

Trip to Selinsing Gold Mine

OIL, GAS AND MINING TECHNICAL DIVISION



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A day visit to Selinsing Gold Mine Manager Sdn Bhd (SGMMSB) located at Kuala Lipis, Pahang, was conducted on 30 April 2011. There were 20 participants who took part in the visit led by Ir. Al-Khairi bin Daud, the Chairman of Oil, Gas and Mining Technical Division (OGMTD).

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 first 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 tour started with a brief safety induction by the SGMMSB safety officer. Visitors are required to wear the issued PPE when entering the site and have to be escorted by SGMMSB employees at all times. The IEM participants were greeted by a welcome speech by the managing director, En. Zaidi bin Harun. He briefly explained the company's activities and the gold production process from trucking the ore to moulding the gold bars. The following flowchart depicts the process.

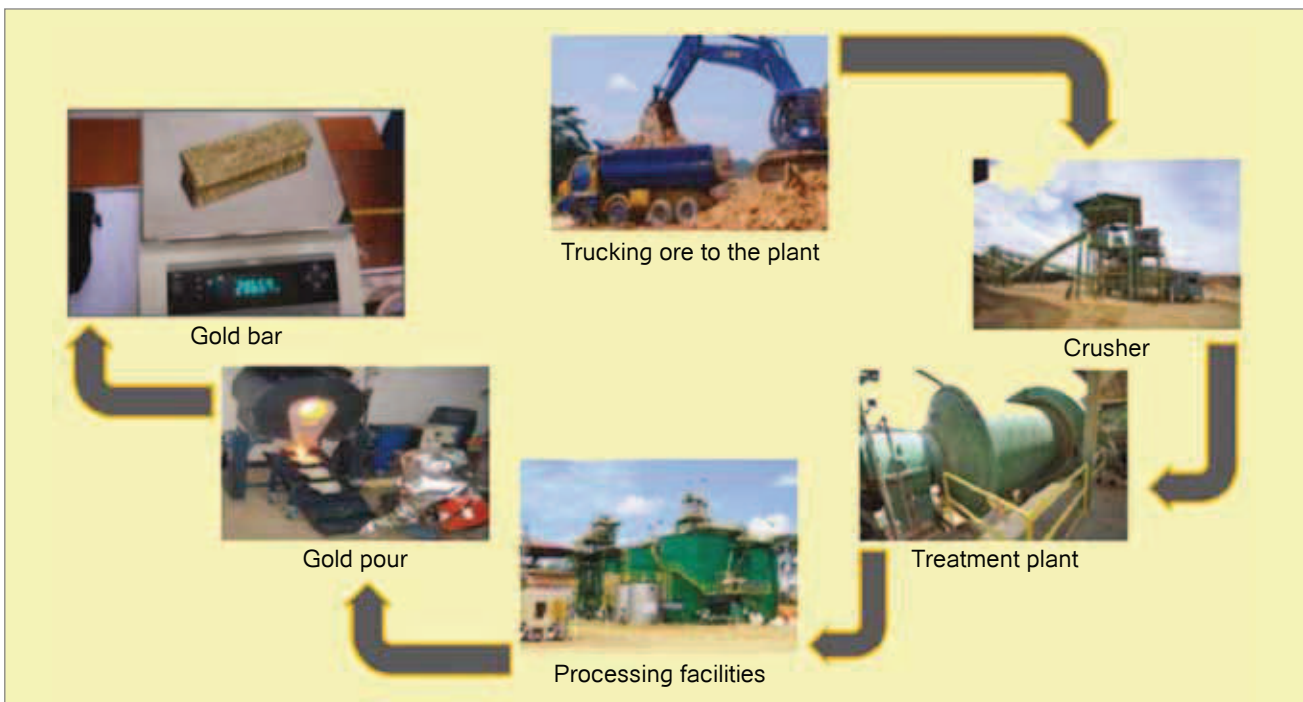
Later, the participants were separated into a few groups and brought to the open mining pits using 4x4 vehicles provided by SGMMSB. The first stop was the ore field where the open pit mining method is employed as the deposits of gold is found near the surface. The excavated ore is then transported to the crusher area by lorries. When asked, SGMMSB informed that the area around Raub is located within a gold belt vein and there is a possibility of expanding the size of the pit subject to land acquisition in the area.



Open pit



Sample of rock found at pit area



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.



Cyanide solution processing tank



A view of the processing facilities

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 does not have the capability to refine pure gold. The IEM participants were unable to witness this activity as no melting process was done on that day.



Participants at the visit

At the end of the tour, the group headed back to the main building. The IEM members were treated to a good lunch at the SGMMSB canteen where they took the opportunity to ask more questions about the gold mining operation and its challenges. The visit ended after lunch with a memorable photography session. Overall, it was another successful activity for the OGMTD, thanks to Engr. Rudisham Marjohan's effort in organising the visit. ■

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