# **ASX: IVR**

# **ASX ANNOUNCEMENT**



# **Cautionary Statements**

The Pre-Feasibility Study ("PFS") discussed herein has been undertaken to explore the technical and economic feasibility of developing an open pit mine and adjacent processing facility to economically and sustainably exploit the Paris Silver Mineral Deposit located in the Eyre Peninsula Region of South Australia.

The Paris Silver Project ("Paris" or "Project") is 100% owned by Investigator Resources Limited.

The Production Target and financial forecasts presented in the PFS are shown on a 100% Project basis. The Production Target underpinning Whole Ore Option (Base Case) financial forecasts included in the PFS comprises 83% Indicated Resources and 17% Inferred Resources. The Production Target included in the PFS relating to the Project payback period of 2.3 years comprises 97% Indicated Resources and 3% Inferred Resources. The Mineral Resource Estimate underpinning the Base Case Production Target has been prepared by a Competent Person in accordance with the requirements in the JORC Code 2012.

The Production Target underpinning Beneficiation Option financial forecasts included in the PFS comprises 83% Indicated Resources and 17% Inferred Resources. The Production Target included in the PFS relating to the Project payback period of 2.6 years comprises 97% Indicated Resources and 3% Inferred Resources. The Mineral Resource Estimate underpinning the Beneficiation Option Production Target has been prepared by a Competent Person in accordance with the requirements in the JORC Code 2012.

There is a lower level of geological and grade continuity confidence associated with Inferred Resources and there is no certainty that further exploration work will result in the conversion of Inferred Resource estimates to Indicated Resource estimates or return the same grade and tonnage distribution.

The stated Production Targets are based on the Company's current expectations of future results or events and should not be solely relied upon by investors when making investing decisions. Further evaluation work and appropriate studies are required to establish sufficient confidence that this target will be met.

The economic outcomes associated with the PFS are based on certain assumptions made for commodity prices, concentrate treatment and recovery charges, exchange rates and other economic variables, which are not within the Company's control and subject to change from time to time. Changes in such assumptions may have a material impact on economic outcomes.

To achieve the range of outcomes indicated in the PFS, additional funding will likely be required. Investors should note that there is no certainty that Investigator will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Investigator's existing shares. It is also possible that Investigator could pursue other 'value realisation' strategies such as a sale or partial sale of the Company's share of the Project.

This announcement contains forward-looking statements. Investigator has concluded it has a reasonable basis for providing the forward-looking statements included in this announcement and believes it has a reasonable basis to expect it will be able to fund the development of the project. However, several factors could cause actual results, or future expectations to differ materially from the results expressed or implied in the forward-looking statements. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the PES



#### **30 November 2021**

# PARIS PFS DELIVERS OUTSTANDING RESULTS

# **Highlights**

Investigator Resources Limited (ASX:IVR, "Investigator" or the "Company") is pleased to present the results of the Pre-Feasibility Study ("PFS") for its 100% owned Paris Silver Project ("Paris" or the "Project"), located in the Eyre Peninsula region of South Australia.

- The Pre-Feasibility Study highlights the low-risk nature of the **high-grade**, **near surface**, **open pit** Paris Silver Project with the Base Case ("Whole of Ore Leach") a simple processing circuit with robust silver recoveries.
- The Project delivers strong Pre-Tax Economics including:
  - Pre-Tax NPV<sub>8</sub> of A\$202M to A\$245M
  - o IRR of 47.9% to 54.1%
  - Payback period of ~2.3 to 2.8 years¹
  - Pre-Tax Life of Mine Net Operating Cash Flow of A\$487M to A\$602M (A\$86M to A\$97Mpa)
  - Project life of 5 to 7 years
- The PFS mine optimisations were run on two silver price scenarios:
  - o at \$34.30/oz with a Production Target mining 8.6Mt of ore (~83% Indicated and 17% Inferred Resource) at an average grade of 128 g/t Ag, producing 26.7Moz; and
  - at \$38.00/oz with a Production Target mining 10.9Mt of ore at an average grade of 109 g/t Ag, producing 29Moz.
- The Paris Silver Project can be **brought into production for a forecast A\$131M of pre-production capital expenditure** comprising:
  - o Pre-production mining: A\$5.2M
  - o Process plant: A\$43.2M
  - Infrastructure costs, including power plant: A\$46.8M
  - o Indirect costs: A\$20.4M
  - Contingency: A\$15.5M
- Low AISC of A\$17.45/oz Ag delivering a Life of Mine operating margin of 49%.
- The Project is supported by a large, near surface Ag-Pb deposit with a Mineral Resource Estimate of 18.8Mt at 88 g/t Ag and 0.52% Pb for 53.1Moz Ag and 97.6kt Pb.
- Potential inclusion of a lead recovery circuit provides scope for upside to PFS Base Case.
- Near mine exploration potential remains high with planned exploration targeting potential to add resources.
- The detailed PFS allow Investigator to immediately commence a Definitive Feasibility Study ("DFS").
   The Company will advance Project financing initiatives in parallel with the technical and approvals workstream.

<sup>&</sup>lt;sup>1</sup> Economic analysis is based on two silver price scenarios of \$34.30/oz (representing the average price over the previous 12-months), and A\$38/oz (approximately 10% higher).



Managing Director, Andrew McIlwain said: "The finalisation of the Paris Silver Project PFS marks a substantial step forward toward a project development decision.

"This comprehensive package of work, completed by the Investigator team that started with the resource drilling in September 2020, brings together all the makings of a feasible project, based on the recovery of silver alone. Whilst there is more work to do to complete a Definitive Feasibility Study, we have demonstrated that in the current economic environment, Paris is a technologically sound and financially robust project - with the potential for significant uplift if we can introduce a lead recovery circuit into the equation as well.

"On a silver only basis, Paris delivers a strong IRR of 54.1% and a Pre-Tax NPV of over \$200M. With our current market capitalisation of around \$100M, we consider Paris financeable and value adding for Investigator shareholders.

"A key element of the project concept was to create a development option with an accelerated payback that could opportunistically capture what are at times a volatile silver price environment.

"We have been able to include leading edge aspects such as using solar power to support power demand as well as adopting dry stacked tailings disposal that will maximise water recovery - vitally important in an arid environment.

"It has been a substantive team effort to get to this point, with the resource uplift and improved metallurgical recoveries underpinning the way forward.

"I look forward to taking this exciting project forward and delivering value for shareholders".

Economic evaluation of the Paris Silver Project was undertaken of the Base Case processing option for silver prices of A\$34.30/oz Ag and A\$38.00/oz Ag. In the opinion of the Investigator Board this represents an appropriate pricing range, based on the 12-month average price and a price scenario of approximately 10% higher. These commodity prices, in addition to forecast operating costs, were provided to the mine design consultants to determine the optimum mineable recovery of the mineral resource.

Economic evaluation was also undertaken on a further processing option that would include silver recovery by gravity and flotation concentration (the **Beneficiation Option**).

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<sup>&</sup>lt;sup>2</sup> August 2020 to August 2021



Table 1 - Summary of economic assumptions, Physicals, Cash flow and value metrics for the PFS at two silver price assumptions for the Base Case Paris Silver Project.

Item	Unit	Whole O	re Option	
		Base Case		
	Economic Assumptions			
Silver Price	A\$/oz	34.30	38.00	
	US\$/oz	24.70	27.35	
Exchange Rate	A\$:US\$	0.72	0.72	
		Physicals		
Life of Mine (LOM)	Years	5	7	
Mined Ore	Kt	8,575	10,909	
Strip Ratio	Waste:Ore	9.2	6.5	
Processed tonnes	Kt	8,575	10,909	
Processed Silver Grade	g/t	128	109	
Silver Recovery	%	75.7	75.2	
Silver Dore produced	Moz	26.7	29	
		Cash Flow		
Gross Revenue	A\$M	969	1,183	
Royalties	A\$M	19	28	
Doré Transport & refining	A\$M	7	8	
Net Revenue	A\$M	943	1,147	
On Site Operating Costs <sup>3</sup>	A\$M	456	545	
Net Operating Cash Flow	A\$M	487	602	
Upfront Capital Cost <sup>4</sup>	A\$M	131.1		
- Mining Pre-production	A\$M	5	.2	
- Process plant	A\$M	43	3.2	
- Infrastructure	A\$M	46	5.8	
- Indirect costs	A\$M	20	).4	
- Contingency	A\$M	15	5.5	
Sustaining Capital Costs	A\$M	21.2	29.2	
Net Project Cash Flow (Pre-Tax)	A\$M	335	442	
	Value Metrics			
Pre-Tax NPV <sub>8</sub>	A\$M	202	245	
Pre-Tax IRR	%	54.1	47.9	
Pre-Tax Payback period	Years	2.3	2.8	
Post-Tax NPV <sub>8</sub>	A\$M	135	158	
Post-Tax IRR	%	40.1	36	

<sup>&</sup>lt;sup>3</sup> C1 operating cost, excluding SA royalty.

 $<sup>^{\</sup>rm 4}$  Upfront Capital Costs, exclusive of sustaining capital and closure costs.



Table 2 - Operating cost summary for the Paris Silver project Base Case scenario at A\$34.30/oz Ag.

Cost Centre	A\$M	A\$/t ore	A\$/oz Ag
Mining	220	25.71	8.23
Processing	206	24.07	7.72
G&A	30	3.51	1.12
C1 Cash cost	456	53.28	15.95
Silver Royalty	19	2.22	0.71
Sustaining CAPEX	21.2	2.47	0.79
All In Sustaining Cost	496	57.98	17.45

Table 3 - Summary of consultants and contributors to the Paris Silver Project Pre-Feasibility Study.

Activity	Consultant
Resource Estimation	H&S Consultants
Mining Studies & Production Targets	AMDAD
Metallurgical Test work	MinAssist, CORE Metallurgy, ALS Minerals
Process modelling	MinAssist
Process Plant and Infrastructure	Mincore
Tailings storage	Mincore
Hydrology and Hydrogeology	Wallbridge Gilbert Aztec
Environmental	SKM, Mincore, Internal
Financial analysis	DW Consulting
Risk Assessment	All

## **Project Summary**

The Paris Silver Project is the highest-grade undeveloped silver deposit in Australia. The Project is located approximately 70km north of the town of Kimba on the central Eyre Peninsula in South Australia. The project is approximately 535km from South Australia's capital city, Adelaide, and accessed either via an approximate 7hr drive or flight to Whyalla and a 2hr drive to the Project, as shown in Figure 1 below. Other major cities with industrial capacity and support services are Whyalla (212km) and Port Augusta (227km). The Project comprises granted exploration licence EL6347 and is situated within pastoral leasehold land, and within the Gawler Ranges Aboriginal Corporation Native Title determination area.

The Pre-Feasibility Study ("PFS") Base Case, utilising silver pricing of A\$34.30/oz and A\$38.00/oz, incorporates the mining of between 8.5 to 10.9Mt of ore from 4 stages of pits over a 5 to 7 year mine life, respectively. Mined ore will be delivered to a Run of Mine pad ("ROM") and both stockpiled and treated



directly through a simple crush-grind-cyanide leach-Merrill Crowe precipitation circuit at a rate of 1.8Mtpa to produce silver Dore, on site, at a rate of approximately 4.2 - 5.3 Moz per year.

Opportunities to extend the project life through near mine exploration have been identified and further opportunities to include capacity for recovery of lead concentrate also remain to be examined.

The Paris Silver Project is 100% owned by Investigator Resources.

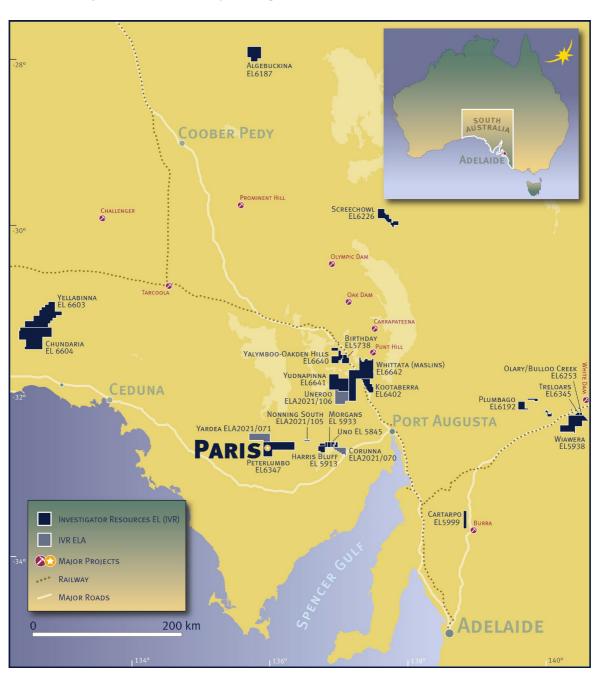


Figure 1-Location of Investigator Resources' 100% owned Paris Silver Project and other SA exploration tenements.



#### **Mineral Resource Estimate**

The PFS has been based on the Mineral Resource Estimate for Paris announced to the ASX on 28 June 2021 shown in Table 4 below.

Table 4 - Mineral Resource Estimate for the Paris Silver Project at cut-off grade of 30 g/t Ag as published on the ASX on 28 June 2021
- Paris Updated Mineral Resource Estimate.

Category	Mt	Ag g/t	Pb %	Ag Mozs	Pb Kt
Indicated	12.7	95	0.60	38.8	76.1
Inferred⁵	6.1	72	0.35	14.3	21.4
Total	18.8	88	0.52	53.1	97.6

# **Upside potential**

The PFS explored various upside opportunities that could be investigated further in a Definitive Feasibility Study, details of which are provided below.

## **Processing**

An additional processing option including flotation and gravity concentration was examined to improve silver recovery and retain potential to recover a lead concentrate. This flow sheet option included crushing, grinding, gravity concentration, deslime of flotation feed, bulk sulphide flotation and separate cyanidation of slimes, concentrate and flotation tails streams.

Test work in the PFS demonstrated that silver recovery in the Breccia Transitional ore could be improved by 3% using this flowsheet.

Whilst the simple direct cyanidation process was selected as the Base Case for the PFS due to lower capital cost, it was demonstrated that this flow sheet could provide greater flexibility in recovery of silver and lead. The PFS results presented here are based on the recovery of silver only. There remains work to be undertaken to determine the potential to produce a saleable lead concentrate which could add substantial project value.

#### Resource

Exploration on the eastern flank and southern end of Paris has identified a modelled fault repetition of breccia hosted mineralisation. There is potential for this to host additional mineralisation, however drilling to date is considered insufficient to confirm the extent or grade distribution and no guarantee of additional resources through estimation is made at this time.

Recent exploration in broader vicinity of the Paris Mineral Resource Estimate has identified some potential for structurally controlled, silver and base metal mineralisation. Exploration activities north of Paris have identified similar geologic units to the host at Paris, and indications of silver mineralisation. These targets are at an early stage of exploration and whilst regarded as prospective and with potential to host additional

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<sup>&</sup>lt;sup>5</sup> There is a lower level of geological and grade continuity confidence associated with Inferred Resources and there is no certainty that further exploration work will result in the conversion of Inferred Resource estimates to Indicated Resource estimates or return the same grade and tonnage distribution.



mineralisation to Paris, the level of drilling information is insufficient to conclude that mineralisation will be found to be of a size, grade or distribution that would support addition to the resource estimate at this stage.

Investigator has 100% tenure over the 583km² Exploration Licence (EL6347) that hosts the Paris Silver Project which offers potential to identify additional mineralisation proximal to the deposit. Additional targets distal to the Paris deposit and within EL6347 are at varying levels of early exploration, with more recent results reported to the ASX on 27 October 2021 - "Silver and Gold Intercepts Enhance Prospectivity Around Paris".

The Company has applied for additional exploration licences within the region, proximal to Paris, that offer further exploration opportunity.

# **Development timeline**

The DFS tasks that will be required to deliver a comprehensive mine development plan to the regulatory authorities is detailed in Figure 2.

Prior to commitment to, and the commencement of construction, a Mining Lease must be issued for the Project.

South Australia has a two stage mining approvals process in which stage one is the granting of a Mining Lease, and stage two is having operational approval through an approved program for environment protection and rehabilitation ("PEPR").

Based on the studies completed to date and the anticipated project impacts, it is anticipated that the main environmental approval will be via a Mining Proposal (inclusive of the PEPR requirements) submitted to the Department for Energy and Mining approximately 14 months from commencement of the DFS program of work.

Once approved by the South Australian regulatory authorities, the Investigator Resources' Board of Directors will make an informed Financial Investment Decision ("FID") as to whether approve the construction, development, and operation of the Project.



	1										
Activity	Months	Q1 22	Q2 22	Q3 22	Q4 22	Q1 23	Q2 23	Q3 23	Q4 23	Q1 24	Q2 24
Stakeholder engagement	6										
Permitting - application	4										
Permitting - approvals	6										
							*				
DFS Drilling	3										
DFS Metallurgy test work	3										
DFS studies - Resource	1										
DFS Studies - Mining	1										
DFS studies - Plant/infrastructure	4										
Front end engineering	3										
EPCM award	0				*						
Detailed design	8										
Financing	12										
FID & Contract award	0						*				
Site and camp establishement	2										
Site construction	10										
Mining mobilisation and pre-production	8										
Production											*

Figure 2 - Development timeline for the Paris Silver Project

The FID will culminate in the delivery of financing options for the Project as well as the final construction timeline to commissioning.

As the proposed plant is using industry standard equipment it is anticipated that development and construction of the Project, from FID to commissioning, will take approximately 12 months.

#### Next steps

Investigator Resources is confident that the PFS provides sufficient confidence to proceed to the next phases of development for the Paris Silver Project. The Company will move immediately to progress the Feasibility Study, financing and approvals workstreams, with work expected to include:

- 1. Drilling
- 2. Geotechnical and hydrological/hydrogeological studies
- 3. Environmental, native title and heritage supportive work
- 4. Metallurgical test work and geometallurgical characterisation
- 5. Financing
- 6. Approvals



## References

#### **ASX announcements:**

- 17 October 2011 "Investigator confirms high silver grades, extended target potential at Paris deposit"
- 15 October 2013 "Maiden Resource Estimate for Paris Silver Project"
- 7 June 2021 "Metallurgical Testwork Improves Paris Silver Recoveries"
- 28 June 2021 "Updated Paris Mineral Resource Estimate"
- 27 October 2021 "Silver and Gold Intercepts Enhance Prospectivity Around Paris"

# **Compliance statements**

Investigator Resources confirms that it is not aware of any new information or data that materially affects the information related to Mineral Resources included in the market announcement released on 28 June 2021 titled "Paris Updated Mineral Resource Estimate" and furthermore, that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. Investigator Resources confirms that the form and context in which the Competent Person's (Mr Simon Tear) findings are presented have not been materially modified from the original market announcement.

The information in this report relating to exploration results is based on information compiled by Mr. Jason Murray who is a full-time employee of the Company. Mr. Murray is a member of the AusIMM. Mr. Murray 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 a Competent Person 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. Murray consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.



# **Pre-Feasibility Study Summary**

# Study overview

The Pre-Feasibility Study (**"PFS"**) for the Paris Silver Project (the **"Project"**), was commissioned by Investigator Resources Ltd (**"Investigator"** or the "**Company"**) in 2021 to evaluate options for development of the Project. The PFS incorporates an upgraded Mineral Resources Estimate<sup>6</sup> and further metallurgical test work<sup>7</sup>.

The Project was a greenfields discovery made by Investigator in 2011<sup>8</sup>. The success of a maiden aircore drilling program led to the rapid decision to advance the project with the declaration of a maiden silver and lead resource estimate (JORC, 2012) completed in 2013<sup>9</sup>.

A number of phases of work have occurred on the Paris deposit and nearby prospects, with historic work dictated largely by commodity price cycles and the availability of funding to advance the Project.

The most recent Mineral Resource Estimate, completed in June 2021, resulted in an increase to 18.8 million tonnes ("Mt") grading an average of 88g/t silver for a total of 53.1 million ounces ("Moz") of silver at a 30g/t cut-off<sup>10</sup>. A total of 73% of the resource estimate was classified as Indicated, with the balance of estimated resource being classified as Inferred. This resource estimate forms the basis by which the current prefeasibility study revolves around.

The project is uniquely placed in that it is a silver dominant deposit which is shallow and flat lying (tabular) in geometry with intensely altered host rocks that made it amenable to a simple open pit mining operation where limited drill and blast will be needed for much of the proposed mining.

Situated within pastoral leasehold land, approximately 70kms to the north of the town of Kimba on the South Australian Eyre Peninsula, the project offers many benefits in that existing land use is limited, transport infrastructure is sound, and many receptors which may pose negative sentiment to mining (such as nearby residences or conflicting land or water use) are not present.

The Paris Silver Project mine plan consists of 4 pit stages that vary in depth to a maximum of approximately 100m below surface. Mining is assumed to be undertaken under contract at an ore production rate of 2Mtpa. Mined ore is assumed to be processed at a rate of 1.8Mtpa through a processing facility comprising a simple crush, grind, cyanide leach and Merrill Crowe precipitation. The balance of mined ore will be stockpiled for later processing. The process will produce silver Dore on site that will be transported to a domestic refinery by road.

Two processing options were considered by the study:

- Direct Processing Option: Where mined ore is crushed, ground to P80 (80% passing) 53μm and leached in cyanide solution. Silver is recovered from solution by Merrill Crowe precipitation and smelted to silver Dore on site.
- **Beneficiation Option:** Where mined ore is crushed and ground to P80 of 75μm. Silver minerals are beneficiated by gravity concentration in the milling circuit. The milled ore is deslimed at 15μm and

<sup>&</sup>lt;sup>6</sup> 28 June 2021 - Updated Paris Mineral Resource Estimate

<sup>&</sup>lt;sup>7</sup> 7 June 2021 - Metallurgical Testwork Improves Paris Silver Recoveries

<sup>&</sup>lt;sup>8</sup> ASX 17 October 2011 - Investigator confirms high silver grades, extended target potential at Paris deposit.

<sup>&</sup>lt;sup>9</sup> ASX 15 October 2013 - Maiden Resource Estimate for Paris Silver Project.

<sup>&</sup>lt;sup>10</sup> ASX 28 June 2021 - Paris Updated Mineral Resource Estimate.



presented to bulk sulphide flotation. The gravity and flotation concentrates are combined for intensive cyanide leaching, while the flotation tail and slimes are leached separately. Combined leach solution is presented to Merrill Crowe precipitation for recovery of silver. This option presents the capacity for easy adaptation for lead recovery during the Feasibility Study.

Both processing options include a cyanide destruction process to ensure residual cyanide levels are reduced to enable safe transport of waste to final storage facilities.

The Direct Processing Option was selected as the base case for the purposes of the PFS based on improved economics for the assumptions used in the PFS.

# Location, ownership and tenure

The project is located upon the Peterlumbo Exploration Licence ("EL") 6347 which is registered under the wholly owned subsidiary of Investigator Resources, Sunthe Minerals ("Sunthe").

The project is located approximately 70km north of the town of Kimba on the central Eyre Peninsula in South Australia. Kimba itself is well located and serviced, being on the Eyre Highway which is the main transport haulage route between Perth, Western Australia and the east coast of Australia. Approximately 535km from South Australia's capital city, Adelaide, the Project can be accessed by road with a travel time of generally a 7hr drive. Other major cities with industrial capacity and support (engineering, services etc) are Whyalla (212km) and Port Augusta (227km).

The project is located on pastoral leasehold land and lies within the Gawler Ranges Aboriginal Corporation Native Title determination area.

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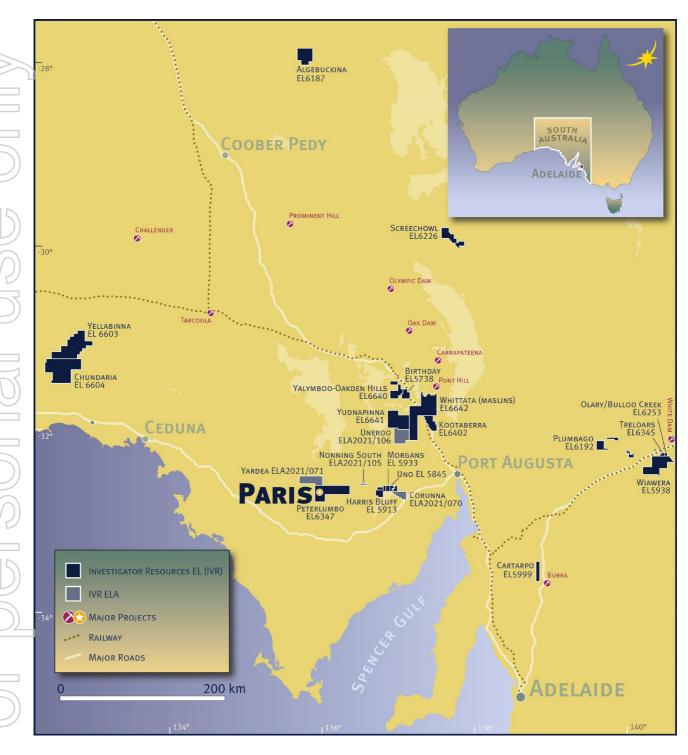


Figure 3 - Paris Silver Project location.



# Geology

## Regional geology

The Paris Project, and Peterlumbo tenement, lie within the Gawler Craton, on the southern boundary of the Gawler Range Volcanic Domain. Roche (1996) summarised the Gawler Craton as a stable block of late Archaean and early Proterozoic gneisses, granites and metasediments, middle Proterozoic sedimentary rocks and extensive acid volcanics. The Gawler Craton was defined as a region of crystalline basement that has not been substantially deformed or remobilised, except by minor epi-orogenic movements since approximately 1450Ma.

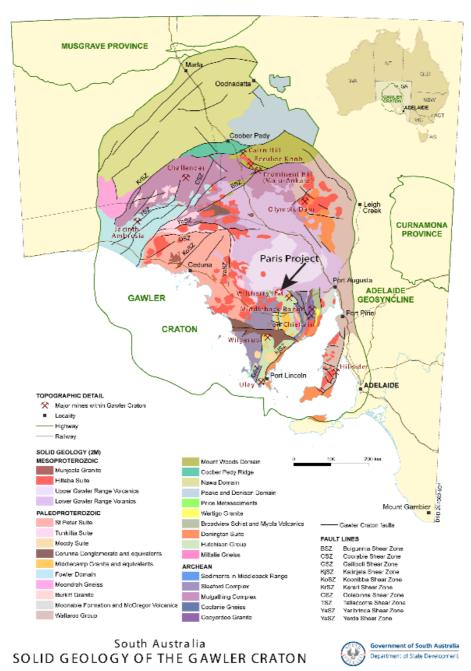


Figure 4 - Geological Survey of South Australia solid geology map of Gawler Craton.



The Paris project is located where the basal units of the Gawler Range Volcanics (GRV) overlie Archaean and Proterozoic rocks. The late Archaean to earliest Palaeoproterozoic, (~2560 – 2470 Ma) was a period of basin development, represented by the Sleaford Complex in the southern Gawler Craton and gneissic sequences associated with the Sleaford Complex have been identified within the tenement, and to the west of Paris in particular. The Hutchison Group metasediments which are located at Paris, were deposited within the post Sleaford orogeny basins underwent a period of orogenic activity between approximately 1845Ma and 1710Ma known as the Kimban Orogeny. This Kimban Orogeny saw deformation of Hutchison group sediments to amphibolite facies levels with tight to isocinal folding prevalent. Subsequent greenschist metamorphism and the development of a series of north-easterly oriented mylonitic shears occurred throughout the district.

#### **Project Geology**

The Paris Silver deposit is interpreted to be hosted within a sequence of flat lying intensely altered, polymictic volcanic breccias related to the Gawler Range Volcanics. Mineralisation is predominantly located in the oxide to transition zones of the host breccia above a palaeo unconformity on a basement of older dolomitic marble. Mineralisation extends for 1,600m of strike length with variable width up to 800m wide. Depth to fresh rock is variable ranging from 60 to 130m below surface. A nominal base to a majority of the drilling is 25mRL, approximately 160m below ground level.

The Paris Ag deposit is likely to have formed at ca. 1594–1590 Ma with S isotopes indicating a dominantly magmatic/mantle source for mineralisation. The magmas associated with the deposit are highly fractionated and consistent with the evolution of a magmatic system to the point where metals (e.g. Silver) could concentrate in the magma and late fluid stages.

The Paris Project has a basal sequence of predominantly dolomitic marbles and calc silicates of Hutchinson Group age, although interpreted faulted sequences of graphitic metasediments, banded iron formation and biotite/chlorite schists are also observed within the margins of the deposit and are interpreted to be of similar age. The upper dolomite surface is interpreted to be a paleo-unconformity, evidenced by development of an iron rich, limonitic cap in many areas and an association with Coronadite (Pb(Mn<sup>4+</sup><sub>6</sub>Mn<sup>3+</sup><sub>2</sub>)O<sub>16</sub>) a lead oxide mineral.

Overlying this basement sequence is an interpreted blanket of intensely argillic altered Gawler Range Volcanics possibly maar related. Whilst primary features can be displayed within this sequence there has been extensive and pervasive alteration and as such, supportive petrology and structural data has limitations.

Units identified within the altered volcanics include polymictic volcanic breccias, monomict breccias, cross cutting felsic dykes (in some instances peperitic) and layered and flow banded volcanics.

A series of narrow dyke like granitoid intrusives are present which intrude the Hutchinson Suite basement lithologies. These intrusives are interpreted to be of Hiltaba age and some evidence is present to support a co magmatic emplacement with the Gawler Range Volcanics. The emplacement of these dykes is presumed to be focussed on brittle fracturing and faulting of the basal dolomites which likely focussed hydrothermal fluid flow within the deposit.

#### **Deposit Type**

The deposit is interpreted to be formed in an intermediate sulphidation epithermal setting and has likely been exposed to multiple mineralising phases. The intense alteration of the deposit makes interpretation of



genesis difficult, with current models including a breccia/maar type system or structurally constrained system.

Alteration within the deposit is intense, with tertiary weathering only interpreted to be to a depth of circa 14m over the deposit. Dominant alteration gangue minerals include kaolin, illite and minor talc proximal to the dolomite basement. Intense silica alteration has occurred within the deposit.

The majority of mineralization is interpreted to be strongly structurally controlled and potentially, with hydrothermal fluid presumed from a more distal possible porphyry system as a source to mineralisation. An alternate, purely structurally controlled model for brecciation and mineralisation has also been modelled and considered. Both models considered do not impact on the gross distribution and geometry of mineralisation that has been modelled and estimated.

Sporadic carbonate replacement style mineralization is present within the dolomitic marble and calc silicate basement units underlying the Paris Project. A dominant component to mineralisation is related to flat lying breccia material, whilst a lesser component is constrained to steeply dipping, narrow faults that are sub parallel to the long axis of the deposit.

#### Mineralisation

Within the basement, below the Gawler Range Volcanics, minor massive sulphide mineralization in the form of pyrite/sphalerite/galena is present in irregularly sized and distributed locations within the dolomitic marbles. This is primarily related to carbonate replacement and brittle fracture fill.

The dominant polymictic breccia host has variable sized clasts, some of which contain sulphides, in addition to matrix sulphide mineralisation. These clasts have a similar sulphide content to that observed within the limited massive sulphide observed within the upper reaches of the dolomitic marble (dominantly pyrite/sphalerite/galena). Clast sizes are variable in size from a few millimetres to tens of centimetres however the average size distribution is approximately 5mm to 10cm.

A syn to late mineralizing event at Paris appears to have been a pyrite dominant phase which resulted in the deposition of fine sulphides within the matrix of the volcanics at Paris. There are zones of significant pyrite mineralisation, particularly within the base of the layered polymictic breccia, where semi massive pyrite and disseminated pyrite are more common.

There is also evidence of late-stage metal dispersion and zones of potential supergene enrichment within the Paris Silver Project.

#### **Silver Mineralisation**

The silver mineralisation has been characterised and identified silver is hosted in several forms with the dominant forms being native silver and/or acanthite (AgS) with quartz. Other lesser forms identified include silver with jalpaite ( $CuAgS_2$ ), chloraryrite (AgCl), with pyrite as argentopyrite (FeAgS). The relative proportions of the silver host minerals vary throughout the resource. Silver mineral particles were often identified at sizes that were less than 30 microns (30 millionths of 1m) in size, with a component less than 10 microns. Understanding this size distribution assisted with determining recovery opportunities and processes targeting liberation of silver minerals from their host particles were prioritised.



#### **Mineral Resource Estimate**

The Mineral Resource estimate supporting the PFS was undertaken by H&S Consultants and previously Preleased to the ASX on 28 June 2021.

The 2021 updated Mineral Resource Estimate ("MRE") represented a significant increase in total silver ounces to the prior 2017 Mineral Resource estimate largely due to the reduction in cut-off grade from 50g/t silver to 30g/t silver.

The use of a lower silver cut-off was supported by the significantly improved prevailing silver price and Investigator's anticipated project economics. Current silver price, in both US\$ and A\$ were last seen at similar levels in 2013, when the Paris maiden Mineral Resource estimate was prepared using a cut-off of 30g/t silver.

It is appropriate to note that resource estimates quoted of peer silver resources in Australia, with comparable metrics and similar open pit mining scenarios to Investigator's Paris Silver Project, are reported at 30g/t, or lower, silver cut-offs. This change in silver cut-off grade at Paris in the 2021 Paris Mineral Resource Estimate resulted in an approximate 100% increase in resource tonnes, a 37% drop in grade and a resultant 27% increase in contained silver metal, to 53.1Moz silver as shown in Table 5, below.

Table 5 - Mineral Resource Estimate at 30 g/t Ag cut-off grade for the Paris Silver Project as published on the ASX on 28 June 2021 -Paris Updated Mineral Resource Estimate.

Category	Mt	Ag g/t	Pb %	Ag Moz	Pb Kt
Indicated	12.7	95	0.60	38.8	76.1
Inferred	6.1	72	0.35	14.3	21.4
Total	18.8	88	0.52	53.1	97.6

The Mineral Resource estimate was constrained to above the 25mRL horizon, which relates to a maximum depth below surface of approximately 160m, as can be seen in Figure 5 below.



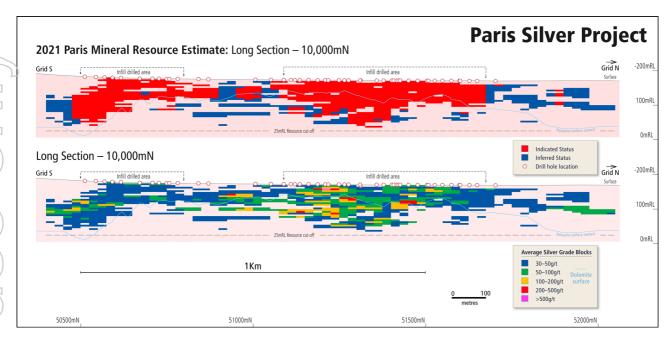


Figure 5 - Long section of the 2021 Paris Silver Mineral Resource estimate block model along section 10000mN showing distribution of Indicated and Inferred categories (above) and average block silver grade (below) (block sizing is 25m x 25m x 5m)

Figure 6 shows the grade/tonnage curves for the global resource that depicts the increasing resource tonnage with a decreasing cut-off grade (blue line) and correspondingly, the increasing contained ounces (red line), with the increase in average resource grade logically corresponding to an increasing cut-off grade (orange line).



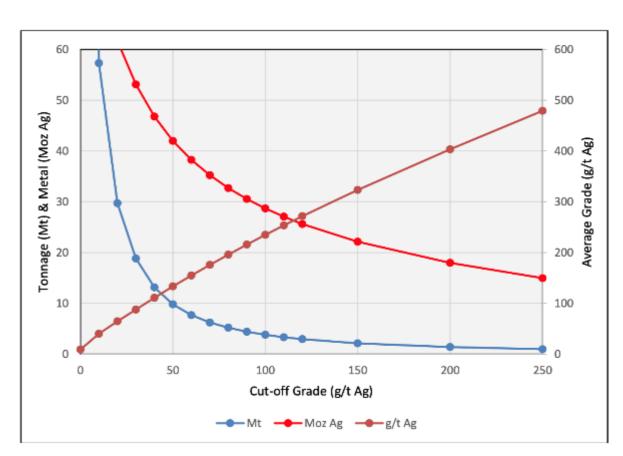


Figure 6 - Grade/tonnage curves for the 2021 Paris Silver Project Mineral Resource Estimate (global resource), with cut-off grade (blue line), contained ounces (red line) and average resource grade (orange line).

Figure 7 shows the grade/tonnage curves for the Indicated Resource component only. Although like the global resource curves shown in Figure 3, the steeper red line of total ounces further emphasises the opportunity to increase the contained ounces as the cut-off grade decreases.



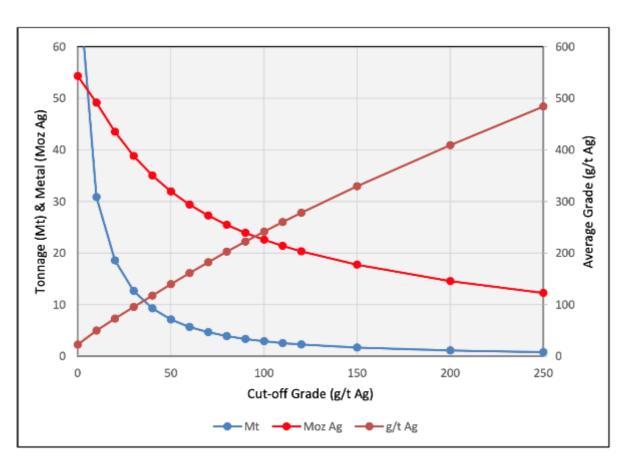


Figure 7 - Grade/tonnage curves for the Indicated Resources component of the 2021 Paris Silver Project Mineral Resource Estimate.

These grade tonnage curves illustrate the sensitivity of the resource to cut-off grade and the significant opportunity to further increase the contained ounces in resource if the cut-off can be further reduced through improved commodity price assumptions or reduced capital and/or operating cost forecast.

The zones that now comprise the updated 2021 Paris Mineral Resource Estimate are shown in Figure 8, below, where red denotes the areas of Indicated Resource classification, and blue, the areas of Inferred Resource classification.



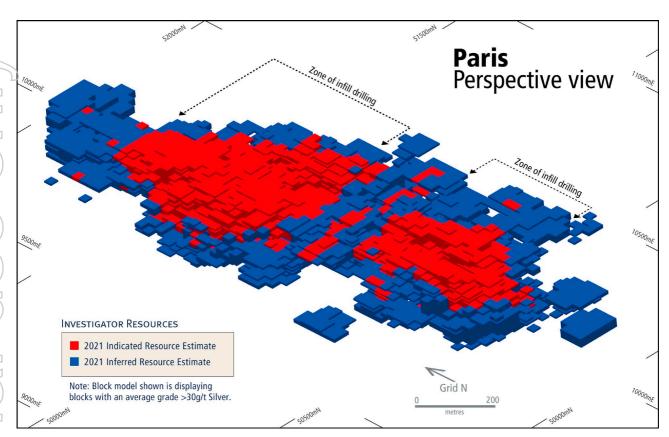


Figure 8 - Distribution of Indicated (red) and Inferred (blue) Resources shown obliquely looking North across the 2021 Paris Silver

Project Mineral Resource Estimate.

# Hydrogeology and hydrology

Within the project area, three existing aquifer systems have been identified being:

- 1. Fractured rock aquifers of limited water supply and variable quality which the majority of pastoral bores are completed in. Standing water levels are generally 20m 50m below ground level.
- 2. Paleochannel aquifers consisting of variable thickness and width sand layers, lacustrine clay zones and organic layers. These paleochannels may display some evidence of presence by way of topographic depression and vegetation changes. Water has been identified to be saline to super saline in quality and presents no use for other stakeholders in the region. Standing water levels can range from 4m to 20m below ground level.
- 3. Water within the conceptual Paris pit as designed from the 2017 optimisation study. This water is variable in content and appears to form several "perched" water zones. Most water is located within the fractured and altered dolomite basement which has high permeability. This water has high salinity and low pH and is of no use for other stakeholders in the region. Standing water levels are generally at approximately 24m below ground level.

The Hector Paleochannel is located approximately 12km to the east of the Paris deposit. The channel has had several aircore traverses that do not provide full coverage but do give sufficient information in order to model the base case extent of the potential aquifer. Some preliminary desktop study incorporated regional



gravity, electromagnetic profiles and magnetic data indicated that the paleochannel footprint was likely sufficient to be considered as a water source for the deposit.

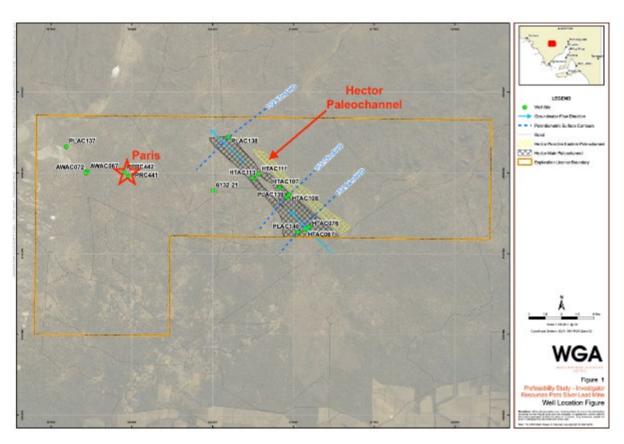


Figure 9 - Hector Paleochannel Locations and water data point locations.

Wallbridge Gilbert Aztec (WGA) were engaged by Investigator Resources in 2017 to undertake a preliminary investigation into the potential of the location to be a water supply for any mining and processing activities at the Paris Project to meet with requirements for a PFS level of study.

This study included base case modelling of the Hector paleochannel to predict a potential aquifer volume, in addition to some preliminary water recharge testing and water quality testing.

Conclusions from the WGA study indicated the size of the modelled paleochannel was likely sufficient to supply a mining operation of the size of Paris, that recharge was of low order, but present at modelled 22megalitres per year, which demonstrates that the aquifer would recharge eventually, and that water quality was such that it would not be in competition with pastoralist use (30,000mg/L salinity, pH3-4).

Investigator consulted with Mincore Process engineering with respect to water quality application to mineral processing who confirmed untreated water would have potential for base processing operations, with a requirement for treated water for potable water and elution processes required. Preliminary investigation for reverse osmosis treatment to produce potable water supply at quantities required were undertaken by Investigator and confirmation of feasibility of this process occurred.



An in-depth study to include accurate modelling of the paleochannel, drilling of production and monitoring bores to test flow rates, draw down rates and recharge was delineated for additional feasibility level study in order to confirm suitability of the paleochannel as a water source.

## Geometallurgy

A geometallurgical modelling program was undertaken by CSA Global in 2017.

A simplified Gangue Mineralogy model was generated as the primary geometallurgy product. This model was used to define the four gangue mineralogy domains relevant to mineral processing domains (independent of the weathering domains):

- Carbonate Domain: Carbonate-bearing rocks include those with dolomite and/or calcite. Carbonate will be a factor in a flotation cell because it will raise pH.
- Kaolinite Domain: The kaolinite bearing group includes the kaolinite and sericite-kaolinite categories, and also quartz-rich material that overlaps with the kaolinite field. Kaolinite will be a factor in a flotation cell because it is likely to affect viscosity.
- Illite Domain: The Illite domain combines the sericite minerals group (dominantly illite), along with the K feldspar, alkali feldspar and relict albite group.
- Mg-Silicate Domain: The Mg-Silicate group which appears to predominantly comprise altered dolomites now devoid of carbonate.

Three weathering domains were classified based on the available data which overprint the Gangue Mineralogy domains. There is significant topography on the weathering horizons due to the morphology of the host breccia, and its sericite clay rich matrix. The three modelled weathering domains are:

- Completely Oxidised: This domain is bounded at its base by the Base of Complete Oxidation (BOCO) surface. There is at least one sulphate-rich horizon within this domain, but there are no sulphides present.
- Transitional-Oxide: This domain, between the BOCO and the Top of Transitional Sulphide horizon, is highly oxidised (with or without sulphates) but is likely to retain some unweathered framework silicates and minor relict sulphides.
- Transitional-Sulphide: Weakly to moderately weathered domain with abundant fresh to partially weathered sulphides, and the potential for both hypogene and supergene clays in addition to unweathered sericite and framework silicates.

The above gangue mineralogy and weathering domains were integrated to generated 4 metallurgical domains that formed the basis of PFS evaluation as detailed in Table 6 below.

Table 6 - Summary of geometallurgical domains and estimated percentage of resource.

	Host Domain	Estimated % of resource
Shallow	Oxide	5%
	Breccia Transitional ("BT") – No Mg/Ca	54%
	Breccia Transitional ("BTM") – Mg/Ca	32%
Deeper	Dolomite	9%



# **Mining**

Australian Mine Design & Development ("AMDAD") were engaged to conduct pit optimisation, design and scheduling of the near surface silver resource at the Paris Silver Project. A summary of the results is shown in Table 7.

Parameter	Unit	Case - A\$34.30/oz Ag	Case - A\$38.00/oz Ag
Tonnes mined	Mt	8.55	10.91
Grade mined	g/t Ag	128	109
Ag Ounces produced	Moz Ag	26.5	28.8
Waste Mined	Mt	72.3	71.1
Mining Cost	A\$/t	2.51	2.51
Mining method		70% Rip and dig	70% Rip and dig
		30% Drill and blast	30% Drill and blast

Table 7 - Summary of mining parameters.

### Mining method

Geotechnical assessment of the material within the pit shell indicated that 70% of the mined volume is considered amenable to free digging, with assisted rip and doze where required, and the remaining 30% requiring conventional drill and blast.

Ore is loaded to conventional off-highway mine trucks by a diesel hydraulic excavator, transported from the mine to the process plant Run-of-Mine ("ROM") pad to be fed by loader into the crusher at the front end of the processing facility.

The mining method proposed for the Paris Silver Project assumes conventional open cut, rip and doze (transitioning to drill and blast in fresh rock), load and haul, hydraulic excavator and diesel haul truck operation. This is a standard for most Australian oxide open pit mining operations of this scale.

Two production scenarios were analysed to understand the economic implication of project size. A base mining case of 1 Mtpa ore production to align with the originally considered proposed processing plant capacity was modelled, along with an increased production option of mining 2 Mtpa in line with the 2017 Scoping Study.

In order to construct and develop the mine area to commence mining operations, Investigator has adopted a contractor mining model. A mining contracting company will supply all equipment, personnel and systems to undertake the works, managed by Investigator site personnel, under a contract to control environmental impact, safety, survey control, quality and production requirements. All personnel required to operate the mining equipment are directly employed by the contractor. Under the agreement, the contractor carries out equipment maintenance as part of their operational risk associated with productivity and downtime. Investigator will undertake mine design, planning, survey and grade control to ensure the contractor is able to meet their commitments and production objectives.

This is considered an optimum structure for the project and is the basis for economic evaluation in the prefeasibility study (PFS). The advantage of this model is that Investigator has full operational control of daily



mining activities and costs where the risks associated with start-up productivity, provision of mining fleet, system development, acquiring and training personnel are minimised.

Two mine production scenarios of ore production rates of 1Mtpa and 2Mtpa were considered, with budget pricing received from two mining contractors with both indicating a substantial total project mine activity cost saving through mining at the higher rate. This results from a change in fleet composition to substantially larger and more efficient equipment operating over a shorter period, thereby reducing the total fixed costs incurred as well. The preferred scenario adopted is the 2Mtpa ore production rate.

A medium scale mining fleet is proposed by the mining contractor to suit the required production rate. It is assumed that ripping, dozing, drilling, loading and hauling operations will be carried out on two 12-hour shifts (night and day), whilst explosive charging and blasting, when required, will be carried out during the day shift only. Internal assessment of material based on geology, core photography and geotechnical data at hand saw an assessment of amenability of material to be free dug within the pit shell and indicated that approximately 70% is classified as soft and has been assumed to be free dug, with assisted rip and doze where required. Fresh rock has been scheduled as requiring drilling and blasting for efficient mining operations. It is proposed that all material will mined on 5m benches (for both ore and waste) nominally on two 2.5m high flitches. Where blasting is required, swell will be mined with the first flitch. Material will be deposited into rear dump, off highway haul trucks for transport to the ROM or waste facilities.

Contract mining rates were obtained from companies that have experience in mining at this scale with proximal South Australian operations. The mining rates used are taken from contractor submitted cost estimate developed on the two production schedules provided by Investigator. Costs included the movement of overburden, ore mining, provision of equipment and manning schedule. The selected production profile anticipated a fleet consisting of a 200-t excavator paired with 5 x 150-t dump trucks and associated ancillary equipment.

Ore will be hauled directly to the ROM Pad at the processing plant. Waste material will preferentially be used for construction of safety structures, roads and ROM pad. Surplus waste will be taken to designated overburden landforms. Opportunity exists to dump waste into areas of the open pit that have been mined in earlier stages, rather than haul to overburden landforms. The detailed scheduling of this will be undertaken during the DFS.

A waste characterisation study was undertaken in 2017 and confirmed that the majority of waste mined from the Paris deposit is Non-Acid Forming ("NAF") potential or Low-Acid Forming potential. Any sulphidic waste material which is classified as Potentially Acid Forming ("PAF") will be encapsulated within low sulphide Non-Acid Forming ("NAF") waste rock within the landform. Stockpiled ore on the ROM will be blended into the processing plant crusher using a separate ROM front end loader. No direct tipping from haul trucks to the crusher is planned.

This operating strategy will deliver high availability and reliability, whilst reducing the requirement for the Company to maintain high levels of technical skill in the maintenance workforce. It also reduces the capital expenditure component of the project.

#### **Geotechnical**

In 2018, AMC Consultants were engaged to undertake a pre-feasibility level geotechnical assessment and design for pit wall slopes of the Paris Project. Subsequent review was completed by AMC in 2021 with the



assessment based on operations being undertaken in a dewatered and drained condition and based on a factor of safety considered more appropriate for the project life.

The geotechnical study will require additional drilling and test work within the next phase of study, including informed modelling utilising hydrological modelling data within the Paris deposit.

#### **Hydrogeology**

Limited detailed hydrogeological work has been undertaken at this stage. Observations recorded from the resource drilling programmes of standing water level have been used for assessment of the anticipated hydrogeological conditions that will be encountered during the development of the pit.

The depth to the phreatic surface at 23m has been adopted for the purposes of geotechnical modelling.

Baseline water quality data has been collected from all known and registered bores within the vicinity of Paris.

It is contemplated that further geotechnical and hydrogeological investigations will be completed during the definitive feasibility study to determine the requirements for dewatering prior to and during pit excavation works.

### Mining rate

An initial processing plant rate of 1,000,000 tpa was considered for this study, however review of mining contractor rates supports a scenario where substantial total project cost savings are available if a larger mining fleet with the capacity to mine at a substantially higher rate is adopted.

The Base Case mining rate will deliver 2,000,000 tpa of ore to the process plant ROM stockpile.

Whilst mining at a planned rate of 2,000,000 tpa is not consistent with the assumed process plant throughput rate of 1,800,000 tpa and will generate a sizeable ore stockpile by end of operating Year 5, consideration will be made to increasing the plant rate during the Definitive Feasibility Study.

One benefit not considered in detail at this stage is the blending opportunity provided by this ROM stockpile which has both the potential to see the higher recovery dolomitic material processed earlier than if the mining and milling rates were matched as well as blending ore types to stabilise plant feed grades.

The economic basis for the Paris Silver Project assumes a life-of-project engagement of a mining contractor to undertake all mine operating activities required to deliver and stockpile ore onto the ROM pad.

#### Pit optimisation

Mine design is based on an optimised pit shell with a conceptual location of the overburden landform placed as close to the mine area as geotechnically possible, with an assumed average life-of-mine waste haul distance of 1,500m. Potential to schedule mining activity such that in-pit waste dumping can be undertaken, thereby substantially lessening the waste haul distance will be investigated in the definitive feasibility study phase.

AMDAD undertook a first principles cost review to utilise for initial pit optimisation and mine design/scheduling. With both the challenges of estimating the non-conventional free dig/rip and doze



activity, as well as the current industry demand, mining schedules were provided to mining contractors for budget pricing.

AMDAD ran a series of Whittle pit optimisations on the Paris Indicated and Inferred Resource. Pit optimisation was undertaken at the two silver prices utilised for economic analysis with cost inputs from the Base Case process option. The pit optimisation assumptions are summarised in Table 8.

Table 8 - Pit optimisation input parameters and assumptions.

Parameter	Unit	Assumption	
Silver price	A\$/oz Ag	\$34.3	\$38.00
Break-even cut-off grade ('COG')	g/t Ag	43.5	39.2
Overall slope angle	o	45°	45°
Mining operating cost	A\$/t mined	\$2.51	\$2.51
Process operating cost <sup>11</sup>	A\$/t processed	\$30.76	\$30.76
Average silver recovery	%	75.7%	75.7%
Target mining rate	Mtpa	2.0	2.0
Discount Rate	%	10%	10%

The results of the optimisations at a silver price of A\$34.30/oz are shown in Figure 10 and contained 8.6Mt at silver grade of 128 g/t Ag. The optimised pit shells determined by AMDAD contained 84% Indicated Resources and 16% Inferred Resources.

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<sup>&</sup>lt;sup>11</sup> Inclusive of G&A costs. Processing cost for pit optimisation based on 1Mtpa throughput case. Forecast costs lower due to higher processing rate.



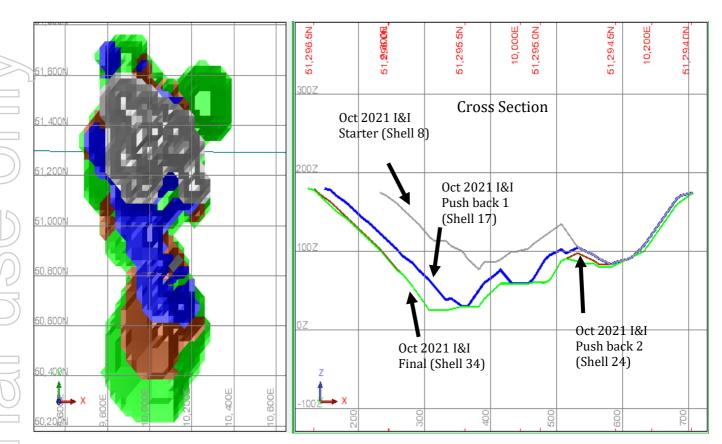


Figure 10 - Pit optimisation results for Indicated and Inferred Resource Estimate. Including Intermediate stages - Shell 8, Shell 17, Shell 24, Shell 34. Optimisation completed for silver price of \$A34.30/oz Ag.

The pit optimisation was also run at the higher silver price of A\$38/oz and results shown in Figure 11. The resulting pit shells determined by AMDAD contained 10.9Mt of mineable material at an average silver grade of 109 g/t Ag. The optimised pit shells were more efficient at accessing Indicated category material, with 82% classified in the Indicated category and 18% in the Inferred category.



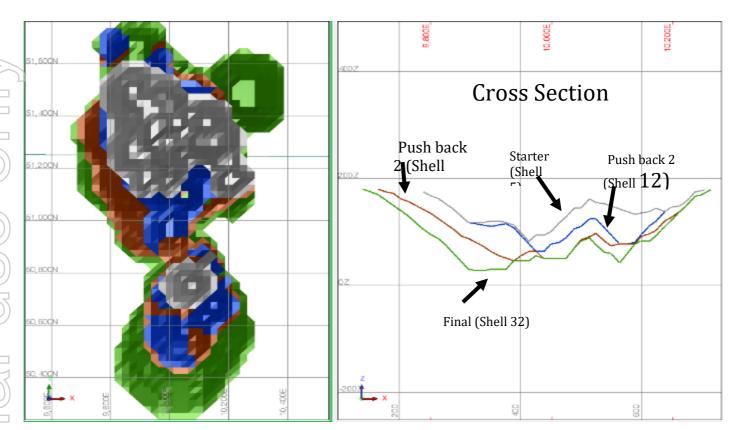


Figure 11 - Pit optimisation results for Indicated and Inferred Resource Estimate. Including Intermediate stages - Shell 5, Shell 12, Shell 18. Optimisation completed for silver price of \$A38/oz Ag.

## Mining schedule

A preliminary mine production schedule based on Whittle pit optimisation shells was developed by AMDAD. The pit will be mined in 4 stages, as shown in Figure 12.



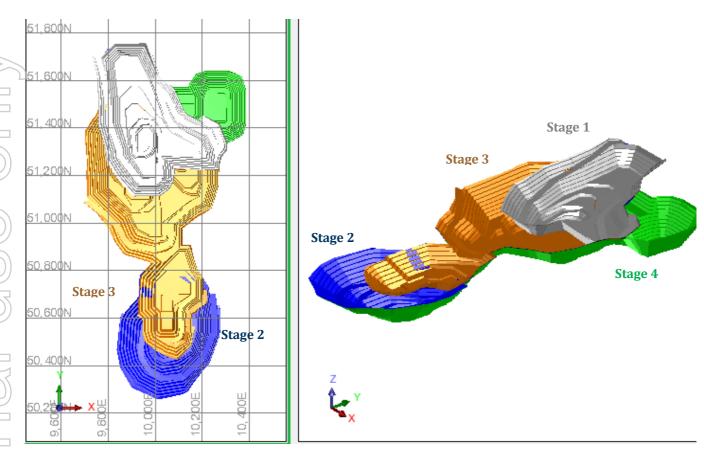


Figure 12 - Stages of mining for whittle pit shells, based on AMDAD mining schedule.

The mined ore rate and average silver grade by 6-month period are shown in Figure 13. It should be noted that mill production rate will be 1.8Mtpa, with the balance of mined ore stockpiled for processing after mining is completed.



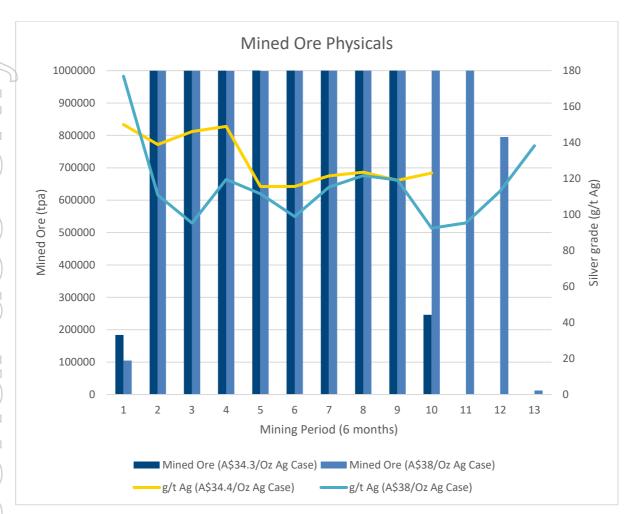


Figure 13 - Mined ore physicals by 6-month mining period based on mine schedule at assumed silver price of A\$34.30/oz Ag and A\$38/oz Ag.

The distribution of mined ore tonnage by Resource Category for silver price of A\$34.30/oz is shown in Figure 14 and at A\$38.00/oz in Figure 15. Over the Project life 82% to 84% of mined ore will be from the Indicated Resource category. Over the project payback period of 2.3 to 2.8 years 98% to 99% of the material processed has been classified as Indicated Resource.



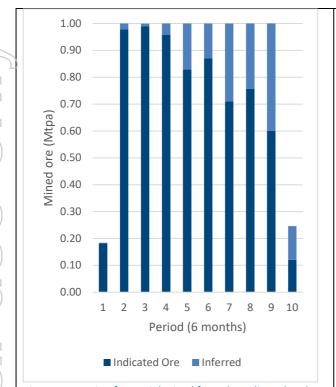


Figure 14 - Ratio of material mined from the Indicated and Inferred Resource categories by 6-month mining period. Estimated based on pit shells optimised for a silver price of A\$34.30/oz.

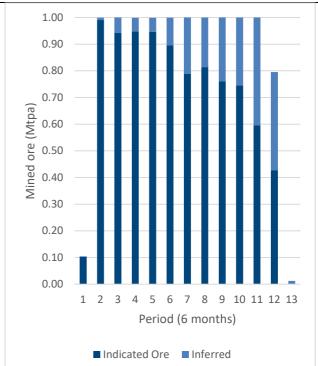


Figure 15 - Ratio of material mined from the Indicated and Inferred Resource categories by 6-month mining period. Estimated based on pit shells optimised for a silver price of A\$38.00/oz.

The PFS considered a mill feed rate of 1.8Mtpa. This resulted in a project life between 5 and 7 years.

# **Metallurgy and Processing**

Mincore Engineers Pty Ltd were engaged to design the Process Plant and Infrastructure for the Paris Silver Project PFS with the support of MinAssist Pty Ltd in process development. This report includes the design, construction, operation and viability of a 1.8Mtpa facility producing Ag Dore. A summary of processing parameters is shown in Table 9.

Table 9 - Summary of processing parameters.

Parameter	Unit	Case – A\$34.30/oz Ag	Case – A\$38.00/oz Ag
Tonnes processed	kt	8,552	10,910
Grade processed	g/t Ag	128	109
Ag Ounces produced	Moz Ag	26.5	28.8
LOM Ag recovery	%	75.7%	75.7%
Annual throughput	Mtpa	1.8	1.8



Several metallurgical testwork programs and option studies were conducted through the course of the PFS to select the preferred flowsheet options, including:

- CORE Metallurgy
- ALS stage 1 and 2
- Power supply option study AllEnergy

The proposed process flowsheet is primary, secondary and tertiary crushing with grinding and a whole ore cyanide leach circuit with Merrill Crowe precipitation of silver. An additional option including gravity concentration, desliming and flotation prior to cyanidation was also examined.

The crushing and grinding circuits are designed to process 1.8Mtpa of ore. The primary, secondary and tertiary crushing circuit will crush the ore to P100 (100% passing) 10mm, followed by grinding in the Ball Mill to P80  $53\mu m$ .

The ground ore will be leached for 36 hours with cyanide, with the addition of lead nitrate (PbNO<sub>3</sub>) and oxygen. Moderate cyanide consumption has been demonstrated through test work programs, with opportunities to improve.

Test work programs completed by CORE Metallurgy and ALS Minerals and reported in 2018 and 2021 demonstrated silver recoveries for the Base Case process flow sheet as outlined in Table 10.

DomainSilver RecoveryBreccia Transitional No Mg/Cb (BT)67%Breccia Transitional (BTM)82.5%Dolomite (DOL)86.3%Weighted average LOM75.7%

Table 10 - Silver recovery by domain

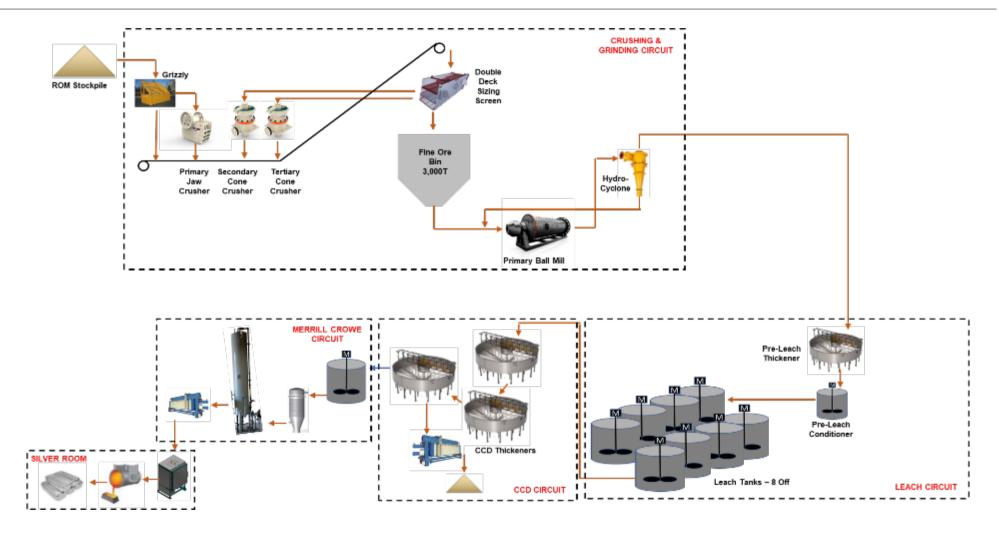
Plant production for the Base Case was estimated at 4.2 - 5.3 Moz of silver per year.

The plant design life is 10 years. The overall plant availability of 92%, utilising 6,074 hours per annum has been adopted, which is an industry standard for a cyanide and Merrill Crowe precipitation circuit of this size. Tailings will be washed and filtered with residual moisture of 15-25%. The tailings will then be dry stacked on a lined tailings pad adjacent to the waste rock dumps.

The PFS focused on silver recovery alone and the potential to produce a saleable lead concentrate was not achieved using the proposed Base Case processing circuit.

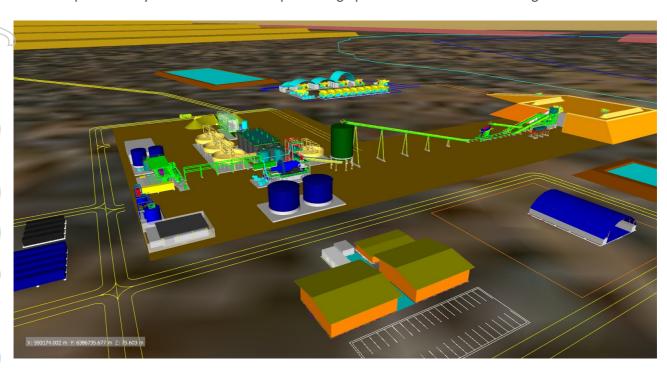
The block flow diagram for the Base Case processing circuit is shown in Figure 16.

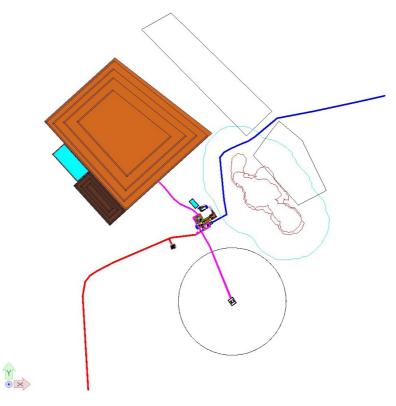
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The conceptual site layout for the Base Case processing option flowsheet is shown in Figure 17.







A second process flow sheet including gravity concentration, desliming and flotation was examined as an alternative to improve silver recovery for the Breccia Transitional ore and the option for lead recovery at later stages of development.

Figure 18 shows the distribution of geometallurgical domains processed by year for the life of the operation where pit optimisation was undertaken for a silver price of A\$34.30/oz.

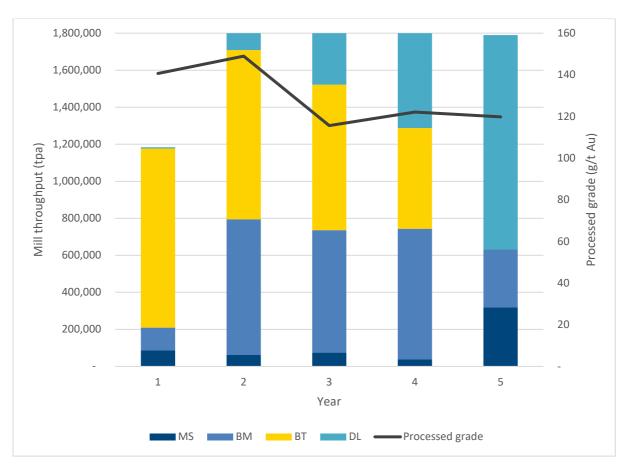


Figure 18 - Mill throughput and grade by year and metallurgical domain. For pit optimisation completed at silver price of A\$34.30/oz.

Figure 19 shows the distribution of geometallurgical domains processed by year for the life of the operation where pit optimisation was undertaken for a silver price of A\$38/oz.



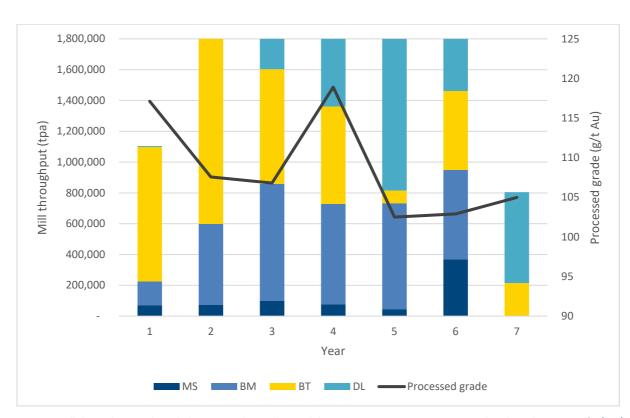


Figure 19 - Mill throughput and grade by year and metallurgical domain. For pit optimisation completed at silver price of A\$38/oz.

The tonnage to stockpile and milling by resource category is shown in Figure 20. This demonstrates that the average proportion of Indicated Resources processed through the payback period of 2.2 years was 98%. The average proportion of Indicated Resources processed for the life of the project was 78% as a result of some Inferred Resource material being processed in later years of the Project life.



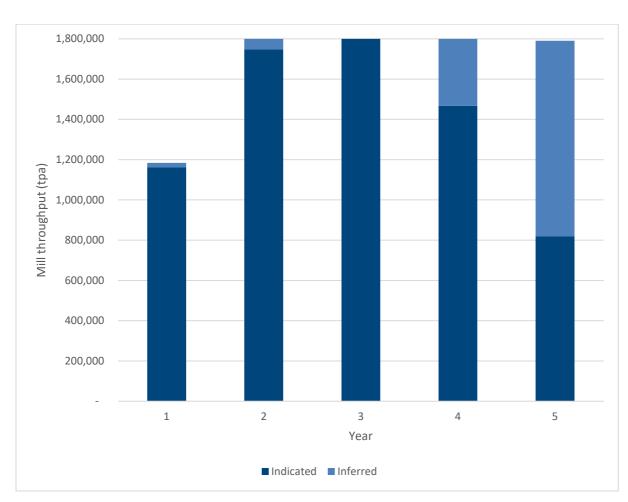


Figure 20 - Distribution of mill throughput by Resource category for pit optimisation completed at silver price of A\$34.30/oz.

## **Infrastructure and Services**

A preliminary plant site layout has been developed by Mincore, which includes the following site infrastructure:

- Power generation facility;
- HV power distribution;
- Tailings Storage Facility;
- Reagent storage area;
- Oil and Fuel storage area;
- Laydown areas;
- Administrative buildings;
- Process plant cribroom, washroom and ablutions;
- Laboratory;
- Change house and ablutions;
- Warehouse;
- Workshops;
- Vehicle wash down bay;



- Sewage treatment plant;
- Accommodation and messing facilities;
- Internal site and main access roads.

#### **Environment**

The project location is situated within pastoral leasehold land within mallee country (low eucalyptus trees or bushes). The area that the project is located within does not support intensive agriculture and is considered amenable for sparse grazing.

A series of dry salt lake depressions are present to the west and north of the project (outside of visual range and removed from the project location). These lakes are not accessible outside of occasional station tracks along nearby fence lines and are of low overall amenity compared to larger lakes in the region (e.g., Lake Gilles, Lake Acraman), however are recognised as important from a cultural heritage perspective.

The project is not within a location that has any historical use outside of pastoral use. The particular "paddock" that the deposit is situated upon has no permanent stock water sources or other infrastructure other than boundary fencing and associated access tracks.

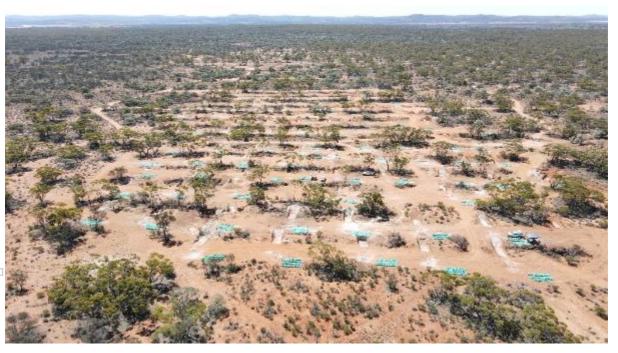


Figure 21 View of Paris deposit drill area (foreground) along long axis of deposit towards the southeast (Peterlumbo Hill located on horizon).

The Project is located in a semi-arid environment where the annual pan evaporation exceeds annual rainfall by an average ratio of approximately twelve to one. Historical data from the Bureau of Meteorology for the



weather station at Buckleboo (Karinya) (the location of the nearest weather station, station number 18190) indicates that the annual average rainfall for the past 30 years is 291mm/year.

SKM consultants were commissioned to undertake a baseline flora and fauna study covering the project site at an early stage in 2012. This survey was targeted to assess the location of the Paris project at an early stage prior to greater exploration activity. The study concluded that no species of national conservation significance were recorded in the area. Three fauna species with state conservation ratings were recorded, however SKM noted that these species were not expected to be significantly impacted by development of a localised mining operation given they are highly mobile, less specific in habitat requirement and/or regionally common. No EPBC listed flora or fauna species were identified in the survey. The survey concluded that vegetation groups identified during the surveys are common throughout the Northern Eyre Peninsula. Mining within the proposed project area is considered unlikely to have a significant impact on the abundance, diversity, geographic distribution and productivity of flora and vegetation at species and ecosystem level.

Additional Flora/Fauna environmental surveys will be required as part of advanced work to DFS level.

The Gawler Ranges Aboriginal Corporation (GRAC) have a registered Native Title determination covering the Project area. Investigator entered into an Indigenous Land User Agreement ("ILUA") with GRAC which was accepted on the 19 March 2008 and outlines the procedure and guidelines for exploration within the region by which Investigator can work. This ILUA expired on 28 February 2017 however this does not affect EL6347 (or any renewals, regrants and extensions) as Investigator had entered into an accepted contract prior to that date. The agreement does not cover the mining and extraction process and a Native Title Mining Agreement ("NTMA") covering this process is required to be negotiated and in place prior to final approval to develop the Project.

Going forward into DFS, Investigator will engage suitable consultants to update the site environmental and Native Title components of the Project to ensure sufficient information is available to support the DFS and any Mining Lease application that may be made thereafter.

## **Capital Cost**

The capital cost estimate for the Paris Project Pre-Feasibility study was developed by Mincore. It includes the Capital Cost Estimate for the scope of facilities and services required to design, purchase and construct the entire project, up to Practical Completion and handover to Operations.

The conceptual mine, process plant and all associated facilities have been developed to process 1.8 Mtpa of ore. This size of the operation was selected because it provides a low capital cost but is a profitable commencement for full scale operation.

Investigator have estimated the Owners' capital costs, consisting of its Project Development Team, and the pre-production build-up of the operating team and its associated costs. The cost estimate is compliant to Australasian Institute of Mining & Metallurgy (AusIMM) Class 4 estimate with an accuracy ±25%.

Investigator have estimated the process plant and infrastructure costs. The estimate covers all capital costs as required to commence and continue operations of the Project. The capital cost summary is based on Q3 CY2021 Australian Dollars (A\$ basis date). The basis exchange rates for United States Dollars (US\$) are 0.72 A\$ per 1 US\$. Future changes due to escalation and exchange are excluded. The accuracy range for the project estimate is  $\pm 25\%$ . The estimate makes no provision for future escalation and currency exchange rate fluctuations beyond the basis date.

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The Capital Cost has been prepared for two Process Circuit Options:

- 1. Base Case Whole Ore Cyanidation and Merrill Crowe Precipitation
- Beneficiation Option Beneficiation, Cyanide Leach and Merrill Crowe Precipitation

Table 11 below shows the estimated Capital Cost summary by main area.

Table 11 - Capital Cost Summary (including Power Station).

Description	Cost (A\$M) Base Case	Proportion (%)	Cost (A\$M) Beneficiation Option	Ratio (%)
Mining mobilisation	5.2	4	5.2	4
Process Plant	43.2	32	44.1	32
Infrastructure	46.8	36	49.3	36
Indirect Cost	20.4	16	21.4	16
Contingency	15.5	12	16.1	12
Total Upfront Capital Cost	131.0	100.0	136.1	100.0
Sustaining Capital	21.2		29.2	
Total Capital Costs	152.2		165.3	

### **Financial Evaluation**

The financial assessment is based on the Base Case of cyanide leach and a commodity price of A\$34.30/oz silver. This price was consistent with historical 12-month average at the commencement of the mine optimisation process. An average exchange rate over the same period of A\$:US\$0.72 was selected.

Calculated annual cashflow for the Whole Ore option is shown in Figure 22 and a summary of Life of Mine Physicals and Financials presented in Table 12.



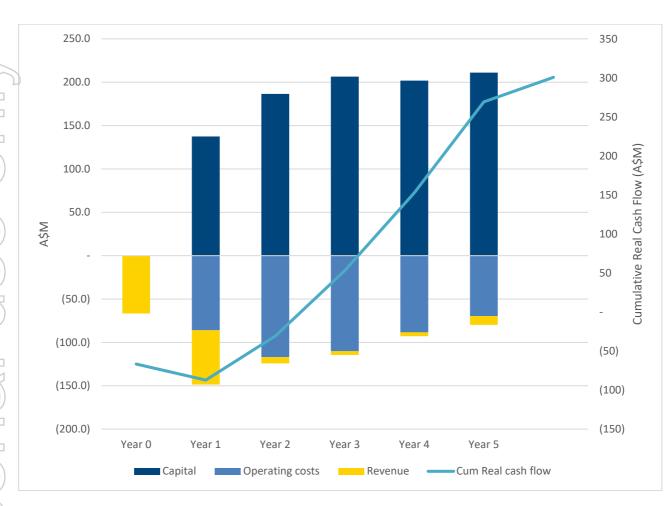


Figure 22 - Cashflow analysis for the Paris PFS Base Case scenario at silver price of A\$34.30/oz



Table 12 - Summary of economic assumptions, Physicals, Cash flow and value metrics for the PFS at the two silver price scenarios for each of the Base Case and Beneficiation options for the Paris Silver Project.

Item	Unit	Whol	e Ore	Benefi	ciation	
		Base	Case	Op <sup>.</sup>	tion	
		Economic Assumptions				
Silver Price	A\$/oz	34.30	38.00	34.30	38.00	
	US\$/oz	24.70	27.35	24.70	26.70	
Exchange Rate	A\$:US\$	0.72	0.72	0.72	0.72	
		Р	hysicals			
Life of Mine (LOM)	Years	5	7	5	7	
Mined Ore	Kt	8,575	10,909	8,575	10,909	
Strip Ratio	Waste:Ore	9.2	6.5	9.2	6.5	
Processed tonnes	Kt	8,575	10,909	8,575	10,909	
Processed Silver Grade	g/t	128	109	128	109	
Silver Recovery	%	75.2	75.7	76.7	77	
Silver Dore produced	Moz	26.7	29	27.2	29.6	
	Cash Flow					
Gross Revenue	A\$M	969	1,183	988	1,206	
Royalties	A\$M	19	28	20	28	
TC/RC & Transport	A\$M	7	8	7	8.2	
Net Revenue	A\$M	943	1,147	961	1,170	
On Site Operating Costs	A\$M	456	545	494	595	
Net Operating Cash Flow	A\$M	487	602	467	575	
Upfront Capital Cost	A\$M	13	1.1	13	6.1	
- Mining Pre-production	A\$M	5	.2	5	5.2	
- Process plant	A\$M	43	3.2	44	1.1	
- Infrastructure	A\$M	46	5.8	49	9.3	
- Indirect costs	A\$M	20	).4	21	L.4	
- Contingency	A\$M	15	5.5	16	5.1	
Sustaining Capital Costs	A\$M	21.2	29.2	21.2	29.2	
Net Project Cash Flow (Pre-Tax)	A\$M	335	442	302	400	
		Valu	ue Metrics	1		
Pre-Tax NPV8	A\$M	202	244	175	213	
Pre-Tax IRR	%	54.1	47.6	45.7	41.0	
Pre-Tax Payback period	Years	2.3	2.8	2.6	3.1	
Post-Tax NPV8	A\$M	135	157	116	133	
Post-Tax IRR	%	40.1	35.8	33.7	30.3	

A discounted cashflow analysis was undertaken to evaluate the project Base Case, considering silver as the only product. Two silver price scenarios were considered, including the impacts on ore availability from pit optimisations. The Base Case was compared to the beneficiation option for both scenarios. Corporate and other related costs incurred by Investigator Resources are excluded in the financial evaluation. All costs and revenue were modelled in both nominal and real terms and reported in real terms.



The Project Physical, Financial and Valuation summary presented in Table 12 shows that under both the Base Case, with whole ore processing and the Beneficiation Option the Project is financially robust, generating high IRRs, positive NPV, strong revenue and a strong payback period. These financial metrics are calculated from an assumed "Year 0" project commencement date currently estimated to be Q2 2023.

Both options were modelled as financially robust. However, Table 12 demonstrates that the Base Case generates greater value, with a higher IRR and NPV and a shorter payback period. For this reason, the Whole Ore processing scenario was selected as the Base Case and will form the primary focus of the Feasibility Study. Analysis of the Beneficiation Option will continue in the Feasibility Study as it presents a better opportunity for recovery of lead from the Paris Project.

Figure 23 demonstrates the financial robustness of the Base Case option by showing that the NPV remains compelling for a range of sensitivities.

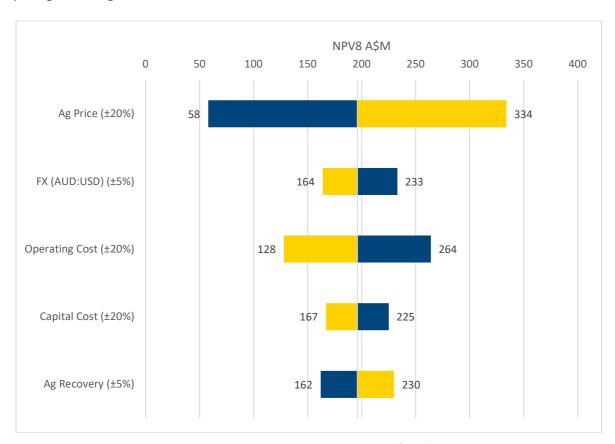


Figure 23 - Sensitivity analysis for Paris silver Project Base Case, A\$34.3/oz silver price scenario.

# **Project Development**

An engineering, procurement, construction and management ("EPCM") schedule has been prepared covering completion of a Definitive Feasibility Study ("DFS"), Board approval for the Project, then detailed engineering design, procurement, contracts, construction and commissioning.

The Company has scheduled a 12-month period for the DFS and Early Works plus an additional 6 to 12 months for final regulatory approvals and construction to commence. This timeline includes DFS metallurgical test work for silver recovery and addition of lead recovery, exploration and resource drilling, discipline studies,



native title and regulatory approvals. The timeline also includes opportunities to increase the size of the Resource, definition of Ore Reserves and DFS level assessment of opportunities for lead recovery. The drilling and DFS program run concurrently with the Project financing activities, regulatory approvals and front-end engineering design works. Award of the key engineering, procurement and construction contracts is assumed in Q4 2022. The proposed development schedule is summarised in Figure 24.

An EPCM contract model has been selected as the implementation strategy for the Plant and Infrastructure design and construct phase of the Project. An EPCM contractor will be engaged by Investigator to provide detailed design, procurement, construction and commissioning activities for the process plant and associated infrastructure required for the development of the Project from commencement to satisfactory completion of a performance test.

The start of the construction phase has been linked to obtaining the remaining environmental and all other required approvals and permits. A detailed schedule has been prepared, with a duration of 30 months from the start of detailed design in January 2022 until commencement of production (hot commissioning) in May 2024. The critical path for the Project completion is through the mill delivery and construction.

The mining will be undertaken by contractor. Contractor pre-selection will take place during the DFS with final selection during the financing period allowing sufficient time for the mining contractor to prepare for site mobilisation. Investigator will build-up its Project Management Team progressively during the DFS including key personnel who will transfer to Operations. Full Operations team build-up will follow from project award.

Activity	Months	Q1 22	Q2 22	Q3 22	Q4 22	Q1 23	Q2 23	<b>ე</b> 3 23	Q4 23	Q1 24	Q2 24
Stakeholder engagement	6										
Permitting - application	4										
Permitting - approvals	6										
							*				
DFS Drilling	3										
DFS Metallurgy test work	3										
DFS studies - Resource	1										
DFS Studies - Mining	1										
DFS studies - Plant/infrastructure	4										
Front end engineering	3										
EPCM award	0				*						
Detailed design	8										
Financing	12										
FID & Contract award	0						*				
Site and camp establishement	2										
Site construction	10										
Mining mobilisation and pre-production	8										
Production											*

Figure 24 - proposed development schedule for the Paris silver project



#### **Risks**

### **Financing**

There is a risk that Investigator will not be able to secure sufficient funding for the equity portion of the Project capital. Funding and mitigation strategies are discussed in Section on Funding.

#### **Silver Market and Price**

The study assumes that a silver price of between A\$34.30/oz and A\$38.00/oz will prevail for the life of the Project. <sup>12</sup> Investigator believes that these assumptions are reasonable, reflecting current market conditions where supply/demand deficiencies currently exist as well as potential forecast growth in use of silver in electric vehicles and solar power generation. <sup>13</sup> The Project remains robust over a range of silver prices as shown in the Sensitivity Analysis section.

#### **Resource Risks**

There is a risk that geological and grade continuity of the Paris Resources may vary from the current estimates as further infill drilling is completed. The current resource is highly sensitive to distribution of high silver grades and further infill drilling will inform the level of risk to variability in high grade will be addressed in the next stages of exploration and studies which establish mineral Reserves.

### **Metallurgical Risks**

There is a risk that metallurgical recoveries for the process may be lower than PFS test work results. Variability test work during the DFS will reduce this risk further. The impact on Project economics of not achieving recovery assumptions has been assessed in Sensitivity Analysis.

#### **Mining Risks**

Geotechnical study of the Paris deposit to date has been sufficient to inform the PFS level of study but is insufficient to eliminate potential risk with respect to pit slope stability. Additional geotechnical study is required as part of the DFS and may have potential to alter optimised pits to those in this study.

Hydrological studies are required to inform pit geotechnical and dewatering assumptions in DFS study work in addition to demonstrating sufficient flow rates and recharge for modelled paleochannel water supply options.

There is a risk that changes in geotechnical modelling or hydrological modelling could affect the project viability or delay approvals and development.

Mining and Projection cost estimates are based on current day estimates provided by contractors at the time of the PFS study. There is a risk that costs may be affected due to global and local supply and demand impacts that may include physical plant or labour constraints.

#### **Environment and Community Risk**

Environmental surveys of the project to date are baseline in nature and whilst they have concluded no likelihood to affect Flora and Fauna at a substantial level, they do not cover the extent of proposed

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<sup>&</sup>lt;sup>12</sup> World Bank Silver Price forecast

<sup>&</sup>lt;sup>13</sup> https://www.silverinstitute.org/silver-supply-demand/



development in full. Further detailed environmental surveying is required in order to ensure the project does not affect environmentally sensitive populations of species.

A Native Title Mining Agreement is required to be negotiated with the native title determinants of the region in order for development of the project to occur. There is the risk that this process may affect timelines for development.

Community consultation and land access negotiation with pastoral leaseholders will be required for development of the project in order to achieve regulatory approvals. There is a low risk that this process may delay approvals and development of the project. Based on high level assessments undertaken to date by Investigator, no significant environmental or community issues have been identified for the development of the Paris Project proposed in this PFS.

### Foreign Exchange Risk

Cost estimates are made in October 2021 Australian dollars, at an assumed exchange rate United States Dollars (US\$) are 1.39 US\$ per 1 A\$ (US72c = A\$1) where applicable.

Whilst the majority of the Project's costs will be in A\$, there remains exposure to both commodity pricing (silver will be sold domestically but priced against a U\$ silver reference price). Similarly, some capital equipment and infrastructure required during construction as well as a proportion of operating costs (consumables) will also be subject to foreign exchange movements.

## **Funding**

To achieve the range of outcomes indicated in the PFS, funding in the order of A\$131M – A\$136M will be required for Project development. In addition, pre-development funding of approximately A\$10M for exploration, metallurgical test work and discipline studies to convert the mineral resource to an ore reserve and to complete a DFS has been estimated. Whilst there is no certainty that Project development funding will be obtained on satisfactory terms, at the time required, or at all, the Investigator Directors believe that providing the Project economics indicated by the Prefeasibility Study are confirmed by the next stages of studies on the Project, it is reasonable to assume that sufficient sources of funding for the development of the Paris Silver Project will be established.

Investigator Directors believe that it is most likely that the abovementioned pre-development and development funding required for the Paris Silver Project may be achieved as:

- continued equity funding of Pre-Development costs including the DFS and associated drilling, metallurgical and engineering programs; and that
- the Project economics are sufficient to support debt funding of a proportion of the upfront capital cost.

Factors which support this assumption, without stating that funding will be necessarily obtained, include:

The robust economics of the Project that make it attractive for investors looking for silver market exposure, especially in relation to growth in industrial applications for silver.



Investors should again note that there is no certainty that Investigator will be able to obtain sufficient funding as and when needed. It is possible that funding may dilute or otherwise affect the value of Investigator's existing shares. It is also possible that Investigator could pursue other 'value realisation' strategies such as sale, partial sale or joint venture of the Project. If these strategies are pursued, this could materially reduce Investigator's proportionate ownership of the Project.

## **Recommendations and Next Steps**

As a result of the outcomes of the PFS, subject to obtaining funding, Investigator plans to undertake a Definitive Feasibility Study on the Paris Silver Project to further assess internal project options, reduce risk and better define the Project. If the results of the DFS continue to indicate a robust investment, the Board will consider a development investment decision.

The DFS is expected to take 12-18 months, depending on the depth of studies required, and will aim to outline the most attractive investment option.

The DFS will include further resource drilling and infill drilling, geotechnical and hydrogeological investigations, detailed pit design and scheduling options, further detailed metallurgical test work, alternative process options for viable lead recovery, water management, Native Title negotiations and environmental baseline and management studies. Engagement with local and broader communities, as well as with the associated regulatory bodies, will be a vital element of the DFS. Investigator recognises that best practice environmental management and strong support from the community are critical for the project. Particular attention will be given to water, waste and emissions management, and to employment opportunities for local people.

For and on behalf of the board.

**Andrew McIlwain** 

Managing Director

For more information:

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## Capital Structure (as at 30 September 2021)

Shares on issue	1,323,946,607
Unlisted Options	28,000,000
Performance Rights	10,000,000
Top 20 shareholders	30.3%
Total number of shareholders	5 718

**Directors & Management** 

Ms Anita Addorisio

Mr Kevin Wilson	Non-Exec. Chairman
Mr Andrew McIlwain	Managing Director
Mr Andrew Shearer	Non-Exec. Director
Ms Melanie Leydin	CFO

**Company Secretary** 

– Ends –



### **APPENDIX**

### APPENDIX 1: JORC Code, 2012 Edition – Table 1

The following section is provided to ensure compliance with the JORC (2012) requirements for the reporting of the Updated Paris Resource Estimate, 2021 in the ASX release "Paris Updated Mineral Resource Estimate" dated 24 June 2021

Assessment and Reporting Criteria Table Mineral Resource – JORC 2012 **Section 1 Sampling Techniques and Data** 

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	Reverse Circulation ("RC") Drilling  RC drilling was sampled at nominal 1m intervals down hole. The upper colluvium/soil material (generally 4-5m depth) was not sampled in this program on the basis it was sufficiently tested in previous drilling and regarded as unmineralized.
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Where dry samples were intersected, sampling was undertaken using a stand-alone riffle splitter. Approximately 3kg of the original sample volume was submitted to the laboratory for assay.
	Aspects of the determination of mineralisation that are Material to the Public Report.	RC drill holes completed up to and including 2014, and where wet samples were recovered had sub-samples taken by riffle splitting or spear sampling depending on material intersected. Wet clays were spear sampled if riffle
	• In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'RC drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	<ul> <li>splitting was inappropriate. Sampling method and quality of sample was recorded.</li> <li>RC drilling from 2016 drill programs onwards and where samples were judged to be sufficiently wet that riffle splitting may be compromised (balling clays or muddy) then samples were quarantined on site and dried until processing in the same format as an originally dry interval could be achieved i.e., riffle split to obtain an approximate 3kg sample submitted to the laboratory for pulverisation and assay.</li> <li>Riffle splitters were visually inspected prior to drilling to confirm</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>appropriate construction and fitness for purpose and regularly cleaned.</li> <li>Drill intervals had visual moisture content and volume recorded i.e., Dry, Moist, Wet and Normal, Low, Excessive.</li> </ul>
		<ul> <li>PQ3, HQ3 and NQ2 core has been drilled by the Company, with sizing selected based on rock competency. The majority of drilling at the deposit is PQ3 sized, including all Quality Assurance/Quality Control ("QA/QC") twin holes from 2016 and 2020.</li> <li>All PQ3, HQ3 and NQ2 diamond drill core samples were collected by cutting the core longitudinally in half using a diamond saw. If an orientation line was present the core was cut to preserve the orientation line. If an orientation line was not present the core was marked with a cut line in order to provide the most representative sample.</li> <li>DD drilling was sampled at 1m intervals down hole, or to geological boundaries with from – to intervals recorded against sample number.</li> <li>Pre-2016 diamond core was sampled by way of ¼ core for PQ and generally ½ core for HQ and NQ sized samples. All duplicate pair analyses were undertaken by ¼ core paired interval samples. From 2016 ½ core sampling occurred in all instances with exception of duplicate pair analyses which were ¼ core paired interval samples.</li> </ul>
		<ul> <li>Core where competent was cut utilising an automatic saw. More friable zones were either cut by manual saw or divided using a broad "knife", which was regarded as effective but may result in some instances of whole clast inclusion/exclusion due to competency differences.</li> <li>Core was oriented on site and a cut line applied to ensure consistent sampling of core from one side occurred, however the lack of ability to</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>orientate core, particularly in the oxide/transition zones means that some intervals may have variation down hole, particularly where breaks between core runs could not be followed.</li> <li>5 DD holes drilled in 2018 for geotechnical purposes were not sampled and assayed but were used as part of the estimate by way of providing additional oxidation state and geological data.</li> </ul>
		<ul> <li>Aircore Drilling ("AC")</li> <li>AC drill cuttings were spear sampled.</li> <li>Aircore sampling was initially undertaken using 3m composite intervals, with 1m sample intervals re-assayed upon return of anomalous results. No QA/QC record of the initial aircore program is present. No data regarding sample size variation exist other than original laboratory received weights. No information relating to the bit type (blade/hammer) or amount of wet or dry sample was recorded.</li> </ul>
		<ul> <li>Other Aspects:</li> <li>Sampling criteria described in this table includes reference to previously released drill data from Paris resource definition and extension drilling completed from 2011 – 2014, and 2016 – 2017, with additional specific information available by referencing prior ASX Paris resource estimate releases dated 19<sup>th</sup> April 2017, 9<sup>th</sup> November 2015 and 15<sup>th</sup> October 2013.</li> <li>No other aspects for determination of mineralisation that are material to the public report have been used.</li> </ul>
Drilling techniques	• Drill type (e.g. core, RC, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Paris Project Drilling Statistics: Aggregate total data used:  DD total holes used as part of resource estimate was 157 for 22,511 metres and 20,895 samples.



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Criteria	JORC Code explanation	Commentary
		RC total holes used as part of resource estimate was 422 for 44,092 metres
		and 37,154 samples.
		• AC total holes used was 78 for 4,987 metres and 2,599 samples.
		New drill data used in 2021 resource estimate (includes components of
		exploration and geotechnical drilling completed in 2017/2018):
		• 255 RC holes for 23,934 metres and 20,070 samples
		9 DD holes for 1,077m and 452 samples.
		Multiple AC, RC, DD programs have been undertaken at the Paris Project.
		AC drilling was predominantly vertical and no down-hole surveys were
		undertaken. No records are available to distinguish between blade and
		percussion sampling of AC drilling.
		2011-2013 RC drilling was completed using standard 5 ½ inch face
		sampling percussion hammers to variable depths and orientations.
		Additional exploration RC step out drilling was completed (2013-2014)
		using 4 ¾ inch face sampling percussion hammers.
		<ul> <li>2016 and 2020 RC drilling programs were completed using standard 5 ½</li> </ul>
		inch face sampling hammers, with all holes being vertical in orientation.
		<ul> <li>29 DD holes in 2012 were pre-collared to varying depths (averaging 45m</li> </ul>
		approximately). All other DD holes were cored from surface. Records of
		pre-collar depths and orientation of all holes is retained in the in-house
		referential database.
		DD core orientation was attempted during drill programs between 2011
		and 2013 using Camtech orientation and manual tools. Orientation of core
		was unsuccessful within the altered breccia zones which host the majority
		of mineralisation but was successful in basement geological units. No core
		orientation was undertaken during the 2016 and 2020 DD programs owing



Criteria	JORC Code explanation	Commentary
		<ul> <li>to shallow twin hole drilling and lack of success in prior programs. Core orientation was attempted in 5 DD holes drilled as geotechnical holes in 2018, with limited success in transition zone material.</li> <li>RC drilling did not utilise a rig attached splitter due to the potential for cross contamination should balling clay or similar intervals be intersected. Drillers supplied sample on a per metre basis into large format numbered sample bags.</li> <li>DD drilling completed as part of the program was undertaken using predominantly PQ3 (triple tube) coring, limited additional core at HQ3 and NQ3 was drilled in 2012 – 2013 based on depth of hole and competency. All core drilling completed in 2016, 2018 and 2020 was PQ3 sized.</li> <li>Core orientation in 2020 was not undertaken due to the intense alteration which had demonstrated from prior programs that reliable orientations were rarely achievable.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul> <li>Diamond Hole Drilling</li> <li>Core recovery and geotechnical data were recorded during core logging for all holes and is stored in the Company's referential database.</li> <li>DD recovery was measured against driller run returns for all holes with the exception of PPDH001 to PPDH006. Weighted average recoveries were calculated on 1m intervals.</li> <li>PPDH001 to PPDH006 had recovery measured against every metre as opposed to driller run.</li> </ul>
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	<ul> <li>Drilling methods are chosen to ensure maximum recovery. Triple tube diamond drilling with large diameter core was used unless sufficient confidence in rock competency is known. Core runs are limited to 1.5m in oxide/transitional material, with 3m runs only in fresh, competent rock and with approval of geologist. All 2016 and 2020 DD drilling used 1.5m runs or</li> </ul>



Criteria	JORC Code explanation	Commentary
Criteria	JORC Code explanation	<ul> <li>less to ensure recovery was maximised.</li> <li>Core recovery in 2016 was extremely high due to use of newly developed drilling fluids and experienced drilling operators, with much of RQD designated as 100%.</li> <li>Core recovery in 2020 was overall good, however a number of holes had lower quality core returned in instances which was attributed to local ground conditions and a degree of variability in driller experience.</li> <li>2012-2013 DD mean recovery for all holes within resource of 94.59%.</li> <li>2016 DD, mean recovery was 98.13%.</li> <li>For 2020 DD, mean recovery was 97.25%.</li> <li>DD grade vs recovery plots for data in 2020 drilling saw 94.2% of samples within 2 Standard Deviations ("SD") of mean for that program. For 2016 data 98.3% of samples were within 2SD of mean for that program, and for older data 94.5% of samples were within 2SD of mean.</li> <li>DD 1m composited assay data for silver was plotted against composited recovery data and indicated no bias.</li> </ul>
		<ul> <li>Reverse Circulation Drilling</li> <li>For RC drill holes numbering PPRC001 to PPRC043 drilling recovery weights were not recorded.</li> <li>For RC drill holes numbering PPRC044 to PPRC080 drilling sample recovery weights were recorded at the time of drilling. Wet or dry sample interval details were also recorded.</li> <li>For slimline RC drill holes (drilled in 2014), drill sample recovery weights were not recorded for 3m composite sample intervals however visual recovery estimates were documented. Resampled mineralised 1m subsample intervals within these holes were weighed with recovery weights recorded at time of sampling. Wet or dry sample intervals were recorded</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>for all intervals.</li> <li>For all RC drilling in 2016 and 2020 whole bag weights were recorded for all 1m intervals. Wet or dry sample interval details were also recorded. Bag weights for designated wet or moist samples were taken after drying of intervals, with the majority of intervals in the program having a dry bag weight recovery value. Moist but splitable bag weights were weighed at the time of splitting and will not be a dry weight record.</li> <li>QA/QC analysis of RC recovery vs grade found 94.51% of bag weights were within +/-2SD of the mean, and 71.5% within +/-1SD of the mean.</li> <li>Bag weight variability was plotted by silver grade (0-30g/t Ag, 30.1-200g/t Ag, 200.1-1,000g/t Ag and 1,000.1-13,000g/t Ag) for RC sample data where weights are recorded with 94.4%, 95.26%, 97.43% and 96.49% of samples being within +/-2SD of the mean for each respective grade interval.</li> <li>Plots of silver assay vs bag weight showed no discernible bias between recovery and grade.</li> </ul>
		<ul> <li>Aircore Drilling:</li> <li>No recovery information was recorded for any AC drilling undertaken in the early exploration (pre-2012) phase of drilling at Paris. Data was utilised in the resource estimate on the basis that sufficient drilling in proximity was able to support the assays and geology from these holes.</li> <li>General:</li> <li>RC holes with poor recovery in target zones were generally redrilled.</li> <li>Observed poor and variable recovery is flagged in the sampling database. Wet or moist samples are also flagged in the sampling database (for RC).</li> <li>Zones of poor DD recovery are flagged in the sampling database.</li> </ul>



Criteria	JORC Code explanation	Commentary
Logging	appropriateness of met overall comparable zon comparison in some are DD core recovery issues pairs for 2016 and 2020 majority of holes, hower majority of holes plotting was more consistent the some differences in geometric dependence of the detail to support appropriate Mineral Resource overall comparable zon comparison in some are DD core recovery issues pairs for 2016 and 2020 majority of holes, hower majority of holes plotting was more consistent the some differences in geometric details and the detail of the detail to support appropriate Mineral Resource of the detail to support appropriate Mineral Resource overall comparable zon comparison in some are DD core recovery issues pairs for 2016 and 2020 majority of holes, hower majority of holes plotting was more consistent the some differences in geometric details and the detail to support appropriate Mineral Resource overall comparable zon comparison in some are DD core recovery issues pairs for 2016 and 2020 majority of holes, hower majority of holes plotting was more consistent the some differences in geometric details and the detail to support appropriate Mineral Resource over	drilling was undertaken to support recovery/grade observations and appropriateness of method. 2016 DD vs RC twin comparison showed good overall comparable zones of mineralisation. 2020 DD vs RC twin comparison in some areas was less consistent due to geological and some DD core recovery issues. Plots of total average grade for RC vs DD twin pairs for 2016 and 2020 drilling showed a slight bias towards RC in the majority of holes, however not regarded as a material difference, with the majority of holes plotting within +/-10% of a 1:1 relationship. 2016 data was more consistent than 2020 and attributed to higher core quality and some differences in geological ground conditions.  • Entire holes are logged comprehensively and photographed on site.  • Qualitative logging includes lithology, colour, moisture content (RC), sample volume (RC), mineralogy, veining type and percentage, sulphide content
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>and percentage, description, marker horizons, weathering, texture, alteration, mineralization, and mineral percentage.</li> <li>Quantitative logging includes magnetic susceptibility, specific gravity (DD only), geotechnical parameters (DD only). Portable XRF is utilised on an informal basis to identify zones of mineralisation and mineralogical components to assist in lithological logging but not relied upon for reporting of mineralisation in this release.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul> <li>Diamond Hole Drilling</li> <li>All PQ3, HQ3 and NQ2 diamond drill core samples were collected by cutting core longitudinally in half using a diamond saw. PQ3 and HQ3 core sampled in 2012-2014 was quarter core sampled. All other DD drilling after 2014 was half core sampling with exception of duplicate samples (refer below). If an orientation line was present the core was cut to preserve the orientation line. If an orientation line was not present the core was marked with a cut</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/secondhalf sampling.</li> </ul>	<ul> <li>line in order to provide the most representative sample.</li> <li>All core where a field duplicate sample was taken (1 in 20 samples) was cut as quarter core longitudinally.</li> <li>Sample lengths were generally 1m and honoured geological boundaries.</li> <li>Multiple twin holes, and duplicate ¼ core samples (1 in 20) were used to examine representivity.</li> </ul>
	Whether sample sizes are appropriate to the grain size of the material being sampled.	<ul> <li>Reverse Circulation Drilling</li> <li>RC drilling was sampled at nominal 1m intervals.</li> <li>Where dry samples were intersected, sampling was undertaken using a stand-alone riffle splitter. Approximately 3kg of the original sample was submitted to the laboratory for assay.</li> <li>Riffle splitters were visually inspected prior to drilling to confirm appropriate construction and fitness for purpose. 87.5/12.5%, 75/25% and 50/50% splitters were utilised dependent on original sample volume – final percentage split of all samples was recorded.</li> <li>RC drill holes completed up to and including 2014 and where wet samples were recovered, sub-samples were obtained by either riffle splitting or spear sampling if riffle splitting was inappropriate due to potential for contamination. Wet clays were spear sampled if riffle splitting was inappropriate. Sampling method and quality of sample were recorded.</li> <li>RC drill holes from 2016 onwards which encountered wet samples were quarantined and dried prior to sub-sampling as per dry sub samples, i.e., riffle split to obtain an approximate 3kg sample submitted to the laboratory for pulverisation and assay.</li> <li>Field duplicates are taken on every 20th sample in the program.</li> </ul>
		Aircore Drilling:



Criteria	JORC Code explanation	Commentary
		<ul> <li>AC drill cuttings were spear sampled.</li> <li>Aircore sampling was initially undertaken using 3m composite intervals with 1m sample intervals re-assayed upon return of anomalous results. No QA/QC record of the initial aircore program is present. No data regarding sample size variation exist other than original laboratory received weights. No information relating to the bit type (blade or hammer) or amount of wet or dry sample was recorded.</li> </ul>
		<u>Duplicates:</u>
		<ul> <li>Results of field duplicate sampling indicate no bias with the sub sampling techniques.</li> </ul>
		<ul> <li>Laboratory sample preparation</li> <li>Subsampling techniques are undertaken in line with standard operating practices to ensure no bias.</li> <li>QA checks of the laboratory included re-split and analysis of a selection of</li> </ul>
		samples from coarse reject material and pulp reject material to determine if bias at laboratory was present.
		<ul> <li>The nature, quality and appropriateness of the sampling technique is considered appropriate for the grainsize and type of mineralisation and confidence level being attributed to the results presented.</li> </ul>
Quality of assay data and laboratory	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>A certified and accredited commercial laboratory ALS Laboratories ("ALS")         (Perth) was used for all assays. Umpire check analysis of a selection of         samples in the program (2020) was completed by Bureau Veritas</li> </ul>
tests	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	<ul> <li>laboratories (Adelaide).</li> <li>Samples were analysed using methods MEMS61 and MEMS61r with a 25g prepared sample subjected to a 4-acid total digest with perchloric, nitric,</li> </ul>



Criteria	JORC Code explanation	Commentary
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul> <li>hydrofluoric and hydrochloric acids and analysed by ICP-AES and ICP-MS for 48 elements including Ag and Pb.</li> <li>Over-range samples (&gt;100ppm Ag, &gt;1% Pb) were re-assayed using ME-OG62, 4-acid total digest with ICP-AES finish to 1,500ppm Ag and 20% Pb.</li> <li>Silver results greater than 1,500ppm are re-assayed by ME-OG62H using 4-acid total digest with ICP-AES finish to 3,000ppm Ag.</li> <li>If samples remain over-range after this method, then GRA-21 is used for Ag (0.1 – 1.0% Ag). ALS have recently closed their Australian laboratory capable of undertaking the method of analysis and any GRA21 analyses are required to be undertaken at their Vancouver, Canada facility.</li> <li>Samples with silver greater than 1% are analysed by Ag-CON01 for Ag (0.7 – 995,000ppm).</li> <li>Umpire check analysis with Bureau Veritas (an alternate NATA accredited laboratory) for a subset of approximately 300 assay pulps from 2020 drilling with varying silver/lead grades and from multiple differing lab batches was completed and confirmed the level of accuracy reported by ALS laboratories.</li> <li>Umpire cross laboratory check sampling with AMDEL laboratories was undertaken on a number of sample batches processed by ALS as part of the 2013 resource estimation with results found to correlate with original assays. No umpire checks were undertaken as part of the 2016 infill drilling program.</li> <li>QA/QC Summary</li> <li>Records of QA/QC techniques undertaken during each drilling program are retained by Investigator.</li> <li>Certified reference standards including blanks, were randomly selected and</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>inserted into the sampling sequence (1 in 25 samples) for all RC and DD drilling where 1m sample intervals were assayed. Standards were designed to validate laboratory accuracy and ranged from low grade to high grade material. Review of standards indicated that they reported within expected limits with no evidence of bias.</li> <li>Field duplicate samples were routinely taken on every 20<sup>th</sup> sample for all RC and DD drilling. Duplicate sample results showed no bias relative to their original sample.</li> <li>A detailed QA/QC report was generated for the initial resource estimates in 2013 (2012 JORC Code). Additional QA/QC reports were generated for the 2016 infill resource drilling and 2020 infill resource drill programs that includes key analysis of all data and procedures and was supplied to the independent resource consultant.</li> <li>No significant analytical biases have been detected in the results presented.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul> <li>Results of significant intersections were verified by Investigator personnel visually and utilising Micromine drill hole validation.</li> <li>Additional 3<sup>rd</sup> party verification of significant intersections was completed by independent resource consultants from Mining Plus (2012-2013) and H&amp;SC (2015, 2017, 2021).</li> <li>12 drill holes at Paris were twinned during 2012-2013 to assess representivity and short-range spatial variability. This has included DD/DD twinning, DD/RC and DD/AC twinning.</li> <li>An additional 6 DD/RC twin holes were drilled as part of the 2016 infill resource drilling program to help validate the accuracy of the RC drilling.</li> <li>A further 4 DD/RC twin holes were drilled as part of the 2020 infill resource drilling program to help validate the accuracy of the RC drilling.</li> </ul>
		<ul> <li>drilling program to help validate the accuracy of the RC drilling.</li> <li>Results of the twinned holes in general confirmed the presence of</li> </ul>



Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	mineralisation, and geological continuity. However, the twin holes highlight the heterogeneity of the breccia host, with variable short distance grade continuity. Mineral intercept comparison between DD and RC from 2016 and 2020 programs showed a slight positive bias towards RC over DD, with greater consistency between RC/DD observed in 2016 drilling due to better core quality. Overall, the majority of this data is within the +/-10% of being 1:1 relationship. The RC bias may be attributed to a greater overall sample volume and small variability in recovery between the two methods or the fundamental nature of breccia hosted mineralisation.  Primary data is captured directly into an in-house referential and integrated database system managed by the Exploration Manager.  All assay data is cross validated using Micromine drill hole validation checks including interval integrity checks. Further integrity checking was undertaken by the independent resource consultant on receipt of data.  Laboratory assay data is not adjusted aside converting all results released as % to ppm. Below detection results reported with a "<" sign are converted to "-" as part of validation.  Where an over range re-assay is returned, the result is transferred into the database with the method of analysis identified against each sample number with such over range results.
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Collar co-ordinate surveys</li> <li>All coordinates are recorded in GDA 94 MGA Zone 53.</li> <li>DD and RC Holes have been field located utilising handheld GPS (accuracy of approximately +/-4m) and orthoimagery. Prior to utilisation of drilling data in any resource estimation collars are located utilising differential GPS with a typical accuracy of +/-10cm.</li> <li>AC collars were surveyed by handheld GPS. AC collars within Paris were</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>subsequently surveyed with DGPS equipment post rehabilitation, this has captured the majority of holes at greater accuracy, however a small number were unable to be adequately identified for detailed survey pickup and retain the +/-5m accuracy.</li> <li>Survey method for all drill holes is recorded in the Company's referential database.</li> <li>Topographic control uses a high resolution DTM generated by an AeroMetrex 28cm survey.</li> <li>A local grid conversion was applied to all data in order to simplify and be consistent with previous resource estimation processes. This transformation was completed using SURPAC software by HS&amp;C and corroborated by using Micromine by Investigator. This resulted in a clockwise rotation from MGA to local of 40 degrees using a two-common point transformation.</li> </ul>
		<ul> <li>Down hole surveys</li> <li>AC holes (pre-2012) and slimline RC holes from 2014 were not surveyed at the time of drilling.</li> <li>2011 to 2013 RC and DD drill holes were surveyed at the bottom of hole and every 30m down hole using either reflex single shot or multi-shot down hole survey tools.</li> <li>Survey results, depth and survey tool are recorded for each hole in Investigator's in house referential database. Hole surveys were checked by geologists for potential errors due to lithological conditions (e.g. magnetite/sphalerite) or setup errors. Suspect surveys were flagged in the database and omitted where reasonable evidence was present to do so. A limited number of holes in 2012 were gyroscopically logged.</li> </ul>



Criteria	JORC Code explanation	Commentary
		2016, 2017 and 2020 RC and DD holes were all drilled vertical with the exception of 5 geotechnical (unsampled) DD holes in 2017. Holes averaged approximately 120m in depth and had a survey completed at collaring, and a second survey at bottom of hole to confirm dip variation. Due to vertical nature of the holes, downhole surveys presented unreliable azimuths with dip variability not regarded as substantial.
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drill hole spacing is variable over the approximate 1,600m x 800m area delineated as the Paris Project.</li> <li>Detailed drilling on 25m centres in a central portion of the deposit, expanding to 50 to 100m spacing in less well drilled areas of the deposit.</li> <li>Traverses are oriented and designed to target mineralisation trends (with some drilling completed in 2013 to verify that alternate trends are adequately covered).</li> <li>Drill hole spacing along lines varies from 10m to 30m within the main body of mineralisation, out to 50m on outer edges and less drilled zones. (refer drill hole location plans in Appendix 2)</li> <li>1m down hole sample intervals.</li> <li>Drill hole spacing and data distribution is considered appropriate for establishing geological and grade continuity for resource estimation and the level of classification applied.</li> <li>Field sample compositing was not undertaken on any of the DD or for RC drilling for hole prefixes PPRC001 to PPRC080 and PPRC364 to PPRC703 used in the resource estimation process.</li> <li>Initial 3m field compositing occurred for RC hole prefixes greater than PPRC081 and less than PPRC364 that are included in the estimate. Upon receipt of composite assays, re-splitting of field samples at 1m intervals were undertaken for all samples with a nominal silver grade in 3m</li> </ul>



Criteria	JORC Code explanation	Commentary
Orientation of		composites greater than 5ppm Ag. Intervals resampled at 1m had their 3m composite assay deprioritised and replaced with the appropriate 1m assays for each interval.
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The majority of the known mineralisation is interpreted to occur in both primary and alteration controlled horizontal to sub-horizontal layers. The drilling orientations are considered appropriate to test these orientations.</li> <li>A minority of the mineralisation is interpreted to occur in sub-vertical fault breccia and structures. These orientations may be inadequately represented in the existing drilling.</li> <li>The main strike of the mineralisation is towards 320 degrees (true). Drill sections have been aligned orthogonal to the main interpreted strike direction.</li> <li>Most drilling has been undertaken vertically and inclined in both directions on section. Additional angled drilling on orthogonal sections was undertaken to test for alternate mineralisation trends.</li> <li>Declinations for drillholes from 2011-2014 have, in the majority been at -60 degrees, however there are a number of holes drilled at -90 degrees and in the latter drilling program. Specific holes have had variable azimuths and declinations to suit the target objective of each drillhole.</li> <li>Declinations for all 2016 and 2020 drilling was -90 degrees based on knowledge that mineralisation is dominantly flat lying.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Diamond Drilling</li> <li>Core is secured on site, strapped, then transported to a secure warehouse in the Adelaide metropolitan area for contract cutting/sampling. 2020 drill core was sampled under supervision of an Investigator geologist.</li> <li>All core is photographed prior to despatch from site.</li> <li>Pallets of core have lids and are metal strapped at site to ensure no loss or</li> </ul>



Criteria	JORC Code explanation	Commentary
		tampering or damage to core whilst in transit to the contract cutting and sampling warehouse.  Core sampling is undertaken under contract by identified individuals with sampling intervals marked up and defined by Investigator geologists.  Sample intervals and sample number designations were written on core and core trays on site prior to transport. Sampling sheets were supplied to core cutting contractors independent of core delivery.  Sample intervals are put into individually numbered, pre-printed calico sample bags and are loaded into cable tied poly-weave bags for dispatch in pallet bins to ALS laboratories, Adelaide for sample preparation using an independent freight contractor.  Cut core is stored in a secure warehouse for future audit/reference.  Assay pulps are returned to Investigator from contracted laboratories on a regular basis and stored securely at the warehouse. Pulp samples are stored in original cardboard boxes supplied by laboratory with lab batch code displayed on each box.  Samples may suffer from oxidation and are not stored under nitrogen or in a freezer.
		<ul> <li>Reverse Circulation</li> <li>Samples were collected at rig site in individually numbered calico sample bags and tied and placed into poly-weave bags in groups of approximately 5 samples and cable tied to prevent access.</li> <li>Samples were dispatched to ALS laboratories in Adelaide by Investigator personnel or independent contractors. Records of each batch dispatched included the sample numbers sent, date and the name of the person transporting each batch.</li> <li>Investigator personnel provided, separate to the sample dispatch, a</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>submission sheet detailing the sample numbers in the dispatch and analytical procedures to ALS laboratories.</li> <li>ALS laboratories conduct an audit of samples received to confirm correct numbers per the submission sheet provided. Exceptions if identified are immediately communicated to Investigator.</li> <li>Assay pulps are returned to Investigator from contracted laboratories on a regular basis and stored securely at a secure warehouse facility leased by Investigator. Pulp samples are stored in original cardboard boxes supplied by the laboratory with laboratory batch code displayed on each box. Boxes are stacked on pallets and shrink wrapped.</li> <li>Samples may suffer from oxidation and are not stored under nitrogen or in a freezer.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>Original sampling methodology and procedures were independently reviewed by Mining Plus who undertook the 2013 Paris resource estimation.</li> <li>Additional review of methodology and practices was completed by H&amp;SC during the 2016 infill drilling program (including a site visit during RC drilling) completed as part of the 2017 updated resource estimation. H&amp;SC confirmed at the time of review that the 2016 QA/QC body of work was of industry best practice standard.</li> <li>Owing to COVID19 pandemic, a site visit was not conducted by H&amp;SC during the 2020 program of drilling, however a review and audit of QA/QC documentation has found it to be of similar standard to that produced by the same authors/field supervisors for 2016.</li> <li>Reviews of past drill hole data has seen continual improvement, with significant changes to recording of quality control data from drill holes to ensure maximum confidence in assessment of drill and assay data.</li> </ul>



Criteria	JORC Code explanation	Commentary
		Current drilling and sampling procedures have been reviewed during site
		visits by Investigator Exploration Manager, in addition to ongoing review
		and supervision by an Investigator geologist with Paris Project experience of
		greater than 8 years.



## **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Paris Project is contained within EL 6347 that was granted to Sunthe Uranium Pty Ltd ("Sunthe") a wholly owned subsidiary of Investigator.</li> <li>Investigator manages EL 6347 and holds 100% interest. EL 6347 is located on Crown Land covered by several pastoral leases.</li> <li>An ILUA has been signed between Sunthe and the Gawler Range Native Title Group. This ILUA terminated on 28<sup>th</sup> February 2017 however this termination does not affect EL 6347 (or any renewals, regrants and extensions) as Sunthe entered into an accepted contract prior to 28<sup>th</sup> February 2017.</li> <li>The Paris Project area has been culturally and heritage cleared for exploration activities over all areas drilled. A heritage site is located proximal to the grid southern end of the Paris deposit which may or may not impact on pit design subject to further heritage assessment.</li> <li>There are no registered Conservation or National Parks on EL 6347.</li> <li>An Exploration PEPR (Program for Environment Protection and Rehabilitation) for the entirety of EL 6347 has been approved by DEM (South Australian Government Department for Energy and Mining).</li> <li>All drilling work has been conducted under DEM approved work program permitting, and within the Exploration PEPR guidelines. All relevant landowner notifications have been completed as part of work programs.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>No previous exploration work has been undertaken at the Paris Project by other parties.</li> <li>The deposit was discovered by Investigator in 2011.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	The Paris Project is an Ag-Pb deposit that is hosted predominantly within a



Criteria	JORC Code explanation	Commentary
		sequence of flat lying polymictic volcanic breccia related to the Gawler Range Volcanics.
		Paris is an intermediate sulphidation mineralised body associated with a
		felsic volcanic breccia system in an epithermal environment with a
		significant component of strata bound control. The deposit has an elongate
		sub-horizontal tabular shape with dimensions of approximately 1.6km
		length and approximately 800m width and is situated at the base of a
		Gawler Range Volcanic (mid-Proterozoic) sequence at an unconformity with
		the underlying Hutchison Group (Palaeo-Proterozoic) dolomitic marble.
		Some of the deposit impinges into the altered upper dolomite. The host
		volcanic stratigraphy comprises felsic volcanic breccia including dolomite,
		volcanic, sulphide, graphitic meta-sediment and granite clasts. The breccia
		host is fault-bounded on its long axis by graphitic meta-sediment indicating
		a possible elongate graben setting to the deposit. The upper margin to the
		host breccia is a thin layer of unconsolidated Quaternary colluvium clays
		and sands to the present-day surface. Steep dipping, granitic dyke
		intrusions occur in the underlying dolomite and are interpreted to have
		intruded parallel to the body of mineralisation and a brittle structural zone
		within the dolomite. Sporadic skarn alteration is observed within the
		dolomite and occurs at the margins of the dykes that is overprinted by the
		silver mineralisation. Felsic dyke intrusives and breccias occur at either end
		and at the centre of the deposit and may comprise different generations.
		These are interpreted to be associated with the brecciation event. Multiple
		stages of mineralisation associated with multiple phases of intrusion,
		alteration and brecciation have been identified at Paris. Silver
		mineralisation is predominantly in the form of acanthite, jalpaite and silver
		intergrowths, with a minor component as solid solution within other
		sulphide species (galena, sphalerite, arsenopyrite etc). High grade zones





Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Any references to reported intersections in this release are on the basis of weighted average intersections. No top cut to intersections has been applied. Allowance for 1m of internal dilution within intersection calculations is made. Lower cut-off grades for intersections by major elements are:</li> <li>Silver &gt;30ppm, Lead &gt;1,000ppm, Zinc &gt;1,000ppm, Copper &gt;500ppm.</li> <li>No metal equivalents are reported.</li> <li>Weighted averaging of irregular sample intervals in DD drilling is undertaken as part of reporting.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul> <li>Mineralisation geometry is generally flat lying within the majority of the breccia hosted deposit however there may be a locally steeper dipping component within the dolomite basement and projecting into transitional breccia zones that may be correlated with localised faulting.</li> <li>All reported intersections are on the basis of down hole length and have not been calculated to true widths.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	See attached plans showing drill hole density (Appendix 2).
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Comprehensive reporting is undertaken.  All material results for previous drill holes used in the 2020 mineral resource estimate have been previously announced in ASX releases with accompanying Table 1 documentation.
Other substantive	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey	Initial metallurgical test work was completed by Core Process Engineering     Pty Ltd which was followed by confirmatory optimisation programmes



Criteria	JORC Code explanation	Commentary
Criteria exploration data	JORC Code explanation  results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	<ul> <li>Commentary         <ul> <li>conducted by ALS Metallurgy Ltd, Burnie, Tasmania.</li> </ul> </li> <li>Two additional metallurgical sample composites were selected for subsequent metallurgical test work programs on the same basis from 2020 drill material.</li> <li>A series of preliminary standard laboratory scale metallurgical tests were undertaken by a suitable testing laboratory, comprising crush and grind analysis, XRD, LA-ICPMS and QEMSCAN mineralogy, cyanide leaching, composite optimisation, gravity concentration and flotation analysis.</li> <li>Mineralogical characterisation identified silver hosted with galena (PbS) as fine inclusions, Acanthite (Ag2S) as discrete particles and fine inclusions</li> </ul>
		<ul> <li>with quartz, argentopyrite (FeAgS), chlorargyrite, iodargyrite, jalpaite and native silver. Silver minerals were predominantly less than 30μm, with a proportion less than 10μm.</li> <li>Recent optimisation testwork focussed on targeted processing of slimes fraction, with gravity concentrate and flotation concentrate reground to maximise total liberation of fine-grained silver host minerals.</li> <li>Preliminary standard laboratory scale metallurgical test work reports a</li> </ul>
		<ul> <li>weighted average silver recovery for the resource of around 78%.</li> <li>Silver recovery for the main geometallurgical domain BT (transitional breccia) was 72%, with BTM (transitional breccia magnesium) at 84% and Dolomite (fresh) of 89% in test work conditions used.</li> <li>Results from these tests were utilised to generate two process flow sheet options for investigation.</li> </ul>
		<ul> <li>Groundwater is generally present below 40m depth.</li> <li>Multi-element geochemistry assaying (48 or 61 elements) is routine for all sampling. Some elemental associations are recognised within certain lithologies within the deposit and are used as a tool to assist in</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>interpretation of original lithologies where alteration affected the ability to visually determine the lithology.</li> <li>A preliminary geotechnical program examining pit wall stability and rock competency was completed in 2017.</li> <li>Aeromagnetic and gravity survey data covers the project area and 5 induced polarisation sections cross-cut the deposit. This data has been used in targeting drilling and in some interpretation.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further work to progress the Paris prefeasibility study will include pit optimisation and mining cost studies utilising the 2021 resource estimate block model, metallurgical process flow sheet development and other ancillary studies.</li> <li>Additional exploration within an approximate 5km radius of Paris is planned, and subject to board approval, additional infill drilling at Paris deposit may also occur.</li> </ul>

## **Section 3 Estimation and Reporting of Mineral Resources**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	Primary data is captured directly into an in-house referential and integrated database system designed and managed by Investigator's Exploration Manager.
	Data validation procedures used.	<ul> <li>All data is cross-validated using MicroMine commercial software for errors including missing intervals/from-to co-ordinate discrepancies/duplications, missing/duplicate holes, 3D hole deviation and missing survey information.</li> </ul>



Criteria	JORC Code explanation	Commentary
Criteria	JORC Code explanation	<ul> <li>The master database is a single server-hosted database managed by the Project Manager. All field database replicas are validated on upload then preserved for future integrity validation. Sensitive data fields such as assay results are only amendable by the database administrator. Time-stamped / user records are kept to map all changes in the database.</li> <li>Hourly time-stamped backups are undertaken with daily and monthly backups to remote drive systems</li> <li>Investigator takes full responsibility for the database</li> <li>Data sent to H&amp;S Consultants Pty Ltd (H&amp;SC) as a series of Excel files for collars, downhole surveys, lithology, alteration, mineralisation, assays, density and geotechnical data.</li> <li>Data was imported by H&amp;SC into an Access database with indexed fields, including checks for duplicate entries, sample overlap, unusual assay values and missing data.</li> <li>Additional error checking using the Surpac database audit option for incorrect hole depth, sample/logging overlaps and missing downhole surveys.</li> <li>Manual checking of logging codes for consistency, plausibility of drill hole trajectories and assay grades. Modifications made to some lithology table codes for easier use in interpretation</li> <li>There were no negative assays in data received. All values were used, except unassayed intervals.</li> <li>Assessment of the data confirms that it is suitable for resource</li> </ul>
		estimation.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Mr Jason Murray, Exploration Manager, a full-time employee of Investigator, completed numerous site visits between 2012 & 2020 and has reviewed all drill core and RC chips, and all geological mapping and



Criteria	JORC Code explanation	Commentary
	If no site visits have been undertaken indicate why this is the case.	<ul> <li>interpretation in conjunction with Mr Andrew Alesci, Senior Project Geologist, a full-time employee of Investigator with 9yrs experience at the Paris Deposit, who was present for all prior programs, and supervised the Paris 2020 drill program.</li> <li>A site visit of approximately 3 weeks was completed by Independent Consultant Mr Bruce Godsmark of Mining Plus in 2013. A full review of drilling techniques, core and drilling data was completed with only minor issues identified.</li> <li>A site visit was conducted by Mr Simon Tear, a director of H&amp;SC for a period of three days during the 2016 infill resource drilling at Paris and reviewed drill core, drilling techniques, sampling and recording of information. No site visits were conducted by Mr Tear during the 2020 drill program owing to COVID19 restrictions.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation</li> <li>The factors affecting continuity both of grade and geology.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> </ul>	<ul> <li>Confidence in the geological interpretation at the Paris Project is regarded as high at a broad scale and also in areas where there is close spaced diamond drilling. Confidence decreases between drilled sections where sampling is on 100m line spacing and drilling of uncertain quality has been undertaken. The recent infill drilling has resulted in very modest changes to the existing geological interpretation derived in 2015.</li> <li>Mineralisation is considered poddy but generally flat-lying, predominantly located in the oxide-transition zone above a basement of older dolomitic marble that forms a "dome" feature within the area drilled. Mineralisation is bounded in lateral extent by graphitic and ironrich metasediments in faulted contact to the host breccia.</li> <li>Depths to mineralisation within the Project area vary from near surface (~4m) to approximately 300m, with the majority of mineralisation at 4 to 150m depths.</li> </ul>



Criteria	JORC Code explanation	Co	ommentary
		•	Sulphide mineralisation is largely breccia hosted as disseminations and clasts and includes acanthite as one of the major silver mineral species in addition to inclusions within sulphide species, predominantly pyrite and galena. Other sulphide species identified include jalpaite, argentopyrite, galena, arsenopyrite, pyrite, sphalerite +/- chalcopyrite. Significant amounts of native silver are also present.
		•	Mineralisation shows a geometry consistent with a degree of dispersion attributed to late-stage hydrothermal alteration and/or subsequent supergene effects from weathering events.
		•	The majority of the contained silver occurs within the host breccia close to the dolomite basement contact. A degree of localised concentration of mineralisation on this interpreted palaeo unconformity is present.
		•	The main trend of mineralisation is approximately 320 degrees, broadly parallel with a pre-existing structural zone defined by intrusive granite dykes. A series of cross cutting structures and felsic volcanic dykes have been observed at approximately 060 degrees, additional structures within the system are most likely present but obscured by the degree of alteration and overall brecciation.
		•	Lead mineralisation partly overlaps with the silver mineralisation. This may be the result of the formation of primary mineralisation related to some boiling effect or due to subsequent dissolution and reprecipitation of silver due to supergene weathering processes. The majority of lead is in the form of galena with some oxide lead as cerussite and coronadite. Interpretation of the drillhole database allowed for the generation of 3D
			oxidation surfaces from wireframe strings snapped to drillholes for the cover sequence, base of complete oxidation (BOCO) and base of partial oxidation (TRANS) on 25 and 50m spaced sections. The Cover and TRANS surfaces were based on geological logging, multielement assays and



Criteria	JORC Code explanation	Commentary
		review of core photographs. The BOCO was primarily defined using sulphur assays, geological logging and core photo review. The surfaces were reviewed by H&SC and if necessary, adjusted for geological sense.  No specific silver mineral zones were defined. This is acceptable with the proposed modelling method.  3D geological definition comprised surfaces for the base of metasediment and the top of dolomite unconformity. The former was based on geological logging and multielement assays particularly titanium, potassium and vanadium whilst the latter was based on geological logging, calcium and magnesium assays; both utilised geological sense.  Occasional deeper drillholes have intersected significant narrow silver mineralisation which is believed to be primary mineralisation. Origins of this mineralisation have not been proven at this point in time.  Geological understanding is good and appropriate for resource estimation. The cover and oxidation surfaces provided major geological controls to the mineral resource estimates.  Alternative interpretations are possible for the lithological and oxidation domain definition but are unlikely to affect the estimates. The complexity of overlapping mineral styles, brecciation and supergene movements plus the orebody type means there is both a strong stratabound and strong structural control to the silver grade and geological continuity of the mineralisation.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>The Mineral Resource stretches for 1,850m of strike length with variable width but is generally &lt;800m wide. Thickness is highly variable, up to 175m.</li> <li>The Mineral Resource outcrops i.e., 1-2 m below the ground surface cover and extends to 175m below surface.</li> </ul>



Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	<ul> <li>The resource estimates are based on 383 drill holes for 45,718m.</li> <li>The estimation of silver grades was undertaken using Multiple Indicator Kriging (MIK) in the GS3M software with the block model loaded into both the Surpac and Datamine mining software for validation and resource reporting.</li> <li>MIK is considered to be an appropriate estimation technique for this style of mineralisation.</li> </ul>
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	<ul> <li>There is no correlation between silver and any other elements e.g., Cu, Pb &amp; Zn</li> <li>MIK was used to model lead with the E-type lead grade used in the resource reporting. Ordinary Kriging with no top cutting was used to model the zinc values.</li> </ul>
	The assumptions made regarding recovery of by-products.	• The resource is divided into 2 drilling domains, northern and southern zones, based on a separation in the amount of drilling i.e.from 25m
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	spacing to 50-100m spacing, with 4 oxidation-based sub-domains. These sub-domains are the Cover Sequence, the oxide, the transition and fresh rock zones based on a set of 3D surfaces.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	<ul> <li>The oxidation limits were treated as soft boundaries</li> <li>A total of 67,008 one metre silver composites were used in the grade interpolation. The dominant number of samples is within the main</li> </ul>
	Any assumptions behind modelling of selective mining units.	transition zone (about 61% of the total). Coefficients of variation were variable for the sub-domains with 2.6 for the cover sequence, 3.8 for the
	Any assumptions about correlation between variables.	oxide, 8.2 for the transition (the main mineralised zone) and 17.4 for the fresh rock zone. This indicates skewed data with a significant outlier high
	Description of how the geological interpretation was used to control the resource estimates.	<ul> <li>grade population(s)</li> <li>MIK is designed to overcome the need for top cutting. However, the high</li> <li>CVs and a review of the conditional statistics for the top indicator class</li> </ul>



Criteria	JORC Code explanation	Commentary
Criteria	<ul> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	for the oxide, transition and fresh mineralisation resulted in compromise mean values being substituted for the top indicator class for the grade estimation; the compromise is the average of the mean and the median for the top indicator class for each of the three sub-domains mentioned.  No assumptions were made regarding the recovery of any by-products.  Variography was performed using 1m composited silver data for the mineralised bedrock. Variable nugget effects were noted with the metal variograms for the different sub-domains. The nugget effect was moderately high for the lower two sub-domains compared to the upper two and ranges in most cases were relatively short with the strike direction generally longer than the across strike direction. The indicator variograms exhibited reasonable continuity. The grade continuity patterns are expected with this type of breccia-hosted sulphide mineralisation overprinted with supergene enrichment producing oxide mineralisation.  Drill section spacing is variable between 25m and 100m. On section drill spacing is either 25m or 50m. Most diamond holes are drilled grid E-W or W-E with a series of N-S oriented holes in the northern half of the deposit; RC holes generally are vertical. Downhole sample spacing is generally 1m.  Block dimensions are 25m by 25m by 5m (E, N, RL respectively) with an assumed selective mining unit ("SMU") of 5m by 5m by 2.5m. The X and Y-axis dimensions were chosen as a reflection of the detailed drill spacing. The vertical dimension reflects downhole data spacing in conjunction with possible bench heights. Discretisation was set to 5x5x2
		<ul> <li>(E, N, RL respectively).</li> <li>Modelling used an expanding search pass strategy with the initial search</li> </ul>
		radii based on the drill spacing increasing to take in the geometry of the mineralisation and the variography. Modelling consisted initially of one



Criteria	JORC Code explanation	Commentary
Criteria	JORC Code explanation	estimation run with 3 passes. An additional pass (Pass 4) was included to maintain consistency with the 2017 model. The minimum search used was 35m by 35m by 5m (Pass 1), expanding by 50% to 52.5m by 52.5m by 7.5m (Pass 2). Passes 3 & 4 had a maximum search of 75m by 75m by 10m. The minimum number of data was 16 samples, a maximum of 48 and 4 octants for Passes 1, 2 & 3 decreasing to 8 points and 2 octants for Pass 4.  • The maximum extrapolation of the estimates is about 75m.  • Separate MIK models were completed for the lead and zinc mineralisation using similar methodologies. The lead data exhibited much lower coefficients of variation, around the 2 value. 2017 experimental models for lead varying the use of the median and mean for the top indicator class indicated very little variation in the resource estimates. The lead and zinc MIK models were checked using Ordinary Kriging with results indicating very little difference.  • The estimation procedure was reviewed as part of an internal H&SC peer review.  • No deleterious elements or acid mine drainage has been factored in.  • A check MIK model was completed by H&SC which showed that replacing the unsampled sections with very low values had minimal impact on the estimates.
		<ul> <li>The final H&amp;SC block model was reviewed visually by H&amp;SC and it was concluded that the block model fairly represents the grades observed in the drill holes. H&amp;SC also validated the block model statistically using a variety of histograms and summary statistics.</li> <li>Validation confirmed the modelling strategy as acceptable with no significant issues.</li> </ul>



Criteria	JORC Code explanation	Commentary
		No production has taken place so no reconciliation data is available.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry weight basis; moisture not determined.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	<ul> <li>For the quoted resource estimates a 30ppm silver cut-off was used on block centroids above the 25m RL for all sub-domains types.</li> <li>The reported silver resources are recoverable estimates.</li> <li>The cut-off grade was nominated by Investigator at 30g/t silver.</li> <li>Investigator regard this cut-off grade as appropriate on the basis that the prevailing US dollar silver price is significantly higher than when the Paris Mineral Resource estimate was reported in 2017 with a prevailing silver price of US\$15/ounce.</li> <li>The reported lead grade is an average block grade from the lead MIK model.</li> <li>The cut-off grade at which the resource is quoted reflects an intended bulk-mining approach and was advised to H&amp;SC by Investigator.</li> </ul>
Mining factors or assumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul> <li>H&amp;SC's understanding of a bulk mining open pit scenario is based on information supplied by Investigator.</li> <li>The assumed SMU (5mx5mx2.5m) is the effective minimum mining dimension for this estimate.</li> <li>Any internal dilution has been factored in with the modelling and as such is appropriate to the block size.</li> <li>A series of optimised pit shell models were created by external consultants in 2015 and 2017 to validate the potential for bulk mining open pit mining assumptions.</li> <li>No specific assumptions were made about external mining dilution.</li> <li>AMDAD completed Whittle Pit shell optimisation for scenarios at</li> </ul>



Criteria	JORC Code explanation	Commentary
		A\$34.3/oz Ag and A\$38/oz Ag, based on the assumptions:  Break even cut off grade of 39.2-43.5 g/t Ag  Overall slope angle 45°  Mining operating cost of \$2.51 /t ore mined  Process operating cost of \$30.76/t processed  Average silver recovery of 75.7%  Target mining rate of 2 Mtpa  Discount rate of 10%
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>Preliminary metallurgical test work was completed by Core Engineering Ltd in 2018. Four geometallurgical domains were tested including oxide breccia, transitional breccia, Mg-Carbonate and Dolomite domains. Weighted average recovery from this body of work averaged at 74% silver. Oxide domain ore, representing approximately 4% of mineralisation was not included due to poor recovery.</li> <li>A series of preliminary standard laboratory scale metallurgical tests were undertaken by a suitable and creditable testing laboratory, comprising; crush and grind analysis, XRD mineralogy, cyanide leaching, composite optimisation and flotation analysis.</li> <li>Comminution characterisation test work determined the material to have low abrasiveness and can be defined as 'soft' for crushing and grinding calculations.</li> <li>Additional metallurgical test work was completed by ALS under the supervision of consultants, MinAssist Pty Ltd and was reported on 7<sup>th</sup> June 2021.</li> <li>The 2021 metallurgical test work focussed on the transitional breccia domain, which represented approximately 54% of silver mineralisation contained within the 2017 resource estimate and accompanying</li> </ul>



Criteria	JORC Code explanation	Commentary
		optimised pit study but was limited to a previous recovery in 2018 of 65% silver. The 2021 program of work saw revised grinding and leach test work and saw an improvement in recovery in this domain from 65% to 72% silver.
		<ul> <li>2021 revised metallurgical test work resulted in a weighted average silver recovery of 78% across the 2017 resource estimate, excluding oxide geometallurgical domains, and identified a workable process flow sheet.</li> </ul>
		Mineralogical analysis indicates that there is low likelihood of complex ore or refractory silver.
		<ul> <li>Analysis of unliberated silver in leach residue samples indicates a dominant fraction of fine silver locked in silica or silicates. 2021 studies have identified additional avenues to explore in an effort to increase silver liberation further, although likely at an incremental level.</li> </ul>
		<ul> <li>Lead and zinc metallurgy is at a more preliminary level of study, with mineralisation recoveries largely dependent on the species present.</li> <li>Zones of galena as the dominant lead mineral show generally good gravity recovery, with cerussite and coronadite more challenging.</li> <li>Further work is required to determine the viability of a potentially economic concentrate.</li> </ul>
		Further geometallurgical characterisation of lead and zinc domains is planned to be followed by metallurgical test work targeted at production of a saleable Pb/Zn concentrate
Environmen-tal factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation.	Comprehensive baseline flora fauna studies have shown that there are no controlled species present in the area which might be disturbed by potential mine development.



iteria JORC Code explanation C	Commentary
While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	<ul> <li>The area lies within flat terrain with no water courses in the general vicinity.</li> <li>The area is covered with sparse mallee vegetation typical of eastern Eyre Peninsula pastoral lease environment in South Australia</li> <li>A waste characterisation study has been completed in 2018 which utilised existing multi-element geochemistry by IVR with subsequent verification and peer review by Resource and Environmental Projects Ltd ("REP"). The review focussed on sampling and testing regime, acid forming potential, composition and classification of waste type and saline/sodic properties of each waste type. REP concluded no significant areas of immediate concern from a waste material management perspective. REP identified in testwork to date 75% of material characterised as "non-acid forming" with a further 10% as "low capacity potentially acid forming" and a further 15% of material classified as "acid consuming material".</li> <li>REP concluded that the current waste characterisation study was sufficient in detail for a pre-feasibility level of study and supplied further recommendations for additional studies at a higher level of study or mine permitting scenario.</li> <li>No active water bores are in use in the vicinity of the project, with the nearest bore used for livestock located approximately 12km from the project. A program of baseline water quality monitoring study has been completed over a 2-year period.</li> </ul>



Criteria	JORC Code explanation	Commentary
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Density data comprises 11,329 samples (using the immersion in water weight in air/weight in water Archimedes method) for both mineralisation and waste rock.</li> <li>Check measurements on 51 transition samples using the sealed in wax technique with the Archimedes method, indicated an overstatement of 5-7% of density in the original 2013 data (4,410 samples). Too few data points for the other oxide zones are present to draw any conclusions.</li> <li>Check density measurements were completed for different rock types from the 2016 and 2020 diamond drillholes. The technique employed weighing the core trays, measuring core runs in the trays and using callipers to measure the core diameter. Resulting density values indicated slightly lower values (~5%) compared to the non-waxed single pieces of core used previously for generating default values.</li> <li>A new series of default density values for mineral sub-domains was supplied by IVR that were derived from the weighed core tray samples and the check sealed in wax samples: 1.97t/m³ for cover material, 2.04/m³ for oxide, 2.24t/m³ for transition and 2.78t/m³ for fresh rock</li> <li>Allocation of density grades to the blocks is based on the oxidation surfaces and their partial percent volume adjustments.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> </ul>	<ul> <li>Allocation of the resource classification to the block was based on the search passes used to interpolate the block grades. Pass 1 = Indicated, Passes 2, 3 &amp; 4 = Inferred.</li> <li>Classification of the Mineral Resources has been based primarily on the drillhole spacing and the variogram modelling i.e., the sample spacing and the improved grade continuity, with significant positive inputs from the sampling methods and procedures, the amount of density data, the QA/QC outcomes, good geological understanding, detailed geological interpretation and sensible mining depths.</li> </ul>



Criteria	JORC Code explanation	Commentary
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The classification appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>No audits of the new resource estimates have been completed.</li> <li>The estimation procedure was reviewed as part of an internal H&amp;SC peer review.</li> <li>A range of check MIK models was produced by H&amp;SC. These models provided a measure of the robustness of the resource estimates and notes the sensitivity of the estimates to the high silver grades.</li> </ul>
Discussion of relative accuracy/confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The relative accuracy and confidence level in the Mineral Resource Estimates are considered to be in line with the generally accepted accuracy and confidence of the nominated Mineral Resource categories. This has been determined on a qualitative, rather than quantitative, basis, and is based on the Competent Person's experience with similar deposits.</li> <li>The complex geological nature of the deposit and the relatively sporadic distribution of high-grade assays and the demonstrations of the grade continuity lend themselves to a moderate level of confidence in the resource estimates. The infill drilling on 25m spacing has allowed for an improvement in the grade continuity and hence an upgrading of the resource quality</li> <li>The resource estimates are very sensitive to the high silver grades. H&amp;SC has attempted to deal with this by using a non-linear grade interpolation technique, Multiple Indicator Kriging, and judicious modification to the parameters and values used in the grade interpolation process. Fresh rock zones below the 25mRL have been omitted from the estimates due to a lack of confidence in the interpolated grades and their distributions, both a function of the geological uncertainty associated with process of</li> </ul>



accurate globally, but there is some uncertainty in the local estimated due to the current drillhole spacing.	Criteria	JORC Code explanation	Commentary
No mining of the deposit has taken place so no production data is available for comparison.			<ul> <li>The Mineral Resource estimates are considered to be reasonable accurate globally, but there is some uncertainty in the local estimate due to the current drillhole spacing.</li> <li>No mining of the deposit has taken place so no production data is</li> </ul>