



**ASIAMET RESOURCES**

***BUILDING A LEADING INDONESIA MINING BUSINESS***

***BKM Copper Project***

***Feasibility Study Update Discussion August 2022***



**August 2022**

# FS Sustaining Momentum



- Value Engineering activity commenced Q2, 2021 investigating options for increasing extraction of copper from BKM resource with several options considered:
  - Outcome: alternatives were capital intensive and overall economics not supportive of progressing
- Q1 2022 committed to progressing BKM development by updating 2019 FS utilizing heap leaching of the copper to produce pure copper cathode for direct sale.
- Expected to be relatively straightforward update of previous FS however several conditions related to previous study changed and need to be assessed in more detail.
- NewPro Engineering engaged to commence work on FS Update in April 2022.
- AMDAD Consulting engaged to update BKM pit optimization and flow through to detailed mine design and production scheduling.
- Independent Technical Expert engaged to complete review of 2019FS and provide guidance on requirements to move FS to being “bankable”.
- FS Update full steam ahead, multiple workfronts progressing, aiming to deliver final version early Q4 to take through to debt financing.

# ITE Review of 2019 BKM Copper FS

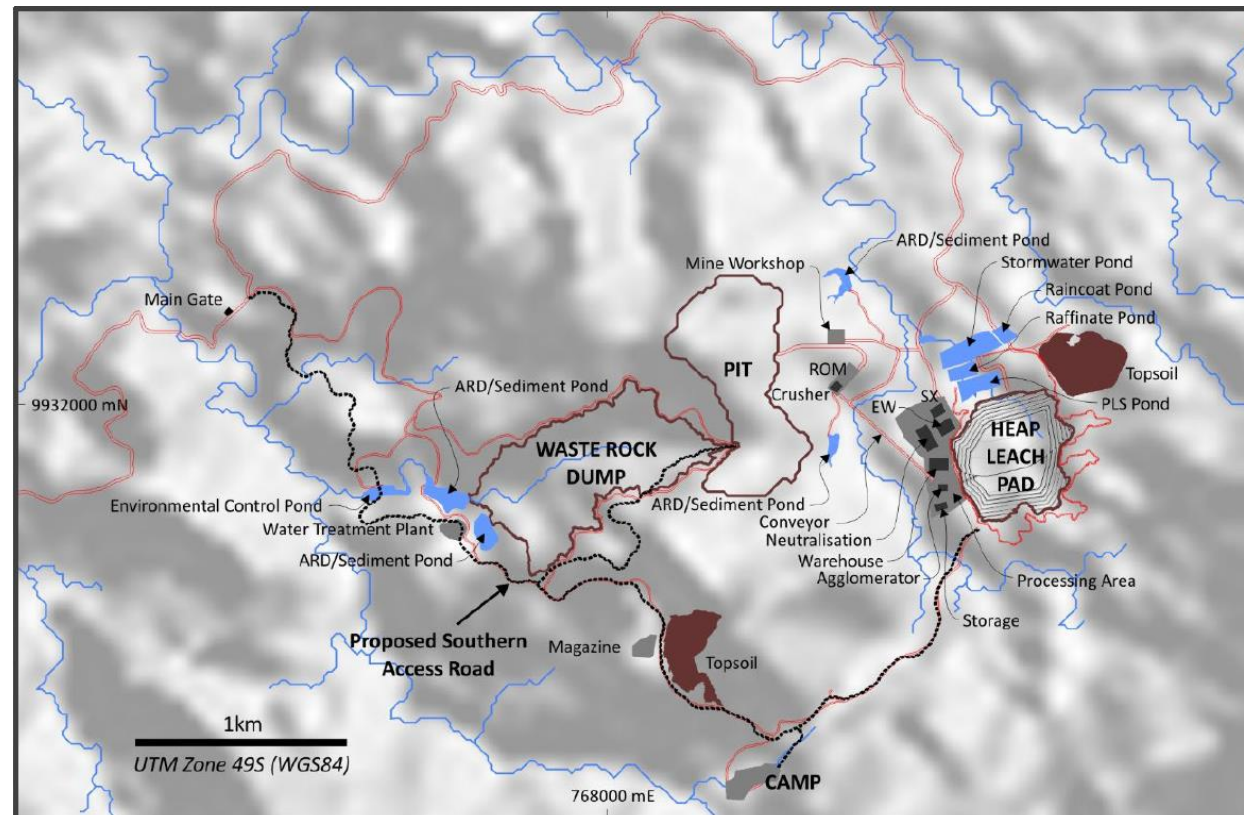
- Bank recommended engineering consultancy engaged as an Independent Technical Expert (ITE) to conduct review of BKM Copper project FS to advise on preparedness for bank financing.
- Concluded no “Fatal Flaws” with the project.
- Various workstreams recommended updates, many aspects covered in the ARS commissioned studies with additional items accepted.
- Geotechnical and Hydrogeology review, update Water Balance/Water Management strategy.



# Feasibility Study Update

## *Optimization of BKM Pit*

- Mining costs have been updated from 2018 Schedule of Rates, benchmarked against an operation of similar scale using the likely fleet to be employed at BKM. Mining costs based on a contractor model, so no capex for mining fleet.
- Processing costs updated based on the current circuit material balance produced by NewPro and updated cost estimates for labour, power and consumables. Not final but current best data.
- The cost base in the current optimization now reflects current best knowledge.
- General layout of mine, waste dump, heap leach pad and process plant remaining the same.



# Feasibility Study Update

## *Newpro Engineering*



- NewPro progressed several fronts of engineering activity
- Requests for pricing for key processing equipment have been issued
- Key areas of optimisation have included heap leach pad design and water management/treatment technologies.
- Updating construction materials balance across the project including bulk earthworks (cut/fill), detailed development works.
- Input provided into pit optimization update in the form of updated processing operating costs.
- Commenced developing detailed CAPEX model for BKM project utilizing current input costs.
  - Heap Leach earthworks currently represent the most significant capital cost area and focus of attention.

# Feasibility Study Update

## *Transport & Logistics*



- Positive interaction with government departments to confirm regulatory requirements related to significant road transportation, updating current situation.
- Engaged experienced T&L service provider PT TransContinent to complete logistics survey and provide updated, indicative rates.
- Main access road (current forestry road) assessed/surveyed by civil engineering resources (Civil Engineer and Surveyor).
- Detailed plan of requirements to improve and upgrade this access road for long-term project use provided.

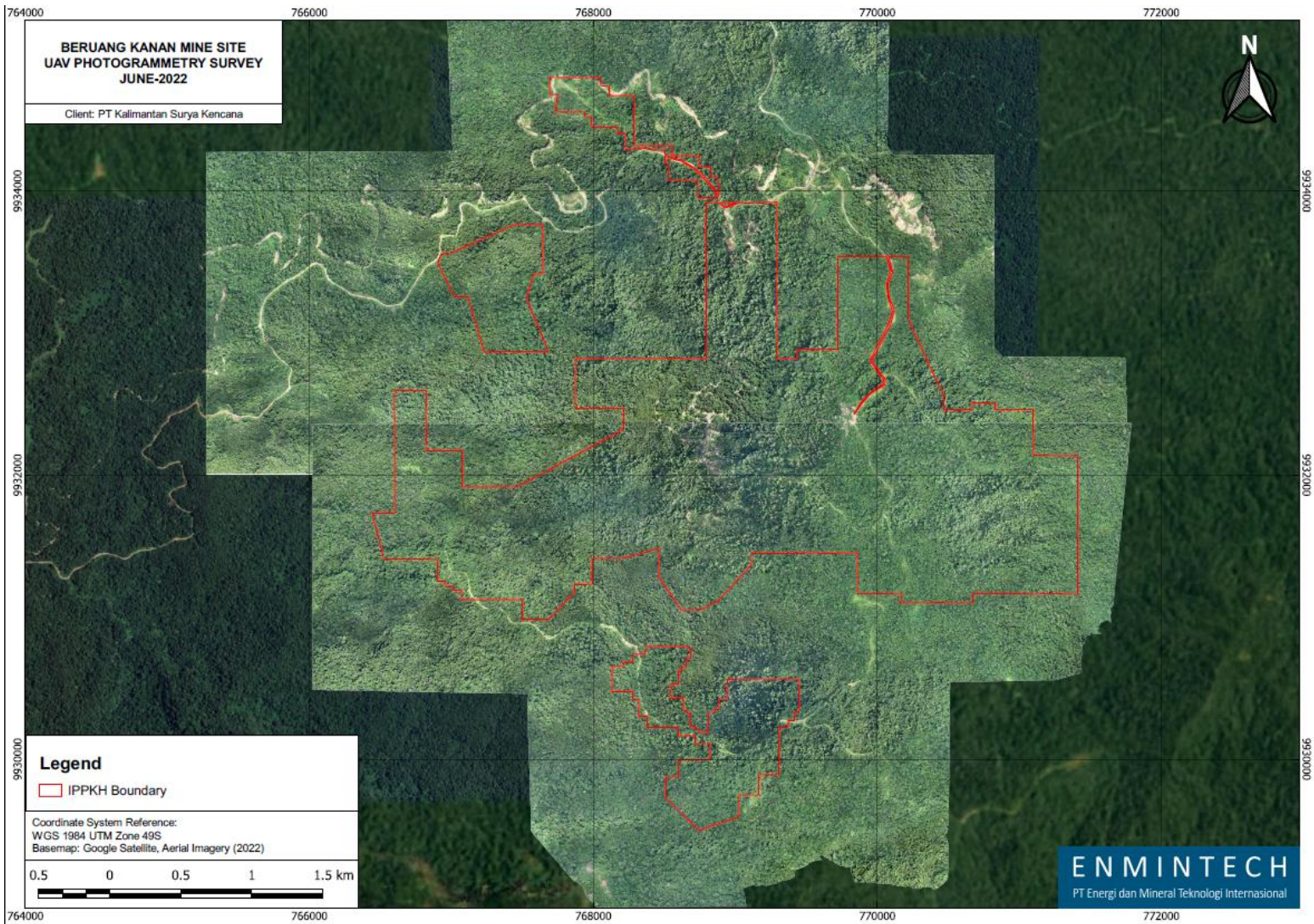
### ROUTE LOGISTICS ROUTE

1. SURABAYA - BANJARMASIN - SITE KSK
2. SURABAYA - SAMPIT - SITE KSK
3. JAKARTA - BANJARMASIN - SITE KSK
4. JAKARTA - SAMPIT - SITE KSK



# Feasibility Study Update

## Transport & Logistics



Detailed aerial survey completed of KSK Mining license and forestry access road.

BKM Deposit Location

# Feasibility Study – Power

- 15-20 MW base load – 24/7
- Diesel power generation remains a base case option, lowest CAPEX, highest OPEX.
- FS team continuing to investigate lower cost options for delivery of power to the site. Power is the major “consumable” and achieving lowest cost delivers higher return.
- The situation with respect to Grid Power in Central Kalimantan has improved over the last 3 years.
- KSK engaging with State Owned electricity company PLN via MoU to explore options available to supply grid power for BKM project.
- Renewable energy options (biomass, solar) have been proposed and being considered.

***Delivery of power for BKM is an enabling aspect for any future development of the KSK Contract of Work.***



# Next Steps - Permitting

- **Conditional Pinjam Pakai (Borrow to Use) Issued** – final permit now referred to as a PAK (Penetapan Areal Kerja or Work Area Determination)
- Final PAK is issued on completion of four key items.
- KSK has completed 3 of these and close to finalizing the final requirement.
- Final PAK expected 6-8 weeks after submitting all final documentation.
- Once PAK issued activities on the ground can commence.
- Mini-AMDAL (EIA) for Exploration in progress. This permit supports investigation work into limestone source on KSK property.
- Reviewing the ongoing permitting requirements once FS Update has been complete to move into construction and operations.



# Focus Areas FS Update

- Continue delivering on plan of agreed activities resulting from ITE review.
- Intention to work with BUMA (DOID's mining services business) providing input to the FS in key areas related to their skillset:
  - Mining Services schedule of rates
  - Process plant / heap leach earthworks and civil construction
  - Site ancillary facilities such as explosive magazine, workshops, accommodation
- Updating of CAPEX model – critical we do not over-capitalize on BKM heap leach.
- Finalise power supply model.
- Finalise Transport and Logistics methods and unit costs for FS.
- Planning for ongoing permitting requirements evolving from FS update work as we look to transition to construction and operations.
- Preliminary drilling investigation into limestone resource on KSK contract or work.

# Opportunities

- **Development of local limestone deposit** – needs basic exploration work but has potential to significantly reduce processing costs by reducing imported lime requirements. Exploration permit in process to allow work to commence.
- **Additional Ore** – some prospective secondary copper anomalies are known to be within reasonable distance to BKM. These will be investigated once the project is in production and resource development drilling can be funded internally.
- **BKM is an enabling project** – infrastructure established for BKM project supports future development of KSK Contract of Work.
  - Long term power supply
  - Certain processing equipment
  - Logistics infrastructure
  - Operational facilities
  - Workforce competence



# Broader Themes

- Copper pricing under pressure however firming up from recent lows.
- Recent reductions in commodity pricing will have eased input pricing for materials of construction.
- A window of opportunity presents itself to build a new project when input prices have come off recent highs.
- The thematic for metals associated with the decarbonization and electrification of society have not gone away, if anything it is strengthening.
- Copper will benefit – it is the key to increased electrification. With supply deficits forecast from 2025 building a new copper project in 2023/2024 is an opportunity.
- Asiamet has a strong portfolio of copper assets with important base metals at KSK. There is great value in the in-situ resources.
- Realization of this value will be apparent when we successfully deliver execution of our first operational project.