

# Corporate Highlights

## Visit Note

# Hibiscus Petroleum

*Adding Some Zest*



**RHB Research  
Institute Sdn Bhd**  
A member of the  
RHB Banking Group  
Company No: 233327 -M

15 November 2011

Share Price : RM0.755  
Recom : **Not Rated**

- ◆ **Qualifying acquisition identified.** Less than four months after it was listed, Hibiscus announced its “qualifying acquisition” (QA) involving a 35% equity stake in an early-stage exploration company called Lime Petroleum with three assets in the UAE and Oman. The acquisition is a combination of new equity injection into Lime and vendor shares from Rex Oil & Gas Ltd (Lime’s originator for the Middle East assets and owner of proprietary exploration technologies). The total cash consideration of US\$55m (or RM172.1m) meets the minimum requirement of RM168m to be spent for the QA under the SPAC listing requirements. The proposal – subject to approvals from Securities Commission and shareholders (excluding management’s 20%) – is expected to be completed by 1HCY12.
- ◆ **All about risk.** Hibiscus, as a SPAC listing, presented the curious case of an almost riskless investment with a guaranteed refund of RM0.74/share (assuming no QA was identified within three years of listing) and a business that is all about taking significant risks related to oil & gas exploration and development (these risks may become even more intense in the current global economic slowdown). Now, with the QA identified, Hibiscus’ risk profile is clearly shifting towards the latter. The market appears to be supportive during this transition period until the QA is approved, as implied by the 13.3% and 70.7% rise in the price of Hibiscus’ shares and warrants since the QA was announced on 25 Oct.
- ◆ **The numbers are important.** After the QA is approved, we believe Hibiscus’ higher risk profile comes with potential significant upside arising from the development of Lime’s estimated 200.7m mboe risked recoverable resources. Hibiscus’ challenge is to convert these “resources” into “reserves” and thereby increase the commerciality and value of the assets. However, we highlight some other risks: 1) Rex’s proprietary exploration technology is commercially unproven although we understand Hibiscus management has tested its capability; 2) Lime’s funding for its work programme is sufficient only for FY12.
- ◆ **Valuing Lime.** We understand that the successful commercialisation of the resources from the four wells to be drilled in the 2012 work programme would result in an estimated net risked resource of 157.6m mboe. Assuming 50% chance of commercialisation and the implied NAV/boe range of US\$4.9-6.5/boe, we estimate Hibiscus’ 35% stake could be worth RM1.01-1.33/share. This implies a significant 33.2-76.1% upside to Hibiscus’ current share price.
- ◆ **Adding the zest.** Hibiscus’ proposed QA is exciting on two counts: 1) the significant risked resources identified relative to the size of the company; and 2) the relatively inexpensive entry cost into the assets vs. its potential value (based on NAV/boe). This does not take into account new concessions to be acquired in the future, including the Fujairah block in 2012. Notwithstanding our cautious medium-term view on global macroeconomic growth, we recognise that crude oil prices have been better supported compared to the 2008 global financial crisis. Therefore, as long as the liquidity continues to flow, we believe Hibiscus’ experienced management and their significant vested interest (with their 20% collective stake) will ensure that this first acquisition is a success.

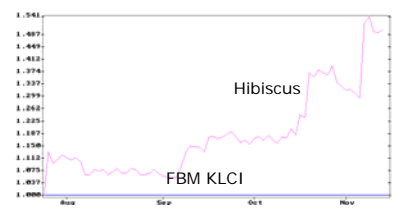
|                           |        |
|---------------------------|--------|
| Issued Capital (m shares) | 418.05 |
| Market Cap (RMm)          | 313.5  |
| Daily Trading Vol (m shs) | 13.0   |
| 52wk Price Range (RM)     | -      |

| Major Shareholders:       | (%)  |
|---------------------------|------|
| Hibiscus Upstream S/B     | 20.0 |
| Lee Chye Tek Lionel       | 9.6  |
| Mercury Pacific Marine    | 6.7  |
| Picadilly Middle East Ltd | 6.4  |
| Littleton Holdings        | 5.8  |
| White Ruby Worldwide Inc  | 5.0  |

### Share Price Chart



### Relative Performance To FBM KLCI



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Please read important disclosures at the end of this report.

**Buying Into Lime Petroleum**

We met up with management to discuss its recent proposal to acquire a 35% stake in Lime Petroleum. Key takeaways are:

- ◆ **Conditional share subscription for 35% stake in Lime Petroleum.** The company has entered into a conditional share subscription agreement for an aggregate 35% stake in Lime (proposed subscription for 76.9m new shares and 22.1m existing shares) for a total consideration of US\$55m (RM172.1m). The purchase price implies an average cost to Hibiscus of around US\$0.554/Lime share. This is Hibiscus' 'qualifying acquisition' (QA) and if successful will result in the company becoming a full-fledged E&P company. The exercise is expected to be completed by 1HCY12, subject to Securities Commission and shareholders' approvals. Recall, that at least 75% of Hibiscus shareholders (excluding management's 20% stake) must approve the QA for it to proceed.

**Table 1. Conditional Share Subscription Agreement**

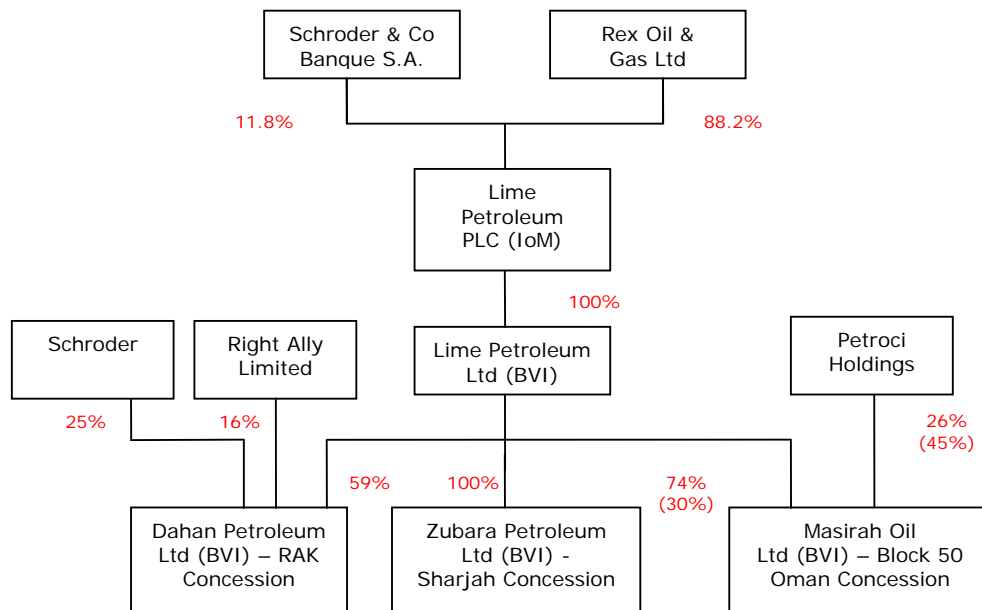
| Payable To     | No of shares (m)       | US\$m       | RMm          | Equity Stake (%) |
|----------------|------------------------|-------------|--------------|------------------|
| Lime Petroleum | 76.9 (new shares)      | 50.0        | 156.5        | 27.2             |
| Rex Oil & Gas  | 22.6 (existing shares) | 5.0         | 15.6         | 7.8              |
| <b>Total</b>   | <b>99.1</b>            | <b>55.0</b> | <b>172.1</b> | <b>35.0</b>      |

\* Bonus fee of US\$5m if Lime Petroleum is able to commercialise reserves by early CY13.

Source: Company

- ◆ **A Middle East play.** The existing shareholders of Lime are Rex Oil & Gas Ltd and Schroder & Co Banque, which hold 88.2% and 11.8% stakes respectively. Rex Oil & Gas Ltd is an asset management company which owns several technology licences for the assessment and selection of oil and gas blocks. Schroder is a private equity fund. Lime has substantial equity stakes in three concession companies (refer to Figure 1) located in United Arab Emirates (UAE) and Oman.

**Figure 1. Existing Lime Petroleum Shareholders And Corporate Structure**



Source: Company

- ◆ **Masirah Oil concession likely to be diluted to 30%.** According to a provision for Block 50 in Oman, Petroci Holdings has the option to inject US\$7.15m for the drilling schedule planned in 2012. Subsequently, Petroci's equity stake will increase to around 65% (from 26% previously). If the recoverable barrels of oil found in the block are above 50m barrels per day, the share of dividends payable to Lime would be 40% and 60% for Petroci. Upon declaration of commerciality, the Government of Oman has the right to participate in the block via an equity stake of up to 25%. This would ultimately dilute Lime's stake to 30% and Petroci's stake to 45%. We understand from Hibiscus' management that Petroci's stake will reduce to 10% if it does not inject the cash consideration. Nevertheless, management believes that it is very likely that the production from the field will exceed 50m boe per day. Hence, in Hibiscus' opinion, there is a high possibility that Lime's stake in Masirah Oil will be pared down to 30%. Petroci Holdings is the national oil company of Cote d'Ivoire (Ivory Coast).
- ◆ **200.7 mmboe of risked recoverable resources.** Based on an independent assessment by Aker Geo (a global oil and gas engineering company), Lime's stake (working interest) amounts to an estimated 200.7 mmboe of risked recoverable resources (refer to Table 1). The company also hopes to secure the Fujairah block in the UAE within CY12. We highlight these assets are still at early stages of exploration and not classified as reserves yet (e.g. 1P, 2P or 3P). Hence, they are not considered commercial at this stage.

**Table 2. Key Assets**

| Name of Concession Companies | Working Interest (%) | Concession rights                     | Net Unrisked Recoverable Reserves (mmboe) | Geological chance of success (%) | Net risked recoverable resources (mmboe) |
|------------------------------|----------------------|---------------------------------------|---|----------------------------------|--|
| Dahan                        | 59                   | Ras Al-Khaimah (RAK) North Concession | 60.9                                      | 25.0                             | 15.2                                     |
| Zubara                       | 100                  | Sharjah Concession                    | 262.3                                     | 12.5                             | 32.7                                     |
| Masirah                      | 30*                  | Block 50 Oman Concession              | 1,388.4                                   | 11.0                             | 152.8                                    |
| <b>Total</b>                 |                      |                                       | <b>1,711.6</b>                            |                                  | <b>200.7</b>                             |

\* Aker Geo's assessment of the net unrisked recoverable resources for Lime Petroleum was based on the most conservative case of a 30% equity stake (versus 74% stake held currently)

Source: Company

**Table 3. Definition Of Oil And Gas Terminology**

| Terminology                  | Definition  |
|------------------------------|---|
| Recoverable resources        | Quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects.                         |
| Risked recoverable resources | Risked recoverable resources are calculated by multiplying the unrisked resources by the geological chance of success to account for the risk of drilling an unsuccessful exploration well. |
| Geological chance of success | Chance of the geological model being correct. The geological risk is established based on technical assessment of key geological variables (e.g. trap, reservoir, source and retention).    |

Source: Society of Petroleum Engineers Website (<http://www.spe.org/index.php>); RHBRI

- ◆ **Becoming an operator and project manager.....** Hibiscus will be the operator and project manager of the concessions for the next five years. This means, despite the minority equity stake, Hibiscus has significant influence over the daily operations of Lime. In return, Hibiscus will be paid monthly project management fees on an actual cost plus 7% margin basis. This agreement is automatically renewed on an annual basis unless either party gives 6 months' notice.
- ◆ **.....and exclusive rights to Rex's technology for the Middle East.** Lime will have exclusive access to the proprietary exploration technologies owned by Rex Oil & Gas Ltd for five years. As mentioned above, Rex's technologies are for finding oil. We understand the technology: 1) has the potential to speed up the exploration stage to 2-3 years (from the conventional 5-year timeline); and 2) minimises the chance of commercial failure. Hence, Hibiscus' management is confident that Lime will be able to reach commercialisation by CY13.

**Table 4. Rex Technologies**

|                      |  |
|----------------------|--|
| Rex Gravity          | To detect possible hydrocarbon accumulations through the use of satellite information                                    |
| Rex Seepage          | To verify hydrocarbon presence through the use of satellite information  |
| Rex Virtual Drilling | To verify content of accumulation (fluid identification) through a complex seismic evaluation scheme based on resonance. |
|                      | This tool reduces the chance of commercial failure when drilling a well  |

Source: Company

- ◆ **Work-plan for 2012 is ready.** Lime already has an indicative work plan and budget which entails the drilling of four wells (three wells in Block 50 Oman Concession and one well in RAK North Concession) in 2012. If the appraisal work is successful, and reserves are classified as commercial, it is likely that production would come soon after. We note that Hibiscus will pay Rex a US\$5m discovery bonus if Lime is able to firm up a commercial discovery no later than CY13. The work plan for 2012 is estimated to be fully funded from the existing cash (US\$30m) in the company and the US\$50m capital injection by Hibiscus.

**Table 5. Available Cash Post Acquisition**

| Subsidiaries       | Available Cash (US\$m) | Comment                                    |
|--------------------|------------------------|--|
| Lime Petroleum PLC | 50 + 4                 | Capital injection by Hibiscus and Schroder |
| Dahan Petroleum    | 22                     | Existing funds (inclusive of an            |
| Masirah Oil        | 4 + (7)                | optional US\$7m from Petroci               |
| <b>Total</b>       | <b>80 + (7)</b>        | <b>Holdings)</b>                           |

Source: Company

## Risks factors

### 1. Risks to Hibiscus' shareholders

- ◆ **SPAC safeguards will no longer apply.** As Hibiscus was listed as a Special Purpose Acquisition Company (SPAC), there were a number of restrictions placed on the company and management in order to act as safeguards for investors. Key restrictions: 1) 90% of the IPO proceeds had to be placed in a trust account, only to be utilised for the QA; 2) a refund guaranteed minimum refund of RM0.675/share (90% of RM0.75/share, before annual interest) to investors if a QA was not found within three years of listing; and 3) Management and persons connected to the management team cannot participate in the voting for the approval of the QA. We highlight that once the QA has been completed, these safeguards will no longer apply and the company will become a full-fledged E&P company exposed to related operating risks (refer to risks to Lime).

### 2. Risks to Hibiscus Petroleum

- ◆ **Lack of track record.** Lime has a limited operating history, making it difficult to assess the potential success rate. As such, we believe there is a risk that the time-line to commercialisation of the reserves and the success of Rex's technology could be optimistic. We highlight that if Lime's drilling plan for 2012 is not successful, it could: 1) result in a loss of investor confidence in Lime (and in turn Hibiscus); 2) delay production schedules; and 3) require further funding by both Lime and Hibiscus, which might not be available at favourable terms going forward.

### 3. Risks to Lime Petroleum

- ◆ **Exploration, development and production risks.** E&P companies are exposed to risks during the lifecycle of developing an oilfield. Results of evaluation, development and production are uncertain and, therefore wells may not produce sufficient crude oil and/or revenues to return a positive cash flow after drilling, development, operating and other costs. Completion of a well does not ensure a profit on the investment or recovery of drilling, completion or operating costs. Production delays and declines from normal field operating conditions may occur and this could adversely affect revenue and cash flow.

- ◆ **External funding risks.** For 2013, we note that the company will have to: 1) Obtain more funding; and/or 2) Farm-out contract areas in particular, Zubara which is wholly-owned; to support its development. There is no assurance that additional funding will be available on acceptable terms, and any farm-out could dilute the control that Lime has on the concessions.
- ◆ **Oil and gas price risks.** Fluctuations in oil and gas prices and demand could significantly impact revenues and returns of an oil and gas company. Moreover, in an environment of global uncertainty, E&P companies typically suffer from low valuations as investors become more risk averse and opt for more stable income-generating companies.
- ◆ **Geopolitical and country risks.** As Lime's concessions are in the Middle East, there could be associated geopolitical risks, which have become more pronounced after the uprisings in neighbouring countries. In mitigation, we note that the UAE and Oman are considered to be more stable. Hibiscus (via Lime) may also be exposed to taxation and profit-sharing policies in the UAE and Oman that could affect the returns on the projects.

### Mitigating Factors

- ◆ **Management's vested interest.** We understand upon the completion of the QA, Hibiscus' management may only sell up to a maximum of 50% of its existing stake p.a.. Besides that, management has internally also agreed that even after the completion of the QA, any disposal or transfer of shares shall only be to other members of the management and at a 30% discount to market price. We believe these safeguards are a sign of management's long-term commitment to the company and in turn to stakeholders.
- ◆ **AIM listing for future funding requirements.** We understand that prior to Hibiscus' entry, Lime had already gone through the process of seeking a listing on the Alternative Investment Market (AIM) of the London Stock Exchange (LSE). While this was not concluded due primarily to Lime's lack of experienced management (as Rex's two founding members are specialists in seismic studies rather than operational E&P), the option remains on the table (now that Hibiscus' management will run operations) to facilitate the fund-raising needs for post-2012 development phases. This also helps to mitigate the external funding risks mentioned above.

### Independent Valuations To Support Hibiscus' QA

- ◆ **Pareto's valuation.** Based on information provided by Hibiscus, we note that Pareto Securities Asia (an independent financial adviser) valued Lime using two methodologies, as part of the supporting valuations for Hibiscus' QA. To be conservative, it applied several levels of discounts and assumed a working interest of 30% for the Masirah concession (as opposed to the current 74% equity stake).

**1) Risked net asset value (NAV) methodology values Lime at US\$51-57m.** The risked NAV calculation is based on a range of peer valuations using EMV/boe (Expected Monetary Value) multiples and NAV/boe (Net Asset Value) multiples of comparable concession licences. These are then applied to Lime's risked recoverable resources (discounted for geological chance of success) of the four wells to be drilled under the 2012 work programme. Three other risk factors are applied. The calculations in simplified form are:

Peers' EMV/boe \* Lime's Unrisked Recoverable Resource \* Geological Chance of Success \* Rf1 \* Rf2 \* Rf3

and,

Peers' NAV/boe \* Lime's Unrisked Recoverable Resource \* Geological Chance of Success \* Rf1 \* Rf2 \* Rf3

where,

Rf1 = 40% chance that the resources will not be commercialised;

Rf2 = 0.25-0.3x to account for the current EV/GAV of selected listed pure exploration companies (implying that other listed peers are trading a significant discounts to their estimated gross asset values); and

Rf3 = an additional 30% discount due to Lime being a private company.

2) **Riskied financial market pricing methodology values Lime Petroleum at US\$55m.** This method is based on Lime's 200.6m boe (refer to Table 2) riskied recoverable resources, which is multiplied by a benchmark Enterprise Value per riskied recoverable resources (EV/riskied boe) for pure exploration companies of US\$0.61/bbl. We note that a private company discount of 30% (similar to RF3 in the simplified form above) is applied.

- ◆ **Discounts and risking is overly conservative.** We note that the discounts and riskings by Pareto against the Lime's NAV is due to the perceived lack of control that Hibiscus would have over dividends/cashflows from the concessions. In our opinion, this additional risk factor is overly-conservative as we believe the appointment of Hibiscus as the operator and project manager of the project also gives it significant influence over financial matters.
- ◆ **D&M's valuation – Implied NAV/boe of US\$6.06 for Oman fields and US\$13.3 for RAK fields.** Based on a recent assessment by Degolyer & MacNaughton (a petroleum consulting company) on the 2P reserves for RAK Petroleum (a Middle East-based E&P company), the estimated NAV/boe for 2P reserves, is: 1) US\$6.06 for Oman fields; and 2) US\$13.3 for Ras Al-Khaimah (RAK) fields (Table 6). D&M's assessment was done to value RAK Petroleum's 2P reserves in relation to a merger with DNO International (an E&P company listed in Norway with E&P concessions in UK, Yemen, Kurdistan Region of Iraq, Equatorial Guinea and Mozambique). In contrast, we understand Pareto Securites Asia valued Lime's reserves in Oman at US\$4.8/boe and RAK at US\$6.4/boe.

**Table 6. Implied Valuation Based On Degolyer & MacNaughton'S Assessment of RAK Petroleum'S Reserves**

| States               | Fields     | 2P Reserves<br>(mmboe) | D&M NAV Estimate<br>(US\$m) | NAV/boe<br>(US\$) |
|----------------------|------------|------------------------|-----------------------------|-------------------|
| Oman                 | Bukha      | 7.4                    |                             |                   |
|                      | West Bukha | 21.8                   |                             |                   |
| <b>Sub-Total</b>     |            | <b>29.2</b>            | <b>177</b>                  | <b>6.06</b>       |
| United Arab Emirates | RAK B      | 4.9                    |                             |                   |
|                      | RAK Salleh | 17.9                   |                             |                   |
| <b>Sub-Total</b>     |            | <b>22.8</b>            | <b>304</b>                  | <b>13.33</b>      |
| <b>Total</b>         |            | <b>52.0</b>            | <b>481</b>                  |                   |

*Source: RAK Petroleum and DNO International Merger Roadshow Presentation*

## Conclusion

- ◆ **Our valuation for Hibiscus' stake – RM1.01-1.33/Hibiscus share.** We understand that the successful commercialisation of the resources from the four wells drilled in 2012 would imply an estimated net riskied resource of 157.6mmboe. Applying the NAV/boe estimates (arising from Pareto and D&M's valuations), we estimate Lime's assets could be worth US\$2.72-3.60/Lime share (Lime Petroleum has a share base of 283m). Assuming a 50% chance of commercialisation (which compares against Pareto's assumption of 40%), we estimate Hibiscus' 35% share could be worth RM1.01-1.33/Hibiscus share (see Table 8).

**Table 7. Calculating NAV Per Share And Value To Hibiscus Shareholders****Scenario 1 (Based on implied pricing from Pareto Securities Asia)**

| Concession | Risked Resources<br>(mmboe) | Assumed<br>NAV/boe<br>(US\$) | NAV<br>(US\$m) * | Hibiscus' 35%<br>share of NAV<br>(RMm) | Hibiscus<br>Shares Cap<br>(m) | Implied Value<br>To Hibiscus<br>Shareholders<br>(RM/share) |
|------------|-----------------------------|------------------------------|------------------|--|-------------------------------|--|
| Oman       | 149.0                       | 4.8                          | 715.2            |  |                               |  |
| RAK        | 8.6                         | 6.4                          | 55.0             |  |                               |  |
|            | <b>157.6</b>                | <b>4.9#</b>                  | <b>770.2</b>     | <b>841.1</b>                           | <b>418.0</b>                  | <b>2.01</b>  |

**Scenario 2 (Based on implied pricing from D&M)**

| Concession | Risked Resources<br>(mmboe) | Assumed<br>NAV/boe<br>(US\$) | NAV<br>(US\$m) | Hibiscus' 35%<br>share of NAV<br>(RMm) | Hibiscus<br>Shares Cap<br>(m) | Implied Value<br>To Hibiscus<br>Shareholders<br>(RM/share) |
|------------|-----------------------------|------------------------------|----------------|--|-------------------------------|--|
| Oman       | 149.0                       | 6.1                          | 903.2          |  |                               |  |
| RAK        | 8.6                         | 13.3                         | 114.7          |  |                               |  |
|            | <b>157.6</b>                | <b>6.5#</b>                  | <b>1,017.9</b> | <b>1,111.5</b>                         | <b>418.0</b>                  | <b>2.66</b>  |

# Implied NAV/boe based on total US\$NAV upon 157.6mmboe in both scenarios

\* Based on net risked resources opined by Pareto Asia, and before chance of commercialization is applied and exchange rate of RM3.12/US\$1

Source: Company; RHBRI; RAK Petroleum and DNO International Merger Roadshow Presentation

**Table 8: Sensitivity Analysis – NAV/Share Vs. Success Of Commercialisation**

| NAV/Hibiscus share (RM) | Chance Of Commercialisation |      |      |      |      |      |      |
|-------------------------|-----------------------------|------|------|------|------|------|------|
|                         | 40%                         | 50%  | 60%  | 70%  | 80%  | 90%  | 100% |
| Scenario 1              | 0.80                        | 1.01 | 1.21 | 1.41 | 1.61 | 1.81 | 2.01 |
| Scenario 2              | 1.06                        | 1.33 | 1.60 | 1.86 | 2.13 | 2.39 | 2.66 |

\* Based on exchange rate of RM3.12/US\$1.

Source: RHBRI

- ◆ **Adding the zest.** Hibiscus' proposed QA is exciting on two counts: 1) the significant risked resources identified relative to the size of the company; and 2) the relatively inexpensive entry cost into the assets (of US\$0.554-0.605/Lime share, or equivalent to RM0.41-0.45/Hibiscus share) vs. its potential value. Our NAV/boe estimates imply a value of RM1.01-1.33/Hibiscus share (or 33.2-76.1% upside from current share price). We note that our valuations have not taken into account new concessions to be acquired in the future, including the Fujairah block in 2012. And, notwithstanding our cautious medium-term view on global macroeconomic growth, we recognise that crude oil prices have been better supported compared to the 2008 global financial crisis. Therefore, as long as the liquidity continues to flow, we believe Hibiscus' experienced management and their significant vested interest (with their 20% collective stake) will ensure that this first acquisition is a success.

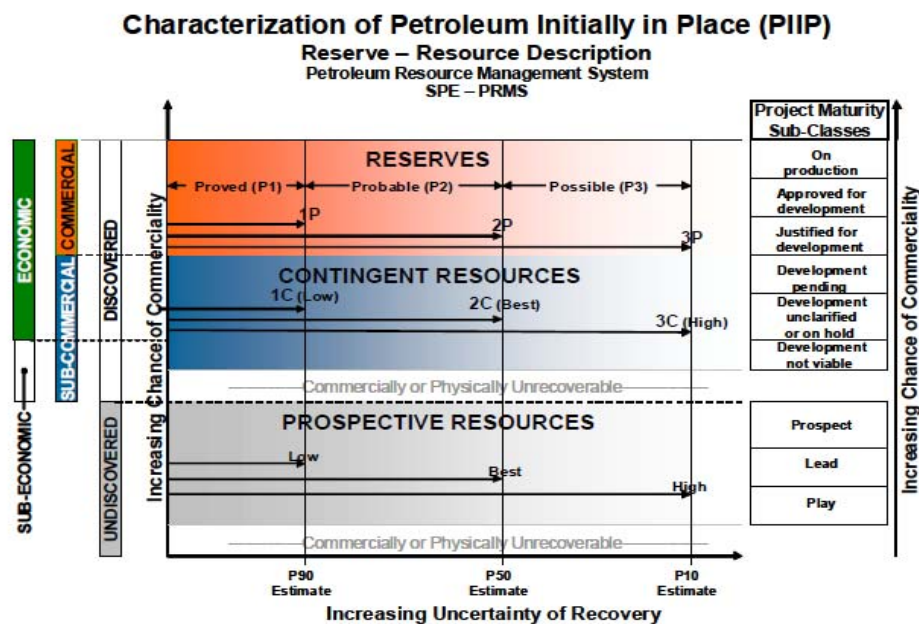
Appendices

**Appendix 1. Key Criteria Of A SPAC**

|  |  |
|--|--|
| Minimum funds raised   | RM150m – Hibiscus raised RM 234m.  |
| Interest of management team                                  | At least 10% in the SPAC upon IPO  |
| Investor protection  | At least 90% of IPO proceeds placed in trust account managed by an independent custodian which is a trust company, a licensed bank or merchant bank. Such proceeds may only be placed in permitted investments i.e. securities issued by the Malaysian Government, money market instruments and AAA-rated papers.            |
| Qualifying acquisition (QA)                                  | The acquisition must have an aggregate fair market value equal to at least 80% of the amount in the trust account. On completion of the IPO, Hibiscus issued 312.2m shares at RM0.75/share, implying RM210.7m (or US\$67.5m) is currently held in the trust account (assuming an exchange rate of RM3.12/US\$1).             |
| Completion of QA   | Within 3 years from the date of listing of the SPAC.   |
| Shareholders' approval for QA                                | A majority in number of shareholders representing at least 75% in value of voting securities (management team and persons connected to abstain from voting) present or voting by proxy   |
| Refund to dissenting shareholders                            | Shareholders who vote against a proposed QA are entitled to receive in exchange for their securities a pro-rata portion of the amount held in the trust account (being 90% of the IPO proceeds), only if the QA is approved. If the QA is not approved, there will be no refund entitlement in relation to that proposed QA. |
| Liquidation in event of failure to meet timeframe for the QA | A SPAC which fails to complete a QA within the three years must be liquidated. The amount held in the trust account (net of taxes and liquidation expenses) will be distributed to the shareholders.   |

Source: Prospectus; Company

**Appendix 2. Petroleum Resource Classification**



Source: Society of Petroleum Engineers Website (<http://www.spe.org/index.php>)



**Appendix 3. Exploration & Production Terms And Definitions**

**Stock Tank Oil Initially In-Place (STOIIP)** – total hydrocarbon content of an oil reservoir (also referred to as Oil in Place)

**Reserves** – quantities of petroleum claimed to be commercially recoverable by application of development projects to known accumulations under defined condition

**Proved reserves (1P)** - reserves claimed to have a reasonable certainty (normally at least 90% confidence) of being recoverable under existing economic and political conditions, with existing technology. Prospect - a lead which has been fully evaluated and is ready to drill

**Probable reserves (2P)** - reserves claimed to have 50% confidence level of recovery. Such reserves are basically the sum of 1P and 2P reserves (proved plus probable).

**Possible reserves (3P)** - reserves claimed to have 10% confidence level of recovery. Such reserves are basically the sum of 1P, 2P and 3P reserves (proved plus probable plus possible).

**Contingent resources** are those quantities of petroleum estimated, at a given date, but not considered to be commercially developed as yet. Contingencies may include factors such as economic, legal, environmental, political, and regulatory matters, or a lack of markets. It is also appropriate to classify as contingent resources the estimated discovered recoverable quantities associated with a project in the early evaluation stage.

*They are further categorised according to the level of certainty associated with the estimates and may be sub-classified based on economic viability.*

- *Low Estimate (1C) – This is considered to be a conservative estimate of the quantity that will actually be recovered. If probabilistic methods are used, there should be at least a 90% probability (P90) that the quantities recovered will equal or exceed the low estimate.*

- *Best Estimate (2C) – This is considered to be the best estimate of the quantity that will actually be recovered. It is equally likely that the actual remaining quantities recovered will be greater or less than the best estimate. If probabilistic methods are used, there should be a 50% probability (P50) that the quantities recovered will equal or exceed the best estimate.*

- *High Estimate (3C) – This is considered to be an optimistic estimate of the quantity that will actually be recovered. It is unlikely that the actual remaining quantities recovered will exceed the high estimate. If probabilistic methods are used, there should be at least a 10% probability (P10) that the quantities recovered will equal or exceed the high estimate.*

**Prospective resources** are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective resources have both an associated chance of discovery and a chance of development.

**Risked prospective resources** are calculated by multiplying the unrisks resources by the geological chance of success to account for the risk of drilling an unsuccessful exploration well.

**Lead** – a structure which may contain hydrocarbons.

**Prospect** – a lead which has been fully evaluated and is ready to drill.

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*Source: Society of Petroleum Engineers Website (<http://www.spe.org/index.php>)*

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## IMPORTANT DISCLOSURES

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The recommendation framework for stocks and sectors are as follows : -

### Stock Ratings

Outperform = The stock return is expected to exceed the FBM KLCI benchmark by greater than five percentage points over the next 6-12 months.

Trading Buy = Short-term positive development on the stock that could lead to a re-rating in the share price and translate into an absolute return of 15% or more over a period of three months, but fundamentals are not strong enough to warrant an Outperform call. It is generally for investors who are willing to take on higher risks.

Market Perform = The stock return is expected to be in line with the FBM KLCI benchmark (+/- five percentage points) over the next 6-12 months.

Underperform = The stock return is expected to underperform the FBM KLCI benchmark by more than five percentage points over the next 6-12 months.

### Industry/Sector Ratings

Overweight = Industry expected to outperform the FBM KLCI benchmark, weighted by market capitalisation, over the next 6-12 months.

Neutral = Industry expected to perform in line with the FBM KLCI benchmark, weighted by market capitalisation, over the next 6-12 months.

Underweight = Industry expected to underperform the FBM KLCI benchmark, weighted by market capitalisation, over the next 6-12 months.

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