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# ASX: IVR ASX ANNOUNCEMENT



**16 December 2024** 

# PARIS DEFINITIVE FEASIBILITY UPDATE

Following extensive analysis, the Board of Directors has determined that the release of the Paris Definitive Feasibility Study (DFS), anticipated in 2024, will be delayed to enable further optimisation work to be undertaken on key aspects of the Project development plan. The Board acknowledges the significance of this decision and shares the frustration of shareholders at the delay, however development of the DFS has required inputs from numerous sources, and multiple iterations of mining and processing scenarios, some of which have changed since the 2021 Pre-Feasibility Study (PFS) analysis. The Board recognises that delivering a successful silver mining operation at Paris is crucially dependent on presenting the most accurate and up-to-date DFS possible.

Offsetting an improved silver price, increased mining and processing costs, as well as increased pre-production capital expenditure have resulted in financial metrics that do not, at first-pass, match those presented in the 2021 PFS<sup>1</sup>. However, there remain several opportunities to add value to the Project that the Company has not yet been able to fully investigate. The Board regards it as critically important to fully examine these opportunities and ensure that the final DFS presents the best possible case for the Project.

The following additional aspects of the Project will be further studied.

**Silver Price**: Re-consideration of the silver price assumptions in the DFS is necessary given its continual improvement and market sentiment. The base case silver price used in the PFS was A\$34/oz (A\$38/oz was considered for the upside case). The most recent DFS work has been on an assumed silver price of A\$45/oz. The average price of silver for the last three months has been A\$47.86, moving up to A\$48.82 for the last two months and has averaged A\$48.21 for the last 30 days. More recently, the silver price has been close to and over A\$50/oz.

**Open pit optimisation**: Pit optimisation is a complex iterative task that first requires an open pit to be designed and production schedules developed based on assumed operational mining costs and cut-off grades. Only then can operational costs be more accurately determined. This in turn leads to further iterations of cut-off grades and pit design and schedules. It has become apparent in our modelling that there is a significant increase in the economically recoverable resource at an assumed silver price of A\$50/oz. This increase is further enhanced if there is any reduction in forecast mining and processing costs. Given the sensitivity of the open pit optimisation at the current silver price, the Board has determined that additional time is required to review pit optimisation with new cost assumptions in the areas detailed below (in tandem with different price assumptions as discussed above).

Owner/operator mining: The largest cost increase seen from the 2021 PFS has been in forecast mining costs. This increase is attributed to higher diesel cost and usage, increased labour and equipment costs and the adoption of a reduced mining rate acknowledging the resource geometry. The Board acknowledges and appreciates the substantial body of work that has been completed by Golding under the Strategic Alliance in undertaking mine planning and estimating, however considers that it is now necessary to investigate the potential for lower mining costs under an 'owner-operator' scenario. The objective of this study will be to seek lower mining costs, which will in turn allow more of the Paris silver resource to be economically mined and thus may significantly improve the Project's outcomes.

**Power options**: The current project development strategy assumes dominantly diesel power generation, supplemented by solar power. This approach has been impacted by higher diesel costs and marginally higher power consumption. With the power requirements for the Project now more clearly defined, there is an opportunity to enhance the contribution of solar power through increased battery storage. With the 24-hour operating regime of the energy-intensive processing facility, battery storage is required to maximise the contribution from solar generation. Mincore will review the most appropriate mix of diesel and solar power generation for the Paris Project's detailed load profile, having undertaken the detailed design of our process plant and recently having completed a comprehensive power trade-off study for a facility of similar size. The expectation is that a higher component of solar power generation will lead to a reduction in total processing costs, which in turn will result in a lowering of the mined cut-off grade and recovery of more of the Paris silver resource.

**Tailings study**: The early Scoping Study and PFS assumed a dry stacked approach to tailings treatment and disposal. The preference for this method, in contrast to a conventional tailings

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storage facility, was driven primarily by the assumed scarcity of water in the region. The dry stacking of tailings enables higher recovery of process water through filtration, thereby reducing overall water consumption. Comprehensive hydrological studies of the water table associated with the Paris open pit, and across the proposed process water source at the Hector palaeochannel, have now shown that the Project will have an abundance of water available, and that the first few years of operation can be supported from the open pit dewatering alone. Thus the higher capital and operating costs of the dry stacked tailings option compared to a conventional style tailings storage facility may not be necessary. Mincore have also been tasked with analysing the merits of the two tailings alternatives using the capital and operating cost assumptions developed through their engineering study.

**Lead recovery**: DFS work evaluated the potential for economic recovery of the known lead resource at Paris. This work identified that acceptable lead recovery was achievable from the lead sulphide material, but recoveries from the lead oxides were more problematic. To-date the overall recoveries of lead do not merit the additional capital and process operating costs and we have been unable to include any contribution from lead revenue in the Project's evaluation. Reduction in the forecast operating costs for the process plant, or increase in resource recovery, driven by the cost reduction initiatives detailed above, would support further review of lead recovery options based on the comprehensive metallurgical testwork already completed.

Regional exploration: The Board continues to have confidence in the exploration prospectivity of the area proximal to Paris, which is reflected in the 27 hole, 3,800m drilling program currently underway<sup>2</sup>. This Reverse Circulation (RC) program is following up on the discovery of silver<sup>3</sup> in initial drilling at the Perseus and Manto prospects, where Investigator's geologists have been encouraged by similarities with the geological setting to that of Paris. This program will be completed prior to year end with assay results to be returned in the first quarter of 2025. There are clear advantages to identification of additional economic mineralisation proximal to Paris, the most obvious being the potential to extend mine life and further improve the Project's financial metrics.

In summary: The Board's preference would be to have finalised the economic evaluation of the Paris Silver Project as planned this year and reported these outcomes to the market. The Board acknowledges that this delay is frustrating given shareholder expectations that the DFS results would be available by now. However, a combination of factors has resulted in the decision to

<sup>2 -</sup> As announced to the ASX 5 December 2024

<sup>3 -</sup> As announced to the ASX 30 May 2024

commit to further work that has the potential to generate improved financial metrics for the Project and demonstrate its robust viability. The Board consider that this decision is the best approach to the obtaining the best possible outcome for the Paris Silver Project and its stakeholders. The Board anticipates that this additional work will be completed by June 2025.

**DFS tasks completed:** A substantial body of work has been completed to date to advance the Paris Silver Project's DFS. This work includes:

- Finalisation and reporting of the JORC compliant mineral resource estimate<sup>4</sup>
- Comprehensive metallurgical testwork to optimise metal recoveries and determine grinding characteristics and power requirements<sup>5</sup>
- Geotechnical drilling and studies to determine optimal pit design characteristics
- Ecological and environmental surveying and review of project area<sup>6</sup>
- Material testing to predict settling and drainage behaviour of the processed materials
- Detailed design of processing plant and associated infrastructure
- Review of labour requirements and forecast wages
- Open pit optimisation studies and subsequent development of mine plans and operating schedules
- Waste rock and tailings facilities design and characterisation studies
- Site layout planning
- Extensive hydrological investigation and modelling of water table behaviour for both the open pit and process plant water supply from Hector
- Engagement with the South Australian Department for Energy and Mining in advance of submitting the application for a Mining Licence for the construction and operation of the Paris Mine

**Paris Silver Project:** The Paris Silver Project hosts a JORC 2012 resource of 24Mt @ 73g/t silver and 0.41% lead for 57Mozs silver and 99kt lead7 providing outstanding exposure to a metal with strong commodity, renewable energy and manufacturing demand.

Regarded as the highest-grade undeveloped silver project in Australia, the shallow nature of the deposit is amenable to open pit mining.

<sup>4 -</sup> As reported to the ASX on 5 July 2023

<sup>5 -</sup> As reported to the ASX on 15 February 2024

<sup>6 -</sup> As reported to the ASX on 25 January 2024

<sup>7 -</sup> As reported to the ASX on 5 July 2023

### For and on behalf of the board.

**Andrew McIlwain** *Managing Director* 

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### About Investigator Resources

Investigator Resources Limited (ASX: IVR) is a metals explorer with a focus on the opportunities for silver-lead, copper-gold and other metal discoveries. Investors are encouraged to stay up to date with Investigator's news and announcements by registering their interest here: <a href="https://investres.com.au/enews-updates/">https://investres.com.au/enews-updates/</a>

1,588,879,574

### Capital Structure (as at 30 Nov 2024)

Listed Options	318,091,182
Unlisted Options	28,500,000
Top 20 shareholders	29.6%
Total number of shareholders	5,547
Total number of optionholders (IVRO)	1,216

### **Directors & Management**

Dr Richard HillisNon-Exec. ChairMr Andrew McIlwainManaging DirectorMr Andrew ShearerNon-Exec. Director

Ms Anita Addorisio CFO & Company Secretary

The information in this release that relates to Mineral Resources Estimates at the Paris Silver Project is extracted from the release titled "Paris Mineral Resource Estimate Update" dated 5 July 2023 and is available to view on the Company's 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.

### Appendix 1 - Paris Mineral Resource Estimate - As released to the ASX on 5 July 2023

Category	Mt	Ag ppm	Pb %	Ag Mozs	Pb Kt
Indicated	17	75	0.5	41	85
Inferred	7.2	67	0.42	16	14
Total	24	73	0.41	57	99

**Appendix Table 1:** 2023 Paris Silver Project Mineral Resource Estimate (25g/t silver cutoff grade).

(Note: Total values may differ due to minor rounding errors in the estimation process)

### NOTE:

The information in this release that relates to Mineral Resources Estimates at the Paris Silver Project is extracted from the release titled "Paris Mineral Resource Estimate Update" dated 5 July 2023 and is available to view on the Company's website <a href="www.investres.com.au">www.investres.com.au</a>. 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.