



# QUARTERLY REPORT

Ending 31 March 2013



## HIGHLIGHTS

### *Paris Silver Project*

- Gaining a better understanding and improved confidence of the structural controls on high-grade mineralisation with infill drilling. Two drill rigs currently operating.
- Silver system still open to the south.
- Targeting a maiden Inferred Mineral Resource for the Paris Silver Project in the September quarter 2013.

### *Paris satellite silver targets*

- New large silver-in-soil targets identified at Alexander and Hector. Aiming to drill in about three months.
- Other satellite silver targets within 10km of Paris being prepared for first-pass drilling, following statutory approvals.
- Gravity surveying extended to all key targets in the Peterlumbo field.

### *Regional Eyre Peninsula targets*

- Large high-amplitude silver-in-soil targets identified 85km east of the Paris silver deposit of comparable size and silver values to the early signature of the Paris soil target.

### *Yorke Peninsula*

- Gravity survey has been completed at the Roundabout copper gold target; data being processed.

# OVERVIEW AND OUTLOOK SUMMARY

*Work continues to improve confidence in the understanding of the structural complexities of the high-grade mineralisation at the Paris Silver Project. Utilising the proven innovative soil-sampling techniques, new silver targets have been identified close to the Paris discovery and regionally.*

Approximately A\$1.9million was spent on exploration activities during the quarter, primarily at the Paris Silver Project. Joint venture recoveries totalled A\$780,000, leaving a cash holding of A\$12.5million.

With access approvals in place for the satellite targets close to Paris, drilling will commence to develop additional opportunities. New high-priority silver-in-soil targets have been identified, both within the Peterlumbo field and regionally.

The focus of the drilling program at the Paris Silver Discovery was infill drilling to gain a better understanding and confidence of the structural controls on high-grade mineralisation. During February, the orientation of drilling was rotated 90°

in-order to better understand the geology and mineralised structures with the orthogonal drilling. The commissioning of another drill rig will speed up the drilling now the diamond drilling has provided more confidence on the distribution of mineralisation.

The company's successful regional soil sampling technique has identified new silver targets, which now require first pass drilling. Approvals have been granted for some, and are pending for others, with work commencing on those approved.

Access was granted to undertake a gravity survey over the new Roundabout iron oxide copper gold (IOCG) target on Yorke Peninsula. Once the data has been processed and analysed, drill targets will be identified and access negotiations started for exploration to be coordinated with farming activities.

## Managing Director's summary:

Managing Director Mr John Anderson said "Investigator Resources continues to be well placed with a pending maiden resource and a growing portfolio of targets based on the same innovative exploration approach.

"With infill and structural drilling at the Paris Silver Project, we are gaining more confidence on the distribution of the high-grade mineralisation.

"The Investigator team continue to develop a new generation of quality precious silver, gold and copper targets across the region. New exciting targets have been identified within the Peterlumbo field, close to the Paris Silver Project, as well as regionally, including the Uno/Morgans field, 85km east of Peterlumbo.

"Activity has also continued on the Yorke Peninsula projects, particularly the Roundabout IOCG target," he added.

## OPERATIONS REVIEW

### Paris silver prospect

(Peterlumbo Joint Venture; EL4228 – IVR 75%)

Drilling at Paris continued utilising a diamond drill rig, with a total of 14 holes (PPDH053 to 066, see Figure 2) (2,065.16m) drilled, which generated 2,073 samples, submitted for analysis with results received covering holes PPDH053 to 062. Holes PPDH063 to 066 assays are pending. As previously reported, in February the drill direction was changed from the NE-SW section plane to drilling "orthogonal holes" at right angles in the NW-SE plane, to test potentially higher grade structural targets and to provide 3-dimensional information

for the geological model (see explanatory diagram Figure 2A). The first of these orthogonal holes was hole PPDH059 and drilling in that orientation continues.

The significant results are summarised below (see Table 1):-

- PPDH053 (6.6m @ 267g/t Ag from 59.0m) drilled on Line 8, infill hole part of the resource confirmation drilling.
- PPDH058 (7.0m @ 161g/t silver from 62.0m and 9.0m @ 226g/t silver from 71.0m) is a twin hole to PPDH055 which was redrilled due to poor recovery / core loss. The hole was drilled in the middle of Line 1, and indicates the flat-

lying layer of silver mineralisation on Line 1 has the potential to be over 100m wide. The result is of particular interest as this confirms there is high-grade silver potential extending from the prior high-grade intersections on Line 2 (e.g. PPRC039; 15m @ 1,209g/t silver from 46m) to south of the current drilling on Line 1.

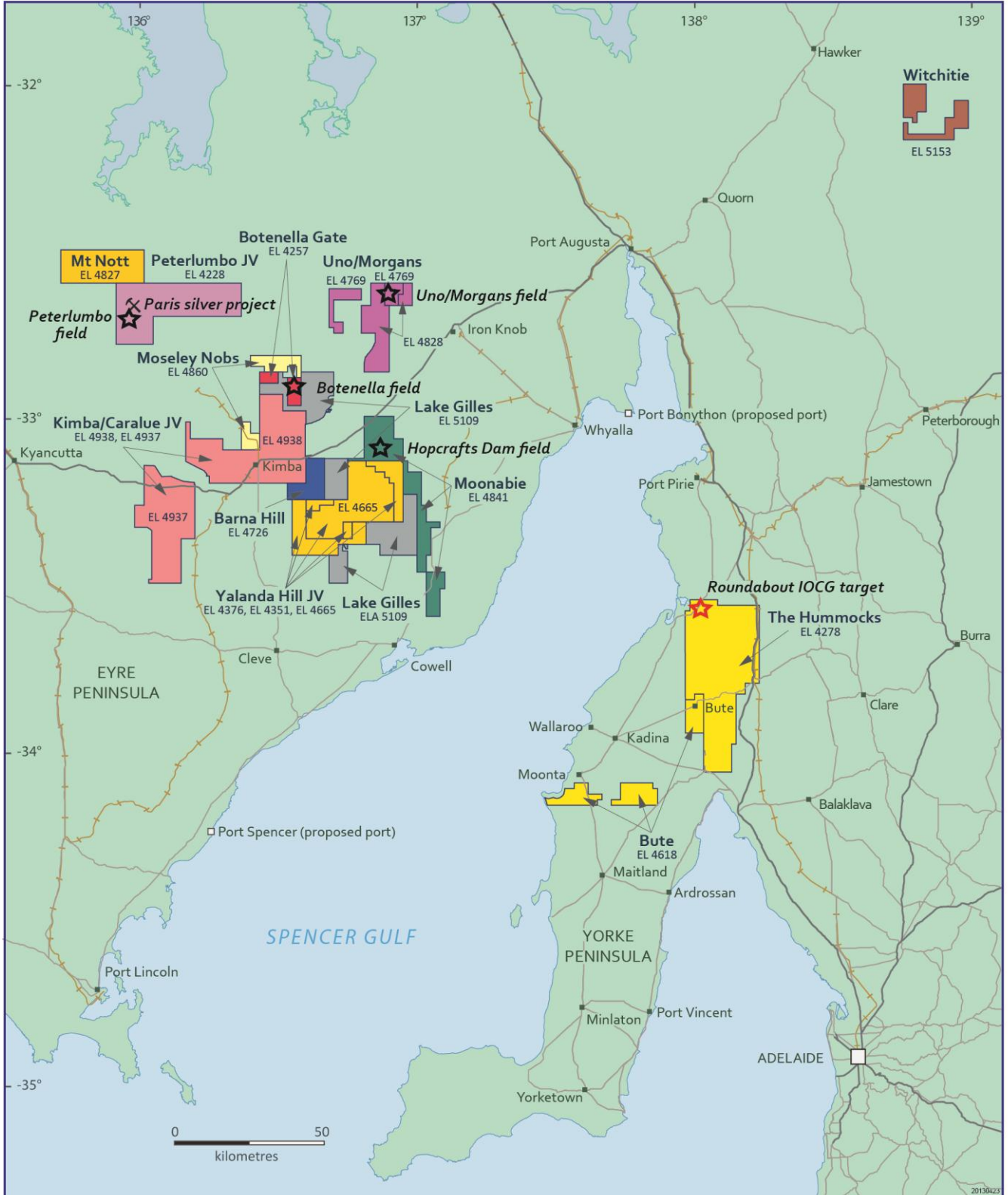
Holes previously reported (drilled during the reporting quarter), but with assay results received after the quarter end, include:

- PPDH060 (6.2m @ 148g/t silver, 1.02% lead and 1.34% zinc from 47.0m and 2.0m @ 206g/t silver, 3.37% lead and 0.29% zinc from



# OPERATIONS REVIEW contd.

**Figure 1: Plan showing Investigator Resources tenement holdings and key projects**



## OPERATIONS REVIEW contd.

### Paris silver prospect contd.

67.0m) drilled from a position just south of Line 8, back and under Line 7. The results indicate a possible down-plunge extension of the Lead Spine.

- PPDH061 (10.3m @ 542g/t silver, 1.61% lead and 0.46% zinc from 59.3m and 1.2m @ 302g/t silver, 1.04% lead and 0.05% zinc from 74.3m). The hole was positioned 150m west of PPDH060, being collared south of Line 7 and directed towards the high-grade mineralisation in PPDH001.

Of significant interest are the high-grade assay results from Line 1, which share some similarities to line 7.

Diamond drilling will continue, for more structural information, although the drilling program may be adjusted as each hole is drilled and evaluated. A second drill rig, a reverse-circulation percussion (RCP) rig commenced during April but the sampling was found to be inadequate in the difficult ground conditions of the central area so another diamond drill rig will replace the RCP rig in early May.

All efforts are currently focussed towards an expected maiden Inferred Mineral Resource for the Paris Silver Project in the September quarter of 2013.

Work has commenced on technical studies, which are required as part of the ongoing work in developing the Paris Silver Project. These not only provide an understanding of the potential economics of a Mineral Resource, but also define the modifying factors in-order to subsequently convert the Mineral Resource to an Ore Reserve. Further technical studies, as part of an initial scoping study to be carried out during 2013, will include but not be limited to; Mineralogy, Metallurgy, Geo-technical, Mining, Infrastructure and Hydrological.

### Peterlumbo satellite targets

(Peterlumbo JV)

During the quarter, first pass soil sampling and analysis showed extensive high silver-in-soil results for the eastern part of the Peterlumbo tenement on a coarse 500m grid. These delineated new high-priority targets in covered areas; Hector, Hector North and Ajax, that have strike lengths of 2km to 5km and highly anomalous silver-in-soil values up to 415 parts per billion ("ppb") silver. The new targets are larger in area and have similar or higher silver values than the Paris target signature at the same stage of exploration.

Additionally, soil sampling (100m infill) and analysis has also defined an east-west silver-in-soil anomaly, Helen East (5km northeast of Paris), at the east end of the six kilometre long broad swathe of soil anomalism referred to as Helen North (Figure 3). The Helen East anomaly is about the same size but less coherent than the Paris soil signature with similar peak silver-in-soil values of 1,027ppb silver.

The most recent soil target identified is the Alexander soil target, following a first pass soil sampling program (100m grid) completed over the western part of the Peterlumbo tenement (Figure 4). The 2.5km by 400m Alexander soil target, situated about 2km west of the Paris Silver Project, is about three times larger in area than the same signature for Paris and has strong and coherent soil geochemical anomaly which is a probable offset extension to Paris. The target is similar in shape, northwest orientation and silver-in-soil levels as the Paris soil target. Alexander has a very well defined plus 500ppb silver-in-soil core of 1,000m length and up to 200m width. This compares with a much smaller 500ppb silver core target at Paris of about 200m length.

The Alexander soil target has a peak of 823ppb silver compared with the isolated 1,629ppb silver peak at Paris.

A Cultural Heritage Clearance survey was undertaken in January over Alexander East, Helen East, Nankivel and Trojan Horse South areas. Whilst the hills at Nankavil were excluded from exploration work, the majority of the other areas were approved for exploration drilling. A suitable aircore drilling contractor has been secured for the first pass drilling on the newly identified anomalies from recent soil targets at Alexander East, Helen North and Trojan Horse targets that are within potentially truckable distances to the Paris Silver Project. On completion of the RCP program at Paris Silver Project, it is planned to extend the RCP drilling on satellite targets close to the Paris Silver Project such as Alexander after access is approved in about three months.

### Regional Eyre Peninsula Targets

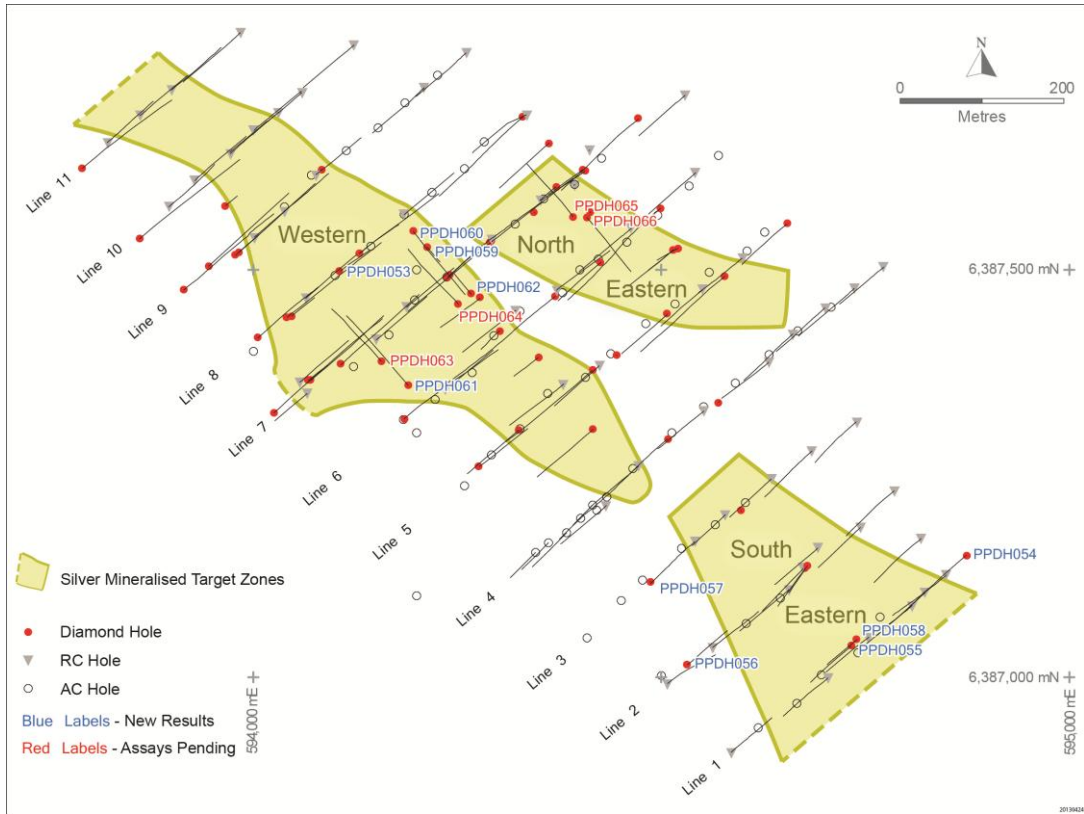
**Lake Gilles** (EL5109): Some results are still pending from the soil sample program completed at the end of 2012. Initial analysis of results confirms the gold and silver anomalies previously identified. Further work will be undertaken when all results are received. Along with other identified anomalies, an aircore drilling program is proposed, following access and work program approvals.

**Moonabie** (EL4841): A small soil sampling survey around a previously identified high gold value returned low values and no further work is planned. A small drilling program at Hopcroft Dam will follow access and work program approvals.

**Moseley Nobs** (EL4860): Following a review of historical work and recent soil sampling results, further soil sampling is planned to assist in identifying potential drill targets.

# OPERATIONS REVIEW contd.

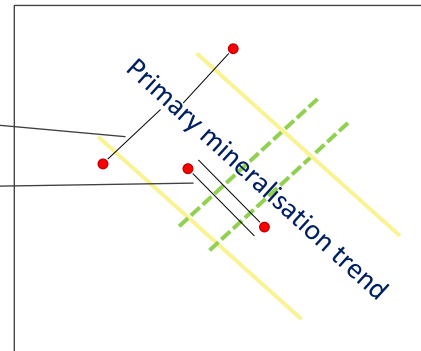
**Figure 2: Plan of Paris drilling**



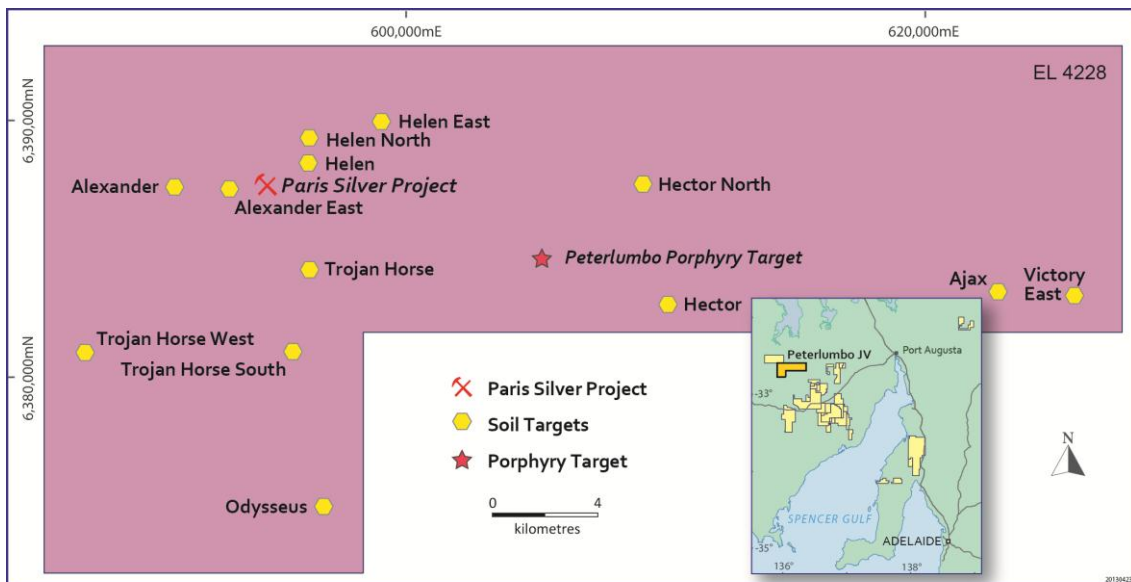
**Figure 2A: Schematic explanation of orthogonal drill holes**

Initial NE-SW holes testing primary mineralisation trend

Recent NW-SE “orthogonal” holes testing possible northeast mineralised structures in the central area of the Paris prospect



**Figure 3: Plan of Peterlumbo joint venture targets**



# OPERATIONS REVIEW contd.

**Table 1: New Paris drill holes and respective intersections for Quarter ending 31 March 2013**

Hole	Target Zone	Easting	Northing	Total depth (m)	Dip	TAZ	From (m)	To (m)	Intersection
PPDH053	Line 8, infill hole part of the resource confirmation drilling	594106	6387498	134.1	-70	56.9	59.0 80.0 84.0 96.8	65.6 82.0 95.0 112.0	<b>6.6m @ 267g/t Ag, 0.3% Pb and 0.44% Zn</b> 2.0m @ 43g/t Ag, 0.12% Pb and 0.1% Zn <b>11.0m @ 91g/t Ag, 0.21% Pb and 0.32% Zn</b> 15.2m @ 56g/t Ag, 0.22% Pb and 0.34% Zn
PPDH054	Line 1, infill hole part of the resource confirmation drilling	594874	6387150	201.3	-60	229.9			No reportable intersections
PPDH055	Line 1, infill hole part of the resource confirmation drilling	594732	6387038	135.5	-60	229.9			A 8.7m interval from 61.3m, with a top portion, 0.7m @ 31.7g/t Ag, 12.4% Pb and 0.08% Zn, a 5.0m zone of poor recovery / core loss and then 3.0m @ 595.9g/t Ag, 10.89% Pb and 0.03% Zn. Due to the poor recovery / core loss, results need confirmation via twin-hole PPDH058
PPDH056	Line 2, infill hole part of the resource confirmation drilling	594532	6387015	134	-60	49.9	72.0 90.0	73.0 92.0	1.0m @ 31g/t Ag, 0.1% Pb and 0.07% Zn <b>2.0m @ 170g/t Ag, 0.04% Pb and 0.49% Zn</b>
PPDH057	Line 3, infill hole part of the resource confirmation drilling	594487	6387117	99.1	-90	49.9	49.8	51.1	1.3m @ 39g/t Ag, 0.13% Pb and 0.21% Zn
PPDH058	Line 1, infill hole part of the resource confirmation drilling A twin hole to PPDH055 due to poor recovery / core loss	594740	6387046	98.0	-60	229.9	62.0 71.0 86.0	69.0 80.0 87.0	<b>7m @ 161g/t Ag, 1.56% Pb and 0.02% Zn</b> <b>9m @ 226g/t Ag, 3.79% Pb and 0.62% Zn</b> 1m @ 44g/t Ag, 0.14% Pb and 0.06% Zn
PPDH059	Drilled between Line 7 and 8, under line 7, to test near the recent high-grade intersection in PPDH043 of 12.15m @ 1,269g/t	594213	6387528	48.5	-60	139.9			Abandoned due to collapse above the mineralised zone and will be redrilled
PPDH060	Drilled from a position just south of Line 8, back and under Line 7	594196	6387547	206.3	-60	139.9	12.0 40.0 42.0 47.0 54.0 58.0 61.0 67.0 72.0 78.0 108.0 125.0	15.0 41.0 43.0 53.2 57.0 60.0 63.0 69.0 73.0 79.3 110.0 126.0	3m @ 41g/t Ag, 0.01% Pb and 0% Zn 1m @ 84g/t Ag, 4.9% Pb and 0.03% Zn 1m @ 56g/t Ag, 0.94% Pb and 0.02% Zn <b>6.2m @ 148g/t Ag, 1.02% Pb and 1.34% Zn</b> 3m @ 76g/t Ag, 0.13% Pb and 0.61% Zn 2m @ 63g/t Ag, 0.29% Pb and 0.43% Zn 2m @ 66g/t Ag, 1.93% Pb and 2.43% Zn <b>2m @ 206g/t Ag, 3.37% Pb and .29% Zn</b> 1m @ 44g/t Ag, 1.41% Pb and 0.1% Zn 1.3m @ 31g/t Ag, 0.52% Pb and 0.02% Zn 2m @ 32g/t Ag, 0.22% Pb and 0.27% Zn 1m @ 75g/t Ag, 3.78% Pb and 0.78% Zn



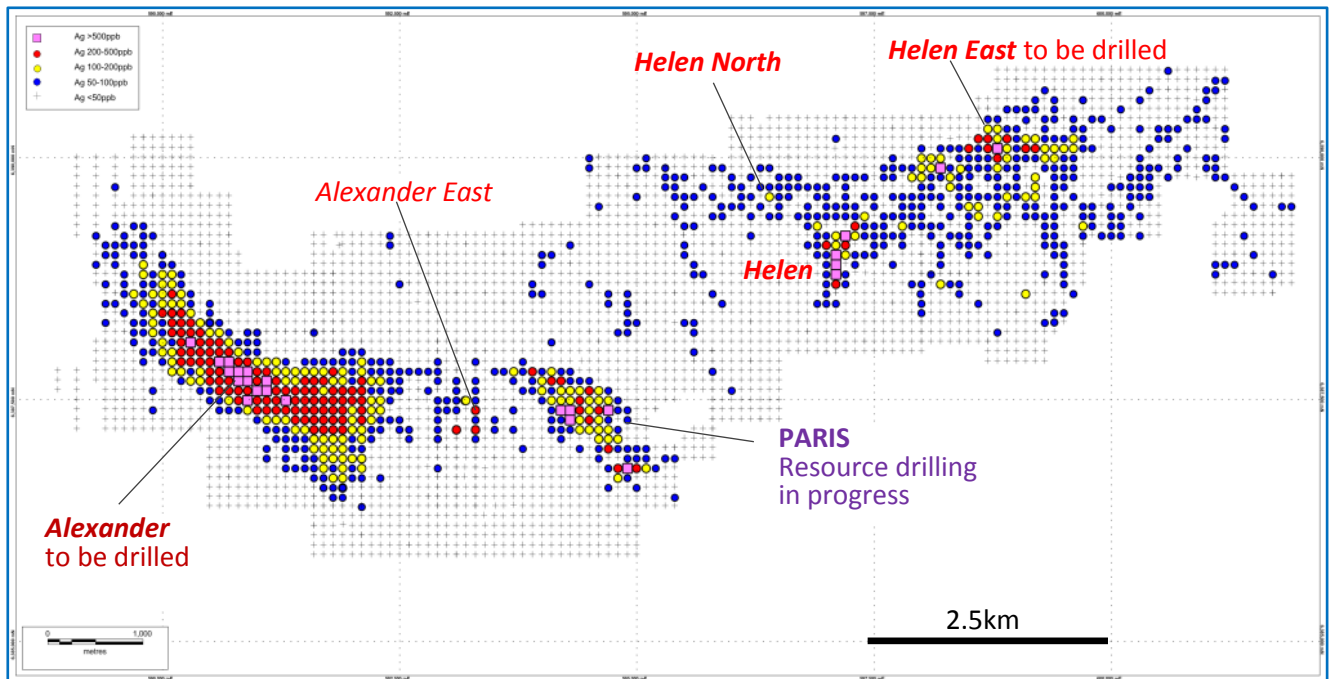
# OPERATIONS REVIEW contd.

**Table 1 contd.: New Paris drill holes and respective intersections for Quarter ending 31 March 2013**

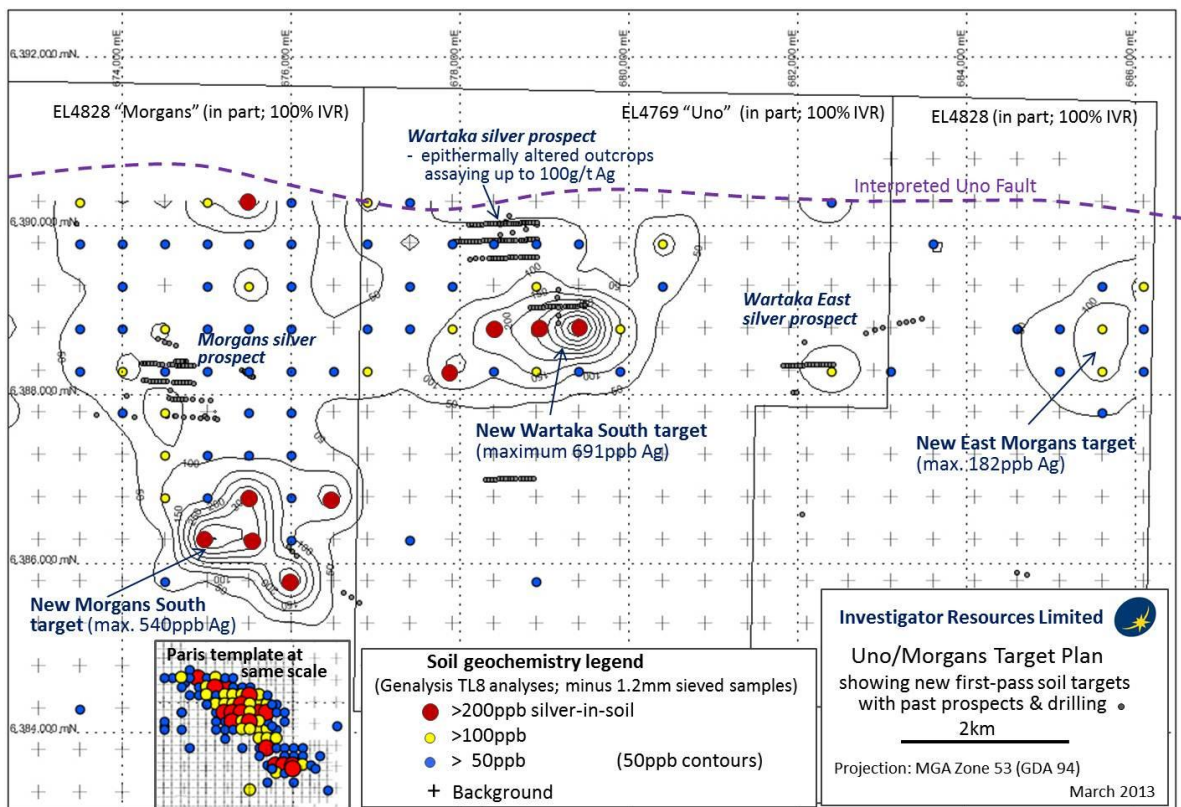
<b>PPDH061</b>	Drilled south of Line 7, towards the high-grade mineralisation in PPDH001	594190	6387358	228.2	-60	320.0	37.1 47.7 59.3 72.4 74.3 156.4	39.5 48.7 69.6 73.4 75.5 157.5	2.4m @ 52g/t Ag, 9.67% Pb and 0.06% Zn 1m @ 91g/t Ag, 0.06% Pb and 0.06% Zn <b>10.3m @ 542g/t Ag, 1.61% Pb and 0.46% Zn</b> 1m @ 78g/t Ag, 0.46% Pb and 0.16% Zn <b>1.2m @ 302g/t Ag, 1.04% Pb and 0.05% Zn</b> 1.1m @ 97g/t Ag, 0.07% Pb and 0.02% Zn
<b>PPDH062</b>	Drilled between Line 6 and 7, under line 7, to test near the recent high-grade intersection in PPDH043 of 12.15m @ 1,269g/t	594267	6387470	64.9	-60	319.9			Abandoned due to collapse above the mineralised zone and will be redrilled
<b>PPDH063</b>	Drilled between lines 6 and 7 closer to line 7 than hole PPDH061 and towards the high-grade mineralisation seen in previously reported holes; PPDH001 (4.75m @1,108g/t silver from 118m) and PPDH023 (10.03m @ 2,591g/t silver from 164.97m).	594157	6387387	178.0	-60	319.9			Assays pending, completed 11 Mar'13
<b>PPDH064</b>	Drilled between lines 6 and 7, under line 7. Testing the extension of the high-grade PPDH043 intersection, 12.15m @ 1,269g/t silver from 45.4m	594251	6387458	187.66	-60	319.9			Assays pending, completed 17 Mar'13
<b>PPDH065</b>	Between lines 6 and 7, drilling under line 7, is testing the extension of PPDH002 intersection, 11.6m @3,646g/t silver from 55m	594392	6387565	168.9	-60	319.9			Assays pending, completed 23 Mar'13
<b>PPDH066</b>	Between lines 6 and 7, was drilled south-east, under line 6 around hole PPDH026, testing the east-west structure seen in holes PPDH043, 060 & 064	594409	6387565	180.7	-60	139.9			Assays pending, completed 31 Mar'13

# OPERATIONS REVIEW contd.

**Figure 4:** Plan of new silver-in-soil geochemical targets near the Paris silver prospect, Peterlumbo field



**Figure 5:** Plan of new silver-in-soil geochemical targets at Uno/Morgans about 85km east of Paris.





## OPERATIONS REVIEW contd.

### Regional Eyre Peninsula Targets contd.

#### *Moseley Nobs contd.*

Access and work program approvals will be required before any drilling is undertaken.

**Botenella Gate** (EL4257): Results are still pending from the close-spaced (25m by 100m) soil sampling over the Botenella East gold/silver anomaly. An aircore drilling program will be planned following analysis of the results. Access and work program approvals are being sought.

**Barna Hill** (EL4726): Assays from the soil sampling completed at the end of 2012 were disappointing, with no silver analyses in excess of 50ppb.

**Mt Nott** (EL 4827): Analytical results are pending from a small infill soil sampling program to follow up the highest gold and silver results from the regional sampling program.

**Uno Range** (EL4769) and **Morgans** (EL4828) collectively referred to as Uno/Morgans: Results for the first-pass soil sampling on a 500m grid have identified two large silver in soil anomalies, Morgans South and Wartaka South. Each anomaly is delineated by contiguous samples returning more than 200ppb silver over about 2km strike length (Figure 5). The peak silver values were 691ppb and 540ppb. The Paris Project, at the same stage of 500m grid sampling, returned only one sample greater than 200ppb silver. This project is to be advanced as quickly as possible as the next priority after the drilling at Paris towards a resource estimate and to initiate drill testing of the Peterlumbo satellite targets around Paris.) with further soil sampling, geological mapping and geophysical surveys. As part of this process, access and work programs will be negotiated.

**Ellemy Joint Venture** (IVR 51%) [Caralue (EL3644) and Kimba

(EL3645)]: During the quarter no work was undertaken. Apart from the Norwood Prospect, there are possible graphite and manganese prospects, but are considered low priority.

**Yalanda Hill Joint Venture** (IVR 60%) [Yalanda Hill (EL4665), Yalanda East (EL4351) and Carpie-Puntha Hill (EL4376)]: Assays from the infill soil sampling around two anomalies identified from previous work returned further anomalous results of equivalent magnitude to the original assay results, but failed to significantly advance their quality as exploration targets.

#### **Yorke Peninsula**

Following access approvals, a gravity survey was completed at the Roundabout IOCG target (The Hummocks (EL4278)). The new gravity data is currently being processed and analysed. Based on the results of the initial magnetic target, at least two-holes will be drilled. Timing of the drilling is dependent on farming activities and could be as late as early 2014.

Analysis continues of the geophysical data collected over the Bute tenement (EL4618), to identify drill targets over Bute Ridge, Agery Magnetic target and Moonta South magnetic target.

#### **TEAM**

The Company has appointed Alex Thin as Commercial Manager, who will be responsible for all commercial aspects of joint ventures and the Paris silver project, as well as assisting with corporate promotion and investor relations. Alex previously worked for IVR as Business Development Manager from 2007 to 2009.

Alex is a mining engineer with extensive experience in Australia, Africa and the Pacific Rim. He has been intimately involved in all aspects of the management of mining and exploration companies including technical evaluation, feasibility studies, company promotion, investor relations, capital raising and joint venture management.

## CORPORATE FOCUS AND KEY PROJECTS

- Drill out and initial resource estimation for the recent Paris silver discovery
- Further discoveries of competitive deposits of silver, gold and copper using our first mover status and strong ground position in the reinvigorated southern Gawler Craton
- Become a silver, gold and copper developer through exploration and acquisition

## KEY PROJECTS

### Southern Gawler Craton:

1. Paris silver project and other silver gold or copper targets within Peterlumbo field
2. Regional East Eyre Peninsula - silver gold copper soil targets in other potential fields
3. Northern Yorke Peninsula - Roundabout/Ridgeback IOCG & Hillside-style copper targets.



## ABOUT INVESTIGATOR RESOURCES

Investigator Resources Limited is an active metals explorer focusing on silver, gold and copper discovery in South Australia's southern Gawler Craton.

Investigator Resources first listed in April 2007 as Southern Uranium Limited then changed its name to Investigator Resources in 2010 to reflect the company's exploration focus on South Australia and diversification towards precious and base metals.

Investigator Resources is leading an exploration resurgence on Eyre Peninsula by applying innovative concepts and exploration techniques to secure quality ground and to compete for the next major metal discovery in Australia. The recent Paris silver discovery within the

newly-recognised Peterlumbo metal field and other potential new fields have given Investigator Resources first mover opportunities across the region.

### CORPORATE

The quarterly corporate and administration costs were \$A199,000; and the direct exploration expenditure was \$A1,905,000.

The Company held \$A12,496,000 in cash at the end of the report quarter.

### CAPITAL STRUCTURE

- As at 30 April 2013
- Shares on issue 335,656,687
  - Unlisted Options 6,800,000

The top 20 shareholders at 29 April 2013 hold 43.22% of the shares on issue. Total shareholders 3,819

### Substantial Shareholders

As at 30 April 2013:

- CITIC Australia Pty Ltd – 19.99%
- Acorn Capital Limited – 5.03%

**ASX listing:** ASX code: IVR

### Directors and Management

- Mr Roger Marshall OBE (Chairman)  
Mr David Jones (Non Exec. Director)  
Mr Bruce Foy (Non Exec. Director)  
Mr John Anderson (Managing Director)  
Mr Garry Gill (CFO and Company Secretary)

## COMPETENT PERSON DISCLOSURE

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by John Anderson [BSc(Hons)Geol] who is a member of the Australasian Institute of Mining and Metallurgy and is bound by and follows the Institute's codes and recommended practices.

Mr Anderson is a full-time employee of Investigator Resources Limited. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Anderson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

For further information please contact:

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