



ASX and Media Release: 14 December 2022

ASX: RXM | OTCQB: RXRLF

## Rex commits to next phase of Hillside Copper-Gold Project

Rex Minerals Ltd (Rex or the Company) today announced moving ahead with project financing and operational readiness plans following completion of the Optimised Feasibility and Definition Phase Engineering Study (OFS). The 100%-owned Hillside Project (Hillside) is one of the most significant copper-gold projects in the country and is located less than two hours' drive from Adelaide, South Australia.

### High level key points:

- **Project Value for Stage One**<sup>1 2 3</sup>
  - Net Present Value (NPV) A\$1,252M (pre-tax), NPV of A\$847M (post-tax)
  - Internal Rate of Return (IRR) of 19% (*nominal IRR 23%*) (*spot IRR 21%*)
  - C1 of US\$1.52/lb copper (*spot C1 US\$1.39/lb*)
  - 4.3-year payback period
- **Scale and Opportunity** – Stage One (11 years) lays the foundation for a 20 plus year operation and extracts around half of the current Ore Reserve. Substantial potential exists for Resource and Or Reserves growth, leading to mine life extension and higher processing rates beyond Stage One<sup>4</sup>
- **First Production** – Annual payable metal of circa 42kt copper (Cu) and 30koz gold (Au) to follow ramp-up. First concentrate delivery timing Q4CY2025<sup>5</sup>, to align with the beginning of the forecast global copper market deficit<sup>6</sup>
- Estimated pre-production capital cost of A\$854M (US\$598M) all-inclusive of full fleet, pre-strip and contingency
- **Team** – Board and Management have significant experience in delivering similar projects in Australia and internationally
- **Contribution** – Hillside to provide employment for over 500 people during construction and over 400 during operations (over \$600M in payroll) and contributing over A\$200M in state royalties
- **Regulatory Approvals** – Key approvals are in place to allow commencement of development and operations<sup>7</sup>
- **Next Steps** – Rex is actively seeking suitable funding via a structured process, to align with the detailed engineering, construction and operational readiness plans. Potential strategic partnerships via a minority interest are being discussed.

<sup>1</sup> All Project values in real terms unless otherwise stated

<sup>2</sup> Pricing (midpoint of the consensus range) assumptions: US\$3.92 Cu; US\$1,610 Au; FX USD:AUD \$0.70, unless otherwise stated

<sup>3</sup> Discount rate: WACC 4.88% (Real), 8.55% (Nominal) rounded to the nearest whole number (Source: Cape Leveque Securities Pty Ltd)

<sup>4</sup> ASX Announcements: Hillside Doubles Ore Reserves, 20 July 2021; 2022 Hillside Mineral Resource and Ore Reserve Statement, 14 December 2022

<sup>5</sup> Subject to finance and FID

<sup>6</sup> Goldman Sachs Report: Copper Top Projects 2022, A Deficit on the Horizon

<sup>7</sup> Refer Table 6 ASX Announcement: Optimised Feasibility & Definition Phase Engineering Study – Executive Study, 14 December 2022

Rex's CEO and MD, Richard Laufmann, said: ***“Rex remains on track to become a significant Australian copper producer. Despite the current global headwinds, the economics remain robust, and Hillside is planned to be in production at a time when the world will require a significant amount of copper to drive the global electrification initiatives.***

***“We have received strong interest from a range of external financiers, traditional and non-traditional lenders, equipment suppliers and the major copper smelters and metal trading companies.***

***“This is an exciting time for copper developers, for Rex Minerals, for shareholders, and for the South Australian (SA) and local communities which are poised to reap regional economic benefit from Hillside.”***

## Background

The 100%-owned Rex Minerals' Hillside Copper-Gold Project on the Yorke Peninsula in SA is one of the most significant copper-gold development projects in Australia, and one of the biggest Ore Reserves<sup>8</sup> in Australia, after Olympic Dam and Carrapateena – both also located in South Australia.

Hillside is fully permitted with key approvals in place. It has State Government and regional support, and in development will become a long-term major regional employer in SA while delivering significant regional economic benefit.

South Australia is a politically stable location with well-developed infrastructure. This infrastructure includes an existing electricity grid, roads, water and a skilled labour pool. The Hillside Project will be well serviced by this current infrastructure. Further, the Hillside Project offers a high probability of future Mineral Resource growth and Mineral Resource to Ore Reserve conversion.

Based on Hillside's 989kt Copper Ore Reserve<sup>8</sup>:

- Stage One mine life of 11 years
- Stage One includes 151kt of copper-gold concentrate. The high-quality concentrate to contain annual payable metal after ramp-up of approximately 42kt of copper and 30koz of gold, average concentrate grade of 27%
- A subsequent Stage Two based upon current Ore Reserves and Mineral Resources<sup>8</sup>.

Mining operations to comprise conventional open pit extraction utilising large-scale rigid trucks loaded by excavator. A conventional flotation processing method has been chosen as the most technically and economically viable method for the separation of copper from the ore. Process tailings to be delivered to a dedicated Tailings Storage Facility. Concentrate to be trucked by road and subsequently shipped to market regularly from Port Adelaide.

<sup>8</sup> ASX Announcements: Hillside Doubles Ore Reserves, 20 July 2021; 2022 Hillside Mineral Resource and Ore Reserve Statement, 14 December 2022

## Project Value – Key financial metrics: Stage One<sup>9 10</sup>

**Table 1: Hillside Project Key Sensitivities Stage One**

		Commodity Price Consensus Range <sup>b c</sup> 'Midpoint'	Commodity Price Consensus Range <sup>b c</sup>	Spot Case <sup>a</sup>	Goldman Sachs 'Demand Case' <sup>c d</sup>
Copper Price	US\$/lb	3.92	3.60 – 4.20	3.82	5.90
Gold Price	US\$/oz	1,610	1,490 - 1,730	1,785	1,730
Exchange Rate	A\$:US\$	0.70	0.70	0.67	0.70
Pre-Tax NPV <sup>e</sup>	A\$M	1,252	914 – 1,552	1,390	3,144
Post-Tax NPV <sup>e</sup>	A\$M	847	610 – 1,058	944	2,174
Post-Tax IRR <sup>e</sup>	% real	19	16 – 22	21	37
	% nominal	23	20 – 27	25	42
C1 Cash Costs (after by-products)	US\$/lb	1.52	1.56 - 1.48	1.39	1.47
AISC	US\$/lb	1.79	1.82 - 1.77	1.66	1.83
Payback period	Years	4.3	5.1 - 3.7	4	2.3

<sup>a</sup> Spot case prices 9 December 2022: FX RBA.gov.au; Kitco (Au); LME (Cu)

<sup>b</sup> Cu price: Consensus Economics Ltd (survey date 14 November 2022)

<sup>c</sup> Au price: Consensus Economics Ltd (survey date 14 November 2022)

<sup>d</sup> Cu price: Goldman Sachs "meet forecast market demand" Cu incentive pricing US\$13,000/t

<sup>e</sup> Discount rate: WACC 4.88% (Real), 8.55% (Nominal) rounded to the nearest whole number (Source: Cape Leveque Securities Pty Ltd)

**Table 2: Stage One Study Outcomes**

Key Metrics	Unit	Outcome
Project Revenue	A\$M	6,250
Operating Costs	A\$M	2,396
C1 Cash Costs (includes by-product credits)	US\$/lb	1.52
AISC	US\$/lb	1.79
Average copper in concentrate annual production (years 2 - 11)	kt	42
Average gold in concentrate annual production (years 2 - 11)	koz	30
Pre-tax NPV <sup>a</sup>	A\$M	1,252
Post-tax NPV <sup>a</sup>	A\$M	847
Post-tax Internal Rate of Return (IRR) <sup>a</sup> :		
IRR real	%	19
IRR nominal		23

<sup>a</sup> Discount Rate: WACC 4.88% (Real), 8.55% (Nominal) rounded to the nearest whole number (Source: Cape Leveque Securities Pty Ltd)

<sup>9</sup> Pricing (midpoint of the consensus range) assumptions: US\$3.92 Cu; US\$1,610 Au; FX USD:AUD \$0.70, unless otherwise stated

<sup>10</sup> See Table 5 for Financial Sensitivities

**Table 3: Pre-Production Capital Cost Summary**

Pre-Production Capital	Unit	
Processing Plant & Associated Infrastructure	A\$M	347
Mining Fleet	A\$M	160
Non-Processing Infrastructure	A\$M	179
Contingency & Growth	A\$M	87
<b>Total Pre-Production Capital</b>	<b>A\$M</b>	<b>773</b>
Mine Development Operating Costs (including pre-strip)	A\$M	81
<b>Total Pre-Production Costs</b>	<b>A\$M (US\$M)</b>	<b>854 (598)</b>

**Table 4: Operating Cost Summary**

Operating Cost Summary	Unit	
Strip Ratio (after initial pre-strip)	waste:ore	6.9:1
Average Mining Cost per tonne (LOM)	A\$/t	2.08
Average Mining Cost per ore tonne (LOM) (after initial pre-strip)	A\$/t	16.86
Processing Cost per tonne	A\$/t	10.32
Other Operating (G&A) Costs per tonne	A\$/t	2.27
<b>Average Total Operating Costs per tonne (excluding pre-strip)</b>	<b>A\$/t</b>	<b>29.45</b>

**Table 5: Financial Sensitivities**

Incremental NPV <sup>a</sup>	-10%	+10%
Copper Price	(257)	257
Gold Price	(36)	36
Exchange Rate	308	(252)
Capital Cost	64	(64)
Operating Cost	125	(125)
Fuel	16	(16)

<sup>a</sup> Assumes Consensus Range "Midpoint". All plant, mining fleet, infrastructure capital included. The Project outcomes are most sensitive to Copper Price and Exchange Rate inputs.

## Metal Inventory – Updated Mineral Resource and Ore Reserve

The Company has also completed an update to both the Mineral Resource and Ore Reserve for Hillside<sup>11</sup>.

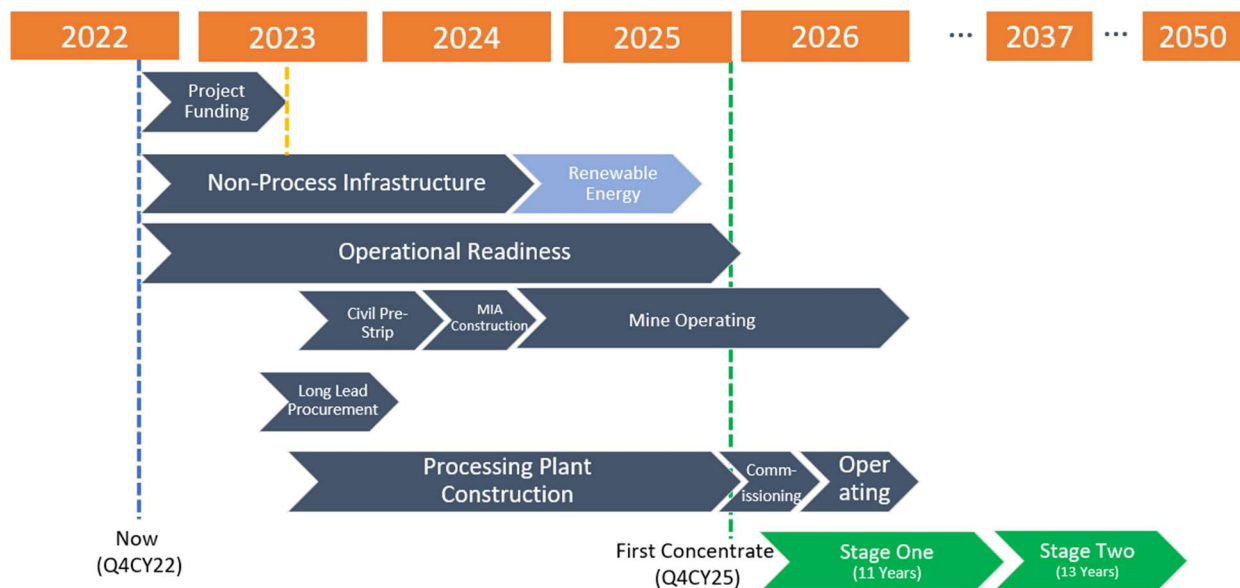
The 11-year Stage One mining plan will only exploit 51% of this Ore Reserve and 26% of this Mineral Resource.

<sup>11</sup> See Footnote 3

Additionally, the Company holds significant regional exploration properties surrounding the Hillside Project. In time, these licences will also be systematically evaluated as part of an overall regional copper strategy.

## First Production

Subject to finance, delivery of first concentrate is targeted late Q4 CY2025. Following ramp-up, steady state concentrate production to contain an estimated 42kt copper and 30koz gold per annum. First concentrate delivery timing aligns with the beginning of the forecast global copper market deficit. Figure 1 below illustrates the indicative development timeline.



**Figure 1:** Hillside Stage Indicative project timeline

## Key developments since July 2020 Feasibility Costing Update

Expansion and value improvements have been integrated into the mine design in the period following the 2020 cost update. These changes were driven by several factors, including:

- An updated Mineral Resource and Ore Reserve estimate – 2022<sup>12</sup>
- Success of coarse particle flotation results indicating future process enhancement in the order of 30% of throughput<sup>13</sup>
- ESG upgrades:
  - Design improvements at the process plant and infrastructure layout
  - Highway and power regulation changes and redesign
- Macro capital and operating cost inflation
- De-risking construction and operation phases.

<sup>12</sup> RXM ASX Announcement: 2022 Hillside Mineral Resource & Ore Reserve Statement, 14 December 2022

<sup>13</sup> RXM ASX Announcement: Hillside Coarse Particle Flotation Test Results, 28 October 2021

## The design enhancements to accommodate the factors above include:

- Optimised the existing processing flowsheet design to allow for further ramp-up post-wet commissioning in line with the open pit ore supply to the ROM:
  - Processing plant design changes:
    - Replace jaw crusher with a larger capacity gyratory crusher
    - Upgrade coarse ore stockpile feeding a 16MW single-stage SAG mill
    - Design closed circuit with a pebble crusher to allow throughput increase
    - Additional modifications to allow for future coarse particle flotation to be implemented, likely in Stage Two
- Modified mine schedule to allow 40m haul roads to improve truck mobility efficiency
- Allowed for higher mine production delivery
- Optimised Stage One (OFS) mine life to 11 years. Stage Two mine life is expected to double and hence extend beyond 20 years
- Increased average annual copper metal production after year 1 from 35ktpa (2020) to 42ktpa (2022) after ramp-up
- Realigned the development schedule in line with long-lead OEM equipment availability.

## Team

The Board and Management are experienced in delivering and executing similar projects. Long-term strategic relationships with technical design and supply partners and deep knowledge of copper concentrate markets have culminated in a detailed and optimised project and operational plan that now makes up the OFS.

## ESG, regulatory approvals and contribution

- Greenfields operation incorporating modern ESG practices
- The Company, like most, has strategic objectives and aspirations, but is focused on delivery of all site-based power requirements sourced from the generation of renewable energy during Stage One of operations. Currently, behind the meter renewable options from the domestic grid supply in SA are under investigation
- Structured initiatives are factored into the Company's Social Management and Community Engagement Plans. Work has begun to flesh these out and initiate training and development in the broader geographical region of the operation, whilst remaining totally committed to working within the local regional communities
- Hillside to employ over 500 people during construction and over 400 during operations<sup>14</sup>
- Royalties to the State of South Australia of over A\$200M and payroll exceeding A\$600M<sup>15</sup>.

<sup>14</sup> As estimated in the OFS, Appendix 1 (RXM ASX Announcement, 14 December 2022)

<sup>15</sup> See Footnote 12

## Next steps

Immediate next steps which are to align with the Project Timeline (see Figure 1) are as follows:

- Actively pursue a suitable funding package via a structured process. The timing of this will align with the Operational Readiness plan which also encompasses the broad disciplines of stakeholder engagement and engineering for Stage One operations
- Potential strategic partnerships, including minority interest discussions are being prioritised. Numerous parties have expressed interest to be involved at the asset level subject to due diligence verification. The Company will investigate all potential partners and progress discussions with an objective of selling a minority interest in the Project
- Continue concentrate marketing discussions
- Building out the owner's and partner teams consistent with the Operational Readiness schedule and plan
- Continue with extensive on and off-site environmental monitoring for operations and continue with existing on-ground pre-development activity
- Award of the initial road realignment upgrade which is planned to occur in Q1CY2023
- Finalise electrical power, water and services agreements
- Continue with detailed engineering<sup>16</sup>
- Subject to finalisation of project funding:
  - Award of contracts with major partners
  - Place key long-lead critical path orders.

The Company currently has cash reserves of A\$36.5M<sup>17</sup>.

The Hillside Copper-Gold Project has now concluded the necessary regulatory and community approvals plus reached a sufficient level of technical design and operational planning to formally commence the final stage of marketing and completing an appropriate funding structure. The Board and Management will be focused on these strategic discussions in the months ahead to ensure all stakeholders can benefit from a successful transition to production.

This announcement has been authorised for release by the Board of Directors of Rex Minerals.

For more information about the Company and its projects, please visit our website <https://www.rexminerals.com.au/> or contact:

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<sup>16</sup> RXM Announcement: Optimised Feasibility & Definition Phase Engineering Study, 14 December 2022

<sup>17</sup> RXM Announcement: September 2022 Quarterly Report, 26 October 2022

## SUPPLEMENTARY INFORMATION

### Notes to the Ore Reserves

The Optimised Feasibility & Definition Phase Engineering Study referred to in this announcement is based on the Hillside Mineral Resource and Ore Reserve Statement (derived from Indicated and Measured Mineral Resources) announced on 14 December 2022. There exists a small proportion of oxide resource within the pit shell that has the potential to be converted to an Ore Reserve. The expectation is that a proportion of this oxide copper will be converted to an Ore Reserve once further metallurgical test work is complete.

### Forward-Looking Statements

This announcement contains “forward-looking statements”. All statements other than those of historical facts included in this announcement are forward-looking statements. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward-looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to, copper, gold and other metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks and governmental regulation and judicial outcomes. The Company does not undertake any obligation to release publicly any revisions to any forward-looking statement.

### Competent Persons’ Statements – Hillside

The information in this report that relates to Ore Reserves is based on information compiled by Mr Charles McHugh who is a Fellow of the Australasian Institute of Mining and Metallurgy and is an employee of Rex Minerals Ltd. Mr McHugh has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr McHugh consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The information in this report that relates to Exploration Results or Mineral Resources is based on information compiled by Mr Steven Olsen who is a Member of the Australasian Institute of Mining and Metallurgy and is an employee of Rex Minerals Ltd. Mr Olsen has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Olsen consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to metallurgy is based on, and fairly reflects, information compiled by Mr John Burgess who is a Fellow of the Australasian Institute of Mining and Metallurgy and a consultant to Rex Minerals Ltd. Mr Burgess has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Burgess consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



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## CORPORATE INFORMATION

ASX: RXM | OTCQB: RXRLF

### Issued Share Capital as at 30 September 2022

Ordinary Shares	592,654,254
Options on Issue (Unquoted)	21,246,667
Hog Ranch Consideration Rights (Unquoted)	15,000,000

### Share Registry

Computershare Investor Services  
Yarra Falls, 452 Johnston Street  
Abbotsford, Victoria 3067  
T: +61 3 9415 4000 (investors)  
1300 850 505 (investors within Australia)

### Registered Office

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+61 3 9068 3077 (International)  
E: rex@rexminerals.com.au  
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Adelaide, South Australia 5000

### For further information, please contact:

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# Optimised Feasibility & Definition Phase Engineering Study – Executive Summary

## Cautionary Statement

The Optimised Feasibility and Definition Phase Engineering Study (**OFS**) referred to in this announcement has been undertaken to update the cost and time estimates for the Stage One Hillside Copper-Gold Project (**Hillside**).

The Ore Reserve and Mineral Resource estimates<sup>1</sup> underpinning the production targets were prepared by a Competent Person in accordance with the JORC Code 2012.

Whilst there is a low level of geological confidence associated with the Inferred Mineral Resource, however only 0.2% of the production plan contains Inferred Mineral Resource.

The production target and forecast financial information set out in this release and supported by the studies mentioned above are based on material assumptions outlined in this summary. Whilst Rex Minerals Ltd (**Rex** or the **Company**) considers all the material assumptions to be based on reasonable grounds, there is no certainty they will be proved to be correct or that the ranges of outcomes indicated by the Study will be achieved.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of this Study.

These materials include forward-looking statements. For further information on forward-looking statements please refer to page 16 of this announcement.

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<sup>1</sup> 2022 Hillside Mineral Resource and Ore Reserve Statement, 14 December 2022

## HILLSIDE PROJECT

### Introduction

Rex's Hillside Project is one of the largest undeveloped copper-gold projects in Australia and currently contains a Mineral Resource of 1.9Mt of copper (Cu) and 1.5Moz of gold (Au)<sup>2</sup>.

Hillside is fully permitted, and pre-development has begun.

In 2015, Rex published an Extended Feasibility Study<sup>3</sup>, and in 2020 a Costing Update<sup>4</sup>.

Following approval of the Program for Environment Protection and Rehabilitation (PEPR), and in preparation for financing and development, the Company embarked on Definition Phase Engineering Study and updates of capital and operating estimates. During this phase of work, numerous challenges in the global supply chain, access to labour and inflation impacted the Project. Coupled with test work improvements, Rex elected to engineer-in a significant increase in throughput and to make allowance for future upgrades.

This has culminated in an Optimised Feasibility & Definition Phase Engineering Study (OFS).

This overview outlines the results of this work, which confirms the favourable economics which underpin Stage One.

### The development of Hillside Stage One, lays the foundation for a 20 plus year operation.

- Based on a 989Kt Copper Ore Reserve<sup>2</sup>
- An initial Stage One development, with a life of 11 years, recovering:
  - 505kt of copper and
  - 435koz of gold
- Producing annualised shipments of 151kt of copper concentrate, exported via Port Adelaide, containing annual payable metal after ramp-up of:
  - **circa 42kt of copper;** and
  - **circa 30koz of gold**
- Building a first-class South Australian operational team and working with strategic partnerships established to achieve our key milestones and manage our key risks
- In a location well serviced by existing infrastructure
- **IRR 19%** and NPV<sub>4.88%</sub> of A\$1,252M (pre-tax) and A\$847M (post-tax)<sup>5 6 7</sup>
- **C1 cash cost of US\$1.52/lb copper and AISC of US\$1.79/lb**<sup>8</sup>
- Pre-production **capital cost of US\$598M** (A\$854M) including pre-strip
- **EBITDA of A\$287M** (annualised).

<sup>2</sup> RXM ASX Announcement: 2022 Hillside Mineral Resource and Ore Reserve Statement, 14 December 2022

<sup>3</sup> RXM ASX Announcement: Hillside Extended Feasibility Results, 25 May 2015

<sup>4</sup> RXM ASX Announcements: Hillside Costing Update, 31 July 2020

<sup>5</sup> All Project values in real terms unless otherwise stated

<sup>6</sup> Pricing (midpoint of the consensus range) assumptions: US\$3.92 Cu; US\$1,610 Au; FX USD:AUD \$0.70, unless otherwise stated

<sup>7</sup> Discount rate: WACC 4.88% (Real), 8.55% (Nominal) rounded to the nearest whole number (Source: Cape Leveque Securities Pty Ltd)

<sup>8</sup> Refer Footnote 6

## ESG

- Greenfields operation incorporating modern ESG practices
- Employing over 500 people during construction and over 400 during operations with payroll exceeding A\$600M
- Royalties to the State of South Australia of over A\$200M
- Fresh water savings through on-site use of saline groundwater
- Exploring behind-the-meter renewable energy
- Hillside is the first and only ASX company with its registered office on the Yorke Peninsula, less than two hours' drive from Adelaide.

## Key Developments since July 2020 Feasibility Costing Update

Expansion and value improvements have been integrated into the design in the period following the 2020 Costing Update. They were driven by several factors, including:

- The Ore Reserves and Mineral Resources have been updated<sup>9</sup>
- Success of coarse particle flotation results indicating future process enhancement in the order of 30% of throughput<sup>10</sup>
- ESG upgrades
  - Water supply risks associated with SA Water pipeline issues and cost escalation
  - Design improvements at the process plant and infrastructure layout
  - Highway and power regulation changes and redesign
- Macro capital and operating cost inflation
- De-risking supply and construction timelines in line with OEM and supplier input.

## Design enhancements to accommodate the factors above include:

- Optimising the existing processing flowsheet design to allow for future ramp-up post wet commissioning and accompanying open pit ore supply
  - Processing plant changes:
    - Replaced the jaw crusher with a larger capacity gyratory crusher
    - Upgraded coarse ore stockpile feeding a 16MW single stage SAG mill
    - Design includes closed circuit pebble crusher to allow throughput increase
    - Additional modifications to allow for future coarse particle flotation to be implemented
- Modifying the mine schedule
- Including 40m haul road widths to accommodate higher mine production delivery
- Supported by detailed monthly plans
- Optimised Stage One mine life now 11 years. Stage Two mine life to extend beyond 20 years<sup>11</sup>
- Increased average annual copper metal production after year 1 from 35ktpa to annualised 42ktpa

<sup>9</sup> RXM ASX Announcement: 2022 Hillside Mineral Resource & Ore Reserve Statement, 14 December 2022

<sup>10</sup> RXM ASX Announcement: Hillside Coarse Particle Flotation Test Results, 28 October 2021

<sup>11</sup> ASX Announcements: Hillside Doubles Ore Reserves, 20 July 2021; 2022 Hillside Mineral Resource and Ore Reserve Statement, 14 December 2022

- Mining Contractor partnership negotiations continuing
- Realigned the development schedule in line with long-lead OEM equipment availability.

The following tables summarise the key outcomes of the updated optimised Study compared to the Costing Update 2020.<sup>12 13 14</sup>

**Table 1: Stage One Study Outcomes**

Key Financial Metrics <sup>a</sup>	Units	2020 Outcome	2022 Outcome
Project Revenue	A\$M	4,524	6,250
Operating Costs	A\$M	2,447	2,396
C1 Cash Costs (includes by-product credits)	US\$/lb	1.38	1.52
AISC	US\$/lb	1.60	1.79
Pre-tax NPV	A\$M	751 <sub>5%</sub>	1,252 <sub>4.88%</sub>
Post-tax NPV	A\$M	501 <sub>5%</sub>	847 <sub>4.88%</sub>
Post-tax Internal Rate of Return (IRR)	%	16.2	19
IRR (Nominal)		n/a	23
Payback period (years)	Years	5	4.3
EBITDA (annualised)	A\$M	n/a	287

<sup>a</sup> Refer Table 4: Pricing Assumptions

**Table 2: Pre-Production Capital Cost Summary**

Pre-Production Capital	Units	2020 Outcome	2022 Outcome
Processing Plant & Associated Infrastructure	A\$M	226	347
Mining Fleet	A\$M	158	160
Non-Processing Infrastructure	A\$M	90	179
Contingency & Growth	A\$M	48	87
<b>Total Pre-Production Capital</b>	<b>A\$M</b>	<b>523</b>	<b>773</b>
Mine Development Operating Costs (including pre-strip)	A\$M	62	81
<b>Total Pre-Production Costs</b>	<b>A\$M (US\$M)</b>	<b>585 (410)</b>	<b>854 (598)</b>

<sup>12</sup> All Project values in real terms unless otherwise stated

<sup>13</sup> RXM ASX Announcements: Hillside Costing Update, 31 July 2020

<sup>14</sup> Discount rate: WACC 4.88% (Real), 8.55% (Nominal) rounded to the nearest whole number (Source: Cape Leveque Securities Pty Ltd)

**Table 3: Operating Cost Summary**

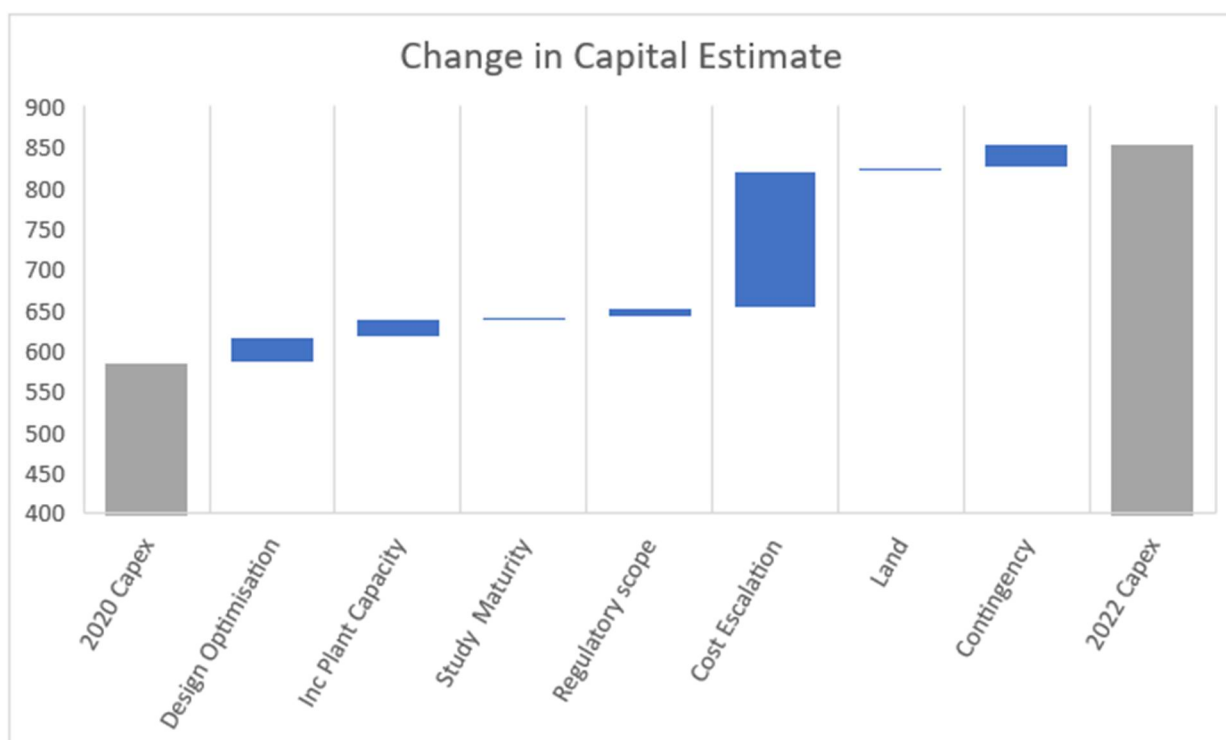
Operating Cost Summary	Units	2020 Outcome	2022 Outcome
Strip Ratio (after initial pre-strip)	waste:ore	6.7:1	6.9:1
Average Mining Cost per tonne	A\$/t	2.18	2.08
Average Mining Cost per ore tonne (after initial pre-strip)	A\$/t	14.51	16.86
Processing Cost per tonne	A\$/t	10.43	10.32
Other Operating (G&A) Costs per tonne	A\$/t	1.92	2.27
<b>Average Total Operating Costs per tonne (excl. pre-strip)</b>	<b>A\$/t</b>	<b>26.86</b>	<b>29.45</b>

**Table 4: Pricing Assumptions**

Commodity and Exchange Rate	Units	2020 Assumptions <sup>a</sup>	2022 Assumptions <sup>b</sup>
Copper	US\$/lb	3.00	3.92
Gold	US\$/oz	1,550	1,610
Exchange Rate	AUD:USD	0.70	0.70

<sup>a</sup> RXM ASX Announcements: Hillside Costing Update, 31 July 2020

<sup>b</sup> Cu and Au price: Consensus Economics Ltd (survey date 14 November 2022)



**Figure 1: Key Drivers for Capital Increase from 2020 compared to 2022**

The main drivers of the “cost escalation” above in Figure 1 are related to non-processing infrastructure, process plant engineering and construction and concrete and steel inputs.

**Table 5: Financial Sensitivities**

Incremental NPV <sup>a</sup>	-10%	+10%
Copper Price	(257)	257
Gold Price	(36)	36
Exchange Rate	308	(252)
Capital Cost	64	(64)
Operating Cost	125	(125)
Fuel	16	(16)

<sup>a</sup> Assumes Consensus Range "Midpoint". All plant, mining fleet, infrastructure capital included. The Project outcomes are most sensitive to Copper Price and Exchange Rate inputs.

## PROJECT OVERVIEW

### Introduction

Rex is developing its 100%-owned Hillside Project, located 12km south of the Ardrossan township on the Yorke Peninsula, South Australia. Hillside is an Iron Oxide Copper Gold (IOCG) deposit in the Gawler Craton.

### Overview of the Project

Hillside is one of the largest undeveloped copper projects in Australia and currently contains a Mineral Resource of 1.9Mt of copper (Cu) and 1.5Moz of gold (Au)<sup>15</sup>. In July 2020, Hillside's PEPR for Stage One of the Project was approved by the South Australian Government. Stage One has a 11-year mine life.

The Project involves the development of an open pit mine (Mine) and associated processing plant and other infrastructure (Plant) to mine and process ore, then ship the marketable concentrates. The capital expenditure for the development of the Project is estimated to be A\$854M (US\$598M). Capital cost estimates are within +/- 15% accuracy and the operating costs estimates are within +/- 20% accuracy.

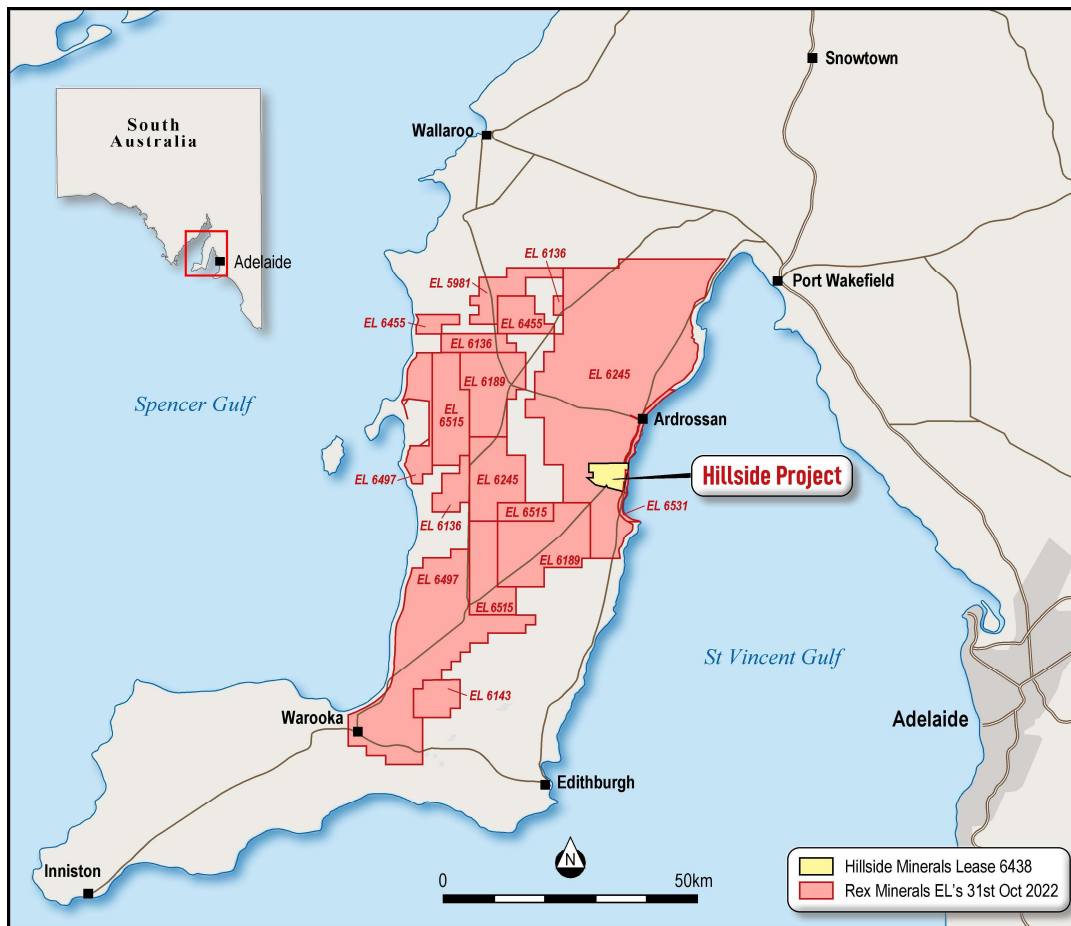
### Location and Infrastructure

The Hillside Project is approximately 150kms by road from Adelaide, with access to a significant workforce in neighbouring townships. Temporary workers' accommodation facilities will be provided for construction at a camp in the vicinity of the Hillside mine. The camp will be built, owned and operated by a facility management company that will charge a nightly rate per person.

A section of the Yorke Highway will be realigned, and modifications and upgrades to sections of the surrounding roads to improve site access and bypass. Costs for these works have been included in the capital cost estimates.

The site has access to mains power through the network grid. Sea water will be used for processing and mining operations as per the license conditions. The transport of final product will be via trucks to Port Adelaide.

<sup>15</sup> Refer Footnote 1



**Figure 2:** Location diagram of the Hillside Project, Yorke Peninsula, South Australia

## Regulatory Approvals

The Hillside Mining Mineral Lease (ML), an Extractive Minerals Lease (EML) and a Miscellaneous Purposes Licence (MPL) were granted in September 2014. In addition, the PEPR was approved in July 2020<sup>16</sup>.

The main approvals comprising the ML are in Table 6 below:

**Table 6: Regulatory Approvals**

Item	Status	Approval
Federal approval to construct and operate a copper mine at Pine Point	Final Approval 11/09/2012	Complete
Mineral Lease, Extractive Mineral Lease and Miscellaneous Purposes Licence	Final Approval 28/07/2014	Complete
Program for Environment Protection and Rehabilitation	Final Approval 23/07/2020	Complete
Section 49 Development Act Approval	Final Approval 30/6/2022	Complete
Environmental Protection Authority Licences	Works Approval Documentation being prepared	Ongoing

<sup>16</sup> See Rex Minerals' ASX Announcement: Rex secures SA Government approval for Hillside PEPR, 24 July 2020



## Geology

Hillside is an Iron-Oxide-Copper-Gold (IOCG) style deposit, located within the Moonta Subdomain of the Olympic Dam Cu-Au Province on the eastern Gawler Craton of South Australia.

This system is also host to the Prominent Hill, Carrapateena and Moonta-Wallaroo deposits.

The geological framework at Hillside is dominated by due north trending faulting and geological contacts. These dominant trends are disrupted by a number of north-west and north-east striking faults which appear to have an influence on the host rocks, alteration and the copper-gold mineralisation.

Copper-gold mineralisation is hosted by a sequence of intensely altered skarns and metasediments. The primary copper zones comprise parallel, steeply-dipping structures of massive, disseminated and dispersed sulphide dominated by chalcopyrite with subordinate bornite and chalcocite.

Secondary (oxide) copper exhibits flat lying to steeply dipping orientations immediately above primary copper mineralisation dominated by malachite with subordinate azurite, cuprite, atacamite, chrysocolla, copper in chlorite and native copper.

Mineralisation which predominantly strikes north-south has so far been observed over the area of 2.3km north-south length and a 900m west-east width. At least four structures with individual copper-mineralised strike lengths of +2.0km have been defined to date. Copper mineralisation within all structures remains open along strike and at depth, and has been observed from as shallow as 5m below surface to 710m below surface with true widths estimated to be in the order of 1 to 130m with an average true ore domain thickness of 27m.

## Mineral Resource

The Mineral Resource estimate at Hillside remains one of Australia's largest. It includes information from 608 diamond holes and 245 reverse circulation (RC) holes for a total of 239,000m.

**Table 7:** Hillside Measured, Indicated and Inferred Mineral Resource Summary Table – December 2022

Zone	Resource Category	Tonnes (Mt)	Copper (%)	Gold (g/t)	Contained Copper (t)	Contained Gold (oz)
Oxide Copper	Measured	16	0.54	0.22	88	114
	Indicated	4.4	0.49	0.12	21	17
	Inferred	0.2	0.76	0.22	1.6	1.5
Secondary Sulphide	Measured	8.8	0.62	0.20	55	58
	Indicated	3.0	0.57	0.13	17	13
	Inferred	0.1	0.61	0.07	0.7	0.3
Primary Sulphide	Measured	47	0.54	0.16	253	248
	Indicated	143	0.59	0.13	837	596
	Inferred	114	0.55	0.13	623	479
<b>Total</b>		<b>337</b>	<b>0.56</b>	<b>0.14</b>	<b>1,897</b>	<b>1,528</b>

*Copper Mineral Resources reported above 0.2% cut-off grade*

*Calculations have been rounded to the nearest Mt of ore (to the nearest 100,000t where < 10Mt), two significant figures for Cu and Au grade and to the nearest kt of Cu metal and kcozs of Au metal (to the nearest 100t where < 10kt). Some apparent errors may occur due to rounding*

## Mining and Metallurgical Methods and Parameters

The Ore Reserve estimate was created from a detailed open pit mine design. A pit shell was selected using discounted cash flow methodology from a Max Flow open pit optimisation as a starting basis for the mine design.

Grade control was assumed to be via reverse circulation methods. A 24-hour, 7-day per week mining operation was assumed. The excavation of ore and waste via a conventional open pit mining method was assumed. Drilling and blasting on 10m benches using ANFO explosives was assumed. Load and haul with hydraulic backhoe excavators using a double benching method loading ultra-class mining trucks. The total material movement per years is approximately 65 million tonnes.

The plant has capacity to ramp from approximately 6Mtpa to 8Mtpa of ore per annum.

The Study details a minimum 11-year mine plan. Given the size and extent of the Mineral Resource at Hillside, there are many options that are available to Rex in terms of how the operation is staged. Most of these options vary depending on the commodity price assumptions.

The Costing Update referred to in this announcement is based on the Ore Reserves within the Stage One Mine Plan (derived from Indicated and Measured Resources). There exists a small proportion of oxide resource within the pit shell that has the potential to be converted to an Ore Reserve. The expectation is that this oxide copper will be converted to an Ore Reserve once further metallurgical test work is complete. The Hillside Costing Update contains a very small proportion of Inferred Resources (1.75kt Cu or 0.37% of the total ore tonnes) in the mine plan.

The essential elements of the process plant design utilise conventional flotation technology to produce a copper-gold concentrate.

### Mining Cut-off Grade

The cut-off grade within the Stage One Mine Plan was determined by applying a positive value Net Smelter Return (copper and gold). This is approximately the equivalent of a 0.17% Cu only cut-off.

### Ore Reserve Within Stage One Mine Plan

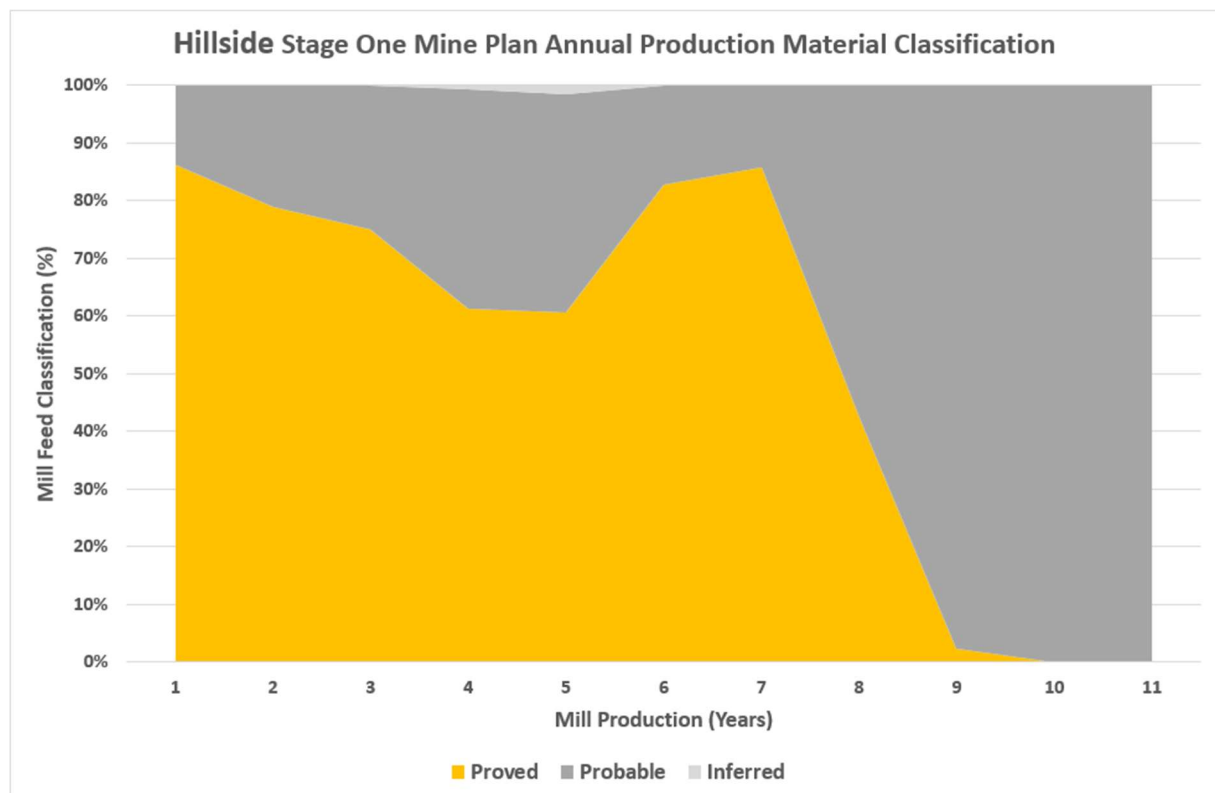
The Ore Reserves estimate at Hillside, announced on 14 December 2022, was based on the mine design completed during the 2021 Stage Two Pre-Feasibility Study. The Ore Reserves contained within the Stage One Mine Plan, noted in Table 8, stand at 82Mt @ 0.62% copper and 0.16g/t gold, equating to approximately 0.5Mt (1.12 billion pounds) of copper and 0.43Moz of gold.

The 11-year Stage One mine plan will only exploit 51% of the current Ore Reserve and 26% of the Mineral Resource.

**Table 8: Ore Reserves Contained within the Stage One Mine Plan**

Category	Tonnes (Mt)	Copper (%)	Gold (g/t)	Contained Copper (t)	Contained Gold (oz)
Proved	42	0.54	0.19	227,508	250,496
Probable	40	0.70	0.14	227,632	184,820
<b>Total</b>	<b>82</b>	<b>0.62</b>	<b>0.17</b>	<b>505,140</b>	<b>435,316</b>

The Stage One Mine Plan mill feed is 99.7% in the Proved or Probable Ore Reserve category and the classification profile is shown below in.



**Figure 3:** Hillside Stage One Mine Plan annual production classification

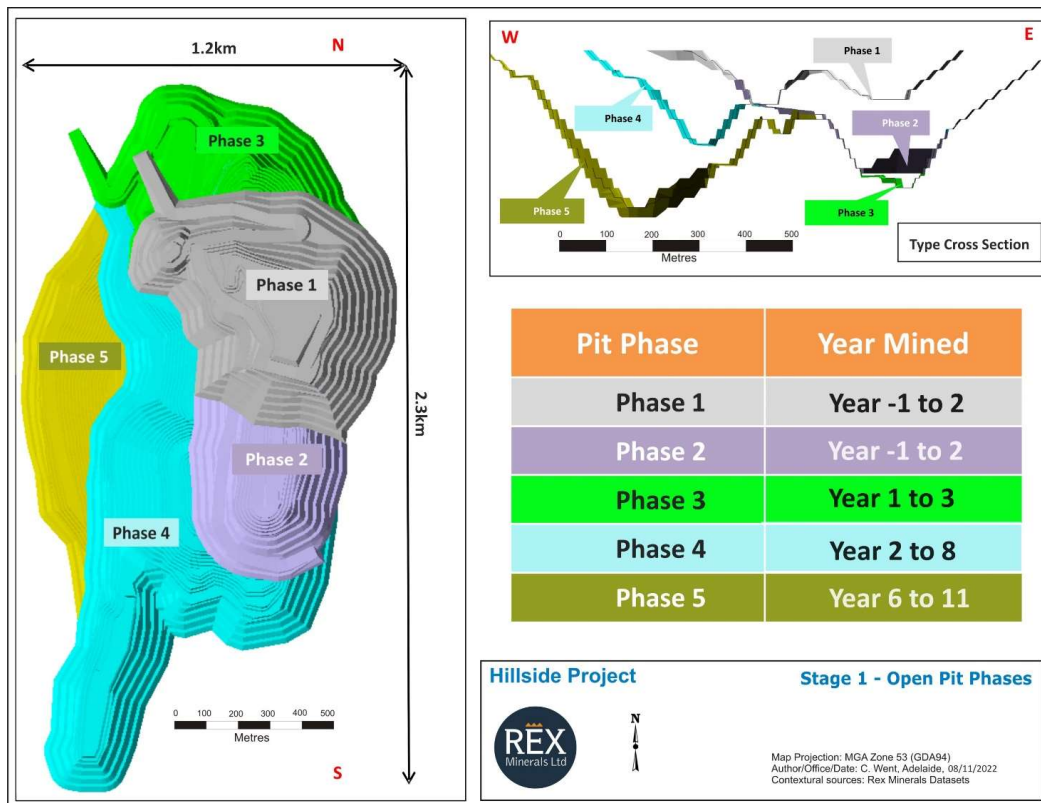
## Mining

The mining method and equipment selection is designed to maximise bulk material haulage at lowest cost, whilst providing selective extraction where the orebody narrows. The use of hydraulic excavators and trucks for primary haulage, with drill and blast practices for rock breakage and wall control is proven and low risk. Ramps were designed for exiting and entering the pit carrying two-way traffic, to achieve optimum production requirements. Previous haul road design widths of 35m have been increased to 40m as part of future-proofing production rates.

Open pit mining dimensions (minimum Selective Mining Unit (SMU)) are 3m x 3m x 5m. Mining dilution was added by creating an SMU and then adding 0.25m edge dilution. Overall dilution is approximately 5% to the Mineral Resource.

The geotechnical slope design parameters used were based on work completed by external consultants. There are various slope configurations based on the geotechnical rock domains and location in the mine schedule. A minimum mining width of 35m was applied.

The Stage One Mine Plan open pit is value optimised and is designed in five phases. Rock movement is scheduled to ensure adequate operating area and access to ore. The phase summary footprint is displayed in Figure 4.



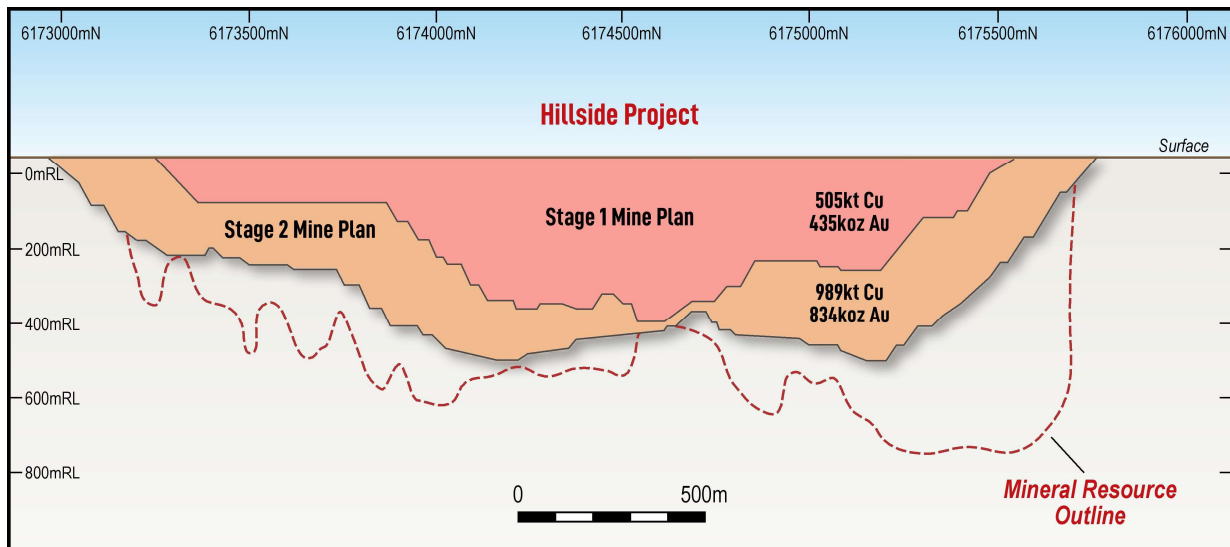
**Figure 4:** Hillside Stage One Mine Plan – Open Pit Phases

After an initial pre-strip of 54Mt, the strip ratio for the operating life is 6.9:1 (waste tonnes : ore tonnes).

Peak total rock haulage is approximately 65Mtpa. Almost 90% of all material (ore and waste) will be mined with 550t hydraulic backhoe excavators, coupled with a fleet of ultra-class (296t) trucks, using the double-benching method. Narrower ore zones will be mined with 250t backhoe excavators to minimise dilution and improve ore recovery. Peak material movement is achieved with a manageable maximum of 17 trucks. The Project has a typical support fleet which includes drills, mid-sized graders, tracked and wheel dozers, front-end loaders and water and service trucks.

The updated Ore Reserves are based on the July 2021 Stage Two Pre-Feasibility Study transition plan.

The Stage Two transition plan is a series of phased pushbacks that begin during the Stage One Mine Plan (Figure 5). Stage One is approved under the current PEPR. A decision to transition to the Stage Two Mine plan could occur by year five. Under this transition plan, the Stage One open pit can transition to Stage Two and continue for more than 20 years of an updated open pit mine schedule at processing rates up to 8Mtpa.



**Figure 5:** Hillside Stage One and Stage Two open pit mine looking west

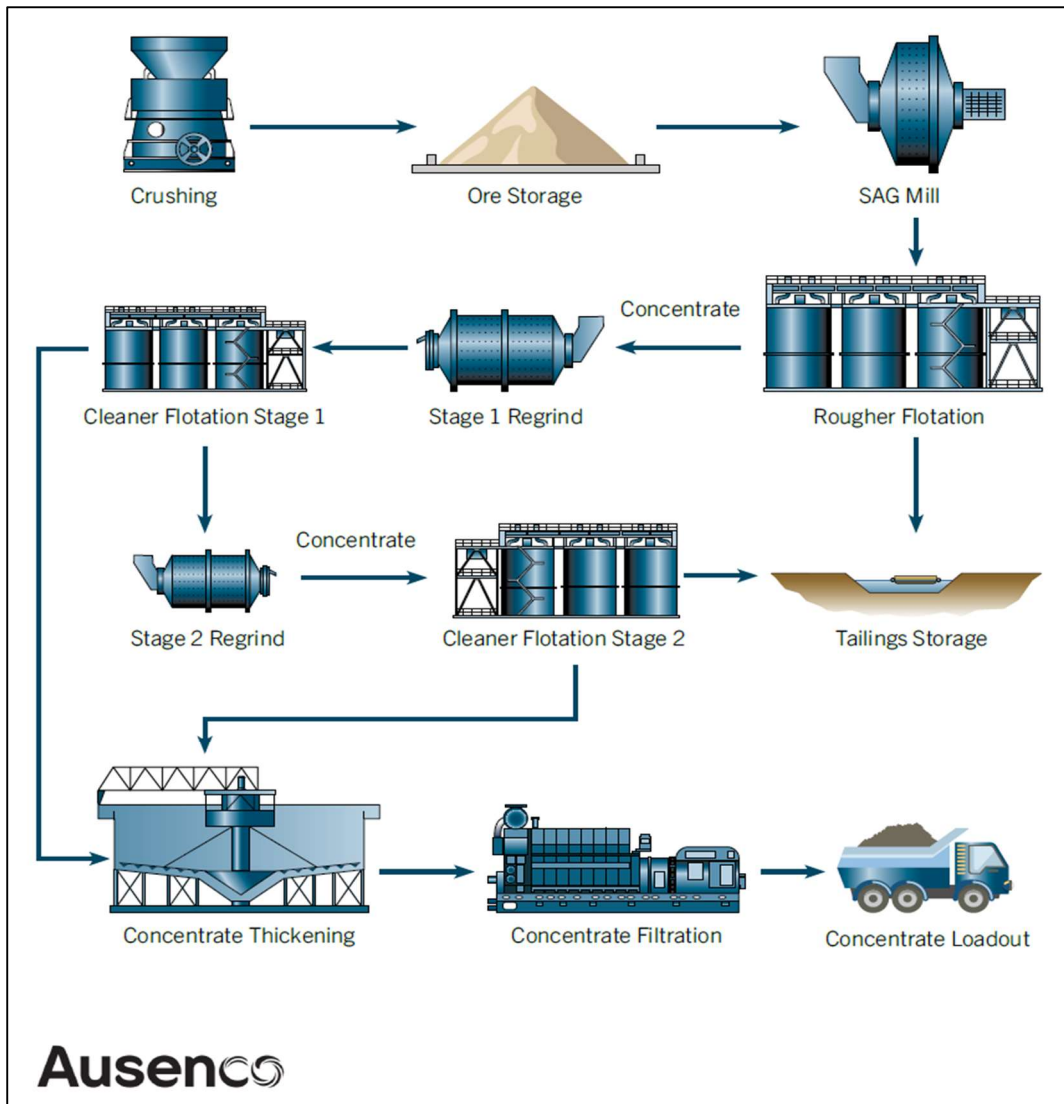
## Processing

The essential elements of the process plant design utilise conventional flotation technology to produce a copper-gold concentrate. Rex also commissioned a pilot plant study, carried out by Wood, to optimise the flotation process and samples were selected from representative components of the orebody that were anticipated to be fed within the first five years of the mine schedule.

The Stage One Mine Plan will feed 0.62% copper and 0.17g/t gold to the processing plant. Pilot plant trials and metallurgical testing confirm a high-quality saleable concentrate with very few deleterious elements.

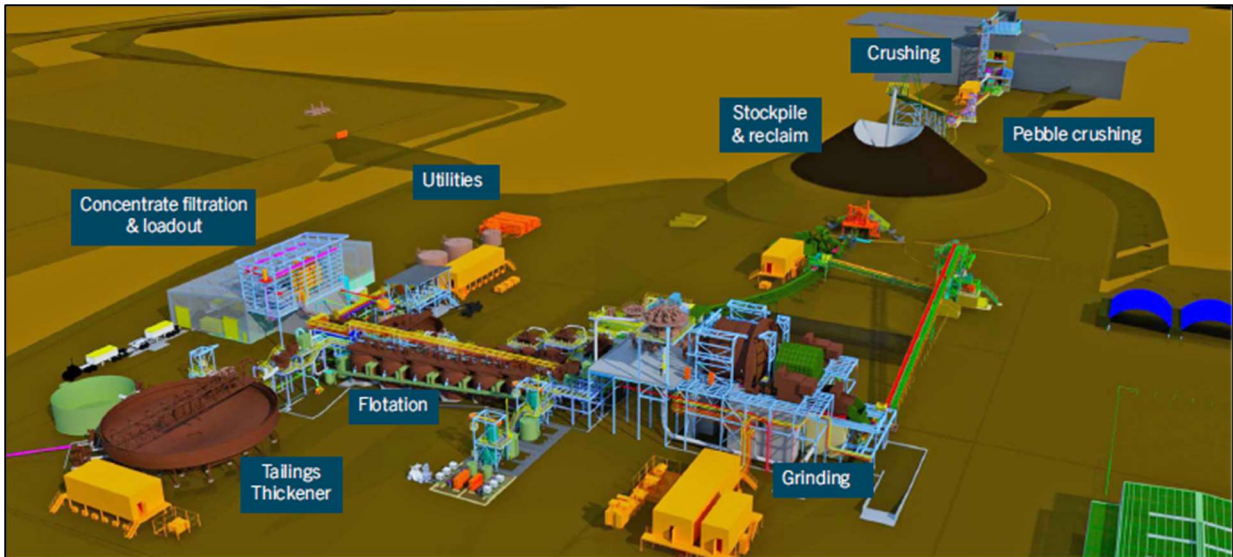
Copper recoveries are estimated to be 92%, gold recoveries are estimated to be approximately 78%.

The processing plant has a designed throughput capacity of 6-8Mtpa. The simplified processing flowsheet is shown in Figure 6 below.



**Figure 6:** Schematic diagram of the proposed process plant flowsheet

The process plant design includes initial crushing and grinding before a first stage (rougher) flotation. This is followed by a fine grind and second stage (cleaner) flotation, before preparation for transport as a copper-gold concentrate. The 3D render of the process plant and infrastructure which was the basis of the capital estimation for development is shown in Figure 7.



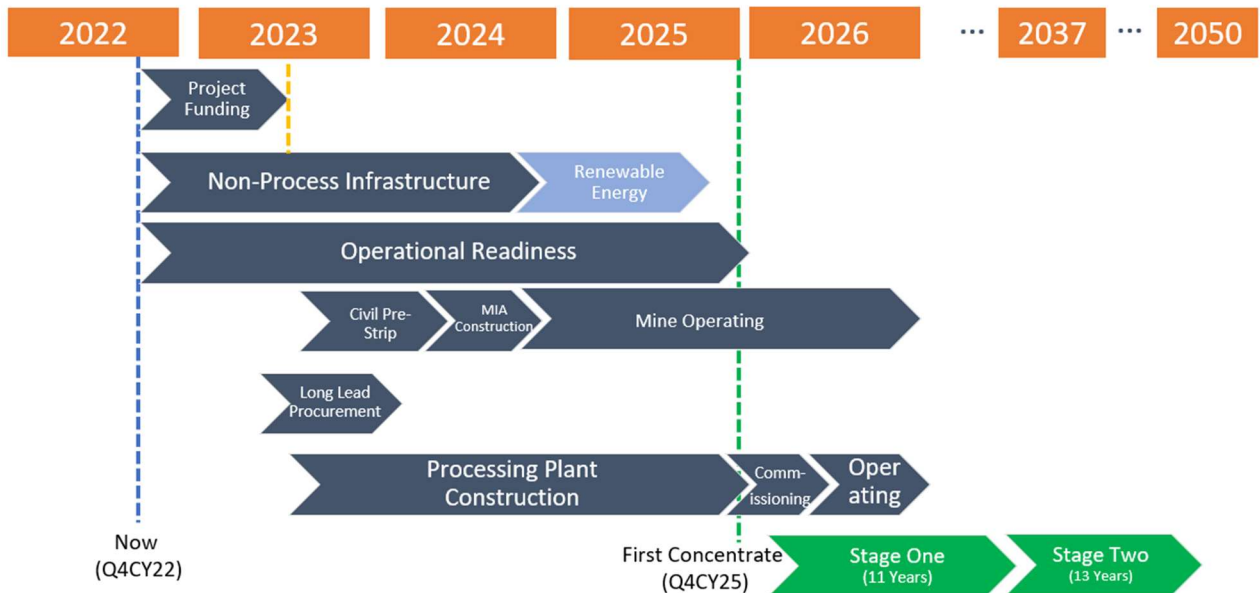
**Figure 7:** 3D model of the proposed process plant layout

The average copper grade of the copper concentrate is over 27% and the average annual copper concentrate produced over 11 years of Stage One operations is approximately 150kt.

### Construction Period and Workforce

The development which has begun, allows for a 24-month construction period, including a 12-month pre-strip. The indicative development schedule is shown below.

During construction, a workforce of over 500 will be required. This will reduce to over 400 during operations.



**Figure 8:** Hillside Stage Indicative project timeline

## Next steps

Immediate next steps which are to align with the Project Timeline (see Figure 8) are as follows:

- Actively pursue a suitable funding package via a structured process. The timing of this will align with the Operational Readiness plan which also encompasses the broad disciplines of stakeholder engagement and engineering for Stage One operations
- Potential strategic partnerships, including minority interest discussions are being prioritised. Numerous parties have expressed interest to be involved at the asset level subject to due diligence verification. The Company will investigate all potential partners and progress discussions with an objective of selling a minority interest in the Project
- Continue concentrate marketing discussions
- Building out the owner's and partner teams consistent with the Operational Readiness schedule and plan
- Continue with extensive on and off-site environmental monitoring for operations and continue with existing on-ground pre-development activity
- Award of the initial road realignment upgrade which is planned to occur in Q1CY2023
- Finalise electrical power, water and services agreements
- Continue with detailed engineering<sup>17</sup>
- Subject to finalisation of project funding:
  - Award of contracts with major partners
  - Place key long-lead critical path orders.

The Company currently has cash reserves of A\$36.5M<sup>18</sup>.

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<sup>17</sup> RXM Announcement: Optimised Feasibility & Definition Phase Engineering Study, 14 December 2022

<sup>18</sup> RXM Announcement: September 2022 Quarterly Report, 26 October 2022



## SUPPLEMENTARY INFORMATION

### Notes to the Ore Reserves

The Optimised Feasibility & Definition Phase Engineering Study referred to in this announcement is based on the Hillside Mineral Resource and Ore Reserve Statement (derived from Indicated and Measured Mineral Resources) announced on 14 December 2022. There exists a small proportion of oxide resource within the pit shell that has the potential to be converted to an Ore Reserve. The expectation is that a proportion of this oxide copper will be converted to an Ore Reserve once further metallurgical test work is complete.

### Forward-Looking Statements

This announcement contains “forward-looking statements”. All statements other than those of historical facts included in this announcement are forward-looking statements. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward-looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to, copper, gold and other metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks and governmental regulation and judicial outcomes. The Company does not undertake any obligation to release publicly any revisions to any forward-looking statement.

### Competent Persons’ Statements – Hillside

The information in this report that relates to Ore Reserves is based on information compiled by Mr Charles McHugh who is a Fellow of the Australasian Institute of Mining and Metallurgy and is an employee of Rex Minerals Ltd. Mr McHugh has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr McHugh consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The information in this report that relates to Exploration Results or Mineral Resources is based on information compiled by Mr Steven Olsen who is a Member of the Australasian Institute of Mining and Metallurgy and is an employee of Rex Minerals Ltd. Mr Olsen has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’.

Mr Olsen consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to metallurgy is based on, and fairly reflects, information compiled by Mr John Burgess who is a Fellow of the Australasian Institute of Mining and Metallurgy and a consultant to Rex Minerals Ltd. Mr Burgess has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Burgess consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## Appendix 1 – Material Assumptions

Material assumptions used in the estimation of the production targets and associated financial information relating to the costing update discussed in this announcement are set out in the following table.

Area	Comment
Study status	The production targets and financial information in this costing update have an accuracy level of +/-20% for the plant capital and +/- 5% for the mining capital, and are subject to the cautionary statements relating to costing update parameters on page 3 of this announcement.
Cut-off factors	The cut-off grade was determined by applying a positive value Net Smelter Return (copper and gold). This is approximately the equivalent of 0.17% Cu only cut-off.
Mining factors or assumptions	<ul style="list-style-type: none"> <li>• The mining method was based on open pit mining, utilising hydraulic excavators and trucks for primary haulage, with drill and blast practices for rock breakage and wall control. Ramps were designed for exiting and entering the pit carrying two-way traffic, to achieve production requirements.</li> <li>• The results from the open pit work identified an open pit mine with a total strip ratio of approximately 7.4:1 (including pre-strip) and a strip ratio of approximately 6.9:1 (excluding 54Mt of pre-strip in pre-production year) and an average mining cost per tonne of approximately A\$2.08.</li> <li>• The Ore Reserve estimate was created from a detailed mine design. A pit shell was selected using discounted cash flow methodology from a Max Flow open pit optimisation as a starting basis for the mine design.</li> <li>• The geotechnical slope design parameters used were based on work completed by external consultants. There are various slope configurations based on the geotechnical rock domains and location in the mine schedule.</li> <li>• A minimum mining width of 35 metres was applied.</li> <li>• Grade control was assumed to be via reverse circulation methods.</li> <li>• A 24-hour, 7 day per week mining operation were assumed.</li> <li>• Conventional dump truck and hydraulic backhoe excavators using a double benching method were assumed.</li> <li>• Mining recovery of the Ore Reserve when compared to equivalent Mineral Resource: <ul style="list-style-type: none"> <li>• 99.0% Cu metal recovered.</li> <li>• 99.8% Au metal recovered.</li> <li>• 108.1% of ore tonnes.</li> </ul> </li> <li>• Open pit mining dimensions (minimum SMU) are 3m x3m x5m.</li> <li>• Mining dilution was added by creating a SMU and then adding 0.25m edge dilution. This overall gives approximately 9% dilution to the resource.</li> <li>• Average mining cost of A\$2.08 per LOM rock tonne moved.</li> <li>• Assumed average of 6-8Million tonnes of ore processing per annum.</li> <li>• Recovery as per metallurgical results as provided to the Competent Person.</li> <li>• There is no Inferred material used in the Ore Reserve estimation.</li> <li>• Infrastructure requirements for open pit mining include; maintenance workshop for all mobile equipment, offices, crib rooms and amenities, explosive storage, fuel farm, water dams, geotechnical monitoring and de-watering systems.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>• As part of the Hillside EFS, Rex commissioned Wood (Formerly AMEC Foster Wheeler Australia Pty Ltd) to complete the mineral processing test-work.</li> </ul>

	<ul style="list-style-type: none"> <li>• Extensive mineral recovery work has been carried out by Wood based on all ore types defined within the Mineral Resource at Hillside and across various grade ranges. This provides a comprehensive view of the average copper and gold recoveries that can be realistically achieved at Hillside.</li> <li>• As part of the Hillside Feasibility Costing Update, Wood also completed a revised assessment of the estimates for the capital required for construction of the processing plant. The outcome of which are noted in this announcement.</li> <li>• The essential elements of the process plant design utilise conventional flotation technology to produce a copper-gold concentrate.</li> <li>• Rex also commissioned a pilot plant study, carried out by Wood, to optimise the flotation process and samples were selected from representative components of the orebody that were anticipated to be fed within the first 5 years of the mine schedule.</li> <li>• The head grades going into the process plant for the LOM are estimated to average 0.62% copper over the LOM.</li> <li>• Rex has shown through metallurgical test work that deleterious elements are unlikely to exist in any significance way.</li> <li>• Rex has shown through metallurgical test work that no deleterious elements exist in concentrate.</li> <li>• Copper recoveries are estimated to be 92%, gold recoveries are estimated to be approximately 78%.</li> </ul>
Environmental	<p>The South Australian Department for Energy and Mining (DEM) implements a comprehensive permitting process, which requires the Company to provide:</p> <ul style="list-style-type: none"> <li>• full detail of the baseline environmental and social aspects;</li> <li>• conduct and document stakeholder consultation;</li> <li>• detail on the proposed mining operation from construction through to closure;</li> <li>• assessment of potential impacts;</li> <li>• detailed engineering and management controls to minimise or avoid potential impacts; and</li> <li>• a comprehensive monitoring regime along with actions that will be implemented should monitoring results trigger action prior to non-compliance being reached.</li> </ul> <p>The permitting process also involves a number of other regulatory agencies to ensure all aspects are covered and all legislative requirements are met. The primary approvals required for a mining operation to commence in South Australia are the Mining Lease Proposal, Mineral Lease, and the Program for Environmental Protection and Rehabilitation (PEPR). The Hillside Mining Lease Proposal was approved in 2013 and resulted in the granting of the Mineral Lease (ML), an Extractive Minerals Lease (EML) and a Miscellaneous Purposes Licence (MPL) in September 2014. The PEPR document details the design, engineering and management controls to be implemented to avoid or minimise the potential impacts and reduce risk, as well as providing the comprehensive monitoring program for the operation. The PEPR was approved by the DEM in July 2020 – announced on 24 July 2020.</p>
Infrastructure and Logistics	<ul style="list-style-type: none"> <li>• The Hillside project is approximately 150kms from Adelaide with a workforce within reach without the need to have an onsite accommodation facility during production. Accommodation facilities will be provided for construction workers at a camp to be built near Ardrossan, approx.12km away from Hillside. The camp will be built, owned and operated by a facility management company that will charge a nightly rate per person.</li> <li>• Most roads in the area are suitable for current uses and adequate to handle the increased traffic from the Project. A section of the Yorke Highway will be realigned. In addition, the Ardrossan – Minlaton Road runs through the mine site requiring closure with an alternative route developed. Site access will be</li> </ul>

	<p>via the unsealed Sandy Church Road to Sandilands, approximately 4km north of the mine site. The T-junction with the Yorke Highway will be upgraded and sealed. Costs for these works have been included in the capital cost estimates.</p> <ul style="list-style-type: none"> <li>The site has access to mains power through the network grid and sea water will be used for processing and mining operations as per the license conditions. Potable water will be purchased from SA Water for the filter of concentrate and other activities that need potable water. The transport of final product will be via trucks to Port Adelaide.</li> </ul>
Capital costs	<p>The Hillside Optimised Feasibility &amp; Definition Phase Engineering Study is a costing update of the Hillside Feasibility Costing Update announced to the ASX on 28 July 2020. The capital estimate is considered to have an accuracy of +/-20% for the plant capital and +/- 5% for the mining capital.</p> <p>In 2022 Rex engaged Ausenco to review our capital and operating costs. The Scope of Work included:</p> <ul style="list-style-type: none"> <li>Revise the Project design, capital and operating costs by updating equipment pricing and rates for the process plant and infrastructure to achieve a plant throughput rate of up to 8Mtpa.</li> </ul> <p>The Project pre-production capital estimate of A\$854M (US\$598) in this announcement) incorporates approximately A\$87M of growth allowance and contingency for both EPCM and non-EPCM works. Mine Development Operating Costs total A\$81M. This estimate is based on a detailed design and costing exercise during the study incorporating an EPCM price component and non-EPCM works. Open cut mining operations have been costed based on owner mining with 100% of the mobile equipment fleet included in capital costs. Subsequent mining fleet additions have been capitalised as sustaining capital.</p> <p>Sustaining capital for the operation is estimated at A\$134M, including progressive tailings lifts. Project mine rehabilitations costs are A\$10M completed progressively during operations and an additional A\$27M has been included at mine closure. An estimate of A\$26M for plant salvage and other surface infrastructure has been included.</p> <p>Mining capital costs are based on quotations from major suppliers of mining and ancillary equipment.</p> <ul style="list-style-type: none"> <li>Maptek Vulcan and Evolution Origin software were used to create a mining design and schedule. Original Equipment Manufacturer (OEM) specifications for the mining fleet were used to derive cycle times to create fleet numbers.</li> <li>Fuel usage and maintenance costs were estimated for the mining schedule based on; site visits to operations using the same equipment and in consultation with OEMs. The organisational structure is comparable to similar size operations in Australia. Labour rates for mining were based on surveys of similar earth moving operations on the Yorke Peninsula in South Australia.</li> </ul>
Operating costs	<p>The operating cost estimate for this study includes all costs associated with mining, processing, infrastructure, and site-based general and administration costs. Processing costs were supplied by Ausenco and were applied to the economic input for mine design parameters and cost models. Mining operating costs were determined by Rex Minerals staff and mining consultants, G&amp;A operating costs were determined by Rex Minerals staff. The operating cost estimate is presented on an annualised basis to an accuracy of +/-15%. There has been no contingency applied to operating costs.</p> <p>The average total operating cost per tonne (excl. pre-strip) of A\$29.45/t (see Table 3 in this announcement) is the summation of:</p> <ul style="list-style-type: none"> <li>Average Mining Cost per ore tonne (LOM) (after pre=strip) = A\$16.86/t</li> <li>Processing Cost per tonne = A\$10.32/t</li> </ul>

	<ul style="list-style-type: none"> <li>• Other Operating (G&amp;A) Costs per tonne = A\$2.27/t</li> </ul> <p>The LOM average C1 (operating) cash cost is US\$1.52/lb of payable copper. This includes all site operating costs, concentrate land transport and sea freight costs, metal treatment charges and is net of revenue from by-product credits (gold). The All In Sustaining Costs (AISC) are US\$1.79/lb of payable copper.</p> <p>Concentrate payables, treatment and refining costs are based on forecast market terms derived from a market outlook study. Key aspects are:</p> <ul style="list-style-type: none"> <li>• Copper: <ul style="list-style-type: none"> <li>• Treatment Charge of US\$60/dry metric tonne concentrate.</li> <li>• Refining Charge of US\$0.06/lb of payable Cu.</li> <li>• Payable Cu is 96.75% of the final copper content, subject to a minimum deduction of 1.0 unit if the full copper content is less than 30.8%</li> <li>• No price participation charges.</li> </ul> </li> <li>• Gold: <ul style="list-style-type: none"> <li>• Refining charge of US\$6.00/oz of payable Au.</li> <li>• Payable Au is calculated on a grade related scale.</li> </ul> </li> </ul> <p>There are no expected levels of impurities that would incur treatment or refining penalty charges. State royalties are payable under South Australian law and are to be over A\$200M over the LOM.</p> <p>Total company tax payments, at a rate of 30% with the first payment expected in year 2 of concentrate production.</p>
Revenue factors	<p>Revenue analysis used the following commodity price and exchange rate assumptions:</p> <ul style="list-style-type: none"> <li>• Copper price used = 3.92 US\$/lb.</li> <li>• Gold price used = 1,610 US\$/ounce.</li> </ul>
Schedule and timeframe	<p>The key milestones for delivery of the Project are:</p> <ul style="list-style-type: none"> <li>• Month 0 through Month 18 for construction</li> <li>• Month 19 and 20 for dry commissioning, and</li> <li>• Month 21 onwards for ore commissioning.</li> </ul> <p>It is anticipated that steady state production will be achieved after three months of ore commissioning.</p> <p>High level summary tasks with indicative forecast durations have been identified and linked to the key milestones to produce a Level 3 schedule. Formal project commencement is scheduled to occur in mid-Month 0 pending the financial investment decision by the Rex Board.</p> <p>The critical path runs directly through the grinding circuit long lead equipment, i.e. the SAG mill. The mill is currently quoted as requiring approximately 45 weeks for delivery. The earliest date that mechanical installation for the concentrator can be completed is 22 weeks after delivery of the last long lead item. A minimum of 2 weeks is required at the concentrator to complete the piping, electrical and instrumentation installation components once mechanical installation is completed, meaning the earliest (time) construction can be completed is 24 weeks after the delivery of the last piece of long lead equipment.</p>
Market assessment	<p>Rex has engaged and been provided with documentation on the supply demand metrics for copper and gold by AFX Commodities Pty Ltd.</p> <p>The forecast commodity prices took into consideration the projected supply/demand for each commodity in conjunction with broker consensus analysis.</p> <p>Price forecasts for the key commodities are detailed above.</p>
Funding	<p>To achieve the range of outcomes indicated in the Hillside Feasibility Costing Update, indicative funding in the range of A\$854M or US\$598M will likely be</p>

	<p>required for capital works, pre-production working capital and contingency required to construct the Hillside Project, together with costs associated with project financing.</p> <p>The Company plans to actively pursue a suitable funding package via a structured process. The timing of this will align with the Operational Readiness plan which also encompasses the broad disciplines of stakeholder engagement and engineering for Stage One operations.</p> <p>With the SA Government’s approval of the PEPR for the Hillside Project, Rex now has a pathway to development. Rex plans to pursue all available financing options.</p>
Economic parameters	<p>A discount rate has been determined based on a WACC of 4.88% (Real) and 8.55% (Nominal) (Courtesy of Cape Leveque Securities Pty Ltd, November 2022). This number was determined to be suitable for a Feasibility Costing Update based on a project located in Australia, and it was calculated referencing market data available. The model has been run as a life of mine model and includes sustaining capital and closure costs (in real terms). Based on the current metallurgical testwork knowledge, equipment selection, process design and Hillside mine plan, the Project is anticipated to achieve the design mill feed rate after 6 months of ramp-up (i.e. after completion of wet commissioning) assuming no major equipment failures.</p> <p>The study outcome was tested for key financial inputs including: metal prices, operating costs, capital costs, grade and US/AU exchange rate. All of these inputs were tested for variations of +/-10%.</p>
Exchange rates	<p>The exchange rate for the reporting of the results from this Costing Update is A\$1.00 = US\$0.70.</p>
Community and social responsibility	<p>The Department for State Development (DSD) issued Rex ML 6438 on 16 September 2014 under the South Australian Mining Act 1971, after undergoing an extensive assessment of the environmental and social impacts and benefits of Hillside as presented in the Mining Lease Proposal (MLP) document submitted to DSD in August 2013. The MLP detailed the benefits, existing environment, mining operations, the methodology and results of consultation, potential impacts along with an outline of the control measures and a statement of the proposed outcomes expected to be met during the life of the mine; construction, operations, rehabilitation and post mine closure. This impact assessment was developed with Hillside’s community reference group which was initiated in 2011, now known as the Hillside Mine Community Voice (HMCV). Public consultation was required during the development of the MLP along with a period for formal public comment.</p> <p>The key areas of concerns raised throughout this process were dust, noise, potential impacts on adjacent agricultural land and the marine environment and land use options post mining. The environmental management plans, closure plan and social management plans, which include the complaints register and resolution process, local employment plan and local business development plan, have all been developed in consultation with the HMCV and other stakeholders such as the local council, government bodies and other representative groups. This process is encompassed in an overarching plan known as Rex’s ‘Community Engagement Plan’ (CEP) which was approved by DSD on 12 June 2015. The CEP is a document that clearly identifies the community and outlines the framework for how Rex will engage with the community during all stages of the development of Hillside. This proactive approach reflects Rex’s Community Engagement Policy statement and has enabled Rex to draw on local knowledge held by the community and other stakeholders to identify and address issues of concern and to optimise the benefits of the Project to the region and its community.</p>

	<p>The benefits that will be associated with the development of the Project will include significant increase to the regional economy, a diversification of its current agricultural and tourism industry base, increased employment opportunities and associated stimulus for population growth. There has been an overwhelming support for the employment outcomes Hillside will bring and associated flow on effect to many businesses in the region and state. To date there have been over 2000 expressions of interest (EOI's) for employment at Hillside with over 500 of the EOI's deriving from within one hour's drive of the site. It is therefore anticipated that there will be a sufficient workforce and that this workforce will be derived from the local pool, those choosing to move to the region for work and those who may want to commute from further afield including Adelaide. The social infrastructure within the primary and regional study areas have sufficient capacity to cater for the increased workforce. It is assumed that there would be various accommodation options available for the workforce including existing residences for local employees and new accommodation developments for purchase or rent. In addition, current limits for growth on the Yorke Peninsula include water and power supply. The Project will result in significant benefit to the region and result in an increase in water and power supply.</p> <p>As a part of the open dialogue between Rex and stakeholders, impact assessments have been presented and published on key issues such as surface water, groundwater, soil and air quality, acid mine drainage, uranium, fibrous materials along with social impact assessments regarding housing, employment and traffic.</p> <p>A Native Title Claim has been lodged covering the entire Yorke Peninsula; however, no Native Title agreements are required in relation to the ML or EML. Evidence of Indigenous cultural heritage is widespread throughout the region and within the vicinity of the proposed Hillside mine area. Surveys within the Hillside area have identified remnants of occupation-sites however these do not represent intact sites. No non-Indigenous cultural heritage sites exist within the Hillside area.</p>
Other	There are several other material risks to this project including product price, competition, social license, scheduling and other risks typical of projects of similar scale.
Classification	Mineral Resources have been converted to Ore Reserves as per JORC 2012 guidelines.
Audits or reviews	<p>Spiers Geological Consultants (SGC) was engaged to undertake a technical review of the Hillside MRE in May 2022. The MRE (and associated data/s) by Rex were undertaken in accordance with the JORC Code and in conjunction with associated regulatory agencies the Australasian Institute of Mining and Metallurgy (AusIMM), the Australian Institute of Geoscientists (AIG) and the Minerals Council of Australia (MCA), The key project related review aspects included (but are not limited to) the following:</p> <ul style="list-style-type: none"> <li>• Review of input data/documentation relating to Hillside Project, review the database integrity/data validation processes and QAQC and appropriateness of the data aggregation methods and to assess the use of cut-off parameters (and any other associated modifying parameters) and reporting.</li> <li>• To review the relationship between the interpreted geology and the defined copper mineralisation domains.</li> <li>• Review of estimation and modelling techniques and outcomes / validation.</li> <li>• Review of bulk density (specific gravity) data and application / modelling where applicable.</li> <li>• Review of application of the Resource classification.</li> </ul>