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01 February 2000

Dear Shareholder,

Enclosed please find our December 1999 Quarterly Report.

The Quarter has been one of great progress. Heron is set to make the transition to nickel production later this year, with planned processing of ore from its Goongarrie lateritic nickel deposit.

Under the Strategic Alliance Agreement with Centaur Mining & Exploration Ltd and subject to meeting certain metallurgical specifications, Heron has an entitlement to toll mill parcels of ore through the Centaur-owned Cawse Stage I plant.

Notices of Intent to Mine are in preparation with a view to delivering ore to Cawse Stage 1 in the second half of 2000, providing interim cash flow over the next 2-3 years and also generating key metallurgical data.

We are also pleased to announce a very successful December Quarter during which we further increased the resource base at Goongarrie, with exploration grades which continue to be the highest documented in the Eastern Goldfields.

Following 10,600 metres of in-fill drilling at Goongarrie, the Company increased the total Inferred Mineral Resource above a 0.75% nickel cut-off to **182.5 million tonne at 1.07% nickel and 0.09% cobalt.**

Results from the program included **16m at 1.58% Ni and 0.32% Co, 21m at 1.39% Ni and 0.23% Co, 24m at 1.32% Ni and 0.15% Co, 36m at 1.38% Ni and 0.06% Co and 45m at 1.06% Ni and 0.08% Co.**

Goongarrie ore types are dominantly high grade limonite and medium grade screenable siliceous ores, with optimum metallurgical performance expected. Test work to date indicates an overall 30% increase in grade through screening, with a 40% oversize reject. Magnesia levels in the ore are below 1%, indicating a very low cost ore in terms of acid consumption during processing.

During the Quarter, Centaur and Anaconda Nickel Ltd announced a deal on the Cawse Stage II Feasibility Study. Heron's toll milling entitlements to Cawse Stage II pursuant to its Centaur Strategic Alliance remain unchanged. Subject to a positive Feasibility Study, Centaur-Anaconda will allocate Heron a minimum entitlement of 20% of the Cawse Stage II ore throughput - expected to be at least 1 million tonnes per annum. Heron will not contribute to the financing of Cawse Stage II but will pay a per tonnage capital recoupment fee.

Heron production from Cawse Stage II over a 30 year life is expected to be at least 50 million tonne, sourced from the high-grade resource, which at a 1.0% nickel cut-off is **83.3 million tonne at 1.32% nickel and 0.12% cobalt.**

If you wish to discuss Heron's progress, please telephone me on (08) 9091 9253.

All the best for 2000,

Regards,

Encl. Refer December 1999 Quarterly Report for technical information lodged with ASX.



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31 January 2000

The Company Announcement Officer  
Australian Stock Exchange Limited  
Post Office Box H224 - Australia Square  
SYDNEY NSW 2000

Dear Sir / Madam

**RE: HERON RESOURCES NL, QUARTERLY REPORT, PERIOD ENDING 31 DECEMBER 1999**

**1. SUMMARY**

- As at 31 December 1999, the **Inferred Mineral Resource** above a 0.75% Ni cut-off for the Goongarrie-Ghost Rocks-Kalpini and satellite nickel projects was **182.5 million tonne at 1.07% Ni and 0.09% Co**. The resource has increased 15% during the December Quarter, which has resulted from continuing discoveries in the Goongarrie project area, where 10,600m of Reverse Circulation drilling in 196 holes was completed.
- The **Inferred Mineral Resource** above a 0.50% Ni cut-off for the Goongarrie-Ghost Rocks-Kalpini and satellite nickel projects is now **392.6 million tonne at 0.82% Ni and 0.06% Co**:
  - Contained metal is 3.22 million tonne nickel and 0.24 million tonne cobalt.
  - Screening testwork at -0.5mm has demonstrated a potential 30% Ni-Co grade increase, with a 40% oversize reject. This indicates the potential to increase nickel grades from 0.82% to 1.07% Ni.
- **Strategic Alliance with Centaur Mining & Exploration Limited**

As previously reported on 17 September 1999, a formal Strategic Alliance Agreement was executed between Heron Resources NL and Centaur Mining & Exploration Ltd. Subsequently on 18 November 1999, Centaur announced that it had entered into an agreement with Anaconda Nickel Ltd whereby Anaconda may earn up to a 60% interest in an expanded Cawse Stage II nickel laterite processing plant by completing a Feasibility Study ("FS") that indicates nickel production exceeding 50,000tpa. The FS completion date is June 2001. Subject to Anaconda earning its equity, the implications to Heron are as follows:

  - Heron still owns its Strategic Alliance Tenements 100%, and now commits ore from the Tenements to a joint Anaconda-Centaur Cawse Stage II plant. Heron remains solely responsible for all mining, ore haulage and product sale in respect of ore and metal from the Tenements.
  - Anaconda-Centaur will 100% own and operate Cawse Stage II, but subject to a positive FS, have allocated Heron a minimum entitlement to 20% of the ore throughput, expected to be at least 1,000,000tpa. Heron will not contribute towards the financing of Cawse Stage II, but will pay Anaconda-Centaur a per tonnage capital recoupment fee as part of the Toll Milling Agreement.
  - Subject to meeting certain metallurgical specifications, Heron has an entitlement to toll mill parcels of ore through the current 100% Centaur-owned Cawse Stage I plant, for generating metallurgical data and interim cash flow over the next 2-3 years prior to the commissioning of Cawse Stage II. Commencement of Stage I production from Goongarrie is Heron's development priority.
- Subject to Centaur's pre-emptive rights, Heron may still proceed to a Stand-alone operation on any ore not ultimately committed to the joint Anaconda-Centaur Cawse Stage II plant. At the current time, a minimum of some 50mt of Heron's 180mt mineral resource base could be expected to be committed to Cawse Stage II.
- Heron's nickel laterite exploration grades are the highest documented in the Eastern Goldfields. The

**Inferred Mineral Resource** at a 1.0% Ni cut-off is **83.3 million tonne at 1.32% Ni and 0.12% Co**. Most significantly in terms of metallurgy, ore types are dominantly high grade limonite and screenable siliceous ore.

- Resource definition drilling is commencing February and Notices of Intent to Mine are in preparation with the view to delivering ore to Cawse Stage I during the current year.
- The exploration focus for the December Quarter has been the **delineation of high grade nickel-cobalt mineralisation at the Goongarrie Project**. Significant drill results at a 0.75% Ni cut-off include:
  - GSRC076, 21m at 1.39% Ni and 0.23% Co from 14m
  - GSRC090, 15m at 1.03% Ni and 0.08% Co from 20m
  - GSRC109, 24m at 1.01% Ni and 0.05% Co from 29m
  - GSRC149, 11m at 1.18% Ni and 0.22% Co from 44m
  - GSRC160, 24m at 1.32% Ni and 0.15% Co from 21m
  - GSRC165, 36m at 1.38% Ni and 0.06% Co from 33m
  - GSRC167, 18m at 1.38% Ni and 0.04% Co from 22m
  - GSRC170, 14m at 1.13% Ni and 0.07% Co from 49m
  - GSRC175, 12m at 1.15% Ni and 0.17% Co from 28m
  - GSRC197, 16m at 1.58% Ni and 0.32% Co from 34m
  - GSRC198, 45m at 1.06% Ni and 0.08% Co from 19m
  - GSRC200, 20m at 1.11% Ni and 0.18% Co from 14m
  - GSRC202, 16m at 1.15% Ni and 0.12% Co from 24m
  - GSRC203, 12m at 1.07% Ni and 0.04% Co from 19m
  - GSRC204, 16m at 1.29% Ni and 0.45% Co from 24m
  - GSRC213, 10m at 1.53% Ni and 0.21% Co from 10m
  - GSRC220, 14m at 1.02% Ni and 0.27% Co from 23m
  - GSRC241, 11m at 1.16% Ni and 0.12% Co from 19m
  - GWRC040, 10m at 1.06% Ni and 0.09% Co from 6m
  - GWRC064, 7m at 2.01% Ni and 0.16% Co from 6m, and 7m at 1.01% Ni and 0.02% Co from 22m

**HERON RESOURCES NL  
INCREASE IN NICKEL LATERITE  
RESOURCE BASE**

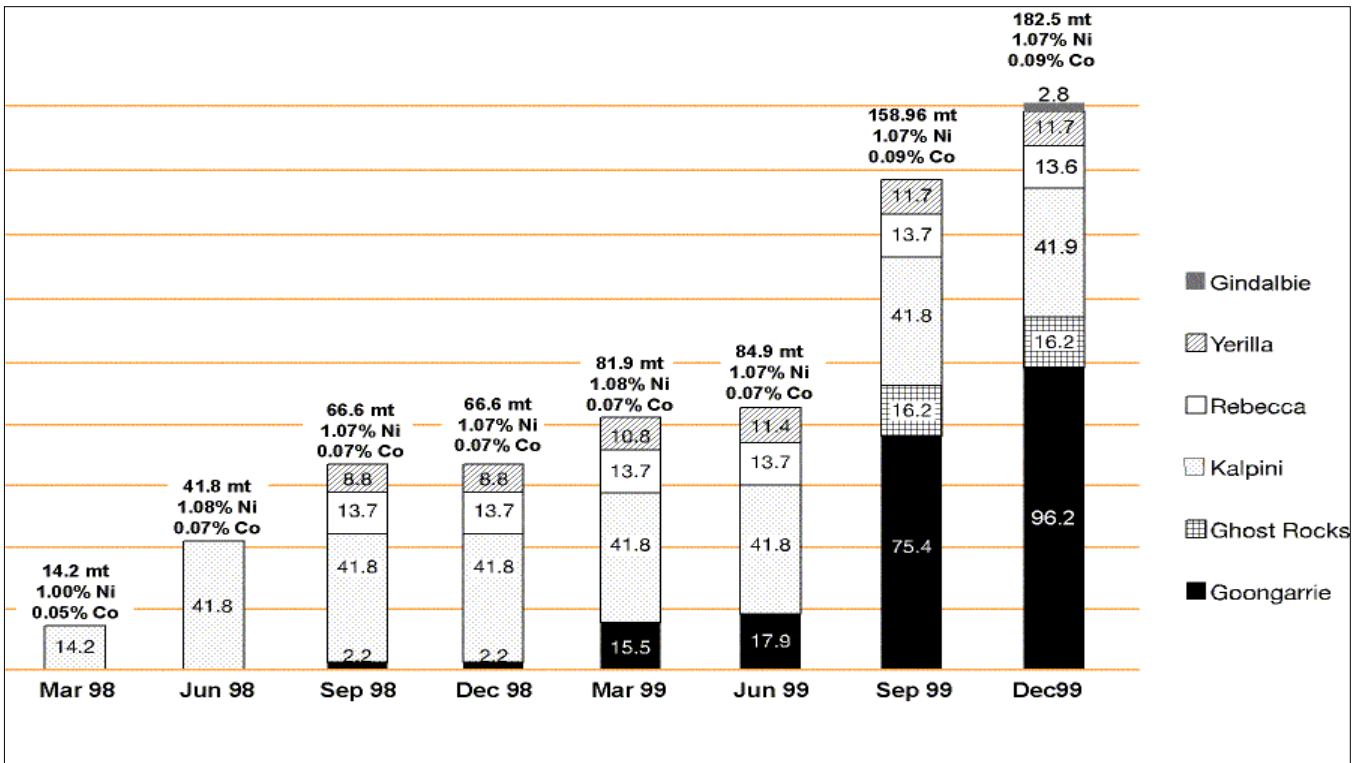


Figure 1. Increase in Nickel Laterite Resource Base

## RESOURCE STATEMENT

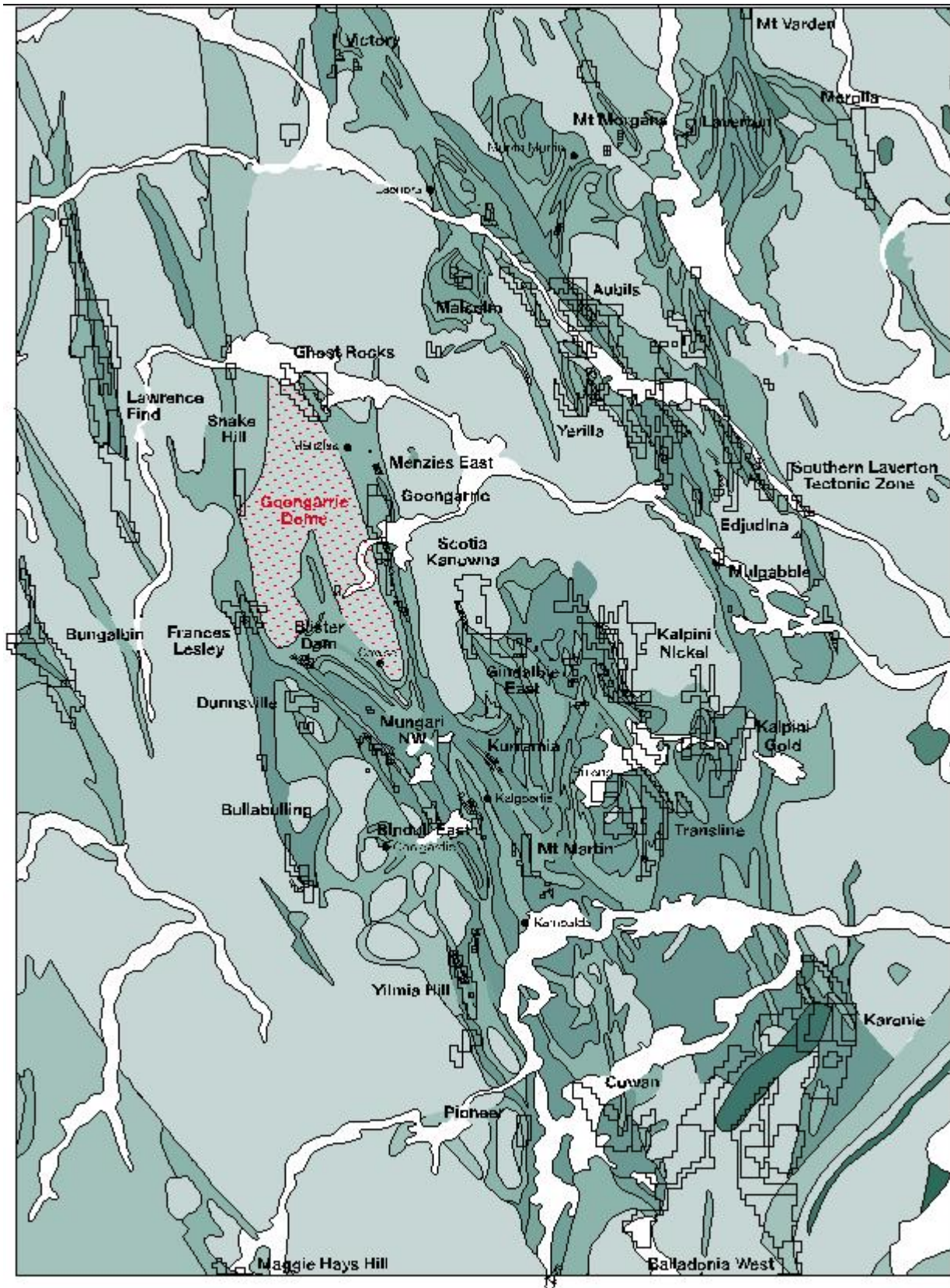
On the basis of Heron 400x40-80m reconnaissance drilling, outcrop exposures, old drill-hole sampling, and magnetic interpretation, the total Heron Inferred Mineral Resource at a 0.75% Ni cut-off is:

<b>Table 1</b>							
<b>HERON RESOURCES NL NICKEL PROJECTS</b>							
<b>INFERRED MINERAL RESOURCE INVENTORY, 0.75% NI CUT-OFF</b>							
<b>Project</b>	<b>Pit</b>	<b>Strike km</b>	<b>Width km</b>	<b>Tonne Million</b>	<b>Ni %</b>	<b>Co %</b>	<b>Ni4Co %</b>
Goongarrie Hill	GN1	5.80	0.20	16.0	1.09	0.06	1.31
Goongarrie South	GN2	7.00	0.30	69.9	1.09	0.11	1.52
Scotia Dam	GN3	2.40	0.30	10.3	1.10	0.11	1.54
<b>Total Goongarrie</b>				<b>96.2</b>	<b>1.09</b>	<b>0.10</b>	<b>1.50</b>
Ghost Rocks	GR1	3.00	0.08	5.2	0.91	0.12	1.39
Ghost Rocks	GR2	4.50	1.00	11.1	1.02	0.06	1.26
<b>Total Ghost Rocks</b>				<b>16.2</b>	<b>0.98</b>	<b>0.08</b>	<b>1.30</b>
Acra North	KA1a	1.60	0.12	1.9	1.02	0.09	1.37
Acra North	KA1b	0.40	0.20	0.7	1.06	0.10	1.44
Acra North	KA1c	0.40	0.12	0.7	1.00	0.09	1.37
Acra North	KA1d	1.90	0.20	3.6	1.00	0.06	1.25
Acra North	KA2a	1.70	0.16	4.9	1.33	0.07	1.60
Acra North	KA2b	0.50	0.08	0.1	1.08	0.01	1.12
Acra North	KA2c	0.50	0.08	0.4	1.13	0.06	1.35
Wellington East	KA3	2.50	0.20	3.1	1.04	0.08	1.36
Wellington East	KA4	3.60	0.16	7.1	1.18	0.07	1.45
Wellington East	KA5	1.20	0.24	1.6	1.21	0.10	1.60
Wellington East	KA6a	1.00	0.16	2.6	1.04	0.10	1.43
Wellington East	KA6b	0.40	0.16	0.2	0.92	0.09	1.28
Wellington East	KA6c	3.00	0.20	6.5	1.04	0.06	1.28
Wellington East	KA8	2.30	0.30	4.9	0.97	0.09	1.31
Wellington Fold	KA9	1.10	0.20	2.1	0.88	0.07	1.14
Wellington North	KA10	0.80	0.20	1.5	1.04	0.06	1.27
<b>Total Kalpini</b>				<b>41.9</b>	<b>1.08</b>	<b>0.07</b>	<b>1.38</b>
<b>STRATEGIC ALLIANCE SUB-TOTAL</b>				<b>154.3</b>	<b>1.08</b>	<b>0.09</b>	<b>1.44</b>
Binti Binti	BB1	2.40	0.16	2.8	0.91	0.09	1.28
<b>Total Gindalbie East</b>				<b>2.8</b>	<b>0.91</b>	<b>0.09</b>	<b>1.28</b>
Lake Rebecca	LR1	2.20	0.30	11.6	1.15	0.08	1.46
Lake Rebecca	LR2	1.10	0.15	2.1	1.03	0.03	1.15
<b>Total Rebecca</b>				<b>13.6</b>	<b>1.13</b>	<b>0.07</b>	<b>1.42</b>
Boyce Creek	YE1	1.00	0.20	6.0	0.95	0.09	1.32
Lady Byron	YE2	0.60	0.20	2.8	1.06	0.05	1.26
Aubils	YE3	0.80	0.20	2.9	0.99	0.10	1.37
<b>Total Yerilla</b>				<b>11.7</b>	<b>0.99</b>	<b>0.08</b>	<b>1.32</b>
<b>HERON TOTAL</b>				<b>182.5</b>	<b>1.07</b>	<b>0.09</b>	<b>1.43</b>



The resource estimate uses intercepts above 0.75% Ni over a minimum 2 metre vertical thickness, with a maximum 2 metre of internal waste within the calculated intercept.

Figure 1  
Heron Resources NL Project Locations







## 2. EXPLORATION REVIEW

### 2.1 CAUSE STAGE II STRATEGIC ALLIANCE PROVINCE

Tenement acquisition continues. The Heron Goongarrie Hill South Prospect, a granted Mining Lease, has been added to the Strategic Alliance.

A Three Stage resource definition program involving 20,000m RC and 350m Diamond drilling has been planned to June 2000, to upgrade the status of existing resources to the Indicated Mineral Resource category, in particular within three high grade zones delineated at the Goongarrie South and Scotia Dam Prospects .

- **Stage 1 PQ Diamond Drilling**

To quantify the confidence level of the RC drill hole samples within the Goongarrie Project, Heron proposes to drill eight (8) PQ diamond drill holes within four selected high grade zones.

- **Stage 2 80x80m Reverse Circulation Drilling**

The main thrust will be the systematic RC drilling on an 80x80m drill pattern of three high grade zones delineated by the 400x80m drill program at Goongarrie South and Scotia Dam. Approximately 400 vertical RC drill holes for 18,000m is proposed.

The aim is to upgrade the status of existing resources, as the primary source of ore feed for 30 years to the Cause Stage II Screened Ore Circuit. Resource targeting will be aimed at achieving the following parameters.

Indicated Mineral Resource, minimum target	50 mt at 1.1% Ni (0.75% Ni cut-off)
Screen Upgrade Material (-0.5mm)	
% Mass Recovery	60%
% Ni and Co Upgrade	30%
Upgrade Ore	30 mt at 1.4% Ni
Minimum pit dimensions	800m x 160m
Maximum overburden thickness	20m
Minimum ore thickness	8m (0.75% Ni cut-off)

- **Stage 3 Lateral Continuity Study, 40x20m Reverse Circulation Drilling**

The main thrust will be the systematic RC drilling on a 40x20m drill pattern of two representative high-grade zones covering Goongarrie Hill siliceous ore and Goongarrie South limonite ore. This is to facilitate geo-statistical modeling.

#### 2.1.1 Goongarrie Nickel Project

Heron 100%. Centaur holds toll milling rights to process ore through Cause Stage II. Nickel (- gold).

Drilling was completed on high grade nickel-cobalt ore zones defined from the September 1999 800x80m reconnaissance drilling.

##### Goongarrie Hill Prospect

During the Quarter, 1,944m of drilling was completed. A total of 46 vertical Reverse Circulation drill holes at 400x80m centres was completed (GWRC023 to 068).

Mineralised zones at Goongarrie Hill tend to be lower grade siliceous ore occurring at shallow depths. Screen upgrades for nickel and cobalt are very good. At a -0.5mm screen size, there is a 45% coarse silica reject, increasing both nickel and cobalt grades by 44%, with 77% of metal retained.

Shallow high grade ore centred on GWRC068 (6m at 1.25% Ni) has been targeted for processing through Cause Stage I during 2000. The ore zone is on a granted Mining Lease. A Notice of Intent to Mine is in preparation, and an archaeological survey has been commissioned for February 2000.

Significant mineralised drill intersections returned during the Quarter are detailed in Table 2 following.

Table 2 GOONGARRIE HILL PROSPECT RCP Drilling Significant Intersections, 0.75% Ni Cut-off								
Hole Number	North m	East m	From m	To m	Thick m	Ni %	Co %	Ni4Co %
GWRC032	76000	1520	15	22	7	1.03	0.020	1.11
GWRC036	76400	1600	8	19	11	0.94	0.042	1.11
GWRC038	77200	1360	15	17	2	1.07	0.032	1.20
GWRC040	77200	1520	6	16	10	1.06	0.093	1.43
GWRC043	78000	1200	7	17	10	0.89	0.045	1.07
GWRC046	78000	1440	6	8	2	1.09	0.086	1.43
			14	16	2	1.27	0.023	1.36
GWRC047	78000	1520	7	9	2	0.96	0.019	1.03
			16	21	5	1.29	0.083	1.63
GWRC049	78400	1120	1	6	5	1.04	0.068	1.31
GWRC050	78400	1040	3	9	6	1.38	0.080	1.70
			16	19	3	1.17	0.028	1.28
			31	33	2	1.02	0.019	1.09
GWRC051	78400	960	14	17	3	0.84	0.128	1.35
			19	22	3	1.03	0.117	1.50
GWRC053	78800	1280	5	8	3	1.44	0.073	1.73
GWRC056	78800	1040	3	6	3	1.02	0.049	1.21
			12	20	8	1.32	0.047	1.51
			30	32	2	1.23	0.023	1.32
GWRC057	78800	960	8	14	6	1.02	0.060	1.26
GWRC061	78800	1360	13	21	8	1.10	0.093	1.47
GWRC062	78800	1440	0	14	14	0.91	0.051	1.11
GWRC063	79600	1280	1	10	9	0.87	0.045	1.05
			15	17	2	1.24	0.025	1.34
GWRC064	79600	1200	6	13	7	2.01	0.155	2.63
			22	29	7	1.01	0.021	1.09
GWRC068	76400	1440	11	17	6	1.25	0.018	1.33

A diamond drilling program has been designed for February 2000, to secure metallurgical samples and confirm the RC drill grades. Once metallurgical performance is confirmed, a detailed 40x20m RC drilling program will be completed for geostatistical audit of the mineralisation.

#### Goongarrie South and Scotia Dam Prospects

All Goongarrie South and Scotia Dam nickel-cobalt mineralisation has been converted into Mining Lease applications.

During the Quarter, 8,656m of drilling was completed over the complete tenement area. A total of 150 vertical Reverse Circulation drill holes at 400x80m centres was completed (GSRC103 to GSRC252 ). Drilling conditions have continued to be difficult, due to moist samples in mineralisation.

Drilling has consistently encountered siliceous and limonitic mineralisation overlying olivine adcumulate. The mineralisation has a very low MgO content (-1%), suggesting a very good autoclave performance can be expected. The “bonanza” grade material is invariably a limonite-rich ore style.

Distinct and continuous eastern, central and western zones of mineralisation have been defined within a wide olivine cumulate sequence. To date, no barren intrusives have been identified with the ore horizon, giving rise to the excellent ore continuity which is observed.

Of interest, gold mineralisation has been intersected in Heron’s nickel laterite drilling, with the main Au-As anomaly at a 100ppb Au threshold extending over a 2.2km strike length. Heron has completed a gold targeting plan, and Centaur are to evaluate their pre-emptive right in respect of non-nickel targets.

Significant mineralised drill intersections returned during the Quarter are detailed in Table 3 following.

**Table 3**  
**GOONGARRIE SOUTH PROSPECT**  
**RCP Drilling Significant Intersections, 0.75% Ni Cut-off**

Hole Number	North m	East m	From m	To m	Interval m	Ni %	Co %	Ni4Co %
GSRC065	64400	3920	12	17	5	0.94	0.142	1.50
GSRC070	59200	6160	6	11	5	0.93	0.079	1.24
GSRC074	58800	6000	24	30	6	0.98	0.035	1.12
GSRC076	58800	6160	14	35	21	1.39	0.226	2.29
GSRC077	58800	6240	11	19	8	1.03	0.088	1.38
GSRC082	58400	6320	23	27	4	0.98	0.187	1.72
GSRC083	58400	6400	24	29	5	0.90	0.129	1.42
GSRC089	56000	7280	10	17	7	1.10	0.083	1.43
GSRC090	56000	7360	20	35	15	1.03	0.082	1.36
GSRC095	58400	6000	14	30	16	0.93	0.070	1.21
GSRC100	72400	1840	19	23	4	1.08	0.148	1.67
GSRC106	72400	1920	17	37	20	0.94	0.066	1.20
GSRC109	73200	1440	29	53	24	1.01	0.049	1.20
GSRC110	73200	1360	22	27	5	1.28	0.127	1.79
GSRC125	72000	1680	41	49	8	1.04	0.048	1.23
GSRC146	72800	1120	19	24	5	0.89	0.268	1.96
GSRC149	72800	1680	44	55	11	1.18	0.223	2.07
GSRC150	72800	1760	45	54	9	1.44	0.113	1.89
GSRC153	73600	1200	30	36	6	1.10	0.021	1.18
GSRC160	71200	2400	9	17	8	1.12	0.051	1.32
			21	45	24	1.32	0.146	1.91
GSRC163	71200	2480	8	18	10	1.09	0.069	1.37
GSRC165	70400	2320	19	23	4	0.93	0.038	1.08
			33	69	36	1.38	0.060	1.17
GSRC167	70400	2480	22	40	18	1.38	0.038	1.53
GSRC169	70400	2640	30	39	9	1.05	0.070	1.33
GSRC170	70400	2720	49	63	14	1.13	0.071	1.42
GSRC175	69600	2240	28	40	12	1.15	0.173	1.84
GSRC176	69600	2320	48	56	8	1.48	0.054	1.69
GSRC183	69600	2880	18	30	12	0.90	0.064	1.15
GSRC191	68800	2560	26	34	8	1.49	0.338	2.84
GSRC192	68800	2640	18	26	8	1.30	0.150	1.89
GSRC194	68800	2800	53	64	11	0.91	0.033	1.04
GSRC196	68800	2960	36	41	5	1.17	0.494	3.14
GSRC197	68800	3040	34	50	16	1.58	0.317	2.84
			54	58	4	1.42	0.067	1.69
GSRC198	68800	3120	19	64	45	1.06	0.076	1.36
GSRC200	68400	3120	14	34	20	1.11	0.184	1.85
GSRC201	68400	3120	20	32	12	0.98	0.015	1.04
			40	48	8	1.09	0.053	1.30
GSRC202	68400	3280	24	40	16	1.15	0.119	1.62
GSRC203	68000	2720	19	31	12	1.07	0.042	1.24
GSRC204	68000	2800	24	40	16	1.29	0.469	3.16
GSRC212	68000	2640	26	39	13	0.94	0.065	1.20
GSRC213	68406	2800	10	20	10	1.53	0.206	2.35
GSRC220	65600	3680	23	37	14	1.02	0.267	2.09
GSRC224	64800	4000	8	16	8	1.41	0.104	1.82
GSRC226	64800	4160	11	19	8	0.97	0.017	1.04
GSRC232	64000	4240	12	14	2	1.66	0.280	2.78
GSRC238	64000	4080	26	38	12	0.98	0.049	1.17
GSRC239	67600	3200	14	18	4	1.17	0.112	1.62
GSRC240	67600	3280	17	23	6	1.17	0.060	1.41
GSRC241	67600	3360	19	30	11	1.16	0.118	1.63
GSRC243	67600	3040	33	46	13	0.89	0.067	1.16
GSRC251	65600	3600	35	53	18	0.99	0.036	1.13



Due to mineralised zones at Goongarrie South being high grade limonite ore, the screen upgrades predictably are less than those seen for the Goongarrie Hill siliceous mineralisation. At a -0.5mm screen size, there is a 50% coarse reject, increasing nickel and cobalt grades by 26% and 29% respectively, with 60% of metal retained. Based on these data, it is unlikely that high grade limonite-rich ore will require screening, so that future grade control in mining will require separate mark-out of siliceous and limonite ore.

A nickel sulphide target has been delineated at Scotia Dam. The anomalous interval is 18m at 2,466ppm Ni and 347ppm Cu at the basal contact of the olivine cumulate komatiite sequence. Peak copper is 0.14%.

### **2.1.2 Ghost Rocks Nickel Project**

Heron 100%. Centaur holds toll milling rights to process ore through Cawse Stage II. Nickel.

During the Quarter, a screen upgrade program was completed. Compared to Goongarrie, ore zones tend to be lower grade material occurring at shallow depths. Screen upgrades for nickel and cobalt is reasonable. At a -0.5mm screen size, there is a 27% coarse silica reject, increasing both nickel and cobalt grades by 12%, with 80% of metal retained. There are extensive areas of siliceous mineralisation uniformly assaying 0.7-0.9% Ni. This ore style upgrades 20-60% through screening. Again, a requirement for selective mining is indicated.

In-fill drilling on a 400x80m pattern is planned, to upgrade the resource status.

### **2.1.3 Kalpini Nickel Project**

Heron 100%. Centaur holds toll milling rights to process ore through Cawse Stage II. Nickel (- gold)

A screen upgrade sampling program, comprising 500 samples from Zones 1 to 8, has commenced to determine the upgrade potential for the various Kalpini ore types. These qualitative data will be controlled against the quantitative screening data generated through the 1999 Oretest metallurgical study.

A draft NOI was commenced to facilitate mining from Zones 3, 4 and 5. It is proposed that selected high grade zones will be drilled out on an 80x40m pattern to confirm ore zone continuity.

A geological evaluation of basal komatiite nickel-copper sulphide targets generated from Heron's RC drilling was completed. Previous soil geochemistry within the target area returned coincident anomalies of 114-602ppm Cu and 788-1,941ppm Ni, notably at the Zone 4 Western Ultramafic. A soil anomaly of 50-230ppb Pd occurs at Zone 6, again indicating a potentially favourable nickel sulphide setting.

## **2.2 SCOTIA KANOWNA PROVINCE**

### **2.2.1 Scotia Kanowna Project**

Heron 100%.  
Nickel (- gold).

#### **Gindalbie Prospect**

A detailed data appraisal was completed, generating both gold and nickel laterite targets. Ground reconnaissance was completed over all zones containing olivine cumulates and documented lateritic nickel.

A gold target has been identified in the SW project area within the Moriarty Shear Zone. Old nickel drill holes in the target area were located and re-logged and sampled. Results are awaited.

Drill testing of the gold target was planned in conjunction with nickel laterite targets. Wet ground conditions have however totally precluded rig access.

#### **Vettersburg Prospect**

The Vettersburg tenement lies south and along strike of the Heron Scotia Dam tenements and covers the granite-greenstone contact on the eastern flank of the Goongarrie-Mount Pleasant Anticline within the Walter Williams Formation. A potential nickel sulphide target is present at the komatiite basal contact.

Rockchip assaying from old costeans was completed, with a peak value of 0.48% Ni returned from siliceous laterite. In terms of the lower grades expected at surface, this result is encouraging.

### **Six Mile North Prospect**

Regional studies have been completed, evaluating Golden Cities style “gold-in-granitoid” targets. Reconnaissance of the area was completed. It appears that a uniformly transported lacustrine regolith is present, such that soil geochemical sampling may not be suited. A RAB drilling program may thus be required once drill access is possible.

#### **2.2.2 Gindalbie East Project**

Heron 100%.  
Nickel (- gold).

##### **Binti Binti Prospect**

The Binti Binti Prospect was purchased from Gindalbie Gold NL.

The Binti Binti Prospect is located approximately 80km NE of Kalgoorlie immediately north of the Heron Kalpini Nickel Project. The tenement comprises a wedge of northerly striking interlayered komatiite, basalt and felsic volcanic rock. Alluvium and laterite obscures bedrock.

Aircore and RAB drilling carried out by previous explorers has delineated lateritic nickel-cobalt mineralisation. Significant intersections at a 1.0% Ni cut-off include:

- 10m at 1.14% Ni, 0.12% Co,
- 6m at 1.28% Ni, 0.15% Co
- 4m at 1.18% Ni, 0.07% Co
- 4m at 1.14% Ni, 0.10% Co.

The currently estimated Inferred Mineral Resource at a 0.75% Ni lower cut-off is 2.8 million tonne at 0.91% Ni and 0.092% Co. Cobalt is particularly elevated.

Selected mineralised Aircore drillholes will be re-sampled and submitted at one-metre intervals, as original assaying was carried out on mainly broad composites. An RC drilling program has been designed for the Binti Binti Prospect and drill collars pegged and access determined. Drilling is planned to be completed during the March 2000 Quarter, subject to rig access in low lying areas.

##### **Acra Nickel Sulphide Prospect**

A tenement holding immediately south of and adjoining Heron’s Acra North nickel laterite resource was offered to Heron.

Previously identified nickel sulphide targets at Acra were assessed, and an acquisition offer made and accepted. Receipt of formal sale documentation is awaited.

The addition of nickel sulphide to a nickel laterite autoclave feed has potential acid generation benefits. Heron is systematically re-assessing its ultramafic tenement holding for nickel sulphide targets.

#### **2.2.3 Menzies East Joint Venture Project**

Heron 100%. Golden State Resources right to earn 60%.  
Gold - nickel.

Golden State advise that regional studies continue.

### **2.3 EMU FAULT PROVINCE**

#### **2.3.1 Kalpini Gold Project**

Heron 100%.  
Nickel infrastructure - gold.

Discussions regarding farm-out of gold rights at Kalpini are current.

### **2.3.2 Transline Project**

Heron 100%.  
Nickel (- gold).

Additional ground was acquired within the eastern project area covering highly anomalous +50ppb soil gold targets associated with the ore-hosting GMQ Shear Zone. GIS compilations were completed, and have defined several +1g/t Au RAB anomalies, peaking at 6g/t Au. Advanced joint venture discussions are current.

## **2.4 KEITH KILKENNY PROVINCE**

### **2.4.1 Malcolm Nickel Project**

Heron 100%.  
Nickel (- gold).

A probable olivine cumulate sequence has been defined for lateritic nickel assessment. The project area is on the western margin of the Keith Kilkenny Tectonic Zone, and adjoins the Apollo Hill gold mining centre. This geological setting suggests gold prospectivity is high.

### **2.4.2 Edjudina Nickel Project**

Heron 100%.  
Nickel (- gold).

Tenement rationalisation was completed, with surrender of tenements lacking ultramafic rocks. Ethnographic surveys are current.

### **2.4.3 Edjudina Gold Project**

Heron 100%.  
Gold.

#### **Banjo Prospect**

With the improvement and then consolidation of the gold price well above A\$400 per ounce, desk studies were run on the Banjo Prospect, to evaluate whether custom milling is a viable option for cash flow generation. It was concluded that planned resource drilling at Banjo should remain in abeyance.

### **2.4.4 Edjudina Laverton Joint Venture Project**

Heron 100%, retains all nickel rights.  
Croesus Mining NL right to earn 80% in gold projects only.

#### **Edjudina Prospect**

Additional tenements were acquired, and consideration given to be incorporation into the Joint Venture. Work consisted of reconnaissance AC and RAB drilling with a total of 8,400m drilled at the Snowy Well, Morris Corner and Red Gate Bore Prospects.

Two fences of RAB and AC drilling tested the sheetwash covered western portion of the project area. Subtle NNE-trending aeromagnetic features branching off the regional Yilgangi Fault were targeted. Best results from this drilling was 5m at 42ppb Au from 45m and 5m at 120ppb Au from 40m.

Intersecting aeromagnetic features with a coincident, low order NNW-trending soil gold anomaly near Morris Corner was tested with three lines of RAB drilling. Drill hole anomalies from previous explorers were recorded 400 metres SW of the target area. Best results recorded from drilling at Morris Corner were 5m at 550ppb Au from 25m, 3m at 230ppb Au from 49m and 10m at 200ppb Au from 45m.

The anomalous gold grades are associated with a weathered fine grained foliated clay-sericite volcanoclastic sequence.

## **Varden Prospect**

A RAB program was completed on the Varden tenement located 50km north of Laverton, to test low-tenor soil anomalies defined by previous explorers. A total of 27 holes for 1,108m were drilled over three lines with 100m drill centres. Assay results are awaited.

Rock types encountered include black shale, chlorite-altered quartzite, serpentine-rich ultramafic rocks and lesser basalt, dolerite, gabbro, porphyry, felsic schist and banded-iron formation. Chlorite and sericite were the dominant alteration types encountered, with minor silica and carbonate alteration.

The serpentinite located in drilling will be evaluated by Heron for its lateritic nickel potential.

### **2.4.5 Southern Laverton Tectonic Zone Joint Venture Project**

Heron 100%, retains all nickel rights.

Gutnick Resources NL right to earn 80% in gold projects only.

Gutnick Resources are completing a GIS data evaluation, identifying follow up drill targets.

### **2.4.6 Mulgabbie Nickel Project**

Heron 100%.

Nickel (- gold).

### **Lake Rebecca Nickel Prospect**

Scoping studies are current, with the view to entering a toll milling arrangement. Metallurgical assessment on bulk drill samples has commenced. An archaeological survey was completed, and report is awaited.

### **2.4.7 Karonie South Joint Venture Project**

Heron 100%. WMC right to earn 80%.

Gold (- nickel - base metals).

A Letter Agreement was signed between WMC Resources Limited ("WMC") and Heron whereby WMC may earn 80% through expending \$300,000, and free carrying Heron through to Decision to Mine.

## **2.5 MUNGARI PROVINCE**

### **2.5.1 Mungari Northwest Joint Venture Project**

Heron 100%. Kundana Gold right to earn 50%.

Gold.

Rationalisation of ground holdings was completed. The project now remaining consists of two Exploration Licences awaiting grant.

## **2.6 LEONORA LAVERTON PROVINCE**

### **2.6.1 Laverton Nickel Project**

Heron 100%.

Nickel - gold.

### **Merolia Prospect**

The tenements cover the northern extension to the Coglia Well nickel laterite-hosting ultramafic unit. Open file records show the presence of nickeliferous laterite. An expression of interest regarding a gold joint venture is being considered. Tenement grant is awaited.



### **Laverton Prospect**

The Mulga Queen gold mine north of Laverton was acquired through pegging. Resource potential for gold is good, and scope exists for tenement exchanges, to secure additional ultramafic sequences in the Laverton area.

#### **2.6.2 Laverton and Mount Morgans Joint Venture Projects**

Heron 100% Metex right to earn 70%.

Gold (-nickel).

Metex advises that a regional target overlay map is in preparation, to provide a focus for future exploration of the tenements.

#### **2.6.3 Victory Project**

Heron 100%.

Nickel - gold.

### **Mt McClure South Prospect**

Additional ground has been acquired by Heron 25km N along strike of the recently announced Thunderbox gold discovery at Wildara. Joint venture discussions are current.

## **2.6 LAWRENCE FIND PROVINCE**

#### **2.6.1 Lawrence Find Project**

Heron 100%.

Copper - zinc - gold - nickel.

A review of all available exploration within the area covered by Heron's tenements identified several target areas warranting further investigation, including a 30km strike "epithermal gold" soil anomaly and a 50m thick massive "VMS" gossan. A joint venture proposal is being sought to further develop this project.

## **2.8 IDA FAULT PROVINCE**

#### **2.8.1 Snake Hill Joint Venture Project**

Heron 100% Connemara right to earn 70%.

Gold - nickel.

Connemara have completed a drill target definition study, as part of their Emerald Gold Mine development work. Several soil gold anomalies have been targeted for drill testing.

#### **2.8.2 Frances Lesley Project**

Heron 100%.

Gold - nickel.

The project area is immediately NW along strike from known nickel sulphide drill intercepts. An expression of joint venture interest has been received, which will be evaluated once key tenements have been granted.

#### **2.8.3 Blister Dam Joint Venture Project**

Heron 100%. Delta Gold NL right to earn 75%.

Gold (- nickel).

Delta Gold has completed RC drilling with diamond drill tail. A best intercept of 8m at 1.38g/t Au from 70m was intercepted in BSC008, within a broadly anomalous zone of 30m at 0.61g/t Au. The drilling has encountered silica-carbonate-sulphide altered porphyritic basalt, with pervasive 0.2-0.5g/t Au occurring as

supergene mineralisation. A primary source for the supergene mineralisation is yet to be identified. Anomalous intercepts are detailed in Table 4 following.

<b>Table 4</b> <b>BLISTER DAM JOINT VENTURE PROJECT</b> <b>Reverse Circulation Drilling, Significant Intersections</b>								
Hole Number	North local	East local	Declin	Azim	From m	To m	Interval m	Au g/t
BSC008	50072	18450	-60 <sup>o</sup>	grid 000	110	126	16	0.21
					135	150	15	0.21
					152	161	9	0.51
BSC009	50122	18450	-60 <sup>o</sup>	grid 000	37	40	3	0.28
					45	55	10	0.35
					58	75	17	0.32
					62	63	1	1.09
					90	93	3	0.22
					98	109	11	0.25
					114	120	6	0.15

A project data review has identified three structural targets south and east of previous drilling, which are to be drill tested in the March Quarter.

#### 2.8.4 Bullabulling Project

Heron 100%.

Nickel - gold.

Native Title negotiations have commenced to expedite grant of Exploration Licences. High priority nickel laterite targets are present, located within hauling distance of the Cawse nickel laterite plant.

#### 2.8.5 Yilmia Hill and Cowan Projects

Heron 100%.

Nickel - gold.

##### Yilmia Hill Prospect

Regional studies and reconnaissance of the area have been completed. It appears that a residual regolith is present, such that BLEG Au-Pd and conventional Ni-Cu-Co soil geochemical sampling should be effective.

Initial geological interpretation suggests the ultramafics are dominantly spinifex textured, thin komatiite flows, and accordingly have poorer lateritic nickel potential. A nickel sulphide study was undertaken, and targets defined for presentation to a potential joint venture partner.

### 2.9 KAMBALDA DOMAIN PROVINCE

#### 2.9.1 Binduli East Project

Heron 100%.

Gold - nickel.

Discussions with a potential joint venture partner are current.

#### 2.9.2 Kurramia and Mount Martin Projects

Heron 100%.

Gold - nickel.

The intensely gold mineralised Boorara Shear Zone underlies the project areas. In addition, ultramafic units in the area have documented lateritic nickel-cobalt. Target generation is on-going. A previous soil geochemical survey returned anomalies of up to 1,100ppb Au.

Joint venture discussions on gold rights only are current.

## 2.10 SOUTHERN CROSS PROVINCE

### 2.10.1 Bungalbin Project

Heron 100%.  
Gold - nickel.

The project area is east along strike of the Marda gold mining centre and west and adjacent to the Mount Dimer gold mine, within an area of pervasive laterite cover. The main gold ore host in the region is banded iron formation (BIF).

Lateritic nickel potential in footwall ultramafics is indicated from Heron's literature reviews. Follow up of the target is awaiting grant of Exploration Licences.

### 2.10.2 Bungalbin Iron Royalty Project

Heron 100%. Portman Mining Ltd right to acquire iron ore rights through a royalty payment to Heron.  
Iron ore.

The project area includes an iron ore **Inferred Mineral Resource** estimated from Heron's open file study at **65.7 million tonne at 57.9% Fe**, with a calcined grade of 64.1% Fe.

Portman is completing a mining assessment for ore to supplement the Koolyanobbing iron ore operation. Heron holds a Royalty entitlement over iron ore production from Bungalbin. A Heritage Protection Agreement is being finalised.

### 2.10.3 Maggie Hayes Hill Project

Heron 100%  
Nickel - gold.

Joint venture interest has been expressed in the project area, which covers a komatiite-basalt contact within the nickel sulphide-hosting Maggie Hays komatiite belt. A tenement swap or farm-out is being considered.

## 2.11 BREMER-EUCLA PALAEO DRAINAGE PROVINCE

The 6,353km<sup>2</sup> Balladonia, Dundas and Ravensthorpe project areas located 200km S of Kalgoorlie in the Bremer-Eucla Palaeodrainage Province have indications of substantial oil shale and lignite resources, exceeding 1.57 billion tonne at an indicative oil yield of 95 litres per tonne ("l/t").

Based on Heron's GIS compilation, the Company controls in excess of 600km<sup>2</sup> of prospective oil shale basins. Documented oil shale-lignite resources are held at Balladonia, Balladonia West 1-9, Coobaninya, Florabel, Mount Beaumont, The Yates, Native Dog Swamp, The Cups and Flower.

Heron is finalising a Scoping Study using Balladonia West 7 as the conceptual ore model (high oil yield, low strip ratio, proximity to downstream energy users). The minimum economic oil shale target is felt to be:

- Minimum oil yield of 70-100 litres per tonne.
- Minimum resource 1 billion tonne.
- Waste to ore less than 2.0.
- Overburden depth not to exceed 25m.
- Scale of operation 50,000 barrels per day of oil/diesel.
- Mine life 20 years.

Potential production of syncrudes from lignite by pyrolysis, gasification or hydrogenation is also being assessed.

With the capital costs of such projects around A\$2.0-2.5 billion, Heron will continue to advance its Bremer-Eucla projects to a stage where a joint venture will be sought. Development decisions will be made once the Scoping Study has been finalised.

### **2.11.1 Balladonia Oil Shale Project**

Heron 100%.

Oil shale - lignite - sulphur - limestone - heavy mineral sands-vanadium.

Compilation of exploration work by previous explorers is current, to identify and prioritise areas for future development by Heron. At this preliminary stage, several metallogenic models for various commodities have been developed.

### **2.11.2 Dundas Oil Shale Project**

Heron 100%.

Oil shale - lignite - sulphur - limestone - heavy mineral sands-vanadium - gold.

Heron's Mining Lease applications have been recommended for grant. Both gold and oil shale targets are present, being localised within a Tertiary graben structure. The provenance area is the Dundas gold mining centre, which is interpreted to be a favourable source of detrital gold. Additional tenements have been pegged within the project area.

### **2.11.3 Ravensthorpe Oil Shale Project**

Heron 100%.

Oil shale - lignite - sulphur - limestone - heavy mineral sands-vanadium.

The principal target is the Flower Prospect oil sands. Oil shale resources are also held by Heron at Lort River and Native Dog Swamp. No resource estimates are as yet possible.

Consultation with land owners is current, to ensure acceptable exploration procedures.

## **2.12 GAWLER CRATON PROVINCE**

### **2.12.1 G2 Project**

Heron 100%.

Gold - copper - uranium – diamonds.

Tenement reductions were completed. A joint venture partner is being sought to sole fund drill testing of kimberlitic aeromagnetic targets in the eastern project area, and base metal targets in the western area.

Digital data bases have been prepared for evaluation by prospective partners.



I J BUCHHORN  
MANAGING DIRECTOR

The information is based on, and accurately reflects, information compiled by Ian James Buchhorn, who is a Member of the Australasian Institute of Mining and Metallurgy.