



15 December 2016

## **Pre-Feasibility Study demonstrates potential for Kin to become a high margin producer at the Leonora Gold Project**

### **Low forecast capital cost of A\$35M underpins robust economics**

#### **Highlights**

- **Pre-Feasibility Study demonstrates the potential for Kin's 100%-owned Leonora Gold Project in WA to be a low-risk, high-margin gold producer**
- **Estimated pre-production capital cost of \$35M (including 15% contingency)**
- **Capital payback period approximately 18 months**
- **Initial mine life of 6.5 years with considerable exploration upside**
- **Forecast life-of-mine (LOM) revenue of A\$494M and operating cash-flow of A\$105M**
- **Forecast production of 43,000oz in Year 1, ramping up to 52,000oz in Year 3**
- **An estimated 6.8 Mt at 1.5 g/t Au to be processed, delivering 309koz of recovered gold**
- **Development based on three open pit mining centres supplying a new centrally-located 750,000 tpa conventional CIL processing plant, expanding to approximately 1.2 Mtpa in Year 3**
- **Estimated operating cash cost (C1) of A\$1,024/oz<sup>1</sup> (LOM)**
- **Estimated All In Sustaining Cost (AISC) of A\$1,084/oz<sup>2</sup> (LOM)**
- **NPV<sub>8%</sub> A\$71M (before corporate and tax)**
- **Feasibility Study to be completed by mid-2017 with 17,000m drill programme currently underway with the objective of converting Inferred Mineral Resources to the Indicated category, and to contribute to further metallurgical and geotechnical studies.**
- **First gold production targeted for mid-2018**

## **ASX Chapter 5 Compliance and Pre-feasibility Study Cautionary Statement**

The information and production target presented in this announcement is based on a Pre-feasibility study ("PFS"). The PFS has been conducted to determine the potential viability, and optimum pathway to production, of an open pit mining operation and CIL processing route for the Leonora Gold Project ("the Project"). The results of the PFS have been sufficient for the Company to reach a decision to proceed to a Feasibility Study for the Project.

The Company has concluded that it has a reasonable basis for providing the forward-looking statements and forecast financial information included in this announcement. The detailed reasons for that conclusion are outlined throughout this announcement and all material assumptions, including the JORC modifying factors, upon which the forecast financial information is based are disclosed in this announcement and in Table 1 Annexure A. This announcement has been prepared in accordance with the JORC Code (2012) and the ASX Listing Rules.

The Company advises that the PFS results, production targets and forecast financial information contained in this announcement are preliminary in nature as the conclusions are based on medium-level technical and economic assessments, conducted to an overall level of accuracy of +/- 25%, and are insufficient to support the estimation of Ore Reserves or to provide an assurance of economic development. The Company cautions that there is no certainty that the forecast financial information derived from the production targets will be realised.

The production target referred to in this announcement is based on Mineral Resource estimates which are classified as Indicated (64%) and Inferred (36%). The early sequence of mine production targets for the first two years has a ratio of 82% to 18% of Indicated to Inferred Mineral Resources respectively. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

The stated Production Target is based on the Company's current expectations of future results or events and should not be relied upon by investors when making investment decisions. Further evaluation work and appropriate studies are required to establish further confidence that this target will be met. The Company believes it has a reasonable ground for reporting the results of the PFS based partially on Inferred resources due to the availability of historical production and successful mining studies completed to date.

If the Inferred resources within the open pit designs is excluded, the preliminary economic analysis still forecasts a positive financial performance, based upon the PFS assumptions, by processing of only the current Indicated Mineral Resources. The Company therefore is satisfied that the use of Inferred Mineral Resources in the production target and forecast financial information is not the determining factor in overall Project viability and that it is reasonable to report the PFS including the Inferred Mineral Resources.

The PFS outputs contained in this report relate to 100% of the Project. Unless otherwise stated all cashflows are in Australian dollars, are not subject to inflation/escalation factors and all years are calendar years.

The Company believes it has a reasonable basis to expect to be able to fund and complete the proposed feasibility study and then fund and develop the Project. However, there is no certainty that the Company can raise funding when required.

**Kin Mining NL (ASX: KIN)** is pleased to advise that the Pre-Feasibility Study (PFS) on its 100%-owned Leonora Gold Project (LGP) in WA has delivered outstanding results, demonstrating that the project has the potential to generate strong cash-flows underpinned by low capital and operating costs, robust margins and a short payback period.

Over recent months, with the support of independent consultants, Kin has updated costs and produced a new mining and processing strategy based upon the 2009 PFS completed by Navigator Resources (refer to ASX announcement 25 March 2009), to determine the most profitable path to gold production.

A heap leach/ carbon-in-leach (CIL) combination and a 100% CIL processing option were evaluated. Following an optimisation process, it was determined the lowest risk pathway to developing the LGP was to adopt the processing route of a new conventional 750,000tpa CIL processing plant for the first two years, before ramping up in Year 3 to approximately 1.2 Mtpa through a modest mill expansion.

The PFS concludes that the LGP is technically viable and economically robust, with a forecast production profile from open pit sources commencing at the rate of 43,000 oz Au per annum, and rising to 52,000 oz Au per annum by Year 3. Life-of-mine all-in sustaining costs (AISC) are forecast to be A\$1,084/oz. Capital costs are estimated to be approximately A\$35 million, with a capital payback period of approximately 18 months.

The initial mine life stands at approximately 6.5 years with a Production Target of 6.8 Mt @1.54 g/t Au for 309 koz of recovered bullion. There is significant potential to grow the mineral resource with a corresponding increase in mine life on the back of exploration at and around known deposits and advanced exploration prospects within the project area.

In light of the study's findings, Kin aims to complete a Feasibility Study (FS) on the LGP by the middle of 2017 with first gold production targeted for 2018.

The Company considers the Leonora Gold Project to be economically viable based on its ability to rapidly pay back project pre-production capital and provide ongoing positive operational cash flows.

The proposed 6.5-year life-of-mine production target contains Indicated Mineral Resources (82%) and Inferred Mineral Resources (18%) for the first two years, and 64% to 36% of Indicated Mineral Resources to Inferred Mineral Resources over the life-of-mine. It is expected that the lower confidence material (Inferred Mineral Resources) in the production target will be potentially upgraded to Indicated Mineral Resources as part of the recently announced 17,000 m drill programme (refer to ASX Announcement of 7 November 2016), as Kin progresses to a Feasibility Study.

Kin believes an initial 6.5 year production life for 309 koz of recovered gold is possible, which will be assessed more fully in the FS. The FS is expected to form the basis of the Company's funding strategy.

Kin Mining Chief Executive Don Harper said that the PFS clearly highlighted the technical and economic strengths of the Leonora Gold Project making it the foundation on which to build a significant new Australian gold producer.

"The study shows that the Leonora Project will enjoy low up-front costs which will in turn underpin a low-risk, high-margin operation with a short payback period of 18 months," Mr Harper said.

"This strategy will enable us to generate early profits and accelerate production while at the same time seeking to grow mine life through an aggressive exploration programme.

"The Leonora Project offers a low-risk, low capital pathway to gold production in the heart of one of WA's richest gold-mining districts. The completion of the PFS marks an important milestone for Kin and sets the scene for our imminent transformation into a significant Australian gold development company."

**Table 1. Key Project Parameters**

<b>LGP MINERAL RESOURCES</b>		<b>Tonnage</b>	<b>Grade</b>	<b>Ounces</b>
Indicated Mineral Resources		8.16 Mt	2.0 g/t	532koz
Inferred Mineral Resources		3.67 Mt	1.6 g/t	189koz
<b>Total Resources</b>		<b>11.83 Mt</b>	<b>1.9 g/t</b>	<b>721koz</b>
<b>MINERAL RESOURCES IN PRODUCTION TARGET</b>				
Indicated Mineral Resources		4.4 Mt	1.6 g/t	(64%)
Inferred Mineral Resources		2.4 Mt	1.4 g/t	(36%)
<b>Total</b> (totals vary due to rounding)		<b>6.8 Mt</b>	<b>1.5 g/t</b>	<b>(100%)</b>
<b>CAPITAL COSTS</b>				
<b>Pre-Production Capital Cost</b>				
New 750,000 tpa Processing Plant (EPCM, Commissioning, First Fill & Spares)				\$23.2M
Infrastructure Capital (In-pit TSF, Camp, Roads)				\$3.5M
Pre-Production Mining & Mine Establishment				\$1.4M
Owners Costs				\$2.0M
Contingency +15%				\$4.5M
<b>Total</b>				<b>\$34.6M</b>
<b>Expansion to 1.2Mtpa Capital Cost</b>				
1.2 Mtpa Processing Plant Expansion (EPCM, First Fill & Spares)				\$13.9M
Contingency +15%				\$2.1M
<b>Total</b>				<b>\$16.0M</b>
Contractor Demobilisation				\$0.3M
Sustaining Capital (Includes TSF embankment lifts)				\$2.8M
Rehabilitation Costs				\$3.0M
<b>Total</b>				<b>\$6.1M</b>
<b>TOTAL CAPITAL (LOM)</b>				<b>\$56.7M</b>
<b>PRODUCTION SUMMARY</b>				
<b>Key Outcome</b>				
Life of Mine Production				6.5 yrs
LOM Open Pit Strip Ratio (unmineralised:mineralised)				5.1:1
Total Recovered Gold Production				309koz
Processing Rate (Years 1-2)				750,000 tpa
Processing Rate (Years 3-7)				1.2 Mtpa
LOM Mill Recovery				92%
<b>PRODUCTION ECONOMICS</b>				
Base Case gold price (US\$)				\$1,200/oz
Exchange Rate (USD:AUD)				75c
Revenue (A\$)				\$494M
C1 Cash Costs <sup>1</sup>				\$1,024/oz
All In Sustaining Costs <sup>2</sup>				\$1,084/oz
Undiscounted Operating Cash Surplus				\$105M
Discounted Operating Cash Surplus (8%)				\$71M
IRR				58%

<sup>1</sup> C1 operating costs include all mining and processing costs, site administration, refining

<sup>2</sup> AISC includes C1 costs + royalties, sustaining capital, but excludes head office corporate costs and tax

## **PFS OVERVIEW**

The Leonora Gold Project (LGP) is located 30km north-east of the mining town of Leonora and approximately 250 km NNE of Kalgoorlie, Western Australia. The area is well serviced by infrastructure including a network of high quality roads, an airstrip with regular services to Perth and proximity to an established mining supply network.

The PFS investigates the potential economic viability of the LGP based principally on the mining and on-site treatment of the Mertondale, Cardinia and Raeside Mineral Resources. The Mineral Resources on which the Production Target is based are located on granted Mining Leases.

Independent JORC 2012 estimates of the Mineral Resources at the LGP total 11.8 Mt at 1.9 g/t Au for 721koz of contained gold (refer to ASX Announcement 11 May 2015). The PFS Production Target includes 6.8 Mt at 1.5 g/t gold for 309koz recovered gold based on a 6.5-year mine life.

The PFS envisages open pit mines at Mertondale, Cardinia and Raeside (see Appendix 1) that will deliver material to a new, centrally located carbon-in-leach (CIL) gold treatment facility at Cardinia. All open pits will be mined via conventional benching with a hydraulic excavator and dump trucks.

The mining strategy is focused during the first year on delivering high grade, low cost, free milling oxide material primarily from the Cardinia deposits located close to the mill. Higher-grade harder material from Merton's Reward will be blended with the softer Cardinia oxide material. It is envisaged that waste material from the open pits will be deposited on surface waste dumps, however opportunities exist to use the waste to back-fill existing pits. These opportunities will be examined in greater detail in the Feasibility Study.

A new standalone 750,000 tpa conventional CIL treatment plant is proposed for the LGP, with the capacity to be expanded to approximately 1.2 Mtpa in Year 3. The proposed plant will incorporate a three-stage crushing circuit feeding a ball mill, gravity recovery circuit and CIL circuit, utilizing established technologies.

It is envisaged that tailings will be deposited into the existing Bruno pit (Stage 1), followed by adjacent pits (Stage 2), and then finally into a conventional Tailings Storage Facility (TSF) (Stage 3). Waste mined, as part of the mining cycle from the Bruno-Lewis pits, will be used for construction of the TSF embankment.

A 60-person accommodation camp will be constructed on site at Cardinia. An estimated 20% of the workforce is expected to reside in Leonora with the remainder on Fly-In-Fly-Out arrangements.

First gold production from the LGP, based upon the PFS production forecast, is expected in mid-2018.

## **MINERAL RESOURCES**

Gold deposits in the LGP are hosted by a series of shear zones that are subsidiary structures of the Keith-Kilkenny Lineament, and which extend over a 35km strike length from Mertondale 5 in the north to Cardinia in the south. At Cardinia, a large proportion of the resource consists of a supergene gold accumulation in the weathering profile.

Independent reviews of the Mineral Resources have been completed in 2009 by consultants McDonald Speijers (Mertondale and Raeside) and Runge Limited (Cardinia).

The LGP has a total of 11.8 Mt @ 1.9 g/t Au for 721koz gold in Mineral Resources (Table 2), all within a 25 km radius of the proposed centrally located Cardinia process plant. Of this total, 74% or 8.16 Mt @ 2.0 g/t gold for 532koz is in the Indicated Mineral Resource category and 26% is in the Inferred Mineral Resource category.



**Table 2. LGP JORC 2012 Mineral Resources**

Leonora Gold Project Mineral Resources										
Project Area	Lower cut-off Grade	Indicated Resources			Inferred Resources			Total Resources		
	g/t Au	Mt	g/t Au	koz Au	Mt	g/t Au	koz Au	Mt	g/t Au	koz Au
<b>Mertondale*</b>										
Mertondale 3/4	0.7	0.87	2.3	65	0.66	2.1	45	1.53	2.2	110
Merton's Reward	0.7	1.01	2.7	87	0.07	1.7	4	1.08	2.6	91
Tonto	0.7	0.97	1.9	60				0.97	1.9	60
Eclipse (Tonto North)	0.7	0.62	1.8	35	0.25	1.7	14	0.87	1.8	49
Mertondale 5	0.7	0.32	3.2	33	0.16	2.7	13	0.48	3.0	46
Quicksilver (Tonto South)	0.7	0.55	1.8	31	0.11	2.1	8	0.66	1.8	39
<b>Subtotal Mertondale</b>		<b>4.34</b>	<b>2.2</b>	<b>311</b>	<b>1.25</b>	<b>2.1</b>	<b>84</b>	<b>5.59</b>	<b>2.2</b>	<b>395</b>
<b>Cardinia**</b>										
Bruno-Lewis Exploration	0.7	1.04	1.1	37	1.52	1.3	63	2.56	1.2	100
Helen's North	0.7	0.63	1.2	24	0.13	1.1	5	0.76	1.2	29
Kyte	0.7				0.31	1.6	16	0.31	1.6	16
Rangoon	0.7	0.09	1.8	5	0.23	1.3	9	0.31	1.4	14
Lewis Grade Control***	0.7	0.29	1.4	12				0.29	1.4	12
Bruno Grade Control	0.7	0.11	1.4	5	0.03	1.1	1	0.15	1.3	6
Helen's South	0.7	0.19	1.8	11	0.01	1.3	0	0.20	1.7	11
Lewis South	0.7				0.10	1.3	4	0.10	1.3	4
<b>Subtotal Cardinia</b>		<b>2.35</b>	<b>1.3</b>	<b>94</b>	<b>2.33</b>	<b>1.3</b>	<b>98</b>	<b>4.68</b>	<b>1.3</b>	<b>192</b>
<b>Raeside</b>										
Michelangelo-Leonardo	0.7	1.28	2.7	111				1.28	2.7	111
Forgotten Four	0.7	0.07	3.0	7	0.10	2.1	7	0.17	2.5	14
Krang	0.7	0.11	2.6	9				0.11	2.6	9
<b>Subtotal Raeside</b>		<b>1.47</b>	<b>2.7</b>	<b>127</b>	<b>0.10</b>	<b>2.1</b>	<b>7</b>	<b>1.57</b>	<b>2.6</b>	<b>134</b>
<b>TOTAL</b>		<b>8.16</b>	<b>2.0</b>	<b>532</b>	<b>3.67</b>	<b>1.6</b>	<b>189</b>	<b>11.83</b>	<b>1.9</b>	<b>721</b>

\* Resource estimate by McDonald Speijers, 2009 with Merton's Reward depleted by McDonald Speijers in 2010.

\*\* Resource estimate by Runge Limited, 2009 with Bruno Grade Control depleted by Runge in 2010.

Notes: Assay top cuts for Mertondale and Raeside are variable but generally between 10-20g/t Au and are 15g/t Au at Cardinia. No allowance has been made for dilution or ore loss. All resources are constrained by open pit shells optimised at A\$2,000/oz.

\*\*\* Resource Estimate at Lewis depleted by 999oz from Lewis Pit Trial Mining completed in June 2016 (ASX announcement 5 October 2016). Production Target includes depletion.

## MINING

Common to all potential LGP open pits is a truck and excavator mining technique involving conventional drill, blast, load and truck haulage to the on-site treatment plant. Kin envisages that all mining will be undertaken by mining contractors while technical and managerial direction will be by Kin.

The LGP contemplates a co-development of three open pit mining centres, namely:

- Cardinia (mainly oxide), which comprises the Bruno-Lewis, Lewis South, Kyte and Helens-Rangoon deposits;
- Mertondale, which comprises the Mertons Reward, Mertondale 3\_4, Tonto, Eclipse and Mertondale 5 deposits; and
- Raeside, consisting of the Michelangelo-Leonardo and Forgotten Four deposits.

Ore production from these mining areas is expected to feed a new 750,000 tpa processing plant to be centrally located near the major baseload mill feed; the Cardinia oxide resources. A majority of the LOM mill feed is soft oxide, which is mainly free dig, resulting in lower mining costs. It is envisaged that, with modest additional capital expenditure to be funded through production cash-flow, the process plant is expected to ramp up to approximately 1.2 Mtpa in Year 3.

Detailed open pit mine design studies were completed on 11 separate deposits. The open pit optimisations were based on both Indicated and Inferred Mineral Resources. Mine designs and development of the mining and milling schedules for the project have been completed by AMC Consultants Pty Ltd, a Perth-based independent mining consultancy.

The life-of-mine (LOM) gold Production Target includes 68% Indicated ounces recovered and 32% Inferred ounces recovered (see Table 3). The Mineral Resources in the Production Target have had the required modifying factors applied (see Annexure A).

The key material assumptions made in the Production Target were as follows:

1. Updated geotechnical recommendations were made by independent geotechnical consultants following a review of historical data, existing pits and drill core during a site visit in November 2016.
2. The processing throughput rate was assumed to be initially at approximately 750 ktpa then ramping up to approximately 1.2 Mtpa.
3. LOM average mill recovery is estimated at 92%.
4. Mining Recovery at Mertondale and Raeside was estimated at 95%.
5. Dilution and mining recovery at Cardinia has been modeled using regularization. Due to the small fleet being utilized and wide mineralized zones dilution is estimated around 4%, while mining recovery is estimated around 97%.
6. Mining dilution at Mertondale and Raeside is included in the block model process and is based on the following parameters:
  - Ore loss of 0.2 m at the top and bottom edges of the intersection for oxide
  - Ore loss of 0.3 m at the top and bottom edges of the intersection for transition and fresh
  - Edge dilution of 0.5 m at the top and bottom edges of the intersection of oxide
  - Edge dilution of 0.8 m at the top and bottom edges of the intersection for transition and fresh
7. Mining, drill & blast, and load & haul costs were sourced from first tier mining contractors following a site visit in October 2016 and data from other similar open pit mines in the goldfields area.
8. An estimated 10% oxide, 80% transition and 100% fresh material has been assumed to be drill & blasted.
9. Allowance has been made in the mining costs for pre-split blasting, dewatering and surface haulage costs relating to transportation of material from Mertondale and Raeside to the Cardinia mill.
10. Open pit Whittle optimisations were completed at A\$1,575/oz.
11. Production Target Financial assumptions were based on A\$1,600/oz. (3-year average A\$/oz gold price)
12. A minimum mining width of 20m was used to allow for existing open pit cutbacks and truck turning circles.
13. Standard Mining Unit (SMU) was applied to all deposits.

14. Mine supervision and grade control costs were provided by Kin based on similar West Australian mining operations.
15. Processing capital and operating costs were provided by West Australian based engineering group CPC Engineering.
16. State and private tenement royalties have been included and applied.
17. Refining costs have been allowed for.

## PRODUCTION TARGET

Detailed open pit mine designs have been used to schedule a potential production profile for the LGP. The higher confidence Indicated Mineral Resources are scheduled in the early years of the project. The portion of ounces in the Production Target which was based on the lower-confidence Inferred Mineral Resources have been scheduled later in the production profile.

The key features of the production schedule include:

- LOM Open Pit Mine Production Target estimated at 6.8Mt @ 1.5 g/t Au for 335koz contained;
- Strip ratio 5.1:1 (unmineralised:mineralised)
- Material is stockpiled at the end of Year 6 with the mining fleet demobilising early Year 7.
- Stockpiled material in the Year 7 is assumed to be re-handled and delivered to the mill
- LOM mill production estimated at 6.8 Mt @ 1.5 g/t Au for 309koz pa recovered bullion;
- LOM production of 6.5 years;
- Estimated average steady-state production of 51koz pa; and
- Production Peak of 52koz pa

**Table 3. LGP Production Target Schedule**

	Unit	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
<b>MINING</b>									
Mineral Resource Tonnes	(t'000)	<b>6,765</b>	901	787	1,034	1,196	1,255	1,592	
Ounces	(oz'000)	<b>335</b>	51	51	53	58	58	64	
Grade Au	(g/t)	<b>1.54</b>	1.76	2.03	1.59	1.51	1.43	1.26	
Indicated Resources	(t'000)	<b>4,362</b>	667	721	643	676	638	1,017	
Indicated Resources %	(%)	<b>64%</b>	74%	92%	62%	57%	51%	64%	
Inferred Resources	(t'000)	<b>2,404</b>	233	66	391	520	617	576	
Inferred Resources %	(%)	<b>36%</b>	26%	8%	38%	43%	49%	36%	
Mineralisation Volume	(bcm'000)	<b>3,375</b>	454	363	497	570	638	853	
Waste Volume	(bcm'000)	<b>16,843</b>	3,011	2,658	2,675	2,760	3,016	2,722	
Strip Ratio	(t:t)	<b>5.1</b>	7	7.4	5.4	4.8	4.6	3.3	
Total Volume	(bcm'000)	<b>20,218</b>	3,465	3,021	3,171	3,330	3,655	3,576	
<b>PROCESSING</b>									
Tonnes Processed	(t'000)	<b>6,765</b>	750	750	1,150	1,200	1,200	1,200	515
Head Grade	(g/t)	<b>1.54</b>	1.92	2.08	1.53	1.51	1.45	1.36	0.94
Recovered Grade	(g/t)	<b>1.42</b>	1.79	1.86	1.41	1.34	1.34	1.3	0.90
Recovered Au	(oz'000)	<b>309</b>	43	45	52	52	52	50	15
Recovered Au Indicated	(oz'000)	<b>211</b>	33	41	36	31	29	31	9
Recovered Au Inferred	(oz'000)	<b>98</b>	10	3	16	20	23	19	6
Recovered Au Indicated	(%)	<b>68%</b>	77%	92%	69%	61%	55%	61%	62%
Recovered Au Inferred	(%)	<b>32%</b>	23%	8%	31%	39%	45%	39%	38%

Rounding errors may occur.



Figure 1. Mill Feed

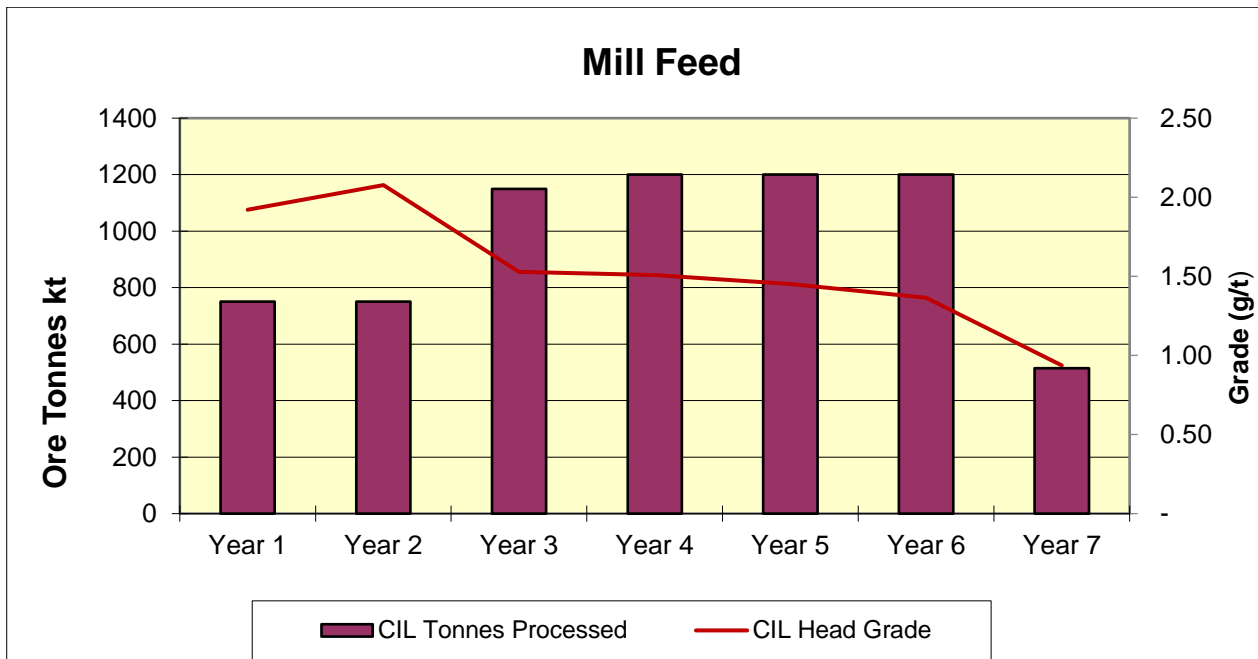
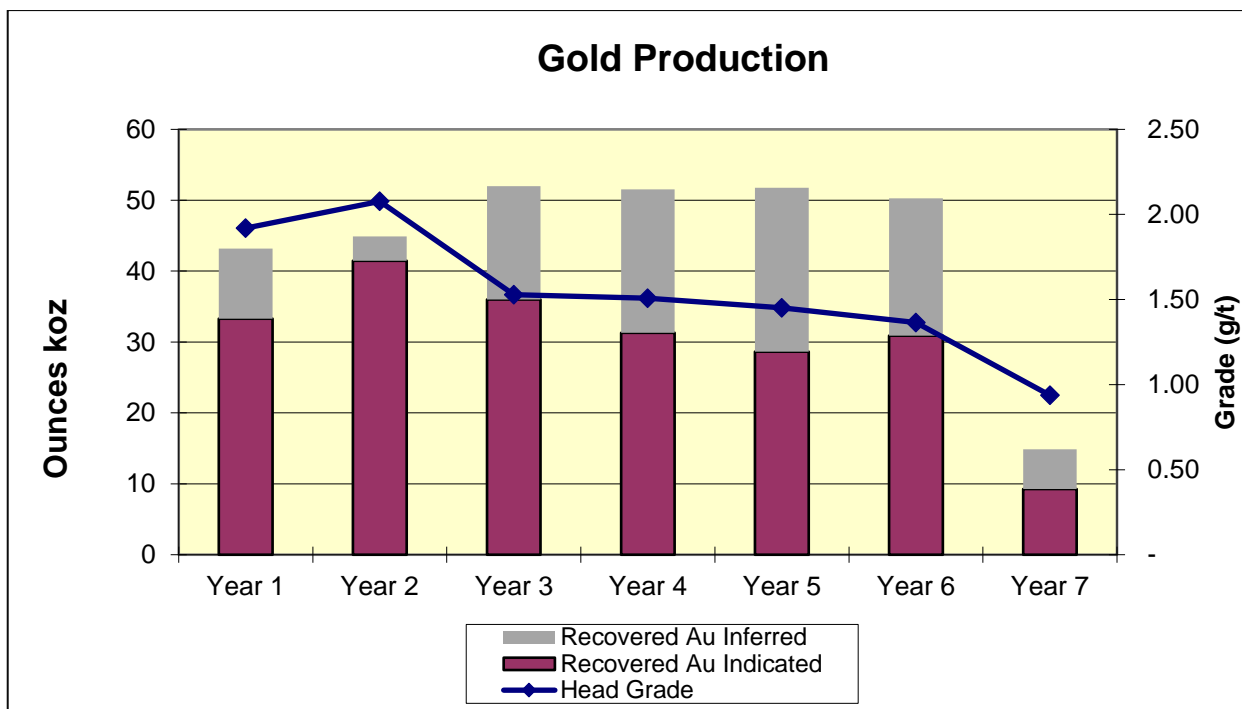
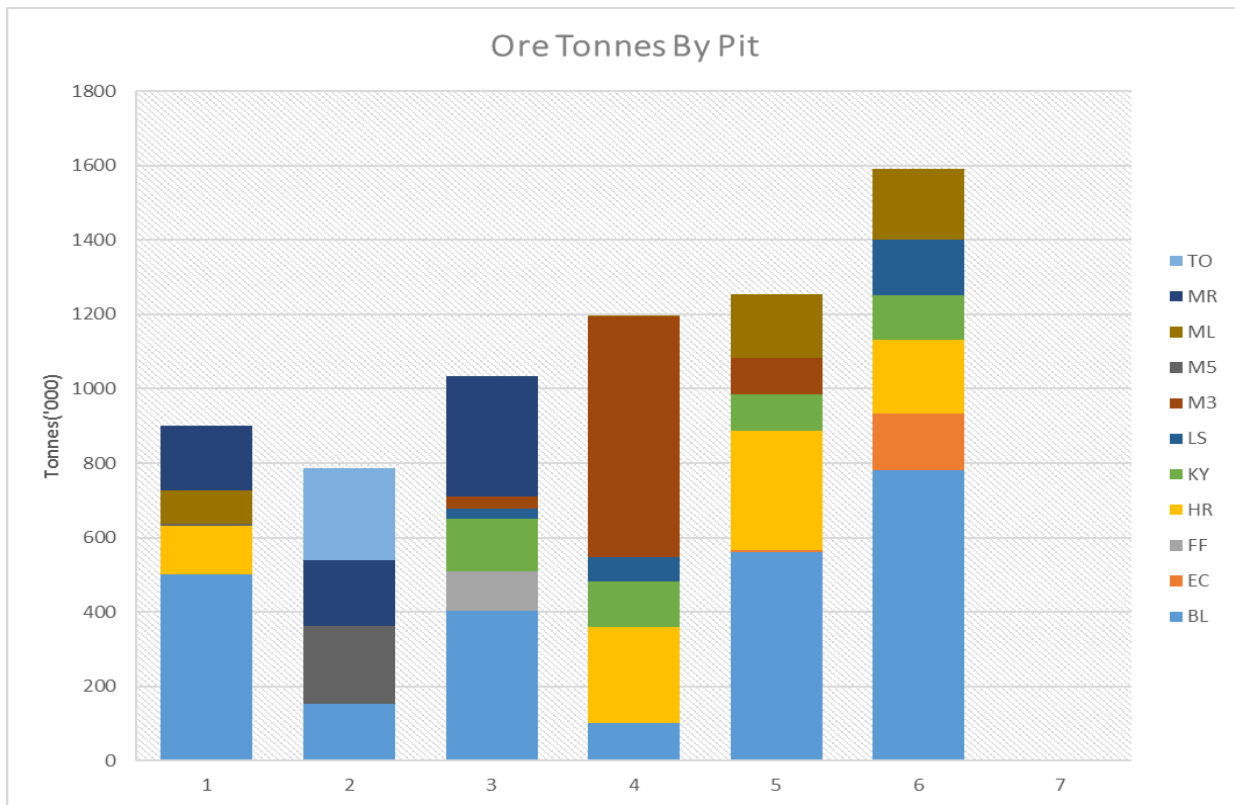


Figure 2. Gold Production (Ratio of Indicated to Inferred Mineral Resources)



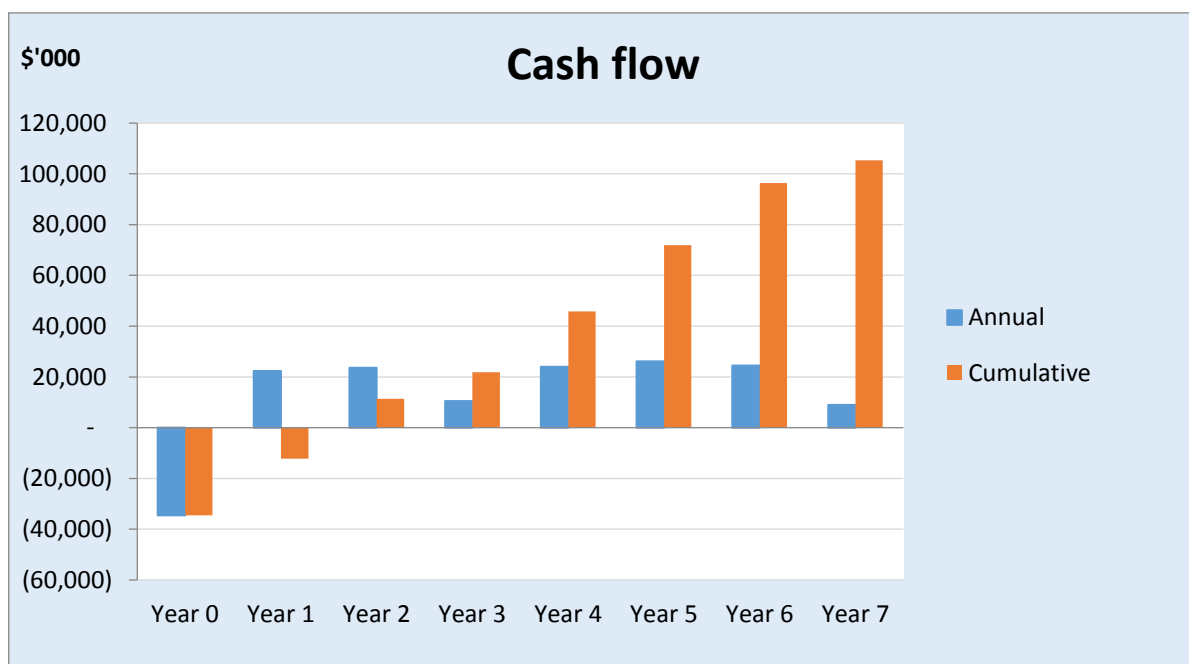
**Figure 3. Production Target Sources (Indicated and Inferred Mineral Resources)**



TO=Tonto, MR=Mertons Reward, ML=Michelangelo-Leonardo, M5=Mertondale 5, M3=Mertondale 3\_4, LS=Lewis South

KY=Kyte, HR=Helens-Rangoon, FF=Forgotten Four, EC=Eclipse, BL=Bruno-Lewis

**Figure 4. Production Target Undiscounted Cashflow**



## GEOTECHNICAL STUDIES

Geotechnical assessments were undertaken as part of the 2009 Pre-Feasibility Study by consultants Dempers & Seymour. Peter O'Bryan and Associates conducted further geotechnical reviews on the proposed open pits in 2016. Previous geotechnical work involved diamond drilling for core samples and geotechnical logging. Peter O'Bryan and Associates have provided the pit wall design criteria to PFS level detail. Further more detailed geotechnical assessments are planned as part of the Feasibility Study to further optimize open pit designs.

## MINE DESIGNS

The open pit mining methods are well known and widely used in the local mining industry. Open pit vertical development rates were planned to adhere to industry standards. Designs have focused on maximizing gold recovery from the optimised Whittle shells whilst targeting low strip ratios. The optimum and most profitable outcome was to design pits to single lane width with passing bays and 1:8 gradient ramps which suit a 40-60 t haulage fleet.

## 750 ktpa PROCESSING PLANT

The LGP processing strategy considers establishing a process plant that matches the Company's development strategy, where the focus is on lower upfront initial capital and a production strategy that delivers low-cost, high margin ounces through industry-standard open pit mining vertical advance rates. With this strategy in mind, it is envisaged the Company plans to establish a new 750 ktpa processing plant for the first two years ramping up in Year 3 to achieve a steady-state mill throughput of 1.2 Mtpa from Year 3 onwards. The key to this expandable mill concept is to design the processing plant at the outset to allow for a low capital expansion with minimal disruption to the operation as the plant is expanded in Year 3. The cost of upgrading the processing plant has been incorporated as a capital cost in Year 3 of the operation.

The process plant using a 2.5 megawatt (MW) ball mill will be designed to treat a nominal 750,000 tpa of gold-bearing material with a crushing availability of 80% and an overall plant availability of 94%. Appendix 2 shows the simplified flowsheet for the treatment process. Material will be delivered to the ROM stockpile using mine haulage trucks at Cardinia and surface haulage trucks from Mertondale and Raeside. The jaw crusher will be fed from the front-end loader via a surge hopper. The jaw crusher will crush the rock to a P80 of 125 mm. Further size reduction to a mill feed will be accomplished using two cone crushers. The crushing circuit selected is a modular design to simplify the installation process and reduce costs.

The grinding circuit will be a conventional ball mill circuit with classification by cyclones. The cyclone product will have a P80 value of 75 micron ( $\mu\text{m}$ ), suitable for gravity recovery and leaching. A gravity concentration circuit consisting of a centrifugal concentrator and shaker table will treat a portion of the cyclone underflow.

The gravity concentrate will be direct smelted in the gold room. The cyclone overflow will be leached in a single tank followed by six stages of CIL adsorption tanks. Loaded carbon will be removed periodically and replaced with regenerated and/or fresh carbon. The loaded carbon will be transferred to the elution circuit for gold recovery and doré production and sold to the Perth Mint. The tailings from the CIL circuit will report directly to the tailings storage facility. Water will be decanted from the tailings storage facility for re-use in the process via the process water tank.

## 1.2 Mtpa PROCESSING PLANT EXPANSION

The current mine plan indicates increased tonnages to the mill starting in Year 3 and reaching a steady state of 1.2 Mtpa in Year 4 of operation. Allowances have been included in some areas of the initial design to facilitate this expansion and, in some areas, additional equipment has been included and costed.

The crushing circuit will require some modifications to process 1.2 Mtpa of material. The primary crusher, ROM bin and mill feed system will remain the same. A new secondary crusher and ancillaries will need to be installed to support the increased tonnage while the existing secondary crusher will be relocated to act as the tertiary crusher in the circuit, with a modified head and liner configuration. The circuit will continue to operate 24 hours a day (2 shifts) with a typical availability of 80%.

At 1.2 Mtpa, an additional 3 MW ball mill and cyclone cluster will be required prior to the existing ball mill. The two mills will operate in series with the primary (new) mill reducing particle size to a P80 250 µm at the mill discharge and the secondary (existing) mill further reducing the particle size to a P80 of 75 µm.

Both mills will operate in closed circuit with a cyclone cluster. The primary mill will require a new cyclone cluster with four 400 mm cyclones installed. The cyclone underflow from the first mill will return to the primary mill feed while the overflow will discharge into the secondary mill feed. An additional pump will be required to feed the primary ball mill cyclone. The secondary mill cyclone cluster will have an additional two 250 mm cyclones added to the existing eight slot cyclone cluster installed upfront for a total of 7 operating and 1 standby.

Additional leach and adsorption volume is required for an 8-hour (leach) and 24-hour (adsorption) residence time requirements. This is achieved by adding four larger tanks (970 m<sup>3</sup> each) at the front of the leach/adsorption tank train. Two of the tanks are for leaching of the entire plant throughput in series while the other two become common adsorption tanks 1 and 2 for the entire flow.

An acid wash hopper is required to allow for the elution circuit to run two stripping cycles per day. No changes are required with the regeneration kiln sized to process 2 tonnes of carbon in 10 hours. A second, identical electrowinning circuit will be added for the expansion case. This will include additional electro-winning cells and associated tanks and pumps. The drying oven and furnace will require no modifications. Initial capital costs allow for installation of a 110 m<sup>3</sup> capacity storage tank for cyanide, which is the required volume for the future increased tonnage. Total expansion capital is estimated at \$16M inclusive EPCM and +15% contingency.

## **METALLURGY**

CPC Engineering evaluated metallurgical testwork data from the 2009 PFS as well as historical comminution testwork results and operating data to develop the flowsheet, the design, and costing of the proposed process plant. A number of metallurgical test programmes were conducted on behalf of the project's previous owner Navigator by metallurgical laboratory AMMTEC under the supervision of independent Perth-based metallurgical consultants.

Previous mining operators Triton Resources, Harbour Lights Mining, Ashton Gold and Sons of Gwalia also undertook detailed metallurgical testwork. Additional detailed metallurgical variability testwork and process design studies will be undertaken in the Feasibility Study. Pilot scale processing plant trials were undertaken using gold bearing resources from the Bruno and Mertondale deposits in 2010 through the Sons of Gwalia mill, with excellent recoveries achieved. In June 2016, Kin undertook a pilot plant scale test on the Lewis resources through the Lakewood toll treating CIL facility in Kalgoorlie.

The LGP Mineral Resources are predominantly oxide and are generally soft with respect to the Bond ball mill work index with the exception of primary fresh material in the Mertondale area. The PFS estimates an overall average LOM metallurgical recovery of 92%. The metallurgical testwork in the oxide zones at Mertondale, Cardinia and Raeside indicate high (+96%) metallurgical recoveries.

Metallurgical recoveries by previous mine operators and independent consultants AMMTEC on deeper fresh material have been estimated at 80.2% (Mertondale 3\_4), 80% (Mertondale 5) and 87.4% (Merton's Reward). The lower recoveries are believed to be due to higher sulphide content with the fine gold associated with pyrite and arsenopyrite.

Further metallurgical and mineralogical evaluation of the Mertondale fresh material will be undertaken during the Feasibility Study including additional variability, fine grinding and flotation testwork as options to improve recovery.

## **TAILINGS STORAGE FACILITY (TSF)**

Kin engaged Perth-based SRK Consultants to undertake a PFS design of the LGP tailings disposal system. The TSF design assumes conventional wet tailings deposition in 3 stages. Stage 1 requires deposition into the existing Bruno Pit adjacent to the mill. Stage 2 allows deposition into an adjacent completed pits and Stage 3 deposition into an above ground facility. Water recovery will be from in-pit pontoons. A system of monitoring bores are planned to be installed around the TSF. As part of the mining cycle, waste material from the open pit mines at Bruno-Lewis is planned to be used to construct the TSF embankment walls. Costs for the annual embankment lifts have been allowed for in sustaining capital. Further geotechnical stability assessments will be undertaken in the FS.

## **POWER SUPPLY**

The total power demand for the 750kpa processing facility and site infrastructure is expected to be approximately 4.4 MW. For the plant expansion, installed power is expected to increase by an additional 3.8MW to total installed power of 8.2MW.

The power station will be established on a Build Own Operate basis by third-party providers with a lease agreement in place to purchase the power required by site. The proposed lease agreement will have the ownership of the power station maintained by the vendor, who will also remain responsible for the ongoing major maintenance. The site personnel will carry out daily operational interface activities, equipment checks and minor maintenance.

## **WATER SUPPLY**

The PFS is based on sourcing of all water required for the project from known underground aquifers. A water supply and management strategy (2009 PFS) was undertaken by Hydrology consultants Rockwater in 2009 and has been reviewed in 2016 based on the new mill and TSF location at Cardinia. The study investigated the process water requirements and assessed the supply from known bores in the Cardinia area. A further more detailed assessment is planned for the FS.

Two water ponds will be constructed to facilitate the needs of the process plant. The raw water pond will be supplied from a borefield arrangement and will feed the potable water treatment plant, gravity circuit and firewater system. The process water pond will receive decant return water from the tailings storage facility. An allowance has been made to top-up the process water pond with raw water if required during periods of low decant return. The potable water plant is sized to sufficiently supply water to the elution circuit, camp and for ablutions on site. The potable water storage tank has sufficient capacity for the short periods of time when a higher flow is required for the elution circuit, filling up slowly between elution batch operations.

## **ROADS & TRANSPORT**

The national road between mining centres Kalgoorlie and Leonora forms the backbone of all road transportation in the area. Access to the proposed plant and camp site from the town of Leonora is by a sealed highway (Leonora Laverton Rd), followed by about 25km of existing gravel haul road, which is held under a miscellaneous licence by the company. A capital cost has been allocated for the construction of new gravel haul road between Mertons Reward and the mill at Cardinia.

The study has assumed that the Leonora airstrip will be used for the operation. A commercial charter will transport employees and contractors.

## **VILLAGE ACCOMMODATION**

A 60-person accommodation village is planned to be established on site at Cardinia near the processing plant. The camp will be setup initially for the construction of the processing plant followed by an expansion once mining reaches steady-state production. The cost of running the camp and associated infrastructure has been included in the General & Administration operating costs. An estimated 20% of the workforce is assumed to be residential in the township of Leonora.



## PERMITTING & APPROVALS

All resources within the Production Target are on located on granted Mining Leases. Kin has engaged the environmental consultants (MWH) who undertook the 2009 PFS to coordinate the statutory approvals process.

There are no active Native Title claims over the operational area. Former Native Title claimants over the area have been consulted and this resulted in heritage surveys being conducted over areas potentially impacted by a project development with no adverse findings. While some of the permits are yet to be received (or applied for) there are reasonable grounds to expect that this will not negatively impact the development timetable for the project.

## ENVIRONMENTAL STUDIES

All environmental fauna, flora and stygofauna impact assessments were successfully completed previously by MWH in 2009; however, some areas of land disturbance which lie outside of the original 2009 assessments are planned to be updated in the Feasibility Study. MWH has advised that all baseline environmental assessments have been completed and sufficient information exists for the PFS.

## CAPITAL EXPENDITURE

CPC Engineering has derived the processing capital cost estimate ( $\pm 25\%$  nominal accuracy) to provide current costs suitable for use in assessing the economics of the project and to provide the initial estimates of capital expenditure. The estimated LOM project capital cost is \$56.7 million, inclusive of \$6.4 million of contingencies as summarized in Table 4.

The processing capital cost estimate is based upon an EPCM approach and has been prepared to a level equivalent to that of a Pre-Feasibility Study. Capital costs do not include a mining fleet as the study is based on a contractor scenario.

**Table 4. LOM Capital Cost Estimate Summary**

Description	Subtotal (\$M)	Contingency (\$M)	Total (\$M)
Process Plant (EPCM, Direct and Indirect costs & first fill)	23.2	3.5	26.7
Infrastructure (TSF, Camp, Roads)	3.5	0.5	4.0
Owners Cost (Pre-production)	2.0	0.3	2.3
Process Plant Expansion (EPCM, Direct, Indirect costs & first fill)	13.9	2.1	16.0
<b>Sub-Total</b>	<b>42.6</b>	<b>6.4</b>	<b>49.0</b>
Contractor (pre-production & demobilisation)			1.9
Sustaining			2.8
Rehabilitation			3.0
<b>Sub-Total</b>			<b>7.7</b>
<b>TOTAL</b>	<b>42.6</b>	<b>6.4</b>	<b>56.7</b>

## OPERATING EXPENDITURE

CPC Engineering calculated the processing operating costs based on different material types. For the purpose of the PFS, the costs were estimated from first principles and used the historical reagent consumption data and pilot plant scale trials to assist in validating the operating cost model. The combination of soft oxide material in the production profile, low reagent consumption, high throughput rates and high oxide metallurgical recovery resulted in a low estimated process operating cost on a per ounce basis. Over the LOM the average AISC is A\$1,084 ( $\pm$  25% nominal accuracy). The operating costs over the LOM are summarized in Table 5.

**Table 5. Operating LOM Cost Estimate**

Item	LOM Cost \$M	LOM Cost /t	LOM Cost /oz
Mining	137.5	20.32	445
Processing	143.1	21.16	464
General & Administration	34.4	5.09	112
Sustaining Capital	2.8	0.41	9
Refining Charges	0.9	0.14	3
Royalties (State and Project)	15.8	2.31	51
<b>Total</b>	<b>334.5</b>	<b>49.4</b>	<b>1,084</b>

Rounding errors may occur.

## Economic Evaluation & Sensitivity

The first phase of the project (Year 0) comprises construction of infrastructure and construction and commissioning of the plant. Years 1-7 comprise an estimated 6.5 years of production. The financial assessment is based on A\$1,600/oz gold price (the past 3-years' approximate average A\$/oz gold price).

**Table 6. Economic Evaluation**

	Unit	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	LOM
Capital Costs	\$M		0.4	0.4	16.4	1.1	1.1	1.1	1.5	<b>22.1</b>
Pre-Production Capital	\$M	34.6								<b>34.6</b>
Tonnes Milled	(Mt)		0.75	0.75	1.2	1.2	1.2	1.2	0.5	<b>6.8</b>
Head Grade	(g/t)		1.92	2.08	1.53	1.51	1.45	1.36	0.94	<b>1.54</b>
Ounces Produced	(oz,000)		43	45	52	52	52	50	15	<b>309</b>
Operating Costs	\$M		44	45.3	53.6	54.4	53.0	52	12.7	<b>315</b>
Revenue	\$M		69	71.9	83.2	82.5	82.8	80.5	23.8	<b>494</b>
AISC	\$/oz		1,084	1,074	1,091	1,119	1,082	1,099	922	<b>1,084</b>
Undiscounted Cashflow	\$M	-34.6	22.3	23.6	10.5	24.0	26.1	24.5	9.0	<b>105.4</b>
Discounted Cashflow (8%)	\$M	-34.6	20.6	20.2	8.3	17.7	17.7	15.4	5.3	<b>70.7</b>

Rounding errors may occur.

At the base case gold price of A\$1,600/oz (US\$1,200/oz and a USD:AUD exchange rate of 75c) and using an 8% discount rate, the project generates a discounted cashflow of A\$70.7M, an IRR of 58% with a payback period of approximately 18 months from first gold pour. The project is viable and robust at a wide range of gold price scenarios. Table 7 provides a sensitivity analysis demonstrating the forecast economics under a

range of future gold price scenarios.

**Table 7. Economic Evaluation Sensitivity (Indicated & Inferred Mineral Resources)**

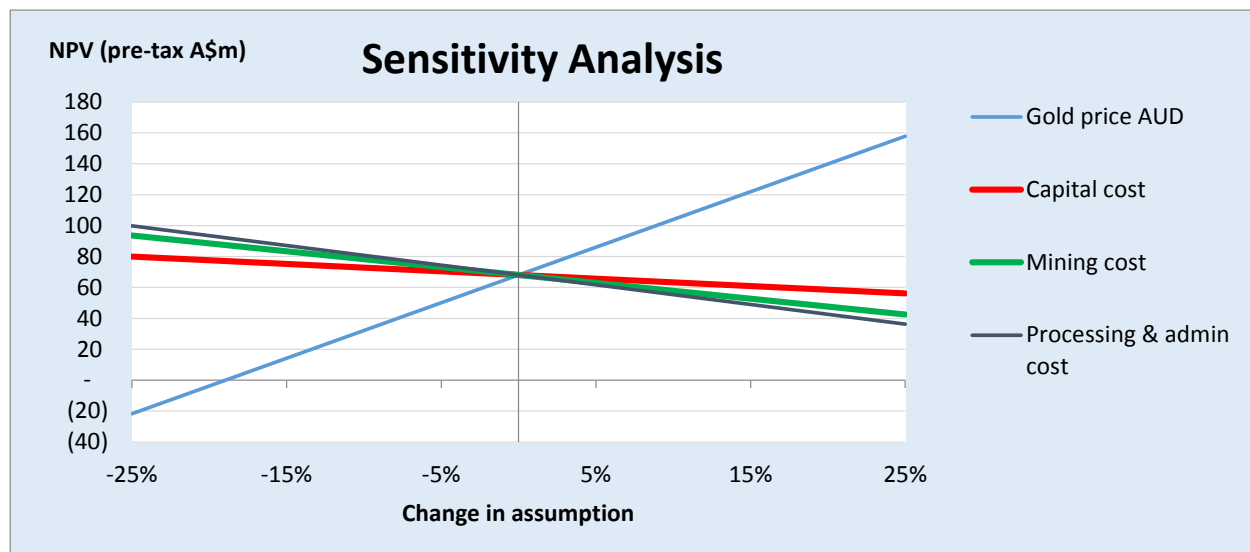
Gold Price (A\$/oz)	Cumulative Cashflow (\$M)	NPV (A\$M) based on	IRR	Payback Months	US\$/oz Price (75c FX)
		8% discount rate			
\$2,000	226	162	112%	10.5	\$1,500
\$1,800	165	116	86%	13.4	\$1,350
\$1,700	135	93	72%	15.4	\$1,275
<b>\$1,600</b>	<b>105</b>	<b>71</b>	<b>58%</b>	<b>18.2</b>	<b>\$1,200</b>
\$1,500	75	48	43%	22.3	\$1,125
\$1,400	45	25	28%	40.7	\$1,050
\$1,333	25	10	16%	51.8	\$1,000

Table 8 provides an indication of LGP viability if all Inferred Mineral Resources contained in the Production Target was set to waste with no change in pit design. The LGP is still viable. Typically, the pits would be optimised on Indicated Mineral Resources only which would significantly increase viability.

**Table 8. Economic Evaluation Sensitivity (Indicated Mineral Resources only)**

Gold Price (A\$/oz)	Cumulative Cashflow (\$M)	NPV (A\$M) based on	IRR	Payback Months	US\$/oz Price (75c FX)
		8% discount rate			
\$2,000	112	81	80%	13.9	\$1,500
\$1,800	71	49	56%	17.3	\$1,350
\$1,700	51	33	42%	19.9	\$1,275
<b>\$1,600</b>	<b>30</b>	<b>18</b>	<b>28%</b>	<b>23.4</b>	<b>\$1,200</b>
\$1,500	10	2	10%	34.9	\$1,125

**Figure 5. Sensitivity on Material Assumptions**



## ESTIMATED TIME TO PRODUCTION

Gold production in the PFS is assumed to commence by mid-CY2018. This estimate includes a 12-month construction and commissioning period for the new 750 ktpa treatment plant. A decision to mine is expected following the completion of a detailed Feasibility Study, expected by mid of CY2017. It is assumed that financing for the required capital, and the gaining of regulatory approvals to commence construction, will continue through the first half of CY2017.

	CY 2016		CY 2017				CY 2018		
Pre-Feasibility Study									
Resource Drilling									
Feasibility Study									
Plant Construction									
Gold Production									

## FINANCING

Prior to a decision to proceed with construction, the LGP has an estimated pre-production project capital requirement of \$34.6 million. Kin will be required to raise capital to construct the LGP. The Company has received strong interest from project financing groups indicating that, subject to the successful completion of a Feasibility Study delivering similar operating and financial results as that seen in the PFS, the LGP is likely to have a significant debt-carrying capacity. The Company has also received substantial interest from equity market participants and has formed the view that there are reasonable grounds to assume that a combination of debt and equity will likely be successfully raised and be sufficient to cover the estimated capital and working capital costs to develop the LGP and commence commercial gold production.

Kin has a simple ownership structure and clean capital structure which is expected to be attractive to potential equity investors and to provide flexibility for potential debt funding structures. The Company recently successfully completed an A\$5M capital raising which was well supported (refer to ASX announcement of 3 October 2016).

Non-Executive Chairman, Terry Grammar, is experienced in funding and developing such projects. Notably, Mr Grammar was a Non-Executive Director of Sirius Resources, which discovered and funded the initial development of the Nova Nickel Project, from 2010 - 2015.

There are sufficient funds in the Company to allow it to move directly into a feasibility study.

## GOING FORWARD

The PFS has outlined Kin's preferred treatment rate, mining schedule, capital costs, operating cost estimates, and infrastructure requirements to support the potential LGP Production Target. The PFS determined that the LGP appears to have strong financial and economic merit, while being technically low-risk.

In order to advance the LGP toward a completed Feasibility Study level, the following additional work programmes commenced in November 2016:

- Further drilling to potentially upgrade the Inferred Mineral Resources to the Indicated Mineral Resource category for areas of respective mine designs where Inferred Mineral Resources comprise part of the production schedule;
- Further detailed metallurgical testwork focusing on the deeper fresh material at Mertondale to improve metallurgical recoveries;
- Based on recent Trial Mining at Lewis, which resulted in a +26% reconciliation in ounces (ASX announcement 5 October 2016), the Company believes this could be specific gravity (SG) related and further confirmatory SG testwork needs be undertaken during the FS;

- Further geotechnical assessment is required for the deeper mines that comprise the LGP with the objective of optimizing mine designs. This PFS has completed preliminary geotechnical assessments on the potential open pits; and
- Complete and update previous environmental surveys and hydrological surveys completed in 2009.

There are clearly defined opportunities that may improve the economic and operational performance of the LGP as described in the PFS. During the Feasibility Study the Company will be evaluating opportunities to:

- Review the option of securing a good condition second-hand processing facility (ASX announcement 24 November 2016);
- Examine the potential for underground development at Merton's Reward linking Mertondale 3\_4, targeting high-grade material below the current pit designs;
- Assess contractor vs. owner operated mining fleet;
- Improve treatment recoveries for fresh Mertondale mineralisation; and
- Further optimize open pit designs

The Company also has three known prospects Gambier Lass, Hobby and Black Chief, (ASX announcement 31 October 2016) which have excellent potential to be converted into JORC 2012 Mineral Resources and to be included in the Feasibility Study.

The 35km long Mertondale-Cardinia greenstone belt system has excellent scope for strike and depth extensions. Large portions of the depth extensions of the Mertondale Shear still remain unexplored below 150m depth.

Kin plans to complete the Feasibility Study by mid-CY2017. Board approval will then be sought to commence construction.

## **FORWARD LOOKING STATEMENTS AND REASONABLE BASIS**

This release contains "forward-looking information" that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the pre-feasibility and feasibility studies, the Company's business strategy, plan, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral resources, results of exploration and relations expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions.

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information. Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to the risk factors set out in the Company's Prospectus dated 15 August 2012. This list is not exhaustive of the factors that may affect our forward-looking information. These and other factors should be considered carefully and readers should not place undue reliance on such forward-looking information. The Company disclaims any intent or obligations to or revise any forward-looking statements whether as a result of new information, estimates, or options, future events or results or otherwise, unless required to do so by law.

Statements regarding plans with respect to the Company's mineral properties may contain forward-looking statements in relation to future matters that can be only made where the Company has a reasonable basis for making those statements.



This announcement has been prepared in compliance with the JORC Code 2012 Edition and the current ASX Listing Rules.

The Company believes that it has a reasonable basis for making the forward-looking statements in this announcement, including with respect to any mining of mineralised material, modifying factors and production targets and financial forecasts. The following information is specially provided in support of this belief:

- a) In relation to Mineral resources, the Lewis Indicated Mineral Resource has been depleted by 9990z in June 2016 as part of the Lewis Trial Mining programme (ASX announcement 15 October 2016) and the Competent Person confirms that all material assumptions and technical parameters that underpin the relevant market announcement continue to apply and to their knowledge have not materially changed.
- b) This 2016 Pre-Feasibility Study has used information from the 2009 Pre-Feasibility (ASX announcement by NAV, 25 March 2009) and has been managed by Mr Don Harper, Chief Executive Officer for Kin Mining NL with contributions from a number of experienced independent technical consultants. As is normal for this type of study, the Pre-Feasibility Study has been prepared to an overall level of accuracy of approximately  $\pm 25\%$ .
- c) The Company has a Production Target of 6.8 Mt at 1.5 g/t gold for 309koz gold recovered of which 82% in the first 2 years of the project and 64% of the LOM Production Target is in the Indicated Mineral Resource category under the JORC Code 2012.
- d) Kin has commenced an infill drilling programme at the Leonora Gold Project. This programme has been designed to potentially convert Inferred Mineral Resources material to the higher confidence Indicated Mineral Resource category for the Feasibility Study.
- e) Mr Don Harper is a Fellow of AusIMM, holds a B.Surv and B.Eng (Mining Engineering), and graduated from the Western Australian School of Mines (Curtin University). Mr Harper is an employee of Kin Mining NL. Mr Harper was responsible for the study management of the 2016 PFS.
- f) CPC engineering prepared the process flowsheet based on the metallurgical test work (Navigator PFS 2009), Pilot scale tests (2010 and 2016), and detailed historical testwork and production data carried out by previous mine operators.
- g) The mine planning and scheduling for the project were undertaken by independent mining firm AMC Consultants Pty Ltd.
- h) Mining and Processing operating costs were derived from quotations from suppliers and contractors. The information in this announcement that related to process plant capital and operating cost estimated is based on information compiled or reviewed by Mr Drew Noble of CPC Engineering who has over 20 years' experience and has sufficient experience to advise Kin on matters relating to capital and operating process costs.
- i) Geotechnical Engineering consultants Peter O'Bryan utilised earlier reports completed by Dempers & Seymour (2009), an industry recognised firm who specialised in geotechnical studies and work. Additional reviews were subsequently carried out by Peter O'Bryan and Associates (PBA) in 2016. PBA geotechnical engineer Mr Emmanuel Deligeorges has visited all the mining areas. In addition, Mr Scott Campbell of PBA has also relevant experience with the Mertondale pits.
- j) Tailing storage facility options analysis and cost estimated associated with the Study was undertaken by SRK (Perth).
- k) The Kin Board is confident there is a good possibility that it will continue to increase mineral resources at the LGP through exploration to extend the mine life beyond what is currently assumed in the study.
- l) The LGP's positive technical and economic fundamentals provide the basis for Kin Mining NL to advance discussions with traditional debt and equity finance groups.

## PROJECT RISKS

Key risks identified during the PFS work include, but are not limited to:

- Access to project funding;
- Timely Project approvals from Government Authorities;
- Conversion of existing Inferred Mineral Resources to Indicated Mineral Resources;
- Adverse movements in the Australian gold price;
- Adverse movements in USD: AUD exchange rates;

### Competent Persons Statement (Mineral Resources)

The information in this report that relates to mineral resources and exploration results at Cardinia is based on information reviewed and compiled by Mr Simon Buswell-Smith who is a Member of the Australian Institute of Geoscientists (MAIG). Mr Buswell-Smith 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 Buswell-Smith has given consent to the inclusion in the report of the matters based on his information in the context in which it appears.

The information in this report that relates to mineral resources and exploration results at Mertondale and Raeside is based on information reviewed and compiled by Mr Terry Topping who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Topping is a contracted employee to Kin Mining NL and 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 Topping has given consent to the inclusion in the report of the matters based on his information in the context in which it appears.

The LGP Mineral Resources (JORC 2004) at Cardinia have been estimated by Runge Limited. The LGP Mineral Resources (JORC 2004) at Mertondale and Raeside have been estimated by McDonald & Speijers. The LGP Mineral Resources have been reported under the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves (see KIN-ASX announcement 11 May 2015 titled: Leonora Gold Project Resource ). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimate in the relevant market announcement continue to apply and have not materially changed with the exception of 999oz depleted from the Lewis Indicated Mineral Resource; this depletion has been allowed for in the Production Target. The Company confirms that the form and context in which the Competent Person's findings are presented have not materially modified from the original market announcements.

The LGP 2012 JORC Resources which formed the basis for the Preliminary Feasibility Study are classified as Indicated and Inferred and as a result, are not sufficiently defined to allow conversion to an ore reserve over all the Indicated Mineral Resources at this time. The financial analysis in the Preliminary Feasibility

Study is conceptual in nature and should not be used as a guide for investment. It is uncertain if additional exploration will allow conversion of the Inferred Resource to a higher confidence Resource (Indicated or Measured) and hence if an increase in Resources or Reserves could be determined for the project in the future. Production targets referred to in the Preliminary Feasibility Study and in this report, are conceptual in nature and include areas where there has been insufficient exploration to define an Indicated Mineral Resource. There is a lower level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

### Competent Persons Statement (Production Target)

Information in this announcement relating to the Leonora Gold Project (LGP Pre-Feasibility Study) and Production Target is based on technical data compiled by Kin Mining NL Chief Executive Officer Mr Don Harper. Mr Harper is a Fellow of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Harper has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which they are undertaking to qualify as a Competent Persons under the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Harper consents to the inclusion of the technical data in the form and context in which it appears.

**For further information, please contact:**

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**About Kin Mining NL**

**Kin Mining (ASX: KIN)** is an emerging gold development company with a significant tenement portfolio in the North Eastern Goldfields of Western Australia. Through exploration success and selective acquisition, the Company aims to become a profitable, high-margin Australian gold producer. The Company has completed a Pre-Feasibility Study (PFS) at its flagship Leonora Gold Project through its 100% owned subsidiary Navigator Mining Pty Ltd, containing a JORC resource of 721 koz Au. The Company is now progressing towards the Feasibility Study stage.

Kin's exploration is targeting near-mine and other prospects within the transport corridor linking further discoveries to a proposed independent processing plant located at the Leonora Gold Project.

**Directors:**

Terry Grammer  
 Chairman

Trevor Dixon  
 Executive Director

Fritz Fitton  
 Technical Director

Joe Graziano  
 Non-Exec Director & Co. Sec.

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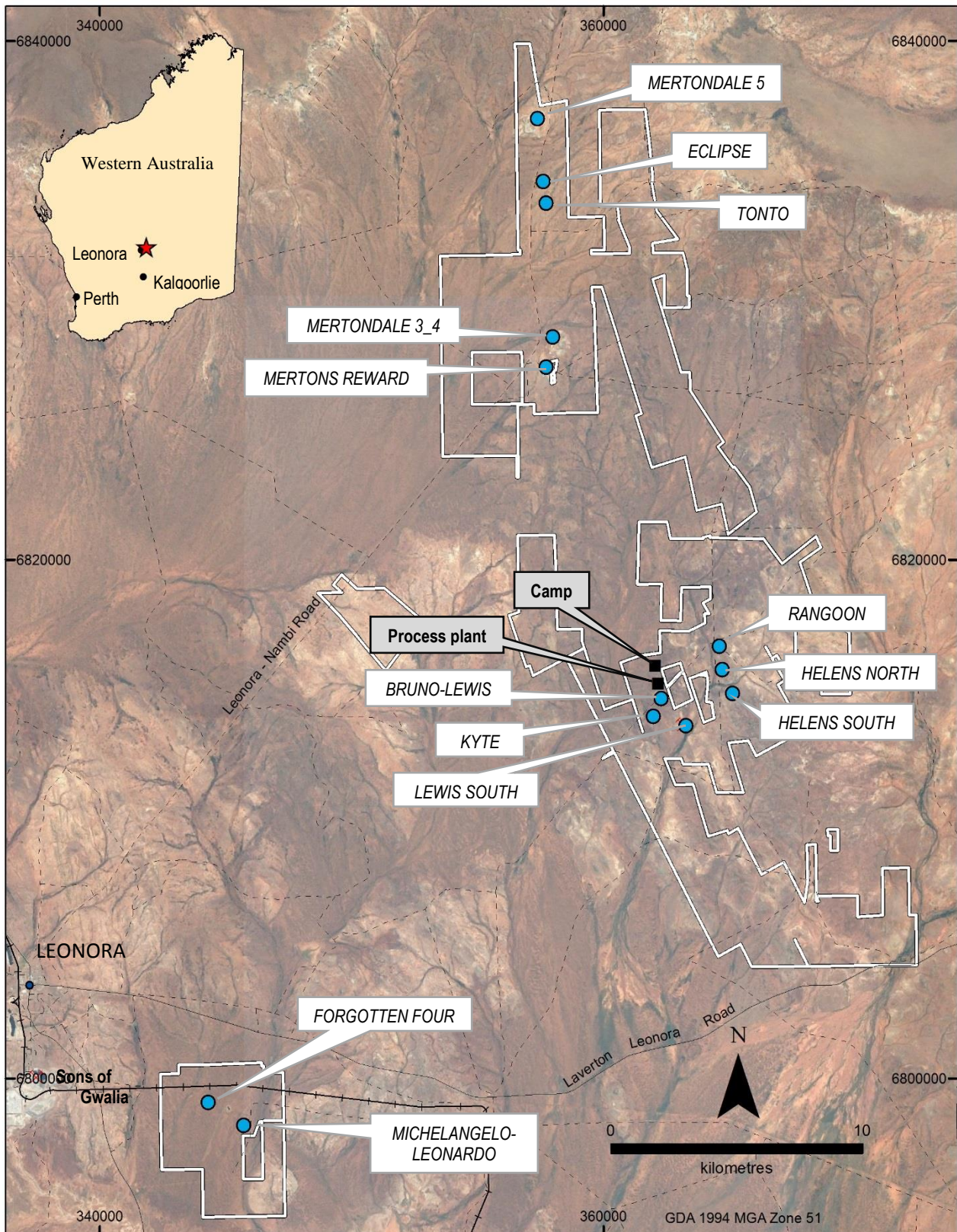
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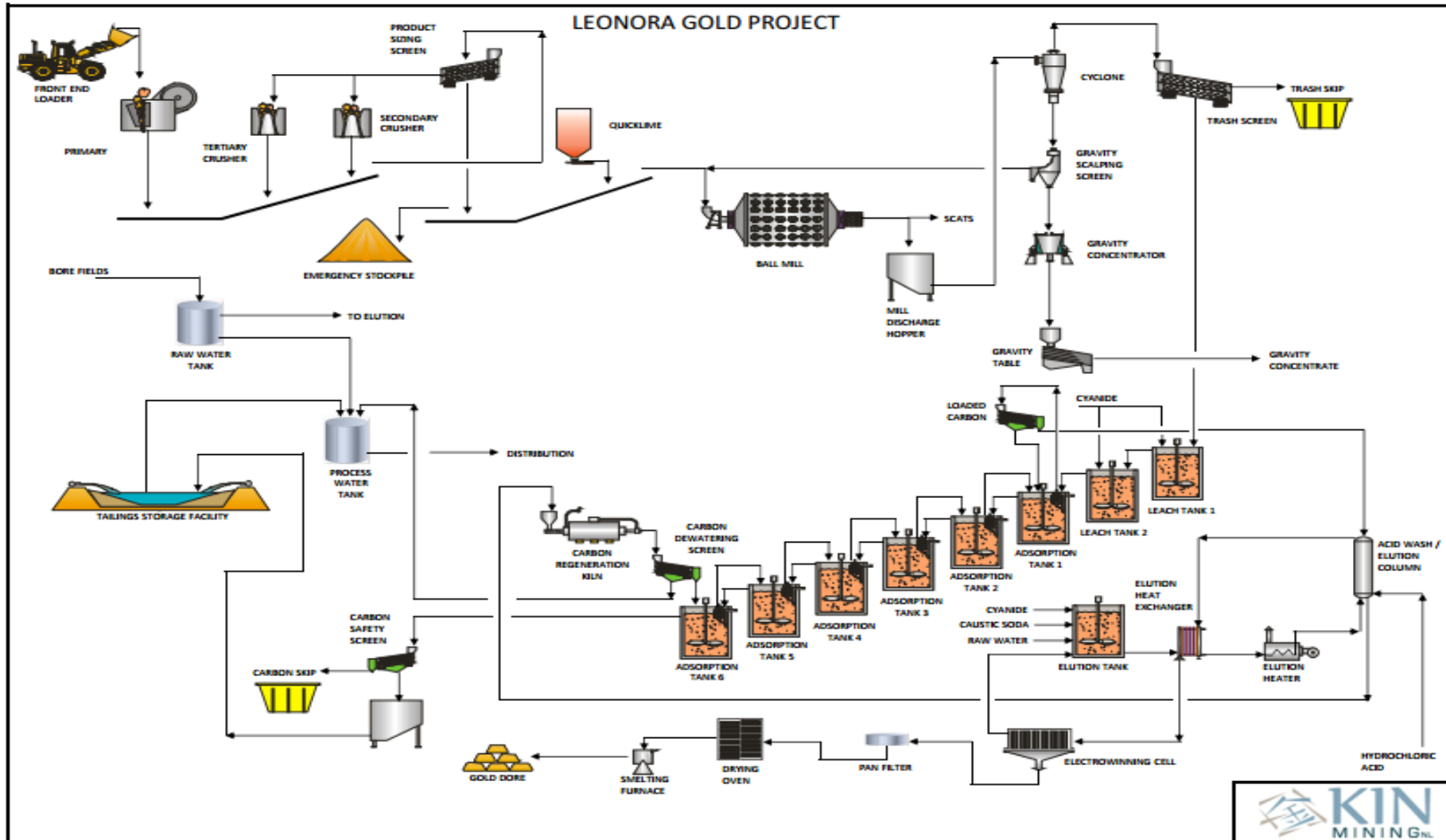
**SHARES on Issue:** 114,060,309  
**Unlisted Options:** 13,445,000



## Appendix 1. Leonora Gold Project Mining Locations



## Appendix 2. Process Plant Flowsheet





## **ANNEXURE A:**

### **Material Assumptions used in the LGP Pre-Feasibility Study**

(Template based on JORC Table 1, Section 4 of the JORC Code 2012)

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<i>Mineral Resource estimate used for assessment of potential Mining Inventory for LGP Pre-Feasibility Study</i>	<ul style="list-style-type: none"> <li><i>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</i></li> <li><i>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</i></li> </ul>	<p>No Ore Reserves are estimated as part of the LGP PFS. For the purpose of the PFS, the following Resource Estimates have been used:</p> <ul style="list-style-type: none"> <li>Mertondale 5:</li> <li>Mertons Reward</li> <li>Mertondale 3/4</li> <li>Tonto</li> <li>Eclipse (Tonto North)</li> <li>Michelangelo-Leonardo</li> <li>Forgotten Four</li> <li>Bruno-Lewis-Kyte</li> <li>Lewis South</li> <li>Helens-Rangoon</li> </ul> <p>The Mineral Resource estimates in the LGP are reported in ASX announcement dated 11 May 2015 (Kin Mining NL) and outlined Annexure B.</p>
<i>Site visits</i>	<ul style="list-style-type: none"> <li><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li><i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>The following persons have provided consent and input to the Pre-Feasibility Study:           <ul style="list-style-type: none"> <li><b>Mr Don Harper</b> (Kin Mining NL) – Mr Harper has visited the site and understands the detail associated with the site. Mr Harper is a Mining Engineer by profession and is the Chief Executive Officer for Kin Mining NL. Mr Harper is the designated Competent Person under the code.</li> <li><b>Mr Peter de Broekert</b> (RockwaterPty Ltd) – Mr de Broekert is the Principal Hydrogeologist who has coordinated the groundwater and surface water assessments previously at the LGP. Mr Broekert has previously visited the site and understands the detail associated with the site.</li> <li><b>Mr Peter O'Bryan</b> (Peter O'Bryan &amp; Associates Pty Ltd) – Mr O'Bryan is the Principal Consultant who has overseen the preliminary geotechnical review of previous studies carried out by Dempers &amp; Seymour. Mr O'Bryan has only visited the Cardinia sites. Mr O'Bryans associate Mr Emmanuel Deligeorges has been to site and has visited all mining areas and understands the detail associated with the site.</li> <li><b>Mr Ivan Komyschan</b> (AMC Consultants Pty Ltd) – Mr Komyschan is a Mining Engineer who has coordinated the mine design and financial modelling work associated with the LGP. AMC Consultants Pty Ltd was engaged as an independent consultant by Kin to assist with the Pre-Feasibility Study. Mr Komyschan has not visited site. He is familiar with the regional location.</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Drew Noble</b> (CPC Engineering Pty Ltd) – Mr Noble is the Process Engineering Manager and who has coordinated the capital and operating cost estimate for the processing facility. Mr Noble has not visited the site and has completed work based on information provided by Kin.</li> <li>• <b>Mr Peter de San Miguel</b> (MWH Pty Ltd) – Mr de San Miguel is the Approvals and Environmental Management Lead who has coordinated the environmental and approvals process. Mr de San Miguel has been to site and understands the detail associated with the site.</li> </ul>
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Criteria	JORC Code explanation	Commentary
<b>Study status</b>	<ul style="list-style-type: none"> <li>• <i>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</i></li> <li>• <i>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered</i></li> </ul>	<ul style="list-style-type: none"> <li>• Kin has been working with its technical advisors to prepare a Pre-Feasibility Study for the LGP. All components of the study are completed. The results of the study indicate that the LGP mine plan is technically achievable and economically viable.</li> <li>• The type and level of study is Pre-Feasibility Study as defined in Clause 39 of the JORC Code, 2012 Edition.</li> <li>• Modifying Factors based on information currently available have been applied to the Pre-Feasibility Study Production Target.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• <i>The basis of the cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Cut-off grades (COGs), expressed as grams per tonne of gold (g/t Au) were determined by dividing the estimated operating cost per tonne of ore treated by the revenue per gram of gold produced.</li> <li>• The following inputs were used to estimate revenue per gram of gold produced:             <ul style="list-style-type: none"> <li>• Gold price: A\$1,575/oz (Whittle optimizations)</li> </ul> </li> </ul> <p>MERTONDALE 5:</p> <ul style="list-style-type: none"> <li>• Metallurgical recovery by CIL treatment:             <ul style="list-style-type: none"> <li>• Oxide: 96%</li> <li>• Transition: 90%</li> <li>• Fresh Above 384mRL: 90%</li> <li>• Fresh Below 384mRL: 80%</li> <li>• Cutoff grade applied: 0.7 g/t Au</li> </ul> </li> <li>• WA state royalty: 2.5% of revenue</li> <li>• Refining charges</li> <li>• Other tenement royalty \$1/t processed</li> </ul> <p>MERTONS REWARD:</p> <ul style="list-style-type: none"> <li>• Metallurgical recovery by CIL treatment:             <ul style="list-style-type: none"> <li>• Oxide: 95%</li> <li>• Transition: 90%</li> <li>• Fresh: 87.4%</li> <li>• Cutoff grade applied: 0.7 g/t Au</li> </ul> </li> <li>• WA state royalty: 2.5% of revenue</li> <li>• Refining charges</li> <li>• Other tenement royalty \$1/t processed</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>MERTONDALE 3_4</p> <ul style="list-style-type: none"> <li>Metallurgical recovery by CIL treatment:               <ul style="list-style-type: none"> <li>Oxide: 96%</li> <li>Transition: 90%</li> <li>Fresh: 80%</li> <li>Cutoff grade applied: 0.7 g/t Au</li> </ul> </li> <li>WA state royalty: 2.5% of revenue</li> <li>Refining charges</li> <li>Other tenement royalty \$1/t processed</li> </ul> <p>TONTO:</p> <ul style="list-style-type: none"> <li>Metallurgical recovery by CIL treatment:               <ul style="list-style-type: none"> <li>Oxide: 96%</li> <li>Cutoff grade applied: 0.7 g/t Au</li> </ul> </li> <li>WA state royalty: 2.5% of revenue</li> <li>Refining charges</li> <li>Other tenement royalty \$1/t processed</li> </ul> <p>ECLIPSE (TONTO NORTH):</p> <ul style="list-style-type: none"> <li>Metallurgical recovery by CIL treatment:               <ul style="list-style-type: none"> <li>Oxide: 96%</li> <li>Cutoff grade applied: 0.7 g/t Au</li> </ul> </li> <li>WA state royalty: 2.5% of revenue</li> <li>Refining charges</li> <li>Other tenement royalty \$1/t processed</li> </ul> <p>MICHELANGELO-LEONARDO:</p> <ul style="list-style-type: none"> <li>Metallurgical recovery by CIL treatment:               <ul style="list-style-type: none"> <li>Oxide: 96%</li> <li>Trans:93%</li> <li>Fresh:90%</li> <li>Cutoff grade applied: 0.7 g/t Au</li> </ul> </li> <li>WA state royalty: 2.5% of revenue</li> <li>Refining charges</li> <li>Other tenement royalty \$1/t processed</li> </ul> <p>FORGOTTEN FOUR:</p> <ul style="list-style-type: none"> <li>Metallurgical recovery by CIL treatment:               <ul style="list-style-type: none"> <li>Oxide: 95%</li> <li>Trans:92.5%</li> <li>Fresh:92.5%</li> <li>Cutoff grade applied: 0.7 g/t Au</li> </ul> </li> <li>WA state royalty: 2.5% of revenue</li> <li>Refining charges</li> </ul> <p>BRUNO-LEWIS-KYTE (Topcut 30 g/t)</p> <ul style="list-style-type: none"> <li>Metallurgical recovery by CIL treatment:               <ul style="list-style-type: none"> <li>Oxide: 96%</li> <li>Cutoff grade applied: 0.6 g/t Au</li> </ul> </li> <li>WA state royalty: 2.5% of revenue</li> <li>Refining charges</li> </ul> <p>LEWIS SOUTH:</p> <ul style="list-style-type: none"> <li>Metallurgical recovery by CIL treatment:               <ul style="list-style-type: none"> <li>Oxide: 96%</li> <li>Cutoff grade applied: 0.6 g/t Au</li> </ul> </li> <li>WA state royalty: 2.5% of revenue</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Refining charges</li> </ul> <b>HELENS-RANGOON:</b> <ul style="list-style-type: none"> <li>Metallurgical recovery by CIL treatment:               <ul style="list-style-type: none"> <li>Oxide: 96%</li> <li>Trans: 91%</li> <li>Cutoff grade applied: 0.6 g/t Au</li> </ul> </li> <li>WA state royalty: 2.5% of revenue</li> <li>Refining charges</li> </ul> <p>The following inputs were used to estimate operating cost per tonne of ore treated, for all potential open pit mines:</p> <ul style="list-style-type: none"> <li>Mining Costs</li> <li>Surface haulage cost</li> <li>Processing cost</li> <li>Grade control cost</li> <li>General &amp; Administration costs</li> <li>Royalties</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li><i>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design)</i></li> <li><i>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</i></li> <li><i>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc.), grade control and pre-production drilling.</i></li> </ul>	<ul style="list-style-type: none"> <li>For all Open Pit Mining production target estimations: A range of pit shells were generated by application of pit optimisation software (Whittle) to the Mineral Resource block models. Pit shells to be used as the basis for pit design were selected by considering NPV, contained gold and estimated cost per ounce of gold produced. The optimisations have been used to identify ultimate pit dimensions and pit stages. PFS Target production has been based on detailed open pit designs. All detailed pit designs and scheduling has been completed by AMC Consultants Pty Ltd.</li> <li>The mining method that is applied to the LGP operations is conventional drill &amp; blast, load and haul open pit mining methods in line with the historical mining methods. These methods are the same as many other similar operations within the West Australian Goldfields. The mining equipment applied to the operation is sized to produce safe, efficient and productive mining. A medium sized mining fleet has been selected to maintain single ramp access with passing bays to reduce the strip ratio.</li> <li>Geotechnical considerations: geotechnical studies were previously completed in 2009 by Dempers &amp; Seymour on behalf of previous owners of the LGP -Navigator Resources. The PFS also incorporates geotechnical reviews by Peter O'Bryan &amp; Associates who have sufficient data from other areas to have adequate understanding of the sites. This is confirmed by Mr Emmanuel Deligeorges having visited all the mining areas. Mr Scott Campbell of Peter O'Bryan &amp; associates has had relevant experience with the Mertondale pits. Mr O'Bryan only visited the Cardinia sites. He has broad experience in open pit mining in the general Leonora area and recommended wall design parameters for the Pre-Feasibility Study. The information used for the geotechnical guidance included reviewing previously mined pits</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</i></li> <li><i>The mining dilution factors used.</i></li> <li><i>The mining recovery factors used.</i></li> <li><i>Any minimum mining widths used.</i></li> </ul>	<p>and the Lewis trial oxide pit completed in July 2016. The information used for the geotechnical study included current geological interpretations; review of the open pit site areas; review of selected diamond drill core photos and core in the Leonora Core Farm. Further detailed geotechnical work is planned as the study progresses to FS.</p> <ul style="list-style-type: none"> <li>The Mineral Resource used was completed by McDonald Spiegers in 2009 and reported to the ASX under JORC 2012 criteria on 11 May 2015 were for Mertondale 5, Mertons Reward, Mertondale 3/4, Tonto and Michelangelo, Leonardo, Forgotten Four and Eclipse</li> <li>Tonnage and grade estimates were achieved by Recovered Fraction (RF) block modelling. This technique is a probabilistic one that estimates the volumetric proportion of each block likely to be above a particular cutoff grade and estimates the average grade of that proportion.</li> <li>The method used to estimate the Production Target is the recoverable fraction method. This involves firstly running an Intersection Selection process within an approximately 0.2 g/t Au envelope with the following parameters used for the diluted model:             <ol style="list-style-type: none"> <li>Cut-off grade of 0.7 g/t</li> <li>Minimum mining excavation width of 2 m</li> <li>Ore loss of 0.2 m at the top and bottom edges of the intersection for oxide</li> <li>Ore loss of 0.3 m at the top and bottom edges of the intersection for transition and fresh</li> <li>Edge dilution of 0.5 m at the top and bottom edges of the intersection for oxide</li> <li>Edge dilution of 0.8 m at the top and bottom edges of the intersection for transition and fresh</li> </ol> <p>An interpolation of the resulting fraction of the intersection greater than cut-off grade (<math>F_i</math>) and the resulting metal greater than cut-off grade (<math>M_i</math>) is then independently smoothed into blocks. The interpolated value <math>M_{int}</math> is then divided by the interpolated value <math>F_{int}</math> to produce the interpolated block grade. The interpolated value <math>F_{int}</math> gives the proportion of block above the cut-off grade.</p> <p>For the undiluted case no dilution or ore loss are applied.</p> <p>In the models used to produce the Production Target in this study, further modification of the diluted Resource model has been applied. This is to reflect selective mining and small tonnages have been further diluted to take them to a minimum mining volume. As a result of this small parcels of ore have been further diluted to a minimum of 20 tonne parcels for oxide and 30 tonne parcels for transition and fresh material. This has resulted in a further dilution of approximately 2%.</p> </li> <li>Conventional block models were also generated (anisotropic, inverse distance cubed) as a check</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>parameter.</p> <ul style="list-style-type: none"> <li>Search radii parameters (dip, strike, cross-dip) were assigned for the following deposits: Merton's Reward (30x30x4 m), Mertondale 3/4 (60x60x4 m), Tonto (30x30x4 m), Eclipse (30x30x5 m), Mertondale 5 (70x35x4 m).</li> <li>Parent block sizes were 4 m X, 10 m Y and 4 m Z for all resources at Mertondale, minimum sub cells were 2 m X, 5 m Y, 1 m Z in all resource block models except for Merton's Reward were 1 m X, 2.5 m Y, 1 m Z was implemented. Block sizes are relative to drill density.</li> <li>The following bulk densities were used:               <ul style="list-style-type: none"> <li>Oxide: 2.0 tonnes/cubic metre.</li> <li>Transition: 2.2 tonnes/cubic metre.</li> <li>Fresh: 2.51 tonnes/cubic metre.</li> </ul>               These are based on SG measurements in the Mertondale area.             </li> </ul> <p>Mineral Resources completed by Runge Limited in 2009 and reported to the ASX under JORC 2012 criteria in 11 May 2015 relate to Bruno-Lewis, Lewis South, Kyte and Helens Rangoon.</p> <ul style="list-style-type: none"> <li>The grade control areas at Bruno-Lewis have been drilled on a close spaced grid (approximately 6 m x 6 m). A 0.1-0.2 g/t Au sectional interpretation was carried out and kriging was then used to smooth the data. In the smoothing process higher grade blocks would have had their grade lowered and lower grade blocks their grade lifted. The cut-off grade used (0.6 g/t Au) would have resulted in an ore loss for the higher grade blocks and a dilution addition as a result of the smoothing process, however, as the drilling is close spaced and the ore is predominately oxide material the dilution and ore loss in this process is expected to be adequate.</li> </ul> <p>In the models used in the PFS and to produce the Production Target in this study, the estimated blocks were regularised to an SMU size and this added a further 4% ore loss and dilution. This is not unrealistic given that the mining is to take place in oxide material.</p> <ul style="list-style-type: none"> <li>Search radii parameters (dip, strike, cross-dip) for Bruno-Lewis grade control areas was 20 m x 30 m x 40 m</li> <li>Parent block sizes for Bruno-Lewis grade control areas was 4 m x 2.5 m x 2.5 m</li> <li>The bulk density for oxide material is 1.8 tonnes/cubic metre. This is based on SG measurements in the Bruno-Lewis area.</li> </ul>
	<ul style="list-style-type: none"> <li><i>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</i></li> </ul>	<ul style="list-style-type: none"> <li>Inferred Mineral Resources have been included in the PFS pit optimisations and mining schedule. The viability of the Production Target is not dependent on inferred mineral resources to be economic. A sensitivity is shown Table 8 of this release.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Mertondale and Raeside Resource models have been modeled with a dilution and ore loss skin, no additional dilution or recovery factors have been applied.</li> <li>Bruno-Lewis, Lewis South, Kyte and Helens-Rangoon Resource models have been modeled with a dilution and ore loss resulting from the Ordinary Kriging method. An additional 4% dilution has been added through regularisation of blocks.</li> <li>A minimum mining width of 20 m was used to allow for existing open pit cut backs (where necessary) and turning circles.</li> <li>Indicated and Inferred Mineral Resource categories have been included in the mining study work. Indicated Mineral Resources were prioritised in the early years of the production schedule used in the LGP Pre-Feasibility Study ahead of scheduling Inferred Mineral Resources.</li> </ul>
	<ul style="list-style-type: none"> <li><i>The infrastructure requirements of the selected mining methods.</i></li> </ul>	<ul style="list-style-type: none"> <li>Apart from offices, workshops and explosives storage facilities there is not expected to be any specialized infrastructure required for the open pit mining method. These items have been included in the budget estimates provided by mining Contractors.</li> <li>Operational establishment, processing plant, camp, site and mine infrastructure, have been included in cashflow modelling.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li><i>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</i></li> <li><i>Whether the metallurgical process is well-tested technology or novel in nature.</i></li> <li><i>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</i></li> <li><i>Any assumptions or</i></li> </ul>	<ul style="list-style-type: none"> <li>The metallurgical process proposed is a conventional carbon-in-leach (CIL) process. The plant has been designed to be expanded from an initial 750 ktpa to 1.2 Mtpa in year 3. The metallurgical process proposed is a well-tested and proven technology.</li> <li>Metallurgical process data relating to each respective deposit has been determined by a review of historical production and laboratory testwork results ranging from 1987 -2009 and processing performance statistics by independent consultants CPC Engineering.</li> <li>The recoveries used for this Production Target statement are based on independent test work carried out by Ammtec Mineral Consultants and historical testwork carried out in 1989/90 and at Raeside May 1995.</li> <li>Metallurgical data reviewed shows that the proposed processing method is expected to produce excellent gold recovery in the oxide material. Lower recoveries will be experienced for transition and fresh material. The PFS Production Target delivered an overall average overall metallurgical mill recovery of 92%.</li> <li>Testwork recoveries of 87.4% (Mertons</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>allowances made for deleterious elements.</i>	<p>Reward), 80.2% (Mertondale 3/4) and 80% for Mertondale 5 were used in the financial model for fresh ore which showed at times lower recoveries due to higher sulphide content. Application of historical metallurgical test data is considered reasonable for Prefeasibility Study purposes.</p> <ul style="list-style-type: none"> <li>At Mertondale 5 preg robbing graphitic shales at depth are evident in fresh material. Testwork does not indicate any preg-robbing for oxide and transition ores.</li> </ul>
	<ul style="list-style-type: none"> <li><i>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</i></li> <li><i>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</i></li> </ul>	<ul style="list-style-type: none"> <li>Pilot scale testwork has been carried out at the Bruno pit in 2010 and toll treated through the Sons of Gwalia mill. Further pilot scale testwork was carried out in June 2016 where a 14,779t parcel of Lewis material was toll treated through the Lakewood mill in Kalgoorlie.</li> <li>Mineralogical testwork was carried out in 2009 by R Townsend.</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li><i>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</i></li> </ul>	<ul style="list-style-type: none"> <li>The LGP area is a brownfields site and as such there is not expected to be any environmental impacts of significance as a result of the proposed mining and processing operation. Previously disturbed areas will be preferentially used for establishing infrastructure where possible.</li> <li>All proposed mining areas lie within granted Mining Leases which in addition to adjoining Mining Leases offer ample area for infrastructure establishment.</li> <li>As a component of statutory approval and permitting applications it is expected that flora and fauna surveys as well as surface water and groundwater studies will be required to be updated for areas outside of previous surveys and will be completed during the Feasibility stage. This work is currently underway.</li> <li>Statutory approval and permitting applications will include DMP Mining Proposal and DER Works Approval and there will be a requirement to update DoW Groundwater Operating Strategy documents and related licenses. This work is currently underway.</li> <li>A waste rock characterization assessment has been undertaken previously as part of the original 2009 PFS, further updates are required to be completed for the Feasibility Study.</li> <li>There has been no allowance made in the Pre-Feasibility Study for special handling of waste rock material during dump construction or subsequent rehabilitation. This will be reviewed in the FS.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>An in-pit Tailings Storage Facility (TSF) will be constructed at Cardinia. Initial tailings deposition will into the existing Bruno pit. Following the filling of the Bruno pit, tailings will then be deposited into the completed open pits adjacent to the Bruno pit. Following completion of the in-pit deposition a 14 m waste embankment would be constructed surrounding the infilled pits for further deposition until project completion. Further geotechnical work is required in the FS stage.</li> <li>TSF Management plans and approval process will be by independent consultants SRK as part of the FS.</li> <li>Baseline and environmental and heritage studies have been conducted on the LGP and environmental licensing is not expected to pose any restriction to the planned activities.</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li><i>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</i></li> </ul>	<ul style="list-style-type: none"> <li>The LGP site is well serviced by the nearby township of Leonora in addition to the major regional centre of Kalgoorlie, 280 km south-west.</li> <li>Air services operate three times a week out of Leonora to Perth with sealed airstrips. Leonora is within a 30-minute drive from the proposed plant site.</li> <li>Extensive good quality, unsealed roads pass through the project area and the sealed Laverton-Leonora Road is within the LGP area.</li> <li>Borefields are planned to be established for water supply to the process plant. Water supply options will be further evaluated in the FS.</li> <li>A 15 km haulage route is required to be constructed, between Cardina (plant location) and the Mertons Reward mine. A road exists between Mertons Reward and Mertondale 5. Miscellaneous licenses have been applied for.</li> <li>Initial water supply for the processing plant will be sourced from planned surrounding Bores and water from the inpit and future TSF decant tower. Further studies will be undertaken during the FS stage.</li> <li>New infrastructure required for the proposed operation (in addition to mine-specific infrastructure) includes:               <ul style="list-style-type: none"> <li>Diesel supplied power station and distribution network (BOO contract)</li> <li>Processing plant and tailings storage facilities</li> <li>Site offices and workshops</li> <li>60 man camp located on site</li> <li>Communications infrastructure to connect to Telstra</li> <li>Borefields for water supply</li> </ul> </li> </ul>
<b>Costs</b>	<ul style="list-style-type: none"> <li><i>The derivation of, or assumptions made, regarding projected capital costs in the study.</i></li> </ul>	<ul style="list-style-type: none"> <li>Capital cost estimates have been derived by Kin and mining contractors for mine related capital costs, CPC Engineers for process plant, site offices and SRK for tailings storage facility capitals costs. The derivation of cost estimates is considered</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>The methodology used to estimate operating costs.</i></li> </ul>	<p>reasonable for Pre-Feasibility Study purposes and at an estimated accuracy of <math>\pm 25\%</math>.</p> <ul style="list-style-type: none"> <li>Accommodation/catering cost provided by leading catering contractors</li> <li>Operating mining and G&amp;A cost estimates have been derived by Kin Mining NL. CPC Engineers Pty Ltd have provided processing, operating and capital costs to <math>\pm 25\%</math> accuracy.</li> <li>Mining cost estimates have been provided by Mining Contractors following on site visits and cost data from similar operations / projects to an estimated accuracy of <math>\pm 25\%</math></li> <li>Processing cooperating costs have been estimated by CPC Engineers via application of costs based on historical testwork data and from pilot plant scale trials at Bruno, Mertons Reward/Mert2 and Lewis. Process parameters were also derived from testwork carried out as part of the 2009 PFS by AMMTEC and pilot plant trials. Operating costs to an accuracy of <math>\pm 25\%</math></li> <li>Costs estimates are based on conceptual designs for mines, process plant and site non-process infrastructure and a combination of budget quotations, factored estimates and cost data from similar operations / projects. The derivation of cost estimates is considered reasonable for Pre-Feasibility Study purposes to an estimated accuracy of <math>\pm 25\%</math>.</li> <li>Majority of labour is expected to be FIFO with anticipated 20% of the workforce being residential in Leonora. The Company will provide a living allowance, costs included in G&amp;A.</li> <li>Mine operating costs have been developed from first principles by mining contractors to provide a budget estimate of the mining schedule. These costs have been used in the detailed PFS financial model.</li> <li>General and administration costs have been estimated on a first principles basis and from quotation from suppliers and contractors.</li> <li>Costs excluded in the financial modelling include corporate overheads/ head office costs; project financing, interest charges and escalation; and ongoing exploration costs.</li> </ul>
	<ul style="list-style-type: none"> <li><i>Allowances made for the content of deleterious elements.</i></li> <li><i>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.</i></li> </ul>	<ul style="list-style-type: none"> <li>No deleterious elements/material have been included in the PFS</li> <li>The project economics have been modelled on a gold price of A\$1,600/oz. Financial models for a range of gold prices with upper range at A\$2,000/oz down to A\$1,333/oz have been developed.</li> <li>The AU\$1,333/oz relates to US\$1,000/oz at an exchange rate of AUD\$:USD\$ = 0.75</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>The source of exchange rates used in the study.</i></li> <li><i>Derivation of transportation charges.</i></li> <li><i>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</i></li> <li><i>The allowances made for royalties payable, both Government and private.</i></li> </ul>	<ul style="list-style-type: none"> <li>All costs have been estimated in AU dollars.</li> <li>Selling costs have been estimated for gold, including royalties, refining and transport.</li> <li>Allowances have been made for Western Australian State royalties and existing private tenement royalty obligations.</li> </ul>
<b>Revenue factors</b>	<ul style="list-style-type: none"> <li><i>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</i></li> <li><i>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</i></li> </ul>	<ul style="list-style-type: none"> <li>See comments above</li> </ul>
<b>Market Assessment</b>	<ul style="list-style-type: none"> <li><i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</i></li> <li><i>A customer and competitor analysis along with the identification of likely market windows for the product.</i></li> <li><i>Price and volume forecasts and the basis for these forecasts.</i></li> <li><i>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</i></li> </ul>	<ul style="list-style-type: none"> <li>Gold is a freely globally traded commodity, with prices determined by demand and supply. As such, specific market studies have not been undertaken. The revenue assumptions for this project are in Australian Dollars. The combined effects of United States Dollar gold price and the US\$:A\$ exchange rate have resulted in a relatively stable Australian Dollar gold price over the previous three years, reflected in the A\$1,600/oz gold price used in this estimation.</li> <li>AUD \$1 = USD \$0.75 (Assumed exchange rate)</li> </ul>
<b>Economic</b>	<ul style="list-style-type: none"> <li><i>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</i></li> <li><i>NPV ranges and sensitivity to variations in the significant assumptions and</i></li> </ul>	<ul style="list-style-type: none"> <li>Cost inputs have been estimated from quotations and/or by competent specialists including current labour rates for Western Australia.</li> <li>Sensitivity analysis has indicated that the project drivers are commodity price and metallurgical recovery followed by operating costs; NPV and IRR remain favorable for commodity price sensitivity tests. Project sensitivity analysis is shown in Tables 7,8 and Figure 5 in this announcement.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>inputs.</i>	
<b>Social</b>	<ul style="list-style-type: none"> <li><i>The status of agreements with key stakeholders and matters leading to social licence to operate.</i></li> </ul>	<ul style="list-style-type: none"> <li>The project is located in the remote Northeastern goldfields region of Western Australia. The site has previously been operated and the current project is a re-establishment of previous mining, with the processing plant proposed to be located near an existing well maintained private road. The area is familiar with existing mining operations with the Sons of Gwalia operation proximal to the town of Leonora.</li> <li>Heritage surveys have been previously conducted for the property and infrastructure has been located to not impact sites of significance.</li> <li>All proposed mining and infrastructure areas lie within granted Mining Leases.</li> <li>There are no Native Title claims pending over the LGP area.</li> <li>The Company has a good relationship with the Shire of Leonora and local Aboriginal community.</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li><i>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</i></li> <li><i>Any identified material naturally occurring risks.</i></li> <li><i>The status of material legal agreements and marketing arrangements.</i></li> <li><i>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</i></li> </ul>	<ul style="list-style-type: none"> <li>No material naturally occurring risks have been identified for the LGP. The environment is stable with a long history of productive mining operations that have not been affected by naturally occurring events.</li> <li>Kin is in possession of necessary legal agreements to develop the operation. The requirements to maintain agreements are transparent and well managed by the company in consultation with the Western Australian Government.</li> <li>Gold is an easily traded commodity and does not require any specific marketing arrangements.</li> <li>There are reasonable grounds to expect that future agreements and Government approvals will be granted and maintained within the necessary timeframes for successful implementation of the project</li> <li>There are no known material matters dependent on a third party that require resolution for the LGP to be developed</li> <li>The LGP assets are unencumbered after final payment to the secured creditor Waterton Global (ASX announcement 19 October 2016).</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Ore Reserves into varying confidence categories.</i></li> </ul>	<ul style="list-style-type: none"> <li>No Ore Reserve is reported</li> <li>The mineral Resource above the cut-off grade within the designed open pits has been modified by the application of mining, recovery and mine dilution</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> <li><i>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</i></li> </ul>	modifying factors to produce a Production Target.
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of Ore Reserve estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>No Ore Reserve is reported.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li><i>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</i></li> <li><i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li><i>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</i></li> <li><i>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production</i></li> </ul>	<ul style="list-style-type: none"> <li>The PFS document addresses the various modifying factors to a PFS level of confidence and addresses the modifying factors and assumptions made in terms of the Production Target. The relevant accuracy of the Production Target is completed to PFS level and is estimated at <math>\pm 25\%</math></li> <li>There is always a degree of uncertainty associated with geological estimates.</li> <li>Accuracy of capital and operating cost estimates is considered to be within <math>\pm 25\%</math>, consistent with accepted PFS standards. +15% contingency has been allowed in the capital cost estimate to reflect the degree of uncertainty of the estimate for each area.</li> <li>The next stages of FS will require additional resource conversion drilling to potentially convert Inferred Mineral Resources to Indicated Mineral Resources, and further geotechnical analysis of pit design requirements at depth. Additional metallurgical domain variability work to confirm metallurgical recoveries is planned for the Feasibility Study.</li> <li>The project is not yet operational and as such, no recent production data exists at this time except for the Lewis Trial Pilot Scale test carried out in 2016</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>data, where available.</i>	

## **ANNEXURE B: (MINERAL RESOURCES)**

### **SECTION 1 – Sample Techniques and Data (Mertondale)**

Criteria	Commentary
<i>Sampling techniques</i>	<p>The various mineralised lodes at Mertondale have been sampled in a variety of ways dependent on the drill technique. The majority of diamond core (NQ or HQ) was longitudinally cut half core and occasionally quarter core for larger (HQ) diameter holes. Sample intervals (diamond) varied from 0.1-1.3m but were predominantly 1m intervals. The vast majority of RC samples were collected via a cyclone or riffle splitter (typically a 3kg sample) and collected/bagged at 1m intervals. Composite scoop samples were often collected at 3m or 4m intervals with follow up collection of the original riffle split 1m samples over anomalous intervals. On occasion wet samples were encountered and in the case of Navigator spear sampled, data relating to historical earlier wet samples is unavailable however the number of wet samples involved is considered to be very low. The procedure for Aircore sampling is similar to RC except the reject, following riffle splitting, is placed on the ground and not stored in bags.</p>
<i>Drilling techniques</i>	<p>Numerous phases of drilling have been conducted by various companies including diamond, RC Aircore and RAB drilling, the data base consists of 6,801 drill holes. The percentages of diamond drilling the Mertondale deposits is very small apart from Mertondale 3-4 and Mertondale 5 however the database fails to distinguish between RC pre-collars and core intervals. Reports indicate the core was dominantly HQ or NQ size but database details are incomplete. Core recoveries are reportedly good, particularly the Navigator drilling; however no confirmation is entered into the database.</p> <p>Reverse circulation (RC) drilling is the dominate drill type at all sites except Eclipse where Aircore holes dominate the resource estimate. Pre-Navigator RC drilling information is limited however suitable large rigs fitted with auxiliary and booster compressors were probably used. Recent RC drilling conducted by Navigator was conducted with suitable rigs equipped with auxiliary and booster compressors and face sampling hammers, bit diameters were typically 5.25 inches.</p> <p>The vast majority of Aircore drilling was conducted by Navigator utilising suitable rigs (eg 250psi, 600cfm). Aircore holes were drilled mostly into the weathered zone using blade bits. Hammer bits were used only when necessary on harder rock types. Holes were typically 50-60m deep. When drilling under dry conditions Aircore samples should be of a comparable quality to RC drilling and sampling techniques.</p> <p>Rotary Air Blast (RAB) drilling is used as a first pass shallow exploration drilling tool. RAB drilling is prone to sample biases and downhole contamination. The RAB holes were used as a guide to support the geological interpretation but were all omitted from the final resource calculation.</p>
<i>Drill sample recovery</i>	<p>Core recovery data is not presented in the database although Navigator core recovery was reported to be good. Regarding Aircore and RC drilling, due to the lack of information in the database, no quantitative or semi-quantitative impression of sample recovery or sample quality is available, it's assumed to be satisfactory. No indication of sample bias is evident nor has it been established.</p> <p>Historical reports indicate diamond core was cut longitudinally, mostly half core with</p>

Criteria	Commentary
	<p>quarter core from larger HQ diameter core, samples are overwhelmingly 1m. RC and Aircore sampling were collected at 1m intervals via a cyclone or riffle split to approximately 3kg. Some earlier holes, pre-Navigator, were samples at 1.5m intervals and a substantial portion of the historical MPI holes were samples over 2-4m intervals.</p> <p>During Navigators drill programmes some samples were spear sampled when returned wet, this is regarded as poor sampling procedure and these samples are regarded as unreliable however the total number of wet samples is considered to be very low. It's unknown how pre-Navigator wet samples were handled.</p> <p>No relationship was observed between sample recovery and grade.</p>
<i>Logging</i>	<p>The logging data coded in the database uses at least four different lithological code systems, a legacy of numerous past operators; this obscures the significance of much of the coded data. No details of pre-Navigator drill hole logging procedures were located however logging methodologies appear consistent with normal industry practices of the time.</p> <p>Navigator RC and Aircore logging was entered on a metre by metre basis recording lithology, alteration, texture, mineralisation, weathering and other features. The information was entered directly into hand held digital data loggers and transferred directly to the database. Logging of chips is qualitative on visual recordings of lithology, oxidation, colour, texture and grain size, logging of mineralogy, mineralisation and veining is quantitative.</p> <p>Navigator's procedure for diamond core was initially orientation and marking of the bottom of the core. Core recovery, fractures per metre and RQD was recorded. The core was geologically logged recording lithologies and marked for sampling. Several geotechnical holes were logged for structural data by Geotechnical Consultants. All the diamond core has been photographed.</p> <p>All drill holes are logged in full to the end of hole.</p>
<i>Sub-sampling techniques and sample preparation</i>	<p>The history of sample preparation and assaying procedures is incomplete and complex. Numerous assay laboratories and numerous assay techniques have been used over the life of the project.</p> <p>Historical core, in storage, where sampled is generally half core, it's assumed and confirmed from surviving reports that half core was routinely sampled. Sample intervals were based on lithological contacts and sample intervals varied from 0.1-1.3m but were predominantly over one metre intervals.</p> <p>Prior to 1996 limited information indicates most RC sampling was conducted over 1m intervals via riffle splitting. RC sampling procedures are believed to be consistent with the normal industry practices of the day. Navigator collected a 3kg riffle splits over the drilled metre at the rig but initially submitted a scooped 4m composite for analysis, anomalous intervals were collected (at the original 1m intervals) pulverised (85% passing 75µ) and assayed. The vast majority of samples were dry but when wet a spear sample technique was used. Sons of Gwalia (SGW) followed a similar procedure but used 3m composites. Aircore sampling also followed a similar procedure. This type of sampling procedure is widely used in the gold mining industry and the sample size is considered appropriate for this style of mineralisation.</p> <p>Available reports covering the pre-Navigator drilling make no mention of systematic sampling and assaying quality control protocols; only limited information is available</p>

Criteria	Commentary
	<p>regarding check assays. Navigator often submitted standards or blanks every 20 samples. Standards were inserted more frequently than blanks.</p> <p>A variety of laboratories were used for analysis, Navigator did not routinely collect and submit duplicate samples from RC and Aircore drilling to the same laboratory consequently overall sampling and assay precision levels can't be determined.</p> <p>While QC protocols were not comprehensive the results indicate that assay results from Navigators exploration programmes were reliable. Results from previous owners are regarded as consistent with normal industry practices of the time</p>
<i>Quality of assay data and laboratory tests</i>	<p>The project has a complex and incomplete history of sample preparation and assay procedures. Numerous laboratories and several analytical techniques have been used over the years. Prior to 1996 the incomplete nature of the historic data results could not be accurately quantified in terms of the data derived from the combinations of various laboratories and analytical methodologies. Navigator utilised six different laboratories during their drilling programmes although Kalgoorlie Assay Laboratories conducted the majority of assaying on diamond, RC and Aircore samples.</p> <p>Since 1996 most of the samples were field split and prepared for assay via crushing to a nominal 85-90% passing 75µm. Fire Assay techniques were conducted on diamond, RC and Aircore however an AAS determination following Aqua Regia digest was generally a first pass RC detection method. Mineralised intervals were subsequently Fire Assayed (usually a 40 gram charge) AAS finish. Aqua Regia digest with an AAS finish was also a first pass detection method for Aircore holes with subsequent 1m fire assays however 15-20% of the Aircore holes may have been subject to Aqua Regia digest methods only.</p> <p>Tabulations of old significant Hunter RC oxide zone intercepts from Merton's Reward and Mertondale 3/4 recorded average grades for both Aqua Regia (AR) and Fire Assay (FA), confirming that there was no significant bias between AR/AAS and FA techniques. Length weighted grades were almost identical for 800m of aggregate intercepts suggesting very low risk of bias associated with the portion of utilised Aqua Regia results. Some low grade (&lt;1g/t Au) assays from Hunter holes are probably Aqua Regia results as opposed to Fire Assay however the proportion cannot be quantified.</p> <p>Navigator regularly submitted standards and blanks to the analytical laboratories, standards or blanks were submitted on average every 20 samples.</p> <p>Fire Assay is considered to be a total analytical technique, Aqua Regia acid digest is considered to be a partial analytical technique.</p> <p>No geophysical tools were used to determine any element concentrations used in the resource estimate.</p>
<i>Verification of sampling and assaying</i>	<p>The returned significant intersections have been verified by company geologists and McDonald Speijers (January 2009) however pre Navigator information has limitations due to the legacy of different companies and different procedures. The results from all phases of diamond, RC and Aircore drilling have been accepted on face value. Core recovery information is not presented in the database. There is always a risk that sampling or assaying biases may exist between results from different drilling programmes this may be due to differing sampling protocols, different laboratories and different analytical techniques.</p> <p>It is assumed that diamond, RC and Aircore samples were equally representative. Several diamond holes, twinning RC holes in the resource model, were drilled for metallurgical test</p>



Criteria	Commentary
	<p>work.</p> <p>The use of twinned holes is limited, however where used grade correlation exists.</p> <p>Generally by the mid 1980's face sample hammers were in use however earlier RC drilling may have used crossover sub-assemblies which are more prone to down-hole contamination. There is no concrete information regarding the frequency of wet sample however the use of booster compressors would allow the majority of holes to be dry.</p> <p>The history of sample preparation and assaying procedures is complex and incomplete. Numerous laboratories and analytical methods have been used over the years. It's assumed that sampling and assay procedures were followed to the standards of the day, grades for most diamond and RC drill holes in mineralised zones have been obtained by fire assay.</p> <p>92% of the assay records in 50 randomly selected check holes were validated with &lt;0.2% discrepancies, the very small proportion of discrepancies indicated that the assay database was probably reliable.</p> <p>No adjustments or calibrations are made to any of the assay data recorded in the database.</p>
<i>Location of data points</i>	<p>A local grid was originally established prior to 1985 however a small angular error in the base line resulted in substantial errors in the northern portion of the project; the points were transformed firstly to AMG and subsequently to MGA (GDA94 zone51). This resulted in different transformations to be applied in the northern and southern parts of the area. Navigator recognised errors in the collar co-ordinates resulting from the transformation, a significant number of holes were resurveyed and a new MGA transformation generated, this exercise appeared to eliminate the offset.</p> <p>Old collars have been validated against the original local grid co-ordinates and independently transformed to MGA co-ordinates and checked against the database. Navigator's MGA co-ordinates were checked against the surveyor's reports. Where variations in the MGA co-ordinate system were detected geologists deemed the errors were not large enough to have a material impact on the resource models.</p> <p>Considering the history of grid transformations and various problems recorded in the surviving documentation there must be some residual risk of error in the MGA co-ordinates for old drill holes, particularly in the northern area. All recent work conducted by Navigator was conducted in MGA using differential GPS equipment and a network of survey controls. General survey control appears to have been satisfactory.</p> <p>Navigator supplied a digital terrain model of the topography, constructed from drill holes, Kin's geologists believe the model is sufficiently accurate for resource estimation purposes.</p> <p>Almost all the diamond and a small portion of the RC holes were downhole surveyed, pre-Navigator single shot survey cameras were used with typical survey intervals of about 30-40m, there were some correction between magnetic and grid azimuths (2°-0.9°) however Kin's geologists deemed the corrections small enough to be acceptable. Aircore holes and most of the RC holes were not down hole surveyed, as was the general practice of the day.</p> <p>All diamond drilling conducted by Navigator were surveyed down hole using a single shot or multi-shot survey camera, at least 80% of the RC holes drilled by Navigator were also</p>



Criteria	Commentary
	<p>surveyed using similar instruments.</p>
<p><i>Data spacing and distribution</i></p>	<p>The drill hole spacing is project specific and the current drilling patterns vary considerably throughout the project area however in the modelled mineralised areas they typically involved holes spaced at about 15-25m along east-west lines 20-30m apart. The majority of the holes were drilled grid west at a dip of about -60°. The Quicksilver and Eclipse areas had the least regular drill patterns. Line spacing's in the Eclipse area were commonly 50m and as much as 100m apart.</p> <p>Drill spacing is sufficient to establish mineral resources and classifications applied.</p> <p>Sample composting occurs in a portion of the resources however the vast majority of assay intervals are 1m split samples (Aircore and RC). Diamond core was predominantly sampled at 1m intervals</p>
<p><i>Orientation of data in relation to geological structure</i></p>	<p>Most of the known gold mineralisation is hosted in sheared mafics, with local porphyry bodies and sedimentary units. Mineralisation is hosted by the Mertondale Shear Zone (MSZ) in two distinct mineralised trends. The western edge of the Mertondale Shear hosts Quicksilver – Tonto - Eclipse - Mertondale 5 while the MSZ (main structure) hosts Merton's Reward - Mertondale 2 - Mertondale 3/4. Mineralisation is associated with varying intensities of carbonate, potassic and silica alteration (Quartz-sericite-carbonate + sulphides within a broader envelope of carbonate alteration). Felsic intrusive porphyry's have a close association with the mineralisation.</p> <p>Detailed subsurface interpretation of the geology of the individual deposits is hampered by inconsistencies in the geological logging code system due to the various companies involved and the different phases of drilling. Structurally the deposits are deformed, sheared and described as complex.</p> <p>The rocks are generally foliated with the foliation apparently parallel to sub-parallel to the lithological layering. The rocks within the shear zone are highly foliated and deformed. The MSZ is not a simple single structure; it consists of two main branches along the eastern and western margins of a broad north-south trending diffuse structural shear feature up to 500m wide.</p> <p>At Mertondale 3/4 mineralisation is associated with the intrusive porphyry contact; the contact can be used as a mineralisation guide. At other sites, due to the lack of geological framework in the database, no interpretation of host stratigraphy or local structures has been developed apart from the observation that the further north and in the western shear steep, shear related mineralisation is dominant.</p> <p>The geological confidence levels relating to the lack of geological interpretation with respect to mineralisation are reduced north of Mertondale 3/4. There were often glaring inconsistencies between lithological codes in adjacent holes due to the compound history of lease ownership.</p> <p>No orientation sampling bias has been identified in the data thus far.</p> <p>Holes are drilled orthogonal to the interpreted strike of the target horizon. Holes are predominantly -60° and on occasion vertical when targeting the MSZ</p>

Criteria	Commentary
<i>Sample security</i>	No sample security details are available for pre-Navigator samples. Numbered and compiled Navigator drill samples were collected from the field on a daily basis and transported to a secure yard in Leonora. They were then processes and packaged into 'bulkabag sacks' for transport to the assay laboratory. No particular security measures were imposed apart from sealing the sacks and storage in a secure yard.
<i>Audits or reviews</i>	<p>A review of sampling and drilling techniques by Kin Mining and others indicates that they were conducted to the best practice industry standards of the day although historic drilling and sampling methods and QA/QC are regarded as weaker than today's current standards. Core samples based on geological boundaries or 1m intervals were mostly half core however some was quarter core. RC samples were usually riffle split at the rig at metre intervals, a 3m (SGW) or 4m (Navigator) composite was collected from the reject and assayed, any anomalous interval (typically &gt;0.1g/t Au) was retrieved at split 1m intervals and assayed. Some (MPI) RC samples (&lt;0.5% of all RC drilling) were collected over 1.5m, 2m or 4m intervals. Aircore sampling followed a similar procedure to RC except the rejects from the riffle split were stored on the ground and not bagged. The number of wet samples is believed to be very low however the intervals and quantity involved can't be quantified.</p> <p>The data has been validated in Datashed and in Surpac prior to resource estimation. These processes checked for holes that are missing data, missing intervals, overlapping intervals, data beyond end-of-hole, holes missing collar co-ordinates, and holes with duplicate collar co-ordinates.</p>

## Section 2 Reporting of Exploration Results

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<p>The deposits are located on granted Mining Leases within the Mertondale project area. All tenements are in the name of and 100% owned by Navigator Mining Pty Ltd, Kin Mining NL has entered into a Share Sale Agreement with Navigator and has acquired all the issued capital and assets of Navigator Mining. The agreement includes the Mertondale tenement package. The following deposits are located on the following tenements: Quicksilver (North) M37/231, Quicksilver (South) M37/232 and M37/82, Tonto M37/233, Eclipse M37/233, Mertondale 5 M37/233, Merton's Reward M37/81, Mertondale 2 M37/81 and M37/1284 and Mertondale 3/4 M37/81 and M37/82.</p> <p>The leases are located in the Mt Margaret Mineral Field, Navigator Mining Pty Ltd is a wholly owned subsidiary of Kin Mining NL. Third parties hold production royalties of up to \$2 per dry tonne mined and milled on various tenements within the Mertondale group. An annual compensation payment (\$10,000) is payable to the Mertondale Pastoral Lease holder upon commencement of mining related activities.</p> <p>The tenements are in good standing with no known impediments.</p>
<i>Exploration done by other parties</i>	<p>Gold was initially discovered in the area at Merton's Reward in 1899, underground mining began almost immediately. Modern exploration (1981-84) was conducted on a limited scale, around Merton's Reward by Telluride Mining NL, Nickelore NL, International Nickel (Aust) Ltd and Petroleum Securities Mining Pty Ltd. Hunter Resources Ltd commenced major exploration drill programmes in 1984 discovering Mertondale 2 and Mertondale 3/4.</p> <p>Open pit mining commenced in 1986 at Mertondale 4, in 1987 Hunter was taken over by Technomin Australia NL, mining ceased in late 1988. Hunter's interest in the project</p>

Criteria	Commentary
	<p>was sold to Harbour Lights Mining Ltd (HML) who delineated the Mertondale 5 deposit and resumed mining in 1990. In 1990 Ashton Gold WA Ltd gained control of HML and continued mining until 1993. In 1993 Ashton's interest was transferred to Aurora Gold Ltd and a Joint Venture (JV) established between Mining Project Investors Pty Ltd (MPI) and Ashton, minor drilling programmes were conducted.</p> <p>In 1996 Sons of Gwalia (SGW) entered into a JV with Aurora eventually acquiring (1997) the entire project, only modest drill programmes were conducted (1996-99). In 2004 Navigator Resources Ltd purchased the Mertondale project area conducting numerous substantial drill programmes (2004-2009) delineating and defining the six resources. The JORC (2004) Resource Estimate for the six deposits released in 2009 comprised an Indicated and Inferred Resource of 5.6Mt @ 2.20g/t Au (395,000ozs).</p> <p>Reported total historic production (1899-1991) from the Mertondale area amounts to 274,000oz of gold. Production was sourced from three main areas Mertondale 3/4 pit - 1.3Mt @ 4.3g/t Au, Mertondale 5 Pit - 385,000t @ 2.56g/t Au and Merton's Reward underground mine - 90,000t @ 21g/t Au. Kin Mining NL purchased the Leonora Gold project from the Navigator administrator in late 2014.</p>
<i>Geology</i>	<p>The Mertondale Project is located 20-40km NE of Leonora in the central part of the Norseman-Wiluna Greenstone Belt. In broad terms the stratigraphy consists of a central felsic volcanic sequence bound by tholeiitic basalt, dolerite, and carbonaceous shale ± felsic porphyry sequences. The Mertondale Shear consists of two distinct branches which are generally located near the contacts between the felsic sequences and the adjoining mafic sequences.</p> <p>The six recognised deposits and all the known mineralisation is within the Mertondale Shear Zone. The majority of the gold mineralisation is hosted by sheared mafic rocks with local porphyry intrusives and sedimentary units. Two distinct parallel structures are recognised over a strike length of approximately 12km. The Western Shear trend, in the north, runs through the Quicksilver, Tonto, Eclipse and Mertondale 5 deposits. The Mertondale Shear, in the south, trends northwest from Merton's Reward and Mertondale 2 through to Mertondale 3/4.</p>
<i>Drill hole Information</i>	<p>In all 6,801 drill holes have been sourced and included in the Mineral Resource estimation. It is impractical to list a table of drill hole details in this report format.</p> <p>Exploration results are not material to this report; the Mineral Resource Estimate is based on all available historic and modern Diamond, RC, Aircore and RAB drilling data.</p>

Criteria	Commentary
<i>Data Aggregation methods</i>	<p>Individual grades are reported as down hole length weighted averages, sample lengths in the mineralised zones in all deposits were overwhelmingly 1m. Less than 5% of the total metres were quotes as composite intervals and less than 2% were intervals shorter than 1m. Composite lengths of 1m or integer multiples of a metre are deemed to be satisfactory and compatible with the sample lengths.</p> <p>Top cut thresholds for Au were selected following analysis of the assay populations on a zone by zone basis including: examination of cumulative log-probability plots for inflections near high grade extremities, iterative tests to determine top cuts required to bring arithmetic means into line with lognormal mean estimations, inspection of log histograms (to assess high values) and inspection of cross sections to determine if extreme high values are scattered or form coherent high grade ore shoots.</p> <p>No metal equivalent values are reported. All values are Au (ppm). Top cuts selected ranged from 1.5-80g/t Au, some low grade zones didn't require top cutting. These were typically in the order of 5-15g/t Au for the weaker, lower grade zones and 20-40g/t Au for the major more strongly developed zones.</p>
<i>Relationship Between Mineralisation widths and intercept lengths</i>	<p>Varying lode geometry is present in the Mertondale Shear but the effective strike of the deposits is NS, at Merton's Reward: ore zones display steep shear zones, flatter NE dipping zones and E-NE intershear zones with a northerly plunge. At Mertondale 3/4 the ore zone displays a shallow east dipping body that becomes more vertical with depth. At Quicksilver mineralised zones dip steeply (80°E-85°W) and strike 010°. At Tonto mineralised zones typically dip 85°E and strike 0-005°. At Eclipse mineralisation trends 355° with a steep dip and at Mertondale 5 the mineralisation strikes 355° degrees and dips 85°W-85°E.</p> <p>The vast majority of holes are generally orientated west at -60° however some holes are drilled vertical, grid drill spacing is varied depending on the deposit and drill holes traces are usually at an optimum angle or close to practicable true width to the mineralisation.</p>
<i>Diagrams</i>	<p>Relevant "type example" plans and diagrams are included in this report.</p>
<i>Balanced Reporting</i>	<p>The available database includes a large inherited data set compiled by previous owners dating back to 1982. There are limitations in the amount of information provided in the data set. It has not been possible to fully verify the reliability and accuracy of a substantial proportion of the data however it appears that no serious problems have occurred and validation check results were within acceptable limits. In general recent data is more reliable. The Quicksilver, Tonto and Eclipse models are supported predominantly by Navigator drilling. More than 50% of the drilling data for the Merton's Reward model is sourced from Navigator with a substantial portion from Hunter. The Mertondale 3/4 model is based on a combination of old Hunter and recent Navigator drilling while the Mertondale 5 model is largely based on old drilling by Harbour Lights.</p> <p>Considering the complex history of grid transformations there must be some residual risk in converting old grids to GDA 94 although generally the survey control appears to be satisfactory.</p> <p>Navigator also supplied data pertaining to the underground workings, old open cuts and mullock dumps although independently verified they have been accepted on face value. In the case of Merton's Reward underground mine expansion adjustments were made to reflect the historic mined tonnage, the adjustment is considered to be conservative.</p>

Criteria	Commentary
	There is always an area of technical risk associated with resource tonnage and grade estimations.
<i>Other Substantive exploration data</i>	Exploration results are not being reported.
<i>Further work</i>	Follow-up resource definition drilling is very likely to occur; the mineralisation along the Mertondale Shear Zone remains open in various directions, particularly at depth. Any additional exploration drilling is expected to test not only depth extensions but also extensions along strike.

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
<i>Database Integrity</i>	<p>The Mertondale data sets date back to 1982. Collected and compiled by numerous previous owners including Nickelore - Carr Boyd 1982, 1986-87, Hunter 1984-88, Harbour Lights 1988-91, Mining Project Investors 1994-95, Sons of Gwalia 1996-99 and Navigator 2004-08 among others. Pre-Navigator data is limited due to the time lag (up to 33 years); the database could not be fully verified regarding the reliability and accuracy of a substantial portion of the historical data.</p> <p>Database checks conducted by Kin and others are within acceptable limits, there is missing data however it is regarded as minimal. It is not possible to identify errors that might have occurred prior or during digital tabulation. Geological control in the database is generally weak, some of the digital lithological data was never captured and no validation was conducted on the geological data. In addition, due to different logging techniques/companies/codes there were many lithological inconsistencies between adjoining holes.</p> <p>The data has been validated in Datashed and in Surpac prior to resource estimation. These processes checked for holes that are missing data, missing intervals, overlapping intervals, data beyond end-of-hole, holes missing collar co-ordinates, and holes with duplicate collar co-ordinates. Navigator uploaded the original assay files received from the labs via a database administrator using Datashed to minimise loading errors. An export of the data was then used to create an access database for use in Surpac.</p> <p>Kin geologists have verified historic drilling/assays/geological logs/survey against the database including viewing old reports and visual checks in Surpac.</p>
<i>Site Visit</i>	Kin's exploration team have conducted multiple site visits including management of drill programmes within the resource areas when a Kin staff member was previously employed by Navigator.
<i>Geological Interpretation</i>	At Mertondale 3/4 gold mineralisation is associated with the intrusive porphyry contact; the contact can be used as a mineralisation guide or marker horizon. The geological confidence levels relating to the lack of geological interpretation with respect to mineralisation are reduced north of Mertondale 3/4. There were often inconsistencies between lithological codes in adjacent holes however confidence in the geological interpretation remains high and no alternative interpretation is envisaged.



Criteria	Commentary
	<p>Geological interpretation of Merton's Reward is largely based on the historic workings and thus has a sufficient level of confidence in the interpretation.</p> <p>The western branch of the fault zone typically contains black mafic mylonite, a black shale, shale, quartz-dolerite, basalt, basaltic andesite and to the east, a felsic volcanic derived from a rhyolite. Felsic porphyritic intrusives occur irregularly along the fault zone. Generally, the black sulphide-graphite-rich mafic mylonite has reasonably high background gold anomalism, in the order of 0.1 to 0.5 g/t Au.</p> <p>Geological data used includes lithology, mineral percentages (such as quartz veining and sulphides) to identify lode positions, weathering codes, rock colour, texture and foliation.</p> <p>Geological codes are assumed to have been logged consistently by various geologist, though it is likely that some variations between drillholes are due to different logging styles or interpretations.</p> <p>The 3D wire frame interpretations of the mineralisation trends were supplied by Navigator. Slight modifications to the interpretation by previous independent consultants were made before regenerating the wireframes. The base of complete oxidation and the base of partial oxidation wire frames were also supplied by Navigator, they were accepted without modification.</p> <p>Alternative interpretations on the mineral Resource would have an effect on the estimation however the current estimation is controlled by all available data in an attempt to quantify the mineralisation with the highest level of confidence.</p> <p>Geology is used as a guide at Tonto, Mertondale 5, Mertondale 3/4, Quicksilver and Eclipse with Merton's Reward lodes are structurally controlled within the sheared basalt.</p> <p>All deposits are held within the Mertondale shear zone which has an effect on both grade and geology.</p>
<i>Dimensions</i>	<p>The Merton's Reward resource drill area covers approximately 1,400m of strike the ore zone can be divided into 3 broad zones, the drill hole search area (1,550m x 500m) included 708 holes of which 147 holes were mineralised intersections amounting to 4,821.9m, and the resource includes/covers the existing Merton's Reward underground workings where 99,000t has been omitted from the estimate due to voids/stopes/underground mining etc.</p> <p>Mertondale 3/4 resource drill area covers 1,620m of strike, the drill hole search area (1,850m x 600m) included 1,006 holes of which 332 holes were mineralised intersections amounting to 11,572.9m and the resource includes/covers the existing open pit mined by Hunter (1986-1988).</p> <p>Quicksilver resource drill area includes 4 independent zones covering 200-500m of strike separated by 400-900m of strike, the drill hole search area (4,500m x 625m) included 461 holes of which 69 holes were mineralised intersections amounting to 1,660.1m.</p> <p>Tonto resource drill area covers approximately 600m of continuous strike, the drill hole search area (1,000m x 450m) included 274 holes of which 168 holes were mineralised intersections amounting to 7,650.8m.</p> <p>At Eclipse, the drill hole search area (2,000m x 450m) included 545 holes of which 275 holes were mineralised intersections amounting to 9,205m.</p>

Criteria	Commentary
	<p>Mertondale 5 covers approximately 800m of continuous strike, the drill hole search area (1,500m x 400m) included 393 holes of which 148 holes were mineralised intersections amounting to 4,443.8m and the resource includes/covers the existing open pit mined (1990-1993) by HLM.</p>
<p><i>Estimations and Modelling Techniques</i></p>	<p>Tonnage and grade estimates were achieved by Recovered Fraction (RF) block modelling. This technique is a probabilistic one that estimates the volumetric proportion of each block likely to be above a particular cutoff grade and what the average grade of that proportion is likely to be.</p> <p>Conventional block models were also generated (anisotropic, inverse distance cubed) as a check parameter.</p> <p>Search radii parameters (dip, strike, cross-dip) was assigned for the following deposits Merton's Reward (30x30x4m), Mertondale 3/4 (60x60x4m), Quicksilver (30x30x5m), Tonto (30x30x4m), Eclipse (30x30x5m), Mertondale 5 (70x35x4m).</p> <p>Parent block sizes were 4m X, 10m Y and 4m Z for all resources at Mertondale, minimum sub cells were 2m X, 5m Y, 1m Z in all resource block models except for Merton's Reward were 1m X, 2.5m Y, 1m Z was implemented. Block sizes are relative to drill density.</p> <p>Block models were generated filling the 3D wireframes of the mineralised zones with cells, SG was assigned using oxidation codes as per the data base, assay top cuts were applied, assays composited over 2m intervals, block models were estimated using a range of cut offs and anisotropic inverse distance cubed interpolation, under zonal control.</p> <p>Top cuts selected ranged from 1.5-80g/t Au, some low grade zones didn't require top cutting. These were typically in the order of 5-15g/t Au for the weaker, lower grade zones and 20-40g/t Au for the major more strongly developed zones.</p> <p>Reported total historic production (1899-1991) from the Mertondale area amounts to 274,000oz of gold. Production was sourced from three main areas Mertondale 3/4 pit - 1.3Mt @ 4.3g/t Au, Mertondale 5 Pit - 385,000t @ 2.56g/t Au and Merton's Reward underground mine - 90,000t @ 21g/t Au. Previous estimates of the resources by Navigator were deemed appropriate and have been the audited and reviewed by Kin Mining.</p> <p>No by-products are to be recovered.</p> <p>Previous mining is mostly in the oxide/transition zone. In fresh rock apart from disseminated sulphides the ore zones can be associated with graphitic material (black shale), however this has not been considered in the current resource estimate.</p> <p>A parent cell size of 4m (east), 10m (north) and 4m (vertical) was used on all deposits, deemed appropriate relative to drill data.</p> <p>Multiple compositing and interpolation passes were done, using a range of cutoff grades and different ore loss and dilution parameters. One set of passes were made with no ore loss or dilution to generate hypothetical in situ estimates for comparison with previous Navigator estimates. A second set used in current resource estimation were made using a down-hole dilution skin set at 0.5m for oxide material and 0.8m for transitional and primary material. Downhole ore loss was set at 0.2m in the oxide and 0.3m in the transitional and primary zones.</p>

Criteria	Commentary
	<p>No assumptions are made regarding correlation between variables.</p> <p>Downhole lithology data was plotted and colour coded in Surpac and sectional interoperation of geological boundaries were generated. Wireframes of lodes were used as hard boundaries to contain the interpolation.</p> <p>Varying top cuts were applied following a series of processes including log-probability plots, iterative tests, log histograms and cross section inspection.</p> <p>To check that the interpolation of the block model honoured the drill data, validation was carried out comparing the interpolated blocks to the sample composite data, the validation plots showed good correlation thus the raw drill data was honoured by the block model.</p>
<i>Moisture</i>	Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.
<i>Cut-off Parameters</i>	Operating cost estimated supplied by Navigator indicate a break even mill feed grade for deposits in the Mertondale area is likely to be in the vicinity of 0.7g/t Au.
<i>Mining Factors or Assumptions</i>	<p>Previous mining is mostly in the oxide/transition zone. In fresh rock apart from disseminated sulphides the ore zones can be associated with graphitic material (black shale). The metallurgical performance, which is an unknown factor, may be poorer in fresh rock. The cut-off grade (0.7g/t Au) is an assumption based on Navigators estimate.</p> <p>Historical gold production is over 270,000 ounces of gold; Mertondale 3/4 pit - 1.3Mt @ 4.3g/t Au; Mertondale 5 Pit - 385,000t @ 2.56g/t au; Merton's Reward - 90,000t @ 21g/t Au from underground production 1899-1911.</p> <p>The current resource estimation were made using a down-hole dilution skin set at 0.5m for oxide material and 0.8m for transitional and primary material. Downhole ore loss was set at 0.2m in the oxide and 0.3m in the transitional and primary zones.</p>
<i>Metallurgical Factors or Assumptions</i>	Mining of Mertondale 5 (1992) indicated that the presence of graphitic material, in the deeper fresher portions of the open pit, resulted in lower metallurgical recoveries. Graphitic black shale may introduce pre-robbing from carbon during processing; arsenopyrite may be a metallurgical issue in transition and primary ore zones. Considerable historical mining suggests that the Mertondale ore (mostly oxide) can be treated without any serious extraction issues. Metallurgical test work conducted on the oxide ore zones at Mertondale and the nearby deposits of Cardinia and Raeside indicate high (+95%) recoveries as well as a significant gravity gold factor (up 30%).
<i>Environmental Factors or Assumptions</i>	Three old pits and a set of underground workings are within the proposed pit parameters being Merton's Reward, Mertondale 3/4 Mertondale 2 and Mertondale 5 along with associated mullock dumps. Old Battery tailings at Mertondale 2 and some drill sites within the pit parameters and surrounds require rehabilitation. The existing open pits have been extensively mined and mullock dumps containing millions of tonnes have been rehabilitated.

Criteria	Commentary
<i>Bulk Density</i>	<p>Bulk density measurements are only available on 3 of the 6 areas modelled. No associated moisture content determinations are available, an arbitrary adjustment was applied based on assumptions. The density measurements available for Merton's Reward, Mertondale 3/4 and Mertondale 5 all appear to be higher than expected; adjustments were made to compensate for moisture. The following Specific Gravity figures (Oxide, Transition, Fresh) were assigned to the following deposits; Merton's Reward (2, 2.2, 2.8 t/m<sup>3</sup>), Mertondale 3/4 (2, 2.22, 2.51 t/m<sup>3</sup>), Quicksilver (2, 2.2, 2.5 t/m<sup>3</sup>), Tonto (2, 2.2, 2.5 t/m<sup>3</sup>), Eclipse (2, 2.2, 2.5 t/m<sup>3</sup>), Mertondale 5 (2, 2.2, 2.51 t/m<sup>3</sup>). The values used in the estimates were assumed based on analogy with Mertondale 5 mining results.</p> <p>When compared with the (April 2009) Ammtec test results Tonto ore composites returned (Oxide 2.738 t/m<sup>3</sup>, Trans. 2.826 and 2.744 t/m<sup>3</sup>, Fresh 2.728 and 2.868 t/m<sup>3</sup>). These test results indicate a conservative Specific Gravity (SG) value is assigned to the current resource calculation at Tonto. Test work on Mertondale ore also returned higher SG values than used in the estimate calculation. Therefore it is assumed that conservative SG values have been used on some estimations, with the intention to commence more detailed SG work in the future.</p>
<i>Classification</i>	<p>There is not enough available quality control data to indicate that the old drill hole data is reliable or accurate, in addition there is a general lack of accurate SG information. The resources could only be classified as Indicated (drill spacing typically 20-30m along strike and 15-25m across strike) or Inferred (wider drill spacing and a general lack of geological confidence with the interpretation of the mineralised zone).</p> <p>At Merton's Reward the Indicated Resource was classified with some reservations, only the advent of previous mining allowed a border line Indicated classification, even though the drill spacing was up to 50m in the central portion of the deposit.</p> <p>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</p>
<i>Audits and Reviews</i>	<p>Internal reviews have been conducted by the Competent Person who is obliged to review the data geology/assay/survey/wire frames etc. this procedure is conducted as part of the normal review process. The technical inputs, methodologies, parameters and results of the estimation have been verified by the Competent Person. McDonald Speijers (January 2009) generated an Indicated and Inferred Resource (0.7g/t Au) cut-off grade - within \$2,000 gold price pit shells. Utilising a 3D block model "Recovered Fraction" technique:</p> <ul style="list-style-type: none"> <li>• Merton's Reward 1,090,000t @ 2.64g/t Au (93,000ozs)</li> <li>• Mertondale 3/4 1,540,000t @ 2.21g/t Au (110,000ozs)</li> <li>• Quicksilver 660,000t @ 1.82g/t Au (39,000ozs)</li> <li>• Tonto 970,000t @ 1.91g/t Au (60,000ozs)</li> <li>• Eclipse 870,000t @ 1.74g/t Au (49,000ozs)</li> <li>• Mertondale 5 480,000t @ 3.03g/t Au (46,000ozs)</li> <li>• TOTAL (Undiluted) 5,600,000t @ 2.20g/t Au (395,000ozs)</li> </ul>
<i>Discussion of Relative Accuracy and Confidence</i>	<p>There is a lack of SG values for Quicksilver, Tonto and Eclipse however Ammtec (April 2009) results of oxide ore at Tonto indicate a SG of 2.738 t/m<sup>3</sup>. Previous consultants who originally calculated the resource assigned 2.0 t/m<sup>3</sup> as the SG value.</p> <p>Due to the lack of QA/QC information the quality of pre Navigator drill hole assay is largely unknown, the limited data that is available indicates no serious problem</p>

Criteria	Commentary
	<p>however the reliability of the historic assay data cannot be adequately demonstrated. The greatest impact is uncertainty on the remaining mineralisation at Merton's Reward, Mertondale 3/4 and Mertondale 5, however historic mining demonstrates that mineralisation can be economically mined.</p> <p>The applied ore loss and dilution factors may require some adjustment, up or down, depending on the physical properties of the ore.</p> <p>There is a veneer of lateritic or hard pan material over most, if not all of the deposits, this thin surface horizon was assigned the same SG as the oxide layer, it may be higher and may be physically harder than the "free dig" oxide zone.</p> <p>The positions (RL) of the transition zone may require adjustment, the values were obtained from Navigator, and the physical properties of mineralised zones at these interfaces may not be "free dig" in addition the SG may be different to that used in the estimations.</p>

## Cardinia (Bruno Lewis Kyte)

### Section 1 Sampling Techniques and Data

Criteria	Commentary
<i>Sampling techniques</i>	<p>Various sampling methods were used during multiple phases of Diamond, RC, Aircore and RAB drilling, ranging from 5m composites to 1m split samples. Analysis of the sample lengths revealed the most common sample length was 1m (99%). All samples within the resource wireframes were composited to 1m with the exception of Kyte. Only RC and Diamond drill holes were used to calculate mineral resource in the Bruno and Lewis grade control areas and the Bruno-Lewis exploration link area. Over 60% of the drilling in the Bruno-Lewis-Kyte Resource (BLK) is Navigator RC grade control drilling. Navigator RC samples were collected at 1m intervals on the drilling rig via a riffle splitter (nominally 3kg). Holes were sampled as 4m composites (scoop), assays &gt;0.1g/t were collected from the original 1m intervals. Grade Control holes were also sampled at 1m intervals. Analysis utilised a FAF1 analysis method (Fire Assay) where a sub-sample of 40g is selected. Sampling techniques relating to historic Aircore holes is unknown however it is assumed they were conducted in line with the standard industry practices of the day. Details of historic Diamond drilling sample techniques is unknown however if the same techniques used at Cardinia were like those used at Mertondale, half core averaging 1m would have been the dominant procedure.</p>
<i>Drilling techniques</i>	<p>The Cardinia project area has been extensively drilled by several companies in past years (mainly Mt Edon, Sons of Gwalia (SGW) and Navigator Resources however the vast majority of exploration and resource drilling was conducted by Navigator Resources (NAV). Holes range from Diamond, RC, Aircore and RAB (Exploration and Grade Control) using local grids and more recently MGA94 Zone 51. An Access database containing drill details was created by NAV. This database contained records of 9,140 drill holes for 315,000m of that 2,947 holes were used in the resource estimate being 349 Aircore, 2 RAB, 380 RC, 151 Grade Control, 10 Diamond, 2,055 Grade Control RC. The data was interrogated and validated prior to being entered into Surpac.</p>
<i>Drill sample recovery</i>	<p>Drill sample recovery details are not mentioned in the resource estimate however recoveries from the various types of drill methods are assumed to have been satisfactory.</p> <p>To obtain representative samples, grade control RC drilling was implemented over a large portion of the resource to ensure good sample recovery.</p> <p>Limited data is recorded about sample recovery in the geological logs, therefore</p>



Criteria	Commentary
	difficulty remains to establish any relationship between grade and sample recovery.
<i>Logging</i>	<p>Navigator RC and Aircore logging were entered on a metre by metre basis recording lithology, alteration, mineralisation, weathering, colour, structure and veining. The information was entered directly into hand held digital data loggers and transferred directly to the database. Holes were logged to a standard considered appropriate for geological and resource modelling.</p> <p>Navigator's procedure for diamond core was initially orientation and marking of the bottom of the hole. Core recovery, fractures per metre and RQD was also recorded. The core was geologically logged in full recording lithologies as in RC drilling, photographed and marked for sampling. Holes were logged to a level considered appropriate for geological and resource modelling.</p> <p>No details of pre-Navigator drill holes logging procedures were located, however logging methodologies appear consistent with normal industry practices of the time and geological logs from historic reports correlate with Navigators logging.</p> <p>Logging of geology, alteration, mineralisation, weathering, colour and structure are interpretative and qualitative, whereas logging of mineral and veining percentage is quantitative. Core photos have been reviewed. All drill holes were logged in full.</p>
<i>Sub-sampling techniques and sample preparation</i>	<p>Core was routinely analysed for this Mineral Resource estimate, however Diamond drilling results comprises a very low proportion of the resource quantifications.</p> <p>All RC and Aircore samples were collected at the rig using a riffle splitter. Samples were predominantly dry.</p> <p>Half core, RC and Aircore sampling are considered standard industry practice.</p> <p>The majority of Navigator drill samples were dispatched to Kalgoorlie Assay Labs (KAL) however SGS and Aurum laboratories were also used for sample analysis. KAL utilised their FAF1 analysis method (Fire Assay) where a sub-sample of 40g is taken. Flux and reducing agents are introduced to the assay sample charge and mixed mechanically prior to analysis. Aqua Regia digest methods utilised Flame AAS analysis to 0.01ppm detection limits. As a check of pulverisation process Kalassay completed a wet screen sample test every 50<sup>th</sup> sample.</p> <p>The preparation procedure at Aurum included drying, splitting to 1kg, pulverising (90% passing 75µ) where a nominal 50g sample was subject to Aqua Regia digest (AuAR50).</p> <p>At SGS the analytical process involved drying, crushing and pulverising (90% passing 75µ) and Aqua Regia digest (ARE155), Grade Control holes were Fire Assayed (FAA505) using a 50gm charge.</p> <p>Analysis of 916 field duplicates indicates a poor relationship between the original and the field duplicate, the result is indicative of a high nugget mineralisation style; repeatability is poor however no sample bias was noted.</p> <p>Sample sizes are considered appropriate to correctly represent the nuggetty gold mineralisation. The sample preparation followed industry's best practice of the day, the sample size is considered to be appropriate to correctly represent the style of mineralisation being tested.</p>
<i>Quality of assay data and laboratory tests</i>	<p>In general, with the exception of the Bruno Lewis Grade Control holes, assays were conducted as 4m composite samples, using an Aqua Regia technique, as a first pass with follow up 1m sampling completed using Fire Assay. Fire Assay is considered to be a total analytical technique, Aqua Regia is considered to be a partial analytical technique.</p> <p>The favoured Assay technique at SGS was Aqua Regia digest (ARE155) where a 50 gram charge is digested in Aqua Regia acid followed by DIBK extraction with an AAS finish. Grade Control holes and 1m re-splits were analysed via Fire Assay (FAA505), where a 50 gram representative sample was fire assayed with AAS finish, detection limit 0.01ppm Au.</p> <p>Aurum Laboratories used a fire assay technique (AuAR50) in which a 50 gram sample is digested in Aqua Regia acid and the Au extracted with DIBK/Aliquot (detection limit 0.01 ppm).</p>

Criteria	Commentary
	<p>KAL used a (FAF1) Fire Assay analysis using a 40 gram charge and Aqua Regia digest with flame AAS finish (detection limit 0.01ppm).</p> <p>NAV used standards and blanks that were routinely submitted with the drill samples. Internal QC included field duplicates, Grade Control drilling (first pass) included duplicates at the 11-12m interval on every second hole. During the latest phase of Grade control drilling duplicates were submitted every 31<sup>st</sup> and 81<sup>st</sup> sample. Additionally blanks or standards were inserted on the 20<sup>th</sup>, 50<sup>th</sup> and 81<sup>st</sup> sample numbers equating to a ratio of 1:20 for QC samples.</p> <p>A total of 1,079 standard samples representing 15 different standards and blanks were analysed during the Cardinia drilling. Standards for Aircore results indicate the reported grade to be within acceptable limits. Standards submitted with Grade Control drilling also reported within acceptable limits.</p> <p>Duplicate repeat pulp analysis from Helens/Rangoon (a deposit close by and drilled around the same time) indicate an excellent relationship between the original and the repeat assay result, indicating an acceptable measure of sample preparation reliability in the assay laboratory.</p> <p>Drilling techniques at the time (+2004) utilised face sampling hammers (RC drilling). There is no information regarding the frequency of wet samples however the use of booster and auxiliary compressors would allow the majority of holes to be dry, additionally, the resource is shallow (20-60m), a depth that would allow for dry samples.</p>
<i>Verification of sampling and assaying</i>	<p>The significant intersections have been internally verified by several company personnel including geologists and have been analysed on screen using 3D software (Surpac) for correlation within the supergene gold mineralisation. Historical results have been accepted at face value. Top cuts were applied to the datasets due to the high coefficient of variations in the summary statistics. A high grade cut of 15g/t Au was applied to the data sets (inflections on the log probability plot). A top cut value of 30g/t Au was also applied to both the Bruno Grade Control (BGC) and Lewis Grade Control (LGC) areas.</p> <p>There is no use of twinned holes in the mineral resource, however a very closely spaced drill hole pattern was implemented in the Grade Control areas where an 8x5m grid pattern was drilled, with the intention to increase confidence due to the inherent grade variability of the BLK supergene mineralisation. Documentation of primary data was varied, dependent on age of drilling. Historic data was obtained by NAV from SGW upon acquisition of the project and limited detail is available on how the data was constructed. During the NAV period (which consists of the vast majority of the resource drilling) field data was entered directly into a field logging tablet and then was entered into the main database via a database administrator using Datashed. Data verification is possible through Datashed during data importation. Data storage is on Kin premises and a backup is stored in a secure off-site facility. Hardcopies of historic reports are stored on Kin premises.</p> <p>Assay data has not been adjusted except results that were below detection limit given an 'x' in the database or if there was no sample taken, in this event a 'ns' was assigned.</p>
<i>Location of data points</i>	<p>The collars of all NAV holes were surveyed after completion using an RTK-DGPS with a accuracy on a centimetre scale. 80% of the holes were surveyed using Spectrum Surveys with the remainder conducted by NAV. No information regarding collar survey technique of earlier drilling is available. Downhole surveys were conducted on 1,284 of the 9,140 holes in the database, at depths ranging from 3m to 180m. Although downhole surveys are somewhat limited, this is of low concern due to the shallow nature of the supergene resource. RC and GC (Grade Control) drilling was conducted on the MGA94 zone 51 grid. Historic AC and RAB were drilled on several local grids (Azimuth 220°-270°) on the national GDA grid. Bruno &amp; Lewis are regularly drilled at 8m NS x 5m EW. Bruno Lewis link exploration was drilled on 32m sections with hole spacing as close as 10m but generally at 20m. Kyte was AC drilled on an oblique grid pattern at 40m x 20m spacing.</p> <p>A topographic DTM was created using the DGPS pickup data of the drillholes.</p>

Criteria	Commentary
<i>Data spacing and distribution</i>	<p>The drill hole spacing is deposit specific. Drill holes used in the resource estimate included 2,353 vertical RC grade control holes on a nominal 8m NS x 5m EW grid. 1,778 vertical surface RC holes. 26 surface diamond holes and 1,710 angled Aircore holes for 315,088m of drilling (entire dataset).</p> <p>The majority of other exploration holes were drilled on a 32m to 42m NS line spacing and 10m to 20m EW spacing. Grade Control holes were drilled on 5m x 8m grid, Aircore holes were mostly angled at -60° grid SW or grid west.</p> <p>The mineralised zones have been extensively drilled and have demonstrated sufficient continuity to support the definition of “Mineral Resource” as per the classifications applied under the 2012 JORC Code.</p> <p>Analysis of the sample lengths revealed the most common sample length within the wireframes are 1m (99%) with Kyte consisting of some historic 2m composites. All samples within the resource wireframes were composited to 1m.</p>
<i>Orientation of data in relation to geological structure</i>	<p>Mineralisation at BLK comprises flat lying shallow dipping zones of gold mineralisation related to supergene Au enrichment. The blanket of supergene mineralisation cuts across all weathered lithologies and has been drill tested by NAV over a strike length of 2.6km. The deeply weathered nature of the deposits has resulted in variable zones of depletion ranging from 0-20m deep with subsequent supergene enrichment occurring beneath the depletion zones and extending in places up to 60m deep. Surface silicification is apparent in the top 4m. RC holes are vertical and RAB and Aircore holes angled (mostly at -60°). No orientation based sample bias has been identified in the sample data.</p>
<i>Sample security</i>	<p>No sample security details are available for pre-Navigator samples. It is assumed the sample security methodologies were the same as those adopted at Mertondale, a former Navigator resource located further north. At Mertondale numbered and compiled Navigator drill samples were collected from the field on a daily basis and transported to a secure yard in Leonora. They were then processed and packaged into ‘bulkabag’ sacks for transport to the assay laboratory. No particular security measures were imposed apart from sealing/tying up the sacks and a secure yard.</p>
<i>Audits or reviews</i>	<p>A review of sampling techniques indicates that they were conducted to the normal industry standards of the day, core samples based on geological boundaries or 1m intervals were mostly half core however some was quarter core. RC samples were usually riffle split at the rig at metre intervals. A 3m (SGW) or 4m (Navigator) composite was collected from the reject and assayed, any anomalous interval (typically &gt;0.1g/t Au) was retrieved at 1m intervals (from the original split when drilled) and Fire Assayed. Aircore sampling followed a similar procedure to RC except the rejects from the riffle split were stored on the ground and not bagged. The number of wet samples is believed to be very low however the intervals involved can’t be quantified. The data has been validated in Datashed and in Surpac prior to resource estimation. These processes checked for holes that are missing data, missing intervals, overlapping intervals, data beyond end-of-hole, holes missing collar co-ordinates, and holes with duplicate collar co-ordinates.</p>

## Section 2 Reporting of Exploration Results

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<p>The deposits are all located on granted Mining Leases within the Cardinia Project area. All except one of the tenements are in the name of (and 100% owned by) Navigator Mining Pty Ltd. The exception is M37/646 (Bruno Lewis Grade Control) which is 80% Navigator and 20% Jindalee Resources Ltd and Mr. Vladimir Nikolaenko. Kin Mining NL has entered into a Share Sale Agreement with Navigator and has acquired all the issued capital and assets of Navigator Mining Pty Ltd. The agreement includes the Cardinia tenement package. The following deposits are located on the subsequent tenements: Lewis South M37/86, Lewis Grade Control M37/227, M37/86 and (small portion of) M37/277, Bruno Grade Control M37/277, Bruno-Lewis Exploration M37/86, M37/227, M37/277, M37/300 and M37/646, Kyte M37/277. M37/86 is subject to a Royalty payment of 1% of the quarterly gross value of gold sales after 10,000oz of production. All tenements are in good standing and no known impediments exist.</p>
<i>Exploration done by other parties</i>	<p>The deposits have been extensively drilled by a number of companies including Mt Edon, SGW and in more recent times Navigator. A review of the collar file reveals the following companies Navigator, NR (Normandy Resources?), MET (?), SGW (Sons of Gwalia), CIM (Centenary International), AZT (Aztec), HLM (Harbour Lights) have all contributed to various drill programmes, however the vast majority of exploration was conducted by Navigator. A test parcel of ore was mined by NAV from Bruno (100,000t) grade and recoveries exceeded expectations. Navigator commissioned Runge Limited to complete a Mineral Resource estimate for the Cardinia deposit in January 2009.</p>
<i>Geology</i>	<p>The Cardinia Project geology comprises intermediate mafic and felsic volcanic lithologies and locally derived epiclastic sediments. The regional lithological strike is 345° and contacts dip between 30°-40°W, foliations tends to dip moderately to the east. Felsic porphyries are recognised at Bruno/Lewis. At Lewis the intrusives are associated with mafic-felsic contacts and the mineralisation is interpreted to dip 40°-70°E with lenses varying in width from 1-7m true thickness.</p> <p>Gold mineralisation at Cardinia comprises flat lying, shallow dipping zones of supergene gold enrichment in weathered regolith. The mineralisation truncates all lithologies without any obvious effects. The central area is dominated by strongly weathered NW trending basalts with intercalated beds of felsic rocks and minor shales.</p> <p>Gold distribution is highly variable resulting in very closely spaced drilling being required to confidently delineate the mineralised zones. Primary gold mineralisation is associated with increased shearing associated with lithological contacts between mafic and felsic rocks. Disseminated carbonate-sericite-quartz-pyrite alteration zones are adjacent to the gold mineralisation.</p> <p>At Bruno/Lewis and Kyte virtually all the known gold resources are associated with flat lying, shallow dipping zones of supergene Au enrichment interpreted to be related to supergene gold enrichment. Interpretation of cross sections reveals a series of mineralised structures evident as quartz-ironstone veining and quartz outcrop.</p>
<i>Drill hole Information</i>	<p>The total drill hole data base, comprises 9,140 drill holes for a total of 315,088m that was used for the Mineral Resource estimate. Drilling included in the resource estimate amounted to 2,947 drill holes (99,786m) of which 34,593m were intersection metres. Plan and typical cross section views have been including in this report.</p> <p>Exploration results are not material to this report; the Mineral Resource Estimate is based on all available historic and modern Diamond, RC, Aircore and RAB drilling data.</p>
<i>Data aggregation methods</i>	<p>Individual grades are reported as down hole length weighted averages, sample lengths in the mineralised zones in all deposits were overwhelmingly 1m. A review of sample lengths determined the optimal sample length to be 1m. More than (&gt;99%)</p>

Criteria	Commentary
	<p>of samples within the wireframes are 1m samples. Surpac software was used to extract 1m downhole composites. Composites were checked for spatial correlation within wireframe objects.</p> <p>The high coefficient of variations in the summary statistics (particularly the GC data) indicated the use of top cuts prior to using linear interpolation methods.</p> <p>A high grade cut of 15g/t Au was applied to the datasets, determined by inflections on the log probability plots. A top cut value of 30g/t Au was also applied to the grade control domains.</p> <p>The wire frames were created using Surpac, digitising on screen of cross sectional data using a 0.1 g/t and 0.2 g/t Au cut off. To maintain coherent resource shapes substantial areas of internal waste have been included inside the wireframes (See figure below for a typical cross section at BLK). Metal equivalent values are not being reported.</p>
<i>Relationship between mineralisation widths and intercept lengths</i>	<p>The Bruno-Lewis mineralisation has been defined over a strike length of 2.6km (320°-340°). It is noted that adjacent drill holes, even the 5x8m Grade Control (GC) grid pattern exhibit highly variable grades (down hole) for the vast majority of the drilling (typical of supergene mineralisation). To maintain coherent resource shapes substantial areas of internal waste have been included inside the wireframes.</p> <p>The majority of holes are drilled vertical, grid drill spacing is varied depending on the resource and drill holes are believed to be true width due to the flat lying nature of the supergene mineralisation. Drilling at Kyte may not be at an optimum angle or true width to the mineralisation as most of the holes in this deposit are inclined (-60°).</p>
<i>Diagrams</i>	Relevant plans and diagrams are included in this report.
<i>Balanced Reporting</i>	<p>The available database includes a large inherited data set compiled by previous owners dating back to 1982. There are limitations in the amount of information provided in the data set. It has not been possible to fully verify the reliability and accuracy of a substantial proportion of the data however it appears that no serious problems have occurred and validation check results were within acceptable limits. In general recent data is more reliable. All NAV collars were surveyed after completion using an RTK GPS instrument.</p> <p>Considering the complex history of grid transformations there must be some residual risk in converting old grids to GDA 94 although generally the survey control appears to be satisfactory. Navigator also supplied data pertaining to the Specific Gravity (SG), pit shells and drill hole date and although not independently verified they have been accepted on face value.</p> <p>There is always an area of technical risk associated with resource tonnage and grade estimations.</p> <p>Exploration results are not being reported.</p>
<i>Other substantive exploration data</i>	Exploration results are not being reported.
<i>Further work</i>	<p>Follow-up resource definition drilling is very likely to occur; the mineralisation in the Cardinia area remains open in various directions, and at depth. There is the possibility of mining a bulk sample/test pit to determine the relationship/reconciliation of the model to the mine head grade and tonnage.</p> <p>Further SG work is recommended to increase confidence in SG values used for future resource estimates.</p> <p>Exploration results are not being reported.</p>



### Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
<i>Database Integrity</i>	<p>The data has been validated in Datashed and in Surpac prior to resource estimation. These processes checked for holes that are missing data, missing intervals, overlapping intervals, data beyond end-of-hole, holes missing collar co-ordinates, and holes with duplicate collar co-ordinates. Navigator uploaded the original assay files received from the labs via a database administrator using Datashed to minimise loading errors. An export of the data was then used to create an access database for use in Surpac.</p> <p>Kin geologists have verified historic drilling/assays/geological logs/survey against the database including viewing old reports and visual checks in Surpac.</p>
<i>Site Visit</i>	<p>Mr Simon Buswell-Smith has visited and worked in the Cardinia area for many years (2008-2012) with the last site visit being 01/12/2014 and can confirm drilling, site layout, local geology, extent of old workings and has signed off as the Competent Person to this report.</p>
<i>Geological Interpretation</i>	<p>The BLK is a highly variable 2.6km long zone of supergene Au mineralisation. Gold grades are highly variable (even at 5x8m drill spacing), not only down hole but also between holes. The resource has been drilled to maximum depth of 110m and the resource is modelled to 68m.</p> <p>Geology – a supergene enrichment gold deposit within zones of depletion, Mafic/felsic clays with intrusive porphyry. Mineralisation associated with zones of shearing and the mafic/felsic lithological contact with carbonate-sericite-quartz-pyrite alteration zones adjacent to the gold mineralisation. Deeply weathered regolith. Flat lying, shallow dipping (30°-40°) with NNW or NS strike (320°-340° at Bruno/Lewis), Vertical thickness of mineralisation averages (5-10m) however it can range between (20-60m) often below a depletion zone (0-20m). The grade is highly variable but continuity is regarded as good. Even though the drilling is closely spaced in some zones (BGC and LGC) the resource is classified as Indicated and Inferred due to the highly varied grade and the lack of bulk density test work. The mineralisation is hosted by a highly-weathered clay zone which is difficult to discriminate geologically and the geological interpretation of the weathered clays are of low order of confidence, however mineralisation is believed to be predominately unconstrained in relation to lithology at this stage due to the supergene nature of the gold resource.</p> <p>The grade and confidence of the geology are highly affected by the location of the mineralisation high in the regolith profile. This environment is conducive for remobilisation of grade and strong weathering of hard rock geology to clays.</p> <p>Trial Mining 2010 (NAV) at Bruno and Mert's Reward extracted 114,000t of ore, 74,200t of this parcel was treated at St Barbara's (Gwalia plant) and 39,800t at NAV's Bronzewing plant for a recovered 7,223ozs of gold. Bruno ore was free dig, open pit mining of supergene mineralisation. Mining costs/BCM were below budget, the head grade of 2.33g/t Au was 40% higher than the mine planned grade and recovery was &gt;95%. The mining trial was very successful and much better than predicted</p>
<i>Dimensions</i>	<p>The drilled strike length of Bruno/Lewis is 2.6km, drilling extends to depths of 110m. There is a deeply weathered, supergene mineralisation zone beneath surface depletion zones (0-20m) which can extend to 60m in places. The EW drilling extent is up to 400m wide, the vertical thickness of the ore zone can vary (by up to 30m) but averages 5-10m in width. The depth of mineralisation is up to 90m however the resource is modelled to a maximum depth of 68m.</p> <ul style="list-style-type: none"> <li>• Kyte (K) - 650m of strike</li> <li>• Lewis South (LS) - 800m of strike</li> <li>• Lewis Grade Control (LGC)- 255m of strike</li> <li>• Bruno Grade Control (BGC) - 400m of strike</li> <li>• Bruno/Lewis Exploration (BLE) - 1600m of strike</li> </ul>
<i>Estimations</i>	<p>Surpac Software was used with Ordinary Kriging (OK) interpolation constrained by</p>

Criteria	Commentary
<i>and Modelling Techniques</i>	<p>mineralised envelopes using a minimal 0.2g/t Au cut-off. Wireframes constructed in Surpac (0.1g/t Au and 0.2g/t Au cut-off). There is poor continuity between drill holes and numerous zones of internal dilution are included to maintain the continuity of the resource wireframes. Individual holes exhibit a high degree of variable grade and downhole variable grade, substantial areas of internal waste are included in the wireframes. Maximum distance of extrapolation from data points is deposit dependant in relation to drill spacing. The largest being 20m at Kyte, BLE and LS (16m) and both the LGC and BGC (4m).</p> <p>A high grade cut of 15g/t Au was applied to the datasets, determined by inflections on the log probability plots. A top cut value of 30g/t Au was also applied to the grade control domains.</p> <p>Bruno/Lewis Grade Control was wire framed using RC and Diamond drill holes on tight drill spacing. Older Aircore holes were omitted.</p> <p>Bruno/Lewis Exploration is well drilled with a regular drill pattern. Recent RC results were preferred and older AC holes were excluded from the wire frame and the resource estimate.</p> <p>Deeper zone of mineralisation below Lewis GC wireframe have been defined by historic RC, AC and GCAC holes – 220 holes (Aircore) were removed from the estimation.</p> <p>Estimation techniques and interpretation constructed by Runge in 2009 that were used by NAV for the Cardinia resource, are predominately used in the current resource estimation, due to the successful outcome from the trial mining at Bruno.</p> <p>To test the sensitivity of the resource to drill spacing sub set test models interpolated the block model. Results show a tonnage and grade variation of 15% at LGC and 25% for BGC. The difference in the sub set estimates reflects the highly variable grade distribution between adjacent drill holes. The grade discrepancy at Bruno was confirmed by the trial mining.</p> <p>No by-products are to be recovered.</p> <p>No estimation of deleterious elements was carried out. Only Au was interpolated in the block model.</p> <p>Block models created for the full extent of Bruno/Lewis trend, Separate block models for BGC and LGC which were then imported into the larger block model.</p> <p>Block model size depended on the drill density of the deposit. Bruno Lewis and Lewis South (16m NS x 10m EW x 5m vert) – sub cells 4m x 2.5m x 2.5m. Grade Control blocks (4m NS x 2.5m EW x 2.5m vert). Kyte (20m NS x 10m EW x 2.5m vert) – sub cells 10m x 5m x 1.25m.</p> <p>The parent block size was selected on 50% of the average drill hole spacing for each domain, “ellipsoid” searches populated the resource blocks.</p> <p>No assumptions are made regarding modelling of selective mining units.</p> <p>No assumptions are made regarding correlation between variables.</p> <p>The supergene mineralisation is in the weathered oxide zone with a weak correlation within a north-west striking mafic/felsic contact. This has been incorporated into the major search direction of the block models that relate to this weathered contact.</p> <p>A high grade cut of 15g/t Au was applied to the datasets, determined by inflections on the log probability plots. A top cut value of 30g/t Au was also applied to the grade control domains; this was done to assist in reducing the known nugget affect throughout the resource.</p> <p>To check that the interpolation of the block model honoured the drill data, validation was carried out comparing the interpolated blocks to the sample composite data, the validation plots showed good correlation thus the raw drill data was honoured by the block model. Hardcopy sections of the resource with the block model plotted on section have also been carried out to maintain that the block model honours original drill data.</p>
<i>Moisture</i>	<p>Grade and tonnages are estimated on a dry in-situ basis, moisture values have not been considered.</p>

Criteria	Commentary
<i>Cut-off Parameters</i>	A nominal 0.7g/t Au cut-off grade was used in the mineral resource on the basis that this has an economic validity throughout similar gold deposits in an open pit environment.
<i>Mining Factors or Assumptions</i>	<p>Historic mining in the area is restricted to small prospector pits and shallow underground workings. NAV undertook the trial mining of Mertondale 2 and Bruno in 2010 (114,000t @ 2.05g/t Au) a year after the Runge resource estimation was published. Recovery and head grade were above expectations.</p> <p>Mining at Bruno returned 100,000t @ 2.33g/t Au, The additional 14,000t came from Mertondale 2, Gwalia plant recovery 97.9% (3,990ozs), Bronzewing plant recovery 94.2% (2,773ozs). Free dig at Bruno trial pit, lower than forecast mining costs, clayey weathered regolith – easy digging, supergene mineralisation, head grade was 40% higher than expected (almost 1g/t Au), good gold recovery, mine cut-off grade 0.85g/t Au, Ammtec SG test work was completed post mining.</p> <p>The successful mining by NAV at Bruno suggests that the mineral resource at BLK has a reasonable prospect for eventual economic extraction by medium scale open pit mining methods, taking into account current mining costs and metal prices and allowing for potential economic variations.</p>
<i>Metallurgical Factors or Assumptions</i>	From the NAV trial mining report Mike Kitney (metallurgist) supervised trial mining to ensure that set out procedures were followed, his findings indicate cyanide test work recoveries of Cardinia ore were 97% after 48Hrs with 90% after 24Hrs (-600 $\mu$ ) 4.4 g/t Au grade. The material was soft and clayey with good recovery from the coarse and the fine fraction prior to grinding. Copper and organic carbon content in metallurgical tested samples is low and limited.
<i>Environmental Factors or Assumptions</i>	Mining at Bruno (100,000t) from trial pit, generated a mullock/waste dump next to open cut to industry standards. It is assumed that practices concerning waste rock and process residual will meet accepted industry standards
<i>Bulk Density</i>	<p>Majority of the entire Bruno-Lewis-Kyte is within the weathered oxide domain (0.7 g/t Au cut-off).</p> <ul style="list-style-type: none"> <li>• Oxide zone 3,274,000t @ 1.3 g/t Au</li> <li>• Transition zone 92,000t @ 1.2 g/t Au</li> <li>• Fresh zone 32,000t @ 1.3 g/t Au</li> </ul> <p>Limited historic bulk density determinations indicate the values used in the resource estimation may be slightly underestimated. There remains the risk that the resource tonnage is not well defined due to the assumed bulk density values Specific Gravity (SG).</p> <p>SG figures of 1.8 t/m<sup>3</sup> – Oxide, 2.2 t/m<sup>3</sup> – Transition, 2.6 t/m<sup>3</sup> Fresh – values were used in the resource estimate and are considered to be conservative. The SG used in the estimation is up to 15-20% lower than the test work results (Ammtec &amp; Amdel), however this data is on only limited samples. Further SG work is recommended to increase confidence in SG values used for future resource estimates.</p>
<i>Classification</i>	<p>The resource has been classified as Indicated and Inferred. The classification category is based on drill density and associated sample support and the highly variable grade distribution both down hole and between holes. Lack of QA/QC in early exploration, Aqua Regia vs Fire Assay results and composite sampling.</p> <p>BGC &amp; LGC – close spaced 5m x 8m drill pattern, grade variability but good continuity, RC &amp; DD only (AC removed) – Indicated.</p> <p>BLE – 20m x 32m drill pattern RC holes, good mineralisation continuity – Indicated.</p> <p>Remainder of BLE – variable drill hole types (RC &amp; AC), wider drill spacing and highly variable grade distribution – Inferred.</p> <p>Kyte/Lewis South – regular grid drill spacing, 32m x 10m, AC holes define the deposit, highly variable grade continuity – Inferred.</p> <p>The relative accuracy of the Mineral Resource is reflected in the reporting of the</p>

Criteria	Commentary
	<p>Mineral Resource as per the guidelines of the 2012 JORC Code.</p> <p>Historic documents (including Annual Reports) provide detailed information on drilling and mining at the various prospects. A large proportion of digital input data has been transcribed from historical written logs and validation checks have confirmed the accuracy of this transcription. The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The continuity of geology is well understood as existing pits and historical mining reports provide substantial information on mineralisation controls and lode geometry. The lack of historical QA/QC data is offset by the quantity and the continuity of the sample data in the database.</p> <p>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</p>
<i>Audits and Reviews</i>	Audits and reviews have been completed by Kin Mining NL.
<i>Discussion of Relative Accuracy and Confidence</i>	<p>The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.</p> <p>The Mineral Resource statement relates to a global estimate of tonnes and grade. Mining at Bruno returned 100,000t @ 2.33g/t Au, The additional 14,000t came from Mertondale 2. Processing at the Gwalia plant saw recovery at 97.9% (3,990ozs), Bronzewing recovery 94.2% (2,773ozs). Free dig at Bruno trial pit, lower than forecast mining costs, clayey weathered regolith – easy digging, supergene mineralisation, head grade 40% higher than expected (almost 1g/t Au), good gold recovery, mine cut-off grade 0.85g/t Au. Previous production at Bruno saw an increase in grade relative to resource model, it is suspected to be due to multiple high grade outlier Au values at Bruno, the uncut resource has good reconciliation. Mineralisation throughout the remainder of the current resource has minimal high grade outliers and is therefore deemed to have less potential for a large uplift in grade that was seen at Bruno. Mining at Bruno increased the level of confidence of the Mineral Resource.</p>

**Cardinia (Helens and Rangoon)**  
**SECTION 1 – Sample Techniques and Data**

Criteria	Commentary
<i>Sampling techniques</i>	<p>The resource drilling included Aircore, RC and diamond drilling (HQ3) for 16,354m of which 4,682m were intersection metres. Aircore holes were composite samples at 4m intervals (assayed for Au via Aqua Regia). Assays intervals &gt;0.1g/t Au were samples as individual metres (then Fire Assayed). Diamond holes were samples along lithological intervals however single meter samples were the preferred sample interval once inside the geological unit.</p> <p>Nothing is stated regarding RC sampling techniques however it's assumed it was a similar methodology to Aircore (composites then meter intervals - grade dependent). Mt Edon drilled the majority of RC holes; their usual assay technique was initially 2m composite sampling, Aqua Regia digest, followed by fire assaying any anomalous intervals (&gt;0.5g/t Au) as one metre intervals. These samples were originally collected through a cyclone, when drilled, and stored on site until submitted to Leonora Laverton Assay Laboratories.</p>
<i>Drilling techniques</i>	<p>The resource drilling included Aircore, RC and diamond drilling (HQ3) for 16,354m of which 4,682m were intersection metres within the wire frames (40,164m of drilling are in the database). 45 Aircore, 337 RC holes and 11 diamond holes were used in the resource estimate. This drilling is a mixture of historical and recent Navigator Resources Ltd (NAV) holes. Since obtaining the project Navigator completed 170 Aircore holes and 9 diamond holes for 5,187m.</p>
<i>Drill sample recovery</i>	<p>Drill sample recovery details are not mentioned in the database, however recoveries from the various types of drill methods are assumed to have been satisfactory.</p> <p>Aircore holes drilled by NAV were samples as 4m composite (scoop) and submitted for analysis via Aqua Regia digest, anomalous (&gt;0.1g/t) sample intervals were sampled again as individual 1m intervals, split at the rig at the time of drilling, and resubmitted for analysis via fire assay. Although not mentioned it's assumed that RC samples were dealt with in a similar fashion, as was the case on other Cardinia deposits that were drilled around the same time.</p> <p>Diamond holes were sampled on lithological boundaries, varied sample lengths, but single metre composites were the preferred sample length.</p> <p>Limited data is recorded about sample recovery in the geological logs, therefore difficulty remains to establish any relationship between grade and sample recovery.</p>
<i>Logging</i>	<p>Navigator RC and Aircore logging were entered on a metre by metre basis recording lithology, alteration, mineralisation, weathering, colour, structure and veining. The information was entered directly into hand held digital data loggers and transferred directly to the database. Holes were logged to a standard considered appropriate for geological and resource modelling.</p> <p>Navigator's procedure for diamond core was initially orientation and marking of the bottom of the hole. Core recovery and fractures per metre was also recorded. The core was geologically logged in full recording lithologies as in RC drilling, photographed and marked for sampling. Holes were logged to a level considered appropriate for geological and resource modelling.</p> <p>Logging of geology, alteration, mineralisation, weathering, colour and structure are interpretative and qualitative, whereas logging of mineral and veining percentage is quantitative. All drill holes were logged in full.</p>



Criteria	Commentary
<i>Sub-sampling techniques and sample preparation</i>	<p>Half diamond core was routinely analysed for this Mineral Resource estimate, however Diamond drilling results comprises a very low proportion of the resource quantifications (11 diamond holes).</p> <p>All RC and Aircore samples were collected at the rig using a riffle splitter. Samples were predominantly dry.</p> <p>Half core, RC and Aircore sampling methods are considered standard industry practice.</p> <p>The majority of Navigator drill samples were dispatched to Kalgoorlie Assay Labs (KAL) however SGS and Aurum laboratories were also used for sample analysis. At KAL samples are initially oven dried (to 110°C) then crushed to 2mm then pulverised (LM5 ringmill) with 90% passing -75µ then assayed via Aqua Regia or Fire Assay. The preparation procedure at Aurum included drying, splitting to 1kg, pulverising (90% passing -75µ) where a nominal 50g sample was subject to Aqua Regia digest (AuAR50). At SGS the analytical process involved drying, crushing and pulverising (90% passing 75µ) and was digested via Aqua Regia (ARE155) or was Fire Assayed (FAA505) using a 50gm charge.</p> <p>The sample preparation followed industry's best practice of the day, the sample size is considered to be appropriate to correctly represent the style of mineralisation being tested.</p>
<i>Quality of assay data and laboratory tests</i>	<p>In general, assays were initially conducted as 4m composite samples, using an Aqua Regia technique, as a first pass, with follow up 1m sampling completed using Fire Assay. Fire Assay is considered to be a total analytical technique, Aqua Regia is considered to be a partial analytical technique.</p>
<i>Verification of sampling and assaying</i>	<p>Duplicate repeat pulp analysis from Helens/Rangoon indicate an excellent relationship between the original and the repeat assay result, indicating an acceptable measure of sample preparation reliability in the assay laboratory.</p> <p>Drilling techniques at the time (+2004) utilised face sampling hammers (RC drilling). There is no information regarding the frequency of wet samples however the use of booster and auxiliary compressors would allow the majority of holes to be dry.</p> <p>NAV maintained approximately 1 QC sample per 20 drill samples submitted to the lab. These samples included the submission of standards and blanks. No field duplicates have been taken.</p> <p>Previous QAQC analysis by Runge considers the overall QA/QC results for Helens and Rangoon resource are acceptable and confirm the validity of the assay data for use in the resource estimate.</p>
<i>Location of data points</i>	<p>The collars of all NAV drilling were surveyed following completion of the hole using a RTK GPS instrument (MGA94), no information regarding the collar survey technique of earlier drilling is available. All holes in the database contain design dip and azimuth data. Drilling was carried out on a local grid pattern which is oblique (25°) to the national GDA grid. Downhole surveys on diamond holes (single shot camera) were conducted roughly at the start, middle and end of hole.</p> <p>A topographic DTM was created using the DGPS pickup data of the drillholes.</p>

Criteria	Commentary
<i>Data spacing and distribution</i>	<p>The majority of the resource has been drilled to 10m hole spacing on 25m EW sections, while some portions of the resource are tested at 50m spacing. Drill holes are orientated towards both grid east and grid west. The main mineralised zones have demonstrated sufficient continuity in both grade and geological continuity to support the definition of mineral resource and the classifications applied under the 2012 JORC Code.</p> <p>Analysis of the sample lengths revealed the most common sample length within the wireframes are 1m and 2m. All samples within the resource wireframes were composited to 2m.</p>
<i>Orientation of data in relation to geological structure</i>	<p>Primary gold mineralisation at the Helen's Rangoon project areas, located in the northeast of the Cardinia area, is sub-vertical in nature and associated with narrow (1-5m) steeply dipping zones of shearing and quartz development. Mineralisation trends are either north-northwest or north-south. At the various Helen's deposits the mineralised shear zones are generally in the mafics but close to a felsic volcanics/sediment contact. At Helens North Lode, excellent visual correlation has been observed in DDH1 (7m @ 6.4g/t Au) between gold grades and bleaching of the oxidised basalt host rock. Only minor supergene mineralisation is present.</p> <p>Drilling was carried out on a local grid pattern which is oblique (25°) to the national GDA grid. Drill holes are orientated towards both grid east and grid west. Holes are drilled orthogonal to the interpreted strike of the target horizon (-60°). Lithological layering within the tenements strike NW to NNW and dips gently to steeply to the SW. No orientation based sample bias has been identified in the sample data.</p>
<i>Sample security</i>	<p>No sample security details are available for pre-Navigator samples. It is assumed the sample security methodologies were the same as those adopted at Mertondale, a former Navigator resource located approximately 10km further north. At Mertondale numbered and compiled Navigator drill samples were collected from the field on a daily basis and transported to a secure yard in Leonora. They were then processed and packaged into 'bulkabag' sacks for transport to the assay laboratory. No particular security measures were imposed apart from sealing/tying up the sacks and a secure yard.</p>
<i>Audits or reviews</i>	<p>A review of sampling and drilling techniques by Kin and others indicates that they were conducted to the best practice industry standards of the day, historic drilling and sampling methods and QA/QC are regarded as acceptable. Core samples based on geological boundaries or 1m intervals were mostly half core. RC samples were usually riffle split at the rig at metre intervals, a 4m (Navigator) composite was collected from the reject and assayed, any anomalous interval (typically &gt;0.1g/t Au) was retrieved at the split 1m intervals and Fire Assayed. Aircore sampling followed a similar procedure to RC except the rejects from the riffle split were stored on the ground and not bagged. The number of wet samples is believed to be very low however the intervals involved can't be quantified.</p>

## Section 2 Reporting of Exploration Results

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<p>The deposits are all located on granted Mining Leases within the Mertondale project area, specifically Cardinia. All tenements are in the name of and 100% owned by Navigator Mining Pty Ltd, Kin Mining NL has entered into a Share Sale Agreement with Navigator and has acquired all the issued capital and assets of Navigator Mining. The agreement includes the entire Mertondale Project tenement package. The following deposits are located on the following tenements: Rangoon is located on M37/316 and Helen's South, Helen's North and Helen's East are all within M37/317.</p> <p>The leases are located in the Mt Margaret Mineral Field, Navigator Mining Pty Ltd is a wholly owned subsidiary of Kin Mining NL. The tenements are in good standing with no known impediments.</p>
<i>Exploration done by other parties</i>	<p>Navigator completed the first resource estimation in October 2006 for the Helens and Rangoon deposits. The resource was interpolated using inverse distance to the power of 1 (ID<sup>1</sup>) with resource outlines generated using 1.0g/t Au boundary. High grade cuts 15g/t Rangoon, 14g/t Helens North and 10g/t Helens South were applied, the resource was reported above 0.5g/t Au cut-off. Results were similar to the original Runge estimate Runge Mineral Estimate January 2009 (page 5).</p> <p>The deposits have been explored and drilled by Mt Edon Gold Mine (CR and CRC series) commencing in 1986 then Sons of Gwalia and finally Navigator (NRAC, NHAC and NCDD series) commencing in 2004. The Mt Edon RAB holes are omitted from the resource estimate.</p> <p>A total of 2,676 tonnes of ore was mined from the area known as Rangoon – Zone 1 yielding 464oz of gold at 5.4g/t Au. Mining the underground workings took place in 1939-1941 and again in 1961.</p>
<i>Geology</i>	<p>The Cardinia tenements overlie a sequence of intermediate mafic and felsic volcanic lithologies and locally derived epiclastic sediments. These lithologies are positioned on the western limb of the regionally faulted south plunging Benalla Anticline. Lithological layering within the tenements strikes NW to NNW and dips are orientated gently to steeply to the SW. The central portion of the tenements are dominated by a NNW-SSE trending lenticular unit of basalt with thin (&lt;50m thick) intercalated beds of felsic volcanogenic sedimentary rocks and shales. The thick units of felsic volcanics comprising lava, fragmental deposits and fine to coarse grained volcanogenic sedimentary rocks flank the basalt unit</p> <p>Mineralisation is sub-vertical in nature associated with narrow (1-5m) steeply dipping zones of shearing and quartz development that transect lithological layering. Only minor supergene/laterite mineralisation is present.</p>
<i>Drill hole Information</i>	<p>In all 393 drill holes have been sourced and included in the Mineral Resource estimation, comprising 45 Aircore holes, 337 RC holes and 11 diamond holes for an advance of 16,354 metres of which 4,682 are intersection metres.</p> <p>Exploration results are not material to this report. The Mineral Resource Estimate is based on all available historic and modern Diamond, RC and Aircore drilling data.</p>
<i>Data Aggregation methods</i>	<p>Individual grades are reported as downhole length weighted averages, sample lengths in the mineralised zones are 2m.</p> <p>Resource outlines were generated based on a 0.25g/t Au mineralised envelopes. Some internal dilution was included to maintain wireframe continuity based on</p>

Criteria	Commentary
	geological contacts. The wire framed objects were validated using Surpac software and set as solids. Metal equivalent values are not being reported.
<i>Relationship Between Mineralisation widths and intercept lengths</i>	<p>Drill holes are orientated grid east or grid west (-60°), grid drill spacing varies, drilling was carried out on a local grid pattern which is oblique (25°) to the national GDA grid. Holes are drilled orthogonal to the interpreted strike of the target horizon. Lithological layering within the tenements strike NW to NNW and dips gently to steeply to the SW mineralisation is sub vertical.</p> <p>Mafic and felsic hosted mineralisation extends over 3,000m strike x 115m deep. Gold mineralisation is associated with narrow (1-5m) steeply dipping zones of shearing and quartz development. The majority of resource is tested at 10m hole spacing on 25m EW sections although some portions are tested at 50m spacing's.</p>
<i>Diagrams</i>	Relevant diagrams are included in the report.
<i>Balanced Reporting</i>	The available database includes a large inherited data set compiled by previous owners dating back to the mid 1980's. There are limitations in the amount of information provided in the data set. It has not been possible to fully verify the reliability and accuracy of a substantial proportion of the early data however it appears that no serious problems have occurred and validation check results were within acceptable limits. In general recent data is more reliable. All NAV collars were surveyed after completion using an RTK GPS instrument.
<i>Other Substantive exploration data</i>	Exploration results are not being reported.
<i>Further work</i>	<p>Follow-up resource definition drilling is very likely to occur; the mineralisation in the Cardinia area remains open in various directions and drilling conducted by NAV in 2012 has not yet been included in the resource estimate. There is the possibility of mining a bulk sample/test pit to determine the relationship/reconciliation of the model to the mine head grade and tonnage.</p> <p>Further Specific Gravity (SG) work is recommended to increase confidence in SG values used for future resource estimates. Exploration results are not being reported.</p>

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
<i>Database Integrity</i>	<p>The deposits have been historically drilled by several companies, utilising different drilling and assaying techniques. Companies include Mt Edon, Sons of Gwalia and Navigator.</p> <p>The database is inherited from NAV (historic and recent). Historic geological logs have not been converted to the NAV system/logging codes however they are acceptable.</p> <p>Runge Limited conducted the original Mineral Resource estimate (January 2009) they reviewed historic assay/geological logs/survey data against the originals and appraised the old annual reports.</p> <p>Grid transformation from early drilling is regarded as acceptable, all NAV drill holes are surveyed and DGPS controlled.</p> <p>The data has been validated in Datashed and in Surpac prior to resource estimation. These processes checked for holes that are missing data, missing intervals, overlapping intervals, data beyond end-of-hole, holes missing collar co-ordinates, and holes with duplicate collar co-ordinates. Navigator uploaded the original assay files received from the labs via a database administrator using Datashed to minimise loading errors. An export of the data was then used to create an access database for use in Surpac.</p> <p>Kin geologists have verified historic drilling/assays/geological logs/survey against the database including viewing old reports.</p>
<i>Site Visit</i>	<p>Paul Payne (Runge - Competent Person) visited the site 5/2/2009 and confirmed drilling, site layout, local geology, extent of old workings and signed off on the original resource calculation. Simon Buswell-Smith (Competent Person) has also visited the site on many occasions and was involved in some of the original NAV drilling/logging etc.</p>
<i>Geological Interpretation</i>	<p>The deposits mineralisation style is consisting of quartz veining (1-5m wide) and shear zones in basaltic host rock. Excellent correlation between grade and bleached basalt is evident in DDH1 - 7m @ 6.4g/t Au. Gold mineralisation is quartz vein hosted and regarded as regular. Mineralisation trends NNW and NS.</p> <p>Geological data in logs records quartz veining, sulphide content and gold associated with quartz and sulphides. Weathering codes is varied in logging data because different companies used differing logging styles.</p> <p>Drill spacing is regarded as good and company geologists have confidence in the model, NAV and Runge agreed on resource estimates, 1,417 holes were drilled by either Mt Edon and Navigator, these included Aircore, RAB, RC and diamond drilling at 25m or 50m spaced drill sections including several costeans,.</p> <p>Helens geology includes – sheared mafics with quartz veining close to felsic volcanic/sediment contact. Rangoon geology includes – Sheared felsic volcanic/sediments host quartz close to the mafic contact.</p> <p>A high degree of confidence is placed on the geological model, any alternative model interpretations are unlikely to have a significant impact on the resource classification.</p>



Criteria	Commentary
	<p>The use of geology is of high importance in guiding and controlling the resource interpretation due to gold associated with qtz veining along lithological contacts.</p> <p>Both deposits are related to qtz veining therefore this is a major factor affecting grade continuity.</p>
<i>Dimensions</i>	<p>Helens South, Helens North and Rangoon extend from (local grid) 9,450mN to 12,450mN with a vertical extent of 115m. Resource estimate is based on data from 393 drill holes (Aircore, RC and Diamond core).</p>
<i>Estimations and Modelling Techniques</i>	<p>Runge (2009) estimated the original resource via standard Surpac block modelling using Ordinary Kriging interpolation constrained by mineralised envelopes utilising a nominal 0.25g/t cut off and applied block dimensions 12.5mNS x 5mEW x 5m vert. with sub cells of 6.25mx2.5mx1.25m, a high grade cut of 15g/t was applied.</p> <p>Bulk density (SG) was estimated based on information from similar projects, values of 1.9t/m<sup>3</sup>, 2.3t/m<sup>3</sup> and 2.7t/m<sup>3</sup> were assigned to the oxide, transitional and fresh portions of the resource, wire frames were constructed using cross section interpretation based on mineralised envelopes (0.25g/t cut off). Samples within the wireframe were composited to 2m intervals.</p> <p>Ellipsoid orientated search included 3 passes, &gt;90% of model was filled in the initial two passes.</p> <p>Some of the earlier drill holes (of lower sample quality) were omitted from the data base including all 667 RAB holes (10,406m) and 5 early RC holes which conflicted with adjacent drill holes, costeans (originally dug by Mt Edon) were also omitted.</p> <p>The Helens and Rangoon deposits display reasonable geological continuity (geology and mineralisation). The resource is defined within an Inferred Resource classification.</p> <p>Numerous resource shapes that were only tested via a single drill hole were omitted from the model.</p> <p>No by-products are to be recovered.</p> <p>No estimation of deleterious elements and no by-products were included – only Au, there were no selective mining units applied.</p> <p>The parent block size was selected on 50% of the average drill hole spacing for each domain, “ellipsoid” searches populated the resource blocks.</p> <p>No assumptions are made regarding correlation between variables.</p> <p>Wireframes were constructed of the mineralised envelopes utilising a nominal 0.25g/t cut off.</p> <p>QQ plots indicate no particular bias between resource domains. All composites, a 2m composite was selected as appropriate for the deposit, were appended to a single file and assessed for a suitable high grade cut-off of 15g/t was applied affecting only 9 composite samples.</p> <p>To check that the interpolation of the block model honoured the drill data, validation was carried out comparing the interpolated blocks to the sample composite data, the validation plots showed good correlation thus the raw drill data was honoured by the block model. Hardcopy sections of the resource with the block model plotted on section have also been carried out to maintain that the block model honours original</p>

Criteria	Commentary
	drill data
<i>Moisture</i>	Grade and tonnages are estimated on a dry insitu basis, moisture values have not been considered.
<i>Cut-off Parameters</i>	A nominal 0.7g/t Au cut-off grade was used in the mineral resource on the basis that this has an economic validity throughout similar gold deposits in an open pit environment.
<i>Mining Factors or Assumptions</i>	<p>Historic mining in the area is restricted to small prospector pits and shallow underground workings. The Rangoon area was previously mined underground (1939-41) yielding 464oz from 2,676t @ 5.4g/t Au.</p> <p>Helen's and Rangoon resources comprise well defined zones of Au mineralisation – associated with shearing/quartz veining. The mineralised zones are robust, 3km strike extension to a vertical depth of 115m.</p> <p>A significant portion of the deposit has reasonable prospects for open cut extraction – mining costs and metal prices require further consideration.</p> <p>The resource is undiluted and a dilution factor should be incorporated in any evaluation of the deposit.</p>
<i>Metallurgical Factors or Assumptions</i>	Specific gravity and cyanide leach testing of various ore types is recommended. Gold recoveries should be determined. Historic metallurgical testwork (1988) on 7 coarsely crushed (-50 to -6mm) RC samples returned recoveries between 8 and 96%, when pulverised recoveries increased to >93%. Static leach test work (1992) on two diamond core samples returned gold recoveries of 83% and 75%.
<i>Environmental Factors or Assumptions</i>	No assumptions have been made regarding environmental factors.
<i>Bulk Density</i>	Bulk density values were nominal and relative to nearby deposits (oxide 1.8t/m <sup>3</sup> , transition 2.3t/m <sup>3</sup> and fresh 2.7t/m <sup>3</sup> ). <i>Note:</i> the average SG for Basalt is 2.8-3.0t/m <sup>3</sup> when fresh. SG test work conducted by Ammtec (April 2009) was conducted not for Helen's and Rangoon but for the nearby Bruno and Tonto deposits, oxide/ transition/ fresh SG's averaged 2.8t/m <sup>3</sup> , thus scope exists to increase the overall tonnage due to the lower estimation of the Bulk Density's – perhaps by as much as 10%. A comprehensive programme of bulk density test work is recommended. The position (RL) of the oxide transition contact is questionable due to logging inconsistencies, future drill campaigns should attempt to delineate the oxide transition fresh zones.
<i>Classification</i>	<p>The resource has been classified as Indicated and Inferred. The classification category is based on drill density and associated sample support.</p> <p>The mineralised zones (indicated and inferred) are described as robust; however gold mineralisation is narrow, well defined and extends over 3km of strike, the mineralisation is not economically continuous over the entire strike and can be divided into 3 distinct areas; Helens North, Helens South and Rangoon. The majority of the resource has been drilled at 10m hole spacing's on 25m E-W sections and some parts of the resource are drilled on 50m sections. 393 drill holes (45 Aircore, 337 RC, and 11 Diamond) for an advance of 16,354m of which 4,662m are resource intersection metres.</p>

Criteria	Commentary
	<p>Mineralisation shows reasonable continuity within the mineralised domain allowing the majority of drill hole intersections to be modelled into coherent geologically robust wire frames. Classifications are Indicated where hole spacing is 25m x 10m and Inferred where hole section spacing is &gt;25m</p> <p>Historic documents (including Annual Reports, A reports) provide detailed information on drilling and mining at the various prospects. A large proportion of digital input data has been transcribed from historical written logs and validation checks have confirmed the accuracy of this transcription. The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The continuity of geology is well understood as existing pits and historical mining and exploration reports provide substantial information on mineralisation controls and lode geometry. The lack of historical QA/QC data is offset by the quantity and the continuity of the sample data in the database.</p> <p>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</p>
<i>Audits and Reviews</i>	<p>Internal reviews have been conducted by the Competent Person who is obliged to review the data geology/assay/survey/wire frames etc. this procedure is conducted as part of the normal review process. The technical inputs, methodologies, parameters and results of the estimation have been verified by the Runge (2009) and the Competent Person. This type of audit is conducted as part of the normal review process.</p>
<i>Discussion of Relative Accuracy and Confidence</i>	<p>Accuracy of the Mineral Resource is reflected in the reporting of Mineral Resources as per the guidelines of the 2012 JORC code. Global estimates of tonnage and grade. The deposit has not been mined. Reconciliation of the current mined resource vs. historic production is not possible.</p> <p>Navigator conducted an in-house resource estimate (2006), the tonnage and grade values compare favourably with the Runge (2009) estimation 47,667oz (NAV 0.5g/t cut-off) vs. 47,600ozs (Runge 1.0g/t cut-off).</p>

**Raeside**  
**SECTION 1 – Sample Techniques and Data**

Criteria	Commentary
<i>Sampling techniques</i>	The majority of diamond core was longitudinally cut half core. Sample intervals varied, lithological boundary dependent, but were predominantly 1m intervals. The vast majority of RC samples, collected by Triton, were collected via a cyclone or riffle split and bagged at 1m intervals (typically 2-3kg.) Composite spear samples were often collected at a nominal 3m interval with follow up collection of the riffle split 1m samples over anomalous intervals. On occasion wet samples were encountered and in the case of Triton Resources Ltd spear sampled, data relating to earlier wet samples is unavailable however the number of wet samples involved is believed to be very low. The procedure for Aircore sampling is similar to RC except the reject, following riffle splitting, is placed on the ground and not bagged.
<i>Drilling techniques</i>	The resource estimate is overwhelmingly based on RC drilling (95%) other drilling techniques include diamond (2%) and Aircore (3%). RC drilling has been used to delineate ore bodies in this region over the last 25 years and is regarded as a satisfactory technique. Old reports indicate that most of the samples were kept dry. Face sampling hammers were used for the majority of the RC drilling.
<i>Drill sample recovery</i>	<p>Diamond drilling (HQ) at Michelangelo, by Sons of Gwalia (SGW), no recovery figures are available but a report stated “there was some core loss in mineralised zones” however only 53.8m of SGW diamond core is included in the resource calculation. The vast majority of the RC drilling was conducted by Triton using suitable rigs with booster and auxiliary compressors, as was the practice of the day. Rigs of this caliber provide satisfactory results in dry conditions.</p> <p>It appears that the sample quality was satisfactory with the possible exception of any wet samples. Sample recovery and comments regarding wet samples are not in the database.</p> <p>Aircore holes are as reliable as RC when the holes are shallow and under soft dry conditions as was the case at Raeside.</p> <p>No relationship between sample recovery and grade was observed.</p>
<i>Logging</i>	<p>There is a good deal of inconstancy in geological codes between different phases of drilling and the geological structure is complex. There is a major lack of supporting geological data and most of the lithology in old holes was never captured digitally. Less than 50% of the holes were represented in the lithological database.</p> <p>The details regarding drill hole logging techniques and procedures are unknown and undocumented. The vast majority of data was originally compiled by Triton and data sets have been passed down as ownership of the project changed.</p>

Criteria	Commentary
<i>Sub-sampling techniques and sample preparation</i>	<p>Triton diamond core, from a limited number of holes, 67m of mineralisation, was split to half core, typically at one metre intervals and assayed. No information is available regarding SGW diamond core sampling techniques however it's considered to be half core. Limited information regarding Triton's RC sampling procedure indicates a riffle split at the rig, to an appropriate size (2-3kg) was kept and 3m speared composite samples collected and assayed via Aqua Regia, anomalous intervals would be collected from the original 1m split and submitted for Fire Assay. Wet samples were also speared and assayed, which yields a poor quality sample, but the intervals and quantity are unknown. RC samples from SGW were "riffle split off the rig" at 1m intervals and it's assumed that the assay methodology would have been similar to Triton being composites followed by anomalous re-splits. No details regarding Aircore sampling procedures could be located.</p> <p>The RC sampling procedures would have been consistent with the standard industry practices of the day. No systematic quality control checks were conducted on sample batches therefore the reliability of the bulk of the assay data can't be demonstrated.</p> <p>QC procedures undertaken by SGW and Navigator Resources Ltd (Nav) have little relevance because of the small portion of the overall data they provide for the estimate.</p>
<i>Quality of assay data and laboratory tests</i>	<p>The reliability of the bulk of the assay data is unknown. Only limited information regarding laboratories, sample preparation and analytical methodologies is available.</p> <p>Prior to 1994 most of the Triton samples were assayed using an Aqua Regia technique (AR/AAS) and some were Fire Assayed (usually if sulphide rich). From 1995 the standard analytical procedure was initially 3m composite samples digested in Aqua Regia with AAS analysis determination. Anomalous values from selected zones using the original rig riffle split sample were subject to a Fire Assay with an AAS finish (when the weight charge was quoted it was 50 gram). The drill hole data base lists the analytical code as unknown in many entries.</p> <p>There is no mention of checks directly comparing Fire Assay against Aqua Regia. The risk of analytical biases affecting some of the assay results can't be ruled out. Aqua Regia is regarded as a partial analytical technique; Fire Assay is regarded as a total analytical technique.</p> <p>No geophysical tools were used to determine any element concentrations used in this resource estimate.</p> <p>It's unknown whether QA/QC samples were collected because no results are available in the database and Triton did not impose any systematic quality control checks. Consequently analysis of any historical QA/QC data has not occurred. The reliability of the bulk of the assay data cannot be demonstrated.</p> <p>The Quality Control procedures used by Navigator and SGW have little relevance due to the very small proportions of data provided by their drilling programmes.</p>



Criteria	Commentary
<i>Verification of sampling and assaying</i>	<p>The returned significant intersections have been verified by company geologists and McDonald Speijers, who calculated the original (2009) resource calculation however pre Navigator information has limitations due to the legacy of different companies and different procedures. The results from all phases of diamond, RC and Aircore drilling have been accepted on face value. McDonald Speijers was not able to gain any quantitative or semi-quantitative impression of RC or Aircore sample recovery or sample quality. Core recovery information is not presented in the database. There is always a risk that sampling or assaying biases may exist between results from different drilling programmes this may be due to differing sampling protocols, different laboratories and different analytical techniques.</p> <p>Generally by the mid 1980's face sample hammers were commonly in use. There is no concrete information regarding the frequency of wet samples however the use of booster compressors allowed the majority of holes to be dry.</p> <p>The history of sample preparation and assaying procedures is complex and incomplete. Numerous laboratories and analytical methods have been used over the years. The historic data, dating back to 1992, is incomplete and McDonald Speijers was unable to accurately quantify the proportions of data derived from the various combinations of laboratories and methods.</p> <p>It's assumed that sampling and assay procedures were followed to the standards of the day; it seems that grades for most diamond and RC drill holes in mineralised zones have been obtained by fire assay.</p> <p>Top cuts selected ranged from 8-16g/t for the more substantial mineralised zones but usually between 4-8g/t for minor peripheral zones. No other alterations were made to the data apart from top-cutting</p> <p>SGW twinned six pairs of holes at Michelangelo. The SGW assays were on average, 10% lower than the earlier Triton holes, however there were 2 unusually high results in a single intercept, removing these 2 results returned the grade difference to 4% lower. Given the variable nature of gold mineralisation the comparison is reasonably satisfactory.</p>
<i>Location of data points</i>	<p>The co-ordinate data has been transferred from local grid to AGM and then to MGA, when transferred back to local grid the results were to within a fraction of a metre however for resource estimation purposes the local grid co-ordinates were used.</p> <p>It appears that at least 70% of all RC and diamond holes were surveyed and the rest were located reasonably accurately. McDonald Speijers felt that there is unlikely any serious risk associated with the drill hole co-ordinates and they accepted the survey data base as correct.</p> <p>The majority of drill holes at Raeside are not very deep, only a few are &gt;200m. There is a shortage of down hole survey data but it isn't a serious area of risk and holes that have been surveyed didn't show substantial deviations.</p> <p>A Digital Terrain Model of topography was supplied by Nav based on known collar survey elevations and assumptions based on survey precision. McDonald Speijers believed the RL data to be adequate and acceptable.</p>

Criteria	Commentary
<i>Data spacing and distribution</i>	<p>The drill patterns are deposit specific, at Michelangelo line spacing of 12.5m or 25m with holes at 25m intervals with localised closer spacing's to about 10m in some areas, holes were orientated grid west at -60°. At the southern end of Leonardo the drill pattern is irregular with line spacing's ranging from 10m to 40m (25m average). Moving northward the pattern becomes regular at 20m intervals and 20m spacing but opens up to 40m and even 70m towards the down dip limits of the drill pattern. Holes are inclined grid west at -60°.</p> <p>At the Forgotten Four the initial drilling was on a different local grid (orientated 19°-20° to the current grid) these holes were drilled grid west at -60° on 10m spaced lines. Recent drilling was on 10m spaced lines at 25m intervals moving to 25m x 25m at the outer edges of the mineralisation. Holes are all inclined grid west at -60°.</p> <p>At Krang a 25mx25m drill pattern covers most of the resource area although the pattern becomes incomplete in the western most zones, some areas have been infilled to 12.5m with hole spacing at 10-20m along lines. Holes are predominantly drilled grid west at -60°.</p> <p>The local grid is orientated at 045° west of Magnetic North.</p> <p>There is not enough information to regard the assay data as reliable and accurate and so no part of the resource is regarded as measured. The majority of the estimate is Indicated and a small percentage Inferred. The mineralised domains support sufficient continuity appropriate for JORC 2012 Mineral Resource and Ore Reserve estimate procedures and the classifications applied.</p> <p>Samples were composited over 1m down hole intervals.</p>
<i>Orientation of data in relation to geological structure</i>	<p>The ore zones at all four deposits strike roughly NW. At Michelangelo sub parallel mineralised zones typically dip 25° east, these zones are on or close to the dolerite contact (170° strike) at the contact mineralisation is sub parallel to the contact but as it moves away from the contact (into the dolerite) their orientation becomes more distorted. The H/W contact of the host unit is poorly defined in the lithological codes.</p> <p>At Leonardo the southern end of single mineralised zone is a similar orientation to Michelangelo however as it moves north it steepens to 35-45° and the strike displays a significant angular discordance however it strikes basically NW.</p> <p>At Forgotten Four the mineralisation strikes basically NW and dips 40-50° east</p> <p>At Krang the ore zone strikes basically NNW and dips 50-60° east. Flanking mineralisation is orientated more NS strike and dips 30-50°.</p> <p>A pervasive weak foliation is present in the host sequence sub parallel to the apparent stratigraphic layering. Mineralisation is generally related to zones of stronger foliation and weak to moderate shearing with local ductile deformation.</p> <p>No orientation based sampling bias has been identified.</p>

Criteria	Commentary
<i>Sample security</i>	No details regarding sample security protocols are available for the Triton and SGW drill samples. Numbered and compiled Navigator drill samples, although minimal, were collected from the field on a daily basis and transported to a secure yard in Leonora as was their general practice. They were then processes and packaged into sacks 'bulkabags' for transport to the assay laboratory. No particular security measures were imposed apart from sealing the sacks and a secure yard.
<i>Audits or reviews</i>	The data was validated, in all cases the Datamine versions of the data files after transfer matched those in the original Access sourced data tables. Holes were checked for duplication of hole numbers or co-ordinates, Overlaps, reversals or gaps in (to-from) sequences and statistically unusual values. The original JORC 2004 resource calculation was conducted by McDonalds Speijers (2009) nothing has materially changed since that time. A review of sampling and drilling techniques by Kin Mining and others indicates that they were conducted to the best practice industry standards of the day although historic drilling and sampling methods and QA/QC are regarded as weaker than today's current standards

## Section 2 Reporting of Exploration Results

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<p>The leases are located approximately 10km southeast of the town of Leonora in the Eastern Goldfields region of Western Australia</p> <p>A royalty, to a third party, of \$1 per tonne of gold bearing ore mined from below 40m from the natural surface of the tenement applies to the Raeside project area.</p> <p>The Raeside deposits are contained within a large ML (M37/1298) surrounded by 2 EL's (E37/868 and E37/1103). All the tenements are 100% owned by Navigator Mining Pty Ltd. Kin Mining NL has entered into a Share Sale Agreement with Navigator and has acquired all the issued capital and assets of Navigator Mining. The agreement includes the Raeside tenement package. Navigator Mining Pty Ltd is now a wholly owned subsidiary of Kin Mining NL. The tenements are in good standing with no known impediments.</p>
<i>Exploration done by other parties</i>	<p>Prospectors began to seriously explore the Raeside area during the 1980's. In 1989 Triton Resources acquired the Forgotten Four area from local prospectors. In 1982 Triton (70%) formed a JV with Sabre Resources and Copperwell P/L (a subsidiary of Cityview Energy Corp) amalgamating their tenements and applying for additional ground. Prior to 1996 drill exploration consisted of RAB with RC follow up, RAB was later replaced with Aircore drilling due to clays and water issues.</p> <p>Triton mined a trial parcel at Forgotten Four in 1990 (6,280t @ 5.18g/t Au) then extended the open pit to 40m in 1992 (43,359t @ 4.15g/t Au and L/G of 6,200t @ 1.0g/t Au) processing the ore at the Harbour Lights plant. Triton continued exploring (on and off) till 1999 and decided the project was not an economically viable stand-alone operation. SGW farmed into the project in 2000, subsequently acquiring full ownership, they conducted limited drilling at Michelangelo. Navigator acquired the Raeside project from SGW (the administrator) in 2004 but only conducted limited drilling. Kin have purchased all the assets of Navigator (from the administrator).</p>

Criteria	Commentary
<i>Geology</i>	<p>Mineralisation within the Raeside prospect is hosted by a mixed package of fine grained sediments and a quartz dolerite unit. The dolerite is sill like in nature and roughly confirms to the observed bedding trends. The dolerite is fine to medium grained with extensive chlorite alteration. Discontinuities and breaks in diamond core are mostly orientated along the foliation planes and slickensides are prominent throughout. Gold mineralisation is hosted by a series of stacked, irregular, sub-parallel structures which dip at a shallow angle to the east. Higher gold grades are generally associated with increased quartz/carbonate veining and varying degrees of iron alteration. Veins are predominantly stockwork in nature and widths of massive veining are generally &lt;1m.</p> <p>Gold mineralisation at Raeside occurs close to or within a large NW trending body of dolerite in a sequence of mafic volcanics (basalts and dolerites) and sediments (dominantly shales, some are graphitic) and/or intrusives near the southern margins of a porphyry intrusion.</p> <p>Gold mineralisation at Michelangelo is hosted by a uniform metamorphosed medium grained dolerite. The position of the F/W has been roughly delineated however no other convincing geological boundaries are defined. Gold mineralisation at Leonardo occurs mainly in a partly graphitic shale (coded as generic metasediment) close or adjacent to a mafic contact. Gold mineralisation at Forgotten Four and Krang is hosted mainly in mafic rocks with some association with contact zones between mafic and metasediment units, the sediments are also mineralised. At the Forgotten Four the strongest zone of mineralisation is just below the lower contact of the overlying sediments. Some mineralisation at Krang appears to be broadly related to the metasediments however no other convincing geological boundaries have been defined.</p> <p>Most of the mineralised zones contain weak stockworks or sheeted veins usually a few centimetres thick and rarely &gt;1-2m, predominantly quartz or quartz-carbonate accompanied (below the base of oxidation) by disseminated to stringer sulphides (mostly pyrite and minor arsenopyrite).</p> <p>Geological structure is obscured by the lack of outcrop but the variation of the mineralisation suggests a considerable level of structural complexity.</p>
<i>Drill hole Information</i>	<p>In all 2,430 drill holes for an advance of 153,100.4m are included in the drillhole summary and used in the resource estimate, of which 10,139m are mineralised meters. It is impractical to list a table of drill hole details in this report format. Exploration results are not material to this report. The Mineral resource Estimate is based on all historic and modern Diamond, RC Aircore and RAB drilling data.</p>
<i>Data Aggregation methods</i>	<p>Sample lengths in mineralised zones were predominantly 1m with a small proportion of 2m and some 3m intervals. Some shorter intervals 0.3m to 0.95m occurred infrequently. McDonald Speijers concluded that composite lengths of 1m or integer multiples of a metre were adequate for modelling purposes.</p> <p>Metal equivalent values are not used in the estimate. Exploration results are not being reported. Individual grades are reported as down hole length weighted averages</p>

Criteria	Commentary
<i>Relationship Between Mineralisation widths and intercept lengths</i>	Drill holes were designed to achieve the optimum intersection of the mineralisation or close to practicable true width to the mineralisation. The deposits are generally orientated NW, drill holes were mostly drilled grid west (or SW) at -60°.
<i>Diagrams</i>	Relevant “type example” plans and diagrams are included in this report.
<i>Balanced Reporting</i>	<p>Ore loss and dilution factors assumed for the Recovered Fraction models may require adjustment up or down, subject to additional information regarding the physical characteristics of the ore boundaries and the proposed mining procedure. Indications from a reconciliation exercise on a Mertondale model indicated that the dilution factor used at Raeside may be optimistic</p> <p>The continuity of thin mineralised zones at Michelangelo, particularly below the base of strong weathering, might not be as good as implied by the current interpretation.</p> <p>The level of accuracy for locating the drill holes cannot be confirmed however it appears that most RC and diamond holes are located with reasonably accurately and McDonald Speijers believed it was unlikely that there was a serious risk associated with drill hole collar co-ordinates.</p>
<i>Other Substantive exploration data</i>	No interpretations of host stratigraphy or local structures have been developed.
<i>Further work</i>	Specific Gravity (SG) definition is questionable due to the lack of data further drilling may be required for metallurgical, geotechnical and QAQC purposes.

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
<i>Database Integrity</i>	<p>The database consists of an assemblage of data originally compiled by Triton (1989-98), Sons of Gwalia (2000-01) and Navigator (2004-08). The pre Navigator data cannot be fully verified regarding reliability and accuracy.</p> <p>The database was provided by Navigator, multiple programmes were conducted by Triton (vast majority of data), Navigator sourced some data from old annuals and DMP reports however they contain limited information regarding collection procedures and virtually no QA/QC information. SGW data is generally reliable and the Navigator data is good although Navigator and SGW data represents a negligible percentage of the overall data package (approx. 2.5%).</p> <p>The bulk of the data has not been fully verified regarding quality, accuracy and reliability. Historical drill hole data was obtained by Navigator (Nav) from SGW (2004) and transferred into the Nav database. McDonald Speijers validated 25 randomly selected representative holes (there are 2,430 holes in the database representing 153,100.4 drilled metres); original logs were cited for 21 of the 25 and printed records of co-ordinates/sample numbers/assay reports found for the majority of the remainder. Original assay reports for 20 holes were cited and the others had assay results annotated to the paper geological logs. Geological data for &lt;50% of the holes had been entered; it seems that much of the original geological data was</p>



Criteria	Commentary
	<p>never formatted and entered digitally. Validations were conducted on 93% of the assay records in the selected 25 representative holes.</p> <p>The data base displays some discrepancy (which is expected considering the age of the information), particularly geological logs but there is a low rate of error in the sample and assay date base. Even though incomplete the database has been accepted as reliable and only minor discrepancies were noted. However there is not enough information in the old drillhole assay files to determine that the data is completely accurate and reliable thus the classification of the resource is mostly Indicated (94.8%) with a small Inferred component (5.2%) even though in some places the drill spacing is relatively close.</p> <p>No quality control assay checks were conducted by Triton. The reliability of the bulk of the assay data used in the resource estimation, originally sourced from Triton (97.5%), can't be confirmed. QA/QC procedures were regularly conducted by Navigator and SGW however this data comprises a very small portion of the resource estimation.</p>
<i>Site Visit</i>	<p>The Competent Person can confirm site conditions at Raeside. Kin's exploration team have conducted multiple site visits within the resource areas including time when a Kin staff member was previously employed by Navigator.</p>
<i>Geological Interpretation</i>	<p>Interpretation of the subsurface geology is difficult due to inconsistencies in the logging codes. There is a lack of outcrop in the area; a veneer (2-10m thick) of recent transported material covers the ore bodies. The weathering profile is deep (25-75m), the structure obscure, the apparent orientation of the mineralisation varies suggesting a considerable level of structural complexity.</p> <p>Most of the mineralisation, in the oxide zone, consists of quartz/quartz carbonate veining in the form of weak stockworks or sheeted veins, in fresh rock disseminated to stringer sulphides (pyrite and minor arsenopyrite) are associated with the "veining or weak stockwork". Individual veins are commonly centimetres thick and rarely exceed 1-2m.</p> <p>Total oxidation extends to a depth of 20-50m containing saprolitic clays. The transition zone, containing partly oxidised sulphides, extends downward for another 5-20m. The base of oxidation may not represent the base of "free dig material". Weathering profiles were supplied by Navigator and are regarded as correct on face value.</p> <p>Mineralised lodes have a consistent geometry and any alternative interpretation is believed to have little impact on the resource estimate.</p> <p>The recorded geology, a portion of which is unavailable, seems to be contradictory through drillholes in relation to lithology, however mineralisation is associated with logged quartz veining.</p>
<i>Dimensions</i>	<p>Michelangelo-Leonardo – holes included in the estimate - 486 holes intersected mineralisation amounting to 5,529m of intersected mineralisation over a tested area covering 960m of strike and 800m width.</p> <p>Forgotten Four - holes included in the estimate - 112 holes intersected mineralisation amounting to 1,981m of intersected mineralisation over a tested area covering 520m of strike and 350m width.</p>

Criteria	Commentary
	<p>Krang - holes included in the estimate - 201 holes intersected mineralisation amounting to 2,629m of intersected mineralisation over a tested area covering 650m of strike and 500m width.</p> <p>The ore zones are obviously much narrower but no specific numbers are quoted.</p>
<i>Estimations and Modelling Techniques</i>	<p>The resource estimate was obtained using a 3D block model "Recovered Fraction" (RF) technique, block models were generated filling the 3D wireframes of the mineralised zones with cells, SG was assigned using oxidation codes as per the data base, assay top cuts were applied, assays composited over 2m intervals, block models were estimated using a range of cut offs and anisotropic inverse distance cubed interpolation, under zonal control.</p> <p>A search radii of 20m, 20m and 3m was used for dip, strike and cross-dip for Michelangelo, 30m, 30m and 3m for Leonardo, 50m, 40m and 2m for Forgotten Four and 20m, 30m and 3m for Krang. Search radii was determine relative to drill density.</p> <p>Parent block sizes were 4m X, 12.5 Y and 4 Z for Michelangelo, Leonardo and Krang. Parent block sizes were 4m X, 10 Y and 4 Z for Forgotten Four, sub cells were half parent cells in all resource block models. Blocks are deemed appropriate relate to drill data.</p> <p>Estimates were initially made with no loss or dilution (hypothetical in situ estimate) and compared to the original Nav estimate. A second set of estimates incorporating ore loss and dilatational skin thickness was also obtained. Following reconciliation from mining at Mertondale 5 it was noted that somewhat larger dilution factors may be required to correlate with the reported grade/tonnage. The dilution factor applied to the Raeside resource may be somewhat optimistic. However Mert 5 (mafics/porphyry) is a completely different style of mineralisation to Raeside (mafics/sediments).Furthermore many resources have no dilution added at the resource stage.</p> <p>Diamond (1,906m), RC (102,264.2m) and Aircore (30,100.2m) have been utilised for the resource estimate. RAB drilling (18,822m) when mineralised is used as a guide to support the interpretation however RAB holes were rejected for the resource estimate purposes.</p> <p>Top cuts selected ranged from 4-16g/t Au a pod by pod basis with the use of cumulative log-probability plots, histograms and Iterative tests.</p> <p>Triton mined a trial parcel at Forgotten Four in 1990 (6,280t @ 5.18g/t Au) then extended the open pit to 40m in 1992 (43,359t @ 4.15g/t Au and L/G of 6,200t @ 1.0g/t Au) processing the ore at the Harbour Lights plant.</p> <p>Previous resource calculations completed by Navigator compare well with the undiluted RF model as there is no significant change in total contained ounces and a 5% variance in grade. Applying dilution skins and containing the resource within a \$2000 pit shell increases the level of confidence in the current resource.</p> <p>No by-products are to be recovered.</p> <p>Testwork on samples from Michelangelo and Krang (oxide and transition) did not reveal any metallurgical issues however there may be an issue with (potential) refractory ore particularly at Leonardo where the ore is associated with graphitic shales, this has not been taken into account with the current resource.</p> <p>No assumptions are made regarding selective mining units.</p> <p>No assumptions are made regarding correlation between variables.</p> <p>Downhole lithology data was plotted and colour coded in Surpac and sectional</p>

Criteria	Commentary
	<p>interoperation of geological boundaries were generated. Wireframes of lodes were used as hard boundaries to contain the interpolation. Lithology was limited and contradictory and lodes were constrained by grade and quartz content.</p> <p>Varying top cuts were applied following a series of processes including log-probability plots, Iterative tests, log histograms and cross section inspection.</p> <p>To check that the interpolation of the block model honoured the drill data, validation was carried out comparing the interpolated blocks to the sample composite data, the validation plots showed good correlation thus the raw drill data was honoured by the block model.</p>
<i>Moisture</i>	Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.
<i>Cut-off Parameters</i>	Preliminary operating cost estimates established by Navigator indicate that the break even mill feed grade cut-off for the Raeside deposits are in the vicinity of 0.7g/t Au.
<i>Mining Factors or Assumptions</i>	The current resource estimation were made using a down-hole dilution skin set at 0.4m for oxide material and 0.7m for transitional and primary material. Downhole ore loss was set at 0.2m in the oxide and 0.3m in the transitional and primary zones.
<i>Metallurgical Factors or Assumptions</i>	Testwork on samples from Michelangelo and Krang (oxide and transition) did not reveal any metallurgical issues however there may be an issue with (potential) refractory ore particularly at Leonardo where the ore is associated with graphitic shales.
<i>Environmental Factors or Assumptions</i>	An old mined open pit exists at the Forgotten Four (no final survey is available). It's unknown if the pit has been back filled because of current water levels. Environmental factors are unknown. No environmental assumptions have been made.
<i>Bulk Density</i>	<p>Several density tests have been conducted by various companies utilising different techniques over the projects period (gamma-gamma density probing and generalised assumptions). Techniques are poorly documented and information relating to how the SG's were measured is limited, none of the previous bulk density testwork was accepted.</p> <p>SGW conducted gamma-gamma surveys and density measurements from core at Michelangelo. McDonald Speijers accepted the SGW figures of 2.0t/m<sup>3</sup> oxide, 2.4 t/m<sup>3</sup> transition and 2.7 t/m<sup>3</sup> for oxide. The values appear reasonable for Michelangelo. The remaining three deposits, that tend to be more like the Forgotten Four than Michelangelo used the mining based values from the mining of the Forgotten Four open pit being 1.9t/m<sup>3</sup> oxide, 2.35 t/m<sup>3</sup> transition and 2.65 t/m<sup>3</sup> for oxide.</p> <p>There remains a general shortage of verifiable dry bulk density measurements and there is a lack of any bulk density measurements in the Leonardo deposit.</p> <p>Values for bulk density test work conducted to date either don't agree very well and can't be accepted or an arbitrary assumed factor was included in the calculation or there are crucial explanations of methodologies that are missing. The SG values used in the estimation are considered to be reasonable however they are still a "best guess" based on nearby mines and recommendations by Nav. Physical measurements on samples are required to finalise the SG however most of the samples have been lost, destroyed or rehabilitated over the last 25 years. The</p>

Criteria	Commentary
	density factors originally adopted by SGW for Michelangelo (2.0 t/m <sup>3</sup> oxide, 2.40 t/m <sup>3</sup> transition, 2.70 t/m <sup>3</sup> fresh) appear reasonable and were adopted. A slightly lower SG factor was applied to the remaining deposits because host lithologies are similar to Forgotten Four (1.90 t/m <sup>3</sup> oxide, 2.35 t/m <sup>3</sup> transition, and 2.65 t/m <sup>3</sup> fresh).
<i>Classification</i>	<p>The resource estimate was obtained using a 3D block model "Recovered Fraction" (RF) technique, when applied without ore loss or dilution parameters it results in a hypothetical insitu tonnage and grade, if appropriate ore loss or dilution parameters are applied then the result is a recoverable resource estimate.</p> <p>Due to the lack of reliability and not being able to verify the quality of the bulk of the old drill hole assays the mineralisation could not be classified as Measured despite the relatively close spaced drilling in places. The majority of the resource is Indicated (94.8%) and where drill spacing is wider and the interpretation of the mineralisation is not convincing an Inferred classification (5.2%) is applied however much of this percentage falls outside the limits of material that meet the resource classification criteria. At Leonardo the applied bulk density values limits the classification to Indicated.</p> <p>An Inferred classification was applied to any mineralised zone where the drill sections exceeded 40m i.e. down dip extensions of Leonardo and some peripheral zones in the other deposits.</p>
<i>Audits and Reviews</i>	Internal audits were compiled by McDonald Speijers and Kin geologists where possible and data was checked and validated however in some instances assumptions were made based on information supplied by Nav (SG and weathering depths). Some data (geological logs) are scant; the assay data is historical and could not be independently verified. The definitive numbers are considered by the Competent Person as reasonable. The drillhole database was generated by transferring and collated databases generated by previous owners. 25 holes (mineralised intersections containing 1,141 sample records) were selected at random and checked against originals the data correlation was not perfect but acceptable (quite good 93%) considering the age of the data and the passing through different company history.
<i>Discussion of Relative Accuracy and Confidence</i>	<p>The drill hole assay data is old (mostly originating from Triton) and second if not third hand, accuracy and reliability of the samples are unknown and have not been verified, its assumed to be correct however no QA/QC control or check measures have been noted or applied. Numerous entries are missing from the geological logging data and there is a good deal of inconsistency in the geological codes thus geological control is limited. The SG value has been assigned based on local knowledge (determined by Nav) however the bulk density values have not been verified particularly at Leonardo.</p> <p>At Michelangelo some of the thin mineralised zones may not be as good as the interpretation suggests particularly below the base of strong weathering.</p> <p>Ore loss and dilution factors applied to the model may require adjustment up or down subject to the physical characteristics of the ore boundaries and proposed mining procedures. Indications from reconciliation of mining at Mertondale suggest that the dilution factor at Raeside might be optimistic which possibly may result in a tonnage reduction. The dilution skins uses in the RF modelling at Mertondale were 0.5m (oxide) and 0.8m (transition and fresh), 0.1m greater in each case than those used in the Raeside models, ore loss skins were the same. However many</p>

Criteria	Commentary
	resources do not apply dilution at this stage and therefore the resources at Raeside can be considered robust.