

# HIGHLIGHTS - Maintaining drilling momentum on copper-gold and silver opportunities in the southern Gawler Craton

#### Paris-Nankivel Area:

- Final assays for September drilling supported potential for large silver targets at Diomedes and Argos North near the Paris silver resource.
- Associated new copper gold potential successfully demonstrated in Nankivel intrusive complex with airborne magnetic survey and scout drill program:
  - 15 RCP holes investigated accessible magnetic targets around Nankivel Rim and at Trojan Horse.
  - Additional copper intersections at Helen Copper Prospect

- Upgraded mineral system model (Figure 5) highlights three new priority and accessible targets for porphyry copper gold, skarn copper gold silver and silver gold. Gravity survey scheduled to prepare targets for drilling in the June quarter.
- Heritage surveys required to access other magnetic copper gold silver targets on the Nankivel Rim and the silver target areas at Argos North and Ares North.

#### Thurlga Joint Venture:

- Airborne geophysical survey completed and data interpretation continuing.
- A number of exploration targets have been identified, to be followed up in early 2015.
- A gravity survey will commence late January.

#### Northern Yorke Peninsula:

- Access agreements finalised for Roundabout & Spyall IOCG targets.
- Further geophysical modelling.
- Diamond drilling commenced mid-January.

## **OVERVIEW AND OUTLOOK SUMMARY**

Investigator continued an active exploration program during the December quarter to build on its discovery opportunities extending from the Paris Silver Project. Exploration was primarily directed towards:

- Assays after September drill testing in the Peterlumbo tenement for potential new silver-lead deposits, e.g. Argos North and Diomedes, in the large field surrounding the Paris Silver Resource.
- Initial drill testing of nearby copper-gold magnetic targets in the intrusive core to the Paris-Nankivel mineral system (Helen Copper, Nankivel Rim) and at Trojan Horse.
- Identification of exploration targets within the Thurlga JV tenement.
- Preparation for the commencement of drilling mid-January on the Northern Yorke Peninsula IOCG Prospects at Roundabout and Spyall.
- Continued review of all geological, assay, geophysical and geochemical data.

During the quarter, A\$1.11million was spent on exploration and A\$0.37million spent on corporate and administration costs.

Investigator Resources Managing Director John Anderson said "Contrary to the industry malaise, Investigator maintained an active exploration program during the December quarter on its developing discovery opportunities in South Australia.

Our focus was largely applied to the Peterlumbo and Thurlga tenements on Eyre Peninsula with airborne magnetic surveys and drilling of emerging copper-gold targets near our Paris silver resource. These developed from the prior breakthrough intersection of copper-gold-silver at the Helen prospect. This showed potential for other skarn copper deposits around the 12 kilometre long rim to the Nankivel intrusive complex.

We now see the intrusive complex offering porphyry and skarn copper targets at the centre of the Paris-Nankivel mineral system. An aureole of epithermal silver targets includes the Paris deposit and has potential to add to that resource.

Three new accessible targets have priority for the next round of drilling planned for the June quarter after preparatory gravity work. These are a) the Nankivel Central copper-gold target with porphyry potential; b) the Helen Southwest copper-gold skarn-style target; and c) a new untested silver-gold soil target at Nankivel West.

Other high-priority target areas for skarn copper in the Nankivel Rim and silver at Argos North and Ares North await heritage surveys before drilling later in 2015. The large potential silver targets at Diomedes, Hector and Ajax will be re-assessed under the new Paris-Nankivel model.

In the meanwhile, I am pleased to say that after extended access negotiations, drilling of the Roundabout and Spyall IOCG targets on Yorke Peninsula with 400m diamond holes are in progress." Mr Anderson added.

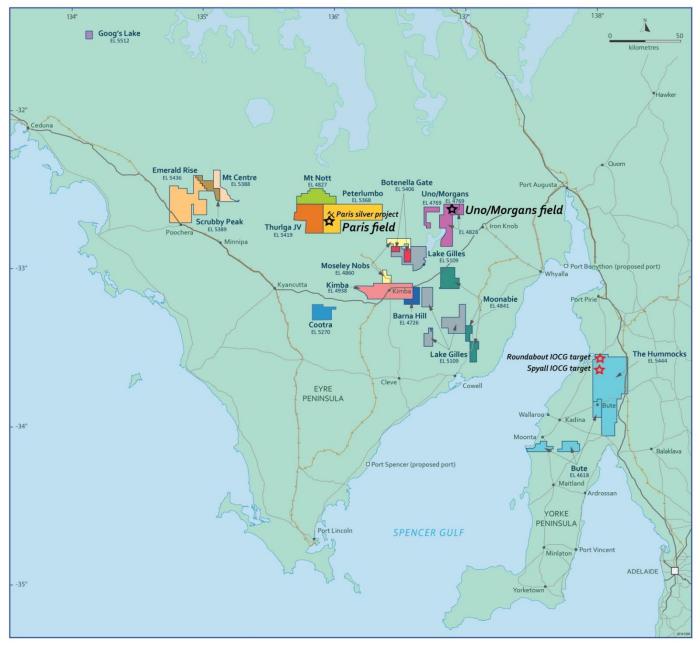


Figure 1: Investigator Resources - Plan showing Tenement holding and key Projects

#### **Peterlumbo Project** (EL5368 - IVR 100%) [Refer to Figure 1, 2, 3, and 4]:

As previously announced (Investigator ASX Releases; 1 December 2014), the assay results for the final 10-holes (PPRC320 to PPRC329) were received and assessed. These holes were part of the 60-holes (6,799m) that were completed at depths of between 36m and 204m (average depth 113m) during September 2014. The highlight of the drill campaign was the copper, gold and silver intersections near the Helen prospect with the drilling of the first magnetic target in the district. This demonstrated the connection between silver-lead and copper-gold mineralisation around Paris and showed at least 20km of strike potential with untested magnetic targets around the rim of the Nankivel granodiorite, at Trojan Horse and Odysseus.

Drilling to the south of Paris, about 750m south-east of the Paris Silver Resource, intersected strong argillic alteration with variable amounts of limonite, as well as what is currently interpreted to be a hydrothermal silica breccia zone. Of the two holes drilled, PPRC328 had encouraging mineralisation; 3m @ 0.21 % lead from 21m and 9m @ 0.17% lead from 72m. These values are similar to the lead and zinc assays seen in the Paris silver mineralisation. Results show potential extensions to the Paris trend to the south-east that warrant further exploration consideration.

## **OPERATIONS REVIEW**

Broad lead intersections with zinc mineralisation and anomalous silver, in altered volcanics and breccias at the Diomedes Prospect, 7km north-east of Paris, indicate upper levels of deeper untested Paris-style system. The results indicate potential to the undrilled depth and lateral extensions to the Diomedes target area. The best Diomedes assay results are:

- PPRC320 3m @ 0.33% lead from 39m;
- PPRC322 21m @ 0.27% lead from 159m;
- PPRC323 9m @ 0.24% lead from surface, 33m @ 0.54% lead from 63m, 30m @ 0.53% lead and 0.23% zinc from 108m (including 12m @ 1.02% lead and 0.4% zinc from 111m and 6m @ 0.19% lead and 0.22% zinc from 126m); and
- PPRC325 3m @ 0.21% zinc from 105m.

The Diomedes area has a large spectral anomaly at the surface which is considered to reflect the high degree of alteration in the upper volcanics. The spectral anomaly extends well beyond the drilling and presents a large and highly prospective target area for underlying silver and lead around the interpreted vent breccia.

The recent detailed airborne magnetic survey and subsequent modelling undertaken over the Nankivel Rim Target area identified copper-gold targets (Investigator ASX Releases; 3 December 2014). The magnetite-hosted copper-gold mineralisation and associated silver-copper intersection confirmed the predicted potential for copper-gold associated with the Paris silver-lead mineralisation. Geological affinities now recognised between Paris and Helen are improving our targeting for both silver-lead and copper-gold and prioritisation of the new magnetic targets (Figure 3).

Re-modelling of the Helen magnetic target with the latest airborne data confirms two holes tested the very top of a depth-extensive magnetic body (Figure 4). Two additional holes were drilled to a greater depth (*circa* 240m) during the December 2014 drilling program.

The Helen copper prospect lies on the rim of the interpreted Nankivel granodiorite about 4km east of Paris. The new modelling shows at least eight other magnetic targets, mostly larger in size than the Helen magnetic body, around the 10km Nankivel Rim. Five of these are accessible for drill testing, with access to the remainder subject to heritage surveys to be sought early in 2015.

At Trojan Horse, another four magnetic targets modelled from existing data and supporting copper soil anomalies were also drilled during the December 2014 drilling.

Commencing early December 2014, a total of 15 holes (2,937m) reverse circulation percussion ("RCP") were drilled and completed before the Christmas break. The hole depths were between 120m and 294m (average depth 196m) and were drilled vertically and inclined. Holes, drilled at Helen (two holes - 486m), Nankivel (four holes - 993m) and Trojan Horse (nine holes - 1,458m), were targeting the magnetic anomalies identified with the latest airborne survey, as well as historic data; geophysical, sampling and mapping.

As previously announced (Investigator ASX Releases; 29 January 2015) initial analysis from the two RCP holes at Helen (PPRC330 and 331) targeted extensions of the mineralisation intersected in the previously drilled holes (PPRC234 and 236) showed similar geology of dolomitic assemblages and calc-silicates along with magnetite alteration and trace fluorite. Associated copper lead zinc silver and gold mineralisation confirms the skarn style mineralisation potential although the copper values are lower than the initial PPRC234 intersection and the continuity of the respective intersections is difficult to interpret (Figure 4). Other holes at Nankivel Rim (PPRC332 to 335) were scout drilled on similar but lower intensity magnetic features on the rim of the intrusive complex. Of note was potassic alteration of the granodiorite complex accompanied by coarse possible replacement magnetite alteration and narrow intersections of anomalous gold, zinc and lead, again confirming the potential for skarn copper-gold mineralisation around the extensive and largely untested Nankivel Rim. The holes at Trojan Horse were disappointing with only weak copper intersected in one hole and the holes largely finishing in mafic volcanics at the base of the Gawler Range Volcanic pile. Although this is a prospective position, the lack of mineralisation in the holes indicates the anomalous copper-in-soil geochemistry associated with the magnetic targets is derived from the high copper backgrounds in the magnetic mafic volcanics, rather than from another intrusive complex like Nankivel.

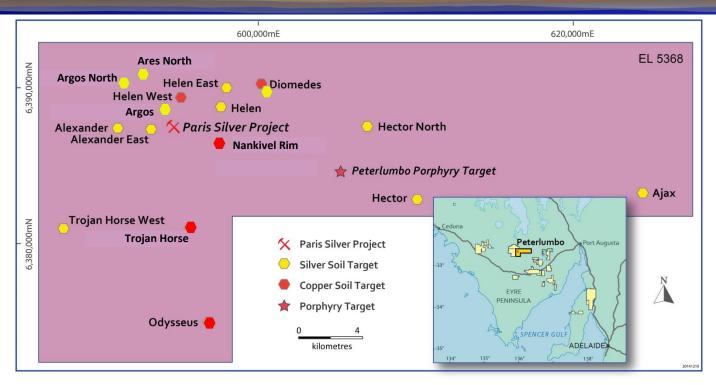
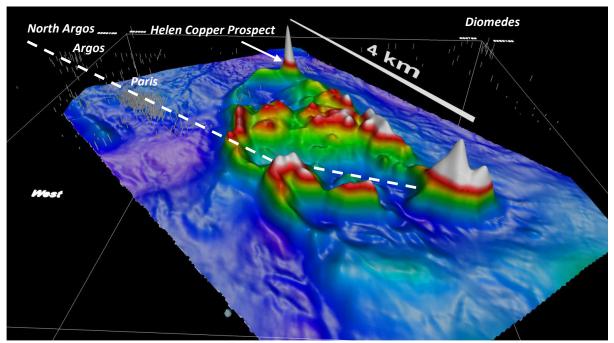
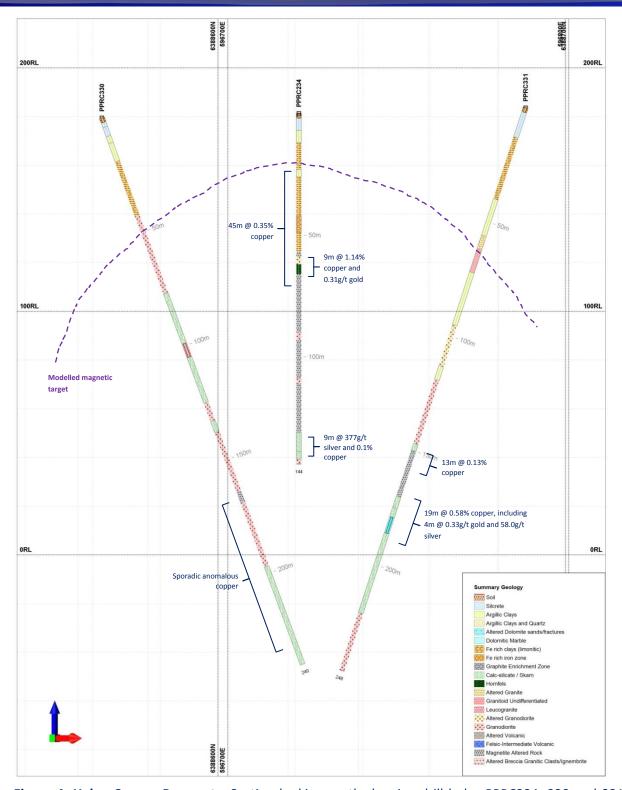


Figure 2: Peterlumbo - Plan of the Targets



**Figure 3:** *Nankivel Rim* - Oblique view to north of the magnetic image for the new airborne survey. The magnetic anomalies (shown as red and white peaks), including the Helen prospect, generally rim the Nankivel granodiorite. The Helen intersection shows the copper-gold potential of the multiple magnetic targets. Drill traces are shown in grey. Key geological elements of interpreted north-east mineralising dykes (yellow) and extensions of the Paris-Argos North spectral trend (white dash) are indicating connections between the silver-lead and copper-gold targets around the Nankivel granodiorite.



**Figure 4: Helen Copper Prospect** - Section looking north showing drill holes PPRC234, 330 and 331. The holes were testing the top of the depth-extensive magnetic body.

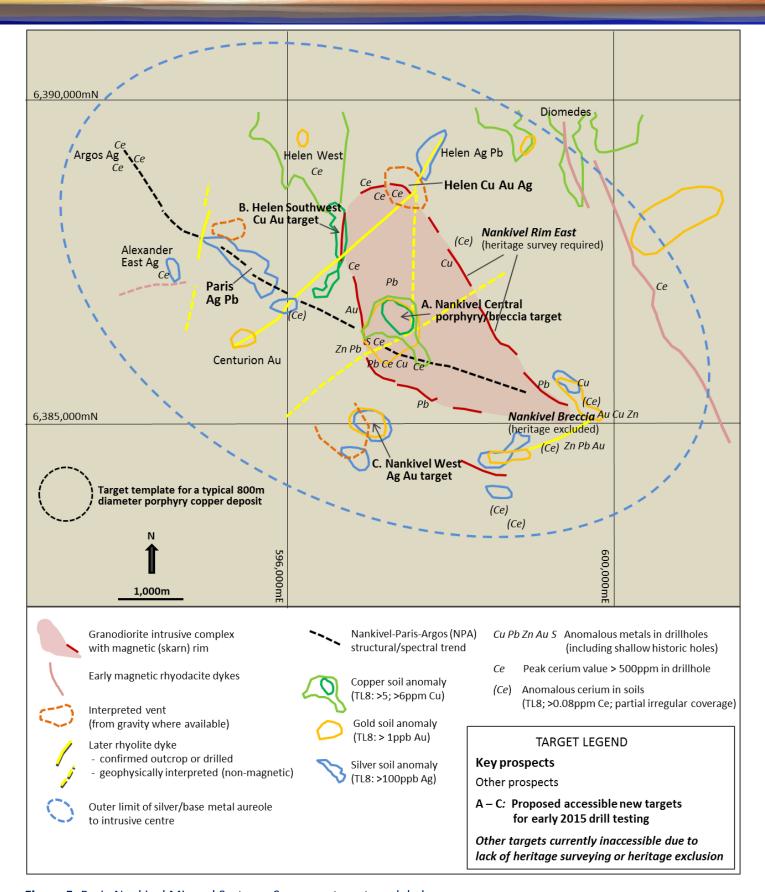


Figure 5: Paris-Nankivel Mineral System - Summary target model plan

### **OPERATIONS REVIEW**

An infill soil survey is proposed to assist targeting within the eastern side of the Nankivel complex. The three new undrilled targets, cleared by heritage surveys, at Nankivel Central, Helen Southwest and Nankivel West are proposed for drill testing in the June Quarter. A gravity survey over the core of this system or along cross cutting structures that are prevalent in the magnetics is planned for early February 2015. The data and its interpretation will assist with the identification of both high magnetic and gravity targets.

There are a number of other high priority copper-gold targets around the Nankivel Rim still to be tested, but these areas are pending heritage clearance. Work is on-going to enable access to these targets later in 2015.

#### **Regional Eyre Peninsula Projects**

**Kimba** (EL4938) (IVR 51%) [Refer to Figure 1]:

The Company has received Ministerial approval for the transfer of Ellemby Consulting Pty Limited 49% interest to Investigator and the process is being finalised.

There has been limited activity on the tenement as the focus has been on the other higher priority East Eyre Projects during the December Quarter.

**Thurlga Joint Venture** (Gawler Resources Limited, earning to 75% and Manager, *Peninsula Resources/Adelaide Resources*) [Thurlga (EL5419) [Refer to Figure 1]:

In early November 2014, a 3,500line km @ 100m line space aeromagnetic survey was flown, as well as detailed aerial imagery. Interpretation of the geophysical data continues, with a number of exploration targets already identified that will be refined by the proposed gravity and soil surveys during the first quarter of 2015.

Several field trips have been undertaken during the quarter, with preliminary geological mapping and rock-chip sampling, to determine the suitability of the soils for sampling. A gravity survey is proposed, consisting of two traverses across the regional gravity anomaly, to be completed in the first quarter of 2015.

A 500m by 500m soil sampling survey over the 333km<sup>2</sup> tenement is also proposed to commence in the first quarter of 2015.

#### **Northern Yorke Peninsula IOCG Targets (IVR 100%)**

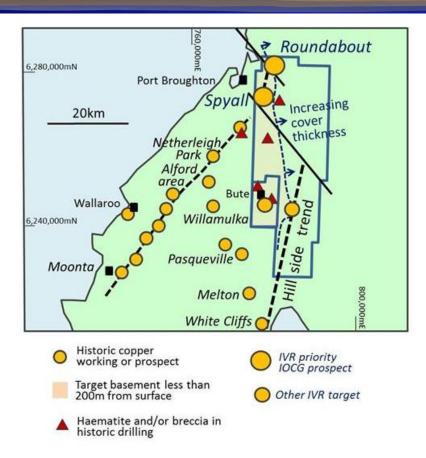
**The Hummocks** (EL4278) and **Bute** (EL4618) (IVR 100%) [Refer to Figure 1 and 5]:

Access Agreements have been finalised with the landholders at the Roundabout and Spyall Prospects (The Hummocks) to enable drilling to commence. A suitably experienced diamond drilling contractor has been appointed to test geophysical (gravity and magnetic) targets under 50m to 200m cover on the regional extensions to the historic Moonta copper field.

Drilling commenced in mid-January 2015 at the Roundabout Prospect with a proposed ±400m vertical diamond hole, a magnetic target. On completion of the Roundabout hole, a second diamond drill hole (±400m diamond hole at an inclination of 70° to the south) at Spyall, targeting a combined magnetic and gravity target, will commence.

The Company is working with the landholders to ensure that the most 'environmentally friendly' techniques are utilised to minimise disturbance to the farmland, *inter alia* the laying of 'coconut matting' for all vehicles to drive on in the field. As far as possible, Investigator is utilising local suppliers, *i.e.* for water cartage and drill-site rehabilitation.

There has been no activity associated with the Bute tenement during the quarter, with the team concentrating on the preparations for The Hummocks drilling, as well as the high-priority East Eyre Projects.



**Figure 6: Northern Yorke Peninsula** - Plan of key targets within Investigator's tenements and relation to copper deposits and interpreted prospective trends

#### **West Eyre Peninsula Projects**

Mt Centre (EL53880), Scrubby Peak (EL5389) Emerald Rise (EL5436) and Goog's Lake (EL5512) (IVR 100%) [Refer to Figure 1]:

There has been no activity on the tenements as the focus has been on the higher priority Peterlumbo and Northern Yorke Peninsula Projects during the December Quarter.

#### **Native Title**

Investigator welcomes and congratulates the Barngarla people for the recent (22 January 2015) Federal Court announcement granting the Barngarla people partial native title over part (44,500km²) of South Australia's Eyre Peninsula.

Some of Investigator's tenements on Eyre Peninsula coincide with the Barngarla area. These include the Uno Range and Morgans tenements where our advanced exploration activities are managed and will continue to be managed under a current Native Title Mining Agreement with the Barngarla people. Investigator's other key tenement area at Peterlumbo (Paris) is subject to existing Native Title held by the Gawler Range Group which includes the Barngarla people. Investigator has signed an Acceptance Document in respect of the Gawler Ranges ILUA (Indigenous Land Use Agreement) and manages its advanced exploration with the Gawler Range Group under that agreement.

Both the Gawler Ranges ILUA and NTMA with the Barngarla enable Investigator to operate on its Projects. We consider that the recent Federal Court decision relating to the Barngarla area will not impact on Investigator's exploration activities in that area. The Company has good working relations with all indigenous groups, as well as other interested and affected parties where it operates.

#### **New Applications and Opportunities**

The Company is and will continue to engage in discussions with potential joint venture and farm-in partners to supplement and expedite the development of the Company's existing projects and objectives.

## **TENEMENT QUARTERLY STATUS**

Table 1 summary's the changes to Investigator Resources Limited tenement holding during the December 2014 Quarter. Figure 1 shows the location of the Investigator tenements.

Table 1: Summary of Investigator Resources Limited tenement changes during the December 2014 Quarter

Tenement			
Number	Tenement Name	Registered Holder	Note
Project: East Eyre Peninsula (IVR 100%)			
5109	Lake Gilles	GRL	Current
4841	Moonabie	GRL	Current
4860	Moseley Nobs	GRL	Current
5406	Botenella Gate	GRL	Current
4726	Barna Hill	GRL	Current
4827	Mt Nott	GRL	Current
5229	Moongi	GRL	Surrendered effective 8 Oct'14
5230	Drekurmi	GRL	Surrendered effective 8 Oct'14
5270	Cootra	GRL	Current
Project: Peterlumbo JV (IVR 100%)			
5368	Peterlumbo	Sunthe	Current
Project: Uno/Morgans (IVR 100%)			
4769	Uno Range	GRL	Current
4828	Morgans	GRL	Current
Project: West Eyre Peninsula (IVR 100%)			
5388	Mt Centre	IVR	Current
5436	Emerald Rise	IVR	Current
5389	Scrubby Peak	IVR	Current
5512	Googs Lake	IVR	Current, granted 27 Nov'14
Project: Northern Yorke Peninsula (IVR 100%)			
5444	The Hummocks	GOY	Current
4618	Bute	GOY	Current
Project: Adelaide Geo-Syncline (IVR 100%)			
5153	Witchitie	IVR	Surrendered effective 8 Oct'14
Project: Kimba/Caralue JV (IVR 51%, Ellemby 49%) *			
4938	Kimba	IVR (51%), Ellemby (49%)	Current
Project: Thurlga JV (PRL, GRL earning to 75%)			
5419	Thurlga	PRL, GRL earning to 75%	Current
Notes:	•		

#### Notes:

IVR - Investigator Resources Ltd.

Sunthe - Sunthe Uranium Pty Ltd, a wholly owned subsidiary of Investigator Resources Ltd.

GRL - Gawler Resources Pty Ltd, a wholly owned subsidiary of Investigator Resources Ltd.

GOY - Goyder Resources Pty Ltd, a wholly owned subsidiary of Investigator Resources Ltd.

Ellemby - Ellemby Consulting Pty Ltd.\*

PRL - Peninsula Resources Ltd, a wholly owned subsidiary of Adelaide Resources Ltd.

\* Ellemby has served notice of their wish to withdraw from the joint venture, effective 29 Oct'14, pending finalisation of the transfer approval process.

There were no changes to the beneficial percentage interests in farm-in or farm-out agreements held or relinquished during the quarter.

## CORPORATE FOCUS AND KEY PROJECTS

- Upgrade the initial resource estimation for the recent Paris silver discovery by testing the lateral extensions.
- Further discoveries of competitive deposits of silver, lead, gold and copper using our first mover status, strong ground position and proprietary soil geochemical dataset in the reinvigorated southern Gawler Craton.
- Become a silver, lead, gold and copper developer through exploration and acquisition.

#### **KEY PROJECTS**

#### **Southern Gawler Craton:**

- Paris silver project and other silver lead gold or copper targets within Peterlumbo field.
- Regional East Eyre Peninsula silver lead gold copper soil targets in other potential fields such as Uno/Morgans.
- Northern Yorke Peninsula -Roundabout/Ridgeback IOCG & Hillside-style copper targets.



The quarterly direct exploration expenditure was A\$1.11million, and associated corporate and administration costs were A\$0.37million. The Company held A\$4.63million in cash at the end of the report quarter.

#### **About Investigator Resources**

Investigator Resources Limited (ASX code: IVR) is a metals explorer with a focus on the opportunities for greenfields silver, gold and copper discoveries offered by the resurging minerals frontier in South Australia's southern Gawler Craton.

The Company announced its maiden Inferred Mineral Resource for its 2011 Paris silver discovery of 5.9Mt at 110g/t silver and 0.6% lead, containing 20Moz silver and 38kt lead credit (at a 30g/t silver cut-off) in October 2013.

Investigator Resources Limited has developed and applied a consistent and innovative strategy that defined multiple quality targets, including the Paris silver discovery and at least two other epithermal fields at Ajax and Uno/Morgans, giving Investigator Resources Limited first mover opportunities across the Uno Province.

The Paris mineralisation is considered to have formed at the same time as the Olympic Dam IOCG deposit and opens up new target potential for epithermal, porphyry and IOCG-style deposits in the southern Gawler Craton. This includes potential for copper gold IOCG deposits on Yorke Peninsula, where Investigator Resources Limited recently announced the high-priority Roundabout and Spyall IOCG geophysical targets near Port Pirie.

#### **Capital Structure**

As at 27 January 2015:

- Shares on issue 462,287,960
- Listed Options 114,179,704
- Unlisted Options 11,510,000

The top 20 shareholders at 27 January 2015 held 37.26% of the shares on issue.
Total shareholders: 3,512

#### **Substantial Shareholders**

As at 27 January 2015:

- CITIC Australia Pty Ltd 14.51%
- Acorn Capital Limited 5.99%

ASX listing code: IVR

#### **Directors and Management**

Mr Roger Marshall OBE (Non Exec. 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 COMPLIANCE STATEMENT

The information in this report relating to exploration results is based on information compiled by Mr. John Anderson who is a full time employee of the company. Mr. Anderson is a member of the Australasian Institute of Mining and Metallurgy. Mr. Anderson has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Anderson consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The information in this report that relates to Mineral Resources Estimates at the Paris Silver Project is extracted from the report entitled "Maiden Resource Estimate for Paris Silver Project, South Australia" dated 15 October 2013 and is available to view on the Company website www.investres.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.