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30 January, 1998

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 FOR PERIOD ENDING 31 DECEMBER 1997**

## **1.0 SUMMARY**

As noted in the September 1997 Quarterly Report, the Company's exploration focus has moved towards lateritic nickel. During the Quarter, the Company identified two lateritic nickel targets for advanced stage evaluation.

### **Nickel Exploration**

- The **Kalpini Project** has advanced stage lateritic nickel prospects at Wellington North, Wellington East and Wellington Fold, and a sulphide nickel prospect at Kalpini Hill. These occur over a strike length of 18km.

At **Wellington East**, open file research and old drill hole re-sampling has produced a zone of significant mineralisation with values including 12m at 1.27%Ni, 10m at 0.87% Ni, 8.5m at 0.92% Ni and 12m at 0.91% Ni, occurring over an area of 2,500 x 200m and thickness typically 10m or more.

At **Kalpini Hill**, geological interpretation has indicated a basal massive sulphide nickel target, following the collation of multi-element MMI soil geochemistry.

- The **Lake Rebecca Project** has been acquired by the Company. Published global resource is **27 million tonnes at 0.75% Ni**. Pattern RC drilling is required in order to quantify higher grade ore reserves.
- In the northern **Edjudina Project** area, the Company has identified several areas of highly prospective geology favourable for nickel laterite and sulphide mineralisation. Targets have been confirmed with MMI soil Ni geochemistry and open file research.

### **Gold Exploration**

- At the **Mungari Northwest Project**, joint venture operator Kundana Gold has commenced a very aggressive exploration program, as part of their **\$3 million for 50%** earning right. Exploration is now current north along strike of the White Foil one million ounce gold discovery.
- Three gold prospects were drill tested at Banjo, Yarri and Garibaldi.
  - At **Banjo**, the Aerie Prospect was tested with nine RCP holes totaling 664 metres. Drilling intersected a broad zone of intense quartz-carbonate-pyrite alteration with assays including 28m at 1.41g/t Au and 7m at 2.00g/t Au.

- At **Yarri**, six holes totaling 321 metres were completed, in-filling previous intercepts. A supergene intercept of 9m at 0.95g/t Au was recorded.
- At **Garibaldi**, two RC holes totaling 160 metres were drilled to test a previously reported RAB drill intercept of 13m at 1.69g/t Au. The RC follow up returned 2m at 1.12g/t Au.
- Soil sampling at Heron's Carosue South Prospect at Mulgabbie West has identified a 1.0km strike length MMI gold anomaly which is twenty times background.
- The Company's regional soil geochemical programs are now essentially completed, and the projects are now ready to proceed to the drilling phase. RC drilling programs have been designed to test nickel targets at Kalpini, Lake Rebecca, north Edjudina, and gold targets at Carosue South. Drilling budget is 20,000 metres commencing in February this year.

## 2.0 EXPLORATION REVIEW

### 2.1 *Scotia Kanowna Province*

#### 2.1.1 *Scotia Kanowna Joint Venture Project*

Heron 100%. MPI - Outokumpu right to earn 75% Nickel (- gold)

Reconnaissance BLEG soil sampling over all Joint Venture tenements was completed. Results have confirmed a moderate gold anomaly previously identified by Heron over granite adjacent to a sheared granite-greenstone contact east of the East Scotia nickel prospect.

Gold analysis of selected intervals from recent Aircore drilling returned one anomalous intercept of 2m at 0.22g/t Au from 38-40m (EOH) in hole ESAC-029.

#### 2.1.2 *Silver Swan North Project*

Heron 100%  
Nickel - gold

Inactive.

#### 2.1.3 *Scotia Kanowna Project*

Heron 100%  
Gold (- nickel)

##### Federal East Prospect

Grant of the tenement is awaited.

##### King of the West Prospect

Soil geochemical surveying has defined granitoid gold anomalies of up to 24ppb Au.

##### Scotia North Prospect

No soil gold or nickel targets were generated. The area is now of low exploration priority.

#### **2.1.4** *Menzies East Joint Venture Project*

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

Strong soil anomalies up to 225ppb Au were returned from the western part of the joint venture area. This zone appears to be continuous with soil gold and bedrock anomalies located over a 600m strike length to the immediate north of the Heron joint venture ground.

First pass RAB drilling was conducted across the soil anomaly. This comprised 13 holes for 588 metres, giving an average depth of 45 metres which reflects the depth of weathering.

The RAB drilling located a probable bedrock source to the soil anomalism. Maximum grades were 0.1g/t Au at hole bottom on the western end of the drilled line.

#### **2.1.5** *Kanowna East Project*

Heron 100%  
Gold - nickel

Farm-out of the project is being sought.

### **2.2** *Keith Kilkenny Province*

#### **2.2.1** *Edjudina Project*

Heron 100%  
Nickel - gold

##### Regional

The Company has been appraising and acquiring various tenements in order to generate contiguous holdings over its nickel targets.

Several Exploration and Prospecting Licence applications were lodged within the Keith Kilkenny Tectonic Zone along strike from existing Heron gold targets.

##### Yarri Prospect

A total of six Reverse Circulation holes (YRC15-20) were drilled.

Drill holes YRC15-17 targeted a potential lode system defined by soil geochemistry to the west of the main Yarri lode. Results were disappointing and downgraded the possibility of parallel lodes on the western flank of the main lode.

Drill holes YRC18-20 targeted an area of shallow supergene mineralisation associated with the main Yarri lode. The aim was to define the lateral extent of the mineralisation. YRC18 returned low grade gold mineralisation with 9m at 0.95g/t Au.

<b>Yarri Prospect RC Intersection Summary</b>						
<b>HOLE I N o.</b>	<b>NORTH I ( M )</b>	<b>EAST I ( M )</b>	<b>FROM I ( M )</b>	<b>TO I ( M )</b>	<b>INTERVAL I ( M )</b>	<b>GRADE I G/T AU</b>
YRC17	5095	1070	14	15	1	1.02
			18	19	1	0.52
YRC18	5840	1138	26	28	2	2.18
			33	42	9	0.95

### Banjo Prospect

Gold mineralisation at Aerie has been mined from a north south striking shear zone with quartz (-tourmaline) veining and stockworks. The shear zone is hosted by sericite-chlorite (-carbonate) schists in meta-basalts, and is south along strike from the Great Banjo gold mine.

Soil geochemistry between the Banjo-Aerie-Gibberts workings was completed by Heron, defining two follow up targets with peaks of 51 and 61ppb Au. These represent new targets away from known mineralisation, and have not yet been drill tested.

A total of nine angled Reverse Circulation holes (RCA8-16) were drilled at the Aerie Prospect. The holes were all hammer drilled and totaled 644m.

Significant gold mineralisation was intersected, with the best gold grades occurring within the upper 15-50m associated with supergene enrichment.

An inferred resource will be calculated when all drill hole data is entered into the Heron database. Currently the tenement has a resource of 66,700t at 1.68g/t Au to a depth of 30m, located at the Great Banjo gold mine, north of Aerie.

<b>Aerie Prospect RC Intersection Summary</b>						
<b>HOLE I N o.</b>	<b>NORTH I ( M )</b>	<b>EAST I ( M )</b>	<b>FROM I ( M )</b>	<b>TO I ( M )</b>	<b>INTERVAL I ( M )</b>	<b>GRADE I G/T AU</b>
RCA8	1010	980	21	29	8	1.18
			42	50 (EOH)	8	0.90
RCA9	1010	1040	83	88	5	0.73
			92	93	1	0.56
RCA10	1030	1020	29	57	28	1.41
inc.			50	53	3	4.63
RCA11	990	1000	17	20	3	1.76
			24	25	1	0.88
RCA12	990	1020	36	53	17	1.17
inc.			36	43	7	2.00
RCA13	970	1000	18	21	3	0.92
RCA14	970	1040	56	75	19	0.67
inc.			63	70	7	1.08
RCA16	1050	1040	82	89	7	1.04

#### Gairdners Find Prospect

Blanket 400 x 100m soil geochemistry was completed. Two anomalous gold trends warranting follow up were indicated. The first extends along the western length of the tenement (at a 10ppb Au threshold), and encompasses two groups of workings. The best result from these workings from 14 mullock samples was 6.46g/t Au, with all samples anomalous. Anomaly area is 1,600 x 25m, with peak of 15ppb Au.

The second anomalous trend is most pronounced at the northern-centre of the tenement. Anomaly area is 700 x 150m, with a peak of 25ppb Au.

#### Boyce Creek Prospect

The Boyce Creek prospect area covers part of the mafic-ultramafic sequence marginal to the sediment-tuff filled Keith Kilkenny Rift. These margins to the rift are considered highly prospective for Archaean gold deposits, and ultramafic-hosted lateritic and sulphide nickel deposits.

MMI soil geochemistry on an 800 x 200m pattern was completed. Anomalous nickel values map the komatiite regolith. Peak values were 4,079ppb Ni and 9.31ppb Au. RC drill follow up is planned for the March Quarter.

#### Lady Byron Prospect

The prospect was acquired through the purchase of 100% of two Mining Leases. The tenements adjoin the McAuliffe Well gold resource, and contain a komatiite unit which is prospective for nickel.

#### Quondong South Prospect

The Quondong tenements cover an area of lake and dune country marginal to Lake Rebecca. Soil geochemistry was completed, returning a maximum gold value of 0.96ppb against a background of 0.11ppb.

#### Outcamp Bore Prospect

A soil sample program was completed. Targets were generated from open file soil and rock chip geochemistry, and the location of old workings. These form a NW trend, which was sampled on a 400 x 100m grid.

Results were generally low. The maximum value was 14ppb Au against a background that was less than 1ppb. Further work is planned, once regional evaluations are completed.

#### Wallbrook Hill Prospect

A blanket BLEG soil sampling program on a 400 x 100m grid was completed.

Values for gold were generally low. One spot value of 166ppb Au requires further investigation, and a low order anomaly of 3 to 11ppb Au occurring over a 600m strike will require in-fill sampling.

### 2.2.2 *Mulgabbie Project*

Heron 100%  
Nickel - gold

#### Regional

Additional Exploration Licences have been acquired at Mulgabbie, with several successes at ballot in key areas.

#### Lake Rebecca Lateritic Nickel Project

Agreement has been reached for the acquisition of the Lake Rebecca Lateritic Nickel Project.

The project area covers mafic to ultramafic units of the Mulgabbie Formation striking NNW along the southern shores of Lake Rebecca. This sequence represents the eastern margin of the Keith Kilkenny Rift.

The northern project area consists of a silica and iron rich laterite capping, overlying saprolitic ultramafic. Nickel mineralisation occurs as flat lying sheets in both lithological settings.

The southern project area is entirely concealed by aeolian and alluvial covered related to the Lake Rebecca playa lake system.

Aeromagnetics confirm the northern outcropping ore hosting ultramafic continues into the southern playa covered area. This southern area represents a significant exploration target.

Bass Strait Oil and Gas NL in the early 1980s defined a global resource of **27 million tonnes at 0.75% Ni** with Co credits.

Previous RC drill intercepts include 34m at 1.38% NiCo, 32m at 1.66% NiCo, 38m at 1.28% NiCo and 14m at 1.46% NiCo (NiCo = Ni + 4Co).

#### Mulgabbie West Prospect

Heron's tenements adjoin and are along strike of the Old Plough Dam - Khartoum mineralised trend (one million ounce gold discovery). Aeromagnetic interpretation of the Heron prospect area identified several discrete high priority targets with similar structural signatures to the neighbouring Carosue gold deposit. These were followed up with soil geochemical sampling.

A number of significant but low level soil gold anomalies exceeding 20x background were generated from the first pass 400 x 100m MMI soil program. Anomalous zones were in-filled to 200 x 50m.

Considering the extremely low background gold levels, the results are highly encouraging, as the anomalous zones occur within a transported regolith of calcareous colluvial and alluvial soils. The Carosue South anomalies are coincident with a N-S aeromagnetic linear which is associated with the Carosue gold deposit.

Two anomalous zones have been prioritised for follow up drilling:

- i) **Carosue West:** 2,300 x 350m zone with peak values to 11.65ppb Au.

- ii) **Carosue South:** adjacent and parallel to the above anomaly and comprising a 1,100 x 150m zone with peak values to 10.20ppb Au.

Round Hill Prospect

A 400 x 100m BLEG program was completed. A follow up target was generated, with anomalies of 15 to 27ppb Au.

Rough Gap Prospect

Soil sampling on a 400 x 100m pattern was completed. No follow up targets were generated, although the prospect is along strike from the previously reported Heron Whitsunday target.

Crab Hill Prospect

Soil sampling on a 400 x 100m pattern was completed across five tenements. Open file research indicated five gold target zones located along the central axis of the tenement group, based on anomalous auger samples, RAB drill holes and structural interpretation. A gossan is also recorded.

Initial results showed a zone of anomalous copper values coincident with the gossan occurrence. Check sampling and repeat assays of samples have proved to be erratic. Several moderately anomalous values are however indicated and when all checks are collated, mapping and field checking will commence.

Old Pinjin Prospect

The tenement encompasses a folded sequence of mafic and felsic lavas and meta-sedimentary units. A large granitoid intrusion underlies part of the most northern tenement boundary. The Keith Kilkenny Lineament changes strike direction as it passes around the south-west margin of this granitoid, which can provide a locus for gold mineralisation. This structure controls gold mineralisation to the immediate northwest along strike at the Mulgabbie mining centre.

An 800 x 100m BLEG program is current.

**2.2.3** *Karonie South Project*

Heron 100%  
Gold - nickel

Regional

Additional Exploration Licence applications have been lodged. Total contiguous area under application and granted is now 940km<sup>2</sup>. This is dominantly greenstone belt associated with the Keith Kilkenny Lineament. The belt contains one million ounce resource/production to the north at Karonie and Old Plough Dam-Khartoum, confirming the belt's prospectivity.

Final aeromagnetic interpretation products have been received including digital and hard copy images, interpretations and report. Several major NE trending cross structures are indicated, which are favourable gold targets.

Regional 800 x 200m soil geochemistry commenced. Initial results indicate low order gold anomalies up to 9ppb, associated with areas of aeromagnetic activity.

## 2.3 Emu Fault Province

### 2.3.1 Gindalbie East Project

Heron 100%  
Nickel - gold

#### Regional

Additional Exploration Licence applications have been lodged (in ballots).

The open file compilation has been completed, highlighting several areas with previous lateritic nickel drill intersections.

#### Wellington North Prospect

Selective re-sampling at one metre intervals from the previously reported September 1997 RAB program was completed.

Wellington North Prospect RAB One Metre Check Assays							
HOLE No	NORTH (M)	EAST (M)	FROM (M)	TO (M)	INTERCEPT (M)	GRADE Ni%	GRADE Co%
WRB1	2665	6977	5	11	6	0.44	0.025
WRB2	2632	6959	4	24	20	0.88	0.072
		Incl.	6	17	11	1.01	0.113
WRB3	2599	6932	10	24	14	1.03	0.029
		Incl.	15	22	7	1.23	0.034
WRB4	2567	6910	1	24	23	1.03	0.046
		Incl.	9	20	11	1.38	0.065
WRB5	2533	6884	2	16	14	0.60	0.022
WRB8	2568	7111	5	12	7	0.62	0.031
		Incl.	11	12	1	1.04	0.018
WRB9	2535	7087	8	16	8	0.56	0.048
WRB10	2503	7064	9	20	11	0.75	0.065
		Incl.	12	16	4	0.94	0.096
WRB11	2472	7040	9	22	13	0.81	0.042
		Incl.	17	19	2	1.02	0.030
WRB12	2430	7018	10	14	4	0.54	0.031
WRB18	2328	6815	8	12	4	0.45	0.029
WAC1	2665	6979	7	9	2	0.60	0.026
WAC2	2632	6957	5	24	19	1.18	0.065
		Incl.	9	20	11	1.55	0.075
WAC3	2599	6935	9	28	19	1.24	0.046
		Incl.	10	23	13	1.52	0.059

WRB RAB Drill holes WACAircore Drill holes

As would be expected, the width of intersections has been marginally reduced through the one metre sampling.



### Wellington East Prospect

At Wellington East, ore grade lateritic nickel has been identified by Heron over a strike length of 1.5km in previously non-sampled oxide sections in four reconnaissance Norex drill holes. Ore grade intercepts are also present in "Nickel Boom" Inco, WMC and Union Oil drilling. Results of the old hole re-sampling and previous drilling were:

<b>Wellington East Prospect Previous Drilling Summary</b>							
<b>HOLE No</b>	<b>NORTH (M)</b>	<b>EAST (M)</b>	<b>FROM (M)</b>	<b>To (M)</b>	<b>INTERCEPT (M)</b>	<b>GRADE Ni%</b>	<b>GRADE Co%</b>
<b><i>NOREX</i></b>							
WEP4	6647100	403480	16	28	12	0.91	0.071
WEP6	6647710	403110	12	28	16	0.64	0.037
WEP7	6648160	402810	12	36	24	0.71	0.026
WEP8	6648450	402490	36	48	12	0.52	0.118
<b><i>INCO Drilling</i></b>							
Z14021	6647110	403390	27	34.5	7.5	0.69	0.043
Z14022	6647110	403490	24	52.5	28.5	0.93	0.020
<b><i>WMC</i></b>							
170	6646200	403680	18	24	6	0.77	0.028
171	6646480	403550	18	26	8	0.72	0.043
173	6647080	403230	12	24	12	0.83	0.045
178	6648760	402420	9	12 (EOH)	3	0.78	0.034
<b><i>Union Oil</i></b>							
WR21	6647630	403000	27.4	30.5	3.0	0.90	Not assay
WR22	6647600	402950	33.5	36.6	3.1	0.80	Not assay
WR29	6648010	403100	18.3	27.4	9.1	0.71	Not assay
WR30	6648050	403160	12.2	15.2 (EOH)	3	0.73	Not assay
WR35	6647980	403050	21.3	25.9 (EOH)	4.6	0.89	Not assay
WR49	6648300	402880	15.2	27.4 (EOH)	12.2	1.28	Not assay

The previous drilling indicates that lateritic nickel mineralisation occurs over an area of 2,500 x 200m, with ore thickness typically 10m or more. Only the Norex and Inco drilling, which were testing nickel sulphide targets, have evaluated the full laterite profile. Accordingly, ore thickness could well exceed 10m.

In addition, most of drilling was directed at sulphide targets to the east of main laterite targets. Again, good potential exists for ore thickness to exceed the 10m indicated in existing reconnaissance drilling.

In view of the presence of the known mineralisation at Wellington East, a light RC rig is being contracted for the initial drill program, rather than completing a first pass RAB program.

### Kalpini Hill Prospect

Geological interpretations confirm the exploration target at Kalpini Hill is basal contact komatiite channel nickel sulphides, rather than lateritic nickel. MMI soil geochemistry indicates a coincident Ni-Cu anomaly.

SIROTEM surveying will be required to advance the prospect to a drilling stage

### Garibaldi Prospect

Two RCP holes (GRC1 and 2, 160m) were completed to test the down dip extensions of GBR109 (16m at 6.4g/t Au from 16m) and GBR110 (8m at 0.8g/t Au from 52m). Best result was 2m at 1.12g/t Au, duplicating the GBR110 intercept rather than GBR109.

<b>Garibaldi Prospect RC Intersection Summary</b>						
<b>HOLE I N o.</b>	<b>NORTH I ( M)</b>	<b>EAST I (M )</b>	<b>FROM I (M )</b>	<b>TO I (M)</b>	<b>INTERVAL I (M)</b>	<b>GRADE I G/T AU</b>
GRC1	4770	1725	43	44	1	0.57
			50	53	3	0.84
GRC2	4770	1745	61	64	3	0.64
			71	73	2	1.12

### Garibaldi Smith Nickel Prospect

Heron option for 100%  
Nickel-cobalt-manganese-gold

In the eastern Garibaldi prospect area, previous costean sampling has returned up to 2.6% Ni, 1.4% Co and 48% Mn, occurring within lateritised ultramafic.

A four hole RAB traverse was completed across the northern anomaly extension. The presence of ultramafic was confirmed, but no ore grade lateritic nickel was present.

### Kalpini West Prospect

Soil sampling on a 200 x 50m pattern was completed. Gold assays were generally of a low ratio to background. Several spot highs were however recorded with peak of 37ppb Au. Follow up is required.

### Gindalbie South Prospect

Low order gold values were returned from soil sampling.

### Mayday North Prospect

MMI soil values to 5.7ppb Au were returned, being immediately north along strike from the Mayday gold resource. Further work is required.

### Lindsays Find Prospect

A maximum value of 29ppb was recorded in soil sampling of the tenement which adjoins the Lindsays Find open cut. Ground checking of the anomaly is required.

#### **2.3.2 Transline Project**

Heron 100%  
Gold

Exploration Licence applications have been lodged targeting Golden Cities style granitoid gold mineralisation.

### **2.4 Mungari Province**

#### **2.4.1 Mungari Northwest Joint Venture Project**

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

The project area is NW along strike from the Mines and Resources Australia-Mineral Commodities White Foil one million ounce gold discovery.

A Joint Venture between Kundana Gold Pty Ltd and Heron has been finalised. Kundana may earn a 50% interest in the tenements by sole funding the initial \$3.0 million of exploration.

A high resolution aeromagnetic survey has been completed, and interpreted.

This clearly demonstrates:

- a. The White Foil - hosting mafic unit unequivocally trends north into the Heron project area, where it occurs as the synformal limbs of the Powder Sill structure.
- b. Strong NE trending cross structures are present, being the SW extension of the Black Flag and Royal Standard fault systems. These structures host the Mount Pleasant gold mining centre to the northeast of the Heron project area.
- c. Northwest structures related to the Zuleika Shear Zone are present.

Soil auger geochemistry of targets has commenced. No results are yet available

### **2.5 Leonora Laverton Province**

#### **2.5.1 Laverton Joint Venture Project**

Heron 100%. Metex right to earn 70%.  
Gold - nickel

Metex advise vacuum drilling returned anomalies of up to 26ppb Au, with supporting As, Sb and Pb anomalism. Detailed aeromagnetics has commenced.

Compilation of results is awaited.

### **2.5.2** *Mount Morgans Joint Venture Project*

Heron 100%. Metex right to earn 70%  
Gold - nickel

Metex advise vacuum drilling defined a number of anomalous areas. Detailed aeromagnetics has commenced.

### **2.5.3** *Malcolm Project*

Heron 100%  
Gold - nickel

#### Regional

Additional Exploration Licences were lodged and are in ballots. Competition for ground in the area is very intense.

#### The Alice Prospect

Soil sampling was completed. Soil geochemical peak was 187ppb Au, which warrants follow up. Old workings are present on the tenement.

#### Horan Lake Prospect

Soil geochemical peak was 28ppb Au, which definitely warrants follow up in view of the transported regolith.

### **2.5.4** *Victory Project*

Heron 100%  
Nickel - gold

#### Doyle Well Prospect

As part of a data appraisal, 10m at 0.7% Ni was identified within laterite in the Heron tenement. Follow up RAB drilling is planned.

#### Mount McClure South Prospect

Tenements have been granted and regional compilations commenced.

## **2.6** *Menzies Leonora Province*

### **2.6.1** *Menzies Leonora Project*

Heron 100%  
Nickel - gold - diamonds

The Union Jack Well tenement has been granted, and the Exploration Licence application at Lawrence Find is awaiting grant.

## **2.7 Ida Fault Province**

### **2.7.1 Snake Hill Joint Venture Project**

Heron 100%. Connemara right to earn 70%  
Gold - nickel

Drilling was delayed, due to rig commitments elsewhere. The program is now planned for the March Quarter.

### **2.7.2 Blister Dam Joint Venture Project**

Heron 100%. Normandy Exploration right to earn 70%  
Gold

The project area is located 100km NW of Kalgoorlie, on the Zuleika Shear Zone.

Results have been received for a regolith drilling program following up previously reported soil gold anomalies. Best intercepts were:

BDA05	44-48m	4m at 0.53g/t Au
BDA03	24-32m	8m at 0.15g/t Au

Six bottom hole samples were submitted for petrographic description. The sequence to the south of the Zuleika Shear comprises felsic to intermediate volcanics, with some quartz veining and flooding. To the north of the Zuleika Shear, the rocks are predominantly mafic to ultramafic.

A 2,470 line kilometre aeromagnetic and radiometric survey was completed over the entire tenement at a line spacing of 50m. The data has been processed and will be interpreted prior to drilling. Preliminary work has revealed several approximately N-S trending faults which cross the Zuleika Shear and a zone of intense deformation within the ultramafic sequence north of the Shear.

Compilation of open file data has been completed. Previous drilling has been conducted on 200m spaced traverses and focussed on shear zones within the ultramafics to the north of the Zuleika Shear. Several significant intersections were reported including 26-32m, 6m at 0.8g/t Au and 32-38m, 6m at 0.88g/t Au.

A 4,000m Aircore drilling program is planned for the March Quarter. The aim of this drilling is to test the Norex BLEG soil anomaly on the western portion of the tenement, in-fill drilling around BDA05, follow up Newcrest drilling along the Zuleika Shear, and test the ultramafic-felsic/intermediate contact.

### **2.7.3 Bullabulling Project**

Heron 100%  
Nickel - gold

Grant of Exploration Licences is awaited.

Reconnaissance soil geochemistry commenced on granted Prospecting Licences. No gold or nickel targets were generated.

#### **2.7.4** *Frances Lesley Project*

Heron 100%  
Gold - nickel

The project area is located 100km NW of Kalgoorlie, within an area of active gold mining operations at Carbine and Davyhurst.

Farm out discussions are current, aimed at follow up of soil gold anomalies generated by Heron.

Additional Exploration Licences have been lodged.

#### **2.7.5** *Yilmia Hill Project*

Heron 100%  
Nickel - gold

Exploration Licence applications are awaiting grant.

#### **2.7.6** *Cowan Project*

Heron 100%  
Nickel - gold

Exploration Licence applications have been lodged.

Cowan covers lacustrine sediments on Lake Cowan, and represents a major land holding in a prime exploration area completely surrounded by Mining Leases associated with Versaille, Eudynie and the Peninsula gold mining centres. The Heron application is in a ballot.

Pioneer covers the Mariners-Dordie Rocks nickel sulphide-hosting komatiite succession. The Pioneer komatiite has been previously diamond drilled testing for nickel sulphide occurrences. The main Heron target is lateritic nickel. There are no competing applications.

### **2.8** *Dundas Province*

#### **2.8.1** *Dundas Lake Project*

Heron 100%  
Gold - uranium - vanadium

Open file interpretation has confirmed potential palaeochannel settings. Due to access problems in a lacustrine environment, drill follow up is in abeyance. Farm-out may be sought for the prospect.

### **2.9** *Kambalda Domain Province*

#### **2.9.1** *Binduli East Joint Venture Project*

Heron 100%. MPI right to earn 70%  
Gold - nickel

This 16km<sup>2</sup> contiguous tenement holding straddling the Abattoir Shear is located 5km SW of Kalgoorlie. Field work is in abeyance, pending finalisation of the joint venture agreement.

## **2.10 Southern Cross Province**

### **2.10.1 Bungalbin Project**

Heron 100%  
Iron ore - gold

The area is east along strike of the Marda gold mining centre, within an area of pervasive laterite cover. The application area includes an iron ore resource. Tenement grant is awaited.

### **2.10.2 Maggie Hays Hill Project**

Heron 100%  
Nickel - gold

Initial data evaluation has commenced. Excellent potential exists for Maggie Hays-Emily Ann style structurally related massive nickel sulphide. The Heron project area will require blanket ground SIROTEM surveying over and along strike of the komatiite sequence.

Lateritic nickel is recorded in previous RAB drilling from the southern tenement area.

## **2.11 Gawler Craton Province**

### **2.11.1 G2 Project**

Heron 100%  
Gold - copper - uranium - diamonds

Crest have withdrawn from the Joint Venture. A new joint venture partner is being sought.

Reconnaissance of the project area was undertaken, to assess drilling priorities.

**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.*

## Glossary of Terms

“Aeromagnetic Survey” means a survey made from the air, recording variations in the earth’s magnetic field.

“Alteration” means rock-forming minerals which have been chemically changed.

“Anomaly” means a value higher or lower than expected, which outlines a zone of potential exploration interest but not necessarily of commercial significance.

“Aircore drilling” means a rotary drilling technique which uses compressed air to cut a core sample and return core fragments to surface inside the drill rods. The drill sample quality is generally good.

“Au” means gold.

“Cu” means copper.

“Geochemical Survey” means the systematic study of the variation of chemical elements in rocks or soils.

“g/t” means grams per tonne.

“Granitoid” means a family of coarse-grained igneous rocks that contain abundant quartz and feldspar.

“Helimag” means an aeromagnetic survey flown by a helicopter.

“km” means kilometres.

“km<sup>2</sup>” means square kilometres.

“Komatiite” means an ultramafic rock with high magnesium content extruded from a volcano. Textural variations include:

“Orthocumulate” means a rock which exhibits a high proportion of crystallised trapped interstitial (“intercumulus”) liquid. The surrounded (“cumulus”) olivine crystals are subhedral to euhedral in form. This komatiite type is regarded as prospective for nickel sulphide mineralisation (e.g. Kambalda nickel mine).

“Mesocumulate” means a rock with cumulus crystals exhibiting extensive mutual boundary contact, but retaining some recognisable interstitial material. This rock type is prospective for lateritic nickel.

“Adcumulate” means a rock with little or no intercumulus material and characterised dominantly by anhedral crystals. This rock type is regarded as prospective for nickel laterite mineralisation.

“m” means metres.

“Mineralisation” means, in economic geology, the introduction of valuable elements into a rock body.

“MMI” means the Mobile Metal Ion Process™, which is a partial extraction soil geochemical technique considered to be very effective for nickel and gold exploration.

“Ni” means nickel.

“Olivine” means a magnesium-iron silicate mineral, often occurring in rocks prospective for nickel.

“prospect” means a target upon which exploration programs are planned or have commenced.

“project” means a grouping of prospects within a geographic location, often with a common geological setting.

“province” means a grouping of projects within a geological district defined by a major mineralised crustal structure.

“ppb” means parts per billion.

“ppm” means parts per million (1g/t equals 1ppm, and 1000ppb equals 1ppm).

“RAB drilling” means the drilling technique in which a sample is returned to surface outside the rod string by compressed air. The drill sample may be subject to some degree of contamination.

“RC drilling” means the drilling method employing a rotating or hammering action on a drill bit which returns a sample to the surface inside the rod string by compressed air. The drill sample quality is generally superior to RAB.

“Shear Zone” means a zone in which crushed rock has been produced by the action of a shearing stress as on a fault. This setting is often favourable for the occurrence of gold mineralisation.

“Tectonic Zone” means a major structural feature characterised by deformation of several kilometres in width.

“Ultramafic” means rocks composed almost entirely of mafic minerals, which are prospective for nickel.



## Appendix 5B

### Mining exploration entity quarterly report

Name of entity

Heron Resources NL

ACN or ARBN

068 263 098

Quarter ended ("current quarter")

31 December 1997

#### Consolidated statement of cash flows

##### Cash flows related to operating activities

- 1.1 Receipts from product sales and related debtors
- 1.2 Payments for: (a) exploration and evaluation  
(b) development  
(c) production  
(d) administration
- 1.3 Dividends received
- 1.4 Interest and other items of a similar nature received
- 1.5 Interest and other costs of finance paid
- 1.6 Income taxes paid
- 1.7 Other (provide details if material)

Current Qtr \$A'000	Year to Date (6 months) \$A'000
------------------------	---------------------------------------

(521)	(909)
(81)	(124)

76	133
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##### Net Operating Cash Flows

(526)	(900)
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##### Cash flows related to investing activities

- 1.8 Payment for purchases of: (a) prospects  
(b) equity investments  
(c) other fixed assets
- 1.9 Proceeds from sale of: (a) prospects  
(b) equity investments  
(c) other fixed assets
- 1.10 Loans to other entities
- 1.11 Loans repaid by other entities
- 1.12 Other (provide details if material)

(101)	(128)
(10)	(92)

	(4)
4	4
4	4

##### Net Investing Cash Flows

(103)	(216)
-------	-------

- 1.13 Total operating and investing cash flows (carried forward)

(629)	(1,116)
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1.13 Total operating and investing cash flows (brought forward)	(629)	(1,116)
<b>Cash flows related to financing activities</b>		
1.14 Proceeds from the issue of shares, options, etc.		
1.15 Proceeds from the sale of forfeited shares		
1.16 Proceeds from borrowings		
1.17 Repayment of borrowings		
1.18 Dividends paid		
1.19 Other (provide details if material) - Share Issue Expenses		
<b>Net financing cash flows</b>	Nil	Nil
<b>Net increase (decrease) in cash held</b>	(629)	(1,116)
1.20 Cash at beginning of quarter/year to date	5,085	5,572
1.21 Exchange rate adjustments to 19		
1.22 <b>Cash at end of quarter</b>	4,456	4,456

**Payments to directors of the entity and associates of the directors**

**Payments to related entities of the entity and associates of the related entities**

	Current Qtr \$A'000
1.23 Aggregate amount of payments to the parties included in item 1.2	65,865.10
1.24 Aggregate amount of loans to the parties included in item 1.10	

1.25 Explanation necessary for an understanding of the transactions

Directors fees, salaries and superannuation (47,904.08).  
Provision of secretarial services and accommodation by director related entities (17,961.02).

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

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2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

See attached schedule
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**Financing facilities available**

Add notes as necessary for an understanding of the position

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities		
3.2 Credit standby arrangements		

**Estimated cash outflows for next quarter**

	\$A'000
4.1 Exploration and evaluation	500
4.2 Development	
<b>Total</b>	500

**Reconciliation of cash**

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to related items in the accounts as follows.

	Current Quarter \$A'000	Previous Quarter \$A'000
5.1 Cash on hand and at bank	46	11
5.2 Deposits at call	328	117
5.3 Bank Overdraft		
5.4 Other (provide details) Bank Bills	4,082	4,957
<b>Total: cash at end of quarter (Item 1.22)</b>	4,456	5,085

### Changes in interests in mining tenements

Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at End of Quarter
6.1 Interests in mining tenements relinquished, reduced or lapsed	See attached schedule		
6.2 Interests in mining tenements acquired or increased	See attached schedule		

**Issued and quoted securities at end of current quarter**

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

	Number Issued	Number quoted	Par value (cents)	Paid-up value (cents)
<b>7.1 Preference securities</b> (description)				
7.2 Issued during quarter				
<b>7.3 Ordinary securities</b>	54,000,000	32,800,003	25	25
7.4 Issued during quarter				
<b>7.5 Convertible debt securities</b> (description)				
7.6 Issued during quarter				
<b>7.7 Options</b> (description)			Exercise Price	Expiry Date
	10,000,000	Nil	25	30/06/2000
	135,000	Nil	25	28/8/2001
	150,000	Nil	25	1/9/2001
7.8 Issued during quarter	500,000	Nil	25	15/12/2001
7.9 Exercised during quarter				
7.10 Expired during quarter				
<b>7.11 Debentures</b> (totals only)				
<b>7.12 Unsecured notes</b> (totals only)				

**2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest.**

1. MPI-Outokumpu has the right to earn a 75% equity interest in the Scotia Kanowna Joint Venture Project tenements through sole funding the initial \$1,500,000 of exploration.
2. Golden State Resources NL has the right to earn a 60% equity interest in the Menzies East Joint Venture Project tenements through sole funding the initial \$250,000 of exploration.
3. Metex Resources NL has the right to earn a 70% equity interest in the Laverton Joint Venture Project tenements through sole funding the initial \$500,000 of exploration.
4. Metex Resources NL has the right to earn a 70% equity interest in the Mt Morgans Joint Venture Project tenements through sole funding the initial \$200,000 of exploration.
5. Connemara Gold Mines Pty Limited has the right to earn a 70% equity interest in the Snake Hill Joint Venture Project tenements through sole funding the initial \$300,000 of exploration.
6. Kundana Gold Pty Limited has the right to earn a 50% equity interest in the Mungari Northwest Joint Venture Project tenements through sole funding the initial \$3,000,000 of exploration.
7. Normandy Gold Pty Limited has the right to earn a 70% equity interest in the Blister Dam Joint Venture Project tenements through sole funding the initial \$250,000 of exploration.
8. Mining Project Investors Pty Limited has the right to earn a 70% equity interest in the Binduli East Joint Venture Project tenements through sole funding the initial \$750,000 of exploration.

**6.1 Interests in Mining Tenements relinquished, reduced or lapsed**

<b><i>Tenement Reference</i></b>	<b><i>Nature of Interest</i></b>	<b><i>Interest Beginning of Quarter</i></b>	<b><i>Interest End of Quarter</i></b>
E39/581	Withdrawn (ballot loss)	100	0

## 6.2 Interests in Mining Tenements acquired or increased

<b>Tenement Reference</b>	<b>Nature of Interest</b>	<b>Interest Beginning of Quarter</b>	<b>Interest End of Quarter</b>
E15/570	Registered Applicant (Ballot)	0	100
E15/573	Registered Applicant	0	100
E16/172	Registered Applicant	0	100
E16/173	Registered Applicant	0	100
E16/174	Registered Applicant	0	100
E25/172	Registered Applicant (Ballot)	0	100
E25/176	Registered Applicant	0	100
E28/860	Registered Applicant	0	100
E28/861	Registered Applicant	0	100
E28/862	Registered Applicant	0	100
E28/863	Registered Applicant	0	100
E28/871	Registered Applicant (Ballot)	0	100
E28/881	Registered Applicant	0	100
E28/886	Registered Applicant (Ballot)	0	100
E28/887	Registered Applicant (Ballot)	0	100
E28/888	Registered Applicant	0	100
E29/368	Registered Applicant (Ballot)	0	100
E31/372	Registered Applicant (Ballot)	0	100
E31/373	Registered Applicant (Ballot)	0	100
E31/374	Registered Applicant (Ballot)	0	100
E31/375	Registered Applicant	0	100
E31/376	Registered Applicant (Ballot)	0	100
E31/377	Registered Applicant (Ballot)	0	100
E31/385	Registered Applicant	0	100
E31/388	Registered Applicant	0	100
E31/389	Registered Applicant (Ballot)	0	100
E31/390	Registered Applicant (Ballot)	0	100
E31/391	Registered Applicant	0	100
E31/392	Registered Applicant (Ballot)	0	100
E39/680	Registered Applicant	0	100
E39/681	Registered Applicant	0	100
E39/682	Registered Applicant	0	100
E40/127	Registered Applicant (Ballot)	0	100
E40/132	Registered Applicant	0	100
E63/616	Registered Applicant	0	100
E63/617	Registered Applicant	0	100
E63/618	Registered Applicant	0	100
E63/619	Registered Applicant	0	100
E63/620	Registered Applicant	0	100



<b>Tenement Reference</b>	<b>Nature of Interest</b>	<b>Interest Beginning of Quarter</b>	<b>Interest End of Quarter</b>
E63/625	Registered Applicant	0	100
M24/702	Registered Applicant	0	100
P15/4049	Registered Applicant	0	100
P15/4050	Registered Applicant	0	100
P15/4051	Registered Applicant	0	100
P15/4052	Registered Applicant	0	100
P15/4053	Registered Applicant	0	100
P31/1485	Registered Holder	0	100
P31/1538	Registered Holder	0	100
P63/1038	Registered Applicant	0	100
P63/1039	Registered Applicant	0	100
P63/1040	Registered Applicant	0	100
P63/1041	Registered Applicant	0	100
P63/1042	Registered Applicant	0	100
P63/1043	Registered Applicant	0	100
P63/1044	Registered Applicant	0	100
P63/1045	Registered Applicant	0	100
P63/1046	Registered Applicant	0	100

