ASX Announcement: ROY
30 January 2013

ROYAL
RESOURCES LIMITED

RAZORBACK PROJECT RETURNS A POSITIVE PFS

Key Points:

- **Pre-feasibility Study confirms the Razorback Premium Iron Project is technically and financially sound**
- **8.2 Million tonnes per annum concentrate production targeted**
- **Process plant designed for 6.2Mtpa production upgradeable to 8.2Mtpa on verification of haematite recovery circuit**
- **Weight recovery is 16% for the magnetite component and an indicated 4.5% for the haematite component[1], giving a total recovery of 20.5%**
- **Standard open cut operation with drill, blast and truck haulage to the process plant**
- **Standard primary crusher – SAG mill – ball mill – LIMS – spirals flow sheet**
- **High grade concentrate of 67% Fe at a 45 micron grind to be produced, attracting a grade-based premium on spot iron pricing**
- **A mine life in excess of 25 years with significant upside**
- **Unique but proven direct slurry loading to a floating stockpile with on-board dewatering obviating the need for a conventional Cape size capable port**
- **Transport infrastructure designed for 10Mtpa production with a 20% surge capability**
- **Capital cost estimate of $2.2B with options to reduce to ~$1.5B through the outsourcing of the slurry pipeline operation**
- **Estimated operating costs of $68 per tonne of concentrate into ship (FOB)**
- **Underpinned by a Mineral Resource of 1.8Bt at 21% Fe, including an Indicated Resource of 1.2Bt at 21.5% Fe**
- **0.79:1 strip ratio**
- **Lower electricity pricing and relatively soft ore an advantage over competitors**
- **Optimisation studies underway to further reduce OPEX and CAPEX**

[1] The haematite recovery requires additional confirmatory work with results to date being very encouraging

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The Board of Directors of Royal Resources Limited is delighted to announce the results of the Pre-feasibility Study on the Razorback Premium Iron Ore Project (RPIP) in South Australia.

Table 1: Key metrics

Project	Value	Unit
Cash operating expense (OPEX)*	$68	FOB per tonne of concentrate
Capital expense (CAPEX) – direct*	$1,575	A$ Million
Capital expense (CAPEX) – indirect*	$658	A$ Million
Ore mining rate	40	Mtpa of ROM
Production rate targeted	8.2	Mtpa iron concentrate
Concentrate grade	67.0%	% Fe
Strip ratio	0.79:1	Waste:Ore mined
Foreign exchange rate	1.00	A$/USD$
Forward iron price	USD$120	USD$/t of 62% Fe fines
Pricing premium	$4	USD$/%Fe/t over 62% Fe fines

* Rounded to significant figure

RAZORBACK PREMIUM IRON PROJECT CONCEPT

A number of options were investigated during the PFS with the lowest risk, OPEX and CAPEX option being chosen as the preferred configuration. This base case will see an annual mining rate of 40 Million tonnes per annum (Mtpa) from which ultimately 8.2Mtpa of premium concentrate production is targeted. The ore will be milled to a grind size of 45µm (microns) on site and beneficiated using an industry standard flow sheet. The resulting concentrate will be transported as slurry via an approximately 230km long pipeline to Spencers Gulf, further thickened, slurried to a permanently moored Cape size ship, dewatered, and stored on the ship for later loading to an ocean going Cape size ship.

SUMMARY OF KEY FINDINGS

Geology and Resources

The resource is developed within the Braemar Iron Formation, a metasiltstone/tillitic sedimentary stratigraphy that is significantly softer and less abrasive than banded iron formations. At Razorback, the formation forms a prominent outcropping ridge dipping 40º to the north. Royal undertook three drilling campaigns between early 2010 and mid 2012 with a total of 31,055m drilled. The resource estimates from this drilling were undertaken by Widenbar and Associates. The project contains a Mineral Resource of 1.8Bt at 21% Fe, including an Indicated Resource of 1.2Bt at 21.5% Fe (Table 2). The Indicated Resource is currently being converted into a Probable Ore Reserve.

Mining

The RPIP will consist of a conventional large scale open-cut mining operation using standard drill and blast, shovel, and truck haulage processes. Initially, one pit will be developed on the Razorback Ridge / Razorback West resource. The Iron Peak resource will be developed as a second pit in the future. Pit optimisation and preliminary scheduling have been undertaken by ORElogy for the first 15 years of production. Pit shells have a low footwall angle, in line with the deposit's dip (~45º), while the hanging wall pit shell has an angle of 54.4º. Current 15 year pit

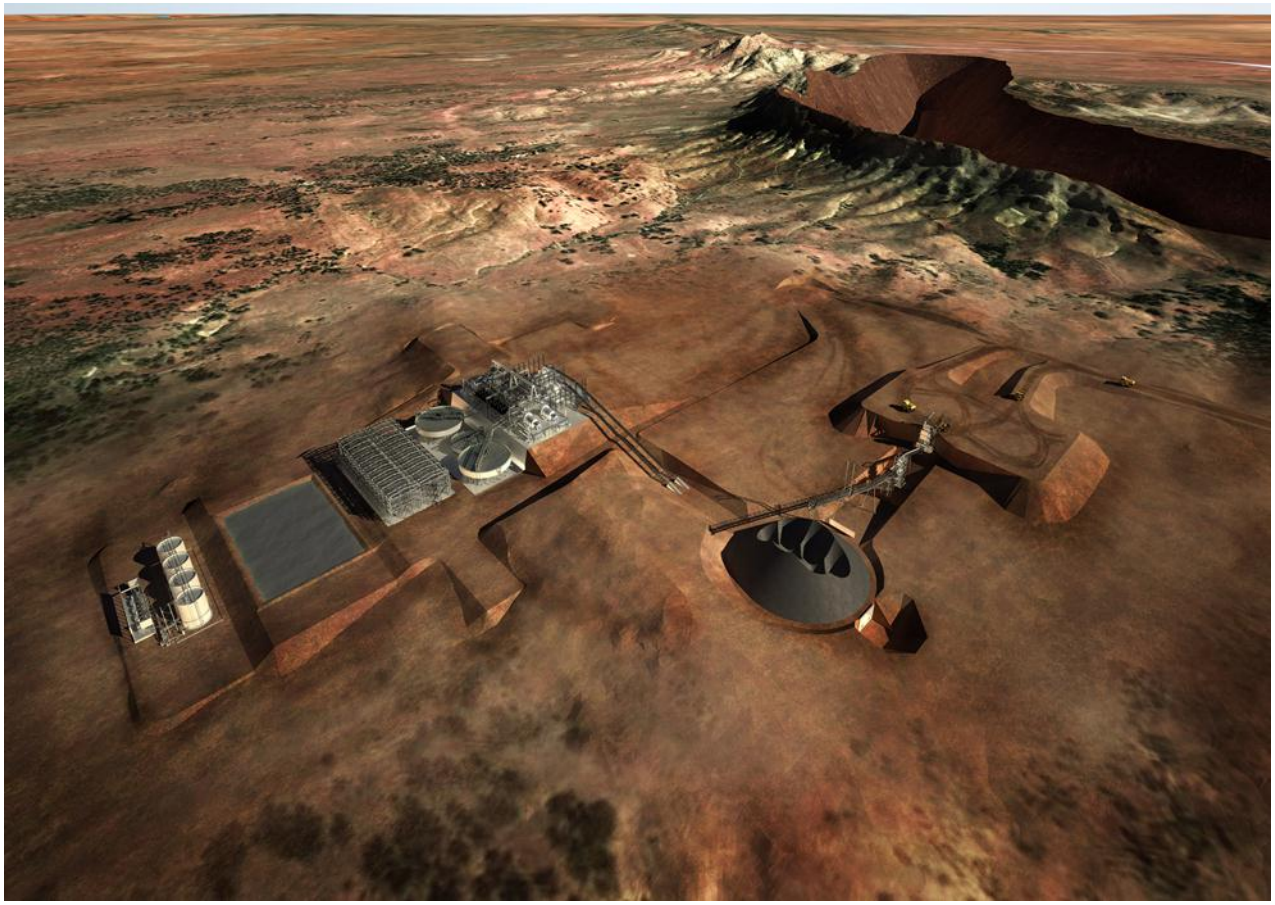
design is to a depth of around 285m. As the ore is outcropping, initial strip ratios are very low while the optimised ratio is 0.79:1. There is no pre-strip required.

Table 2: Total JORC compliant Inferred Mineral Resource from Ironback Hill

Project	JORC Classification	Million Tonnes	Fe%	SiO_2%	Al_2O_3%	P%
Razorback	Indicated Mineral Resource	980	21.6	43.0	7.0	0.21
	Inferred Mineral Resource	520	19.6	45.8	7.4	0.25
Iron Peak	Indicated Mineral Resource	213	21.0	45.0	7.4	0.18
	Inferred Mineral Resource	103	21.4	44.6	7.4	0.18
TOTAL[1]		**1,816**	**21**	**44.1**	**7.2**	**0.22**

[1] Rounded to significant figure

Figure 1: Razorback Process Plant and Mine – conceptual design layout. Shown are pit (upper right), primary crusher and crushed ore stockpile (centre right) and process plant (centre left).



Comminution Beneficiation

The process flow sheet was developed by John Clout and Associates in association with FL Smidth. The work included extensive metallurgical testing and pilot processing. Crushing consists of a single stage gyratory crusher feeding a crushed product stockpile with tunnel conveyor reclaim feeding two modules each with one SAG mill and two ball mills. The ore is ground to 45µm and passed through a rougher and cleaner Low Intensity Magnetic Separator. Final product upgrading is achieved using spirals. The final product specification targeted, which is expected to command a premium price (currently USD$4/Fe%/t over 62% Fe over the Pilbara Fines) is shown in Table 3.

Table 3: Razorback Premium Iron Project indicative product specifications

	Recovery	Fe%	SiO_2%	Al_2O_3%	P%	S%
Magnetite product	16.5%	67.4	4.74	0.54	0.016	0.003
Haematite product	4.0%	61.8	8.45	0.76	0.078	0.016
TOTAL[1,2]	**20.5%**	**67.0**	**4.74**	**0.5**	**0.026**	**0.005**

[1] Rounded to significant figures

[2] Assumes an additional 1% magnetite and 4% haematite is recovered via a haematite recovery circuit

Based on test work to date, Royal believes it will confirm with follow up tests that haematite recovery is economically and technically feasible. Additional orebody-wide testing is scheduled to demonstrate this.

Concentrate Transport

One of the early attractions of the RPIP was its access to existing, open-user rail and port. Analysis of the OPEX and CAPEX required to use the rail indicated that the slurry pipeline option is a lower OPEX alternative to rail. Compared to rail, slurry has reduced rehandling requirements (up to four less), reduced ancillary equipment requirements (slurry does not require product stockpiles and stacker-reclaimers at both the mine site and port, rail car unloader, conveyor belts, and ship loader), reduced OPEX (about a fifth the cost of rail transport), and reduced capital guarantee requirements (rail will require capital guarantees for rolling stock and passing loops). The slurry pipeline option also obviates the need to build a spur rail line to the mine site and a conveyor belt easement through Port Pirie. Importantly, the slurry pipeline option is environmentally attractive from a dust, noise, traffic, and aesthetic perspective.

Costings for a number of slurry pipeline routes to Port Germein and Myponie Point on the Spencers Gulf have been assessed. The preferred pipeline route is to the Myponie Point area, approximately 12km north of Wallaroo. Existing easements will be used for its placement where possible.

A railway transport option, using the existing rail, is retained for a low tonnage start up option, though this option is not preferred on cost grounds.

Port

Royal is pursuing an unique ship loading facility concept, unseen in Australia but in operation elsewhere. Concentrate slurry will be received at a coastal facility and further thickened before pumping the short distance to a permanently moored Cape size ship. The slurry will be dewatered on the ship, with the recovered water pumped back to mine site and the iron concentrate stored in the ship's holds. This vessel is referred to as the Dewatering Transhipment Vessel (DTSV). The concentrate is transferred to the transport Cape size ship via automated clamshell bucket cranes. This configuration minimises the level of infrastructure required on the coast whilst allowing access to Cape size water drafts. It also eliminates product rehandling and the majority of port charges.

Power

The RPIP requires 158MW of power at the mine site and a further 44MW at the coastal site. Two options were identified for the supply of power to the project.

State electricity grid power is available approximately 99km from the proposed mine site. This is the preferred option and will require building a 275kV transmission line and associated switching and substation infrastructure. The current state grid power cost is indicated at $0.057/kWh, excluding carbon tax.

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The proposed mine site is approximately 80km from the Moomba to Adelaide natural gas pipeline. A gas fired power station has been costed as an alternative to state grid power. This option will be outsourced in the unlikely event that this is chosen.

Figure 2: The Dewatering Transhipment Vessel (DTSV) configuration. Slurry is delivered directly to the surge tanks shown on the bow and dewatered by pressure filters (aft of the tanks). Dried concentrate is stored in the DTSV's holds for transfer by automated clam bucket cranes to the ocean going vessel shown behind the DTSV.

Water

The PFS has incorporated a 55Ml/day per year desalination plant on the DTSV. Water will be transported to site via a return water pipe on the slurry pipeline. Opportunities for joint development of the desalination plant have not been assessed yet, though initial discussions indicate the possibility exists.

Tailings Storage Facility

The operation will generate nominally 32Mtpa of tailings per year over its 25 year mine life. Tailings will be stored in six cells constructed from, and ultimately encapsulated by, waste rock to form an approximately rectangular landform to a height of approximately 40m. They will be deposited as slurry from multiple spigot locations around the perimeter of the cells.

Dry-stacking of tailings is being investigated. This option could reduce total project water consumption and capital costs.

CAPEX AND OPEX ESTIMATE

Cash operating expenses, collated by GR Engineering Services (GRE) and ORElogy, are A$68 per tonne of concentrate into ship, ie, FOB. The break down is shown in Table 4.

A capital cost of A$2,234M has also been estimated by GRE. It is quoted to an accuracy of ±30% and is based on quotes from suppliers and GRE's in-house data from similar projects (Table 5).

Contract miners will be used for the first seven years of operations; capital associated with mining is excluded and incorporated as an operating cost. Indicative pricing for the building and operating the DTSV has been obtained from a globally recognised shipping services provider. The dewatering and desalination plant on that vessel will be delivered by Royal.

Table 4: OPEX estimate[1]

Operating area	Cost estimate A$ /t of product
Mining[2]	$31
Beneficiation	$17
Transport to DTSV, dewatering and transhipment	$9
Infrastructure and Admin	$6
Royalties[3]	$5
TOTAL[4]	**$68**

[1] for the 15 year optimised pit
[2] Weighted averages of ore and waste
[3] State royalty of 2% is applicable for the first 5 years operation; 5% thereafter. Vendor royalty of 1.25% applies. Royalties are based on product pricing reduced by transport and Sales and Marketing costs.
[4] Carbon tax excluded (refer to text)
Optimisation studies underway to further reduce OPEX

Table 5: CAPEX estimate (Option 1A)

Operating area	Cost estimate A$ Million
Direct Costs	
Mining	-
Primary Crushing & ROM stockpile	69
Processing	281
Tailings Disposal	140
Slurry pipeline with water return	741
DTSV fit out	54
Desalination plant	130
Port infrastructure	5
Plant infrastructure (incl accom & access road)	92
Power transmission line	63
Indirect Costs	
EPCM	234
Owner costs	78
Construction	45
Contingency	302
TOTAL[1]	**2,234**

[1] Rounded to significant digit
Optimisation studies underway to further reduce CAPEX

Carbon Tax

Impacts of the Carbon Tax have been calculated, but not included in OPEX as the project will start up after the move to a floating market-based Emissions Trading Scheme (ETS) on 1 July 2015. Projects designed to ameliorate the tax, such as carbon sequestration through plantation development, will be assessed during the DFS.

PFS Optimisation

During the course of the PFS a number of opportunities were recognised for optimising the mining, beneficiation and transport processes. These include:

- Steepening of pit walls to reducing the strip ratio (mining waste)
- In-pit crushing
- Use of conveyors to replace haul trucks
- Use of surface miners instead of traditional drill and blast
- Use of magnetic drums for dewatering
- Investigating dewatering technologies to achieve dry tailings
- Elimination of the need for a slurry pipeline liner
- Using a lower pressure water return pipeline to enable the use of concrete pipes
- Outsourcing the ownership and operation of the slurry pipeline

These are areas of ongoing investigations that may bring significant cost benefits to the project.

Initial discussions have been held with a third party on outsourcing the building and operating of the slurry pipeline and so potentially reducing the project's capital requirements by $741M (Table 5) to A$1,483M. The impact on OPEX for this option has not yet been evaluated.

Royal Transitions from an explorer to a developer

The PFS on the Razorback Premium Iron Project has demonstrated that a mining, processing, and transport operation is technically very robust and profitable. Royal is confident in advancing the project to a Definitive Feasibility Study (DFS) once funding has been secured. Over the next 12 months, Royal intends to:

- Finalise PFS optimisation to reduce costs further, particularly OPEX;
- Progress the Mine Lease Proposal studies to enable application for a mining licence;
- Continue and expand community and Traditional Owner engagement to ensure the project's impacts are minimised and understood;
- Undertake drilling, where necessary, to derisk the short term mine model, particularly in regards to haematite recoveries and to maximise magnetite recoveries;
- Assess partnering opportunities with a view to full project funding; and
- Initiate the DFS.

In support of this work, the project office has moved to Royal's Adelaide Office. The Project Director - Razorback has also relocated to Adelaide in readiness for the start-up of the Definitive Feasibility Study.

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Partnerships in the PFS

The following companies and consultants had major input into the PFS; their important contribution is acknowledged:

Area	Company
Engineering & Drafting	PDC Global Pty Ltd
Fauna & Flora	Rural Solutions SA
Heritage & Anthropological	Ironbark Heritage and Environment
Hydrogeology	RPS Aquaterra Pty Ltd
Metallurgical	Nagrom
Metallurgical	AMDEL Pty Ltd (Bureau Veritas Group)
Metallurgical	CSIRO Process Science And Engineering
Mine Lease	Parsons Brinckerhoff
Mining	Hardrock Mining Consultants Pty Ltd
Mining Study Manager	ORElogy Pty Ltd
Port	Flinders Ports
Power	Petro Min Engineers
Pre-Feasibility Study Manager	Camco Dreico Industrial Services Pty Ltd
Process	Sinclair Knight Merz Pty Ltd
Process Designer / Supplier	FLSmidth Pty Ltd
Process Study Manager	John Clout and Associates
Project Cost Estimators	GR Engineering Services Limited
Rail	G&WA, Pacific National, SPC
Roads	Trimble Planning Solutions Pty Ltd
Slurry Pipeline	Ausenco PSI
Slurry Pipeline	OSD Pty Ltd
Taillings	Golder Associates Pty Ltd
Thickening & Filtration	Outotec South East Asia Pacific
Transhipping	CSL Australia
Water Supply	Emerson Stewart Consulting

Mr Phil Crabb, Royal's Chairman of the Board commented: "*The quality and quantity of Royal's mineral resources will underpin the long term success of the Razorback Project. The PFS detail provides a broad perspective on the progress of the project and the Board's vision of bringing into existence a major new source of premium quality iron concentrate. I would like to thank everyone involved for their efforts in delivering a robust PFS for the Razorback Project and look forward to working with them as we turn our vision for the project into reality*".

Mr Marcus Flis, Royal's MD and CEO observed, "*The PFS is a significant step in realising Royal's progression to becoming a miner. Our future work programme is designed to target significant reductions in OPEX costs to ensure the long term viability and competitiveness of the Razorback Premium Iron Project. I invite our loyal shareholders to join us on what should be an exciting and ultimately rewarding journey*".

About Razorback

The Red Dragon Venture is a very large magnetite deposit located 240km NNE of Adelaide, South Australia. It is owned 100% by Royal. The project has a global resource of 3 Billion tonnes and an additional exploration target of 1.8 to 5 Billion tonnes at grades of 18 to 45% Fe[2] occurring in an infrastructure rich area that has access to nearby existing open user rail, port, power, gas, heavy engineering and dormitory towns.

The Red Dragon Venture covers over 1,450 square kilometres of exploration tenement through either outright ownership (EL4267 and ELA313/10) or an exclusive option over the iron rights (EL3927 and EL3997). This area contains in excess of 110 strike kilometres of the host Braemar Iron Formation.

The project was acquired in November 2009 and by August 2010, a maiden JORC compliant Inferred Resource was declared. The current resource, centred on the Razorback deposit, now stands at 1,815 Million tonnes at 21.0% Fe, including 1,193 Million tonnes at 21.5% Fe in the Indicated Resource category[3]. It also includes a higher grade component of 308Mt at 30% Fe. This deposit supports the Razorback Premium Iron Project for which a pre-Feasibility Study has been completed.

Together with a JORC compliant Inferred Resource of 1,187 Million tonnes at 23.2% Fe at the Ironback Hill Prospect, Royal now control over 3 Billion tonnes at 21.8% Fe in Resources. This is now the largest iron resource outside of Western Australia and the second largest in Australia.

The Razorback mineralisation style is a bedded magnetite. It is significantly softer than banded iron formation ores. As a result, this outcropping resource will be low cost to mine and beneficiate which, together with the available infrastructure, means a low capital cost compared to its peers.

The ore produces a low contaminant, high iron content concentrate and is expected to be readily marketable at a premium to the reference haematite fines price.

About Royal Resources Limited

Royal Resources Limited is developing a major iron ore project in South Australia and aspires to transition to a mining company.

Directors

Philip Crabb	Chairman
Marcus Flis	Managing Director
Frank DeMarte	Non-executive Director
Malcolm Randall	Non-executive Director

Share Capital

Issued Capital (ROY)	335.6M
Listed Options (ROYOA)	34.7M (12[c],Oct '13)
Unlisted Options	35.7M (8[c]- 50[c])
Fully Diluted	406M
Share price range	$0.05 - $0.16
Annual turnover	20.4%
Director's Shareholdings	9.6%
Top 20 shareholders	58.6%

The details contained in this report that pertains to ore and mineralisation is based upon information compiled by Mr Marcus Flis, BSc (Hons), MSc, a full-time employee of the Royal Resources Limited and Mr Lynn Widenbar BSc(Hons), MSc, DIC, Principal Consultant Widenbar and Associates Pty Ltd . Mr Flis is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Widenbar is a Member of the AusIMM. Both have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Persons as defined in the December 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr Flis and Mr Widenbar consents to the inclusion in this report of the matters based upon their information in the form and context in which it appears.

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Tony Heslop
Company Secretary

[2] The potential quantity and grade of the exploration target is conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Resource. The estimate of an exploration target tonnage should not be construed as an estimate of Mineral Resource.

[3] ASX Release 22nd August 2012 and this announcement