

**BUSINESS VALUATION**



**Prepared for:**

**MADAGASCAR SOUTHERN PETROLEUM COMPANY LIMITED**

**In respect of:**

**Oilfield Block 3112 located in the Republic of Madagascar**

**Valuation Date : 31 August 2016**

**Report Date : 3 October 2016**

**Our Reference : BMIA/BV/20161003**

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Our Ref.: BMIA/BV/20161003

October 3 2016

The Directors

**Madagascar Southern Petroleum Company Limited**

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China Merchants Tower, Shun Tak Centre

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Hong Kong

Dear Sirs/Madams,

**Re: Valuation of the investment value of Oilfield Block 3112 located in the Republic of Madagascar**

**1. INSTRUCTIONS**

We refer to the instructions from Madagascar Southern Petroleum Company Limited (referred to as the "Company") for us to provide our independent opinion on the investment value of Oilfield Block 3112 (referred to as the "Project" or "Block 3112") located in the Republic of Madagascar (referred to as "Madagascar") as at 31 August 2016 (referred to as the "Date of Valuation").

This report presents the basis of valuation, the purpose of valuation, the background of the Project, an industry overview, the source of information, the scope of work and the valuation assumptions. It also explains the valuation methodology utilized and presents our conclusion of value.

**2. PURPOSE OF VALUATION**

Our valuation is for your internal reference purpose only.

Our valuation is indicative only and is provided to the Company as reference for internal reference purpose such as business development, strategic planning and internal discussion among Directors and senior management of the Company. This report is not prepared for the use of other purposes such as financial reporting, fund raising and merger and acquisition.

### **3. BASIS OF VALUATION**

Our valuation has been carried out on the basis of investment value. Investment value is defined as “the value of an asset to the owner or a prospective owner for individual investment or operational objectives”.

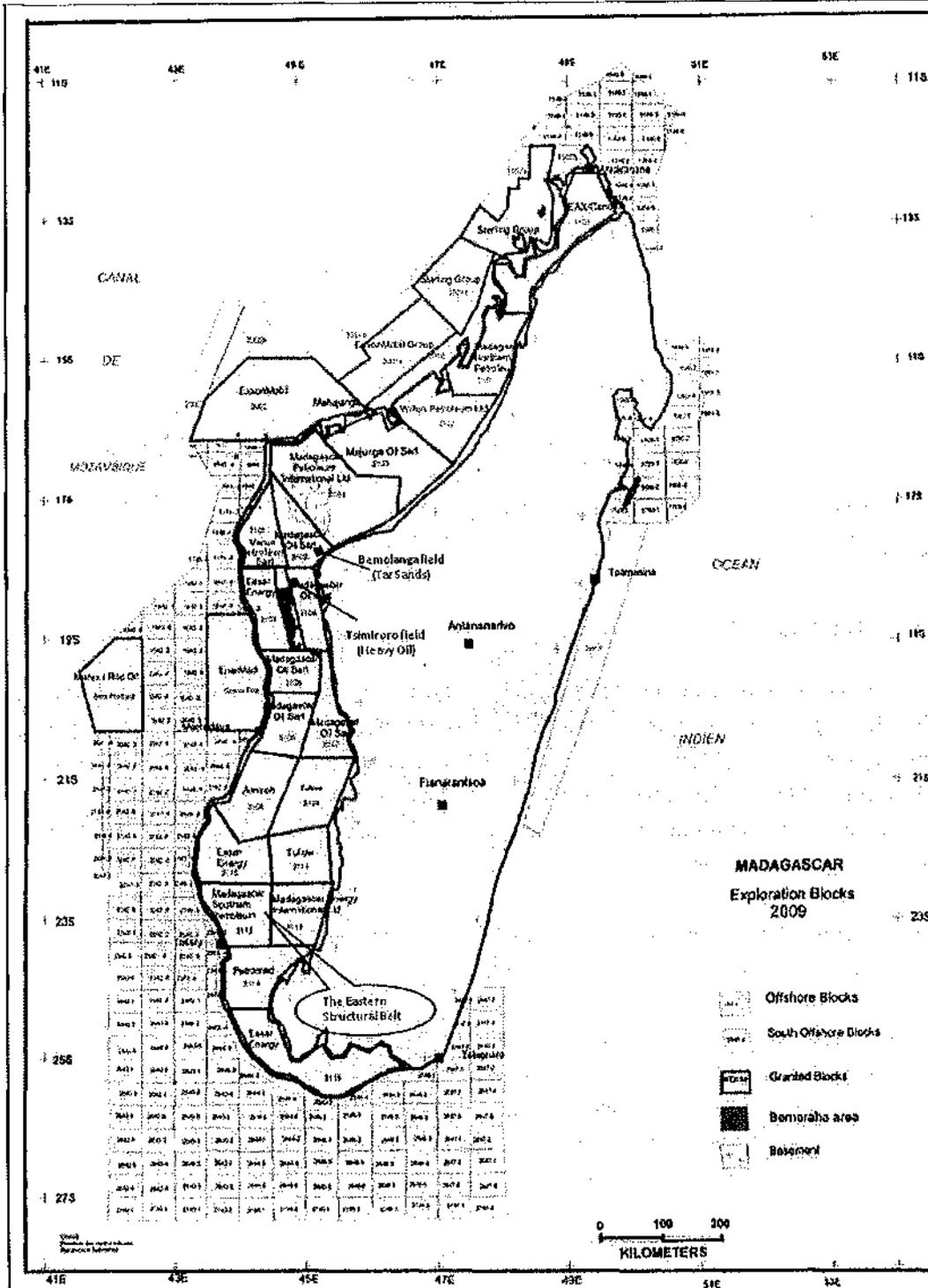
### **4. BACKGROUND OF THE PROJECT**

The Company is a British Virgin Islands registered company primarily engaged in oil and gas resources exploration and exploitation business in Madagascar. The Project is controlled by the Company through a Production Sharing Contract (referred to as the “PSC”) with the Malagasy authorities signed on 11 October 2006. ECSI LLC has issued a Competent Person’s Report on the Project.

The Project is located in the Southern Morondava Basin of Madagascar, west of Block 3113, with an area of 9,290 km<sup>2</sup>. The PSC stated that project exploration period is eight (8) years, which can be prolonged by the validity of two (2) years; the oil exploitation timeframe is twenty-five (25) years, which can be prolonged by the validity of five (5) years; and that gas exploitation timeframe is thirty-five (35) years, which can be prolonged by the validity of ten (10) years.

The Project is located approximately 100 km to the north east of Toliara, the capital of the Atsimo-Andrefana region. It can be accessed by paved road (National Route 7) from Torliara, which is connected with domestic flights from Antananarivo, the capital of Madagascar. Frequent international flights are available to Madagascar from South Africa, Mauritius, France and other countries. Private chartered air service is also essential to some of the blocks in Madagascar.

Figure 1: Location Map of Oil and Gas Exploration Blocks in Madagascar



Source: Competent Person's Report

According to the Competent Person's Report issued by ECSI LLC on the Oilfield Block 3112 located in Madagascar, the evaluation results are expressed in accordance with PRMS. For the VTL-1 and MHB-1 gas fields, where drilling has taken place and gas-bearing layers have been proved to exist, the gas reserves including Proved (P1), Probable (P2) and Possible (P3) Reserves are determined by probability simulation method.

Figure 2: Reserve Summary

Name	Reserves (Billion m <sup>3</sup> )	
	1P	2P
MHB-1	2.122	3.128
VTL-1	20.813	34.348
<b>Total</b>	<b>22.935</b>	<b>37.476</b>

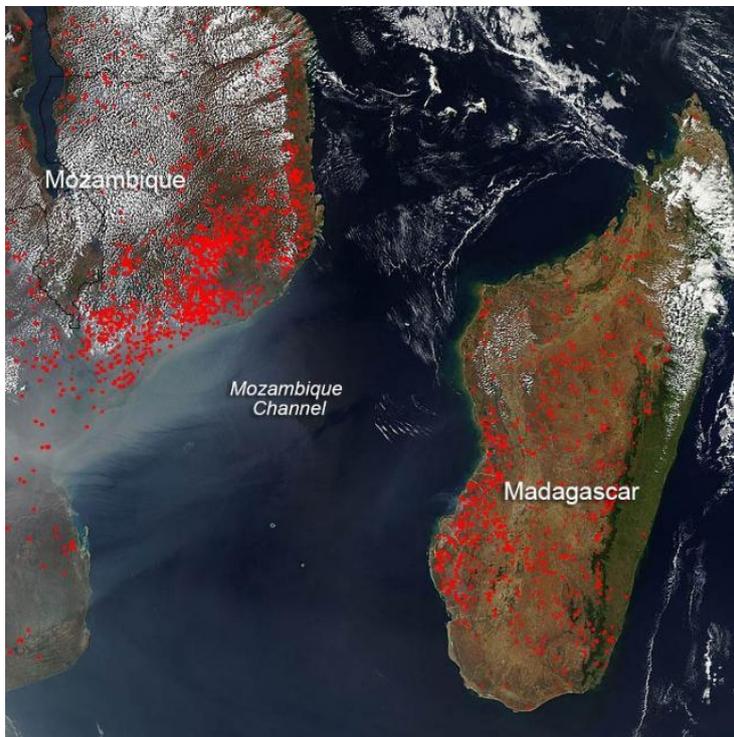
Source: Competent Person's Report

## 5. INDUSTRY OVERVIEW

### Country Overview - Madagascar

The island of Madagascar lies in the Indian Ocean, about 500 km off the coast of Mozambique in Southern Africa. According to the "Madagascar: Country Profile" published by Euromonitor International, Madagascar covers an area of 581,500 km<sup>2</sup>, it is the world's fourth largest island, measuring some 2,000 km from north to south. Madagascar became a French colony in 1896 and gained independence in 1960. Due to the fact of continued political instability, Madagascar is one of the poorest countries in sub-Saharan Africa. The World Bank has estimated that 92% of Malagasy live on less than US\$2 per day. About half of the population is less than 20 years of age. Antananarivo is the capital of Madagascar. The official languages of Madagascar are French and Malagasy. From the Central Intelligence Agency (CIA)'s "The World Fact Book", the population of Madagascar is estimated to be 23,812,681 in July 2015 with a population growth rate at 2.58%. The map of Madagascar is shown in the Figure 3 below.

Figure 3: Map of Madagascar



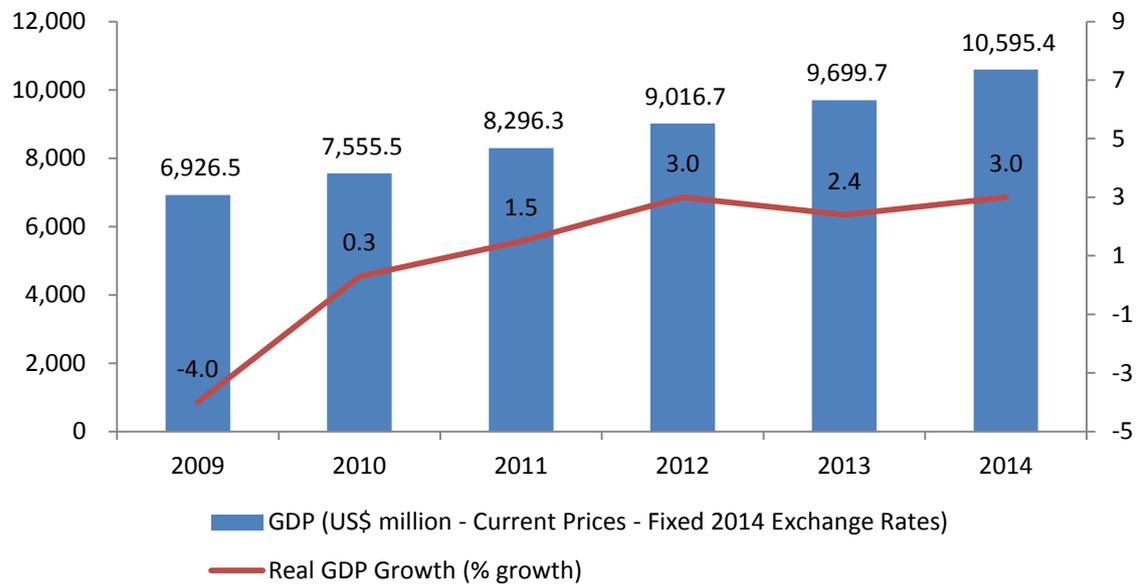
Source: Central Intelligence Agency (CIA), *The World Fact Book*

### **Economic Development in Madagascar**

According to the statistics from Euromonitor International, the gross domestic product (GDP) increased by 3.0% in real growth from US\$9,699.7 million in 2013 to US\$10,595.4 million in 2014. Figure 4 illustrates the trend of Madagascar's GDP from 2009 to 2014.

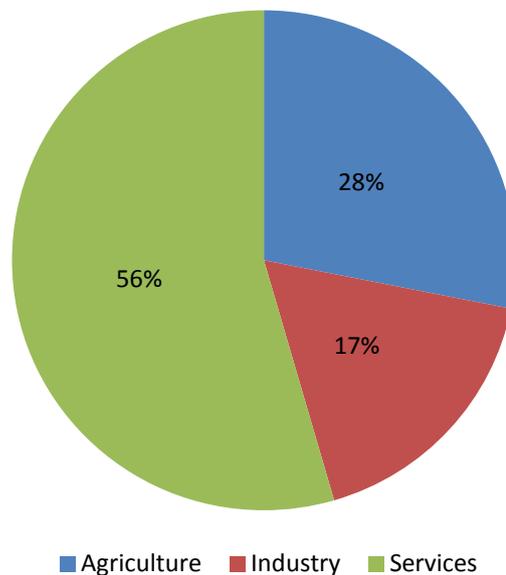
According to the "Madagascar 2015 Country Review" by CountryWatch, Inc., Madagascar's economy mainly consists of agriculture, including fishing and forestry. It created almost one-third of the value of its GDP. Low domestic savings together with the poor social and economic infrastructure have dragged its economic development. Moreover, the economy is also easily affected by the external shocks, such as intermittent cyclones and drought and fluctuations in key commodity prices. Figure 5 illustrates the composition of Madagascar's GDP by sector of origin in 2014 estimated by the CIA.

**Figure 4: Trend of Gross Domestic Product of the Madagascar (US\$ million), 2009 – 2014**



Source: Euromonitor International, Madagascar: Country Profile

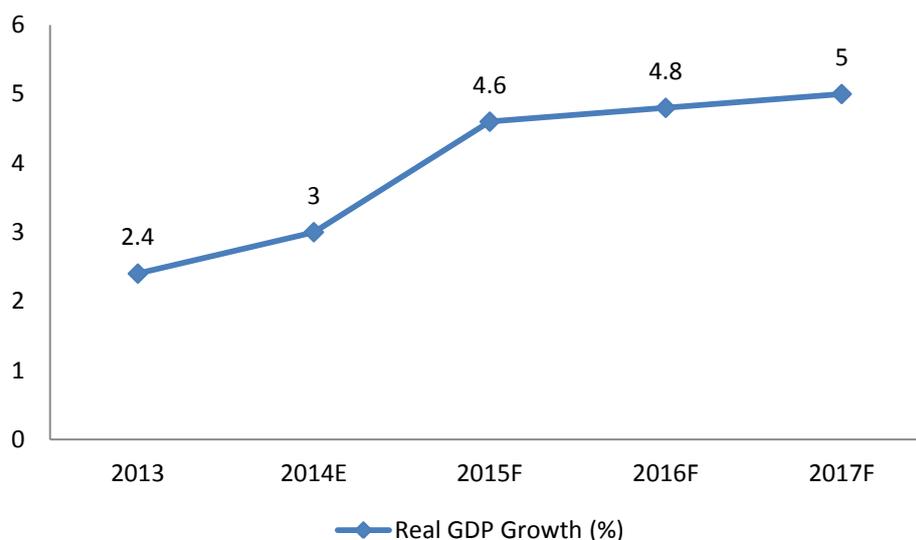
**Figure 5: Madagascar's GDP Composition, by sector of origin**



Source: Central Intelligence Agency (CIA), The World Fact Book

From the report “Global Economic Prospects” by The World Bank Group, it illustrated that the real growth rate is expected to rise. The following Figure 6 illustrates the trend of real GDP growth in Madagascar in 2013 and the projected growth rate from 2014 to 2017.

Figure 6: Trend of Real GDP Growth (%) in Madagascar, 2013 – 2017

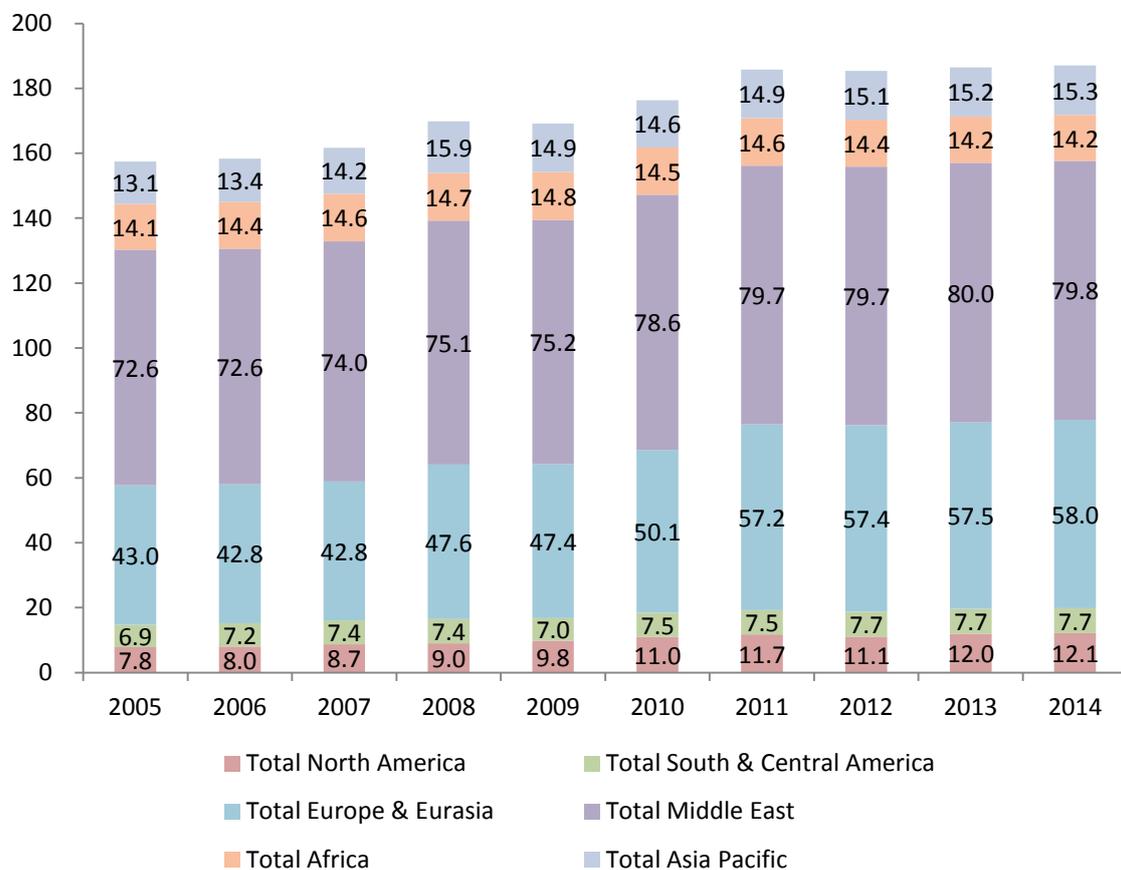


Accordingly, foreign aid to Madagascar was frozen and the country's tourism industry was badly hurt as a result of the unstable political situation in Madagascar. Many investors are trying to avoid investing in the country with political instability and weaknesses in the business environment. On the other hand, expansion in mining and agricultural sectors contributed to growth in 2014.

### Overview of Global Natural Gas Industry

According to the “Statistical Review of World Energy 2015” by BP p.l.c., the world total proven natural gas reserves at the end of 2014 is 187.1 trillion cubic metres (tcm), and it is sufficient to meet 54.1 years of global production. Total proved reserves slightly increased by 0.3% when compared to those in 2013. Iran (34.0 tcm) and Russia (32.6 tcm) hold the largest proved reserves. Figure 7 showed the total proved reserves of natural gas by different geographical regions from 2005 to 2014.

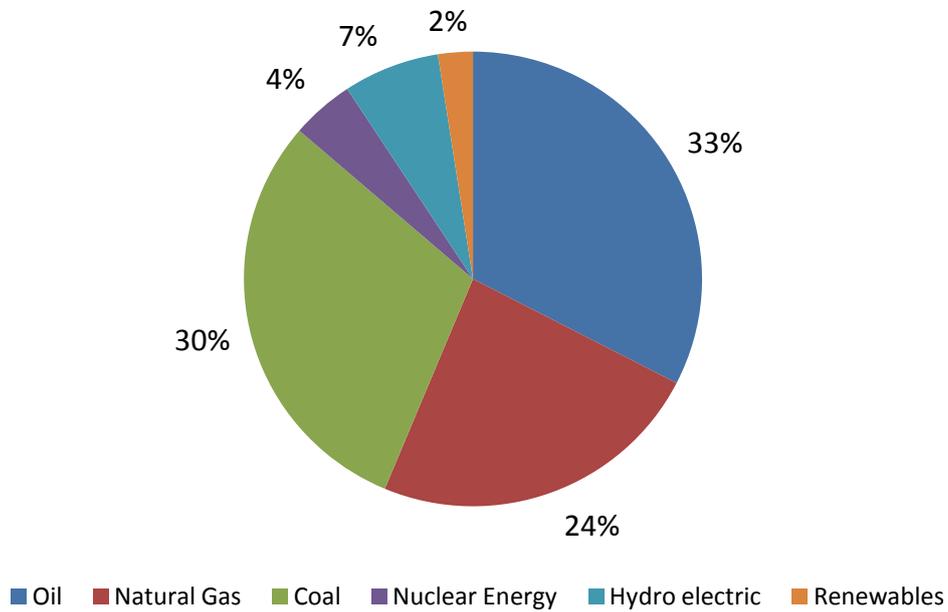
Figure 7: Total proved reserves of natural gas by different geographical regions (in trillion cubic metres), 2005-2014



Source: BP p.l.c., Statistical Review of World Energy 2015

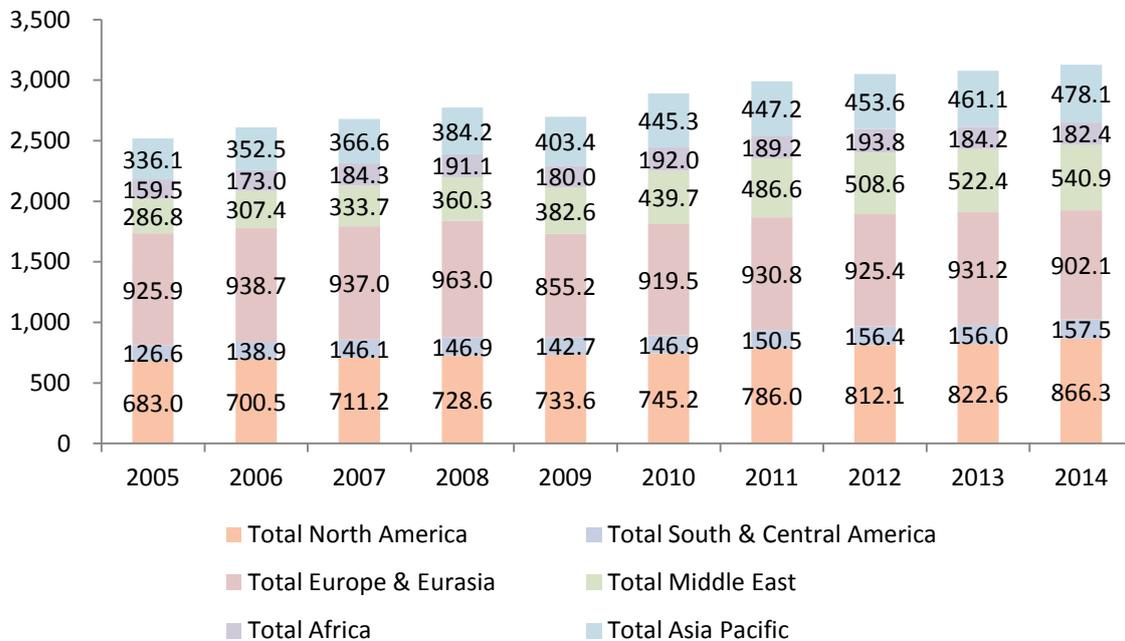
The global natural gas consumption increased by 0.4% and it was below the 10-year average of 2.4%. Natural gas accounted for 23.7% of global primary energy consumption. Figure 8 illustrated the composition of global primary energy consumption by fuel. On the other hand, the total production for the natural gas production increased by 1.6% in 2014 and it was below its 10-year average of 2.5%. Production growth was below average in all regions except North America. The United States recorded the largest growth increment with a growth rate by 6.1%. Figure 9 showed the total production of natural gas by different geographical regions from 2005 to 2014.

Figure 8: Composition of global primary energy consumption by fuel



Source: BP p.l.c., Statistical Review of World Energy 2015

Figure 9: World total production of natural gas (in million tonnes oil equivalent), 2005-2014



Source: BP p.l.c., Statistical Review of World Energy 2015

According to Statistical Review of World Energy 2015, Africa's share in global primary energy consumption reached 3.2%, but in per capita terms, energy consumption remains well below the global average. Regarding Africa's production of oil and gas in 2014, it has been falling for the second consecutive year by 5% and 1% respectively. Although Africa's domestic energy production remained low level, it is still an important net energy exporter.

### **Overview of Natural Gas Industry in Madagascar**

According to U.S. Energy Information Administration (EIA), exploration activities in East Africa have evolved at a much slower pace relative to other African regions. However, the pace of exploration activity has recently picked up after foreign oil and gas companies made a series of sizable discoveries in several East African countries. Among the countries with emerging oil and gas developments, Mozambique, Tanzania, Uganda, and Madagascar have shown the most progress toward commercial development of newly discovered resources in recent years. Uganda and Madagascar will most likely be the next new oil producers on the continent.

Madagascar's most promising asset, the Tsimiroro oil field, was discovered almost a century ago, but prior to 2008 it was believed to contain only 300 million barrels of heavy crude oil, so it was deemed not commercially viable. However, according to an assessment by the United States Geological Survey (USGS), four geologic provinces along the east coast of Africa recently were assessed for undiscovered, technically recoverable oil, natural gas, and natural gas liquids resources. It estimates that the mean technically recoverable resources that are undiscovered in the offshore Morondava basin which are located onshore to the south of Tsimiroro and Bemolanga are: 10.8 billion barrels of oil, 167 trillion cubic feet (Tcf) of natural gas, and 5 billion barrels of natural gas liquids.

## **6. SOURCE OF INFORMATION**

For the purpose of our valuation, we have been furnished with the financial and operational information in respect of the Project provided by the senior management of the Company. We were provided with the Competent Person's Report issued by ECSI LLC.

We have no reason to doubt the truth and accuracy of the information provided to us, and we have been confirmed by the senior management of the Company that no material facts have been omitted from the information provided to us.

Apart from the information provided by the senior management of the Company, we also obtained market data, industrial information and statistical figures from Bloomberg Terminal and other publicly available sources.

## **7. SCOPE OF WORKS**

The following processes have been conducted by us in the course of our valuation:

- Interviewed with the senior management of the Company in respect of the core operation of the Project;
- Obtained relevant financial and operational information in respect of from the senior management of the Company;
- Examined the basis and assumptions of the financial and operational information in respect of the Project provided by the senior management of the Company;
- Examined the information in respect of the Block 3112 stated in the Competent Person's Report;
- Conducted appropriate research to obtain sufficient market data, industry information and statistical figures from Bloomberg Terminal and other publicly available sources; and

- Prepared the valuation and this report in accordance with generally accepted valuation procedures and practices.

## **8. VALUATION ASSUMPTIONS**

Due to the changing economic and market conditions, a number of assumptions have to be adopted in our valuation. The major assumptions adopted in our valuation are as follows:

### **The General Market Assumptions**

- There will be no material change in the existing political, legal, fiscal, technological, economic and market conditions in the jurisdiction where the Project currently or will be situated;
- There will be no material change in the taxation laws and regulations in the jurisdiction where the Project currently or will be situated, that the tax rates will remain unchanged and that all applicable laws and regulations will be complied with;
- The market return, market risk, interest rates and exchange rates will not differ materially from those of present or expected;
- The market data, industrial information and statistical figures obtained from Bloomberg Terminal and other publicly available sources are true and accurate.

### **The Company-specific Assumptions**

- All licenses, permits, certificates and consents issued by any local, provincial or national government or other authorized entity or organization that will affect the operation of the Project have been obtained or can be obtained upon request with an immaterial cost;
- The core operation of the Project will not differ materially from those of present or expected;

- The financial and operational information in respect of the Project have been prepared on a reasonable basis that have been arrived at after due and careful consideration by the senior management of the Company;
- The Project currently has, or will have, adequate human capital and capacity required for the production the products of the Project, and the required human capital and capacity will be acquired in a timely manner that will not affect the operation of the Project;
- The Project has acquired, or will acquire, adequate financial capital for the investments in projected capital expenditure and working capital from time to time, and any scheduled interest or repayment of loan and payable will be paid on time;
- The information in respect of the Project stated in the Competent Person's Report have been prepared after due and careful consideration by the Competent Person;
- The senior management of the Company will implement only those prospective financial and operational strategies that will maximize the efficiency of the operation of the Project;
- The senior management of the Company has sufficient knowledge and experience in respect of the operation of the Project, and the turnover of any director, management or key person will not affect the operation of the Project;
- The senior management of the Company has adopted reasonable and appropriate contingency measures against any human disruption such as fraud, corruption and strike, and the occurrence of any human disruption will not affect the operation of the Project; and
- The senior management of the Company has adopted reasonable and appropriate contingency measures against any natural disaster such as fire, flood and hurricane, and the occurrence of any natural disaster will not affect the operation of the Project.

## **9. VALUATION APPROACH**

### **The General Valuation Approaches**

The following generally accepted valuation approaches have been considered in the course of our valuation: (1) the income approach; (2) the market approach; and (3) the cost approach.

#### **The Income Approach**

The income approach provides an indication of value based on the principle that an informed buyer would pay no more than the present value of anticipated future economic benefits generated by the subject asset.

The discounted cash flow (DCF) method is the most fundamental and prominent method of the income approach. In applying the DCF method, the free cash flows of the subject asset in future years were determined from the net income after tax plus non-cash expenses, such as depreciation and amortization expenses, and after-tax interest expense; the result was then less non-cash incomes, investment in capital expenditure and investment in net working capital.

#### **The Market Approach**

The market approach provides an indication of value by comparing the subject asset to similar assets that have been sold in the market, with appropriate adjustments for the differences between the subject asset and the assets that are considered to be comparable to the subject asset.

Under the market approach, the guideline company method computes a price multiple for publicly listed companies that are considered to be comparable to the subject asset and then applies the result to a base of the subject asset. The sales comparison method computes a price multiple using recent sales and purchase transactions of assets that are considered to be comparable to the subject asset and then applies the result to a base of the subject asset.

## **The Cost Approach**

The cost approach provides an indication of value based on the principle that an informed buyer would pay no more than the cost of producing the same or a substitute asset with equal utility as the subject asset.

Under the cost approach, the historical cost method measures the cost incurred throughout the development of the subject asset at the time it was developed. The replication cost method measures the amount of investment that would be required to develop an asset similar to the subject asset. The replacement cost method measures the amount of investment that would be required to develop the subject asset as it currently exists.

### **The Selected Valuation Approach**

The selection of a valuation approach is based on, among other criteria, the quantity and quality of the information provided, access to available data, supply of relevant market transactions, type and nature of the subject asset, purpose and objective of the valuation and professional judgment and technical expertise.

The income approach was considered to be the most appropriate valuation approach in the valuation. Although the Block 3112 just started production in 2015, the income approach could incorporate the future development plan specific to the Project. The annual production rates, future selling prices and relevant expenses as well as the amount and timing of capital expenses, which impacts the value of the Project, was considered in the valuation using income approach. In addition, the specific profit sharing arrangement under the PSC signed with OMNIS was also taken into account under the income approach. Therefore, as the income approach takes the future growth potential and project specific issues of the Project into consideration, it was considered to be the most appropriate valuation approach for this Project.

The market approach, instead, relies generally on deriving value through a measure of the values of industry comparables or market transactions. Given the characteristics of the Project, there was a lack of explicitly industry comparables or market transactions available as at the date of valuation to derive an indicative value of the Project with sufficient level of accuracy. Accordingly, the market approach was abandoned. The cost approach was also considered inappropriate as the replication cost of the Project may not represent the value of the Project.

## 10. VALUATION METHODOLOGY

Under the income approach, the discounted cash flow (DCF) method was adopted in the valuation. The DCF method is the most fundamental and prominent method of the income approach.

In applying the DCF method, the free cash flows were computed using the following formula:

$$FCF = NI + NCE + Int (1 - T_{int}) - NCI - InvFA - InvNWC$$

Where:

<i>FCF</i>	=	free cash flow
<i>NI</i>	=	net income after tax
<i>NCE</i>	=	non-cash expenses
<i>Int</i>	=	interest expenses
<i>T<sub>int</sub></i>	=	tax rate applied to interest expense
<i>Int (1 - T<sub>int</sub>)</i>	=	after-tax interest expense
<i>NCI</i>	=	non-cash incomes
<i>InvFA</i>	=	investment in capital expenditure
<i>InvNWC</i>	=	investment in net working capital

The results were then discounted using a discount rate, or the cost of capital, to determine the present value of the expected cash flows.

The present value of the expected cash flows was computed using the following formula:

$$PVFCF = FCF_1 / (1 + r)^1 + FCF_2 / (1 + r)^2 + \dots + FCF_n / (1 + r)^n$$

Where:

*PVFCF* = present value of free cash flows

*FCF* = free cash flow

*r* = discount rate

*n* = number of year of projections

### **The Comparable Companies**

For the purpose of our valuation, we referred to the information in respect of publicly listed companies that are considered to be comparable to the Project (referred to as the “Comparable Companies”).

### **The Selection Criteria of the Comparable Companies**

The selection of the Comparable Companies was based on the comparability of the overall industry sector and geographical location. Although no two companies are ever exactly alike, behind the differences there are certain business universals such as required capital investment and overall perceived risks and uncertainties that guided the market in reaching the expected returns for companies with certain similar attributes.

The selection criteria of the Comparable Companies are as follows:

- The principal activities of the company is located in Africa;
- The company is principally engaged in the crude oil and natural gas exploration and production and the related operation;
- Shares of the company are listing in a major stock exchange and are actively trading in a reasonable period of time; and

- Detailed financial and operational information in respect of the company are available at Bloomberg Terminal or other publicly available sources.

### **The Selected Comparable Companies**

Given the abovementioned selection criteria, the Comparable Companies were considered to be fair and representative samples. Details of the Comparable Companies are as follows:

#### **Comparable Company 1**

Name of Company : PA Resources AB  
Bloomberg Ticker : PAR SS  
Stock Exchange : Stockholm  
Company : PA Resources AB is an upstream oil and gas company  
Description : PA Resources AB is an upstream oil and gas company focusing on exploration and production in North Sea, West Africa and North Africa. The Company's portfolio of oil fields has been acquired through company takeover, purchase of license shares, and by license application and awarded permits/licenses.

#### **Comparable Company 2**

Name of Company : Circle Oil Plc  
Bloomberg Ticker : COP LN  
Stock Exchange : London  
Company : Circle Oil Plc explores for and produces oil and gas. The  
Description : Circle Oil Plc holds reconnaissance licenses in Tunisia, Oman and Namibia and produces assets in Egypt and Morocco.

### **Comparable Company 3**

Name of Company : Sterling Energy Plc  
Bloomberg Ticker : SEY LN  
Stock Exchange : London  
Company : Sterling Energy plc is an independent oil and gas company  
Description : based in the United Kingdom. The Company has interests in high potential exploration projects in Cameroon, Madagascar, Mauritania and Somaliland.

### **Comparable Company 4**

Name of Company : Orca Exploration Group Inc.  
Bloomberg Ticker : ORC/B CN  
Stock Exchange : Toronto  
Company : Orca Exploration Group Inc. develops and produces natural  
Description : gas. The Company markets natural gas in East Africa.

### **Comparable Company 5**

Name of Company : Kosmos Energy Ltd.  
Bloomberg Ticker : KOS US  
Stock Exchange : New York  
Company : Kosmos Energy Ltd. is an oil and gas exploration and  
Description : production company. The Company's discoveries include hydrocarbon resources offshore along West Africa's Atlantic coast.

### **Comparable Company 6**

Name of Company : Oando Energy Resources Inc.  
Bloomberg Ticker : OER CN  
Stock Exchange : Toronto  
Company : Oando Energy Resources Inc. acquires interests in oil and  
Description : natural gas properties. The Company operates in Canada and West Africa.

### **Comparable Company 7**

Name of Company : Mart Resources, Inc.  
Bloomberg Ticker : MMT CN  
Stock Exchange : Toronto  
Company : Mart Resources, Inc. explores for oil and natural gas. The  
Description Company operates in Alberta and Nigeria.

### **Comparable Company 8**

Name of Company : VAALCO Energy Inc.  
Bloomberg Ticker : EGY US  
Stock Exchange : New York  
Company : VAALCO Energy, Inc. acquires, explores, and develops crude  
Description oil and natural gas properties. The Company owns producing  
properties and conducts exploration activities in the  
Philippines and Gabon, and has interest in the Texas Gulf  
Coast area. VAALCO, through participation in a partnership,  
has additional international exploration interests in South and  
North America and Africa.

### **Comparable Company 9**

Name of Company : Tullow Oil Plc  
Bloomberg Ticker : TLW LN  
Stock Exchange : London  
Company : Tullow Oil Plc explores for and produces oil and gas. The  
Description Group's assets are in Africa, Europe, South America and  
Asia.

### **The Discount Rate**

The Weighted Average Cost of Capital (WACC) was adopted as the discount rate for the valuation. It is the required return on the capital investment of a company. The cost of capital will be different for each source of capital and class of securities a company has, reflecting the different risks. The WACC is the weighted average of the costs of each of the different types of capital, and the weights are proportion of the company's capital that comes from each source.

The WACC was computed using the following formula:

$$WACC = R_e (E / V) + R_d (D / V) (1 - T_c)$$

Where:

<i>WACC</i>	=	weighted average cost of capital
<i>R<sub>e</sub></i>	=	cost of equity
<i>R<sub>d</sub></i>	=	cost of debt
<i>E</i>	=	value of the firm's equity
<i>D</i>	=	value of the firm's debt
<i>V</i>	=	sum of the values of the firm's equity and debt
<i>T<sub>c</sub></i>	=	corporate tax rate

The WACC comprises two components: the cost of equity and the cost of debt. The cost of equity was determined using the Capital Asset Pricing Model (CAPM). The CAPM describes the relationship between the risk of a particular asset, its market price and the expected return to the investor, that investors required additional return to compensate additional risk associated.

The cost of equity under the modified CAPM was computed using the following formula:

$$R_e = R_f + \beta * MRP + RP_S + RP_U$$

Where:

$R_e$	=	cost of equity
$R_f$	=	risk-free rate
$\beta$	=	beta coefficient
$MRP$	=	market risk premium
$RP_S$	=	size premium
$RP_U$	=	company-specific risk premium

### **Risk-free Rate**

$R_f$  The risk-free rate ( $R_f$ ) represents the time value of money. It is the theoretical rate of return of an investment with no risk of financial loss. The yield rate of bonds issued by a government or agency where the risks of default are so low as to be negligible are commonly applied as the risk-free rate.

The yield rate of the 10-year South Africa Government Bond as at the date of valuation, as extracted from Bloomberg Terminal, was adopted as the risk-free rate in the valuation.

### **Beta Coefficient**

$\beta$  The beta coefficient ( $\beta$ ) measures the risk of an asset relative to the overall market. It reflects the sensitivity of an asset's value to economic variables or risks that affect the values of all risky assets, including economic growth rates, interest rates, exchange rates and inflation rates.

In the valuation, as the Project is not listing in any major stock exchange or be marketable in any over-the-counter market, it is not possible to determine its beta coefficient directly. Instead, the beta coefficient for the Project was determined as the median of the betas of the Comparable Companies, with adjustment for differences in corporate tax rates and leverage compositions.

The adjusted betas of the Comparable Companies, which measure their risks relative to the market, as extracted from Bloomberg Terminal, were derived from the corresponding raw betas, modified by the assumption that a security's beta moves toward the market average over time with the following generally accepted formula:

$$\text{Adjusted Beta} = (1/3) + (2/3) * \text{Raw Beta}$$

The unlevered beta was calculated to consider the differences in corporate tax rates and leverage compositions of the Project and the Comparable Companies. The unlevered beta removes the effects of the use of leverage on the capital structure of a firm. Removing the debt component allows an investor to compare the base level of risk between various companies.

The unlevered beta was computed using the following formula:

$$\beta_{unlevered} = \beta_{levered} / [1 + (1 - T_c) (D / E)]$$

Where:

$\beta_{unlevered}$	=	unlevered beta
$\beta_{levered}$	=	levered beta
$T_c$	=	corporate tax rate
$D$	=	value of the firm's debt
$E$	=	value of the firm's equity
$D / E$	=	debt-to-equity ratio

The median of the unlevered betas of the Comparable Companies was then being relevered based on the specific corporate tax rate and the expected debt-to-equity ratio applied to the Project.

The relevered beta was computed using the following formula:

$$\beta_{relevered} = \beta_{unlevered} * [1 + (1 - T_c) (D / E)]$$

Where:

$\beta_{relevered}$	=	relevered beta
$\beta_{unlevered}$	=	unlevered beta
$T_c$	=	corporate tax rate
$D$	=	value of the firm's debt
$E$	=	value of the firm's equity
$D / E$	=	debt-to-equity ratio

### **Market Risk Premium**

*MRP* The market risk premium (*MRP*) is the implied risk premium expected from the market using forecasted growth rates, earnings, dividends, payout ratios and current values. It represents the additional return required by an investor as compensation for investing in equities rather than a risk-free instrument.

The market risk premium of South Africa as at the date of valuation was computed using the market risk premium of the United States and the country risk premium of South Africa.

### **Company-specific Risk Premium**

By considering the additional risk associated with the operation of the Project, a company-specific risk premium was adopted in the valuation.

### **Cost of Equity**

The cost of equity was determined using the CAPM.

### **Cost of Debt**

The cost of debt was determined by the expected lending rate of the Project.

### **After-tax Cost of Debt**

Since the interest paid on debts are tax-deductible expense for a company, the cost of the company of obtaining debt funds is less than the required rate of return of the suppliers of the debt capital. The after-tax cost of debt was calculated by multiplying one minus the corporate tax rate of MSP by the cost of debt.

### **Weight of Debt**

The weight of debt was determined by the median of the weights of debt of the Comparable Companies, assuming that the weight of debt of the Project moves toward that of the average of the Comparable Companies over time.

### **Weight of Equity**

The weight of equity was determined by the median of the weights of equity of the Comparable Companies, or calculated as one minus the weight of debt of the Project.

### **Discount for Lack of Marketability**

The discount for lack of marketability is a downward adjustment to the value of an investment to reflect its reduced level of marketability. The concept of marketability deals with the liquidity of an ownership interest, that is, how quickly and easily it can be converted into cash if the owner chooses to sell.

The discount for lack of marketability reflects the fact that there is no ready market for

shares in a closely held company. Ownership interests in closely held companies are typically not readily marketable compared to similar interests in publicly listed companies. Therefore, a share of stock in a privately held company is usually worth less than an otherwise comparable share in a publicly listed company.

As the Project is unlikely to undergo public offering and shares of the Project are unlikely to be listed in any major stock exchange or be marketable in any over-the-counter market in the near future, a discount for lack of marketability has been adopted in the valuation.

## **11. REMARKS**

For the purpose of our valuation, we have been furnished with information provided by the senior management of the Company. We have had no reason to doubt the truth and accuracy of the information provided to us by the Company. We have also sought and received confirmation from the Company that no material facts have been omitted from the information supplied.

To the best of our knowledge, all data set forth in this report are true and accurate. Although gathered from reliable sources, no guarantee is made or liability assumed for the accuracy of any data, opinions or estimates identified as being furnished by others, which have been used in formulating our analysis.

## **12. CONCLUSION OF VALUE**

Our conclusion of value is based on accepted valuation procedures and practices that rely on the use of numerous assumptions and the consideration of a lot of uncertainties, not all of which can be easily ascertained or quantified.

Further, whilst the assumptions and consideration of such matters are considered to be reasonable, they are inherently subject to uncertainties and contingencies that are beyond the control of the Company, the Target or us.

Based on our analysis outlined in this report, it is our independent opinion that the

investment value of the Oilfield Block 3112 located in Madagascar (i.e. the “Project” or “Block 3112”) as at 31 August 2016 (i.e. the “Date of Valuation”) was **US\$4,100,000,000 (UNITED STATES DOLLARS FOUR BILLION AND ONE HUNDRED MILLION ONLY).**

Yours faithfully,

**BMI APPRAISALS LIMITED**

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**TC/ec**

### 13. LIMITING CONDITIONS

- The result of our valuation does not constitute and should not be interpreted as an investment advice or legal evidence. It also serves as neither a substitute nor any part of due diligence work in respect of the truth and accuracy of the financial and operational information in respect of the subject asset.
- The actual consideration in any past or possible transaction in relation to the subject asset or similar assets may be different from the result of our valuation. The differences may be due to factors such as the motivation of the parties, expected synergistic benefits and economies of scale arising from the transaction.
- The date of valuation is a specific point of time as at which an opinion of value applies. As economic and market conditions may change over time, the result of our valuation only reflects the existing economic and market conditions as at the date of valuation, not as at either a past or future date.
- In view of prospective data including projected economic and market conditions as well as financial and operational information in respect of the subject asset to derive the result of our valuation, there may be differences between the forecasted and actual results because of events and circumstances occurred out of expectation.
- To the best of our knowledge, all data set forth in our valuation and this report are true and accurate. Although gathered from reliable sources, no guarantee is made or liability is assumed for the truth and accuracy of any data provided to us or obtained from Bloomberg Terminal or other publicly available sources.
- Our valuation relied on research of market data, industrial information and statistical figures. The scope of research is at our own discretion. Moreover, there may be parameters adopted in our valuation that are derived by our professional judgment and technical expertise or opinion of any other party of which written supporting document may not be available.
- The result of our valuation assumes continuation of appropriate management policies to maintain the character and integrity of the subject asset over a reasonable period of time, including adoption of reasonable and appropriate contingency measures against any human disruption and natural disaster.

- The result of our valuation is based on generally accepted valuation procedures and practices that rely on the use of numerous assumptions and the consideration of a lot of uncertainties, not all of which can be easily ascertained or quantified, and no responsibility is assumed for the differences between the actual outcome and our adopted assumptions.
- Whilst the assumptions and consideration of such matters are considered to be reasonable, they are inherently subject to uncertainties and contingencies that are beyond the control of us. We assume no responsibility for unexpected changes in economic and market conditions that may require adjustments in the valuation.
- We will not give testimony or attendance in court or to any governmental authority by reason of our valuation, unless prior arrangements have been made. Moreover, no opinion is intended to be expressed for matters, which require legal or other specialized expertise or knowledge, beyond that customarily employed by appraisers.
- Any information provided to us for the valuation will be treated as confidential information, but we may disclose the information to our directors or employees who need to know the information for the purpose of carrying out the valuation or any authority as required by the laws of any jurisdiction.
- All research findings, working papers and valuation model developed by us during the course of our valuation are deemed to be our property. We will retain the research findings, working papers and valuation model, either in physical form or in electronic form, for at least seven years after completion of our valuation.
- We reserve the right to include the addressee's name, scope of valuation, date of valuation and nature of subject asset in our client list and track record that may be presented to our existing or prospective clients, but we will maintain the confidentiality of the information provided to us, our valuation model and the contents of this report.
- We may not disclose any arrangement in relation to referral, cooperation, sub-contract or subscription of research report conducted by third party as well as compensation of our directors or employees that are deemed to have no impact on our independence and objectivity and have no conflict of interest with the addressee.