

**Selinsing Gold Mine Visit**

by Ir. Razmahwata bin Mohamad

Ir. Razmahwata is currently a committee member in Oil, Gas and Mining Engineering Technical Division (OGMTD).

The Oil, Gas and Mining Technical Division conducted a visit to a gold mine in Sg Koyan, Pahang, which is operated by Selinsing Gold Mine Manager Sdn Bhd on Saturday, 20th August, 2016. The participants accompanying the bus left Bangunan Ingenieur at 7:45 am. The group met up with participants at Genting Sempah R&R, and met the remaining participants who travelled by car at the mine itself at 11:30am. A total of 17 participants attended the visit.

SGMMSB is located at Bukit Selinsing near Sungai Koyan, approximately 65km north of Raub and 30km west of Kuala Lipis. The site is surrounded by oil palm plantation land owned by Felda settlers. Interestingly, the mine is sited at the original location where gold was found in Raub in the early 19th Century. Backed by Canadian expertise with the support of the state government, SGMMSB has revived the mining activities there with better technology to extract the gold deposits in the area.

The group was met by En. Rafiq, Customer Relations officer, and En. Zaidi Harun, VP Business Development. The visitors were presented with an overall background of the mine structure and operations. A token of appreciation was presented to En. Zaidi, who accepted on behalf of Selinsing Gold Mine, and Ir. Look Keman accepted a token on behalf of the IEM.

The group was then issued with safety equipment, and brought the first location, Pit no 4. The group was shown the rock structure of the pit walls, and traces of gold veins embedded in the rock.

The group was then brought to the refining plant, where the process of refining the group was explained. En. Rafiq and En. Zaidi walked the team through the process.



Figure 1.1: Gold production process

At the crusher area, the ore is crushed into small-sized grains. It is then pounded into finer particles by a ball mill before being sent to a treatment plant. The first treatment is the leaching process where the crushed ore is mixed with a cyanide solution to dissolve the gold from the crushed ore.

To extract the gold from the cyanide solution, carbon particles are added into the processing tank. The heavier carbon with gold particles is separated from the solution using a hydrocyclone. After that, the concentrated solution is ready to be melted to form a gold bar. The remaining solution is treated properly in huge retention ponds before the water is released back to the river.

At the processing facilities, there is a room where the gold is processed into raw gold bars. In this room, a furnace is used to melt gold at a temperature of around 1200°C . Gold is melted in bulk in holding crucibles. Here, the gold bar is only about 85% pure. Further refining is done overseas as the plant do not have the capability to refine pure gold.

The group was finally brought back to the cafeteria for lunch and final questions before leaving the site at 3 pm.

