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Pre-Feasibility Study shows strong economics of KGL's Jervois Copper-Silver Project

- **Low C1 cash cost of US$0.88/lb over mine life**
- **3.2 years payback**
- **A$807M operating cash flow**

KGL Resources Limited (KGL) is pleased to announce the results of the completed Pre-Feasibility Study (PFS) of KGL's 100% owned Jervois Copper-Silver Project in the Northern Territory.

The initial PFS, announced in December 2014, found Jervois to be technically and commercially feasible. Work since then has enhanced the project significantly.

Simon Milroy, Managing Director of KGL, commented:

> "Jervois is confirmed as a robust, mid-level scale mining project with an initial annual production of more than 20,000 tonnes of copper, one million ounces of silver, plus lead and zinc, with a mine life of more than 8 years."
>
> "In 2015, we increased and upgraded the mineral resource, simplified the metallurgical processing and reduced the operating costs."
>
> "The additional studies now show Jervois to be:-
>
> - a conventional copper flotation project with strong economics
> - with a C1 (cash) cost of US$0.88/lb and C3 (including depreciation, amortisation and royalty) cost of US$2.13/lb
> - among the lowest cost of the world's probable new mines."
>
> "The PFS benefited from the upgrading of mineral resources and increases in silver, lead and zinc tonnages."
>
> "With 12km of strike length, all current orebodies remain open, and the potential for substantial new discoveries is demonstrated by the recent intersection at the Rockface prospect in an area that is not included in the current mining inventory used in the PFS. The strongly mineralised 14m intersection is currently being assayed."

Table 1. Key Project Metrics

Key Life of Mine (LoM) Highlights	
Resource – Copper	26.7Mt @ 1.12%Cu, 16.6g/tAg
– Lead/Zinc	3.8Mt @ 0.72%Cu, 3.7%Pb, 1.2%Zn, 67.5g/tAg
LoM*	8.25 years
Average Annual Production	21,000t Cu
LoM C1 Cash Cost	US$ 0.88/lb
LoM C3 Cash Cost	US$ 2.13/lb
Copper Price**	US$ 3.25
Silver	US$ 19.94 / oz
Gold	US$ 1,269 /oz
FX – Exchange (A$:US$)	1A$:0.7US$
Gross Revenue (net TC and RC's)	A$ 2,392m
Operating Cash Flow	A$ 807m
Pre-Production Capital Costs	A$ 189.5m
Deferred Capital Cost (Year 2)	A$ 26.7m
NPV (10% Discount rate)	A$ 248m
Payback Period	3.2 years
IRR	35%

**The LoM schedule is derived from a mining inventory of which 56.5% is Indicated Resources and 43.5% is Inferred Resources, the LoM mining inventory does not constitute an Ore Reserve. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.*

*** The commodity prices were based on the mean value of the long term (beyond 2020) forecast price of each metal from a number of international banks and investment firms as compiled by Concensus Economics Prices were quoted in nominal US dollars, metal prices in real US dollars will be accounted for through the application of a discount rate.*

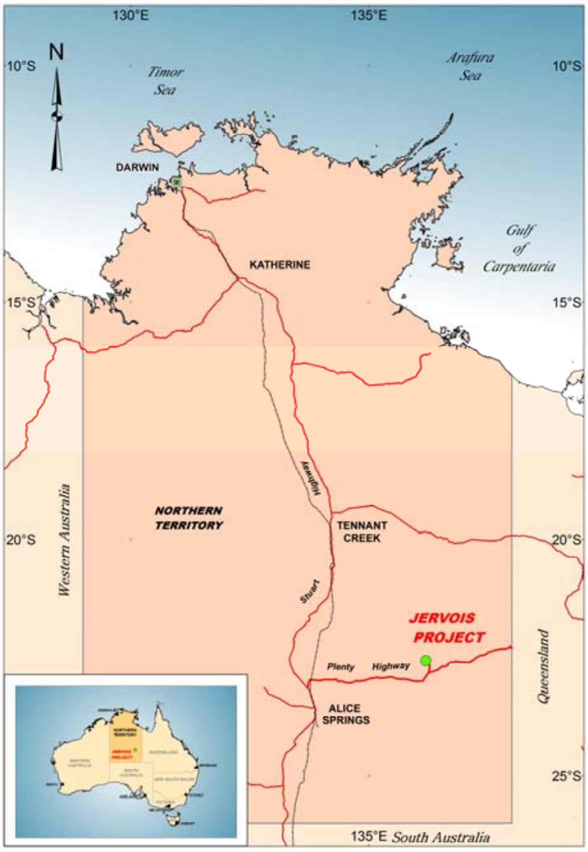
Significant growth potential

Recent exploration successes at Rockface, Green Parrot and Bellbird East offer the potential for additional high grade, relatively shallow resources that could feed into the early part of the mine schedule and further enhance the Project's economics.

1. INTRODUCTION

The Jervois Copper Project is located approximately 380km by road north-east of Alice Springs in the Northern Territory of Australia, with road access from Alice Springs via the Stuart and Plenty Highways, as depicted in Figure 1.

Figure 1. Jervois Location Map



The Jervois Project will consist of open pit mining of several deposits followed by underground mining to feed a 2.2Mtpa flotation plant producing 80-100,000 tpa of copper concentrate plus a separate lead/zinc bulk concentrate.

The Jervois Project is forecast to produce a total of 754,000 tonnes of copper concentrate at a grade of approximately 23% copper and 283 g/t silver over an initial life of 8.25 years*. This equates to an annual average production of 21,000 tonnes of contained copper and 1 million ounces of contained silver. The Jervois Project will also produce approximately 179,000 tonnes of bulk concentrate at a grade of 43% lead, 17% zinc and 1,069 g/t silver over the LoM.

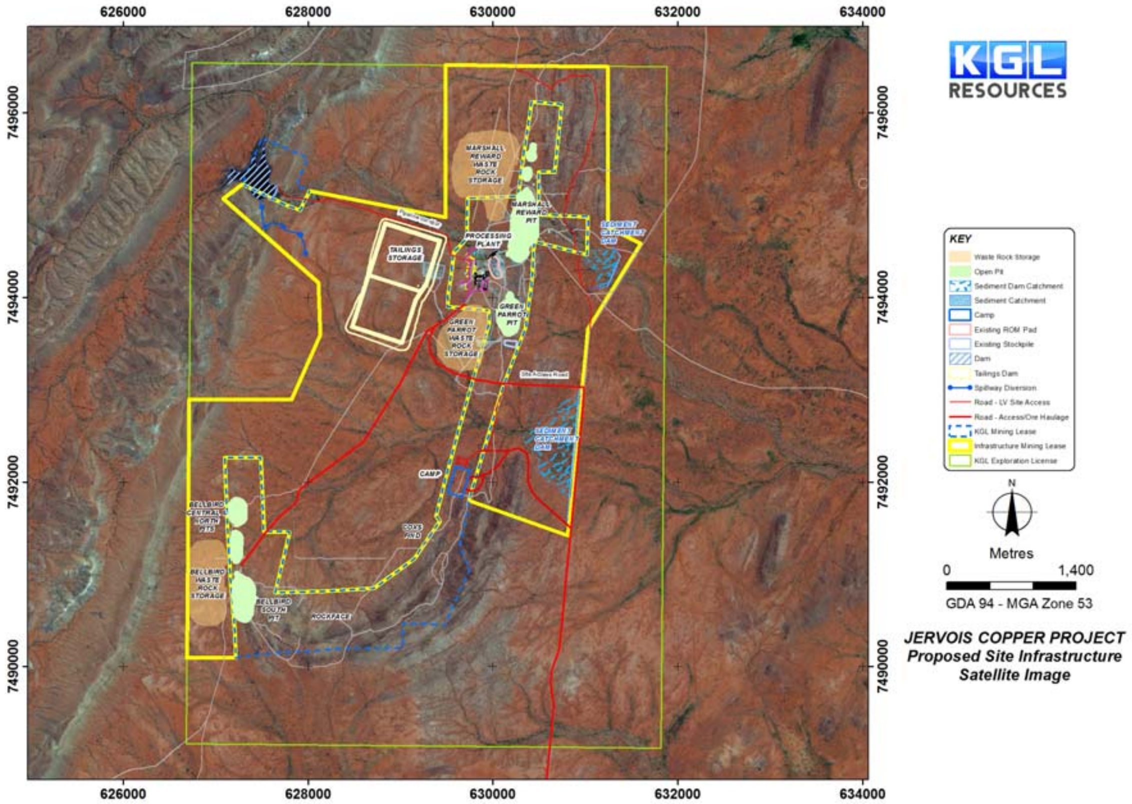
The PFS is based on an Indicated and Inferred resource of 30.5Mt containing 327,000 tonnes of copper, 22.6Moz silver, 143,000 tonnes of lead and 47,000 tonnes of zinc (Table 2).

** The Mineral Resources underpinning this production target have been prepared by a competent person in accordance with the requirements of Appendix 5A JORC Code. The mining inventory on which the production target is based is derived from 56.5% Indicated Resources and 43.5% Inferred Resources. The above figures do not constitute an Ore Reserve. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised.*

Sections of this pre-feasibility report (Report) have been compiled with information provided by the following companies:

• Geology	KGL
• Mineral resource	H&S Consultants
• Mining	Auralia Mining Consulting
• Metallurgy	Minelogix
• Process plant	Lycopodium
• Process plant infrastructure	Lycopodium
• Tailings management and related infrastructure	Knight Piésold
• Environmental, social and permitting	KGL
• Transport and marketing	Solutions Development & KGL
• Capital and operating cost estimates	Lycopodium

Figure 2. ***Site Layout***



2. GEOLOGY

The Jervois Project is located on two Mineral Licences (ML 30180 and ML 30182) and one Mineral License Application (MLA 30829) located within EL 25429 held by Jinka Minerals, a subsidiary of KGL Resources. Base metal mineralisation at Jervois is hosted by a lower-to-middle amphibolite grade metasedimentary sequence of the Bonya Metamorphics. The Bonya Metamorphics is a unit in the Aileron Province of the Palaeoproterozoic eastern Arunta Region that reached peak metamorphism during the regionally extensive high-T low-P Strangways Event. The base metal mineralisation at Jervois is stratabound and contained within steeply dipping lenticular bodies (lodes) of calc-silicate, garnet-chlorite-magnetite rock and garnet-magnetite quartzite, within a thick succession of spotted andalusite-cordierite schist and quartz-sericite-magnetite schist. The mineralised sequence has a strike length of some 12km and a stratigraphic thickness up to about 600m.

3. History

Copper was discovered at Jervois in 1929 during mustering of stray cattle on a track leading from Tobermorey on the Northern Territory – Queensland border. In the 1950s, leases covering the area were acquired by Kurt Johannsen, who mined copper carbonate on a small scale for the fertilizer industry and later as a flux used in the smelting process at Mount Isa.

The first modern exploration was conducted by New Consolidated Goldfields (Australasia) Pty Ltd from 1961 – 1965. Exploration continued sporadically through to 1980 when the project was acquired by Plenty River Mining. A treatment plant designed to treat Green Parrot lead-zinc-copper-silver ore was completed in early 1982 and was successfully commissioned in April, but was placed on care and maintenance within 12 months following a sharp decline in the lead price.

Over the next 20 years, a succession of companies conducted exploration at Jervois including Normandy Poseidon, MIM Exploration and Jinka Minerals. In May 2011, Jinka Minerals was acquired by KGL for A$12.8m and since that time approximately A$21.3m has been spent on exploration and project development. KGL has conducted drilling programs each year since the acquisition and has steadily increased the size and confidence of the resource. Reverse circulation (RC) drilling and diamond drilling has been used for resource definition and exploration. Samples generated from RC and diamond drilling were analysed by the ALS Laboratory and a QA / QC procedure has been applied on all samples used for the resource estimation.

KGL considers good potential remains to increase the global resource with further exploration. This can be achieved by extending existing resources or by discovering new mineralised trends. Resource definition drilling and geophysics at the existing resources at Marshall-Reward, Bellbird, Rockface and Green Parrot, has identified targets along strike and at depth that will be tested with drilling. Soil sampling, RAB drilling and detailed geological mapping of KGL's tenements has also located new mineralised trends that remain to be drill tested.

4. Resource

H&S Consultants Pty Ltd ("H&SC") was commissioned by KGL to complete updated mineral resource estimates for the Jervois Project. The target commodity is copper with subordinate silver, lead, zinc and gold.

A total of five deposits comprise the Jervois Project, namely Marshall-Reward (including Reward East and Sykes), Green Parrot, Bellbird including Bellbird North, Rockface and Cox's Find. The current round of work involved updated resource estimates for most of the lodes including Marshall, Reward, Reward East (two lodes), Sykes (maiden resource), Green Parrot (two lodes), Bellbird (four lodes) and Bellbird North.

The new resource estimates are based on 15,187 one metre composites from the drilling data. Elements modelled included copper, silver, lead, zinc, gold, sulphur, iron, bismuth, cobalt, tungsten, uranium and acid soluble copper. Composite extraction for modelling, used mineral wireframes designed to a nominal 0.1% copper cut-off (and anomalous silver and/or lead) under limited geological control, including litho-geochemical interpretation (where available). Extrapolation of the wireframes beyond the limiting drillholes was generally <25m in strike and <100m in dip. Modelling consisted of Ordinary Kriging using the Micromine or GS3M software with the modelled data loaded into Surpac block models.

Modelled gold grades have been included as part of the Marshall-Reward and Bellbird (including Bellbird North) resource estimates. The amount of historical gold data is limited and as a result, the gold resource estimate is classed as Inferred. A global gold Inferred Resource for the two deposits stands at 21.4Mt at 0.16 g/t totalling 113,000 oz for a copper cut-off of 0.5%.

Exploration Potential* exists peripheral to the new resource estimates within the current interpreted mineral wireframes. The Exploration Target for the combined Bellbird and Marshall-Reward zones for a 0.5% Cu cut-off is of the order of 4 – 8 Mt at 0.8 – 1.2% Cu, 7 – 15 ppm Ag for 40,000 to 100,000 tonnes of copper and 1.5 – 3.5Mozs of Ag (Table 2). The lodes are open at depth, and there are additional possibilities along strike from the deposits based on isolated drill hole information and from interpretations of the geophysical surveys.

** The potential quantity and grade of the Exploration Target is conceptual in nature and there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource.*

Table 2. 2015 Jervois Resource Estimate*

Jervois Copper Resources	Category	Tonnes Mt	Copper %	Silver g/t	Lead %	Zinc %	Copper kt	Silver Moz	Lead kt	Zinc kt	Cut-off Cu%
Marshall	Indicated	1.4	1.45	35.6			20.1	1.6			0.5
Copper	Inferred	0.3	0.90	20.2			2.5	0.2			0.5
Reward	Indicated	5.0	1.14	25.3			57.1	4.1			0.5
Copper	Inferred	7.6	1.02	22.2			78.0	5.4			0.5
East Reward	Inferred	2.6	0.92	8.2			24.1	0.7			0.5
Bellbird	Indicated	4.1	1.22	7.7			49.9	1.0			0.5
	Inferred	4.3	1.29	8.5			55.9	1.2			0.5
Cox's Find	Inferred	0.7	0.87	2.8			6.0	0.1			0.5
Rockface	Inferred	0.7	0.82	3.1			6.0	0.1			0.5
TOTAL	Indicated	10.5	1.21	19.8			127.0	6.7			
	Inferred	16.2	1.06	14.6			172.1	7.6			
	TOTAL	26.7	1.12	16.6			299.1	14.3			

Jervois Lead/Zinc Resources	Category	Tonnes Mt	Copper %	Silver g/t	Lead %	Zinc %	Copper kt	Silver Moz	Lead kt	Zinc kt	Cut-off Cu%
Reward	Indicated	0.5	0.74	70.7	6.8	0.9	3.6	1.1	33.6	4.4	None
Lead/Zinc	Inferred	0.8	0.51	90.9	8.6	1.2	4.1	2.3	69.4	9.4	None
Green Parrot	Indicated	0.5	0.99	64.0	0.9	0.6	5.1	1.1	4.7	3.2	0.3
Lead/Zinc	Inferred	1.4	0.81	78.0	1.8	0.9	11.1	3.4	24.4	12.8	0.3
Bellbird North	Inferred	0.7	0.57	17.9	1.7	2.5	3.8	0.4	11.3	16.7	0.2
TOTAL	Indicated	1.0	0.87	67.3	3.8	0.8	8.7	2.2	38.3	7.6	
	Inferred	2.8	0.67	67.6	3.7	1.4	19.0	6.2	105.1	38.9	
	TOTAL	3.8	0.72	67.5	3.7	1.2	27.7	8.4	143.4	46.5	

2015 Combined	TOTAL	30.5					327	22.6	143	47	

**These tables may contain minor rounding errors*

5. Ore Reserves

The Indicated Resource material within the pit designs has been classified as a Probable Ore Reserve. There are also significant Inferred Resources nearby that are likely be upgraded to Measured and Indicated Resources before KGL commit to developing the Jervois Project.

The Project Ore Reserves are included in Tables 3 and 4. Due to the processing recovery and processing costs varying for each element, a single, overall economic cut-off cannot be calculated. Block model reports using a range of economic cut-offs were run to determine which best represented the outputs from the optimisations; these were then applied to the Ore Reserve designs.

A 0.35% Cu cut-off was selected for the Marshall / Reward and Bellbird Resources, and a 0.5% Pb cut was used for the predominantly Pb/Zn Resources to calculate the Reserves. Mining recovery of 95% has been applied as well as 5% ore losses. The following two tables contain the Copper Ore Reserves and Lead-Zinc Ore Reserves respectively. All Ore Reserves are classified as Probable.

Table 3. Copper Ore Reserves

	Bellbird	Marshall Reward	Total
Ore Tonnes	3,394,000	5,037,700	8,431,700
Cu %	1.20	1.07	1.12
Au g/t	0.12	0.26	0.20
Ag g/t	7.36	25.00	17.90
Pb %	0.02	0.22	0.14
Zn %	0.05	0.21	0.14

Table 4. Lead / Zinc Ore Reserves

	Bellbird	Marshall Reward	Total
Ore Tonnes	239,300	204,700	444,000
Cu %	0.57	0.91	0.77
Au g/t	0.03	0.20	0.13
Ag g/t	19.99	62.67	45.49
Pb %	2.27	5.38	4.13
Zn %	3.04	0.83	1.72

The above Ore Reserve numbers include mining dilution and recovery. Ore Reserve estimates are not precise calculations. Reporting of tonnage and grade estimates should reflect the relative uncertainty of the estimate by rounding off to appropriately significant figures.

6. Mining

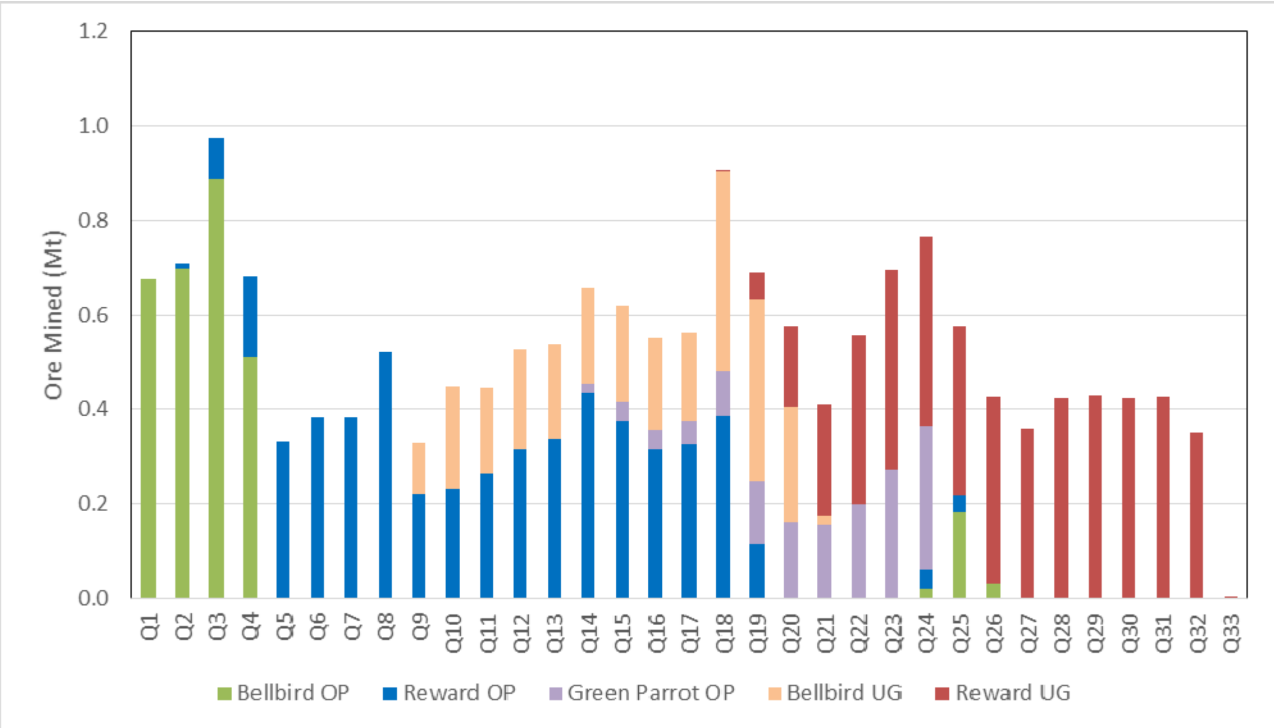
The information detailed in this section is based on the conceptual LoM work with the inclusion of Inferred Resources and has been completed separate to and in addition to the Ore Reserve.

Open pit mining is proposed in three locations: Marshall-Reward, Green Parrot and Bellbird, as shown in Figures 3,4 & 5. The life of mine waste to ore stripping ratio for the open pits is 7.3 : 1. Open pit mining continues for the first 6.25 years of the mine life.

The surface mining schedule utilises a fleet of 90 tonne trucks loaded by a Hitachi EX1900 and a Hitachi EX1200 for the first seven quarters of mine life, after which the EX1900 is decommissioned and removed from site. The remainder of the open pits are mined with the remaining EX1200 and fleet of 90 tonne trucks. Mining has been scheduled to start three months prior to steady state production through the processing plant to ensure sufficient stocks are available on the ROM to maintain a throughput base case rate of 2.2Mtpa once processing begins and to aid in the blending preferences for the transitional ore.

Underground mining at Bellbird has been delayed for five quarters after completion of the Bellbird open pit to delay the capital expense associated with underground development. This limits the size of the ore stockpile while maintaining a high proportion of high-grade mill feed and results in a shorter period where both open pit and underground contractors are on site.

Figure 3. Ore Tonnes Mined by Location (Qtr's)



Underground mining is scheduled to commence in the third year of operations. Long Hole Open Stoping (LHOS) was selected as the most suitable method to mine the underground deposits at the Jervois Project. Other mining methods investigated during the optimised PFS work included Sub-Level Open Stoping (SLOS) and Benching. Both of these mining methods may still be suitable to exploit specific areas of the underground reserve and as such will be considered during future work. The nominal level spacing is 30m from floor to floor. Stope heights range from 20-40m in a few select stopes.

The Jervois Project will utilise standard underground mining equipment. The scale of the project leads to the selection of larger equipment with twin-boom jumbos used to develop all headings. 17 tonne loaders (LHDs) will be used to remove blasted rock from all development headings and stopes. Where required, these LHDs will also be used to backfill stopes with aggregate fill and potentially cemented fill. 50 tonne trucks will be required to transport the broken rock from underground to the surface stockpile or waste dump.

Figure 4: Planned Open Pit and Underground Development at the Marshall – Reward deposit (looking west)

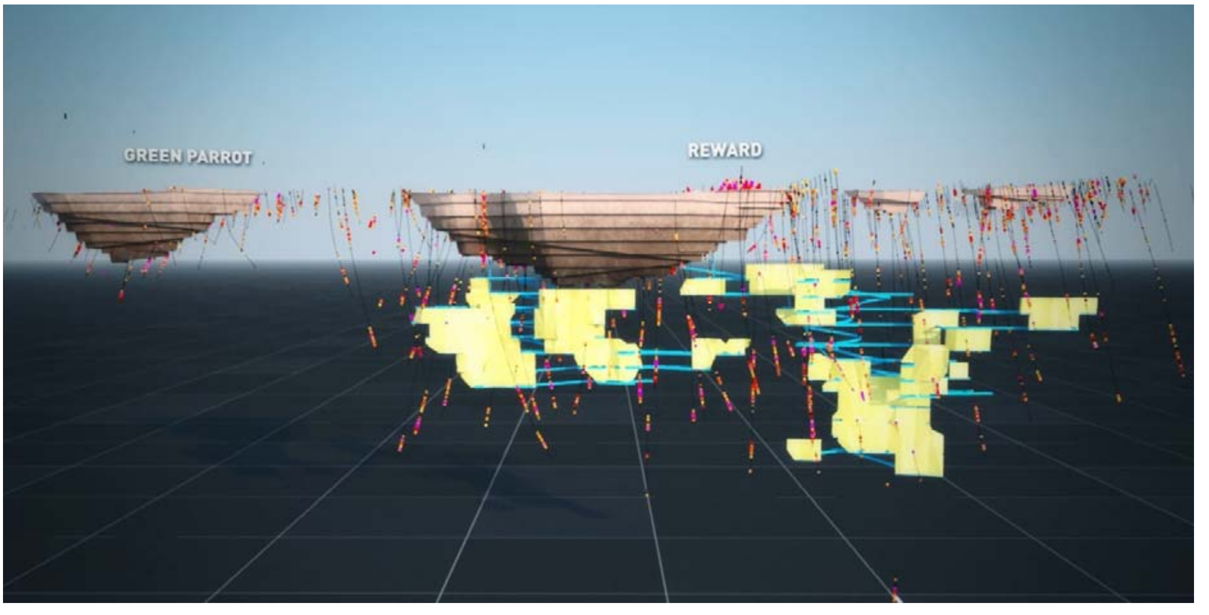
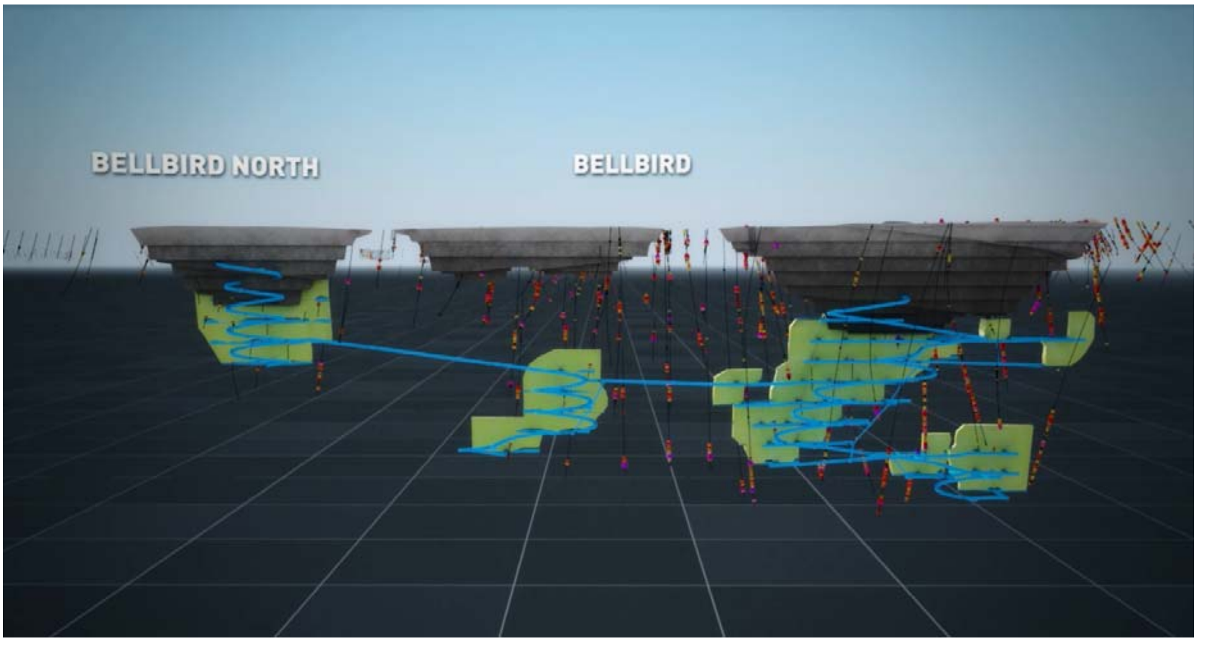


Figure 5: Planned Open Pit and Underground Development at the Bellbird deposit (looking east)



A large long-hole rig will be used to drill all production holes. The primary production fleet will be supported by a dedicated charge-up unit, integrated tool carriers and a grader. Ground control in the proposed stopes will be a combination of installed ground support in the form of cable bolts, pillars being left in the narrower or lower grade areas of stopes and backfill, and either cemented or aggregate fill depending on the location of stopes.

Stoping will generally commence from the upper stopes and progress down, although this process may be reversed in certain stoping areas to allow backfill, or due to other operational constraints. Overall stope ore losses are expected to be 9% (from island and sill pillars and some stope under break). Mining dilution of 10% is expected during the underground mining operations.

7. PROCESSING PLANT

The process plant has been designed to treat a number of different ore types, including primary copper ore, transition copper ore and lead-zinc ore. As each of these ore types varies in hardness and/or grind size requirements, different throughput rates will be achieved for each.

The primary product from the plant will be a copper sulphide concentrate. The concentrate will also contain variable amounts of bismuth, silver and gold depending on the ore source. During treatment of lead-zinc ores, the plant will produce two products: a copper concentrate and a bulk lead-zinc concentrate which will also contain the majority of the bismuth, silver and gold (Figure 7).

For primary copper ore, the plant has been designed to accommodate 2.2Mtpa at a head grade of up to 2.00% copper, 0.16% lead and 0.22% zinc. For transition copper ore, the plant will process 2.4Mtpa at a head grade of up to 2.70% copper, 0.30% lead and 0.16% zinc. For lead-zinc ore, the plant will treat 1.56Mtpa at a head grade of up to 1.10% copper and 8.1% combined lead plus zinc.

The process plant will comprise the following principal process areas:

- Primary crushing, crushed ore storage and reclaim.
- Primary grinding and classification.
- Rougher and scavenger flotation.
- Copper regrind.
- Copper cleaner and scavenger flotation.
- Lead zinc regrind.
- Lead zinc cleaner flotation.
- Copper concentrate thickening and filtration.
- Lead zinc concentrate thickening and filtration.
- Concentrates storage and load-out.
- Tailings thickening, disposal and decant water return.
- Process water storage and distribution.
- Raw water storage and distribution.
- Reagent make-up and distribution.
- High and low pressure air distribution.

A schematic flowsheet for the process plant is presented in Figure 6. The plant will incorporate a conventional comminution circuit comprising a primary crusher, followed by a SAG mill and a ball mill which will operate in closed circuit with a cyclone cluster (with provision for a pebble crusher to be installed in the future).

The flotation circuit design is based on flotation test work conducted at ALS Metallurgy. The remaining unit processes in the flowsheet, such as copper and lead-zinc concentrate thickening, copper and lead zinc concentrate filtration, and tailings thickening, were based on design data from similar plants and are considered by Lycopodium to be reasonable at the current study’s level of accuracy.

Figure 6. Schematic Flow Sheet for concentrate production

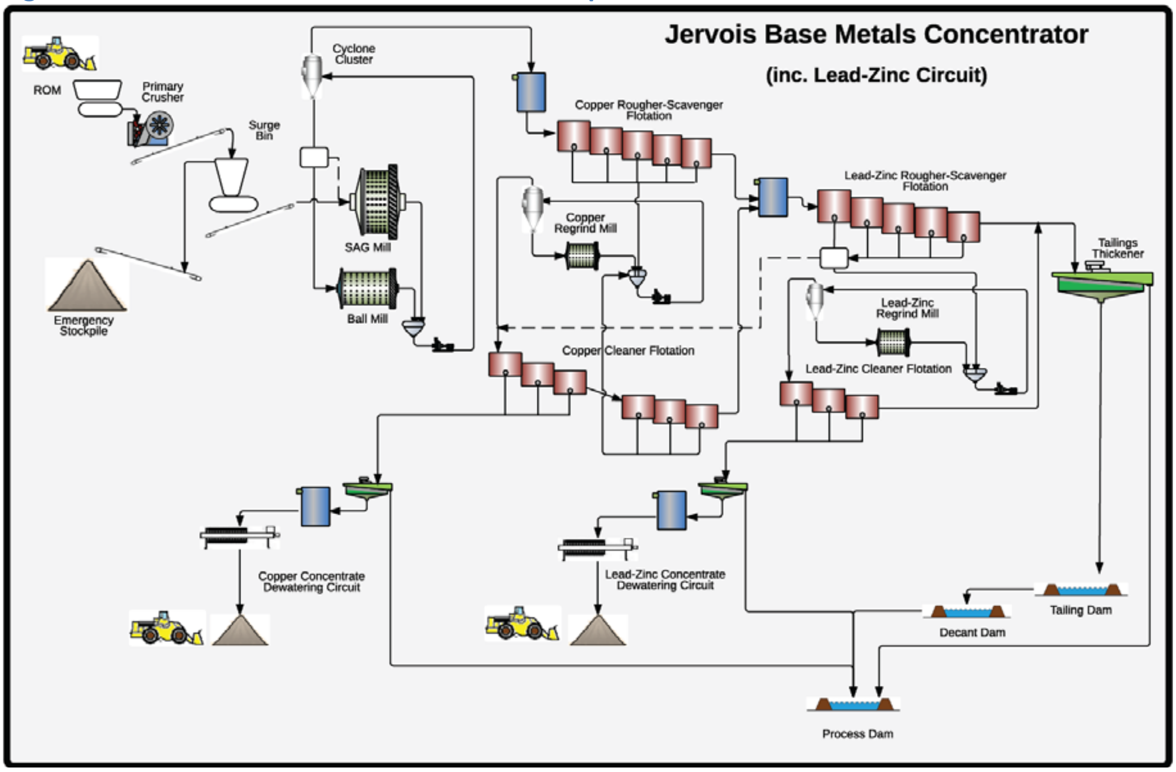
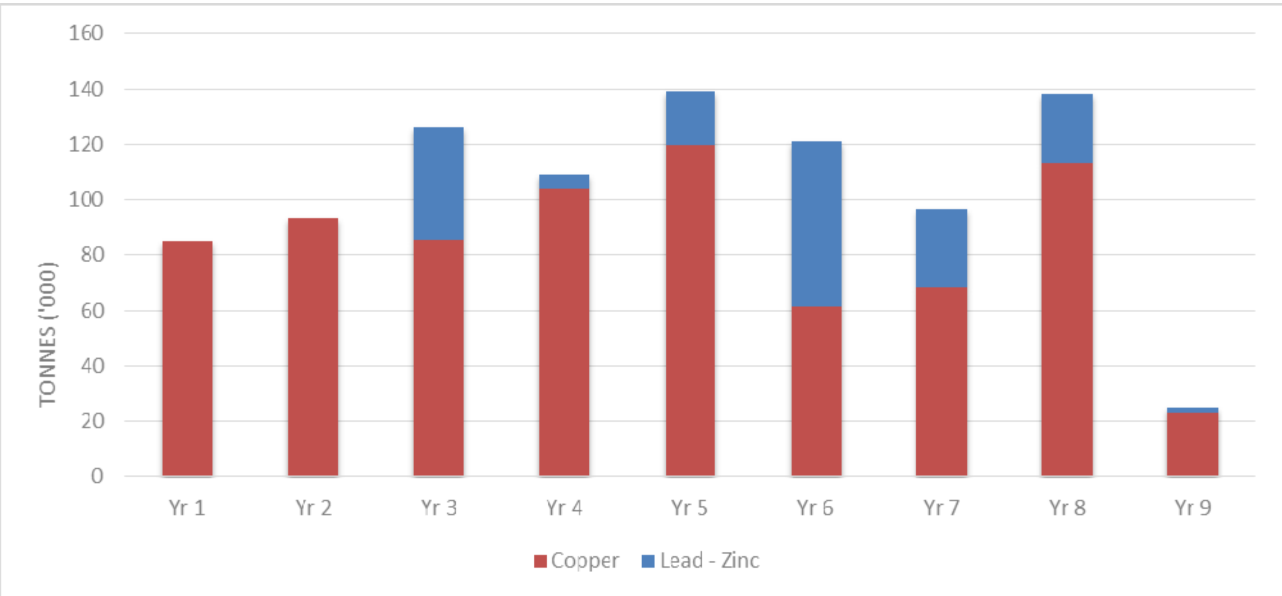


Figure 7. Concentrate Production ('000t)



8. METALLURGY

Primary Copper Ores

Both Marshall-Reward and Bellbird ores have a similar flotation response for copper and silver minerals.

Greater than 90% copper recovery can be achieved using a primary grind P80 of 120 µm, regrind of rougher concentrate to a P80 of 53 µm, and a single stage of cleaning. A final concentrate grade of 23% copper is planned.

Transitional Copper Ores

The flowsheet for treatment of transition ore is compatible with the main sulphide primary copper ore flowsheet. Flotation residence times for treatment of the transition ore, fit within the primary copper sulphide ore design envelope.

Lead-Zinc Ore

The chalcopyrite will be separated from the galena and sphalerite rapidly, with a single stage of cleaning producing a saleable grade copper concentrate.

The lead and zinc will be floated together from the copper tailings stream rapidly with a single stage of lead zinc cleaning, producing a saleable grade lead-zinc concentrate. A bulk lead-zinc concentrate grade of 60% combined lead plus zinc is estimated, with recoveries of over 85% for lead, over 58% for zinc and approximately 70% for silver.

The flowsheet for the lead/zinc ore is compatible with the main primary copper sulphide ore flowsheet.

Green Parrot Ore

The Green Parrot sulphide primary copper and transition ores are compatible with the flowsheet established for other Jervois ores. Based on the samples tested to date, no regrind or cleaning of copper or lead-zinc rougher concentrates will be required, although facilities exist to do so if required.

Table 5. Throughput for various ore types

		Throughput		Primary Grind
Deposit	**Ore Type**	**t/h**	**Mtpa**	**P80 µm**
Marshall-Reward	Transition	300	2.40	110
	Primary	275	2.20	120
	Lead-Zinc Deeps	195	1.56	75+
Bellbird	Transition	300	2.40	110
	Primary	275	2.20	120
Green Parrot	Transition	275	2.20	90
	Primary	250	2.00	120

9. PERMITTING

Project referral documents were submitted in 2013 to the Federal Department of the Environment and the Northern Territory Environmental Protection Agency (NT EPA) to determine the impact assessment process for the project. The Jervois Project will be assessed at the level of Environmental Impact Statement (EIS) by the NT EPA. No matters of national environmental significance were deemed likely to be impacted by the project and as such, there will be no Federal involvement in the impact assessment process.

Project specific Terms of Reference for the EIS have been issued by the NT EPA. Baseline studies for the Project area have been undertaken. Additional baseline information continues to be collected as part of the project development process.

Discussions are taking place with the Central Land Council regarding land access, future relationships with the local communities and benefits arising from the project including commitments to local indigenous employment and contracting opportunities.

10. Concentrate Transport

The concentrate transport study concluded that the use of sealed half height containers was the most cost effective and safest method to transport the concentrate from site to Darwin. The sealed half height containers will be trucked to Alice Springs and then transported by rail to either Darwin or Adelaide for export to Asian smelters. This process will eliminate the need for any intermediate enclosed warehousing at both Alice Springs and at the export port.

11. Concentrate Marketing

The copper concentrate produced at Jervois is expected to contain approximately 23% copper, with the only significant penalty element being bismuth. Bismuth contained in the concentrate is likely to attract a penalty of approximately $4M/pa.

12. Capital Cost

The capital cost estimate has been produced based on the requirements to process predominantly primary copper and transitional copper ore. Table 6 summarises these costs (which exclude any sustaining capital, taxes or escalation) to an accuracy of ±25%

Table 6. Summary of Copper Plant Capital Costs (3Q15)

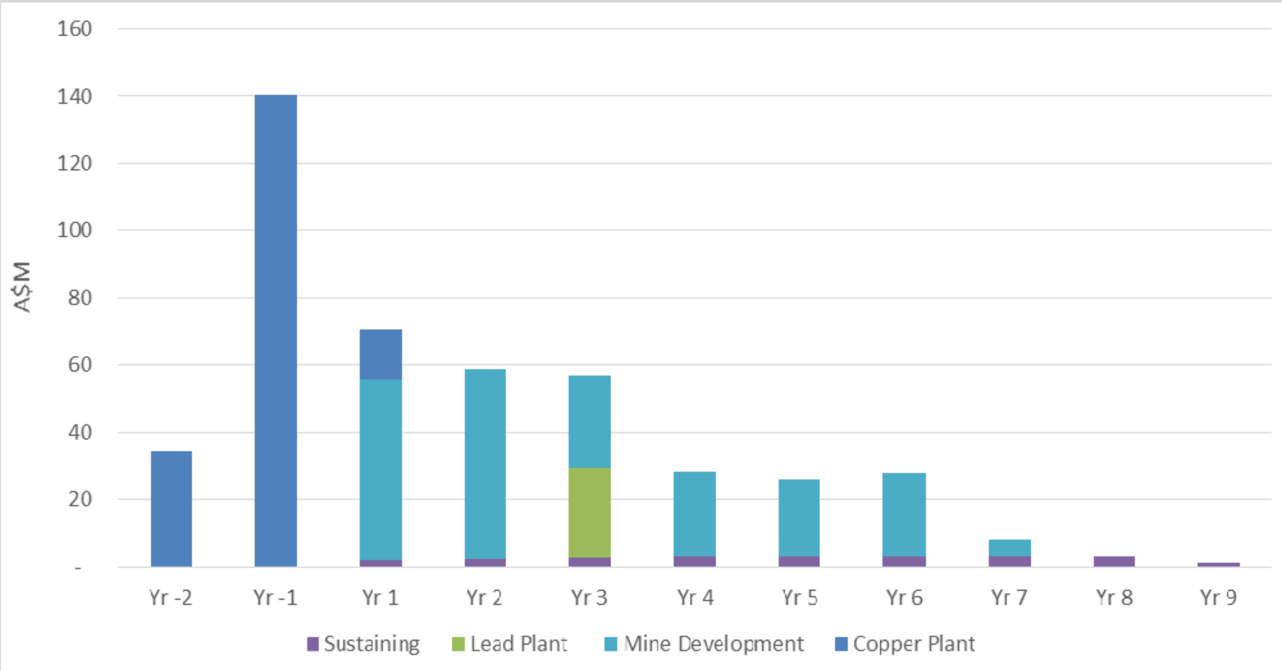
Copper Plant	Cost Estimate (A$M)
Direct Costs	
Treatment Plant	89.6
Infrastructure	23.0
Mining	1.4
Sub-Total Direct Costs	***114.0***
Indirect Costs	
Construction	22.2
EPCM	19.8
Owners Project Costs	10.2
Sub-Total Indirect Costs	***52.2***
Project Total (without contingency)	***166.2***
Project Contingency (14.0%)	23.3
Project Total	***189.5***

Capital costs relating to the additions to the processing plant to treat the lead-zinc ore have been deferred in line with the LoM Production Schedule. Table 7 and Figure 8 summarises the direct, indirect, and contingency cost estimates for the deferred works.

Table 7. Deferred Capital Cost Estimate Summary ±25%

Lead Plant	Cost Estimate (A$M)
Direct Costs	15.4
Indirect Costs	7.9
Project Total (without contingency)	***23.3***
Project Contingency (13.9%)	3.4
Project Total	***26.7***

Figure 8. Capital Expenditure (A$M)



13. Operating Cost

The information detailed in this section is based on the conceptual LoM work with the inclusion of Inferred Resources and has been completed separate to and in addition to the Ore Reserve.

Open cut mining operating costs (at surface) vary from A$5.69/bcm (Marshall-Reward) to A$6.52/bcm (Green Parrot). Mining operating costs increase with depth of mining.

Average underground mining costs are A$47.00 / t inclusive of development costs.

Process plant operating costs (Table 8) were developed for each major ore type: primary copper ore, transition copper ore and lead-zinc ore, as well as two primary / transition copper ore blends. Operating costs were developed using the plant parameters specified in the process design criteria.

Table 8. Summary Process Plant Unit Operating Costs +/- 25%**

Cost Centre	Cu Primary 2.2Mtpa A$/t ore	Cu Transition 2.4Mtpa A$/t ore	Pb-Zn 1.56Mtpa A$/t ore	20% Transition 2.24Mtpa A$/t ore	40% Transition 2.28Mtpa A$/t ore
Power	7.01	6.43	10.57	6.89	6.77
Labour	3.81	3.49	5.37	3.74	3.68
Consumables	2.80	2.56	8.24	2.75	3.01
Maintenance Materials	2.07	1.89	2.91	2.03	1.99
General and Administration	3.50	3.21	4.94	3.44	3.38
Total	19.20	17.59	32.03	18.85	18.83

****Estimate accuracy is deemed to be ±25% and is presented in Australian dollar (A$) currency, with base date third quarter 2015 (3Q15).*

Power will be generated on site from a 100% Liquefied Natural Gas (LNG) fuelled power plant with the inclusion of a PV solar plant representing 10% of the overall power demand. There is provision for 14 days LNG storage on site to mitigate any risk associated with fuel supply during a significant rain event. The power station at Jervois will be supplied on a Build, Own and Operate (BOO) basis with power supplied through a power purchasing agreement at A$0.23/kWh.

As presented in Table 9, C1 costs over the life of mine are A$1.26/lb (US$ 0.88/lb) and C3 costs are A$3.04/lb (US$ 2.13/lb). C1 costs fluctuate over the life of the operations moving to a credit in 2024 due to the significant amount of lead & zinc by products credits.

Table 9. C1 & C3 Operating Costs*

Costs	US$	AUD
Mining	0.60	0.85
Processing	0.58	0.82
Other Ops	0.11	0.16
Selling & transport	0.68	0.97
Net by product (credits)	(1.09)	(1.55)
C1 – Cash Costs	***0.88***	***1.26***
Dep. & Amortisation	1.00	1.43
NT State Royalties	0.25	0.34
C3 - Costs	***2.13***	***3.04***

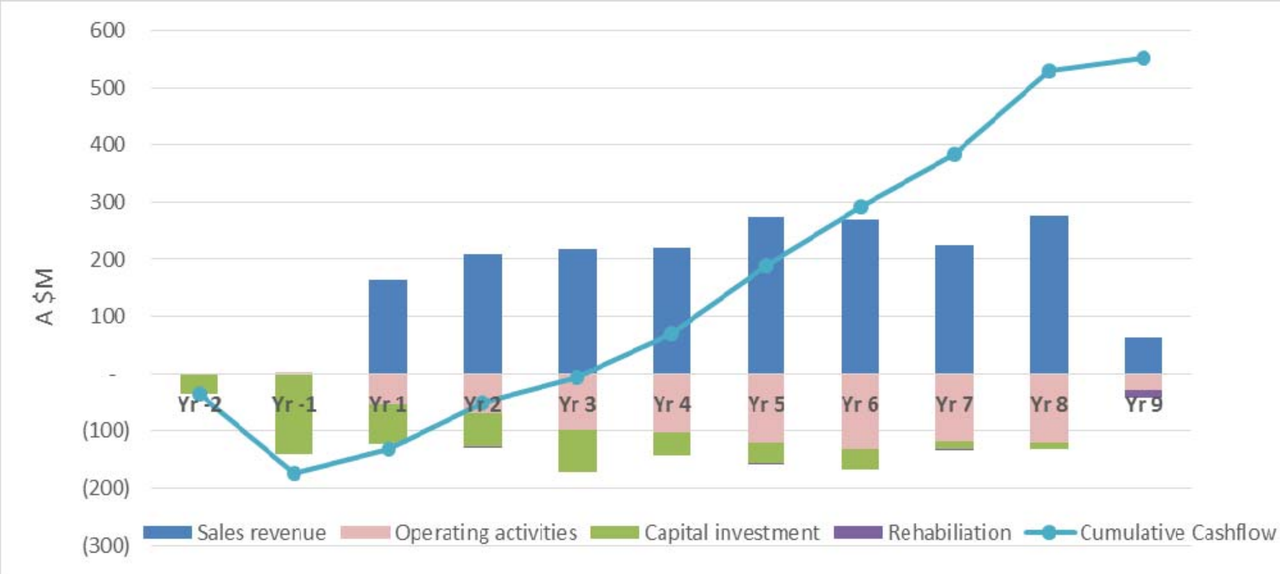
*conversion exchange rate used 1A$:0.7US$

14. Cash Flow Analysis By Period

The information detailed in this section is based on the conceptual LoM work with the inclusion of Inferred Resources and has been completed separate to and in addition to the Ore Reserve.

Peak sales revenue occurs in year 5 when processing of the lead-zinc by products is at its peak. No provision has been made for ongoing exploration but given that the deposits are still open, it is likely the mine life will be extended beyond its current life. Rehabilitation charges of A$12.3M have been provided in year 9 at the end of mine life (Figure 9).

Figure 9. Cash flow analysis by year



An AUD:USD project exchange rate of US$0.70 has been applied, based on the historical averages over twelve years pre-dating the Global Financial Crises (GFC) and on the assumption that the United States of America (US) will return to normal growth and interest rates will average to normal over the forward estimates. This is confirmed by most recent National Australia Bank and ANZ bank forecasted currency rates.

The long term commodity prices were based on the mean value of the long term (beyond 2020) forecast price of each metal from a number of international banks and investment firms as compiled by Consensus Economics. Prices were quoted in nominal US dollars, metal prices in real US dollars will be accounted for through the application of a discount rate.

Table 10. Commodity Price and Exchange Rate assumptions

		2018	2019	2020 - LOM
AUD:USD		0.70	0.70	0.70
Copper	US$/lb	3.25	3.25	3.25
Copper	US$/t	7,165	7,165	7,165
Lead	US$/t	2,225	2,257	2,299
Zinc	US$/t	2,707	2,727	2,624
Silver	US$/oz	19.97	20.39	19.94
Gold	US$/oz	1,300	1,310	1,269

15. Sensitivity Analysis

The information detailed in this section is based on the conceptual LoM work with the inclusion of Inferred Resources and has been completed separate to and in addition to the Ore Reserve.

Table 11. Sensitivity Analysis

Internal Rate of Return

		Copper US$/lb				
	IRR	**2.50**	**3.00**	**3.25**	**3.50**	**4.00**
Ex. Rate	**0.75**	11%	23%	29%	35%	45%
	0.70	16%	29%	35%	41%	52%
	0.65	22%	35%	41%	47%	59%
	0.60	29%	42%	49%	55%	67%

Net Present Value

		Copper US$/lb				
	NPV$M	2.50	3.00	3.25	3.50	4.00
Ex. Rate	**0.75**	10	126	184	242	357
	0.70	62	186	248	310	434
	0.65	122	255	322	388	522
	0.60	191	335	408	480	624

Free Cash Flow

		Copper US$/lb				
	Free Cash A$M	2.50	3.00	3.25	3.50	4.00
Ex. Rate	**0.75**	149	343	441	538	733
	0.70	238	447	551	655	864
	0.65	341	566	678	791	1,016
	0.60	462	705	827	949	1,192

*Before interest and Tax.

16. Schedule

Table 12. Summary of Key Project Dates

Activity	Date
Commence Definitive Feasibility Study	1Q16*
Commence Front End Engineering Design	1Q17
Project Award – Start Detailed Design	2Q17*
Award Long Lead Items	2Q17
Engineering and Procurement Complete	2Q18
Commence Site Earthworks	3Q17
Mechanical Completion	3Q18
First Product	4Q18

* *Assumes funding is secured*

For further information contact:

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About KGL Resources

KGL Resources Limited is an Australian mineral exploration company focussed on increasing the high grade Resource at the Jervois Copper Project in the Northern Territory and developing it into a multi-metal mine.

Competent Person Statement

The Jervois Exploration data in this report is based on information compiled by Martin Bennett, who is a member of the Australian Institute of Geoscientists and a full time employee of KGL Resources Limited. Mr. Bennett has sufficient experience which is relevant to the style of the mineralisation and the type of deposit under consideration and to the activity to 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. Bennett has consented to the inclusion of this information in the form and context in which it appears in this report.

The Jervois Resources information and Exploration Potential were first released to the market on 29 July 2015 and complies with JORC 2012. The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.'

The data in this report that relates to Mineral Resource Estimates is based on information evaluated by Mr Simon Tear who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who has sufficient 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 (the "JORC Code"). Mr Tear is a Director of H&S Consultants Pty Ltd and he consents to the inclusion in the report of the Mineral Resource in the form and context in which they appear.
The data in this report that relates to cut off grades and mining assumptions is based on information evaluated by Mr Simon Milroy who is a member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who has sufficient 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 (the "JORC Code"). Mr Milroy is a full-time employee of KGL Resources Limited and he consents to the inclusion in the report of the cut off grades and mining assumptions in the form and context in which they appear.

The information in this Release which relates to the Jervois Copper Project Ore Reserve estimate accurately reflects information prepared by Competent Persons (as defined by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves). The information in this public statement relating to the Jervois Copper Project Ore Reserves is based on information resulting from Pre-Feasibility-level Ore Reserve works carried out by Auralia Mining Consulting Pty Ltd. Mr. Anthony Keers completed the Ore Reserve estimate. Mr Anthony Keers is a Member and Chartered Professional (Mining) of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify him as a Competent Person as defined in accordance with the 2012 Edition of the Australasian Joint Ore Reserves Committee (JORC). Mr Keers consents to the inclusion in the document of the information in the form and context in which it appears.

1 JORC CODE, 2012 EDITION – TABLE 1

1.1 Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Diamond drilling and reverse circulation (RC) drilling were used to obtain samples for geological logging and assaying. • RC drill holes are sampled at 1m intervals and split using a cone splitter attached to the cyclone to generate a split of ~3kg. • Diamond core was quartered with a diamond saw and generally sampled at 1m intervals with shorter samples at geological contacts. • RC samples are routinely scanned with a Niton XRF. Samples assaying greater than 0.1% Cu, Pb or Zn are submitted for analysis at a commercial laboratory. • Other sampling techniques may have been used prior to KGL Resources involvement in 2011.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• RC Drilling was conducted using a reverse circulation rig with a 5.25" face-sampling bit. Diamond drilling was either in NQ or HQ drill diameters.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• RC samples were not weighed on a regular basis but no sample recovery issues were encountered during the drilling program.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All RC and diamond core samples are geologically logged. Core samples are also orientated and logged for geotechnical information.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• RC drill holes are sampled at 1m intervals and split using a cone splitter attached to the cyclone to generate a split of ~3kg. • Diamond core was quartered with a diamond saw and generally sampled at 1m intervals with shorter samples at geological contacts. • RC sample splits (~3kg) are pulverized to 85% passing 75 microns. • Diamond core samples are crushed to 70% passing 6mm and then pulverized to 85% passing 75 microns. • Sampling techniques used by KGL are appropriate and generate sub-samples for analysis that are representative of the whole sample.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• The QAQC data includes standards, duplicates and laboratory checks. In ore zones Standards are added at a ratio of 1:10 and duplicates and blanks 1:20. • Basemetal samples are assayed using a four acid digest with an ICP AES finish. Gold samples are assayed by Aqua Regia with an ICP MS finish. Samples over 1ppm Au are re-assayed by Fire Assay with an AAS finish. • An umpire laboratory is used to check ~1% of samples analysed. • Assay methods are appropriate for the style of mineralisation and provide results of acceptable accuracy.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Data is validated on entry into the Datashed database. • Further validation is conducted when data is imported into Vulcan. • Below detection limit results are replaced in the database with values of half the detection limit. • Selected holes are twinned. • Intersections in selected historic holes were visually validated.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Surface collar surveys were picked up using a Trimble DGPS. • Downhole surveys were taken during drilling with a Ranger or Reflex survey tool every 30m with checks conducted with a Gyrosmart gyro and Azimuth Aligner. • All drilling is conducted on the MGA 94 Zone 53 grid. All downhole magnetic surveys were converted to MGA 94 grid. • A digital terrain model was generated using grid based DGPS data and surveyed drillhole collar data.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drilling for Inferred resources has been conducted at a spacing of 80m along strike and 50m within the plane of the mineralized zone. Closer spaced drilling was used for Indicated resources. • Shallow oxide RC drilling was conducted on 80m spaced traverses with holes 10m apart. • 4m RC composite samples were used in unmineralised portions of the hangingwall and footwall.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Holes were drilled perpendicular to the strike of the mineralization a default angle of -60 degrees but holes vary from -45 to -80. • There is no sampling bias based on drill hole orientation.
Sample security	• *The measures taken to ensure sample security.*	• Samples were stored in sealed polyweave bags on site and transported to the laboratory at regular intervals by KGL staff or by a contractor.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The sampling techniques are regularly reviewed.

1.2 Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Jervois project is within E25429 and contains two Mining Leases, ML30180 and ML30182 and one application MLA30829, all 100% owned by Jinka Minerals and operated by Kentor Minerals (NT), both wholly owned subsidiaries of KGL Resources. • The Jervois project is covered by Mining Licences owned by KGL Resources subsidiary Jinka Minerals.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous exploration has primarily been conducted by Reward Minerals, MIM and Plenty River.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• E25429, ML30180, ML30182 and MLA30829 lie on the Huckitta 1: 250 000 map sheet (SF 53-11). The tenement is located mainly within the Palaeo-Proterozoic Bonya Metamorphics on the northeastern boundary of the Arunta Orogenic Domain. The Arunta Orogenic Domain in the north western part of the tenement is overlain unconformably by Neo-Proterozoic sediments of the Georgina Basin. • The copper-lead-zinc mineralisation is interpreted to be stratabound in nature, probably relating to the discharge of base metal-rich fluids in association with volcanism or metamorphism or dewatering of the underlying rocks at a particular time in the geological history of the area.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• N/A
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• N/A
Relationship between mineralisation widths and	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill*	• N/A

Criteria	JORC Code explanation	Commentary
intercept lengths	*hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• N/A
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• N/A
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Outcrop mapping of exploration targets using Real time DGPS.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Refer Announcement Section 3

1.3 Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	Explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Limited validation was conducted by H&S Consultants (H&SC) to ensure the drill hole database is internally consistent. Validation included checking that no assays, density measurements or geological logs occur beyond the end of hole and that all drilled intervals have been geologically logged. The minimum and maximum values of assays and density measurements were checked to ensure values are within expected ranges. • H&SC has not performed detailed database validation or audit and KGL personnel take responsibility for the accuracy and reliability of the data used to estimate the Mineral Resources. • The project has been hampered by a lack of continuous sampling and assaying in the historical data. To counteract this H&SC inserted default values for copper, and silver representative of the likely mineralisation taking into account grade continuity issues. Generally the inserted values were low grade. Additional problems have been encountered with the accuracy of the historical hole locations. Some check field work by KGL indicated that some historical holes had been mislocated with the results that some of the historical holes have been relocated in order to make better geological sense; these movements will impact negatively on the resource classification. • KGL has recommended the removal of 61 holes from the database due to suspect locations, lack of sampling or geological inconsistencies.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Regular site visits have been carried out by Martin Bennett, KGL's Exploration Manager, who acts as the Competent Person with responsibility for the integrity and validity of the database on which resource estimates were conducted. • Simon Tear of H&SC, Competent Person for the reporting of the resource estimates, visited site in August 2011 for 4 days.

Criteria	Explanation	Commentary
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geological interpretation of the Jervois mineral deposits was supplied by KGL and are reasonably well constrained by the drilling. • The mineralisation at Jervois comprises structurally controlled disseminations and veinlets of copper sulphide mineralisation (locally oxidised near surface) associated with a broader magnetite alteration. The structural zones tend to be narrow steeply dipping to vertical structures parallel to the host stratigraphy and eminently traceable at surface in the airborne EM data. They are reasonably well defined by the drilling data. Thus the interpretation of the mineral wireframes, is based on a combination of logged rock units, lithogeochemical interpretation of host units, magnetic susceptibility, copper (and lead/silver) and iron assays, using a notional 0.1% Cu cut off. H&SC personnel have had a substantial input into the geological interpretation. • The structural nature to the mineralisation meant there appeared in some cases to be lensing, bifurcations, small fault offsets and possible subtle en echelon zoning. The strike and dip of the mineral zones vary slightly but predominately strike parallel to the stratigraphy. Where no drill data exists along strike the wireframes were extended 15 metres north and south of last drill hole intercept. These wireframes were treated as hard boundaries for the estimation of each of the elements. • Inside the Reward mineral wireframe nine additional wireframes were created representing discrete bodies of higher grade lead mineralisation at a nominal 1% Pb cut off and were used to limit the influence of the high grade lead samples. These wireframes were treated as hard boundaries for the estimation of lead. • KGL provided surfaces representing the base of oxidation for the Bellbird, Reward & Green Parrot deposits, which required limited modifications by H&SC, using a combination of geological logs and sulphur assays. The base of oxidation surface was used as a hard boundary for the estimation of sulphur and Acid Soluble Cu concentrations. • H&SC is aware that alternative interpretations of the mineralised zones are possible but consider the wireframes to adequately approximate the locations of the mineralised zones for the purposes of resource estimation. Alternative interpretations are unlikely to have a large impact on the global resource estimate.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The resources at Bellbird, at a cut-off of 0.5% copper, span a length of around 1.5 km and consist of several en echelon parallel north-south striking bodies that dip steeply to the west. The plan width of the resource varies from 10m to 210m (including internal low grade zones) with individual lodes reaching up to 45 m wide. The upper limit of the mineralisation reaches surface and the lower limit of the resource extends to a depth of 460 m below the surface. • The resources at Marshall-Reward, at a cut-off of 0.5% copper, span a length of around 1.5 km and consist of several en echelon parallel north-south striking bodies that dip very steeply to the east. The plan width of the resource varies from 10m to 175m (including internal low grade zones) with individual lodes reaching up to 40m wide. The upper limit of the mineralisation reaches surface and the lower limit of the resource extends to a depth of 560 m below the surface. • The resources at Green Parrot at a cut-off of 0.3% copper span a length of around 600m and consist of two parallel north-south striking bodies that dip steeply to the west. The plan width of the resource varies from 2.5m to 60m (including internal low grade zones) with individual lodes reaching up to 25m wide. The upper limit of the mineralisation reaches surface and the lower limit of the resource extends to a depth of 240 m below the surface. • The resources at Cox's_Find, at a cut-off of 0.5% copper, span a length of around 425m and consist of a single lens striking approximately at 030°. The plan width of the resource varies from 3.5m to 15m (including internal low grade zones). The upper limit of the mineralisation reaches surface and the lower limit of the resource extends to a depth of 250m below the surface. • The resources at Rockface, at a cut-off of 0.5% copper, span a length of around 700m and consist of a single lens striking approximately E-W in the western half before rotating to a 060° bearing in the east. The plan width of the resource varies from 4m to 25m (including internal low grade zones). The upper limit of the mineralisation reaches surface and the lower limit of the resource extends to a depth of 200m below the surface.

Criteria	Explanation	Commentary
		• In all cases mineralisation appears open at depth
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• The copper, silver, lead, zinc and gold resources at Jervois were estimated using Ordinary Kriging. The resources at Bellbird, Marshall Reward and Green Parrot were estimated using Micromine software. The block models used for reporting the resource estimates were created in the Surpac mining software Previous estimation of the resources of Cox's_Find and Rockface in 2014 were estimated using the GS3 software with the block model loaded into Surpac. One metre composites were used for estimation of all areas. H&SC considers Ordinary Kriging to be an appropriate estimation technique for the type of copper, silver, lead, zinc and gold mineralisation and extent of data available at Jervois. • A total of 17,138 copper composites were used in the resource estimation. Composite totals for silver, lead, zinc and gold were 16,363, 16,833, 15,373 and 14,055 respectively. • H&SC used a series of wireframes that outline zones of anomalous mineralisation broadly equating to a Cu or Cu equivalent grade of greater than 0.1% with geological sense. The wireframes were treated as hard boundaries i.e. blocks within the wireframes were estimated using composites from within that wireframe. • Top-cuts were applied to individual zones when the extreme values had an undue effect on local estimates. Values were cut back to distinct breaks in the grade populations. In Bellbird gold grades were top-cut to 15ppm. In Green Parrot West and Green Parrot East silver values were top-cut to 364 and 340ppm respectively. Lead values were not top-cut but the influence of high grade values in Reward was limited by the use of wireframes differentiating the high-grade mineralisation from the main copper mineralisation. • The estimation procedure was reviewed as part of an internal H&SC peer review. No check models by a different operator were conducted in this round of estimation as resources are in line with the resources estimated in October 2014 by H&SC. The current resource estimates are based on additional geological and assay data from 231 new drill holes for just over 28,000m of drilling and significantly more density data. A detailed comparison of the two resource estimates has not been completed although, due to the extra drilling, the estimated tonnages of the current model are greater and more material is classified as Indicated than the previous estimate. • No assumptions were made regarding the recovery of by-products. The resources are reported here at a cut-off based on copper. • Block dimensions are 2x10x5m (E, N, RL respectively) for Bellbird, Marshall Reward and Green Parrot. The longer north-south dimension was chosen as it is nominally a third to a half of the distance between drill hole sections. The vertical dimension was chosen to reflect the data distribution and allow some added control over tagging blocks with the oxidation codes. The thin east-west dimension was chosen to reflect the sample spacing and anisotropy of mineralisation. • For Cox's_Find and Rockface the block size was 2x20x5m (E, N, RL respectively) to reflect the larger drill spacing. • Each element was estimated separately by Ordinary Kriging. Two different three pass search regimes were used for both Bellbird and Marshall Reward because some portions of these zones are relatively thin (<3 m) and therefore had less data available for estimation. Green Parrot used the thick zone search. Both search regimes employed three passes of progressively larger radii or decreasing search criteria. The first passes used radii of 10x30x30m, the second passes used 10x60x60m and the third passes used 60x60x20m (along strike, down dip and across mineralisation respectively). • All passes used a four sector search ellipse in order to aid declustering. The first pass in the thick zone domains required a minimum of 13 composites from at least four drill holes. The maximum total number of composites was set to 24 with a limit of six per drill hole. The thick zone domains' second pass criteria were similar except a minimum of nine samples were required with data from at least three drill holes. The third pass used a maximum of 32 composites, allowing eight composites from a single drill hole. • The first pass in the thin domains and the high grade lead domains required a minimum of 9 composites from at least four drill holes. The

Criteria	Explanation	Commentary
		maximum total number of composites was set to 16 with a limit of four per drill hole. The second pass criteria were similar except a minimum of six samples were required with data from at least three drill holes. The third pass used a maximum of 24 composites, allowing six composites from a single drill hole. An extra pass was added for the estimation of lead inside the narrow high grade lead. This pass used the same criteria as the thin domains' third pass except the minimum number of samples was reduced to two. • For Cox's_Find and Rockface a slightly different set of search parameters was used to reflect the different amounts of drilling with a thinner search zone beginning from radii of 5x30x30m with a minimum number of 12 data for 4 octants to 10x60x60m and a minimum number of 6 data and 2 octants. • Each of the mineralised wireframes was treated as a hard boundary so that only composites from within each wireframe were used to estimate the blocks in the respective wireframe. • The block model was reviewed visually by H&SC and it was concluded that the block model fairly represents the grades observed in the drill holes. H&SC also validated the block model statistically using a variety of histograms, boxplots, swathe plots, contact plots and summary statistics.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages of the Mineral Resource are estimated on a dry weight basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The resources are reported at a cut-off of 0.5% copper at the request of KGL who take responsibility for the cut off grades and depths below surface for reporting the resources. • A cut off grade of 0.3% Cu was used for Green Parrot to accommodate the higher lead and zinc grades; For Bellbird North a copper cut off of 0.2% Cu was used; Bellbird North is generally higher lead and zinc grades than Green Parrot • The Reward lead /zinc lenses were reported within the mineral wireframes at a zero Pb% cut off grade.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• The Jervois resources were estimated on advice supplied by KGL, that the shallow resources will be targeted using conventional open pit mining methods and the deeper resources will be targeted by underground mining methods. Minimum mining dimensions are envisioned to be around 2.5x10x5m (E, N, RL respectively). The resource estimation includes internal mining dilution.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Results from scoping and prefeasibility level metallurgical testwork were used in the design of a processing facility. The intent is to process ore on site at Jervois at a certain production rate, producing a sellable copper concentrate product for shipment. • No metallurgical factors where used to determine the resource. • Sample selection and compositing for the metallurgical testwork program procedure involving continuous drill hole intersection samples making up the variability composite. Various amounts of variability composites were then blended to create four master composites to represent the oxide and sulphide components of each of the Bellbird and Marshall-Reward deposits. An extended suite of head assays were conducted on variability and master composites. • The lithologies within the tenement include quartzo-feldspathic muscovite and sericite schists, ranging in composition from pelitic to psammo-pelitic. There are also local occurrences of cordierite, sillimanite, garnet and andalusite. The mine sequence also contains chlorite schist, garnet,

Criteria	Explanation	Commentary
		magnetite quartzite, calc silicates and impure marble. The mineralization consists predominately of stratiform/stratabound copper and/or lead-silver-zinc sulphides with evidence for structural modification and remobilisation during several deformation events. • Mineralogical analysis using QEMSCAN (and XRD) identified chalcopyrite (12%) to be the dominant economic mineral, with minor presence of galena, sphalerite, bismuthinite and molybdenite. Pyrite (18%) was the only sulphide gangue mineral, whilst magnetite (27%) and quartz (31%) were the main non-sulphide gangue minerals. • Comminution tests including SMC tests, JK drop weight tests, Bond ball mill tests, Bond rod mill tests and Bond abrasion tests, were conducted on several samples from the Bellbird and Marshall-Reward deposits. • This PFS Sulphide Flotation Testwork Report has been prepared for KGL Minerals Limited by AMEC Limited. Supporting data and assumptions are identified throughout the text.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• The Jervois Project lies with a broad open area of relatively flat ground. Vegetation is typical arid bushland with seasonal rainfall and creek flows. • There has been previous mining activity at the Green Parrot open pit, some minor trial underground exploration at Marshall-Reward and trial surface mining at Bellbird.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Density data has been determined on single pieces of core using the Archimedes Method with 8,199 results supplied. Density data from the oxidation zone is limited. However oxidation via surface weathering has had only limited sub-surface penetration as many partially oxidised pieces of core have density values marginally less than fresh rock. • Density of the mineralised domains was estimated directly from measured density values using Ordinary Kriging and the same search criteria as used for the estimation of the elements. The distribution of measured density data was not sufficient to populate all blocks with an estimated density and so an additional estimate of density was carried out using default values derived for each rock type. For blocks that were not estimated using data based on the measured data the density that was estimated from the rock type densities was used. A small proportion of blocks that were estimated for copper remained without a density value due to missing rock types in drill hole logs. These blocks were assigned the average density values for each area. The density of samples within the high grade lead wireframes are strongly related to the lead grade and are therefore the individual block density was based on a regression from the estimated lead grade. This regression was based on measured values. • The density data tend to occur in clusters making broader reaching modelling potentially less accurate.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately*	• The resources are classified on a number of aspects including the search criteria, the variography, the drillhole location, geological logging, sampling and assay issues with the historical drilling, Passes 1 and 2 are therefore classified as Indicated and Pass 3 classified as Inferred. • H&SC believes the confidence in tonnage and grade estimates, the continuity of geology and grade, and the distribution of the data reflect the Indicated and Inferred categorisation. H&SC has not assessed the reliability of input data and KGL personnel take responsibility for the accuracy and reliability of the data including the geological interpretation,

Criteria	Explanation	Commentary
	reflects the Competent Person's view of the deposit.	used to estimate the Mineral Resources. KGL also take responsibility for the cut off grades for reporting the resources and the depth to which the resources are reported. • The estimates appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No audits or reviews have been conducted
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *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.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• No statistical or geostatistical procedures were used to quantify the relative accuracy of the resource. The Mineral Resource estimate of the Jervois deposits are sensitive to the cut-off grade applied and are considered to be global estimates. • Comparison with the 2014 estimates indicates that the new changes are in line with expectations. • A confidence issue surrounds the veracity of the historical data and hence the lack of Measured Resources. • There is no reliable production data from the earlier Green Parrot mining. There are no production figures for trial mining at Bellbird and Marshall Reward.

1.4 Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Mineral Resources of the Jervois Copper Project were estimated by H&S Consultants. • Refer to Table 2 • The following tables comprise the Ore Reserves for the Jervois Copper Project. Any Mineral Resources are reported as wholly inclusive of the Ore Reserves. Note that numbers may not sum up due to rounding.

Copper Reserve	Bellbird	Marshall Reward	Total
Probable			
Ore Tonnes	3,394,000	5,037,700	8,431,700
Cu %	1.2	1.07	1.12
Au g/t	0.12	0.26	0.2
Ag g/t	7.36	25	17.9
Pb %	0.02	0.22	0.14
Zn %	0.05	0.21	0.14

Pb/Zn Reserve	Bellbird	Marshall Reward	Total
Probable			
Ore Tonnes	239,300	204,700	444,000
Cu %	0.57	0.91	0.77
Au g/t	0.03	0.2	0.13
Ag g/t	19.99	62.67	45.49
Pb %	2.27	5.38	4.13
Zn %	3.04	0.83	1.72

Notes: Figure in Table may not sum due to rounding.

Criteria	JORC Code Explanation	Commentary
Site visits	• *Was there a site visit undertaken.*	• A site visit to the Jervois Copper Project was undertaken by Mr Anthony Keers, Director of Auralia Mining Consulting Pty Ltd, in October 2014 as part of a previous feasibility study.

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 Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• This Ore Reserve was completed to a Pre-Feasibility level. • Project costs and parameters were either supplied by various contracting companies tendering on the project or by KGL Resources. • Any material classified as an Inferred Mineral Resource was not included in any of the Pre-Feasibility study Ore Reserves calculations.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Due to many of the inputs in this study being variable, a single, overall economic cut could not be calculated. Block model reports using a range of economic cut-offs were run to determine which best represented the outputs from the optimisations; these were then applied to the Reserve designs. • A 0.35% Cu cut was selected for the Marshall / Reward and Bellbird Resources, a 0.5% Pb was used for the predominately Pb / Zn Green Parrot Resource to calculate the Reserves.
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 optimisation or by preliminary or detailed design).* • *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 assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*	• Reserve project costs and parameters were either supplied by various contracting companies tendering on the project or by KGL. • Technical work and data consolidation were performed by Anthony Keers and Steve Lampron of Auralia Mining Consulting. • Industry standard mining methods using excavator and trucks are employed. A combination of Hitachi EX1900 and EX1200 excavators with 90 tonne rigid trucks are currently being considered for the surface mining at the Jervois Copper Project. • Optimisation and design constraints during this Pre-Feasibility study were based on prior existing geotechnical investigations and recommendations resulting from a study by Peter O'Bryan and Associates.

Marshall Reward	Bench Face Angle (°)	Bench Height (m)	Bench Width (m)	Ramp Gradient (1:X)	Ramp Width (m)
Surface to ~ 330 mRl	55	≤20	7	9	26 and 16
Below ~ 330 mRl	80	25	11	9	26 and 16

Bellbird	Bench Face Angle (°)	Bench Height (m)	Bench Width (m)	Ramp Gradient (1:X)	Ramp Width (m)
Surface to ~ 340 mRl	60	≤20	7	9	26 and 16
Below ~ 340 mRl	70	20	10	9	26 and 16

Green Parrot	Bench Face Angle (°)	Bench Height (m)	Bench Width (m)	Ramp Gradient (1:X)	Ramp Width (m)
Surface to ~ 340 mRl	55	≤20	5	9	26 and 16
Below ~ 340 mRl	80	20	10	9	26 and 16

Criteria	JORC Code Explanation	Commentary
	• *The infrastructure requirements of the selected mining methods.*	• Test work has been undertaken on the processing recoveries at the Jervois project. A set of algorithms were generated for each distinct material type, with recovery algorithms for copper, lead, zinc, gold and silver used for calculation of payable product, while algorithms for bismuth, fluorine and uranium were generated to track potential penalty products. In total five distinct material types have been tested, the range of recovery algorithms for those material types are shown in the following tables: •

Recovery Algorithms for Marshall-Reward Transition Copper Ore	
Metal / Element	Algorithm
Copper (Ore > 1%)	Cu Rec = (Cu HGore –(0.75-(0.09* Cu HGore))/ Cu HGore)*100
Silver	Ag Rec = 88.2*LN(Cu Rec%) -303.5
Bismuth	Bi Rec = 1.47*(Cu Rec%) - 64
Gold	Au Rec = 1.17*(Cu Rec%) - 31
Fluorine	F Rec = 2.925* 2.71^(-1.809*F% HG)
Uranium	U Rec = 12.12*LN(U ppm HG)-29 (Note UHG ppm >11ppm)

Recovery Algorithms for Marshall-Reward Sulphide Copper Ore	
Metal / Element	Algorithm
Copper	Cu Rec = ((CuHG% - 0.07)*0.974/(CuHG%)) *100
Silver	Ag Rec = 2.07*(Cu Recovery) – 125.5
Bismuth	Bi Rec = 0.83*(Ag Recovery) + 8
Gold	Au Rec = 0.51*(Bi Recovery) + 25.5
Fluorine	F Rec = 0.01*(Ag Recovery) +0.3
Uranium	U Rec = 0.16*(Ag Recovery)

Recovery Algorithms for Bellbird Sulphide Copper Ore	
Metal / Element	Algorithm
Copper	Cu Rec = ((CuHG% - 0.07)*0.974/(CuHG%)) *100
Silver	Ag Rec = 0.0078*(Cu Recovery) ^2 + 0.1*(Cu Recovery)
Bismuth	Bi Rec = 0.83*(Ag Recovery) + 8
Gold	Au Rec = 0.51*(Bi Recovery) + 25.5
Fluorine	F Rec = 0.01*(Ag Recovery)
Uranium	U Rec = 0.05*(Ag Recovery)

Criteria	JORC Code Explanation	Commentary

Recovery Algorithms for Copper Component of Polymetallic Ore- 23% Cu Concentrate	
Metal / Element	Algorithm
Copper	Cu Rec = Cu Rec = (((CuHG%-0.11)*0.9)/CuHG%)*100
Silver	Ag Rec = 3.87*2.71^(0.3105*Pb Rec% to Cu)
Bismuth	Bi Rec = 1.3179*2.71^(0.4416*Pb Rec to Cu%)
Gold	Au Rec = 6.5442*2.71^(0.0198*Cu Rec%)
Lead	Pb Rec = 0.12*2.71^(0.0395*Cu Rec%)
Zinc	Zn Rec = 0.502*2.71^(0.0419*Cu Rec%)

Recovery Algorithms for Lead/Zinc Component of Polymetallic Ore- 60% Pb + Zn Concentrate	
Metal / Element	Algorithm
Copper	Cu Rec = (96-(((CuHG%-0.11)*0.9)/CuHG%)*100)
Silver	Ag Rec = 20.225*2.71^(0.0152*Pb Rec% to Pb-Zn)
Bismuth	Bi Rec = 18*2.71^(0.0174*Pb Rec to Pb-Zn)
Gold	Au Rec = 3.79*2.71^(0.0283*Pb Rec % to Pb-Zn)
Lead	Pb Rec = ((Pb HG%-0.24)/Pb HG%)*94
Zinc	Zn Rec = (((Zn HG% - 0.08)/ ZnHG%)*(-0.0232*ZnHG%^2 + 0.2416 * ZnHG% +0.3417)*100

- Processing costs took into account cost of milling, grade control, transport and shipping, refining charges, predicted concentrate grades and processing recoveries.

Processing Cost Formula
Pcost+((TC + RC)*ComG/ConG*Rec)

Where:

- Pcost = Base Processing Cost (which includes grade control cost)
- TC + RC = Transport and Refining Costs (refer the Transport and Refining Cost Table)
- ComG = Commodity Grade (copper grade for Cu process, lead grade for Pb/Zn process)
- ConG = Expected Concentrate Grade (refer the Transport and Refining Cost Table)
- Rec = Processing Recovery of Material (variable depending on head grade)

Criteria	JORC Code Explanation	Commentary

Base Processing Cost	
Ore Type	Processing Cost (AUD / t)
Cu Ore – Fresh	20.45
Cu Ore – Trans	18.57
Pb/Zn Ore	33.06

- Due to Bellbird needing the ore to be hauled from site to the main ROM pad at the mill area, a haul of approximately 4km, an additional AUD0.90/t was added to the Bellbird processing streams.

Transport and Refining Costs						
Concentrate	Transport Cost (TC, AUD / t.con)	Refining Costs (RC)				Expected Concentrate Grade (ConG, %)
		Concentrate (AUD/t.con)	Cu (AUD/lb)	Au (AUD/oz)	Ag (AUD/oz)	
Cu (Cu process)	194.63	100	0.1	5.75	0.388	23
Cu (PbZn process)	194.63	100	0.1	5.75	0.388	25
Pb/Zn	194.63	175	0	15	1.5	60 (Pb + Zn)

- Refining costs for copper, gold and silver were calculated based on the expected concentrate grade of each metal and added to overall concentrate refining costs. As an example, the expected Au grade in the concentrate produced from the Pb/Zn process is 1.26g/t, resulting in a gold refining cost of (1.26g/t.con / 31.103477g/oz * AUD15/oz) = AUD0.608/t concentrate.
- Penalties apply for the existence of certain metals in the concentrates shipped from the operation. Blending of mill feed material on site at Jervois will be undertaken to try and limit potential penalties for bismuth, lead and zinc in the copper concentrate and bismuth in the bulk (lead/zinc) concentrate. From the August 2014 PFS, the penalties paid over the life of mine was calculated to be less than 1% of gross revenue, it has therefore been decided that these penalties are not of significant importance to include in the Whittle optimisation process. Penalties have been accounted for in financial modelling.

- The following tables include the minimum mining cost (cost for mining at surface) and maximum mining cost for each rock type in each deposit. These costs were based on data provided to Auralia by Watpac, an independent earth moving contractor tendering on the Jervois project.

Criteria	JORC Code Explanation	Commentary

Marshall Reward Mining Costs		
Material Type	Minimum Mining Cost ($/bcm)	Maximum Mining Cost ($/bcm)
Oxide Ore:	7.27	13.11
Transitional Ore	8.17	14.01
Fresh Ore	9.56	15.41
Oxide Waste	5.69	11.31
Transitional Waste	6.24	11.86
Fresh Waste	7.17	12.79

Bellbird Mining Costs		
Material Type	Minimum Mining Cost ($/bcm)	Maximum Mining Cost ($/bcm)
Oxide Ore:	6.62	11.09
Transitional Ore	7.51	11.99
Fresh Ore	8.91	13.38
Oxide Waste	5.81	9.81
Transitional Waste	6.36	10.35
Fresh Waste	7.29	11.28

Green Parrot Mining Costs		
Material Type	Minimum Mining Cost ($/bcm)	Maximum Mining Cost ($/bcm)
Oxide Ore:	6.24	13.22
Transitional Ore	7.02	14.00
Fresh Ore	8.24	15.22
Oxide Waste	5.66	11.56
Transitional Waste	6.15	12.04
Fresh Waste	6.95	12.85

Criteria	JORC Code Explanation	Commentary
		• No sell costs were applied directly as any refining costs and penalties were taken into account at the processing cost stage. • State royalties in the Northern Territory for this type of mining project are based on company revenue rather than metal sales and have therefore been omitted from the optimisation process. State royalties have been accounted for in financial modelling. • Minimum mining widths of 20m were applied as constraints to the 90 tonne truck fleets. • Only the Measured and Indicated Mineral Resource classified material types were used in the optimisations; while the final designs may contain Inferred material as part of the final material inventory, Inferred classified material was not utilised as an economic driver and thus not included for consideration for any of Ore Reserve calculations. • Sensitivities were run which included the Inferred classified material to determine its impact upon the project.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *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.* • *Any assumptions or allowances made for deleterious elements.* • *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 minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The process used for the recovery of the base and precious metals contained in the various ore bodies at the Jervois project are well-proven and conventional using standard means of crushing, grinding and froth flotation. A suitable amount of testwork was performed to establish an appropriate means of recovery of metals into various mineral concentrates. This testwork was carried out in two distinct programs and was performed on a suitable range of variability and composite samples from across the deposits and various ore domains for this level of study. The testwork was carried out at an independent metallurgical laboratory (ALS Perth) to perform and report on the batch testwork carried out. Further testing on more variability samples is recommended in future studies to support the findings of the most recent work. • Known deleterious elements were tracked and appraised in the recent testwork program. A set of algorithms were generated for ore domain, with recovery algorithms for copper, lead, zinc, gold and silver used for calculation of payable product, while algorithms for bismuth, fluorine and uranium were generated to track potential penalty products. • The flotation flowsheet developed reflects the various ore domains mineralogy.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• Advice was received from the Federal Department of the Environment that the project was not considered to be a Controlled Action and did not require assessment or approval under the EPBC Act. Subsequently, KGL have received Terms of Reference for an Environmental Impact Assessment (EIS) from the Northern Territory Environmental Protection Authority, under the EA Act. Baseline studies for the Jervois Project area have been undertaken. Additional baseline information continues to be collected and KGL will continue to address the EIS moving into the next phase of the project. • Approximately 80 to 85% of the waste rock material is considered low risk and is likely to be classed as NAF waste. Around 5 to 10% of the waste will exceed the upper-bound sulphur cut-off of 0.8%. This material is considered high risk and likely to be classed as PAF waste. Around 10 to 15% of the samples tested are considered moderate risk material.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk*	• There is an existing Run Of Mine (ROM) wall, from previous operations, which can be utilised in the Project. As of this writing no other infrastructure has been established.

Criteria	JORC Code Explanation	Commentary
	commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• No capital costs were included in the Whittle optimisations. • Operational costs were provided by contract earth movers as well as a study performed by Lycopodium for the processing costs at a prefeasibility level of accuracy, deemed to be ±25%. • No sell costs were applied directly as any refining costs and penalties were taken into account at the processing cost stage (refer to above section). • State royalties in the Northern Territory for this type of mining project are based on company profit rather than metal sales and have therefore been omitted from the optimisation process. State royalties have been accounted for in financial modelling. • The exchange rate provided by KGL was USD0.735=AUD1.00. Forward looking estimates for the exchange rate were required for this study, the best indicate for this is historical averages, pre dating the GFC (2009). Pre GFC, the historical average for the AUD:USD ranged between 0.72 and 0.75, therefore an exchange rate of AUD:USD of 0.735 was selected on the assumption that the US will return to normal growth and interest rates in the short to medium term. • The additional cost of hauling the ore material from the Bellbird site to the existing processing plant was included, and appropriately adjusted, to provide final tailored processing costs per site.
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 assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• The head grade is derived from the Mineral Resource and Modifying Factors as described above. • The sell prices were based on the mean value of the long term (beyond 2020) forecast price of each metal from a number of international banks and investment firms as compiled by Concensus Economics Inc. Prices were quoted in nominal US dollars, metal prices in real US dollars will be accounted for through the application of a discount rate. The commodity prices are as follows: **Commodity** — **Sell Price (USD)** **Cu** — 7,165 $/t **Au** — 1,200.00 $/oz **Ag** — 20.00 $/oz **Pb** — 2,000 $/t **Zn** — 2,200 $/t
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely*	• Marketing studies were completed at a prefeasibility level by KGL Resources. Product specification was sent out to the market for expressions of interest

Criteria	JORC Code Explanation	Commentary
	market windows for the product. • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• A simple economic analysis was undertaken on the Ore Reserve pit designs with positive results indicating an Ore Reserve could be named • A life of mine (LoM) study including Inferred material from open pits and underground mining was used as the basis of the full economic analysis. The inclusion of Inferred material from open pits and underground mining was considered appropriate for the economic analysis as all material within the LoM mining inventory is scheduled for further drilling to improve confidence prior to KGL completing a full Feasibility Study. • A pre-tax NPV of AUD239.4M and an IRR of 34.6% was calculated from the full economic analysis of the Jervois LoM project. • A discount rate of 10% was applied to the optimisation works for this study. • Inputs to the economic analysis include Modifying Factors as described above. • Sensitivity studies were carried out at the Whittle optimisation level. Standard linear deviations were observed.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• There are no known significant social licencing requirements for the project. • KGL Resources regularly engages with the local community to maintain a healthy relationship.
Other	• *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• There are no known significant naturally occurring risks to the project. • All current deposits are located on granted Mining Leases.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived*	• All Reserves stated are Probable Reserves, there are no Proven Reserves currently at the Project • The estimated Ore Reserves are, in the opinion of the Competent Person, appropriate for this style of deposit.

Criteria	JORC Code Explanation	Commentary
	from Measured Mineral Resources (if any).	
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• Auralia Mining Consulting has completed an internal review of the Ore Reserve estimate resulting from this updated Feasibility study.
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 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.* • *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.*	• No full economic analysis has been completed on the Ore Reserve material alone, there are significant Inferred Resources close by that will likely be upgraded to Indicated Resources (at least) before KGL commit to developing the Jervois Project. Upgrading Inferred material within and near the pits and underground is a high priority for future work. • Other work required from a mining perspective prior to or as a part of the feasibility study includes, but is not limited to: further geotechnical work, a complete water study and waste rock classification (potentially acid forming or non-acid forming) and the location of such waste rock types.