The Distribution, Properties and Production of Bauxite in Malaysia

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Introduction

- Bauxite is the most common ore & aluminium is the second most abundant metallic element in the earth’s crust.

- The mineral industry is a vital engine of growth for the country. Its contribution to the national economy is in the form of supplying raw and processed materials for domestic industries and export of minerals and mineral-based products.
This technical paper aims:

1) To present data relating to the distribution of known bauxite deposits in Malaysia and their properties
   - Analysis of Malaysia's bauxite reserves and distribution within the country
   - Can we expect further bauxite mining exploration in Malaysia

2) To highlight the current issues related to the production of bauxite in Malaysia.
   - Is Malaysia bauxite supply likely to continue in large volumes & how large are their reserves?
   - How has the Indonesian export ban affected Malaysian production and export volumes?

3) The use of bauxite by the domestic refineries
   - Insight into domestic refinery operations and capabilities?

4) What will happen if the Indonesian export ban is lifted
   - Back to square one or what?
METHODOLOGY

This technical paper is produced by:

- Compilation of the published and unpublished historical data; and

- The latest information based on the latest research conducted in the states like Pahang, Johore, Terengganu, Sarawak and Sabah.
Throughout the year 2014, mining activities for bauxite in Malaysia were still being carried out in the same two (2) states as in the previous year namely Johore and Pahang.

In 2015, Pahang became as the top bauxite producer in the country and the bauxite mining in this state continued to strengthen due to their on-going demand for bauxite ore especially from China.

There was twelve (12) active mines in Pahang in 2015 compared to only one in the previous year.

In 2015, Johore only have one active mine that is in Sungai Rengit, Pengerang, Kota Tinggi district.
## Mineral royalty for Pahang (2011-2015) (RM’000,000)

<table>
<thead>
<tr>
<th>MINERAL/YEAR</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron ore &amp; manganese</td>
<td>16.6</td>
<td>30.76</td>
<td>30.04</td>
<td>22.71</td>
<td>4.23</td>
</tr>
<tr>
<td>Gold (raw)</td>
<td>22.1</td>
<td>33.3</td>
<td>20.72</td>
<td>20.64</td>
<td>10.29</td>
</tr>
<tr>
<td>Tin</td>
<td>0.99</td>
<td>0.6</td>
<td>0.52</td>
<td>0.79</td>
<td>0.43</td>
</tr>
<tr>
<td>Kaolin</td>
<td>NA</td>
<td>0.018</td>
<td>0.063</td>
<td>0.069</td>
<td>0.047</td>
</tr>
<tr>
<td>Bauxite</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>10.81</td>
<td>19.196</td>
</tr>
<tr>
<td>TOTAL</td>
<td>39.69</td>
<td>64.68</td>
<td>51.34</td>
<td>55.019</td>
<td>34.192</td>
</tr>
<tr>
<td>No.</td>
<td>LEASE HOLDER/MINING CERT.</td>
<td>LEASE/ LOT NO.</td>
<td>AREA (HECTARES)</td>
<td>DISTRICT</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Kota SAS Sdn Bhd/Kreatif Selaras Mining Sdn Bhd</td>
<td>PML 01/2014</td>
<td>Kota SAS NA</td>
<td>Kuala Kuantan/Kuantan</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Fahad Holding Sdn Bhd</td>
<td>ML 07/2015</td>
<td>Bukit Goh (2.428)</td>
<td>Kuala Kuantan/Kuantan</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Ringgit Harmoni Sdn Bhd</td>
<td>ML 06/2015</td>
<td>Sg. Pinang (34.83)</td>
<td>Kuala Kuantan/Kuantan</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Cheroh Mining Sdn Bhd</td>
<td>PML 03/2015</td>
<td>RTP Bukit Goh (3.923)</td>
<td>Kuala Kuantan/Kuantan</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Good Man Ventures Sdn Bhd</td>
<td>ML 16/2015</td>
<td>Sungai Baluk (80.94)</td>
<td>Sungai Karang/Kuantan</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Se Satu Pelangi Sdn Bhd</td>
<td>ML 17/2015</td>
<td>Sungai Air Putih (60.71)</td>
<td>Sungai Karang/Kuantan</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>LEASE HOLDER/MINING CERT.</td>
<td>LEASE/ LOT NO.</td>
<td>AREA (HECTARES)</td>
<td>DISTRICT</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------</td>
<td>---------------</td>
<td>---------------------</td>
<td>----------------------------</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Aras Kuasa Sdn Bhd</td>
<td>ML 18/2015</td>
<td>Sungai Rasau (161.9)</td>
<td>Sungai Karang/ Kuantan</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>YGolden Prosperous Resources Sdn Bhd</td>
<td>ML 21/2015</td>
<td>Sungai Perasing (10.68)</td>
<td>Kuala Kuantan/ Kuantan</td>
<td></td>
</tr>
</tbody>
</table>
ML & PML IN BUKIT GOH AND GEBENG AREAS, PAHANG
BAUXITE DEPOSITS IN GEBENG AREA, PAHANG
<table>
<thead>
<tr>
<th>No.</th>
<th>LEASE HOLDER/MINING CERT.</th>
<th>Address</th>
<th>Area (Ha.)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Johor Mining &amp; Stevedoring S/B (JOMIS)</td>
<td>No. 2A, Jalan Padi Mahsuri 12, Bandar Baru Uda, 81200 Johor Bahru</td>
<td>1,853 &amp; 324.4</td>
<td>Teluk Rumunia, Mersing</td>
</tr>
</tbody>
</table>
Bauxite production in 2015 (until June) was 797,302 tonnes and expected to be higher compared with previous year. This production data is a result of mining activities only (MC / ML and PML).

In year 2015, there were no Prospecting Licence (PL) or Exploration Licence (EL) or MC/ML issued in Johore State. As a result only one mining license that is currently active.

As for the Pahang State there are eleven (11) more bauxite mine license was approved in 2015, making all twelve (12) mines than just only one mine in the previous year.

MC – Mining certificate, ML – Mining Lease & PML – Proprietary Mining Licence
<table>
<thead>
<tr>
<th>Year</th>
<th>Production (tonne)</th>
<th>Value (RM)</th>
<th>Number of Mine</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>208,770</td>
<td>16.7</td>
<td>1</td>
</tr>
<tr>
<td>2014</td>
<td>962,799</td>
<td>77.0</td>
<td>2</td>
</tr>
<tr>
<td>2015 (Jan-Jun)</td>
<td>797,320</td>
<td>63.8</td>
<td>13</td>
</tr>
</tbody>
</table>
## Malaysia’s exports of bauxite (2012-2015)

<table>
<thead>
<tr>
<th>Country</th>
<th>2012 (tonne)</th>
<th>2013 (tonne)</th>
<th>2014 (tonne)</th>
<th>2015 (tonne)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>16,875</td>
<td>12,685</td>
<td>3,665,462</td>
<td>NA</td>
</tr>
<tr>
<td>Thailand</td>
<td>450</td>
<td>4,500</td>
<td>10,910</td>
<td>NA</td>
</tr>
<tr>
<td>Australia</td>
<td>14</td>
<td>-</td>
<td>476</td>
<td>NA</td>
</tr>
<tr>
<td>Brunei</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>NA</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-</td>
<td>-</td>
<td>13</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17,339</strong></td>
<td><strong>17,185</strong></td>
<td><strong>3,676,876</strong></td>
<td><strong>8,415,548</strong></td>
</tr>
</tbody>
</table>

(Until May 2015)
Production Vs Export

- Production: 797,320 tonnes
- Export: 3,676,876 tonnes
- Production (Jan-Jun): 962,799
- Export: 8,415,548 tonnes
To date, there are two aluminium smelters plants set-up in Sarawak. The plants owned and operated by Press Metal Smelter and have been in operation since November 2009.

The first aluminium smelter in Balingian in Mukah Division which is currently operating at its full capacity of 120,000 tonnes per annum.

The Press Metal’s second aluminium smelter plant is located in Samalaju Industrial Park, Bintulu with a capacity of 240,000 tonnes per year. The combined capacity of these two plants would be 360,000 tonnes a year.
BAUXITE IN KUANTAN AREAS

LEGEND:
1 - BUKIT TANAH MERAH
2 - LADANG LEMBAH JABOR
3 - LADANG JERAM KUANTAN
4 - LADANG BUKIT GOH

After Rajah (1980)
LEGEND:

1 - BATU PAHAT AREA

2 – PENERANG – TELUK RAMUNIA AREA
Sg. Buloh Bauxite Deposit
BAUXITE DEPOSITS IN TANJUNG SERABANG

GRADE OF BAUXITE AND LATERITE IN PITS:

- Low-alumina bauxite with less than 5% SiO₂
- Low-alumina bauxite with more than 5% SiO₂
- Laterite with less than 40% Al₂O₃

Approximate form lines; interval about 50 feet

Scale
0  500  1,000 FEET
Serian bauxite deposit
Telupid bauxite deposit
Malaysian bauxite is mostly associated with weathered intermediate to basic rocks such as gabbro, diorite, andesite, and basalt.

The bauxite found so far is as a residual product and it occurs as a superficial crust of nodules in clay.
BAUXITE DEPOSIT & NODULES FROM GEBENG AREA, PAHANG
BAUXITE DEPOSIT IN BUKIT GEBONG, SEMATAN, SARAWAK
BAUXITE DEPOSIT & NODULES FROM MUNGGU BELIAN AREA, SEMATAN, SARAWAK
BAUXITE DEPOSIT IN TANJUNG SERABANG, SEMATAN, SARAWAK
<table>
<thead>
<tr>
<th>Location / Area</th>
<th>Constituent Percentages</th>
<th>Al$_2$O$_3$</th>
<th>SiO$_2$</th>
<th>Fe$_2$O$_3$</th>
<th>TiO$_2$</th>
<th>LOI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bauxite in Johore</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pengerang – Teluk Ramunia</td>
<td>45.30 - 59.10</td>
<td>2.80 - 8.00</td>
<td>5.43 - 24.00</td>
<td>0.30 - 3.00</td>
<td>27.00 - 30.65</td>
<td></td>
</tr>
<tr>
<td>Batu Pahat</td>
<td>52.60 - 56.60</td>
<td>1.60 - 8.99</td>
<td>2.60 - 5.80</td>
<td>0.01 - 0.80</td>
<td>27.30 - 30.4</td>
<td></td>
</tr>
<tr>
<td><strong>Bauxite in Pahang and Terengganu</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bukit Tanah Merah</td>
<td>33.0 – 44.0</td>
<td>1.0 – 7.0</td>
<td>21.0 – 30.0</td>
<td>2.56 – 4.88</td>
<td>21.4 - 27.0</td>
<td></td>
</tr>
<tr>
<td>Ladang Jeram Kuantan</td>
<td>21.0 – 39.0</td>
<td>1.9 – 21.8</td>
<td>25.0 – 40.0</td>
<td>3.60 – 5.20</td>
<td>20.6 – 27.1</td>
<td></td>
</tr>
<tr>
<td>Lembah Jabor</td>
<td>30.0 – 48.0</td>
<td>2.28 – 24.1</td>
<td>23.0 – 27.0</td>
<td>2.00 – 4.56</td>
<td>20.0 – 28.4</td>
<td></td>
</tr>
<tr>
<td><em>(Pahang &amp; Terengganu)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bauxite in Selangor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sungai Buloh</td>
<td>43.46 – 44.86</td>
<td>2.18 – 2.93</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

NA – Not available
<table>
<thead>
<tr>
<th>Location</th>
<th>Constituent Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\text{Al}_2\text{O}_3$</td>
</tr>
<tr>
<td><strong>Bauxite in Sarawak</strong></td>
<td></td>
</tr>
<tr>
<td>Bukit Gebong</td>
<td>45.6 – 52.9</td>
</tr>
<tr>
<td>Munggu Belian</td>
<td>47.7 – 54.5</td>
</tr>
<tr>
<td>Tanjung Serabang</td>
<td>36.3 – 57.8</td>
</tr>
<tr>
<td>Serian</td>
<td>28.2 – 57.3</td>
</tr>
<tr>
<td><strong>Bauxite in Sabah</strong></td>
<td></td>
</tr>
<tr>
<td>Telupid area</td>
<td>46.0 – 53.6</td>
</tr>
</tbody>
</table>
BAUXITE NODULES FROM TG. SERABANG

$\text{Al}_2\text{O}_3 \approx 40\% \text{ (After washing).}$
KEPUTUSAN ANALISIS BAGI BAUXITE DI LUNDU 2014

Sample: JB 1
Locality: Bt. Jebong, Lundu
Analysis result:
- $\text{Al}_2\text{O}_3 = 45.8$
- $\text{SiO}_2 = 11.9$
- $\text{Fe}_2\text{O}_3 = 13.6$
- LOI = 25.2

Sample: JB 2
Locality: Bt. Jebong, Lundu
Analysis result:
- $\text{Al}_2\text{O}_3 = 45.8$
- $\text{SiO}_2 = 1.76$
- $\text{Fe}_2\text{O}_3 = 21.9$
- LOI = 26.2

Sample: JB 3
Locality: Bt. Jebong, Lundu
Analysis result:
- $\text{Al}_2\text{O}_3 = 45.3$
- $\text{SiO}_2 = 4.31$
- $\text{Fe}_2\text{O}_3 = 18.0$
- LOI = 26.1

Sample: JB 4
Locality: Bt. Jebong, Lundu
Analysis result:
- $\text{Al}_2\text{O}_3 = 11.8$
- $\text{SiO}_2 = 10.3$
- $\text{Fe}_2\text{O}_3 = 60.4$
- LOI = 14.4

Sample: JB 5
Locality: Bt. Jebong, Lundu
Analysis result:
- $\text{Al}_2\text{O}_3 = 45.4$
- $\text{SiO}_2 = 21.2$
- $\text{Fe}_2\text{O}_3 = 8.00$
- LOI = 24.3

Sample: JB 7
Locality: Bt. Jebong, Lundu
Analysis result:
- $\text{Al}_2\text{O}_3 = 50.1$
- $\text{SiO}_2 = 13.0$
- $\text{Fe}_2\text{O}_3 = 5.6$
- LOI = 25.0

Sample: JB 10
Locality: Bt. Jebong, Lundu
Analysis result:
- $\text{Al}_2\text{O}_3 = 53.4$
- $\text{SiO}_2 = 4.6$
- $\text{Fe}_2\text{O}_3 = 10.9$
- LOI = 30.0

Sample: KB 1
Locality: Kpg. Bejo, Lundu
Analysis result:
- $\text{Al}_2\text{O}_3 = 45.2$
- $\text{SiO}_2 = 18.4$
- $\text{Fe}_2\text{O}_3 = 8.86$
- LOI = 24.2
The bauxite in the Pengerang-Teluk Ramunia & Batu Pahat is considered as a metallic quality but for other areas the alumina (Al$_2$O$_3$) is slightly low.
<table>
<thead>
<tr>
<th>Oxide (%)</th>
<th>Specification of bauxite for industries (Harben, 1998)</th>
<th>Bauxite (Sarawak &amp; Sabah)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Metal</td>
<td>Chemical</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>50-55</td>
<td>min. 55</td>
</tr>
<tr>
<td>SiO₂</td>
<td>0-15</td>
<td>5-18</td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td>5-30</td>
<td>max. 2</td>
</tr>
<tr>
<td>TiO₂</td>
<td>0-6</td>
<td>0-6</td>
</tr>
</tbody>
</table>

The bauxite in the Bukit Gebong, Munggu Belian, Tanjung Serabang and Telupid is considered as a metallic quality.
The reserves are estimated from the compilation of published and unpublished historical data, with consideration of the latest information based on the latest research conducted in Malaysia.
<table>
<thead>
<tr>
<th>State</th>
<th>Area</th>
<th>Size of deposit km² (acre)</th>
<th>Estimated available reserve (tonnes)</th>
<th>Land status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johore</td>
<td>1. Pengerang – Teluk Rumania area</td>
<td>3.5 (865)</td>
<td>1,200,000</td>
<td>Mixed &amp; State Land</td>
<td>Grubb (1986) reported 10,044,000 tonnes &amp; after revised by MGD became 1.2 mt</td>
</tr>
<tr>
<td></td>
<td>2. Batu Pahat area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Bukit Tampol</td>
<td>7.36 (1,820)</td>
<td>None</td>
<td>Residential area</td>
<td>Rajah (1980) reported reserve 0.45 mt tonnes but area already converted to residential. MGD reported reserve about 8,000 tonnes but the area already converted to residential.</td>
</tr>
<tr>
<td></td>
<td>b) Bukit Pasir &amp; Sri Medan area</td>
<td>1.69 (417)</td>
<td>None</td>
<td>Residential area</td>
<td></td>
</tr>
<tr>
<td>Pahang &amp;</td>
<td>1) Bukit Tanah Merah</td>
<td>10.5 (2,595)</td>
<td>None</td>
<td>Industrial area</td>
<td>MGD reported reserve about 8,497,109 but already reserve for port development Industrial area called Gebeng Industrial Area</td>
</tr>
<tr>
<td>Terengganu</td>
<td>2) Ladang Lembah Jabor</td>
<td>29 (7,166)</td>
<td>23,468,208</td>
<td>Palm Oil Plantation &amp; residential</td>
<td>MGD, Al₂O₃ content ranges from 25.9 to 48.3%</td>
</tr>
<tr>
<td></td>
<td>3) Ladang Jeram Kuantan</td>
<td>7 (1,730)</td>
<td>5,664,739</td>
<td>Palm Oil Plantation &amp; residential</td>
<td>MGD</td>
</tr>
<tr>
<td></td>
<td>4) Ladang Bukit Goh</td>
<td>40 (9,884)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selangor</td>
<td>1) Sungai Buloh</td>
<td>0.05 (12)</td>
<td>300,000</td>
<td>Private Land</td>
<td>Development area</td>
</tr>
<tr>
<td></td>
<td>Estimated reserve available since 1979</td>
<td></td>
<td>82,792,947</td>
<td>Rajah (1980) &amp; MGD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bauxite Production from year 1979 until 2013</td>
<td></td>
<td>13,857,668</td>
<td>MGD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Estimated available reserve of bauxite (2014)</td>
<td></td>
<td>68,935,279</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
LAND STATUS FOR THE DEPOSITS

- BATU PAHAT: Residential area
- Pengerang – Teluk Ramunia: State & private land
- LADANG LEMBAH JABOR, LADANG JERAM KUANTAN & LADANG BUKIT GOH: Plantation & swampy areas
- BUKIT TANAH MERAH: Development area
- SUNGAI BULOH: Development area
- BUKIT GEBONG: State land
- MUNGGU BELIAN: Residential area
- TANJUNG SERABANG & TELUPID: State & Private land
Known bauxite deposits in Malaysia occurs in five states:

i) **JOHORE**: Pengerang-Teluk Ramunia & Batu Pahat areas

ii) **PAHANG**: Bukit Tanah Merah, Ladang Lembah Jabor, Ladang Jeram & Ladang Bukit Goh areas

iii) **TERENGGANU**: Ladang Lembah Jabor

iv) **SARAWAK**: Bukit Gebong, Munggu Belian & Tanjung Serabang areas, Serian areas; and

v) **SABAH**: Telupid area
Bauxite of metallic quality
\((\text{Al}_2\text{O}_3 \geq 50\%)\) : Pengerang-Teluk Ramunia, Batu Pahat, Bukit Gebong, Munggu Belian, Tanjung Serabang & Telupid areas.

Mineralogy

Pengerang-Teluk Ramunia : Major gibbsite with subordinate kaolinite & goethite
Kuantan : Major gibbsite with minor goethite, hematite, kaolinite & trace quartz
Sarawak & Sabah : Major gibbsite with minor goethite, kaolinite & trace quartz
ACCORDING TO THE LATEST LAND STATUS:

- BATU PAHAT, BUKIT TANAH MERAH BAUXITE DEPOSITS ARE CONSIDERED BEEN STERILISED & MUNGGU BELIAN WILL BE VERY SOON; AND

- PENGGERANG – TELUK RAMUNIA, LADANG LEMBAH JABOR, LADANG JERAM KUANTAN, LADANG BUKIT GOH, BUKIT GEBONG, TANJUNG SERABANG & TELUPID AREAS FALL IN STATE & PRIVATE LANDS
ESTIMATED RESERVE & LIFE TIME:

- **MALAY PENINSULA**: 74.5 million tonnes (68.9mt + 6.6mt) with current production (2014) of 962,799 tonnes per year, the reserve can sustain for another 71 years. But based on the export figure for 2015, the known bauxite reserve can sustain may be for another 5 years.

- **SARAWAK AND SABAH**: 6.6 million tonnes. Still no development after colonial era.
STERILISATION
1 - BUKIT TANAH MERAH

Felda Neram Satu

Google Earth
Bukit Pasir & Sri Medan areas
Munggu Belian Area
THE REMAINING ORE RESERVE OF Bauxite in Peninsula Malaysia is about 50.9 million tonnes & in Sarawak and Sabah is about 6.6 million tonnes and this reserve is depleting. However, there are potential resources of bauxite:

i) Swampy areas: Pengerang-Teluk Ramunia area, Johore

ii) Areas with parent rock of basalt: Kuantan area, Pahang

iii) New area: North east of Bukit Gebong, Sarawak

iv) Serian area: The area with parent rock of andesite/basalt/tuff

v) Sabah: Areas with parent rock of gabbro
Areas with parent rock of basalt: Kuantan area, Pahang

LEGEND:
1 - BUKIT TANAH MERAH
2 - LADANG LEMBAH JABOR
3 - LADANG JERAM KUANTAN
4 - LADANG BUKIT GOH

After Rajah (1980)
LEGEND:

2 - BATU PAHAT AREA

3 – PENDERANG – TELUK RAMUNIA AREA
LEGEND:

2 - BATU PAHAT AREA

3 – PENGERANG – TELUK RAMUNIA AREA

Tanjong Surat area
(298,253 tonnes)
New area: Eastern & north-east of Bukit Gebong
1) To present data relating to the distribution of known bauxite deposits in Malaysia and their properties

- Analysis of Malaysia’s bauxite reserves and distribution within the country
  - Malaysia’s bauxite reserves > 68.9 million tonnes
  - Bauxite distribution within the country: Bauxite deposit can be found in State of Pahang, Johore, Selangor, Sarawak & Sabah

- Can we expect further bauxite mining exploration in Malaysia
  - Yes & for sure because we know that bauxite mining activities could contribute something to the country & the miners. As a result, further mining exploration need to be done to make sure that the life of bauxite mining will sustain and remains as a source of great wealth and prosperity to the country
2) To highlight the current issues related to the production of bauxite in Malaysia.

- Is Malaysia bauxite supply likely to continue in large volumes & how large are their reserves?
  - It will depend on the price and demand. If the market price is good and demand is also high, for sure bauxite supply from Malaysia will continue until the availability of the bauxite reserve exhausted.

- How has the Indonesian export ban affected Malaysian production and export volumes?
  - The production & exporting of bauxite from Malaysia is increased tremendously due to high demand.
  - Malaysia has no export duty on mineral but AP (export permit) is needed.
3) The use of bauxite by the domestic refineries/smelter plant
   - The combined capacity of two aluminium smelter plants in Sarawak would be 360,000 tonnes a year.

4) What will happen if the Indonesian export ban is lifted (Back to square one or what?)
   - Malaysia is the ‘Winner’: Indonesian Miners go overseas after ban and may be come back after export ban is lifted.
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Malaysia is the Winner': Indonesia Miners Go Overseas After Ban...... but we hope and prey “Short term gain & long term suffer” is not going to be happen in Malaysia.