



Market Release

Newcrest Mining

15 February 2016



Lihir Pit Optimisation Project to progress to Feasibility Study stage

As previously advised, a project is being undertaken to optimise the integrated life of mine plan for Lihir, including seepage barrier options. The project has been completed to Prefeasibility study stage ("Prefeasibility Study") and the Board of Newcrest Mining Limited (Newcrest) has now approved the project progressing to Feasibility Study stage. The highlights from the Prefeasibility Study¹, include:

- Forecast reduction in estimated capital expenditure requirement for the seepage barrier to USD 215m, compared to the USD 1,290m in the 2013 Prefeasibility Study which included a cofferdam
- Lateral mine sequence development affirmed
- Near shore cut-off wall and harbour infill replacing the previously proposed cofferdam

Key Findings of the Prefeasibility Study

The purpose of the project is to optimise the integrated life-of-mine plan for Lihir, including different mine sequencing and ore scheduling options, the most appropriate mining methods and civil engineering options. The project focused on both financial outcomes and risk level of associated options.

The new operating strategy at Lihir, announced in February 2015, was the precursor to identifying and examining the potential for this lower capital solution. The new operating strategy which commenced implementation at the end of 2014 largely removed sulphur as a processing constraint, which resulted in the Lienetz orebody being more economical and enabled the lateral development of the Lihir mine. This in turn deferred the date a seepage barrier is required, allowing additional time to infill and compact the inner harbour and construct a cut-off wall, rather than the more costly cofferdam option. As part of the Prefeasibility Study the Kapit Flat Stockpile is included in the lateral cutback sequence and will be progressively processed rather than relocated.

Managing Director and Chief Executive Officer, Sandeep Biswas, said "This project is a testament to the team challenging the existing thinking and developing a better solution. With the new operating strategy comes the potential for new, more cost-effective opportunities for accessing the Kapit orebody. A potential capital saving of \$1 billion dollars for the future seepage barrier is a great outcome for Lihir and shareholders."

¹ All figures are in US dollars unless otherwise stated. Estimates are from a Prefeasibility Study and as such are subject to an accuracy range of $\pm 25\%$. Subject to further study, investment approval, receipt of all necessary permits and approvals, changes in market and operating conditions and engineering. Refer to statement on last page of this release in relation to forward looking statements.

Mine Plan

The mine plan that is now being examined under the Feasibility Study is based on three main stages as set out below.

Stage 1, which will occur over FY17 to FY21, includes mining Minifie and Lienetz, utilising medium grade stock piles and pre-strip work for successive cutbacks.

Stage 2, which will occur over FY22 to FY26, includes mining Lienetz and Kapit, medium and low grade stockpiles and pre-strip for successive cutbacks.

Stage 3, which will occur over FY27 to FY31, continues mining Lienetz and Kapit, and low grade stockpiles. The average feed grade increases in this phase due to access to the higher grade Kapit ore.

Mining of the remaining reserves remain subject to ongoing studies.

The Prefeasibility Study indicated that the lateral development mine plan could:

- Provide additional time to cool geothermally-active areas to a more manageable level
- Enable filling and compacting of the inner harbour
- Provide additional time to construct the lower cost cut-off wall compared to a more costly cofferdam

The potential mine plan used in the Prefeasibility Study is summarised below.

Summary mine plan²

Timing (Years)	Stage	Sources	Total Material Moved (Mt) ³	Waste (Mt)	Tonnes to Stockpiles (Mt)	Ex-pit Tonnes Fed (Mt)	Stockpile Tonnes Fed (Mt)	Plant Feed (Mt) ⁴	Average Feed Grade g/t
FY17-21	1	Minifie & Lienetz, medium grade stockpiles, and pre-strip	320 - 330	160 - 170	30 - 35	25 - 30	40 - 45	65 - 75	~2.7
FY22-26	2	Lienetz & Kapit, medium / low grade stockpiles and pre-strip	360 - 370	150 - 160	60 - 65	27 - 32	38 - 43	65 - 75	~2.4
FY27-31	3	Lienetz & Kapit and low grade stockpiles	340 - 350	150 - 160	45 - 50	38 - 43	27 - 32	65 - 75	~2.8
FY32+	4	Remaining Reserves ⁵	Subject to ongoing study						

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³ Includes sheeting material and crusher rehandle.

⁴ Plant feed = Ex-pit + Stockpile feed.

⁵ For the remaining Reserves and Resources please refer to Newcrest Annual Statement of Mineral Resources and Ore Reserves as at December 31 2015.

Near Shore Cut-Off (NSCO)

The selected seepage barrier under the Prefeasibility Study is a combination of:

- Clay infill of the inner harbour compacted by stockpiles to generate an impermeable barrier
- A diaphragm wall comprised of soil bentonite or plastic concrete (cut-off wall)

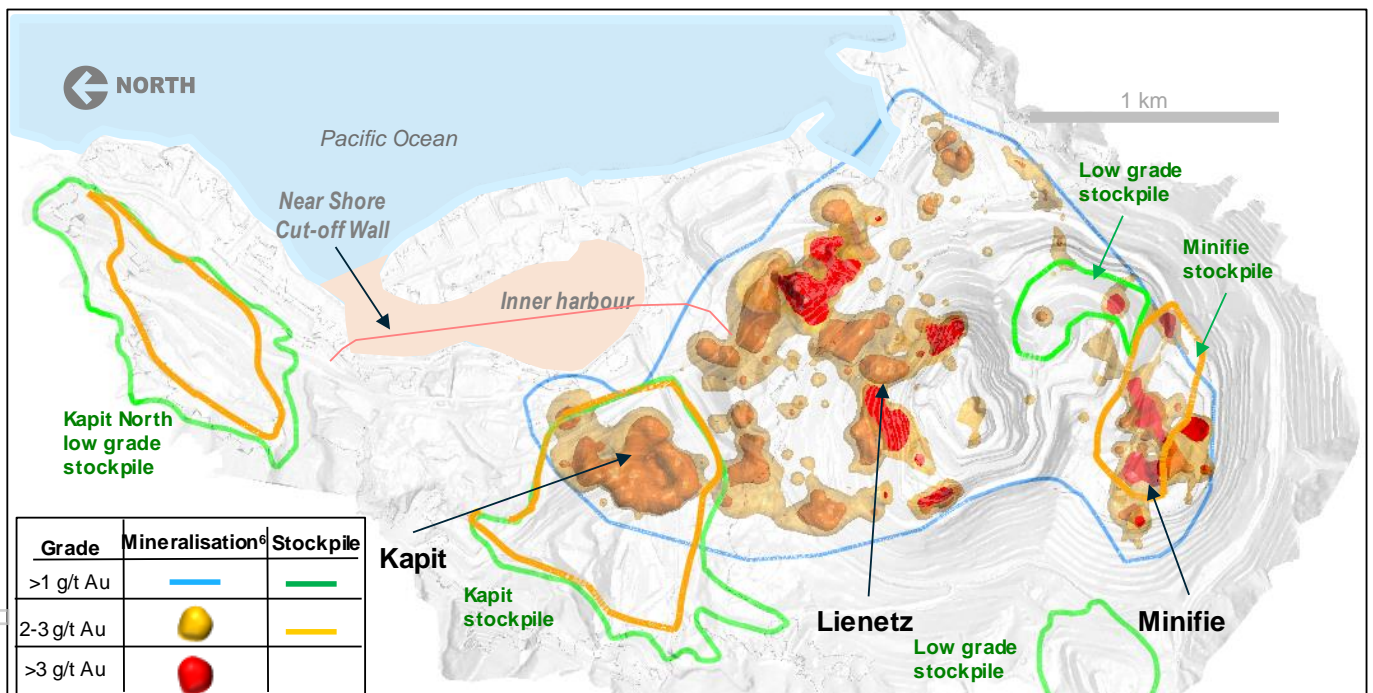
The Prefeasibility Study concluded that the harbour infill, in combination with a cut-off wall, could provide a dual seepage barrier to reduce seepage into the Lihir open pit and provide protection of the pit from inflow during earthquake and/or tsunami events.

Due to the lateral mining advance, the cut-off wall is estimated now to be required around FY25. This deferral provides sufficient time to investigate hydrogeological and geothermal conditions in the ground below the proposed cut-off wall, in order to refine and further optimise the design prior to implementation. This enabled the Prefeasibility Study to recommend the NSCO over the previously studied cofferdam.

The soil bentonite or plastic concrete mix design will be uniquely tailored to the Lihir environment (i.e. geothermal heat, seawater and heavy metals in the argillic clays) and will require testing to ensure the appropriate design is used.

Adoption of the NSCO has two additional potential cost benefits compared with the prior study. One, the infill of the inner harbour utilises available clay rich waste material rather than sourcing it externally. Secondly, the inner harbour will provide a temporary stockpile location for material that would otherwise have needed to be stockpiled elsewhere.

Indicative location of harbour infill and cut-off wall⁶



⁶ NOT TO SCALE. This image is illustrative only, and is subject to changes in market and operating conditions and engineering. Refer to statement on last page of this release in relation to forward looking statements.

Capital Requirement⁷

The table below compares the capital costs of the previous seepage barrier alternative with the capital costs determined under the 2015 Pit Optimisation Prefeasibility Study.

Construction costs are now expected to be approximately USD 80m, which comprises the costs of the cut-off wall (~USD 43m) and engineering and project management (~USD 37m). A near shore cut-off wall is a relatively simpler engineering solution compared to a cofferdam, significantly lowering the cost of construction.

Ongoing feasibility study costs are assumed to be lower. The NSCO Feasibility Study costs of USD 22m consist of a dedicated project team, supported by the Lihir site team and external experts as required.

Infrastructure relocation costs of approximately USD 85m represent relocation of the public access road, a haul road, communications, electrical reticulation and water supply lines. The relocation of the facilities is required under any scenario that accesses the Kapit pit.

The original 2013 Prefeasibility Study solution required the decommissioning and recommissioning of geothermal wells currently in operation in the Kapit orebody, and a second heavy fuel power generator was required to meet the shortfall in electricity. Under the project's new mine plan the Kapit orebody will not be accessed until the geothermal wells are naturally exhausted, which has saved approximately USD 218m.

Under the original 2013 Prefeasibility Study, work on the cofferdam required a significant increase in the workforce which in turn required the construction of a camp. The NSCO construction requires a smaller work force than the cofferdam, therefore the existing accommodation at Lihir is deemed sufficient.

Comparison of capital costs for seepage barrier

USD	2013 PFS ^{7,8,9}	2015 Pit Optimisation Study Coffe Dam Wall ^{7,8,9}	2015 Pit Optimisation Study – Near Shore Cut Off ^{7,8,9}
Construction (seepage barrier) – includes engineering and project management	~760m	~625m	~81m
Feasibility study	~75m	~23m	~22m
Infrastructure relocation	~120m	~62m	~85m
Geothermal decommissioning / recommissioning and temporary power	~245m	~26m	~27m
Construction camp and plant upgrades	~90m	0	0
Total	~1,290m	~735m	~215m

Permitting & Approvals

Newcrest holds mining leases and an environmental permit with respect to development of the Lihir mine. As part of the Feasibility Study, Newcrest will work with all relevant government agencies and communities to identify any approvals and consents necessary to implement the proposed mine plan.

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⁸ Subject to completion of Feasibility Study, investment approval, receipt of all necessary permits and approvals, changes in market and operating conditions and engineering. Refer to statement on last page of this release in relation to forward looking statements.

⁹ The figures in the above table do not include sustaining capital, such as mobile fleet replacement, under any scenario.

Next Steps and Indicative Timing

The lateral mining mine plan has commenced and will continue through the life of mine.

The table below summarises the cost and key focus areas over the next few years.

Subject to the outcomes of the Feasibility Study and obtaining all necessary approvals, it is intended that from FY25 Newcrest will access the Kapit ore within the NSCO.

Indicative timetable and capex requirement based upon Prefeasibility Study findings

Financial Year	Capex (USD) ^{10,11}	Key Events
FY17-22	~22m	<ul style="list-style-type: none"> Geotechnical investigation, analysis and monitoring Compaction testing of the inner harbour fill Feasibility and design work on Near Shore Cut-off Wall
FY21-22	~38m	<ul style="list-style-type: none"> Early infrastructure removal Excavation of the Harbour Waste Platform to facilitate Near Shore Cut-off Wall construction
	~26m	<ul style="list-style-type: none"> Geothermal power decommissioning and removal
FY23-24	~108m	<ul style="list-style-type: none"> Construction of Near Shore Cut-off Wall
FY25		<ul style="list-style-type: none"> Relocation of infrastructure (roads, power, water)
FY28-29	~21m	<ul style="list-style-type: none"> Mine infrastructure relocation to facilitate southern mining area
Total	~215m	

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Forward Looking Statements

These materials include forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, “outlook” and “guidance”, or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company and its management’s good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company’s business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company’s business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company’s control.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

Ore Reserves and Mineral Resources Reporting Requirements

As an Australian Company with securities listed on the Australian Securities Exchange (“ASX”), Newcrest is subject to Australian disclosure requirements and standards, including the requirements of the Corporations Act 2001 and the ASX. Investors should note that it is a requirement of the ASX listing rules that the reporting of ore reserves and mineral resources in Australia comply with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the “JORC Code”) and that Newcrest’s ore reserve and mineral resource estimates comply with the JORC Code.

Competent Person’s Statement

The information in this release that relates to Mineral Resources or Ore Reserves has been extracted from the release titled “Annual Mineral Resources and Ore Reserves Statement – 31 December 2015” dated 15 February 2016 (the original release). Newcrest confirms that it is not aware of any new information or data that materially affects the information included in the original release and, in the case of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the original release continue to apply and have not materially changed. Newcrest confirms that the form and context in which the competent person’s findings are presented have not been materially modified from the original release.