2013 Oil & Gas Property Evaluation Seminar

- We attended the Oil & Gas property evaluation seminar organized by SGX and presented by US firm Netherland, Sewell & Associates (NSAI). NSAI is an established petroleum consultant, providing a wide range of services especially to listed O&G companies in the US. Its clients include oil majors such as Exxon Mobil, Shell and BHP Billiton. We summarise the key takeaways from the two day seminar below.

- What’s a reserves report? A reserves report basically includes an inventory of oil and gas reserves classified by risk level, forecast of future expenditures required to develop and produce the reserves and a projection of cash flows generated from the sale of the reserves.

- Standardization to benefit investors. Reserves reporting has become standardized over the years with various organizations coming together to agree on certain standards to enable investors to make accurate comparisons among the O&G companies.

- Assumptions based on expert opinions. Reserves reporting requires subjective input from geologists, engineers and experts on the field. Hence, it is important investors do their research and due diligence to know the difference between the terminologies and methods that companies employ. In short, all numbers are estimates which needs to be taken with some margin of error.

- Not everything can be recovered. Reserves asset recoverability will depend on various factors such as the type of recovery method used, surface restrictions on the facility, regulatory limitations, and most importantly, the actual amount of oil or gas in the reservoir.

- Reserves versus resources. Traditional reporting used to focus only on the reserves assets. However, recent reports began to include resource reporting as well. Reserves are quantities of petroleum anticipated to be commercially recoverable while resources has potential to be recovered.

- Estimation table. Figure 1 below shows the classification system agreed by the various organizations. It defines the major recoverable classes: Production, Reserves, Contingent Resources, Prospective Resources, and Unrecoverable petroleum.

- Commerciality and recoverability. A simple explanation based on Figure 1 shows the higher chances of recoverability and commerciality at the top left corner (i.e. Proved Reserves being the highest) while decreasing recoverability and commerciality moving down to the bottom right (High Estimate).

- O&G Exploration and Production in Singapore’s context. There are currently five companies doing O&G exploration and production (E&P) in Singapore (see Figure 2). They are RH Petrogas, Interra Resources, Ramba Energy, Mirach Energy and Loyz Energy. Two companies which have recently made lodgements are KrisEnergy and Rex International. All the companies have assets mainly in Asia, with the exception of Rex International and Loyz Energy.

- Do your homework! These companies offer investors a way to gain exposure to the O&G upstream activities and growth potential in the region, given the continued strong demand for O&G resources. We advise investors to do their homework in order to make an informed decision, more so given the higher risk of this specific sector. We have provided links on the left hand side of this report that offers a good start to learn more.
Figure 1 Resource Classification Framework

![Resource Classification Framework](source: www.spe.org)

Figure 2 Singapore listed O&G upstream companies

<table>
<thead>
<tr>
<th>Stock</th>
<th>SGX Code</th>
<th>MKT CAP $M</th>
<th>12 M Px Chg</th>
</tr>
</thead>
<tbody>
<tr>
<td>RH PETROGAS LTD</td>
<td>T13</td>
<td>311</td>
<td>14.8%</td>
</tr>
<tr>
<td>INTERRA RESOURCE</td>
<td>5GL</td>
<td>199</td>
<td>43.5%</td>
</tr>
<tr>
<td>RAMBA ENERGY LTD</td>
<td>R14</td>
<td>177</td>
<td>7.1%</td>
</tr>
<tr>
<td>MIRACH ENERGY LT</td>
<td>C65</td>
<td>165</td>
<td>252.5%</td>
</tr>
<tr>
<td>LOYZ ENERGY LTD*</td>
<td>594</td>
<td>107</td>
<td>3.2%</td>
</tr>
</tbody>
</table>

Source: Bloomberg (Data as of 1 July 2013) *Note Loyz Energy is listed on Catalist
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