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**ASX: KIN** 

# Feasibility confirms a high margin gold mine for Kin at its Leonora Gold Project

Feasibility demonstrates robust project economics, a Maiden Ore Reserve of 373koz, a 7-year mine life, with production peaking at 65kozpa

#### **HIGHLIGHTS**

- Maiden Ore Reserve of 373koz (7.9Mt @ 1.5g/t)<sup>1</sup>
- Pre-production capital cost of \$35.4M (including 18% contingencies)
- Pre-production capital payback period of 11 months
- Ore Reserves provide for a mine life of 7 years, likely to increase with considerable exploration upside
- Forecast Life-of-Mine (LOM) revenue of \$596.1M and surplus operating cashflow of \$167.9M at A\$1,600/oz. gold price<sup>2</sup>
- Processing an estimated 8.6Mt at 1.5g/t (405koz)<sup>3</sup> will deliver 372koz of recovered gold
- Development based on three open pit mining centres feeding a 1.5Mtpa conventional CIL processing plant located at Cardinia
- LOM operating cash cost (C1) of A\$957/oz<sup>4</sup>
- LOM All-In-Sustaining Cost (AISC) of A\$\$1,038/oz<sup>5</sup>
- Estimates include proposed new Western Australian Gold Royalty tax of 3.75%
- NPV<sub>8%</sub> A\$107.4M<sup>2</sup> (before corporate and tax)
- Plant commissioning and first gold targeted for second half of 2018
- A 15,000m drill program targeting high grade extensions to commence shortly at Helens, Lewis and the Bruno Lewis Link deposits

<sup>&</sup>lt;sup>1</sup> See JORC Code (2012) Table 1, Section 4 for Reserve and Details in Annexure 2, Appendix E

<sup>&</sup>lt;sup>2</sup> Based on production of 405,000oz at \$US1,250 gold price, A\$/US\$ exchange rate of 78c. All amounts in A\$ unless otherwise stated.

<sup>&</sup>lt;sup>3</sup> 92% of the material in the mine plan is classified as an Ore Reserve, the remaining 8% is classified as Inferred Mineral Resource

<sup>&</sup>lt;sup>4</sup>C1 operating costs include all mining and processing costs, site administration.

<sup>&</sup>lt;sup>5</sup> AISC includes C1 costs + royalties, refining and sustaining capital, but excludes head office corporate costs

#### **Cautionary Statement:**

Kin has concluded it has a reasonable basis for providing the forward-looking statements included in this announcement. The detailed reasons for that conclusion are outlined throughout this announcement and are disclosed Annexure 2 Table 1, Section 4. This announcement has been prepared in accordance with the JORC Code (2012) and ASX Listing Rules. The Company advises that the Definitive Feasibility Study (DFS) results, Mine Plan and Forecast Financial Information contained in this announcement are reasonable in nature as the conclusions are based on high-level technical and economic assessments, and are sufficient to support the estimation of Probable Ore Reserves (92%) used in the Mine Plan and to provide an assurance of economic development at this stage.

The Company advises that while the DFS is based on Probable Ore Reserves, it is partly based on Inferred Mineral Resources (8%). 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. The stated production target is based on the company's current expectations of future results or events and should not be solely relied upon by investors when making investment decisions. Further evaluation work is required to establish sufficient confidence that this target will be met. Currently the drill spacing in the Inferred portion of the resource is too wide to allow the material to be classified as Indicated. The Company believes that there is a good probability of conversion of Inferred Resources into Indicated Resources as the structures and geological units are now well understood.

#### **EXECUTIVE SUMMARY AND INTRODUCTION**

Kin Mining NL ("Kin" or "Company") (ASX:KIN) is pleased to announce the completion of the Definitive Feasibility Study (DFS) for the Company's 100% owned Leonora Gold Project (LGP) in the North-Eastern goldfields of Western Australia. The LGP contains Indicated and Inferred Resources of 22.3 Mt @ 1.4 g/t gold for 1.02Moz of contained gold (see Table 4). The DFS has delivered a robust forecast outcome for the Company. The LGP will generate strong free cash flows underpinned by a low capex pathway to cash flow. The DFS confirmed the LGP as a technically sound and highly profitable project.

Development is based on three open pit mining centres (Mertondale, Cardinia and Raeside) which will supply a 1.5Mtpa conventional CIL processing plant centrally located at Cardinia. The feasibility study has delivered a **Maiden Ore Reserve of 373koz (7.9Mt @ 1.5g/t)**. Kin has secured ownership of the Lawlers Processing Facility, supported by the option to purchase a 2.5MW ball mill providing the capacity to treat up to 1.5Mtpa on oxide and transition ores. The pre-production capital cost is \$35.4M which includes 18% in contingencies. By scheduling the mining of the high margin and low strip ratio open pits first, the pre-production capital is repaid in just 11 months. The project has an initial mine life of 7 years, with considerable exploration upside.

The DFS provides a LOM operating cash cost (C1) of A\$957/oz. and an All-In-Sustaining Cost (AISC) of A\$1,038/oz. for the life of the project. The LGP delivers a discounted NPV8% of A\$107.4M (before corporate costs and tax) and an Internal Rate of Return (IRR) of 77%. The forecast LOM revenue is \$596.1M with a projected operating cash-flow surplus of \$167.9M based on a gold price of A\$1,600/oz. An estimated 8.6Mt at 1.5g/t (405koz) will be mined and processed, delivering 372koz of recovered gold.

Significant potential remains to grow the LGP mineral resources via exploration of known targets which present near-mine extensional opportunities within the project area.

Kin Managing Director Don Harper said,

"the DFS clearly demonstrates the technical and economic strengths of the Leonora Gold Project and this solid foundation provides Kin with the opportunity to build a significant new Australian gold production company.

The DFS has concluded that the LGP will enjoy low pre-production and operating costs which underpin a low-risk, high-margin gold operation with a short payback period and strong free cash flow.

Kin is now on a clear pathway to cash flow and plans to be producing gold in the second half of 2018 in the heart of one of WA's richest gold-mining districts.

The company will continue to undertake an aggressive exploration strategy at the LGP seeking to expand resources by initially drilling recently discovered high grade primary gold targets.

On behalf of the Board we thank our staff, contractors, consultants and advisors for their most diligent efforts in completing a very detailed and comprehensive DFS".

#### 2017 DFS vs 2016 PFS

The DFS in comparison to the PFS as announced to the ASX on 15 December 2016 has significantly improved the LGP economics (see Table 1).

Table 1, 2017 DFS vs 2016 PFS

Leonora	Gold Project DFS	V PFS Parameters	S	
	DFS	PFS	Variance	Change
Total Resources	1,023,000oz	721,000oz	302,000oz	+42%
Total Capital Cost (including contingency)	\$41.4M	\$56.7M	-\$15.3M	-27%
Undiscounted Operating Cash Surplus	\$167.9M	\$105M	\$63M	+60%
NPV Operating Cash Surplus (8%)	\$107.4M	\$71M	\$36.4M	+51%
Total Recovered Gold Production	372koz	309koz	63oz	+20%
Revenue (A\$)	\$596M	\$494M	\$102M	+21%
All in Sustaining Cost	\$1,038	\$1,084	-\$46	-4%
IRR	77%	58%	19%	+33%
Maximum Processing Rate	1.5Mtpa	1.2mtpa	300Ktpa	+25%

Totals vary due to rounding.

#### **ORE RESERVE**

In conjunction with the DFS, Kin has completed a maiden Ore Reserve estimate for the LGP based on the 2017 Mineral Resources estimated by independent consultants Carras Mining (see ASX announcement 30 August 2017). The Ore Reserve is supported by the DFS and has been completed by independent mining consultants Entech Pty Ltd (Entech).

A detailed financial model for the LGP was generated as part of the DFS process which has been used by Entech to determine the economic viability of the Ore Reserve estimate.

The Ore Reserve (see Table 2) has been completed in accordance with the JORC Code (2012). The Probable Ore Reserve is based on the Indicated portion of the Mineral Resource (see Table 4). It should be noted that none of the Inferred portion of the Mineral Resource has been incorporated into the Probable Ore Reserve.

Table 2 presents a summary of the Probable Ore Reserve based on the open pits being optimised at a A\$1,575/oz. gold price. Refer to Section 4 of JORC Code (2012) Table 1 (Annexure 2, Appendix E) for full details on the Ore Reserve.

Table 2. Leonora Gold Project – Ore Reserve estimate

Open Pit Mine	Classification	Tonnes (t)	Grade (g/t)	Metal (oz. Au)
Tonto	Probable	210,000	1.5	10,000
Merton's Reward	Probable	1,285,000	1.7	71,000
Mertondale 3-4	Probable	952,000	1.3	39,000
Bruno Lewis Link / Lewis	Probable	2,479,000	1.2	94,000
Kyte	Probable	461,000	1.2	18,000
Helens	Probable	873,000	1.5	42,000
Rangoon	Probable	285,000	1.4	13,000
Michelangelo	Probable	1,230,000	1.9	75,000
Leonardo	Probable	158,000	2.1	11,000
Operation Total	Probable	7,933,000	1.5	373,000

Calculations have been rounded to the nearest 1,000 t of ore, 0.1 g/t Au grade and 1000 oz. Au metal. Assumes a gold price of A\$1,575/oz.

Totals vary due to rounding.

#### INDEPENDENT THIRD-PARTY REVIEW

Kin engaged independent mining consultancy, SRK Consulting (Australasia) Pty Ltd (SRK) to conduct a review of its Mineral Resources, process plant capital estimates, build methodology, process plant operating costs, execution plan and metallurgical assumptions. Recommendations provided by SRK in these areas were adopted by Kin.

#### **KEY PROJECT PARAMETERS**

Table 3 summarises the key LGP DFS parameters which include Ore Reserves, the proportion of Mineral Resources used in the Mine Plan, capital costs, production summary and project financials.

**Table 3. Key Project Parameters** 

LGP MINERAL RESOURCES	Tonnage	Grade	Ounces		
Indicated Mineral Resources <sup>1</sup>	17.0Mt	1.4 g/t	771,000		
Inferred Mineral Resources <sup>1</sup>	5.3Mt	1.5g/t	252,000		
Total Resources	22.3Mt	1.4g/t	1,023,000oz		
MATERIAL IN MINE PLAN	<u>-</u>		-		
Probable Ore Reserve	7.9Mt	1.5 g/t	(92%)		
Inferred Mineral Resources	0.7Mt	1.4 g/t	(8%)		
Total (totals vary due to rounding)	8.6Mt	1.5 g/t	(100%)		
CAPITAL COSTS					
Final payment to Gold Fields Ltd for Lawlers Processing Plan	t acquisition (September 20	18)	\$1.2M		
Relocate, Refurbish and Upgrade Lawlers Processing Plant to	o 1.5Mtpa		\$23.4M		
Infrastructure Capital (Borefield, Roads & TSF "Lift 1")			\$2.8M		
Pre-Production Mining & Mine Establishment (Accommodatio First Fill & Spares)	n expansion, Communicatio	ons, Personnel,	\$2.6M		
Contingency +18%			\$5.4M		
Sub-Total (Pre-production Capital)			\$35.4M		
Tailings Storage Facility Construction			\$3.4M		
Post-production infrastructure & demobilisation					
Contingency +15%					
Sub-Total			\$6.0M		
TOTAL CAPITAL (LOM)					
PRODUCTION SUMMARY			_		
Key Outcome					
Life of Mine Production			7yrs		
LOM Open Pit Strip Ratio (Waste:Ore)			8.0:1		
Total Recovered Gold			372koz.		
Maximum Processing Rate			1.5Mtpa		
LOM Mill Recovery			92.5%		
PROJECT ECONOMICS					
Base Case gold price (A\$)					
Exchange Rate (US\$:A\$)					
Life of Mine Revenue (A\$)					
C1 Cash Costs <sup>2</sup>					
All-In-Sustaining Costs <sup>3</sup>					
Undiscounted Operating Cash Surplus			\$167.9M		
Net Present Value NPV (8%)			\$107.4M		
Internal Rate of Return (IRR)			77%		

<sup>&</sup>lt;sup>1</sup> Cut off grade 0.5 g/t Au <sup>2</sup> C1 operating costs include all mining and processing costs, site administration

<sup>&</sup>lt;sup>3</sup>AISC includes C1 costs + royalties, refining and sustaining capital, but excludes head office corporate costs and Tax Totals vary due to rounding

#### PROJECT SUMMARY

The Leonora Gold Project is located 30km north-east of Leonora, and approximately 250km north of the main regional town of Kalgoorlie, Western Australia (see Figure 1). The area is well serviced by infrastructure including a network of high quality roads, an airstrip at Leonora with regular services to Perth and close to an established mining supply network.

A Pre-Feasibility Study (PFS) was completed on 15 December 2016 which formed the basis on which the DFS was developed. The DFS investigated the potential economic viability of the LGP based on the mining and on-site treatment of Mertondale, Cardinia and Raeside Mineral Resources. The Mineral Resources on which the DFS is based are located on granted Mining Leases.

Independent JORC Code (2012) estimates of the Mineral Resources at the LGP total 22.3Mt @ 1.4g/t for 1.02Moz of contained gold (see ASX Announcement 30 August 2017). The DFS includes the mining and processing of 8.6Mt @ 1.5g/t gold for 372koz of recovered gold over a 7-year mine life.

In 2017, the Company secured the decommissioned 800,000tpa Lawlers processing plant and associated infrastructure owned by Gold Fields which is located approximately 160km to the north northwest of the LGP. The DFS incorporates the refurbishment and upgrade of the Lawlers plant to 1.5Mtpa through the installation of a refurbished 2.5MW ball mill and six new 1,500m³ CIL tanks. The proposed plant incorporates a two-stage crushing circuit feeding the 2.5MW ball mill, with gold extracted by gravity and CIL processes. The Lawlers processing plant is in good condition and comes with a large inventory of spares and infrastructure. The electrical componentry is particularly valuable having been substantially upgraded by Barrick shortly before the operation was acquired by Gold Fields. The DFS contemplates relocation of the Lawlers plant and infrastructure to the centrally located Cardinia mining centre with construction and commissioning expected to take 11 months.

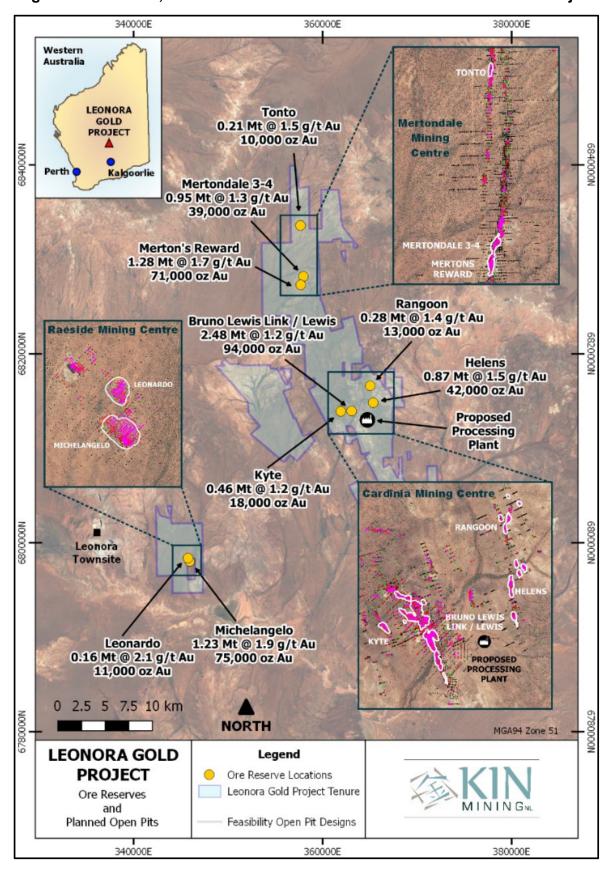
Early mining operations will be mainly focused at the Cardinia area. Pre-production mining costs will be low with the first open pit deposit Kyte, exhibiting a very low strip ratio of only 2:1 waste to ore. The production ramp up schedule is based on a conservative mill throughput of 25% (month 1), 50% (month 2), 75% (month 3) and 100% in month 4. Mining operations will include Mertondale pits in year 3 and Raeside material in year 4.

Existing accommodation infrastructure facilities in Leonora will be expanded to house a permanent workforce of approximately 64 people who will be employed on a Fly-In-Fly-Out (FIFO) arrangement.

Operating costs have been estimated to ±15%. The DFS has determined the LGP can produce an initial 61koz in its first full year of production and reaching a maximum production of 65koz in year 7. The LOM AISC operating costs estimate for the LGP is estimated at \$1,038/oz. Preproduction capital is expected to be repaid within 11 months from the successful commissioning of the process plant.

The pre-production capital cost is estimated at \$35.4M. LOM capital cost is estimated at \$41.4M (Table 6) which includes the pre-production capital and subsequent lifts to the TSF, borefield establishment and construction of haul roads. In anticipation of exploration success, the Company expects the LGP to continue well beyond its 7-year mine life and has not allocated closure costs to the financial model.

Figure 1 - Location, Ore Reserves and Pit Outlines of the Leonora Gold Project



#### **DFS TEAM**

The DFS commenced immediately after completion of the PFS in December 2016 and was managed by Kin working with specialised consultants. Key contributors are listed below:

- Gary Goh (Kin General Manager Development) Study Manager
- Independent Metallurgical Operations Metallurgical Testwork
- David Sproule, Greg-Wardell Johnson, CPC Lawlers process and plant design
- Como Engineering Lawlers Plant dismantling and relocation to Cardinia
- SRK (Perth) Tailings Storage Design
- Tailings thickener test work Patterson & Cooke
- Groundwater Development Services Water supply
- Rockwater Hydrogeology
- Stantec Subterranean Fauna, environmental, waste rock classification
- Stantec Environmental permitting
- Stantec Surface water
- Peter O'Bryan Geotechnical Assessment
- Entech Financial Model, Optimisations, Mine Planning and Ore Reserves
- Carras Mining Mineral Resource estimate

#### **GEOLOGY**

Gold deposits in the LGP production area are hosted by a series of shear zones that cut through a typical Eastern Goldfields greenstone sequence. Three Mining Centres, namely Mertondale, Cardinia, and Raeside, are recognised within the project, which have slightly different geology and structural setting (See Figure 1).

The Mertondale prospects extend over a total 12km strike length from Merton's Reward in the south to Mertondale 5 (32,000oz mined in 1991) 10km to the north. Merton's Reward (60,524oz previously mined), Mertondale 2 (2,700oz mined in 1987 and 2010) and Mertondale 3-4 (179,300oz mined between 1986-1993) are contained within the eastern branch of the Mertondale Shear Zone and extend over approximately 3km of strike. Quicksilver, Tonto, Eclipse and Mertondale 5 are all contained within the western branch of the shear zone and extend over approximately 9km of strike. The Mertondale area consists of a central felsic volcanic sequence bounded on either side by a tholeiitic basalt-dolerite-carbonaceous shale +/- felsic porphyry sequence. The western and eastern shear zone branches are generally located near the felsic volcanics/mafic contacts. Merton's Reward, Mertondale 3-4 and Tonto are included in the Ore Reserve estimate.

The Cardinia prospects overlie a sequence of intermediate-mafic and felsic volcanic lithologies and locally derived epiclastic sediments. Minor felsic porphyries and lamprophyre lithologies have been recognised within and adjacent to the Bruno and Lewis areas. At Lewis, these intrusive rocks are often associated with mafic-felsic contacts. The eastern edge of the Bruno-Lewis system is intruded by a dolerite sill. At Helens and Rangoon, the gold mineralisation is hosted within sheared zones of metabasalt, and minor sediment. Kin recently announced the discovery of two primary zones of mineralisation at Lewis and Helens.

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 conforms to observed bedding trends. The dolerite is fine to medium grained with extensive chlorite alteration. The gold mineralisation is generally stratiform within the dolerite and certain sedimentary horizons.

#### **MINERAL RESOURCES**

The LGP has a total of 22.3Mt @ 1.4 g/t for 1.02Moz gold in Mineral Resources to JORC Code (2012) standard (Table 4), all within a 25km radius of the proposed centrally located Cardinia process plant. Of this total, 75% or 17Mt @ 1.4 g/t gold for 771koz is in the Indicated Mineral Resource category and 25% is in the Inferred Resource category.

**Table 4. LGP Mineral Resources** 

	Cutoff		Indicated			Inferred			Total	
Deposit	Cutoff g/t Au	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au
	g/t Au	(Mt)	(g/t)	(k oz)	(Mt)	(g/t)	(k oz)	(Mt)	(g/t)	(k oz)
				MERT	ONDALE					
Mertons Reward	0.5	2.75	1.37	121	0.36	1.33	15	3.11	1.37	137
Mertondale 3-4	0.5	2.08	1.50	100	0.48	1.33	21	2.56	1.47	121
Tonto	0.5	2.67	1.18	101	0.18	1.30	8	2.85	1.18	109
Mertondale 5	0.5	0.81	1.83	48	0.22	1.71	12	1.03	1.80	60
*Eclipse	0.5				1.23	1.39	55	1.23	1.39	55
*Quicksilver	0.5				0.81	1.54	40	0.81	1.54	40
TOTAL		8.30	1.39	370	3.29	1.43	151	11.59	1.40	521
				CAF	RDINIA		1			
Bruno Lewis Link	0.5	1.09	1.30	45	0.72	1.55	36	1.81	1.40	81
Lewis	0.5	2.48	1.21	96	0.22	1.31	9	2.70	1.22	105
Kyte	0.5	0.51	1.28	21	0.02	1.60	1	0.53	1.30	22
Helens	0.5	0.99	1.53	48	0.29	1.39	13	1.27	1.50	61
Rangoon	0.5	0.41	1.37	18	0.19	1.18	7	0.60	1.31	25
TOTAL		5.47	1.30	229	1.44	1.43	66	6.91	1.33	296
				RA	ESIDE					1
Michelangelo	0.5	2.47	1.61	128	0.09	1.51	4	2.56	1.61	132
Leonardo	0.5	0.75	1.81	44	0.15	1.23	6	0.90	1.71	50
*Forgotten Four	0.5				0.21	2.12	14	0.21	2.12	14
*Krang	0.5				0.15	2.11	10	0.15	2.11	10
TOTAL		3.22	1.66	172	0.60	1.81	35	3.82	1.68	206
GRAND TOTAL		17.00	1.41	771	5.33	1.47	252	22.32	1.43	1,023
	Cutoff		Indicated			Inferred			Total	
Mining Centre	g/t Au	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au
		(Mt)	(g/t)	(k oz)	(Mt)	(g/t)	(k oz)	(Mt)	(g/t)	(k oz)
MERTONDALE	0.5	8.30	1.39	370	3.29	1.43	151	11.59	1.40	521
CARDINIA	0.5	5.47	1.30	229	1.44	1.43	66	6.91	1.33	296
RAESIDE	0.5	3.22	1.66	172	0.60	1.81	35	3.82	1.68	206
TOTAL		17.00	1.41	771	5.33	1.47	252	22.32	1.43	1,023
	Cutoff		Indicated			Inferred			Total	
Material Type	g/t Au	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au
	_ 5/ t Au	(Mt)	(g/t)	(k oz)	(Mt)	(g/t)	(k oz)	(Mt)	(g/t)	(k oz)
Oxide	0.5	2.65	1.36	116	1.82	1.47	86	4.47	1.40	202
Transitional	0.5	4.46	1.29	184	1.01	1.41	46	5.47	1.31	230
Fresh	0.5	9.88	1.48	471	2.50	1.50	120	12.38	1.49	591
TOTAL		17.00	1.41	771	5.33	1.47	252	22.32	1.43	1,023
NOTES:										

NOTES

All resources other than Eclipse, Quicksilver, Forgotten Four and Krang have been estimated by CM in 2017 and reported @ 0.5g/t Au within Entech AUD2,200 pit shells.

Totals may not tally due to rounding.

<sup>\*</sup> Mineral Resources estimated by McDonald Speijers in 2009, audited by Carras Mining Pty Ltd in 2017 and reported in accordance with JORC 2012 using a 0.5g/t Au cut-off within Entech AUD2,200 pit shells.

#### **OVERALL MINING STRATEGY**

The DFS assumes the open-pit mines at Mertondale, Cardinia and Raeside (see Figure 1) will deliver ore to a conventional purpose-built Carbon-In-Leach (CIL) gold treatment facility centrally located at Cardinia. Kin envisages that all mining will be undertaken by owner miner operators using equipment supplied and maintained by a contract mining equipment supplier. All drill, blast and grade control activities will be undertaken by contractors. All technical and managerial direction will be by Kin.

Mining operations will operate on a continuous 12-hour shift basis. Kin personnel and contract mining personnel will be accommodated in the nearby township of Leonora and it is expected that the mining and processing workforce will operate on the same roster based on 14 work shifts followed by seven rostered days off (2 weeks on: 1 week off).

The mining strategy is focused on initially delivering oxide and transitional ore sourced primarily from the Cardinia deposits. Harder material from Merton's Reward will be blended with the softer oxide and transitional ores in the latter stages of the project. Waste material from the open pits will be deposited on surface waste dumps.

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

- Cardinia (mainly oxide and transitional), which comprises the Bruno-Lewis Link, Lewis, Kyte, Helens and Rangoon deposits;
- The Mertondale area, which comprises the Mertons Reward (transitional & fresh), Mertondale 3 4 (oxide, transitional & fresh ores) and Tonto (transitional ore); and
- The Raeside deposits of Michelangelo and Leonardo (transitional and fresh ores)

Detailed open-pit mine designs were completed on all deposits in the mine plan. Mining operations are based on mining a maximum of 3 deposits at any one time. This allows effective management of the mining fleet, drill & blast activities, and grade control. The open pit optimisations were based on both Indicated and Inferred Mineral Resources at a gold price of A\$1,575/oz. Mine designs and development of the mining and milling schedules for the DFS have been completed by Entech.

The LOM gold production in the DFS includes 92% Ore Reserve ounces and 8% Inferred ounces (see Table 5). The Inferred Mineral Resources in the DFS have had the required modifying factors applied (see Annexure 2, Appendix E). Inferred material was mined as part of the usual mining cycle but stockpiled separately. The Inferred material was then scheduled for processing in month 42 post plant commissioning allowing the first 3.5 years of gold production to be based on 100% Ore Reserve.

Pre-production activities include construction of the processing plant, mining fleet mobilisation, site set up, clearing, grubbing, stockpiling of topsoils, preparation of the ROM pad, construction of the first stage of the tailings dam embankment, and installation of a water supply pipeline to convey water from the existing Mertondale 3-4 open pit to the processing plant.

Reverse Circulation (RC) grade control drilling will be undertaken on an 8m by 8m grid pattern to 20m depth at 60-degree angles. Trenching is planned at the Bruno Lewis Link / Lewis deposits to ensure confidence in the dig block boundaries within the supergene oxide zone before mining of the benches.

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 maximising gold recovery from the optimised Whittle shells whilst targeting low strip ratios. The optimum and most profitable outcome was to design single lane pits with passing bays and a 1:10 gradient suitable for a 100t haulage fleet. Based on the Bruno (2010) and Lewis trial mining (2016) pits, free digging of material to a depth 25-30m should be

achievable for all oxide and a large portion of the transition material.

Drill and blast activities will be carried out from surface on 5m benches and then excavated in 2.5 m passes. A 5% drill and blast estimate has been assumed for oxide, 60% for transition material and 100% for fresh material.

Ore will be hauled in 100 tonne trucks directly from the mining area and dumped onto the ROM pad into various graded stockpiles. Ore will be rehandled from the graded stockpiles on the ROM pad by a front-end loader (FEL) and fed to the primary crushing plant to meet the nominated processing blend. Ore from Mertondale and Raeside will be trucked from local mining centre intermediate ROM's to the ROM at Cardinia using road trains.

**Table 5. LGP Mine Plan** 

Tuble 0. Lot Mille	Unit	Total	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025
MINING										
LGP Mine Plan	('000t)	8,646	423	1,351	1,875	1,122	1,132	1,472	1,137	134
Ounces	(koz)	404.6	16.8	62.7	73.5	43.1	54.5	77.2	65.8	11.0
Grade Au	(g/t)	1.5	1.2	1.4	1.2	1.2	1.5	1.6	1.8	2.5
Ore Reserve	('000t)	7,933	422	1,188	1,738	1,075	795	1,444	1,136	134
Ore Reserve %	(%)	92%	100%	88%	93%	96%	70%	98%	100%	100%
Inferred Resources	('000t)	711	0	163	135	47	337	29	0	•
Inferred Resources %	(%)	8%	0%	12%	7%	4%	30%	2%	0%	-
Mineralisation Volume	('000bcm)	3,729	198	616	857	500	494	558	455	51
Waste Volume	('000bcm)	31,259	543	4,862	5,153	5,526	5,516	5,003	4,552	104
Strip Ratio (waste:ore)	(t:t)	8.0	2.7	7.5	5.8	10.5	10.5	8.3	9.7	2.1
Total Volume	('000bcm)	34,987	741	5,477	6,010	6,027	6,010	5,561	5,006	155
PROCESSING										
Tonnes Processed	('000t)	8,646	189	1,399	1,426	1,303	1,120	1,031	1,276	900
Head Grade	(g/t)	1.5	1.3	1.4	1.2	1.2	1.5	1.7	1.7	1.6
Recovered Grade	(g/t)	1.3	1.2	1.3	1.2	1.1	1.3	1.6	1.6	1.4
Recovered Au	(Koz.)	372.5	7.5	60.7	53.6	44.6	48.1	51.6	65.0	41.3
Recovered Au Ore Reserve	(Koz.)	342.8	7.5	60.7	53.6	44.6	38.1	51.6	65.0	21.7
Recovered Au inferred	(Koz.)	29.7	-	-	-	-	10.1	-	-	19.7
Recovered Au Ore Reserve	(%)	92%	100%	100%	100%	100%	79%	100%	100%	52%
Recovered Au inferred	(%)	8%	-	-	-	-	21%	-	-	48%

Totals and estimates may not tally due to rounding

Figure 2. Mill Tonnes (monthly)

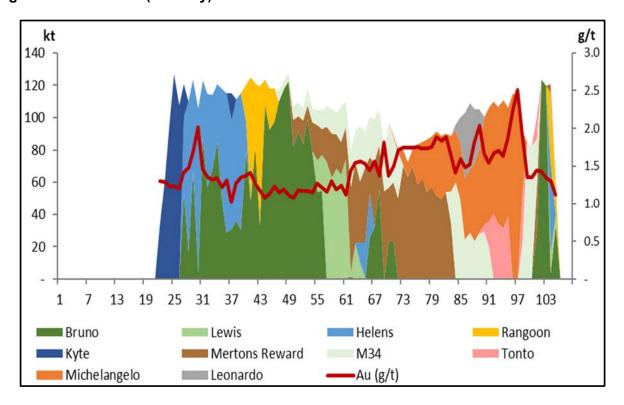


Figure 3. Gold Production Ounces (monthly)

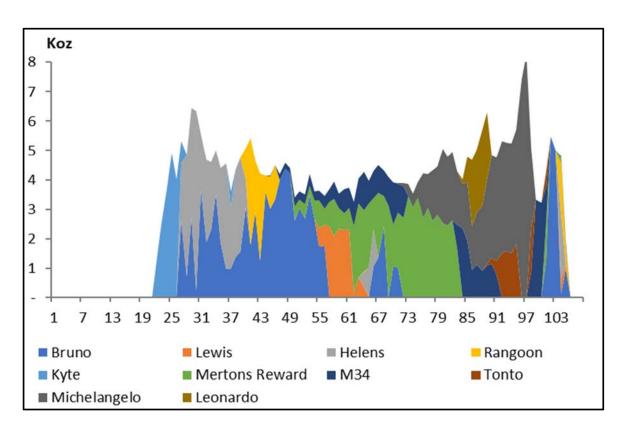
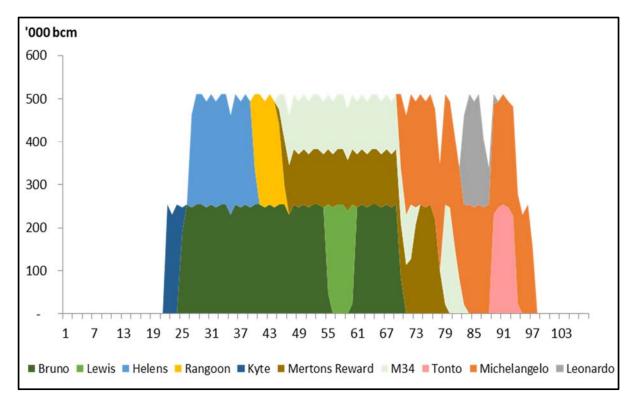
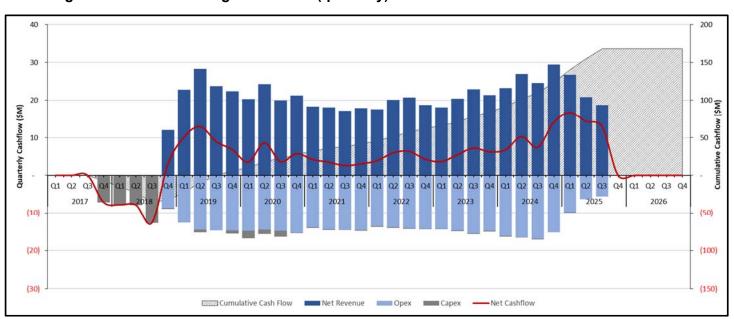


Figure 4. Total Material Movement Target Sources (monthly)



**Figure 5. Production Target Cashflow (quarterly)** 



#### **GEOTECHNICAL**

Geotechnical assessments for the DFS were completed by Perth based independent consultants, Peter O'Bryan & Associates. The assessments used the evaluation of existing pits at Mertondale (1991-2010), the Bruno pit (2010) and the Lewis Trial pit (2016). The derivation of the proposed geotechnical open pit design parameters was predominantly based on new test work from diamond drilling activities and televiewer geotechnical data evaluation.

#### **WATER SUPPLY**

Process water supply for the LGP processing plant is planned to be drawn initially from water contained within the existing Mertondale 3-4 and Mertondale 5 open pits which includes groundwater recharge as water levels are lowered by pumping. A 20km water supply pipeline is planned to be constructed from Mertondale 3-4 to the Cardinia mill. Upon dewatering the Mertondale 3-4 pit the pipeline will be extended a further 10km to the Mertondale 5 pit to the north. There are seven known historical production bores that will feed into the main water supply line, however for the first 6 months of operations water will be supplied from Mertondale 3-4 and Mertondale 5 until the seven bores are refurbished and re-equipped to supply the mill. Fresh water supply will be generated via a reverse osmosis unit acquired as part of the Lawlers infrastructure acquisition at the plant.

#### **HYDROGEOLOGY**

Modelling assessments predict that a dewatering rate of about 20 l/s will be required to dewater Tonto and Mertondale 3-4 new pits during mining. The Cardinia mining region is likely to require average individual pit dewatering rates of 4-11 l/s, with peak individual years of up to 17 l/s. Based on the Eastern Borefield's response to long-term pumping, the proposed Michelangelo-Leonardo pits will require dewatering and are likely to yield >30 l/s, Dewatering strategies have been developed and costed in the DFS.

#### 1.5MTPA PROCESSING PLANT

In 2017, Kin acquired the Lawlers' processing facility and associated infrastructure from Gold Fields Ltd for A\$2.5M based on a \$100,000 deposit followed by two equal payments for the balance. The first payment of A\$1.2M was made on 8 September 2017 with the second due on 8 September 2018.

The Lawlers' plant, which has been on care and maintenance for 27 months, has a capacity of approximately 800,000tpa. The plant includes a significant inventory of spare parts as well as laboratory, warehouse, administration buildings, plant design and construction drawings with the latter significantly reducing engineering costs and time.

Lawlers remains on care & maintenance with the mills rotated regularly. They have been completely stripped and cleaned internally, as have all gravity traps throughout the circuit. The gravity circuit tower is the only area where corrosion needs to be addressed via refurbishment after its move to the LGP, otherwise all equipment is in good order due to the excellent quality of the process water at Lawlers.

Kin has also secured an option to purchase a used 2.5MW ANI-Ruwolt ball mill in good condition from Macca-Interquip (see ASX release dated 1 August 2017). The installation of the 2.5MW ball mill at the LGP is expected to provide sufficient single-stage primary grinding power to increase milling capacity to 1.5Mtpa for the softer oxide/transition ores. Six new 1500m³ Carbon-In-Leach (CIL) tanks will be constructed to support the increased treatment rate.

The process plant general arrangement at Cardinia is shown in Figure 6.

**€** 1. HAZARDOUS MATERIAL AREA 2. CONCRETE ESTIMATE = 530s<sup>3</sup> 3. STEEL ESTIMATE = 310 TONN 

**Figure 6. Process Plant Arrangement** 

#### **Process Design Flowsheet**

The process flow diagram for the 1.5Mtpa processing plant is illustrated in Figure 7. All main elements that comprise the processing plant are typical of conventional CIL plants operating throughout the Western Australian Goldfields. The LGP treatment circuit has been designed to produce a grind P80 75 µm and minimum leach retention time of 24 hours.

LEONORA GOLD PROJECT

Figure 7. Process Design Flowsheet

#### **METALLURGY**

Head analysis results for 26 composite ore samples prepared for metallurgical testing showed relatively small average variations in assay gold grade and interval calculated gold grade. Concentrations of arsenic in several samples, indicate the potential for mild refractory behavior of some fresh ore zones at Mertons Reward and Lewis.

#### **Gravity and Cyanide Leach Recovery**

Overall gravity recoveries range from 6.9% to 41.1% with an average gold recovery of 17.3%. The Lawlers gravity circuit has been incorporated in the LGP plant design to affect the recovery of the gravity gold component.

An average grind size of  $P_{80}$  125  $\mu m$  is sufficient for the oxide ore composites tested, with a high average oxide ore gravity-leach recovery of between 95%-98%. Fresh ore lithology was mainly grind sensitive, requiring a  $P_{80}$  75  $\mu m$  grind, resulting in average 24-hour recoveries of 88% and 85% for transitional and fresh lithology types respectively at Mertons Reward. Average fresh ore recovery over the 4 Helens pits was 93%. Transitional ore types observed a trend of reducing leach recovery with increasing antimony feed grade.

Table 6. Combined Gravity/Leach Laboratory Test Results for key deposits

Mining Centre	Oxide	Transition	Fresh	Comment
MERTONDALE				
Merton's Reward*	88%	88%	85%	Oxide and transitional comprises 9% of total inventory, Fresh range 83%-88%
Mertondale 3-4*	95%	95%	90%	
Tonto*	96%	91%	N/A	No fresh in Mine Plan
CARDINIA				
Kyte**	98%	97%	97%	
Bruno-Lewis Link**	97%	97%	80%	Bruno Pit + testwork
Lewis*	92%	96%	80%	Lewis Trial Pit + Testwork (92%-98%)
Helens**	96%	93%	91%	Fresh range 91%-95%
Rangoon**	96%	90%	90%	Fresh comprises 3% of total inventory
RAESIDE				
Michelangelo**	N/A	98%	90%	No oxide domain near surface
Leonardo**	N/A	98%	93%	No oxide domain near surface

<sup>\*75</sup> µm grind size (fresh)

N/A – not material in mine plan

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

The TSF design concept features an above-ground impoundment with a single perimeter embankment. The maximum embankment height is 10.6 m and the total landform height at Life of Mine (LOM) is predicted to be RL 429.8 m, 14.8 m above ground level. The TSF classifies as Category 2, having a maximum embankment height below 15m and hazard rating of "medium". The facility is designed to be unlined as it is expected that percolation rates from thickened tailings is low as there is less pore water available to seep into the ground. Independent consultants SRK, conducted a site investigation with the objective of determining foundation conditions for the TSF, identifying borrow materials in the area and investigating features of the terrain such as creeks and rock outcrops. Samples from potential borrow material were tested and a physical tailings characterisation conducted as part of this investigation. Tailings testing included rheological testing.

<sup>\*\*125</sup> µm grind size (oxide)

The thickened tailings concept was selected for DFS level design. Central tailings deposition (CTD) is the preferred deposition option as it minimises embankment construction volumes, allows staged development and maximises water return. A reduction of approximately 25% in embankment volume over a conventional upstream paddock facility was realised.

The TSF embankment will comprise mass clayey fill sourced from within the TSF footprint supplemented with overburden from the Bruno waste dump. Geotechnical investigations have confirmed the availability of suitable clayey construction materials for the TSF footprint and embankment. As indicated in the 2016 PFS (ASX announcement 15 December 2016), there remains significant opportunity to deliver tailings into mined out pits in the future, which would result in further reducing TSF capital expenditure.

#### **POWER SUPPLY**

Power will be supplied and operated by a contractor who will install a power station on site consisting of six 1250 kVA containerised diesel generating sets requiring only a level ground surface with good drainage. Kin will use four 1250kVA diesel generator sets for base load power, with two backup units to provide power for mill start-ups, additional power under the peak load conditions and to provide standby power to the mine.

#### **ROADS, TRANSPORT & ACCOMMODATION**

The national road between mining centre Kalgoorlie and Leonora forms the backbone of all road transportation in the area. Access to the LGP from the town of Leonora is via the sealed Leonora – Laverton road and a well-maintained private road to Cardinia. A capital cost has been allocated for the construction of a new 10km gravel haul road between Mertons Reward and the proposed Cardinia mill. The DFS has assumed that the existing Leonora all-weather airstrip will be used. A commercial charter will transport employees and contractors.

Single person village accommodation will be provided in the township Leonora. It is proposed to upgrade existing accommodation to include an additional 64 rooms. The workforce will be able to share existing recreational and messing facilities. Full messing and laundry services will be provided on a daily manday rate. An estimated 10% of the workforce is assumed to be employed locally and reside in the township of Leonora. There is sufficient overflow accommodation in Leonora available to cater for the overlap with construction, mining, and processing personnel during the commissioning phase.

#### **PERMITTING & ENVIRONMENTAL**

Kin holds all the tenure that the LGP requires for execution of its activities. All mining areas and infrastructure areas are on existing granted mining leases. All studies to support the lodgment of the required approvals have been completed. Kin have used a range of consultants best suited to provide the following studies:

- Flora and fauna surveys completed across all project areas
- Soil and waste characterisation and management
- Subterranean field survey and lab assessments
- Surface hydrology
- Hydrogeology assessments
- Proposed plant site sterilisation drilling
- Refreshed discussions with participants of previous ethnographic surveys

There have been no issues identified in these studies that are expected to delay the submission and approval of the required consents.

Kin reached agreement with the regulators (DMIRS and DWER) to conduct a phased approval process to allow the processing plant to commence construction earlier than would have been

possible if it had to wait for final project mining parameters. The two-phased approach enables immediate commencement of construction of the process plant once a decision to mine is made and funding is secured, while providing the required time to further clarify the final project layout for Phase 2.

The Phase 1 approvals relate to the construction of the LGP processing plant and related infrastructure to dry commissioning in advance of the lodgement of complete operational approvals in Phase 2 for the mining and processing activities.

#### Phase 1 Approvals

A Mining Proposal been lodged with the Department of Mines, Industry Regulation and Safety (DMIRS) and a Works Approval has been lodged with the Department of Water and Environmental Regulation (DWER) (see ASX announcement 17 August 2017).

#### Phase 2 Approvals

With the final outlines of the LGP project (final disturbance outlines) now completed Kin can prepare the final impact calculations and lodge the Phase 2 Mining Proposal, Clearing Permit and Works Approval to the relevant agency. Kin is not aware of any matter that would cause these approvals to be delayed.

#### **HERITAGE**

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 this will not negatively impact the development timetable for the project.

#### **CAPITAL COSTS**

Kin and its specialist consultants have derived the processing capital cost estimate (± 15% 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 \$41.4. million, inclusive of \$6.2 million of contingencies as summarised in Table 6.

The processing capital expenditure has had a third-party review by independent consultants SRK and found to be of a reasonable basis. The processing capital cost estimate is based upon a contractor quotation (Como Engineering) to dismantle and relocate the Lawlers plant to Cardinia, combination of specialist contractors and an owner build approach. Plant construction drawings are available and the estimate has been prepared to a level equivalent to that of ±15 accuracy.

Capital costs do not include a mining fleet as the DFS is based on a contractor equipment supplied and maintained basis or sustaining capital that are included in AISC (see Table 7).

**Table 7. LOM Capital Cost Estimate Summary** 

CAPITAL COSTS	
Final payment to Gold Fields Ltd for Lawlers Processing Plant Acquisition (September 2018)	\$1.2M
Relocate, Refurbish and Upgrade Lawlers Processing Plant to 1.5Mtpa	\$23.4M
Infrastructure Capital (Borefield, Roads & TSF)	\$8.0M
Pre-Production Mining & Mine Establishment (Accommodation expansion, Communications, Personnel, First Fill & Spares)	\$2.6M
Contingency +17%	\$6.2M
TOTAL CAPITAL (LOM)	\$41.4M

Totals vary due to rounding.

#### **OPERATING COSTS**

The key operating cost elements assumed have been based on the Request for Quotation (RFQ) from various suppliers, mine employment consultants and drill & blast contractors. The RFQ received were within an accuracy of  $\pm 15\%$  to meet the requirements for the DFS. Kin calculated the processing operating costs based on different material types and test work.

DFS costs were estimated from first principles and metallurgical laboratory test work for reagent consumption data and pilot plant scale trials from Bruno Pit (2010) and Lewis Trial Pit (2016) to assist in validating the operating cost model. The combination of soft oxide material and transition material in the production profile, low reagent consumption, high throughput rates and high oxide and transitional metallurgical recovery resulted in a low process operating cost on a per ounce basis. The LOM the average AISC is A\$1,038 (±15% nominal accuracy). The operating costs over the LOM is summarised in Table 8.

**Table 8. Operating LOM Cost Estimate** 

Item	LOM Cost (A\$M)	LOM Cost/Ore t	LOM Cost/oz.
Mining	\$180.9	\$20.93	\$486
Processing and Maintenance	\$158.0	\$18.27	\$424
General & Administration	\$17.8	\$2.06	\$48
Refining Charges	\$0.3	\$0.04	\$1
Royalties (State and Project)	\$26.2	\$3.03	\$70
Sustaining Capital Costs	\$3.5	\$0.40	\$9
Total	\$386.7	\$44.57	\$1,038

Totals vary due to rounding.

#### **ECONOMIC EVALUATION & SENSITIVITY**

The financial assessment is based on A\$1,600/oz gold price (Table 8).

Using a base case gold price of A\$1,600/oz (US\$1,250/oz and an FX of 78c) and an 8% discount rate, the project generates an NPV of A\$107.4M, an IRR of 77% with a payback period of approximately 11 months from first gold pour. The project is viable and robust at a wide range of gold price scenarios. Table 9 provides a sensitivity analysis demonstrating the forecast economics under a range of future gold prices scenarios.

Table 9. Economic Evaluation with varying Gold Price

	Cumulative Cashflow (\$M)	NPV (A\$M) based on 8% discount rate	IRR	Payback Years	US\$ Price (78c FX)
\$1,750	221.7	145.8	102%	0.7	\$1,367
\$1,700	203.7	132.9	94%	0.8	\$1,328
\$1,650	185.8	120.1	86%	0.8	\$1,289
\$1,600	167.9	107.4	77%	0.9	\$1,250
\$1,550	150.1	94.6	69%	1.0	\$1,211
\$1,500	132.1	81.8	61%	1.3	\$1,172
\$1,450	114.2	69	53%	1.4	\$1,133

Totals vary due to rounding.

#### **PROJECT FINANCE**

The financing required to construct and commission the LGP is an estimated A\$35.4 million. Kin intends to finance the construction of the LGP infrastructure and the mine establishment costs for the open pit operations through a combination of project debt and equity. The Company will take a measured approach in setting the level of debt whilst minimising shareholder dilution. Preparations for the project debt financing have been advanced in the September 2017 quarter with the appointment of the financier's independent technical consultant SRK. SRK have completed due diligent reviews on the Mineral Resource estimation, process capital, processing operating costs and metallurgy.

#### **ESTIMATED TIME TO PRODUCTION**

The DFS estimates potential gold production to commence in the second half of CY2018. This estimate assumes a 11-month construction and commissioning period. It is assumed that financing for the required capital will continue through CY2017. All statutory approvals are expected to be granted to allow the development to proceed as planned.

#### **GOING FORWARD**

Subject to receiving acceptable terms to finance the LGP the immediate milestones are:

- Recruit management and operational personnel for the LGP.
- Identify additional cost-saving measures from proposed capital and operating expenditure.
- Maintain an aggressive exploration campaign focused on discovering high grade mineralisation.

#### **RISKS & OPPORTUNITIES**

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

- Access to project funding.
- Timely project approvals from government authorities.
- Adverse movements in the Australian gold price.
- Adverse movements in USD:AUD exchange rates.
- Not achieving the mining production rates, dilution assumptions and metallurgical recovery rates.
- Adverse movement in fuel price.

#### Key opportunities identified during the DFS work include, but are not limited to:

- Achieving higher throughput and production rates by installing the Lawlers 600kw ball mill. (This eventuality has been assumed in the current plant layout).
- High grade exploration success.
- Drilling from the pit floor of Mertondale 3-4 (historical production 1.3Mt @ 4.3 g/t Au) once dewatered to access exposed high-grade material.
- Conversion of inferred resources of 119koz. in Eclipse, Quicksilver, Krang and Forgotten Four (see Table 4) to mineable material.

#### 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 feasibility and definitive feasibility studies, the Company's' business strategy, plan, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and operational 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', '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 October 2014.

This list is not exhausted 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.

#### 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 highly prospective North Eastern Goldfields region of Western Australia. Kin is currently transitioning into a profitable gold producer, through its flagship operation Leonora Gold Project, a near surface, high margin gold operation.

#### **Competent Persons Statement (Mineral Resources)**

The information in this report that relates to 2017 Mineral Resources is based on information reviewed and compiled by Dr. Spero Carras of Carras Mining Pty Ltd (CM). Dr. Carras is a Fellow of the Australasian Institute Mining and Metallurgy (AusIMM) and has over 40 years' experience 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. Mark Nelson, Consultant Geologist to CM with over 30 years' experience and is a Member of the Australasian Institute Mining and Metallurgy (AusIMM) with sufficient experience in 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. Gary Powell Consultant Geologist to CM with over 30 years' experience and is a Member of the Australasian Institute Mining and Metallurgy (AusIMM) and the AIG with sufficient experience in 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".

CM also acted as auditors of the 2009 McDonald Speijers resource estimates for Eclipse, Quicksilver, Forgotten Four and Krang (deposits not included in the DFS)

Dr. S. Carras, Mr. Mark Nelson and Mr. Gary Powell consent to the inclusion in the report of the matters based on their information in the context in which it appears.

The information contained in this report relating to exploration results relates to information compiled or reviewed by Paul Maher and Simon Buswell-Smith. Mr. Maher is a member of the Australasian Institute of Mining and Metallurgy, and Mr. Buswell-Smith is a member of the Australian Institute of Geoscience, and both are employees of the company and fairly represent this information. Mr. Maher and Mr. Buswell-Smith have sufficient experience of relevance to the styles of mineralisation and the types of deposit under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 edition of the JORC "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Maher and Mr. Buswell-Smith consent to the inclusion in the report of the matters based on information in the form and context in which it appears.

#### Competent Persons Statement (Ore Reserves)

The information contained in the report that relates to ore reserves at the Leonora Gold Project is based on information compiled or reviewed by Mr. Shane McLeay who is a fulltime employee of Entech Pty Ltd. Mr. McLeay confirms that he has read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012 JORC Edition). He is a Competent Person as defined by the JORC Code 2012 Edition, having five years' experience which is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which he is accepting responsibility. He is a Fellow of The Australasian Institute of Mining and Metallurgy, he has reviewed the Report to which this consent statement applies, for the period ended 1 October 2017. He verifies that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in his supporting documentation relating to Ore Reserves

# ANNEXURE 1 - LEONORA GOLD PROJECT OPEN PIT DESIGNS

Figure 1: Rangoon (Cardinia Mining District)

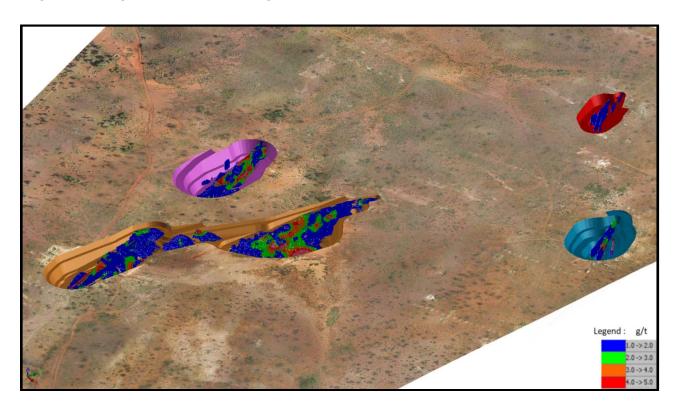


Figure 2: Helens (Cardinia Mining District)

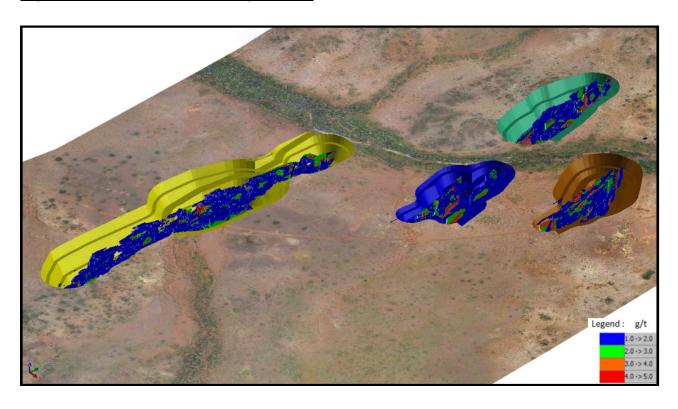


Figure 3: Kyte & Bruno Lewis Link/ Lewis (Cardinia Mining Centre)

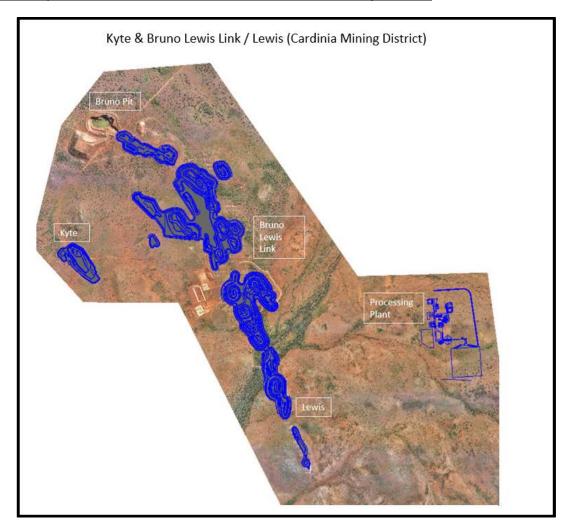
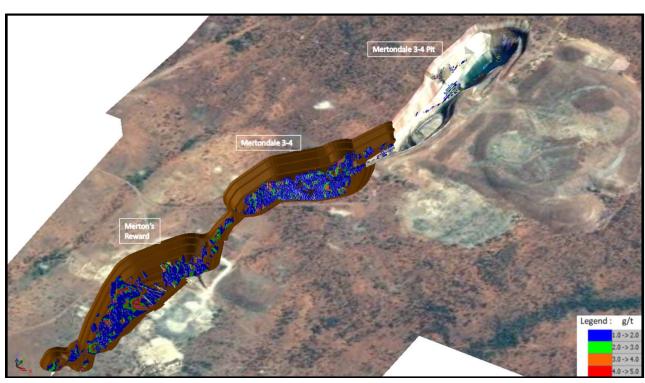
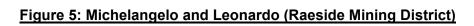
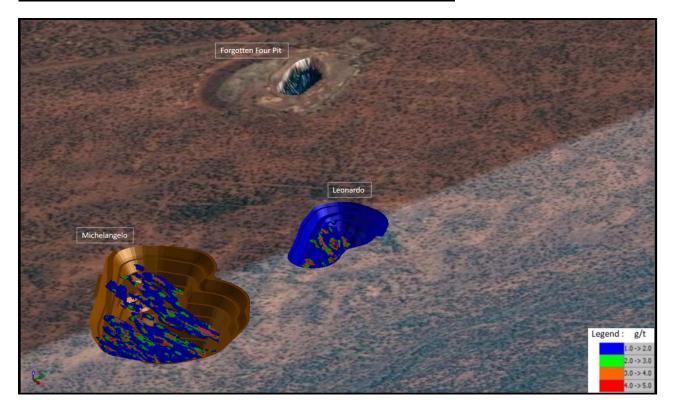


Figure 4: Merton's Reward and Mertondale 3-4 (Mertondale Mining District)







# ANNEXURE 2 - JORC CODE (2012) TABLE 1 REPORT

Annexure 2 includes the Table 1 Reports in accordance with the JORC Code 2012 as follows:

APPENDIX A: MERTONDALE PROJECT - Merton's Reward, Mertondale 3-4, Mertondale 5 and Tonto

- o Table 1, Section 1 Sample Techniques and Data
- o Table 1, Section 2 Reporting of Exploration Results
- o Table 1, Section 3 Estimation and Reporting of Mineral Resources

#### APPENDIX B: CARDINIA PROJECT - Bruno Lewis Link, Lewis and Kyte

- o Table 1, Section 1 Sample Techniques and Data
- o Table 1, Section 2 Reporting of Exploration Results
- o Table 1, Section 3 Estimation and Reporting of Mineral Resources

#### APPENDIX C: CARDINIA PROJECT – Helens and Rangoon

- o Table 1, Section 1 Sample Techniques and Data
- o Table 1, Section 2 Reporting of Exploration Results
- o Table 1, Section 3 Estimation and Reporting of Mineral Resources

#### APPENDIX D: RAESIDE PROJECT – Michelangelo and Leonardo

- o Table 1, Section 1 Sample Techniques and Data
- o Table 1, Section 2 Reporting of Exploration Results
- o Table 1, Section 3 Estimation and Reporting of Mineral Resources

#### APPENDIX E: LEONORA GOLD PROJECT (Mertondale, Cardinia and Raeside)

o Table 1, Section 4 - Estimation and Reporting of Ore Reserves

## Appendix A

# JORC 2012 TABLE 1 REPORT MERTONDALE PROJECT

### Merton's Reward, Mertondale 3-4, Mertondale 5 and Tonto

### SECTION 1 – Sample Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	Commentary
Sampling techniques	All sample data, subject of this report and used for resource estimation work, is obtained from various drilling programs carried at Mertondale out since 1981. Data was obtained predominantly from Reverse Circulation ('RC') drilling, and to a lesser extent, diamond core ('Diamond' or 'DD') drilling and Air Core ('Aircore' or 'AC') drilling.
	Companies involved in the collection of the majority of the exploration data prior to 2014 include: Nickelore NL ("Nickelore") 1981-1982; Hunter Resources Ltd ("Hunter") 1984-1988; Harbour Lights Mining Ltd (a joint owned company of Ashton Gold WA Ltd and Carr Boyd Minerals Pty Ltd - "HLML") 1988-1993; Mining Project Investors Pty Ltd ("MPI") 1993-1996; Sons of Gwalia Ltd ("SOG") 1996-2004; Navigator Resources Ltd ("Navigator") 2004-2014.
	Kin Mining Ltd ("KIN") acquired the Mertondale Project in 2014.
	HISTORIC SAMPLING (1981-2014)
	Drill samples were generally obtained from 1m downhole intervals and riffle split to obtain a 3-4kg representative sub-sample, which were submitted to a number of commercial laboratories for a variety of sample preparations methods, including oven drying (90-110°C), crushing (-2mm to -6mm), pulverizing (-75 $\mu$ m to -105 $\mu$ m), and generally riffle split to obtain a 30, 40 or 50 gram catchweight for gold analysis, predominantly by Fire Assay fusion, with AAS finish. On occasions, initial assaying have been carried out using Aqua Regia digest and AAS/ICP finish, with anomalous samples re-assayed by Fire Assay fusion and AAS/ICP finish.
	Diamond Drilling
	Half core (or quarter core) sample intervals varied from 0.15 to 1.46m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in marked core trays and stored in a secure yard for future reference. The only known available drill core from these programs and stored at KIN's Leonora Exploration Yard, are those drilled by Navigator.
	RC Drilling
	The vast majority of Reverse Circulation (RC) drill samples were collected over 1m downhole intervals from beneath a cyclone and then riffle split to obtain a sub-sample (typically 3-4kg). After splitting, 1m sub-samples were typically collected in pre-numbered calico bags, and the 1m sample rejects were commonly stored at the drill site in marked plastic bags, for future reference. First pass sampling often involved collecting composite samples by using a scoop (dry samples) or spear (wet samples) to obtain 3m or 4m composited intervals, with the single metre split sub-samples being retained at the drill site. If the composite sample assays returned anomalous results, the single metre sub-samples for the anomalous composite intervals were retrieved and submitted for analysis.
	Navigator obtained sub-samples from wet samples using the spear method.
	Data relating to historical wet samples is not available, however the number of wet samples involved is considered to be relatively low, and not material.
	There are no sample rejects available from RC drilling prior to 2014. Most drill sites have been rehabilitated and the sample bags removed and destroyed.

Criteria	Commentary
	Aircore Drilling
	The procedures for sampling of Aircore drilling is generally the same as for RC drilling, although in earlier (pre-2004) programs, the majority of the 1m samples were mostly stored directly on the ground prior to sampling with a scoop. Assay results from these samples are not used for resource estimation work, however they do sometimes provide a guide in interpreting geology and mineralisation continuity.
	When drilling under dry conditions, Aircore samples should be of a comparable quality to Resamples, when implementing same sampling techniques. Aircore sample assay results were only used for resource estimation work if the 1m sub-samples were obtained by riffle splitting of the primary sample, prior to placing on the ground.
	There are no sample rejects available from AC drilling prior to 2014. Most drill sites have bee rehabilitated and the sample bags removed and destroyed.
	RAB Drilling
	Sample returns from Rotary Air Blast (RAB) drilling are collected from the annulus between the open hole and drill rods, using a stuffing box and cyclone. Samples are usually collected at 1 metri intervals and placed on the ground with 3-4kg sub-samples collected using a scoop or spear. Up hole contamination of the sample is commonplace, therefore this type of drilling and sampling regarded as reconnaissance in nature and the samples indicative of geology and mineralisation. The qualities of samples are not appropriate for resource estimation work and are only sometimes used as a guide for interpreting geology and mineralisation.
	KIN MINING (2014-2017)
	Diamond drilling
	Diamond drill core (HQ3) samples collected for analysis were longitudinally cut in half, and the in quarters, using a powered diamond core saw blade centered over a cradle holding the core place. Half core (or quarter core) sample intervals varied from 0.3 to 1.11m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in their respective core trays and securely stored in KIN's yard Leonora for future reference.
	RC drilling
	During drilling, sample return is passed through a cyclone and stored in a sample collection bo At the end of each metre, the cyclone underflow is closed off, the underside of the sample box opened and the sample passed down through a riffle splitter.
	All RC sub-samples were collected over one metre downhole intervals and averaged 3-4k Sample reject from the riffle splitter were retained and stored in marked plastic bags, and locate near to each drillhole collar.
	All drilling, sample collection and sampling handling procedures were conducted and/o supervised by KIN geology personnel to today's industry standards. QA/QC procedures were implemented during each drilling program to industry standards.
	<u>Analysis</u>
	Once received at the assay laboratory, diamond core and RC samples were oven dried (10 110°C), crushed (-6mm and -2mm), pulverised (P85% -75µm) and split to obtain a representative 50 gram sample catchweight for gold only analysis using Fire Assay fusion with AAS finish.
	COMMENT
	For some earlier (pre-2004) drilling programs, RC and Aircore samples were obtained at 1.5 or metre downhole intervals and a substantial portion of the historical MPI holes were composit sampled over 2-4m intervals.
	For resource estimation work, Diamond, RC and some Aircore drilling data was used when

appropriate. RAB drilling data was not used for resource estimation but was sometimes used as

Criteria	Commentary
	an interpretative guide only. A proportion of the 1.5m sample intervals, particularly for Mertons Reward, were used in the resource estimation, only where the sampling methods are appropriate, and where they sit within the mineralisation interpretations.
Drilling techniques	Numerous programs comprising various types of drilling have been conducted by several companies since 1981. The Mertondale database encompasses the various deposits and prospects within the Mertondale Project area, and consists of 6,974 drillholes for a total of 345,635 metres, viz:

Hole Type	Drill holes	Metres (m)	%(m)
DD	192	27,129	7.8
RC	1,244	125,874	36.4
AC	1,343	83,508	24.2
RAB	4,195	109,124	31.6
Total	6,974	345,635	100%

#### **HISTORIC DRILLING (1981-2014)**

#### **Diamond Drilling**

Diamond drilling was carried out using industry standard 'Q' wireline techniques, with the core retrieved from the inner tubes and placed in core trays. Core sizes include NQ/NQ3 ( $\emptyset$  45-48mm), HQ/HQ3 ( $\emptyset$  61-64mm), minimal NDBGM ( $\emptyset$  50-51mm) and some PQ/PQ3 ( $\emptyset$  83-85mm). At the end of each core run, the driller placed core blocks in the tray, marked with hole number and depth. Core recovery was usually measured for each core run and recorded onto the geologist's drill logs.

#### **RC** Drilling

RC drilling used conventional reverse circulation drilling techniques, utilising a cross-over sub, until the late 1980s, when the majority of drilling companies started changing over to using face-sampling hammers with bit shrouds. Drill bit sizes typically ranged between 110-140mm. Samples obtained from conventional RC drilling techniques with cross-over subs often suffered from down hole contamination (e.g. smearing of grades), especially beneath the water table. Samples obtained from RC drilling techniques using the face sampling hammer suffered less from down hole contamination and were more likely to be kept dry beneath the water table, particularly if auxiliary and booster air compressors were used. These samples are considered to be more reliable and representative.

#### **Aircore Drilling**

Aircore drilling is a form of RC drilling, but generally utilizing smaller rigs and smaller air compressors, compared to standard RC drill rigs of the times. Aircore bits are hollow in the centre, with the kerf comprising cutting blades or 'wings' with tungsten-carbide inserts. Drill bit diameters usually range between 75-110mm.

The vast majority of Aircore drilling (98%) was conducted by Navigator utilising suitable rigs with appropriate compressors (eg 250psi/600cfm). Aircore holes were drilled mostly into the weathered regolith using 'blade' or 'wing' bits, until the bit was unable to penetrate further ('blade refusal'), often near to the fresh rock interface. Hammer bits were used only when it was deemed necessary to penetrate harder rock types. Holes were typically no deeper than 60 metres.

#### **RAB Drilling**

RAB drilling is carried out using small air compressors (eg 250psi/600cfm) and drill rods fitted with a percussion hammer or blade bit, with the sample return collected at the drillhole collar using a stuffing box and cyclone collection techniques. Drillhole sizes generally range between 75-

Criteria	Commentary	
	110mm.	
	KIN MINING (2014-2017)	
	Diamond Drilling	

Diamond drilling was carried out by contractor Orbit Drilling Pty Ltd ("Orbit Drilling") with a truck-mounted Hydco 1200H drill rig, using industry standard 'Q' wireline techniques. Drill core is retrieved from the inner tubes and placed in plastic core trays and each core run depth recorded onto core marker blocks and placed at the end of each run in the tray.

Drillhole deviation was measured at regular downhole intervals, typically at 10m from surface, thence every 30m to bottom of hole, using electronic multi-shot downhole survey tools (e.g. Reflex EZ-TRAC, Camteq Proshot), or in some instances a separate independent program of downhole deviation surveying was carried out to validate previous surveys, utilizing an electronic continuous logging survey tool (AusLog A698 deviation tool).

Core orientation was obtained for each core run where possible, using electronic core orientation tools (e.g. Reflex EZ-ORI) and the 'bottom of core' marked accordingly.

#### **RC** Drilling

RC drilling was carried out by Orbit Drilling's truck-mounted Hydco 350RC drill rigs with 350psi/1250cfm air compressor, with auxiliary and booster air compressors (when required). Drilling utilised mostly downhole face-sampling hammer bits (Ø 140mm), with occasional use of blade bits for highly oxidized and soft formations. The majority of drilling retrieved dry samples, with the occasional use of the auxiliary and booster air compressors beneath the water table, to maintain dry sample return as much as possible.

Drillhole deviations were surveyed downhole, during drilling operations, using an electronic multi-shot downhole tool (e.g. Reflex EZ-TRAC). In some instances, drillholes were surveyed later in open hole. Where stopes and cavities were encountered, surveying was completed within the steel rods to obtain dip only readings. In the later drilling programs, downhole surveying was carried out inside a non-magnetic stainless steel (s/s) rod, located above the hammer. Providing the tool was located in the middle of the stainless steel rod, azimuth and dip readings were successfully recorded. A separate independent program of downhole deviation surveying was carried out to validate previous surveys, utilizing an electronic continuous logging survey tool (AusLog A698 deviation tool).

The following tables summarise drilling totals for the entire Mertondale Project area, for DD, RC and AC only (i.e. excluding open-hole drilling such as RAB):

Mertondale Project – Historical Drilling Summary (Pre-2014)

Hole Type	Holes	Metres
DD	188	26,666
RC	1,131	112,215
AC	1,343	83,508
Total	2,662	222,389

Mertondale Project – Drilling Summary – KIN (2014-2017)

Hole Type	Holes	Metres
DD	4	463
RC	113	13,659
Total	117	14,122

KIN's assay data represents 11% of all RC assays and 6% of all DD/RC/AC assays for the entire Mertondale Project database.

Criteria	Commentary
	COMMENT
	The drilling database supplied includes depths of some RC precollars for diamond drillholes, but is incomplete. Historical reports indicate that drill core sizes were predominantly HQ/HQ3 or NQ/NQ3, with minimal PQ/PQ3, however database details are incomplete. Most historical reports recorded core recoveries, although these details are not included in the database. Review of some historical reports indicate that core recoveries were generally good, although recoveries were typically less in highly fractured zones and some highly weathered mineralised zones in the transition and oxide zones, however this information is not recorded in the supplied database.
	RC drilling is the dominant drill type at all sites. RC drilling information is generally described in varying detail in historical reports to the DMP, including drilling companies used and drilling rig types, however it's not all recorded in the database supplied. Review of the historical reports indicates that reputable drilling companies were typically contracted and the equipment supplied was of an acceptable standard for those times. During the 1990s, and 2000s, suitable large drill rigs with on-board compressors were probably complimented with auxiliary and booster air compressors for drilling to greater depths and/or when groundwater was encountered. KIN's drilling was conducted with modern rigs equipped with auxiliary and booster compressors and face sampling hammers with bit diameters typically 140mm.
	When drilling under dry conditions, Aircore samples should be of a comparable quality to RC samples, when implementing same sampling techniques. Aircore drilling data was only used in resource estimation work, where the in-field and laboratory sampling methodologies was considered appropriate and limited to a number of selected Navigator drillholes.
Drill sample	HISTORIC DRILLING (1981-2014)
recovery	Diamond drilling
	Core recovery has been recorded in most drill logs for most of the diamond drilling programs since 1981, but is not recorded in the supplied database. A review of some historical reports indicates that generally core recovery was good with lesser recoveries recorded in zones of broken ground and/or areas of mineralisation. Overall recoveries are considered acceptable for resource estimation.
	RC drilling
	There is limited information recorded for sample recoveries for historical RC and Aircore drilling. However there has been an improvement in sample recoveries and reliability following the introduction of face sampling hammers and improved drilling technologies and equipment, since the mid-1980s.
	KIN MINING (2014-2017)
	Diamond Drilling
	Core recovery was recorded for each run by measuring total length of core retrieved against the downhole interval actually drilled.
	Diamond core recoveries were recorded in the database, and averaged 100%. Independent field reviews by the Competent Persons (SC and GP) in 2017 of the diamond drilling rig in operation and core integrity at the drill sites, demonstrated that diamond drill core recoveries were being maximised by the driller, and that core recoveries were consistently > 95%, even when difficult ground conditions were being encountered.
	RC drilling
	Integrity of each one metre RC sample is preserved as best as possible. At the end of each 1 metre downhole interval, the driller stops advancing the rods, retracts from the bottom of hole, and waits for the sample to clear from the bottom of the hole through to the sample collector box fitted beneath the cyclone. The sample is then released from the sample collector box and passed through the 3-tiered riffle splitter fitted beneath the sample box. Sample reject is collected in plastic bags, and a 3-4kg sub-sample is collected in pre-marked calico bags for analysis. Once the samples have been collected, the cyclone, sample collector box and riffle splitter are flushed with

Criteria	Commentary
	compressed air, and the riffle splitter cleaned by the off-sider using a compressed air hose, and if necessary a scraper. This process is maintained throughout the entire drilling program to maximise drill sample recovery and to maintain a highly representative level of the material being drilled.
	RC drill sample recoveries are not recorded in the supplied database, however a review by the Competent Person (GP) in May 2017 of RC drill samples stored in the field, and observations of the two RC drilling rigs in operation, suggests that RC sample recoveries were mostly consistent and very good, with the samples themselves being reliable and representative of the material being drilled.
	COMMENT
	Due to the lack of detailed information in the database regarding historic (pre-2014) Aircore and RC drilling, no quantitative or semi-quantitative impression of sample recovery or sample quality is available. It's assumed to be satisfactory given that several deposits were mined in the past, by open pit methods, in the Mertondale area (i.e. Mertondale 2, Mertondale 3-4 and Mertondale 5), where the open pits were mined to their original design limits, based on the historical drill data. This suggests that the amount of metal recovered was probably not grossly different from pre-mining drill data based expectations.
	During Navigators drill programs wet samples were spear sampled instead of riffle split. 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.
	No indication of sample bias is evident nor has it been established. That is, no relationship has been observed to exist between sample recovery and grade.
	The amount of Aircore drilling data used in the Mertondale resource estimation process is minimal and regarded as not material.
Logging	HISTORIC DRILLING (1981-2014)
	The logging data coded in the database uses at least four different lithological code systems, a legacy of numerous past operators (Hunter, MPI, SOG and Navigator). Correlation between codes is difficult to establish, however it can be achieved with effort. Based on historical reports, drill hole logging procedures appear consistent with normal industry practices of the time.
	Navigator's procedure for logging of diamond core included firstly marking of the bottom of the core (for successful core orientations), core recovery, fractures per metre and RQD, lithology, alteration, texture, mineralisation, weathering, and other features, and then marked up for cutting and sampling. Several diamond drillholes were completed for geotechnical purposes and were independently logged for structural data by geotechnical consultants. All diamond drill core has been photographed, and currently stored at KIN's yard in Leonora.
	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, after validation, to minimize data entry errors.
	The entire length of all drillholes is logged in full from surface to bottom of hole.
	Logging is qualitative on visual recordings of lithology, oxidation, colour, texture and grain size.  Logging of mineralogy, mineralisation and veining is quantitative.
	Drill core photographs are only available for Navigator's diamond drillholes.
	KIN MINING (2014-2017)
	KIN's logging of drill samples was carried out in the field (RC drilling) or at the Leonora Yard (diamond core) and entered onto a portable computer, on a metre by metre basis for RC, and by sample intervals and/or geological contacts for diamond core. Data recorded included lithology, alteration, structure, texture, mineralisation, sulphide content, weathering and other features. Drillhole collar coordinates, azimuth, dip, depth and sampling intervals are also recorded in the

Criteria	Commentary
	drill logs in the field.
	KIN geological personnel retrieved the core trays from the drill rig site and relocated them to KIN's yard in Leonora at the end of each day. Drill core was photographed in the field or at the Leonora yard, prior to cutting using a diamond core saw to obtain quarter core samples for analysis.
	All information collected was entered directly into laptop computers or tablets, and transferred to the database to be validated.
	COMMENT
	KIN has attempted to validate historical logging data and to standardize the logging code system by incorporating the SOG and Navigator logging codes into one. This is an ongoing process and is not yet completed.
	The level of logging detail is considered appropriate for exploration and to support appropriate mineral resource estimation, mining studies and metallurgical studies.
	Qualitative logging includes classification and description of lithology, weathering, oxidation, colour, texture and grain size. Quantitative logging includes identification and percentages of mineralogy, sulphides, mineralisation, veining, and in addition, logging of diamond drilling included geotechnical data, RQD and core recoveries.
	For the majority of historical drilling (pre-2004), and all of the more recent drilling, the entire length of drillholes have been logged from surface to 'end of hole'. Diamond core logging is typically logged in more detail compared to RC and Aircore drilling.
Sub-	HISTORIC DRILLING (1981-2014)
sampling techniques and sample	Historical reports for drilling programs prior to 2004, are not always complete in the description of sub-sampling techniques, sample preparation and quality control protocols.
preparation	Diamond drilling
	Diamond drill core (NQ/NQ3, HQ/HQ3 or PQ/PQ3) samples collected for analysis were longitudinally cut in half, and occasionally in quarters for the larger (HQ/HQ3 or PQ/PQ3) diameter holes, using a powered diamond core saw blade centered over a cradle holding the core in place.
	Half core (or quarter core) sample intervals varied from 0.15 to 1.46m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining half (quarter) core was retained in core trays.
	Where historical reports do not describe the sampling protocol for sampling of drill core, it is assumed that drill core was sampled as described above.
	RC drilling
	Prior to 1996, limited historical information indicates most RC sampling was conducted by collecting 1m samples from beneath a cyclone and passing through a riffle splitter to obtain a 3-4kg sub-sample for analysis. RC sampling procedures are believed to be consistent with the normal industry practices at the time. The vast majority of samples were dry and riffle split, however spear or tube sampling techniques were used for wet samples.
	Samples obtained from conventional RC drilling techniques with cross-over subs often suffered from down hole contamination, especially beneath the water table. Samples obtained from RC drilling techniques using the face sampling hammer suffered less from down hole contamination and were more likely to be kept dry beneath the water table, particularly if auxiliary and booster air compressors were used. These samples are considered to be representative.
	The vast majority of Reverse Circulation (RC) drill samples were collected at 1m downhole intervals from beneath a cyclone and then riffle split to obtain a sub-sample (typically 3-4kg). After splitting, 1m sub-samples were typically collected in pre-numbered calico bags, and the 1m sample rejects were commonly stored at the drill site in marked plastic bags, for future reference. First pass sampling often involved collecting composite samples by using a scoop (dry samples)

### Criteria Commentary or spear/tube (wet samples) to obtain 3m or 4m composited intervals, with the single metre split sub-samples being retained at the drill site. If the composite sample assays returned anomalous results, the single metre sub-samples for the anomalous composite intervals were retrieved and submitted for analysis. Navigator obtained sub-samples from wet samples using the spear or tube method. Data relating to historical wet samples is not available, however the number of wet samples involved is considered to be relatively low, and not material. There are no sample rejects available from RC drilling prior to 2014. Most drill sites have been rehabilitated and the sample bags removed and destroyed. Navigator included standards and blanks within each drill sample batch, at a ratio of 1 for every 20 samples, with the number of standards being inserted at a ratio of 1 for every 50 samples. Since 2009, Navigator adopted a stricter sampling regime with the additional submission of field split duplicate samples at a rate of 1 for every 50 primary samples. Aircore drilling The procedures for sampling of Aircore drilling is generally the same as for RC drilling, although in earlier (pre-2004) programs, the majority of the 1m samples were mostly stored directly on the ground prior to sampling with a scoop. Navigator included standards and blanks within each drill sample batch, at a ratio of 1 for every 20 samples, with the number of standards being inserted at a ratio of 1 for every 50 samples. Since 2009, Navigator adopted a stricter sampling regime with the submission of field split duplicate samples at a rate of 1 for every 50 primary samples. A variety of laboratories were used for analysis. Prior to 2009, duplicate samples were not routinely collected and submitted from RC and Aircore drilling to the same laboratory consequently overall sampling and assay precision levels can't be quantified for that period. While QC protocols were not always comprehensive, the results indicate that assay results from Navigators exploration programs were reliable. Results from pre-Navigator operators are regarded as consistent with normal industry practices of the time. **KIN MINING (2014-2017) Diamond drilling** Diamond drill core samples (HQ3) collected for analysis were longitudinally cut in half and quarters, using a powered diamond core saw blade centered over a cradle holding the core in place. Core sample intervals varied from 0.3 to 1.11m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in their respective core trays and stored in KIN's yard for future reference. At the time of resource estimation, assays had not yet been received for KIN's diamond core samples. RC drilling All RC sub-samples were collected over 1 metre downhole intervals and retained in pre-marked calico bags, after passing through a cyclone and riffle splitter configuration. The majority of RC sub-samples consistently averaged 3-4kg. Sample reject from the riffle splitter were retained and stored in plastic bags, and located near each drillhole site. When drilling beneath the water table, the majority of sample returns were kept dry by the use of the auxiliary and booster air compressors. Very few wet samples were collected through the riffle splitter, and the small number is not considered material. Field duplicates were taken at regular intervals at a ratio of 1:50 and assay results indicate that there is reasonable analytical repeatability, considering the presence of nuggety gold. COMMENT All sub-sampling techniques and sample preparation procedures conducted and/or supervised by

KIN geology personnel are to standard industry practice. Sub-sampling and sample preparation

Criteria	Commentary
	techniques used are considered to maximise representivity of the material being drilled. QA/QC procedures implemented during each drilling program are to industry standard practice.
	Samples sizes are considered appropriate for this style of gold mineralisation, and is an industry accepted method for evaluation of gold deposits in the Eastern Goldfields of Western Australia
Quality of assay data and laboratory	Numerous assay laboratories and various sample preparation and assay techniques have been used since 1981. Historical reporting and descriptions of laboratory sample preparation, assaying procedures, and quality control protocols for the samples from the various drilling programs are variable in their descriptions and completeness.
tests	HISTORIC DRILLING (1981-2014)
	For assay data obtained prior to 1996, the incomplete nature of the data results could not be accurately quantified in terms of the data derived from the combinations of various laboratories and analytical methodologies.
	Since 1996, the majority of samples submitted to the various laboratories were typically prepared for analysis firstly by oven drying, crushing and pulverizing to a nominal 85% passing 75µm.
	In the initial exploration stages, Aqua Regia digest with AAS/ICP finish, was generally used as a first pass detection method, with follow up analysis by Fire Assay fusion and AAS/ICP finish. This was a common practice at the time. Mineralised intervals were subsequently Fire Assayed (using 30, 40 or 50 gram catchweights) with AAS/ICP finish.
	Approximately 15-20% of the sampled Aircore holes may have been subject to Aqua Regia digest methods only, however Aircore samples were obtained predominantly within the oxide profile, where aqua regia results are not expected to be significantly different to results from fire assay methods.
	In 1989, Hunter tabulated significant RC oxide zone intercepts from Merton's Reward and Mertondale 3-4, and 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.
	Hunter also carried out a comparison of 18 assays results in 1985, between standard fire assay and screen fire assay results from five RC holes. There was a reasonably good correlation between assays for the two methods for values < 5ppm Au, considering the presence of nuggety gold.
	During 2004-2014, Navigator utilised six different commercial laboratories during their drilling programs, however Kalgoorlie Assay Laboratories conducted the majority of assaying for diamond, RC and Aircore samples using Fire Assay fusion on 40 gram catchweights and AAS/ICP finish.
	Navigator regularly included, Certified Reference Material (CRM) standards and blanks with their sample batch submissions to the laboratories at average ratio of 1 in every 20 samples. Sample assay repeatability, and blank and CRM standards assay results are within acceptable limits. Since 2009, Navigator adopted a stricter sampling regime with the submission of field split duplicate samples at a rate of 1 for every 50 primary samples.
	KIN MINING (2014-2017)
	Sample analysis was conducted by SGS Australia Pty Ltd's ("SGS") Kalgoorlie and Perth laboratories. Sample preparation included oven drying (105°C), crushing (-6mm), pulverising (P85% -75µm) and riffle split to obtain a 50 gram catchweight. Analysis for gold only was carried out by Fire Assay fusion technique with AAS finish (SGS Lab Code FAA505).
	KIN regularly insert blanks, field duplicate and CRM standards in each sample batch at a ratio of 1:20. This allows for at least one blank and one CRM standard to be included in each of the laboratory's fire assay batch of 50 samples. Field duplicate sample assay repeatability, blank standards and CRM standards assay results are within acceptable limits for this style of gold mineralisation.
	SGS include blanks and CRMS as part of their internal QA/QC for sample preparation and analysis,

Criteria	Commentary
	as well as regular assay repeats. Sample pulp assay repeatability, and internal blank and CRM standards assay results are within acceptable limits.
	COMMENT
	The nature and quality of the historical assaying and laboratory procedures used are considered to be satisfactory and appropriate for use in mineral resource estimations.
	Fire Assay fusion or Aqua Regia digestion techniques were conducted on diamond, RC and Aircore samples, with AAS or ICP finish.
	Fire Assay fusion is considered to be a total extraction technique. The majority of assay data used for the mineral resource estimations were obtained by the Fire Assay technique with AAS or ICP finish. AAS and ICP methods of detection are both considered to be suitable and appropriate methods of detection.
	Aqua Regia is considered a partial extraction technique, where gold encapsulated in refractory sulphides or some silicate minerals may not be fully dissolved, resulting in partial reporting of gold content.
	No other analysis techniques have been used to determine gold assays.
	KIN's ongoing QA/QC monitoring program identified one particular CRM that was returning spurious results. Further analysis demonstrated that the standard was compromised and subsequently removed and destroyed. A replacement CRM of similar grade was substituted into the QA/QC program.
Verification of sampling and assaying	Verification of sampling and assaying techniques and results prior to 2004 has limitations due to the legacy of the involvement of various companies, personnel, drilling equipment, sampling protocols and analytical techniques at different laboratories, over a twenty year period.
	During 2009, a selection of significant intersections had been verified by Navigator's company geologists and an independent consultant McDonald Speijers ("MS"). MS were able to validate 92% of the assay records in 50 randomly selected check holes, and only 6 assay discrepancies were detected (< 0.2%), only 2 of those were considered significant. MS concluded that the very small proportion of discrepancies indicated that the assay database was probably reliable at that time.
	Since 2014, significant drill intersections have been verified by KIN's company geologists during the course of the drilling programs.
	During 2017, Carras Mining Pty Ltd ("CM") carried out an independent data verification. 8,991 assay records for KIN's 2014-2017 drilling programs were verified by comparing laboratory assay reports against the database. 3 errors were found, which are not considered material and which represents less than 0.01% of all database records verified for KIN's 2014-2017 drilling programs.
	COMMENT
	There is always a risk with legacy data that sampling or assaying biases may exist between results from different drilling programs due to differing sampling protocols, different laboratories and different analytical techniques.
	Repeated examinations of historic reports on phases of diamond, RC and Aircore drilling have been conducted from time to time. Assay results from KIN's recent drilling are consistent with surrounding information and as a result the information obtained from the various diamond, RC and Aircore drilling programs (where sampling protocols are appropriate) have been accepted.
	Recent (2014-2017) RC and diamond drilling by KIN included some twinning of historical drillholes in several locations predominantly within the Mertondale 3-4 resource area. There is no material difference observed between historical drilling information and the KIN drilling information. In the areas that were not drilled with twin holes, the drill density is considered sufficiently close enough to enable comparison with surrounding historic information, and there is no material difference of a negative nature between historical drilling information and the KIN drilling information. KIN's diamond holes were drilled for metallurgical and geotechnical test work, and

Criteria	Commentary
	assay results received to date for these holes also show good correlation with nearby historical results.
	Where sampling protocols are appropriate, diamond, RC and Aircore samples, are of equal importance in the resource estimation process.
	There has been no adjustments or calibrations made to the assay data recorded in the supplied database.
Location of	HISTORIC DATA (1981-2014)
data points	A local survey grid was originally established in 1981 at Mertons Reward, and subsequently extended by Hunter during 1985-1988. During the 1990s, SOG identified a small angular error in the base line, which resulted in substantial errors, particularly in the northern portion of the project. Surface survey data were transformed firstly to AMG and subsequently to MGA (GDA94 zone51). This resulted in different grid transformations being applied in the northern and southern parts of the Mertondale area.
	Navigator recognised errors in the collar co-ordinates resulting from these transformations and as a result, a significant number of holes were resurveyed and a new MGA grid transformation generated. This exercise largely appeared to eliminate the offset. Historical 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, Navigator's geologists deemed the errors were not large enough to have a material impact on the resource estimation work in 2009.
	All survey work carried out by Navigator was conducted in GDA94 Zone 51 using differential GPS equipment and a network of survey controls.
	Almost all the diamond and at least 80% of Navigator's RC holes were downhole surveyed. Pre-Navigator, single shot survey cameras were used, with typical survey intervals of 30-40 metres. There were some variation between magnetic and grid azimuths noted (up to 2°) for pre-Navigator drillholes, however the variations are small enough to be within acceptable limits. Aircore holes and the majority of pre-Navigator RC holes were not surveyed down hole, as was the general practice of the day.
	Navigator carried out down hole survey using a single shot or multi-shot survey camera.
	KIN MINING (2014-2017)
	KIN's drill hole collars were located and recorded in the field by a contract surveyor using RTK-DGPS (with a horizontal and vertical accuracy of ±50mm). Location data was collected in the GDA94 Zone51 grid coordinate system. During this program the surveyor also located one historic Navigator diamond and 13 RC drillhole collars using the database collar positions. The collar positions were verified using RTK-DGPS within 1 metre.
	Downhole surveying during KIN's drilling programs was predominantly carried out by the drilling contractor. KIN recognised that some of the downhole survey data appeared to be spurious, and commissioned an independent downhole surveying program by a survey contractor (BHGS, Perth) to check several drillholes at Mertons Reward, Mertondale 3-4 and Tonto. The check survey found occasional erroneous results with the initial surveys. This can be explained by the fact that when the drilling company's survey tool is run inside the drill rods, the tool's sensors need to be located exactly in the middle of the bottom s/s RC rod to obtain accurate readings. Check readings by KIN personnel at different locations within the s/s rod found that variation in azimuth can be measured up to 2°, within 1 metre from the centre of the rod, and up to 10° further away from the centre. The positioning of the tool by the drilling contractor is assumed to be within 1 metre of the centre of the s/s rod for the majority of the drilling program. Therefore, given the nature of the mineralisation and the shift in apparent position of up to 5 metres (for 2° variation) along 'strike' for open pit depths (<140 metres), the occasional errors are not considered material for this resource estimation work.
	In addition, if the downhole survey tool is located within 15 metres of the surface, there is risk of

Criteria	Commentary					
	influence of the drill rig affecting the azimuth readings. This was observed for the survey readings, which include total magnetic intensity (TMI) measurements, where TMI is spurious for readings taken at downhole depths less than 20 metres. These spurious readings are included in the database, but are not used.					
		res at the end	of hole (204	metres depth	ı), which app	an elevation error of ears to be related to an drilling.
	data, and the second	I from a recer close and wi	nt aerial orth thin accepta	ophotogramn	netry survey.	ted from drill hole collar . The two DTM surfaces nd vertical control, and
	COMMENT					
	The accuracy of the use in resource estim		ar and down	nole data are	located with	n sufficient accuracy for
	_		-			ertondale 3-4 and Tontond checked against the
	documentation ther drillholes, particularly	Considering the history of grid transformations and various problems recorded in the surviving documentation there might be some residual risk of error in the MGA co-ordinates for old drillholes, particularly in the northern area, however this is not considered to be material for the resource estimations, subject of this report.				
	declination for the N (2017), with a maxin magnetic north, and	fertondale Pronum variation the annual variation or the annual variation or the measure or the m	oject area is n of +1.575° ariation in n ements have	calculated at in 2005. The nagnetic decli been used, w	+0.823° East difference b nation since	h. Variation in magnetic t (1985) to +1.301° East etween true north and 1985 is not significant, orth data is unavailable,
Data spacing and distribution	·					
	Resource	Drill Grid	d Spacing	Drillhole	Spacing	1
	Areas	from (m)	to (m)	from (m)	to (m)	_
	Mertons Reward	20	25	12.5	25	
	Mertondale 2	25	25	25	25	
	Mertondale 3-4	12.5	25	12.5	25	
	Mertondale 5 Tonto	12.5 20	25 25	12.5 10	25 20	
	Mineralised areas have typically been drilled at hole spacings of 10-25 metres and 12.5-25 metre drill grid spacings. The majority of the holes were drilled at an average dip of -60°, and orthogonal to the strike of mineralisation.  Drill hole and sample interval spacing is sufficient to establish an acceptable degree of geological and grade continuity appropriate for mineral resource estimations and classifications applied.  There has been no sample compositing, other than a few historical compositing of field samples for some Aircore and RC samples to 1.5m, 2m and few 4m intervals. The vast majority of primary assay intervals are 1 metre intervals for RC and Aircore samples, and predominantly 1 metre					
Orientation of data in relation to	Mertondale Shear Zo	deposits and a one (MSZ), lo	cated within	the Mertono	lale greensto	vithin the north trending one sequence, which is ralisation generally dips

Criteria	Commentary
geological structure	sub-vertically to steeply dipping to the east or west. The majority of drilling and sampling programs were carried out to intersect mineralisation orthogonal to strike and as close to orthogonal to dip as practical.
	Geological interpretation of Mertons Reward is largely based on drill data together with information retrieved from historic mapping and mine plans of the old workings, and thus there is a high level of confidence in the interpretation.
	At Mertondale 3-4 gold mineralisation is associated with the intrusive porphyry contact, where the contact can be used as a mineralisation guide or 'marker' horizon.
	The majority of holes were inclined at -60° and drilled orthogonal to the interpreted strike of the target mineralisation (i.e. towards 245° to 270°). In some areas, historical vertical drillholes were completed, as initial reconnaissance drilling, or specifically targeting interpreted flat- to shallow-dipping mineralisation.
	The chance of sample bias introduced by sample orientation is considered minimal. No orientation sampling bias has been identified in the data thus far.
Sample	HISTORIC DRILLING (1981-2014)
security	No sample security details are available for pre-Navigator (pre-2004) drill samples.
	Navigator's drill samples were collected from the riffle splitter in pre-numbered calico bags at the drill rig site. Samples were collected by company personnel from the field and transported to Navigator's secure yard in Leonora, where the samples were then batch processed (drillhole and sample numbers logged into the database) and then packed into 'bulkabag sacks'. The bulkabags were tied off and stored securely in Navigator's yard, until transporting to the laboratory. There was no perceived opportunity for the samples to be compromised from collection of samples at the drill site, to delivery to the laboratory.
	KIN MINING (2014-2017)
	KIN's RC drill samples were collected from the riffle splitter in pre-numbered calico bags at the drill rig site. The samples were then batch processed (drillhole and sample numbers encoded onto a hardcopy sample register) in the field, and then transported and stacked into 'bulkabag sacks' at KIN's secure yard in Leonora. The bulkabags were tied off and stored securely in the yard. The laboratory's (SGS) transport contractor was utilized to transport the bulkabags to the laboratory. There was no perceived opportunity for the samples to be compromised from collection of samples at the drill site, to delivery to the laboratory, where they were stored in their secure compound, and made ready for processing.
	On receipt of the samples, the laboratory (SGS) independently checked the sample submission form to verify samples received, and readied the samples for sample preparation. SGS's sample security protocols are of industry acceptable standards.
Audits or reviews	Historic drilling and sampling methods and QA/QC are regarded as not being as thoroughly documented compared to today's current standards. A review of various available historical company reports of drilling and sampling techniques indicates that these were most likely conducted to the best practice industry standards of the day.
	A review of the Mertondale Project's database, drilling and sampling protocols, and so forth, was conducted and reported on by independent geological consultants MS in 2009. Their report highlighted various issues, which had subsequently been mostly rectified by Navigator prior to 2014, and most recently by KIN.
	During 2017, CM have reviewed and carried out an audit on the field operations and database. Drilling and sampling methodologies observed during the site visits are to today's industry standard. Similarly there were no issues identified for the supplied databases, which would be considered material.
	KIN is in the process of completing validation of all historical logging data and to standardise the logging code system by incorporating the SOG and Navigator logging codes into one, and

Criteria	Commentary
	converting all historical logging into the standardized code system. This is an ongoing process and is not yet completed.
	During the review, CM logged the oxidation profiles ('base of complete oxidation' or "BOCO", and 'top of fresh rock' or "TOFR") for each of the deposit areas, based on visual inspection of selected RC drill chips from KIN's recent drilling programs, and a combination of historical and KIN's drillhole logging, with final adjustments made with input from KIN geologists. The oxidation profiles were used to assign bulk densities and metallurgical recoveries to the resource models.
	Bulk density testwork in the past has been inconsistent with incorrect methods employed, to derive specific gravity or in-situ bulk density, rather than dry bulk density. Navigator (2009) and recent KIN (2017) bulk density testwork was carried out using the water immersion method on oven dried, coated samples to derive dry bulk densities for different rock types and oxidation profiles. This information has been incorporated into the database for resource estimation work. CM conducted site visits during 2017 to the laboratory to validate the methodology.
	Recent (2014-2017) RC and diamond drilling by KIN include some twinning of historical drillholes within the Mertondale Project area. In addition, KIN's infill drilling density is considered sufficiently close enough to enable comparison with surrounding historic information, and there is no material difference of a negative nature between historical drilling information and the KIN drilling information. KIN's diamond holes were drilled for metallurgical and geotechnical test work, and assay results for these holes also show good correlation with nearby historical results.
	Drilling, Sampling methodologies and assay techniques used in the historical and recent drilling programs are considered to be appropriate and to mineral exploration industry standards of the day.

### **SECTION 2 – Reporting of Exploration Results**

(Criteria in the preceding section also apply to this section)

Criteria	Commentary
Mineral tenement and land tenure status	The Mertondale Project area includes granted mining tenements M37/1284 (Mertons Reward), M37/81 and M37/82 (Mertondale 3-4) and M37/233 (Mertondale 5 and Tonto), centered some 40km NNE of Leonora. The tenements are held in the name of Navigator Mining Pty Ltd, a wholly owned subsidiary of KIN. These tenements are managed, explored and maintained by KIN, and constitute a portion of KIN's Leonora Gold Project (LGP), which is located within the Shire of Leonora in the Mt Margaret Mineral Field of the North Eastern Goldfields of Western Australia.  The following royalty and compensation payments may be applicable to the areas within the Mertondale Project that comprise the deposits being reported on:  1. Aurora Gold (WA) Pty Ltd (subsidiary company of Harmony Gold Mining Company Ltd in respect of M37/82, M37/231, M37/232 and M37/233 - \$0.25 production royalty per dry tonne of ore mined and processed.  2. Aurora Gold (WA) Pty Ltd in respect of M37/81 and M37/82 - \$1.00 production royalty per dry tonne of ore mined and processed.  3. Technomin Australia Pty Ltd in respect of M37/82, M37/231, M37/232 and M37/233 - \$0.75 production royalty per dry tonne of ore mined and milled, and  4. Higherealm Pty Ltd (Mertondale Pastoral Leaseholder) in respect of M37/81, M37/82, M37/231, M37/232 and M37/233 - \$10,000 per annum, indexed to CPI, for the year(s) when extraction activities are being carried out.  There are no known native title interests, historical sites, wilderness areas, national park or environmental impediments over the resource areas, and there are no current impediments to obtaining a licence to operate in the area.

Criteria	Commentary
Exploration done by other parties	Gold was initially discovered in the Mertondale area in 1899 by Mr. Fred Merton. The Mertons Reward (MR) underground gold mine (M37/1284) was the direct result of his discovery. The main mining phase at MR was carried out from 1899 to 1911. Historic underground production records to 1942 totalled 88,890t @ 21.0g/t Au (60,520oz) which represents the only recorded mining conducted at Mertons Reward.
	Between 1981-1984 Telluride Mining NL, Nickel Ore NL, International Nickel (Aust) Ltd and Petroleum Securities Mining Co Pty Ltd conducted exploration programs in the Mertondale area. Hunter Resources Ltd began actively exploring the region 1984-1989, Hunter submitted a Notice of Intent (NOI) to mine in 1986 and established a JV with Harbour Lights to treat ore from the Mertondale 2 (M37/1284) and Mertondale 3 pits (M37/82). Between 1986 and 1993 the adjoining Mertondale 4 pit (M37/82 and 81) was mined. Harbour Lights acquired the project in 1989 from Hunter. Ashton Gold eventually gained control of Harbour Lights. Large scale mining in the region was completed in 1993 with the mining of the Mertondale 2 and Mertondale 3-4 pits (M37/81 and M37/82). In 1993 Ashton's interest was transferred to Aurora Gold who established a JV with MPI followed by Sons of Gwalia who entered into a JV with Aurora.
	Historic gold production from the Mertondale Mining Centre.
	Sons of Gwalia (SOG) eventually obtained control of the project in 1997 but conducted limited exploration drilling. In 2004 Navigator Mining Pty Ltd (Navigator) acquired the entire existing tenement holding from the SOG administrator. Navigator conducted the majority of recent exploration drilling in the Mertondale area. KIN acquired the project from Navigator's administrator in late 2014. Historic production from the Mertondale Mining Centre totals 274,724 oz of gold.
	KIN's drilling is focused in areas comprising historical drilling conducted by the above mentioned previous operators.
Geology	The Mertondale Project area is located 35-45km NNE of Leonora in the central part of the Norseman-Wiluna Greenstone Belt, which extends for some 600 km on a NNW trend across the Archean Yilgarn Craton of Western Australia.
	In broad terms the stratigraphy consists of a central felsic volcanic sequence bounded by tholeiitic basalt, dolerite, and carbonaceous shale ± felsic porphyry sequences.
	The four recognised deposits and all the known mineralisation is located within the north trending Mertondale Shear Zone (MSZ).
	Two distinct north trending mineralised zones are recognized within the MSZ. The western zone includes Quicksilver, Tonto, Eclipse and Mertondale 5, while the eastern zone includes the Merton's Reward, Mertondale 2 and Mertondale 3-4 deposits.
	Within the Mertondale Project area, most of the known mineralisation is hosted in sheared mafics, with local porphyry bodies and sediment units. Some of the sediment units are graphitic, notably in the western mineralised zone.
	Eastern Mineralised Zone
	In the Mertons Reward - Mertondale 2 area, two distinct types of high grade lodes were historically recognized:
	<ul> <li>Shear Lodes: Steeply dipping structures containing abundant quartz-carbonate veinlets accompanied by finely disseminated pyrite-arsenopyrite, and</li> </ul>
	<ul> <li>Intershear Lodes: Narrow, flat to moderately dipping auriferous quartz veins up to about 40cm thick, enveloped in carbonate-altered zones up to +10m thick, which contain pyrite and arsenopyrite and lower grades of Au. These are usually truncated to the east and west by the steep dipping shear lodes.</li> </ul>
	Geological interpretation of Mertons Reward is largely based on historic mapping and mine plans

Criteria	Commentary
	of the historic workings, and thus there is a high level of confidence in the interpretation.
	At Mertondale 3-4 gold mineralisation is associated with the intrusive porphyry contact, where the contact can be used as a mineralisation guide or 'marker' horizon.
	Western Mineralised Zone
	The western mineralised zone typically comprises dark mafic mylonites, sedimentary units including carbonaceous shales, mafic intrusives and mafic-intermediate and felsic volcanics. Felsic porphyry intrusives occur irregularly within the shear zone. The black sulphide-rich mafic mylonite typically contains anomalous gold values up to 0.5 g/t Au in the resource areas.
	Lithologies at Tonto are black mafic mylonite, a black shale, shale, quartz-dolerite, basalt, basaltic andersite and felsic volcanics. The steeply dipping high grade lode at Tonto is more than likely structurally controlled and appears to potentially have a shallow southerly plunge. Visually the grade still remains very difficult to pick with no obvious association with sulphide content, quartz veining or alteration of either graphite or sericite.
	The footwall consists of the massive quartz dolerite. This dolerite has a noticeable bleached or carbonated halo along its immediate contact with the mylonite but grades into a strongly chloritic massive barren quartz dolerite.
	The Western mineralised zone at Mertondale 5 typically comprises dark mafic mylonites, sedimentary units including carbonaceous shales, mafic intrusives and mafic-intermediate and felsic volcanics. Felsic porphyry intrusives occur irregularly within the shear zone. The black sulphide-rich mafic mylonite typically contains anomalous gold values in the resource areas.
Drill hole Information	Material drilling information used for the resource estimation has previously been publicly reported in numerous announcements to the ASX by previous operators of the Mertondale Project, including Navigator (2004-2014) and KIN since 2014.
Data Aggregation methods	When exploration results have been reported for the resource areas, the intercepts are generally reported as weighted average grades over intercept lengths defined by geology or lower cut-off grades, without any high grade cuts applied. Where aggregate intercepts incorporated short lengths of high grade results, these results were included in the reports.
	Since 2014, KIN have reported RC drilling intersections with low cut off grades of greater than or equal to 0.5 g/t Au and a maximum of 2m of internal dilution at a grade of <0.5g/t Au.
	There is no reporting of metal equivalent values.
Relationship Between Mineralisation widths and intercept lengths	The orientation, true width and geometry of the mineralised zones have been determined by interpretation of historical drilling and verified by KIN's drilling. The majority of drill holes are inclined at -60° towards 270° (west), which is regarded as the optimum orientation to intersect the target mineralisation. Since the mineralisation is steeply dipping, drill intercepts are reported as downhole widths, and not true widths. Accompanying dialogue to reported intersections normally describes the attitude of the mineralisation.
Diagrams	A plan and type sections for each resource area are included in the main body of the report.
Balanced Reporting	Public reporting of exploration results by KIN and past explorers for the resource areas are considered balanced and included representative widths of low and high grade assay results.
Other Substantive exploration data	Comments on recent bulk density and metallurgical information are included in Section 3 of this Table 1 Report. There is no other new substantive data acquired for the resource areas being reported on. All meaningful and material information is or has been previously reported.

Criteria	Commentary
Further work	The potential to increase the existing resources is viewed as probable. Further work does not guarantee that an upgrade in the resource would be achieved, however KIN intend to drill more holes at Mertondale 3-4, Mertons Reward, Mertondale 2, Mertondale 5 and Tonto with the intention of increasing the Mertondale resources and converting the Inferred portions of the resources to the Indicated category.

#### **SECTION 3 – Estimation and Reporting of Mineral Resources**

(Criteria in section 1, and where relevant in section 2, also apply to this section)

Criteria	Commentary
Database Integrity	All sample data, subject of this report and used for resource estimation work, is obtained from various drilling programs carried out since 1981. Data was obtained predominantly from Reverse Circulation (RC) drilling, and to a lesser extent, diamond core (Diamond) drilling and Air Core (Aircore) drilling.
	Companies involved in the collection of the majority of the exploration data prior to 2014 include: Nickelore NL ("Nickelore") 1981-1982; Hunter Resources Ltd ("Hunter") 1984-1988; Harbour Lights Mining Ltd (a joint owned company of Ashton Gold WA Ltd and Carr Boyd Minerals Pty Ltd - "HLML") 1988-1993; Mining Project Investors Pty Ltd ("MPI") 1993-1996; Sons of Gwalia Ltd ("SOG") 1996-2004; Navigator Resources Ltd ("Navigator") 2004-2014.
	KIN exploration data from 2014 to 2017 has been acquired predominantly from RC and some diamond drilling, representing approximately 6% of the supplied Mertondale Project database.
	The database could not be fully verified regarding the reliability and accuracy of a substantial portion of the historical data, however the recent drilling by KIN has enabled comparison with the historical data and there is no material differences observed of a negative nature.
	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 of historic (pre-2004) data, however the amount of historic data used in the resource estimation is minimal and the effect would not be material.
	The logging data coded in the database uses at least four different lithological code systems, a legacy of numerous past operators (Hunter, MPI, SOG and Navigator). Correlation between codes is difficult to establish, however can be achieved with effort. Based on historical reports, drill hole logging procedures appear consistent with normal industry practices of the time.
	KIN has attempted to validate historical logging data and to standardise the logging code system by incorporating the SOG and Navigator logging codes into one. This is an ongoing process and is not yet completed.
	Drilling conducted by Navigator and KIN has been used to scrutinize and calibrate historic logging data. This has enabled KIN to establish good geological control, which has been used to derive the geological interpretations in current resource work.
	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 a Microsoft Access ("Access") database for use in Surpac.
	In 2009, MS ("MS") completed a mineral resource estimate report for the Mertondale Project area, including the Mertons Reward, Mertondale 2, Mertondale 3-4 and Mertondale 5 deposits. MS carried out extensive database verification, which included checks of surface survey positions, downhole surveys and assay data against original records. MS reported on verification of 92% of the assay records in 50 randomly selected check holes with < 0.2% discrepancies. Identified issues were then addressed by Navigator.
	Since 2014, KIN geologists have conducted verification of historic drilling, assays, geological logs and survey information against the digital database, and in the field, including reviewing historic reports and visual confirmations of Datashed, Surpac and Access databases. KIN have not reported any significant issues with the database.
	KIN has validated the database in Datashed and in Surpac prior to Resource estimation. These processes checked for holes that have missing data, missing intervals, overlapping intervals, data beyond end-of-hole, holes missing collar co-ordinates, and holes with duplicate collar co-ordinates.

Criteria	Commentary
	CM carried out continuous database review during the 2017 resource estimation process.
	During 2017, CM also carried out an independent data verification. 8,991 assay records for KIN's 2014-2017 drilling programs were verified by comparing laboratory assay reports against the database. 3 errors were found, which are not considered material and which represents less than 0.01% of all database records verified for KIN's 2014-2017 drilling programs.
Site Visit	KIN's geological team have conducted multiple site visits including supervision and management of drill programs within each of the Resource areas.
	Dr Spero Carras (Competent Person) of CM, was involved in the Leonora district at the Harbour Lights and Mertondale areas during the 1980s, and is familiar with the geology and styles of gold mineralisation within the Mertondale Project area. He revisited the Leonora area during 2017 to review the projects, drilling, sampling and general geology.
	Messrs Mark Nelson and Gary Powell (Competent Persons) also conducted site visits to the resource areas, and they have independently reviewed drill core, existing open pits, surface exposures, drilling, logging and sampling procedures. Mr Nelson also collected representative rock samples of mineralisation from the Mertondale 3 pit for bulk density determination.
Geological Interpretation	The Mertondale Project area is located 20-40km NE of Leonora in the central part of the Norseman-Wiluna Greenstone Belt, which extends for some 600 kilometres on a NNW trend across the Archean Yilgarn Craton of Western Australia.
	In broad terms the stratigraphy consists of a central felsic volcanic sequence bounded by tholeiitic basalt, dolerite, and carbonaceous shale ± felsic porphyry sequences.
	The four recognised deposits and all the known mineralisation is located within the north trending Mertondale Shear Zone (MSZ).
	Two distinct north trending mineralised zones are recognized within the MSZ. The western zone includes Quicksilver, Tonto, Eclipse and Mertondale 5, while the eastern zone includes the Merton's Reward, Mertondale 2 and Mertondale 3-4 deposits.
	Within the Mertondale Project area, most of the known mineralisation is hosted in sheared mafics, with local porphyry bodies and sediment units. Some of the sediment units are graphitic, notably in the western mineralised zone.
	Eastern Mineralised Zone
	In the Mertons Reward - Mertondale 2 area, two distinct types of high grade lodes were historically recognized:
	<ul> <li>Shear Lodes: Steeply dipping structures containing abundant quartz-carbonate veinlets accompanied by finely disseminated pyrite-arsenopyrite, and</li> </ul>
	<ul> <li>Intershear Lodes: Narrow, flat to moderately dipping auriferous quartz veins up to about 40cm thick, enveloped in carbonate-altered zones up to +10m thick, which contain pyrite and arsenopyrite and lower grades of Au. These are usually truncated to the east and west by the steep dipping shear lodes.</li> </ul>
	Geological interpretation of Mertons Reward is largely based on historic mapping and mine plans of the historic (pre-1980) workings, and thus there is a high level of confidence in the interpretation.
	At Mertondale 3-4 gold mineralisation is associated with the intrusive porphyry contact, where the contact can be used as a mineralisation guide or 'marker' horizon.
	Western Mineralised Zone
	The western mineralised zone typically comprises dark mafic mylonites, sedimentary units including

Criteria	Commentary			
	intrusives occur irregular	fic intrusives and mafic-int ly within the shear zone. T values up to 0.5 g/t Au in t	he black sulphide-rich	
	(e.g. quartz veining and s	used a combination of drill ulphides), weathering code for resource estimation of	s, rock colour, texture	
		des are assumed to have obable that some variations tations.		
	validated by KIN. Slight m made before regeneratir	rpretations of the mineral nodifications to previous int ng the wireframes. The 'bas produced by CM based on geological staff.	terpretations by indep se of complete oxidat	pendent consultants were ion' and the 'top of fresh
	is unlikely that there wou The resource estimation	ns of the mineralisation mauld be a gross change in the in is controlled by all avighest level of confidence.	interpretation, base	d on current information.
Dimensions	The dimensions of the mineralized area for Mertons Reward are 1200m (N-S) x 100m (E-W). The Mertons Reward area includes a total of 28,792m of drilling. The drilling in the mineralized area fo Mertons Reward includes 15 DD holes for 486m and 196 RC holes for 5,244m.			n the mineralized area for
	Mertondale 3-4 area incl	nineralized area for Mertor udes a total of 46,023m of 99 DD holes for 2,333m an	drilling. The drilling in	n the mineralized area for
	The dimensions of the mineralized area for Tonto are 1300m (N-S) x 50m (E-W). The To includes a total of 35,772m of drilling. The drilling in the mineralized area for Tonto incluholes for 148m, 194 RC holes for 4,557m and 51 AC holes for 509m.			
	The dimensions of the mineralized area for Mertondale 5 are 900m (N-S) x 50m (E-W). The Mertondale 5 area includes a total of 18,390m of drilling. The drilling in the mineralized area for Mertondale 5 includes 3 DD holes for 106m, 134 RC holes for 2,440m and 8 AC holes for 70m.			
	Even though historic mining has taken place at Mertons Reward, Mertondale 3-4 and Mertondale 5, mined drillhole data has been used in the interpretation of structure.			
Estimations and Modelling Techniques	1. The following outline	es the estimation and mod posits in the Mertondale ard ward e 3-4	elling technique used	for producing Resources
	Deposit	Orebody Dimensions	Nominal Drill Spacing	Mineralised Metres of Drilling (m)
	Mertons Reward	1200m x 100m x 250m	25m x 12.5m	5,730
	3-4	1300m x 200m x 250m	25m x 12.5m	9,574
		1300m x 50m x 350m 900m x 50m x 200m	25m x 20m 25m x 12.5m	5,214 2,616

Criteria	Commentary		
	5		
	Wireframes were provided by KIN for:		
	<ul> <li>a. Topography based on drill collar data</li> <li>b. Bottom of Oxidation (BOCO)</li> <li>c. Top of Fresh Rock (TOFR)</li> <li>d. Wireframes of pre-existing pits and some waste dumps</li> <li>e. Historic workings</li> </ul>		
	CM carried out an Independent Review of the weathering surfaces and where necessary, base on new drilling (both RC and diamond), geological relogging and bulk density information, th surfaces were modified to reflect the additional information.		
	Based on geology, statistical analysis and intersection selection, domainal shapes wer wireframed at a 0.3g/t nominal edge cut-off grade. These domainal shapes could contai values less than 0.3g/t within the wireframes although this was minimized to preven smoothing dilution being incorporated into the final models. The parameters used for intersection selection were 3m downhole, which equates to an approximate 2.5m bencheight. The intersections could include 1m of internal dilution.		
	The wireframed shapes were audited by KIN geological staff who had previous experience in the Mertondale area whilst working for Navigator Resources Ltd.		
	Historically mined volumes were removed from the model. These shapes were based on historical workings obtained from Mines Department information. The historical undergroun shapes were expanded to be larger than that shown on Mines Department records to allow for any overmining, which may have taken place and had not been recorded and included.		
	Each wireframe had an assigned strike, dip and plunge.		
	Compositing from the top of each shape was carried out at 1m within each wireframe. Th majority of composites (98%) were greater than 1m.		
	The domainal shapes were passed into ISATIS Software with specified strike, dip and plunge.		
	). The number of shapes used was as follows:		
	Deposit Number of Shapes Mertons 84		
	Reward		
	Mertondale 71 3-4		
	Tonto 51 Mertondale 17 5		
	<ol> <li>A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</li> </ol>		
	<ol><li>The declustering program DECLUS (ISATIS) was used to produce the weights to be assigned t each composite for statistical analysis.</li></ol>		
	3. For each shape a detailed set of weighted statistics was produced. Based on the statistics, hig grade cuts were determined for every shape and the percentage metal cut was estimated for each denosit as shown in the below table:		

each deposit as shown in the below table:

Criteria		Commentary		
	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	
	Mertons	(g/ t/) 50	11	
	Reward	30		
	Mertondale	50	3	
	3-4			
	Tonto	40	7	
	Mertondale	30	4	
	5			

- 14. Where a data point belonged to 2 shapes the cut allocated was determined for each domain and independently allocated.
- 15. Variograms were run for each domain using ISATIS. The variograms were of very poor quality with the dowhole variograms being the basis of fitted models. Directional variograms were produced for downhole, down dip, down plunge. Where the downhole variograms were calculated on an individual hole basis, variograms were not normalized. Variograms were normalized for down dip and plunge. Raw variograms were used in subsequent work.
- 16. The Author, Dr. S. Carras had extensive experience in the Leonora Belt during the 1980's and has had familiarity with the nature of the mineralisation. The shears are made up of plunging Boudins. The nature of Boudins is such that there is a central high grade core. This means that once inside a Boudin the grades are relatively homogenous and the nugget effect is small. Horsetail splays which occur on the periphery of Boudins give rise to the "string problem" in Ordinary Kriging (OK) where samples on edges are given abnormally high values. To overcome the "string problem" three estimations were produced, OK, Inverse Distance Squared (ID2) and Inverse Distance Cubed (ID3). Distance weighting methods do not suffer from the "string problem".
- 17. The following parameters were used in modelling OK, ID2 and ID3:
  - A minimum number of samples were as follows:
    - Mertons Reward: 4
    - Mertondale 3-4: 4
    - Tonto: 12
    - Mertondale 5: 2
  - A maximum number of samples of 32
  - The discretisation parameters were 2 x 2 x 2
  - A maximum of 2 samples per hole
  - Note: for blocks that did not meet these requirements, the parameters were relaxed and the search radii were increased.
  - To minimize the striping effect created by estimation in narrow shapes, the downhole search radii were increased.
- 18. The ranges of search and directions used were applied on a shape by shape basis. The aim was to produce OK results for the majority of shapes where there had been adequate data to produce meaningful variography. Small shapes where there was inadequate data were estimated using distance weighting squared methodology rather than OK.
- 19. The fundamental block size used was:

Deposit Small Blocks
Mertons 3.125m x 1.5625m
Reward, x 2.5m
Mertondale (approximately 30 tonnes)

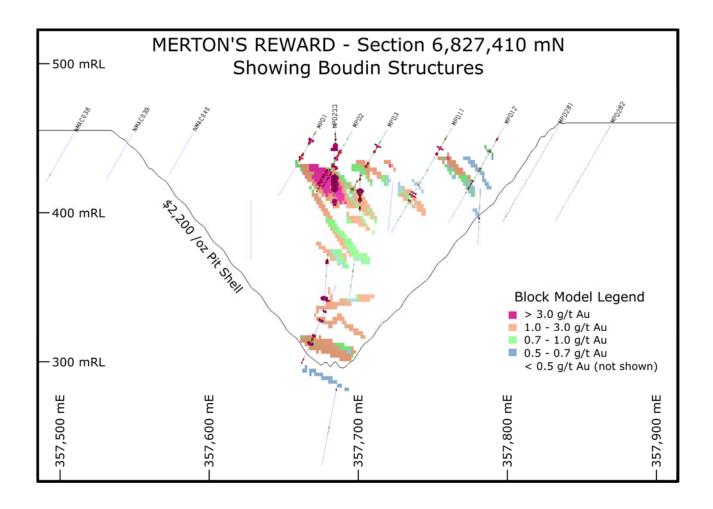
Criteria	Commentary		
	Mertondale		
	5		
	Tonto	3.125m x 1.0m x 2.5m	
		(approximately 20	
		tonnes)	
		·	
	Small blocks were use narrow.	ed to ensure adequate volume e	estimation where shapes were
	20. Scatter plots were then p blocks.	produced which compared OK, a	anisotropic ID2 and ID3 for the small
		-	ection' basis of block versus drillholes ne Boudins and eliminated the "string
			o form medium (quarter) sized blocks er) sized blocks and panels were:
	Deposit	Medium (Quarter) Blocks	Panels
	Mertons	6.25m x 3.125m x	12.5m x 6.25m x 5.0m
	Reward,		(approximately 1,015 tonnes)
	Mertondale	(approximately 130	
	3-4, Mertondale	tonnes)	
	5		
	Tonto	6.25m x 4.0m x	12.5m x 8.0m x 5.0m
		2.5m (approximately 162 tonnes)	(approximately 1,300 tonnes)
	Quarter size blocks were	e used for reporting Resources.	
	23. Plots were produced of fro	equency histograms in domains	for point data and for blocks.
	carried out comparing the		noured the drill data, validation was mple composite data. The validation is honoured by the block model.
		within those wireframes on a sl	were then compared with the block hape by shape basis to ensure that
	26. Classification was carried geology as the guide.	out using a combination of drill	hole density, drillhole quality, and
	The optimised pit shells per may have prospects for expression reasonably be declared a recovery of 95%. This was	provided a reasonable basis for economic exploitation in the for as Open Pit Resources. (Optim	d pit shell provided by Entech (Perth). defining the portion of models that reseeable future and could therefore hisation used a dilution of 5% and a define the Resource not the Reserve. In ore loss applied.)
	_	developed by KIN indicated that adale area was likely to be 0.5g/	t a break even mill feed cut-off grade t Au.

Criteria	Commentary
Moisture	Tonnages and grades were estimated on a dry basis only. Bulk Density determinations of diamond drill core included measurements of moisture content.
Cut-off Parameters	Operating cost estimates provided by KIN's engineering consultants indicate a break even mining grade for open pit deposits in the Mertondale area is likely to be 0.5g/t Au.
Mining Factors or Assumptions	Previous mining is mostly in the oxide/transition zone. In fresh rock, historical underground mining has occurred at Mertons Reward. Open pit mining will be the mining method employed going forward.
Assumptions	<ul> <li>Historical gold production is over 270,000 ounces of gold;</li> <li>Mertondale 3-4 Open Pit: 1.3Mt @ 4.3g/t Au;</li> <li>Mertondale 5 Pit: 385,000t @ 2.56g/t Au;</li> </ul>
Metallurgical Factors or	<ul> <li>Mertondale 2 Pit: 35,000t @ 2.7g/t Au;</li> <li>Merton's Reward: 90,000t @ 21g/t Au from underground production 1899-1942.</li> <li>In 2016 – 2017 KIN's drilling program included a series of RC and DD drillholes to collect samples for geotechnical and metallurgical testwork.</li> </ul>
Assumptions	In the Mertondale Project area, recoveries for oxide material were generally high (approximately mid-nineties), however in the Mertons Reward area, slightly lower recoveries were returned for transition and fresh material (mid-eighties). This was associated with the presence of a minor amount of sulphides (e.g. pyrite, arsenopyrite).
	For Mertondale 3-4, recoveries were generally high for oxide and transition (mid-nineties), and 90% for fresh.
	Tonto, recoveries were high for oxide (mid-nineties) and transition (+90%), and high sixties for fresh. The lower recoveries experienced for fresh material in Tonto is due to the presence of preg-robbing graphitic shales. Testwork has shown that the use of modified activated carbon has increased the recovery.
	It is known that within Mertondale 5 graphitic shales occur, and while these are present within the MSZ, recent testwork by KIN has shown that they can be passivated to an extent through the use of modified activated carbon.
	During the mining process, and where necessary, selective extraction of the graphitic shales is envisaged to be possible so that successful segregation and quarantining of the shale material can be achieved, so as to mitigate potential contamination of ore in the process plant.
Environmental Factors or Assumptions	Three open pits and their associated waste rock landforms (i.e. Mertons Reward, Mertondale 3-4 and Mertondale 5), the historical Mertons Reward underground workings and battery tailings are encompassed by the current mineral resource estimate work. The Tonto resource area has not been subjected to any previous mining activity.
	Historical mining at each of the Mertondale deposits sites, including waste rock landforms have not demonstrated any impacts that cannot be managed in normal operations. Studies completed to date, on ore and waste characterisations for previous and potential mining and processing operations, have not identified any potential environmental impacts that cannot be managed by normal operations. In addition, Navigator's environmental bonds lodged with the DMP for previous operations have since been returned to Navigator, following the rehabilitation of those operations.
Bulk Density	Prior to 2014, there have been numerous programs of bulk density testwork conducted by several companies at different times on diamond drill core and/or RC drill chips for some of the various deposits. Generally the testwork has not been conclusive, since the testwork methodology has not been adequately described in the historical reports, or when it has, the testwork itself was not carried out using an acceptable method to determine dry bulk density. Often, when described, the

#### Criteria Commentary testwork measured specific gravity, not bulk density, and in cases where bulk density was reported, the moisture content was not taken into account. In 2009 Navigator Resources Ltd submitted 189 half or whole diamond core samples to Amdel Mineral Laboratories Ltd's ("Amdel") Kalgoorlie laboratory for bulk density determination by the water immersion method. The core samples were a mixture of half core and whole core samples ranging from 10cm to 30cm in length, and were taken at downhole intervals of roughly every 2 to 3 metres. The samples were firstly weighed, oven dried overnight at 110°C, and weighed again to determine moisture content. Those samples that were likely to absorb water were then sealed, using hairspray, prior to immersion in water. It is not known what proportion of samples were not sealed, however it is likely that only fresh, non-porous samples were not sealed. In 2017, KIN carried out a diamond drilling program to include obtaining samples for bulk density testwork. Four diamond drill holes were drilled into the major parts of mineralised zones at Mertons Reward and Tonto. A total of 484 half or quarter core samples, of varying lengths (5-20cm) were submitted to an independent laboratory in Perth for bulk density determinations by the water immersion method. The core samples were a mixture of half core and quarter core samples ranging from 5cm to 20cm in length, and were taken at downhole intervals of roughly every 1 metre. The samples were firstly weighed, oven dried overnight at 110°C, and weighed again to determine moisture content. The samples were then sealed, using hairspray, prior to immersion in water. In addition, Mr M Nelson (Consultant to CM) also took representative samples of mineralised material from the Mertondale 3-4 pit and submitted to the laboratory for bulk density determination. During the 2017 bulk density testwork and estimation process, Dr S Carras and Mr G Powell (Consultant to CM) visited the laboratory and identified some improvements for consideration in the bulk density determination process, particularly for small core pieces to give better precision of measurements. The suggested improvements were implemented and precision improved. When estimating the bulk density for pieces of diamond drill core, it was found that the larger sized samples gave more repeatable results and these were mostly used in assigning the bulk densities. Based on measurements the following bulk density parameters were used for the Mertondale area: **Deposit Name** Oxide **Transition** Fresh Mertons Reward 1.8 2.2 2.8 2.2 2.7 Mertondale 3-4 2.0 Mertondale 5 2.0 2.2 2.5 1.9 2.3 2.7 Tonto For Mertondale 5 the bulk densities are based on historic open pit performance. Classification Classification was based on a combination of drillhole spacing, drillhole quality and confidence in geological continuity. In general all deposits were drilled on the following nominal grids (N x E): Mertons Reward: 25m x 12.5m Mertondale 3-4: 25m x 12.5m Tonto: 25m x 20m Mertondale 5: 25m x 12.5m In general drillhole spacing of 25m x 20m resulted in mineralisation being classified as Indicated. Drillhole spacing generally increases with depth and as a result deeper mineralisation is mostly

allocated to the Inferred category.

Criteria	Commentary
	The Mineral Resource estimate appropriately reflects the view of the Competent Person.
Audits and Reviews	Navigator Resources had worked with McDonald Speijers (January 2009) to produce estimates for the Mertondale deposits using the recovered fraction technique. KIN personnel carried out audits and internal reviews of the data, assay, survey, wireframes and geological interpretations used by CM in carrying out the Resource estimation for Mertons Reward, Mertondale 3-4, Tonto and Mertondale 5. CM also carried out detailed reviews of all data.
	Bulk density determination methodology was audited by S Carras and G Powell (Consultant to CM) through visitation of the independent laboratory.
	Snowden (July/August 2017) carried out an independent audit of Mertons Reward and Mertondale 3-4. There were no material issues.
Discussion of Relative	KIN embarked on a program of infill drilling, including twinning of historical drillholes. The drilling largely substantiated the position and tenor of mineralisation. It also validated the information obtained from various drilling campaigns.
Accuracy and Confidence	In the modelling process every attempt has been made to eliminate the "string effect" problem associated with the estimation of narrow vein structures through the use of ordinary kriging. This has been achieved through the use of distance weighting estimates correlated back to ordinary kriging estimates. This method, although heuristic has been validated by extensive review of the block models and the drillhole data.
	Every attempt has been made in the modelling to reduce the smoothing effect which results when using a low cut-off grade to determine boundary positions and limit the amount of dilution in the Resource so that it can be correctly diluted for Reserve.
	In all high coefficient of variation orebodies, local estimation is very difficult to achieve due to the high nugget effect of the gold. This means that small parcels of ore are difficult to estimate without further information such as closer spaced grade control drilling.



## **Appendix B**

# JORC 2012 TABLE 1 REPORT CARDINIA PROJECT Bruno Lewis Link, Lewis and Kyte

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

(Criteria in this section apply to all succeeding sections)

Criteria	Commentary
Sampling techniques	All sample data, subject of this report and used for resource estimation work, is obtained from various drilling programs carried out since 1985. Data was obtained predominantly from Reverse Circulation ("RC") drilling, and to a lesser extent, diamond core ("Diamond") drilling and Air Core ("Aircore") drilling.
	There is limited exploration data available prior to 1985, where it is believed that exploration was more focused on base metals, and not gold. Companies involved in the collection of the majority of the gold exploration data since 1985 and prior to 2014 include: Thames Mining NL ("Thames") 1985; Centenary International Mining Ltd ("CIM") 1986-1988, 1991-1992; Metana Minerals NL ("Metana") 1986-1989; Sons of Gwalia Ltd ("SOG") 1989, 1992-2004; Pacmin Mining Corporation ("Pacmin") 1999, and Navigator Resources Ltd ("Navigator") 2004-2014.
	Kin Mining Ltd ("KIN") acquired the Cardinia Project in 2014.
	HISTORIC SAMPLING (1985-2014)
	Drill samples were generally obtained from 1m downhole intervals and riffle split to obtain a 3-4kg representative sub-sample, which were submitted to a number of commercial laboratories for a variety of sample preparations methods, including oven drying (90-110°C), crushing (-2mm to -6mm), pulverizing (-75 $\mu$ m to -105 $\mu$ m), and generally riffle split to obtain a 30, 40 or 50 gram catchweight for gold analysis, predominantly by Fire Assay fusion, with AAS finish. On occasions, initial assaying have been carried out using Aqua Regia digest and AAS/ICP finish, with anomalous samples re-assayed by Fire Assay fusion and AAS/ICP finish.
	<u>Diamond Drilling</u>
	Half core (or quarter core) sample intervals varied from 0.3 to 1.4m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in marked core trays and stored in a secure yard for future reference. The only known available drill core from these programs and stored at KIN's Leonora Exploration Yard, are those drilled by Navigator.
	RC Drilling
	The vast majority of Reverse Circulation (RC) drill samples were collected over 1m downhole intervals from beneath a cyclone and then riffle split to obtain a sub-sample (typically 3-4kg). After splitting, 1m sub-samples were typically collected in pre-numbered calico bags, and the 1m sample rejects were commonly stored at the drill site in marked plastic bags, for future reference. First pass sampling often involved collecting composite samples by using a scoop (dry samples) or spear (wet samples) to obtain 3m or 4m composited intervals, with the single metre split sub-samples being retained at the drill site. If the composite sample assays returned anomalous results, the single metre sub-samples for the anomalous composite intervals were retrieved and submitted for gold analysis.
	Navigator obtained sub-samples from wet samples using the spear method.
	Data relating to historical wet samples is not available, however the number of wet samples involved is considered to be relatively low, and not material.
	There are no sample rejects available from RC drilling prior to 2014. Most drill sites have been

Criteria	Commentary
	rehabilitated and the sample bags removed and destroyed.
	Aircore Drilling
	The procedures for sampling of Aircore drilling is generally the same as for RC drilling, although in earlier (pre-2004) programs, the majority of the 1m samples were mostly stored directly on the ground prior to sampling with a scoop. Assay results from these samples are not used for resource estimation work, however they do sometimes provide a guide in interpreting geology and mineralisation continuity.
	When drilling under dry conditions, Aircore samples should be of a comparable quality to RC samples, when implementing same sampling techniques, therefore Aircore sample assay results were only used for resource estimation work if the 1m sub-samples were obtained by riffle splitting of the primary sample, prior to placing on the ground.
	There are no sample rejects available from AC drilling prior to 2014. Most drill sites have been rehabilitated and the sample bags removed and destroyed.
	RAB Drilling
	Sample return from Rotary Air Blast (RAB) drilling is collected from the annulus between the open hole and drill rods, using a stuffing box and cyclone. Samples are usually collected at 1 metre intervals and placed on the ground with 3-4kg sub-samples collected using a scoop or spear. Uphole contamination of the sample is commonplace, therefore this type of drilling and sampling is regarded as reconnaissance in nature and the samples indicative of geology and mineralisation. The qualities of samples are not appropriate for resource estimation work and are only sometimes used as a guide for interpreting geology and mineralisation.
	KIN MINING (2014-2017)
	<u>Diamond Drilling</u>
	Diamond drill core (HQ3) samples collected for analysis were longitudinally cut in half, and then in quarters, using a powered diamond core saw blade centered over a cradle holding the core in place. Core sample intervals varied from 0.2 to 1.1m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in their respective core trays and securely stored in KIN's yard in Leonora for future reference.
	RC Drilling
	During drilling, sample return is passed through a cyclone and stored in a sample collection box. At the end of each metre, the cyclone underflow is closed off, the underside of the sample box is opened and the sample passed down through a riffle splitter.
	All RC sub-samples were collected over one metre downhole intervals and averaged 3-4kg. Sample reject from the riffle splitter were retained and stored in marked plastic bags, and located near to each drillhole collar.
	All drilling, sample collection and sampling handling procedures were conducted and/or supervised by KIN geology personnel to high level industry standards. QA/QC procedures were implemented during each drilling program to industry standards.
	<u>Analysis</u>
	Once received at the assay laboratory, diamond core and RC samples were oven dried (105-110°C), crushed (-6mm & -2mm), pulverised (P85% -75 $\mu$ m) and split to obtain a representative 50 gram sample catchweight for gold only analysis using Fire Assay fusion with AAS finish.
	COMMENT
	For some earlier (pre-2004) drilling programs, RC and Aircore samples were obtained at 1.5, 2 or 4 metre downhole intervals.
	For resource estimation work, Diamond, RC and some Aircore drilling data was used where appropriate. RAB drilling data was not used for resource estimation but was sometimes used as

Criteria	Commentary
	an interpretative guide only.
Drilling techniques	Numerous programs comprising various types of drilling have been conducted by several companies since 1985. The Cardinia database encompasses the various deposits and prospects within the Cardinia Project's Bruno Lewis Link, Lewis and Kyte areas, and consists of 5,713 drillholes for a total 227,705 metres (excluding open hole drilling, such as RAB), viz:  Diamond drilling: 20 drillholes 1,852 metres
	RC drilling: 3,898 drillholes 155,614 metres
	Aircore drilling: 1,435 drillholes 58,755 metres
	Grade Control drilling: 360 drillholes 11,484 metres HISTORIC DRILLING (1985-2014)
	Diamond Drilling
	Diamond drilling was carried out using industry standard 'Q' wireline techniques, with the core retrieved from the inner tubes and placed in core trays. Core sizes include NQ/NQ3 (Ø 45-48mm) and HQ/HQ3 (Ø 61-64mm). At the end of each core run, the driller placed core blocks in the tray, marked with hole number and depth. Core recovery was usually measured for each core run and recorded onto the geologist's drill logs.
	RC Drilling
	RC drilling used conventional reverse circulation drilling techniques, utilising a cross-over sub, until the late 1980s, when the majority of drilling companies started changing over to using face-sampling hammers with bit shrouds. Drill bit sizes typically ranged between 110-140mm. Samples obtained from conventional RC drilling techniques with cross-over subs often suffered from down hole contamination (e.g. smearing of grades), especially beneath the water table. Samples obtained from RC drilling techniques using the face sampling hammer suffered less from down hole contamination and were more likely to be kept dry beneath the water table, particularly it auxiliary and booster air compressors were used. These samples are considered to be more reliable and representative.
	Aircore Drilling
	Aircore drilling is a form of RC drilling, but generally utilizing smaller rigs and smaller air compressors, compared to standard RC drill rigs of the times. Aircore bits are hollow in the centre, with the kerf comprising cutting blades or 'wings' with tungsten-carbide inserts. Drill bit diameters usually range between 75-110mm.
	The vast majority of Aircore drilling (>60%) was conducted by Navigator utilising suitable rigs with appropriate compressors (eg 250psi/600cfm). Aircore holes were drilled mostly into the weathered regolith using 'blade' or 'wing' bits, until the bit was unable to penetrate further ('blade refusal'), often near to the fresh rock interface. Hammer bits were used only when it was deemed necessary to penetrate harder rock types. Holes ranged in depth from 2m to 109m averaging 40 metres.
	RAB Drilling
	RAB drilling is carried out using small air compressors (eg 250psi/600cfm) and drill rods fitted with a percussion hammer or blade bit, with the sample return collected at the drillhole collar using a stuffing box and cyclone collection techniques. Drillhole sizes generally range between 75-110mm.
	KIN MINING (2014-2017)
	Diamond Drilling
	Diamond drilling was carried out by contractor Orbit Drilling Pty Ltd ("Orbit Drilling") with a truck-mounted Hydco 1200H drill rig, using industry standard 'Q' wireline techniques. Drill core (HQ3) is retrieved from the inner tubes and placed in plastic core trays and each core run depth recorded

is retrieved from the inner tubes and placed in plastic core trays and each core run depth recorded

## Criteria Commentary

onto core marker blocks and placed at the end of each run in the tray.

Drillhole deviation was measured at regular downhole intervals, typically at 10m from surface, thence every 30m to bottom of hole, using electronic multi-shot downhole survey tools (i.e. Reflex EZ-TRAC or Camteq Proshot).

Core orientation was obtained for each core run where possible, using electronic core orientation tools (e.g. Reflex EZ-ACT) and the 'bottom of core' marked accordingly.

#### **RC** Drilling

RC drilling was carried out by Orbit Drilling's truck-mounted Hydco 350RC drill rigs with 350psi/1250cfm air compressor, with auxiliary and booster air compressors (when required). Drilling utilised mostly downhole face-sampling hammer bits (Ø 140mm), with occasional use of blade bits for highly oxidized and soft formations. The majority of drilling retrieved dry samples, with the occasional use of the auxiliary and booster air compressors beneath the water table, to maintain dry sample return as much as possible.

Drillhole deviations were surveyed downhole, during drilling operations, using an electronic multi-shot downhole tool (e.g. Reflex EZ-TRAC). In some instances, drillholes were surveyed later in open hole. In the later drilling programs, downhole surveying was carried out inside a nonmagnetic stainless steel (s/s) rod, located above the hammer. Providing the tool was located in the middle of the stainless steel rod, azimuth and dip readings were successfully recorded. A separate independent program of downhole deviation surveying was carried out to validate previous surveys, utilizing an electronic continuous logging survey tool (AusLog A698 deviation

The following tables summarise drilling totals for the Cardinia Project's Bruno Grade Control/Link, Lewis Grade Control/Lewis South and Kyte areas, for DD, RC and AC only (i.e. excluding open-hole drilling such as RAB):

Cardinia Project, Bruno Grade Control/Link, Lewis Grade Control/Lewis South and Kyte -Historical Drilling Summary (Pre-2014)

TOTAL	Holes	Metres
DD	15	1,413
RC	3,599	136,791
AC	1,435	58,756
GC	360	58,756
Total	5,409	255,716

Cardinia Project, Bruno Grade Control/Link, Lewis Grade Control/Lewis South and Kyte - Drilling Summary - KIN (2014-2017)

TOTAL	Holes	Metres
DD	5	439
RC	300	18,893
Total	305	19,332

#### COMMENT

Historical reports indicate that drill core sizes were predominantly HQ/HQ3 or NQ/NQ3, however database details are incomplete. Most historical reports recorded core recoveries, although these details are not included in the database. Review of some historical reports indicate that core recoveries were generally good, although recoveries were typically less in highly fractured zones and some highly weathered mineralised zones in the transition and oxide zones, however this information is not recorded in the supplied database.

RC drilling is the dominant drill type at all sites. RC drilling information is generally described in varying detail in historical reports to the DMP, including drilling companies used and drilling rig types, however it's not all recorded in the database supplied. Review of the historical reports

Criteria	Commentary
	indicates that reputable drilling companies were typically contracted and the equipment supplied was of an acceptable standard for those times. During the 1990s, and 2000s, suitable large drill rigs with on-board compressors were probably complimented with auxiliary and booster air compressors for drilling to greater depths and/or when groundwater was encountered. KIN's drilling was conducted with modern rigs equipped with auxiliary and booster compressors and face sampling hammers with bit diameters typically 140mm.
	When drilling under dry conditions, Aircore samples should be of a comparable quality to RC samples, when implementing same sampling techniques. Aircore drilling data was only used in resource estimation work, where the in-field and laboratory sampling methodologies was considered appropriate and limited to a number of selected Navigator drillholes.
Drill sample	HISTORIC DRILLING (1985-2014)
recovery	Diamond Drilling
	Core recovery has been recorded in most drill logs for most of the diamond drilling programs since 1985, but is not recorded in the supplied database. A review of some historical reports indicates that generally core recovery was good with lesser recoveries recorded in zones of broken ground and/or areas of mineralisation. Overall recoveries are considered acceptable for resource estimation.
	RC Drilling
	There is limited information recorded for sample recoveries for historical RC and Aircore drilling. However there has been an improvement in sample recoveries and reliability following the introduction of face sampling hammers and improved drilling technologies and equipment, since the mid-1980s.
	KIN MINING (2014-2017)
	<u>Diamond Drilling</u>
	Core recovery was recorded for each run by measuring total length of core retrieved against the downhole interval actually drilled.
	Diamond core recoveries were recorded in the database. Independent field reviews by the Competent Persons (SC & GP) in 2017 of the diamond drilling rig in operation and core integrity at the drill sites, demonstrated that diamond drill core recoveries were being maximised by the driller, and that core recoveries averaged >95%, even when difficult ground conditions were being encountered.
	RC Drilling
	Integrity of each one metre RC sample is preserved as best as possible. At the end of each 1 metre downhole interval, the driller stops advancing the rods, retracts from the bottom of hole, and waits for the sample to clear from the bottom of the hole through to the sample collector box fitted beneath the cyclone. The sample is then released from the sample collector box and passed through the 3-tiered riffle splitter fitted beneath the sample box. Sample reject is collected in plastic bags, and a 3-4kg sub-sample is collected in pre-marked calico bags for analysis. Once the samples have been collected, the cyclone, sample collector box and riffle splitter are flushed with compressed air, and the riffle splitter cleaned by the off-sider using a compressed air hose, and if necessary a scraper. This process is maintained throughout the entire drilling program to maximise drill sample recovery and to maintain a high level of representivity of the material being drilled.
	RC drill sample recoveries are not recorded in the supplied database, however a review by the Competent Person (GP) in May 2017 of RC drill samples stored in the field, and observations of the two RC drilling rigs in operation, suggests that RC sample recoveries were mostly consistent and very good, with the samples themselves being reliable and representative of the material being drilled.
	COMMENT

Due to the lack of detailed information in the database regarding historic (pre-2014) Aircore and

Criteria	Commentary
	RC drilling, no quantitative or semi-quantitative impression of sample recovery or sample quality is available. Given that much of the drilling at Cardinia was conducted by the same companies and at the same times as that carried out for the Mertondale Project, where it is assumed to be satisfactory given that the Mertondale deposits were mined in the past, by open pit methods, where the open pits were mined to their original design limits, based on the historical drill data. This suggests that the amount of metal recovered was probably not grossly different from premining drill data based expectations.
	During Navigators drill programs wet samples were spear sampled instead of riffle split. 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.
	No indication of sample bias is evident nor has it been established. That is, no relationship has been observed to exist between sample recovery and grade.
	The amount of Aircore drilling data used in the Cardinia resource estimation process is low and regarded as not material.
Logging	HISTORIC DRILLING (1985-2014)
	The logging data coded in the database uses at least four different lithological code systems, a legacy of numerous past operators (Metana, CIM, SOG & Navigator). Correlation between codes is difficult to establish, however it can be achieved with effort. Based on historical reports, drill hole logging procedures appear consistent with normal industry practices of the time.
	Navigator's procedure for logging of diamond core included firstly marking of the bottom of the core (for successful core orientations), core recovery, fractures per metre and RQD, lithology, alteration, texture, mineralisation, weathering, and other features, and then marked up for cutting and sampling.
	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, after validation, to minimize data entry errors.
	The entire length of all drillholes are logged in full from surface to bottom of hole.
	Logging is qualitative on visual recordings of lithology, oxidation, colour, texture and grain size. Logging of mineralogy, mineralisation and veining is quantitative.
	Drill core photographs are only available for Navigator's diamond drillholes.
	KIN MINING (2014-2017)
	KIN's logging of drill samples was carried out in the field (RC drilling) or at the Leonora Yard (diamond core) and entered onto a portable computer, on a metre by metre basis for RC, and by sample intervals and/or geological contacts for diamond core. Data recorded included lithology, alteration, structure, texture, mineralisation, sulphide content, weathering and other features. Drillhole collar coordinates, azimuth, dip, depth and sampling intervals are also recorded in the drill logs in the field.
	Several diamond drillholes were completed for geotechnical purposes and were independently logged for structural data by geotechnical consultants. All diamond drill core has been photographed, and currently stored at KIN's yard in Leonora.
	KIN geological personnel retrieved the core trays from the drill rig site and relocated them to KIN's yard in Leonora at the end of each day. Drill core was photographed in the field or at the Leonora yard, prior to cutting using a diamond core saw to obtain quarter core samples for analysis.
	All information collected was entered directly into laptop computers or tablets, and transferred to the database to be validated.
	COMMENT
	KIN has attempted to validate historical logging data and to standardize the logging code system

Criteria	Commentary
	by incorporating the SOG and Navigator logging codes into one. This is an ongoing process and is not yet completed.
	The level of logging detail is considered appropriate for exploration and to support appropriate mineral resource estimation, mining studies and metallurgical studies.
	Qualitative logging includes classification and description of lithology, weathering, oxidation, colour, texture and grain size. Quantitative logging includes identification and percentages of mineralogy, sulphides, mineralisation, veining, and in addition, logging of diamond drilling included geotechnical data, RQD and core recoveries.
	For the majority of historical drilling (pre-2004), and all of the more recent drilling, the entire length of drillholes have been logged from surface to 'end of hole'. Diamond core logging is typically logged in more detail compared to RC and Aircore drilling.
Sub-	HISTORIC DRILLING (1985-2014)
sampling techniques and sample	Historical reports for drilling programs prior to 2004, are not always complete in the description of sub-sampling techniques, sample preparation and quality control protocols.
preparation	Diamond Drilling
	Diamond drill core (NQ/NQ3 or HQ/HQ3) samples collected for analysis were longitudinally cut in half, and occasionally in quarters for the larger (HQ/HQ3) diameter holes, using a powered diamond core saw blade centered over a cradle holding the core in place.
	Core sample intervals varied from 0.3 to 1.4m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in core trays.
	Where historical reports do not describe the sampling protocol for sampling of drill core, it is assumed that drill core was sampled as described above.
	RC Drilling
	Prior to 1996, limited historical information indicates most RC sampling was conducted by collecting 1m samples from beneath a cyclone and passing through a riffle splitter to obtain a 3-4kg sub-sample for analysis. RC sampling procedures are believed to be consistent with the normal industry practices at the time. The vast majority of samples were dry and riffle split, however spear or tube sampling techniques were used for wet samples.
	Samples obtained from conventional RC drilling techniques with cross-over subs often suffered from down hole contamination, especially beneath the water table. Samples obtained from RC drilling techniques using the face sampling hammer suffered less from down hole contamination and were more likely to be kept dry beneath the water table, particularly if auxiliary and booster air compressors were used. These samples are considered to be representative.
	The vast majority of Reverse Circulation (RC) drill samples were collected at 1m downhole intervals from beneath a cyclone and then riffle split to obtain a sub-sample (typically 3-4kg). After splitting, 1m sub-samples were typically collected in pre-numbered calico bags, and the 1m sample rejects were commonly stored at the drill site in marked plastic bags, for future reference. First pass sampling often involved collecting composite samples by using a scoop (dry samples) or spear/tube (wet samples) to obtain 3m or 4m composited intervals, with the single metre split sub-samples being retained at the drill site. If the composite sample assays returned anomalous results, the single metre sub-samples for the anomalous composite intervals were retrieved and submitted for analysis.
	Navigator obtained sub-samples from wet samples using the spear or tube method.
	Data relating to historical wet samples is not available, however the number of wet samples involved is considered to be relatively low, and not material.
	There are no sample rejects available from RC drilling prior to 2014. Most drill sites have been rehabilitated and the sample bags removed and destroyed.
	Navigator included standards, duplicate splits, and blanks within each drill sample batch, at a ratio of 1 for every 20 samples, with the number of standards being inserted at a ratio of 1 for every

Criteria	Commentary
	50 samples.
	Aircore Drilling
	The procedures for sampling of Aircore drilling is generally the same as for RC drilling, although in earlier (pre-2004) programs, the majority of the 1m samples were mostly stored directly on the ground prior to sampling with a scoop.
	A variety of laboratories were used for analysis. Prior to 2009, duplicate samples were not routinely collected and submitted from RC and Aircore drilling to the same laboratory consequently overall sampling and assay precision levels can't be quantified for that period. Since 2009, Navigator adopted a stricter sampling regime with the submission of duplicate samples at a rate of 1 for every 50 primary samples.
	While QC protocols were not always comprehensive, the results indicate that assay results from Navigators exploration programs were reliable. Results from pre-Navigator operators are regarded as consistent with normal industry practices of the time.
	KIN MINING (2014-2017)
	Diamond Drilling
	Diamond drill core samples collected for analysis were longitudinally cut in half and quarters, using a powered diamond core saw blade centered over a cradle holding the core in place. Core sample intervals varied from 0.2 to 1.1m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in their respective core trays and stored in KIN's yard for future reference.
	All of KIN's diamond drill core is securely stored at their Leonora Yard.
	RC Drilling
	All RC sub-samples were collected over 1 metre downhole intervals and retained in pre-marked calico bags, after passing through a cyclone and riffle splitter configuration. The majority of RC sub-samples consistently averaged 3-4kg. Sample reject from the riffle splitter were retained and stored in plastic bags, and located near each drillhole site. When drilling beneath the water table, the majority of sample returns were kept dry by the use of the auxiliary and booster air compressors. Very few wet samples were collected through the riffle splitter, and the small number is not considered material.
	Field duplicates were taken at regular intervals at a ratio of 1:50 and assay results indicate that there is reasonable analytical repeatability, considering the presence of nuggety gold.
	COMMENT
	All sub-sampling techniques and sample preparation procedures conducted and/or supervised by KIN geology personnel are to standard industry practice. Sub-sampling and sample preparation techniques used are considered to maximise representivity of the material being drilled. QA/QC procedures implemented during each drilling program are to industry standard practice.
	Samples sizes are considered appropriate for this style of gold mineralisation and is an industry accepted method for evaluation of gold deposits in the Eastern Goldfields of Western Australia
Quality of assay data and laboratory	Numerous assay laboratories and various sample preparation and assay techniques have been used since 1985. Historical reporting and descriptions of laboratory sample preparation, assaying procedures, and quality control protocols for the samples from the various drilling programs are variable in their descriptions and completeness.
tests	HISTORIC DRILLING (1985-2014)
	In the initial exploration stages, Aqua Regia digest with AAS/ICP finish, was generally used as a first pass detection method, with follow up analysis by Fire Assay fusion and AAS/ICP finish. This was a common practice at the time. Mineralised intervals were subsequently Fire Assayed (using 30, 40 or 50 gram catchweights) with AAS/ICP finish.
	Limited information is available regarding check assays for drilling programs prior to 2004.

Criteria	Commentary				
Criteria					
	During 2004-2014, Navigator utilised six different commercial laboratories during their drilling programs, however Kalgoorlie Assay Laboratories conducted the majority of assaying for diamond, RC and Aircore samples using Fire Assay fusion on 40 gram catchweights and AAS/ICP finish.				
	Navigator regularly include field duplicates, Certified Reference Material (CRM) standards and blanks with their sample batch submissions to the laboratories at average ratio of 1 in every 20 samples. Sample assay repeatability, and blank and CRM standards assay results are within acceptable limits. Field duplicates were taken at regular intervals at a ratio of 1:50 and assay results indicate that there is reasonable analytical repeatability, considering the presence of nuggety gold.				
	KIN MINING (2014-2017)				
	Sample analysis was conducted by SGS Australia Pty Ltd's ("SGS") Kalgoorlie and Perth laboratories. Sample preparation included oven drying (105°C), crushing (-6mm), pulverising (P85% -75µm) and riffle split to obtain a 50 gram catchweight. Analysis for gold only was carried out by Fire Assay fusion technique with AAS finish (SGS Lab Code FAA505).				
	KIN regularly insert blanks, field duplicate and CRM standards in each sample batch at a ratio of 1:20. This allows for at least one blank and one CRM standard to be included in each of the laboratory's fire assay batch of 50 samples. Field duplicate sample assay repeatability, blank standards and CRM standards assay results are within acceptable limits for this style of gold mineralisation.				
	SGS include blanks and CRMS as part of their internal QA/QC for sample preparation and analysis, as well as regular assay repeats. Sample pulp assay repeatability, and internal blank and CRM standards assay results are within acceptable limits.				
	COMMENT				
	The nature and quality of the assaying and laboratory procedures used are considered to be satisfactory and appropriate for use in mineral resource estimations.				
	Fire Assay fusion or Aqua Regia digestion techniques were conducted on diamond, RC and Aircore samples, with AAS or ICP finish.				
	Fire Assay fusion is considered to be a total extraction technique. The majority of assay data used for the mineral resource estimations were obtained by the Fire Assay technique with AAS or ICP finish. AAS and ICP methods of detection are both considered to be suitable and appropriate methods of detection.				
	Aqua Regia is considered a partial extraction technique, where gold encapsulated in refractory sulphides or some silicate minerals may not be fully dissolved, resulting in partial reporting of gold content.				
	No other analysis techniques have been used to determine gold assays.				
	KIN's ongoing QA/QC monitoring program identified one particular CRM that was returning spurious results. Further analysis demonstrated that the standard was compromised and subsequently removed and destroyed. A replacement CRM of similar grade was substituted into the QA/QC program.				
Verification of sampling and	Verification of sampling and assaying techniques and results prior to 2004 has limitations due to the legacy of the involvement of various companies, personnel, drilling equipment, sampling protocols and analytical techniques at different laboratories, over a twenty year period.				
assaying	Since 2014, significant drill intersections have been verified by KIN's company geologists during the course of the drilling programs.				
	In 2009, Runge Ltd ("Runge") completed a mineral resource estimate report for the Bruno Lewis Link, Lewis and Kyte deposits. Runge carried out database verification, which included basic visual validation in Surpac and cross check queries in Microsoft Access ("Access"). Runge did not report any significant issues with the database.				

Criteria	Commentary
	During 2017, Carras Mining Pty Ltd ("CM") carried out an independent data verification. 18,608 assay records for KIN's 2014-2017 drilling programs were verified by comparing laboratory assay reports against the database. 4 errors were found, which are not considered material and which represents only 0.01% of all database records verified for KIN's 2014-2017 drilling programs.
	COMMENT
	There is always a risk with legacy data that sampling or assaying biases may exist between results from different drilling programs due to differing sampling protocols, different laboratories and different analytical techniques.
	Repeated examinations of historic reports on phases of diamond, RC and Aircore drilling have been conducted from time to time. Assay results from KIN's recent drilling are consistent with surrounding information and as a result the information obtained from the various diamond, RC and Aircore drilling programs (where sampling protocols are appropriate) have been accepted.
	Recent (2014-2017) RC and diamond drilling by KIN did not include twinning of historical drillholes within the Bruno Lewis Link, Lewis and Kyte areas, however the drill density is considered sufficiently close enough to enable comparison with surrounding historic information, and there is no material difference between historical drilling information and the KIN drilling information. KIN's diamond holes were drilled for metallurgical and geotechnical test work, and assay results for these holes also show good correlation with nearby historical results.
	Where sampling protocols are appropriate, diamond, RC and Aircore samples, are of equal importance in the resource estimation process.
	There has been no adjustments or calibrations made to the assay data recorded in the supplied database.
Location of	HISTORIC DATA (1985-2014)
data points	Several local survey grids were established by various operators in the 1980s and 1990s. During the 1990s, SOG transformed the surface survey data firstly to AMG and subsequently to MGA (GDA94 zone51).
	Drilling was carried out historically using various local grids. Since 2004, All Navigators drill hole collars were surveyed on completion of drilling in the Australian MGA94, Zone51 grid using RTK-DGPS equipment by licensed surveyors, with more than 80% of the pickups carried out by independent contractors.
	Almost all the diamond and at least 70% of Navigator's RC holes were downhole surveyed. Pre- Navigator, single shot survey cameras were used, with survey intervals at various depths.
	KIN MINING (2014-2017)
	KIN's drill hole collars were located and recorded in the field by a contract surveyor using RTK-DGPS (with a horizontal and vertical accuracy of ±50mm). Location data was collected in the GDA94 Zone51 grid coordinate system.
	Downhole surveying during KIN's drilling programs was predominantly carried out by the drilling contractor. KIN recognised that some of the downhole survey data appeared to be spurious, and commissioned an independent downhole surveying program by a survey contractor (BHGS, Perth) to check the orientation of several drillholes at Cardinia. The check survey found occasional spurious results with the initial surveys. This can be explained by the fact that when the drilling company's survey tool is run inside the drill rods, the tool's sensors need to be located exactly in the middle of the bottom stainless steel (s/s) RC rod to obtain accurate readings. Check readings by KIN personnel at different locations within the s/s rod found that variation in azimuth can be measured up to 2°, within 1 metre from the centre of the rod, and up to 10° further away from the centre. The positioning of the tool by the drilling contractor is assumed to be within 1 metre of the centre of the s/s rod for the majority of the drilling program. Therefore, given the nature of the mineralisation and the shift in apparent position of up to 5 metres (for 2° variation) along 'strike' for open pit depths (<140 metres), the occasional errors are not considered material for

Criteria	Commentary
	this resource estimation work.
	In addition, if the downhole survey tool is located within 15 metres of the surface, there is risk of influence of the drill rig affecting the azimuth readings. This was observed for the survey readings, which include total magnetic intensity (TMI) measurements, where TMI is spurious for readings taken at downhole depths less than 20 metres. These spurious readings are included in the database, but are not used.
	KIN supplied two digital terrain models (DTM) of the topography: one DTM constructed from drill hole collar data, and the second from a recent aerial orthophotogrammetry survey. The two DTM surfaces correlate sufficiently close and within acceptable limits for horizontal and vertical control, and appropriate for resource estimations.
	COMMENT
	The accuracy of the drill hole collar and downhole data are located with sufficient accuracy for use in resource estimation work
	Some historical Navigator drillhole collar positions at Bruno Lewis Link and Lewis have recently been independently located and verified in the field, and checked against the database.
	Considering the history of grid transformations and surviving documentation, there might be some residual risk of error in the MGA co-ordinates for old drillholes, however this is not considered to be material for the resource estimations, subject of this report.
	Azimuth data was historically recorded relative to magnetic north. Much of the historical drilling data was recorded relative to magnetic north. Variation in magnetic declination for the Cardinia Project area is calculated at +0.823° East (1985) to +1.301° East (2017), with a maximum variation of +1.575° in 2005. The difference between true north and magnetic north, and the annual variation in magnetic declination since 1985 is not significant, therefore magnetic north measurements have been used, where true north data is unavailable, for all survey data used in resource estimation processes.
Data spacing and	Drill hole spacing patterns vary considerably throughout the Project area, and is deposit specific, depending on the nature and style of mineralisation being tested.
distribution	Parts of the Bruno and Lewis Grade Control areas have been drilled, with vertical holes, on a close spaced regular drill pattern of 8 mN by 5 mE. The Link area has also been drilled predominantly with vertical holes on a wider spacing (30m x 20m).
	Drill hole and sample interval spacing is sufficient to establish an acceptable degree of geological and grade continuity appropriate for mineral resource estimations and classifications applied.
	There has been no sample compositing, other than a few historical compositing of field samples for some Aircore and RC samples to 1.5m, 2m, 3m, 4m and a few 5m intervals. The vast majority (>90%) of primary assay intervals are 1 metre intervals for RC and Aircore samples, and predominantly 1 metre intervals for core samples.
Orientation of data in relation to geological	The sheared Cardinia greenstone sequence displays a NNW to NW trend. The drilling and sampling programs were carried out to obtain an unbiased location of drill sample data, generally orthogonal to the strike of mineralisation.
structure	Mineralisation is structurally controlled in sub-vertical shear zones within the broader Cardinia area, with a supergene component in the oxidised profile.
	The vast majority of historical drilling is predominantly orientated at -60°/270° (west) or vertical for Grade Control drillholes, and generally orthogonal to the strike of mineralisation. The majority of KIN's drilling, at Lewis, was orientated -60°/090° (east).
	Orientation sampling bias has been identified for the vertical Grade Control drillholes, where these are interpreted as intercepting vertically oriented mineralisation/structures. This has been taken into account in the resource estimation process.

Criteria	Commentary		
Sample	HISTORIC DRILLING (1985-2014)		
security	No sample security details are available for pre-Navigator (pre-2004) drill samples.		
	Navigator's drill samples were collected from the riffle splitter in pre-numbered calico bags at the drill rig site. Samples were collected by company personnel from the field and transported to Navigator's secure yard in Leonora, where the samples were then batch processed (drillhole and sample numbers logged into the database) and then packed into 'bulkabag sacks'. The bulkabags were tied off and stored securely in Navigator's yard, until transporting to the laboratory. There was no perceived opportunity for the samples to be compromised from collection of samples at the drill site, to delivery to the laboratory.		
	KIN MINING (2014-2017)		
	KIN's RC drill samples were collected from the riffle splitter in pre-numbered calico bags at the drill rig site. The samples were then batch processed (drillhole and sample numbers encoded onto a hardcopy sample register) in the field, and then transported and stacked into 'bulkabag sacks' at KIN's secure yard in Leonora. The bulkabags were tied off and stored securely in the yard. The laboratory's (SGS) transport contractor was utilized to transport the bulkabags to the laboratory. There was no perceived opportunity for the samples to be compromised from collection of samples at the drill site, to delivery to the laboratory, where they were stored in their secure compound, and made ready for processing.		
	On receipt of the samples, the laboratory (SGS) independently checked the sample submission form to verify samples received, and readied the samples for sample preparation. SGS's sample security protocols are of industry acceptable standards.		
Audits or reviews	Historic drilling and sampling methods and QA/QC are regarded as not being as thoroughly documented compared to today's current standards. A review of various available historical company reports of drilling and sampling techniques indicates that these were most likely conducted to the best practice industry standards of the day.		
	A review of the Cardinia Project's database, drilling and sampling protocols, and so forth, was conducted and reported on by independent geological consultants Runge Ltd (2009). Their report highlighted issues with bulk density and QA/QC analysis of the database, which have since been identified and addressed by Navigator and most recently by KIN.		
	During 2017, CM have reviewed and carried out an audit on the field operations and database. Drilling and sampling methodologies observed during the site visits are to today's industry standard. Similarly there were no issues identified for the supplied databases, which would be considered material.		
	KIN is in the process of completing validation of all historical logging data and to standardise the logging code system by incorporating the SOG and Navigator logging codes into one, and converting all historical logging into the standardized code system. This is an ongoing process and is not yet completed.		
	During the review, CM logged the oxidation profiles ('base of complete oxidation' or "BOCO", and 'top of fresh rock' or "TOFR") for each of the deposit areas, based on visual inspection of selected RC drill chips from KIN's recent drilling programs, and a combination of historical and KIN's drillhole logging, with final adjustments made with input from KIN geologists. The oxidation profiles were used to assign bulk densities and metallurgical recoveries to the resource models.		
	Bulk density testwork in the past has been inconsistent with incorrect methods employed, to derive specific gravity or in-situ bulk density, rather than dry bulk density. Navigator (2009) and recent KIN (2017) bulk density testwork was carried out using the water immersion method on oven dried, coated samples to derive dry bulk densities for different rock types and oxidation profiles. This information has been incorporated into the database for resource estimation work. CM conducted site visits during 2017 to the laboratory to validate the methodology.		
	Recent (2014-2017) RC and diamond drilling by KIN include some twinning of historical drillholes within the Cardinia Project area. In addition, KIN's infill drilling density is considered sufficiently close enough to enable comparison with surrounding historic information, and there is no		

Criteria	Commentary				
	material difference between historical drilling information and the KIN drilling information. KIN's diamond holes were drilled for metallurgical and geotechnical test work, and assay results for these holes also show good correlation with nearby historical results.				
	Drilling, Sampling methodologies and assay techniques used in these drilling programs are considered to be appropriate and to mineral exploration industry standards of the day.				

## **SECTION 2 – Reporting of Exploration Results**

(Criteria in the preceding section also apply to this section)

Criteria	Commentary
Mineral tenement and land tenure status	The Bruno Lewis Link, Lewis and Kyte areas includes granted mining tenements M37/86, M37/227, M37/277, M37/300, M37/428 and M37/646, centered some 35-40km NE of Leonora. The tenements are held in the name of Navigator Mining Pty Ltd, a wholly owned subsidiary of KIN. The Cardinia Project is managed, explored and maintained by KIN, and constitute a portion of KIN's Leonora Gold Project (LGP), which is located within the Shire of Leonora in the Mt Margaret Mineral Field of the North Eastern Goldfields.
	The following royalty payment may be applicable to the areas within the Cardinia Project's Bruno and Lewis areas that comprise the deposits being reported on:
	<ol> <li>Gloucester Coal Ltd (formerly CIM Resources Ltd and Centenary International Mining Ltd) in respect of M37/86 - 1% of the quarterly gross value of sales for gold ounces produced, in excess of 10,000 ounces.</li> </ol>
	There are no known native title interests, historical sites, wilderness areas, national park or environmental impediments over the resource areas, and there are no current impediments to obtaining a licence to operate in the area.
Exploration done by other parties	There is limited exploration data available prior to 1985, where it is believed that exploration was more focused on base metals, and not gold. Companies involved in the collection of the majority of the gold exploration data since 1985 and prior to 2014 include: Thames Mining NL ("Thames") 1985; Centenary International Mining Ltd ("CIM") 1986-1988, 1991-1992; Metana Minerals NL ("Metana") 1986-1989; Sons of Gwalia Ltd ("SOG") 1989, 1992-2004; Pacmin Mining Corporation ("Pacmin") 1999, and Navigator Resources Ltd ("Navigator") 2004-2014.
	A trial pit (Bruno) was mined by Navigator in 2010, and a 'test parcel' of ore was extracted and transported firstly to Sons of Gwalia's processing plant in Leonora, and finally to Navigator's processing plant located at Bronzewing, where approximately 100,000 tonnes were processed at an average head grade of 2.33 g/t au (7,493 oz Au).
	In 2009, Navigator commissioned Runge Limited ("Runge") to complete a Mineral Resource estimate for the Cardinia deposits (Kyte, Lewis and Bruno). Runge reported a JORC 2004 compliant Mineral Resource estimate, at a low cutoff grade of 0.7g/t Au, totaling 4.34Mt @ 1.2 g/t au (169,700 oz Au), comprising total Indicated Resources of 1.69 Mt @ 1.2 g/t Au (64,500oz) and total Inferred Resources of 2.65Mt @ 1.2 g/t Au (105,200oz).
	KIN's drilling is focused along the mineralised structures that host the Bruno and Lewis Trial open pits and the Kyte deposit, and historical drilling conducted by the above mentioned previous operators.
Geology	The Project area is located 35-40km NE of Leonora in the central part of the Norseman-Wiluna Greenstone Belt, which extends for some 600km on a NNW trend across the Archean Yilgarn Craton of Western Australia.
	The regional geology comprises a suite of NNE-North trending greenstones positioned within the Mertondale Shear Zone (MZN) a splay limb of the Kilkenny lineament. The MSZ denotes the contact between Archaean felsic volcanoclastics and sediment sequences in the west and Archaean mafic volcanics in the east. Proterozoic dykes and Archaean felsic porphyries have intruded the sheared mafic/felsic volcanoclastic/sedimentary sequence.
	Locally within the Cardinia Project area, the stratigraphy consists of intermediate, mafic and felsic volcanic and intrusive lithologies and locally derived epiclastic sediments, which strike NNW with a sub-vertical attitude. Structural foliation of the stratigraphy dips moderately to the east.
	At Bruno Lewis Link, Lewis and Kyte, primary gold mineralisation is typically characterised by finely disseminated sulphides (pyrite), and spatially associated with increased shearing and lithological

Criteria	Commentary					
	contacts between mafic and felsic lithologies. Secondary gold mineralisation occurs as supergene enrichment within the regolith, and characterized by iron oxides, after sulphides, in the bleached, carbonated felsic units near the footwall dolerite/felsic contact.					
	The central Lewis area is dominated by sub-vertical, NW trending, highly altered, strongly weathered mafics and intercalated beds of carbonated felsic rocks and minor sediments (including shales).					
	Mineralisation at Kyte is hosted within weathered, sheared and altered mafics, and is typified in the weathered zone, by iron-rich alteration, after sulphides.					
	In some areas, gold mineralisation is highly variable in the regolith. In these areas, closer spaced drilling was carried out to provide a high level of confidence in the interpretations.					
Drill hole Information	Material drilling information used for the resource estimation has previously been publicly reported in numerous announcements to the ASX by Navigator (2004-2014) and KIN since 2014.					
	All hole depths refer to down hole depth in metres. All hole collars are surveyed and MGA94 Zone51 DGPS positioned. Elevation (R.L.) is recorded as part of the surveyed collar pick up. Drill holes are measured from the collar of the hole to the bottom of the hole.					
Data Aggregation methods	When exploration results have been reported for the resource areas, the intercepts are reported as weighted average grades over intercept lengths defined by geology or lower cut-off grades, without any high grade cuts applied. Where aggregate intercepts incorporated short lengths of high grade results, these results were included in the reports.					
	Since 2014, KIN have reported RC drilling intersections with low cut off grades of ≥ 0.5 g/t Au and a maximum of 2m of internal dilution at a grade of < 0.5g/t Au.					
	There is no reporting of metal equivalent values.					
Relationship Between Mineralisation widths and intercept	The orientation, true width and geometry of the mineralised zones have been determined by interpretation of historical drilling and verified by KIN's drilling. The vast majority of historical drilling is predominantly orientated at -60°/270° (west) or vertical for Grade Control drillholes, and generally orthogonal to the strike of mineralisation. The majority of KIN's drilling, at Lewis, was orientated -60°/090° (east).					
lengths	Since the mineralisation is steeply dipping, drill intercepts are reported as downhole widths, not true widths. Accompanying dialogue to reported intersections normally describe the attitude of the mineralisation.					
Diagrams	A plan and type sections for the resource areas are included in the main body of the report.					
Balanced Reporting	Public reporting of exploration results by KIN and past explorers for the resource areas are considered balanced and included representative widths of low and high grade assay results.					
Other Substantive exploration data	Comments on recent bulk density and metallurgical information is included in Section 3 of this Table 1 Report. There is no other new substantive data acquired for the resource areas being reported on. All meaningful and material information is or has been previously reported.					
Further work	The potential to increase the existing resources is viewed as probable. Further work does not guarantee that an upgrade in the resource would be achieved, however KIN intend to drill more holes at Bruno Lewis Link, Lewis and Kyte with the intention of increasing the Cardinia Project's resources and converting the Inferred portions of the resources to the Indicated category.					

### **SECTION 3 – Estimation and Reporting of Mineral Resources**

(Criteria in section 1, and where relevant in section 2, also apply to this section)

Criteria	Commentary
Database Integrity	All sample data, subject of this report and used for resource estimation work, is obtained from various drilling programs carried out since 1981. Data was obtained predominantly from Reverse Circulation (RC) drilling, and to a lesser extent, diamond core (Diamond) drilling and Air Core (Aircore) drilling.
	There is limited exploration data available prior to 1985, where it is believed that exploration was more focused on base metals, and not gold. Companies involved in the collection of the majority of the gold exploration data since 1985 and prior to 2014 include: Thames Mining NL ("Thames") 1985; Centenary International Mining Ltd ("CIM") 1986-1988, 1991-1992; Metana Minerals NL ("Metana") 1986-1989; Sons of Gwalia Ltd ("SOG") 1989, 1992-2004; Pacmin Mining Corporation ("Pacmin") 1999, and Navigator Resources Ltd ("Navigator") 2004-2014.
	KIN exploration data from 2014 to 2017 has been acquired predominantly from RC and some diamond drilling.
	The database could not be fully verified regarding the reliability and accuracy of a substantial portion of the historical data, however the recent drilling by KIN has enabled comparison with the historical data and there is no material differences observed of a negative nature.
	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 of historic (pre-2004) data, however the amount of historic data used in the resource estimation is minimal and the effect would not be material.
	The logging data coded in the database uses at least four different lithological code systems, a legacy of numerous past operators (Hunter, MPI, SOG & Navigator). Correlation between codes is difficult to establish, however can be achieved with effort. Based on historical reports, drill hole logging procedures appear consistent with normal industry practices of the time.
	KIN has attempted to validate historical logging data and to standardise the logging code system by incorporating the SOG and Navigator logging codes into one. This is an ongoing process and is not yet completed.
	The drilling by Navigator and KIN has been used to scrutinize and calibrate historic logging data. This has enabled KIN to establish good geological control, which has been used to derive the geological interpretations in current work.
	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.
	In 2009, Runge Ltd ("Runge") completed a mineral resource estimate report for the Bruno, Lewis and Kyte deposits. Runge carried out database verification, which included basic visual validation in Surpac and cross check queries in Microsoft Access ("Access"). Runge did not report any significant issues with the database.
	Since 2014, KIN geologists have conducted verification of historic drilling, assays, geological logs and survey information against the digital database, and in the field, including reviewing historic reports and visual confirmations of Surpac and Access databases. KIN have not reported any significant issues with the database.
	KIN has validated the database in Datashed and in Surpac prior to Resource estimation. These processes checked for holes that have missing data, missing intervals, overlapping intervals, data beyond end-of-hole, holes missing collar co-ordinates, and holes with duplicate collar co-ordinates.
	During 2017, CM carried out an independent data verification. 18,608 assay records for KIN's

Criteria	Commentary
	2014-2017 drilling programs were verified by comparing laboratory assay reports against the database. 4 errors were found, which are not considered material and which represents only 0.01% of all database records verified for KIN's 2014-2017 drilling programs.
Site Visit	KIN's geological team have conducted multiple site visits including supervision and management of drill programs within each of the Resource areas.
	Dr Spero Carras (Competent Person) was involved in the Leonora area at the Harbour Lights and Mertondale areas during the 1980s, and is familiar with the geology and styles of mineralisation within the Leonora Project area. He revisited the Leonora area during 2017 to review the projects, drilling, sampling and general geology.
	Messrs Mark Nelson and Gary Powell (Competent Persons) also conducted site visits to the resource areas, and they have independently reviewed drill core, existing open pits, surface exposures, drilling and sampling procedures. Mr Nelson also collected representative rock samples of mineralisation from the Bruno and Lewis pits for bulk density determination.
Geological Interpretati on	The Cardinia Project area is located 35km NE of Leonora in the central part of the Norseman-Wiluna Greenstone Belt, which extends for some 600 kilometres on a NNW trend across the Archean Yilgarn Craton of Western Australia.
	The regional geology comprises a suite of NNE-North trending greenstones positioned within the Mertondale Shear Zone (MZN) a splay limb of the Kilkenny lineament. The MSZ denotes the contact between Archaean felsic volcanoclastics and sediment sequences in the west and Archaean mafic volcanics in the east. Proterozoic dykes and Archaean felsic porphyries have intruded the sheared mafic/felsic volcanoclastic/sedimentary sequence.
	Locally within the Cardinia Project area, the stratigraphy consists of intermediate, mafic and felsic volcanic and intrusive lithologies and locally derived epiclastic sediments, which strike NNW with a sub-vertical attitude. Structural foliation of the stratigraphy dips moderately to the east.
	At Bruno, Lewis Link and Lewis, primary gold mineralisation is typically characterised by finely disseminated sulphides (pyrite), and spatially associated with increased shearing and lithological contacts between mafic and felsic lithologies. Secondary gold mineralisation occurs as supergene enrichment within the regolith, and characterized by iron oxides, after sulphides, in the bleached, carbonated felsic units near the footwall dolerite/felsic contact.
	The central Lewis area is dominated by sub-vertical, NW trending, highly altered, strongly weathered mafics and intercalated beds of carbonated felsic rocks and minor sediments (including shales).
	Mineralisation at Kyte is hosted within sheared and altered mafics, and is typified in the weathered zone, by iron-rich alteration, after sulphides.
	In some areas, gold mineralisation is highly variable in the regolith. In these areas, closer spaced drilling was carried out to provide a high level of confidence in the interpretations.
Dimensions	The Bruno Lewis Link deposit has a strike of 1.4km (NW-SE) and a width of 500m (NE-SW). The Bruno Lewis Link area includes a total of 87,493m of drilling. The drilling in the mineralized area for Bruno Lewis Link includes 2 DD holes for 15m, 1,309 RC holes for 9,432m and 277 AC holes for 1,808m.
	The Lewis deposit has a strike of 1.2km NW and a width of 200m. The Lewis area includes a total of 100,880m of drilling. The drilling in the mineralized area for Lewis includes 13 DD holes for 219m, 1,858 RC holes for 18,831m and 160 AC holes for 1,275m.
	The Kyte deposit has a strike of 600m NW and a width of 200m. The Kyte area includes a total of 10,430m of drilling. The drilling in the mineralized area for Kyte includes 2 DD holes for 64m, 114 RC holes for 1,623m and 55 AC holes for 424m.

Criteria			Comr	nentary	
Estimations and Modelling Techniques	<ul> <li>29. The following outlines the estimation and modelling technique used for producin Resources for the following deposits in the Cardinia area:</li> <li>Bruno Lewis Link</li> <li>Lewis</li> <li>Kyte</li> </ul>				
	Dep	osit	Orebody Dimensions	Nominal Drill Spacing	Mineralised Metres of Drilling (m)
	Bru Lew Link	/is	1,400 x 500 x 100	GC 8 x 5 Link 30 x 20	11,255
				GC 8 x 5	
	Lew		1,200 x 200 x 150	South 20 x 20	20,325
	Kyte	е	600 x 200 x 100	20 x 20	2,111
	31. CM carried based on informating topograpic	ed out a new on, the	drilling (both RC and die surfaces were modified	and some waste dumps  f the weathering surfaces amond), geological relog  to reflect the additional w information obtained in	ging and bulk densi I information. Surfac
	wireframe values les smoothin intersecti Link, Lew dilution.	ed at a ss thar g dilut on sele ris area The I	0.3g/t nominal edge cut- n 0.3g/t within the wirefion being incorporated i ection as a guide for wire n and 3m downhole for	d intersection selection, off grade. These domains rames although this was not the final models. The framing were 8m downhows Kyte. The intersections e chosen due to vertical Link area.	al shapes could conta minimized to preve e parameters used f ble for the Bruno Lew could include intern
	grade cor and while	ntrol ar	reas of Bruno Lewis Link, clear that there is a com	y detailed analysis of the Lewis. The drillholes we ponent of supergene ore s could be correlated fro	re on 8m x 5m spacion and depletion in the

- 33. In December 2016 CM carried out a very detailed analysis of the closely spaced drilled grade control areas of Bruno Lewis Link, Lewis. The drillholes were on 8m x 5m spacing and while it is clear that there is a component of supergene ore and depletion in the deposit, it became apparent that grades could be correlated from level to level on a structural basis, indicating that the supergene component of the ore is restricted to the vicinity of definitive felsic/mafic contacts and other shear structures. This was the model that was followed in the ensuing geological interpretation where use was also made of the geological logging. Discussions were also held with the mine geologist who worked on mining of the Lewis pit, who confirmed that control on the mineralisation was mostly in a vertical sense with a component of supergene ore.
- 34. The wireframed shapes were audited by KIN geological staff who had previous experience whilst working for Navigator. It is possible that there could be slightly more supergene ore in the models than has been used in the current interpretation.
- 35. Historically mined volumes were removed from the model. These shapes were based on historical workings obtained from KIN.
- 36. Each wireframe had an assigned strike, dip and plunge.

Criteria	Commentary
	37. Compositing from the top of each shape was carried out at 1m within each wireframe. The majority of composites (98%) were greater than 1m.
	38. The domainal shapes were passed into ISATIS Software with specified strike, dip and plunge.
	39. The number of shapes used was as follows:

Deposit	Number of
	Shapes
Bruno	151
Lewis	
Link	
Lewis	244
Kyte	49

- 40. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.
- 41. The declustering program DECLUS (ISATIS) was used to produce the weights to be assigned to each composite for statistical analysis.
- 42. For each shape a detailed set of weighted statistics was produced. Due to the size of the Bruno Lewis Link, Lewis areas, modelling was carried out by breaking it into 3 distinct zones based approximately on northings and drill density in the South (see Figure 1). The first zone, the most northerly, which encompassed the Bruno Grade Control area and the Link area was known as Bruno Lewis Link. The Lewis area was broken into 2 further zones. A zone north of the Proterozoic dyke known as Lewis Grade Control and a zone south of the Proterozoic dyke, known as South. Each of these zones was analysed independently and then recombined for reporting purposes into 2 areas known as Bruno Lewis Link (which is a combination of the Bruno Grade Control zone and the Link zone) and Lewis (which is a combination of the Lewis Grade Control zone and the area to the south of this shown as Lewis South) (see Figure 2). Based on the statistics, high grade cuts were determined for every shape and the percentage metal cut was estimated for each zone as shown in the below table:

Deposit	Maximum Cut	Percentage
	(g/t)	Metal Cut %
Bruno	60	9
Lewis		
Link		
Lewis	70	4
Grade		
Control		
South	25	19*

<sup>\*</sup>The high percentage metal cut is due to a very high grade outlier of > 500g/t. If this high grade is removed then the percentage metal cut is 6%. However it does show the high grade potential of the southern area.

43. The Kyte deposit was analysed as an independent area for high grade cutting. Based on the statistics, high grade cuts were determined for every shape and the percentage metal cut was estimated as shown in the below table:

Deposit	Maximum Cut	Percentage
	(g/t)	Metal Cut %
Kyte	15	3

Criteria	Commentary			
	Where a data point belonged to 2 shapes the cut allocated was determined domain and independently allocated.	for each		
	Variograms were run for each domain using ISATIS. The variograms were of variograms were run for each domain using ISATIS. The variograms were of variograms were produced for downhole, down dip, down plunge. Where the dayariograms were calculated on an individual hole basis, variograms were not not Variograms were normalized for down dip and plunge. Raw variograms were subsequent work.	rectional ownhole malized.		
	The Author, Dr. S. Carras had extensive experience in the Leonora Belt during the and has had familiarity with the nature of the mineralisation. To overcome the problem" which occurs in narrow vein structures where more than 2 samples per drillhole, three estimations were produced, OK, Inverse Distance Squared (Inverse Distance Cubed (ID3). Distance weighting methods do not suffer from the problem".	e "string are used ID2) and		
	The following parameters were used in modelling OK, ID2 and ID3:			
	<ul> <li>A minimum number of samples of 4 and a maximum number of sample</li> <li>The discretisation parameters were 1 x 1 x 2 for Bruno Lewis Link, Lewis 2 x 2 for Kyte</li> <li>A maximum of 2 samples per hole</li> </ul>			
	<ul> <li>Note: for blocks that did not meet these requirements, the parameters relaxed and the search radii were increased.</li> <li>To minimize the striping effect created by estimation in narrow shapes, downhole search radii were increased.</li> </ul>			
	The ranges of search and directions used were applied on a shape by shape basi aim was to produce OK results for the majority of shapes where there had been adequate data to produce meaningful variography. Small shapes where there we inadequate data were estimated using distance weighting squared methodology than OK.	/as		
	. The fundamental block size used was:			
	Deposit         Small Blocks           Bruno Lewis         0.5m x 0.5m x           Link, Lewis         2.5m           Kyte         2.5m x 1.25m x           2.5m			
	Small blocks were used to ensure adequate volume estimation where shape narrow.	es were		
	Scatter plots were then produced which compared OK, ID2 and ID3 for the small for larger shapes.	all blocks		
	The models were then visually checked on a section by section basis of bloc drillholes and ID2 proved to be the best fit, which eliminated the "string problem			
	The small blocks produced by ID2 were then composited to form medium (quart blocks and panels. The block dimensions for the medium (quarter) sized blocks ar were:	-		
	Deposit Medium Panels			

Criteria		Commentary			
		(Quarter) Blocks			
	Bruno Lewis Link, Lewis	8m x 4m x 2.5m	16m x 8m x 5m		
	Kyte	5m x 2.5m x 2.5m	10m x 5m x 5m		
	Quarter size blocks were used for reporting Resources.				
	53. Plots were produced of free	quency histograms in domains	s for point data and for blocks.		
	carried out comparing the	interpolated blocks to the	red the drill data, validation was sample composite data. The drill data was honoured by the		
	55. Volumes within wireframes block estimates of the volumensure that volumes estimates	mes within those wireframes			
	56. Classification was carried or and geology as the guide.	ut using a combination of drill	lhole density, drillhole quality,		
	57. Resources were estimated within an AUS\$2,200 optimised pit shell provided by Entech (Perth). The optimised pit shells provided a reasonable basis for defining that portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a dilution of 5% and a recovery of 95%. This was minimal and was only used to define the Resource not the Reserve. The Resources reported are undiluted and do not have an ore loss applied.)				
	58. Operating cost estimates de grade for deposits in the Car	eveloped by KIN indicated that dinia area was likely to be 0.9			
Moisture	Tonnages and grades were estin diamond drill core included mea				
Cut-off Parameters	Operating cost estimates provid mining grade for open pit depos				
Mining Factors or Assumption s	was published. Recovery and he Bruno returned 100,000t @ 2.33 costs, clayey weathered regoliti 40% higher than expected (alm. Au. The successful mining by reasonable prospect for eventumethods, taking into account cu economic variations. Mining als that more metal was returned the bulk density in the Bruno pit (20).	ead grade were above expectingly that it is a part of the control	al pit, lower than forecast mining mineralisation, head grade was very, mine cut-off grade 0.85g/t that the mineral resource has a medium scale open pit mining prices and allowing for potential. Reconciliation studies showed time. Recent samples taken for density than had been previously ensity. Successful past open pit		

Criteria	Commentary
Metallurgic	In 2010, an estimated 100,000 tonnes of Bruno trial mining was completed with a reconciled
al Factors or	recovery of 95%. In 2016, an estimated 15,000 tonnes of trial mining from the Lewis Grade
Assumption	Control area was processed through the Lakewood mill in Kalgoorlie and delivered a
=	
S	recovery of 94%. In both cases the material mined was oxide showing that oxide material in
	the Bruno Lewis Link, Lewis area is expected to have good recoveries.
	In 2016 – 2017 KIN's drilling program included a series of RC and DD drillholes to collect samples for geotechnical and metallurgical testwork.
	Metallurgical testwork in the Bruno Lewis Link area has shown metallurgical recoveries in the mid-nineties in oxide and in transition.
	Lewis (south of the Proterozoic dyke) metallurgical testwork has shown metallurgical recoveries of better than 90% in oxide and transition and low eighties for fresh. The lower recoveries for fresh material was associated with the presence of a minor amount of sulphides (e.g. pyrite, arsenopyrite). Further testwork at a finer grind size will be undertaken to improve recoveries.
	For the Kyte deposit, very high recoveries were achieved in the mid-nineties for both oxide and transition.
Environmen	Mining at Bruno (100,000t) from the trial pit, generated a mullock/waste dump next to the
tal Factors	open cut. It was to industry standards. It is assumed that practices concerning waste rock and
or	process residual will meet accepted industry standards.
	process residual will fileet accepted ilidustry standards.
Assumption	Two open pits and their associated waste rock landforms (i.e. Bruno and the Lewis Trial Pit)
S	
	are encompassed by the current mineral resource estimate work. The Kyte resource area has
	not been subjected to any previous mining activity.
	Historical mining at each of the open pit sites, including waste rock landforms have not demonstrated any impacts that cannot be managed in normal operations. Studies completed to date, on ore and waste characterisations for previous and potential mining and processing operations, have not identified any potential environmental impacts that cannot be managed by normal operations. In addition, Navigator's environmental bonds lodged with the DMP for the Bruno operations have since been returned to Navigator, following the rehabilitation of those operations.
Bulk Density	Prior to 2014, there have been numerous programs of bulk density testwork conducted by
	several companies at different times on diamond drill core and/or RC drill chips for some of
	the various deposits. Generally the testwork has not been conclusive, since the testwork
	methodology has not been adequately described in the historical reports, or when it has, the testwork itself was not carried out using an acceptable method to determine dry bulk density. Often, when described, the testwork measured specific gravity, not bulk density, and in cases where bulk density was reported, the moisture content was not taken into account.
	In 2009 Navigator Resources Ltd submitted 54 half or whole diamond core samples to Amdel
	Mineral Laboratories Ltd's ("Amdel") Kalgoorlie laboratory for bulk density determination by
	the water immersion method. The core samples were a mixture of half core and whole core
	· ·
	samples ranging from 10cm to 30cm in length, and were taken at downhole intervals of
	roughly every 2 to 3 metres. The samples were firstly weighed, oven dried overnight at 110°C,
	and weighed again to determine moisture content. Those samples that were likely to absorb
	water were then sealed, using hairspray, prior to immersion in water. It is not known what
	proportion of samples were not sealed, however it is likely that only fresh, non-porous samples were not sealed.
	In 2017, KIN carried out a diamond drilling program to include obtaining samples for bulk
	density testwork. Five diamond drill holes were drilled into the major parts of mineralised zones at Bruno Lewis Link and Lewis.
	A total of 478 half or quarter core samples, of varying lengths (5-20cm) were taken at
	downhole intervals of roughly every 1 metre. The samples were submitted to an independent

Criteria	Commentary				
	laboratory in Perth for bulk density determinations by the water immersion method, where they were firstly weighed, oven dried overnight at 110°C, and weighed again to determine moisture content. The samples were then sealed, using hairspray, prior to immersion in water.			ain to determine	
	In addition, Mr M Nelson (Consultant to CM) also took representative samples of mineralised material from the Bruno and Lewis Trial pits and submitted to the laboratory for bulk density determination.				
	During the 2017 bulk density testwork and estimation process, Dr S Carras and Mr G Powell (Consultant to CM) visited the laboratory and identified some improvements for consideration in the bulk density determination process, particularly for small core pieces to give better precision of measurements. The suggested improvements were implemented and precision improved.				
	When estimating the bulk density for pieces of diamond drill core, it was found that the larger sized samples gave more repeatable results and these were mostly used in assigning the bulk densities.				_
	The following bulk density areas:	, parameters wer	e used for the Bı	runo Lewis Link	x, Lewis and Kyte
	Area	Oxide	Transition	Fresh	]
	Bruno GC	2.1	2.35	2.6	1
	Bruno Link	1.8	2.2	2.6	
	Lewis GC	1.9	2.3	2.7	
	Lewis South	1.8	2.3	2.7	
	Kyte	2.1	2.2	2.6	
n	Classification was based on a combination of drillhole spacing, drillhole quality and confidence in geological continuity. In general all deposits were drilled on the following nominal grids:  Bruno:  Grade Control: 8m x 5m Link: 30m x 20m  Lewis: Grade Control: 8m x 5m  South: South: 20m x 20m  Kyte Kyte: 20m x 10m  In general drillhole spacing of 20m x 20m resulted in mineralisation being classified as Indicated.  Drillhole spacing generally increases with depth and as a result deeper mineralisation is mostly allocated to the Inferred category.  The Mineral Resource estimate appropriately reflects the view of the Competent Person.				
Audits and Reviews	Navigator Resources had worked with Runge (2009) to produce estimates for the Cardinia deposits using ordinary kriging. KIN personnel carried out audits and internal reviews of the data, assay, survey, wireframes and geological interpretations used by CM. CM also carried out detailed reviews of all data.  Bulk density determination methodology was audited by S Carras and G Powell (Consultant to		al reviews of the CM also carried		

Criteria	Commentary
	CM) through visitation of the independent laboratory.
Discussion of Relative Accuracy and Confidence	Two areas, the Bruno Grade Control area and the Lewis Grade Control area have been drilled on a very close spaced grid 8m x 5m.  While it is acknowledged that there is a supergene and depletion effect in the Cardinia area, it is also apparent that there are major structural controls on the location of mineralisation. These controls are largely associated with the contact between felsic and mafic rocks and shear zones. Very small blocks have been used to model the very narrow shear structures.  The use of vertical drilling into zones where the dip may be 70 degrees or more to the east can also constitute some cause for concern, however given the very close drilling grids in the grade control areas the major concern would be in the Link zone. To overcome any potential over valuation of the Link zone, as a result of the wider spaced mostly vertical drilling, only very narrow structures have been interpreted where intersected by drilling. It is likely that more narrow mineralised structures are present between the current drill pattern. Hence, it is likely that the Link zone is potentially undervalued.  In the modelling process every attempt has been made to eliminate the "string effect" problem associated with the estimation of narrow vein structures through the use of ordinary kriging. This has been achieved through the use of distance weighting estimates correlated
	back to ordinary kriging estimates. This method, although heuristic has been validated by extensive review of the block models and the drillhole data.  Every attempt has been made in the modelling to reduce the smoothing effect which results when using a low cut-off grade to determine boundary positions and limit the amount of dilution in the Resource so that it can be correctly diluted for Reserve.
	In all high coefficient of variation orebodies, local estimation is very difficult to achieve due to the high nugget effect of the gold. This means that small parcels of ore are difficult to estimate without further information such as closer spaced grade control drilling.
	Historic mining of the Bruno pit resulted in more metal than had been predicted. It is likely that this was due to an understatement of the bulk density and cutting of high grades, which was too severe. In the current estimates both the high grade cuts and bulk density values have been raised.

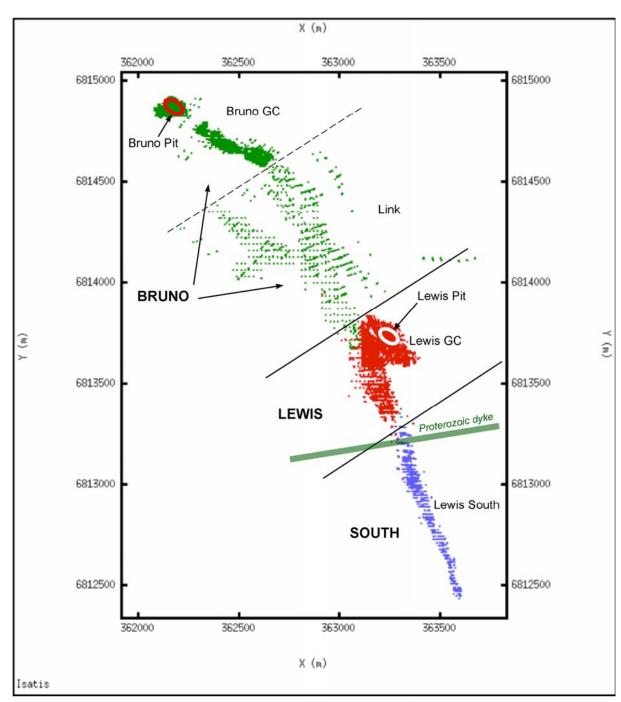


Figure 1: Sub Areas of Bruno Lewis Link, Lewis

Dark Lines Indicate Boundaries Used in Resource Estimation Methodology

Dotted Line Shows the Boundary Between Bruno Grade Control and Link

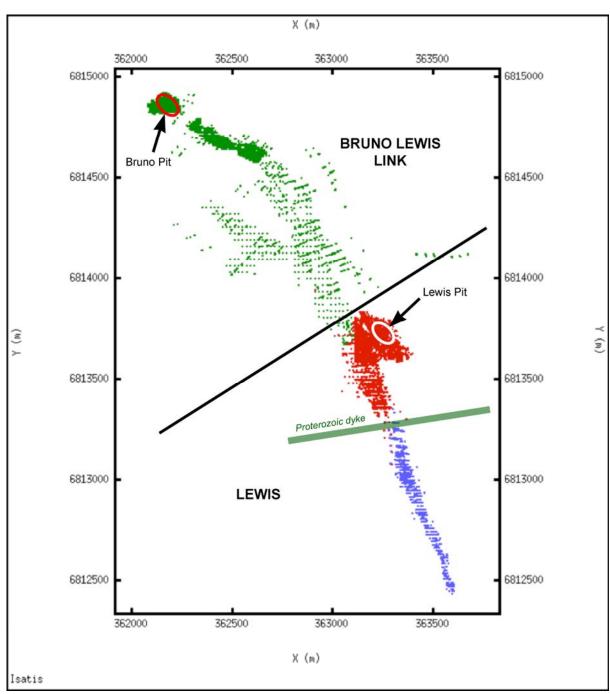


Figure 2: Bruno Lewis Link, Lewis

Dark Lines Indicate Boundaries Used in Resource Reporting

## **Appendix C**

# JORC 2012 TABLE 1 REPORT CARDINIA PROJECT Helens and Rangoon

#### SECTION 1 – Sample Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	Commentary
Sampling techniques	All sample data, subject of this report and used for resource estimation work, is obtained from various drilling programs carried out since 1986. Data was obtained predominantly from Reverse Circulation (RC) drilling, and to a lesser extent, diamond core (Diamond) drilling and Air Core (Aircore) drilling.
	There is limited exploration data available prior to 1986, where exploration for nickel was carried out in the late 1960s and for base metals in the 1970s. During 1980-1985, Townson Holdings Pty Ltd ("Townson") mined a small open pit over some old workings at the Rangoon prospect.
	Companies involved in the collection of the majority of the gold exploration data since 1986 and prior to 2014 include: Mt Eden Gold Mines (Aust) NL (also Tarmoola Aust Pty Ltd "MEGM") 1986-2003; Pacmin Mining Corporation Ltd ("Pacmin") 1998-2001; Sons of Gwalia Ltd ("SOG") 2001-2004, and Navigator Resources Ltd ("Navigator") 2004-2014.
	Kin Mining Ltd ("KIN") acquired the Cardinia Project in 2014.
	HISTORIC SAMPLING (1986-2014)
	Drill samples were generally obtained from 1m downhole intervals and riffle split to obtain a 3-4kg representative sub-sample, which were submitted to a number of commercial laboratories for a variety of sample preparations methods, including oven drying (90-110°C), crushing (-2mm to -6mm), pulverizing (-75 $\mu$ m to -105 $\mu$ m), and generally riffle split to obtain a 30, 40 or 50 gram catchweight for gold analysis, predominantly by Fire Assay fusion, with AAS finish. On occasions, initial assaying have been carried out using Aqua Regia digest and AAS/ICP finish, with anomalous samples re-assayed by Fire Assay fusion and AAS/ICP finish.
	Diamond Drilling
	Half core (or quarter core) sample intervals varied from 0.3 to 1.4m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in marked core trays and stored in a secure yard for future reference. The only known available drill core from these programs and stored at KIN's Leonora Exploration Yard, are those drilled by Navigator.
	RC Drilling
	The vast majority of Reverse Circulation (RC) drill samples were collected over 1m downhole intervals from beneath a cyclone and then riffle split to obtain a sub-sample (typically 3-4kg). After splitting, 1m sub-samples were typically collected in pre-numbered calico bags, and the 1m sample rejects were commonly stored at the drill site in marked plastic bags, for future reference. First pass sampling often involved collecting composite samples by using a scoop (dry samples) or spear (wet samples) to obtain 3m or 4m composited intervals, with the single metre split sub-samples being retained at the drill site. If the composite sample assays returned anomalous results, the single metre sub-samples for the anomalous composite intervals were retrieved and submitted for gold analysis.
	Navigator obtained sub-samples from wet samples using the spear method.
	Data relating to historical wet samples is not available, however the number of wet samples involved is considered to be relatively low, and not material.

Criteria	Commentary
	There are no sample rejects available from RC drilling prior to 2014. Most drill sites have bee rehabilitated and the sample bags removed and destroyed.
	Aircore Drilling
	The procedures for sampling of Aircore drilling is generally the same as for RC drilling, althoug in earlier (pre-2004) programs, the majority of the 1m samples were mostly stored directly on th ground prior to sampling with a scoop. Assay results from these samples are not used for resource estimation work, however they do sometimes provide a guide in interpreting geology an mineralisation continuity.
	When drilling under dry conditions, Aircore samples should be of a comparable quality to R samples, when implementing same sampling techniques, therefore Aircore sample assay result were only used for resource estimation work if the 1m sub-samples were obtained by riffl splitting of the primary sample, prior to placing on the ground.
	There are no sample rejects available from AC drilling prior to 2014. Most drill sites have bee rehabilitated and the sample bags removed and destroyed.
	RAB Drilling
	Sample return from Rotary Air Blast (RAB) drilling are collected from the annulus between the open hole and drill rods, using a stuffing box and cyclone. Samples are usually collected at 1 metri intervals and placed on the ground with 3-4kg sub-samples collected using a scoop or spear. Up hole contamination of the sample is commonplace, therefore this type of drilling and sampling regarded as reconnaissance in nature and the samples indicative of geology and mineralisation. The qualities of samples are not appropriate for resource estimation work and are on sometimes used as a guide for interpreting geology and mineralisation.
	KIN MINING (2014-2017)
	Diamond Drilling
	Diamond drill core (HQ3) samples collected for analysis were longitudinally cut in half, and the in quarters, using a powered diamond core saw blade centered over a cradle holding the core place. Core sample intervals varied from 0.2 to 1.25m, but were predominantly taken over 1 intervals, or at geological contacts, whichever was least. The remaining core was retained in the respective core trays and securely stored in KIN's yard in Leonora for future reference.
	RC Drilling
	During drilling, sample return is passed through a cyclone and stored in a sample collection bo At the end of each metre, the cyclone underflow is closed off, the underside of the sample box opened and the sample passed down through a riffle splitter.
	All RC sub-samples were collected over one metre downhole intervals and averaged 3-4kg Sample reject from the riffle splitter were retained and stored in marked plastic bags, and locate near to each drillhole collar.
	All drilling, sample collection and sampling handling procedures were conducted and/o supervised by KIN geology personnel to high level industry standards. QA/QC procedures were implemented during each drilling program to industry standards.
	<u>Analysis</u>
	Once received at the assay laboratory, diamond core and RC samples were oven dried (10: 110°C), crushed (-6mm & -2mm), pulverised (P85% -75µm) and split to obtain a representative 50 gram sample catchweight for gold only analysis using Fire Assay fusion with AAS finish.
	COMMENT
	For some earlier (pre-2004) drilling programs, RC and Aircore samples were obtained at 1.5, 2 of 4 metre downhole intervals.

For resource estimation work, Diamond, RC and some Aircore drilling data was used where

Criteria	Commentary	
	appropriate. RAB drilling data was not used for resource estimation but was sometimes used as an interpretative guide only. A small proportion of the 2m sample intervals, particularly for Helens-Rangoon, were used in the resource estimation, only where the sampling methods are appropriate, and where they sit within the mineralisation interpretations.	
Drilling techniques	Numerous programs comprising various types of drilling have been conducted by several companies since 1985. The Cardinia database encompasses the various deposits and prospects within the Cardinia Project's Helens and Rangoon areas, and consists of 1,077 drillholes for a total 46,753 metres, excluding RAB drilling, viz:	
	Diamond drilling: 17 drillholes 956 metres	
	RC drilling: 755 drillholes 36,231 metres	
	Aircore drilling: 305 drillholes 9,566 metres	
	HISTORIC DRILLING (1986-2014)	
	Diamond Drilling	
	Diamond drilling was carried out using industry standard 'Q' wireline techniques, with the core retrieved from the inner tubes and placed in core trays. Core sizes include NQ/NQ3 (Ø 45-48mm) and HQ/HQ3 (Ø 61-64mm). At the end of each core run, the driller placed core blocks in the tray, marked with hole number and depth. Core recovery was usually measured for each core run and recorded onto the geologist's drill logs.	
	RC Drilling	
	RC drilling used conventional reverse circulation drilling techniques, utilising a cross-over sub, until the late 1980s, when the majority of drilling companies started changing over to using face-sampling hammers with bit shrouds. Drill bit sizes typically ranged between 110-140mm. Samples obtained from conventional RC drilling techniques with cross-over subs often suffered from down hole contamination (e.g. smearing of grades), especially beneath the water table. Samples obtained from RC drilling techniques using the face sampling hammer suffered less from down hole contamination and were more likely to be kept dry beneath the water table, particularly if auxiliary and booster air compressors were used. These samples are considered to be more reliable and representative.	
	Aircore Drilling	
	Aircore drilling is a form of RC drilling, but generally utilizing smaller rigs and smaller air compressors, compared to standard RC drill rigs of the times. Aircore bits are hollow in the centre, with the kerf comprising cutting blades or 'wings' with tungsten-carbide inserts. Drill bit diameters usually range between 75-110mm.	
	All Aircore drilling (100%) was conducted by Navigator utilising suitable rigs with appropriate compressors (eg 250psi/600cfm). Aircore holes were drilled mostly into the weathered regolith using 'blade' or 'wing' bits, until the bit was unable to penetrate further ('blade refusal'), often near to the fresh rock interface. Hammer bits were used only when it was deemed necessary to penetrate harder rock types. Hole depths ranged from 4m to 78m, averaging approximately 30 metres.	
	RAB Drilling	
	RAB drilling is carried out using small air compressors (eg 250psi/600cfm) and drill rods fitted with a percussion hammer or blade bit, with the sample return collected at the drillhole collar using a stuffing box and cyclone collection techniques. Drillhole sizes generally range between 75-110mm.	
	KIN MINING (2014-2017)	
	Diamond Drilling	
	Diamond drilling was carried out by contractor Orbit Drilling Pty Ltd ("Orbit Drilling") with a truck-mounted Hydco 1200H drill rig, using industry standard 'Q' wireline techniques. Drill core (HQ3) is retrieved from the inner tubes and placed in plastic core trays and each core run depth recorded	

# Criteria Commentary onto core marker blocks and placed at the end of each run in the tray.

Drillhole deviation was measured at regular downhole intervals, typically at 10m from surface, thence every 30m to bottom of hole, using electronic multi-shot downhole survey tools (i.e. Reflex EZ-TRAC or Camteq Proshot).

Core orientation was obtained for each core run where possible, using electronic core orientation tools (e.g. Reflex EZ-ACT) and the 'bottom of core' marked accordingly.

#### **RC** Drilling

RC drilling was carried out by Orbit Drilling's truck-mounted Hydco 350RC drill rigs with 350psi/1250cfm air compressor, with auxiliary and booster air compressors (when required). Drilling utilised mostly downhole face-sampling hammer bits ( $\emptyset$  140mm), with occasional use of blade bits for highly oxidized and soft formations. The majority of drilling retrieved dry samples, with the occasional use of the auxiliary and booster air compressors beneath the water table, to maintain dry sample return as much as possible.

Drillhole deviations were surveyed downhole, during drilling operations, using electronic multishot downhole tool (e.g. Reflex EZ-TRAC). In some instances, drillholes were surveyed later in open hole. In the later drilling programs, downhole surveying was carried out inside a non-magnetic stainless steel (s/s) rod, located above the hammer. Providing the tool was located in the middle of the stainless steel rod, azimuth and dip readings were successfully recorded. A separate independent program of downhole deviation surveying was carried out to validate previous surveys, utilizing an electronic continuous logging survey tool (AusLog A698 deviation tool).

The following tables summarise drilling totals for the Cardinia Project's Helens and Rangoon areas, for DD, RC and AC only (i.e. excluding open-hole drilling such as RAB):

Cardinia Project, Helens & Rangoon – Historical Drilling Summary (Pre-2014)

TOTAL	Holes	Metres	%(m)
DD	11	423	44.2%
RC	505	21,952	60.6%
AC	305	9,566	100.0%
Total	821	31,941	68.3%

Cardinia Project, Helens & Rangoon – Drilling Summary – KIN (2014-2017)

TOTAL	Holes	Metres	%(m)
DD	6	534	55.8%
RC	250	14,279	39.4%
Total	256	14,813	31.7%

#### COMMENT

Historical reports indicate that drill core sizes were predominantly HQ/HQ3 or NQ/NQ3, however database details are incomplete. Most historical reports recorded core recoveries, although these details are not included in the database. Review of some historical reports indicate that core recoveries were generally good, although recoveries were typically less in highly fractured zones and some highly weathered mineralised zones in the transition and oxide zones, however this information is not recorded in the supplied database.

RC drilling is the dominant drill type at all sites. RC drilling information is generally described in varying detail in historical reports to the DMP, including drilling companies used and drilling rig types, however it's not all recorded in the database supplied. Review of the historical reports indicates that reputable drilling companies were typically contracted and the equipment supplied was of an acceptable standard for those times. During the 1990s, and 2000s, suitable large drill rigs with on-board compressors were probably complimented with auxiliary and booster air compressors for drilling to greater depths and/or when groundwater was encountered. KIN's

Criteria	Commentary
	drilling was conducted with modern rigs equipped with auxiliary and booster compressors and face sampling hammers with bit diameters typically 140mm.
	When drilling under dry conditions, Aircore samples should be of a comparable quality to RC samples, when implementing same sampling techniques. Aircore drilling data was only used in resource estimation work, where the in-field and laboratory sampling methodologies was considered appropriate and limited to a number of selected Navigator drillholes.
Drill sample	HISTORIC DRILLING (1986-2014)
recovery	Diamond Drilling
	Core recovery has been recorded in most drill logs for most of the diamond drilling programs since 1985, but is not recorded in the supplied database. A review of some historical reports indicates that generally core recovery was good with lesser recoveries recorded in zones of broken ground and/or areas of mineralisation. Overall recoveries are considered acceptable for resource estimation.
	RC Drilling
	There is limited information recorded for sample recoveries for historical RC and Aircore drilling. However there has been an improvement in sample recoveries and reliability following the introduction of face sampling hammers and improved drilling technologies and equipment, since the mid-1980s.
	KIN MINING (2014-2017)
	Diamond Drilling
	Core recovery was recorded for each run by measuring total length of core retrieved against the downhole interval actually drilled.
	Diamond core recoveries were recorded in the database. Independent field reviews by the Competent Persons (SC & GP) in 2017 of the diamond drilling rig in operation and core integrity at the drill sites, demonstrated that diamond drill core recoveries were being maximised by the driller, and that core recoveries averaged >95%, even when difficult ground conditions were being encountered.
	RC Drilling
	Integrity of each one metre RC sample is preserved as best as possible. At the end of each 1 metre downhole interval, the driller stops advancing the rods, retracts from the bottom of hole, and waits for the sample to clear from the bottom of the hole through to the sample collector box fitted beneath the cyclone. The sample is then released from the sample collector box and passed through the 3-tiered riffle splitter fitted beneath the sample box. Sample reject is collected in plastic bags, and a 3-4kg sub-sample is collected in pre-marked calico bags for analysis. Once the samples have been collected, the cyclone, sample collector box and riffle splitter are flushed with compressed air, and the riffle splitter cleaned by the off-sider using a compressed air hose, and if necessary a scraper. This process is maintained throughout the entire drilling program to maximise drill sample recovery and to maintain a high level of representivity of the material being drilled.
	RC drill sample recoveries are not recorded in the supplied database, however a review by the Competent Person (GP) in May 2017 of RC drill samples stored in the field, and observations of the two RC drilling rigs in operation, suggests that RC sample recoveries were mostly consistent and very good, with the samples themselves being reliable and representative of the material being drilled.
	COMMENT
	Due to the lack of detailed information in the database regarding historic (pre-2014) Aircore and RC drilling, no quantitative or semi-quantitative impression of sample recovery or sample quality is available. Given that much of the drilling at Cardinia was conducted by the same companies and at the same times as that carried out for the Mertondale Project, where it is assumed to be satisfactory given that the Mertondale deposits were mined in the past, by open pit methods,

Criteria	Commentary
	where the open pits were mined to their original design limits, based on the historical drill data. This suggests that the amount of metal recovered was probably not grossly different from premining drill data based expectations.
	During Navigators drill programs wet samples were spear sampled instead of riffle split. 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.
	No indication of sample bias is evident nor has it been established. That is, no relationship has been observed to exist between sample recovery and grade.
	The amount of Aircore drilling data used in the Cardinia resource estimation process is low and regarded as not material.
Logging	HISTORIC DRILLING (1986-2014)
	The logging data coded in the database uses at least four different lithological code systems, a legacy of numerous past operators (MEGM, Pacmin, SOG & Navigator). Correlation between codes is difficult to establish, however it can be achieved with effort. Based on historical reports, drill hole logging procedures appear consistent with normal industry practices of the time.
	Navigator's procedure for logging of diamond core included firstly marking of the bottom of the core (for successful core orientations), core recovery, fractures per metre and RQD, lithology, alteration, texture, mineralisation, weathering, and other features, and then marked up for cutting and sampling.
	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, after validation, to minimize data entry errors.
	The entire length of all drillholes are logged in full from surface to bottom of hole.
	Logging is qualitative on visual recordings of lithology, oxidation, colour, texture and grain size. Logging of mineralogy, mineralisation and veining is quantitative.
	Drill core photographs are only available for Navigator's diamond drillholes.
	KIN MINING (2014-2017)
	KIN's logging of drill samples was carried out in the field (RC drilling) or at the Leonora Yard (diamond core) and entered onto a portable computer, on a metre by metre basis for RC, and by sample intervals and/or geological contacts for diamond core. Data recorded included lithology, alteration, structure, texture, mineralisation, sulphide content, weathering and other features. Drillhole collar coordinates, azimuth, dip, depth and sampling intervals are also recorded in the drill logs in the field.
	Several diamond drillholes were completed for geotechnical purposes and were independently logged for structural data by geotechnical consultants. All diamond drill core has been photographed, and currently stored at KIN's yard in Leonora.
	KIN geological personnel retrieved the core trays from the drill rig site and relocated them to KIN's yard in Leonora at the end of each day. Drill core was photographed in the field or at the Leonora yard, prior to cutting using a diamond core saw to obtain quarter core samples for analysis.
	All information collected was entered directly into laptop computers or tablets, and transferred to the database to be validated.
	COMMENT
	KIN has attempted to validate historical logging data and to standardize the logging code system by incorporating the SOG and Navigator logging codes into one. This is an ongoing process and is not yet completed.

Criteria	Commentary
	The level of logging detail is considered appropriate for exploration and to support appropriate mineral resource estimation, mining studies and metallurgical studies.
	Qualitative logging includes classification and description of lithology, weathering, oxidation, colour, texture and grain size. Quantitative logging includes identification and percentages of mineralogy, sulphides, mineralisation, veining, and in addition, logging of diamond drilling included geotechnical data, RQD and core recoveries.
	For the majority of historical drilling (pre-2004), and all of the more recent drilling, the entire length of drillholes have been logged from surface to 'end of hole'. Diamond core logging is typically logged in more detail compared to RC and Aircore drilling.
Sub-	HISTORIC DRILLING (1986-2014)
sampling techniques and sample	Historical reports for drilling programs prior to 2004, are not always complete in the description of sub-sampling techniques, sample preparation and quality control protocols.
preparation	Diamond Drilling
	Diamond drill core (NQ/NQ3 or HQ/HQ3) samples collected for analysis were longitudinally cut in half, and occasionally in quarters for the larger (HQ/HQ3) diameter holes, using a powered diamond core saw blade centered over a cradle holding the core in place.
	Core sample intervals varied from 0.3 to 1.4m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in core trays.
	Where historical reports do not describe the sampling protocol for sampling of drill core, it is assumed that drill core was sampled as described above.
	RC Drilling
	Prior to 1996, limited historical information indicates most RC sampling was conducted by collecting 1m samples from beneath a cyclone and passing through a riffle splitter to obtain a 3-4kg sub-sample for analysis. RC sampling procedures are believed to be consistent with the normal industry practices at the time. The vast majority of samples were dry and riffle split, however spear or tube sampling techniques were used for wet samples.
	Samples obtained from conventional RC drilling techniques with cross-over subs often suffered from down hole contamination, especially beneath the water table. Samples obtained from RC drilling techniques using the face sampling hammer suffered less from down hole contamination and were more likely to be kept dry beneath the water table, particularly if auxiliary and booster air compressors were used. These samples are considered to be representative.
	The vast majority of Reverse Circulation (RC) drill samples were collected at 1m downhole intervals from beneath a cyclone and then riffle split to obtain a sub-sample (typically 3-4kg). After splitting, 1m sub-samples were typically collected in pre-numbered calico bags, and the 1m sample rejects were commonly stored at the drill site in marked plastic bags, for future reference. First pass sampling often involved collecting composite samples by using a scoop (dry samples) or spear/tube (wet samples) to obtain 3m or 4m composited intervals, with the single metre split sub-samples being retained at the drill site. If the composite sample assays returned anomalous results, the single metre sub-samples for the anomalous composite intervals were retrieved and submitted for analysis.
	Navigator obtained sub-samples from wet samples using the spear or tube method.
	Data relating to historical wet samples is not available, however the number of wet samples involved is considered to be relatively low, and not material.
	There are no sample rejects available from RC drilling prior to 2014. Most drill sites have been rehabilitated and the sample bags removed and destroyed.
	Navigator included standards, fields duplicate splits (since 2009), and blanks within each drill sample batch, at a ratio of 1 for every 20 samples, with the number of standards being inserted at a ratio of 1 for every 50 samples.

Criteria	Commentary					
	Aircore Drilling					
	The procedures for sampling of Aircore drilling is generally the same as for RC drilling, although in earlier (pre-2004) programs, the majority of the 1m samples were mostly stored directly on the ground prior to sampling with a scoop.					
	A variety of laboratories were used for analysis. Prior to 2009, duplicate samples were not routinely collected and submitted from RC and Aircore drilling to the same laboratory consequently overall sampling and assay precision levels can't be quantified for that period. Since 2009, Navigator adopted a stricter sampling regime with the submission of duplicate samples at a rate of 1 for every 50 primary samples.					
	While QC protocols were not always comprehensive, the results indicate that assay results from Navigators exploration programs were reliable. Results from pre-Navigator operators are regarded as consistent with normal industry practices of the time.					
	KIN MINING (2014-2017)					
	Diamond Drilling					
	Diamond drill core samples collected for analysis were longitudinally cut in half and quarters, using a powered diamond core saw blade centered over a cradle holding the core in place. Core sample intervals varied from 0.2 to 1.25m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in their respective core trays and stored in KIN's yard for future reference.					
	All of KIN's diamond drill core is securely stored at their Leonora Yard.					
	RC Drilling					
	All RC sub-samples were collected over 1 metre downhole intervals and retained in pre-marked calico bags, after passing through a cyclone and riffle splitter configuration. The majority of RC sub-samples consistently averaged 3-4kg. Sample reject from the riffle splitter were retained and stored in plastic bags, and located near each drillhole site. When drilling beneath the water table, the majority of sample returns were kept dry by the use of the auxiliary and booster air compressors. Very few wet samples were collected through the riffle splitter, and the small number is not considered material.					
	Field duplicates were taken at regular intervals at a ratio of 1:50 and assay results indicate that there is reasonable analytical repeatability, considering the presence of nuggety gold.					
	COMMENT					
	All sub-sampling techniques and sample preparation procedures conducted and/or supervised by KIN geology personnel are to standard industry practice. Sub-sampling and sample preparation techniques used are considered to maximise representivity of the material being drilled. QA/QC procedures implemented during each drilling program are to industry standard practice.					
	Samples sizes are considered appropriate for this style of gold mineralisation and is an industry accepted method for evaluation of gold deposits in the Eastern Goldfields of Western Australia					
Quality of assay data and laboratory	Numerous assay laboratories and various sample preparation and assay techniques have been used since 1981. Historical reporting and descriptions of laboratory sample preparation, assaying procedures, and quality control protocols for the samples from the various drilling programs are variable in their descriptions and completeness.					
tests	HISTORIC DRILLING (1986-2014)					
	For assay data obtained prior to 2001, the incomplete nature of the data results could not be accurately quantified in terms of the data derived from the combinations of various laboratories and analytical methodologies.					
	Since 1993, the majority of samples submitted to the various laboratories were typically prepared for analysis firstly by oven drying, crushing and pulverizing to a nominal 85% passing 75 $\mu$ m.					
	In the initial exploration stages, Aqua Regia digest with AAS/ICP finish, was generally used as a					

Criteria	Commentary				
	first pass detection method, with follow up analysis by Fire Assay fusion and AAS/ICP finish. This was a common practice at the time. Mineralised intervals were subsequently Fire Assayed (using 30, 40 or 50 gram catchweights) with AAS/ICP finish.				
	Approximately 15-20% of the sampled Aircore holes may have been subject to Aqua Regia digest methods only, however Aircore samples were predominantly within the oxide profile, where aqua regia results would not be significantly different to results from fire assay methods.				
	Limited information is available regarding check assays for drilling programs prior to 200				
	During 2004-2014, Navigator utilised six different commercial laboratories during their drilling programs, however Kalgoorlie Assay Laboratories conducted the majority of assaying for diamond, RC and Aircore samples using Fire Assay fusion on 40 gram catchweights and AAS/ICP finish.				
	Since 2009 Navigator regularly include field duplicates, Certified Reference Material (CRM) standards and blanks with their sample batch submissions to the laboratories at average ratio of 1 in every 20 samples. Sample assay repeatability, and blank and CRM standards assay results are within acceptable limits.				
	KIN MINING (2014-2017)				
	Sample analysis was conducted by SGS Australia Pty Ltd's ("SGS") Kalgoorlie and Perth laboratories. Sample preparation included oven drying (105°C), crushing (-6mm), pulverising (P85% -75µm) and riffle split to obtain a 50 gram catchweight. Analysis for gold only was carried out by Fire Assay fusion technique with AAS finish (SGS Lab Code FAA505).				
	KIN regularly insert blanks, field duplicate and CRM standards in each sample batch at a ratio of 1:20. This allows for at least one blank and one CRM standard to be included in each of the laboratory's fire assay batch of 50 samples. Field duplicate sample assay repeatability, blank standards and CRM standards assay results are within acceptable limits for this style of gold mineralisation.				
	SGS include blanks and CRMS as part of their internal QA/QC for sample preparation and analysis, as well as regular assay repeats. Sample pulp assay repeatability, and internal blank and CRM standards assay results are within acceptable limits.				
	COMMENT				
	The nature and quality of the assaying and laboratory procedures used are considered to be satisfactory and appropriate for use in mineral resource estimations.				
	Fire Assay fusion or Aqua Regia digestion techniques were conducted on diamond, RC and Aircore samples, with AAS or ICP finish.				
	Fire Assay fusion is considered to be a total extraction technique. The majority of assay data used for the mineral resource estimations were obtained by the Fire Assay technique with AAS or ICP finish. AAS and ICP methods of detection are both considered to be suitable and appropriate methods of detection.				
	Aqua Regia is considered a partial extraction technique, where gold encapsulated in refractory sulphides or some silicate minerals may not be fully dissolved, resulting in partial reporting of gold content.				
	No other analysis techniques have been used to determine gold assays.				
	KIN's ongoing QA/QC monitoring program identified one particular CRM that was returning spurious results. Further analysis demonstrated that the standard was compromised and subsequently removed and destroyed. A replacement CRM of similar grade was substituted into the QA/QC program.				
Verification of sampling and	Verification of sampling and assaying techniques and results prior to 2004 has limitations due to the legacy of the involvement of various companies, personnel, drilling equipment, sampling protocols and analytical techniques at different laboratories, over a twenty year period.				
assaying	In 2009, Runge Ltd ("Runge") completed a mineral resource estimate report for the Cardinia				

Criteria	Commentary				
	Project area, including the Helens and Rangoon deposits. Runge's database verification included basic visual validation in Surpac and field verification of drillhole positions in February 2009. Runge did not report any significant issues with the database.				
	Since 2014, significant drill intersections have been verified by KIN's company geologists during the course of the drilling programs.				
	During 2017, Carras Mining Pty Ltd ("CM") carried out an independent data verification. 10,499 assay records for KIN's 2014-2017 drilling programs were verified by comparing laboratory assay reports against the database. 6 errors were found, which are not considered material and which represents only 0.015% of all database records verified for KIN's 2014-2017 drilling programs				
	COMMENT				
	There is always a risk with legacy data that sampling or assaying biases may exist between results from different drilling programs due to differing sampling protocols, different laboratories and different analytical techniques.				
	Repeated examination of historic reports on phases of diamond, RC and Aircore drilling have been conducted from time to time. Assay results from KIN's recent drilling are consistent with surrounding information and as a result the information obtained from the various diamond, RC and Aircore drilling programs (where sampling protocols are appropriate) have been accepted.				
	Recent (2014-2017) RC and diamond drilling by KIN included some twinning of historical drillholes at the Helens and Rangoon resource areas, comprising historic information. There is no material difference between historical drilling information and the KIN drilling information. In the areas that were not drilled with twin holes, the drill density is considered sufficiently close enough to enable comparison with surrounding historic information, and there is no material difference of a negative nature between historical drilling information and the KIN drilling information. KIN's diamond holes were drilled for metallurgical and geotechnical test work, and assay results for these holes also show adequate correlation with nearby historical results.				
	Where sampling protocols are appropriate, diamond, RC and Aircore samples, are of equal importance in the resource estimation process.				
	There has been no adjustments or calibrations made to the assay data recorded in the supplied database.				
Location of	HISTORIC DATA (1986-2014)				
data points	Several local grids were established and used by previous project owners. During the 1990s, SOG transformed the surface survey data firstly to AMG and subsequently to MGA (GDA94 zone51).				
	Drilling was carried out historically using various local grids. Since 2004, All Navigators drill hole collars were surveyed on completion of drilling in the Australian MGA94, Zone51 grid using RTK-DGPS equipment by licensed surveyors, with more than 80% of the pickups carried out by independent contractors.				
	Almost all the diamond and at least 70% of Navigator's RC holes were downhole surveyed. Pre- Navigator, single shot survey cameras were used, with typical survey intervals of 30-40 metres.				
	KIN MINING (2014-2017)				
	KIN's drill hole collars were located and recorded in the field by a contract surveyor using RTK-DGPS (with a horizontal and vertical accuracy of ±50mm). Location data was collected in the GDA94 Zone51 grid coordinate system.				
	Downhole surveying during KIN's drilling programs was predominantly carried out by the drilling contractor. KIN recognised that some of the downhole survey data appeared to be spurious, and commissioned an independent downhole surveying program by a survey contractor (BHGS, Perth) to check several drillholes at Helens and Rangoon. The check survey found occasional				

Criteria	Commentary			
	spurious results with the initial surveys. This can be explained by the fact that when the drilling company's survey tool is run inside the drill rods, the tool's sensors need to be located exactly in the middle of the bottom stainless steel (s/s) RC rod to obtain accurate readings. Check readings by KIN personnel at different locations within the s/s rod found that variation in azimuth can be measured up to 2°, within 1 metre from the centre of the rod, and up to 10° further away from the centre. The positioning of the tool by the drilling contractor is assumed to be within 1 metre of the centre of the s/s rod for the majority of the drilling program. Therefore, given the nature of the mineralisation and the shift in apparent position of up to 5 metres (for 2° variation) along 'strike' for open pit depths (<140 metres), the occasional errors are not considered material for this resource estimation work.			
	In addition, if the downhole survey tool is located within 15 metres of the surface, there is risk of influence from the drill rig affecting the azimuth readings. This was observed for the survey readings, which include total magnetic intensity (TMI) measurements, where TMI is spurious for readings taken at downhole depths less than 20 metres. These spurious readings are included in the database, but are not used.			
	KIN supplied two digital terrain models (DTM) of the topography: one DTM constructed from drill hole collar data, and the second from a recent aerial orthophotogrammetry survey. The two DTM surfaces correlate sufficiently close and within acceptable limits for horizontal and vertical control, and appropriate for resource estimations.			
	COMMENT			
	The accuracy of the drill hole collar and downhole data are located with sufficient accuracy for use in resource estimation work.			
	Some historical Navigator drillhole collar positions at Helens and Rangoon have recently been independently located and verified in the field, and checked against the database.			
	Considering the history of grid transformations and surviving documentation, there might be some residual risk of error in the MGA co-ordinates for old drillholes, however this is not considered to be material for the resource estimations, subject of this report.			
	Azimuth data was historically recorded relative to magnetic north. Much of the historical drilling data was recorded relative to magnetic north. Variation in magnetic declination for the Cardinia Project area is calculated at +0.823° East (1985) to +1.301° East (2017), with a maximum variation of +1.575° in 2005. The difference between true north and magnetic north, and the annual variation in magnetic declination since 1985 is not significant, therefore magnetic north measurements have been used, where true north data is unavailable, for all survey data used in resource estimation processes.			
Data spacing and	Drill hole spacing patterns vary considerably throughout the Project area, and is deposit specific, depending on the nature and style of mineralisation being tested.			
distribution	Drill hole and sample interval spacing is sufficient to establish an acceptable degree of geological and grade continuity appropriate for mineral resource estimations and classifications applied.			
	There has been no sample compositing, other than a few historical compositing of field samples for some Aircore and RC samples to 1.5m, 2m, 3m, 4m and a few 5m intervals. The vast majority (>90%) of primary assay intervals are 1 metre intervals for RC and Aircore samples, and predominantly 1 metre intervals for core samples.			
Orientation of data in relation to geological	The sheared Cardinia greenstone sequence displays a NNW to NW trend. The drilling and sampling programs were carried out to obtain an unbiased location of drill sample data, generally orthogonal to the strike of mineralisation.			
structure	Mineralisation is structurally controlled in sub-vertical shear zones within the Cardinia area, with a supergene component in the oxidised profile.			
	The vast majority of historical and KIN's drilling is orientated at -60°/245° (WSW) and -60°/065° (ENE), generally orthogonal to the strike of mineralisation.			

Criteria	Commentary				
	The chance of sample bias introduced by sample orientation is considered minimal. No orientation sampling bias has been identified in the data thus far.				
Sample	HISTORIC DRILLING (1986-2014)				
security	No sample security details are available for pre-Navigator (pre-2004) drill samples.				
	Navigator's drill samples were collected from the riffle splitter in pre-numbered calico bags at the drill rig site. Samples were collected by company personnel from the field and transported to Navigator's secure yard in Leonora, where the samples were then batch processed (drillhole and sample numbers logged into the database) and then packed into 'bulkabag sacks'. The bulkabags were tied off and stored securely in Navigator's yard, until transporting to the laboratory. There was no perceived opportunity for the samples to be compromised from collection of samples at the drill site, to delivery to the laboratory.				
	KIN MINING (2014-2017)				
	KIN's RC drill samples were collected from the riffle splitter in pre-numbered calico bags at the drill rig site. The samples were then batch processed (drillhole and sample numbers encoded onto a hardcopy sample register) in the field, and then transported and stacked into 'bulkabag sacks' at KIN's secure yard in Leonora. The bulkabags were tied off and stored securely in the yard. The laboratory's (SGS) transport contractor was utilized to transport the bulkabags to the laboratory. There was no perceived opportunity for the samples to be compromised from collection of samples at the drill site, to delivery to the laboratory, where they were stored in their secure compound, and made ready for processing.				
	On receipt of the samples, the laboratory (SGS) independently checked the sample submission form to verify samples received, and readied the samples for sample preparation. SGS's sample security protocols are of industry acceptable standards.				
Audits or reviews	Historic drilling and sampling methods and QA/QC are regarded as not being as thoroughly documented compared to today's current standards. A review of various available historical company reports of drilling and sampling techniques indicates that these were most likely conducted to the best practice industry standards of the day.				
	A review of the Cardinia Project's database, drilling and sampling protocols, and so forth, was conducted and reported on by independent geological consultants Runge Ltd in 2009. Their report highlighted issues with bulk density and QA/QC analysis of the database, which have since been identified and addressed by Navigator and most recently by KIN during the 2017 drilling campaign.				
	During 2017, CM have reviewed and carried out an audit on the field operations and database. Drilling and sampling methodologies observed during the site visits are to today's industry standard. Similarly there were no issues identified for the supplied databases, which would be considered material.				
	KIN is in the process of completing validation of all historical logging data and to standardise the logging code system by incorporating the SOG and Navigator logging codes into one, and converting all historical logging into the standardized code system. This is an ongoing process and is not yet completed.				
	During the review, CM logged the oxidation profiles ('base of complete oxidation' or "BOCO", and 'top of fresh rock' or "TOFR") for each of the deposit areas, based on visual inspection of selected RC drill chips from KIN's recent drilling programs, and a combination of historical and KIN's drillhole logging, with final adjustments made with input from KIN geologists. The oxidation profiles were used to assign bulk densities and metallurgical recoveries to the resource models.				
	Bulk density testwork in the past has been inconsistent with incorrect methods employed, to derive specific gravity or in-situ bulk density, rather than dry bulk density. Navigator (2009) and recent KIN (2017) bulk density testwork was carried out using the water immersion method on oven dried, coated samples to derive dry bulk densities for different rock types and oxidation				

Criteria	Commentary					
	profiles. This information has been incorporated into the database for resource estimation work.					
	CM conducted site visits during 2017 to the laboratory to validate the methodology.					
	Recent (2014-2017) RC and diamond drilling by KIN include some twinning of historical drillholes within the Cardinia Project area. In addition, KIN's infill drilling density is considered sufficiently close enough to enable comparison with surrounding historic information, and there is no material difference of a negative nature between historical drilling information and the KIN drilling information. KIN's diamond holes were drilled for metallurgical and geotechnical test work, and assay results for these holes also show good correlation with nearby historical results.					
	Drilling, Sampling methodologies and assay techniques used in these drilling programs are considered to be appropriate and to mineral exploration industry standards of the day.					

#### **SECTION 2 – Reporting of Exploration Results**

(Criteria in the preceding section also apply to this section)

Criteria	Commentary				
Mineral tenement and land tenure status	The Cardinia Project's Helens and Rangoon areas includes granted mining tenements M37/316 and M37/317, centered some 35-40km NE of Leonora. The tenements are held in the name of Navigator Mining Pty Ltd, a wholly owned subsidiary of KIN. The Cardinia Project is managed, explored and maintained by KIN, and constitute a portion of KIN's Leonora Gold Project (LGP), which is located within the Shire of Leonora in the Mt Margaret Mineral Field of the North Eastern Goldfields.				
	There are no known native title interests, historical sites, wilderness areas, national park or environmental impediments over the resource areas, and there are no current impediments to obtaining a licence to operate in the area.				
Exploration done by other parties	There is limited exploration data available prior to 1986, where exploration for nickel was carried out in the late 1960s and for base metals in the 1970s. During 1980-1985, Townson Holdings Pty Ltd ("Townson") mined a small open pit over some old workings at the Rangoon prospect.				
	Companies involved in the collection of the majority of the gold exploration data since 1986 and prior to 2014 include: Mt Eden Gold Mines (Aust) NL (also Tarmoola Aust Pty Ltd "MEGM") 1986-2003; Pacmin Mining Corporation Ltd ("Pacmin") 1998-2001; Sons of Gwalia Ltd ("SOG") 2001-2004, and Navigator Resources Ltd ("Navigator") 2004-2014.				
	In 2009, Navigator commissioned Runge Limited ("Runge") to complete a Mineral Resource estimate for the Helens and Rangoon deposits. Runge reported a JORC 2004 compliant Mineral Resource estimate, at a low cut-off grade of 0.7g/t Au, totaling 1.45Mt @ 1.3 g/t au (61,700 oz Au), comprising total Indicated Resources of 1.0Mt @ 1.4 g/t Au and total Inferred Resources of 0.446Mt @ 1.2 g/t Au.				
	KIN's drilling is focused in areas hosting the Helens and Rangoon deposits together with the strike extensions and historical drilling conducted by the above mentioned operators.				
Geology	The Cardinia Project area is located 35km NE of Leonora in the central part of the Norseman-Wiluna Greenstone Belt, which extends for some 600km on a NNW trend across the Archean Yilgarn Craton of Western Australia.				
	The regional geology comprises a suite of NNE-North trending greenstones positioned within the Mertondale Shear Zone (MZN) a splay limb of the Kilkenny lineament. The MSZ denotes the contact between Archaean felsic volcanoclastics and sediment sequences in the west and Archaean mafic volcanics in the east. Proterozoic dykes and Archaean felsic porphyries have intruded the sheared mafic/felsic volcanoclastic/sedimentary sequence.				
	Locally within the Cardinia Project area, the stratigraphy consists of intermediate, mafic and felsic volcanic and intrusive lithologies and locally derived epiclastic sediments, which strike NNW with a sub-vertical attitude. Structural foliation of the stratigraphy dips moderately to the east.				
	At Helens and Rangoon, the stratigraphy comprises a sequence of intermediate-mafic and felsic volcanic lithologies and locally derived epiclastic sediments, intruded in places by narrow felsic porphyry dykes. Carbonaceous shales often mark the mafic/felsic contact. These lithologies are located on the western limb of the regionally faulted south plunging Benalla Anticline.				
	Primary mineralised zones at the Helens and Rangoon areas are north-south trending with a subvertical attitude. Mineralisation is hosted predominantly in mafic rock units, adjacent to the felsic volcanic/sediment contacts, where it is associated with increased shearing, intense alteration and disseminated sulphides.				
	Minor supergene enrichment occurs within the mineralised shears within the regolith profile.				
	In some areas, gold mineralisation is highly variable in the regolith. In these areas, closer spaced				

Criteria	Commentary			
	drilling was carried out by KIN to provide a high level of confidence in the interpretations.			
Drill hole Information	Material drilling information used for the resource estimation has previously been publicly reported in numerous announcements to the ASX by Navigator (2004-2014) and KIN since 2014.			
Data Aggregation methods	When exploration results have been reported for the resource areas, the intercepts are reported as weighted average grades over intercept lengths defined by geology or lower cut-off grades, without any high grade cuts applied. Where aggregate intercepts incorporated short lengths of high grade results, these results were included in the reports.			
	Since 2014, KIN have reported RC drilling intersections with low cut off grades of >= 0.5 g/t Au and a maximum of 2m of internal dilution at a grade of <0.5g/t Au.			
	There is no reporting of metal equivalent values.			
Relationship Between Mineralisation widths and intercept lengths	The orientation, true width and geometry of the mineralised zones have been determined be interpretation of historical drilling and verified by KIN's drilling. The majority of drill holes are inclined at -60° towards 245° (WSW), which is regarded as the optimum orientation to intersect the target mineralisation, and some at -60° towards 065° (ENE). Since the mineralisation is steepl dipping, drill intercepts are reported as downhole widths, not true widths. Accompanying dialogue to reported intersections normally describe the attitude of the mineralisation.			
Diagrams	A plan and type sections for each resource area are included in the main body of the report.			
Balanced Reporting	Public reporting of exploration results by KIN and past explorers for the resource areas ar considered balanced and included representative widths of low and high grade assay results.			
Other Substantive exploration data	Comments on recent bulk density and metallurgical information is included in Section 3 of th Table 1 Report. There is no other new substantive data acquired for the resource areas beir reported on. All meaningful and material information is or has been previously reported.			
Further work	The potential to increase the existing resources is viewed as probable. Further work does guarantee that an upgrade in the resource would be achieved, however KIN intend to drill me holes at the Helens and Rangoon resource areas with the intention of increasing the Cardi Project's resources and converting the Inferred portions of the resources to the Indicated category.			

#### **SECTION 3 – Estimation and Reporting of Mineral Resources**

(Criteria in section 1, and where relevant in section 2, also apply to this section)

Criteria	Commentary					
Database Integrity	All sample data, subject of this report and used for resource estimation work, is obtained from various drilling programs carried out since 1986. Data was obtained predominantly from Reverse Circulation (RC) drilling, and to a lesser extent, diamond core (Diamond) drilling and Air Core (Aircore) drilling.					
	Companies involved in the collection of the majority of the gold exploration data since 1986 and prior to 2014 include: Mt Eden Gold Mines (Aust) NL (also Tarmoola Aust Pty Ltd "MEGM") 1986-2003; Pacmin Mining Corporation Ltd ("Pacmin") 1998-2001; Sons of Gwalia Ltd ("SOG") 2001-2004, and Navigator Resources Ltd ("Navigator") 2004-2014.					
	KIN exploration data from 2014 to 2017 has been acquired predominantly from RC and some diamond drilling.					
	The database could not be fully verified regarding the reliability and accuracy of a substantial portion of the historical data, however the recent drilling by KIN has enabled comparison with the historical data and there is no material differences observed of a negative nature.					
	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 of historic (pre-2004) data, however the amount of historic data used in the resource estimation is minimal and the effect would not be material.					
	The logging data coded in the database uses at least four different lithological code systems, a legacy of numerous past operators (MEGM, Pacmin, SOG & Navigator). Correlation between codes is difficult to establish, however can be achieved with effort. Based on historical reports, drill hole logging procedures appear consistent with normal industry practices of the time.					
	KIN has attempted to validate historical logging data and to standardise the logging code system by incorporating the SOG and Navigator logging codes into one. This is an ongoing process and is not yet completed.					
	The drilling by Navigator and KIN has been used to scrutinize and calibrate historic logging data. This has enabled KIN to establish good geological control, which has been used to derive the geological interpretations in current work.					
	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.					
	In 2009, Runge Ltd ("Runge") completed a mineral resource estimate report for the Cardinia Project area, including the Helens and Rangoon deposits. Runge carried out database verification, which included basic visual validation in Surpac and field verification of drillhole positions in February 2009. Runge did not report any significant issues with the database.					
	Since 2014, KIN geologists have conducted verification of historic drilling, assays, geological logs and survey information against the digital database, and in the field, including reviewing historic reports and visual confirmations of Surpac and Access databases. KIN have not reported any significant issues with the database.					
	KIN has validated the database in Datashed and in Surpac prior to Resource estimation. These processes checked for holes that have missing data, missing intervals, overlapping intervals, data beyond end-of-hole, holes missing collar co-ordinates, and holes with duplicate collar co-ordinates.					
	During 2017, CM carried out an independent data verification. 10,499 assay records for KIN's 2014-2017 drilling programs were verified by comparing laboratory assay reports against the database. 6 errors were found, which are not considered material and which represents only					

Criteria	Commentary					
	0.015% of all database records verified for KIN's 2014-2017 drilling programs.					
Site Visit	KIN's geological team have conducted multiple site visits including supervision and management of drill programs within each of the Resource areas.					
	Dr Spero Carras (Competent Person) was involved in the Leonora area at the Harbour Lights Mertondale areas during the 1980s, and is familiar with the geology and styles of mineralisa within the Leonora Project area. He revisited the Leonora area during 2017 to review projects, drilling, sampling and general geology.					
Geological	Messrs Mark Nelson and Gary Powell (Competent Persons) also conducted site visits to th resource areas, and they have independently reviewed drill core, existing open pits, surface exposures, drilling and sampling procedures.  The Cardinia Project area is located 35km NE of Leonora in the central part of the Norseman					
Interpretati on	Wiluna Greenstone Belt, which extends for some 600km on a NNW trend across the Archean Yilgarn Craton of Western Australia.					
	The regional geology comprises a suite of NNE-North trending greenstones positioned within the Mertondale Shear Zone (MZN) a splay limb of the Kilkenny lineament. The MSZ denotes the contact between Archaean felsic volcanoclastics and sediment sequences in the west and Archaean mafic volcanics in the east. Proterozoic dykes and Archaean felsic porphyries have intruded the sheared mafic/felsic volcanoclastic/sedimentary sequence.					
	Locally within the Cardinia Project area, the stratigraphy consists of intermediate, mafic and felsic volcanic and intrusive lithologies and locally derived epiclastic sediments, which strike NNW with a sub-vertical attitude. Structural foliation of the stratigraphy dips moderately to the east.					
	At Helens and Rangoon, the stratigraphy comprises a sequence of intermediate-mafic and felsic volcanic lithologies and locally derived epiclastic sediments, intruded in places by narrow felsic porphyry dykes. Carbonaceous shales often mark the mafic/felsic contact. These lithologies are located on the western limb of the regionally faulted south plunging Benalla Anticline.					
	Primary mineralised zones at the Helens and Rangoon areas are north-south trending with a subvertical attitude. Mineralisation is hosted predominantly in mafic rock units, adjacent to the felsic volcanic/sediment contacts, where it is associated with increased shearing, intense alteration and disseminated sulphides.					
	Minor supergene enrichment occurs within the mineralised shears within the regolith profile.					
Dimensions	The dimensions of the mineralized area for Helens are 1700mN x 50m. The Helens area includes a total of 27,830m of drilling. The drilling in the mineralized area for Helens includes 9 DD holes for 148m, 418 RC holes for 5,473m and 23 AC holes for 127m.					
	The dimensions of the mineralized area for Rangoon are 900mN x 50m. The Rangoon area includes a total of 12,356m of drilling. The drilling in the mineralized area for Rangoon includes 2 DD holes for 24m, 175 RC holes for 1,631m and 16 AC holes for 107m.					
Estimations and Modelling Techniques	<ul> <li>59. The following outlines the estimation and modelling technique used for producing Resources for the following deposits in the Helens/Rangoon area:</li> <li>Helens</li> <li>Rangoon</li> </ul>					
·	D Orebody Dimensions e p o	Nominal Drill Spacing	Mineralised Metres of Drilling (m)			

Criteria	Commentary				
	i				
	t				
	Н	1700m x 50m x 100m	25m x 12.5m	5,748	
	е				
	I				
	е				
	n				
	S				
	R	900m x 50m x 100m	25m x 12.5m	1,762	
	а				
	n				
	g				
	0				
	0				
	n				

- 60. Wireframes were provided by KIN Mining NL (KIN) for:
  - a. Topography based on drill collar data
  - b. Bottom of Oxidation (BOCO)
  - c. Top of Fresh Rock (TOFR)
- 61. CM carried out an Independent Review of the weathering surfaces and where necessary, based on new drilling (both RC and diamond), geological relogging and bulk density information, the surfaces were modified to reflect the additional information. Surface topography was also adjusted due to new information obtained in an April 2017 drone survey.
- 62. Based on geology, statistical analysis and intersection selection, domainal shapes were wireframed at a 0.3g/t nominal edge cut-off grade. These domainal shapes could contain values less than 0.3g/t within the wireframes although this was minimized to prevent smoothing dilution being incorporated into the final models. A minimum of 5m downhole at a 0.4g/t cut-off grade was also used as a guide for wireframing. This could include internal waste.
- 63. The wireframed shapes were audited by KIN geological staff who had previous experience in the Cardinia area whilst working for Navigator.
- 64. Each wireframe had an assigned strike, dip and plunge.
- 65. Compositing from the top of each shape was carried out at 1m within each wireframe. The majority of composites (98%) were greater than 1m.
- 66. The domainal shapes were passed into ISATIS Software with specified strike, dip and plunge.
- 67. The number of shapes used was as follows:

Deposit	Number of
	Shapes
Helens	72
Rangoon	38

- 68. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.
- 69. The declustering program DECLUS (ISATIS) was used to produce the weights to be assigned to each composite for statistical analysis.

70. For each shape a detailed set of weighted statistics was produced. Based on the statistics,
high grade cuts were determined for every shape and the percentage metal cut was
estimated for each deposit as shown in the below table:

Criteria

Deposit	Maximum Cut	Percentage
	(g/t)	Metal Cut %
Helens	70	4
Rangoon	30	28

Commentary

Note that the metal cut appears high however it is due to one outlier assay value of 551g/t.

- 71. Where a data point belonged to 2 shapes the cut allocated was determined for each domain and independently allocated.
- 72. Variograms were run for each domain using ISATIS. The variograms were of very poor quality with the downhole variograms being the basis of fitted models. Directional variograms were produced for downhole, down dip, down plunge. Where the downhole variograms were calculated on an individual hole basis, variograms were not normalized. Variograms were normalized for down dip and plunge. Raw variograms were used in subsequent work.
- 73. The Author, Dr. S. Carras had extensive experience in the Leonora Belt during the 1980's and has had familiarity with the nature of the mineralisation. The shears are made up of plunging en-echelon structures. Three estimations were produced, OK, Inverse Distance Squared (ID2) and Inverse Distance Cubed (ID3).
- 74. The following parameters were used in modelling OK, ID2 and ID3:
  - A minimum number of samples of 4 and a maximum number of samples of 32
  - The discretisation parameters were 1 x 1 x 2
  - A maximum of 2 samples per hole
  - Note: for blocks that did not meet these requirements, the parameters were relaxed and the search radii were increased.
  - To minimize the striping effect created by estimation in narrow shapes, the downhole search radii were increased.
- 75. The ranges of search and directions used were applied on a shape by shape basis. The aim was to produce OK results for the majority of shapes where there had been adequate data to produce meaningful variography. Small shapes where there was inadequate data were estimated using an anisotropic distance weighting squared methodology rather than OK.
- 76. The fundamental block size used was:

Deposit	Small Blocks
Helens, Rangoon	1.25mN x 0.5mE x
Combined	1.25mRL

Small blocks were used to ensure adequate volume estimation where shapes were narrow.

77. Scatter plots were then produced which compared OK, ID2 and ID3 for the small blocks.

Criteria	Commentary						
	78. The models were then visually checked on a section by section basis of block versus drillholes and ID2 proved to be the best fit.						
	79. The small blocks produced by ID2 were then composited to form medium (quarter) sized blocks and panels. The block dimensions for the medium (quarter) sized blocks and panels were:						
	Deposit	Medium (Quarter) Blocks	Panels				
	Helens, Rangoon 5mN x 5mE x 10mN x 8mE x 5mRL Combined 2.5mRL						
	Quarter size blocks were used for r	eporting Resources.					
	80. Plots were produced of frequency h	istograms in domains for poir	nt data and for blocks.				
	81. To check that the interpolation of the carried out comparing the interpolation plots showed good correlation thus	ed blocks to the sample comp	oosite data. The validation				
	82. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.						
	83. Classification was carried out using a combination of drillhole density, drillhole quality, and geology as the guide.						
	84. Resources were estimated within an AUS\$2,200 optimised pit shell provided by Entech (Perth). The optimised pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a dilution of 5% and a recovery of 95%. This was minimal and was only used to define the Resource not the Reserve. The Resources reported are undiluted and do not have an ore loss applied.)						
	85. Operating cost estimates developed by KIN indicated that a break even mill feed cut-off grade for deposits in the Cardinia area was likely to be 0.5g/t Au.						
Moisture	Tonnages and grades were estimated on a dry basis only. Bulk Density determinations of diamond drill core included measurements of moisture content.						
Cut-off Parameters	Operating cost estimates provided by KIN's engineering consultants indicate a break even mining grade for open pit deposits in the Cardinia area is likely to be 0.5g/t Au.						
Mining Factors or Assumption s	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.						
3	Helens and Rangoon resources comprise well defined zones of Au mineralisation – associated with shearing/quartz veining. The mineralised zones are robust, approximately 3km strike extension to a vertical depth of approximately 115m.						
	Helens and Rangoon will be mined by op	en pit.					

Criteria	Commentary					
Metallurgic al Factors or	In 2017 KIN's drilling program included a series of RC and DD drillholes to collect samples for geotechnical and metallurgical testwork.					
Assumption s	Metallurgical testwork in the nineties in oxide, lower nine	_		_	recoveries of mid-	
	During the mining process, envisaged to be possible so can be achieved, so as to m	that successful s	segregation and	quarantining of	the shale material	
Environmen	No assumptions have been	made regarding	environmental f	actors.		
tal Factors or Assumption s	Historical mining at the ne landforms have not demon Studies completed to date, of and processing operations, be managed by normal ope	strated any impa on ore and waste have not identifi	acts that cannot characterisation	be managed in ns for previous a	normal operations. nd potential mining	
Bulk Density	Prior to 2014, there have been numerous programs of bulk density testwork conducted by several companies at different times on diamond drill core and/or RC drill chips for the some of the various deposits. Generally the testwork has not been conclusive, since the testwork methodology has not been adequately described in the historical reports, or when it has, the testwork itself was not carried out using an acceptable method to determine dry bulk density. Often, when described, the testwork measured specific gravity, not bulk density, and in cases where bulk density was reported, the moisture content was not taken into account.					
	In 2009 Navigator Resources Ltd submitted 144 half or whole diamond core samples to Amdel Mineral Laboratories Ltd's ("Amdel") Kalgoorlie laboratory for bulk density determination by the water immersion method. The core samples were a mixture of half core and whole core samples ranging from 10cm to 30cm in length, and were taken at downhole intervals of roughly every 2 to 3 metres. The samples were firstly weighed, oven dried overnight at 110°C, and weighed again to determine moisture content. Those samples that were likely to absorb water were then sealed, using hairspray, prior to immersion in water. It is not known what proportion of samples were not sealed, however it is likely that only fresh, non-porous samples were not sealed.					
	In 2017, KIN carried out a diamond drilling program to include obtaining samples for bulk density testwork. Six diamond drill holes were drilled into the major parts of mineralised zones at Helens South, Helens North, Helens NE and Rangoon.					
	A total of 526 half or quarter core samples, of varying lengths (5-20cm) were submitted by KIN to an independent laboratory in Perth for bulk density determinations by the water immersion method. The core samples were a mixture of half core and quarter core samples ranging from 5cm to 20cm in length, and were taken at downhole intervals of roughly every 1 metre. The samples were firstly weighed, oven dried overnight at 110°C, and weighed again to determine moisture content. The samples were then sealed, using hairspray, prior to immersion in water.				e water immersion mples ranging from every 1 metre. The again to determine	
	During the 2017 bulk density testwork and estimation process, Dr S Carras and Mr G Power (Consultant to CM) visited the laboratory and identified some improvements for consideration in the bulk density determination process, particularly for small core pieces to give better precision of measurements. The suggested improvements were implemented and precision improved.				ts for consideration eces to give better	
	When estimating the bulk of sized samples gave more redensities.					
	As a result of the analysis results, the following bulk d		_		•	
	Area	Oxide	Transition	Fresh		

Criteria	Commentary						
	Helens / Rangoon 2.1 2.4 2.7						
Classificatio n	Classification was based on a combination of drillhole spacing, drillhole quality and confidence in geological continuity. In general all deposits were drilled on the following nominal grids (N-E):						
	<ul> <li>Helens: 25m x 12.5m</li> <li>Rangoon: 25m x 12.5m</li> </ul>						
	In general drillhole space Indicated.	cing of 25m x 12.	5m resulted in	mineralisation	n being classified as		
	Drillhole spacing general allocated to the Inferred		pth and as a res	ult deeper mir	neralisation is mostly		
	The Mineral Resource es	timate appropriatel	y reflects the vie	w of the Comp	petent Person.		
Audits and Reviews	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.						
	Navigator Resources had worked with Runge (2009) to produce estimates for the Cardinia deposits using ordinary kriging. KIN personnel carried out audits and internal reviews of the data, assay, survey, wireframes and geological interpretations used by CM. CM also carried out detailed reviews of all data.						
	Bulk density determination methodology was audited by S Carras and G Powell (Consultant t CM) through visitation of the independent laboratory.						
Discussion of Relative Accuracy	KIN embarked on a program of infill drilling, including some close spaced drilling. The drilling largely substantiated the position and tenor of mineralisation. It also validated the information obtained from various drilling campaigns. (In some instances new results were much higher.)						
In the modelling process every attempt has been made to eliminate the "string effect" associated with the estimation of narrow vein structures through the use of ordinar This has been achieved through the use of distance weighting estimates correlated ordinary kriging estimates. This method, although heuristic has been validated by a review of the block models and the drillhole data.							
	Every attempt has been made in the modelling to reduce the smoothing effect which when using a low cut-off grade to determine boundary positions and limit the amount of in the Resource so that it can be correctly diluted for Reserve.						
	In all high coefficient of variation orebodies, local estimation is very difficult to achieve due to the high nugget effect of the gold. This means that small parcels of ore are difficult to estimate without further information such as closer spaced grade control drilling.						

### **Appendix D**

# JORC 2012 TABLE 1 REPORT RAESIDE PROJECT Michelangelo and Leonardo

#### SECTION 1 – Sample Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	Commentary
Sampling techniques	All sample data, subject of this report and used for resource estimation work, is obtained from various drilling programs carried out since 1989. Data was obtained predominantly from Reverse Circulation (RC) drilling, and to a lesser extent diamond core (Diamond) drilling and Air Core (Aircore) drilling.
	There is limited exploration data available prior to 1989, where it is believed that exploration was more focused on base metals, and not gold. Companies involved in the collection of the majority of the gold exploration data since 1989 and prior to 2014 include: Triton Resources Ltd ("Triton") 1989-1999, Triton and Sons of Gwalia Ltd ("SOG") 2000-2004, and Navigator Resources Ltd ("Navigator") 2004-2014.
	Kin Mining Ltd ("KIN") acquired the Raeside Project in 2014.
	HISTORIC SAMPLING (1989-2014)
	For some historical drilling programs, RC and Aircore samples were composited at 2, 3, 4 or 5 metre downhole intervals, however the majority of drill samples were generally obtained from 1m downhole intervals and riffle split to obtain a 3-4kg representative sub-sample, which were submitted to a number of commercial laboratories for a variety of sample preparations methods, including oven drying (90-110°C), crushing (-2mm to -6mm), pulverizing (-75µm to -105µm), and generally riffle split to obtain a 30, 40 or 50 gram catchweight for gold analysis, predominantly by Fire Assay fusion, with AAS finish. On occasions, initial assaying have been carried out using Aqua Regia digest and AAS/ICP finish, with anomalous samples re-assayed by Fire Assay fusion and AAS/ICP finish.
	Diamond Drilling
	Half core (or quarter core) sample intervals varied from 0.1 to 1.0m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in marked core trays and stored in a secure yard for future reference. The only known available drill core from this program (1 Diamond drill hole for 180.1m) and stored at KIN's Leonora Exploration Yard, are those drilled by Navigator.
	RC Drilling
	The vast majority of Reverse Circulation (RC) drill samples were collected over 1m downhole intervals from beneath a cyclone and then riffle split to obtain a sub-sample (typically 3-4kg). After splitting, 1m sub-samples were typically collected in pre-numbered calico bags, and the 1m sample rejects were commonly stored at the drill site in marked plastic bags, for future reference. First pass sampling often involved collecting composite samples by using a scoop (dry samples) or spear (wet samples) to obtain 3m or 4m composited intervals, with the single metre split sub-samples being retained at the drill site. If the composite sample assays returned anomalous results, the single metre sub-samples for the anomalous composite intervals were retrieved and submitted for gold analysis.
	Navigator obtained sub-samples from wet samples using the spear method.
	Data relating to historical wet samples is not available, however the number of wet samples involved is considered to be relatively low, and not material.
	There are no sample rejects available from RC drilling prior to 2014. Most drill sites have been

Criteria	Commentary				
	rehabilitated and the sample bags removed and destroyed.				
	Aircore Drilling				
	The procedures for sampling of Aircore drilling is generally the same as for RC drilling in earlier (pre-2004) programs, the majority of the 1m samples were mostly stored drilling ground prior to sampling with a scoop. Assay results from these samples are not used estimation work, however they do sometimes provide a guide in interpreting mineralisation continuity.	irectly on the I for resource			
	When drilling under dry conditions, Aircore samples should be of a comparable quality to RC samples, when implementing same sampling techniques, therefore Aircore sample assay results were only used for resource estimation work if the 1m sub-samples were obtained by riffle splitting of the primary sample, prior to placing on the ground.				
	There are no sample rejects available from AC drilling prior to 2014. Most drill site rehabilitated and the sample bags removed and destroyed.	es have been			
	RAB Drilling				
	No Rotary Air Blast (RAB) drilling has been included in the Michelangelo or Leona estimation.	rdo resource			
	KIN MINING (2014-2017)				
	Diamond Drilling				
	Diamond drill core (HQ3) samples collected for analysis were longitudinally cut in half, and then in quarters, using a powered diamond core saw blade centered over a cradle holding the core in place. Core sample intervals varied from 0.2 to 1.15m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in their respective core trays and securely stored in KIN's yard in Leonora for future reference.				
	RC Drilling				
	During drilling, sample return is passed through a cyclone and stored in a sample coat the end of each metre, the cyclone underflow is closed off, the underside of the sopened and the sample passed down through a riffle splitter.				
	All RC sub-samples were collected over one metre downhole intervals and ave Sample reject from the riffle splitter were retained and stored in marked plastic bags near to each drillhole collar.				
	All drilling, sample collection and sampling handling procedures were conducted and/or supervised by KIN geology personnel to today's industry standards. QA/QC procedures were implemented during each drilling program to today's industry standards.				
	<u>Analysis</u>				
	Once received at the assay laboratory, diamond core and RC samples were oven dried (105-110°C), crushed (-6mm & -2mm), pulverised (P85% -75µm) and split to obtain a representative 50 gram sample catchweight for gold only analysis using Fire Assay fusion with AAS finish.				
	COMMENT				
	For some historical drilling programs, RC and Aircore samples were composited a metre downhole intervals. For resource estimation work, some RC field composite was used where appropriate.				
Drilling techniques	Numerous programs comprising various types of drilling have been conducted by several companies since 1989. The entire Raeside database encompasses the various deposits and prospects within the Raeside Project area, including Michelangelo, Leonardo, Forgotten Four and Krang, and consists of 1,805 drill holes for a total 134,278 metres, excluding RAB drilling, viz:				
	Drill Type Holes Metres (m) Metre Percentage (%)				
	DD 12 1,906 1.4%				

Criteria	Commentary				
	RC	1,163	102,264	76.2%	
	AC	630	30,108	22.4%	
	Total	1,805	134,278	100.0%	

#### **HISTORIC DRILLING (1989-2014)**

#### **Diamond Drilling**

Diamond drilling was carried out using industry standard 'Q' wireline techniques, with the core retrieved from the inner tubes and placed in core trays. Core sizes include NQ/NQ3 (Ø 45-48mm) and HQ/HQ3 (Ø 61-64mm). At the end of each core run, the driller placed core blocks in the tray, marked with hole number and depth. Core recovery was usually measured for each core run and recorded onto the geologist's drill logs.

#### **RC** Drilling

RC drilling used conventional reverse circulation drilling techniques, utilising a cross-over sub, until the late 1980s, when the majority of drilling companies started changing over to using face-sampling hammers with bit shrouds. Drill bit sizes typically ranged between 110-140mm. Samples obtained from conventional RC drilling techniques with cross-over subs often suffered from down hole contamination (e.g. smearing of grades), especially beneath the water table. Samples obtained from RC drilling techniques using the face sampling hammer suffered less from down hole contamination and were more likely to be kept dry beneath the water table, particularly if auxiliary and booster air compressors were used. These samples are considered to be more reliable and representative.

#### **Aircore Drilling**

Aircore drilling is a form of RC drilling, but generally utilizing smaller rigs and smaller air compressors, compared to standard RC drill rigs of the times. Aircore bits are hollow in the centre, with the kerf comprising cutting blades or 'wings' with tungsten-carbide inserts. Drill bit diameters usually range between 75-110mm.

The majority of the Aircore drilling (100%) was conducted by Triton utilising suitable rigs with appropriate compressors (eg 250psi/600cfm). Aircore holes were drilled mostly into the weathered regolith using 'blade' or 'wing' bits, until the bit was unable to penetrate further ('blade refusal'), often near to the fresh rock interface. Hammer bits were used only when it was deemed necessary to penetrate harder rock types. Hole depths averaged less than 50m.

#### **RAB Drilling**

RAB drilling is carried out using small air compressors (eg 250psi/600cfm) and drill rods fitted with a percussion hammer or blade bit, with the sample return collected at the drillhole collar using a stuffing box and cyclone collection techniques. Drillhole sizes generally range between 75-110mm.

#### **KIN MINING (2014-2017)**

#### **Diamond Drilling**

Diamond drilling was carried out by contractor Orbit Drilling Pty Ltd ("Orbit Drilling") with a truck-mounted Hydco 1200H drill rig, using industry standard 'Q' wireline techniques. Drill core (HQ3) is retrieved from the inner tubes and placed in plastic core trays and each core run depth recorded onto core marker blocks and placed at the end of each run in the tray.

Drillhole deviation was measured at regular downhole intervals, typically at 10m from surface, thence every 30m to bottom of hole, using electronic multi-shot downhole survey tools (i.e. Reflex multi-shot).

Core orientation was obtained for each core run where possible, using electronic core orientation tools (e.g. Reflex EZ-ACT) and the 'bottom of core' marked accordingly.

#### **RC** Drilling

RC drilling was carried out by Orbit Drilling's truck-mounted Hydco 350RC drill rigs with

#### Criteria Commentary

350psi/1250cfm air compressor, with auxiliary and booster air compressors (when required). Drilling utilised mostly downhole face-sampling hammer bits ( $\emptyset$  140mm), with occasional use of blade bits for highly oxidized and soft formations. The majority of drilling retrieved dry samples, with the occasional use of the auxiliary and booster air compressors beneath the water table, to maintain dry sample return as much as possible.

Drillhole deviations were surveyed downhole, during drilling operations, using an electronic multi-shot downhole tool (i.e. Camteq Proshot). In some instances, drillholes were surveyed later in open hole. In the later drilling programs, downhole surveying was carried out inside a non-magnetic stainless steel (s/s) rod, located above the hammer. Providing the tool was located in the middle of the stainless steel rod, azimuth and dip readings were successfully recorded.

The following tables summaries drilling totals for the Raeside Project area, for DD, RC and AC only (i.e. excluding open-hole drilling such as RAB):

Raeside Project – Drilling Summary – KIN (2014-2017)

Hole type	Number of Holes	Metres (m)	%(m)
DD	4	317	30%
RC	8	724	70%
Total	12	1,041	100%

Raeside Project – Drilling Summary – Triton, SOG and Navigator (1989-2014) Michelangelo and Leonardo

Hole type	Number of Holes	Metres (m)	%(m)
DD	12	1,906	3.5%
RC	559	49,385	92%
AC	83	2,619	4.5%
Total	654	53,910	100%

The above phases of drilling were used to estimate the Michelangelo and Leonardo resources.

#### COMMENT

Historical reports indicate that diamond drill core sizes were predominantly HQ/HQ3 or NQ/NQ3, however database details are incomplete. Most historical reports recorded core recoveries, although these details are not included in the database. Review of some historical reports indicate that core recoveries were generally good, although recoveries were typically less in highly fractured zones and some highly weathered mineralised zones in the transition and oxide zones, however this information is not recorded in the supplied database.

RC drilling is the dominant drill type at all sites. RC drilling information is generally described in varying detail in historical reports to the DMP, including drilling companies used and drilling rig types, however it's not all recorded in the database supplied. Review of the historical reports indicates that reputable drilling companies were typically contracted and the equipment supplied was of an acceptable standard for those times. During the 1990s, and 2000s, suitable large drill rigs with on-board compressors were probably complimented with auxiliary and booster air compressors for drilling to greater depths and/or when groundwater was encountered. KIN's drilling was conducted with modern rigs equipped with auxiliary and booster compressors and face sampling hammers with bit diameters typically 140mm.

When drilling under dry conditions, Aircore samples should be of a comparable quality to RC samples, when implementing same sampling techniques. Aircore drilling data was only used in resource estimation work, where the in-field and laboratory sampling methodologies was considered appropriate and limited to a number of selected Navigator drillholes.

## Drill sample recovery

#### **HISTORIC DRILLING (1989-2014)**

**Diamond Drilling** 

# Commentary Core recovery has been recorded in most drill logs for most of the diamond drilling programs since 1985, but is not recorded in the supplied database. A review of some historical reports indicates that generally core recovery was good with lesser recoveries recorded in zones of broken ground and/or areas of mineralisation. Overall recoveries are considered acceptable for resource estimation. RC Drilling There is limited information recorded for sample recoveries for historical RC and Aircore drilling.

There is limited information recorded for sample recoveries for historical RC and Aircore drilling. However there has been an improvement in sample recoveries and reliability following the introduction of face sampling hammers and improved drilling technologies and equipment, since the mid-1980s.

#### **KIN MINING (2014-2017)**

#### **Diamond Drilling**

Core recovery was recorded for each run by measuring total length of core retrieved against the downhole interval actually drilled.

Diamond core recoveries were recorded in the database. Independent field reviews by the Competent Persons (SC & GP) in 2017 of the diamond drilling rig in operation and core integrity at the drill sites, demonstrated that diamond drill core recoveries were being maximised by the driller, and that core recoveries averaged >95%, even when difficult ground conditions were being encountered.

#### **RC Drilling**

Integrity of each one metre RC sample is preserved as best as possible. At the end of each 1 metre downhole interval, the driller stops advancing the rods, retracts from the bottom of hole, and waits for the sample to clear from the bottom of the hole through to the sample collector box fitted beneath the cyclone. The sample is then released from the sample collector box and passed through the 3-tiered riffle splitter fitted beneath the sample box. Sample reject is collected in plastic bags, and a 3-4kg sub-sample is collected in pre-marked calico bags for analysis. Once the samples have been collected, the cyclone, sample collector box and riffle splitter are flushed with compressed air, and the riffle splitter cleaned by the off-sider using a compressed air hose, and if necessary a scraper. This process is maintained throughout the entire drilling program to maximise drill sample recovery and to maintain a high level of representivity of the material being drilled.

RC drill sample recoveries are not recorded in the supplied database, however a review by the Competent Person (GP) in May 2017 of RC drill samples stored in the field, and observations of the two RC drilling rigs in operation, suggests that RC sample recoveries were mostly consistent and very good, with the samples themselves being reliable and representative of the material being drilled.

#### COMMENT

Due to the lack of detailed information in the database regarding historic (pre-2014) Aircore and RC drilling, no quantitative or semi-quantitative impression of sample recovery or sample quality is available. Given that much of the drilling at Raeside was conducted by the same company (Triton) and at the same time as that carried out for the nearby Forgotten Four deposit, where it is assumed to be satisfactory given that the Forgotten Four deposit was mined by Triton to a depth of 40-45 metres by open pit methods. This suggests that the amount of metal recovered was probably not grossly different from pre-mining drill data based expectations.

During Navigators drill programs wet samples were spear sampled instead of riffle split. 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.

No indication of sample bias is evident nor has it been established. That is, no relationship has been observed to exist between sample recovery and grade.

No Aircore drilling data was used in the Raeside resource estimation process.

Criteria	Commentary
Logging	HISTORIC DRILLING (1989-2014)
	The logging data coded in the database uses at least three different lithological code systems, a legacy of numerous past operators (Triton, SOG & Navigator). Correlation between codes is difficult to establish, however it can be achieved with effort. Based on historical reports, drill hole logging procedures appear consistent with normal industry practices of the time.
	Navigator's procedure for logging of diamond core included firstly marking of the bottom of the core (for successful core orientations), core recovery, fractures per metre and RQD, lithology, alteration, texture, mineralisation, weathering, and other features, and then marked up for cutting and sampling. Several diamond drillholes were completed for geotechnical purposes and were independently logged for structural data by geotechnical consultants. The diamond drill core has been photographed, and currently stored at KIN's yard in Leonora.
	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, after validation, to minimize data entry errors.
	The entire length of all drillholes are logged in full from surface to bottom of hole.
	Logging is qualitative on visual recordings of lithology, oxidation, colour, texture and grain size. Logging of mineralogy, mineralisation and veining is quantitative.
	Drill core photographs are only available for Navigator's diamond drillholes.
	KIN MINING (2014-2017)
	KIN's logging of drill samples was carried out in the field (RC drilling) or at the Leonora Yard (diamond core) and entered onto a portable computer, on a metre by metre basis for RC, and by sample intervals and/or geological contacts for diamond core. Data recorded included lithology, alteration, structure, texture, mineralisation, sulphide content, weathering and other features. Drillhole collar coordinates, azimuth, dip, depth and sampling intervals are also recorded in the drill logs in the field. Four diamond drillholes were completed for geotechnical purposes and were independently logged for structural data by geotechnical consultants.
	KIN geological personnel retrieved the core trays from the drill rig site and relocated them to KIN's yard in Leonora at the end of each day. Drill core was photographed in the field or at the Leonora yard, prior to cutting using a diamond core saw to obtain quarter core samples for analysis.
	All information collected was entered directly into laptop computers or tablets, and transferred to the database to be validated.
	COMMENT
	KIN has attempted to validate historical logging data and to standardize the logging code system by incorporating the SOG and Navigator logging codes into one. This is an ongoing process and is not yet completed.
	The level of logging detail is considered appropriate for exploration and to support appropriate mineral resource estimation, mining studies and metallurgical studies.
	Qualitative logging includes classification and description of lithology, weathering, oxidation, colour, texture and grain size. Quantitative logging includes identification and percentages of mineralogy, sulphides, mineralisation, veining, and in addition, logging of diamond drilling included geotechnical data, RQD and core recoveries.
	For the majority of historical drilling (pre-2004), and all of the more recent drilling, the entire length of drillholes have been logged from surface to 'end of hole'. Diamond core logging is typically logged in more detail compared to RC and Aircore drilling.
Sub- sampling techniques	HISTORIC DRILLING (1989-2014)
	Historical reports for drilling programs prior to 2004, are not always complete in the description

Criteria	Commentary
and sample	of sub-sampling techniques, sample preparation and quality control protocols.
preparation	Diamond Drilling
	Diamond drill core (NQ/NQ3 or HQ/HQ3) samples collected for analysis were longitudinally cut in half, and occasionally in quarters for the larger (HQ/HQ3) diameter holes, using a powered diamond core saw blade centered over a cradle holding the core in place.
	Core sample intervals varied from 0.1 to 1.0m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in core trays.
	Where historical reports do not describe the sampling protocol for sampling of drill core, it is assumed that drill core was sampled as described above.
	RC Drilling
	Prior to 1995, limited historical information indicates most RC sampling was conducted by collecting 1m samples from beneath a cyclone and passing through a riffle splitter to obtain a 3-4kg sub-sample for analysis. RC sampling procedures are believed to be consistent with the normal industry practices at the time. The vast majority of samples were dry and riffle split, however spear or tube sampling techniques were used for wet samples.
	Samples obtained from conventional RC drilling techniques with cross-over subs often suffered from down hole contamination, especially beneath the water table. Samples obtained from RC drilling techniques using the face sampling hammer suffered less from down hole contamination and were more likely to be kept dry beneath the water table, particularly if auxiliary and booster air compressors were used. These samples are considered to be representative.
	The vast majority of RC drill samples were collected at 1m downhole intervals from beneath a cyclone and then riffle split to obtain a sub-sample (typically 3-4kg). After splitting, 1m sub-samples were typically collected in pre-numbered calico bags, and the 1m sample rejects were commonly stored at the drill site in marked plastic bags, for future reference. First pass sampling often involved collecting composite samples by using a scoop (dry samples) or spear/tube (wet samples) to obtain 3m or 4m composited intervals, with the single metre split sub-samples being retained at the drill site. If the composite sample assays returned anomalous results, the single metre sub-samples for the anomalous composite intervals were retrieved and submitted for analysis.
	Navigator obtained sub-samples from wet samples using the spear or tube method.
	Data relating to historical wet samples is not available, however the number of wet samples involved is considered to be relatively low, and not material.
	There are no sample rejects available from RC drilling prior to 2014. Most drill sites have been rehabilitated and the sample bags removed and destroyed.
	Navigator included standards, duplicate splits, and blanks within each drill sample batch, at a ratio of 1 for every 20 samples, with the number of standards being inserted at a ration of 1 for every 50 samples.
	Aircore Drilling
	The procedures for sampling of Aircore drilling is generally the same as for RC drilling, although in earlier (pre-2004) programs, the majority of the 1m samples were mostly stored directly on the ground prior to sampling with a scoop.
	A variety of laboratories were used for analysis. Prior to 2009, duplicate samples were not routinely collected and submitted from RC and Aircore drilling to the same laboratory consequently overall sampling and assay precision levels can't be quantified for that period. Since 2009, Navigator adopted a stricter sampling regime with the submission of duplicate samples at a rate of 1 for every 50 primary samples.
	While QC protocols were not always comprehensive, the results indicate that assay results from Navigators exploration programs were reliable. Results from pre-Navigator operators are regarded as consistent with normal industry practices of the time.

Criteria	Commentary			
	KIN MINING (2014-2017)			
	Diamond Drilling			
	Diamond drill core samples collected for analysis were longitudinally cut in half and quarters, using a powered diamond core saw blade centered over a cradle holding the core in place. Core sample intervals varied from 0.2 to 1.15m, but were predominantly taken over 1m intervals, or at geological contacts, whichever was least. The remaining core was retained in their respective core trays and stored in KIN's yard for future reference.			
	All of KIN's diamond drill core is securely stored at their Leonora Yard.			
	RC Drilling			
	All RC sub-samples were collected over 1 metre downhole intervals and retained in pre-marked calico bags, after passing through a cyclone and riffle splitter configuration. The majority of RC sub-samples consistently averaged 3-4kg. Sample reject from the riffle splitter were retained and stored in plastic bags, and located near each drillhole site. When drilling beneath the water table, the majority of sample returns were kept dry by the use of the auxiliary and booster air compressors. Some wet samples were collected through the riffle splitter, and the small number is not considered material.			
	Field duplicates were taken at regular intervals at a ratio of 1:50 and assay results indicate that there is reasonable analytical repeatability, considering the presence of nuggety gold.			
	COMMENT			
	All sub-sampling techniques and sample preparation procedures conducted and/or supervised by KIN geology personnel are to standard industry practice. Sub-sampling and sample preparation techniques used are considered to maximise representivity of the material being drilled. QA/QC procedures implemented during each drilling program are to industry standard practice.			
	Samples sizes are considered appropriate for this style of gold mineralisation and is an industry accepted method for evaluation of gold deposits in the Eastern Goldfields of Western Australia			
Quality of assay data and laboratory	Numerous assay laboratories and various sample preparation and assay techniques have been used since 1981. Historical reporting and descriptions of laboratory sample preparation, assaying procedures, and quality control protocols for the samples from the various drilling programs are variable in their descriptions and completeness.			
tests	HISTORIC DRILLING (1989-2014)			
	For assay data obtained prior to 1995, the incomplete nature of the pre-1995 data results could not be accurately quantified in terms of the data derived from the combinations of various laboratories and analytical methodologies.			
	During 1995 Triton described the sample preparation process as hammer milling to -1mm, riffle splitting to 0.5kg then pulverizing to a nominal 90% passing -75 $\mu$ m prior to Fire assay analysis.			
	In the initial exploration stages, Aqua Regia digest with AAS/ICP finish, was generally used as a first pass detection method, with follow up analysis by Fire Assay fusion and AAS/ICP finish. This was a common practice at the time. Mineralised intervals were subsequently Fire Assayed (using 30, 40 or 50 gram catchweights) with AAS/ICP finish.			
	Limited information is available regarding check assays for drilling programs prior to 2004.			
	During 2004-2014, Navigator utilised six different commercial laboratories during their drilling programs, however Kalgoorlie Assay Laboratories conducted the majority of assaying for diamond, RC and Aircore samples using Fire Assay fusion on 40 gram catchweights and AAS/ICP finish.			
	Post 2009 Navigator regularly included field duplicates, Certified Reference Material (CRM) standards and blanks with their sample batch submissions to the laboratories at average ratio of 1 in every 20 samples.			
	KIN MINING (2014-2017)			

Criteria	Commentary			
	Sample analysis was conducted by SGS Australia Pty Ltd's ("SGS") Kalgoorlie and Perth laboratories. Sample preparation included oven drying (105°C), crushing (-6mm), pulverising (P85% -75µm) and riffle split to obtain a 50 gram catchweight. Analysis for gold only was carried out by Fire Assay fusion technique with AAS finish (SGS Lab Code FAA505).			
	KIN regularly insert blanks, field duplicate and CRM standards in each sample batch at a ratio of 1:20. This allows for at least one blank and one CRM standard to be included in each of the laboratory's fire assay batch of 50 samples. Field duplicate sample assay repeatability, blank standards and CRM standards assay results are within acceptable limits for this style of gold mineralisation.			
	SGS include blanks and CRMs as part of their internal QA/QC for sample preparation and analysis, as well as regular assay repeats. Sample pulp assay repeatability, and internal blank and CRM standards assay results are within acceptable limits.			
	COMMENT			
	The nature and quality of the assaying and laboratory procedures used are considered to be satisfactory and appropriate for use in mineral resource estimations.			
	Fire Assay fusion or Aqua Regia digestion techniques were conducted on diamond, RC and Aircore samples, with AAS or ICP finish.			
	Fire Assay fusion is considered to be a total extraction technique. The majority of assay data used for the mineral resource estimations were obtained by the Fire Assay technique with AAS or ICP finish. AAS and ICP methods of detection are both considered to be suitable and appropriate methods of detection.			
	Aqua Regia is considered a partial extraction technique, where gold encapsulated in refractory sulphides or some silicate minerals may not be fully dissolved, resulting in partial reporting of gold content.			
	No other analysis techniques have been used to determine gold assays.			
	KIN's ongoing QA/QC monitoring program in general validated the assaying procedure used in 2017. One particular CRM was returning spurious results. Further analysis demonstrated that the standard was compromised and subsequently removed and destroyed. A replacement CRM of similar grade was substituted into the QA/QC program.			
Verification of sampling and	Verification of sampling and assaying techniques and results prior to 2004 has limitations due to the legacy of the involvement of various companies, personnel, drilling equipment, sampling protocols and analytical techniques at different laboratories, over a fifteen year period.			
assaying	Since 2014, significant drill intersections have been verified by KIN's company geologists during the course of the drilling programs.			
	An independent validation check by McDonald Speijers ("MS") (2009) resulted in 25 holes (13 being positioned at Michelangelo and Leonardo) being selected at random for which 21 original hardcopy logs could be located and 20 corresponding lab reports. Correlation between this data was good.			
	During 2017, an independent verification of 725 assay records for the 2014-2017 drilling programs completed by KIN have been verified by Carras Mining Pty Ltd ("CM"), with only one discrepancy.			
	COMMENT			
	There is always a risk with legacy data that sampling or assaying biases may exist between results from different drilling programs due to differing sampling protocols, different laboratories and different analytical techniques.			
	Repeated examination of historic reports on phases of diamond, RC and Aircore drilling have been conducted from time to time. Assay results from KIN's recent drilling are consistent with surrounding information and as a result the information obtained from the various diamond, RC and Aircore drilling programs (where sampling protocols are appropriate) have been accepted.			

Criteria	Commentary
	Recent (2014-2017) RC and diamond drilling by KIN included some twinning of historical drillholes within the Raeside Project area. The correlation between drill holes is regarded as good and in other locations where the drill density is considered sufficiently close enough to enable comparison with surrounding historic information, and there is no material difference between historical drilling information and the KIN drilling information. KIN's diamond holes were drilled for metallurgical and geotechnical test work, and assay results for these holes also show good correlation with nearby historical results.
	Where sampling protocols are appropriate, diamond, RC and Aircore samples, are of equal importance in the resource estimation process.
	There has been no adjustments or calibrations made to the assay data recorded in the supplied database.
Location of	HISTORIC DATA (1989-2014)
data points	A local survey grid a mine grid were originally established in 1989 by Triton. During 2000-2004, SOG transformed the surface survey data firstly to AMG and subsequently to MGA (GDA94 zone51).
	Drilling was carried out historically using various local grids. Since 2004, All Navigators drill hole collars were surveyed on completion of drilling in the Australian MGA94, Zone51 grid using RTK-DGPS equipment by licensed surveyors.
	Azimuth data was historically recorded relative to magnetic north. Much of the historical drilling data was recorded relative to magnetic north. Variation in magnetic declination for the Raeside Project area is calculated at +0.823° East (1985) to +1.301° East (2017), with a maximum variation of +1.575° in 2005. The difference between true north and magnetic north, and the annual variation in magnetic declination since 1985 is not significant. True north survey data was used in resource estimation processes.
	KIN MINING (2014-2017)
	KIN's drill hole collars were located and recorded in the field by a contract surveyor using RTK-DGPS (with a horizontal and vertical accuracy of ±50mm). Location data was collected in the GDA94 Zone51 grid coordinate system.
	Downhole surveying during KIN's drilling programs was predominantly carried out by the drilling contractor.
	If the downhole survey tool is located within 15 metres of the surface, there is risk of influence of the drill rig affecting the azimuth readings. This was observed for the survey readings, which include total magnetic intensity (TMI) measurements, where TMI is spurious for readings taken at downhole depths less than 20 metres. These spurious readings are included in the database, but are not used.
	KIN supplied one digital terrain model (DTM) of the topography constructed from drill hole collar data. A new DTM was supplied by KIN following a July 2017 aerial survey. The latter was used for the resource estimation.
	COMMENT
	The accuracy of the drill hole collar and downhole data are located with sufficient accuracy for use in resource estimation work
	Considering the history of grid transformations and surviving documentation, there might be some residual risk of error in the MGA co-ordinates for old drillholes, however this is not considered to be material for the resource estimations.
	Azimuth data was historically recorded relative to magnetic north. Much of the historical drilling data was recorded relative to magnetic north. Variation in magnetic declination for the Raeside Project area is calculated at +0.823° East (1985) to +1.301° East (2017), with a maximum variation of +1.575° in 2005. The difference between true north and magnetic north, and the annual variation in magnetic declination since 1985 is not significant, therefore magnetic north

Criteria	Commentary					
	measurements have been used, where true north data is unavailable, for all survey data used in resource estimation processes.					
Data spacing and distribution	Drill hole spacing patterns vary considerably throughout the Project area, and is deposit specific, depending on the nature and style of mineralisation being tested.  The following table summarises the general range of drillhole collar spacings and drilling grid line spacings for each of the resource areas.					
	Resource	Drill Grid	d Spacing	Drillhole Sp	acing	]
	Areas	from (m)	to (m)	from (m)	to (m)	
	Michelangelo	12.5	25	12.5	25	-
	Leonardo	15	20	15	20	
	Drill hole and sample interval spacing is sufficient to establish an acceptable degree of geological and grade continuity appropriate for mineral resource estimations and classifications applied.  There has been no sample compositing, other than a few historical compositing of field samples for some Aircore and RC samples to 2m, 3m, 4m, and a few 5m and 6m intervals. The vast majority (>90%) of primary assay intervals are 1 metre intervals for RC and Aircore samples, and predominantly 1 metre intervals for core samples.					
Orientation of data in relation to geological structure	The sheared Raeside greenstone sequence displays a NNW to NW trend. The drilling and sampling programs were carried out to obtain an unbiased location of drill sample data, generally orthogonal to the strike of mineralisation.  Mineralisation is structurally controlled in moderately dipping shear zones within the broader Raeside Shear Zone, The majority of the gold mineralisation is confined to shear bound quartz lodes/veining within a narrow carbonaceous shale that dips (-40° to -60°) to the east.  The vast majority of historical drilling is orientated -60°/280° (local grid west). KIN's RC drilling is predominantly orientated at -60°/225° (SW), generally orthogonal to the strike of mineralisation. Diamond drilling by KIN, for geotechnical purposes, were orientated at -60° towards varying azimuths including 225°, 045°, 200° and 025°.  The chance of sample bias introduced by sample orientation is considered minimal. No orientation sampling bias has been identified in the data thus far.					
Sample HISTORIC DRILLING (1989-2014)						
security	No sample security details are available for pre-Navigator (pre-2004) drill samples.					
	Navigator's drill samples were collected from the riffle splitter in pre-numbered calico bags at the drill rig site. Samples were collected by company personnel from the field and transported to Navigator's secure yard in Leonora, where the samples were then batch processed (drillhole and sample numbers logged into the database) and then packed into 'bulkabag sacks'. The bulkabags were tied off and stored securely in Navigator's yard, until transporting to the laboratory. There was no perceived opportunity for the samples to be compromised from collection of samples at the drill site, to delivery to the laboratory.					
	KIN MINING					
	drill rig site. The samp a hardcopy sample re at KIN's secure yard i laboratory's (SGS) tra There was no perce	oles were ther egister) in the n Leonora. Th insport contra ived opportu site, to delive	n batch proce field, and the bulkabags actor was util nity for the ry to the lab	ssed (drillhole en transporte were tied off ized to transp samples to b	e and sample ed and stacke and stored se ort the bulka ee compromi	ered calico bags at the numbers encoded onto ed into 'bulkabag sacks' ecurely in the yard. The abags to the laboratory, sed from collection of estored in their secure

Criteria	Commentary			
	On receipt of the samples, the laboratory (SGS) independently checked the sample submission form to verify samples received, and readied the samples for sample preparation. SGS's sample security protocols are of industry acceptable standards.			
Audits or reviews	Historic drilling and sampling methods and QA/QC are regarded as not being as thoroughly documented compared to today's current standards. A review of various available historical company reports of drilling and sampling techniques indicates that these were most likely conducted to the best practice industry standards of the day.			
	A review of the Raeside Project's database, drilling and sampling protocols, was conducted and reported on by independent geological consultants MS in 2009. Their report highlighted issues with bulk density and QA/QC analysis of the database, which have since been identified and addressed by Navigator and most recently by KIN.			
	During 2017, CM reviewed and carried out an audit on the field operations and database. Drilling and sampling methodologies observed during the site visits are to today's industry standard. Similarly there were no issues identified for the supplied databases, which would be considered material.			
	KIN is in the process of completing validation of all historical logging data and to standardise the logging code system by incorporating the SOG and Navigator logging codes into one, and converting all historical logging into the standardized code system. This is an ongoing process and is not yet completed.			
	During the review, CM logged the oxidation profiles ('base of complete oxidation' or "BOCO", and 'top of fresh rock' or "TOFR") for each of the deposit areas, based on visual inspection of selected RC drill chips from KIN's recent drilling programs, and a combination of historical and KIN's drillhole logging, with final adjustments made with input from KIN geologists. The oxidation profiles were used to assign bulk densities and metallurgical recoveries to the resource models.			
	Bulk density testwork in the past has been inconsistent with incorrect methods employed, to derive specific gravity or in-situ bulk density, rather than dry bulk density. Navigator (2009) and recent KIN (2017) bulk density testwork was carried out using the water immersion method on oven dried, coated samples to derive dry bulk densities for different rock types and oxidation profiles. This information has been incorporated into the database for resource estimation work. CM conducted site visits during 2017 to the laboratory to validate the methodology.			
	Recent (2014-2017) RC and diamond drilling by KIN included twinning of historical drillholes within the Raeside Project area, and where the infill drilling density is considered sufficiently close enough to enable comparison with surrounding historic information, there is no material difference between historical drilling information and the KIN drilling information. KIN's diamond holes were drilled for metallurgical and geotechnical test work, and assay results for these holes also show good correlation with nearby historical results.			
	Drilling, Sampling methodologies and assay techniques used in these drilling programs are considered to be appropriate and to mineral exploration industry standards of the day.			

## **SECTION 2 – Reporting of Exploration Results**

(Criteria in the preceding section also apply to this section)

Criteria	Commentary
Mineral tenement and land tenure status	The Raeside Project area includes granted mining tenement M37/1298, centered some 10km ESE of Leonora. The tenements are held in the name of Navigator Mining Pty Ltd, a wholly owned subsidiary of KIN. The Raeside Project is managed, explored and maintained by KIN, and constitute a portion of KIN's Leonora Gold Project (LGP), which is located within the Shire of Leonora in the Mt Margaret Mineral Field of the North Eastern Goldfields.
	The following royalty payment may be applicable to the areas within the Raeside Project that comprise the deposits being reported on:
	<ol> <li>Messers Blitterswyk, Halloran &amp; Prugnoli, in respect of dead mineral tenements M37/256, M37/369, M37/377, M37/379, P37/4046 and MLA37/563, which are partly or wholly overlain by M37/1298 - \$1.00 per tonne of ore mined and milled for the extraction of gold or other saleable mineral.</li> </ol>
	There are no known native title interests, historical sites, wilderness areas, national park or environmental impediments over the resource areas, and there are no current impediments to obtaining a licence to operate in the area.
Exploration done by other parties	Gold was first discovered in the Leonora district about 1896 and it is likely that the first prospecting activity in and around the Raeside Project area would have occurred at about that time. Initial production from Raeside was a small underground operation in the early 1970's when 60t @ 6.0 g/t Au was produced.
	In 1989, Triton Resources Limited (Triton) entered into an arrangement with local prospectors (Halloran and Prugnoli) to acquire some tenements in what is known as the Forgotten Four area. The Triton Raeside Joint Venture mined the Forgotten Four (1990-1992) to 45m depth. Production statistics include:
	1990: Mined and processed 6,280t @ 5.18 g/t Au (959oz) at the Tower Hill plant in Leonora with 91.7% recovery. 1992: Mined and processed 40,537t @ 4.14 g/t Au (4,993oz) at the Harbour Lights plant in Leonora with 92.57% recovery. Finally a 2,822t parcel of ore (4.47 g/t Au) (389oz) was sold to Harbour Lights. In 1992 remnant ore from low grade stockpiles totaling 6,200t @ 1.0 g/t Au (199oz) was processed. Thus total production from the nearby Forgotten Four open cut yielded 55,839t @ 3.92 g/t Au (7,030oz) with an estimated recovery of approximately 92%. None of the reported production figures have been confirmed from official Mines Department records.
	The larger Raeside Project originated in 1992, when Triton (70%) formed a joint venture with Sabre Resources N.L. (Sabre) (20%) and Copperwell Pty Ltd (Copperwell), a subsidiary of Cityview Energy Corporation (10%). The three companies amalgamated their tenement holdings in the area and the joint venture applied for additional tenements.
	Until sometime in 1994 the project was managed on behalf of the joint venture by Westchester Pty Ltd. Incomplete drilling records indicate that Westchester had been involved to some extent in managing exploration in the area for Triton prior to 1992. After mid-1994 Triton appears to have taken over as project manager.
	Before 1995, drilling programs were apparently dominated by first-pass rotary air blast (RAB) drilling, with local reverse circulation (RC) rotary or percussion drilling to follow up in places where mineralisation was detected. Because of RAB drilling difficulties (clays and water) air core (AC) drilling was subsequently adopted as the first-pass method.
	Triton's drilling programs were suspended in June 1995 while a major review of results was undertaken and a pre-feasibility study was conducted. Drilling resumed in about April 1995.
	Another economic evaluation of the project was undertaken by Triton in 1998-1999 which indicated that a stand-alone operation was not possible, but that the project could be viable as a

Criteria	Commentary			
	supplementary feed source for an existing, nearby process plant.			
	SOG farmed in to the project in January 2000 and subsequently acquired full ownership. They carried out limited amounts of predominantly RC drilling, aimed mainly at confirming previous results from the Michelangelo deposit.			
	Navigator Resources Ltd (Navigator) acquired the Raeside project from SOG in September 2004.			
	Subsequent work by Navigator has focused mainly on other projects in the Leonora district, with only very small amounts of additional drilling having been completed in the Raeside area.			
	In 2009, Navigator commissioned MS to complete a Mineral Resource estimate for the Raeside deposits. MS reported a JORC 2004 compliant Indicated Mineral Resource estimate, at a low cutoff grade of 0.7g/t Au, totaling 1.28Mt @ 2.68 g/t Au (111,000oz).			
	KIN acquired the Raeside Project from Navigator's administrator in 2014.			
Geology	The Raeside Project area is located 10km ESE of Leonora in the central part of the Norseman-Wiluna Greenstone Belt, which extends for some 600km on a NNW trend across the Archean Yilgarn Craton of Western Australia.			
	The regional geology comprises a sequence of Archaean greenstone lithologies. The area is underlain by very poorly exposed rocks units. The gold deposits at Raeside occur within or close to the margins of a large NW (320°) trendy body of dolerite within a sequence of sediments and volcanoclastic rocks near the southern margin of porphyry intrusive. Most of the gold recovered from mining the nearby Forgotten Four mine was from shear bound quartz vein stockworks or sheeted veins and/or quartz carbonate veins within a narrow carbonaceous shale (dipping 40°-60° East) lying within a granophyric quartz dolerite and carbonate/sericite/sulphide altered wall rocks.			
	Gold mineralisation at Michelangelo is hosted by a uniform metamorphosed medium grained dolerite. The deposit occurs on or above the basal sheared contact of the quartz dolerite. Four or five extensive quartz vein structures dip at 30°-40° to the northeast, extending over a strike length of 575m with a total stratigraphic thickness of approximately 90m. The position of the footwall has been roughly delineated however no other convincing geological boundaries are defined.			
	Gold mineralisation at Leonardo occurs mainly in a partly carbonaceous-graphitic shale (coded as generic metasediment) close to/adjacent to but above the quartz mafic contact. The mineralisation dips 35°-50° to the east however this ore body exhibits significant differences to the other deposits. Initially the mineralisation at Leonardo is hosted in sedimentary rocks above the quartz diorite. Secondly the mineralisation is associated with a zone of strong bleaching, sericitisation and silicification, often up to +20m wide. The strike length of the steeply plunging north main shoot is approximately 60m. Thirdly the gold mineralisation occurs within a relatively linear shear zone that is traceable over 2km of strike; the shear contains significant mineralisation in at least three other locations along strike.			
Drill hole Information	Material drilling information used for the resource estimation has previously been publicly reported in numerous announcements to the ASX by Navigator (2004-2014) and KIN since 2014.			
Data Aggregation methods	When exploration results have been reported for the resource areas, the intercepts are reported as weighted average grades over intercept lengths defined by geology or lower cut-off grades, without any high grade cuts applied. Where aggregate intercepts incorporated short lengths of high grade results, these results were included in the reports.			
	Since 2014, KIN have reported RC drilling intersections with low cut off grades of ≥ 0.5 g/t Au and a maximum of 2m of internal dilution at a grade of < 0.5g/t Au.			
	There is no reporting of metal equivalent values.			

Criteria	Commentary	
Relationship Between Mineralisation widths and intercept lengths	The orientation, true width and geometry of the mineralised zones have been determined by interpretation of historical drilling and verified by KIN's drilling. The majority of historic drill holes within the pit area are inclined at -60° towards 280° (west). Later drilling was undertaken on the Raeside local grid, with a base line orientated to 330° (north west). The KIN RC drilling is orientated towards 225° (SW), which is regarded as the optimum orientation to intersect the target mineralisation. Since the mineralisation is moderately dipping (-40° to -60° easterly), drill intercepts are reported as downhole widths, not true widths. Accompanying dialogue to reported intersections normally describe the attitude of the mineralisation.	
Diagrams	A plan and type sections for each resource area are included in the main body of the report.	
Balanced Reporting	Public reporting of exploration results by KIN and past explorers for the resource areas are considered balanced and included representative widths of low- and high-grade assay results.	
Other Substantive exploration data	Comments on recent bulk density and metallurgical information is included in Section 3 of th Table 1 Report. There is no other new substantive data acquired for the resource areas bein reported on. All meaningful and material information is or has been previously reported.	
Further work	The potential to increase the existing resources is viewed as probable. Further work does not guarantee that an upgrade in the resource would be achieved, however KIN intend to drill more holes at Michelangelo and Leonardo with the intention of increasing the Raeside Project's resources and converting the Inferred portions of the resources to the Indicated category.	

## **SECTION 3 – Estimation and Reporting of Mineral Resources**

(Criteria in section 1, and where relevant in section 2, also apply to this section)

Criteria	Commentary
Database Integrity	All sample data, subject of this report and used for resource estimation work, is obtained from various drilling programs carried out since 1989. Data was obtained predominantly from Reverse Circulation (RC) drilling, and to a lesser extent, diamond core (Diamond) drilling and Air Core (Aircore) drilling.
	Companies involved in the collection of the majority of the gold exploration data since 1989 and prior to 2014 include: Triton Resources Ltd ("Triton") 1989-1999, Triton and Sons of Gwalia Ltd ("SOG") 2000-2004, and Navigator Resources Ltd ("Navigator") 2004-2014.
	KIN exploration data from 2014 to 2017 has been acquired predominantly from RC and some diamond drilling.
	The database could not be fully verified regarding the reliability and accuracy of a substantial portion of the historical (pre-2004) data, however the recent drilling by KIN has enabled comparison with the historical data and there is no material differences observed of a negative nature.
	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 of historic (pre-2004) data, however the amount of historic data used in the resource estimation is minimal and the effect would not be material.
	The logging data coded in the database uses at least four different lithological code systems, a legacy of numerous past operators (Triton, SOG & Navigator). Correlation between codes is difficult to establish, however can be achieved with effort. Based on historical reports, drill hole logging procedures appear consistent with normal industry practices of the time.
	KIN has attempted to validate historical logging data and to standardise the logging code system by incorporating the SOG and Navigator logging codes into one. This is an ongoing process and is not yet completed.
	The drilling by Navigator and KIN has been used to scrutinize and calibrate historic logging data. This has enabled KIN to establish good geological control, which has been used to derive the geological interpretations in current work.
	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.
	In 2009, MS ("MS") completed a mineral resource estimate report for the Raeside Project area, including the Michelangelo and Leonardo deposits. MS carried out extensive database verification, which included checks of surface survey positions, downhole surveys and assay data against original records.
	Since 2014, KIN geologists have conducted verification of historic drilling, assays, geological logs and survey information against the digital database, and in the field, including reviewing historic reports and visual confirmations of Surpac and Access databases. KIN have not reported any significant issues with the database.
	KIN has validated the database in Datashed and in Surpac prior to Resource estimation. These processes checked for holes that have missing data, missing intervals, overlapping intervals, data beyond end-of-hole, holes missing collar co-ordinates, and holes with duplicate collar co-ordinates.
	During 2017, CM carried out an independent data verification. 725 assay records for KIN's 2014-2017 drilling programs were verified by comparing laboratory assay reports against the database. 1 error was found, which is not considered material and which represents less than 0.01% of all database records verified for KIN's 2014-2017 drilling programs.

Criteria	Commentary			
	The database was continuously reviewed by CM during the 2017 resource estimation process.			
Site Visit	KIN's geological team have conducted multiple site visits including supervision and manageme drill programs within each of the Resource areas.			
	Dr Spero Carras (Competent Person) was involved in the Leonora area at the Harbour Lights and Mertondale areas during the 1980s, and is familiar with the geology and styles of mineralisation within the Leonora Project area. He revisited the Leonora area during 2017 to review the projects, drilling, sampling and general geology.			
	Messrs Mark Nelson and Gary Powell (Competent Persons) also conducted site visits to the resource areas, and they have independently reviewed drill core, existing open pits, surface exposures, drilling and sampling procedures.			
Geological Interpretation	The Raeside Project area is located 10km ESE of Leonora in the central part of the Norseman-Wiluna Greenstone Belt, which extends for some 600km on a NNW trend across the Archean Yilgarn Craton of Western Australia.			
	The regional geology comprises a sequence of Archaean greenstone lithologies. The area is underlain by very poorly exposed rocks units. The gold deposits at Raeside occur within or close to the margins of a large NW-trending (320°) body of dolerite within a sequence of sediments and volcanoclastic rocks near the southern margin of a porphyry intrusive. Most of the gold recovered from mining the nearby Forgotten Four mine was from shear bound quartz vein stockworks or sheeted veins and/or quartz carbonate veins within a narrow carbonaceous shale (dipping 40°-60° East) lying within a granophyric quartz dolerite and carbonate/sericite/sulphide altered wall rocks.			
Dimensions	The Michelangelo deposit has a strike of 600m NW and a width of 100m. The Michelangelo area includes a total of 32,536m of drilling. The drilling in the mineralized area for Michelangelo includes 16 DD holes for 225m and 320 RC holes for 3,419m.  The Leonardo deposit has a strike of 500m NW and a width of 150m. The Leonardo area includes a total of 21,645m of drilling. The drilling in the mineralized area for Leonardo includes 8 DD holes			
Estimations and Modelling	for 54m and 159 RC holes for 1,378m.  86. The following outlines the estimation and modelling technique used for producing Resources for the Michelangelo-Leonardo deposit.			
Techniques	Deposit Orebody Dimensions Nominal Metres of Drill Spacing Mineralised Drilling (m)			
	Michelangelo 600m x 100m x 300m 25m x 15m 3,644			
	Leonardo 500m x 150m x 300m 25m x 15m 1,432			
	87. Wireframes were provided by KIN for:  a. Topography based on drill collar data b. Bottom of Oxidation (BOCO) c. Top of Fresh Rock (TOFR)			
	88. CM carried out an Independent Review of the weathering surfaces and where necessary, based on new drilling (both RC and diamond), geological relogging and bulk density information, the surfaces were modified to reflect the additional information. Surface topography was also adjusted due to new information obtained in a July 2017 aerial survey.			
	89. Based on geology, statistical analysis and intersection selection, domainal shapes were wireframed at a 0.3g/t nominal edge cut-off grade. These domainal shapes could contain values less than 0.3g/t within the wireframes although this was minimized to prevent smoothing dilution being incorporated into the final models. The parameters used for			

Criteria	Commentary				
	intersection selection were 3m downhole which equates to an approximate 2.5m bench height. The intersections could include 1m of internal dilution.				
	90. The wireframed shapes were audited by KIN geological staff who had previous experience in the Raeside area whilst working for Navigator Resources Ltd. The interpreted mineralisation wireframes are consistent with those historically used at Raeside.				
	91. Each mineralisation wireframe had an assigned strike, dip and plunge.				

- 92. Compositing from the top of each shape was carried out at 1m within each wireframe. In Michelangelo the majority of composites (95%) were greater than 1m. In Leonardo the majority of composites (98%) were greater than 1m.
- 93. The domainal shapes were passed into ISATIS Software with specified strike, dip and plunge.
- 94. The number of shapes used was as follows:

Deposit	Number of Shapes
Michelangelo	19
Leonardo	9

- 95. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.
- 96. The declustering program DECLUS (ISATIS) was used to produce the weights to be assigned to each composite for statistical analysis.
- 97. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined for every shape and the percentage metal cut was estimated for each deposit as shown in the below table:

Deposit	Maximum Cut	Percentage Metal Cut
	(g/t)	%
Michelangelo-	25	4
Leonardo Combined		

- 98. Where a data point belonged to 2 shapes the cut allocated was determined for each domain and independently allocated.
- 99. Variograms were run for each domain using ISATIS. The variograms were of very poor quality with the dowhole variograms being the basis of fitted models. Directional variograms were produced for downhole, down dip, down plunge. Where the downhole variograms were calculated on an individual hole basis, variograms were normalized. Variograms were normalized for down dip and plunge. Raw variograms were used in subsequent work.

100. The following parameters were used in modelling OK, ID2 and ID3:

- A minimum number of samples of 12 and a maximum number of samples of 32
- The discretisation parameters were 2 x 2 x 2
- A maximum of 2 samples per hole
- Note: for blocks that did not meet these requirements, the parameters were relaxed and the search radii were increased.
- To minimize the striping effect created by estimation in narrow shapes, the downhole search radii were increased.

Criteria	Commentary  101. The ranges of search and directions used were applied on a shape by shape basis. The aim was to produce OK results for the majority of shapes where there had been adequate data to produce meaningful variography. Small shapes where there was inadequate data were estimated using an anisotropic distance weighting cubed methodology rather than OK.  102. The fundamental block size used was:			
		C HPL I		
	Deposit  Michelangelo-Leonardo	Small Blocks 3.125mN x 1.875	mF x	
	Combined	1.25mRL	THE X	
	Small blocks were used to ensur narrow.	e adequate volume estimatio	on where shapes were	
	103.Scatter plots were then produced wh	nich compared OK, ID2 and II	D3 for the small blocks.	
	104.The models were then visually check and ID3 proved to be the best fit.	ed on a section by section b	asis of block versus drillholes	
	105. The small blocks produced by ID3 were then composited to form medium (quarter) sized blocks and panels. The block dimensions for the medium (quarter) sized blocks and panels were:			
	Deposit Medium Panels (Quarter) Blocks			
	Michelangelo-Leonardo Combined	6.25mN x 3.75mE x 2.5mRL	12.5mN x 7.5mE x 5mRL	
	Quarter size blocks were used for re  106.To check that the interpolation of the carried out comparing the interpolation plots showed good correlation thus the stimates of the volumes within those volumes estimated were correct.  108.Classification was carried out using a geology as the guide.  109.Resources were estimated within an The optimised pit shells provided a may have prospects for economic ereasonably be declared as Open Pit recovery of 95%. This was minimal at The Resources reported are undiluted.	the block model honoured to ted blocks to the sample control the raw drill data was honour termined and these were the se wireframes on a shape by combination of drillhole der AUS\$2,200 optimised pit she reasonable basis for defining easonable basis for defining the total total the total	mposite data. The validation red by the block model.  en compared with the block shape basis to ensure that ensity, drillhole quality, and ell provided by Entech (Perth). It is the portion of models that the future and could therefore used a dilution of 5% and a she Resource not the Reserve. It is applied.)  k even mill feed cut-off grade	
Moisture	Tonnages and grades were estimated on drill core included measurements of mois	sture content.		
Cut-off Parameters	Operating cost estimates provided by KII grade for open pit deposits in the Raeside		_	

Criteria		Com	mentary		
Mining Factors or Assumptions	Open pit mining will be the mining method employed going forward.				
Metallurgical Factors or Assumptions	In 2017 KIN's drilling program included a series of RC and DD drillholes to collect samples for geotechnical and metallurgical testwork.				
, 100 <b>0 , p</b> 100 0	Metallurgical testwork in the Michelangelo-Leonardo area has shown metallurgical recoveries of mid-nineties for oxide and transition and approximately 90% for fresh.				
	During the mining process, envisaged to be possible so be achieved, so as to mitiga	that successful segr	egation and qua	rantining of the s	hale material can
Environmental	The Michelangelo and Leor	nardo deposits have	not been subject	ted to any previou	us mining activity.
Factors or Assumptions	Historical mining at nearby any impacts that cannot be	_	_	र landforms have ।	not demonstrated
Bulk Density	Prior to 2014, there have been numerous programs of bulk density testwork conducted by several companies at different times on diamond drill core and/or RC drill chips for the some of the various deposits. Generally the testwork has not been conclusive, since the testwork methodology has not been adequately described in the historical reports, or when it has, the testwork itself was not carried out using an acceptable method to determine dry bulk density. Often, when described, the testwork measured specific gravity, not bulk density, and in cases where bulk density was reported, the moisture content was not taken into account.  In 2017, KIN carried out a diamond drilling program to include obtaining samples for bulk density testwork at Michelangelo and Leonardo, where four diamond drill holes were drilled into the major parts of mineralised zones.  A total of 231 half or quarter core samples, of varying lengths (5-20cm) were submitted to an independent laboratory in Perth for bulk density determinations by the water immersion method. The core samples were a mixture of half core and quarter core samples ranging from 5cm to 20cm in length, and were taken at downhole intervals of roughly every 1 metre. The samples were firstly weighed, oven dried overnight at 110°C, and weighed again to determine moisture content. The samples were then sealed, using hairspray, prior to immersion in water.  During the 2017 bulk density testwork and estimation process, Dr S Carras and Mr G Powell (Consultant to CM) visited the laboratory and identified some improvements for consideration in the bulk density determination process, particularly for small core pieces to give better precision of measurements. The suggested improvements were implemented and precision improved.				
				r consideration in petter precision of	
	When estimating the bulk of samples gave more repeated				_
	Based on recent data the following bulk density parameters were used for the Michelange Leonardo area:			e Michelangelo /	
	Area	Lithology	Oxide	Transition	Fresh
	Michelangelo /	Mafic	2.0	2.3	2.65
	Leonardo	Sediments	2.0	2.3	2.6
Classification	Classification was based or geological continuity. In (approximately NW-SE):	n a combination of d general all deposi	-		
	<ul><li>Michelanglo:</li><li>Leonardo:</li></ul>	25m x 15m 25m x 15m			
	Leonardo.	73111 X 13111			

Criteria	Commentary
	In general drillhole spacing of 25m x 15m, with some infill holes, resulted in mineralisation being classified as Indicated.  Drillhole spacing generally increases with depth and as a result deeper mineralisation is mostly allocated to the Inferred category.  The Mineral Resource estimate appropriately reflects the view of the Competent Person.
Audits and Reviews	Internal audits were carried out on the geological interpretations and wireframes by KIN geologists. Some data (e.g. geological logs) are scant; the assay data is historical and could not be independently verified, however in 2017 KIN drilled 5 twinned drillholes. The drillholes provided a very good validation to historical holes in the current database. In 2009, MS checked 25 holes (mineralised intersections containing 1,141 sample records) selected at random and checked against originals. The data correlation was not perfect but very acceptable (93% correlation) considering the age of the data and the passing through different company history.
	KIN personnel carried out audits and internal reviews of the data, assay, survey, wireframes and geological interpretations carried out by CM for Michelangelo-Leonardo. CM also carried out reviews of data used for Michelangelo-Leonardo.  Bulk density determination methodology was audited by S Carras and G Powell (Consultant to CM) through visitation of the independent laboratory.
Discussion of Relative Accuracy and Confidence	KIN embarked on a program of infill drilling, including twinning of 5 historical drillholes. The drilling largely substantiated the position and tenor of mineralisation. It also validated the information obtained from various drilling campaigns.
Conjugate	In the modelling process every attempt has been made to eliminate the "string effect" problem associated with the estimation of narrow vein structures through the use of ordinary kriging. This has been achieved through the use of distance weighting estimates correlated back to ordinary kriging estimates. This method, although heuristic has been validated by extensive review of the block models and the drillhole data.
	Every attempt has been made in the modelling to reduce the smoothing effect, which results when using a low cut-off grade to determine boundary positions and limit the amount of dilution in the Resource so that it can be correctly diluted for Reserve.
	In all high coefficient of variation orebodies, local estimation is very difficult to achieve due to the high nugget effect of the gold. This means that small parcels of ore are difficult to estimate without further information such as closer spaced grade control drilling.

## Appendix E

## JORC 2012 TABLE 1 REPORT LEONORA GOLD PROJECT Mertondale Mining Centre Cardinia Mining Centre Raeside Mining Centre

Table 1, Section 4 – Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate used for assessment of potential Mining Inventory for LGP Feasibility Study	<ul> <li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	Mineral Resource Estimates have been used for to determine an Ore Reserve for:  Mertons Reward  Mertondale 3  Tonto  Michelangelo  Bruno-Lewis Link/Lewis  Kyte  Helens  Rangoon  Leonardo  The mineral resources stated are reported inclusive of the ore reserve.
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	The following persons have provided input to this Feasibility Study:  Mr Don Harper (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 Managing Director for Kin Mining NL. Mr Harper is a designated Competent Person under the code.  Mr Shane McLeay (Entech Pty Ltd) – Mr McLeay is a Mining Engineer who has coordinated the mine design and financial modelling work associated with the LGP. Entech Pty Ltd was engaged as an independent consultant by Kin to assist with the DFS. Mr McLeay has visited site.  Mr Peter O'Bryan (Peter O'Bryan & Associates Pty Ltd) – Mr O'Bryan is the Principal Consultant Mr O'Bryan and his associate Mr Emmnauel has been to site and understands the detail associated with the site.

Criteria	JORC Code explanation	Commentary
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.  The Code requires that a study to at least 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	<ul> <li>Kin has been working with its technical advisors to prepare a 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 a 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 Feasibility Study.</li> </ul>
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.  The basis of the cut-off grade(s) or quality parameters applied.	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.  The following inputs were used to estimate revenue per gram of gold produced:  Gold price: AU\$1,575 per troy ounce (Whittle optimizations)  MERTONS REWARD:  Metallurgical recovery by CIL treatment:  Oxide:88%  Transition:88%  Fresh: 85%  Cutoff grade applied: 0.7 g/t  WA state royalty: 2.5% of revenue  Refining charges  Other tenement royalty \$1/t processed  MERTONDALE 3_4  Metallurgical recovery by CIL treatment:  Oxide: 95%  Transition: 95%  Fresh: 90%  Cutoff grade applied: 0.6 g/t  WA state royalty: 2.5% of revenue  Refining charges  Other tenement royalty \$1/t processed  TONTO:  Metallurgical recovery by CIL treatment:  Oxide: 96%  Transitional:91%  Cutoff grade applied: 0.6 g/t  WA state royalty: 2.5% of revenue  Refining charges  Other tenement royalty \$1/t processed  MICHELANGELO:  Metallurgical recovery by CIL treatment:  Transitional: 98%  Fresh: 90%  Cutoff grade applied: 0.7 g/t  WA state royalty: 2.5% of revenue  Refining charges  Other tenement royalty \$1/t processed

Criteria	JORC Code explanation	Commentary
Officia	CONO COGO EXPIANACION	LEONARDO
		Metallurgical recovery by CIL treatment:
		BRUNO-LEWIS LINK/LEWIS  Metallurgical recovery by CIL treatment:  Oxide: 97% Transition:97% Fresh 80% Cutoff grade applied: 0.6 g/t WA state royalty: 2.5% of revenue Refining charges
		<ul> <li>Metallurgical recovery by CIL treatment: <ul> <li>Oxide: 98%</li> <li>Transition:97%</li> <li>Fresh:97%</li> <li>Cutoff grade applied: 0.4 g/t</li> </ul> </li> <li>WA state royalty: 2.5% of revenue</li> <li>Refining charges</li> </ul>
		HELENS  • Metallurgical recovery by CIL treatment:  • Oxide: 96%  • Transition:93%  • Fresh:91%  • Cutoff grade applied: 0.5 g/t  • WA state royalty: 2.5% of revenue  • Refining charges
		RANGOON  Metallurgical recovery by CIL treatment:  Oxide: 96% Transition:90% Fresh:90% Cutoff grade applied: 0.5 g/t WA state royalty: 2.5% of revenue Refining charges
		The following inputs were used to estimate operating cost per tonne of ore treated, for all potential open pit mines:  Mining Costs  Surface haulage cost  Processing cost  Grade control cost  General & Administration costs  Royalties  Sustaining Capital
Mining factors or assumptions	The method and assumptions used as reported in the Pre- Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by	For all Open Pit Mining Ore Reserve estimations: A range of pit shells were generated by application of pit optimisation software 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

Criteria	JORC Code explanation	Commentary
	optimisation or by preliminary or detailed design)	identify ultimate pit dimensions and pit stages. The Ore Reserve has been based on detailed open pit designs. All pit designs and scheduling has been completed by Entech Pty Ltd.
	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	The mining method that is applied to the LGP operations is conventional drill, blast, load and haul. 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 with single ramp access with passing bays.
	The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc.), grade control and pre-production drilling.	Geotechnical considerations: The DFS incorporates geotechnical reviews by Peter O'Bryan & 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 O'Bryan only visited the Cardinia sites. He has broad experience in open pit mining in the general Leonora area to determine the recommended wall design parameters for the Feasibility Study. The information used for the geotechnical guidance included reviewing previously mined pits at Mertondale, Bruno 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; wall angles and bench widths have been largely determined by new geotechnical diamond drilling and televiewing and adopted as per by Peter O'Bryan recommendations; review of selected diamond drill core photos and core in the Leonora Core Farm.
	The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	<ul> <li>The Mineral Resource used was completed by Carras Mining in 2017 and reported to the ASX under JORC 2012 criteria in 30 August 2017</li> </ul>
	The mining dilution factors used.	<ul> <li>Given the narrow width of some areas of the ore bodies, Entech Pty Ltd used its in-house proprietary method to model the smallest mining unit (SMU) and economically assess these mining unit. The SMU defines the dimensions of the smallest practical mining block that can be expected to be mined by open pit methods.</li> <li>Ore blocks smaller than the SMU are bulked out to the</li> </ul>
		<ul> <li>appropriate width, resulting in a corresponding reduction in grade. It also allows a waste skin of unplanned dilution to be applied along the boundaries</li> <li>Results have been identified through the use of the following inputs:</li> </ul>
		<ul> <li>unplanned dilution of 0.25 m (on both the hangingwall and footwall)</li> <li>cut-off grade \$0/t (i.e. the shape must be profitable considering mining and processing costs of all diluting material)</li> <li>smallest mining unit (6.25 m along strike (half</li> </ul>
		parent cell size), 1.5 m minimum width, 2.5 m vertical height)  • Material outside the ore boundaries are predominantly the host rock with zero grade.
		The resulting dilution is calculated and used for further assessment and for the calculation of tonnes and grade within the open pit schedules.

Criteria	JORC Code explanation	Commentary
Jitoriu	Corto Codo expluitation	The global dilution for Cardinia, Mertondale and Raeside mining districts are 9%, 16.1% (MSO recovery) and 5.6% respectively.
	<ul> <li>The mining recovery factors used.</li> <li>Any minimum mining widths used.</li> </ul>	<ul> <li>The mining recovery is calculated from the difference between Mineral Resource material above cut-off and that contained within the identified mineable shapes.</li> <li>The global mining recovery for Cardinia, Mertondale and Raeside mining districts are 91.2%, 85.7% and 91.9% respectively.</li> </ul>
	useu.	<ul> <li>Bench height is an important design factor when considering the deposit attributes and the impact on mining productivity. Based on a burden ranging between 2.8 m and 3.6 m, a bench height of 5 m was selected for the following reasons:</li> <li>the ore body is medium width and small diameter blast holes are desired</li> <li>minimise the planned dilution where the deposit experiences variances in dip and dip direction by maintaining a short bench height</li> <li>prevent large oversize; as a rule of thumb a bench height much greater than the burden will prevent large oversize, preferably a ratio closer to 2:1 (bench height to burden); large operations with large benches achieve ratios above 3:1, however, being a smaller operation, ratios close to two are considered reasonable.</li> </ul>
		<ul> <li>As the pits deepen, the area that is available for the equipment to operate within will reduce. Typically, there will be enough room for a truck to complete a full turn-around until the point where the truck will reverse into position to be loaded.</li> <li>In these areas, a minimum 30 m mining width will be maintained and is considered the smallest operating width to conduct operations. At the end of the mine life when a 'goodbye cut' is completed, a minimum 20 m mining width has been used.</li> </ul>
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Inferred Mineral Resources have been included in the mine plan as its mined as part of the Inferred material comprises 8% of the mine plan. The projects viability is not dependent on the inferred material. Inferred material is stockpiled and only processed in beginning of month 64 post plant commissioning.
	The infrastructure requirements of the selected mining methods.	<ul> <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 and infrastructure currently at the Lawlers gold mine.</li> <li>Operational establishment, processing plant and mine infrastructure, have been included in cashflow modelling.</li> </ul>
Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	The metallurgical process proposed is a conventional carbon-in-leach (CIL)process. The plant has been designed to a 1.5Mtpa. The metallurgical process proposed is a well-tested and proven technology.

Criteria	JORC Code explanation	Commentary
Criteria	• Whether the metallurgical process is well-tested technology or novel in nature.  • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	<ul> <li>Metallurgical process data relating to each respective deposit has been determined by a review of historical production and laboratory test work results ranging from 1987 -2017 and processing performance statistics by independent metallurgical consultant Greg Wardell Johnson.</li> <li>The recoveries used for this Ore Reserve statement are based on independent test work carried out by Independent Metallurgical Operations (IMO) in 2017 and Ammtec Mineral Consultants (2010)</li> <li>Metallurgical data reviewed shows that the proposed processing methods is expected to produce high gold recovery in the oxide and transitional material. Lower recoveries will be experienced for fresh material at Mertons Reward. The DFS delivered an overall average metallurgical recovery of 92.5%.</li> <li>Test work does not indicate material quantities of preg-robbing for oxide and transition ores in the mine plan. Where preg-robbing material is encountered historical metallurgical testwork (2010) showed that recoveries improved significantly with the use of Activated Carbon. In</li> </ul>
	Any assumptions or allowances made for deleterious elements.	<ul> <li>significantly with the use of Activated Carbon. In addition, preg-robbing black shales may be mined separately from and stockpiled.</li> <li>During the mining process, and where necessary, selective extraction of the graphitic shales is envisaged to be possible so that successful segregation and quarantining of the shale material can be achieved, so as to mitigate potential contamination of ore in the process plant.</li> <li>Test work has shown the presence of arsenopyrite at Mertons Reward and Lewis has reduced recoveries for fresh ores to 86% and 80% respectively.</li> <li>There were no deleterious elements noted</li> </ul>
	The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.  For minorals that are	Pilot scale test work has been carried out at the Bruno (Cardinia) and Mertondale 2 pits (100,000t) in 2010 and toll treated through the Sons of Gwalia mill. Further pilot scale testwork was carried out at Cardinia in June 2016 where a 15,000t parcel (oxide & transition ores) was toll treated through the Lakewood mill in Kalgoorlie.
	<ul> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	Mineralogical test work was carried out in 2009 by R Townsend.
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details	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

Criteria	JORC Code explanation	Commentary
Criteria	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.	be preferentially used for establishing infrastructure where possible.  All proposed mining areas lie within granted Mining Leases which in addition to adjoining Mining Leases offer ample area for infrastructure establishment.  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 have been updated for areas outside of previous surveys and was completed during the Feasibility stage.  Statutory approval and permitting applications will include Department of Mining, Industrial Regulation and Safety (DMIRS) Mining Proposal and Department of Water and Environmental (DWER) regulation Works Approval and there will be a requirement to update DWER Groundwater Operating Strategy documents and related licenses. A Works Approval and Clearing permit for the construction of the processing plant has been submitted.  A waste rock characterization assessment has been completed.  Waste rock material during dump construction will be part of the Stage II Works Approval application  A Tailings Storage Facility (TSF) (8Mt capacity) will be constructed at Cardinia. Excess tailings can to be deposited into mined out pits as part of the rehabilitation process.  TSF Management plans and approval process will be by independent consultants SRK as part of the DFS  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.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	<ul> <li>The LGP site is well serviced by the nearby township of Leonora in addition to the major regional centre of Kalgoorlie, 280km south-west.</li> <li>Air services operate three times a week out of Leonora to Perth with sealed airstrips. Leonora is within 20 minutes' drive from the site.</li> <li>Extensive good quality, unsealed public roads pass through the project area and the sealed Laverton-Leonora Road is within the LGP area.</li> <li>The historical bore fields exist to supply both the LGP processing plant. Field based investigations completed by consultants the bores can be reestablished. Initial water supply will be from in-pit water at Mertondale 5 and Mertondale 4.</li> <li>A 15km haulage route is required to be constructed, between Cardinia (plant location) and the Mertons Reward. A road exists between Mertons Reward and Mertondale 5. Miscellaneous license has been</li> </ul>

Criteria	JORC Code explanation	Commentary
		granted between Mertons Reward and Cardinia
		Initial water supply for the processing plant will be sourced from Mertondale 5 and Mertondale 4 and surrounding Bores and water from the TSF decant tower.
		Majority of labour is expected to be FIFO with anticipated 10% of the workforce to be sourced locally and being residential in Leonora.
		New infrastructure required for the proposed operation (in addition to mine-specific infrastructure) includes:     Diesel supplied power station     Processing plant and tailings storage facilities     Site offices and workshops     64 man camp expansion in Leonora     Communications infrastructure to connect to the Telstra
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study.  The derivation of, or assumptions made, regarding projected capital costs in the study.	The cost estimation strategy was based on securing quotations or budget pricing from vendors for dismantling of Lawlers processing plant, contract labour work, equipment and associated mine infrastructure. KIN's strategy for the dismantling and reassembling/modification of the Lawlers processing plant will be based on a "First principles build model". The model implies that KIN will be managing the entire dismantling and reassembling of the process plant and infrastructure using the services of construction supervisors, contract engineers, draftsman, surveyor and purchasing officer. The costs evaluated by both "COMO Engineering" and "Simulus Engineers & Simulus Laboratories". Capital costs are to ±15%.
	The methodology used to estimate operating costs.	Operating mining and G&A cost estimates have been derived by Kin & Entech Pty Ltd. Operating and capital costs to ±15% accuracy.
		Mining cost estimates have been provided by Mining Contractors and cost data from similar operations / projects to an estimated accuracy of ±15%
		Processing costs have been estimated by Kin and reviewed by independent consultants SRK.     Operating costs to an accuracy of ±15%
		Costs estimates are based on designs for open pit mines, process plant (Lawlers) 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 Feasibility Study purposes to an estimated accuracy of ±15%
		Mine operating costs have been developed from first principles by mining contractors and quotations to provide a budget estimate of the mining schedule. These costs have been used in the detailed DFS financial model.
		General and administration costs have been estimated on a first principles basis and from quotation from suppliers and contractors and benchmarked to surrounding operations.

Criteria	JORC Code explanation	Commentary
		<ul> <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> <li>Allowances made for the content of deleterious elements.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> </ul>	<ul> <li>No deleterious elements/material have been included in the DFS</li> <li>The project economics have been modelled on a gold price of AU\$1,600/oz.</li> <li>exchange rate of US\$:AU\$ = 0.78</li> <li>All costs have been estimated in AUD.</li> <li>Selling costs have been estimated for gold, including royalties, refining and transport.</li> </ul>
	<ul> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>The allowances made for royalties payable, both Government and private.</li> </ul>	Allowances have been made for the new Western Australian State royalty (3.75%) and existing private tenement royalty obligations.
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.  The derivation of	See comments above
	assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	
Market A ssessment	<ul> <li>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>A customer and competitor analysis along with the identification of likely market windows for the product.</li> </ul>	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\$:AU\$ exchange rate have resulted in a relatively stable Australian Dollar gold price over the previous three years, reflected in the AU \$1,600/oz gold price used in this estimation.
	<ul> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	AU \$1 = USD \$0.78 (Assumed exchange rate)
Economic	The inputs to the economic analysis to produce the net	Cost inputs have been estimated from quotations and/or by competent specialists including current

Criteria	JORC Code explanation	Commentary
2110.10	present value (NPV) in the study, the source and	labour rates for Western Australia.  Sensitivity analysis has indicated that the project
	confidence of these economic inputs including estimated inflation, discount rate, etc.  NPV ranges and sensitivity to variations in the significant assumptions and inputs.	drivers are commodity price and metallurgical recovery followed by operating costs; NPV and IRR remain favorable for commodity price sensitivity tests. The full project sensitivity analysis is shown in the LGP DDFS Financial model.
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	<ul> <li>The project is located in the North-Eastern goldfields region of Western Australia. The site has previously been operated and the current project is a reestablishment of previous mining, with the processing plant proposed to be located near an existing well maintained private road.</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 mine plan area.</li> <li>The Company has a good relationship with the Shire of Leonora and local Indigenous community.</li> </ul>
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	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.
	Any identified material naturally occurring risks.	<ul> <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> </ul>
	The status of material legal agreements and marketing	Gold is an easily traded commodity and does not require any specific marketing arrangements.
Classification	<ul> <li>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 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.</li> <li>The basis for the</li> </ul>	<ul> <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 Warton Global in October 2016.</li> </ul>
	classification of the Ore	The mineral Resource above the cut-off grade within

Criteria	JORC Code explanation	Commentary
Jittoria	Reserves into varying	the designed open pits has been modified by the
	confidence categories.	application of mining, recovery and mine dilution factors.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	Mr Shane McLeay, the Competent person for this Ore Reserve estimation, has overseen the work undertaken in the 2017 DFS and considers that in general, it is sufficiently detailed and relevant to the deposit to allow Indicated resources scheduled within
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	the pit designs to be classified as Probable Ore Reserves.  There are no Measured Resources
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	A review of the resources, process plant, processing costs and metallurgy has been undertaken by SRK and that data has been used to form part of the basis of the study and derivation of Ore Reserve.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure	The DFS document addresses the various modifying factors to a DFS level of confidence and addresses the modifying factors and assumptions made.  There is a degree of uncertainty associated with
	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.	<ul> <li>Geological estimates.</li> <li>Accuracy of capital and operating cost estimates is considered to be within ±15%, consistent with accepted DFS standards. 18% contingency has been allowed in the capital cost estimate to reflect the degree of uncertainty of the estimate for each area.</li> <li>The project is not yet operational and as such, no recent production data exists at this time except for the Bruno Mine (2010) and the Lewis Trial Pilot Scale test carried out in 2016</li> </ul>
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	
	Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.	
	It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	