9 October 2023 **ASX ANNOUNCEMENT**



BLACKSMITH PROJECT: DSO SCOPING STUDY

- Scoping Study demonstrates the viability of a 3Mtpa DSO project incorporating the Delta and Paragon deposits at the 100%-owned Blacksmith Iron Ore Project
- Life-of-mine product grade of 60.5% Fe and C1 cash costs of US\$50/wmt
- Low upfront capital costs of \$150M including a 30-35% contingency
- Robust economics including pre-tax NPV_{8%} of \$356m, IRR of 35% and capital payback of 3.1 years from first production
- Pre-Feasibility Study commenced to refine operating and capital cost estimates, and assess value-enhancing opportunities

Red Hawk Mining Limited (ASX: **RHK**, "**Red Hawk**" or "**the Company**") is pleased to announce the results of a Scoping Study on a 3Mtpa Direct Shipping Ore (**DSO**) project at the 100%-owned Blacksmith Iron Ore Project (**Blacksmith**) in the Pilbara region of Western Australia.

The Scoping Study is based on the recently released DSO Mineral Resource Estimate (**MRE**) from the Delta and Paragon deposits of 100.1Mt at 60.1% Fe, with 96% of the resource classified as Indicated (*see Table 2 in ASX release of 6 September 2023*).

Key highlights of the Scoping Study include:



Figure 1: Blacksmith DSO Scoping Study Key Metrics

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Commenting on the Scoping Study, Red Hawk's Managing Director, Steven Michael, said:

"Over the past six months, Red Hawk has 'right sized' the development plan for Blacksmith, with a focus on speed to market and lowering upfront capital. We have leveraged off the considerable work already completed at Blacksmith, including extensive drilling, metallurgical testwork, State and Federal approvals, and native title agreements.

The DSO Mineral Resource Estimate for Delta and Paragon (100.1Mt at 60.1% Fe), demonstrates there are ample resources which can produce a saleable product in the current iron ore market. Red Hawk has progressed geological re-interpretation of the Champion and Blackjack deposits, which aims to increase the overall Mineral Resource Estimate, for inclusion in the PFS which is now underway.

One of the key highlights of this Scoping Study is the low upfront capital of \$150M, including a 30%-35% contingency. When combined with life-of-mine C1 cash costs of just US\$50/wmt, the Project delivers outstanding returns, with an NPV_{8%} (pre-tax) of \$356M, IRR of 35% and capital payback of 3.1 years from first production, using Platts' long-term iron price of US\$89/t.

Red Hawk has added considerable iron ore development experience to its team over the past few months, to continue its rapid progress through the various study phases and into construction, production targeted for 2025."

Red Hawk's Chair, The Hon. Cheryl Edwardes AM, said:

"I am extremely pleased with the results of this Scoping Study and the positive steps being taken towards becoming an iron ore producer. I commend the team at Red Hawk and the technical and commercial consultants for their diligence throughout the Study process and delivering a robust development plan.

Along with all Red Hawk shareholders, I look forward to seeing our first iron ore on a ship in 2025."

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Steven Michael Managing Director and CEO Red Hawk Mining Limited

This ASX announcement was authorised by the Board of Red Hawk Mining Limited.

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BLACKSMITH PROJECT SCOPING STUDY

RED HAWK MINING, SEPTEMBER 2023

CAUTIONARY STATEMENT

This Scoping Study has been undertaken for the purpose of evaluation of a potential development of the Blacksmith Iron Ore Project in the Pilbara Region of Western Australia. It is a scoping level technical and economic study of the potential viability of the Blacksmith Iron Ore Project. The Scoping Study outcomes, production target and forecast financial information referred to in this release, are based on low accuracy level technical and economic assessments that are insufficient to support estimation of Ore Reserves. The Scoping Study has been completed to a AACE Class 5 level of accuracy of -30% / +50% in line with a scoping level study accuracy. While each of the modifying factors were considered and applied, there is no certainty of eventual conversion to Ore Reserves, or that the production target itself will be realised. Further exploration and evaluation work and appropriate studies are required before Red Hawk will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case.

The Mineral Resources scheduled for extraction in the Scoping Study production plan show results of greater than 98% which are classified as Indicated and the remainder as Inferred during this 21-year operating period. The Company has concluded that it has reasonable grounds for disclosing a production target which includes a proportion of Inferred material. However, there is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

Red Hawk confirms that the financial viability of the Blacksmith Iron Ore Project is not dependent on the inclusion of Inferred Resources in the production schedule.

The Mineral Resources underpinning the production target in the Scoping Study have been prepared by a Competent Person in accordance with the requirements of the JORC Code (2012) and the Competent Person's Statement is found on page 31 of this ASX release. For full details of the DSO Mineral Resources Estimate for the Delta and Paragon deposits, please refer to ASX Announcement dated 6 September 2023. Red Hawk also confirms that it is not aware of any new information or data that materially affects the information included in that release. All material assumptions and technical parameters underpinning the estimates in that ASX release continue to apply and have not materially changed.

This announcement may contain certain forwardlooking statements and opinions. Forward-looking statements, including projections, forecasts and estimates, are provided as a general guide only and should not be relied on as an indication or guarantee of future performance and involve known and unknown risks, uncertainties, assumptions, contingencies and other important factors, many of which are outside the control of the Company and which are subject to change without notice and could cause the actual results, performance or achievements of the Company to be materially different from future results, performance or achievements expressed or implied by such statements. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecasts. Nothing contained in this announcement, nor any information made available to you is, or and shall be relied upon, as a promise, representation, warranty or guarantee as to the past, present or the future performance of Red Hawk.

To achieve the range of outcomes indicated in the Scoping Study, funding in the order of approximately \$150M will likely be required for pre-production capital expenditure and working capital. Based on the current market conditions and the results of this Scoping Study there are reasonable grounds to believe the Project can be financed via a combination of debt and equity, as has been done for numerous comparable projects in Western Australia in recent years. The Company, and individually its Board and management have extensive experience and a strong track record of successfully raising equity via capital markets. The Company has a reasonable basis that equity could be raised via existing and/or new shareholders. Debt may be secured from several sources including Australian banks, international banks, the high yield bond market, resource credit funds, and in conjunction with product sales of offtake agreements. It is also possible the Company may pursue alternative funding options, including undertaking a corporate transaction, seeking a joint venture partner or partial asset sale. Whilst no formal funding discussions have commenced the Company has engaged with potential financiers of the Blacksmith Project and these financial institutions have expressed an interest in being involved in the funding of the Project. There is, however, no certainty that Red Hawk will be able to source funding as and when required. No Ore Reserve has been declared. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

The Scoping Study was assembled by Ausenco Services Pty Ltd, with contributions from the following specialists:

Ausenco

Ausenco – Process plant, infrastructure, road and intersection design, capital and operational cost estimates (in conjunction with Orelogy), master schedule, risk assessment, project development, forward work plan



CSA Global Mining Industry Consultants an ERM Group company

Brandwood Advisory – Land access, permitting and approvals



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CSA Global - Geology



FTI Consulting – Financial modelling and analysis



Jacobs – Mine access road design



NeoMet – Metallurgy and marketing



Orelogy – Mine design and operation



Pastin and **MLG** – Transport and logistics, contract crushing

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HIGHLIGHTS

Red Hawk Mining's 100% owned Blacksmith Project is a major undeveloped iron ore project in the Pilbara Region of Western Australia. The Project is located 70km north of Tom Price and is surrounded by world-class iron ore mines with power, road, rail and port infrastructure.

This Scoping Study is based on the following project attributes:

- DSO Mineral Resource at the Delta and Paragon deposits of 100.3Mt at 60.1% Fe (using a 57.5% Fe cut-off).
- Establishment of several shallow open-pits, commencing in 2025, producing 55Mt of ore at an average grade of 60.5% Fe over a 20 year mine life.
- Over 98% of the overall material in the production schedule is currently classified as an Indicated resource, while less than 2% is Inferred.
- Construction and operation of a standard "Pilbara" crushing and screening plant with a nominal capacity of 3Mtpa.
- Initial production of 1.2Mt in Year 1, ramping up to 3Mtpa from Year 3 onwards.
- Product grade of 62% Fe in Years 1 and 2, followed by 60.5% Fe for the Life of Mine.
- Iron ore product to be transported by public roads to Port Hedland and exported via the Utah Point bulk handling facility.

"I am extremely pleased with the results of this Scoping Study and the positive steps being taken towards becoming an iron ore producer.

I commend the team at Red Hawk and the technical and commercial consultants for their diligence throughout the Study process and delivering a robust development plan.

Along with all Red Hawk shareholders, I look forward to seeing our first iron ore on a ship in 2025."

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The Hon. Cheryl Edwardes AM Chair, Red Hawk Mining Limited

3Mtpa

60.5% Fe

Average Grade

US\$50/wmt

\$356M NPV_{8%} (Pre-tax)

35% IRR (Pre-tax)

\$150M Capital Costs

3.1 years Capital Payback

20.1 years

55Mt Total LOM Production

PROJECT OVERVIEW

The Blacksmith Project is located in the western Pilbara district of Western Australia, approximately 170km southwest of Karratha and 70km northwest of the township of Tom Price, and within the Shire of Ashburton.

Blacksmith consists of seven deposits: Ajax, Badger, Blackjack, Champion, Delta, Eagle and Paragon. The Scoping Study considers the development of the Delta and Paragon orebodies only. These resources will be mined to produce a direct shipping ore (**DSO**) quality product consisting of canga (hematite), mineralised Dales Gorge Member (goethite) with minor contributions from other detrital materials.

Access to the Blacksmith Project is south from the township of Karratha along the Tom Price–Karratha Road, then south along the Manuwarra Red Dog Highway before joining the Rio Tinto rail access road which passes approximately 20km east of the Project. Access into the Project is via unsealed pastoral tracks. The Project can also be accessed from Tom Price via the Rio Tinto Dampier–Tom Price railway access road, then via unsealed pastoral and powerline access tracks.

The Project is well progressed in securing access to land and having primary approvals in place to enable an expedient pathway to approval of ground disturbance and construction activities. The Company has previously progressed alternative project options and the tenure, access agreements, approvals and permits have been maintained. They now form the basis for Red Hawk to secure a 3Mtpa DSO operation at the Blacksmith Project. To ensure development options are not constrained, permits and approvals are being sought for a capacity of 5Mtpa noting that the actual capacity may be less.





Figure 1: Location map showing Blacksmith Project in the Pilbara Region of Western Australia

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LAND ACCESS AND NATIVE TITLE

The Blacksmith Project sits entirely within approved mining lease M47/1451-I and miscellaneous licences L47/731 and L47/734 which are 100% owned by Red Hawk. Miscellaneous licences L47/1116 to L47/1122 have been lodged for the purpose of enabling an access road from the Project to the future Manuwarra Red Dog Highway.

Red Hawk is well progressed with land access agreements being in place with the Coolawanyah Pastoral Station and Rio Tinto for the Blacksmith Project. The Coolawanyah agreement is undergoing a deed of variation to include the access roads to Manuwarra Red Dog Highway. A second agreement is under negotiation for the extent of the access roads that intersect Rio Tinto tenements.

The Wintawari Guruma People are recognised as Native Title holders to the land that contains

M47/1451-I and the southern portions of the mine access road. The Wintawari Guruma Aboriginal Corporation (**WGAC**) is the registered body corporate that represents and manages the Native Title rights and interests of the Wintawari Guruma People. Red Hawk has a Native Title agreement with WGAC that applies generally to all infrastructure tenements required for Blacksmith and allows for the inclusion of access road miscellaneous licences. In due course, this agreement will be superseded by a new agreement that is more aligned with today's expectations for First Nations relationships.

Yindjibarndi People are recognised as the Native Title holders to the land that contains the northern portions of the access road that intersect Manuwarra Red Dog Highway. Red Hawk is negotiating a heritage agreement with Yindjibarndi Aboriginal Corporation (**YAC**), which represents and manages the Native Title rights of the Yindjibarndi People. The heritage agreement will stipulate the terms and conditions for heritage surveys and protection measures along the access road.



Figure 2: Blacksmith Project land access

PERMITTING AND APPROVALS

Red Hawk has approval for the Blacksmith Project under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) and the Environmental Protection Act 1986 (EP Act) (Figure 3).

The Company is currently meeting conditions such as pre-clearance environmental surveys and management plans that will enable commencement of the Project. An EP Act S46 application has been submitted to the Office of the Environmental Protection Authority to enable an extension to the substantial commencement date of Ministerial Statement 924. The pre-clearance environmental surveys have also informed minor amendments to Ministerial Statements 924 and 1014 and a referral under the EPBC Act. The minor amendments capture the northern most access road from the Blacksmith Project to the Manuwarra Red Dog Highway corridor, greenhouse gas emissions and social surrounds studies. The decision on whether a further minor amendment and EPBC Act referral is required for the eastern access road will be informed by flora surveys that are scheduled for April 2024.

The advanced status of the environmental approvals enables Red Hawk to focus on studies and design required to support Mining Act mining proposals and mine closure plans. These plans will be shared with key stakeholders and in particular WGAC to ensure that expectations on mining operations and end land use planning are aligned.



Figure 3: Blacksmith Project tenure and environmental development envelopes

GEOLOGY AND EXPLORATION

The Blacksmith Project is situated within the Hamersley Province which covers an area of approximately 80,000km² and comprises Late Archaean to Palaeo-Proterozoic rocks of the Mount Bruce Supergroup, which consists of the Fortescue, Hamersley, and Turee Creek groups, overlain by remnants of the Wyloo Group.

The banded iron formation (**BIF**) units of the Hamersley Group host the bedded iron deposits of the Pilbara with mineralisation occurring predominantly within the Marra Mamba Iron Formation and Brockman Iron Formation. Substantial mineralisation also occurs in overlying detrital units.

At Blacksmith the Brockman Iron Formation is present as either an unenriched BIF or as martitegoethite mineralisation within the Dales Gorge Member, although predominantly as a heavily hard-capped goethite-rich style of mineralisation.

A geological re-interpretation of the Delta and Paragon deposits within the Blacksmith lease has been completed by CSA Global. The purpose of the re-interpretation was to define the internal stratigraphy of the detritals (CzD3) and bedrock geology based on integrated geology, physical properties, chemistry, and downhole geophysics to enable alignment to its metallurgical properties and industry standard nomenclature. This is summarised in Table 1.

The updated geological interpretation form the basis of the Mineral Resource Estimate and the DSO mine plan.

Exploration history

A total of 3,893 drillholes (189,639m) were drilled by Red Hawk from 2008 through 2017 across the entire Blacksmith Project as shown in Figure 4.

Drilling at Delta has comprised a total of 1,682 drillholes (85,714m) completed between 2008 through 2017, including 1,595 reverse circulation percussion (**RCP**) holes used to estimate the Mineral Resource.

Delta comprises 69 sections on a drill spacing ranging from approximately 50m x 50m to 100m x 130m in the northeast-southwest directions and in the northwest-southeast directions. Sections have been oriented based on the dominant trend of the channel within the deposit.

21 sections were drilled within Paragon on a section spacing of approximately 100m (east-west) and a hole spacing of approximately 100m (north-south) on each section.



Figure 4: Blacksmith Project (M47/1451-I) showing drill hole collars and deposits

Table 1: Stratigraphic units at Blacksmith

Unit/ member	Brief description
SZ	Surface detrital/colluvium
HMZ	High soil matrix with trace clasts
LZ	Unconsolidated to compacted detritals with angular to subrounded clasts in a red-brown soil matrix. Clast rather than matrix dominated
ΡZ	Pisolitic high maghemite (<1–2 mm), well rounded supported in a hematite/soil matrix
Canga	Cemented hematite clasts in a hematite/goethite cement matrix
CzD2	Mixture of clay and textureless goethite in various proportions
CID	Channel iron deposit
PHbd	Bedrock can be enriched beneath detritals and CID. Mostly hardcap. Occasionally magnetite with potential for crocidolite (asbestos)

Delta geology

Delta is approximately 4km long and 2km wide and includes a number of minor valleys separated by ridgelines which report to a single large valley entrance. The depth of the valley from the floor to the basement contact varies from approximately 20m to 50m on average across the central part of Delta. In the central part of the deposit, overburden (SZ and HMZ) averages 20m in depth and overlies LZ and PZ which can each be up to 30m thick. Within the fingers of Delta, the valley walls are characterized by outcropping lenses of canga overlaying the mineralised Dales Gorge Member with minimal waste overburden.

Paragon geology

Paragon is located in the northeast of the Blacksmith Project and comprises a northern valley containing a deepening detrital sequence north to the lease boundary, and a small, enclosed valley to the south, each separated by outcropping Brockman Iron Formation.

The resource is relatively flat lying to shallow dipping of average thickness 5m-25m in both outcrop and under shallow cover.

The valley to the south varies from 16m to 26m deep from the valley floor to top of bedrock and contains a substantial accumulation of canga overlying hardcapped Dales Gorge Member, overlain by lenses of LZ and PZ of varying thickness.



Canga

The hematite dominant canga is the highest iron grade unit within the detritals stratigraphy and represents approximately 42Mt of the total 100.3Mt MRE. This unit is typically a competent, cemented basal detrital unit occurring above the bedrock. It generally has an iron content above 60% Fe, although can be as high as 65% Fe.



Dales Gorge Member

The Dales Gorge Member mineralisation underlies the canga and is predominantly goethite with minor hematite and is extensive across the Delta and Paragon deposits.

The iron mineralisation grades between 55% to 62% Fe. The Dales Gorge Member comprises approximately 44Mt of the total 100.3Mt MRE.

MINERAL RESOURCES

The Scoping Study is based on a Mineral Resource Estimate (MRE) for Direct Shipping Ore (DSO) for the Delta and Paragon deposits. It comprises 100.3Mt grading 60.1% Fe. Importantly, 96% of the resource is classified as Indicated (Table 2).

Full details of the MRE were reported to the ASX on 6 September 2023. '<u>DSO Mineral Resource</u> <u>Estimate: Delta and Paragon Deposits'</u>

A cut-off grade of 57.5% Fe has been applied to the MRE as it reflects the in-situ chemistry of the iron mineralisation likely to be mined to target a DSO product grading ~60.5% Fe. The potentially economic mineralisation types reported comprise canga (hematite) and Dales Gorge Member hardcap (goethite), with minor contribution from detrital materials (Figure 5). These lithologies have an in-situ iron mineralisation suitable for processing by Pilbara standard dry crush and screen practices to produce a DSO product.



Figure 5: Mineral Resource estimate outlines for the Delta and Paragon deposits

JORC classification	Tonnage Mt	Fe %	P %	SiO₂ %	Al ₂ O ₃ %	LOI %
Delta deposit						
Indicated	83.9	60.2	0.090	4.81	3.17	5.11
Inferred	3.9	59.9	0.103	4.12	2.61	6.81
Total	87.8	60.1	0.090	4.78	3.14	5.18
Paragon deposit						
Indicated	12.2	60.0	0.094	4.03	2.79	6.21
Inferred	0.4	58.8	0.090	4.10	1.82	8.85
Total	12.5	60.0	0.093	4.04	2.76	6.28
Total Delta and Paragon deposits						
Indicated	96.1	60.1	0.090	4.71	3.12	5.25
Inferred	4.3	59.8	0.102	4.12	2.54	6.98
TOTAL	100.3	60.1	0.091	4.68	3.09	5.32

Table 2: Mineral Resource Estimate by deposit and classification (57.5% Fe cut-off)

Notes:

1. Due to effects of rounding, totals may not represent the sum of all components.

2. Tonnages are rounded to the nearest 0.1 million tonnes and grades are shown to two significant figures.

3. Reporting criteria are: Indicated and Inferred material (Rescat=2 or Rescat=3), Fe > 57.5%, Zone=2, Zone=3, Zone=4 or Zone=5.

GROWTH POTENTIAL

The Blacksmith Project is underpinned by a substantial geological knowledge base, including over 200,000m of historical drilling, assays, geological modelling, metallurgical testwork and geophysical data.

This knowledge base was the foundation for the successful geological re-interpretation and updated Mineral Resource estimation of the Delta and Paragon deposits and extends to the other deposits in the Blacksmith Project – Champion, Blackjack, Eagle, Ajax and Badger.

Adopting the improved geological interpretation, an updated Mineral Resource estimation is planned for the Champion, Blackjack and Eagle deposits for the purposes of growing the Blacksmith resource base.

Champion

The Champion deposit was drilled by Red Hawk from 2008 through 2017. Data was collected for Champion using RCP drilling, sonic drilling, geotechnical, and metallurgical diamond drilling. A total of 850 drillholes (37,796m) were completed.

Detrital mineralisation at Champion is predominantly PZ which occurs distal to outcrop, with zones of LZ close to outcrop. Areas of canga overlie hardcap mineralisation Dales Gorge Member, and minor CID occurs in a channel in the far northwest of the deposit.

Canga occurs throughout the Champion deposit as discrete lenses directly on top of hardcap. It tends to predominate along the channel margins where it can assume thicknesses of up to 20m. It becomes more dominant in the northern, narrowest part of the valley where it occurs as lenses up to 15m thick on both sides of the valley. In addition, substantial canga occurs in the western part of Champion.

In the northern part of Champion, mineralisation is restricted to the central and western sides of the valley, with the eastern half being almost barren apart from thin lenses of LZ overlying thin canga. In the central part of the valley abutting the CID, the PZ is up to 30m thick.

Blackjack

273 drillholes (10,290m) were drilled at Blackjack by Red Hawk from 2008 through 2017. Data was

collected for Blackjack using RCP drilling, sonic drilling, geotechnical, and metallurgical diamond drilling.

The detrital valley is shallower (up to 60m deep) and narrower than in Champion and Delta. Consequently, no major deposition of HMZ has occurred. Similarly, no CzD2 or CID was identified.

The Blackjack valley comprises a thin SZ overlying a simple "layer cake" sequence of LZ and PZ, in approximate 50:50 proportions. A continuous lens of canga occurs to the east. This may grade into PZ along strike towards the centre of the valley. Small lenses of canga occasionally occur at the base of the detrital valley but these have no continuity.

Hardcap mineralisation has formed in the Dales Gorge Member in the west as well as to the east in the southern part of the deposit.

Eagle

The Eagle deposit was drilled by Red Hawk from 2008 through 2017. Data was collected for Eagle using RCP drilling, sonic drilling, geotechnical, and metallurgical diamond drilling. A total of 766 drillholes (44,868m) were completed.

Canga lenses of approximately 60% Fe abut the Eagle valley on both sides and occasionally overlie hardcap martite goethite mineralisation in the Dales Gorge Member which grades over 60% Fe. The majority is between 55% Fe and 59% Fe. In addition to canga and Dales Gorge Member mineralisation, Eagle comprises a large palaeochannel channel containing mainly CzD2 with some CID. The channel varies in widths from approximately 300m to 500m. The maximum channel width is approximately 800m.



MINING

A mine plan has been developed by Orelogy for the Delta and Paragon deposits. This production will be DSO produced by crushing and screening with no additional beneficiation or upgrade processing.

The mine plan is based on re-interpreted resource block models and identifies a twenty year life of Mine (**LOM**) with 62% iron product in the first two years, transferring to a 60.5% iron product from Year 3 onwards.

The mine plan

A LOM production schedule was completed based on an initial throughput of 1.2Mtpa ramping up to 3Mtpa over three years. The schedule was completed in monthly increments for the first twelve months, quarters for four years, then annually for the remainder of LOM.

The LOM plan satisfactorily meets all production objectives and constraints. Key highlights of the schedule are:

- All DSO production targets have been satisfied. The initial focus is on the mining of a 62% Fe product in the first two years, transferring to a 60.5% Fe product from Year 3 onwards.
- The total mining profile remains within capacity limits during all periods. This adherence to capacity constraints ensures a smooth and steady pace of mining activities throughout the Project lifespan.
- A satisfactory compromise in DSO quality is achieved by adhering to strict mining area stage release, Total Material Mined (TMM) and quality constraints and ensuring practical amounts of ore re-handling.

Over the twenty year life of mine the Delta and Paragon deposits are scheduled to produce 55.2Mtpa of ore at an average grade of 60.55% Fe, 4.66% silica and 2.99% alumina.

Mining operations

The mining operations are planned to be undertaken by a suitably experienced mining contractor.

The mine plan is based on a mining fleet using Caterpillar 6015 excavators and Caterpillar 777G dump trucks, along with suitable support vehicles. The annual production capacity of this fleet is approximately 7 million dry tonnes per annum (Mdtpa).

Mining block model

The updated resource models for both Paragon and Delta were merged and regularised to form one complete mining model with block dimensions of 12.5m x 12.5m x 2m. This dimension is in line with an acceptable mining flitch height for the selected mining equipment and generates a realistic and acceptable dilution of the resource for mine planning purposes. In regularising the resource block model, the overall loss of ore and dilution are estimated to be 7.4% and 4.5% respectively, the diluent waste having an average iron grade of 55.7% Fe with higher than average silica and alumina grades.

Geotechnical investigation

A geotechnical investigation was completed by Snowden Mining Industry Consultants in 2017. The geotechnical site investigation consisted of 44 drill holes with a combination of diamond core and sonic methods targeting areas of mineralisation within the Delta valley and other potential mining areas. Site work was followed up with geotechnical testwork and analysis.

The geotechnical slope design criteria previously developed was based on the geological interpretation of the previous resource model. As the geological zones have been updated with the resource model update, these parameters could not be accurately applied to the current model. Therefore, a simplified global slope angle of 45 degrees was utilised, which was in line with the previous slopes and considered acceptable given the shallow pits being targeted.

Pit optimisation

Pit optimisations were undertaken to identify the pit shells that produced a DSO product with suitable iron and impurities grades at low strip ratios. The optimisation was based on preliminary economic data and ranked the shells using net present value.

Initially, a range of pit shells was generated with a strip ratio of 1:1 and an iron product blend ranging from 58% to 62% in 0.5% increments. This process enabled the selection of an appropriate marketable product specification in terms of iron, and the key

contaminants, alumina and silica, that could be extracted from Delta and Paragon.

Following the identification of a preferred product grade, a series of pit shells was generated to identify the impact of strip ratio on total mining inventory. Based on these pit shells an optimal strip ratio was selected.

The final optimisation iteration targeted a pit shell capable of generating a minimum blend of 62% Fe for the initial two years before dropping to a 60.5% Fe blend, accepting that this strategy would require a slightly higher strip ratio to achieve an acceptable mine life. The final LOM strip ratio to achieve the desired production and grade outcomes is 1.18 to 1. Following the initial optimisation process, detailed production targets were generated with three main objectives:

- Meet the DSO production targets per period.
- Develop a manageable material movement profile that defers waste as much as possible.
- Maintain the DSO product quality requirements by adopting a combined in-pit and off-ROM blending approach.

To achieve this, the "Origin" direct block scheduler module available in the Maptek™ Evolution scheduling software was used for the Study.

The optimised pits were grouped into mining stages to allow mining to be focused in specific areas and avoid concurrent mining of spatially disparate areas. As part of this process, an indicative value was calculated for each mining stage. Stage groups with less waste and a higher-grade content could be prioritised.







Production sequence

The final production sequence ramps-up from 1.2Mtpa to full production of approximately 3Mt of wet product per year by Year 3 of operation. Initially the mining sequence focuses on low strip ratio high quality ore located in the north-west of Delta (starter pit in image below).

Mining continues in this location and by Year 3 the pit in Paragon south is initiated. These two pits provide 100% of the feed to the process plant for the first seven years. Following this the mining sequence moves to the south-western Delta through the remaining mining areas in a relatively continuous sequence to facilitate mining operation without excessive movement of equipment.

Approximately 98% of LOM production is derived from Indicated Mineral Resource. With the overall proportion of Inferred material in the first five years production being approximately 7%.



Figure 8: LOM mining footprint

METALLURGY, TESTWORK AND ORE PROCESSING

The properties of the Blacksmith resource have been defined via a wide range of metallurgical testwork. This includes the comminution testwork required to support the design of a Pilbara standard dry crush and screen process facility.

The process flowsheet for the Project is relatively simple and will accommodate both fines and lump product options. It will comprise:

- primary crushing
- screening
- closed-circuit secondary crushing
- closed-circuit tertiary crushing
- product stockpiling and load-out

The plant will be capable of producing 3Mtpa of product at a moisture content of approximately 6%.

Overall, the material from Delta and Paragon are not considered to present any specific crushing or screening issues due to ore hardness or abrasion properties. The average results for the uniaxial compressive strength (UCS) and crushing work index (CWi) testwork show the material is generally soft and easy to crush. Drop tower testwork has been established as a Pilbara iron ore standard test method to condition laboratory samples generally derived from diamond core intervals. The drop tower conditioning simulates the degradation that occurs in the process of mining. The quantity of drop tower testwork completed highlights the importance of continuing this process as part of the broader metallurgical core processing flowsheet.

The drop tower testwork supports an investigation into the potential to produce a lump product from the resource. It may be possible to produce a lump product at various stages as the more competent geotypes are intercepted and mined. Lump iron ores are priced higher than fines for equivalent specifications as a result of the ability to direct charge lump into the blast furnace whilst fines must be prepared by sintering.

The DSO fines product will be crushed to nominally -8mm. The -8mm nominal product size is the result of recent sintering testwork, where it was found that coarser particle top sizes can result in a sub-optimal result at the sinter plant.

Sinter testwork completed on various samples from Blacksmith has shown the Blacksmith products sinter well. Additional sinter testwork will be required for the DSO product aligned with the current mine schedules, lithology makeup and target grades.



Figure 9: Process flow diagram

HAULAGE

Red Hawk is developing an optimal road train haulage strategy for the Blacksmith Project which minimises upfront capital expenditure and operational cost whilst complying with all regulatory requirements. Selection of the optimal road haulage strategy involved:

- Review of existing approved Restricted Access Vehicle (RAV) configurations along the route from Blacksmith to the Utah Point bulk handling facility (Utah Point) at Port Hedland,
- Evaluating conceptual design detail and costing for various options including supporting infrastructure requirements and road upgrades,
- Engagement with stakeholders including Main Roads Western Australia (**MRWA**) to identify requirements for permits and approvals, and
- Evaluating operational and maintenance strategies.

The route from Blacksmith to Utah Point travels from Blacksmith to the Manuwarra Red Dog Highway via a 23km unsealed private haul road. Product is trucked to Karratha via the Manuwarra Red Dog Highway and then along the North West Coastal Highway to Utah Point. The total one-way travel distance is 446km.

Stages 1, 2, and 3 of the Manuwarra Red Dog Highway have been completed. Stage 4, which consists of 140km from Roebourne-Wittenoom road to Nanutarra-Munjina Road, is incomplete. According to MRWA, development is underway for the final 110km of Stage 4, including:

- Traditional Owner heritage surveys
- highway alignment definition
- optimisation of sustainable outcomes
- construction material usage



Figure 10: Red Hawk Mining transport route to Port Hedland



Figure 11: Manuwarra Red Dog Highway stages

Several haulage options were examined for the movement of the heavy vehicle combinations along the route from Blacksmith to Utah Point, including:

- **1.** Blacksmith to Whim Creek laydown area and Whim Creek to Utah Point.
- **2.** Direct transit from Blacksmith to Utah Point and off-port sprint stockpile.
- **3.** Blacksmith to Karratha changeover yard and Karratha changeover yard to Utah Point.

The Scoping Study identified "Option 1" (Figure 10) using 60 metre ultra quad road trains with a 153 tonne payload as the most cost-effective solution as it delivers ore with efficient utilisation of labour and road trains while maintaining compliance to relevant legislative standards.

The road train fleet is set up in a split model with a dedicated fleet making up 66% of the total fleet requirements being based out of the Karratha Light Industrial Area working from a dedicated leased contractor facility (Fleet A). The remaining 33% of the road train fleet will be drawn from the current haulage contractor base that exists in Port Hedland and will operate from the Port Hedland Light Industrial Area (Fleet B).

The haulage legs are split into two key stages being:

- Blacksmith to an intermediate storage facility located adjacent to the North West Coastal Highway at Whim Creek (332 km)
- From the Whim Creek intermediate storage facility through to the Utah Point bulk handling facility at Port Hedland (114 km)



Table 3: Haulage legs – Blacksmith to Utah Point

	Year 1 1.2Mwtpa	Year 2 2.0Mwtpa	Year 3 onwards 3.0Mwtpa			
Blacksmith to Whim Creek						
Trucks required	14	22	33			
Drivers required	40	66	99			
Whim Creek to Utah Point						
Trucks required	7	11	17			
Drivers required	20	33	50			



PORT AND SHIPPING

Western Australia is the largest iron ore supplier in the world with exports totalling 902Mt in 2022, accounting for 39% of global iron ore supply. Western Australia's iron ore supply increased by 387Mt between 2012 and 2022 and total exports are expected to exceed 1 billion tonnes per annum following a planned expansion at the Port of Port Hedland.

Western Australia's iron ore industry has established long term trade relationships across Asia. In 2022-23, Western Australia accounted for the majority of iron ore imported by China (68%), Japan (52%) and South Korea (65%). In 2022-23, China accounted for 85% of Western Australia's iron ore export volumes at 753 million tonnes.



Figure 12: Western Australia's iron ore exports by port 2022-23

Mt = Million tonnes

Source: Based on data from ABS 5368.0 International Trade in Goods and Services, Australia (Monthly)

In 2022-23, the volume of iron ore exports from:

- Port Hedland rose 1% to 536 million tonnes
- Cape Lambert rose 4% to 172 million tonnes
- Dampier rose 7% to 133 million tonnes
- All other ports rose 1% to 44 million tonnes



Figure 13: Share of world's iron ore imports and exports, 2022

Source: Resources and Energy Quarterly, June 2023, Office of the Chief Economist, Australian Government – Department of Industry, Science and Resources. The Port of Port Hedland is the world's largest bulk export port with iron ore exports in 2022-23 of 536 million tonnes, accounting for 61% of Western Australia's iron ore sales volumes. The next largest ports in Western Australia for iron ore sales volumes in 2022-23 were Cape Lambert (172Mt) and Dampier (133Mt).

The Port of Port Hedland consists of 19 berths, including the Utah Port bulk handling facility which was developed as a multi-user facility to allow access for smaller miners who are unable to secure or develop their own port facilities. The shiploader at the Utah Point bulk handling facility (berth 4) has a maximum ship loader long travel distance of 190m. It is rated for a maximum peak rate of 7,500tph, however normally achieves a gross loading capacity for iron ore of 3,700 – 4,300tph. The berth pocket is able to cater for small capesize vessels up to approximately 120,000DWT and has a capacity of 24Mtpa.



IRON ORE PRICING AND FORECAST

Over the past twelve months, the Platts IODEX 62% Fe (CFR China) iron ore price has averaged US\$111/dmt with a range of US\$79.50/dmt to US\$133.10/dmt (see Figure 14).



Figure 14: Platts IODEX 62% Fe (CFR China iron ore price)

Red Hawk has adopted Platts' iron ore price forecasts, commencing at US\$110/dmt in 2024 and reducing to a long-term price of US\$89/dmt. The long-term price of US\$89/wmt is viewed as conservative when balanced against the average price over the past five years of US\$117/dmt and US\$96/dmt over the past decade.



PRODUCT QUALITY AND MARKETING

The Blacksmith Project will produce a direct shipping ore (DSO) fines product from a Pilbara standard dry crushing and screening process. For the first two years the fines product will have a grade of 62% Fe, for the remainder of LOM the grade will be 60.5% Fe.

The fines product is expected to be in high demand as sinter feedstock for iron making with competitive chemical specification (Table 4). Previous testwork has indicated the product will sinter well and is likely to be suitable for widespread use.

Product	Fe %	SiO₂ %	Al2O3 %	P %	S %	LOI %
Year 1-2 Fines	62.00	3.69	1.89	0.10	0.04	5.37
Year 3+ Fines	60.47	4.72	3.07	0.08	0.02	4.79
Life of Mine	60.55	4.66	3.00	0.08	0.02	4.82

Due to the nature of the geology in the Blacksmith Project area, the long run fines product will be a mix of hematite and goethite mineralisation. The canga ore type is predominantly haematitic, whilst the other zones have higher levels of goethite. There are existing products in the market exported from the Pilbara with a similar mixed hematite and goethite composition (e.g. Rio Tinto Pilbara Blend Fines). Pilbara Blend Fines is a large tonnage product that has gained widespread acceptance by steel mills since its introduction. A comparison of the Red Hawk products against other Pilbara iron ores is provided in Figure 16.

The proposed Blacksmith products are considered to be competitive to current exported iron ores of Pilbara origin. Specifications will continue to be refined through additional mine scheduling works in the Pre-Feasibility Study.

It is anticipated that the majority of marketing functions for Red Hawk's products will be outsourced by agreements with traders or an agent acting on behalf of the Company and through direct discussions with potential offtakers.



Figure 16: Pilbara iron ore product specifications v Red Hawk

CAPITAL ESTIMATE

The capital cost estimate for the Study was developed by Orelogy and Ausenco. Orelogy was responsible for the items related to the mining contractor's facilities, with Ausenco covering all other items of capital.

The Blacksmith Project Scoping Study estimate consists of the following:

- primary crushing
- open-circuit secondary crushing
- closed-circuit tertiary crushing with screening
- product stockpiling and loadout
- mining contractor's facilities
- access road and provision for intersections onto the highways

The following infrastructure was included as part of this option:

- on-site buildings
- 120 bed permanent on-site camp
- Whim Creek staging yard buildings
- Port Hedland sprint yard buildings
- bulk fuel storage at Whim Creek and at the mine site
- utilities (power, water and sewerage treatment) at the mine site and at Whim Creek
- explosives magazine

The estimate was developed to an AACE Class 5 accuracy level (-30% +50%), with a base date of the estimate of 2Q 2023.

Red Hawk has assumed contractors are engaged to provide mining, crushing, haulage, camp and power generation services. This assumption results in reduced up-front capital, with higher contractor margins reflected in operating costs.

Ausenco and Orelogy have considered the requirements for the associated infrastructure necessary to commence operation of the proposed project. Capital allowances have been included for mining infrastructure (including pre-strip and first fills), power supply and distribution, access roads, accommodation and mess facilities, bore field for water supply, water treatment plant, sewage treatment plant, administration buildings, telecommunications, security, maintenance workshop, wash-down areas, fuel storage depot and emergency response facilities.

Sustaining capital of 2% of initial capital has been applied throughout the life of the Project (reducing to 1% for the last five years of production).

A nominal project contingency of 30% has been allowed for in the estimate for all areas, except the road estimate for which a contingency of 35% has been used.

The estimated capital cost to build the Blacksmith Project is \$150.2M, including EPCM costs (\$16.2M) and contingency (\$35.0M). Capital breakdown by facility is presented in Table 5 below.

Table 5: Capital cost estimate summary – mining

Item	\$M
Mining	2.5
Crushing and screening	36.3
Process plant utilities and indirects	5.1
Roads	27.6
Ports	1.0
Non-process Infrastructure	26.5
EPCM costs (14% - 18%)	16.2
Total costs (pre-contingency)	115.2
Contingency (30% - 35%)	35.0
TOTAL	150.2



Figure 17: Capital cost estimate

OPERATING COSTS

The estimate includes mining, processing, haulage, port handling, shipping, general and administration (G&A), non-process infrastructure and accommodation costs. The base date for the cost estimates is June 2023. The cost estimates were not escalated.

The common assumptions included:

- diesel costs used were \$1.60/litre inclusive of taxes (sensitivity tested in the financial model)
- full board accommodation cost is \$92.70 per person per day
- flight costs (return Perth) \$450/one way flight

The operating cost estimate was developed to an AACE Class 5 accuracy level (-30% +50%).

Mining costs

The mine operating cost estimate was generated by Orelogy as part of the mining component of the Scoping Study. It was developed on the basis that mining production and all associated activities would be undertaken by a mining contractor, with a separate Red Hawk team established to undertake management and technical supervision of the contract.

Table 6: Life of Mine operating cost

Cost centre	\$M	\$/t mined	\$/t product
Contractor			
Mobilisation	7.3	0.06	0.11
Site preparation	3.9	0.03	0.07
Production drilling	42.8	0.36	0.72
Production blasting	27.4	0.23	0.47
Load and haul	320.5	2.66	5.55
ROM rehandle	35.1	0.29	0.58
Rehabilitation	4.2	0.03	0.06
Fixed personnel	108.1	0.90	1.87
Equipment fees	87.6	0.73	1.13
Fixed charges	37.5	0.31	0.63
Contractor costs	674.4	5.60	11.20
Red Hawk costs	73.1	0.61	1.23
TOTAL	747.4	6.20	12.43

The estimate was built up on a first-principles basis but structured in a manner consistent with a mining contract inclusive of a margin. Orelogy has estimated a LOM mine operating cost of \$6.20/t of total material moved (ore and waste) or \$12.43/t of product (wmt). A breakdown of costs is shown in Table 6.

Plant and site operating cost estimate

Ausenco has determined a nameplate operating cost for the crushing and screening plant based on two costing scenarios:

- a contract crushing scenario, with minimal capital costs and equipment and operations outsourced from vendors
- a Build Own Operate scenario, with all plant equipment and infrastructure purchased and installed by Red Hawk, and operating costs in relation to the operation of this plant.

The project commercial strategy indicated that the contract mobile crushing scenario to be the preferred option.

Annual maintenance consumable costs were calculated based on a total installed mechanical capital cost by area using a weighted average factor from 1% to 4%. The factor was applied to mechanical equipment.

General and administrative (G&A) costs are expenses not directly related to the production of DSO and include expenses not included in mining, processing, and transportation costs. These costs were developed with input from Red Hawk, as well as Ausenco's inhouse data on existing Australian operations.

The inclusions of the G&A costs are:

- site office administration (stationery, computer supplies, first aid consumables, visitors and vendors, communications, postal services, entertainment and waste management)
- safety and training (including personal protective equipment)
- miscellaneous costs (such as laboratory costs, consultants, administrative vehicles, environmental costs, miscellaneous tools, recruitment, government charges and miscellaneous freight).

Total G&A costs are \$2.5 million per year, which corresponds to 1% of the operating cost for the 3Mwtpa production.

Road haulage and port handling operating cost estimate

A logistics analysis was performed to identify the requirements for product road haulage. This service will be contracted out based on 153t payload ultra quad trucks.

The cost of road haulage includes:

- driver wages, accommodation and flights
- lease / maintenance of ultra quads
- fuel
- maintenance
- consumables (oil, tyres, parts, etc.)

Port handling costs were calculated based on the Port Hedland schedule of charges as published on the Pilbara Ports Authority's website www.pilbaraports.com.au

This value includes:

- pilotage charges
- tonnage charge
- wharfage charges bulk
- berthage charges
- sustaining infrastructure due (SID)
- port charge Port Hedland voluntary buy-back scheme (PHVBS)
- storage charges
- miscellaneous charges (loader hire, security charge, fresh water)

Port charges 10%

Figure 18: LOM C1 cash costs

Table 8: LOM All in costs (C3)

	LOM		
Cost item	\$/wmt	US\$/wmt	
C1 cash costs	73.41	49.92	
Shipping	13.00	8.84	
Capital expenditure	2.01	1.37	
Sustaining capital	0.41	0.28	
C2 costs	88.83	60.40	
Royalties	8.00	5.44	
All in costs (C3)	96.83	65.85	

Table 7: C1 cash costs

Cost item		ar 1 Viwt)		ır 2 Viwt))M lwtpa)
	\$A	US\$	A \$	US\$	A \$	US\$
Fixed costs						
Mining	23.73	16.14	14.29	9.72	12.66	8.61
Processing	8.54	5.81	7.60	5.17	6.12	4.16
Trucking	45.00	30.60	45.00	30.60	45.00	30.60
Port charges	7.10	4.83	7.10	4.83	7.22	4.91
G&A	5.25	3.57	3.00	2.04	2.40	1.63
C1 cash costs (FOB)	89.62	60.94	76.99	52.35	73.41	49.92

Global C1 Cost Comparison

Red Hawk has used cost information provided by Wood Mackenzie to compare the LOM C1 cash costs for the Blacksmith Project of US\$49.92/wmt to global iron ore producers. Figure 19 shows the Wood Mackenzie global iron ore cost curve for 2023. Figure 20 shows the global cost curve with the major iron ore producers (>50Mtpa) removed. On this basis, C1 cash costs for the Blacksmith Project are forecast to be around the global average for non-major iron ore producers.



Figure 19: Wood Mackenzie global iron ore cost curve - 2023



Note: Excludes Fortescue Metals, Rio Tinto, BHP, Vale and Hancock Prospecting (including Atlas Iron)

Figure 20: Wood Mackenzie global iron ore cost curve – 2023 (excluding majors)

TAXATION (CORPORATE TAX CONSIDERATIONS)

Key taxation inputs to the financial model

Income tax rate	30%
Eligible brought forward tax losses ¹	\$141.6M

1 Pitcher Partners are engaged by Red Hawk for the provision of taxation and other services which included a review of the eligibility of the brought forward tax losses and specifically in relation to the Same Business and Continuity of Ownership tests.

Fuel tax credit regime

The Fuel Tax Credit (**FTC**) regime exists to provide businesses with a credit, equal to the excise amount, to the extent that they use the fuel for carrying on their enterprise.

The fuel cost of \$1.60/litre used in the model is inclusive of all taxes and net of GST. The applicable FTC rate is then applied to each category of usage based on eligibility.

Table 9: Current fuel tax credit rates



1. Including power generation and haulage (off-public roads)

Eligibility

Haulage

- Mining access roads are specifically included in the definition of 'roads that are not public' and, as such, are eligible for the higher rate
- Haulage on public roads, including the Manuwarra Red Dog Highway and North West Coastal Highway remain eligible for the lower rate

Mining activities

- Diesel usage for the majority of on-site activities are eligible for the higher FTC rate including:
 - o mining and transport
 - o crushing
 - o power generation

Other considerations

Public / non-public road use

Total haulage distance metrics for recommended haulage option.

- Mine site to Whim Creek 332km (including 25km of mine access road, i.e. off public road)
- Whim Creek to Utah Point 114km

The current apportionment by distance travelled may significantly understate the FTC that can be claimed at the higher rate for haulage. Further work is warranted in this area including:

- Detailed fuel usage studies and simulation to provide a more accurate apportionment methodology
- Utilisation of in-vehicle telematics data to generate accurate usage metrics



FINANCIAL ANALYSIS

A discounted cashflow analysis has been undertaken for the Blacksmith Project using the base case production LOM target of 3Mtpa at 60.5% Fe and strip ratio of 1.18:1. Production in the first two years of 1.2Mt (Year 1) and 2.0Mt (Year 2) will focus on canga ore only with an average product grade of 62.0% Fe. The base case assumes contractor mining, processing, road haulage and port handling.

A long-term iron ore price of US\$89/dmt (62% Fe, CFR China) and A\$/US\$ exchange rate of \$0.68 was used in the analysis, which were selected by the Company as suitable estimates based upon conservative long-range forecasts.

Red Hawk considers 8% to be an appropriate discount rate based upon the Australian risk-free interest rate, low risk profile of Western Australia as reported by Fraser Institute and the Project's proximity to major infrastructure. A sensitivity to the discount rate $(\pm 2\%)$ is provided in Figure 22.

A summary of the results of financial analysis is presented in Table 10.

Table 10: Financial analysis (ungeared)

Project financial output	LOM
Revenue (net of pricing discounts)	\$6,654M
Net cash flow (pre-tax)	\$1,097M
NPV ₈ (pre-tax)	\$356M
IRR (pre-tax)	35%
NPV ₈ (post-tax)	\$265M
IRR (post-tax)	32%
Capital payback (from first production)	3.1 years
Mine life	20.1 years





Sensitivity

Sensitivity analysis has been performed on the pre-tax NPV. Key Project sensitivities were flexed with appropriate ranges (Figure 22). The analysis indicates that the Project is most sensitive to operating cost, iron ore price and US\$ exchange rate.

The tornado chart highlights the sensitivity of pre-tax NPV of key Project sensitivities against the \$356M base case scenario.





EXECUTION PLAN

Red Hawk Mining is targeting first ore from the Blacksmith Project in 2025. The proposed schedule leverages off significant historical Project development activities, including heritage surveys, permitting, drilling, geotechnical analysis and metallurgical testwork.

The Project has a reduced capital footprint, supplemented by the use of existing or planned public infrastructure. In addition, it is planned to use contractors to provide skilled labour, equipment, systems and procedures for the construction and operation of major Project components, including:

- mining
- design, construction and operation of the process plant
- road haulage
- camp construction and operation
- port operations

Project development is planned via the completion of a Pre-Feasibility Study (**PFS**), followed by a Definitive Feasibility Study (**DFS**). At the conclusion of the DFS a final investment decision (**FID**) will be sought. Final investment decision is targeted for 2H 2024.

To support the FID, Red Hawk will continue to advance definition of the Blacksmith resource, heritage clearance activities, gain required permits and approvals, and finalise access agreements with adjacent stakeholders.

The Red Hawk team will employ a suitably experienced EPCM contractor to manage the execution of Project home office and on-site activities. Much of the design work for the Project will be completed by contractors employed on a build own operate (**BOO**) or design and construct (**D&C**) basis.

The critical path for the Project is expected to include approval of the mining proposal(s), camp construction, mine access road construction and commissioning.

It is likely that early commitment will be made prior to FID for haulage equipment and accommodation buildings to ensure critical path activities remain on schedule.



The existing exploration camp may be expanded and serve as a base to allow for contractor establishment and the completion of early works. Construction of the new accommodation facility will be prioritised on a staged basis to allow the mobilisation of larger construction crews.

Water for the camp and earthworks construction activities will be provided by existing production bores, with a water licence to be obtained prior to mobilisation.

The major contractors will be mobilised in accordance with schedule requirements. Initially site activities will be focused on camp construction and civil works. Later the crushing contractor and mining contractor will be mobilised.

The mining contractor will be mobilised to site with sufficient time to construct mining infrastructure and initiate pre-strip. The initial mining areas have been selected to improve Project economics by providing high grade ore at a low strip ratio. Mining will be sequenced by area to reduce machinery movements and simplify the operational footprint.

NEXT STEPS

Following the positive outcomes of this Scoping Study, Red Hawk has commenced a Pre-Feasibility Study (PFS) to advance the maturity of the Project.

The objectives of the PFS are to:

- report a Mineral Resource Estimate for the Blackjack and Champion deposits
- advance the mine planning to a PFS level of detail, including the addition of conceptual pit designs for Blackjack and Champion
- report a maiden Ore Reserve for the Delta and Paragon deposits
- advance the design of the process and nonprocess infrastructure
- engage with Project critical contractors to acquire market pricing and develop the commercial relationships to underpin the execution and operation of the Project
- update the capital cost and operating cost estimate
- validate the Project economics

The capacity to efficiently transport the DSO product by road and export via Utah Point bulk handling facility is critical to the Project's success. During the PFS, Red Hawk will continue to liaise with Main Roads Western Australia and the Pilbara Ports Authority to progress transport permits and secure port capacity.

During the PFS, Red Hawk will complete additional diamond drilling and geophysical logging within the Delta and Paragon orebodies. These activities will convert resources in early mining areas within Delta from an Indicated to a Measured classification. The target is to upgrade ~100% of the first two years and 50% of Years 3 to 6 of scheduled production into the Measured category. The core recovered by the drilling campaign will be utilised to complete further metallurgical testwork and provide product samples for customers.

In addition to the PFS, heritage, approvals and land access activities are ongoing. Heritage fieldwork for 2023 will be completed by early 4Q 2023. The heritage work has been prioritised to allow access to the first seven years of the mining plan and infrastructure footprints. Critical approvals activities that will be progressed during the period include compliance with permit conditions, updating the existing Ministerial Statements, incorporating additional Project footprint within existing or new EPBC referrals and acquiring a water licence for the existing production bores.

Access agreements with stakeholders adjacent to the Project will be updated and finalised.

During the PFS, a range of outstanding Project options will be considered. Options will be developed to a scoping study level of detail and will include:

- beneficiation of a component of the orebody via wet scrubbing
- identification of longer term port options that reduce haulage distance and will allow for increased production
- construction of an aerodrome
- increased proportion of renewable energy for site power requirements

Options that positively impact the Project's economics, or ESG credentials will be incorporated into the DFS.



COMPETENT PERSON'S STATEMENT

Previously Reported Information:

This information relates to the Blacksmith Iron Ore Project Mineral Resource which was prepared in accordance with the requirements of the JORC Code (2012). This information was included in the Company's previous announcement as follows: ASX announcement dated 6 September 2023 "DSO Mineral Resource Estimate: Delta and Paragon Deposits" or see www.redhawkmining.com.au.

Competent Person's Statement:

The information in this report that relates to Mineral Resources for the Delta and Paragon deposits is based on and fairly represents, information compiled by Mr Aaron Meakin and Mr Mark Pudovskis. Mr Aaron Meakin is a full-time employee of CSA Global Pty Ltd and is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Mark Pudovskis is a full-time employee of CSA Global Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Aaron Meakin and Mr Mark Pudovskis have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). The Company confirms that the form and context in which the results are presented and all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed from the original announcement and that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcement on 6 September 2023.



Appendix A - JORC Table 1

The following Table sourced from the JORC Code (2012) is provided as advised in the ASX Scoping Study Interim Guidelines.

Section 4 Estimation and Reporting of Ore Reserves modified for a Scoping Study which includes an approximate Production Target and/or Forecast Financial Information.

No JORC Code (2012) Ore Reserves are being reported.

Criteria listed in the preceding sections, contained in the ASX announcement of 6 September 2023, also apply to this section.

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	 Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves. 	 No JORC (2012) Ore Reserve estimate has been classified or reported. The preliminary production target is based on the Mineral Resource for the Blacksmith Project of 100.3Mt at 60.1% Fe (at 57.5% Fe cut-off), classified in the Indicated and Inferred categories and reported in the ASX announcement of 6 September 2023. The Competent Persons for the Mineral Resources are Mr Aaron Meakin and Mr Mark Pudovskis, who are both full-time employees of CSA Global Pty Ltd.
Site visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	 No JORC (2012) Ore Reserve estimate has been classified or reported. The following persons have contributed to the Scoping Study: Mr Mark Pudovskis – Mr Pudovskis is a Geologist and was responsible for the development of the Delta and Paragon Mineral Resource Estimate. Mr Ross Cheyne – Mr Cheyne is a Mining Engineer and the Principal Consultant who reviewed the Scoping Study. He is a full-time employee of Orelogy Consulting Pty Ltd. Mr Cheyne visited the site in August 2019. Aaron Debono is a Metallurgist and full-time employee of NeoMet Engineering Pty Ltd. Mr Debono was responsible for the metallurgical assessment included in the Scoping Study. As all historical drill core processing has occurred in Perth, Mr Debono has not completed a site visit.
Study status	 The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The Code requires that a study to at least Pre- Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered. 	 The Study presented is a Scoping Study and accordingly an Ore Reserve is not being reported. A Pre-Feasibility Study is currently underway, including the conversion of resources to reserves, and is expected to be completed by Q1 2024. The Scoping Study has been prepared to an accuracy of +35% / -50% using Indicated and Inferred Mineral Resources. Appropriate mine planning and modifying factors have been applied commensurate to a Scoping Study level of accuracy and are deemed to have reasonable prospects of being technically achievable and economically viable.

Section 4 – Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
		 Section 4 of the JORC Code (2012)'s Table 1 has been completed to enable material modifying factors and assumptions underpinning the conceptual Production Target, and their link to the forecast financial information, to be disclosed in an appropriate manner for investors.
	• The basis of the cut-off grade(s) or quality parameters applied.	• A mine cut-off of 57.5% Fe was applied in order to generate a marketable DSO product while also maximising conversion of the resource and achieving an optimum NPV for the Project.
Mining factors or assumptions	 The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). The mining dilution factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. The infrastructure requirements of the selected mining methods. 	 No JORC (2012) Ore Reserve estimate has been classified or reported. A truck/shovel open pit mining methodology was utilised for the Study comprising the conventional drill/blast/load/haul production cycle. Ore will be transported from the open pits by mine haul truck to a processing facility located central to the Delta deposit. Waste rock will be placed in waste rock landform adjacent to the open pits. The Mineral Resource block model was converted to a mining block model by regularising to a single block size appropriate for the mining equipment. This was primarily accumulating the 0.5m high resource blocks to a 2m high block reflecting the selected mining bench height. The accumulation included waste into the mining blocks as an allowance for dilution. The result of the regularisation process was a dilution of tonnes by 4.5% and an ore loss of 7.5% due to material being diluted below the resource cut-off of 57.5% Fe. The Study assumes material will be blasted to a 6m high design bench and excavated in 2 x 3m high flitches to suit the selection mining fleet. However, ore can be mined in 3 x 2m high flitches to manage dilution as required. Open pit optimisation proprietary software was utilised to develop pit geometries that provided the required inventory for the Scoping Study at the lowest possible stripping ratio. This equated to approximately 20 years of mine life at a nominal production target of 3Mtpa of 60.5% DSO product. The optimisation process used initial estimates of the various modifying factors. However, as the Scoping Study pits lay well within any final economic limit for the Project, the parameters were only critical in terms of generating shells with the appropriate inventory, not in confirming an ultimate economic pit limit. Inferred resources were included in the optimisation. It amounts to less than 2% of the subsequent production targets and is therefore immaterial to the outcome. The Scoping Study only assesse

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Metallurgical factors or assumptions	 The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. Any assumptions or allowances made for deleterious elements. The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. For minerals that are defined by a specification, has the ore reserve estimation been based on 	 of the previous resource model. These have been fundamentally changed with the 2023 resource model update and therefore the 2018 design parameters could not be accurately applied to the current model. Therefore, a simplified global slope angle of 45 degrees was utilised, which was in line with the previous slopes and considered acceptable given the shallow pits being targeted. It has been assumed mining will be undertaken by a suitably qualified and experienced mining contractor. An area for the contractors mining facilities (workshop, laydown, fuel dispensing, washdown, offices etc.) has been demarcated adjacent to the proposed processing facilities. There is no metallurgical processing to complete a chemical or product upgrade. The process proposed in the Scoping Study is a fines only direct shipping ore product. Historical testwork data was utilised to provide comminution (crushing) characteristics for input to this Study. The historical works are extensive and provide suitable geological and spatial coverage to be utilised for this Study. The process flowsheet is a well understood Pilbara standard crushing and screening flowsheet to produce fines only product. Product chemical specifications are derived from the mine schedule.
Environmental	 the appropriate mineralogy to meet the specifications? The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported. 	 The Blacksmith Project is approved under Ministerial Statement MS924, MS1014, EPBC2011/6152 and EPBC2015/7495. A Groundwater Dependent Vegetation Monitoring and Management Plan has been approved by EPA Services (2 Aug 2022) on the basis that mining will be above the water table. The Blacksmith Project has identified waste rock landform locations based on waste characterisation studies completed to date. The studies have identified the Resource as not containing any elevated sulphur or material occurrences of asbestiform materials. The Blacksmith Project will submit mining proposals and mine closure plans for the mining and processing operation by Q2 2024.
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	 The Blacksmith Project will use the Manuwarra Red Dog Highway for access to / from site and transport of ore to the port. A 23km mine access road will be constructed between the mine and the Manuwarra Red Dog Highway. Utah Point bulk handling facility will be used for export of the product. Power will be generated on site via diesel gensets.

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		 Accommodation at the mine will be provided by Red Hawk Mining. Water supply for the operation will be provided by existing production bores.
		 Local regional airports will be used to transport FIFO personnel.
Costs	 The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs. Allowances made for the content of deleterious elements. The source of exchange rates used in the study. Derivation of transportation charges. The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. The allowances made for royalties payable, both Government and private. 	 Capital costs are based on conceptual engineering. Capital and operating costs have been estimated using budget pricing, first principal cost estimates and from historical project costs. Where possible costs have been derived from material take offs, otherwise appropriate factoring has been used. The cost of diesel (terminal gate price ex-Perth) has been assumed as \$1.60/L for LOM. Target LOM is 20 years. Target accuracy of the capital cost estimate complies with the requirements of AACE Class 5 (+35% / -50%). Ore transport costs are based on estimates from reputable transport and shipping companies that operate within Western Australia. Royalties of 7.5% are based on the Western Australian royalty rate for iron ore.
Revenue factors	 The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products. 	 Product grade and impurity levels has been determined from the mine plan. The sale price is derived from the forward look ahead of the Platts IODEX 62% Fe benchmark. Estimated penalties for grade and impurities have been developed from historical market data. Product pricing has been validated by several trading groups. The Study assumes sale in Asia, with freight, handling and insurance included in the cost of shipping. An A\$: US\$ exchange rate of 0.68 has been forecast for LOM.
Market assessment	 The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract. 	 Global steel demand in 2022 was estimated to be 8 billion tonnes (World Steel Association 2023). Steel demand is forecast to grow to 2.5-2.8bt by 2050 as economies grow and mature. Given the industrialisation occurring in India and the MENA region continued growth in steel demand is likely. India stands out as one of the primary drivers of increased steel demand as the economy industrialises and steel consumption increases from the current low level of 80kg per capita to an estimated 160kg per capita by 2050. Relative to domestic Indian steel production of 111 million tonnes in 2020, production is forecast to rise to

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Criteria	JORC Code explanation	 Commentary continue to be required in ever increasing tonnages in line with increasing steel production. Decarbonisation plans will see a preference for higher purity iron ores and increased use of scrap steel. In advanced economies there is increasing use of scrap steel as the primary raw material feed for steel production using electric arc furnaces. In emerging markets where the capital stock of steel is low and there is a greater reliance on using iron ore and coal in a blast furnace. In the short to medium term, iron ore of current seaborne traded specifications will remain in demand to meet the global growth in steel production. Lump iron ore products will become preferred in areas and steel mills where there is a concerted effort to reduce carbon emissions from steelmaking as the lump can be direct charged to the blast furnace reducing the inputs and emissions from sintering.
Economic	 The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs. 	 side remains strong. The inputs to the NPV estimations are tabulated in the body of the ASX release. The NPV has been determined using the Discounted Cash Flow method of valuation. For the Scoping Study a discount rate of 8% was applied. The financial model is in real terms. The model was based on yearly increments. No escalation was applied. The Project was valued as a single tax entity. Royalties of 7.5% are based on the Western Australian royalty rate for processed material. Australian corporate tax rate of 30% was applied as per the federal government corporate tax rate. A sensitivity analysis has been completed that demonstrates NPV ranges impact of the following items: Operating costs - ±15% has ±\$282 impact on NPV Iron ore price - ±10% has ±\$217 impact on NPV Further detail on the sensitivity analysis is presented in the body of the announcement.
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	 The Blacksmith Project is located within live tenement M47/1451-I that has access and mining agreements in place with Wintawari Guruma Aboriginal Corporation (WGAC) and Coolawanyah Pastoral Station. The existing Native Title Agreement with WGAC is proposed to be modernised to better reflect industry standards with First Nations engagement. The access road miscellaneous licenses require a new agreement to be reached with Rio Tinto. The Blacksmith Project has submitted an Environmental Protection Act 1986 section 46 application that will result in an additional

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		 Ministerial Statement 924 condition for social surrounds studies. Social surrounds studies are underway with Wintawari Guruma Aboriginal Corporation to inform a heritage management plan that will support an appropriate <i>Aboriginal Heritage Act 1972</i> section 18 application.
Other	 To the extent relevant, the impact of the following on the Project and/or on the estimation and classification of the Ore Reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental agreements and approvals critical to the viability of the Project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent. 	 No natural occurring risks have been identified. No marketing agreements are in place at this stage. Applications for land access, water usage licence and port access are in progress and not expected to affect the timelines outlined in the release. The Blacksmith Project is within granted Mining Lease ML47/1451 which was granted on 26 March 2012. Several miscellaneous licences for access and haulage roads were applied for in May 2023 and are expected to be granted in early 2024. The Blacksmith Project is well advanced with mining tenure, Government approvals and a social licence to operate. There are reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Scoping Study.
Classification	 The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any). 	 Ore Reserves have not been classified and reported. Section 4 of Table 1 contained in the JORC Code (2012) is being completed as part of the Scoping Study requirements to disclose a conceptual Production Target estimate linked to forecast financial information.
Audits or reviews	• The results of any audits or reviews of Ore Reserve estimates.	• No audits or reviews have been conducted.
Discussion of relative accuracy/ confidence	 Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. Accuracy and confidence discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. 	 Ore Reserves have not been classified and reported. The level of accuracy for the Scoping Study is +35% / -50%. The level of confidence for the estimates used in the conceptual production schedule is below that required for reporting Ore Reserves under the JORC Code (2012). The Life-of-Mine (LOM) Production Target used in the Scoping Study comprises 98% in the Indicated and 2% in the Inferred resource categories. A Pre-Feasibility Study is currently underway, including the conversion of resources to reserves, and is expected to be complete within the next six months.