

HERON RESOURCES LIMITED

John Macdonald

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CAPITAL DETAILS

ASX Code:	HRR
Share Price:	52 cents
Shares on issue:	165 million
Fully diluted:	177 million
Market Cap. (FD):	\$92 million

PRINCIPAL OFFICE

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DIRECTORS

Craig Readhead (Chairman, Director)
Ian Buchhorn (Managing Director)
Mathew Longworth (Exec Director)
Dr Allan Trench (Non Exec. Director)

SUBSTANTIAL SHAREHOLDERS

Ian Buchhorn	22.2%
Inco Limited	9.9%
BHP Billiton Limited	9.6%

Summary

Among nickel laterites the Kalgoorlie Nickel Project offers a rare combination of size, amenability to pressure acid leaching, political security, and environmental stability.

A recent technical discovery relating to the KNP's main ore type could mean that high average grade can be added to the list of the KNP's attributes; effectively fulfilling the major mining company wish list for new nickel projects.

Inco has committed over \$US17 million to the KNP on the strength of Heron's results to date.

Few if any other nickel projects around the world appear capable of diverting capital from the KNP.

To earn an interest, Inco must free carry Heron's 40% of the KNP through to capital payback, except for a token expense at project finance. Heron bears almost none of the project risk and will share in 40% of the upside.

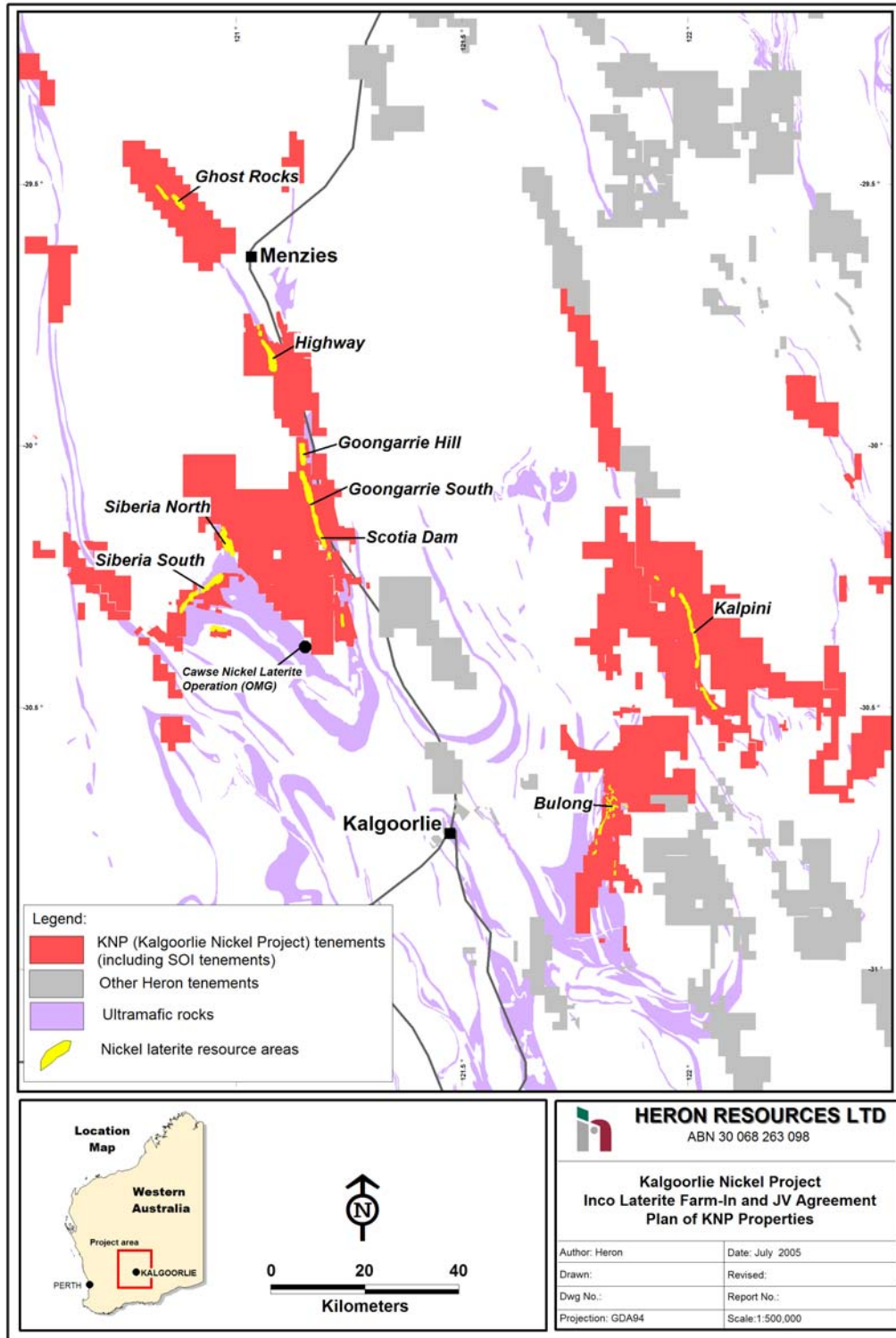
BHP Billiton bought 11% of Heron's shares a week after the KNP JV was announced, further endorsing the KNP's merits. The conflicting goals of Inco and BHPB could turn in Heron shareholders' favour.

At minimum return rates and a 60% probability of successful development, Heron's stake in the KNP can be valued at 80 cents per share. Upward revisions will be required as Inco achieves each JV milestone.

Company Background

Heron Resources Limited (Heron) began acquiring tenements over nickel laterite deposits in the Kalgoorlie region in 1997. The subsequent operational woes of Murrin Murrin, Cawse and Bulong effectively discouraged competing prospectors and Heron opportunistically acquired most of the nickel laterite prospects in the arc between the three operations, including the Bulong mineral rights in April 2004. Heron pegged nearly 5,000 square kilometres of tenure covering the ultramafic sequences north and east of Kalgoorlie that now comprise the Kalgoorlie Nickel Project (KNP). In September 2004 Heron estimated aggregate nickel resources, in four main project areas, of 903 million tonnes at 0.74% nickel and 0.05% cobalt.

At the end of March 2005, Heron announced that Inco Limited (Inco) had agreed to earn up to 60% of the KNP. A week later, in a separate move, BHP Billiton Limited (BHPB) bought 11.2% of Heron on market. Inco responded within seven days by subscribing to a placement in Heron, paying \$A12.4 million for a 10.5% stake and diluting BHPB back to a 10.1% interest in the process. Heron and Inco signed the KNP joint venture agreement in July 2005, officially launching one of the most ambitious mineral development programs currently underway in Australia.



The Kalgoorlie Nickel Project

Nickel from laterites – The KNP in context.

Despite the generally painful financial experience associated with nickel laterite projects worldwide in the past, all of the major nickel producers are persisting with efforts to convert more laterite resources into nickel mines. The common threads running through each producer's strategy are the underlying convictions that:

- a) Growth in sulphide ore sources will be insufficient to meet nickel demand,
- b) Refinement in the technology of extraction will force down the basic cost of extracting nickel from laterite ore, and
- c) The process technology most likely to be refined to a competitive level is Pressure Acid Leach (PAL), a hydrometallurgical process that enables high metal recovery rates and relatively efficient energy use.

Although there has been broad agreement on the above, the companies diverged when it came to how and where to tackle the nickel laterites. Each of Inco, BHPB, Falconbridge and Rio Tinto have assessed every known nickel laterite on the planet and proceeded cautiously with only a few, without at all collectively narrowing down the style of laterite that can be developed with a high rate of return, and not too much risk. Against this background, the convergence of the two major producers on the KNP speaks volumes about what has been learned about nickel laterites from experience in the past decade.

Firstly it has become apparent that there are very few undeveloped nickel laterites in politically and environmentally stable locations that can meet the technical requirements for development. Only two tropical nickel laterite projects qualify as low cost producers today (Sorowako in Indonesia and Cerro Matoso in Colombia), on account of long and costly project gestation periods, high grades, attendant low energy costs, and political continuity. Even with the benefit of technical advances through experience, finding a virtuous set of circumstances elsewhere is increasingly difficult.

A second discovery influencing future investment plans for new nickel supplies is a purely technical one that has led Inco and BHP to Heron and the KNP. The unexpected success of certain screening practices could convert the KNP's massive low grade laterites into high grade autoclave feed. If successful the KNP could prove to be a nickel producer's holy grail; a low cost, long life, PAL project in a politically and environmentally stable location.

KNP and the screening breakthrough.

Over the last few years, work at Cawse (OMG) and Ravensthorpe (BHPB) has discovered that oxide-silica ores grading sub 1% nickel can be routinely and practically upgraded to +1.5% nickel through a physical process alone. The project set to benefit most from this finding is the KNP, which contains the largest known resource of oxide-silica type nickel laterite. Heron and Inco have set out to replicate the ore upgrade effects with KNP ore, and design a mining and treatment operation to take advantage of the findings.

Most of the known resources of oxide-silica nickel laterites in Australia are derived from a unit within the Walter Williams Formation, a vertically dipping ultramafic lava flow that extends from west of Kalgoorlie to Ghost Rocks, north of Menzies. A portion of the formation called olivine adcumulate is comprised of a single mineral, which is low in aluminium and weathers to a consistent silica-goethite-kaolinite profile enriched in nickel and cobalt. The Walter Williams Formation is unique in terms of the extent of deeply weathered olivine adcumulates. The nearest known analog is the Bandalup Ultramafics at Ravensthorpe, which extends over 30 kilometres of strike compared to the Walter Williams Formation strike length of over 170 kilometres.

Heron dominates ownership of the Walter Williams Formation adcumulates, with about 125 kilometres or 75% of the known prospective strike. Most of the remainder forms the basis for the OMG Group's Cawse operation. Although Cawse is a pilot scale project producing about 8,000 annual tonnes of nickel in intermediate form, Heron's confidence in proceeding with the Kalgoorlie Nickel Project is in large part based on the performance of the Cawse process train, in particular Cawse's success with upgrading siliceous ores by screening.

Cawse was commissioned in 1998 with a resource of 275 million tonnes at 0.7% nickel and 0.04% cobalt, of which 80% comprised laterites over Walter Williams Formation intended for upgrade by screening prior to treatment in an autoclave. Cawse's screening practices have evolved with experience and technical development. Initially higher grade (1%+ Ni) siliceous ore was mined preferentially and screened through a relatively coarse mesh (212 micron), achieving an average upgrade in the order of 40% and a leach feed grade of about 1.7%. Improved upgrade rates have since been achieved at lower ore grades and finer mesh sizes, so that on average a 0.8% mined grade is screened through a sub 100 micron mesh to deliver material grading 1.6% to the autoclave. BHP Billiton has drawn heavily on the Cawse experience in designing the Ravensthorpe screening circuit, adding an attritioning unit to remove more goethite from the silica surfaces and improve nickel recovery. In the first six years of operation Ravensthorpe plans to mine siliceous laterite grading 0.89% and upgrade it to a leach feed grade of 1.87%. At each of Cawse and Ravensthorpe predictive models have been developed to guide mine planning in achieving a consistent leach feed grade.

Heron's testing of KNP laterites has so far been consistent with the Cawse and Ravensthorpe findings. As expected due to the geological closeness to Cawse, the same broad mineralisation types with analogous screen upgrade responses have been identified. In accordance with early Cawse practice Heron has tested over 5,500 KNP drill samples by bottle roll (to emulate the washing process) followed by screening through a 500 micron mesh. The average upgrade of the screened siliceous samples has been 54%. The more recent success of both Cawse and Ravensthorpe with finer mesh sizes and lower grade material encouraged Heron to test 180 micron screens across a range of cutoff grades in August 2004. The results confirmed the trend of improving upgrades of siliceous mineralisation with lower grades and finer mesh sizes; a finding which has added impetus to the KNP. The possibility that a lower cutoff grade (down to 0.5% Ni) can be applied to the KNP resources, while still delivering a leach feed grade of up to 1.5% Ni, has the potential to greatly improve the mining continuity of the deposits and thus enhance the conversion of resources to reserves.

Further tests of KNP resource screen upgrading are planned. Larger sample sizes are required to test 75 micron mesh screening because of the reduced screened product.

The determination of the screening upgrade behaviour to be expected from KNP resources is an important first step to establishing the viability of the project. One of the lessons of the first generation of Australian PAL developments is that a leach feed grade of at least 1.3% nickel is required to cover the capital and running costs of the leaching circuit, considering long run nickel prices of \$US3.50/lb. The costs of the mechanical mining and screening processes are insignificant relative to the expense of running and maintaining a set of autoclaves and the associated pipe work under high temperature, high pressure, acidic conditions. As long as the tonnages are available, any means of increasing the leach feed grade is likely to improve project economics, regardless of the mass of nickel lost from the starting resource during mining and screening.

The Kalgoorlie Nickel Project JV

In July 2005 Inco signed a joint venture agreement with Heron for the purpose of developing the KNP. To earn a 60% JV interest, Inco must fund all evaluation costs up to a decision to mine (Inco has estimated the evaluation process will cost at least \$US68 million). Inco must also lend Heron all but 4.5% of Heron's share of project equity finance required after the decision to mine. Inco will be entitled to purchase Heron's 40% share of KNP output on commercial terms. The agreement received regulatory and Heron shareholder approvals in October 2005.

The terms under which Inco must carry the KNP through a decision to mine and project finance in order to earn an interest, are included as provisions in the joint venture agreement. The first of four steps on the way to completing a feasibility study is for Inco to check Heron's data and assumptions, upon which Heron has estimated that the KNP can produce at least 120 million tonnes of material at a leach feed grade of 1.5% nickel or better. The estimated cost to Inco of the program is US\$2.4 million.

As in any earn-in joint venture agreement, Inco is spending the money and can withdraw from the joint venture before a decision to mine is made. Heron will retain 100% of the KNP in that event. Heron can also terminate the agreement if Inco fails to meet certain deadlines specified in the agreement. Inco's current checking program must be finished by July 2006, initial metallurgical testing and flow sheet selection must be completed by September 2007, all pre-feasibility study work including infill and extension drilling must be completed by January 2009, the feasibility study must be finished by July 2011, and if a positive BFS results a decision to mine must be made before July 2013 (otherwise Heron has certain rights to bank the project and so increase equity and secure off-take rights).

In the context of nickel laterite projects six years is a reasonably tight assessment schedule. Breakneck BFS speeds set by earlier projects such as Murrin Murrin resulted in high prices paid in terms of retro-engineering. The large size of the KNP resource base dictates an extensive drilling requirement (step three) which under the current timetable must be completed between September 2007 and January 2009. An early start to step three drilling would ease pressure on the timetable.

The JV agreement gives Inco flexibility on the project's timing, which is likely to be dictated by progressive results from the KNP, Inco's reading of nickel supply and demand, and Inco's refinery requirements. Inco plans to commission Voisey's Bay in 2006, Goro in 2007, and expand PT Inco by 2009, spending about \$US3 billion in the process. The KNP is Inco's next most likely green fields investment, and could be in production as early as 2013 if Inco believed it was the best available option for meeting demand growth. Both Goro and Voisey's Bay will have hydrometallurgical refining facilities to which the KNP could be designed to supply intermediate nickel product.

Inco established a team in Kalgoorlie in April 2005. The immediate tasks undertaken include re-logging previous drilling and auditing the effects of the RC drilling process on the samples. Diamond drilling, twinned against Heron's previous holes, commenced in October 2005 as part of the program. Heron expects (step two) metallurgical diamond drilling (delivering undisturbed samples to the laboratory) to commence immediately upon completion of the current confirmatory (step 1) diamond drilling

For Heron, a free carried 40% of the KNP, all the way to payback, with only a token capital requirement at financing stage, is a dream agreement that could only reflect Inco's enthusiasm for the project. Heron bears virtually none of the project risk and will enjoy 40% of the upside. BHPB appears to have been impressed, perhaps by both the project and the JV terms, when choosing to take an equity stake in Heron.

BHPB's interest in Heron

Although BHPB's intentions with regard to its Heron stake are unclear, the effect is to introduce some competitive tension into the future ownership of both Heron and the KNP. BHPB could increase its stake in Heron with a view to eventually becoming Inco's 40% partner. Heron's feasibility study free carry and the terms of the JV are certainly attractive enough for BHPB to entertain the possibility. Moreover BHPB will have plenty to offer the JV through its experience at Ravensthorpe. The only obvious sticking point would be Inco's rights to the offtake.

BHPB may also be prepared to act as fall back partner, ready to step in should Inco not proceed to development under the agreement.

From Inco's perspective the presence of BHPB on Heron's register will be disconcerting, especially in the light of BHPB's takeover of WMC Resources Limited. The prospect of a major competitor seeking to take over a JV partner is not generally accepted in markets such as nickel, where technical advantages are closely guarded. Since Inco carries all of the JV responsibilities through to BFS, the technical exchange could be a one way street. Inco's decision to take a placement in Heron is ostensibly a warning to BHPB that Inco will not tolerate BHPB hitching a ride on the JV through any sort of board control of Heron.

Valuation issues

Inco has committed at least A\$17.4 million to Heron via the placement and KNP JV expenditure to date, while BHP has spent A\$5.6 million on shares in Heron. At one end of the scale of significance the amount of money involved will not blow out the respective annual corporate development or exploration budgets. At the other, Heron owns a large nickel project that two major nickel producers are prepared to enter into open competition for. The odds of its eventual development have shortened as a consequence.

For the KNP to eventually be developed with a real terms capital cost of over A\$1.4 billion, an NPV of at least A\$580 million would need to be demonstrated, assuming a minimum 15% hurdle rate of return on capital. If development were assured, Heron's share of the NPV, which is greater than 40% by virtue of the free carry, would be at least A\$240 million. At a 60% probability of successful development an initial valuation of 80 cents per share (fully diluted) is reasonable. The probability will climb as Inco achieves each JV milestone.

The relatively open timeline within which Inco can develop the KNP reflects Inco's general attitude which dictates that green field PAL nickel projects take 8-10 years from exploration to commissioning. Inco may be over cautious on the timing in view of its experience in New Caledonia and elsewhere. Certainly, if the KNP stacks up Inco could conceivably shorten the timetable, taking into account improved contractor response times and its own greater confidence in HPAL processes. At any rate Heron's equity participation terms more than make up for any caution that Inco might bring to the project. Also the time to cash flow returns from the project is balanced by the scale of the investment, which withstands even heavy discount rates.

The real value of the KNP lies in its capacity to attract capital away from competing projects.

Project comparison

The pace of nickel demand growth suggests 40-50,000 tonnes of new nickel capacity, or the equivalent of one green fields project, will need to be added each year. Assuming sulphide source production can be maintained in the face of resource depletion pressures, all of the growth will need to come from laterite sources.

The two main competing nickel laterite project 'types' are smelting and PAL. In general the deposit mineralogy determines which of the two apply to any particular project. Laterite smelting projects are relatively energy intensive, requiring a combination of high grade ore and cheap power to be competitive. Dwindling high grade ore sources and increasing power costs are reducing the viability of new laterite smelting projects relative to PAL nickel projects.

Because of the constraints facing future nickel production worldwide, a comparison of the KNP with other PAL projects can give a sense of its likelihood of development. If the KNP can be ranked among the best of the PAL projects then it can be reasonably assured of development.

TABLE 1. PAL ACTIVE PROJECT LIST

	Owner	Location	Status	Leach feed	Comment
Ambatovy	Implats, Dynatec, Sumitomo	Madagascar	Feasibility	125 Mt @1.04% reserve	Target late 2008 start-up,60ktpa
Cawse	OMG	Australia	Production	Very low tonne @ 1.8%	Upgrading 1% material.8ktpa Ni
Gag Island	BHPB, PT Antam	Indonesia	Suspended	240 Mt at 1.35% resource	Forestry/environ issues
Goro	Inco	New Caledonia	Construction	57 Mt @1.52% Ni (reserve)	Total resource 239Mt @ 1.65% Ni,60ktpa from mid07
KNP	Heron, Inco	Australia	Pre-feasibility	120 Mt @ 1.5% target	50ktpa by 2015
Moa Bay	General Nickel Co	Cuba	Production	?MT @ 1.27%	Expanding to 49ktpa by late 2007
Murrin Murrin	Glencore, Minara	Australia	Production	140 Mt @1.10% reserve	Total resource 316 Mt @ 0.99% Ni
Ramu	China MCC, Ramu Nickel	PNG	Feasibility	64 Mt at 1.09% (1st 20 yrs)	Target late 2008 start-up,33ktpa
Ravensthorpe	BHPB	Australia	Construction	126 Mt @1.20% (1st 20 yrs)	Total resource 263 Mt @ 0.65% Ni,50ktpa from late 2006
Rio Tuba	Sumitomo & others	Philippines	Production	?MT @ 1.2%	Treating waste dumps,10ktpa nickel
Vermelho	CVRD	Brazil	Construction	171 Mt @1.74% resource	46ktpa from Dec 2008
Weda Bay	Weda Bay Minerals	Indonesia	Seeking partner	35 Mt @1.35% (1st 10 yrs)	Total resource 278 Mt @ 1.49% Ni

For each of the projects in Table 1 resources contain cobalt grades proportionate to nickel at 12-15:1.

The active projects list excludes deposits that, despite having technical merit, are not likely to be advanced under current circumstances. Commercial scale HPAL projects are long life and up-front capital intensive, requiring security of tenure and regulation. Several deposits in Cuba may be suitable for PAL development but are likely to remain constrained by capital availability.

Of the active PAL projects identified, only Goro, Vermelho, KNP and probably Gag Island appear capable of delivering a 1.5% average nickel leach feed grade to the autoclaves at a +40,000 tpa scale, over a +20 year project life.

All projects, other than those in Australia, occur in tropical climates with attendant environmental issues of tailings and effluent disposal. Projects in Madagascar, New Caledonia, Cuba, PNG, and Indonesia also contend with some potential for social or political unrest.

The KNP is at an earlier stage of assessment than most, as the potential for upgrading of the KNP laterites has only recently been quantified.

Examination of the list of active HPAL projects tends to support Inco's statement after entering into the KNP JV, that "finding a project of this scale with established infrastructure in a politically attractive location is extremely difficult". Realisation of Heron and Inco's initial expectations of the KNP would elevate the KNP to the top tier of green field nickel projects in the world.

Heron's other assets

Since the mid 1990s Heron has been one of the most active tenement acquirers in Western Australia, concentrating on but not restricted to the greenstone belts of the Eastern Goldfields. Except for some tenements over Walter Williams Formation in the KNP, Heron has compiled its tenement portfolio entirely through application for vacant leases and by land swap arrangements with other tenement holders. The minerals industry downturn from 1999 to 2002 enabled Heron to secure regional scale holdings at negligible cost. A significant number of the tenements are held under application, awaiting grant following the native title process.

Although the final boundaries of the KNP will depend on Inco's nomination by March 2006 of tenements likely to contribute to the KNP, the designated area of interest from which Inco must make its choice contains less than 20% of Heron's total holdings by area. The total portfolio, including the area to be allotted to the KNP, covers nickel sulphide, gold, iron ore, copper and uranium prospects.

In addition to the KNP joint venture, Inco and Heron have agreed to form a separate joint venture to explore for nickel sulphides on Heron's tenements.

At Kalpini, laterite and sulphide nickel mineralisation occur in close association. Heron's Kalpini tenements surround the Emu Lake and Acra prospects of Jubilee Mines led joint ventures, where basal contact massive sulphides have been discovered. Heron found and sampled a gossan coincident with a magnetic anomaly north of Jubilee's Emu Lake prospect in 2004. Elevated nickel, copper and PGE values confirmed the prospectivity for nickel sulphides. Plans for EM surveys over up to 12 nickel sulphide targets in the broader Kalpini district were put on hold pending negotiations with Inco in 2005.

A second region of interest for nickel sulphides exploration is Heron's Transfind-Cowarna Downs block, south of the Silver Swan and Acra nickel sulphide belts.

The terms and scope of the nickel sulphide exploration joint venture between Inco and Heron are yet to be finalised. The announced intent is for Inco to fund all exploration with minimum Department of Industry and Resources expenditure commitments, and that any development will be owned 60% by Inco and 40% by Heron upon Decision-to-Mine.

In October 2005 Heron announced the discovery of gossanous material within ultramafic sequences at Ghost Rocks. Samples taken from malachite rich stringers over a 400 metre strike length assayed up to 6.5% copper with elevated nickel, platinum and palladium. A ground electromagnetic survey of the Ghost Rocks sulphide prospect will be completed in 2006 in preparation for drilling.

To allow a nickel laterite focus and help finance exploration and development of project areas outside of the core nickel laterite holdings, as they take shape and progress through to grant, Heron has floated separate companies and distributed the vendor shares to Heron shareholders. Gold and nickel sulphide prospects were transferred to Avoca Resources (ASX code AVO) and Pioneer Nickel (PIO) in 2002 and 2003. In each case the shares that Heron received as consideration for the prospects were distributed pro rata to Heron shareholders. The strategy has delivered effective dividends to Heron shareholders of \$16 million (at February 2006 share prices), as well as provided for external project finance and management. Heron also received 6 million options in Avoca which it sold, and still holds 6 million options in Pioneer.

In February 2006 Heron had three subsidiaries at various stages of preparedness for initial public offers. Ochre Resources, comprising a portfolio of iron ore projects, is the most advanced of the three. Regent Resources was established to hold Heron's gold and copper assets in the Eastern Goldfields, post the KNP and nickel sulphide joint venture carve out. Balladonia Energy has pegged oil shale, mineral sands and uranium prospects.

Heron employs seven experienced geoscientists based in Kalgoorlie. Four work on new project generation and three are seconded to Inco for the KNP laterite work. After ten continuous years of operating out of Kalgoorlie, Heron's knowledge of the Eastern Goldfields delivers a competitive edge in tenement acquisition and exploration.

DISCLAIMER

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John Macdonald declares that at the date of this document he has no relevant interest in the securities described herein. John Macdonald was retained by Heron Resources to research and write this report, and was paid on normal commercial terms. Heron and Inco provided information used in the report's preparation, but the conclusions drawn are the author's.

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