

# **Advancing the Woodlawn Project**

# **Key Points:**

- Preliminary Economic Assessment on track to release findings within the 1st Half 2015, with excellent progress being made across all technical disciplines
- Drilling results support new Mineral Resources with further discovery potential
- Updated Mineral Resource model being prepared in accordance with JORC and CIM standards
- Metallurgical testwork on underground and blended underground/tailings samples is demonstrating improvements in metal recoveries compared to historical production
- Mine planning and rock mechanics work have identified mining methods adapted to localised conditions
- Zinc market fundamentals remain strong supply deficit underpinning price escalation

Heron Resources Limited ("Heron" or the "Company") is pleased to provide an update on the progress being made with the Woodlawn Underground Project Preliminary Economic Assessment ("PEA" - refer to page 8 for definition). This PEA or detailed scoping study commenced during 3rd Quarter 2014 and, once completed, will represent the first complete study since mine closure in 1998 targeting the economics of re-establishing underground operations at Woodlawn. The Company is very pleased with progress to date and acknowledges the effort being made by Heron employees, consultants and contractors assisting in the compilation of this important study.

The PEA remains on track and the Company is targeting to release its findings within the first-half of 2015.

#### **PEA Objectives**

As noted above, the principle objective of the PEA is to demonstrate the viability of recommencing operations at Woodlawn. Whilst this study has a focus on the high grade underground mineralisation, the development plan for the Woodlawn Project will involve the combined development of underground mining and the tailings retreatment project at the Woodlawn site. The metallurgical testwork currently ongoing reflects this approach.

The tailings retreatment project has previously been studied to a higher level of detail (Feasibility Study and Front End Engineering Design Study) than the underground project. The PEA thus forms the first step in raising the level of review on the underground project to allow for an integrated study to be completed.

## **Drilling Program**

The current (Phase 1) drilling program has been designed to provide the inputs for a revised Mineral Resource estimate, a key component of the PEA study. Approximately 1,150m of RC drilling has been completed. This tested a number of the shallow up-dip positions of known lenses, after which the program moved to predominantly diamond drilling. Approximately 6,300m of diamond core drilling has now been completed in 16 holes.

The drilling program to date has returned 20 massive sulphide intercepts which represents an outstanding 'success' hit rate with results that have included high grade intercepts such as WNDD0007 (12.3m at 20.0% Zn, 2.1% Cu, 6.1% Pb, 0.8g/t Au and 53g/t Ag from 414m). In addition, during the last two years, two new lenses have been identified, with the potential for a third being investigated. These results demonstrate the very real potential to continue to make new discoveries within the Woodlawn system.

The focus of the diamond drilling has primarily been on Kate Lens where seven of the nine holes drilled to-date intersected massive sulphide mineralisation (see Figures 1, 2 & 3 below). Overall, the boundaries currently interpreted from drilling the Kate Lens have met expectations and are expected to provide a significant addition to the overall Mineral Resource tonnage. Kate Lens is viewed as a likely source for early, high-grade, tonnage for the planned underground operation. Importantly, the lens still remains open in a number of directions.

Lenses within the Woodlawn system have a tendency to pinch and swell along-strike and down-plunge, and can appear in a slightly different plane in either orientation. This characteristic provides for a number of additional targets that are still open for testing in Kate and other lenses.

Other areas tested in the current program include the up-dip positions of the A, E, G and I lenses. Significant mineralisation was recently intercepted in the E and G lenses that are expected to add shallow, high-grade tonnages. Modelling of the DHEM data from two holes into the I Lens up-dip position indicates that mineralisation occurs nearby and that a modest zone of mineralisation is likely to lie between the two holes.

As this initial phase of drilling nears completion, a number of "step-out" targets are being drilled which include the new Lisa Lens and testing a target to the south of the previous mining operation. At this stage, the results from these holes will not be included in the revised Mineral Resource estimate, however it is expected these results may demonstrate further potential upside to the Woodlawn mineral inventory.

#### **DHEM Surveys**

The majority of the holes drilled in the current program have been surveyed with DHEM probes which provide an indication of the potential occurrence of conductive massive sulphides adjacent to the drill hole ('off-hole'). Recent technological progress has provided a marked improvement in the measured response to sphalerite (zinc sulphide mineral), which has historically been a limitation with DHEM techniques.

During the Phase 1 drill program, the recorded and modelled response from the DHEM surveys has, in many cases, successfully guided follow-up drilling, and continues to be an important component of drill-targeting. As an example, the massive sulphide intercepts in drill hole WNDD0012 (4.75m of massive sulphides, assays pending), WNDD0013 (6.0m of massive sulphides, assays pending) and WNDD0014 (2.0m of massive sulphides, assays pending) were the result of off-hole conductors modelled from WNRC0010. Similarly, the Kate Lens conductors modelled in WNDD0002 and WNDD0003 provided an excellent platform for targeting the further holes into the Kate Lens.

Two conductors have now also been modelled from drill hole WNDD0009, providing down-plunge indicators for the G Lens, and indicating the Kate Lens is open in the up-dip position. These are robust targets for future drilling. Given this success, DHEM will continue to be a key contributor to the future exploration programs at Woodlawn.

#### **Data Management**

As part of the PEA, Heron has adopted a rigorous data management system to ensure the reliability of the data being used both for the PEA and future requirements for the project feasibility study. All recent and historic data has been entered into an industry standard database platform, and industry standard QAQC procedures are being followed. This provides a solid foundation for the Mineral Resource estimation, and is designed to comply with future independent audits.

#### **Mineral Resource Estimation**

Heron's preparatory work on the Mineral Resource estimation has focused on developing a better understanding of the geology and ore controls of the deposit through systematically digitising the extensive historic underground geological maps, and generating a 3D model of the geology and structures. This rigorous approach has led to an improved understanding of certain geological structures which focus, or constrain, the mineralization within the mine sequence. This analysis is



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providing excellent insight into the prediction of potential new mineralised locations and lenses (eg, Lisa Lens) and identifying the key plunge directions for other lenses (eg, the down-dip projection of G Lens).

The revised Mineral Resource estimate is progressing well and will provide the PEA with a solid foundation from which to determine other technical input parameters. While it is expected that part of the current Mineral Resource will be decreased due to the more rigorous overlay of the revised mining engineering parameters, this will, in-part, be offset by gains made in new areas from the Phase 1 drilling, such as the Kate and I Lenses, and a number of the other lenses. In addition, the overall technical quality of the Mineral Resource estimation will be improved. The establishment of the PEA mining inventory is expected to be established from both within the bounds of the existing Mineral Resource and from the additions generated through the current Phase 1 drilling program.

Figure 1: Plan overview of the Woodlawn Lenses showing pit and existing underground decline.

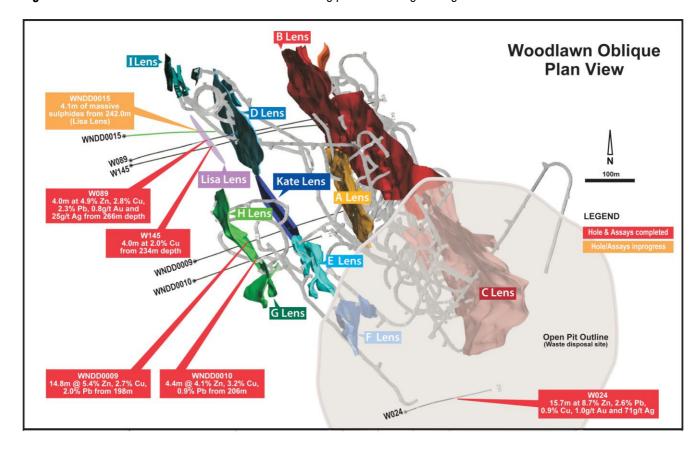




Figure 2 (top): Cross section through the Woodlawn underground lenses looking north.

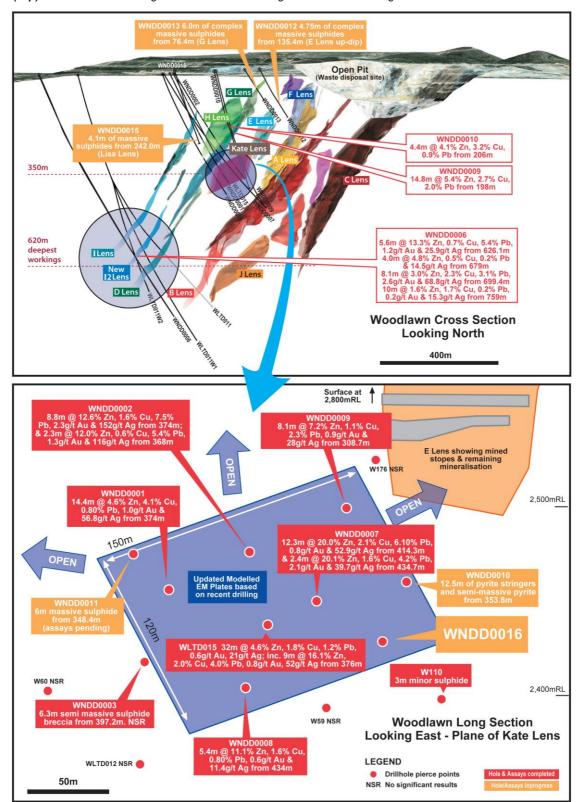


Figure 3 (bottom): Long-section looking east for the Kate Lens showing recent drilling and modelled DHEM plate.



## **Metallurgical Testwork**

Testwork is ongoing at Australian Minmet Metallurgical Laboratories ("AMML") on both fresh ore from the current Phase 1 drilling and on a 50:50 blend combination of drill core and tailings from Tailings Dam South. This work demonstrates that readily saleable copper, lead and zinc concentrates can be produced at high metal recoveries in a conventional sequential flotation circuit.

By applying improvements to process technologies, the Company has achieved excellent results from floating the combined underground mineralisation and former tailings, even exceeding the historical recoveries achieved during the original flotation of fresh Woodlawn underground ore alone. These excellent results bode well for the PEA outcome and confirm the viability of the planned co-treatment of the underground and tailings mineralisation through the same process plant.

# **Process and Plant Engineering**

GR Engineering Services is undertaking the process and plant engineering work which builds upon their 2012 Front End Engineering Design ("FEED") Study for the tailings retreatment plant, as well as taking into account the metallurgical test results for the underground and underground/tailings samples. The work aims to simplify the earlier flowsheet, and allows for increasing concentrate production by adding components required for processing the high-grade material from underground.

A revised flowsheet taking into account the improved process technologies has now been approved, and the engineering study work is proceeding on a plant design capable of processing variable blends of underground ore and tailings at a total feed rate of 1.5 million tonnes per annum.

#### **Rock Mechanics / Geotechnical Engineering**

Beck Engineering, an Australian east coast based specialist consultancy, has been engaged to assist with the rock mechanics input to the proposed underground operation. As a component of their work, the extensive historical records have been reviewed to better understand the ground conditions previously encountered, and past ground control practices deployed. In addition to this historical knowledge base, inspection and geotechnical logging of Kate Lens diamond drill core has led Beck to note that for this exciting new lens, the "hanging wall appears to be more competent than in the major lenses". This increased competency, along with the use of competent backfill, are important input parameters for the selection of an appropriate mining method that provides for maximum recovery and high productivity.

The new operation contemplated by the PEA has presented the Company with the opportunity to consider the implementation of a number of changes that will greatly improve the future management of the ground conditions. These include:

- Full time geotechnical resources on site to provide day-to-day technical support to mine operations;
- Whole of mine environment structural modelling to improve the predictive capacity for mine planning;
- Adoption of alternative extraction techniques that will minimise the creation of isolated sill pillars (areas of ore loss, which was the case with the previously employed overhand cut-and-fill mining method); and critically
- Implementation of cemented paste fill as a competent support medium that will enable significantly higher resource recovery whilst providing local and regional ground support to the mine excavations.



## **Proposed Boxcut, Portal & Decline**

A component of the current drilling program includes the drilling of specific geotechnical holes along the proposed decline route. The first geotechnical drill hole encountered low-competency black shale and mudstone units, which led Beck Engineering to recommend a revised decline route and a redesigned geotechnical drill program. Three geotechnical holes have now been completed with adequate ground conditions encountered in these holes at the designed decline depths.

#### **Mining Studies and Costs**

SRK and Beck Engineering, with input from Heron (including past Woodlawn employees), have been working on examining a number of different mining methods that could be applied to both existing resources in and around the former workings, as well as the new resource areas defined by the recent drilling programs. Future mining at Woodlawn will utilise several different mining techniques determined by localised factors, such as mineralised width, length and height, proximity to other workings, new resource areas, and assessment of the likely ground conditions. Due to the high-grade nature of the mineralisation, a target for the mine planning work is to maximise metal recovery. The application of competent cement paste fill will be integral to achieving this. SRK has estimated a set of preliminary production rates and costs for these mining methods that will be incorporated into the proposed mining inventory, production schedule and financial assessment of the PEA.

#### **Backfill Studies**

Outotec has commenced paste fill and rheology work on a 134kg large sample collected from the South Tailings Dam and ground to 30 microns at AMML's laboratory in Gosford. Initial testwork indicates that approximately 48% of the material will be of a size suitable for paste fill. This is a very positive development, and rheology test work on the sample is due to be conducted shortly.

Following the completion of flotation test work by AMML on the core samples from underground, the resulting tailings will be forwarded to Outotec for further paste fill and rheology test work.

# Project Development - Permitting / Licensing

Whilst permitting and licensing aspects do not influence the completion of the PEA, they are being advanced in parallel with the study, to prepare the site for commencement of on-ground development activity, aiming to avoid the extended delays often encountered after decisions to proceed are taken.

The Woodlawn Project received NSW State Government approval for development on 4 July 2013. As a condition of that approval, a number of aspect management plans are required prior to the commencement of construction. The management plans required by the Department of Planning are in hand and final drafts will be completed by the end of January 2015 for distribution to the designated government agencies. It is anticipated these plans will be lodged with the Department before the end of March 2015. Heron has received notification from the Division of Resources & Energy (DRE) that SML20, the mining lease that covers the Woodlawn site, is to be renewed for a further 15 year period. Final renewal documents are expected from the DRE within the next few weeks.



#### Commodity Market, Prices and Exchange Rate

A number of key commercial aspects will influence the financial performance of the Woodlawn Underground Project with a particular focus on the revenue received from the commodities produced. Zinc is the most important product for the Woodlawn Project and the issues of commodity market supply and demand balance, commodity pricing trends, and the impact of exchange rate movements are all trending towards an improvement in the Woodlawn project economics.

Zinc market supply and demand balance – The latest reported statistics from the International Lead Zinc Study Group indicate for the period of January 2014 to November 2014, zinc metal production was in a supply deficit in the order of 255kt. This follows a reported deficit of 97kt for the full 2013 year.

As a separate measure of the market supply/demand fundamentals, the reported stock levels of zinc metal at both the London Metal Exchange (LME) and the Shanghai Metal Exchange (SHFE) dropped significantly in 2014 with LME stocks dropping by 242kt and SHFE by 155kt. Combined, these internationally recognised exchanges dropped inventories by approximately 397kt. Year to date in 2015, these reported stocks have dropped a further 55kt.

The lack of new supply additions along with significant mine closures has led forecasters to point to a market that will be in a long term supply deficit.

Zinc price – The zinc price for 2013 averaged US\$1909/t or US\$0.87/lb, for 2014, and with improving market fundamentals, this averaged US\$2164/t or US\$0.98/lb. The tightening of the zinc market, as projected by market forecasters, continues to provide a basis for medium term and long term commodity price strength. Macquarie Research have recently (January 2015) revised their long term zinc prices up by 39% to US\$2.600/t (\$2014).

Exchange rate impacts – The project cost base is primarily exposed to the Australian dollar and the commodity/product pricing to the US dollar. The Australian dollar to US dollar exchange rate becomes an important issue for the project financial margins. The AUD:USD exchange rate at the end of 2013 was 0.893 and at the end of 2014 it was 0.820. This provides improved AUD revenue for a consistent USD commodity price. Forecasters are generally projecting a stable to further weakening in the Australian dollar against the US dollar over the medium term which may further improve the project economics.

#### **Woodlawn Project Development Plan**

Following completion of the PEA, it is anticipated that a Feasibility Study (FS) will be undertaken. The FS is expected to take up to 12 months, encompassing the combined development of both the underground and tailings projects. Following a positive outcome from the FS and project funding, first production of zinc concentrates at Woodlawn is estimated to be early in 2018.

#### **About Heron Resources Limited:**

Heron is engaged in the exploration and development of base and precious metal deposits in Australia. Heron's projects include the high grade Woodlawn Zinc-Copper Project located 250km southwest of Sydney, New South Wales, and the Kalgoorlie Nickel Project located north of Kalgoorlie, Western Australia. In addition the Company holds a number of other high quality exploration properties located in the Lachlan Fold Belt, New South Wales.

# For further information, please visit www.heronresources.com.au or contact: Australia:

Mr Wayne Taylor, Managing Director and Chief Executive Officer:

Tel: +61 8 9215 4444

Email: heron@heronresources.com.au

#### Canada:

Tel: +1 905 727 8688 (Toronto)



#### Compliance Statement (JORC 2012 and NI43-101)

The technical information in this news release relating to the exploration results at the Woodlawn Project is based on information compiled by Mr David von Perger, who is a Member of the Australian Institute of Mining and Metallurgy (Chartered Professional – Geology). Mr von Perger is a full time employee of Heron Resources Limited and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results and "qualified person" as this term is defined in Canadian National Instrument 43-101 ("NI 43-101"). Mr von Perger has reviewed this press release and consents to the inclusion in this news release of the information in the form and context in which it appears.

### Preliminary Economic Assessment (PEA)

The Canadian Securities Administrators ("CSA") published Staff Notice 43-307 Mining Technical Reports – Preliminary Economic Assessments, clarifying the definition of "preliminary economic assessment" ("PEA") in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101"). NI 43-101 defines a PEA as "a study, other than a pre-feasibility study or feasibility study, which includes an economic analysis of the potential viability of mineral resources". The terms pre-feasibility study ("PFS") and feasibility study ("FS") have the meanings ascribed by the CIM Definition Standards for Mineral Resources and Mineral Reserves.

#### CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This news release contains forward-looking statements and forward-looking information within the meaning of applicable Canadian securities laws, which are based on expectations, estimates and projections as of the date of this news release. This forward-looking information includes, or may be based upon, without limitation, estimates, forecasts and statements as to management's expectations with respect to, among other things, the timing and amount of funding required to execute the Company's exploration, development and business plans, capital and exploration expenditures, the effect on the Company of any changes to existing legislation or policy, government regulation of mining operations, the length of time required to obtain permits, certifications and approvals, the success of exploration, development and mining activities, the geology of the Company's properties, environmental risks, the availability of labour, the focus of the Company in the future, demand and market outlook for precious metals and the prices thereof, progress in development of mineral properties, the Company's ability to raise funding privately or on a public market in the future, the Company's future growth, results of operations, performance, and business prospects and opportunities. Wherever possible, words such as "anticipate", "believe", "expect", "intend", "may" and similar expressions have been used to identify such forward-looking information. Forward-looking information is based on the opinions and estimates of management at the date the information is given, and on information available to management at such time. Forward-looking information involves significant risks, uncertainties, assumptions and other factors that could cause actual results, performance or achievements to differ materially from the results discussed or implied in the forward-looking information. These factors, including, but not limited to, fluctuations in currency markets, fluctuations in commodity prices, the ability of the Company to access sufficient capital on favourable terms or at all, changes in national and local government legislation, taxation, controls, regulations, political or economic developments in Canada, Australia or other countries in which the Company does business or may carry on business in the future, operational or technical difficulties in connection with exploration or development activities, employee relations, the speculative nature of mineral exploration and development, obtaining necessary licenses and permits, diminishing quantities and grades of mineral reserves, contests over title to properties, especially title to undeveloped properties, the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drill results and other geological data, environmental hazards, industrial accidents, unusual or unexpected formations, pressures, cave-ins and flooding, limitations of insurance coverage and the possibility of project cost overruns or unanticipated costs and expenses, and should be considered carefully. Many of these uncertainties and contingencies can affect the Company's actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, the Company. Prospective investors should not place undue reliance on any forward-looking information. Although the forward-looking information contained in this news release is based upon what management believes, or believed at the time, to be reasonable assumptions, the Company cannot assure prospective purchasers that actual results will be consistent with such forward-looking information, as there may be other factors that cause results not to be as anticipated, estimated or intended, and neither the Company nor any other person assumes responsibility for the accuracy and completeness of any such forward-looking information. The Company does not undertake, and assumes no obligation, to update or revise any such forward-looking statements or forward-looking information contained herein to reflect circumstances, new events or except as may be required law. No stock exchange, regulation services provider, securities commission or other regulatory authority has approved or disapproved the information contained in this news release.