVATION**				
14.1	**Dewatering Screen**				
	Type		Horizontal Vibrating	6	A
	Feed rate	m^3/h	20	3	A
	Screen specific duty	$m^3/m^2/h$	40	3	A
	Required screen area	m^2	0.5	3	A
	Nominal width	m	0.5	1	A

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AREA		UNITS	OXIDE	FRESH	DESIGN	REFERENCE	REV
	Nominal length	m			0.8	1	A
	Calculated screen area	m^2			0.4	3	A
	Screen spray water flowrate	m^3/h			0	6	A
14.2	**Regeneration Kiln**						
	Type				Diesel Fired	6	A
	Capacity	kg/h			250	6	A
	Design Operating Temperature	°C			700 - 800	6	A
	Design total carbon retention time at Temperature	min			20	2	A
	Carbon processing time	h/batch			16	3	A
	Number of feed hoppers	#			1	6	B
	Dry carbon sizing screen type				Vibrating	6	A
	Kiln water addition	m^3/h			0.1	6	A
15	**GOLDROOM**						
15.1	**Cathode Treatment**						
	Method				Calcining	6	A
	Number of Ovens	#			1	6	A
	Design Treatment Temperature	°C			700	6	A
	Number of Trays	#			6	6	A
	Tray Dimensions	mm			800 x 800	6	A
15.2	**Smelting**						
	Furnace Type				Diesel Fired	6	A
	Crucible Capacity	kg			100	6	A
	Mass of Metal Smelted per Week	kg			71	3	A
	Nominal Smelts per Week	#			2	3	A
16	**REAGENTS STORAGE & DISTRIBUTION**						
16.1	**Quicklime**		**OXIDE**	**FRESH**	**DESIGN**		
	Testwork Consumption	kg/t			2.8	8	B
		kg/d			15342	3	A
		t/mth			467	3	A
		tpa			5600	3	A
	Addition Point				Mill Feed Conveyor	6	A
	Storage Method				Silo	4	A
	Storage Capacity	t			200	4	A
	Storage Duration	days			13	3	A
	Delivery Size	t			120	6	B
	Discharge Method				Rotary Valve	4	A
	Discharge Rate	kg/min			11.7	3	A
16.2	**Sodium Cyanide**						
	Consumption						
	Leach Circuit	kg/t			0.25	8	B
	Elution Circuit	kg/strip			139	3	A
	Intensive Leach	kg/batch			12.9	3	A
	Overall Design Consumption	kg/t			0.27	3	A
		kg/d			1462	3	A
		t/mth			44.5	3	A
		tpa			534	3	A
	Addition Point				Leach Circuit	6	A
					Elution Circuit	6	A
					Intensive Leach	6	A
	Solution Strength	%w/w			30.5	6	A
	Solution SG				1.19	6	A
	Average Solution Consumption	m^3/d			4.0	3	A
		L/h			167.8	3	A
	Delivery Method				Bulk Bags	6	B
	Delivery Size	kg			1,000	6	B
	Batch Size	bags/batch			3	6	A
		kg/batch			3,000		A
	Number of Storage Tanks	#			1	6	A
	Storage Tank Volume	m^3			21.5	6	A
		batches			2.6	3	A
		d			5.3	3	A
	Mixing Schedule	batch/d			1	6	A
	Mixing Tank Volume - Required	m^3			8.3	3	A
	- Design	m^3			10	3	A

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AREA		UNITS		REFERENCE	REV
16.3	**Sodium Hydroxide**				
	Design Consumption				
	Elution Circuit	kg/strip	139	3	A
	Intensive Leach	kg/batch	7.5	3	A
		kg/t	0.016	3	A
		kg/d	87	3	A
		t/mth	2.6	3	A
		tpa	31.7	3	A
	Addition Point		Elution Circuit	6	A
			Intensive Leach	6	A
	Solution Strength	%w/w	25	6	A
	Solution SG		1.27	1	A
	Average Solution Consumption	m^3/d	0.27	3	A
	Delivery Method		Bulk Bags	1	B
	Delivery Size	kg	1,000	1	B
	Batch Size	bags/batch	1	3	A
		kg/batch	1,000	3	B
	Number of Mixing/Storage Tanks	#	1	6	A
	Storage/Mixing Tank Volume	m^3	4.0	3	B
	Storage Duration	d	14.6	3	B
16.4	**Hydrochloric Acid**				
	Design Consumption	kg/t	0.05	3	A
		kg/d	297	3	A
		t/mth	9.0	3	A
		tpa	108	3	A
	Addition Point		Acid Wash/Carbon Surge Hopper	6	A
	Solution Strength	%w/w	32	6	A
	Solution SG		1.17	6	A
	Average Solution Consumption	m^3/d	0.25	3	A
	Delivery method		IBC	1	A
	Delivery size	kg	1,185	1	A
	Maximum storage duration	d/IBC	4	3	A
16.5	**Oxygen**				
	Design Consumption	kg/t	0.0115	1	B
		Sm^3/t	0.008	3	A
		Sm^3/d	46	3	A
		Sm^3/mth	1,409	3	A
		Sm^3/a	16,912	3	A
	Addition Point		CIL Tanks 1 - 2	2	A
	Vaporisation Density	kg/m^3	1.36	1	A
	PSA Plant Capacity	Sm^3/h	2.4	6	B
16.6	**Flocculant**				
	Design Consumption				
	Leach feed thickener	kg/t	0.04	1	B
	Total	kg/t	0.04	3	A
		kg/d	219	3	A
		t/mth	6.7	3	A
		tpa	80	3	A
	Flocculant Addition				
	Leach feed thickener	m^3/h	11.1	3	A
	Mixing Strength	%w/v	0.15	8	A
	Delivery method		Bags	1	A
	Bag size	kg	25	1	A
16.7	**Grinding Media**				
	Consumption				
	SAG Mill	kg/t	0.35	1	B
	Ball Mill	kg/t	0.65	1	B
	Total	kg/t	1	3	A
		tpa	2000	3	A
					A
16.8	**Activated Carbon**				
	Design Consumption	kg/t	0.02	1	A
		kg/d	110	3	A
		t/mth	3.3	3	A
	Delivery Bag Size	t	0.55	3	B

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Design Document	Process Design Criteria	

Process Design Criteria

Assumed	1	Engineers Experience	6
Client Advised	2	Process Simulation	7
Calculated	3	Testwork	8
Vendor Advice	4	To Be Advised	TBA
Estimated	5	Not Applicable	NA

AREA		UNITS		REFERENCE	REV
16.9	**SMBS**				
	Design Consumption	kg/t	0.3	6	B
		kg/d	1644	3	B
		tpa	600	3	B
16.10	**Copper Sulphate**				
	Design Consumption	kg/t	1.2	6	B
		kg/d	6575	3	B
		tpa	2400	3	B
17	**WATER SUPPLY, STORAGE AND DISTRIBUTION**				
17.1	**Process Water**				
	Supply Source		RW Pond/Decant Return/Thickener Overflow	1	A
	Total Demand	m^3/h	441	3	A
	Storage Method		Tank	1	B
	Storage Requirement	h	2.0	6	A
	Storage Volume - Required	m^3	883	3	A
	Storage Volume - Designed	m^3	1,000	1	B
		h	2.27	3	A
17.2	**Raw Water**				
	Supply source		River Faleme	2	B
	Annual Average Demand	m^3/h	43	3	B
	System Operating Rate	m^3/h	173	6	B
	Storage Method		Pond	2	A
	Storage Requirement	months	9	1	B
	Storage Volume - Required	m^3	279,932	3	A
	Storage Volume - Designed	m^3	300,000	1	B
17.3	**Tailings Return Water**				
	Average Tails Return Water (Including rainfall collected in TSF)	m^3/h	193.0	3	A
	Tailings Water Losses - Evaporation	%	15	1	B
	Tailings Water Losses - Evaporation	m^3/h	39	3	B
	Tailings Water Losses - Retention	t liquid / t solid	0.4	6	B
	Tailings Water Losses - Retention	m^3/h	100	3	B
	TSF Area	m^2	500000	1	B
	TSF Rainfall (Annual Average Inflow)	m^3/h	66.2	3	B
17.4	**Potable Water Generation**				
	Source		Bore Water	2	B
	Method		Reverse Osmosis (TBA)	2	B
	Camp	m^3/d	50	6	B
	Plant (Mining Contractors and Misc.)	m^3/d	20	1	B
	Total Consumption	m^3/d	70	3	B
	Storage method	m^3	Lined/Enclosed Tank	6	A
	Storage volume	m^3	160	6	A
18	**AIR SERVICES**				
18.1	**High Pressure Air**				
	Compressor Type		Rotary Screw	6	A
	Pressure	kPa	700	6	A
	Instrument Air Supply Source		HPA System	6	A

ATTACHMENT 2
JORC TABLE 1
DIAMBA SUD GOLD PROJECT, SENEGAL
15 March 2022

ATTACHMENT 2

JORC Code, 2012 Edition – Table 1 (Diamba Sud)

Section 4: Consideration of Modifying Factors

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions on which the Scoping Study production target and projected financial information are based have been included in this release and disclosed in the table below.

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 Mineral Resource estimate on which the scoping study is based was separately and previously announced on 16 November 2021 • No Ore Reserve has been declared as part of the scoping study.
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.*	• Site visit information and commentary pertaining to the Mineral Resource estimate are provided in the Mineral Resource estimate announcement of 16 November 2021. The Competent Person for the scoping study has undertaken two site visits to the Project one each in 2021 and 2022.
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 is an at Scoping Study level. No Ore Reserve has been declared. • No Ore Reserve has been declared.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Cut-off grade parameters for the Mineral Resource estimate are provided in the Mineral Resource estimate announcement of 16 November 2021. • Refer to Section 6.3.2 (Cut-off Grade Calculation) Scoping Study report; 0.5 g/t for weathered and 0.6 g/t for fresh materials.
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 (eg 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).*	• No Ore Reserve has been declared. • Refer to Section 6 (Mining) Scoping Study report. • Refer to Section 6 (Mining) Scoping Study report. • Refer to Section 6.3.3 (Geotech Parameters) Scoping Study report.

Criteria	JORC Code explanation	Commentary
	• *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 dilution factor of 10% applied, Section 6.3.1 (Mining Dilution and Ore Loss) Scoping Study report. • Mining recovery factor of 95% applied, Section 6.3.1 (Mining Dilution and Ore Loss) Scoping Study report. • Refer to Section 6 (Mining) Scoping Study report. • Refer to Section 6 (Mining) Scoping Study report. • Refer to Sections 6 (Mining), 9 (Process Plant) and 13.2 (Plant Layout) Scoping Study report.
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 orebody 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?*	• Refer to Sections 8 (Ore Properties) and 9 (Process Plant) Scoping Study report. • Refer to Section 8 (Ore Properties) Scoping Study report. Standard industry gold processing. • Refer to Section 8 (Ore Properties) Scoping Study report. Recoveries applied 95% Oxide and 93% Fresh are below recommendations by Mintrex and testwork results, 96% average recovery. • Refer to Section 8 (Ore Properties) Scoping Study report. No evidence of deleterious elements in the ore. • No bulk sample or pilot testwork undertaken. • n/a
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.*	• Refer to Section 4 (Environmental Social and Licensing) Scoping Study report. • Scoping Study level of analysis and these aspects of the Project will be fully addressed during the Feasibility Study. ESIA baseline studies have commenced over the Project area.
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.	• Refer to Sections 9 (Processing Plant) and 13.2 (Plant Layout) Scoping Study report. • Scoping Study level of analysis and these aspects of the Project will be fully addressed during the Feasibility Study. No known impediments to Project infrastructure.
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 source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of*	• Refer to Section 10 (Basis for Capital Cost Estimate) Scoping Study report. Scoping Study level +/- 35%. • Refer to Sections 6.4 (Mining Cost Estimation) and 11 (Basis for Operating Cost Estimate) Scoping Study report. Scoping Study level +/- 35%. • No evidence of deleterious elements. • Refer to Section 14 (Economic Analysis) Scoping Study report. • Refer to Section 14 (Economic Analysis) Scoping Study report.

Criteria	JORC Code explanation	Commentary
	treatment and refining charges, penalties for failure to meet specification, etc. • *The allowances made for royalties payable, both Government and private.*	• Refer to Section 14 (Economic Analysis) Scoping Study report. • Refer to Section 14 (Economic Analysis) Scoping Study report.
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.*	• The derivation of feed grades comes form the Mineral Resource estimate referenced in Sections 5 (Geology and Resources) and 6 (Mining) Scoping Study report. • The product to be sold is gold in the form of dore produced on site and to be sold on the spot market. Reference was made to the spot price of gold and forecast pricing. Refer to Section 14 (Economic Analysis) of the Executive Summary for commodity price assumptions.
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.*	• n/a – the product in the form of gold dore will be sold on the spot market. • n/a • n/a • n/a
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.*	• Refer to Section 14 (Economic Analysis) Scoping Study report. • Refer to Section 14 (Economic Analysis) Scoping Study report.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Refer to Section 4 (Environmental Social and Licensing) Scoping Study report.
Other (incl Legal and Governmental)	• *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.*	• No Ore Reserve has been declared. • No material naturally occurring risks have been identified. • The project is owned 100% by Chesser and there are no marketing agreements in place. • There are currently no governmental agreements in place. The tenements the subject of the Study have been granted and are owned 100% by Chesser. • The Company continues to undertake relevant studies to support necessary government approvals processes. There are reasonable grounds from the studies conducted to date to expect that all necessary Government approvals will be received within the timeframes anticipated. The Company is yet to commence Pre-Feasibility or Feasibility studies.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence*	• No Ore Reserve has been declared.

Criteria	JORC Code explanation	Commentary
	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).*	• No Ore Reserve has been declared. • No Ore Reserve has been declared.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• No Ore Reserve has been declared.
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.*	• No Ore Reserve has been declared. • No Ore Reserve has been declared. • No Ore Reserve has been declared. • No Ore Reserve has been declared.