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Geological breakthrough advances potential at Paris silver prospect

- Sulphide-bearing breccias intersected adjacent to and under Paris silver zones
- Prospective feeder vent structure interpreted along much of the length of the Paris prospect
- Adds further resource potential at shallow depths
- Significantly advances Paris system and surrounding Peterlumbo field as premium opportunities for further silver and copper discovery
- Infill drilling progressing well, up to diamond hole PPDH097 with another 35 holes planned to be directed to the improved target model
- First drilling of larger nearby prospects (Alexander silver, Hector silver and Peterlumbo copper targets) anticipated in July.

Investigator Resources Ltd (ASX Code: IVR), active explorers on the Eyre and Yorke Peninsulas, South Australia for silver and copper/gold, is pleased to announce a significant advance in the geological understanding of the Paris silver prospect 70km northwest of Kimba township and within the Peterlumbo Joint Venture tenement (75% IVR).

Recent drilling has intersected extensive mineralised breccias that explain the prior uncertainty about the Paris geology and add to the silver potential as subvolcanic vent breccias underlying and reworking the earlier flat-lying silver deposits in the basal volcanics.

The improved geological model enhances the potential for more vent-related silver deposits within Paris and for epithermal and vent breccia deposits at the surrounding larger targets of Alexander and Hector; and for the porphyry copper gold target under obscuring gravel cover at Peterlumbo Hill.

Managing Director John Anderson said *"The new intersections and upgraded target model are a great credit to the Investigator team that has persisted with the difficult geology and drilling conditions at the Paris silver prospect.*

The three diamond rigs currently at the Paris silver project are now producing good core recoveries at a reasonable production rate. This has enabled the geological breakthrough that we have been waiting for that shows Paris is in a large multiphase minerals complex with a lot of potential upside for more discoveries of silver and copper."

Drilling

Drilling at the Paris silver prospect is progressing well with three diamond rigs operating, mostly drilling day and night shifts to complete infill drilling of the initial 1,000m x 400m silver-in-soil geochemical target.

Since the last update on 30 May (ASX Release: "Paris Silver Project: Drilling and Assay Update"), 25 holes have been completed (PPDH073 to 097 – Figure 1) with drilling on-going.

The drilling of orthogonal holes at right angles to the original 100m spaced north easterly drill lines continued up to and including hole PPDH080. The drilling orientation reverted to parallel with the original drill lines from hole PPDH081. Many of the recent holes have infill drilled between prior drill lines on intermediate Lines 5.5, 6.5, 7.5, 8.5 and 9.5.

Processing and assaying of the drill core is on-going with results awaited for holes PPDH068 onwards.



Figure 1: Plan of new drilling and prospective breccia intersections

Breccia intersections

The first altered breccias were recognised in hole PPDH082 on Line 7.5 and sharpened logging observations thereafter. (A breccia is a broken rock made up of different sized angular fragments (clasts) in a finer matrix. Breccias often indicate a prospective subvolcanic or high-level intrusive environment conducive to strong and often repeated hydrothermal mineralising events).

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Extensive volcanic and hydrothermal breccias were recognised in subsequent holes PPDH086 on Line 8.5, PPDH084 and 088 on Line 9, PPDH092 on Line 9.5, then in PPDH087, 089 and 091 on Line 5.5; and PPDH093 and 097 on Line 7. Breccia clasts include granite, volcanic, silica/quartz, sulphides and altered dolomite (See photos on page 7). These breccias have been viewed in the field by four experienced geologists who agree on the logging descriptions and geological significance.

Of particular note is the extreme alteration and mixed nature of the clasts including massive sulphide clasts (clasts dominantly made up of sulphides) in holes PPDH091, 093 and 097 (e.g. Photos 4, 5 & 6).

The nature and geometry of the PPDH091 intersection in relation to other holes on the section (Figure 2a) strongly supports a vent breccia model for Line 5.5 (Figure 2b). The highly mixed ("heterolithic") nature of the breccia clasts (e.g. Photo 5) indicates a strong mineralising environment of vent pulses and collapse. It is likely the flat-lying silver deposits initially drilled at Paris were "reworked" in the central part of the Paris prospect by collapse into the vent breccia.



Figure 2a: Paris silver prospect - Section for Line 5.5 summarising logged geology (Distribution of breccia symbols is only illustrative)

Upgraded silver potential

The massive sulphide clasts and matrix sulphides described in some places make the vent breccias a new silver target adjacent to and under the prior North Eastern and Western Silver Zones and still at shallow depths of 50 to 150 metres (Figure 2b).

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Page 3

The interpreted collapse of the flat-lying silver mineralisation back into the vent breccia created a highly altered and disjointed geology that thwarted early recognition of the silver potential in the central part of the Paris prospect.

Similar breccias are now recognised in orthogonal hole PPDH074 between Lines 6 and 7 and in new holes PPDH093 and 097 on Line 7, showing the prospective vent extends at least from Line 5.5 to near Line 7.

Figure 2b: Paris silver prospect – Interpretive Section for Line 5.5 showing expanded silver potential (Legend as for Figure 2a)



The reinterpreted section for Line 7 (Figure 3 below) explains the previous hit and miss of silver intersections between the North Eastern and Western Zones. As for Line 5.5, the vent breccia has overprinted the prior flat-lying silver mineralisation and disrupted the main shallow west-dipping sheet. PPDH097 and 093 show the transition from the massive sulphides as in PPDH002 to the heterolithic breccia above the vent structure that probably extends down through the basement dolomite.

The high degree of brecciation and clay alteration has hindered the geological interpretation until this breakthrough. Anomalous flow banded rhyolite with elevated fluorite, rare earth elements and uranium are preserved on the margins of the prospect as initially seen in hole PPDH001 (Photo 1). The rhyolite is a possible mineralising volcanic and precursor to the strong brecciation and alteration towards the centre of the prospect where much of the previously logged clay-rich rocks are likely to be highly altered breccias (Photo 2).

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With individual fragments of granite and sulphide now likely over several metres width, previous interpretations of multiple granite dykes and unexplained isolated silver sulphides within the central zone can be alternatively explained as prospective breccias. Holes prior to PPDH081 will be reviewed for breccia textures and sulphide clasts in the context of the upgraded potential.





For example, the isolated silver intersections in holes PPDH006 and 043 on Line 7 (Figure 3 above) are now explained as rafts of sulphide connecting the North Eastern and Western Zones. This is supported by a two metres massive sulphide intersection at the top of the breccia system in PPDH093 and raises the opportunity for semi-continuous mineralisation to bridge the gap between the original target zones.

Multiple prospective vents may occur along the vent structure (Figure 1). On Lines 7 and 8, the vent structure is interpreted to extend down into the basement dolomite under the breccias as shown on Figure 3. Further north, the prospective structure is likely to follow the breccia intersections north to near Line 10 for an initial strike length of 500m as shown on Figure 1.

The recognition of this longitudinal vent structure along the axis of the Paris prospect and the interpreted vent breccia on Line 5.5 also raises the likelihood that the vent structure extends into the South Eastern Zone from Line 4 southwards (Figure 1). The South Eastern Zone will therefore be re-incorporated into the resource studies with additional drilling based on the new model also planned in that southern zone.

Conclusions

The key role of the volcanic and subvolcanic vent breccias raises the potential for additional shallow silver zones within the Paris silver prospect.

On-going drilling is being adjusted to the improved target model with adequate infill drilling expected by mid-July to enable the maiden resource estimate late in the September quarter.

The revised geological setting at Paris gives added support to the larger northwest trending Alexander silver target as being associated with an offset of the same northwest vent structure (Figure 4).

The upgraded target model also gives further credence for favourable basal volcanic and subvolcanic setting elsewhere in the Peterlumbo field at the very large Hector silver target and associated Peterlumbo porphyry copper target. The outcropping siliceous caprock and rhyolite breccia at Trojan Horse has the right high-sulphidation epithermal characteristics to support the covered Peterlumbo porphyry target nearby.



Figure 4: Peterlumbo field – silver-in-soil targets & porphyry copper target location

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Photo 1: Relatively unaltered flow-banded rhyolite breccia. Pre-alteration basal volcanic - typically anomalous in fluorite, rare earth elements & uranium (PPDH001 – 130m)



Photo 3: Hydrothermal breccia with dark grey sulphide mineralisation & vuggy silica clasts (arrow) (PPDH091)



Photo 5: Galena (lead sulphide associated with silver) rich sulphide clast (arrow) (PPDH097 – 78m)



Photo 7: Iron-rich oxidised breccia above dolomite contact (PPDH082 – c. 53m)



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Page 7

Photo 2: Strongly clay altered hydrothermal breccia with rarely preserved texture (PPDH093 – 74.5m)



Photo 4: Heterolithic (mixed) breccia with massive sulphide clast (rear of pencil) with quartz & granite clasts (PPDH097)



Photo 6: Massive sulphide clasts (arrows) in strongly altered possible vent breccia (PPDH091 – 82.4m)



Photo 8: Galena infilling brecciated dolomite (PPDH085 – 112m)



Investigator Resources overview

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

Investigator Resources has developed and applied a consistent and innovative strategy that defined multiple quality targets, including the Paris silver discovery within the newly-recognised Peterlumbo metal field, giving IVR first mover opportunities across the province.

The Paris/Peterlumbo 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 IVR recently announced the high-priority Roundabout IOCG magnetic target near Port Pirie.

Peterlumbo Tenement and Joint Venture

The Paris prospect is the most advanced of five priority targets within the Peterlumbo epithermal field, located about 400km northwest of Adelaide. The Peterlumbo field is situated at the west end of a 583km² tenement area secured under EL4228.

The tenement area is subject to the Peterlumbo Joint Venture between Investigator Resources (holding 75% interest) and Mega Hindmarsh Pty Ltd (25% interest).

Investigator Resources is managing the joint venture that made the greenfields Paris silver discovery during 2011.

Competent Person Statement: 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.

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