

PT Merdeka Copper Gold Tbk. IDX Code: MDKA As at 30 September 2020

Capital Structure (27-10-2020) 21,897,591,650 listed shares Share price: IDR 1,830 Market capitalisation: \$2.7 billion

Cash & Debt

Cash: \$84 million Bank Debt: \$110 million IDR Bond \$114 million

Board of Commissioners

Edwin Soeryadjaya (President) Garibaldi Thohir Richard Bruce Ness Heri Sunaryadi Dhohir Farisi (Independent) Budi Bowoleksono (Independent)

Board of Directors

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PT Merdeka Copper Gold is proudly an Indonesian owned and operated company and is listed on the Indonesian Stock Exchange.

PT Merdeka Copper Gold Tbk.

Registered No. S-03192/BEI.PG1/06-2015

QUARTERLY REPORT: SEPTEMBER 2020

PT Merdeka Copper Gold Tbk ("MDKA") is pleased to report on its September Quarter 2020 activities.

Since the time of its IPO in June 2015, MDKA has transformed from a small company with a single undeveloped gold project into a multi asset diversified group with exciting long life development projects.

With the successful execution of its strategy, MDKA management expects MDKA will become a globally significant copper and gold producer.

MDKA today consists of five main assets, which are in order of importance, as follows:

- 1) Tujuh Bukit Copper Project ("TB Copper Project")
- 2) Wetar / Morowali Acid Iron Metal Project ("AIM Project")
- 3) Pani Joint Venture ("Pani JV Project")
- 4) Tujuh Bukit Gold Mine
- 5) Wetar Copper Mine

The majority of MDKA's value is attributable to the TB Copper Project, however, the other projects will provide long-term stable cash flows.

Gold produced at the Tujuh Bukit Gold Mine for the quarter was 42,997 ounces at an all-in sustaining cost ("AISC") of \$561/oz. Year to date production was 151,820 ounces at an AISC of \$626/oz. No Lost Time Injury ("LTI") occurred during the quarter.

On 12 September 2020, a portion of the ore that was stacked on the front face of the heap leach pad subsided at Tujuh Bukit Gold Mine. There were no injuries to personnel or environmental damage. This event will impact production for the 2020 and 2021 years.

At the Wetar Copper Mine, development of the Partolang open pit commenced with mining operations at that pit commencing in October 2020. Copper produced in the quarter was 1,434 tonnes of copper at an AISC of \$4.14/lb. Year to date production was 4,360 tonnes at an AISC of \$4.27/lb. With production at Partolang commencing, we expect copper production to increase materially in the medium term which will drive down AISC. No LTI occurred during the quarter, with the site achieving 9.25 million hours without an LTI.

At Wetar, new drilling results from the Barumanu prospect near Partolang confirm potential for additional high-grade mineralisation, including exciting intercepts of 18m @ 4.12% Cu, 1.19 g/t Au and 104.9 g/t Ag from BMR018 and 19m @ 3.35% Cu, 0.95 g/t Au and 46.3 g/t Ag from BMR022. The mineralisation remains open in several directions.

During the quarter, the AIM feasibility study was progressed by Beijing General Research Institute of Mining and Metallurgy ("BGRIMM") and DRA Pacific Pty Ltd ("DRA"). The feasibility study is expected to be completed in January 2021.

During the quarter, MDKA successfully completed an IDR Bond raising for a total equivalent amount of \$114 million. The proceeds were used to repay the Merdeka Corporate Senior Facility of \$100 million. Furthermore, a debt repayment of \$10 million was made on the \$200 million BSI Senior Secured Facility in the quarter, resulting in bank debt at 30 September 2020 of \$110 million and \$84 million of cash.

1) <u>TB Copper Project</u>

World Class Resource: This project is 100% owned by MDKA. Located beneath the existing Tujuh Bukit Gold Mine, the global inferred resource is 1.9 billion tonnes of ore at a grade of 0.45% copper and 0.45 g/t gold containing approximately 8.7 million tonnes of copper metal and 28 million ounces of gold.

Pre-Feasibility Study ("PFS"): MDKA has invested \$68 million to date on a pre-feasibility study, which is planned for completion in Q4 2021. The majority of the investment is related to the underground development of a 1,890m exploration decline and resource definition drilling.

The bulk of the pre-feasibility study expenditure during the quarter was spent on resource definition drilling. The exploration decline, complete with equipped lateral drill cuddies was succesfully completed in June 2020. This was an important milestone that allowed drilling to be accelerated and was completed without a LTI with over 1 million hours worked.

Following a comprehensive internal review of the project status, a subset of the Upper High Grade Zone ("UHGZ") has been identified and prioritised for exploration and associated pre-feasibility study work. This area (referred to as the Initial Mining Area – "IMA") contains the largest zone of contiguous high grade drilling results for copper and gold to date, and is well positioned for drilling from the exploration decline.

During the quarter, MDKA engaged a new contractor for the underground resource definition drilling. Following contractor mobilisation and changeover, at the end of the quarter, three underground drill rigs were operating, with a fourth rig being commissioned early in Q4 2020. Drilling productivity from the new contractor has exceeded planned rates during the quarter, with improved core recovery and reduced drilling complications. Surface hydrogeological drilling also continued throughout the quarter. Total drilling for the quarter was 1,946.9m.



Figure 1: Underground drill rig and associated equipment



Drilling for hydrological investigation purposes near the western edge of the Tujuh Bukit Copper Resource (Figure 2) unexpectedly encountered several well mineralised sections that may extend the current resource to the west.



Figure 2: Location of hydrological drill holes near western edge of TB Copper Resource

Sulphide mineralisation comprising chalcocite, covellite, enargite, chalcopyrite and bornite was intersected outside the current 0.5% Cu shell as shown in Figure 3. The assay results from this hole (MBH-20-041, shown in red on the section below) were still pending at the end of the quarter.

Project schedules have been adjusted to prioritise drilling of the IMA, accelerating data collection for permitting, resource estimation, mine planning and other project related studies. Drilling and study work for the remainder of the UHGZ will be completed following the accelerated IMA work program.

The MDKA project team has made good progress in terms of PFS set-up. The scope of works for the technical disciplines, which supplement the PFS report, were defined and issued to the local and international market for pricing. Mine planning and infrastructure design, focusing on potential mining methods and throughput rates for the IMA, will commence in the next quarter setting a baseline for the PFS mine planning in 2021 once the IMA mineral resource estimate has been completed.



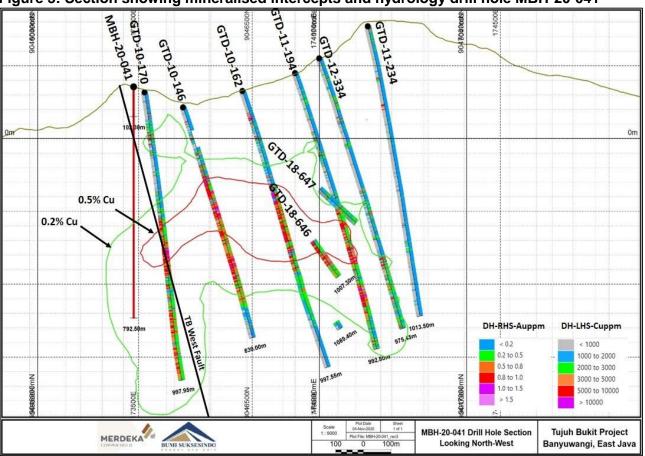


Figure 3: Section showing mineralised intercepts and hydrology drill hole MBH-20-041

Metallurgical Test Work: MDKA is pleased to report encouringing metallurgical results for this quarter.

Metallurgical test work composites were collected from surface drill holes GTD-18-646, GTD-18-647 and GTD-18-648 which were reported previously in Q1 2019 (https://www.merdekacoppergold.com/en/download/activities-reports-q1-2019/). A long section is shown in Figure 4 showing the location of the drill holes and previously reported assay results.

The PFS test work has been focused on producing a marketable concentrate by reducing rougher concentrate mass pull with improved selectivity, without losing metal recovery. This approach has provided a significant increase in rougher concentrate grades compared to historical metallurgical results, i.e. the upgrade ratio to copper rougher concentrate is up to 20 to 1 for copper and up to 14 to 1 for gold. A typical upgrade ratio for porphyry copper deposits is 10 to 1.

The performance improvement in the copper rougher flows into the copper cleaner circuit has provided copper grades in final concentrate between 21% and 24% Cu at recoveries between 76% and 83%. This has shown that marketable copper concentrate can be produced with acceptable recovery. While these results are promising, optimisation test work is ongoing to improve the final recovery.



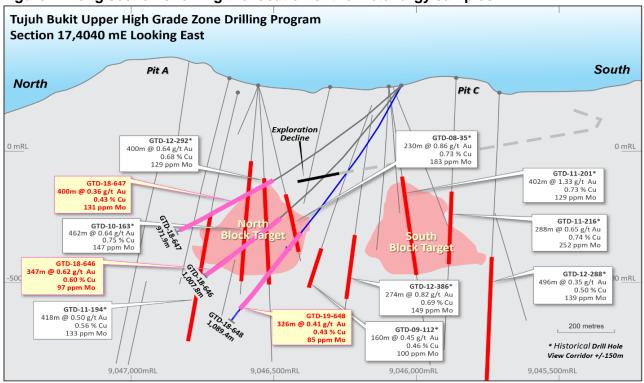


Figure 4: Long section showing the location of the metallurgy samples

Based on limited test work, the current optimised flotation conditions are summarised below:

- Primary grind of P80=75µm and regrind size of P80=25µm
- Milling at 50% solids at natural pH (acidic)
- Rougher solids concentration of 34%
- Pyrite depression using lime and clay depression using sodium silicate
- One stage of copper cleaning

The next round of test work planned will modify the latest rougher conditions to improve rougher recovery, including achieving higher recovery from rougher test work at coarser grinds before focussing on additional cleaner test work. The tables below show the most recent optimised results for roughing and cleaning so far.

			Copper Rougher Concentrate				Pyrite Rougher Concentrate									
	Composite	Head	Grade	Primarv	Mass	Cu Rec	Au Rec	Cu Con	Au Con	Mass	Cu Rec	Au Rec	Fe Rec	Cu Con	Au Con	Fe Con
	Composite	Си	Au	Frimary	Pull	Kec	Kec	Grade	Grade	Pull	Kec	Kec	Kec	Grade	Grade	Grade
Lab	Lithology	(%)	(g/t)	P ₈₀ μm	%	%	%	%	g/t	%	%	%	%	%	g/t	%
ALS	AGIA	0.54	0.48	75	4.2	88.2	59.6	11.2	6.7	8.4	3.7	27.6	43.3	0.2	1.6	29.5
Kwan	Comp	0.55	0.43	75	6.5	91.8	66.8	7.8	4.4	7.5	3.5	17.5	40.9	0.3	1.0	31.9
ALS	AA Comp	0.43	0.48	75	4.1	82.0	47.1	8.6	5.6	19.8	9.1	41.7	88.4	0.2	1.0	37.5
Kwan	AA Comp	0.42	0.46	75	3.8	85.5	50.5	9.4	6.1	17.7	7.9	36.4	85.9	0.2	0.9	40.5



					Copper Cleaner Concentrate						
Lab	Composite	Head	Grade	Regrind	Mass	Cu Rec	Au Rec	Cu Con	Au Con		
	Lithology	Cu (%)	Au (g/t)	Ρ ₈₀ μm	Pull %	%	%	Grade %	Grade g/t		
ALS	AGIA Comp	0.54	0.48	26	1.9	83.2	52.5	23.9	13.3		
ALS	AA Comp	0.43	0.48	12	1.6	75.6	40.2	20.6	12.3		

Table 2: Open Circuit Cleaner Test Work Optimised Results

2) AIM Project

Overview: The ore at the Wetar Copper Mine is primarily pyrite (FeS_2) which hosts copper, gold, silver and zinc. Since 2018, MDKA has investigated opportunities to realise additional value from the Wetar ore, as the existing heap leaching process at Wetar only recovers a portion of the copper and does not recover any of the gold, silver, zinc, iron and sulphur (a component of sulphuric acid) contained in the ore.

As part of this initiative, MDKA has worked with Eternal Tsingshan Group Limited ("Tsingshan") to conduct metallurgical test work on the Wetar ore as well as developing a preliminary process flowsheet.

Tsingshan is involved in a number of projects that have been and are being developed at the Indonesia Morowali Industrial Park ("IMIP") located in Sulawesi, Indonesia. Some of these projects will require large amounts of sulphuric acid and steam in their production process.

Tsingshan / MDKA MOU: As a result of the positive test results to date, MDKA and Tsingshan were sufficiently confident with the process that they entered into a memorandum of understanding ("MOU") to develop a plant to undertake the processing of the Wetar ore ("Pyrite Processing Plant") which will be located at IMIP. A Joint Venture company ("JV") with MDKA as the majority owner will be established to operate the AIM project.

JV Overview: The JV will purchase feedstock from the Wetar Copper Mine. The Pyrite Processing Plant will process the feedstock to produce commercial grade sulphuric acid and high grade iron ore pellets, and will also recover copper, gold and silver.

Based on the MOU, the initial scale of production will be one million tonnes per annum of commercial grade sulphuric acid, which will be supplied under a long term contract to another Tsingshan joint venture company at IMIP. Expansion of acid production to more than one million tonnes is also under investigation.

Conceptual Study Summary: A conceptual study, managed by Fluor Australia, was completed in April 2020 and forms the foundation for the feasibility study to advance the AIM Project into development, construction and operations. Metallurgical test work has been undertaken at ALS Global's Perth laboratory and at the BGRIMM laboratory in Beijing.

The goal of the proposed AIM Project is to produce pyrite concentrate from heap leach pad inventories and mineral resources at the Wetar Copper Mine. The pyrite feedstock will be transported to the Wetar port where it will be loaded onto shipping vessels. The pyrite feedstock will then be shipped approximately 385 nautical miles to the IMIP and processed by the JV facility to produce sulphuric acid and steam and recover copper, gold and silver together with pelletised iron ore. The IMIP is a well established facility that includes a coal-fired power plant, port unloading facilities, fuel



storage, communications, mobile equipment, airport and accommodation. Contract discussions for the sale of acid and steam to the IMIP customers are underway.

The initial pyrite feedstock will be sourced from the existing leach pads at Wetar which contain approximately 7.7 million tonnes of ore, which was mined and stacked on heap leach pads from the Kali Kuning and Lerokis open pits since 2015. Additional pyrite feedstock is available at the Partolang and Lerokis deposits. The ore at Wetar is pyrite rich, typically containing around 70% pyrite by weight, which makes the ore a suitable feedstock for the production of sulphuric acid by roasting.

At IMIP, the Project aims to achieve the following:

- 1. Establish a joint venture (MDKA & Tsingshan) pyrite feedstock processing plant to produce approximately one million tonnes per annum of commercial grade sulphuric acid. This acid will be sold to other operations within the IMIP;
- 2. Produce approximately 1.2 million tonnes of high pressure steam as a by-product from acid production, for sale to other operations within the IMIP;
- 3. Recover the copper, gold and silver contained in the pyrite feed; and
- 4. Produce iron ore pellets, for sale to other customers in IMIP, or for export sales.

Process facilities proposed at Wetar and IMIP are depicted in the flow diagram in Figure 5 below.

Considering all the open pit mineral resources and the heap leach pads at Wetar, the overall pyrite inventory is estimated at 20 million tonnes at 38% sulphur (S) and 33% iron (Fe). This would provide feed for ~20 years. Test work on samples of spent ore from the Wetar operations, and low grade ore from the Partolang open pit were provided to BGRIMM in Beijing and ALS Perth to conduct beneficiation, flotation, roasting, chlorinated roasting and leaching test work.

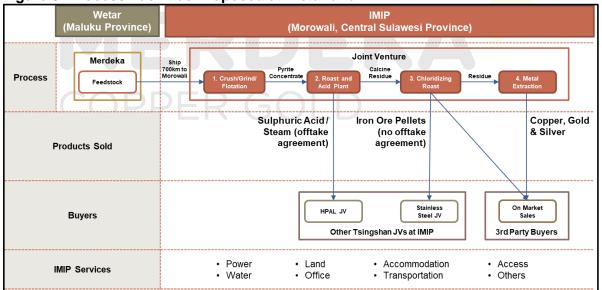


Figure 5: Process Facilities Proposed at Wetar and IMIP

Outlook: Preliminary financial results from the concept study look promising and have given MDKA confidence to engage BGRIMM and DRA to complete a Class 3 feasibility study. Following site layout optimisations, final site locations for the AIM plant at IMIP, adjacent to the potential acid customer, have been agreed. Results of the feasibility study are expected to be announced in January 2021 with a decision to proceed with the project expected early in 2021. Legal documents for acid and steam sales, JV operation and ore sales are expected to be substantially negotiated in Q4 2020.



3) Pani JV Project

Pani Joint Venture Agreement: Agreement with PT J Resources Asia Pasifik Tbk ("PSAB") in relation to the combination of MDKA's Pani Mining IUP ("Pani IUP") and one of the three mining blocks, that is the Pani block ("Pani Project") within PT Gorontalo Sejahtera Mining's ("GSM", a subsidiary of PSAB) Contract of Work ("GSM COW"), together referred to as the "Pani Joint Venture", can be completed when conditions precedent on pending regulatory and PSAB's lenders' approvals are met. The long stop date of the Pani Joint Venture agreement is 25 November 2020. MDKA has proposed an extension of the long stop date to allow additional time for conditions precedents to be satisfied. Joint development of the Pani project generates maximum value for all participants and MDKA continues to pursue this outcome.

Through its 66.7% ownership of PT Pani Bersama Jaya ("PBJ"), MDKA controls the Pani IUP in Gorontalo Province, Sulawesi. Through its 99.999% ownership of PT J Resources Nusantara ("JRN"), PSAB controls a 100% interest in the Pani Project located in Gorontalo Province, Sulawesi.

Adjacent Resources: The Pani IUP and the Pani Project are located adjacent to each other in Gorontalo. One Asia Resources Limited has previously reported that the Pani IUP contains mineral resources of 89.5 million tonnes at a gold grade of 0.82 g/t for 2.37 million contained ounces of gold and PSAB has previously reported that the Pani Project contains a mineral resource of 72.7 million tonnes at a gold grade of 0.98 g/t for 2.3 million contained ounces of gold.

PBJ's subsidiary, PT Pani Bersama Tambang ("PBT"), continued a drill program on the Pani IUP in the area between the Pani IUP and Pani Project where two holes drilled by Utah International in 1982, assayed 406m @ 0.5 g/t Au (GPD-04) and 154m @ 0.57 g/t Au (GPD-05). At the end of the quarter, 4 further holes have been completed for a total of 1,136 metres. This brings total drilling in the current program to 17 holes for 4,543 metres (Figure 6).

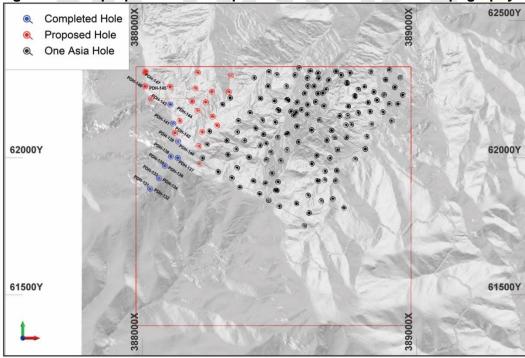


Figure 6: Pani proposed and completed drill holes overlain on topography

The Pani Joint Venture has paused its ongoing drilling program pending completion of the agreement.

4) <u>Tujuh Bukit Gold Mine</u>

Heap Leach Slump Incident: On 12 September 2020, a portion of the ore that was stacked on the front face of the heap leach pad subsided (the "incident"). There were no injuries to personnel or environmental impacts. Open cut mining activities, operation of the ore preparation plant ("OPP") and irrigation of the heap leach pads ("HLP") has been suspended until the incident investigation and remediation works have been completed.

Summary: Gold produced during the quarter was 42,997 ounces at an AISC of \$561/oz net of silver credits. Year to date production was 151,820 ounces at an AISC of \$626/oz net of silver credits.

Mining: Ore mined for Q3 2020 was 1.88 million tonnes with waste mined of 1.69 million tonnes. Mining operations achieved total material movement of 3.69 million tonnes including rehandling ore stockpiles during the quarter. Mining activities were stopped from 21 September 2020 with mining equipment redeployed to remediate the heap leach pad.

Processing: During Q3 2020 the OPP was operated in line with expectation with throughput of 1.61 million tonnes of crushed and agglomerated ore, at a grade of 0.86 g/t Au (containing 44,529 ounces of gold), hauled and stacked onto the HLP for the quarter. OPP activities were suspended on 12 September 2020 following the incident on the heap leach pad.

Prior to the incident, the HLP continued to perform as per design with project to date gold recoveries of 79%.

The adsorption, desorption and recovery ("ADR") plant continued to operate at full throughput design rates prior to the incident. Subsequently, throughput capacity was at a reduced rate at the end of the quarter whilst remediation works commenced. Construction of the elution circuit upgrade to improve silver recoveries is behind schedule because of the Covid-19 pandemic, mainly involving delay on the delivery of primary pieces of required equipment. The elution upgrade is expected to be commissioned in Q4 2020.

Environmental, Safety and Social Performance: At the end of the quarter, Tujuh Bukit operations achieved 3,381,638 man-hours without a LTI. The mine's total year to date recordable injury frequency rate per million hours worked was 0.44 at the end of September, with one medical treatment injury during the quarter.

The workforce at the mine including all employees and contractors is currently 2,275 people, comprising over 99% Indonesian nationals and less than 1% expatriates. Of the workforce, 66% comes from the regency of Banyuwangi, including approximately 43% from the local sub-district of Pesanggaran.

During the quarter, the company coordinated with 5 villages in the Pesanggaran sub-district surrounding its operation, as well as the Banyuwangi administration, to integrate the Master Plan of the Community Development and Empowerment Program 2019-2023 (PPM) with the village administration's program.

A total of 2,781 environmental samples were taken during the quarter, encompassing statutory based sampling requirements as well as company driven internal monitoring. Cover cropping of 0.3 ha as well as hydro seeding of 2.6 ha were carried out during this quarter.

Operational Cost Summary: The cash cost per tonne of ore stacked for Q3 2020 was \$8.39/t. Before the Heap Leach incident, the owner mining, agglomerate transport and stacking equipment availabilities and efficiencies continued to improve, resulting in lower mining and processing costs per tonne ore stacked compared to the previous quarter. The Q3 2020 cash cost was \$315/oz and



the AISC was \$561/oz. Year to date cash cost was \$395/oz and the AISC was \$626/oz.

Remediation of Heap Leach Slump: Initial findings from investigations into the cause of the slump by Knight Piesold suggest that the lower lifts of the heap leach pad had become saturated due to a high level of fines. This reduced the hydraulic conductivity of the ore and the ore strength leading to the slump. A campaign of drill holes is being completed to confirm the level of fines in the lower levels of the heap leach pad. The reason for the increase in fines is being investigated.

A remediation plan that addresses the causes of the slump has been developed. The objective of the remediation plan is to bring the unaffected portion of the heap leach pad back into production as soon as possible. The slump has affected bays 1 to 5 (pad A) of the heap leach pads. Bays 6 to 9 were not affected by the slump however the irrigation system needs to be re-instated before irrigation of pad B can re-commence. The remediation plan comprises the following key steps:

- 1. Recovery of pumps, piping and other key infrastructure that was used to irrigate the leach pads. A significant portion of this equipment is expected to be re-used.
- 2. Relocation of recently stacked ore from lift 7 on pad A to pad B.
- 3. Use of spent ore from lift 6 of pad A and B to create a large buttress at the base of the heap leach pad to increase stability.
- 4. Remediation of the slip area on pad A with a new liner being placed on lift 5 of pad A.

This plan is expected to result in irrigation of partially leach ore on pad B in January to allow production to resume. Ore can then be stacked on the new liner on pad A in April 2021 with leaching across both pads A and B commencing in July 2021. Production plans are being optimised and a full update of the costs of the remediation plan and production will be provided early in 2021.

An insurance claim for material damage and business interruption has been lodged with the company's insurers. Discussions are progressing on confirming acceptance of the claim. The company expects to reach a conclusion on this in Q4 2020. The quantum of the claim will be established as part of the process of finalising costs for the remediation plan and production forecast over the indemnity period of 12 months commencing 12 September 2020.

Life of Mine Impact: This heap leach pad slump is not expected to change the Tujuh Bukit oxide gold reserve with no gold expected to be lost as a result of the incident. This incident is expected to only cause some delays in gold production.

To improve the pad stability going forward, an interlift drainage layer will also be installed after every 4th lift. This will prevent a re-occurance of this incident in the future.

Operating Outlook: Production of low levels of gold is continuing as the ADR plant is treating the gold bearing solutions as they continue to drain from the heap. Total production for 2020 is expected to be in the range of 154,000 to 160,000 ounces of gold.

5) <u>Wetar Copper Mine</u>

Summary: As detailed earlier in 2020, a strategic review of the Wetar Copper Mine and integration with the AIM Project is being conducted. This has resulted in a delay in copper production as mining has shifted from the Lerokis pit to the new Partolang pit. Copper produced in Q3 2020 was 1,434 tonnes at an AISC of \$4.14/lb with year to date production of 4,360 tonnes at an AISC of \$4.27/lb. As part of the group's strategy to improve copper production, development of the Partolang open pit is continuing with mining operations commencing in October 2020, leading to improved copper production in 2021.



With the signing of the MOU with Tsingshan, the focus going forward will be on extracting maximum value from the Wetar ore including production of copper at Wetar and the sale of ore to the AIM Project to be used to produce acid, iron, steam, gold and silver as well as extracting residual copper.

Mining: Permits to commence development of the Partolang deposit were received during the quarter and development works commenced. Initial activities have included construction of the haul road, sediment ponds, waste dumps and pre-stripping of the mine area. Mining operations commenced in October 2020 with ore mining expected to ramp up in November 2020.

Processing: During Q3 2020 total copper extracted was 1,464 tonnes with 1,434 tonnes of copper produced.

Copper leaching of both the Lerokis and Kali Kunning ores continued to be affected by high levels of total dissolved solids ("TDS"), especially iron, in leach solutions. Column leach test work shows Partolang ore will leach even with high TDS solutions. Stacking of Partolang ore commenced in November 2020 and will be ramped up to full stacking rates by February 2021.

Test work and a feasibility study was completed in Q3 to confirm the flowsheet for a plant to treat Wetar leach solutions to reduce iron, acid and other dissolved metals and manage the site water balance. This flowsheet sees the existing neutralisation plant being expanded and modified to remove iron with the addition of a metals precipitation plant. Detailed engineering has commenced and is expected to be completed in Q4 2020 with construction of the expanded plant expected to commence in 2021. Once built copper leaching is expected to improve further.

Medium to Longer Term Strategy: The current Wetar heap leaching process extracts a portion of the copper but none of the gold, silver, iron or sulphuric acid in a saleable form. It is estimated that the current process route delivers revenue of \$70 per tonne. By developing the AIM Project, a further possible \$200 of revenue per tonne should be recoverable. While the bankable feasibility study for AIM is being completed (expected Q1 2021), work is being undertaken to plan for integration of the current Wetar operations with the AIM Project.

A desktop study investigating Copper Tank Leaching ("CTL") as a viable alternative to heap leaching was completed. The results indicated that further test work should be conducted. The CTL process would speed up the rate of copper leaching, provide more reliable and predictable recoveries and produce less iron and acid into solution. This process would also produce feedstock concentrate necessary for the AIM process rather than the AIM plant upgrading the pyrite feedstock.

The CTL test work was based on "whole of ore" leaching, however subsequent economic modelling has demonstrated that a copper concentration stage (flotation) would be required to ensure viability. A phased study was initiated to progress the CTL concept which yielded positive results in Q3 2020. Additional test work will now be undertaken during Q4 2020 before a decision is made to move into a full feasibility study.

A study on alternative power supply options to reduce power costs at Wetar commenced in Q3 2020 with completion planned for end of 2020.

Wetar Gold Strategy: The mining of the Partolang open cut cap will yield an estimated 400,000 tonnes of gold-silver ore at ~2.6 g/t Au and 106 g/t Ag.

Most of the gold is very fine grained in electrum, with limited free gold. The metal was previously recovered by Billiton with a Merrill-Crowe process plant on site with recoveries in the order of ~90% Au and ~40% Ag. A test work campaign has been launched to test the Partolang cap for potentially applying a similar process to recover the gold and silver.



Environmental, Safety and Social Performance: At the end of the quarter, Wetar Copper Mine had achieved a record of 9,315,320 man-hours without a LTI since January 2018, whilst the mine's total year to date recordable injury frequency rate per million hours worked, was 0.00 at the end of September 2020, with no recordable injuries during the quarter.

The Wetar operation has 773 total direct and contract employees comprising of 4 expatriates and 769 nationals. National employees comprise of 347 local (Maluku) and 426 non local employees, while contractors' employees comprise of 78 local (Maluku) and 128 non local.

High priority Community Development and Empowerment ("CDE") programs were carried out. However, due to the Covid-19 pandemic, multiple CDE programs have been temporarily suspended.

Operational Cost Summary: The cash cost in Q3 2020 was \$2.79/lb of copper produced and the AISC cost was \$4.14/lb of copper produced. Year to date cash cost was \$3.31/lb of copper produced and the AISC cost was \$4.27/lb of copper produced.

Exploration: At Wetar new drilling results from the Barumanu prospect near Partolang confirm potential for additional high-grade mineralisation. Better intercepts were 18m @ 4.12% Cu, 1.19 g/t Au and 104.9 g/t Ag from BMR018 and 19m @ 3.35% Cu, 0.95 g/t Au and 46.3 g/t Ag from BMR022. The mineralisation remains open in several directions. These results validate the exploration strategy at Wetar and the prospectivity for further discovery at Wetar.

Operating Outlook: Copper production is expected to increase in Q1 2021 following the development of Partolang and is expected to reach consistent production levels in Q2 2021. AISC costs will fall as production increases.



Appendix 1: Finance and Corporate

Cash and Cash Equivalents: Cash and cash equivalents, net of restricted cash, at 30 September 2020 was \$84 million.

Debt: On 4 August 2020, the Merdeka Corporate Senior Facility of \$100 million was refinanced with the issue of an IDR Bond and internal cash flow. The IDR Bond consists of two series, with tenor of 1 year and 3 years amounting to Rp673.65 billion and Rp726.35 billion, respectively. Hedging in the form of cross currency swap was entered with detail as follows:

- Principal: Rp1.4 trillion swapped to \$96 million
- 1-year coupon rate: IDR 8.90% swapped to USD 3.83%
- 3-years coupon rate: IDR 10.50% swapped to USD 5.10%

Subsequently, a second tranche of the IDR Bond was issued on 9 September 2020 amounting to Rp300 billion with detail as follows:

- 1-year tenor: Rp149 billion at IDR 8.25% swapped to \$10 million at USD 4.30%
- 3-years tenor: Rp151 billion at IDR 10.25%

A debt repayment of \$10 million was made on the \$200 million BSI Senior Secured Facility in the quarter. The balance at the end of the quarter was \$110 million.

The finance lease balance outstanding at 30 September 2020 was \$41.3 million. This resulted from the acquisition of owner mining equipment during 2019 and 2020.

Sales and Hedging: During the quarter, at Tujuh Bukit, a total of 50,183 ounces of gold and 221,518 ounces of silver were sold at an average price of \$1,910/oz and \$24/oz respectively for total revenue of \$101 million. Furthermore, 19,956 oz of gold hedging with a strike price of \$1,448/oz was closed out at a price of \$1,917/oz resulting in a net loss on hedging for the quarter of \$9.4 million. Mark to market liability has decreased from \$9.8 million at 31 December 2019 to \$7.8 million at 30 September 2020, resulting in comprehensive income (unrealised gain) of \$2 million.

At Wetar, 916 tonnes of copper were sold at an average price of \$6,339/t. Wetar's copper production is currently unhedged.

	Ounces	\$/oz	\$m					
Gold	50,183	1,910	95.8					
Silver	221,518	24	5.2					
	Tonnes	\$/tonne	\$m					
Copper	916	6,339	5.8					
Total			106. 8					

Table 3: Gold, Silver and Copper Sales for September 2020 Quarter

Table 4: Details of Gold and Copper Hedge Profile as at 30 September 2020

Period	Gold He	edged	Copper	Hedged
	oz Au	\$/oz	t Cu	\$/t
2020	17,048	1,452	-	-
2021	3,000	1,775	-	-

Capital Structure: The issued and paid-up capital of the company is 21,897,591,650 shares.

Shareholders	No. of shares	%
PT Saratoga Investama Sedaya Tbk	4,189,971,184	19.13
PT Mitra Daya Mustika	2,948,833,595	13.47
Garibaldi Thohir	1,796,442,892	8.20
PT Suwarna Arta Mandiri	1,386,733,708	6.33
Pemda Kabupaten Banyuwangi	1,145,000,000	5.23
Hardi Wijaya Liong	69,276,728	0.32
Gavin Arnold Caudle	10,250,000	0.05
Richard Bruce Ness	4,783,500	0.02
Tri Boewono	4,500,000	0.02
Heri Sunaryadi	4,083,330	0.02
Total Major Shareholders	11,559,874,937	52.79
Others	10,337,716,713	47.21
Total shares on issue as at 30 September 2020	21,897,591,650	100.00

Table 5: Major Shareholders as at 30 September 2020

On 10 November 2020, MSCI Inc. (NYSE:MSCI), a leading provider of research-based indexes and analytics, announced the results of the November 2020 Semi-Annual Index Review for the MSCI Equity Indexes - including the MSCI Global Standard. MDKA will be added to the MSCI Indonesia Index, as one of constituents for the MSCI Global Standard Indexes. The addition will be implemented as of the close of 30 November 2020.

Appendix 2: Exploration and Development

1) <u>Tujuh Bukit Copper Project</u>

Underground resource definition and geotechnical drilling of the UHGZ continued this quarter, with a total of 5,082 metres drilled.

Total drilling from surface, primarily for hydrogeology holes (to understand the nature of water movement and the presence of water transmitting fault structures in and around the resource) and for geotechnical information was 559 metres.

A surface hole to install hydrogeological monitoring equipment for potential underground development was completed during the quarter, with 792 metres drilled.

Underground resource definition drilling was ongoing from the exploration decline during the quarter. The purpose of this drilling is to provide comprehensive geological, geotechnical, and hydrological information for the UHGZ. Visual inspection of core corresponds well with current geological interpretation and resource estimates. Hyperspectral Corescan production has been proceeding according to plan at approximately 90 metres per day.

The hydrogeology investigation program to establish baseline hydrology conditions for underground operations continued during the quarter. All surface and underground monitoring stations are active and regular data measurements show that general dewatering continues near to the decline development, with no significant correlation with rainfall events.

All drill holes completed during the quarter are shown in Table 6. Assay results were pending at the end of the quarter, and should be available for release during the next quarter.

Hole ID	From	То	Interval	Туре
MBH-20-033	POR	113	113	Hydro
MBH-20-034	0	31	31	Hydro
MBH-20-035	0	151	151	Hydro
MBH-20-036	0	101	101	Hydro
MBH-20-037	0	31	31	Hydro
MBH-20-038	0	101	101	Hydro
MBH-20-039	0	31	31	Hydro
UGTH-20-018	0	240	240	Geotech
UHGZ-20-011	336.8	784.8	448	Res Def
UHGZ-20-014	789.6	881.5	91.9	Res Def
UHGZ-20-015	462.2	470.2	8	Res Def
UHGZ-20-016	0	685.1	685.1	Res Def
UHGZ-20-017	0	810.3	810.3	Res Def
UHGZ-20-018	0	530.3	530.3	Res Def
UHGZ-20-019	0	887.3	887.3	Res Def
UHGZ-20-020	0	894.5	894.5	Res Def
UHGZ-20-021	0	486.6	486.6	Res Def

Table 6: Tujuh Bukit Copper Project Drilling Q3 2020



2) <u>Tujuh Bukit Exploration</u>

An induced polarisation ("IP") geophysical survey combined with detailed geological mapping and sampling and results from soil geochemical programs in the Candrian area, has highlighted a potential area of oxidised high sulphidation epithermal mineralisation (Figure 7).

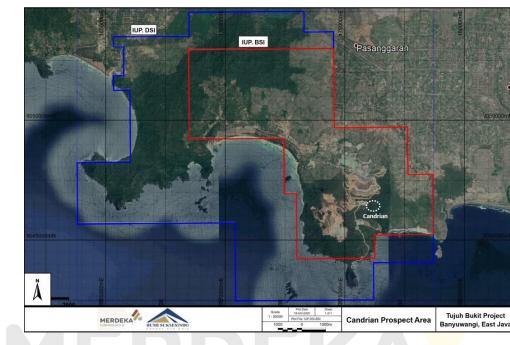
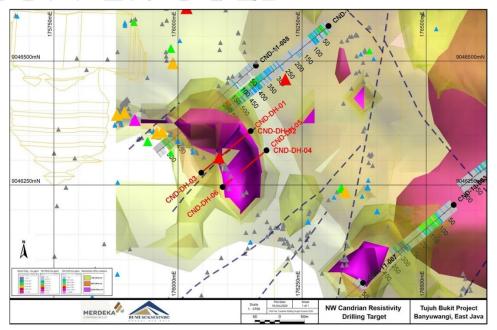


Figure 7: Candrian Area in relation to current infrastructure

The IP survey results shown in the figure below has highlighted an area with a resistivity response of over 1200 Ohm metres and coincident anomalous rock chips and gold in soil values. A six hole diamond drill program to test this anomaly is planned for 2021 (Figure 8).

Figure 8: NW Candrian IP survey resistivity target





3) <u>Wetar</u>

Exploration aimed at finding additional copper resources near Partolang resumed late in the quarter, including further drilling and geological mapping at the Barumanu prospect shown in Figure 9. This work focused on electromagnetic ("EM") anomalies defined previously, and followed up encouraging drill results from Q1 2020, including 26m @ 3.82% Cu from 59m (BMR011) and 23m @ 0.89% Cu from 31m (BMR009).

Twenty-four (24) reverse circulation exploration drill holes were completed for 3,203m (BMR018-BMR041). Drilling included 11 vertical and 3 angled holes into part of the ground EM anomaly, on a nominal 50m x 50m pattern, reducing to 50m x 25m locally. A further 10 vertical scout holes were completed outside of the ground EM feature around weak copper intersections from previous drilling and airborne EM targets.

Massive sulphides have been intersected in 12 of the new drill holes, with sulphidic stockwork in a further 5 holes. Barite was intersected above the massive sulphides in 3 holes, which generally contains gold and silver based on work elsewhere in the lease. The copper-bearing massive sulphides generally correlate well with the ground EM anomaly shown in Figure 10 and remain open in several directions.

Drill holes completed during the quarter are shown in Figure 10 and detailed in Appendix 3.

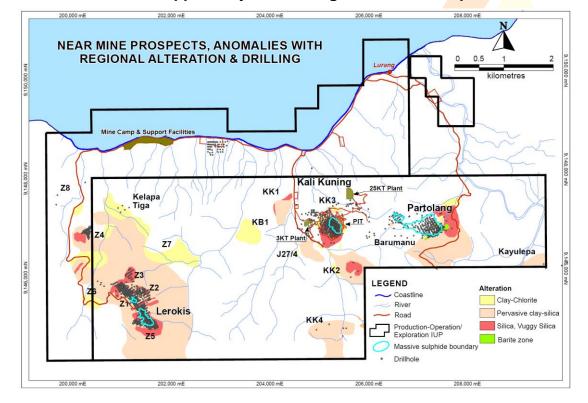


Figure 9: Plan of Wetar Copper Project Showing Near Mine Prospect Locations



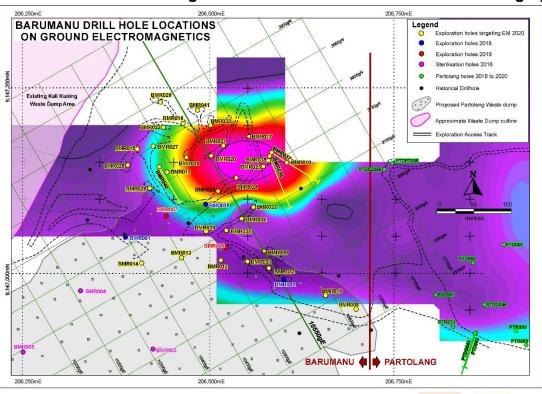


Figure 10: Plan view with drilling in the Barumanu Area on Ground EM Imagery

Results were returned from 8 holes, including 7 with significant values as shown in Table 7, confirming the potential for high-grade copper, gold and silver mineralisation in this area.

Table 7. 5									
Hole_ID	From (m)	To (m)	Drilled Interval (m)	Cu %	Au (ppm)	Ag (ppm)	Zn %	Pb %	
	REVERSE CIRULATION HOLES								
BMR018	76.00	94.00	18.00	4.12	1.19	104.94	0.76	0.96	
Incl	76.00	79.00	3.00	8.16	0.74	75.33	0.15	1.09	
Incl	84.00	89.00	5.00	5.83	2.21	206.80	1.34	0.62	
BMR019	71.00	80.00	9.00	4.35	1.89	70.11	0.11	0.49	
Incl	72.00	77.00	5.00	6.89	2.91	113.40	0.16	0.54	
BMR020	72.00	84.00	12.00	2.56	0.59	27.22	0.39	0.28	
Incl	73.00	78.00	5.00	5.27	1.21	55.40	0.40	0.57	
BMR022	74.00	93.00	19.00	3.30	0.95	46.31	0.32	0.26	
Incl	74.00	82.00	8.00	5.84	1.58	56.50	0.53	0.24	
BMR023	70.00	79.00	9.00	3.97	0.80	35.00	0.13	0.06	
Incl	71.00	74.00	3.00	7.90	1.43	61.00	0.12	0.04	
BMR024	41.00	66.00	25.00	2.45	0.72	36.25	0.36	0.10	
Incl	41.00	56.00	15.00	3.75	1.11	58.47	0.58	0.16	
BMR025	5.00	8.00	3.00	0.04	1.47	53.00	0.01	0.04	
DIVIRUZO	8.00	12.00	4.00	1.63	0.46	35.13	0.07	0.05	

Table 7: Significant assay intersections – Barumanu

(1) Reported at a 0.4% Cu cut-off for massive sulphide intercepts, and 0.5g/t Au for (2) Minimum composite length of 2m

The available drilling and EM data indicate the mineralisation is largely flat lying as shown in Figure 11. Late faults have displaced the mineralisation locally, resulting in steeper mineralisation in the east/southeast, and deeper mineralisation in the north.



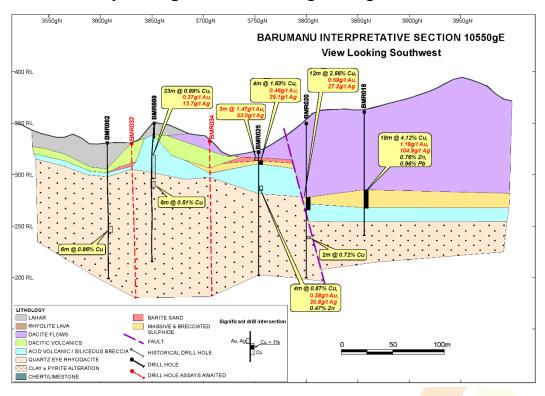


Figure 11: Preliminary Geological Section along 10550gE

Analysis of the new data is ongoing but initial work confirms that the rock units observed, and the high copper grades intersected, are similar to those from along the western margin of Partolang, and indicate the Barumanu mineralisation may represent a faulted extension of the copper resources at Partolang.

There were no environmental, or community incidents during the quarter. One near miss safety incident was reported, involving a reversing vehicle, but no injuries were sustained.



Appendix 3 – Wetar Competent Person's Statement - Barumanu

Exploration Results and Targets

The information in this report that relates to Exploration Results and Targets is based on, and fairly represents, information compiled by Ms. Donna Sewell, BSc. Ms. Sewell is contracted by Batutua Kharisma Permai. She does not hold any shares in the company either directly or indirectly.

Ms Sewell is a Member of the Australian Institute of Geoscientists (member number #2413) and is currently a committee member of the AIG Western Australia Branch. She has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Ms Sewell consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

	Billiolo	intercept						1
Hole_ID	From	То	Drilled	Cu %	Au	Ag	Zn %	Pb %
	(m)	(m)	Interval		(ppm)	(ppm)		
			(m)					
			REVERSE		N HOLES			
BMR018	76.00	94.00	18.00	4.12	1.19	104.94	<mark>0.7</mark> 6	0.96
Incl	76.00	79.00	3.00	8.16	0.74	75.33	0.15	1.09
Incl	84.00	89.00	5.00	5.83	2.21	206. <mark>80</mark>	1.34	0.62
BMR019	71.00	80.00	9.00	4.35	1.89	70.11	0.11	0.49
Incl	72.00	77.00	5.00	6.89	2.91	113.40	0.16	0.54
BMR020	72.00	84.00	12.00	2.56	0.59	27.22	0.39	0.28
Incl	73.00	78.00	5.00	5.27	1.21	55.40	0.40	0.57
BMR020	110.00	112.00	2.00	0.72	0.03	1.30	0.00	0.00
BMR022	74.00	93.00	19.00	3.30	0.95	46.31	0.32	0.26
Incl	74.00	82.00	8.00	5.84	1.58	56.50	0.53	0.24
BMR023	70.00	79.00	9.00	3.97	0.80	35.00	0.13	0.06
Incl	71.00	74.00	3.00	7.90	1.43	61.00	0.12	0.04
BMR024	41.00	66.00	25.00	2.45	0.72	36.25	0.36	0.10
Incl	41.00	56.00	15.00	3.75	1.11	58.47	0.58	0.16
	5.00	8.00	3.00	0.04	1.47	53.00	0.01	0.04
BMR025	8.00	12.00	4.00	1.63	0.46	35.13	0.07	0.05
	33.00	37.00	4.00	0.87	0.38	20.83	0.47	0.05

Barumanu Drillhole Intercepts

(1) Reported at a 0.4% Cu cut-off for massive sulphide intercepts, and 0.5g/t Au for barite

(2) Minimum composite length of 2m

BKP Drill Hole Details Barumanu

Hole_ID	EOH (m)	Easting	Northing	RL	Azim	DIP	Datum
BMR018	120	206463.76	9147201.9	360.88	0	-90	UTM WGS84 Zone 52S
BMR019	102	206468.04	9147156.4	355.47	0	-90	UTM WGS84 Zone 52S
BMR020	150	206501.52	9147158.5	349.65	0	-90	UTM WGS84 Zone 52S
BMR021	150	206517.62	9147172	352.08	0	-90	UTM WGS84 Zone 52S
BMR022	140	206437.12	9147196.7	354.47	0	-90	UTM WGS84 Zone 52S
BMR023	150	206571.97	9147144	325.05	0	-90	UTM WGS84 Zone 52S



Hole_ID	EOH (m)	Easting	Northing	RL	Azim	DIP	Datum
BMR024	130	206535.25	9147128.7	326.30	0	-90	UTM WGS84 Zone 52S
BMR025	120	206511.07	9147110.6	321.58	0	-90	UTM WGS84 Zone 52S
BMR026	142	206433.29	9147231	365.71	0	-90	UTM WGS84 Zone 52S
BMR027	130	206500.77	9147199.3	363.52	0	-90	UTM WGS84 Zone 52S
BMR028	120	206418.87	9147115	318.77	0	-90	UTM WGS84 Zone 52S
BMR029	145	206423.47	9147171.5	332.05	0	-90	UTM WGS84 Zone 52S
BMR030	150	206389.14	9147145.8	331.05	0	-90	UTM WGS84 Zone 52S
BMR031	84	206550.22	9147016.1	322.62	0	-90	UTM WGS84 Zone 52S
BMR032	150	206579.14	9147007.2	330.13	0	-90	UTM WGS84 Zone 52S
BMR033	150	206558.42	9147089.4	332.53	0	-90	UTM WGS84 Zone 52S
BMR034	150	206542.49	9147073.6	332.29	0	-90	UTM WGS84 Zone 52S
BMR035	150	206522.05	9147057.7	327.67	0	-90	UTM WGS84 Zone 52S
BMR036	150	206580.05	9147157.8	328.63	158	-60	UTM WGS84 Zone 52S
BMR037	150	206583	9147162.8	328.82	122	-60	UTM WGS84 Zone 52S
BMR038	100	206578.68	9147152	328.44	0	-90	UTM WGS84 Zone 52S
BMR039	100	206494.71	9147056.2	323.04	0	-90	UTM WGS84 Zone 52S
BMR040	132	206431.55	9147143.8	334.34	150	-65	UTM WGS84 Zone 52S
BMR041	138	206483.04	9147219.9	367.39	0	-90	UTM WGS84 Zone 52S

JORC Code, 2012 Edition – Table 1 Report (Wetar Exploration – Barumanu only)

Section 1 - Sampling Techniques and Data

Criteria	section apply to all succeeding sections.) JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more 	 Historical sampling at Barumanu during the 1990s was completed over several phases by a subsidiary of Billiton International, PT Prima Lirang Mining (PLM). Drilling was completed with a diamond drill rig using NQ diameter core and half drill core samples were collected at 1m intervals. Sampling by Batutua Kharisma Permai (BKP), since late 2015 has been with diamond drill (DD) rigs, mainly using HQ3 and NQ3 diameter core and with reverse circulation (RC) rigs using 5½-inch bit and face sampling hammers. Half drill core samples are collected by BKP, with the remaining half core generally retained on site. Limited core is available to date, but where available core recoveries have averaged 97-100%. RC samples are collected every 1 m, with one-eighth of each interval riffle split for sampling, and the remaining seven-eighths of each material stored at the drill site. Estimation of RC recoveries for assay intervals in this report are still being reviewed but initial estimates suggest overall recoveries in the holes reported of 83%, and except for 1 hole (BMR025), 71% in the sulphide ore intervals from these.



Criteria	JORC Code explanation	Commentary
	explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	 on a nominal 1 m basis, increasing to 2 m in known footwall units. Above the mineralisation, 1 m intervals of quarter core or RC splits from unaltered cover sequences are generally composited to 5 m for assaying. An independent laboratory is used to pulverise the entire sample for analysis. Sample weights submitted for preparation and analysis range from 2 kg/m to 6 kg/m dependent on rock type. The entire sample is crushed and then pulverised to 95% passing -200# (<i>75um</i>), and then 200gram pulp is taken for various analyses. Sieve tests are completed on 5% of samples to test grind quality. Industry standard QAQC protocols include the insertion of certified OREAS standards and field duplicates at rate of 1 in 20-25, and blanks at rate of 1 in 50. Analysis of QAQC results suggest sample assays are accurate. All exploration drill samples are analysed for gold using 30g fire assay, standard multi-element ICP 3-acid digestion with AAS finish, ore-grade 3-acid digestion with AAS finish for ore elements above DL by ICP, total sulphur (LECO) for sulphur above DL of the ICP, and sequential copper analysis for Cu values > 0.4% testing for acid and cyanide soluble copper, zinc and iron. Further details on the assaying are provided further down in this table. No adjustments or calibrations were made to any assay data used in reporting.
Drilling techniques	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	 PLM drilled 17 shallow DD holes (BMD001–BMD017) with NQ standard tube. BKP drilling has been conducted in four phases and included diamond drilling with HQ3 core of diameter 63.5 mm, reducing to NQ core of diameter 45mm if necessary. RC holes with a 5½-inch bit and face sampling hammer. Phase 1 drilling in 2015 comprised 1 DD hole only (KKE02) to a depth of 250.1m. Phase 2 drilling in late, 2018 and early, 2019, included 1 DD hole (BMD018) and 7 RC holes (BMR001-007) for 242.1 m and 654 m respectively. Phase 3 drilling in early 2020 included 10 RC holes (BMR008-017) for 1,532m. Phase 4 drilling (this report) included 24 RC holes (BMR018-041) for 3,203m.
recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	 PLM diamond core recovery reportedly averaged 80% in the barite zones although recoveries were sometimes poor due to the loose friable nature of the ore. BKP core recovery is measured for each drill run and calculated for each sample interval, averaging between 97-100% (2 holes only). Scout RC drilling to date is largely restricted to areas where the targeted sulphides are expected to be <100 m deep, as the density of the material and the locally porous nature of the sulphides has made it difficult to lift adequate sample material from much deeper levels. RC samples are bagged and weighed for each 1 m interval prior to being riffle split. Estimation of RC sample recoveries is ongoing and is complicated by mixing of the different ore types in



Criteria		JORC Code explanation		Commentary
				chips, as the specific gravity (SG) for these vary considerably based on work in nearby Partolang and range from 2.33 g/cm ³ to 4.87 g/cm ³ for the main massive sulphide units, and from 1.52 g/cm ³ to 3.3 g/cm ³ for the main units containing gold and silver. Diamond drilling is planned in the next quarter to assist with calculating recoveries for the RC. Using Partolang SG data as a reference, overall RC recoveries during this reporting period average around 83% in the holes for which assays were received, and except for 1 hole (BMR025), 71% in the sulphide ore intervals from these.
Logging		Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged.	•	Records for historical PLM drilling comprise skeletal geological logs only and are only available for 9 of the completed holes (BMD009-017). BKP drill core is geologically, geotechnically, and structurally logged. Logging fields included (but not limited to), lithology, alteration, mineralisation, assigned ore unit, structure, RQD and defect angles. All core is photographed prior to sampling for a permanent record and for desktop study purposes. RC chips are geologically logged, with representative chips from the drilling retained in chip trays. These are photographed for desktop study purposes and retained on site. All drill core and RC chips are logged, initially in a qualitative way to create summary logs, and then in more detail. The BKP logging is based on nomenclature developed specifically for the Wetar project. The logging and codes or abbreviations are input into computerised logging sheets.
Subsampling techniques	•	If core, whether cut or sawn and whether quarter, half or all core taken.	•	PLM core was sampled in 1 m intervals, with half core taken for analysis. None of this core is available.
and sample preparation	ł	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	 BKP core (2 holes only to date) is sampled in intervals, with half core taken through any sul 	BKP core (2 holes only to date) is sampled in 1 m intervals, with half core taken through any sulphide and barite zones, increasing to 2 m intervals in
С	Ċ	For all sample types, the nature, quality and appropriateness of the sample preparation technique.		footwall units. In unmineralised cover sequences, no material is sent for analysis. RC bulk samples are collected from the cyclone in buckets or large bags in 1 m intervals, weighed, and
	•	Quality control procedures adopted for all subsampling stages to maximise representivity of samples.		riffle split using a 3-tier Jones splitter to 2–6 kg samples for assay through the sulphide and barite zones. The 1 m samples are composited to 2 m
	•	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	•	intervals in footwall units, and 5 m in cover sequences for assaying. Tube sampling has been used locally for wet samples taken from some of the deeper holes. One in 20 samples are duplicated as field splits for both DD and RC. The DD duplicates are of quarter- core only, whilst the RC splits are taken from the bulk
	•	Whether sample sizes are appropriate to the grain size of the material being sampled.	•	sample and split with riffle. In general, zones of expected mineralisation are targeted for the duplicates to avoid comparing samples with no grades. The samples are collected after logging has been completed.
Quality of assay data and laboratory tests	•	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	•	PLM analysed for Au (FAS), Ag (AAS), Cu, Pb, Zn (AAS) and As, Sb and Ba by XRF at PT. Inchape Utama Services in Jakarta. Samples with >10% Ba were reanalysed by XRF. The accuracy of the assays was reportedly monitored using high grade and low
	•	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make	•	grade (Au) CRMs (range 2.61-22.17g/t) as well as blanks. Samples from BKP drilling are assayed by PT Geoservices in Jakarta as follows:





Criteria		JORC Code explanation		Commentary
		and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	•	Gold (fire assay – method FAA40), with copper, lead, zinc, silver, arsenic, antimony, iron, sulphur and a suite of 28 other elements by aqua regia ICP-OES package (method GA103_ICP36). Analyses for the arsenic and antimony are considered partial only by this method. A three-acid ore grade AAS digest (method GOA03_AAS) is completed on samples above detection limits of 1% for Cu, Pb, Zn, As and Sb, above 100 ppm for Ag, and above 25% for Fe. Any sulphur values above DL of 20% by ICP were re-assayed by total sulphur (method MET_LECO_S01) by combustion furnace. Samples, which returned Cu values of >0.4% have also been analysed for cyanide soluble and acid soluble amounts of Cu, Zn and Fe by sequential leach (method MET_CU_DG3A and MET_SOLN_AAS). Industry standard QAQC protocols by BKP include the insertion of certified OREAS standards and field duplicates at rate of 1 in 20-25, and blanks at rate of 1 in 50. The accuracy of the BKP sulphide assays is monitored using high, mid and low grade (Cu) certified reference materials (CRMs) (3.82%, 1.53%, 0.51% respectively) as well as blanks at rate of 1:50. Gold and silver standards range from 1.43 g/t to 2.47 g/t for Au and 4.45 g/t to 488 g/t for Ag (for barite material more recently). Analyses of laboratory replicate and duplicate assays show a high degree of correlation. Standards and blanks from the drilling programs by BKP have returned assays within acceptable tolerances. Duplicate field samples for copper results show some scatter locally, especially at higher grades, and near detection limits, but the gold results generally show good correlation.
Verification of sampling and assaying	•	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	•	Significant assay intersections in this report have been verified by the Wetar mine lab. No pulp samples have yet been dispatched for analysis by an external check laboratory. The drill holes being reported are exploration in nature and have not yet been twinned. Hardcopy geological reports are available for some of the PLM drilling and data from the reports has been entered in the Company database. All BKP geological data is recorded on paper log sheets retained on site or entered directly into excel computer templates of same form. These are manually entered into a Microsoft Access database on site, which is backed up daily. Checking of the manual entries is routinely completed. Primary assay data is received from the laboratory in soft-copy digital format. Digital data is stored on a secure server on site with a back-up copy off site. Assays are regularly merged into the Microsoft Access database off-site by contract personnel. Once merged, the database is sent back to site and assay columns are checked by the senior geologists to ensure that assays have been correctly merged.
Location of data points	•	Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in	•	Historical coordinates are available from the 17 drillholes by PLM at Barumanu, however, few of these have been located, and no downhole surveys are available.



Criteria		JORC Code explanation		Commentary
	•	Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	•	Drill hole collars of BKP are surveyed by total station to an accuracy of 2 mm. The topographic surface is surveyed by LIDAR and supplemented by Total Station surveys. Drilling in this report was conducted on a local grid that is rotated approximately 30° to the west of true north. All data is subsequently transformed into UTM WGS-84, Zone 52S. Earlier scout drilling was based on UTM coordinates only. Downhole surveys are generally completed by BKP with a Proshot camera at 30 m intervals. No surveys are available for the first 13 vertical holes completed during this reporting period (ie BMR018-030). Dip, and to a much lesser extent the azimuth variations downhole generally average <2.0° per 100 m for the vertical drilling and 2–5° per 100 m for inclined holes due to the relatively shallow nature of the drilling. However, a number of the vertical holes had larger downhole azimuth variations. These hole deviations are generally minor and indicate that dips and azimuths at the collar used at the end of hole for unsurveyed holes will result in insignificant errors.
Data spacing and distribution	•	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has	•	Drill spacing is nominal 50m x 50m pattern, with some drilling on 50m x 25m over a portion of the main EM target, with scout drilling at 50-100m centres outside of this. Previous drilling by PLM, largely over known barite outcrops was scattered. The assay intervals reported are from 1 m samples and constrained by geological units.
Orientation of data in relation to geological structure		been applied. Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	•	Sampled drill holes were designed in Mapinfo Datamine Discover 3D to intersect the interpreted electromagnetic anomalies and expected shallow dipping VMS mineralisation comprised of a copper- rich massive sulphide body. Based on initial analysis of the available drilling, and the EM data, mineralisation appears to have a tabular geometry and is largely flat lying. Late faults appear to have displaced the mineralisation locally, resulting in steeper mineralisation in the east/southeast, and deeper mineralisation in the north. Except for 3 holes, drilling has been vertical, with holes completed on rough sections orientated perpendicular to, and along the interpreted strike of the tabular mineralisation. The sampling is considered unbiased.
Sample security	•	The measures taken to ensure sample security.	•	Bagged BKP drill samples are packed into wooden boxes and shipped on the Company chartered boat to Kupang (West Timor) where the samples are crushed and split, prior to sending pulps to Jakarta for final assay analysis.
Audits or reviews	•	The results of any audits or reviews of sampling techniques and data.	•	No audits have yet been completed on the drilling data by BKP, but the drilling, logging and sampling methods utilised are based on methods reviewed previously by external consultants for the adjacent mine area, and in-house company standards.



Section 2 - Reporting of Exploration Results

Criteria listed in the preceding section also apply to this section Criteria JORC Code explanation	Commentary
 Mineral tenement and land tenure status Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	 The Wetar Copper Project is a fully permitted and operational mine and solvent extraction-electrowinning (SX-EW) treatment facility located on Wetar Island, part of the Maluku Barat Daya Regency (MBD), in the Maluku Province of the Republic of Indonesia. Key permits are listed below. IUP Exploitation 543-124 Tahun 2011 and PMA adjustment to 543-124 Tahun 2011 for copper, 2,733 ha expiry 9/6/2031, are held by PT Batutua Kharisma Permai (BKP), a subsidiary of PT Merdeka Copper Gold Tbk. AMDAL environmental permit for life of mine was granted April 2010, which covers the Kali Kuning and Lerokis areas. Addendum applications to cover revised works at Lerokis, Kali Kuning and future works covering the Partolang development were approved on 7 November 2019. Permits include those for environmental feasibility 05/SKKL/503 Tahun 2019 and 06/SKKL/503 Tahun 2019, and environmental permits 06/IL/2019 and 07/IL/2019. Forestry permit (Pinjam Pakai) Number SK478/Menhut II/2013) for 134.63 ha is valid to December 2031.
Exploration done by other parties • Acknowledgment and appraisal of exploration by other parties.	 Extensive exploration including drilling and mining was carried out at Kali Kuning and Lerokis from 1990 to 1997 by PLM, a subsidiary of Billiton. The gold/precious metals exploration, mining and processing activities were rehabilitated at the completion of processing. At Partolang, and to a lesser extent Barumanu, exploratory drilling was completed by PLM. Informal resource estimates were also undertaken in-house for the barite and sulphides, where present. Preliminary scoping studies were undertaken on the informal gold resource at Partolang but, no mining was completed. No scoping studies were undertaken for Barumanu.
Geology • Deposit type, geological setting and style of mineralisation.	 Wetar Island is composed of Neogene volcanic rocks and minor oceanic sediments and forms part of the Inner Banda Arc. The island preserves ~4.7 million-year-old precious metal-rich volcanogenic massive sulphide (VMS) and barite deposits. The polymetallic massive sulphides are dominated by pyrite, with minor primary chalcopyrite and lesser bornite cut by late fractures infilled with sulphosalts, tennantite-tetrahedrite and enargite. The sulphosalts have replaced primary chalcopyrite and bornite to varying extents across Kali Kuning, Lerokis, Partolang, and Barumanu and these have in turn been replaced by supergene chalcocite and covellite to varying extents, with the latter most common at



Criteria	JORC Code explanation	Commentary
		 Partolang. Barite-rich orebodies are developed on the flanks of the sulphide units and locally overly the massive sulphides. Sulphide mounds showing talus textures are generally localised along faults, which provided the main pathways for high-temperature hydrothermal fluids and the development of associated stockworks. Known orebodies, including Barumanu are closely associated with quartz-porphyry dacites which occur within the basalts/andesites and are surrounded by widespread propylitic and argillic alteration haloes. Hydrothermal alteration around the various orebodies is zoned and dominated by illite-kaolinite-smectite with local alunite and pyrophyllite. The sulphide mounds and related barite bodies are generally covered and preserved by post-mineralisation chert, gypsum, calcareous siltstone/limestone, lahars, subaqueous debris flows, volcaniclastic rocks and locally fresh dacitic lava flows at Barumanu and Partolang. Gold-silver mineralisation occurs predominantly within barite-rich units, including sands, tuffs and breccias (after original dacitic rocks), which are strongly ferruginised locally. In some of the dacitic rocks, barite and hydrated iron minerals have completely replaced the host units, with original breccia textures no longer visible. The economic copper mineralisation occurs predominantly within cherent massive sulphide units and locally in dacitic breccia units which, have been almost completely replaced by sulphides, with some minor material occurring in fractures and as stockworks within intensely altered andesitic and dacitic tuffs and volcanics in the immediate footwall and lateral extent of the massive sulphides. Not all massive sulphides are mineralised.
Drillhole information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: easting and northing of the drillhole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar dip and azimuth of the hole downhole length and interception depth hole length. If the exclusion of this information is justified on the basis that the 	 New BKP drill hole location and directional information is provided in this report. Hole locations from the historic PLM work are shown in the diagrams.



Criteria	JORC Code explanation	Commentary
	information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	• Exploration results by BKP are reported to a minimum cutoff grade of 0.4% Cu for sulphide zones and 0.5g/t Au, for barite Au-Ag zones, with an internal dilution of 2m maximum. No top cuts have been applied to this data.
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known'). 	 Except for three angled BKP holes, all of the drilling has been vertical, and the intercept widths are generally indicative of deposit thickness. Based on initial analysis of available drilling, and the EM data, mineralisation appears to have a tabular geometry and is largely flat lying. Late faults appear to have displaced the mineralisation locally, resulting in steeper mineralisation in the east/southeast, and deeper mineralisation in the north.
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	 Location plans for the prospects and completed drillholes are provided in this report together with a tabulation of significant inetrcepts from the drilling. A representative section, showing the main rock units and how these relate to the available assays is provided in this report.
Balanced reporting	 Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced, to avoid misleading reporting of Exploration Results. 	 The geological reporting of the rock types is provided in the information. All available significant results from the drilling by BKP are included in this report and in previous quarterly reports by MDKA.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	 At Barumanu, massive sulphides, ranging in thickness from 3 m to 19 m, have been intersected in 12 of the holes completed in this reporting period, and in 2 holes from previous quarters. The massive sulphides are associated with ground and airborne EM conductors. Diagnostic leach data from available mineralised holes have to date returned leachable copper values ranging from 44-88% (average 70%) by either



Criteria	JORC Code explanation	Commentary
		cyanide or sulphuric acid.
Further work	 The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	• Future work will include completion of additional ground electromagnetics in the area. Drilling will be aimed at testing for possible extensions to the mineralisation in the northwest, east and southeast, where mineralisation remains open, and will include significant diamond drilling to better understand interpreted structures which appear to be disrupting the mineralisation.

MERDEKA COPPER GOLD



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About PT Merdeka Copper Gold Tbk.

PT Merdeka Copper Gold Tbk ("Merdeka"), a holding company with operating subsidiaries engaging in mining business activities, encompassing: (i) exploration; (ii) production of gold, silver, copper (and other related minerals); and (iii) mining services. The subsidiaries are: (i) PT Bumi Suksesindo ("BSI") as the holder of the operation production mining business license for the Tujuh Bukit Gold Mine; (ii) PT Damai Suksesindo ("DSI") which holds the adjacent exploration permit; (iii) PT Batutua Tembaga Raya ("BTR") as the holder of operation production mining business license specifically for processing and refining; (iv) PT Batutua Kharisma Permai ("BKP") as the holder of the operation production mining business license for the Wetar Copper Mine; (v) PT Merdeka Mining Servis ("MMS") as the holder of mining services business license; vi) PT Pani Bersama Tambang ("PBT"), as the holder of an operation production mining business license specifically for processing and refining; and (vii) PT Puncak Emas Tani Sejahtera ("PETS"), as the holder of an operation production mining business license for Pani Gold Project.

The company's major assets, in order of management's assessment of future value, are the: (i) Tujuh Bukit Copper Project; (ii) Pani Joint Venture; (iii) Wetar / Morowali Acid Iron Metal Project; (iv) Tujuh Bukit Gold Mine and; (v) Wetar Copper Mine.

The Tujuh Bukit Copper Project deposit is one of the world's top ranked undeveloped copper and gold mineral resources, containing approximately 8.7 million tonnes of copper and 28 million ounces of gold.

As a world-class Indonesian mining company, Merdeka is owned by prominent Indonesian shareholders including: PT Saratoga Investama Sedaya Tbk., PT Provident Capital Indonesia and Mr. Garibaldi Thohir. Merdeka's three major shareholders have exceptional track records in successfully identifying, building and operating multiple publicly listed companies in Indonesia.

Refer Annual Statements of Mineral Resources and Ore Reserves on www.merdekacoppergold.com