BRIEF HISTORY OF TIN MINING IN MALAYSIA

The Malaysian economy relied on tin and rubber as the two major incomes for many years. The industry is still one of the largest contributors despite a decrease in the earnings in these few recent years. In 1983, this industry had contributed RM2,505.6 million through exportation. Tin is by far one of the most important mineral mined in Peninsular Malaysia.

Tin occurs as alluvial deposits in the foothills of the Peninsular mainly on the Western side of the Main Range. One of the important areas is in the Kinta Valley, which embraces towns like Ipoh, Gopeng, Kampar, Malim Nawar and Batu Gajah, located in the state of Perak.

In fact, tin is mined in a belt of states stretching from Kedah into the Kinta Valley, Selangor and Johore. It also includes the capital of Malaysia, Kuala Lumpur, which is the centre of another rich tin-mining area. Apart from that, at the East Peninsular Malaysia, alluvial tin is obtained from the Kelantan valley and near Mersing, Johor.

However, the discovery of large and rich tin deposits in the Districts of Larut and Kinta Valley in the State of Perak and along with the growing demand for tin due to industrial growth has led to the disputes among Malay Rulers. Apart from that, the immigration of large scale Chinese labour from China has also led to the rise to Chinese investment, thus with the British intervention and domination, and finally, the injection of foreign funds (mainly British) capital and technology into the Peninsular.

In 1872, civil war broke out amongst the rival secret societies of the Ghee Hin and Hai San in the mining district of Larut, in Perak, where contending factions fought for control of the mines and the main river outlets. The Malays were also split among themselves over the division of tin-mining revenues and the question of succession to the Perak Sultanate thus the British intervention in Perak occurred in 1874. After the murder of James Birch, the newly appointed Assistant Resident Sir Andrew Clarke was appointed to develop communications with the locals, thus leading to the construction of state roads between principal mining towns in Perak. A 12.8 kilometre stretch of railway line was laid from Taiping in 1885, which was the distribution centre for the Larut tin fields and its port - Port Weld. This line was extended north from Taiping to Kamunting in Perak in 1890 and to Ulu Sa'petang in 1892.
Following the success of the Taiping/Port Weld railways, another line was opened from Kuala Lumpur, the capital city of Malaysia, to Klang in 1886 and was carried through port Swettenham in 1889. In 1896 Perak became one of the four states under the Federated Malaya States (FMS) banner.

Plans were being put into hand for the construction of trunk roads shortly after the introduction of railways. Work started in 1895 whereby the trunk road was routed through the main tin mining towns of Seremban, Kuala Lumpur, Ipoh and Taiping. The first road into Pahang connected to Kuala Kubu (in Selangor) and the coal mines in Raub, passing through the "Gap" which was at that time a significant tin-mining state. Thus, it can be seen that the pioneering work of developing Malaysia was carried out through tin mining.

Malaysia became one of the largest tin producers in the world by 1883, a position it has maintained ever since. By the end of the 19th century, it was supplying about 55% of the world's tin compared with the current figure of about 32%.

However, tin is not the only mineral that is found in the country. A variety of minerals has been exploited in the past and with the increase in demand for many different types of minerals after World War II and for constructional minerals after independence, the list of minerals mined continues to lengthen, so has the amount.

Most tin ore in Malaysia today is obtained from alluvial deposits. The two principal methods of mining these alluvial are by dredging or by gravel pumping.

DREDGING

A modern large capacity tin dredge weighing 5,100 tonnes would cost some RM30 million to build. In appearance the dredge resembles a floating factory, with a flat bottom, sides and a roof and it carries a chain of heavy buckets. The dredge floats on a natural or artificial lake and the bucket chain scoops out the tin ore bearing earth and transports it to a point high in the body of the dredge.

The excavated material is broken up by jets of high pressure water as it falls on to the revolving or oscillating screens. The large stones and rubble are retained by these screens and the tin bearing material passes to a primary separating plant, where the heavy mineral particles are recovered. The largest dredges now in operation can dig in a continuous operation to depths of 200 metres below water level and can handle over three quarters of a million cubic metres of material per month.

The first tin dredge was introduced to Malaya by Malayan Tin Dreding, Ltd, in the Kinta Valley tin field was in 1913. In 1914 there were three dredges and by 1915, there were 11 dredges; by 1920s the total had risen to 20 dredges and by 1921 to 30. The greatest number of
tin dredges ever operating at one time was in 1929 where there were 105 dredges and not a single dredge was idle. However, in 1940s there were 123 dredges in Malaya which was the highest total number of dredges ever recorded of which 19 dredges was not in operation. By the end of 1981, there were only 60 dredging units operating. Then in 1983 there were only 38 dredges left.

Malaysia's largest tin dredges, first built in 1938, last rebuilt in 1963 and specially equipped for working tailings. This dredge is powered by electricity and has a total of 2004 horsepower; the pontoon is 75 meters long and 19.5 meters wide; it has 117 manganese steel buckets, each with a capacity of 0.51 cubic meters capable of digging to a depth of 31.5 meters. The bucket ladder and supporting gear of a tin dredge raised commences digging of the land on the surface. The ladder may weigh up to 4500 tonnes.

Sadly there are only about three tin dredges left in the country, 2 in Selangor (which can be seen when flying in/out from KLIA) and 1 in Perak. The latter is at Chenderong, near Tanjung Tualang. In 2005 there were plans to save the dredge and turn it into a tourist museum. Work began but the project was never completed. Then in Apr 2007 similar plans were revived. The dredge finally opened to the public in Feb 2008, and packages include guided tours – inside the dredge, a trip to a tin mining museum and later there will be movies on how the 4,500 tonne giant works.