



May 9<sup>th</sup> 2016

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Chairman

#### **Trevor Dixon**

Managing Director

#### **Fritz Fitton**

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**ASX: KIN** 

# Positive Scoping Study Outcome for the Leonora Gold Project

Kin Mining NL (ASX: KIN) is pleased to announce the completion of a Scoping Study for the development on the Leonora Gold Project (LGP). Results demonstrate an economically and technically viable project with considerable upside. Key financial parameters are tabled below.

Key Financial Parameter	Base Case A\$1500 oz	A\$1700 oz			
NPV (A\$M)	\$56.3	\$105.5			
Revenue (A\$M)	\$461.6	\$523.13			
Operating Costs (A\$M)	\$318.9	\$318.9			
Free Cashflow (A\$M)	\$142.7	\$204.3			
Capital Costs (A\$M)	\$55.0	\$55.0			
EBITD (A\$M)	\$87.7	\$149.3			
C1 Cash Cost (A\$/oz)	\$1,010	\$1,010			
AISC (A\$/oz)	\$1,185	\$1,185			
IRR (%)	30%	48%			
Payback (months)	45	30			
* All key parameters based on scoping study inputs and Whittle pit shells and are indicative only					

## **Scoping Study Parameters – Cautionary Statement**

The Scoping Study referred to in this report is based on low accuracy level of technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage; or to provide certainty that the conclusions of the Scoping Study will be realized. There is a low level of geological confidence associated with the Inferred Mineral Resource (approximately 1/3<sup>rd</sup> of all proposed process material from the Whittle results) and there is no certainty that further exploration work will result in the conversion of Inferred Mineral Resources to Indicated Mineral Resources or that the production target itself will be realised.



## **Commentary**

Managing Director Trevor Dixon said "The release of the Scoping Study for the Leonora Gold Project is an important milestone for our Company. It transforms the Project from valuable in ground resources, to potentially an economically viable mining operation. This Study demonstrates to the market that Kin Mining has a genuine likelihood of becoming a gold producing company in the near future."

"The conservative Base Case production scenario set at \$1500 has delivered a strong platform and has highlighted the robust nature of the project. Interestingly was the higher than expected sensitivity to fluctuation in gold price, whereby a 10% change in the metal price results in approximately 25% change in outputs. This is very encouraging and demonstrates that the scale of this project could potentially grow very quickly if the gold price continues its upward trend."

"The study indicated that refining of the mining fleet and scheduling may also have value add implications to the Project. We are encouraged by the overall strength of the cash flow generation possible and are now looking at ways to deliver the best outcome for the Project."

"The recent drilling at Mertondale has had pleasing results and the guys are on site drilling more holes as I speak. This is part of the overall strategy to grow the resource base with the intention to add more mineable ounces to the Leonora Gold Project."

#### Introduction

Auralia Mining Consulting Pty Ltd ("Auralia"), were engaged by Kin Mining NL to carry out a Scoping study on its Leonora Gold Project ("Project"), producing a high level mining and processing schedule utilising Whittle shells, inclusive of a high level financial analysis. All mineralised material types (Measured, Indicated, Inferred and unclassified) were included for consideration in the study. Given the level of study, and that Inferred and unclassified material was used as an economic driver, no JORC Compliant Ore Reserve table can result from this study.

The Project consists of the Mertondale, Cardinia and Raeside areas and is located in the Mt Margaret Mineral Field in the centre of the Eastern Goldfields. The Mertondale mining area is positioned approximately 32km NE of the town of Leonora, Cardinia 28km ENE of Leonora and Raeside 9km SE of Leonora. A relocated, refurbished processing facility for the Project has been assumed to be located in the Mertondale area for this study.

This following results constitutes the work carried out by Mr Anthony Keers of Auralia. All outputs relating to these works are dated April-May 2016.



# **Optimisations**

A total of 13 Mineral Resource models were provided to Auralia in Datamine or Surpac block model formats. The models for Mertondale and Raeside were generated by McDonald Speijers in 2009 and use the "recovered fraction" technique for gold estimation with the Cardinia models were generated by Runge in 2009 using the Ordinary Kriging ("OK") technique for interpolation. A number of operations were performed within the graphical mining package ("GMP") Surpac to make each Resource model suitable for application to optimisation and scheduling works.

The table below contains the Whittle outputs of the selected pit shell of each mining area.

<sup>\*</sup>Note ounces are rounded to nearest 100

Project Area	Mining Area	Discounted Cashflow AUD M	Tonnes Input to Processing	Grade Input to Processing	Waste Tonnes Mined	Cut-off Grade g/t Au	Recovered Gold Ounces	
Mertondale	Mertondale 3/4	\$23.5M	870,000	1.9	8,430,000	0.6	50,200	
	Mertondale 5	\$12.6M	210,000	3.0	1,740,000	0.7	19,000	
	Merton's Reward	\$21.4M	680,000	2.2	7,770,000	0.6	45,000	
	Quicksilver	\$1.3M	110,000	1.6	800,000	0.6	5,100	
	Tonto	\$7.6M	330,000	1.8	3,500,000	0.7	17,700	
	Eclipse	\$2.8M	270,000	1.5	3,200,000	0.7	12,200	
Raeside	Forgotten Four	\$3.3M	80,000	2.4	530,000	0.8	5,500	
	Krang	\$0.8M	50,000	2.5	1,030,000	0.8	4,200	
	Michelangelo	\$10.5M	370,000	2.4	6,170,000	0.8	26,000	
Cardinia	Bruno-Lewis	\$27.9M	1,740,000	1.4	6,020,000	0.7	72,300	
	Lewis South	\$2.7M	220,000	1.0	400,000	0.7	6,800	
	Kyte	\$11.4	470,000	1.3	1,010,000	0.7	18,700	
	Helens Rangoon	\$15.5	890,000	1.4	2,820,000	0.7	36,300	
Total		\$141.3M	6,290,000	1.7	43,420,000		319,000	
*Note ounces are rounded to nearest 100 ounces								

The unclassified material included in the Bruno-Lewis and Helens Rangoon optimisations accounted for less than 1% and 2% of the processed material respectively. On the Project scale, unclassified material was less than 1% of all processed material and is therefore considered to have no impact on the optimisation results.

A number of sensitivity runs were performed on the base case sell price scenario, these were:

- Processing cost, mining cost and sell price variations at -20%, -10%, +10% and +20%
- Processing recovery of 88% and 95%
- Exclusion of Inferred material
- Slope angles of ±5 degrees



Reviewing the combined sensitivity outputs for the Project shows a higher than standard sensitivity to most inputs where for every 10% change in processing and mining cost, there is a roughly 10% change in outputs for discounted cash flow, total tonnes mined and recovered gold. The sensitivity to fluctuations in gold price is more pronounced with a 10% change in metal price resulting in approximately 25% change in outputs. The higher than standard sensitivity for the Project is anticipated to be caused by the generally shallow nature of the Whittle shells produced.

# **Open Pit Operations**

Mining operations for the Project are currently planned to utilise a standard truck and shovel configuration. At peak production, two separate fleets will operate, one with a 100t Excavator (Komatsu PC1250 or similar) paired with 90t rigid body dump trucks (Cat 777 or similar) and a smaller 75t Excavator (Cat 374 or similar) paired with 40t articulated trucks (Cat 740 or similar).

The larger mining fleet will operate in the large, simple to mine pits of Mertondale 3/4, Mert's Reward, Tonto, Eclipse and Michelangelo/Leonardo. The smaller mining fleet will be used in the remaining mining areas which are narrow (entire mining area or cutback) in nature. Once on site, the flexibility to use either fleet in a particular area may exist to produce the best outcome such as "pre-stripping" waste with the larger fleet or using the smaller fleet to recovery ounces at the base of the larger pits.

# **Scheduling**

A simplified, high level global scoping level production schedule has been completed for the Project using the pit shells generated by Whittle; no designs have been completed for this work. The three main constraints applied to the production schedule were:

- 1. to target the processing throughput of 1Mtpa,
- 2. to limit the overall stockpile size as much as possible, and
- 3. to maintain a steady fleet of mining equipment throughout the life of the project.

Mining commences with the 75t excavator operating in the Cardinia area, this excavator and truck fleet is in operation for the entirety of the project life, which is currently scheduled to be 76 months.

After month 13, the larger 100t excavator is mobilised to commence mining in the larger strip, but higher grade Mertondale area, the 100t excavator is demobilised around month 58 of the project schedule when the larger pits have been exhausted of current expected mining inventory.

Processing has been scheduled to start two months after mining commences in order to allow suitable stocks to be available prior to commissioning the mill. At steady state production, the processing plant is scheduled to run at a throughput of 1,000,000tpa. The ratio of oxide and transitional material to fresh material was set at a minimum of 2:1 throughout the schedule to maintain an ore blend that would suit the SAG mill configuration of the proposed processing facility.

For this schedule, all ore mined from the satellite deposits (Raeside, Cardinia and the northern Mertondale pits) has been assumed to be trucked directly to the main ROM without delay. Further studies are recommended to determine the optimal mill size as preliminary indications suggest that a larger mill with a higher throughput may be better suited to reduce stockpile size throughout the mining operation.



Annual Production <i>Mining</i>	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7	Total
Waste tonnes	2,136,200	9,879,700	10,630,700	9,826,500	7,897,500	2,458,800	596,400	43,426,000
Ore tonnes	864,100	1,357,000	1,159,800	1,145,400	940,700	541,500	282,800	6,291,400
Gold Ounces	34,800	69,300	72,600	69,300	54,100	27,500	11,600	340,300
Gold Grade	1.25	1.59	1.95	1.88	1.79	1.58	1.28	1.68
Annual Production Processing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7	Total
Process Input Tonnes	830,200	1,015,700	1,032,900	951,300	1,124,000	1,054,500	282,800	6,291,400
Process Input Grade	1.23	1.68	1.81	1.99	1.96	1.44	1.24	1.68
Recovered Gold Ounces *Note number	30,500	50,900	55,900	56,600	65,800	45,300	10,500	315,600

# **Financial Analysis**

A high level financial analysis was undertaken on the Project using cost inputs provided by Kin and work undertaken for this mining study. Upfront capital of AUD50M was included in the financial analysis to account for the acquisition, relocation and refurbishment of a second hand processing plant with a nominal 1Mtpa throughput and other Project start-up costs; working capital of AUD1M/year was also included.

Annual Production Financials (\$M)	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year7	Total
Mining Cost		\$8.84	\$31.07	\$34.19	\$28.15	\$22.16	\$8.38	\$2.60	\$135.39
Grade Control Cost		\$0.26	\$0.41	\$0.35	\$0.34	\$0.28	\$0.16	\$0.08	1.89
Haulage Cost		\$1.56	\$1.56	\$0.63	\$1.54	\$3.32	\$0.97	\$0.51	\$10.08
Variable Processing Cost		\$19.39	\$23.72	\$24.12	\$22.21	\$26.25	\$24.62	\$6.60	\$146.90
General and Admin Cost		\$3.25	\$3.97	\$4.04	\$3.72	\$4.39	\$4.12	\$1.11	\$24.60
Capital Cost	\$50		\$1.00	\$1.00	\$1.00	\$1.00	\$1.00		\$55.00
Revenue		\$44.61	\$74.48	\$81.73	\$82.83	\$96.25	\$66.30	\$15.39	\$461.59
Cashflow	-\$50	\$11.32	\$12.76	\$17.40	\$25.87	\$38.84	\$27.04	\$4.49	\$87.72
Discounted Cashflow	-\$50	\$1132	\$11.74	\$14.73	\$20.14	\$27.82	\$17.82	\$2.73	\$56.30



The gold price of AUD1,500 an ounce was used for the base case optimisation and financial analysis is somewhat conservative with the spot price for gold varying between AUD1,600 an ounce and AUD1,700 an ounce over the past three months. The table below contains the key financial parameters from the base case financial analysis as well as sensitivities run using a gold price of AUD1,600/oz and AUD1,700/oz.

Key Financial Parameter	Base Case A\$1500 oz	A\$1600 oz	A\$1700 oz			
NPV (A\$M)	\$56.3	\$80.9	\$105.5			
Revenue (A\$M)	\$461.6	\$492.4	\$523.13			
Operating Costs (A\$M)	\$318.9	\$318.9	\$318.9			
Free Cashflow (A\$M)	\$142.7	\$173.5	\$204.3			
Capital Costs (A\$M)	\$55.0	\$55.0	\$55.0			
EBITD (A\$M)	\$87.7	\$118.5	\$149.3			
C1 Cash Cost (A\$/oz)	\$1,010	\$1,010	\$1,010			
AISC (A\$/oz)	\$1,185	\$1,185	\$1,185			
IRR (%)	30%	39%	48%			
Payback (months)	45	38	30			
* All key parameters based on scoping study inputs and Whittle pit shells and are indicative only						

Additional work is required to improve the level of confidence in the Mineral Resource as well as continuing studies and test work related to both mining and processing. Results from this study indicate that additional work is warranted, and that a positive economic outcome from the proposed mining and milling operations at the Leonora Gold Project is achievable.

## **Competent Persons Statement**

The information contained in this report relates to information compiled or reviewed by Mr. Paul Maher who is a member of the (AusIMM) and Mr. Simon Buswell-Smith who is a Member of the Australian Institute of Geoscientists (MAIG), both are employees of the company and fairly represents this information. Mr. Maher and Mr. Buswell-Smith have sufficient experience of relevance to the styles of mineralisation and the types of deposit under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 edition of the "JORC Australian code for reporting of Exploration Results, Mineral Resources and Ore Reserves". Both consent to the inclusion in this report of the matters based on information in the form and context in which it appears.

#### **Forward Looking Statements**

Certain information in this document refers to the intentions of Kin Mining NL, but these are not intended to be forecasts, forward looking statements or statements about future matters for the purposes of the Corporations Act or any other applicable law. The occurrence of events in the future are subject to risks, uncertainties and other factors that may cause Kin Mining NL's actual results, performance or achievements to differ from those referred to in this announcement. Accordingly, Kin Mining NL, its directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of the events referred to in this announcement will actually occur as contemplated.