

**12 December 2019** 

# King of the Hills Final Feasibility Study advancing well, with multiple work streams underway

Final Study on track for delivery in the September 2020 Quarter

- Final Feasibility Study (FFS) for the proposed stand-alone integrated bulk open pit and underground mining and processing operation at the King of the Hills (KOTH) Gold Project in Western Australia is progressing on schedule for completion in the September 2020 Quarter.
- The FFS advances the Pre-feasibility Study (PFS) reported on 1 August 2019, which delivered maiden Probable Ore Reserves of 36.0Mt grading 1.25g/t Au for 1.45Moz for the KOTH open pit and 1.4Mt grading 1.00g/t Au for 44koz for the Rainbow deposit. The FFS will also incorporate additional key elements including:
  - Indicated and Inferred Mineral Resource of 17.5Mt @ 2.0g/t Au for 1.11Moz of contained gold (1.0g/t Au cut-off) outside of the current KOTH optimised pit shell, which would form the basis of an underground mine (refer ASX announcement 20 May 2019);
  - Underground exploration upside, with a significant proportion of the prospective Eastern Margin Contact remaining largely untested by drilling;
  - Regional satellite deposits, including Centauri and Cerebus-Eclipse, which offer the opportunity for early gold production and cash-flow; and
  - Regional exploration upside, with key targets including Severn, Cavalier, Puzzles and other prospects along the Ursus and Tarmoola Fault Zones. These and other targets are being systematically explored.
- A new 3D animation showing the KOTH bulk mining opportunity can be viewed on the home page of the Red 5 web-site: www.red5limited.com.

Red 5 Limited ("Red 5" or "the Company") (ASX: RED) advises that the Final Feasibility Study (FFS) for the proposed stand-alone integrated bulk open pit and underground mining and processing operation at the King of the Hills (KOTH) Gold Project in Western Australia is progressing on schedule for completion in the September 2020 Quarter, with multiple work streams currently underway.



#### **KEY ACTIVITIES CURRENTLY BEING PROGRESSED**

## 1. General Site Arrangement

GR Engineering Services has been engaged to design the infrastructure for the KOTH Project including the process plant, accommodation village, workshops and administration facilities. Initial proposals for the infrastructure layout, including accommodation village, 4Mtpa process plant and Tailings Storage Facility 6 (TSF6) are currently under review and shown in Figure 1.



Figure 1. Preliminary layout showing key site infrastructure.

## 2. Underground

As previously reported, the Resource base below the current KOTH open pit shell of 17.5Mt at 2.0g/t Au for 1.11Moz of contained gold (see ASX announcement 20 May 2019) presents a key underground mine extension opportunity for the project.

To further expand and increase the confidence levels in this Resource, an intensive underground exploration drill program was ramped up in September 2019, with drilling contractor Australian Underground Drilling (AUD) now operating three underground diamond rigs. Results from this program will be reported as they come to hand.

Entech has been awarded the contract for the underground mining study, commencing in mid-December 2019, and will work closely with SRK Consulting to ensure the interactions between the concurrently operating underground and open pit operations are well understood.

Meanwhile, bulk underground mining continues, utilising Pit N Portal mining contractors, under the current 'Truck to Darlot' business model. This experience and knowledge is invaluable, assisting with testing the Resource Model, development of stoping parameters, crushing and milling parameters, mine schedules and underground mining costs for the FFS based on actual mining inputs – all of which increases the confidence levels of the Study.





Figure 2a: Underground drilling by AUD.

**Figure 2b**: High grade quartz + sulphide vein in underground drill core.

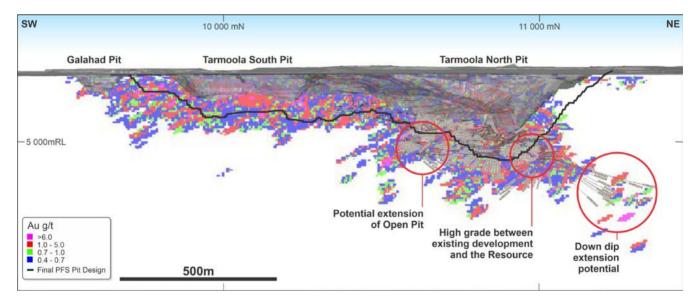


Figure 3: Longitudinal Projection of the KOTH resource model and Tarmoola open pit, looking orthogonal to strike.

# 3. Surface Resource drilling

The Open Pit design developed by consulting firm SRK during the KOTH PFS will be further refined during the current FFS. The outcomes of the PFS mine design have allowed Red 5 to plan a targeted in-fill drilling program on the western crest of the KOTH open pit to evaluate the potential of Resource extension and inform further pit optimisation works.

Drilling company Precision Exploration Drilling (PXD) commenced work on this in-fill program in November 2019, with 36 RC drill holes for 7,568m completed to date.

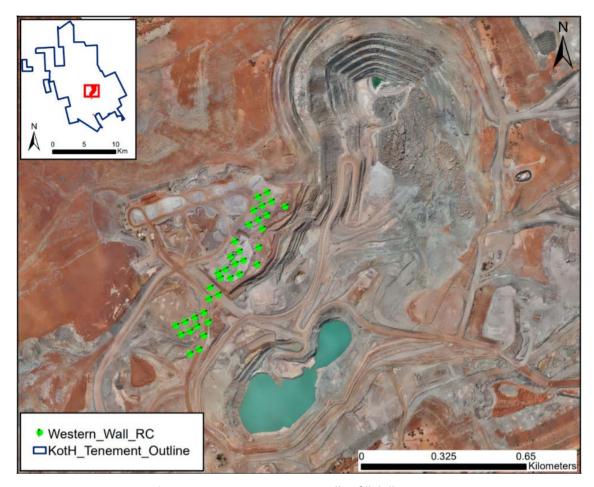


Figure 4: KOTH Open Pit West Wall in-fill drill program.



Figure 5: KOTH West Wall in-fill drilling.

In-fill drilling at the highly prospective Cerebus, Eclipse and Centauri deposits to the north-west of the KOTH open pit is currently in progress with drilling contractor PXD. This program is scheduled for completion in late January 2020. Sterilisation drilling of all infrastructure areas, including TSF6, has also been planned and PXD has been contracted to undertake this program in the first quarter of CY2020.

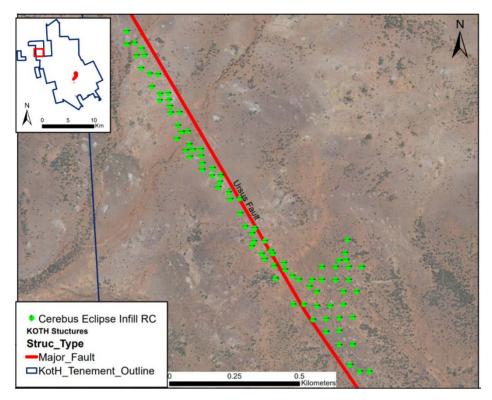


Figure 6: Cerebus Eclipse in-fill drilling program.

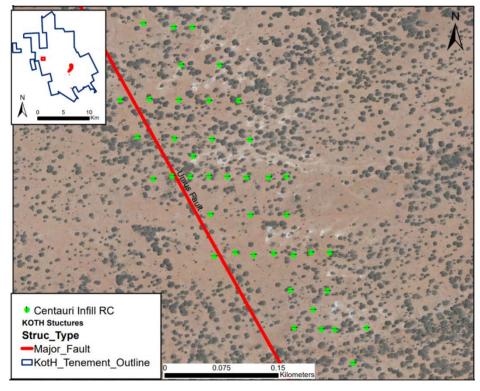


Figure 7: Centauri in-fill drilling program.

# 4. Open Pit

Following the completion of the Open Pit PFS, SRK Consulting has been awarded the contract for the FFS open pit mining study, which is scheduled for completion by mid-CY2020. SRK will further refine and optimise the KOTH and Rainbow open pit schedule and designs, while also developing plans for additional satellite deposits.



Red 5 has commenced early discussions with several experienced mining contractors with a view to a future tender process for the KOTH open pit mining requirements. A site visit in November 2019 provided an opportunity for the contractors to familiarise themselves with the site. This process will also assist Red 5 with the development of mine designs, schedules and costings for the FFS with high levels of confidence based on third party inputs.



Figure 8: Mining contractors viewing the KOTH Open Pit from the northern pit crest.

## 5. Geotechnical drilling

DDH1 Drilling has been awarded the contract to drill 12 diamond drill holes around the pit wall areas of the KOTH open pit and satellite deposits, for the purpose of geotechnical evaluation and development of input parameters for mine designs that provide confidence in ultimate pit wall stability.

Concurrently, they will drill approximately 14 geotechnical drill holes around the proposed Process Plant and TSF5 and TSF6 areas. This program commenced in mid-November 2019 and will be completed by early January 2020.

Peter O'Bryan & Associates, which has a long history with the KOTH mine, has been engaged to provide geotechnical core logging services and specialist advice.





Figure 9: Drilling of 200m geotechnical diamond drill hole in the NE section of the open pit.

## 6. Metallurgy

The metallurgical properties of KOTH ore are well understood given the long history of processing. To complement the existing dataset, further metallurgical testing is being conducted on core and RC rock chips from strategically located drill holes in each mining area. GR Engineering Services will utilise this metallurgical information to optimise the processing plant design.

## 7. Hydro-geological and hydrological studies

Building on a significant historical database from previous owners, consultancy Big Dog Hydrogeology is supporting Red 5 in evaluating groundwater impacts on the mine and meeting the water supply requirements of the proposed 4Mtpa CIL Processing Plant and general operations. Previous owners successfully operated a 3.7Mtpa mill, giving Red 5 a high level of confidence in the capacity of the local bore fields and pit dewatering to meet demand. In addition, the existing Vibrating Wire Piezometer (VWP) network around the KOTH pit is being extended.

## 8. Fauna and Flora

Flora (Mattiske Consulting Pty Ltd) and fauna (Terrestrial Ecosystems) surveys have commenced in areas where new disturbance is expected. Satellite pits and associated haulage routes, TSF6, waste dumps and the accommodation village require mapping. To date, no rare or endangered species have been identified as being impacted by the planned KOTH project.

## 9. Waste Characterisation and Soil Mapping

MBS Environmental are supporting site staff in collecting samples for waste rock characterisation. The focus of these studies is in validating historical mining data that indicates there are no risks associated with potentially acid forming materials or deleterious elements. Mine planning will utilise these studies in tailoring the mine design to minimise the impact of the future operations wherever feasible.



## 10. Cultural Heritage

Local Traditional Owners have been consulted and involved in a recently completed anthropological survey. Information derived from this consultation and survey work will be integrated into the mine design to maximise protection of areas and features of importance to the traditional owners. Consultants Daniel Le Gand and Waru Consulting have been engaged to conduct the cultural heritage studies.

Results from these studies indicate that there are several sites important to Traditional Owners but, in general, mining operations will not impact these sites. Sullivans Creek is an existing registered site and plans for the KOTH Project include a haul road crossing Sullivans Creek to access the northern satellite deposits and a transmission corridor for access to the Goldfields Gas Pipeline. These plans require further consultation with Traditional Owners and initial discussions have been very positive.

#### 11. Environmental Approvals

MBS Environmental has been engaged to provide an Approvals Strategy and Plan to de-risk the permitting process. All approvals requirements will be identified and scheduled to minimise the risk of potential delays.

## 12. Tailings Storage Facilities (TSF)

Tailings deposition during the initial 10-year LOM will commence in the existing TSF4 for a period of approximately one year, before transferring to the already substantially complete TSF5, which will have approximately five years' life.

Knight Piésold has previously been involved with TSF design for the project and has prepared a preliminary design for TSF6, which will provide capacity for LOM tails (approximately 20Mt) after TSF5 is filled and is expandable to 30Mt (Figure 11). On-site works managed by Knight Piésold including test pits and geotechnical core drilling are currently underway and are expected to be completed before the end of 2019.



Figure 10: Knight Piésold Engineer logging test pits for TSF studies.



#### MANAGEMENT COMMENT

Red 5 Managing Director, Mark Williams, said all aspects of the FFS were proceeding well, putting the Company on track to deliver the final study in the September 2020 Quarter.

"There is a significant level of activity currently underway on site, with the FFS advancing on multiple fronts. Based on the work completed to date, we expect to be in a position to award a consultancy contract for the energy study before Christmas, while also continuing to progress geotechnical, resource extension and resource in-fill drilling programs," he said.

"We are also fast-tracking the assaying of previously un-assayed historical drill core from KOTH, which offers an outstanding opportunity to continue to grow our Reserve base.

"We expect to have a steady stream of announcements relating to ongoing assay results and the award of contracts for the FFS over the remainder of 2019 and into 2020," he continued.

A new 3D animation showing the KOTH Project infrastructure, resources and bulk mining opportunity is available on the Red 5 web-site. The animation can be accessed on the web-site home page under "Featured Highlight": www.red5limited.com.

#### **ENDS**

For more information:

## Investors/Shareholders:

Mark Williams, Managing Director John Tasovac, Chief Financial Officer Red 5 Limited

Telephone: +61 8 9322 4455

#### Media:

Nicholas Read / Kate Bell Read Corporate

Telephone: +61 8 9388 1474

## **Competent Person's Statements**

## **Mineral Resource and Exploration Results**

Mr Byron Dumpleton, confirms that he is the Competent Person for the Mineral Resource and Exploration Results summarised in this report and Mr Dumpleton has read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). Mr Dumpleton is a Competent Person as defined by the JORC Code, 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in this report and to the activity for which he is accepting responsibility. Mr Dumpleton is a Member of the Australian Institute of Geoscientists, No. 1598. Mr Dumpleton is a full time employee of Red 5. Mr Dumpleton has reviewed this report and consents to the inclusion of the matters based on his supporting information in the form and context in which it appears.

#### **JORC 2012 Mineral Resource and Ore Reserves**

Red 5 confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not been materially modified from the original market announcements.

## **Forward-Looking Statements**

Certain statements made during or in connection with this statement contain or comprise certain forward-looking statements regarding Red 5's Mineral Resources and Reserves, exploration operations, project development operations, production rates, life of mine, projected cash flow, capital expenditure, operating costs and other economic performance



and financial condition as well as general market outlook. Although Red 5 believes that the expectations reflected in such forward-looking statements are reasonable, such expectations are only predictions and are subject to inherent risks and uncertainties which could cause actual values, results, performance or achievements to differ materially from those expressed, implied or projected in any forward looking statements and no assurance can be given that such expectations will prove to have been correct. Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic and market conditions, delays or changes in project development, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in metals prices and exchange rates and business and operational risk management. Except for statutory liability which cannot be excluded, each of Red 5, its officers, employees and advisors expressly disclaim any responsibility for the accuracy or completeness of the material contained in this statement and excludes all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in this statement or any error or omission. Red 5 undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events other than required by the Corporations Act and ASX Listing Rules. Accordingly, you should not place undue reliance on any forward-looking statement.