

## ***Inside Freeport McMoRan: Last Quarter's Progress***

***Oct. 27, 2021***

It was another quarter for progress for Freeport McMoRan. It is nearly at the end of its two-year ramp-up period at the underground portion of its Indonesian mine, Grasberg, hitting 90% of its expected annual mining rate. The development of this portion of the mine involved complicated geology, skilled mining operations, and two decades' worth of planning, and so far, the ramp up has gone off without a hitch. Higher volumes of copper and gold along with higher copper prices than a year ago led to 60% revenue growth. Freeport's costs came out lower than expected due to good performance from a project aimed to capture copper and gold from existing mine tailings, and it generated \$2 billion of operating cash flow, the highest amount since the sale of its oil and gas business back in the mid 2010's. It's truly a golden time for Freeport.

As the transition period of the last 2 years comes a close, Freeport's management provided an update on its long term plans for the next decade. In the near term, it's progressing with the leaching project mentioned earlier. Freeport continues to develop a leaching technology, which is a chemical process that extracts copper from already mined materials, to potentially extract up to 40 billion pounds of the metal at a relatively low cost. If successful, this project would be similar to starting a new mine in terms of added production. In the medium-term time frame, Freeport's Arizona Lone Star mine is being developed. Currently, it is only stripping the oxide portion of the mine in order to reach the massive sulfide deposit below. Copper oxide is more abundant than copper sulfide, but copper sulfide has higher copper content and will be more profitable. In the longer term, Freeport finally announced its plans to develop another mine in Indonesia called Kucing Liar. It has known about this copper resource for a long time, but was waiting for its Grasberg underground block cave to be developed and for political agreements to be in place before committing to another development plan for the mine. Kucing Liar should be up and running by 2030.

The timeline of Kucing Liar (almost 10 years from development to full production) is very common in the copper industry. This is part of the reason why copper should continue its streak in the \$4 to \$5 range for years to come. Supply problems just keep persisting worldwide. Chile and Peru account for the majority of the world's copper. In Chile, mines have been experiencing strike-related closures and November's presidential election carries large implications for the mining industry as well. Several companies are putting off investment decisions until after the new president's stance towards miners is known. Peru had its own presidential election in the summer, and the elected president ran under the campaign of nationalizing the mining industry. So far, talks with the new president have been hopeful for Freeport and other companies, but there are still a lot of unknowns with policy going forward. Even the US is experiencing difficulties with sanctioning new mining projects. Rio Tinto has been trying to get a new copper mine going in Arizona for almost a decade and keeps hitting regulatory roadblocks. One strength of Freeport's is that the three growth projects mentioned earlier are already part of existing, owned mines and do not need governmental approval.

The price of copper has certainly ridden its own roller coaster this past quarter, and Freeport's stock usually aligns with those price swings. While we expect the ride to climb with every news item of "copper hits 47-year inventory low!" and to fall with every bit of news of "new COVID variant!", the long term trend points only up.

Copper Price June through October 2021

